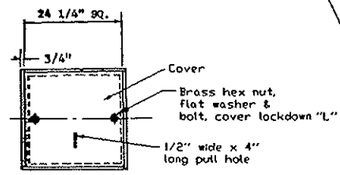
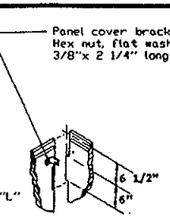
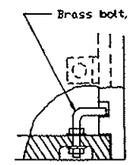
NOTE: Fiberglass pull box is composed of fiberglass skins and reinforced mortar structural elements in combination with polyurethane foam cells.



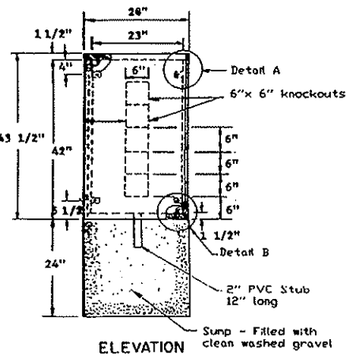
PLAN



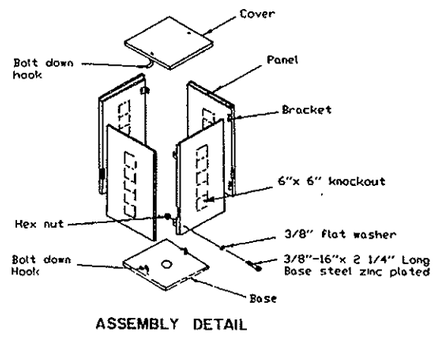
DETAIL – A



DETAIL – B

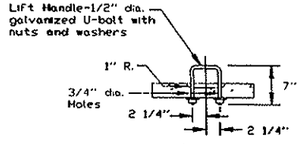


ELEVATION

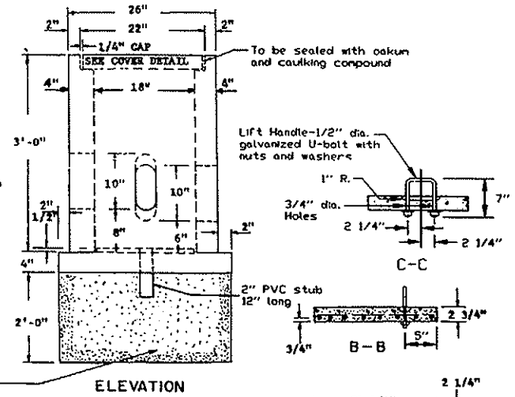


ASSEMBLY DETAIL

FIBERGLASS PULL BOX

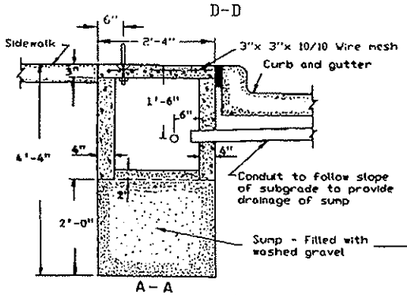


D-D

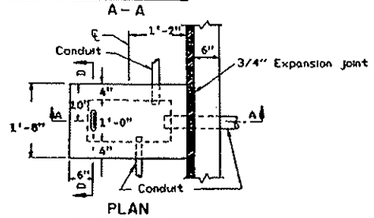


ELEVATION

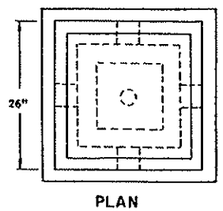
C-C



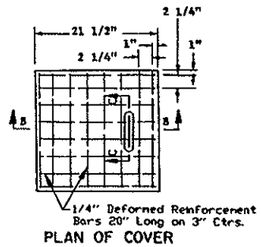
A-A



PLAN
CAST IN PLACE



PLAN



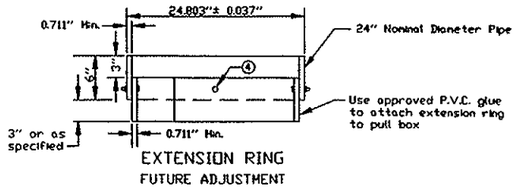
PLAN OF COVER

PRECAST CONCRETE

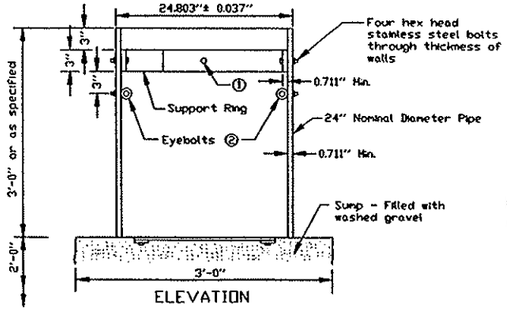
CONCRETE PULL BOX

PULL BOX DETAILS

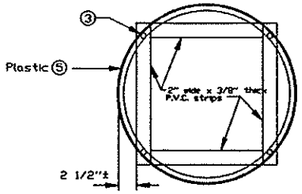
D-770-3



EXTENSION RING
FUTURE ADJUSTMENT



ELEVATION

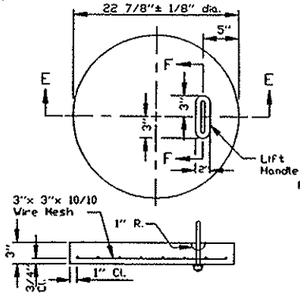


BOTTOM VIEW

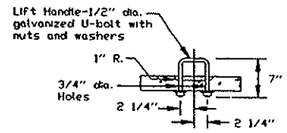
PVC PULL BOX

PVC PULL BOX NOTES:

1. Attach split 24" nominal diameter P.V.C. cover support ring with four 3/8" dia. x 2" long stainless steel hex head bolts with nuts at 90° apart.
2. Two Type 2 Shoulder Eyebolts, 3/8" dia. x 1 1/4" shank length, with hex nuts 180° apart (for lifting pull box and supporting electric cable).
3. Four 1/4"x 1 1/4" long galvanized lag screws. Screw assembly together.
4. Attach split 24" nominal diameter P.V.C. cover support extension ring with four 3/8" dia. x 2" long stainless steel hex. head bolts with nuts at 90° apart.
5. Bolt assembly together.
6. Conduit holes located in barrel section shall be sized no more than 1" larger than size of conduit being used.
7. After pull box & conduit installation, all inside walls & cover shall be made water tight to the satisfaction of the Engineer.
8. P.V.C. pipe to meet requirements of ASTM F679T-1 or equal.
9. Hex head bolts and nuts shall be austenitic stainless steel. Other fasteners to be galvanized as per AASHTO M-232.



SECTION E-E

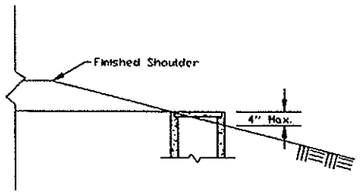


SECTION F-F

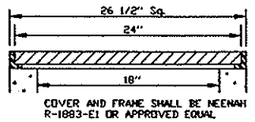
PVC PULL BOX NOTES:

Concrete cover shall be coated on top and sides with an approved epoxy coating. The epoxy protective coating shall be light grey, clear, or neutral in color and shall be applied as recommended by the manufacturer. The surfaces of the concrete to which the epoxy protective coating is applied, shall be cleaned by wire brush and shall be dry before application.

CONCRETE COVER

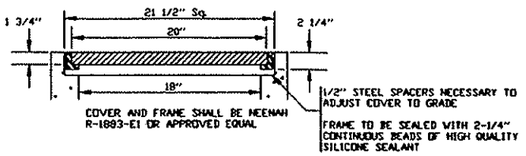


Typical Pull Box in Rural Section



COVER AND FRAME SHALL BE NEENAH R-1883-E1 OR APPROVED EQUAL

CAST IN PLACE CONCRETE PULL BOX COVER DETAIL

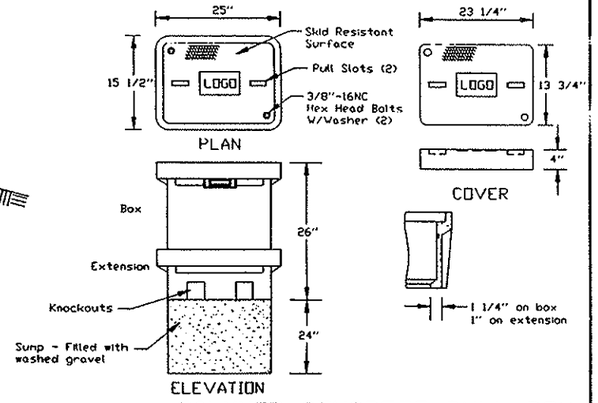


COVER AND FRAME SHALL BE NEENAH R-1883-E1 OR APPROVED EQUAL

1/2" STEEL SPACERS NECESSARY TO ADJUST COVER TO GRADE

FRAME TO BE SEALED WITH 2-1/4" CONTINUOUS BEADS OF HIGH QUALITY SILICONE SEALANT

PRECAST CONCRETE PULL BOX COVER DETAIL



ELEVATION

POLYMER CONCRETE PULL BOX

(Polymer concrete reinforced by a heavy weave fiberglass)

10-1-86 REVISIONS	
DATE	CHANGE
4-26-94	Add NEENAH Cover
10-11-94	Lift Handle & Polymer Concrete Pull Box
3-20-95	Add PVC Pull Box

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

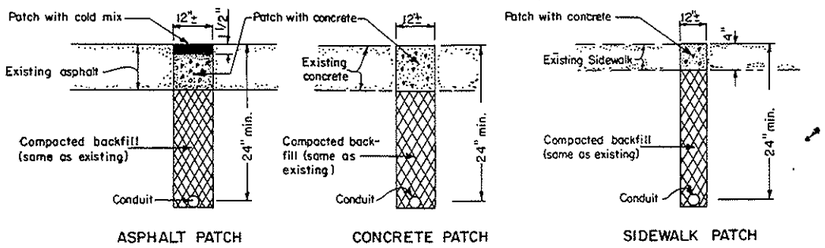
APPROVED: David K. O Lee
DESIGN ENGINEER

ED770-03 P=1"

LIGHTING & SIGNAL DETAILS

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.
8	N.D.		

D-770-4



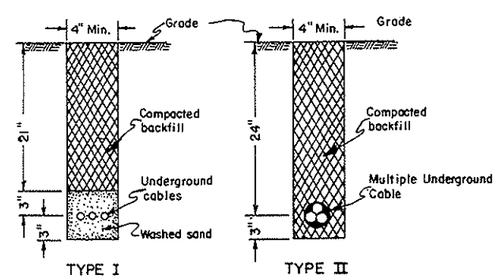
ASPHALT PATCH CONCRETE PATCH SIDEWALK PATCH

SURFACE PATCH DETAILS

NOTE:

PATCHES: All trenches shall be saw-cut. The replacement concrete shall be P.C.C. pavement and the coarse aggregate gradation, maximum size and method of curing shall be as approved by the Engineer. The cost shall be included in the price bid for Conduit.

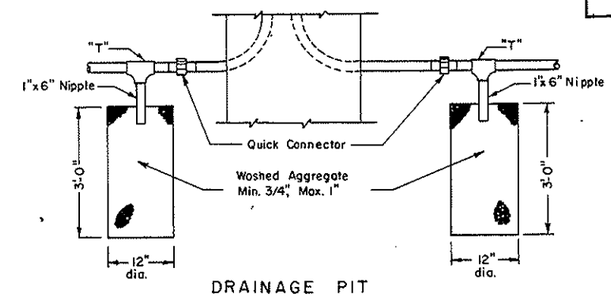
Immediately prior to pouring replacement concrete, all surfaces shall be painted with an approved epoxy compound.



TYPE I TYPE II

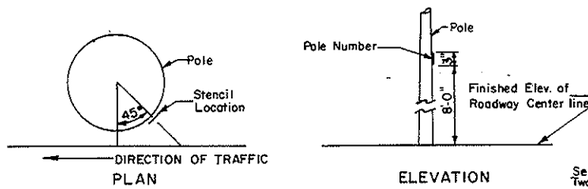
CABLE TRENCH

The entire area which is disturbed by the trenching shall be sodded, or as directed by the Engineer. The cost shall be included in the price bid for "Cable Trench".



DRAINAGE PIT

Drainage pits shall be installed in both ends of the conduit runs. Except where conduit slopes enough for drainage to one end. (To be used for Traffic Signal Conduit Runs Only)

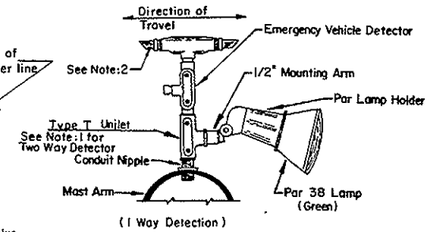


PLAN ELEVATION

LIGHT STANDARD NUMBERING

NOTE:

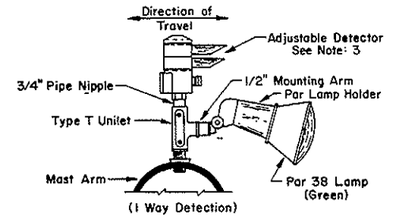
POLE NUMBERING: The contractor shall stencil on each light standard the pole number in black paint on the roadway side of the pole, or adhesive coated plastic such as Scotch cal. Manufactured by 3M as approved by the Engineer. See layout sheets for pole numbers.



EMERGENCY VEHICLE DETECTOR DETAIL
(Location As Shown In Plans)

Notes:

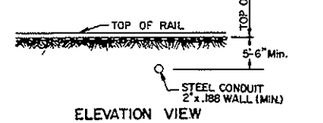
1. Two-way Detector shall have Type X Unilet with two Par lamp holders and lamps (one in each direction).
2. One-Way Detector shall have the unused end plugged with metal pipe plug.



ALTERNATE EMERGENCY VEHICLE DETECTOR DETAIL (Adjustable)
(Location As Shown In Plans)

Notes:

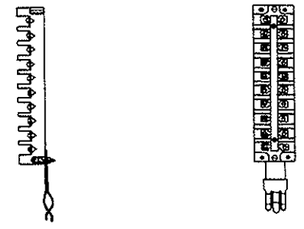
3. Two-way Detector shall have the detector lens rotated to face the direction of travel, and shall have Type X Unilet with two Par lamp holders and lamps (one in each direction).



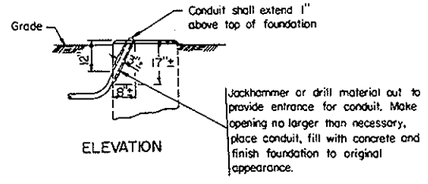
PLAN VIEW

ELEVATION VIEW

RAILROAD TRACK CONDUIT PLACEMENT

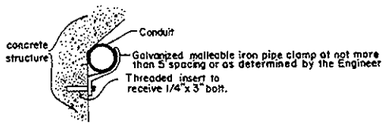


SIDE VIEW FRONT VIEW

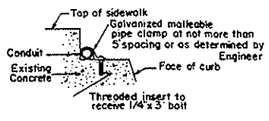


ELEVATION

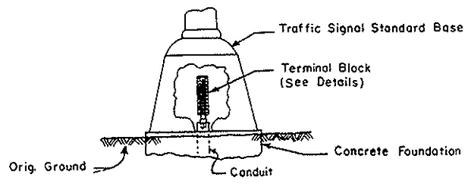
REVISE CONCRETE FOUNDATION



BRIDGE MOUNTED CONDUIT HANGER



CURB MOUNTED CONDUIT



TERMINAL BLOCK
(Rigid Mounted)

10-1-86 REVISIONS		NORTH DAKOTA STATE HIGHWAY DEPARTMENT
DATE	CHANGES	
11-7-90	Track Clearance	APPROVED: David K. D. Loe, DESIGN ENGINEER