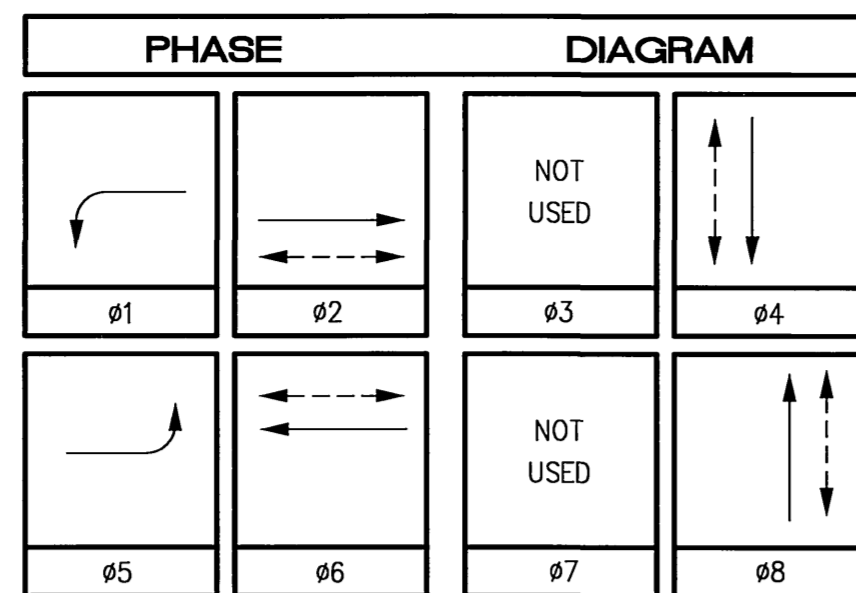
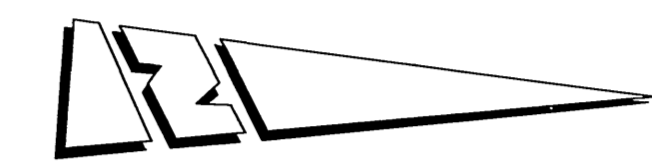


| CONDUCTOR   |                   | TABLE          |    |    |        |      |    |       |    |
|---|-------------------|----------------|----|----|--------|------|----|-------|----|
| CONTROL FUNCTION  | CONDUCTORS        | CONDUCTOR RUNS |    |    |        |      |    |       |    |
|   |                   | 1              | 2  | 3  | 4      | 5    | 6  | 7     | 8  |
| VEHICLE & PEDESTRIAN HEADS, PEDESTRIAN PUSH BUTTONS, SPARES & COMMONS | 12 CONDUCTOR IMSA | 1              | 2  | 3  | 8      | 4    | 3  | 2     | 1  |
|   | 9 CONDUCTOR IMSA  | -              | -  | -  | -      | -    | -  | -     | -  |
|   | 5 CONDUCTOR IMSA  | -              | -  | -  | -      | -    | -  | -     | -  |
|   | 3 CONDUCTOR IMSA  | 1              | 2  | 3  | 8      | 4    | 3  | 2     | 1  |
| DETECTOR CABLE  | #16/2             |                |    |    |        |      |    |       |    |
| PHASE 1   |                   | 1              | 1  | 1  | 1      | -    | -  | -     | -  |
| PHASE 2   |                   | -              | -  | -  | 3      | 3    | -  | -     | -  |
| PHASE 4   |                   | -              | -  | 2  | 2      | -    | -  | -     | -  |
| PHASE 5   |                   | -              | -  | -  | 1      | 1    | -  | -     | -  |
| PHASE 6   |                   | 3              | 3  | 3  | 3      | -    | -  | -     | -  |
| PHASE 8   |                   | -              | -  | -  | 1      | 1    | 1  | 1     | -  |
| TOTALS  |                   | 4              | 4  | 6  | 11     | 5    | 1  | 1     | -  |
| EVPE CABLE  | #20/4             | -              | 1  | 1  | 4      | 2    | 2  | 1     | 1  |
| IISNS   | #12               | -              | 2  | 2  | -      | 2    | 2  | 2     | 2  |
| LUMINAIRES  | #8                | -              | 2  | 2  | -      | 2    | 2  | 2     | 2  |
| SIGNAL SERVICE  | #8                | -              | -  | -  | 2      | -    | -  | -     | -  |
| CONDUIT SIZE  |                   | 2"(E)          | 3" | 3" | 2-3.5" | 3.5" | 3" | 2"(E) | 2" |

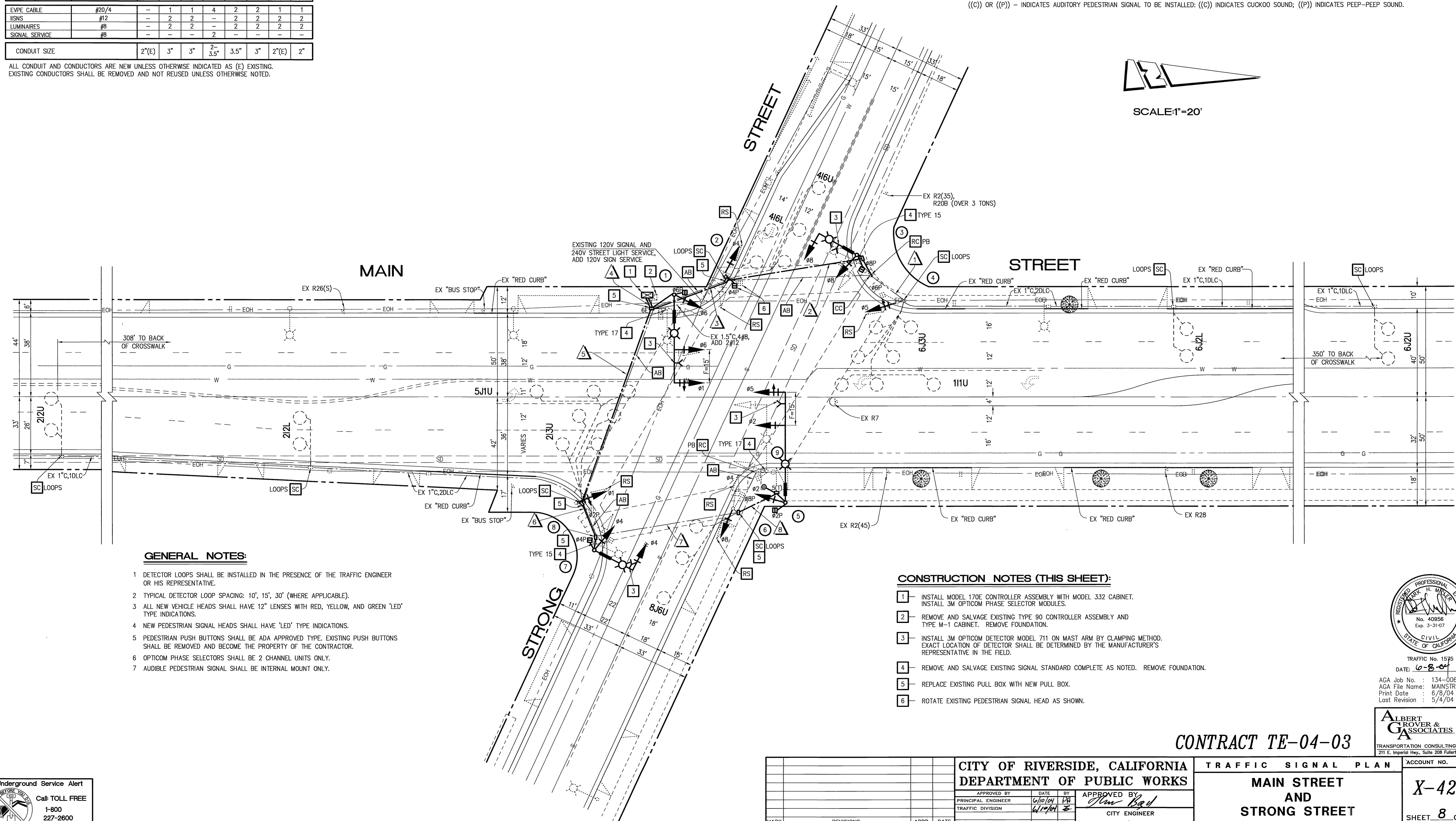


| POLE |             | SCHEDULE |           |           |         |        |                 |           |         |       |         |
|------|-------------|----------|-----------|-----------|---------|--------|-----------------|-----------|---------|-------|---------|
| No.  | TYPE        | STANDARD |           | LUMINAIRE | HPS     | IISNS  | SIGNAL MOUNTING |           |         | PPB   | REMARKS |
|      |             | HGT.     | SIG. M.A. |           |         |        | VEHICLE         | PED       | AUDIBLE |       |         |
| 1    | 26-4-129(N) | 30'      | 40'(N)    | 15'(N)    | 250W(N) | Strong | SV-1-T(N)       | SP-1-T(N) | ((P))   | ø4(N) |         |
| 2    | 1-A         | 10'      | -         | -         | -       | -      | TV-1-T(N)       | SP-1-T    | ((C))   | ø6(N) |         |
| 3    | 17-2-129(N) | 30'      | 20'(N)    | 12'(N)    | 250W(N) | Main   | SV-1-T(N)       | SP-1-T(N) | ((C))   | ø6(N) |         |
| 4    | 1-A         | 10'      | -         | -         | -       | -      | TV-1-T(N)       | SP-1-T    | ((P))   | ø8(N) |         |
| 5    | 29-5-129(N) | 30'      | 50'(N)    | 15'(N)    | 250W(N) | Strong | SV-1-T(N)       | SP-1-T(N) | ((P))   | -     |         |
| 6    | 1-A         | 10'      | -         | -         | -       | -      | TV-1-T(N)       | SP-1-T    | ((C))   | ø2(N) |         |
| 7    | 17-2-129(N) | 30'      | 20'(N)    | 12'(N)    | 250W(N) | Main   | SV-1-T(N)       | SP-1-T(N) | ((C))   | ø2(N) |         |
| 8    | 1-A         | 10'      | -         | -         | -       | -      | TV-1-T(N)       | SP-1-T    | ((P))   | ø4(N) |         |
| 9    | PPB POST(N) | 40"      | -         | -         | -       | -      | -               | -         | -       | ø8(N) |         |

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE INDICATED AS (N) NEW.  
 ((C)) OR ((P)) - INDICATES AUDITORY PEDESTRIAN SIGNAL TO BE INSTALLED: ((C)) INDICATES CUCKOO SOUND; ((P)) INDICATES PEEP-PEEP SOUND.



SCALE: 1"=20'



**GENERAL NOTES:**

- DETECTOR LOOPS SHALL BE INSTALLED IN THE PRESENCE OF THE TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
- TYPICAL DETECTOR LOOP SPACING: 10', 15', 30' (WHERE APPLICABLE).
- ALL NEW VEHICLE HEADS SHALL HAVE 12" LENSES WITH RED, YELLOW, AND GREEN 'LED' TYPE INDICATIONS.
- NEW PEDESTRIAN SIGNAL HEADS SHALL HAVE 'LED' TYPE INDICATIONS.
- PEDESTRIAN PUSH BUTTONS SHALL BE ADA APPROVED TYPE. EXISTING PUSH BUTTONS SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
- OPTICOM PHASE SELECTORS SHALL BE 2 CHANNEL UNITS ONLY.
- AUDIBLE PEDESTRIAN SIGNAL SHALL BE INTERNAL MOUNT ONLY.

**CONSTRUCTION NOTES (THIS SHEET):**

- INSTALL MODEL 170E CONTROLLER ASSEMBLY WITH MODEL 332 CABINET. INSTALL 3M OPTICOM PHASE SELECTOR MODULES.
- REMOVE AND SALVAGE EXISTING TYPE 90 CONTROLLER ASSEMBLY AND TYPE M-1 CABINET. REMOVE FOUNDATION.
- INSTALL 3M OPTICOM DETECTOR MODEL 711 ON MAST ARM BY CLAMPING METHOD. EXACT LOCATION OF DETECTOR SHALL BE DETERMINED BY THE MANUFACTURER'S REPRESENTATIVE IN THE FIELD.
- REMOVE AND SALVAGE EXISTING SIGNAL STANDARD COMPLETE AS NOTED. REMOVE FOUNDATION.
- REPLACE EXISTING PULL BOX WITH NEW PULL BOX.
- ROTATE EXISTING PEDESTRIAN SIGNAL HEAD AS SHOWN.



TRAFFIC No. 1575  
 DATE: 6-8-04  
 AGA Job No. : 134-006  
 AGA File Name: MAINSTRONG  
 Print Date : 6/8/04  
 Last Revision : 5/4/04

**ALBERT ROVER & ASSOCIATES**  
 TRANSPORTATION CONSULTING ENGINEERS  
 211 E. Imperial Hwy., Suite 208 Fullerton, CA 92835  
 (714) 992-2890  
 FAX 992-2883

**CONTRACT TE-04-03**



|   |                   |                 |         |   |         |              |
|---|-------------------|-----------------|---------|---|---------|--------------|
| CITY OF RIVERSIDE, CALIFORNIA<br>DEPARTMENT OF PUBLIC WORKS |                   |                 |         | TRAFFIC SIGNAL PLAN                     |         | ACCOUNT NO.  |
| APPROVED BY   | DATE              | BY              | DATE    | APPROVED BY                             | DATE    | X-424A       |
| PRINCIPAL ENGINEER  | 6/10/04           | JAT             | 6/10/04 | City Engineer                           | 6/10/04 |              |
| MARK  | REVISIONS         | APPR.           | DATE    | DATE                                    |         | SHEET 8 OF 9 |
| DESIGNED BY: JAT  | DRAWN BY: TRB/DMS | CHECKED BY: JAT |         | DATE: 6/10/04                           |         |              |
|   |                   |                 |         | HORIZ. SCALE: 1"=20' VERT. SCALE: 1"= - |         |              |

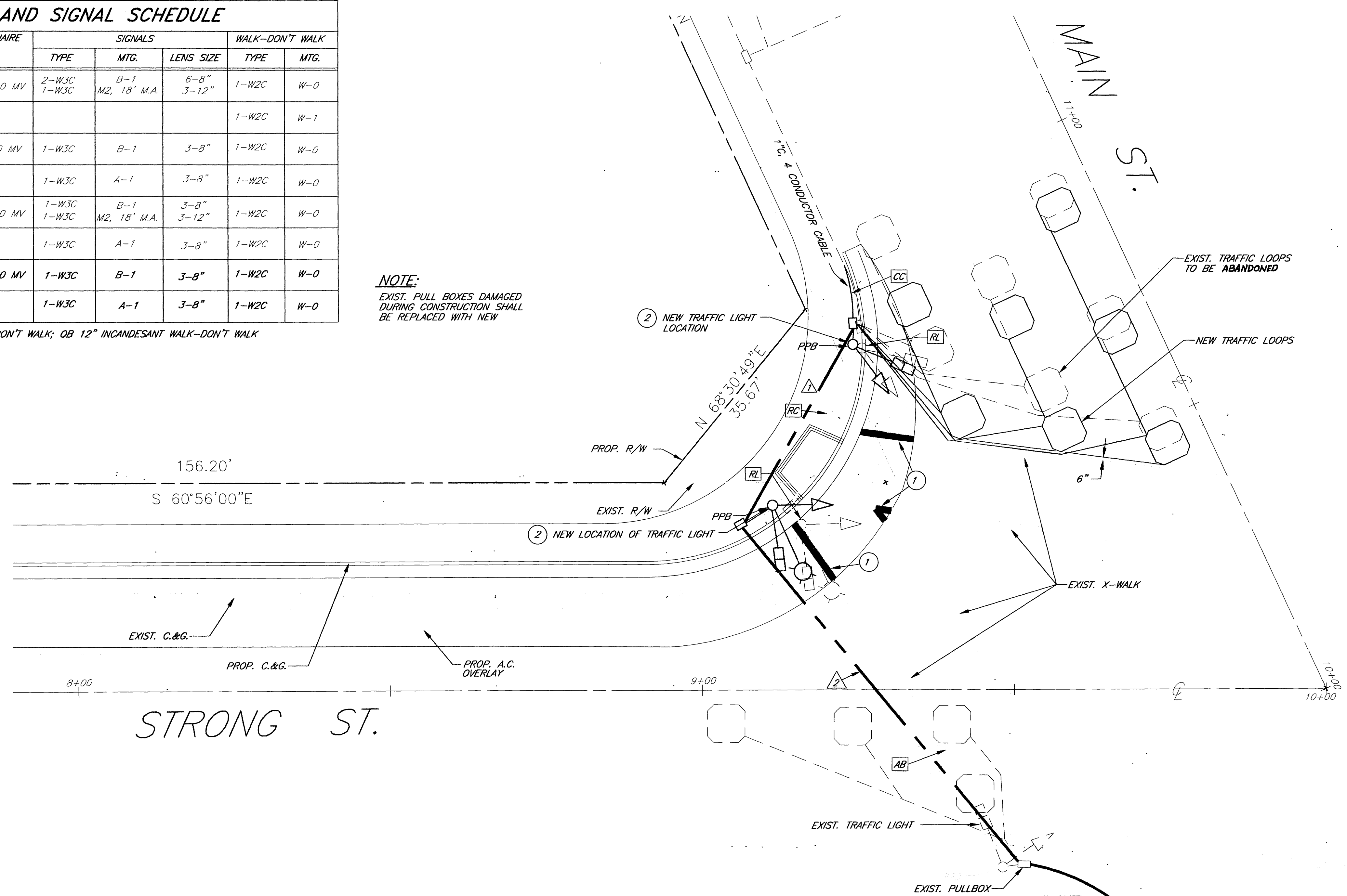
| POLE AND SIGNAL SCHEDULE |            |           |                |                     |               |                 |      |
|--------------------------|------------|-----------|----------------|---------------------|---------------|-----------------|------|
| LOCATION                 | STANDARD   | LUMINAIRE | SIGNALS        |                     |               | WALK-DON'T WALK |      |
|                          |            |           | TYPE           | MTG.                | LENS SIZE     | TYPE            | MTG. |
| (A)                      | TYPE XVII  | 50,000 MV | 2-W3C<br>1-W3C | B-1<br>M2, 18' M.A. | 6-8"<br>3-12" | 1-W2C           | W-0  |
| (B)                      | 7' TYPE I  |           |                |                     |               | 1-W2C           | W-1  |
| (C)                      | TYPE XVI   | 10,000 MV | 1-W3C          | B-1                 | 3-8"          | 1-W2C           | W-0  |
| (D)                      | 10' TYPE I |           | 1-W3C          | A-1                 | 3-8"          | 1-W2C           | W-0  |
| (E)                      | TYPE XVII  | 50,000 MV | 1-W3C<br>1-W3C | B-1<br>M2, 18' M.A. | 3-8"<br>3-12" | 1-W2C           | W-0  |
| (F)                      | 10' TYPE I |           | 1-W3C          | A-1                 | 3-8"          | 1-W2C           | W-0  |
| (G) (REL)                | TYPE XVI   | 20,000 MV | 1-W3C          | B-1                 | 3-8"          | 1-W2C           | W-0  |
| (H) (REL)                | 10' TYPE I |           | 1-W3C          | A-1                 | 3-8"          | 1-W2C           | W-0  |

0A 9" INCANDESCENT WALK-DON'T WALK; 0B 12" INCANDESCENT WALK-DON'T WALK  
(REL) RELOCATE

**NOTE:**  
EXIST. PULL BOXES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW

**TRAFFIC SIGNAL NOTES**

- This Traffic Signal Work requires a "Street Opening Permit" obtained at the Public Works Department's counter on the third floor of City Hall.
- Traffic Signal Work shall be performed in accordance to the most current provisions of Section 86 of the Standard Specifications, the Standard Plans, both published by the State of California Department of Transportation (CALTRANS), the Construction Plan(s), the Contract Special Provisions and as directed by the City Traffic Engineer.
- Contact Traffic Signal Maintenance (909-351-6096) 48 hours in advance to schedule inspection of the work performed. Inspection for Traffic Signal Work shall be at the rate of \$55.00 per hour.
- The Private Engineer signing these plans is responsible for assuring the accuracy and acceptability of the work hereon. In the event of discrepancies arising during construction, the Private Engineer shall be responsible for determining an acceptable solution and revising these Plans for approval by the City Traffic Engineer.
- Construction work that will cause damage to the detector loop(s) shall not be performed until Traffic Signal Maintenance personnel have been notified (909-351-6096) and the necessary timing adjustments made to maintain signal operation.
- All equipment and loop locations shall be approved by the City Traffic Engineer or his Inspector prior to installation by the Contractor.
- All detector loops shall be installed in the presence of the City Traffic Engineer's Inspector.
- Conductors for detector loops shall be Type 2.
- Splicing of traffic signal conductors is not permitted.
- Conductor schedule is furnished as an installation guideline only, it shall be the contractor's responsibility to provide the correct conductors required for the intended operation.
- Pole foundations not to be reused shall be completely removed.



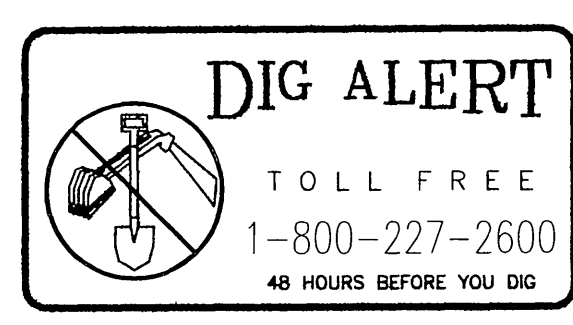
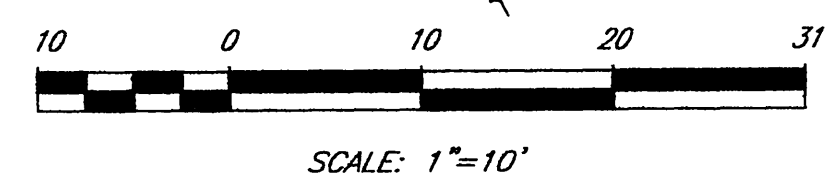
**CONDUCTOR SCHEDULE**

| CONDUCTOR RUN       | A (N) |    |    | B (N) |    |    | C (E) |    |    | D (E) |    |        | E (E) |    |    |
|---------------------|-------|----|----|-------|----|----|-------|----|----|-------|----|--------|-------|----|----|
| CONDUCTORS          | 8     | 10 | 12 | 8     | 10 | 12 | 8     | 10 | 12 | 8     | 10 | 12     | 8     | 10 | 12 |
| Ø A                 |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| Ø B                 |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| Ø A W-DW            |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| Ø B W-DW            |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| Ø A P.P.B.          |       |    | 1  |       |    | 1  |       |    | 1  |       |    | 1      |       |    | 1  |
| Ø B P.P.B.          |       |    | 1  |       |    | 1  |       |    | 1  |       |    | 1      |       |    | 1  |
| Ø A DET. LOOPS      |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| Ø B DET. LOOPS      |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| SPARES              |       |    | 3  |       |    | 3  |       |    | 3  |       |    | 3      |       |    | 3  |
| 12V COMMON          |       |    | 1  |       |    | 1  |       |    | 1  |       |    | 1      |       |    | 1  |
| 120V COMMON         |       |    | 1  |       |    | 1  |       |    | 1  |       |    | 1      |       |    | 1  |
| LUMINAIRE           |       |    | 2  |       |    | 2  |       |    | 2  |       |    | 2      |       |    | 2  |
| SIGNAL SERVICE      |       |    | *  |       |    | *  |       |    | *  |       |    | *      |       |    | *  |
| * TRANSSENSOR CABLE |       |    | *  |       |    | *  |       |    | *  |       |    | *      |       |    | *  |
| TOTAL CONDUCTORS    | 1     | 1  | 3  | 1     | 1  | 3  | 1     | 1  | 3  | 1     | 1  | 3      | 1     | 1  | 3  |
| CONDUIT SIZE        |       |    | 2" |       |    | 3" |       |    | 3" |       |    | 2 1/2" |       |    | 2" |

\* TRANSSENSOR CABLE = 4 CONDUCTOR CABLE  
(N) NEW CONDUCTORS IN RUN  
(E) EXISTING CONDUCTORS IN RUN TO REMAIN

**TRAFFIC & STRIPING NOTES:**

- APPLY 12" SOLID WHITE CROSSWALK/LIMIT LINE PER CALTRANS STD. PLAN A24E (THERMOPLASTIC)
- RELOCATE EXIST. TRAFFIC LIGHT



*S. Akbarpour* 8-14-02  
R.C.E. No. DATE

**BENCHMARK**  
CITY OF RIVERSIDE B.M. NO. 17-02; A DIVISION OF HIGHWAYS BRASS DISK IN WELL AT THE CL INTERSECTION OF OAKLEY & MAIN ST. ELEV = 825.45

**SAKE CONSULTING ENGINEERS, INC.**  
ENGINEERING • ARCHITECTURE • LAND DEVELOPMENT  
400 S. RAMONA AVE., STE. 202  
CORONA, CALIFORNIA 92789  
(909) 279-4041 FAX (909) 279-2830

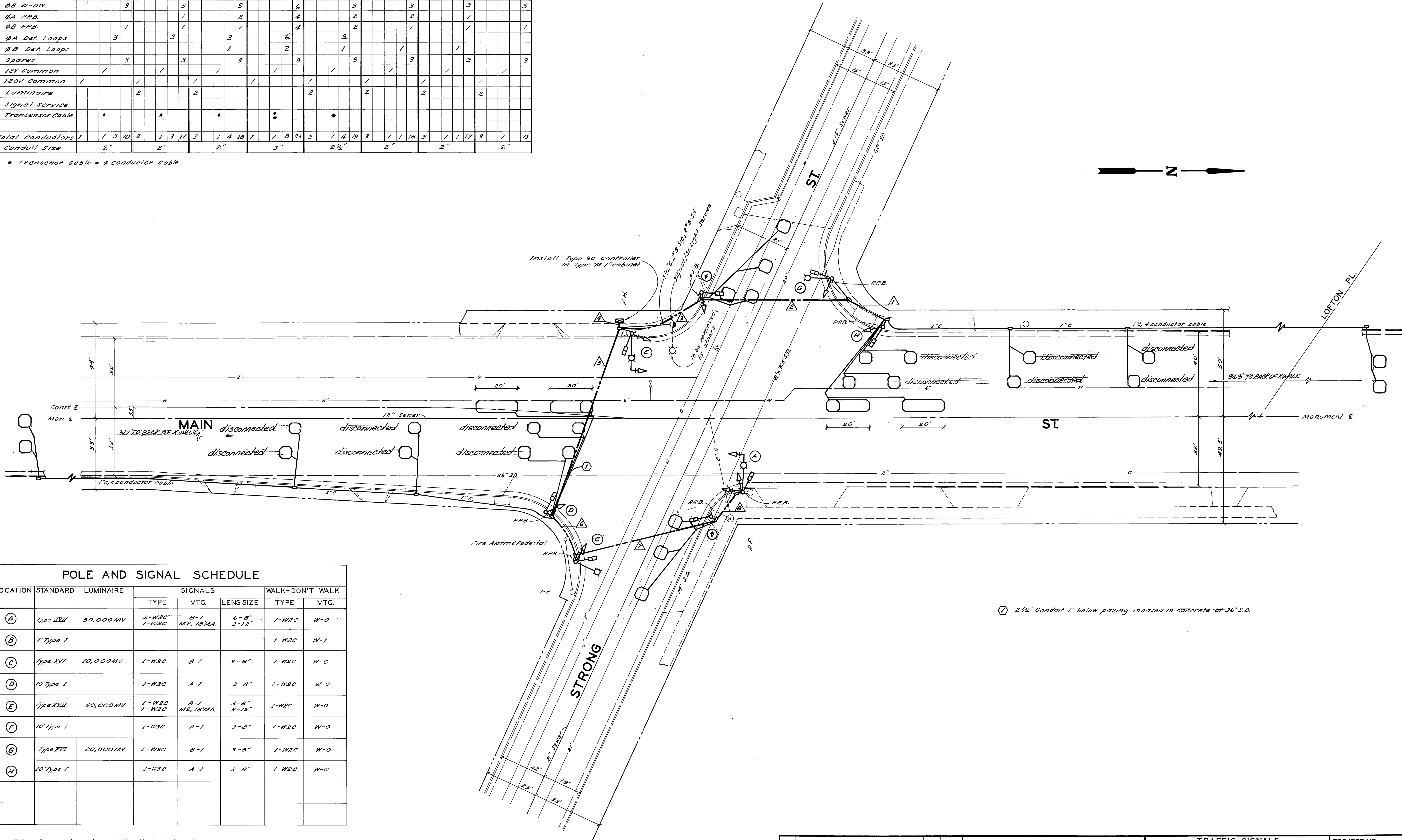
|   |                    |               |                          |
|---|--------------------|---------------|--------------------------|
| CITY OF RIVERSIDE, CALIFORNIA<br>DEPARTMENT OF PUBLIC WORKS |                    |               |                          |
| APPROVED BY   | BY                 | DATE          | APPROVED BY              |
| PRINCIPAL ENGINEER  | <i>[Signature]</i> | 9/11/02       | <i>John Bad</i>          |
| PARK DEPARTMENT   |                    |               | DIRECTOR OF PUBLIC WORKS |
| TRAFFIC DIVISION  |                    |               |                          |
| DEPUTY P.W. DIRECTOR  |                    |               |                          |
| DESIGNED BY SA  | DRAWN BY JT        | CHECKED BY SA |                          |

|   |                   |                   |
|---|-------------------|-------------------|
| <b>TRAFFIC SIGNAL &amp; STRIPING PLAN</b> |                   | PROJECT NO. Jn456 |
| <b>MAIN AND STRONG STREETS</b>            |                   | <b>X-424A</b>     |
| HORIZ. SCALE: 1"=10'                      | VERT. SCALE: NONE | FILE NO.          |
| SHEET 1 OF 1                              |                   |                   |



| Conductor Run      | CONDUCTOR SCHEDULE |    |    |    |   |    |    |    |   |    |    |    |   |    |    |        |   |    |    |    |   |    |    |    |   |    |    |    |   |   |   |    |
|--------------------|--------------------|----|----|----|---|----|----|----|---|----|----|----|---|----|----|--------|---|----|----|----|---|----|----|----|---|----|----|----|---|---|---|----|
|                    | 8                  | 10 | 12 | 14 | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14     | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14 |   |   |   |    |
| Conductors         |                    |    |    |    |   |    |    |    |   |    |    |    |   |    |    |        |   |    |    |    |   |    |    |    |   |    |    |    |   |   |   |    |
| ØA                 |                    |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |    |    | 3      |   |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |   |   | 3  |
| ØB                 |                    |    |    |    |   |    |    |    |   |    |    |    |   |    |    |        |   |    |    |    |   |    |    |    |   |    |    |    |   |   |   |    |
| ØA W-DW            |                    |    |    |    |   |    |    | 3  |   |    |    | 3  |   |    |    | 3      |   |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |   |   | 3  |
| ØB W-DW            |                    |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |    |    | 3      |   |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |   |   | 3  |
| ØA P.P.B.          |                    |    |    |    |   |    |    | 2  |   |    |    | 4  |   |    |    | 2      |   |    |    | 2  |   |    |    | 2  |   |    |    | 2  |   |   |   | 2  |
| ØB P.P.B.          |                    |    |    | 1  |   |    |    | 1  |   |    |    | 4  |   |    |    | 2      |   |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |   |   | 1  |
| ØA Det. Loops      |                    |    |    | 3  |   |    |    | 3  |   |    |    | 6  |   |    |    | 3      |   |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |   |   | 3  |
| ØB Det. Loops      |                    |    |    |    |   |    |    |    |   |    |    | 1  |   |    |    | 2      |   |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |   |   | 1  |
| Spares             |                    |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |    |    | 3      |   |    |    | 3  |   |    |    | 3  |   |    |    | 3  |   |   |   | 3  |
| 12V Common         |                    |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |    |    | 1      |   |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |   |   | 1  |
| 120V Common        |                    |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |    |    | 1      |   |    |    | 1  |   |    |    | 1  |   |    |    | 1  |   |   |   | 1  |
| Luminaire          |                    |    |    |    |   |    |    | 2  |   |    |    | 2  |   |    |    | 2      |   |    |    | 2  |   |    |    | 2  |   |    |    | 2  |   |   |   | 2  |
| Signal Service     |                    |    |    |    |   |    |    |    |   |    |    |    |   |    |    |        |   |    |    |    |   |    |    |    |   |    |    |    |   |   |   |    |
| * Transensor Cable |                    |    |    | *  |   |    |    | *  |   |    |    | *  |   |    |    | *      |   |    |    | *  |   |    |    | *  |   |    |    | *  |   |   |   | *  |
| Total Conductors   | 1                  | 1  | 3  | 10 | 3 | 1  | 3  | 17 | 3 | 1  | 4  | 18 | 1 | 1  | 8  | 35     | 3 | 1  | 4  | 19 | 3 | 1  | 1  | 18 | 3 | 1  | 1  | 17 | 3 | 1 | 1 | 13 |
| Conduit Size       |                    |    |    | 2" |   |    |    | 2" |   |    |    | 3" |   |    |    | 2 1/2" |   |    |    | 2" |   |    |    | 2" |   |    |    | 2" |   |   |   | 2" |

\* Transensor Cable = 4 conductor cable



| POLE AND SIGNAL SCHEDULE |            |           |                |                   |               |                 |      |
|--------------------------|------------|-----------|----------------|-------------------|---------------|-----------------|------|
| LOCATION                 | STANDARD   | LUMINAIRE | SIGNALS        |                   |               | WALK-DON'T WALK |      |
|                          |            |           | TYPE           | MTG.              | LENS SIZE     | TYPE            | MTG. |
| (A)                      | Type XIII  | 50,000 MV | 2-W3C<br>1-W3C | B-1<br>M2, 18"MA. | 6-8"<br>3-12" | 1-W2C           | W-0  |
| (B)                      | Type I     |           |                |                   |               | 1-W2C           | W-1  |
| (C)                      | Type XII   | 10,000 MV | 1-W3C          | B-1               | 3-8"          | 1-W2C           | W-0  |
| (D)                      | 10' Type I |           | 1-W3C          | A-1               | 3-8"          | 1-W2C           | W-0  |
| (E)                      | Type XIII  | 50,000 MV | 1-W3C<br>1-W3C | B-1<br>M2, 18"MA. | 3-8"<br>3-12" | 1-W2C           | W-0  |
| (F)                      | 10' Type I |           | 1-W3C          | A-1               | 3-8"          | 1-W2C           | W-0  |
| (G)                      | Type XII   | 20,000 MV | 1-W3C          | B-1               | 3-8"          | 1-W2C           | W-0  |
| (H)                      | 10' Type I |           | 1-W3C          | A-1               | 3-8"          | 1-W2C           | W-0  |

ØA 9" Incandescent Walk-Don't Walk; ØB 12" Incandescent Walk-Don't Walk

(H) 2 1/2" Conduit, 1' below paving incased in concrete at 36" S.D.

|  |  |                          |  |                      |
|--|--|--------------------------|--|----------------------|
| CITY OF RIVERSIDE, CALIFORNIA<br>DEPARTMENT OF PUBLIC WORKS  |  | TRAFFIC SIGNALS          |  | PROJECT NO.          |
| APPROVED BY _____ BY _____ DATE _____  |  | APPROVED BY _____        |  | X-424                |
| OFFICE ENGINEER  |  | DIRECTOR OF PUBLIC WORKS |  |                      |
| PARK DEPARTMENT  |  | TRAFFIC DIVISION         |  | SHEET _____ OF _____ |
| ASSISTANT CITY ENG.  |  | DATE _____               |  | FILE NO.             |
| AS-BUILT FOR LOOP REPAIR 5/3/88<br>LOOP ADDITION EAST WEST APPROACH 2/8/78<br>As Built (Contract TE-69-A) JMW 7-25-69<br>DESIGNED BY _____ DRAWN BY JMW CHECKED BY _____ |  |                          |  |                      |

HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 10'