

A. CONDUIT

- 50 MM (INSIDE DIAMETER) CONDUIT SHALL BE USED THROUGHOUT THE PROJECT. ALL CONDUIT SHALL BE P.V.C. SCHEDULE 40 ELECTRICAL CONDUIT (UNDERGROUND) AND P.V.C. SCHEDULE 80 CONDUIT (ABOVE GROUND AND IN CONCRETE) AS DETAILED IN THESE PLANS.
- THE FINAL CONDUIT DEPTH SHALL BE 600 MM MINIMUM BELOW GRADE FOR CONDUIT RUNS PARALLEL WITH EDGE OF SIDEWALK. FINAL DEPTHS TO BE APPROVED BY THE RESIDENT ENGINEERS.
- A 150 MM WIDE RED MARKING TAPE (PLASTIC) SHALL BE INSTALLED 150 MM TO 300 MM BELOW FINISH GRADE OVER CONDUIT RUNS.
- A MAXIMUM OF 270 DEGREES IN TOTAL BENDS WILL BE PERMITTED IN A SINGLE RUN OF CONDUIT.

B. GROUNDING

- A CONTINUOUS GROUNDING CIRCUIT (MINIMUM 13.3 MM COPPER CONDUCTOR) SHALL BE RUN BACK TO THE POWER SOURCE.
- ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

C. POLES AND ANCHOR BASES

- THE 6 HISTORIC SIDEWALK LIGHT POLES SHALL BE A "WELSBACH, ESSEX" ROUND 112 MM ALUMINUM POLE WITH DECORATIVE BASE ASSEMBLY. THE POLE SHALL HAVE A 112 MM TOP DIAMETER AND A STRAIGHT SHAFT. THE POLE SHALL HAVE ONE SINGLE WEATHERPROOF RECEPTACLE MOUNTED 150 MM BELOW THE TOP OF THE POLE. THE ANCHOR BASE SHALL HAVE FOUR ANCHOR BOLT HOLES AND A ONE PIECE ANCHOR BOLT COVER.
- EACH POLE SHALL BE MOUNTED TO THE CONCRETE BASE WITH FOUR STAINLESS STEEL ANCHOR BOLTS, NUTS AND WASHERS. SEE "DECK REINFORCING DETAILS" SHEET 42 OF 67 FOR ANCHORAGE TO BRIDGE. WIRING ACCESS SHALL BE A 80 MM X 130 MM HANDHOLE IN THE POLE BASE.
- FINISH SHALL BE A FLAT BLACK LACQUER WHICH IS APPLIED IN A THREE STAGE PROCESS.

D. WIRE

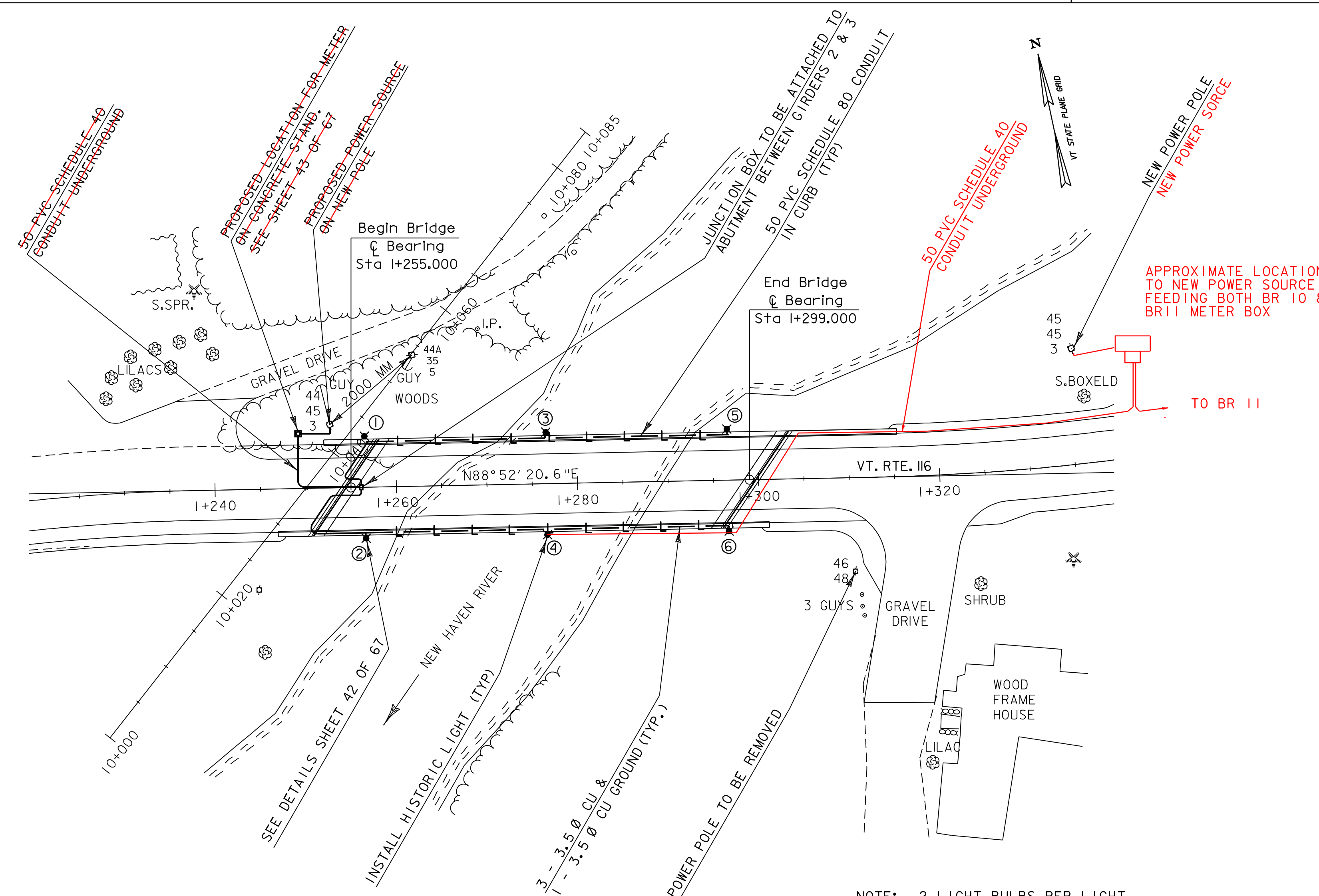
- ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER, SIZE AS INDICATED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.
- USE 5.86 MM² STRANDED COPPER WIRES IN EACH POLE BETWEEN THE POLE BASE AND THE LUMINAIRE.
- USE 13.3 MM² COPPER (MINIMUM) WIRES FOR THE CONTINUOUS GROUND CIRCUIT.
- ALL CONDUIT SHALL INCLUDE A GROUNDING CONDUCTOR.
- ALL WIRE CONNECTIONS IN THE LIGHT POLE BASES SHALL BE MADE WITH THE PROPER, IN LINE OR WYE TYPE WATERPROOF DISCONNECT KIT. THE LOAD SIDE TO THE LUMINAIRE SHALL BE FUSED AT 3 TIMES THE LOAD.
- VOLTAGE LOSSES GREATER THAN 3% IN THE SECONDARY CIRCUIT SHALL REQUIRE LARGER WIRE.

E. LUMINAIRES

- THE 6 HISTORIC SIDEWALK LIGHTS SHALL BE A "WELSBACH, QUAKER" MODEL 50, WITH THE FOLLOWING: AN ALUMINUM HOUSING PRIMED AND PAINTED WITH A FLAT BLACK FINISH. LENS TO BE STABILIZED POLYCARBONATE - UPPER LENS FROSTED - LOWER LENS CLEAR. OPTICS TO INCLUDE ASYMMETRIC SPECULAR ALZAK ALUMINUM REFLECTOR SYSTEM FOR A 100 WATT METAL HALIDE LAMP HORIZONTALLY MOUNTED WITH SEMI-CUTOFF, TYPE V DISTRIBUTION AND HAVE A DECORATIVE CAST ACRYLIC FIBER OPTIC COLUMN ASSEMBLY MOUNTED IN THE BASE FOR SIMULATING A BASE MOUNTED LIGHT SOURCE. BALLAST TO BE A HIGH POWER FACTOR, CONSTANT WATTAGE, AUTO-TRANSFORMER. LAMPHOLDER SHALL BE PORCELAIN. THE LIGHT FIXTURE SHALL MOUNT TO A 80 MM O.D. BY 105 MM TALL TENON, SECURED WITH STAINLESS STEEL HARDWARE AND HAVE A PRIMED AND PAINTED FLAT BLACK FINISH.

F. GENERAL

- THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE, LOAD TO NEUTRAL.
- CONDUIT LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE, ACTUAL LOCATIONS, SHALL BE DETERMINED IN THE FIELD, DUE TO DRAINAGE AND UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES WITH UNDERGROUND FACILITIES WHEN EXCAVATING IN THE AREA OF THESE UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONTACTING AND SCHEDULING WORK WITH LOCAL UTILITIES WITH FACILITIES IN THE PROJECT AREA FOR LOCATION OF POWER SOURCES.
- THE LAST POLE BASE AT THE END OF EACH BRANCH CIRCUIT OF THE TWO CIRCUITS SHALL HAVE A CONDUIT SWEEP WITH CAP INSTALLED FOR FUTURE USE.
- FOR ADDITIONAL DETAILS, SEE STANDARD SHEETS E-180M AND E-181M.
- STANCHION TYPE #3 MOD. SHALL BE USED FOR THIS PROJECT. SEE "DETAIL SHEET FOR POWER DROP STANCHION" SHEET 43 OF 67.
- ONE (1) PHOTO-CELL FOR EACH OF THE TWO (2) LIGHT CIRCUITS SHALL BE LOCATED AT THE POWER SOURCE OR SOME COMMON POINT, AS DIRECTED BY THE ENGINEER.



LEGEND

- ⊙ EXISTING UTILITY POLE
- ② LIGHT POLE NUMBER
- L— PROPOSED LIGHTING CONDUIT
- ✕ PROPOSED HISTORIC LIGHT
- JUNCTION BOX
- METER BOX

PLAN

SCALE IN METERS

NOTE: 2 LIGHT BULBS PER LIGHT. DELIVER 1 BULB TO DISTRICT OFFICE.

G. WORK TO BE PERFORMED BY THE CONTRACTOR

- THE CONTRACTOR SHALL:
- COORDINATE ALL ITEMS REGARDING PROJECT POWER WITH TOWN OF BRISTOL BEFORE COMMENCING WORK.
 - INSTALL ALL LIGHT POLES, LUMINAIRES, WIRING, AND DISCONNECT PLUG KITS.
 - INSTALL ALL THE CONDUIT AND WIRING AS DETAILED ON THIS DRAWING.
 - INSTALL POLE RISER, WEATHERHEAD, RAIN/TIGHT ENCLOSURE WITH METER SOCKET ON A STANCHION, WITH OVERLOAD DISCONNECTS FOR EACH CIRCUIT, AND OTHER RELATED MATERIALS. PADLOCK(S) FOR ENCLOSURE, KEYS TO BE GIVEN TO TOWN OF BRISTOL.
 - INSTALL REMOTE TWO POLE RELAY WITH CIRCUIT BREAKERS FOR AUTOMATIC SWITCHING OF THE TWO LIGHTING CIRCUITS.
 - THE CONTRACTOR IS DIRECTED TO SPECIFICATION 679.09 IN THE VA0T 1995 SPECIFICATIONS REGARDING POWER COSTS FOR THE STREET LIGHTING.
 - THE CONTRACTOR MAY OPEN THE BRIDGE TO TRAFFIC WITHOUT THE STREET LIGHTING IN OPERATION. HOWEVER, THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN SAFE PASSAGE OF VEHICLES WHILE WORKERS ARE COMPLETING ALL STREET LIGHTING WORK.

H. WORK TO BE PERFORMED BY CENTRAL VERMONT PUBLIC SERVICE

- PROVIDE A METERED POWER SOURCE FOR THE PROJECT LIGHTS.

POLE NO.	LOCATION	OFFSET*	LUMINAIRE WATTS TYPE	MOUNT HEIGHT	REMARKS
①	1+257 LT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON WW
②	1+257 RT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON BRIDGE
③	1+277 LT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON BRIDGE
④	1+277 RT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON BRIDGE
⑤	1+297 LT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON BRIDGE
⑥	1+297 RT.	5.5 M	100W Me Ha	4.3 M	MOUNT ON WW

NOTE: Me Ha = METAL HALIDE
* = OFFSET TO CENTERLINE POLE & FOUNDATION

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD83(92)

PROJECT:	BRISTOL	PROJECT NO.:	ER 021-(13)
DESIGN FILE NAME:	M:\Projects\78f188\Construction\026.dgn	PLOT DATE:	05-JAN-2007 08:24
IPARM FILE NAME:	sf188s11J	SURVEY DATE:	9/97
SURVEYED BY:	ORVIS	DRAWN BY:	L.BULLOCK
SQUAD LEADER:	PORTALUPI	SHEET:	26 OF 67