PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

FOR

CORNWALL PROPERTIES, LLC

LOCATED IN

CORNWALL BOROUGH
LEBANON COUNTY, PENNSYLVANIA
OCTOBER 27, 2023

REVISION	DATE	BY
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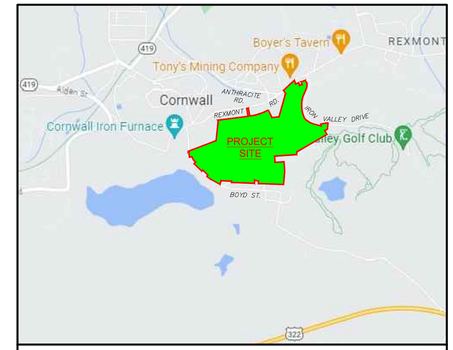
Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	NOTES
3	OVERALL EXISTING CONDITIONS - DEMOLITION PLAN
4	EXISTING CONDITIONS PLAN
5	EXISTING CONDITIONS PLAN
6	EXISTING CONDITIONS PLAN
7	EXISTING CONDITIONS PLAN
8	EXISTING CONDITIONS PLAN
9	CONSERVATION PLAN
10	OVERALL SUBDIVISION - PHASING PLAN
11	SUBDIVISION PLAN
12	SUBDIVISION PLAN
13	SUBDIVISION PLAN
14	SUBDIVISION PLAN
15	SUBDIVISION PLAN
16	OVERALL LAYOUT PLAN
17	LAYOUT PLAN
18	LAYOUT PLAN
19	LAYOUT PLAN
20	LAYOUT PLAN
21	LAYOUT PLAN
22	OVERALL EASEMENT PLAN
23	EASEMENT PLAN
24	EASEMENT PLAN
25	EASEMENT PLAN
26	EASEMENT PLAN
27	EASEMENT PLAN
28	OVERALL POST CONSTRUCTION STORMWATER PLAN
29	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
30	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
31	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
32	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
33	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
34	POST CONSTRUCTION STORMWATER MANAGEMENT NOTES
35	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
36	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
37	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
38	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
39	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
40	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
41	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
42	OVERALL GRADING PLAN
43	GRADING PLAN
44	GRADING PLAN
45	GRADING PLAN
46	GRADING PLAN
47	GRADING PLAN
48	OVERALL UTILITY PLAN
49	UTILITY PLAN
50	UTILITY PLAN
51	UTILITY PLAN
52	UTILITY PLAN
53	UTILITY PLAN
54	OVERALL LANDSCAPING PLAN
55	LANDSCAPING PLAN
56	LANDSCAPING PLAN
57	LANDSCAPING PLAN
58	LANDSCAPING PLAN
59	LANDSCAPING PLAN
60	OVERALL LIGHTING PLAN
61	LIGHTING PLAN
62	LIGHTING PLAN
63	LIGHTING PLAN
64	LIGHTING PLAN
65	LIGHTING PLAN
66	PROFILES - (ROAD A STA. 0+00-15+00)
67	PROFILES - (ROAD A STA. 15+00-30+00)
68	PROFILES - (ROAD A STA. 30+00-45+04)
69	PROFILES - (ROAD B STA. 0+00-15+00)
70	PROFILES - (ROAD B STA. 15+00-23+88)
71	PROFILES - (ROAD C STA. 0+00-9+49 - ROAD D STA. 0+00-3+54)
72	PROFILES - STORMWATER
73	PROFILES - STORMWATER
74	PROFILES - STORMWATER
75	PROFILES - STORMWATER
76	PROFILES - STORMWATER
77	SITE DETAILS
78	SANITARY SEWER DETAILS
79	WATER DETAILS
80	OVERALL EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
81	EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
82	EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
83	EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
84	EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
85	EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN
86	EROSION AND SEDIMENTATION POLLUTION CONTROL NOTES
87	EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS
88	EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS

* SHEETS 1-53 TO BE RECORDED

SITE MAP

SCALE: 1"=500'



OWNERS

CORNWALL PROPERTIES LLC
118 SPRINGFIELD DRIVE SUITE 300
LEBANON, PA 17042
CONTACT: MICHAEL SWANK
PHONE: 717-438-4800
EMAIL: MSWANK@TYLERHOLDINGS.COM

SOURCE OF TITLE

CURRENT DEED BOOK: 2315-4901
PIN: 12-2346649-344743-0000
PLAN: 58-240: LOT 54
ACRES: 10.60 AC.

CURRENT DEED BOOK: 2315-4901
PIN: 12-2346649-344743-0000
PLAN: 58-240: LOT 55
ACRES: 50.79 AC.

CURRENT DEED BOOK: 2315-4901
PIN: 12-2344396-343756-0000
PLAN: 58-240: LOT 56
ACRES: 40.17 AC.

CURRENT DEED BOOK: 2315-4901
PIN: 12-2345841-343578-0000
PLAN: 58-240: LOT 57
ACRES: 13.79 AC.

CURRENT DEED BOOK: 2323-8923
PIN: 12-2346322-344893-0000
PLAN: 37-176
ACRES: 8.39 AC.

ZONING COMPLIANCE CHART

CORNWALL BOROUGH:

ZONING DISTRICT: LOW DENSITY RESIDENTIAL (RLD)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	15,000 S.F.	SEE CHART
MINIMUM LOT WIDTH	110'	110'
MAXIMUM LOT COVERAGE	30%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	30'	
SIDE	15'	
REAR	30'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'

ZONING DISTRICT: CONSERVATION RECREATIONAL (CR)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	5 ACRES	SEE CHART
MINIMUM LOT WIDTH	300'	110'
MAXIMUM LOT COVERAGE	5%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	75'	
SIDE	50'	
REAR	75'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'
MAX. DENSITY	5 AC. PER LOT	5.50

SITE DATA

SITE AREA	123.76 Acres
SITE ZONING	LOW DENSITY RESIDENTIAL (R-1) CONSERVATION RECREATION (CR)
EXISTING LAND USE	VACANT/WOODED
PROPOSED LAND USE	SINGLE FAMILY RESIDENTIAL
SOURCE OF WATER	PUBLIC
SOURCE OF SEWER	PUBLIC
SITE ADDRESS	200 REXMONT RD
STORMWATER MANAGEMENT DISTRICT	LEBANON COUNTY RESIDUAL
PROPOSED LOTS	130
DENSITY	5.5 UNITS/ACRE (CR DISTRICT ONLY)

PURPOSE OF PLAN NOTE

THE PURPOSE OF THIS PLAN IS TO CREATE 130 NEW LOTS WHICH WILL BE USED FOR SINGLE FAMILY RESIDENTIAL HOMES. THIS PLAN ALSO PROPOSES STORM WATER MANAGEMENT FACILITIES, AND PUBLIC SEWER AND WATER CONNECTIONS.

THIS PLAN WILL REQUIRE AN INDIVIDUAL NPDES PERMIT, WHICH WILL BE ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

OFF-STREET PARKING

REQUIREMENT: 2 OFF-STREET PARKING SPACES PER DWELLING UNIT

PROPOSED: 4 (2 IN GARAGE, 2 IN DRIVEWAY)

PHASING SCHEDULE

PHASE 1	- 40 UNITS	START: 2025/COMPLETE: 2027
PHASE 2	- 51 UNITS	START: 2027/COMPLETE: 2029
PHASE 3	- 39 UNITS	START: 2029/COMPLETE: 2031

BMP/OUTFALL LOCATIONS

BMP	LATITUDE	LONGITUDE
BASIN A	40°16'20.29"	76°24'08.94"
BASIN B	40°16'20.66"	76°23'52.96"
BASIN C	40°16'24.35"	76°23'45.83"
BASIN D	40°16'19.01"	76°23'36.82"
BASIN E	40°16'17.80"	76°23'32.30"
BASIN F	40°16'16.98"	76°23'43.49"
BASIN G	40°16'07.84"	76°23'58.51"
BASIN H	40°16'06.80"	76°24'10.63"

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN AND OFFER OF DEDICATION

COMMONWEALTH OF PENNSYLVANIA _____

COUNTY OF LEBANON _____

ON THIS, THE _____ DAY OF _____ 2024, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ BEING THE MEMBERS OF THE FIRM OF CORNWALL PROPERTIES, LLC, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE COPARTNERSHIP IS THE _____ OF THE PROPERTY SHOWN ON THIS PLAN AND DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO THE PUBLIC USE.

_____
INDIVIDUAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____,20____

CORNWALL BOROUGH PLANNING AND ZONING COMMISSION REVIEW CERTIFICATE

AT A MEETING ON _____ 20____, THE CORNWALL BOROUGH PLANNING AND ZONING COMMISSION REVIEWED THIS PLAN AND A COPY OF THE REVIEW COMMENTS IS ON FILE IN THE BOROUGH OFFICE.

_____
CHAIRMAN

_____
SECRETARY

CORNWALL BOROUGH COUNCIL FINAL PLAN APPROVAL CERTIFICATE

AT A MEETING ON _____ 20____, THE CORNWALL BOROUGH COUNCIL APPROVED THIS PROJECT INCLUDING THE COMPLETE SET OF PLANS AND INFORMATION THAT ARE FILED WITH THE BOROUGH COUNCIL IN FILE NO. _____, BASED UPON ITS CONFORMITY WITH THE STANDARDS OF THE CORNWALL BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____
PRESIDENT

_____
VICE PRESIDENT

CERTIFICATION OF ACCURACY (PLAN)

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE THE ACCURACY REQUIRED BY THE CORNWALL BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

_____
STEPHEN A. SHERK, P.E. DATE

CERTIFICATION OF ACCURACY (SURVEY)

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE CORNWALL BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____
JASON E. CHERNICH, P.L.S DATE

STORM DRAINAGE PLAN CERTIFICATION

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE STORM DRAINAGE FACILITIES SHOWN AND DESCRIBED HEREON ARE DESIGNED IN CONFORMANCE WITH THE STORMWATER MANAGEMENT REQUIREMENTS OF CORNWALL BOROUGH.

I, STEPHEN A. SHERK, CERTIFY THAT THE PROPOSED DETENTION BASINS ARE UNDERLAIN BY LIMESTONE.

_____
STEPHEN A. SHERK, P.E. DATE

CORNWALL BOROUGH ENGINEER CERTIFICATION

_____
REVIEWED

LEBANON COUNTY PLANNING DEPARTMENT

_____
REVIEWED DATE

RECORDER OF DEEDS

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR LEBANON COUNTY, PENNSYLVANIA, IN SUBDIVISION PLAN BOOK ____, VOLUME ____, PAGE _____. WITNESS MY HAND AND SEAL OF OFFICE THIS ____DAY OF _____, A.D., 20_____

_____

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

GENERAL NOTES:

1. UNDERGROUND UTILITIES ARE SHOWN ACCORDING TO INFORMATION PROVIDED BY OTHERS AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION, EXCAVATION OR BLASTING. THE ACTUAL LOCATIONS OF THESE UTILITIES HAVE NOT BEEN FIELD VERIFIED AND THE LOCATIONS ARE APPROXIMATE. STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTEE THAT THE UNDERGROUND UTILITY LOCATION PROVIDED BY OTHERS AND REFLECTED ON THESE DRAWINGS ARE CORRECT AND ACCURATE. STECKBECK ENGINEERING & SURVEYING, INC. ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
2. ALL EXISTING FEATURES SHOWN OUTSIDE OF THE LIMITS OF SURVEY HAVE NOT BEEN FIELD VERIFIED AND MAY NOT REPRESENT ACTUAL CONDITIONS.
3. RIGHT-OF-WAYS FOR ALL ROADS ARE SHOWN IN ACCORDANCE WITH BOROUGH AND STATE RECORDS AND PREVIOUSLY RECORDED DOCUMENTS.
4. ANY REVISION TO THESE PLANS AFTER THE DATE OF PLAN PREPARATION OR LATEST REVISION DATE SHALL NOT BE THE RESPONSIBILITY OF STECKBECK ENGINEERING AND SURVEYING, INC.
5. NO ONE SHALL SCALE FROM THESE PLANS FOR CONSTRUCTION PURPOSES.
6. THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT DATED OCTOBER 2023 AND EROSION AND SEDIMENT POLLUTION CONTROL REPORT DATED OCTOBER, 2023 SHALL BE CONSIDERED A PART OF THIS PLAN AND IS ENFORCEABLE AS IF IT APPEARED IN TOTAL HEREIN.
7. THE INFORMATION SHOWN ON THIS DRAWING MAY HAVE ALSO BEEN PROVIDED IN A DIGITAL DRAWING FORMAT. ONCE A DRAWING IS RELEASED FROM STECKBECK ENGINEERING & SURVEYING, INC. IN A DIGITAL FORMAT, WE HAVE NO CONTROL OVER MANIPULATION OR MISUSE OF THE DATA CONTAINED IN THAT FILE. THE VIEWER IS THEREFORE CAUTIONED TO COMPARE ANY SUBSEQUENT REPRODUCTIONS OR MANIPULATIONS OF THIS DATA WITH THE ORIGINAL HARD COPY SEALED PLAN PROVIDED BY STECKBECK ENGINEERING & SURVEYING, INC. THE USER IS ALSO CAUTIONED THAT ANY USE OF THE DATA CONTAINED IN THE DIGITAL FILE THAT IS NOT SHOWN ON THE HARD COPY DRAWING, MUST BE AT THE RISK OF THE USER.
8. ALL SITE DEVELOPMENT SHALL BE DONE IN ACCORDANCE WITH FEDERAL, STATE, COUNTY, AND BOROUGH STANDARDS AND REQUIREMENTS.
9. ALL SANITARY SEWER CLEAN-OUTS IN IMPERVIOUS AREAS SHALL HAVE WATERTIGHT COVERS.
10. ALL SANITARY SEWER AND WATER MAIN EXTENSIONS AND CONNECTIONS HERETO SHALL BE CONSTRUCTED PER APPROVED DESIGNS IN ACCORDANCE WITH APPLICABLE REGULATIONS AND APPROVALS.
11. ALL JOINTS WHERE PROPOSED MACADAM MEETS EXISTING MACADAM SHALL BE SAW-CUT AND SEALED WITH PG 64S-22.
12. ALL PROPOSED SIGNS SHALL BE IN ACCORDANCE WITH APPLICABLE CORNWALL BOROUGH ORDINANCES.
13. CORNWALL BOROUGH SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF ANY AREA THAT IS NOT OFFERED FOR DEDICATION TO PUBLIC USE AND SUCH OFFER ACCEPTED BY CORNWALL BOROUGH. NO ALTERATION TO SWALES, BASINS, OR OTHER DRAINAGE STRUCTURES SHALL BE PERMITTED WITHIN DRAINAGE EASEMENTS.
14. UTILITY TYPE AND LOCATION NOTICE: ALL EXISTING UTILITIES ARE SHOWN AS FOUND IN THE FIELD AND/OR ILLUSTRATED ON VARIOUS USER DRAWINGS. TO THE BEST OF OUR KNOWLEDGE, THE LOCATIONS AND TYPES ARE CORRECT AND ACCURATE, BUT STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTEE THE INFORMATION RECEIVED AND REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE. PURSUANT TO SECTION 5 CLAUSE (1) OF ACT 172 AMENDING ACT 287 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN THE LOCATION AND TYPE OF USERS LINES AT THE CONSTRUCTION SITE, EITHER BY INSPECTION OF THE DESIGNER'S DRAWING OR IF THERE BE NO SUCH DRAWINGS, THEN BY THE SAME MANNER AS THAT PRESCRIBED FOR A DESIGNER IN CLAUSE (1) AND (2) OF SECTION 4. PURSUANT TO SECTION 5 CLAUSE (2) IT WILL BE THE CONTRACTORS RESPONSIBILITY NOT LESS THAN THREE NOR MORE THAN TEN WORKING DAYS PRIOR TO THE DAY OF BEGINNING SUCH WORK, TO NOTIFY EACH USER OF THE CONTRACTOR'S INTENT TO PERFORM SUCH WORK AT ITS SITE OR SITES AND REQUEST THE INFORMATION PRESCRIBED BY [SUBCLAUSES II AND III] OR CLAUSE (5) OF SECTION 2, FROM EACH USER'S OFFICE DESIGNATED ON THE DESIGNERS DRAWINGS OR ON THE LIST OF USERS OBTAINED PURSUANT TO CLAUSE (1) OF SECTION 4.
15. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND INCLUDING BUT NOT LIMITED TO TELEPHONE, CABLE, ELECTRIC, GAS, WATER, AND SANITARY SEWER.
16. STECKBECK ENGINEERING & SURVEYING, INC. HAS NOT PERFORMED ANY GEOLOGICAL STUDIES, SOUNDINGS OR SUBSURFACE INVESTIGATIONS OR EVALUATIONS FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE LANDOWNER, LAND PURCHASER, OR PROSPECTIVE BUYER OF ANY PORTION OF THE SITE DEPICTED ON THIS PLAN TO PERFORM THEIR OWN INDIVIDUAL EVALUATION OF THE GEOLOGY OF THIS SITE TO ASCERTAIN THE GEOLOGICAL FORMATION AND THE IMPACT WHICH IT MAY HAVE UPON THEIR LAND OR ANY CONSTRUCTION PROPOSED THEREON. STECKBECK ENGINEERING & SURVEYING, INC. SHALL NOT BE RESPONSIBLE FOR THE COST OF ANY ROCK REMOVAL, SINKHOLES, SOLUTION CHANNELS OR ROCK FRACTURES NOR FOR THE CONSTRUCTION COST IMPACT WHICH ANY OF THESE GEOLOGICAL FEATURES MAY HAVE UPON THIS LAND OWNER OR BUILDER.
17. SITE IMPROVEMENTS AND DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL DETAILS WITHIN THIS PLAN AND THE APPROVED EROSION SEDIMENT CONTROL PLAN.
18. ALL STORM SEWER AND SANITARY SEWER PIPING SHALL BE CONSTRUCTED UTILIZING A LASER TO ENSURE PROPER SLOPE.
19. TREES AND SHRUBS SHALL NOT BE PLANTED IN SWALES OR WITHIN 5 FEET OF BURIED UTILITY LINES. IN DEVELOPMENTS WITH SIDEWALKS, TREES SHALL NOT BE PLANTED WITHIN 8 FEET OF THE SIDEWALK. ANY TREES PLANTED ON LOTS SHALL NOT BE CLOSER THAN 5' TO ANY STREET RIGHT-OF-WAY. INDIVIDUAL TREES SHALL BE ESTABLISHED AT 6' OR GREATER IN HEIGHT AND SHALL BE AT LEAST 2 1/2" CALIPER, MEASURED AT 6" ABOVE FINISHED GRADE.
20. MATERIALS AND DETAILS SPECIFIED ON THE APPROVED PLAN SHALL NOT BE ALTERED DURING CONSTRUCTION WITHOUT WRITTEN APPROVAL BY THE BOROUGH.
21. ALL DRAINAGE AND UTILITY EASEMENTS SHOWN ON THIS PLAN SHALL BE MAINTAINED IN GRASSED OR OTHERWISE IMPROVED CONDITION IN ACCORDANCE WITH THE GRADES AND DESIGNS SHOWN ON THE APPROVED PRELIMINARY PLANS AND SHALL BE KEPT FREE OF ALL OBSTRUCTIONS, INCLUDING, BUT NOT LIMITED TO, FILL, TEMPORARY OR PERMANENT STRUCTURES, AND PLANTS OTHER THAN GRASS. MAINTENANCE OF SUCH EASEMENTS SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNER.
22. ALL PROPOSED HOMES LOCATED ADJACENT TO THE BASINS OR FLOODPLAIN SHALL BE FLOOD PROOFED TO AN ELEVATION OF 2' ABOVE THE ADJACENT BASIN OR 100-YR. FLOODPLAIN ELEVATION.
23. NO BUILDING SHALL EXCEED TWO AND ONE-HALF STORIES OR 35 FEET, WHICHEVER IS LESS, UNLESS AUTHORIZED AS A SPECIAL EXCEPTION.
24. ALL PRIVATE DRIVEWAYS SHALL HAVE, FOR A DISTANCE OF 30 FEET FROM THE STREET RIGHT-OF-WAY, A MAXIMUM GRADIENT OF 8 PERCENT.
25. TEMPORARY CUL-DE-SACS SHALL BE UTILIZED AT THE LIMITS OF EACH PHASE. REFER TO DETAIL ON SHEET 77.

FLOODPLAIN NOTE
FLOODPLAIN SHOWN HEREON IS SHOWN IN ACCORDANCE WITH THE FLOOD INSURANCE RATE MAP NUMBER 42075C0270E, EFFECTIVE DATE JULY 8, 2020. THE ENTIRE SITE IS IN THE ZONE "X" FLOOD CLASSIFICATION.

WETLAND NOTE
REGULATED WETLANDS EXIST ON THE SUBJECT PROPERTY. A WETLAND INVESTIGATION WAS PERFORMED BY BRAD GOCHNAUER OF VORTEX ENVIRONMENTAL, INC. ON 12/13/22. SEE EXISTING CONDITIONS PLAN FOR LIMITS OF EXISTING WETLANDS.

PRE-CONSTRUCTION MEETING NOTE
A PRE-CONSTRUCTION MEETING WILL BE REQUIRED BETWEEN THE DESIGN ENGINEER, BOROUGH ENGINEER, THE LEBANON COUNTY CONSERVATION DISTRICT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.

CONTRACTOR NOTES
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON SITE PRIOR TO THE START OF CONSTRUCTION. UNDERGROUND UTILITIES HAVE BEEN SHOWN ACCORDING TO INFORMATION PROVIDED BY OTHERS AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION, EXCAVATION OR BLASTING. THE ACTUAL LOCATIONS OF THESE UTILITIES HAVE NOT BEEN FIELD VERIFIED AND THE LOCATIONS ARE APPROXIMATE. STECKBECK ENGINEERING & SURVEYING, INC. (SESI) DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE UNDERGROUND UTILITY LOCATION INFORMATION PROVIDED BY OTHERS AND REFLECTED ON THESE DRAWINGS IS CORRECT AND ACCURATE. SESI ASSUMES NO LIABILITY FOR ANY DAMAGE INCURRED AS A RESULT OF UNDERGROUND UTILITIES OMITTED OR INACCURATELY SHOWN.
2. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. DAMAGE TO ANY UTILITY SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, UTILITY COMPANY OR AUTHORITY, AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS FROM THE MUNICIPALITY, COUNTY, STATE OR AUTHORITY RELATIVE TO CONSTRUCTION SHOWN ON THIS PLAN.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AND RECORD DRAWINGS AS MAY BE REQUIRED BY THE MUNICIPALITY AND/OR THE VARIOUS AUTHORITIES RELATIVE TO THE CONSTRUCTION SHOWN ON THESE PLANS.
5. PROVIDE 95% MODIFIED PROCTOR DENSITY PER ASTMD-698 IN AREAS WHERE PROPOSED UTILITIES ARE LOCATED ON FILL.

SURVEY NOTES:
1. BENCHMARK:
   - BM1: MAG NAIL ON THE WESTERN CORNER OF REXMONT ROAD AND LYNCH DRIVE, APPROX 7'± NORTH OF THE FIRE HYDRANT.
     NORTHING: 345752.02
     EASTING: 2346127.49
     ELEVATION: 678.56
   - BM2: CAPPED REBAR WEST SIDE OF REXMONT ROAD; APPROX 57'± SOUTH OF UTILITY POLE 37771-34589.
     NORTHING: 345868.92
     EASTING: 2346294.38
     ELEVATION: 691.64

   VERTICAL DATUM: NAVD 88
   HORIZONTAL DATUM: NAD83 – PA SOUTH ZONE
2. UNDERGROUND UTILITIES ARE SHOWN ACCORDING TO INFORMATION PROVIDED BY OTHERS AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION, EXCAVATION OR BLASTING. THE ACTUAL LOCATIONS OF THESE UTILITIES HAVE NOT BEEN FIELD VERIFIED AND THE LOCATIONS ARE APPROXIMATE. STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTEE THAT THE UNDERGROUND UTILITY LOCATION PROVIDED BY OTHERS AND REFLECTED ON THESE DRAWINGS ARE CORRECT AND ACCURATE. STECKBECK ENGINEERING & SURVEYING, INC. ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
3. IN ACCORDANCE WITH THE FLOOD INSURANCE RATE MAP NUMBER 42075C0270E, EFFECTIVE DATE JULY 8, 2020. THE ENTIRE SITE IS IN THE ZONE "X" FLOOD CLASSIFICATION.
4. RIGHT-OF-WAY FOR REXMONT ROAD, IRON VALLEY DRIVE AND BOYD STREET IS SHOWN IN ACCORDANCE WITH PREVIOUSLY RECORDED PLANS AND BOROUGH RECORDS.
5. TOPOGRAPHY AND PLANIMETRICS SHOWN HEREON IS A COMBINATION OF CONVENTIONAL AND AERIAL SURVEY.
6. THE EXISTING CONDITIONS PLAN WAS PROVIDED FROM A SURVEY PREPARED BY STECKBECK ENGINNERING & SURVEYING.

BUILDING CODE NOTE
ALL CONSTRUCTION SHALL BE SUBJECT TO THE REQUIREMENTS OF THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE, AS ADOPTED BY THE MUNICIPALITY.

STANDARD STORM WATER NOTES

1. ALL STORM WATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED BY THE DEVELOPER IN ACCORDANCE WITH THE DESIGN, CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN. OWNERSHIP AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE LANDOWNER, HIS SUCCESSORS AND ASSIGNS, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE HEREIN.
2. STORM WATER MANAGEMENT FACILITIES SHALL BE MAINTAINED IN GOOD WORKING CONDITION SO THAT THEY ARE PERFORMING THEIR DESIGN FUNCTION, IN A MANNER ACCEPTABLE TO THE CORNWALL BOROUGH, AS REQUIRED BY THE CORNWALL BOROUGH STORMWATER MANAGEMENT ORDINANCE. MAINTENANCE SHALL INCLUDE PERFORMING ROUTINE MAINTENANCE AND REPAIR OR REPLACEMENT OF DAMAGED FACILITIES, VEGETATION OR STORM WATER AREAS TO CONDITIONS AS SHOWN ON THE APPROVED PLAN AND IN ACCORDANCE WITH THE CORNWALL BOROUGH STORM WATER MANAGEMENT ORDINANCE.
3. ANY DRAINAGE AND UTILITY EASEMENTS SHOWN ON THE PLAN SHALL BE CONSTRUCTED, OWNED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLAN AND SHALL BE REFERENCED WITHIN THE PROPERTY DEED.
4. RUNOFF FROM THE LOT IMPROVEMENTS SHALL BE DIRECTED TO THE STORM WATER MANAGEMENT FACILITIES. STORM WATER RUNOFF FROM EXISTING NATURAL SWALES AND/OR OTHER EXISTING DRAINAGE CONVEYORS SHALL NOT BE DIRECTED TOWARDS OR INTERCEPTED BY THE STORM WATER MANAGEMENT FACILITIES.
5. MUNICIPAL OFFICIALS AND THEIR AGENTS OR EMPLOYEES HAVE THE RIGHT OF ACCESS FOR INSPECTION AND, IN CASES OF CONSTRUCTION DEFAULT, CONSTRUCTION OF THE STORM WATER MANAGEMENT FACILITIES. THE MAINTENANCE OF ALL SUCH FACILITIES SHALL BE THE RESPONSIBILITY OF THE LOT OWNER ON WHICH THE FACILITIES EXIST. CORNWALL BOROUGH SHALL NOT BE LIABLE FOR MAINTENANCE OF ANY STORM WATER MANAGEMENT FACILITIES NOT CONSTRUCTED AS SHOWN HEREIN.
6. THE MUNICIPAL ENGINEER SHALL INSPECT ALL PHASES OF DEVELOPMENT OF THE SITE. CONTACT THE BOROUGH 717-274-3436 FOR INSPECTION OF EACH PHASE OF WORK AT LEAST 5 BUSINESS DAYS PRIOR TO BEGINNING OF EACH PHASE OF WORK. ANY PORTION OF THE WORK WHICH DOES NOT COMPLY WITH THE APPROVED PLAN MUST BE CORRECTED BY THE DEVELOPER.
7. STONE MUST BE MOUNDED TO PROVIDE A MINIMUM OF 2' COVER OVER THE STORM SEWER PIPING WHERE THE PIPE IS SUBJECT TO ANY VEHICLE CROSSINGS DURING CONSTRUCTION.
8. STORMWATER INLETS, PIPES, CULVERTS AND SWALES (CUMULATIVELY REFERRED TO AS DRAINAGE IMPROVEMENTS) CONSTRUCTED ON THIS PLAN HAVE BEEN DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH REQUIREMENTS OF MUNICIPAL ORDINANCES GOVERNING LAND DEVELOPMENT OR IN ACCORDANCE WITH REGULATIONS OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION FOR ANY DRAINAGE IMPROVEMENTS TO STATE HIGHWAYS. THESE ORDINANCES AND REGULATIONS STIPULATE SIZES AND CAPACITIES FOR THESE DRAINAGE IMPROVEMENTS, WHICH SIZES AND CAPACITIES MAY HAVE LIMITED ABILITY TO CARRY AND TRANSFER STORMWATER DRAINAGE FROM CERTAIN SEVERE OR INTENSE STORMS. STECKBECK ENGINEERING & SURVEYING, INC. SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY SURFACE RUN-OFF OR FLOODING FROM STORMS WHICH GENERATE MORE RUNOFF THAN AS REQUIRED TO BE COLLECTED AND CONVEYED BY MUNICIPAL OR PENNDOT REGULATIONS.
9. DRAINAGE EASEMENTS SHALL ALLOW PASSAGE OF STORM WATER IN UNDERGROUND STORM WATER SEWER PIPING AND ASSOCIATED STRUCTURES, AND/OR ALLOW PASSAGE OF STORM WATER OVER THE SURFACE OF THE GROUND AND SHALL ALLOW ACCESS ACROSS THE AREA FOR PURPOSES OF MAINTENANCE OF THE STORM CONVEYANCE SYSTEMS.
10. EXISTING AND PROPOSED ROADSIDE GUTTERS OR SWALES SHALL NOT BE OBSTRUCTED BY DRIVEWAYS, FILL, OR STRUCTURES.
11. ALL DEEDS FOR THE LOT(S) SHALL INCLUDE A REFERENCE TO THE EASEMENT(S) THAT ARE LOCATED WITHIN THE LOT ALONG WITH ANY RIGHTS AND RESTRICTIONS OF EACH EASEMENT INCLUDING LOT OWNER RESPONSIBILITY FOR OWNERSHIP AND MAINTENANCE OF THE EASEMENT, PIPES AND STRUCTURES WITHIN THE EASEMENT.
12. ALL STORMWATER MAINS AND RELATED STRUCTURES WITHIN THE DEVELOPMENT SHALL BE CONSTRUCTED BY THE DEVELOPER. THE STORM WATER MANAGEMENT FACILITIES (S.W.M.F.) SHALL BE CONSTRUCTED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE.
13. SEWER MAINS SHALL BE SMOOTH LINED CORRUGATED POLYETHYLENE PIPE (SLCPP) AND SHALL BE CONCRETE ENCASED WHEN COVER IS LESS THAN 12" TO SUBGRADE.
14. ALL INLETS SHALL BE SUPPLIED WITH BICYCLE SAFE GRATES.
15. STORM WATER MAINS WHICH ARE LOCATED WITHIN A PUBLIC RIGHT-OF WAY SHALL BE OWNED AND MAINTAINED BY CORNWALL BOROUGH. STORM SEWER MAINS WHICH ARE LOCATED WITHIN ANY LOTS SHALL BE OWNED AND MAINTAINED BY THE INDIVIDUAL LOT OWNER. BOROUGH OFFICIALS, INCLUDING CORNWALL BOROUGH COUNCIL WILL HAVE THE RIGHT TO INSPECT AND/OR CORRECT ANY DEFICIENCIES IN THE STORM WATER COLLECTION SYSTEM WHICH IS LOCATED ON ANY LOT OR WITHIN AN EASEMENT WITHIN THE DEVELOPMENT AT ANY TIME IF DEEMED NECESSARY.
16. ALL NEW CATCH BASINS LOCATED IN BOROUGH RIGHT-OF-WAY MUST BE MARKED WITH A MEDALLION THAT STATES "DON'T POLLUTE, FLOWS TO WATERWAYS". THESE MEDALLIONS WILL BE PROVIDED FROM THE BOROUGH OF CORNWALL AT THE EXPENSE OF THE DEVELOPER. THE MEDALLION MUST BE CENTERED ON THE TOP OF CURB OF A TYPE "C" INLET OR ON THE BACK OF THE TOP OF A TYPE 'M' INLET.
17. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE OR ALTER STORMWATER MANAGEMENT FACILITIES WHICH MAY HAVE BEEN INSTALLED ON A PROPERTY UNLESS A STORMWATER MANAGEMENT SITE PLAN HAS BEEN APPROVED WHICH AUTHORIZES SUCH MODIFICATIONS, REMOVAL, FILLING, LANDSCAPING OR ALTERATION. NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING OR VEGETATION INTO A STORMWATER MANAGEMENT FACILITY OR WITHIN A DRAINAGE EASEMENT WHICH WILL LIMIT OR ALTER THE FUNCTIONING OF THE FACILITY OR EASEMENT IN ANY MANNER.

BOROUGH INSPECTION NOTES

A. GENERAL SITE CONSTRUCTION
1. UPON COMPLETION OF PRELIMINARY SITE PREPARATION INCLUDING STRIPPING OF VEGETATION, STOCKPILING OF TOPSOIL AND CONSTRUCTION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES.
2. UPON COMPLETION OF ROUGH GRADING, BUT PRIOR TO PLACING TOPSOIL, PERMANENT DRAINAGE, OR OTHER SITE DEVELOPMENT IMPROVEMENTS AND GROUND COVERS.
3. DURING THE CONSTRUCTION OF PERMANENT STORM WATER MANAGEMENT AND BMP FACILITIES. ALL STORM SEWERS, CULVERTS, ETC. MUST BE INSPECTED PRIOR TO BACKFILLING.
4. DURING CONSTRUCTION OF SANITARY SEWERS AND APPURTENANCES, ALL SANITARY SEWERS MUST BE CONSTRUCTED AND INSPECTED IN ACCORDANCE WITH BOROUGH SPECIFICATIONS.
5. UPON THE FINAL COMPLETION OF PERMANENT STORM WATER MANAGEMENT AND BMP FACILITIES, INCLUDING THE ESTABLISHMENT OF GROUND COVERS AND PLANTINGS.
6. AFTER REVIEW OF THE AS-BUILT DRAWINGS, REQUIRED BY SECTION 607 OF THIS ORDINANCE, BUT PRIOR TO FINAL RELEASE OF THE FINANCIAL GUARANTEE FOR COMPLETION OF THE FINAL GRADING, VEGETATIVE CONTROLS REQUIRED BY THE BMP STANDARDS, OR OTHER SITE RESTORATION WORK.

B. STREET CONSTRUCTION
1. PREPARATION OF ROAD SUBGRADE. AT THE TIME OF THIS INSPECTION, THE SUBGRADE SHOULD BE PROOF ROLLED AND THE PROPOSED CROWN AND GRADE SHOULD BE CHECKED. IT IS RECOMMENDED THAT A DEVELOPER'S/CONTRACTOR'S REPRESENTATIVE ACCOMPANIES THE OBSERVER WHEN THE CROWN AND GRADE ARE CHECKED. PROOF ROLLING SHOULD BE PERFORMED WITH A FULLY LOADED, TANDEM-AXLE DUMP TRUCK. THIS INSPECTION MUST OCCUR PRIOR TO ANY STONE SUBBASE BEING PLACED.
2. PLACEMENT AND COMPACTION OF ROAD SUBBASE. AT THE TIME OF THIS INSPECTION, THE DEPTH OF SUBBASE SHOULD BE CHECKED AFTER COMPACTION, THE SUBBASE SHOULD BE PROOF ROLLED IN THE SAME MANNER AS THE SUBGRADE AND THE CROWN AND GRADE SHOULD BE CHECKED AGAIN. THIS INSPECTION MUST OCCUR PRIOR TO ANY BINDER OR BASE COURSE BEING PLACED.
3. PLACEMENT AND COMPACTION OF THE BINDER/BASE COURSE. AT THE TIME OF THIS INSPECTION, THE DEPTH OF THE BINDER/BASE COURSE SHOULD BE CHECKED, AMBIENT TEMPERATURE SHOULD BE MONITORED (THIS IS IMPORTANT IN EARLY SPRING AND LATE FALL DAYS WHEN THE TEMPERATURE CAN GO BELOW ACCEPTABLE LIMITS, IN ACCORDANCE WITH PENNDOT SPECIFICATIONS, FORM 408, AS AMENDED), THE TEMPERATURE OF THE BITUMINOUS MATERIAL SHOULD BE CHECKED (IF POSSIBLE), AND IT IS RECOMMENDED THAT COPIES OF THE WEIGHT SLIPS FOR EACH TRUCKLOAD ARE OBTAINED. THE CROWN AND GRADE SHOULD ALSO BE CHECKED AGAIN. THIS INSPECTION MUST OCCUR PRIOR TO THE WEARING COURSE BEING PLACED.
4. PLACEMENT AND COMPACTION OF THE WEARING COURSE. AT THE TIME OF THIS INSPECTION, THE GUIDELINES FOR THE PLACEMENT AND COMPACTION OF THE BINDER/BASE COURSE SHOULD BE FOLLOWED.

C. RELEASE OF FINANCIAL SECURITY.
1. IN ADDITION TO THE ABOVE OUTLINED INSPECTIONS, ADDITIONAL INSPECTIONS WILL BE MADE AT THE REQUEST OF THE DEVELOPER FOR REDUCTION OF FINANCIAL SECURITIES. RANDOM INSPECTIONS SHOULD BE MADE AT THE FREQUENCY DESIRED BY THE MUNICIPALITY. AT THE TIME OF ANY OF THE ABOVE LISTED INSPECTIONS, ALL ONGOING CONSTRUCTION (I.E. STORM DRAINAGE, SANITARY SEWER, WATER, EROSION CONTROL, ETC.) SHOULD ALSO BE CHECKED FOR COMPLIANCE WITH THE APPROVED PLANS AND THE FINDINGS REPORTED. SINCE THE ABOVE INSPECTIONS ARE MANDATORY, IT IS RECOMMENDED THAT REQUESTS FOR REDUCTION OF FINANCIAL GUARANTEE BE SUBMITTED TO COINCIDE WITH THE ABOVE INSPECTIONS.

WATER & SEWER NOTES:
WATER SERVICE TO THE PROPOSED LOTS WILL BE PROVIDED BY CONNECTION TO THE EXISTING PUBLIC WATER SYSTEM. CONNECTION TO THE PUBLIC SYSTEM IS REQUIRED.

SANITARY SEWER SERVICE TO THE PROPOSED LOTS WILL BE PROVIDED BY CONNECTION TO THE EXISTING PUBLIC SEWER SYSTEM. CONNECTION TO THE PUBLIC SYSTEM IS REQUIRED.

NPDES APPROVAL
THE NPDES PERMIT WAS APPROVED ON __________. THE PERMIT WILL EXPIRE ON__________.
NPDES PERMIT # __________.

FLOODPLAIN NOTE
IN ACCORDANCE WITH THE FLOOD INSURANCE RATE MAP NUMBER 42075C0270E EFFECTIVE DATE JULY 8, 2020, NO FLOODPLAIN EXISTS ON THE SUBJECT PROPERTY.

WETLAND NOTE
REGULATED WETLANDS DO EXIST ON THE SUBJECT PROPERTY. REFER TO THE REPORT PREPARED BY VORTEX ENVIRONMENTAL, INC. DATED 3/24/2023. SEE SHEETS 3 TO 8 FOR WETLAND LOCATIONS.

INFILTRATION NOTE:
INFILTRATION FACILITIES RELY ON PERMEABLE SOIL CONDITIONS TO DEWATER AND FUNCTION PROPERLY. AS PART OF THE DESIGN PROCESS, INFILTRATION TESTING WAS CONDUCTED BY A QUALIFIED PROFESSIONAL, SOIL SCIENTIST LICENSED GEOLOGIST OR THEIR DESIGNATED REPRESENTATIVE TO ASSURE THAT CONDITIONS WERE CONDUCIVE TO UTILIZE THIS TYPE OF FACILITY FOR STORMWATER MANAGEMENT CONTROL. EVERY PRECAUTION MUST BE TAKEN BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE INFILTRATION FACILITY TO ASSURE THAT COMPACTION DOES NOT OCCUR WHICH WOULD COMPROMISE THE PERMEABILITY OF THE FLOOR OF THE INFILTRATION FACILITY. IF AFTER INSTALLATION, ANY INFILTRATION FACILITY DOES NOT FUNCTION AS DESIGNED THE CONTRACTOR WILL BE RESPONSIBLE TO PERFORM REMEDIATION, OUTLINED BY THE QUALIFIED PROFESSIONAL, TO RESTORE BEFORE CONSTRUCTION PERMEABILITY.

BUILDING OCCUPANCY PERMIT NOTE
A BUILDING OCCUPANCY PERMIT SHALL NOT BE ISSUED BY THE BOROUGH UNLESS THE LANDOWNER/DEVELOPER OR HIS REPRESENTATIVE PROVIDES A CERTIFICATE OF SUBSTANTIAL COMPLETION LETTER FROM A QUALIFIED PROFESSIONAL VERIFYING THAT ALL PERMANENT SWM BMP FACILITIES ASSOCIATED WITH SUCH BUILDING(S) HAVE BEEN SUBSTANTIALLY COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS AND APPROVED REVISIONS THERETO. THE BOROUGH ENGINEER SHALL ALSO VERIFY SUBSTANTIAL COMPLETION IN WRITING PRIOR TO ISSUANCE OF AN OCCUPANCY PERMIT. THE BUILDING OCCUPANCY PERMIT SHALL BE REQUIRED FOR EACH LOT OWNER AND/OR DEVELOPER FOR ALL SUBDIVISIONS AND LAND DEVELOPMENT IN THE BOROUGH THAT INVOLVE THE CONSTRUCTION OF A NEW STRUCTURE INTENDED FOR HUMAN OCCUPATION.

IMPERVIOUS COVER CHART

LOT NO.	HOUSE (s.f.)	DRIVEWAY (s.f.)	PATIO (s.f.)
LOT 1	2,400	800	144
LOT 2	2,400	800	144
LOT 3	2,400	800	144
LOT 4	2,400	800	144
LOT 5	2,400	800	144
LOT 6	2,400	835	144
LOT 7	2,400	834	144
LOT 8	2,400	845	144
LOT 9	2,400	807	144
LOT 10	2,400	813	144
LOT 11	2,400	809	144
LOT 12	2,400	803	144
LOT 13	2,400	973	144
LOT 14	2,400	800	144
LOT 15	2,400	888	144
LOT 16	2,400	888	144
LOT 17	2,400	888	144
LOT 18	2,400	800	144
LOT 19	2,400	800	144
LOT 20	2,400	833	144
LOT 21	2,400	814	144
LOT 22	2,400	816	144
LOT 23	2,400	938	144
LOT 24	2,400	800	144
LOT 24	2,400	800	144
LOT 26	2,400	805	144
LOT 27	2,400	805	144
LOT 28	2,400	805	144
LOT 29	2,400	805	144
LOT 30	2,400	805	144
LOT 31	2,400	3,113	144
LOT 32	2,400	3,086	144
LOT 33	2,400	815	144
LOT 34	2,400	798	144
LOT 35	2,400	4,177	144
LOT 36	2,400	4,525	144
LOT 37	2,400	800	144
LOT 38	2,400	800	144
LOT 39	2,400	3,941	144
LOT 40	2,400	798	144
LOT 41	2,400	802	144
LOT 42	2,400	823	144
LOT 43	2,400	821	144
LOT 44	2,400	826	144
LOT 45	2,400	798	144
LOT 46	2,400	825	144
LOT 47	2,400	825	144
LOT 48	2,400	798	144
LOT 49	2,400	798	144
LOT 50	2,400	798	144
LOT 51	2,400	3,755	144
LOT 52	2,400	800	144
LOT 53	2,400	800	144
LOT 54	2,400	892	144
LOT 55	2,400	777	144
LOT 56	2,400	787	144
LOT 57	2,400	7,330	144
LOT 58	2,400	812	144
LOT 59	2,400	800	144
LOT 60	2,400	800	144
LOT 61	2,400	800	144
LOT 62	2,400	821	144
LOT 63	2,400	805	144
LOT 64	2,400	800	144
LOT 65	2,400	800	144

IMPERVIOUS COVER CHART

LOT NO.	HOUSE (s.f.)	DRIVEWAY (s.f.)	PATIO (s.f.)
LOT 66	2,400	800	144
LOT 67	2,400	800	144
LOT 68	2,400	800	144
LOT 69	2,400	800	144
LOT 70	2,400	800	144
LOT 71	2,400	807	144
LOT 72	2,400	850	144
LOT 73	2,400	805	144
LOT 74	2,400	800	144
LOT 75	2,400	3,989	144
LOT 76	2,400	800	144
LOT 77	2,400	908	144
LOT 78	2,400	806	144
LOT 79	2,400	800	144
LOT 80	2,400	800	144
LOT 81	2,400	800	144
LOT 82	2,400	800	144
LOT 83	2,400	800	144
LOT 84	2,400	800	144
LOT 85	2,400	800	144
LOT 86	2,400	798	144
LOT 87	2,400	802	144
LOT 88	2,400	800	144
LOT 89	2,400	800	144
LOT 90	2,400	817	144
LOT 91	2,400	838	144
LOT 92	2,400	835	144
LOT 93	2,400	836	144
LOT 94	2,400	800	144
LOT 95	2,400	800	144
LOT 96	2,400	800	144
LOT 97	2,400	800	144
LOT 98	2,400	801	144
LOT 99	2,400	802	144
LOT 100	2,400	800	144
LOT 101	2,400	800	144
LOT 102	2,400	808	144
LOT 103	2,400	889	144
LOT 104	2,400	889	144
LOT 105	2,400	808	144
LOT 106	2,400	800	144
LOT 107	2,400	800	144
LOT 108	2,400	800	144
LOT 109	2,400	800	144
LOT 110	2,400	800	144
LOT 111	2,400	800	144
LOT 112	2,400	1,250	144
LOT 113	2,400	791	144
LOT 114	2,400	2,491	144
LOT 115	2,400	1,455	144
LOT 116	2,400	755	144
LOT 117	2,400	901	144
LOT 118	2,400	812	144
LOT 119	2,400	798	144
LOT 120	2,400	798	144
LOT 121	2,400	798	144
LOT 122	2,400	798	144
LOT 123	2,400	865	144
LOT 124	2,400	863	144
LOT 125	2,400	798	144
LOT 126	2,400	799	144
LOT 127	2,400	786	144
LOT 128	2,400	798	144
LOT 129	2,400	798	144
LOT 130	2,400	905	144

DEED RESTRICTIONS/COVENANTS NOTES:
1. NO DEED RESTRICTIONS ARE PROPOSED BY THESE PLANS.
2. LOTS CONTAINING EASEMENTS AS DESCRIBED ON THE EASEMENT PLANS CONTAINED HEREIN SHALL BE SUBJECT TO THE LIMITATIONS AND REQUIREMENTS OF THE INTENDED EASEMENTS. SEE GENERAL NOTE #21.

DEDICATION NOTES:
1. ALL PROPOSED STREETS ARE OFFERED FOR DEDICATION TO THE BOROUGH OF CORNWALL
2. RIGHT-OF-WAY ALONG THE FRONT OF LOTS 115 & 116 ALONG IRON VALLEY DRIVE IS OFFERED TO THE BOROUGH SO THAT THE ENTIRETY OF THE PAVING ASSOCIATED WITH IRON VALLEY DRIVE IS FULLY CONTAINED WITHIN THE PRIVATE RIGHT-OF-WAY.
3. NO LAND IS OFFERED FOR DEDICATION TO THE BOROUGH. THE APPLICANT WILL PAY A FEE IN LIEU OF DEDICATION OF LAND..

MODIFICATIONS / WAIVER REQUESTS

1. SALDO, SECTION 13-402.1.A. PLAN SCALE – THE PLAN SHALL BE CLEARLY AND LEGIBLY DRAWN TO A SCALE OF ONE INCH EQUALS 50 FEET OR LARGER.

   THE APPLICANT REQUESTS TO PROVIDE PLANS AT A SCALE OF 60 FEET TO THE INCH.

   JUSTIFICATION FOR THE WAIVER: THE PLANS ARE PROPOSING THE USE OF A SCALE OF 60 FEET TO THE INCH. THE PLAN SCALE PROPOSED IS A COMMON SCALE, WHICH IS CLEAR AND LEGIBLE.

2. SALDO, SECTION 13-501.1.G(1). EXISTING STREET IMPROVEMENTS – ALL EXISTING STREETS AT THE PERIMETER AND/OR THROUGH THE DEVELOPMENT SHALL BE IMPROVED ACCORDING TO BOROUGH SPECIFICATIONS AND SHALL BE IMPROVED TO THE CENTERLINE OF THE STREET. STREET IMPROVEMENTS INCLUDE ROAD WIDENING, CURBING AND CONCRETE SIDEWALKS.

   THE APPLICANT REQUESTS TO MAINTAIN THE EXISTING IMPROVEMENTS ALONG THE DEVELOPMENT'S REXMONT ROAD AND IRON VALLEY DRIVE FRONTAGE.

   JUSTIFICATION FOR THE WAIVER: THE DEVELOPMENT HAS A VERY NARROW FRONTAGE ALONG REXMONT ROAD. THE PROJECT HAS TWO SECTIONS OF FRONTAGE ALONG REXMONT ROAD OF 50 FEET? AND 400 FEET. ANY IMPROVEMENTS PROPOSED ALONG THIS SECTION WOULD BE OUT OF PLACE AND NOT FIT THE CHARACTER OF THE SURROUNDING DEVELOPED AREA. CAN YOU IDENTIFY WHAT THE EXISTING WIDTH OF CARTWAY AND SHOULDER IS ALONG REXMONT ROAD? IT WILL BE HELPFUL TO UNDERSTAND HOW CLOSE WE ARE TO MEETING THE REQUIREMENTS. IRON VALLEY DRIVE IS A PRIVATE STREET AND HAS BEEN DETERMINED IN THE PAST THAT NO IMPROVEMENTS ALONG THE ENTIRE ROAD WOULD BE NECESSARY.

3. SALDO, SECTION 13-510.4.A. MAXIMUM LOTS ON A CUL-DE-SAC – CUL-DE-SACS SHALL SERVE A MAXIMUM OF 12 LOTS OR DWELLING UNITS.

   THE APPLICANT REQUESTS TO PROVIDE 14 LOTS / DWELLING UNITS ON THE ROAD C CUL-DE-SAC.

   JUSTIFICATION FOR THE WAIVER: THE DESIGN OF THE CUL-DE-SAC MEETING ALL ORDINANCE REQUIREMENTS REGARDING MAXIMUM LENGTH. THE LOTS ALONG THE CUL-DE-SAC MEET THE MINIMUM LOT WIDTH REQUIREMENTS. THE PLAN PROPOSES 14 LOTS ALONG THIS CUL-DE-SAC. OTHER EXISTING CUL-DE-SAC ROADS IN THE BOROUGH HAVE MORE LOTS THAN WHAT IS PROPOSED BY THIS PLAN.

   - GRANITE STREET – 15 LOTS
   - JUNIPER STREET – 15 LOTS
   - CORNWALL HILLS DRIVE – 13 LOTS
   - BELL TOWER DRIVE – 20 LOTS
   - LACKAWANNA DRIVE – 13 LOTS

4. SALDO, SECTION 13-510.7.A. CUL-DE-SAC RADII – PAVED CARTWAY WIDTHS SHALL BE 100 FEET AT THE CUL-DE-SAC TURN AROUND ALONG WITH A RIGHT-OF-WAY OF 120 FEET AT THE TURN AROUND.

   THE APPLICANT REQUESTS TO PROVIDE 80 FEET AT THE CUL-DE-SAC TURN AROUND ALONG WITH A RIGHT-OF-WAY OF 100 FEET AT THE TURN AROUND.

   JUSTIFICATION FOR THE WAIVER: IT IS OUR OPINION THAT THE REQUIRED 100 FOOT DIAMETER TURN AROUND IS EXCESSIVELY LARGE. TO REDUCE PAVEMENT, THE PLAN PROPOSES AN 80 FOOT DIAMETER TURN AROUND WITH A 100 FOOT RIGHT-OF-WAY DIAMETER. BELOW IS A SCREEN SHOT OF A TYPICAL FIRE APPARATUS NEGOTIATING THE CUL-DE-SAC WITH A DIAMETER OF 80'.

5. SALDO, SECTION 13-511.2.B. SIDEWALKS ON BOTH SIDES OF STREET – SIDEWALKS SHALL BE INSTALLED ON BOTH SIDES OF ALL STREETS IN RESIDENTIAL AND NONRESIDENTIAL SUBDIVISIONS AND LAND DEVELOPMENT AS SPECIFIED HEREIN. SIDEWALKS SHALL BE LOCATED, IF POSSIBLE, WITHIN THE STREET RIGHT-OF-WAY LINE.

   THE APPLICANT REQUESTS TO PROVIDE SIDEWALK ALONG ONLY ONE SIDE OF THE PROPOSED RESIDENTIAL STREETS WITHIN THE PROPOSED DEVELOPMENT.

   JUSTIFICATION FOR THE WAIVER: SIDEWALKS ON ONE SIDE OF THE STREET IS ADEQUATE FOR PEDESTRIAN TRAVEL THROUGHOUT THE DEVELOPMENT. ADDITIONAL SIDEWALKS WOULD POSE ADDITIONAL MAINTENANCE COSTS ON FUTURE BOROUGH RESIDENTS.

   THE REDUCTION OF IMPERVIOUS SURFACE ALSO SERVES A PUBLIC BENEFIT THROUGH THE REDUCTION OF STORMWATER RUNOFF. BY REDUCING THE AMOUNT OF IMPERVIOUS SIDEWALK ON THE SITE THE ENVIRONMENTAL IMPACT CAN BE REDUCED BY INSTALLING LESS PAVEMENT AND REDUCING THE AMOUNT OF STORMWATER RUNOFF FROM THE PARKING LOT. THIS SERVES A VALID PUBLIC PURPOSE.

   PER THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERSHED MANAGEMENT, PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL DATED DECEMBER 30, 2006 REDUCING PARKING IMPERVIOUSNESS IS AN ENCOURAGED STORMWATER BEST MANAGEMENT PRACTICE. AS IDENTIFIED IN BEST MANAGEMENT PRACTICE 5.7.2, "REDUCING PARKING IMPERVIOUSNESS PERFORMS VALUABLE STORMWATER FUNCTIONS IN CONTRAST TO CONVENTIONAL OR BASELINE DEVELOPMENT: INCREASING INFILTRATION; DECREASING STORMWATER RUNOFF VOLUME; INCREASING STORMWATER TIME OF CONCENTRATION; IMPROVING WATER QUALITY BY DECREASING THE POLLUTANT LOADING OF STREAMS; IMPROVING NATURAL HABITATS BY DECREASING THE DELETERIOUS EFFECTS OF STORMWATER RUNOFF; DECREASING THE CONCENTRATION AND ENERGY OF STORMWATER. IMPERVIOUSNESS GREATLY INFLUENCES STORMWATER RUNOFF VOLUME AND QUALITY BY FACILITATING THE RAPID TRANSPORT OF STORMWATER AND COLLECTING POLLUTANTS FROM ATMOSPHERIC DEPOSITION, AUTOMOBILE LEAKS, AND ADDITIONAL SOURCES. INCREASED IMPERVIOUSNESS ALTERS AN AREA'S HYDROLOGY, HABITAT STRUCTURE, AND WATER QUALITY."

6. SALDO, SECTION 13-511.3.C. USE OF SLANT CURB – STANDARD STRAIGHT CURB SHALL BE REQUIRED ALONG ALL STATE HIGHWAYS AND ALONG ALL BOROUGH STREETS. OTHER TYPES OF CURBING ARE NOT PERMITTED UNLESS MATCHING AN EXISTING CONDITION OR A WAIVER IS REQUESTED AND GRANTED BY BOROUGH COUNCIL.

   THE APPLICANT REQUESTS TO PROVIDE SLANT CURB THROUGHOUT THE DEVELOPMENT.

   JUSTIFICATION FOR THE WAIVER: THE USE OF SLANT CURB IS COMMON. THIS ALLOWS A LITTLE FLEXIBILITY IN THE PLACEMENT OF HOMES AND DRIVEWAYS WELL AFTER THE CURBING HAS BEEN INSTALLED. THIS WILL ALLOW A MUCH CLEANER LOOK AT THE END OF THE PROJECT.

7. SALDO, SECTION 13-512.1 & 512.2. CONCRETE MONUMENTS – PERMANENT CONCRETE MONUMENTS SHALL BE ACCURATELY PLACED ALONG AT LEAST ONE SIDE OF EACH STREET AT THE BEGINNING AND END OF ALL CURVES AND AT ALL ANGLES. AT LEAST ONE MONUMENT SHALL BE PLACED FOR EVERY TWO LOTS OR EVERY 200 FEET OF STREETS, WHICHEVER REQUIREMENT IS LESS.

   THE APPLICANT REQUESTS TO PROVIDE 8 CONCRETE MONUMENTS THROUGHOUT THE DEVELOPMENT IN THE LOCATIONS SHOWN ON THE PLANS.

   JUSTIFICATION FOR THE WAIVER: THE AMOUNT OF CONCRETE MONUMENTS REQUIRED BY ORDINANCE IS EXCESSIVE. WITH TODAY'S MODERN SURVEY EQUIPMENT AND TECHNOLOGY, IT'S RECOMMENDED ONLY A FEW MONUMENTS BE PLACED THROUGHOUT A DEVELOPMENT. EIGHT (8) MONUMENTS ARE PROPOSED THROUGHOUT THIS DEVELOPMENT.

8. SWM, SECTION 11A-309.2.B. PIPE SIZE – PIPES PROPOSED FOR DEDICATION TO THE BOROUGH SHALL HAVE A MINIMUM DIAMETER OF 18 INCHES. FIFTEEN-INCH DIAMETER DRAINAGE PIPES MAY BE ALLOWED AT THE DISCRETION OF THE BOROUGH ENGINEER. IS A WAIVER NEEDED HERE IF THE BOROUGH ENGINEER CAN AUTHORIZE THE USE OF 15" PIPE?

   JUSTIFICATION FOR THE WAIVER: THE PROPOSED STORM SEWER SYSTEM IS DESIGNED TO CONVEY THE 100-YR STORM EVENT WITH VARIOUS SECTIONS OF 15" DIAMETER PIPE.

9. SWM, SECTIONS 11A-309.3.C & 11A-310.5. GUTTER SPREADS – FOR THE TWENTY-FIVE-YEAR STORM, THE MAXIMUM ALLOWABLE SPREAD OF WATER ON PROPOSED STREETS SHALL BE 1/2 OF A TRAVEL LANE OR ONE INCH LESS THAN THE CURB DEPTH, WHICHEVER IS LESS.

   THE APPLICANT REQUESTS...

   JUSTIFICATION FOR THE WAIVER: THE ONLY LOCATIONS WHERE GUTTER SPREADS EXCEED 1/2 OF A TRAVEL LANE (7.50') ARE LOW POINTS (SAG CONDITION) WITHIN THE PROPOSED STREETS. THE FLAT NATURE OF THE ROAD IN THESE LOCATIONS RESULTS IN A VERY SHALLOW, BUT WIDE, GUTTER SPREAD. THE MAXIMUM GUTTER DEPTH PROPOSED IS 0.18' (2.16 INCHES) WHICH IS LESS THAN HALF OF THE CURB HEIGHT AND WILL POSE NO THREAT TO PUBLIC SAFETY. BELOW IS A LIST OF THE INLETS THAT EXCEED THE MAXIMUM.

   - I-C28A – 8.37
   - I-C28B – 8.32
   - I-C28 – 8.88
   - I-B4 – 8.18
   - I-B3 – 7.82
   - I-G9 – 7.72
   - I-F6 – 7.59
   - I-E5 – 7.55

10. SWM, SECTION 11A-310.7. INTERSECTION FLOWS – STORMWATER FLOW ACROSS STREET INTERSECTIONS SHALL NOT EXCEED ONE INCH DEPTH FOR THE TWENTY-FIVE-YEAR STORM.

    THE APPLICANT REQUESTS...

    JUSTIFICATION FOR THE WAIVER: THERE IS ONLY ONE PROPOSED STREET INTERSECTION WHERE FLOWS EXCEED 1" IN DEPTH. AT THE INTERSECTION OF ROAD B AND ROAD D THE CALCULATED FLOW DEPTH IS 1.56" (0.13'). AS DEPICTED ON THE PLAN, INLETS ARE PLACED ON EACH CORNER OF THE INTERSECTION TO CAPTURE AS MUCH RUNOFF AS POSSIBLE. THE 1.56" FLOW DEPTH WILL POSE NO THREAT TO PUBLIC SAFETY. THE FLOW WIDTH ACROSS THIS INTERSECTION IS LESS THAN THE ALLOWABLE WIDTH OF 7.50". THE DESIGNED FLOW WIDTH IS 6.25".

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG!

SERIAL NUMBER: 20240730177
DATE: 03/13/2024

STECKBECK ENGINEERING & SURVEYING, INC., HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974 AS AMENDED BY ACT 121 OF 2008 OF THE PENNSYLVANIA GENERAL ASSEMBLY, IT HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) SHOWN ON THE DRAWINGS:

(1) PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. REQUESTED THE LINE AND FACILITY INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) FROM A ONE CALL SYSTEM NOT LESS THAN TEN NOR MORE THAN NINETY WORKING DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED.

(2) PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. SHOWN UPON THE DRAWING(S) THE POSITION AND TYPE OF EACH FACILITY OWNERS LINE, DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY SECTION 4, CLAUSE (2), AND THE NAME OF THE FACILITY OWNER, AND THE FACILITY OWNERS DESIGNATED OFFICE ADDRESS AND THE TELEPHONE NUMBER AS SHOWN ON THE LIST REFERRED TO IN SECTION 3.

(3) PURSUANT TO SECTION 4, CLAUSE (4) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. MADE A REASONABLE EFFORT TO PREPARE THE CONSTRUCTION DRAWING(S) TO AVOID DAMAGE TO AND MINIMIZE INTERFERENCE WITH A FACILITY OWNERS FACILITIES IN THE CONSTRUCTION AREA BY MAINTAINING AN EIGHTEEN-INCH CLEARANCE OF THE FACILITY OWNERS FACILITIES WHERE POSSIBLE.

(4) PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC., SHALL BE DEEMED TO HAVE MET THE OBLIGATIONS OF CLAUSE (2) BY CALLING A ONE CALL SYSTEM AND SHOWING AS PROOF THE SERIAL NUMBER OF THE ONE CALL NOTICE ON THE DRAWING(S). CORNWALL BOROUGH, LEBANON COUNTY ID NO. 20240730177.

AND STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST AND AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT STECKBECK ENGINEERING & SURVEYING, INC. IS REFLECTING SAID INFORMATION ON THESE DRAWINGS ONLY DUE TO THE REQUIREMENTS OF THE SAID ACT 187, DECEMBER 19, 1996.

VERIZON PENNSYLVANIA LLC
1026 HAY STREET
PITTSBURGH, PA 15221
CONTACT – DEBORAH BARUM
deborah.d.delia@verizon.com
PHONE: (412) 344-3901

CORNWALL BOROUGH
44 REXMONT ROAD
LEBANON, PA 17042
CONTACT – BARB HENRY
bhenry@cornwall-pa.com
PHONE: (717) 274-3436

UGI UTILITIES INC
1301 AIP DR
MIDDLETOWN, PA 17057
CONTACT – GEOFFREY FERGUSON
gferguson@ugi.com
PHONE: (610) 807-3118

COMCAST CABLE LEBANON
C/O USIC LOCATING SERVICES INC
13085 HAMILTON CROSSING BLVD STE 200
CARMEL, IN. 46032
CONTACT – USIC OFFICE PERSONNEL
PHONE: (800) 811-7981

FIRSTENERGY CORPORATION
21 S. MAIN STREET
AKRON, OH. 44308
CONTACT: MELLYSSA ADAMS
madams@firstenergycorp.com
PHONE: (330) 604-4073

REVISION	DATE	BY
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NOTES

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
For
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	N/A
PROJECT #	2216-22-003

2

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY
- DEMO (TO BE REMOVED OR RELOCATED)
- HISTORIC OVERLAY DISTRICT LIMITS

GRAPHIC SCALE
150' 0' 75' 150' 300'
1 inch = 150ft.

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

EX. BOUNDARY LINE (TO BE EXTINGUISHED)
EX. UTILITY POLES AND OVERHEAD LINES (TO BE REMOVED)
EX. GRAVEL/ MACADAM ROAD (TO BE REMOVED)
EX. STORMPIPES AND RIP RAP (TO BE REMOVED)
EX. BUILDINGS/CONC. PADS/CONC. ALL STRUCTURES/INLETS WITH RELATED STORM PIPES/MANHOLES MACADAM/UTILITY POLES AND RELATED OVERHEAD WIRE/DEBRIS (TO BE REMOVED)
EX. STORM PIPES AND RIP RAP (TO BE REMOVED)
EX. BUILDING/ MACADAM (TO BE REMOVED)
EX. STONE (TO BE REMOVED)
EX. BUILDING/RAIL LINE/MACADAM (TO BE REMOVED)
EX. CONC. PAD WITH RELATED STRUCTURES (TO BE REMOVED)
EX. WATER LINE (TO BE REMOVED)
EX. MACADAM (TO BE REMOVED)
EX. STRUCTURES/EX. UTILITY POLES AND OVERHEAD LINES/ FENCE (TO BE REMOVED)
SHAFTS NO. 4 AND NO. 5 TO BE OPENED, EXCAVATED AND PLUGGED IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS RECOMMENDATIONS
EXISTING ROCK CRUSHER TO BE RELOCATED TO MIXED USE COMMUNITY PROPOSED ON SOUTH SIDE OF OPEN PIT
EX. STRUCTURE AND MACADAM (TO BE REMOVED)
MATCHLINE
("RLD" LOW DENSITY RESIDENTIAL)
("CR" CONSERVATION RECREATION)
("RV" VILLAGE RESIDENTIAL)

KEY MAP
Scale:1"=800'
Legend
Current Sheet
Sheet 4 of 88
Sheet 5 of 88
Sheet 6 of 88
Sheet 7 of 88
Sheet 8 of 88

REVISION	DATE	BY
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OVERALL EXISTING CONDITIONS - DEMOLITION PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #2216-22-003	

3
3 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

PROPERTY ADJOINERS

	OWNER	UPI #	DEED
1	KENT M. & SANDRA J. JONES	12-2346592-346039	217-512
2	BRIAN S. & ANN M. SMITH	12-2346617-346048	221-810
3	RYAN C. POPER	12-2346634-346055	2250-7837
4	JEFFREY J. & SANDRA J. SYNDER	12-2346651-346061	2203-9737
5	DUSTIN WESLEY NOLAND	12-2346668-346067	2327-5787
6	EQUITY TRUST COMPANY CUSTODIAN FBO & BENNET J. BERNARD IRA	12-2346685-346074	2066-307
7	JOHN R. & SHARON C. BURTON	12-2346687-346094	242-778
8	JEFFREY L GABRIEL	12-2346719-346086	2304-1976
9	NICOLE E. BRUNNER	12-2346735-346092	2310-7851
10	ROBERT E. & HELEN M. MARTIN	12-2346752-346099	2331-6161
11	JOSEPH J. & KRISTA L. FISHER	12-2346769-346105	333-622
12	LISA MICHELE HAHN	12-2346804-346116	2317-6429
13	WILLIAM A. & EDWARD R. REED	12-2346729-345959	377-701

SOIL DATA

SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 4 of 88 (MATCHLINE)

Sheet 5 of 88 (MATCHLINE)

Sheet 6 of 88 (MATCHLINE)

Sheet 7 of 88 (MATCHLINE)

Sheet 8 of 88 (MATCHLINE)

REXMONT ROAD, IRON VALLEY DRIVE, BOYD STREET, OLD GOLD ROAD, GRANITE ST

MATCHLINE (See Sheet 5 of 88)

MATCHLINE (See Sheet 6 of 88)

MATCHLINE (See Sheet 6 of 88)

REVISION	DATE	BY
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EXISTING CONDITIONS PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

For

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT	#2216-22-003

4

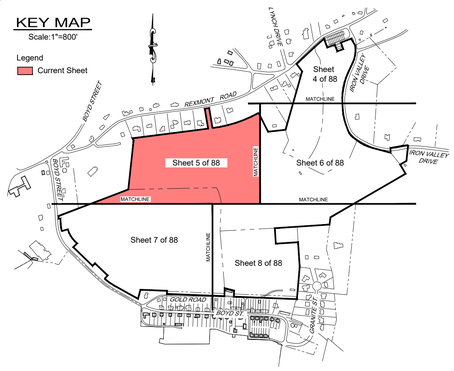
4 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REXMONT ROAD

BOROUGH OF CORNWALL DEED: 184-582 PIN: 2345152-345549

JOHN G. SCHRECENGOST & PAULA F. ANDERSON DEED:2223-555 PLAN: 49-96, 50-52 PIN: 12-2344479-345058

PATRICK M. & MELISSA A. LEIBICH DEED: 366-106 PLAN: 49-96, 50-52 PIN:12-2344636-345076

STEVEN WERNER, TRUSTEE YVONNE J. WERNER, IRREVOCABLE TRUST DEED: 2256-6105 PLAN: 49-96, 50-52 PIN:12-2344779-345094

BRIAN P. & RUTH E. ROOFT DEED: 366-684 PLAN: 49-96, 50-52 PIN:12-2344922-345111

HEATH A. & REBECCA N. HENTZ DEED: 2256-2371 PLAN: 49-96, 50-52 PIN: 12-2345065-345133

MICHAEL A. & AIMEE J. SCHMITT DEED: 2207-2693 PLAN: 49-96, 50-52 PIN: 2345205-345155

JEFFREY S. & AMY E. FLICK DEED: 2277-1870 PLAN: 49-96, 50-53 PIN: 12-2345400-345194

JAMES C. & ABBY L. COX DEED: 2319-6898 PIN: 12-2346011-345089

MARK D. & JUDY A. MILLER DEED: 2213-6563 PLAN: 28-52 PIN: 12-2344312-344991

MINERS VILLAGE MENNONITE CHURCH C/O ERNEST WINE DEED: 2033-2107 PIN: 12-2344092-344542

CORNWALL PROPERTIES, LLC UPI: 12-2346649-344743 DEED: 2315-4901 PLAN: 58-240; LOT 55 AREA: 2,212,474 S.F.; 50.79 ACRES

CORNWALL PROPERTIES, LLC UPI: 12-2344396-343756 PLAN: 58-240; LOT 56 AREA: 1,749,917 S.F.; 40.17 ACRES

N 80°34'33" E 50.00' INV: 638.28

S 09°25'27" E 222.07'

N 09°25'27" W 721.50'

N 82°46'27" E 131.14'

N 80°34'33" E 540.05' REBAR (FND)

S 09°25'27" E REBAR (FND)

N 07°17'32" E 834.47'

N 88°47'44" E REBAR (FND)

S 10°19'38" W 985.06'

L=645.89' R=1451.62' CH=S 71°46'08" W 642.68'

A: 211.84' R: 361.07' D: 33°36'53" CH: S 14°28'49" E 208.81'

EX. WETLAND #5

EX. WETLAND #6

W.E. 640.5

GRADING/NET.LAND EASEMENT (PLAN: 50-52)

MATCHLINE (See Sheet 7 of 88)

MATCHLINE (See Sheet 8 of 88)

MATCHLINE (See Sheet 6 of 88)

REVISION	DATE	BY
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EXISTING CONDITIONS PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

5

5 OF 88 SHEETS

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY

REVISION	DATE	BY
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EXISTING CONDITIONS PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
CORNWALL PROPERTIES, LLC
for
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

6

6 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 4 of 88 | Sheet 5 of 88 | Sheet 6 of 88 | Sheet 7 of 88 | Sheet 8 of 88

REXMONT ROAD, BOYD STREET, IRON VALLEY DRIVE, GOLD ROAD, ROYD ST, OLD TURNPIKE

CORNWALL PROPERTIES, LLC
DEED: 2315-4901
UPI: 12-2344396-343756
PLAN: 58-240; LOT 56
AREA: 1,749,917 S.F.; 40.17 ACRES

CORNWALL MANOR UNITED METHODIST CHURCH
DEED: 158-745
PIN: 12-2343611-344332

TRIG. FUND I CORNWALL LEBANON PA, LLC
DEED: 2315-0678
PIN: 12-2343387-343693

MATCHLINE (See Sheet 5 of 88)

MATCHLINE (See Sheet 8 of 88)

LIMITS OF HISTORIC OVERLAY DISTRICT

"RLD" LOW DENSITY RESIDENTIAL)

"CPR" CONSERVATION RECREATION)

"RV" VILLAGE RESIDENTIAL)

EX. WETLAND #7

LANDSCAPE SPIKE (FND)
S 87°23'39" W 20.00'
MONUMENT (FND)
N 02°36'21" W 56.48'
L=83.26'
R=365.28'
CH=N 09°38'09" W 83.08'
REBAR (FND)
S 14°20'03" W 20.00'
L=155.19'
R=295.28'
CH=N 30°43'19" W 153.41'
N 47°19'19" W 60.00'
REBAR (FND)
N 47°19'19" W 60.00'
(FOR CONSERVATION RECREATION)
REBAR (FND)
N 42°40'41" E 20.00'
MONUMENT (FND)
N 47°19'19" W 60.00'
L=28.32'
R=557.49'
CH=N 47°41'00" W 28.32'
MONUMENT (FND)
N 47°19'19" W 60.00'
L=127.93'
R=607.28'
CH=N 54°43'17" W 127.69'
MONUMENT (FND)
N 61°54'28" W 60.00'
MONUMENT (FND)
N 61°54'28" W 60.00'
REBAR (FND)
S 28°05'32" E 15.24'
OFFER OF ADD'L R-O-W TO BOROUGH OF CORNWALL (PLAN: 58-240)
REBAR (FND)
S 61°54'28" E 60.00'
MONUMENT (FND)
S 61°54'28" E 60.00'
MONUMENT (FND)
S 61°54'28" E 60.00'
REBAR (FND)
S 28°05'32" E 15.24'
REBAR (FND)
S 28°05'32" E 15.24'
MONUMENT (FND)
S 61°54'28" E 60.00'
REBAR (FND)
S 28°05'32" E 15.24'
MONUMENT (FND)
S 61°54'28" E 60.00'
REBAR (FND)
S 28°05'32" E 15.24'

CB TG: 658.40 INV: 654.55
CB TG: 657.85 INV: 653.25
CB TG: 667.75 INV: 664.30
CB TG: 635.25 INV: 634.25
SMH RIM: 643.51
SMH RIM: 640.58
SMH RIM: 639.50
SMH RIM: 599.88
20" CMP
18" CMP INV: 652.22
INV: 632.42
INV: 630.71
INV: 631.32
INV: 627.54
INV: 632.15
INV: 632.74
INV: 655.1

KOBY GEHMAN
DEED: 2226-3908
PIN: 12-2344576-343189

RICHARD M. & KELLY L. ELLINGER
DEED: 2117-197
PIN: 12-2344707-343140

EDWARD NICHOLAS & ANNE M. WITT
PIN: 12-2345246-343046

RALPH FORENTINO, JR. & SARAH TACOLONDRO
DEED: 2296-1334
PIN: 12-2344822-343107

DEED: 2296-1334
PIN: 12-2344863-343105

MICHAEL S. FORENTINO
DEED: 2296-1334
PIN: 12-2344921-343105

DOUG J. & LINDSEY D. LINGLE
DEED: 2220-4106
PIN: 12-2344960-343049

NICHOLAS R. & WOLF E. RIFFAH
DEED: 2296-1466
PIN: 12-2345024-343103

TYLER RUHL
DEED: 2296-1466
PIN: 12-2345049-343052

MELISSA L. SIMMS
DEED: 301-644
PIN: 12-2345123-343099

LISA MARIE NELSON
DEED: 301-644
PIN: 12-2345153-343037

NICHOLAS S. & AMBER M. MUSSER
DEED: 2296-1466
PIN: 12-2345226-343084

WILLIAM W. KESSINGER
DEED: 332-859
PIN: 12-2345254-343033

APRIL L. TROUTMAN
PIN: 12-2345153-343092

RICHARD L. & CHRISTINE A. LUTZ
DEED: 2296-1466
PIN: 12-2345339-343039

DANIEL T. & JANET E. LIGHT
DEED: 2296-180
PIN: 12-2345388-343099

BOYD STREET

GOLD ROAD

REXMONT ROAD

IRON VALLEY DRIVE

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

KEY MAP
Scale: 1"=800'
Legend
Current Sheet
Sheet 4 of 88
Sheet 5 of 88
Sheet 6 of 88
Sheet 7 of 88
Sheet 8 of 88

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING STREAM/CREEK
- EXISTING SOILS
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY

REVISION	DATE	BY
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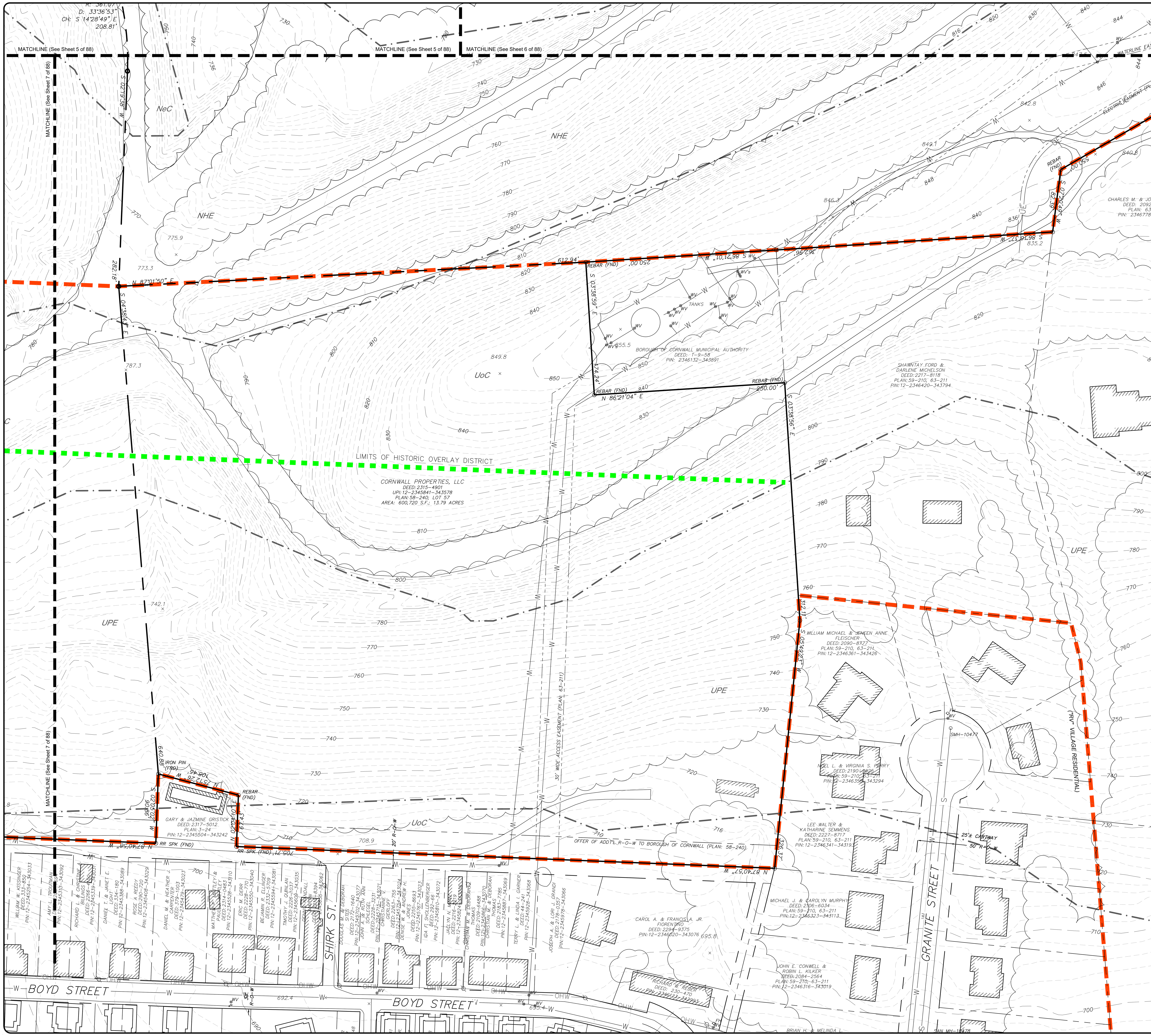
EXISTING CONDITIONS PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
for
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042-7004
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

7

7 OF 88 SHEETS



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EXISTING ZONING BOUNDARY
- EX. WETLAND BOUNDARY

North

SOIL DATA

SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

GRAPHIC SCALE

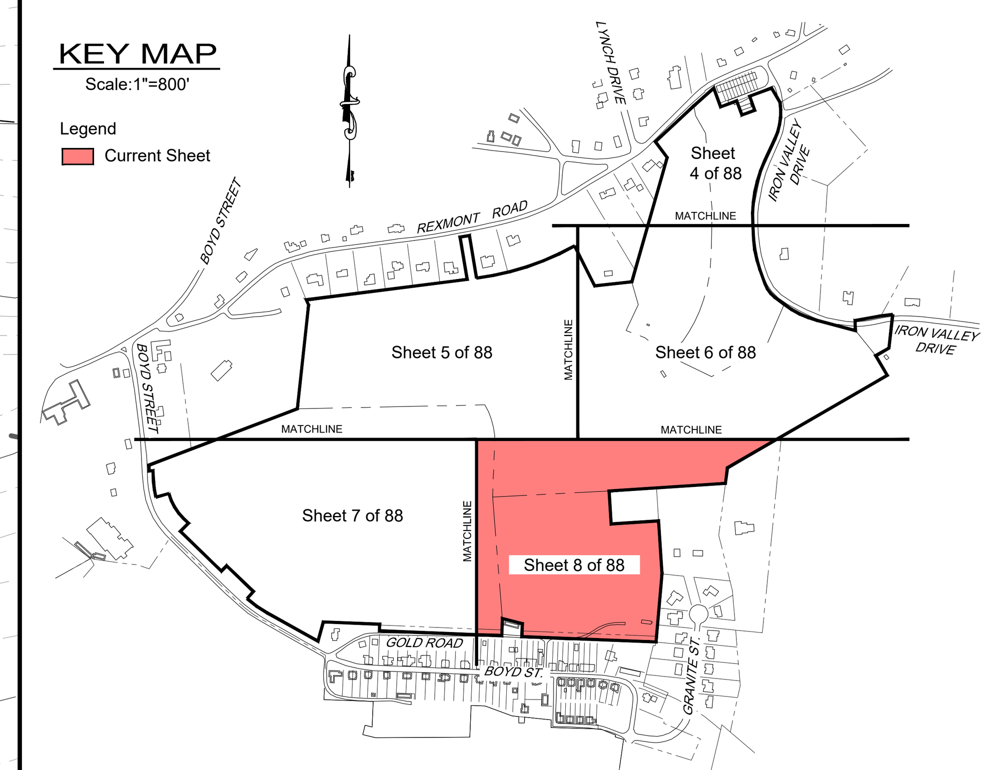
60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP

Scale: 1"=800'

Legend: Current Sheet



REVISION	DATE	BY
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EXISTING CONDITIONS PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
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SCALE:	1"=60'
PROJECT	#2216-22-003

8

CONSERVATION PLAN NARRATIVE:

1. THE DEVELOPMENT OF THIS SUBDIVISION MEETS THE REQUIREMENTS OF ARTICLE 20, SECTION 14 OF THE CORNWALL BOROUGH ORDINANCE.
2. THE DISTURBANCE OF STEEP SLOPES IS UNAVOIDABLE. HOWEVER, THE DEVELOPMENT WAS DESIGNED TO MINIMIZE STEEP SLOPE DISTURBANCE. THE PROPOSED STORMWATER MANAGEMENT FACILTIES WERE DESIGNED USING EXISTING LOW POINTS TO REDUCE STEEP SLOPE DISTURBANCES. IN ADDITION, MEASURES HAVE BEEN TAKEN TO ENSURE SLOPE STABILITY.
3. THERE ARE APPROXIMATELY 20 ACRES OF IMPERVIOUS SURFACE IS ADDED BY THIS DEVELOPMENT AND 95 ACRES OF DISTURBANCE AS A RESULT OF THE DEVELOPMENT.

ENVIRONMENTAL PROTECTION (EP) NOTE:

ALL REGULATIONS IN ARTICLE 20, SECTION 14 OF THE CORNWALL BOROUGH ZONING ORDINANCE SHALL APPLY TO ENVIRONMENTALLY SENSITIVE AREAS SUCH AS STEEPLY SLOPED AREAS, WETLANDS, WOODLANDS OR SURFACE WATER AS DELINEATED ON THIS PLAN. NO OTHER AREAS DESCRIBED IN ARTICLE 20, SECTION 14 ARE PRESENT WITHIN THE AREA AFFECTED BY THIS PLAN.

CONSERVATION NOTES:

1. THIS CONSERVATION PLAN IS PREPARED IN ACCORDANCE WITH ARTICLE 20, SECTION 14 OF THE CORNWALL BOROUGH ZONING ORDINANCE. SITE ALTERATIONS AND IMPACTS MUST BE ILLUSTRATED AND APPROVED WITHIN A LAND DEVELOPMENT PLAN.
2. THIS PLAN DELINEATES ALL STRONGLY SLOPING (15%-25%) LAND AND STEEPLY SLOPING (25%+) LAND WITHIN THE SUBJECT PARCEL BOUNDARY. ALL EXISTING STEEP SLOPES THAT ARE BEING DISTURBED ARE NOT NATURALLY OCCURRING. All SLOPES HAVE BEEN PREVIOUSLY DISTURBED AS PART OF THE HISTORICAL MINING ON THE SITE..
3. THE EXISTING PARCEL CONTAINS 123.76 ACRES. 67.12 ACRES OF THE SITE CONTAINS SLOPES THAT ARE CONSIDERED STRONGLY SLOPED (15%-25%) OR STEEPLY SLOPED (25%+). DISTURBANCE OF STEEP SLOPES WERE AVOIDED AND ONLY NECESSARY FOR THE CONSTRUCTION OF INFASTRUCTURE, HOMES AND STORMWATER MANAGEMENT FACILITIES.
4. EXISTING SITE GROUND COVER CONDITIONS CONSIST OF WOODLAND AREAS, DEVOID (BARE) AREAS FROM PREVIOUS MINING/INDUSTRIAL OPERATIONS, WETLANDS AND IMPERVIOUS COVERS SUCH AS CONCRETE AND STONE DRIVEWAYS. NO ROCK OUTCROPPING WERE OBSERVED THROUGHOUT THE SITE.
5. GEOLOGIC CONDITIONS – SEE GEOLOGICAL REPORT.
6. A PNDI SEARCH FOR THE PRESENCE OF RARE OR ENDANGERED PLANT AND ANIMAL SPECIES WAS PERFORMED. TWO IMPACTS WERE IDENTIFIED. ONE WITH THE PA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES AND THE OTHER WITH THE US FISH AND WILDLIFE SERVICE. BOTH IMPACTS WERE FURTHER INVESTIGATED. NO FURTHER REVIEW IS REQUIRED WITH THE PA DCNR AND AVOIDANCE MEASURERS ARE RECOMMENDED FOR THE USFWS.
7. THE IMPROVEMENTS, EARTHMOVING, GRADING OR OTHER CONSTRUCTION ACTIVITIES PROPOSED BY THE LAND DEVELOPMENT PLAN ARE LIMITED TO THE MINIMUM REQUIRED FOR THE DEVELOPMENT, ACCESS DRIVES, AND THE ASSOCIATED STORM WATER, SEWAGE AND WATER FACILITIES.
8. WETLANDS ARE PRESENT ON THE SUBJECT TRACK AND ARE IDENTIFIED ON THE CONSERVATION PLAN. SEE ASSOCIATED WETLAND REPORT PREPARED BY VORTEX ENVIRONMENTAL.
9. THE DESIGN PROPOSES 36.27 ACRES OF TREES TO BE REMOVED. THIS EQUATES TO 29.30% OF THE TOTAL SITE AREA WHICH IS LESS THAN THE ALLOWABLE 30%.
10. ACCORDING TO FEMA MAPPING, NO FLOODPLAINS EXISTING ON THE SUBJECT PROPERTY.

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING WETLANDS (0.96 AC)
- EXISTING WOODLANDS (36.27 AC.)
- EXISTING WOODLANDS REMOVED (29.30%)
- SLOPES EXCEEDING 15% (54%)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)

GRAPHIC SCALE
150' 0' 75' 150' 300'
1 inch = 150 ft.

NORTH

KEY MAP
Scale:1"=800'
Legend
Current Sheet

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #2216-22-003	

9

9 OF 88 SHEETS

REVISION	DATE	BY
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CONSERVATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
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Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
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LEGEND

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (REBAR — CONCRETE MONUMENT)
- PROPOSED RIGHT-OF-WAY
- EX. ZONING DISTRICT LINES

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

North

PHASING SCHEDULE

PHASE 1	– 40 UNITS	START: 2025/COMPLETE: 2027
PHASE 2	– 51 UNITS	START: 2027/COMPLETE: 2029
PHASE 3	– 39 UNITS	START: 2029/COMPLETE: 2031

ZONING COMPLIANCE CHART

CORNWALL BOROUGH:

ZONING DISTRICT: LOW DENSITY RESIDENTIAL (RLD)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	15,000 S.F.	SEE CHART
MINIMUM LOT WIDTH	110'	110'
MAXIMUM LOT COVERAGE	30%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	30'	
SIDE	15'	
REAR	30'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'

ZONING DISTRICT: CONSERVATION RECREATIONAL (CR)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	5 ACRES	SEE CHART
MINIMUM LOT WIDTH	300'	110'
MAXIMUM LOT COVERAGE	5%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	75'	
SIDE	50'	
REAR	75'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'
MAX. DENSITY	5 AC. PER LOT	5.50

LYNCH DRIVE
REXMONT ROAD
COBALT ALLEY
IRON VALLEY DR.
BOYD STREET
GOLD ROAD
SILVER RD.
SHIRK ST.
GRANITE STREET
MATCHLINE
PHASE 1
PHASE 2
PHASE 3
("RLD" LOW DENSITY RESIDENTIAL)
("CR" CONSERVATION RECREATION)
("RV" VILLAGE RESIDENTIAL)
("RLD" LOW DENSITY)

KEY MAP
Scale:1"=800'
Legend
Current Sheet

REVISION | DATE | BY

OVERALL SUBDIVISION - PHASING PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
CORNWALL PROPERTIES, LLC
located in
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Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
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DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #2216-22-003	

10

LEGEND

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- REBAR — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY
- EX. ZONING DISTRICT LINES

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

NORTH

PR. LOT CURVE DATA

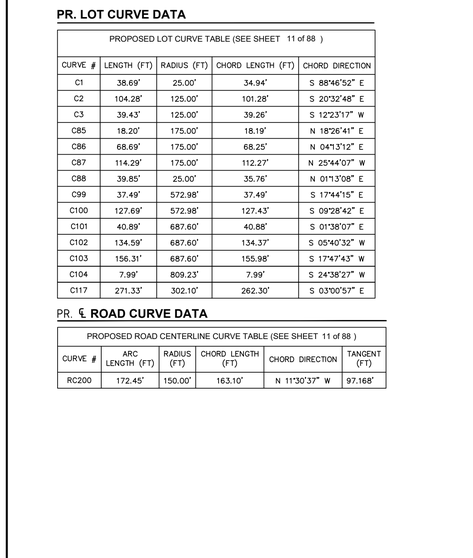
PROPOSED LOT CURVE TABLE (SEE SHEET 11 of 88)

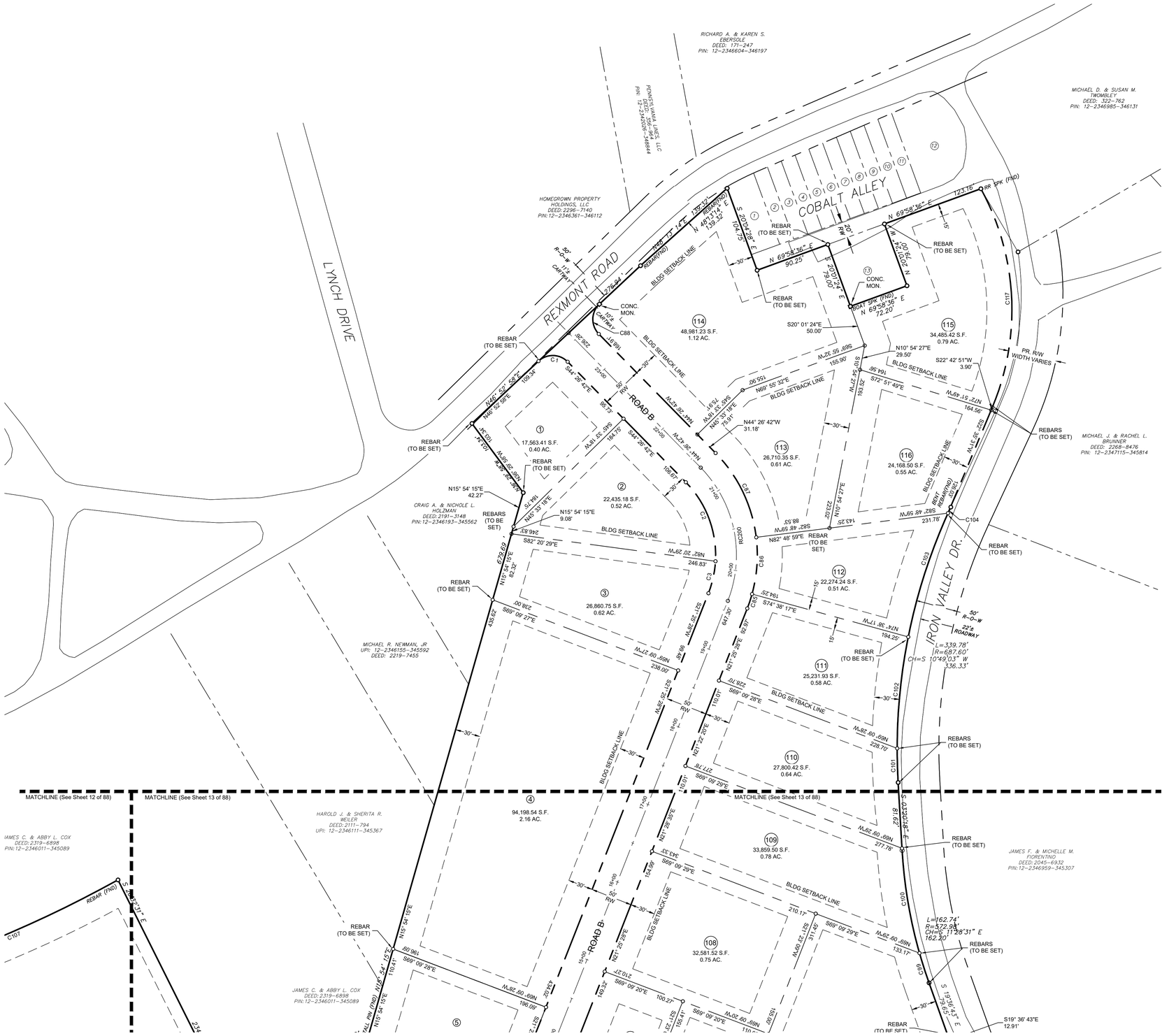
CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C1	38.69'	25.00'	34.94'	S 88°46'52" E
C2	104.28'	125.00'	101.28'	S 20°32'48" E
C3	39.43'	125.00'	39.26'	S 12°23'17" W
C85	18.20'	175.00'	18.19'	N 18°26'41" E
C86	68.69'	175.00'	68.25'	N 04°13'12" E
C87	114.29'	175.00'	112.27'	N 25°44'07" W
C88	39.85'	25.00'	35.76'	N 01°13'08" E
C99	37.49'	572.98'	37.49'	S 17°44'15" E
C100	127.69'	572.98'	127.43'	S 09°28'42" E
C101	40.89'	687.60'	40.88'	S 01°38'07" E
C102	134.59'	687.60'	134.37'	S 05°40'32" W
C103	156.31'	687.60'	155.98'	S 17°47'43" W
C104	7.99'	809.23'	7.99'	S 24°38'27" W
C117	271.33'	302.10'	262.30'	S 03°00'57" E

PR. ℄ ROAD CURVE DATA

PROPOSED ROAD CENTERLINE CURVE TABLE (SEE SHEET 11 of 88)

CURVE #	ARC LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION	TANGENT (FT)
RC200	172.45'	150.00'	163.10'	N 11°30'37" W	97.168'





REVISION	DATE	BY
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SUBDIVISION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
278 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
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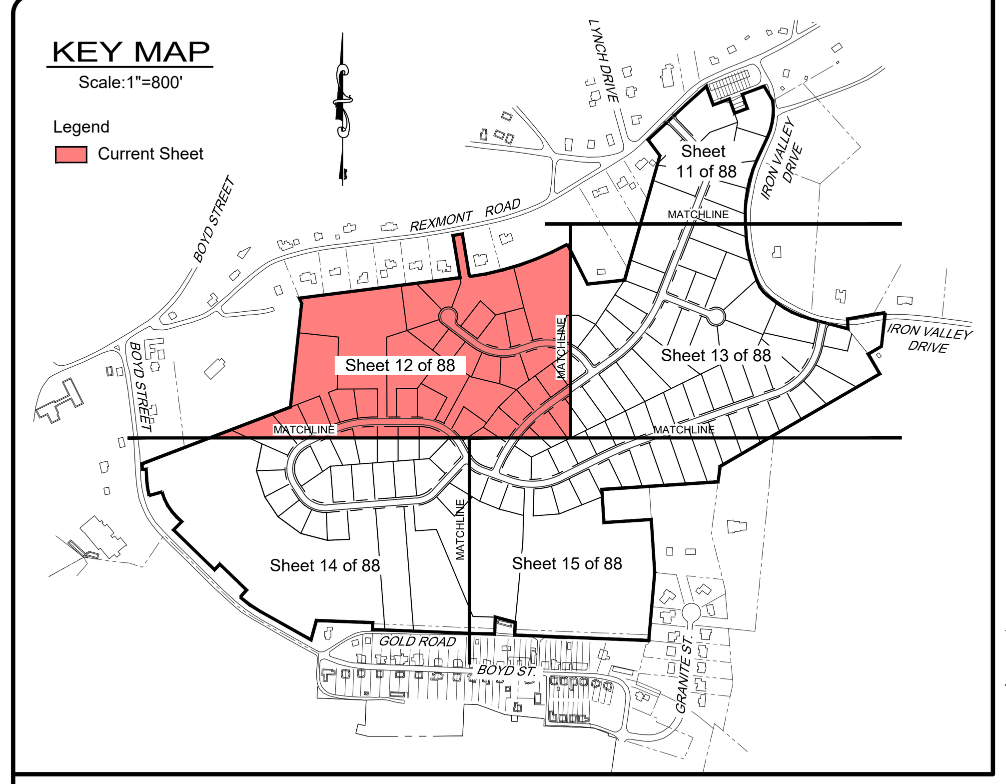
SCALE:	1" = 60'
PROJECT #	2216-22-003



LEGEND

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- REBAR / CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY
- EX. ZONING DISTRICT LINES

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

PR. LOT CURVE DATA

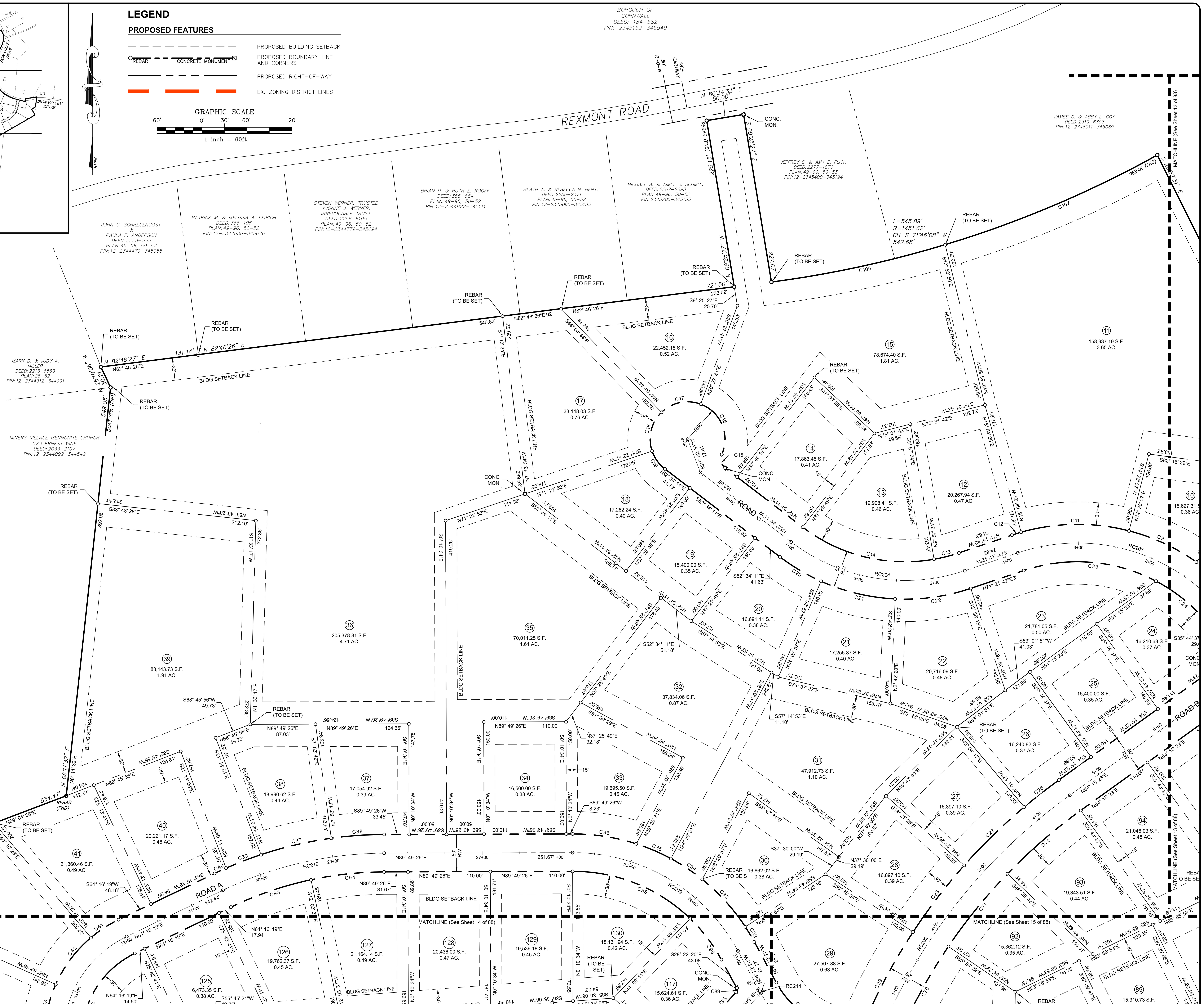
PROPOSED LOT CURVE TABLE (SEE SHEET 12 of 88)

CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C9	99.74'	275.00'	99.19'	N 65°07'39" W
C11	145.86'	275.00'	144.16'	S 89°17'16" W
C13	34.08'	225.00'	34.05'	S 75°42'04" W
C14	186.10'	225.00'	180.84'	N 76°15'52" W
C15	20.07'	15.00'	18.61'	N 14°14'27" W
C16	81.70'	50.00'	72.91'	N 22°43'31" W
C17	56.32'	50.00'	53.39'	S 78°11'29" W
C18	56.32'	50.00'	53.39'	S 13°39'04" W
C19	29.63'	50.00'	29.20'	S 35°35'40" E
C20	64.22'	275.00'	64.08'	S 59°15'37" E
C22	102.44'	275.00'	101.85'	N 82°02'01" E
C23	182.25'	225.00'	177.31'	S 85°26'00" E
C24	104.01'	225.00'	103.08'	S 48°59'09" E
C26	58.54'	775.00'	58.52'	S 52°05'33" W
C27	112.08'	775.00'	111.98'	S 45°47'09" W
C28	112.08'	775.00'	111.98'	S 37°30'00" W
C29	154.36'	775.00'	154.10'	S 27°39'05" W
C31	91.38'	125.00'	89.36'	N 49°18'56" W
C32	23.42'	275.00'	23.41'	N 30°48'43" W
C33	86.06'	275.00'	85.71'	N 42°13'01" W
C35	50.28'	275.00'	50.21'	N 66°53'45" W
C36	86.60'	275.00'	86.24'	N 81°09'18" W
C37	96.52'	525.00'	96.39'	S 76°50'10" W
C38	70.74'	525.00'	70.69'	S 85°57'49" W
C39	50.02'	525.00'	50.00'	S 68°50'23" W
C40	16.85'	525.00'	16.84'	S 65°11'28" W
C41	44.12'	175.00'	44.01'	S 57°02'55" W
C42	78.88'	175.00'	78.21'	S 36°54'48" W
C43	79.19'	175.00'	78.51'	S 11°02'17" W
C70	151.59'	725.00'	151.31'	N 28°07'10" E
C71	125.36'	725.00'	125.20'	N 39°03'46" E
C72	129.58'	725.00'	129.40'	N 49°08'11" E
C89	6.23'	5.00'	5.83'	S 07°19'16" W
C92	214.93'	125.00'	189.41'	N 15°00'50" E
C93	113.31'	475.00'	113.04'	N 71°06'21" E
C94	98.52'	475.00'	98.35'	N 83°52'54" E
C95	173.49'	225.00'	169.23'	S 68°05'12" E
C96	69.21'	225.00'	68.94'	S 37°11'05" E
C106	237.61'	1451.62'	237.34'	N 77°51'11" E
C107	308.29'	1451.62'	307.71'	N 67°04'47" E
C21	102.44'	275.00'	101.85'	S 76°37'22" E
C34	50.28'	275.00'	50.21'	N 56°25'13" W
C12	13.11'	275.00'	13.11'	S 72°43'39" W

PR. ℄ ROAD CURVE DATA

PROPOSED ROAD CENTERLINE CURVE TABLE (SEE SHEET 12 of 88)

CURVE #	ARC LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION	TANGENT (FT)
RC202	451.80'	750.00'	445.00'	S 36°59'56" W	232.990'
RC203	318.06'	250.00'	297.04'	N 72°11'27" W	184.635'
RC204	244.65'	250.00'	235.00'	N 80°36'14" W	133.120'
RC209	269.67'	250.00'	256.79'	S 59°16'27" E	149.634'
RC210	222.98'	500.00'	221.14'	N 77°02'52" E	113.376'
RC211	257.91'	150.00'	227.30'	N 15°00'50" E	174.133'



SUBDIVISION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

located in Cornwall Borough Lebanon County, Pennsylvania

REVISION	DATE	BY
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SESI
Steckbeck Engineering & Surveying Inc.
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SCALE:	1" = 60'
PROJECT	#2216-22-003

PR. LOT CURVE DATA

PROPOSED LOT CURVE TABLE (SEE SHEET 13 of 88)

CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C4	121.00'	725.00'	120.86'	S 26°12'20" W
C5	123.56'	725.00'	123.41'	S 35°52'10" W
C6	125.27'	725.00'	125.11'	S 45°42'07" W
C7	15.71'	10.00'	14.14'	N 80°44'37" W
C8	91.17'	275.00'	90.75'	N 45°14'26" W
C9	99.74'	275.00'	99.19'	N 65°07'39" W
C24	104.01'	225.00'	103.08'	S 48°59'09" E
C25	15.71'	10.00'	14.14'	S 09°15'23" W
C52	19.43'	1747.02'	19.43'	N 63°58'11" E
C53	120.32'	1747.02'	120.29'	N 66°15'41" E
C54	72.19'	1747.02'	72.19'	N 69°25'05" E
C55	58.67'	375.00'	58.61'	N 66°07'12" E
C56	107.53'	375.00'	107.16'	N 53°25'23" E
C57	107.56'	380.48'	107.20'	N 37°02'47" E
C58	107.59'	380.27'	107.23'	N 20°30'04" E
C59	40.41'	25.00'	36.15'	N 58°35'09" E
C61	168.94'	325.00'	167.05'	S 27°14'07" W
C63	161.52'	325.00'	159.86'	S 56°21'52" W
C64	23.31'	1797.02'	23.31'	S 70°13'49" W
C65	110.00'	1797.02'	109.98'	S 68°04'45" W
C66	84.69'	1797.02'	84.69'	S 65°02'06" W
C74	109.88'	775.00'	109.79'	N 49°39'32" E
C80	55.06'	50.00'	52.32'	N 52°22'12" E
C101	40.89'	687.60'	40.88'	S 01°38'07" E

PR. LOT CURVE DATA (CON'T)

PROPOSED LOT CURVE TABLE (SEE SHEET 13 of 88)

CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C73	7.25'	775.00'	7.25'	N 53°59'19" E
C75	109.88'	775.00'	109.79'	N 41°32'08" E
C76	187.27'	775.00'	186.82'	N 30°33'04" E
C77	7.66'	5.00'	6.93'	N 67°31'36" E
C78	13.62'	15.00'	13.16'	S 42°33'56" E
C79	69.40'	50.00'	63.96'	S 56°19'04" E
C81	55.06'	50.00'	52.32'	N 10°43'46" W
C82	68.34'	50.00'	63.15'	N 81°26'15" W
C83	13.62'	15.00'	13.16'	S 85°24'51" W
C84	7.85'	5.00'	7.07'	N 23°34'32" W
C98	90.63'	156.60'	89.37'	S 36°11'29" E
C99	37.49'	572.98'	37.49'	S 17°44'15" E
C100	127.69'	572.98'	127.43'	S 09°28'42" E
C110	48.42'	522.91'	48.40'	N 81°48'50" E
C111	45.61'	725.00'	45.60'	S 52°27'15" W

PR. ℄ ROAD CURVE DATA

PROPOSED ROAD CENTERLINE CURVE TABLE (SEE SHEET 13 of 88)

CURVE #	ARC LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION	TANGENT (FT)
RC201	429.77'	750.00'	423.92'	N 37°50'26" E	220.965'
RC203	318.06'	250.00'	297.04'	N 72°11'27" W	184.635'
RC205	356.26'	350.00'	341.08'	S 41°26'29" W	195.292'
RC206	214.97'	1772.02'	214.84'	S 67°07'36" W	107.618'

REVISION	DATE	BY
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SUBDIVISION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

13

13 OF 88 SHEETS

KEY MAP
Scale:1"=800'

Legend
Current Sheet

Sheet 11 of 88
Sheet 12 of 88
Sheet 13 of 88
Sheet 14 of 88
Sheet 15 of 88

LEGEND

PROPOSED FEATURES

PROPOSED BUILDING SETBACK
REBAR — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
PROPOSED RIGHT-OF-WAY
EX. ZONING DISTRICT LINES

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

PR. LOT CURVE DATA

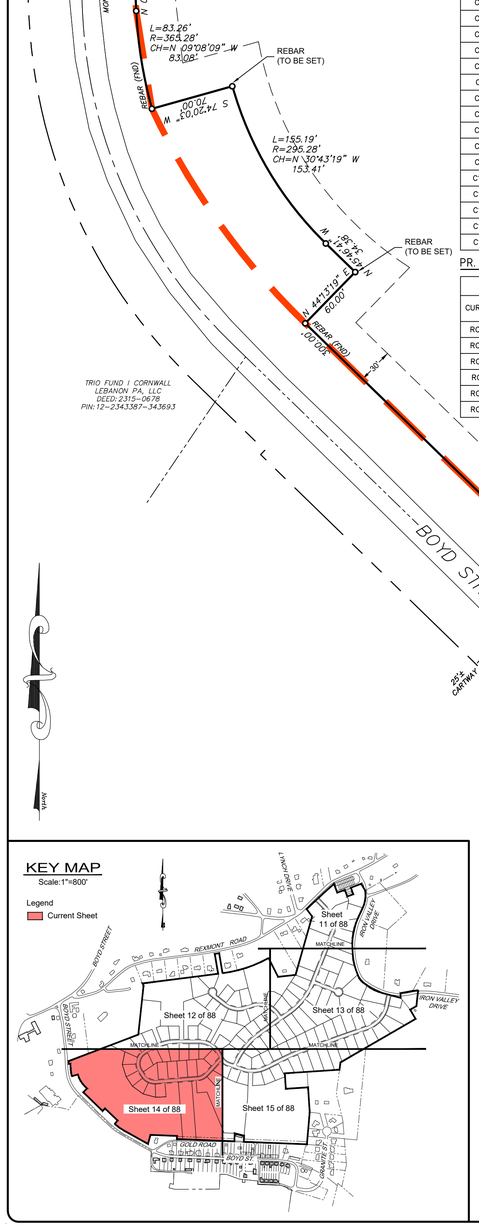
PROPOSED LOT CURVE TABLE (SEE SHEET 14 of 88)

CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C31	91.38'	125.00'	89.36'	N 49°18'56" W
C37	96.52'	525.00'	96.39'	S 76°50'10" W
C39	50.02'	525.00'	50.00'	S 68°50'23" W
C40	16.85'	525.00'	16.84'	S 65°11'28" W
C41	44.12'	175.00'	44.01'	S 57°02'55" W
C42	78.88'	175.00'	78.21'	S 36°54'48" W
C43	79.19'	175.00'	78.51'	S 11°02'17" W
C44	116.63'	175.00'	114.49'	N 66°29'30" E
C45	13.39'	175.00'	13.39'	N 45°12'22" E
C46	8.28'	5.00'	7.36'	S 89°34'08" E
C47	85.85'	175.00'	84.99'	S 56°12'19" E
C89	6.23'	5.00'	5.83'	S 07°19'16" W
C90	86.94'	125.00'	85.20'	S 62°56'21" W
C91	79.29'	175.00'	78.61'	S 14°54'17" E
C92	214.93'	125.00'	189.41'	N 15°00'50" E
C93	113.31'	475.00'	113.04'	N 71°06'21" E
C94	98.52'	475.00'	98.35'	N 83°52'54" E
C95	173.49'	225.00'	169.23'	S 68°05'12" E
C96	69.21'	225.00'	68.94'	S 37°11'05" E
C109	25.99'	181.43'	25.97'	S 32°01'13" E
C113	83.26'	175.00'	82.48'	S 52°08'51" E
C114	80.10'	175.00'	79.40'	S 78°53'23" E
C115	7.37'	175.00'	7.37'	N 86°47'29" E
C116	131.27'	125.00'	125.32'	N 64°19'47" W

PR. ℄ ROAD CURVE DATA

PROPOSED ROAD CENTERLINE CURVE TABLE (SEE SHEET 14 of 88)

CURVE #	ARC LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION	TANGENT (FT)
RC208	106.81'	150.00'	104.57'	N 49°51'36" W	55.78'
RC209	269.67'	250.00'	256.79'	S 59°16'27" E	149.634'
RC210	222.98'	500.00'	221.14'	N 77°02'52" E	113.376'
RC211	257.91'	150.00'	227.30'	N 15°00'50" E	174.133'
RC212	157.53'	150.00'	150.39'	N 64°19'47" W	86.901'
RC213	111.45'	150.00'	108.90'	S 64°17'59" W	58.438'



LEGEND

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- REBAR — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY
- EX. ZONING DISTRICT LINES

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

14

14 OF 88 SHEETS

REVISION	DATE	BY

SUBDIVISION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in Cornwall Borough Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

LEGEND

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- REBAR — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY
- EX. ZONING DISTRICT LINES

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

PR. LOT CURVE DATA

PROPOSED LOT CURVE TABLE (SEE SHEET 15 of 88)

CURVE #	LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION
C28	112.08'	775.00'	111.98'	S 37°30'00" W
C29	154.36'	775.00'	154.10'	S 27°39'05" W
C30	7.66'	5.00'	6.93'	S 65°50'37" W
C31	91.38'	125.00'	89.36'	N 49°18'56" W
C32	23.42'	275.00'	23.41'	N 30°48'43" W
C46	8.28'	5.00'	7.36'	S 89°34'08" E
C47	85.85'	175.00'	84.99'	S 56°12'19" E
C48	89.24'	375.00'	89.03'	S 77°04'34" E
C49	50.04'	375.00'	50.00'	S 87°42'58" E
C50	93.67'	375.00'	93.43'	N 81°18'18" E
C51	68.71'	375.00'	68.61'	N 68°54'00" E
C52	19.43'	1747.02'	19.43'	N 63°58'11" E
C53	120.32'	1747.02'	120.29'	N 66°15'41" E
C54	72.19'	1747.02'	72.19'	N 69°25'05" E
C64	23.31'	1797.02'	23.31'	S 70°13'49" W
C65	110.00'	1797.02'	109.98'	S 68°04'45" W
C66	84.69'	1797.02'	84.69'	S 65°02'06" W
C67	1.05'	325.00'	1.05'	S 63°44'39" W
C68	106.62'	325.00'	106.14'	N 79°39'24" W
C69	8.06'	5.00'	7.22'	N 24°03'53" W
C70	151.59'	725.00'	151.31'	N 28°07'10" E
C118	153.77'	325.00'	152.34'	S 77°23'28" E

PR. ℄ ROAD CURVE DATA

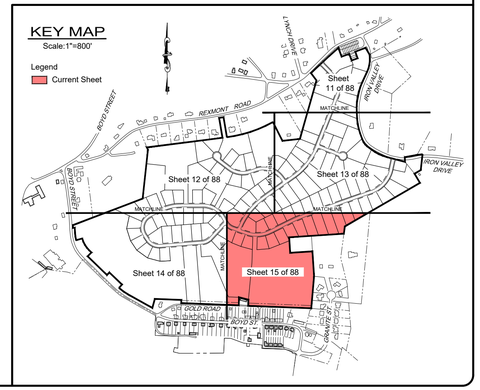
PROPOSED ROAD CENTERLINE CURVE TABLE (SEE SHEET 15 of 88)

CURVE #	ARC LENGTH (FT)	RADIUS (FT)	CHORD LENGTH (FT)	CHORD DIRECTION	TANGENT (FT)
RC202	451.80'	750.00'	445.00'	S 36°59'56" W	232.990'
RC206	214.97'	1772.02'	214.84'	S 67°07'36" W	107.618'
RC207	281.55'	350.00'	274.02'	S 86°41'47" W	148.891'
RC208	106.81'	150.00'	104.57'	N 49°51'36" W	55.781'
RC214	2.85'	150.00'	2.85'	S 28°55'00" E	1.425'

KEY MAP

Scale:1"=800'

Legend: Current Sheet



REVISION	DATE	BY
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SUBDIVISION & LAND DEVELOPMENT PLANS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION PLAN

CORNWALL PROPERTIES, LLC

for

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

15

15 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY (TWP.)
- EXISTING ZONING BOUNDARY
- EXISTING HISTORIC OVERLAY DISTRICT LIMITS
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN / CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

ZONING COMPLIANCE CHART

CORNWALL BOROUGH:

ZONING DISTRICT: LOW DENSITY RESIDENTIAL (RLD)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	15,000 S.F.	SEE CHART
MINIMUM LOT WIDTH	110'	110'
MAXIMUM LOT COVERAGE	30%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	30'	
SIDE	15'	
REAR	30'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'

ZONING DISTRICT: CONSERVATION RESIDENTIAL (CR)

	REQUIRED	PROVIDED
MINIMUM LOT AREA	5 ACRES	SEE CHART
MINIMUM LOT WIDTH	300'	110'
MAXIMUM LOT COVERAGE	5%	SEE CHART
MINIMUM BUILDING SETBACKS		
FRONT	75'	
SIDE	50'	
REAR	75'	
MAXIMUM BUILDING HEIGHT	35' (2.5 STORIES)	>35'

LYNCH DRIVE
REXMONT ROAD
COBALT ALLEY
IRON VALLEY DR.
ROAD B
ROAD D
ROAD C
ROAD C1
ROAD B1
ROAD A
ROAD A1
MATCHLINE
A PORTION OF IRON VALLEY DRIVE IS TO BE OFFERED FOR DEDICATION TO THE BOROUGH OF CORNWALL
EX. WETLAND
BOYD STREET
GOLD ROAD
SILVER RD.
SHIRK ST.
GRANITE STREET
500'

KEY MAP
Scale:1"=800'
Legend: Current Sheet
Sheet 17 of 88
Sheet 18 of 88
Sheet 19 of 88
Sheet 20 of 88
Sheet 21 of 88

NO.	REVISION	DATE	BY
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OVERALL LAYOUT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=150'
PROJECT #2216-22-003	

16

16 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY
- EXISTING ZONING BOUNDARY
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN / CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
	STOP SIGN STREET SIGN	24x24	R1-1
	SPEED LIMIT	18x24	

NOTE:
NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' TO THE SIGHT DISTANCE.

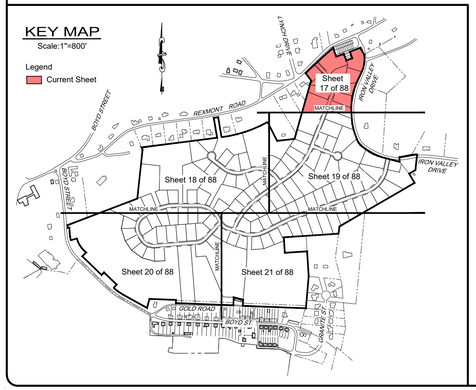
GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

The maximum length of roadway along which a driver at an access location can continuously see another vehicle approaching on the roadway.
SL: Sight Line
SSSD: Safe Stopping Sight Distance

LEGAL SPEED LIMIT: 25 M.P.H.

The maximum length of roadway along which a driver of a vehicle intending to make a left turn into an access can continuously see a vehicle approaching from the opposite direction.

ROAD B / REXMONT ROAD SIGHT DISTANCE
NO SCALE



FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

REVISION	DATE	BY
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LAYOUT PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
for
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

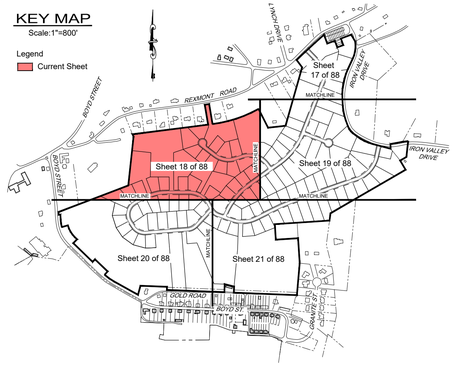
17
17 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY (TWP. / TWP.)
- EXISTING ZONING BOUNDARY
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
A	STOP SIGN STREET SIGN	24x24	R1-1
B	SPEED LIMIT	18x24	

NOTE:
NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' TO THE SIGHT DISTANCE.

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REXMONT ROAD

EX. WETLAND #5

EX. WETLAND #6

W.E. 640.5

ROAD A

ROAD B

ROAD C

PROPOSED ROAD R.O.W.

PR. EDGE OF PAVE

PR. SLANT CURB

PR. 3.83' WIDE GRASS STRIP

PROPOSED 5' CONCRETE SIDEWALK

PR. SEGMENTED BLOCK RETAINING WALL

12' PAVED DRIVEWAY

PROPOSED 75' CLEAR SIGHT TRIANGLE (TYP.)

BLDG SETBACK LINE

PR. DWELLING 40' x 60'

MATCHLINE (See Sheet 20 of 88)

MATCHLINE (See Sheet 21 of 88)

MATCHLINE (See Sheet 19 of 88)

REVISION | DATE | BY

LAYOUT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
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FIELD CREW:	MOD/JEC
BASE MAP:	MA
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DESIGN:	CDS
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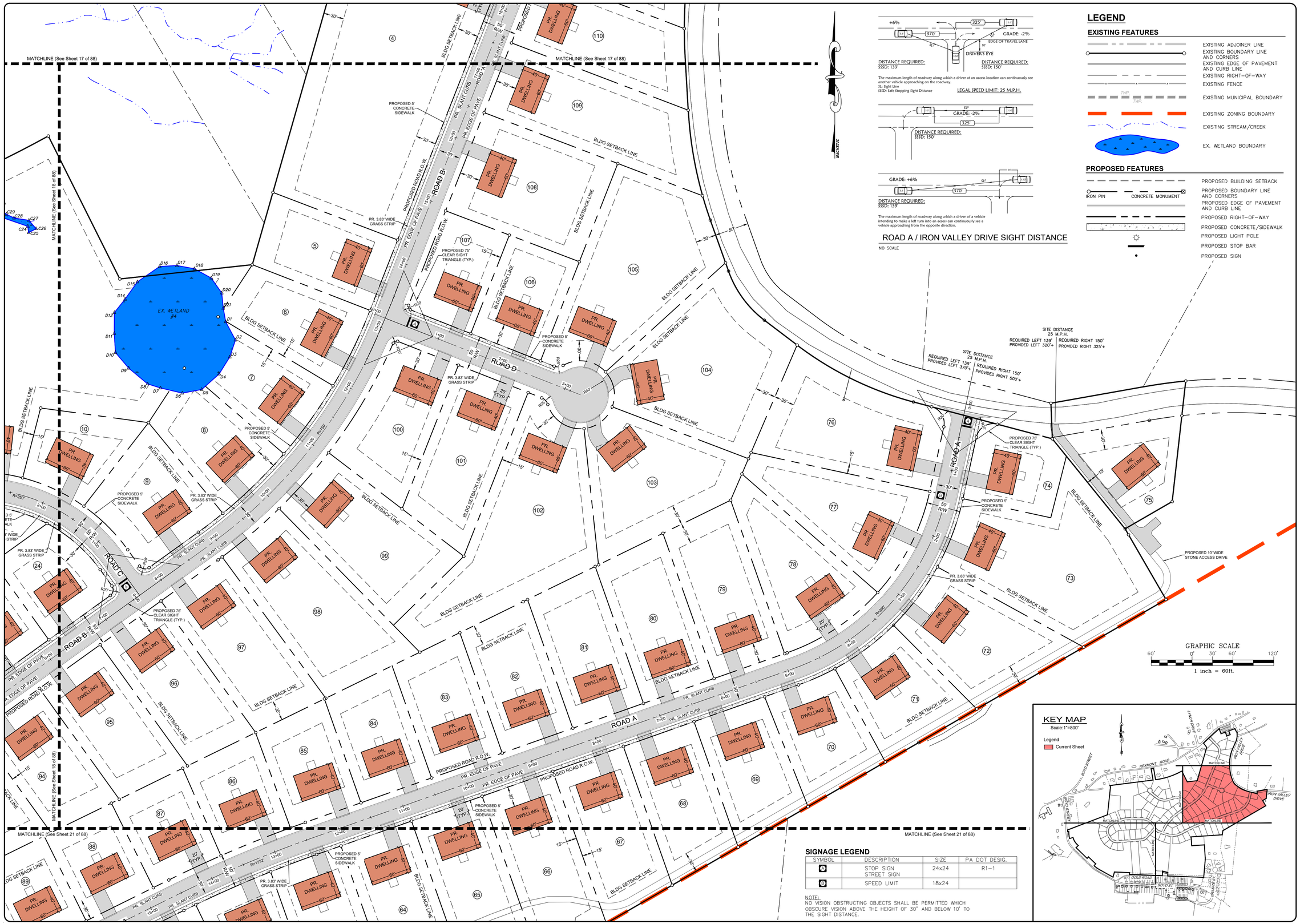
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

18

18 OF 88 SHEETS



ROAD A / IRON VALLEY DRIVE SIGHT DISTANCE

NO SCALE

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY
- EXISTING ZONING BOUNDARY
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN / CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
	STOP SIGN STREET SIGN	24x24	R1-1
	SPEED LIMIT	18x24	

NOTE:
NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' TO THE SIGHT DISTANCE.

KEY MAP

Scale:1"=800'

Legend
- Current Sheet

REVISION	DATE	BY
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LAYOUT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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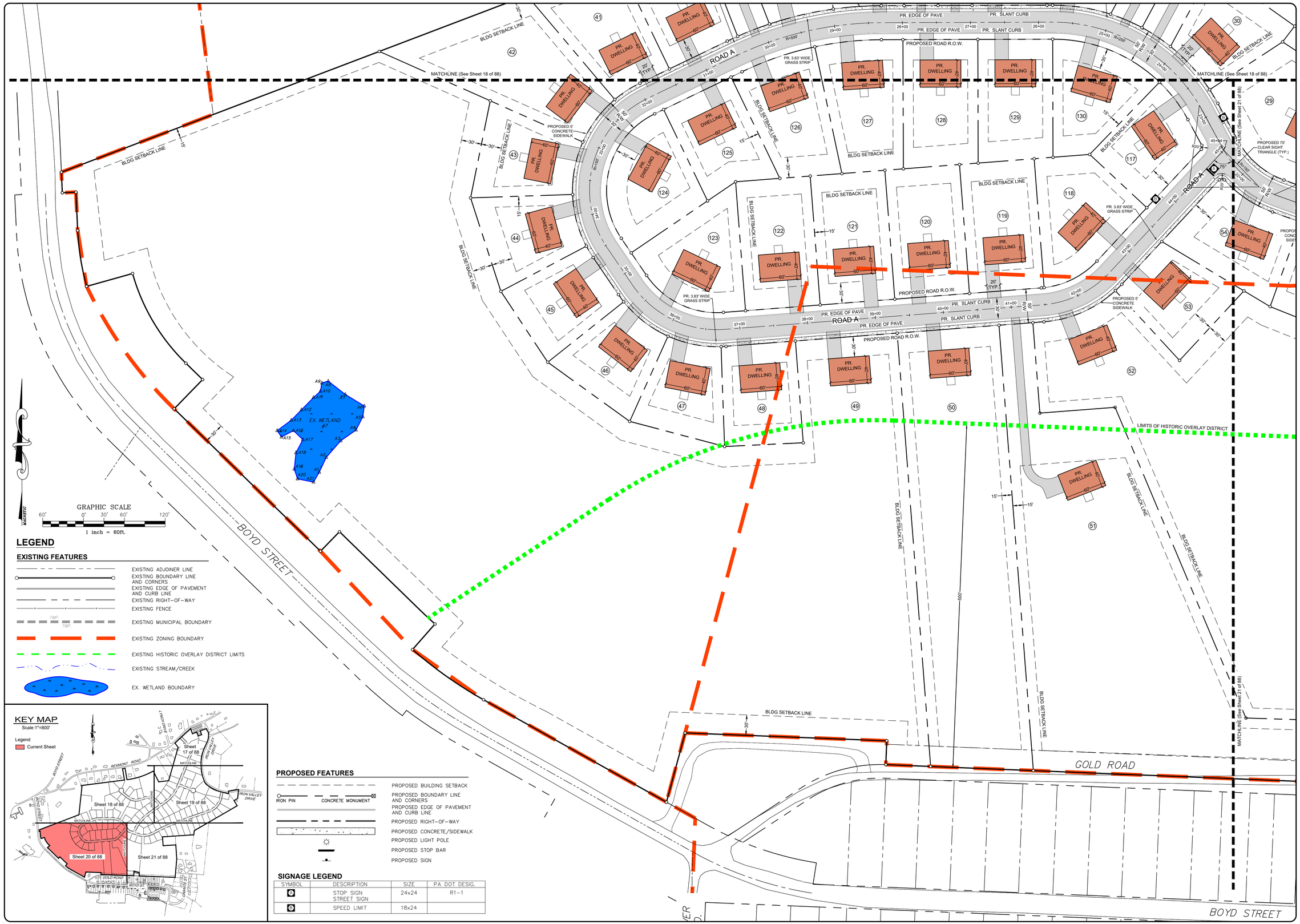
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

19

19 OF 88 SHEETS



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY
- EXISTING ZONING BOUNDARY
- EXISTING HISTORIC OVERLAY DISTRICT LIMITS
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
	STOP SIGN STREET SIGN	24x24	R1-1
	SPEED LIMIT	18x24	

KEY MAP

Scale:1"=800'

Legend: Current Sheet

REVISION	DATE	BY
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LAYOUT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

For

located in

Cornwall Borough

Lebanon County, Pennsylvania

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Phone: (717) 272-7110
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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #2216-22-003	

20

20 OF 88 SHEETS

MATCHLINE (See Sheet 18 of 88)
MATCHLINE (See Sheet 18 of 88)
MATCHLINE (See Sheet 19 of 88)
MATCHLINE (See Sheet 19 of 88)
MATCHLINE (See Sheet 20 of 88)
MATCHLINE (See Sheet 20 of 88)

ROAD A
PROPOSED ROAD R.O.W.
PR. EDGE OF PAVE
PR. SLANT CURB
PR. 3.83' WIDE GRASS STRIP
PROPOSED 5' CONCRETE SIDEWALK
PROPOSED 75' CLEAR SIGHT TRIANGLE (TYP.)
PR. SEGMENTED BLOCK RETAINING WALL
BLDG SETBACK LINE
LIMITS OF HISTORIC OVERLAY DISTRICT
PR. DWELLING
SHIRK ST.
GRANITE STREET
BOYD STREET
BOYD STREET

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING MUNICIPAL BOUNDARY
- EXISTING ZONING BOUNDARY
- EXISTING HISTORIC OVERLAY DISTRICT LIMITS
- EXISTING STREAM/CREEK
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN / CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN

SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
	STOP SIGN STREET SIGN	24x24	R1-1
	SPEED LIMIT	18x24	

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

NORTH

KEY MAP
Scale:1"=800'
Legend
Current Sheet
Sheet 17 of 88
Sheet 18 of 88
Sheet 19 of 88
Sheet 20 of 88
Sheet 21 of 88
REXMONT ROAD
BOYD STREET
IRON VALLEY DRIVE
GOLD ROAD
GRANITE ST.

REVISION	DATE	BY
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LAYOUT PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
for
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

21

21 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINEAND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS
- MAJOR 100 MINOR — PROPOSED CONTOURS

GRAPHIC SCALE
150' 0' 75' 150' 300'
1 inch = 150ft.

MAGNETIC

REXMONT ROAD
LYNCH DRIVE
COBALT ALLEY
IRON VALLEY DR.
BOYD STREET
GOLD ROAD
SILVER RD.
SHIRK ST.
GRANITE STREET
ROAD A
ROAD B
ROAD C
ROAD D
MATCHLINE

KEY MAP
Scale:1"=800'

Legend
Current Sheet

Sheet 23 of 88
Sheet 24 of 88
Sheet 25 of 88
Sheet 26 of 88
Sheet 27 of 88

REVISION	DATE	BY
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OVERALL EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

SCSI
Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=150'
PROJECT #2216-22-003	

22

22 OF 88 SHEETS

LEGEND

EXISTING FEATURES

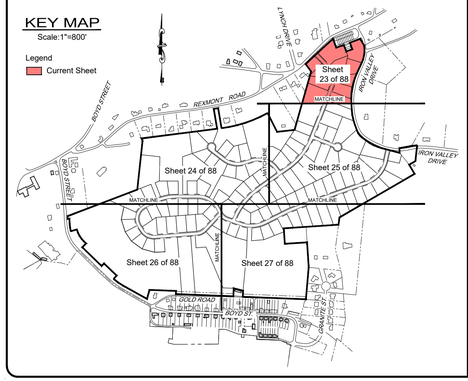
- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINEAND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN / CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS
- PROPOSED CONTOURS (MAJOR 1100 / MINOR)

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

KEY MAP
Scale:1"=800'
Legend
Current Sheet



REVISION	DATE	BY
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EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

23

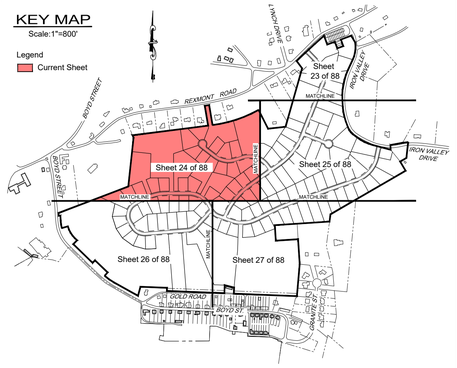
23 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINEAND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS
- MAJOR (100) MINOR — PROPOSED CONTOURS

MAGNETIC

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REXMONT ROAD

ROAD A

ROAD B

ROAD C

BMP NO. 1 INFILTRATION BASIN A

BMP NO. 2 INFILTRATION BASIN B

PR. STORMWATER EASEMENT

PR. SANITARY EASEMENT

PR. SNOW DUMP EASEMENT

PR. RIPARIAN EASEMENT

PR. STORMWATER EASEMENTS

EX. WETLAND #5

EX. WETLAND #6

W.E. 640.5

MATCHLINE (See Sheet 26 of 88)

MATCHLINE (See Sheet 27 of 88)

MATCHLINE (See Sheet 25 of 88)

REVISION	DATE	BY
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EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

24

24 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINEAND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN — CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS
- PROPOSED ACCESS EASEMENTS
- PROPOSED CONTOURS (MAJOR 100 — MINOR)

MAGNETIC

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

BMP NO. 7 INFILTRATION BASIN C

BMP NO. 6 INFILTRATION BASIN F

BMP NO. 4 INFILTRATION BASIN D

BMP NO. 5 DETENTION BASIN E

EX. WETLAND

PR. STORMWATER EASEMENT

PR. RIPARIAN EASEMENT

PR. SNOW DUMP EASEMENT

PR. STORMWATER EASEMENTS

PR. 20' WIDE ACCESS EASEMENT

ROAD A

ROAD B

ROAD C

ROAD D

SWALE 8A

SWALE 8B

SWALE 8C

SWALE 8D

SWALE 8E

SWALE 8F

SWALE 8G

SWALE 8H

SWALE 8I

SWALE 8J

MATCHLINE (See Sheet 23 of 88)

MATCHLINE (See Sheet 24 of 88)

MATCHLINE (See Sheet 27 of 88)

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 23 of 88

Sheet 24 of 88

Sheet 25 of 88

Sheet 26 of 88

Sheet 27 of 88

BOYD STREET

REMONT ROAD

IRON HILL DRIVE

IRON VALLEY DRIVE

OLD GOLD ROAD

REVISION	DATE	BY
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EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

located in Cornwall Borough Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7710
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

25

25 OF 88 SHEETS

MATCHLINE (See Sheet 24 of 88)

MATCHLINE (See Sheet 27 of 88)

ROAD A

BOYD STREET

GOLD ROAD

PR. STORMWATER EASEMENT

PR. RIPARIAN EASEMENT

PR. SANITARY SEWER EASEMENT

BMP NO. 3
INFILTRATION
BASIN G

BMP NO. 8
INFILTRATION
BASIN H

SWALE 1

SWALE 2

SWALE 3

SWALE 4

SWALE 5

SWALE 6

EX. WETLAND

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN / CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS
- MAJOR 1000 MINOR — PROPOSED CONTOURS

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 23 of 88

Sheet 24 of 88

Sheet 25 of 88

Sheet 26 of 88

Sheet 27 of 88

REVISION | DATE | BY

EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

Located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT	#2216-22-003

26

26 OF 88 SHEETS

MATCHLINE (See Sheet 24 of 88)
MATCHLINE (See Sheet 24 of 88)
MATCHLINE (See Sheet 25 of 88)
MATCHLINE (See Sheet 25 of 88)
MATCHLINE (See Sheet 26 of 88)
MATCHLINE (See Sheet 26 of 88)
ROAD A
PR. STORMWATER EASEMENT
SWALE 10
SWALE 9
PR. STORMWATER EASEMENT
PR. STORMWATER EASEMENT
PR. STORMWATER EASEMENT
PR. STORMWATER EASEMENT
PR. STORMWATER EASEMENT
SHIRK ST.
BOYD STREET
BOYD STREET
GRANITE STREET

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

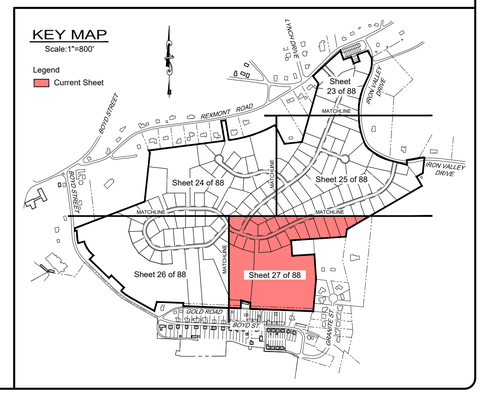
- PROPOSED BUILDING SETBACK
- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS
- PROPOSED RIPARIAN EASEMENTS

MAGNETIC

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

KEY MAP
Scale:1"=800'

Legend
Current Sheet



REVISION	DATE	BY
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EASEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road - Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7710
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

27

27 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- PERC TEST LOCATION
- NPDES BOUNDARY
- DISTURBANCE LIMITS (LOD)

GRAPHIC SCALE
150' 0' 75' 150' 300'
1 inch = 150ft.

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

BMP NO. 1
INFILTRATION BASIN A

BMP NO. 2
INFILTRATION BASIN B

BMP NO. 3
INFILTRATION BASIN G

BMP NO. 4
INFILTRATION BASIN D

BMP NO. 5
DETENTION BASIN E

BMP NO. 6
INFILTRATION BASIN F

BMP NO. 7
INFILTRATION BASIN C

BMP NO. 8
INFILTRATION BASIN H

REXMONT ROAD
BOYD STREET
IRON VALLEY DR.
COLD ROAD
LYNCH DRIVE
COBALT ALLEY
SHIRK ST.
GRANITE STREET
SILVER RD.

MATCHLINE

KEY MAP

Scale:1"=800'

Legend
- Current Sheet

Sheet 29 of 88
Sheet 30 of 88
Sheet 31 of 88
Sheet 32 of 88
Sheet 33 of 88

REVISION	DATE	BY
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OVERALL POST CONSTRUCTION STORMWATER PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #2216-22-003	

28

28 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

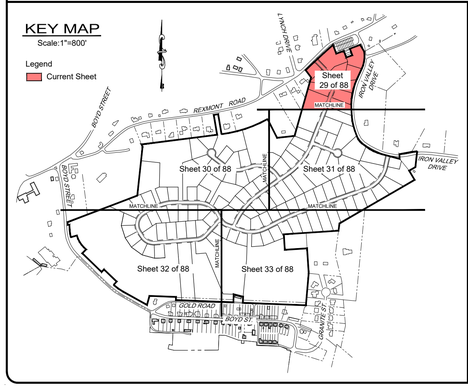
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR 100, MINOR)
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- EMERGENCY SPILLWAY LINING (N.A.G. S200)
- PERC TEST LOCATION (1)
- NPDES BOUNDARY
- LOD DISTURBANCE LIMITS

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend
- Current Sheet



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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
for
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Lebanon, PA 17042
Phone: (717) 272-7110 Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

29

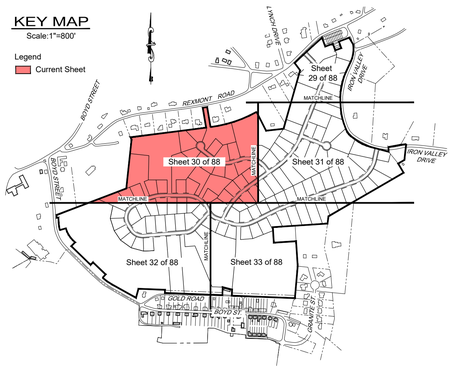
29 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

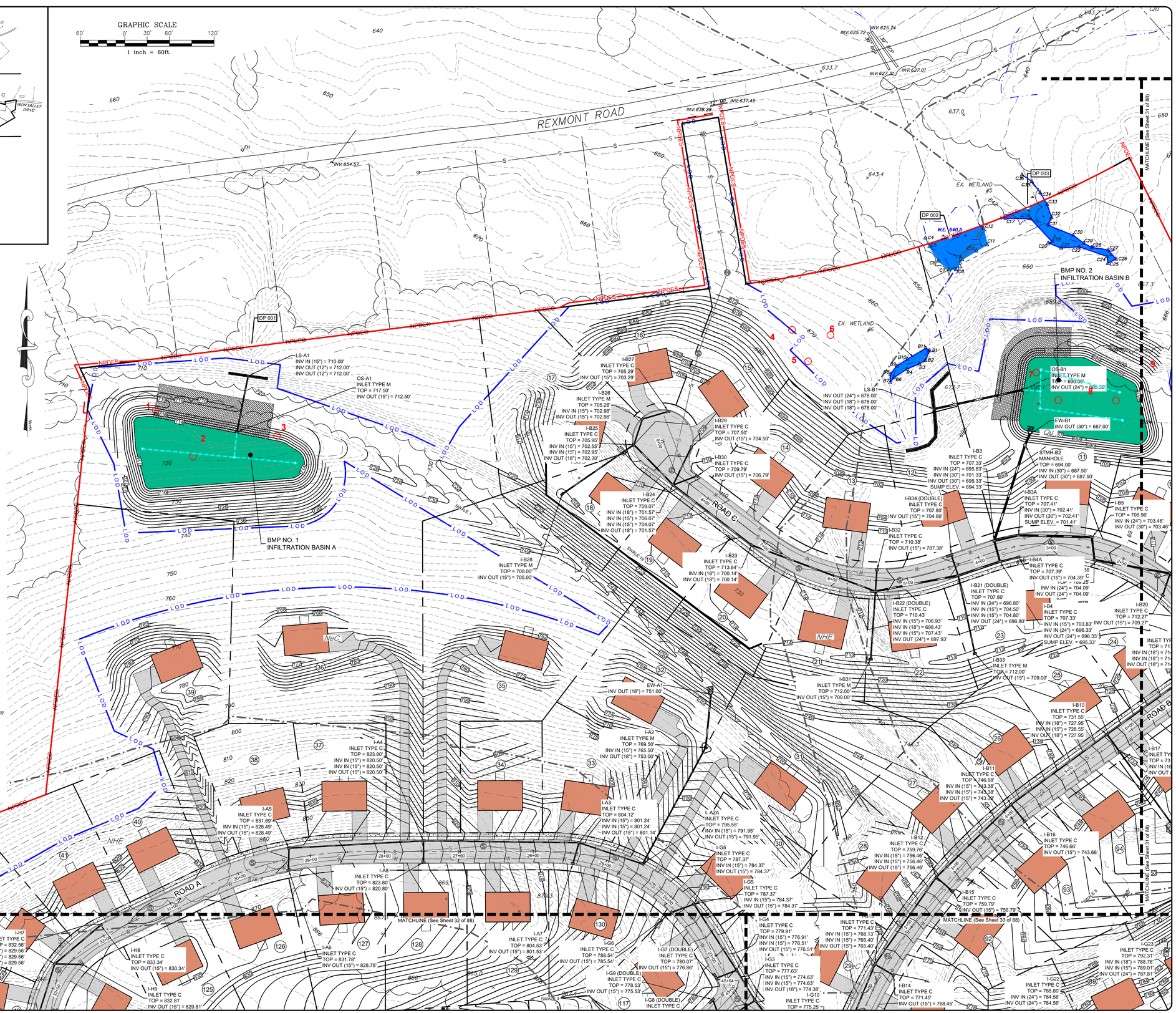
LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- IRON PIN, CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- CLEAN OUT, MANHOLE — PROPOSED SEWER
- HEADWALL, MANHOLE, INLET, END WALL, RIP-RAP — PROPOSED STORMWATER
- W, GATE VALVE, FIRE HYDRANT — PROPOSED DOMESTIC WATERLINE
- G, GAS VALVE — PROPOSED GASLINE
- PROPOSED CONCRETE/SIDEWALK
- 100 MAJOR, MINOR — PROPOSED CONTOURS
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- EMERGENCY SPILLWAY LINING (N.A.G. S200)
- 1 — PERC TEST LOCATION
- NPDES — NPDES BOUNDARY
- LOD — DISTURBANCE LIMITS



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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

30

30 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING WATERLINE (GATE VALVE)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EX. WETLAND BOUNDARY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126) & PLUG PLANTINGS
- EMERGENCY SPILLWAY LINING (N.A.G. S200)
- PERC TEST LOCATION (1)
- NPDES BOUNDARY
- DISTURBANCE LIMITS (LOD)

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

BMP NO. 7
INFILTRATION BASIN C

BMP NO. 6
INFILTRATION BASIN F

BMP NO. 4
INFILTRATION BASIN D

BMP NO. 5
DETENTION BASIN E

EX. WETLAND #4

ROAD A

ROAD B

ROAD C

ROAD D

MATCHLINE (See Sheet 29 of 88)

MATCHLINE (See Sheet 30 of 88)

MATCHLINE (See Sheet 33 of 88)

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 29 of 88
Sheet 30 of 88
Sheet 31 of 88
Sheet 32 of 88
Sheet 33 of 88

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC
for
Cornwall Borough
located in
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
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31

31 OF 88 SHEETS

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EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
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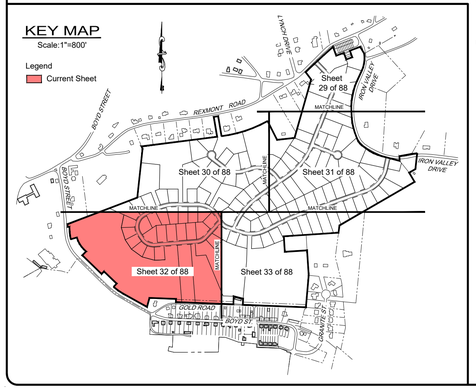
- EXISTING SEWER (CLEAN OUT, MANHOLE, HEADWALL, MANHOLE, INLET, RIP RAP)
- EXISTING STORMWATER
- EXISTING WATERLINE (W, GATE VALVE)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100)
- EXISTING STREAM/CREEK
- EXISTING SOILS (Soil Type)
- EXISTING TREELINE
- EX. WETLAND BOUNDARY

KEY MAP

Scale:1"=800'

Legend

Current Sheet



GRAPHIC SCALE

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PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
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- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTLITY POLE
- PROPOSED LIGHT POLE
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- EMERGENCY SPILLWAY LINING (N.A.G. S200)
- PERC TEST LOCATION
- NPDES BOUNDARY
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32

32 OF 88 SHEETS

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- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100 MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTLITY POLE
- EXISTING LIGHT POLE
- EXISTING WETLANDS

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
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- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100 MAJOR, MINOR)
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- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE
- AMENDED SOILS W/ERNST SEEDS RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- EMERGENCY SPILLWAY LINING (N.A.G. S200)
- PERC TEST LOCATION (1)
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GRAPHIC SCALE

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KEY MAP

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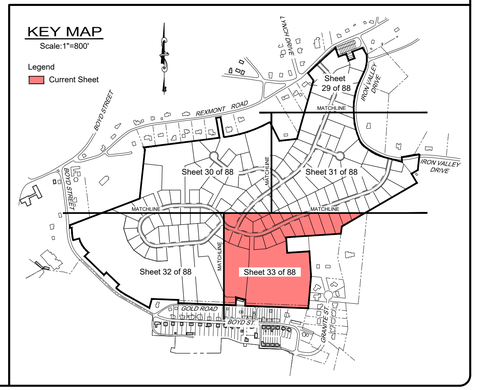

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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

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for

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33

33 OF 88 SHEETS

POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE
CORNWALL PROPERTIES, LLC - RESIDENTIAL SUBDIVISION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR THE PROPOSED RESIDENTIAL SUBDIVISION FOR CORNWALL PROPERTIES, LLC, LOCATED BETWEEN GOLD ROAD, BOYD STREET, REXMONT ROAD, AND IRON VALLEY DRIVE IN CORNWALL BOROUGH, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.

PROJECT DETAILS

THE TOTAL AREA OF THE 5 EXISTING PARCELS TO BE DEVELOPED IS 123.74 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS APPROXIMATELY 85.51 ACRES. THE CURRENT SITE CONSISTS OF AN OLD MINING OPERATION WHICH IS NOW MOSTLY COVERED IN TREES, WITH VARIOUS AREAS OF GRAVEL, PAVEMENT, ABANDONED STRUCTURES, BUILDING FOUNDATIONS, ETC. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE TWO BUILDINGS TOWARDS THE SOUTHEAST PORTION OF THE SITE WERE DEMOLISHED BETWEEN 2008 AND 2010. THE LARGE BUILDING TOWARDS THE CENTER OF THE SITE WAS DEMOLISHED BETWEEN 2013 AND 2015. THE SITE IS BORDERED TO THE NORTH BY REXMONT ROAD, TO THE EAST BY IRON VALLEY DRIVE, TO THE SOUTH BY GOLD ROAD, AND TO THE WEST BY BOYD STREET. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A 130-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION WITH ASSOCIATED HOMES, DRIVEWAYS, ROADS, CONNECTION TO PUBLIC SEWER AND WATER, AND REQUIRED STORMWATER MANAGEMENT FACILITIES. THE ANTICIPATED SITE DISTURBANCE SHALL INCLUDE GRADING AS WELL AS ADDITIONAL IMPERVIOUS AREA WHICH WILL BE TREATED ON-SITE BY STORMWATER MANAGEMENT BMPS. SEVEN (7) INFILTRATION BASINS AND ONE (1) DETENTION BASIN ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL REACH THE SNITZ CREEK AND AN UNT TO THE SNITZ CREEK. BOTH ARE DESIGNATED AS A TROUT STOCKED FISHERY (TSF). THE SNITZ CREEK IS IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE - NUTRIENTS. THE SNITZ CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS. THE UNT TO SNITZ CREEK IS IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: CROP PRODUCTION (CROP LAND OR DRY LAND) - SILTATION. THE UNT TO SNITZ CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS.

CALCULATIONS

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE PENNSYLVANIA STORMWATER MANAGEMENT BMP MANUAL (PA DEP BUREAU OF WATERSHED MANAGEMENT, DECEMBER 2006), AND THE CORNWALL BOROUGH STORMWATER MANAGEMENT ORDINANCE.

HYDROLOGY

A STORMWATER MANAGEMENT CONTROL SYSTEM IS PROPOSED TO MINIMIZE THE ADDITIONAL RUNOFF VOLUME GENERATED BY THE PROPOSED IMPROVEMENTS AND TO CONTROL THE FLOW TO A RATE LESSER THAN OR EQUAL TO THE PRE-DEVELOPMENT RUNOFF, FOLLOWING THE REQUIREMENTS OF THE PA CODE CHAPTER 102.8 AND THE CORNWALL BOROUGH STORMWATER MANAGEMENT ORDINANCE. IN ORDER TO PROVIDE WATER QUALITY, VOLUME CONTROL, AND RATE CONTROL, THE SITE WILL BE SERVED BY SEVEN (7) INFILTRATION BASINS AND ONE (1) DETENTION BASIN. THE BASINS ARE DESIGNED TO MANAGE THE POST-DEVELOPMENT DISCHARGE RATE TO A RATE EQUAL OR LOWER THAN THE PRE-DEVELOPMENT RATE AND TO INFILTRATE AND EVAPOTRANSPIRATE THE 2-YR 24-HOUR VOLUME INCREASE. THE CURVE NUMBERS ARE TAKEN FROM TR-55. SUPPORTING CALCULATIONS CAN BE SEEN IN THE DEP PCSM SPREADSHEETS.

PER THE CORNWALL BOROUGH STORMWATER MANAGEMENT ORDINANCE, POST-DEVELOPMENT DISCHARGE FLOW RATES MUST MEET THE FOLLOWING CRITERIA.

Pre - Developed	Post Developed
2 - year	< or = to 1-yr Pre
5 - year	< or = to 2-yr Pre
10 - year	< or = to 10-yr Pre
25 - year	< or = to 25-yr Pre
100 - year	< or = to 100-yr Pre

THE SCS METHOD WAS USED TO DETERMINE PEAK FLOW RATES FOR BOTH PRE- AND POST-DEVELOPED CONDITIONS FOR ALL DISCHARGE POINTS WHICH INCLUDE BASIN ROUTINGS. THE RATIONAL METHOD WITH A CRITICAL DURATION ANALYSIS WAS UTILIZED FOR PEAK RATE CALCULATIONS FOR THE SMALLER DISCHARGE POINTS WHICH ONLY INCLUDE UNDETAINED AREAS. THE RESULTING POST DEVELOPMENT RUNOFF FLOW RATES HAVE BEEN REDUCED TO REQUIRED PRE-DEVELOPMENT RELEASE RATES AS SHOWN IN THE TABLE ABOVE. THE STORMWATER FACILITIES WILL SATISFY THE APPLICABLE STORMWATER MANAGEMENT RATE REQUIREMENTS, WHICH CAN BE SEEN IN THE FLOW SUMMARY TABLE. *HYDROCAD V10.0* SOFTWARE WAS USED TO PERFORM ALL BASIN ROUTING CALCULATIONS.

THIS PCSM PLAN IS DESIGNED TO MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME AND PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF. IN ORDER TO ANALYZE THE EFFECTIVENESS OF THE PROPOSED STORMWATER MANAGEMENT PLAN THE DRAINAGE PATTERN IS ANALYZED AS TWELVE (12) POINTS OF INTEREST.

DP 001 - DISCHARGES TO AN EXISTING CHANNEL ALONG THE NORTHERN PROPERTY LINE. THIS CHANNEL CONTINUES NORTH AND INTO AN EXISTING CULVERT BENEATH REXMONT ROAD.

DP 002 - DISCHARGES TO WATERCOURSE 3 / WETLAND 5 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 3 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 003 - DISCHARGES TO WATERCOURSE 2 / WETLAND 5 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 2 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 004 - DISCHARGES TO WETLAND 4 WHICH IS AN OLD MINE PIT. IF THE PIT WERE TO OVERFLOW, IT WOULD DISCHARGE TO WATERCOURSE 2.

DP 005 - DISCHARGES IN A SHEET FLOW TO THE NORTHWESTERN PROPERTY LINE AND EVENTUALLY REACHING WATERCOURSE 1. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 006 - DISCHARGES TO WATERCOURSE 1 / WETLAND 3 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 007 - DISCHARGES TO WATERCOURSE 1 / WETLAND 1 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 008 - DISCHARGES DIRECTLY TO AN EXISTING 24" RCP CULVERT BENEATH REXMONT ROAD WHICH CONVEYS RUNOFF TO THE NORTH.

DP 009 - DISCHARGES TO A STORM SEWER INLET JUST NORTH OF GOLD ROAD ALONG THE SOUTHERN PROPERTY LINE. THIS STORM SEWER DISCHARGES TO THE CORNWALL OPEN PIT.

DP 010 - DISCHARGES IN A SHEET FLOW ACROSS THE SOUTHERN PROPERTY LINE TOWARDS GOLD ROAD AND BOYD STREET. RUNOFF WILL REACH AN EXISTING CULVERT CROSSING BOYD STREET AND EVENTUALLY THE CORNWALL OPEN PIT.

DP 011 - DISCHARGES IN A SHEET FLOW ACROSS THE WESTERN PROPERTY LINE TOWARDS BOYD STREET. RUNOFF WILL REACH AN EXISTING CULVERT CROSSING BOYD STREET AND EVENTUALLY THE CORNWALL OPEN PIT.

DP 012 - DISCHARGES IN A SHEET FLOW ACROSS THE NORTHERN PROPERTY LINE TOWARDS THE INTERSECTION OF BOYD STREET AND REXMONT ROAD. RUNOFF WILL REACH AN EXISTING CHANNEL WHICH IS THE OUTLET FROM THE CORNWALL OPEN PIT.

THERMAL IMPACTS ANALYSIS

ALL EXISTING SITE RUNOFF CURRENTLY LEAVES THE SITE UN-DETAINED WITH NO TREATMENT OF THIS RUNOFF IN ANY WAY. SEVEN (7) INFILTRATION BASINS ARE PROPOSED TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE INFILTRATION BASINS WILL BE COOLED BY THE VEGETATION IN THE BASIN BOTTOM BEFORE BEING FILTERED THROUGH AN ENGINEERED SOIL MIXTURE AND INFILTRATED INTO THE GROUND. RUNOFF REACHING THE ONE (1) DETENTION BASIN WILL BE COOLED BY THE VEGETATION IN THE BASIN BOTTOM PRIOR TO BEING RELEASED SLOWLY TO THE DOWNSTREAM STORM SEWER SYSTEM. STREET TREES ARE ALSO PROPOSED ALONG BOTH SIDES OF ALL PROPOSED ROADS TO SHADE THESE AREAS AND PROVIDE TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

WATER QUALITY AND NON-DISCHARGE ANALYSIS

THE SITE HAS BEEN DESIGNED TO MEET THE NPDES REQUIREMENTS AS CALCULATED IN THE DEP PCSM SPREADSHEET - *QUALITY*. THROUGH THE IMPLEMENTATION OF THE STRUCTURAL BMPS, THE WATER QUALITY REQUIREMENTS HAVE BEEN MET FOR THIS SITE. PLEASE SEE THE STANDARD DEP PCSM SPREADSHEETS FOR A MORE IN-DEPTH DESCRIPTION OF HOW THE REQUIREMENTS ARE MET FOR THIS SITE.

PROPOSED BEST MANAGEMENT PRACTICES

- INFILTRATION BASIN - SEVEN (7) INFILTRATION BASINS WILL BE UTILIZED TO PROMOTE INFILTRATION, EVAPORATION, AND EVAPOTRANSPIRATION AND CONTROL FLOW AND VOLUME LEAVING THE SITE.
- DETENTION BASIN - ONE (1) DETENTION BASIN WILL BE UTILIZED TO PROMOTE EVAPORATION AND EVAPOTRANSPIRATION AND CONTROL FLOW AND VOLUME LEAVING THE SITE.

OFFSITE DISCHARGE ANALYSIS

THE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED *CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NON-SURFACE WATERS* (JANUARY 2, 2019). FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER EITHER THROUGH EITHER A COMMON LAW EASEMENT OR AN EXPRESS EASEMENT. FOR SITES THAT DISCHARGE TO EXISTING SWALES, DITCHES, STORM SEWERS OR SIMILAR STRUCTURES WHERE THE NEW ACTIVITIES WILL NOT RESULT IN A CHANGE IN VOLUME OR RATE OF STORMWATER RUNOFF (FOR ALL STORM EVENTS), THE EXISTING COMMON LAW EASEMENT COULD BE RELIED UPON."

THE SITE DISCHARGES TO ALL DISCHARGE POINTS IN A SIMILAR MANNER AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.

CHAPTER 102.8 (B) ANALYSIS

THE DOWNSTREAM STREAM CHANNELS ARE PROTECTED BY THE FLOW REDUCTION PROVIDED BY THE PROPOSED STORMWATER MANAGEMENT FACILTIES. THE STRUCTURAL BMPS, ALONG WITH DRAINAGE AREA MODIFICATIONS, WILL ALLOW FOR REDUCED FLOW TO ALL DISCHARGE POINTS, AND THEREFORE ALL DOWNSTREAM CHANNELS WILL NOT BE NEGATIVELY IMPACTED. THE SAME FLOW REDUCTION AND WATER QUALITY BENEFITS PROVIDED BY THE STRUCTURAL BMPS WILL SERVE TO PROTECT ANY EXISTING DRAINAGE FEATURES AND DOWNSTREAM VEGETATION.

SOIL INFORMATION AND GEOLOGY

THE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA TO BE DISTURBED BY EARTH MOVING ACTIVITIES. THESE SOILS CAN ERODE WHEN DISTURBED. EROSION WILL BE CONTROLLED WITH STANDARD EROSION CONTROLS SUCH AS FILTER SOCK, SLOPE AND SWALE MATTING, RIPRAP OUTLET PROTECTION, ROCK CONSTRUCTION ENTRANCES, AND SEDIMENT BASINS.

NeC	NESHAMINY GRAVELLY SILT LOAM	8-15%	C
NHE	NESHAMINY EXTREMELY STONY SILT LOAM	STEEP	C
UPE	HAGERSTOWN - ROCK OUTCROP COMPLEX	8-25%	B
Qu	QUARRIES		
UoC	UNGERS EXTREMELY STONY LOAM	8-25%	B

***IF SOILS ARE BOLD THEY ARE DISTURBED DURING CONSTRUCTION ON THIS PROJECT.**

THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KARST FEATURES WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT SITE. THE SITE IS UNDERLAIN BY DIABASE AND THE HAMBURG SEQUENCE ROCKS (SHALE, SILTSTONE, AND GRAYWACKE). THESE BEDROCK FORMATIONS ARE NOT SUSCEPTIBLE TO KARST ACTIVITY, AS SUCH THE RISK FOR KARST ACTIVITY IS CONSIDERED LOW. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, A GEOTECHNICAL ENGINEER WILL BE IMMEDIATELY CONTACTED AND REQUIRED TO OVERSEE ANY MITIGATION MEASURES.

NESHAMINY SOILS - THE NESHAMINY SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN MATERIALS WEATHERED FROM DIABASE AND OTHER DARK COLORED BASIC ROCKS. SATURATED HYDRAULIC CONDUCTIVITY IS MODERATELY HIGH. SLOPES RANGE FROM 0 TO 70 PERCENT. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 50 DEGREES F. NESHAMINY SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO STEEL AND CONCRETE. THIS SOIL MAY ALSO BE SUBJECT TO A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, FROST ACTION, SHRINK-SWELL, AND A POOR SOURCE OF TOPSOIL.

UNGERS SOILS - THE UNGERS SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM FROM RED SANDSTONE AND SHALE. SLOPES RANGE FROM 0 TO 60 PERCENT. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 43 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. UNGERS SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE, AND EASILY ERODIBLE. THIS SOIL MAY ALSO BE SUSCEPTIBLE TO LOW STRENGTH/LANDSLIDES, SLOW PERCOLATION, AND FROST ACTION.

SOIL USE LIMITATIONS AND RESOLUTIONS

- CUT-BANK CAVING: ALL APPLICABLE OSHA STANDARDS AND REGULATIONS SHALL BE IMPLEMENTED AT ALL TIMES DURING TRENCHING AND EXCAVATION OPERATIONS.
- CORROSION OF STEEL AND CONCRETE: ALL UNDERGROUND FOUNDATIONS AND STRUCTURES SHALL BE PROPERLY PROTECTED AGAINST CORROSION, WHICH MAY INCLUDE COATING THESE STRUCTURES WITH CORROSION-RESISTANT MATERIAL.
- EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF SEDIMENT-LADEN WATER OFF-SITE. ALL SLOPES GREATER THAN 3:1 WILL BE STABILIZED WITH EROSION CONTROL LINING.
- DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, EXCAVATING TRENCHES, DEWATERING BASINS, ETC. THE GEOTECHNICAL REPORT DID NOT IDENTIFY ANY GROUNDWATER IN THE PROPOSED INFILTRATION BASIN LOCATIONS, SO LIMITATIONS ARE NOT EXPECTED IN THESE AREAS. SHOULD DEWATERING BE REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE UTILIZED, AND WATER SHALL BE PUMPED TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL BMP SUCH AS A FILTER SOCK.
- HYDRIC SOILS/HYDRIC INCLUSIONS: A WETLAND FIELD SURVEY WAS CONDUCTED, AND VARIOUS WETLANDS AND WATERCOURSES WERE IDENTIFIED ON SITE. NO DISTURBANCE OF SAID WETLANDS OR WATERCOURSES IS PROPOSED.
- LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 2:1. ALL SLOPES GREATER THAN 3:1 WILL BE STABILIZED WITH EROSION CONTROL LINING. THIS WILL REDUCE THE POTENTIAL FOR EROSION AND LAND SLIDE ACTION. ALL PROPOSED BERMS SHALL BE COMPACTED FULLY IN ORDER TO PROTECT AGAINST LANDSLIDES, AND SHALL BE STABILIZED IMMEDIATELY.
- SLOW PERCOLATION: ADEQUATE PRECAUTIONS WILL BE TAKEN TO ENSURE THAT THE PCSM BMPS INFILTRATE WITHIN THE REQUIRED TIME PERIOD, INCLUDING INFILTRATION TESTING AND SOIL MODIFICATION/UNDERDRAIN INSTALLATION, IF NECESSARY.
- PIPING: ANTI-SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS.
- FROST ACTION: THE PROJECT'S IMPERVIOUS SURFACES SHALL BE GRADED AT A MINIMUM OF 1% IN ONE DIRECTION, SO THAT WATER WILL NOT COLLECT ON THE SURFACE AND CAUSE DAMAGE DURING FREEZE/THAW CYCLES. CRACKS WHICH DEVELOP IN THE IMPERVIOUS SURFACES SHALL BE PROMPTLY SEALED.
- SHRINK/SWELL: ALL SITE GRADING SHALL DIRECT WATER AWAY FROM BUILDINGS AND OTHER IMPERVIOUS SURFACES TO REDUCE THE LIKELIHOOD OF WATER INFILTRATING NEAR OR UNDER THESE STRUCTURES.
- POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS MUCH OF THE SITE IS AN OLD MINING OPERATION, TOPSOIL MAY NEED TO BE IMPORTED. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN.

GENERAL SOIL NOTES

1. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE E&S CONTROLS.
2. 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.
3. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
4. 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.
5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
7. THE LOCAL CONSERVATION DISTRICT SHALL BE CONTACTED IF SEEPS OR SPRINGS ARE ENCOUNTERED AND THE DESIGNS ARE ALTERED DURING CONSTRUCTION AND THEY SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

INFILTRATION TESTING REQUIREMENTS

INFILTRATION TESTING HAS BEEN CONDUCTED WITH RESULTS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT.

OWNERSHIP, OPERATIONS AND MAINTENANCE

SHORT-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM BMPS IS THE RESPONSIBILITY OF THE CONTRACTOR (UNKNOWN AT THIS TIME), WHO SHALL BE LISTED AS THE CO-PERMITTEE ON THE NPDES PERMIT.

LONG-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM BMPS IS THE RESPONSIBILITY OF THE PROPERTY OWNER HEREIN IDENTIFIED AS CORNWALL PROPERTIES, LLC.

INDIVIDUAL BMP DESCRIPTION, CONSTRUCTION SEQUENCE, AND MAINTENANCE

GENERAL OVERALL BMP DESCRIPTION

BMP 6.4.2: INFILTRATION BASIN

AN INFILTRATION BASIN IS A SHALLOW IMPOUNDMENT THAT STORES AND INFILTRATES RUNOFF OVER A LEVEL, UN-COMPACTED (PREFERABLY UNDISTURBED AREA) WITH RELATIVELY PERMEABLE SOILS.

SEVEN (7) INFILTRATION BASINS WILL BE LOCATED ON SITE. THE BOTTOMS WILL BE CONSTRUCTED WITH AN ENGINEERED SOIL MIXTURE TO ASSIST IN THE WATER QUALITY BENEFITS OF FILTRATION AS WELL AS TO PROMOTE VEGETATION GROWTH AND INFILTRATION. THE INFILTRATION BASIN FACILITIES WILL BE PLANTED WITH ERNST SEEDS RETENTION BASIN FLOOR MIX - LOW MAINTENANCE (ERNMX-126) WHICH WILL PROMOTE POLLUTANT REMOVAL. THE PRIMARY FUNCTION OF THE BMP IS TO MANAGE STORMWATER RUNOFF VOLUME AND CONTROL THE PEAK RATE AND WATER QUALITY LEAVING THE SITE. PLEASE SEE THE PCSM PLAN AND REPORT FOR DETAILS, SPECIFICATIONS AND CALCULATIONS.

TYPICAL CONSTRUCTION SEQUENCE

1. PROTECT INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING THE LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT LADEN WATER FROM ENTERING INLETS AND PIPES.
3. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
4. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCK AND DEBRIS. DO **NOT** COMPACT SUBGRADE.
5. INSTALL OUTLET CONTROL STRUCTURES.
6. SEED AND STABILIZE TOPSOIL. (VEGETATE IF APPROPRIATE WITH NATIVE PLANTINGS)
7. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

MAINTENANCE

1. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
2. DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
3. AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION VEGETATIVE CONDITIONS ETC.
4. DURING PERIODS OF EXTENDED DROUGHT, AREAS MAY REQUIRE WATERING.

MAINTENANCE AND INSPECTION

1. CATCH BASINS AND INLETS (UPGRADIENT OF INFILTRATION FACILITY) SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER MAJOR RUNOFF EVENTS (> 1-INCH RAINFALL DEPTH).
2. THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION FACILITY SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS SHALL BE RE-VEGETATED AS SOON AS POSSIBLE.
3. VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER AN INFILTRATION AREA, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. INSPECT THE FACILITY AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
5. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS.
6. THE SEED MIXTURE PLANTED IN THE BOTTOM OF THE BASINS SHALL BE MOWED DOWN TO A HEIGHT OF 8-INCHES WHEN IT REACHES A HEIGHT OF 24-INCHES DURING THE FIRST FULL GROWING SEASON ONLY. IN ALL SUBSEQUENT YEARS, ANY MATERIAL STILL STANDING FROM THE PREVIOUS GROWING SEASON SHALL BE MOWED IN EARLY SPRING TO A HEIGHT OF 2-INCHES PRIOR TO THE CURRENT YEAR'S GROWTH REACHING A HEIGHT OF 2-INCHES. THE SEED MIXTURE SHALL NOT BE MOWED AGAIN UNTIL THE FOLLOWING SPRING. IN ALL INSTANCES, CLIPPINGS SHALL BE COMPOSTED OR TAKEN TO AN APPROVED YARD WASTE RECYCLING FACILITY.
7. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE.
8. SHOULD ANY INFILTRATION BASIN FAIL TO DEWATER WITHIN A 72-HOUR TIME PERIOD THE OWNER SHALL INVESTIGATE ALTERNATIVE SOLUTIONS.

   ALTERNATIVES INCLUDE:

- REPLACE THE ENGINEERED SOIL LAYER AND / OR THE UNDERDRAIN SYSTEM. THE ENGINEERED SOIL LAYER SHOULD BE REMOVED. THE SOIL LAYER AT THE BOTTOM OF THE ENGINEERED SOIL SHALL BE SCARIFIED. THE ENGINEERED SOIL LAYER SHALL BE REPLACED PER THE PCSM PLAN SPECIFICATIONS.
- CONDUCT AN INVESTIGATION BY A QUALIFIED INDIVIDUAL IN ORDER TO DETERMINE THE CAUSE OF FAILURE AND MAKE A DETERMINATION AS TO THE BEST COURSE OF ACTION AS TO RETURN THE SITE TO THE STANDARDS OF THE LOCAL MUNICIPALITY AND THE PA DEP.

DETENTION BASIN

A DETENTION BASIN IS AN EARTHEN STRUCTURE CONSTRUCTED EITHER BY IMPOUNDMENT OF A NATURAL DEPRESSION OR EXCAVATION OF EXISTING SOIL, THAT PROVIDES TEMPORARY STORAGE OF RUNOFF AND FUNCTIONS HYDRAULICALLY TO ATTENUATE STORMWATER RUNOFF PEAKS.

ONE (1) DETENTION BASIN IS PROPOSED ON SITE. THE PRIMARY FUNCTION OF THIS BMP IS TO MANAGE THE STORMWATER RUNOFF RATE AND VOLUME PRIOR TO LEAVING THE SITE. PLEASE SEE THE PCSM PLAN AND REPORT FOR DETAILS, SPECIFICATIONS AND CALCULATIONS.

CONSTRUCTION SEQUENCE

1. INSTALL ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
   a. THE AREA IMMEDIATELY ADJACENT TO THE BASIN MUST BE STABILIZED IN ACCORDANCE WITH THE PADEP'S *EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL* (2000 OR LATEST EDITION) PRIOR TO BASIN CONSTRUCTION.
2. PREPARE SITE FOR EXCAVATION AND/OR EMBANKMENT CONSTRUCTION.
   a. ALL EXISTING VEGETATION SHOULD REMAIN IF FEASIBLE AND SHOULD ONLY BE REMOVED IF NECESSARY FOR CONSTRUCTION.
   b. CARE SHOULD BE TAKEN TO PREVENT COMPACTION OF THE BASIN BOTTOM.
   c. IF EXCAVATION IS REQUIRED, CLEAR THE AREA TO BE EXCAVATED OF ALL VEGETATION. REMOVE ALL TREE ROOTS, ROCKS, AND BOULDERS ONLY IN THE EXCAVATION AREA.
3. EXCAVATE BOTTOM OF BASIN TO DESIRED ELEVATION (IF NECESSARY).
4. INSTALL SURROUNDING EMBANKMENTS AND INLET AND OUTLET CONTROL STRUCTURES.
5. GRADE SUBSOIL IN BOTTOM OF BASIN, TAKING CARE TO PREVENT COMPACTION. COMPACT SURROUNDING EMBANKMENT AREAS AND AROUND INLET AND OUTLET STRUCTURES.
6. APPLY AND GRADE PLANTING SOIL.
7. APPLY GEO-TEXTILES AND OTHER EROSION-CONTROL MEASURES.
8. SEED, PLANT AND MULCH ACCORDING TO PLANTING PLAN.
9. INSTALL ANY ANTI-GRAZING MEASURES, IF NECESSARY.

OPERATION AND MAINTENANCE

MAINTENANCE IS NECESSARY TO ENSURE PROPER FUNCTIONALITY OF THE DETENTION BASIN AND SHOULD TAKE PLACE ON A QUARTERLY BASIS. BASIN MAINTENANCE SHALL INCLUDE THE FOLLOWING MEASURES:

1. ALL BASIN STRUCTURES EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION ONCE EVERY THREE MONTHS AND AFTER THE CESSATION OF ALL STORM EVENTS OF 0.25-INCH OR GREATER. DEBRIS AND SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. UN-VEGETATED AREAS SHALL BE IMMEDIATELY SEEDED AND STABILIZED.
2. STRUCTURES INCLUDE BASIN BOTTOMS, TRASH RACKS, OUTLETS STRUCTURES, RIPRAP OR GABION STRUCTURES, AND INLETS.
3. SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY AND ONCE SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATELY STABILIZED AND REVEGETATED.
4. MOWING AND/OR TRIMMING OF VEGETATION SHOULD BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM, BUT ALL DETRITUS SHOULD BE REMOVED FROM THE BASIN.
5. VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR EROSION.
6. VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR UNWANTED GROWTH OF EXOTIC/INVASIVE SPECIES.
7. VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIMUM OF 95 PERCENT. IF VEGETATIVE COVER HAS BEEN REDUCED BY 10%, VEGETATION SHOULD BE REESTABLISHED.

SWALES

OPERATION & MAINTENANCE

1. MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (>1-INCH RAINFALL DEPTH):
   a. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN >3 INCHES AT ANY SPOT OR COVERING VEGETATION).
   b. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED.
   c. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE.
   d. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY; MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING.
   e. INSPECT FOR LITTER; REMOVE PRIOR TO MOWING.
   f. INSPECT FOR UNIFORMITY IN A CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED.
   g. INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.
   h. WRITTEN REPORTS DOCUMENTING ALL INSPECTIONS, REPAIRS, AND MAINTENANCE ACTIVITIES SHALL BE MAINTAINED ON SITE BY THE PROPERTY OWNER AT ALL TIMES.
2. MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:
   a. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT.
   b. RE-SEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING.
   c. ROTO-TILL AND REPLANT SWALE IF DRAW DOWN TIME IS MORE THAN 48 HOURS.
   d. INSPECT AND CORRECT CHECK DAMS WHEN SIGNS OF ALTERED WATER FLOW (CHANNELIZATION, OBSTRUCTIONS, EROSION, ETC.) ARE IDENTIFIED.
   e. WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY.
3. WINTER CONDITIONS ALSO NECESSITATE ADDITIONAL MAINTENANCE CONCERNS, WHICH INCLUDE THE FOLLOWING:
   a. INSPECT SWALE IMMEDIATELY AFTER SPRING MELT, REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING VEGETATION.
   b. IF ROADSIDE OR PARKING LOT RUNOFF IS DIRECTED TO THE SWALE, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE REQUIRED IN THE SPRING TO RESTORE STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS.
   c. USE NONTOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT.
   d. USE SALT-TOLERANT VEGETATION IN SWALES.

OVERALL PCSM CONSTRUCTION SEQUENCE (TYPICAL EACH PHASE)

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
2. UPON INSTALLATION OF PERIMETER E&S CONTROLS (SEE CONSTRUCTION SEQUENCE), INSTALL SEDIMENT BASINS, TRIBUTARY SWALES, AND PIPING.
3. AFTER THE IMPROVEMENTS ARE CONSTRUCTED ADD TOPSOIL TO THE POST-CONSTRUCTION PERVIOUS AREAS TO BE PERMANENTLY STABILIZED.
4. AFTER STABILIZATION OF THE SITE AREA, CONVERT SEDIMENT BASINS TO PERMANENT STORMWATER BASINS AS SEEN ON THE PCSM PLAN AND DETAILS. **CARE SHOULD BE TAKEN TO MINIMIZE SOIL COMPACTION IN THESE AREAS BEFORE AND AFTER CONSTRUCTION**. SUCCESS HAS BEEN ACHIEVED WITH MINIMAL COMPACTION UTILIZING A "ROCK SLINGER".
5. APPLY THE SPECIFIED PERMANENT STABILIZATION ACROSS THE SITE.

NPDES PERMIT NOTES

1. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 90 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE.
2. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE.
3. ALL EARTHMOVING CONTRACTORS MUST BE ADDED AS CO-PERMITTEES TO THE NPDES PERMIT.
4. SITE INSPECTIONS AND MONITORING REPORTS - THE PERMITTEE AND CO-PERMITTEE(S) SHALL COMPLY WITH ALL OF THE MONITORING AND REPORTING REQUIREMENTS, AS OUTLINED IN PART A.2 OF THE NPDES PERMIT. THE PERMITTEE AND CO-PERMITTEE(S) SHALL ENSURE THAT SITE INSPECTIONS ARE CONDUCTED AT LEAST WEEKLY AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL. A WRITTEN REPORT SHALL BE KEPT FOR EACH INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF PART A.2.A.
5. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTION AND SHOULD BE AVAILABLE ON-SITE FOR INSPECTION BY DEP OR COUNTY CONSERVATION DISTRICT PERSONNEL.
6. AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED, THE PERMITTEE MUST SUBMIT A NOTICE OF TERMINATION TO THE LOCAL COUNTY CONSERVATION DISTRICT TO CLOSE OUT THE PERMIT. ALLOWING THE NPDES PERMIT TO EXPIRE IS DETERMINED TO BE A VIOLATION OF THE NPDES PERMIT.

BMP CRITICAL STAGES

PER REQUIREMENTS OF THE PA DEP A LICENSED PROFESSIONAL OR DESIGNEE MUST BE PRESENT FOR THE INSTALLATION OF ALL BMP AND STORMWATER CONTROLS. PLEASE CONTACT THE DESIGN PROFESSIONAL OR ENSURE A LICENSED PROFESSIONAL IS PRESENT BEFORE BEGINNING THE FOLLOWING CONSTRUCTION ACTIVITIES:

- PERMANENT SITE STABILIZATION
- INFILTRATION BASINS A-D, F-H
  - O EXCAVATION / ROUGH GRADING
  - O OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
  - O UNDERDRAIN AND AMENDED SOILS INSTALLATION
- DETENTION BASIN E
  - O EXCAVATION / ROUGH GRADING
  - O OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
  - O AMENDED SOILS INSTALLATION

PROJECT WASTES NOTES

THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, EXISTING ON-SITE REFUSE, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. 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 SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

WASTE MATERIALS WITH OR FROM THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BEST MANAGEMENT PRACTICES (BMPS):

- SEDIMENT DEPOSITED AND ACCUMULATED IN PCSM BMPS SHALL BE REMOVED FROM THE BMP AND DISPOSED OF PROPERLY.
- CUTTINGS AND TRIMMINGS FROM PCSM BMPS SHALL BE DISPOSED OF IN A LOCAL COMPOSTING FACILITY.
- LITTER CLEANED FROM PCSM BMPS SHALL BE DISPOSED OF IN A TRASH RECEPTACLE FOR PICK UP BY THE LOCAL REFUSE HAULER.

STAGING OF EARTHMOVING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN IN THE FALL OF 2024. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. SHOULD ANY SINKHOLES OR GROUNDWATER SOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT.

SEQUENCE OF CONSTRUCTION - PHASE I

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCES AT LOCATIONS 1 & 2 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. INSTALL TEMPORARY ORANGE CONSTRUCTION FENCE AROUND ALL WETLANDS IDENTIFIED ON THE PLAN.
7. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS C, D, F, AND DETENTION BASIN E). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
8. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 1-15 AND 65-69 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 72-75 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREAS DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO PERMANENT STORMWATER BASINS IS COMPLETE.
9. INSTALL ROCK FILTER #1 AT THE EXISTING 24" RCP HEADWALL AT DP 008.
10. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
11. INSTALL THE BYPASS STORM SEWER PIPE FROM HW-BP2 TO EW-BP1. ENSURE ROCK FILTER #2 IS INSTALLED UPSTREAM OF HW-BP2 AND THE RIPRAP APRON IS INSTALLED AT EW-BP1.
12. INSTALL SWALE 12. ENSURE SWALE LINING IS INSTALLED IN ACCORDANCE WITH THE PLAN.
13. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM I-BP7 TO EW-BP4. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP4.
14. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM I-BP5 TO EW-BP3. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP3.
15. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM HW-BP19 TO EW-BP8. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP8, ROCK FILTER #3 IS INSTALLED UPSTREAM OF HW-BP19, AND INLET PROTECTION IS PROVIDED FOR THOSE INLETS AS SHOWN ON THE PLAN.
16. INSTALL SEDIMENT BASINS C, D, E, & F WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO PERMANENT STORMWATER BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS OR CONNECT TO DOWNSTREAM BYPASS STORM SEWER AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
17. INSTALL SWALES 9, 10, 11, 13, 14, 16, 17, 20 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.
18. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
19. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
20. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
21. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE I AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
22. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
23. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
24. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
25. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
26. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
27. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
28. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS C, D, E AND F AS REQUIRED TO INSTALL INFILTRATION BASINS C, D, AND F AND DETENTION BASIN E AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH INFILTRATION BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN EACH BASIN. INSTALL THE SILT SOCK AT LOCATIONS 72-75 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, TURBIDITY BARRIERS, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS C, D, AND F AND DETENTION BASIN E.**
29. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
30. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

SEQUENCE OF CONSTRUCTION - PHASE II

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCES AT LOCATIONS 3 & 4 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS B & H). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 15-31 AND 55-64 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 71 & 76 IS TO ENSURE SEDIMENTATION OF THE INFILTRATION BASIN BOTTOM AREAS DO NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONSTRUCTION OF THE INFILTRATION BASINS IS COMPLETE.
8. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
9. INSTALL SEDIMENT BASINS B & G WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO INFILTRATION BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS OR CONNECT TO DOWNSTREAM STORM SEWER AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
10. INSTALL SWALES 1, 7, 8, 15, 18, AND 19 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS. INSTALL ROCK FILTER #4 AT THE TERMINATION OF SWALE 1.
11. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
12. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
13. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
14. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE II AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
15. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
16. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
17. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
18. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
19. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
20. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
21. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS B AND G AS REQUIRED TO INSTALL INFILTRATION BASINS B AND H AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN INFILTRATION BASINS. INSTALL THE SILT SOCK AT LOCATIONS 71 & 76 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, TURBIDITY BARRIERS, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS B AND G.**
22. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
23. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

SEQUENCE OF CONSTRUCTION - PHASE III

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCE AT LOCATION 5 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS A & H). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 32-54 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 70 & 77 IS TO ENSURE SEDIMENTATION OF THE INFILTRATION BASIN BOTTOM AREAS DO NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONSTRUCTION OF THE INFILTRATION BASINS IS COMPLETE.
8. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
9. INSTALL SEDIMENT BASINS A & H WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO INFILTRATION BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
10. INSTALL SWALES 2, 3, 4, 5, 6, 21, AND 22 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.
11. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
12. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
13. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
14. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE III AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
15. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
16. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
17. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
18. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
19. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
20. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
21. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS A AND H AS REQUIRED TO INSTALL INFILTRATION BASINS A AND H AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN INFILTRATION BASINS. INSTALL THE SILT SOCK AT LOCATIONS 70 & 77 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, TURBIDITY BARRIERS, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS A AND H.**
22. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
23. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

CONTRACTOR NOTES

1. 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 DEP PRIOR TO IMPLEMENTATION.
2. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
3. IF SOIL IT IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
4. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
5. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS).
6. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
7. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGEMENT NOTES

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

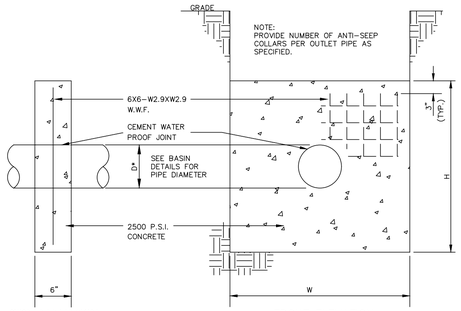
located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	N/A
PROJECT #	2216-22-003



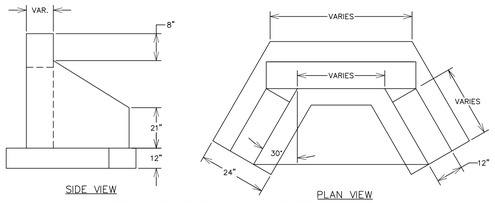
BASIN	W	H	DIA.	# OF COLLARS
A	6.79'	4.50'	15"	2
B	8.19'	5.02'	24"	2
C	8.54'	5.95'	18"	2
D	14.12'	11.83'	15"	2
E	7.11'	3.94'	24"	2

BASIN	W	H	DIA.	# OF COLLARS
F	11.83'	9.54'	15"	2
G	5.96'	3.66'	15"	2
H	6.56'	4.26'	15"	2

CONCRETE ANTI-SEEP COLLAR DETAIL

NO SCALE

*ALL DIMENSIONS THAT ARE IDENTIFIED AS VARIES ARE CUSTOM BASED ON THE SIZE OF THE PIPE. SEE PENNDOT PUBLICATION 72, RC-31M FOR EXACT DIMENSIONS.

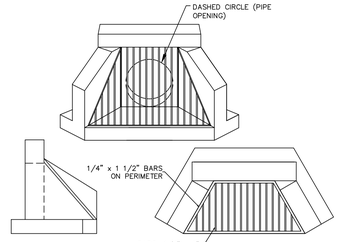


NOTES: ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-31M DRAWINGS

MAXIMUM PIPE SIZE – 48" SLCPP

TYPE DW ENDWALL DETAIL

NO SCALE

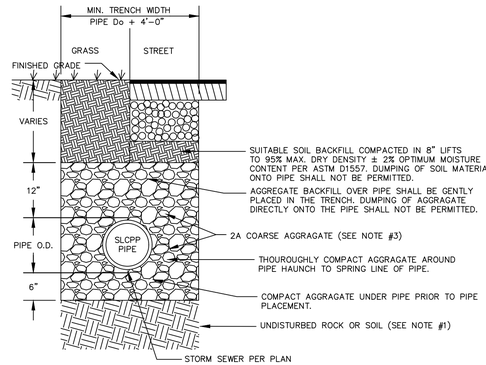


NOTES:
1. MATERIALS TO BE STAINLESS STEEL.
2. ATTACH TRASH RACK TO HEADWALL WITH 3/8" DIA. S.S. ANCHOR BOLTS.
3. HINGED VERSION REQUIRED.

NOTES: ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-31M DRAWINGS

TYPE DW ENDWALL WITH TRASH RACK DETAIL

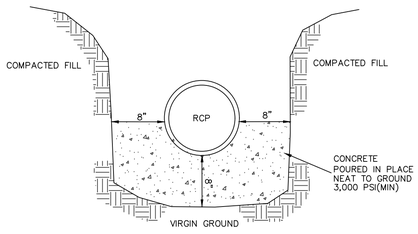
NO SCALE



NOTE:
1. USE #2A MODIFIED AGGREGATE COMPACTED IN 4 INCH LIFTS AS NECASSARY TO FILL ANY EXCAVATED UNSUITABLE MATERIALS.
2. ALL PIPE INSTALLATIONS SHALL HAVE STRAIGHT ALIGNMENTS BETWEEN DRAINAGE STRUCTURES.
3. ALL TRENCHING SHALL CONFORM TO THE CURRENT PENNDOT RC-30M DRAWINGS

TYPICAL TRENCH DETAIL FOR SLCPP INSTALLATION

NO SCALE

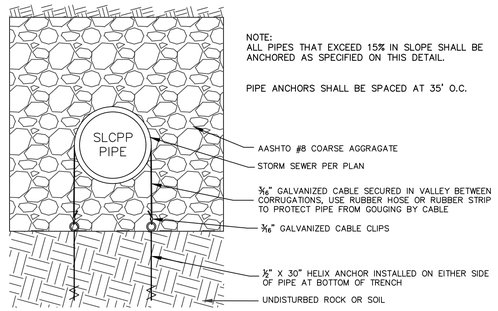


CROSS-SECTION AT OUTLET BARREL

NOTES:
1. A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS AND/OR FILTER DIAPHRAGM.
2. ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.
3. THE CONCRETE CRADLE SHALL RUN ALONG THE ENTIRE LENGTH OF THE PIPE.

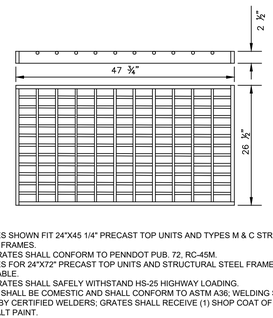
CONCRETE CRADLE DETAIL

NO SCALE



TYPICAL STEEP SLOPE PIPE ANCHOR ASSEMBLY

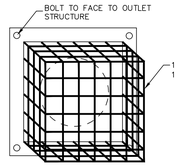
NO SCALE



NOTES:
1. GRATES SHOWN FIT 24"X45 1/4" PRECAST TOP UNITS AND TYPES M & C STRUCTURAL STEEL FRAMES.
2. ALL GRATES SHALL CONFORM TO PENNDOT PUB. 72, RC-45M.
3. GRATES FOR 24"X72" PRECAST TOP UNITS AND STRUCTURAL STEEL FRAMES ARE ALSO AVAILABLE.
4. ALL GRATES SHALL SAFELY WITHSTAND HS-25 HIGHWAY LOADING.
5. STEEL SHALL BE COMESTIC AND SHALL CONFORM TO ASTM A36; WELDING SHALL BE DONE BY CERTIFIED WELDERS; GRATES SHALL RECEIVE (1) SHOP COAT OF BLACK ASPHALT PAINT.

STRUCTURAL STEEL GRATE-BICYCLE SAFE

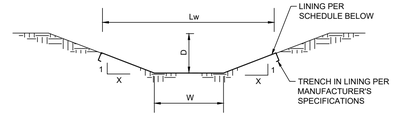
NO SCALE



NOTES:
1. ALL VERTICAL RISERS, INLETS, ORIFICES, AND OTHER SURFACE WATER RECEIVING STRUCTURES SHALL BE INSTALLED WITH TRASH RACKS.

ORIFICE TRASH RACK DETAIL

NO SCALE

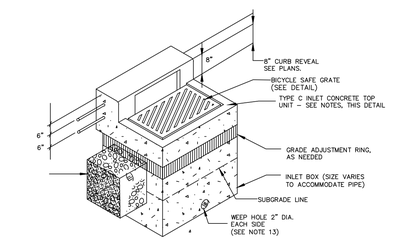


CROSS SECTION

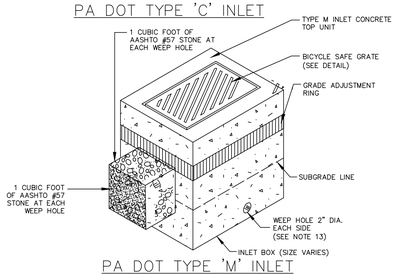
SWALE NO.	WIDTH (W)	DEPTH (D)	SIDE SLOPE (X)	MAX. SLOPE	LINING WIDTH (Lw)	LINING	TEMPORARY LINING	STAPLE PATTERN
1	3.5'	1.5'	2	8%	9.5'	GRASS	N.A.G. P550	E
2	2'	1'	2	9%	6'	GRASS	N.A.G. S200	E
3	2'	1'	3	9%	8'	GRASS	N.A.G. SC250	E
4	1'	1'	2.5	9%	6'	GRASS	N.A.G. S75	D
5	2'	1'	3	8%	8'	GRASS	N.A.G. S200	E
6	2'	1'	6	4%	14'	GRASS	N.A.G. S75	D
7	2'	1'	2	8%	6'	GRASS	N.A.G. S200	E
8	2'	1'	7	9%	16'	GRASS	N.A.G. S200	E
9	2'	1'	7	10%	16'	GRASS	N.A.G. S200	E
10A	2'	1'	7	6.5%	16'	GRASS	N.A.G. S200	E
10B	2'	1'	4	10%	10'	GRASS	N.A.G. S200	E
11	2'	1'	3	1%	8'	GRASS	N.A.G. S75	D
12	5'	2'	3	15%	17'	RIPRAP	R-6 RIPRAP	N/A
13	2'	1'	3	5%	8'	GRASS	N.A.G. S75	D
14	1.5'	1'	3	10%	7.5'	GRASS	N.A.G. S200	E
15	3'	1'	16	2%	35'	GRASS	N.A.G. S75	D
16	2'	1'	2.5	1.6%	7'	GRASS	N.A.G. S75	D
17	3'	1'	2	4%	7'	GRASS	N.A.G. S200	E
18	2'	1'	8.5	5%	19'	GRASS	N.A.G. S200	E
19	2'	1'	3	4%	8'	GRASS	N.A.G. S75	D
20	2'	1'	3	1.3%	8'	GRASS	N.A.G. S75	D
21	1'	1'	2	20%	5'	GRASS	N.A.G. S200	E
22	1'	1'	3	20%	7'	GRASS	N.A.G. S200	E

STORMWATER SWALE DETAIL

NO SCALE



PA DOT TYPE 'C' INLET



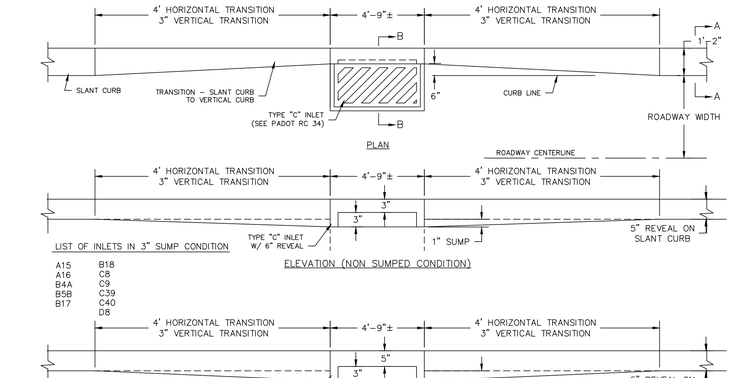
PA DOT TYPE 'M' INLET

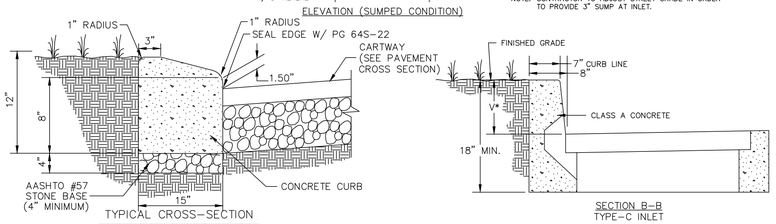
PADOT STORMWATER INLETS (TYPE C & M)

NO SCALE

INLET NOTES:

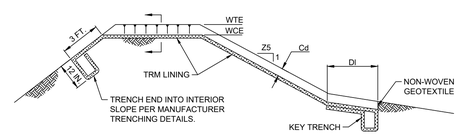
1. CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
2. THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
3. WHENEVER AN INLET IS REQUIRED WITHIN A MOUNTABLE CURB SECTION, A TYPE M INLET WILL BE LOCATED ADJACENT TO THE BACK EDGE OF THE CURB AND WILL BE FLUSH WITH THE PAVEMENT SURFACE. SEE PA DOT RC-65 FOR INSTALLATION DETAILS.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
5. PIPES SHALL BE LOCATED AS REQUIRED.
6. ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
7. GRADE ADJUSTMENT RINGS MAY BE OF MASONRY OR PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
8. INLET BOX SHALL BE PRECAST CONCRETE.
9. REFER TO PA DOT BUREAU OF DESIGN STANDARDS RC-45M.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PADOT PUBLICATION 408, SECTION 605 & STANDARDS FOR ROADWAY CONSTRUCTION, RC-45M. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
11. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED.
12. ALL STORMWATER INLET BOXES, CONCRETE TOP UNITS, AND INLET GRATES AND FRAMES SHALL CONFORM TO CURRENT PENNDOT RC-45M STANDARDS.
13. ALL INLETS SHALL BE CONSTRUCTED WITH CONCRETE FLOW CHANNELS CAST IN-PLACE IN THE BOTTOM OF EACH INLET, EXCEPT THE LAS TWO INLETS BEFORE A STORM SEWER OUTFALL SHALL BE CONSTRUCTED WITH A MINIMUM 12" SUMP TO CATCH DEBRIS. INLET SUMPS SHALL HAVE WEEPHOLES.





SLANT CURB TO TYPE C INLET CURB TRANSITION DETAIL

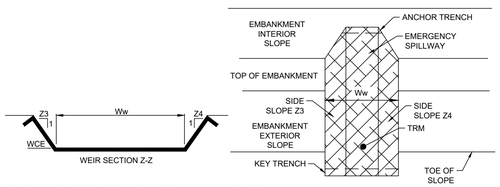
NO SCALE



BASIN NO.	WEIR					LINING		CHANNEL		DISSIPATOR			
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGTH DI (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R-_)	RIPRAP THICK. DRI (IN)
A	3	3	719.33	718.00	125	S200	E	3	1.33	15	N/A	N/A	N/A
B	3	3	692.33	691.00	150	S200	E	3	1.33	15	N/A	N/A	N/A
C	3	3	685.33	684.00	250	S200	E	3	1.33	15	N/A	N/A	N/A
D	3	3	810.50	809.00	20	S200	E	3	1.50	15	N/A	N/A	N/A
E	3	3	812.50	811.00	35	S200	E	3	1.50	15	N/A	N/A	N/A
F	3	3	738.33	737.00	75	S200	E	3	1.33	15	N/A	N/A	N/A
G	3	3	774.33	773.00	210	S200	E	3	1.33	15	N/A	N/A	N/A
H	3	3	791.33	790.00	100	S200	E	3	1.33	15	N/A	N/A	N/A

BASIN EMERGENCY SPILLWAY DETAIL

NO SCALE



REVISION	DATE	BY

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

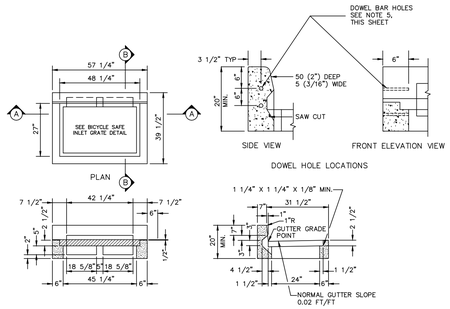
located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

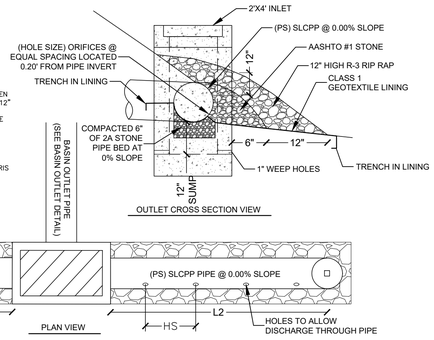


NOTES: ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-45M DRAWINGS

NOTES:
1. THIS DETAIL DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. PERMIT ONLY TOP UNITS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. CAST-IN-PLACE TOP UNITS MAY BE MONOLITHIC WITH THE INLET BOX.
3. PROVIDE ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE FOR ALL TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT.
4. PLACE A TYPE M INLET ADJACENT TO THE BACK EDGE OF THE CURB, FLUSH WITH THE PAVEMENT SURFACE, WHEN REQUIRED WITHIN A CONCRETE MOUNTABLE CURB SECTION.
5. DOWEL TYPE C INLET TOP UNITS WITH 2-#25 x 300 (2-#8 x 1'-0") DOWEL BARS AND PLACE PREMOLDED EXPANSION JOINT FILLER 6 (1/4") WIDE WHEN CONNECTED TO ADJACENT CURB SECTION.
6. THE PLACEMENT OF THE TYPE S INLET RELATIVE TO THE GUTTER INVERT IS DEPENDENT ON THE RATE OF BACK SLOPE. FOR BACK SLOPES GREATER THAN 1:2 (2:1), LOCATE THE INLET WHERE THE BACK SLOPE LINE INTERSECTS THE BACK, TOP, OUTSIDE CORNER OF THE INLET. FOR BACK SLOPES LESS THAN 1:2 (2:1), LOCATE THE INLET WHERE THE BACK SLOPE LINE INTERSECTS THE EDGE OF THE INLET GRATE.
7. TAPERS MAY BE PROVIDED ON INSIDE VERTICAL FACES OF PRECAST INLET TOPS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VERY TO A MAXIMUM OF 25 MM (1").

PENNDOT TYPE "C" INLET TOP

NO SCALE



NOTES:
1. LEVEL SPREADER PIPE SHALL BE INSTALLED FLAT WITH ALL HOLES IN THE PIPE INSTALLED AT THE SAME ELEVATION TO ALLOW EVEN DISTRIBUTION OF STORM WATER DISCHARGE.
2. PROVIDE AASHTO #1 AROUND PIPE HOLES TO ALLOW FOR EVEN DISTRIBUTION OF STORM DISCHARGE. STONE SHALL EXTEND 12" BEYOND FRONT FACE OF STORM INLET.
3. PROVIDE AN ADDITIONAL 12" (TAPERED TO 24" AT DISCHARGE ELEVATION) OF R-3 RIPRAP TO PROTECT THE AASHTO #1 STONE AND THE STORM PIPE.
4. 6" OF COMPACTED 2A STONE SHALL BE PROVIDED BENEATH THE LEVEL SPREADER PIPE TO PROVIDE AN EVEN FLAT SURFACE FOR THE PIPE TO SIT ON.
5. INLET SHALL BE SUMPED 12" TO ALLOW COLLECTION OF DEBRIS TO PREVENT CLOGGING OF LEVEL SPREADER PIPE. INLET SHALL BE MONITORED AND CLEANED AT LEAST TWICE PER YEAR.

LEVEL SPREADER DETAIL

NO SCALE

LEVEL SPREADER

ID	PIPE SIZE (PS)	HOLE SIZE	HOLE ELEVATION	HOLE SPACING (HS)	# OF HOLES	L1	L2	TOTAL PIPE LENGTH (L1+L2)
LS-A1	12"	1.5"	712.20	0.397'	126	25'	25'	50'
LS-B1	18"	1.5"	678.20	0.297'	484	55'	80'	135'
LS-C1	12"	1.5"	676.20	1.144'	101	59'	57'	115'
LS-H1	12"	1.5"	782.20	0.480'	42	10'	10'	20'

NOTES: ALL INLET BOXES SHALL CONFORM TO THE CURRENT PENNDOT RC-45M DRAWINGS

TYPE M INLET DETAIL (RC-45M)

NO SCALE

ENGINEERED SOIL MIX*
50% TOPSOIL
25% COMPOST
25% SAND**

*SHALL BE LESS THAN 20% CLAY BY VOLUME, TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

**SAND USED IN ENGINEERED SOILS SHALL BE SILICA SAND MEETING THE SPECIFICATIONS IDENTIFIED IN AASHTO M-6 OR ASTM C-33 FOR SILICA CONCRETE SAND. CALCIUM CARBONATE, MAGNESIUM CARBONATE, AND/OR DIABASE SUBSTITUTIONS ARE NOT ACCEPTABLE. NEITHER STONE DUST NOR #10 SCREENINGS MAY BE SUBSTITUTED FOR SAND.

INFILTRATION BASIN BOTTOM TYPICAL CROSS SECTION DETAIL

NO SCALE

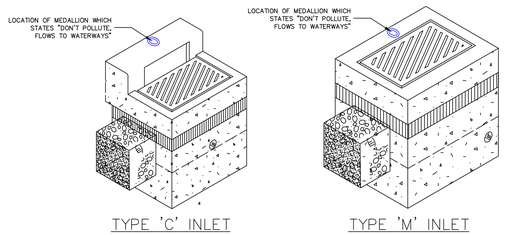
ENGINEERED SOIL MIX*
50% TOPSOIL
25% COMPOST
25% SAND**

*SHALL BE LESS THAN 20% CLAY BY VOLUME, TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

**SAND USED IN ENGINEERED SOILS SHALL BE SILICA SAND MEETING THE SPECIFICATIONS IDENTIFIED IN AASHTO M-6 OR ASTM C-33 FOR SILICA CONCRETE SAND. CALCIUM CARBONATE, MAGNESIUM CARBONATE, AND/OR DIABASE SUBSTITUTIONS ARE NOT ACCEPTABLE. NEITHER STONE DUST NOR #10 SCREENINGS MAY BE SUBSTITUTED FOR SAND.

DETENTION BASIN BOTTOM TYPICAL CROSS SECTION DETAIL

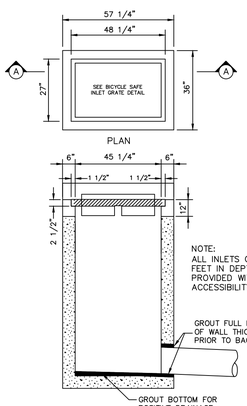
NO SCALE



STORM STRUCTURE MARKING DETAIL

NO SCALE

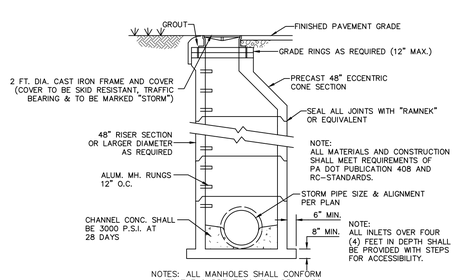
PIPE NO.	PIPE DIA. Do (in.)	RIPRAP SIZE	Rt (in)	Al (ft)	Alw (ft)	Atw (ft)
EW-A1	18	R-5	27	11	5	16
EW-H1	15	R-5	27	19	4	11
EW-H13	24	R-5	27	9	6	10
EW-E1	18	R-4	18	7	5	7
EW-BP8	30	R-7	45	28	8	36
EW-F1	15	R-4	18	6	4	6
EW-D1	15	R-4	18	6	4	6
EW-G17	30	R-6	36	12	8	12
EW-G1	18	R-4	18	7	5	7
EW-G11	15	R-6	36	23	4	13
EW-B1	30	R-8	63	32	8	20
EW-BP3	15	R-4	18	8	4	12
EW-BP4	15	R-5	27	12	4	16
EW-C2	30	R-7	45	24	8	17
EW-C23	15	R-5	27	6	4	6
EW-C26	30	R-7	45	12	8	12
EW-BP1	24	R-5	27	17	6	23



NOTES: ALL INLET BOXES SHALL CONFORM TO THE CURRENT PENNDOT RC-45M DRAWINGS

TYPE C INLET DETAIL (RC-45M)

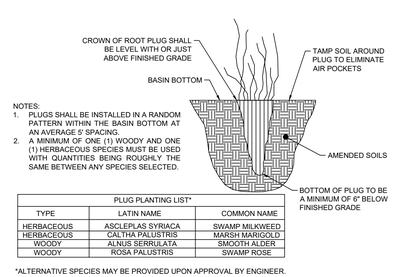
NO SCALE



NOTES: ALL MANHOLES SHALL CONFORM TO THE CURRENT RC-39M DRAWINGS

STORMWATER MANHOLE CROSS SECTION

NO SCALE



NOTES:
1. PLUGS SHALL BE INSTALLED IN A RANDOM PATTERN WITHIN THE BASIN BOTTOM AT AN AVERAGE 5' SPACING.
2. A MINIMUM OF ONE (1) WOODY AND ONE (1) HERBACEOUS SPECIES MUST BE USED WITH QUANTITIES BEING ROUGHLY THE SAME BETWEEN ANY SPECIES SELECTED.

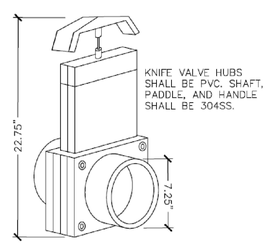
PLUG PLANTING LIST*

TYPE	LATIN NAME	COMMON NAME
HERBACEOUS	ASCLEPLAS SYRIACA	SWAMP MILKWEED
HERBACEOUS	CALTHA PALUSTRIS	MARSH MARIGOLD
WOODY	ALNUS SERRULATA	SMOOTH ALDER
WOODY	ROSA PALUSTRIS	SWAMP ROSE

*ALTERNATIVE SPECIES MAY BE PROVIDED UPON APPROVAL BY ENGINEER.

PLUG PLANTING DETAIL

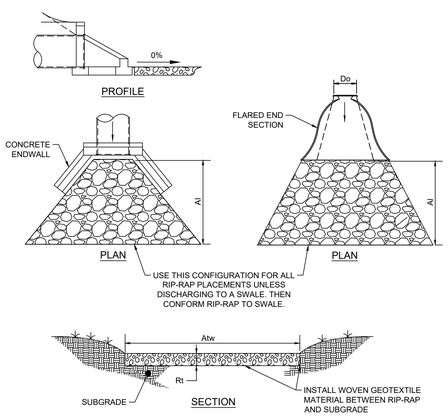
NO SCALE



PVC KNIFE VALVE SHALL BE MANUFACTURED BY THE FOLLOWING:
1. VALUGRA PRODUCTS, LLC
MISSION HILLS, CALIFORNIA
PHONE: 818-898-1671
FAX: 818-361-5389
2. OR APPROVED EQUAL

6" PVC KNIFE VALVE DETAIL

NO SCALE



FLARED END SECTION/ENDWALL RIP RAP DETAIL

NO SCALE

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

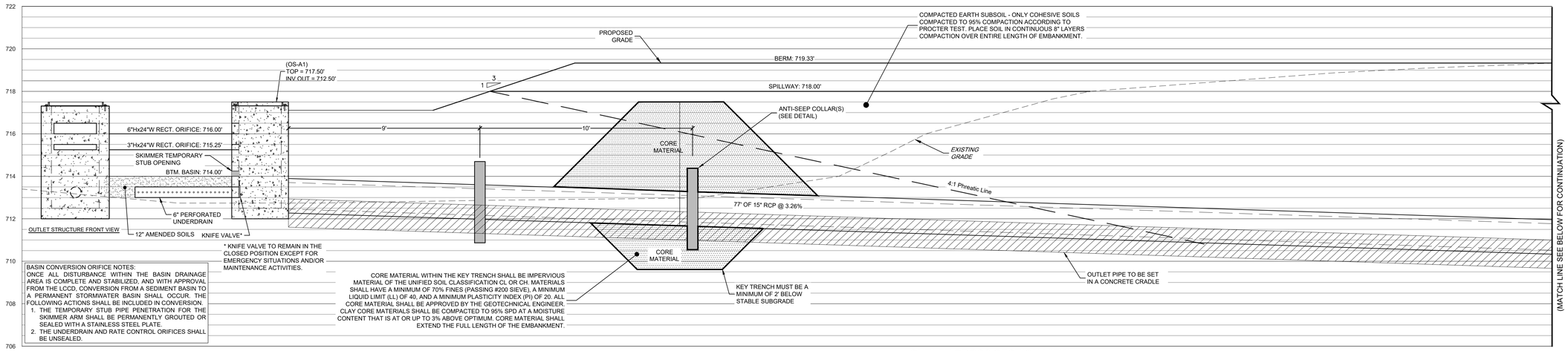
Cornwall Borough

Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
278 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

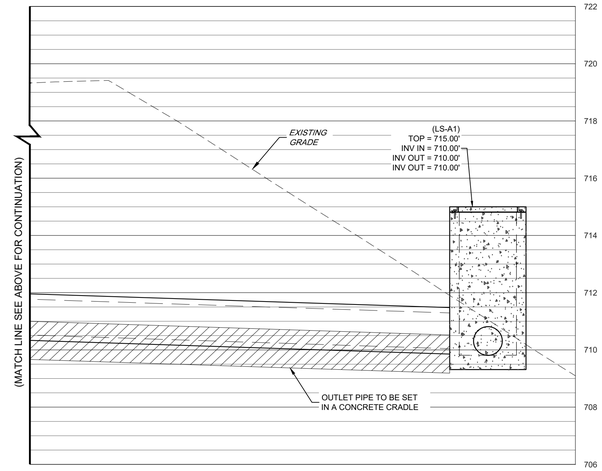
36



INFILTRATION BASIN "A" OUTLET

SCALE: 1" = 2.5'

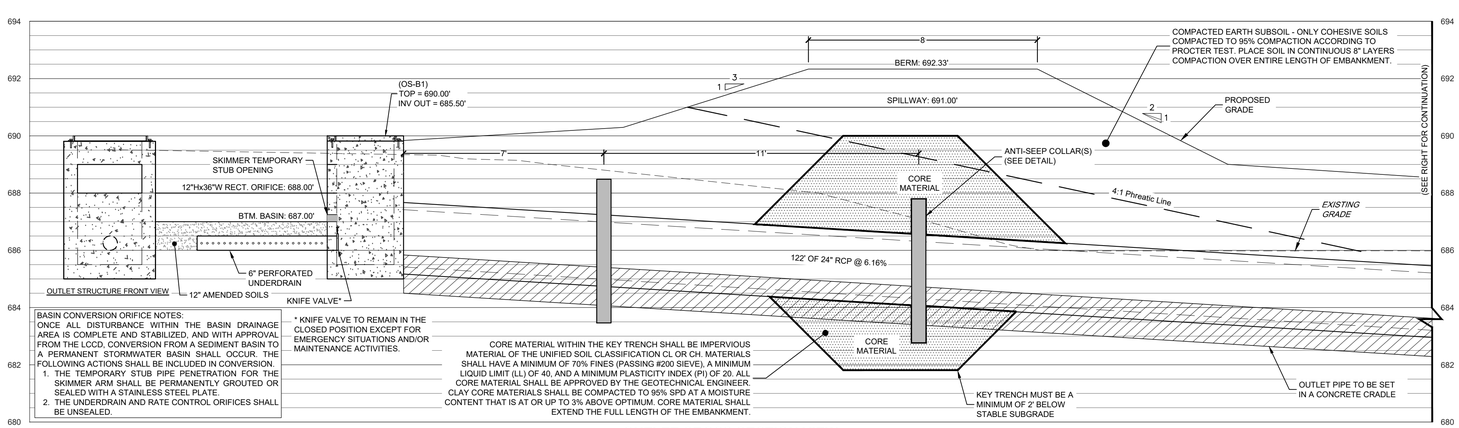
OUTLET CROSS SECTION VIEW



INFILTRATION BASIN "A" OUTLET (CON'T)

SCALE: 1" = 2.5'

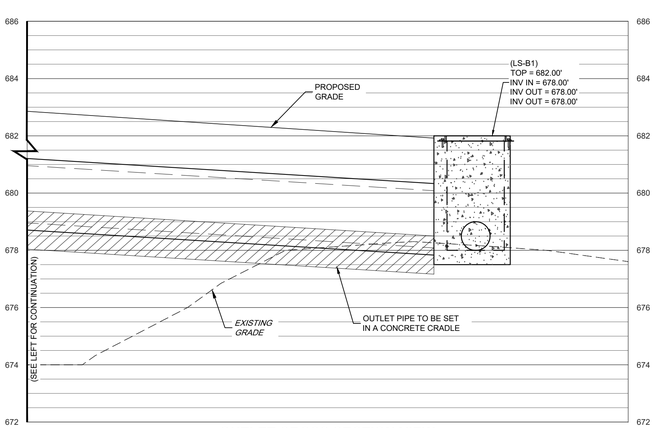
GRAPHIC SCALE
2.5' 0' 2.5' 5'
1 inch = 2.5ft. (H&V)



INFILTRATION BASIN "B" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



OUTLET CROSS SECTION VIEW

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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Cornwall Borough & North Cornwall Township
Lebanon County, Pennsylvania

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Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
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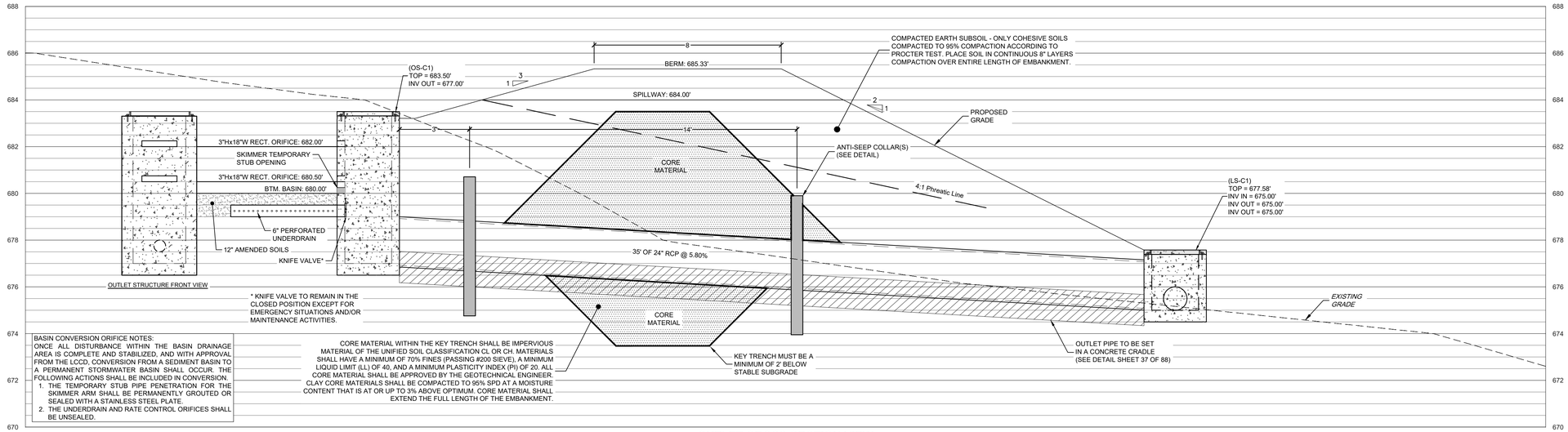
SCALE:	AS NOTED
PROJECT #	2216-22-003

37

37 OF 88 SHEETS



BASIN CONVERSION ORIFICE NOTES:
ONCE ALL DISTURBANCE WITHIN THE BASIN DRAINAGE AREA IS COMPLETE AND STABILIZED, AND WITH APPROVAL FROM THE LCCD, CONVERSION FROM A SEDIMENT BASIN TO A PERMANENT STORMWATER BASIN SHALL OCCUR. THE FOLLOWING ACTIONS SHALL BE INCLUDED IN CONVERSION.

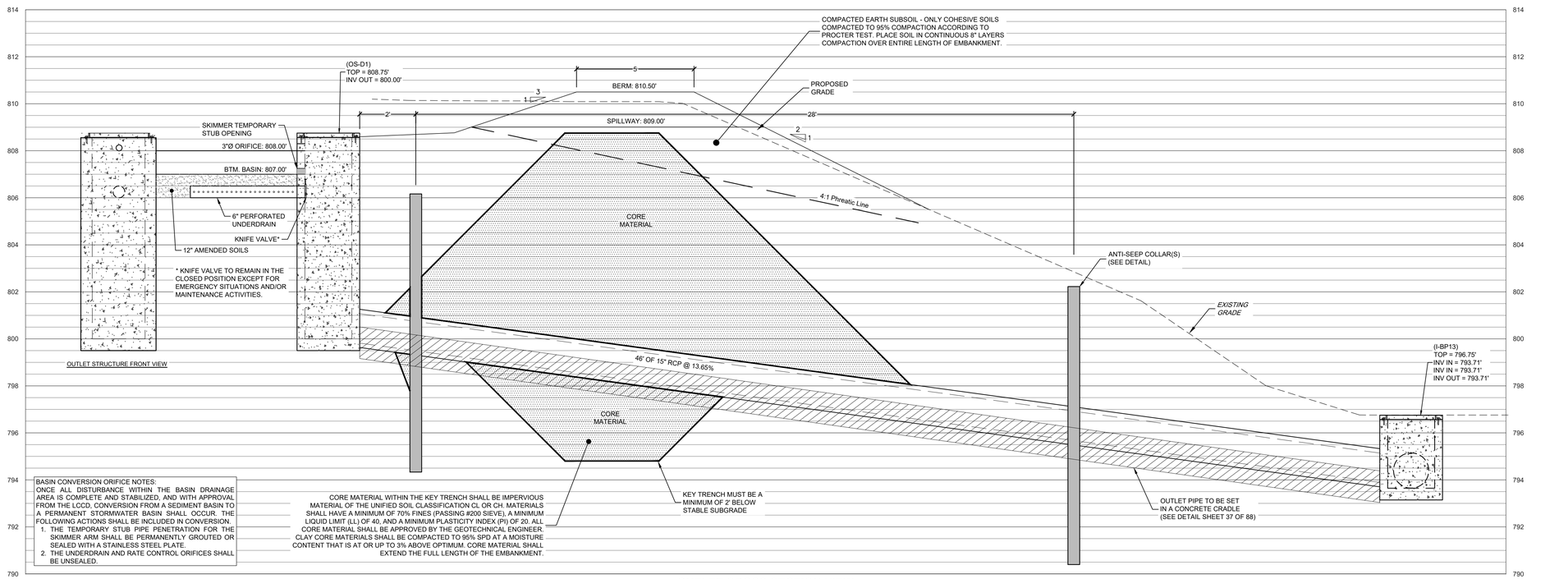
1. THE TEMPORARY STUB PIPE PENETRATION FOR THE SKIMMER ARM SHALL BE PERMANENTLY GROUTED OR SEALED WITH A STAINLESS STEEL PLATE.
2. THE UNDERDRAIN AND RATE CONTROL ORIFICES SHALL BE UNSEALED.

CORE MATERIAL WITHIN THE KEY TRENCH SHALL BE IMPERVIOUS MATERIAL OF THE UNIFIED SOIL CLASSIFICATION CL OR CH. MATERIALS SHALL HAVE A MINIMUM OF 70% FINES (PASSING #200 SIEVE), A MINIMUM LIQUID LIMIT (LL) OF 40, AND A MINIMUM PLASTICITY INDEX (PI) OF 20. ALL CORE MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. CLAY CORE MATERIALS SHALL BE COMPACTED TO 95% SPD AT A MOISTURE CONTENT THAT IS AT OR UP TO 3% ABOVE OPTIMUM. CORE MATERIAL SHALL EXTEND THE FULL LENGTH OF THE EMBANKMENT.

INFILTRATION BASIN "C" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



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INFILTRATION BASIN "D" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW

GRAPHIC SCALE
2.5' 0' 2.5' 5'
1 inch = 2.5ft. (H&V)

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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(Applicant)
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Stackbeck Engineering & Surveying Inc.
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Phone: (717) 272-7110
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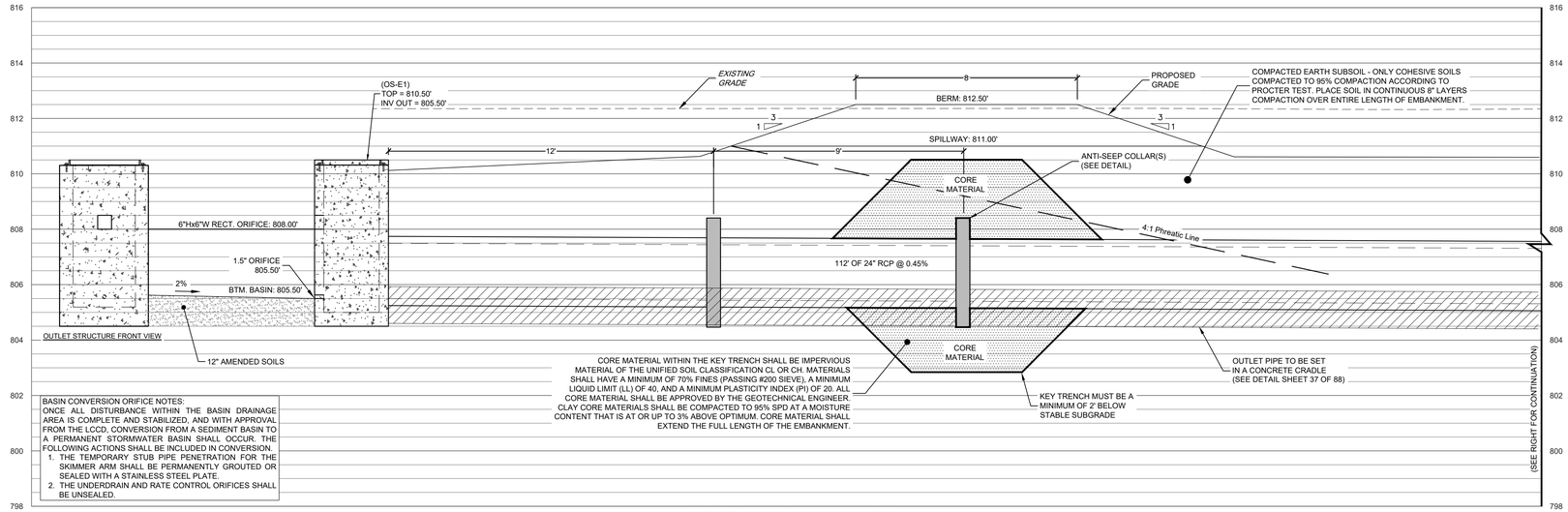
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

38

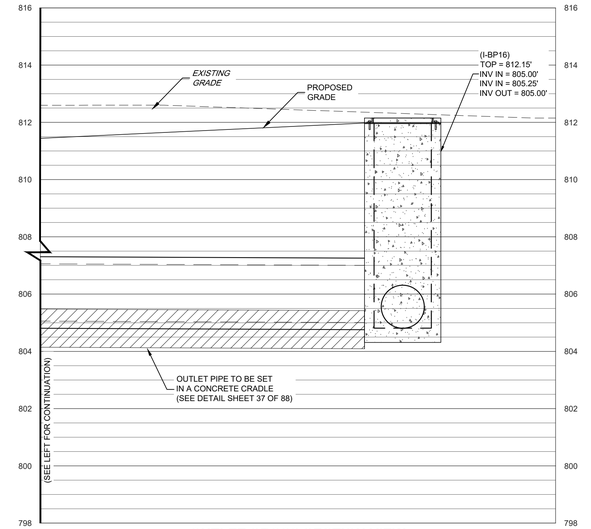
38 OF 88 SHEETS



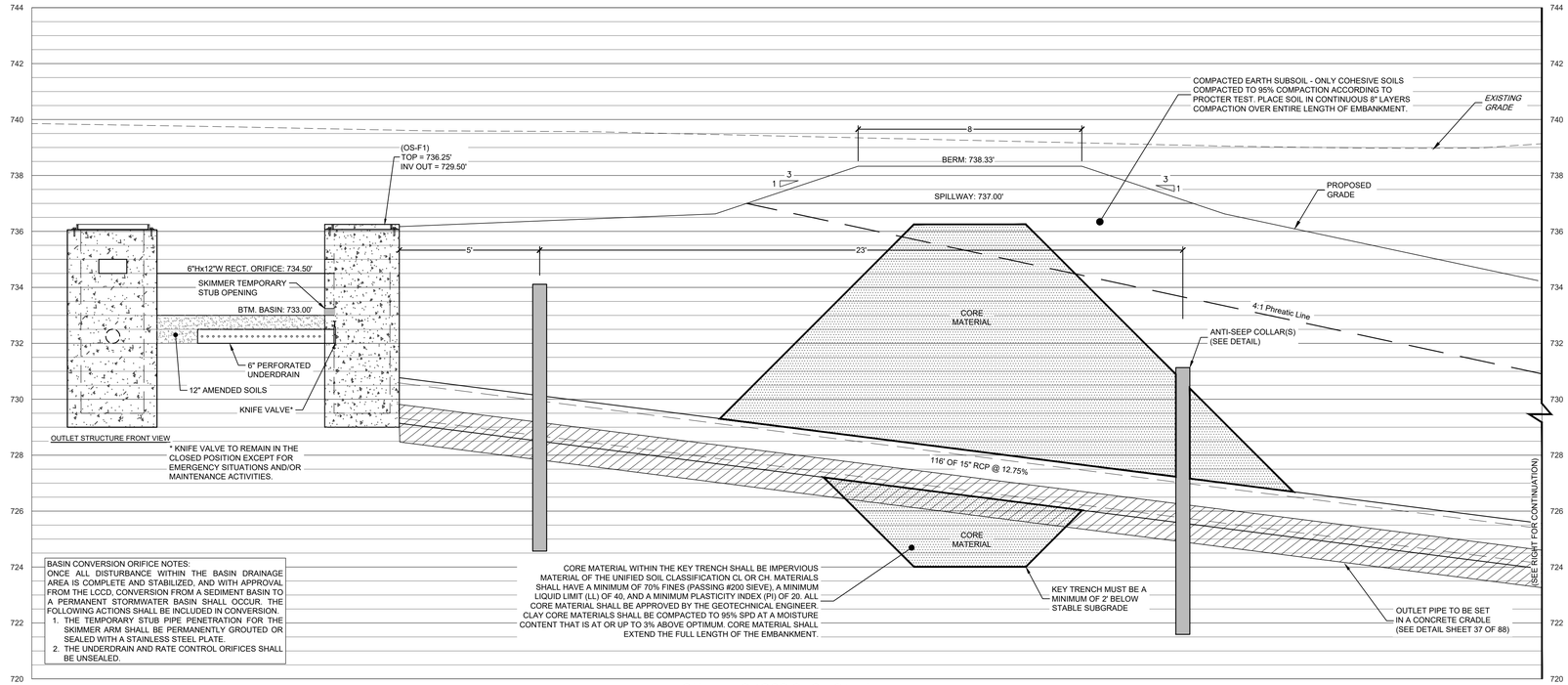
DETENTION BASIN "E" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



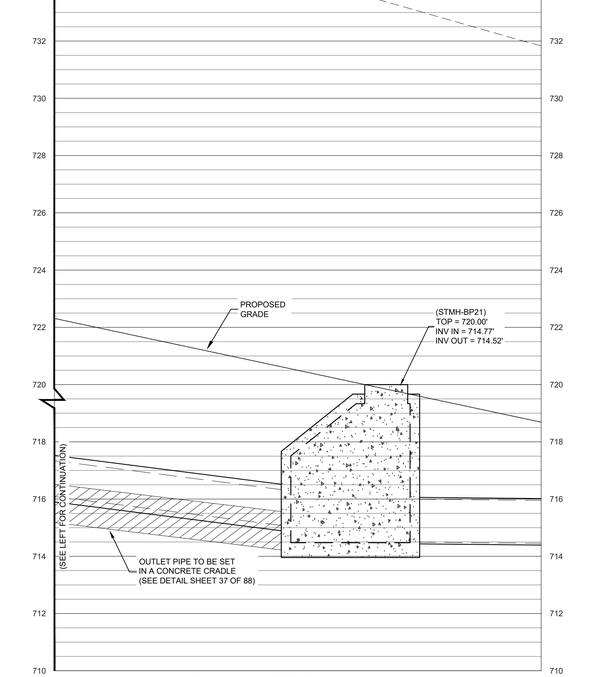
OUTLET CROSS SECTION VIEW



INFILTRATION BASIN "F" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



OUTLET CROSS SECTION VIEW

GRAPHIC SCALE
2.5' 0' 2.5' 5'
1 inch = 2.5ft. (H&V)

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

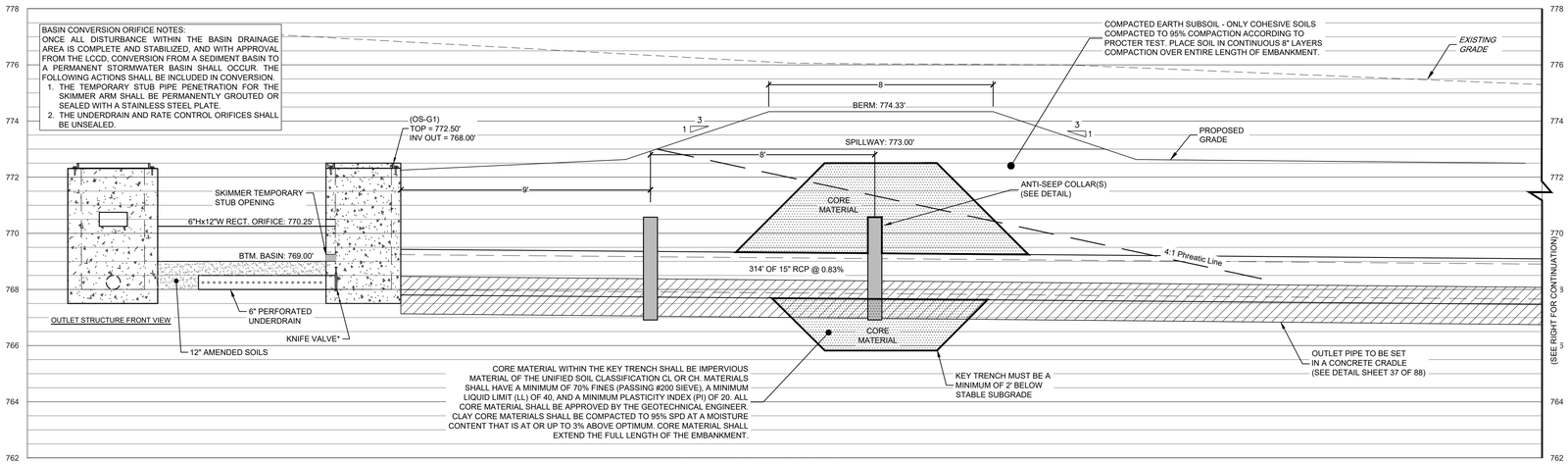
Cornwall Borough
Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

39

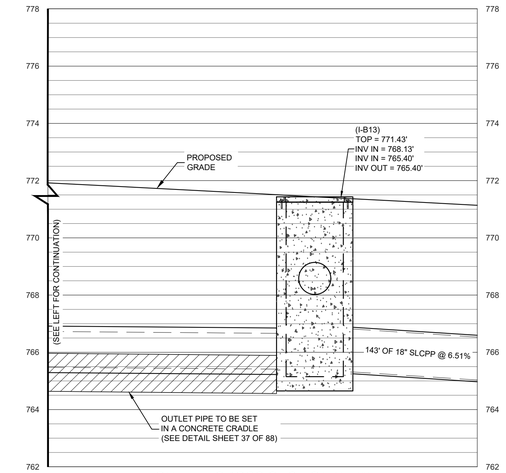
39 OF 88 SHEETS



INFILTRATION BASIN "G" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



OUTLET CROSS SECTION VIEW

GRAPHIC SCALE
2.5' 0' 2.5' 5'
1 inch = 2.5ft. (H&V)

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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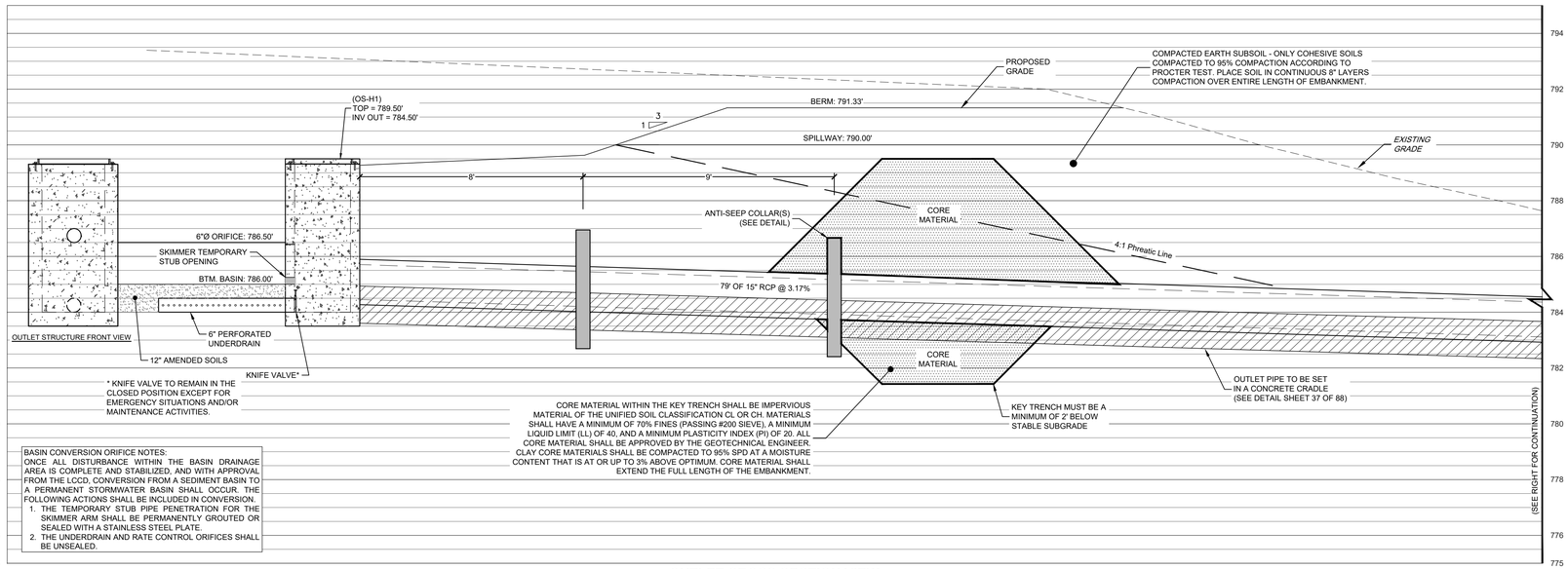
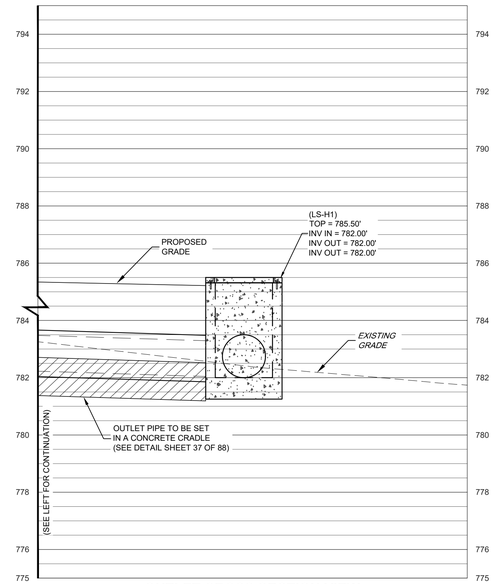
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003



INFILTRATION BASIN "H" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



OUTLET CROSS SECTION VIEW

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGMENT DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

GRAPHIC SCALE
150' 0' 75' 150' 300'
1 inch = 150ft.

BMP NO. 1 INFILTRATION BASIN A
BMP NO. 2 INFILTRATION BASIN B
BMP NO. 3 INFILTRATION BASIN G
BMP NO. 4 INFILTRATION BASIN D
BMP NO. 5 DETENTION BASIN E
BMP NO. 6 INFILTRATION BASIN H
BMP NO. 7 INFILTRATION BASIN I

REXMONT ROAD, BOYD STREET, LYNCH DRIVE, COBALT ALLEY, IRON VALLEY DR., ROAD A, ROAD B, ROAD C, ROAD D, ROAD E, ROAD F, GOLD ROAD, SILVER RD., SHIRK ST., GRANITE STREET, MATCHLINE

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 43 of 88
Sheet 44 of 88
Sheet 45 of 88
Sheet 46 of 88
Sheet 47 of 88

REVISION	DATE	BY
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OVERALL GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #2216-22-003	

42

42 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100, MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

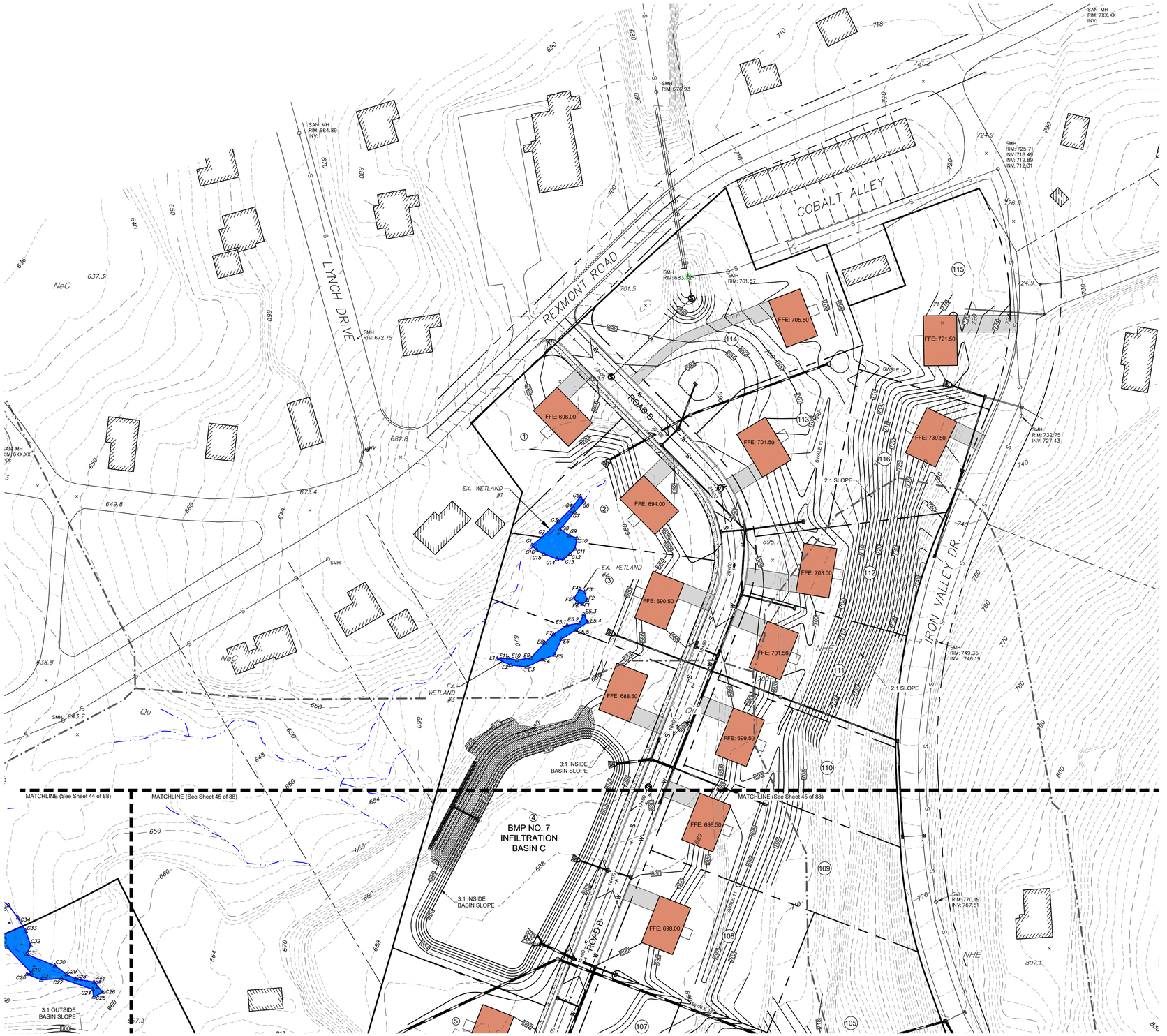
PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

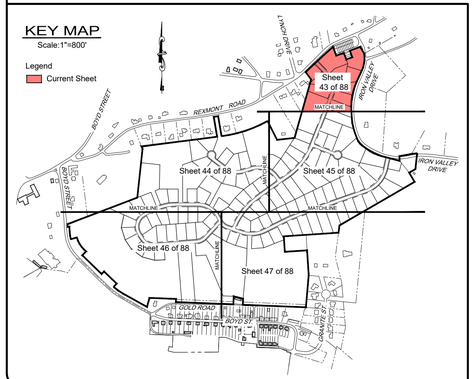


KEY MAP

Scale:1"=800'

Legend

Current Sheet



REVISION	DATE	BY
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GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

43

43 OF 88 SHEETS

KEY MAP
Scale:1"=800'

Legend
Current Sheet

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE, RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
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- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
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- PROPOSED RIGHT-OF-WAY
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- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

REVISION	DATE	BY
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GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

44

44 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
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- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100 MAJOR, MINOR)
- EXISTING TREELINE (TWP)
- EXISTING TOWNSHIP BOUNDARY (TWP)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTLITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
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- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100 MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

MAGNETIC

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

MATCHLINE (See Sheet 43 of 88)

MATCHLINE (See Sheet 47 of 88)

BMP NO. 7 INFILTRATION BASIN C

BMP NO. 6 INFILTRATION BASIN F

BMP NO. 4 INFILTRATION BASIN D

BMP NO. 5 DETENTION BASIN E

EX. WETLAND #3

EX. WETLAND #4

NHE

NeC

Qu

ROAD A

ROAD B

ROAD C

ROAD D

3:1 INSIDE BASIN SLOPE

3:1 SLOPE

2:1 SLOPE

FFE: 688.50
FFE: 699.50
FFE: 698.50
FFE: 698.00
FFE: 694.50
FFE: 703.00
FFE: 711.50
FFE: 716.00
FFE: 696.50
FFE: 703.00
FFE: 711.50
FFE: 716.00
FFE: 716.50
FFE: 700.50
FFE: 706.00
FFE: 712.00
FFE: 713.50
FFE: 714.50
FFE: 724.00
FFE: 733.50
FFE: 743.50
FFE: 794.50
FFE: 797.50
FFE: 802.00
FFE: 806.00
FFE: 811.50
FFE: 815.50
FFE: 817.50
FFE: 819.00
FFE: 819.50
FFE: 818.50
FFE: 819.00
FFE: 816.50
FFE: 816.00
FFE: 815.00
FFE: 814.50
FFE: 814.00
FFE: 814.00
FFE: 817.50
FFE: 818.00

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 43 of 88
Sheet 44 of 88
Sheet 45 of 88
Sheet 46 of 88
Sheet 47 of 88

REMONT ROAD, BOYD STREET, IRON VALLEY DRIVE, GOLD ROAD, GRANGE DR.

GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

REVISION	DATE	BY
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Steckbeck Engineering & Surveying Inc.
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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

45

45 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE, HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- EXISTING STORMWATER
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100, MAJOR / MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP. / TWP.)
- EXISTING SOILS (SOIL TYPE / SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
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- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR / MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

KEY MAP

Scale: 1"=800'

Legend: Current Sheet

Sheet 43 of 88 — Sheet 44 of 88 — Sheet 45 of 88 — Sheet 46 of 88 — Sheet 47 of 88

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REVISION	DATE	BY
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GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

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BASE MAP:	MA
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DESIGN:	CDS
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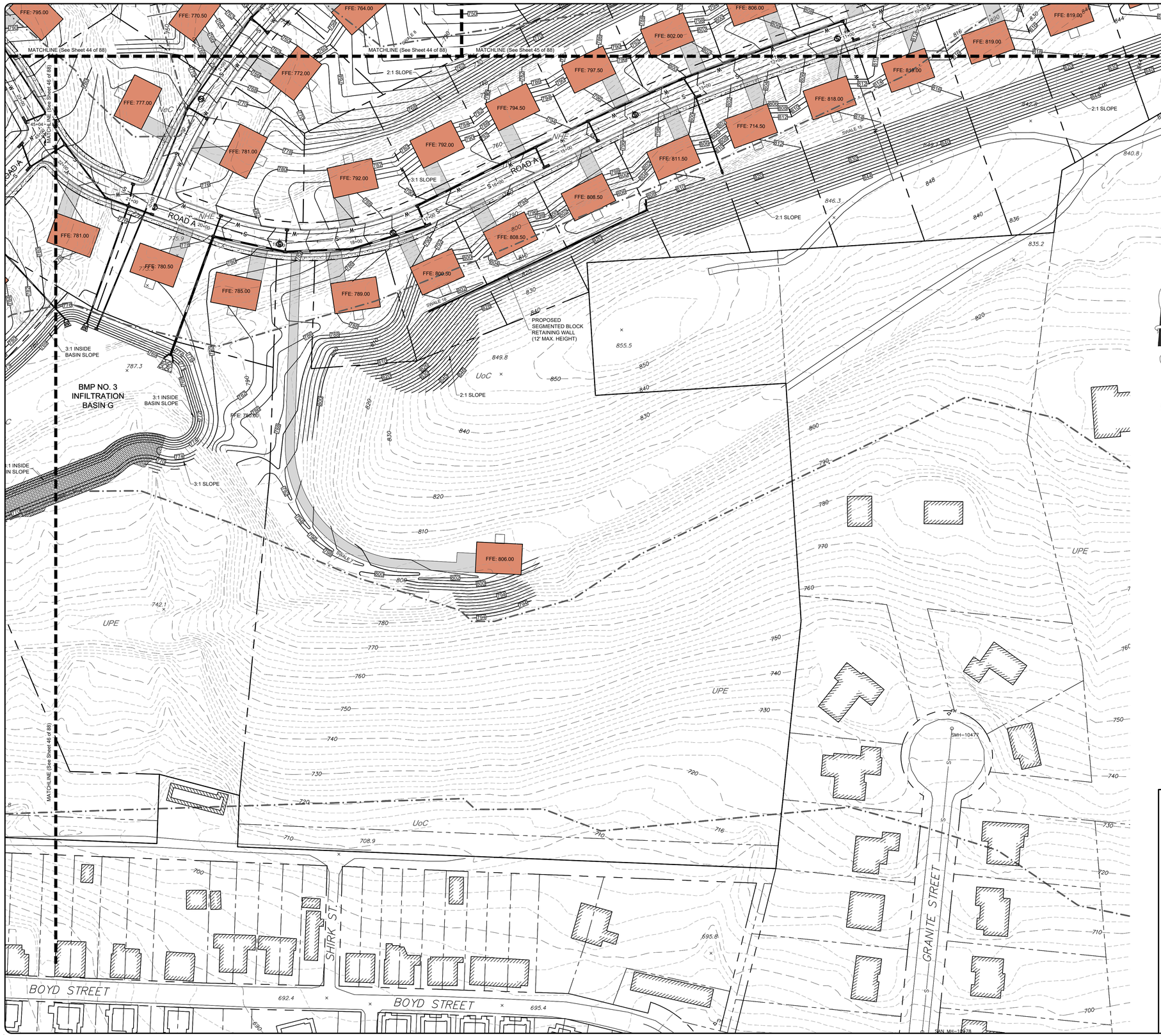
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

46

46 OF 88 SHEETS



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY
- EXISTING SOILS
- EXISTING UTLITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
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- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTLITY POLE
- PROPOSED LIGHT POLE

GRAPHIC SCALE

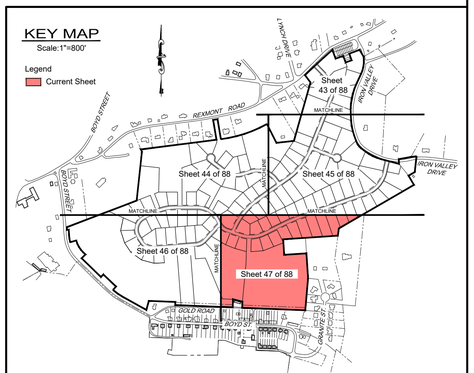
60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend: Current Sheet



REVISION	DATE	BY
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GRADING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

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Lebanon County, Pennsylvania

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219 North Zinns Mill Road, Suite A
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Phone: (717) 272-7110
Fax: (717) 272-2348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #2216-22-003	

47

47 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED WATER LINE

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

UTILITY NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.
2. CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING WATER MAINS PRIOR TO EXCAVATION WORK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED WATER MAINS OR RE-ROUTING OF WATER MAINS.

REXMONT ROAD
LYNCH DRIVE
COBALT ALLEY
IRON VALLEY DR.
BOYD STREET
SILVER RD.
GOLD ROAD
SHIRK ST.
GRANITE STREET
ROAD A
ROAD B
ROAD C
ROAD D
MATCHLINE

KEY MAP
Scale:1"=800'

Legend
Current Sheet

Sheet 49 of 88
Sheet 50 of 88
Sheet 51 of 88
Sheet 52 of 88
Sheet 53 of 88

REVISION	DATE	BY
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OVERALL UTILITY PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
Cornwall Borough
Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 150'
PROJECT #	2216-22-003

48

48 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED WATER LINE

UTILITY NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.
2. CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING WATER MAINS PRIOR TO EXCAVATION WORK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED WATER MAINS OR RE-ROUTING OF WATER MAINS.

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

WATER MAIN NOTES:

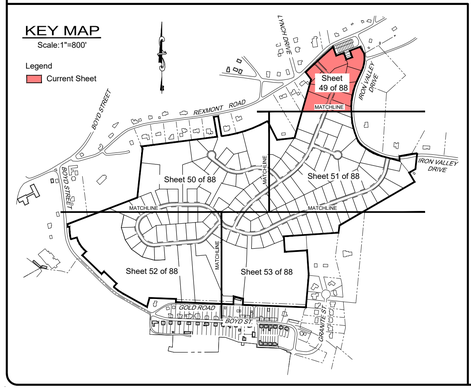
1. CONTRACTOR SHALL USE BENDS AS NECESSARY TO ACHIEVE PROPOSED WATER MAIN LAYOUT.
2. PIPE DEFLECTION IS TO BE A MAXIMUM OF HALF OF THE MANUFACTURERS RECOMMENDATION
3. CURB STOPS TO BE INSTALLED JUST INSIDE THE CURB LINE (WITHIN BEAUTY STRIP IF SIDEWALK IS PROPOSED) WITH THE METER PIT TO BE WITHIN 2'-8' OF THE CURB STOP. (OPPOSITE SIDE OF SIDEWALK IF SIDEWALK IS PROPOSED)
4. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.

KEY MAP

Scale:1"=800'

Legend

Current Sheet



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UTILITY PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

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Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Suite A
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Phone: (717) 272-7110
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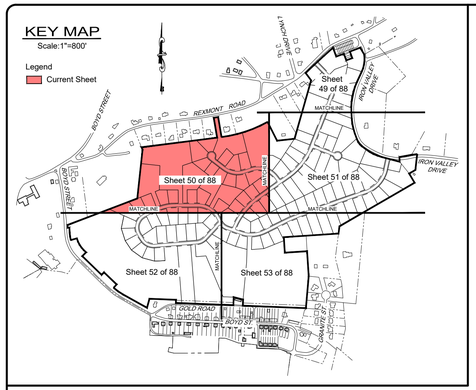
SCALE:	1" = 60'
PROJECT #	2216-22-003

49

49 OF 88 SHEETS



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED WATER LINE

UTILITY NOTES:
1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.
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GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

REXMONT ROAD
EX. MH 2
RIM = 646.12'
INV IN = 636.49'
INV OUT = 636.49'
SMH
RIM: 643.89'
INV: 636.49'
SMH
RIM: 662.11
INV: 651.61
SMH
RIM: 637.57
INV: 625.29
W.E. 640.5
MH 15
RIM = 667.01'
INV IN = 660.89'
INV OUT = 660.79'
MH 16
RIM = 708.76'
INV IN = 694.07'
INV OUT = 693.97'
PR. HYDRANT & VALVE ASSEMBLY
MH 17
RIM = 713.43'
INV IN = 696.33'
INV OUT = 696.23'
MH 18
RIM = 709.79'
INV IN = 697.80'
INV OUT = 697.70'
MH 19
RIM = 708.13'
INV IN = 700.00'
INV OUT = 699.90'
ROAD C
PR. 8" SDR-35 PVC SEWER MAIN
PR. 8" DICL WATER MAIN
MATCHLINE (See Sheet 51 of 88)
GRINDER PUMP
GRINDER PUMP
GRINDER PUMP
PLACE CLEANOUTS EVERY 50' AND ON ALL BENDS
MH 27
RIM = 799.18'
INV IN = 791.28'
INV OUT = 791.18'
MH 28
RIM = 816.93'
INV IN = 809.03'
INV OUT = 808.93'
MH 22
RIM = 749.22'
INV IN = 741.32'
INV OUT = 741.22'
ROAD B
PR. 8" SDR-35 PVC SEWER MAIN
PR. 8" DICL WATER MAIN
MH 37
RIM = 834.13'
INV OUT = 826.13'
ROAD A
MH 29
RIM = 832.49'
INV OUT = 824.49'
MATCHLINE (See Sheet 52 of 88)
MH 26
RIM = 786.67'
INV IN = 778.77'
INV OUT = 778.67'
MATCHLINE (See Sheet 53 of 88)
MH 36
RIM = 832.69'
INV IN = 824.79'
INV OUT = 824.69'
PR. HYDRANT & VALVE ASSEMBLY
PR. 8"x8"x8" TEE WITH (3) GATE VALVES
MH 23
RIM = 770.58'
INV IN = 762.68'
INV OUT = 762.58'
MH-39
RIM = 787.46'
INV IN = 779.84'
INV OUT = 779.74'
MH 25
PR. HYDRANT & VALVE ASSEMBLY

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UTILITY PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
219 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

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DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

50

50 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO) (W)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED WATER LINE (W)

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

UTILITY NOTES:
1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.
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MATCHLINE (See Sheet 49 of 88)
MATCHLINE (See Sheet 50 of 88)
MATCHLINE (See Sheet 53 of 88)

MH 7
RIM = 685.85'
INV IN = 680.20'
INV OUT = 680.10'

MH 8
RIM = 692.74'
INV IN = 682.20'
INV IN = 684.00'
INV OUT = 682.20'

MH 9
RIM = 695.25'
INV IN = 687.35'
INV OUT = 687.25'

MH 10
RIM = 699.34'
INV IN = 691.44'
INV OUT = 691.34'

MH 11
RIM = 707.92'
INV OUT = 699.92'

MH 12
RIM = 714.60'
INV OUT = 705.80'

MH 20
RIM = 711.90'
INV IN = 703.90'
INV OUT = 703.80'

MH 21
RIM = 716.00'
INV IN = 708.10'
INV OUT = 708.00'

MH-40
RIM = 796.42'
INV IN = 788.42'
INV OUT = 788.32'

MH-41
RIM = 807.43'
INV IN = 799.73'
INV OUT = 799.63'

MH-42
RIM = 815.06'
INV OUT = 807.13'

MH 1
RIM = 811.86'
INV IN = 802.53'

MH 2
RIM = 812.13'
INV IN = 804.13'
INV OUT = 804.03'

MH 3
RIM = 813.75'
INV IN = 805.85'
INV OUT = 805.75'

MH4
RIM = 815.06'
INV OUT = 807.39'

SMH
RIM: 770.19
INV: 767.51

SMH
RIM: 795.71
INV: 792.30

SMH
RIM: 813.54
INV: 806.71

ROAD B
ROAD C
ROAD D
ROAD A

EX. WETLAND #4

CUT ABANDONED WATER LINE

WATER LINE TO BE ABANDONED OR REMOVED AS NECESSARY

EXISTING 8" WATER MAIN (LOCATION APPROXIMATE)

CONNECT TO EXISTING 8" WATER MAIN WITH 8"x8"x8" TAPPING SLEEVE AND VALVE

LIMIT OF 8" WATER MAIN RELOCATION

EX. 6" SEWER LATERAL APPROX. LOCATION

PR. HYDRANT & VALVE ASSEMBLY

PROPOSED 2" BLOW OF VALVE W/ FIVE (5) FIELD LOK GASKETS PRIOR TO BLOW OFF VALVE INSTALLED AT PIPE CONNECTIONS

PR. 8"x8"x8" TEE W/ (3) GATE VALVES

PR. 8" DICL WATER MAIN

PR. 8" SDR-35 PVC SEWER MAIN

AIR RELEASE VALVE

EXISTING PUMP HOUSE

KEY MAP

Scale:1"=800'

Legend
Current Sheet

Sheet 49 of 88
Sheet 50 of 88
Sheet 51 of 88
Sheet 52 of 88
Sheet 53 of 88

REVISION	DATE	BY
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UTILITY PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
219 North Zinns Mill Road, Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-2348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

51

51 OF 88 SHEETS

MATCHLINE (See Sheet 50 of 88)

MATCHLINE (See Sheet 50 of 88)

MATCHLINE (See Sheet 53 of 88)

MATCHLINE (See Sheet 53 of 88)

ROAD A

ROAD A

ROAD A

BOYD STREET

GOLD ROAD

MH 37
RIM = 834.13'
INV OUT = 826.13'

MH 29
RIM = 832.49'
INV OUT = 824.49'

MH 36
RIM = 832.69'
INV IN = 824.79'
INV OUT = 824.69'

PR. HYDRANT &
VALVE ASSEMBLY

MH 35
RIM = 831.21'
INV IN = 823.38'
INV OUT = 823.28'

MH 34
RIM = 829.64'
INV IN = 821.74'
INV OUT = 821.64'

MH 33
RIM = 828.45'
INV IN = 820.55'
INV OUT = 820.45'

PR. 8" SDR-35 PVC
SEWER MAIN

PR. 8" DICL WATER
MAIN

MH 31
RIM = 802.16'
INV IN = 792.56'
INV OUT = 792.18'

MH 26
RIM = 786.67'
INV IN = 778.77'
INV OUT = 778.67'

MH 25
RIM = 778.43'
INV IN = 770.53'
INV IN = 770.53'
INV OUT = 770.31'

MH 30
RIM = 788.46'
INV IN = 780.56'
INV OUT = 780.46'

WATER
MAIN

PR. 8"x8"x8"
TEE WITH (3)
GATE VALVES

GRINDER PUMP

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED WATER LINE

KEY MAP
Scale:1"=800'

Legend
Current Sheet

Sheet 49 of 88
Sheet 50 of 88
Sheet 51 of 88
Sheet 52 of 88
Sheet 53 of 88

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

UTILITY NOTES:
1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.
2. CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING WATER MAINS PRIOR TO EXCAVATION WORK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED WATER MAINS OR RE-ROUTING OF WATER MAINS.

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CORNWALL PROPERTIES, LLC

for

located in

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Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
278 North Zinns Mill Road Suite A
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PROJECT #	2216-22-003

MATCHLINE (See Sheet 50 of 88)

MATCHLINE (See Sheet 50 of 88)

MATCHLINE (See Sheet 51 of 88)

MATCHLINE (See Sheet 51 of 88)

MATCHLINE (See Sheet 52 of 88)

MATCHLINE (See Sheet 53 of 88)

PR. 8" DICL WATER MAIN

PR. 8"x8"x8" TEE WITH (3) GATE VALVES

PR. HYDRANT & VALVE ASSEMBLY

PR. 8"x8"x8" TEE WITH (3) GATE VALVES

MH 23
RIM = 770.58'
INV IN = 762.68'
INV OUT = 762.58'

MH 24
RIM = 775.62'
INV IN = 769.50'
INV IN = 767.72'
INV OUT = 767.62

MH-38
RIM = 780.43'
INV IN = 772.92'
INV OUT = 772.82'

MH-39
RIM = 787.46'
INV IN = 779.84'
INV OUT = 779.74'

MH-40
RIM = 796.42'
INV IN = 788.42'
INV OUT = 788.32'

MH-41
RIM = 807.43'
INV IN = 799.73'
INV OUT = 799.63'

PR. 8" DICL WATER MAIN

WATER LINE TO BE ABANDONED OR REMOVED AS NECESSARY

EX. 8" WATER MAINS

EX. WATER TANK

EX. WATER TANK

EX. 8" WATER MAINS

GRINDER PUMP

ROAD A

ROAD A

ROAD A

BOYD STREET

BOYD STREET

SHIRK ST.

GRANITE STREET

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING WATERLINE (DEMO)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED WATER LINE

UTILITY NOTES:

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GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP
Scale:1"=800'

Legend
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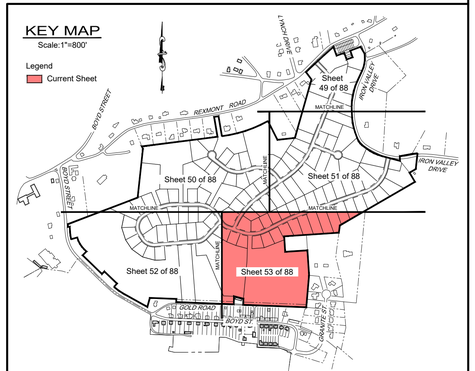

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UTILITY PLAN

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PROJECT #	2216-22-003

53

53 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- LIMITS OF FIELD SURVEY (SURVEY LIMITS)

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

NORTH

STREET TREES

KEY	BOTANICAL NAME	COMMON NAME
PA	PRINUS AUTUMNALIS	AUTUMN FLOWERING CHERRY
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
SY	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
GB	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
AR	ACER RUBRUM	RED MAPLE
QR	QUERCUS RUBRA	RED OAK

ALL STREET TREES SHALL HAVE A MINIMUM 2" CALIPER AT A HEIGHT OF 6" ABOVE THE GROUND AT THE TIME OF PLANTING.

STREET TREES SHALL BE PLANTED A MAXIMUM OF 10' FROM THE STREET RIGHT-OF-WAY LINE. REQUIRED PLANTINGS SHALL NOT BE REMOVED EXCEPT TO FACILITATE THE PLANTING OF ACCEPTABLE REPLACEMENT PLANTS.

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

REXMONT ROAD
LYNCH DRIVE
COBALT ALLEY
IRON VALLEY DR.
BOYD STREET
GOLD ROAD
SHIRK ST.
SILVER RD.
GRANITE STREET
ROAD A
ROAD B
ROAD C
MATCHLINE
BASIN OUTLET #1
BASIN OUTLET #2

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 55 of 88
Sheet 56 of 88
Sheet 57 of 88
Sheet 58 of 88
Sheet 59 of 88

REVISION	DATE	BY
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OVERALL LANDSCAPING - REFORESTATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=150'
PROJECT #2216-22-003	

54

54 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- LIMITS OF FIELD SURVEY (SURVEY LIMITS)

PROPOSED FEATURES

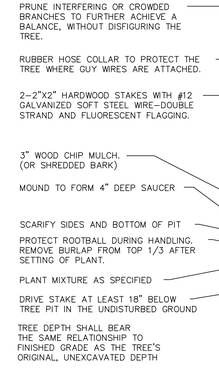
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

STREET TREES

KEY	BOTANICAL NAME	COMMON NAME
PA	PRINUS AUTUMNALIS	AUTUMN FLOWERING CHERRY
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
SY	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
GB	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
AR	ACER RUBRUM	RED MAPLE
QR	QUERCUS RUBRA	RED OAK

ALL STREET TREES SHALL HAVE A MINIMUM 2" CALIPER AT A HEIGHT OF 6" ABOVE THE GROUND AT THE TIME OF PLANTING.

STREET TREES SHALL BE PLANTED A MAXIMUM OF 10' FROM THE STREET RIGHT-OF-WAY LINE. REQUIRED PLANTINGS SHALL NOT BE REMOVED EXCEPT TO FACILITATE THE PLANTING OF ACCEPTABLE REPLACEMENT PLANTS.

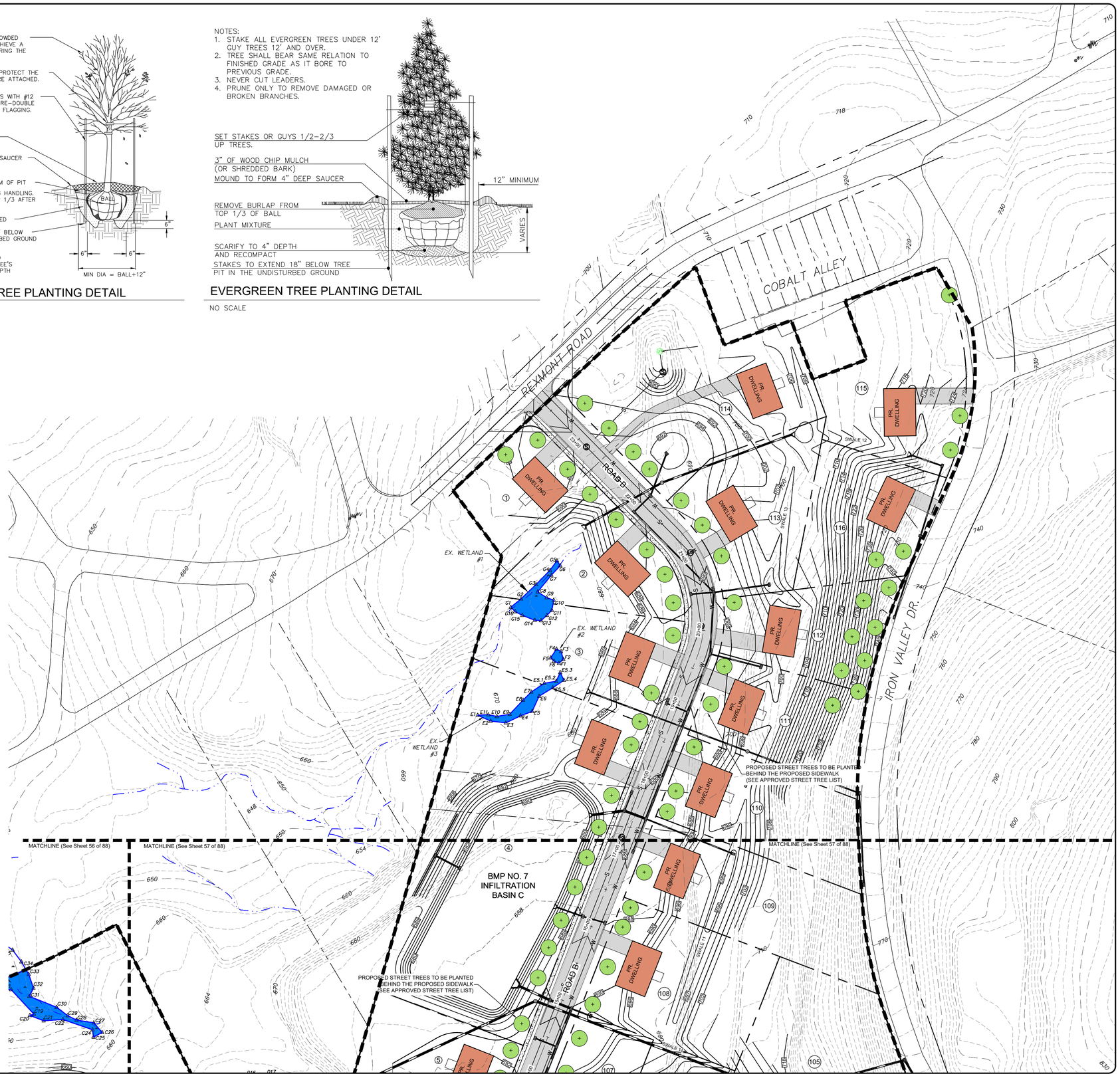


DECIDUOUS TREE PLANTING DETAIL

NO SCALE

EVERGREEN TREE PLANTING DETAIL

NO SCALE



GRAPHIC SCALE

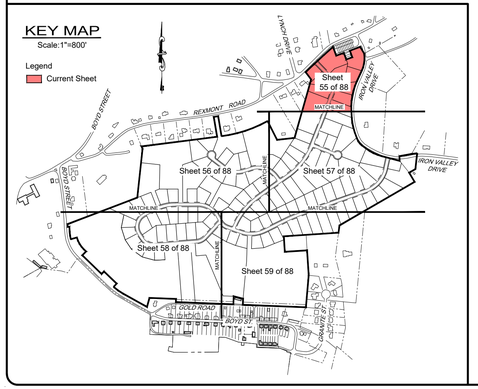
60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend: Current Sheet



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LANDSCAPING - REFORESTATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #2216-22-003	

55

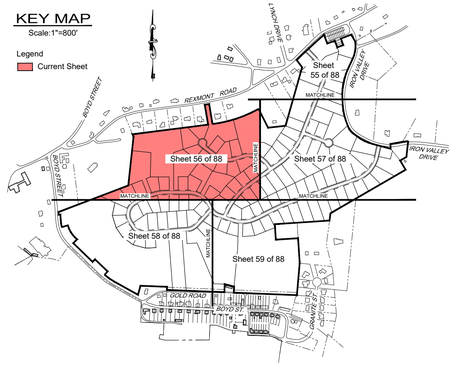
55 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE, RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING STORMWATER
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- LIMITS OF FIELD SURVEY (SURVEY LIMITS)

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

STREET TREES

KEY	BOTANICAL NAME	COMMON NAME
PA	PRINUS AUTUMNALIS	AUTUMN FLOWERING CHERRY
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
SY	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
GB	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
AR	ACER RUBRUM	RED MAPLE
QR	QUERCUS RUBRA	RED OAK

ALL STREET TREES SHALL HAVE A MINIMUM 2" CALIPER AT A HEIGHT OF 6" ABOVE THE GROUND AT THE TIME OF PLANTING.

STREET TREES SHALL BE PLANTED A MAXIMUM OF 10' FROM THE STREET RIGHT-OF-WAY LINE. REQUIRED PLANTINGS SHALL NOT BE REMOVED EXCEPT TO FACILITATE THE PLANTING OF ACCEPTABLE REPLACEMENT PLANTS.

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REXMONT ROAD

BMP NO. 1 INFILTRATION BASIN A

BMP NO. 2 INFILTRATION BASIN B

PHASE 2 PHASE 3

PHASE 3 PHASE 2

ROAD A

ROAD B

ROAD C

EX. WETLAND #5

EX. WETLAND #6

W.E. 640.5

PR. DWELLING

PROPOSED STREET TREES TO BE PLANTED BEHIND THE PROPOSED SIDEWALK (SEE APPROVED STREET TREE LIST)

MATCHLINE (See Sheet 57 of 88)

MATCHLINE (See Sheet 58 of 88)

MATCHLINE (See Sheet 59 of 88)

SWALE 1

SWALE 2

SWALE 3

SWALE 4

REVISION	DATE	BY
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LANDSCAPING - REFORESTATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

For

CORNWALL PROPERTIES, LLC

Insets in

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Lebanon County, Pennsylvania

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DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

56

56 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- LIMITS OF FIELD SURVEY (SURVEY LIMITS)

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

NORTH

STREET TREES

KEY	BOTANICAL NAME	COMMON NAME
PA	PRINUS AUTUMNALIS	AUTUMN FLOWERING CHERRY
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
SY	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
GB	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
AR	ACER RUBRUM	RED MAPLE
QR	QUERCUS RUBRA	RED OAK

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GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

MATCHLINE (See Sheet 55 of 88)

MATCHLINE (See Sheet 56 of 88)

MATCHLINE (See Sheet 58 of 88)

BMP NO. 7 INFILTRATION BASIN C

BMP NO. 4 INFILTRATION BASIN D

BMP NO. 6 INFILTRATION BASIN F

BMP NO. 5 DETENTION BASIN E

EX. WETLAND #4

PROPOSED STREET TREES TO BE PLANTED BEHIND THE PROPOSED SIDEWALK (SEE APPROVED STREET TREE LIST)

ROAD B

ROAD C

ROAD A

ROAD D

PHASE 2 PHASE 1

PHASE 3 PHASE 2

PR. DWELLING

SWALE 7

SWALE 8

SWALE 9

SWALE 10A

SWALE 10B

SWALE 15

SWALE 16

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 55 of 88

Sheet 56 of 88

Sheet 57 of 88

Sheet 58 of 88

Sheet 59 of 88

REMONT ROAD

BOYD STREET

BULL STREET

RONALDO DRIVE

IRON VALLEY DRIVE

GOLD ROAD

GRANITE ST

REVISION	DATE	BY
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LANDSCAPING - REFORESTATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

for

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Lebanon County, Pennsylvania

Stecktech Engineering & Surveying Inc.
219 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

57

57 OF 88 SHEETS

MATCHLINE (See Sheet 56 of 88)

MATCHLINE (See Sheet 59 of 88)

ROAD A

BOYD STREET

GOLD ROAD

PROPOSED STREET TREES TO BE PLANTED BEHIND THE PROPOSED SIDEWALK (SEE APPROVED STREET TREE LIST)

BMP NO. 3 INFILTRATION BASIN G

BMP NO. 8 INFILTRATION BASIN H

EX. WETLAND #7

PR. DWELLING

SWALE 1

SWALE 2

SWALE 3

SWALE 4

SWALE 5

SWALE 6

SMH RIM: 643.51

SMH RIM: 639.80

SMH RIM: 640.58

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100, MAJOR, MINOR)
- EXISTING TREELINE

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 55 of 88

Sheet 56 of 88

Sheet 57 of 88

Sheet 58 of 88

Sheet 59 of 88

BOYD STREET, REXMONT ROAD, MATCHLINE, IRON VALLEY DRIVE, OLD COLONY DRIVE, GOLD ROAD, BOYD ST

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

TWP. TWP.

EXISTING TOWNSHIP BOUNDARY

SURVEY LIMITS

LIMITS OF FIELD SURVEY

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

STREET TREES

KEY	BOTANICAL NAME	COMMON NAME
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GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
GB	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
AR	ACER RUBRUM	RED MAPLE
QR	QUERCUS RUBRA	RED OAK

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STREET TREES SHALL BE PLANTED A MAXIMUM OF 10' FROM THE STREET RIGHT-OF-WAY LINE. REQUIRED PLANTINGS SHALL NOT BE REMOVED EXCEPT TO FACILITATE THE PLANTING OF ACCEPTABLE REPLACEMENT PLANTS.

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LANDSCAPING - REFORESTATION PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

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DESIGN:	CDS
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DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

58

MATCHLINE (See Sheet 56 of 88)
MATCHLINE (See Sheet 56 of 88)
MATCHLINE (See Sheet 57 of 88)
MATCHLINE (See Sheet 57 of 88)
MATCHLINE (See Sheet 58 of 88)

PROPOSED STREET TREES TO BE PLANTED BEHIND THE PROPOSED SIDEWALK (SEE APPROVED STREET TREE LIST)

PROPOSED STREET TREES TO BE PLANTED BEHIND THE PROPOSED SIDEWALK (SEE APPROVED STREET TREE LIST)

ROAD A 20'-100'

BMP NO. 3 INFILTRATION BASIN G

PR. DWELLING

SHIRK ST.

GRANITE STREET

BOYD STREET

BOYD STREET

SWALE 7

SWALE 8

SWALE 15

SWALE 16

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
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- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- LIMITS OF FIELD SURVEY (SURVEY LIMITS)

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- LIGHT POLE TYP.
- PROPOSED DECIDUOUS TREES

STREET TREES

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ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
SY	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE
GT	GLEDITSIA TRIACANTHOS INERMIS	STREET KEEPER HONEY LOCUST
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AR	ACER RUBRUM	RED MAPLE
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GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 55 of 88
Sheet 56 of 88
Sheet 57 of 88
Sheet 58 of 88
Sheet 59 of 88

REVISION	DATE	BY
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LANDSCAPING - REFORESTATION PLAN

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SCALE:	1"=60'
PROJECT #2216-22-003	

59

59 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

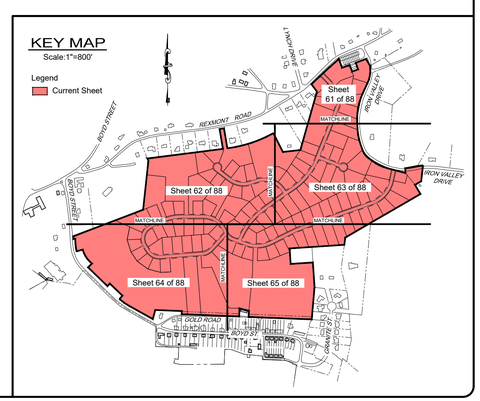
NORTH

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

LYNCH DRIVE
REXMONT ROAD
COBALT ALLEY
IRON VALLEY DR.
BOYD STREET
COLD ROAD
SILVER RD.
SHIRK ST.
GRANITE STREET
ROAD A
ROAD B
ROAD C
ROAD D
MATCHLINE



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OVERALL LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
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Lebanon County, Pennsylvania

Stackbeck Engineering & Surveying Inc.
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SCALE:	1" = 150'
PROJECT #	2216-22-003

60

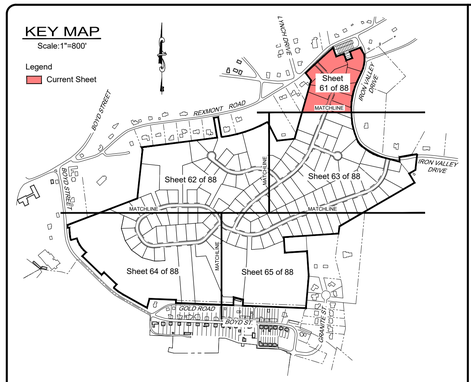
60 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

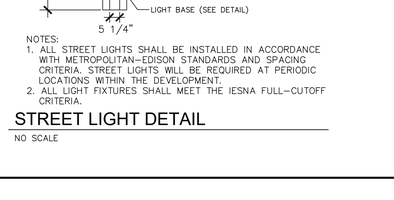
PROPOSED FEATURES

IRON PIN — CONCRETE MONUMENT

- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

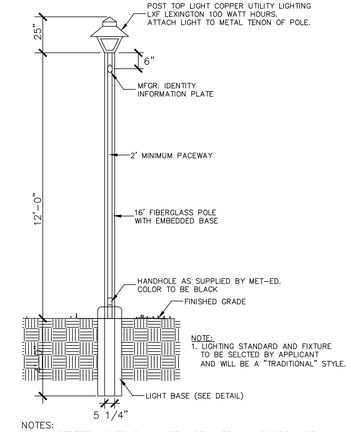
MAGNETIC

*NOTE: IN AREAS WITH UNSUITABLE SUBSOIL, (AS DETERMINED BY THE SITE ENGINEER), LIGHT POLE BASES SHALL BE 10'-0" DEEP.



LIGHT BASE DETAIL

NO SCALE



NOTE:
1. LIGHTING STANDARD AND FIXTURE TO BE SELCTED BY APPLICANT AND WILL BE A "TRADITIONAL" STYLE.

NOTES:
1. ALL STREET LIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH METROPOLITAN-EDISON STANDARDS AND SPACING CRITERIA. STREET LIGHTS WILL BE REQUIRED AT PERIODIC LOCATIONS WITHIN THE DEVELOPMENT.
2. ALL LIGHT FIXTURES SHALL MEET THE IESNA FULL-CUTOFF CRITERIA.

STREET LIGHT DETAIL

NO SCALE

REVISION	DATE	BY
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LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 60'
PROJECT #	2216-22-003

61

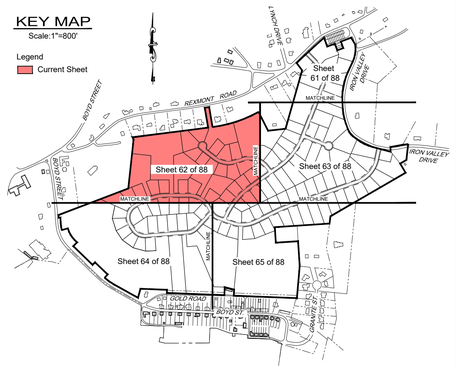
61 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS

- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

REVISION	DATE	BY
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LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

62

62 OF 88 SHEETS

MATCHLINE (See Sheet 61 of 88)

MATCHLINE (See Sheet 62 of 88)

MATCHLINE (See Sheet 64 of 88)

MATCHLINE (See Sheet 64 of 88)

1.0 LUMINARIES LEVEL
0.20 LUMINARIES LEVEL
0.10 LUMINARIES LEVEL

PROPOSED 12' STREET LIGHT (TYPICAL)

ROAD B

ROAD C

ROAD D

ROAD A

PHASE 2
PHASE 1

PHASE 1
PHASE 2

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

MIDPOINT

GRAPHIC SCALE

60' 0' 30' 60' 120'

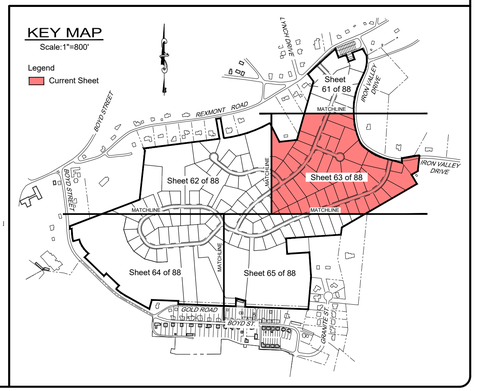
1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend

Current Sheet



REVISION	DATE	BY
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LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

63

63 OF 88 SHEETS

MATCHLINE (See Sheet 62 of 88)

MATCHLINE (See Sheet 65 of 88)

MATCHLINE (See Sheet 63 of 88)

ROAD A

BOYD STREET

GOLD ROAD

PROPOSED 12' STREET LIGHT (TYPICAL)

1.0 LUMINARIES LEVEL
0.20 LUMINARIES LEVEL
0.10 LUMINARIES LEVEL

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

KEY MAP
Scale:1"=800'

Legend
Current Sheet

Sheet 61 of 88
Sheet 62 of 88
Sheet 63 of 88
Sheet 64 of 88
Sheet 65 of 88

REXMONT ROAD
BOYD STREET
IRON VALLEY DRIVE
GOLD ROAD
GRANDVIEW ROAD

GRAPHIC SCALE
60' 0' 30' 60' 120'
1 inch = 60ft.

REVISION	DATE	BY
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LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

64

64 OF 88 SHEETS

MATCHLINE (See Sheet 62 of 88)

MATCHLINE (See Sheet 62 of 88)

MATCHLINE (See Sheet 63 of 88)

MATCHLINE (See Sheet 63 of 88)

MATCHLINE (See Sheet 64 of 88)

MATCHLINE (See Sheet 64 of 88)

PROPOSED 12' STREET LIGHT (TYPICAL)

PROPOSED 12' STREET LIGHT (TYPICAL)

PROPOSED 12' STREET LIGHT (TYPICAL)

PROPOSED 12' STREET LIGHT (TYPICAL)

1.0 LUMINARIES LEVEL
0.20 LUMINARIES LEVEL
0.10 LUMINARIES LEVEL

1.0 LUMINARIES LEVEL
0.20 LUMINARIES LEVEL
0.10 LUMINARIES LEVEL

ROAD A

ROAD A

ROAD A

SHIRK ST.

GRANITE STREET

BOYD STREET

BOYD STREET

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY

PROPOSED FEATURES

- IRON PIN — CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE

MAGNETIC

GRAPHIC SCALE

60' 0' 30' 60' 120'

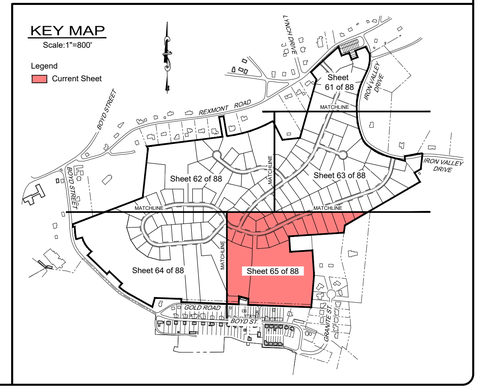
1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend

Current Sheet



REVISION	DATE	BY
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LIGHTING PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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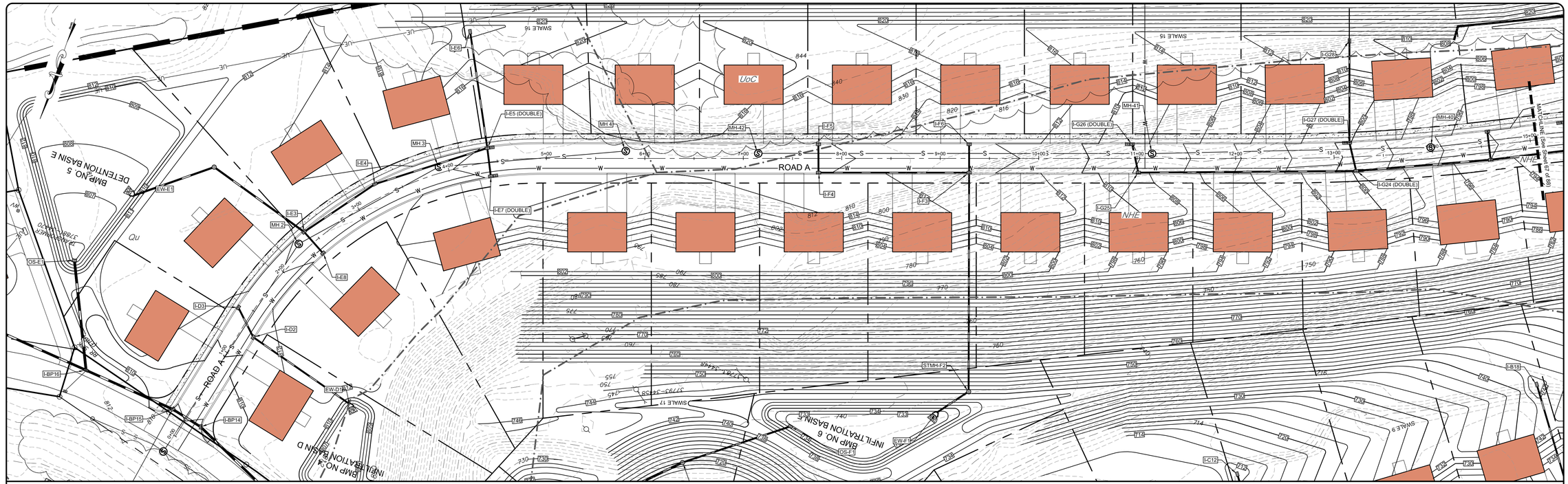
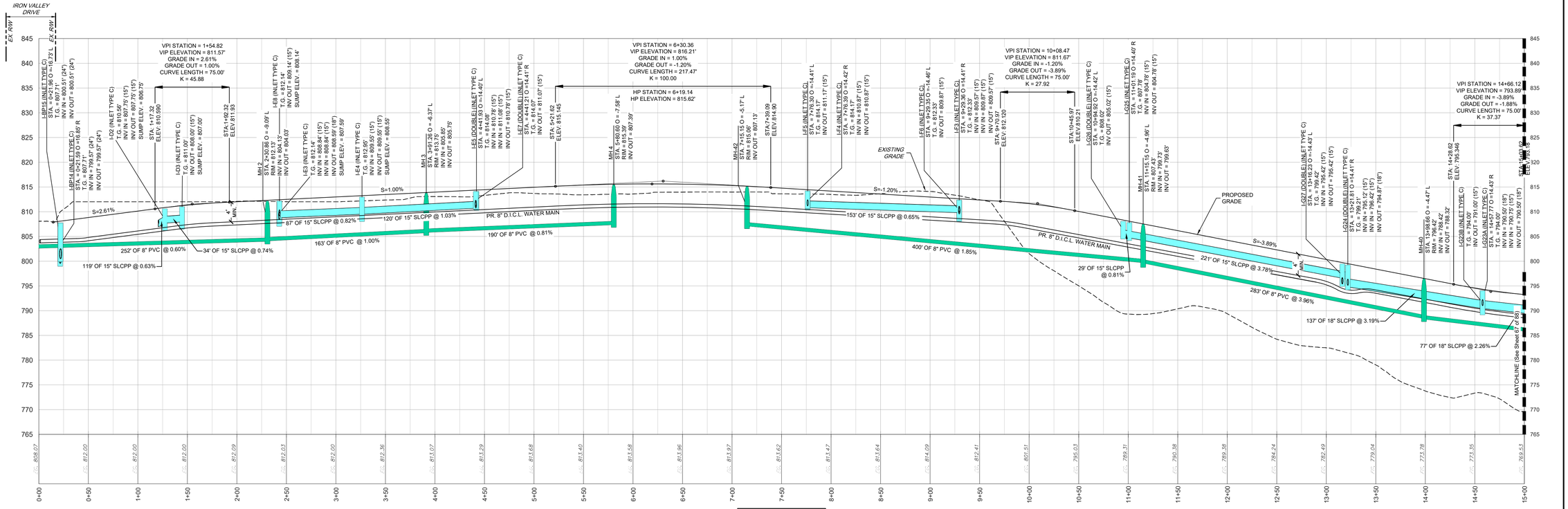
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

65

65 OF 88 SHEETS



ROAD A PLAN VIEW



ROAD A PROFILE

HORIZONTAL SCALE
50 0 25 50 100
1 inch = 50 ft.

VERTICLE SCALE
10 0 5 10 20
1 inch = 10 ft.

REVISION	DATE	BY
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PROFILES - (ROAD A STA. 0+00-15+00)

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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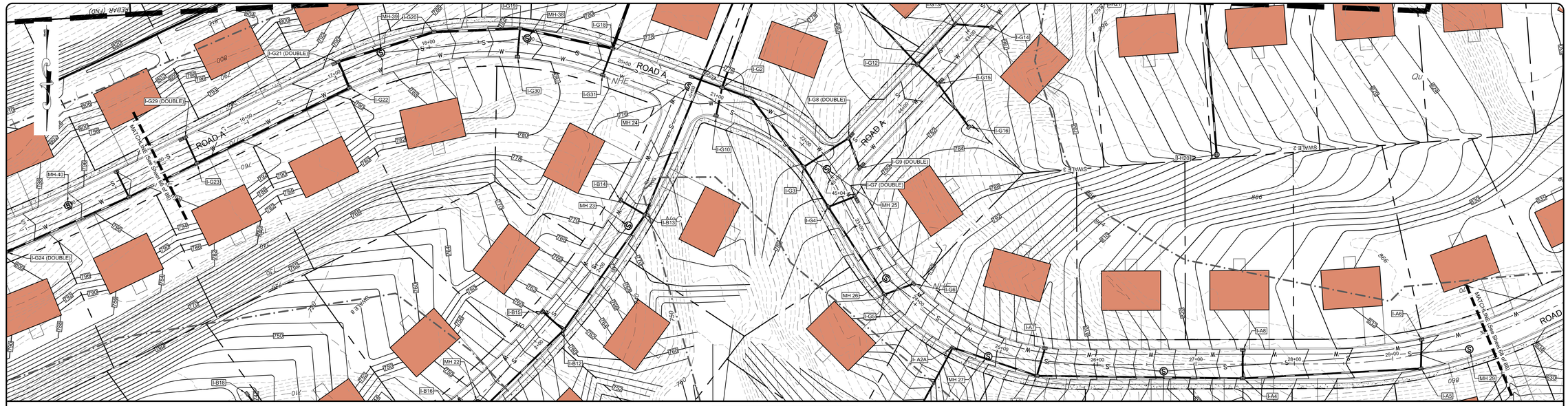
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 50'
PROJECT #	2216-22-003

66

66 OF 88 SHEETS



ROAD A PLAN VIEW (CON'T)

ROAD A PROFILE

REVISION	DATE	BY
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PROFILES - (ROAD A STA. 15+00-30+00)

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

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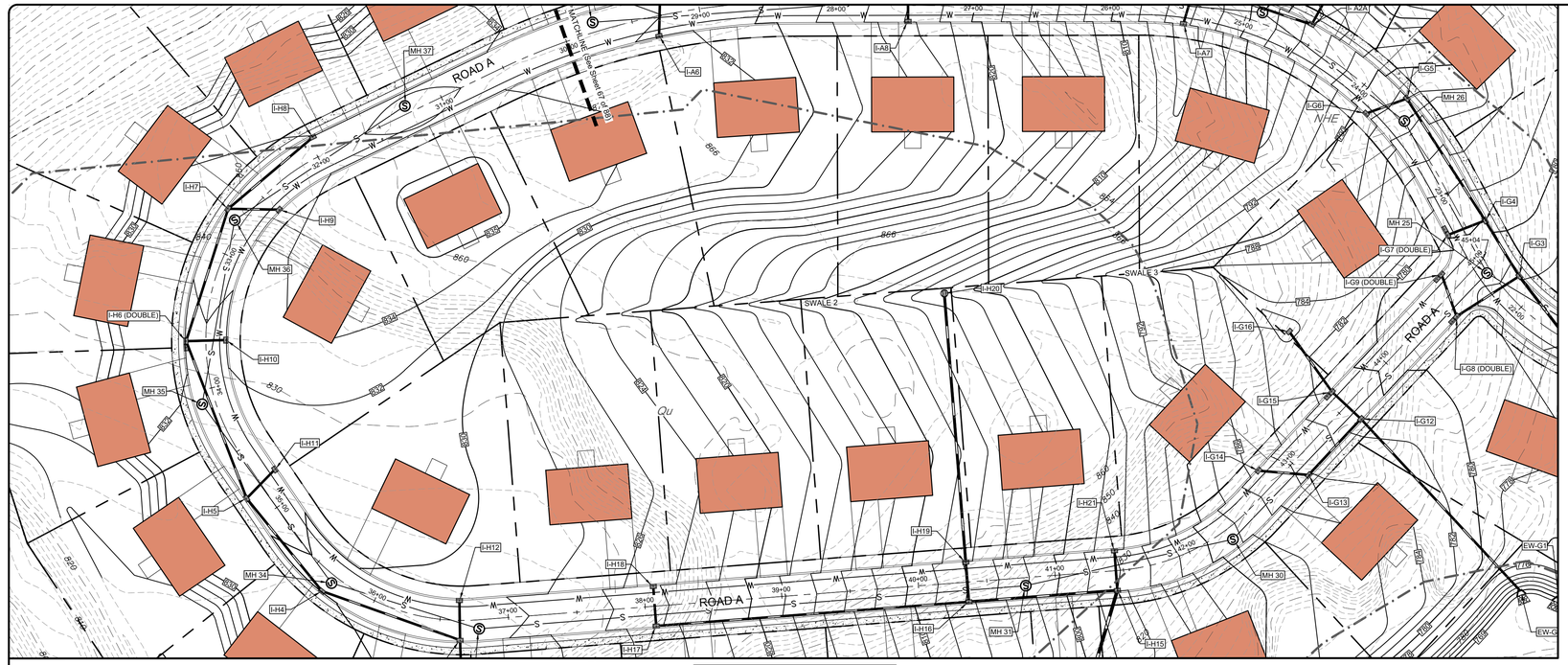
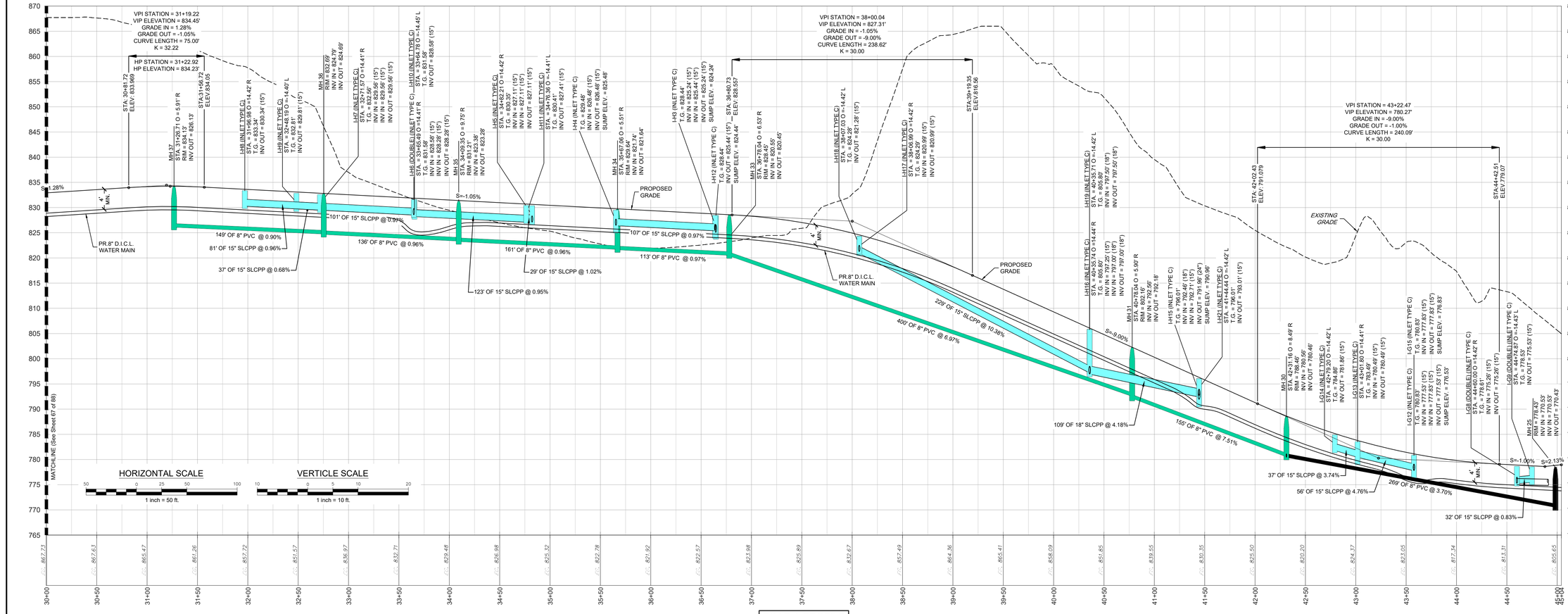
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 50'
PROJECT #	2216-22-003



ROAD A PLAN VIEW (CON'T)



ROAD A PROFILE

REVISION	DATE	BY
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PROFILES - (ROAD A STA. 30+00-45+04)
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
CORNWALL PROPERTIES, LLC
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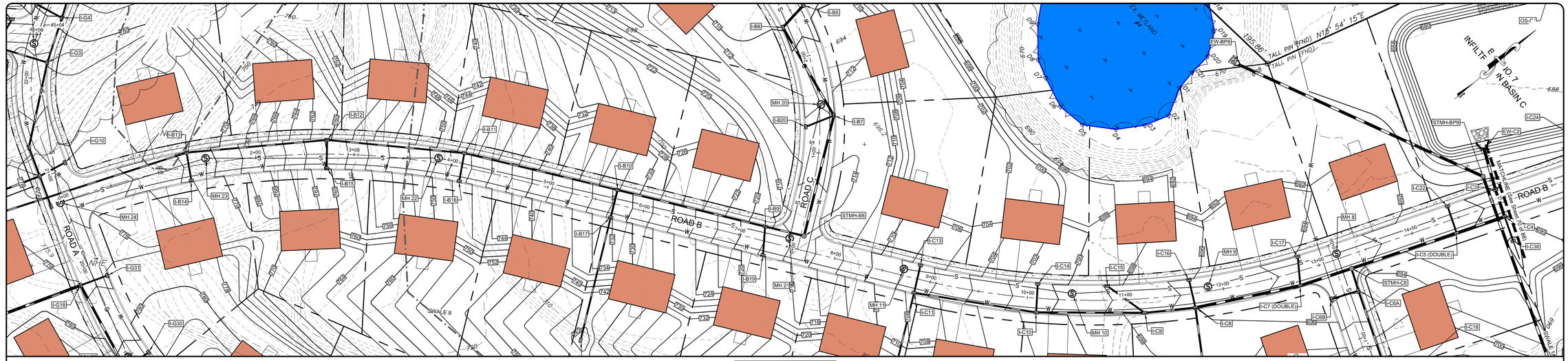
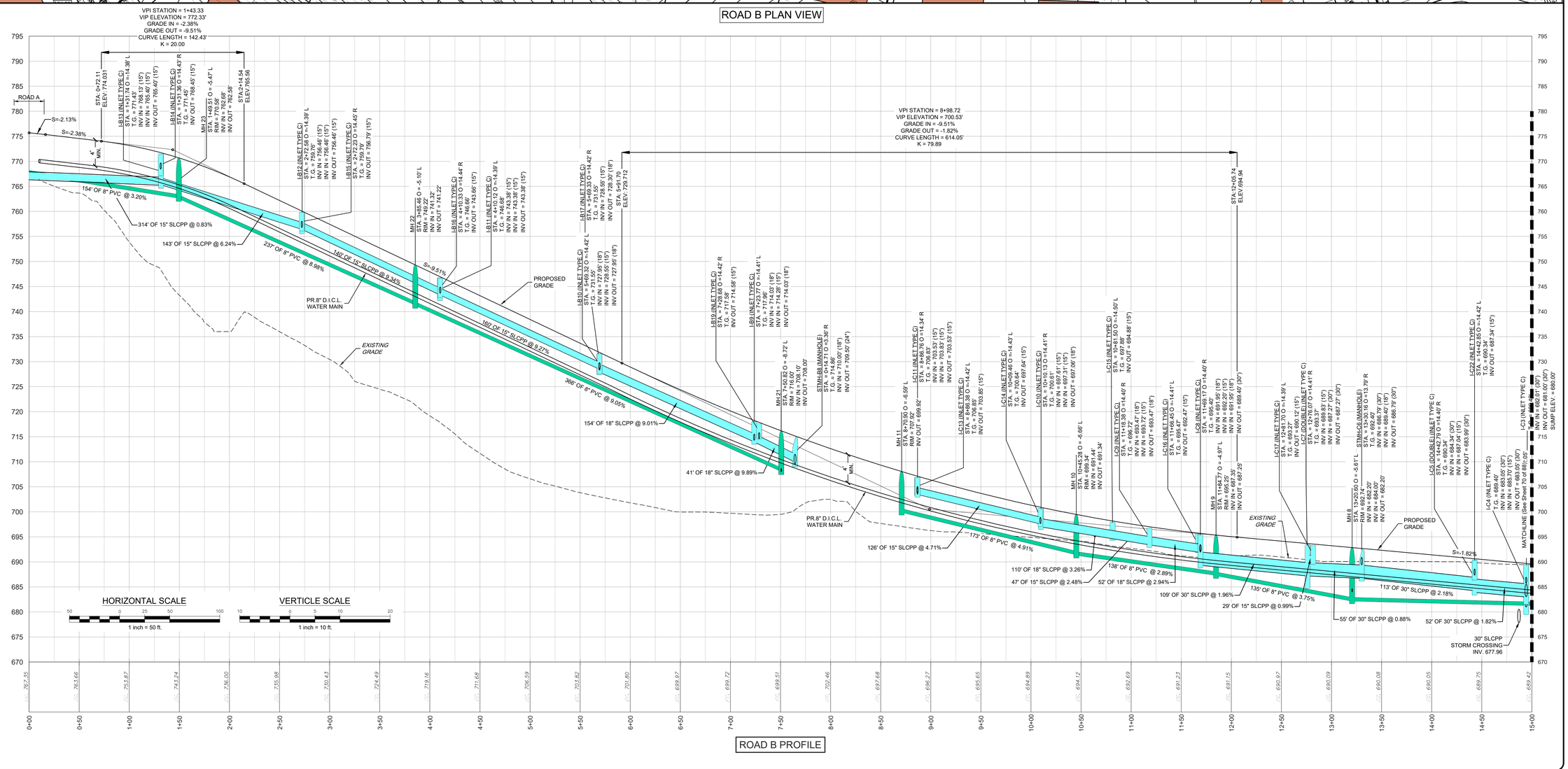
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #2216-22-003	



ROAD B PLAN VIEW



ROAD B PROFILE

REVISION	DATE	BY
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PROFILES - (ROAD B STA. 0+00-15+00)

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

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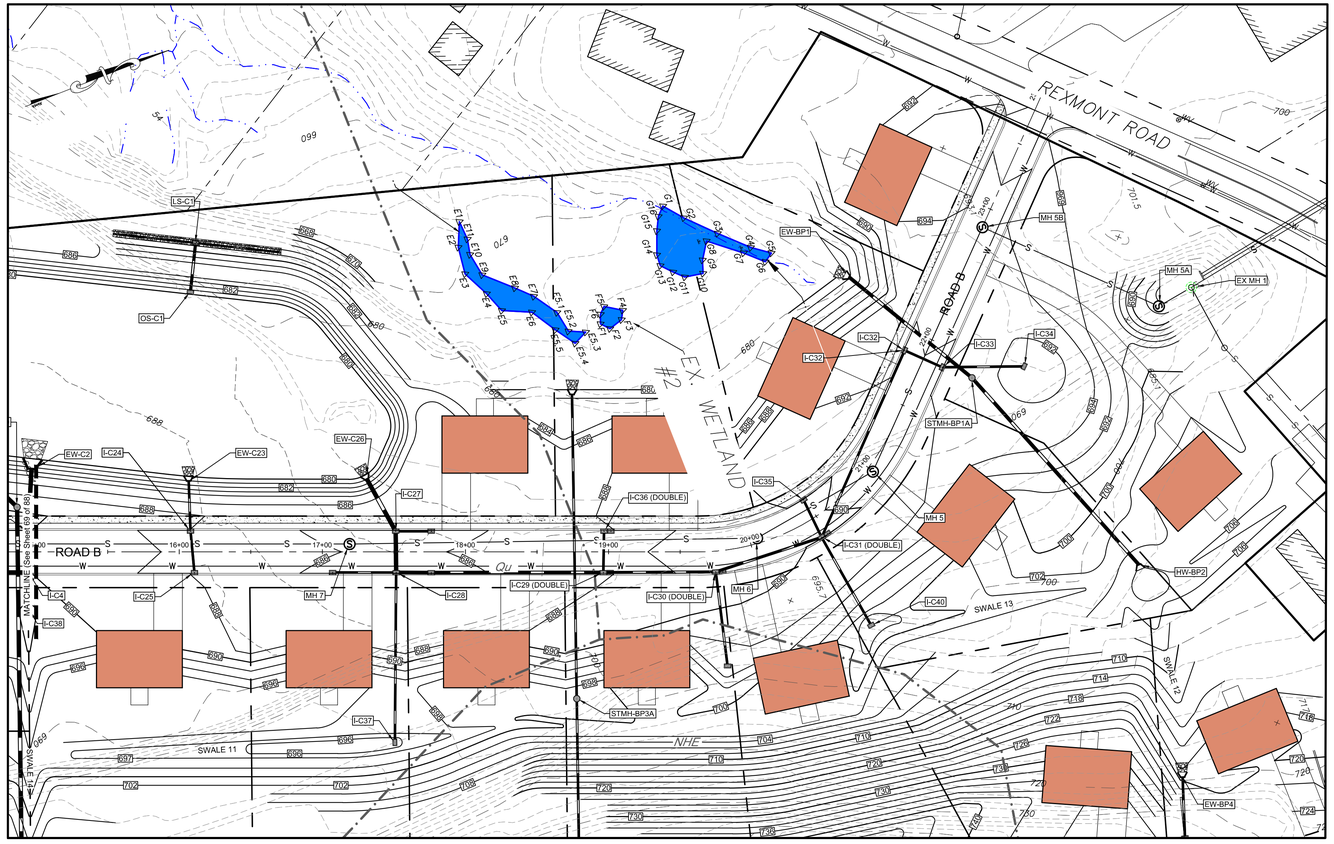
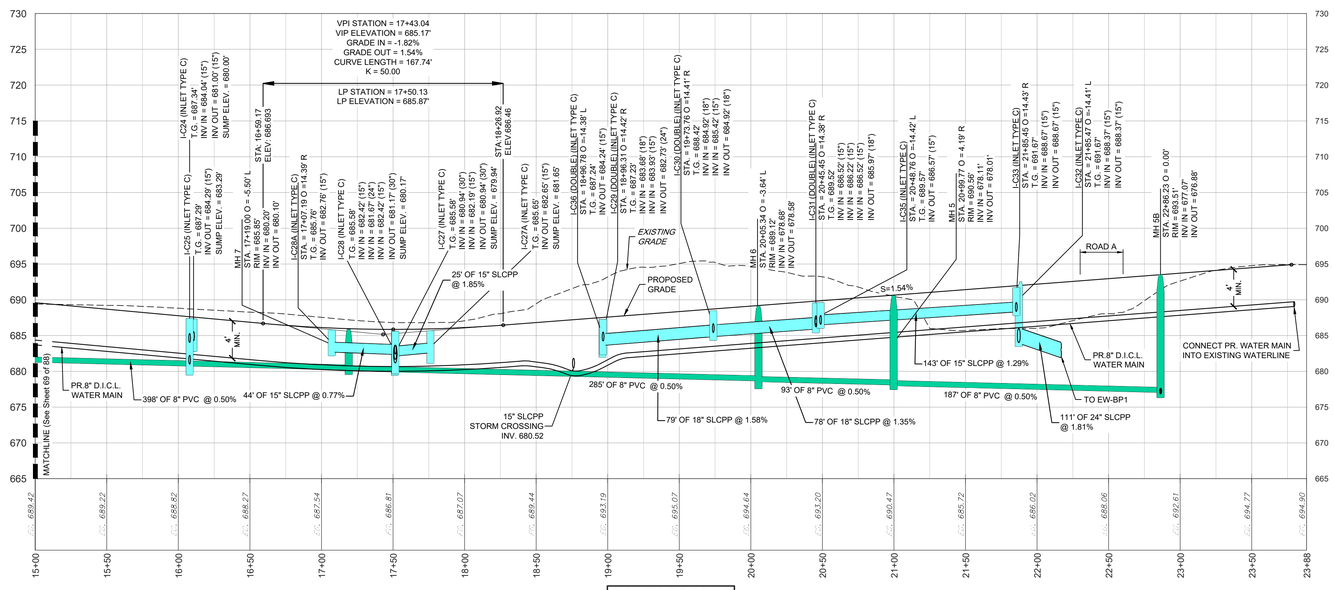
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 50'
PROJECT #2216-22-003	

69

69 OF 88 SHEETS



ROAD B PLAN VIEW



ROAD B PROFILE

HORIZONTAL SCALE
50 0 25 50 100
1 inch = 50 ft.

VERTICLE SCALE
10 0 5 10 20
1 inch = 10 ft.

REVISION	DATE	BY
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PROFILES - (ROAD B STA. 15+00-23+88)

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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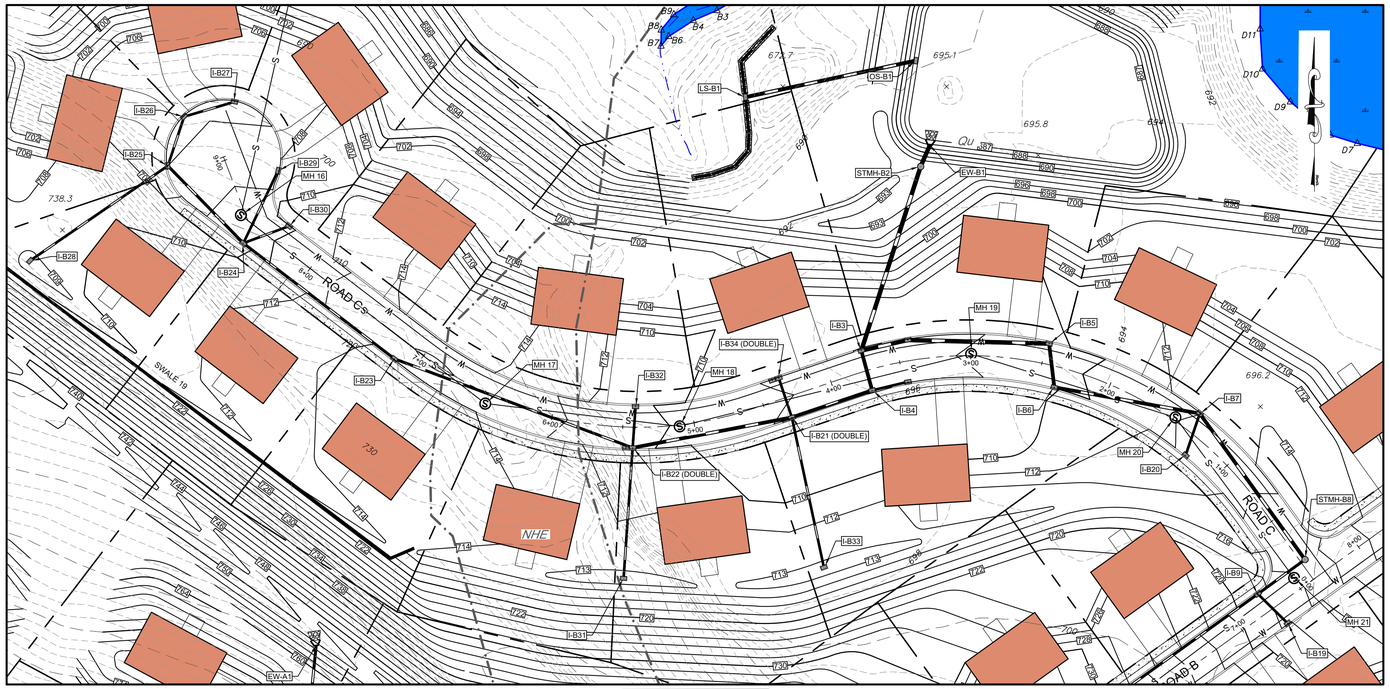
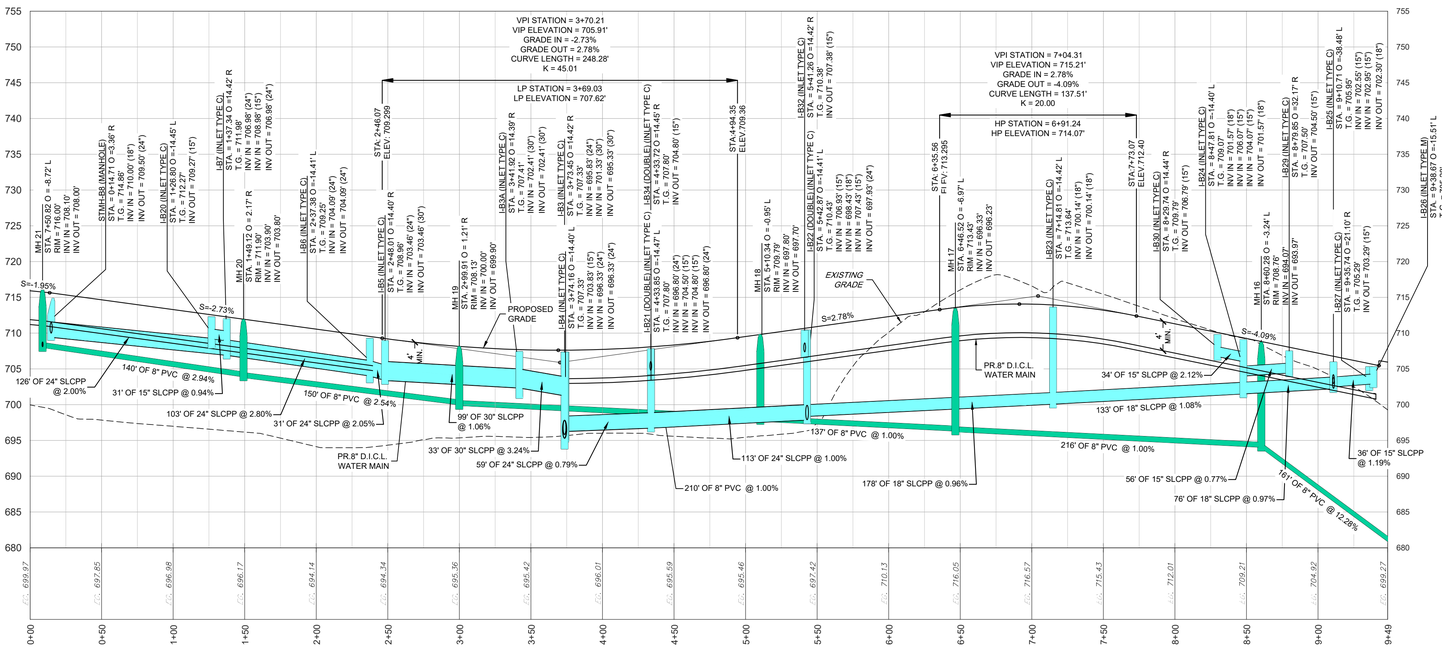
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1" = 50'
PROJECT #2216-22-003	

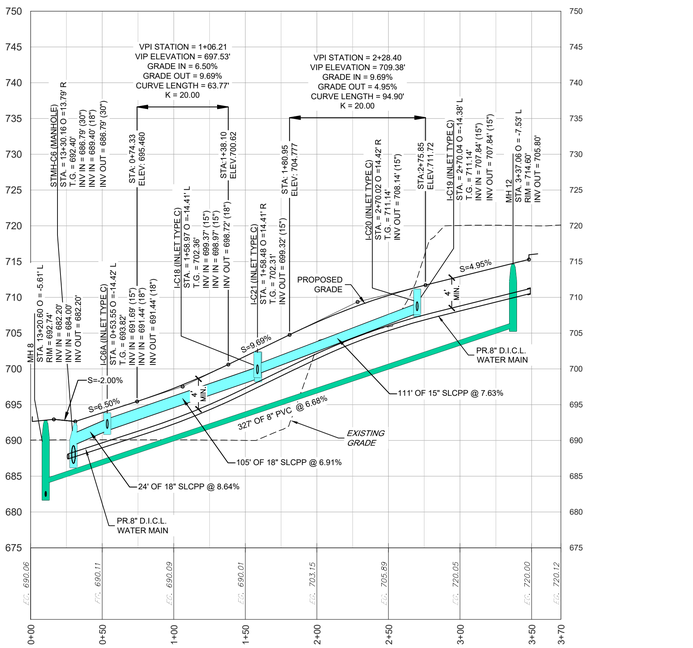


ROAD C PLAN VIEW

ROAD D PLAN VIEW



ROAD C PROFILE



ROAD D PROFILE

HORIZONTAL SCALE
50 0 25 50 100
1 inch = 50 ft.

VERTICLE SCALE
10 0 5 10 20
1 inch = 10 ft.

REVISION	DATE	BY
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PROFILES - (ROAD C STA. 0+00-9+49 - ROAD D STA. 0+00-3+54)

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

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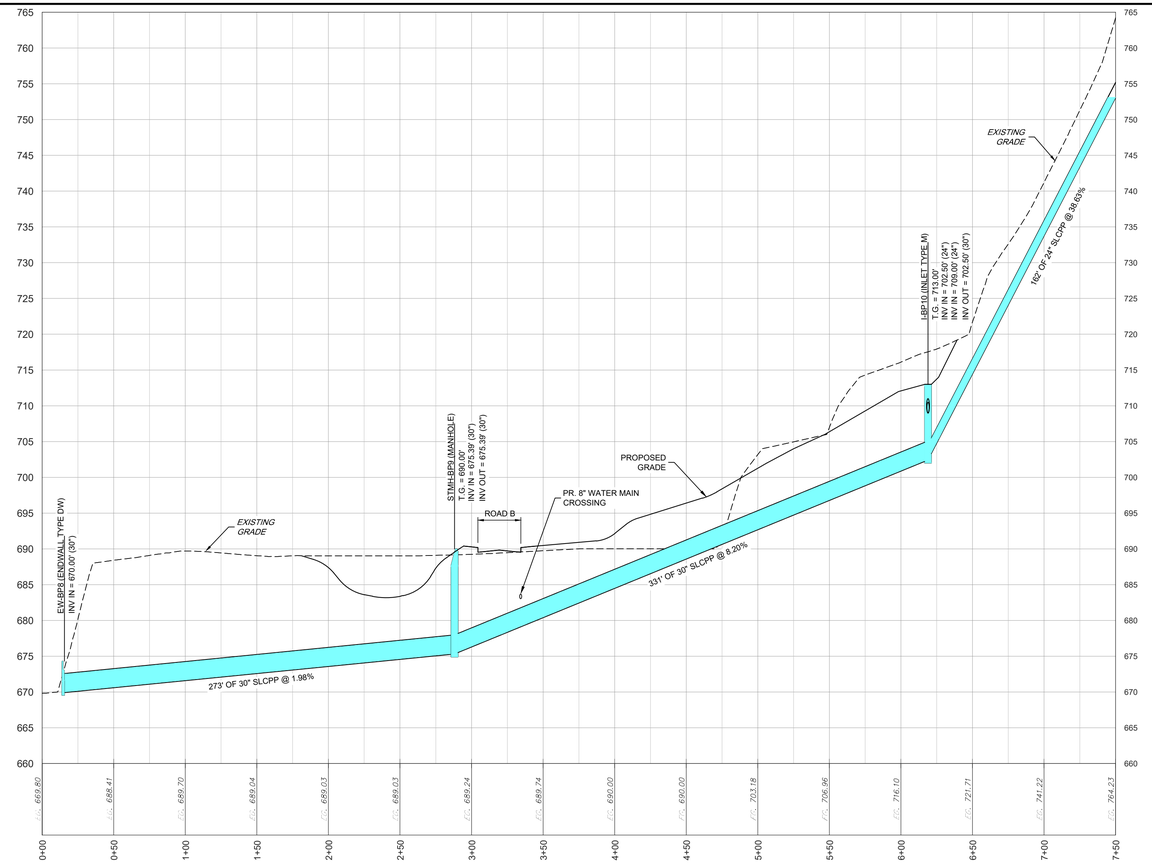
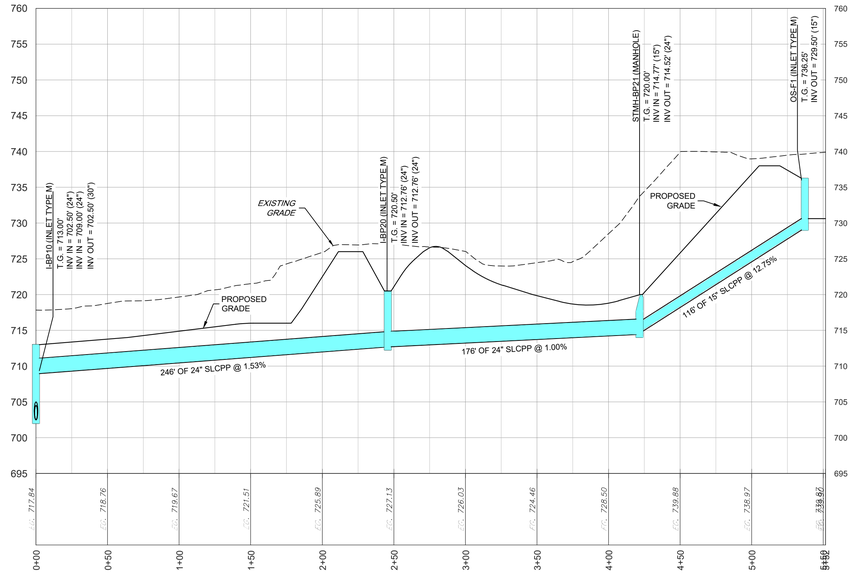
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #	2216-22-003



STORMWATER BYPASS - EW-BP8 TO HW-BP19 PROFILE



STORMWATER BYPASS - OS-F1 TO I-BP10 PROFILE

HORIZONTAL SCALE

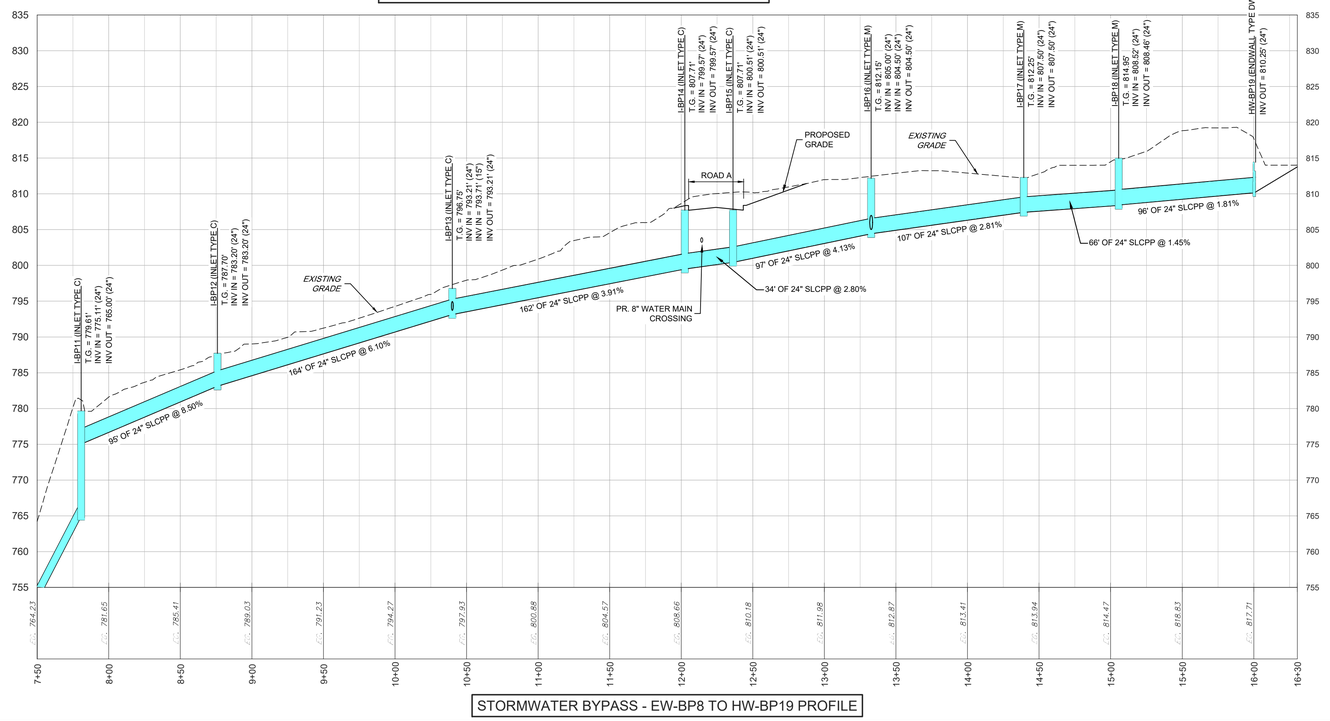
50 0 25 50 100

1 inch = 50 ft.

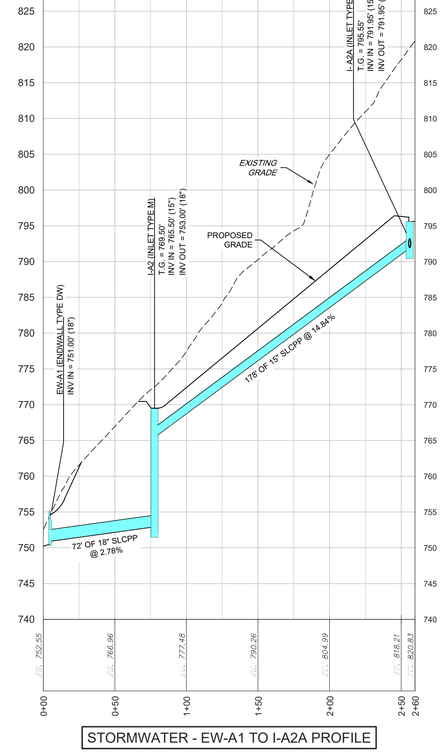
VERTICLE SCALE

10 0 5 10 20

1 inch = 10 ft.



STORMWATER BYPASS - EW-BP8 TO HW-BP19 PROFILE



STORMWATER - EW-A1 TO I-A2A PROFILE

REVISION	DATE	BY
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PROFILES - STORMWATER

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

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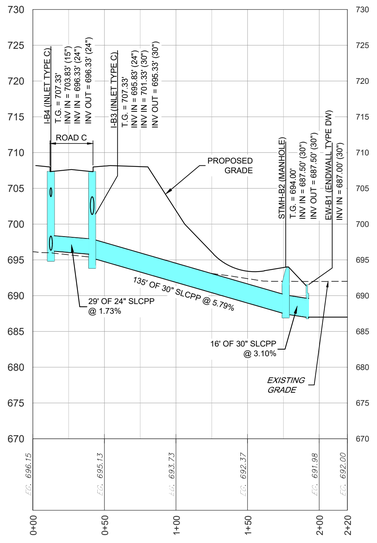
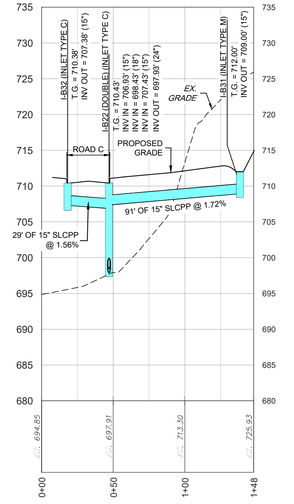
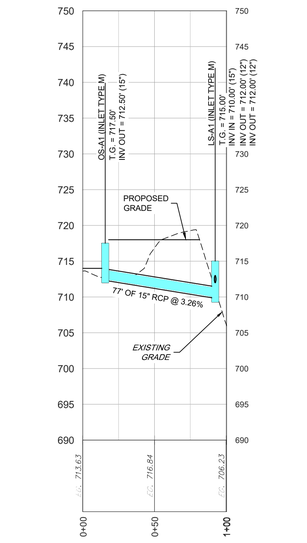
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #	2216-22-003



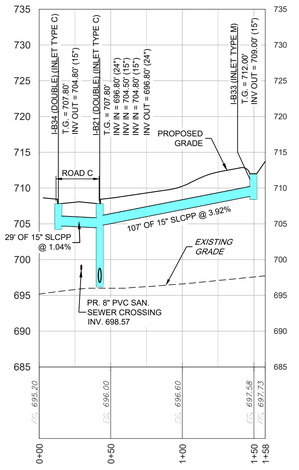
STORMWATER - EW-B1 TO I-B4 PROFILE



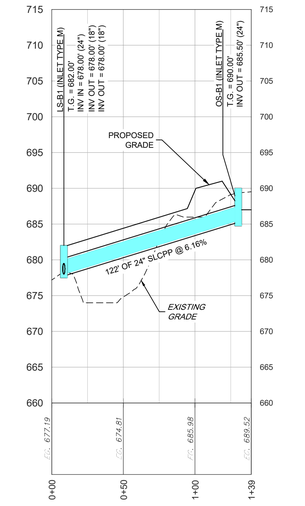
STORMWATER - I-B32 TO I-B31 PROFILE



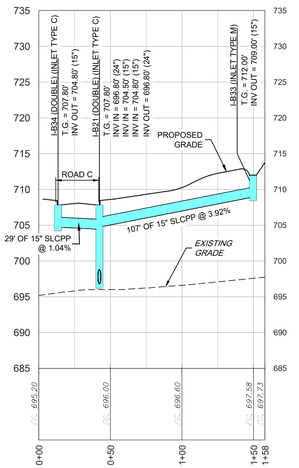
STORMWATER - OS-A1 TO LS-A1 PROFILE



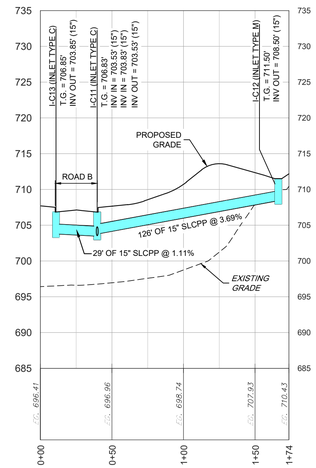
STORMWATER - I-B34 TO I-B33 PROFILE



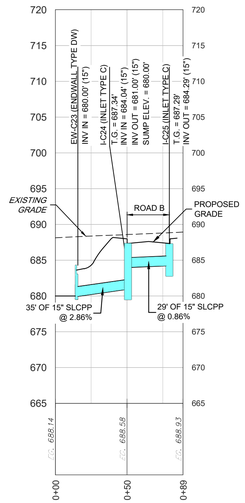
STORMWATER - OS-B1 TO LS-B1 PROFILE



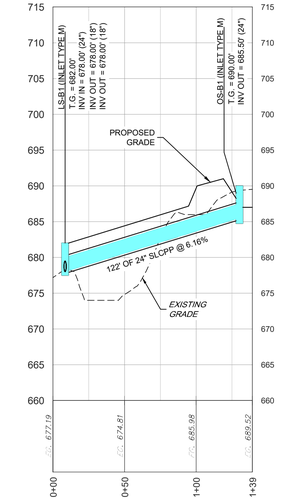
STORMWATER - I-B34 TO I-B33 PROFILE



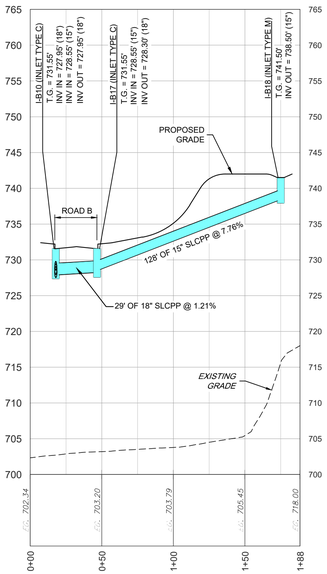
STORMWATER - I-C13 TO I-C12 PROFILE



STORMWATER - EW-C23 TO I-C25 PROFILE



STORMWATER - OS-B1 TO LS-B1 PROFILE



STORMWATER - I-B10 TO I-B18 PROFILE

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

VERTICLE SCALE

10 0 5 10 20

1 inch = 10 ft.

REVISION	DATE	BY
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PROFILES - STORMWATER

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for

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Phone: (717) 272-7110
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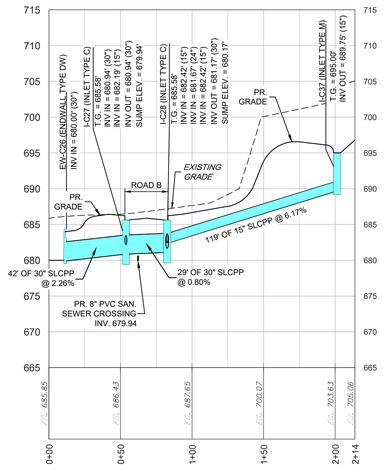
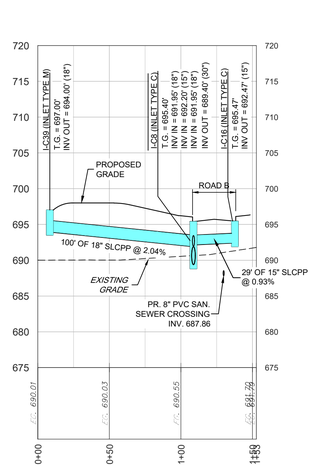
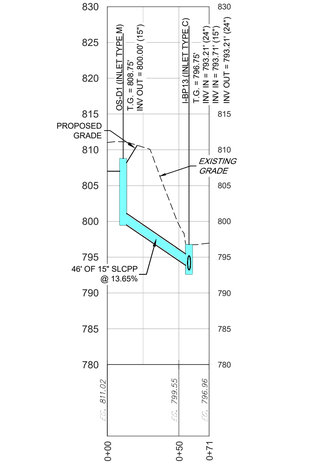
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #	2216-22-003



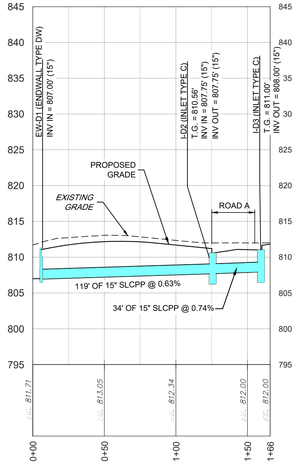
STORMWATER - EW-C26 TO I-C37 PROFILE



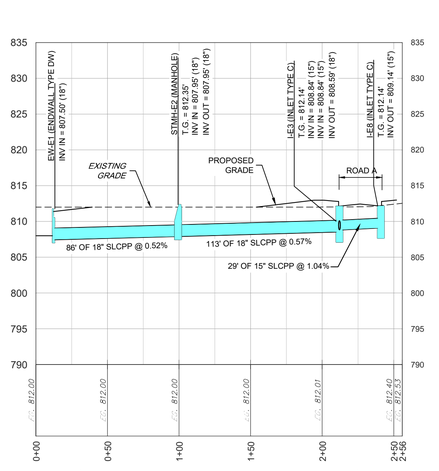
STORMWATER - I-C39 TO I-C16 PROFILE



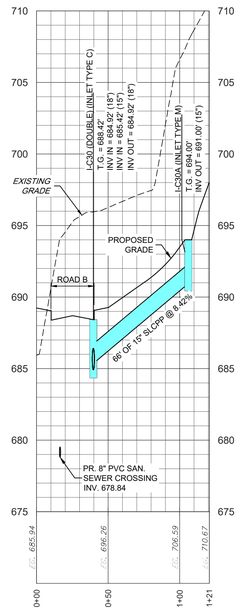
STORMWATER - OS-D1 TO I-BP13 PROFILE



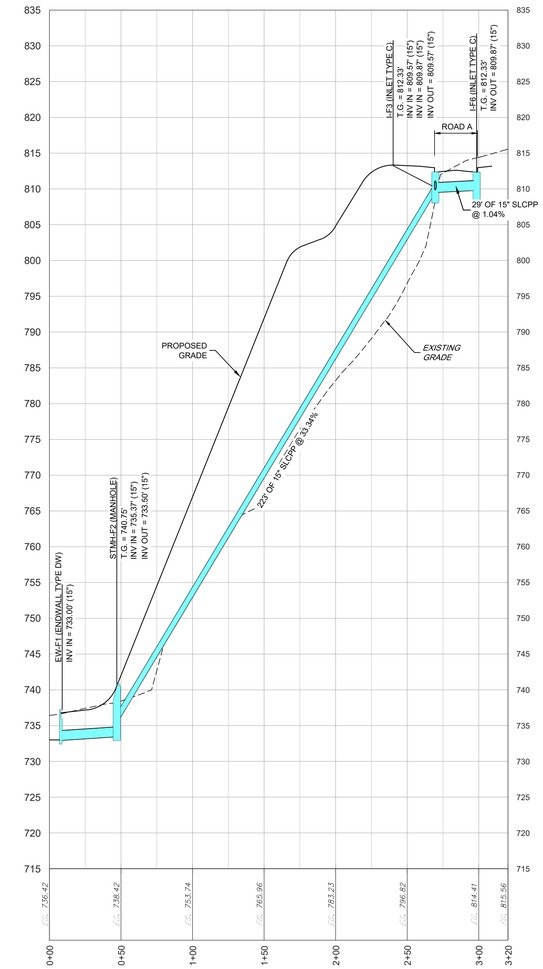
STORMWATER - EW-D1 TO I-D3 PROFILE



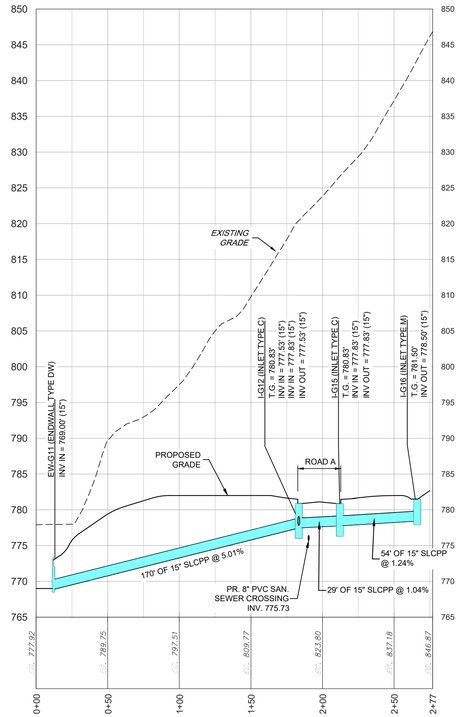
STORMWATER - EW-1 TO I-E8 PROFILE



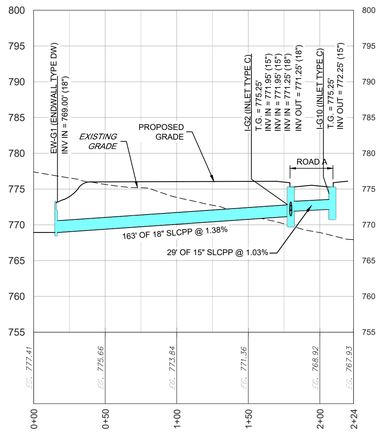
STORMWATER - I-C30 TO I-C30A PROFILE



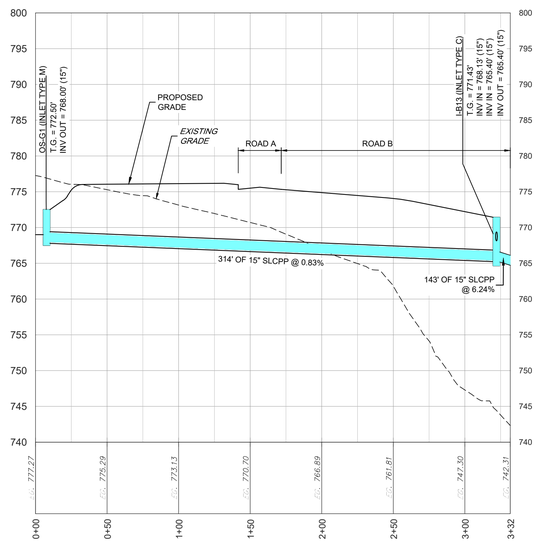
STORMWATER - EW-F1 TO I-F6 PROFILE



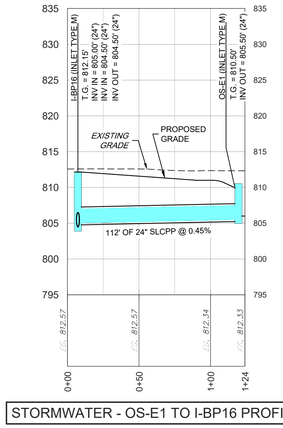
STORMWATER - EW-G11 TO I-G16 PROFILE



STORMWATER - EW-G1 TO I-G10 PROFILE



STORMWATER - OS-G1 TO I-B13 PROFILE



STORMWATER - OS-E1 TO I-BP16 PROFILE

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

VERTICLE SCALE

10 0 5 10 20

1 inch = 10 ft.

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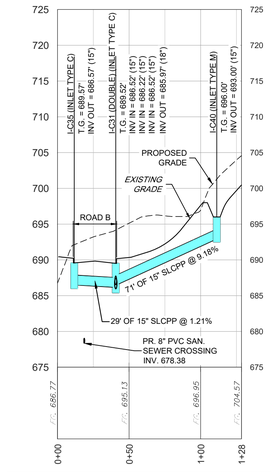
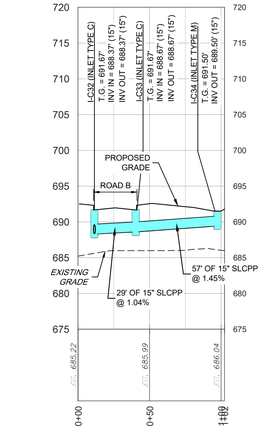
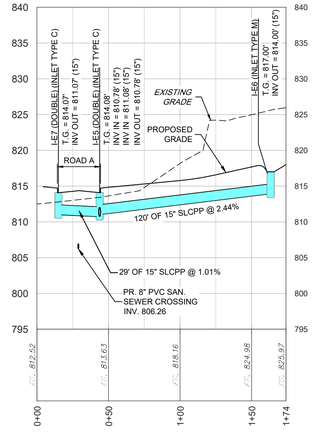
PROJECT #	2216-22-003



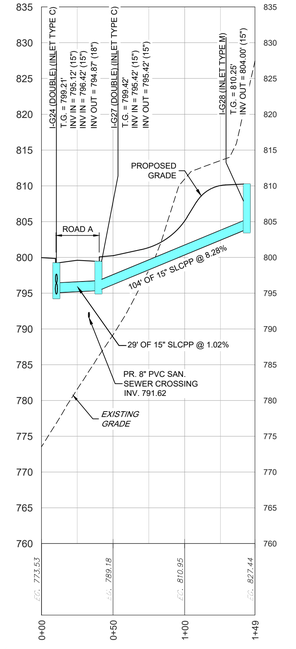
STORMWATER - I-C35 TO I-C40 PROFILE



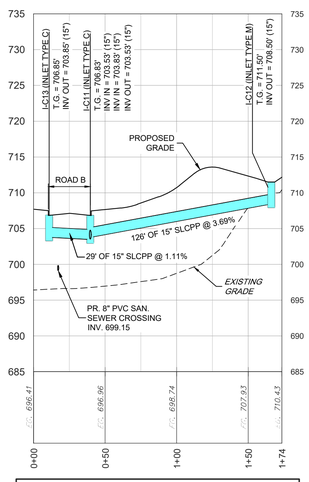
STORMWATER - I-C32 TO I-C34 PROFILE



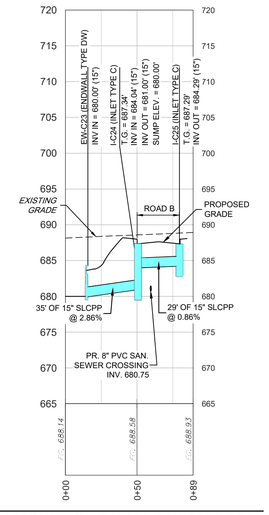
STORMWATER - I-E7 TO I-E6 PROFILE



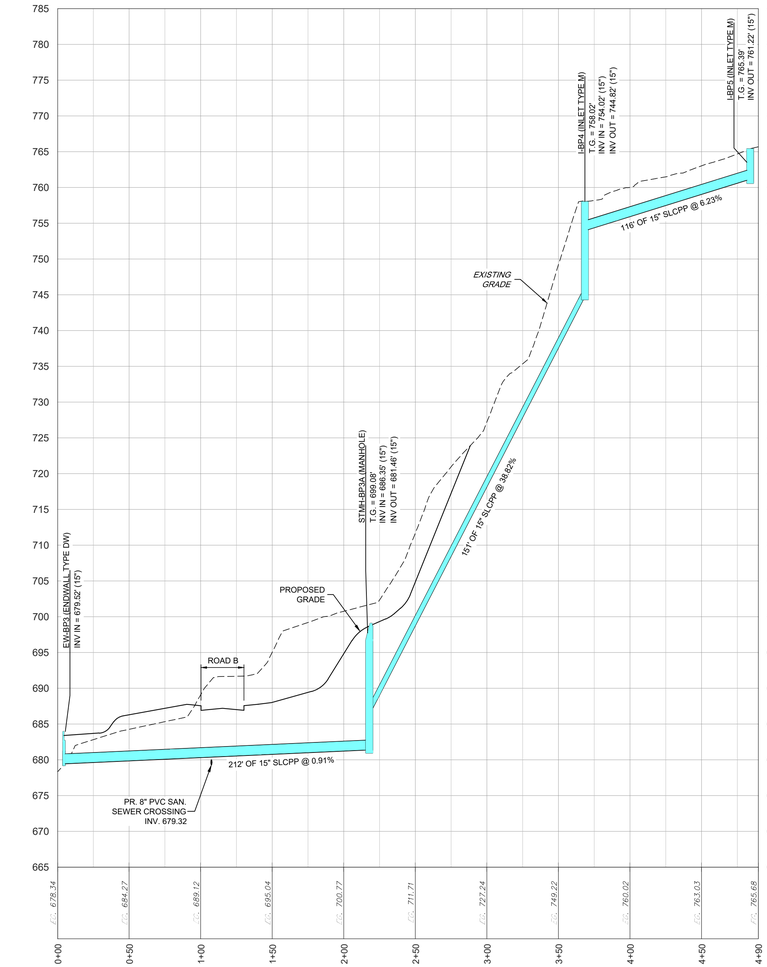
STORMWATER - I-G24 TO I-G28 PROFILE



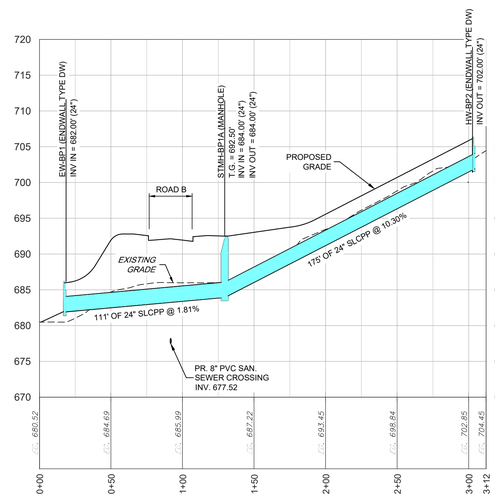
STORMWATER - I-C13 TO I-C12 PROFILE



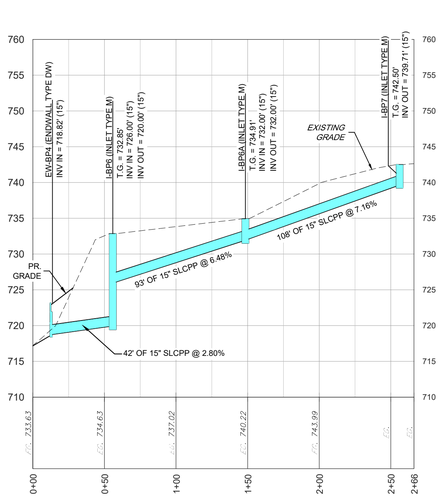
STORMWATER - EW-C23 TO I-C25 PROFIL



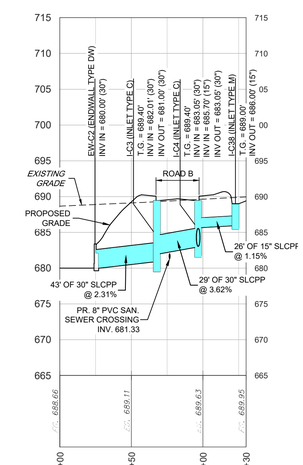
STORMWATER - EW-BP3 TO I-BP5 PROFILE



STORMWATER - EW-BP1 TO HW-BP2 PROFILE



STORMWATER - EW-BP4 TO I-BP7 PROFILE



STORMWATER - EW-C2 TO I-C38 PROFILE

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

VERTICLE SCALE

10 0 5 10 20

1 inch = 10 ft.

REVISION	DATE	BY
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PROFILES - STORMWATER

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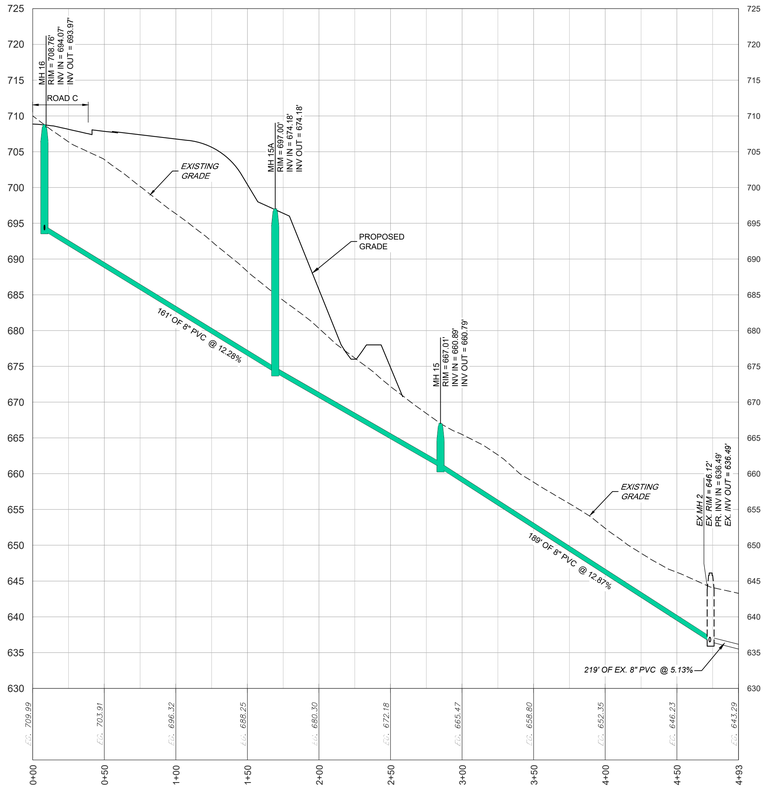
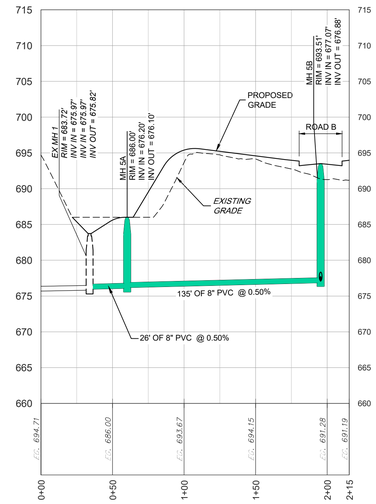
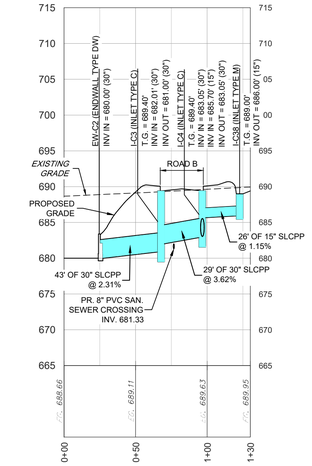
FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #	2216-22-003



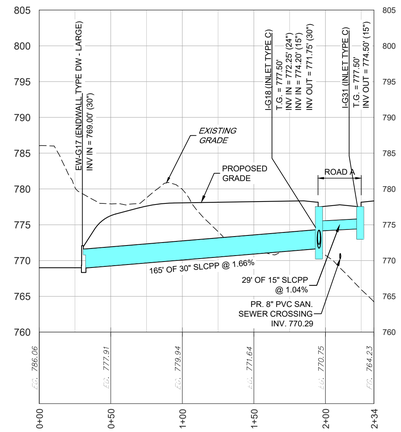
SANITARY SEWER - MH-16 TO EX-MH2 PROFILE



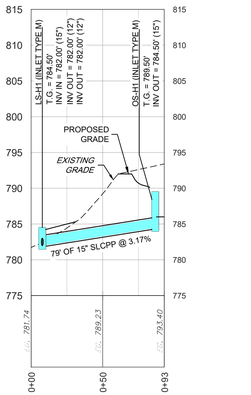
SANITARY SEWER - EX. MH 1 TO MH 5B PROFILE



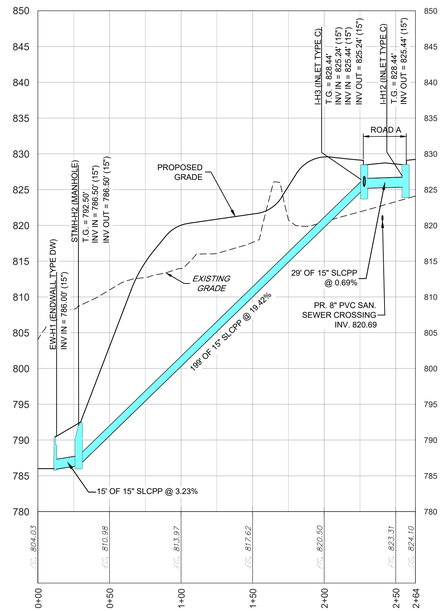
STORMWATER - EW-C2 TO I-C38 PROFILE



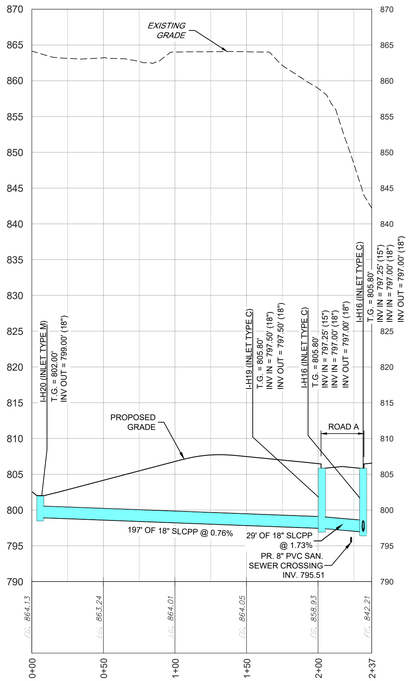
STORMWATER - EW-G17 TO I-G31 PROFILE



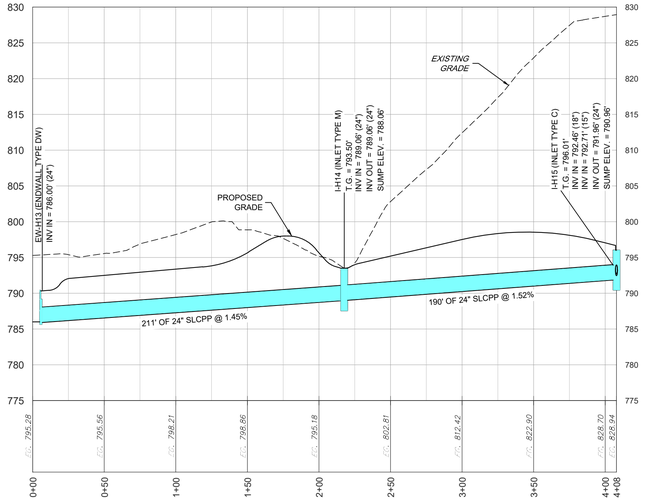
STORMWATER - OS-H1 TO LS-H1 PROFILE



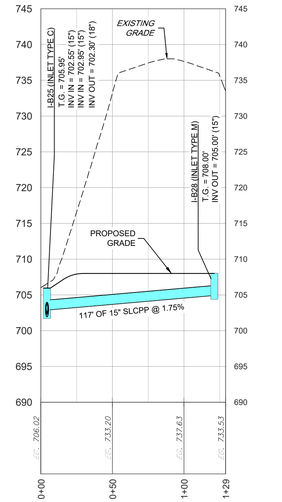
STORMWATER - EW-H1 TO I-H12 PROFILE



STORMWATER - I-H16 TO I-H20 PROFILE



STORMWATER - EW-H13 TO I-H15 PROFILE



STORMWATER - I-B25 TO I-B28 PROFILE

VERTICLE SCALE

10 0 5 10 20

1 inch = 10 ft.

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

REVISION	DATE	BY
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PROFILES - STORMWATER

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DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=50'
PROJECT #	2216-22-003

NOTES

PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 305, 409, 630, 676 AND 694.

PROVIDE EXPANSION JOINT MATERIAL 13 (½") THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.

CONSTRUCT CURB RAMPS WITH A MINIMUM 1220 X 1220 (4'–0" X 4'–0") CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. .

SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.

PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS.

MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 205 (8") HEIGHT.

CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.

TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 4500 (15'–0"). ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.

NON–WALK AREA IS AN OBSTRUCTED OR GRASS/NON–PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.

THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SP AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.

ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED. US CUSTOMARY UNITS IN () PARENTHESIS.

ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.

PROVIDE DETECTABLE WARNING SURFACE (DWS) 610 (24") MINIMUM ON THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT–ON–DARK OR DARK–ON–LIGHT FOR THE FULL WIDTH OF RAMP.

FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESSIBLE ROUTE.

FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED IN THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.

CONSTRUCT SIDEALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00% FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%, CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.

THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11.00%. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP. LANDING OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.

THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.

ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 150 (6") CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1830 (6'–0") FOR A 12:1 (1:12) SLOPE.

SIDEWALK WIDTH MAY BE REDUCED TO 1220 (4'–0"), WHEN PASSING AREAS 1525 X 1525 (5'–0" X 5'–0") ARE PROVIDED EVERY 61 METERS (200').

THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.

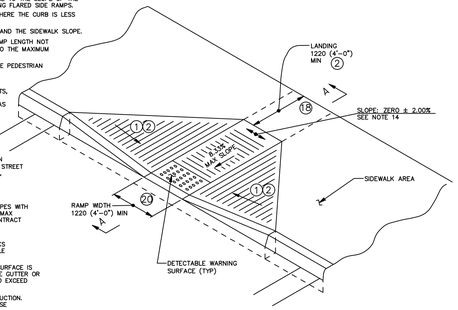
CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL LANDINGS BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.

CHECK WALLS ARE PERMITTED WHEN ADJACENT TO NON–WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON–WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.

CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).

FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.

A 1220 (4'–0") MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.



TYPE 1
CURB RAMP

PERCENT SLOPE	EQUIVALENT SLOPE
10.00%	10:1 (1:10)
8.33%	12:1 (1:12)
7.14%	14:1 (1:14)
5.00%	20:1 (1:20)
2.00%	50:1 (1:50)
1.00%	100:1 (1:100)

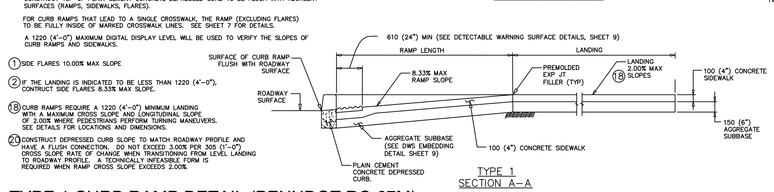
EQUIVALENT SLOPES

1 SIDE FLARES 10.00% MAX SLOPE

2 IF THE LANDING IS INDICATED TO BE LESS THAN 1220 (4'–0"), CONTRUCT SIDE FLARES 8.33% MAX SLOPE.

18 CURB RAMPS REQUIRE A 1220 (4'–0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

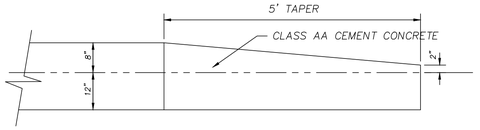
20 CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. DO NOT EXCEED 3.00% PER 305 (1'–0") CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING FROM LEVEL LANDING TO ROADWAY PROFILE. A TECHNICALLY INFEASIBLE FORM IS REQUIRED WHEN RAMP CROSS SLOPE EXCEEDS 2.00%.



TYPE 1
SECTION A–A

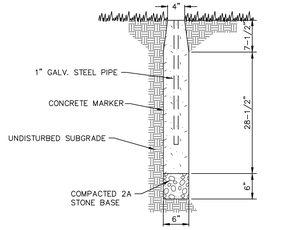
TYPE 1 CURB RAMP DETAIL (PENNDOT RC-67M)

NO SCALE



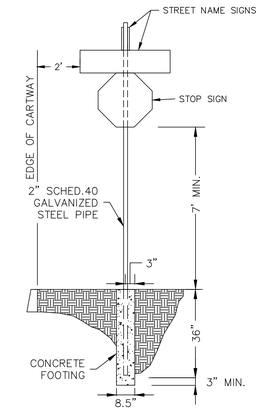
CURB TERMINAL END SECTION

NO SCALE



CONCRETE MONUMENT DETAIL

NO SCALE



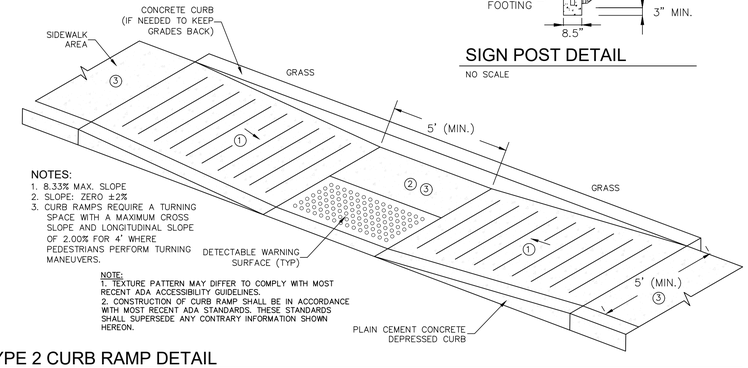
SIGN POST DETAIL

NO SCALE

SIGN SIZE	DIMENSIONS A	B	C	D	E	F	G	SERIES LINES 1	2	3	MAR–GIN	BOR–DER	BLANK STD
24x30	24	30	4	2	10	9⅜	7⅛	E	E	E	⅜	¾	B5–3024
30x36	30	36	5	2	12	12	9⅜	E	E	E	½	¾	B5–3630
36x48	36	48	6	5	14	14½	11	E	E	E	⅝	¾	B5–4836
48x60	48	60	8	6	16	19½	14⅜	E	E	E	¾	1½	B5–6048

SPEED LIMIT SIGN DETAIL

NO SCALE

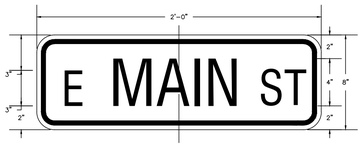


NOTES:
1. 8.33% MAX. SLOPE
2. SLOPE: ZERO ±2%
3. CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% FOR 4' WHERE PEDESTRIANS PERFORM TURNING MANEUVERS.

NOTE:
1. TEXTURE PATTERN MAY DIFFER TO COMPLY WITH MOST RECENT ADA ACCESSIBILITY GUIDELINES.
2. CONSTRUCTION OF CURB RAMP SHALL BE IN ACCORDANCE WITH MOST RECENT ADA STANDARDS. THESE STANDARDS SHALL SUPERSEDE ANY CONTRARY INFORMATION SHOWN HEREON.

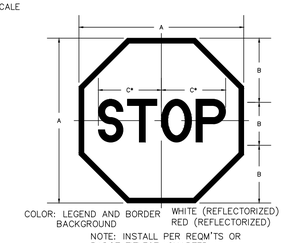
TYPE 2 CURB RAMP DETAIL

NO SCALE



STREET NAME SIGN DETAIL

NO SCALE



COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)
BACKGROUND RED (REFLECTORIZED)

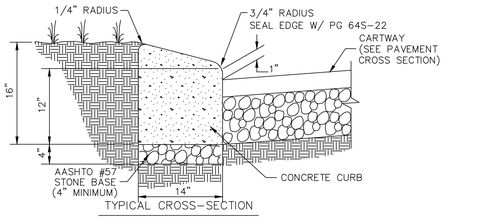
NOTE: INSTALL PER REQM'TS OR PADOT TITLE67, CHAPTER 211–OFFICIAL TRAFFIC CONTROL DEVICES.

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BOR DER	BLANK STD
24 X 24	24	8	10	C	¾	B1–24
30 X 30	30	10	12½	C	¾	B1–30
36 X 36	36	12	15	C	¾	B1–36
48 X 48	48	16	20	C	1½	B1–48

⟹ * REDUCE SPACING 40%

STOP SIGN DETAIL

NO SCALE



TYPICAL CROSS–SECTION

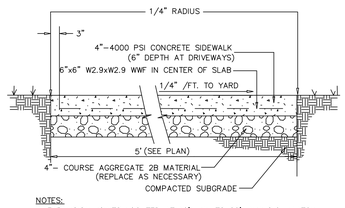
NOTES:
1. A SMOOTH CURB TRANSITION SHALL BE PROVIDED AT THE INTERSECTION OF SLANT CURBS AND ROADWAY INLETS.
2. BACK OF CURB TO BE IN LINE WITH BACK OF INLET.

CURBS:
1/2" EXPANSION JOINTS: MINIMUM 60' APART, AT ALL INLETS, AT ENDS OF CORNER RADII.

STRUCK JOINTS: AT 10' INTERVALS.

SLANT CURB DETAIL

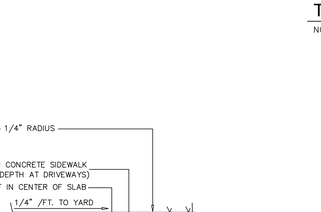
NO SCALE



NOTES:
1. EXPANSION JOINTS LOCATED AT 10' MIN. TO 20' MAX O.C., MATCH EXISTING IF APPLICABLE.
2. TOOLED JOINTS LOCATED AT 5' O.C.
3. SIDEWALK IS TO BE LIGHT BROOM FINISHED IN THE DIRECTION OF SIDEWALK WIDTH.
4. THIS DETAIL MAY BE FIELD MODIFIED ONLY IF IT IS APPROVED BY THE SOUTH LEBANON TOWNSHIP.
5. SIDEWALK TO HAVE A 2% CROSS SLOPE AWAY FROM ROAD.
6. CONCRETE SEALER SHALL BE APPLIED TO SIDEWALK AT A RATE AND THICKNESS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. CONCRETE SEALER SHALL ONLY BE APPLIED IN DRY CONDITIONS WHEN BOTH THE SURFACE AND AMBIENT TEMPERATURES ARE 50° AND ABOVE.

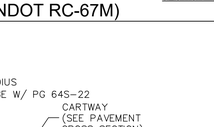
CONCRETE SIDEWALK/DRIVEWAY APRON DETAIL

NO SCALE



PAVEMENT NOTCH DETAIL

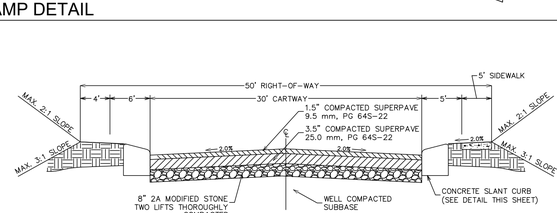
NO SCALE



NOTE: 1. SEAL ALL EDGES WITH PG 64S–22
2. COMPACTED DEPTHS ARE SHOWN.

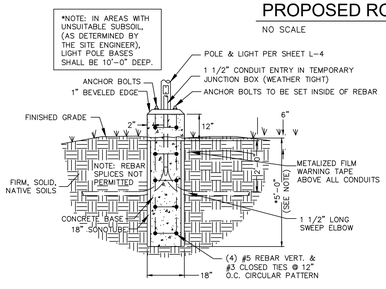
STANDARD DRIVEWAY PAVING DETAIL

NO SCALE



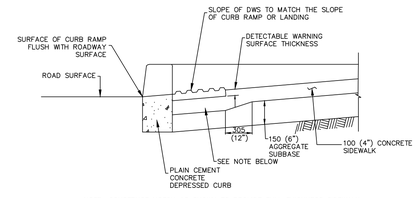
PROPOSED ROAD CROSS SECTION DETAIL

NO SCALE



LIGHT BASE DETAIL

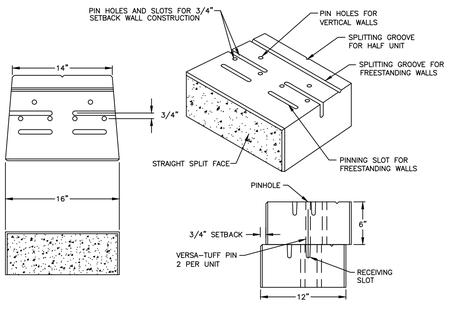
NO SCALE



NOTE: CONSTRUCT NOTCH AS SHOWN TO PROVIDE FULL THICKNESS SIDEWALK UNDER DETACHABLE WARNING SURFACE

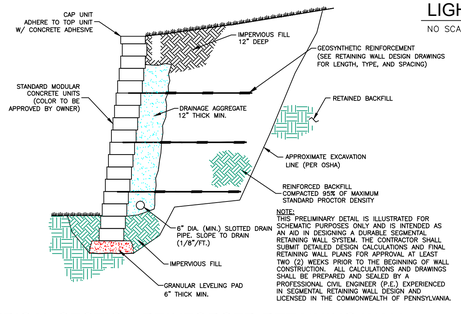
DETECTABLE WARNING SURFACE DETAIL

NO SCALE



SEGMENTED BLOCK STANDARD UNIT/PINNING

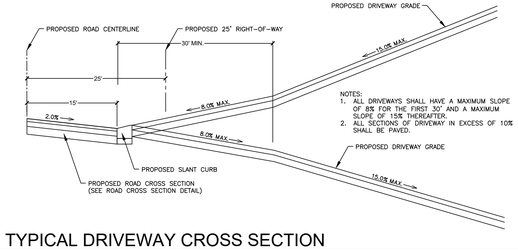
NO SCALE



NOTE:
THIS PRELIMINARY DETAIL IS ILLUSTRATED FOR SCHEMATIC PURPOSES ONLY AND IS INTENDED AS AN AID IN DESIGNING A DURABLE SEGMENTAL RETAINING WALL SYSTEM. THE CONTRACTOR SHALL SUBMIT DETAILED DESIGN CALCULATIONS AND FINAL RETAINING WALL PLANS FOR APPROVAL AT LEAST TWO (2) WEEKS PRIOR TO THE BEGINNING OF WALL CONSTRUCTION. ALL CALCULATIONS AND DRAWINGS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL CIVIL ENGINEER (P.E.) EXPERIENCED IN SEGMENTAL RETAINING WALL DESIGN AND LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.

TYPICAL SECTION-REINFORCED RETAINING WALL

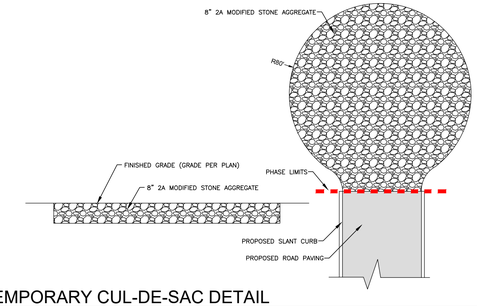
NO SCALE



NOTES:
1. ALL DRIVEWAYS SHALL HAVE A MAXIMUM SLOPE OF 8% FOR THE FIRST 30' AND A MAXIMUM SLOPE OF 15% THEREAFTER.
2. ALL SECTIONS OF DRIVEWAY IN EXCESS OF 10% SHALL BE PAVED.

TYPICAL DRIVEWAY CROSS SECTION

NO SCALE



TEMPORARY CUL-DE-SAC DETAIL

NO SCALE

SITE DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

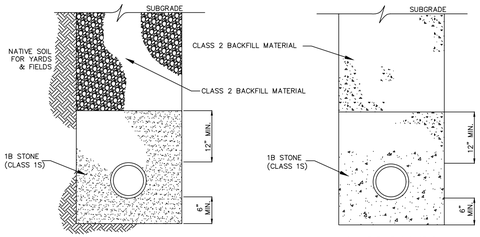
Cornwall Borough

Lebanon County, Pennsylvania

REVISION	DATE	BY

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272–7710
Fax: (717) 272–7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216–22–003



NOT TO SCALE

NOTES

THE TRENCHES SHALL BE EXCAVATED TRUE TO LINE SO THAT A CLEAR SPACE NOT LESS THAN 6" NOR MORE THAN 8" IN WIDTH IS PROVIDED ON EACH SIDE OF THE BARREL OF THE PIPE. IF SHEETING IS REQUIRED, THE FORGOING DIMINSIONS SHALL BE APPLICABLE TO THE INSIDE FACES OF THE SHEETING.

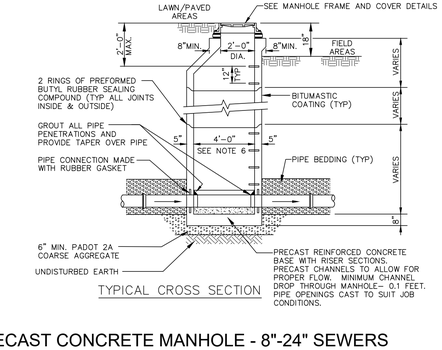
FOR MORE DETAIL ON TRENCHING, BACKFILLING & COMPACTING SEE SECTION 02221OF PUCA.

TYPICAL TRENCH BACKFILL FOR SANITARY SEWER

NO SCALE

NOTES:

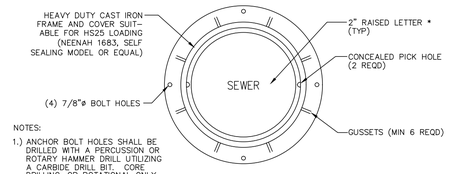
1. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6") SEE FRAME & COVER DETAILS
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/ INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
6. LARGER DIA MANHOLE REQUIRED ON INSIDE DROP AND INSIDE SPLASH CONNECTION GREATER THAN 12", SEE DETAIL 9.



TYPICAL CROSS SECTION

PRECAST CONCRETE MANHOLE - 8"-24" SEWERS

NO SCALE

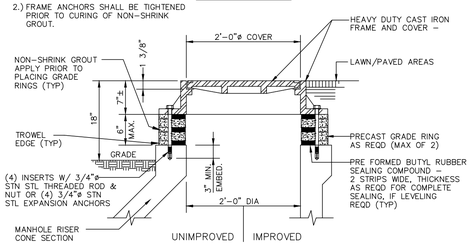


NOTES:

1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.

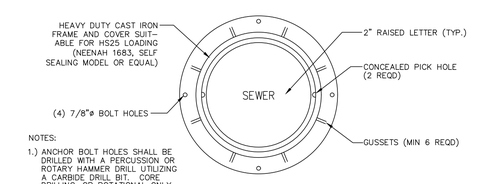
COVER PATTERN

2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.



STANDARD MANHOLE FRAME & COVER

NO SCALE

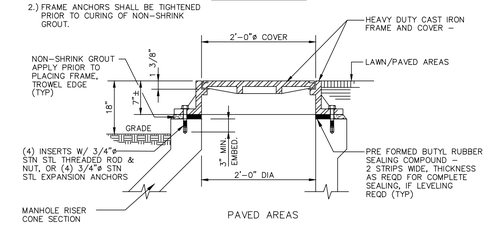


NOTES:

1.) ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.

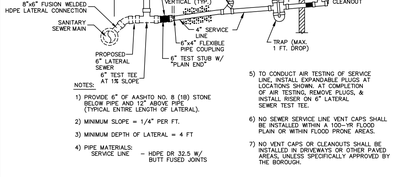
COVER PATTERN

2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.



STANDARD MANHOLE FRAME & COVER-W/O GRADE RING

NO SCALE



NOTES:

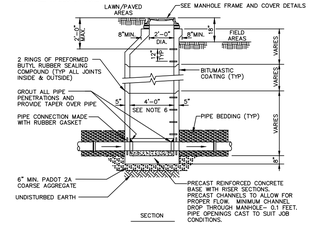
1) PROVIDE 6" OF AASHTO NO. 8 (1B) STONE BELOW PIPE AND 12" ABOVE PIPE. (TYPICAL ENTIRE LENGTH OF LATERAL).
2) MINIMUM SLOPE = 1/4" PER FT.
3) MINIMUM DEPTH OF LATERAL = 4 FT
4) PIPE MATERIALS
SERVICE LINE - HDPE DR 32.5 W/ BUTT FUSED JOINTS
5) TO CONDUCT AIR TESTING OF SERVICE LINE, INSTALL EXPANDABLE PLUGS AT LOCATIONS SHOWN. AT COMPLETION OF AIR TESTING, REMOVE PLUGS, & INSTALL RISER ON 6" LATERAL SEWER TEST TEE.
6) NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7) NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS, UNLESS SPECIFICALLY APPROVED BY THE BOROUGH.

SERVICE LINE INSTALLATION DETAIL

NO SCALE

NOTES:

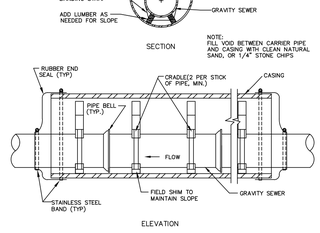
1. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6") SEE FRAME & COVER DETAILS
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/ INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
6. LARGER DIA MANHOLE REQUIRED ON INSIDE DROP AND INSIDE SPLASH CONNECTION GREATER THAN 12", SEE DETAIL 9.



SECTION

PRECAST MANHOLE DETAIL 8" THRU 24" SEWERS

NO SCALE

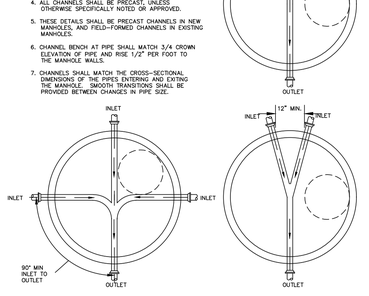


CASING CRADLE DETAIL - GRAVITY SEWER INSTALLATION VIA BORING

NO SCALE

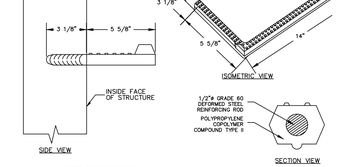
NOTES:

1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO MANHOLE.
2. NO LATERALS INTO MANHOLES, EXCEPT BY SPECIAL EXCEPTION FROM SLTMA.
3. MINIMUM CHANNEL DROP THROUGH MANHOLE:
STRAIGHT THROUGH - 0.1 FEET
- 0.2 FEET
BEND
4. ALL CHANNELS SHALL BE PRECAST, UNLESS OTHERWISE SPECIFICALLY NOTED OR APPROVED.
5. THESE DETAILS SHALL BE PRECAST CHANNELS IN NEW MANHOLES, AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
6. CHANNEL BENCH AT PIPE SHALL MATCH 3/4 CROWN ELEVATION OF PIPE AND RISE 1/2" PER FOOT TO THE MANHOLE WALLS.
7. CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE.



PRECAST CHANNEL DETAILS

NOT TO SCALE

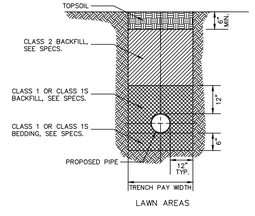


STEP SPECIFICATIONS:
STEPS SHALL BE 1/2"ø GRADE 60 DEFORMED STEEL REINFORCING ROD CONFORMING TO ASTM A615 AND COMPLETING ENCAPSULATED IN POLYPROPYLENE COPOLYMER COMPOUND TYPE II CONFORMING TO ASTM D4101.

STEP INSTALLATION:
STEPS SHALL BE CAST IN-PLACE BY THE MANUFACTURE. STEPS SHALL BE ALIGNED VERTICALLY NOT MORE THAN 12" ON CENTER. STEPS SHALL NOT BE LOCATED OVER ANY FLOW CHANNEL.

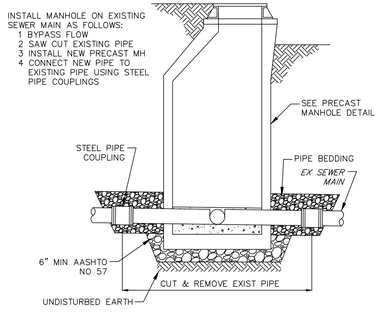
STEEL REINFORCED PLASTIC STEP

NOT TO SCALE



TRENCH BACKFILL & RESTORATION FOR PVC/DI PIPE IN NON-PAVED AREAS

NO SCALE



NEW MANHOLE ON EXISTING MAIN DETAIL

NOT TO SCALE

SANITARY SEWER DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

REVISION	DATE	BY
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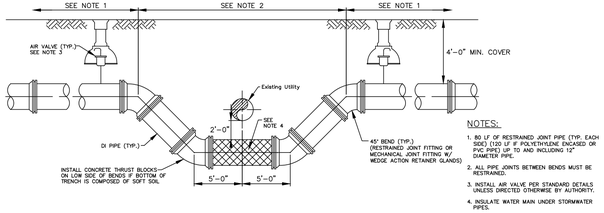
Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #2216-22-003	

78

78 OF 88 SHEETS

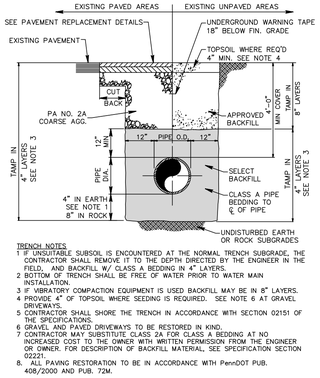


NOTES:

1. 80 LF OF RESTRAINED JOINT PIPE (TYP. EACH SIDE) (120 LF IF POLYETHYLENE ENCASED OR DIAMETER EXCEEDS 12" AND INCLUDING 12" DIAMETER PIPE.)
2. ALL PIPE JOINTS BETWEEN BENDS MUST BE RESTRAINED.
3. INSTALL AIR VALVE PER STANDARD DETAILS UNLESS DIRECTED OTHERWISE BY AUTHORITY.
4. INSULATE WATER MAIN UNDER STORMWATER PIPES.

UTILITY CROSSING VERTICAL OFFSET DETAIL

NO SCALE

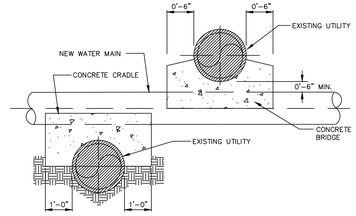


TRENCH NOTES

1 IF UNSUITABLE SUBSOIL IS ENCOUNTERED AT THE NORMAL TRENCH SUBGRADE, THE CONTRACTOR SHALL REMOVE IT TO THE DEPTH DIRECTED BY THE ENGINEER IN THE FIELD, AND BACKFILL W/ CLASS A BEDDING IN 4" LAYERS.
2 BOTTOM OF TRENCH SHALL BE FREE OF WATER PRIOR TO WATER MAIN INSTALLATION.
3 IF VIBRATORY COMPACTION EQUIPMENT IS USED BACKFILL MAY BE IN 8" LAYERS.
4 PROVIDE 4" OF TOPSOIL WHERE SEEDING IS REQUIRED. SEE NOTE 6 AT GRAVEL DRIVEWAYS.
5 CONTRACTOR SHALL SHORE THE TRENCH IN ACCORDANCE WITH SECTION 02151 OF THE SPECIFICATIONS.
6 GRAVEL AND PAVED DRIVEWAYS TO BE RESTORED IN KIND.
7 CONTRACTOR MAY SUBSTITUTE CLASS 2A FOR CLASS A BEDDING AT NO INCREASED COST TO THE OWNER WITH WRITTEN PERMISSION FROM THE ENGINEER OR OWNER. FOR DESCRIPTION OF BACKFILL MATERIAL, SEE SPECIFICATION SECTION 02221.
8. ALL PAVING RESTORATION TO BE IN ACCORDANCE WITH PennDOT PUB. 408/2000 AND PUB. 72M.

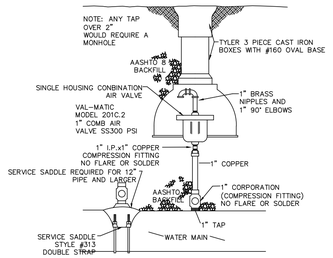
TRENCH BACKFILL FOR WATER MAIN

NO SCALE



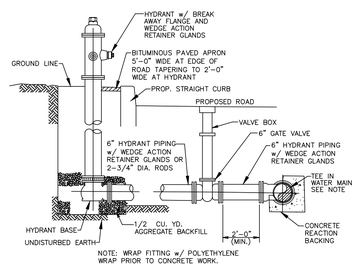
TYPICAL CONFIGURATION OVER/UNDER EXISTING UTILITY

NO SCALE



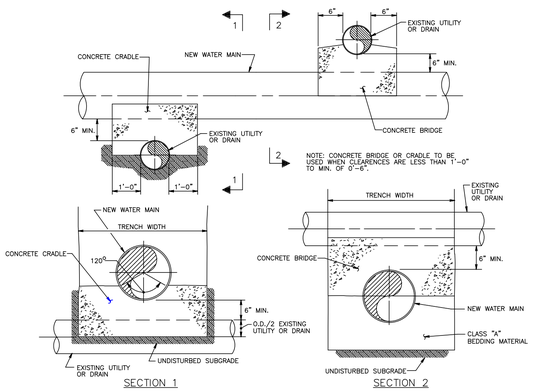
1" AIR RELEASE VALVE

NO SCALE



WATER HYDRANT DETAIL

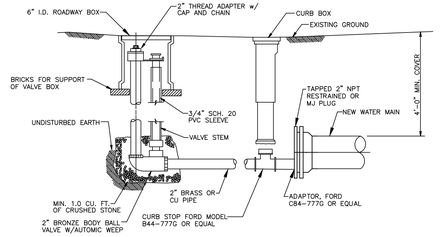
NO SCALE



SECTION 1 SECTION 2

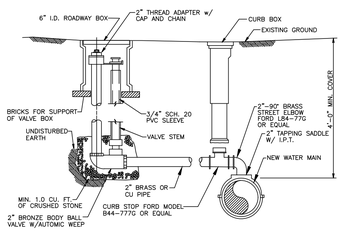
CONCRETE CRADLE AND BRIDGE DETAIL

NO SCALE



2" BLOW OFF HYDRANT DETAIL (DEAD-END)

NO SCALE



2" BLOW OFF HYDRANT DETAIL (TOP MOUNT)

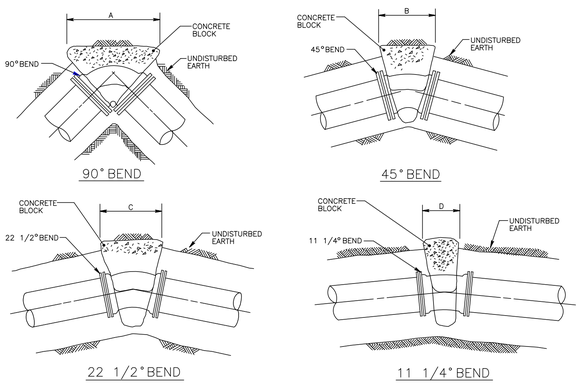
NO SCALE

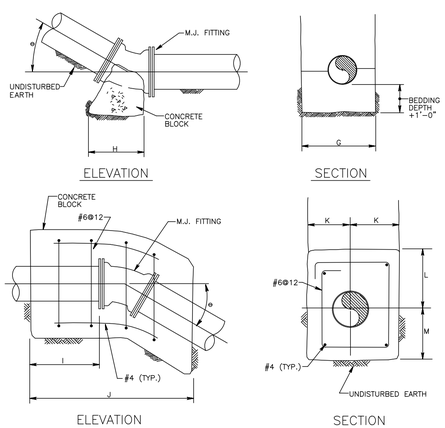
NOTES:

1. REPLACE EXISTING WATER SERVICE LINES WITH MIN. 3/4" CU., IF EXISTING SERVICE IS LARGER DIAMETER, REPLACE WITH SAME SIZE.
2. CURB STOP LOCATION NO MORE THAN 1'-0" BEHIND CURB.
3. NEW SERVICE LINES – FROM CORPORATION TO CURB STOP, INCLUDING NEW CURB BOX.
4. ANY METER PITS REQUIRED FOR SERVICE LINES WILL BE AT THE AUTHORITY'S DISCRETION.

NOTES:

1. REACTION BACKING DIMENSIONS HAVE BEEN CALCULATED USING A SOIL BEARING CAPACITY OF 2000 POUNDS PER SQUARE FOOT AND TEST PRESSURES AS INDICATED.
2. ALL FITTINGS SHALL BE MECHANICAL JOINT AND SHALL HAVE WEDGE ACTION FOLLOWER GLANDS INSTALLED TO MANUFACTURERS SPECIFICATIONS, EXCEPT IN RESTRAINED JOINT AREAS.
3. ALL CONTRETE SHALL BE HIGH EARLY STRENGTH.





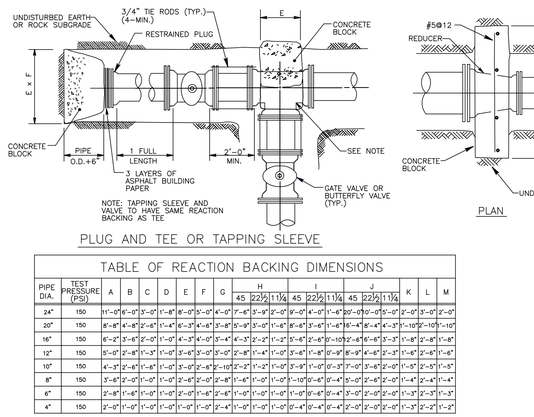
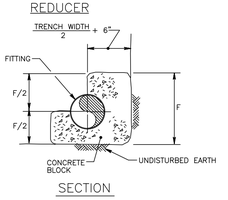


TABLE OF REACTION BACKING DIMENSIONS

PIPE DIA.	TEST PRESSURE (PSI)	A	B	C	D	E	F	G	H			I			J			K	L	M
									45	22½	11¼	45	22½	11¼	45	22½	11¼			
24"	150	11'-0"	6'-0"	3'-0"	1'-8"	8'-0"	5'-0"	4'-0"	7'-6"	3'-9"	2'-0"	9'-0"	4'-0"	1'-6"	20'-0"	10'-0"	5'-0"	2'-0"	3'-0"	2'-0"
20"	150	8'-8"	4'-8"	2'-6"	1'-4"	6'-3"	3'-8"	3'-0"	5'-9"	3'-0"	1'-6"	6'-6"	3'-0"	1'-6"	16'-4"	8'-4"	4'-3"	1'-10"	2'-10"	1'-10"
16"	150	6'-2"	3'-6"	2'-0"	1'-0"	4'-3"	2'-8"	2'-0"	4'-3"	2'-0"	1'-0"	4'-6"	2'-0"	1'-0"	12'-6"	6'-6"	3'-3"	1'-6"	2'-6"	1'-8"
12"	150	5'-0"	2'-8"	1'-3"	1'-0"	3'-6"	2'-0"	2'-0"	3'-0"	1'-4"	1'-0"	3'-6"	1'-8"	0'-9"	8'-9"	4'-6"	2'-3"	1'-6"	2'-6"	1'-6"
10"	150	4'-3"	2'-6"	1'-8"	1'-0"	3'-0"	2'-6"	2'-0"	2'-6"	1'-2"	1'-0"	3'-0"	1'-6"	0'-9"	7'-0"	3'-6"	2'-0"	1'-5"	2'-5"	1'-5"
8"	150	3'-6"	2'-0"	1'-0"	1'-0"	2'-6"	2'-0"	2'-0"	2'-0"	1'-0"	1'-0"	2'-6"	1'-3"	0'-10"	5'-6"	2'-6"	2'-0"	1'-4"	2'-4"	1'-4"
6"	150	2'-8"	1'-6"	1'-0"	1'-0"	2'-0"	1'-6"	1'-6"	1'-6"	1'-0"	1'-0"	1'-0"	0'-6"	0'-4"	3'-0"	2'-0"	2'-0"	1'-3"	2'-3"	1'-3"
4"	150	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	1'-0"	1'-0"	1'-0"	0'-4"	0'-4"	0'-4"	2'-0"	2'-0"	2'-0"	1'-3"	2'-3"	1'-2"



REDUCER

VERTICAL REACTION BACKING DETAIL

NO SCALE

NO.	REVISION	DATE	BY

WATER DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

CORNWALL PROPERTIES, LLC

located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042-7710
Phone: (717) 272-7710
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE, HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- EXISTING STORMWATER
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (100, MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE, HEADWALL, MANHOLE, INLET, ENDWALL, RIP-RAP)
- PROPOSED STORMWATER
- PROPOSED DOMESTIC WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTLITY POLE
- PROPOSED LIGHT POLE

PROPOSED E&S FEATURES

- INLET PROTECTION
- ROCK CONST. ENTRANCE
- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK (SS)
- NPDES BOUNDARY
- DISTURBANCE LIMITS (LOD)
- SPILLWAY LINING
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)

GRAPHIC SCALE

150' 0' 75' 150' 300'

1 inch = 150ft.

MAGNETIC

EROSION AND SEDIMENT CONTROL LIABILITY NOTE:

FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. 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.

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 WATER.

THESE PLANS INDICATE CRITICAL AREAS FOR EROSION AND SEDIMENT CONTROL PLACEMENT BUT DO NOT RELIEVE THE CONTRACTOR FROM PROVIDING ADDITIONAL CONTROLS AS SITE CONDITIONS WARRANT. THE ENVIRONMENTAL COMPLIANCE MANAGER FOR THE PROJECT AND OR CONSERVATION DISTRICT MAY DIRECT THE CONTRACTOR TO INSTALL E&S BMPS NOT DEPICTED ON THESE DRAWINGS IN ORDER TO PROTECT DOWN GRADIENT AREAS FROM EROSION AND SEDIMENTATION DURING CONSTRUCTION.

REXMONT ROAD · BOYD STREET · IRON VALLEY DR. · LYNCH DRIVE · COBALT ALLEY · GOLD ROAD · SILVER RD. · SHIRK ST. · GRANITE STREET · MATCHLINE · NPDES · LOD

KEY MAP

Scale:1"=800'

Legend

Current Sheet

Sheet 81 of 88 · Sheet 82 of 88 · Sheet 83 of 88 · Sheet 84 of 88 · Sheet 85 of 88

REVISION	DATE	BY
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OVERALL EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=150'
PROJECT #2216-22-003	

80

80 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- EXISTING WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR 100, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTLITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (W, GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (G, GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTLITY POLE
- PROPOSED LIGHT POLE

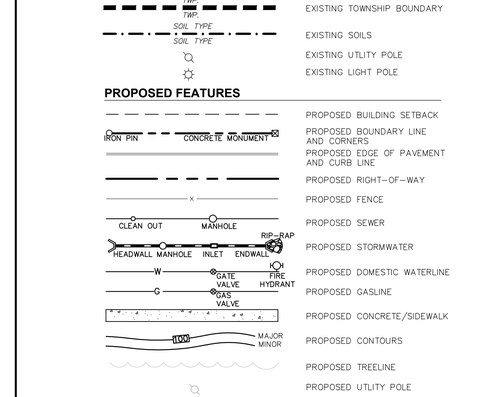
PROPOSED E&S FEATURES

- INLET PROTECTION
- ROCK CONST. ENTRANCE
- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK (SS)
- NPDES BOUNDARY (NPDES)
- DISTURBANCE LIMITS (LOD)
- SPILLWAY LINING

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.



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EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
219 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #2216-22-003	

81

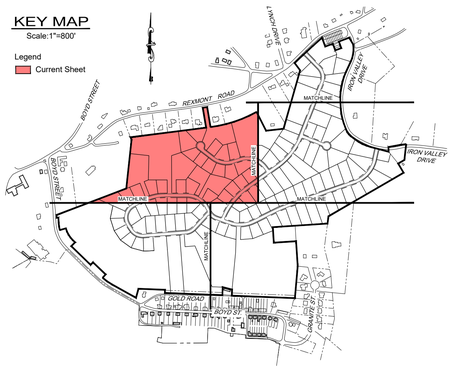
81 OF 88 SHEETS

KEY MAP

Scale:1"=800'

Legend

Current Sheet



GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

LEGEND

EXISTING FEATURES

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- EXISTING BOUNDARY LINE AND CORNERS
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- EXISTING FENCE
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- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
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- COMPOST FILTER SOCK (SS)
- NPDES BOUNDARY
- DISTURBANCE LIMITS (LOD)
- SPILLWAY LINING

MAGNETIC

REXMONT ROAD

DP 001 · DP 002 · DP 003 · DP 012

SEDIMENT BASIN A · SEDIMENT BASIN B

DOUBLE SILT FENCE AROUND WETLAND FOR BOG TURTLE PROTECTION

TEMPORARY ORANGE CONSTRUCTION FENCE SURROUNDING WETLANDS

12" SILT SOCK LOCATION 34 · 12" SILT SOCK LOCATION 35 · 12" SILT SOCK LOCATION 33 · 12" SILT SOCK LOCATION 32 · 12" SILT SOCK LOCATION 18 · 12" SILT SOCK LOCATION 19 · 12" SILT SOCK LOCATION 20 · 12" SILT SOCK LOCATION 22

18" SILT SOCK LOCATION 30 · 24" SILT SOCK LOCATION 17 · 24" SILT SOCK LOCATION 29 · 24" SILT SOCK LOCATION 71 · 24" SILT SOCK LOCATION 70

24" STACKED SILT SOCK LOCATION 25 · 24" STACKED SILT SOCK LOCATION 26 · 24" STACKED SILT SOCK LOCATION 27 · 24" STACKED SILT SOCK LOCATION 28 · 24" STACKED SILT SOCK LOCATION 24 · 24" STACKED SILT SOCK LOCATION 23 · 24" STACKED SILT SOCK LOCATION 21 · 24" STACKED SILT SOCK LOCATION 38 · 24" STACKED SILT SOCK LOCATION 39 · 24" STACKED SILT SOCK LOCATION 40 · 24" STACKED SILT SOCK LOCATION 37 · 24" STACKED SILT SOCK LOCATION 43 · 24" STACKED SILT SOCK LOCATION 44

32" SILT SOCK LOCATION 41 · 32" SILT SOCK LOCATION 42

SILT SOCK LOCATION 61

ROCK FILTER #4

SLOPE LINING (N.A.G. P300) · SWALE LINING (N.A.G. P550) · SWALE LINING (N.A.G. S75) · SWALE LINING (N.A.G. S200)

SKIMMER (SEE DETAIL) · BAFFLE (SEE DETAIL) · SEDIMENT CLEANOUT STAKE (SEE DETAIL)

INLET PROTECTION (TYP.)

ROCK CONSTRUCTION ENTRANCE #5

PHASE II · PHASE III

MATCHLINE (See Sheet 84 of 88) · MATCHLINE (See Sheet 85 of 88) · MATCHLINE (See Sheet 83 of 88)

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EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

for

CORNWALL PROPERTIES, LLC

located in

Cornwall Borough

Lebanon County, Pennsylvania

REVISION	DATE	BY
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Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	1"=60'
PROJECT #	2216-22-003

82

82 OF 88 SHEETS

LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER (CLEAN OUT, MANHOLE)
- EXISTING STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- EXISTING WATERLINE (GATE VALVE, FIRE HYDRANT)
- EXISTING GASLINE (GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY (TWP.)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER (CLEAN OUT, MANHOLE)
- PROPOSED STORMWATER (HEADWALL, MANHOLE, INLET, RIP-RAP, ENDWALL)
- PROPOSED DOMESTIC WATERLINE (GATE VALVE, FIRE HYDRANT)
- PROPOSED GASLINE (GAS VALVE)
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

PROPOSED E&S FEATURES

- INLET PROTECTION
- ROCK CONST. ENTRANCE
- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK (SS)
- NPDES BOUNDARY (NPDES)
- DISTURBANCE LIMITS (LOD)
- SPILLWAY LINING

GRAPHIC SCALE

60' 0' 30' 60' 120'

1 inch = 60ft.

KEY MAP

Scale:1"=800'

Legend: Current Sheet

Sheet 81 of 88 | Sheet 82 of 88 | Sheet 83 of 88 | Sheet 84 of 88 | Sheet 85 of 88

EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN

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219 North Zinns Mill Road, Lebanon, PA 17042
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83

83 OF 88 SHEETS

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- EXISTING GASLINE (G, GAS VALVE)
- EXISTING SIDEWALK/CONCRETE
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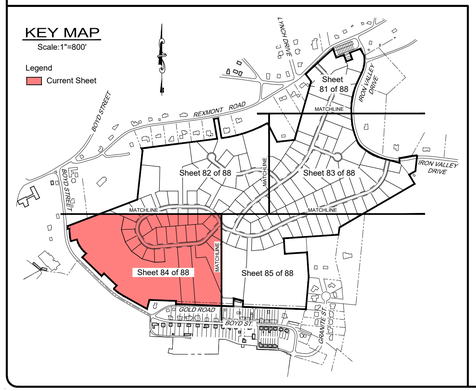

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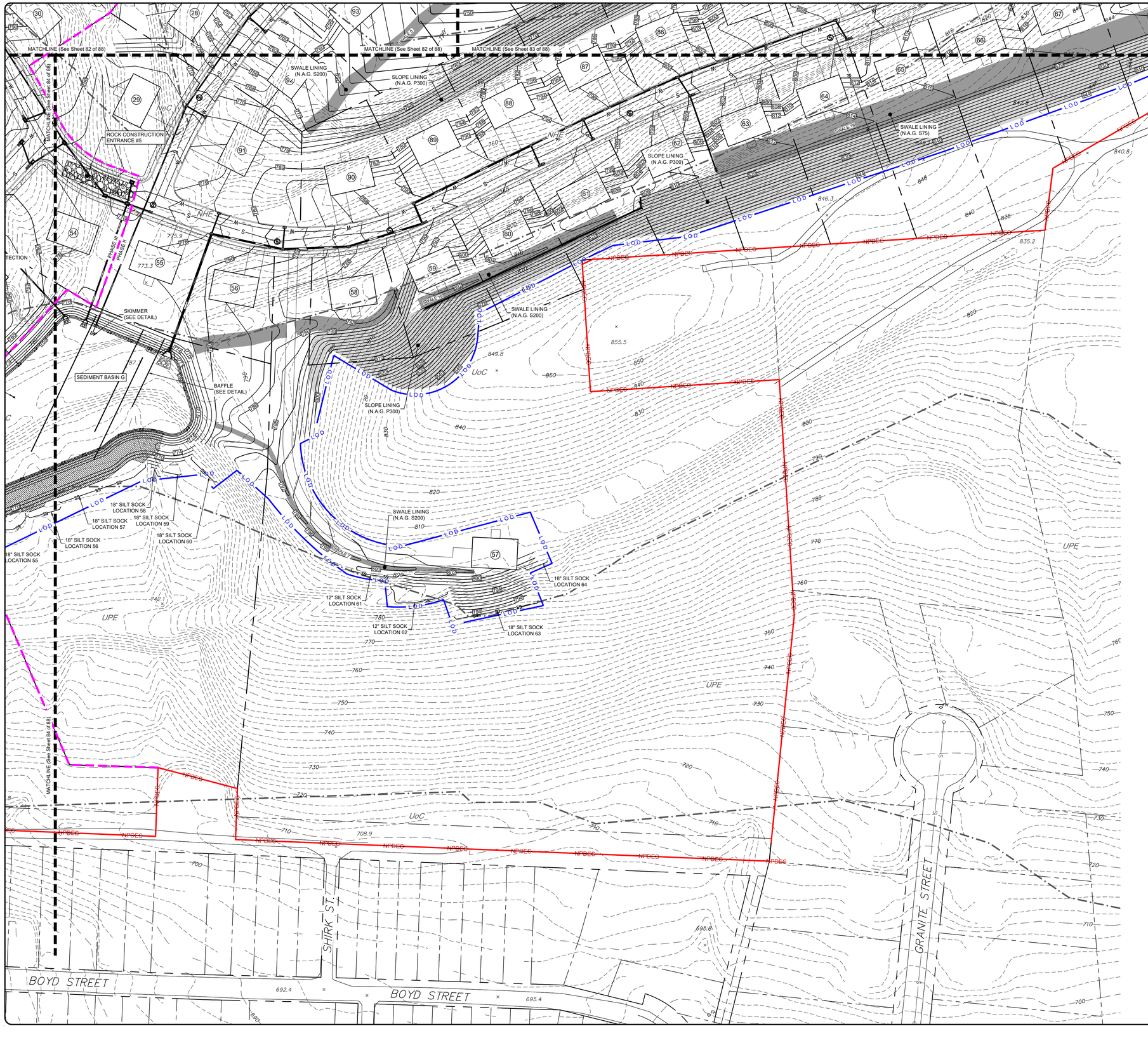

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- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100, MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

PROPOSED E&S FEATURES

- INLET PROTECTION
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- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK (SS)
- NPDES BOUNDARY
- DISTURBANCE LIMITS (LOD)
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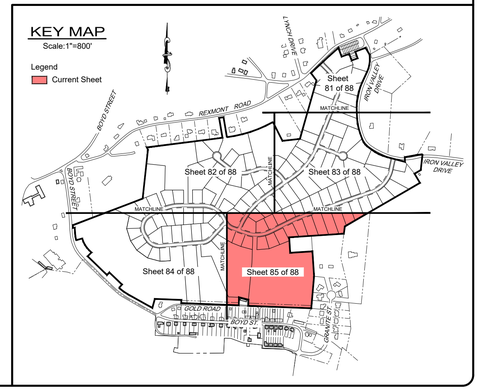
KEY MAP

Scale:1"=800'

Legend: Current Sheet



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EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN

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CORNWALL PROPERTIES, LLC

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located in

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PROJECT #2216-22-003	

85

85 OF 88 SHEETS

EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE
CORNWALL PROPERTIES, LLC - RESIDENTIAL SUBDIVISION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR THE PROPOSED RESIDENTIAL SUBDIVISION FOR CORNWALL PROPERTIES, LLC, LOCATED BETWEEN GOLD ROAD, BOYD STREET, REXMONT ROAD, AND IRON VALLEY DRIVE IN CORNWALL BOROUGH, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN.

PROJECT DESCRIPTION
THE TOTAL AREA OF THE 5 EXISTING PARCELS TO BE DEVELOPED IS 123.74 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS APPROXIMATELY 85.51 ACRES. THE CURRENT SITE CONSISTS OF AN OLD MINING OPERATION WHICH IS NOW MOSTLY COVERED IN TREES, WITH VARIOUS AREAS OF GRAVEL, PAVEMENT, ABANDONED STRUCTURES, BUILDING FOUNDATIONS, ETC. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE TWO BUILDINGS TOWARDS THE SOUTHEAST PORTION OF THE SITE WERE DEMOLISHED BETWEEN 2008 AND 2010. THE LARGE BUILDING TOWARDS THE CENTER OF THE SITE WAS DEMOLISHED BETWEEN 2013 AND 2015. THE SITE IS BORDERED TO THE NORTH BY REXMONT ROAD, TO THE EAST BY IRON VALLEY DRIVE, TO THE SOUTH BY GOLD ROAD, AND TO THE WEST BY BOYD STREET. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A 130-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION WITH ASSOCIATED HOMES, DRIVEWAYS, ROADS, CONNECTION TO PUBLIC SEWER AND WATER, AND REQUIRED STORMWATER MANAGEMENT FACILITIES. THE ANTICIPATED SITE DISTURBANCE SHALL INCLUDE GRADING AS WELL AS ADDITIONAL IMPERVIOUS AREA WHICH WILL BE TREATED ON-SITE BY STORMWATER MANAGEMENT BMPS. SEVEN (7) INFILTRATION BASINS AND ONE (1) DETENTION BASIN ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL REACH THE SNITZ CREEK AND AN UNT TO THE SNITZ CREEK. BOTH ARE DESIGNATED AS A TROUT STOCKED FISHERY (TSF). THE SNITZ CREEK IS IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE - NUTRIENTS. THE SNITZ CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS. THE UNT TO SNITZ CREEK IS IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: CROP PRODUCTION (CROP LAND OR DRY LAND) - SILTATION. THE UNT TO SNITZ CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS.

THERMAL IMPACTS ANALYSIS
ALL EXISTING SITE RUNOFF CURRENTLY LEAVES THE SITE UN-DETAINED WITH NO TREATMENT OF THIS RUNOFF IN ANY WAY. SEVEN (7) INFILTRATION BASINS ARE PROPOSED TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE INFILTRATION BASINS WILL BE COOLED BY THE VEGETATION IN THE BASIN BOTTOM BEFORE BEING FILTERED THROUGH AN ENGINEERED SOIL MIXTURE AND INFILTRATED INTO THE GROUND. RUNOFF REACHING THE ONE (1) DETENTION BASIN WILL BE COOLED BY THE VEGETATION IN THE BASIN BOTTOM PRIOR TO BEING RELEASED SLOWLY TO THE DOWNSTREAM STORM SEWER SYSTEM. STREET TREES ARE ALSO PROPOSED ALONG BOTH SIDES OF ALL PROPOSED ROADS TO SHADE THESE AREAS AND PROVIDE TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

DOWNSTREAM WATERCOURSE ANALYSIS
THE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED *CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NON-SURFACE WATERS* (JANUARY 2, 2019). FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER EITHER THROUGH EITHER A COMMON LAW EASEMENT OR AN EXPRESS EASEMENT. FOR SITES THAT DISCHARGE TO EXISTING SWALES, DITCHES, STORM SEWERS OR SIMILAR STRUCTURES WHERE THE NEW ACTIVITIES WILL NOT RESULT IN A CHANGE IN VOLUME OR RATE OF STORMWATER RUNOFF (FOR ALL STORM EVENTS), THE EXISTING COMMON LAW EASEMENT COULD BE RELIED UPON."

THE SITE DISCHARGES TO ALL DISCHARGE POINTS IN A SIMILAR MANNER AND AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.
DP 001 - DISCHARGES TO AN EXISTING CHANNEL ALONG THE NORTHERN PROPERTY LINE. THIS CHANNEL CONTINUES NORTH AND INTO AN EXISTING CULVERT BENEATH REXMONT ROAD.

DP 002 - DISCHARGES TO WATERCOURSE 3 / WETLAND 5 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 3 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 003 - DISCHARGES TO WATERCOURSE 2 / WETLAND 5 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 2 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 004 - DISCHARGES TO WETLAND 4 WHICH IS AN OLD MINE PIT. IF THE PIT WERE TO OVERFLOW, IT WOULD DISCHARGE TO WATERCOURSE 2.

DP 005 - DISCHARGES IN A SHEET FLOW TO THE NORTHWESTERN PROPERTY LINE AND EVENTUALLY REACHING WATERCOURSE 1. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 006 - DISCHARGES TO WATERCOURSE 1 / WETLAND 3 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 007 - DISCHARGES TO WATERCOURSE 1 / WETLAND 1 ALONG THE NORTHERN PROPERTY LINE. WATERCOURSE 1 IS TRIBUTARY TO THE UNT TO SNITZ CREEK WHICH BEGINS NORTH OF THE PROJECT SITE.

DP 008 - DISCHARGES DIRECTLY TO AN EXISTING 24" RCP CULVERT BENEATH REXMONT ROAD WHICH CONVEYS RUNOFF TO THE NORTH.

DP 009 - DISCHARGES TO A STORM SEWER INLET JUST NORTH OF GOLD ROAD ALONG THE SOUTHERN PROPERTY LINE. THIS STORM SEWER DISCHARGES TO THE CORNWALL OPEN PIT.

DP 010 - DISCHARGES IN A SHEET FLOW ACROSS THE SOUTHERN PROPERTY LINE TOWARDS GOLD ROAD AND BOYD STREET. RUNOFF WILL REACH AN EXISTING CULVERT CROSSING BOYD STREET AND EVENTUALLY THE CORNWALL OPEN PIT.

DP 011 - DISCHARGES IN A SHEET FLOW ACROSS THE WESTERN PROPERTY LINE TOWARDS BOYD STREET. RUNOFF WILL REACH AN EXISTING CULVERT CROSSING BOYD STREET AND EVENTUALLY THE CORNWALL OPEN PIT.

DP 012 - DISCHARGES IN A SHEET FLOW ACROSS THE NORTHERN PROPERTY LINE TOWARDS THE INTERSECTION OF BOYD STREET AND REXMONT ROAD. RUNOFF WILL REACH AN EXISTING CHANNEL WHICH IS THE OUTLET FROM THE CORNWALL OPEN PIT.

SOIL INFORMATION AND GEOLOGY

THE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA TO BE DISTURBED BY EARTH MOVING ACTIVITIES. THESE SOILS CAN ERODE WHEN DISTURBED. EROSION WILL BE CONTROLLED WITH STANDARD EROSION CONTROLS SUCH AS FILTER SOCK, SLOPE AND SWALE MATTING, RIPRAP OUTLET PROTECTION, ROCK CONSTRUCTION ENTRANCES, AND SEDIMENT BASINS.

Map Symbol	Soil Name	Slope	Hydrologic Group
NeC	**Neshaminy gravelly silt loam**	8-15%	C
NHE	**Neshaminy extremely stony silt loam**	Steep	C
Qu	**Quarries**	N/A	N/A (Modeled as C)
UoC	**Ungers extremely stony loam**	8-25%	B

***IF SOILS ARE BOLD THEY ARE DISTURBED DURING CONSTRUCTION ON THIS PROJECT.**

THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KARST FEATURES WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT SITE. THE SITE IS UNDERLAIN BY DIABASE AND THE HAMBURG SEQUENCE ROCKS (SHALE, SILTSTONE, AND GRAYWACKE). THESE BEDROCK FORMATIONS ARE NOT SUSCEPTIBLE TO KARST ACTIVITY, AS SUCH THE RISK FOR KARST ACTIVITY IS CONSIDERED LOW. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, A GEOTECHNICAL ENGINEER WILL BE IMMEDIATELY CONTACTED AND REQUIRED TO OVERSEE ANY MITIGATION MEASURES.

NESHAMINY SOILS - THE NESHAMINY SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN MATERIALS WEATHERED FROM DIABASE AND OTHER DARK COLORED BASIC ROCKS. SATURATED HYDRAULIC CONDUCTIVITY IS MODERATELY HIGH. SLOPES RANGE FROM 0 TO 70 PERCENT. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 50 DEGREES F. NESHAMINY SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO STEEL AND CONCRETE. THIS SOIL MAY ALSO BE SUBJECT TO A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, FROST ACTION, SHRINK-SWELL, AND A POOR SOURCE OF TOPSOIL.

UNGERS SOILS - THE UNGERS SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM FROM RED SANDSTONE AND SHALE. SLOPES RANGE FROM 0 TO 60 PERCENT. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 43 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. UNGERS SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE, AND EASILY ERODIBLE. THIS SOIL MAY ALSO BE SUSCEPTIBLE TO LOW STRENGTH/LANDSLIDES, SLOW PERCOLATION, AND FROST ACTION.

SOIL USE LIMITATIONS AND RESOLUTIONS
- CUT-BANK CAVING: ALL APPLICABLE OSHA STANDARDS AND REGULATIONS SHALL BE IMPLEMENTED AT ALL TIMES DURING TRENCHING AND EXCAVATION OPERATIONS.
- CORROSION OF STEEL AND CONCRETE: ALL UNDERGROUND FOUNDATIONS AND STRUCTURES SHALL BE PROPERLY PROTECTED AGAINST CORROSION, WHICH MAY INCLUDE COATING THESE STRUCTURES WITH CORROSION-RESISTANT MATERIAL.
- EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF SEDIMENT-LADEN WATER OFF-SITE. ALL SLOPES GREATER THAN 3:1 WILL BE STABILIZED WITH EROSION CONTROL LINING.
- DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, EXCAVATING TRENCHES, DEWATERING BASINS, ETC. THE GEOTECHNICAL REPORT DID NOT IDENTIFY ANY GROUNDWATER IN THE PROPOSED INFILTRATION BASIN LOCATIONS, SO LIMITATIONS ARE NOT EXPECTED IN THESE AREAS. SHOULD DEWATERING BE REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE UTILIZED, AND WATER SHALL BE PUMPED TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL BMP SUCH AS A FILTER SOCK.
- HYDRIC SOILS/HYDRIC INCLUSIONS: A WETLAND FIELD SURVEY WAS CONDUCTED, AND VARIOUS WETLANDS AND WATERCOURSES WERE IDENTIFIED ON SITE. NO DISTURBANCE OF SAID WETLANDS OR WATERCOURSES IS PROPOSED.
- LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 2:1. ALL SLOPES GREATER THAN 3:1 WILL BE STABILIZED WITH EROSION CONTROL LINING. THIS WILL REDUCE THE POTENTIAL FOR EROSION AND LAND SLIDE ACTION. ALL PROPOSED BERMS SHALL BE COMPACTED FULLY IN ORDER TO PROTECT AGAINST LANDSLIDES, AND SHALL BE STABILIZED IMMEDIATELY.
- SLOW PERCOLATION: ADEQUATE PRECAUTIONS WILL BE TAKEN TO ENSURE THAT THE PCSM BMPS INFILTRATE WITHIN THE REQUIRED TIME PERIOD, INCLUDING INFILTRATION TESTING AND SOIL MODIFICATION/UNDERDRAIN INSTALLATION, IF NECESSARY.
- PIPING: ANTI-SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS.
- FROST ACTION: THE PROJECT'S IMPERVIOUS SURFACES SHALL BE GRADED AT A MINIMUM OF 1% IN ONE DIRECTION, SO THAT WATER WILL NOT COLLECT ON THE SURFACE AND CAUSE DAMAGE DURING FREEZE/THAW CYCLES. CRACKS WHICH DEVELOP IN THE IMPERVIOUS SURFACES SHALL BE PROMPTLY SEALED.
- SHRINK/SWELL: ALL SITE GRADING SHALL DIRECT WATER AWAY FROM BUILDINGS AND OTHER IMPERVIOUS SURFACES TO REDUCE THE LIKELIHOOD OF WATER INFILTRATING NEAR OR UNDER THESE STRUCTURES.
- POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS MUCH OF THE SITE IS AN OLD MINING OPERATION, TOPSOIL MAY NEED TO BE IMPORTED. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN.

GENERAL SOIL NOTES
1. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE E&S CONTROLS.
2. 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.
3. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
4. 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.
5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
7. THE LOCAL CONSERVATION DISTRICT SHALL BE CONTACTED IF SEEPS OR SPRINGS ARE ENCOUNTERED AND THE DESIGNS ARE ALTERED DURING CONSTRUCTION AND THEY SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

CALCULATIONS
TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (PA DEP BUREAU OF WATERWAYS ENGINEERING AND WETLANDS, MARCH 2012).

CONSERVATION DISTRICT GENERAL E&S NOTES
1. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE LOCAL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. 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 ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT.
3. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
4. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE EARTH DISTURBANCE ACTIVITY, 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.
5. 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.
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED AND FULLY IMPLEMENTED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.
7. 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.)
8. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
9. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. 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 DILIGENCE 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 A 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 CLEAN FILL".

TEMPORARY CONTROL MEASURES

1. TOPSOIL STOCKPILE
   a. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.
   b. STOCKPILES SHALL BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATION CONTAINED HEREON.
   c. STOCKPILES SHALL BE LOCATED SO THAT ALL SWALES CAN FUNCTION AS DESIGNED.
   d. STOCKPILE HEIGHTS MUST NOT EXCEED 35' IN HEIGHT. SIDE SLOPES SHALL BE 2:1 OR FLATTER.

2. SEDIMENT BASINS
   a. THE PROPOSED STORMWATER BASINS (A-H) WILL SERVE AS SEDIMENT BASINS DURING THE CONSTRUCTION PHASE. REQUIRED SEDIMENT STORAGE AND DEWATERING VOLUMES ARE SPECIFIED ON THE STANDARD E&S WORKSHEETS PRESENTED LATER IN THIS REPORT.
   b. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM EACH BASIN WHEN IT HAS REACHED THE CLEAN OUT ELEVATION NOTED ON THE CLEANOUT STAKE FOR THAT BASIN. ALL SEDIMENT REMOVED FROM THE BASIN SHALL BE DISPOSED WITHIN THE LIMITS OF DISTURBANCE, AWAY FROM STEEP SLOPES, AND IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE MULCHED AND PERMANENTLY STABILIZED WITH SEED.

3. SILT SOCK
   a. SILT SOCK SHALL BE USED TO INTERCEPT SEDIMENT-LADEN RUNOFF FROM SMALL WATERSHEDS.
   b. SILT SOCK MUST BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF THE SILT SOCK SHALL EXTEND UP-SLOPE AT A 45-DEGREE ANGLE TO THE MAIN FENCE/SOCK ALIGNMENT.
   c. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ½ THE ABOVE GROUND HEIGHT OF SOCK.
   d. ALL AREAS OF CONCENTRATED FLOW AND AT ALL AREAS WHERE THE SILT SOCK HAS COLLAPSED OR UNDERCUT DUE TO EXCESSIVE FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED.

4. INTERIM STABILIZATION / TEMPORARY EROSION CONTROL MATTING
   a. TEMPORARY SEEDING/MATTING AND MULCHING SHALL BE APPLIED WHERE INDICATED TO PROVIDE INTERIM STABILIZATION TO EXPOSED AREAS.
   b. TEMPORARY SEEDING/MULCHING/MATTING SHALL BE AS APPLIED AS SPECIFIED ON THE SEEDING SCHEDULE CONTAINED ON THE E&SPC PLAN.
   c. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED MUST BE STABILIZED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WILL BE RE-DISTURBED WITHIN 1 YEAR MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATION CONTAINED HEREON. DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS CONTAINED HEREON.

5. ALTERNATIVE ROCK CONSTRUCTION ENTRANCE
   a. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE CONSTRUCTION TRAFFIC WILL BE ENTERING AND LEAVING THE SITE. THE ROCK CONSTRUCTION ENTRANCE IS USED TO ELIMINATE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE EXISTING ROADWAY.
   b. ROCK CONSTRUCTION ENTRANCE SHALL BE A MINIMUM OF 100'L AND 20'W. REFER TO THE PLAN DETAIL FOR ADDITIONAL SPECIFICATIONS.

6. SEDIMENT SKIMMER
   a. A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.
   b. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
   c. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
   d. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.
   e. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.
   f. A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS

7. INLET FILTER BAGS
   a. INLET FILTER BAGS SHOULD BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT GREATER THAN 0.25" IN DEPTH.
   b. FILTER BAGS SHOULD BE CLEANED AND/OR REPLACED WHEN THE BAG IS HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET.
   c. ACCUMULATED SEDIMENT SHOULD BE DISPOSED OF IN THE APPROVED MANNER. BAGS THAT WILL BE REUSED SHOULD BE RINSED AT A LOCATION WHERE THE RINSE WATER WILL ENTER A SEDIMENT TRAP OR SEDIMENT BASIN.
   d. DAMAGED FILTER BAGS SHOULD BE REPLACED.

8. ROCK FILTER
   a. A RIPRAP BERM SHALL BE PROVIDED WHERE SHOWN ON THE PLAN AND AT ALL LOCATIONS OF CONCENTRATED FLOWS.
   b. A 6" LAYER OF COMPOST SHALL BE ANCHORED TO THE UPSLOPE SIDE OF THE ROCK FILTER.
   c. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE FILTER.
   d. ROCK FILTERS WILL BE REMOVED WHEN CLOGGED WITH SEDIMENT. THE STONE SHALL BE WASHED FREE OF ALL SEDIMENT OR NEW STONE SHALL BE USED TO REBUILD THE FILTER.

9. PUMPED WATER FILTER BAG
   a. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE-STICHED "J" TYPE SEAMS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
   b. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
   c. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREAS, AND SHALL DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
   d. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
   e. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
   f. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PERMANENT CONTROL MEASURES
1. PERMANENT GRASS / LEGUME COVER
   a. ALL DISTURBED AREAS THAT ARE NOT PAVED SHALL BE PERMANENTLY STABILIZED WITH GRASS TO MINIMIZE EROSION. ALL SWALES SHALL BE PERMANENTLY SEEDED AS REQUIRED IN ACCORDANCE WITH THE SEEDING SPECIFICATION SHOWN ON THE ATTACHED E&SPC PLAN.
   b. PERMANENT GRASS COVER SHALL BE APPLIED AS SPECIFIED IN ACCORDANCE WITH THE SEEDING SCHEDULE AND NOTES CONTAINED ON THE ATTACHED E&SPC PLAN.

2. SOD
   a. SOD SHALL BE INSTALLED IN AREAS WHERE PERMANENT STABILIZATION WITH SEED ALONE IS DIFFICULT.
   b. SOD MATERIALS AND INSTALLATION SHALL MEET THE APPROVAL OF THE LOCAL CONSERVATION DISTRICT.

3. RIP - RAP OUTLET PROTECTION
   a. RIP-RAP SHALL BE USED AT ALL PIPE OUTLETS TO REDUCE THE OUTFLOW VELOCITY AND MINIMIZE EROSION POTENTIAL AT THE OUTLET PIPE.
   b. RIP-RAP SHALL BE INSTALLED IN ACCORDANCE WITH THE DIMENSIONS AND MATERIALS SHOWN ON THE ATTACHED PLAN.

4. CHANNELS / SWALES
   a. ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES & WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY, OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS SECTION DETAIL.
   b. VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS, OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT. THE CHANNEL SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.

5. SWALE/SPILLWAY LINING
   a. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
   b. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
   c. ROLL CENTER BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
   d. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP, USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
   e. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
   f. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C350 MATTING).
   g. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40-FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
   h. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

STABILIZATION SPECIFICATIONS
1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
4. AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES (12 INCHES ON COMPACTED SOILS) - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUT-SLOPES SHALL HAVE A MINIMUM OF 3 INCHES OF TOPSOIL.
5. LIME AND FERTILIZER SHOULD BE APPLIED IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY AT LEAST 6 TONS OF AGRICULTURAL GRADE LIMESTONE AND 1000 POUNDS OF 10-20-20 FERTILIZER PER ACRE.
6. APPLY SEED AT REQUIRED RATES. IF LEGUMES ARE PLANTED, BE SURE TO INOCULATE THE SEED WITH THE CORRECT LEGUME INOCULANT. SEED MAY BE BROADCAST ON THE SURFACE AND A LAYER OF MULCH APPLIED AT THE NECESSARY RATES. HYDROSEEDING IS ANOTHER METHOD OF SEEDING, WHERE THE SEED, FERTILIZER, AND MULCH ARE MIXED WITH WATER TO FORM AN EMULSION. THIS METHOD SHOULD ONLY BE DONE WITH THE CORRECT EQUIPMENT OR BY PROFESSIONALS.
7. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
8. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
9. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.

MAINTENANCE
1. THE APPLICANT/OR HIS DESIGNEE SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITATES SHOWN ON THIS PLAN.
2. DIVERSIONS, CHANNELS, AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.
3. ANY PERMANENTLY SEEDED AREA THAT BECOMES ERODED OR DISTURBED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS RE-SOWN AND MULCH REAPPLIED, OR, AT THE DISCRETION OF THE OWNER, SOD INSTALLED.
4. SILT SOCK MUST BE INSTALLED AT LEVEL GRADE ALONG THE CONTOURS. BOTH ENDS OF EACH SILT SOCK SECTION MUST EXTEND AT LEAST 8 FEET UP-SLOPE AT 45-DEGREE ANGLES TO THE MAIN ALIGNMENT. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ½ THE ABOVE GROUND HEIGHT OF THE SILT SOCK.
5. ANY SILT SOCK SECTION THAT HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A NEW SECTION OF SILT SOCK.
6. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
7. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED MUST BE STABILIZED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE (1) YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.
8. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS), TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED IMMEDIATELY.
9. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
10. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION. ALL AREAS DISTURBED DURING THIS PROCESS WILL BE MULCHED AND PERMANENTLY STABILIZED WITH SEED.
11. E&S BMPS SHALL BE INSPECTED FOLLOWING EACH MEASURABLE RAINFALL THROUGH THE DURATION OF THE PROJECT. INSPECTIONS SHALL BE LOGGED ON DEP FORM 3800-FM-BCW0271D (DATED 12/2019) AND SHALL SHOW THE DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THAT THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE COUNTY CONSERVATION DISTRICT OR OTHER REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

STAGING OF EARTHMOVING
ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN IN THE FALL OF 2024. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. SHOULD ANY SINKHOLES OR GROUNDWATER SOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT.

SEQUENCE OF CONSTRUCTION - PHASE I

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCES AT LOCATIONS 1 & 2 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. INSTALL TEMPORARY ORANGE CONSTRUCTION FENCE AROUND ALL WETLANDS IDENTIFIED ON THE PLAN.
7. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS C, D, F, AND DETENTION BASIN E). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
8. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 1-15 AND 65-69 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 72-75 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREAS DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO PERMANENT STORMWATER BASINS IS COMPLETE.
9. INSTALL ROCK FILTER #1 AT THE EXISTING 24" RCP HEADWALL AT DP 008.
10. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
11. INSTALL THE BYPASS STORM SEWER PIPE FROM HW-BP2 TO EW-BP1. ENSURE ROCK FILTER #2 IS INSTALLED UPSTREAM OF HW-BP2 AND THE RIPRAP APRON IS INSTALLED AT EW-BP1.
12. INSTALL SWALE 12. ENSURE SWALE LINING IS INSTALLED IN ACCORDANCE WITH THE PLAN.
13. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM I-BP7 TO EW-BP4. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP4.
14. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM I-BP5 TO EW-BP3. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP3.
15. INSTALL THE BYPASS STORM SEWER PIPING NETWORK FROM HW-BP19 TO EW-BP8. ENSURE RIPRAP APRON IS INSTALLED AT EW-BP8, ROCK FILTER #3 IS INSTALLED UPSTREAM OF HW-BP19, AND INLET PROTECTION IS PROVIDED FOR THOSE INLETS AS SHOWN ON THE PLAN.
16. INSTALL SEDIMENT BASINS C, D, E, & F WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO PERMANENT STORMWATER BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS OR CONNECT TO DOWNSTREAM BYPASS STORM SEWER AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
17. INSTALL SWALES 9, 10, 11, 13, 14, 16, 17, 20 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.
18. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
19. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
20. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
21. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE I AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
22. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
23. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
24. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
25. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
26. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
27. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
28. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS C, D, E AND F AS REQUIRED TO INSTALL INFILTRATION BASINS C, D, AND F AND DETENTION BASIN E AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH INFILTRATION BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN EACH BASIN. INSTALL THE SILT SOCK AT LOCATIONS 72-75 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, TURBIDITY BARRIERS, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS C, D, AND F AND DETENTION BASIN E.**
29. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
30. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

SEQUENCE OF CONSTRUCTION - PHASE II

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCES AT LOCATIONS 3 & 4 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS B & H). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 15-31 AND 55-64 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 71 & 76 IS TO ENSURE SEDIMENTATION OF THE INFILTRATION BASIN BOTTOM AREAS DO NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONSTRUCTION OF THE INFILTRATION BASINS IS COMPLETE.
8. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
9. INSTALL SEDIMENT BASINS B & G WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO INFILTRATION BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS OR CONNECT TO DOWNSTREAM STORM SEWER AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
10. INSTALL SWALES 1, 7, 8, 15, 18, AND 19 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS. INSTALL ROCK FILTER #4 AT THE TERMINATION OF SWALE 1.
11. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
12. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
13. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
14. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE II AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
15. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
16. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
17. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
18. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
19. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
20. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
21. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS B AND G AS REQUIRED TO INSTALL INFILTRATION BASINS B AND H AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN INFILTRATION BASINS. INSTALL THE SILT SOCK AT LOCATIONS 71 & 76 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, TURBIDITY BARRIERS, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS B AND G.**
22. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
23. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

SEQUENCE OF CONSTRUCTION - PHASE III
1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCE AT LOCATION 5 AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASINS A & H). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 32-54 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK IN LOCATIONS 70 & 77 IS TO ENSURE SEDIMENTATION OF THE INFILTRATION BASIN BOTTOM AREAS DO NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONSTRUCTION OF THE INFILTRATION BASINS IS COMPLETE.
8. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
9. INSTALL SEDIMENT BASINS A & H WHICH WILL SERVE AS SEDIMENT BASINS DURING CONSTRUCTION AND BE CONVERTED TO INFILTRATION BASINS UPON TRIBUTARY STABILIZATION. **DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL EACH SEDIMENT BASIN. THE SEDIMENT BASINS MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING.** INSTALL THE OUTLET PIPE FROM EACH FACILITY ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORES, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENTS, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAYS. INSTALL LEVEL SPREADERS AT BASIN OUTLETS. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF BASIN. INSTALL CLEAN OUT STAKE, BAFFLES, AND SKIMMER WITHIN EACH FACILITY. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. **A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.**
10. INSTALL SWALES 2, 3, 4, 5, 6, 21, AND 22 AND ASSOCIATED DOWNSTREAM CONVEYANCE PIPING AT THIS TIME. ENSURE EROSION CONTROL LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.
11. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
12. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF EACH DWELLING, DRIVEWAY, AND STREETS AND PLACE ON THE TOPSOIL STOCKPILES AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW EACH TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
13. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE HOMES, DRIVEWAYS, AND ROADS. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
14. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES WITHIN THE LIMITS OF PHASE III AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL INLETS AS SPECIFIED ON THE E&S PLAN. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH, THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
15. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAYS, ROADS, AND CONCRETE SLABS (WHERE REQUIRED) AS PER PLAN REQUIREMENTS.
16. CONSTRUCT THE PROPOSED HOMES AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE EACH LOT.
17. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
18. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
19. PAVE THE DRIVEWAYS AND ROADS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.
20. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASINS TO INFILTRATION BASINS. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
21. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASINS A AND H AS REQUIRED TO INSTALL INFILTRATION BASINS A AND H AS SHOWN ON THE PCSM PLAN. THE INFILTRATION BASINS SHALL BE OVER-EXCAVATED AND SCARIFIED FOR ENGINEERED SOIL PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. DURING THE EXCAVATION OF EACH BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN INFILTRATION BASINS. INSTALL THE SILT SOCK AT LOCATIONS 70 & 77 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOMS. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKES, AND SKIMMERS. **WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASINS A AND H.**
22. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
23. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

CONTRACTOR NOTES
1. 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 DEP PRIOR TO IMPLEMENTATION.
2. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
3. IF SOIL IT IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
4. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
5. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE LOCAL CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS).
6. 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 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.
7. PER NPDES REQUIREMENTS, "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 SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT 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."

REVISION	DATE	BY
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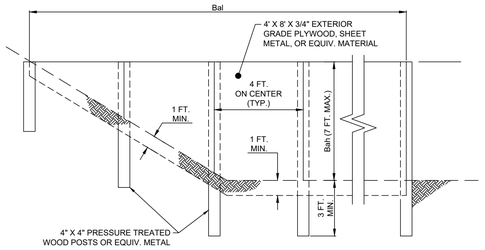
EROSION AND SEDIMENTATION POLLUTION CONTROL NOTES
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
For
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	N/A
PROJECT #	2216-22-003



BASIN OR TRAP NO.	BAFFLE		RISER	BOTTOM
	LENGTH Bal (FT)	HEIGHT Bah (FT)	CREST ELEV. TRCE (FT)	BOTTOM ELEV BE (FT)
SEDIMENT BASIN A	150	3.50	717.50	714.00
SEDIMENT BASIN B	*	3.50	690.50	687.00
SEDIMENT BASIN C	275	3.50	683.50	680.00
SEDIMENT BASIN D	90	1.75	808.75	807.00
SEDIMENT BASIN E	115	3.50	810.50	807.00
SEDIMENT BASIN F	85	3.25	736.25	733.00
SEDIMENT BASIN G	*	3.50	772.50	769.00
SEDIMENT BASIN H	125	3.50	789.50	786.00

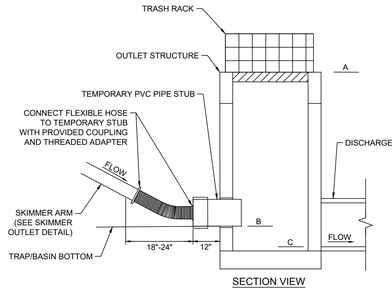
*MULTIPLE BAFFLES OF DIFFERING LENGTHS. SEE PLAN FOR CONFIGURATION.

NOTES:
1. SEE APPROPRIATE BASIN DETAIL PROPER LOCATION AND ORIENTATION.
2. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL THE SAME HEIGHT WITH SUPER SILT FENCE OR COMPOST FILTER SOCK AT THE BAFFLE LOCATION.
3. IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.
4. BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.
5. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.
6. DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTIONS.
7. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

SEDIMENT BASIN/TRAP BAFFLE DETAIL

NO SCALE

SEDIMENT BASIN/TRAP OUTLET STRUCTURE						
BASIN /TRAP	BASIN /TRAP BOTTOM ELEV	ELEV A	ELEV B	TEMPORARY STUB PIPE DIA. (IN)	ELEV C	DISCHARGE PIPE DIA. (IN)
A	714.00	717.50	714.00	4.0	715.50	15
B	687.00	690.50	687.00	4.0	685.50	24
C	680.00	683.50	680.00	6.0	677.00	18
D	807.00	808.75	807.00	4.0	800.00	15
E	807.00	810.50	807.00	4.0	805.50	24
F	733.00	736.25	733.00	4.0	729.50	15
G	769.00	772.50	769.00	6.0	768.00	15
H	786.00	789.50	786.00	4.0	784.50	15

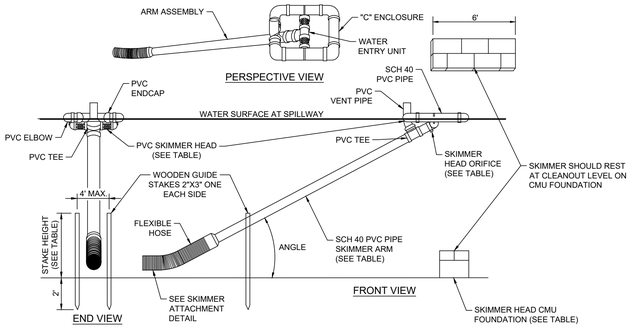


SECTION VIEW

NOTES:
1. ALL JOINTS SHALL BE WATERTIGHT.
2. TEMPORARY STUB PIPE PENETRATION TO BE FULLY GROUTED OR SEALED WITH A STAINLESS STEEL PLATE DURING CONVERSION TO PERMANENT STORMWATER BASIN.

SKIMMER ATTACHMENT - SEDIMENT BASIN/TRAP OUTLET STRUCTURE DETAIL

NO SCALE



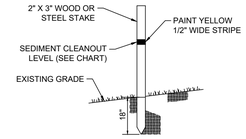
SKIMMER DESIGN CHART								
BASIN/TRAP NO.	SKIMMER ARM		SKIMMER HEAD		SKIMMER HEAD CMU		HEIGHT	WOODEN STAKES
	LENGTH (FT)	PIPE DIA. (IN)	PIPE DIA. (IN)	ORIFICE DIA. (IN)	BOTTOM	TOP ELEV		HEIGHT
BASIN A	5	3.0	4.0	3.1	714.00	715.00	1	4'
BASIN B	5	2.0	3.0	2.9	687.00	688.00	1	4'
BASIN C	5	4.0	5.0	4.4	680.00	681.00	1	4'
BASIN D	3	1.5	2.0	1.0	807.00	808.00	1	2'
BASIN E	5	3.0	4.0	3.0	807.00	808.00	1	4'
BASIN F	5	1.5	2.5	2.0	733.00	734.00	1	4'
BASIN G	5	4.0	5.0	4.8	769.00	770.00	1	4'
BASIN H	5	3.0	4.0	3.5	786.00	787.00	1	4'

SKIMMER SHALL BE MANUFACTURED BY THE FOLLOWING:
1. J.W. FAIRCLOTH & SON, INC.
   PO BOX 789
   HILLSBOROUGH, NORTH CAROLINA
   PHONE: 919-732-1244
   FAX: 919-732-1266
2. OR APPROVED EQUAL

NOTES:
1. SKIMMER SHALL BE CONSTRUCTED WITH SCHEDULE 40 PVC PIPE.
2. ALL JOINTS SHALL BE WATERTIGHT.
3. ANGLE SHOULD BE 45° OR LESS WHEN SKIMMER HEAD AT MAXIMUM ELEVATION.

E&S SKIMMER OUTLET DETAIL

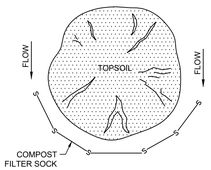
NO SCALE



SEDIMENT BASIN/TRAP CLEANOUT LEVEL	
BASIN/TRAP NO.	ELEVATION
BASIN A	715.00
BASIN B	688.00
BASIN C	681.00
BASIN D	808.00
BASIN E	808.00
BASIN F	734.00
BASIN G	770.00
BASIN H	787.00

CLEANOUT STAKE DETAIL

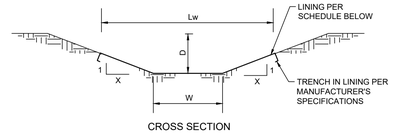
NO SCALE



NOTES:
1. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.
2. STOCKPILES ARE TO BE STABILIZED IMMEDIATELY.
3. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET.
4. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
5. STOCKPILES SHALL BE LOCATED SO THAT ALL SWALES CAN FUNCTION AS DESIGNED.

TOPSOIL STOCKPILE

NO SCALE

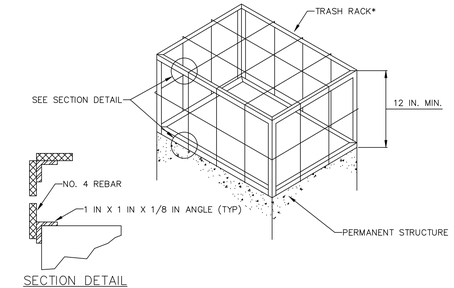


CROSS SECTION

SWALE NO.	WIDTH (W)	DEPTH (D)	SIDE SLOPE (X)	MAX. SLOPE	LINING WIDTH (Lw)	LINING	TEMPORARY LINING	STAPLE PATTERN
1	3.5'	1.5'	2	8%	9.5'	GRASS	N.A.G. P550	E
2	2'	1'	2	9%	6'	GRASS	N.A.G. S200	E
3	2'	1'	3	9%	8'	GRASS	N.A.G. SC250	E
4	1'	1'	2.5	9%	6'	GRASS	N.A.G. S75	D
5	2'	1'	3	8%	8'	GRASS	N.A.G. S200	E
6	2'	1'	6	4%	14'	GRASS	N.A.G. S75	D
7	2'	1'	2	8%	6'	GRASS	N.A.G. S200	E
8	2'	1'	7	9%	16'	GRASS	N.A.G. S200	E
9	2'	1'	7	10%	16'	GRASS	N.A.G. S200	E
10A	2'	1'	7	6.5%	16'	GRASS	N.A.G. S200	E
10B	2'	1'	4	10%	10'	GRASS	N.A.G. S200	E
11	2'	1'	3	1%	8'	GRASS	N.A.G. S75	D
12	5'	2'	3	15%	17'	RIPRAP	R-6 RIPRAP	N/A
13	2'	1'	3	5%	8'	GRASS	N.A.G. S75	D
14	1.5'	1'	3	10%	7.5'	GRASS	N.A.G. S200	E
15	3'	1'	16	2%	35'	GRASS	N.A.G. S75	D
16	2'	1'	2.5	1.6%	7'	GRASS	N.A.G. S75	D
17	3'	1'	2	4%	7'	GRASS	N.A.G. S200	E
18	2'	1'	8.5	5%	19'	GRASS	N.A.G. S200	E
19	2'	1'	3	4%	8'	GRASS	N.A.G. S75	D
20	2'	1'	3	1.3%	8'	GRASS	N.A.G. S75	D
21	1'	1'	2	20%	5'	GRASS	N.A.G. S200	E
22	1'	1'	3	20%	7'	GRASS	N.A.G. S200	E

STORMWATER SWALE DETAIL

NO SCALE



*THE UNDERDRAIN ORIFICE AND ALL RATE CONTROL ORIFICES IN THE OUTLET STRUCTURE SHALL BE SEALED WITH A STAINLESS STEEL PLATE DURING THE E&S PHASE OF CONSTRUCTION. EDGES OF THE PLATE SHALL BE CAULKED, GROUTED, OR OTHERWISE SEALED FOR WATERTIGHTNESS.

SEDIMENT BASIN/TRAP DESIGN CHART											
BASIN/TRAP NO.	BASIN BOTTOM (FT)	INVERT OF SKIMMER ARM (FT)	TOP OF GRATE (FT)	SPILLWAY ELEVATION (FT)	SIZE OF DISCHARGE PIPE (IN)	(UPSTREAM) INV OF DISCHARGE PIPE (FT)	(DOWNSTREAM) INV OF DISCHARGE PIPE (FT)	PIPE LENGTH (FT)	HEIGHT OF RISER EXT.(FT)	SKIMMER	SILT SOCK BARRIER
BASIN A	714.00	714.00	717.50	718.00	15	712.50	710.00	77	--	YES	NO
BASIN B	687.00	687.00	690.50	691.00	24	685.50	678.00	122	--	YES	NO
BASIN C	680.00	680.00	683.50	684.00	18	677.00	675.00	35	--	YES	NO
BASIN D	807.00	807.00	808.75	809.00	15	800.00	793.71	46	--	YES	NO
BASIN E	807.00	807.00	810.50	811.00	24	805.50	805.00	112	--	YES	NO
BASIN F	733.00	733.00	736.25	737.00	15	729.50	714.77	116	--	YES	NO
BASIN G	769.00	769.00	772.50	773.00	15	768.00	765.40	314	--	YES	NO
BASIN H	786.00	786.00	789.50	790.00	15	784.50	782.00	79	--	YES	NO

SEDIMENT BASIN/TRAP W/ SKIMMER DETAIL

NO SCALE

SECTION DETAIL

* TRASH RACK COMPOSED OF 1 IN. X 1 IN. X 1/8 IN. L (TYP.) AND #4 BARS (TYP.) WELDED TO THE ANGLES AND AT EACH INTERSECTION OF THE BARS; #4 BARS SPACED AT HALF THE WIDTH OF THE OPENING MAX.

NOTES:

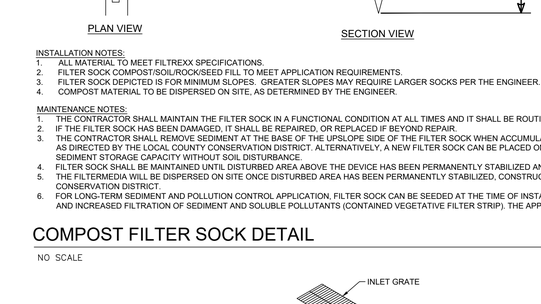
ALL JOINTS SHALL BE WATER TIGHT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

TRASH RACK MAY BE REMOVED AFTER CONVERSION FROM SEDIMENT BASIN TO PERMANENT STORMWATER BASIN.

TEMPORARY TRASH RACK FOR PERMANENT STRUCTURE DETAIL

NO SCALE

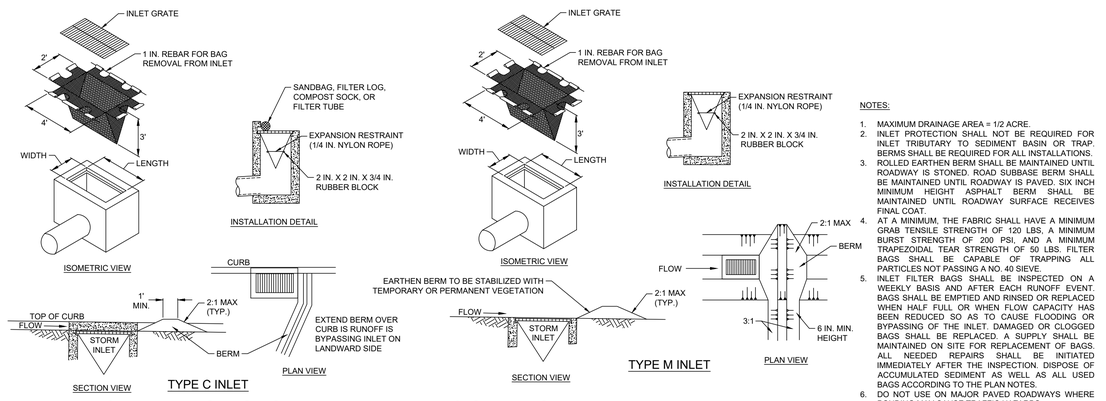


INSTALLATION NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. FILTER SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

MAINTENANCE NOTES:
1. THE CONTRACTOR SHALL MAINTAIN THE FILTER SOCK IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
2. IF THE FILTER SOCK HAS BEEN DAMAGED, IT SHALL BE REPAIRED, OR REPLACED IF BEYOND REPAIR.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE FILTER SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE FILTER SOCK, OR AS DIRECTED BY THE LOCAL COUNTY CONSERVATION DISTRICT. ALTERNATIVELY, A NEW FILTER SOCK CAN BE PLACED ON TOP OF AND SLIGHTLY BEHIND THE ORIGINAL ONE CREATING MORE SEDIMENT STORAGE CAPACITY WITHOUT SOIL DISTURBANCE.
4. FILTER SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.
5. THE FILTERMEDIA WILL BE DISPERSED ON SITE ONCE DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED, CONSTRUCTION ACTIVITY HAS CEASED, OR AS DETERMINED BY THE LOCAL COUNTY CONSERVATION DISTRICT.
6. FOR LONG-TERM SEDIMENT AND POLLUTION CONTROL APPLICATION, FILTER SOCK CAN BE SEEDED AT THE TIME OF INSTALLATION TO CREATE A VEGETATIVE FILTERING SYSTEM FOR PROLONGED AND INCREASED FILTRATION OF SEDIMENT AND SOLUBLE POLLUTANTS (CONTAINED VEGETATIVE FILTER STRIP). THE APPROPRIATE SEED MIX SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL.

COMPOST FILTER SOCK DETAIL

NO SCALE



NOTES:
1. MAXIMUM DRAINAGE AREA = 1/2 ACRE.
2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
3. ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
4. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
5. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FILTER BAG INLET PROTECTION DETAIL - TYPE M & C INLETS

NO SCALE

REVISION	DATE	BY
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EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS

PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

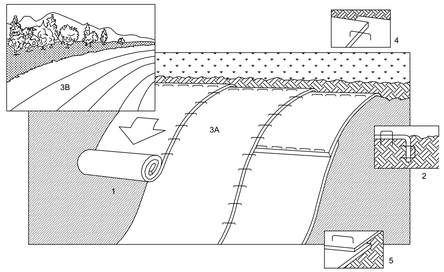
CORNWALL PROPERTIES, LLC
for
Cornwall Borough
located in
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
219 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

87

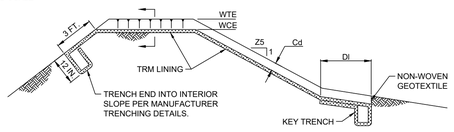
87 OF 88 SHEETS



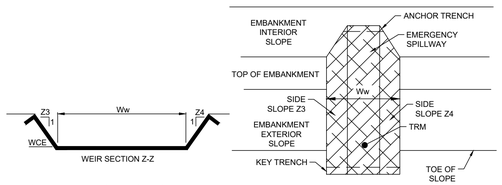
NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. REFER TO THE GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTER RECOMMENDATIONS FOR SLOPE INSTALLATIONS.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

SLOPE MATTING INSTALLATION DETAIL

NO SCALE

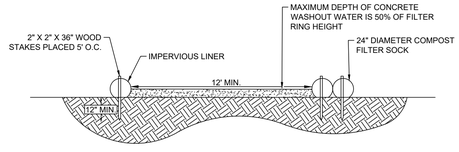


BASIN NO.	WEIR					LINING		CHANNEL	DISSIPATOR				
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGTH DI (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R-_)	RIPRAP THICK. DRt (IN)
A	3	3	719.33	718.00	125	S200	E	3	1.33	15	N/A	N/A	N/A
B	3	3	692.33	691.00	150	S200	E	3	1.33	15	N/A	N/A	N/A
C	3	3	685.33	684.00	250	S200	E	3	1.33	15	N/A	N/A	N/A
D	3	3	810.50	809.00	20	S200	E	3	1.50	15	N/A	N/A	N/A
E	3	3	812.50	811.00	35	S200	E	3	1.50	15	N/A	N/A	N/A
F	3	3	738.33	737.00	75	S200	E	3	1.33	15	N/A	N/A	N/A
G	3	3	774.33	773.00	210	S200	E	3	1.33	15	N/A	N/A	N/A
H	3	3	791.33	790.00	100	S200	E	3	1.33	15	N/A	N/A	N/A

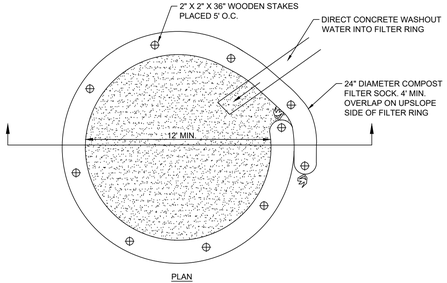


BASIN EMERGENCY SPILLWAY DETAIL

NO SCALE



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

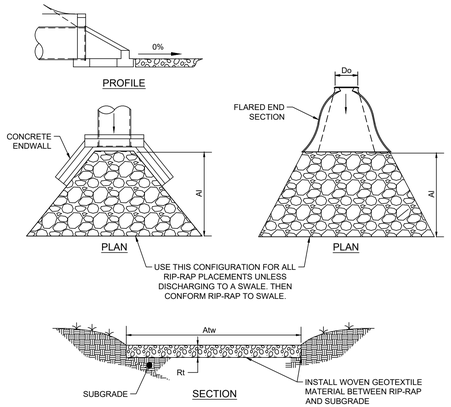


A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
ADAPTED FROM FILTREXX.

TYPICAL COMPOST SOCK WASHOUT INSTALLATION

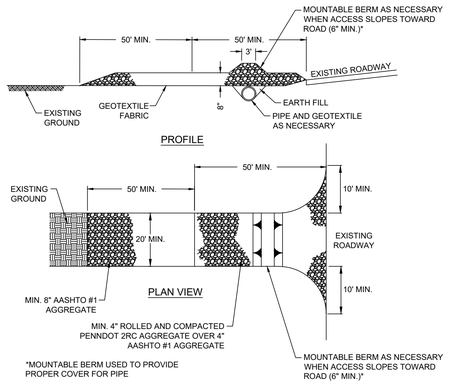
NO SCALE

PIPE NO.	PIPE DIA. Do (in.)	RIPRAP SIZE	Rt (in)	Al (ft)	Alw (ft)	Atw (ft)
EW-A1	18	R-5	27	11	5	16
EW-H1	15	R-5	27	19	4	11
EW-H13	24	R-5	27	9	6	10
EW-E1	18	R-4	18	7	5	7
EW-BP8	30	R-7	45	28	8	36
EW-F1	15	R-4	18	6	4	6
EW-D1	15	R-4	18	6	4	6
EW-G17	30	R-6	36	12	8	12
EW-G1	18	R-4	18	7	5	7
EW-G11	15	R-6	36	23	4	13
EW-B1	30	R-8	63	32	8	20
EW-BP3	15	R-4	18	8	4	12
EW-BP4	15	R-5	27	12	4	16
EW-C2	30	R-7	45	24	8	17
EW-C23	15	R-5	27	6	4	6
EW-C26	30	R-7	45	12	8	12
EW-BP1	24	R-5	27	17	6	23



FLARED END SECTION/ENDWALL RIP RAP DETAIL

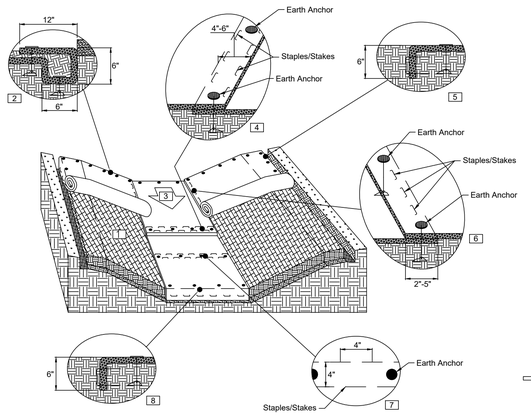
NO SCALE

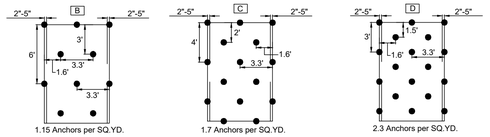


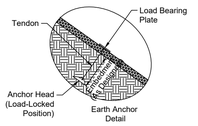
NOTES:
1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY THE MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
4. 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 ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

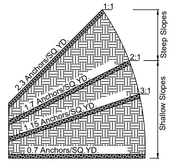
ALTERNATE ROCK CONSTRUCTION ENTRANCE

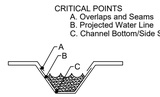
NO SCALE

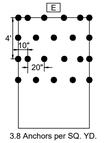












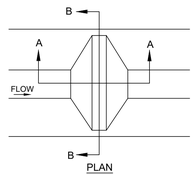
NOTES:
1. PREPARE SOIL BEFORE INSTALLING TRM, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE TRM IN A 6" (15 CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF TRM EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. USE SHOREMAX MAT AT THE CHANNEL/CULVERT OUTLET AS SUPPLEMENTAL SCOUR PROTECTION AS NEEDED. ANCHOR THE TRM WITH A ROW OF STAPLES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF TRM BACK OVER SEED AND COMPACTED SOIL. SECURE TRM OVER SOIL WITH A ROW OF STAPLES AND ANCHORS SPACED APPROXIMATELY 12 (30 CM) ACROSS THE WIDTH OF THE TRM.
3. ROLL CENTER TRM IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. TRM WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL TRM MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES AND ANCHORS IN APPROPRIATE LOCATIONS AS SHOWN IN THE FASTENER PATTERN GUIDE.
4. PLACE CONSECUTIVE TRM END-OVER-END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE TRM.
5. FULL LENGTH EDGE OF TRM AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT TRM MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) (DEPENDING ON TRM TYPE) AND FASTENED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE TRM MUST BE ANCHORED WITH A ROW OF STAKES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

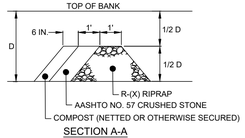
Tensar. NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633
PH: 800-772-2040
www.tensarnagreen.com

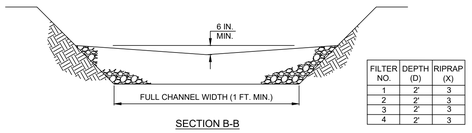
THE PERFORMANCE OF GROUND ANCHORING DEVICES IS HIGHLY DEPENDENT ON NUMEROUS SITE/PROJECT SPECIFIC VARIABLES. IT IS THE SOLE RESPONSIBILITY OF THE PROJECT ENGINEER AND/OR CONTRACTOR TO SELECT THE APPROPRIATE ANCHOR TYPE AND LENGTH. ANCHORING SHALL BE SELECTED TO HOLD THE MAT IN INTIMATE CONTACT WITH THE SOIL SUBGRADE AND RESIST PULLOUT IN ACCORDANCE WITH THE PROJECT'S DESIGN INTENT.
- ANCHOR PATTERN GUIDE CAN VARY BASED ON EARTH ANCHOR AND BLANKET SELECTION.
- IF DESIRED, THE SYSTEM CAN BE SOIL-FILLED AND SODDED AFTER TRM INSTALLATION. SOD SHOULD BE STAPLED/STAKED ACCORDING TO PLAN SPECIFICATIONS.

CHANNEL INSTALLATION EARTH ANCHOR DETAIL

NO SCALE





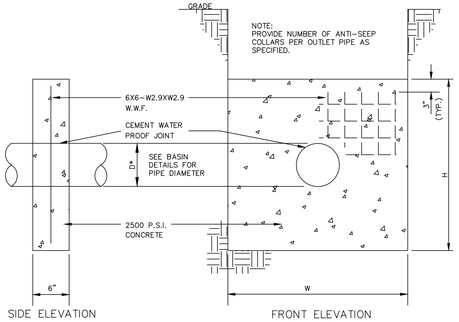


FILTER NO.	DEPTH (D)	RIPRAP (X)
1	2'	3
2	2'	3
3	2'	3
4	2'	3

NOTES:
1. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.
2. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

ROCK FILTER DETAIL

NO SCALE

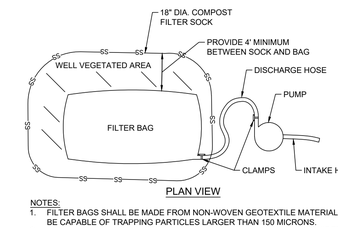


BASIN	W	H	DIA.	# OF COLLARS
A	6.79'	4.50'	15"	2
B	8.19'	5.02'	24"	2
C	8.54'	5.95'	18"	2
D	14.12'	11.83'	15"	2
E	7.11'	3.94'	24"	2

BASIN	W	H	DIA.	# OF COLLARS
F	11.83'	9.54'	15"	2
G	5.96'	3.66'	15"	2
H	6.56'	4.26'	15"	2

CONCRETE ANTI-SEEP COLLAR DETAIL

NO SCALE



NOTES:
1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE-STICHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL.
3. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
6. FILTER BAGS SHALL BE INSPECTED DAILY. IF NAY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG DETAIL

NO SCALE

APPLICATION	SPECIES	% PURE LIVE SEED	APPLICATION RATE	FERTILIZER (LBS/AC)	LIMING RATE	FINAL SEEDING DATE
NURSE CROP	ANNUAL RYEGRASS	98%	64 LBS/AC	50-50-50 N-P2O5-K2O	2000 LBS / AC	OCT. 15
PERMANENT	BIRDSFOOT TREFOIL PLUS CROWN VETCH PLUS TALL FESCUE	98% 98% 98%	P.L.S. IN LBS/AC 10 20 30	100-200-200 N-P2O5-K2O	2000 LBS / AC	MARCH 15 - OCTOBER 15

ALL SEEDED AREAS SHALL BE MULCHED WITH HAY OR STRAW APPLIED AT A RATE OF 3 TONS/ACRE. MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER AT A RATE OF 750 LBS/ACRE.

STEEP SLOPE SEEDING SPECIFICATIONS

NO SCALE

APPLICATION	SPECIES	APPLICATION RATE $_1$ (P.L.S. IN LBS/AC)	FERTILIZER (LBS/AC)	LIMING RATE $_2$	FINAL SEEDING DATE
TEMPORARY	ANNUAL RYE	174	50-50-50 N-P2O5-K2O	2000 LBS / AC	OCTOBER 30
PERMANENT	FINE FESCUES KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	60 90 25	100-200-200 N-P2O5-K2O	12000 LBS / AC	AUGUST 30 - OCTOBER 30
BASIN BOTTOM ERNST SEEDS RETENTION BASIN FLOOR MIX - LOW MAINTENANCE	PER MANUFACTURER'S SPECIFICATIONS				

1. PLS IS PURE LIVE SEED. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100. TO SECURE THE ACTUAL PLANTING RATE, DIVIDE THE POUNDS PLS BY THE PLS PERCENTAGE AS SHOWN ON THE SEED TAG OR AS PREVIOUSLY DISCUSSED. THUS, IF THE PLS CONTENT OF FINE FESCUES IS 50%, DIVIDE 7 PLS BY 0.50 TO OBTAIN 140 LBS OF SEED PER ACRE.
2. LIMING RATE SHALL BE IN ACCORDANCE WITH SOIL TEST RESULTS. APPLY 6 TONS OF AGRICULTURAL GRADE LIMESTONE PER ACRE OF LAND DISTURBED BY DIVERSIONS AND DAMS.
3. ALL SEEDED AREAS SHALL BE MULCHED WITH HAY OR STRAW APPLIED AT A RATE OF 3 TONS PER ACES. MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER AT A RATE OF 750 LBS PER ACRE.
4. ALL DIVERSIONS, CHANNELS, SED TRAPS, AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

SEEDING & FERTILIZER SPECIFICATIONS

NO SCALE

REVISION	DATE	BY
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EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS
PRELIMINARY/FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS
for
CORNWALL PROPERTIES, LLC
located in
Cornwall Borough
Lebanon County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road Lititz, PA 17543
Address: 717-626-1342
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD/JEC
BASE MAP:	MA
DRAWN:	CDS/MA
DESIGN:	CDS
CHECKED:	CDS
DATE:	10/27/23
SCALE:	AS NOTED
PROJECT #	2216-22-003

88

88 OF 88 SHEETS