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633 CENTRAL OFFICE MONITOR, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING THE CENTRAL OFFICE MONITOR TO BE LOCATED AT THE ODOT DISTRICT 12 HIGHWAY MANAGEMENT OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO - ATTENTION: TOM ROSS, PHONE 216-581-2333 X 297. THE BASIC CENTRAL EQUIPMENT COMPLEMENT SHALL BE SUPPLIED AND SHALL CONSIST OF THE FOLLOWING:

1. AN IBM OR IBM COMPATIBLE PERSONAL COMPUTER, PENTIUM II PROCESSOR RUNNING AT 300 MHZ WITH 128 MB USER MEMORY, 32-BIT PCI BUS TYPE MOTHER BOARD, 512K CACHE, 1.44 MB INTERNAL 3.5 INCH FLOPPY DISKETTE DRIVE, 3.2 GB HARD DISK DRIVE, 24 SPEED CD ROM IDE DRIVE, BUILT-IN SVGA WITH 2 MB VRAM, THREE EXPANSION SLOTS, TWO SERIAL PORTS, ONE PARALLEL PORT, MICROSOFT BUS MOUSE, INTERNAL COLORADO 1400 TAPE BACKUP, 104 ENHANCED SOFT TOUCH KEYBOARD AND WINDOWS 98.
 - A. A HEWLETT PACKARD PAINJET XL-300, 11" x 17" FORMAT COLOR PRINTER OR AN APPROVED EQUAL.
 - B. 17 INCH SVGA 1280 X 1024, 0.28mm, COLOR MONITOR.
 - C. A 56.6 EXTERNAL MODEM.
 - D. A 56.6 INTERNAL FAX / VOICE MODEM.
 - E. A POWER LINE FILTER, VOLTAGE SURGE PROTECTOR AND A FUSE PROTECTED MULTI-SERVICE OUTLET WITH AT LEAST SIX POSITIONS.
 - F. ALL NECESSARY CABLES AND ACCESSORIES NEEDED TO MAKE THE SYSTEM OPERATE ACCORDING TO THESE SPECIFICATIONS.
 - G. PHONE DROP SHALL BE PROVIDED BY ODOT DISTRICT 12.
2. TWO (2) PENTIUM PORTABLE LAPTOP MICROCOMPUTER WITH 2.0 GB HARD DISK DRIVE, 1.44MB INTERNAL 3.5 INCH FLOPPY DISK DRIVE, 8MB RAM MEMORY, ACTIVE MATRIX COLOR SCREEN AND 28.8 K BAUD INTERNAL MODEM WITH CARRYING CASE.
3. THE GRAPHICS SHALL DISPLAY IN COLOR, THE VEHICULAR SIGNALS, PEDESTRIAN SIGNALS AND DETECTOR ACTUATION. EACH INTERSECTION IN ANY OF THE SUBSYSTEMS SHALL BE CAPABLE OF VIEWING ONE INTERSECTION AT A TIME. THE INTERSECTION LAYOUT SHALL BE GRAPHICALLY CONSTRUCTED BY THE USER USING PREDETERMINED SHAPES (EG: "T" INTERSECTION). ALSO IT SHALL BE POSSIBLE TO DISPLAY THE STATUS OF A COMPLETE SUBSYSTEM AT ONE TIME ON THE MONITOR. THE NAME AND SIGNAL STATUS (G-Y-R) OF EACH INTERSECTION SHALL BE DISPLAYED. THE SUBSYSTEM NETWORK SHALL BE CAPABLE OF BEING CONFIGURED IN ANY USER DEFINED GRID.
4. UPON COMMAND FROM THE CENTRAL OFFICE FACILITY, IT SHALL BE POSSIBLE TO DOWNLOAD ALL STORED SETTING ON THE DATA DISK FOR INTERSECTION CONTROLLER TIMING AS WELL AS COORDINATION SETTINGS AND TIME OF DAY PLANS. IT SHALL BE POSSIBLE TO DOWNLOAD ALL SETTINGS TO ALL INTERSECTIONS IN A SUBSYSTEM OR SELECT ANY/ALL PARAMETERS TO ANY INDIVIDUAL INTERSECTION. ALSO, UPON COMMAND IT SHALL BE POSSIBLE TO UPLOAD ALL THE INFORMATION MENTIONED ABOVE FROM EACH LOCAL INTERSECTION TO THE CENTRAL FACILITY.

IT SHALL ALSO BE POSSIBLE TO DOWNLOAD/UPLOAD ALL MASTER SETTINGS BETWEEN THE CENTRAL AND MASTER. UPON COMMAND FROM THE LOCAL CONTROLLER IT SHALL BE POSSIBLE TO DOWNLOAD ALL CONTROLLER TIMING AND COORDINATION SETTINGS FROM THE CENTRAL. THIS DOWNLOAD SHALL BE POSSIBLE EVEN WHEN THE CENTRAL IS UNATTENDED.

UPON COMMAND FROM THE ON-STREET MASTER IT SHALL BE POSSIBLE TO DOWNLOAD ALL MASTER SETTINGS FROM THE CENTRAL. THIS DOWNLOAD SHALL BE POSSIBLE EVEN WHEN THE CENTRAL IS UNATTENDED.

IT SHALL BE POSSIBLE TO COMPARE AN UPLOADED LOCAL INTERSECTION DATA BASE WITH A PREVIOUSLY DEVELOPED DATA BASE STORED IN THE CENTRAL OFFICE MONITOR'S MEMORY. DIFFERENCES IN THE DATA BASES SHALL BE REPORTED.
5. THE ON-STREET MASTER SHALL ATTEMPT TO CONTACT THE CENTRAL OFFICE WHENEVER A SYSTEM MONITORED CONDITION OCCURS WHICH IS PROGRAMMED FOR IMMEDIATE REPORT. IF THE ON-STREET MASTER PROGRAM IS ON LINE IN THE CENTRAL OFFICE MONITOR, THE FAILURE REPORT WILL BE DISPLAYED ON THE CRT AND ALSO HARD-COPIED BY THE PRINTER. THE ON-STREET MASTER WILL CONTINUE TO CONTACT THE CENTRAL OFFICE MONITOR AT REGULAR INTERVALS UNTIL THE PROGRAM IS BROUGHT ON LINE AND THE MESSAGE IS TRANSMITTED.

6. UPON COMMAND FROM THE CENTRAL OFFICE FACILITY IT SHALL BE POSSIBLE TO DOWNLOAD MANUAL COMMANDS THAT WILL AFFECT THE FOLLOWING:
 - A. OVERRIDE PATTERN SELECTED BY MASTER
 - B. PLACE ENTIRE SYSTEM IN FREE OR FLASH
 - C. PLACE AN INTERSECTION IN FREE
 - D. PLACE AN INTERSECTION IN FLASH
 - E. PLACE SYSTEM IN TIME-OF-DAY
7. UPON COMMAND FROM THE CENTRAL OFFICE FACILITY IT SHALL BE POSSIBLE TO RETRIEVE THE FOLLOWING LOG REPORTS:
 - A. PATTERN CHANGES
 - B. LOCAL INTERSECTION FAILURES
 - C. SENSOR FAILURES
 - D. VOLUME, OCCUPANCY AND SPEED
8. IT SHALL BE POSSIBLE TO SPECIFY THE TIME AND DATE FOR AUTOMATIC TRANSMISSION OF ANY COMBINATION ON ALL THE LOGS SPECIFIED IN 6.
9. THE CENTRAL OFFICE FACILITY SHALL BE SUPPLIED WITH THE OFF-LINE PROGRAMS PASSER II-90 AND TRANSYT 7F, AS DEVELOPED BY MCTRANS FOR TRAFFIC SIGNAL PROGRESSION ANALYSIS AND SIGNAL OPERATION OPTIMIZATION ANALYSIS FOR SINGLE INTERSECTIONS. ONE (1) COPY OF SOFTWARE AND DOCUMENTATION SHALL BE SUPPLIED. THE CENTRAL OFFICE MONITOR SHALL BE CAPABLE OF THE FOLLOWING:
 - A. ALL OFF-LINE PROGRAMS AND "CLOSED LOOP" SYSTEM SOFTWARE SHALL BE IMPLEMENTED THROUGH THE WINDOWS PROGRAM MANAGER.
 - B. ALL OFF-LINE PROGRAMS AND "CLOSED LOOP" SOFTWARE SHALL BE STORED ON THE HARD DISK UNDER SEPARATE SUBDIRECTORIES. THERE SHALL ALSO BE SEPARATE SUBDIRECTORIES FOR DATA FILES FOR EACH OF OFF-LINE PROGRAMS AND "CLOSED LOOP" SOFTWARE.
10. BENCH MARK TESTING WILL BE ACCOMPLISHED AT THE SYSTEM SUPPLIER'S OR ODOT'S FACILITIES IN CONJUNCTION WITH THE TRAINING COURSE. THE PURPOSE OF BENCH MARK TESTING IS TO DEMONSTRATE THE CAPABILITIES OF THE SYSTEM WHICH THE SUPPLIER INTENDS TO FURNISH. THE COMPUTER, PERIPHERAL DEVICES AND ELEMENTS UTILIZED FOR THE TESTS NEED NOT BE THE SPECIFIC ITEMS WHICH WILL BE INSTALLED IN ODOT BUT SHALL BE OF THE SAME TYPE, MODEL AND CAPACITY. (USE OF THE ACTUAL EQUIPMENT TO BE INSTALLED IN ODOT IS PREFERRED.) BENCH MARK TESTING SHALL INCLUDE THE FOLLOWING:
 - A. LOAD AND OPERATE A BENCH MARK PROGRAM ON THE COMPUTER, UTILIZING ALL PERIPHERAL DEVICES AND AT LEAST TWO ACTUATED (FOUR PHASE MINIMUM) INTERSECTION CONTROLLERS. THE BENCH MARK PROGRAM SHALL CONTAIN PARAMETERS FOR AT LEAST 15 LOCAL INTERSECTIONS, AT LEAST 10 SENSOR INPUTS WITH THE ABILITY TO SIMULATE FIELD VOLUME AND OCCUPANCY DETECTOR DATA, AND SHALL OPERATE WITH AT LEAST 3 ZONES OF CONTROL.
 - B. THE BENCH MARK TESTS SHALL EXERCISE ALL FEATURES OF THE HARDWARE, SOFTWARE, COMMUNICATIONS SYSTEMS AND LOCAL CONTROLLERS AND SHALL BE A MINIMUM OF 48 HOURS OF CONTINUOUS OPERATION.

THE TESTING SHALL BE ARRANGED AT A TIME AND PLACE MUTUALLY AGREEABLE TO ODOT AND CONTRACTOR.

ALL MATERIALS AND LABOR SHALL BE PAID FOR UNDER EACH - ITEM 633 CENTRAL OFFICE MONITOR, AS PER PLAN.

CALCULATED
ACB
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TRAFFIC SIGNAL
GENERAL NOTES

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