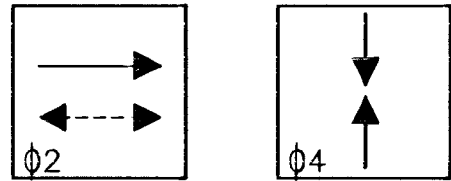


|                    |  |  |  |  |
|--------------------|--|--|--|--|
| DATE               |  |  |  |  |
| BY                 |  |  |  |  |
| REFERENCES NOTED   |  |  |  |  |
| REFERENCES CHECKED |  |  |  |  |

| BILL OF MATERIALS (FOR INFORMATION ONLY)                    |      |          |
|-------------------------------------------------------------|------|----------|
| ITEM                                                        | UNIT | QUANTITY |
| CROSSWALK SIGNAL:                                           |      |          |
| TRAFFIC SIGNAL POLE STEEL W/ MAST ARM                       | EACH | 2        |
| TRAFFIC SIGNAL PEDESTAL                                     | EACH | -        |
| CONCRETE BASE - POLE                                        | EACH | 2        |
| CONCRETE BASE - PEDESTAL                                    | EACH | -        |
| BACK PLATE 130mm - 3 SECTION                                | EACH | 4        |
| SERVICE BOX - 1m DIA.                                       | EACH | 2        |
| GROUND ROD & CLAMP                                          | EACH | 3        |
| TRAFFIC SIGNAL LAMP 135 WATT                                | EACH | 18       |
| TRAFFIC SIGNAL LAMP 60 WATT                                 | EACH | 4        |
| ENTRANCE HEAD                                               | EACH | 1        |
| CIRCUIT BREAKER & BOX                                       | EACH | 1        |
| TRAFFIC SIGNAL HEAD - 300mm (TYPE A) W/MOUNTING BRACKET     | EACH | 6        |
| PEDESTRIAN SIGNAL HEAD - 300mm (TYPE L) W/MOUNTING BRACKET  | EACH | 2        |
| PEDESTRIAN PUSHBUTTON W/SIGN                                | EACH | 2        |
| POLE MOUNTED CABINET & CONTROLLER SYSTEM-TYPE 170(SEE NOTE) | EACH | 1        |
| LEAD-IN WIRE NO. 6 AWG 1/c (TYPE THHN)                      | m    | 18       |
| MULTI-CONDUCTOR CABLE NO. 14 AWG 5/c                        | m    | 114      |
| CONDUIT 50mm                                                | m    | 48       |
| CONDUIT 25mm                                                | m    | 33       |
| STANDARD TC #8 (GROUND)                                     | m    | 34       |
| PEDESTRIAN CROSSING SIGN (W11A-2) W/MOUNTING HARDWARE       | EACH | 2        |

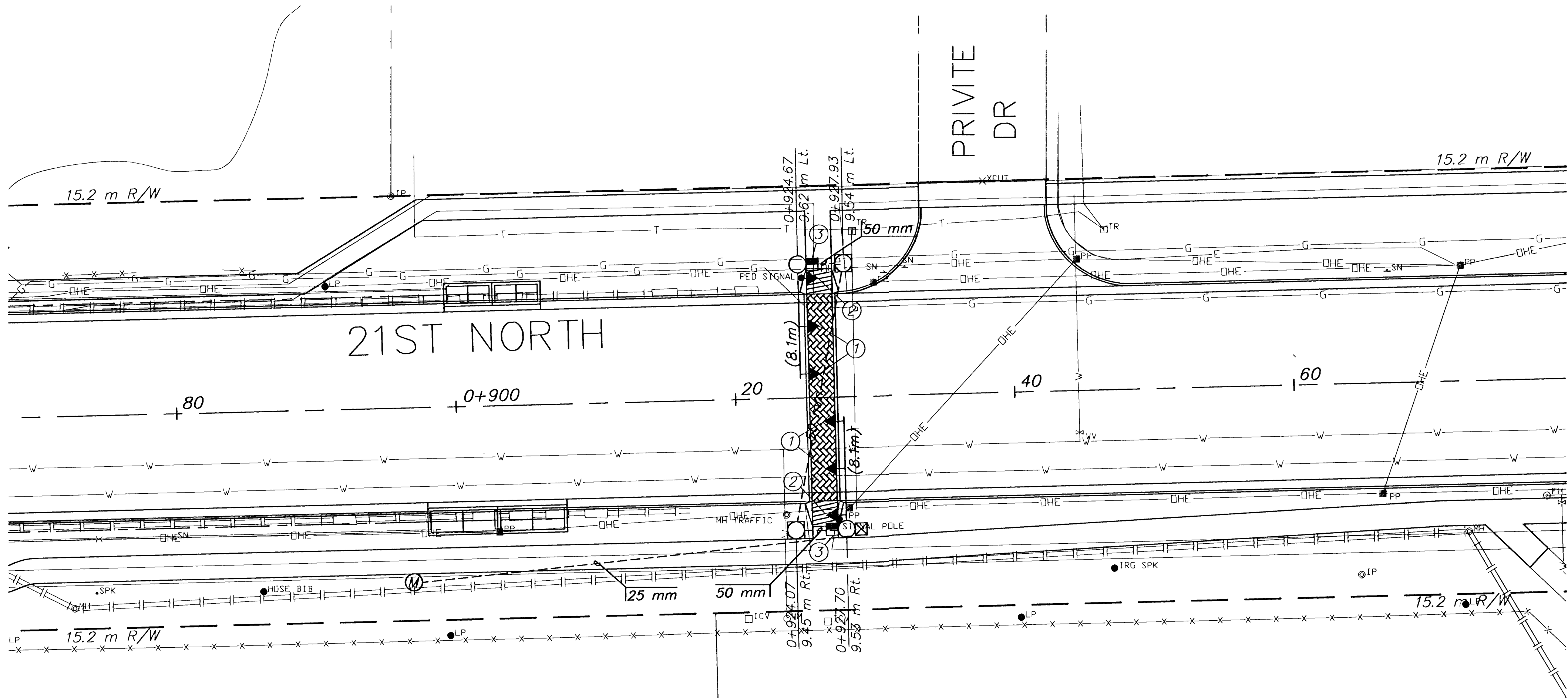


SIGNAL PHASING

| CROSSWALK SIGNAL POLE SUMMARY |      |            |                |                        |               |
|-------------------------------|------|------------|----------------|------------------------|---------------|
| STATION                       | TYPE | ARM LENGTH | SIGNALS ON ARM | SIGNALS/EQUIP. ON POLE | SIGNS ON POLE |
| 0+924.67 L                    | A    | 8.1m       | 2-C            | 1-C, 1-D, 1-B          | 1-E           |
| 0+927.70 R                    | A    | 8.1m       | 2-C            | 1-C, 1-D, 1-B          | 1-E           |
|                               |      |            |                |                        |               |

- A. STANDARD STEEL POLE WITH MAST ARM  
B. CONTROLLER WITH CABINET  
C. TRAFFIC SIGNAL  
D. PEDESTRIAN SIGNAL WITH PUSH BUTTON  
E. PEDESTRIAN CROSSING (W11A-2)

SCALE: 1:200



TYPE 170 TRAFFIC CONTROLLER SYSTEM TO INCLUDE:

ONE (1) MODEL 170 CONTROLLER UNIT & 400 MODEM COMPLETE WITH 412B2 SYSTEM MEMORY MODULE CAPABLE OF SUPPORTING WAPITI MICRO SYSTEM W4IKS (LATEST REVISION) TRAFFIC PROGRAM ON 27256 EPROM.

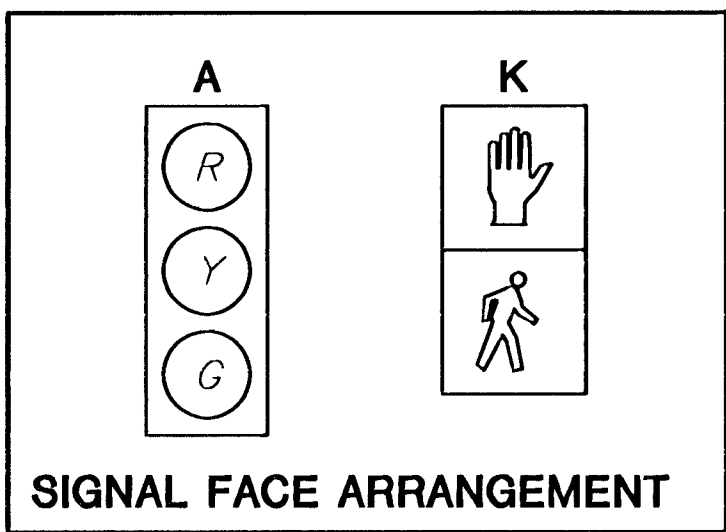
ONE (1) MODEL 336 CABINET COMPLETE WITH ALL ACCESSORIES INCLUDING FOUR (4) MODEL 430 TRANSFER RELAYS, TWO (2) MODEL 204 FLASHER UNITS AND ONE (1) MODEL 210PC CONFLICT MONITOR.

TWO (2) MODEL 242 TWO CHANNEL ISOLATORS.

TWO (2) MODEL 200 SWITCH PACKS.

NOTE: THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NECESSARY MATERIAL AND EQUIPMENT FOR THE COMPLETE INSTALLATION AND OPERATION OF THE TRAFFIC SIGNAL WHETHER SPECIFICALLY MENTIONED OR NOT.

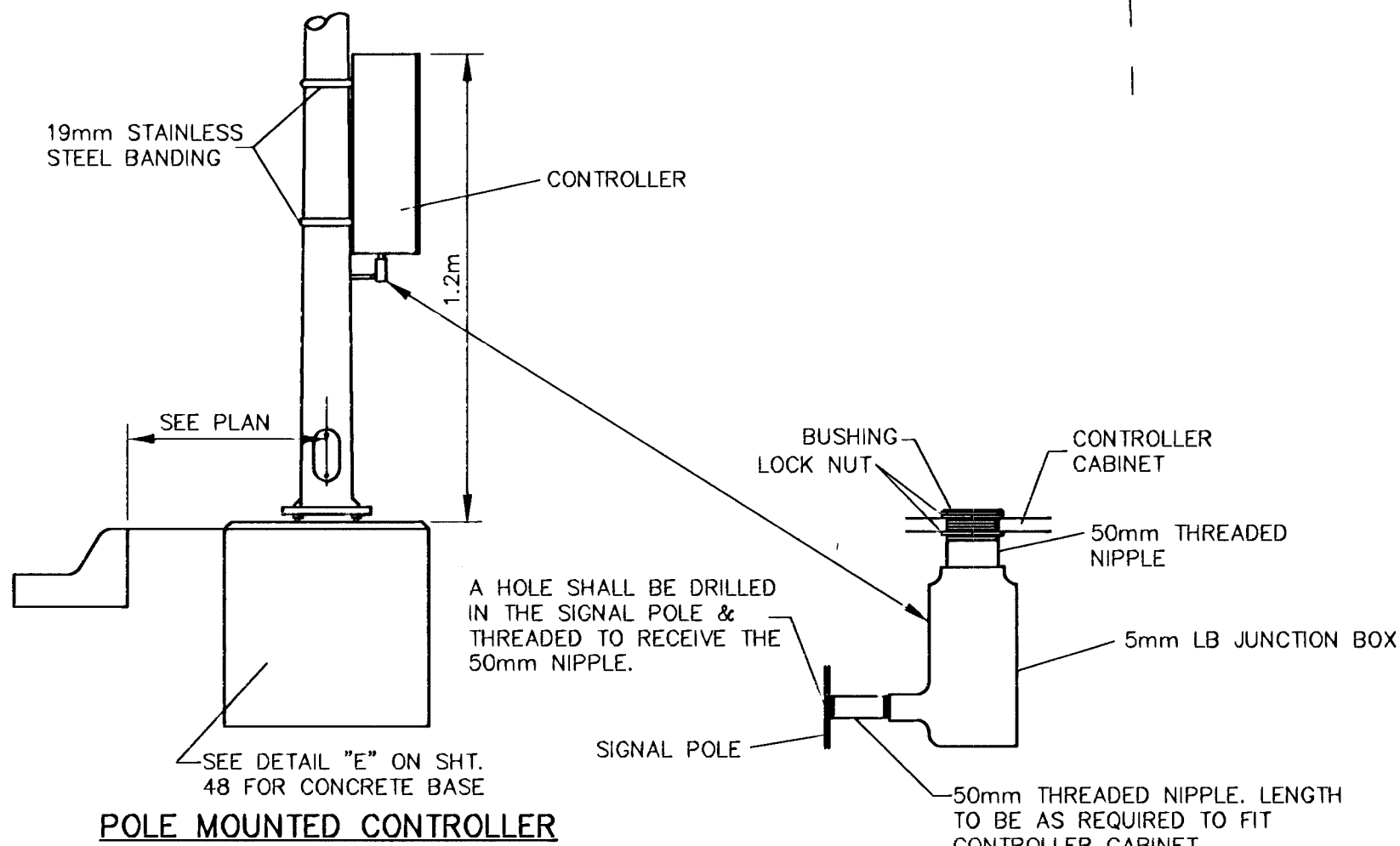
| CROSSWALK SIGNAL HEAD SUMMARY |      |       |                  |          |
|-------------------------------|------|-------|------------------|----------|
| SIGNAL NO.                    | TYPE | SIZE  | MOUNTING BRACKET | QUANTITY |
| 1                             | A    | 3-.3m | TYPE I           | 4        |
| 2                             | A    | 3-.3m | TYPE IV *        | 2        |
| 3                             | K    | 2-.3m | TYPE IV *        | 2        |



SIGNAL FACE ARRANGEMENT

\* ONE TYPE IV BRACKET WILL SUPPORT 1 TYPE A AND 1 TYPE L HEADS.

| TYPE 170 CONTROLLER SETTINGS |        |      |        |      |        |      |        |                         |             |            |   |   |
|------------------------------|--------|------|--------|------|--------|------|--------|-------------------------|-------------|------------|---|---|
| "WAPITI PROGRAM" PHASE       |        |      |        |      |        |      |        | NORMAL DISPLAY FEATURES |             |            |   |   |
| INTERVAL                     | 1 WBLT | 2 EB | 3 SBLT | 4 NB | 5 EBLT | 6 WB | 7 NBLT | 8 SB                    | TIME CLOCK  | VEH RECALL |   |   |
| MAX                          | 0      | 40   |        | 30   |        |      |        |                         | 0 YEAR      | 1          | 2 | 3 |
| MAX 2                        | 1      | 40   |        | 30   |        |      |        |                         | 1 MONTH     | 4          | 5 | 6 |
| WALK                         | 2      |      |        | 8    |        |      |        |                         | 2 DAY/MONTH |            |   |   |
| FL. DW.                      | 3      |      |        | 15   |        |      |        |                         | 3 DAY/WEEK  | X          | X |   |
| MAX INIT.                    | 4      | 30   |        | 10   |        |      |        |                         | 4 HOUR      |            |   |   |
| MIN GREEN                    | 5      | 30   |        | 8    |        |      |        |                         | 5 MINUTE    |            |   |   |
| TBR                          | 6      | 1.0  |        |      |        |      |        |                         | 6 SECOND    | X          | X | X |
| TTR                          | 7      | 1.0  |        |      |        |      |        |                         | 7           |            |   |   |
| PASSAGE                      | 8      |      |        |      |        |      |        |                         | 8           |            |   |   |
| MIN GAP                      | 9      | 1.0  |        |      |        |      |        |                         | 9           |            |   |   |
| ADD ACT                      | 0      | 1.0  |        |      |        |      |        |                         | 0           |            |   |   |
| YELLOW                       | b      | 1.0  |        |      |        |      |        |                         | b           |            |   |   |
| RED CLR.                     | c      | 4.0  |        | 3.0  |        |      |        |                         | c           |            |   |   |
| RED REV.                     | d      | 2.0  |        | 1.0  |        |      |        |                         | d           |            |   |   |
| WALK II                      | e      |      |        |      |        |      |        |                         | e           |            |   |   |
|                              | f      |      |        |      |        |      |        |                         | f           |            |   |   |



- LEGEND**
- Steel Traffic Signal Pole (Joint use)
  - Steel Traffic Signal Pole (Std. Pole)
  - Traffic Signal Indication (Type A)
  - ▼ Mast Arm Suspended Traffic Signal
  - Service Box
  - Controller
  - ▣ Pedestrian Indication
  - △ Junction Box
  - Vehicle Detector Loop
  - ⑦ Detector Number
  - Rigid Galvanized Conduit (RGC)
  - Ⓜ Meter Box and Power Disconnect
  - TT Overhead Street Name Sign
  - TT Overhead Sign R10-10L (L.T. Signal)

| RECAPITULATION OF CROSSWALK SIGNAL QUANTITIES     |          |          |
|---------------------------------------------------|----------|----------|
| BID ITEM                                          | QUANTITY | UNIT     |
| TRAFFIC SIGNAL INSTALLATION (PEDESTRIAN CROSSING) | LUMP SUM | LUMP SUM |

| 2                                   |      |                 |                |       |
|-------------------------------------|------|-----------------|----------------|-------|
| 1                                   |      |                 |                |       |
| NO.                                 | DATE | REVISIONS       | BY             | APP'D |
| KANSAS DEPARTMENT OF TRANSPORTATION |      |                 |                |       |
| 21ST STREET NORTH                   |      |                 |                |       |
| CROSS WALK PLAN & SUMMARY           |      |                 |                |       |
| PROJ. NO. 87-N-0200-01              |      |                 | SEDGWICK CO.   |       |
| MKEC ENGINEERING CONSULTANTS, INC.  |      |                 |                |       |
| WICHITA, KANSAS                     |      |                 |                |       |
| DESIGNED BY: DFL                    |      | CHECKED BY: GJA |                |       |
| DRAWN BY: DAG                       |      | DATE: JUNE 2001 | SHEET 47 OF 78 |       |