

PLOT FILE: K:\BLACKWELL\Intersections\21st 119th 83138\119th - 21st Signal.dwg

CHART A SIGNAL SUMMARY

|  | NO. WAYS | NO. SECTIONS<br>(per face) | SIGNAL FACE<br>ARRANGEMENT | MOUNTING<br>TYPE | QUANTITY |
|--|----------|----------------------------|----------------------------|------------------|----------|
|  | 1        | 3                          | A                          | RIGID MAST ARM   | 8        |
|  | 1        | 3                          | C                          | RIGID MAST ARM   | 2        |
|  | 1        | 5                          | I                          | RIGID MAST ARM   | 2        |
|  | 2        | 2                          | K                          | VERTICAL BRACKET | 8        |
|  | 1        | 3                          | A                          | VERTICAL BRACKET | 4        |

MAJOR ITEMS OF ELECTRONIC EQUIPMENT

| ITEM                                            | QTY |
|-------------------------------------------------|-----|
| CONTROLLER, MODEL 170 WITH 400 MODEM            | 1   |
| CONTROLLER, CABINET, PAD-MOUNTED                | 1   |
| CONFLICT MONITOR 210P, MS OR ECL                | 1   |
| FLASHER                                         | 2   |
| FLASH TRANSFER RELAY                            | 4   |
| LOAD SWITCH                                     | 8   |
| SURGE PROTECTOR                                 | 1   |
| DC ISOLATOR                                     | 3   |
| PROGRAM MODULE 412 B W/ WAPITI 56 OR LATEST REV | 1   |

CHART C

| CONDUIT | TRENCHED | PUSHED |
|---------|----------|--------|
| 19mm    |          |        |
| 25mm    | 15m      |        |
| 32mm    |          |        |
| 50mm    | 20m      |        |
| 76mm    | 30m      |        |

CHART D

| LEGEND   | STREET NAME<br>SIGN SUMMARY |
|----------|-----------------------------|
| 21st St  | 2                           |
| 119th St | 2                           |

SIGNAL FACE SUMMARY

| PHASE | TYPE | # REQ'D |
|-------|------|---------|
| 1     | C    | 1       |
| 2     | A, K | 3, 2    |
| 3     | I    | 1       |
| 4     | A, K | 3, 2    |
| 5     | C    | 1       |
| 6     | A, K | 3, 2    |
| 7     | I    | 1       |
| 8     | A, K | 3, 2    |

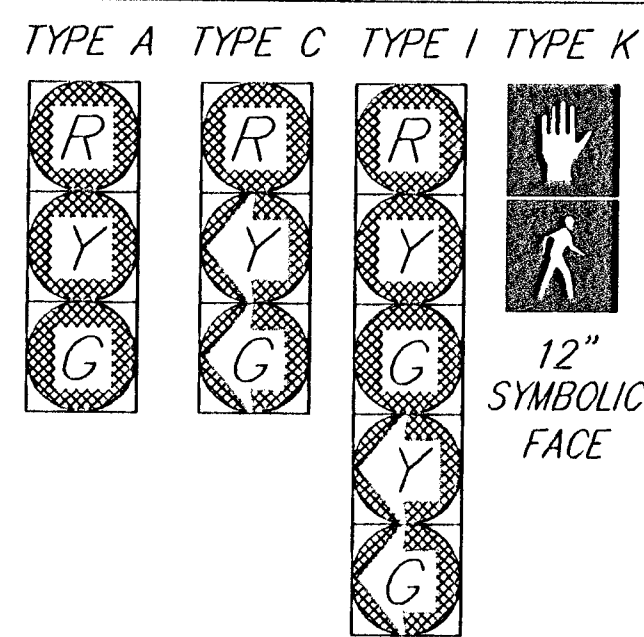


CHART B

TRAFFIC SIGNAL POLE SUMMARY

| STATION    | OFFSET     | POLE<br>TYPE | MAST<br>ARM<br>LENGTH | NO. OF<br>SIGNALS ON<br>MAST ARM | BRACKET<br>TYPE | NO. OF<br>SIGNALS<br>ON POLE | BRACKET<br>TYPE | OTHER<br>EQUIPMENT<br>ON ARM |
|------------|------------|--------------|-----------------------|----------------------------------|-----------------|------------------------------|-----------------|------------------------------|
| 9+979.205  | 18.034 Lt. | A            | 17.25 m               | 3 - D                            | I               | 1-D, 2-E                     | //              | C, F, G                      |
| 9+979.803  | 23.244 Rt. | B            | 17 m                  | 3 - D                            | I               | 1-D, 2-E                     | //              | C, F, G                      |
| 10+16.700  | 23.861 Lt. | A            | 14 m                  | 3 - D                            | I               | 1-D, 2-E                     | //              | C, F, G                      |
| 10+017.084 | 23.580 Rt. | A            | 20 m                  | 3 - D                            | I               | 1-D, 2-E                     | //              | C, F, G                      |

LEGEND:

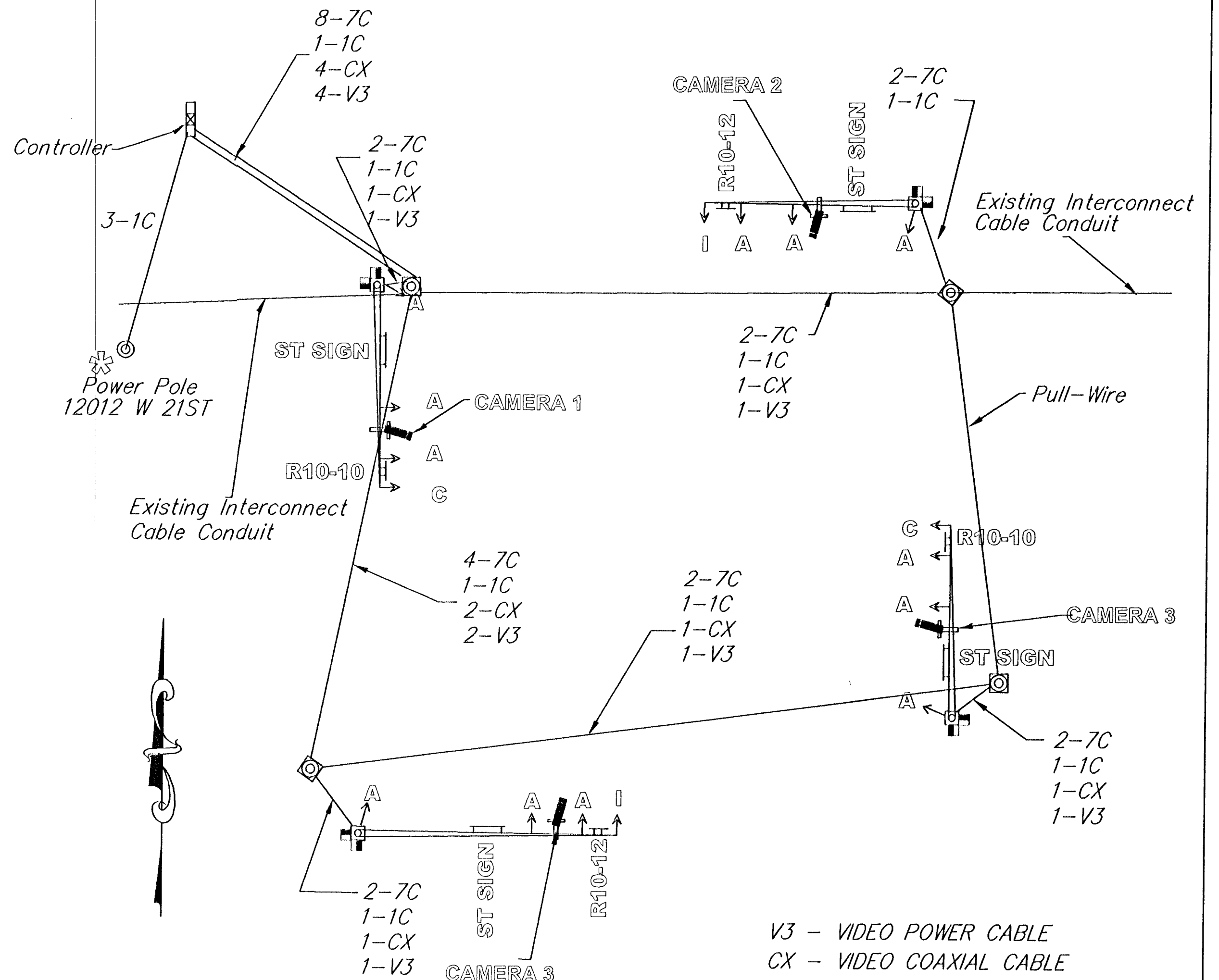
- A. STANDARD STEEL POLE WITH MAST ARM  
B. STANDARD STEEL POLE WITH MAST ARM (JOINT USE)  
C. PROTECTED TURN SIGN (R10-12)

D. TRAFFIC SIGNAL

- E. PEDESTRIAN SIGNAL WITH PUSH BUTTON  
F. STREET NAME SIGN  
G. VIDEO DETECTION CAMERA

BILL OF MATERIALS

| ITEM                                                         | UNIT  | QUANT.    |
|--------------------------------------------------------------|-------|-----------|
| POLE MOUNTED CONTROLLER & CABINET                            | EACH  |           |
| PEDESTAL MOUNTED CONTROLLER & CABINET                        | EACH  |           |
| PAD MOUNTED CONTROLLER & CABINET                             | EACH  | 1         |
| TRAFFIC SIGNAL HEAD (SEE CHART A) W/MOUNTING HARDWARE        | EACH  | 24        |
| TRAFFIC SIGNAL POLE (SEE CHART B) STEEL                      | EACH  | 4         |
| TRAFFIC SIGNAL PEDESTAL ALUMINUM 4.5m                        | EACH  |           |
| CONCRETE CONTROLLER PAD                                      | EACH  | 1         |
| CONCRETE FOOTING - PEDESTAL                                  | EACH  | 4         |
| CONCRETE FOOTING - POLE                                      | EACH  |           |
| CONDUIT ELBOW 90                                             | EACH  | As Needed |
| CONDUIT ELBOW 90 3"                                          | EACH  | As Needed |
| BACK PLATE 5" 3 SECTION                                      | EACH  | 10        |
| BACK PLATE 5" 4 SECTION                                      | EACH  |           |
| BACK PLATE 5" 5 SECTION                                      | EACH  | 2         |
| TERMINAL BLOCK                                               | EACH  |           |
| SERVICE BOX                                                  | EACH  |           |
| JUNCTION BOX                                                 | EACH  |           |
| GROUND ROD & CLAMP                                           | EACH  | 5         |
| RED L.E.D. KIT                                               | EACH  | 16        |
| YELLOW L.E.D. KIT                                            | EACH  | 14        |
| GREEN L.E.D. KIT                                             | EACH  | 14        |
| YELLOW ARROW                                                 | EACH  | 4         |
| GREEN ARROW                                                  | EACH  | 4         |
| ORANGE/WHITE L.E.D. KIT(12" COMBINATION-"HAND/MAN" INDICAT.) | EACH  | 8         |
| ENTRANCE HEAD                                                | EACH  |           |
| CIRCUIT BREAKER & BOX 40 AMP                                 | EACH  |           |
| GUY WIRE GUARD                                               | EACH  |           |
| GUY WIRE CLAMP                                               | EACH  |           |
| THIMBLE EYE ANCHOR ROD                                       | EACH  |           |
| PEDESTRIAN PUSHBUTTON W/SIGN                                 | EACH  | 8         |
| PEDESTRIAN INDICATOR HEAD WITH MOUNTING HARDWARE             | EACH  | 8         |
| COMMUNICATION CABLE 6 PAIR NO. 19 A.W.G.                     | METER |           |
| DETECTOR LOOP WIRE NO. 14 A.W.G. 1/c (TYPE THHN)             | METER |           |
| LEAD-IN WIRE NO. 6 A.W.G. 1/c (TYPE THHN)                    | METER | 50        |
| MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 5/c                      | METER | 200       |
| MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 7/c                      | METER | 600       |
| MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 2/c                      | METER |           |
| SHIELDED DETECTOR LEAD-IN NO. 16 A.W.G. 2/c                  | METER |           |
| CONDUIT 19mm SEE CHART C                                     | METER |           |
| CONDUIT 25mm SEE CHART C                                     | METER | 15        |
| CONDUIT 32mm SEE CHART C                                     | METER |           |
| CONDUIT 50mm SEE CHART C                                     | METER | 20        |
| CONDUIT 76mm SEE CHART C                                     | METER | 30        |
| STANDARD IC #8 (GROUND)                                      | METER | ISO       |
| TETHER WIRE 6mm ASTM A475 Siemens-Martin Grade Min.          | METER |           |
| REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT **              | L. S. | 1         |
| STREET NAME SIGNS - SEE CHART D                              | EACH  | 4         |
| LEFT TURN YIELD ON GREEN W/MOUNTING HARDWARE (R10-12)        | EACH  | 2         |
| LEFT TURN SIGNAL ON GREEN W/MOUNTING HARDWARE(R10-10)        | EACH  | 2         |
| VIDEO DETECTION SYSTEM (4 CAMERAS) & MOUNTING HARDWARE       | EACH  | 1         |
| COAX CABLE - 75 OHM (BELDEN 8281)                            | METER | 325       |
| VIDEO POWER CABLE #16 AWG 3/C                                | METER | 325       |
| VIDEO DETECTION PROCESSOR UNIT                               | EACH  | 1         |
| CAMERA HOUSING                                               | EACH  | 4         |
| CAMERA CHARGED COUPLING DEVICE                               | EACH  | 4         |



\* EXISTING METER TO BE  
RETAINED

NO SCALE

- Quantities For Information Only -

NOTE: The contractor shall supply and install all necessary materials and equipment for the complete installation and operation of the traffic signal system whether specifically mentioned or not.

\* Subscript "P" indicates programmed signals.  
Subscript "D" indicates dual-mode green/yellow arrow section.

\*\* Removal of existing traffic signal equipment shall include removal of foundations, service boxes, and junction boxes. See construction traffic control regarding removal of existing signals.

SIGNAL TIMING BY  
CITY OF WICHITA  
PAUL GUNZELMAN  
268-4448

|  |                                                                                                                                                    |                      |                                                  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------|
|  | 21st & 119th Streets<br>Summary of Quantities                                                                                                      |                      |                                                  |
|  | NEIL CABLE, P.E.                                                                                                                                   |                      |                                                  |
|  | NEIL CABLE, P.E.                                                                                                                                   |                      |                                                  |
|  | PROJECT NUMBER<br>472-83609                                                                                                                        | QCA NUMBER<br>710216 | DATE<br>09/2002                                  |
|  | CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1820<br>(316) 268-4501<br>(316) 268-4114 FAX |                      | DESIGN<br>PDG<br>DRAWN<br>LRB<br>SHEET<br>4 OF 7 |