

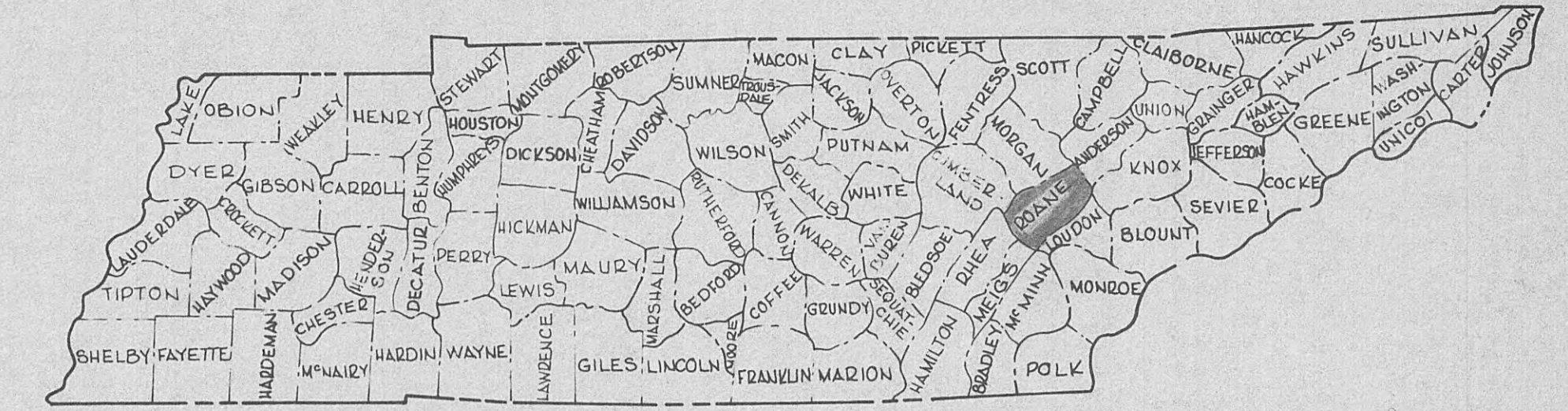
INDEX OF SHEETS

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3	LIGHTING LAYOUT
4	DETAILS OF MAINTAINING TRAFFIC

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

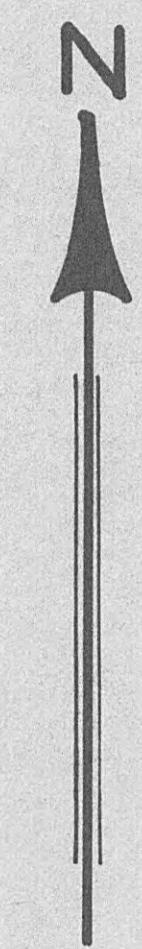
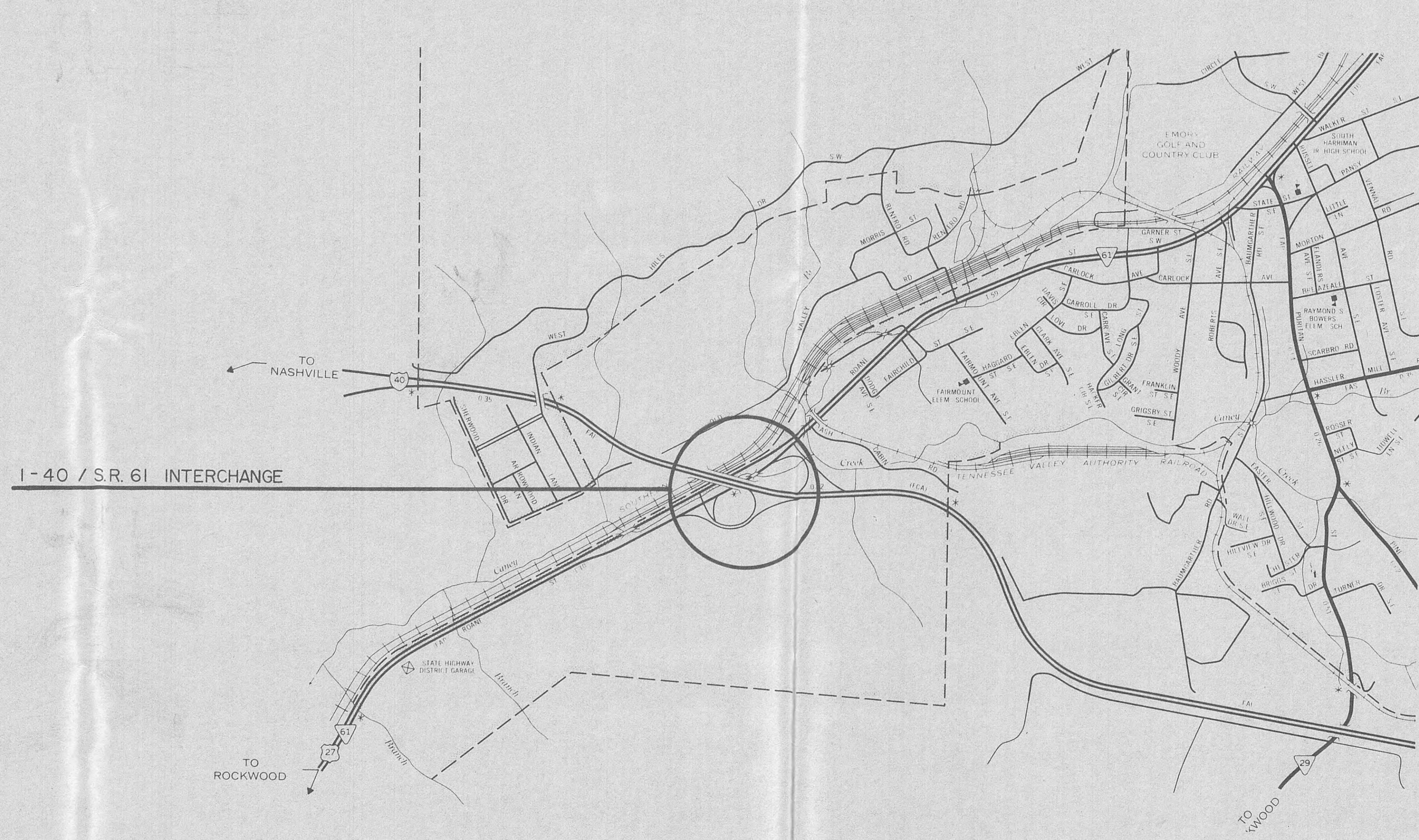
ROANE COUNTY
I-40 / S.R. 61 INTERCHANGE

FED. AID REGION	TENN	YEAR	SHEET NO.
4		1982	1
FED. AID PROJ. NO.		I.R.-40-60 (88) 348	
STATE PROJ. NO.		73001-3155-44	



LIGHTING

HIGHWAY NO. S.R. 61 F.A.H.S. NO. I-40



**FOR
CONST
P.S.&E.
ONLY**

APPROVED *Louis Swann*
STATE TRANSPORTATION ENGINEER

DATE _____

APPROVED *Paul E. Funn*
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE _____

SPECIAL NOTE

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1981 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

PROJECT LENGTH... 0.00 MILES

DESIGNER CROCKER

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	82	T-40-G(88)348	2

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	QUAN.	UNIT
712-01	TRAFFIC CONTROL	1	L.S.
712-05.02	WARNING LIGHTS (TYPE B)	2	EACH
(1) 712-06	SIGNS (CONSTRUCTION)	84	S.F.
712-08.03	ARROW BOARD (TYPE C)	2	EACH
(2) 714-03.01	DIRECT BURIAL CONDUIT (2", RGS, JACKED)	100	L.F.
714-03.02	DIRECT BURIAL CONDUIT (2" P.V.C.)	3820	L.F.
714-05.01	PULL BOXES	7	EACH
714-06.01	CABLE (1/C NO. 2, 600 VOLT, THWN-MTW)	7215	L.F.
714-06.02	CABLE (1/C NO. 2, 600 VOLT, TW, GROUNDING)	7215	L.F.
(3) 714-08.01	LIGHT STANDARD (STEEL - 120' M.H.)	6	EACH
(4) 714-09.01	LUMINAIRES (400 WATT H.P.S.)	72	EACH
714-12	CONTROL CENTER	1	L.S.
717-01	MOBILIZATION	1	L.S.
705-04.01	GUARDRAIL TERMINAL ANCHOR (TYPE 11)	2	EACH
705-04.03	GUARDRAIL TERMINAL ANCHOR (TYPE 13)	2	EACH
705-02.02	METAL DEEP BEAM SINGLE GUARDRAIL (POST SP. 6 FT. 3 IN.)	600	L.F.

- (1) INCLUDES TWO (2) ADVANCE UTILITY WORK SIGNS (W21-4A-48), TWO (2) WORKER SIGNS (W21-1) AND TWO (2) END UTILITY WORK SIGNS (W23-4A), SEE SHEET 4 FOR DETAILS.
- (2) TO BE PLACED UNDER EXISTING ROADWAYS.
- (3) WITH RING ASSEMBLY AND LOWERING DEVICE.
- (4) COMPLETE WITH BALLAST AND VERTICAL BURNING LAMP.

CONDUCTORS SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THWN-MTW, 75°C THERMOPLASTIC INSULATION WITH NYLON JACKET. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID, SIZES NO. 8 AND LARGER SHALL BE STRANDED. ALL WIRING SHALL BE RUN IN CONDUITS.

CONDUITS TO BE INSTALLED UNDER PAVEMENT SHALL BE RIGID GALVANIZED STEEL. CONDUIT SHALL BE JACKED OR BORED UNDER EXISTING PAVEMENT, UNLESS ROCK IS ENCOUNTERED. WHERE ROCK IS ENCOUNTERED, OBTAIN APPROVAL FROM THE ENGINEER TO SAW CUT EXISTING PAVEMENT. BURIAL DEPTH OF CONDUIT UNDER PAVEMENT SHALL BE 36". CONDUIT SHALL EXTEND 1'-0" BEYOND EDGE OF PAVED SHOULDER.

CONDUITS IN UNPAVED AREAS SHALL BE RIGID HEAVYWALL SCHEDULE 40 POLYVINYL CHLORIDE (PVC).

TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION OF THIS PROJECT. TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR UNDER ITEMS 713.

DISTURBED AREAS ARE TO BE SODDED PER SECTION 803 OF THE STANDARD SPECIFICATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING MATERIAL.

THIS CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRICAL CODE, NFPA NO. 70 AND THE NATIONAL ELECTRICAL SAFETY CODE.

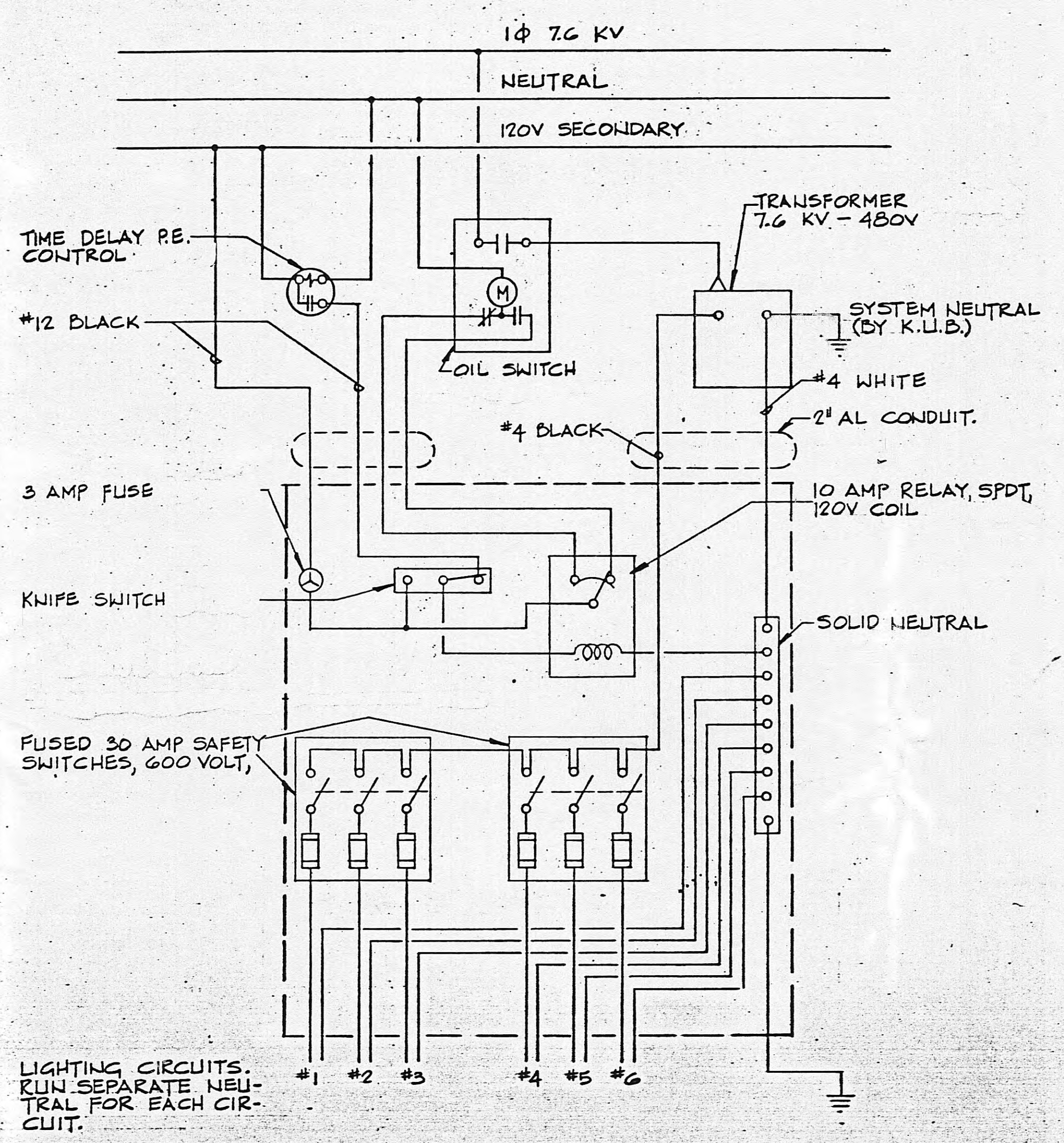
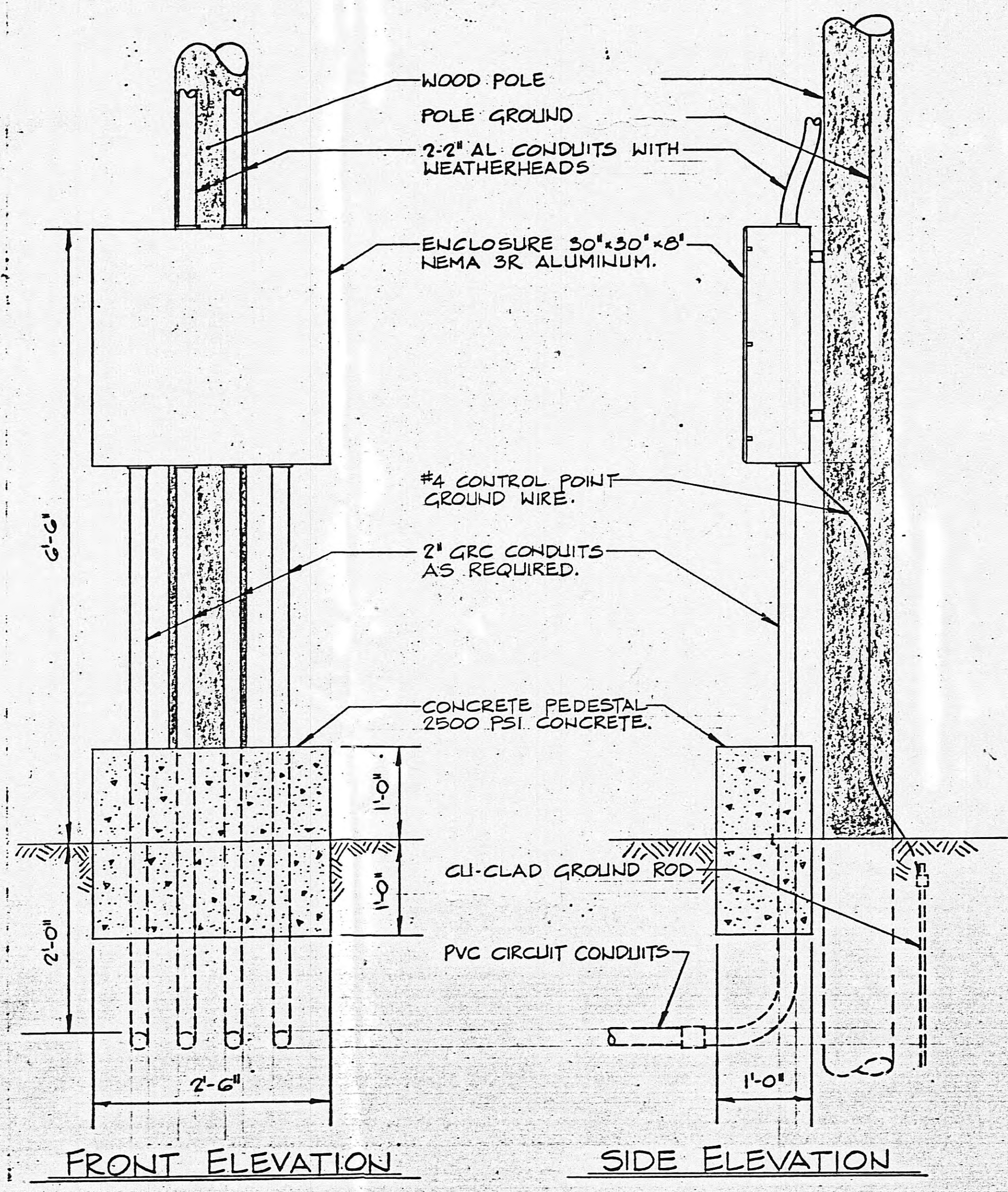
ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED WHETHER SPECIFICALLY NOTED OR NOT.

WHENEVER THE CONTRACTOR IS NOT ACTIVELY WORKING ON THIS PROJECT (NIGHTS, WEEKENDS, ETC.) ANY EQUIPMENT PARKED IN THE VICINITY OF THE CONSTRUCTION MUST BE PARKED 30' FROM THE TRAVELLED LANES.

CONDUITS TO BE INSTALLED UNDER EXISTING ROADWAYS SHALL BE JACKED OR BORED BY METHODS SUITABLE TO ACCOMPLISH THE WORK AND THAT WILL NOT DISTURB THE PAVEMENT. WATER SHALL NOT BE USED AS AN AID FOR JACKING OR BORING, EXCEPT WHERE PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER. JACKING OR BORING PITS SHALL BE KEPT AT LEAST 10 FT. FROM THE EDGE OF PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE INSTALLED CONDUIT SHALL BE IN COMPLETE CONTACT WITH THE SURROUNDING MATERIAL. THE JACKING OR BORING PROCEDURE AND EQUIPMENT SHALL BE SUCH THAT PLACEMENT OF CASEMENT SHALL BE ACCOMPLISHED WITHOUT PRODUCING AN UNSUPPORTED LENGTH BETWEEN THE ESTABLISHED ENDS OF THE REQUIRED CONDUIT.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED
QUANTITIES



INTERIOR LAYOUT AND WIRING DIAGRAM

NOTE: WOOD POLES FOR CONTROL STATIONS WILL BE LOCATED IN FIELD BY LOCAL UTILITY
 TAG EACH CIRCUIT WIRE WITH 1" DIAMETER BRASS DISC IDENTIFYING CIRCUIT NUMBER.

LUMINAIRE SPECIFICATIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1980	140-C(8)348	25

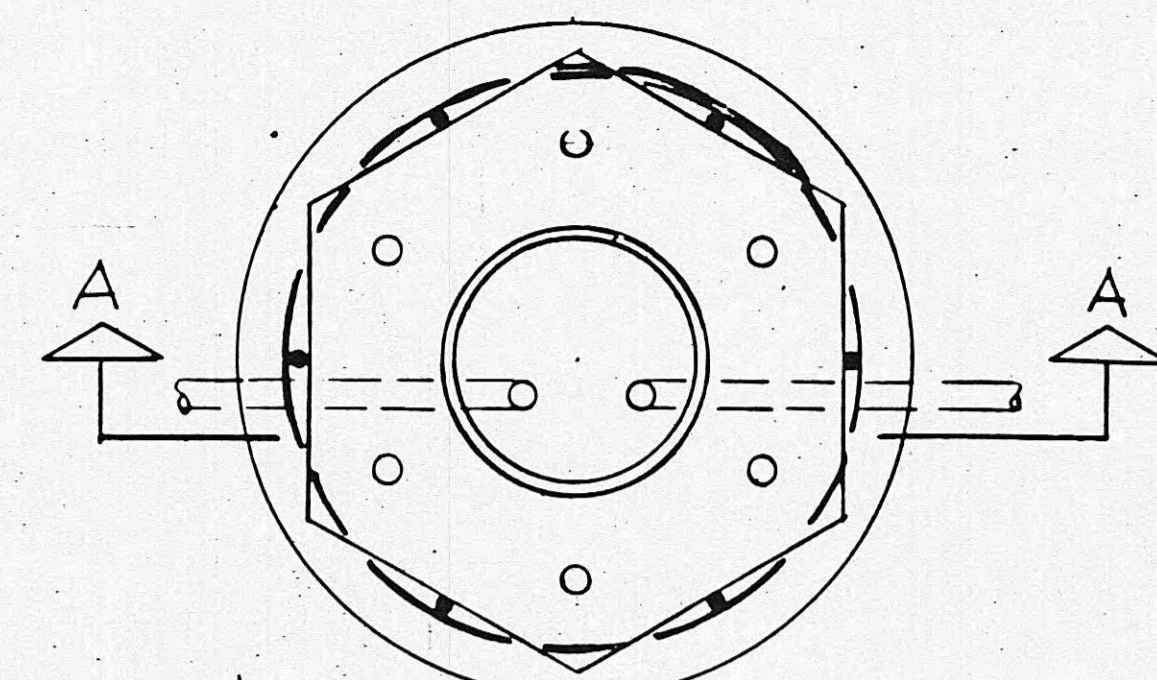
NOTE: THESE SPECIFICATIONS AND DETAILS SPECIFY THE FEATURES AND FUNCTIONS REQUIRED FOR THE LUMINAIRES. THEY SHALL NOT BE CONSTRUED AS LIMITING COMPETITION BY SPECIFYING PROPRIETARY EQUIPMENT OR DEVICES.

BALLASTS: ALL BALLASTS FOR ALL LUMINAIRES SHALL COMPLY WITH THESE SPECIFICATIONS. BALLASTS SHALL BE REGULATOR OR AUTO-REGULATOR TYPE, HIGH POWER FACTOR, 480 VOLT. THE MANUFACTURER SHALL CERTIFY BALLAST PERFORMANCE TO COMPLY WITH THESE SPECIFICATIONS. THE BALLASTS SHALL PROVIDE REGULATION OF LAMP WATTS AND VOLTS WITHIN THE LAMP MANUFACTURERS SPECIFICATIONS THROUGHOUT THE RATED LAMP LIFE. REGULATION SHALL BE AS FOLLOWS:

- LAMP WATTAGE: +5% AT RATED SUPPLY VOLTAGE.
±18% AT ±10% LINE VOLTAGE VARIATION.
- LAMP CURRENT CREST FACTOR: 1.8 FOR ±10% LINE VOLTAGE VARIATION.
- LOW TEMPERATURE STARTING: -20 DEGREES FAHRENHEIT AT ±10% LINE VOLTAGE VARIATION.

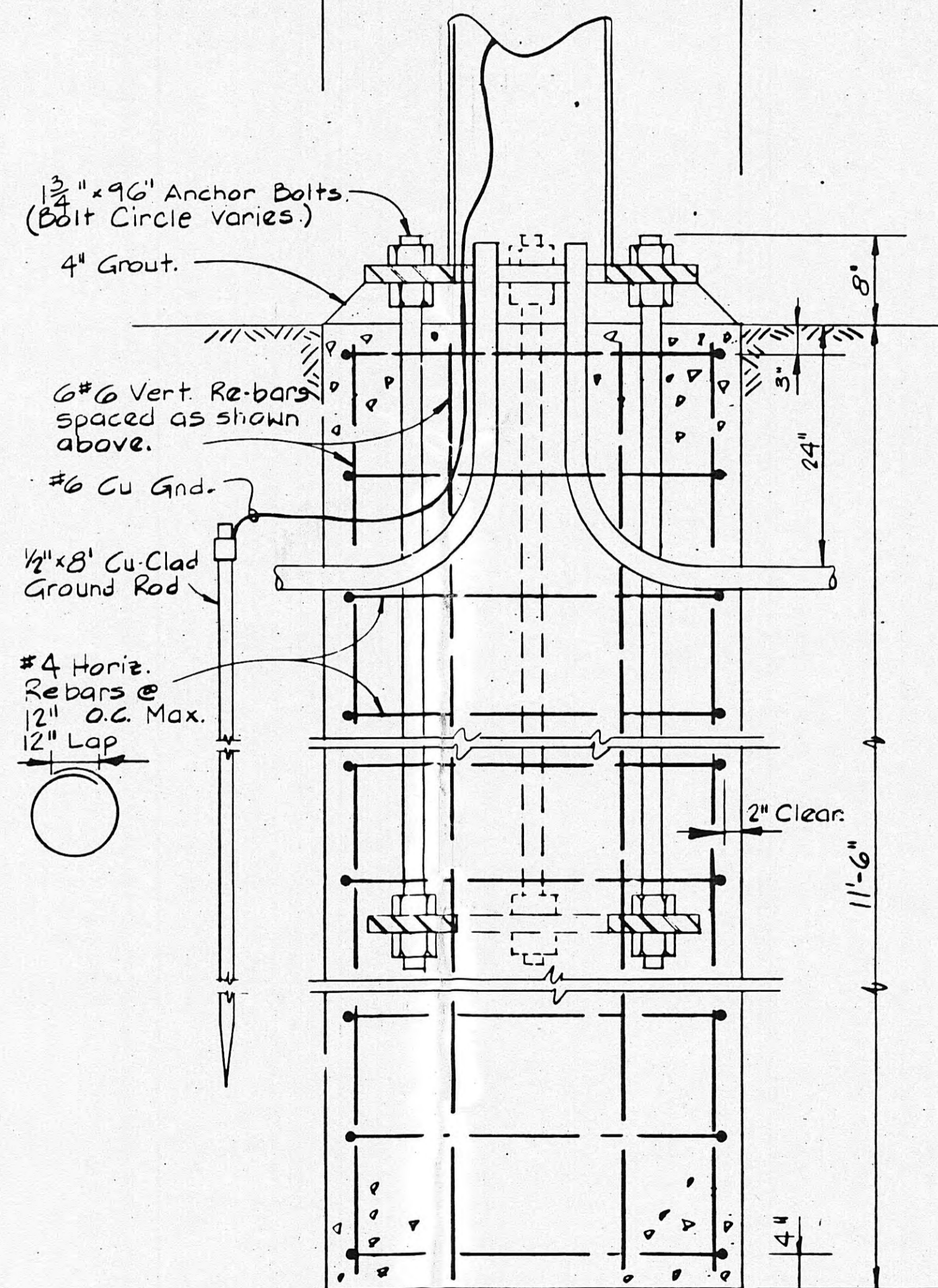
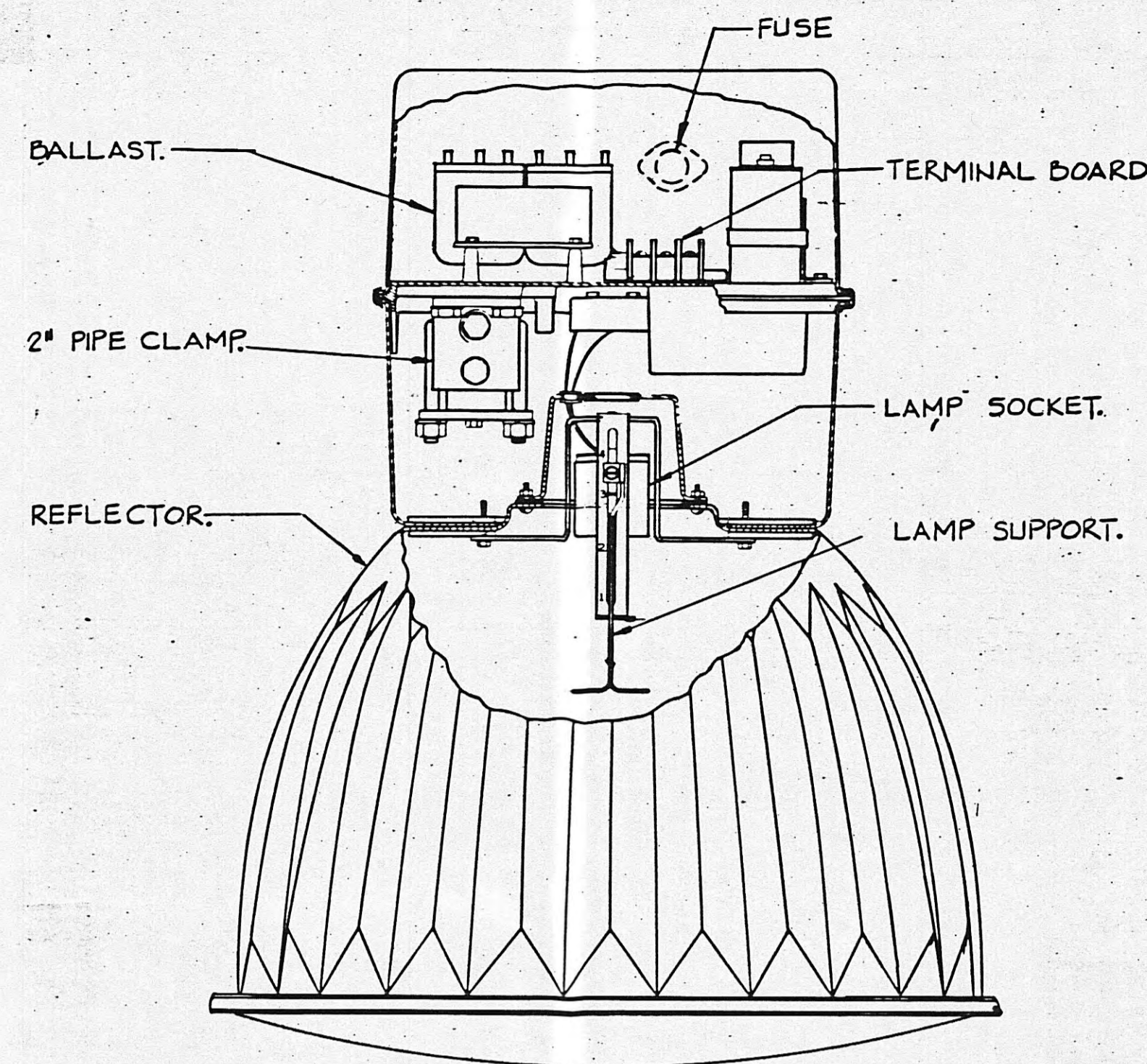
HIGH MAST LUMINAIRE SPECIFICATION:

1. THE LUMINAIRE SHALL BE A VERTICAL BURNING OUTDOOR TYPE LUMINAIRE WITH A MEDIUM CUTOFF TYPE V LIGHT DISTRIBUTION. THE PERFORMANCE OF THE LUMINAIRE SHALL BE WITHIN +10% OF THAT SPECIFIED IN THE CANDELA DISTRIBUTION CURVE, BASED ON THE PUBLISHED LUMEN RATING OF THE LAMP.
2. THE LAMP SHALL BE 400 WATT HIGH PRESSURE SODIUM, ANSI CODE 551MA-400, CLEAR, RATED 50,000 LUMENS INITIAL IN ANY BURNING POSITION.
3. BALLAST SHALL MEET ANSI SPECIFICATION "551" AND BE AS SPECIFIED ABOVE.
4. THE LUMINAIRE SHALL HAVE AN ANODIZED (ALZAK OR ALGLAS) ALUMINUM OR BOROSILICATE GLASS REFLECTOR, AND A WEATHERPROOF CAST ALUMINUM BALLAST HOUSING. THE LUMINAIRE SHALL BE OPEN REFLECTOR DESIGN. THE BALLAST HOUSING SHALL HAVE A 2" PIPE SLIPFITTER MOUNT EQUIPPED WITH A LEVEL ADJUSTMENT FOR ±3 DEGREES. THE BALLAST ENCLOSURE SHALL BE FULLY GASKETED TO PREVENT ENTRANCE OF WATER, RUGS, OR OTHER FOREIGN MATERIAL. THE LUMINAIRE SHALL BE PROVIDED WITH A 3 AMP, 600 VOLT, DUAL ELEMENT, UL CLASS K5 TIME DELAY FUSE. THE FUSEHOLDER SHALL BE HEATHERPROOF, ACCESSIBLE FROM THE OUTSIDE OF THE LUMINAIRE.



PLAN VIEW

42" Diam.

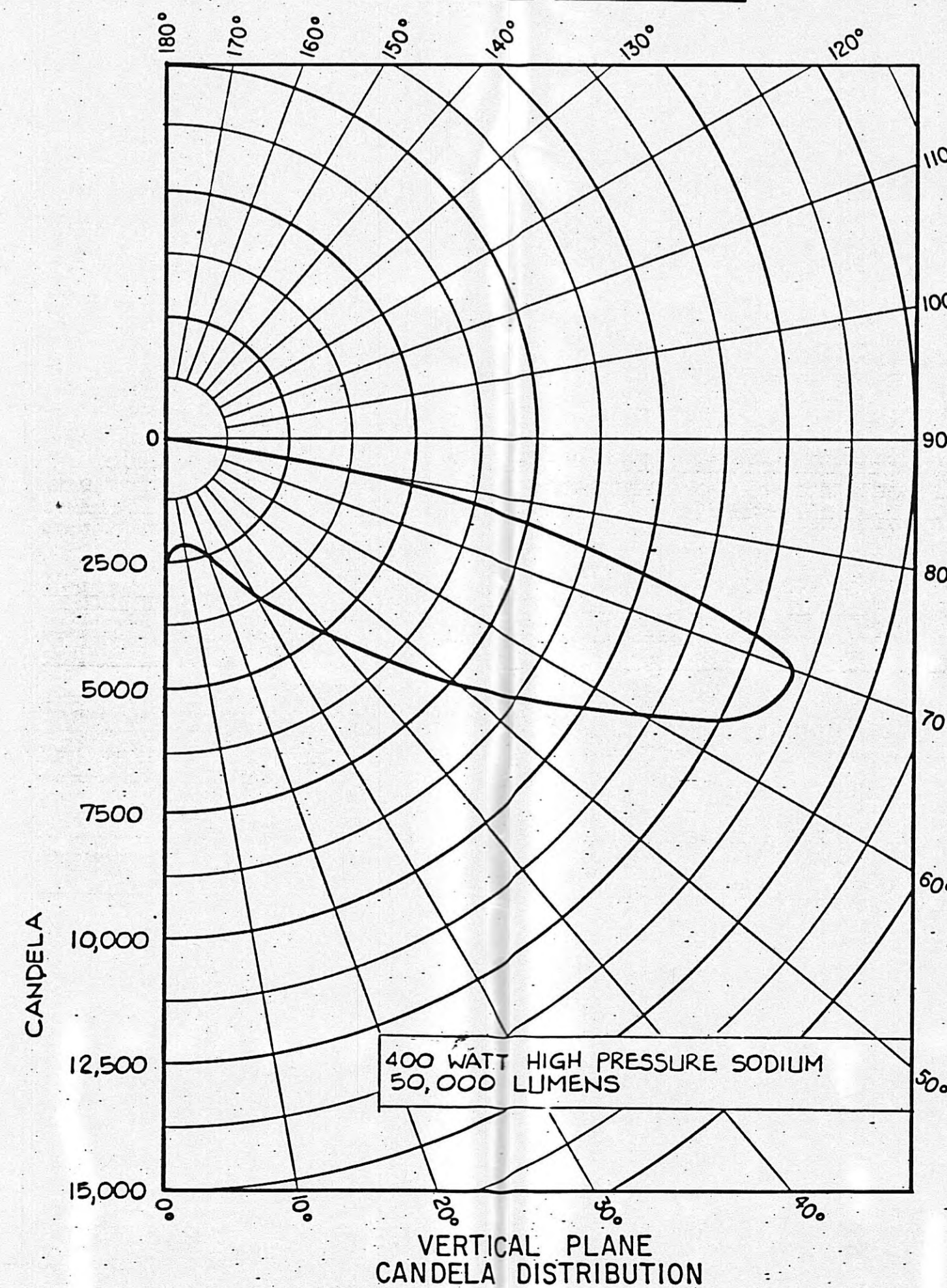


SECTION A-A

FOUNDATION DETAIL

Note: Foundation shall be placed against undisturbed soil. If rock is encountered during excavation for foundation, the contractor may propose modifications to the foundation design, subject to the review and approval of the Engineer.

HIGH MAST LUMINAIRE

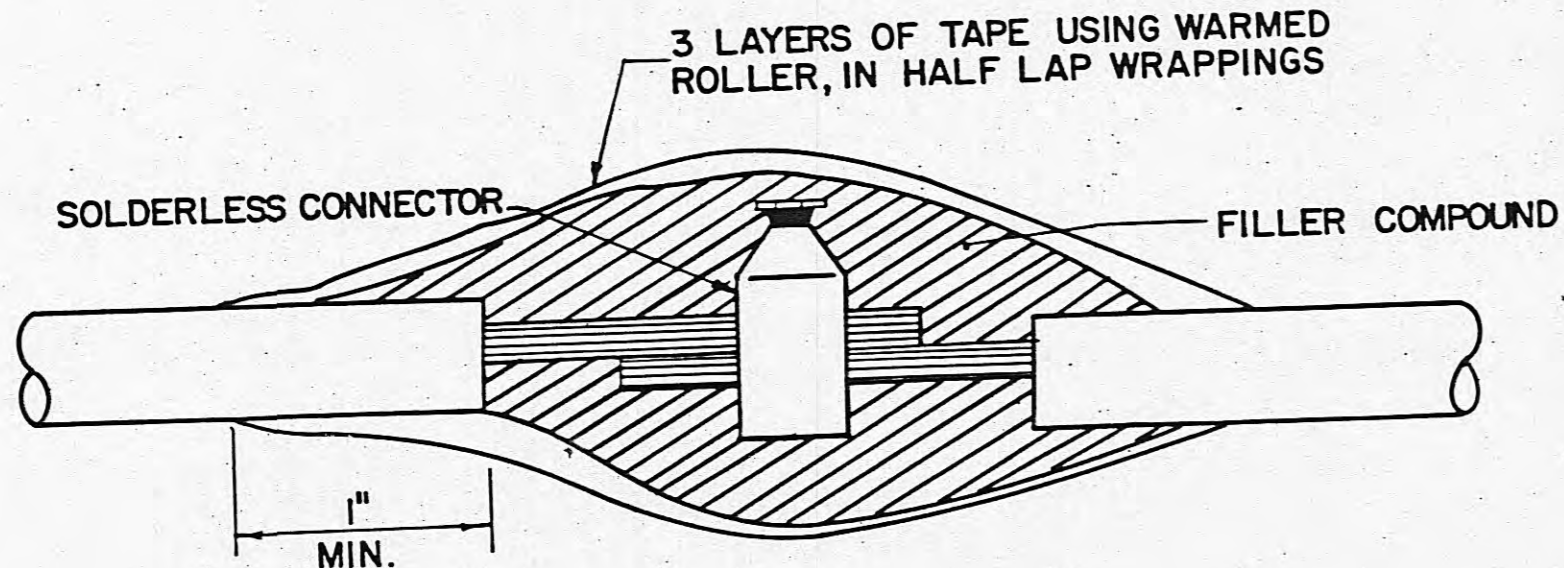


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LUMINAIRE
DETAILS

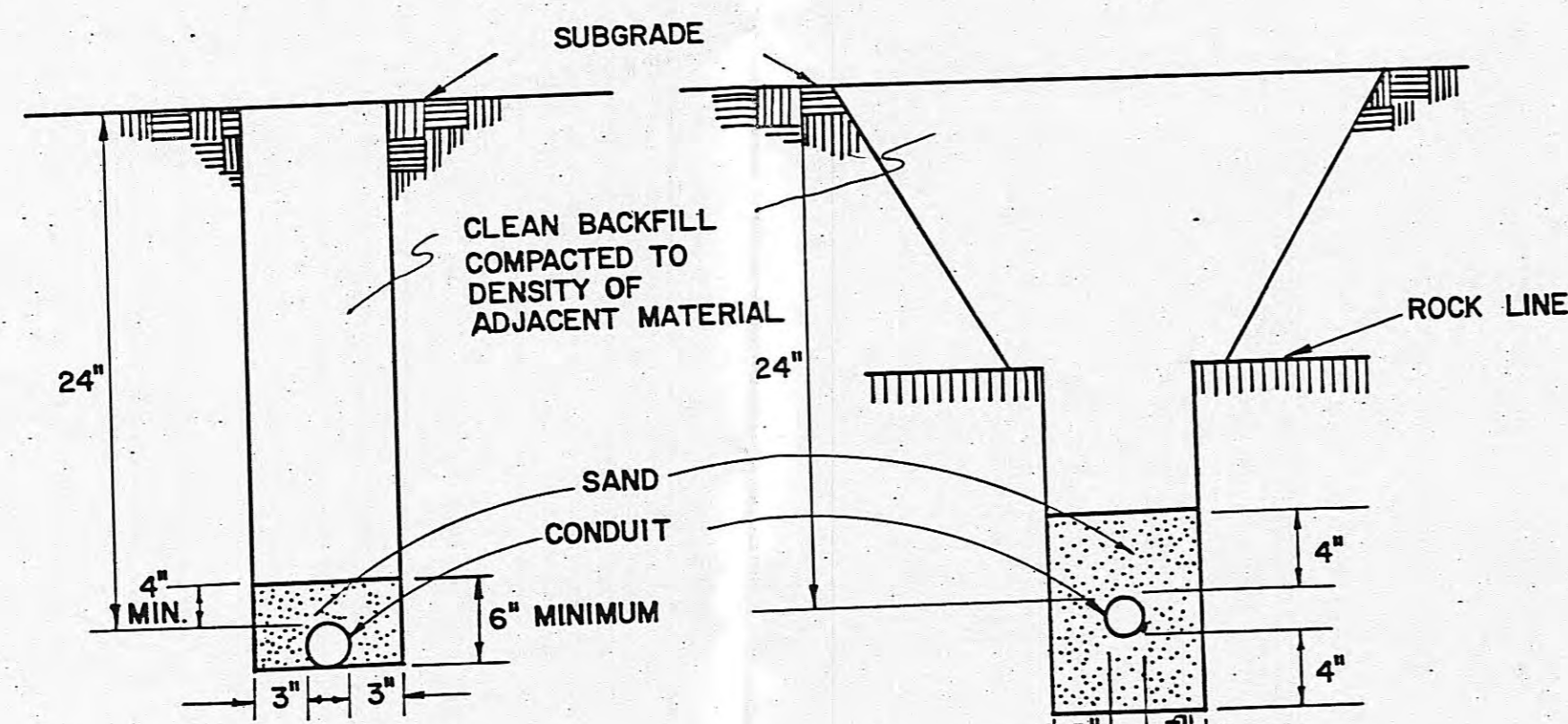
TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1980	I-40-G(88)348	2 C

MICROFILMED



TYPICAL SPLICING & TAPING DETAILS

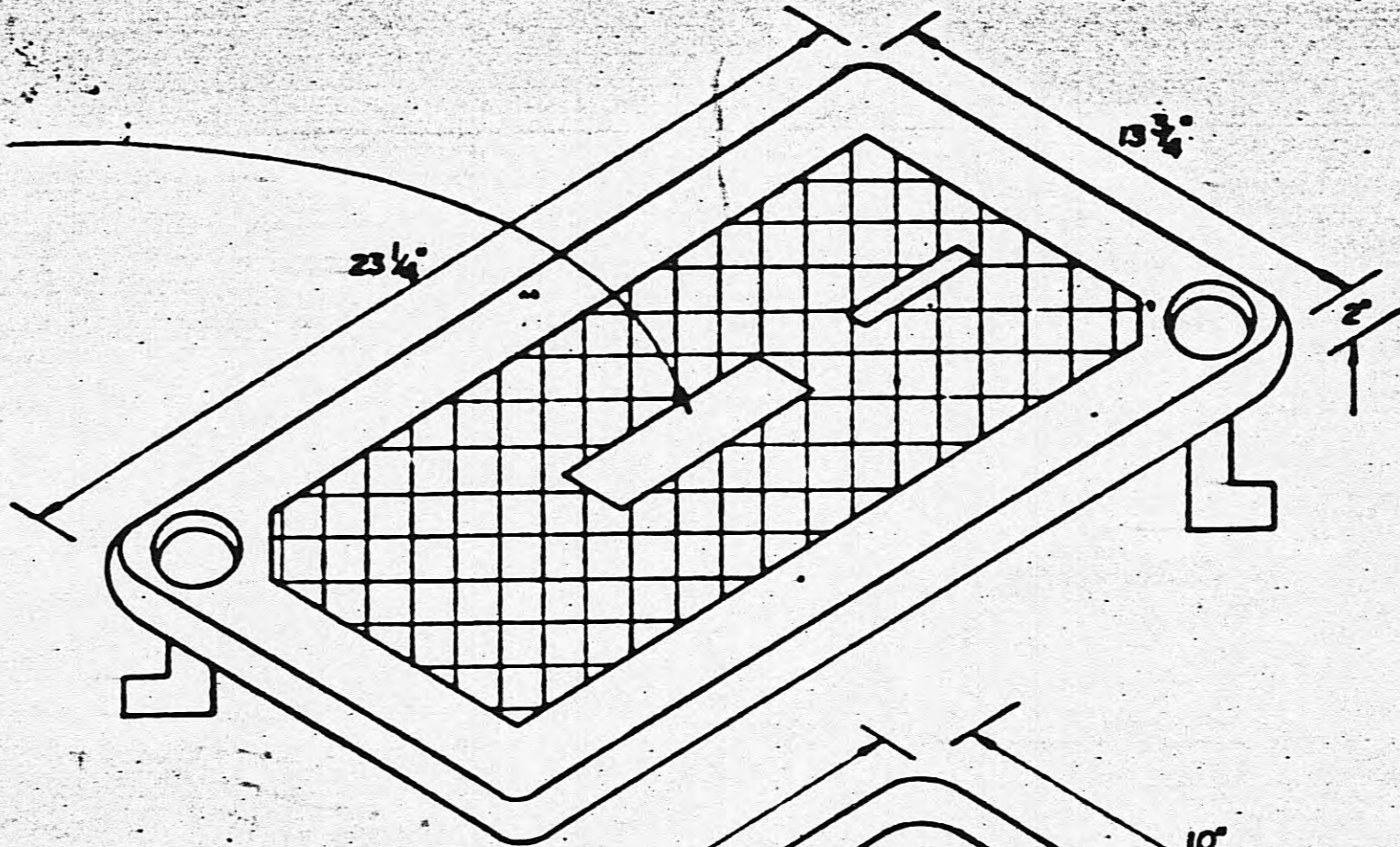
NOTE: COMPRESSION FITTING CONNECTOR KITS MAY BE USED AS ALTERNATE



EARTH TRENCH DIRECT BURIAL CONDUIT DETAILS

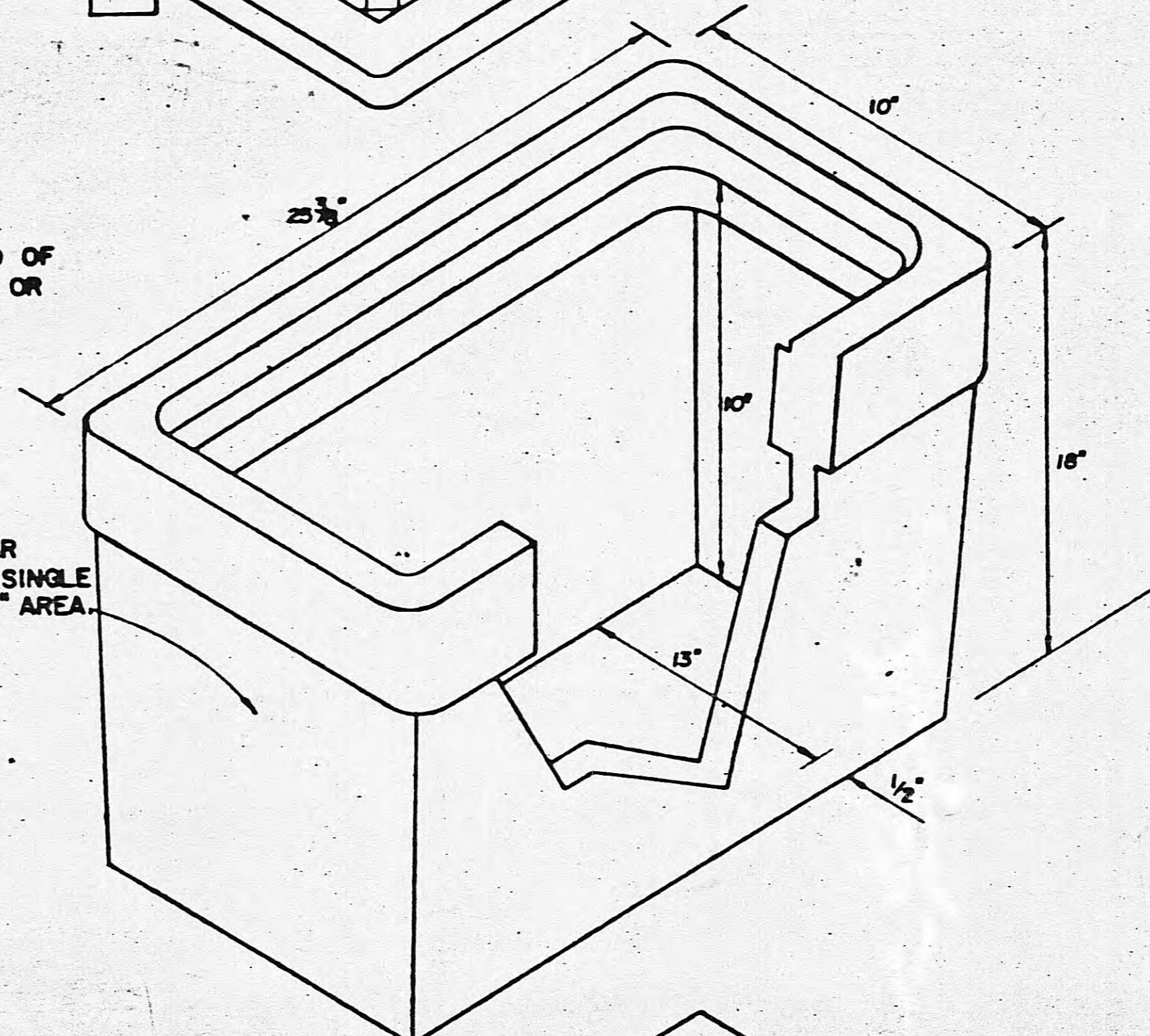
NOTE: WHERE THERE IS MORE THAN ONE CONDUIT PER TRENCH, CONDUITS SHALL NOT BE PLACED CLOSER THAN 8" C.C.

MARK COVER "STREET LIGHT"



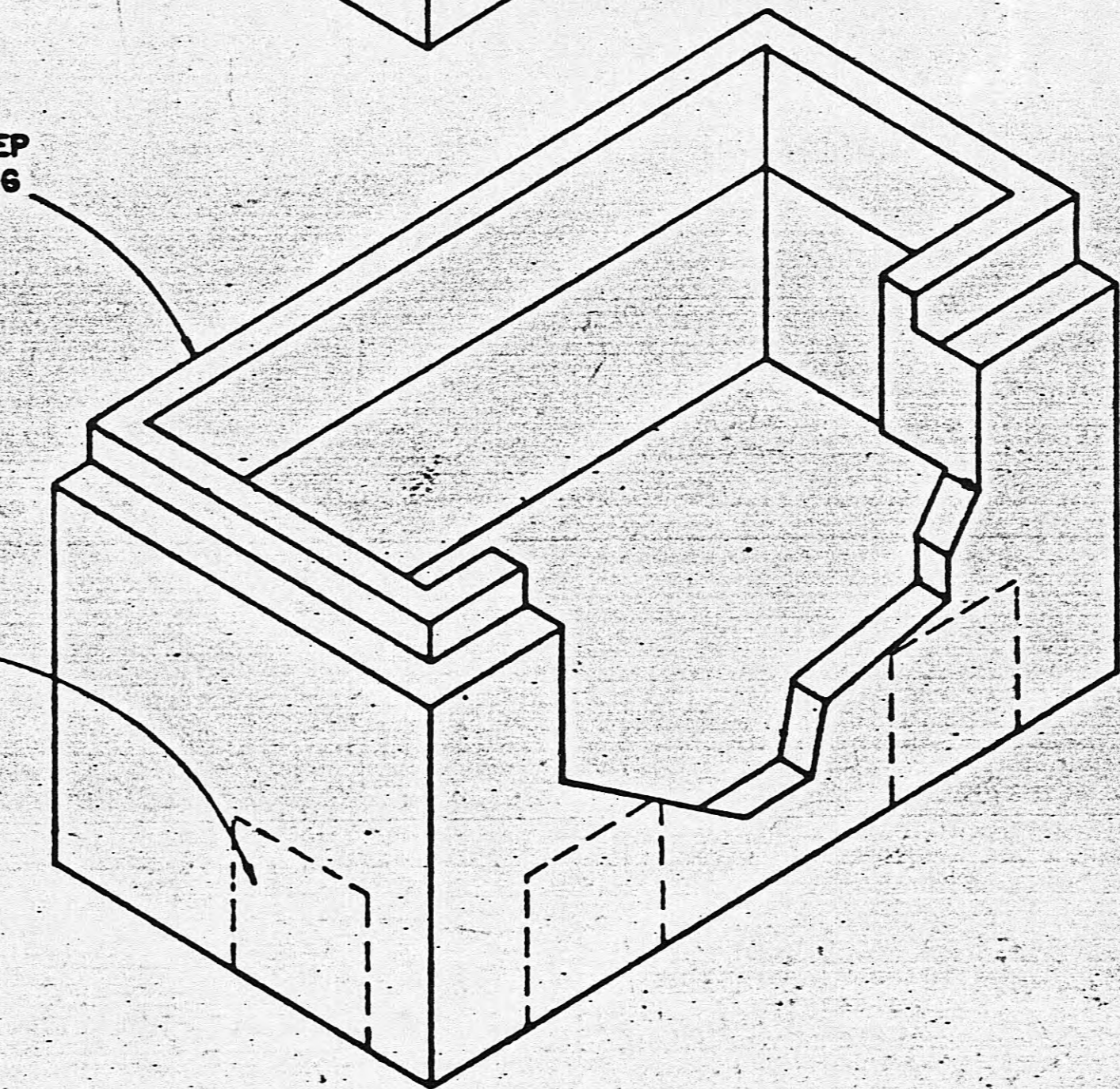
PRECAST PULL BOX COMPOSED OF REINFORCED PLASTIC MORTAR OR STRUCTURAL FOAM

DESIGNED FOR LIGHT VEHICULAR TRAFFIC BASED ON 5000 lbs. SINGLE AXLE. LOAD OVER ANY 10' x 10' AREA.



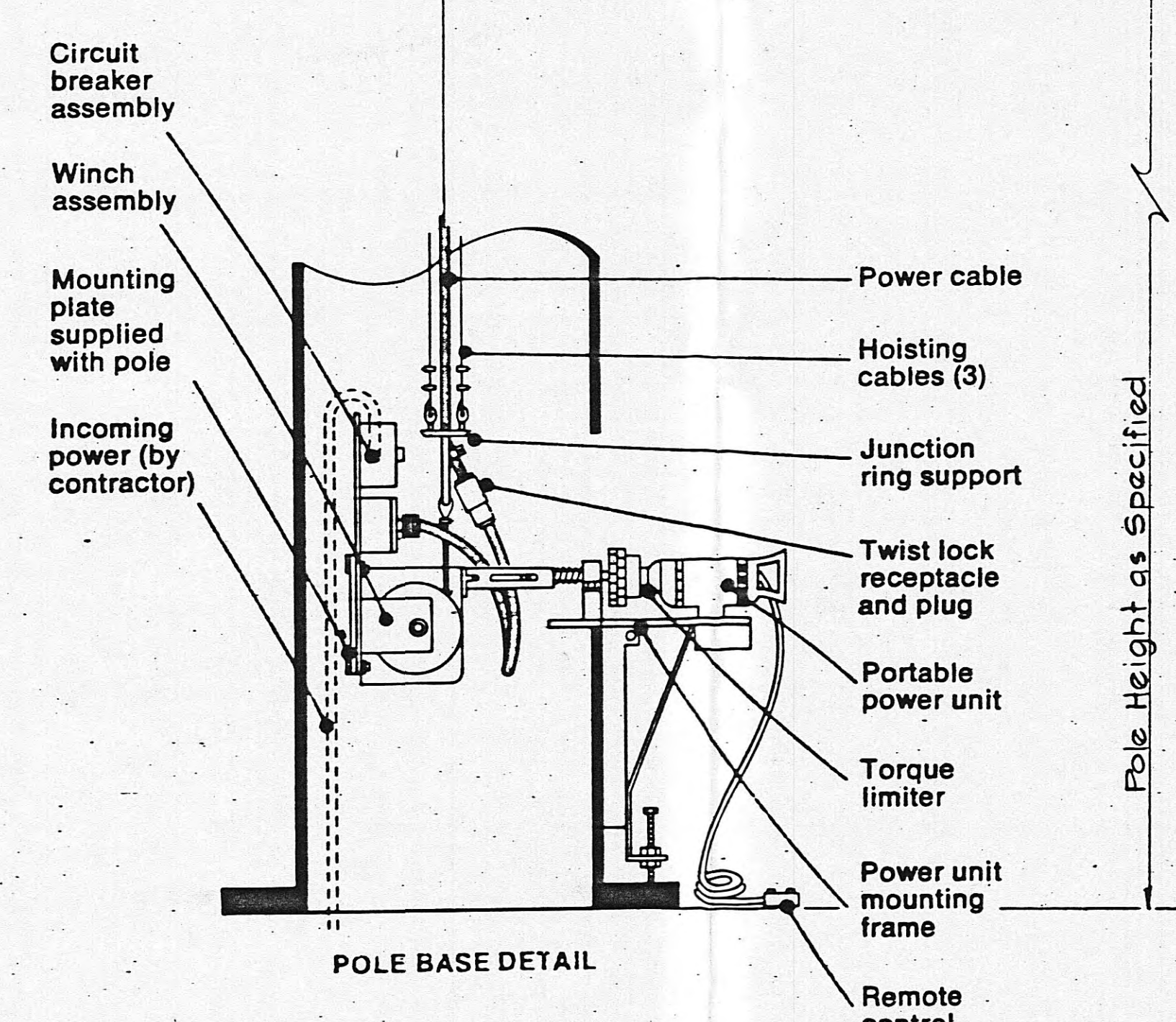
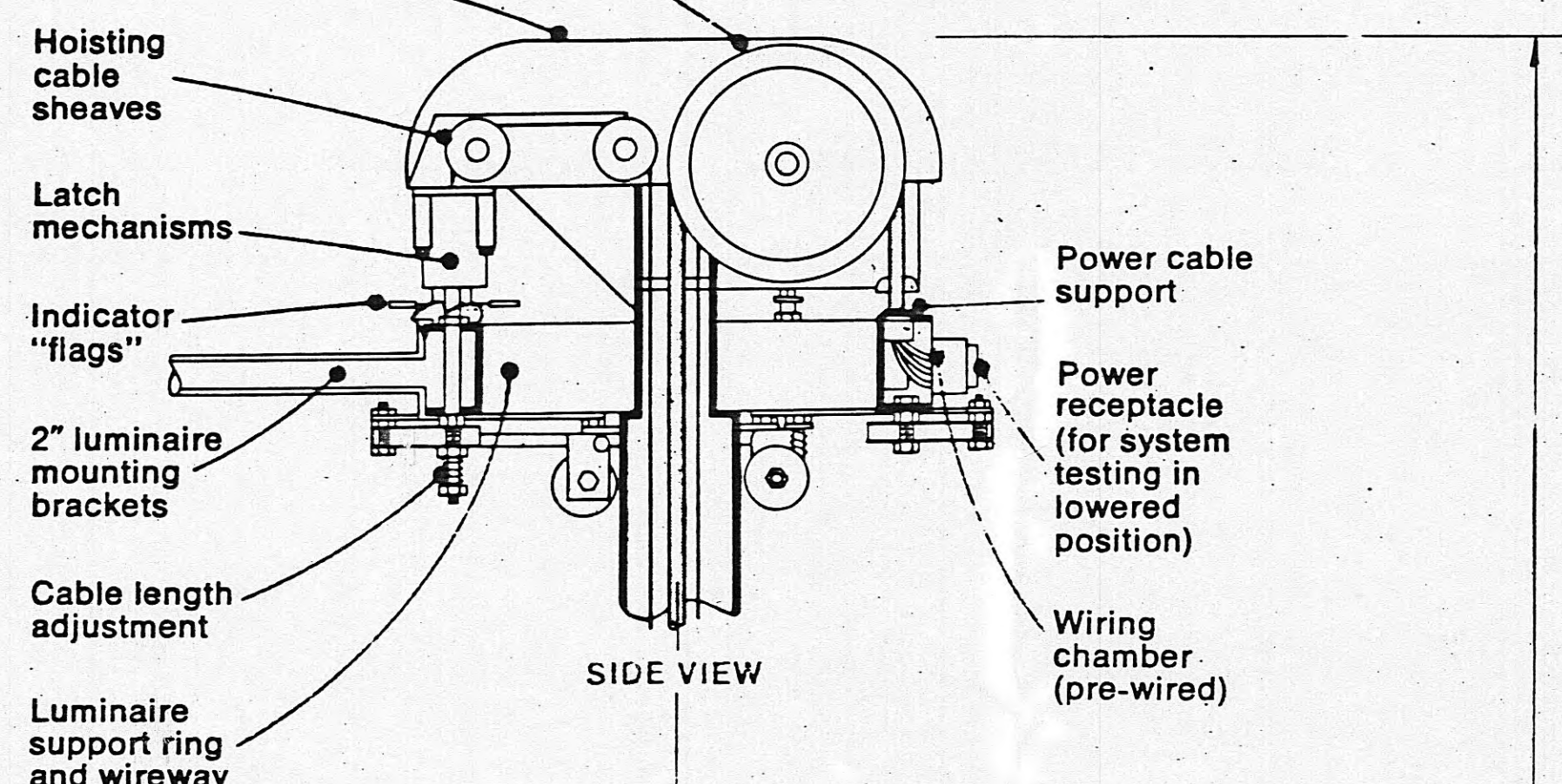
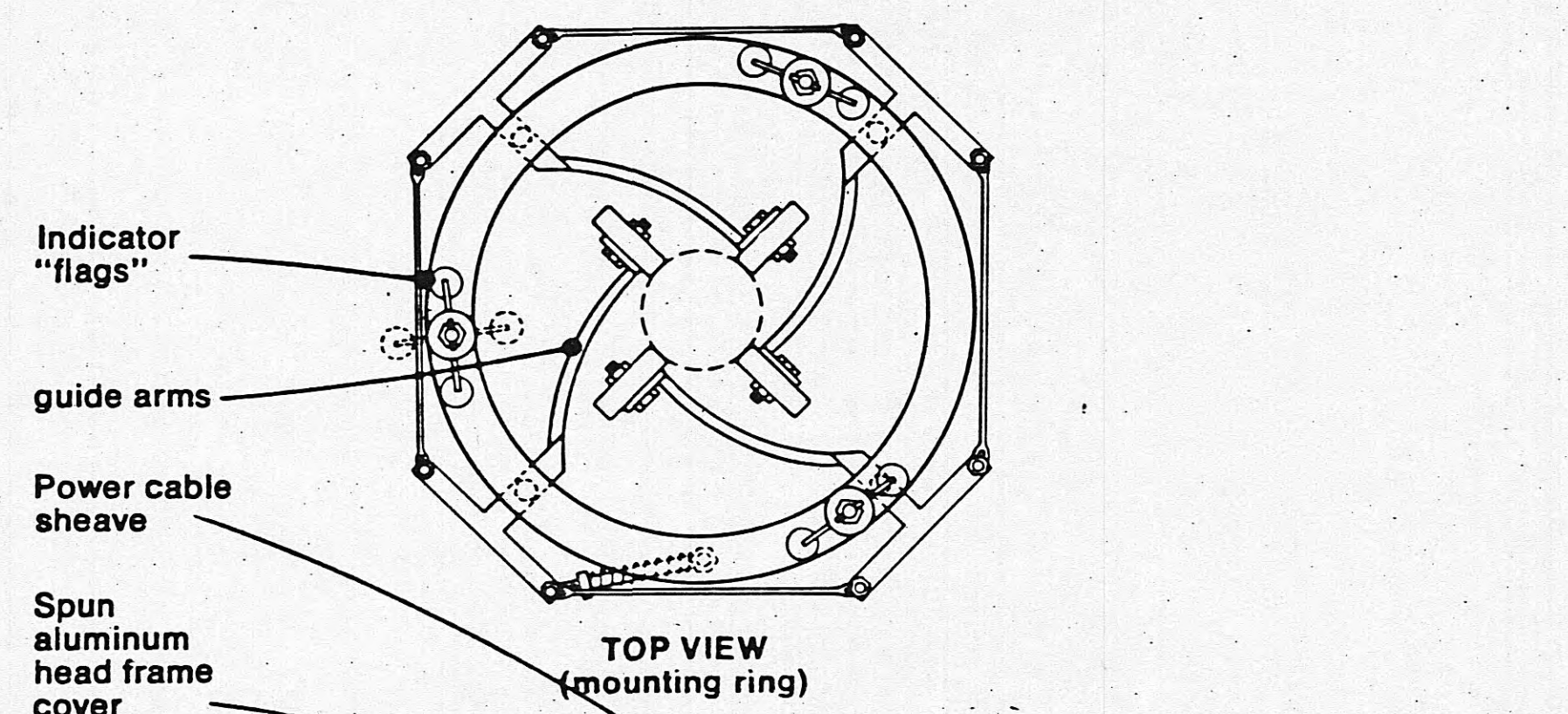
BOXES MAY BE NESTED FOR DEEP CONDUIT AND FOR MORE WORKING ROOM.

DRAINAGE THROUGH PEA GRAVEL OR CRUSHED STONE.

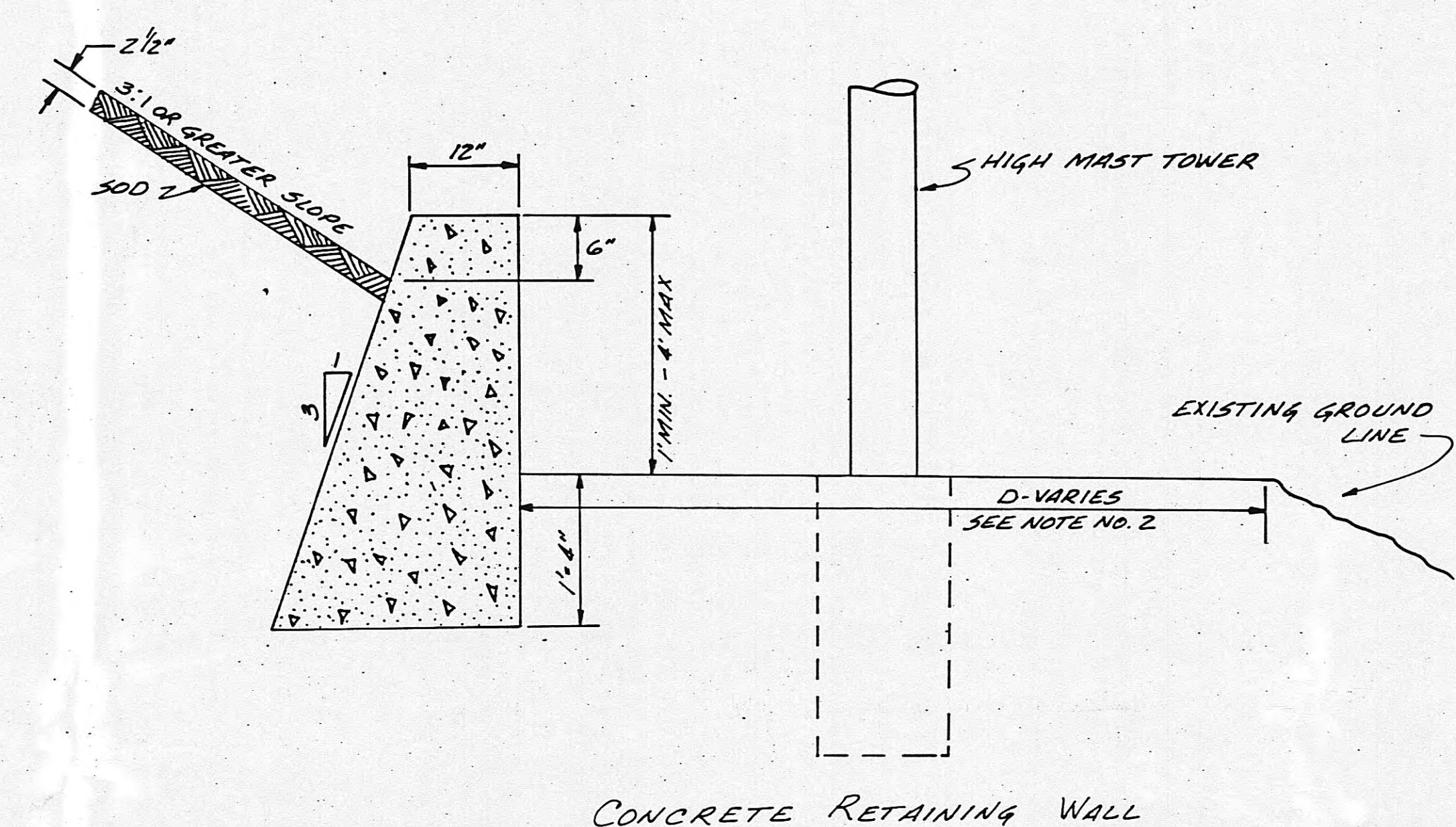


UNDERGROUND PULL BOX DETAIL

TYPE	YEAR	PROJECT NO.	SHT. NO.
CONST.	82	I-40-G(88)348	ZD

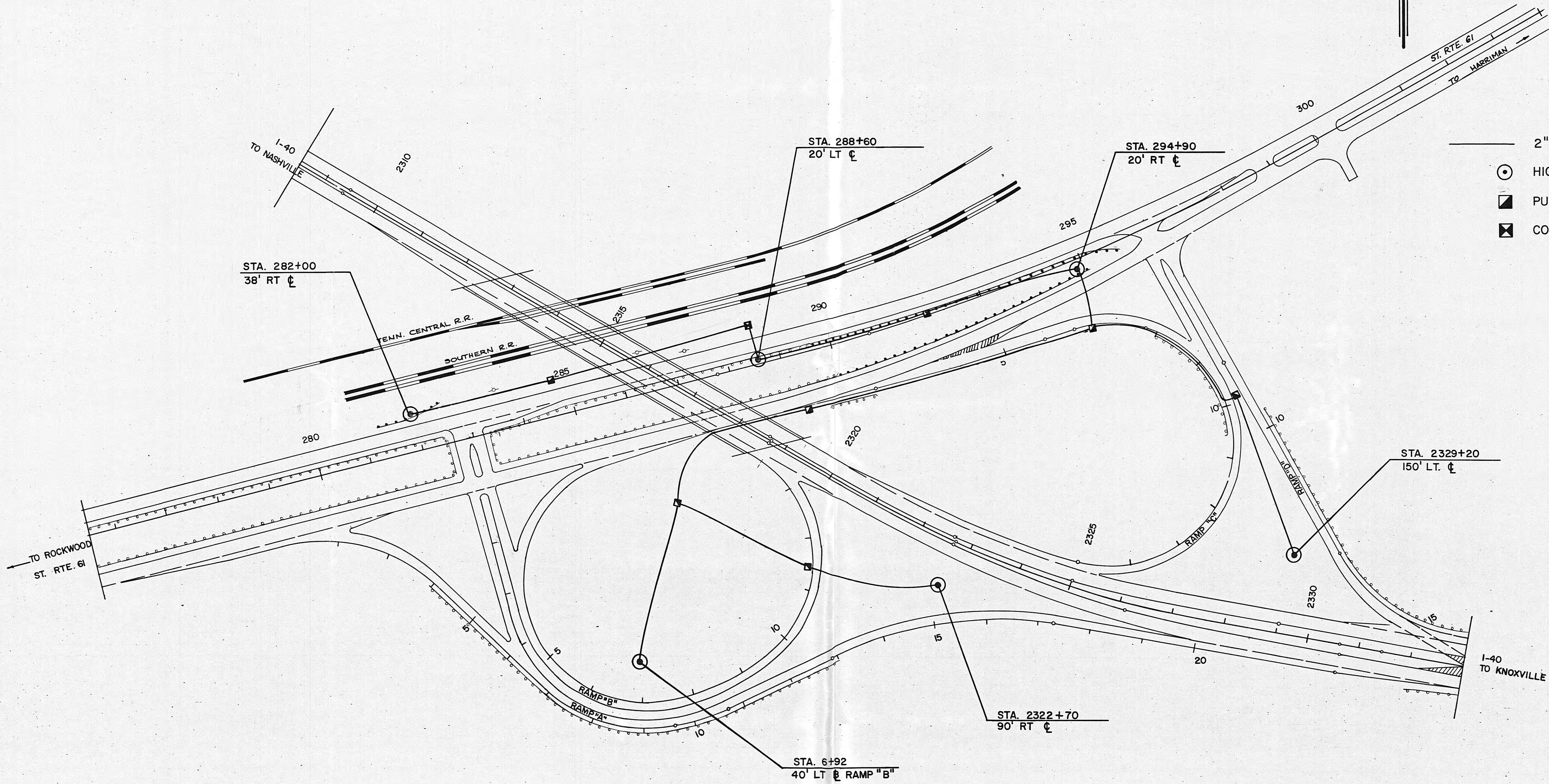


Note: The above details indicate the features and functions required for the high-mast lowering device. These details shall not be construed as limiting competition or specifying proprietary equipment or devices.



- NOTE:
- (1) IF HEIGHT OF WALL EXCEEDS 4' AS DETERMINED BY FIELD SURVEY, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF STRUCTURES FOR DETAILS OF REINFORCED RETAINING WALL.
 - (2) THE DIAMETER OF EXCAVATED AREA MAY VARY WITH MANUFACTURER OF RING ASSEMBLY. EXCAVATED AREA SHALL ALLOW FOR 3' CLEARANCE OUTSIDE THE RING ASSEMBLY.
 - (3) ALL LABOR AND MATERIALS SHOWN IN CONCRETE RETAINING WALL DETAIL TO BE INCLUDED IN PRICE BID FOR HIGH MAST TOWERS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1982	I.R.-40-60-188348	3



- 2" CONDUIT
- ⊙ HIGH MAST
- ▣ PULL BOX
- ⊠ CONTROL CENTER

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING LAYOUT

I 40 / SR 61

SCALE: 1" = 100'

TELETYPE POST 11/8/82

TYPE	YEAR	PROJECT NO.
CONST.	82	I-40-G(88)

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	QUAN.	UNIT
	712-01 TRAFFIC CONTROL	1	L.S.
	712-05.02 WARNING LIGHTS (TYPE B)	2	EACH
(1)	712-06 SIGNS (CONSTRUCTION)	84	S.F.
	712-08.03 ARROW BOARD (TYPE C)	2	EACH
(2)	714-03.01 DIRECT BURIAL CONDUIT (2", RGS, JACKED)	100	L.F.
	714-03.02 DIRECT BURIAL CONDUIT (2" P.V.C.)	3820	L.F.
	714-05.01 PULL BOXES	7	EACH
	714-06.01 CABLE (1/C NO. 2, 600 VOLT, THWN-MTW)	7215	L.F.
	714-06.02 CABLE (1/C NO. 2, 600 VOLT, TW, GROUNDING)	7215	L.F.
(3)	714-08.01 LIGHT STANDARD (STEEL - 120' M.H.)	6	EACH
(4)	714-09.01 LUMINAIRES (400 WATT H.P.S.)	72	EACH
	714-12 CONTROL CENTER	1	L.S.
	717-01 MOBILIZATION	1	L.S.
	705-04.01 GUARDRAIL TERMINAL ANCHOR (TYPE 11)	2	EACH
	705-04.03 GUARDRAIL TERMINAL ANCHOR (TYPE 13)	2	EACH
	705-02.02 METAL DEEP BEAM SINGLE GUARDRAIL (POST SP. 6 FT. 3 IN.)	600	L.F.

- (1) INCLUDES TWO (2) ADVANCE UTILITY WORK SIGNS (W21-4A-48), TWO (2) WORKER SIGNS (W21-1) AND TWO (2) END UTILITY WORK SIGNS (W23-4A), SEE SHEET 4 FOR DETAILS.
- (2) TO BE PLACED UNDER EXISTING ROADWAYS.
- (3) WITH RING ASSEMBLY AND LOWERING DEVICE.
- (4) COMPLETE WITH BALLAST AND VERTICAL BURNING LAMP.

CONDUCTORS SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THWN-MTW, 75°C THERMOPLASTIC INSULATION WITH NYLON JACKET. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID, SIZES NO. 8 AND LARGER SHALL BE STRANDED. ALL WIRING SHALL BE RUN IN CONDUITS.

CONDUITS TO BE INSTALLED UNDER PAVEMENT SHALL BE RIGID GALVANIZED STEEL. CONDUIT SHALL BE JACKED OR BORED UNDER EXISTING PAVEMENT, UNLESS ROCK IS ENCOUNTERED. WHERE ROCK IS ENCOUNTERED, OBTAIN APPROVAL FROM THE ENGINEER TO SAW CUT EXISTING PAVEMENT. BURIAL DEPTH OF CONDUIT UNDER PAVEMENT SHALL BE 36". CONDUIT SHALL EXTEND 1'-0" BEYOND EDGE OF PAVED SHOULDER.

CONDUITS IN UNPAVED AREAS SHALL BE RIGID HEAVYWALL SCHEDULE 40 POLYVINYL CHLORIDE (PVC).

TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION OF THIS PROJECT. TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR UNDER ITEMS 713.

DISTURBED AREAS ARE TO BE SODDED PER SECTION 803 OF THE STANDARD SPECIFICATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING MATERIAL.

THIS CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRICAL CODE, NFPA NO. 70 AND THE NATIONAL ELECTRICAL SAFETY CODE.

ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED WHETHER SPECIFICALLY NOTED OR NOT.

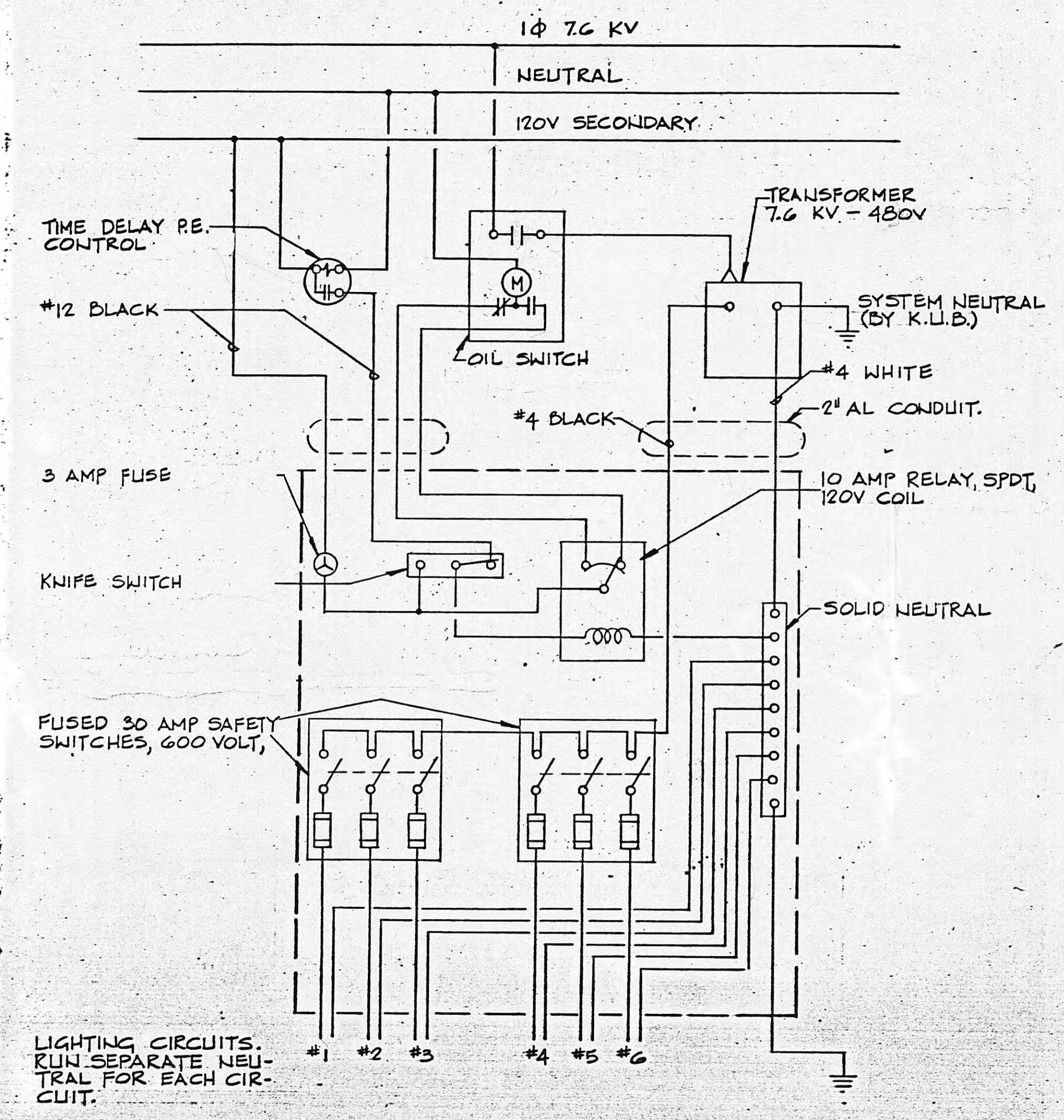
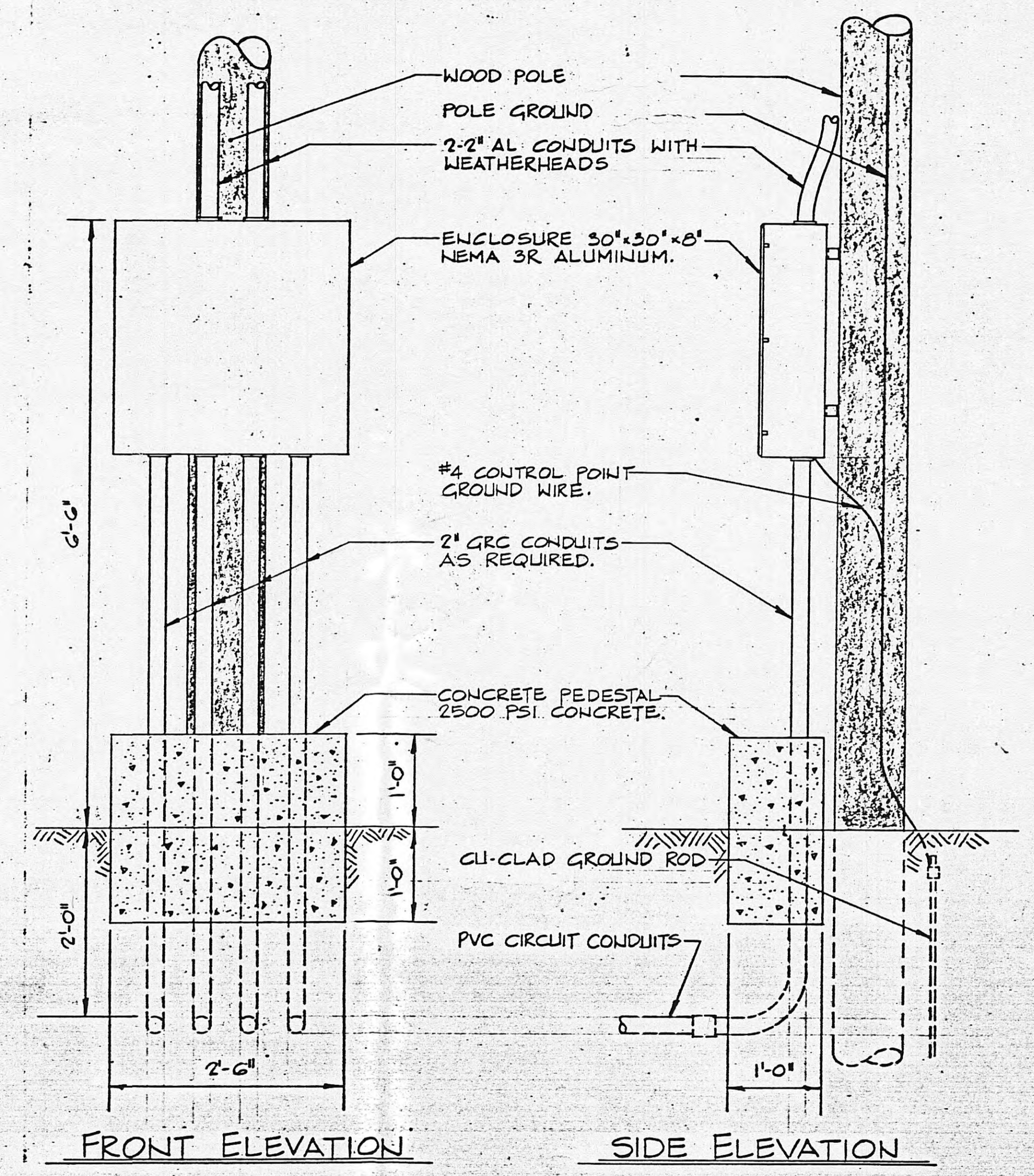
WHENEVER THE CONTRACTOR IS NOT ACTIVELY WORKING ON THIS PROJECT (NIGHTS, WEEKENDS, ETC.) ANY EQUIPMENT PARKED IN THE VICINITY OF THE CONSTRUCTION MUST BE PARKED 30' FROM THE TRAVELLED LANES.

CONDUITS TO BE INSTALLED UNDER EXISTING ROADWAYS SHALL BE JACKED OR BORED BY METHODS SUITABLE TO ACCOMPLISH THE WORK AND THAT WILL NOT DISTURB THE PAVEMENT. WATER SHALL NOT BE USED AS AN AID FOR JACKING OR BORING, EXCEPT WHERE PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER. JACKING OR BORING PITS SHALL BE KEPT AT LEAST 10 FT. FROM THE EDGE OF PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE INSTALLED CONDUIT SHALL BE IN COMPLETE CONTACT WITH THE SURROUNDING MATERIAL. THE JACKING OR BORING PROCEDURE AND EQUIPMENT SHALL BE SUCH THAT PLACEMENT OF CASEMENT SHALL BE ACCOMPLISHED WITHOUT PRODUCING AN UNSUPPORTED LENGTH BETWEEN THE ESTABLISHED ENDS OF THE REQUIRED CONDUIT.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	1980	E40-G(85)348	2A



INTERIOR LAYOUT AND WIRING DIAGRAM

NOTE: WOOD POLES FOR CONTROL STATIONS WILL BE LOCATED IN FIELD BY LOCAL UTILITY TAG EACH CIRCUIT WIRE WITH 1/8\"

12-400 HPS

LUMINAIRE SPECIFICATIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1980	140-C(8)348	25

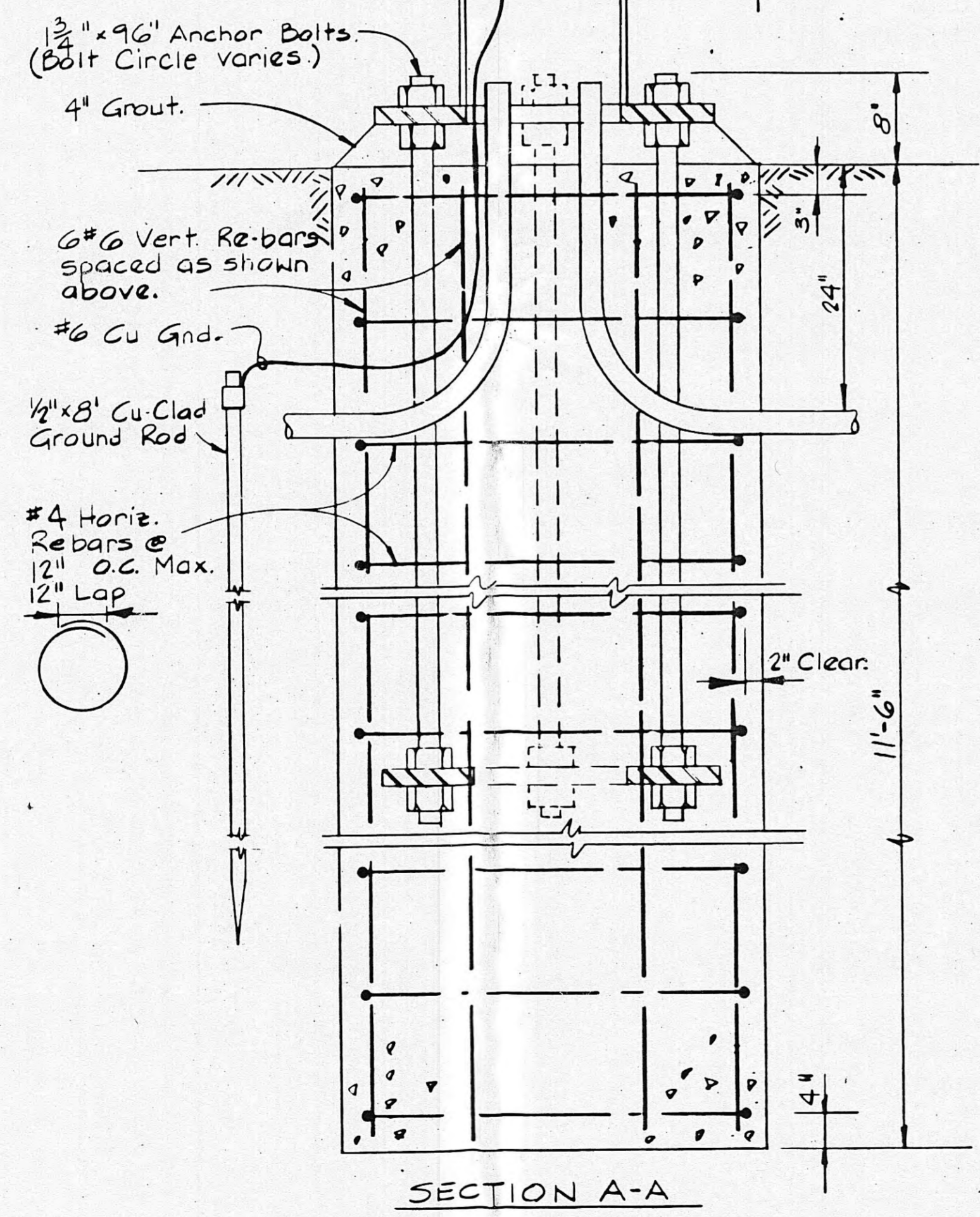
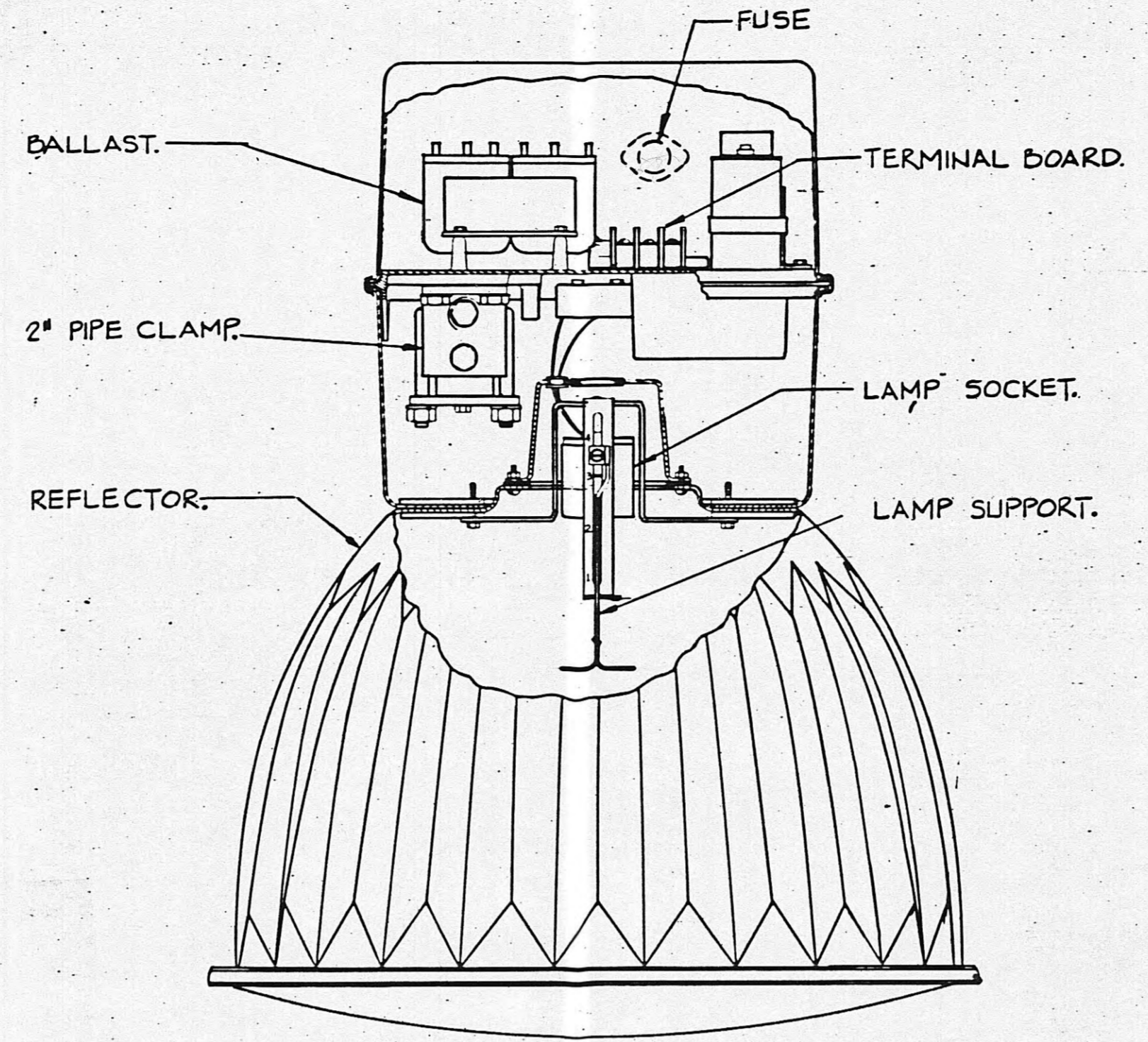
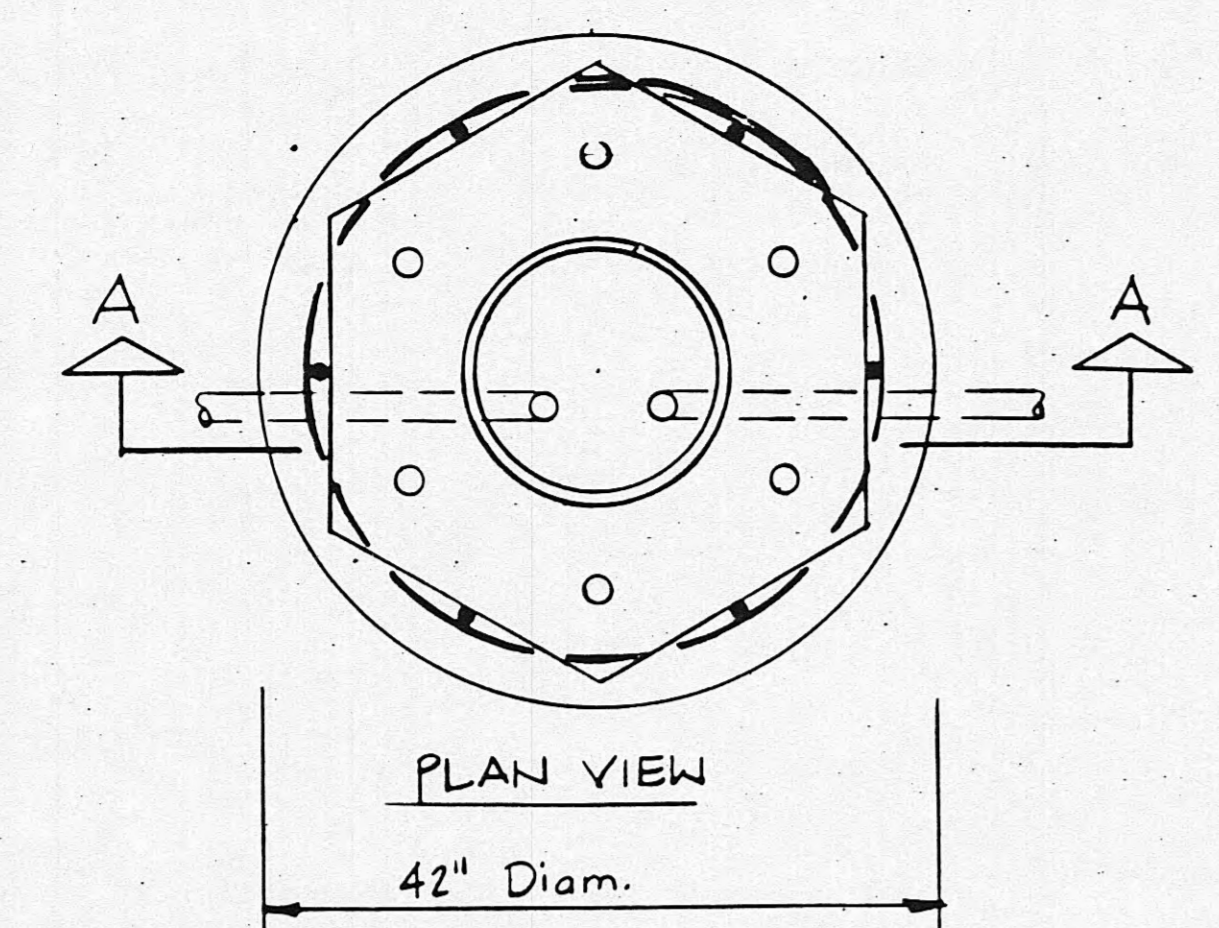
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BALLASTS: ALL BALLASTS FOR ALL LUMINAIRES SHALL COMPLY WITH THESE SPECIFICATIONS. BALLASTS SHALL BE REGULATOR OR AUTO-REGULATOR TYPE, HIGH POWER FACTOR, 480 VOLT. THE MANUFACTURER SHALL CERTIFY BALLAST PERFORMANCE TO COMPLY WITH THESE SPECIFICATIONS. THE BALLASTS SHALL PROVIDE REGULATION OF LAMP WATTS AND VOLTS WITHIN THE LAMP MANUFACTURERS SPECIFICATIONS THROUGHOUT THE RATED LAMP LIFE. REGULATION SHALL BE AS FOLLOWS:

- LAMP WATTAGE: +5% AT RATED SUPPLY VOLTAGE.
±18% AT ±10% LINE VOLTAGE VARIATION.
- LAMP CURRENT CREST FACTOR: 1.8 FOR ±10% LINE VOLTAGE VARIATION.
- LOW TEMPERATURE STARTING: -20 DEGREES FAHRENHEIT AT ±10% LINE VOLTAGE VARIATION.

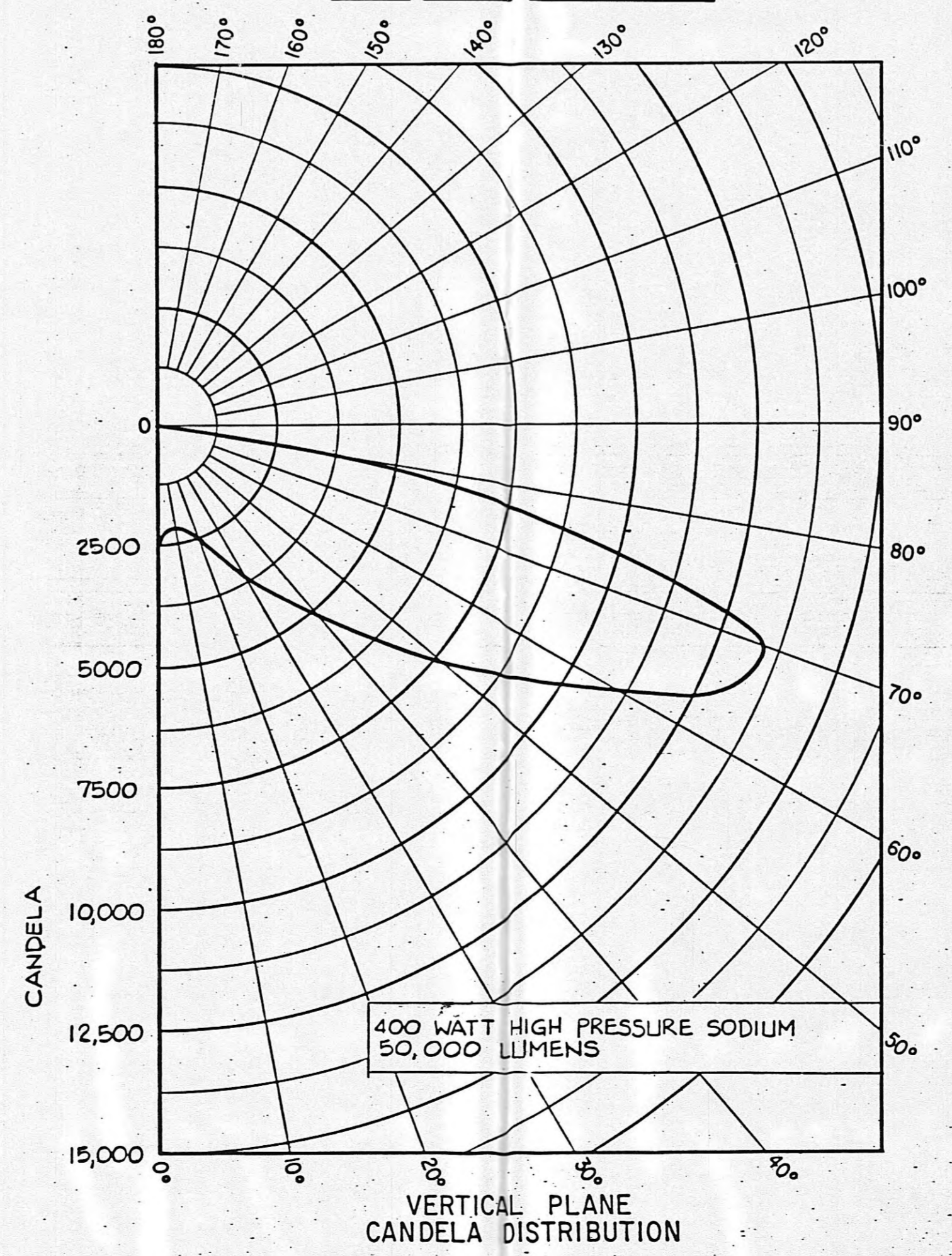
HIGH MAST LUMINAIRE SPECIFICATION:

- THE LUMINAIRE SHALL BE A VERTICAL BURNING OUTDOOR TYPE LUMINAIRE WITH A MEDIUM CUTOFF TYPE V LIGHT DISTRIBUTION. THE PERFORMANCE OF THE LUMINAIRE SHALL BE WITHIN +10% OF THAT SPECIFIED IN THE CANDELA DISTRIBUTION CURVE, BASED ON THE PUBLISHED LUMEN RATING OF THE LAMP.
- THE LAMP SHALL BE 400 WATT HIGH PRESSURE SODIUM, ANSI CODE S51WA-400, CLEAR, RATED 50,000 LUMENS INITIAL IN ANY BURNING POSITION.
- BALLAST SHALL MEET ANSI SPECIFICATION "S51" AND BE AS SPECIFIED ABOVE.
- THE LUMINAIRE SHALL HAVE AN ANODIZED (ALZAK OR ALGLAS) ALUMINUM OR BORO-SILICATE GLASS REFLECTOR, AND A WEATHERPROOF CAST ALUMINUM BALLAST HOUSING. THE LUMINAIRE SHALL BE OPEN REFLECTOR DESIGN. THE BALLAST HOUSING SHALL HAVE A 2" PIPE SLIPFITTER MOUNT EQUIPPED WITH A LEVEL ADJUSTMENT FOR ±3 DEGREES. THE BALLAST ENCLOSURE SHALL BE FULLY GASKETED TO PREVENT ENTRANCE OF WATER, BUGS, OR OTHER FOREIGN MATERIAL. THE LUMINAIRE SHALL BE PROVIDED WITH A 3 AMP, 600 VOLT, DUAL ELEMENT, UL CLASS K5 TIME DELAY FUSE. THE FUSEHOLDER SHALL BE WEATHERPROOF, ACCESSIBLE FROM THE OUTSIDE OF THE LUMINAIRE.



Note: Foundation shall be placed against undisturbed soil. If rock is encountered during excavation for foundation, the contractor may propose modifications to the foundation design, subject to the review and approval of the Engineer.

HIGH MAST LUMINAIRE

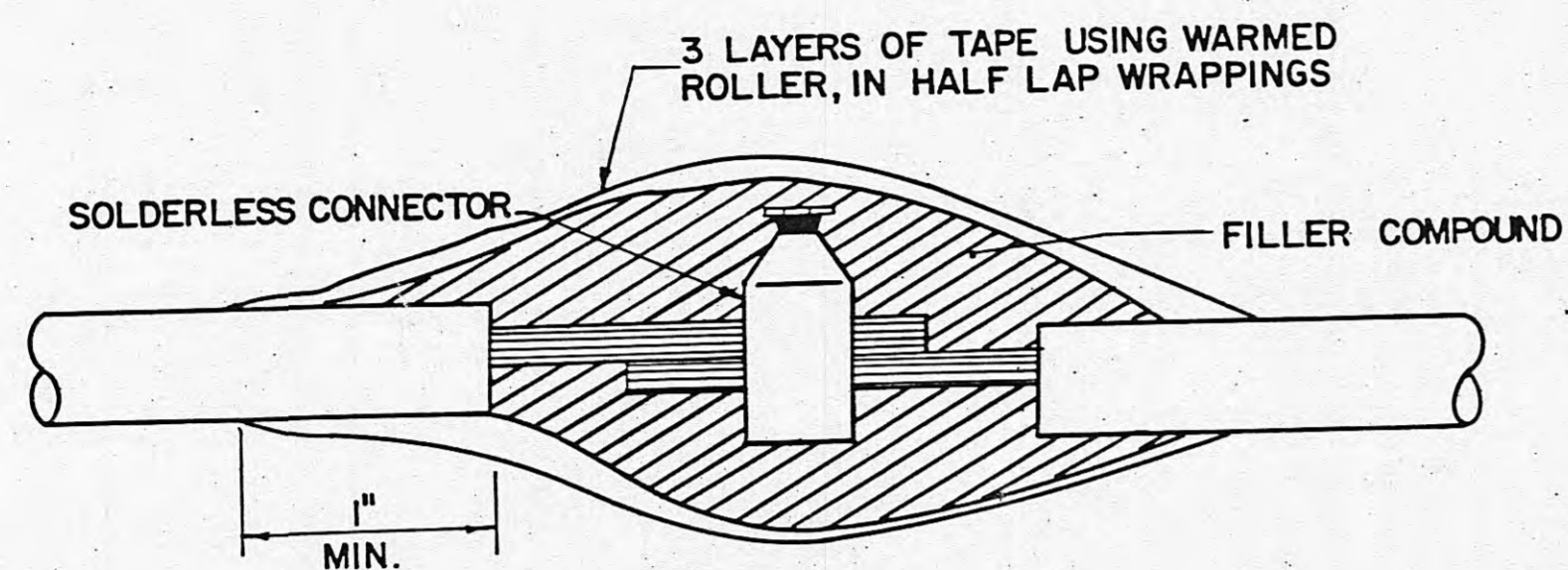


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LUMINAIRE
DETAILS

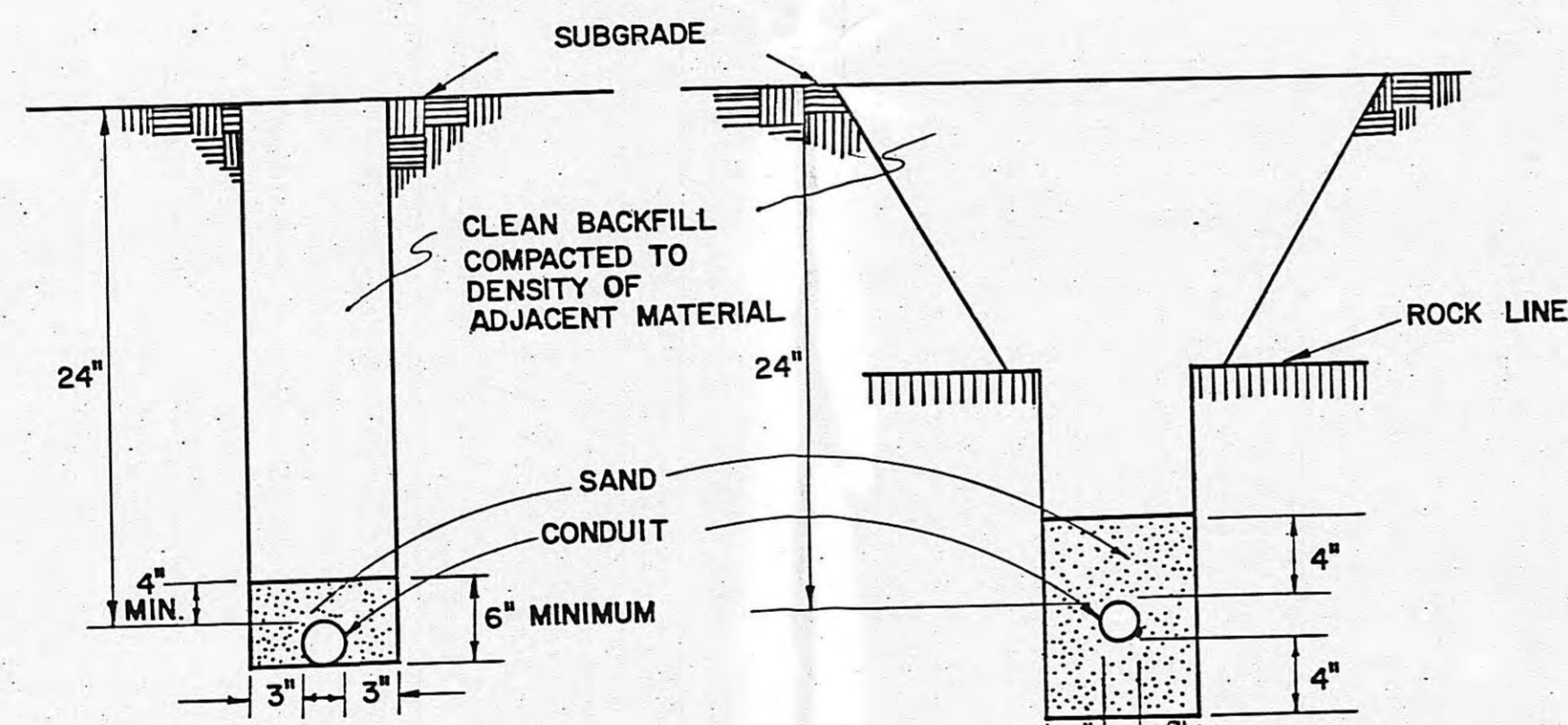
MICROFILMED

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1980	I-40-G(88)345	2 C.



TYPICAL SPLICING & TAPING DETAILS

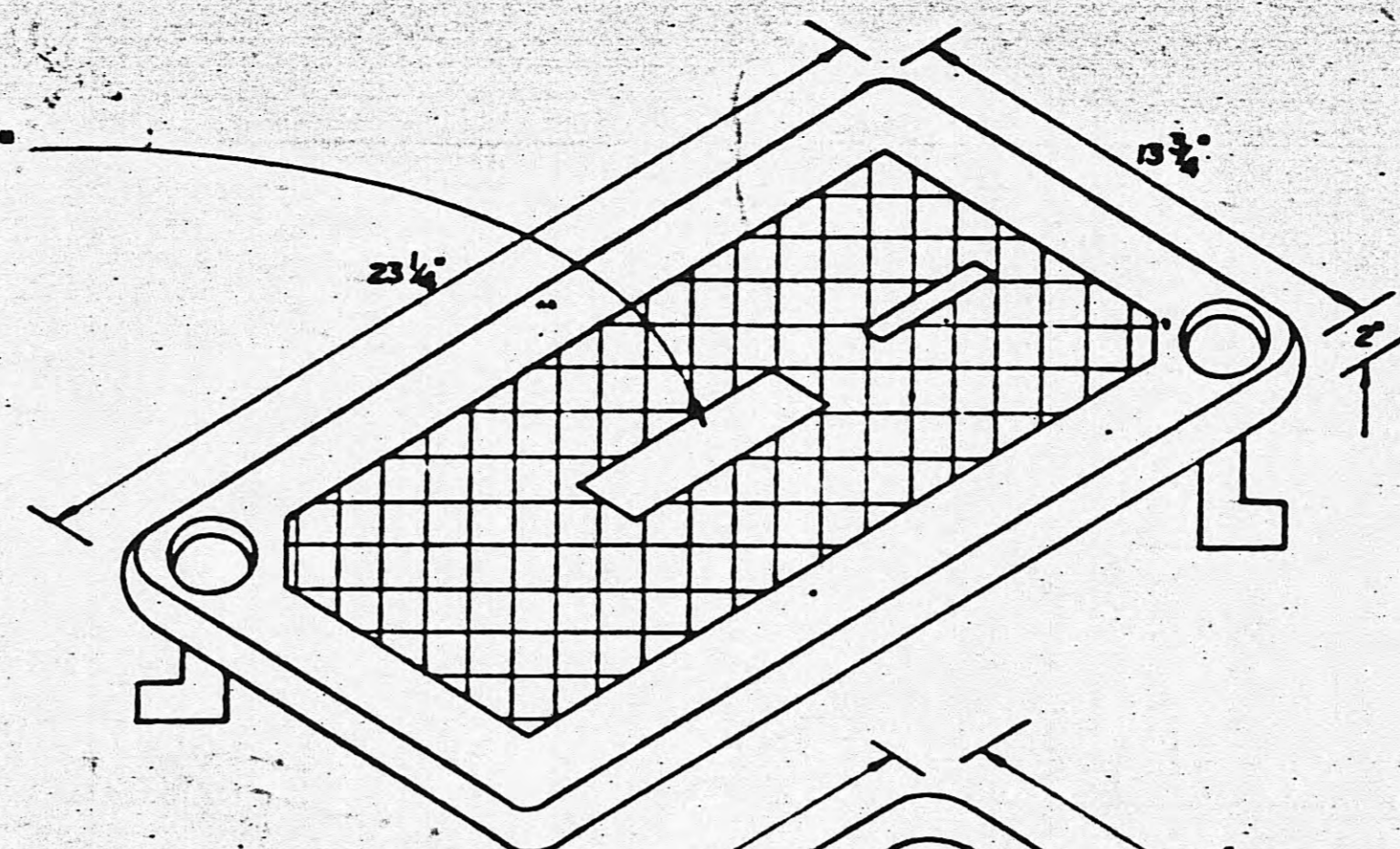
NOTE: COMPRESSION FITTING CONNECTOR KITS MAY BE USED AS ALTERNATE



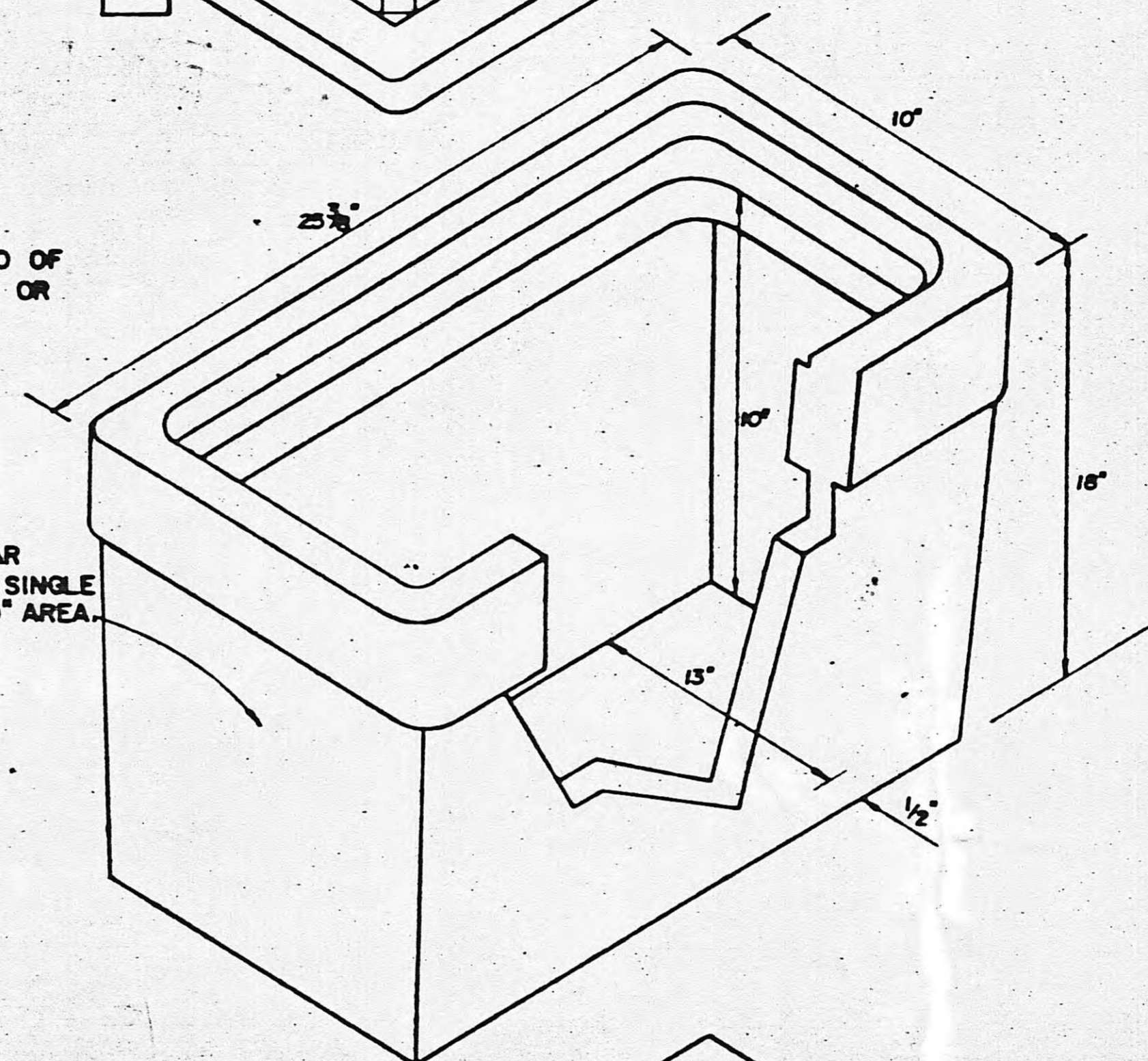
**EARTH TRENCH
DIRECT BURIAL CONDUIT DETAILS**

NOTE: WHERE THERE IS MORE THAN ONE CONDUIT PER TRENCH, CONDUITS SHALL NOT BE PLACED CLOSER THAN 8\"/>

MARK COVER "STREET LIGHT"

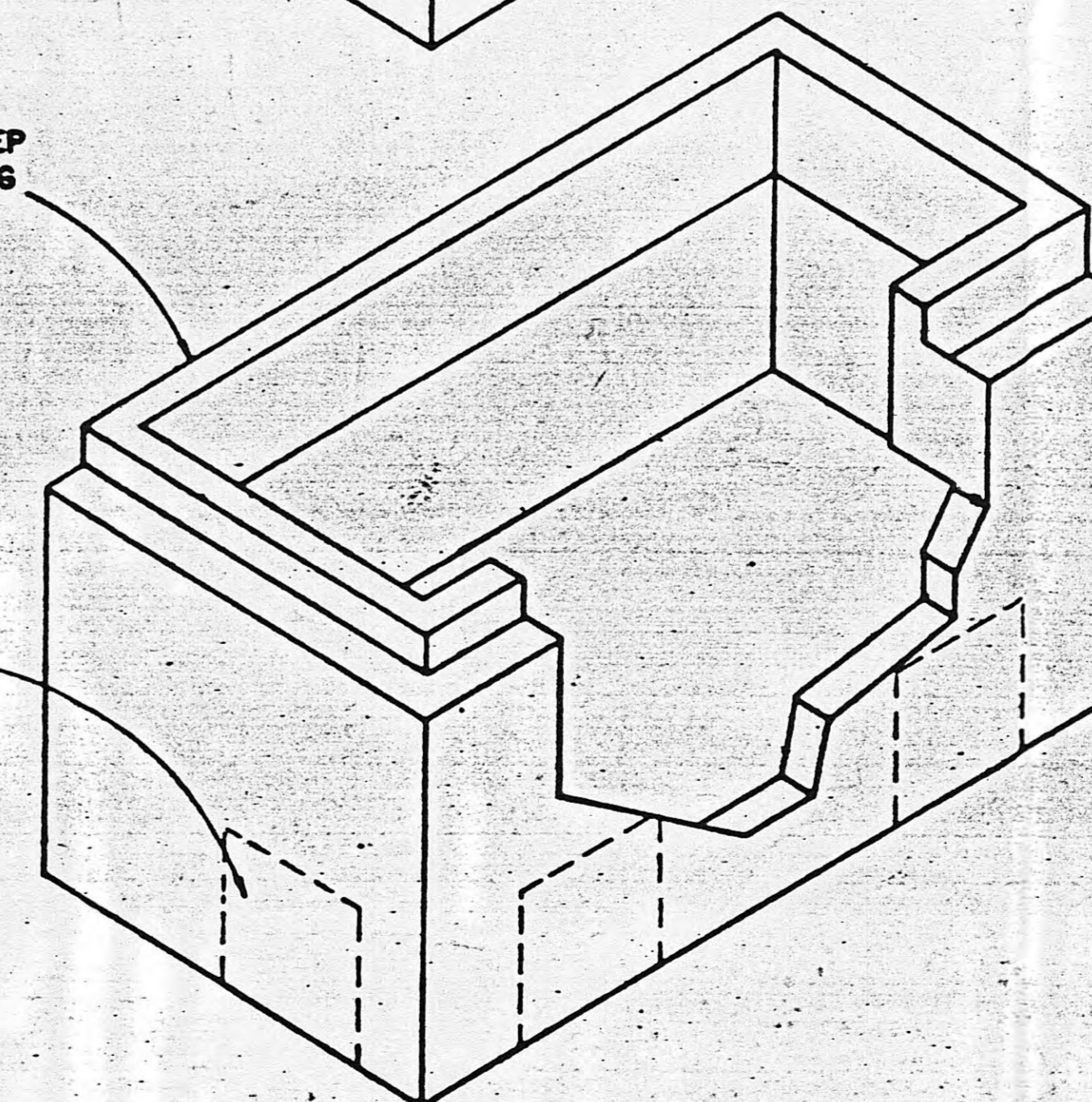


PRECAST PULL BOX COMPOSED OF REINFORCED PLASTIC MORTAR OR STRUCTURAL FOAM.



DESIGNED FOR LIGHT VEHICULAR TRAFFIC BASED ON 5000 lbs. SINGLE AXLE. LOAD OVER ANY 10\"/>

BOXES MAY BE NESTED FOR DEEP CONDUIT AND FOR MORE WORKING ROOM.



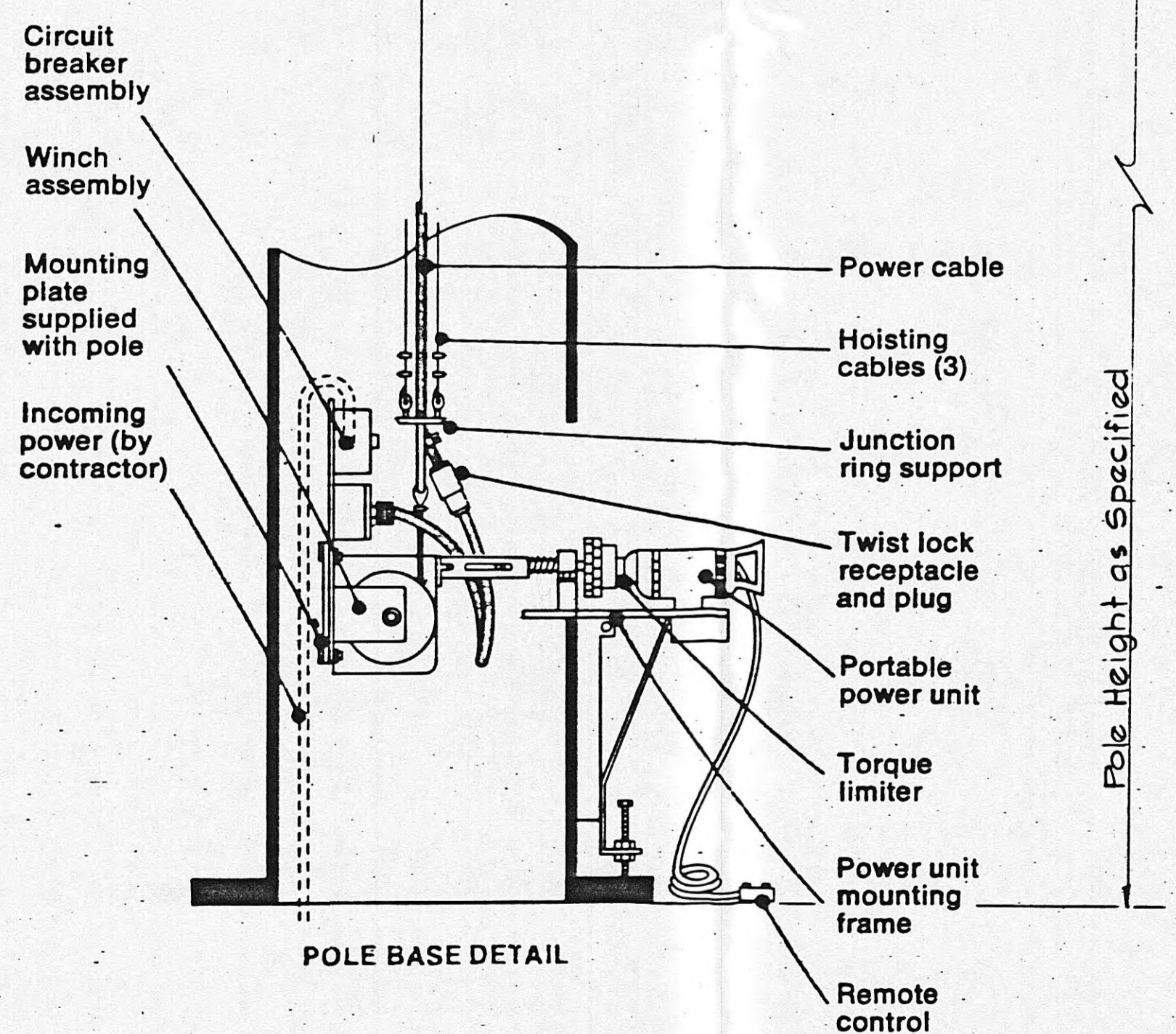
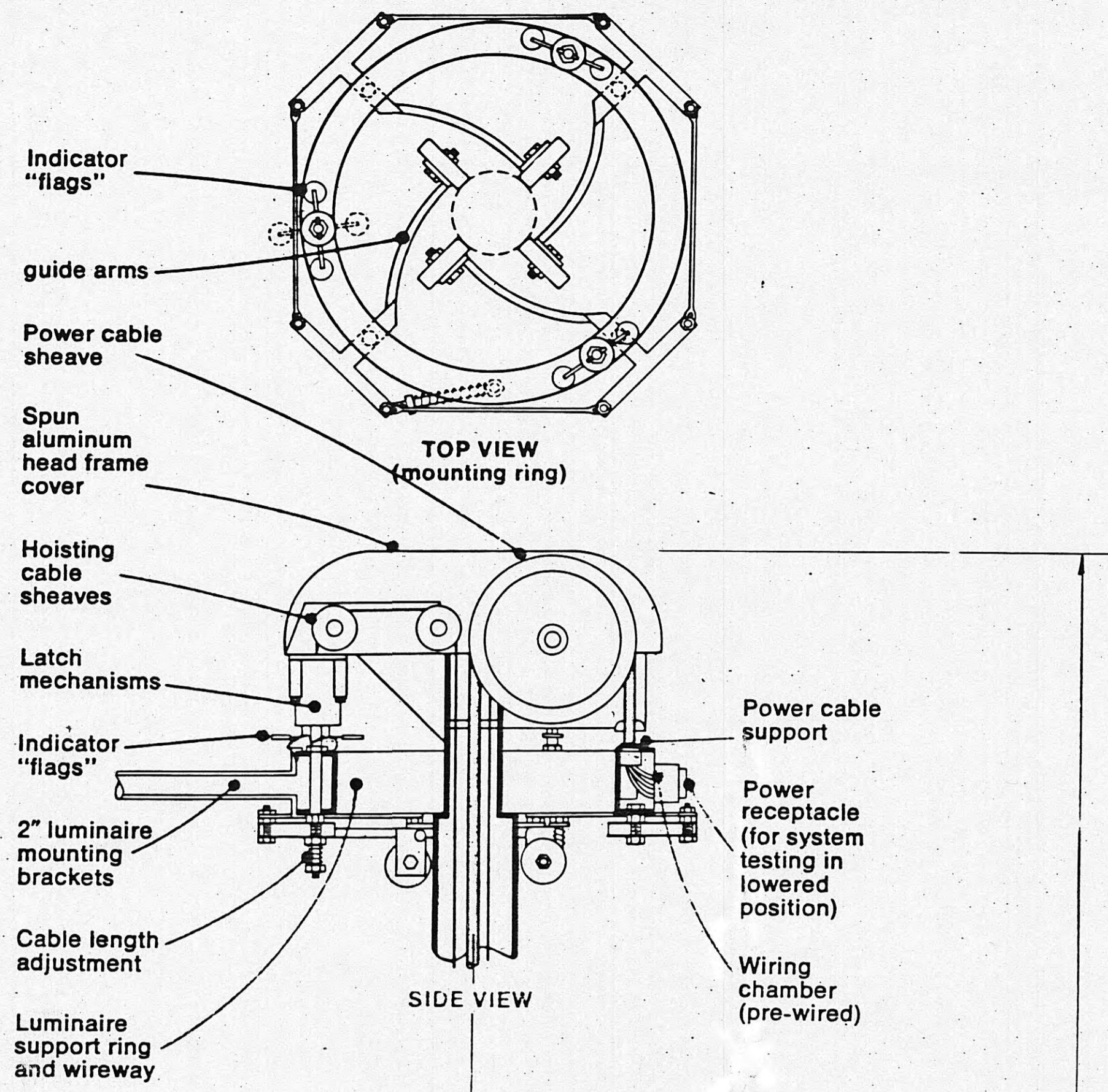
DRAINAGE THROUGH PEA GRAVEL OR CRUSHED STONE.

UNDERGROUND PULL BOX DETAIL

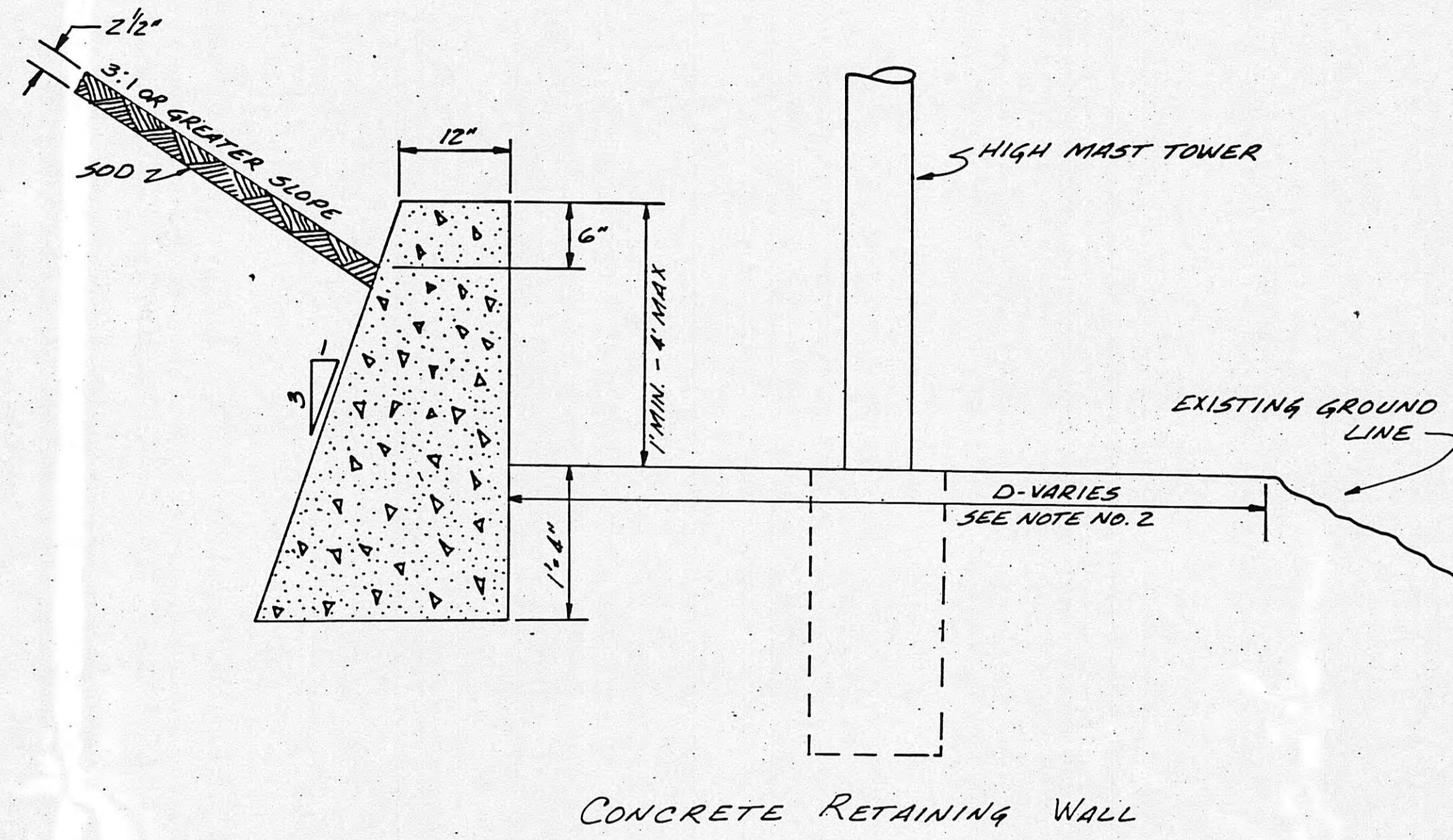
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LIGHTING DETAILS

TYPE	YEAR	PROJECT NO.	SHT. NO.
CONST.	82	I-40-G(88)348	2D
			18

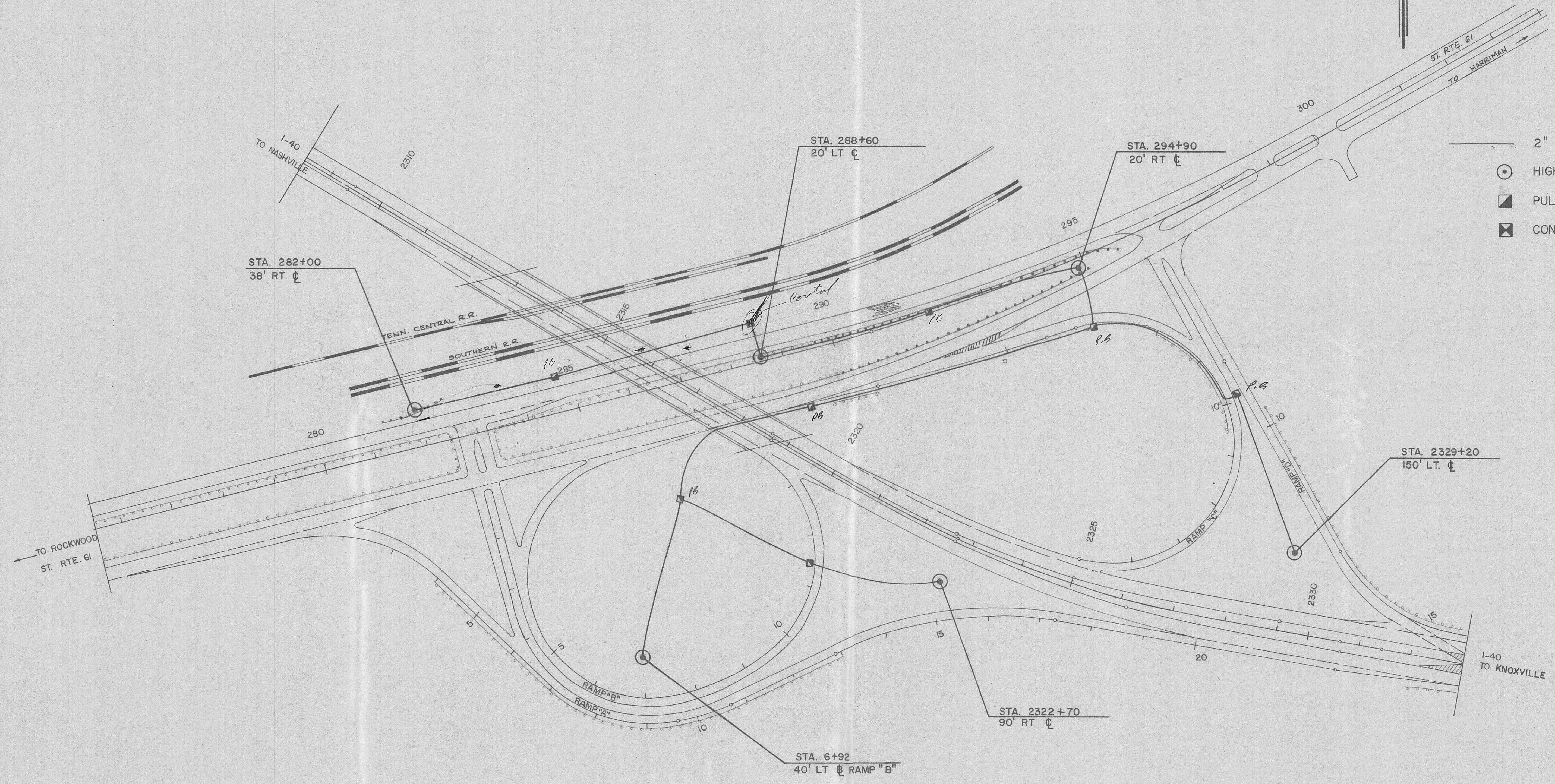
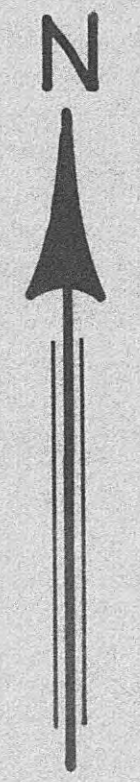


Note: The above details indicate the features and functions required for the high-mast lowering device. These details shall not be construed as limiting competition or specifying proprietary equipment or devices.



- NOTE:
- (1) IF HEIGHT OF WALL EXCEEDS 4' AS DETERMINED BY FIELD SURVEY, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF STRUCTURES FOR DETAILS OF REINFORCED RETAINING WALL.
 - (2) THE DIAMETER OF EXCAVATED AREA MAY VARY WITH MANUFACTURER OF RING ASSEMBLY. EXCAVATED AREA SHALL ALLOW FOR 3' CLEARANCE OUTSIDE THE RING ASSEMBLY.
 - (3) ALL LABOR AND MATERIALS SHOWN IN CONCRETE RETAINING WALL DETAIL TO BE INCLUDED IN PRICE BID FOR HIGH MAST TOWERS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1982	I.R.-40-60-(88)348	3



- 2" CONDUIT
- ⊙ HIGH MAST
- ▣ PULL BOX
- ⊠ CONTROL CENTER

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

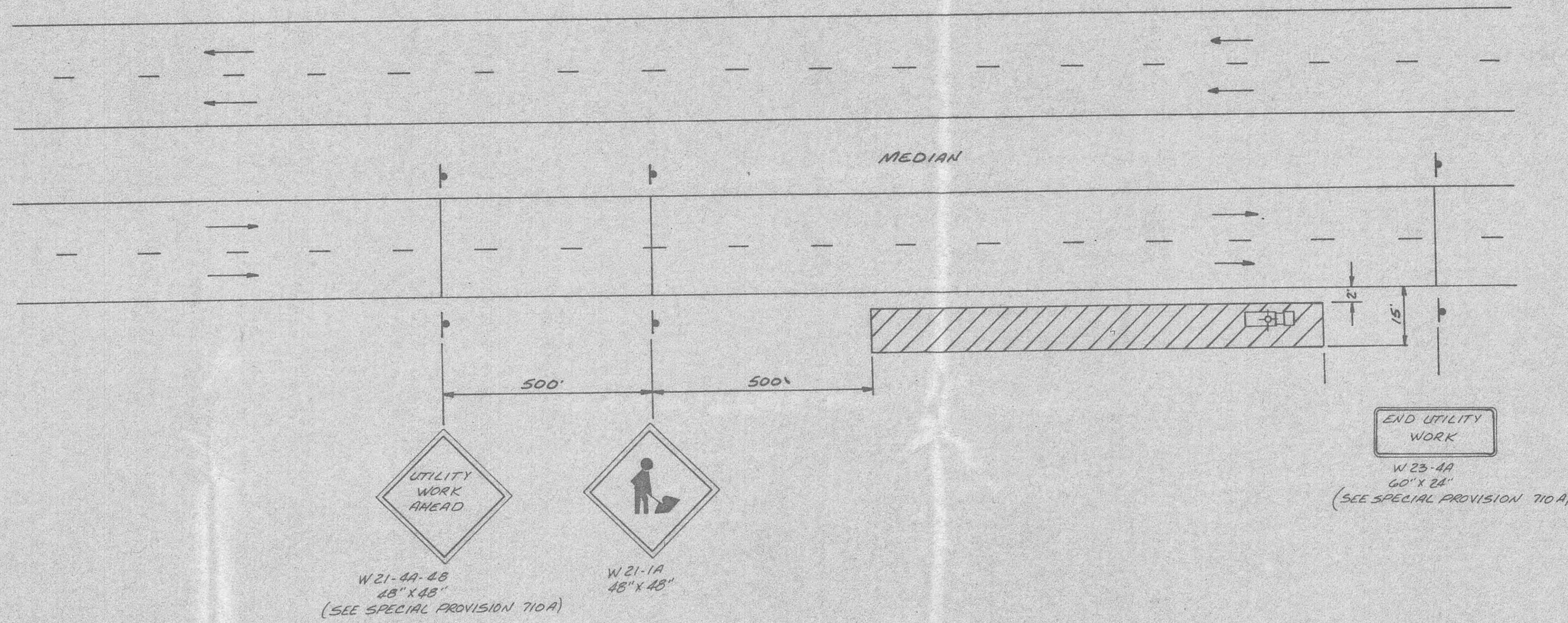
LIGHTING LAYOUT

I 40 / SR 61

SCALE: 1" = 100'

TEL: 615-542-1000

TYPE	YEAR	PROJECT NO.	SHEET NO.
LIGHTING	1982	73001-3155-44	4



LEGEND

- SIGN
- WORK AREA
- FLASHING VEHICLE LIGHT

NOTES

1. DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
2. IF THE WORK OPERATION REQUIRES THAT FOUR OR MORE WORK VEHICLES ENTER THE THROUGH TRAFFIC LANES IN A ONE HOUR PERIOD, A FLAGGER SHOULD BE PROVIDED AND THE FLAGGER AHEAD SIGN SUBSTITUTED FOR THE WORKER SIGN.
3. IF THE WORK OPERATION IS LESS THAN ONE HOUR, SIGNS ARE NOT REQUIRED WHEN ALL VEHICLES HAVE DUAL FLASHERS OR FLASHING AMBER DOME LIGHTS OPERATING.
4. ALL SIGNS SHOULD BE REMOVED AT COMPLETION OF EACH DAYS OPERATION.
5. FOR A WORK AREA IN THE MEDIAN, AT LEAST 2 FEET AND LESS THAN 15 FEET FROM EITHER PAVEMENT EDGE, THE TRAFFIC CONTROL SHOULD BE AS SHOWN.
6. FOR WORK ON UNDIVIDED MULTILANE HIGHWAYS, THE TRAFFIC CONTROL SHOULD BE AS SHOWN OMITTING THE MEDIAN SIGNS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAILS OF
MAINTAINING
TRAFFIC

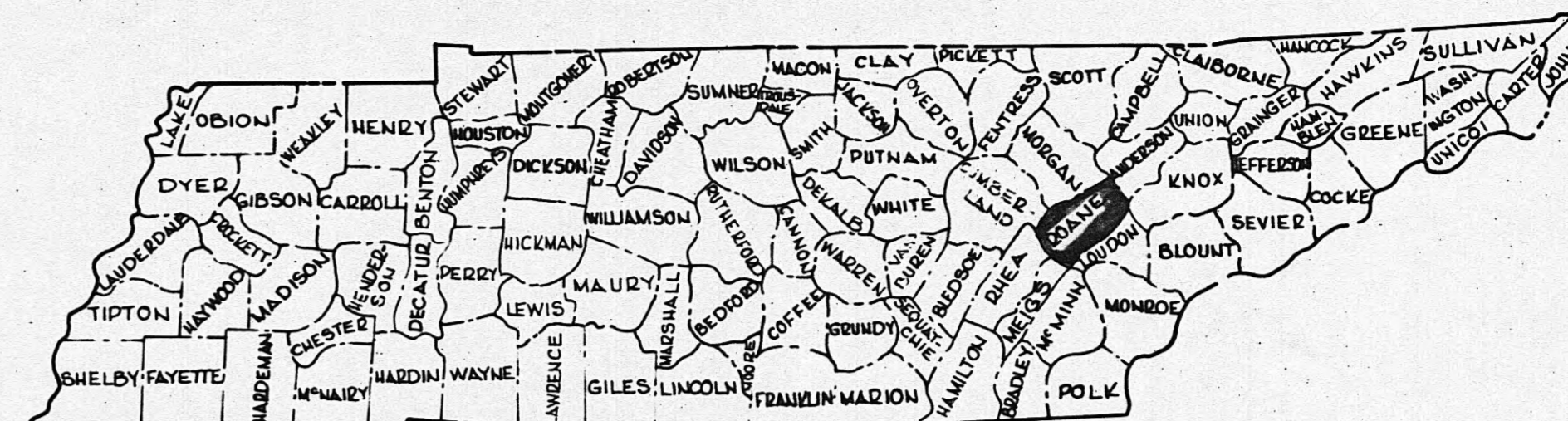
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
2A-2	LIGHTING DETAILS
3	LIGHTING LAYOUT
4	DETAILS OF MAINTAINING TRAFFIC

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

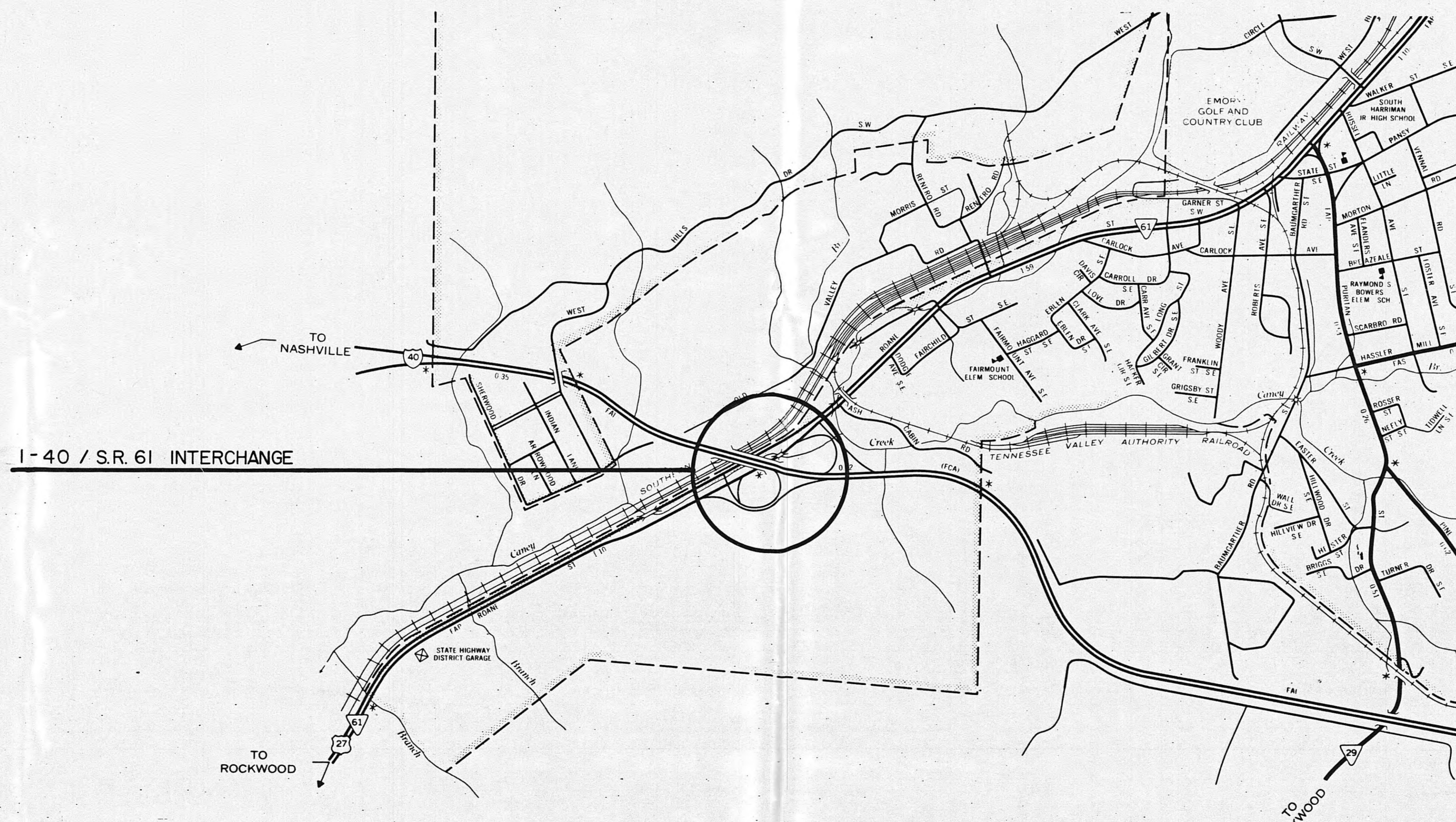
ROANE COUNTY
I-40 / S.R. 61 INTERCHANGE

FED.-AID REGION	TENN	YEAR	SHEET NO.
4		1982	1
FED. AID PROJ. NO.		I.R.-40-60 (88) 348	
STATE PROJ. NO.		73001-3155-44	



LIGHTING

HIGHWAY NO. S.R. 61 F.A.H.S. NO. I-40



FOR
CONST
P.S.&E.
 ONLY

APPROVED *Lewis Eason*
 STATE TRANSPORTATION ENGINEER

DATE _____

APPROVED *Paul E. F...*
 COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
 DIVISION ADMINISTRATOR DATE _____

PROJECT LENGTH... 0.00 MILES

SPECIAL NOTE

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1981 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

DESIGNER CROCKER