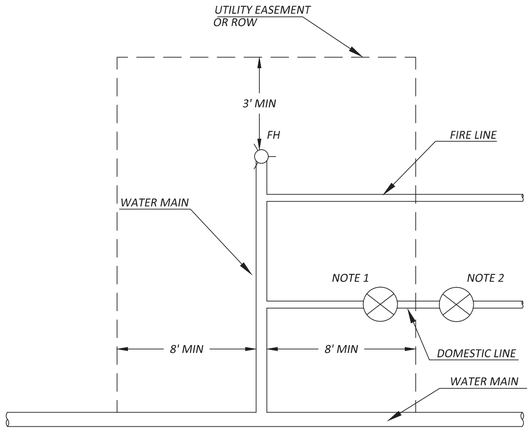


FIGURE 1
(NOT TO SCALE)

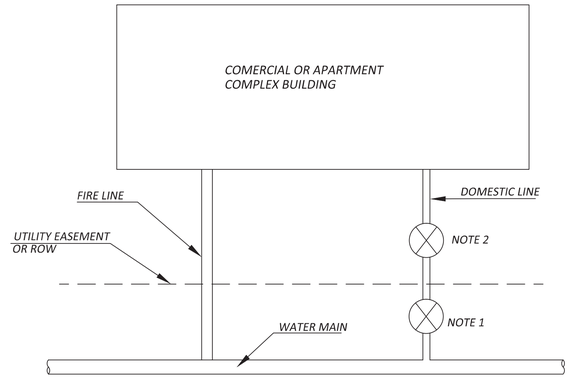


FIGURE 2
(NOT TO SCALE)

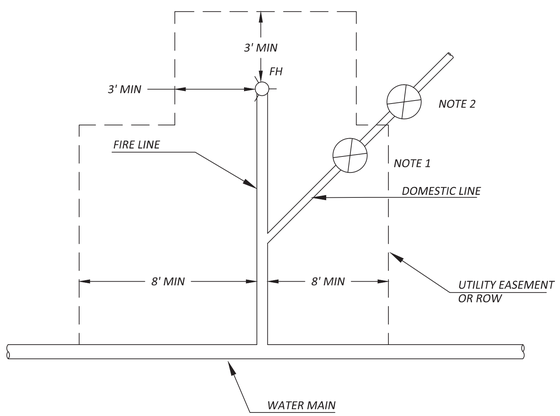


FIGURE 3
(NOT TO SCALE)

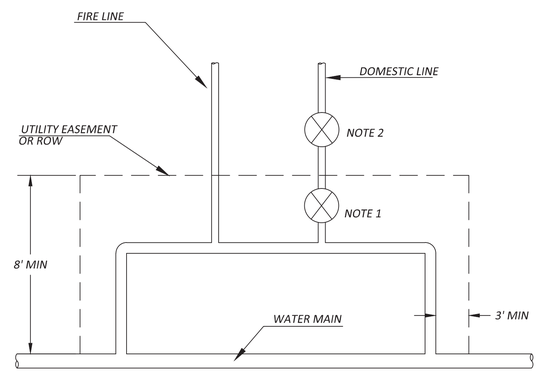


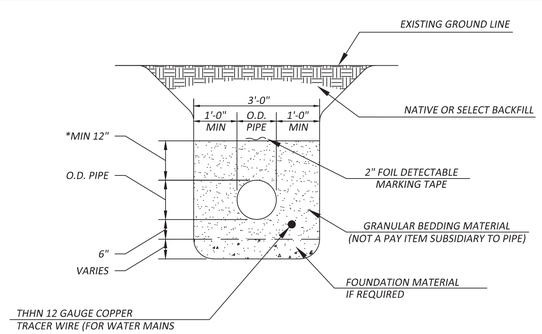
FIGURE 4
(NOT TO SCALE)

NOTES:
1. IF LOCATED INSIDE THE UTILITY EASEMENT OR RIGHT OF WAY, THE CITY OF MANHATTAN WILL MAINTAIN WATER LINE, HYDRANT, FIRE LINE, AND METER.
2. IF LOCATED OUTSIDE THE UTILITY EASEMENT OR RIGHT OF WAY, THE CITY OF MANHATTAN WILL MAINTAIN ONLY THE METER.
3. FIRE LINE SERVING HYDRANT MUST BE 6" DIA OR LARGER.
4. HYDRANTS ON FIRE LINE MUST BE INCLUDED IN EASEMENT.
5. TRACER WIRE SHALL BE THHN 12 GAUGE SINGLE STRAND COPPER WIRE.
6. 2" DETECTABLE FOIL WARNING TAPE HAVING THE WORDS "CAUTION" AND "WATER LINE" ON A BLUE BACKGROUND SHALL BE INSTALLED 12" ABOVE AND FOR THE LENGTH OF THE PIPE AND IS SUBSIDIARY TO ALL WATER LINE INSTALLATIONS.
7. GRANULAR BEDDING MATERIAL SHALL BE A COARSE AGGREGATE OF LESS THEN 1½".

LEGEND

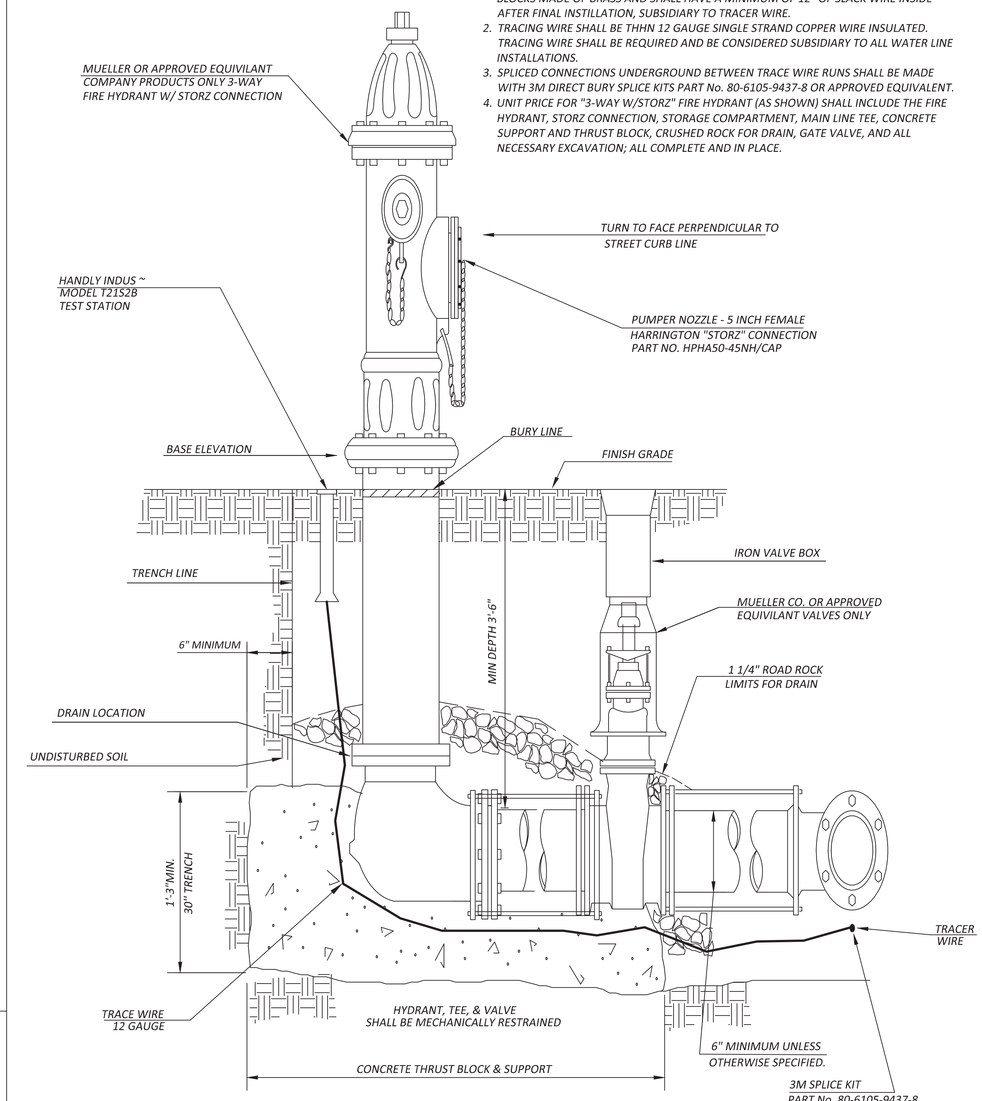
⊕ METER

FH FIRE HYDRANT



WATER LINE PIPE BEDDING
(NOT TO SCALE)

NOTES:
1. CATHODIC TEST STATIONS SHALL BE T2IS2B OF HANDLY INDUSTRIES INC., BLUE CAST IRON TOP WITH 15 INCH LENGTH TUBE MADE OF ABS AND 2-$\frac{3}{8}$ INCH DIA. ID. TWO TERMINAL BLOCKS MADE OF BRASS AND SHALL HAVE A MINIMUM OF 12" OF SLACK WIRE INSIDE AFTER FINAL INSTILLATION, SUBSIDIARY TO TRACER WIRE.
2. TRACING WIRE SHALL BE THHN 12 GAUGE SINGLE STRAND COPPER WIRE INSULATED. TRACING WIRE SHALL BE REQUIRED AND BE CONSIDERED SUBSIDIARY TO ALL WATER LINE INSTALLATIONS.
3. SPLICED CONNECTIONS UNDERGROUND BETWEEN TRACE WIRE RUNS SHALL BE MADE WITH 3M DIRECT BURY SPLICE KITS PART No. 80-6105-9437-8 OR APPROVED EQUIVALENT.
4. UNIT PRICE FOR "3-WAY W/STORZ" FIRE HYDRANT (AS SHOWN) SHALL INCLUDE THE FIRE HYDRANT, STORZ CONNECTION, STORAGE COMPARTMENT, MAIN LINE TEE, CONCRETE SUPPORT AND THRUST BLOCK, CRUSHED ROCK FOR DRAIN, GATE VALVE, AND ALL NECESSARY EXCAVATION; ALL COMPLETE AND IN PLACE.



FIRE HYDRANT SETTING
(NOT TO SCALE)

NO.	DATE	DESCRIPTION	BY
.	.	.	.

City of Manhattan Kansas
PUBLIC WORKS
1101 POYNTZ AVE., MANHATTAN, KS 66502 (785) 587-2415

BRIAN D. JOHNSON
LICENSED
20469
8-1-15
KANSAS
PROFESSIONAL ENGINEER

MANHATTAN STANDARD DETAILS
MSD 2320 WATER LINE STANDARDS

CITY ENGINEER: BRIAN JOHNSON, P.E.	DESIGN BY:	
CITY PROJ. #:		
DATE:	DRAWN BY:	PAGE OF

PLOTTED BY: RICK PETRIE PLOT DATE: 7/30/2015 3:54 PM X:\PUBLICWORKS\ENGINEERING\ENGINEERING STANDARDS\DETAILS\CURRENT\DWGS\MSD 2320 WATER LINE STANDARDS (2015-08).DWG