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633 CONTROLLER ITEM MISC.: TRAINING

THE CONTRACTOR SHALL SUPPLY TRAINING FOR ODOT DESIGNATED PERSONNEL. THE TRAINING SHALL INCLUDE OPERATION OF THE CENTRAL COMPUTER AND FIELD EQUIPMENT, MAINTENANCE OF ALL FIELD EQUIPMENT AND ASSISTANCE IN SYSTEM PARAMETER DEVELOPMENT. THE TRAINING PROGRAM SHALL BE AS FOLLOWS:

LOCAL CONTROL EQUIPMENT CONSTRUCTION TRAINING SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF INSTRUCTION FOR UP TO TEN (10) PERSONS. TRAINING SESSIONS WILL BE HELD IN ODOT PROVIDED FACILITIES. TRAINING WILL INCLUDE THOROUGH FAMILIARIZATION WITH THE FOLLOWING FIELD EQUIPMENT:

- A. LOCAL CONTROLLERS
- B. INTERSECTION MULTIPLEX AND TELEMETRY AND MODEM UNITS
- C. CONTROLLER ACCESSORIES AND AUXILIARY EQUIPMENT

THE COURSES SHALL ALSO COVER GENERAL FIELD MAINTENANCE AND TROUBLE-SHOOTING PROCEDURES AND TESTING PROCEDURES, AS WELL AS THE PROPER USE OF SYSTEM MAINTENANCE ACCESSORIES TO CHECK THE ABOVE LISTED COMPONENTS.

TRAFFIC RESPONSIVE MASTER CONTROLLER TRAINING SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF INSTRUCTION FOR UP TO TEN (10) ODOT DESIGNATED PERSONS. TRAINING SESSIONS SHALL BE HELD AT THE SYSTEM SUPPLIER'S FACILITIES OR ODOT'S FACILITIES AND SHALL BE HELD IN CONJUNCTION WITH THE BENCH MARK TEST.

CENTRAL SOFTWARE TRAINING SHALL INCLUDE ALL ITEMS NECESSARY TO SET UP THE MONITORING OF INTERSECTION CONTROLLERS. THERE SHALL BE 24 HOURS OF TRAINING FOR UP TO TEN (10) PERSONS. IT SHALL ALSO INCLUDE INSTRUCTION IN METHODS OF PREPARING TIMING SETTINGS, CHOOSING SYSTEM AND INTERSECTION PARAMETERS, LOADING TIMING PLANS AND OTHER PARAMETERS, INCLUDING TRAFFIC RESPONSIVE OPERATION, AND OTHER FUNCTIONS WHICH WILL BE NECESSARY TO IMPLEMENT AND FINE TUNE SYSTEM OPERATION. FINALLY, IT SHALL INCLUDE GENERAL MAINTENANCE AND TROUBLE SHOOTING PROCEDURES FOR THE MASTER CONTROL DEVICE.

MAINTENANCE TRAINING (FIELD EQUIPMENT) SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF INSTRUCTION FOR UP TO TEN (10) PERSONS. TRAINING SESSIONS SHALL BE HELD IN ODOT FACILITIES. IT SHALL COVER MAINTENANCE AND TROUBLE SHOOTING TECHNIQUES FOR ALL FIELD EQUIPMENT AND THE USE OF SYSTEM MAINTENANCE ACCESSORIES.

MAINTENANCE TRAINING (COMPUTER AND PERIPHERALS) SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF INSTRUCTION AT A SITE SELECTED BY THE SYSTEM SUPPLIER FOR UP TO TEN (10) ODOT DESIGNATED PERSONS. IT SHALL COVER DETAILED PROCEDURES FOR MAINTAINING AND TROUBLE SHOOTING THE MASTER CPU, MASTER COMMUNICATIONS DEVICES, AND MASTER PERIPHERAL EQUIPMENT. THE TRAINING SHALL COVER BOTH PRESENTATION OF RECOMMENDED PROCEDURES, AS WELL AS "HANDS ON" DEMONSTRATIONS OF METHODS TO ISOLATE, DETERMINE AND CORRECT EQUIPMENT MALFUNCTIONS.

FOLLOW-UP COMPUTER OPERATION TRAINING SHALL CONSIST OF AT LEAST EIGHT (8) HOURS OF TRAINING FOR UP TO TEN (10) ODOT DESIGNATED PERSONS. IT SHALL BE HELD DURING THE 180 DAY GUARANTEE PERIOD AND IN ODOT SUPPLIED FACILITIES. IT SHALL INCORPORATE A MANAGERIAL OVERVIEW OF THE SYSTEM AND SYSTEM OPERATION PROCEDURES TO FULLY FAMILIARIZE ODOT PERSONAL WITH THE DAY-TO-DAY OPERATION OF THE SYSTEM.

THE CONTRACTOR SHALL PROVIDE ALL COURSE MATERIALS FOR ALL TRAINING SESSIONS, INCLUDING OPERATION MANUALS, REPAIR MANUALS, TEST EQUIPMENT, DEMONSTRATION MATERIALS, AND OTHER MATERIALS FOR DEVICES TO ASSURE A USEFUL SESSION. INSTRUCTORS SHALL BE KNOWLEDGEABLE ON THE OPERATION OF THE SYSTEM PROVIDED AND BE CAPABLE OF EFFICIENTLY AND ACCURATELY PRESENTING THIS KNOWLEDGE TO THE TRAINEES.

THE COST OF TRAINING, INCLUDING COURSE MATERIALS, TRAVEL OR SUBSISTENCE, IF REQUIRED, AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR. COST SHALL BE INCIDENTAL TO THE UNIT PRICES BID FOR VARIOUS ITEMS OF EQUIPMENT UNDER CONTRACT.

PAYMENT FOR 633 CONTROLLER ITEM MISC.: TRAINING WILL BE MADE AT THE CONTRACT PRICE AS A LUMP SUM FOR ALL TRAINING COMPLETELY SUPPLIED AND ACCEPTED, INCLUDING COURSE MATERIALS, TRAVEL OR SUBSISTENCE AND RELATED COSTS.

632 SIGNALIZATION MISC.: TEMPORARY SIGNAL SUPPORT

THE CONTRACTOR SHALL SUPPLY AND ERECT A TEMPORARY SIGNAL SUPPORT. THE SIGNAL SUPPORT SHALL MEET OR EXCEED THE DESIGN STRENGTH OF A CLASS ONE (1) WOOD POLE, 45 FEET, WITH A DOWN GUY.

ALL ADJUSTMENTS TO THE SPANS, HEADS, ETC. SHALL BE INCLUDED IN THIS ITEM. THE EXISTING DETECTORS LEAD IN WIRING SHALL BE MAINTAINED UNDER THIS ITEM.

ALL WORK SHALL BE PAID FOR UNDER EACH - ITEM 632 SIGNALIZATION MISC.: TEMPORARY SIGN SUPPORT

633 CONTROLLER ITEM MISC.: 170E TIMER WITH FIBER OPTIC MODEM (FURNISH ONLY)

THE CONTRACTOR SHALL PROVIDE TO THE STATE TWO (2) SPARE 170E CONTROLLERS WITH FIBER OPTIC MODEMS. SPARE EQUIPMENT SHALL BE DELIVERED TO THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12, GARFIELD HEIGHTS, OHIO 45701.

633 CONTROLLER MISC.: MODEL 170E CONTROLLER WITH MODEL 332 CABINET AND ACCESSORIES (FURNISH ONLY)

THE CONTRACTOR SHALL FURNISH ODOT DISTRICT 12 WITH ONE (1) COMPLETE 170E CONTROLLER IN A 332 (CONFORMING TO THESE SPECIFICATIONS) CABINET, WITH CONFLICT MONITOR. THIS EQUIPMENT SHALL BE DELIVERED TO THE DISTRICT 12 SIGNAL SHOP AT THE ODOT DISTRICT 12 HIGHWAY MANAGEMENT OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO - ATTENTION: TOM ROSS, PHONE 216-581-2333 X 297. ALL INPUT FILES SHALL BE PROVIDED WITH DETECTOR UNITS; ALL OUTPUT FILES SHALL BE PROVIDED WITH SWITCH PACKS; 3 DC AND 1 AC ISOLATOR SHALL BE PROVIDED.

CALCULATED
ACB
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TRAFFIC SIGNAL
GENERAL NOTES
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