

MAINTENANCE OF TRAFFIC NOTES

LAKE COUNTY
LAK-90/271-1.88/0.00

OHIO

FHWA
REGION 5

FEDERAL
PROJECT

22A
185

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, CLASS 11, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE 2 EACH, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN ON SITE FOR THE DURATION OF THE PROJECT. AT THE COMPLETION OF THE PROJECT, OR WHEN DIRECTED BY THE ENGINEER, THE SIGN SHALL BECOME THE PROPERTY OF ODOT DISTRICT 12, AND DELIVERED TO 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO. THE SIGN SHALL BE IN GOOD WORKING ORDER, AND MUST BE ACCEPTED BY THE ENGINEER IN WRITING BEFORE OWNERSHIP IS TRANSFERRED. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. MACHINES OTHER THAN THOSE ON THE APPROVED LIST MUST FIRST BE FIELD TESTED AND APPROVED TO BECOME ELIGIBLE FOR THIS PROJECT. EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

GENERAL SPECIFICATIONS: THESE SPECIFICATIONS ARE INTENDED TO DESCRIBE THE MINIMUM PERFORMANCE AND TECHNICAL CRITERIA OF A SOLAR POWERED, TRAILER MOUNTED PORTABLE MESSAGE SIGN UPON WHICH VARYING ELECTRONICALLY GENERATED MESSAGES WILL BE DISPLAYED TO HIGHWAY TRAFFIC AS ADVISORIES FOR THE PURPOSE OF PROVIDING INFORMATION, WARNINGS, AND/OR CONTROL. THE UNIT MUST BE NEW, UNUSED, CURRENT PRODUCTION, AND YEAR MACHINE TO INCLUDE THE LATEST TECHNICAL IMPROVEMENTS.

ITEM	MINIMUM REQUIREMENTS
A. POWER	
1. SOLAR PANEL	REQUIRED
2. PHOTOVOLTAIC ARRAY WITH TOTAL OUTPUT OF	424 WATTS
3. AUTONOMY (DAYS)	30 DAYS
4. OPERATING VOLTAGE	12 VDC
5. EIGHT DEEP CYCLE 4-D 12 VOLT BATTERIES	MINIMUM
6. ON BOARD BATTERY CHARGER WITH REGULATOR	50 AMP
7. LOCKABLE BATTERY AND BATTERY CHARGER COVER	REQUIRED
8. LOW VOLTAGE DISCONNECT	REQUIRED
9. UNIT CAPABLE OF OPERATING FROM STANDARD 120 VOLT AC ELECTRICAL SERVICE	REQUIRED
B. MESSAGE PANEL	
1. L.E.D.	REQUIRED
2. SIGN DIMENSIONS	76" X 113"
3. THREE, EIGHT CHARACTER LINES	REQUIRED
4. LINE SPACING	6"
5. CHARACTER DIMENSIONS	18" H X 12" W
6. MESSAGE PANEL ROTATION WITH LOCK	360
7. PANEL LIFT, ELECTRIC/HYD. WITH BACKUP MANUAL PUMP	REQUIRED
8. HEIGHT FULLY RAISED	13'6"

B. MESSAGE PANEL (CONT'D)

- SIGN TO BE PARALLEL TO THE DIRECTION OF TOWING WHEN IN THE TRANSPORT POSITION
REQUIRED
- SIGN SHALL BE CLEARLY VISIBLE AND LEGIBLE BOTH DAY AND NIGHT FROM A DISTANCE UP TO
900'

C. CONTROLS

- COMPUTER CONTROL HOUSED IN WEATHER RESISTANT LOCKABLE CONTROL BOX
REQUIRED
- THE UNIT SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED, OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK
REQUIRED
- SELECTIVE LINE BLINK
REQUIRED
- PREPROGRAMMED AND USER PROGRAMMED MESSAGES
250
- TWO DIFFERENT MEMORIES
PROM AND RAM
- CONTROL CONSOLE DISPLAY
REQUIRED
- PROGRAMMING KEYBOARD DESIGNED FOR SEVERE SERVICE APPLICATION
REQUIRED
- OPERATING TEMPERATURE RANGE
-25 TO +50C
- AUTOMATIC DIMMING MECHANISM
REQUIRED
- ALL COMPONENTS SHALL BE ACCESSIBLE AND A SCHEMATIC DIAGRAM SHALL BE FURNISHED
REQUIRED

D. TRAILER

- TWO WHEEL TRAILER STRUCTURALLY ADEQUATE TO SERVE BOTH AS A CARRIER AND AS AN OPERATING PLATFORM FOR ALL COMPONENTS
REQUIRED
- THE BASIC TRAILER STRUCTURE TO BE MADE FROM STRUCTURAL RECTANGULAR STEEL TUBING
2" X 4"
- AXLE AND SUSPENSION SYSTEM SHALL BE OF ADEQUATE CAPACITY WITH A MINIMUM CAPACITY OF
3,500 LBS.
- STEEL FENDER INSTALLED OVER EACH WHEEL
REQUIRED
- HYDRAULIC SURGE BRAKES
REQUIRED
- HEAVY DUTY RADIAL TIRES, 4 PLY RATING
15"
- ADJUSTABLE HITCH HEIGHT
REQUIRED
- BOTH 2" BALL AND 3" PINTLE RING HITCH INCLUDED
REQUIRED
- SAFETY CHAINS AND HOOKS
REQUIRED
- FOUR (4) 2,000 LBS. CAPACITY LEVELING JACKS WITH CRANK TYPE SWIVEL
REQUIRED

D. TRAILER (CONT'D)

- COMPLETE STANDARD HIGHWAY LIGHTING PACKAGE WITH A N.A.P.A. SIX POLE PLUG *TC-6207 OR EQUAL
REQUIRED
- TRAILER SHALL BE CAPABLE OF 55 MPH SUSTAINED HIGHWAY SPEED AND 80 MPH WIND GUSTS WHEN IN DISPLAY WITH ALL OUTRIGGERS IN PLACE
REQUIRED

E. PAINT (UNLEADED ONLY)

- ALL PARTS TO BE PAINTED AND COMPLETELY CLEANED FROM RUST AND GREASE
REQUIRED
- AT LEAST ONE COAT OF PRIMER APPLIED
REQUIRED
- THE TRAILER SHALL BE PAINTED MANUFACTURER'S STANDARD COLOR
REQUIRED
- THE MESSAGE PANEL TO BE PAINTED BLACK
REQUIRED

F. MANUALS

- OPERATING MANUAL
2 PER UNIT
- PARTS MANUAL
2 PER UNIT
- WIRING DIAGRAMS AND TROUBLESHOOTING GUIDE
1 PER UNIT

G. WARRANTY

- ENTIRE UNIT ON SITE WARRANTY
12 MONTH

H. TRAINING

- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 8 HOURS OF OPERATING AND MAINTENANCE TRAINING BY FACTORY TRAINED REPRESENTATIVE AT THE POINT OF DESTINATION
REQUIRED

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