REVISED FINAL PHASE 1 & FINAL PHASE 2 SUBDIVISION & LAND DEVELOPMENT PLAN

FOR

THE ESTATES AT HEARTHSIDE

OWNER: MT. PLEASANT VENTURES, LLC

LOCATED IN

NORTH LEBANON TOWNSHIP

LEBANON COUNTY, PENNSYLVANIA

SEPTEMBER 8, 2025

REVISION	DATE	BY
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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 NORTH LEBANON TOWNSHIP, AS REQUIRED BY THE NORTH LEBANON TOWNSHIP 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 NORTH LEBANON TOWNSHIP 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. TOWNSHIP 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. NORTH LEBANON TOWNSHIP SHALL NOT BE LIABLE FOR MAINTENANCE OF ANY STORM WATER MANAGEMENT FACILITIES NOT CONSTRUCTED AS SHOWN HEREIN.
6. THE TOWNSHIP ENGINEER SHALL INSPECT ALL PHASES OF DEVELOPMENT OF THE SITE. CONTACT THE TOWNSHIP AT 717-273-7132 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. TREES, SHRUBBERY, AND STRUCTURES WITHIN DRAINAGE EASEMENTS ARE PROHIBITED UNLESS APPROVED BY THE TOWNSHIP.
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 NORTH LEBANON TOWNSHIP. STORM SEWER MAINS WHICH ARE LOCATED WITHIN ANY LOTS SHALL BE OWNED AND MAINTAINED BY THE INDIVIDUAL LOT OWNER. TOWNSHIP OFFICIALS, INCLUDING NORTH LEBANON TOWNSHIP SUPERVISORS 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 TOWNSHIP RIGHT-OF-WAY MUST BE MARKED WITH A MEDALLION THAT STATES "DON'T POLLUTE, FLOWS TO WATERWAYS." THESE MEDALLIONS WILL BE PROVIDED FROM NORTH LEBANON TOWNSHIP 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.
18. ALL ENDWALLS AND FLARED END SECTIONS WITH PIPES OF 12-INCH OR GREATER DIAMETER SHALL BE PROTECTED FROM CHILD ENTRY BY PLACING REMOVABLE STAINLESS-STEEL BARS (AND COMPATIBLE MOUNTING HARDWARE) SPACED FOUR INCHES (4") APART ACROSS THE OPENING.
19. CONTRACTORS AND PROPERTY OWNERS SHALL NOT STORE CONSTRUCTION MATERIALS OR LOCATE TRASH RECEPTACLES (I.E. DUMPSTERS) ON THE PAVED CARTWAY OF STREETS.
20. ALL MUD FROM CONSTRUCTION ACTIVITIES SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER AT THE END OF EACH WORKDAY.
21. STORMWATER INLETS OR DRAINAGE PIPES WHICH BECOME FILLED WITH MUD OR DEBRIS FROM CONSTRUCTION ACTIVITIES SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER.

BUILDING CODE NOTE

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

NPDES APPROVAL

THE NPDES PERMIT WAS APPROVED ON 11/22/24. THE PERMIT WILL EXPIRE ON 12/07/29 NPDES PERMIT # PAC380267.

FLOODPLAIN NOTE

IN ACCORDANCE WITH THE FLOOD INSURANCE RATE MAP NUMBER 42075C0252E & 42075C0256E, EFFECTIVE DATE JULY 8, 2012, 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 ON 09/27/22. SEE EXISTING CONDITIONS PLAN FOR LIMITS OF EXISTING WETLANDS.

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.

AS-BUILT NOTE

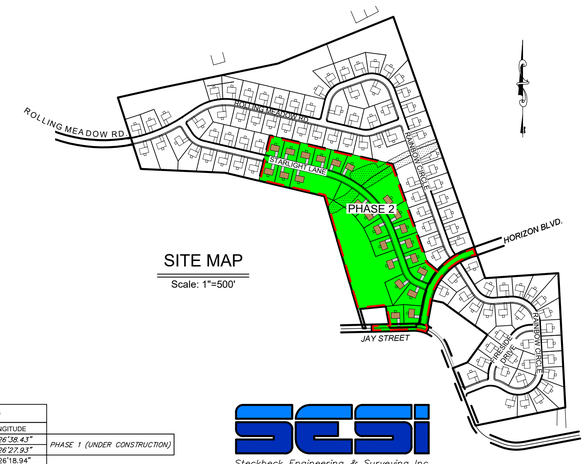
THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS OF ALL SWM BMPS INCLUDED IN THE APPROVED SUBDIVISION, LAND DEVELOPMENT OR SWM SITE PLAN AS SPECIFIED IN SECTION 406 OF THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

PURPOSE OF PLAN NOTE

THE PURPOSE OF THIS PLAN IS TO PROPOSE 23 LOTS (PHASE 2) OF THE ESTATES AT HEARTHSIDE DEVELOPMENT. THE OVERALL PLAN PROPOSES 120 LOTS. THIS PLAN ALSO PROPOSES ROAD INFRASTRUCTURE, STORMWATER MANAGEMENT FACILITIES AND PUBLIC SEWER AND WATER MAINS. THIS PLAN ALSO PROPOSES AN ADJUSTMENT TO A STORMWATER EASEMENT ON LOTS 76-79 WITHIN PHASE 1.

PRELIMINARY PLAN APPROVAL NOTE

THE PRELIMINARY PLANS WERE APPROVED BY THE NORTH LEBANON TOWNSHIP BOARD OF SUPERVISORS AT THEIR REGULARLY SCHEDULED MEETING ON APRIL 22, 2025.



SITE MAP

Scale: 1"=500'

BMP/OUTFALL LOCATIONS			
BMP	LATITUDE	LONGITUDE	
BASIN A	*40°22'13.32"*	*76°26'38.43"*	*PHASE 1 (UNDER CONSTRUCTION)*
BASIN B	*40°22'14.54"*	*76°26'27.93"*	
BASIN C	40°22'17.14"	76°26'18.94"	
BASIN D	40°22'08.58"	76°26'17.55"	
BASIN E	40°22'06.16"	76°26'21.85"	PHASE 2
BASIN F	40°22'01.34"	76°26'21.39"	
BASIN G	40°21'51.55"	76°26'10.42"	

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

OWNERS CERTIFICATION AND ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF _____)

ON THIS, THE _____ DAY OF _____, 2025, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ BEING _____ OF _____, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CORPORATION IS THE _____ OF THE PROPERTY SHOWN ON THIS PLAN, THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE CORPORATION, THAT THE PLAN THEREOF WAS MADE AT ITS DIRECTION, THAT IT ACKNOWLEDGES THE SAME TO BE ITS ACT AND PLAN, THAT IT DESIRES THE SAME TO BE RECORDED, AND THAT IT ACKNOWLEDGES ALL STORMWATER MANAGEMENT FACILITIES ARE PERMANENT FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED STORMWATER MANAGEMENT SITE PLAN BY THE TOWNSHIP.

_____ _____
Name/Title DATE
MT. PLEASANT VENTURES, LLC

_____
NOTARY PUBLIC

LEBANON COUNTY PLANNING DEPARTMENT

_____ _____
REVIEWED DATE

CERTIFICATION OF PLAN ACCURACY

I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND COMPLIES WITH THE PROVISIONS OF THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

THE PROPOSED STORMWATER MANAGEMENT BMP(S) IS/ARE OR IS/ARE NOT UNDERLAIN BY LIMESTONE.

_____ _____
STEPHEN A. SHERK, P.E. DATE

CERTIFICATION OF SURVEY ACCURACY

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 NORTH LEBANON TOWNSHIP, NORTH LEBANON TOWNSHIP AND THE CITY OF LEBANON SUBDIVISION AND LAND DEVELOPMENT ORDINANCES.

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

NORTH LEBANON TOWNSHIP PLANNING COMMISSION

AT A MEETING HELD ON_____, 2025, THE PLANNING COMMISSION OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA REVIEWED THIS PLAN AND A COPY OF THE REVIEW COMMENTS IS ON FILE IN THE TOWNSHIP OFFICE.

_____ _____
CHAIRMAN OR VICE CHAIRMAN DATE

NORTH LEBANON TOWNSHIP SUPERVISORS

AT A MEETING HELD ON_____, 2025, THE BOARD OF SUPERVISORS OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA APPROVED THE FINAL LAND DEVELOPMENT PLAN FOR THE PROPERTY AS SHOWN HEREON. NO OTHER PLAN OR PLANS SHALL BE RECOGNIZED. APPROVAL INCLUDES ALL DOCUMENTATION, INCLUDING THE COMMENTS OR REQUIREMENTS OF OFFICIAL REVIEWING INDIVIDUALS OR AGENCIES. APPROVAL IS BASED ON COMPLIANCE WITH APPLICABLE ORDINANCES, RULES AND REGULATIONS, AND SHALL NOT BE CONSTRUED AS A GUARANTEE TO ANY PERSON OR ORGANIZATION THAT THE DESIGN OF ANY PART OF THE PLAN WILL FUNCTION AS ANTICIPATED UNDER ANY OR ALL CONDITIONS OR SITUATIONS. ADDITIONALLY, THAT BY REVIEW AND/OR APPROVAL OF THE PLAN, THE TOWNSHIP EXPRESSLY DECLINES THE ASSUMPTION OF LIABILITY ERRORS, OMISSIONS OR MISTAKES IN JUDGEMENT IN THE DESIGN, ENGINEERING, CONSTRUCTION, OR EXPECTED FUNCTION OF THE MATTERS REVIEWED AND/OR APPROVED.

_____ _____
APPROVED DATE

_____ _____
APPROVED DATE

_____ _____
APPROVED DATE

NORTH LEBANON TWP PLANNING COMMISSION

AT A MEETING HELD ON_____, 2025, THE PLANNING COMMISSION OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA RECOMMENDED FOR APPROVAL THE LAND DEVELOPMENT PLAN OF THE PROPERTY AS SHOWN HEREON.

_____ _____
CHAIRPERSON DATE

NORTH LEBANON TOWNSHIP ENGINEER

REVIEWED BY THE NORTH LEBANON TOWNSHIP ENGINEER THIS DAY OF_____, 2025.

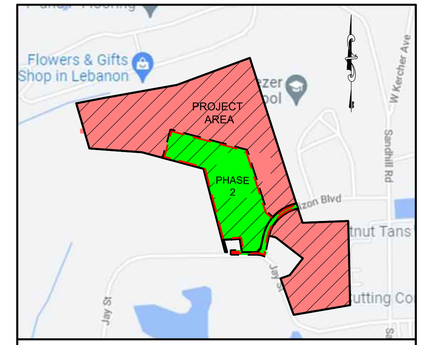
_____ _____
REVIEWED DATE

LIST OF DRAWINGS

Phase 2 Drawing List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	NOTES
3	OVERALL EXISTING CONDITIONS PLAN
4	EXISTING CONDITIONS PLAN
5	EXISTING CONDITIONS PLAN
6	EXISTING CONDITIONS PLAN
7	EXISTING CONDITIONS PLAN
8	OVERALL SUBDIVISION PLAN
9	SUBDIVISION PLAN
10	SUBDIVISION PLAN
11	LAYOUT PLAN
12	LAYOUT PLAN
13	EASEMENT PLAN
14	EASEMENT PLAN
15	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
16	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
17	POST CONSTRUCTION STORMWATER MANAGEMENT NOTES
18	POST CONSTRUCTION STORMWATER MANAGEMENT NOTES
19	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
20	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
21	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
22	GRADING PLAN
23	GRADING PLAN
24	UTILITY PLAN
25	UTILITY PLAN
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27	LANDSCAPING PLAN
28	LIGHTING PLAN
29	LIGHTING PLAN
30	PROFILES
31	PROFILES
32	PROFILES
33	PROFILES
34	PROFILES
35	SITE DETAILS
36	SANITARY SEWER DETAILS
37	SANITARY SEWER DETAILS
38	WATER DETAILS
39	EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
40	EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
41	EROSION & SEDIMENTATION POLLUTION CONTROL NOTES
42	EROSION & SEDIMENTATION POLLUTION CONTROL NOTES
43	EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS
44	EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS

IMPERVIOUS COVER BREAKDOWN (ENTIRE DEVELOPMENT)

PROPOSED STREETS (INCLUDING CURBING)	313,078 S.F.	7.18 AC.
PROPOSED SIDEWALKS	46,657 S.F.	1.07 AC.
PROPOSED DRIVEWAYS	115,772 S.F.	2.65 AC.
PROPOSED DWELLINGS	292,800 S.F.	6.72 AC.



LOCATION MAP

1" = 800'

OWNERS

MT. PLEASANT VENTURES, LLC
2021 SOUTH FORGE ROAD
PALMYRA, PA 17078
PHONE:717-821-1129
CONTACT: GERALD MUSSER

SOURCE OF TITLE

CURRENT DEED BOOK: 2250-7984, TR. 1
PIN: 27-2333478-380088-0000
PLAN: 69-111
ACRES: 56.40 AC. (*2,456,763 S.F.*)

CURRENT DEED BOOK: 2250-7984, TR. 2
PIN: 27-2334783-378807-0000
PLAN: 69-111
ACRES: 16.53 AC. (*720,083 S.F.*)

ZONING COMPLIANCE CHART

NORTH LEBANON TOWNSHIP:
ZONING DISTRICT: "LOW DENSITY RESIDENTIAL (R-1)"

	REQUIRED	PROPOSED
MIN. LOT AREA	15,000 S.F.	15,000 S.F.
MIN. LOT WIDTH	110'	110' (MIN.)
MAX. LOT COVERAGE	30%	30% (MAX.)
FRONT YARD SETBACK -BUILDING	40'	40' (MIN.)
SIDE YARD SETBACK -BUILDING	15'	15' (MIN.)
REAR YARD SETBACK -BUILDING	25'	25' (MIN.)
BUILDING HEIGHT	35'	35' (MAX.)

SITE DATA

SITE AREA	72.93 Acres
SITE ZONING	LOW DENSITY RESIDENTIAL (R-1)
EXISTING USE	AGRICULTURAL
PROPOSED USE	SINGLE FAMILY RESIDENTIAL
SOURCE OF WATER	PUBLIC
SOURCE OF SEWER	PUBLIC
SITE ADDRESS	1415 JAY STREET
STORMWATER MANAGEMENT DISTRICT	LEBANON COUNTY RESIDUAL

PHASING SCHEDULE

PHASE 1	- 29 UNITS	START: 2025/COMPLETE: 2025
PHASE 2	- 23 UNITS	START: 2025/COMPLETE: 2026
PHASE 3	- 13 UNITS	START: 2026/COMPLETE: 2027
PHASE 4	- 24 UNITS	START: 2027/COMPLETE: 2028
PHASE 5	- 31 UNITS	START: 2028/COMPLETE: 2029

120 UNITS TOTAL

PENNSYLVANIA ONE CALL SYSTEM INC. 1-800-242-1776 SERVICE YOU CAN DEPEND ON - DIGSAFELY. BEFORE YOU DIG

SERIAL NUMBER: 20252312450 (NORTH LEBANON TOWNSHIP)
DATE: 9/19/25

STECKBECK ENGINEERING & SURVEYING, INC., HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974 AS AMENDED BY ACT 121 of 7108 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). NORTH LEBANON TOWNSHIP, LEBANON COUNTY ID NO. 20220671279.

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.

LEBANON AUTHORITY CITY OF
2311 RIDGEVIEW ROAD
LEBANON, PA 17042
CONTACT – BOB SENTZ
BSENTZ@LEBANONAUTHORITY.COM
(717) 272-2841

FIRSTENERGY PENELEC
21 S MAIN ST
AKRON, OH 44308
CONTACT – CARA WARREN
CARAWARREN@FIRSTENERGYCORP.COM

NORTH LEBANON TOWNSHIP
725 KIMMERLINGS ROAD
LEBANON, PA 17046
CONTACT – OFFICE PERSONNEL
(717) 273-7132

VERIZON PENNSYLVANIA LLC
1050 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
CONTACT – DIANE REDILLA
diane.c.d.della@verizon.com
(215) 591-6210

UGI UTILITIES INC
1301 AIP DR
MIDDLETOWN, PA 17057
CONTACT – GEOFFREY FERGUSON
GRERGUSON@ugi.com

USIC
9045 N RIVER RD SUITE 300
INDIANAPOLIS, IN 46240
CONTACT – JEFFREY TRUMBOWER
JeffTrumbower@usic.com
(317) 810-8254

PENNSYLVANIA ELECTRIC CO.
341 WHITE POND DRIVE
AKRON, OH. 44320
CONTACT – MELLSYSSA ADAMS
madam@firstenergycorp
(330) 436-4013

NLTMA SANITARY SEWER NOTES

1. EXISTING SEWER WILL NOT BE DISTURBED IN ANY WAY.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/NLTMA STANDARDS.
3. PROPOSED GRAVITY LATERALS SHALL BE SLOPED AT A MINIMUM 1/4" PER FOOT, UNLESS OTHERWISE NOTED ON THE PLAN.
4. STANDARD CLEANOUTS MUST BE "SCREWED ON" CAPS (PLUGS) AND THEY ARE TO BE WATER TIGHT.
5. SPACE BETWEEN TEST TEE & SEWER MAIN WILL BE AS REQUIRED BY NLTMA.
6. TRENCH MUST REMAIN OPEN FOR INSPECTION. ANY TRENCH THAT IS FILLED MUST BE UNCOVERED FOR INSPECTION IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT NLTMA FOR INSPECTION.
7. A PRE-CONSTRUCTION MEETING WILL BE REQUIRED.
8. METAL MARKING TAPE WILL BE PLACED 12" ABOVE THE PIPE FOR THE ENTIRE HORIZONTAL RUN.
9. AIR TESTING FOR ALL SEWER MAINS AND LATERALS SHALL BE 5LBS/5 MIN. NO DROP.
10. VACUUM TEST OF MANHOLES SHALL BE 10 LBS. VACUUM WITH AN ALLOWABLE DROP OF 1LB/1 MIN.
11. VACUUM TEST UNIT SHALL BE PLACED IN THE FRAME AREA ONLY.
12. LINE WILL BE PLUGGED AT THE COMPLETION OF EACH WORKDAY TO PREVENT DEBRIS AND WATER FROM ENTERING THE LINE.
13. AN APPOINTED NLTMA INSPECTOR MUST BE PRESENT AT ALL TIMES WHEN ANY SEWER WORK IS PERFORMED.
14. INSPECTORS WILL BE AVAILABLE FROM 8 AM TO 3 PM. A 1/2 HOUR LUNCH BREAK WILL BE TAKEN DAILY DURING WHICH TIME NO SEWER WORK WILL BE ALLOWED.
15. ALL LINES SHALL BE FLUSHED WITH FRESH WATER TO CLEAR CONSTRUCTION DEBRIS UPON COMPLETION OF THE PROJECT.
16. MANDRELL TESTING WILL BE CONDUCTED FOR ALIGNMENT OF THE PIPE.
17. DAMAGED OR CRACKED MANHOLE SECTIONS WILL BE REJECTED.
18. DOUBLE MASTIC ON ALL JOINTS ON MANHOLES.
19. STEPS MUST BE ALIGNED.
20. NO CONCRETE PATCHING OF ANY KIND WILL BE ACCEPTED ON LEAKING JOINTS OR ON ANY CRACKED OR DAMAGED MANHOLE SECTIONS.
21. GROUTING OF THE INVERT IN ANY INVERT OUT PIPES SHALL BE DONE.
22. AFTER CONSTRUCTION IS COMPLETE THE CONSTRUCTED SEWER SHALL NOT BE TESTED UNTIL 30 DAYS HAS PASSED.
23. BASEMENT SERVICE IS ENCOURAGED, AS NO GRINDER PUMPS WILL BE ALLOWED.
24. NO DROP MANHOLES OR INSIDE SPLASH MANHOLES WILL BE ALLOWED.
25. P-TRAP MUST BE INSTALLED AT THE END OF EACH LATERAL CONNECTED TO THE MAIN TO FACILITATE LATERAL LOCATION.
26. BUILDING OWNER SHALL BE REQUIRED TO PARTICIPATE IN THE NLTMA "STRONG WASTE MANAGEMENT PROGRAM" WHICH REQUIRES AN AGREEMENT BY THE OWNER TO MONITOR, SAMPLE AND TEST SEWAGE DISCHARGE SEMI-ANNUALLY AT OWNER'S EXPENSE AND SUPPLY RESULTS TO NLTMA.
27. BUILDING OWNER GRANTS PERPETUAL RIGHT OF ACCESS TO THE SEWER LATERALS AND MANHOLES SHOWN HEREON FOR PURPOSE OF INSPECTION, MONITORING AND/OR SAMPLING.
28. NO PRODUCTION AREA OR STORAGE AREA FLOOR DRAINS ARE ALLOWED.
29. THE APPLICANT ACKNOWLEDGES THAT APPROVAL OF THIS LAND DEVELOPMENT PLAN DOES NOT CONSTITUTE APPROVAL OF THE WASTEWATER DISCHARGE FROM THE PROPOSED FACILITY, APPLICANT ACKNOWLEDGES THAT DISCHARGE MUST COMPLY WITH THE CRITERIA SET FORTH IN THE NORTH LEBANON TOWNSHIP MUNICIPAL AUTHORITY (NLTMA) STRONG WASTE MANAGEMENT ORDINANCE. COMPLIANCE WITH THE ORDINANCE MIGHT NECESSITATE THAT APPLICANT CONSTRUCT PRETREATMENT FACILITIES TO TREAT WASTEWATER PRIOR TO DISCHARGE INTO THE NLTMA SEWER SYSTEM. APPLICANT ACKNOWLEDGES THEY ARE REQUIRED TO MAKE APPLICATION TO NLTMA FOR A STRONG WASTE MANAGEMENT PERMIT AND THAT NO DISCHARGE FROM THE SUBJECT FACILITY CAN COMMENCE UNTIL APPROVAL HAS BEEN GRANTED BY NLTMA AND/OR THE PERMIT HAS BEEN ISSUED IF PERMIT IS DEEMED NECESSARY BY NLTMA UNDER THE TERMS OF THE STRONG WASTE MANAGEMENT ORDINANCE.

STANDARD WATER SUPPLY NOTE

1. WATER SUPPLY FOR THE LOT OR LOTS SHALL BE PROVIDED BY EXTENSION OF THE EXISTING NLTMA PUBLIC WATER SYSTEM. CONNECTION TO THE PUBLIC WATER SYSTEM IS REQUIRED.

STANDARD SEWER SUPPLY NOTE

1. SEWAGE DISPOSAL FOR THE LOT SHALL BE PROVIDED BY EXTENSION OF THE EXISTING NLTMA PUBLIC SEWER SYSTEM. CONNECTION TO THE PUBLIC SEWER SYSTEM IS REQUIRED.

GEOTECHNICAL ENGINEERING NOTES:

1. A GEOTECHNICAL ENGINEERING INVESTIGATION WAS CONDUCTED AND PREPARED BY ECS MID-ATLANTIC, LLC, RESULTS ARE PROVIDED IN THE GEOTECHNICAL REPORT DATED AUGUST 2, 2022.
2. IT IS RECOMMENDED THAT PROBING ON A 25-FOOT GRID IS COMPLETED WITHIN EACH BASIN BOTTOM TO EVALUATE PROPER OFFSET DISTANCE FROM BEDROCK LIMITING ZONES.
3. AN AUTHORIZED REPRESENTATIVE FROM THE GEOTECHNICAL ENGINEER SHALL BE ON LOCATION, AT THE TIME OF CONSTRUCTION, TO VERIFY THE SUBGRADE CONDITIONS OF ALL BMPS.
4. INFILTRATION FACILITIES LOCATED WITHIN 25 FEET OF A BUILDING REQUIRE AN APPROVAL LETTER FROM THE GEOTECHNICAL ENGINEER.
5. ROCK EXCAVATION SHOULD BE EXPECTED TO ACHIEVE THE REQUIRED 2-FOOT BUFFER WITHIN THE VARIOUS INFILTRATION FACILITIES BASED ON TESTING PREVIOUSLY COMPLETED.

OPERATIONS STANDARDS NOTE:

1. THE APPLICANT/OWNER/DEVELOPER SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 316 – OPERATIONS AND PERFORMANCE STANDARDS OF THE ZONING ORDINANCE. COMPLIANCE REGULATIONS INCLUDE BUT NOT LIMITED TO AIR POLLUTION, AIRBORNE EMISSIONS, ODOR, OPEN BURNING, ELECTRICAL DIESEL, GAS OR OTHER SOURCES OF POWER, FIRE AND EXPLOSIVES, GLARE AND HEAT, MATERIALS AND WASTE STORAGE, HANDLING AND DISPOSAL OF WASTE, NOISE POLLUTION, SEWAGE AND OTHER WASTE DISPOSAL, VIBRATION AND WATER QUALITY.

PRE-CONSTRUCTION / INSPECTION NOTES

1. THE APPLICANT AND HIS CONTRACTOR ARE REQUIRED TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL ENGINEERS AND MUNICIPALITIES PRIOR TO THE COMMENCEMENT OF WORK.
2. THE APPLICANT AND HIS CONTRACTOR ARE RESPONSIBLE FOR PROVIDING A MINIMUM OF THREE BUSINESS DAYS NOTICE TO THE MUNICIPAL ENGINEERS OFFICE FOR INSPECTIONS OF ALL ESCROWED ITEMS:

   NORTH LEBANON TOWNSHIP – ARRO ENGINEERING – 717-569-7021

   IF ESCROWED ITEMS ARE INSTALLED, PLACED OR CONSTRUCTED WITHOUT THE REQUIRED NOTICE AND INSPECTION, THEN ITEMS WILL NEED TO BE REMOVED IN TOTALITY AND REPLACED AT NO COST TO THE MUNICIPALITY UNDER THE CONSTRICTION OBSERVATION OF THE MUNICIPAL ENGINEER.
3. THE MUNICIPAL ENGINEER SHALL INSPECT ALL PHASES OF DEVELOPMENT OF THE SITE, AND SHALL BE NOTIFIED OF THE COMMENCEMENT OF SUCH WORK AT LEAST 5 BUSINESS DAYS PRIOR TO BEGINNING. IT IS THE RESPONSIBILITY OF THE OWNER, SUBDIVIDER, DEVELOPER OR HIS AGENT TO NOTIFY THE MUNICIPAL ENGINEER 24 HOURS IN ADVANCE OF THE COMPLETION OF EACH IDENTIFIED PHASE OF DEVELOPMENT.
4. ANY PORTION OF THE WORK WHICH DOES NOT COMPLY WITH THE APPROVED PLAN MUST BE CORRECTED BY THE DEVELOPER. NO WORK MAY PROCEED ON ANY SUBDIVISION OR LAND DEVELOPMENT OR BUILDING CONSTRUCTION UNTIL THE REQUIRED CORRECTIONS HAVE BEEN MADE.
5. IF AT ANY STATE OF THE WORK, THE MUNICIPALITY OR ITS ENGINEER DETERMINES THAT THE SOIL OR OTHER CONDITIONS ARE NOT AS STATED OR SHOWN ON THE PLAN, IT MAY REFUSE TO APPROVE FURTHER WORK AND THE MUNICIPALITY OR ITS DESIGNEE MAY REVOKE EXISTING APPROVALS UNTIL A REVISED PLAN IS SUBMITTED AND APPROVED.
6. A COPY OF ALL GEOTECHNICAL ENGINEER INSPECTIONS SHALL BE PROVIDED TO THE MUNICIPALITY.

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.

STANDARD STORMWATER 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 COUNTY, AS REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION & LAND DEVELOPMENT 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 NORTH LEBANON TOWNSHIP SUBDIVISION & LAND DEVELOPMENT 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. TOWNSHIP OFFICIALS AND THEIR AGENTS OR EMPLOYEES HAVE THE RIGHT OF ACCESS FOR INSPECTION AND, IN CASES OF CONSTRUCTION DEFAULT, CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITIES.
6. CONTACT NORTH LEBANON TOWNSHIP AT (717) 273-7132 PRIOR TO CONSTRUCTION TO COORDINATE INSPECTIONS OF STORMWATER MANAGEMENT FACILITIES BY THE TOWNSHIP ENGINEER. NO OCCUPANCY IS PERMITTED UNTIL STORMWATER MANAGEMENT FACILITIES HAVE BEEN INSTALLED AND APPROVED BY THE NORTH LEBANON TOWNSHIP ENGINEER.
7. ROOF DRAINS SHALL NOT BE CONNECTED TO STREETS, SANITARY SEWERS OR ROADSIDE DITCHES.
8. INFILTRATION FACILITIES HAVE BEEN TESTED AND DESIGNED IN ACCORDANCE WITH ACCEPTABLE MEASURES AND ONCE CONSTRUCTED MUST WORK AS DESIGNED. FAILURE OF INFILTRATION FACILITIES TO WORK AS DESIGNED WILL LEAD TO TESTING. IF TESTING INDICATES FACILITIES WERE COMPACTED OR OTHERWISE NOT CONSTRUCTED AS PER PLAN, THE INSTALLER OF THE FACILITIES WILL BE RESPONSIBLE FOR CONSTRUCTING THE FACILITIES TO THEIR DESIGNED WORKING CONDITION.
9. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON RECORDING.
10. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON RECORDING.
11. THESE STRUCTURES ARE THE RESPONSIBILITY OF THE PROPERTY OWNER WHEN LOCATED ON PRIVATE PROPERTY. ACCESS TO BE PROVIDED TO THE TOWNSHIP FOR THE PURPOSE OF INSPECTION TO THE TOWNSHIP.
12. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON RECORDING.

STORM WATER MANAGEMENT OWNERSHIP & MAINTENANCE PROGRAM:

1. ALL STORM WATER FACILITIES WILL BE OWNED BY THE GRANTOR, ITS SUCCESSORS AND ASSIGNS. THIS INCLUDES ALL STORM WATER BMP'S AS SHOWN ON THESE PLANS.
2. ALL DRAINAGE COURSES, SWALES, STORM WATER INLETS, PIPES, CONDUITS, DETENTION BASINS AND OTHER STORM WATER MANAGEMENT FACILITIES SHALL BE INSTALLED, CONSTRUCTED AND MAINTAINED BY THE GRANTOR, ITS SUCCESSORS AND ASSIGNS, IN A FIRST-CLASS CONDITION IN CONFORMANCE WITH THE PLAN, AS APPROVED BY THE NORTH LEBANON TOWNSHIP BOARD OF SUPERVISORS, AND IN A MANNER SUFFICIENT TO MEET OR EXCEED THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH ON THE PLAN.
   A. LIMING, FERTILIZING, SEEDING AND MULCHING OF VEGETATED CHANNELS AND ALL OTHER UNSTABILIZED SOILS OR AREAS ACCORDING TO THE SPECIFICATIONS IN THE "EROSION AND SEDIMENT POLLUTION CONTROL MANUAL" PUBLISHED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OR SUCH SIMILAR ACCEPTED STANDARD.
   B. REESTABLISHMENT OF VEGETATION BY SEEDING, MULCHING, AND USE OF EROSION MATTING OR SODDING OF SCOURED AREAS OR AREAS WHERE VEGETATION HAS NOT BEEN SUCCESSFULLY ESTABLISHED.
   C. MOWING AS NECESSARY TO MAINTAIN ADEQUATE STANDS OF GRASS AND TO CONTROL WEEDS. CHEMICAL WEED CONTROL MAY BE USED IF FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS ARE MET. SELECTION OF SEED MIXTURES SHALL BE SUBJECT TO APPROVAL BY THE NORTH LEBANON TOWNSHIP.
   D. REMOVAL OF SILT FROM ALL PERMANENT STRUCTURES WHICH TRAP SILT OR SEDIMENT IN ORDER TO KEEP THE MATERIAL FROM BUILDING UP IN GRASS WATERWAYS AND THUS REDUCING THEIR CAPACITY.
   E. REGULAR INSPECTION OF THE AREAS IN QUESTION TO ASSURE PROPER MAINTENANCE AND CARE.
   F. ALL PIPES, SWALES, AND DETENTION FACILITIES SHALL BE KEPT FREE OF ANY DEBRIS OR OTHER OBSTRUCTION. GRANTOR, ITS SUCCESSORS AND ASSIGNS, SHALL BE RESPONSIBLE FOR PERFORMING THE FOREGOING MAINTENANCE.
3. GRANTOR, FOR ITSELF, ITS SUCCESSORS AND ASSIGNS, AGREES THAT THE FAILURE TO MAINTAIN ALL DRAINAGE COURSES, SWALES, STORM WATER INLETS, PIPES, CONDUITS, DETENTION BASINS, AND OTHER STORM WATER MANAGEMENT FACILITIES IN A FIRST-CLASS CONDITION IN CONFORMANCE WITH THE AGREEMENT AND THE PLAN SHALL CONSTITUTE A NUISANCE AND SHALL BE ABATABLE BY THE NORTH LEBANON TOWNSHIP AS SUCH.
4. GRANTOR, FOR ITSELF, ITS SUCCESSORS AND ASSIGNS, HEREBY GRANTS NORTH LEBANON TOWNSHIP, AT ANY TIME AND FROM TIME TO TIME, BY ITS AUTHORIZED REPRESENTATIVES, TO ENTER UPON THE PREMISES TO INSPECT THE STORM WATER MANAGEMENT FACILITIES.
5. IN THE EVENT NORTH LEBANON TOWNSHIP MAY REQUIRE THAT GRANTOR, HIS SUCCESSORS AND ASSIGNS, OR ANY FUTURE OWNER OR OCCUPIER OF THE PREMISES, OR ANY PART THEREOF, TAKE SUCH CORRECTIVE MEASURES AS THE NORTH LEBANON TOWNSHIP MAY DEEM REASONABLY NECESSARY TO BRING THE PREMISES INTO COMPLIANCE WITH THE AGREEMENT AND WITH THE PLAN, AS APPROVED BY THE NORTH LEBANON TOWNSHIP BOARD OF SUPERVISORS.
6. UPON THE FAILURE OF THE OWNER OR OCCUPIER OF THE PREMISES TO COMPLY WITH THE TERMS OF THE STORM WATER MANAGEMENT AGREEMENT OR TO TAKE CORRECTIVE MEASURES FOLLOWING THIRTY (30) DAYS' NOTICE FROM THE NORTH LEBANON TOWNSHIP, THE NORTH LEBANON TOWNSHIP, THROUGH ITS AUTHORIZED REPRESENTATIVES, MAY TAKE SUCH CORRECTIVE MEASURES AS IT DEEMS REASONABLY NECESSARY TO BRING THE PREMISES INTO COMPLIANCE WITH THE AGREEMENT AND WITH THE PLAN. GRANTOR, HIS SUCCESSORS AND ASSIGNS, TO THE REMOVAL OF ANY BLOCKAGE OR OBSTRUCTION FROM DRAINAGE PIPES, SWALES AND DETENTION BASINS, AND MAY CHARGE THE COST THEREOF TO GRANTOR, ITS SUCCESSORS OR ASSIGNS, OR ANY OWNER OF THE PREMISES AND, IN DEFAULT OF SUCH PAYMENT, MAY CAUSE A MUNICIPAL LIEN TO BE IMPOSED UPON THE PREMISES OR ANY PART THEREOF.
7. GRANTOR HEREBY IMPOSES UPON THE PREMISES FOR THE BENEFIT OF ALL PRESENT AND FUTURE OWNERS OF THE PREMISES OR ANY PART OF THE PREMISES, NORTH LEBANON TOWNSHIP AND ALL OTHER PROPERTY OWNERS AFFECTED BY THE STORM WATER MANAGEMENT FACILITIES, THE PERPETUAL NONEXCLUSIVE RIGHT, PRIVILEGE AND EASEMENT FOR THE DRAINING OF STORM WATER IN AND THROUGH THE DRAINAGE COURSES, SWALES, STORM WATER INLETS, PIPES, CONDUITS, DETENTION BASINS AND OTHER STORM WATER MANAGEMENT FACILITIES DEPICTED ON THE PLAN OR PLANS SUBMITTED TO NORTH LEBANON TOWNSHIP OR HEREAFTER MADE OF RECORD AND NOW OR HEREAFTER INSTALLED ON OR CONSTRUCTED UPON THE PREMISES AND, IN ADDITION, EASEMENTS OF ACCESS TO THE STORM WATER MANAGEMENT FACILITIES.
8. GRANTOR SHALL INCLUDE A SPECIFIC REFERENCE TO THE STORM WATER MANAGEMENT AGREEMENT AND DECLARATION OF EASEMENT IN ANY DEED OF CONVEYANCE FOR THE PREMISES OR ANY PART THEREOF.
9. GRANTOR AGREES TO INDEMNIFY NORTH LEBANON TOWNSHIP, LEBANON CO., AND ALL OF IT'S ELECTED AND APPOINTED OFFICIALS; AGENTS AND EMPLOYEES (HEREINAFTER COLLECTIVELY REFERRED TO AS THE "INDEMNITEES"), AGAINST AND HOLD INDEMNITEES HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR DAMAGE, INCLUDING ATTORNEYS' FEES AND COSTS OF INVESTIGATION AND DEFENSE, AS A RESULT OF CLAIMS, DEMANDS, COSTS OR JUDGMENTS AGAINST INDEMNITEES WHICH ARISE AS A RESULT OF THE DESIGN, INSTALLATION, CONSTRUCTION OR MAINTENANCE OF THE STORM WATER MANAGEMENT FACILITIES.
10. NORTH LEBANON TOWNSHIP MAY, IN ADDITION TO THE REMEDIES PRESCRIBED HEREIN, PROCEED WITH ANY ACTION AT LAW OR IN EQUITY TO BRING ABOUT COMPLIANCE WITH THE NORTH LEBANON TOWNSHIP STORM WATER MANAGEMENT ORDINANCE AND THE AGREEMENT.
11. GRANTOR'S PERSONAL LIABILITY UNDER THE AGREEMENT SHALL CEASE AT SUCH TIME AS (A) ALL STORM WATER MANAGEMENT FACILITIES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE NORTH LEBANON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE APPROVED PLANS; (B) THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN INSPECTED AND APPROVED BY THE NORTH LEBANON TOWNSHIP ENGINEER; (C) ALL FINANCIAL SECURITY, INCLUDING ANY MAINTENANCE SECURITY, POSTED BY GRANTOR HAS BEEN RELEASED BY NORTH LEBANON TOWNSHIP; AND (D) GRANTOR HAS TRANSFERRED ALL LOTS TO BE CREATED FROM THE PREMISES TO THIRD PARTIES. NOTWITHSTANDING THE FOREGOING, GRANTOR'S PERSONAL LIABILITY SHALL CONTINUE FOR ANY VIOLATIONS OF THIS AGREEMENT AND DECLARATION OF EASEMENT WHICH OCCURRED DURING THE TIME THAT GRANTOR OWNED THE PREMISES OR ANY LOT CREATED FROM THE PREMISES OR IN THE EVENT THE STORM WATER MANAGEMENT FACILITIES WERE NOT COMPLETED, INSPECTED OR APPROVED AS SET FORTH HEREIN.
12. IT IS THE INTENT OF THE PARTIES TO THIS AGREEMENT THAT PERSONAL LIABILITY AND MAINTENANCE OBLIGATIONS SHALL PASS TO SUBSEQUENT TITLE OWNERS UPON CHANGE IN OWNERSHIP OF THE PREMISES OR ANY LOT CREATED FROM THE PREMISES, AND SUCH SUBSEQUENT OWNERS SHALL ASSUME ALL PERSONAL LIABILITY AND MAINTENANCE OBLIGATIONS FOR THE TIME PERIOD DURING WHICH THEY HOLD TITLE. PERSONAL LIABILITY SHALL REMAIN FOR ANY VIOLATIONS OF THE AGREEMENT AND DECLARATION OF EASEMENT, WHICH OCCURRED DURING THE PERIOD IN WHICH AN OWNER HELD TITLE.
13. THIS AGREEMENT AND DECLARATION OF EASEMENT SHALL BE BINDING UPON GRANTOR, THE SUCCESSORS AND ASSIGNS OF GRANTOR, AND ALL PRESENT AND FUTURE OWNERS OF THE PREMISES, OR ANY PART THEREOF, AND IS INTENDED TO BE RECORDED IN ORDER TO GIVE NOTICE TO FUTURE OWNERS OF THE PREMISES, OR ANY PART THEREOF, OF THEIR DUTIES AND RESPONSIBILITIES WITH RESPECT TO THE STORM WATER MANAGEMENT FACILITIES.

STANDARD WATER NOTES - CITY OF LEBANON AUTHORITY

1. CONTACT INFORMATION FOR THE CITY OF LEBANON AUTHORITY

   CITY OF LEBANON AUTHORITY
   2311 RIDGEVIEW ROAD
   LEBANON, PA 17042
   CONTACT: BOB SENTZ, BSENTZ@LEBANONAUTHORITY.ORG, 717-272-2841

2. WATER SYSTEMS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE CITY OF LEBANON AUTHORITY'S "GENERAL SPECIFICATIONS FOR WATER SYSTEM CONSTRUCTION".
3. THE CONSTRUCTION OF WATER MAINS REQUIRES A WATER MAIN EXTENSION AGREEMENT BETWEEN THE DEVELOPER AND THE AUTHORITY.
4. EXISTING WATER MAINS ARE SHOWN AT AN APPROXIMATE LOCATION. THE CONTRACTOR SHALL EXCAVATE TEST PITS TO DETERMINE ACTUAL LOCATIONS AND VERIFY WATER MAIN SIZES AT UTILITY CROSSINGS, EXCAVATED AREAS, AND TIE-IN LOCATIONS.
5. WATER LATERAL CONNECTION REQUIRES AN APPLICATION AND PAYMENT FOR A CAPACITY FEE WITH THE AUTHORITY PRIOR TO MAKING THE WATER TAPS.
6. FIRE SERVICE CONNECTION REQUIRES AN APPLICATION AND PAYMENT FOR A CAPACITY FEE WITH THE AUTHORITY PRIOR TO MAKING THE FIRE LINE TAP.
7. ANY WORK WITHIN PENNDOT RIGHT-OF-WAY REQUIRES A PENNDOT HIGHWAY OCCUPANCY PERMIT (HOP). THE PERMIT TYPICALLY IS REQUIRED TO BE IN THE AUTHORITY'S NAME, AND THE AUTHORITY REQUIRES THE CONTRACTOR TO PROVIDE A REFUNDABLE DEPOSIT TO THE AUTHORITY UNTIL PENNDOT SIGNS OFF ON THE PERMIT AFTER CONSTRUCTION IS COMPLETE.
8. ANY WORK WITHIN MUNICIPAL RIGHT-OF-WAY'S MIGHT REQUIRE A MUNICIPAL PERMIT. THE PERMIT SHALL BE ACQUIRED IN THE CONTRACTOR'S NAME.
9. THE AUTHORITY SHALL APPROVE ALL MATERIALS PRIOR TO CONSTRUCTION.
10. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE AUTHORITY, BUREAU OF WATER, AND WATERLINE CONSTRUCTION CONTRACTOR.
11. THE BUREAU OF WATER WILL INSPECT THE WATER MAIN INSTALLATION AND TESTING. THERE ARE FEES CHARGED TO THE DEVELOPER / CONTRACTOR FOR INSPECTION SERVICES. WATER MAIN CONSTRUCTION AND FEES SHALL BE COORDINATED WITH THE AUTHORITY.
12. THE PROPERTY OWNER / DEVELOPER SHALL INSTALL THE WATER TAP AND SERVICE LINE TO THE CURB STOP UNDER THE INSPECTION OF THE BUREAU OF WATER. THE PROPERTY OWNER IS RESPONSIBLE FOR THE WATER SERVICE AFTER THE CURB STOP. THE BUREAU OF WATER WILL INSTALL THE WATER METER WITHIN THE BUILDING OR AN APPROVED METER PIT AS INSTRUCTED BY CLAUSE (1) OF SECTION 4. CONTACT THE BUREAU OF WATER METER DEPARTMENT FOR METER INSTALLATION, 2200 WEST CHESTNUT STREET, 717-273-2506.
13. WATER SERVICE LATERALS OVER 100-FEET FROM THE CURB STOP TO THE ENTRANCE OF THE BUILDING REQUIRES THE INSTALLATION OF A METER PIT WITHIN 10-FEET OF THE CURB STOP. METER PITS SHALL BE APPROVED BY THE METER DEPARTMENT PRIOR TO INSTALLATION.
14. SEWER AND WATER MAINS SHALL HAVE A MINIMUM OF AN 18-INCH SEPARATION, OR THE SEWER MAIN SHALL BE CONCRETE ENCASED IN THE AREA WHERE THE 18-INCH SEPARATION CANNOT BE MAINTAINED.
15. WATER MAINS AND LATERALS THAT ARE LESS THAN 18-INCHES FROM A STORM SEWER OR CULVERT SHALL BE INSULATED WITH A FOAM WRAP.
16. AT THE CONCLUSION OF THE INSTALLATION OF THE WATER SYSTEM AND SERVICE LINES, AND SUCCESSFUL TESTING THEREOF, THE WATER SYSTEM WILL BE OFFERED FOR DEDICATION TO THE CITY OF LEBANON AUTHORITY.
17. ALL EXISTING WATER LATERALS SHALL BE TERMINATED AT THE WATER MAIN BY TURNING OFF THE CORPORATION STOP AT THE MAIN, AND THE SERVICE LINES CUT AND CRIMPED WITHIN ONE FOOT OF THE MAIN CONNECTION. ALL WORK, INCLUDING EXCAVATION, LATERAL TERMINATION, BACKFILL, AND PAVING, SHALL BE DONE BY THE CONTRACTOR AND INSPECTED BY THE BUREAU OF WATER.

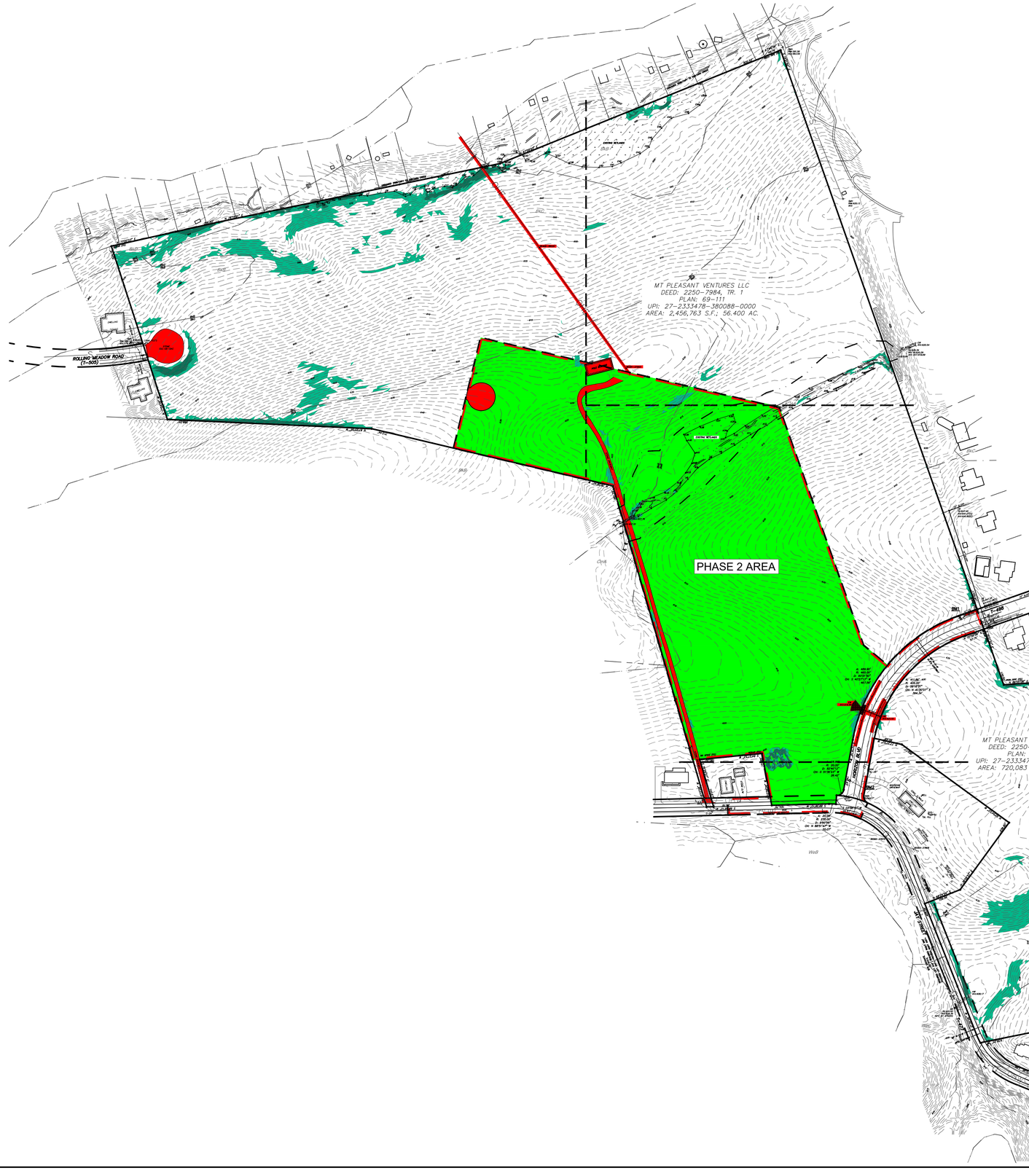
SURVEY NOTES:

1. BENCHMARK:
   BM1: CAPPED REBAR ON THE NORTH SIDE OF HORIZON BOULEVARD, 61±' WEST OF A CATCH BASON
   NORTHING: 47930.04
   EASTING: 2934516.76
   ELEVATION: 642.95
   BM2: CAPPED REBAR ON THE WEST SIDE OF HORIZON BOULEVARD, 42'± NORTH
   NORTHING: 378905.13
   EASTING: 2334196.85
   ELEVATION: 627.37
   VERTICAL 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, LLC. 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 42075C0252E & 42075C0256E, EFFECTIVE DATE JULY 8, 2012, THE ENTIRE SITE IS IN THE ZONE "X" FLOOD CLASSIFICATION.
4. WETLANDS SHOWN HEREON ARE IN ACCORDANCE WITH...
5. RIGHT-OF-WAY FOR HORIZON BOULEVARD AND JAY STREET ARE SHOWN IN ACCORDANCE WITH NORTH LEBANON TOWNSHIP RECORDS AND PREVIOUSLY RECORDED PLANS.
6. THE SUBJECT PARCEL WAS SURVEYED BY STECKBECK ENGINEERING & SURVEYING ON 2/10/2022-3/4/2022. THE SURVEY WAS PROVIDED USING CONVENTIONAL SURVEY EQUIPMENT COMBINED WITH DRONE TECHNOLOGIES.

SCHEDULE OF MUNICIPAL INSPECTIONS - STORMWATER

A. THE TOWNSHIP ENGINEER SHALL INSPECT ALL PHASES OF CONSTRUCTION OF THE STORMWATER MANAGEMENT IMPROVEMENTS. INSPECTIONS SHALL INCLUDE THE FOLLOWING:
   a. STORM SEWER PIPE TRENCHING AND INSTALLATION
   b. SWALE EXCAVATION AND INSTALLATION
   c. BASINS E AND F
      - ROUGH GRADING
      - EXCAVATION TO SUBGRADE
      - UNDERDRAIN SYSTEM INSTALLATION (WHERE APPLICABLE)
      - AMENDED SOIL INSTALLATION
      - OUTLET STRUCTURE AND OUTLET PIPE INSTALLATION (INCLUDING ANTI-SEEP COLLARS AND CLAY CORE)
   d. FINAL SITE STABILIZATION

B. DURING ANY STAGE OF THE WORK, IF THE TOWNSHIP ENGINEER DETERMINES THAT THE SWM BMPS ARE NOT BEING INSTALLED IN ACCORDANCE WITH THE APPROVED SWM SITE PLAN, NORTH LEBANON TOWNSHIP SHALL PROVIDE WRITTEN NOTIFICATION TO THE LAND OWNER AND/OR DEVELOPER



GRAPHIC SCALE

150' 0 75' 150' 300' 450'

1 inch = 150 feet

NORTH

LEGEND

PROPOSED LIMIT OF PHASE

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
EXISTING STORMWATER
EXISTING WATERLINE
EXISTING GASLINE
EXISTING SIDEWALK/CONCRETE
EXISTING CONTOURS
EXISTING TREELINE
EXISTING TOWNSHIP BOUNDARY
LIMITS OF FIELD SURVEY
EXISTING SOILS
EXISTING UTLITY POLE
EXISTING LIGHT POLE
15%-25% SLOPES
25%+ SLOPES
DEMO (TO BE REMOVED)

REVISION	DATE	BY
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OVERALL EXISTING CONDITIONS PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=150'
PROJECT #784-25-001	

3

3 OF 44 SHEETS

LEGEND

EXISTING FEATURES

- PROPOSED LIMIT OF PHASE
- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING TOWNSHIP BOUNDARY
- LIMITS OF FIELD SURVEY
- EXISTING SOILS
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- 15%-25% SLOPES
- 25%+ SLOPES
- DEMO (TO BE REMOVED)

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

UNNAMED TRIBUTARY TO SWATARA CREEK

N 78°15'21" E 316.60'

N 77°20'23" E 91.52'

REBAR (FD)

N 87°25'08" W 713.44'

N 17°47'47" W 588.25'

N 67°59'23" E 1326.33'

MATCH LINE (SEE SHEET 5 OF 44)

MATCH LINE (SEE SHEET 6 OF 44)

MATCH LINE (SEE SHEET 7 OF 44)

EXISTING WETLANDS

EX. OVERHEAD UTILITY (TO BE REMOVED)

EXISTING UTILITY POLE (TO BE REMOVED)

EXISTING UTILITY LINE (TO BE REMOVED)

EXISTING PAVING (TO BE REMOVED)

EXISTING BLDG. (TO BE DEMOLISHED)

EXISTING TEMPORARY CUL-DE-SAC CONSTRUCTED UNDER PHASE 1 (TO BE REMOVED UNDER PHASE 2)

EXISTING STONE ROAD (TO BE REMOVED)

EXISTING STONE R (TO BE REMOVED)

MT PLEASANT VENTURES LLC
DEED: 2250-7984, TR. 1
PLAN: 69-111
UPI: 27-2333478-380088-0000
AREA: 2,456,763 S.F.; 56.400 AC.

JANET H. SHIELDS, ETUX
DEED: 2240-3954
PLAN: 75-272
UPI: 27-2332077-380274-0000

NORMAN & CHERYL BOULANGER
DEED: 2337-0319
PLAN: 75-272
UPI: 27-2332167-380019-0000

JERE A. & JOAN M. PUTT
DEED: 255-233
UPI: 27-2332040-329437-0000

RALPH A. JR & MANDI JO MASE
DEED: 2297-9495
PLAN: 45-80
UPI: 27-2332947-380800-0000

DOUGLAS & ANN E. MOHL
DEED: 2275-1455
PLAN: 45-80
UPI: 27-2333165-380840-0000

PRECOOK S. WITTS
DEED: 2275-1455
PLAN: 45-80
UPI: 27-2333256-380948-0000

JOSE LUIS RIVERA
DEED: 2275-1455
PLAN: 45-80
UPI: 27-2333341-380880-0000

LEROY A. & BARBARA A. SHERK
DEED: 2184-1455
PLAN: 53-80-1026
UPI: 27-2332526-380678-0000

STEVEN A. & JOLYNE Z. SHANNON
DEED: 2275-1455
PLAN: 53-80-4055
UPI: 27-2332526-380655-0000

ROLAND P. & BARBARA A. BERTIN
DEED: 2184-1455
PLAN: 53-80-1026
UPI: 27-2332697-380697-0000

RAYMOND A. JR & DIANNE F. RINE
DEED: 2275-1455
PLAN: 53-80-1026
UPI: 27-2332443-380632-0000

KATHY M. HUTCHINGS
DEED: 2184-1455
PLAN: 53-80-1026
UPI: 27-2332610-380679-0000

LEONID & ELENA FELDMAN
DEED: 2014-4455
PLAN: 53-80-1026
UPI: 27-2332871-380740-0000

KEVIN & VALERIE HENRY
DEED: 2275-1455
PLAN: 53-80-1026
UPI: 27-2332680-380838-0000

RALPH & TERESA KLEIN
DEED: 2135-1455
PLAN: 53-80-1026
UPI: 27-2332762-380699-0000

HENRY P. III & TAMY L. WALLACE
DEED: 2201-1455
PLAN: 53-80-1026
UPI: 27-2332865-380846-0000

THOMAS B. & BRENDA A. BRENNEMAN
DEED: 2080-1455
PLAN: 53-80-1026
UPI: 27-2332936-380941-0000

MARK S. & JANA R. ALEWS
DEED: 2275-1455
PLAN: 53-80-1026
UPI: 27-2332936-380941-0000

DWELLING

SMALL TRANS. COMM. MH'S
RIM: 585.12
INV: 578.43
STA: 2+47-380C

TC: 596.17
FC: 586.04

TC: 586.23
FC: 586.03

STONE CUL-DE-SAC

MACADAM D/W

ROLLING MEADOW ROAD (T-505)

BkC BkD BkB

REVISION	DATE	BY
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EXISTING CONDITIONS PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

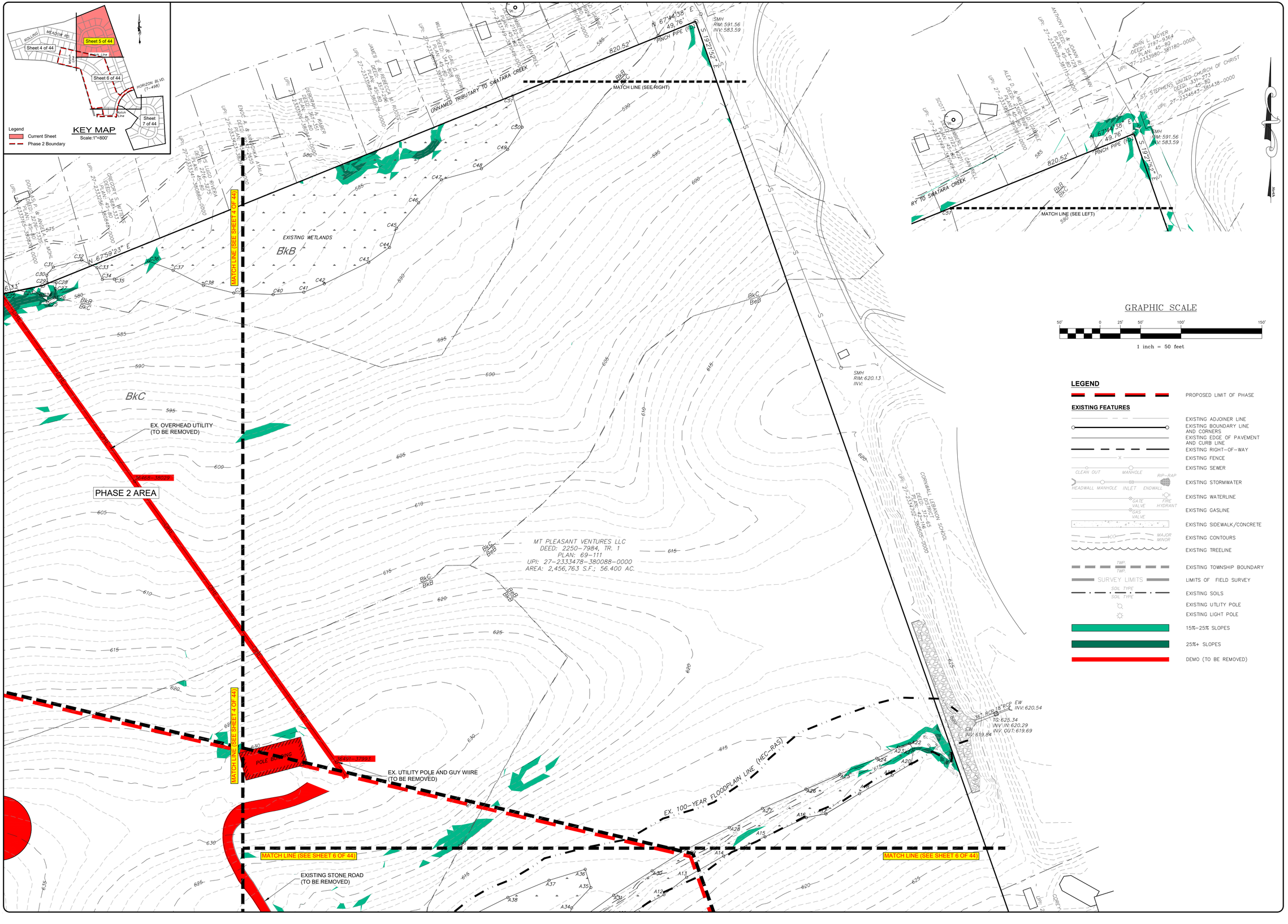
4

4 OF 44 SHEETS

KEY MAP
Scale:1"=800'

Legend
- Current Sheet
- Phase 2 Boundary

Sheet 4 of 44 — ROLLING MEADOW RD.
Sheet 5 of 44
Sheet 6 of 44 — HORIZON BLVD. (T-498)
Sheet 7 of 44
Match Line



GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

LEGEND

PROPOSED LIMIT OF PHASE

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)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTLITY POLE
- EXISTING LIGHT POLE
- 15%-25% SLOPES
- 25%+ SLOPES
- DEMO (TO BE REMOVED)

REVISION	DATE	BY
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---

EXISTING CONDITIONS PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

5

5 OF 44 SHEETS

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

LEGEND

PROPOSED LIMIT OF PHASE

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
EXISTING STORMWATER
EXISTING WATERLINE
EXISTING GASLINE
EXISTING SIDEWALK/CONCRETE
EXISTING CONTOURS
EXISTING TREELINE
EXISTING TOWNSHIP BOUNDARY
LIMITS OF FIELD SURVEY
EXISTING SOILS
EXISTING UTILITY POLE
EXISTING LIGHT POLE
15%-25% SLOPES
25%+ SLOPES
DEMO (TO BE REMOVED)

MATCH LINE (SEE SHEET 5 OF 44)

MATCH LINE (SEE SHEET 5 OF 44)

MATCH LINE (SEE SHEET 7 OF 44)

MATCH LINE (SEE SHEET 7 OF 44)

MATCH LINE (SEE SHEET 7 OF 44)

EXISTING STONE ROAD (TO BE REMOVED)

EXISTING WETLANDS

EX. 100-YEAR FLOODPLAIN LINE (HEC-RAS)

FIRE LANE

MT. PLEASANT VENTURES LLC
DEED: 2250-7984, TR. 1
PLAN: 69-111
UPI: 27-2333478-380088-0000
AREA: 2,456,763 S.F.; 56.400 AC.

JERE A. & JOAN M. PUTT
DEED: 255-231
UPI: 27-2332040-379437-0000

LARRY S. & ALBERTA A. MANN
DEED: 232-927
UPI: 27-2333760-378912-0000

COREY A. & JANE A. SHEAFFER
DEED: 1535-116
PLAN: 42-116
UPI: 27-2334511-379901-0000

WOODLAND CONTRACTORS
DEED: 2202-116
PLAN: 42-116
UPI: 27-2334646-379700-0000

TRENTON L. JONES, SR. & RAMIRE L. JONES
DEED: 2402-116
PLAN: 42-116
UPI: 27-2334931-379902-0000

PATRICK M. & HEATHER L. HITZ
DEED: 2402-116
PLAN: 42-116
UPI: 27-2334804-379958-0000

DONALD J. & AMY W. SCHEG
DEED: 315-462
PLAN: 42-116
UPI: 27-2334673-379312-0000

MELISSA S. RAMBLER
DEED: 2236-2406
PLAN: 42-116
UPI: 27-2334797-379311-0000

BkC

BeA

BkG
BeB

CmA

T-498

BM1

EX. 18" RCP AND OUTLET STRUCTURE (TO BE REMOVED)

EXISTING HEADWALL (TO BE REMOVED)

EX. GUIDE RAIL TO BE REMOVED

EX. GUIDE RAIL TO BE REMOVED

EXISTING STONE ROAD (TO BE REMOVED)

EXISTING STONE ROAD (TO BE REMOVED)

HORIZON BLVD

60' R.O.W.
31'± CARTWAY

A: 489.90'
R: 465.00'
D: 60°21'50"
CH: S 40°27'13" W
467.56'

A: 411.86'
R: 405.00'
D: 58°16'01"
CH: N 41°30'07" E
394.34'

A: 66.84'
R: 20.00'
D: 82°40'12"

15" SLOPP

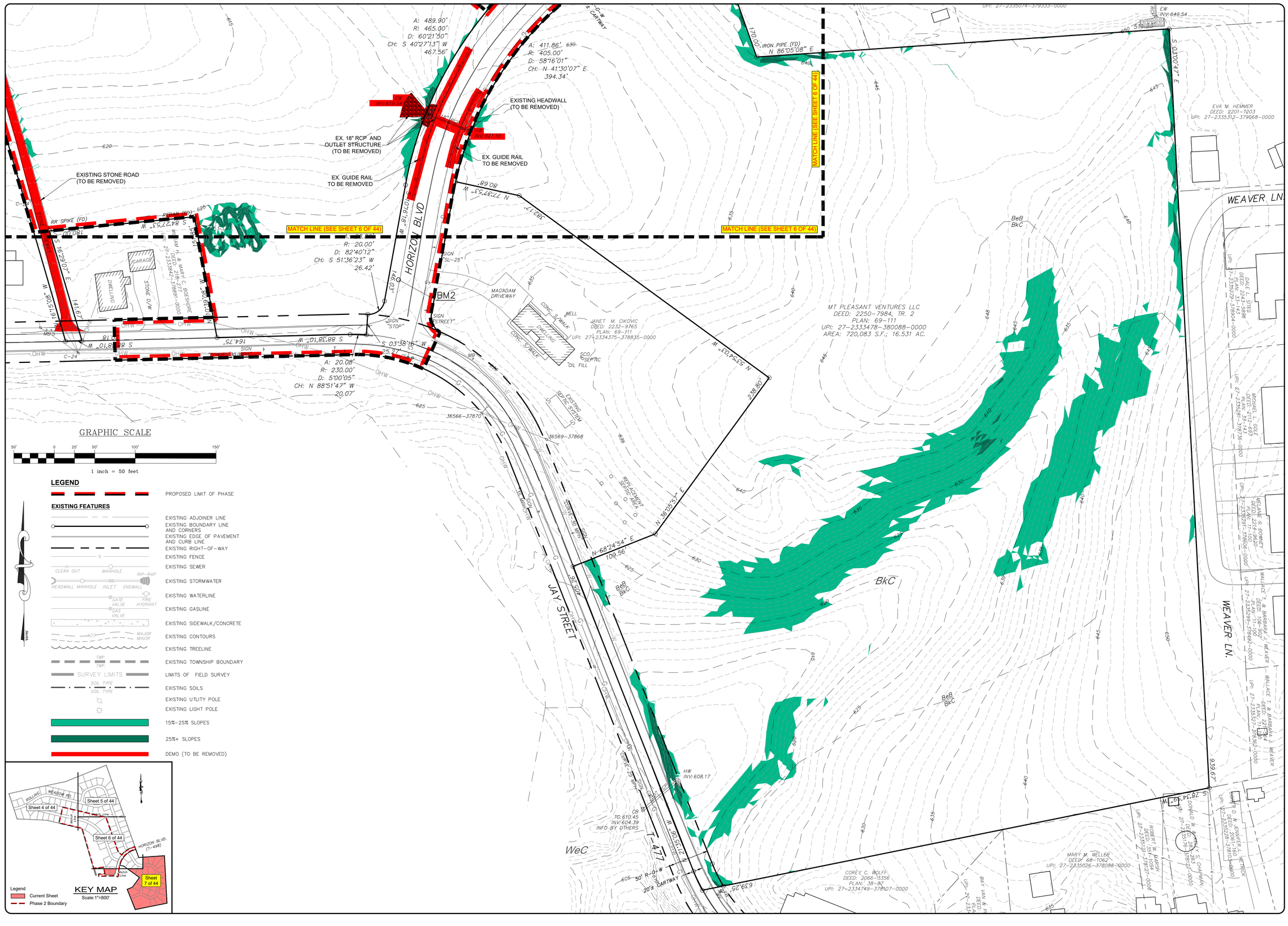
18" RCP

CB
TO: 647.45
INV: 641.45(S)
INV: 641.45(E)

CB
TO: 647.24
INV: 643.08(S)
INV: 642.98(E)
INV: 642.91(N)

CB
TO: 647.17
INV: 643.55
INV: 643.45(N)

CB
TO: 647.45
INV: 641.45(S)
INV: 641.45(E


A: 489.90'
R: 465.00'
D: 60°21'50"
CH: S 40°27'13" W
467.56'
A: 411.86'
R: 405.00'
D: 58°16'01"
CH: N 41°30'07" E
394.34'
EXISTING HEADWALL
(TO BE REMOVED)
EX. 18" RCP AND
OUTLET STRUCTURE
(TO BE REMOVED)
EX. GUIDE RAIL
TO BE REMOVED
EX. GUIDE RAIL
TO BE REMOVED
EXISTING STONE ROAD
(TO BE REMOVED)
MATCH LINE (SEE SHEET 6 OF 44)
MATCH LINE (SEE SHEET 6 OF 44)
MATCH LINE (SEE SHEET 6 OF 44)
HORIZON BLVD
A: 20.00'
R: 20.00'
D: 82°40'12"
CH: S 51°36'23" W
26.42'
A: 20.08'
R: 230.00'
D: 5°00'05"
CH: N 88°51'47" W
20.07'
BM2
MACADAM
DRIVEWAY
CONC. S'WALK
DWELLING
WELL
SEPTIC
"OIL FILL"
JANET M. CIKOVIC
DEED: 2232-9765
PLAN: 69-111
UPI: 27-2334375-378835-0000
MT PLEASANT VENTURES LLC
DEED: 2250-7984, TR. 2
PLAN: 69-111
UPI: 27-2333478-380088-0000
AREA: 720,083 S.F.; 16.531 AC.
EVA M. HEMMER
DEED: 2201-1203
UPI: 27-2335312-379068-0000
WEAVER LN.
DALE L. SITES
DEED: 2243-142
UPI: 27-2335229-378904-0000
MICHAEL L. COLE
DEED: 2112-693
UPI: 27-2335281-378736-0000
WALLACE T. & BARBARA A. WEAVER
DEED: 2214-3620
PLAN: 11-100
UPI: 27-2335299-378492-0000
WALLACE T. & BARBARA A. WEAVER
DEED: 2214-3620
PLAN: 11-100
UPI: 27-2335271-378382-0000
MELANIE S. BONNEY
DEED: 2214-3620
PLAN: 11-100
UPI: 27-2335291-378205-0000
JAY STREET
WeC
BkC
BeB
BkC
HW
INV: 619.58
HW
INV: 621.10
HW
INV: 608.17
EW
INV: 649.54
CB
TG: 610.45
INV: 604.39
INFO BY OTHERS
EXIST. SEPTIC SYSTEM
REPLACEMENT SEPTIC AREA
SIGN
"STOP"
SIGN
"STREET"
SIGN
"SL-25"
SIGN
"DEAD END"
SIGN
"DEAD END"
SIGN
"SPEED LIMIT 25 MPH"
SIGN
"SPEED LIMIT 25 MPH"
SIGN
"SPEED LIMIT 25 MPH



REVISION	DATE	BY
---	---	---

OVERALL SUBDIVISION PLAN

REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN

For

THE ESTATES AT HEARTHSIDE

located in

NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=150'
PROJECT #	784-25-001

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 SIDEWALK/CONCRETE
- EXISTING TOWNSHIP BOUNDARY

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- REBAR / CONCRETE MONUMENT — PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY

GRAPHIC SCALE
50' 0' 25' 50' 100'
1 inch = 50 ft.

NORTH

REVISION	DATE	BY
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SUBDIVISION PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

9
9 OF 44 SHEETS

KEY MAP
Scale:1"=800'
Legend
Current Sheet
Phase 2 Boundary
Sheet 9 of 44
Sheet 10 of 44
ROLLING MEADOW RD.
HORIZON BLVD. (T-498)
STARLIGHT LN.
MEADOW CIRCLE

MATCHLINE Sheet 10 of 44
MATCHLINE Sheet 10 of 44

STARLIGHT LANE
RAINBOW CIRCLE
HORIZON BLVD. (T-498)

JERE A. & JOAN M. PUTT
DEED: 255-233
UPI: 27-2332040-379437-0000

COREY L. & JANE A. SWEIGART
DEED: 4258-996
UPI: 27-2334518-379903-0000

WOODLAND CONTRACTORS
DEED: 320-116
UPI: 27-2334548-379771-0000

TRENTON L. JONES, SR. & SABRINA N. JONES
DEED: 4302-1586
UPI: 27-2334695-379852-0000

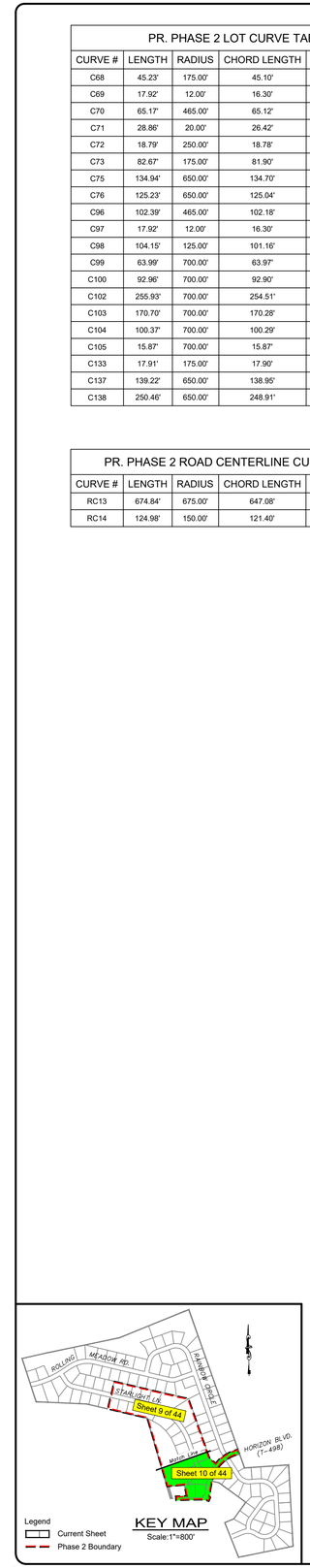
I-F37
TOP = 640.00'
INV IN = 630.00'
INV IN = 635.00'
INV OUT = 635.00'

I-F2
TYPE C INLET
TOP = 638.50'
INV IN = 628.50'
INV IN = 633.50'
INV OUT = 628.50'

REBAR (TO BE SET)
CONC. MON.
PR. ALUMINUM CULVERT
100-YR FLOOD PLAIN
BLDG SETBACK LINE

PR. PHASE 2 LOT CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD LENGTH	CHORD DIRECTION
C68	45.23'	175.00'	45.10'	S 59°50'42" E
C69	17.92'	12.00'	16.30'	S 24°28'25" E
C70	65.17'	465.00'	65.12'	S 14°17'12" W
C71	28.86'	20.00'	26.42'	S 51°36'23" W
C72	18.79'	250.00'	18.78'	N 89°12'40" W
C73	82.67'	175.00'	81.90'	S 38°54'29" E
C75	134.94'	650.00'	134.70'	S 25°27'26" E
C76	125.23'	650.00'	125.04'	S 36°55'26" E
C96	102.39'	465.00'	102.18'	S 33°30'28" W
C97	17.92'	12.00'	16.30'	S 69°58'31" W
C98	104.15'	125.00'	101.16'	N 43°22'46" W
C99	63.99'	700.00'	63.97'	N 22°07'44" W
C100	92.96'	700.00'	92.90'	N 28°33'09" W
C102	255.93'	700.00'	254.51'	N 42°49'52" W
C103	170.70'	700.00'	170.28'	N 60°17'29" W
C104	100.37'	700.00'	100.29'	N 71°23'06" W
C105	15.87'	700.00'	15.87'	N 76°08'33" W
C133	17.91'	175.00'	17.90'	S 22°26'35" E
C137	139.22'	650.00'	138.95'	S 70°39'22" E
C138	250.46'	650.00'	248.91'	S 53°28'54" E

PR. PHASE 2 ROAD CENTERLINE CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD LENGTH	CHORD DIRECTION
RC13	674.84'	675.00'	647.08'	S 48°09'03" E
RC14	124.98'	150.00'	121.40'	S 43°22'46" E



JERE A. & JOAN M. PUTT
DEED: 255-233
UPI: 27-2332040-379437-0000
LARRY S. & ALBERTA A. MANN
DEED: 232-977
UPI: 27-2333700-378912-0000
WILLIAM H. & MARY C. BOESHORE
DEED: 218-277
PLAN: 69-111
UPI: 27-2333842-378891-0000
JANET M. CIKOVIC
DEED: 2232-9765
PLAN: 69-111
UPI: 27-2334375-378835-0000
DONALD J. & J
DEED:
PLAN:
UPI: 27-233467
MATCHLINE Sheet 9 of 44
MATCHLINE Sheet 9 of 44
JAY STREET (T-477)
HORIZON BLVD. (T-498)
STARLIGHT LANE
RAINBOW CIRCLE
RAINBOW CIRCLE
REBAR (TO BE SET)
CONC. MON.
REBAR (TO BE SET)
CONC. MON.
I-F37
INV IN = 635.00'
INV OUT = 635.00'
I-F2
TYPE C INLET
TOP = 636.50'
INV IN = 628.50'
INV IN = 633.50'
INV OUT = 628.50'
61 15,400 S.F. 0.35 AC.
62 15,400 S.F. 0.35 AC.
63 17,361 S.F. 0.40 AC.
64 21,597 S.F. 0.50 AC.
65 15,043 S.F. 0.35 AC.
66 15,003 S.F. 0.34 AC.
67 19,845 S.F. 0.46 AC.
68 191,232 S.F. 4.39 AC.
69 15,400 S.F. 0.35 AC.
70 17,051 S.F. 0.39 AC.
15,462 S.F. 0.35 AC.
15,400 S.F. 0.35 AC.
16,730 S.F. 0.38 AC.
30 15,400 S.F. 0.35 AC.
28 17,036 S.F. 0.39 AC.
29 16,915 S.F. 0.39 AC.
90 18,535 S.F. 0.43 AC.
120 17,097 S.F. 0.39 AC.
91 16,057 S.F. 0.37 AC.
119 17,185 S.F. 0.39 AC.
118 18,902 S.F. 0.43 AC.
117 18,164 S.F. 0.42 AC.
116 21,724 S.F. 0.50 AC.
112 15,505 S.F. 0.36 AC.
1705.61'
N 86°05'0
170.00'
S 19°21'52" E
N 70°38'08" E
57.71'
N 77°37'53" W
80.66'
392.17'
N 53°54'03" W
238.80'
S 84°27'53" W
180.00'
S 16°29'07" E
141.67'
N 80°51'19" W
S 88°38'10" W
164.75'
S 03°38'16" W
25.27'
A: 20.08'
R: 230.00'
D: 5°00'05"
CH: N 88°51'47" W
20.07'
S 10°16'19" W
146.03'
N 83° 58' 55" E
125.41'
S 83° 58' 55" W
51.16'
S 10° 16' 19" W
37.15'
S 10°16'19" W
108.68'
N 10° 16' 19" E
108.68'
S 10° 29' 24" W
140.00'
N 70° 29' 24" E
140.00'
N 19° 30' 36" W
46.10'
S 19° 30' 36" E
184.00'
N 25° 27' 36" E
180.00'
N 25° 27' 36" E
180.00'
N 19° 30' 36" W
69.05'
S 19° 30' 36" E
12.23'
N 19° 30' 36" W
3.47'
S 19° 30' 36" E
269.57'
N 64° 37' 29" E
141.66'
S 64° 37' 29" W
141.66'
N 67° 14' 57" W
63.08'
S 67° 14' 57" E
63.08'
S 10° 16' 19" W
60' ROW
S 10° 16' 19" W
108.68'
S 88° 38' 10" W
105.09'
S 88° 38' 10" W
67.23'
S 88° 38' 10" W
20.18'
N 25° 27' 36" E
180.00

PHASE 2

PHASE 2

MATCHLINE Sheet 12 of 44

MATCHLINE Sheet 12 of 44

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 SIDEWALK/CONCRETE
- EXISTING TOWNSHIP BOUNDARY

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (REBAR / CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED CROSS WALK
- 100 STARLIGHT LANE — PROPOSED STREET ADDRESS

North

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

Legend
Current Sheet
Phase 2 Boundary

KEY MAP
Scale:1"=800'

SIGNAGE LEGEND

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

SIGHT DISTANCE NOTE:

NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' WITHIN THE CLEAR SIGHT TRIANGLE.

REVISION	DATE	BY
----	----	----

LAYOUT PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #	784-25-001

11

11 OF 44 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 SIDEWALK/CONCRETE
- EXISTING TOWNSHIP BOUNDARY

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (REBAR / CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED LIGHT POLE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED CROSS WALK
- PROPOSED STREET ADDRESS (100 STARLIGHT LANE)

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

PHASE 2

PHASE 2

MATCHLINE Sheet 11 of 44

PROPOSED DWELLING

PR. 15'x15' CONC. PATIO (TYP.)

PROPOSED 5' CONCRETE SIDEWALK

PR. 20' WIDE PAVED DRIVEWAY (TYP.)

PROPOSED ADA RAMP/ DETECTABLE WARNING SURFACE

PROPOSED 75' CLEAR SIGHT TRIANGLE (TYP.)

TRANSITION SLANT CURB TO ROLL CURB

PR. ROAD WIDENING SEE HORIZON BLVD. TYPICAL WIDENING DETAIL SHEET 66 OF 77

LIMITS OF PR. SLANT CURB AND 5' CONC. SIDEWALK

LIMITS OF SLANT CURB

PROPOSED ADA RAMP/ DETECTABLE WARNING SURFACE

1405 JAY STREET

JAY STREET (T-477)

HORIZON BLVD. (T-498)

STARLIGHT LANE

RAINBOW CIRCLE

BLDG SETBACK LINE

PR. SLANT CURB

PR. SLANT RTB

OHW

GARAGE

DWELLING

OIL FILL

SIGN "STOP"

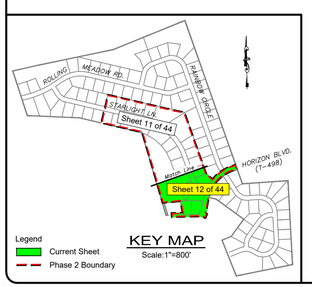
SIGN "STREET"

SIGN "SL-25"

PROPOSED ADA RAMP/ DETECTABLE WARNING SURFACE

PROPOSED ADA RAMP/ DETECTABLE WARNING SURFACE

PROPOSED ADA RAMP/ DETECTABLE WARNING SURFACE



SIGNAGE LEGEND

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

SIGHT DISTANCE NOTE:

NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' WITHIN THE CLEAR SIGHT TRIANGLE.

REVISION	DATE	BY

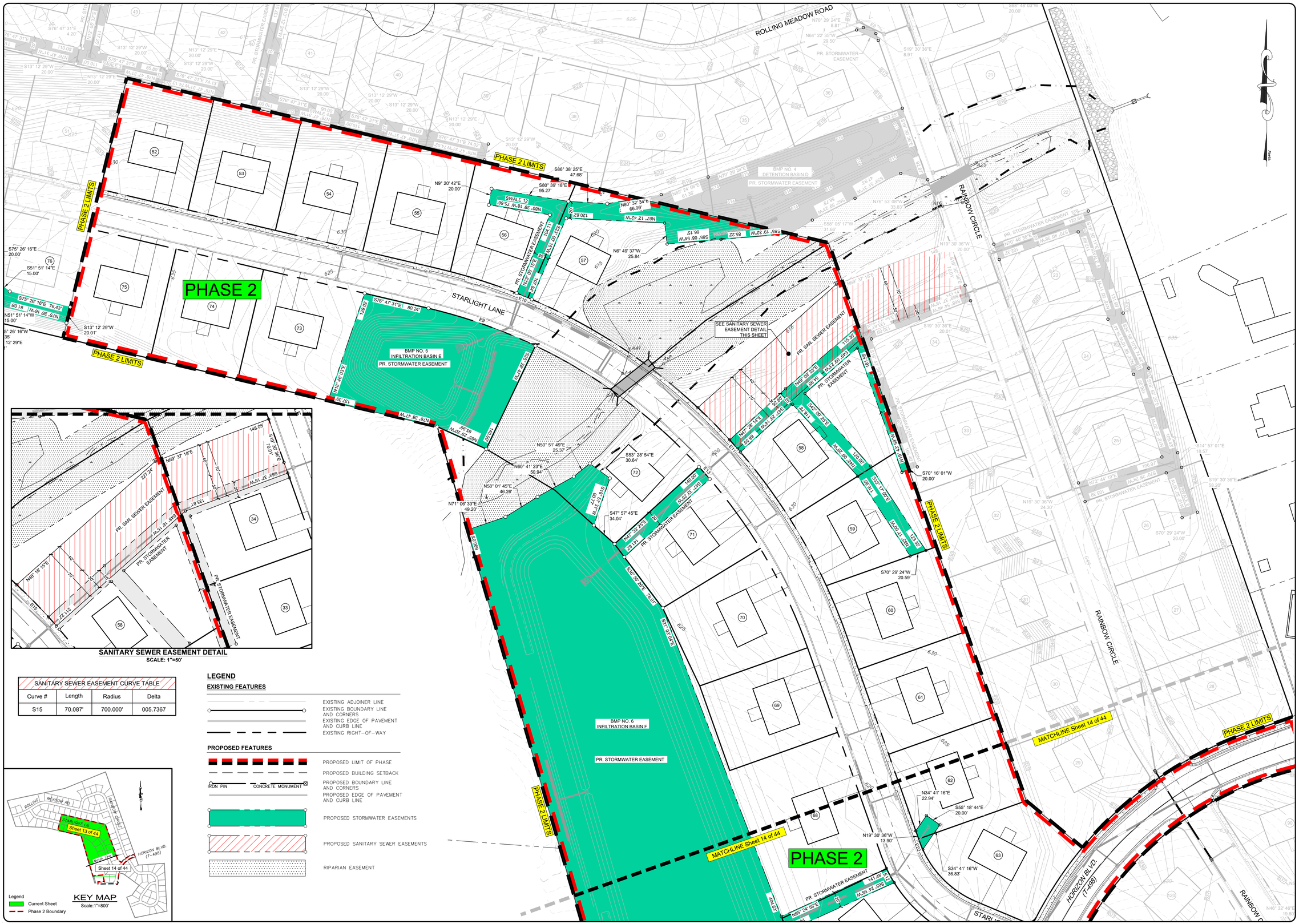
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DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

12

12 OF 44 SHEETS


ROLLING MEADOW ROAD
RAINBOW CIRCLE
STARLIGHT LANE
HORIZON BLVD. (T-498)
PHASE 2
PHASE 2 LIMITS
BMP NO. 4 DETENTION BASIN D PR. STORMWATER EASEMENT
BMP NO. 5 INFILTRATION BASIN E PR. STORMWATER EASEMENT
BMP NO. 6 INFILTRATION BASIN F
PR. STORMWATER EASEMENT
PR. SAN. SEWER EASEMENT
SEE SANITARY SEWER EASEMENT DETAIL THIS SHEET
MATCHLINE Sheet 14 of 44
SWALE 12
SWALE 13
SWALE 14
N9° 20' 42"E 20.00'
S80° 39' 18"E 95.27'
S86° 38' 25"E 47.68'
N80° 32' 34"E 66.99'
N87° 12' 42"W 120.62'
S85° 19' 32"W 65.22'
S85° 08' 54"W 66.15'
N6° 49' 37"W 25.84'
S75° 26' 16"E 20.00'
S51° 51' 14"E 15.00'
S13° 12' 29"W 20.01'
S76° 47' 31"E 80.24'
S70° 16' 01"W 20.00'
S34° 41' 16"E 22.94'
S55° 18' 44"E 20.00'
N19° 30' 36"W 13.90'
S34° 41' 16"W 36.83'
N50° 51' 49"E 25.37'
S53° 28' 54"E 30.64'
N60° 41' 23"E 50.94'
N58° 01' 45"E 46.26'
N71° 06' 33"E 49.20'
S47° 57' 45"E 34.04'
S36° 35' 36"E 73.81'
S17° 09' 01"E
S14° 57' 01"E 18.57'
S19° 30' 36"E 8.91'
S19° 30' 36"E 20.00'
N19° 30' 36"W 20.00'
S70° 29' 24"W 20.59'
N70° 29' 24"E 8.81'
N64° 22' 35"W 29.50'
S68° 48' 03"W 20.00'
N76° 53' 08"W 33.83'
S58° 05' 17"W 31.60'
S70° 29' 24"W 20.00'
N70° 40' 36"E 20.00'
N70° 40' 36"E 106.97'
S70° 29' 24"W 20.00'
N46° 32' 46"E 16.98'
N65° 24' 58"E 141.48'
N69° 37' 18"E 227.24'
S69° 37' 18"W 148.05'
N25° 09' 12"E 100.67'
N25° 09' 12"E 104.11'
N25° 09' 12"E 20'
S25° 09' 12"W 100.67'
S25° 09' 12"W 104.11'
S25° 09' 12"W 20'
N16° 47' 31"W 137.39'
N16° 47' 31"W 65.59'
S16° 47' 31"W 65.59'
N16° 47' 31"W 100.00'
S16° 47' 31"W 100.00'
N16° 47' 31"W 139.02'
N16° 47' 31"W 76.43'
S16° 47' 31"W 81.06'
N16° 47' 31"W 139.02'
N16° 47' 31"W 139.02'
S

LEGEND

EXISTING FEATURES

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

PROPOSED FEATURES

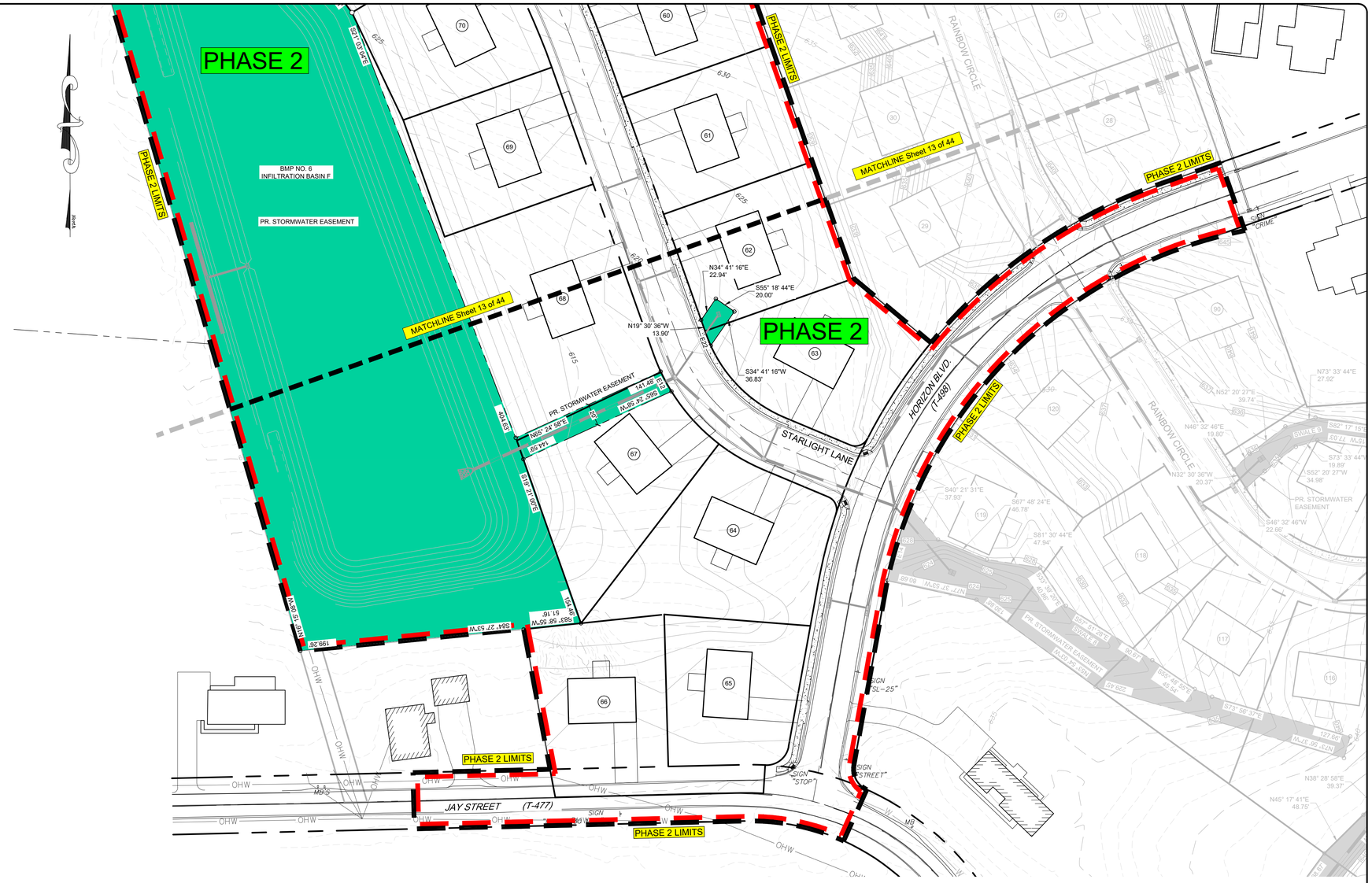
- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN — CONCRETE MONUMENT)
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED STORMWATER EASEMENTS
- PROPOSED SANITARY SEWER EASEMENTS

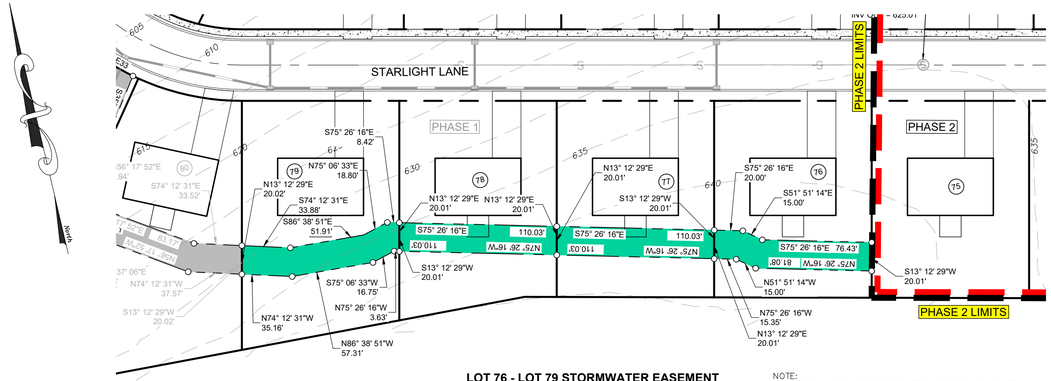
GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

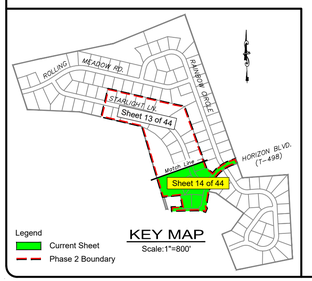
PR. PHASE 2 STORMWATER EASEMENT CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD LENGTH	CHORD DIRECTION
E9	139.22'	650.00'	138.95'	S 70°39'22" E
E10	20.00'	700.00'	20.00'	N 67°41'02" W
E11	20.00'	700.00'	20.00'	N 41°32'04" W
E12	20.06'	175.00'	20.05'	S 28°27'44" E
E13	20.00'	650.00'	20.00'	S 41°33'42" E
E22	10.46'	125.00'	10.45'	N 21°54'27" W





LOT 76 - LOT 79 STORMWATER EASEMENT
(TO BE MODIFIED UNDER PHASE 2)

NOTE:
THE STORMWATER EASEMENTS FOR LOT 76 TO LOT 79 SUBMITTED UNDER PHASE 1 ARE TO BE MODIFIED UNDER PHASE 2 AS SHOWN. THERE IS NO OTHER MODIFICATIONS TO PHASE 1 PROPOSED UNDER THIS LAND DEVELOPMENT PLAN.



KEY MAP
Scale:1"=800'

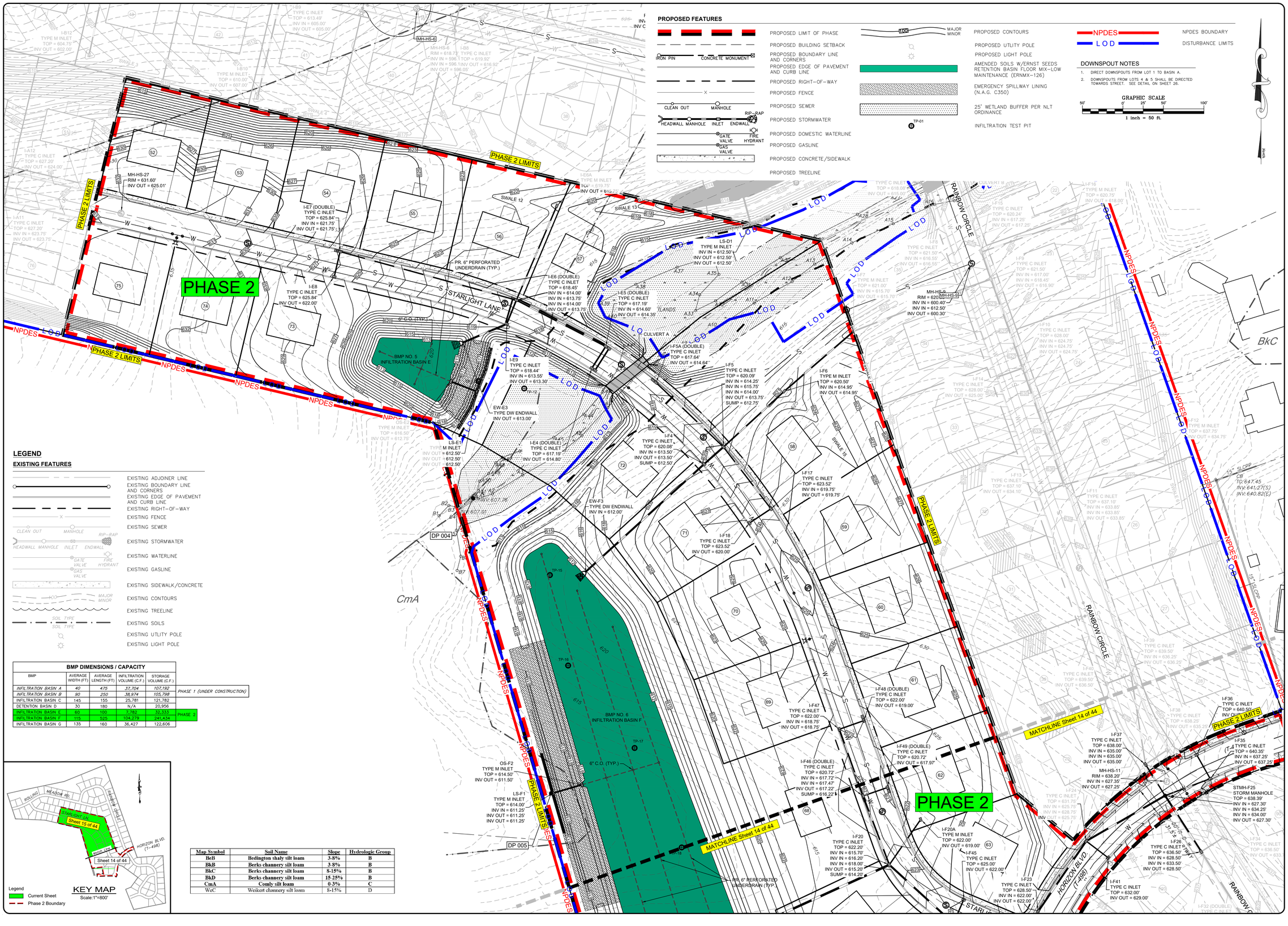
REVISION	DATE	BY
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EASEMENT PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
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LEBANON County, Pennsylvania

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

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #	784-25-001

14



REVISION	DATE	BY

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
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Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #	784-25-001

15

15 OF 44 SHEETS

PHASE 2

PHASE 2 LIMITS

MATCHLINE Sheet 15 of 44

BMP NO. 6
INFILTRATION BASIN F

6" C.O. (TYP.)

4IN. 6" PERFORATED UNDERDRAIN (TYP.)

OS-F2
TYPE M INLET
TOP = 614.50'
INV OUT = 611.50'

LS-F1
TYPE M INLET
TOP = 614.00'
INV IN = 611.25'
INV OUT = 611.25'
INV OUT = 611.25'

DP 005

I-F47
TYPE C INLET
TOP = 622.00'
INV IN = 618.75'
INV OUT = 618.75'

I-F48 (DOUBLE)
TYPE C INLET
TOP = 622.00'
INV OUT = 619.00'

I-F49 (DOUBLE)
TYPE C INLET
TOP = 620.72'
INV OUT = 617.97'

I-F46 (DOUBLE)
TYPE C INLET
TOP = 620.72'
INV IN = 617.72'
INV IN = 617.47'
INV OUT = 617.22'
SUMP = 616.22'

I-F20
TYPE C INLET
TOP = 622.20'
INV IN = 615.70'
INV IN = 616.20'
INV IN = 618.00'
INV OUT = 615.20'
SUMP = 614.20'

I-F20A
TYPE M INLET
TOP = 622.00'
INV OUT = 619.00'

I-F45
TYPE C INLET
TOP = 625.00'

EW-F19
TYPE DW ENDWALL
INV IN = 612.00'

I-F21
TYPE C INLET
TOP = 625.00'
INV IN = 618.00'
INV IN = 621.75'
INV OUT = 618.00'
SUMP = 617.00'

I-F44 (DOUBLE)
TYPE C INLET
TOP = 626.75'
INV OUT = 624.00'

I-F43 (DOUBLE)
TYPE C INLET
TOP = 626.75'
INV IN = 623.75'
INV OUT = 623.75'

I-F42 (DOUBLE)
TYPE M INLET
TOP = 623.50'
INV OUT = 620.75'

I-F36
TYPE C INLET
TOP = 640.50'
INV OUT = 637.50'

I-F37
TYPE C INLET
TOP = 638.00'
INV IN = 635.00'
INV IN = 635.00'
INV OUT = 635.00'

I-F35
TYPE C INLET
TOP = 640.35'
INV IN = 637.25'
INV OUT = 637.25'

STMH-F25
STORM MANHOLE
TOP = 638.39'
INV IN = 627.30'
INV IN = 634.25'
INV IN = 634.00'
INV OUT = 627.30'

I-F26
TYPE C INLET
TOP = 636.50'
INV IN = 628.50'
INV IN = 633.50'
INV OUT = 628.50'

I-F41
TYPE C INLET
TOP = 632.00'
INV OUT = 629.00'

I-F22
TYPE C INLET
TOP = 627.50'
INV IN = 619.25'
INV IN = 620.00'
INV IN = 622.50'
INV OUT = 619.25'

HW
INV: 621.10

MH-HS-11
RIM = 638.20'
INV IN = 627.35'
INV OUT = 627.25'

MH-HS-37
RIM = 629.30'
INV IN = 607.35'
INV IN = 618.00'
INV OUT = 607.25'

STMH-H2A
STORM MANHOLE
TOP = 641.71'
INV IN = 631.15'
INV OUT = 631.05'

HORIZON BLVD. (T-498)

STARLIGHT LANE

RAINBOW CIRCLE

RAINBOW DRIVE

JAY STREET (T-477)

GARAGE

DWELLING

WELL

OIL FILL

SIGN

LOD

NPDES

OHW

SWALE

CmA

WeB

MgB

MgC

MgM2

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
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING SOILS
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER
- PROPOSED STORMWATER
- PROPOSED DOMESTIC WATERLINE
- PROPOSED GASLINE
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED TREELINE
- MAJOR / MINOR — PROPOSED CONTOURS
- 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. C350)
- 25' WETLAND BUFFER PER NLT ORDINANCE
- TP-01 — INFILTRATION TEST PIT
- NPDES — NPDES BOUNDARY
- LOD — DISTURBANCE LIMITS

IRON PIN — CONCRETE MONUMENT

CLEAN OUT — MANHOLE — HEADWALL — MANHOLE — INLET — ENDWALL — RIP-RAP — GATE VALVE — FIRE HYDRANT — GAS VALVE

SOIL TYPE

DOWNSPOUT NOTES

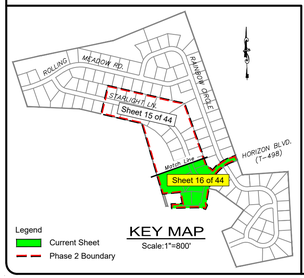
1. DIRECT DOWNSPOUTS FROM LOT 1 TO BASIN A.
2. DOWNSPOUTS FROM LOTS 4 & 5 SHALL BE DIRECTED TOWARDS STREET. SEE DETAIL ON SHEET 26.

GRAPHIC SCALE
50' 0' 25' 50' 100'
1 inch = 50 ft.

BMP DIMENSIONS / CAPACITY

BMP	AVERAGE WIDTH (FT)	AVERAGE LENGTH (FT)	INFILTRATION VOLUME (C.F.)	STORAGE VOLUME (C.F.)	
INFILTRATION BASIN A	*40*	*475*	*37,704*	*107,192*	*PHASE 1 (UNDER CONSTRUCTION)*
INFILTRATION BASIN B	*90*	*250*	*38,974*	*105,798*	
INFILTRATION BASIN C	145	155	25,781	121,782	
DETENTION BASIN D	30	180	N/A	20,956	
INFILTRATION BASIN E	60	100	7,782	32,333	PHASE 2
INFILTRATION BASIN F	115	525	104,279	241,434	
INFILTRATION BASIN G	135	160	36,427	122,606	

Map Symbol	Soil Name	Slope	Hydrologic Group
BeB	**Bedington shaly silt loam**	**3-8%**	**B**
BkB	**Berks channery silt loam**	**3-8%**	**B**
BkC	**Berks channery silt loam**	**8-15%**	**B**
BkD	**Berks channery silt loam**	**15-25%**	**B**
CmA	**Comly silt loam**	**0-3%**	**C**
WeC	Weikert channery silt loam	8-15%	D



Legend
Current Sheet
Phase 2 Boundary

KEY MAP
Scale:1"=800'

REVISION	DATE	BY
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
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DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

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16 OF 44 SHEETS

POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE
MT. PLEASANT VENTURES SUBDIVISION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR THE PROPOSED PRELIMINARY LAND DEVELOPMENT PLAN FOR THE MT. PLEASANT VENTURES SUBDIVISION, LOCATED ON BOTH SIDES OF HORIZON BOULEVARD BETWEEN JAY STREET AND COLONIAL DRIVE IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.

PROJECT DETAILS

THE TOTAL TRACT OF THE TWO PROPERTIES IN QUESTION IS APPROXIMATELY 72.93 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS APPROXIMATELY 67.58 ACRES. THE CURRENT SITE CONSISTS OF OPEN AGRICULTURAL FIELDS AND ONE EXISTING BARN. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE HAS BEEN AGRICULTURAL SINCE THE EARLY 1990'S. BASED ON PENN PILOT HISTORICAL IMAGERY, THE SITE HAS BEEN AGRICULTURAL IN USE SINCE THE 1950'S. THE SITE IS SPLIT BY HORIZON BOULEVARD. THE NORTHERN PORTION OF THE SITE IS BORDERED TO THE EAST BY RESIDENTIAL HOMES AND THE EBENEZER ELEMENTARY SCHOOL, TO THE SOUTH BY HORIZON BOULEVARD, TO THE WEST BY AGRICULTURAL AND RESIDENTIAL PROPERTIES, AND TO THE NORTH BY RESIDENTIAL PROPERTIES. THE SOUTHERN PORTION OF THE SITE IS BORDERED TO THE EAST AND SOUTH BY RESIDENTIAL PROPERTIES, TO THE WEST BY JAY STREET, AND TO THE NORTH BY HORIZON BOULEVARD. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF 120 SINGLE-FAMILY HOMES, WITH DRIVEWAYS, STREETS, CONNECTION TO PUBLIC SEWER AND WATER, AND ASSOCIATED 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. SIX (6) ABOVE GROUND INFILTRATION BASINS, AND ONE (1) DETENTION BASIN ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL REACH TWO DIFFERENT UNT'S TO SWATARA CREEK AND AN EXISTING QUARRY POND WHICH IS CLOSEST TO THE BRANDYWINE CREEK. THE UNT'S TO SWATARA CREEK ARE DESIGNATED AS WARM WATER FISHES (WWF) AND ARE IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE – FLOW REGIME MODIFICATION. THE UNT'S TO SWATARA CREEK ARE ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE – SILTATION. THE BRANDYWINE CREEK IS DESIGNATED AS TROUT STOCKED FISHES (TSF) AND ARE IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: URBAN RUNOFF/STORM SEWERS – FLOW REGIME MODIFICATION. THE BRANDYWINE 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), PA CODE CHAPTER 102, AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE (ORDINANCE NO. 6–2022).

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 LESS THAN OR EQUAL TO THE PRE-DEVELOPMENT RUNOFF, FOLLOWING THE REQUIREMENTS OF THE PA CODE CHAPTER 102.8 AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE. IN ORDER TO PROVIDE WATER QUALITY, VOLUME CONTROL, AND RATE CONTROL, THE SITE WILL BE SERVED BY ONE (1) DETENTION BASIN, AND SIX (6) INFILTRATION BASINS. THE STRUCTURAL BMPS ARE DESIGNED TO MANAGE THE DISCHARGE RATE TO A RATE EQUAL OR LOWER THAN THE PRE-DEVELOPMENT RATE AND TO INFILTRATE THE 2–YR 24–HOUR VOLUME INCREASE. THE CURVE NUMBERS ARE TAKEN FROM THE NORTH LEBANON TOWNSHIP SWM ORDINANCE. SUPPORTING CALCULATIONS CAN BE SEEN IN THE DEP PCSM SPREADSHEETS.

PER THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE, THE SITE IS LOCATED WITHIN THE LEBANON COUNTY RESIDUAL – STORMWATER MANAGEMENT DISTRICT AND AS SUCH, 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 5-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. 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 SIX (6) POINTS OF INTEREST.

DISCHARGE POINTS 001–003 (DP 001–003) ARE LOCATED ADJACENT TO THE NORTHERN PROPERTY LINE AND WILL DISCHARGE TO THE UNT TO SWATARA CREEK LOCATED LESS THAN 100' TO THE NORTH. PRE–DEVELOPMENT RUNOFF SHEET FLOWS ALONG THE ENTIRE PROPERTY LINE DOWN TO THE UNT TO SWATARA CREEK. DP'S 001–003 HAVE BEEN ESTABLISHED AT THE LOCATION OF THE PROPOSED BASIN OUTLET LEVEL SPREADERS IN ORDER TO PROVIDE AN ACCURATE PRE– TO POST–DEVELOPMENT ANALYSIS.

DISCHARGE POINT 004 (DP 004) IS LOCATED ALONG THE WESTERN PROPERTY LINE WHERE WATERCOURSE 2 LEAVES THE SITE AT THE BOTTOM OF WETLAND 2. RUNOFF WILL DISCHARGE OVERLAND FOR APPROXIMATELY 1,750 FEET PRIOR TO REACHING AN UNT TO SWATARA CREEK.

DISCHARGE POINT 005 (DP 005) IS LOCATED ALONG THE WESTERN PROPERTY LINE WHERE AN EXISTING BROAD DRAINAGE WAY LEAVES THE SITE. RUNOFF WILL DISCHARGE OVERLAND FOR APPROXIMATELY 1,750 FEET PRIOR TO REACHING AN UNT TO SWATARA CREEK.

DISCHARGE POINT 006 (DP 006) IS LOCATED AT AN EXISTING 30" STORM PIPE CROSSING JAY STREET AT THE SOUTHWESTERN CORNER OF THE PROPERTY. RUNOFF REACHING THIS PIPE WILL DISCHARGE ACROSS THE STARLIGHT LANEND FLOW DOWN INTO THE EXISTING QUARRY POND.

THERMAL IMPACTS ANALYSIS

ALL EXISTING SITE RUNOFF CURRENTLY LEAVES THE SITE UN–DETAINED WITH NO TREATMENT OF THIS RUNOFF IN ANY WAY. STRUCTURAL BMPS ARE PROPOSED TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE SIX (6) INFILTRATION BASINS WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOMS BEFORE BEING INFILTRATED THROUGH THE ENGINEERED SOIL MIX AND INTO THE GROUND. RUNOFF REACHING THE DETENTION BASIN WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOM BEFORE BEING SLOWLY RELEASED TO THE GROUND SURFACE. TREES ARE ALSO PROPOSED IN AND AROUND THE STREETS TO SHADE A PORTION OF THESE AREAS WHICH WILL 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 MORE IN–DEPTH DESCRIPTION OF HOW THE REQUIREMENTS ARE MET FOR THIS SITE.

PROPOSED BEST MANAGEMENT PRACTICES

- INFILTRATION BASIN – SIX (6) 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 IN A SIMILAR MANNER TO ALL DISCHARGE POINTS AT A RATE THAT IS LESS THAN PRE–DEVELOPMENT.

CHAPTER 102.8 (B) ANALYSIS

THE STREAM CHANNEL IS PROTECTED BY THE FLOW REDUCTION PROVIDED FROM THE PROPOSED STORMWATER MANAGEMENT FACILITIES. THE STRUCTURAL BMPS ALLOWS FOR REDUCED FLOW TO ALL DISCHARGE POINTS, AND THEREFORE THE DOWNSTREAM CHANNEL WILL NOT BE IMPACTED. THE SAME FLOW REDUCTION AND WATER QUALITY BENEFITS PROVIDED BY THE STRUCTURAL AND NON–STRUCTURAL BMPS WILL ALSO SERVE TO PROTECT THE 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.

Map Symbol	Soil Name	Slope	Hydrologic Group
BeB	Bellington shaly silt loam	3-8%	B
BkB	Berks chanmery silt loam	3-8%	B
BkC	Berks chanmery silt loam	8-15%	B
BkD	Berks chanmery silt loam	15-25%	B
CmA	Conly silt loam	0-3%	C
WeC	Weikert channery silt loam	8-15%	D

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

THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KNOWN KARST FEATURES ON SITE OR IN THE IMMEDIATE VICINITY OF THE PROJECT. THE ENTIRE SITE IS UNDERLAIN BY THE HAMBURG SEQUENCE ROCKS AND THE GRAYWACKE OF HAMBURG SEQUENCE ROCKS WHICH ARE COMPRISED OF SHALE, SILTSTONE, AND GRAYWACKE. AS SUCH, THE POTENTIAL FOR KARST ACTIVITY IS MINIMAL. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, THE COUNTY CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED, AND A CERTIFIED GEOTECHNICAL ADVISOR WILL BE REQUIRED TO OVERSEE MITIGATION OF THE HAZARDS.

BEDINGTON SOILS – THE BEDINGTON SERIES CONSISTS OF VERY DEEP, WELL DRAINED SOILS. BEDINGTON SOILS FORMED IN RESIDUUM FROM DARK BROWN, GRAY AND OLIVE ACID, SEDIMENTARY, SILTSTONE AND SHALE, WITH SOME SANDSTONE INTERBEDS. THEY ARE ON NEARLY LEVEL TO STEEP CONVEX UPLANDS AND ON THE SIDESLOPES OF HILLS AND RIDGES. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. BEDINGTON SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO CONCRETE. THIS SOIL MAY ALSO BE SUBJECT TO DROUGHT AND MAY BE EASILY ERODIBLE. BEDINGTON SOILS MAY ALSO BE SUSCEPTIBLE TO HYDRIC INCLUSIONS, SLOW PERCOLATION, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

BERKS SOILS – THE BERKS SERIES CONSISTS OF MODERATELY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM WEATHERED FROM SHALE, SILTSTONE AND FINE–GRAINED SANDSTONE ON ROUNDED AND DISSECTED UPLANDS. SLOPE RANGES FROM 0 TO 80 PERCENT. PERMEABILITY IS MODERATE OR MODERATELY RAPID. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. BERKS SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE, DROUGHTY, AND EASILY ERODIBLE. THIS SOIL MAY ALSO BE SUBJECT TO HYDRIC INCLUSIONS, SLOW PERCOLATION, PIPING, AND A POOR SOURCE OF TOPSOIL.

COMLY SOILS – THE COMLY SERIES CONSISTS OF VERY DEEP, MODERATELY WELL DRAINED. THESE SOILS FORMED COLLUVIUM WEATHERED FROM ACID BROWN AND GRAY SHALE, SILTSTONE, AND SILTSTONE. THEY ARE ON CONCAVE UPLAND SLOPES OF 0 TO 25 PERCENT. PERMEABILITY IS MODERATE ABOVE THE FRAGIPAN AND MODERATELY SLOW IN THE FRAGIPAN. MEAN ANNUAL PRECIPITATION IS 44 INCHES. MEAN ANNUAL TEMPERATURE IS 51 DEGREES F. COMLY SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO STEEL AND CONCRETE, DROUGHTY, AND EASILY ERODIBLE. THESE SOILS MAY ALSO BE SUSCEPTIBLE TO A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, PIPING, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

WEIKERT SOILS – THE WEIKERT SERIES CONSIST OF SHALLOW, WELL DRAINED SOILS FORMED IN MATERIAL THAT WEATHERED FROM INTERBEDDED GRAY AND BROWN ACID SHALE, SILTSTONE, AND FINE–GRAINED SANDSTONE ON GENTLY SLOPING TO VERY STEEP AREAS ON UPLANDS. SLOPE RANGES FROM 0 TO 100 PERCENT. PERMEABILITY IS MODERATELY RAPID. MEAN ANNUAL PRECIPITATION IS ABOUT 42 INCHES, AND THE MEAN ANNUAL AIR TEMPERATURE IS ABOUT 52 DEGREES F. WEIKERT SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE AND STEEL, AND DROUGHTY. THIS SOIL MAY ALSO BE SUSCEPTIBLE TO HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

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.
- 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 AREAS OF HIGH GROUNDWATER. IF DEWATERING IS 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 ARE LOCATED ON SITE. MINIMAL DISTURBANCE WILL TAKE PLACE IN WETLANDS A FOR THE CONSTRUCTION OF STREETS WITH ASSOCIATED CULVERTS TO MAINTAIN HYDRAULIC CONVEYANCE.
- LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 3:1. 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. INFILTRATION TESTS PREVIOUSLY PERFORMED INDICATED THAT THE INFILTRATION RATE AT THE SITE IS ADEQUATE IN THE PROPOSED INFILTRATION FACILITIES. A DETENTION BASIN IS PROPOSED IN THE AREA WHERE INFILTRATION TESTING YIELDED NEGLIGIBLE RESULTS.
- PIPING: ANTI–SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS.
- POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS THE ENTIRE SITE IS AN AGRICULTURAL FIELD, THE TOPSOIL IS EXPECTED TO BE SUFFICIENT.
- FROST ACTION: ALL 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.
- SINKHOLE FORMATION: THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KNOWN KARST FEATURES ON SITE OR IN THE IMMEDIATE VICINITY OF THE PROJECT. THE ENTIRE SITE IS UNDERLAIN BY THE HAMBURG SEQUENCE ROCKS AND THE GRAYWACKE OF HAMBURG SEQUENCE ROCKS WHICH ARE COMPRISED OF SHALE, SILTSTONE, AND GRAYWACKE. AS SUCH, THE POTENTIAL FOR KARST ACTIVITY IS MINIMAL. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, THE COUNTY CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED, AND A CERTIFIED GEOTECHNICAL ADVISOR WILL BE REQUIRED TO OVERSEE MITIGATION OF THE HAZARDS.
- WETNESS: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, DEWATERING BASINS, ETC. 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 (FILTER SOCK).

GENERAL SOIL NOTES

1. ALL 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 AND HAS YIELDED FAVORABLE RESULTS IN THE PROPOSED INFILTRATION FACILITIES. INFILTRATION RATES WERE NEGLIGIBLE IN THE AREA OF DETENTION BASIN D. AS SUCH, THE BASIN IS NOT DESIGNED FOR INFILTRATION. PLEASE REFER TO THE GEOTECHNICAL ENGINEERING REPORT FOR STORMWATER MANAGEMENT FOUND LATER IN THIS REPORT FOR FURTHER DISCUSSION AND RESULTS.

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 MT. PLEASANT VENTURES, LLC.

INDIVIDUAL BMP DESCRIPTION, CONSTRUCTION SEQUENCE, AND MAINTENANCE

GENERAL OVERALL BMP DESCRIPTION

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.

SIX (6) 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. 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 LEAVING THE SITE. PLEASE SEE THE PCSM PLAN AND REPORT FOR DETAILS, SPECIFICATIONS AND CALCULATIONS.

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 ROCKS 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 AND INSPECTION

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.
5. 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).
6. 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.
7. VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER AN INFILTRATION AREA, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
8. INSPECT THE FACILITY AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITO'S SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
9. 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.
10. 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.
11. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE.
12. 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 MUNICIPAL AUTHORITY 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 SUBSOI

SEQUENCE OF CONSTRUCTION – PHASE 3

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 EXTENDED ROCK CONSTRUCTION ENTRANCES #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.). INSTALL TEMPORARY ORANGE CONSTRUCTION FENCING AROUND WETLAND 2 AS SHOWN ON THE E&S PLANS.

6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASIN F). 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 37–42 AND 49–50 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 LOCATION 65 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN 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 BASIN F WHICH WILL SERVE AS A SEDIMENT BASIN DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT STORMWATER BASIN UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT BASIN. THE SEDIMENT BASIN MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. INSTALL THE OUTLET PIPE FROM THE BASIN ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI–SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN C350 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL TYPE LEVEL SPREADER AT BASIN OUTLET. INSTALL SEED IN THE INTERIOR SLOPES AND BERM OF BASIN. INSTALL TYPE M OUTLET STRUCTURE, CLEAN OUT STAKE, BASIN BAFFLE(S), AND SKIMMER WITHIN THE SEDIMENT BASIN. PLEASE 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 PIPE, ANTI–SEEP COLLARS, AND CLAY CORE.

10. 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.

11. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF THE BUILDING PADS AND STREETS WITHIN PHASE 4 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.

12. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE BUILDINGS, DRIVEWAYS, AND STREETS WITHIN PHASE 4. INSTALL SWALE 12 DURING ROUGH GRADING. ENSURE THE SWALE LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.

13. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL STORM INLETS NOT DRAINING TO SEDIMENT BASIN E AS SHOWN 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.

14. INSTALL THE STONE SUB–BASE FOR THE STREETS, DRIVEWAYS, AND CONCRETE SLABS AS PER PLAN REQUIREMENTS.

15. CONSTRUCT THE PROPOSED BUILDINGS AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE LOT.

16. 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 4–8 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.

17. 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.

18. PAVE THE STREETS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL THE 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.

19. ALL 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 PERMANENT STORMWATER BASINS. ANY WATER PUMPED FROM THE SEDIMENT 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.

20. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASIN F AS REQUIRED TO INSTALL INFILTRATION BASIN F AS SHOWN ON THE PCSM PLAN. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKE, AND SKIMMER. THE INFILTRATION BASIN SHALL BE OVER–EXCAVATED AND SCARIFIED 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 THE BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN THE BASIN BOTTOM. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. IMMEDIATELY AFTER PLACING THE ENGINEERED SOIL MIX, INSTALL THE SILT SOCK AT LOCATION 65 TO PREVENT SEDIMENTATION OF THE ENGINEERED SOILS. 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 BASIN F.

21. 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.

22. 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 4

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 EXTENDED ROCK CONSTRUCTION ENTRANCE #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.). INSTALL TEMPORARY ORANGE CONSTRUCTION FENCING AROUND WETLAND 2 AS SHOWN ON THE E&S PLANS.

6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION 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.

7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 31–37 AND 50–56 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 LOCATION 64 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN 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 BASIN E WHICH WILL SERVE AS A SEDIMENT BASIN DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT STORMWATER BASIN UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT BASIN. THE SEDIMENT BASIN MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. INSTALL THE OUTLET PIPE FROM THE BASIN ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI–SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN C350 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL TYPE LEVEL SPREADER AT BASIN OUTLET. INSTALL SEED IN THE INTERIOR SLOPES AND BERM OF BASIN. INSTALL TYPE M OUTLET STRUCTURE, CLEAN OUT STAKE, BASIN BAFFLE(S), AND SKIMMER WITHIN THE SEDIMENT BASIN. PLEASE 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 PIPE, ANTI–SEEP COLLARS, AND CLAY CORE.

10. 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.

11. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF THE BUILDING PADS AND STREETS WITHIN PHASE 5 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.

12. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE BUILDINGS, DRIVEWAYS, AND STREETS WITHIN PHASE 5. INSTALL SWALES 8–10 DURING ROUGH GRADING. ENSURE THE SWALE LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.

13. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL STORM INLETS THAT ARE NOT TRIBUTARY TO SEDIMENT BASIN G AS SHOWN ON THE E&S PLAN. INSTALL ROCK FILTER #2 ABOVE EW–H6. 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.

14. INSTALL THE STONE SUB–BASE FOR THE STREETS, DRIVEWAYS, AND CONCRETE SLABS AS PER PLAN REQUIREMENTS.

15. INSTALL THE PROPOSED BUILDINGS AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE LOT.

16. CONSTRUCT THE PROPOSED BUILDINGS AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE 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 4–8 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 STREETS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL THE 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. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASIN TO PERMANENT STORMWATER BASINS. ANY WATER PUMPED FROM THE SEDIMENT 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 BASIN E AS REQUIRED TO INSTALL INFILTRATION BASIN E AS SHOWN ON THE PCSM PLAN. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKE, AND SKIMMER. THE INFILTRATION BASIN SHALL BE OVER–EXCAVATED AND SCARIFIED 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 THE BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN THE BASIN BOTTOM. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. IMMEDIATELY AFTER PLACING THE ENGINEERED SOIL MIX, INSTALL THE SILT SOCK AT LOCATION 64 TO PREVENT SEDIMENTATION OF THE ENGINEERED SOILS. 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 BASIN E.

21. 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.

22. 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 5

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 EXTENDED ROCK CONSTRUCTION ENTRANCE #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.)

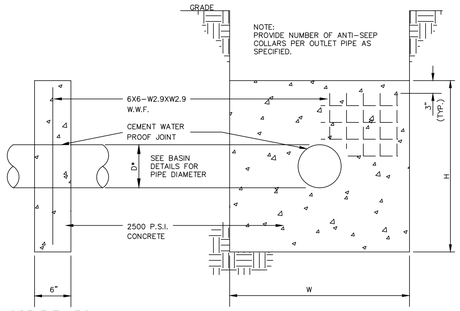
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASIN G). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.

7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 44–48 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 LOCATION 66 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN IS COMPLETE.

8. INSTALL ROCK FILTER #1 AT THE CULVERT BENEATH JAY STREET.

9. 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."

10. INSTALL S

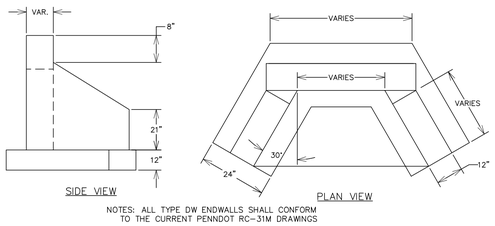


BASIN	W	H	DIA.	# OF COLLARS	BASIN	W	H	DIA.	# OF COLLARS
A	7.35'	4.76'	18"	2	E	5.76'	3.17'	18"	2
B	7.89'	5.30'	18"	2	F	6.15'	3.56'	18"	2
C	7.48'	4.89'	18"	2	G	6.98'	4.39'	18"	2
D	5.76'	3.17'	18"	2					

CONCRETE ANTI-SEEP COLLAR

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.

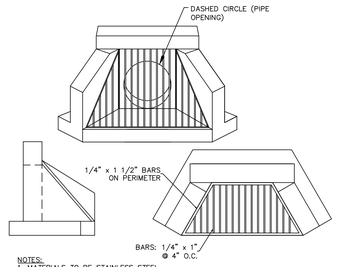


NOTES: ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-31M DRAWINGS

MAXIMUM PIPE SIZE – 48" SLCPP

TYPE DW ENDWALL DETAIL

NO SCALE

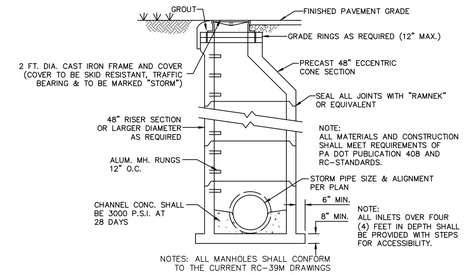


NOTES:
1. MATERIALS TO BE STAINLESS STEEL.
2. ATTACH TRASH RACK TO HEADWALL WITH 3/8" DIA. S.S. ANCHOR BOLTS.
3. HINGED VERSION REQUIRED.

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

TYPE DW ENDWALL WITH TRASH RACK DETAIL

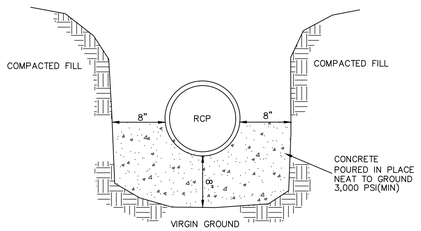
NO SCALE



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

STORMWATER MANHOLE CROSS SECTION

NO SCALE



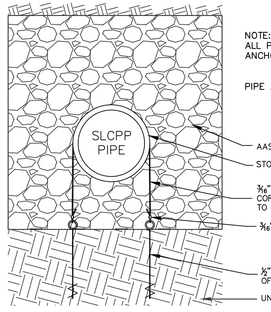
CROSS-SECTION AT OUTLET BARREL

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



NOTE:
ALL PIPES THAT EXCEED 15% IN SLOPE SHALL BE ANCHORED AS SPECIFIED ON THIS DETAIL.

PIPE ANCHORS SHALL BE SPACED AT 35' O.C.

AASHTO #8 COARSE AGGREGATE

STORM SEWER PER PLAN

3/16" GALVANIZED CABLE SECURED IN VALLEY BETWEEN CORRUGATIONS, USE RUBBER HOSE OR RUBBER STRIP TO PROTECT PIPE FROM GOUGING BY CABLE

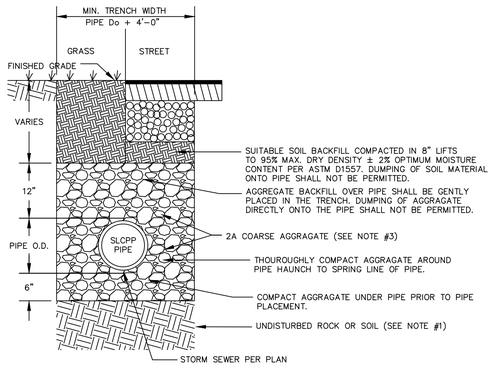
3/16" GALVANIZED CABLE CLIPS

1/2" X 30" HELIX ANCHOR INSTALLED ON EITHER SIDE OF PIPE AT BOTTOM OF TRENCH

UNDISTURBED ROCK OR SOIL

TYPICAL STEEP SLOPE PIPE ANCHOR ASSEMBLY

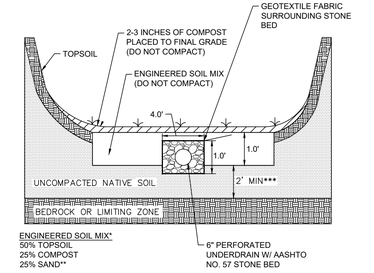
NO SCALE



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. USE NO. 2A STONE FOR OUTLET PIPES IN DETENTION BASIN EMBANKMENTS.
4. ALL TRENCHING SHALL CONFORM TO THE CURRENT PENNDOT RC-30M DRAWINGS

TYPICAL TRENCH DETAIL FOR SLCPP INSTALLATION

NO SCALE



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

6" PERFORATED UNDERDRAIN W/ AASHTO NO. 57 STONE BED

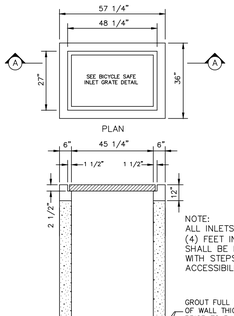
*SHALL BE LESS THAN 20% CLAY BY VOLUME, TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

**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.

***ANY ROCK WITHIN TWO (2) FEET OF THE BOTTOM OF THE ENGINEERED SOILS SHALL BE OVEREXCAVATED AND REPLACED WITH UNCOMPACTED NATIVE SOILS.

INFILTRATION BASIN BOTTOM TYPICAL CROSS SECTION DETAIL

NO SCALE

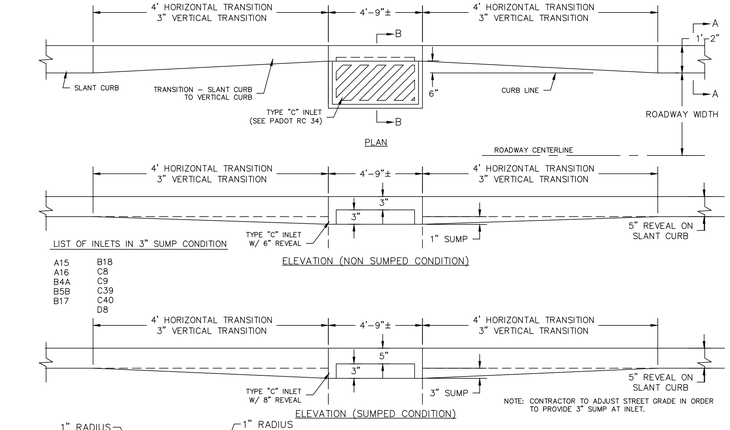


SECTION A–A

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

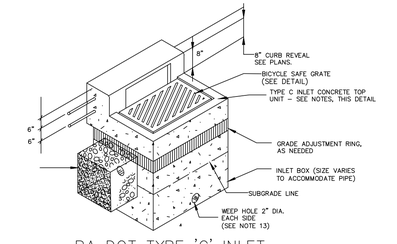
TYPE M INLET DETAIL (RC-45M)

NO SCALE

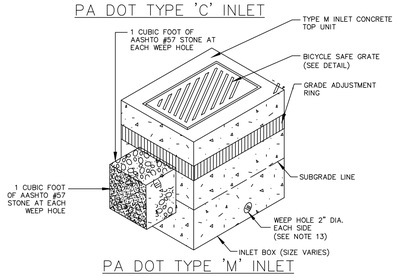


SLANT CURB TO TYPE C INLET CURB TRANSITION DETAIL

NO SCALE



PA DOT TYPE 'C' INLET



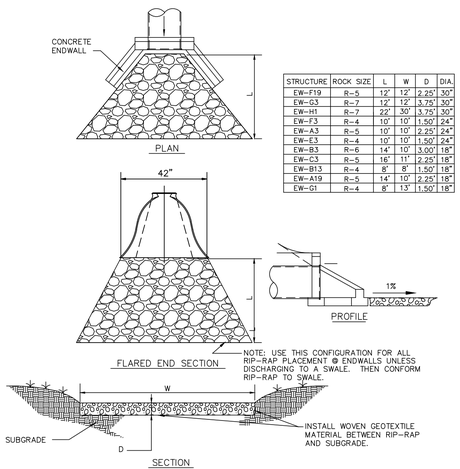
PA DOT TYPE 'M' INLET

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.

PADOT STORMWATER INLETS (TYPE C & M)

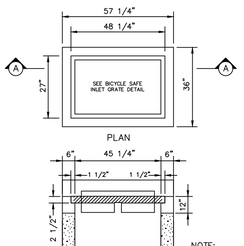
NO SCALE



STRUCTURE	ROCK SIZE	L	W	D	DIA
EW-F19	R-5	12'	12'	2.25'	30"
EW-G3	R-7	12'	12'	3.75'	30"
EW-H1	R-7	22'	30'	3.75'	30"
EW-F3	R-4	10'	10'	1.50'	24"
EW-A3	R-5	10'	10'	2.25'	24"
EW-E3	R-4	10'	10'	1.50'	24"
EW-B3	R-6	14'	10'	3.00'	18"
EW-C3	R-5	16'	11'	2.25'	18"
EW-B1.3	R-4	8'	8'	1.50'	18"
EW-A19	R-5	14'	10'	2.25'	18"
EW-C1	R-4	8'	1.3'	1.50'	18"

FLARED END SECTION/ENDWALL RIP RAP DETAIL

NO SCALE

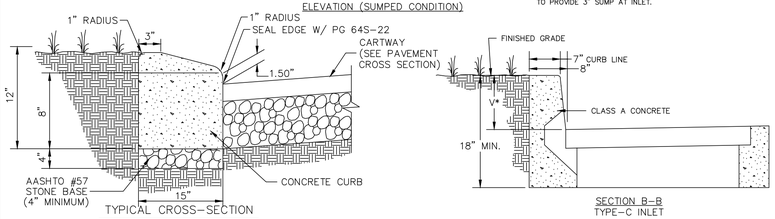


SECTION A–A

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

TYPE C INLET DETAIL (RC-45M)

NO SCALE



SLANT CURB TO TYPE C INLET CURB TRANSITION DETAIL

NO SCALE

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

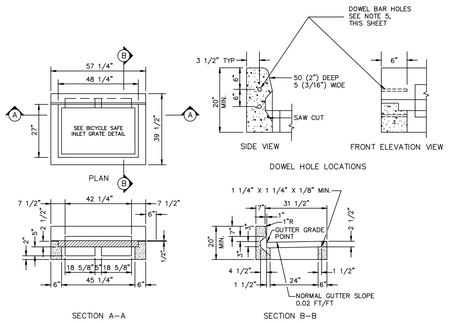
REVISION	DATE	BY
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Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7102
Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #784-25-001	

19

19 OF 44 SHEETS

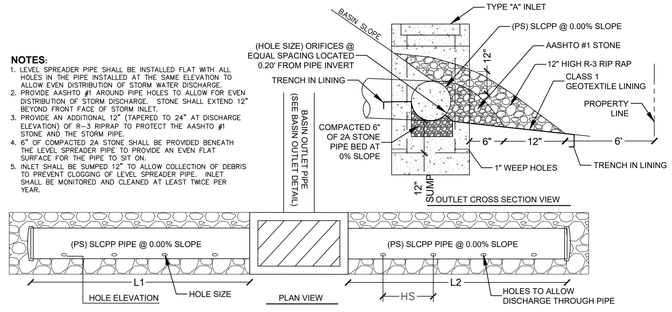


NOTES: ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-45M DRAWINGS

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

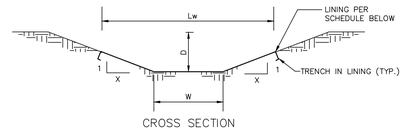


NOTES:
1. LEVEL SPREADER PIPE SHALL BE INSTALLED FLAT WITH ALL HOLES IN THE PIPE INSTALLED AT THE SAME ELEVATION TO ALLOW EVEN DISTRIBUTION OF STORM WATER DISCHARGE.
2. PROVIDE AASHTO #1 AROUND PIPE HOLES TO ALLOW FOR EVEN DISTRIBUTION OF STORM DISCHARGE. STONE SHALL EXTEND 12" BEYOND FRONT FACE OF STORM 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								
BASIN OUTLET	PIPE SIZE (PS)	HOLE SIZE	HOLE ELEVATION	HOLE SPACING (HS)	# OF HOLES	L1	L2	TOTAL PIPE LENGTH (L1+L2)
A	18"	1.5"	599.20	0.362	249	70'	20'	90'
B	18"	1.5"	580.20	2.41	50	80'	40'	120'
C	18"	1.5"	588.20	4.642	13	25'	35'	60'
D	12"	1.5"	612.70	8.356	10	55'	25'	80'
E	12"	1.5"	612.70	1.215	82	50'	50'	100'
F	18"	1.5"	611.45	0.842	119	50'	50'	100'

LEVEL SPREADER DETAIL

NO SCALE

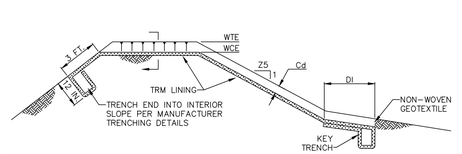


CROSS SECTION

SWALE NO	WIDTH (W)	DEPTH (D)	SIDE SLOPE(X)	MAX. SLOPE	LINING WIDTH (Lw)	LINING	TEMPORARY LINING	STAPLE PATTERN
1	1.5'	1'	4	17%	9.5'	GRASS	N.A.G. C-350	E
2	1.5'	1'	15	8%	31.5'	GRASS	N.A.G. S-75	D
3	1.5'	1'	12.5	5%	26.5'	GRASS	N.A.G. S-75	D
4	1.5'	1'	9	7%	19.5'	GRASS	N.A.G. P-300	E
5	1.5'	1'	6.5	10%	14.5'	GRASS	N.A.G. P-300	E
6	1'	1'	9	6%	19'	GRASS	N.A.G. S-75	D
7	1'	1'	10	12%	21'	GRASS	N.A.G. P-300	E
8	2'	1'	7.5	6%	17'	GRASS	N.A.G. P-300	E
9	1.5'	1'	7	10%	15.5'	GRASS	N.A.G. P-300	E
10	2'	1'	8	6%	18'	GRASS	N.A.G. P-300	E
11A	1.5'	1'	3	33%	16.5'	RIPRAP	R-5 RIPRAP	–
11B	1.5'	1'	7.5	10%	16.5'	GRASS	N.A.G. P-300	E
12	1'	1'	15	4%	31'	GRASS	N.A.G. S-75	D
13	1'	1'	3	6%	7'	GRASS	N.A.G. S-75	D
14A	2'	1'	3	33%	8'	RIPRAP	R-5 RIPRAP	–
14B	2'	1'	3	4%	8'	GRASS	N.A.G. S-75	D
15	1.5'	1'	8	10%	17.5'	GRASS	N.A.G. P-300	E

STORMWATER SWALE DETAIL

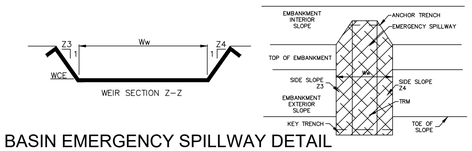
NO SCALE



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 Dl (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R-__)	RIPRAP THICK. DR1 (IN)
A	3	3	568.25	567.00	425	C350	E	3	1.25	7	N/A	N/A	N/A
B	3	3	591.25	590.00	175	C350	E	3	1.25	7	N/A	N/A	N/A
C	3	3	598.25	597.00	100	C350	E	3	1.25	7	N/A	N/A	N/A
D	3	3	618.25	617.00	25	C350	E	3	1.25	7	N/A	N/A	N/A
E	3	3	618.25	617.00	80	C350	E	3	1.25	7	N/A	N/A	N/A
F	3	3	616.25	615.00	350	C350	E	3	1.25	7	N/A	N/A	N/A
G	3	3	618.35	617.00	150	C350	E	3	1.35	7	N/A	N/A	N/A

BASIN EMERGENCY SPILLWAY DETAIL

NO SCALE



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

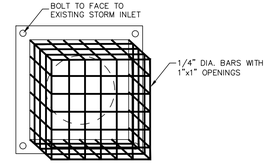
6" PVC KNIFE VALVE DETAIL

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



STORM INLET TRASH RACK DETAIL

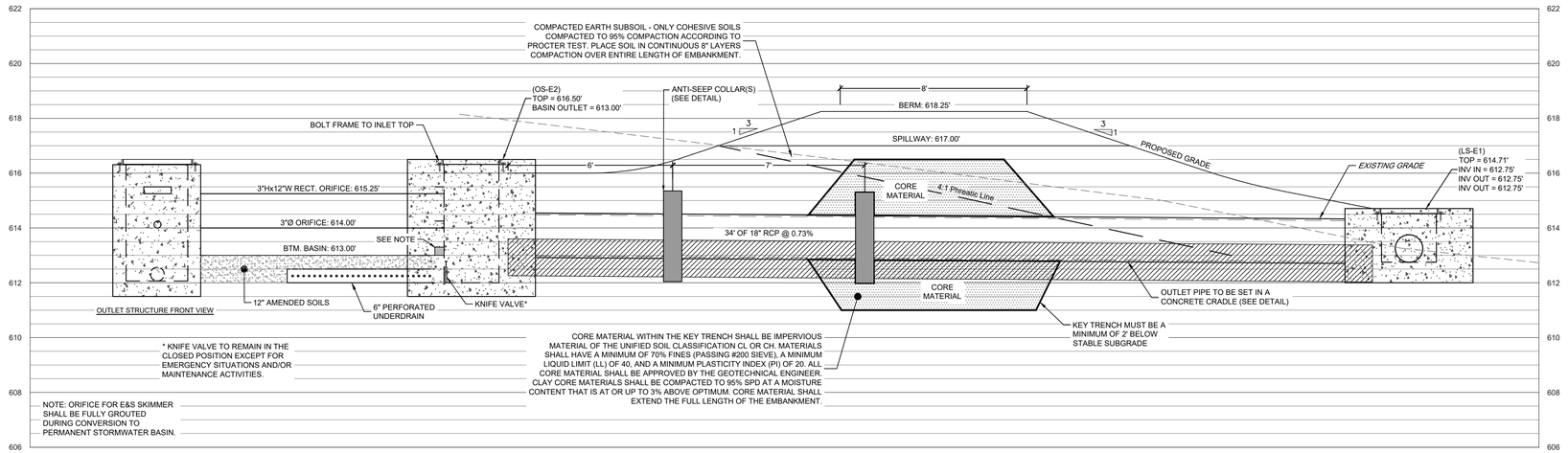
NO SCALE

BY						
DATE						
REVISION						

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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

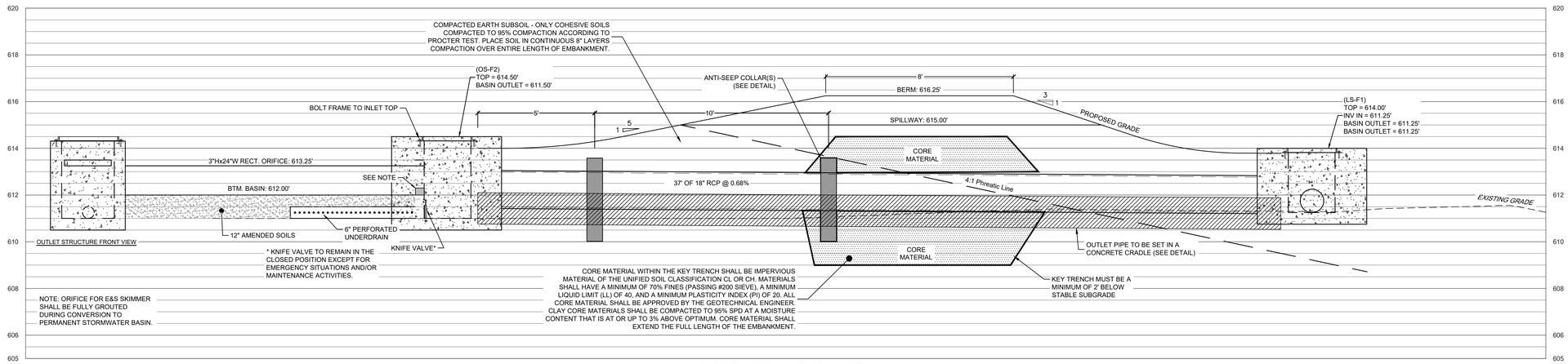
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #784-25-001	



INFILTRATION BASIN "E" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW



INFILTRATION BASIN "F" OUTLET

SCALE: 1" = 2.5'

OUTLET CROSS SECTION VIEW

BY	DATE	REVISION
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POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

REVISED FINAL PHASE 1 AND FINAL PHASE 2

SUBDIVISION & LAND DEVELOPMENT PLAN

For

THE ESTATES AT HEARTHSIDE

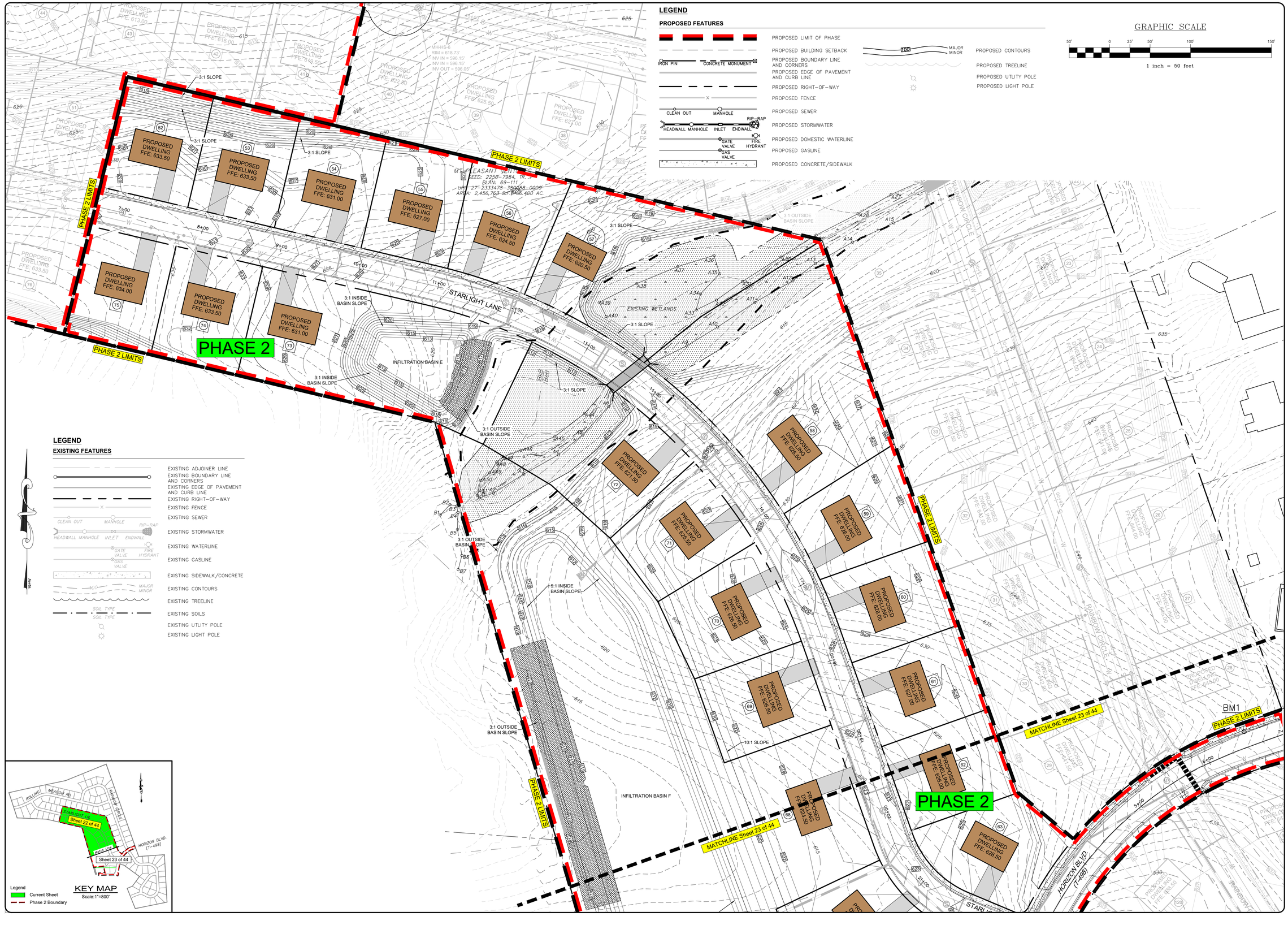
located in

NORTH LEBANON TOWNSHIP

LEBANON County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7110
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SCALE:	AS NOTED
PROJECT #	784-25-001



REVISION	DATE	BY
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GRADING PLAN

REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
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Lebanon, PA 17042
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Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

22

22 OF 44 SHEETS

PHASE 2

PHASE 2 LIMITS

MATCHLINE Sheet 22 of 44

MATCHLINE Sheet 22 of 44

PHASE 2 LIMITS

PHASE 2 LIMITS

PHASE 2 LIMITS

PHASE 2 LIMITS

PHASE 2

3:1 OUTSIDE BASIN SLOPE

10:1 SLOPE

INFILTRATION BASIN F

5:1 INSIDE BASIN SLOPE

3:1 SLOPE

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 628.00

PROPOSED DWELLING FFE: 627.00

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 628.00

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 630.50

PROPOSED DWELLING FFE: 630.00

PROPOSED DWELLING FFE: 630.50

GARAGE

DWELLING

DWELLING

RAINBOW CIRCLE

RAINBOW CIRCLE

HORIZON BLVD. (T-498)

STARLIGHT LANE

JAY STREET (T-477)

BM1

BM2

MB-2

MB-3

MB-4

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 (100 MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

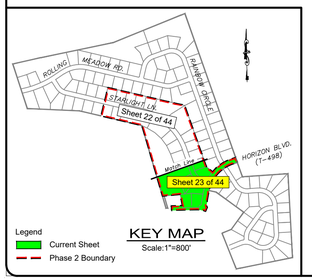
PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- 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)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet



GRADING PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

REVISION	DATE	BY
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----	----	----
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Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-2348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

23

23 OF 44 SHEETS

PHASE 2

PHASE 2 LIMITS

EX. MH-HS-6 INSTALLED UNDER PHASE 1

EXISTING SANITARY SEWER (INSTALLED UNDER PHASE 1)

ROLLING MEADOW ROAD

MH-HS-7
RIM = 623.09'
INV IN = 597.60'
INV OUT = 597.50'

MH-HS-8
RIM = 615.36'
INV IN = 598.80'
INV OUT = 598.70'

MH-HS-6
RIM = 618.73'
INV IN = 596.15'
INV IN = 596.15'
INV OUT = 596.05'

TO BE INSTALLED UNDER PHASE 2

PROPOSED 8" PVC SEWER MAIN

MH-HS-27
RIM = 631.60'
INV OUT = 625.01'

EX. MH-HS-27 INSTALLED UNDER PHASE 1

MH-HS-32
RIM = 630.18'
INV OUT = 622.04'

ARV

PR. 8" DICL WATER MAIN

PROPOSED FIRE HYDRANT

GATE VALVES

TRAP AND VENT
(INSTALL FOR ALL LOTS)

MH-HS-31
RIM = 616.88'
INV IN = 610.00'
INV OUT = 609.90'

PR. WATER METER (TYP.)

STARLIGHT LANE

MH-HS-28 (WT)
RIM = 619.00'
INV IN = 601.20'
INV OUT = 601.10'

MH-HS-9
RIM = 620.90'
INV IN = 600.40'
INV IN = 612.50'
INV OUT = 600.30'

MH-HS-30
RIM = 617.40'
INV IN = 605.50'
INV OUT = 605.40'

MH-HS-29
RIM = 619.55'
INV IN = 602.25'
INV IN = 602.25'
INV OUT = 602.15'

MH-HS-10
RIM = 640.80'
INV IN = 628.00'
INV OUT = 625.90'

MH-HS-11
RIM = 638.20'
INV IN = 627.35'
INV OUT = 627.25'

MH-HS-33
RIM = 625.15'
INV IN = 603.25'
INV OUT = 603.15'

MH-HS-34
RIM = 621.32'
INV IN = 604.70'
INV OUT = 604.60'

MH-HS-35
RIM = 624.82'
INV IN = 605.40'

MATCHLINE Sheet 25 of 44

MATCHLINE Sheet 25 of 44

11.25° BEND

11.25° BEND

PROPOSED DWELLING FFE: 606.50 (44)
PROPOSED DWELLING FFE: 609.00 (43)
PROPOSED DWELLING FFE: 611.00 (42)
PROPOSED DWELLING FFE: 614.50 (41)
PROPOSED DWELLING FFE: 618.00 (40)
PROPOSED DWELLING FFE: 622.50 (39)
PROPOSED DWELLING FFE: 624.50 (38)
PROPOSED DWELLING FFE: 624.50 (37)
PROPOSED DWELLING FFE: 623.50 (36)
PROPOSED DWELLING FFE: 621.50 (35)
PROPOSED DWELLING FFE: 618.50 (20)
PROPOSED DWELLING FFE: 619.50 (21)
PROPOSED DWELLING FFE: 622.50 (22)
PROPOSED DWELLING FFE: 627.00 (27)
PROPOSED DWELLING FFE: 630.50 (34)
PROPOSED DWELLING FFE: 634.00 (33)
PROPOSED DWELLING FFE: 641.50 (32)
PROPOSED DWELLING FFE: 642.50 (31)
PROPOSED DWELLING FFE: 645.00 (30)
PROPOSED DWELLING FFE: 645.00 (28)
PROPOSED DWELLING FFE: 632.50 (51)
PROPOSED DWELLING FFE: 633.50 (76)
PROPOSED DWELLING FFE: 634.00 (75)
PROPOSED DWELLING FFE: 633.50 (74)
PROPOSED DWELLING FFE: 631.00 (73)
PROPOSED DWELLING FFE: 632.50 (52)
PROPOSED DWELLING FFE: 632.50 (53)
PROPOSED DWELLING FFE: 631.00 (54)
PROPOSED DWELLING FFE: 627.00 (55)
PROPOSED DWELLING FFE: 624.50 (56)
PROPOSED DWELLING FFE: 620.50 (57)
PROPOSED DWELLING FFE: 621.50 (72)
PROPOSED DWELLING FFE: 625.50 (71)
PROPOSED DWELLING FFE: 628.50 (70)
PROPOSED DWELLING FFE: 628.50 (69)
PROPOSED DWELLING FFE: 624.50 (68)
PROPOSED DWELLING FFE: 628.50 (58)
PROPOSED DWELLING FFE: 627.00 (59)
PROPOSED DWELLING FFE: 627.00 (60)
PROPOSED DWELLING FFE: 627.00 (61)
PROPOSED DWELLING FFE: 628.00 (62)
PROPOSED DWELLING FFE: 628.50 (63)

LEGEND

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- 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 FORCE MAIN (FM)
- 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
- PROPOSED WATER METER PIT

GRAPHIC SCALE
50' 0' 25' 50' 100'
1 inch = 50 ft.

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 SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

SANITARY SEWER NOTES:

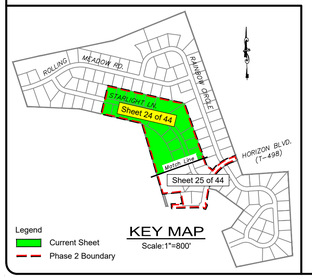
1. ALL SANITARY SEWER WORK SHALL BE COMPLETED ACCORDING TO THE RULES AND REGULATIONS OF THE NORTH LEBANON TOWNSHIP MUNICIPAL AUTHORITY.
2. CLAY DIKES SHALL BE ADDED TO THE SEWER TRENCH. SPACING SHALL BE NO GREATER THAN 200 FT. AND NO LESS THAN ONE (1) PER SEWER RUN. THE CLAY DIKE SEWER DETAIL IS SHOWN ON SHEET 36 & 37.
3. SEWAGE GRINDER PUMPS SHALL NOT BE PERMITTED FOR USE ON THE PROJECT.
4. CENTERLINE SEPARATION BETWEEN WYE FITTING (LATERALS) ON SEWER MAINS SHALL BE FIVE (5) FEET MINIMUM.
5. THE HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LATERALS AND WATER SERVICE LINES SHALL BE FIVE (5) FEET MINIMUM.
6. HORIZONTAL CLEARANCE BETWEEN SEWER LATERALS AND SANITARY MANHOLE, STORM INLETS, ENDWALLS, HEADWALLS, INLETS AND OTHER STORMWATER FACILITIES SHALL BE THREE (3) FEET MINIMUM.
7. SEWER SERVICE LINES SHALL BE PLACED NO CLOSER THAN 10 FT. TO A PROPERTY LINE UNLESS AN EASEMENT IS PROVIDED ON ADJOINING PROPERTY AS NECESSARY TO MAINTAIN SEWER SERVICE LINE.

WATER MAIN NOTES:

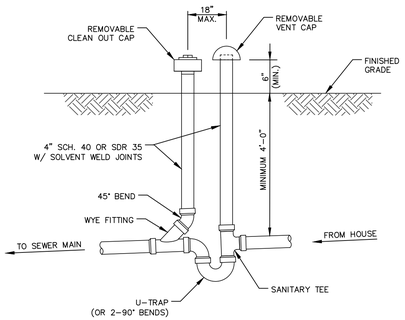
1. CONTRACTOR SHALL USE BENDS AS NECESSARY TO ACHIEVE PROPOSED WATER MAIN LAYOUT.
2. PIPE DEFLECTION IS TO BE A MAXIMUM OF HALF OF THE MANUFACTURERS RECOMMENDATION
3. ALL 11.25° BENDS WERE USED IN THE DESIGN OF THE PROPOSED WATER MAIN. WHERE BENDS ARE NOT SHOWN, HALF OF THE MANUFACTURERS RECOMMENDATION ON PIPE DEFLECTION SHALL BE USED.
4. 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)

NOTES:

1. 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'



TYPICAL TRAP & VENT ASSEMBLY DETAIL
NO SCALE

REVISION	DATE	BY

UTILITY PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

24

24 OF 44 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)
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- 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 FORCE MAIN (FM)
- PROPOSED STORMWATER (RIP-RAP, HEADWALL, MANHOLE, INLET, 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 WATER METER PIT (W, METER PIT)

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

PHASE 2

PHASE 2 LIMITS

MATCHLINE Sheet 24 of 44

MH-HS-33
RIM = 625.15'
INV IN = 603.25'
INV OUT = 603.15'

MH-HS-34
RIM = 621.32'
INV IN = 604.70'
INV OUT = 604.60'

MH-HS-35
RIM = 624.82'
INV IN = 605.40'
INV OUT = 605.30'

MH-HS-36
RIM = 627.85'
INV IN = 606.00'
INV OUT = 605.90'

MH-HS-37
RIM = 629.30'
INV IN = 607.35'
INV IN = 618.00'
INV OUT = 607.25'

MH-HS-38
RIM = 626.40'
INV IN = 608.00'
INV OUT = 607.90'

MH-HS-42
RIM = 629.50'
INV OUT = 621.50'

PROPOSED FIRE HYDRANT

TRAP AND VENT (INSTALL FOR ALL LOTS)

PR. WATER METER (TYP.)

PROPOSED DWELLING FFE: 628.50

PROPOSED DWELLING FFE: 627.00

PROPOSED DWELLING FFE: 626.50

PROPOSED DWELLING FFE: 624.50

PROPOSED DWELLING FFE: 630.00

PROPOSED DWELLING FFE: 630.50

PROPOSED DWELLING FFE: 642.50

PROPOSED DWELLING FFE: 643.00

PROPOSED DWELLING FFE: 641.50

PROPOSED DWELLING FFE: 639.50

PROPOSED DWELLING FFE: 637.50

PROPOSED DWELLING FFE: 635.50

PROPOSED DWELLING FFE: 633.50

PROPOSED DWELLING FFE: 642.00

PR. 8" DICL WATER MAIN

PR. 8" D.I.F. WATER MAIN

EX. 8" D.I.F. WATER MAIN

CONNECT PR. 8" DICL TO EXISTING WATER MAIN

PR MH-HS-11 TO BE INSTALLED UNDER PHASE 5

GATE VALVE

GATE VALVES

11.25° BEND

STARLIGHT LANE (T-477)

HORIZON BLVD. (T-498)

JAY STREET (T-477)

PR SAN. SEWER MAIN TO BE INSTALLED UNDER PHASE 5

PR WATER MAIN TO BE INSTALLED UNDER PHASE 5

PROPOSED FIRE HYDRANT

SCO SEPTIC OIL FILL

EXISTING SEPTIC SYSTEM

WELL

OHW

PROPOSED 8" PVC SEWER MAIN

KEY MAP

Scale:1"=800'

Legend
- Current Sheet
- Phase 2 Boundary

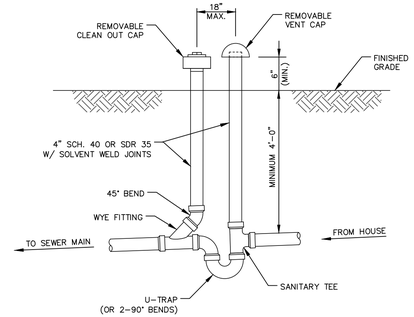
SANITARY SEWER NOTES:

1. ALL SANITARY SEWER WORK SHALL BE COMPLETED ACCORDING TO THE RULES AND REGULATIONS OF THE NORTH LEBANON TOWNSHIP MUNICIPAL AUTHORITY.
2. CLAY DIKES SHALL BE ADDED TO THE SEWER TRENCH. SPACING SHALL BE NO GREATER THAN 200 FT. AND NO LESS THAN ONE (1) PER SEWER RUN. THE CLAY DIKE SEWER DETAIL IS SHOWN ON SHEET 36 & 37.
3. SEWAGE GRINDER PUMPS SHALL NOT BE PERMITTED FOR USE ON THE PROJECT.
4. CENTERLINE SEPARATION BETWEEN WYE FITTING (LATERALS) ON SEWER MAINS SHALL BE FIVE (5) FEET MINIMUM.
5. THE HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LATERALS AND WATER SERVICE LINES SHALL BE FIVE (5) FEET MINIMUM.
6. HORIZONTAL CLEARANCE BETWEEN SEWER LATERALS AND SANITARY MANHOLE, STORM INLETS, ENDWALLS, HEADWALLS, INLETS AND OTHER STORMWATER FACILITIES SHALL BE THREE (3) FEET MINIMUM.
7. SEWER SERVICE LINES SHALL BE PLACED NO CLOSER THAN 10 FT. TO A PROPERTY LINE UNLESS AN EASEMENT IS PROVIDED ON ADJOINING PROPERTY AS NECESSARY TO MAINTAIN SEWER SERVICE LINE.

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. ALL 11.25° BENDS WERE USED IN THE DESIGN OF THE PROPOSED WATER MAIN. WHERE BENDS ARE NOT SHOWN, HALF OF THE MANUFACTURERS RECOMMENDATION ON PIPE DEFLECTION SHALL BE USED.
4. 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)

NOTES:
1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PURCHASE AND INSTALL FIRE HYDRANT MARKERS FOR ALL NEWLY INSTALLED FIRE HYDRANTS.



TYPICAL TRAP & VENT ASSEMBLY DETAIL

NO SCALE

REVISION	DATE	BY
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UTILITY PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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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BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

25

25 OF 44 SHEETS

GENERAL LANDSCAPE NOTES (BY LANDSCAPE CONTRACTOR)

1. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL UTILITIES AND SHALL ASSUME RESPONSIBILITY FOR DAMAGE TO UTILITIES AND PROPERTY AS A RESULT OF HIS WORK.
2. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR A PERIOD OF EIGHTEEN (18) MONTHS FROM THE DATE OF INSTALLATION AND ACCEPTANCE BY OWNER.
3. PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY AND SHALL CONFORM TO MEASUREMENTS AND MINIMUM STANDARDS AS SET FORTH IN THE PLANT SCHEDULE.
4. ALL PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 3" OF SHREDDED AGED HARDWOOD BARK MULCH.
5. THE CONTRACTOR IS TO PROVIDE ADDITIONAL TOPSOIL AS NEEDED FOR PLANTING OPERATIONS.
6. ALL TREES ARE TO BE STAKED AND GUYED ACCORDING TO THE PLANTING DETAILS AND ACCEPTED PROFESSIONAL NURSERYMAN'S STANDARDS. TREES WITH LESS THAN A 3" CALIPER SHALL BE PROPERLY STAKED AND MORE THAN A 3" CALIPER PROPERLY GUYED. ALL PLANTING DETAILS ARE LOCATED ON THE LANDSCAPING PLAN (SHEETS 12 & 13). ALL STREET TREES MUST BE A MINIMUM OF 2.50 INCHES IN DIAMETER.
7. THE CONTRACTOR SHALL REMOVE WIRE BASKETS AND NYLON BURLAP OR ROPE FROM THE ROOT BALL OF ALL PLANT MATERIAL.
8. APPLY A 50/50 MIX OF CHIPCO RONSTAR 6 AND PENNANT 56 TO SOIL SURFACE IN MULCHED AREAS PRIOR TO MULCHING. APPLY AT A RATE OF 7 POUNDS PER 1000 SF.
9. PLACE "WEED BLOCK" WATER PERMEABLE FILTRATION FABRIC UNDER MULCHED AREAS EXCEPT FOR AREAS OF GROUND COVER (I.E. IVY AND VINCA) AND PERENNIAL BEDS.
10. LANDSCAPE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH ALL OTHER CONTRACTORS ON SITE.
11. ALL AREAS OTHER THAN PLANTING BED AREAS SHALL BE CONSIDERED LAWN AREAS.
12. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN AND REMOVE/DISPOSE FROM THE SITE ALL DEBRIS THAT IS A PART OF THE LANDSCAPE CONTRACTOR'S OPERATION.
13. THE CONTRACTOR SHALL INSTALL ORANGE PLASTIC CONSTRUCTION FENCE AROUND EXISTING MATURE TREES TO PREVENT ROOT ZONE COMPACTION AND DAMAGE TO TRUNKS AND BRANCHES. THE FENCING SHALL BE INSTALLED TO PREVENT DAMAGE AT A MINIMUM OF 2/3 OF THE DIAMETER OF THE TREE CANOPY.

PROPOSED STREET TREE PLANT SCHEDULE

	QUANTITY	KEY	BOT. NAME	COMMON NAME	SIZE	CONDITION
+	10	AT	ACER TRUNCATUM	PACIFIC SUNSET MAPLE	2.5"–3" CAL	B&B
	8	UF	ULMUS 'FRONTIER'	FRONTIER HYBRID ELM	2.5"–3" CAL	B&B
	7	EB	CERCIS CANADENSIS	EASTERN REDBUD	2.5"–3" CAL	B&B
	8	AC	ACER CAMPESTRE	HEDGE MAPLE	2.5"–3" CAL	B&B
	13	CK	CORNUS KOUSA	KOUSA DOGWOOD	2.5"–3" CAL	B&B
	16	CS	CARPINUS BETULUS	EUROPEAN HORNBEAM	2.5"–3" CAL	B&B

LANDSCAPING LONG-TERM MAINTENANCE NOTES:

1. A QUALIFIED LANDSCAPE CONTRACTOR KNOWLEDGEABLE IN PRUNING TECHNIQUES, FERTILIZER APPLICATION, PEST CONTROL, AND LAWN CARE SHALL PERFORM ANNUAL LANDSCAPE MAINTENANCE.
2. THE INDIVIDUAL LOT OWNERS SHALL BE RESPONSIBLE FOR REGULAR MOWING OF ALL PRIVATE LAWN AREAS.
3. ANY PLANT MATERIAL SHOWN ON THE APPROVED LANDSCAPE PLAN THAT DOES NOT SURVIVE OR IS DAMAGED SHALL BE REPLACED IN KIND BY THE OWNER WITHIN A SIX-MONTH PERIOD.

PHASE 2 LIMITS

PHASE 2

STARLIGHT LANE

RAINBOW CIRCLE

HORIZON BLVD (T-498)

ROLLING MEADOW RD.

MATCHLINE Sheet 27 of 44

MATCHLINE Sheet 26 of 44

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 UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

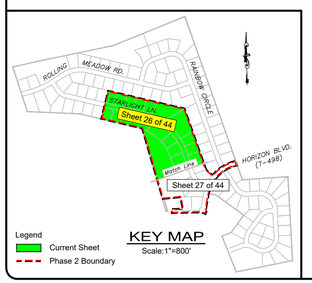
- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS (IRON PIN, CONCRETE MONUMENT)
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- PROPOSED RIGHT–OF–WAY
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- PROPOSED SEWER (CLEAN OUT, MANHOLE)
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- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE
- PROPOSED TREES

NOTES:

1. NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30" AND BELOW 10' TO THE SIGHT DISTANCE. TREES SHALL NOT BE PLANTED WITHIN 5' OF ANY SIDEWALKS.
2. A MINIMUM OF 15% OF EACH LOT PROPOSED IS PROVIDED WITH GROUND COVER (LANDSCAPING) AS REQUIRED BY ORDINANCE.
3. IF ANY OF THE PLANTINGS DIE OR ARE CUT DOWN, REPLACEMENT OF PLANTINGS SHALL BE REQUIRED AND SHALL BE OF COMPARABLE SIZE AND TYPE WITHIN 18 MONTHS OF PROJECT COMPLETION.

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY THE INSTALLATION OF ALL STREET TREES IS NOT WITHIN 10' OF ANY UTILITIES, INCLUDING SEWER LATERALS, WATER LATERALS, ELECTRIC, GAS, ETC. TO ALL HOMES.



GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

REVISION	DATE	BY

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For
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located in
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LEBANON County, Pennsylvania

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BASE MAP:	JEC
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CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784–25–001	

26

26 OF 44 SHEETS

LEGEND

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- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
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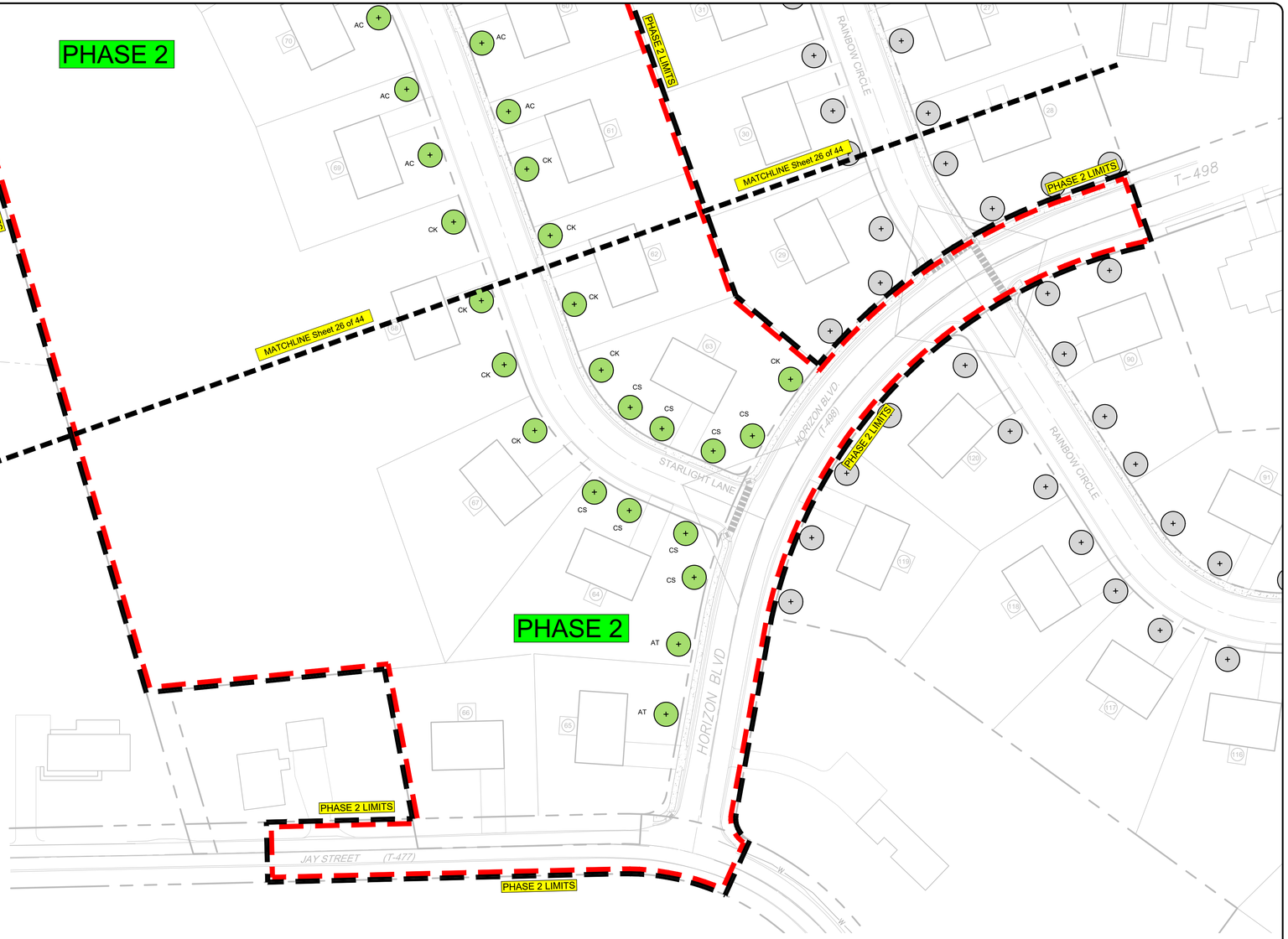
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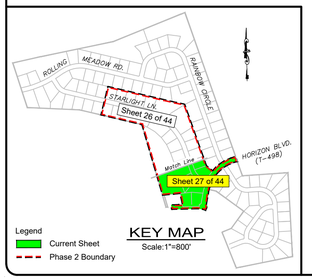
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SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
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27

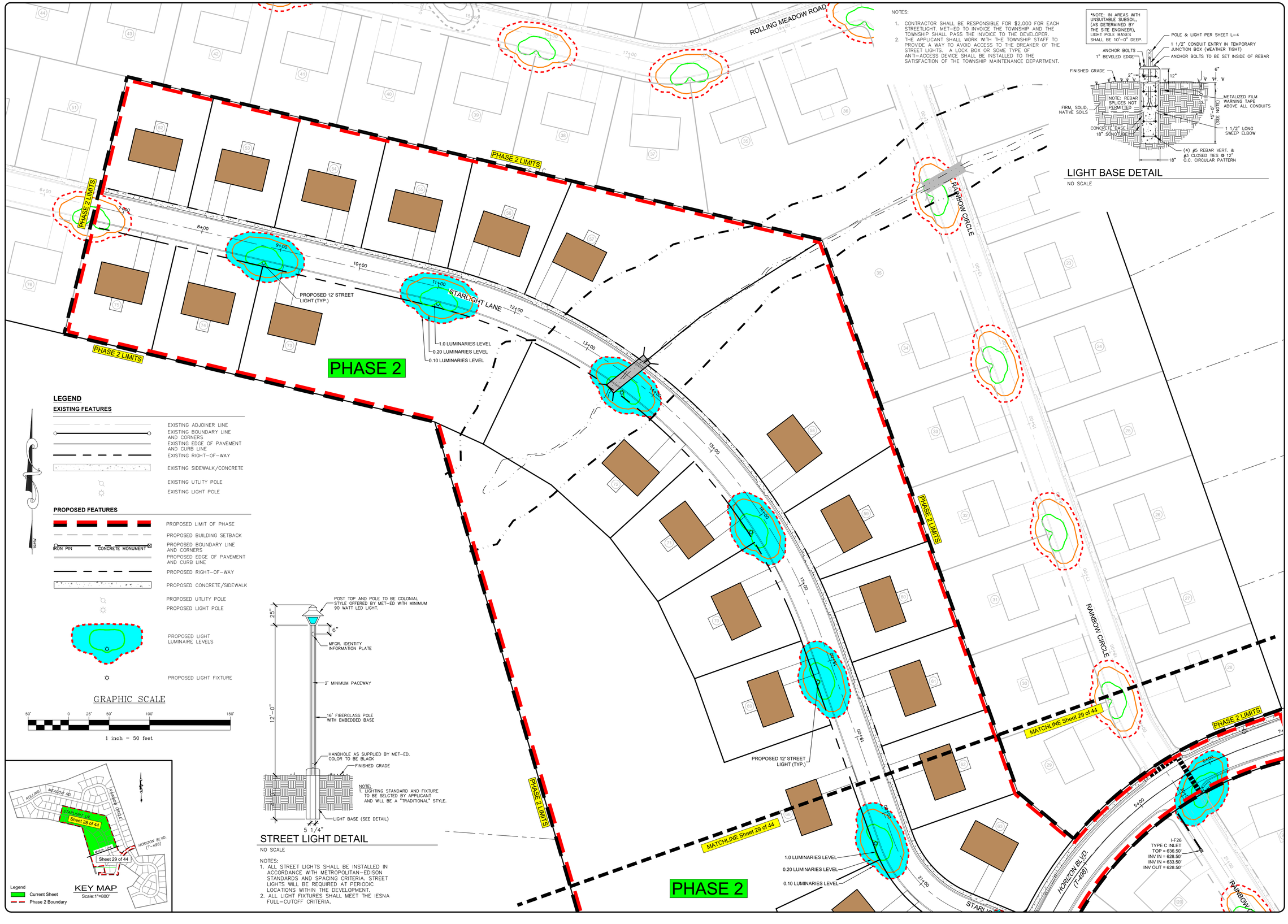
27 OF 44 SHEETS

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR $2,000 FOR EACH STREETLIGHT. MET-ED TO INVOICE THE TOWNSHIP AND THE TOWNSHIP SHALL PASS THE INVOICE TO THE DEVELOPER.
2. THE APPLICANT SHALL WORK WITH THE TOWNSHIP STAFF TO PROVIDE A WAY TO AVOID ACCESS TO THE BREAKER OF THE STREET LIGHTS. A LOCK BOX OR SOME TYPE OF ANTI-ACCESS DEVICE SHALL BE INSTALLED TO THE SATISFACTION OF THE TOWNSHIP MAINTENANCE DEPARTMENT.

LIGHT BASE DETAIL

NO SCALE



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
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PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- PROPOSED BUILDING SETBACK
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- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE
- PROPOSED LIGHT LUMINAIRE LEVELS
- PROPOSED LIGHT FIXTURE

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet

KEY MAP

Scale:1"=800'

STREET LIGHT DETAIL

NO SCALE

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.

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LIGHTING PLAN

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28

28 OF 44 SHEETS

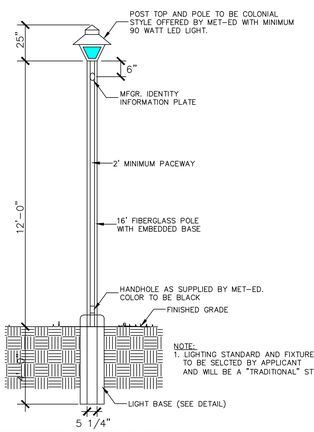
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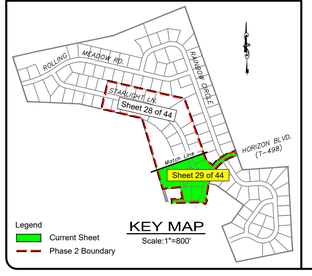
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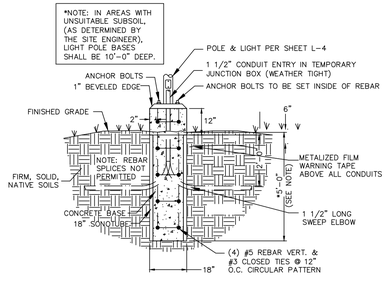
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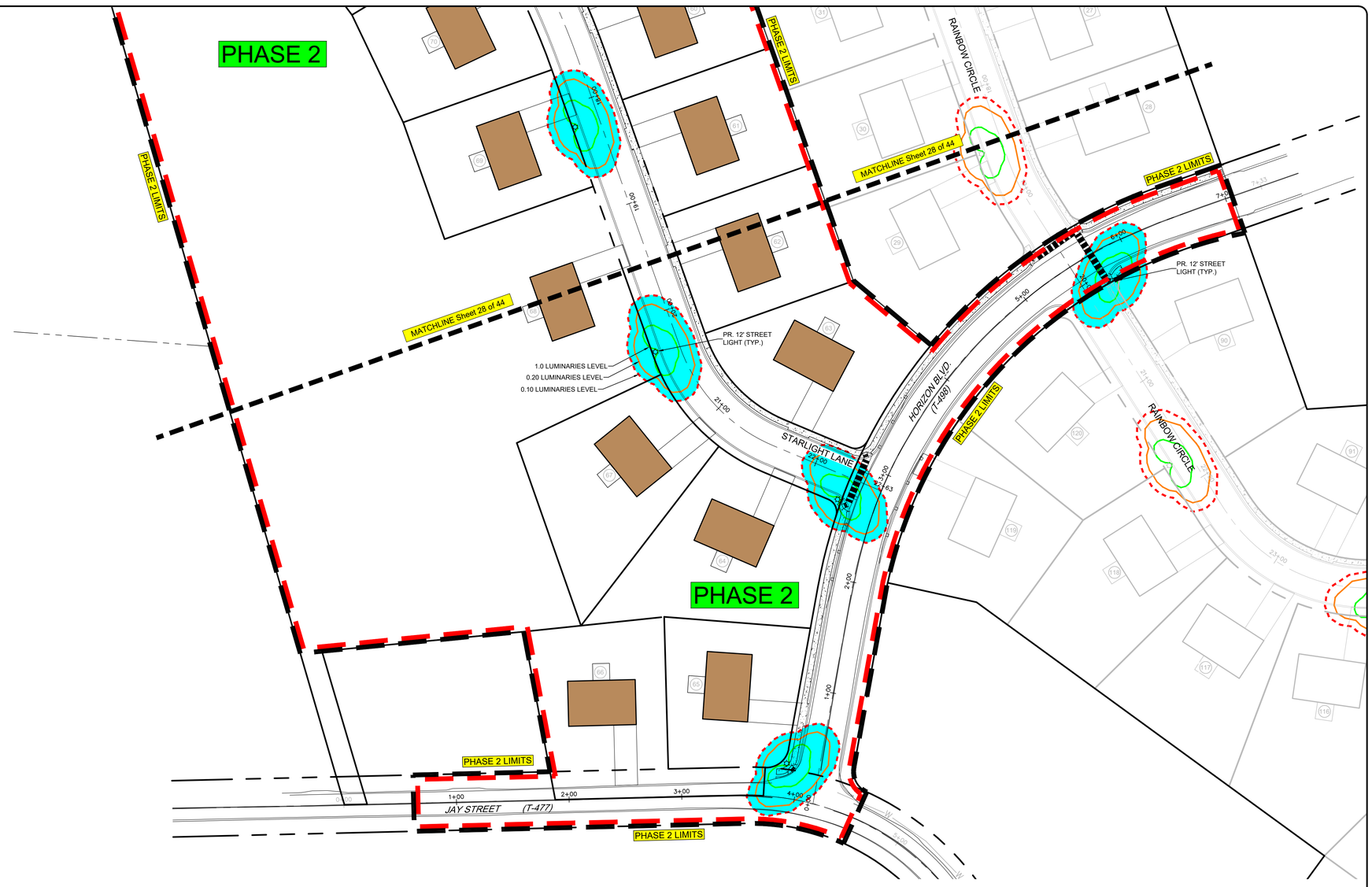
KEY MAP

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LIGHT BASE DETAIL

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BY	DATE	REVISION
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LIGHTING PLAN

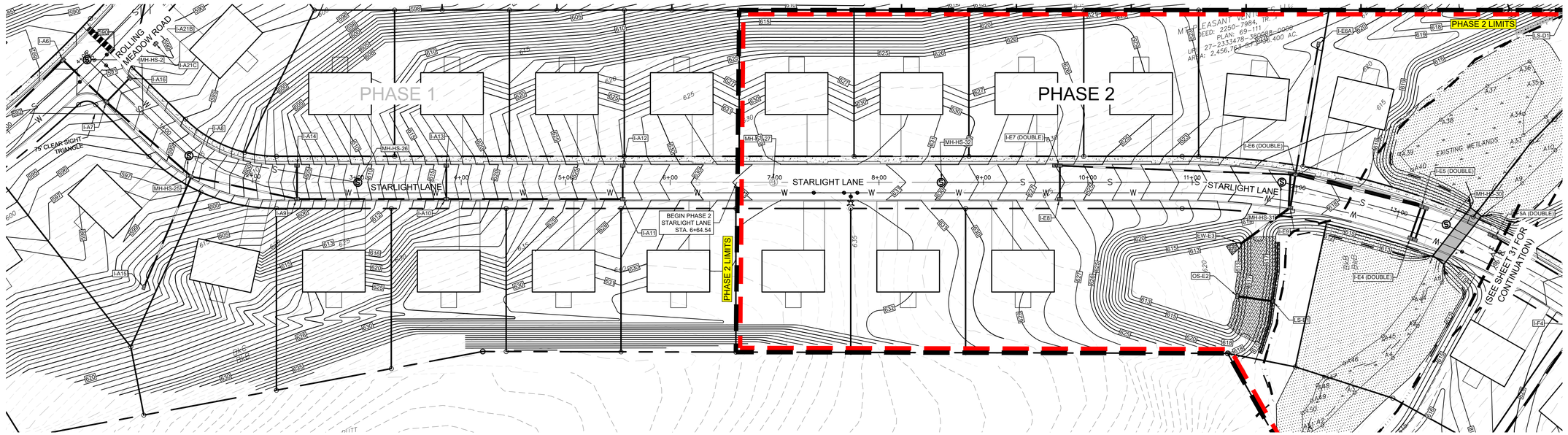
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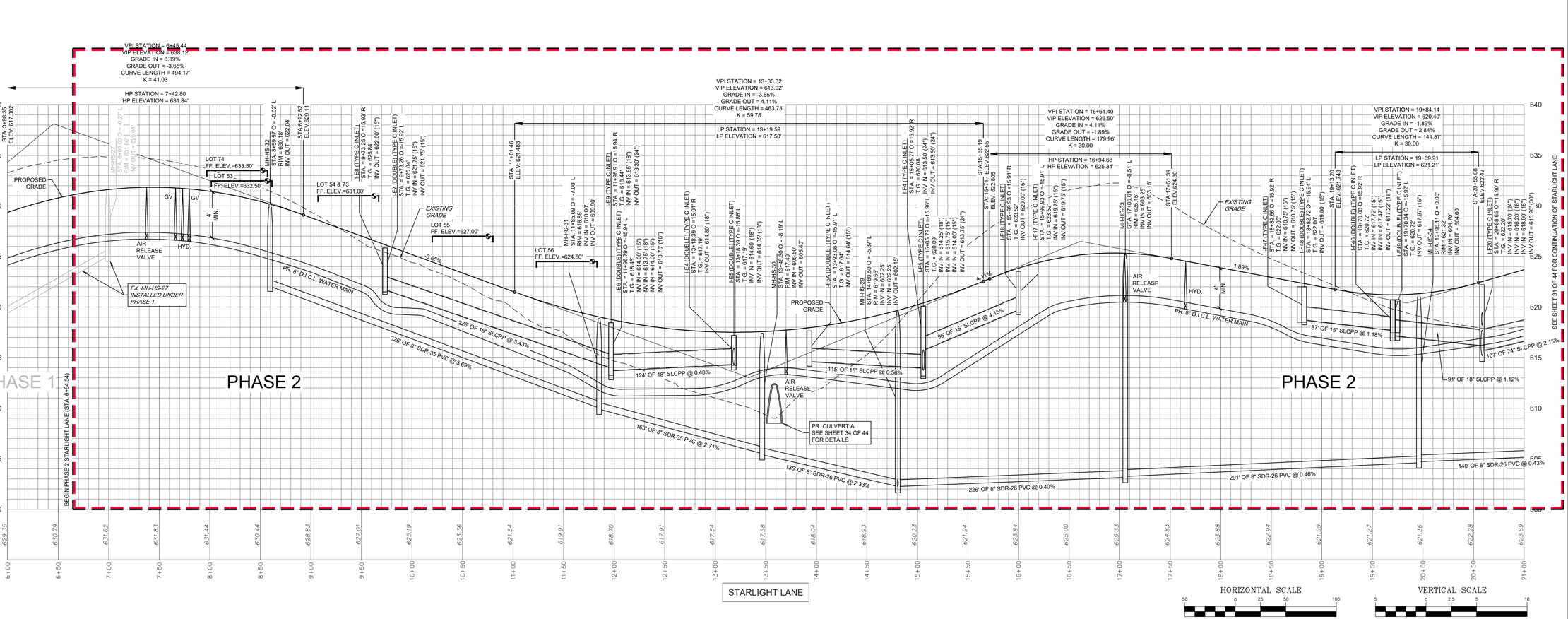
Stackbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone. (717) 272-7110
Fax. (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #	784-25-001

29

29 OF 44 SHEETS





BY	DATE	REVISION
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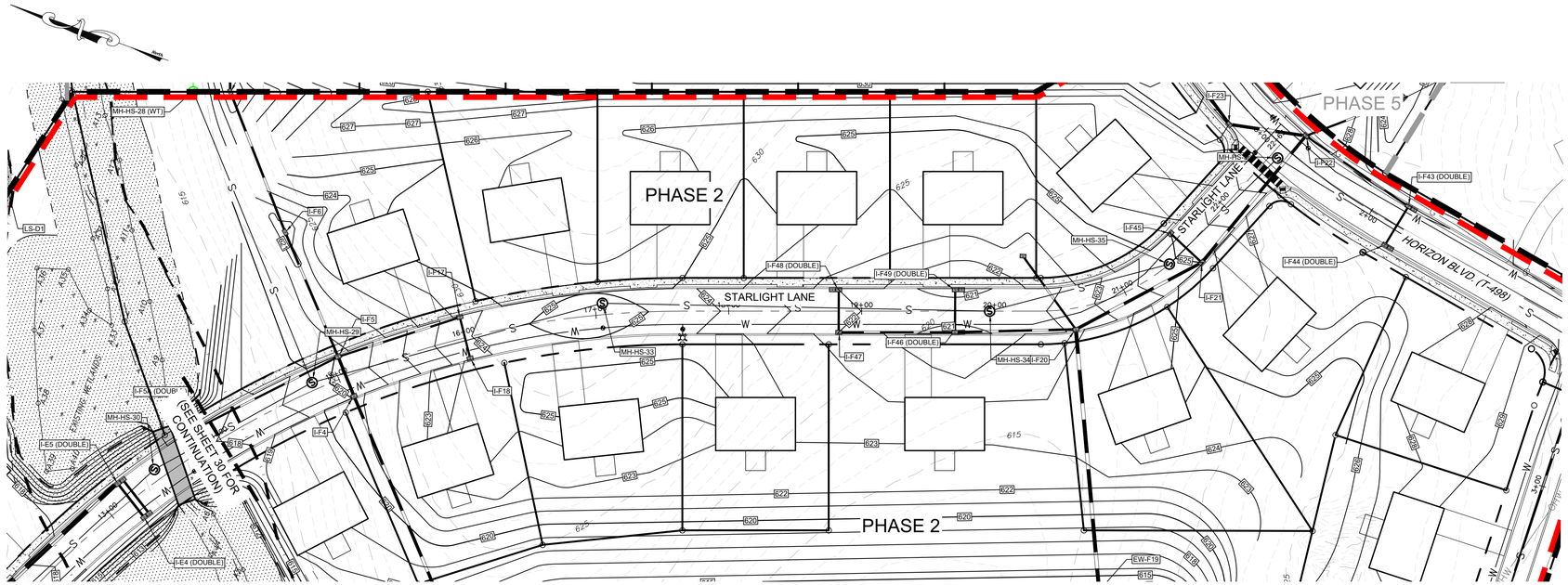
PROFILES
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
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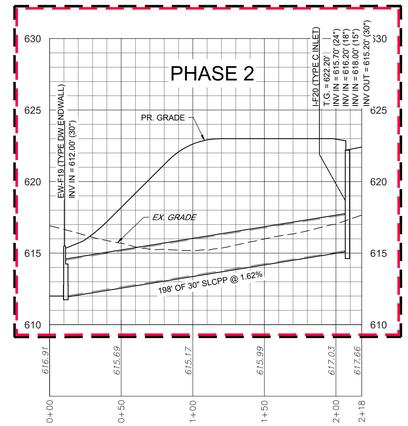
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30

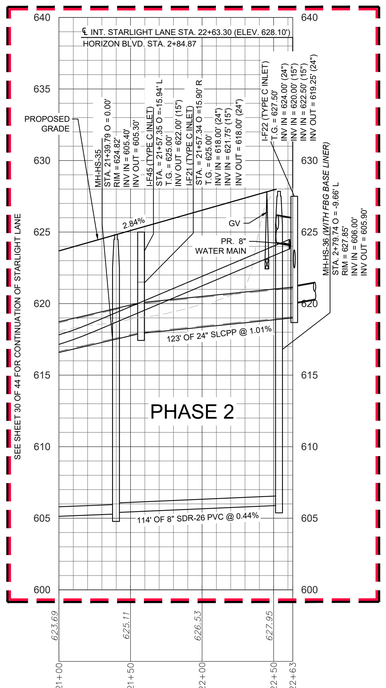
30 OF 44 SHEETS



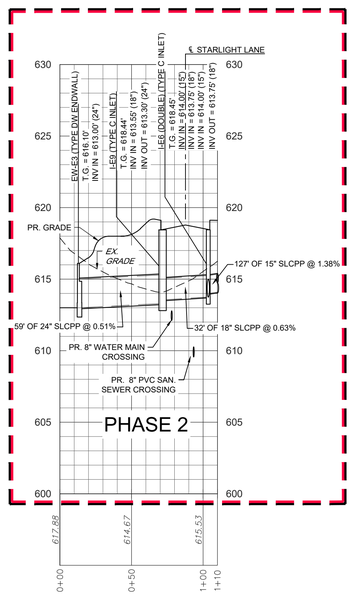
STARLIGHT LANE



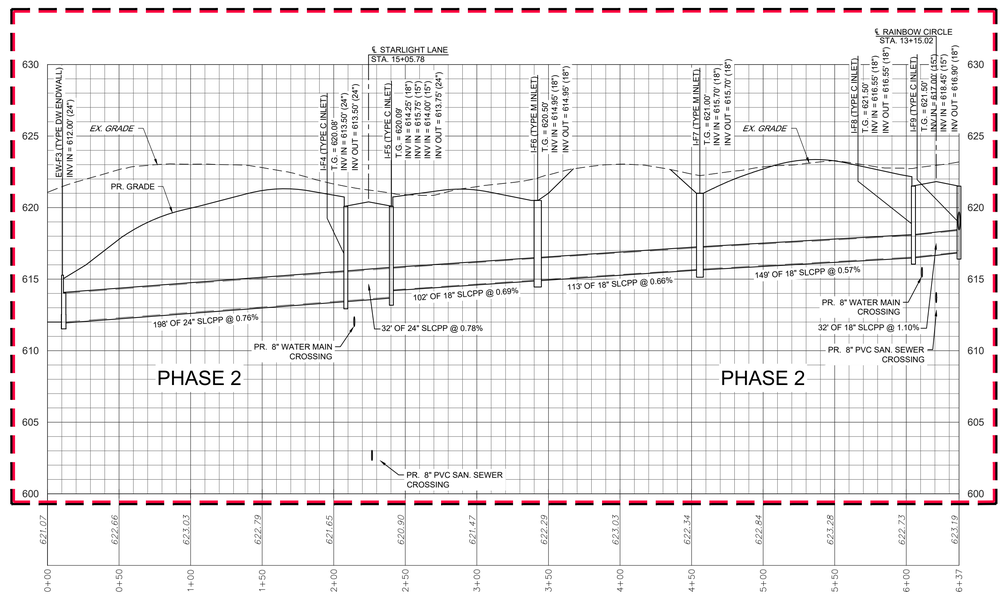
STORMWATER - EW-F19 TO I-F20



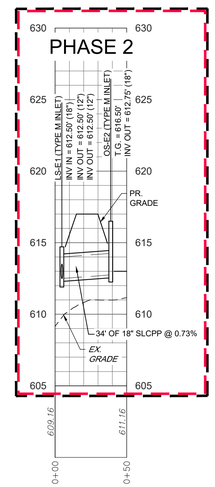
STARLIGHT LANE



STORMWATER - EW-E3 TO I-E6



STORMWATER - EW-F3 TO I-F9



STORMWATER - EW-E1 TO OS-E2

WATER MAIN NOTES

1. WATER MAIN DEPTHS TO BE A MINIMUM OF 3.50 FEET AND A MAXIMUM OF 6 FEET TO TOP OF PIPE.
2. PROVIDE A PREFERABLE SEPARATION OF 18 INCHES TO SANITARY SEWER AND STORM SEWER WITH A MINIMUM SEPARATION OF 12 INCHES ALLOWABLE WITH THE WATER MAIN BEING INSULATED.
3. MAXIMUM PIPE DEFLECTION IS 1/2 THE MANUFACTURER'S RECOMMENDATION.
4. ALL SERVICE CONNECTIONS TO BE INSULATED AT STORM SEWER CROSSINGS.

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

VERTICAL SCALE
5 0 2.5 5 10
1 inch = 5 ft.

REVISION	DATE	BY
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PROFILES

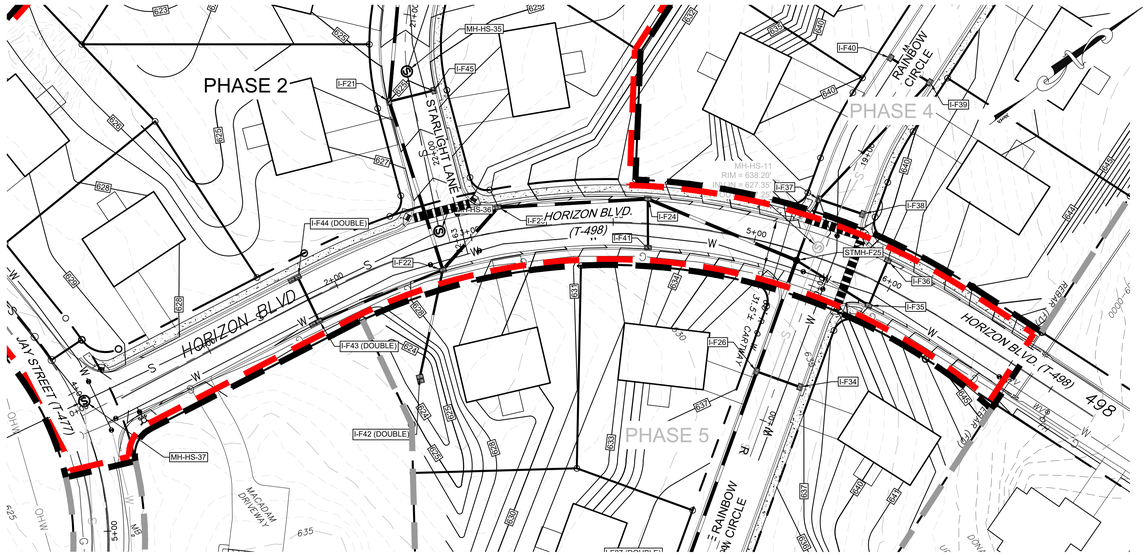
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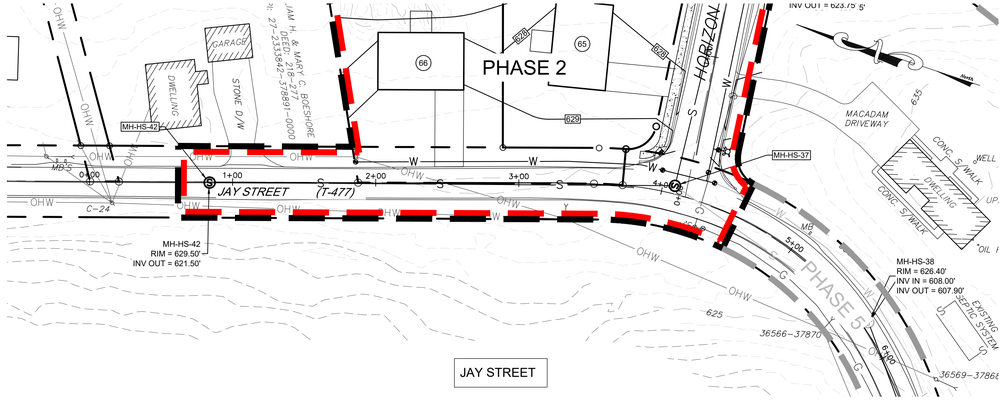
FIELD CREW:	MOD,JEC
BASE MAP:	JEC
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DATE:	9/8/25
SCALE:	1"=50'
PROJECT #784-25-001	

31

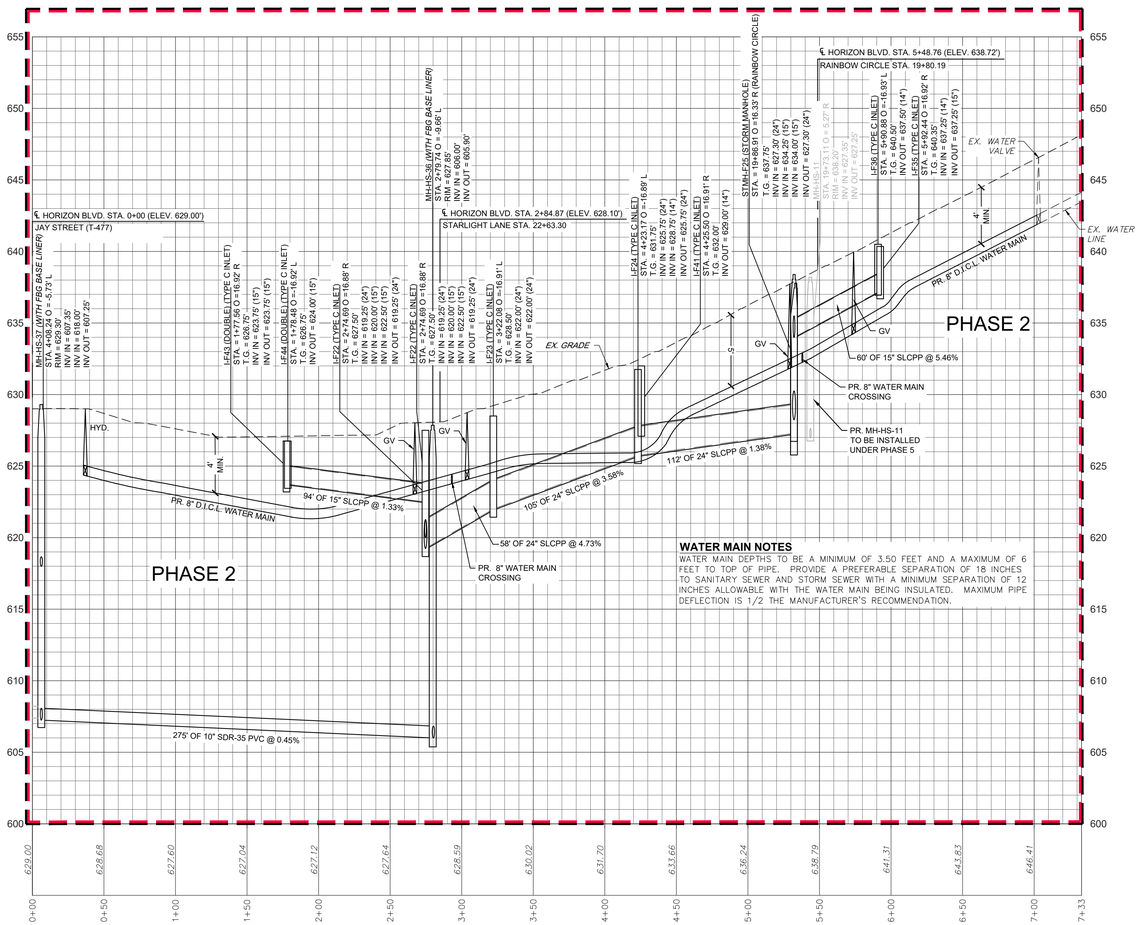
31 OF 44 SHEETS



HORIZON BLVD (T-498)



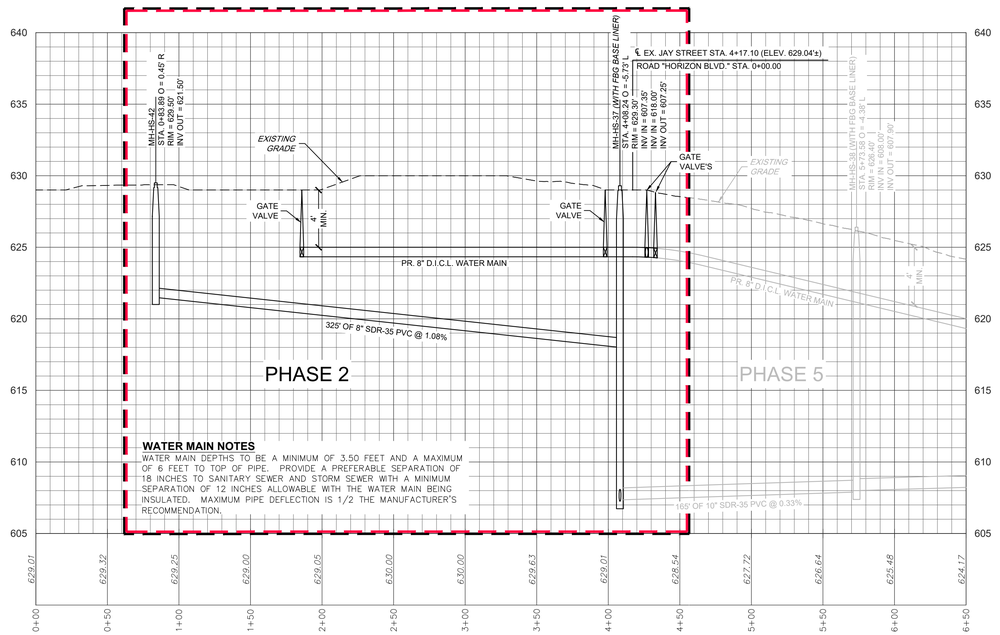
JAY STREET



WATER MAIN NOTES

WATER MAIN DEPTHS TO BE A MINIMUM OF 3.50 FEET AND A MAXIMUM OF 6 FEET TO TOP OF PIPE. PROVIDE A PREFERABLE SEPARATION OF 18 INCHES TO SANITARY SEWER AND STORM SEWER WITH A MINIMUM SEPARATION OF 12 INCHES ALLOWABLE WITH THE WATER MAIN BEING INSULATED. MAXIMUM PIPE DEFLECTION IS 1/2 THE MANUFACTURER'S RECOMMENDATION.

HORIZON BLVD (T-498)



WATER MAIN NOTES

WATER MAIN DEPTHS TO BE A MINIMUM OF 3.50 FEET AND A MAXIMUM OF 6 FEET TO TOP OF PIPE. PROVIDE A PREFERABLE SEPARATION OF 18 INCHES TO SANITARY SEWER AND STORM SEWER WITH A MINIMUM SEPARATION OF 12 INCHES ALLOWABLE WITH THE WATER MAIN BEING INSULATED. MAXIMUM PIPE DEFLECTION IS 1/2 THE MANUFACTURER'S RECOMMENDATION.

JAY STREET

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

VERTICAL SCALE

5 0 2.5 5 10

1 inch = 5 ft.

REVISION	DATE	BY
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PROFILES

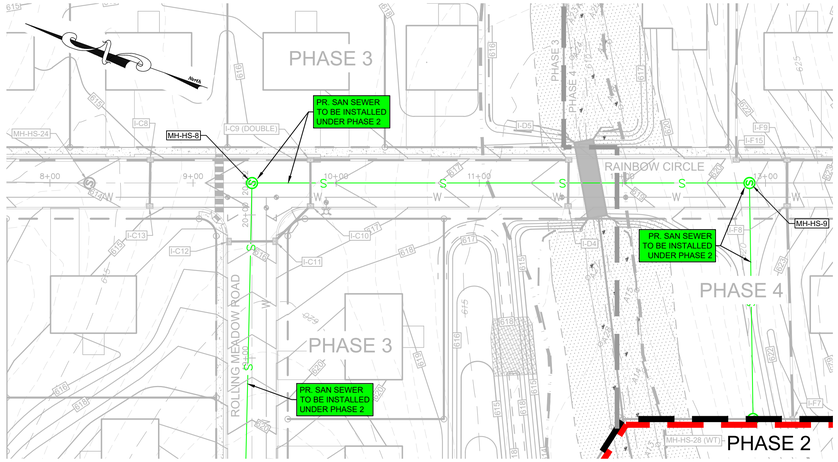
REVISED FINAL PHASE 1 AND FINAL PHASE 2 SUBDIVISION & LAND DEVELOPMENT PLAN for THE ESTATES AT HEARTHSIDE

located in NORTH LEBANON TOWNSHIP LEBANON County, Pennsylvania

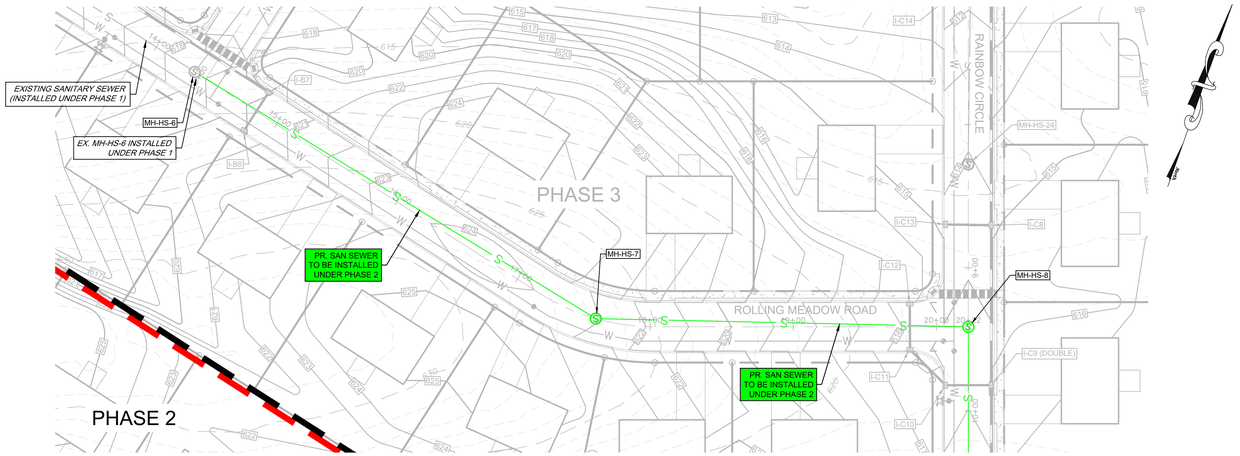
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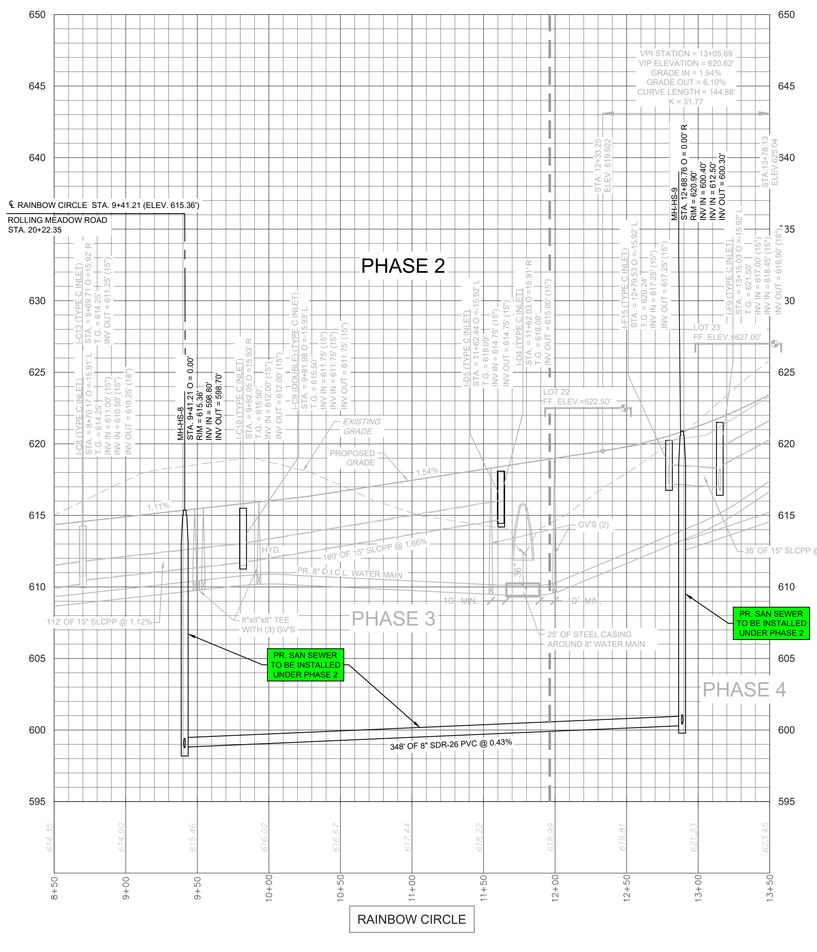
32



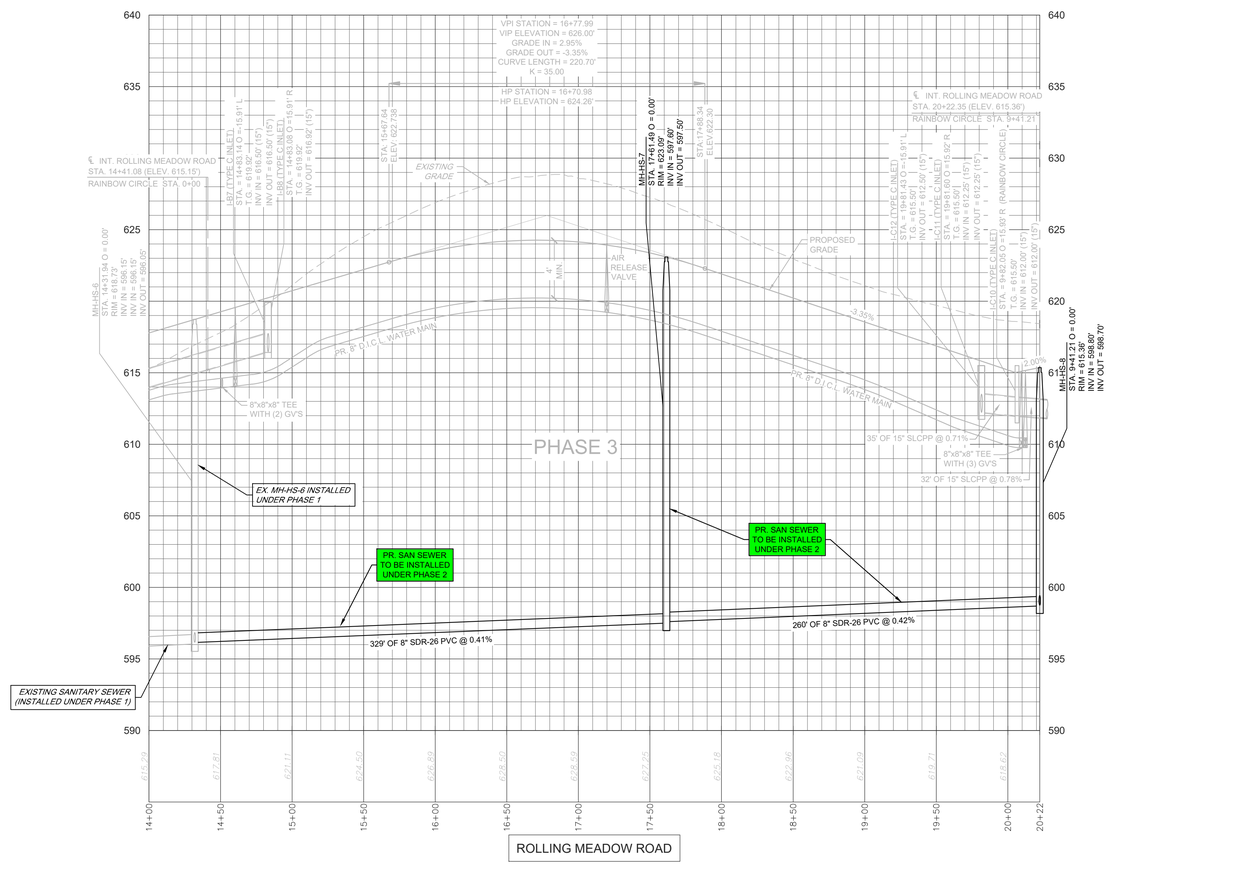
RAINBOW CIRCLE



ROLLING MEADOWS ROAD



RAINBOW CIRCLE



ROLLING MEADOW ROAD

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

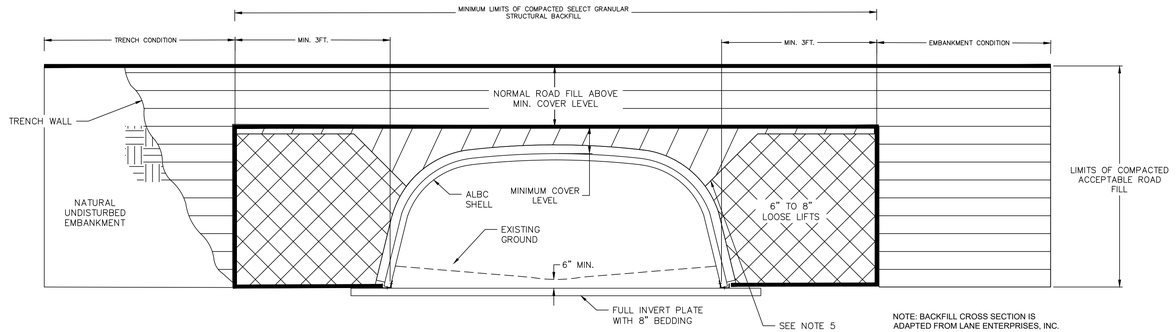
VERTICAL SCALE
5 0 2.5 5 10
1 inch = 5 ft.

REVISION	DATE	BY
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PROJECT #	784-25-001



NOTE: BACKFILL CROSS SECTION IS ADAPTED FROM LANE ENTERPRISES, INC. AND CONTECH ENGINEERED SOLUTIONS.

TYPICAL CULVERT BACKFILL CROSS SECTION

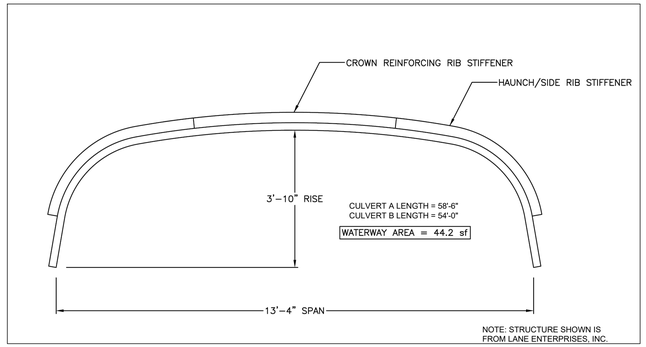
NOT TO SCALE

SELECT GRANULAR STRUCTURAL BACKFILL LIMITS. (PENNDOT 2A)

INITIAL LIFTS OVER CROWN OF STRUCTURE AS INDICATED BY SHADED AREA TO BE COMPACTED TO REQUIRED DENSITY WITH HAND OPERATED EQUIPMENT OR WITH SMALL TRACTOR (D-4 OR SMALLER) DRAWN EQUIPMENT.

NOTES:

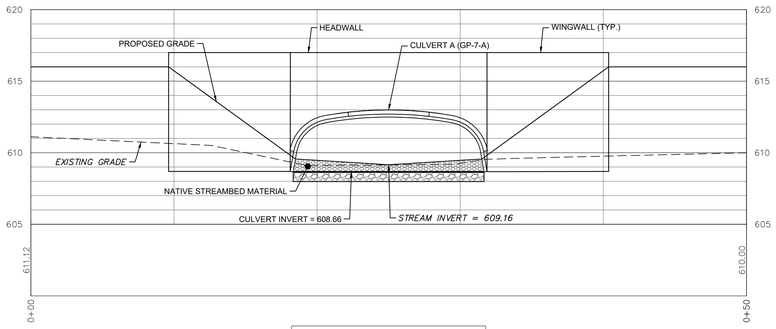
1. ALL SELECT GRANULAR BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (6"-8" LOOSE TYPICALLY) AND COMPACTED TO 90 PERCENT DENSITY PER AASHTO T180.
2. COMPLETE AND REGULAR MONITORING OF THE ALUMINUM BOX CULVERT SHAPE IS NECESSARY DURING ALL BACKFILLING OF THE STRUCTURE.
3. PREVENT DISTORTION OF THE SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.
4. TRENCH WIDTH OTHER THAN 3FT. AS SHOWN ABOVE SHALL BE BY DIRECTION OF THE ENGINEER OF RECORD.
5. SWITCH TO PLACING SELECT GRANULAR BACKFILL IN RADIAL LIFTS AT APPROXIMATELY 75% OF THE RISE OF THE STRUCTURE.



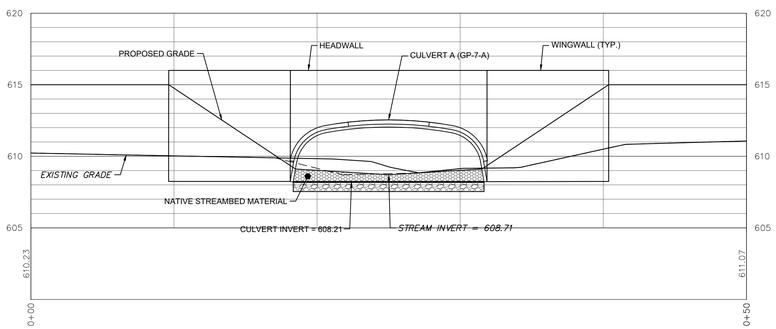
NOTE: STRUCTURE SHOWN IS FROM LANE ENTERPRISES, INC.

CULVERT A - ALUMINUM STRUCTURAL PLATE BOX CULVERT

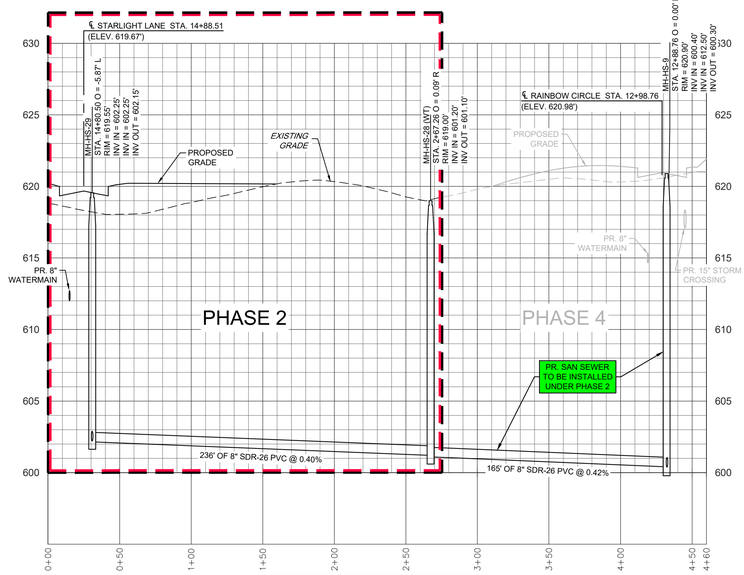
NO SCALE



CULVERT A – UPSTREAM



CULVERT A – DOWNSTREAM



SANITARY SEWER MH-29 TO MH-10

HORIZONTAL SCALE

50 0 25 50 100

1 inch = 50 ft.

VERTICAL SCALE

5 0 2.5 5 10

1 inch = 5 ft.

REVISION	DATE	BY
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PROFILES

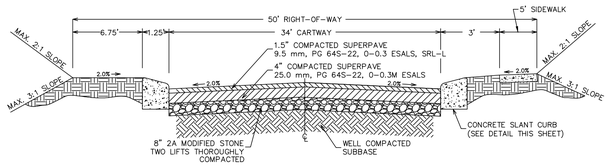
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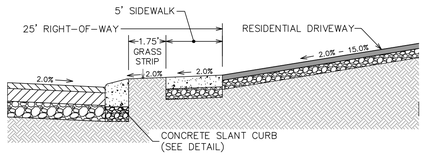
34

34 OF 44 SHEETS



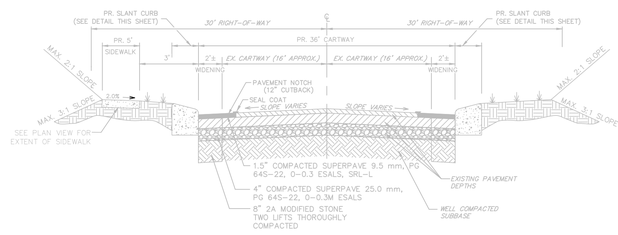
PROPOSED ROAD CROSS SECTION DETAIL

NO SCALE



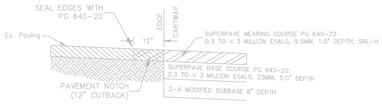
TYPICAL DRIVEWAY @ SIDEWALK DETAIL

NO SCALE



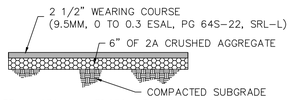
PROPOSED HORIZON BLVD. (T-498) TYPICAL WIDENING DETAIL

NO SCALE



PAVEMENT NOTCH DETAIL

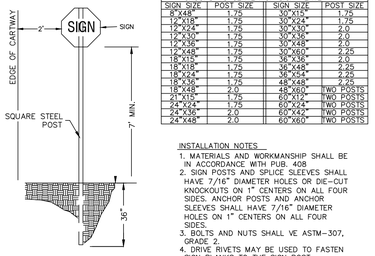
NO SCALE



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

STANDARD DRIVEWAY PAVING DETAIL

NO SCALE



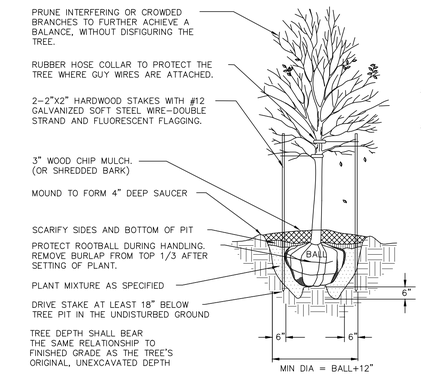
INSTALLATION NOTES
1. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PUB. 408
2. SIGN POSTS AND SPLICE SLEEVES SHALL HAVE 7/16" DIAMETER HOLES OR DIE-CUT KNOCKOUTS ON 1" CENTERS ON ALL FOUR SIDES. ANCHOR POSTS AND ANCHOR SLEEVES SHALL HAVE 7/16" DIAMETER HOLES ON 1" CENTERS ON ALL FOUR SIDES.
3. BOLTS AND NUTS SHALL VE ASTM-307, GRADE 2.
4. DRIVE RIVETS MAY BE USED TO FASTEN SIGN BLANKS TO THE SIGN POST.

POST SCHEDULE
14 GAUGE POST, 10' MAX. HEIGHT FROM GROUND TO CENTER OF SIGN PLATE

SIGN SIZE	POST SIZE	SIGN SIZE	POST SIZE
6"x18"	1.75	30"x24"	1.75
12"x18"	1.75	30"x24"	1.75
12"x24"	1.75	30"x30"	2.0
12"x30"	1.75	30"x36"	2.0
12"x36"	1.75	30"x48"	2.0
12"x48"	1.75	30"x60"	2.25
18"x18"	1.75	36"x36"	2.0
18"x18"	1.75	36"x48"	2.25
18"x24"	1.75	36"x54"	2.25
18"x30"	1.75	48"x48"	2.25
18"x48"	2.0	48"x60"	TWO POSTS
24"x18"	1.75	60"x42"	TWO POSTS
24"x24"	1.75	60"x54"	TWO POSTS
24"x36"	2.0	60"x42"	TWO POSTS
24"x48"	2.0	60"x60"	TWO POSTS

SIGN POST DETAIL

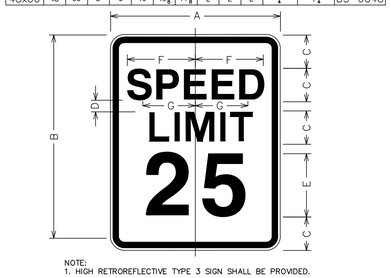
NO SCALE



DECIDUOUS TREE PLANTING DETAIL

NO SCALE

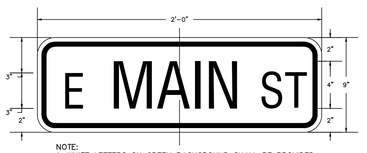
SIGN SIZE	DIMENSIONS A	B	C	D	E	F	G	SERIES 1	2	3	MAR-GIN	BOR-DER	BLANK STD
24x30	24	30	4	2	10	9⅜	7⅜	E	E	E	⅜	⅜	B5-3024
30x36	30	36	5	2	12	12	9⅜	E	E	E	½	½	B5-3630
36x48	36	48	6	5	14	14½	11	E	E	E	⅝	⅝	B5-4836
48x60	48	60	8	6	16	19½	14½	E	E	E	½	1½	B5-6048



NOTE:
1. HIGH RETROREFLECTIVE TYPE 3 SIGN SHALL BE PROVIDED.

SPEED LIMIT SIGN DETAIL

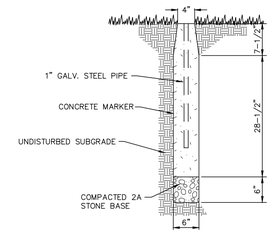
NO SCALE



NOTE:
1. WHITE LETTERS ON GREEN BACKGROUND SHALL BE PROVIDED. DOUBLE BLADE, SINGLE SIDED PRINTING ON RETROREFLECTIVE ALUMINUM.

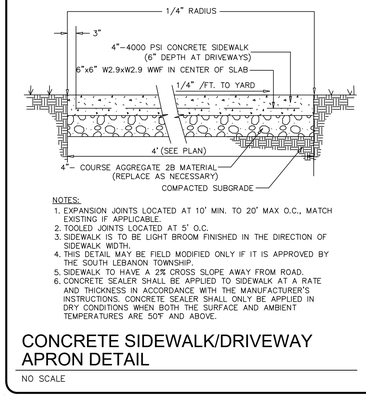
STREET NAME SIGN DETAIL

NO SCALE

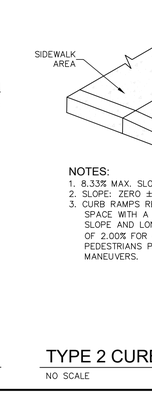


CONCRETE MONUMENT DETAIL

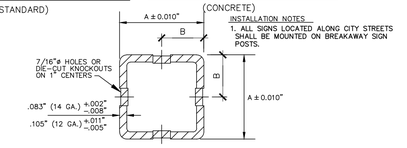
NO SCALE



INSTALLATION DETAIL (STANDARD)



INSTALLATION DETAIL (CONCRETE)



INSTALLATION NOTES
1. ALL SIGNS LOCATED ALONG CITY STREETS SHALL BE MOUNTED ON BREAKAWAY SIGN POSTS.

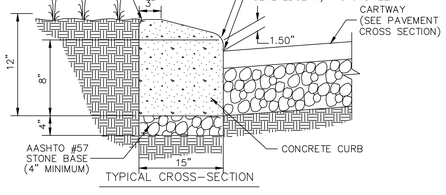
SIGN POST SIZE	DIMENSION A	B	GAUGE	ANCHOR POST SIZE	DIMENSION A	B	GAUGE	ANCHOR SLEEVE* SIZE	DIMENSION A	B	GAUGE	SPLICE SLEEVE SIZE	DIMENSION A	GAUGE
1.75"	1 3/4"	7/8"	14	2.0"	2"	1"	12	2.25"	2 1/4"	1 1/4"	12	1.50"	1 1/2"	14
2.0"	2"	1"	14	2.25"	2 1/4"	1 1/4"	12	2.50"	2 1/2"	1 1/4"	12	1.75"	1 3/4"	14
2.25"	2 1/4"	1 1/8"	14	2.50"	2 1/2"	1 1/4"	12	3.00"	3"	1 1/2"	3/16"	2.00"	2"	14

* ONLY REQUIRED FOR INSTALLATIONS IN CONCRETE.

SQUARE STEEL POSTS
12 AND 14 GAGE = 60 KSI

SITE SIGN POST SIGNAGE 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



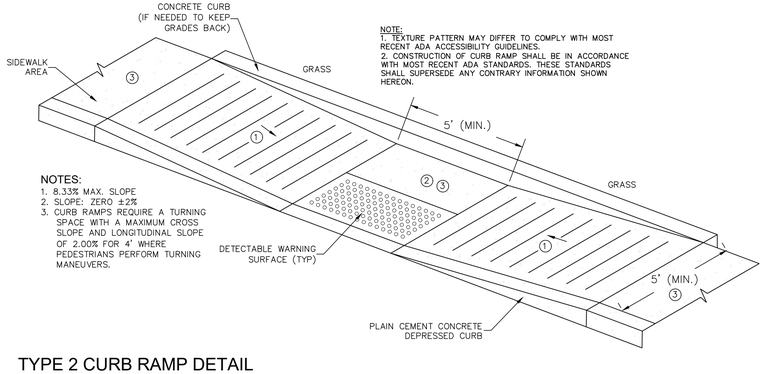
CURB TERMINAL END SECTION

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

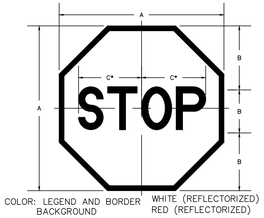


NOTE:
1. TEXTURE PATTERN MAY DIFFER TO COMPLY WITH MOST RECENT ADA ACCESSIBILITY GUIDELINES.
2. CONSTRUCTION OF CURB RAMP SHALL BE IN ACCORDANCE WITH MOST RECENT ADA STANDARDS. THESE STANDARDS SHALL SUPERSEDE ANY CONTRARY INFORMATION SHOWN HEREON.

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.

TYPE 2 CURB RAMP DETAIL

NO SCALE



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

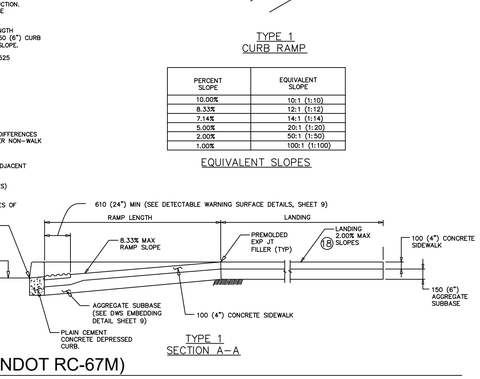
NOTE: INSTALL PER REQM'TS OR PADOT TITLE67, CHAPTER 211-OFFICIAL TRAFFIC CONTROL DEVICES.

SIGN SIZE	DIMENSIONS A	B	C	SER IES	BOR DER	BLANK STD
24 X 24	24	8	10	C	⅜	B1-24
30 X 30	30	10	12½	C	½	B1-30
36 X 36	36	12	15	C	⅝	B1-36
48 X 48	48	16	20	C	¾	B1-48

* REDUCE SPACING 40%

STOP SIGN DETAIL

NO SCALE



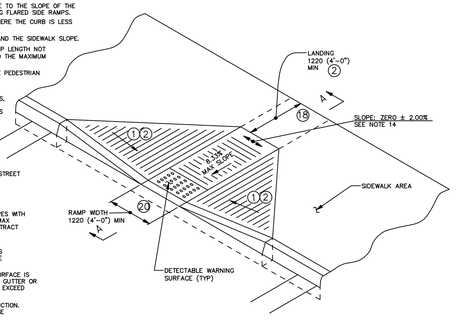
1 SIDE FLARES 10.00% MAX SLOPE

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

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

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

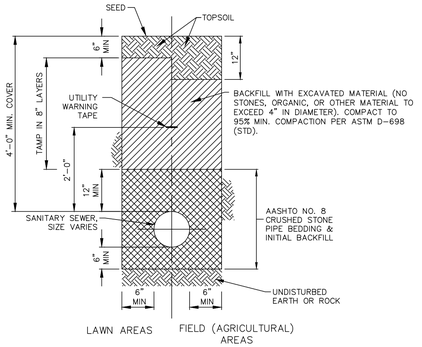
NO SCALE

REVISION	DATE	BY

SITE DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

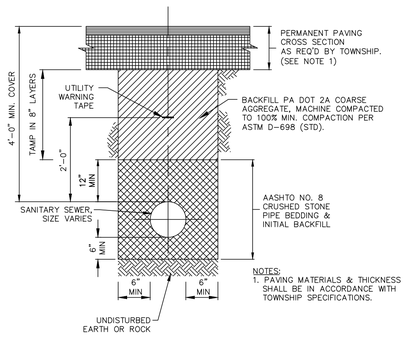
Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road, Suite A
Lebanon, PA 17042
Phone: (717) 272-7110
Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #	784-25-001



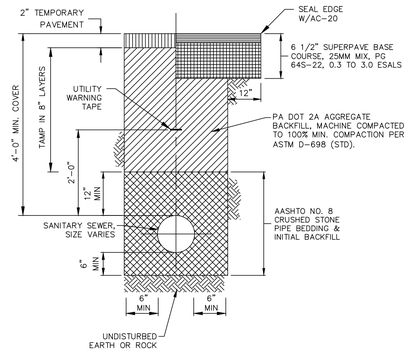
TRENCH RESTORATION LAWN/FIELD AREAS DETAIL

NO SCALE



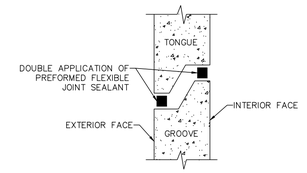
TRENCH RESTORATION NEW ROADWAY DETAIL

NO SCALE



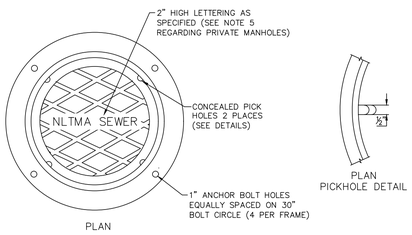
TRENCH RESTORATION EXISTING PAVED AREAS DETAIL

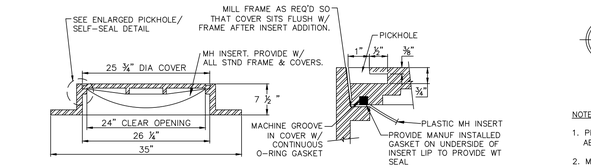
NO SCALE



PRECAST MANHOLE JOINT DETAIL

NO SCALE

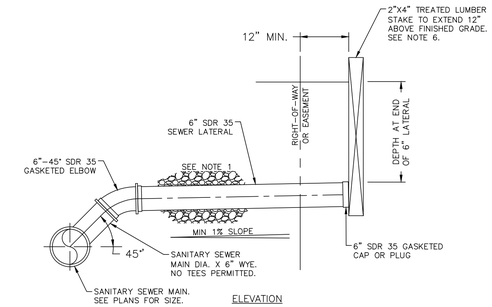




NOTES:
1. CAST IRON MEETS ASTM SPEC A-48 CLASS 35B, AASHTO HIGHWAY LOADING HS-20 EQUIVALENT TO NEENAH FOUNDRY COMPANY MODEL R-1643.
2. LOW PROFILE FRAME AND COVERS SHALL ONLY BE USED FOLLOWING APPROVAL BY NLTMA DUE TO RISER ADJUSTMENT LIMITATIONS.
3. APPLY ANTI-SEIZE COMPOUND TO ALL THREADED SURFACES.
4. LETTERING FOR PRIVATE MANHOLES SHALL BE "PRIVATE SEWER".

STANDARD MANHOLE FRAME AND COVER DETAIL

NO SCALE

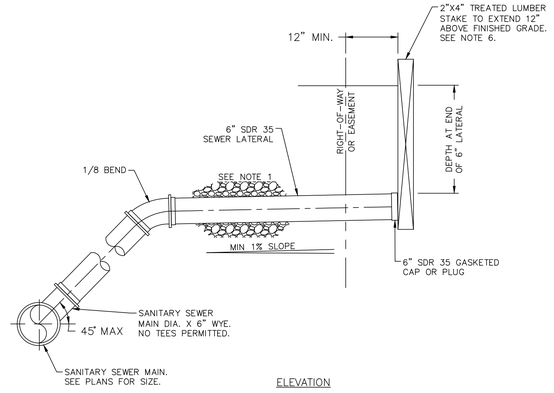


NOTES:

1. PROVIDE 6" OF AASHTO NO. 8 (1B) STONE BELOW PIPE AND 12" ABOVE PIPE. (TYPICAL ENTIRE LENGTH OF LATERAL.
2. MINIMUM SLOPE = 1% (1/8" PER FOOT)
3. MINIMUM DEPTH OF COVER = 4 FT
4. DEVELOPER SHALL TEST AGAINST 6" SDR 35 GASKETED CAP OR PLUG.
5. LATERAL TO EXTEND 12" BEYOND R.O.W. OR EASEMENT OR AS APPROVED OTHERWISE BY NLTMA.
6. LABEL STAKE AS "SEWER LATERAL". NOTE LATERAL DEPTH AT EDGE OF R.O.W. OR EASEMENT.

SEWER LATERAL INSTALLATION DETAIL

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% (1/8" PER FOOT)
3. MINIMUM DEPTH OF COVER = 4 FT
4. DEVELOPER SHALL TEST AGAINST 6" SDR 35 GASKETED CAP OR PLUG.
5. LATERAL TO EXTEND 12" BEYOND R.O.W. OR EASEMENT OR AS APPROVED OTHERWISE BY NLTMA.
6. LABEL STAKE AS "SEWER LATERAL". NOTE LATERAL DEPTH AT EDGE OF R.O.W. OR EASEMENT.

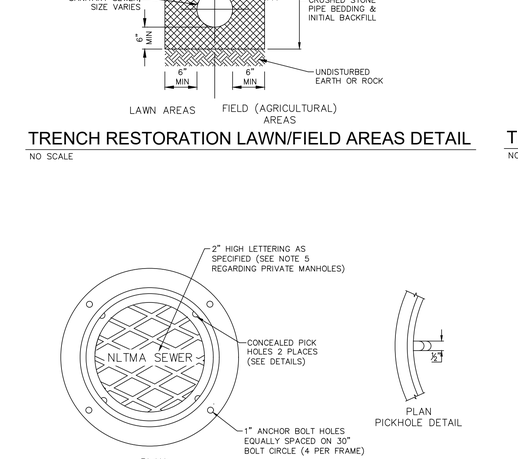
SEWER LATERAL DEEP INSTALLATION DETAIL

NO SCALE

NOTE: MAINTAIN SLOPE OF PROPOSED SEWER AT ALL CROSSINGS.

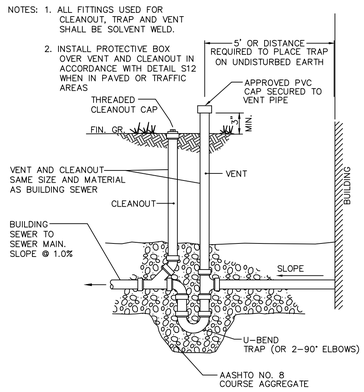
GRAVITY SEWER CROSSING UTILITIES DETAIL

NO SCALE



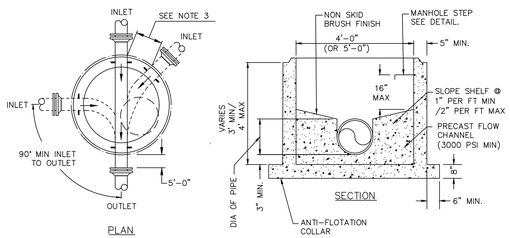
UTILITY CROSSING - CONCRETE CRADLE AND BRIDGE DETAIL

NO SCALE



TRAP AND VENT DETAIL

NO SCALE

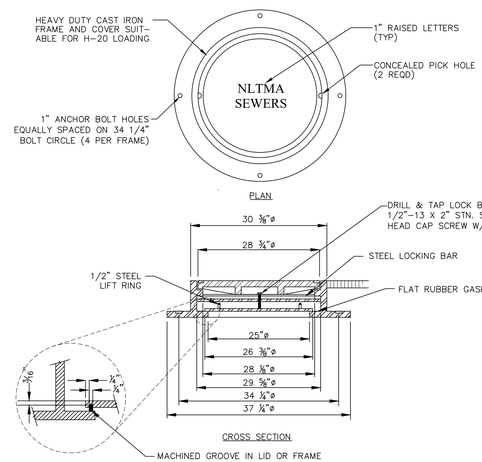


NOTES

1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO 4' DIA. MANHOLE.
2. NO LATERALS INTO MANHOLES, UNLESS AUTHORIZED OTHERWISE BY NLTMA.
3. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION.
4. MINIMUM CHANNEL DROP THROUGH MANHOLE:
   STRAIGHT THROUGH - 0.1 FEET
   BEND - 0.2 FEET
5. ALL CHANNELS SHALL BE PRECAST UNLESS APPROVED OTHERWISE BY NLTMA.
6. THESE DETAILS APPLY TO PRECAST CHANNELS IN NEW MANHOLES AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
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.
8. 4'-0" DIA. UNLESS PIPING CONFIGURATION REQUIRES LARGER.
9. MIN. DEPTH OF CHANNEL SHALL MATCH DIAMETER OF LARGEST PIPE ENTERING MANHOLE.

PRECAST MANHOLE BASE DETAIL

NO SCALE



NOTES:
1. CAST IRON MEETS ASTM SPEC A-48 CLASS 35B, AASHTO HIGHWAY LOADING HS-20.
2. APPROVED MANUFACTURER: NEENAH FOUNDRY COMPANY MODEL R-1755. NO SUBSTITUTIONS ALLOWED UNLESS OTHERWISE APPROVED BY NLTMA.
3. APPLY ANTI-SEIZE COMPOUND TO ALL THREADED SURFACES.
4. LETTERING FOR PRIVATE MANHOLES SHALL BE "PRIVATE SEWER".

WATERTIGHT MANHOLE FRAME AND COVER DETAIL

NO SCALE

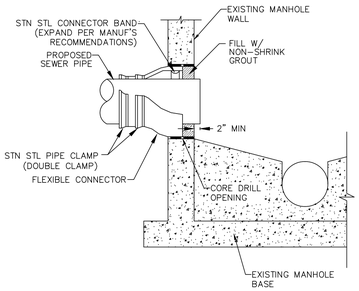
REVISION	DATE	BY
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SANITARY SEWER DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7100
Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #	784-25-001

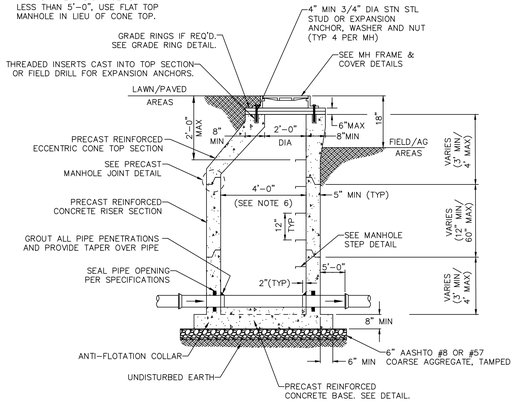
36



PIPE TO MANHOLE CONNECTOR DETAIL

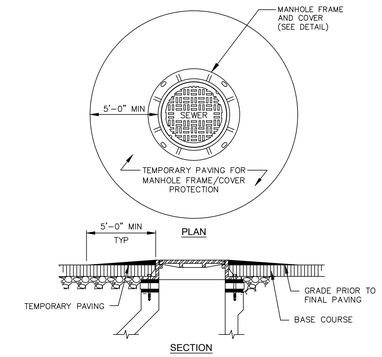
NO SCALE

NOTES:
1. PRECAST REINFORCED CONCRETE MANHOLES SHALL CONFORM TO A.S.T.M. SPEC. C-478.
2. STEEL REINFORCEMENT SHALL BE GRADE 60 PER ASTM A-615.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 12", 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. 5' DIA MANHOLE REQUIRED ON INSIDE DROP. SEE INSIDE DROP MH DETAIL FOR ADDITIONAL DETAILS.
7. ALL MANHOLE HARDWARE SHALL BE STN STL.



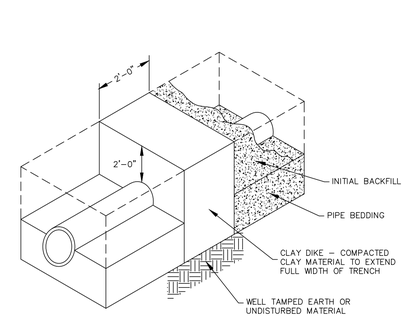
PRECAST CONCRETE MANHOLE DETAIL

NO SCALE



MANHOLE FRAME AND COVER PROTECTION DETAIL

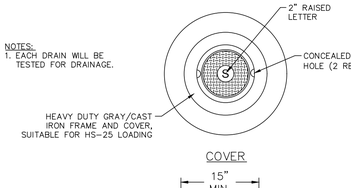
NO SCALE

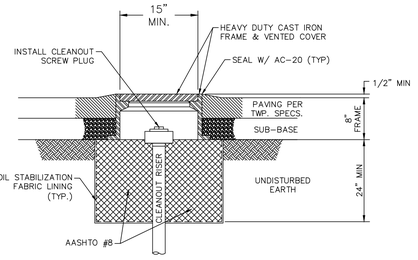


NOTES:
1. CLAY DIKE SHALL CONSIST OF CLAY CONTAINING NO MORE THAN 15% (BY VOLUME) STONE NO LARGER THAN TWO (2) INCHES IN DIAMETER. CLAY SHALL BE PLACED IN SIX (6) INCH LIFTS AND COMPACTED BY MECHANICAL TAMPER TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
2. CLAY DIKE SHALL BE INSTALLED EVERY 200 FEET.

CLAY DIKE (TRENCH PLUG) DETAIL

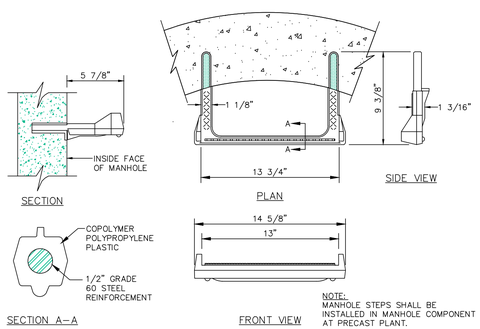
NO SCALE





CLEANOUTS IN PAVED AREA DETAIL

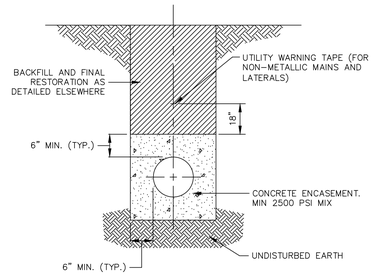
NO SCALE



NOTE:
MANHOLE STEPS SHALL BE INSTALLED IN MANHOLE COMPONENT AT PRECAST PLANT.

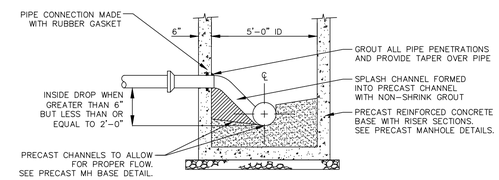
MANHOLE STEPS DETAIL

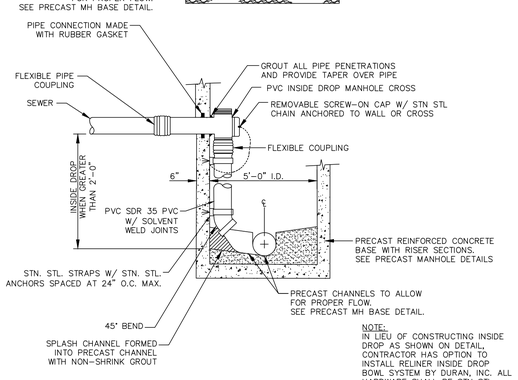
NO SCALE



CONCRETE ENCASEMENT DETAIL

NO SCALE

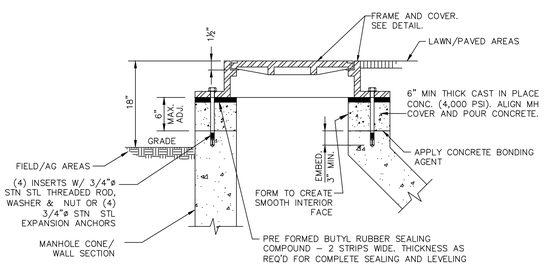




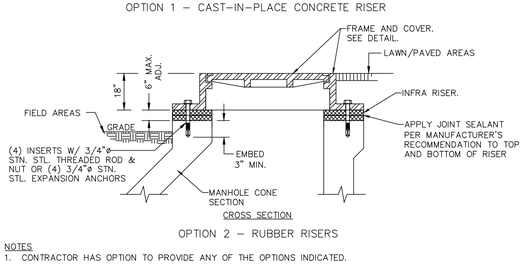
NOTE:
IN LIEU OF CONSTRUCTING INSIDE DROP AS SHOWN ON DETAIL, CONTRACTOR HAS OPTION TO INSTALL RELINER INSIDE DROP BOWL SYSTEM BY DURAN, INC. ALL HARDWARE SHALL BE STN STL.

INSIDE DROP / SPLASH MANHOLE DETAIL

NO SCALE



OPTION 1 - CAST-IN-PLACE CONCRETE RISER

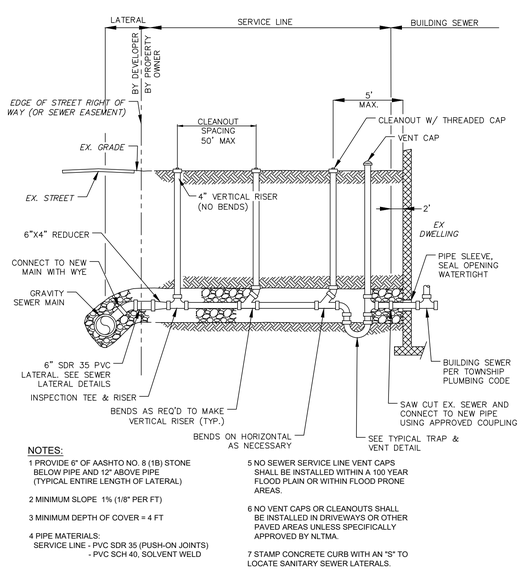


OPTION 2 - RUBBER RISERS

NOTES
1. CONTRACTOR HAS OPTION TO PROVIDE ANY OF THE OPTIONS INDICATED.
2. TAPER GRADE RINGS TO MATCH ROAD PROFILE IN PAVED AREAS.

MANHOLE GRADE RINGS DETAIL

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% (1/8" PER FT)

3 MINIMUM DEPTH OF COVER = 4 FT

4 PIPE MATERIALS:
SERVICE LINE - PVC SDR 35 (PUSH-ON JOINTS)
- PVC SCH 40, SOLVENT WELD

5 NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100 YEAR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.

6 NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS UNLESS SPECIFICALLY APPROVED BY NLTMA.

7 STAMP CONCRETE CURB WITH AN "S" TO LOCATE SANITARY SEWER LATERALS.

GRAVITY SERVICE LINE INSTALLATION DETAIL

NO SCALE

NO.	REVISION	DATE	BY
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	---	---	---
6	---	---	---

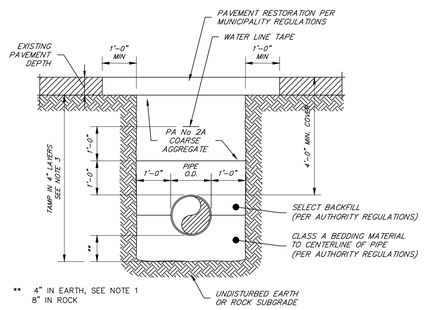
SANITARY SEWER DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, Pennsylvania 17042
Phone: (717) 272-7100
Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #784-25-001	

TRENCH NOTES

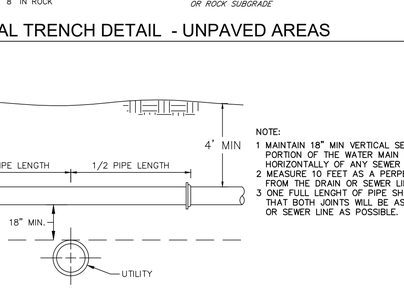
1. IF UNSUITABLE SUBSOIL IS ENCOUNTERED AT THE NORMAL TRENCH SUBGRADE THE CONTRACTOR SHALL REMOVE IT TO THE DEPTH DIRECTED BY THE ENGINEER IN THE FIELD, AND SHALL BACKFILL w/ CLASS A BEDDING IN 4" LAYERS.
2. BOTTOM OF TRENCH SHALL BE FREE OF WATER PRIOR TO WATER MAIN INSTALLATION.
3. IF VIBRATORY COMPACTION 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 PA No. 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 PUBLICATION 408/2003 AND PUBLICATION 72M.



** 4" IN EARTH, SEE NOTE 1
8" IN ROCK

TYPICAL TRENCH DETAIL - PAVED AREAS

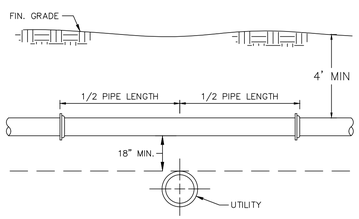
NO SCALE



** 4" IN EARTH, SEE NOTE 1
8" IN ROCK

TYPICAL TRENCH DETAIL - UNPAVED AREAS

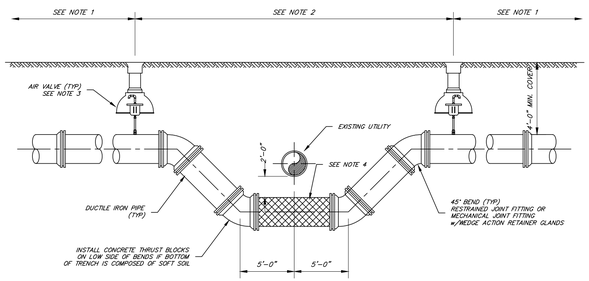
NO SCALE



NOTE:
1 MAINTAIN 18" MIN VERTICAL SEPARARATION FOR THE PORTION OF THE WATER MAIN LOCATED WITHIN 10 FEET HORIZONTALLY OF ANY SEWER OR DRAIN IT CROSSES.
2 MEASURE 10 FEET AS A PERPENDICULAR DISTANCE FROM THE DRAIN OR SEWER LINE TO THE WATER LINE.
3 ONE FULL LENGHT OF PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE DRAIN OR SEWER LINE AS POSSIBLE.

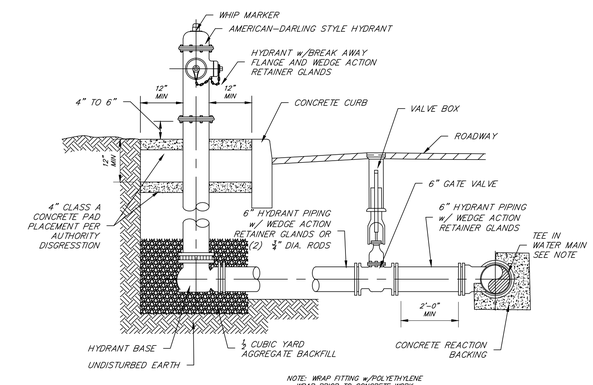
WATER MAIN UTILITY CROSSING DETAIL

NO SCALE



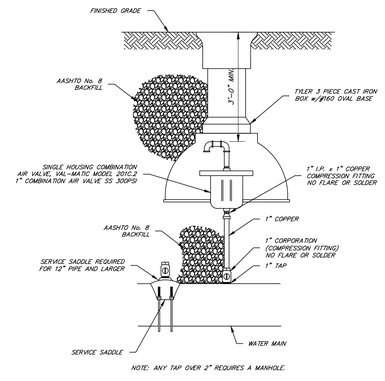
UTILITY CROSSING VERTICAL OFFSET DETAIL

NO SCALE



HYDRANT AT CURB DETAIL

NO SCALE

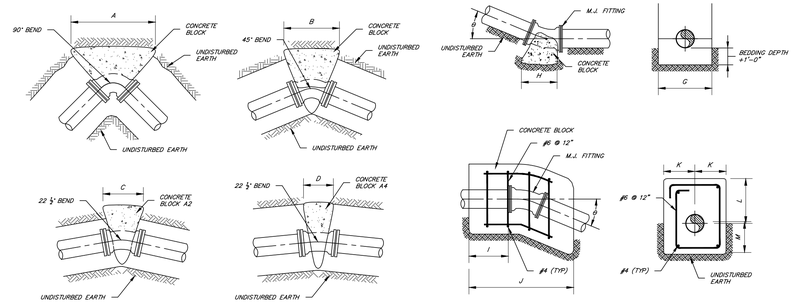


AIR RELEASE VALVE DETAIL

NO SCALE

NOTES:

1. 80 LF OF RESTRAINED JOINT PIPE (TYP EACH SIDE) (120 LF IF POLYETHYLENE ENCASED OR PVC PIPE) UP TO AND INCLUDING 12" DIAMETER PIPE.
2. ALL PIPE JOINTS BETWEEN BENDS MUST BE RESTRAINED. ALTERNATE RESTRAINING METHODS MAY BE USED WITH APPROVAL BY THE CITY OF LEBANON AUTHORITY.
3. INSTALL AIR VALVE PER STANDARD DETAILS UNLESS OTHERWISE DIRECTED BY THE AUTHORITY.
4. INSTALL WATER MAIN UNDER STORMWATER PIPES.



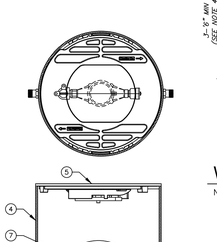
NOTES:

1. REACTION BACKING DIMENSIONS HAVE BEEN CALCULATED USING A SOIL BEARING CAPACITY OF 2000 POUNDS PER SQUARE FOOT AND TEST PRESSURES AS NEEDED.
2. ALL FITTINGS SHALL BE MECHANICAL JOINT AND HAVE WEDGE ACTION FOLLOWER GLANDS INSTALLED TO MANUFACTURERS SPECIFICATIONS, EXCEPT IN RESTRAINED JOINT AREAS.
3. ALL CONCRETE SHALL BE HIGH EARLY STRENGTH.
4. ALTERNATE RESTRAINING METHODS MAY BE USED IN PLACE OF CONCRETE THRUST BLOCKS WITH APPROVAL BY THE CITY OF LEBANON AUTHORITY.

PIPE DIA (INCHES)	TEST PRESSURE (PSI)	A	B	C	D	E	F	G	H			I			J			K	L	M
									45	22 1/2	11 1/4	45	22 1/2	11 1/4	45	22 1/2	11 1/4			
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"	4'-6"	3'-8"	5'-9"	3'-0"	1'-6"	8'-6"	3'-6"	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"	4'-0"	3'-4"	4'-3"	2'-2"	1'-2"	5'-6"	2'-6"	0'-10"	12'-6"	6'-6"	3'-3"	1'-8"	2'-8"	1'-8"
12	150	5'-0"	2'-8"	1'-3"	1'-0"	3'-6"	3'-0"	3'-0"	2'-8"	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'-6"	1'-0"	3'-0"	2'-6"	2'-10"	2'-2"	1'-2"	1'-0"	3'-9"	1'-0"	0'-3"	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'-8"	1'-6"	1'-0"	1'-0"	1'-10"	0'-6"	0'-4"	5'-0"	2'-6"	2'-0"	1'-4"	2'-4"	1'-4"
6	150	2'-8"	1'-6"	1'-0"	1'-0"	2'-0"	1'-6"	2'-6"	1'-0"	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'-2"	1'-2"

REACTION BACKINGS DETAIL

NOT TO SCALE

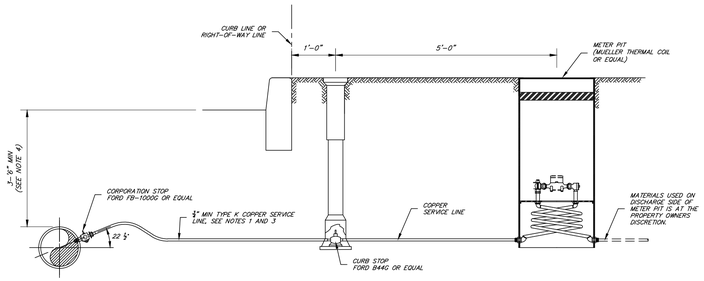


ITEM	DESCRIPTION	QTY
1	ABS PLATFORM 18-40	1
2	3/4" HOSE CONNECTOR	4
3	3/4" COIL PART	2
4	SHELL SUB-ASSEMBLY	1
5	18" DIA CENTER LOCKING LID (NOT INCLUDED)	1
6	3/4" HEX NUT	8
7	18"x4" INSULATION PAD (SOLD SEPARATELY)	1
8	5/8"x3/4" FULL PORT BALL VALVE	1
9	5/8"x3/4" DUAL CHECK VALVE	1

NOTE
METER NOT INCLUDED
HOLE SHOULD NOT BE DRILLED IN LID

MUELLER THERMAL COIL METER DETAIL

NO SCALE

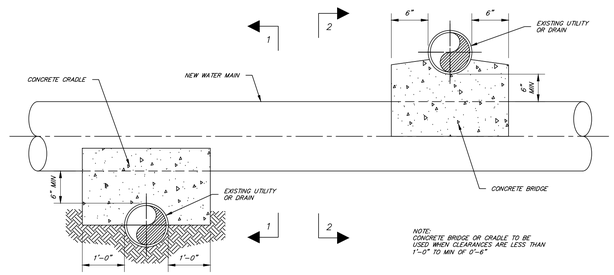


NOTES:

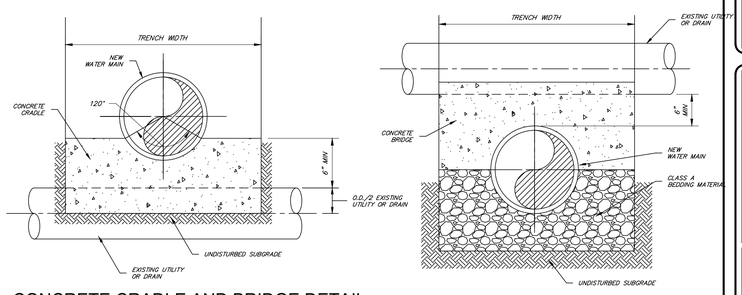
1. REPLACE EXISTING WATER SERVICE LINES WITH MINIMUM ¾" COPPER. IF EXISTING SERVICE IS LARGER DIAMETER, REPLACE WITH SAME SIZE.
2. CURB STOP LOCATION NO MORE THAN 1'-0" BEHIND CURB.
3. WATER LINE TAPE TO BE INSTALLED 1'-6" TO 2'-0" ABOVE PIPE.
4. IF MAIN DEPTH CAN NOT BE MAINTAINED TUBE INSULATION TO BE INSTALLED ON SERVICE LINE.
5. NEW SERVICE LINES - FROM CORPORATION TO CURB STOP, INCLUDING NEW CURB BOX.
6. SERVICE LINES TO BE INSULATED WHEN 18" OF SEPARATION CANNOT BE MAINTAINED.
7. ANY METER PITS REQUIRED FOR SERVICE LINES WILL BE AT THE AUTHORITY'S DISCRETION.
8. REFER TO METER PIT DETAILS FOR ADDITIONAL INFORMATION.

WATER SERVICE WITH METER PIT CONNECTION DETAIL

NO SCALE

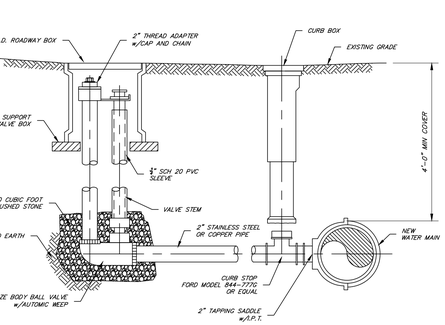


NOTE:
CONCRETE BRIDGE OR CRADLE TO BE USED WHEN CLEARANCES ARE LESS THAN 1'-0" TO MIN OF 0'-6"



CONCRETE CRADLE AND BRIDGE DETAIL

NO SCALE



2" BLOW OFF HYDRANT DETAILS

NO SCALE

REVISION	DATE	BY

WATER DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #784-25-001	

38

38 OF 44 SHEETS

Map Symbol	Soil Name	Slope	Hydrologic Group
BeB	Bedington shaly silt loam	3-8%	B
BkB	Berks chanmery silt loam	3-8%	B
BkC	Berks chanmery silt loam	8-15%	B
BkD	Berks chanmery silt loam	15-25%	B
CmA	Comly silt loam	0-3%	C
WeC	Weikert chanmery silt loam	8-15%	D

EROSION AND SEDIMENT CONTROL LIABILITY NOTE:

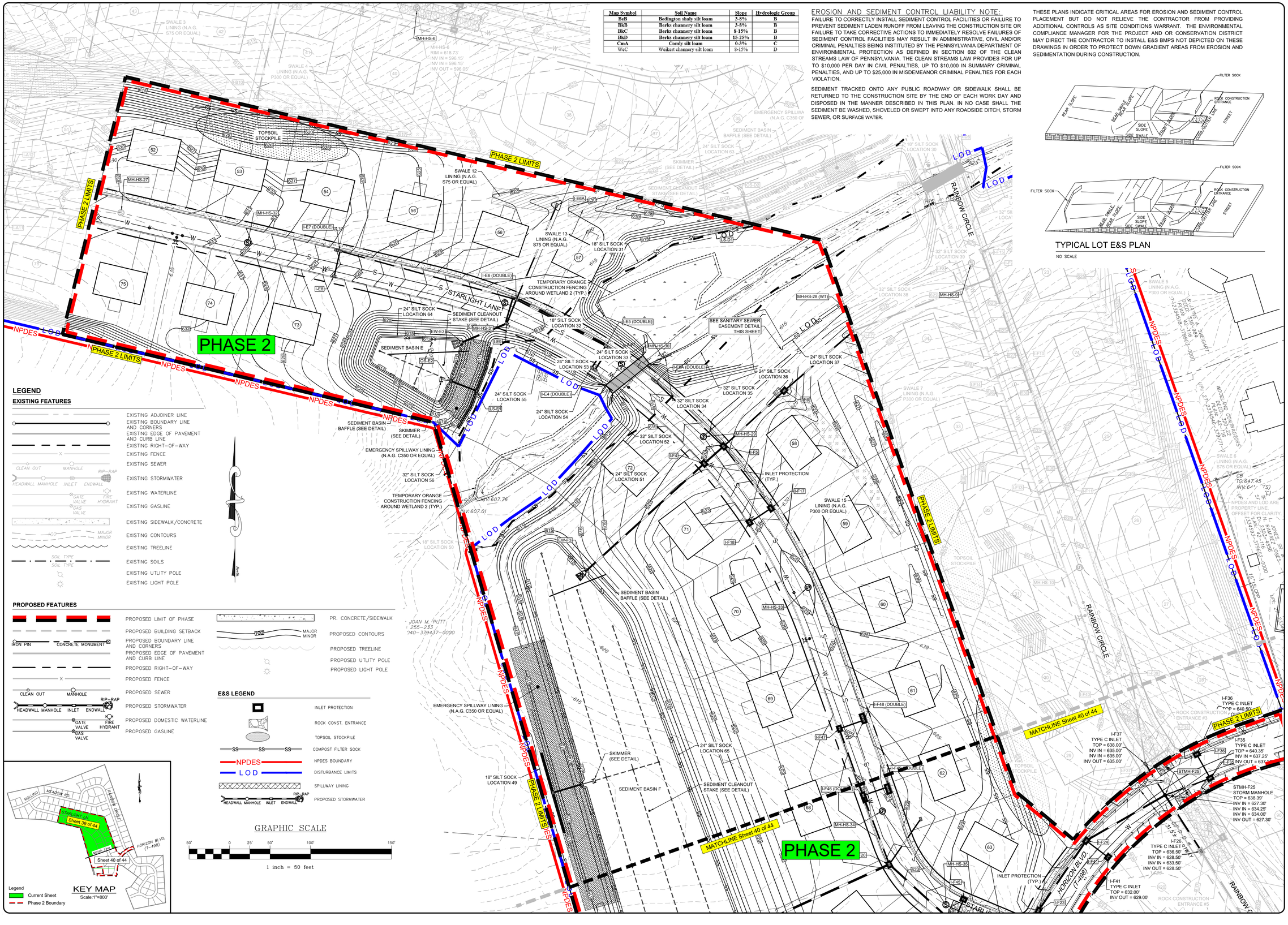
FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING 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.

TYPICAL LOT E&S PLAN

NO SCALE


PHASE 2
PHASE 2 LIMITS
LOD
NPDES
STARLIGHT LANE
RAINBOW CIRCLE
HORIZON BLVD. (T-498)
MATCHLINE Sheet 40 of 44
MATCHLINE Sheet 39 of 44
SEDIMENT BASIN E
SEDIMENT BASIN F
SEDIMENT BASIN BAFFLE (SEE DETAIL)
SKIMMER (SEE DETAIL)
SEDIMENT CLEANOUT STAKE (SEE DETAIL)
EMERGENCY SPILLWAY LINING (N.A.G. C350 OR EQUAL)
TEMPORARY ORANGE CONSTRUCTION FENCING AROUND WETLAND 2 (TYP.)
INLET PROTECTION (TYP.)
TOPSOIL STOCKPILE
SEE SANITARY SEWER EASEMENT DETAIL THIS SHEET
SWALE 3 LINING (N.A.G. S75 OR EQUAL)
SWALE 4 LINING (N.A.G. P300 OR EQUAL)
SWALE 5 LINING (N.A.G. P300 OR EQUAL)
SWALE 6 LINING (N.A.G. S75 OR EQUAL)
SWALE 7 LINING (N.A.G. P300 OR EQUAL)
SWALE 12 LINING (N.A.G. S75 OR EQUAL)
SWALE 13 LINING (N.A.G. S75 OR EQUAL)
SWALE 15 LINING (N.A.G. P300 OR EQUAL)
ROCK CONSTRUCTION ENTRANCE #3
ROCK CONSTRUCTION ENTRANCE #5
MH-HS-6
MH-HS-9
MH-HS-10
MH-HS-20
MH-HS-27
MH-HS-28 (WT)
MH-HS-29
MH-HS-30
MH-HS-31
MH-HS-32
MH-HS-33
MH-HS-34
MH-HS-35
STMH-F25
I-F36 TYPE C INLET TOP = 640.50' INV IN = 640.35' INV IN = 637.25' INV OUT = 637.25'
I-F35 TYPE C INLET TOP = 640.35' INV IN = 637.25' INV OUT = 637.25'
I-F37 TYPE C INLET TOP = 638.00' INV IN = 635.00' INV IN = 635.00' INV OUT = 635.00'
I-F41 TYPE C INLET TOP = 632.00' INV OUT = 629.00'
I-F26 TYPE C INLET TOP = 636.50' INV IN = 628.50' INV IN = 633.50' INV OUT = 628.50'
STMH-F25 STORM MANHOLE TOP = 638.39' INV IN = 627.30' INV IN = 634.25' INV IN = 634.00' INV OUT = 627.30'
CB TO=647.45 INV=64' (S)
18" SILT SOCK LOCATION 30
18" SILT SOCK LOCATION 31
18" SILT SOCK LOCATION 32
18" SILT SOCK LOCATION 49
18" SILT SOCK LOCATION 50
24" SILT SOCK LOCATION 33
24" SILT SOCK LOCATION 34
24" SILT SOCK LOCATION 36
24" SILT SOCK LOCATION 37
24" SILT SOCK LOCATION 51
24" SILT SOCK LOCATION 53
24" SILT SOCK LOCATION 54
24" SILT SOCK LOCATION 55
24" SILT SOCK LOCATION 63
24" SILT SOCK LOCATION 64
24" SILT SOCK LOCATION 65
32" SILT SOCK LOCATION 35
32" SILT SOCK LOCATION 38
32" SILT SOCK LOCATION 39
32" SILT SOCK LOCATION 52
32" SILT SOCK LOCATION 56
I-E1 (DOUBLE)
I-E2
I-E3
I-E4 (DOUBLE)
I-E5 (DOUBLE)
I-E6 (DOUBLE)
I-E7 (DOUBLE)
I-E8
I-E9
I-E6A
I-F1
I-F2
I-F3
I-F4
I-F5
I-F17
I-F18
I-F23
I-F24
I-F46 (DOUBLE)
I-F47
I-F48 (DOUBLE)
LS-E1
LS-E2
LS-E3
LS-E4
LS-E5
LS-E6
LS-F1
LS-F2
EW-E3
EW-F3
DS-E2
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DS-F40
DS-F41

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, GAS VALVE)
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS (MAJOR, MINOR)
- EXISTING TREELINE
- EXISTING SOILS (SOIL TYPE)
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE

PROPOSED FEATURES

- PROPOSED LIMIT OF PHASE
- 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, GAS VALVE)
- PROPOSED GASLINE
- PR. CONCRETE/SIDEWALK
- PROPOSED CONTOURS (100 MAJOR, MINOR)
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

E&S LEGEND

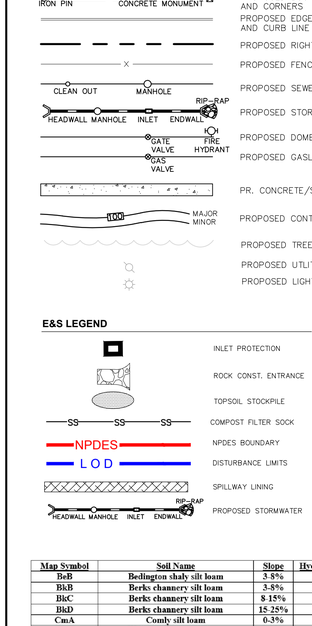
- INLET PROTECTION
- ROCK CONST. ENTRANCE
- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK (SS SS SS)
- NPDES BOUNDARY
- DISTURBANCE LIMITS
- SPILLWAY LINING
- PROPOSED STORMWATER (HEADWALL MANHOLE INLET ENDWALL RIP-RAP)

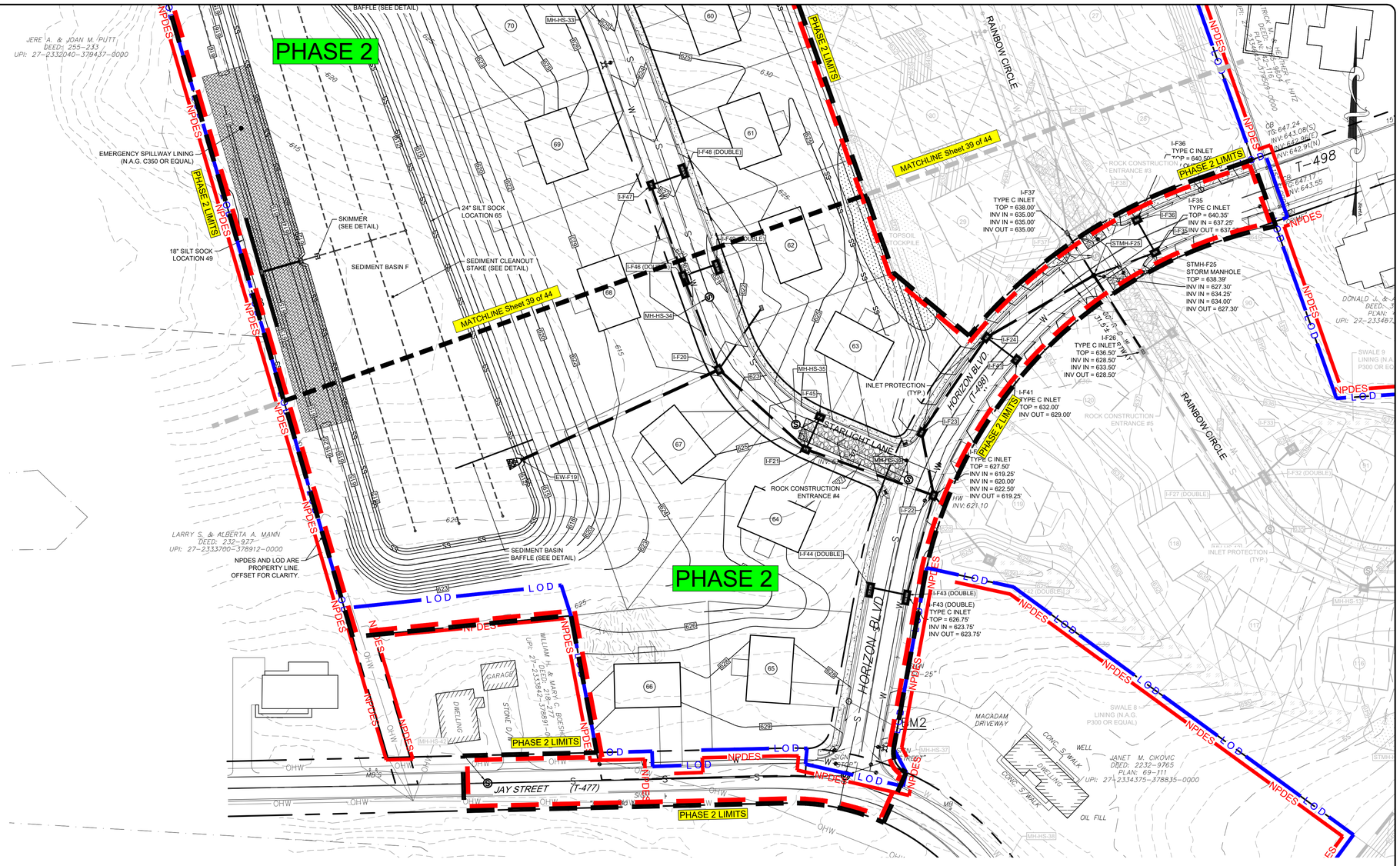
Map Symbol	Soil Name	Slope	Hydrologic Group
BeB	Bedington shaly silt loam	3-8%	B
BkB	Berks channery silt loam	3-8%	B
BkC	Berks channery silt loam	8-15%	B
BkD	Berks channery silt loam	15-25%	B
CmA	Comly silt loam	0-3%	C
WeC	Weikert channery silt loam	8-15%	D

GRAPHIC SCALE

50' 0 25' 50' 100' 150'

1 inch = 50 feet



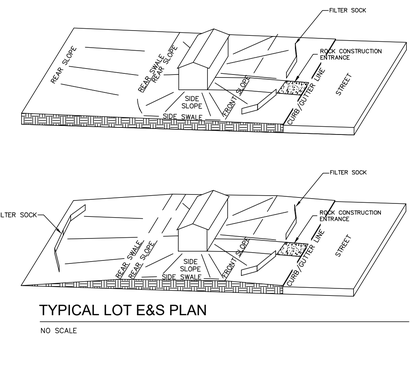


EROSION AND SEDIMENT CONTROL LIABILITY NOTE:

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.



TYPICAL LOT E&S PLAN

NO SCALE

BY	DATE	REVISION

EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
LEBANON County, Pennsylvania

Steckbeck Engineering & Surveying Inc.
279 North Zinns Mill Road / Suite A
Lebanon, PA 17042
Phone: (717) 272-7100
Fax: (717) 272-7348

FIELD CREW:	MOD,JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	1"=50'
PROJECT #	784-25-001

40

40 OF 44 SHEETS

EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE
MT. PLEASANT VENTURES SUBDIVISION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR THE PROPOSED PRELIMINARY LAND DEVELOPMENT PLAN FOR THE MT. PLEASANT VENTURES SUBDIVISION, LOCATED ON BOTH SIDES OF HORIZON BOULEVARD BETWEEN JAY STREET AND COLONIAL DRIVE IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN.

PROJECT DESCRIPTION
THE TOTAL TRACT OF THE TWO PROPERTIES IN QUESTION IS APPROXIMATELY 72.93 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS APPROXIMATELY 67.58 ACRES. THE CURRENT SITE CONSISTS OF OPEN AGRICULTURAL FIELDS AND ONE EXISTING BARN. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE HAS BEEN AGRICULTURAL SINCE THE EARLY 1990'S. BASED ON PENN PILOT HISTORICAL IMAGERY, THE SITE HAS BEEN AGRICULTURAL IN USE SINCE THE 1950'S. THE SITE IS SPLIT BY HORIZON BOULEVARD. THE NORTHERN PORTION OF THE SITE IS BORDERED TO THE EAST BY RESIDENTIAL HOMES AND THE EBENEZER ELEMENTARY SCHOOL, TO THE SOUTH BY HORIZON BOULEVARD, TO THE WEST BY AGRICULTURAL AND RESIDENTIAL PROPERTIES, AND TO THE NORTH BY RESIDENTIAL PROPERTIES. THE SOUTHERN PORTION OF THE SITE IS BORDERED TO THE EAST AND SOUTH BY RESIDENTIAL PROPERTIES, TO THE WEST BY JAY STREET, AND TO THE NORTH BY HORIZON BOULEVARD. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF 122 SINGLE-FAMILY HOMES WITH DRIVEWAYS, STREETS, CONNECTION TO PUBLIC SEWER AND WATER, AND ASSOCIATED 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. SIX (6) ABOVE GROUND INFILTRATION BASINS, AND ONE (1) DETENTION BASIN ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL REACH TWO DIFFERENT UNT'S TO SWATARA CREEK AND AN EXISTING QUARRY POND WHICH IS CLOSEST TO THE BRANDYWINE CREEK. THE UNT'S TO SWATARA CREEK ARE DESIGNATED AS WARM WATER FISHES (WWF) AND ARE IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE – FLOW REGIME MODIFICATION. THE UNT'S TO SWATARA CREEK ARE ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: AGRICULTURE – SILTATION. THE BRANDYWINE CREEK IS DESIGNATED AS TROUT STOCKED FISHES (TSF) AND ARE IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: URBAN RUNOFF/STORM SEWERS – FLOW REGIME MODIFICATION. THE BRANDYWINE 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. STRUCTURAL BMPS ARE PROPOSED TO REDUCE THE IMPACTS OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE SIX (6) INFILTRATION BASINS WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOMS BEFORE BEING INFILTRATED THROUGH THE ENGINEERED SOIL MIX AND INTO THE GROUND. RUNOFF REACHING THE DETENTION BASIN WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOM BEFORE BEING SLOWLY RELEASED TO THE GROUND SURFACE. TREES ARE ALSO PROPOSED IN AND AROUND THE STREETS TO SHADE A PORTION OF THESE AREAS WHICH WILL 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 AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.

DISCHARGE POINTS 001–003 (DP 001–003) ARE LOCATED ADJACENT TO THE NORTHERN PROPERTY LINE AND WILL DISCHARGE TO THE UNT TO SWATARA CREEK LOCATED LESS THAN 100' TO THE NORTH. PRE-DEVELOPMENT RUNOFF SHEET FLOWS ALONG THE ENTIRE PROPERTY LINE DOWN TO THE UNT TO SWATARA CREEK. DPS 001–003 HAVE BEEN ESTABLISHED AT THE LOCATION OF THE PROPOSED BASIN OUTLET LEVEL SPREADERS IN ORDER TO PROVIDE AN ACCURATE PRE– TO POST–DEVELOPMENT ANALYSIS.

DISCHARGE POINT 004 (DP 004) IS LOCATED ALONG THE WESTERN PROPERTY LINE WHERE WATERCOURSE Z LEAVES THE SITE AT THE BOTTOM OF WETLAND Z. RUNOFF WILL DISCHARGE OVERLAND FOR APPROXIMATELY 1,750 FEET PRIOR TO REACHING AN UNT TO SWATARA CREEK.

DISCHARGE POINT 005 (DP 005) IS LOCATED ALONG THE WESTERN PROPERTY LINE WHERE AN EXISTING BROAD DRAINAGE WAY LEAVES THE SITE. RUNOFF WILL DISCHARGE OVERLAND FOR APPROXIMATELY 1,750 FEET PRIOR TO REACHING AN UNT TO SWATARA CREEK.

DISCHARGE POINT 006 (DP 006) IS LOCATED AT AN EXISTING 30" STORM PIPE CROSSING JAY STREET AT THE SOUTHWESTERN CORNER OF THE PROPERTY. RUNOFF REACHING THIS PIPE WILL DISCHARGE ACROSS THE STARLIGHT LANEND FLOW DOWN INTO THE EXISTING QUARRY POND.

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, INLET PROTECTION, ROCK CONSTRUCTION ENTRANCES, AND SEDIMENT BASINS.

Map Symbol	Soil Name	Slope	Hydrologic Group
BeB	Bedington shaly silt loam	3-8%	B
BkB	Berks channery silt loam	3-8%	B
BkC	Berks channery silt loam	8-15%	B
BkD	Berks channery silt loam	15-25%	B
CmA	Comly silt loam	0-3%	C
WkB	Weikert channery silt loam	3-15%	D

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

THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KNOWN KARST FEATURES ON SITE OR IN THE IMMEDIATE VICINITY OF THE PROJECT. THE ENTIRE SITE IS UNDERLAIN BY THE HAMBURG SEQUENCE ROCKS AND THE GRAYWACKE OF HAMBURG SEQUENCE ROCKS WHICH ARE COMPRISED OF SHALE, SILTSTONE, AND GRAYWACKE, AS SUCH, THE POTENTIAL FOR KARST ACTIVITY IS MINIMAL. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, THE COUNTY CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED, AND A CERTIFIED GEOTECHNICAL ADVISOR WILL BE REQUIRED TO OVERSEE MITIGATION OF THE HAZARDS.

BEDINGTON SOILS – THE BEDINGTON SERIES CONSISTS OF VERY DEEP, WELL DRAINED SOILS. BEDINGTON SOILS FORMED IN RESIDUUM FROM DARK BROWN, GRAY AND OLIVE ACID, SEDIMENTARY, SILTSTONE AND SHALE, WITH SOME SANDSTONE INTERBEDS. THEY ARE ON NEARLY LEVEL TO STEEP CONVEX UPLANDS AND ON THE SIDESLOPES OF HILLS AND RIDGES. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. COMLY SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE, THIS SOIL MAY ALSO BE SUBJECT TO DROUGHT AND MAY BE EASILY ERODIBLE. BEDINGTON SOILS MAY ALSO BE SUSCEPTIBLE TO HYDRIC INCLUSIONS, SLOW PERCOLATION, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

BERKS SOILS – THE BERKS SERIES CONSISTS OF MODERATELY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM WEATHERED FROM SHALE, SILTSTONE AND FINE-GRAINED SANDSTONE ON ROUNDED AND DISSECTED UPLANDS. SLOPE RANGES FROM 0 TO 80 PERCENT. PERMEABILITY IS MODERATE OR MODERATELY RAPID. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. BERKS SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE, DROUGHTY, AND EASILY ERODIBLE. THIS SOIL MAY ALSO BE SUBJECT TO HYDRIC INCLUSIONS, SLOW PERCOLATION, PIPING, AND A POOR SOURCE OF TOPSOIL.

COMLY SOILS – THE COMLY SERIES CONSISTS OF VERY DEEP, MODERATELY WELL DRAINED. THESE SOILS FORMED COLLUVIUM WEATHERED FROM ACID BROWN AND GRAY SHALE, SANDSTONE, AND SILTSTONE. THEY ARE ON CONCAVE UPLAND SLOPES OF 0 TO 25 PERCENT. PERMEABILITY IS MODERATE ABOVE THE FRAGIPAN AND MODERATELY SLOW IN THE FRAGIPAN. MEAN ANNUAL PRECIPITATION IS 44 INCHES. MEAN ANNUAL TEMPERATURE IS 51 DEGREES F. COMLY SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO STEEL AND CONCRETE, DROUGHTY, AND EASILY ERODIBLE. THESE SOILS MAY ALSO BE SUSCEPTIBLE TO A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, PIPING, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

WEIKERT SOILS – THE WEIKERT SERIES CONSIST OF SHALLOW, WELL DRAINED SOILS FORMED IN MATERIAL THAT WEATHERED FROM INTERBEDDED GRAY AND BROWN ACID SHALE, SILTSTONE, AND FINE-GRAINED SANDSTONE. THEY ARE ON STRONGLY SLOPING TO VERY STEEP AREAS ON UPLANDS. SLOPE RANGES FROM 0 TO 100 PERCENT. PERMEABILITY IS MODERATELY RAPID. MEAN ANNUAL PRECIPITATION IS ABOUT 42 INCHES, AND THE MEAN ANNUAL AIR TEMPERATURE IS ABOUT 52 DEGREES F. WEIKERT SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS, CORROSIVE TO CONCRETE AND STEEL, AND DROUGHTY. THIS SOIL MAY ALSO BE SUSCEPTIBLE TO HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

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, OR
- EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF SEDIMENT–LADEN WATER OFF–SITE.
- 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 AREAS OF HIGH GROUNDWATER. IF DEWATERING IS 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 ARE LOCATED ON SITE. MINIMAL DISTURBANCE WILL TAKE PLACE IN WETLANDS A FOR THE CONSTRUCTION OF STREETS WITH ASSOCIATED CULVERTS TO MAINTAIN HYDRAULIC CONVEYANCE.
- LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 3:1. 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. INFILTRATION TESTS PREVIOUSLY PERFORMED INDICATED THAT THE INFILTRATION RATE AT THE SITE IS ADEQUATE IN THE PROPOSED INFILTRATION FACILITIES. A DETENTION BASIN IS PROPOSED IN THE AREA WHERE INFILTRATION TESTING YIELDED NEGLIGIBLE RESULTS.
- PIPING: ANTI–SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS.
- POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS THE ENTIRE SITE IS AN AGRICULTURAL FIELD, THE TOPSOIL IS EXPECTED TO BE SUFFICIENT.
- FROST ACTION: ALL 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.
- SINKHOLE FORMATION: THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KNOWN KARST FEATURES ON SITE OR IN THE IMMEDIATE VICINITY OF THE PROJECT. THE ENTIRE SITE IS UNDERLAIN BY THE HAMBURG SEQUENCE ROCKS AND THE GRAYWACKE OF HAMBURG SEQUENCE ROCKS WHICH ARE COMPRISED OF SHALE, SILTSTONE, AND GRAYWACKE, AS SUCH, THE POTENTIAL FOR KARST ACTIVITY IS MINIMAL. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED, THE COUNTY CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED, AND A CERTIFIED GEOTECHNICAL ADVISOR WILL BE REQUIRED TO OVERSEE MITIGATION OF THE HAZARDS.
- WETNESS: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, DEWATERING BASINS, ETC. 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 (FILTER SOCK).

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 LEBANON COUNTY 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 COUNTY 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 COUNTY 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 PERMANENT STORMWATER BASINS A–G WILL SERVE AS SEDIMENT BASINS A–G 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 SOCK SHALL BE INSTALLED.
4. ROCK FILTER WITH COMPOST
   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.
5. 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.
6. 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 100', AND 20'W. REFER TO THE PLAN DETAIL.
7. 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
8. STONE INLET PROTECTION WITH COMPOST
   a. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS. ROLLED EARTHEN BERMS SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED.
   b. SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE.
   c. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
   d. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
   e. A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE.

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. 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.
3. CHANNEL 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 DOWNHILL. 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 TREN

SEQUENCE OF CONSTRUCTION – PHASE 3

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 EXTENDED ROCK CONSTRUCTION ENTRANCES **#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.). INSTALL TEMPORARY ORANGE CONSTRUCTION FENCING AROUND WETLAND 2 AS SHOWN ON THE E&S PLANS.

6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASIN F). 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 37-42 AND 49-50 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 LOCATION 65 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN 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 BASIN F WHICH WILL SERVE AS A SEDIMENT BASIN DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT STORMWATER BASIN UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT BASIN. THE SEDIMENT BASIN MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. INSTALL THE OUTLET PIPE FROM THE BASIN ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN C350 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL TYPE LEVEL SPREADER AT BASIN OUTLET. INSTALL SEED IN THE INTERIOR SLOPES AND BERM OF BASIN. INSTALL TYPE M OUTLET STRUCTURE, CLEAN OUT STAKE, BASIN BAFFLE(S), AND SKIMMER WITHIN THE SEDIMENT BASIN. PLEASE 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 PIPE, ANTI-SEEP COLLARS, AND CLAY CORE.

10. 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.

11. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF THE BUILDING PADS AND STREETS WITHIN PHASE 3 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.

12. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE BUILDINGS, DRIVEWAYS, AND STREETS WITHIN PHASE 3. INSTALL SWALES 5-7 DURING ROUGH GRADING. ENSURE THE SWALE LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.

13. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL STORM INLETS. 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.

14. INSTALL THE STONE SUB-BASE FOR THE STREETS, DRIVEWAYS, AND CONCRETE SLABS AS PER PLAN REQUIREMENTS.

15. CONSTRUCT THE PROPOSED BUILDINGS AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE LOT.

16. 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 4-8 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.

17. 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.

18. PAVE THE STREETS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL THE 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.

19. ALL 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 PERMANENT STORMWATER BASINS. ANY WATER PUMPED FROM THE SEDIMENT 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.

20. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASIN F AS REQUIRED TO INSTALL INFILTRATION BASIN F AS SHOWN ON THE PCSM PLAN. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKE, AND SKIMMER. THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AND SCARIFIED 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 THE BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN THE BASIN BOTTOM. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. IMMEDIATELY AFTER PLACING THE ENGINEERED SOIL MIX, INSTALL THE SILT SOCK AT LOCATION 65 TO PREVENT SEDIMENTATION OF THE ENGINEERED SOILS. 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 BASIN F.

21. 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.

22. 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 4

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 EXTENDED ROCK CONSTRUCTION ENTRANCE #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.). INSTALL TEMPORARY ORANGE CONSTRUCTION FENCING AROUND WETLAND 2 AS SHOWN ON THE E&S PLANS.

6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION 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.

7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 31-37 AND 50-56 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 LOCATION 64 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN 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 BASIN E WHICH WILL SERVE AS A SEDIMENT BASIN DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT STORMWATER BASIN UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT BASIN. THE SEDIMENT BASIN MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. INSTALL THE OUTLET PIPE FROM THE BASIN ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN C350 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL TYPE LEVEL SPREADER AT BASIN OUTLET. INSTALL SEED IN THE INTERIOR SLOPES AND BERM OF BASIN. INSTALL TYPE M OUTLET STRUCTURE, CLEAN OUT STAKE, BASIN BAFFLE(S), AND SKIMMER WITHIN THE SEDIMENT BASIN. PLEASE 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 PIPE, ANTI-SEEP COLLARS, AND CLAY CORE.

10. 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.

11. CLEAR AND STRIP TOPSOIL ACROSS THE AREA OF THE BUILDING PADS AND STREETS WITHIN PHASE 4 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.

12. ROUGH GRADE THE DISTURBED AREA TO CONSTRUCT THE BUILDINGS, DRIVEWAYS, AND STREETS WITHIN PHASE 4. INSTALL SWALE 12 DURING ROUGH GRADING. ENSURE THE SWALE LINING IS INSTALLED IN EACH SWALE IN ACCORDANCE WITH THE PLAN DETAILS.

13. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. ENSURE INLET PROTECTION IS PROVIDED FOR ALL STORM INLETS NOT DISCHARGING TO SEDIMENT BASIN E AS SHOWN 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.

14. INSTALL THE STONE SUB-BASE FOR THE STREETS, DRIVEWAYS, AND CONCRETE SLABS AS PER PLAN REQUIREMENTS.

15. CONSTRUCT THE PROPOSED BUILDINGS AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE LOT.

16. 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 4-8 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.

17. 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.

18. PAVE THE STREETS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL THE 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.

19. ALL 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 PERMANENT STORMWATER BASINS. ANY WATER PUMPED FROM THE SEDIMENT 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.

20. UPON STABILIZATION OF ALL DISTURBED AREAS MODIFY SEDIMENT BASIN E AS REQUIRED TO INSTALL INFILTRATION BASIN E AS SHOWN ON THE PCSM PLAN. REMOVE ALL SEDIMENT BASIN BAFFLES, CLEANOUT STAKE, AND SKIMMER. THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AND SCARIFIED 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 THE BASIN BOTTOM, INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE SPECIFIED ELEVATION WITHIN THE BASIN BOTTOM. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. IMMEDIATELY AFTER PLACING THE ENGINEERED SOIL MIX, INSTALL THE SILT SOCK AT LOCATION 64 TO PREVENT SEDIMENTATION OF THE ENGINEERED SOILS. 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 BASIN E.

21. 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.

22. 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 5

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 EXTENDED ROCK CONSTRUCTION ENTRANCE #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.)

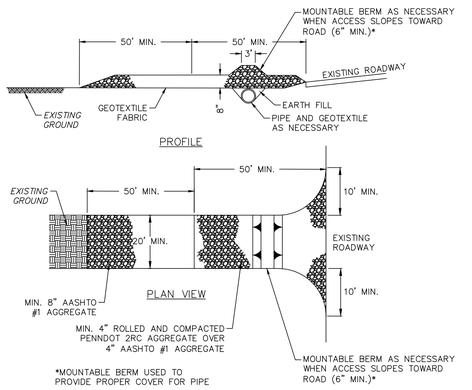
6. LOCATE, STAKE, AND FLAG AREAS MARKED AS PCSM BMP'S (I.E. INFILTRATION BASIN G). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.

7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 44-48 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 LOCATION 66 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED ONCE THE CONVERSION TO THE PERMANENT STORMWATER BASIN IS COMPLETE.

8. INSTALL ROCK FILTER #1 AT THE CULVERT BENEATH JAY STREET.

9. 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."

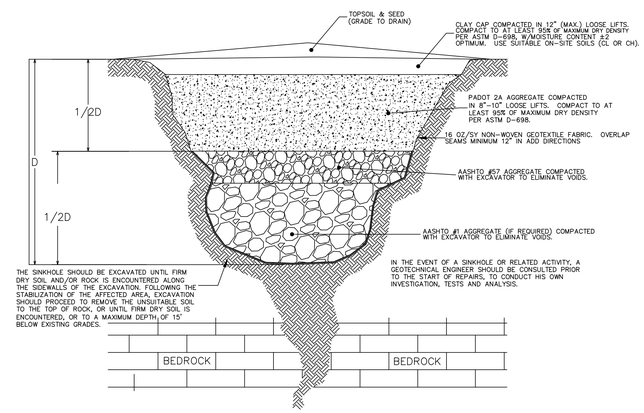
10. INSTALL SEDIMENT BASIN G WHICH WILL SERVE AS A SEDIMENT BASIN DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT STORMWATER BASIN UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT BASIN. THE SEDIMENT BASIN MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. IN



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.

ALTERNATIVE ROCK CONSTRUCTION ENTRANCE

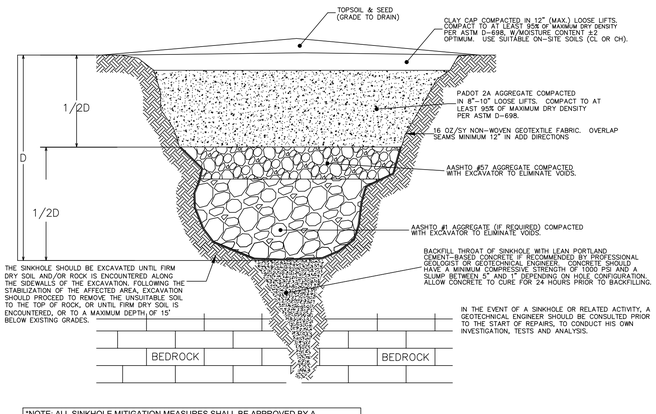
NO SCALE



*NOTE: ALL SINKHOLE MITIGATION MEASURES SHALL BE APPROVED BY A QUALIFIED GEOLOGIST OR GEOTECHNICAL ENGINEER PRIOR TO IMPLEMENTATION.

SINKHOLE REPAIR DETAIL-BEDROCK THROAT NOT ENCOUNTERED

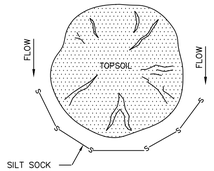
NO SCALE



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SINKHOLE REPAIR DETAIL-BEDROCK THROAT ENCOUNTERED

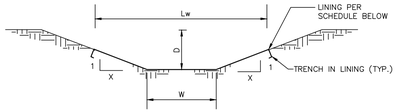
NO SCALE



NOTE:
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

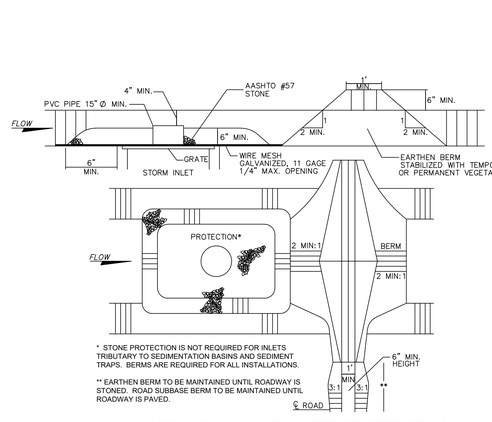


CROSS SECTION

SWALE NO	WIDTH (W)	DEPTH (D)	SIDE SLOPE(X)	MAX. SLOPE	LINING WIDTH (Lw)	LINING	TEMPORARY LINING	STAPLE PATTERN
1	1.5'	1'	4	17%	9.5'	GRASS	N.A.G. C-350	E
2	1.5'	1'	15	8%	31.5'	GRASS	N.A.G. S-75	D
3	1.5'	1'	12.5	5%	26.5'	GRASS	N.A.G. S-75	D
4	1.5'	1'	9	7%	19.5'	GRASS	N.A.G. P-300	E
5	1.5'	1'	6.5	10%	14.5'	GRASS	N.A.G. P-300	E
6	1'	1'	9	6%	19'	GRASS	N.A.G. S-75	D
7	1'	1'	10	12%	21'	GRASS	N.A.G. P-300	E
8	2'	1'	7.5	6%	17'	GRASS	N.A.G. P-300	E
9	1.5'	1'	7	10%	15.5'	GRASS	N.A.G. P-300	E
10	2'	1'	8	6%	18'	GRASS	N.A.G. P-300	E
11A	2'	1'	3	33%	16.5'	RIPRAP	R-5 RIPRAP	--
11B	1.5'	1'	7.5	10%	16.5'	GRASS	N.A.G. P-300	E
12	1'	1'	15	4%	31'	GRASS	N.A.G. S-75	D
13	1'	1'	3	6%	7'	GRASS	N.A.G. S-75	D
14A	2'	1'	3	33%	8'	RIPRAP	R-5 RIPRAP	--
14B	2'	1'	3	4%	8'	GRASS	N.A.G. S-75	D
15	1.5'	1'	8	10%	17.5'	GRASS	N.A.G. P-300	E

STORMWATER SWALE DETAIL

NO SCALE

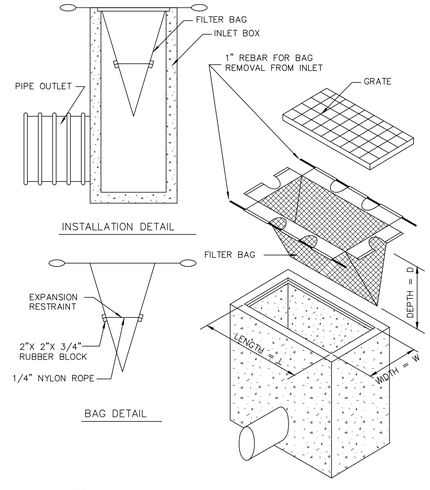


* STONE PROTECTION IS NOT REQUIRED FOR INLETS TRIBUTARY TO SEDIMENTATION BASINS AND SEDIMENT TRAPS. BERMS ARE REQUIRED FOR ALL INSTALLATIONS.

** EARTHEN BERM TO BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM TO BE MAINTAINED UNTIL ROADWAY IS PAVED.

CHANNEL OR SWALE INLET PROTECTION

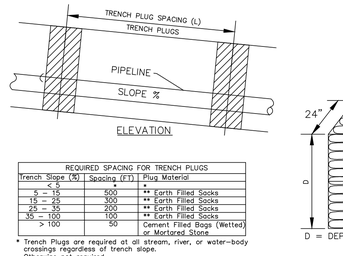
NO SCALE



NOTES:
1. Filter bags should trap all particles larger than 150 microns.
2. Wherever filter bags are used they should be installed according to the manufacturer's specifications.
3. Inlet filter bags should be inspected on a weekly basis and after each runoff event.
4. Filter bags should be cleaned and/or replaced when the bag is 1/2 full.
5. Damaged filter bags should be replaced.
6. Needed repairs should be initiated immediately after the inspection.

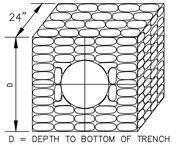
SILT FILTER BAG DETAIL

NO SCALE



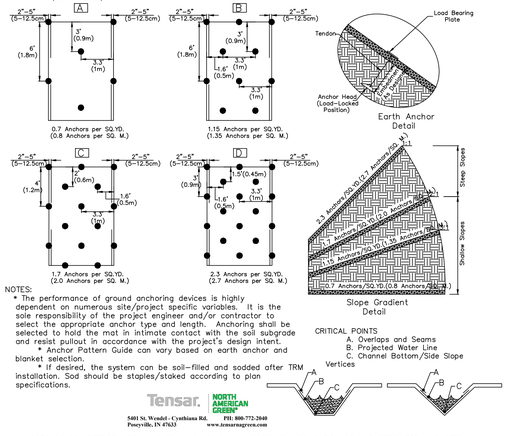
REQUIRED SPACING FOR TRENCH PLUGS		
Trench Slope (%)	Spacing (FT)	Plug Material
< 5	*	*
5 – 15	500	** Earth Filled Sacks
15 – 25	300	** Earth Filled Sacks
25 – 35	200	** Earth Filled Sacks
35 – 100	100	** Earth Filled Sacks
> 100	50	Cement Filled Bags (Wetted) or Mortared Stone

* Trench Plugs are required at all stream, river, or water-body crossings regardless of trench slope. Otherwise not required.
** Topsoil may not be used to fill sacks.



TYPICAL TRENCH PLUG INSTALLATION

NO SCALE



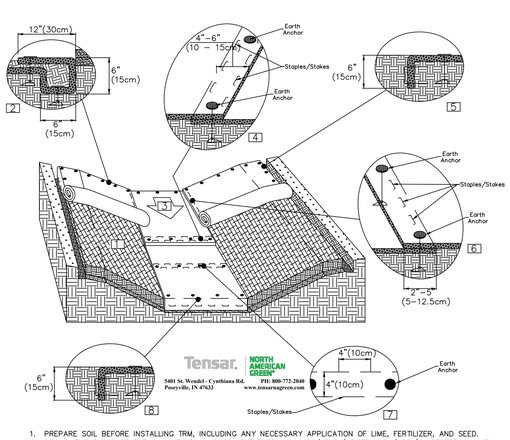
NOTES:
* The performance of ground anchoring devices is highly dependent on numerous site/project specific variables. It is the sole responsibility of the project engineer and/or contractor to select the appropriate anchor type and length. Anchoring shall be selected to hold the mat in intimate contact 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 staples/staked according to plan specifications.

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Poseyville, IN 47633 www.tensarnagreen.com

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.

CHANNEL INSTALLATION EARTH ANCHOR DETAIL

NO SCALE

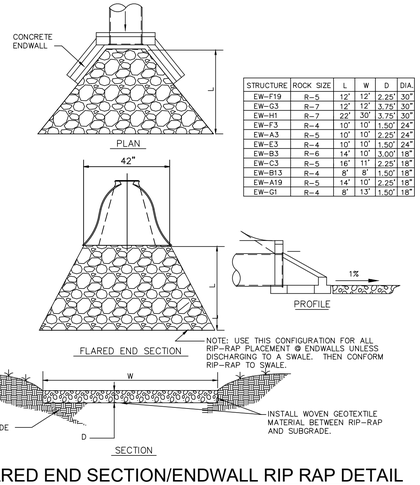


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CHANNEL INSTALLATION EARTH ANCHOR DETAIL

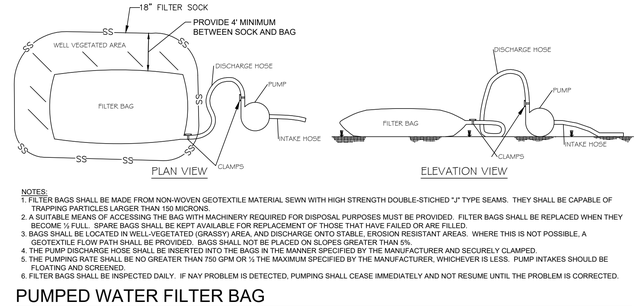
NO SCALE



STRUCTURE	ROCK SIZE	L	W	D	DIA.
EW–F19	R–5	12'	12'	2.25'	30"
EW–G3	R–7	12'	12'	3.75'	30"
EW–H1	R–7	22'	30'	3.75'	30"
EW–F3	R–4	10'	10'	1.50'	24"
EW–A3	R–5	10'	10'	2.25'	24"
EW–E3	R–4	10'	10'	1.50'	24"
EW–B3	R–6	14'	10'	3.00'	18"
EW–C3	R–5	16'	11'	2.25'	18"
EW–B13	R–4	8'	8'	1.50'	18"
EW–A19	R–5	14'	10'	2.25'	18"
EW–G1	R–4	8'	13'	1.50'	18"

FLARED END SECTION/ENDWALL RIP RAP 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. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. 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

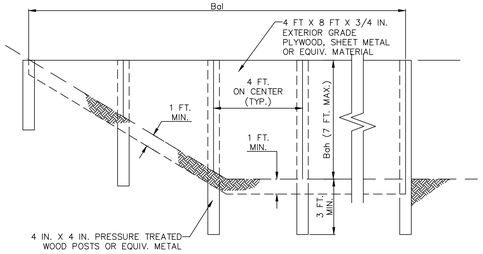
NO SCALE

REVISION	DATE	BY

EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS
REVISED FINAL PHASE 1 AND FINAL PHASE 2
SUBDIVISION & LAND DEVELOPMENT PLAN
For
THE ESTATES AT HEARTHSIDE
located in
NORTH LEBANON TOWNSHIP
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:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	9/8/25
SCALE:	AS NOTED
PROJECT #	784–25–001



BASIN OR TRAP NO.	BAFFLE LENGTH Bal (FT)	BAFFLE HEIGHT Bah (FT)	RISER CREST ELEV. RCE (FT)	BOTTOM BOTTOM ELEV BE (FT)
SEDIMENT BASIN A	125	3.50	566.50	563.00
SEDIMENT BASIN B	*	3.50	589.50	586.00
SEDIMENT BASIN C	*	3.50	596.50	593.00
SEDIMENT BASIN D	150	3.50	616.50	613.00
SEDIMENT BASIN E	100	3.50	616.50	613.00
SEDIMENT BASIN F	75(X2)	2.50'	614.50	612.00
SEDIMENT BASIN G	*	4.50'	616.50	612.00

NOTES:

*VARIES (SEE PLAN VIEW FOR LAYOUT OF BAFFLES)

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL THE SAME HEIGHT WITH SUPER SILT FENCE OR COMPOST FILTER SOCK AT THE BAFFLE LOCATION

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.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

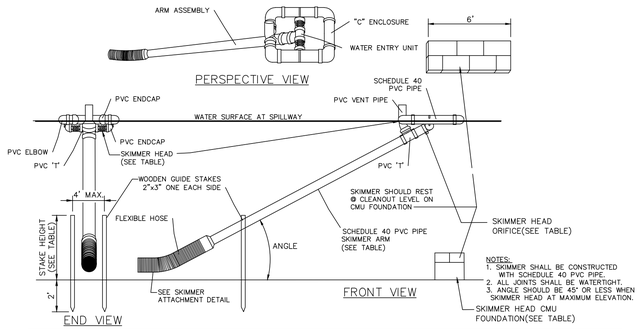
SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

SEDIMENT BASIN BAFFLE DETAIL

NO SCALE



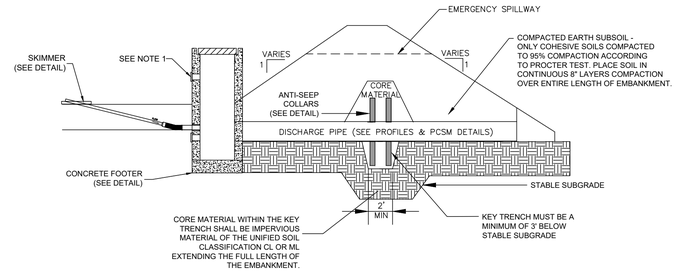
BASIN	SKIMMER ARM LENGTH (FT)	SKIMMER ARM DIA. (IN)	SKIMMER HEAD PIPE DIA. (IN)	SKIMMER HEAD ORIFICE DIA.	SKIMMER HEAD CMU BOTTOM	SKIMMER HEAD CMU TOP ELEV	HEIGHT (FT)	WOODEN STAKES HEIGHT
A	7	4	4	3.6	563.00	564.00	1	4
B	7	4	4	3.6	586.00	587.00	1	4
C	7	4	4	2.9	593.00	594.00	1	4
D	7	2	2	1.7	613.00	614.50	1.5	4
E	7	2.5	2.5	2.2	613.00	614.00	1	4
F	7	5	5	4.6	612.00	613.00	1	4
G	7	5	5	4.0	612.00	613.00	1	5

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

E&S SKIMMER OUTLET DETAIL

NO SCALE



BASIN	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
A	563.00	563.00	566.50	567.00	18	561.50	559.00	50	--	YES	NO
B	586.00	586.00	589.50	590.00	18	584.50	580.00	54	--	YES	NO
C	593.00	593.00	596.50	597.00	18	591.50	588.00	52	--	YES	NO
D	613.00	613.00	616.50	617.00	18	612.75	612.50	36	--	YES	NO
E	613.00	613.00	616.50	617.00	18	613.00	612.75	34	--	YES	NO
F	612.00	612.00	614.50	615.00	18	611.50	611.25	37	--	YES	NO
G	612.00	612.00	616.50	617.00	18	610.75	610.25	36	--	YES	NO

NOTES:

1. ALL ORIFICES IN THE OUTLET STRUCTURE (WITH THE EXCEPTION OF THE SKIMMER PENETRATION) SHALL BE TEMPORARILY SEALED WITH A SOLID STAINLESS STEEL PLATE DURING THE E&S PHASE.

SEDIMENT BASIN W/ SKIMMER DETAIL

NO SCALE

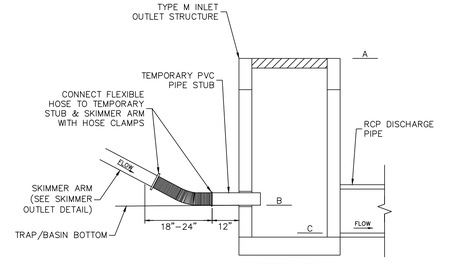


BASIN	ELEVATION
A	564.00
B	587.00
C	594.00
D	614.50
E	614.00
F	613.00
G	613.00

CLEANOUT STAKE DETAIL

NO SCALE

BASIN /TRAP	BASIN /TRAP BOTTOM ELEV	ELEV A	ELEV B	TEMPORARY STUB PIPE DIA. (IN)	ELEV C	DISCHARGE PIPE DIA. (IN)
A	563.00	566.50	563.00	4.0	561.50	18
B	586.00	589.50	586.00	4.0	584.50	18
C	593.00	596.50	593.00	4.0	591.50	18
D	613.00	616.50	613.00	2.0	612.75	18
E	613.00	616.50	613.00	2.5	613.00	18
F	612.00	614.50	612.00	5.0	611.50	18
G	612.00	616.50	612.00	5.0	610.75	18



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

OPEN, SUNNY LOCATIONS AND WELL-DRAINED SOILS				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
KENTUCKY BLUEGRASS	100%	2-3		
OR				
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	80-90% 10-20%	3-4		
OR				
KENTUCKY BLUEGRASS FINE FESCUES PERENNIAL RYEGRASS	40-60% 30-40% 10-20%	3-4	10-100-20 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
OR				
TURF-TYPE TALL FESCUE	100%	6-8		
OR				
TURF-TYPE PERENN. RYEGRASS	100%	4-5		
MODERATE TO PARTIAL SHADE				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
FINE FESCUES	40-50%	4		
KENTUCKY BLUEGRASS	40-50%			
PERENNIAL RYEGRASS	10-20%		10-10-20 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
OR				
FINE FESCUES	100%	4-5		
OR				
TURF-TYPE TALL FESCUE	100%	6-8		
HEAVY SHADE, WELL-DRAINED SOILS				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
FINE FESCUES	100%	4-5	10-10-20 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
HEAVY SHADE, POORLY-DRAINED SOILS				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
ROUGH BLUEGRASS	100%	2-3	10-10-20 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
INFILTRATION BASIN BOTTOM				
MIX	MANUFACTURER	APP. RATE	FERTILIZER	SEED DATES
RETENTION BASIN FLOOR MIX - LOW MAINTENANCE (ERNMX-126)	ERNST CONSERVATION SEEDS, INC. 8884 MERCER PIKE MEADVILLE, PA 16335	PER MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS		
* LBS PER 1,000 S.F.				

1. APPLY LIME IN ACCORDANCE WITH SOIL TEST RESULTS. APPLY 6 TONS OF AGRICULTURAL GRADE LIMESTONE/ACRE.
2. APPLY FERTILIZER AT 1,000 LB./ACRE.
3. 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 @ 750 LBS/AC.
4. ALL DIVERSIONS, CHANNELS, SED TRAPS AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

SEEDING SPECIFICATIONS

NOT TO SCALE

STEEP SLOPES				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
BIRDSFOOT TREFOIL	98%	10	10-10-20 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
CROWN VETCH	1-2%	20		
TALL FESCUE	1-2%	30		
* LBS PER 1,000 S.F.				

1. APPLY LIME IN ACCORDANCE WITH SOIL TEST RESULTS. APPLY 6 TONS OF AGRICULTURAL GRADE LIMESTONE/ACRE.
2. APPLY FERTILIZER AT A RATE OF 1,000 LB./ACRE.
3. 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 @ 750 LBS/AC.
4. ALL DIVERSIONS, CHANNELS, SED TRAPS AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

STEEP SLOPE SEEDING SPECIFICATIONS

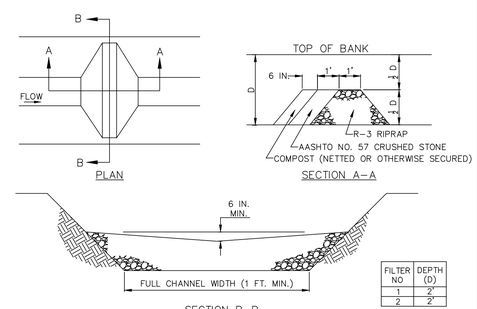
NOT TO SCALE

TEMPORARY				
SPECIES	PERCENTAGE	APP. RATE*	FERTILIZER	SEED DATES
ANNUAL RYEGRASS	98%	40	10-10-10 $N-P_2O_5-K_2O$	MARCH 15-JUNE 15 & AUGUST 30-OCTOBER 15
* LBS PER ACRE				

1. APPLY LIME IN ACCORDANCE WITH SOIL TEST RESULTS. APPLY 1 TON OF AGRICULTURAL GRADE LIMESTONE/ACRE.
2. APPLY FERTILIZER AT A RATE OF 500 LB./ACRE.
3. 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 @ 750 LBS/AC.
4. ALL DIVERSIONS, CHANNELS, SED TRAPS AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

TEMPORARY SEEDING SPECIFICATIONS

NOT TO SCALE



FILTER NO	DEPTH (D)
1	2'
2	2'

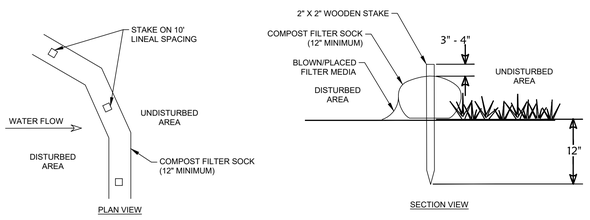
NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.

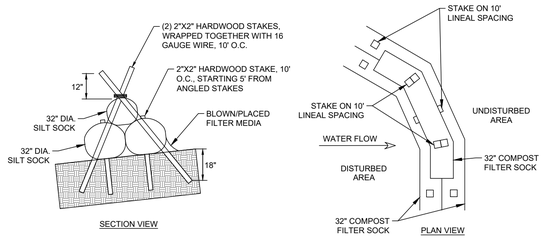
IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

ROCK FILTER

NO SCALE



STANDARD INSTALLATION



STACKED INSTALLATION

GENERAL NOTES:

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

OPERATION AND 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. IF BEYOND REPAIR, A NEW SECTION OF FILTER SOCK SHALL BE INSTALLED IMMEDIATELY ON THE UPSLOPE SIDE OF THE DAMAGED SOCK.
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 LEBANON 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 LEBANON 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

REVISION	DATE	BY
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44 OF 44 SHEETS