

**ITS CONDUIT GENERAL NOTES:**

THE FOLLOWING NOTES SHALL APPEAR ON ALL ITS CONDUIT PLANS AND ARE INCLUDED HERE FOR THE USER'S REFERENCE.

1. ALL EQUIPMENT/MATERIALS AND CONSTRUCTION SHALL MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CURRENT PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND THE STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS AND THE APPROVED PLANS.
2. PULLBOXES AND VAULTS SHOWN ON THE PLANS ARE DIAGRAMMATIC REPRESENTATIONS. THE EXACT LOCATION OF EACH VAULT OR PULLBOX SHALL BE APPROVED BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
3. VAULTS SHALL BE USED FOR LONG RUNS OF CONDUIT. THE MAXIMUM SPACING BETWEEN VAULTS IS 1500 FEET. A VAULT SHALL BE INSTALLED ON ONE CORNER OF EVERY SIGNALIZED OR FUTURE SIGNALIZED INTERSECTION AS SHOWN ON THE APPROVED PLANS.
4. EVERY SIGNALIZED INTERSECTION OR FUTURE SIGNALIZED INTERSECTION SHALL BE RINGED WITH INTERCONNECT CONDUIT. ON THE THREE CORNERS OF THE INTERSECTION NOT CONTAINING THE VAULT, ITS PULLBOXES SHALL BE UTILIZED. THE MAXIMUM SPACING BETWEEN ITS PULLBOXES OR BETWEEN AN ITS PULLBOX AND A VAULT SHALL BE 600 FEET.
5. AT ALL SIGNALIZED INTERSECTIONS, A 1.5 INCH PVC CONDUIT SHALL BE INSTALLED FROM THE TRAFFIC SIGNAL CONTROLLER TO THE ADJACENT ITS PULLBOX OR VAULT.
6. THE TOP OF THE VAULTS AND PULLBOXES SHALL BE LEVEL WITH THE SURROUNDING FINISHED GRADE. IF THE SLOPE OR SHOULDER DROPS OFF FROM FINISHED GRADE, THE CONTRACTOR SHALL GRADE AROUND POLE FOUNDATION. THE TOP OF THE FOUNDATION SHALL EXTEND NO MORE THAN 4 INCHES ABOVE THE SURROUNDING FINISHED GRADE.
7. VAULTS SHALL MAINTAIN A MINIMUM OF SIX (6) FEET HORIZONTAL DISTANCE FROM EXISTING WATER MAINS, MEASURED FROM OUTSIDE OF THE WALL OF THE VAULT TO THE OUTSIDE OF PIPE WALL.
8. ITS PULLBOXES SHALL BE A 30 INCH X 48 INCH PENCELL BOX OR APPROVED EQUAL.
9. VAULTS SHALL BE PRECAST CONCRETE WITH A MINIMUM OUTSIDE DIMENSION OF 48 INCHES LONG BY 48 INCHES WIDE BY 50 INCHES HIGH.
10. PULLBOXES SHALL NOT BE INSTALLED WITHIN CONCRETE CURB ACCESS RAMPS OR LANDINGS. IN ADDITION, ANY PULLBOXES INSTALLED BEHIND CURBS SHALL BE INSTALLED BETWEEN THE CURB AND THE PROPOSED/FUTURE SIDEWALK OR BEYOND THE PROPOSED/FUTURE SIDEWALK. AN EXCEPTION TO THIS NOTE WOULD BE PULLBOXES INSTALLED IN A MEDIAN. ANY PULLBOXES INSTALLED ALONG AN UNCURBED ROADWAY SHALL BE INSTALLED 10 FEET FROM EDGE OF PAVEMENT TO EDGE OF PULLBOX WHERE RIGHT-OF-WAY PERMITS OR AS FAR FROM PAVEMENT AS PRACTICAL WHEN THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE THE 10 FOOT OFFSET.
11. A THREE-QUARTER (3/4) INCH X TEN (10) FOOT GROUND ROD SHALL BE INSTALLED IN EVERY ITS VAULT AND ITS PULLBOX. TWO (2) GROUND ROD CLAMPS SHALL BE FURNISHED AND INSTALLED FOR EACH GROUND ROD FOR CLAMPING THE GROUND WIRE.
12. THE CONDUIT LOCATIONS SHOWN ON THE APPROVED PLANS ARE DIAGRAMMATIC REPRESENTATIONS ONLY. THE LOCATION OF THE CONDUIT MAY BE ADJUSTED IN THE FIELD TO AVOID CONFLICTS. THE CONTRACTOR SHALL OBTAIN APPROVAL PRIOR TO INSTALLATION. ALL CONDUITS SHALL BE INSTALLED WITHIN EXISTING RIGHT-OF-WAY UNLESS OTHERWISE APPROVED.
13. CONDUIT INSTALLED UNDER EXISTING PAVED DRIVEWAYS, THAT ARE NOT SCHEDULED TO BE RECONSTRUCTED AS PART OF THIS PROJECT, SHALL BE INSTALLED BY MEANS OF BORING.
14. ALL CONDUITS SHALL BE INSTALLED A MINIMUM OF 36 INCHES BELOW FINISHED GRADE, EXCEPT WHEN CONDUITS CROSS CULVERTS OR ARE ROUTED ALONG BRIDGE AND WING WALLS. ANY CONDUIT INSTALLED LESS THAN 36 INCHES DEEP SHALL BE ENCASED IN CONCRETE PER PAG STANDARD SPECIFICATIONS.
15. ONLY NEW CONDUITS SHALL BE INSTALLED. ALL ITS INTERCONNECT CONDUIT SHALL BE FOUR (4) INCH PVC SCHEDULE 40 UNLESS NOTED OTHERWISE. CONDUIT ADJACENT TO CURB SHALL BE INSTALLED SIX (6) INCHES BEHIND THE BACK OF CURB AND 42 INCHES BELOW THE TOP OF CURB.
16. ALL CONDUITS SHALL BE CLEANED BY COMPRESSED AIR. A PROPERLY SIZED CONDUIT PISTON OR MANDREL SHALL BE PULLED THROUGH THE CONDUIT PRIOR TO INNERDUCT INSTALLATION.
17. WHEN SHOWN ON THE PLANS, FOUR (4) - ONE (1) INCH INNERDUCTS SHALL BE INSTALLED WITHIN INTERCONNECT CONDUIT.
18. WHEN INCLUDED ON THE PLANS, INNERDUCTS SHALL BE PRE-LUBRICATED WITH SMOOTH EXTERIOR WALLS AND LONGITUDINALLY RIBBED INTERIOR WALLS. INTERNAL SPACERS WHICH EXPAND AND CONTRACT AT THE SAME RATE AS THE INTERCONNECT CONDUIT SHALL BE INSTALLED. ANTI-REVERSING GASKETS AND AN O-RING GASKET AT THE BELL BASE ARE REQUIRED. INNERDUCTS SHALL BE CLARON TELECOM SYSTEMS MULTI-GARD BRAND OR EQUIVALENT. EACH INNERDUCT WITHIN A SINGLE CONDUIT SHALL BE OF A DIFFERENT COLOR (ORANGE, BROWN, BLUE, AND BLACK).
19. IF INNERDUCTS ARE INSTALLED, ALL INTEGRAL INNERDUCTS SHALL HAVE A CONTINUOUS NON-SPLICED, UNKNOTTED DETECTABLE 1,250 POUND TEST MULE TAPE INSTALLED.
20. CONDUITS FOR FUTURE USE SHALL BE SEALED WITH A PROPERLY SIZED TAPERED POLYETHYLENE DUCT PLUG AT EACH TERMINATION POINT. THE #8 BARE BOND WIRE SHALL BE LOOPED THROUGH THE PLUG PULL TAB AND GROUNDED TO THE GROUND ROD IN THE PULLBOX OR VAULT. AN EXTRA THREE (3) FEET OF SLACK SHALL BE PROVIDED ON THE #8 BARE BOND IN EACH PULLBOX OR VAULT.

21. WHEN THE CONDUIT IS INSTALLED BY OPEN TRENCHING, AN ELECTRONICALLY DETECTABLE SIX (6) INCH FIBER WARNING TAPE SHALL BE INSTALLED 18 INCHES ABOVE THE INTERCONNECT CONDUIT. THE TAPE SHALL BE ORANGE AND HAVE THE INSCRIPTION "CAUTION-FIBER OPTIC CABLE BURIED BELOW".
22. GREEN TRACER CONDUCTOR SHALL BE INSTALLED WITHIN EACH INTERCONNECT CONDUIT. THE CONDUCTOR SHALL BE A CONTINUOUS UNSPLICED STRANDED CU 6 AWG, RATED FOR 600 VOLTS, AND SHALL HAVE THW OR XHHW INSULATION. THE TRACER CONDUCTOR SHALL BE INSTALLED ON THE OUTSIDE OF THE INNERDUCTS IF INNERDUCTS ARE INSTALLED.
23. FOR ALL CONDUIT INSTALLED, A MINIMUM HORIZONTAL SEPARATION OF 6 FEET SHALL BE MAINTAINED FROM LANDSCAPE IRRIGATION MAINLINES OR WATER LINES.
24. A MINIMUM HORIZONTAL SEPARATION OF 24 INCHES SHALL BE MAINTAINED FROM ALL GAS LINES.
25. THE TRAFFIC SIGNAL OPERATION AT EXISTING SIGNALIZED INTERSECTIONS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
26. UPON COMMENCEMENT OF WORK, ALL TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH A TIME AS THE WORK IS COMPLETE. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS ADOPTED BY PIMA COUNTY AND APPROVED BY THE ENGINEER. ALL TRAFFIC CONTROL DEVICES ON FEDERALLY FUNDED PROJECTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS ADOPTED BY ADOT AND APPROVED BY THE ENGINEER.

**RESPONSIBILITIES:**

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY ALL GOVERNMENTAL AGENCIES.
2. THE CONTRACTOR SHALL CONTACT THE BLUE STAKE AT 1-800-782-5348, A MINIMUM OF 2 WORKING DAYS PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR SHALL MAINTAIN AND ALLOW ACCESS TO ALL PIMA COUNTY WASTEWATER MANHOLES LOCATED WITHIN THE RIGHT-OF-WAY. ACCESS MUST BE MAINTAINED 24 HOURS PER DAY, 7 DAYS A WEEK. NO ELECTRICAL UTILITIES MAY BE PLACED WITHIN 6 FEET OF A FORCE MAIN.
4. THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING/ POTHOLING UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED POLE FOUNDATIONS.
5. ANY EQUIPMENT AND/OR UTILITIES WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DESTROYED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE SOLE EXPENSE OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL EQUIPMENT AND MATERIALS AS SPECIFIED ON THE APPROVED PLANS AND IN THE PROJECT SPECIFICATIONS.
7. UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL AS PART OF THIS PROJECT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR /RESTORE ANY LANDSCAPING, IRRIGATION, OR HARDSCAPE THAT MAY HAVE BEEN DAMAGED OR DISTURBED BY THE CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE OPERATIONS DIVISION VEGETATION MAINTENANCE PUBLIC WORKS SUPERVISOR AT (724-2421) BEFORE ANY PLANTS ARE MOVED.



*Ana M. Olivares, P.E., Director*

Date	Engineer	Revision	Description	Date			
				MO/	YO/	DAY/	YEAR

*Pima County Department of Transportation*

*ITS CONDUIT GENERAL NOTES*

Shannon Road – Ina Road to Magee Road – Project No. 4XXXX