

GENERAL NOTES:


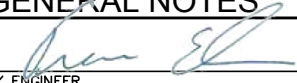
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT CITY OF COLORADO SPRINGS ENGINEERING DIVISION (THE CITY) STANDARD SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS (EXCAVATION, CONCRETE, TRAFFIC CONTROL, ETC.), AND NOTIFY THE CITY BY 1500 HOURS THE BUSINESS DAY BEFORE INSPECTION IS REQUIRED.
3. DO NOT BACKFILL INLETS PRIOR TO ONE-POUND ANODE AND 1.5# MAGNESIUM GROUND ROD INSTALLATION.

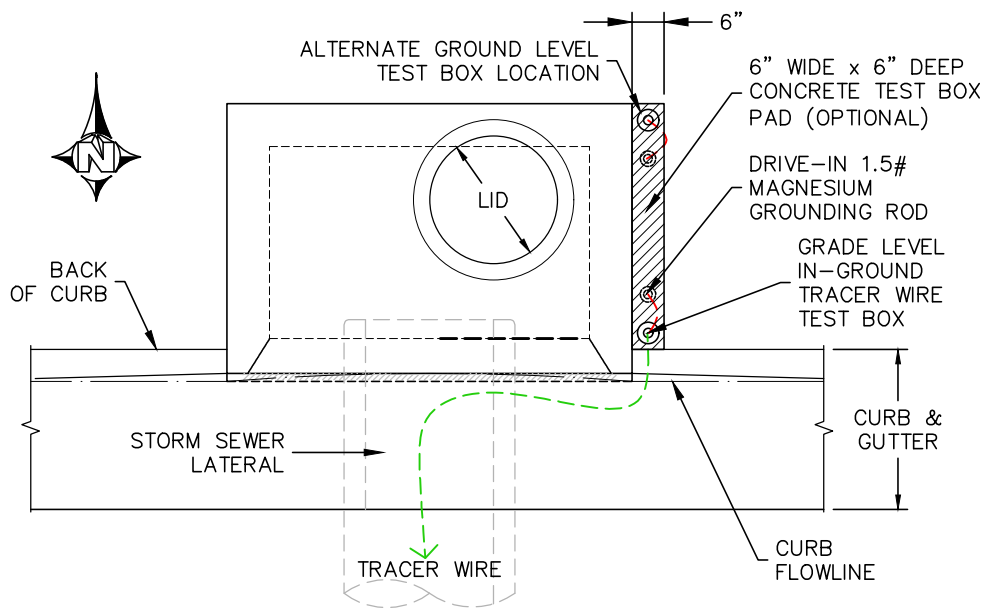
TRACER WIRE:

4. TRACER WIRE SHALL BE INSTALLED ON ALL UNDERGROUND PIPE.
5. TRACER WIRE FOR STORM SEWER AND DRAIN LINES SHALL BE **GREEN** IN ACCORDANCE WITH AMERICAN PUBLIC WORKS ASSOCIATION (APWA) UNIFORM COLOR CODE.
6. "OPEN TRENCH" TRACER WIRE SHALL BE #8 OR #10 AWG COPPER SOLID OR #12 AWG COPPER CLAD HIGH STRENGTH WITH MINIMUM 30 MIL HDPE INSULATION THICKNESS COMPLYING WITH ASTM D-1248, AND A MINIMUM AVERAGE TENSILE BREAK LOAD OF 450-LBS, AND A 30-MIL HDPE JACKET-GREEN (TYPICAL).
7. "PIPE/SLIP LINING" TRACER WIRE SHALL BE 7X7 STRANDED COPPER CLAD STEEL, EXTREME STRENGTH WITH 4,700 LB. BREAK LOAD, WITH MINIMUM 50-MIL HDPE INSULATION THICKNESS.
8. TRACER WIRE SHALL BE SECURED EVERY 5-FEET TO 8-FEET ON THE TOP OF THE PIPE BY TAPING OR TYING TO THE PIPE.
9. A 4-WAY CONNECTOR OR (2) 3-WAY CONNECTORS WITH SHORT JUMP WIRE ARE REQUIRED AT ALL CROSSINGS.
10. TRACER WIRE SHALL BE AS CONTINUOUS AS POSSIBLE. IF SPLICING IS NECESSARY, THE ONLY APPROVED SPLICE METHOD IS A SPLIT BOLT CONNECTOR HOUSED IN A SPLIT BOLT HOUSING.
11. ANY DAMAGE OCCURRING DURING INSTALLATION OF THE TRACER WIRE MUST BE IMMEDIATELY REPAIRED BY REMOVING THE DAMAGED WIRE AND INSTALLING A NEW SECTION OF WIRE WITH APPROVED CONNECTORS. TAPING AND/OR SPRAY COATING SHALL NOT BE ALLOWED AS A CONNECTION.
12. EXPOSED WIRE SHALL BE WRAPPED WITH SCOTCH LINERLESS RUBBER SPLICING TAPE TO SEAL OUT MOISTURE, AND THEN COATED WITH SCOTCH SUPER 33+ VINYL ELECTRIC TAPE TO SEAL THE RUBBER TAPE.
13. TRACER WIRE CAN NOT BE PLACED INSIDE DRAINAGE INLETS.

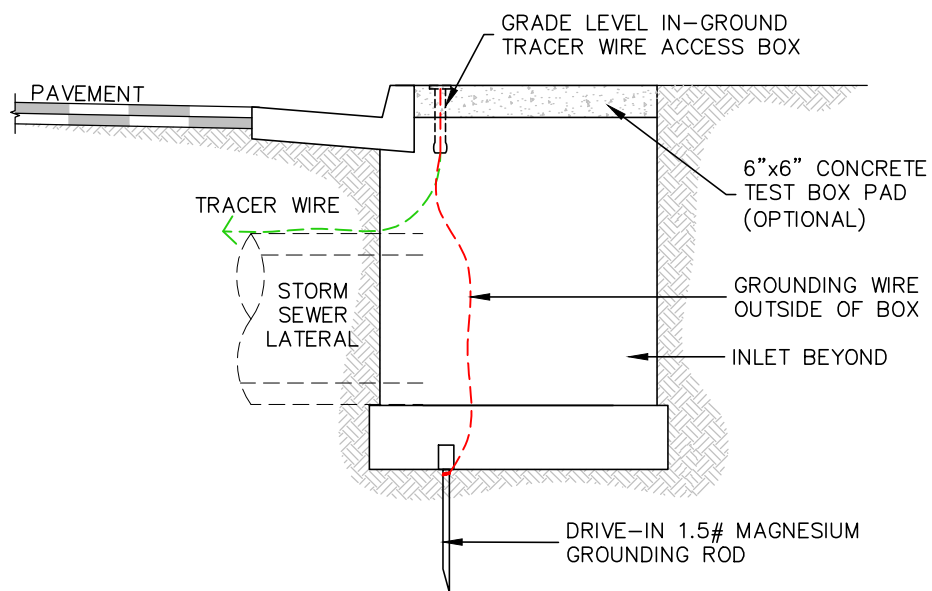
TERMINATION/ACCESS:

14. TRACER WIRE SHALL BE BROUGHT ABOVE GROUND AND CONNECT AT EACH INLET AND MANHOLE IN A GRADE LEVEL TRACER WIRE TEST BOX.
15. A MINIMUM OF 2-FEET OF EXCESS/SLACK WIRE IS REQUIRED IN ALL TRACER WIRE ACCESS BOXES AFTER MEETING FINAL ELEVATION.
16. DRIVE-IN 1.5# MAGNESIUM GROUND RODS (ANODE) WHICH SHALL BE ATTACHED TO THE END OF THE TRACER WIRE.
17. TRACER WIRE MUST BE PROPERLY GROUNDED AT ALL DEAD ENDS (INLETS, OUTFALL, ETC.), AND DRIVEN INTO NATIVE SOIL AT PIPE LEVEL.
18. TRACER WIRE TERMINATION POINTS MUST UTILIZE A WIRE ACCESS BOX.
19. TRACER WIRE ACCESS BOXES MUST INCLUDE A MANUAL INTERRUPTIBLE CONDUCTIVE/CONNECTIVE LINK BETWEEN TERMINAL FOR TRACER WIRE CONNECTION AND TERMINAL FOR GROUND ROD WIRE CONNECTION.
20. GROUNDING ANODE WIRE AND 1.5# MAGNESIUM GROUND ROD WIRE SHALL BE CONNECTED TO THE IDENTIFIED LOCATION (BOTTOM) TERMINAL IN ALL ACCESS BOXES.
21. ALL SERVICE LATERAL TRACER WIRES MUST BE PROPERLY CONNECTED TO THE MAINLINE TRACER WIRE TO ENSURE FULL TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
22. TRUNK LINE TRACER WIRE SHALL BE CONTINUOUS, BY-PASSING AROUND THE OUTSIDE OF MANHOLES/STRUCTURES ON THE NORTH OR EAST SIDE, UNLESS ON THE END SECTION.
23. ALL NEW TRACER WIRE INSTALLATIONS SHALL BE TESTED AND LOCATED PRIOR TO ACCEPTANCE. TESTING AND LOCATING SHALL BE PERFORMED BY A THIRD PARTY AT THE COMPLETION OF ROUGH GRADING AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. ANY DEFICIENCIES SHALL BE CORRECTED PRIOR TO FINAL ACCEPTANCE.
24. WHEN REPAIRS ARE PERFORMED ON STORMWATER LINE, TRACER WIRE SHALL BE TESTED PRIOR TO FINAL ACCEPTANCE

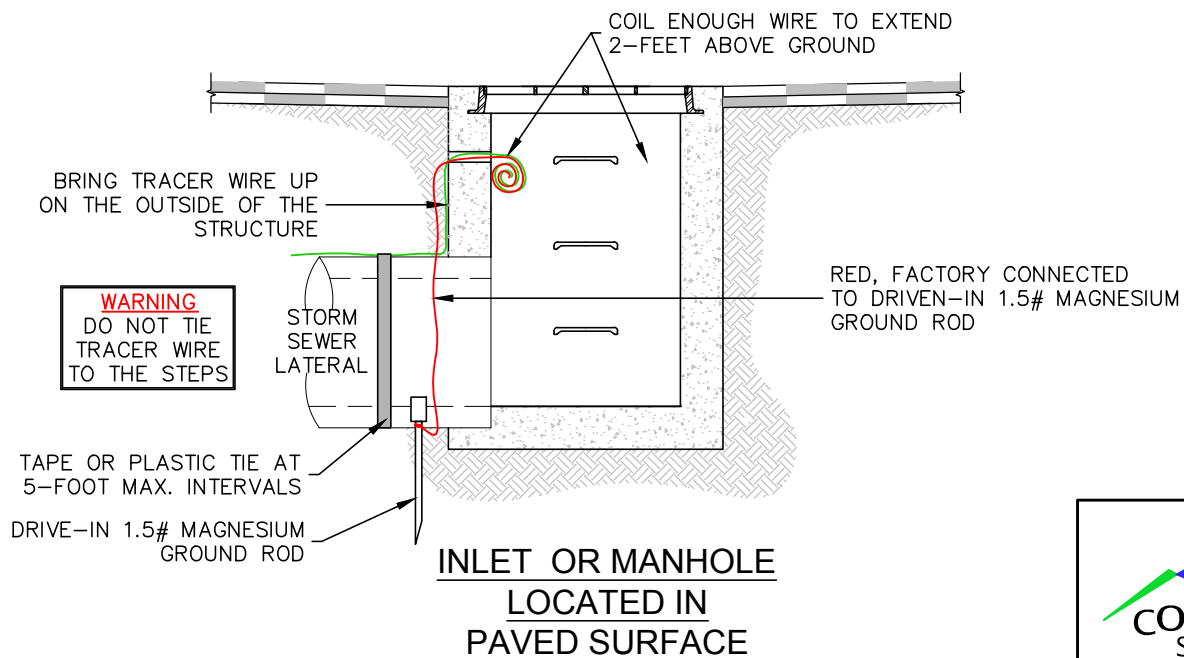
	TRACER WIRE GENERAL NOTES	
	APPROVED:  CITY ENGINEER	
	ISSUED: 8/16/19	REVISED:


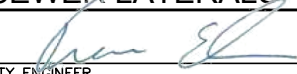


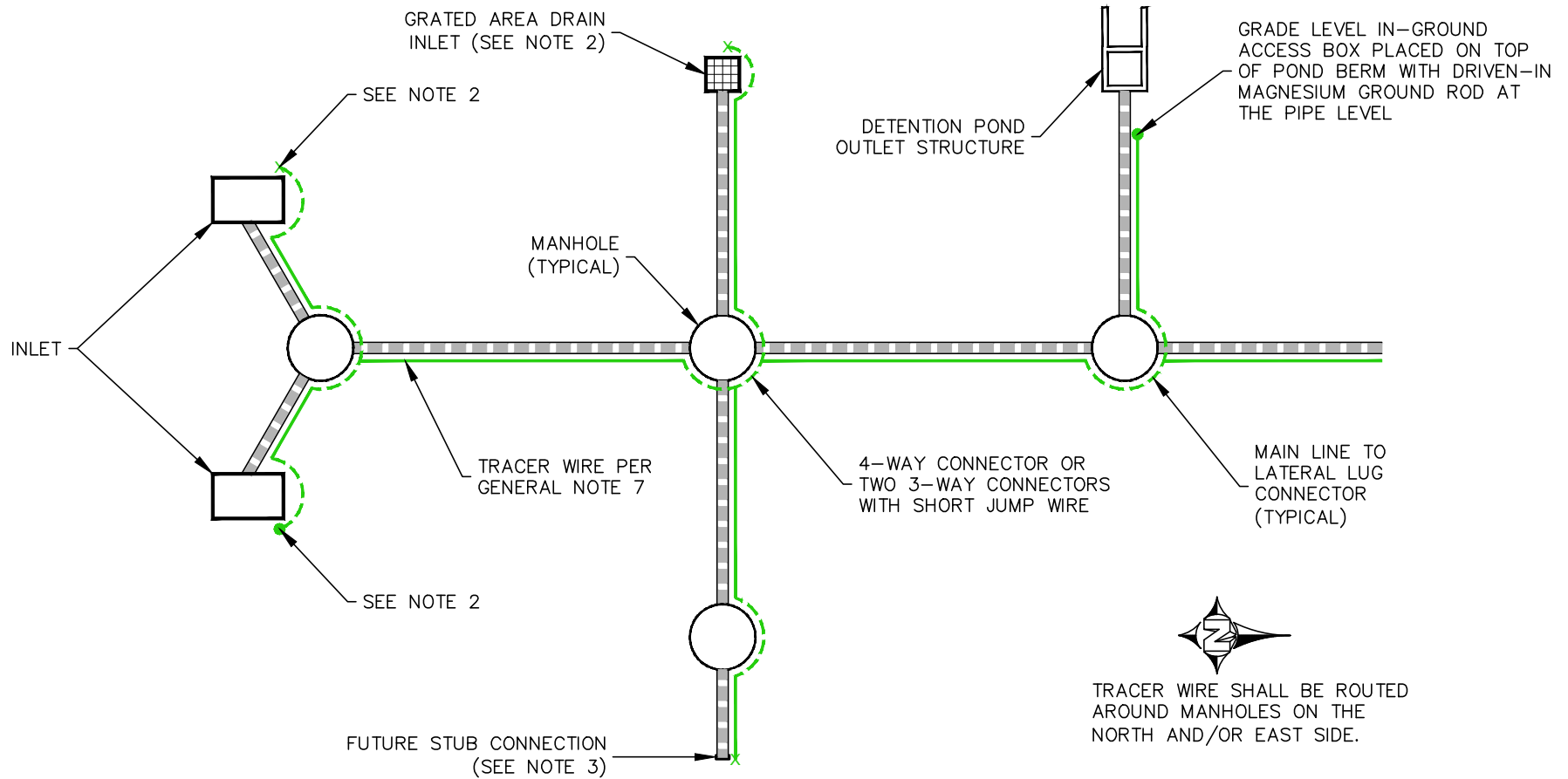
TYPICAL CURB INLET PLAN



TYPICAL CURB INLET SECTION


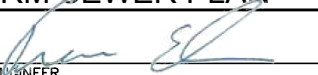


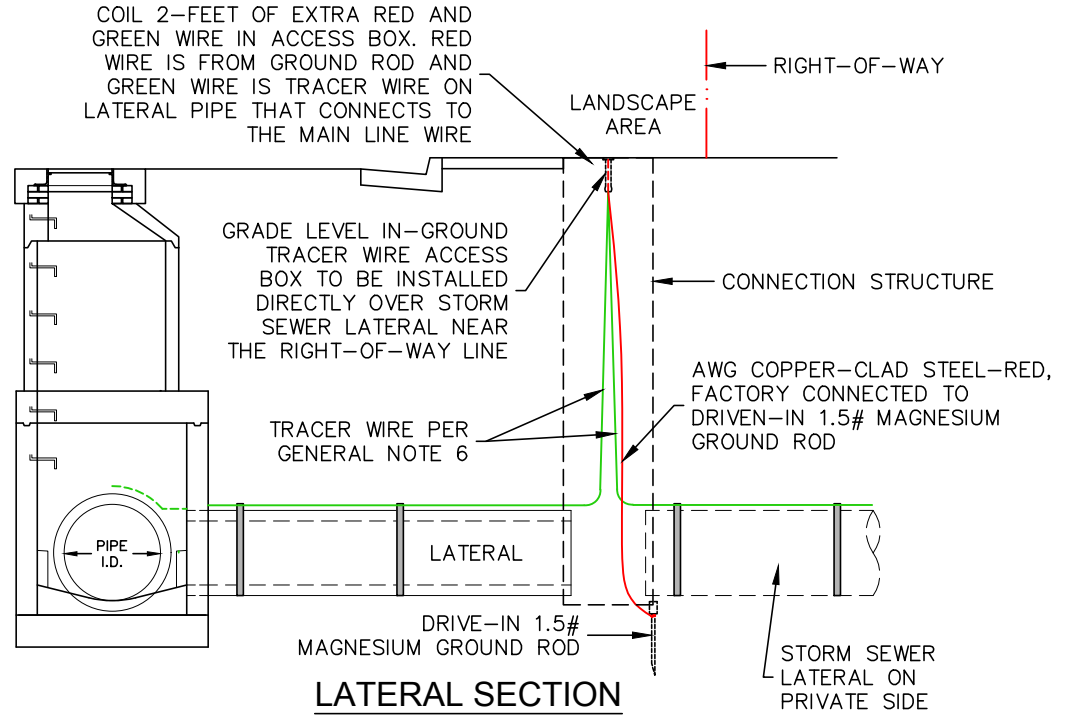
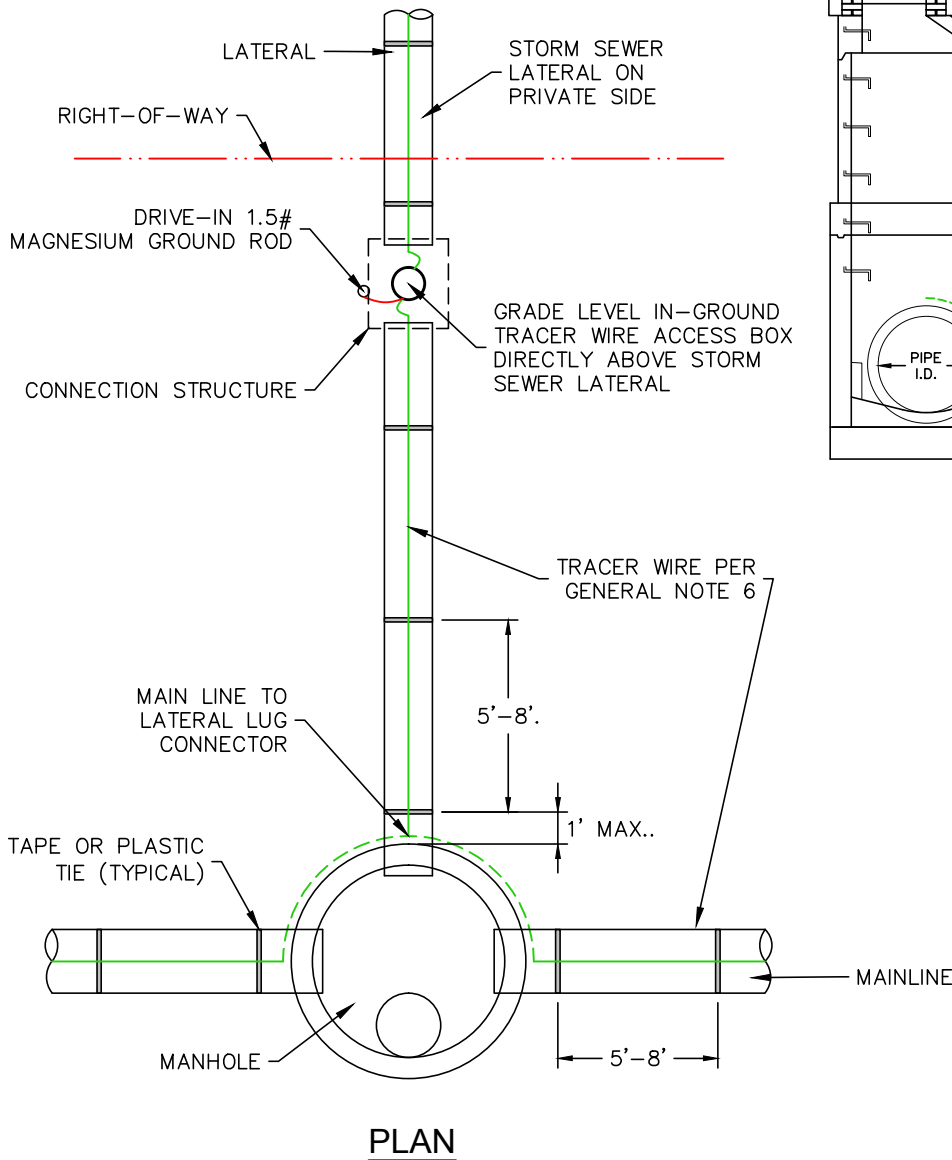
	TRACER WIRE AT STORM SEWER LATERALS	
	APPROVED: 	
	CITY ENGINEER	
ISSUED: 8/16/19	REVISED:	DRAWING NO. D-37B



NOTES:

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON TOP OF THE PIPE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5-FOOT TO 8-FOOT INTERVALS.
2. TRACER WIRE FOR INLETS SHALL TERMINATE AT A GRADE LEVEL IN-GROUND ACCESS BOX. DRIVE-IN MAGNESIUM GROUND ROD MUST BE USED AT ALL TERMINATION POINTS.
3. PLACE A TEST STATION WITH A DRIVEN-IN 1.5# MAGNESIUM GROUND ROD AT DEAD ENDS AND FUTURE CONNECTIONS.

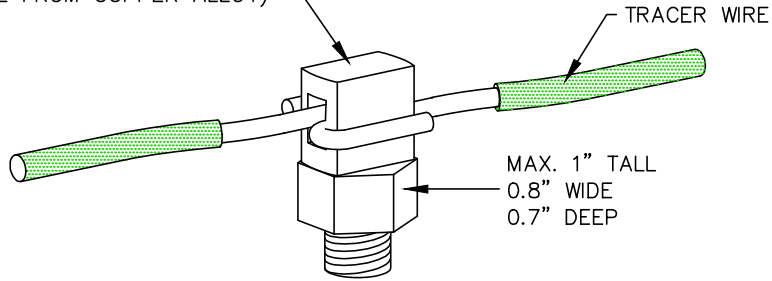
 <p>COLORADO SPRINGS</p>	TRACER WIRE SAMPLE STORM SEWER PLAN	
	APPROVED: 	
	CITY ENGINEER	
ISSUED: 8/16/19	REVISED:	DRAWING NO. D-37C



- NOTES:**
1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON TOP OF THE SERVICE PIPE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5-FOOT TO 8-FOOT INTERVALS.

	TRACER WIRE AT STORM SEWER MANHOLE	
	APPROVED:	
	CITY ENGINEER	
ISSUED: 8/16/19	REVISED:	DRAWING NO. D-37D

SPLIT BOLT CONNECTOR
(8-14 AWG WIRE, COPPER-TO-COPPER,
SQUARE HEAD, MADE FROM COPPER ALLOY)



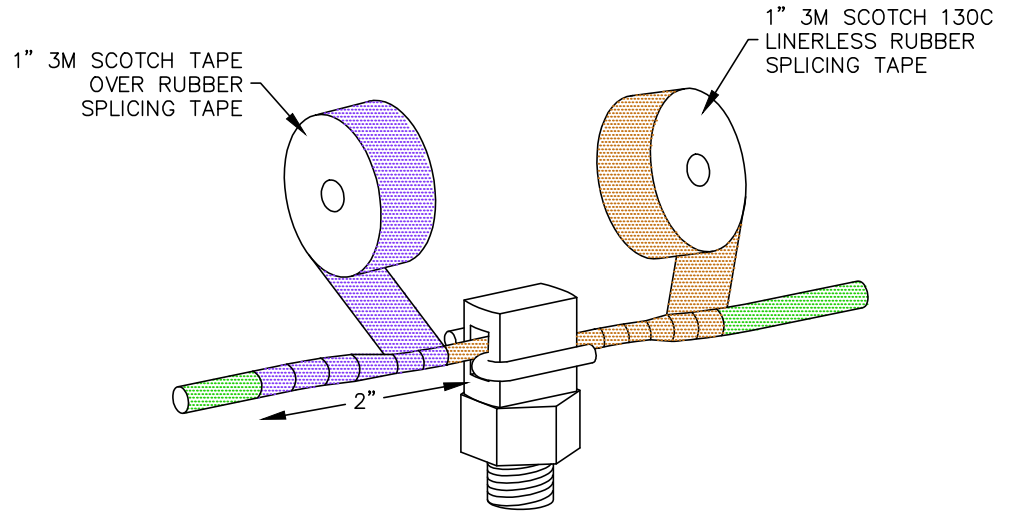
SPLIT BOLT HOUSING SPECIFICATION:
VOLTAGE - 50 VOLTS
HOUSING - HIGH IMPACT POLYPROPYLENE
SEALANT - DIELECTRIC SILICONE GEL



NOTE: ONCE THE WIRE SPLIT BOLT CONNECTOR IS IN PLACE IT SHALL BE ENCAPSULATED WITH A SPLIT BOLT HOUSING.

SPLIT BOLT CONNECTION

TAPING NOTES:

1. WRAP ALL TRACER WIRE SPLIT BOLT CONNECTORS OR EXPOSED WIRE USING 1-INCH 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE. SEAL ALL ENDS TO PREVENT MOISTURE PENETRATION.
2. WRAP OVER RUBBER TAPE WITH 1-INCH SCOTCH 33+ VINYL TAPE TO COVER AND PROTECT RUBBER TAPE. EXTEND WRAP 2-INCHES ON BOTH SIDES OF CONNECTOR.



	TRACER WIRE SPlice DETAIL	
	APPROVED: 	
	CITY ENGINEER	
ISSUED: 8/16/19	REVISED:	DRAWING NO. D-37E