

- GENERAL NOTES:
- Removal of existing traffic signal equipment shall include removal of foundations, service boxes, junction boxes and old service riser.
  - See construction traffic control regarding removal of existing signals.
  - Salvagable equipment (cabinet, service box lds, controller, poles, mast arms, etc.) shall be stockpiled on City right-of-way and remain property of the City.
  - Pole/mast arm connection shall be alternative flange plate design.
  - Exact video detection camera locations to be at the direction of the manufacturer's representative. Video camera cable terminations, camera fine tuning, system set-up and programming will be performed by the supplier with the assistance of the contractor.

-QUANTITIES FOR INFORMATION ONLY-

|     |      |  |    |       |  |
|-----|------|--|----|-------|--|
| 3   |      |  |    |       |  |
| 2   |      |  |    |       |  |
| 1   |      |  |    |       |  |
| NO. | DATE |  | BY | APP'D |  |

KANSAS DEPARTMENT OF TRANSPORTATION

TYPE 170E SYSTEM

TRAFFIC SIGNAL QUANTITIES SHEET

TEI30BSI

05/18/98

APP'D

04/28/98

DESIGNED

J.F.F.

DETAILED

J.F.F.

QUANTITIES

J.F.F.

TRACED

Linda G. Vosa, P.E.

DESIGN CR.

D.A.C.

DETAIL CR.

D.A.C.

QUANT. CR.

D.A.C.

TRACE CR.

BILL OF MATERIALS

| ITEM                                            | QUANT.   | UNIT  | SPEC. NO. | NOTE         |
|-------------------------------------------------|----------|-------|-----------|--------------|
| TYPE 170E CONTROLLER UNIT                       | 1        | EACH  |           | W/ 400 MODEM |
| W4IKS PROGRAM MODULE 412B (LATEST REVISION) 53A | 1        | EACH  |           |              |
| CONFLICT MONITOR (MS ON E.C.L.)                 | 1        | EACH  |           |              |
| FLASHER                                         | 2        | EACH  |           |              |
| LOAD SWITCH                                     | 12       | EACH  |           |              |
| FLASH TRANSFER RELAY                            | 4        | EACH  |           |              |
| SURGE PROTECTOR                                 | 1        | EACH  |           |              |
| DC ISOLATOR                                     | 3        | EACH  |           |              |
| AC ISOLATOR                                     |          | EACH  |           |              |
| DETECTOR, 2-CHANNEL (C-800)                     | 12       | EACH  |           |              |
| DETECTOR, 4-CHANNEL                             |          | EACH  |           |              |
| POLE MOUNTED CABINET                            | 1        | EACH  |           |              |
| PAD MOUNTED CABINET                             | 1        | EACH  |           |              |
| DIAL-UP MODEM (HAYES COMPATIBLE)                |          | EACH  |           |              |
| TRAFFIC SIGNAL HEAD (ALL L.E.D.)                | CHART A  | EACH  |           |              |
| SIGNAL HEAD MOUNTING BRACKET                    | CHART A  | EACH  |           |              |
| BACK PLATE                                      | CHART A  | EACH  |           |              |
| VEHICLE TRAFFIC SIGNAL LAMP                     | 49       | EACH  |           |              |
| PEDESTRIAN TRAFFIC SIGNAL LAMP                  | 16       | EACH  |           |              |
| PEDESTRIAN PUSHBUTTON & SIGN                    | 8        | EACH  |           |              |
| TRAFFIC SIGNAL POLE                             | CHART B  | EACH  |           |              |
| TRAFFIC SIGNAL PEDESTAL ALUMINUM                |          | EACH  |           |              |
| TERMINAL BLOCK                                  | 5        | EACH  |           |              |
| JUNCTION BOX                                    | 7        | EACH  |           |              |
| SERVICE BOX                                     |          | EACH  |           |              |
|                                                 |          | EACH  |           |              |
|                                                 |          | EACH  |           |              |
|                                                 |          | EACH  |           |              |
|                                                 |          | EACH  |           |              |
| UNFUSED STREET LIGHT CONNECTOR KIT              |          | EACH  |           |              |
| FUSED STREET LIGHT CONNECTOR KIT                |          | EACH  |           |              |
| OVERHEAD STREET NAME SIGN                       | CHART C  | EACH  |           |              |
| R10-10 SIGN (600 mm X 750 mm)                   | 2        | EACH  |           |              |
| R10-12 SIGN (600 mm X 750 mm)                   |          | EACH  |           |              |
| BLANK OUT SIGN                                  | 1        | EACH  |           |              |
| ENTRANCE HEAD                                   | 1        | EACH  |           |              |
| SERVICE ENCLOSURE, AMP.                         | 1        | EACH  |           |              |
| CIRCUIT BREAKER, TRAFFIC SIGNAL, AMP.           | 1        | EACH  |           |              |
| CIRCUIT BREAKER, LUMINAIRE, AMP.                | 1        | EACH  |           |              |
| GROUND ROD & CLAMP                              | 6        | EACH  |           |              |
| SERVICE WIRE NO. 6 AWG 1/C                      | 82       | METER |           |              |
| LIGHTING DISTRIBUTION WIRE NO. 8 AWG 2/C        | 308      | METER |           |              |
| POLE & BRACKET WIRE NO. 10 AWG 1/C              |          | METER |           |              |
| GROUND WIRE NO. 6 AWG 1/C                       | 299      | METER |           |              |
| MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C            | 813      | METER |           |              |
| MULTI-CONDUCTOR CABLE NO. 14 AWG 1/C            |          | METER |           |              |
| MULTI-CONDUCTOR CABLE NO. 14 AWG 1/C            |          | METER |           |              |
| VIDEO DETECTOR CAMERA CABLE NO. 18 AWG 3/C      | 602      | METER |           |              |
| VIDEO DETECTION CAMERAS                         | 6        | EACH  |           |              |
| VIDEO DETECTION PROGRAM & SYSTEM SETUP          | AS REQ'D |       |           |              |
| VIDEO COAXIAL CABLE 75 OHM                      | 602      | METER |           |              |
| CONDUIT, 25 mm & FITTINGS                       |          | METER |           |              |
| CONDUIT, 40 mm & FITTINGS                       | 168      | METER |           |              |
| CONDUIT, 50 mm & FITTINGS                       | 112      | METER |           |              |
| CONDUIT, 75 mm & FITTINGS                       | 96       | METER |           |              |
| CONDUIT, 100 mm & FITTINGS                      |          | METER |           |              |

| CHART A SIGNAL SUMMARY  |                         |                      |          |
|-------------------------|-------------------------|----------------------|----------|
| SIGNAL FACE ARRANGEMENT | NO. SECTIONS (PER FACE) | SIGNAL MOUNTING TYPE | QUANTITY |
| A                       | 3                       | MAST ARM W/BACKPLATE | 8        |
| I                       | 5                       | MAST ARM W/BACKPLATE | 2        |
|                         |                         | MAST ARM W/BACKPLATE |          |
| A                       | 3                       | SIDE-OF-POLE         | 5        |
| K <sub>L</sub>          | 2                       | SIDE-OF-POLE         | 8        |
|                         |                         | SIDE-OF-POLE         |          |

NOTE: ALL HEADS L.E.D.

\* SUBSCRIPT \*P\* INDICATES PROGRAMMED SIGNALS;  
SUBSCRIPT \*L\* INDICATES L.E.D. RED LENS.

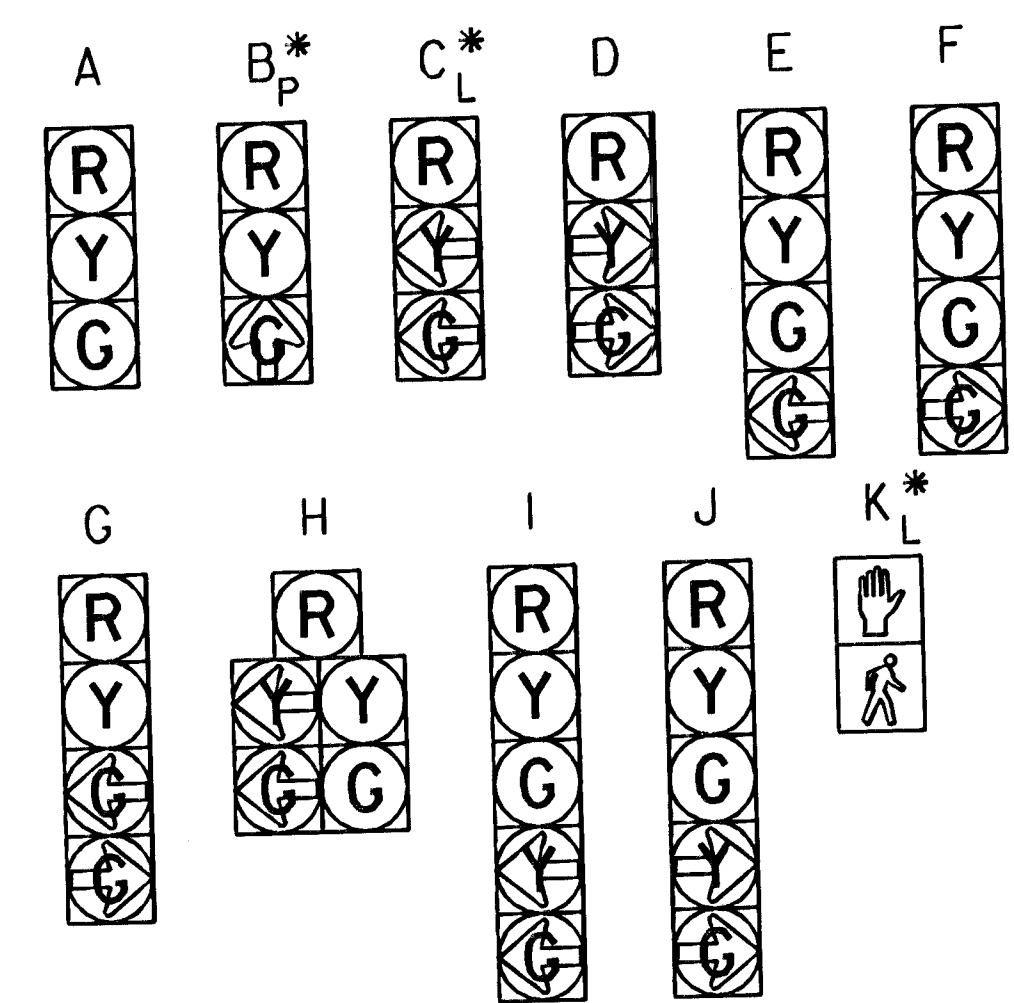
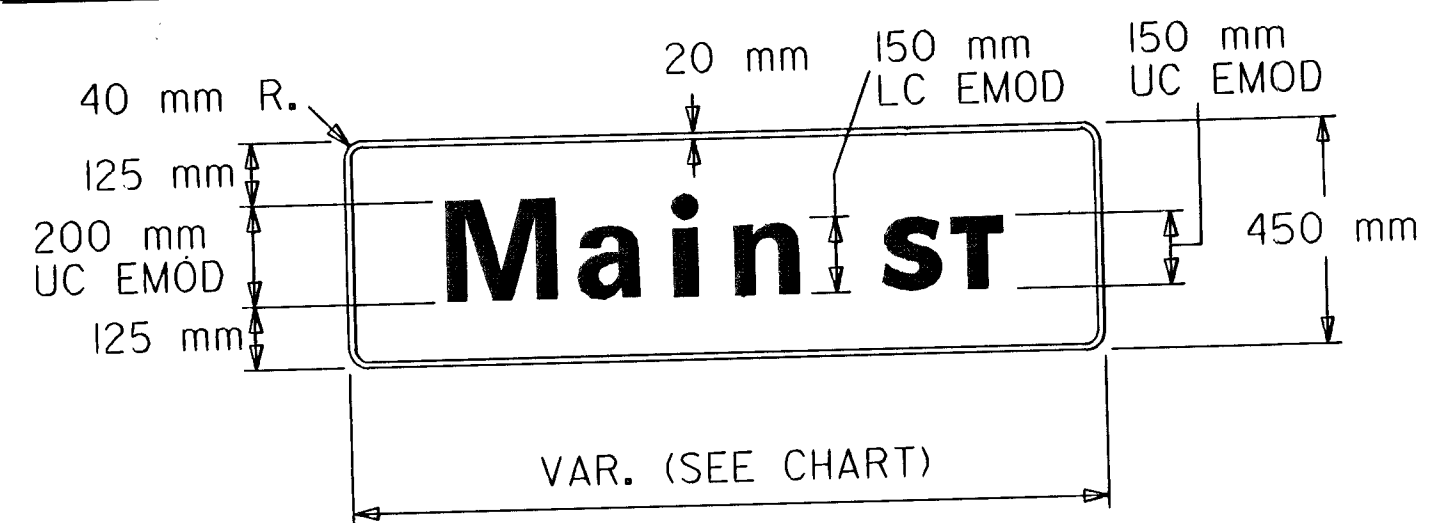


CHART B TRAFFIC SIGNAL POLES (BLACK)

| POLE DESIG. | POLE HEIGHT | SIGNAL ARM LENGTH | SIGNAL ARM MOUNTING HEIGHT | NO. OF SIGNALS ON ARM | SIGNAL SPACING   | LUMINAIRE ARM LENGTH | LUMINAIRE MOUNTING HEIGHT | QUANT. |
|-------------|-------------|-------------------|----------------------------|-----------------------|------------------|----------------------|---------------------------|--------|
| P1          | 8 m         | 7 m               | 5.8 m                      | 2                     | 6.5 - 3.4        | 2 m                  | 6.8 m                     | 1      |
| P2          | 8 m         | 13 m              | 5.8 m                      | 3                     | 12.3 - 8.5 - 4.6 | 2 m                  | 6.8 m                     | 1      |
| P3          | 8 m         | 8 m               | 5.8 m                      | 2                     | 7.3 - 4.2        | 2 m                  | 6.8 m                     | 1      |
| P4          | 8 m         | 13 m              | 5.8 m                      | 3                     | 12.3 - 8.5 - 4.6 | 2 m                  | 6.8 m                     | 1      |
| P5          | 3 m         |                   |                            |                       |                  |                      |                           | 1      |

CHART C OVERHEAD STREET NAME SIGNS

| SIGN | LEGEND        | LENGTH | QUANTITY |
|------|---------------|--------|----------|
|      | Geo Wash Blvd | 1.5 m  | 2        |
|      | Mt Vernon     | 1.5 m  | 2        |



NOTE :

THE TRAFFIC SIGNAL SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR THE SATISFACTORY OPERATION OF ELECTRICAL APPARATUS AND FOR COMPLETE OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.

Plotted By : J. TRUMPP  
Plot File : 2232A00T SIGS/TEI30BSI  
Plot Date : 4-25-02