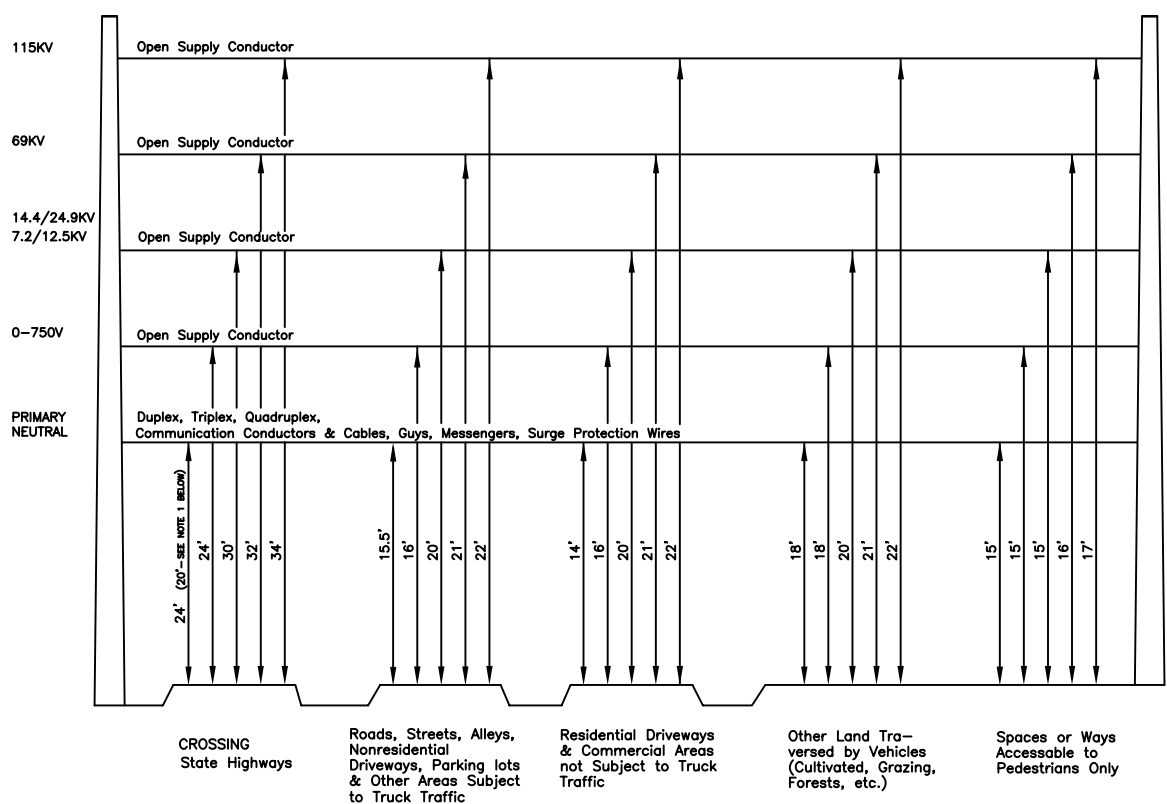


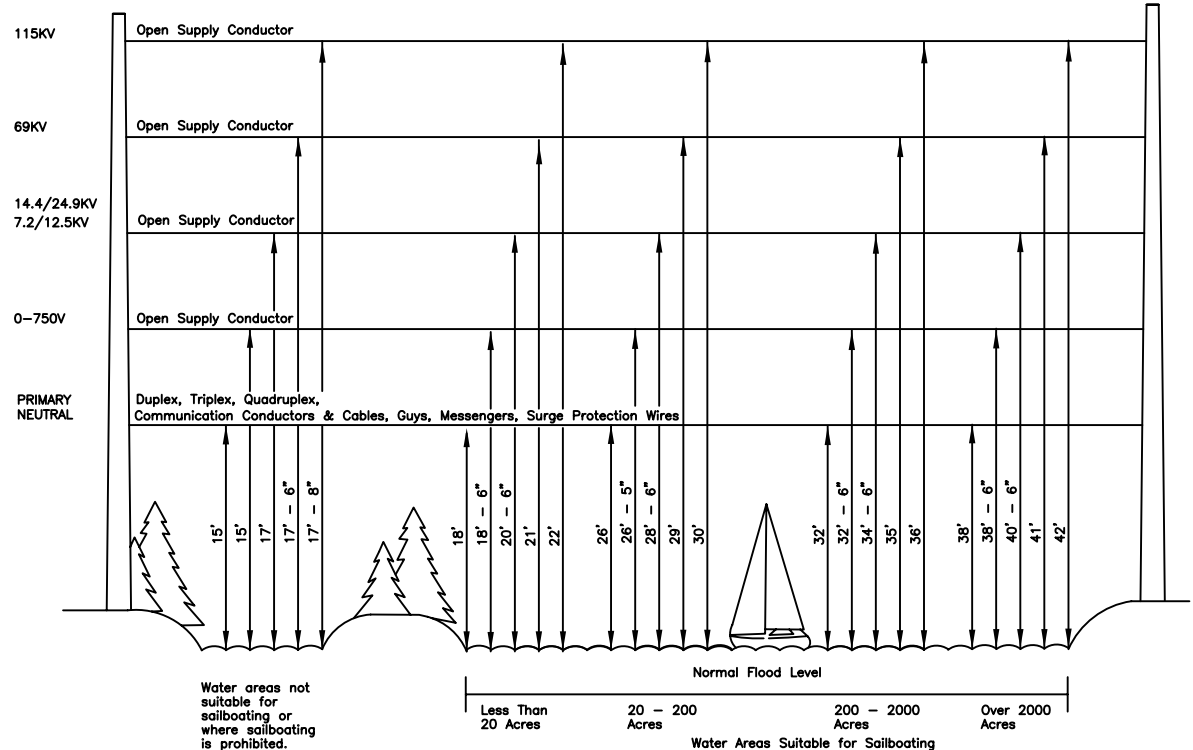
MINIMUM VERTICAL CLEARANCES ABOVE GROUND



NOTES:

- 20' = COMMUNICATIONS AND/OR CABLE TELEVISION JOINT USAGE WITH ELECTRICAL PER WAC 468-34-290

MINIMUM VERTICAL CLEARANCES ABOVE WATER



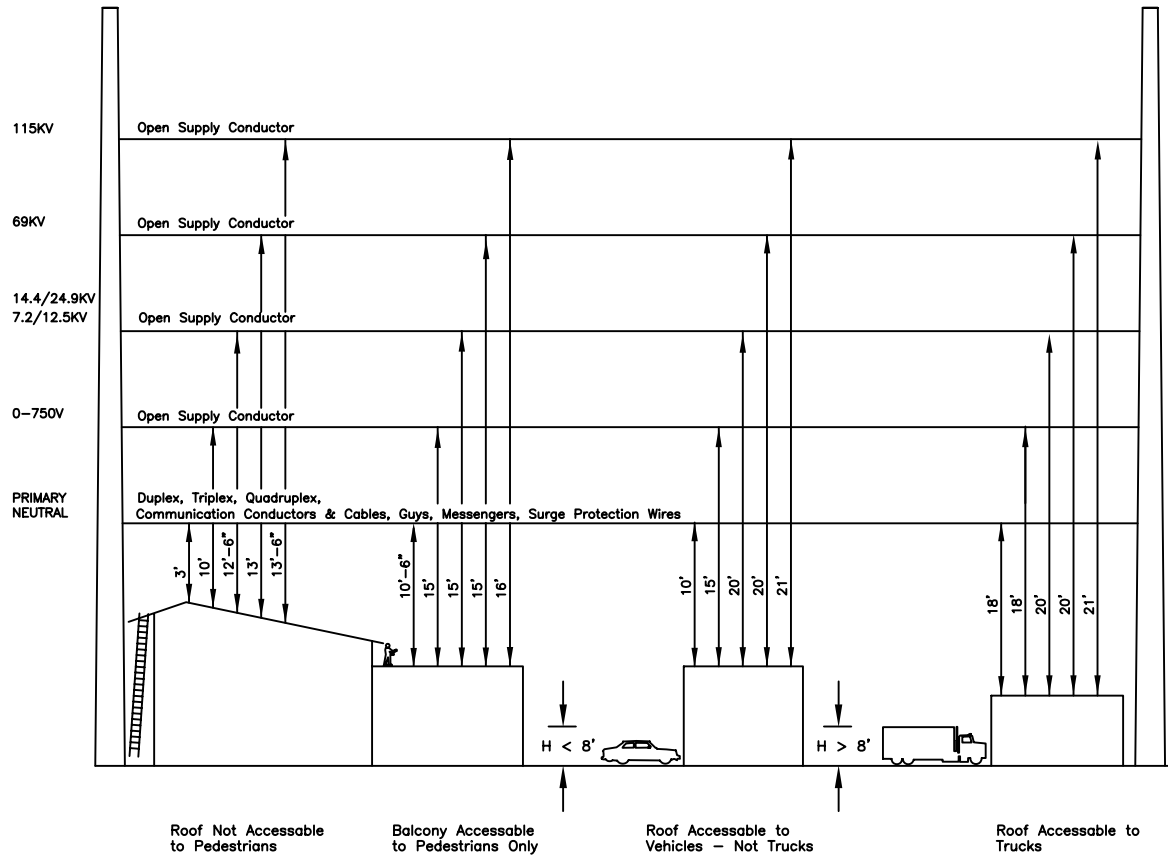
DATE: 08/20/04  
 REV: 09/23/07  
 DRAWN: JK/DT  
 CHK: JP  
 FILE: H:\ENGSTANDARDS\05 SPEC\2000\DET 1A



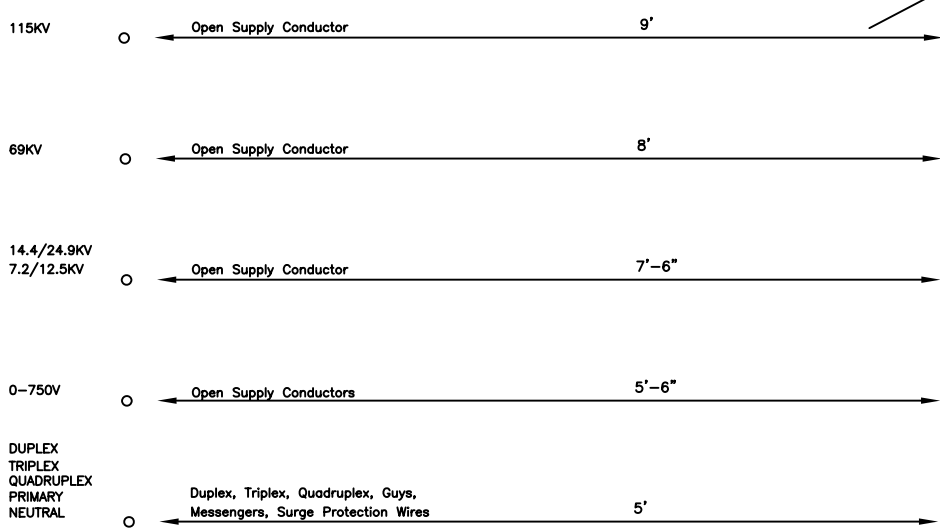
PG 1  
OF 1

INSTALLATION SPECIFICATIONS  
 CLEARANCES, VERTICAL

Drawing #1a



MINIMUM VERTICAL CLEARANCES FROM BUILDINGS



MINIMUM HORIZONTAL CLEARANCES FROM BUILDINGS

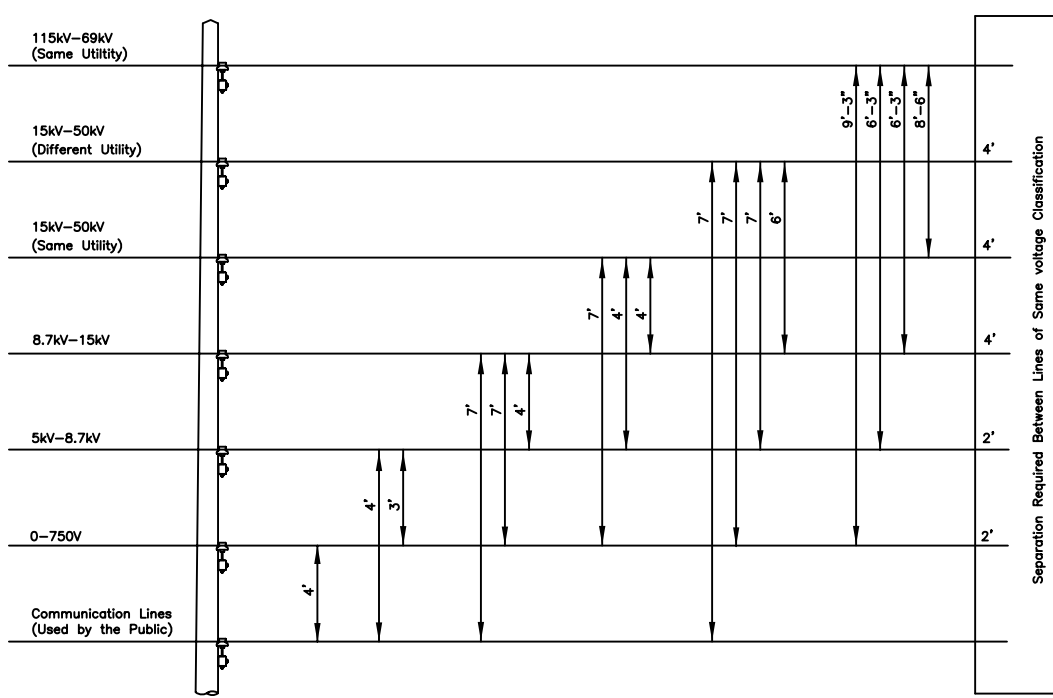
DATE: 08/20/04  
 REV: 09/23/07  
 DRAWN: JK/DT  
 CHK: JP  
 FILE: H:\ENGSTANDARDS\05 SPEC\2000\DET 1B



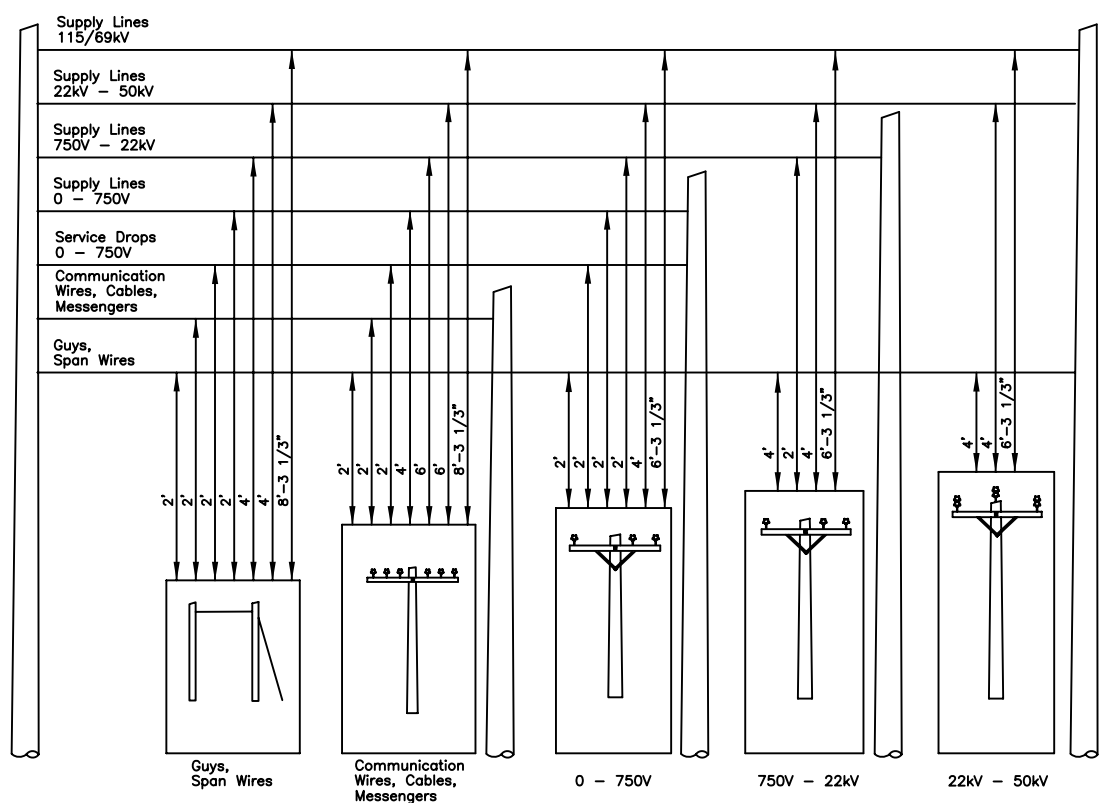
PG 1  
 OF 1

INSTALLATION SPECIFICATIONS  
 CLEARANCES, VERTICAL AND HORIZONTAL TO BUILDINGS

Drawing #1b



MINIMUM VERTICAL CLEARANCES AT SUPPORTS BETWEEN LINE CONDUCTORS



MINIMUM VERTICAL CLEARANCE BETWEEN WIRES ON DIFFERENT SUPPORTS

VOLTAGES ARE PHASE TO PHASE

DATE: 08/20/04  
 REV: 09/23/07  
 DRAWN: JK/DT  
 CHK: JP  
 FILE: H:\ENGSTANDARDS\05 SPEC\2000\DETAIL 1C

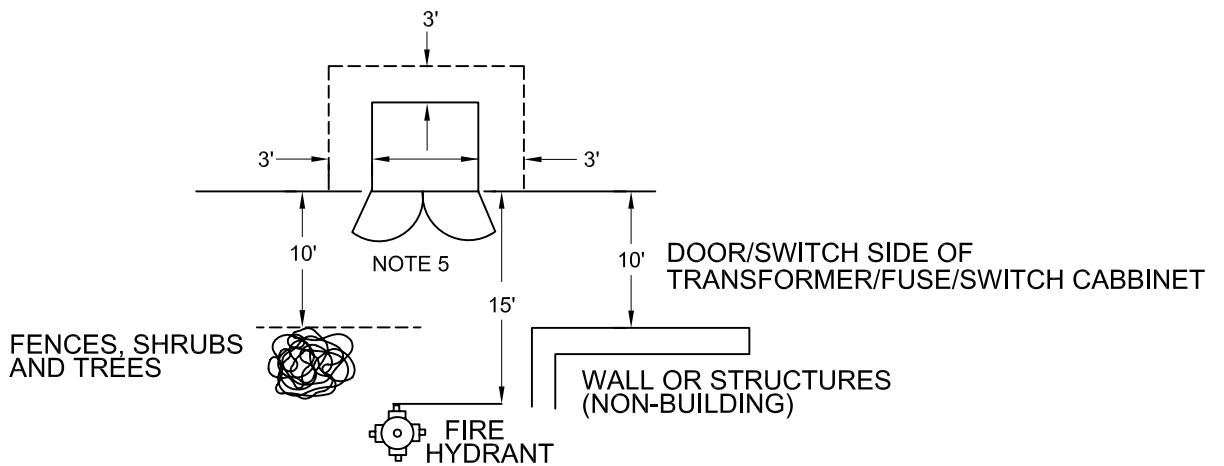
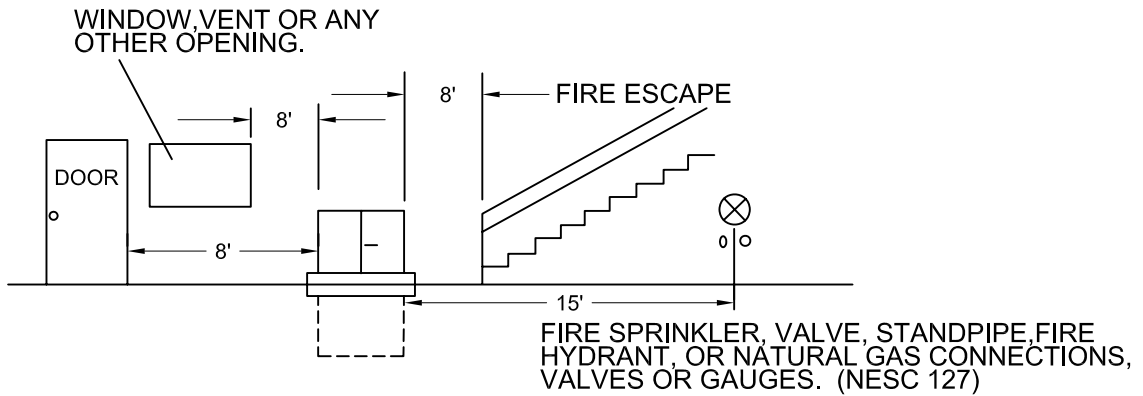
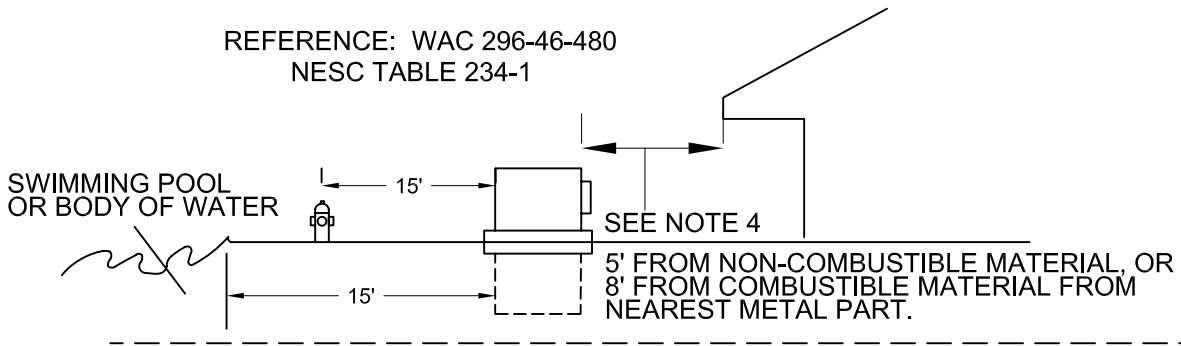


PG 1  
 OF 1

INSTALLATION SPECIFICATIONS  
 CLEARANCES BETWEEN CONDUCTORS AND WIRES

Drawing #1c

REFERENCE: WAC 296-46-480  
 NESC TABLE 234-1



Notes:

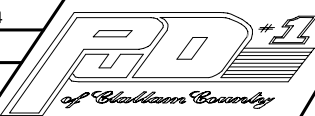
1. ALL MEASUREMENTS FROM NEAREST METAL PART OF THE TRANSFORMER.
2. MINIMUM 20' CLEARANCE FROM COMBUSTIBLE FUEL STORAGE TANKS.
3. PADMOUNT EQUIPMENT SHALL BE NOT MORE THAN 15' FROM ACCESS ROAD OR DRIVEWAY.
4. NON-COMBUSTIBLE: BRICK, CONCRETE, STEEL AND STONE.
5. LANDSCAPING WHICH DOES NOT INTERFERE WITH OPERATION AND MAINTENANCE OF THE TRANSFORMER IS ALLOWED.
6. GROUND MUST SLOPE AWAY FROM BUILDING FOR TRANSFORMER INSTALLATION SHOWN.

DATE: 08/20/04

REV: 02/06/05

DRAWN: JK/DT

CHK: RA/DP

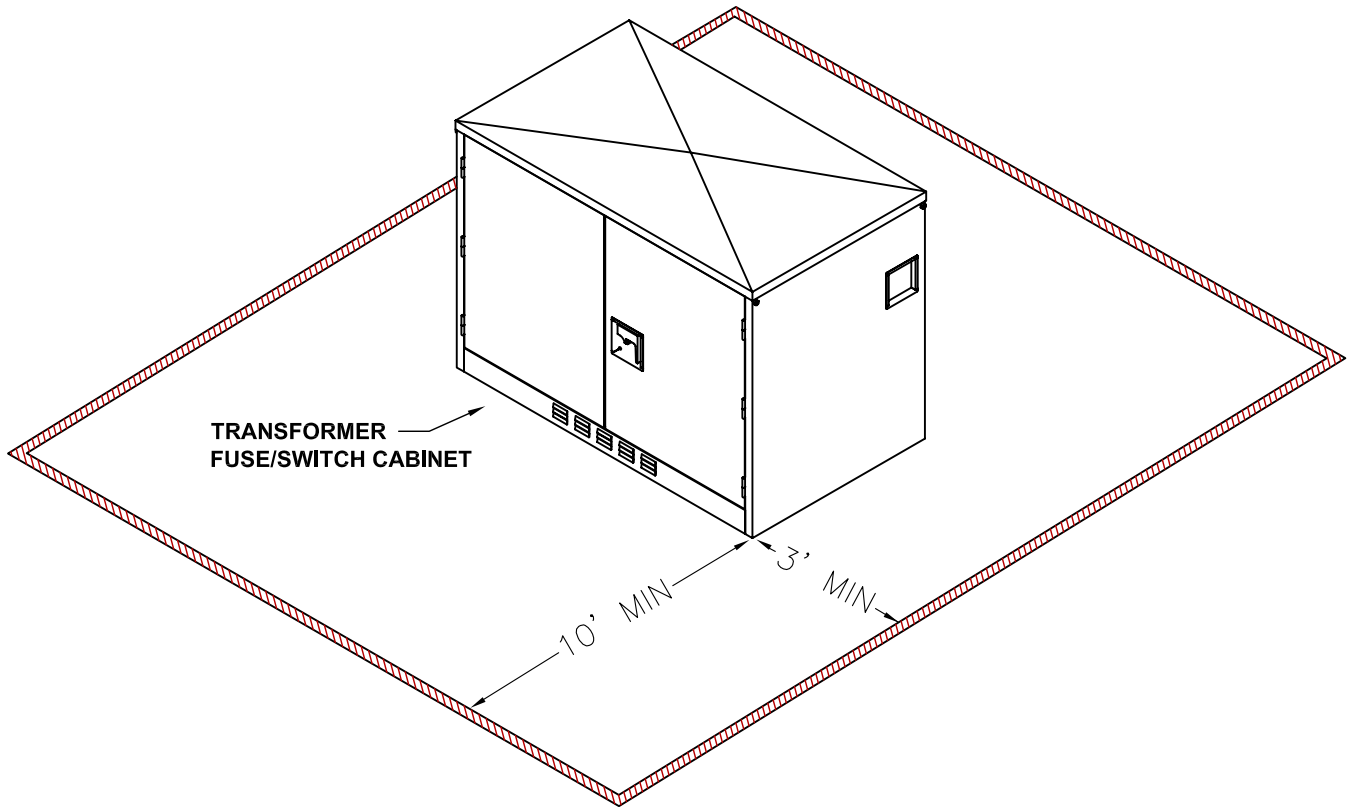


PG 1  
 OF 1

**GROUP: INSTALLATION SPECIFICATIONS**  
**DETAIL: PADMOUNT CLEARANCE**

DIMENSIONS:

**Drawing #2**



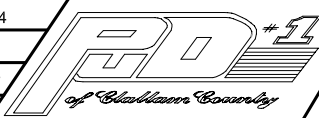
**KEEP THIS AREA CLEAR - WE  
NEED ROOM TO WORK  
SAFELY ON THIS EQUIPMENT**

DATE: 08/20/04

REV: 02/06/05

DRAWN: JK/DT

CHK: RA/DP

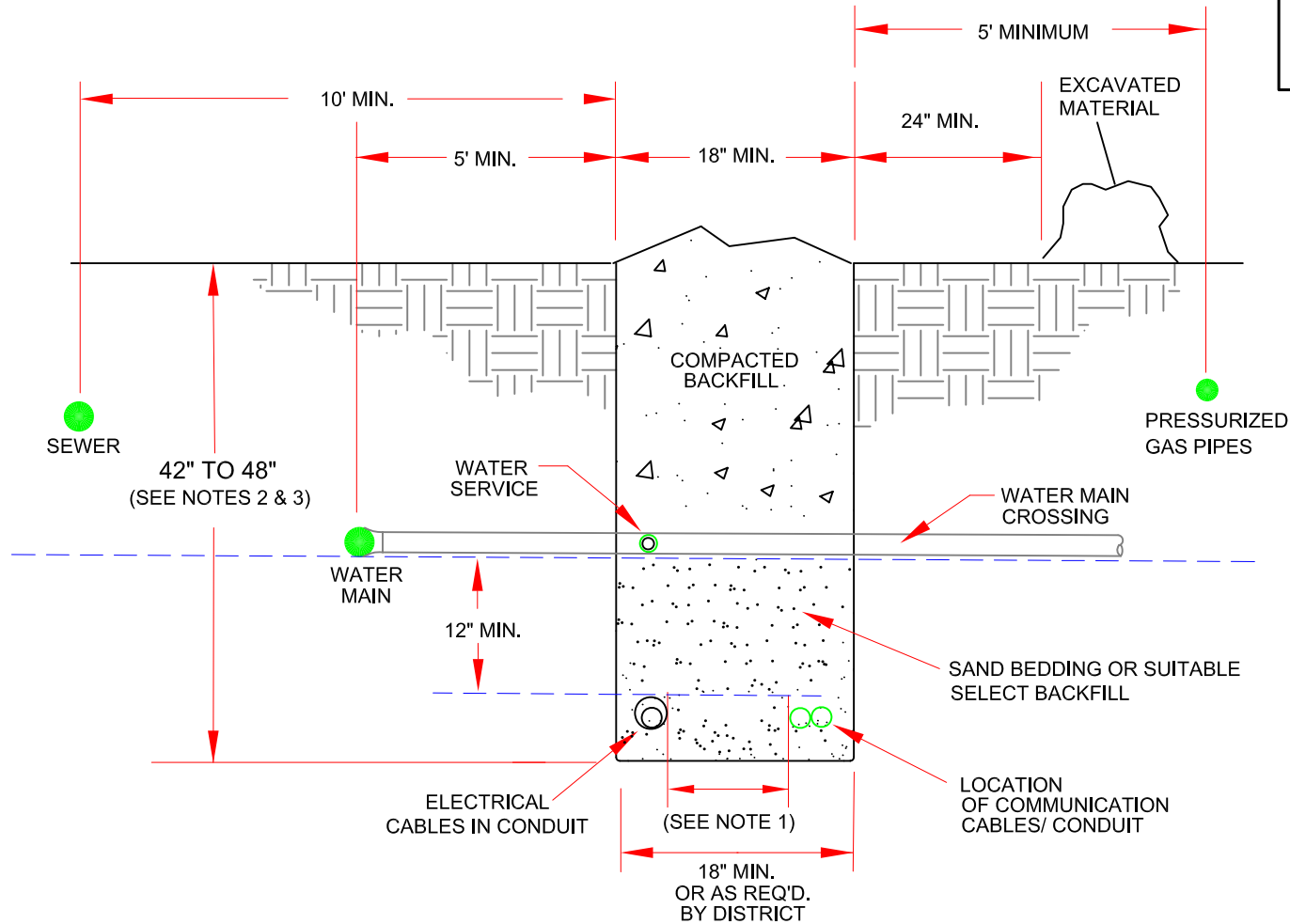


PG 1  
OF 1

**GROUP: INSTALLATION SPECIFICATIONS**  
**DETAIL: VAULT CLEARANCE**

DIMENSIONS:

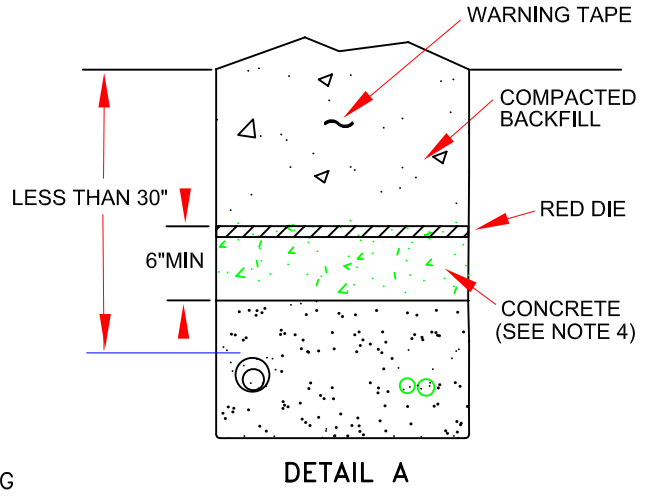
**Drawing #2A**



### PRIMARY OR SERVICE TRENCH

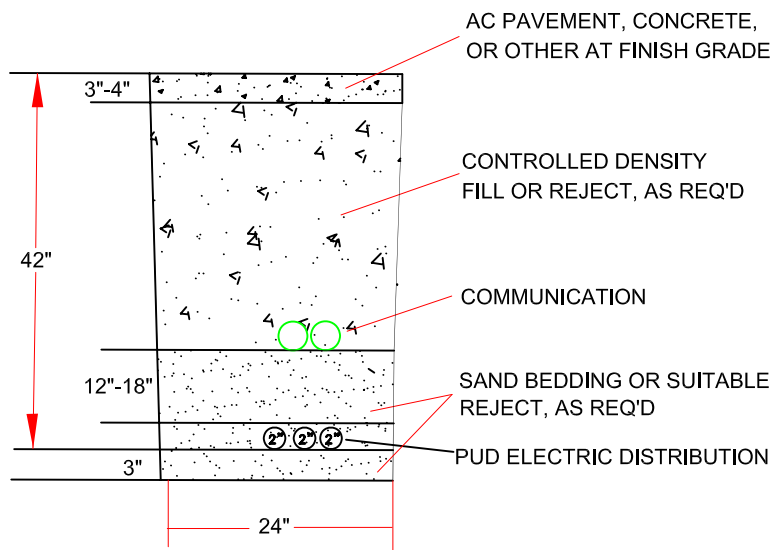
**NOTES:**

1. 12-INCH MINIMUM RADIAL SEPARATION IS REQUIRED EXCEPT WHERE RANDOM SEPARATION IS PERMITTED IN ACCORDANCE WITH NESC SECTION 354.
2. AN EXCEPTION TO MINIMUM TRENCH DEPTH MAY BE PERMITTED BY AUTHORIZED PERSONNEL DUE TO OBSTRUCTIONS OR ROCK SUBGRADE. IF DEPTH OF CONDUIT COVER IS LESS THAN 30-INCHES, THE CONDUIT SHALL BE PROTECTED BY A 6-INCH MINIMUM CONCRETE CAP AS SHOWN. (SEE DETAIL A & NOTE 4)
3. SEE WAC 296-155-657 FOR EXCAVATION, TRENCHING AND SHORING REQUIREMENTS.
4. MINIMUM 2,500 PSI STRENGTH CONCRETE WITH RED DYE IDENTIFIER TO A DEPTH OF 1-INCH AND/OR WARNING TAPE LOCATED ALONG TRENCH CENTERLINE, 12-INCHES ABOVE CONCRETE. (SEE DETAIL A)

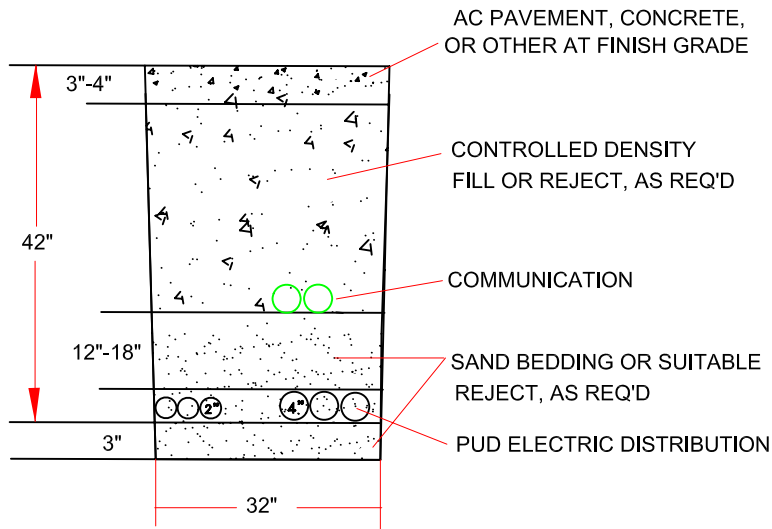


DATE: 08/20/04		PG 1
REV: 09/23/07		OF 1
DRAWN: JK/DT		
CHK: JP		

**INSTALLATION SPECIFICATIONS  
TRENCH DETAIL**



### 1/0 - 3Ø CONSTRUCTION



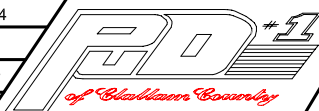
### 750MCM with 1/0 - 3Ø CONSTRUCTION

DATE: 08/20/04

REV: 11/17/05

DRAWN: JK/DT

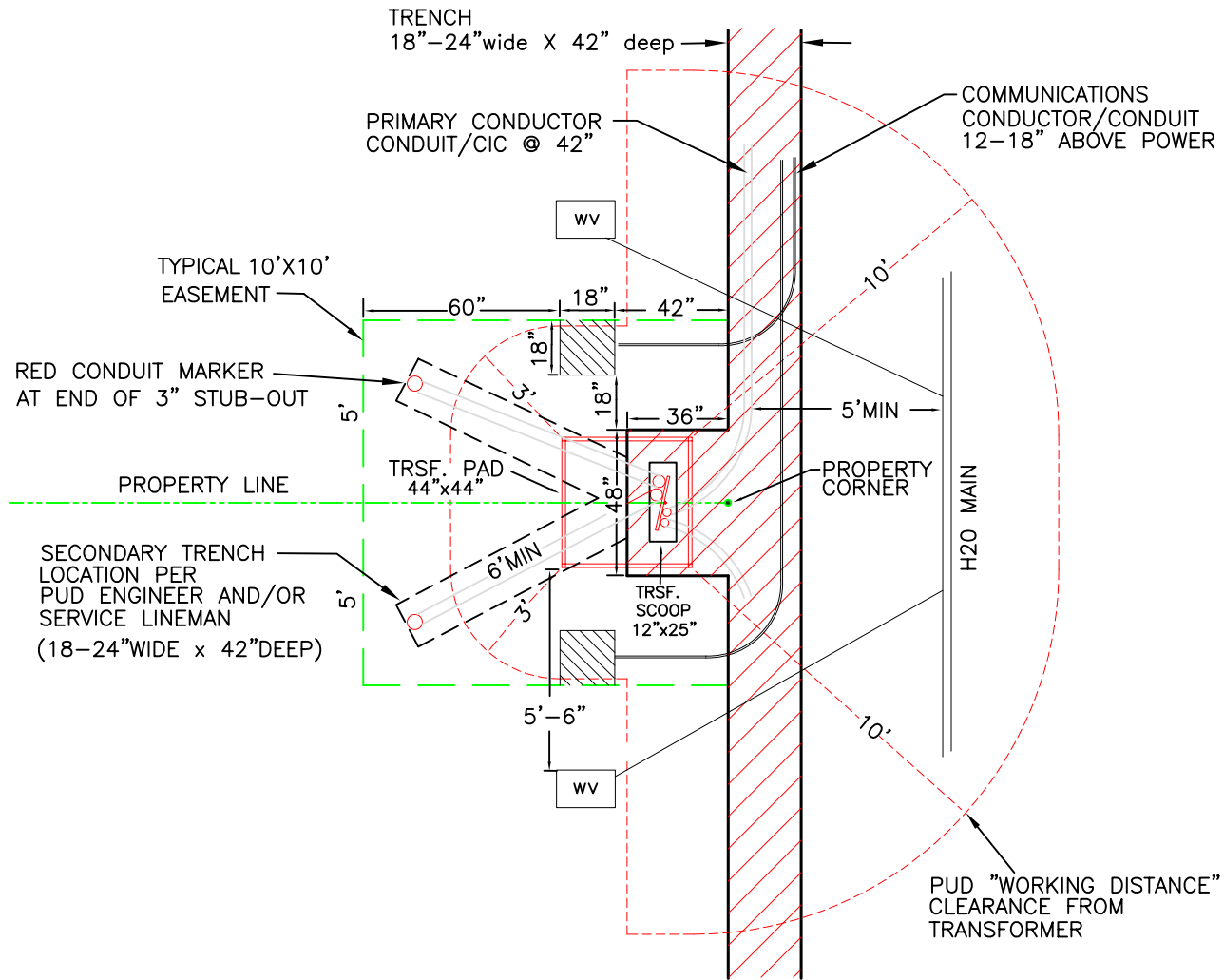
CHK: RA/DP






PG 1  
OF 1

### INSTALLATION SPECIFICATIONS 3Ø TRENCH DETAIL

Drawing #4



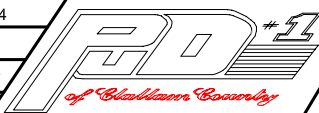
-  PRIMARY TRENCH - (18"-24" WIDE x 42" DEEP)  
36"x48" AREA CLEARED FOR TRSF. SCOOP
-  PEDESTAL LOCATION FOR TV/TELE/COMM.
-  WATER METER - SVC BOX  
5.5- FEET ADJACENT FROM SIDE OF TRANSFORMER

DATE: 08/20/04

REV: 11/17/05

DRAWN: JK/DT

CHK: RA/DP

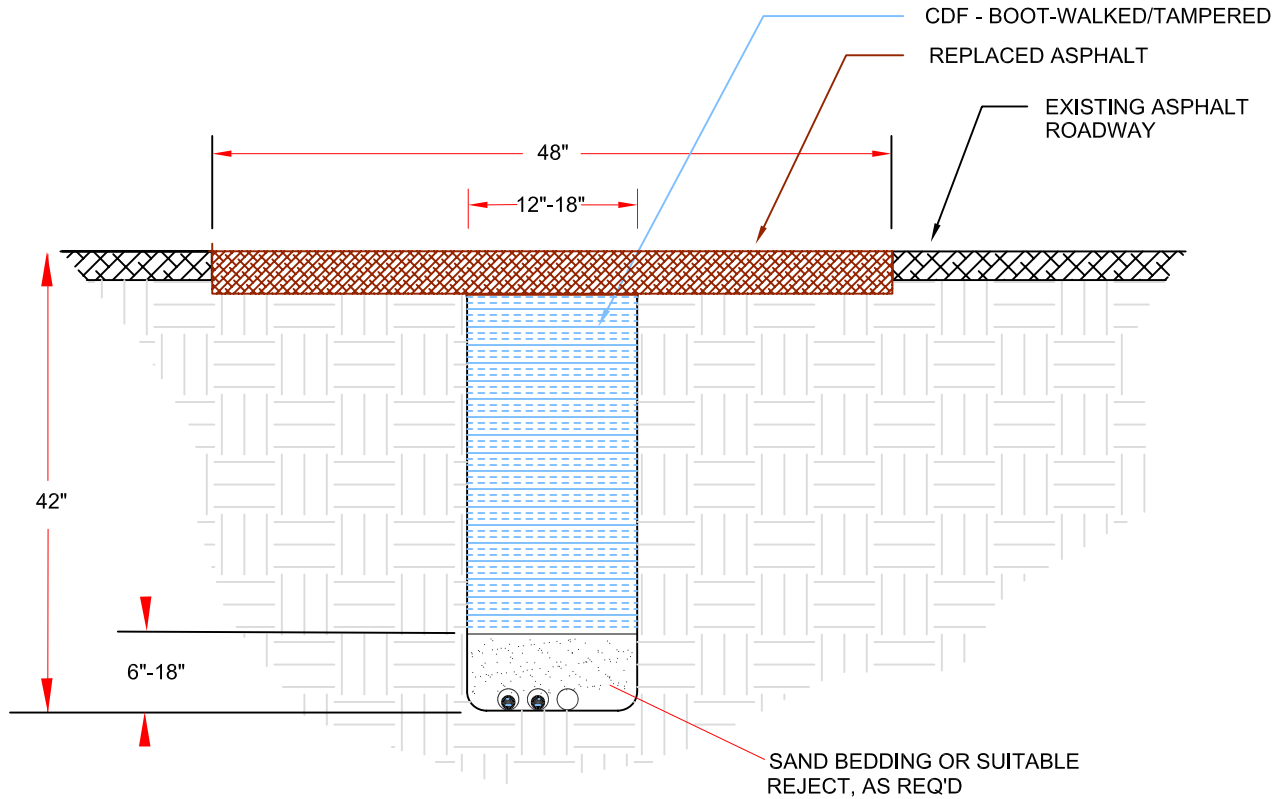


PG 1  
OF 1

INSTALLATION SPECIFICATIONS  
SECTION 5 - TRENCHING

**DRAWING #4B**





1. SAW CUT EXISTING ROADWAY 24" EACH SIDE OF PROPOSED TRENCH CENTERLINE.
2. TRENCH WITH 12" BUCKET TO A DEPTH OF 42".
3. INSTALL CONDUIT(S) AS REQUIRED PLUS ONE ADDITIONAL 2" CONDUIT AS A SPARE.
4. BACKFILL TRENCH WITH CDF. BOOT-WALK TO FILL VOIDS. COVER WITH STEEL PLATES.
5. EXCAVATE CDF TO 1.5 TIMES DEPTH OF EXISTING ROADWAY AND PATCH WITH CLASS "B" ASPHALT AS SOON AS POSSIBLE.
6. SEAL CRACKS WITH HOT TAR.

## OPEN-CUT TRENCH

DATE: 08/20/04

REV: 11/17/05

DRAWN: JK/DT

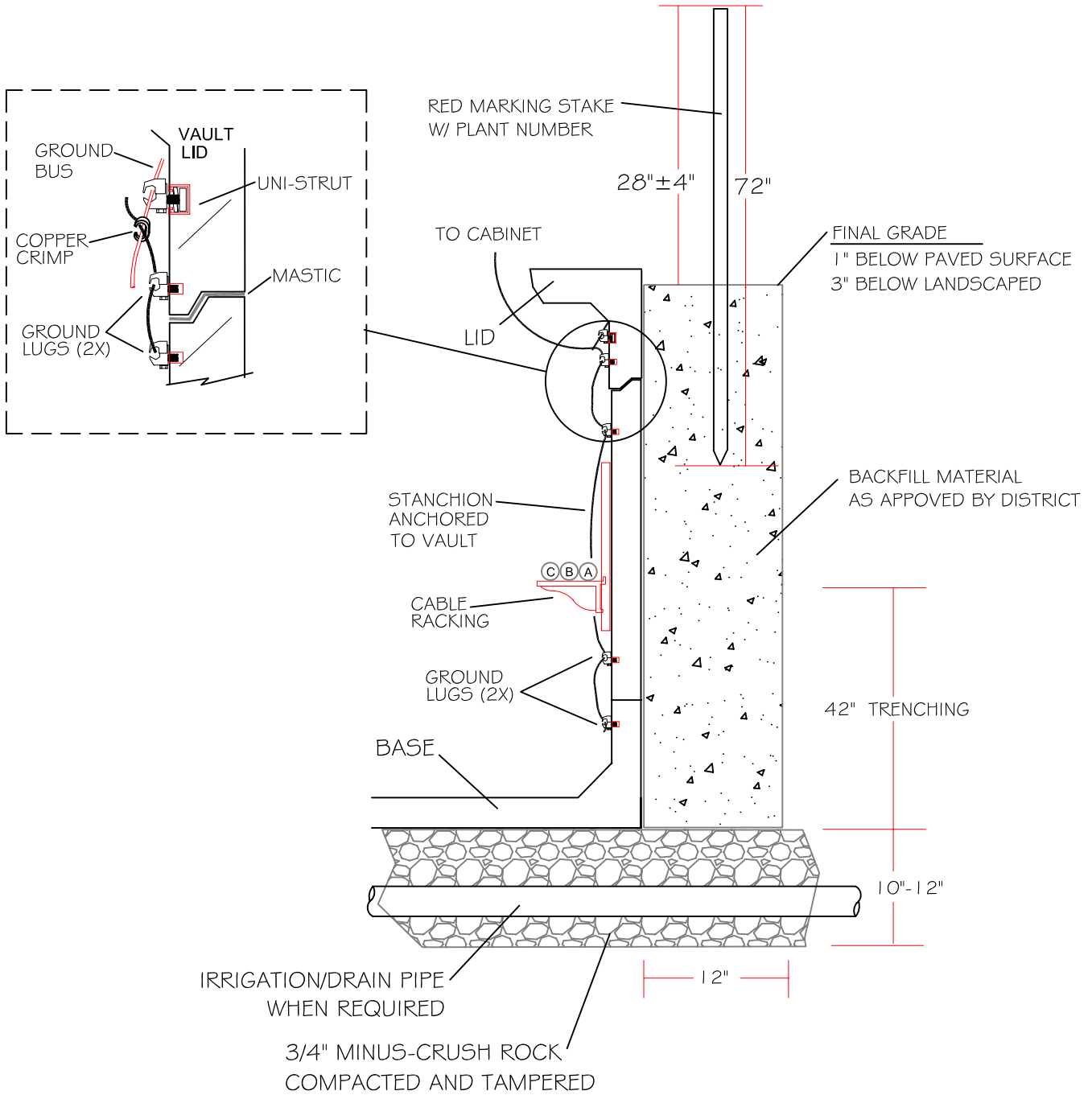
CHK: RA/DP



PG 1  
OF 1

### INSTALLATION SPECIFICATIONS OPEN CUT DETAIL

**Drawing #5**



DATE: 08/20/04  
REV: 11/17/06  
DRAWN: JK/DT  
CHK: RA/DP

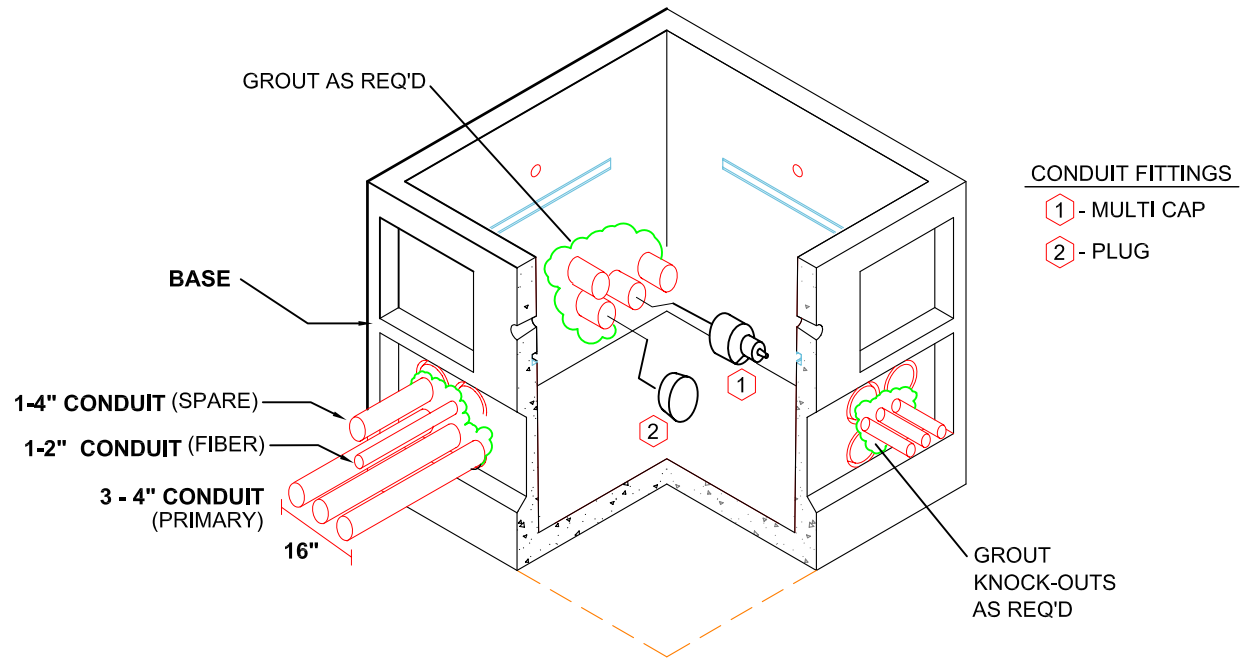


PG 1  
OF 1

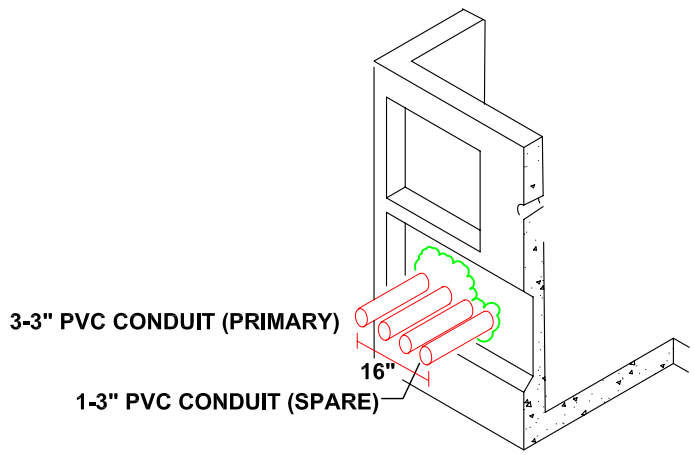
### INSTALLATION SPECIFICATION VAULT ASSEMBLY

SIZE:

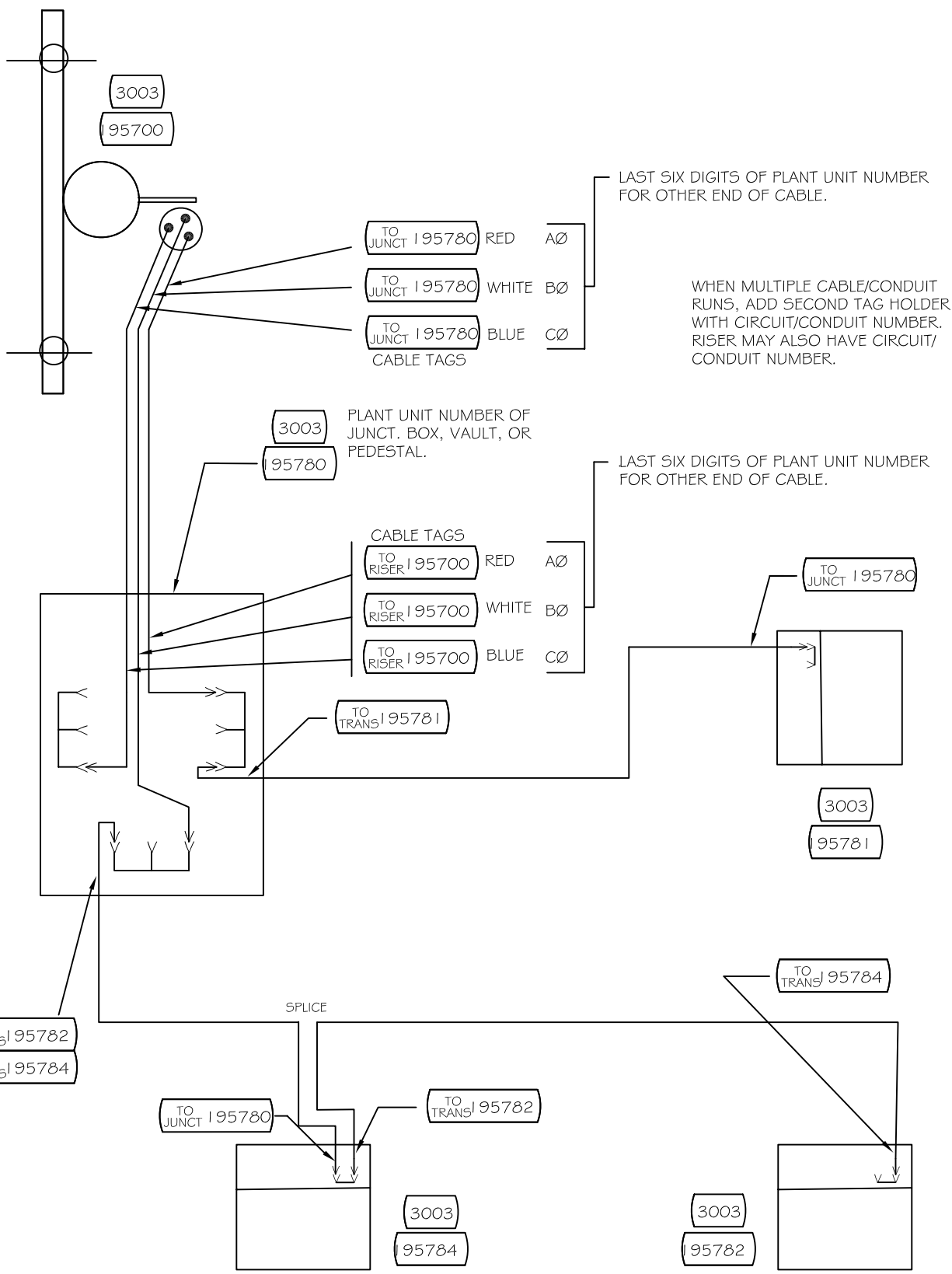
Drawing #6



### 4" CONDUIT (PVC - HDPE)



### 3" CONDUIT (PVC - HDPE)

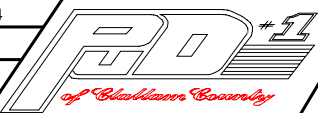


DATE: 08/20/04

REV: 11/01/06

DRAWN: JK/DT

CHK: RA/DP

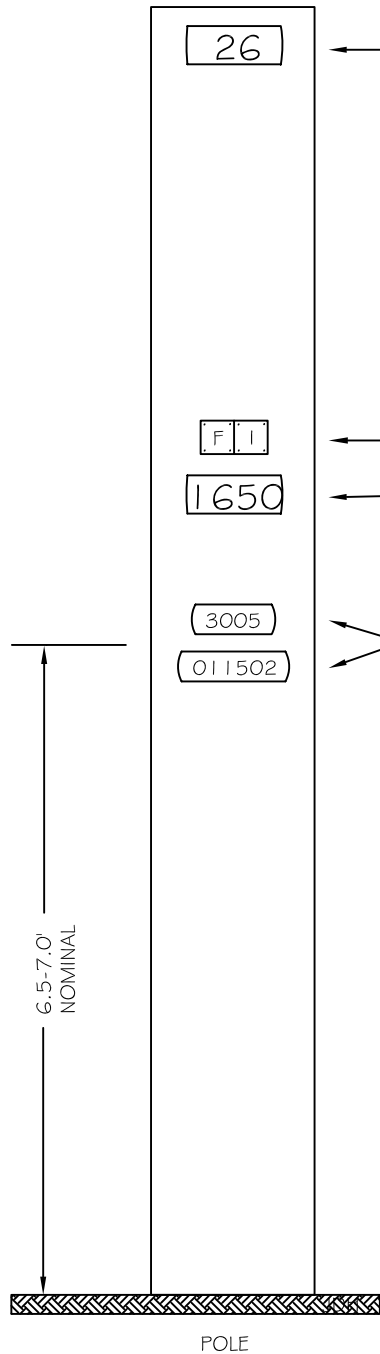


PG 1  
OF 1

**GROUP** Specifications  
**DETAIL** LABELING & IDENTIFICATIONS

CABLE MARKING

**Drawing #7a**



STRUCTURE NUMBERS

3" ALUMINUM - BLACK ON YELLOW IN ALUMINUM HOLDERS.

FAULT INDICATOR TAGS

SWITCHING OR PROTECTIVE EQUIPMENT NUMBERS.

3" ALUMINUM - BLACK ON YELLOW IN ALUMINUM HOLDERS.

TRANSMISSION - DISTRIBUTION, SECTIONALIZING AND RECLOSER DEVICES.

- TRANSMISSION - XXXX
- DISTRIBUTION - D-XXXX - SWITCHES, S.B. DISC., CUTOUTS.
- D-XXXXR - RECLOSERS
- D-XXXXS - SECTIONALIZERS

PLACE ABOVE PLANT UNIT AND STRUCTURE NUMBER.

PLANT UNIT NUMBERS

1" ALUMINUM - BLACK ON YELLOW IN BLACK PLASTIC HOLDERS.

TOWNSHIP/RANGE

SECTION/GRID COORDINATES/CLASSIFICATION

INSTALL NUMBERS FACING MOST LOGICAL APPROACH TO POLE.

FORKS, CLALLAM BAY SERVICE AREAS:

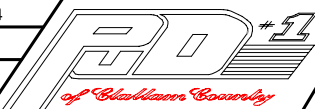
PLACE DISTRICT PLANT UNIT NUMBER ABOVE SIX DIGIT TELEPHONE CO. NUMBERS.

DATE: 08/20/04

REV: 11/01/06

DRAWN: JK/DT

CHK: RA/DP

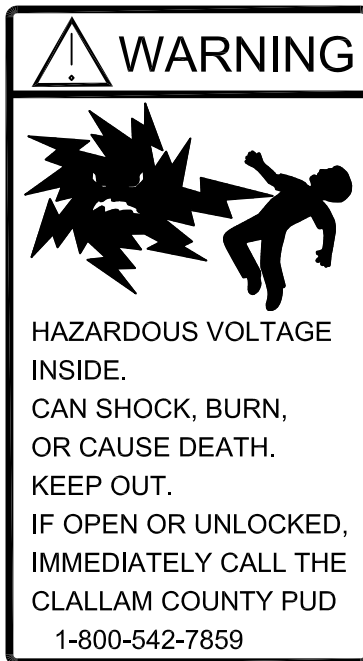


PG 1 OF 1

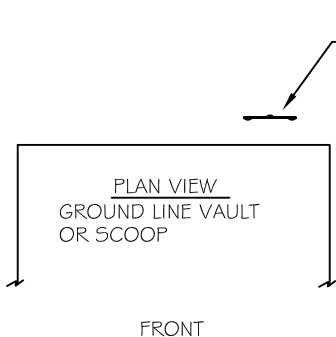
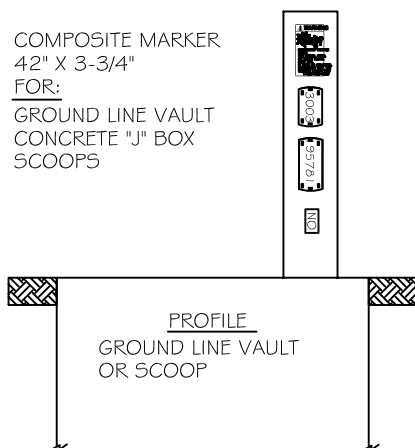
**Specifications  
LABELING & IDENTIFICATIONS**

PLANT, STRUCTURE, EQUIPMENT

**Drawing #7b**



COMPOSITE MARKER  
42" X 3-3/4"  
FOR:  
GROUND LINE VAULT  
CONCRETE "J" BOX  
SCOOPS



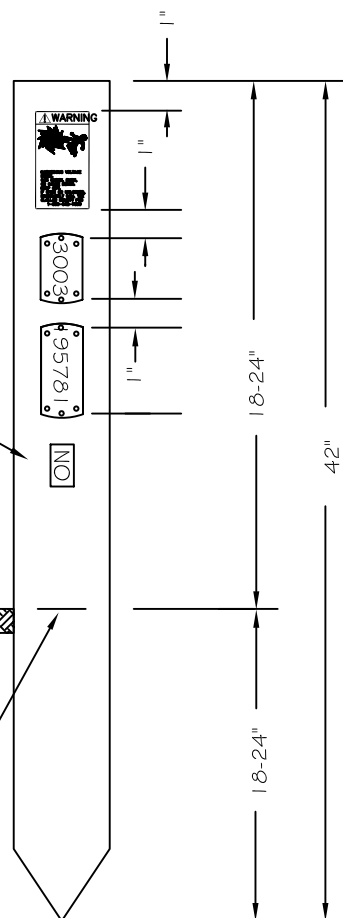
WARNING

IF SCOOP, PLANT UNIT  
NUMBERS ARE ATTACHED  
TO CABLES UNTIL  
TRANSFORMER INSTALLED.

"NORMAL OPEN"  
(WHERE APPROPRIATE)

POSITION MARKER AT  
RIGHT REAR CORNER

DEPTH MARK  
AT 18".

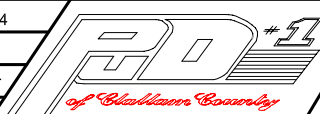


DATE: 08/20/04

REV: 11/01/06

DRAWN: JK/DT

CHK: RA/DP

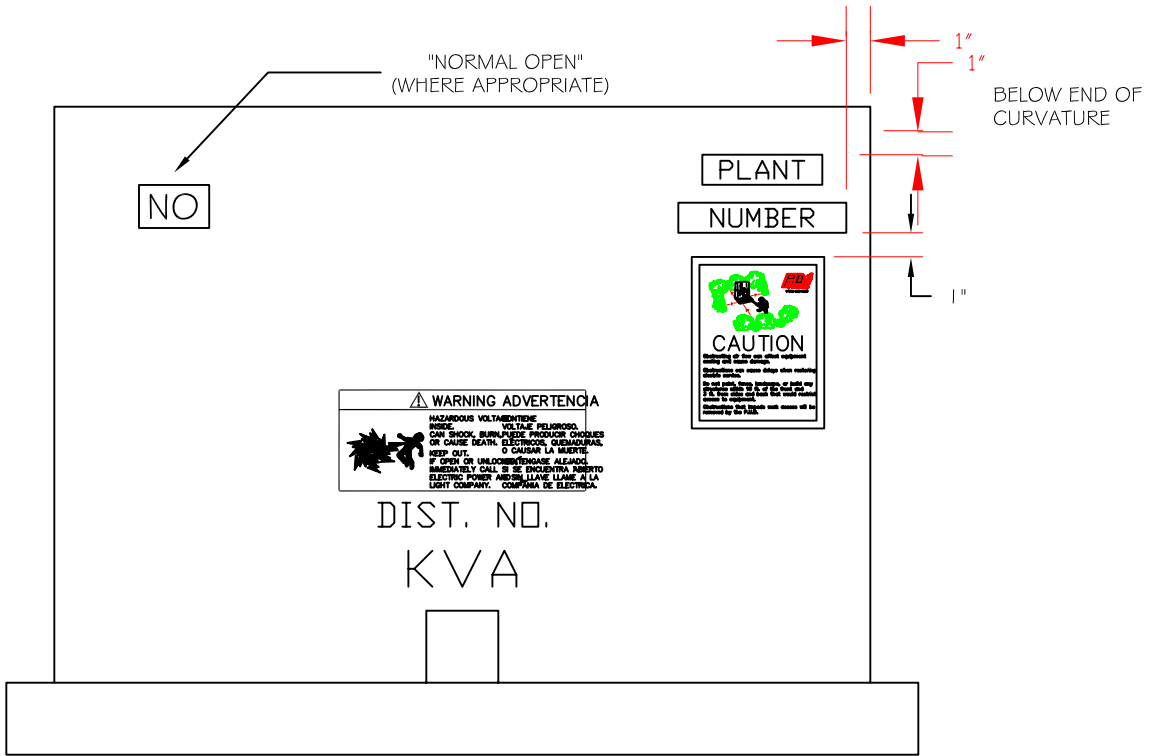


PG 1  
OF 1

Specifications  
LABELING & IDENTIFICATIONS

VAULT MARKER

Drawing #7c



FRONT  
PAD MOUNT TRANSFORMER, PRIMARY PEDESTAL, OR EQUIPMENT CABINET