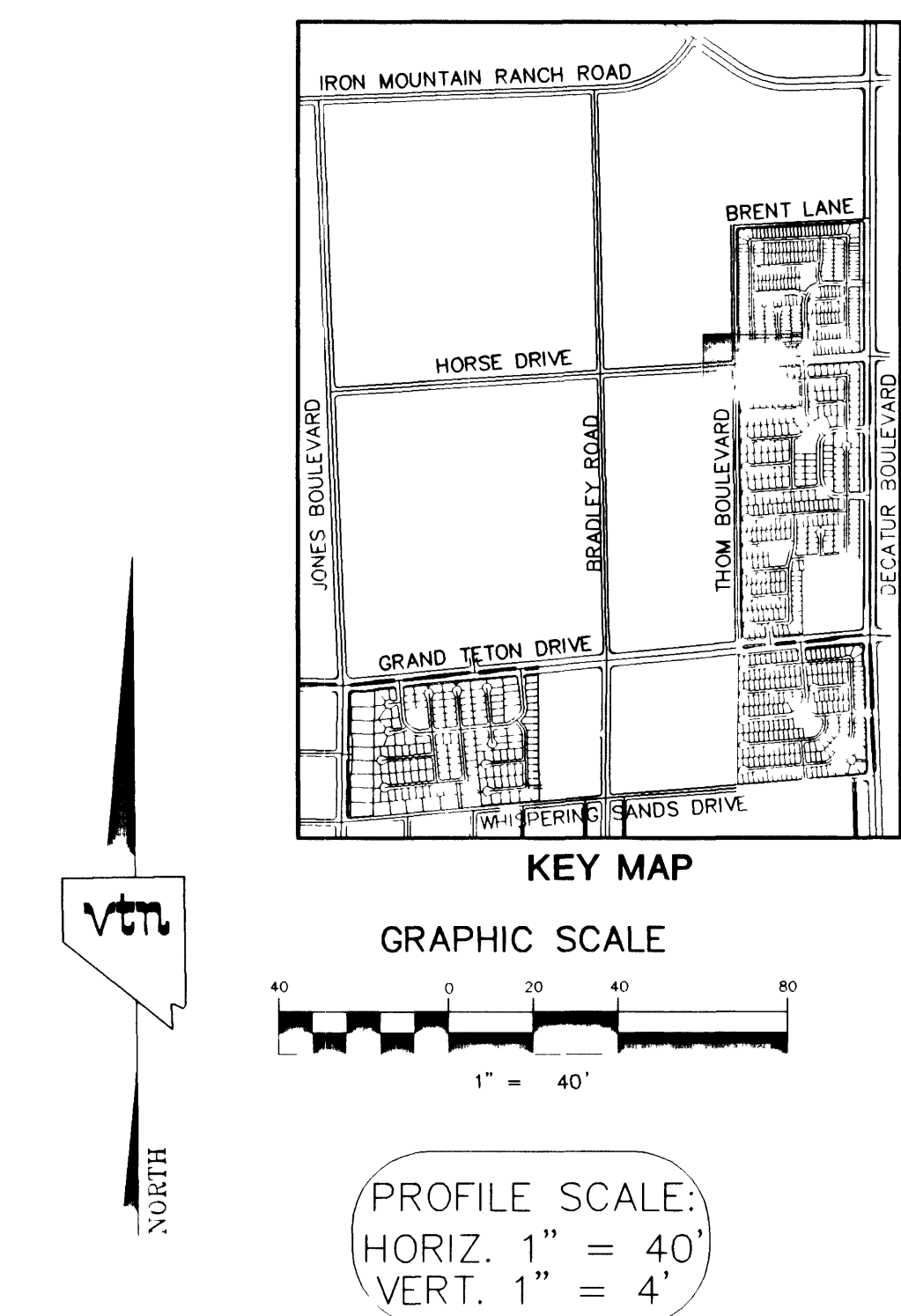
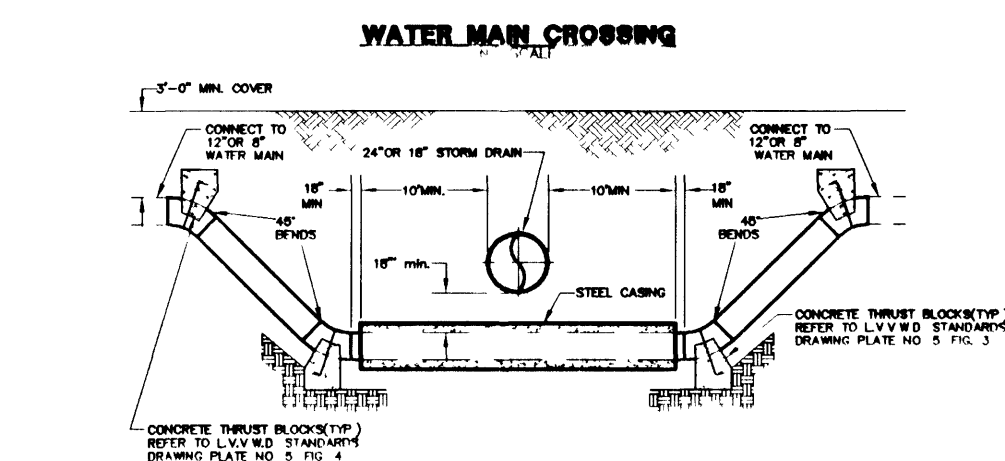


NOTE:
ALL MH STATIONING IS BASED ON SEWER LENGTHS FROM MANHOLE TO MANHOLE.
ALL MANHOLES ARE 72" SIZE MANHOLES PER STD. DWG #SD-1. UNLESS OTHERWISE SPECIFIED.

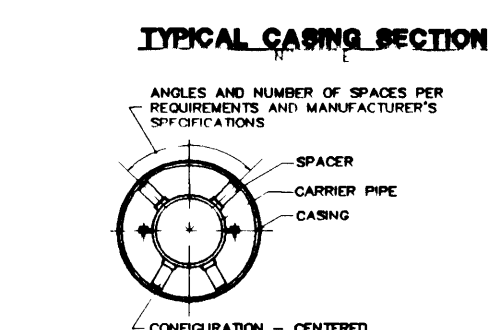
NOTE:
MANHOLES TEN (10') FEET OR DEEPER ARE
REQUIRED TO HAVE LOCKING MANHOLE COVERS.



WHERE THE WATER IS LESS THAN 18 INCHES OVER SEWER LINE, WHERE THE WATER LINE IS UNDER THE SEWER LINE, AND WHERE THE HORIZONTAL SEPARATION, AS REQUIRED BY THE WATER SUPPLY REGULATIONS, CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS, THE WATER LINE SHALL BE PROTECTED BY CONSTRUCTION OF THE STORM/SEWER LINE AS FOLLOWS:

1. EXCAVATE HEAVY CAST IRON PIPE.
2. WATER SUPPLY QUALITY MATERIALS, OR
3. ENCASEMENT WITH FOUR INCHES, MINIMUM, OF CONCRETE OR SETTING WITH WATER SUPPLY QUALITY PIPE.

EACH OF THESE PROVISIONS SHALL ALSO BE EXTENDED FOR OTHER THAN 90 DEGREE CROSSINGS TO THE POINT AT WHICH THE TEN FOOT SEPARATION BETWEEN THE WATER AND SEWER LINES IS ACHIEVED (1/2 INCH OF CROSSING ANGLE).



NOTES:

1. STEEL PIPE CASING SYMMETRICAL ABOUT WATER MAIN CENTERLINE.
2. PRE-APPROVED CASING SPECIFICATIONS & PIPE-APPROVED END SEALS SHALL BE PROVIDED BY MANUFACTURER. (SEE ATTACHED DRAWING FOR END SEAL LOCATION. SEE SECTION 5.26 NOT APPLICABLE) USE OF END SEALS SHALL BE AT THE DISCRETION OF THE CONTRACTOR AND PROVIDE THE MANUFACTURER WITH THE FOLLOWING:
 - a. PIPE OD
 - b. CASING ID
 - c. CASING LENGTH

CASING CASING:

1. STEEL PIPE CASING SHALL BE FABRICATED FROM A MINIMUM OF 1/4" THICK CARBON STEEL. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE IN ACCORD WITH AWWA C200 "AWWA STANDARD FOR FABRICATED ELECTRICALLY INSULATED WATER PIPES". INTERIOR JOINTS SHALL BE WELDED TO MEET AWWA C200 "AWWA STANDARD FOR FABRICATED ELECTRICALLY INSULATED WATER PIPES".
2. PIPE CASING SHALL BE LONG ENOUGH TO LAY AND GRADE WITH NO JOINTS OR CHANGES IN GRADE TO THE FULL LENGTH OF THE CASING.
3. THE PIPE SHALL BE SUPPORTED AT EACH END JOINT WITH CASING. AFTER INITIAL INSTALLATION OF THE CASING SHALL BE SEALED AT BOTH ENDS WITH CASING END SEALS DUE TO THE PIPE JOINTS BEING INSUFFICIENT.

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