



# 9C5: Concrete Control Cabinet Bases

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

\* INCLUDES MAINTENANCE PLATFORM.

TYPICAL 3'-0" X 3'-0" X 4" THICK MAINTENANCE PLATFORM. LOCATION TO BE DETERMINED IN THE FIELD. COST TO BE INCLUDED UNDER CONCRETE CONTROL CABINET TYPE 10.

EXIT LOCATION OF 1/4" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE.

THE 3" CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLAN

ALL CONDUITS WITHIN 6" DIA. CIRCLE

12 3/4" BOLT CIRCLE

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA

HALF SECTION IN PAVED AREA

TOPSOIL AND SEED OR CRUSHED AGGREGATE  
1" CONDUIT - 6" STUB FOR GROUNDING WIRE ENTRANCE

3" \*  
1"  
1/4" PREFORMED FILLER AS APPROVED BY THE ENGINEER

EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR

1/4" SERVICE ENTRANCE WITH 6" STUB

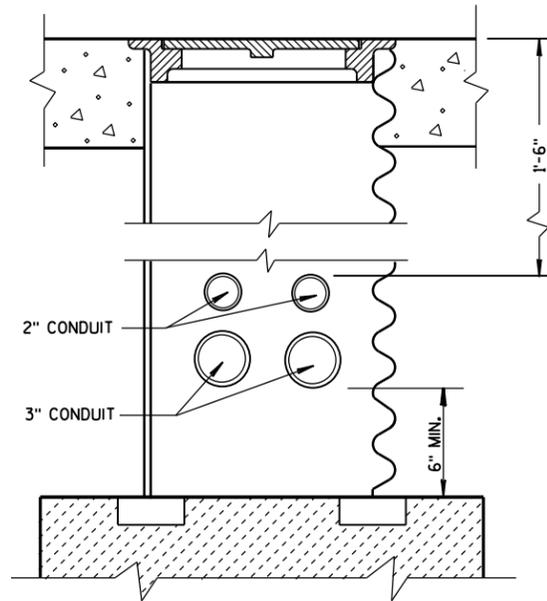
5/8" DIA. X 8'-0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

THE 3" CONDUIT SHALL BE SPACED 2" MIN. APART TO ALLOW FOR PLACEMENT OF CAPS, BUSHINGS OR COUPLINGS

(ALTERNATE) 4" L BEND OR ONE HEX NUT

TYPE 10

\* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.



## CONDUIT LOCATIONS IN 24" X 36" PULL BOX (LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

ALL CONDUIT SHALL BE INSTALLED WITHIN 7" X 14" RECTANGLE

LOCATE CONCRETE MAINTENANCE PLATFORM ON DOOR SIDE OF CABINET (SEE NOTES)

GROUND LINE  
2'-0"  
6" STUB

2" CONDUIT COMMUNICATION CABLE

4 - 6" STUBS SPACED 2" MIN. APART TO ALLOW FOR PLACEMENT OF CAPS, BUSHING OR COUPLINGS

EXIT LOCATION OF 1/4" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE.

TYPE 6, 7, 8 AND 9 (ISOMETRIC VIEW)

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: Sep 1, 2016 /S/ Ahmet Demirbilek  
STATE ELECTRICAL ENGINEER  
FHWA

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6

S.D.D. 9 C 5-10

S.D.D. 9 C 5-10

## CONCRETE CONTROL CABINET BASES

## Concrete Control Cabinet Bases

**References:**

NONE

**Bid items associated with this drawing:**

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
652.0010 - 0199	Conduit Rigid Metallic (size) .....	LF
652.0200 - 0399	Conduit Rigid Nonmetallic (schedule)(size).....	LF
654.0200	Concrete Control Cabinet Bases Type 6 .....	EACH
654.0205	Concrete Control Cabinet Bases Type 7 .....	EACH
654.0210	Concrete Control Cabinet Bases Type 8 .....	EACH
654.0215	Concrete Control Cabinet Bases Type 9 .....	EACH
654.0220	Concrete Control Cabinet Bases Type 10 .....	EACH

**Standardized Special Provisions associated with this drawing:**

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

**Other SDDs associated with this drawing:**

SDD 9b2	Conduit
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**Design Notes:**

Referring to Concrete Control Cabinet Bases Type 10 in contracts which do not involve grading: Any grading shaping and finishing to provide a foundation to construct the required concrete maintenance platform should be bid separately. When there is a larger number of Concrete Control Cabinet Bases Type 10 in the contract, bid the appropriate WisDOT standard bid items to accomplish grading and finishing. When there is only one or maybe two bases in the contract, use an "EACH" or "LS" Unit of Measure "SPV" item to accomplish the grading shaping and finishing.

*Note: When using "EACH" or "LS" Unit of Measure "SPV" item to accomplish the grading shaping and finishing for the platform work to be accomplished, a Miscellaneous Quantity listing of the items and approximate quantity of work or each item should be included and the listing should be noted as "For Bid Information Only."*

**Contact Person:**

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