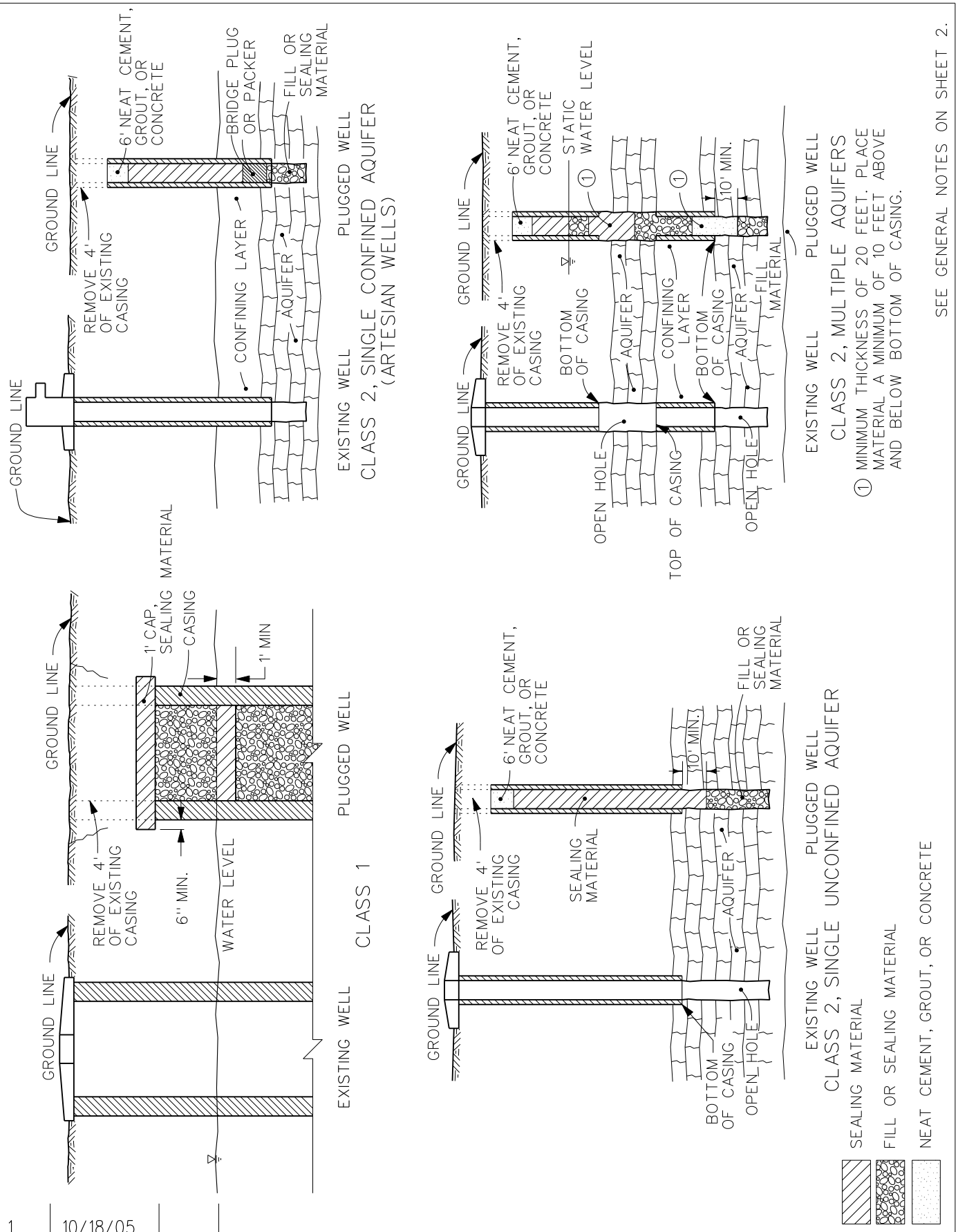

REV.	DATE	BY
1	10/18/05	

DATE: 01-01-98

DETAILS FOR PLUGGING WATER WELLS

FIGURE: 1110.1

SHEET 1 OF 2

GENERAL NOTES:

ANY WELL NO LONGER IN USE SHALL BE SEALED. DETAILS SHOWN HEREON ARE INTENDED TO DEPICT THE VARIOUS STANDARD METHODS USED FOR SEALING WATER WELLS. ALL MATERIALS AND METHODS USED SHALL BE IN ACCORDANCE WITH IOWA ADMINISTRATIVE CODE SECTION 567, CHAPTER 39

APPROVED SEALING MATERIALS ARE: 1) NEAT CEMENT (14 LBS. CEMENT PER 1 GALLON OF WATER); 2) GRADED BENTONITE, BENTONITE PELLETS OR BENTONITE GROUT; 3) SAND CEMENT GROUT (1 SACK OF CEMENT / EQUAL VOLUME MASONRY SAND / NOT MORE THAN 6 GALLONS WATER); 4) CONCRETE.

APPROVED FILL MATERIALS ARE: 1) SAND, 2) PEA GRAVEL, 3) CLASS A, B, OR C GRANULAR SURFACING MATERIAL, 4) AGRICULTURE LIME. ALL MATERIALS SHALL BE FREE OF FOREIGN MATTER AND ANY TOXIC RESIDUE.

REGARDLESS OF THE MATERIAL USED IN THE PROCESS, THE SEALING (FILLING) MATERIAL SHOULD BE INTRODUCED AT THE BOTTOM OF THE WELL, OR AT THE INTERVAL TO BE SEALED (OR FILLED) AND PLACED PROGRESSIVELY UPWARD TO THE TOP OF THE WELL. ALL SEALING MATERIALS SHALL BE PLACED BY THE USE OF GROUT PIPE, TREMIE PIPE, CEMENT BUCKET OR DUMP BAILER, IN SUCH A WAY AS TO AVOID SEGREGATION OR DILUTION OF THE SEALING MATERIALS. BENTONITE PELLETS OR GRADED BENTONITE MAY BE ADDED AS SEALING MATERIAL BY POURING IN PLACE AND AGITATING TO AVOID BRIDGING.

PLUGGING PROCEDURES: ALL OBSTRUCTIONS MUST BE REMOVED FROM THE WELL.

FOR DEEP WELLS, FILL OR SEALING MATERIAL SHALL BE PLACED FROM THE BOTTOM OF THE WELL UP TO 10 FEET BELOW THE BOTTOM OF THE CASING OR CONFINING LAYER, WHICHEVER IS LESS.

FOR CONFINED AQUIFERS AND SINGLE UNCONFINED AQUIFERS, SEALING MATERIAL SHALL BE PLACED FROM THE TOP OF THE FILLING MATERIAL TO 4 FEET BELOW THE GROUND SURFACE.

FOR WELLS COMPLETED IN MULTIPLE AQUIFERS, NEAT CEMENT SHALL BE PLACED ON TOP OF THE FILL MATERIAL AND EXTEND UPWARD AT LEAST 20 FEET. SEALING MATERIALS SHALL BE PLACED IN AT LEAST THE TOP 10 FEET OF EACH SUBSEQUENT AQUIFER, AND EXTEND AT LEAST 10 FEET INTO THE CONFINING LAYER OR CASING ABOVE. THE SAME TYPE OF FILLING MATERIALS AND SEALING PROCEDURES SHALL APPLY FOR EACH SUBSEQUENT AQUIFER. FILLING MATERIAL MAY BE PLACED FROM THE TOP OF THE UPPERMOST AQUIFER SEAL TO THE STATIC WATER LEVEL OF THE WELL. THE CASING SHALL THEN BE FILLED WITH AN APPROVED SEALING MATERIALS TO 4 FEET BELOW THE GROUND SURFACE.

FOR ALL DEEP WELLS, IF BENTONITE GROUT IS USED FROM THE STATIC WATER LEVEL TO THE TOP OF THE WELL, IT SHALL BE CAPPED WITH 6 FEET OF NEAT CEMENT, SAND CEMENT GROUT, OR CONCRETE.

FOR ALL WELLS: IT IS PREFERABLE THAT THE FILLING MATERIALS BE OMITTED AND THE SEALING MATERIALS BE USED TO FILL THE ENTIRE WELL UP TO 4 FEET BELOW THE GROUND SURFACE. CASING PIPE AND ANY CURBING, FROST PIT, OR PUMP HOUSE STRUCTURE SHALL BE REMOVED TO A DEPTH OF 4 FEET BELOW THE GROUND SURFACE.

PRICE BID FOR "PLUGGING WELLS" SHALL BE CONSIDERED FULL COMPENSATION FOR FURNISHING ALL MATERIAL AND WORK NECESSARY TO COMPLETELY SEAL WELLS AS DETAILED HEREON AS WELL AS NOTED ON DETAIL PROJECT PLANS OR AS DIRECTED BY THE ENGINEER.

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