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COMPANY: HONEY BROOK TOWNSHIP ADDRESS: 500 SUPLEE RD HONEY BROOK, PA. 19344 CONTACT: KRIS BRY EMAIL: Kbry@honeybrooktwp.org

PHONE: 610-273-3970 COMPANY: AQUA PENNSYLVANIA ADDRESS: 762 LANCASTER AVE BRYN MAWR, PA. 19010

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COMPANY: COMCAST ADDRESS: 1250 HADDONFIELD-BERLIN RD CHERRY HILL, NJ. 08034 CONTACT: WYATT PARRISH EMAIL: WYATT_PARRISH@CABLE.COMCAST.COM

PHONE: 484-368-4391 COMPANY: PECO AN EXELON COMPANY C/O USIC

ADDRESS: 450 S HENDERSON ROAD SUITE B KING OF PRUSSIA, PA. 19406 CONTACT: NIKKIA SIMPKINS EMAIL: nikkiasimpkins@usicllc.com

PHONE: 484-681-5720

COMPANY: NORTHWESTERN CHESTER COUNTY MUNI AUTH ADDRESS: 187 DAMPMAN ROAD

PO BOX 308 HONEY BROOK, PA. 19344

CONTACT: DEREK INK EMAIL: PLANT@NWCCMA.NET

PHONE: 610-273-2264

COMPANY: PPL ELECTRIC UTILITIES CORPORATION ADDRESS: 437 BLUE CHURCH RD PAXINOS, PA. 17860 CONTACT: DOUG HAUPT

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COMPANY: ENERGY TRANSFER ADDRESS: 1300 MAIN ST HOUSTON, TX. 77002 CONTACT: SAUL SHAW EMAIL: saul.shaw@energytransfer.com PHONE: 713-989-7342

COMPANY: SERVICE ELECTRIC CABLEVISION INC ADDRESS: PO BOX 8 BIRDSBORO, PA. 19508

CONTACT: MIKE SPAYD EMAIL: mike.spayd@secv.com PHONE: 610-582-5317

COMPANY: TEXAS EASTERN/ENBRIDGE ADDRESS: SUITE 400 2601 MARKET PLACE HARRISBURG, PA. 17110 CONTACT: RYAN LUMBATIS EMAIL: Ryan.Lumbatis@enbridge.com PHONE: 717-540-8330

COMPANY: UGI UTILITIES INC ADDRESS: 225 MORGANTOWN RD READING, PA. 19611 CONTACT: KURT ZIELASKOWSKI EMAIL: kzielaskowski@ugi.com PHONE: 610-736-5571

COMPANY: VERIZON BUSINESS FORMERLY MCI ADDRESS: 7000 WESTON PKWY CARY, NC. 27513 CONTACT: VICTOR WOOD EMAIL: victor.s.wood@verizon.com PHONE: 919-414-2782





ROBERT W. SWEPPENHEISER II, P.E.

To the best of my professional knowledge, judgment and belief, the design meets or exceeds the Pennsylvania technical guide standards and specifications and the DEP Manure Management Manual.

- <u>NOTES</u> 1. Regulations: All federal, state and local laws, rules and regulations covering the construction of this facility shall be strictly followed. The owner is responsible for obtaining all construction permits.
- 2. Act 187: It is the duty of the contractors to comply with the provisions of the 'PA One Call' utility check before performing any excavation work. The toll-free number of the One-Call system is 1-800-242-1776.
- 3. Pre-construction meeting: A meeting between the owner, contractor and engineer shall be required prior to any construction
- 4. Certification of performance: The certification of conformance shall certify that all work was performed according to the Pennsylvania Technical Guide.
- 5. Warning sign: Install warnings at clearly visible locations. Signs shall state, "Danger Drowning Hazard" or approved equal. 6. Capacity (gallons): 10'X72' Round Tank = 304,548 gallons, Rectangular Storage - 59,603 gallons, Reception Pit - 32,478
- 7. The items below are included as part of this contract package:
- construction specifications PA 313 waste storage structure
- PA342 critical area planting PA367 roofs and covers
- PA382 Fence
- PA558 roof runoff structure PA560 access road
- PA575 trails and walkways PA561 heavy use area protection
- PA606 subsurface drain
- PA620 underground outlet PA587 structure for water control
- PA634 waste transfer system PA533 pumping plant
- PA578 stream crossing PA468 lined waterway or outlet
- PA500 obstruction removal • PA391 Riparian Forest Buffer
- 8. Benchmark Information:
- BM-1: 609.15 nail in hub BM-2: 624.06 nail in wood berm
- 9. This project has been designed according to the Pennsylvania Technical Guide. 10. Contractor shall notify TeamAG 48 hours prior to pouring concrete.

PROPOSED AGRICULTURAL WASTE BMPS

FOR

DAVID KAUFFMAN

SITE ADDRESS: 549 BEAVER DAM ROAD HONEYBROOK, PA 19344

HONEYBROOK TOWNSHIP CHESTER COUNTY, PA

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STORM-	1 - STORMWATER DETAILS

To the best of my knowledge, I certify that the practices have be	en installed as per the attached
drawings and specifications, based on my observations and info	rmation provided to me.
	<u>.</u>
Signature of Quality Assurance Person	Date
In my professional opinion, I certify that the practices have been	installed as per the attached drawings
and specifications, based on the information provided to me and	l/or observations I have made.
Signature of Engineer	Date









GENERAL EROSION CONTROL NOTES:

- . All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E#S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion
- At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E#S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.
- 3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
- 4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
- 5. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
- 5. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E#S plan.
- At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
- 8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan maps(s) in the amount necessary to complete the finish grading of all exposed greas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H:IV or
- . Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
- 10. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
- 11. All off-site waste and borrow areas must have an E\$S plan approved by the local conservation district or the Department fully implemented prior to being activated. 12. The contractor is responsible for ensuring that any material brought on site is clean fill. Form
- FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing. 13. All pumping of water from any work area shall be done according to the procedure described in
- this plan, over undisturbed vegetated areas. 14. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and renetting must be performed immediately. If the E#S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
- 15. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
- 16. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface 17. All sediment removed from BMPs shall be disposed of in the manner described on the plan
- drawinas. 18. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches (6 to 12
- inches on compacted soils) prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes shall have a minimum of 2 inches of topsoil. 19. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or
- other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes. 20. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness. 21. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or
- objectionable materials that would interfere with or prevent construction of satisfactory fills. 22. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills
- 23. Fill shall not be placed on saturated or frozen surfaces. 24. Seeps or springs encountered during construction shall be handled in accordance with the standard
- and specification for subsurface drain or other approved method. 25. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
- Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within I year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within I year shall be stabilized in accordance with the permanent stabilization specifications.
- 27. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
- 28. E\$S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the Department.
- 29. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E\$S BMPs
- 30. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions are to be done only during the germinating season. 31. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed
- areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
- 32. Failure to correctly install E#S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E#S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.

ADDITIONAL NOTES:

- . Concrete wash water shall be handled in the manner described on the plan drawings. In no case shall it be allowed to enter any surface waters or groundwater systems.
- 2. All channels shall be kept free of obstructions including but not limited to fill, rocks, leaves, woody debris, accumulated sediment, excess vegetation, and construction material/wastes.
- 3. Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work area in the manner described in this plan until such restoration is complete.
- 4. Channels having riprap, Reno mattress, or gabion linings must be sufficiently over-excavated so that the design dimensions will be provided after placement of the protective lining.
- Sediment basins and/or traps shall be kept free of all construction waste, wash water, and other debris having potential to clog the basin/trap outlet structures and/or pollute the surface waters. Sediment basins shall be protected from unauthorized acts by third parties.
- Any damage that occurs in whole or in part as a result of basin or trap discharge shall be immediately repaired by the permittee in a permanent manner satisfactory to the municipality, local conservation district, and the owner of the damaged property.
- 8. Upon request, the applicant or his contractor shall provide an as-built (record drawing) for any sediment basin or trap to the municipal inspector, local conservation district or the Department.
- 9. Erosion control blanketing shall be installed on all slopes 3H:IV or steeper within 50 feet of a surface water and on all other disturbed areas specified on the plan maps and/or detail sheets.
- 10. Fill material for embankments shall be free of roots, or other woody vegetation, organic material, large stones, and other objectionable materials. The embankment shall be compacted in maximum 6"-12" layered lifts at 90% density.

SEQUENCE OF CONSTRUCTION:

- 1. All earth disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed in compliance with Chapter 102 regulations before any following stage is initiated. Clearing and grubbing shall be limited only to those areas described in each stage.
- 2. At least 7 days before starting any earth disturbance activities, the operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion and sedimentation control plan preparer, and a representative of the County Conservation District to schedule an on-site pre-construction meeting. Also, at least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the Pennsylvania One Call System Inc. at 1-800-242-1776 for buried utilities location.
- Before implementing any revisions to the approved erosion and sediment control plan or revisions to other plans which may affect the effectiveness of the approved E#S control plan, the operator must receive approval of the revisions from the County Conservation District.
- 4. The operator shall remove from the site, recycle or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 PA Code 260.1 et seq, 271.1 e. seq, and 287.1 et seq,

- 5. Before disposing of soil or receiving borrow for the site, the operator must assure that each spoil or borrow area has an erosion and sediment control plan approved by the County Conservation District, and which is being implemented and maintained according to Chapter 102 regulations. The operator shall also notify the County Conservation District in writing of all receiving spoil and borrow areas when they have been identified. Construct and stabilize gravel drive to access the site. Install rock construction entrance.
- Install compost filter sock as shown on the drawinas.
- Install construction fence around infiltration area.
- Remove topsoil and rough grade area for the proposed barns and stacking shed. 10. Place excess soil in stockpile as needed. Stockpile height shall not exceed 35 ft. Side slopes must be 2:1 or flatter. Install fabric fence below topsoil and excess material stockpiles. 11. A crushed aggregate base course shall be immediately applied to the driveway system which is to
- service the proposed site. 12. Stabilize gravel access to site and begin construction of the structures. Construct vegetated swale. CRITICAL STAGE - See sheet PC-2 for specifications.
- 14. Fine grade the lawn areas and seed or sod immediately with a perennial grass cover. Lawns shall be maintained on a regular basis and repaired, reseeded and mulched until stabilization is achieved
- 15. The bioretention basin should not be installed until all tributary areas are uniformly stabilized. The Conservation District and Township shall approve the start of construction on the bioretention
- 16. Construct the Bioretention basin. The basin should be excavated from the sides to reduce compaction as much as possible. CRITICAL STAGE - See sheet PC-2 for specifications. Equipment that exerts a low ground pressure shall be used to construct the basins and all other infiltration BMPs to avoid compaction of the infiltration floor.
- 18. Install Inlet 1 and Inlet 2 and associated piping. 19. Prior to seeding and placement of compost mixture, the infiltration basin floors shall be chisel
- plowed to a depth of 12-18 inches with suitable equipment. 20. Plant a seed mix containing "Virginia Wild rye" such as "Retention Basin Floor Seeding Mix ERNMX-126" from Ernst Conservation Seeds at 1/2 to 1 pound per 1,000 square feet.
- 21. After final grading, seeding will take place to establish a dense vegetative cover. 22. After permanent stabilization of site (i.e. a minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation) has been achieved, the temporary erosion and sedimentation controls must be removed. Areas disturbed during the removal of the controls shall be restabilized.
- 23. Upon completion of an earth disturbance activity or any stage or phase of an activity, the site shall be immediately seeded, mulched or otherwise protected from accelerated erosion and sedimentation. Erosion and sediment control BMPs shall be implemented and maintained until the permanent stabilization is completed. For an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following: (1) A minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation. (2) An acceptable BMP which permanently minimizes accelerated erosion and sedimentation.
- 24. Within 30 days after the completion of earth disturbance activities authorized by this permit, including the permanent stabilization of the site and proper installation of PCSM BMPs in accordance with the approved PCSM Plan, or upon submission of the NOT if not sooner, the permittee shall file with the Department or authorized Conservation District, a statement signed by a licensed professional and by the permittee certifying the work has been performed in accordance with the terms and conditions of this permit and the approved E#S and PCSM Plans. Completion certificates are needed to ensure that all work is performed in accordance with the terms and conditions of the permit and the approved E#S and PCSM Plans.

MAINTENANCE OF EROSION CONTROL FACILITIES:

- 1. The General Contractor, or in the absence of a General Contractor, the Operator/Owner, shall be responsible for implementing and maintaining all Soil Erosion Controls. The Contractor shall, at the end of each week as well as with each rainfall, inspect all drainage and erosion control facilities to determine if they still function. Silt fence shall be cleared of silt when silt reaches halfway up fence. Additional stone ballast shall be placed, if necessary, to control the tracking of mud by construction vehicles onto the adjacent roads. 2. Check basin embankments, spillways, and outlets for erosion, piping and settlement. Make
- necessary repairs immediately. Replace displaced riprap within the outlet energy dissipater immediately after it is displaced and especially after major storm discharge events. 3. If additional silt fence or diversions are necessary, they shall be provided as required. The
- County Conservation District must review all changes. Sediment deposited behind silt barriers shall be removed and incorporated into the final grading operations. 4. Until the site is stabilized, all erosion and sedimentation controls must be maintained properly. Maintenance must include inspections of all erosion and sedimentation controls after each storm
- event and on a weekly basis. All site inspections will be documented in an inspection log kept for this purpose. The compliance actions and the date, time and name of the person conducting the inspection. The inspection log will be kept on site at all times and made available to the district on request 5. All preventative and remedial maintenance work, including clean out, repair, replacement,
- regarding, reseeding, remulching and renetting must be performed immediately. If erosion and sedimentation BMPs fail to perform as expected, replace or modify installed BMPs. An extra supply of stone, seed, mulch and silt fence shall be kept on site for emergency purposes.
- sediment and erosion controls shall be removed and the areas stabilized. Sediment must be removed from basins when sediment has accumulated to the clean out elevation. Sediment basins must be protected from unauthorized acts of third parties.
- Stockpile heights must not exceed 35'. Stockpile slopes must be 2:1 or flatter. 9. An area shall be considered to have achieved final stabilization when it has a minimum of 70%
- sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding or other movements.

10. Mulch with mulch control netting or erosion control blankets must be installed on all slopes 3:1 and areater.

PROCEDURES FOR RECYCLING AND WASTE HANDLIING & DISPOSAL: The developer or its authorized representative shall to the greatest extent possible recycle and reuse construction materials when no longer needed on the site. Concrete forms will be reused in other construction projects. Excess materials will be used in other projects as much as is feasible, rather than disposal on the site. Construction waste anticipated for this project includes wood forms, excess concrete, cardboard and other typical construction wastes. All wastes shall be handled and disposed of properly in accordance with governing state and federal regulations. Manure shall be handled and disposed of according to PA Act 38 and other governing manure management plan requirements and applicable regulations.

FILL MATERIALS:

- 1. The General Contractor, or in the absence of a General Contractor, the Operator/Owner shall be responsible for performing Environmental Due Diligence to ensure that all fill material associated with the project qualifies as Clean Fill. All fill material must be used in accordance with the
- Department's policy "Management of Fill", document number 258-2182-773. Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.)
- 3. Environmental due diligence is defined as: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diliaence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the Department's policy "Management of Fill".

6. When the entire project has become stabilized (i.e. uniform vegetative cover), any temporary

uniform perennial vegetative cover or other permanent non-vegetative cover with a density

GENERAL SEEDING NOTES

1. Any disturbed area on which activity has ceased and which will remain exposed must be seeded and mulched immediately. During non-germinating periods, mulch must be applied at the recommended rates. Disturbed areas which are not at finished arade and which will be redisturbed within I year may be seeded and mulched with a quick growing temporary seeding mixture and mulch. Disturbed areas which are either at finished grade or will not be redisturbed within one year must be seeded and mulched with a permanent seed mixture and mulch. 2. Diversions, channels, sedimentation basins sediment traps and stockpiles must be seeded and

mulched immediately. 3. Hay or straw mulch must be applied at rates of at least 3.0 tons per acre. Mulch shall be anchored immediately after application. Mulch shall be held down by synthetic binders or mechanical means.

TEMPORARY SEEDING NOTES Site preparation: Apply 1 ton/acre agricultural grade limestone and 10-10-10 fertilizer at a rate of 500 lbs./acre and work in where possible. Mulch seeded areas immediately after seeding.

PERMANENT SEEDING NOTES Site preparation: Grade as necessary to bring the subgrade to a true, smooth slope parallel to and six inches below finished grade. Place topsoil over specified areas to a depth sufficiently greater than six inches so that after settlement and light rolling the complete work will conform to lines, grades, and elevations shown.

Apply 6 tons/acre agricultural grade limestone and 10-20-10 fertilizer at a rate of 1,000 lbs./acre or as per soil test. Limestone and fertilizer may not be required in agricultural fields.

Fertilizer and agricultural limestone shall be thoroughly incorporated into the soil by rototilling or other method to a minimum depth of four inches. The entire surface shall be done in two separate operations. The second seeding shall be done immediately after the first and at right angles to the first seeding and lightly raked into the soil. Mulch seeded areas immediately after seeding. RECOMMENDED SEED MIXTURES

CONDITION	MIXTURE NUMBER	SPECIES	SEEDING RATES PURE LIVE SEED ⁽¹⁾			
Temporary	1	Spring oats, or Annual ryegrass (spring or fall), or Winter wheat (fall), or Winter rye (fall)	64 10 90 56			
	1	Temporary mixture, plus				
Lawn area flatter than 3 to 1 and permanent swales ⁽²⁾	2	Tall fescue, or Fine fescue, or Kentucky bluegrass, plus Redtop, or Perennial ryegrass	60 35 25 3 15			
Lawn area	1	Temporary mixture, plus				
3 to 1 and steeper	3	Birdsfoot trefoil, plus Tall fescue	6 30			

Adapted from PA DEP Erosion and Sediment Pollution Control Program Manual

⁽¹⁾ PLS is the product of the percentage of pure seed times percentage germination divided by 100. ⁽²⁾This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.



NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER I YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

> STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

> STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

> > NOT TO SCALE

REVISION							
ВҮ							
DATE							
PROJECT MANAGER ROB SWEPPENHEISER		UESIGN DI : KNS	DRAWN BY : RWS/I MR		DATE : APRIL 19, 2024		PROJECT NO.: 2743-23-01
SEAL SEAL	AN REGISTERED A	CIA PROFESSIONAL ANTH	ROBERT W. SWEPPENHEISER II	ENGINEER V	HAN PEOA5582-EF		
		120 LAKE STREET Fruidata da 17633	EFTIKALA, FA 17322 PHONE: 717-721-6795 FAX: 717-721-9275	www.TeamAalnc.com TeamAa@TeamAalnc.com		SCALE	AS NOTED
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ROOF CONSTRUCTION NOTES:

- ACI318-02 Structural Concrete ASCE 7-10 - Minimum design loads for buildings and other structures 1.2 1.3. AISC Manual of Steel Construction 2005 - Allowable stress design 2. All construction shall be in accordance with the international building code and all applicable state and local codes.
- . Bolts, screws or metal plate connectors may be used instead of nails. The connections must provide equal or greater strength according to the national forest products association's national design specifiation. All wood in contact with the ground or concrete shall be pressure treated.
- Solid or laminated posts shall be as shown in the drawings. If other post type is desired, it must be approved by the engineer. 6. All other lumber, unless specically called out, may be spruce-pine-fir (s-p-f)
- All metal hardware and nails shall be stainless steel or hot-dip galvanized (HDG). Stainless steel shall be grade types 304 or 316. Hot dipped aalvanized fasteners shall conform to ASTM A 153 and hot-dip galvanized connectors shall conform to ASTM Standard A 653 (Class G-185). All fasteners, connectors, and any other metal contacting ACZA, ACQ, or CA treated wood shall be stainless steel. There may be additional products (other than stainless steel and hot-dip galvanized) which are suitable for use in treated wood except for the types listed in the note above. These screws and connectors have proprietary anti-corrosive technologies and are acceptable for treated wood exposed to moisture when used according to the hardware manufacturer's recommendations and <u>must be clearly marked for use with the type of</u> <u>treated wood being used.</u> 8. All structural nail connections must be nailed with twisted or ring shank
- 9. Power driven nails (PDN) shall be 0.131 diameter or larger, deformed shank, and helical (spiral) or annular (ring) type. The number and length of 0.131 diameter power driven nails is specified in parenthesis next to each connection. Pressure shall be applied to wood members to insure tight joints when using power driven nails. The head of the nail many not be countersunk more than $\frac{1}{16}$ into the wood.
- 10. Sturdi-Wall Plus wet set post brackets shall be used for post wall connection as noted. End trusses shall be faced with the same material as the roof. Fascia
- boards shall be installed on all truss ends. 12. The southern and western sides of the structure may be enclosed either with adjustable drop down curtains or by permanent means. Permanent walls should have studs secured to posts with (2) l6d nails at each

SEE SNOW DRIFT CROSS SECTION DIAGRAM

- LESS THAN 20'. MUST HAVE DIAGONALS AT EACH END OF THE BUILDING.

LVL'S, ONE ON INSIDE OF 4-PLY 2"X8" POSTS POST AND ONE ON OUTSIDE FOR STANDARD 8' O.C. SPACING SPACED 4' O.C.

Structure is designed in accordance with the following codes:

- connection. Corrugated 29 GA. Steel siding to be secured to studs. 13. Permanent, continuous lateral truss bracing is required. There shall be no
- butt-butt connections on lateral bracing. 14. When air temperatures are 80 degrees F; a set delay add mixture shall be discussed with the engineer prior to use in the concrete mix @ batch plant, except when batch plant is within 30 minutes of the job site.
- 15. Roof fastners shall be a combination of zinc coated steel and a neoprene washer or better. Double screw the metal seams of the roof edges. Aluminum roofing shall have a nominal thickness of .018 inches. Galvanized steel roofing shall be 29 gauge or better.
- 16. Ventilation shall be provided at the ridge. 17. Nails for general framing can be common, smooth nails. General framing
- includes purlins, diagonal braces, lateral braces, etc. 18. A P.E. Sealed truss design must be supplied to the engineer by the contractor. Also see typical bracing details, which include knee braces.
- 19. Butt-Butt joints in purlins must skip at least 2 rows before repeating. 20. Galvanized Washers shall be used with all bolts.
- 21. If stored on-site, all structurual lumber, including trusses, must be placed in neat stacks at least 12" off the ground. 22. Wood treatment or preservatives must meet ASTM d 1760.
- 23. Roof pitch = 4:12 (GABLE ROOF), unless noted otherwise.
- 24. Truss spacing = 4^{1} , unless noted otherwise 25. Assumed soil bearing capacity = min. 2,000 psf at 4' depth. If soil bearing is not attained, extra excavation and compaction of granular fill will be required.
- 26. Assumed ground snow load = 30 psf. 27. Assumed wind velocity v=110 mph for 3 second gust, exposure c. 28. ASCE 7-10, Risk Category II.
- 29. Structure to be considered partially enclosed or enclosed, whichever is worse case.
- 30. Assumed dead load = 10 psf. (5psf top chord, 5 psf bottom chord) 31. All work shall be performed in accordance with the National Design Specification for Wood Construction, latest edition.
- 32. Proper temporary bracing of all construction work in progress is the contractor's responsibility. Contractor to take extra precaution to temporarily brace as needed for this structure.
- 33. All dimensions shall be verified by the contractor. If structural drawings are used for laying out column/post centers and wall lines, all dimensions shall be checked and coordinated between all construction documents and specifications prior to the start of work.
- 34. The design professionals will assume no responsibility and/or liability for problems that arise from failure to follow these drawings and the design intent they convey or for problems which arise from others failure to obtain and /or follow the design professionals' guidance.
- 35. If errors or discrepancies are found in the drawings, it shall be the contractors responsibility to bring it to the engineers attention prior to proceeding with the work.

SITE SPECIFIC CONSTRUCTION SPECIFICATIONS

GENERAL

- 1. A copy of the specifications and drawings shall be on site during all phases of construction
- 2. A pre-construction meeting between Farmer, Contractor, and Engineer shall be required
- prior to any construction work. 3. It is the responsibility of the Contractor to implement all measures necessary to protect work-in-progress from environmental conditions such as temperature extremes, surface
- and around water, etc. 4. If errors or discrepancies are found in the design drawings; it shall be the contractors responsibility to bring it to the engineers attention prior to proceeding with the work.

ROOF STRUCTURE FOUNDATION AND BACKFILL

- Compost filter sock should be placed downhill from any earth disturbance. 2. Embankments and disturbed areas surrounding the facility shall be treated to control
- 3. Strip all topsoil. Excavate the roofs structures to the dimensions and elevations specified in the drawings. All fill and cut slopes shall be compacted in horizontal lifts with a smooth vibratory roller. Distribute excess fill on site. Finish grades may be adjusted slightly to better balance cut and fills (with approval of the Owner).
- 4. Foundation must be prepared in such a way that the structure is installed on uniform foundation. If any rock or unsuitable material such as large quantities of limestone or soft soil is encountered, this material shall be removed and undercut to a depth of 1 feet below the finished bottom elevation and replaced with suitable gravel compacted in its place. While foundation is being prepared, contractor shall provide adequate drainage for foundation. After the foundation has been excavated and unsuitable material has been replaced with suitable material, it should be recompacted with a smooth vibratory roller.
- 5. Fill material under concrete shall be accomplished by placing maximum 8-inch lifts (before compaction). The lifts shall be compacted by the traversing of the entire surface by not less than one track of the equipment or by a minimum of four complete passes with a sheepsfoot, vibratory, or rubber tire roller. Compaction around structures (i.e. around pipes, adjacent to walls, etc.) shall be accomplished by placing fill in maximum 4-inch lifts and compacting by means of hand tampers or other manually directed compaction equipment. The technician shall determine if the moisture content is suitable for fill placement. The contractor shall make adjustments as directed by the technician. The method of compaction shall be approved prior to placement of fill material.
- 6. Backfilling may occur 14 days after the final pour, except that walls can be backfilled on both sides simultaneously may be done so within 7 days. Select best native material previously excavated from site for the 4 feet next to the walls from footing to surface. Place fill in lifts of 8 inches. Compaction within 4 feet of the wall may only be done with equipment less than one ton. Avoid backfill containing large rocks, hard or frozen soil chunks, construction debris, or large amounts of clay. Where slab on grade or driveway will be placed on this backfill, compact to 100% standard proctor. Compact to 95% in all other areas. Grade backfill so that storm runoff is directed away from the structure.
- 7. All disturbed areas shall be seeded and mulched.

CONCRETE

- 1. Masonry Blocks or chairs (height as specified in construction details) shall be used to hold floor reinforcement in place during concrete placement. Blocks or chairs shall be placed at spacing equal to half the width of the welded wire fabric, or at a maximum spacing of 60" for rebar.
- 2. All concrete and reinforcing work shall conform to American Concrete Institute's "Standard Building Code Requirements for Reinforced Concrete, (ACI 318-99), and to the Pennsylvania NRCS PA3135 Waste Storage Structure Construction Specification. 3. All concrete shall develop a minimum 28-day strength F¹c of 4000 psi. All concrete
- shall have 3/4 inch maximum aggregate size and maximum water-cement ratio of 0.49. Slump shall be 3 to 6 inches (without superplasticizers, if any). Superplasticizers (ASTM C494, Type F or G) may be added to concrete that has a 2 to 4 inch slump, and the slump shall not exceed 7 1/2 inches with the addition of a superplasticizer. All concrete shall be furnished with the proper admixture to obtain 6% + 1/-1% of air entrainment. 4. Concrete is to be mechanically vibrated. Cure concrete at air temperatures of 40° F to
- 5. Procedures for cold weather concreting must be followed when, for more than 3 consecutive days, the following conditions exist: 1) the average daily air temperature is less than 40 °F and 2) the air temperature is less than 50 °F for more than half of any 24 hour period. All procedures for cold weather concreting must follow ACI 306
- and be approved by the engineer. Reinforcing steel to meet ASTM Specifications A-615, latest revision grade 60. All
- welded wire fabric shall meet A-185, latest revision.
- When connecting two sections of vinyl waterstop, the ends must be heat welded or tied together and sealed with a watertight caulking. 8. All concrete shall be reinforced with the same steel as shown in similar sections unless
- specifically called out as "not reinforced". Maximum variation from indicated reinforcing bar spacing is 1/12 of indicated spacing. 10. The following minimum concrete cover shall be provided for reinforcement unless otherwise noted: Where cast against earth - 3 inches. Walls and slabs (exposed to earth or weather) - 1-1/2 inches. Other - 2 inches. Maximum reduction in cover from
- formed and exposed surfaces is 1/4 inch, from earth surfaces 1/2 inch. Place concrete in the forms in horizontal lifts of no more than 5 feet when a super plasticizer is used, and no more than 2 feet when a super plasticizer is not used. Do not allow the concrete to drop more than 12 feet when a super plasticizer is used, and no more than 4 feet when a super plasticizer is not used. Consolidate each lift by vibratina.
- 12. All concrete must be properly cured using curing compound applied at 1 gallon per 150 square feet. Curing compound shall meet ASTM C-309 and be sprayed on as soon as the concrete can be walked on (slabs) and immediately after all wall ties are parged both inside and outside (walls). Wall forms may be taken off 24 hours after the end of the pour if the temperature is above 50° F. Alternative curing methods must be approved by the engineer prior to implementation.

SEQUENCE OF BMP INSTALLATION AND REMOVAL IN RELATION TO THE SCHEDULING OF EARTH DISTURBANCE ACTIVITIES

- Install filter sock downhill from earth disturbance activities and soil stockpiles as shown on the drawings. 2. Excavate for the round waste storage facility.
- Place stockpiles to divert storm water away from excavation.
- 4. Prepare subgrade for concrete floor and footer including: install perimeter drain and drain outlet and compacted stone. 5. Install reinforcing steel for floor and footers.
- 6. Pour WSF floor and footers. See required concrete testing.
- Install forms and reinforcing for wsf walls.
- 8. Pour WSF walls. See required concrete testing. 9. The walls may be backfilled 14 days after the walls are poured. Backfill must be compacted to
- prevent settling.
- 10. Extra cut will be used for the proposed Roofed HUA and Barn if there is any left over. 11. Excavate for Underhouse Storage for Roofed HUA. Install footer drain and outlet.
- 12. Install reinforcing steel for floor and footers.
- 13. Pour Underhouse floor and footers. See required concrete testing.
- 14. Install forms and reinforcing for underhouse walls.
- 15. Pour Underhouse walls. See required concrete testing.
- 16. The walls may be backfilled 14 days after the walls are poured. Backfill must be compacted to prevent settling.
- 17. Install stone base and reinforcing for HUA retaining walls.
- 18. Install Footer Steel for HUA retaining walls
- 19. Pour HUA retaining wall footers. See required concrete testing. 20. Install forms and reinforcing for retaining walls
- 21. Pour Retaining walls. See required testing.
- 22. Backfill Walls and install stone for under HUA slab
- 23. Pour HUA slab, curb and wall footers. 24. Install forms and rebar and pour curbs and walls.
- 25. Install Roof system.
- 26. Install fence around HUA lot. 27. Install stone base and reinforcing for Stacking Area retaining walls.
- 28. Install Footer Steel for Stacking Area retaining walls
- 29. Pour Stacking Area retaining wall footers. See required concrete testing. 30. Install forms and reinforcing for retaining walls
- 31. Pour Retaining walls. See required testing.
- 32. The walls may be backfilled 14 days after the walls are poured. Backfill must be compacted to prevent settling.
- 33. Install reinforcing for stacking area slab and pour slab.
- 34. Install Roof system.
- 35. Excavate for reception pit for proposed barn expansion. 36. Install footer drain and outlet.
- 37. Install reinforcing steel for floor and footers.
- 38. Pour reception pit floor and footers. See required concrete testing.
- 39. Install forms and reinforcing for reception pit walls.
- 40. Pour reception pit walls. See required concrete testing. 41. The walls may be backfilled 14 days after the walls are poured. Backfill must be compacted to
- prevent settling.
- 42. Install pump transfer from reception pit to round wsf. 43. Install drop box and transfer pipes

CONCRETE TESTING PROTOCOL

The concrete contractor is responsible for retaining a third-party testing firm to test slump, air entrainment, and temperature on site, and prepare cylinders for strength testing during the pours noted above (at minimum) to ensure that the concrete meets specifications. Testing requirements may be modified at the engineer's discretion. All test results shall be given to the engineer of record or his representative.

- prior to any pour
- 2. The PA3I3S Construction Specification shall be supplied to the concrete supplier.
- amount of water that may be added on site, and the time the truck left the batch plant. 4. <u>Slump</u>: of the concrete shall be tested (1) time for 50 cubic yards of concrete poured. The determined to meet slump requirements.
- 5. Cylinders: (4) Cylinders shall be made for every 50 cubic yards of concrete poured, or a within 48 hours.
- poured or a minimum of (1) time for each pour.
- 7. <u>Temperature</u>: of the concrete shall be tested (1) time for every 50 cubic yards of concrete poured
- or a minimum of (1) time for each pour.

QUALITY ASSURANCE PLAN

Pre Construction Meeting - A meeting between concrete and excavation contractors, engineer, and landowner must be scheduled and held prior to beginning construction.

Project Milestone --Circular Concrete Waste Storage--Subgrade Condition and Stone Placement ** Installation of Footers \$ Floor ** Installation of Walls Inspection Prior to Backfilling Walls

--Underhouse Waste Storage--Subgrade Condition and Stone Placement ** Installation of Footers & Floor ** Installation of Walls Inspection Prior to Backfilling Walls

--Roofed Concrete HUA--Subgrade Condition and Stone Placement ****** Installation of Footers ** Installation of Walls Inspection Prior to Backfilling Walls

Installation of Slab --Roofed Concrete Stacking--Subgrade Condition and Stone Placement

** Installation of Footers ** Installation of Walls Inspection Prior to Backfilling Walls Installation of Slab

--HUA Slabs--Subgrade Condition and Stone Placement Installation of Slabs

--Transfer Components--

Subgrade Condition and Stone Placement Installation of Transfer Line, Underground Outlets * = Soil Density Testing Required

** = Concrete Testing Required TeamAg Contacts: Rob Sweppenheiser, Project Manager

Mobile: 607-426-2500 Office: 717-721-6795

- 44. Close existing underhouse storage. As a minimum the manure must be all removed by coordination with the farmer, the floor must be broken up, and the area filled with compacted aranular material
- plan. 46. Install reinforced gravel cattle walkways and access road.
- 47. Install stream crossing.
- 48. Install high tensile fence.

49. Install Stream fence and buffer. 50. Fine grade the lawn areas and seed or sod immediately with a perennial grass cover. Lawns

- shall be maintained on a regular basis and repaired, reseeded and mulched until stabilization is achieved. 51. After final site stabilization (i.e. 70% vegetative uniform cover) has been achieved, the temporary
- erosion and sedimentation controls must be removed. Areas disturbed during the removal of the controls shall be restabilized.

I. The concrete design mix shall be presented to the engineer of record or his representative 3 days

3. Each truck supplying concrete shall have a batch ticket identifying the site, design mix, maximum concrete from this truck shall not be placed until the slump test is completed and the concrete is

minimum of (4) cylinders shall be made for every pour. (2) of these cylinders shall be broken at 7 days following the pour and the remaining (2) cylinders shall be broken at 28 days following the pour. Cylinders MUST be stored according to ASTM C31 and be transported to the testing facility

6. Air entrainment: of the concrete shall be tested (1) time for every 50 cubic yards of concrete

8. Concrete that has been mixed for greater than 90 minutes and showing signs of active hydration including a decrease in slump, a rise in temperature, or a change in workability, shall not be used.

The engineer must be contacted at the following project milestones. If the engineer is not contacted for inspections as indicated, TeamAg may not be able to certify the proposed manure storage system.

> Notification Requirement 48 Hours prior to reaching subgrade 48 Hours prior to Concrete Pour 48 Hours prior to Concrete Pour Schedule at wall pour

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48 Hours prior to reaching subgrade

48 Hours prior to Installation

48 Hours prior to reaching subgrade 48 Hours prior to Installation

45. Install gutters, downspouts and outlets for the roofs. Install stormwater infiltration according to

ROOF CONSTRUCTION NOTES:

Structure is designed in accordance with the following codes: ACI318-02 - Structural Concrete ASCE 7-10 - Minimum design loads for buildings and other structures 1.3. AISC Manual of Steel Construction 2005 - Allowable stress design

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- 11. End trusses shall be faced with the same material as the roof. Fascia boards shall be installed on all truss ends. 12. The southern and western sides of the structure may be enclosed either
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