

***CONDUIT INSTALLATION BY
DEL DOT CONTRACTOR
CHAPMAN ROAD BRIDGE
STATE CONTRACT #T201507402
BRIDGE NO. 1-714/1-714A***

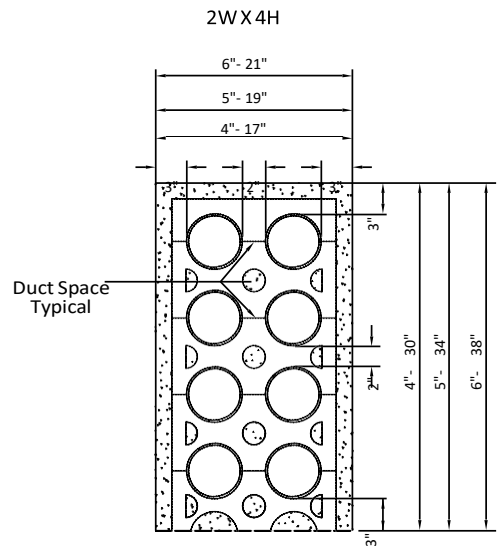
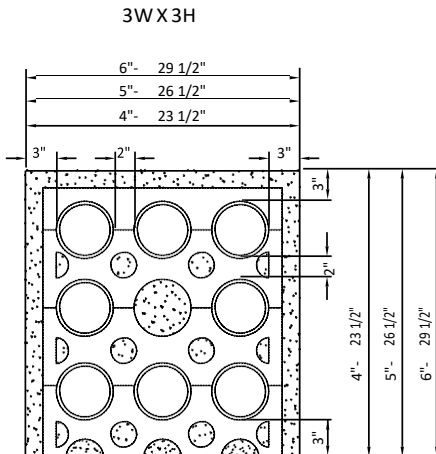
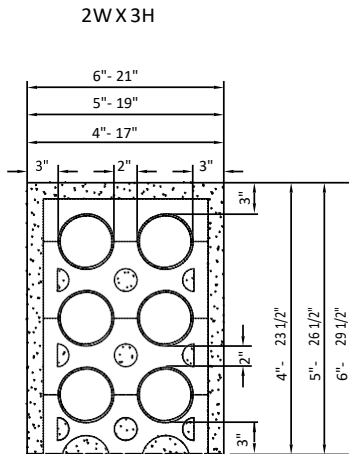
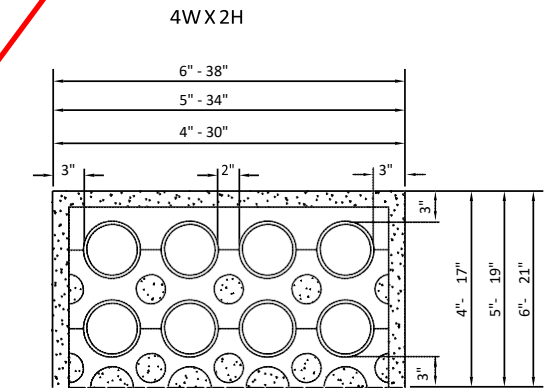
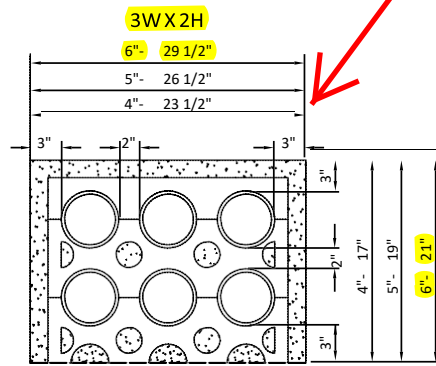
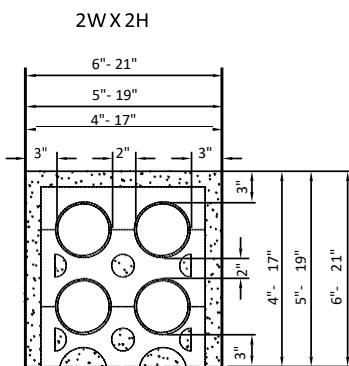
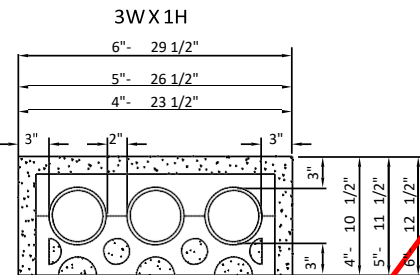
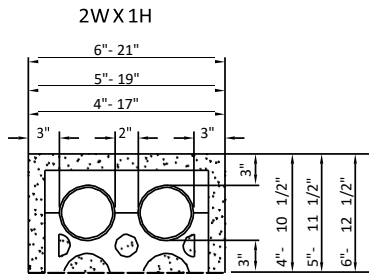
SPECIFICATIONS FOR CONTRACTOR INSTALLATION

Concrete Encased Electric Conduit

1. Duct banks must be concrete encased.
2. DPL shall specify the number, size and configuration of ducts.
3. Schedule 40 PVC must be used for concrete encased ducts with 20' length.
4. Bends shall be no less than 48" in radius. A total of two (2) 90-degree bends are allowed in the conduit line. If this still will not be sufficient for the conduit design/construction, contact your DPL representative. A manhole, splice/ pull box or hand box may be required.
5. Duct spacers that maintain a 2" separation between ducts are required every 6 1/2 - 7'.
6. Only standard 2,500-psi ready-mix concrete with 1/2" pea gravel will be approved for encasement.
7. After concrete cures for 24 hours, backfill around duct bank with clean select soil and mechanically tamp in 6" lifts.
8. The Contractor shall pull a mandrel (1/2" smaller in diameter than the conduit and 6" long) through each duct prior to DPL cable installation, followed by a pulling line (1800 lb. mule line required), which shall remain in each duct.

STANDARD DUCT BANK ARRANGEMENT/INSTALLATION

Trench Width and Height for concrete encased duct bank.



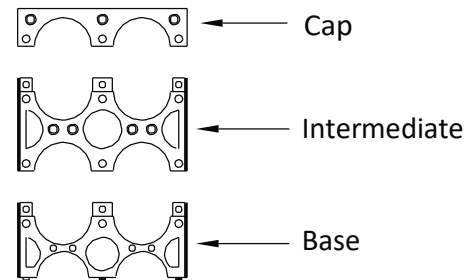
Duct Space Typical

PLASTIC PVC DUCT SPACERS CONTRACTOR INFORMATION

General Information

(A) Duct spacers are used to hold PVC ducts in position and maintain a 2" separation between adjacent ducts while pouring concrete.

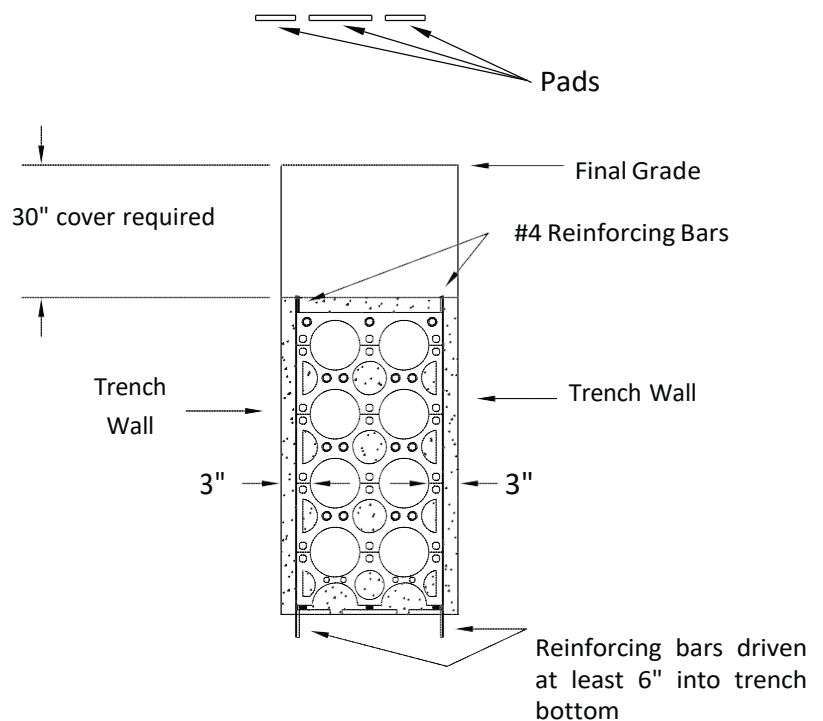
(B) There are 3 basic parts to the duct spacers -- the base, intermediate, and cap. If required, there are also pads/feet that can be used with 5" and 6" spacers for extra support in an unstable trench bottom.



(C) Contractor will install concrete encased ductbank a minimum 30" cover measured from final grade to the top of the concrete envelope of the duct. 30" minimum cover required for Road Crossings.

(D) Reinforcing bars are used to stabilize the duct and spacers when the concrete is poured. Drive #4 reinforcing bars through the inside edges of the duct spacers and at least 6" into the trench bottom.

(E) The sides of the trench are used as retaining walls when the concrete is poured. The distance from the outer duct diameter to the trench wall should be 3" wide. This in turn gives the required 3" apron around the whole Duct Bank.



(F) To properly support multiple ducts in a trench, the duct spacers are separated approximately 6-1/2' to 7' apart. Contractor is required to use 20' lengths, this means there are three (3) spacers installed within one section of duct.

