

| Associated Phase | Direction | Movement   | Traffic Signal          |                                      |                                  |                        |                                   |                           |                                  |                |                           |     |       |                    |                    | Pedestrian |              |                  |                  |                     |                                                                         |                             |                             |     |                                       |                                           |                                         |          |                                      |                     |                                 |
|------------------|-----------|------------|-------------------------|--------------------------------------|----------------------------------|------------------------|-----------------------------------|---------------------------|----------------------------------|----------------|---------------------------|-----|-------|--------------------|--------------------|------------|--------------|------------------|------------------|---------------------|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----|---------------------------------------|-------------------------------------------|-----------------------------------------|----------|--------------------------------------|---------------------|---------------------------------|
|                  |           |            | Factors<br>*(TEM 403-2) |                                      |                                  |                        |                                   |                           |                                  |                | Calculated<br>(TEM 403-2) |     |       | Final Clearance    |                    |            | Ped Movement | Associated Phase | Crosswalk Length | Pushbutton Provided | Distance to<br>Pushbutton from<br>Curb (furthest of the<br>two corners) | OMUTCD<br>4E.06-12          | OMUTCD<br>4E.06-07          |     | 3 fps Checks<br>(OMUTCD 4E.06, 01-14) |                                           |                                         |          | Final Ped Timing                     |                     |                                 |
|                  |           |            | Posted Speed Limit      | Perception/Reaction<br>Time (1s TYP) | Yellow Change<br>Approach Speed* | Red Approach<br>Speed* | Deceleration Rate<br>(10 fps TYP) | Width of<br>Intersection* | Length of Vehicle<br>(20 ft TYP) | Approach Grade | Yellow                    | Red | Y + R | Yellow             | Red                | Y + R      |              |                  |                  |                     |                                                                         | WALK INTERVAL<br>(4-7s TYP) | Calculated Ped<br>Clearance |     | Ped Change<br>Interval (FDW)          | (L+P)/(3 fps)<br>P=6 IF NO<br>PUSHBUTTON) | WALK + Ped Change<br>Intervals + Yellow | IS Y>=X? | Additional Walk Interval<br>Required | Final Walk Interval | Final Ped Change Interval (FDW) |
|                  |           |            |                         | t                                    | V <sub>Y</sub>                   | V <sub>R</sub>         | a                                 | W                         | L                                | g              | Y                         | R   | TOTAL | Y<br>(3-6s<br>TYP) | R<br>(1-6s<br>TYP) | TOTAL      |              |                  |                  |                     |                                                                         | P                           | = 3.5 fps<br>WALK TIME      |     | = 3.5 fps<br>WALK TIME -<br>YELLOW    | X                                         | Y                                       |          |                                      |                     |                                 |
|                  |           |            | MPH                     | SEC                                  | MPH                              | MPH                    | FPS                               | FT                        | FT                               | %              | SEC                       | SEC | SEC   | SEC                | SEC                | SEC        | FT           |                  |                  | SEC                 | SEC                                                                     | SEC                         | SEC                         | SEC | SEC                                   | SEC                                       | SEC                                     | SEC      | SEC                                  | SEC                 | SEC                             |
| 1                | SB LT     | LEFT TURN  | 40                      | 1                                    | 35                               | 25                     | 10                                | 88                        | 20                               | -0.37          | 3.6                       | 1.9 | 5.5   | 3.6                | 2.3                | 5.9        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 2                | NB        | THROUGH/RT | 40                      | 1                                    | 47                               | 47                     | 10                                | 94                        | 20                               | 0.527          | 4.4                       | 0.7 | 5.1   | 4.4                | 1                  | 5.4        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 3                | WB LT     | -          | 40                      | 1                                    | -                                | -                      | 10                                | -                         | 20                               | -              | -                         | -   | -     | -                  | -                  | -          | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 4                | EB        | THROUGH/RT | 40                      | 1                                    | 47                               | 47                     | 10                                | 92                        | 20                               | 1.79           | 4.3                       | 0.6 | 4.9   | 4.3                | 1.1                | 5.4        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 5                | NB LT     | LEFT TURN  | 40                      | 1                                    | 35                               | 25                     | 10                                | 103                       | 20                               | 0.527          | 3.5                       | 2.3 | 5.8   | 3.6                | 2.3                | 5.9        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 6                | SB        | THROUGH/RT | 40                      | 1                                    | 47                               | 47                     | 10                                | 85                        | 20                               | -0.37          | 4.5                       | 0.5 | 5.0   | 4.5                | 1                  | 5.5        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 7                | EB LT     | LEFT TURN  | 40                      | 1                                    | 35                               | 25                     | 10                                | 88                        | 20                               | 1.79           | 3.4                       | 1.9 | 5.3   | 3.4                | 1.9                | 5.3        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |
| 8                | WB        | THROUGH/RT | 40                      | 1                                    | 47                               | 47                     | 10                                | 125                       | 20                               | 0.98           | 4.3                       | 1.1 | 5.4   | 4.3                | 1.1                | 5.4        | -            | -                | -                | -                   | -                                                                       | -                           | -                           | -   | -                                     | -                                         | -                                       | -        | -                                    | -                   | -                               |

| CONDUIT  |      |            |                       |                 |             |                 | CABLE AND WIRE |                           |                       |                      |                    |                             | IS [A] LESS THAN 0.25C? | FINAL CONDUIT NOMINAL DIAMETER |
|----------|------|------------|-----------------------|-----------------|-------------|-----------------|----------------|---------------------------|-----------------------|----------------------|--------------------|-----------------------------|-------------------------|--------------------------------|
| FROM     | TO   | RUN LENGTH | SIZE/NOMINAL DIAMETER | INSIDE DIAMETER | C           | 0.25C           | CABLE USE      | SPECIFICATION OR MATERIAL | NO. OF CONDUCTORS AWG | NO. CABLES OR WIRES* | a                  | [A]                         |                         |                                |
|          |      |            |                       |                 | INSIDE AREA | 25% INSIDE AREA |                |                           |                       |                      | CROSS SECTION AREA | COMBINED CROSS SECTION AREA |                         |                                |
|          |      | FT.        | IN.                   | IN.             | SQ. IN.     | SQ. IN.         |                |                           |                       |                      | SQ. IN.            | SQ. IN.                     |                         | IN.                            |
| EX. PB-1 | PB-3 | 94         | 4                     | 4.026           | 12.72       | 3.18            | SIGNALS        | IMSA 19-1 OR 20-1         | 7/C # 14              | 4                    | 0.88               | 1.74                        | YES                     | 4                              |
|          |      |            |                       |                 |             |                 | SIGNALS        | IMSA 19-1 OR 20-1         | 5/C # 14              | 2                    | 0.38               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | VIDEO          | RG-6/V WITH POWER (COAX)  | 2/C # 16 (POWER)      | 3                    | 0.48               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
| PB-3     | SP-3 | 34         | 3                     | 3.068           | 7.38        | 1.85            | SIGNALS        | IMSA 19-1 OR 20-1         | 7/C # 14              | 2                    | 0.44               | 0.79                        | YES                     | 3                              |
|          |      |            |                       |                 |             |                 | SIGNALS        | IMSA 19-1 OR 20-1         | 5/C # 14              | 1                    | 0.19               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | VIDEO          | RG-6/V WITH POWER (COAX)  | 2/C # 16 (POWER)      | 1                    | 0.16               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
| PB-2     | SP-2 | 10         | 3                     | 3.068           | 7.38        | 1.85            | SIGNALS        | IMSA 19-1 OR 20-1         | 7/C # 14              | 2                    | 0.44               | 0.95                        | YES                     | 3                              |
|          |      |            |                       |                 |             |                 | SIGNALS        | IMSA 19-1 OR 20-1         | 5/C # 14              | 1                    | 0.19               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | VIDEO          | RG-6/V WITH POWER (COAX)  | 2/C # 16 (POWER)      | 2                    | 0.32               |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|          |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |

\* NOTE: INCLUDE GROUNDING CONDUCTOR IN WIRE COUNT FOR LIGHTING CIRCUITS OF NOTATION "WITH GROUND."

| CONDUIT |      |            |                       |                 |             |                 | CABLE AND WIRE |                           |                       |                      |                    |                             | IS [A] LESS THAN 0.25C? | FINAL CONDUIT NOMINAL DIAMETER |
|---------|------|------------|-----------------------|-----------------|-------------|-----------------|----------------|---------------------------|-----------------------|----------------------|--------------------|-----------------------------|-------------------------|--------------------------------|
| FROM    | TO   | RUN LENGTH | SIZE/NOMINAL DIAMETER | INSIDE DIAMETER | C           | 0.25C           | CABLE USE      | SPECIFICATION OR MATERIAL | NO. OF CONDUCTORS AWG | NO. CABLES OR WIRES* | a                  | [A]                         |                         |                                |
|         |      |            |                       |                 | INSIDE AREA | 25% INSIDE AREA |                |                           |                       |                      | CROSS SECTION AREA | COMBINED CROSS SECTION AREA |                         |                                |
|         |      | FT.        | IN.                   | IN.             | SQ. IN.     | SQ. IN.         |                |                           |                       |                      | SQ. IN.            | SQ. IN.                     |                         | IN.                            |
| PB-2    | PB-3 | 101        | 4                     | 4.026           | 12.72       | 3.18            | SIGNALS        | IMSA 19-1 OR 20-1         | 7/C # 14              | 2                    | 0.44               | 0.95                        | YES                     | 4                              |
|         |      |            |                       |                 |             |                 | SIGNALS        | IMSA 19-1 OR 20-1         | 5/C # 14              | 1                    | 0.19               |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | VIDEO          | RG-6/V WITH POWER (COAX)  | 2/C # 16 (POWER)      | 2                    | 0.32               |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
| -       | -    | -          | -                     | -               | -           | -               | -              | -                         | -                     | -                    | -                  | -                           | -                       | -                              |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
| -       | -    | -          | -                     | -               | -           | -               | -              | -                         | -                     | -                    | -                  | -                           | -                       | -                              |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |
|         |      |            |                       |                 |             |                 | -              | -                         | -                     | -                    | -                  |                             |                         |                                |

\* NOTE: INCLUDE GROUNDING CONDUCTOR IN WIRE COUNT FOR LIGHTING CIRCUITS OF NOTATION "WITH GROUND."

| SUPPORT NO. | ARM | MIN CLEARANCE FROM<br>PAVEMENT TO BOTTOM OF<br>SIGNAL HEAD | MAX CLEARANCE FROM<br>PAVEMENT TO BOTTOM OF<br>SIGNAL HEAD | FOUNDATION ELEVATION AT<br>GROUND LEVEL | DISTANCE FROM GROUND TO<br>FOUNDATION | ELEVATION B<br>TOP OF FOUNDATION | RISE ANGLE WITH HORIZONTAL<br>ARM TIP | SIGNAL HEADS CENTERED ON<br>WHICH COLOR? | SIGNAL NO. | SIGNAL HEAD TYPE<br><br>(12 IN. SECTIONS WITH<br>BACKPLATES) | DISTANCE FROM BOTTOM OF<br>SIGNAL HEAD TO CENTER OF<br>MAST ARM (TEM 497-6) | SIGNAL HEAD DISTANCE FROM<br>SUPPORT POLE | ELEVATION A PAVEMENT<br>ELEVATION UNDER SIGNAL<br>HEAD OR SIGN | MINIMUM HEIGHT (FOUNDATION<br>TO MAST ARM) | MAXIMUM HEIGHT<br>(FOUNDATION TO MAST ARM) | MINIMUM ALLOWABLE HEIGHT<br>(FOUNDATION TO MAST ARM) | MAXIMUM ALLOWABLE HEIGHT<br>(FOUNDATION TO MAST ARM) | FINAL ATTACHMENT ARM<br>HEIGHT (FOUNDATION TO MAST<br>ARM) | DOES MAST ARM HAVE POLE<br>EXTENSION? ^ | HEIGHT FROM MAST ARM TO<br>TOP OF POLE | SUGGESTED POLE HEIGHT | POLE HEIGHT WITH<br>10' EXTENSION |
|-------------|-----|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------|---------------------------------------|----------------------------------|---------------------------------------|------------------------------------------|------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|-----------------------------------|
|             |     | FT                                                         | FT                                                         | FT                                      | IN                                    | FT                               | DEGREE                                |                                          |            |                                                              | FT                                                                          | FT                                        | FT                                                             | FT                                         | FT                                         | FT                                                   | FT                                                   | FT                                                         |                                         | FT                                     | FT                    | FT                                |
| SP-2        | A   | 17                                                         | 19                                                         | 988.979                                 | 2                                     | 989.15                           | 1/2                                   | YELLOW                                   | 5          | 5 SECTIONS - CLUSTER                                         | 2.6                                                                         | 50.5                                      | 988.91                                                         | 18.93                                      | 20.93                                      | 18.9                                                 | 20.4                                                 | 19.5                                                       | NO                                      | 1.5                                    | 21                    | N/A                               |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 2B         | 3 SECTIONS                                                   | 2.3                                                                         | 39                                        | 988.65                                                         | 18.47                                      | 20.47                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 2A         | 3 SECTIONS                                                   | 2.3                                                                         | 30                                        | 988.47                                                         | 18.36                                      | 20.36                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
| SP-2        | B   | 17                                                         | 19                                                         | 988.979                                 | 2                                     | 989.15                           | 1/2                                   | YELLOW                                   | 8A         | 3 SECTIONS                                                   | 2.3                                                                         | 50                                        | 987.45                                                         | 17.17                                      | 19.17                                      | 17.2                                                 | 19.2                                                 | 19.5                                                       | NO                                      | 1.5                                    | 21                    | N/A                               |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
| SP-3        | -   | 17                                                         | 19                                                         | 989.54                                  | 2                                     | 989.71                           | 1/2                                   | YELLOW                                   | 7B         | 3 SECTIONS                                                   | 2.3                                                                         | 55                                        | 987.53                                                         | 16.64                                      | 18.64                                      | 16.8                                                 | 18.6                                                 | 18.5                                                       | NO                                      | 1.5                                    | 20                    | N/A                               |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 8B         | 3 SECTIONS                                                   | 2.3                                                                         | 51.5                                      | 987.54                                                         | 16.68                                      | 18.68                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 7A         | 3 SECTIONS                                                   | 2.3                                                                         | 43.5                                      | 987.51                                                         | 16.73                                      | 18.73                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 4B         | 3 SECTIONS                                                   | 2.3                                                                         | 35.5                                      | 987.50                                                         | 16.78                                      | 18.78                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | 4A         | 3 SECTIONS                                                   | 2.3                                                                         | 27.5                                      | 987.44                                                         | 16.79                                      | 18.79                                      |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
| -           | -   | 17                                                         | 19                                                         | -                                       | -                                     | -                                | -                                     | -                                        | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          | -                                                    | -                                                    | -                                                          | -                                       | -                                      | -                     | -                                 |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |
|             |     |                                                            |                                                            |                                         |                                       |                                  |                                       |                                          | -          | -                                                            | -                                                                           | -                                         | -                                                              | -                                          | -                                          |                                                      |                                                      |                                                            |                                         |                                        |                       |                                   |

^ With typical extension, 5' is calculated, as per SCD TC-85.22.  
Note: Final Pole Height will be noted in the plans on Mast Arm Design Table

| SUPPORT NO. | ARM | NUMBER OF LUMINAIRES OR BRACKET ARMS | LUMINAIRE/ BRACKET ARM LENGTH | SIGNAL OR SIGN? | SIGNAL/ SIGN NO. | ATTACHMENT DISTANCE FROM SUPPORT POLE |      | SIGNAL HEAD TYPE (12 IN. LENS) | SIGN SIZE |         | AREA | ATTACHMENT LENGTH * AREA | L                     | DAMPER REQUIRED?<br><br>(Incidental to Support item; CM&S 632 and SCD TC-81.22) | K                         | DESIGN NO. |
|-------------|-----|--------------------------------------|-------------------------------|-----------------|------------------|---------------------------------------|------|--------------------------------|-----------|---------|------|--------------------------|-----------------------|---------------------------------------------------------------------------------|---------------------------|------------|
|             |     |                                      | FT                            |                 |                  | NO.                                   | FT   |                                | IN        | SQ. FT. |      |                          | TOTAL MAST ARM LENGTH |                                                                                 | AREA MOMENT DESIGN FACTOR |            |
|             |     |                                      |                               |                 |                  |                                       |      |                                |           |         |      |                          | FT                    |                                                                                 |                           |            |
| SP-2        | A   | 0                                    | -                             | SIGNAL          | 5                | L1                                    | 50.5 | 5 SECTIONS - CLUSTER           | -         | -       | 12.4 | 626.2                    | 54                    | NO                                                                              | 1718.25                   | 13         |
|             |     |                                      |                               | SIGNAL          | 2B               | L2                                    | 39   | 3 SECTIONS                     | -         | -       | 8.7  | 339.3                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGNAL          | 2A               | L3                                    | 30   | 3 SECTIONS                     | -         | -       | 8.7  | 261.0                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGN            | C                | S1                                    | 46.5 | -                              | 30        | 36      | 7.5  | 348.8                    |                       |                                                                                 |                           |            |
|             |     |                                      | -                             | SIGN            | B                | S2                                    | 13   | -                              | 66        | 24      | 11.0 | 143.0                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
| SP-2        | B   | 0                                    | -                             | SIGNAL          | 8A               | L1                                    | 50   | 3 SECTIONS                     | -         | -       | 8.7  | 435.0                    | 54                    | NO                                                                              | 795                       | 13         |
|             |     |                                      |                               | SIGN            | A                | S1                                    | 30   | -                              | 72        | 24      | 12.0 | 360.0                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      | -                             | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
| SP-3        | -   | 0                                    | -                             | SIGNAL          | 7B               | L1                                    | 55   | 3 SECTIONS                     | -         | -       | 8.7  | 478.5                    | 58                    | NO                                                                              | 2386.35                   | 14         |
|             |     |                                      |                               | SIGNAL          | 8B               | L2                                    | 51.5 | 3 SECTIONS                     | -         | -       | 8.7  | 448.1                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGNAL          | 7A               | L3                                    | 43.5 | 3 SECTIONS                     | -         | -       | 8.7  | 378.5                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGNAL          | 4B               | L4                                    | 35.5 | 3 SECTIONS                     | -         | -       | 8.7  | 308.9                    |                       |                                                                                 |                           |            |
|             |     |                                      | -                             | SIGNAL          | 4A               | L5                                    | 27.5 | 3 SECTIONS                     | -         | -       | 8.7  | 239.3                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGN            | D                | S1                                    | 49.5 | -                              | 30        | 36      | 7.5  | 371.3                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | SIGN            | A                | S2                                    | 13.5 | -                              | 72        | 24      | 12.0 | 162.0                    |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | -                                     | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
| -           | -   | -                                    | -                             | -               | -                | L1                                    | -    | -                              | -         | -       | -    | -                        | -                     | -                                                                               | -                         | -          |
|             |     |                                      |                               | -               | -                | L2                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | L3                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | L4                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      | -                             | -               | -                | L5                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | L6                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | L7                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |
|             |     |                                      |                               | -               | -                | L8                                    | -    | -                              | -         | -       | -    | -                        |                       |                                                                                 |                           |            |

| SUPPORT NO. | ARM | DESIGN NO. | POLE SIZE REQ. | POLE DESIGNATION |
|-------------|-----|------------|----------------|------------------|
| SP-2        | A   | 13         | D              | TC-12.31 DES 10  |
|             | B   | 13         |                |                  |
| -           | -   | -          | -              | -                |
|             | -   | -          |                |                  |
| -           | -   | -          | -              | -                |
|             | -   | -          |                |                  |
| -           | -   | -          | -              | -                |
|             | -   | -          |                |                  |