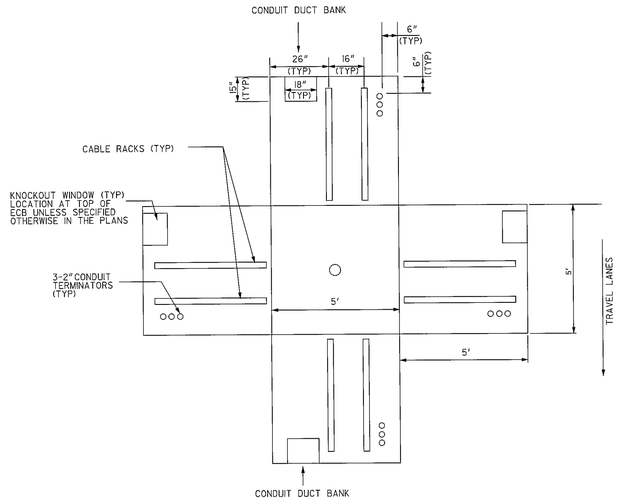
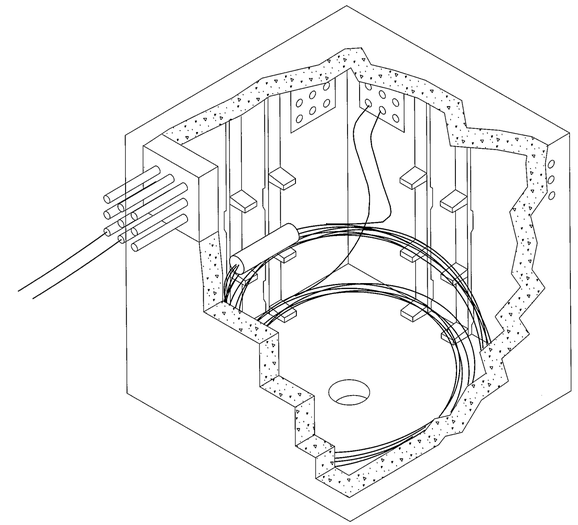
AS-BUILT PLANS - 08/30/13

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA			



TYPE 5 ECB FEATURES - INSIDE WALLS



TYPICAL TYPE 5 ECB LAYOUT

REHABILITATION OF ECB'S

THE FOLLOWING REQUIREMENTS DEFINE THE WORK ASSOCIATED WITH PAY ITEM, ECB REHABILITATION (ALL TYPES).

ECB REHABILITATION (ALL TYPES) SHALL BE MEASURED BY UNIT, WORK COMPLETE, AND SHALL BE PAID FOR AT THE UNIT PRICE PER EACH ECB REHABILITATED AS DEFINED IN THE FOLLOWING REQUIREMENTS.

1) THE CONTRACTOR SHALL ESTABLISH THE LOCATION OF THE ECB, RECOGNIZING THAT THE MANHOLE MAY BE PAVED OVER.

2) THE MANHOLE LID SHALL BE OPENED, WHICH MAY INCLUDE USE OF POWER TOOLS TO ACCOMPLISH.

3) EXISTING CABLE COILS SHALL BE REMOVED FROM THE ECB TEMPORARILY ENSURING NO KINKS OR ABRASIONS

4) THE INTERIOR OF THE ECB SHALL BE CLEANED BY REMOVING ANY DEBRIS, TRASH, MUD, SILT, AND WATER.

5) ALL JOINTS AND SEAMS IN THE ECB SHALL BE RESEALED WITH A SILICONE SEALANT AS SPECIFIED IN SECTION 833.06, TYPE A.

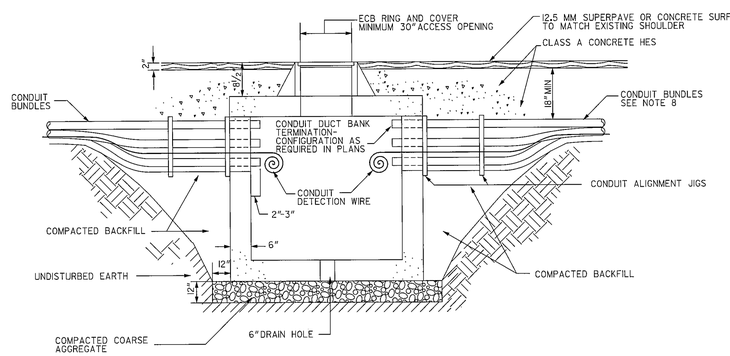
6) APPROPRIATE CABLE RACKING, AS DEFINED BELOW, SHALL BE INSTALLED:

- RACK QUANTITY: 2 RACKS PER INSIDE WALL, FOR INSIDE WALL WIDTHS OF GREATER THAN OR EQUAL TO 36"; 1 RACK PER INSIDE WALL, FOR INSIDE WALL WIDTHS LESS THAN 36" OR GREATER THAN 24"; NO RACKS REQUIRED FOR INSIDE WALL WIDTHS LESS THAN OR EQUAL TO 24".
- SPACING BETWEEN SUCCESSIVE RACKS AND ECB CORNERS SHALL BE EQUAL.
- RACK HEIGHT: INSIDE HEIGHT OF ECB, MINUS 6"
- BOTTOM EDGE OF RACK TO BE INSTALLED NO GREATER THAN 3" FROM FLOOR OF ECB.
- RACKS TO BE INSTALLED DIRECTLY TO ECB WALL OR WITH SHORTEST STANDOFF BRACKET POSSIBLE. RACKS ARE TO BE INSTALLED USING THREADED ANCHORS INTO THE ECB WALLS.
- CABLE SUPPORT ARMS SHALL BE 7" TO 9" IN LENGTH AND SHALL HAVE PLASTIC OR CERAMIC INSULATORS.
- ALL CABLE RACKS, SUPPORT ARMS, AND HARDWARE SHALL BE MANUFACTURED FROM HOT-DIPPED GALVANIZED STEEL.

7) THE ECB RING AND LID ASSEMBLY SHALL BE RE-SET AT ACTUAL ROADWAY SURFACE ELEVATION.

8) ANY UNLABELED CABLING SHALL BE LABELED IN ACCORDANCE WITH LABELING REQUIREMENTS AS SET FORTH IN SECTION 935.

9) CORE CONDUIT ENTRY AND TERMINATE CONDUIT.



TYPE 5 ECB - TYPICAL INSTALLATION

GENERAL NOTES FOR ELECTRICAL COMMUNICATION BOX (ECB)

1. PRIOR TO ANY ECB WORK AND WITHIN 60 DAYS AFTER NOTICE TO PROCEED, THE CONTRACTOR SHALL SUBMIT CATALOG SHEETS AND ENGINEERING DRAWINGS FOR REVIEW BY THE ENGINEER. THE SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ECB, RING AND COVER, CONDUIT TERMINATORS, CABLE RACKS AND HARDWARE, AND CONDUIT ALIGNMENT JIGS. NO WORK SHALL BE DONE USING THESE PRODUCTS UNTIL AFTER SUBMITTALS HAVE BEEN APPROVED BY THE ENGINEER.

2. ECB, TYPE 5, SHALL BE MEASURED BY UNIT, COMPLETE IN PLACE, AND SHALL BE PAID FOR AT THE UNIT PRICE PER EACH.

3. ECBS AND COVERS SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C-857-95. THE ECB WALLS, FLOORS AND ROOF SHALL BE MINIMUM 6" THICKNESSES AND SHALL BE FORMED FROM 4500 PSI CONCRETE IN ACCORDANCE WITH GDOT SECTION 830. TYPE 5 ECBS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN HERE AND THE PLANS. ALL JOINTS AND SEAMS IN THE BOXES CREATED FROM MANUFACTURE OR FINAL ASSEMBLY SHALL BE SEALED WITH MANUFACTURER-APPROVED SEALANT.

4. ECBS, TYPE 5, EACH WALL SHALL INCLUDE 1 KNOCKOUT WINDOW AND 3 CONDUIT TERMINATORS FOR NONMETAL, TYPE 3, 2" CONDUIT, AS SHOWN IN THE DETAILS. KNOCKOUT WINDOWS SHALL REMAIN SEALED UNLESS USED FOR CONDUIT DUCT BANK TERMINATION. CONDUIT INSTALLED INTO TERMINATORS SHALL BE SEALED WITH MANUFACTURER-APPROVED SEALANT. CONDUIT TERMINATORS SHALL PROVIDE 1" TO 1-1/2" SEPARATION BETWEEN CONDUITS.

5. ECBS, TYPE 5, EACH WALL SHALL INCLUDE 2 CABLE RACKS, MINIMUM 54" IN LENGTH, AS SHOWN IN THE DETAILS. CABLE RACKS SHALL BE INSTALLED DIRECTLY TO THE BOX WALL OR WITH THE SHORTEST STANDOFF BRACKET POSSIBLE. CABLE SUPPORT ARMS WITH PLASTIC OR CERAMIC INSULATORS AND 7" TO 9" IN LENGTH, SHALL BE INCLUDED WITH EACH RACK. FOR EACH RACK, SUFFICIENT CABLE SUPPORT ARMS SHALL BE INSTALLED TO PROVIDE ONE ARM FOR EACH CABLE INSTALLED IN THE BOX, PLUS ONE SPARE ARM. ALL CABLE RACKS, CABLE SUPPORT ARMS, AND MOUNTING/FASTENING HARDWARE SHALL BE HOT-DIPPED GALVANIZED STEEL.

6. CONDUIT DUCT BANKS SHALL BE TERMINATED IN THE ECB AS SHOWN IN THE DETAILS. PRIOR TO GROUTING, THE DUCT BANK SHALL BE BACKFILLED AND COMPACTED FOR THE ENTIRE LENGTH OF TRENCH TO WITHIN TEN FEET OF THE ECBS AT EITHER END OF THE DUCT BANK. CONDUITS SHALL ENTER THE ECB LEVEL, STRAIGHT AND PERPENDICULAR TO THE ECB WALL. CONDUITS SHALL BE SECURED AND ALIGNED WITH CONDUIT ALIGNMENT JIGS MANUFACTURED FROM PLYWOOD, OR CONDUIT SPACERS IN ACCORDANCE WITH SECTION 682, OR OTHER METHOD SUBMITTED TO AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE SECURED PRIOR TO GROUTING AND GROUTING SHALL BE COMPLETE AND SET PRIOR TO FINAL BACKFILLING AROUND THE BOX.

7. ECB COVERS SHALL BE IMPRINTED WITH "GEORGIA DOT COMMUNICATIONS".

8. CONTRACTOR TO BUNDLE CONDUIT, AS SHOWN ON CONDUIT DUCT BANK INSTALLATION DETAILS, WITH CABLE TIES, WIRE OR DUCT TAPE.

9. CONTRACTOR SHALL INSTALL ECBS IN PAVED SHOULDER ONLY WHEN SHOWN IN THE PLANS. IN THE CASE OF NARROW SHOULDER LANES, THE CONTRACTOR SHALL BACKFILL TO THE TOP OF THE BOX THAT EXTENDS BEYOND THE EDGE OF PAVEMENT. IN NO CASE SHALL ANY PORTION OF THE ECB BE INSTALLED IN THE TRAVEL LANE.

10. COSTS OF COMPACTED BACKFILL MATERIAL AND COMPACTED COARSE AGGREGATE SHALL BE INCLUDED IN THE BID PRICE.

3/1/2007 GPLN

GEORGIA
DEPARTMENT OF TRANSPORTATION

- NO SCALE -

REVISION DATES		
09/01/2005		
03/01/2007		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: TRAFFIC OPERATIONS
ATMS DETAILS
ELECTRICAL COMMUNICATION BOX TYPE 5
DRAWING No. ITS-02

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PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS
HISTORICAL BOUNDARY

A&R Engineering, Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255 Fax: (770) 690-9210
www.arengs.com

SCALE IN FEET
0 50 100 200

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE PROGRAM DELIVERY
ATMS DETAILS
I-20 EASTBOUND CD LANES
I-285 TO PANOLA ROAD
DRAWING No. 28-021

1/5/2009 GPLN