

**INDEX - CLEARANCES**

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BURLINGTON ELECTRIC DEPT.

DISTRIBUTION STANDARDS

CLEARANCES

DATE: 01/01/17 DWG. NO.: 040000

DWN BY: CC APP. BY:

SCALE: NONE SHEET 1 OF 1

**CLEARANCES - GENERAL**

THE CLEARANCE REQUIREMENTS MUST BE MET WITH THE CONDUCTORS AT THE SAG CONDITION THAT PRODUCES THEIR CLOSEST APPROACH.

**DEFINITION:**

MAXIMUM SAG CONDITIONS – THE MAXIMUM SAG CONDITION IS DEFINED AS WHICHEVER OF THE FOLLOWING TEMPERATURE AND LOADING CONDITIONS THAT PRODUCES THE GREATEST FINAL SAG:

- 1) 120° F (50°C), NO WIND DISPLACEMENT.
- 2) THE MAXIMUM CONDUCTOR TEMPERATURE FOR WHICH THE LINE IS DESIGNED TO OPERATE, IF GREATER THAN 120°F (50°C), NO WIND DISPLACEMENT.
- 3) 32°F (0°C), NO WIND DISPLACEMENT; WIND DISPLACEMENT WITH 1/2” RADIAL THICKNESS OF ICE (NOTE: THE NESC HEAVY LOADING CONDITION IS A TENSION LIMIT ON THE CONDUCTOR, NOT A MAXIMUM SAG CONDITION).

|                                  |                  |
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| <b>BURLINGTON ELECTRIC DEPT.</b> |                  |
| <b>DISTRIBUTION STANDARDS</b>    |                  |
| <b>CLEARANCES<br/>GENERAL</b>    |                  |
| DATE: 01/01/17                   | DWG. NO.: 040101 |
| DWN BY: RG                       | APP. BY:         |
| SCALE: NONE                      | SHEET 1 OF 4     |

**CONDUCTOR CONDITIONS**

THE CLEARANCES CONSIDERED FALL INTO 3 AREAS:

- 1) CLEARANCES OF CONDUCTORS FROM OTHER CONDUCTORS.
- 2) CLEARANCES OF CONDUCTORS OVER VARIOUS TYPES OF SURFACES.
- 3) CLEARANCES OF CONDUCTORS OVER, UNDER, OR NEXT TO OBJECTS OR BUILDINGS.

THE FOLLOWING CONDITIONS APPLY TO CONDUCTORS, GIVEN THEIR POSITION RELATIVE TO THE OBJECT FROM WHICH THE CLEARANCE MUST BE MAINTAINED:

**CONDUCTORS OVER OTHER CONDUCTORS**

CLEARANCES SHALL BE MAINTAINED WITH THE UPPER CONDUCTOR AT ITS MAXIMUM SAG CONDITION AND THE LOWER CONDUCTOR AT ITS FINAL UNLOADED SAG UNDER THE SAME AMBIENT CONDITIONS AND WITHOUT ELECTRICAL LOADING.

**CONDUCTORS OVER SURFACES**

CLEARANCES SHALL BE MAINTAINED WITH THE CONDUCTOR AT ITS MAXIMUM SAG CONDITION.

**CONDUCTORS OVER, UNDER, OR NEXT TO OBJECTS OR BUILDINGS**

VERTICAL: CLEARANCES SHALL BE MAINTAINED WITH THE CONDUCTOR AT WHICHEVER OF THE FOLLOWING CONDITION PRODUCES THE CLOSEST APPROACH:

- 1) ITS MAXIMUM SAG CONDITION

OR

- 2) AT INITIAL SAG WITH THE CONDUCTOR AT THE MINIMUM TEMPERATURE FOR WHICH THE LINE IS DESIGNED TO OPERATE, NO WIND DISPLACEMENT.

HORIZONTAL: CLEARANCES SHOWN IN THE ATTACHED TABLE SHALL BE MAINTAINED WHEN THE CONDUCTOR IS AT 60°F FINAL SAG AND IS DISPLACED FROM REST (BLOWOUT) BY 6 LBS PER SQUARE FOOT OF WIND.

UNLESS OTHERWISE SPECIFIED, ONE OR MORE OF THESE CONDITIONS, AS APPROPRIATE, GOVERN THE CONDUCTOR POSITIONS SHOWN IN THE DRAWINGS AND TABLES. CARE SHOULD BE TAKEN TO ASSURE THAT CLEARANCES ARE MAINTAINED WHEN THE CONDUCTORS ARE AT THEIR CLOSEST APPROACH TO THE OBJECT IN QUESTION.

|                                  |                            |
|----------------------------------|----------------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b> |                            |
| <b>DISTRIBUTION STANDARDS</b>    |                            |
| <b>CLEARANCES<br/>GENERAL</b>    |                            |
| <b>DATE:</b> 01/01/17            | <b>DWG. NO.:</b> 040102    |
| <b>DWN BY:</b> RG                | <b>APP. BY:</b>            |
| <b>SCALE:</b> NONE               | <b>SHEET</b> 2 <b>OF</b> 4 |

## CONDUCTOR CATEGORIES

CONDUCTOR CLEARANCES VARY DEPENDING ON THE VOLTAGE LEVEL AND TYPE OF CONDUCTOR INVOLVED. THESE CAN BE DIVIDED INTO 4 BASIC CATEGORIES. UNGUARDED RIGID LIVE PARTS CAN ALSO BE PLACED INTO THESE CATEGORIES, BASED ON THEIR VOLTAGE LEVEL. FOR CLARITY AND SIMPLICITY, THE FOLLOWING CONDUCTOR CATEGORIES ARE DEFINED FOR USE:

### CATEGORY 1:

- GROUNDED GUYS.
- EFFECTIVELY GROUNDED NEUTRALS ON 0–220kV PHASE TO GROUND CIRCUITS
- EFFECTIVELY GROUNDED MESSENGERS.
- EFFECTIVELY GROUNDED CONCENTRIC NEUTRAL CABLES OPERATING AT 0–22kV PHASE TO GROUND CIRCUITS.
- CABLES OF ANY VOLTAGE HAVING AN EFFECTIVELY GROUNDED CONTINUOUS METAL SHEATH OR SHIELD, SUPPORTED ON AN EFFECTIVELY GROUNDED MESSENGER, OR INSULATED COMMUNICATIONS CONDUCTORS AND CABLE.

### CATEGORY 2:

- UNGUARDED RIGID LIVE PARTS, 0–750V.
- DUPLEX, TRIPLEX, OR QUADRAPLEX CABLE WITH AN EFFECTIVELY GROUNDED BARE MESSENGER, OPERATING AT 0–750V.
- NON-INSULATED COMMUNICATIONS CONDUCTORS (BARE OR COVERED).

|                                  |                            |
|----------------------------------|----------------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b> |                            |
| <b>DISTRIBUTION STANDARDS</b>    |                            |
| <b>CLEARANCES</b>                |                            |
| <b>GENERAL</b>                   |                            |
| <b>DATE:</b> 01/01/17            | <b>DWG. NO.:</b> 040103    |
| <b>DWN BY:</b> RG                | <b>APP. BY:</b>            |
| <b>SCALE:</b> NONE               | <b>SHEET</b> 3 <b>OF</b> 4 |

**CATEGORY 3:**

- OPEN SUPPLY 0-750V.
- CABLES OF ANY VOLTAGE, COVERED WITH A CONTINUOUS AUXILIARY SEMI-CONDUCTING SHIELD IN COMBINATION WITH METALLIC DRAINAGE, SUPPORTED ON AND CABLED TOGETHER WITH AN EFFECTIVELY GROUNDED BARE MESSENGER.
- INSULATED, NON-SHIELDED CABLE OPERATED AT 5kV PHASE TO PHASE OR 2.9kV PHASE TO GROUND, SUPPORTED ON AND CABLED TOGETHER WITH AN EFFECTIVELY GROUNDED BARE MESSENGER.
- UNGROUNDED PORTION OF GUYS, EXPOSED TO 300V-750V.

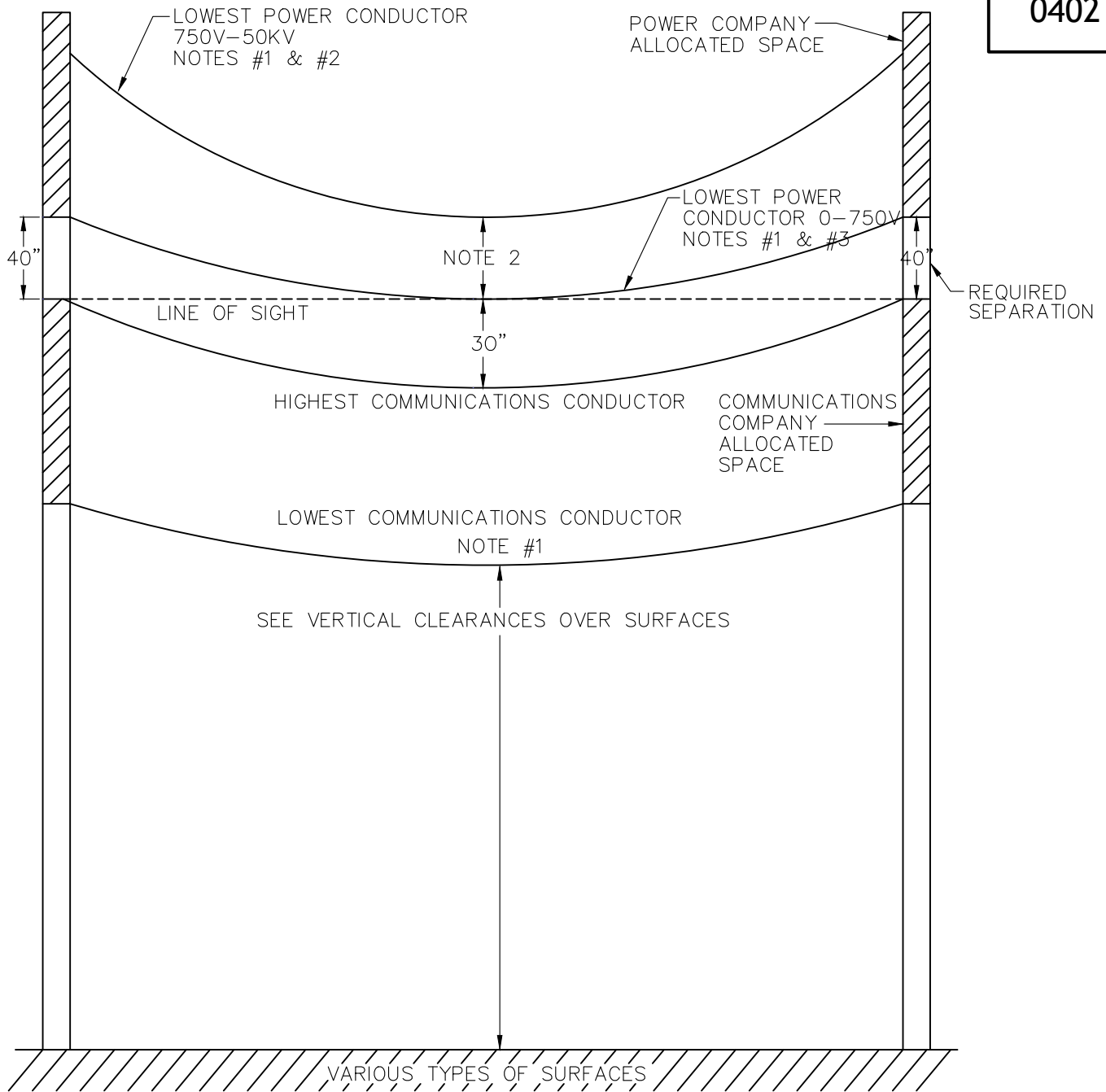
**CATEGORY 4:**

- UNGUARDED RIGID LIVE PARTS AND GUYS, 750V-22kV PHASE TO GROUND.
- OPEN SUPPLY CONDUCTORS 750V-22kV, PHASE TO GROUND.
- UNSHIELDED, COVERED CONDUCTORS 750V-22kV, PHASE TO GROUND.

**VOLTAGE DESIGNATIONS:**

UNLESS OTHERWISE SPECIFIED, THE VOLTAGE DESIGNATIONS ARE PHASE TO GROUND FOR EFFECTIVELY GROUNDED CIRCUITS AND OTHER CIRCUITS WHERE ALL GROUND FAULTS ARE CLEARED BY PROMPTLY DE-ENERGIZING THE FAULTED SECTION, BOTH INITIALLY AND FOLLOWING SUBSEQUENT BREAKER OPTIONS.

|                                  |                            |
|----------------------------------|----------------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b> |                            |
| <b>DISTRIBUTION STANDARDS</b>    |                            |
| <b>CLEARANCES</b>                |                            |
| <b>GENERAL</b>                   |                            |
| <b>DATE:</b> 01/01/17            | <b>DWG. NO.:</b> 040104    |
| <b>DWN BY:</b> RG                | <b>APP. BY:</b>            |
| <b>SCALE:</b> NONE               | <b>SHEET</b> 4 <b>OF</b> 4 |

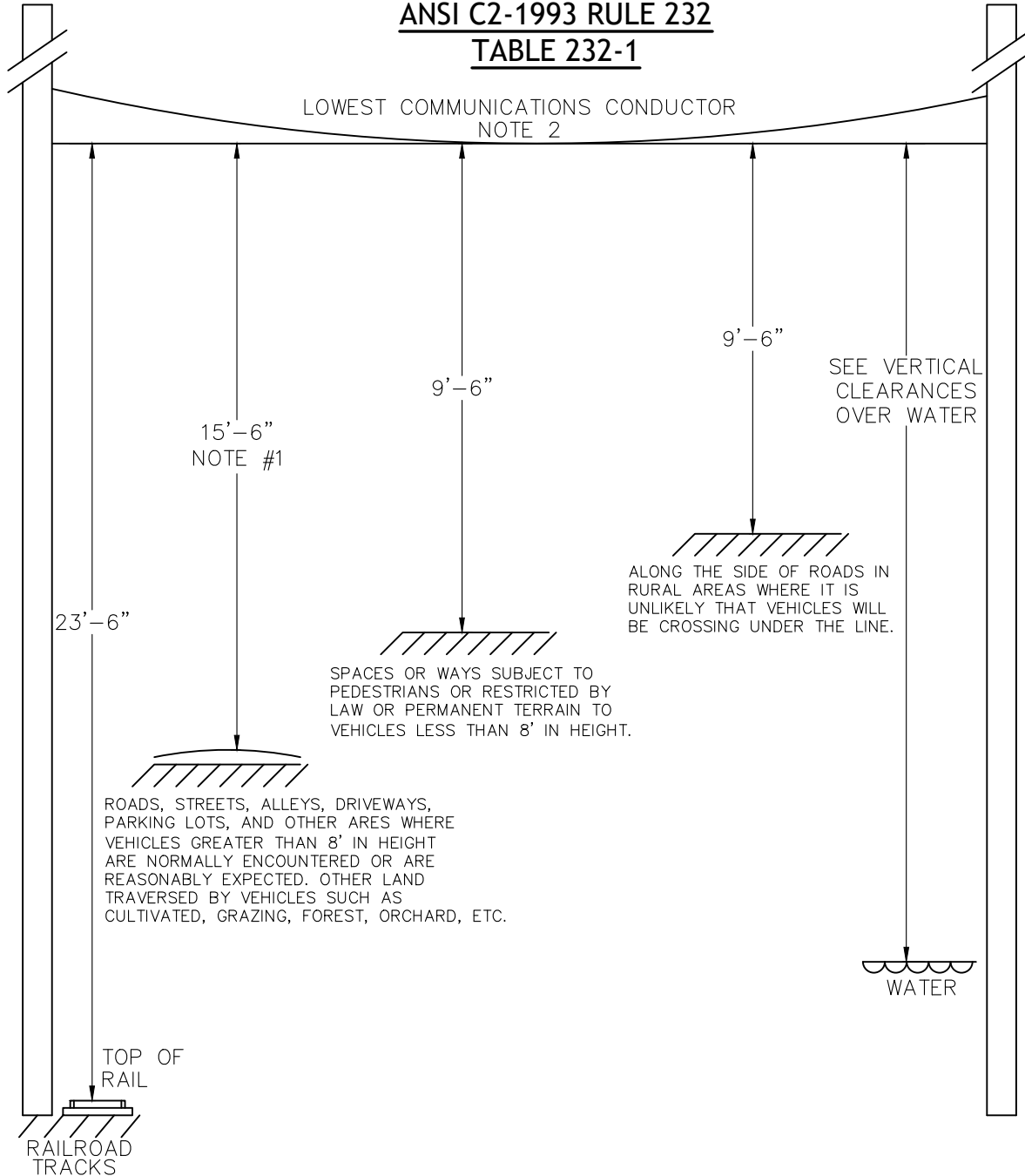


**NOTES**

1. CONDUCTOR POSITION SHOWN AT WHICHEVER CONDITION PRODUCES THE MAXIMUM FINAL SAG.
2. FOR SPAN LENGTHS IN EXCESS OF 150'; VERTICAL CLEARANCES AT THE STRUCTURE BETWEEN OPEN SUPPLY CONDUCTORS AND COMMUNICATIONS CABLES OR CONDUCTORS SHALL BE ADJUSTED SO THAT UNDER CONDITIONS OF CONDUCTOR TEMPERATURE OF 60° F, NO WIND DISPLACEMENT, AND FINAL UNLOADED SAG, NO OPEN SUPPLY CONDUCTOR OVER 750V BUT LESS THAN 50KV SHALL BE LOWER IN THE SPAN THAN A STRAIGHT LINE JOINING THE POINTS OF SUPPORT OF THE HIGHEST COMMUNICATIONS CABLE. ALSO, THIS CONDUCTOR SHALL NOT SAG CLOSER THAN 30" VERTICAL SEPARATION BETWEEN CONDUCTORS WITH THE SUPPLY CONDUCTOR AT MAXIMUM FINAL SAG.
3. NEUTRAL CONDUCTORS WHICH ARE EFFECTIVELY GROUNDED THROUGHOUT THEIR LENGTH AND ASSOCIATED WITH CIRCUITS OF 0-22kv TO GROUND MAY HAVE A CLEARANCE IN THE SPAN OF 12" FROM THE HIGHEST COMMUNICATIONS COMPANY CONDUCTOR.

|   |                  |
|---|------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b>                            |                  |
| <b>DISTRIBUTION STANDARDS</b>                               |                  |
| <b>MINIMUM VERTICAL CLEARANCES<br/>FOR JOINT POLE LINES</b> |                  |
| DATE: 01/01/17  | DWG. NO.: 040201 |
| DWN BY: RG  | APP. BY:         |
| SCALE: NONE   | SHEET 1 OF 2     |

**CLEARANCES DETERMINED BY  
ANSI C2-1993 RULE 232  
TABLE 232-1**



**NOTES**

1. DOES NOT APPLY TO SERVICE DROPS TO BUILDINGS.
2. CONDUCTOR POSITION SHOWN AT WHICHEVER CONDITION PRODUCES THE MAXIMUM FINAL SAG.
3. SEE NESC TABLE 232-1 FOR DETAILS.

**BURLINGTON ELECTRIC DEPT.  
DISTRIBUTION STANDARDS  
MINIMUM VERTICAL CLEARANCES  
FOR JOINT POLE LINES**

|                |                  |
|----------------|------------------|
| DATE: 01/01/17 | DWG. NO.: 040202 |
| DWN BY: RG     | APP. BY:         |
| SCALE: NONE    | SHEET 2 OF 2     |

CONDUCTOR  
CATEGORY

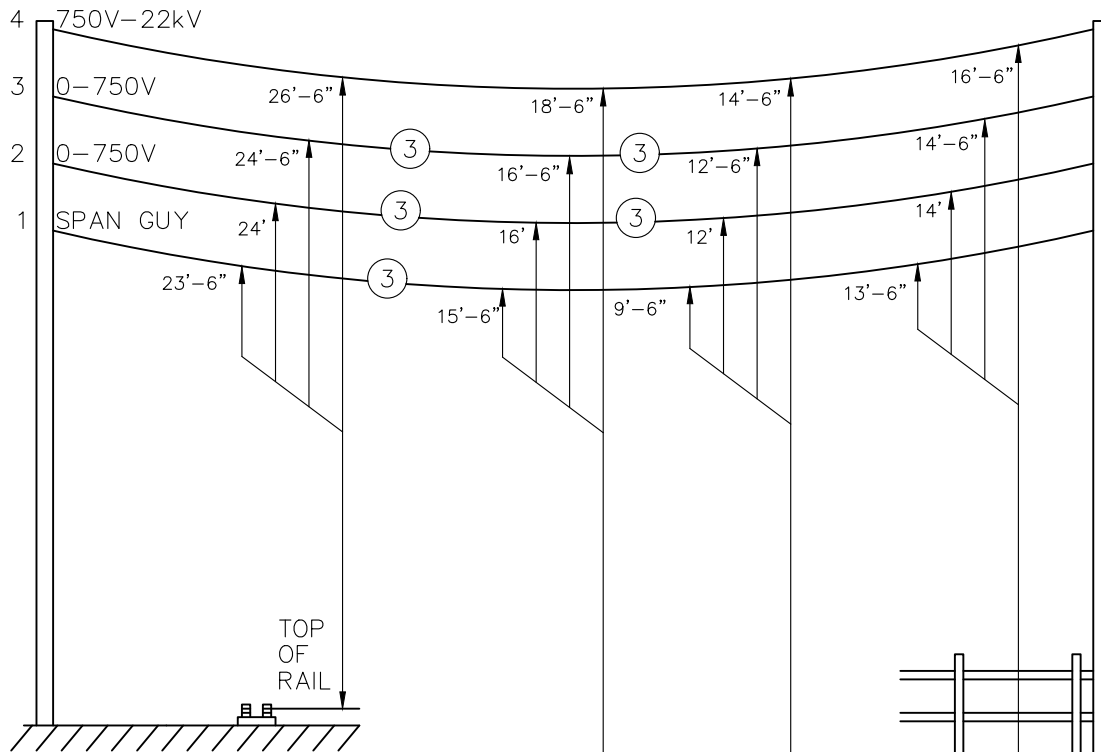


FIG 1: CROSSING RAILROAD TRACKS

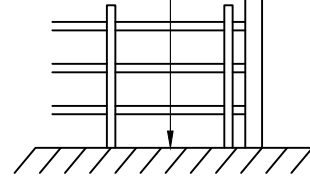


FIG 4: OPEN SPACE  
ROADS IN RURAL DISTRICTS WHERE  
IT IS UNLIKELY THAT VEHICLES WILL  
BE CROSSING UNDER THE LINE (4)

○ - SEE NOTES  
SEE NESC TABLE 232-1 FOR DETAILS

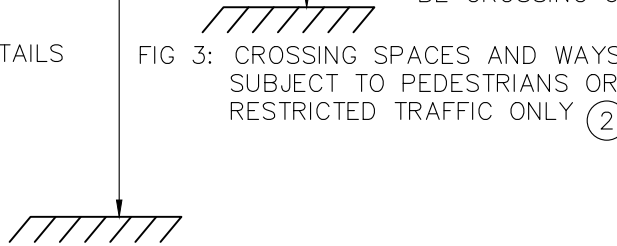


FIG 3: CROSSING SPACES AND WAYS  
SUBJECT TO PEDESTRIANS OR  
RESTRICTED TRAFFIC ONLY (2)

FIG 2: CROSSING ALL DRIVEWAYS, STREETS, ALLEYS, ROADS, PARKING LOTS, AND  
OTHER AREAS SUBJECT TO TRUCK TRAFFIC OR OVER LAND TRAVERSED BY  
VEHICLES, SUCH AS CULTIVATED, GRAZING, FORESTS, ORCHARD, ETC.; ALSO  
RUNNING ALONG ROADS, STREETS, OR ALLEYS WITHIN THE LIMITS OF THE  
HIGHWAY R.O.W. (1)

**BURLINGTON ELECTRIC DEPT.**  
**DISTRIBUTION STANDARDS**  
**MINIMUM VERTICAL CLEARANCES**  
**SOLELY OWNED POLES**  
**LAND SURFACES**

|                |                  |
|----------------|------------------|
| DATE: 01/01/17 | DWG. NO.: 040301 |
| DWN BY: RG     | APP. BY:         |
| SCALE: NONE    | SHEET 1 OF 2     |



**NOTES**

1. TRUCKS ARE DEFINED AS ANY VEHICLE EXCEEDING 8' IN HEIGHT. AREAS NOT SUBJECT TO TRUCK TRAFFIC ARE AREAS WHERE TRUCK TRAFFIC IS NOT NORMALLY ENCOUNTERED OR NOT REASONABLY ANTICIPATED.
2. SPACES AND WAYS SUBJECT TO PEDESTRIANS OR RESTRICTED TRAFFIC ONLY, ARE THOSE AREAS WHERE EQUESTRIANS, VEHICLES, OR OTHER MOBILE UNITS, EXCEEDING 8 FEET IN HEIGHT, ARE PROHIBITED BY REGULATION OR PERMANENT TERRAIN CONFIGURATION OR ARE OTHERWISE NOT NORMALLY ENCOUNTERED OR ARE NOT REASONABLY ANTICIPATED.
3. DOES NOT APPLY TO SERVICE DROPS TO BUILDINGS.
4. WHERE A SUPPLY OR COMMUNICATION LINE ALONG A ROAD IS LOCATED IN CLOSE PROXIMITY TO FENCES, DITCHES, EMBANKMENTS, ETC., SO THAT THE GROUND UNDER THE LINE WOULD NOT BE EXPECTED TO BE TRAVELED EXCEPT BY PEDESTRIANS.

**BURLINGTON ELECTRIC DEPT.****DISTRIBUTION STANDARDS****VERTICAL CLEARANCES  
SOLELY OWNED  
LAND SURFACES**

DATE: 01/01/17

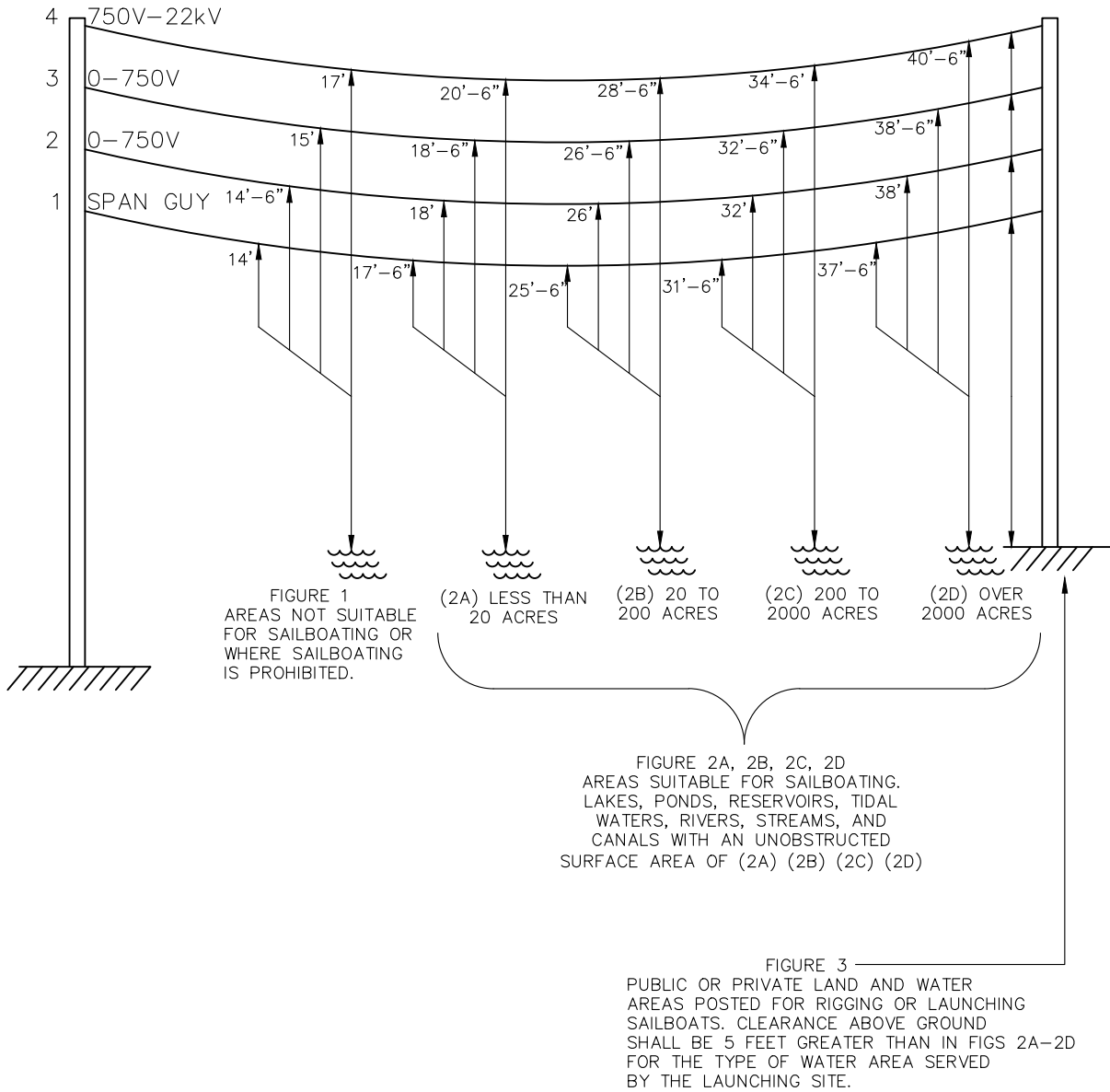
DWG. NO.: 040302

DWN BY: RG

APP. BY:

SCALE: NONE

SHEET 2 OF 2



**NOTES**

1. WHERE GOVERNMENTAL PERMITS ARE REQUIRED, CLEARANCES SHALL CONFORM TO PERMIT IF GREATER THAN ABOVE.
2. SEE NESC TABLE 232-1 FOR DETAILS.

|  |                  |
|--|------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b>   |                  |
| <b>DISTRIBUTION STANDARDS</b>  |                  |
| <b>MINIMUM VERTICAL CLEARANCES<br/>SOLELY OWNED POLES<br/>WATER SURFACES</b> |                  |
| DATE: 01/01/17   | DWG. NO.: 040401 |
| DWN BY: RG   | APP. BY:         |
| SCALE: NONE  | SHEET 1 OF 1     |

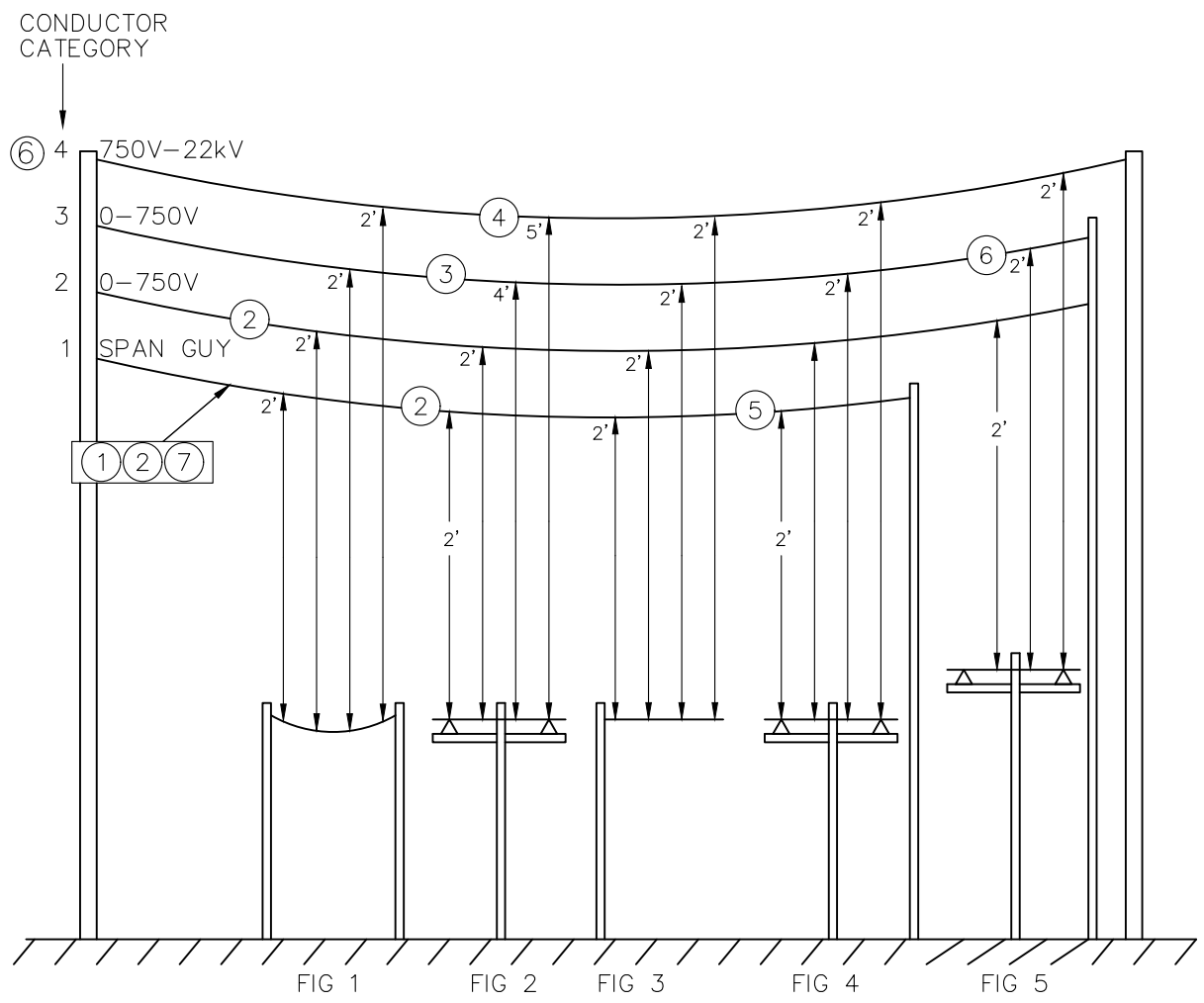


FIG 1  
SPAN WIRES,  
GUY AND  
NEUTRAL  
CONDUCTORS

FIG 2  
INSULATED  
COMMUNICATION  
CABLES AND  
MESSENGERS

FIG 3  
SUPPLY CABLES:  
DUPLEX, TRIPLEX,  
OR QUADRAPLEX  
CABLE (0-750V)  
WITH GROUNDED  
BARE MESSENGER

FIG 4  
OPEN SUPPLY  
CONDUCTORS  
0-750V  
SUPPLY CABLES  
MEETING RULE  
230C2 OR C3

FIG 5  
OPEN SUPPLY  
CONDUCTORS  
750V-22kV

○ - SEE NOTES  
SEE NESC TABLE 232-1 FOR DETAILS

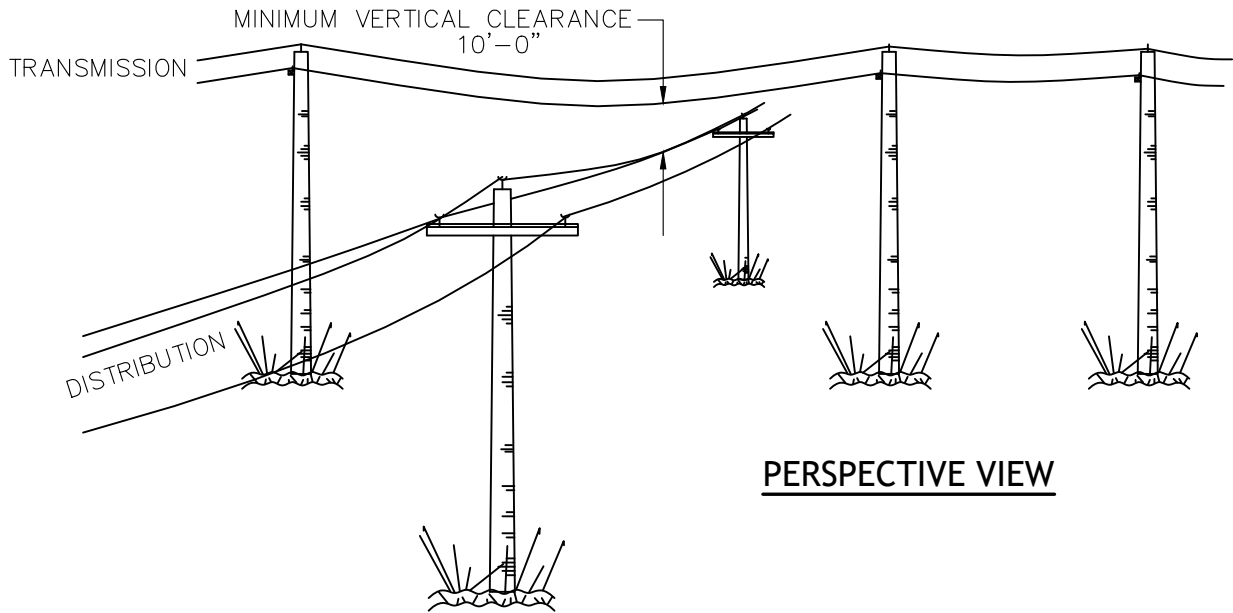
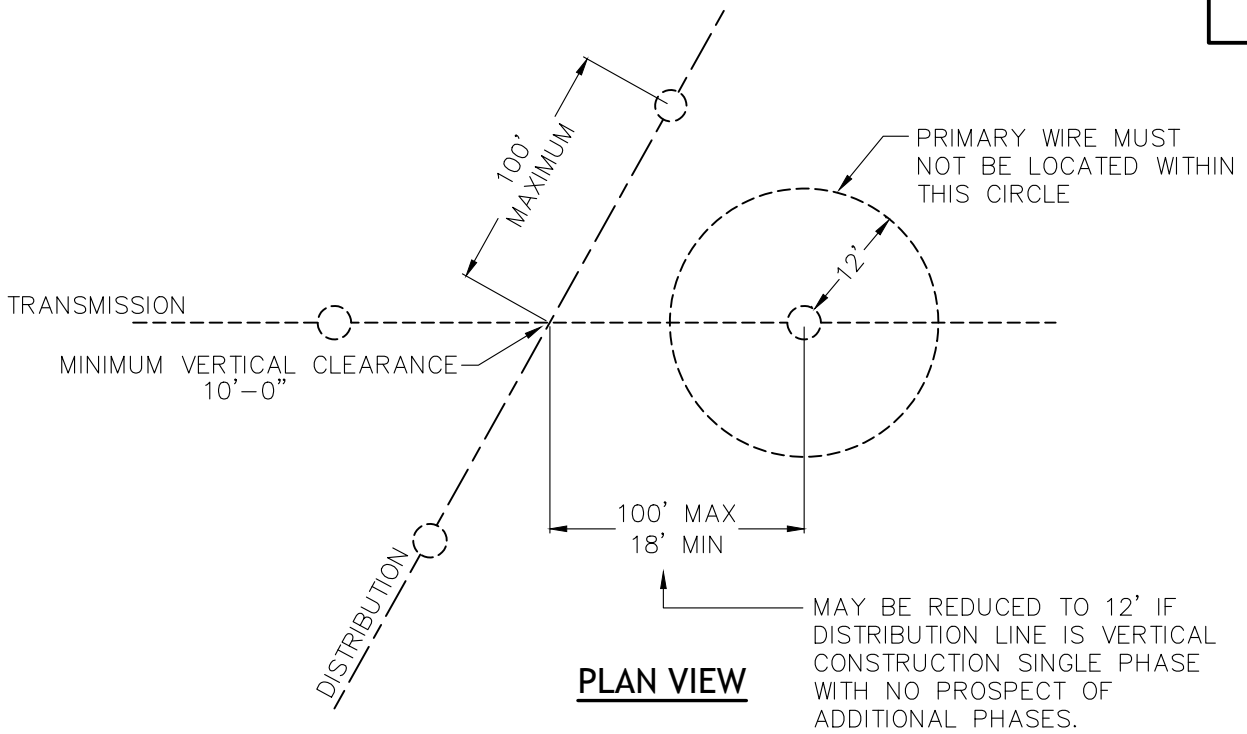
**BURLINGTON ELECTRIC DEPT.**  
**DISTRIBUTION STANDARDS**  
**MINIMUM VERTICAL CLEARANCES**  
**WIRE CROSSING**

|                |                  |
|----------------|------------------|
| DATE: 01/01/17 | DWG. NO.: 040501 |
| DWN BY: RG     | APP. BY:         |
| SCALE: NONE    | SHEET 1 OF 3     |

**NOTES**

1. THE CLEARANCE FOR GUY WIRES (ONLY) MAY BE REDUCED WHERE BOTH GUYS ARE CONNECTED TO NEUTRAL OR GROUND.
2. THE CLEARANCE OF COMMUNICATIONS CONDUCTORS AND THEIR GUY, SPAN AND MESSENGER WIRES FROM EACH OTHER IN LOCATIONS WHERE NO OTHER CATEGORIES OF CONDUCTOR ARE INVOLVED MAY BE REDUCED BY MUTUAL CONSENT OF THE PARTIES CONCERNED, SUBJECT TO THE APPROVAL OF THE REGULATORY BODY HAVING JURISDICTION, EXCEPT FOR FIRE ALARM CONDUCTORS AND CONDUCTORS USED IN THE OPERATION OF RAILROADS, OR WHERE ONE SET OF CONDUCTORS IS FOR PUBLIC USE AND THE OTHER USED IN THE OPERATION OF POWER SYSTEMS.
3. THIS CLEARANCE MAY BE REDUCED TO 2' FOR SUPPLY SERVICE DROPS.
4. WHERE SUPPLY CONDUCTORS OF 750V TO 8.7kV CROSS A COMMUNICATION LINE MORE THAN 6' HORIZONTALLY FROM A COMMUNICATION STRUCTURE, THIS CLEARANCE MAY BE REDUCED TO 4'.
5. IN GENERAL, IT IS NOT RECOMMENDED THAT COMMUNICATION CONDUCTORS, CABLES AND MESSENGERS PASS ABOVE OPEN SUPPLY CONDUCTORS.
6. IN GENERAL, THIS TYPE OF CROSSING IS NOT RECOMMENDED.
7. THE CLEARANCES (PERTAINING TO GUYS ONLY) MAY BE REDUCED BY NOT MORE THAN 25% TO A GUY INSULATOR, PROVIDED THAT FULL CLEARANCE IS MAINTAINED TO ITS METALLIC AND FITTING AND THE GUY WIRES. THE CLEARANCE TO AN INSULATED SECTION OF A GUY BETWEEN TWO INSULATORS MAY BE REDUCED BY NOT MORE THAN 25% PROVIDED THAT FULL CLEARANCE IS MAINTAINED TO THE UNINSULATED PORTION OF THE GUY.

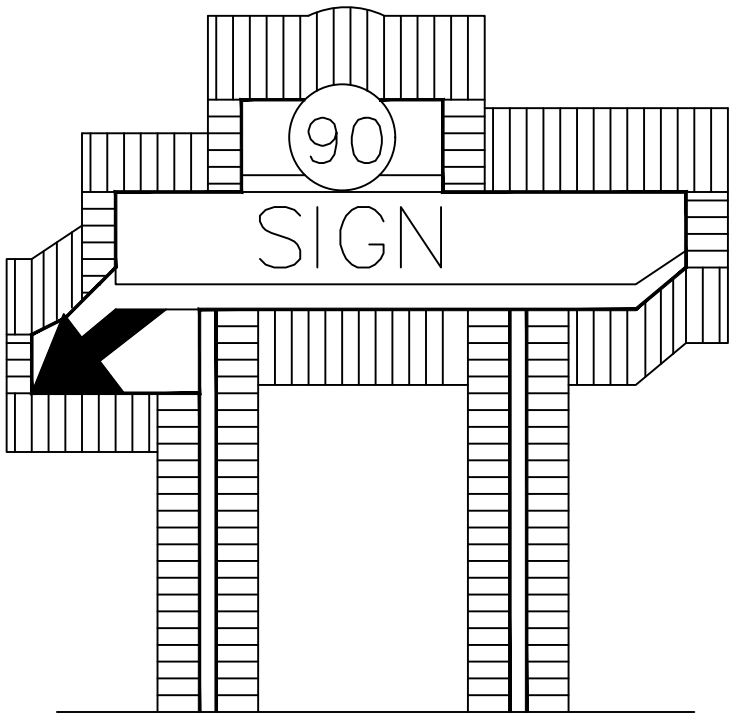
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|----------------------------------|----------------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b> |                            |
| <b>DISTRIBUTION STANDARDS</b>    |                            |
| <b>VERTICAL CLEARANCES</b>       |                            |
| <b>WIRE CROSSINGS</b>            |                            |
| <b>DATE:</b> 01/01/17            | <b>DWG. NO.:</b> 040502    |
| <b>DWN BY:</b> RG                | <b>APP. BY:</b>            |
| <b>SCALE:</b> NONE               | <b>SHEET</b> 2 <b>OF</b> 3 |



TO ELIMINATE THE POSSIBILITY OF DISTRIBUTION WIRE UNLOADING AND WHIPPING UP INTO THE TRANSMISSION WIRE, ONE OF THE DISTRIBUTION POLES MUST BE LOCATED NOT MORE THAN 100' FROM THE TRANSMISSION CROSSING.

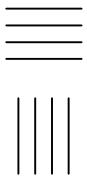
**BURLINGTON ELECTRIC DEPT.**  
**DISTRIBUTION STANDARDS**  
**MINIMUM VERTICAL CLEARANCES**  
**WIRE CROSSING**

|                |                  |
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| DATE: 01/01/17 | DWG. NO.: 040503 |
| DWN BY: RG     | APP. BY:         |
| SCALE: NONE    | SHEET 3 OF 3     |



**LEGEND**

**REGIONS WHERE  
CONDUCTORS ARE  
PROHIBITED**



**CONTROLLING  
CLEARANCE**

HORIZONTAL

VERTICAL

**BURLINGTON ELECTRIC DEPT.  
DISTRIBUTION STANDARDS  
CLEARANCES FROM BUILDINGS  
& OTHER INSTALLATIONS  
EXCEPT BRIDGES**

DATE: 01/01/17      DWG. NO.: 040601

DWN BY: RG      APP. BY:

SCALE: NONE      SHEET 1 OF 2

CLEARANCE AT REST OF WIRES, CONDUCTORS, CABLES, AND UNGUARDED RIGID LIVE PARTS ADJACENT TO BUT NOT ATTACHED TO BUILDINGS AND OTHER INSTALLATIONS EXCEPT BRIDGES REFER TO NESC RULE 234.

| <b><u>BUILDINGS</u></b>  | <b>CONDUCTOR CATEGORY 1</b> | <b>CONDUCTOR CATEGORY 2</b> | <b>CONDUCTOR CATEGORY 3</b>         | <b>CONDUCTOR CATEGORY 4</b>         |
|--|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|
| A. HORIZONTAL  | 4'-6"                       | 5'-0"                       | 5'-6" OR<br>3'6"+BLOWOUT<br>NOTE #2 | 7'-6" OR<br>4'6"+BLOWOUT<br>NOTE #2 |
| B. VERTICAL OVER AND UNDER ROOFS AND BALCONIES NOT ACCESSIBLE TO PEDESTRIANS (NOTE #1) | 3'-0"                       | 3'-6"                       | 10'-6"                              | 12'-6"                              |
| OVER AND UNDER ROOFS AND BALCONIES ACCESSIBLE TO PEDESTRIANS (NOTE #1)                 | 10'-6"                      | 11'-0"                      | 11'-6"                              | 13'-6"                              |
| OVER ROOFS ACCESSIBLE TO VEHICLES NOT EXCEEDING 8' IN HEIGHT                           | 10'-6"                      | 11'-0"                      | 11'-6"                              | 13'-6"                              |
| OVER ROOFS ACCESSIBLE TO VEHICLES EXCEEDING 8' IN HEIGHT                               | 15'-6"                      | 16'-0"                      | 16'-6"                              | 18'-6"                              |

| <b><u>OTHER INSTALLATIONS</u></b>                         | <b>CONDUCTOR CATEGORY 1</b> | <b>CONDUCTOR CATEGORY 2</b> | <b>CONDUCTOR CATEGORY 3</b>         | <b>CONDUCTOR CATEGORY 4</b>         |
|---|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|
| (SIGNS, CHIMNEYS, BILLBOARDS, ANTENNAS, TANKS, AND OTHER) |                             |                             |                                     |                                     |
| A. HORIZONTAL ACCESSIBLE TO PEDESTRIANS                   | 4'-6"                       | 5'-0"                       | 5'-6" OR<br>3'6"+BLOWOUT<br>NOTE #2 | 7'-6" OR<br>4'6"+BLOWOUT<br>NOTE #2 |
| B. VERTICAL OVER OR UNDER ACCESSIBLE TO PEDESTRIANS       | 10'-6"                      | 11'-0"                      | 11'-6"                              | 13'-6"                              |

### **NOTES**

1. A ROOF, BALCONY, OR AREA IS CONSIDERED ACCESSIBLE TO PEDESTRIANS IF THE MEANS OF ACCESS IS THROUGH A DOORWAY, RAMP, WINDOW, OR STAIRWAY OR PERMANENTLY MOUNTED LADDER. A PERMANENTLY MOUNTED LADDER IS NOT CONSIDERED A MEANS OF ACCESS IF IT'S BOTTOM RUNG IS 8' OR MORE FROM THE GROUND OR OTHER PERMANENTLY INSTALLED ACCESSIBLE SURFACE.
2. USE WHICHEVER DIMENSION IS LARGER. BLOWOUT SHALL BE CALCULATED WITH THE CONDUCTOR DISPLACED BY 8 LBS PER SQUARE FOOT OF WIND AT 60°F FINAL SAG.
3. SEE NESC TABLE 234-1 FOR MORE DETAILS.

**BURLINGTON ELECTRIC DEPT.**

**DISTRIBUTION STANDARDS**

**CLEARANCES FROM BUILDINGS  
& OTHER INSTALLATIONS  
EXCEPT BRIDGES**

DATE: 01/01/17

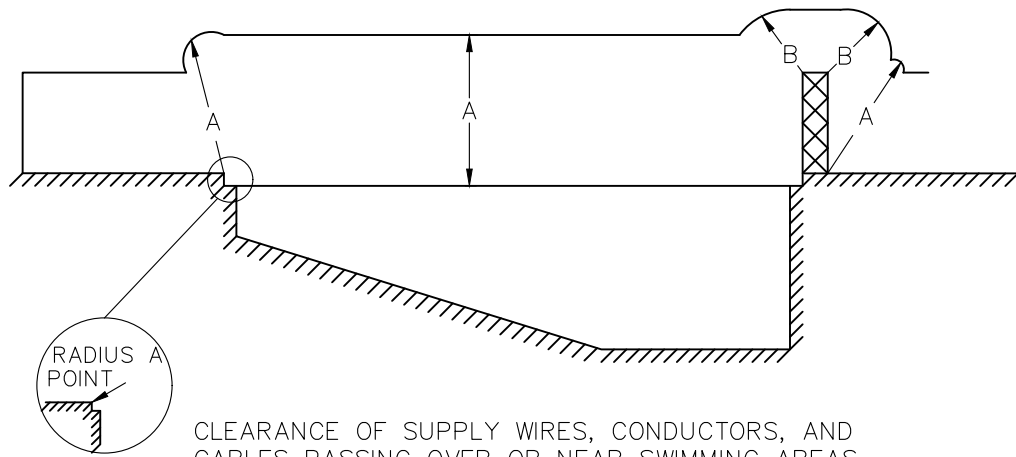
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DWN BY: RG

APP. BY:

SCALE: NONE

SHEET 2 OF 2



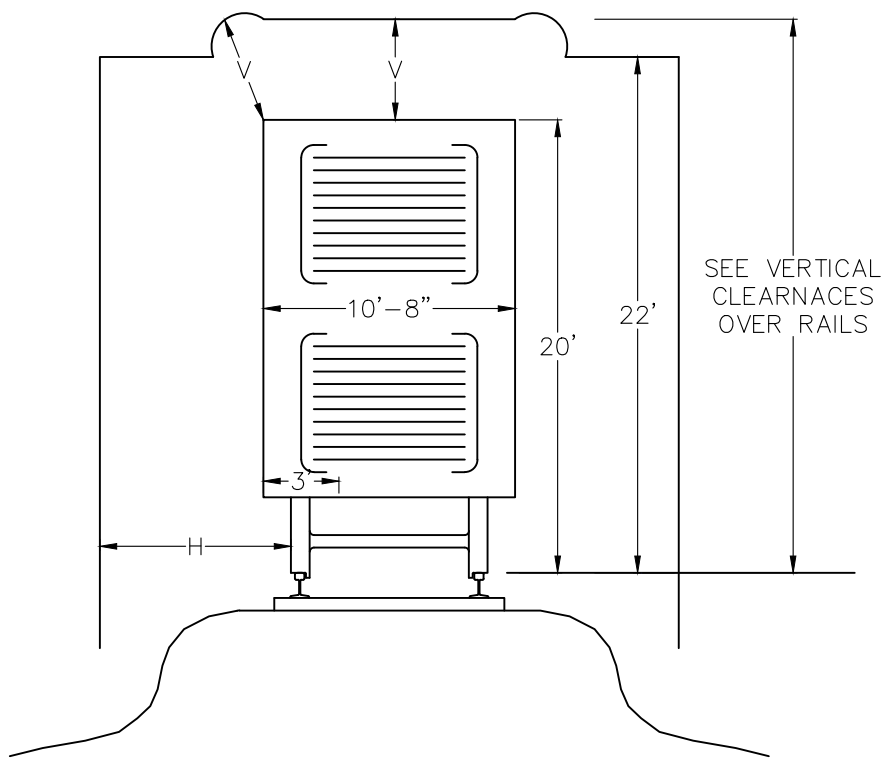
|  | <u>COND<br/>CAT #1</u> | <u>COND<br/>CAT #2</u> | <u>COND<br/>CAT #3</u> | <u>COND<br/>CAT #4</u> |
|--|------------------------|------------------------|------------------------|------------------------|
| A: CLEARANCE IN ANY DIRECTION FROM THE WATER LEVEL, EDGE OF POOL, BASE OF DIVING PLATFORM, OR ANCHORED RAFT. | 22'                    | 22'-6"                 | 23'                    | 25'                    |
| B: CLEARANCE IN ANY DIRECTION TO THE DIVING PLATFORM OR TOWER.   | 14'                    | 14'-6"                 | 15'                    | 17'                    |

**NOTE**

1. INCREASE CLEARANCE BY ADDITIONAL BLOWOUT.
2. SEE NESC TABLE 234 FOR MORE DETAILS AND EXAMPLES.

|                                  |                  |
|----------------------------------|------------------|
| <b>BURLINGTON ELECTRIC DEPT.</b> |                  |
| <b>DISTRIBUTION STANDARDS</b>    |                  |
| <b>SWIMMING POOL CLEARANCES</b>  |                  |
| DATE: 01/01/17                   | DWG. NO.: 040701 |
| DWN BY: RG                       | APP. BY:         |
| SCALE: NONE                      | SHEET 1 OF 1     |



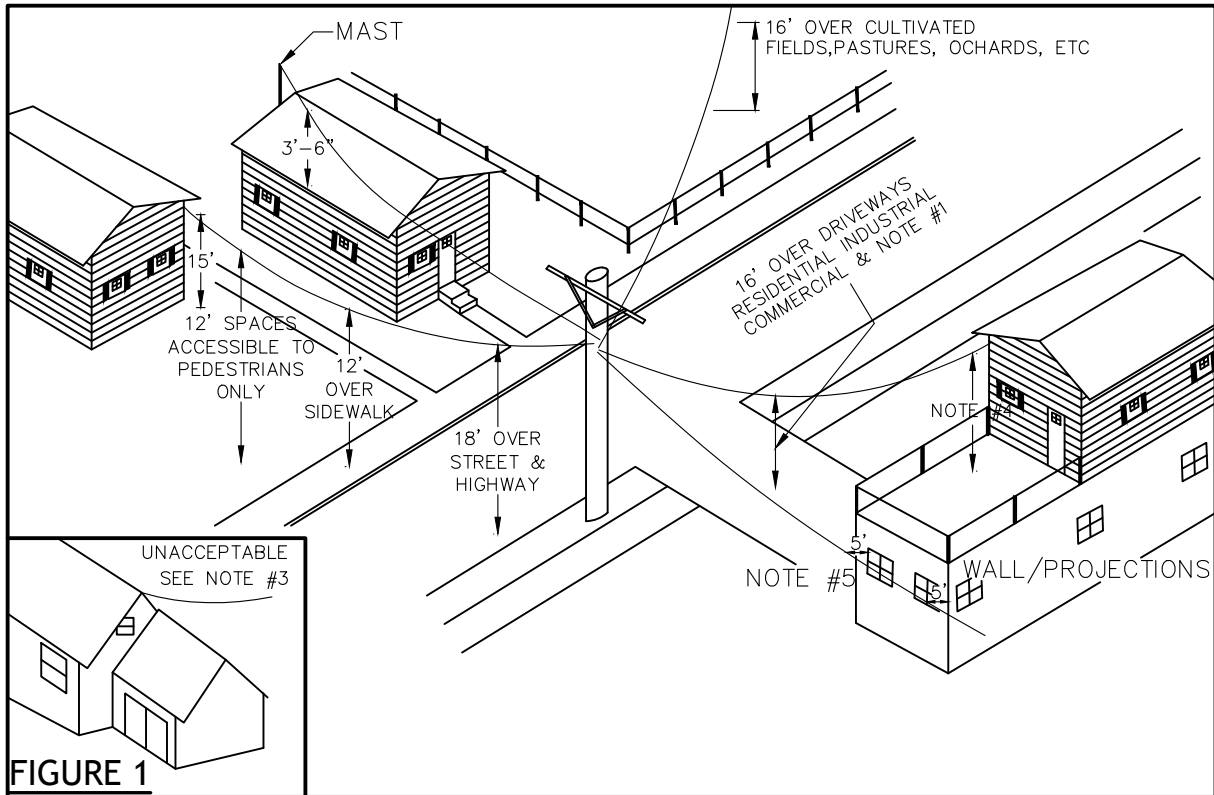


H = MINIMUM HORIZONTAL CLEARANCE FROM THE WIRE, CONDUCTOR, OR CABLE TO THE NEAREST RAIL, WHICH IS EQUAL TO THE REQUIRED VERTICAL CLEARANCE ABOVE THE RAIL MINUS 15'. INCREASE CALCULATED CLEARANCE BY ADDITIONAL BLOWOUT COMPONENT.

V = MINIMUM VERTICAL CLEARANCE FROM THE WIRE, CONDUCTOR, OR CABLE ABOVE THE TOP OF THE RAIL, MINUS 20', THE ASSUMED HEIGHT OF THE RAIL CAR.

REFER TO STANDARD 0403 FOR CLEARANCES.

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| <b>BURLINGTON ELECTRIC DEPT.</b> |                  |
| <b>DISTRIBUTION STANDARDS</b>    |                  |
| <b>RAIL CAR CLEARANCES</b>       |                  |
| DATE: 01/01/17                   | DWG. NO.: 040801 |
| DWN BY: RG                       | APP. BY:         |
| SCALE: NONE                      | SHEET 1 OF 1     |



## NOTES

1. THIS INCLUDES PARKING LOTS AND OTHER AREAS SUBJECT TO TRUCK TRAFFIC.
2. MAINTAIN 3'-6" VERTICAL AND HORIZONTAL CLEARANCES TO SIGNS, CHIMNEYS, BILLBOARDS, RADIO AND TELEVISION ANTENNAS, TRAFFIC SIGNALS, AND OTHER LINES WITHOUT BEING ATTACHED.
3. SERVICE ATTACHMENT LOCATED ABOVE BUILDING EXTENSION AS SHOWN IN FIGURE 1 IS NOT ACCEPTABLE BECAUSE THE SERVICE CONNECTIONS CANNOT BE DIRECTLY REACHED FROM A LADDER PLACED SECURELY ON THE GROUND.
4. THIS CLEARANCE APPLIES TO FLAT ROOFS, BALCONIES, AND AREAS RESTRICTED TO PEDESTRIANS ONLY OR TO VEHICLES NOT EXCEEDING 8' IN HEIGHT.
5. 3'-6" WHEN DISPLACED BY WIND.

|                                  |  |
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| <b>BURLINGTON ELECTRIC DEPT.</b> |  |
| <b>DISTRIBUTION STANDARDS</b>    |  |
| <b>MINIMUM CLEARANCES FOR</b>    |  |
| <b>SERVICES 0 - 750 VOLTS</b>    |  |

DATE: 01/01/17

DWG. NO.: 040901

DWN BY: RG

APP. BY:

SCALE: NONE

SHEET 1 OF 1

**SUPPLY CABLE CLEARANCES (MINIMUM):**

1. THE CONDUIT SYSTEM SHALL MAINTAIN A MINIMUM CLEARANCE FROM COMMUNICATION CABLES OF 12" IN WELL TAMPED EARTH, 4" OF MASONRY AND 3" OF CONCRETE.
2. THE CONDUIT SYSTEM SHALL MAINTAIN A MINIMUM CLEARANCE FROM WATER, GAS, AND SEWER LINES OF 5'. WHERE THIS IS NOT FEASIBLE, A LESSER CLEARANCE MAY BE AUTHORIZED WITH WRITTEN APPROVAL OF ALL INVOLVED PARTIES. THE REQUESTING PARTY SHALL SUBMIT APPROVALS TO BED.
3. CONDUITS CROSSING WATER, SEWER, OR GAS LINES WILL BE INSTALLED AT RIGHT ANGLES AND SO AS NOT TO PLACE ANY STRAIN ON THESE SERVICES, THE CONDUITS SHALL BE ENCASED IN CONCRETE.
4. 5' FROM SWIMMING POOLS OR ASSOCIATED EQUIPMENT.
5. THE CONDUIT SYSTEM SHALL MAINTAIN A MINIMUM CLEARANCE FROM GASOLINE OR PROPANE EQUIPMENT OF 12'. THE CONDUITS WITHIN 20' OF GASOLINE OR PROPANE EQUIPMENT SHALL BE INSTALLED IN RIGID METAL OR ENCASED IN CONCRETE.
6. 5' VERTICAL CLEARANCE FROM TOP OF RAIL WHEN INSTALLED LONGITUDINALLY UNDER RAILROAD BED (THIS CONSTRUCTION SHOULD BE AVOIDED WHEN POSSIBLE).

**PADMOUNT TRANSFORMER CLEARANCES (MINIMUM):**

1. 10' FROM ANY BUILDING. WHEN NECESSARY, THIS MAY BE REDUCED TO 3' (MEASURED FROM PAD) PROVIDING ANY WALL WITHIN 10' IS AN APPROVED FIRE WALL AND ANY WINDOWS OR DOORS ARE MINIMUM 10' FROM TRANSFORMER.
2. PADMOUNT EQUIPMENT SHALL BE LOCATED WITHIN 10'-15' OF A SUITABLE WAY PROVIDING FULL ACCESS TO UTILITY VEHICLES FOR MAINTENANCE. TRANSFORMERS LOCATED WITHIN 10' OF PUBLIC VEHICLE ACCESS SHALL BE PROVIDED PROTECTION FROM VEHICULAR DAMAGE.

**BURLINGTON ELECTRIC DEPT.****DISTRIBUTION STANDARDS****UNDERGROUND  
CLEARANCES**

DATE: 01/01/17

DWG. NO.: 041001

DWN BY: RG

APP. BY:

SCALE: NONE

SHEET 1 OF 1

**POLE SPACE CHART**  
**NEW CONSTRUCTION - SPACE ALLOWED FOR CATV**

| SIZE OF POLE | STD. DEPTH IN GROUND | <u>B.E.D.</u>   |                           | NEUTRAL SPACE** | <u>CABLE TV</u> |                | <u>TELEPHONE</u>       |                           |
|--------------|----------------------|-----------------|---------------------------|-----------------|-----------------|----------------|------------------------|---------------------------|
|              |                      | ASSIGNED SPACE* | BOTTOM LIMIT ABOVE GROUND |                 | ASSIGNED SPACE  | ASSIGNED SPACE | TOP LIMIT ABOVE GROUND | BOTTOM LIMIT ABOVE GROUND |
| 35'          | 5'-6"                | 3'-4"           | 26'-2"                    | 3'-4"           | 1'-0"           | 1'-6"          | 21'-10"                | 20'-4"                    |
| 40'          | 6'-0"                | 6'-10"          | 27'-2"                    | 3'-4"           | 1'-0"           | 2'-6"          | 22'-10"                | 20'-4"                    |
| 45'          | 6'-6"                | 10'-4"          | 28'-2"                    | 3'-4"           | 1'-0"           | 3'-6"          | 23'-10"                | 20'-4"                    |
| ***50'       | 7'-0"                | 13'-10"         | 29'-2"                    | 3'-4"           | 1'-0"           | 4'-6"          | 24'-10"                | 20'-4"                    |
| ***55'       | 7'-6"                | 17'-4"          | 30'-2"                    | 3'-4"           | 1'-0"           | 5'-6"          | 25'-10"                | 20'-4"                    |

**EXISTING CONSTRUCTION - SPACE ALLOWED FOR MUNICIPAL CIRCUITS AND CATV**

| SIZE OF POLE | STD. DEPTH IN GROUND | <u>B.E.D.</u>   |                           | NEUTRAL SPACE** | <u>MUN &amp; CABLE TV</u> |                | <u>TELEPHONE</u>       |                           |
|--------------|----------------------|-----------------|---------------------------|-----------------|---------------------------|----------------|------------------------|---------------------------|
|              |                      | ASSIGNED SPACE* | BOTTOM LIMIT ABOVE GROUND |                 | ASSIGNED SPACE            | ASSIGNED SPACE | TOP LIMIT ABOVE GROUND | BOTTOM LIMIT ABOVE GROUND |
| 35'          | 5'-6"                | 2'-10"          | 26'-8"                    | 3'-4"           | 2'-0"                     | 1'-4"          | 21'-4"                 | 20'-4"                    |
| 40'          | 6'-0"                | 6'-4"           | 27'-8"                    | 3'-4"           | 2'-0"                     | 2'-4"          | 22'-4"                 | 20'-4"                    |
| 45'          | 6'-6"                | 9'-10"          | 28'-8"                    | 3'-4"           | 2'-0"                     | 3'-4"          | 23'-4"                 | 20'-4"                    |
| ***50'       | 7'-0"                | 13'-4"          | 29'-8"                    | 3'-4"           | 2'-0"                     | 4'-4"          | 24'-4"                 | 20'-4"                    |
| ***55'       | 7'-6"                | 16'-10"         | 30'-8"                    | 3'-4"           | 2'-0"                     | 5'-4"          | 25'-4"                 | 20'-4"                    |

STREET LIGHT BRACKETS MAY BE MOUNTED IN NEUTRAL SPACE, PROVIDED THE SERVICE CONDUCTOR LOOP IS AT LEAST 12" ABOVE THE COMMUNICATION CONDUCTORS AND THE BRACKET IS GROUNDED.

NEW CONSTRUCTION – CABLE TV SPACE OF 1' IS CREATED BY EACH JOINT OWNER CONTRIBUTING 6" FROM THEIR ASSIGNED SPACE.

EXISTING CONSTRUCTION – MUNICIPAL AND CABLE TV SPACE OF 2' IS CREATED BY EACH JOINT OWNER CONTRIBUTING 1' FROM THEIR ASSIGNED SPACE.

THE ABOVE CHART IS BASED ON THE JOINT OWNERSHIP AGREEMENT OF OCTOBER 1, 1985. ASSIGNED SPACES FOR 40' AND 45' POLES WITH MUNICIPAL CIRCUITS SHOWN ABOVE HAVE BEEN CORRECTED FROM THE 1955 AGREEMENT.

NEW JOINT OWNERSHIP POLES IN THOROUGHFARES MUST BE 40' MINIMUM.

\* A BED PROPERTY TAG SHALL BE PLACED ON ALL JOINT POLES TO INDICATE THE BOTTOM OF BED'S ASSIGNED SPACE.

\*\* THE 3'-4" NEUTRAL SPACE MAY BE REDUCED TO 2'-6" BETWEEN EFFECTIVELY GROUNDED NON-CURRENT CARRYING EQUIPMENT SUCH AS TRANSFORMERS AND COMMUNICATION CONDUCTORS.

\*\*\* POLES 50' AND UP: SPACING MUST BE MUTUALLY AGREED UPON BASED ON REQUIREMENTS.

|                                  |                  |
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| <b>BURLINGTON ELECTRIC DEPT.</b> |                  |
| <b>DISTRIBUTION STANDARDS</b>    |                  |
| <b>POLE SPACE CHART</b>          |                  |
| <b>THIRD PARTY ATTACHMENTS</b>   |                  |
| DATE: 01/01/17                   | DWG. NO.: 041101 |
| DWN BY: RG                       | APP. BY:         |
| SCALE: NONE                      | SHEET 1 OF 1     |