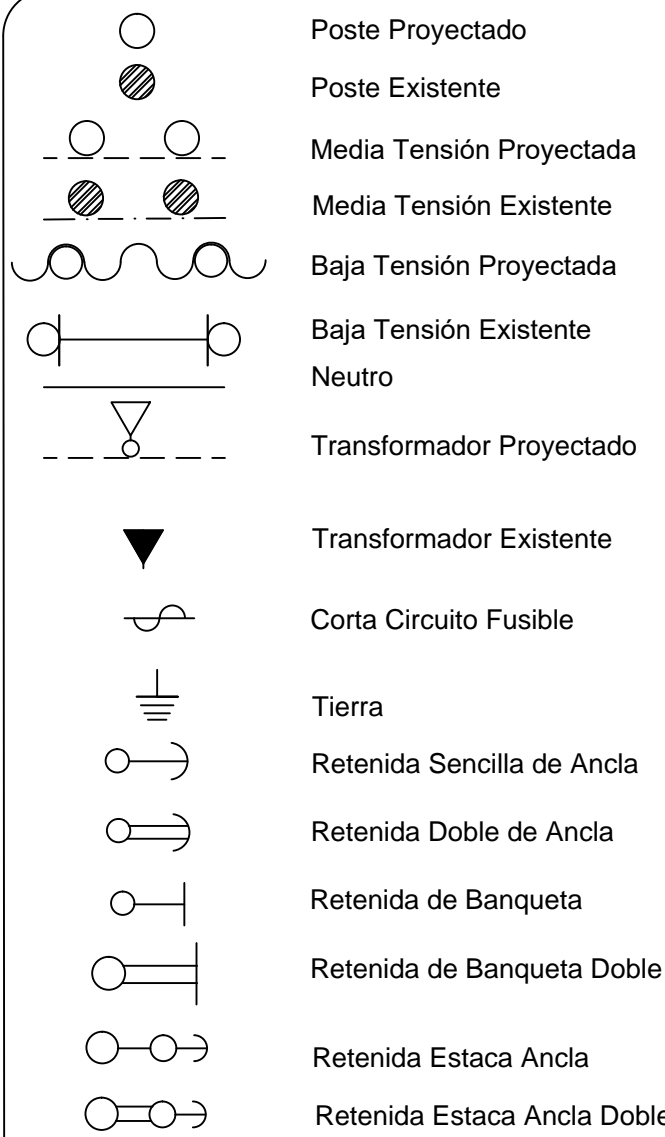
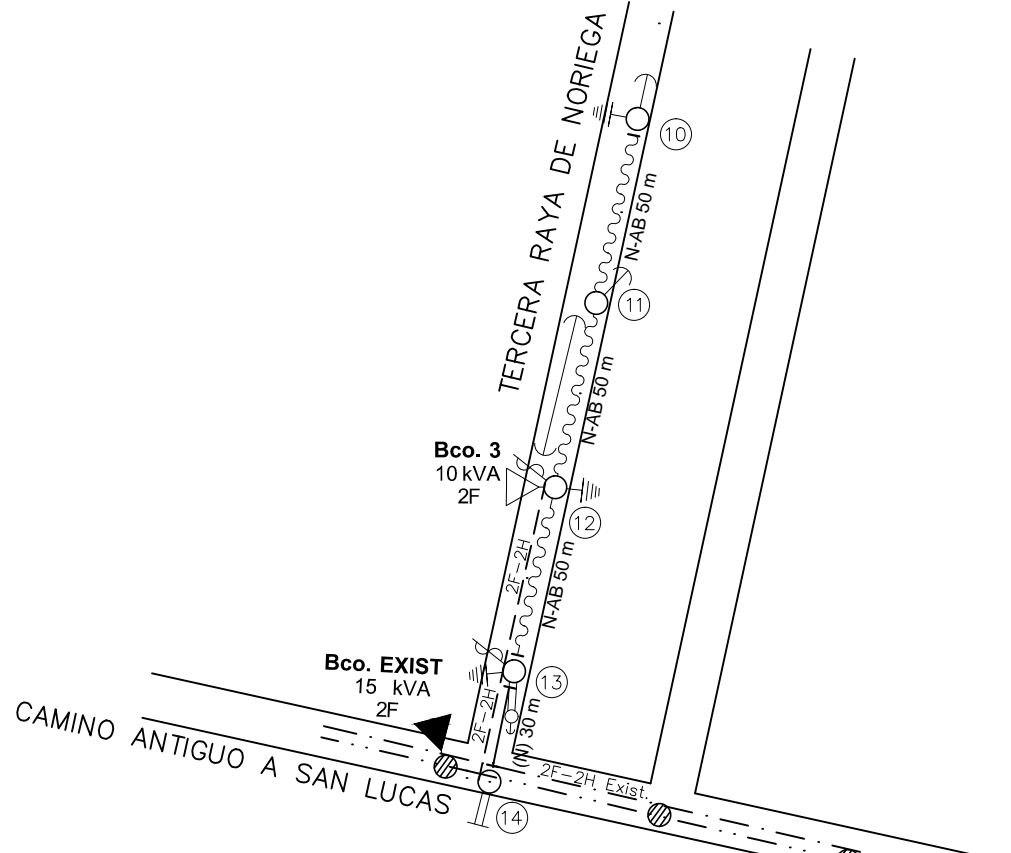


## SIMBOLOGIA



## VOLUMEN DE OBRA

63 POSTES DE R.D.

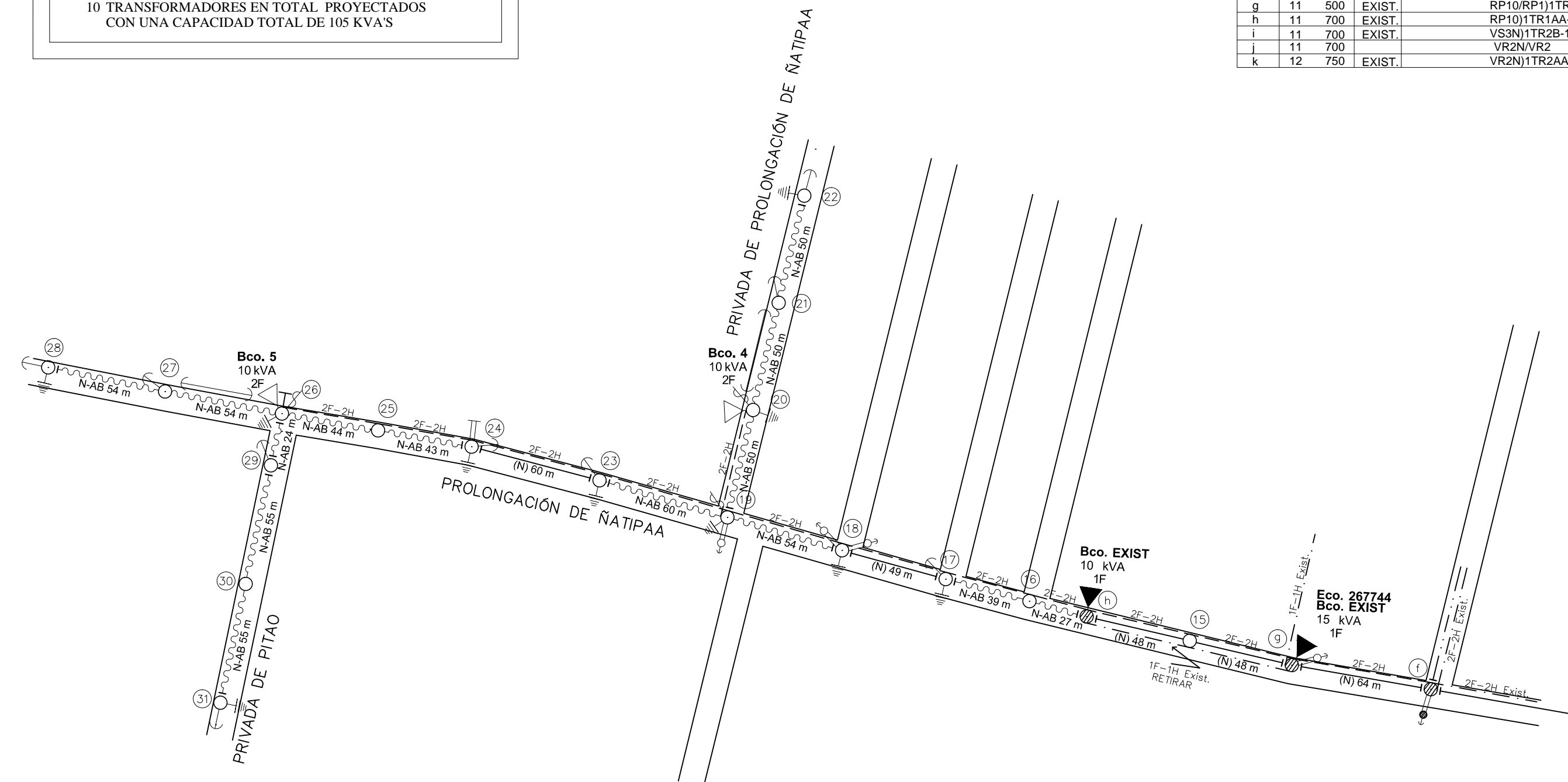


| CUADRO DE CARGAS |            |                 |                    |              |              |                      |            |      |       |                  |
|------------------|------------|-----------------|--------------------|--------------|--------------|----------------------|------------|------|-------|------------------|
| Bco.             | KVA TRANSF | USUARIOS NUEVOS | SUBSISTEMAS EXIST. | NO. DE LOTES | KVA POR LOTE | KVA TOTAL DEMANDADOS | KVA x FASE |      |       | % DE UTILIZACION |
|                  |            |                 |                    |              |              |                      | A          | B    | C     |                  |
| Bco.1            | 10         | 8               | 0                  | 8            | 0.6          | 4.80                 | 2.40       | 2.40 | ----- | 4.80 48.00       |
| Bco.2            | 15         | 19              | 0                  | 19           | 0.6          | 11.40                | 5.70       | 5.70 | ----- | 11.40 76.00      |
| Bco.3            | 10         | 1               | 0                  | 1            | 0.6          | 0.60                 | 0.30       | 0.30 | ----- | 0.60 6.00        |
| Bco.4            | 10         | 4               | 0                  | 4            | 0.6          | 2.40                 | 1.20       | 1.20 | ----- | 2.40 24.00       |
| Bco.5            | 10         | 6               | 0                  | 6            | 0.6          | 3.60                 | 1.80       | 1.80 | ----- | 3.60 36.00       |
| Bco.6            | 10         | 3               | 0                  | 3            | 0.6          | 1.80                 | 0.90       | 0.90 | ----- | 1.80 18.00       |
| Bco.7            | 10         | 5               | 0                  | 5            | 0.6          | 3.00                 | 1.50       | 1.50 | ----- | 3.00 30.00       |
| Bco.8            | 10         | 11              | 2                  | 13           | 0.6          | 7.80                 | 3.90       | 3.90 | ----- | 7.80 78.00       |
| Bco.9            | 10         | 8               | 0                  | 8            | 0.6          | 4.80                 | 2.40       | 2.40 | ----- | 4.80 48.00       |
| Bco.10           | 10         | 4               | 0                  | 4            | 0.6          | 2.40                 | 1.20       | 1.20 | ----- | 2.40 24.00       |

| CUADRO DE DISPOSITIVOS R.D. EXISTENTES |      |      |        |                             |  |          |            |    |           |                  |
|----------------------------------------|------|------|--------|-----------------------------|--|----------|------------|----|-----------|------------------|
| No.                                    | MTS. | KGS. | BANCO  | DISPOSITIVOS                |  | PRIMARIO | SECUNDARIO |    | KVA TOTAL | % DE UTILIZACION |
|                                        |      |      |        |                             |  |          |            |    |           |                  |
| a                                      | 11   | 500  |        | VR2NVR2                     |  | 1P3/1R3  | RVED       |    |           |                  |
| b                                      | 12   | 750  |        |                             |  | 1P3      | RSA        |    |           |                  |
| c                                      | 9    | 450  |        |                             |  | 1P3      | RVED       |    |           |                  |
| d                                      | 11   | 500  |        |                             |  | 1P3      | RSA        |    |           |                  |
| e                                      | 11   | 700  | EXIST. | VR2N1TR2AA-37.5 KVA, 2CF2A  |  | 1P3      | RVP        | 3K |           |                  |
| f                                      | 11   | 700  |        | VR2NVR2                     |  | 1P3      | RVED       |    |           |                  |
| g                                      | 11   | 500  | EXIST. | RP10RP11TR1AA-15 KVA, 1CF1A |  | 1P3      | RSA        | 3K |           |                  |
| h                                      | 11   | 700  | EXIST. | RP101TR1AA-10 KVA, 1CF1A    |  | 1P3      | RSA        | 3K |           |                  |
| i                                      | 11   | 700  | EXIST. | VS2N1TR2B-10 KVA, 2CF2A     |  | 1P3      | RSA        | 3K |           |                  |
| j                                      | 11   | 700  | EXIST. | VR2NVR2                     |  | 1R3      | 2RVED      | 3K |           |                  |
| k                                      | 12   | 750  | EXIST. | VR2N1TR2AA-15 KVA, 2CF2A    |  | 1R1      | RVED       | 3K |           |                  |

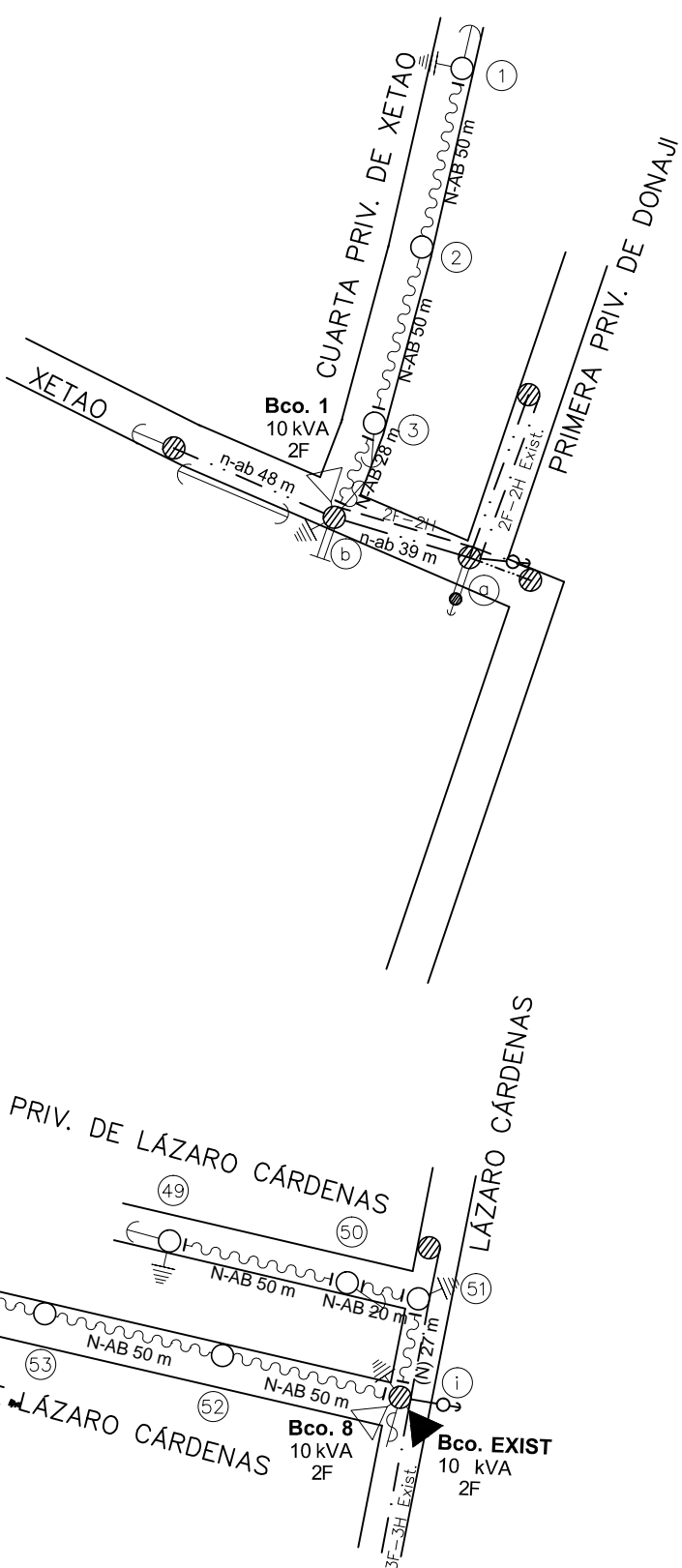
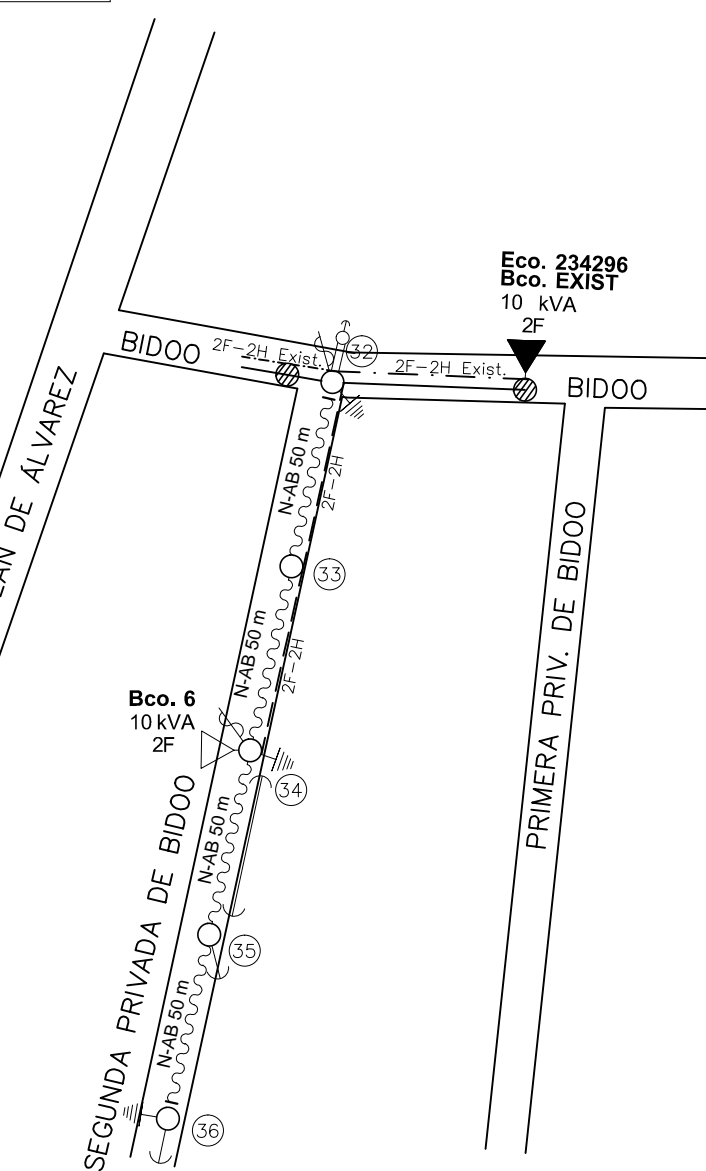
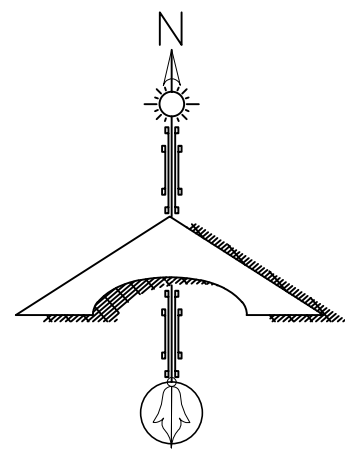
## LISTA DE MATERIAL A RETIRAR

| MATERIALES               | UNIDAD | CANTIDAD |
|--------------------------|--------|----------|
| ASLADOR 1R               | PZA    | 3        |
| ASLADOR 6SVH044          | PZA    | 6        |
| CABLE ACSR CAL. 6        | MTS    | 96       |
| CABLE AG 5/16            | MTS    | 45       |
| HORQUILLA CON GUARDACABO | PZA    | 3        |
| TRANSFORMADOR TD2        | PZA    | 1        |
| POSTE DE 9-450           | PZA    | 2        |



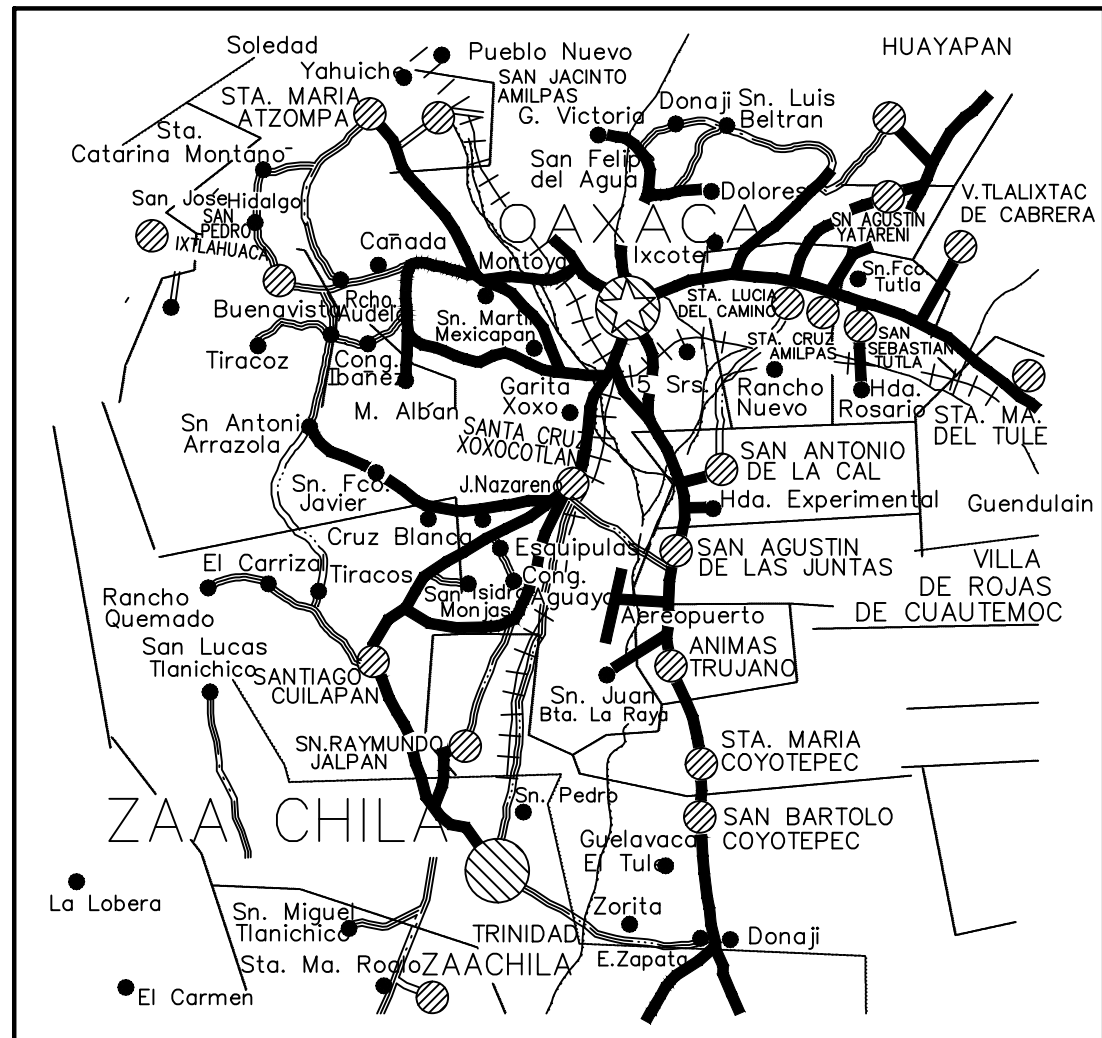
## NOTAS:

- \* ESTA OBRA SE CONSTRUIRA EN M.T. A 2F-3H CON CONDUCTOR ACSR 3/0 Y NEUTRO COMUN CON CONDUCTOR ACSR 1/0.
- \* SE INSTALARAN 10 TRANSFORMADORES DE DIFERENTES CAPACIDADES MONOFASICOS DE DOS BOQUILLAS INSTALANDOLES SUS EQUIPOS DE PROTECCION.
- \* PARA LA RED DE BAJA TENSION SE INSTALARA CABLE MULTIPLE 2+1 CAL. 1/0 SEGUN SE INDICA EN EL PLANO.
- \* SE INSTALARAN APARTARRAYOS DE BAJA TENSION EN TODOS LOS TRANSFORMADORES.
- \* SE INSTALARAN POSTES DE CONCRETO DE 12-750 PARA LA RED.
- \* SE INSTALARAN CCF'S EN LOS POSTES "13,19,32,38", PARA PROTECCION Y SECCIONAMIENTO DE LOS RAMALES.
- \* SE INSTALARA EQUIPO PROFAUNA A LOS TRANSFORMADORES QUE SE INSTALAN.
- \* EL TRANSFORMADOR MONTADO EN EL POSTE (i) SE RETIRARA Y SE INGRESARA AL ALMACEN DE CFE.
- \* LOS POSTES (c,d) SERAN RETIRADOS Y SE INGRESARAN AL ALMACEN DE CFE.
- \* TODO MATERIAL Y EQUIPO A RETIRAR QUE NO ESTE CONSIDERADO SU REUTILIZACION SERA INGRESADO AL ALMACEN DE C.F.E.



| PUNTOS GPS |               |
|------------|---------------|
| 1          | 739524 187656 |
| 2          | 739513 187660 |
| 3          | 739500 187658 |
| 4          | 738382 187651 |
| 5          | 738434 187646 |
| 6          | 738422 187636 |
| 7          | 738411 187638 |
| 8          | 738405 187631 |
| 9          | 738460 187627 |
| 10         | 738380 187632 |
| 11         | 738069 187628 |
| 12         | 738069 187628 |
| 13         | 738069 187628 |
| 14         | 738041 187615 |
| 15         | 738250 187516 |
| 16         | 738178 187518 |
| 17         | 738140 187519 |
| 18         | 738093 187520 |
| 19         | 738041 187521 |
| 20         | 738052 187526 |
| 21         | 738064 187531 |
| 22         | 738064 187531 |
| 23         | 737983 187525 |
| 24         | 737925 187521 |
| 25         | 737882 187528 |
| 26         | 737839 187526 |
| 27         | 737786 187527 |
| 28         | 737773 187527 |
| 29         | 737634 187529 |
| 30         | 737622 187518 |
| 31         | 737811 187513 |
| 32         | 738484 187467 |
| 33         | 738473 187468 |
| 34         | 738462 187468 |
| 35         | 738451 187450 |
| 36         | 738440 187449 |
| 37         | 738336 187429 |
| 38         | 738853 187428 |
| 39         | 738916 187427 |
| 40         | 738971 187426 |
| 41         | 738951 187417 |
| 42         | 738946 187416 |
| 43         | 738946 187416 |
| 44         | 738946 187416 |
| 45         | 738946 187416 |
| 46         | 738899 187406 |
| 47         | 738889 187397 |
| 48         | 738878 187398 |
| 49         | 740348 187546 |
| 50         | 740397 187545 |
| 51         | 740417 187542 |
| 52         | 740363 187545 |
| 53         | 740314 187546 |
| 54         | 740265 187548 |
| 55         | 740358 187510 |
| 56         | 740327 187516 |
| 57         | 740368 187510 |
| 58         | 740210 187516 |
| 59         | 740341 187508 |
| 60         | 740292 187509 |
| 61         | 740243 187503 |
| 62         | 740195 187504 |
| 63         | 740146 187505 |
| a          | 739526 187652 |
| b          | 739489 187653 |
| c          | 738506 187656 |
| d          | 738551 187624 |
| e          | 738573 187625 |
| f          | 738360 187514 |
| g          | 738297 187512 |
| h          | 738297 187512 |
| i          | 740412 187539 |
| j          | 740367 187514 |
| k          | 740334 187499 |

## CROQUIS DE MICROLOCALIZACIÓN



## CUADRO DE DISPOSITIVOS R.D. PROYECTADOS

| No. | MTS.   | KGS. | BANCO                    | DISPOSITIVOS             |                     |
|-----|--------|------|--------------------------|--------------------------|---------------------|
|     |        |      |                          | PRIMARIO                 | SECUNDARIO          |
| 1   | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 2   | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 3   | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 4   | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 5   | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 6   | 12     | 750  | 2                        | VR2N1TR2AA-15 KVA, 2CF2A | 1P3 RVP 6K          |
| 7   | 12     | 750  |                          | VA2N                     | 1R3/1R3 RVED 1K     |
| 8   | 12     | 750  |                          | VR2NVR2                  | 1R3/1R3 RVED 1K     |
| 9   | 12     | 750  |                          | VD2N                     | 1R1/1R3 RBAD,RSA 1K |
| 10  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 11  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 12  | 12     | 750  | 3                        | VR2N1TR2AA-10 KVA, 2CF2A | 1P3 RVP 6K          |
| 13  | 12     | 750  |                          | VA2N 2CF2A               | 1R1/1R3 RVED 1K     |
| 14  | 12     | 750  |                          | VS2NVR2                  | 1P3/1R1 RVED 1K     |
| 15  | 12     | 750  |                          | VS2N                     | 1P1                 |
| 16  | 12     | 750  |                          | VS2N                     | 1R3/1R1 RSA 1K      |
| 17  | 12     | 750  |                          | VS2N                     | 1R3/1R1 RSA 1K      |
| 18  | 12     | 750  |                          | VA2N                     | 1R1/1R3 2RVED 1K    |
| 19  | 12     | 750  |                          | VS2NVR2 2CF2A            | 1P3/1R3 RVED 1K     |
| 20  | 12     | 750  | 4                        | VR2N1TR2AA-10 KVA, 2CF2A | 1P3 RVP 6K          |
| 21  | 12     | 750  |                          |                          | 1P3 RSA 3K          |
| 22  | 12     | 750  |                          | VS2N                     | 1R3 RSA 3K          |
| 23  | 12     | 750  |                          | VD2N                     | 1R3/1R1 RSA 1K      |
| 24  | 12     | 750  |                          | VS2N                     | 1R1/1R3 RBAD,RSA 1K |
| 25  | 12     | 750  |                          | VS2N                     | 1P3                 |
| 26  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 27  | 12     | 750  | 5                        | VR2N1TR2AA-10 KVA, 2CF2A | 1R3/1R3 RSA 3K      |
| 28  | 12     | 750  |                          |                          | 1P3 RSA 3K          |
| 29  | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 30  | 12     | 750  |                          |                          | 1P3 RSA 3K          |
| 31  | 12     | 750  |                          | VS2NVR2N 2CF2A           | 1R3 RSA 3K          |
| 32  | 12     | 750  |                          | VS2N                     | 1P1/1R3 RVED 1K     |
| 33  | 12     | 750  |                          | VS2N                     | 1P3                 |
| 34  | 12     | 750  | 6                        | VR2N1TR2AA-10 KVA, 2CF2A | 1P3 RVP 6K          |
| 35  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 36  | 12     | 750  |                          | VS2NVR2                  | 1R3 RSA 3K          |
| 37  | 12     | 750  |                          | VS2NVR2                  | 1P3/1R1 RVED 1K     |
| 38  | 12     | 750  |                          | VS2NVR2                  | 1R1/1R1 RVED 1K     |
| 39  | 12     | 750  |                          | VS2N                     | 1P1                 |
| 40  | 12     | 750  |                          | VR2NVR2                  | 1R1/1R1 2RVED 1K    |
| 41  | 12     | 750  |                          | VA2N                     | 1R1/1R1 RVED 1K     |
| 42  | 12     | 750  |                          | VR2NVR2                  | 1R1/1R1             |
| 43  | 12     | 750  |                          | VR2NVR2                  | 1R1/1R1             |
| 44  | 12     | 750  |                          | VA2N                     | 1R1/1R3 RVED 1K     |
| 45  | 12     | 750  |                          | VS2N                     | 1P3                 |
| 46  | 12     | 750  |                          |                          | 1P3 RVP 6K          |
| 47  | 12     | 750  | 7                        | VR2N1TR2AA-10 KVA, 2CF2A | 1P3 RSA 3K          |
| 48  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 49  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 50  | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 51  | 12     | 750  |                          | VS2N                     | 1R3/1R3 RSA 1K      |
| 52  | 12     | 750  |                          |                          | 1P3                 |
| 53  | 12     | 750  |                          |                          | 1P3                 |
| 54  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 55  | 12     | 750  | 9                        | VR2N1TR2AA-10 KVA, 2CF2A | 1R3/1R3 RVED 1K     |
| 56  | 12     | 750  |                          |                          | 1R3/1R3 RSA 3K      |
| 57  | 12     | 750  |                          |                          | 1P3 RSA 3K          |
| 58  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| 59  | 12     | 750  |                          | VR2NVR2                  | 1R1/1R3 2RVED 1K    |
| 60  | 12     | 750  |                          | VS2N                     | 1P3                 |
| 61  | 12     | 750  | 10                       | VR2N1TR2AA-10 KVA, 2CF2A | 1P3 RVP 6K          |
| 62  | 12     | 750  |                          |                          | 1P3 RSA 3K          |
| 63  | 12     | 750  |                          |                          | 1R3 RSA 3K          |
| a   | EXIST. |      |                          | CONV VR2N A VA2N         | RVE                 |
| b   | EXIST. | 1    | VR2N1TR2AA-10 KVA, 2CF2A | 1R3                      | RVP,RBAD 6K         |
| c   | 12     | 750  |                          | VS2N                     | 1R3/1R1 RSA 1K      |
| d   | 12     | 750  |                          | VA2N                     | 1P3/1R3 RVED 1K     |
| e   | EXIST. |      |                          | CONV VR2N A VA2N         |                     |
| f   | EXIST. |      |                          | CONV RD2N A AD2N         |                     |
| g   | EXIST. |      |                          | VA2N                     | 1R1/1R1 RVED 1K     |
| h   | EXIST. |      |                          | VS2N                     | 1R1/1R3             |
| i   | EXIST. | 8    | 1TR2AA-10 KVA, 2CF2A     | 1R3/1R3                  | REA 6K              |
| j   | EXIST. |      |                          | CONV VR2N A VA2N         | 1R1                 |
| k   | EXIST. |      |                          | CONV VR2N A VA2N         |                     |

LA COMISION FEDERAL DE ELECTRICIDAD DIVISION SURESTE  
CERTIFICA HABER REVISADO Y AUTORIZADO EL PRESENTE PROYECTO DE ELECTRIFICACION  
CON VIGENCIA DE UN AÑO A PARTIR DEL \_\_\_\_\_ DE \_\_\_\_\_ DEL 20\_\_\_\_

REVISO

Vo.Bo.

ING. RIGOBERTO AVENDAÑO TADEO  
SUPERVISOR DE CONSTRUCCION

ING. EDWIN ACEVEDO MENDEZ  
JEFE DE OFICINA DE ELECTRIFICACION

APROBO

ING. SANDRA MESTAS PEREZ  
JEFE DEL DEPTO. DE PLANEACION

NOTA: ESTA APROBACION NO ES UNA AUTORIZACION PARA CONSTRUIR LA  
OBRA PODRA EJECUTARSE HASTA QUE HAYA SIDO FORMALIZADO  
EL CONVENIO DE OBRA CORRESPONDIENTE

## COMISION FEDERAL DE ELECTRICIDAD

DIVISION SURESTE  
ZONA OAXACA

PLANO PROYECTO

AMPLIACION DE LA RED DE DISTRIBUCION DE ENERGIA ELECTRICA  
EN VARIAS CALLES DE LA LOCALIDAD DE VILLA DE ZAACHILA

## MEDIA Y BAJA TENSION AEREA

|                      |                         |         |            |
|----------------------|-------------------------|---------|------------|
| RESPONSABLE TECNICO. | RESPONSABLE DE PROYECTO | ESCALA: | 1:2000     |
|                      |                         | FECHA:  | JUNIO/2019 |
|                      |                         | PLANO:  | 1-3        |