

LIMITING SOIL CHARACTERISTICS LEGEND

Table with columns: Map Symbol, Soil Name, Cutbank Cave, Corrosive to Concrete/Steel, Droughty, Easily Eroded, Flooding, Depth to Saturated Zone/Seasonal High Water Table, Hydric/Hydric Inclusions, Low Shear/Landslide Prone, Slow Percolation, Piping, Poor Source of Topsoil, Frost Action, Shrink/Swell, Potential Sinkhole, Ponding, Wetness, Min. Depth to Bedrock, pH. Lists various soil types like Aa, Ab, Ac, Ad, Ae, Af, Ag, Ah, Ai, Aj, Ak, Al, Am, An, Ao, Ap, Aq, Ar, As, At, Au, Av, Aw, Ax, Ay, Az, Ba, Bb, Bc, Bd, Be, Bf, Bg, Bh, Bi, Bj, Bk, Bl, Bm, Bn, Bo, Bp, Bq, Br, Bs, Bt, Bu, Bv, Bw, Bx, By, Bz, Ca, Cb, Cc, Cd, Ce, Cf, Cg, Ch, Ci, Cj, Ck, Cl, Cm, Cn, Co, Cp, Cq, Cr, Cs, Ct, Cu, Cv, Cw, Cx, Cy, Cz, Da, Db, Dc, Dd, De, Df, Dg, Dh, Di, Dj, Dk, Dl, Dm, Dn, Do, Dp, Dq, Dr, Ds, Dt, Du, Dv, Dw, Dx, Dy, Dz, Ea, Eb, Ec, Ed, Ee, Ef, Eg, Eh, Ei, Ej, Ek, El, Em, En, Eo, Ep, Eq, Er, Es, Et, Eu, Ev, Ew, Ex, Ey, Ez, Fa, Fb, Fc, Fd, Fe, Fg, Fh, Fi, Fj, Fk, Fl, Fm, Fn, Fo, Fp, Fq, Fr, Fs, Ft, Fu, Fv, Fw, Fx, Fy, Fz, Ga, Gb, Gc, Gd, Ge, Gf, Gg, Gh, Gi, Gj, Gk, Gl, Gm, Gn, Go, Gp, Gq, Gr, Gs, Gt, Gu, Gv, Gw, Gx, Gy, Gz, Ha, Hb, Hc, Hd, He, Hf, Hg, Hh, Hi, Hj, Hk, Hl, Hm, Hn, Ho, Hp, Hq, Hr, Hs, Ht, Hu, Hv, Hw, Hx, Hy, Hz, Ia, Ib, Ic, Id, Ie, If, Ig, Ih, Ii, Ij, Ik, Il, Im, In, Io, Ip, Iq, Ir, Is, It, Iu, Iv, Iw, Ix, Iy, Iz, Ja, Jb, Jc, Jd, Je, Jf, Jg, Jh, Ji, Jj, Jk, Jl, Jm, Jn, Jo, Jp, Jq, Jr, Js, Jt, Ju, Jv, Jw, Jx, Jy, Jz, Ka, Kb, Kc, Kd, Ke, Kf, Kg, Kh, Ki, Kj, Kk, Kl, Km, Kn, Ko, Kp, Kq, Kr, Ks, Kt, Ku, Kv, Kw, Kx, Ky, Kz, La, Lb, Lc, Ld, Le, Lf, Lg, Lh, Li, Lj, Lk, Ll, Lm, Ln, Lo, Lp, Lq, Lr, Ls, Lt, Lu, Lv, Lw, Lx, Ly, Lz, Ma, Mb, Mc, Md, Me, Mf, Mg, Mh, Mi, Mj, Mk, Ml, Mm, Mn, Mo, Mp, Mq, Mr, Ms, Mt, Mu, Mv, Mw, Mx, My, Mz, Na, Nb, Nc, Nd, Ne, Nf, Ng, Nh, Ni, Nj, Nk, Nl, Nm, Nn, No, Np, Nq, Nr, Ns, Nt, Nu, Nv, Nw, Nx, Ny, Nz, Oa, Ob, Oc, Od, Oe, Of, Og, Oh, Oi, Oj, Ok, Ol, Om, On, Oo, Op, Oq, Or, Os, Ot, Ou, Ov, Ow, Ox, Oy, Oz, Pa, Pb, Pc, Pd, Pe, Pf, Pg, Ph, Pi, Pj, Pk, Pl, Pm, Pn, Po, Pp, Pq, Pr, Ps, Pt, Pu, Pv, Pw, Px, Py, Pz, Qa, Qb, Qc, Qd, Qe, Qf, Qg, Qh, Qi, Qj, Qk, Ql, Qm, Qn, Qo, Qp, Qq, Qr, Qs, Qt, Qu, Qv, Qw, Qx, Qy, Qz, Ra, Rb, Rc, Rd, Re, Rf, Rg, Rh, Ri, Rj, Rk, Rl, Rm, Rn, Ro, Rp, Rq, Rr, Rs, Rt, Ru, Rv, Rw, Rx, Ry, Rz, Sa, Sb, Sc, Sd, Se, Sf, Sg, Sh, Si, Sj, Sk, Sl, Sm, Sn, So, Sp, Sq, Sr, Ss, St, Su, Sv, Sw, Sx, Sy, Sz, Ta, Tb, Tc, Td, Te, Tf, Tg, Th, Ti, Tj, Tk, Tl, Tm, Tn, To, Tp, Tq, Tr, Ts, Tt, Tu, Tv, Tw, Tx, Ty, Tz, Ua, Ub, Uc, Ud, Ue, Uf, Ug, Uh, Ui, Uj, Uk, Ul, Um, Un, Uo, Up, Uq, Ur, Us, Ut, Uv, Uw, Ux, Uy, Uz, Va, Vb, Vc, Vd, Ve, Vf, Vg, Vh, Vi, Vj, Vk, Vl, Vm, Vn, Vo, Vp, Vq, Vr, Vs, Vt, Vu, Vv, Vw, Vx, Vy, Vz, Wa, Wb, Wc, Wd, We, Wf, Wg, Wh, Wi, Wj, Wk, Wl, Wm, Wn, Wo, Wp, Wq, Wr, Ws, Wt, Wu, Wv, Ww, Wx, Wy, Wz, Xa, Xb, Xc, Xd, Xe, Xf, Xg, Xh, Xi, Xj, Xk, Xl, Xm, Xn, Xo, Xp, Xq, Xr, Xs, Xt, Xu, Xv, Xw, Xx, Xy, Xz, Ya, Yb, Yc, Yd, Ye, Yf, Yg, Yh, Yi, Yj, Yk, Yl, Ym, Yn, Yo, Yp, Yq, Yr, Ys, Yt, Yu, Yv, Yw, Yx, Yy, Yz, Za, Zb, Zc, Zd, Ze, Zf, Zg, Zh, Zi, Zj, Zk, Zl, Zm, Zn, Zo, Zp, Zq, Zr, Zs, Zt, Zu, Zv, Zw, Zx, Zy, Zz.

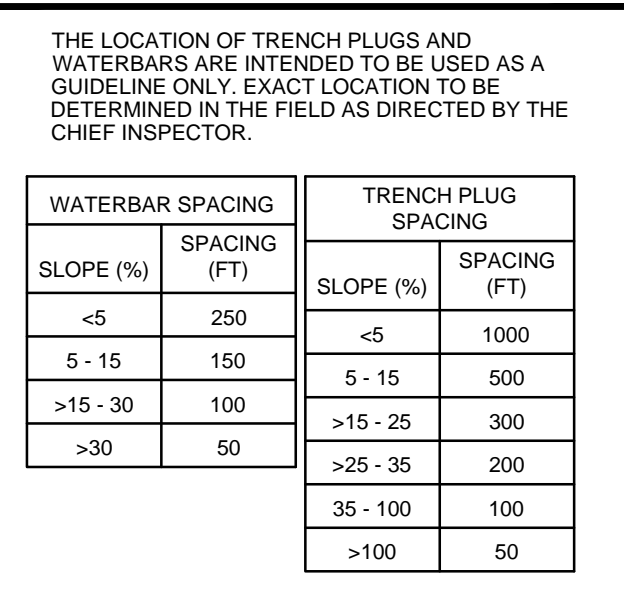
LIMITING SOIL CHARACTERISTICS LEGEND

Table with columns: Map Symbol, Soil Name, Cutbank Cave, Corrosive to Concrete/Steel, Droughty, Easily Eroded, Flooding, Depth to Saturated Zone/Seasonal High Water Table, Hydric/Hydric Inclusions, Low Shear/Landslide Prone, Slow Percolation, Piping, Poor Source of Topsoil, Frost Action, Shrink/Swell, Potential Sinkhole, Ponding, Wetness, Min. Depth to Bedrock, pH. Lists various soil types like LuRb, LuRc, LuRd, LuRe, LuRf, LuRg, LuRh, LuRi, LuRj, LuRk, LuRl, LuRm, LuRn, LuRo, LuRp, LuRq, LuRr, LuRs, LuRt, LuRu, LuRv, LuRw, LuRx, LuRy, LuRz, VuB, VuC, VuD, VuE, VuF, VuG, VuH, VuI, VuJ, VuK, VuL, VuM, VuN, VuO, VuP, VuQ, VuR, VuS, VuT, VuU, VuV, VuW, VuX, VuY, VuZ, Wb, Wc, Wd, We, Wf, Wg, Wh, Wi, Wj, Wk, Wl, Wm, Wn, Wo, Wp, Wq, Wr, Ws, Wt, Wu, Wv, Ww, Wx, Wy, Wz, Xa, Xb, Xc, Xd, Xe, Xf, Xg, Xh, Xi, Xj, Xk, Xl, Xm, Xn, Xo, Xp, Xq, Xr, Xs, Xt, Xu, Xv, Xw, Xx, Xy, Xz, Ya, Yb, Yc, Yd, Ye, Yf, Yg, Yh, Yi, Yj, Yk, Yl, Ym, Yn, Yo, Yp, Yq, Yr, Ys, Yt, Yu, Yv, Yw, Yx, Yy, Yz, Za, Zb, Zc, Zd, Ze, Zf, Zg, Zh, Zi, Zj, Zk, Zl, Zm, Zn, Zo, Zp, Zq, Zr, Zs, Zt, Zu, Zv, Zw, Zx, Zy, Zz.

THE SOIL LIMITATIONS SHALL BE ADDRESSED AS FOLLOWS:

LIMITATIONS AND RESOLUTIONS:
LIMITATION: CUTBANKS CAVE, LOW STRENGTH - CUTBANKS HAVE POTENTIAL TO CAVE AND MANY SOILS ARE LOW STRENGTH.
LIMITATION: CORROSIVE TO STEEL - SOILS CORROSIVE TO STEEL.
LIMITATION: DROUGHTY - SOILS EXHIBITING A POOR MOISTURE-HOLDING CAPACITY, WHICH MAY LIMIT THE VEGETATIVE STABILIZATION ABILITY OF THE SOIL.
LIMITATION: EASILY ERODIBLE - RESOLUTION: SPECIAL ATTENTION SHALL BE GIVEN TO MAINTAINING EXISTING VEGETATION IN EASILY ERODIBLE SOILS.
LIMITATION: FLOODING - ANY SOIL SUBJECT TO INUNDATION DURING A 2-YEAR/24HR STORM EVENT.
LIMITATION: HIGH WATER TABLE, POTENTIALLY HYDRIC - HIGH WATER TABLE IS TO BE EXPECTED AND MANY OF THE SOILS ARE POTENTIALLY HYDRIC.
LIMITATION: HYDRIC/HYDRIC INCLUSIONS - A SOIL THAT IS SATURATED, FLOODED, OR PONDED LONG ENOUGH DURING THE GROWING SEASON TO DEVELOP ANAEROBIC CONDITIONS.
LIMITATION: LOW STRENGTH / LANDSLIDE PRONE - SOILS WITH LOW STRENGTH HAVE A LESSER ABILITY TO RESIST SLOPE FAILURE.
LIMITATION: PIPING - RESOLUTION: PIPING POTENTIAL IN THE SOIL WILL BE MINIMIZED BY THE USE OF TRENCH PLUGS.
LIMITATION: LIMITED AVAILABLE TOPSOIL - RESOLUTION: ANY EXCAVATED TOPSOIL WILL BE STOCKPILED AND REUSED.
LIMITATION: FROST ACTION - THE LIKELIHOOD OF UPWARD OR LATERAL EXPANSION OF THE SOIL CAUSED BY THE FORMATION OF SEGREGATED ICE LENSES.
LIMITATION: WET SOILS - SOME SOILS MAY EXHIBIT A HIGH WATER TABLE OR PONDING.
LIMITATION: MIN. DEPTH TO BEDROCK - SOME SOILS HAVE A MIN DEPTH OF BEDROCK LESS THAN THE TYPICAL TRENCH DEPTH OF 7 FT.
LIMITATION: pH - SOME SOILS HAVE pH VALUES LESS THAN 5.5, WHICH MAY LIMIT THE VEGETATIVE STABILIZATION ABILITY OF THE SOIL.

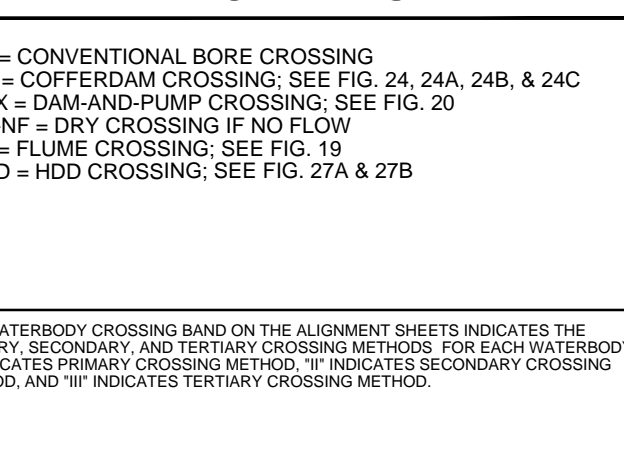
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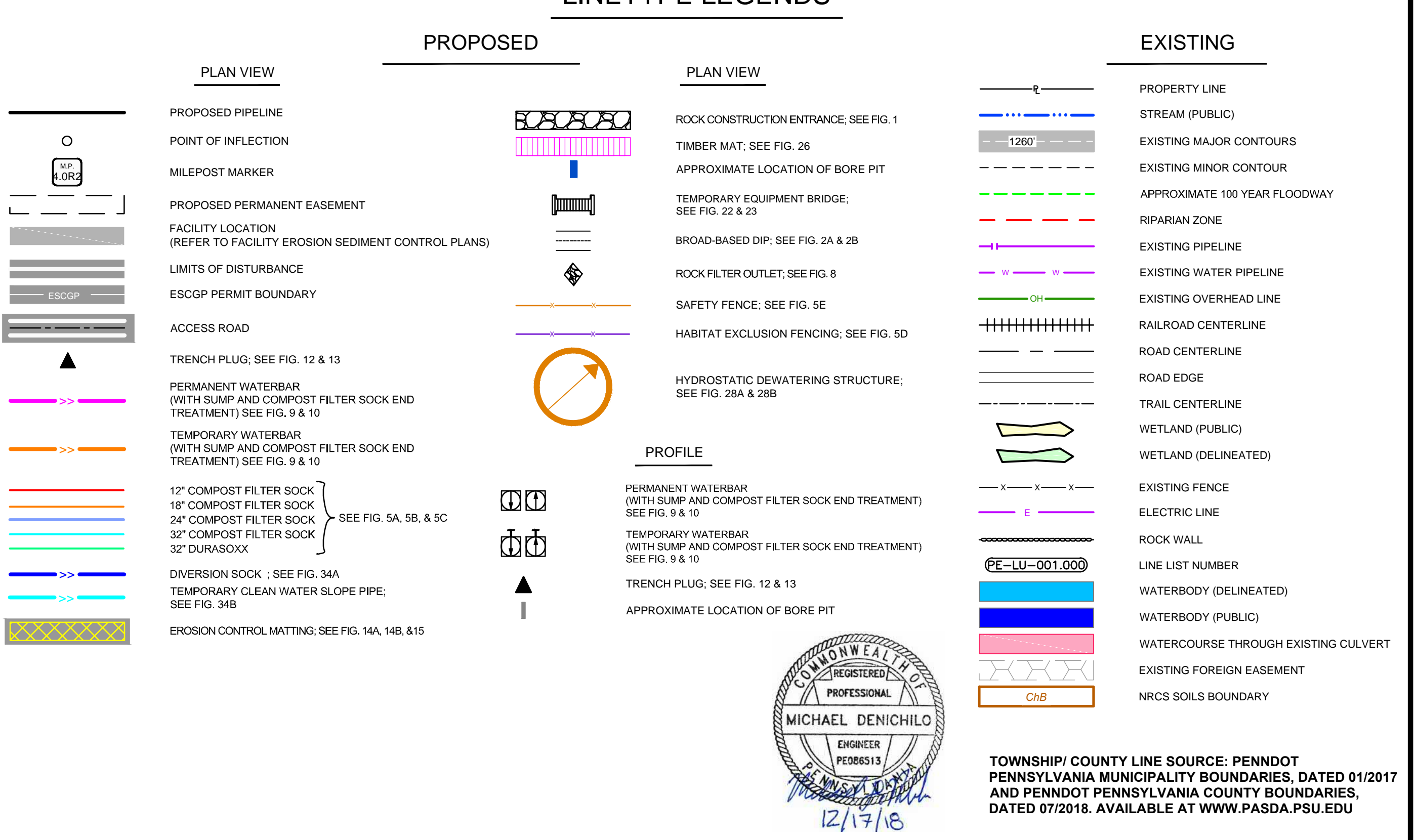
WATERSHED LEGEND

Table with columns: SYM, DESCRIPTION. Lists symbols for Cold Water Fishery, Exceptional Value, High Quality, Trout Stocking Fishery, and Warm Water Fishery.

WATERBODY CROSSING METHOD LEGEND



LINETYPE LEGENDS



TOWNSHIP/COUNTY LINE SOURCE: PENNDOT PENNSYLVANIA MUNICIPAL BOUNDARIES, DATED 01/2017 AND PENNDOT PENNSYLVANIA COUNTY BOUNDARIES, DATED 07/2018. AVAILABLE AT WWW.PASDA.PSU.EDU

SOIL LIMITATIONS NARRATIVE

THE SOILS IMPACTED BY THE PROJECT CAN BE SEEN IN THE LIMITING SOIL CHARACTERISTICS TABLE. AS A RESULT OF THE LIMITING CHARACTERISTICS OF THE SOILS, MANY EROSION AND SEDIMENT CONTROL MEASURES ARE RECOMMENDED. THE FOLLOWING IS A LIST OF PRECAUTIONS TAKEN TO PREVENT NEGATIVE EFFECTS FROM OCCURRING:
1. THE GRADING OF THE CUT AND FILL SLOPES WERE LIMITED TO NOT EXCEED 2H:1V SLOPES.
2. EROSION CONTROL MATTING IS PROPOSED FOR ALL SLOPES GREATER THAN 3H:1V.
3. ANY TRENCHING WILL FOLLOW OSHA APPROVED GUIDELINES FOR TRENCHING.
4. OVERALL SITE HAS BEEN DESIGNED AND GRADED TO SAFELY CONVEY STORM WATER RUNOFF FROM THE CONSTRUCTION PROJECT AREA.

Table with columns: REVISIONS, DATE, DRAWN, CK, APPR. Includes a table for revisions and a table for penneast pipeline project details like scale, drawing no., and revision.

G:\PENNEAST\PIPELINE\EPC\MD\TAPROD1\_STATE\_PERMIT\WORK\DRAWING\EROSION\_SEDIMENT\_CONTROL\_PLAN\NO1\_COVER\_SHEET\_&\_LEGEND\000-01-002\_LEGENDS.DWG\2018/12/12 DUM62479