



TOWN COUNCIL – AGENDA REQUEST FORM

THIS FORM WILL BECOME PART OF THE BACKGROUND INFORMATION USED BY THE COUNCIL AND PUBLIC

Please submit Agenda Request Form, **including back up information**, 8 days prior to the requested meeting date. **Public Hearing requests must be submitted 20 days prior to requested meeting date to meet publication deadlines** (exceptions may be authorized by the Town Manager, Chairman/Vice Chair).

MEETING INFORMATION

Date Submitted: March 23, 2018

Date of Meeting: April 12, 2018

Submitted by: Fire Chief Michael Currier & Police

Chief Denise Roy

Department: Fire & Police

Time Required: 15 minutes

Speakers:

Background Info.

Supplied:

Yes: ☒

No: ☐

CATEGORY OF BUSINESS (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)

Appointment:

☐

Recognition/Resignation/

☐

Retirement:

Public Hearing:

☒

Old Business:

☐

New Business:

☐

Consent Agenda:

☐

Nonpublic:

☐

Other:

☐

TITLE OF ITEM

Public Hearing – 2018 Abbie Griffin Memorial Fund for Fire & Police Departments

DESCRIPTION OF ITEM

The Town Council will hold a public hearing to authorize the acceptance and expenditure of funds from the Abbie Griffin Memorial Fund in the amount of but not to exceed \$15,000 for the purchase of physical fitness equipment for the Fire Department and for two (2) portable lightweight electronic speed signs for the Police Department, pursuant to RSA 31:95-b and Charter Article 8-15.

REFERENCE (IF KNOWN)

RSA:

31:95-b

Warrant Article:

Charter Article:

8-15

Town Meeting:

Other:

N/A

EQUIPMENT REQUIRED (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)

Projector:

☐

Grant Requirements:

☐

Easel:

☐

Joint Meeting:

☐

Special Seating:

☐

Other:

☐

Laptop:

☐

None:

☐

CONTACT INFORMATION

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LEGAL NOTICE
Town of Merrimack
Public Hearing

Residents of Merrimack are hereby advised that the Town Council will hold a public hearing to authorize the acceptance and expenditure of funds from the Abbie Griffin Memorial Fund in the amount of but not to exceed \$15,000 for the purchase of physical fitness equipment for the Fire Department and for two (2) portable lightweight electronic speed signs for the Police Department, pursuant to RSA 31:95-b and Charter Article 8-15. The public hearing will be held on **Thursday, April 12, 2018, at 7:00 PM** in the Matthew Thornton Room located at 8 Baboosic Lake Road in Merrimack.

For Town of Merrimack Use:

Posted: April 2, 2018

To Be Published: April 2, 2018 (*Union Leader*)

Abbie Griffin Memorial Fund Distribution

-April 2018-

Fire Department:

Request to purchase Physical Fitness Equipment for Stations 1 & 2 totaling approximately **\$7,727.00**

Police Department:

Request to purchase (2) portable lightweight electronic signs totaling approximately **\$7,400.00**, broken down as follows:

- SafePace 250 & SafePace 650: $\underline{\$2,599 + \$3,699} = \mathbf{\$6,298}$
- Data Collectors for *both* signs: $\underline{\$400 + \$400} = \mathbf{\$800}$
- Universal brackets for *both* signs: $\underline{\$125 + \$125} = \mathbf{\$250}$
- Plus associated shipping costs



TOWN OF MERRIMACK, NEW HAMPSHIRE

Department of Fire Rescue
432 Daniel Webster Highway
Merrimack, New Hampshire 03054

Headquarters
TEL: 603.424.3690

Abbie Griffin Fund

Expenditure Recommendation

Town of Merrimack New Hampshire
Fire and Rescue



2018

Abbie Griffin Fund 2018

INTRODUCTION

Each year Merrimack Fire Rescue is fortunate enough to receive resources from the Abbie Griffin Memorial Fund to procure needed items that will benefit the department and community which would not ordinarily be purchased through the operating budget. This year we have been allotted \$7,727 from this fund, and it is our intention to use these funds to purchase Physical Fitness equipment for Stations 1 and 2.

BACKGROUND

Strength is a necessity for all physical actions, and more specifically a written requirement for the fire service. Having the baseline strength to be able to walk could be considered the most primitive strength requirement all healthy individuals have. However, the fire service demands a much higher degree of strength aptitude in order to complete basic job functions. Without access to proper gym equipment to reach and maintain the necessary strength and conditioning requirements, the stressors of these functions are amplified from fatigue, which can and will inevitably lead to injury.

For example, the advancement of a charged 2-1/2" hose line: Weighing approximately 250lbs per 100', an aggressive interior attack with a 2-1/2" hose line can exhaust an engine company at an exponential rate. If those Firefighters do not have a high degree of strength and cardiovascular endurance, the most technically sound deployment of tactics will soon become moot as these Firefighters begin to reach their max capacity. Additionally, to combat one of the leading causes of death in the fire service, cardiovascular disease, physical training must be a high priority in all fire departments. Whether picking up an obese patient, performing an auto extrication, or pulling a ceiling during overhaul, Firefighters need to be physically fit. In a report which was posted by the NFPA in 2017, 60% of injuries in the fire service were related to fire ground and non-fire related emergencies, 27.1% of injuries that occurred on the fire scene were classified as "overexertion and strains".




Across the country, private industries have spent a great deal of money to institute health and wellness programs to reduce stress, injuries, and overall wellness for its employees. However, these business are in office settings and not in a dynamic atmosphere like the fire service. Cardiac related events are the leading cause of death in the fire service. A 10-year study, which was published in 2013, has indicated a reduction of cardiac related deaths in the fire service when the firefighters actively participate in a wellness-fitness program.







The fitness equipment located in the fitness room at Station 1 and in the apparatus bay at Station 2 has been acquired over the years through donations and/or purchases made by the Firefighter's Union Local 2904. Some of this equipment is Professional quality, some is homeowner quality, but much of it is showing wear and tear from everyday use by our personnel. Our personnel often train with additional equipment on, such as a Self-Contained Breathing Apparatus to simulate real – life work conditions. Training often involves work on a treadmill or stair stepper, followed by simulated firefighter activities such as pulling hose loads, roof ventilation cutting, etc. This makes it virtually impossible to achieve this type of real-world conditioning at a public fitness facility. Below is a list of the equipment that we are proposing to purchase.

Proposed Equipment:

<u>Equipment</u>	<u>Manufacturer</u>	<u>Unit Price</u>	<u>Qty.</u>	<u>Price</u>
S-2 Squat Stand	Rogue	\$425.00	3	\$1,275.00
STS Flat to Incline Bench	York	\$329.58	1	\$329.58
Cast Iron Weight Plates w/ BB (300lbs)	York	\$199.99	2	\$399.98
Rower	Concept 2	\$900.00	2	\$1,800.00
Treadmill C 850 S	NordicTrack	\$700.00	1	\$700.00
Bumper Plate 45lbs	York	\$67.50	4	\$270.00
Kettle Bell 53lb	Rogue	\$62.50	1	\$62.50
Kettle Bell 35lb	Rogue	\$47.86	1	\$47.86
Prowler	Rogue	\$195.00	2	\$390.00
Sand Bag (X-Large)	Rogue	\$125.00	1	\$125.00
XL Funnel Bag	Rogue	\$75.00	1	\$75.00
Sand Bag (large)	Rogue	\$115.00	2	\$230.00
Large Funnel Bag	Rogue	\$65.00	2	\$130.00
Weight Vest	Dicks Sporting Goods	\$139.99	1	\$139.99
Weight Tree w/ barbell stand	York	\$156.87	2	\$313.74
Blast Mask	Paul Conway Company	\$119.00	4	\$476.00
G-2 Rubber Weight 45lbs	York	\$44.55	4	\$178.20
G-2 Rubber Weight 25lbs	York	\$24.75	2	\$49.50
G-2 Rubber Weight 10lbs	York	\$9.90	2	\$19.80
G-2 Rubber Weight 5lbs	York	\$4.95	2	\$9.90

Heavy Bag Wall Mount	Ringside	\$100.00	1	\$100.00
Basic Barbell Training 3rd Edition	Starting Strength	\$26.96	1	\$26.96
Barbell Prescription	Starting Strength	\$19.96	1	\$19.96
Practical Programing	Starting Strength	\$19.23	1	\$19.23
S&H	Rogue	x	x	\$215.18
S&H	York	x	x	\$138.5
S&H	Paul Conway	x	x	\$50.00
S&H	Concept 2	x	x	\$90.00
S&H	Ringside	x	x	\$14.00
S&H	Starting Strength	x	x	\$6.96
Total				\$7,702.85

S-2 Squat Stand	<ul style="list-style-type: none"> • Allows lifter to perform 6 out of 7 basic human movements to improve strength • Rated for 1,000lbs • Small footprint 	
STS Flat to Incline Bench	<ul style="list-style-type: none"> • Multi-purpose bench provides the ability to use the S-2 to its full potential • Replace rusting bench at station 2 • Compact and mobile 	
Cast Iron Weight Plates w/ BB (300lbs)	<ul style="list-style-type: none"> • Weight set to replace rusting plates at station 1 • Create a uniform set of equipment 	

Rower	<ul style="list-style-type: none"> • Full body cardio equipment • Small footprint & Mobile • Posterior chain strength builder • Low impact on joints 	
Treadmill C 850 S	<ul style="list-style-type: none"> • Most preferred means of cardio • Replace current equipment which has slipping tracks • HIIT or Low intensity training • Can be used in conjunction with a weight vest to simulate fire ground functions 	
Bumper Plates 45lbs	<ul style="list-style-type: none"> • Addition to regular weight plates • Increases the variety of exercises that can be performed with a barbell • Reduces risk of damage to equipment / floor if dropped 	
Kettle Bells (53lbs and 35lbs)	<ul style="list-style-type: none"> • Strength and Cardiovascular training • Multi-purpose equipment • Small footprint 	
Prowler	<ul style="list-style-type: none"> • Strength and Cardiovascular training • Great specificity to fire ground actions • Multipurpose 	
Sand Bag (L-160lbs & XL-220lbs)	<ul style="list-style-type: none"> • Used to replicate carrying awkward objects, which routinely happens in the fire service • Can be used in conjunction with other fitness equipment 	

Weight Vest	<ul style="list-style-type: none"> • Used in the NH CPAT to replicate wearing Firefighting PPE • Can be used in conjunction with other proposed fitness equipment 	
Weight Tree w/ barbell stand	<ul style="list-style-type: none"> • Allows for safe storage of gym equipment • Small footprint 	
Blast Mask	<ul style="list-style-type: none"> • Mimics breathing off of an SCBA while not having to go on air • Specificity is extremely high when used in conjunction with other fitness equipment listed 	
Rubber Weight Plates	<ul style="list-style-type: none"> • Addition to weights already being purchased • Rubberized coating will increase durability in the open bay at Station 2 	
Heavy Bag Wall Mount	<ul style="list-style-type: none"> • Another alternative cardiovascular training piece • Will be used in conjunction with a heavy bag that has already been donated by Local 2904 members 	

PROPOSAL:

Our proposal is the purchase of the fitness equipment to allow our personnel to maintain their physical fitness, strength and stamina necessary for the rigors of the Firefighting and Emergency Medical professions. In conjunction with this equipment purchase, we are researching opportunities to develop a fitness program tailored to our job functions. The total cost of this equipment is \$ 7,702.85. The Abbie Griffin Trust Fund resources in the amount of \$ 7,727.00 would allow us to fully fund this purchase. It is our sincere hope that you will give careful consideration to this proposal request. If you have any further questions please feel free to contact me at any time.

SUMMARY

Merrimack Fire Rescue is always trying to move in a progressive direction as well as striving to provide better service not only to our community but our emergency responders. All equipment that has been listed in this proposal is intended to allow for training with a high specificity for fire and non-fire related incidents, by allowing a trainee to engage in a training philosophy called "progressive overload". When a trainee intends to increase their physical strength, muscular endurance, or cardiovascular capacity, the trainee needs a reliable means to track their progress in a progressive manner. Each piece of equipment supports this, with compound movements (movement that recruits multiple muscle groups) being the primary focus. Similar to the requirements set forth by the NH CPAT, the equipment that has been proposed allows a trainee to engage in physical training that is needed to be a professional firefighter.

By adding this new equipment we will be able to increase our response abilities, the safety of our emergency responders and perhaps even reduce workers compensation insurance costs.

Submitted By:

Michael Currier, Fire Chief
Richard Pierson, Assistant Chief
William Dodge, Firefighter/AEMT



MERRIMACK POLICE DEPARTMENT

31 Baboosic Lake Road • Merrimack, NH 03054
(603) 424-3774 • Fax (603) 424-1760
www.merrimackpd.org

Denise I. Roy
Chief of Police

Michael J. Dudash
Support Services Captain

Brian K. Levesque
Operations Captain

MEMO

DATE: MARCH 26, 2018
TO: PAUL MICALI
FROM: CAPTAIN DUDASH
RE: ABBIE GRIFFIN

The Merrimack Police Department and Chief Denise Roy would like to expend approximately \$7,400 from the Abbie Griffin Fund for fiscal year ending June 30th, 2018. The area that we believe needs our attention immediately would be that of speeding vehicles and funds from Abbie Griffin Fund would be helpful. The speed trailer we currently have is over 20 years old and is in poor condition. At this time the electronics are failing and it is time to replace it with a modern unit. The speed trailer that we presently have has been a beneficial tool to prevent speeding vehicles and reduce accidents. As we all know "Speed Kills" and one of our primary duties is to enforce the motor vehicle laws of this State and to prevent motor vehicle accidents.

Lieutenant Killkelley was assigned to research the alternatives to the trailer and the memo from him detailing the specifics is attached.

It is our request that the Town approve the replacement of the Speed Trailer by allowing the purchase of two portable/light weight Electronic signs that only require one officer to install. The signs weigh less than 25 pounds and can be placed in the back of a cruiser to be transported and installed to areas that need monitoring with very little time and effort.



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MEMO

DATE: MARCH 26, 2018
TO: CHIEF DENISE ROY
FROM: LT. DEAN KILLKELLEY
RE: SPEED SIGNS WITH DATA COLLECTORS

Chief,

As you're aware our current radar trailer is out of service due to the electronics failing. I've researched replacement trailers, the estimates to replace it are between \$11,000.00 and \$15,000.00. We were hoping to be able to retro fit an electronic speed / message board onto our existing trailer to save some money but it does not appear it will be feasible due to safety issues.

The next step and I believe the best solution for our needs would be to purchase electronic speed signs which we can mount to our current speed limit sign post and telephone poles in any neighborhood or roadway in town. These speed signs have come a long way; they include data collectors so we can keep track of vehicle speeds on our roadways and neighborhood along with warning strobe lights to alert the motorist when they exceed the limit. They are lightweight, can be transported in the backseat of any vehicle and can be installed by a single officer.

A 2017 NTSB traffic speed safety study revealed that high-visibility enforcement "is more effective when data is used to target the locations for enforcement". Radar speed signs, also known as driver feedback signs, are traffic calming devices designed to slow speeders down by alerting them of their speed. They are being used across the country, and around the world, because they are effective at slowing speeding drivers down. Tests repeatedly show that:

- Speeders will slow down up to 80% of the time when alerted by a radar sign
- Typical speed reductions are 10-20%.
- Overall compliance with the posted speed limit will go up by 30-60%.
- Radar speed signs are particularly effective at getting "super speeders"—speeders driving 20 mph or more over the posted speed limit—to slow down

When motorists are alerted to their actual speed, and with the flashing strobe lights, I believe we will see a dramatic reduction in speeds on the targeted roadways. The new electronic speed signs are much more portable vs hauling a trailer into a neighborhood or roadway, they will allow us to move these into areas that were inaccessible with the trailer due to its size and safety concerns being parked on the side of a roadway. Below is a link to a video example of how a speed sign is made and works.

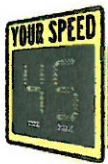
I've researched different models of Speed Signs and believe the Signs which will meet our needs are;

SafePace 250: \$2,599.00

Data collector: \$400.00

Universal bracket: \$125.00

Plus shipping



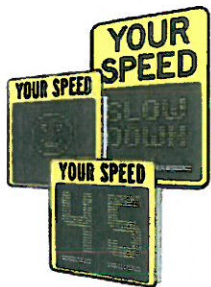
And the

SafePace 650: \$3699.00

Data collector: \$400.00

Universal Bracket: \$125.00

Plus shipping

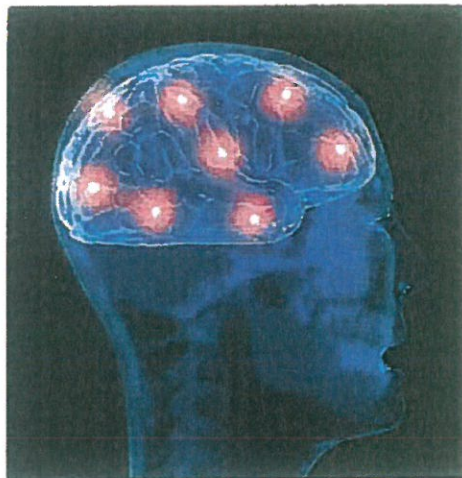


The SafePace 250 would be ideal for our neighborhoods and backroads as the digits are 12" while the SafePace 650 would be utilized in our School Zones and on our major roadways where the speed limits are higher and a more visible sign would serve better, the digits are 15" and it allows for different alert messaging.

Why Do Radar Speed Signs Work?

Why Do Radar Speed Signs Work? The Science Behind Radar Speed Signs' Ability to Change Driver Behavior

Feedback Loops, which have been studied since the 18th century, have long been recognized as an effective strategy to affect behavioral changes. According to Wired.com, driver feedback signs are effective because of Feedback Loops, a simple concept which states: "Provide people with information about their actions in real time (or something close to it), then give them an opportunity to change those actions, pushing them toward better behaviors. Action, information, reaction."



Here's how Radarsign driver feedback radar signs can have a profound effect on driver behavior.

"Familiarity breeds inattention" says RoadtripAmerica.com, citing inattentive drivers as the most common source of collisions. The behavior, described as "driving on autopilot" or "highway hypnosis," is the focus of a Churchill Insurance study of drivers' habits that reveals: On average, drivers make eight journeys on familiar routes each week. And, while traveling on these familiar routes, 46% of drivers say they are most likely to have no recollection of how they got to their destination.

The study – which identifies the top "autopilot journeys" as the work commute (43%), going shopping (16%) and motorway driving (15%) – also confirms that autopilot drivers regularly break the speed limit (25%), brake too late and don't stop at pedestrian crossings because they haven't seen them until it's too late. Further, 7%

of motorists say they are most likely to switch to autopilot while “doing the school run” – a zone that is especially vulnerable to speeding dangers.

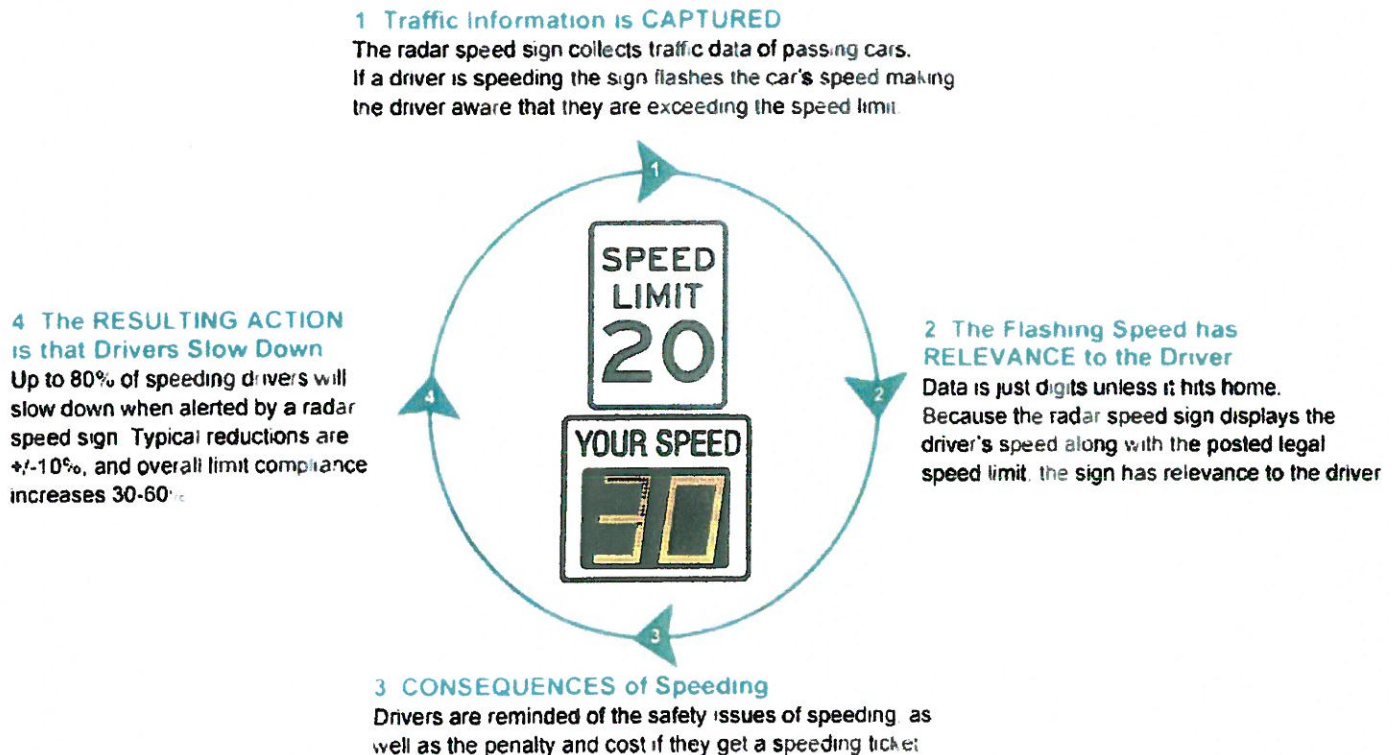
Understanding how the brain works can explain the findings and help identify solutions to improve traffic safety. At its basic level, the human brain – as an electrochemical organ – produces three types of brain waves that have an impact on driver behavior, each reflecting specific levels of the awake brain:

- Beta waves reflect a strongly engaged mind, active in conversation or debate.
- Alpha waves reflect a state of rest or relaxation (e.g. a break from work to take a walk in a garden).
- Theta waves reflect a state of functional daydream – the ability to complete repetitious or habitual tasks, such as driving to and from work.

Converting a driver’s brain activity from a Theta “autopilot” state to a Beta “engaged” state requires a trigger — an event or interruption that is identified by the Reticular Activator (RA). The RA is the ignition part of the brain, on alert, searching and categorizing all sensory input into categories such as familiar/connected, unusual/shocking/strange, or dangerous/threatening/problematic. Once the RA — which also controls the transition between different states — is triggered by something unfamiliar, problematic or dangerous, the brain instantly converts from Theta to Beta.

Radar Speed Signs as Reticular Activators

Strategically placed radar speed signs can serve as triggers – stimulating the RA to identify potential “danger” – to transition a driver’s brain activity from Theta to Beta. Utilized as part of a comprehensive traffic management plan in areas classified as 1) “familiar routes” with 2) a high risk of pedestrian traffic, radar speed signs can alert drivers to pay attention.



In Theta mode, drivers see speed limit signs as usual and familiar, but can be prompted into Beta mode by something unusual AND problematic, such as a flashing radar speed sign that indicates high speed. Once engaged, the driver is alert, paying attention and slowing the vehicle to a safer speed.

An independent speed study conducted by the City of Bellevue [Wash.] Transportation Department found that at ten locations — where radar driver feedback signs had been installed for six or more years — the speed reduction effectiveness continued to increase over time: 60% of drivers reduced speed by 10 mph.

Radarsign data also confirms a consistent five mph reduction in average speeds and a 62% reduction in the number of drivers who speed more than five mph above the speed limit. More than two years after installation, data indicates a long-term shift in driver behavior (Alpharetta, GA location — comparing week 1 data with week 109 data).

If you like this, share it

TRAFFIC LOGIX®
SAFEPLACE® 250 PRODUCT SPECIFICATIONS

Radar Sign Specifications



SafePace® 250 Product Specifications

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This document is supplied as a guide for the SafePace 250 product. Reasonable care has been taken in preparing the information it contains. However, it is possible that this document contains omissions, technical inaccuracies, or typographical errors. Product specifications are subject to change without notice and should not be considered commitments by Traffic Logix Corporation. Traffic Logix Corporation does not accept responsibility of any kind for customers' losses due to the use of this document.

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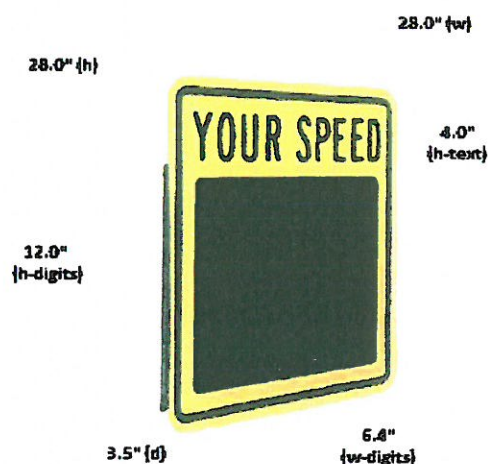
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Data Collection, Statistical Analysis and Reporting (optional feature)	8
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DIMENSIONS

- » Digit: 12"(h) x 6.4"(w), 112 LEDs per digit
- » Text: Letters 4.0" (h) spell "YOUR SPEED" fixed message, 1 line
- » Unit alone: 21.5"(h) x 26"(w) x 3.5"(d)
- » Unit with "YOUR SPEED" sign mounted:
 - Full size sign: 28.0"(h) x 28.0"(w) x 3.5"(d)
- » Sign Weight (unit alone without "YOUR SPEED" sign)
 - AC Powered Model: 18 lbs
 - 4 Cell Battery Powered Model: 22 lbs
 - Solar Powered Model: 20 lbs (does not include solar panel or bracket)
- » Accessories
 - 4 Cell Lithium Ion Battery: 4 lbs
 - Universal Mounting Bracket System
 - Sign Bracket: 2 lbs
 - Pole Bracket: 5 lbs



All Specifications Subject to Change Without Notice

TECHNICAL SPECIFICATIONS

- » Miles Per Hour (mph) or Kilometers Per Hour (km/h)
- » Aluminum protective cover: 0.1875" (d)
- » Yellow or white high-Intensity prismatic reflective sheeting on the sign face with black colored text
- » MUTCD approved colors and format
- » Operating Temperatures F (C): -40° (-40°) to 185° (85°)
- » Conformal coating on all circuit boards

Power

- » Power input:
 - 100~240 V AC
 - 12 V DC
 - Built in ambient light sensing and automatic brightness control
 - Wireless battery charge monitor
- » Power Options
 - AC power input: 100~240 V AC
 - DC power input: 12 V DC
 - Solar power: 50W or 90W solar panel depending on location



NOTE: Unless the power source is continuous, direct AC/DC power; the sign must be programmed to only display speeds when it detects an approaching vehicle and remain blank the rest of the time (to conserve power). Solar power with battery backup will not, in most cases, provide enough continuous power for the sign to display speeds constantly.

Radar

- » Internal Radar: Doppler (FCC approved)
- » Radar RF out: 5 mW maximum
- » Radar f-center: 24.125 GHz center +/- 25 MHz
- » Pickup distance: Up to 1,200 feet
- » Beam angle: 11° x 11°
- » Beam polarization: Linear

Display

- » LEDs 252:
 - Digits: 224 Amber, 23°, 5 mm, luminous Intensity (5,000 – 12,000 mcd/LED)
 - Speed Violator Strobe: 28 White, 15°, 5 mm, luminous intensity (18,000 – 28,000 mcd/LED)
- » Optical lenses: 252 lenses

- » Ambient light sensor and automatic brightness adjustment

Enclosure

- » 12 gauge aluminum, flat black powder coated front for reduced glare and maximum contrast; light gray powder coated body to minimize heat absorption
- » Weatherproof, NEMA 4X-12, IP65 level compliant
- » Non-sealed and ventilated

Mounting Options

- » Banding brackets (standard)
- » Universal Mounting Bracket System
 - Universal mounting options: circular, square and telspar poles
 - Theft resistant
 - Promotes sign portability: sign locks into mounting bracket with a turn of a key

All Specifications Subject to Change Without Notice

COMMUNICATIONS

- » Bluetooth (standard)
- » GSM/GPRS (optional, for use with SafePace Cloud)



PROGRAMMING

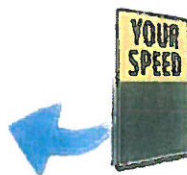
- » SafePace® Pro management software
- » SafePace® Cloud remote management
- » 24/7 365 day unlimited programming and scheduling
- » Display Settings:
 - Display On/Stealth Modes (In Stealth Mode, speed is not displayed but data is collected)
 - Display Minimum Speed, Display Maximum Speed
 - Digit Flashing Speed Threshold (digits flash above selected speed)
 - Speed Violator Strobes (pulsing strobes flash with digits or alone above Display Maximum Speed)



All Specifications Subject to Change Without Notice

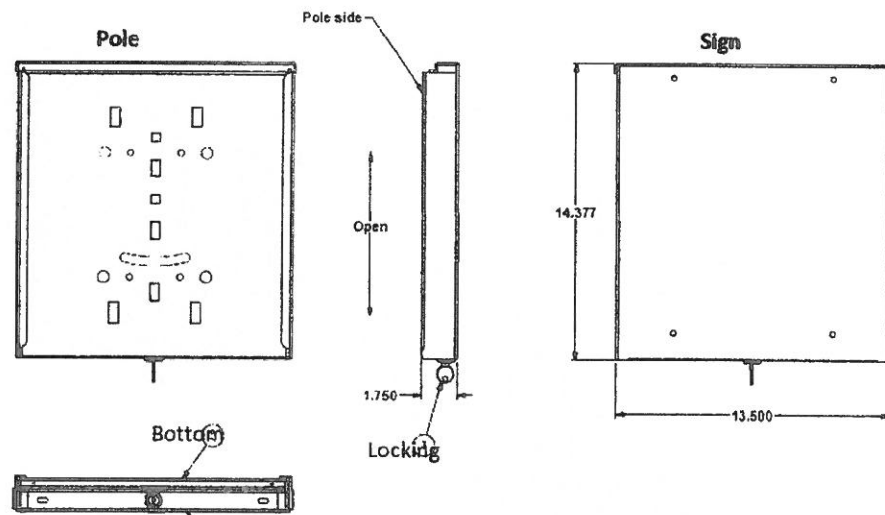
DATA COLLECTION, STATISTICAL ANALYSIS AND REPORTING (OPTIONAL FEATURE)

- » Traffic data collected and stored by location
- » Stealth Mode (captures baseline traffic data with speed display turned off)
- » Download through wireless connection
- » Statistical Reporting & Charts
 - Summary Reports
 - Weekly Reports
 - Period Comparison Reports
 - Full custom reports and charts
 - Reporting Parameters:
 - Average Vehicle Count
 - Total Vehicle Count
 - Average Speed
 - Average Number of Speed Violations
 - Total Number of Speed Violations
 - Other Features:
 - Minimum and Maximum Speed
 - 85% Speed
 - Counters by Speed Bins
 - 5 MPH Bin Resolution
 - Reports print directly or can be exported into CSV format, MS Excel, Adobe Acrobat PDF and HTML
 - Charts may be printed directly or converted into Adobe Acrobat PDF and image formats

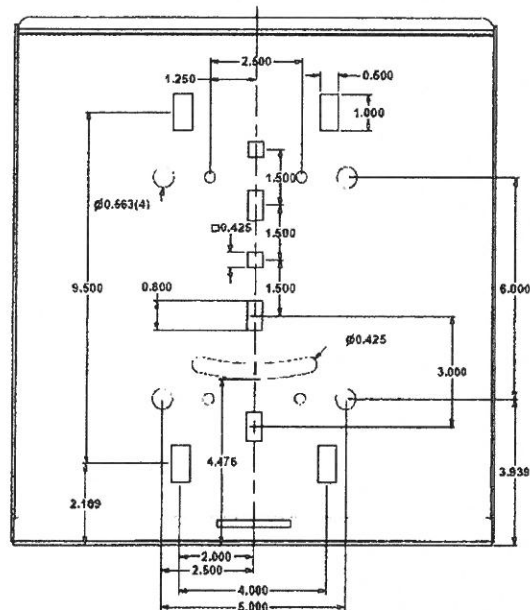


All Specifications Subject to Change Without Notice

UNIVERSAL MOUNTING BRACKET SYSTEM



Inside View



All Specifications Subject to Change Without Notice

WARRANTY



Two Year Warranty

Subject to the following conditions, Traffic Logix Corporation ("Traffic Logix") warrants that the SafePace 250 sign (the "Product") is free from defects in materials and workmanship.

This limited warranty begins on the invoice date of your purchase of the Product and extends:

- » For TWO (2) calendar years on the sign, and
- » For ONE (1) calendar year on the batteries.

This limited warranty extends only to the original purchaser of the Product when purchased either directly through Traffic Logix or through an authorized Traffic Logix distributor and is not assignable or transferable to any subsequent purchaser or end-user. Traffic Logix's obligation and liability under this warranty are expressly limited to repairing or replacing, at Traffic Logix's option, defective products. In no circumstances shall Traffic Logix's liability, whether in contract or tort, under any warranty, in negligence, or otherwise, exceed the amount of the purchase price of the product. Traffic Logix shall not be liable for special, indirect, or consequential damages of any kind. This warranty does not cover damages resulting from normal wear and tear, incorrect installation or operation, use other than for the product's intended purposes, vandalism, and extraordinary environmental circumstances. Traffic Logix reserves the right to charge for these damages to the product at rates normally charged for repairing such products not covered under this warranty. Damages resulting from any physical changes or alterations made to the product other than Traffic Logix will render this warranty **VOID**. Using any parts or accessories not supplied or approved by Traffic Logix, such as battery chargers, will further render the warranty **VOID**.

Traffic Logix neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale of the Product, and there are no agreements or warranties collateral to or affecting this limited warranty.

THE LIMITED WARRANTY SET FORTH IN THIS AGREEMENT IS THE EXCLUSIVE AND SOLE WARRANTY APPLICABLE TO THIS PURCHASE. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

Traffic Logix does not warrant that any of its products will meet or comply with the requirements of any applicable federal, state or local safety code, law, regulation or ordinance ("Applicable Safety Laws"). Buyer acknowledges that Traffic Logix's products are to be used only in accordance with the attached Conditional Terms of Use and any Applicable Safety Laws. Buyer agrees that there shall be no coverage or benefits of any kind under this limited warranty if it is determined by Traffic Logix that the Product was not installed or used in accordance with the Conditional Terms of Use or Applicable Safety Laws, or if the Product has been altered in any way by anyone other than Traffic Logix, or if the Product has been subject to any misuse or accident. In addition, Buyer assumes and agrees

to indemnify Traffic Logix for all risk, liability or expense that results from any installation or use of the Product that is not in accordance with the Conditional Terms of Use or any Applicable Safety Laws.

Warranty Replacement Procedure

In order to submit a claim for the repair or replacement of the Product under this limited warranty, proceed as follows:

1. Contact Technical Support. **Do NOT** ship your defective product to Traffic Logix prior to contacting Technical Support.
2. A Technical Support Agent will evaluate the Product to determine if it is defective. You may be required to do some troubleshooting as part of this evaluation.
3. If the Product is defective, then you will need to submit your contact information, and proof of purchase (including the date of purchase), in order to obtain repair or replacement parts.
4. The Technical Support Agent will provide you with a Return Materials Authorization number and instructions on how to have the defective parts repaired or replaced.



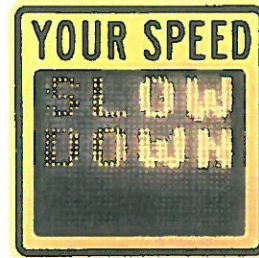
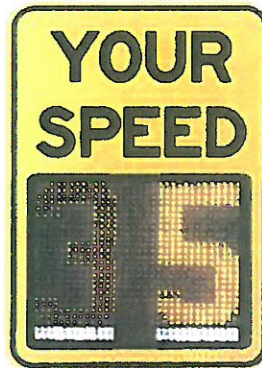
COMPARISON CHART

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Traffic Logix®

SafePace® 650 (Full & Compact) Radar Speed Signs

Product Specifications Version 1.0



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Dimensions

- Digit: 15.0"(h) x 8.0"(w)
- Text:
 - Full Size: Letters 6.0"(h) spell "YOUR SPEED" fixed message, 2 lines
 - Compact Size: Letters 4.0" (h) spell "YOUR SPEED" fixed message, 1 line
- Unit alone: 21.5"(h) x 26.0"(w) x 3.0"(d)
- Unit with "YOUR SPEED" sign mounted:
 - Full Size: 40.0"(h) x 30.0"(w) x 3.5"(d)
 - Compact Size: 28.0"(h) x 28.0"(w) x 3.5"(d)
- Sign Weight (unit alone without "YOUR SPEED" sign)
 - AC Powered Model: 18 lbs
 - Battery Powered Model (3 batteries): 30 lbs
 - Solar Powered Model: 30 lbs (does not include solar panel or solar panel bracket)
- Accessories
 - Cell Lithium Ion Battery: 4 lbs
 - Universal Mounting Bracket System
 - Sign Bracket: 2 lbs
 - Pole Bracket: 5 lbs

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Technical Specifications

- Miles Per Hour (mph) or Kilometers Per Hour (km/h)
- Aluminum protective cover: 0.1875" (d)
- Yellow or white High-Intensity prismatic reflective sheeting on the sign face with black colored text
- MUTCD approved colors and format
- Operating Temperatures F (C): -40° (-40°) to 185° (85°)
- Conformal coating on all circuit boards
- Power
 - Power input:
 - AC 100~240 VAC
 - 12 VDC
 - Built in ambient light sensing and automatic brightness control
 - Wireless battery charge monitor
 - Power Options
 - AC power input: 100~240 VAC
 - DC power input: 12 VDC
 - Solar power: 85 W solar panel
- Radar
 - Internal Radar: Doppler (FCC approved)
 - Radar RF out: 5 mW maximum
 - Radar f-center: 24.125 GHz center +/-25 MHz
 - Pickup distance: Up to 1,200 feet (366 m)
 - Beam angle: 11° x 11°
 - Beam polarization: Linear
- Display
 - 796 LEDs:
 - Digits: 744 Amber, 23°, 5 mm, luminous Intensity (5680 – 8200 mcd/LED)
 - Speed Violator Strobe: 52 White, 15°, 5 mm , luminous intensity (28,150 mcd/LED)
 - Optical lenses: 796 lenses
 - Ambient light sensor and automatic brightness adjustment

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- **Enclosure**
 - 12 gauge aluminum, flat black powder coated front for reduced glare and maximum contrast; light gray powder coated body to minimize heat absorption
 - Weatherproof, NEMA 4X-12, IP65 level compliant
 - Non-sealed and ventilated
- **Mounting Options**
 - Banding brackets (standard)
 - Universal Mounting Bracket System
 - Universal mounting options: circular, square and telspar poles
 - Theft resistant
 - Promotes sign portability: sign locks into mounting bracket with a turn of a key

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Communication

- Bluetooth 4.0
- Wi-Fi



Programming

- SafePace® Pro management software
- 24/7 365 day unlimited programming and scheduling
- Display Settings:
 - Display On/Stealth Modes (In Stealth Mode, speed is not displayed but data is collected)
 - Display Minimum Speed, Display Maximum Speed
 - Digit Flashing Speed Threshold (digits flash above selected speed)
 - Message Flashing Speed Threshold (message flash above selected speed)
 - 4 standard messages: "SPEED LIMIT", "YOUR SPEED", "SLOW DOWN", "TOO FAST"
 - 4 Custom Message slots
 - 1 custom Animation which can utilize up to four Custom Message slots
 - 2 Speed Violator Strobes (pulsing strobes flash with digits or alone above Display Maximum Speed)



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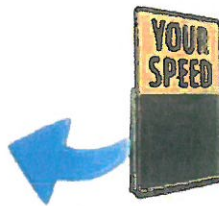


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Data Collection and Statistical Analysis & Reporting (optional feature)

- Traffic data collected and stored by location
- Stealth Mode (capture baseline traffic data with speed display off)
- Download through wireless connection
- Statistical Reporting & Charts
 - Summary Reports
 - Weekly Reports
 - Period Comparison Reports
 - Full custom reports and charts
 - Reporting Parameters:
 - Average Vehicle Count
 - Total Vehicle Count
 - Average Speed
 - Average Number of Speed Violations
 - Total Number of Speed Violations
 - Other Features:
 - Minimum and Maximum Speed
 - 85% Speed
 - Reports print directly or can be exported into CSV format, MS Excel, Adobe Acrobat PDF and HTML
 - Charts may be printed directly or converted into Adobe Acrobat PDF and picture formats



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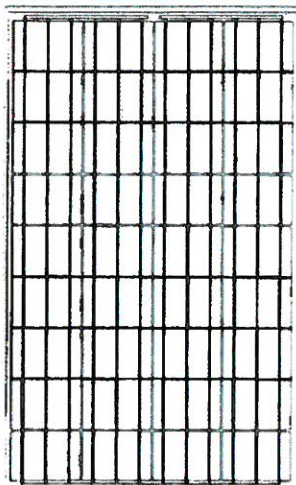


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SafePace 650 Solar Panel specifications

DS-A1-85 Panels Specifications



Solar cells: Crystalline solar cells

Laminate: Glass /EVA / TPT (tedlar/pet tedlar) or TPE

Front Side: High-transmission 3.2mm tempered glass

Back Side: TPT /TPE

Frame: Clear anodized aluminum frame

Output cable: Junction box

Module Type	Pm(Wp)±5%	Vmpp(V)	Impp(A)	Voc(V)	Isc(A)	Module size(mm)	NET(kg)
DS-A1-85	85	17.3	4.91	21.6	5.46	1008*653*35	7.8

Operation Temperature Range: - 40 85

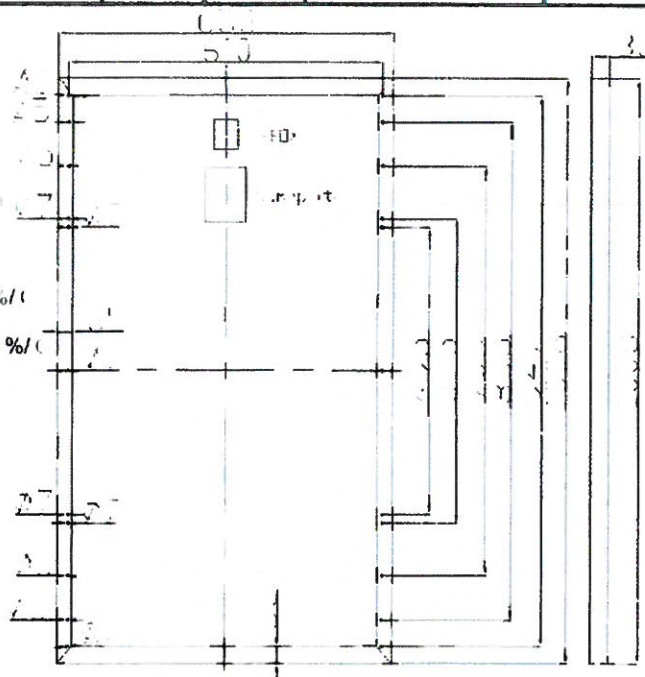
NOCT: 48 (3)

Temperature coefficients of Im: + 0.1 %/°C

Temperature coefficients of Vm: - 0.38 %/°C

Maximum System Voltage: DC600V

STC: 1000W/m², 25°C, AM1.5



All the data of this sheet are subjected to change without notice.

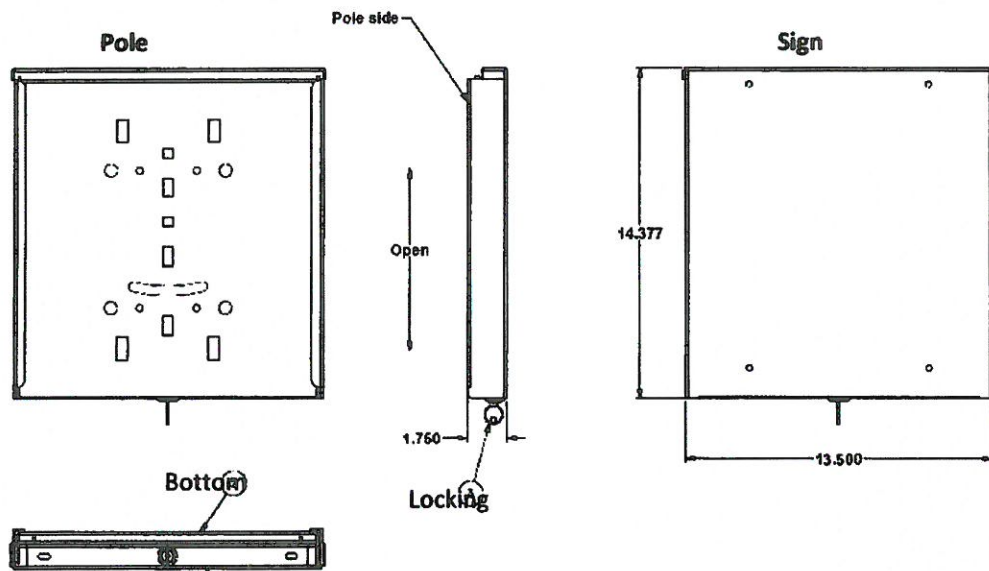
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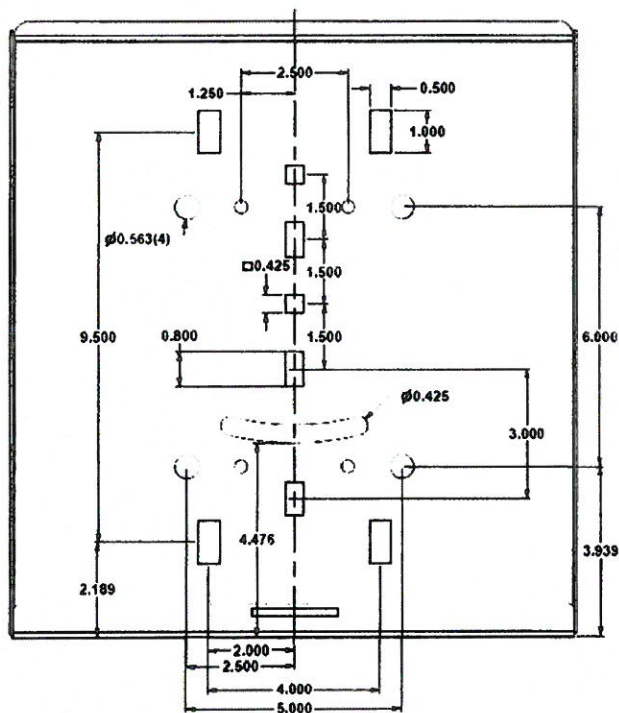
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Universal Mounting Bracket System



Inside view



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Warranty

Subject to the following conditions, Traffic Logix® Corporation ("Traffic Logix®") warrants that the SafePace® 650 Speed sign sold by it (the "Product") is free from defects in materials and workmanship with normal use and service. This limited warranty extends for TWO (2) calendar year beginning on the invoice date of the Product on the radar sign and TEN (10) years on the LEDs.

This limited warranty extends only to the original purchaser of the Product when purchased either directly through Traffic Logix® or through an authorized Traffic Logix® distributor and is not assignable or transferable to any subsequent purchaser or end-user. Traffic Logix's® obligation and liability under this warranty are expressly limited to repairing or replacing, at Traffic Logix's® option, defective products. In no circumstances shall Traffic Logix's® liability, whether in contract or tort, under any warranty, in negligence, or otherwise, exceed the amount of the purchase price of the product. Traffic Logix® shall not be liable for special, indirect, or consequential damages of any kind. This warranty does not cover damages resulting from normal wear and tear, incorrect installation or operation, use other than for the product's intended purposes, vandalism, and extraordinary environmental circumstances. Traffic Logix® reserves the right to charge for these damages to the product at rates normally charged for repairing such products not covered under this warranty. Damages resulting from any physical changes or alterations made to the product other than Traffic Logix® will render this warranty VOID. Using any parts or accessories not supplied or approved by Traffic Logix®, such as battery chargers, will further render the warranty VOID.

Traffic Logix® neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale of the Product, and there are no agreements or warranties collateral to or affecting this limited warranty.

THE LIMITED WARRANTY SET FORTH IN THIS AGREEMENT IS THE EXCLUSIVE AND SOLE WARRANTY APPLICABLE TO THIS PURCHASE. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

Traffic Logix® does not warrant that any of its products will meet or comply with the requirements of any applicable federal, state or local safety code, law, regulation or ordinance ("Applicable Safety Laws"). Buyer acknowledges that Traffic Logix's® products are to be used only in accordance with the attached Conditional Terms of Use and any Applicable Safety Laws. Buyer agrees that there shall be no coverage or benefits of any kind under this limited warranty if it is determined by Traffic Logix® that the Product was not installed or used in accordance with the Conditional Terms of Use or Applicable Safety

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Laws, or if the Product has been altered in any way by anyone other than Traffic Logix®, or if the Product has been subject to any misuse or accident. In addition, Buyer assumes and agrees to indemnify Traffic Logix® for all risk, liability or expense that results from any installation or use of the Product that is not in accordance with the Conditional Terms of Use or any Applicable Safety Laws.

Warranty Replacement Procedure

In order to submit a claim for the repair or replacement of the Product under this limited warranty, you must do the following:

- 1) Obtain a Return Materials Authorization number by contacting Customer Support. Do not ship your defective product to Traffic Logix® prior to contacting Customer Support.
- 2) A Customer Support agent will evaluate the Product to determine if it is defective. If the product is defective, then you will need to submit your contact information, and proof of purchase (including the date of purchase), in order to obtain repair or replacement parts.
- 3) The Customer Service Agent will provide you with instructions on how to have defective parts repaired or replaced.



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Installation Guide: SafePace 100 **Universal Mounting Bracket System**

With the *Universal Mounting Bracket System*, the SafePace 100 Radar Speed Sign can easily be mounted and dismounted from the installation pole with just the turn of a key. This quick mount and dismount feature readily allows the sign to be moved from one location to another with relative ease and convenience. Additional pole brackets can be purchased separately.

Components:

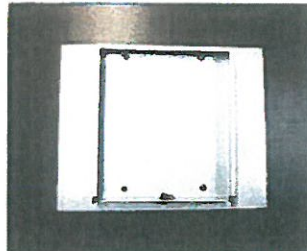
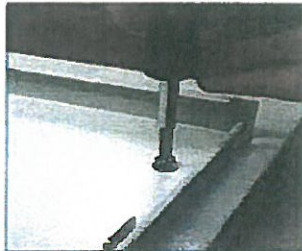
- SafePace 100 Radar Sign – available at SafestParkingProducts.com
- Universal Mounting Bracket System (includes 1 sign bracket & 1 pole bracket)
- Installation Hardware (included)

**** Please refer to our “General Installation Guide: SafePace 100 Radar Sign” document for choosing the proper installation location and further details.**

Installing the Mounting Brackets

Sign Bracket

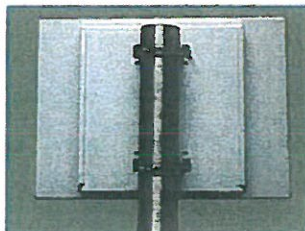
Attach the Sign Bracket to the backside of the SafePace 100 Radar Sign using the included hardware.



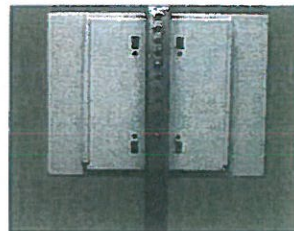
Use supplied hardware to mount the Sign Bracket to the rear of the SafePace 100

Pole Bracket

The Pole Bracket can be secured to any type of standard pole or Telespar type pole by a choice of banding straps, lag screws, or bolts and nuts.



Pole bracket mounted to circular pole



Pole bracket mounted to 2" Telespar pole

Installation of the Pole Bracket using supplied banding straps

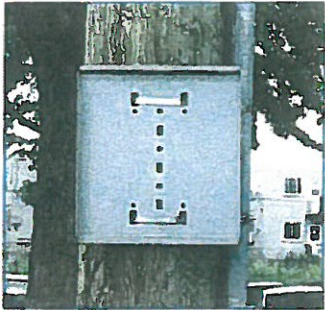


Figure 3.1

Pole bracket banded to utility pole.



Figure 3.2

Additional lag bolts should be used for added security.



Figure 3.3

Profile view of pole bracket banded.

NOTE: It is highly recommended that if banding is used to secure the Pole Bracket additional screws and/or bolts should also be used (see Figure 3.2 above) to further prevent theft and vandalism.

Installation of Pole Bracket on Telespar Pole (Note: a 2 inch Telespar pole should be used)

Use the supplied 2.5" stainless steel security bolts and nuts to secure the Pole Bracket to the 2" Telespar pole. Note: It is very important that the head of the bolt be placed on the Telespar pole (See Figures 4.1 and 4.2) and that the nuts be placed on the inside part of the bracket (see Figures 4.3 and 4.4).

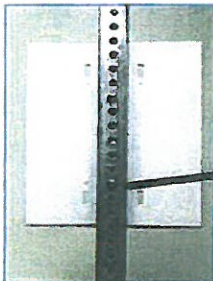


Figure 4.1

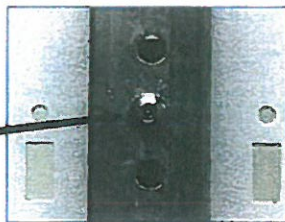


Figure 4.2

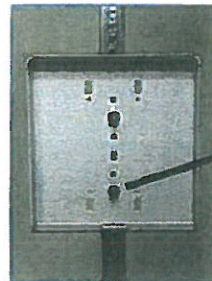


Figure 4.3

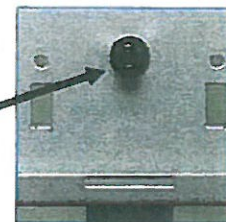


Figure 4.4

Mounting and Dismounting the SafePace 100

The SafePace 100 easily mounts by sliding the sign down onto the Pole Bracket and dismounts by sliding the sign up off of the Pole Bracket. Once mounted, the sign should be locked into place as shown in Figure 5.3.



Figure 5.1

Step 1: Position the sign above the bracket.

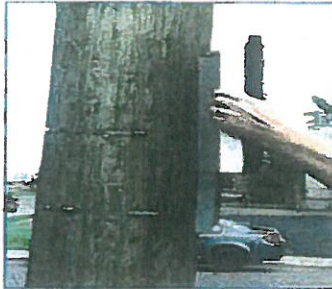


Figure 5.2

Step 2: Slide the sign down the bracket.

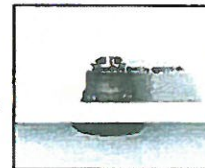


Figure 5.3

Step 3: Lock the sign in place.

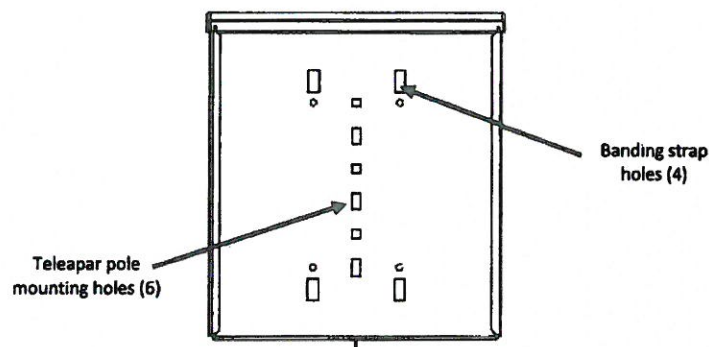


WARNING: To prevent damage to the locking mechanism of the Universal Mounting Bracket System, the key must be removed from the lock and the locking mechanism must be set in the "unlocked" position (see picture on right) BEFORE sliding the sign ON or OFF of the Pole Bracket.



Locking Mechanism in "unlocked" position

Pole Bracket



** Detailed installation instructions (i.e. how to connect the proper power source and optional Solar Panel) are shipped with every SafePace 100 Radar Sign.

**Technical Support: for any questions or comments regarding the SafePace 100 Radar Speed Sign, please contact: (866) 915-6449 or support@trafficlogix.com.