SOIL LEGEND

SOIL INFORMATION OBTAINED FROM THE USDA-NRCS SOIL SURVEY, VERSION 13, JUNE 5, 2020

SOIL NAME	SOIL LIMITATIONS														
	CUTBANKS CAVE	CORROSIVE TO CONCRETE / STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE ZONE / SEASONAL HIGH WATER TABLE	HYDRIC/HYDRIC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINKHOLES	PONDING	WETNESS
GLADSTONE GRAVELLY LOAM	X	C		X			X					X				
						X										
	X	C									X					

CUT BANK - CUT BANK (IF APPLICABLE) WILL BE LAID BACK AT A MINIMUM OF 3(H):1(V) TO PRODUCE STABLE SLOPES;

CORROSIVE TO CONCRETE/STEEL - CONCRETE AND STEEL WILLL BE FORMULATED TO RESIST CORROSION;

EASILY ERODIBLE - EROSION PROTECTION BLANKETS WILL BE USED TO PREVENT ACCELERATED EROSION ON DISTURBED SLOPES OF 3(H):1(V) AND STEEPER. SEEDING AND MULCHING OF DISTURBED AREAS WILL BE DONE AS SOON AS POSSIBLE AFTER WORK AREAS ARE COMPLETED. DISTURBED AREAS WILL BE INSPECTED AND MAINTAINED B RE-SEEDING AS NEEDED UNTIL A STABLE VEGETATION COVER IS ESTABLISHED;

FLOODING - EARTH DISTURBANCE ACTIVITIES IN LOW-LYING AREAS WILL BE CONDUCTED DURING FAVORABLE WEATHER (IF POSSIBLE) OR WILL BE DEWATERED DURING CONSTRUCTION ACTIVITIES;

SEASONALLY HIGH WATER TABLE - - IF CONSTRUCTION DEWATERING IS CONDUCTED, DEWATERING FLUIDS WILL BE PUMPED THROUGH A FILTER BAG AND DISCHARGED OVER STABLE GROUND SURFACES;

HYDRIC INCLUSIONS - A WETLANDS INVESTIGATION WAS CONDUCTED THROUGHOUT THE PROJECT AREA. TIMBER MATTING WILL BE USED IN PLACE OF WORKAREAS AND ACCESS ROADS WITHIN WETLANDS;

LOW STRENGTH / LANDSLIDE PRONE - CUT AND FILL SLOPES WILL BE CONSTRUCTED AT A SLOPE ADEQUATE TO PREVENT LANDSLIDES;

SLOW PERCOLATION - EXCAVATIONS WILL BE DEWATERED (AS APPROPRIATE). DEWATERING FLUIDS WILL BE PUMPED THROUGH A PUMPED WATER FILTER BAGAND DISCHARGED OVER STABLE GROUND SURFACES;

PIPING - NO IMPOUNDMENTS ARE PROPOSED TO BE CONSTRUCTED DURING THIS PROJECT. THEREFORE PIPING CONSIDERATIONS ARE NOT APPLICABLE;

POOR SOURCE OF TOPSOIL - ADDITIONAL FERTILIZER, LIME, AND MULCH WILL BE APPLIED AS NEEDED TO ESTABLISH THE REQUIRED 70% UNIFORM VEGETATIVE GROWTH TO STABILIZE THE DISTURBED AREAS;

FROST ACTION - THE FOUNDATIONS WILL BE DESIGNED AND CONSTRUCTED TO PREVENT DAMAGE BY FROST HEAVE;

SHRINK / SWELL - THE TRANSMISSION LINE STRUCTURES WILL BE CONSTRUCTED TO NOT BE SUSCEPTIBLE TO SHRINK / SWELL ISSUES;

POTENTIAL SINKHOLES - A DETAIL FOR REPAIR OF SINKHOLES IS PRESENTED ON THE DRAWINGS;

PONDING - EARTH DISTURBANCE ACTIVITIES IN LOW-LYING AREAS WILL BE CONDUCTED DURING FAVORABLE WEATHER (IF POSSIBLE) OR WILL BE DEWATERED DURING CONSTRUCTION ACTIVITIES;

WETNESS - TEMPORARY WORK AREAS AT EACH STRUCTURE LOCATION WILL BE CONSTRUCTED OF GRAVEL OR WOODEN MATS TO FACILITATE A STABLE DRY WORK AREA;

CONSTRUCTION NOTES:

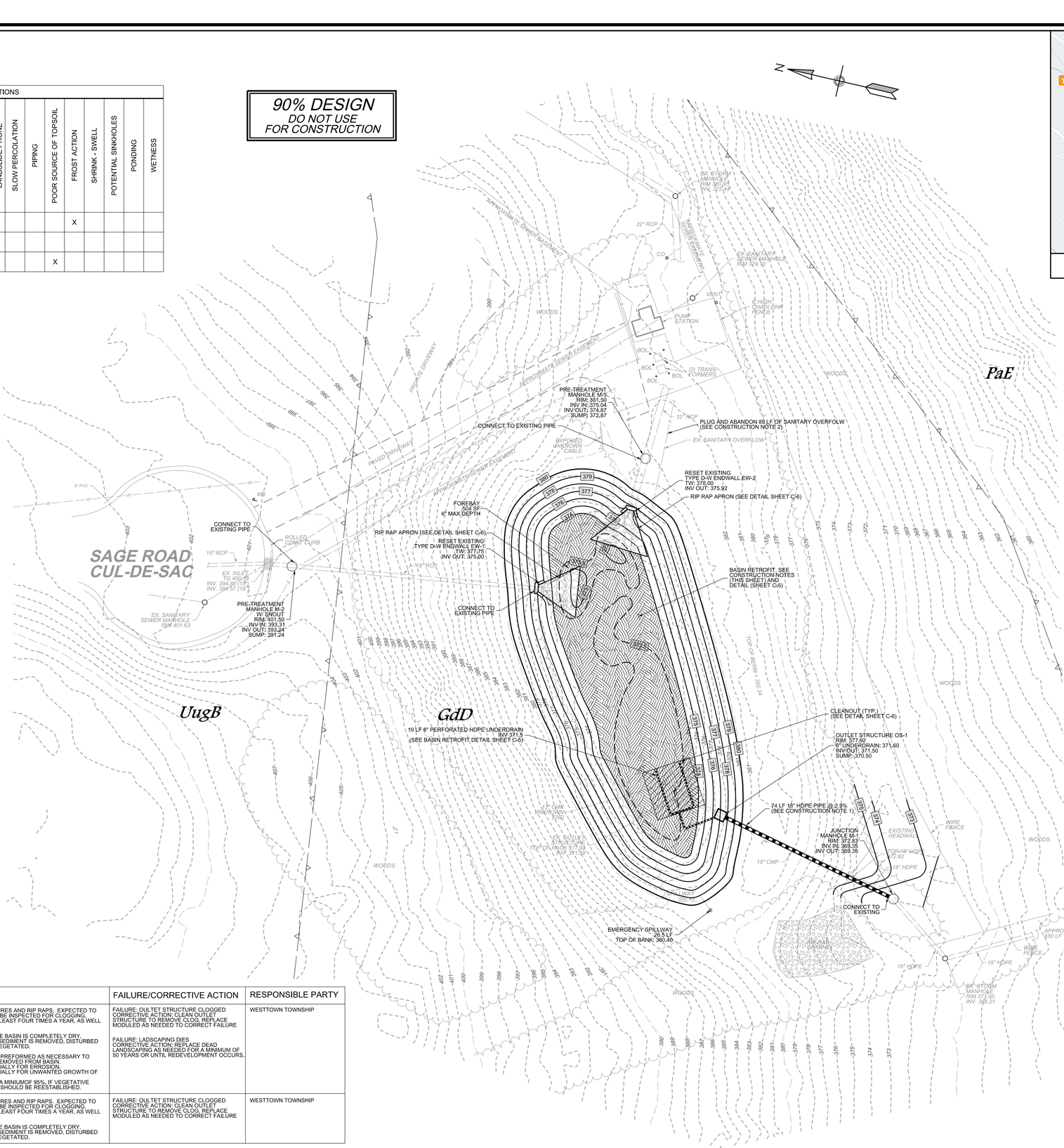
1. CONTRACTOR TO REPLACE BERM "KEY-WAY" WITH BENTONITE OR CONCRETE TRENCH PLUGS, COMPACTION IN TRENCH TO BE IN ACCORDANCE WITH SPECIFICATION SECTION 312346.13 TRENCHING.
2. CONTRACTOR TO PLUG SANITARY OVERFLOW AT PUMPSTATION, CUT AND CAP LINE TWO (2) FEET BELOW THE SURFACE, AND FILL ENTIRE LINE WITH FLOWABLE GROUT PER THE SPECIFICATIONS.
3. BASIN BOTTOM TOPSOIL TO BE IMPORTED TO ALLOW INFILTRATION

PROPOSED SUB-SURFACE EXTENDED DETENTION BASIN RETROFIT:

1. CONTRACTOR TO SCARIFY BASIN BOTTOM PRIOR TO INSTALLATION OF FABRIC, STONE, AND UNDERDRAIN.
2. REMOVE ESTIMATED 393 CY OF MATERIAL AND REPLACE WITH 331 CY OF IMPORTED TOPSOIL TO ELEVATION INDICATED
3. BASIN TO BE PROVIDED WITH 4,680 S.F., NATIVE PLANTINGS (SEE SHEET C-9 AND C-10)
4. PROVIDE TEMPORARY EROSION CONTROL DURING CONSTRUCTION INCLUDING FILTER SOCKS AND EROSION CONTROL BLANKET (SEE E+S CONTROL PLAN, SHEET C-7)

LEGEND:

EX EASEMENT
EX CONTOUR -382-
EX TREE LINE
EX SEWER LINE S
EX WATER LINE W
EX ELECTRIC LINE E
SOIL BOUNDARY LINE
PR CONTOUR 374
STONE STORAGE
PR STORM SEWER
PR UNDERDRAIN



BMP	PROCEDURE	FAILURE/CORRECTIVE ACTION	RESPONSIBLE PARTY
BMP 6.6.3: DRY EXTENDED DETENTION BASIN	ALL BASIN STRUCTURES, INCLUDING OUTLET SUTRUCTURES AND RIP RAPS, EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING. EXCESSIVE DEBRIS, AND SEDIMENT ACCUMULATION AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM GREATER THAN 1 INCH SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY. ONCE SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATLEY STABLEIZED AND REVEGETATED. MOWING AND/OR TRIMMING OF VEGITATION SHOULD BE PREFORMED AS NECESSARY TO SUSTAIN THE SYSTEM, BUT ALL DETRITUS SHOULD BE REMOVED FROM BASIN. - VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR ERROSION. - VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR UNWANTED GROWTH OF EXOTIC/INVASIVE SPECIES. - VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIUMOF 95%, IF VEGETATIVE COVER HAS BEEN REDUCED BY 10%, VEGETATION SHOULD BE REESTABLISHED.	FAILURE: OULTET STRUCTURE CLOGGED CORRECTIVE ACTION: CLEAN OUTLET STRUCTURE. TO REMOVE CLOG, REPLACE MODULED AS NEEDED TO CORRECT FAILURE FAILURE: LADSCAPING DIES CORRECTIVE ACTION: REPLACE DEAD LANDSCAPING AS NEEDED FOR A MINIMUM OF 50 YEARS OR UNTIL REDEVELOPMENT OCCURS.	WESTTOWN TOWNSHIP
BMP PRE-TREATMENT MANHOLE	ALL BASIN STRUCTURES, INCLUDING OUTLET SUTRUCTURES AND RIP RAPS, EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING. EXCESSIVE DEBRIS, AND SEDIMENT ACCUMULATION AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM GREATER THAN 1 INCH SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY. ONCE SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATLEY STABLEIZED AND REVEGETATED.	FAILURE: OULTET STRUCTURE CLOGGED CORRECTIVE ACTION: CLEAN OUTLET STRUCTURE. TO REMOVE CLOG, REPLACE MODULED AS NEEDED TO CORRECT FAILURE	WESTTOWN TOWNSHIP

LOCATION MAP
SCALE = 1" = 2000'

CONSTRUCTION SEQUENCE:

1. THE CONTRACTOR SHALL CLEARLY DELINEATE ALL PROPOSED DISTURBANCE LIMITS WITH FENCING AROUND THE WORK LOCATIONS.
2. INSTALL ROCK CONSTRUCTION ENTRANCE AT THE PROPOSED LOCATION INDICATED ON THE PLAN.
3. INSTALL COMPOST FILTER SOCKS AS INDICATED ON THE PLAN, DOWN SLOPE OF ALL FILL AREAS, AND AS DIRECTED BY THE ENGINEER.
4. UPON COMPLETION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITIES, THE PROJECT SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
5. ERECT ORANGE CONSTRUCTION FENCE AS REQUIRED TO PROTECT THE CONSTRUCTION.
6. PLUG AND ABANDON SAITARY OVERFLOWS AS INDICATED.
7. EXCAVATE FOR THE PROPOSED MANHOLE M-1. SAWCUT THE EXISTING 18" CMP PIPE AND INSTALL THE MANHOLE AS SHOWN ON THE PLAN. BRICK AND MORTAR THE PIPE OPENINGS.
8. INSTALL 18" HDPE PIPE BETWEEN MANHOLE M-1 AND OUTLET STRUCTURE OS-1.
9. EXCAVATE FOR THE PROPOSED MANHOLE M-2. SAWCUT THE EXISTING 18" RCP AND INSTALL THE MANHOLE AS SHOWN ON THE PLAN. BRICK AND MORTAR THE PIPE OPENINGS.
10. EXCAVATE AND INSTALL THE PROPOSED 18" HDPE AND CONNECT TO EXISTING ENDWALL EW-1. EW-1 TO BE RESET.
11. EXCAVATE FOR THE PROPOSED MANHOLE M-3. SAWCUT THE EXISTING 32" RCP AND INSTALL THE MANHOLE AS SHOWN ON THE PLAN. BRICK AND MORTAR THE PIPE OPENINGS.
12. ALL STORMWATER IMPROVEMENTS SHALL BE SEALED AFTER INSTALLATION TO PREVENT SEDIMENT LADEN RUNOFF FROM EXITING THE SITE UNTIL ALL DISTURBED UPSTREAM TRIBUTARY AREAS HAVE ACHIEVED 70% UNIFORM STABILIZATION AS DEFINED BY THE CHESTER COUNTY CONSERVATION DISTRICT.
13. EXCAVATE AND INSTALL THE PROPOSED 32" HDPE AND CONNECT TO EXISTING ENDWALL EW-2. EW-2 TO BE RESET.
14. CLEAR AND GRUB THE BOTTOM OF THE BASIN. STRIP TOPSOIL FROM THE BOTTOM OF THE BASIN STOCKPILE TOPSOIL IN THE DESIGNATED TOPSOIL STOCKPILE LOCATION SHOWN ON THE PLAN. TOPSOIL STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
15. EXCAVATE AND INSTALL STONE STORAGE AND UNDERDRAIN. CONNECT UNDERDRAIN TO OUTLET STRUCTURE OS-1.
16. SCARIFY BASIN BOTTOM IN ACCORDANCE WITH THE SPECIFICATIONS.
17. EXCAVATE AND INSTALL FOREBAYACCORDING TO THE SPECIFICATIONS. CONTRACTOR TO PREVENT EQUIPMENT FROM COMPACTING FOREBAY BOTTOM.
18. FINE GRADE THE BASIN BOTTOM AS SHOWN ON THE PLAN AND ACCORDING TO THE CONSTRUCTION SPECIFICATIONS, PROVIDE SOIL AMENDMENT IN ZONE 1 TO THE DEPTH SPECIFIED ON THE PLAN AND ACCORDING TO THE CONSTRUCTION SPECIFICATIONS.
19. INSTALL RIP RAP APRONS AT ENDWALLS EW-1 AND EW-2.
20. STABILIZE BASIN BOTTOM, INSTALL ALL PLANTINGS AND SEED MIX AS SHOWN ON THE PLAN AND ACCORDING TO THE CONSTRUCTION SPECIFICATIONS.
21. GRADE THE BASIN EMBANKMENTS AND STABILIZE WITH TOP SOIL, SEED, AND EROSION CONTROL BLANKET AS SHOWN ON THE PLAN AND ACCORDING TO THE CONSTRUCTION SPECIFICATIONS.
22. PLACE FILL MATERIAL WITHIN THE EMBANKMENT IN LAYERS NOT MORE THAN EIGHT (8") INCHES IN LOOSE DEPTH AND COMPACT FILL MATERIAL TO NOT LESS THAN THE NINETY (90%) PERCENTAGE OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698. UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
23. WHEN THE SITE HAS REACHED FINISHED GRADE AND ACHIEVED 70% UNIFORM STABILIZATION, REMOVE CONSTRUCITON ENTRANCE, DIVERSION SOCKS, AND ORANGE CONSTRUCTION FENCE. STABILIZE ALL AREAS DISTURBED BY REMOVAL OF ALL TEMPORARY E&S BMPS. MAINTAIN COMPOST FILTER SOCKS BELOW CONSTRUCTION ENTRANCE.
24. UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY E&S BMPS AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER/OPERATORS SHALL CONTACT THE MUNICIPAL AUTHORITY FOR A FINAL INSPECTION.

SCALE: 1" = 20'
0 20 40

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MARK	REVISIONS	DATE
	COMMENT - 90% FOR TOWNSHIP REVIEW	3/30/21

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SITUATE IN
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

PCSM & SITE IMPROVEMENTS PLAN

PREPARED FOR
WESTTOWN TOWNSHIP

PROJECT NAME
SAGE ROAD BASIN RETROFIT

DESIGNED BY:	MJC/AR
DRAWN BY:	CAS/MJC
CHECKED BY:	BMF/BU
PROJECT NO.	WTT-20-376
DATE:	02/01/2021
SCALE:	1"=20'

SHEET 4 OF 10

C-4

P:_Design\WTT-20-376 Sage Road Basin Retrofit\Sheets\WTT20376-PLAN.dgn