FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN
FOR
LIBERTY FORGE

CERTIFICATE OF ACCURACY - SURVEY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, ALL SURVEY INFORMATION AND COMPUTATIONS SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE LOWER ALLEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____, 20____. _____
SURVEYOR'S SIGNATURE

CERTIFICATE OF ACCURACY - PLAN

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

_____, 20____. _____

STORMWATER MANAGEMENT PLAN CERTIFICATION

_____ ON THIS DATE _____, HAVE REVIEWED AND HEREBY
DESIGN ENGINEER
CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE LOWER ALLEN TOWNSHIP ACT 167 STORMWATER MANAGEMENT ORDINANCE

_____

GEOTECHNICAL ENGINEER CERTIFICATION

I, _____ , DO HEREBY CERTIFY THAT THE PROPOSED STORMWATER MANAGEMENT FACILITIES ON THIS PROJECT SITE ARE/ARE NOT UNDERLAIN BY CARBONATE GEOLOGY.

_____, 20_____
Signature

OWNER STORMWATER STATEMENT

THE STORMWATER MANAGEMENT FACILITIES AND BMPS SHOWN ON THESE PLANS ARE TO BE PERMANENT FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE MUNICIPALITY.

_____
OWNER

NOTARIZED OWNERS STATEMENT

COMMONWEALTH OF PENNSYLVANIA

CUMBERLAND COUNTY

ON THIS THE _____ DAY OF _____, 20_____, BEFORE ME _____

THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON(S) WHOSE NAMES(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGED THAT _____ EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET NY HAND AND OFFICIAL SEAL.

_____ _____
(NOTARY SEAL) OWNER

NOTARIZED OWNERS STATEMENT

COMMONWEALTH OF PENNSYLVANIA

CUMBERLAND COUNTY

ON THIS THE _____ DAY OF _____, 20_____, BEFORE ME _____

THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON(S) WHOSE NAMES(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGED THAT _____ EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET NY HAND AND OFFICIAL SEAL.

_____ _____
(NOTARY SEAL) OWNER

RECORD INFORMATION

RECORDED IN THE CUMBERLAND COUNTY COURTHOUSE

RECORDED THIS _____ DAY OF _____, 20_____

INSTRUMENT NO._____

WETLAND STATEMENT

WETLAND AS NOTED ON THE PLANS ARE TO BE ALTERED AND DISTURBED AND ARE SUBJECT TO PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT PERMIT AND U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT AND REQUIREMENTS.

_____ _____
DATE OWNER SIGNATURE

MUNICIPAL STORMWATER CERTIFICATION

_____ ON THIS DATE _____,
MUNICIPAL OFFICIAL OR DESIGNEE
HAS REVIEWED AND HEREBY CERTIFY THAT THE SWM PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE MUNICIPAL ORDINANCE NO. 2022-02"

BOARD OF COMMISSIONERS

APPROVED BY THE BOARD OF COMMISSIONERS, LOWER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA.

APPROVED THIS _____ DAY OF _____, 20_____

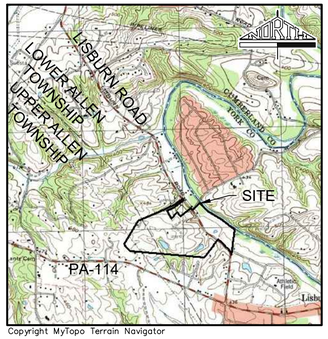
CONDITIONS OF APPROVAL COMPLETED THIS_____ DAY OF _____ . 20_____

_____ _____
PRESIDENT SECRETARY

CUMBERLAND COUNTY PLANNING DEPARTMENT

REVIEWED THIS _____ DAY OF _____, 20_____ CUMBERLAND COUNTY PLANNING DEPARTMENT

_____
DIRECTOR OF PLANNING



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LOCATION MAP
SCALE: 1" = 2000'

REQUESTED WAIVERS

THE FOLLOWING WAIVERS OF THE LOWER ALLEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND STORMWATER MANAGEMENT ORDINANCE WERE REQUESTED ON JUNE 22, 2026.

LISBURN ROAD CORRIDOR:
1. SECTION 192-57.C(1) - PAVEMENT WIDTH
   ACTION: DATE:
   CONDITIONS:
2. SECTION 192-57.C(8) - CURBS
   ACTION: DATE:
   CONDITIONS:
3. SECTION 192-57.C(9) - SIDEWALKS (DEFERRAL)
   ACTION DATE:
   CONDITIONS:

LIBERTY FORGE DEVELOPMENT:
4. SECTION 192-57.C(9) - SIDEWALKS
   ACTION: DATE:
   CONDITIONS:
5. SECTION 192-57.C(8) - CURBS (SLANT)
   ACTION: DATE:
   CONDITIONS:
6. SECTION 192-63.A(2)(A)[1], 184-19.G.(16) & 184-19.H.(7) - INLET HOOD TYPE
   ACTION: DATE:
   CONDITIONS:
7. SECTION 192.57.C(9)(C) - SIDEWALK LEVEL AREAS
   ACTION: DATE:
   CONDITIONS:
8. SECTION 192-63.C(1)(A) - SIDEWALK SEPARATION
   ACTION: DATE:
   CONDITIONS:
9. SECTION 192-57.C(12)(b) & 184-19.G.(21) - PAVEMENT BASE DRAINS
   ACTION: DATE:
   CONDITIONS:
10. SECTION 184-14 - VOLUME CONTROLS
    ACTIONS: DATE:
    CONDITIONS:

DRAWING INDEX

LAND DEVELOPMENT PLAN
LD-1 COVER SHEET
LD-2 GENERAL NOTES
LD-3 OVERALL EXISTING CONDITIONS PLAN
LD-4 ENVIRONMENTALLY SENSITIVE AREA PLAN
LD-5 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-6 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-7 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-8 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-9 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-10 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-11 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-12 EXISTING CONDITIONS AND DEMOLITION PLAN
LD-13 SUBDIVISION PLAN
LD-14 OVERALL SITE AND PHASING PLAN
LD-15 OPEN SPACE PLAN
LD-16 ON-STREET PARKING & FIRE TRUCK TURNING PLAN
LD-17 LAYOUT PLAN
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LD-55 SCM 009, 010 & 011 FACILITY PLAN
LD-56 OPERATION & MAINTENANCE NOTES
LD-57 MATERIAL SPECIFICATIONS

LIBERTY FORGE ASSOCIATED PLANS

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN TOWNSHIP SLD# 2025-04	SHEETS LD-1 TO LD-65	DATED: LAST REVISED: APPROVAL:	04/21/2025 03/23/2026 01/26/2026
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN NPDES PERMIT# PAD210143	SHEETS SW-66 TO SW-116	DATED: LAST REVISED: APPROVAL:	04/21/2025 06/09/2026
EROSION AND SEDIMENT CONTROL PLAN NPDES PERMIT# PAD210143	SHEETS ES-1 OF ES-47	DATED: LAST REVISED: APPROVAL:	04/21/2025 06/09/2026
JOINT PERMIT PLAN APPLICATION# 2103226-002	SHEETS JP-1 OF JP-16	DATED: LAST REVISED: APPROVAL:	02/20/2026 06/12/2026
LISBURN ROAD WATER EXTENSION PHASE 1 PLAN	SHEETS 1 OF 11	DATED: LAST REVISED: APPROVAL:	06/22/2026
LIBERTY FORGE RESIDENTIAL REDEVELOPMENT HOP	SHEETS 1 OF 21	DATED:	03/24/2026
LISBURN ROAD WATERLINE HOP	SHEETS 1 OF 15	DATED:	03/26/2026

EXISTING NON-CONFORMITIES

1. SECTION 220-24(B)(1) MINIMUM FRONT YARD DEPTH OF 40 FEET. EXISTING NON-CONFORMITY OF 4' FOR LOT 1 STRUCTURE.
2. SECTION 220-164.C - DRIVING RANGES TO HAVE A MINIMUM SETBACK OF 100 FEET FROM THE FIELD OF PLAY TO ANY ADJACENT RESIDENTIALLY ZONED PROPERTY. EXISTING NON-CONFORMITY OF 30' IS PROVIDED TO THE ADJACENT RESIDENTIALLY ZONED PROPERTY.
3. 220-242.L(1)(A) MINIMUM DIMENSIONS OF PARKING FACILITIES - EXISTING NON-CONFORMITY OF 20', FOR THE DRIVE ENTRANCE OF LOT 1 ONTO LISBURN ROAD.

APPROVED VARIANCES

LOT 1 HAS AN APPROVED VARIANCE GRANTED ON MAY 15, 2025 TO MAINTAIN THE GOLF DRIVING RANGE AND MINIATURE GOLF COURSE ON THE PROPERTY AND IS AUTHORIZED TO HAVE THE RESTAURANT ON-SITE AS AN ACCESSORY USE TO THE GOLF DRIVING RANGE AND MINIATURE GOLF COURSE.

UPPER ALLEN TOWNSHIP WAIVER

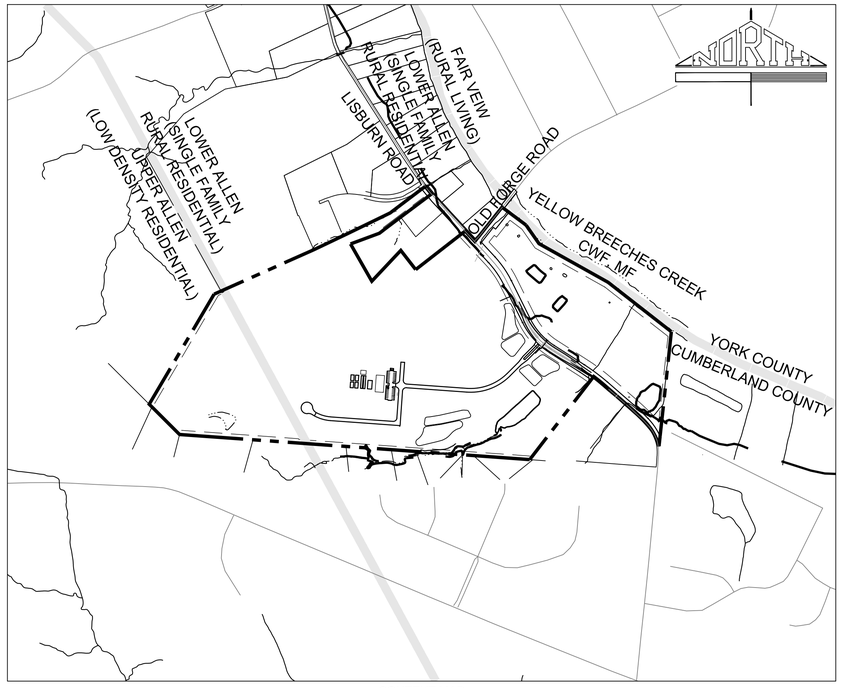
ON JUNE 04, 2025 UPPER ALLEN TOWNSHIP APPROVED A WAIVER TO DEFER THE REQUIRED APPROVALS AND SIGNATURES ON THE SUBDIVISION/LAND DEVELOPMENT PLANS AND STORMWATER MANAGEMENT PLANS TO LOWER ALLEN TOWNSHIP. UPPER ALLEN ALSO WAIVES THE REQUIREMENT FOR STORMWATER INSPECTIONS FOR THE FACILITIES WHICH WILL BE LOCATED WITHIN THE TOWNSHIP.
CONDITIONS:
1. LOWER ALLEN TOWNSHIP WILL BE RESPONSIBLE FOR CONDUCTING ALL REQUIRED INSPECTIONS AND FOR FUTURE ENFORCEMENT OF THESE FACILITIES.
2. ALL FINANCIAL SECURITIES SHALL BE SUBMITTED TO LOWER ALLEN TOWNSHIP IN ACCORDANCE WITH THEIR ORDINANCES.
3. THE STORMWATER OPERATION AND MAINTENANCE (O&M) AGREEMENT MUST SPECIFY THAT THE STORMWATER SCM FACILITIES ARE PART OF THE LOWER ALLEN TOWNSHIP MS4 SYSTEM, AND NOT THAT OF UPPER ALLEN TOWNSHIP.

OVERALL SITE / ZONING DATA

EXISTING PARCEL ACREAGE	96.29 AC. (4,194,401 S.F.) INCLUDING PUBLIC STREET R.O.W			
LOT 1	17.74 AC. (772,665 S.F.)			
LOT 2	75.89 AC. (3,305,716 S.F.)*			
ZONING:	LOWER ALLEN: (R2) SINGLE-FAMILY RURAL RESIDENTIAL DISTRICT (OSD) OPEN SPACE DEVELOPMENT OVERLAY DISTRICT* (LOT 2 ONLY) UPPER ALLEN TOWNSHIP: (R-1) LOW DENSITY RESIDENTIAL (CSO) CONSERVATION DESIGN OVERLAY DISTRICT			
EXISTING LAND USE:	GOLF COURSE (ACCESSORY USES: GOLF DRIVING RANGE, GOLF COURSE (MINIATURE), EATING ESTABLISHMENT			
PROPOSED LAND USE:	LOT 1 GOLF DRIVING RANGE, GOLF COURSE (MINIATURE) & EATING ESTABLISHMENT (SEE APPROVED VARIANCE)		LOT 2 SINGLE-FAMILY, DETACHED, & TWIN SIDE BY SIDE RESIDENTIAL (DEED RESTRICTED ACTIVE -ADULT RESIDENTIAL COMMUNITY)	
SEWER:	PUBLIC			
WATER:	PUBLIC			
	PHASE 1			
PROPOSED SINGLE-FAMILY DETACHED UNITS:	45			
PROPOSED SIDE BY SIDE TWIN UNITS:	8			
PROPOSED TOTAL NUMBER OF UNITS:	53			
DEVELOPABLE LAND CALCULATION:				
TOTAL ACRES:	75.89 ACRES			
EXISTING R.O.W., STREETS, AND WATER:****	03.27 ACRES			
LAND AVAILABLE FOR DEVELOPMENT:	72.62 ACRES			
DENSITY:	PERMITTED 3 DU/AC.**			LOT 2 0.73 DU/AC.
	LOWER ALLEN	UPPER ALLEN	LOT 1	LOT 2
LOT WIDTH:	40 FT. MIN. (SINGLE-FAMILY) 30 FT. MIN. (SIDE BY SIDE)	125 FT.	1971 FT.	1392 FT.***
LOT AREA:	6,000 S.F. MIN. (SINGLE-FAMILY) 5,000 S.F. MIN. (SIDE BY SIDE)	NO MINIMUM	LOT 1 17.74 AC. (772,665 S.F.)	LOT 2 75.89 AC. (3,305,716 S.F.)***
FRONT YARD:	5 FT. MIN. 25 FT. MAX.	50 FT.	40 FT.	25 FT.***
REAR YARD:	25 FT. MIN.	30 FT.	40 FT.	25 FT.***
SIDE YARD:	(SINGLE-FAMILY DETACHED) TOTAL: 15 FT. MIN. ONE SIDE: 5 FT. MIN. (SIDE BY SIDE DWELLING) TOTAL 10 FT. MIN	30 FT.	20 FT.	15 FT.***
BUILDING HEIGHT:	35 FT. MAX. (PRINCIPLE BUILDING) 25 FT. MAX. (ACCESSORY BUILDING)			35 FT. MAX.
IMPERVIOUS COVERAGE:		UPPER ALLEN	LOT 1	LOT 2
PERMITTED:		30% MAX. (R-1) 60% MAX. (CSO)	30% MAX.	30% MAX.
EXISTING:		8.06%	12.68%	11.00%
PROPOSED:		3.94%	13.33%	22.26%*****
	PERMITTED	EXISTING	PROPOSED	
BUILDING COVERAGE (UPPER ALLEN):	50% MAX. (CSO)	0.96%	0%	
OPEN SPACE:	25% MIN. - BASE REQUIREMENT			18.97 AC.
(LOT 2 ONLY)	ADDITIONAL OPEN SPACE - 125% OF BASE AREA			23.72 AC.
	TOTAL AREA REQUIRED			23.72 AC.
	TOTAL AREA PROVIDED			40.37 AC.*****

	REQUIRED	PROVIDED
PARKING (LOT 1):		
GOLF (MINIATURE):	2.5 PER HOLE PLUS 1 PER EMPLOYEE (18 X 2.5 + 3 X 1 = 48)	
GOLF DRIVING RANGE:	1.5 PER TEE PLUS 1 PER EMPLOYEE (32 X 1.5 + 3 X 1 = 51)	
EATING ESTABLISHMENTS:	1 PER 2 SEATS (80 SEATS / 2 = 40)	
TOTAL:	139 SPACES	207 SPACES
PARKING (LOT 2):		
SINGLE FAMILY RESIDENTIAL:	2 PER DWELLING UNIT	2 CAR GARAGES PER UNIT

* A MINIMUM TRACT SIZE OF FIVE ACRES IS REQUIRED FOR AN OSD DEVELOPMENT
** THE UNDERLYING ZONING DISTRICT R-2 PERMITS TWO DU PER ACRE. ONE BONUS DU PER ACRE ARE PERMITTED IF THE DEVELOPER PROVIDES AT LEAST 125% OF THE REQUIRED OPEN SPACE.
*** THIS PROJECT IS PROPOSED AS A PLANNED COMMUNITY. NO INDIVIDUAL LOTS OR PUBLIC STREETS ARE PROPOSED. 15 FEET IS PROVIDED BETWEEN BUILDINGS.
**** PONDS WHICH ARE TO BE REMOVED ARE NOT INCLUDED IN THIS AREA AS IT WILL BE AVAILABLE FOR DEVELOPMENT.
***** IMPERVIOUS COVERAGE AND OPEN SPACE AREAS PROVIDED ARE FOR THE ENTIRE DEVELOPMENT PER THE PRELIMINARY PLAN, PHASE 1 COVERAGES AND AREAS MEET THE PRELIMINARY PLAN AREAS WITH THE EXCEPTION OF TEMPORARY ACCESS IMPROVEMENTS.



CONTEXT MAP
SCALE: 1" = 500'

LOTS

LOT NUMBER	ADDRESS	PARCEL NUMBER
1	3921 LISBURN RD, MECHANICSBURG, PA 17055	
2	3804 LISBURN RD, MECHANICSBURG, PA 17055	13-11-0270-042 & 42-11-0272-132

EQUITABLE OWNER

EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545

OWNER OF RECORD

LUCKY BEAR LLC
ONE CENTER SQUARE
ABBOTTSTOWN, PA 17301

SOURCE OF TITLE

3804 LISBURN ROAD
MECHANICSBURG, PA 17055
CUMBERLAND COUNTY, PA
TAX MAP NO.: 13-11-0270-042 & 42-11-0272-132
DEED REF: 201903872
LOTS 1 THRU 4 PB 85 PG 138

SURVEY INFORMATION

BOUNDARY AND TOPOGRAPHY PROVIDED BY:

JAMES HOCKENBERRY
533 BUCKS VALLEY RD
NEWPORT, PA 17074
(717)-567-6770
DATE: 01-06-2025

TRAFFIC INFORMATION

TRAFFIC STUDY PROVIDED BY:

TRAFFIC PLANNING AND DESIGN
4000 CRUMS MILL ROAD #102
HARRISBURG, PA 17112
(717)-234-1430
JOB NO.: RGS.00279

WETLANDS INFORMATION

WETLANDS DELINEATION PROVIDED BY:

VORTEX ENVIRONMENTAL
2819-I WILLOW STREET PIKE NORTH
WILLOW STREET, PA 17584
(717)-509-3934
DATE: 12-04-2024
JOB NAME: LIBERTY FORGE

GEOLOGIC INFORMATION

GEOLOGY STUDY PROVIDED BY:

ECS MID-ATLANTIC LLC
52-6 GRUMBACHER ROAD
YORK, PA 17408
(717)-767-4788
DATE: 02-14-2025
JOB NO. 18: 6304

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE
FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN
LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA
COVER SHEET

Land Planning
Landscape Architecture
Civil Engineering
Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com
Regional Offices:
York, Harrisburg, and Paoli
RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.:
LD-1 OF 57

XREFS: Cover,Demolition,Existing1,Layout,EXISTING-GIS,Layout-HOP
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Cover.dwg
SCRIPT:

GENERAL PLAN NOTES

1. THE PURPOSE OF THIS PLAN IS FOR THE SUBDIVISION OF THE TWO LOTS EAST AND WEST OF LISBURN ROAD. PROPOSED LOT 1 WILL MAINTAIN ALL THE EXISTING USES AND FEATURES. PROPOSED LOT 2 PHASE 1 IS FOR THE DEVELOPMENT OF 45 SINGLE-FAMILY DETACHED AND 8 SIDE BY SIDE TWIN DWELLING UNITS ALONG WITH THE ASSOCIATED STORMWATER MANAGEMENT, ROADWAY AND UTILITY INFRASTRUCTURE AND OPEN SPACE.
2. BENCHMARK IS LOCATED: SANITARY SEWER MANHOLE IN NORTHEAST PARCEL ON LISBURN ROAD ELEV. 355.59' (SEE SHEET LD-10 FOR LOCATION). DATUM IS NAVD88
3. BOUNDARY AND TOPOGRAPHICAL INFORMATION PROVIDED BY JAMES HOCKENBERRY, PLS PROJECT NAME: LIBERTY FORGE, DATED: 01/06/25.
4. THIS PROPERTY WAS SURVEYED USING THE CURRENT DEED OR DEEDS OF RECORDS AND WITHOUT THE BENEFIT OF A "TITLE SEARCH."
5. BASIS OF BEARINGS IS PA STATE PLANE COORDINATES SOUTH ZONE NAD 83
6. PERMANENT MONUMENTS ⬢ AND LOT MARKERS ○ SHALL BE SET UPON COMPLETION OF FINAL GRADING AT THE LOCATIONS TO BE SHOWN ON THE FINAL PLAN.
7. ANY ALTERATIONS TO THIS PLAN AFTER THE DATE OF PLAN PREPARATION OR LATEST REVISION SHALL NOT BE THE RESPONSIBILITY OF RGS ASSOCIATES, INC.
8. ALL PROPOSED STREETS ARE INTENDED TO REMAIN PRIVATE.
9. ALL IRRIGATION LINES TO BE REMOVED AS ENCOUNTERED DURING CONSTRUCTION. ALL OTHER IRRIGATION LINES IN UNDISTURBED AREAS TO BE ABANDONED IN PLACE
10. FOR LOT 2 ALL AREAS LOCATED OUTSIDE OF THE BUILDING FOOTPRINTS SHOWN ON THE PLANS ARE TO BE COMMON OPEN SPACE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
11. THE PROPOSED EMERGENCY ACCESS DRIVE IS TO BE SECURED FOR EMERGENCY ACCESS USE ONLY, SEE PLANS FOR LOCATIONS. IT IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION AND IS TO BE KEPT FREE AND CLEAR AT ALL TIMES INCLUDING SNOW REMOVAL.
    - 11.1. ACCESS TO SECURED REMOVABLE BOLLARDS TO BE COORDINATED WITH THE TOWNSHIP AT THE TIME OF INSTALLATION FOR ACCESS.
12. ALL AREAS LOCATED OUTSIDE OF THE BUILDING FOOTPRINTS IS DESIGNATED AS COMMON OPEN SPACE AND IS AVAILABLE SPACE TO BE UTILIZED FOR SNOW REMOVAL STORAGE.
13. ALL WALL DESIGN CALCULATIONS AND ENGINEER CERTIFICATIONS FOR SITE RETAINING WALLS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A BUILDING PERMIT.
14. THE ABANDONMENT AND/OR REMOVAL OF ALL ON LOT WELLS, SEPTIC, FUEL TANKS AND UNDERGROUND STORAGE TANKS SHALL BE IN ACCORDANCE WILL ALL GOVERNING FEDERAL, STATE AND LOCAL REGULATIONS. ALL APPLICABLE PERMITS SHALL BE PROVIDED TO THE TOWNSHIP PRIOR TO ANY WORK RELATED TO THESE SYSTEMS.
15. A FEE IN LIEU OF RECREATION IS PROPOSED FOR THIS PROJECT. 125% OF THE RECREATION FEE IN LIEU OF AMOUNT IS REQUIRED DUE TO THE PROPOSED DENSITY OF THE PROJECT PER THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE SECTION 20-111.B(1).
16. SPLASH BLOCKS ARE PROPOSED AT ALL ROOF LEADER CONNECTIONS. A DRAINAGE AREAS SHALL BE MAINTAINED PER THE APPROVED STORM WATER MANAGEMENT PLANS.

UTILITY NOTES

A. GENERAL NOTES - SANITARY SEWER
1. MINIMUM OF 5' OF COVER IS REQUIRED OVER ALL SEWER LINES. THE SEWER MAIN SHALL BE CONSTRUCTED TO THE LINE AND GRADE SHOWN ON THE PLANS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL FIELD TESTING AND "RECORD DRAWINGS" PER THE AUTHORITY REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN FIELD RECORDS OF THE LOCATION AND DEPTH OF ALL SANITARY SEWER LATERAL LOCATIONS, AND SHALL PROVIDE THIS INFORMATION TO THE DESIGN ENGINEER FOR PREPARATION OF AS-BUILT DRAWINGS.
3. A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN ALL WATER AND SEWER CROSSINGS. IF THIS CLEARANCE CANNOT BE MAINTAINED, A CONCRETE ENCASEMENT SHALL BE PROVIDED.
4. ALL SANITARY SEWER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUNICIPAL SEWER AUTHORITY CONSTRUCTION SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF APPLICABLE STANDARDS AND SPECIFICATIONS AS WELL AS THE REQUIRED METHODS OF CONSTRUCTION. ALL DEVIATIONS FROM THE PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION.
5. 95% STANDARD PROCTOR FILL COMPACTION IS REQUIRED FOR ALL SANITARY SEWER FACILITIES LOCATED IN FILL MATERIAL. TESTING MUST BE IN ACCORDANCE WITH THE APPROPRIATE AASHTO AND ASTM STANDARDS.
6. ALL SANITARY SEWER MANHOLES WITHIN THE PUBLIC RIGHT-OF-WAY AND STREET CARTWAYS SHALL HAVE THE MANHOLE CONE SECTION ROTATED TO MINIMIZE IMPACTS WITHIN THE VEHICLE WHEEL PATHS.
7. ALL CLEANOUTS & SANITARY MANHOLES LOCATED WITHIN PAVED AREAS SHALL BE INSTALLED WITH TRAFFIC BEARING TOPS.
8. ALL PROPOSED SANITARY SEWERS WILL BE OFFERED FOR DEDICATION TO THE LOWER ALLEN TOWNSHIP AUTHORITY.
9. A MINIMUM OF 0.1 FEET OF FALL SHALL BE PROVIDED THROUGH ALL SANITARY SEWER MANHOLES.
10. ALL SANITARY SEWERS SHALL BE CONSTRUCTED FROM SDR-35 PVC UNLESS OTHERWISE NOTED ON THE PLANS. IN AREAS WHERE COVER EXCEEDS 15 FEET, SDR-26 PVC SHALL BE USED FOR BOTH MAINS AND LATERALS.

B. GENERAL NOTES - WATER SERVICE
1. CONTRACTOR SHALL INSTALL A COMPLETE WATER SYSTEM TO INCLUDE THE EXTENSION OF A 12-INCH WATER MAIN AND INDIVIDUAL SERVICE LATERALS/CURB STOPS ALONG LISBURN ROAD AND THE EXTENSION OF AN 8-INCH WATER MAIN AND INDIVIDUAL SERVICE LATERALS IN CONFORMANCE WITH THE SPECIFICATIONS AND DETAILS OF THE WATER COMPANY.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AND "RECORD DRAWINGS" PER THE WATER COMPANY REQUIREMENTS.
3. ALL WATER MAINS SHALL COMPLY WITH THE PENNSYLVANIA AMERICAN WATER SPECIFICATIONS UNLESS SPECIFIC WAIVERS HAVE BEEN GRANTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF APPLICABLE STANDARDS AND SPECIFICATIONS AS WELL AS THE REQUIRED METHODS OF CONSTRUCTION. ALL DEVIATIONS FROM THE PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION.
4. 95% FILL COMPACTION IS REQUIRED FOR ALL WATER DISTRIBUTION FACILITIES LOCATED IN FILL MATERIAL.
5. THE CONSTRUCTION OF WATER AND SANITARY SEWER LINES SHALL BE IN ACCORDANCE WITH PA DEP REGULATIONS RELATED TO HORIZONTAL AND VERTICAL SEPARATION.
6. ALL WATER APPURTENANCES SHALL BE SET TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

C. GENERAL NOTES - STORM DRAINAGE
1. THE PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES TO ENSURE THEY ARE KEPT IN DESIGN CONDITION.
2. THE STORMWATER COLLECTION AND CONVEYANCE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH DESIGN STANDARDS AND SPECIFICATIONS IN PLACE AT THE TIME OF PLAN APPROVALS. RGS ASSUMES NO RESPONSIBILITY FOR CHANGES IN SPECIFICATIONS THAT MAY OCCUR AFTER PLAN APPROVAL THAT WOULD REQUIRE ALTERNATE MATERIALS OR INSTALLATION REQUIREMENTS. THE CONTRACTOR SHALL VERIFY ALL CURRENT STANDARDS AND NOTIFY THE OWNER/DEVELOPER AND RGS ASSOCIATES OF ANY DISCREPANCIES THAT MAY EXIST PRIOR TO THE START OF CONSTRUCTION.
3. CONSTRUCTION OF STORMWATER MANAGEMENT AND EROSION CONTROL FACILITIES SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY AND COUNTY CONSERVATION DISTRICT STANDARDS AND SPECIFICATIONS.
4. ALL STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MATERIAL SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. A BLANKET STORMWATER EASEMENT IS PROVIDED FOR THE ENTIRE PARCEL. THE MUNICIPALITY WILL HAVE THE RIGHT TO ACCESS FOR THE PURPOSE OF INSPECTION. NOTHING SHALL BE PLACED, PLANTED, SET, OR PUT WITHIN THE AREA OF ANY STORMWATER FACILITY OR STRUCTURE THAT WOULD ADVERSELY AFFECT THE FUNCTION OF IT. NO PERSON SHALL PLACE ANY STRUCTURE, FILL, OR VEGETATION INTO A STORM WATER MANAGEMENT FACILITY WHICH WILL LIMIT OR ALTER THE FUNCTIONS OF THE FACILITY OR STRUCTURE IN ANY WAY.
6. WHERE ANY PART OF THE PROPOSED STORM DRAIN SYSTEM IS TO BE CONSTRUCTED WITHIN A FILL SECTION, THE CONTRACTOR SHALL COMPACT ALL SELECT FILL MATERIAL TO 95% OF ASTM D-698 (AASHTO T-99) WITH A MOISTURE CONTENT ± 3% OF OPTIMUM UP TO THE PIPE BEDDING. REFER TO THE "STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS" FOR A DESCRIPTION OF SELECT FILL MATERIAL.

D. ADS PIPE INSTALLATION NOTES
1. STORMDRAIN PIPES SHALL BE ADS (N-12) HDPE PIPE WITH ADS PRO-LINK ULTRA (IN-LINE BELL) PIPE JOINTS (FOR SOIL TIGHT CONNECTIONS) AND/OR ADS PRO-LINK WT (FOR WATER TIGHT CONNECTIONS). REFER TO PLAN AND PROFILES FOR MATERIALS USED.
2. ALL EMBEDMENT MATERIALS USED FOR BEDDING, HAUNCHING AND INITIAL BACKFILL FOR SLCPP/HDPE PIPE SHALL CONFORM TO AASHTO SECTION 30 AND ASTM D-2321 AS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

E. GENERAL NOTES - OTHER
1. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL COORDINATE UNDERGROUND ELECTRICAL SERVICE.
3. THE EXISTING UTILITIES SHOWN HAVE BEEN DETERMINED AND REFERENCED BASED UPON INFORMATION RECEIVED FROM THE UTILITY COMPANIES, SURVEYORS, VISITS TO THE SITE AND GENERAL BEST INFORMATION, TO THE BEST OF RGS ASSOCIATES' KNOWLEDGE, AT THE TIME OF DESIGN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 A MINIMUM OF 3 DAYS PRIOR TO EXCAVATING OR WITH CAREFUL EXPLORATORY WORK, AT THE CONTRACTOR'S RISK, PRIOR TO CONSTRUCTION FOR THOSE PRIVATE LINES WHICH ARE NOT ABLE TO BE LOCATED THROUGH THE ONE CALL PROCESS. IT MAY BECOME NECESSARY TO ADJUST THE PROPOSED UTILITY LOCATION IN THE FIELD TO RESOLVE ANY UTILITY CROSSING CONFLICTS WHICH MAY OCCUR. RGS ASSOCIATES SHALL BE NOTIFIED IMMEDIATELY IF ANY SUCH CONFLICTS ARE ENCOUNTERED.
4. ALL UTILITY ELEVATIONS ARE AT THE INVERT UNLESS OTHERWISE NOTED.

STORMWATER MANAGEMENT - IMPERVIOUS COVER

1. THE PROJECT'S STORMWATER MANAGEMENT DESIGN ACCOUNTED FOR A TOTAL IMPERVIOUS COVERAGE OF 21.56 ACRES.
2. THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED FOR THE ADDITIONAL IMPERVIOUS COVER NOTED BELOW, BEYOND WHAT IS SHOWN ON THE PLAN:

FUTURE IMPERVIOUS ASSUMPTIONS		
DRAINAGE AREA	IMPERVIOUS COVER	SCM ID
POST-003.003	3,450 S.F.	SCM-003
POST-005.004	3,450 S.F.	SCM-004
POST-006.005	10,000 S.F.	SCM-005

MUNICIPAL SPECIFIC NOTES

1. LIGHTING SHALL BE PROVIDED IN CONFORMANCE WITH SECTION 220-193 , OF THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE.
2. THE MUNICIPALITY IS NOT RESPONSIBLE FOR MAINTENANCE OF ANY AREA NOT DEDICATED TO AND ACCEPTED FOR PUBLIC USE, AND NO ALTERATION TO SWALES OR BASINS SHALL BE PERMITTED.
3. THE TYPICAL STREET CROSS-SECTION IS IN ACCORDANCE WITH THE MUNICIPAL ORDINANCE WITH EXCEPTION OF THE RELIEF PROVIDED FOR PAVEMENT BASE DRAIN WAIVER (SEE PLANS FOR LOCATIONS).
4. ALL WORK SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SPECIFICATIONS AND PUBLICATION 72, ROADWAY CONSTRUCTION STANDARDS, UNLESS OTHERWISE NOTED.
5. WORK ZONE TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 213.
6. A RIGHT-OF-WAY PERMIT IS REQUIRED BEFORE STARTING ANY WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY.
7. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS. ALL PAVEMENT MARKINGS SHALL BE HOT THERMOPLASTIC.
8. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH ALL PENNDOT STANDARDS AND REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
9. ALL STORM DRAINAGE PIPE SHALL BE SMOOTH INTERIOR UNLESS OTHERWISE NOTED.
10. INDIVIDUAL LOT GRADING PLANS SHALL BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE RESPECTIVE BUILDING AREA.
11. THE PROPERTY OWNER IS REQUIRED TO MAINTAIN LOT GRADING AND SURFACE DRAINAGE PATTERNS AND CHARACTERISTICS IN ACCORDANCE WITH THE APPROVED PLAN.
12. MANHOLE COVERS FOR STORM MANHOLES SHALL BE CAST WITH THE WORD “STORM” FOR IDENTIFICATION PURPOSES.
13. CONSTRUCTION OF ALL WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY AND WORK RELATED TO STORM DRAINAGE FACILITIES REQUIRES INSPECTION BY THE TOWNSHIP. PROVIDE A MINIMUM 48 HOURS NOTICE TO THE TOWNSHIP BEFORE STARTING WORK.
14. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION SITE MEETING WITH THE TOWNSHIP ENGINEER AND CUMBERLAND COUNTY CONSERVATION DISTRICT AT LEAST 48 HOURS PRIOR TO STARTING SITE CONSTRUCTION ACTIVITIES.
15. SITE DISTURBANCE IS PERMITTED TO START ONLY IF AND WHEN SUFFICIENT TIME IS AVAILABLE TO STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PADEP REQUIREMENTS AND WITH THE APPROVED PLAN.
16. APPLICANT AND OWNER ACKNOWLEDGE THAT CERTAIN SITE IMPROVEMENTS DEPICTED ON THIS PLAN, INCLUDING BUT NOT LIMITED TO ACCESSIBLE PARKING SPACES, ACCESSIBLE ROUTE TO THE BUILDING AND FREESTANDING SIGNS, THAT REQUIRE APPROVAL UNDER REGULATIONS CONTAINED IN THE PA UNIFORM CONSTRUCTION CODE AND/OR LOWER ALLEN TOWNSHIP ZONING CODE MUST BE INSTALLED IN ACCORDANCE WITH SEPARATE PERMIT APPROVALS GRANTED UNDER THOSE REGULATIONS.”
17. LOT 1 COMPLIES WITH THE SCENIC RIVER CORRIDOR STANDARDS PER THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE SECTION 220-205.
18. THE PLAN COMPLIES WITH THE AIRPORT HAZARD ZONE REQUIREMENTS PER THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE ARTICLE XXII.
19. ALL SIGNAGE IS TO MEET THE REQUIREMENTS OF THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE, ARTICLE XXV.
20. LOT 1 COMPLIES WITH ALL REQUIREMENTS OF THE LOWER ALLEN TOWNSHIP ZONING SECTION 220-164, WITH THE EXCEPTION OF 220-164.C WHICH IS AN EXISTING NON-CONFORMITY.
21. SWM SITE PLANS APPROVED BY THE MUNICIPALITY SHALL BE ONSITE THROUGHOUT THE DURATION OF THE REGULATED ACTIVITY
22. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY SWM BMPS, FACILITIES, AREAS, STRUCTURES, OR EASEMENTS THAT WERE INSTALLED/APPROVED AS A REQUIREMENT OF THE STORMWATER MANAGEMENT ORDINANCE WITHOUT THE WRITTEN APPROVAL OF THE MUNICIPALITY.
23. THE CONSTRUCTION OF PEDESTRIAN PATHS, STRUCTURES, ETC. WITHIN UPPER ALLEN TOWNSHIP WILL REQUIRE THE APPROPRIATE ZONING, BUILDING, AND/OR STORMWATER PERMITS. ALL NECESSARY PERMITS MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION OF ANY IMPERVIOUS SURFACE, STRUCTURE, STORMWATER BMP, ETC.
24. IN ACCORDANCE WITH THE LOWER ALLEN TOWNSHIP STORMWATER ORDINANCE SECTION 184-34 THE PROPERTY OWNER WILL BE EMPLOYING A QUALIFIED REGISTERED PROFESSIONAL TO CONDUCT THE INSPECTIONS AND PREPARE REPORTS AS REQUIRED BY THE ORDINANCE.
25. UNSAFE TREES ALONG LISBURN ROAD ARE TO BE REMOVED DURING CONSTRUCTION OF PHASE 1 AND CONTINUAL MAINTENANCE IS TO BE PROVIDED TO ENSURE PEDESTRIAN AND MOTORIST SAFETY.
26. FINAL WEARING COURSE PAVING FOR EACH PHASE OF THE PROPOSED DEVELOPMENT IS TO BE INSTALLED WITHIN 12 MONTHS OF THE FINAL CERTIFICATE OF OCCUPANCY BEING ISSUED.
27. ALL PARKING IS RESTRICTED WITHIN 40' OF ALL FIRE HYDRANTS IN ACCORDANCE WITH THE LOWER ALLEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 192-57.C.1F TO MAINTAIN A MINIMUM PAVEMENT WIDTH OF 26 FEET.
28. A PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT PERMIT AND U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT IS REQUIRED PRIOR TO START OF CONSTRUCTION.

SCHEDULE OF INSPECTIONS

1. THE MUNICIPAL ENGINEER OR HIS/HER DESIGNEE SHALL BE PERMITTED TO INSPECT ALL PHASES OF THE INSTALLATION OF THE PERMANENT STORMWATER MANAGEMENT FACILITIES AND BMPS.
2. THE MUNICIPAL ENGINEER OR HIS/HER DESIGNEE SHALL BE PERMITTED TO INSPECT ALL PHASES OF THE SITE DEVELOPMENT WORK IN PROGRESS, TO ENSURE COMPLIANCE WITH EROSION AND SEDIMENT CONTROL REQUIREMENTS. INSPECTION FUNCTIONS MAY BE DELEGATED BY THE MUNICIPALITY TO ANOTHER ENTITY IF SUCH AGREEMENT IS ENTERED INTO BY THE MUNICIPALITY.
3. DURING ANY STATE OF THE WORK, IF THE MUNICIPAL ENGINEER DETERMINES THAT THE PERMANENT STORMWATER MANAGEMENT FACILITIES OR BMPS ARE NOT BEING INSTALLED IN ACCORDANCE WITH THE APPROVED SWM SITE PLAN, THE MUNICIPALITY SHALL REVOKE ANY EXISTING MUNICIPAL PERMITS AND/OR ISSUE A STOP-WORK ORDER UNTIL A REVISED SWM SITE PLAN IS SUBMITTED AND APPROVED.
4. UPON PRESENTATION OF PROPER CREDENTIALS, DULY AUTHORIZED REPRESENTATIVES OF THE MUNICIPALITY MAY ENTER AT REASONABLE TIMES UPON THE PROPERTY TO INSPECT THE IMPLEMENTATION, CONDITION, OR OPERATION OF THE STORMWATER BMPS.
5. BMP OWNERS AND OPERATORS SHALL ALLOW PERSONS WORKING ON BEHALF OF THE MUNICIPALITY READY ACCESS TO ALL PARTS OF THE PREMISES FOR THE PURPOSES OF DETERMINING COMPLIANCE OF THE STORMWATER ORDINANCE.
6. PERSONS WORKING ON BEHALF OF THE MUNICIPALITY SHALL HAVE THE RIGHT TO TEMPORARILY LOCATE ON ANY BMP SUCH DEVICES AS ARE NECESSARY TO CONDUCT MONITORING AND/OR SAMPLING OF THE DISCHARGES FROM SUCH BMP.
7. UNREASONABLE DELAYS IN ALLOWING THE MUNICIPALITY ACCESS TO A BMP IS A VIOLATION OF THE SWM ORDINANCE.

AS BUILT PLAN REQUIREMENTS

1. AS-BUILT PLANS OF ALL SWM BMPS INCLUDED IN THE APPROVED SWM SITE PLAN AND AN EXPLANATION OF ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS SHALL BE SUBMITTED TO THE MUNICIPALITY AFTER PROJECT COMPLETION. THE AS-BUILT SUBMISSION SHALL INCLUDE A CERTIFICATION OF COMPLETION SIGNED BY A QUALIFIED PROFESSIONAL VERIFYING THAT ALL PERMANENT SWM BMPS HAVE BEEN CONSTRUCTED ACCORDING TO THE APPROVED PLANS AND SPECIFICATIONS. THE LATITUDE AND LONGITUDE COORDINATES FOR ALL PERMANENT SWM BMPS MUST ALSO BE SUBMITTED, AT THE CENTRAL LOCATION OF THE BMPS.

FLOODPLAIN NOTES

1. AREAS IDENTIFIED AS FLOODPLAINS WERE DELINEATED USING FEMA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 42041C0291F LAST REVISED SEPTEMBER 07, 2023 AND ARE APPROXIMATE.
2. THE PLAN COMPLIES WITH THE THE FLOODPLAIN DISTRICT REQUIREMENTS PER THE LOWER ALLEN ZONING ORDINANCE ARTICLE XXVIII.
3. 3. ALL WORK WITHIN THE FLOODPLAIN SHALL BE SUBJECT TO THE TOWNSHIP’S FLOODPLAIN MANAGEMENT ORDINANCE.

WETLAND NOTES

1. WETLANDS DELINEATED ON THE PLANS SHALL BE KEPT FREE OF STRUCTURES, FILL AND OTHER ENCROACHMENTS. NO DISTURBANCE SHALL OCCUR WITHIN THE BOUNDARY OF THE WETLANDS UNLESS IDENTIFIED ON THE PLANS. WETLANDS NOTED TO BE REMOVED ARE REQUIRED TO BE PERMITTED PER PADEP REQUIREMENTS.
2. IN DECEMBER OF 2024 AND MARCH AND APRIL OF 2025 A PRELIMINARY WETLANDS INVESTIGATION TO DETERMINE THE EXTENT OF WETLANDS PRESENT ON THE SITE WAS CONDUCTED BY VORTEX ENVIRONMENTAL, INC. WETLANDS WERE REPORTED AS SHOWN ON PLANS.

EROSION AND SEDIMENT CONTROL NOTES

1. THE MEASURES REQUIRED IN THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN SHALL APPLY AS IF SHOWN ON THIS PLAN. THESE MEASURES SHALL BE COMPLETED AND IN SERVICE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR CONSTRUCTION, PER THE SEQUENCE OF CONSTRUCTION OUTLINED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLANS.
2. SOIL TYPES PRESENT ON THE SITE, PER THE SOIL SURVEY OF CUMBERLAND COUNTY, PENNSYLVANIA ARE AS FOLLOWS:

SYMBOL	NAME	SLOPE	HYDRO GROUP
AtB	ATHOL GRAVELLY LOAM	3-8%	B
AtC	ATHOL GRAVELLY LOAM	8-15%	B
AtD	ATHOL GRAVELLY LOAM	15-25%	B
BoA	BIRDSBORO SILT LOAM	0-5%	B
Ls	LINDSIDE SILT	0-3%	C
Me	MELVIN SILT	0-2%	D

PADOT/STREET NOTES

1. A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO. 428), KNOWN AS THE "STATE HIGHWAY LAW", BEFORE STREET OR DRIVEWAY ACCESS TO A STATE HIGHWAY IS PERMITTED. ACCESS TO THE STATE HIGHWAY SHALL ONLY BE AS AUTHORIZED BY A HIGHWAY OCCUPANCY PERMIT. NO BUILDING PERMITS, ZONING PERMITS OR CERTIFICATES OF OCCUPANCY SHALL BE ISSUED FOR SAID LOT UNTIL SUCH TIME AS A PENNDOT HIGHWAY OCCUPANCY PERMIT HAS BEEN SECURED AND FILED WITH THE TOWNSHIP. THE TOWNSHIP SHALL NOT BE HELD LIABLE FOR DAMAGES TO PERSONS OR PROPERTY ARISING OUT OF ISSUANCE OR DENIAL OF A HIGHWAY OCCUPANCY PERMIT BY THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PURSUANT TO SECTION 508 OF THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE.
2. ALL PROPOSED PRIVATE SPEED LIMITS SHALL BE POSTED AT 25 MILES PER HOUR.
3. CLEAR SIGHT TRIANGLES PER THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE ARE 25' IN ALL DIRECTIONS FROM INTERSECTIONS. FOR ALL EXISTING AND PROPOSED INTERSECTIONS THE CLEAR SIGHT TRIANGLE IS ENTIRELY WITHIN THE STREET AND DRIVE CARTWAYS AND MEET THE MINIMUM REQUIREMENTS OF ORDINANCE FOR CLEAR SIGHT TRIANGLES.

GRADING NOTES

1. THE FINISHED FLOOR ELEVATIONS (FFE) SHOWN ON THE PLAN REPRESENT THE ELEVATION OF THE FIRST FLOOR INSIDE THE BUILDING.
2. THE FINISHED GRADE ELEVATIONS (FG) SHOWN ON THE PLAN REPRESENTS THE GRADE IMMEDIATELY ADJACENT TO THE BUILDING FOUNDATION.
3. THE BASEMENT FLOOR ELEVATIONS (BFE) SHOWN ON THE PLAN REPRESENTS THE ELEVATION OF THE BASEMENT.
4. THE GARAGE FLOOR ELEVATIONS (GFE) SHOWN ON THE PLAN REPRESENT THE ELEVATION AT THE GARAGE DOOR OPENING.
5. THE CONTRACTOR AND/OR BUILDER SHALL CONFIRM ALL ELEVATION RELATIONSHIPS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE SUBMITTED TO RGS ASSOCIATES IMMEDIATELY.
6. THE LOT GRADING, FINISHED FLOOR ELEVATION (FFE), FINISHED GRADE ELEVATION (FG), BASEMENT FLOOR ELEVATION (BFE), AND GARAGE FLOOR ELEVATION (GFE) SHOWN FOR EACH RESIDENTIAL/COMMERCIAL BUILDING IS SHOWN FOR FEASIBILITY PURPOSES ONLY.
7. THE SINGLE FAMILY HOMES HAVE BEEN GRADED TO SHOW CONCEPTUAL PAD GRADING WITH APPROXIMATE FINISHED GRADE ELEVATIONS (FG'S). THE INDIVIDUAL LOT GRADING CAN BE REVISED FOR EACH HOME, ASSUMING THE CONTRACTOR AND HOME BUILDER ARE RESPONSIBLE FOR MAINTAINING THE OVERALL DRAINAGE PATTERNS SHOWN ON THESE PLANS. ANY REVISIONS SHALL BE REFLECTED IN THE BUILDING PERMIT APPLICATION.
8. THE CONTRACTOR AND HOME BUILDER ARE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
9. ALL FINISHED FLOOR ELEVATIONS MUST BE SET A MINIMUM OF TWO (2) FEET ABOVE THE 100 YEAR WATER SURFACE ELEVATION OF ANY ADJACENT STORMWATER FACILITY.
10. ALL FINISHED FLOOR ELEVATIONS MUST BE SET A MINIMUM OF TWO (2) FEET ABOVE THE 100 YEAR WATER SURFACE ELEVATION OF ANY ADJACENT 100-YEAR FLOODPLAIN.
11. THE PROPOSED SEWER MAIN HAS NOT BEEN DESIGNED TO ACCOMMODATE BASEMENT ELEVATIONS. THIS PLAN ASSUMES THAT GRAVITY SEWER LATERALS WILL ACCOMMODATE THE FIRST FLOOR OF THE BUILDINGS AND THAT BASEMENT SEWERS ARE NOT INTENDED.

CONTRACTOR NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS FROM THE MUNICIPALITY RELATIVE TO THE CONSTRUCTION PROPOSED ON THIS PLAN.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DESTROYED EXISTING VEGETATION AND/OR OTHER SITE FEATURES WHICH ARE TO REMAIN.
3. PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
4. PRIOR TO BUILDING STAKEOUT, CONTRACTOR SHALL VERIFY DIMENSIONS SET FORTH ON LATEST ARCHITECTURAL PLANS. THE CONTRACTOR SHALL REVIEW ALL DOOR LOCATIONS AND POINTS-OF-ACCESS TO BUILDINGS SHOWN ON THIS PLAN AND CONFIRM THAT THE DOOR LOCATIONS MATCH THE FINAL ARCHITECTURAL DRAWINGS PRIOR TO THE INSTALLATION OF CURB, SIDEWALK AND HANDICAP RAMPS. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN THE SITE PLAN AND ARCHITECTURAL DRAWINGS, RGS ASSOCIATES SHALL BE CONTACTED IMMEDIATELY.
5. ALL HANDICAP-ACCESSIBLE RAMPS, SIDEWALKS, AND PARKING SPACES MUST MEET ALL APPLICABLE ADA REQUIREMENTS. THE CONTRACTOR SHALL VERIFY ADA COMPLIANCE PRIOR TO PLACEMENT OF PAVING OR CONCRETE.
6. ALL CONSTRUCTION TO CONFORM TO THE MUNICIPAL AND PENNDOT STANDARDS AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF APPLICABLE STANDARDS AND SPECIFICATIONS AS WELL AS THE REQUIRED METHODS OF CONSTRUCTION. ALL DEVIATIONS FROM THE PLANS MUST BE APPROVED PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRENCH BARRICADING, COVERING, SHEETING AND SHORING, IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. MAINTENANCE AND PROTECTION OF TRAFFIC ON EXISTING ROADS NEIGHBORING THE PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL MEP PLANS AND PROCEDURES SHALL BE IN ACCORDANCE WITH MUNICIPAL AND/OR PENNDOT STANDARDS.
8. THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING SITE CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO RGS ASSOCIATES, INC. PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES, ROADS, DRIVEWAYS, AND STRUCTURES SHOWN ARE FROM THE BEST AVAILABLE RECORDS, AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION.
10. DIMENSIONS AND GEOMETRY SHOWN ON THIS PLAN SHALL BE VERIFIED DURING STAKE-OUT CALCULATIONS AND FIELD STAKE-OUT.
11. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE DRAINAGE PATTERN AS SHOWN ON THESE PLANS, AND FOR MAINTAINING POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND ALSO A MINIMUM SLOPE ON ALL UNPAVED AREAS.
12. CONTRACTOR SHALL SEQUENCE THE RELOCATION OF TELECOMM/ELECTRIC SERVICES TO MINIMIZE SERVICE INTERRUPTIONS TO EXISTING BUILDINGS. THE CONTRACTOR SHALL NOTIFY ALL POTENTIALLY IMPACTED PROPERTIES PRIOR TO CONSTRUCTION.
13. CROSSWALKS SHALL BE APPLIED ONTO THE FINAL WEARING COURSE AND SHALL BE PAINTED WITH TYPE I WHITE PAINT CONFORMING TO SECTION 962 OF PENNDOT PUBLICATION 408.
14. THE CONTRACTOR SHALL REFER TO PENNDOT PUBLICATION 111 FOR PAVEMENT MARKINGS AND SIGNAGE STANDARDS, UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY.
15. ANY PROPOSED SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE.
16. CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. RGS ASSOCIATES, INC. MAKES NO GUARANTEE THAT THE EXISTING UTILITIES ARE EXACTLY AS SHOWN.
17. CONTRACTOR SHALL VERIFY THE FINAL EARTHWORK QUANTITIES TO THEIR SATISFACTION PRIOR TO THE COMMENCEMENT OF SITE WORK. RGS MAKES NO GUARANTEE THAT IN-SITU SOILS WILL BE SUITABLE FOR STRUCTURAL FILL, OR THAT THE EARTHWORK WILL BALANCE. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THE ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.
18. ALL DIMENSIONS IN AREAS OF PROPOSED CURBING ARE FROM FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
19. IN THE CASE OF DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSION SHALL GOVERN.
20. FAILURE TO SPECIFICALLY IDENTIFY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO PERFORM SUCH WORK.
21. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
22. THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY APPURTENANCES AS NECESSARY TO MATCH PROPOSED GRADES, UNLESS OTHERWISE NOTED.
23. CURB AND PAVEMENT SHALL BE INSTALLED IN A MANNER AS TO ENSURE POSITIVE DRAINAGE IN ALL AREAS.
24. FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY TO PROVIDE A SMOOTH TRANSITION BOTH HORIZONTALLY AND VERTICALLY FROM THE EXISTING TO PROPOSED PAVING SECTIONS.
25. ALL UNSUITABLE MATERIAL WITHIN STRUCTURAL FILL AREAS MUST BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO A DEPTH AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND/OR THE MUNICIPALITY.
26. GEOTECHNICAL RECOMMENDATIONS PRESENTED IN THE REPORT ENTITLED, "GEOTECHNICAL ENGINEERING REPORT FOR STORMWATER MANAGEMENT", PREPARED BY ECS MID-ATLANTIC LLC, SHALL BE STRICTLY FOLLOWED. ANY DEVIATION MUST BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
27. WHERE IT IS NECESSARY TO CONNECT TO, OR EXTEND TO, EXISTING PAVING, SAW CUT THE EXISTING EDGE OF PAVEMENT AND MILL AND OVERLAY AT THE POINT OF TIE-IN TO ENSURE A SMOOTH TRANSITION AND POSITIVE DRAINAGE.
28. THE RETAINING WALLS SHOWN HEREON HAVE NOT BEEN STRUCTURALLY DESIGNED, AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL SHAPE, HEIGHT, FOOTING, MATERIAL SELECTION, DESIGN, STRUCTURAL COMPUTATIONS, CONSTRUCTION SPECIFICATIONS, AND APPLICABLE BUILDING PERMITS OF THESE WALLS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE LAYOUT AND GRADING OF THE RETAINING WALLS ASSUMES NO STORM RUNOFF OVER THE TOP OF THE WALL. IF SITE CONDITIONS ARE NOT AS ASSUMED, CONTACT THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OF THE RETAINING WALL.
29. A GEOTECHNICAL ENGINEER OR OTHER TECHNICAL PROFESSIONAL SHALL BE PRESENT DURING THE CONSTRUCTION OF SLOPES EXCEEDING 3:1 FILL OR 2:1 CUT.
30. ALL ITEMS WHICH ARE REFERENCED AND NOT SPECIFICALLY DETAILED SHALL BE SELECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
31. A LICENSED PROFESSIONAL GEOLOGIST/GEOTECHNICAL ENGINEER, RGS ASSOCIATES AND THE MUNICIPALITY SHALL BE CONTACTED UPON THE DISCOVERY OF ANY SINKHOLES OR CARBONATE GEOLOGY FORMATIONS DURING CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITIES. IF A SINKHOLE IS ENCOUNTERED WITHIN OR IMMEDIATELY ADJACENT TO THE PROPOSED STORMWATER MANAGEMENT FACILITIES, PRIOR TO OR DURING CONSTRUCTION, THE SINKHOLE SHOULD BE PROMPTLY REPAIRED UNDER THE DIRECTION OF A QUALIFIED GEOLOGIST OR GEOTECHNICAL ENGINEER.
32. THE CONTRACTOR SHALL VERIFY THAT THE SUBGRADE IS PREPARED IN ACCORDANCE WITH THE PROJECT'S GEO-TECHNICAL RECOMMENDATIONS.
33. THE CONTRACTOR SHALL VERIFY SUBSURFACE CONDITIONS TO HIS SATISFACTION PRIOR TO PLACEMENT OF CONCRETE OR ASPHALT. RGS ASSOCIATES MAKES NO GUARANTEE, WRITTEN OR IMPLIED, THAT THE SUBGRADE IS SUITABLE FOR DEVELOPMENT. RGS ASSOCIATES RECOMMENDS THAT ALL SUBGRADES BE INSPECTED BY A LICENSED PROFESSIONAL GEO-TECHNICAL ENGINEER PRIOR TO PLACEMENT OF PAVEMENTS.
34. THE ASPHALT PAVEMENT SECTIONS SHOWN ON THE PLANS MEET OR EXCEED THE MUNICIPAL STANDARDS. IT IS ASSUMED THAT THE SUBGRADE, MATERIALS, CONDITIONS AND CONSTRUCTION METHODS ARE IN ACCORDANCE WITH ALL MUNICIPAL AND/OR PENNDOT CONSTRUCTION STANDARDS.
35. THE ASPHALT PAVEMENT SECTIONS SHOWN ON THE PLANS MAY-NOT BE DESIGNED FOR CERTAIN LEVELS OF CONSTRUCTION RELATED TRAFFIC/EQUIPMENT. ADDITIONAL DEPTH OF STONE AND/OR ASPHALT BASE MAY BE REQUIRED TO SUPPORT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ANALYSIS, MODIFICATIONS AND/OR REPAIRS FOR SUCH CHANGES AND ACTIVITIES.
36. RGS HAS NOT PROVIDED ANY STRUCTURAL DESIGN OF THE PAVEMENT CROSS SECTION OR DETERMINATION OF THE IN-SITU MATERIAL'S SUITABILITY AS A ROAD BASE. SUCH TESTING AND ANALYSIS IS THE CONTRACTOR'S RESPONSIBILITY DURING CONSTRUCTION BEFORE THE PLACEMENT OF THE PAVING SECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ANY REQUIRED STRUCTURAL TESTING OR CERTIFICATION FOR THE INSTALLED PAVEMENT TO THE OWNER AND/OR MUNICIPAL REPRESENTATIVE.
37. AT ALL TIMES DURING AND AFTER CONSTRUCTION, THE SUBBASE AND BASE OF THE PAVING SECTION SHALL BE FREE DRAINING. THE CONTRACTOR SHALL INSTALL UNDER DRAINS, IN ACCORDANCE WITH RC-30M, AT ALL LOCATIONS WHERE THE PAVEMENT BASE IS NOT FREE DRAINING OR SUSCEPTIBLE TO FREEZE/THAW DAMAGE. WATER SHALL NOT BE IMPOUNDED ADJACENT TO PAVEMENT.
38. THE CONTRACTOR MAY NOT BEGIN CONSTRUCTION UNTIL ALL REQUIRED PERMITS HAVE BEEN ISSUED BY THE CONSERVATION DISTRICT OR PA DEP. IT IS THE CONTRACTORS' RESPONSIBILITY TO VERIFY WITH RGS ASSOCIATES, PRIOR TO BEGINNING CONSTRUCTION, THAT THE MOST CURRENT APPROVED PLANS ARE BEING UTILIZED.
39. TOPSOIL MUST BE FREE OF LARGE DEBRIS, ROOTS, ROCKS, BRUSH, SOD, FROZEN PARTICLES, OR OTHER FOREIGN OR OBJECTIONABLE MATERIAL THAT WOULD INHIBIT VEGETATIVE ESTABLISHMENT AND GROWTH TO MEET THE PROJECT REQUIREMENTS. TOPSOIL MUST BE SUITABLE TO SUPPORT A DENSE AND DIVERSE VEGETATIVE COVER, AS DIRECTED BY THE OWNER OR LANDSCAPE ARCHITECT.

GEOTECHNICAL NOTES

A. GENERAL RECOMMENDATIONS
1. IT IS RECOMMENDED THAT FULL-TIME OBSERVATION OF THE EXCAVATION OF THE BASINS BY AN AUTHORIZED ECS REPRESENTATIVE BE PROVIDED TO VERIFY SUITABLE CONDITIONS ARE PRESENT.
2. IF REDOXIMORPHIC FEATURES (SOIL MOTTLING AND COLORATION PATTERNS FORMED BY THE REDUCTION OF IRON AND/OR MANGANESE FROM SATURATED CONDITIONS IN THE SOIL) ARE ENCOUNTERED:
    - 2.1. A QUALIFIED PROFESSIONAL SHOULD DETERMINE IF THE FEATURES OBSERVED ARE ASSOCIATED WITH A HISTORIC CONDITION (ASSOCIATED WITH FILL, PREVIOUS SITE CONDITION, OR NATURAL COLORATION) OR ARE ASSOCIATED WITH CONDITIONS THAT COULD PRESENTLY OCCUR (SEASONAL VARIATIONS IN THE WATER TABLE).
    - 2.2. EVALUATE THE ELEVATION OF THE FEATURES RELATIVE TO THE PROPOSED DESIGN ELEVATION OF THE SWM FEATURE AND DETERMINE IF THE SIZE AND ELEVATION OF THE SWM FEATURE CAN BE ADJUSTED TO ALLEVIATE THE CONFLICT.
    - 2.3. RETAIN ECS AND CIVIL ENGINEER TO EVALUATE ALTERNATE DESIGN CONCEPTS. ALTERNATE DESIGNS PROPOSED BY THE PROFESSIONAL SHOULD BE SEALED AND SUBMITTED TO THE TOWNSHIP FOR APPROVAL.
3. IF MATERIAL REPLACEMENT IS REQUIRED IN STRUCTURAL AREAS, MATERIAL PLACEMENT SPECIFICATIONS, INCLUDING MATERIALS TYPE, MIX RATIO, COMPACTIVE EFFORT AND REQUIRED DENSITY SHOULD BE DETERMINED BY ECS. SUITABLE SOIL MIXTURES CAN CONSIST OF A BLEND OF ON-SITE AND/OR OFF-SITE MATERIALS AVAILABLE TO THE CONTRACTOR GENERALLY CONFORMING THE TABLE ABOVE, WITH FIELD INFILTRATION RATES POST PLACEMENT DETERMINED AND APPROVED BY ECS.

B. GEOTECHNICAL EVALUATION RECOMMENDATIONS PRIOR TO CONSTRUCTION
1. PERFORM SUFFICIENT GEOTECHNICAL EVALUATION TO DETERMINE THE LABORATORY CLASSIFICATION OF THE ON-SITE MATERIALS FOR REUSE AS STRUCTURAL FILL FOR PLANNING AND PRICING PURPOSES.
2. PERFORM SUFFICIENT GEOTECHNICAL EVALUATION OF THE SITE TO EVALUATE THE STABILITY OF THE SLOPES AND TO PROVIDE DESIGN AND CONSTRUCTION RECOMMENDATIONS FOR INTERMEDIATE SLOPE BENCHING, SLOPE TOE KEY TRENCHES, BENCHING DETAILS INTO THE EXISTING SLOPE, SLOPE DRAINAGE, AND GLOBAL STABILITY.
3. EVALUATE THE SLOPE STABILITY OF LARGE SLOPES SUPPORTING NEW STRUCTURES.
4. DEVELOP EARTHWORK RECOMMENDATIONS, INCLUDING THE POTENTIAL REUSE OF SHOT ROCK FOR NEW STRUCTURAL FILL.
5. EVALUATE THE POTENTIAL OF SETTLEMENT OF LARGE STRUCTURAL FILLS (IN EXCESS OF ~20 FEET) AND DEVELOP SETTLEMENT MONITORING RECOMMENDATIONS.

C. CONSTRUCTION RECOMMENDATIONS
1. IT IS RECOMMENDED THAT VERIFICATION OF THE SUBGRADE CONDITIONS AT THE TIME OF CONSTRUCTION BE CONDUCTED BY AN AUTHORIZED GEOTECHNICAL REPRESENTATIVE.
2. IT SHOULD BE NOTED THAT BEDROCK IN THE FORM OF BUCKET REFUSAL WAS ENCOUNTERED IN TEST PITS TP-03, TP-06, TP-07, TP-09, TP-10, TP-13, TP-14, TP-23, TP-26, TP-29, AND TP-30 WITH A BOBCAT E32 EXCAVATOR. A LARGER MACHINE MAY BE ABLE TO EXCEED OUR REFUSAL DEPTHS BY SEVERAL FEET. THE BUCKET REFUSAL ENCOUNTERED IN TP-01 WAS LIKELY DUE TO THE OBSERVED FILL RECORDED DURING DIGGING AND THE REFUSAL IS NOT BELIEVED TO BE INDICATIVE OF BEDROCK REFUSAL. ROCK EXCAVATION MAY BE REQUIRED TO ACHIEVE BOTTOM OF BASIN ELEVATIONS WITH THE REQUIRED 2-FOOT OF BUFFER BELOW THE BASIN SUBGRADE.
3. IT IS RECOMMENDED SWM FACILITIES BE LOCATED A MINIMUM OF 25 FEET FROM ADJACENT BUILDINGS, TAKEN FROM EDGE OF SWM FACILITY TO OUTSIDE OF FOOTING. THE ALLOWABLE BUFFER DISTANCE IS HIGHLY DEPENDENT ON SITE CONSTRAINTS INCLUDING BUT NOT LIMITED TO, FOUNDATION TYPE, SUBGRADE SOILS, GEOLOGY, STRUCTURAL LOADING, FOUNDATION BEARING ELEVATION, INVERT ELEVATION, AND GROUNDWATER. IF SITE CONSTRAINTS PROHIBIT THIS RECOMMENDATION, THE FACILITY MAY BE LOCATED CLOSER TO A BUILDING SUBJECT TO THE REVIEW AND APPROVAL OF ECS. IT IS IMPORTANT TO NOTE THAT THE CLOSE PROXIMITY OF BUILDINGS WILL GENERALLY NOT NEGATIVELY IMPACT THE FUNCTIONALITY OF THE STORMWATER FACILITIES, BUT WATER INFILTRATION AND A REDUCED BUFFER MAY NEGATIVELY AFFECT THE BEARING CAPACITY OF ADJACENT BUILDINGS.
4. EMBANKMENTS ARE REQUIRED TO BE CONSTRUCTED WITH SUITABLE AND APPROVED EARTHEN FILL, NOT SHOT ROCK OR GRANULAR MATERIALS.

D. LIMITING ZONE REMEDIATION NOTES
1. THE CONTRACTOR SHALL PROBE THE VIRGIN SOIL BENEATH THE EXCAVATED BOTTOM OF EACH OF THE SUB-SURFACE STORMWATER MANAGEMENT FACILITIES TO VERIFY THAT A MINIMUM OF 24 INCHES IS PROVIDED TO THE LIMITING ZONE IN ACCORDANCE WITH APPENDIX C OF THE PA DEP STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. IF A DEPTH OF 24 INCHES TO THE EXISTING BEDROCK IS NOT NATURALLY POSSIBLE, THE CONTRACTOR SHALL REMEDIATE THE MANTLE BELOW THE FACILITY IN ACCORDANCE WITH THE FOLLOW PROCEDURE:
    - a. UNDER THE DIRECTION OF THE PROJECT GEO-TECHNICAL ENGINEER, THE CONTRACTOR SHALL OVER EXCAVATE THE BOTTOM OF THE FACILITY AN ADDITIONAL 24 INCHES.
    - b. THE CONTRACTOR SHALL REMOVE ANY BEDROCK ENCOUNTERED WITHIN THE 24 INCHES.
    - c. UNDER THE SUPERVISION AND DIRECTION OF THE PROJECT GEO-TECHNICAL ENGINEER, THE CONTRACTOR SHALL CONSTRUCT A SOIL MANTLE BETWEEN THE REMAINING BEDROCK AND THE BOTTOM OF THE PROPOSED STORMWATER MANAGEMENT FACILITY TO A DEPTH OF 24 INCHES.
3. THE COMPOSITION, COMPACTION AND MATERIAL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEO-TECHNICAL ENGINEER.

UNDERGROUND UTILITY LINE PROTECTION ACT

IN COMPLIANCE WITH AND PURSUANT TO THE PROVISIONS OF 73 P.S. 176, AS AMENDED BY PA ACT 287 OF 1974, AS AMENDED, RGS ASSOCIATES, INC. HAS PERFORMED THE FOLLOWING REQUIREMENTS IN PREPARING THESE DRAWINGS THAT INCLUDE EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION AND/OR LAND DEVELOPMENT SHOWN ON THE DRAWINGS HEREIN:

1. PURSUANT TO 73 P.S. 176(2), RGS ASSOCIATES, INC. HAS REQUESTED LINE AND FACILITY INFORMATION FROM THE ONE CALL SYSTEM NOT LESS THAN TEN (10) NOR MORE THAN NINETY (90) BUSINESS DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED. IF SUCH INFORMATION WAS OBTAINED MORE THAN NINETY (90) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED, RGS HAS STATED IN THE REQUEST THAT WORK IS PRELIMINARY.
2. PURSUANT TO 73 P.S. 176(3), RGS ASSOCIATES, INC. HAS SHOWN, UPON THESE DRAWINGS, THE POSITION AND TYPE OF EACH FACILITY OWNER'S LINE, AS DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY 73 P.S. 176(2), THE NAME OF THE FACILITY OWNER AND THE FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.
3. PURSUANT TO 73 P.S. 176(5), RGS ASSOCIATES, INC. HAS CALLED THE ONE CALL SYSTEM AND SHOWN AS PROOF, THE SERIAL NUMBER OF ONE CALL NOTICE AND THE TOLL-FREE NUMBER OF THE ONE CALL SYSTEM ON THE DRAWINGS NEAR THE SERIAL NUMBER.
4. IF, PURSUANT TO THE REQUIREMENTS OF 73 P.S. 176(2), RGS ASSOCIATES, INC. HAS REQUESTED LINE AND FACILITY INFORMATION FROM THE ONE CALL SYSTEM MORE THAN NINETY (90) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED, RGS HAS INDICATED THAT THE REQUEST IS PRELIMINARY AND THE SERIAL NUMBER OF SAID REQUEST IS SHOWN ON THE DRAWINGS HEREIN.

RGS ASSOCIATES, INC. DOES NOT REPRESENT, WARRANT, ASSURE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO THE ONE CALL SYSTEM REQUEST AND AS REFLECTED ON THESE DRAWINGS IS ACCURATE OR CORRECT. FURTHERMORE, RGS ASSOCIATES, INC. INCLUDES THE INFORMATION ONLY PURSUANT TO THE REQUIREMENTS OF THE UNDERGROUND UTILITY LINE PROTECTION ACT, AS AMENDED.

PENNSYLVANIA ONE CALL SYSTEM SERIAL NO. (FINAL): ____________

DATE: ________ BY: ____________

PENNSYLVANIA ONE CALL SYSTEM SERIAL NO. (PRELIMINARY): ____________

DATE: ________ BY: ____________

PENNSYLVANIA ONE CALL SYSTEM SERIAL NO. (SURVEY): 20250273275

DATE: 01/27/2025 BY: JAMES HOCKENBERRY, PLS

PA 1 CALL SYSTEM, INC.
1-800-242-1776

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES (3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND (10) WORKING DAYS IN DESIGN STAGE - STOP CALL

PUBLIC UTILITY LISTING

PA ONE CALL SERIAL NUMBER 20250273275

COMPANY:VERIZON PENNSYLVANIA LLC
ADDRESS:1050 VIRGINIA DR
FORT WASHINGTON, PA. 19034
CONTACT:DIANE REDILLA
EMAIL:DIANE.C.REDILLA@VERIZON.COM
PHONE:215-591-6210

COMPANY:PENNSYLVANIA ELECTRIC CO
ADDRESS:21 S MAIN STREET
AKRON, OH. 44308
CONTACT:MELLYSSA ADAMS
EMAIL:MADAMS@FIRSTENERGYCORP.COM
PHONE:330-604-4073

COMPANY:PPL ELECTRIC UTILITIES CORPORATION
ADDRESS:437 BLUE CHURCH RD
PAXINOS, PA. 17860
CONTACT:DOUG HAUPT
EMAIL:DLHAUPT@PPLWEB.COM
PHONE:570-490-5684

COMPANY:COMCAST
ADDRESS:4601 SMITH STREET
HARRISBURG, PA. 17109
CONTACT:MICHAEL SWEIGARD
EMAIL:MIKE_SWEIGARD@CABLE.COMCAST.COM
PHONE:717-298-6450

COMPANY:UPPER ALLEN TOWNSHIP PUBLIC WORKS DEPT
ADDRESS:100 GETTYSBURG PIKE
MECHANICSBURG, PA. 17055
CONTACT:COLLIN BARGE
EMAIL:CBARGE@UATWP.ORG
PHONE:717-756-9169

COMPANY:UPPER ALLEN TOWNSHIP SEWER
ADDRESS:400 CREEKSIDE DR
MECHANICSBURG, PA. 17055
CONTACT:KODI HOCKENBERRY
EMAIL:KHOCKENBERRY@UATWP.ORG
PHONE:717-697-9548

SITE FEATURE LEGEND

EXISTING FEATURES

Symbol label	Feature
454	GRADE CONTOUR
455	GRADE INDEX CONTOUR
× (428.17)	SPOT ELEVATION
	BENCHMARK
	IRON PIN
	MONUMENT
	BOUNDARY LINE
	ADJOINER
	LOT LINE
	RIGHT-OF-WAY LINE
	CENTERLINE
	EASEMENT LINE
	SETBACK LINE
	MUNICIPAL BOUNDARY
	ZONING BOUNDARY
	BUILDING
	EDGE OF PAVEMENT
	SIDEWALK
	WALL
	SIGN
	GUIDERAIL
	FENCE
	FIELDLINE
	PLANTING BED
	POND
	EDGE OF WETLANDS
	STREAM
	TREELINE
OE	OVERHEAD ELECTRIC
UE	UNDERGROUND ELECTRIC
OE/OT	OVERHEAD ELECTRIC/TELEPHONE
UE/UT	UNDERGROUND ELECTRIC/TELEPHONE
	OVERHEAD LIGHT FIXTURE
	UTILITY POLE
S	SEWER LATERAL
CMP	STORM DRAIN PIPE, ENDWALL, MANHOLE, & INLET
OE/OT	OVERHEAD TELEPHONE
W	WATER MAIN, VALVE & HYDRANT

PROPOSED FEATURES

Symbol label	Feature
454	GRADE CONTOUR
455	GRADE INDEX CONTOUR
X 496.70	SPOT ELEVATION
X BC 496.70	SPOT ELEVATION- BOTTOM OF CURB
X TC 496.70	SPOT ELEVATION- TOP OF CURB
X BW 496.70	SPOT ELEVATION- BOTTOM OF WALL
X TW 496.70	SPOT ELEVATION- TOP OF WALL
X HP 496.70	SPOT ELEVATION- HIGH POINT
X LP 496.70	SPOT ELEVATION- LOW POINT
BFE=496.70	BASEMENT FLOOR ELEVATION
GFE=496.70	GARAGE FLOOR ELEVATION
	IRON PIN
	MONUMENT
	SETBACK LINE
	CENTERLINE
	SAFE SIGHT STOPPING DISTANCE
	EASEMENT LINE
	BUILDING
	EDGE OF PAVEMENT
	CURB
	SIDEWALK & RAMP - CONCRETE
	TRAIL - BITUMINOUS
	CONSTRUCTION FENCE
	BLOCK WALL
	SIGN
	PLANTING BED
	POND & BMP EXTENTS
100 YEAR FLOODPLAIN	EDGE OF FLOODPLAIN
	STREAM
	WETLAND
	TREELINE
UE	UNDERGROUND ELECTRIC
T	TELEPHONE
	OVERHEAD LIGHT FIXTURE
	UTILITY POLE
MH-1	GRAVITY SEWER LINE & MANHOLE
S	SEWER LATERAL
EW-A; I-A1 (STRUCTURE TYPE; SYSTEM ID.; NUMBER W./IN SYSTEM)	STORM DRAIN PIPE, ENDWALL MANHOLE, & INLET
	STORMWATER INFILTRATION
W	WATER LINE, VALVE, & HYDRANT
W	WATER LATERAL
	FIRE PROTECTION SERVICE LINE

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY, PA

GENERAL NOTES

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-2 OF 57

XREFS: Existing;Floodplain;Demolition;EG;Soils;EG-LIDAR-survey
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Overall-Existing.dwg

Land Planning
Landscape Architecture
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LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

OVERALL EXISTING CONDITIONS PLAN

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 150'

SEAL

SEAL

NO.	DATE	REVISION

DATE: JUNE 22, 2026
PROJECT NO: 2024657-044
MANAGER: JAKE RIEGER, RLA
SHEET NO: LD-3 OF 57

ENVIRONMENTAL RESOURCE LEGEND

- EXISTING WETLANDS
- YOUNG WOODLANDS TO REMAIN 2.3 AC.
- YOUNG WOODLANDS TO BE REMOVED 3.0 AC.
- EXISTING STREAMS

NORTH

SLOPES TABLE			
NUMBER	SLOPE RANGE	AREA	COLOR
1	15.00% - 24.99%	539,882 SF	
2	25.00% - 2000.00%	337,008 SF	

NOTES:
1. ALL STEEP SLOPES SHOWN ON THE PLANS ARE A RESULT OF MAN-MADE IMPROVEMENTS FOR THE ROADS, GOLF COURSE, DRIVES, TRAILS, AND PONDS. AS A RESULT THERE ARE NO DEVELOPMENT CONSTRICTING NATURAL STEEP SLOPES.
2. WOODLAND AREA DEFINITIONS:
   - 2.1. WOODLAND - AN AREA OF PLANT MATERIAL COVERING ONE ACRE OR MORE.
   - 2.2. MATURE — AN AREA OF PLANT MATERIAL COVERING ONE ACRE OR MORE AND CONSISTING OF 30% OR MORE CANOPY TREES HAVING A SIXTEEN-INCH OR GREATER CALIPER, OR ANY GROVE CONSISTING OF EIGHT OR MORE TREES HAVING AN EIGHTEEN-INCH OR GREATER CALIPER. TREES SHALL BE MEASURED AT 4.5 FEET FROM GROUND LEVEL.
   - 2.3. YOUNG — AN AREA OF PLANT MATERIAL COVERING ONE ACRE OR MORE AND CONSISTING OF 70% OR MORE CANOPY TREES HAVING A TWO-AND-ONE-HALF-INCH CALIPER OR GREATER, OR A TREE PLANTATION FOR COMMERCIAL OR CONSERVATION PURPOSES WHERE 70% OR MORE OF THE CANOPY TREES HAVE A TWO-AND-ONE-HALF-INCH OR GREATER CALIPER. TREES SHALL BE MEASURED AT 4.5 FEET FROM GROUND LEVEL.
3. THERE ARE NO EXISTING MATURE WOODLANDS LOCATED ON THE SITE. THE MAJORITY OF THE TREES LOCATED ON THE SITE WERE PLANTED FOR THE GOLF COURSE AND CONSIST OF SINGLE TREES, SMALL STANDS, OR YOUNG WOODLAND AREAS AS DESIGNATED ON THE PLANS. YOUNG WOODLANDS TO BE REMOVED ARE NOTED AND ARE BELOW THE 60% PERMITTED PER THE LOWER ALLEN TOWNSHIP ZONING ORDINANCE.

LOWER ALLEN (SINGLE FAMILY RURAL RESIDENTIAL) — UPPER ALLEN — ENSITY RESIDENTIAL)

LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP

OLD FORGE ROAD

LISBURN ROAD

YELLOW BREECHES CREEK CWF, MF

EX. 100 YEAR FLOODPLAIN

EXISTING FEMA FLOODWAY

EXISTING 100 YEAR FEMA FLOODPLAIN

EX. FLOODWAY

PR. 100 YEAR FLOODPLAIN

BENCHMARK SANITARY SEWER MANHOLE ELEVATION: 355.59'

N/F NAEWON LIMITED PARTNERSHIP LISBURN ROAD DB 251–3179

N/F JONATHAN VIPOND TIM BRUNNER 1728 LISBURN ROAD INST. NO. 201421152 LOT 1 & 1A INST. NO. 201421599

N/F JANEY GENIN 3800 LISBURN ROAD DB 29–F–624 LOT 3A & 3B – PB 39–141

N/F NAEWON LIMITED PARTNERSHIP RR E LISBURN ROAD DB 251–3179

N/F GREGORY SHOOP INST. 1201 E LISBURN ROAD NO. 201605106 LOT 1 –PB 50–82

N/F DORIS HOFFMAN 1239 LISBURN ROAD DB 31–Z–777 LOT 2 –PB 50–82

N/F RL Mechanicsburg, LLC 1243 E LISBURN ROAD Inst. No. 201605116 LOT 2of –PB 81–104

N/F Matthew & Staci Barley 1245 E LISBURN ROAD INST. NO. 201425477 Lot 29A/29C – PB 85–149

N/F JOSEPH & JENNIFER BALDA 1400 WELLGATE LANE INST. NO. 200823499 LOT 28–PB 73–139

N/F MICHAEL & ANGELA EICHELBERGER 4002 ASHBURN WAY INST. NO. 201026741 LOT 25–PB 72–125

N/F Michael & Luann Brooks 4000 ASHBURN WAY DB 249–1328 Lot 24–PB 72–125

N/F Kathy Acquaviva DB 4002 GLENFINNAN PLACE 250–600 LOT 19–PB 72–125

N/F Augusto & Suzanne Delermie 4000 GLENFINNAN PLACE DB 249–3841 Lot 18–PB 72–125

N/F Larry & Marsha Shoop 4010 LISBURN ROAD DB 34–E–752

N/F LOWER ALLEN LISBURN ROAD TOWNSHIP DB 25–Z–465

LUCKY BEAR LLC TAX PARCEL NO.:13–17–0270–042 & 42–11–0272–132 No. 201903872 Lot 1 third 4 Pb 85 PG 135

Iron Pin Found

Iron Pipe Found

Wetland 'A'

Wetland 'B'

Wetland 'C'

Wetland 'D'

Wetland 'E'

Wetland 'F'

Wetland 'G'

Wetland 'J'

Wetland 'K'

Wetland 'L'

Wetland 'M'

60.0' RIGHT-OF-WAY

80' RIGHT-OF-WAY

200' PPL Right-of-Way

S 69°39'04" E 68.89'

S 52°51'56" E 306.54'

N 52°51'56" W 309.38'

S 69°34'25" W 215.82'

S 52°12'25" W 44.20'

S 37°49'35" E 170.00'

N 52°06'25" E 438.06'

S 38°25'27" E 306.69'

S 53°12'41" E 209.51'

S 34°55'41" E 158.00'

S 60°45'41" E 553.00'

S 52°00'41" E 561.00'

N 64°37'40" E 249.83'

N 65°57'34" E 762.36'

N 43°10'45" E 295.79'

S 29°46'35" E 300.00'

N 20°31'07" E 89.24'

N 45°20'52" W 299.66'

N 86°54'01" W 245.58'

S 23°05'59" W 239.08'

N 29°02'04" W 94.22'

N 60°30'19" W 201.80'

R=1359.45' L=98.16' Chd=N 51°06'10" W Chd=98.14'

R=1552.00' L=135.44' Chd=N 46°32'03" W Chd=135.40'

R=400.00' L=201.93' Chd=N 29°34'21" W Chd=199.79'

AlB AlC AlD MeB BoA

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 120'
0' 120' 240'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

ENVIROMENTALLY SENSITIVE AREA PLAN

NO.	DATE	REVISION

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-4 OF 57

XREFS: Layout-HOP-Floodplain;Demolition;EG;EG-Slopes;Soils;EXISTING-GIS;Existing
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Environmentally-Sensitive Area.dwg
SCRIPT:

NORTH

LD-10 LD-11 LD-8 LD-9 LD-5 LD-6 LD-7 LD-12

SHEET KEY MAP

SITE FEATURE LEGEND

EXISTING FEATURE TO BE REMOVED
T.B.R. = TO BE REMOVED

TO REMAIN

T.B.R. FOUNDATION TO REMAIN

LD-8 / LD-5 MATCHLINE

LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP

N 30°51'07" E 892.84'

200' PP&L Right-of-Way

N/F NAEWON LIMITED PARTNERSHIP
RR 6 LISBURN ROAD
DB 251-3179

N/F GREGORY SHOOP INST.
1201 E LISBURN ROAD
NO. 201605106
LOT 1 -PB 50-82

N/F DORIS HOFFMAN
1239 LISBURN ROAD
DB 31-2-277
LOT 2 -PB 50-82

N 46°03'37" W 299.66'

Stone Found

Iron Pin Found

Rip-Rap

22850
S307

22843
S30730

End of Pipe Not Found

12" RCP

Inv 467.09

Wetland "2"

Debris

Wall

Stockpile

N/F RL Mechanicsburg, LLC
1243 E LISBURN ROAD
Inst. No. 201805116 Lot 29B
-PB 81-104

TG 469.96
Inv 467.29

10" HDPE

TG 464.47
Inv 461.59

10" HDPE

TP-31

Wall T.B.R.

TG 455.25
Inv 451.71

EX. TRAIL T.B.R.

TP-13

TP-14

TP-03

Inv 451.48

12" HDPE

LD-5 / LD-6 MATCHLINE

N/F Matthew & Staci Barley
1245 E LISBURN ROAD
INST. NO. 201425417 Lot
29A/29C - PB 85-149

EX. TREES T.B.R. (TYP.)

Drain

Rocks

Roof Drain

TG 455.47
Inv 452.55

8" PVC

Well

AtB
AtC

XREFS: Soils; Demolition; EG-Ldar-Survey; Existing Easement+Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Exist-Demo.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

CUMBERLAND COUNTY, PA

LOWER ALLEN & UPPER ALLEN TOWNSHIP

EXISTING CONDITIONS AND DEMOLITION PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-5 OF 57

TP-22
TP-11
TP-29
TP-28
TP-15
TP-12
TP-09
TP-14
TP-30
TP-03

MATCHLINE LD-8 LD-6
MATCHLINE LD-9 LD-6
MATCHLINE LD-9 LD-7
MATCHLINE LD-5 LD-6
MATCHLINE LD-6 LD-7

TG 455.42
Inv 452.35
Roof Drain
12" HDPE
TG 458.42
Inv 455.51
TG 458.60
Inv 456.40
TG 450.53
Inv 447.53
TG 446.00
Inv 443.32
TG 437.64
Inv 434.94
TG 410.52
Inv 407.57
Inv 401.46

(Filled W/Mud)
TG 459.00
2" PVC
Rocks
Wall
Maintenance Building T.B.R. FOUNDATION TO REMAIN
Propane Tank
Stockpile
Stockpile T.B.R.
Fuel Tank
Conc. T.B.R.
Tel Box Trans.
UG Propane Tank
Stone Dwelling T.B.R. FOUNDATION TO REMAIN
Wall T.B.R.
EX. TREES T.B.R. (TYP.)
EX. TRAIL T.B.R. (TYP.)
24" CMP
Wetland 3 T.B.R.
Wetland
Brush

AtB
AtC
AtC
AtB
AtB
AtD
AtC
AtD

N/F Matthew & Staci Barley
1245 E LISBURN ROAD
INST. NO. 20142547 Lot 29A/29C – PB 85–149

N/F DEREK & ANGELA ETCHELBERGER 4002 ASHBURN WAY INST. NO. 201026411 LOT 25–PB 72–125

N/F Michael & Luc
4000 ASHBURN WA
OB 249–1328 Lot
72–125

N 85°54'01" W 2452.58'

SHEET KEY MAP
LD-10 LD-11 LD-8 LD-9 LD-5 LD-6 LD-7 LD-12

NORTH

SITE FEATURE LEGEND
EXISTING FEATURE TO BE REMOVED
T.B.R. = TO BE REMOVED

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-6 OF 57

XREFS: Solis;Demolition;EG;EG-Lidar-Survey;Existing Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\Final-PH1\Plot\Z-Exist-Demo.dwg
SCRIPT:

TP-26
TP-27
TP-08
TP-07
TP-28
TP-09
TP-10
MATCHLINE
LD-9
LD-7
LD-6
LD-12
LISBURN ROAD
UTILITY POLE TO BE RELOCATED
23099 530765
23115 530756
23128 530747
Storage T.B.R.
Maintenance Building T.B.R.
Approx. Septic System
Approx. Well
Inv 365.79 T.B.R.
Storage T.B.R. Inv 369.79
TC 388.26 Inv 384.76 T.B.R.
10" HDPE
12" CMP
EX. INLET T.B.R.
Inv 366.08 Inv 363.33
12"x8"
RCP
TC 364.24 Inv 361.56
Inv 363.95 Inv 361.12
TC 363.54 Inv 358.54
80.0' RIGHT-OF-WAY
Wall T.B.R.
40 MPH Sign
25.5"x17" CMP/MAX
INV 358.22
Inv 358.81
36" HDPE T.B.R.
Inv 358.59
Rip Rap
Curve Ahead Sign
Iron Pipe O/S 15.38'
R=1359.45' L=98.16'
Chd=N 51°06'10" W Chd=98.14'
Wetland "7"
EX. TREES T.B.R. (TYP.)
AIC
AIB
AID
TC 380.25 Inv 369.00 T.B.R.
Wetland "6" T.B.R.
Rocks T.B.R.
Wetland "5"
Tank T.B.R.
Wall
Steps
Pool
FENCE T.B.R.
S 37°35'59" W 793.08'
EX. TRAIL T.B.R. (TYP.)
BRIDGE T.B.R.
TC 410.52 Inv 407.57 T.B.R.
TC 402.84 Inv 399.79 T.B.R.
10" HDPE
Wetland "4" Inv 383.30
Brush
N/F Michael & Luann Brooks 4000 ASHBURN WAY DB 249-1328 Lot 24-PB 72-125
N/F Kathy Acquaviva DB 4002 GLENFINNAN PLACE 250-600 LOT 19-PB 72-125
N/F Augusto & Suzanne Delerme 4000 GLENFINNAN PLACE DB 249-3890 Lot 18-PB 72-125
N/F Larry & Marsha Shoop 4010 LISBURN ROAD DB 34-E-752

SITE FEATURE LEGEND

EXISTING FEATURE TO BE REMOVED
T.B.R. = TO BE REMOVED

NORTH

SHEET KEY MAP
LD-5 LD-6 LD-7 LD-8 LD-9 LD-10 LD-11 LD-12

SCALE: 1" = 40'
0' 40' 80'

CLIENT:
EG STOLTZFUS LAND LLC
345 CHAMP BLVD.
MANHEIM, PA 17545
(717) 723-4324

NO.	DATE	REVISION

SEAL

SEAL

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN
LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA

EXISTING CONDITIONS AND DEMOLITION PLAN

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-7 OF 57

XREFS: Soils;Demolition;EG;EG-Lidar-Survey;Existing;Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Exist-Demo.dwg
SCRIPT:

NORTH

LD-10 LD-11 LD-8 LD-9 LD-5 LD-6 LD-7 LD-12

SHEET KEY MAP

SITE FEATURE LEGEND

EXISTING FEATURE TO BE REMOVED
T.B.R. = TO BE REMOVED

N/F JONATHAN VAPOND III & TIM BRUNNER 3728 LISBURN ROAD INST. NO. 201421152 LOT 1 & 1A INST. NO. 201421599

N/F NAEWON LIMITED PARTNERSHIP LISBURN ROAD DB 251-3179

N 65°57'57" E 762.36'

N 64°31'40" E 249.83'

S 69°34'25" W 215.82'

S 52°12'25" W 44.20'

S 29°46'35" E 300.00'

N 43°10'

Iron Pin Found

Iron Pin Found

Rip-Rap

15" HDPE

TG 404.04 Inv 400.98

Tel Box

Inv 417.25

12" HDPE

TG 421.08 Inv 418.48

Inv 428.35

PP&L 22949 S30815

12" HDPE

TG 433.58 Inv 430.78

Wetland 'A'

PP&L 22935 S30802

Inv 440.86

PP&L 22921 S30797

Box

12" HDPE

TG 445.91 Inv 442.31

12" HDPE

TG 450.29 Inv 447.25

PP&L 22905 S30705

Tel. Box

Conc.

Cell Tower

PP&L 22890 S30776

per Plan/Not Found) Manhole LF-11 (Approx. Loc

TG 477.83 Inv 474.66

12" HDPE

Pipe Destination Undetermined

Pipe Destination Undetermined

Parking

Manhole LF-10 (Unable to Open) Rim 470.21

Mon. Wells

Fuel Tank

UG Tank Lids

Wall

Hydrant Fire

Drain

Drain

Storage Cort T.B.R. FOUNDATION TO REMAIN

Club House T.B.R. FOUNDATION TO REMAIN

Wall

Conc.

Wall

MANHOLE LF-12 RIM 490.25 (UNDER FENCE)

TP-17

Drain

TP-18

UG Propane Tank(s)

Tel Box

Trans

Water MH

MANHOLE LF-11 (APPROX. LOC.per Plan/Not Found)

Fire Dept. Connection

Restaurant T.B.R. FOUNDATION TO REMAIN

Grease Traps

Tent T.B.R.

Rocks

Wall

Wall

Roof Drain

2" PVC

TG 455.47 Inv 452.55

LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP

Manhole LF-8 (Unable to Open) Rim 459.69

Water MH

TP-19

Steps

Wall

AtC

AtB

Restrooms T.B.R. FOUNDATION TO REMAIN

Manhole LF-7 Rim 456.69 Inv 450.04

Panel Box

Trans.

Elec. Box

UE/UT

Drain

Hydrant Fire

2" PVC

Wall

Conc.

(Filled W/Mud) TG 459.00

Wall

Wall

Rocks

12" HDPE

TG 458.42 Inv 455.51

TG 458.60 Inv 456.40

TP-22

AtB

AtC

TG 450.53 Inv 447.93

Roof Drain

2" HDPE

Maintenance Building T.B.R. FOUNDATION TO REMAIN

Propane Tank

TG 446.00 Inv 443.32

LD-8 MATCHLINE LD-5

MATCHLINE LD-8 LD-6

LD-8 MATCHLINE LD-8

TP-20

Iron Pin Found

AtB AtD AtC AtD

XREFS: Soils;Demolition;EG;EG-Lidar-Survey;Existing Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Exist-Demo.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA

EXISTING CONDITIONS AND DEMOLITION PLAN

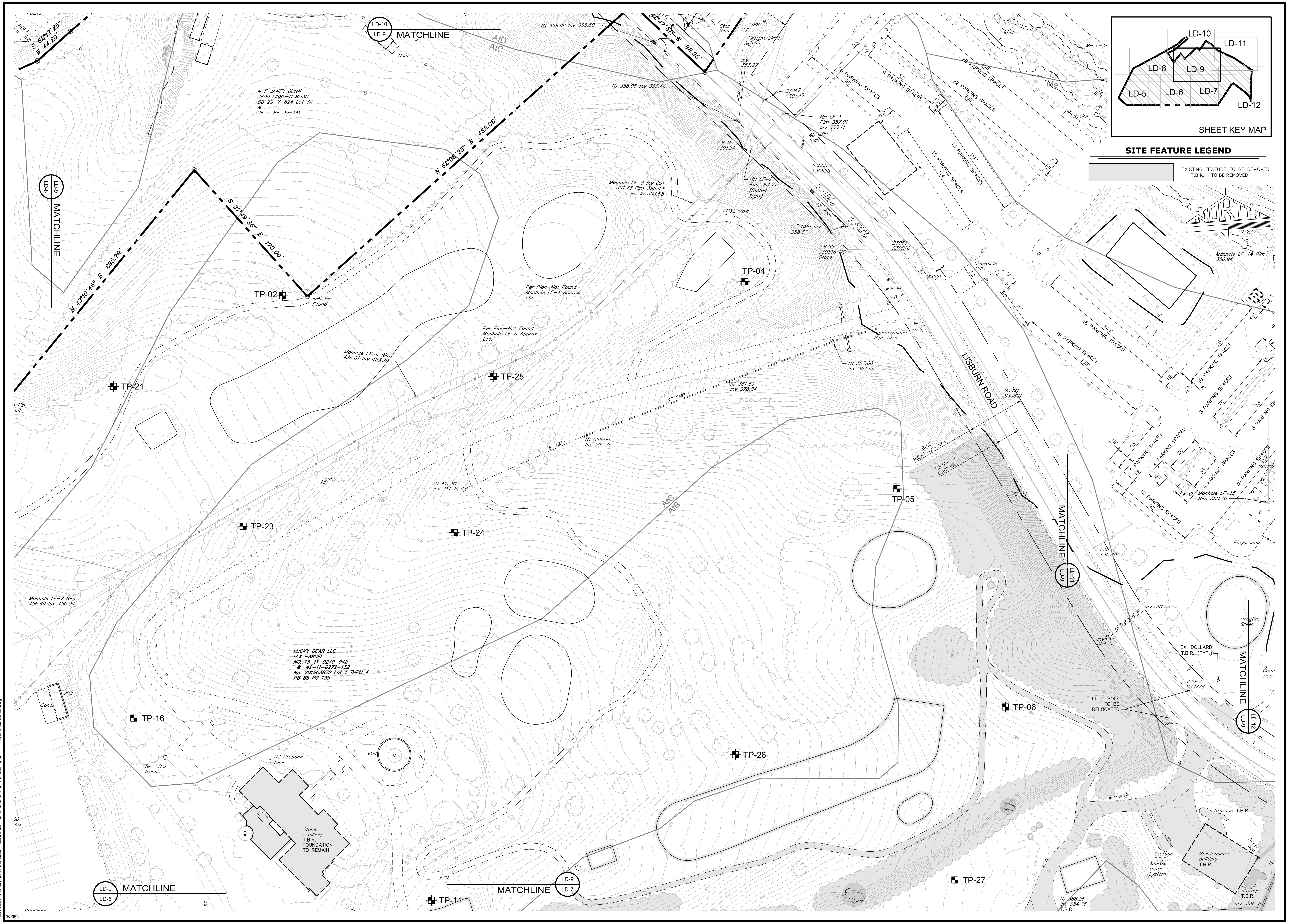
Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-8 OF 57



XREFS: Soils;Demolition;EG;EG-Lidar-Survey;Existing;Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Exist-Demo.dwg
SCRIPT:

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY, PA

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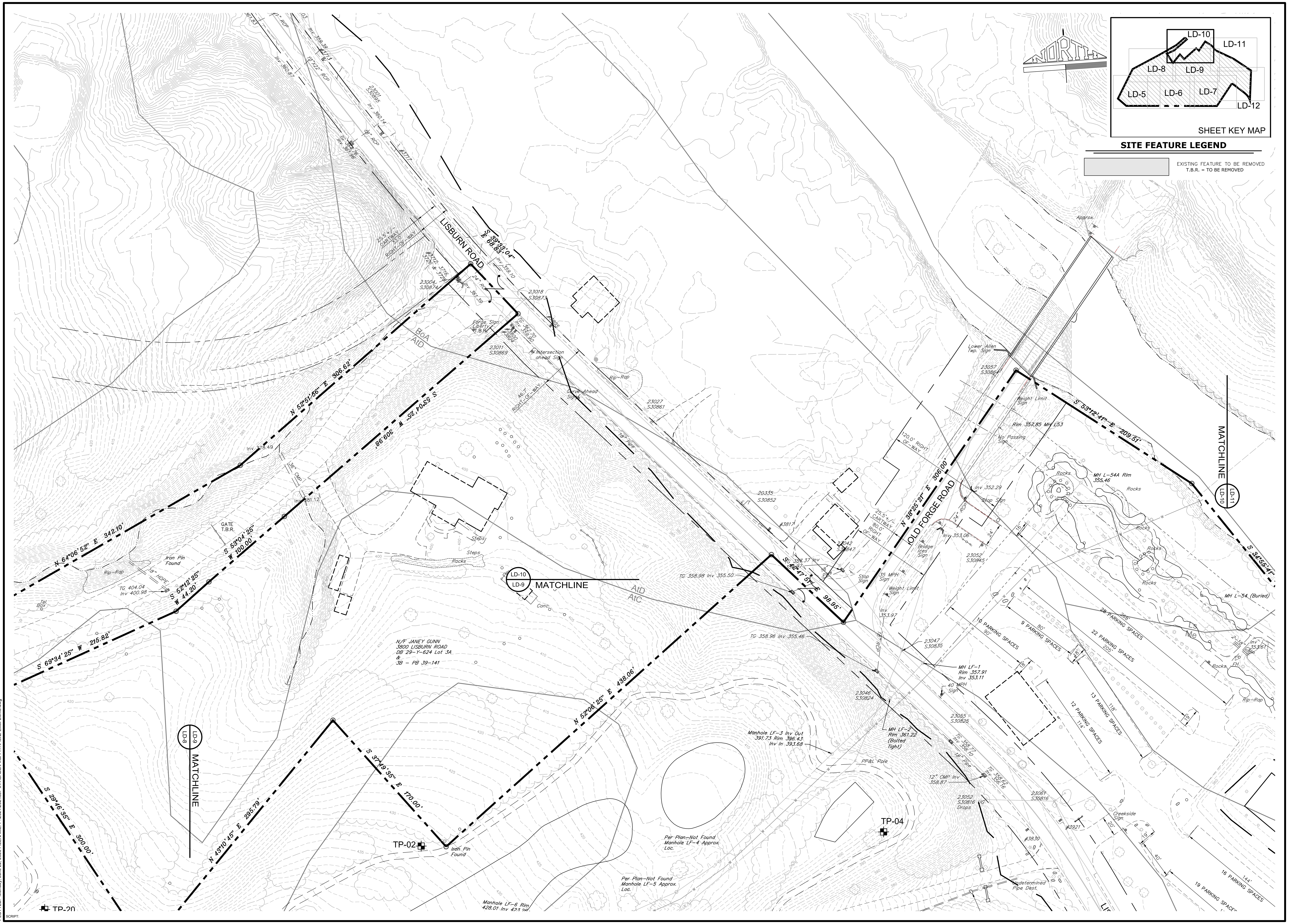
RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-9 OF 57



LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

EXISTING CONDITIONS AND DEMOLITION PLAN

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

Land Planning
Landscape Architecture
Civil Engineering

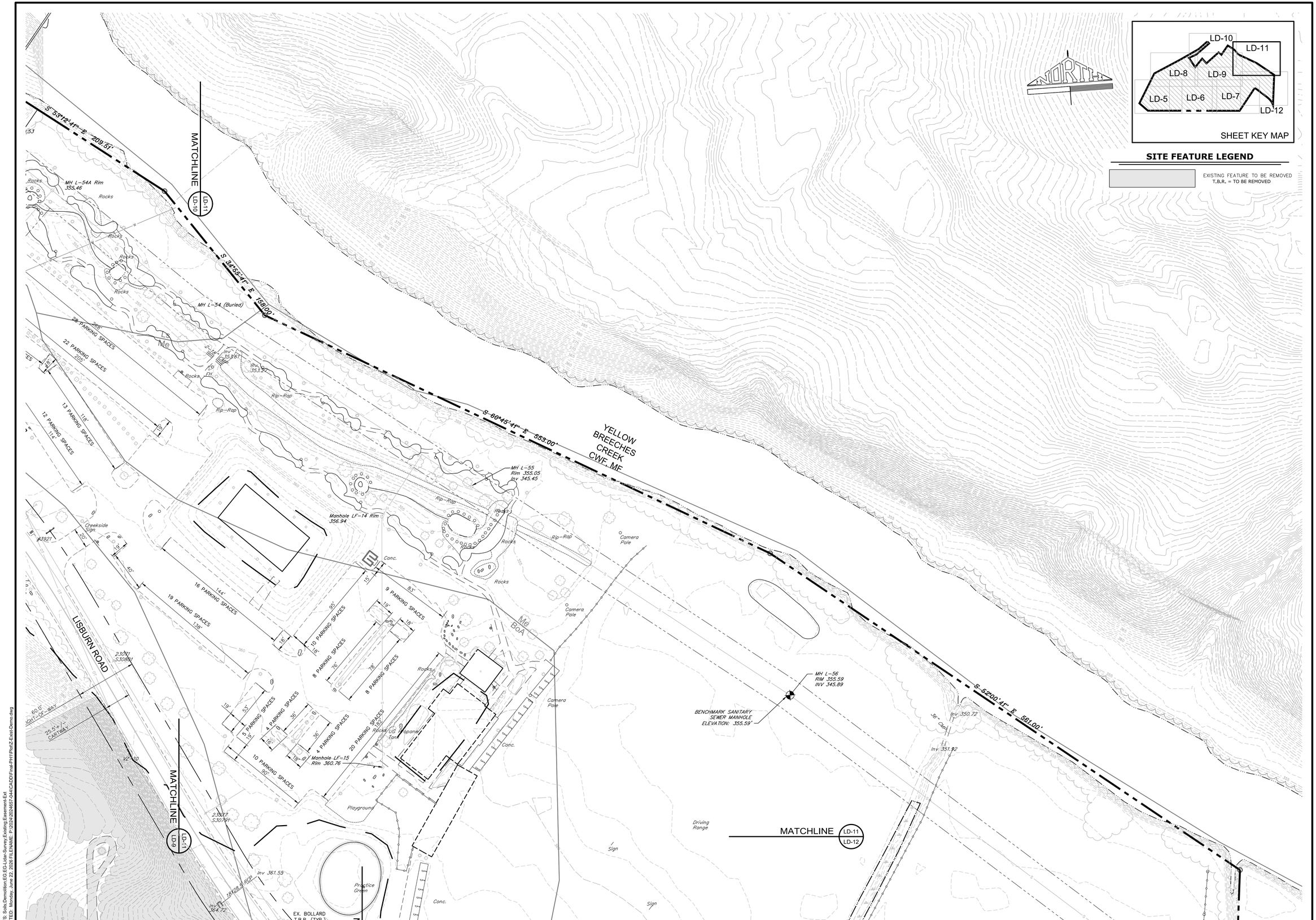
Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-10 OF 57

XREFS: Soils;Demolition;EG;EG-Lidar-Survey;Existing;Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Exist-Demo.dwg
SCRIPT:



NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = XX'
0' X' 2X'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

EXISTING CONDITIONS AND DEMOLITION PLAN

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-11 OF 57

XREFS: Soils;Demolition;EG;EG-Lidar;Survey;Existing;Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Exist-Demo.dwg
SCRIPT:

MATCHLINE LD-11 LD-12

MATCHLINE LD-9 LD-12

MATCHLINE LD-7 LD-12

LISBURN ROAD

UTILITY POLE TO BE RELOCATED

UTILITY POLE TO BE RELOCATED

ROCK TO BE RELOCATED

EX. INLET T.B.R.

EX. INLET T.B.R.

EX. INLET T.B.R.

EX. INLET T.B.R.

FENCE T.B.R.

Curve Ahead Sign

Iron Pipe O/S 15.38'

R=1359.45' L=98.16'
Chd=N 51°06'10" W Chd=98.14'

N 49°03'04" W 242.22'

S 80°09'19" W 804.80'

R=1552.00' L=135.44'
Chd=N 46°32'03" W Chd=135.40'

R=400.00' L=201.93'
Chd=N 29°34'21" W Chd=199.79'

S 30°55'26" W 284.08'

N/F LOWER ALLEN TOWNSHIP ROAD TOWNSHIP DB 25-Z-465

Driving Range

Wetland 'A'

Wetland 'B'

Wetland 'C'

Wetland 'D'

Wetland 'E'

Wetland 'F'

Wetland 'G'

Wetland 'H'

Wetland 'I'

Playground

Practice Green

Conc.

Combd Pole

Sign

Storage T.B.R.

Inv 365.79 T.B.R.

Storage T.B.R. Inv 369.79

Wall T.B.R.

Wall

Steps

Pool

Rocks T.B.R.

Brush

Rocks

Gully

Rip Rap

Inv 358.59

36" Horiz. T.B.R.

Inv 358.83

INV 368.22

40 MPH Sign

25.5'± / 330' R/W

MH 'C' Rim 357.02

Inv 361.95

Inv 361.12

Inv 364.24

Inv 361.36

TC 366.08

Inv 362.73

18" CMP T.B.R.

TC 364.27

Inv 360.54

18" CMP T.B.R.

650'± RIGHT OF WAY

23099 530765

23113 530756

23126 530747

23140 530738

23154 530714

Me AlD

Me BoA

Me LS

AlC AlB

AlD AlB

SHEET KEY MAP

LD-10 LD-11 LD-8 LD-9 LD-5 LD-6 LD-7 LD-12

SITE FEATURE LEGEND

EXISTING FEATURE TO BE REMOVED
T.B.R. = TO BE REMOVED

NORTH

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 1" 2"
SCALE: 1" = XX'

LIBERTY FORGE

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LOWER ALLEN & UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY, PA

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-12 OF 57

XREFS: Soils;Demolition;EG;EG-Lidar-Survey;Existing Easement-Ext
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Exist-Demo.dwg
SCRIPT:

NORTH

S39°33'04"E
110.58'

276.60'

S53°04'25"W

N52°51'56"E

279.95'

N 64°06'52" E 342.10'

N/F JONATHAN VIPOND III &
TIM BRUNNER
3728 LISBURN ROAD
INST. NO. 201421152 LOT 1 &
1A INST. NO. 201421599

Iron Pin Found

S 53°04'25" W
100.00'

N 64°31'40" E 249.83'

Iron Pin Found

S 69°34'25" W
215.82'

S 52°12'25" W
44.20'

N/F JANEY GUNN
3800 LISBURN ROAD
DB 29-Y-624 Lot 3A &
3B - PB 39-141

S 29°46'35" E
300.00'

N 43°10'45" E 295.79'

S 37°49'35" E
170.00'

N32°06'25"E

Iron Pin Found

Iron Pin Found

407.95'

S42°47'51"E

275.78'

N38°25'21"E
133.53'

S53°12'41"E
149.49'

S 34°55'41" E
150.00'

N38°25'21"E
150.00'

S51°34'39"E
20.00'

N42°47'51"W
138.41'

L=201.88'
R=705.00'
T=101.64'
Δ=16°24'25"
CB=N34°35'38"W
CD=201.19'

S 60°45'41" E 553.00'

S 52°00'41" E 561.00'

L=184.70'
R=645.00'
T=92.99'
Δ=16°24'25"
CB=S34°35'38"E
CD=184.07'

S26°23'25"E

297.85'

N26°23'25"W

297.85'

LOT 1
772,665 SF
17.74 AC

L=254.13'
R=470.00'
T=130.25'
Δ=30°58'47"
CB=N41°52'48"W
CD=251.04'

L=286.57'
R=530.00'
T=146.88'
Δ=30°58'47"
CB=S41°52'48"E
CD=283.09'

249.80'

N57°22'12"W

S57°22'12"E

249.80'

L=202.14'
R=1389.45'
T=101.25'
Δ=8°20'08"
CB=N53°12'07"W
CD=201.97'

S8°09'19"W

735.52'

Iron Pipe
O/S 15.38'

L=97.02'
R=1329.45'
T=48.53'
Δ=4°10'52"
CB=S55°16'45"E
CD=96.99'

S37°55'45"E

342.22'

N49°02'04"W

L=138.05'
R=1581.90'
T=69.07'
Δ=5°00'01"
CB=N46°32'04"W
CD=138.01'

L=152.27'
R=430.00'
T=76.94'
Δ=20°17'21"
CB=N33°53'23"W
CD=151.47'

N/F LOWER
ALLEN LISBURN
ROAD TOWNSHIP
DB 25-Z-465

N/F Larry & Marsha Shoop
4010 LISBURN ROAD
DB 34-E-752

LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP

LUCKY BEAR LLC
TAX PARCEL
NO.:13-11-0270-042
& 42-11-0272-132
No. 201903872 Lot 1 THRU 4
PB 85 PG 135

LOT 2
3,305,716 SF
75.89 AC

N 39°31'07" E 892.84'

200' PP&L Right-of-Way

200' PP&L Right-of-Way

N/F NAEWON
LIMITED
PARTNERSHIP
RR E LISBURN
ROAD
DB 251-3179

N/F NAEWON
LIMITED
PARTNERSHIP
LISBURN ROAD
DB 251-3179

N/F GREGORY
SHOOP INST.
1201 E LISBURN
ROAD
NO. 201605106
LOT 1 -PB 50-82

Stone Found

N 89°56'28" W 899.66'

N 65°57'37" E 762.36'

Iron Pin Found

N 85°54'07" W 2452.58'

703.01'

N/F DORIS HOFFMAN
1239 LISBURN ROAD
DB 31-Z-777
LOT 2 -PB 50-82

N/F RL
Mechanicsburg, LLC
1243 E LISBURN
ROAD
Inst. No. 201805116
Lot 29B -PB 81-104

N/F Matthew & Staci Barley
1245 E LISBURN ROAD
INST. NO. 201425477 Lot
29A/29C - PB 85-149

N/F JOSEPH &
JENNIFER BALDA
1400 WELLGATE
LANE
INST. NO. 200823499
LOT 28-PB 73-139

N/F DEREK & ANGELA
EICHELBERGER 4002
ASHBURN WAY
INST. NO. 201026411
LOT 25-PB 72-125

N/F Michael & Luann
Brooks
4020 ASHBURN WAY
DB 249-1328 Lot
24-PB 72-125

N/F Kathy
Acquavivo DB
4002
GLENFINNAN
PLACE
250-600 LOT
19-PB 72-125

N/F Augusto & Suzanne Delerme
4000 GLENFINNAN PLACE
DB 249-3890
Lot 18-PB
72-125

XREFS: Existing/Existing-GIS-Survey/Layout
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plat2-Subdivision.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 120'
0' 120' 240'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SUBDIVISION PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com

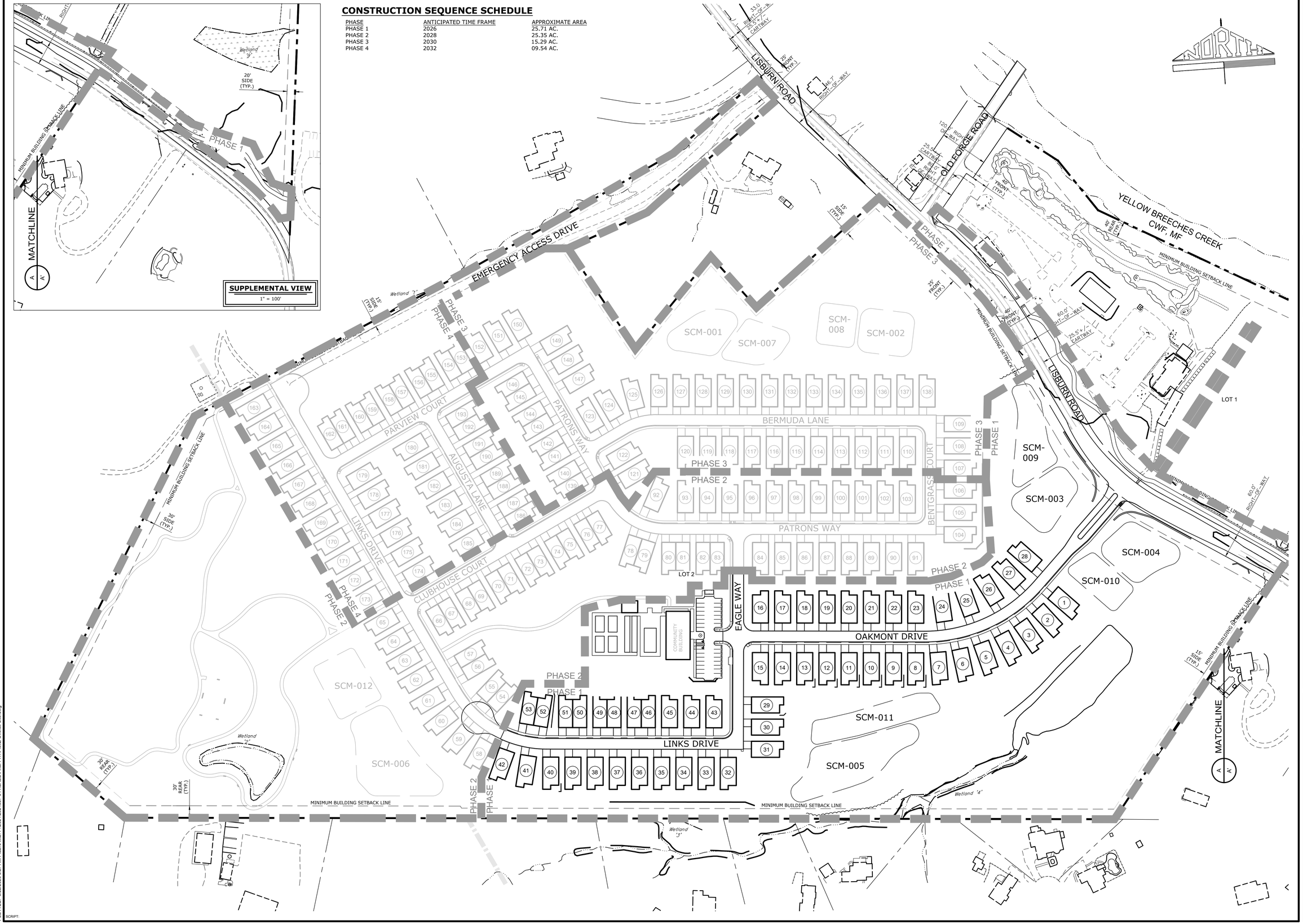
Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-13 OF 57

CONSTRUCTION SEQUENCE SCHEDULE

PHASE	ANTICIPATED TIME FRAME	APPROXIMATE AREA
PHASE 1	2026	25.71 AC.
PHASE 2	2028	25.35 AC.
PHASE 3	2030	15.29 AC.
PHASE 4	2032	09.54 AC.



XREFS: Existing1Layout;Layout-HOP
PLOTTED: 6/22/2026 8:27 AM FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Overall-Site.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 100' 200'
SCALE: 1" = 100'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

OVERALL SITE AND PHASING PLAN

Land Planning
Landscape Architecture
Civil Engineering

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-14 OF 57

OPEN SPACE LEGEND

REGRADED TOWNSHIP REQUIRED OPEN SPACE

NOT REGRADED TOWNSHIP REQUIRED OPEN SPACE

TOTAL PARCEL AREA	- 75.89 AC.
25% MINIMUM REQUIRED OPEN SPACE	- 18.97 AC.
1 DU/AC DENSITY BONUS - 125% BASE AREA	- 23.72 AC.
MAXIMUM REGRADED OPEN SPACE PERMITTED	- 20.20 AC.
PROVIDED TOTAL OPEN SPACE	- 40.37 AC.
PROVIDED REGRADED OPEN SPACE	- 20.00 AC.

NOTES:
1. A MINIMUM TRACT SIZE OF FIVE ACRES IS REQUIRED FOR AN OSD DEVELOPMENT.
2. A MINIMUM OF 25% OF THE GROSS AREA OF AN OSD DEVELOPMENT SHALL BE RETAINED AS COMMON OPEN SPACE RESERVED FOR PASSIVE RECREATIONAL USE.
3. 50% OF THE DESIGNATED COMMON SPACE SHALL NOT BE REGRADED AS PART OF DEVELOPMENT OF SITE.
4. THE REMAINDER OF ALL LANDS OUTSIDE OF THE BUILDING FOOTPRINTS SHALL BE DESIGNATED AS COMMON OPEN SPACE FOR THE DEVELOPMENT AND IS ABOVE THE REQUIRED OPEN SPACE NOTED ON THE PLANS.
5. SOME AREAS OF UNDISTURBED OPEN SPACE AREAS WILL HAVE SEEDING AND PLANTING WITHIN THEM TO NATURALIZE GOLF COURSE AREAS.

YELLOW BREECHES CREEK WATER TRAIL ACCESS AGREEMENT

GRANTS PERMISSION TO THE GENERAL PUBLIC TO ACCESS THE YELLOW BREECHES CREEK TRAIL USING LOT 1 IMMEDIATELY UPSTREAM FROM THE FORGE ROAD BRIDGE BETWEEN OLD FORGE ROAD AND THE MINIATURE GOLF COURSE (THE "ACCESS").

1. THE ACCESS AND NEARBY PARKING ARE FOR USE BY FISHERMAN, CANOEISTS, KAYAKERS AND OTHER NON-MOTORIZED BOATERS ONLY.
2. OWNER GIVES PERMISSION TO HAVE THE ACCESS LISTED IN THE ASSOCIATION'S YELLOW BREECHES WATER TRAIL MAP AND GUIDE. OWNER UNDERSTANDS THAT THIS IS A PUBLIC DOCUMENT THAT MAY BE USED BY THE PUBLIC TO FIND AND USE THE ACCESS.
3. OWNER'S LIABILITY PROTECTION EXISTS WITH RESPECT TO THOSE INDIVIDUALS TO WHOM NO FEE IS CHARGED BY OWNER FOR USE OF ACCESS. AS SUCH, UNDER 68 P.S.A. §477 (PA RECREATIONAL USE STATUTE), OWNER CANNOT BE HELD LIABLE FOR ANY PROPERTY DAMAGE, PERSONAL INJURY OR DEATH SUSTAINED BY A PERSON USING THE ACCESS UNLESS OWNER INTENTIONALLY INFLICTS DAMAGE OR INJURY.
4. OWNER'S PERMISSION FOR USE OF ACCESS IS OF INDEFINITE DURATION, BUT OWNER MAY SUSPEND OR TERMINATE THIS PERMISSION OR THE ASSOCIATION MAY SUSPEND OR TERMINATE THIS PERMISSION WITH THIRTY (30) DAYS ADVANCE WRITTEN NOTICE.
5. IF IMPROVEMENTS TO ACCESS BECOME NECESSARY DURING THE TERM OF THIS PERMISSION, THE PARTIES HEREBY AGREE TO WORK TOGETHER TO SECURE FUNDING AND APPROVALS TO EFFECT SUCH IMPROVEMENTS.
6. THE PARTIES AGREE TO WORK TO SECURE FUNDING FOR APPROPRIATE AND NECESSARY ACCESS AND WATER TRAIL SIGNAGE.
7. OWNER MAY PLACE TEMPORARY RESTRICTIONS ON PARKING NEAR ACCESS DUE TO OWNER'S ONGOING BUSINESS NEEDS.

XREFS: Existing:Existing-GIS-Survey;Layout;Layout-HOP-Profiles-Utilities;Furniture;PG:EG-Lidar-Survey;EG:Floodplain;Z-Overall-Site
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Open Space Exhibit.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 100'
0' 100' 200'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

OPEN SPACE PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-15 OF 57

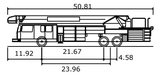
LEGEND

- ON STREET PARKING PERMITTED
- ON STREET PARKING PROHIBITED
- SNOW REMOVAL AREA

NOTES:
1. ALL LOCATIONS WHICH ARE NOTED TO PROHIBIT ON-STREET PARKING WILL BE MARKED WITH SITE SIGNAGE PROHIBITING PARKING AT ALL TIMES. (SEE SHEET LD-17 - LD-20).
2. ALL LOCATIONS WHICH ARE NOTED TO PERMIT ON-STREET PARKING WILL BE MARKED WITH SITE SIGNAGE PROHIBITING PARKING ONLY WHEN THERE IS SNOW ON THE ROAD TO ALLOW IT TO BE CLEARED.

VEHICLE LEGEND

- TIRES
- VEHICLE BODY
- FORWARD MOVEMENT
- REVERSE MOVEMENT



Fire Truck - Lower Allen	
Overall Length	50.810ft
Overall Width	9.880ft
Overall Body Height	10.761ft
Min Body Ground Clearance	1.312ft
Track Width	9.880ft
Lock-to-lock time	6.000s
Max Wheel Angle	40.00°

LISBURN ROAD
33.0' RIGHT-OF-WAY
25.5'+/- CARTWAY
66.7' RIGHT-OF-WAY
OLD FORGE ROAD
120.0' RIGHT-OF-WAY
25.5'+/- CARTWAY
60.0' RIGHT-OF-WAY
YELLOW BREECHES CREEK
CWF, MF
LOT 1
LISBURN ROAD
60.0' RIGHT-OF-WAY
Wetland 'F'
LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP
LOT 2
PROPOSED SIGN (TYP.)
PROPOSED LIGHT (TYP.)
PROPOSED TREE (TYP.)
EAGLE WAY
OAKMONT DRIVE
LINKS DRIVE
SNOW REMOVAL AREA (TYP.)
Wetland 'A'
Wetland 'B'
Wetland 'C'
Wetland 'D'
Wetland 'E'
Wetland 'G'
Wetland 'H'
Wetland 'I'
Wetland 'J'
Wetland 'K'
Wetland 'L'
Wetland 'M'
Wetland 'N'
Wetland 'O'
Wetland 'P'
Wetland 'Q'
Wetland 'R'
Wetland 'S'
Wetland 'T'
Wetland 'U'
Wetland 'V'
Wetland 'W'
Wetland 'X'
Wetland 'Y'
Wetland 'Z'
Wetland '1'
Wetland '2'
Wetland '3'
Wetland '4'
Brush

NO.	DATE	REVISION

SEAL

SEAL

CLIENT:
EG STOLTZFUS LAND LLC
471 MT. SIDNEY ROAD
LANCASTER PA, 17602
(717)-393-0212

0' 100' 200'
SCALE: 1" = 100'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

ON-STREET PARKING & FIRE TRUCK TURNING PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER RLA
SHEET NO.:	LD-16 OF 57

XREFS: Turning-Movements Existing Layout Landscape Profiles-Utilities Layout-HOP
PLOTTED: 6/22/2026 8:28 AM FILENAME: P:\2024\2024657-044\CADD\Final-PH1-Plot\2-Turning-Movements.dwg
SCRIPT:

SAFE SIGHT STOPPING DISTANCES

LOCATION SSSD- #	INTERSECTION	DIRECTION	GRADE (%)	SIGHT DISTANCES (FEET) REQUIRED:	ACTUAL:
1	LISBURN ROAD & OAKMONT DRIVE	TO THE LEFT	1	309'	500'+
		TO THE RIGHT	0	314'	500'+
3	OAKMONT DRIVE & EAGLE WAY	TO THE LEFT	6	139'	270'
		TO THE RIGHT	2	144'	260'

*ACTUAL SAFE SIGHT STOPPING DISTANCE LIMITED DUE TO PROXIMITY TO INTERSECTION OF OLD FORGE ROAD AND LISBURN ROAD

CENTERLINE CURVE DATA

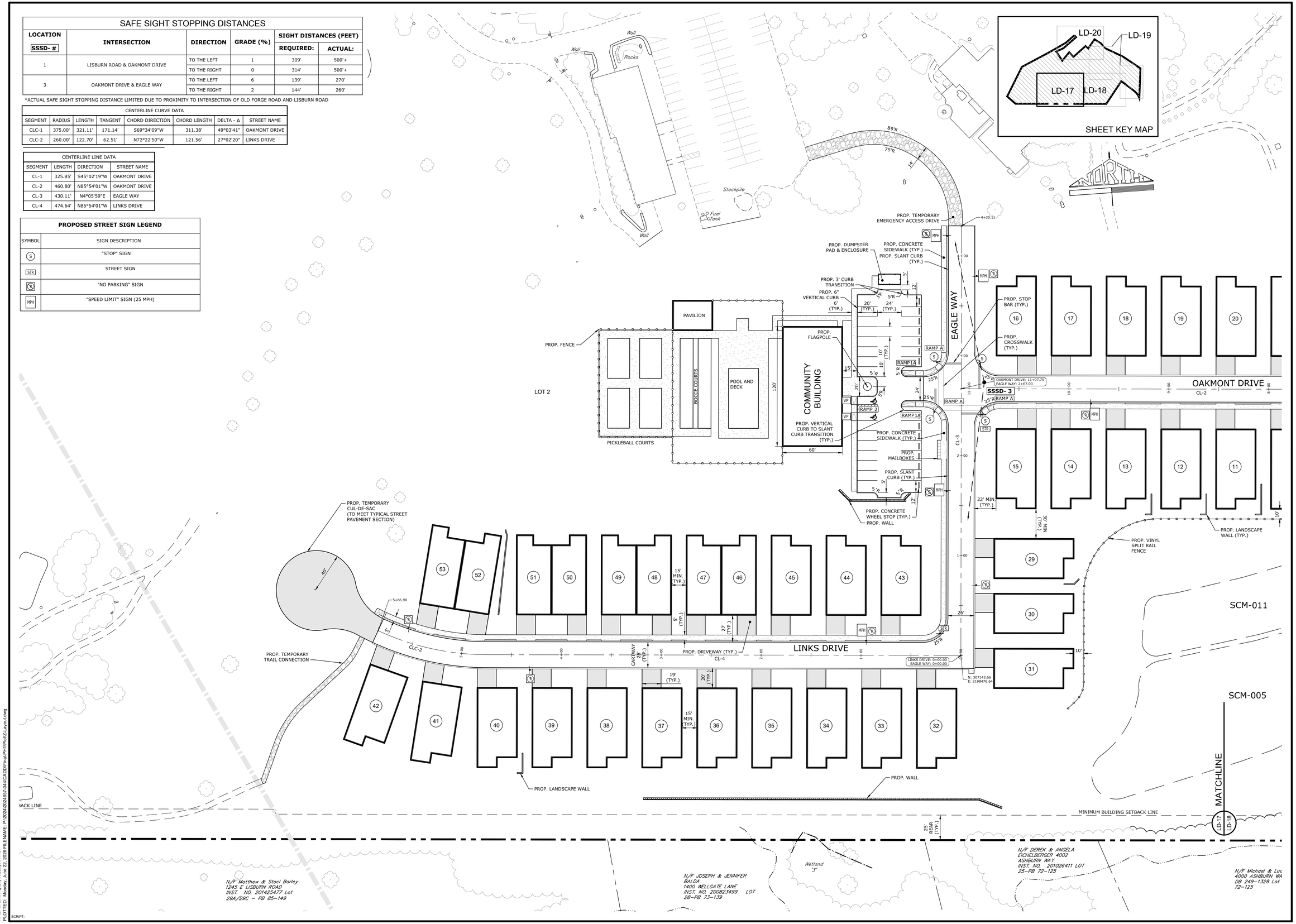
SEGMENT	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH	DELTA - Δ	STREET NAME
CLC-1	375.00'	321.11'	171.14'	S69°34'09"W	311.38'	49°03'41"	OAKMONT DRIVE
CLC-2	260.00'	122.70'	62.51'	N72°22'50"W	121.56'	27°02'20"	LINKS DRIVE

CENTERLINE LINE DATA

SEGMENT	LENGTH	DIRECTION	STREET NAME
CL-1	325.85'	S45°02'19"W	OAKMONT DRIVE
CL-2	460.80'	N85°54'01"W	OAKMONT DRIVE
CL-3	430.11'	N4°05'59"E	EAGLE WAY
CL-4	474.64'	N85°54'01"W	LINKS DRIVE

PROPOSED STREET SIGN LEGEND

SYMBOL	SIGN DESCRIPTION
S	"STOP" SIGN
STR	STREET SIGN
	"NO PARKING" SIGN
MPH	"SPEED LIMIT" SIGN (25 MPH)



NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLANS

LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA

LAYOUT PLAN

Land Planning
Landscape Architecture
Civil Engineering

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Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-17 OF 57

XREFS: ExistingLayout,Layout-HOP
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\Final-PH1\Plot\Z-Layout.dwg
SCRIPT:

MATCHLINE LD-19 A / LD-18

SCM-003

SCM-004

SCM-010

SCM-011

SCM-005

SSSD- 1

PROP. DEVELOPMENT ENTRANCE WALL/SIGN

PROP. CONCRETE MONUMENT

PROP. CONCRETE SIDEWALK (TYP.)
PROP. SLANT CURB (TYP.)
PROP. DRIVEWAY (TYP.)

PROP. WETLAND

PROP. BITUMINOUS TRAIL

PROP. IRON PIN (TYP.)

PROP. LANDSCAPE WALL (TYP.)

PROP. VINYL SPLIT RAIL FENCE

LISBURN ROAD

MINIMUM BUILDING SETBACK LINE

50.0' RIGHT-OF-WAY

40 MPH Sign

25.5'+/- CART MAX.

Curve Ahead Sign

OAKMONT DRIVE
CL-2

CLC-1

CARTWAY 26' (TYP.)

20' (TYP.)

19' (TYP.)

5' (TYP.)

15' MIN. (TYP.)

27' (TYP.)

10'

15' SIDE (TYP.)

Wetland 'A'

Wetland '7'

Iron Pipe O/S 15.38'

Wall

Steps

Pool

Brush

N/F Michael & Luann Brooks
4000 ASHBURN WAY
DB 249-1328 Lot 24-PB 72-125

N/F Kathy Acquaviva DB
4002 GLENFINNIAN PLACE
250-600 LOT 19-PB 72-125

N/F Augusto & Suzanne Delerme
4000 GLENFINNIAN PLACE
DB 249-3890
Lot 18-PB 72-125

N/F Larry & Marsha Shoop
4010 LISBURN ROAD
DB 34-E-752

MATCHLINE LD-17 / LD-18

MATCHLINE LD-18 / LD-19

NORTH

SHEET KEY MAP
LD-20 LD-19 LD-17 LD-18

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-18 OF 57

XREFS: Existing\Layout\Layout-HOP
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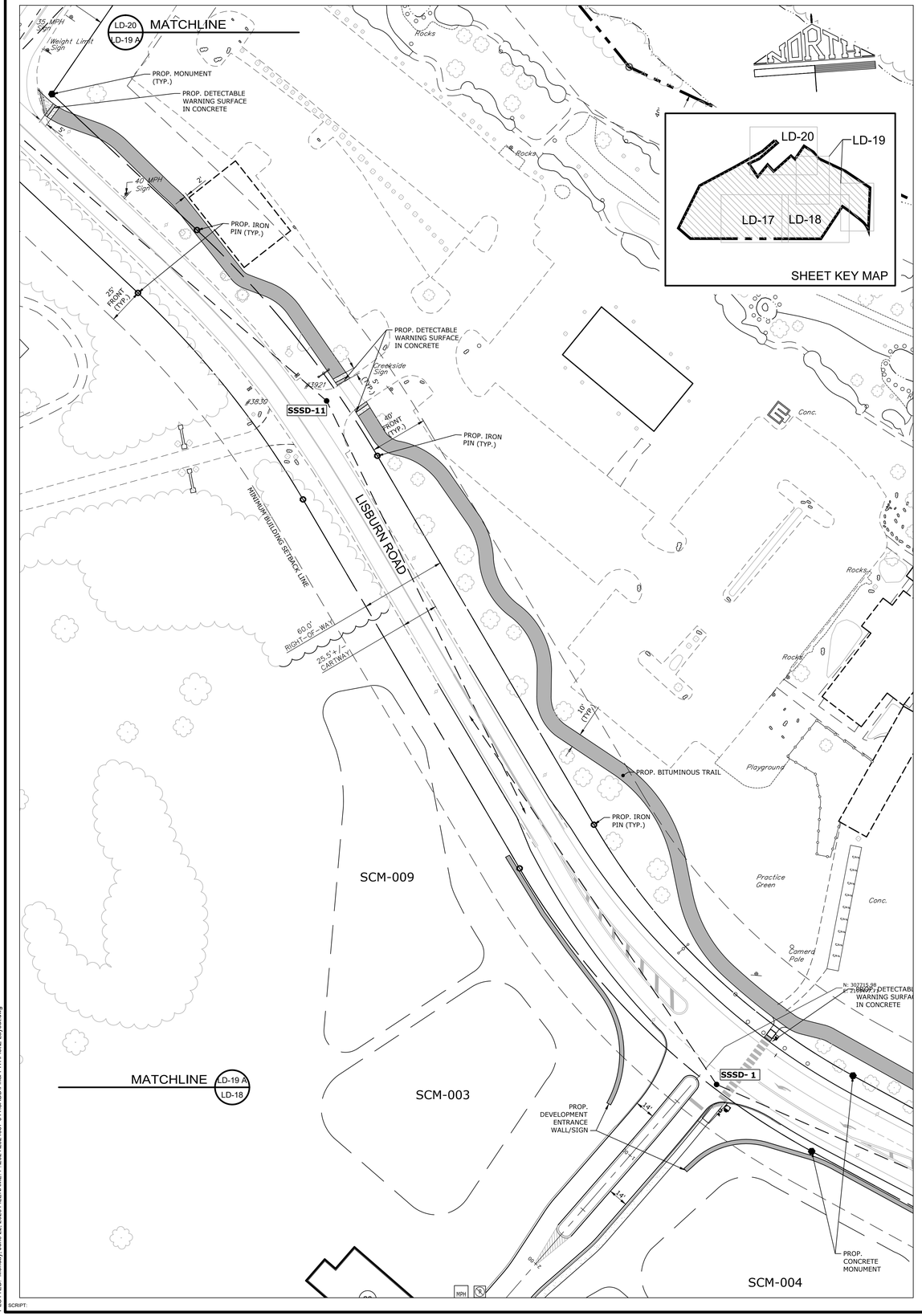

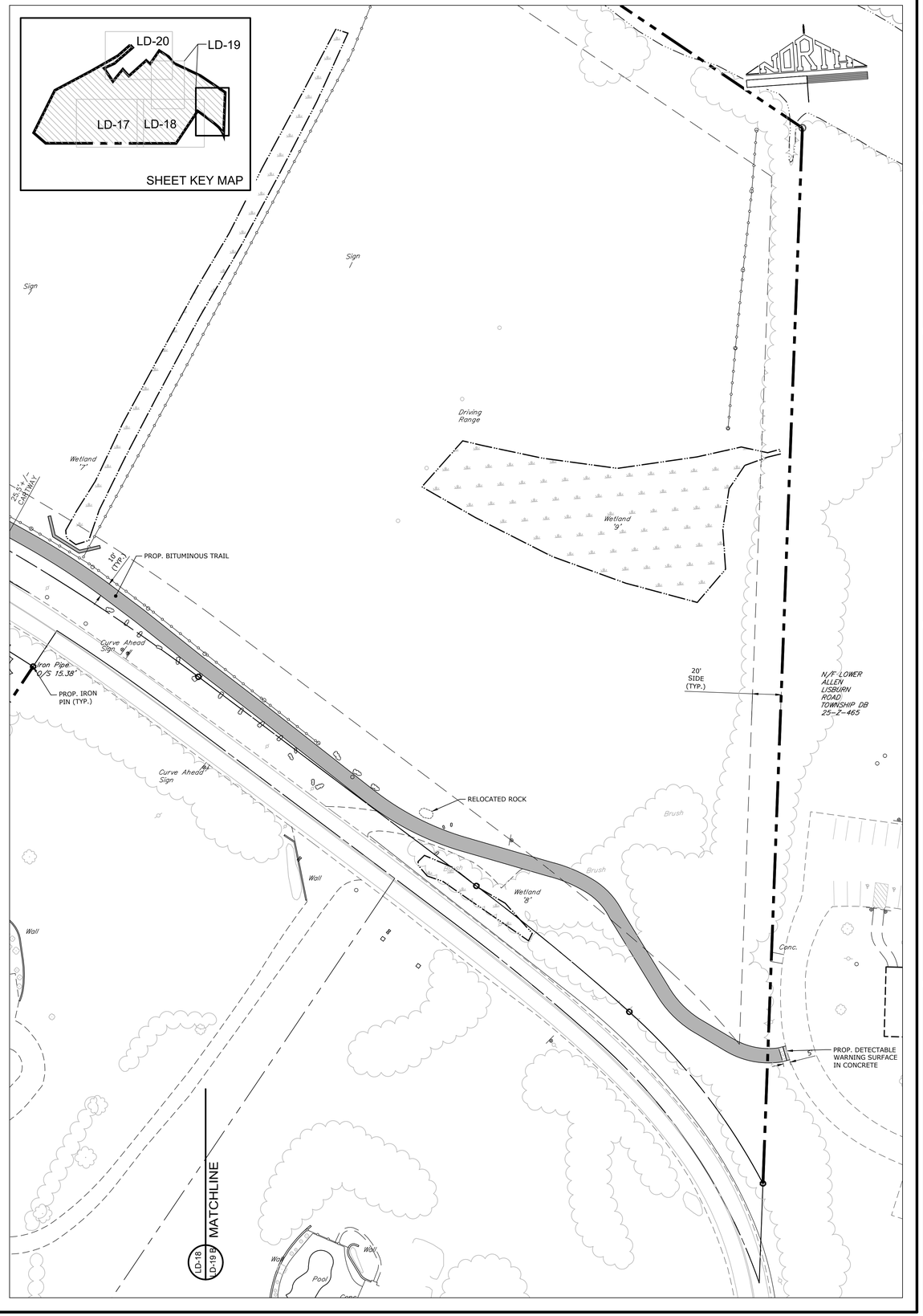

NO.	DATE	REVISION

SEAL

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EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

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LAYOUT PLAN

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DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-19 OF 57

XREFS: ExistingLayout;Layout-HOP
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\2-Layout.dwg
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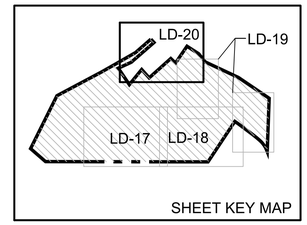

LISBURN ROAD
#1717
#1705
25.5'+/- CARTWAY 80.0' RIGHT-OF-WAY
#3712 3720 & 3716
#3704 3708
25' FRONT (TYP.)
22'-1"
46'-7" RIGHT-OF-WAY
N Intersection ahead Sign
Curve Ahead Sign
EMERGENCY ACCESS DRIVE
6" (TYP.)
30'
PROP. REMOVABLE BOLLARDS (TYP.)
Iron Pin Found
Steps
Steps
Rocks
Conc.
N/F JANEY GUNN
3800 LISBURN ROAD
DB 29-Y-624 Lot 3A
&
3B - PB 39-141
15' SIDE (TYP.)
Iron Pin Found
Approx. 8"
Lower Allen Twp. Sign
Height Limit Sign
No Passing Sign
120.0' RIGHT-OF-WAY
OLD FORGE ROAD
SSSD-12
Stop Sign
40' FRONT (TYP.)
#3817
25.5'+/- CARTWAY 80.0' RIGHT-OF-WAY
Bridge Ices Sign
Stop Sign
35 MPH Sign
Weight Limit Sign
LD-20
LD-19 A
MATCHLINE
PROP. MONUMENT (TYP.)
PROP. DETECTABLE WARNING SURFACE IN CONCRETE
5'
40 MPH Sign
PROP. IRON PIN (TYP.)
25' FRONT (TYP.)
PROP. DETECTABLE WARNING SURFACE IN CONCRETE
Creekside Sign
#1921
#3830
SSSD-11
40' FRONT (TYP.)
PROP. IRON PIN (TYP.)
Rocks
Rocks
Rocks
Rocks
Rocks
Rocks

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

LAYOUT PLAN

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Civil Engineering

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RGS ASSOCIATES

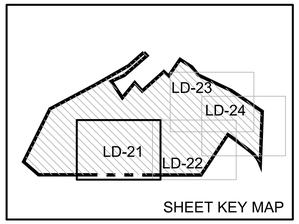
DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-20 OF 57

XREFS: ExistingLayout;LayoutHOP
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\Final-PH1\PlotZ-Layout.dwg
SCRIPT:

EASEMENT HATCH LEGEND

- PROPOSED STORM DRAINAGE EASEMENT*
- PROPOSED SANITARY SEWER EASEMENT
- PROPOSED ACCESS/UTILITY EASEMENT
- PROPOSED RIPARIAN BUFFER EASEMENT
- PROPOSED ACCESS/TRAIL EASEMENT

*A BLANKET STORMWATER EASEMENT IS PROVIDED FOR THE ENTIRE LOT 2.



LOT 2

PAVILION

COMMUNITY BUILDING

EAGLE WAY

OAKMONT DRIVE

LINKS DRIVE

AE-121
AE-122
AE-128
AE-120
AEC-118
AEC-101
AE-103
AE-104
AE-119
AEC-110
AEC-111
AE-105
AEC-109
AE-110
45' (TYP.)

PROP. ACCESS/UTILITY EASEMENT

PROP. ACCESS/UTILITY EASEMENT

16 17 18 19 20
15 14 13 12 11
53 52 51 50 49 48 47 46 45 44 43
29 30 31
42 41 40 39 38 37 36 35 34 33 32

SCM-011

SCM-005

MATCHLINE

LD-21 LD-22

LE-219 LE-220 LE-221 LE-222 LE-223 LE-224 LE-225 LE-226 LE-227 LE-228

N 86°54'01" W 2452.58'

Wetland 3

N/F Matthew & Staci Barley
1245 E LISBURN ROAD
INST. NO. 201425477 Lot
29A/29C - PB 85-149

N/F JOSEPH & JENNIFER BALDA
1400 WELLGATE LANE
INST. NO. 200823499 LOT
28-PB 73-139

N/F DEREK & ANGELA EICHELBERGER 4002 ASHBURN WAY
INST. NO. 201026411 LOT
25-PB 72-125

N/F Michael & Luc
4020 ASHBURN WA
DB 249-1328 Lot
72-125

XREFS: Existing\Layout\Layout-HOP.Easements
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\2-Easements.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

EASEMENTS PLAN

Land Planning
Landscape Architecture
Civil Engineering

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Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-21 OF 57

MATCHLINE LD-23 LD-22

SCM-003

SCM-004

SCM-010

SCM-011

SCM-005

MATCHLINE LD-21 LD-22

MATCHLINE LD-24 LD-23

LISBURN ROAD

OAKMONT DRIVE

STORM DRAINAGE EASEMENT P.O.B.

S54° 04' 36"E 60.89'

P.O.B. ACCESS EASEMENT

PROP. ACCESS/TRAIL EASEMENT

P.O.B. SANITARY SEWER EASEMENT

N45° 01' 41"E 28.55'

PROP. SANITARY SEWER EASEMENT

30' (TYP.)

60.0' RIGHT-OF-WAY

5.5'+/- R.TMIX.

Wetland

S9° 23' 34"E 42.86'

STORM DRAINAGE EASEMENT P.O.B.

N54° 52' 55"W 17.74'

Iron Pipe O/S 15.38'

P.O.B. RIPARIAN BUFFER EASEMENT

PROP. ACCESS/UTILITY EASEMENT

PROP. RIPARIAN BUFFER EASEMENT

Wetland

N/F Michael & Luann Brooks
4000 ASHBURN WAY
DB 249-1328 Lot 24-PB 72-125

N/F Kathy Acquaviva DB 4002 GLENFINNIAN PLACE 250-600 LOT 19-PB 72-125

N/F Augusto & Suzanne Delerme
4000 GLENFINNAN PLACE
DB 249-3590
Lot 18-PB 72-125

N/F Larry & Marsha Shoop
4010 LISBURN ROAD

EASEMENT HATCH LEGEND

- PROPOSED STORM DRAINAGE EASEMENT*
- PROPOSED SANITARY SEWER EASEMENT
- PROPOSED ACCESS/UTILITY EASEMENT
- PROPOSED RIPARIAN BUFFER EASEMENT
- PROPOSED ACCESS/TRAIL EASEMENT

*A BLANKET STORMWATER EASEMENT IS PROVIDED FOR THE ENTIRE LOT 2.

SHEET KEY MAP

LD-23 LD-24 LD-21 LD-22

NORTH

SCALE: 1" = 40'

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

CUMBERLAND COUNTY, PA

LOWER ALLEN & UPPER ALLEN TOWNSHIP

EASEMENTS PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-22 OF 57

XREFS: Existing\Layout\Layout-HOP.Easements
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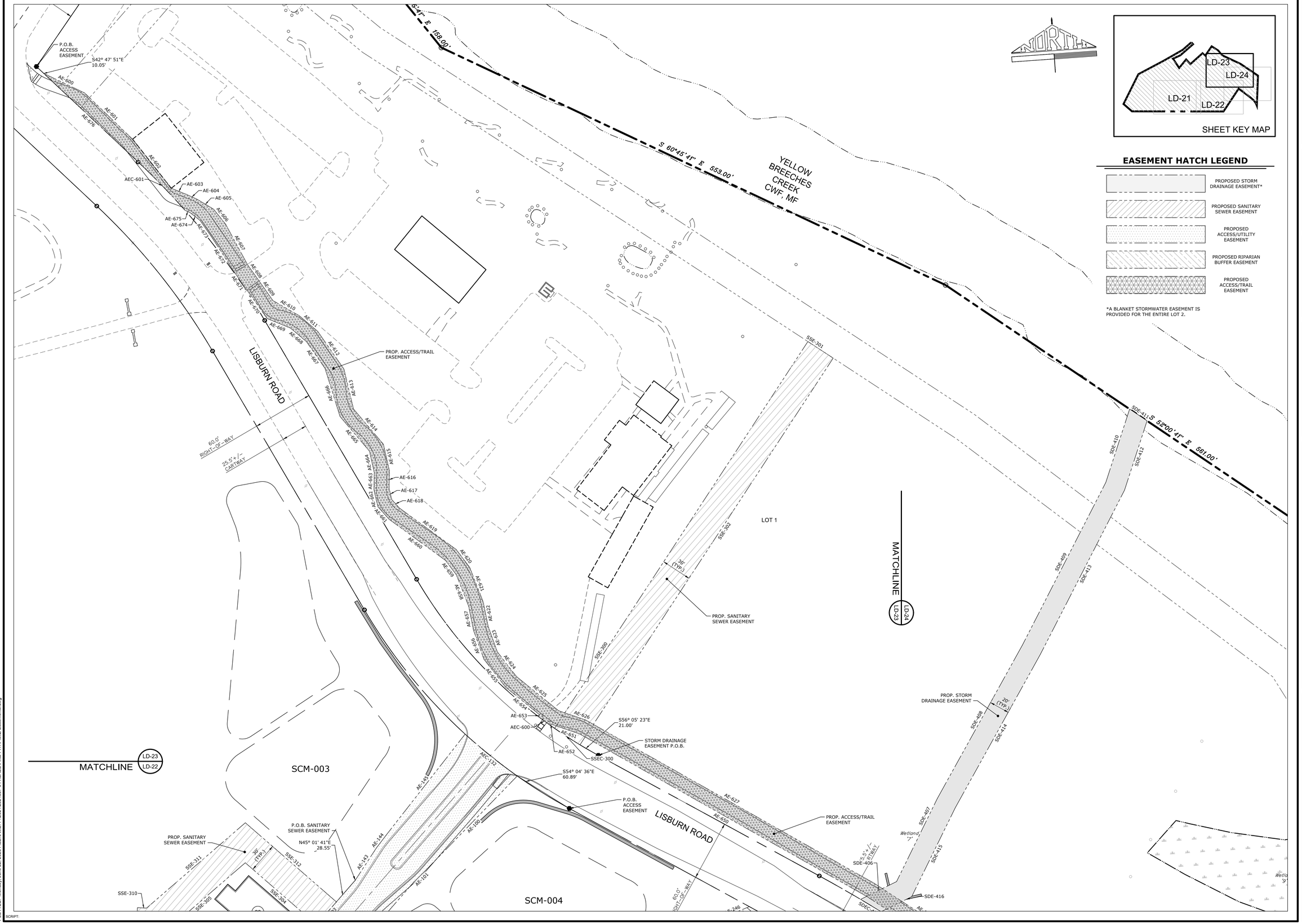

NO.	DATE	REVISION

SEAL

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CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 40'
0' 40' 80'

LIBERTY FORGE

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-23 OF 57

XREFS: Existing\Layout\Layout-HOP-Easements
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Easements.dwg
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LOT 1

MATCHLINE LD-23 / LD-24

MATCHLINE LD-22 / LD-24

SCM-004

LISBURN ROAD

60.0' RIGHT-OF-WAY

15.5' x 4' STAIRWAY

36' (TYP.)

PROP. SANITARY SEWER EASEMENT

PROP. STORM DRAINAGE EASEMENT

20' (TYP.)

PROP. ACCESS/TRAIL EASEMENT

PROP. RIPARIAN BUFFER EASEMENT

STORM DRAINAGE EASEMENT P.O.B.

P.O.B. ACCESS EASEMENT

P.O.B. RIPARIAN BUFFER EASEMENT

S56° 05' 23"E 21.00'

S54° 04' 36"E 60.89'

S9° 23' 34"E 42.86'

N54° 53' 55"W 17.74'

Iron Pipe O/S 15.38'

S 52°00'41" E 561.00'

N/F LOWER ALLEN LISBURN ROAD TOWNSHIP DB 25-2-465

Wetland 'A'

Wetland 'B'

Wetland 'C'

SSE-300 SSE-302 SSEC-300

SDE-400 SDE-402 SDE-403 SDE-404 SDE-405 SDE-406 SDE-407 SDE-408 SDE-409 SDE-410 SDE-411 SDE-412 SDE-413 SDE-414 SDE-415 SDE-416

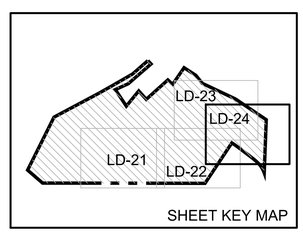
AE-624 AE-625 AE-626 AE-627 AE-628 AE-629 AE-630 AE-631 AE-632 AE-633 AE-634 AE-635 AE-636 AE-637 AE-638 AE-639 AE-640 AE-641 AE-642 AE-643 AE-644 AE-645 AE-646 AE-647 AE-648 AE-649 AE-650 AE-651 AE-652 AE-653 AEC-600

LE-200 LE-201 LE-202 LE-203 LE-204 LE-205 LE-206 LE-207 LE-208 LE-209 LE-243 LE-244 LE-245 LE-246 LE-247

EASEMENT HATCH LEGEND

- PROPOSED STORM DRAINAGE EASEMENT*
- PROPOSED SANITARY SEWER EASEMENT
- PROPOSED ACCESS/UTILITY EASEMENT
- PROPOSED RIPARIAN BUFFER EASEMENT
- PROPOSED ACCESS/TRAIL EASEMENT

*A BLANKET STORMWATER EASEMENT IS PROVIDED FOR THE ENTIRE LOT 2.



NORTH

NO.	DATE	REVISION

SEAL

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345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

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DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-24 OF 57

XREFS: Existing Layout, Layout-HOP, Easements
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\DF\Final-PH1\Plot\Z-Easements.dwg
SCRIPT:

RIPARIAN BUFFER EASEMENT LINE DATA		
LINE	BEARING	LENGTH
LE-201	S83°54'41"W	45.51'
LE-202	N87°27'59"W	49.91'
LE-203	S74°12'41"W	52.25'
LE-204	S47°17'14"W	68.26'
LE-205	S26°14'09"E	35.96'
LE-206	S02°03'51"E	28.30'
LE-207	S17°14'30"W	35.60'
LE-208	S40°16'19"W	53.02'
LE-209	S45°43'04"W	81.46'
LE-210	S42°23'26"W	40.04'
LE-211	S58°12'08"W	96.18'
LE-212	S72°59'46"W	59.46'
LE-213	S46°57'47"W	36.88'
LE-214	S52°13'02"W	37.12'
LE-215	S66°10'07"W	128.81'
LE-216	S74°31'34"W	130.63'
LE-217	N87°44'22"W	27.67'
LE-218	S31°55'50"W	9.27'
LE-219	N85°54'01"W	422.52'
LE-220	N23°58'46"E	10.39'

RIPARIAN BUFFER EASEMENT LINE DATA		
LINE	BEARING	LENGTH
LE-221	N75°53'18"E	31.65'
LE-222	N81°18'10"E	54.77'
LE-223	N86°11'26"E	30.92'
LE-224	N85°00'57"E	63.58'
LE-225	S73°43'07"E	17.18'
LE-226	N84°27'15"E	31.09'
LE-227	N82°19'25"E	18.78'
LE-228	N86°27'54"E	28.74'
LE-229	N84°16'50"E	39.30'
LE-230	N71°36'35"E	39.82'
LE-231	N31°55'50"E	32.82'
LE-232	S87°44'22"E	70.19'
LE-233	N74°31'34"E	105.67'
LE-234	N63°49'45"E	73.61'
LE-235	N06°37'51"E	40.45'
LE-236	N18°08'02"E	43.43'
LE-237	N39°30'13"E	33.23'
LE-238	N48°20'11"E	308.89'
LE-239	N54°29'00"E	15.08'
LE-240	N71°43'05"E	22.74'

RIPARIAN BUFFER EASEMENT LINE DATA		
LINE	BEARING	LENGTH
LE-241	S86°04'15"E	13.69'
LE-242	N47°22'55"E	106.01'
LE-243	N74°12'41"E	92.16'
LE-244	S87°27'59"E	58.49'
LE-245	N83°54'41"E	26.78'
LE-246	N71°08'24"E	32.37'
LE-247	S56°06'13"E	125.62'

STORM DRAINAGE EASEMENT LINE DATA		
LINE	BEARING	LENGTH
SDE-406	N67°44'20"E	39.79'
SDE-407	N30°08'08"E	91.98'
SDE-408	N33°01'49"E	174.02'
SDE-409	N31°09'15"E	181.39'
SDE-410	N21°59'43"E	76.45'
SDE-411	S52°00'41"E	20.81'
SDE-412	S21°59'43"W	72.32'
SDE-413	S31°09'15"W	183.32'
SDE-414	S33°01'49"W	173.84'
SDE-415	S30°08'08"W	98.28'
SDE-416	S67°44'20"W	33.77'

SANITARY SEWER EASEMENT LINE DATA		
LINE	BEARING	LENGTH
SSE-300	N37°13'38"E	458.79'
SSE-301	S52°46'22"E	30.00'
SSE-302	S37°13'38"W	458.68'
SSE-303	S45°01'41"W	30.00'
SSE-304	N44°58'19"W	93.71'
SSE-305	S53°11'48"W	115.70'
SSE-306	N82°57'35"W	21.04'
SSE-310	S82°57'35"E	8.96'
SSE-311	N53°11'48"E	129.62'
SSE-312	S44°58'19"E	119.71'
SSE-313	S07°02'25"W	30.00'

ACCESS/UTILITY EASEMENT LINE DATA		
LINE	BEARING	LENGTH
AE-100	S48°10'19"W	131.67'
AE-101	S49°16'49"W	15.82'
AE-102	S45°02'19"W	154.10'
AE-103	N85°54'01"W	420.80'
AE-104	S04°05'59"W	242.00'
AE-105	N85°54'01"W	494.64'
AE-118	N33°34'38"E	45.00'
AE-119	S85°54'01"E	429.64'
AE-120	N04°05'59"E	395.11'
AE-121	S85°54'01"E	45.00'
AE-122	S04°05'59"W	133.11'
AE-128	S85°54'01"E	420.80'
AE-129	N45°01'41"E	117.86'
AE-143	N37°12'56"E	37.91'
AE-144	N41°07'37"E	14.49'
AE-145	N42°01'44"E	129.06'

ACCESS/UTILITY EASEMENT LINE DATA						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
AEC-100	400.00'	342.51'	182.55'	49°03'41"	S69°34'09"W	332.14'
AEC-101	20.00'	31.42'	20.00'	90°00'00"	S49°05'59"W	28.28'
AEC-109	280.00'	144.05'	73.66'	29°28'38"	N71°09'41"W	142.47'
AEC-110	235.00'	120.90'	61.82'	29°28'38"	S71°09'41"E	119.57'
AEC-111	20.00'	31.42'	20.00'	90°00'00"	N49°05'59"E	28.28'
AEC-118	20.00'	31.42'	20.00'	90°00'00"	S40°54'01"E	28.28'
AEC-131	355.00'	303.98'	162.01'	49°03'41"	N69°34'09"E	294.78'
AEC-132	671.51'	66.39'	33.22'	5°39'53"	S47°11'38"E	66.36'

ACCESS/TRAIL EASEMENT LINE DATA		
LINE	BEARING	LENGTH
AE-600	S60°27'29"E	44.86'
AE-601	S42°00'34"E	66.07'
AE-602	S34°14'34"E	62.01'
AE-603	S63°53'56"E	16.44'
AE-604	S61°21'06"E	11.66'
AE-605	S54°58'41"E	18.85'
AE-606	S34°41'16"E	19.10'
AE-607	S24°24'51"E	45.81'
AE-608	S31°16'01"E	19.60'
AE-609	S31°16'01"E	23.90'
AE-610	S56°05'34"E	30.23'
AE-611	S45°38'52"E	23.93'
AE-612	S30°48'32"E	45.67'
AE-613	S09°25'38"E	40.71'
AE-614	S36°18'19"E	45.82'
AE-615	S08°42'45"E	26.93'
AE-616	S04°52'27"W	17.72'
AE-617	S09°23'43"E	11.20'
AE-618	S37°56'03"E	11.36'
AE-619	S49°52'44"E	69.77'

ACCESS/TRAIL EASEMENT LINE DATA		
LINE	BEARING	LENGTH
AE-620	S33°00'57"E	22.15'
AE-621	S17°22'59"E	36.85'
AE-622	S07°24'26"E	24.77'
AE-623	S15°45'08"E	26.85'
AE-624	S33°46'13"E	31.05'
AE-625	S46°55'43"E	53.85'
AE-626	S67°03'24"E	28.47'
AE-627	S56°28'27"E	328.84'
AE-628	S52°55'11"E	68.34'
AE-629	S47°44'35"E	131.08'
AE-630	S48°59'10"E	139.89'
AE-631	S69°37'35"E	97.63'
AE-632	S62°48'53"E	29.22'
AE-633	S38°44'02"E	28.90'
AE-634	S25°56'29"E	57.72'
AE-635	S31°30'13"E	26.62'
AE-636	S59°06'39"E	53.89'
AE-637	N87°08'51"E	7.78'
AE-638	S06°09'19"W	15.19'
AE-639	S87°08'51"W	9.95'

ACCESS/TRAIL EASEMENT LINE DATA		
LINE	BEARING	LENGTH
AE-640	N59°06'39"W	54.10'
AE-641	N57°36'58"W	14.58'
AE-642	N32°05'55"W	25.47'
AE-643	N23°01'31"W	57.09'
AE-644	N38°44'02"W	23.63'
AE-645	N62°48'53"W	25.13'
AE-646	N69°37'35"W	95.95'
AE-647	N49°02'09"W	195.34'
AE-648	N47°44'35"W	81.29'
AE-649	N52°55'11"W	67.20'
AE-650	N56°28'27"W	326.99'
AE-651	N67°03'24"W	29.62'
AE-652	S39°52'41"W	1.47'
AE-653	N39°52'41"E	2.13'
AE-654	N46°55'43"W	43.33'
AE-655	N33°46'13"W	35.16'
AE-656	N15°45'08"W	30.33'
AE-657	N07°24'26"W	24.55'
AE-658	N17°22'59"W	33.48'
AE-659	N33°00'57"W	17.87'

ACCESS/TRAIL EASEMENT LINE DATA		
LINE	BEARING	LENGTH
AE-660	N49°52'44"W	69.12'
AE-661	N37°56'03"W	16.74'
AE-662	N09°23'43"W	16.90'
AE-663	N04°52'27"E	17.81'
AE-664	N08°42'45"W	21.46'
AE-665	N36°18'19"W	45.19'
AE-666	N13°19'16"W	50.14'
AE-667	N30°48'32"W	32.21'
AE-668	N45°38'52"W	20.60'
AE-669	N63°38'22"W	25.22'
AE-670	N31°16'01"W	35.09'
AE-671	N30°58'48"W	21.39'
AE-672	N28°58'20"W	41.83'
AE-673	N30°54'15"W	19.63'
AE-674	N48°02'41"W	12.32'
AE-675	N61°21'06"W	5.63'
AE-676	N42°47'51"W	128.36'
AE-677	S13°00'24"E	15.24'
AE-678	S87°08'51"W	16.67'
AE-679	N87°08'51"E	11.61'

ACCESS/UTILITY EASEMENT LINE DATA						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
AEC-600	470.00'	15.00'	7.50'	1°49'43"	N49°37'06"W	15.00'
AEC-601	708.98'	66.90'	33.47'	5°24'23"	N40°04'44"W	66.87'

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY, PA

EASEMENTS DESCRIPTIONS

Land Planning
Landscape Architecture
Civil Engineering

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RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.:
LD-25 OF 57

XREFS: Existing1,ayout,Layout1,HOP,Easements
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Easements.dwg
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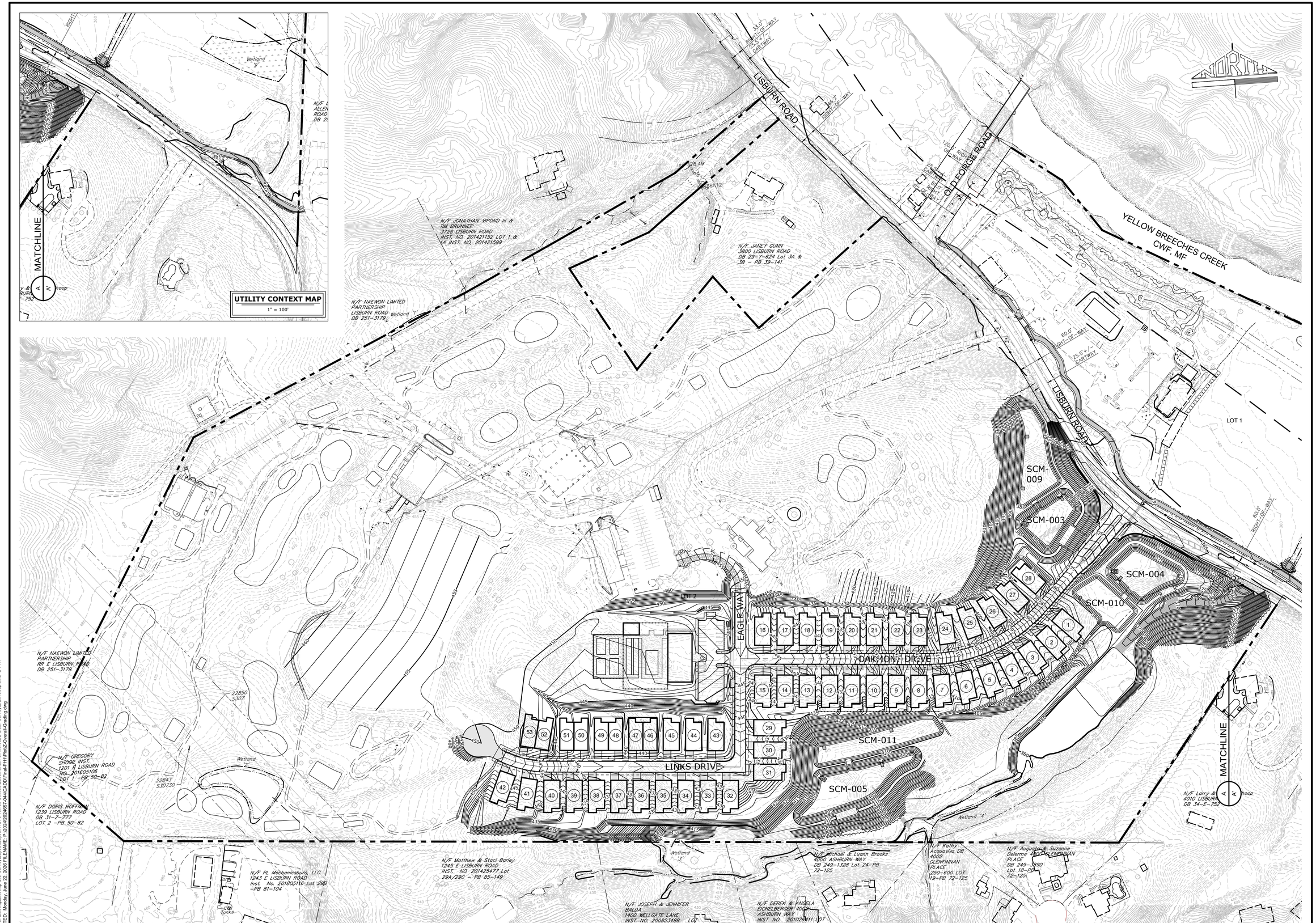

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SEAL

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CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: 1" = 100'
0' 100' 200'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

OVERALL GRADING PLAN

Land Planning
Landscape Architecture
Civil Engineering

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Suite 101, Lancaster, PA 17603
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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-26 OF 57

XREFS: Existing;Existing-GIS-Survey;Layout;Layout-HOP;Profiles-Utilities Easements;Furniture;EG-Lidar-Survey;EG-Floodplain-FG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Overall-Grading.dwg
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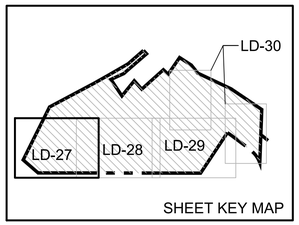

NORTH

N/F NAEWON LIMITED PARTNERSHIP
RR 6 LISBURN ROAD
DB 251-3179

N/F GREGORY SHOOP INST. 1201 E LISBURN ROAD NO. 201605106 LOT 1 -PB 50-82

N/F DORIS HOFFMAN 1239 LISBURN ROAD DB 31-2-777 LOT 2 -PB 50-82

PROP. TEMPORARY TRAIL CONNECTION

22850
S307

22843
S30730

Rip-Rap

Wetland

End of Pipe Not Found

12" RCPE

Inv 467.09

Inv 451.48

Wall

Stockpile

Debris

N/F RL Mechanicsburg, LLC 1243 E LISBURN ROAD Inst. No. 201805116 Lot 29B -PB 81-104

Drain

Roof Drain

Rocks

N/F Matthew & Staci Barley 1245 E LISBURN ROAD INST. NO. 201425477 Lot 29A/29C - PB 85-149

LD-27 LD-28 MATCHLINE

CHANNEL 6-B

NO.	DATE	REVISION

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EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
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SCALE: AS NOTED

LIBERTY FORGE

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GRADING PLAN

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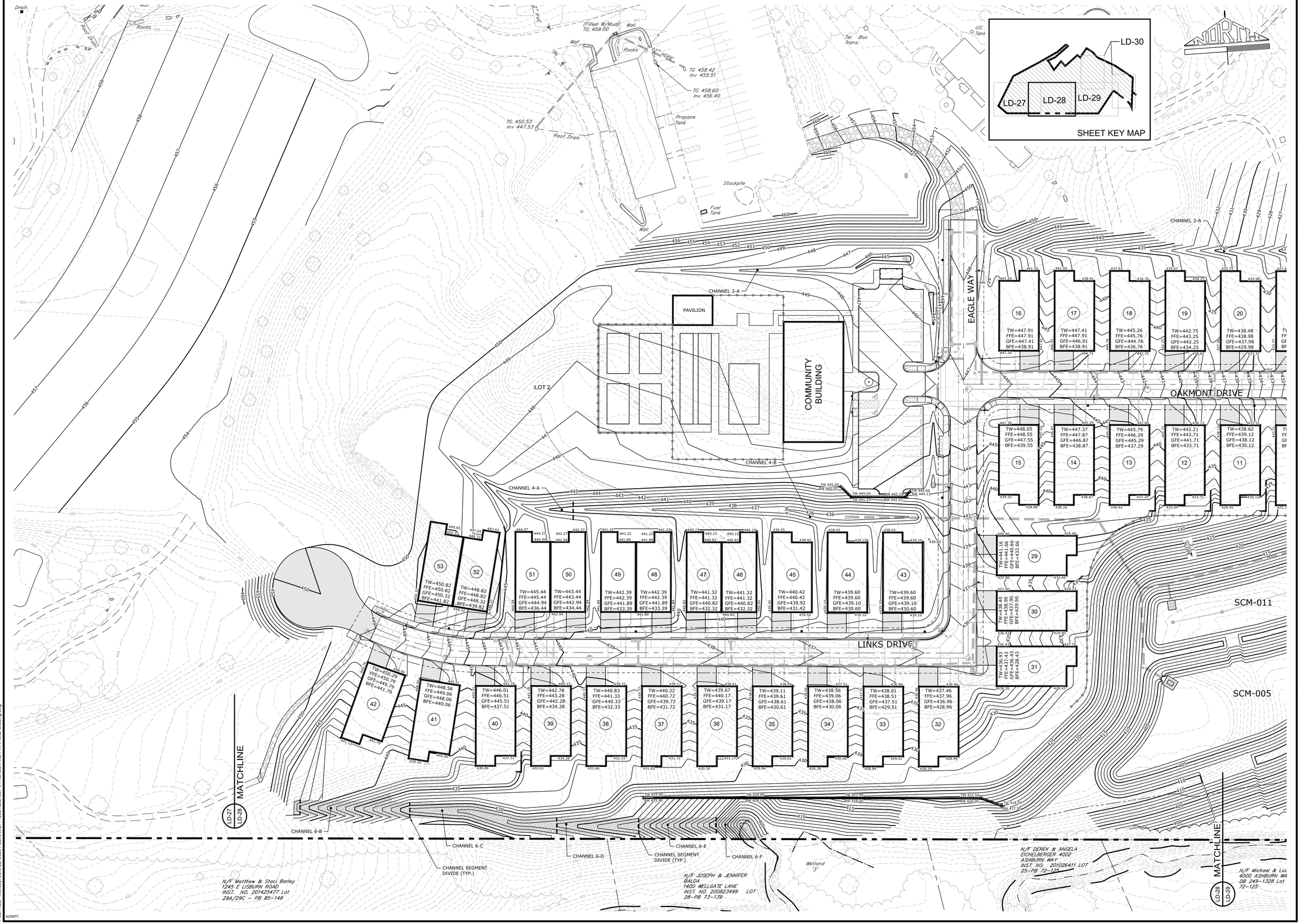
DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-27 OF 57

XREFS: Existing\Layout\Layout-HOP-Profiles-Utilities-Easements-EG-Lidar-Survey-EG-Floodplain-PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Grading.dwg
SCRIPT:



XREFS: Existing\Layout\Layout-HOP-Profiles-Utilities Easements; EG-Lidar-Survey; EG Floodplain PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\PlotCZ-Grading.dwg
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0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

GRADING PLAN

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-28 OF 57

NORTH

MATCHLINE LD-30 A / LD-29

SCM-003

SCM-004

SCM-010

SCM-011

SCM-005

LISBURN ROAD

OAKMONT DRIVE

CHANNEL 2-A

CHANNEL SEGMENT DIVIDE (TYP.)

CHANNEL 2-C

CHANNEL 2-B

CHANNEL 1-C

CHANNEL 1-B CHANNEL SEGMENT DIVIDE (TYP.)

CHANNEL 1-A

CHANNEL 12A

Wetland 'A'

Wetland 'B'

Wetland 'C'

Brush

Wall

Steps

Pool

Roof

Deck

Shed

25.5'± CART PATH

2312R 530747

N/F Larry & Marsha Shoop
4010 LISBURN ROAD
DB 34-E-752

N/F Michael & Luann Brooks
4000 ASHBURN WAY
DB 249-1328 Lot 24-PB 72-125

N/F Kathy Acquaviva DB
4002 GLENFINNAN PLACE
250-600 LOT 19-PB 72-125

N/F Augusto & Suzanne Delerme
4000 GLENFINNAN PLACE
DB 249-3890
Lot 18-PB 72-125

MATCHLINE LD-28 / LD-29

MATCHLINE LD-29 / LD-30

	TW	FFE	GFE	BFE
1	380.68	381.18	380.68	380.68
2	394.19	394.69	393.69	393.69
3	398.98	399.48	389.48	390.48
4	403.95	404.45	403.45	395.45
5	408.91	409.41	408.41	400.41
6	413.87	414.37	413.37	405.37
7	418.84	419.34	418.34	410.34
8	423.40	423.90	422.90	414.90
9	428.59	429.09	428.09	420.09
10	434.01	434.01	433.51	425.01
11	438.62	439.12	438.12	430.12
12	442.21	442.71	441.71	433.71
19	435.67	443.25	442.25	434.25
20	432.75	438.98	437.98	429.98
21	427.87	434.37	433.37	425.37
22	423.28	428.95	427.95	419.95
23	417.28	423.45	422.45	414.45
24	410.67	415.89	414.89	406.89
25	406.89	408.39	407.89	399.89
26	401.03	401.53	400.53	392.53
27	393.08	393.58	392.58	385.58
28	386.51	387.01	386.01	377.51

SHEET KEY MAP

LD-27 LD-28 LD-29 LD-30

XREFS: Existing\Layout\Layout-HOP-Profiles-Utilities-Easements-EG-Lidar-Survey-EG-Floodplain-PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Grading.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

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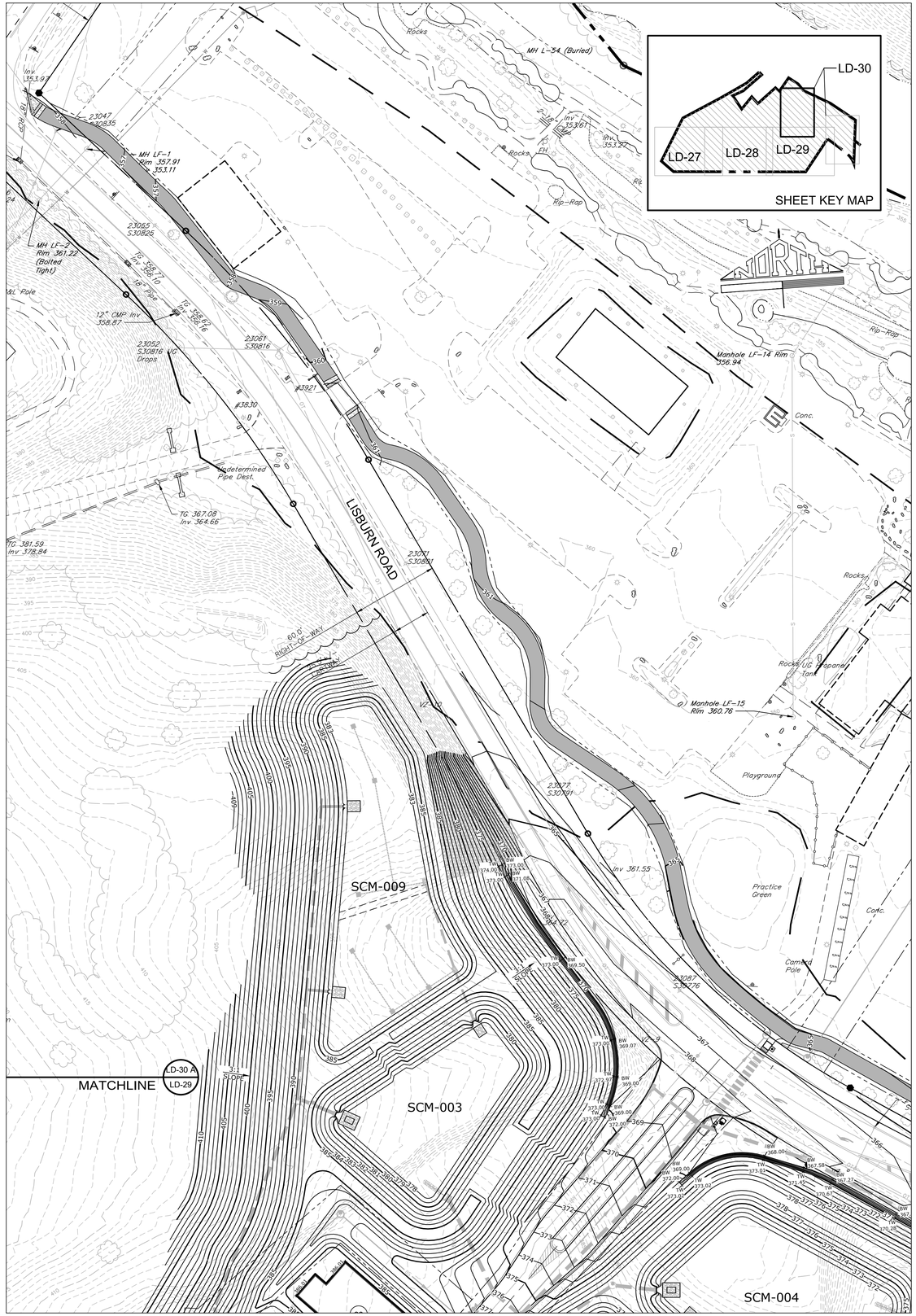

XREFS: Existing Layout,Layout-HOP,Profiles-Utilities,Easements,EG-Lidar-Survey,EG Floodplain,PG-PH1
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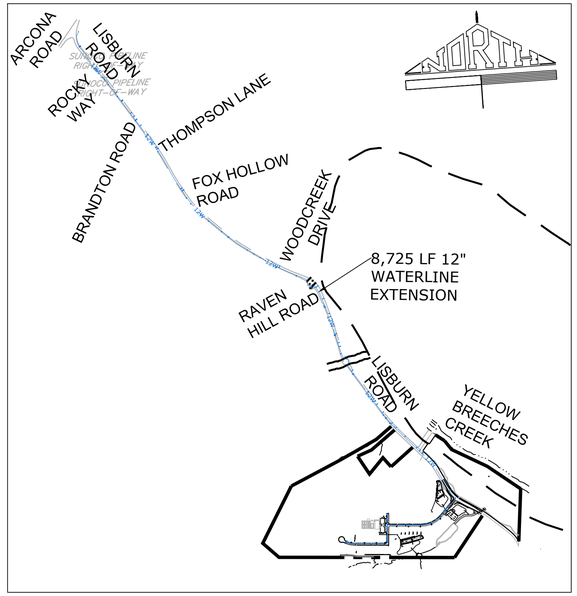

UTILITY CONTEXT MAP
1" = 1000'

LISBURN ROAD
OLD FORGE ROAD
YELLOW BREECHES CREEK
CWF, MF
LISBURN ROAD
SCM-009
SCM-003
SCM-004
SCM-010
SCM-011
SCM-005
LOT 1
LOT 2
PROP. FIRE HYDRANT
EAGLE WAY
OAKMONT DRIVE
LINKS DRIVE
LOWER ALLEN TOWNSHIP
UPPER ALLEN TOWNSHIP
Wetland '2'
Wetland '3'
Wetland '4'
Wetland '7'
15' (TYP.)
324'
549'
521'

XREFS: Existing:Existing-GIS-Survey\Layout:Profiles-Utilities&Easements-Floodplain\Layout-HOP Profiles-Utilities-Water
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-Overall-Utility.dwg
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SCALE: 1" = 100'
0' 100' 200'

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OVERAL UTILITY PLAN

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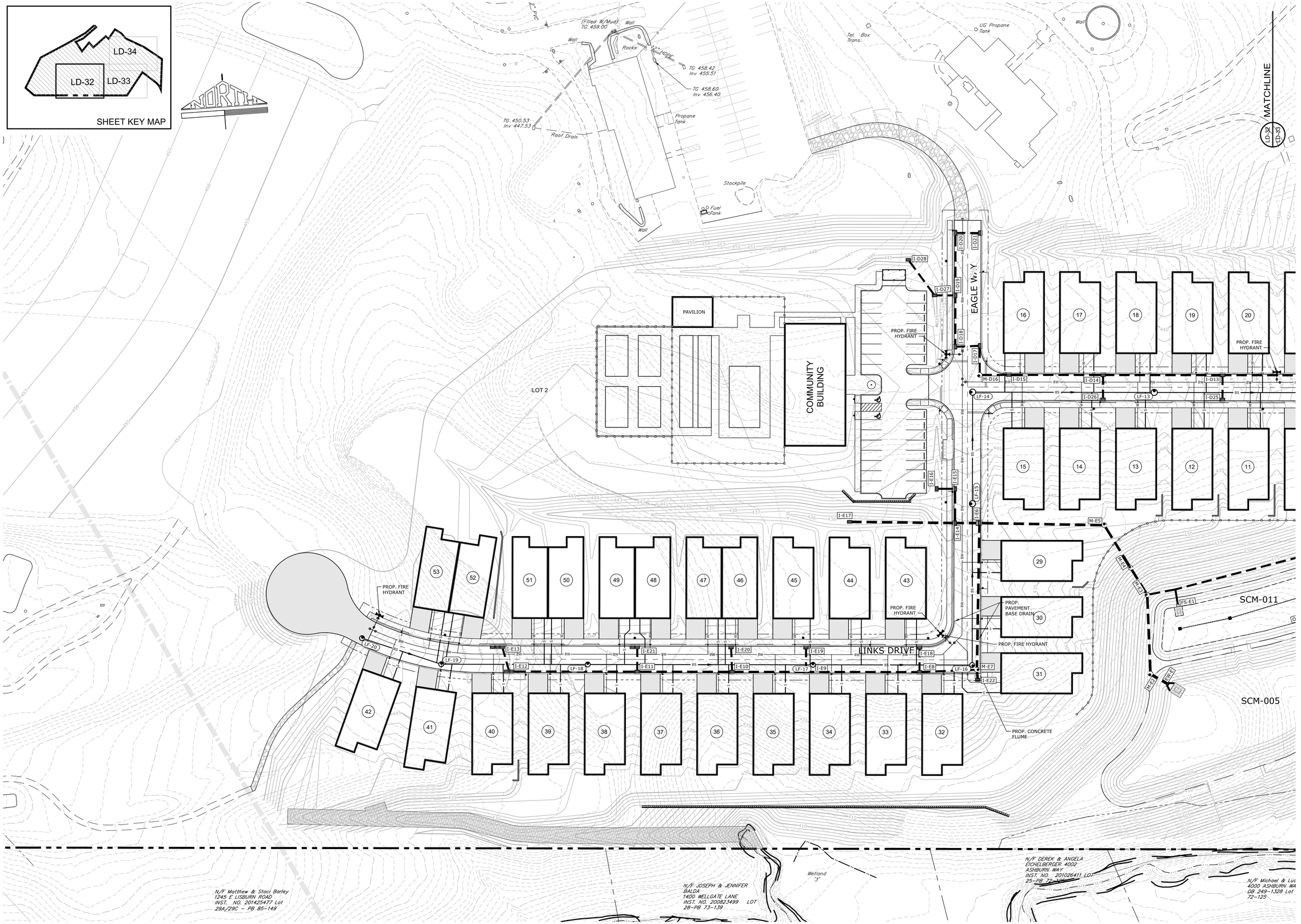
SHEET NO.:	LD-31 OF 57



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SHEET NO.:	LD-32 OF 57

XREFS: Existing:Existing-GIS-Survey\Layout\Profiles-Utilities-Easements-Floodplain-EG-Layout-HOP-PG-PH1
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SCRIPT:

MATCHLINE LD-32 LD-33

MATCHLINE LD-34 LD-33

SCM-003

SCM-004

SCM-010

SCM-011

SCM-005

RAILWAY DRIVE

LISBURN ROAD

OAKMONT DRIVE

UTILITY POLE TO BE RELOCATED

UTILITY POLE TO BE RELOCATED

PROVIDE TEMPORARY BLOCKING FOR OPEN CONNECTION

PROVIDE TEMPORARY BLOCKING FOR OPEN CONNECTION AND SEAL PER AUTHORITY REQUIREMENTS

PROP. FIRE HYDRANT

PROP. FIRE HYDRANT

Wetland "A"

Wetland "4"

Wall

Steps

Pool

N/F Larry & Marsha Shoop
4010 LISBURN ROAD
DB 34-E-752

N/F Michael & Luann Brooks
4000 ASHBURN WAY
DB 249-1328 Lot 24-PB
72-125

N/F Kathy Acquaviva DB
4002 GLENFINNAN PLACE
250-600 LOT 19-PB 72-125

N/F Augusto & Suzanne Delerme
4000 GLENFINNAN PLACE
DB 249-3890
Lot 18-PB
72-125

NORTH

SHEET KEY MAP

LD-34
LD-32
LD-33

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SHEET NO.:	LD-33 OF 57

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MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-34 OF 57

LANDSCAPE CONTRACTOR NOTES:

A. GENERAL PLANTING NOTES:

1. CONTRACTOR SHALL CONTACT PA ONE CALL (8-1-1), AND SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT AREA PRIOR TO INSTALLATION OF PLANT MATERIALS.
2. THE LANDSCAPE CONTRACTOR SHALL LOCATE AND VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY PLANTING, AND SHALL FIELD-ADJUST THE LOCATIONS OF TREES AND SHRUBS, IF NECESSARY, TO AVOID ANY CONFLICT WITH THESE UTILITIES. **CONTACT THE LANDSCAPE ARCHITECT FOR APPROVAL OF ANY PROPOSED DESIGN CHANGES.**
3. THIS PLAN IS FOR PLANTING INFORMATION ONLY. REFER TO GRADING, UTILITY, SITE LAYOUT AND SEDIMENT EROSION CONTROL PLANS FOR ALL RELATED INFORMATION.
4. ALL PLANTS AND SHRUBS SHALL BE AS SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE DETAILS AND COMMENTS NOTED ON THESE DRAWINGS.
5. **ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OR REJECTION BY THE LANDSCAPE ARCHITECT OR THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.** PLANT MATERIALS INSTALLED WITHOUT PRIOR APPROVAL ARE SUBJECT TO REPLACEMENT BY THE CONTRACTOR AT HIS/HER EXPENSE IF DETERMINED TO BE UNSATISFACTORY. REJECTED PLANT MATERIALS SHALL BE REMOVED IMMEDIATELY FROM THE PROJECT SITE.
6. PROPOSED LOCATIONS OF ALL NON-HERBACEOUS PLANT MATERIALS AND PLANTING BED OUTLINES SHALL BE STAKED AND OUTLINED IN THE FIELD BY THE **CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT** OR OWNER'S REPRESENTATIVE PRIOR TO PLANTING.
7. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS, AND SHALL REPORT ANY IDENTIFIED DISCREPANCIES TO THE LANDSCAPE ARCHITECT. IF SITE WORK HAS BEEN MODIFIED AND DIFFERS FROM INFORMATION SHOWN ON THE APPROVED PLANS, AND POTENTIAL CHANGES TO THE PLANTING DESIGN ARE NECESSARY, THE CONTRACTOR **SHALL CONTACT THE LANDSCAPE ARCHITECT FOR INSTRUCTIONS.**
8. PROCEED WITH WORK ONLY WHEN PRESENT AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING WITHOUT EXCESSIVE SOIL COMPACTION AND/OR UNNECESSARY PLANT DAMAGE.
9. PLANT TREES, SHRUBS, AND OTHER PLANT MATERIALS AFTER FINISHED GRADES ARE ESTABLISHED, AND BEFORE PLANTING ANY TURF AREAS UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR SHALL INSPECT ALL PLANTING AREAS BEFORE ANY TOPSOIL IS PLACED OR PLANTING BEGINS TO ENSURE ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE PLANTED SHOW EVIDENCE OF POOR DRAINAGE, THE CONTRACTOR **SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY FOR CORRECTIVE ACTION.** ANY PLANT MATERIAL THAT DIES DUE TO POOR OR INADEQUATE DRAINAGE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
11. REMOVE ANY EXCESS SOIL FROM PLANT ROOT FLARES, IF PRESENT.
12. LANDSCAPE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN WORKING IN AREAS OF EXISTING VEGETATION THAT IS TO REMAIN AND TO BE PROTECTED. IF SUCH VEGETATION IS INJURED OR DESTROYED DURING CONSTRUCTION, IT SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR WITH PLANTS OF A SIZE AND SPECIES **AS DETERMINED BY THE LANDSCAPE ARCHITECT,** AND SUCH REPLACEMENT SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
13. PLANT QUANTITIES NOTED ON THE PLANT LIST SHOULD MATCH THE PLANT SYMBOLS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL PROVIDE AND INSTALL ALL PLANT MATERIAL BASED UPON GRAPHIC SYMBOL QUANTITIES AND **SHALL CONTACT THE LANDSCAPE ARCHITECT** IF A DIFFERENCE IS FOUND BETWEEN THE QUANTITIES NOTED IN THE PLANT LIST AND THE DRAWING SYMBOLS.
14. ALL AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE, AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

B. PLANT STANDARDS

1. ALL TREES SHALL HAVE BEEN NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE FINAL PLANTING SITE.
2. ALL PLANTS SHALL HAVE A NORMAL GROWTH HABIT AND SHALL BE SOUND, HEALTHY, AND VIGOROUS. THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
3. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE.
4. REQUIREMENTS FOR PLANT MEASUREMENTS, BRANCHING, GRADING, QUALITY, AND BALLING AND BURLAPPING SHALL FOLLOW THE CODE OF STANDARDS AS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1, CURRENT EDITION, AS AMENDED. DO NOT PRUNE TO ATTAIN REQUIRED SIZES.
5. IF FORMAL PLANTING ARRANGEMENTS OR A CONSISTENT ORDER OF PLANTS IS INDICATED ON THE DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.
6. ALL STREET TREES AND SCREENING PLANT MATERIALS SHALL BE INSTALLED DURING THE FIRST PLANTING SEASON FOLLOWING COMPLETION OF OTHER SITE WORK.
7. THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS PRIOR TO THE BEGINNING OF THE GUARANTEE PERIOD BY WATERING, FERTILIZING, DISEASE CONTROL, PRUNING, AND WEEDING TO KEEP THE COMPLETED WORK AND/OR UNCOMPLETED WORK IN A CLEAN AND NEAT CONDITION AT ALL TIMES.

C. PLANT GUARANTEE:

1. ALL MATERIAL SHALL BE GUARANTEED BY INSTALLER FOR THE DURATION OF 12 MONTHS FOLLOWING FINAL INSPECTION AND ACCEPTANCE OF THE WORK. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.
2. THE CONTRACTOR SHALL GUARANTEE THAT PLANTS SHALL BE IN VIGOROUS AND THRIVING CONDITION AT THE END OF THE GUARANTEE PERIOD. SHOULD ANY PLANTS APPEAR TO BE IN POOR HEALTH OR LACK NORMAL GROWTH HABIT, AS DETERMINED BY THE LANDSCAPE ARCHITECT, THEY SHALL BE REMOVED AT ONCE AND REPLACED.
3. DURING THE TIME BETWEEN THE INSTALLATION OF PLANTS AND THE BEGINNING OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SUPERINTENDENCE OF THE PLANTINGS. SHOULD ANY PLANT BE STOLEN OR OTHERWISE REMOVED, ANY SUCH PLANT SHALL BE REPLACED BY THE CONTRACTOR. THE GUARANTEE PERIOD WILL BEGIN WHEN ALL PLANTS ARE INSTALLED AS SHOWN AND SPECIFIED IN THESE PLANS.
4. WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY MAINTENANCE PRACTICES BEING FOLLOWED OR OMITTED WHICH WOULD BE DETRIMENTAL TO THE HEALTHY VIGOROUS GROWING CONDITIONS OF PLANTS.
5. INSPECTION TO DETERMINE WORK COMPLETION FOR BEGINNING THE ONE-YEAR GUARANTEE PERIOD WILL BE MADE BY THE OWNER AND LANDSCAPE ARCHITECT UPON WRITTEN NOTICE REQUESTING SUCH INSPECTION SUBMITTED BY THE CONTRACTOR AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE ANTICIPATED INSPECTION DATE.
6. AFTER INSPECTION, THE CONTRACTOR WILL BE NOTIFIED OF ANY DEFICIENCIES TO BE CORRECTED.
7. IF DEFICIENCIES ARE NOTED, A SECOND INSPECTION TO DETERMINE WORK COMPLETION FOR BEGINNING THE ONE-YEAR GUARANTEE PERIOD WILL BE MADE BY THE OWNER AND LANDSCAPE ARCHITECT UPON WRITTEN NOTICE REQUESTING SUCH INSPECTION SUBMITTED BY THE CONTRACTOR AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE ANTICIPATED INSPECTION DATE.
8. ONCE ANY AND ALL DEFICIENCIES ARE ADDRESSED, THE CONTRACTOR WILL BE NOTIFIED OF THE DATE THAT THE WORK HAS BEEN APPROVED FOR BEGINNING THE GUARANTEE PERIOD.
9. ONE-YEAR FROM THE FROM THE START OF THE PLANT GUARANTEE PERIOD, THE CONTRACTOR, OWNER AND LANDSCAPE ARCHITECT WILL INSPECT THE SITE TO LOCATE ANY PLANTS THAT ARE NOT IN A VIGOROUS AND THRIVING CONDITION. A SITE INSPECTION REPORT WILL BE ISSUED TO THE CONTRACTOR. THE CONTRACTOR WILL HAVE 30 DAYS TO REPLACE ANY PLANTS IDENTIFIED AS FAILING THE GUARANTEE STANDARD.

D. SOIL PREPARATION:

1. NOTES IN THIS SECTION APPLY TO ALL PLANTING AREAS OTHER THAN LANDSCAPED PCSM BMPS. SOIL PREPARATION REQUIREMENTS FOR PCSM BMPS CAN BE FOUND ON SHEET LD-57.
2. PRIOR TO PLANTING, THE LANDSCAPE CONTRACTOR SHALL OBTAIN, AND FORWARD TO THE LANDSCAPE ARCHITECT, SOIL AGRONOMY TESTING REPORTS FROM AN APPROVED SOILS LABORATORY SUCH AS PENNSYLVANIA STATE UNIVERSITY'S AGRICULTURAL ANALYTICAL SERVICES LABORATORY. TESTS SHALL BE COMPLETED FOR EACH EXISTING SOIL TYPE AND FOR EACH BATCH OF IMPORTED TOPSOIL. TESTS TO INCLUDE SOIL FERTILITY, PARTICLE SIZE, SAND SEIVE ANALYSIS, ORGANIC MATTER AND SOLUBLE SALTS. CONTRACTOR TO REQUEST SOIL AMENDMENT RECOMMENDATIONS FOR EACH CATEGORY OF TURF AND/OR LANDSCAPE PLANT TO BE INSTALLED IN THE SUBJECT SOIL.
3. ALL SOIL AMENDMENTS SHALL BE INSTALLED PER THE SOIL AGRONOMY REPORT, AND SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR.
4. PERENNIAL, ANNUAL AND BULB PLANTING AREAS SHALL HAVE AMENDED SOILS AS FOLLOWS
   FOR EACH 100 S.F. AREA:
   6 CU. FT. OF CLEAN COMPOST
   5-6 LBS. MILORGANITE OR EQUAL
   2-3 LBS. OF 0-20-20 FERTILIZER
5. AGRIFORM 20-10-5 PLANTING TABLETS OR EQUIVALENT SHALL BE USED FOR ALL TREE AND SHRUB PLANTINGS PER THE MANUFACTURER'S SPECIFICATIONS. TABLETS ARE NOT A REPLACEMENT FOR AMENDMENTS REQUIRED BY THE SOIL AGRONOMY TEST RESULTS.
6. APPLY AMENDMENTS ON-SITE, AND MIX SOIL TO FULLY ADDRESS ALL EXISTING SOIL DEFICIENCIES. DO NOT APPLY AMENDMENTS NOR TILL IF EXISTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
7. LANDSCAPE PLANTING AREAS SHALL BE FREE OF ANY DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE RUBBLE, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE TAR, ROOFING COMPOUND, ACID, AND STONES LARGER THAN 3" IN ANY DIRECTION.
8. TOPSOIL SHALL BE PLACED AT A MINIMUM DEPTH OF 6". IN ALL PLANTING AREAS, IF INSUFFICIENT TOPSOIL IS PRESENT PRIOR TO PLANTING, THE SITE CONTRACTOR SHALL PROVIDE AND PLACE THE REQUIRED TOPSOIL AT THE LANDSCAPE CONTRACTOR'S REQUEST. THE TOPSOIL SHALL BE ROUGH GRADED BY THE SITE CONTRACTOR AND FINISH GRADED BY THE LANDSCAPE CONTRACTOR.
9. CONTRACTOR SHALL KILL OFF ANY EXISTING TURF AND UNWANTED VEGETATION WITHIN PROPOSED BED LIMITS. COMPLETE REMOVAL OF TURF BY MEANS OF A SOD CUTTER OR SCUFFING IS AN ACCEPTABLE ALTERNATIVE METHOD TO HERBICIDE APPLICATION. IF HERBICIDE IS NOT USED, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL EXISTING PLANT ROOTS.

E. MULCH:

1. THE CONTRACTOR MAY APPLY A PRE-EMERGENT HERBICIDE PER THE MANUFACTURERS SPECIFICATIONS TO THE ENTIRE PLANTING BED FOR CONTROL OF WEED GERMINATION.
2. A LAYER OF NATURAL, NON-COLORED ORGANIC MULCH SHALL BE APPLIED ACROSS THE ENTIRE PLANTING BED AREA UNLESS OTHERWISE INDICATED ON THE PLAN. MULCH DEPTH SHALL NOT BE GREATER THAN 3" NOR LESS THAN 2".
3. MULCH SHALL BE ORGANIC, DOUBLE-CUT, NATURAL, UN-DYED AND FREE FROM DELETERIOUS MATERIALS.
4. MULCH SHALL NOT COVER THE CROWNS OF ANY HERBACEOUS PLANTS, NOR THE ROOT FLARES OF ANY WOODY PLANTS.

F. SEED/SOD ESTABLISHMENT NOTES:

1. GRASS SEED SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH AOSA'S "RULING FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCES.
2. TURFGRASS SOD SHALL COMPLY WITH 'SPECIFICATIONS FOR TURFGRASS SOD MATERIALS' IN TPI GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING. TURFGRASS SOD SHALL BE A VIABLE SOD OF UNIFORM DENSITY, COLOR, AND TEXTURE. IT SHALL BE STRONGLY ROOTED AND CAPABLE OF VIGOROUS GROWTH AND DEVELOPMENT.
3. RECOMMENDED TIME OF TURFGRASS SEEDING IS SEPTEMBER 1ST TO OCTOBER 15TH. WHERE SPRING SEEDINGS ARE NECESSARY, SEED NO LATER THAN APRIL 1ST FOR BEST RESULTS.
4. SOW RECOMMENDED SEED MIXTURE ADAPTED TO USE IN CLIMATIC CONDITIONS OF THE SPECIFIC SITE AREA.
5. PRIOR TO SEEDING AND/OR SODDING, REMOVE ANY EXISTING VEGETATION FROM PROPOSED LAWN AREAS.
6. EXCESS DEAD VEGETATION SHOULD BE TURNED UNDER, IF THE SITE IS NOT TOO WET FOR TILLING WITHOUT EXCESSIVE SOIL COMPACTION.
7. IF TOPSOIL HAS BEEN DEPLETED OR REMOVED IN THE AREA TO BE SEEDED OR SODDED, PROVIDE SOIL AMENDMENTS PER THE SOIL AGRONOMY REPORT.
8. DIVIDE TOTAL SEED QUANTITY INTO TWO EQUAL LOTS, SOWING ONE LOT IN ONE DIRECTION, AND THE SECOND LOT AT RIGHT ANGLES TO THE FIRST WITH A MECHANICAL SEEDER OR SPREADER.
9. EXTRA CARE SHALL BE TAKEN TO ELIMINATE DEPRESSIONS OR AIR POCKETS BY ROLLING OR TAMPING LAWN BASE BEFORE INSTALLATION. ALL SOD MUST BE DELIVERED AND INSTALLED WITHIN 36 HOURS OF BEING CUT. SOD SHALL BE LAID SMOOTHLY; EDGE TO EDGE WITH STAGGERED JOINTS. IMMEDIATELY AFTER INSTALLATION, THE SOD SHALL BE WATERED TO A DEPTH OF 4" INTO THE SOIL.
10. MULCHING WITH STRAW, HYDROMULCH, OR FIBER MATS IS RECOMMENDED TO PROTECT SEED FROM DRYING OUT OR WASHING AWAY. HEAVY MULCHES SHOULD BE REMOVED FROM THE AREA WITHIN A FEW DAYS AFTER SEED GERMINATION.
11. BOUNDARIES OF NEWLY SEEDED AREAS SHALL BE WELL DEFINED WITH SIGNS OR OTHER MARKERS TO DETER INTRUSION UNTIL LAWN AREAS ARE FULLY ESTABLISHED.
12. CONTRACTOR IS RESPONSIBLE FOR TURF MAINTENANCE UNTIL SATISFACTORY TURF IS ESTABLISHED, AS DETERMINED BY THE LANDSCAPE ARCHITECT. MAINTENANCE TO INCLUDE WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND PERFORMING OTHER OPERATIONS AS REQUIRED TO ESTABLISH HEALTHY, VIABLE TURF. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH TURF. PROVIDE MATERIALS AND INSTALLATION THE SAME AS THOSE USED IN THE ORIGINAL INSTALLATION.
    a. FILL IN AS NECESSARY SOIL SUBSIDENCE THAT MAY OCCUR BECAUSE OF SETTLING OR OTHER PROCESSES. REPLACE MATERIALS AND TURF DAMAGED OR LOST IN AREAS OF SUBSIDENCE.
    b. IN AREAS WHERE MULCH HAS BEEN DISTURBED BY WIND OR MAINTENANCE OPERATIONS, ADD NEW MULCH AND ANCHOR AS REQUIRED TO PREVENT DISPLACEMENT.
    c. APPLY TREATMENTS AS REQUIRED TO KEEP TURF AND SOIL FREE OF PESTS AND PATHOGENS OR DISEASE. USE INTEGRATED PEST MANAGEMENT PRACTICES WHENEVER POSSIBLE TO MINIMIZE THE USE OF PESTICIDES AND REDUCE HAZARDS.
13. WATERING: INSTALL AND MAINTAIN TEMPORARY PIPING, HOSES, AND TURF-WATERING EQUIPMENT TO CONVEY WATER FROM SOURCES AND TO KEEP TURF UNIFORMLY MOIST TO A DEPTH OF 4 INCHES.
    a. SCHEDULE WATERING TO PREVENT WILTING, PUDDLING, EROSION, AND DISPLACEMENT OF SEED OR MULCH. LAY OUT TEMPORARY WATERING SYSTEM TO AVOID WALKING OVER MUDDY OR NEWLY PLANTED AREAS.
    b. WATER TURF WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.
14. MOW TURF AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN ONE-THIRD OF GRASS HEIGHT. REMOVE NO MORE THAN ONE-THIRD OF GRASS-LEAF GROWTH IN INITIAL OR SUBSEQUENT MOWINGS. DO NOT DELAY MOWING UNTIL GRASS BLADES BEND OVER AND BECOME MATTED. DO NOT MOW WHEN GRASS IS WET.
15. TURF POST-FERTILIZATION: APPLY FERTILIZER AFTER INITIAL MOWING AND WHEN GRASS IS DRY. USE FERTILIZER THAT PROVIDES ACTUAL NITROGEN OF AT LEAST 1 LB/1000 SQ. FT. TO TURF AREA.
16. SATISFACTORY TURF - TURF INSTALLATIONS SHALL MEET THE FOLLOWING CRITERIA AS DETERMINED BY LANDSCAPE ARCHITECT/ENGINEER: AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 70 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES.
17. CONTRACTOR TO USE SPECIFIED MATERIALS TO REESTABLISH TURF THAT DOES NOT COMPLY WITH REQUIREMENTS, AND CONTINUE MAINTENANCE UNTIL TURF IS SATISFACTORY.

BARE ROOT STOCK PLANTINGS & ERNST SEED MIX ERNMIX-153-1

TOTAL AREA WITHIN THE BUFFER: 63,793 S.F. (1.46 AC.)

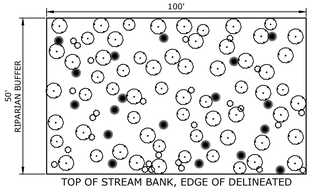
TREE SPECIES: (159)
- Acer rubrum - Red Maple
- Cercis canadensis - Redbud
- Betula nigra - River Birch
- Gleditsia triacanthos - Honey Locust
- Platanus occidentalis - Sycamore

SHRUB SPECIES: (53)
- Aronia melanocarpa - Black Chokeberry
- Cornus sericea - Red Twig Dogwood
- Ilex verticillata - Winterberry
- Viburnum dentatum - Arrowood Viburnum

PLANTING RATE:
APPROXIMATELY 145 PLANTS PER ACRE**

1.46 AC x ~145 PLANTS/AC. = 212 PLANTS

75% X 212 = 159 TREES
25% X 212 = 53 SHRUBS
TOTAL 212 PLANTS



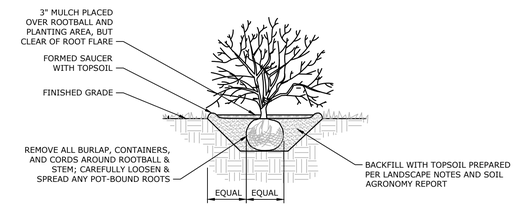
*PROPOSED PLANTINGS SHALL BE EVENLY DISTRIBUTED THROUGHOUT THE PROPOSED RIPARIAN BUFFER AREA WITH APPROXIMATE 20'X20' SPACING FOR TREES. NO ONE PLANT SPECIES SHALL COMPRISE MORE THAN 20% OF THE TOTAL.

**REFERENCE PA STORMWATER BMP MANUAL

SEEDING FOR THE WATERCOURSE/RIPARIAN BUFFER AREA IS ALSO DETAILED. ERNST SEED MIX ERNMX-153-1 IS PROPOSED TO BE SPREAD AT A RATE OF 15 LBS./AC.

1 RIPARIAN BUFFER PLANTING

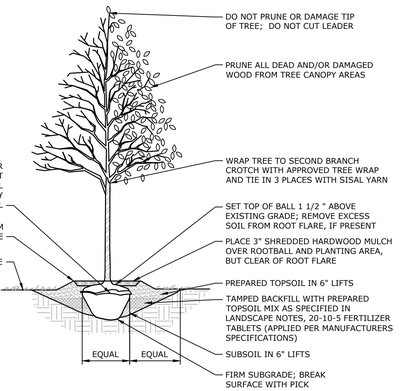
NOT TO SCALE



PLANT SPECIFICATION NOTES:
1. SET PLANTS AT SAME FINISHED GRADE AS GROWN IN THE NURSERY.
2. ALL SHRUBS SHALL HAVE BEEN NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE FINAL PLANTING SITE.
3. ALL SHRUBS SHALL HAVE A NORMAL GROWTH HABIT AND SHALL BE SOUND, HEALTHY AND VIGOROUS; THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
4. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE.
5. REQUIREMENTS FOR SHRUB MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING OF SHRUBS SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60, CURRENT EDITION, AS AMENDED.
5. SEE LANDSCAPE NOTES FOR REQUIRED SOIL TESTING, PREPARATION AND AMENDMENT.

3 TYPICAL SHRUB PLANTING

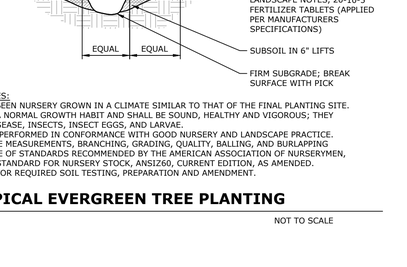
NOT TO SCALE



PLANT SPECIFICATION NOTES:
1. ALL TREES SHALL HAVE BEEN NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE FINAL PLANTING SITE.
2. ALL TREES SHALL HAVE A NORMAL GROWTH HABIT AND SHALL BE SOUND, HEALTHY AND VIGOROUS; THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
3. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE.
4. REQUIREMENTS FOR TREE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60, CURRENT EDITION, AS AMENDED.
5. SEE LANDSCAPE NOTES FOR REQUIRED SOIL TESTING, PREPARATION AND AMENDMENT.

2 TYPICAL DECIDUOUS TREE PLANTING

NOT TO SCALE



PLANT SPECIFICATION NOTES:
1. ALL TREES SHALL HAVE BEEN NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE FINAL PLANTING SITE.
2. ALL TREES SHALL HAVE A NORMAL GROWTH HABIT AND SHALL BE SOUND, HEALTHY AND VIGOROUS; THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
3. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE.
4. REQUIREMENTS FOR TREE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60, CURRENT EDITION, AS AMENDED.
5. SEE LANDSCAPE NOTES FOR REQUIRED SOIL TESTING, PREPARATION AND AMENDMENT.

4 TYPICAL EVERGREEN TREE PLANTING

NOT TO SCALE

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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-35 OF 57

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Landscape-Details.dwg
SCRIPT:

PLANT SCHEDULE PH1

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
PARKING LOT TREES					
Af	4	Acer rubrum `Franksred`	Red Sunset® Maple	2.5" - 3" Cal.	B&B
STREET TREES					
Ag	9	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	2.5" - 3" Cal.	B&B
Cs	8	Cornus kousa `Gold Star`	Gold Star Kousa Dogwood	2.5" - 3" Cal.	B&B
Gt	8	Gleditsia triacanthos f. inermis	Thornless Honey Locust	2.5" - 3" Cal.	B&B
Md	15	Malus x `Donald Wyman`	Donald Wyman Crabapple	2.5" - 3" Cal.	B&B
Ov	17	Ostrya virginiana	American Hophornbeam	2.5" - 3" Cal.	B&B
Pa	10	Prunus subhirtella `Autumnalis`	Autumn Flowering Cherry	2.5" - 3" Cal.	B&B
SHRUBS					
Aa	3	Aronia arbutifolia	Red Chokeberry	1 gal.	
Am	15	Aronia melanocarpa	Black Chokeberry	1 gal.	
Ca	5	Cornus amomum	Silky Dogwood	1 gal.	
Cs	11	Cornus sericea	Red Twig Dogwood	1 gal.	
Sc	11	Sambucus canadensis 'Adams'	Adams American Elderberry	1 gal.	
Vl	11	Viburnum lentago	Nannyberry	1 gal.	

LANDSCAPE REQUIREMENTS

STREET TREES
REQUIREMENT: 1 TREE PER 50 LF OF FRONTAGE/ROW/CARTWAY

	REQUIRED	PROPOSED
CARTWAY:		
OAKMONT DRIVE (1,074 LF)	43	39
EAGLE WAY (417 LF)	17	11
LINKS DRIVE (574 LF)	23	17
SITE TREES		00*
ROW:		
LOT 1 LISBURN RD. (1,876 LF)	38	EXISTING TREES MEET REQUIREMENT
LOT 1 OLD FORGE RD. (303 LF)	7	EXISTING TREES MEET REQUIREMENT
LOT 2 LISBURN RD. (1,811 LF)	37	EXISTING TREES MEET REQUIREMENT

5% OF INTERIOR PARKING LANDSCAPED		REQUIRED	PROVIDED
LOT 1	87,276 S.F. OF PARKING	4,364 S.F.	7,543 S.F.

FRONT YARD LANDSCAPING

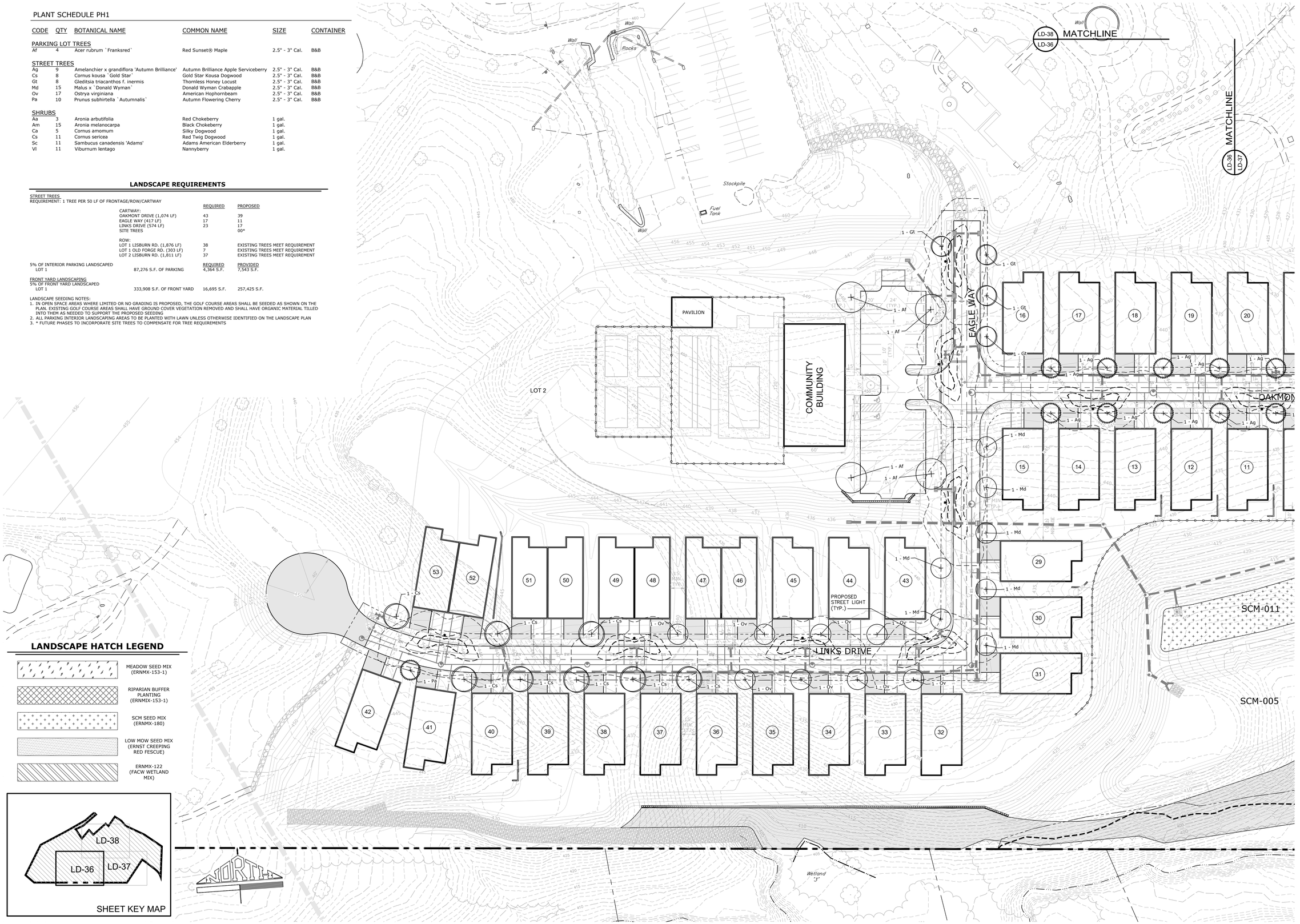
5% OF FRONT YARD LANDSCAPED			
LOT 1	333,908 S.F. OF FRONT YARD	16,695 S.F.	257,425 S.F.

LANDSCAPE SEEDING NOTES:
1. IN OPEN SPACE AREAS WHERE LIMITED OR NO GRADING IS PROPOSED, THE GOLF COURSE AREAS SHALL BE SEEDED AS SHOWN ON THE PLAN. EXISTING GOLF COURSE AREAS SHALL HAVE GROUND COVER VEGETATION REMOVED AND SHALL HAVE ORGANIC MATERIAL TILLED INTO THEM AS NEEDED TO SUPPORT THE PROPOSED SEEDING
2. ALL PARKING INTERIOR LANDSCAPING AREAS TO BE PLANTED WITH LAWN UNLESS OTHERWISE IDENTIFIED ON THE LANDSCAPE PLAN
3. * FUTURE PHASES TO INCORPORATE SITE TREES TO COMPENSATE FOR TREE REQUIREMENTS

LANDSCAPE HATCH LEGEND

- MEADOW SEED MIX (ERNMX-153-1)
- RIPARIAN BUFFER PLANTING (ERNMIX-153-1)
- SCM SEED MIX (ERNMX-180)
- LOW MOW SEED MIX (ERNST CREEPING RED FESCUE)
- ERNMX-122 (FACW WETLAND MIX)

SHEET KEY MAP



NO.	DATE	REVISION

SEAL

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CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

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LANDSCAPE & LIGHTING PLAN

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DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-36 OF 57

XREFS: Existing\Layout\Layout-HOP-Profiles-Utilities-Easements-EG-Lidar-Survey-EG-Floodplain\Landscape\Lighting PKG-PH1
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SCRIPT:

MATCHLINE LD-38 LD-37

MATCHLINE LD-36 LD-37

PROP. SCM SEED MIX

SCM-003

SCM-004

SCM-010

SCM-011

SCM-005

LISBURN ROAD

15' (TYP.)

NORTH

Wetland 'A'

40 MPH Sign

25.5' x 4' CAT MIX

RIGHT 40' O' WAY

PROP. STREET LIGHT (TYP.)

Curve Ahead Sign

OAKMONT DRIVE

PROP. SCM SEED MIX

PROP. RIPARIAN BUFFER PLANTING

PROP. FACW WETLAND SEED MIX

PROP. LOW MOW SEED MIX

PROP. MEADOW SEED MIX

RIPARIAN BUFFER

Wetland 'A'

Brush

Wall

Steps

Pool

Patio

1 - Ov

2 - Md

2 - Gt

3 - Ca

3 - Sc

3 - Vl

3 - Aa

5 - Am

5 - Ca

5 - Sc

5 - Vl

1 - Ag

1 - Pa

SHEET KEY MAP

LD-38

LD-36

LD-37

LANDSCAPE HATCH LEGEND

- MEADOW SEED MIX (ERNMX-153-1)
- RIPARIAN BUFFER PLANTING (ERNMIX-153-1)
- SCM SEED MIX (ERNMX-180)
- LOW MOW SEED MIX (ERNST CREEPING RED FESCUE)
- ERNMX-122 (FACW WETLAND MIX)

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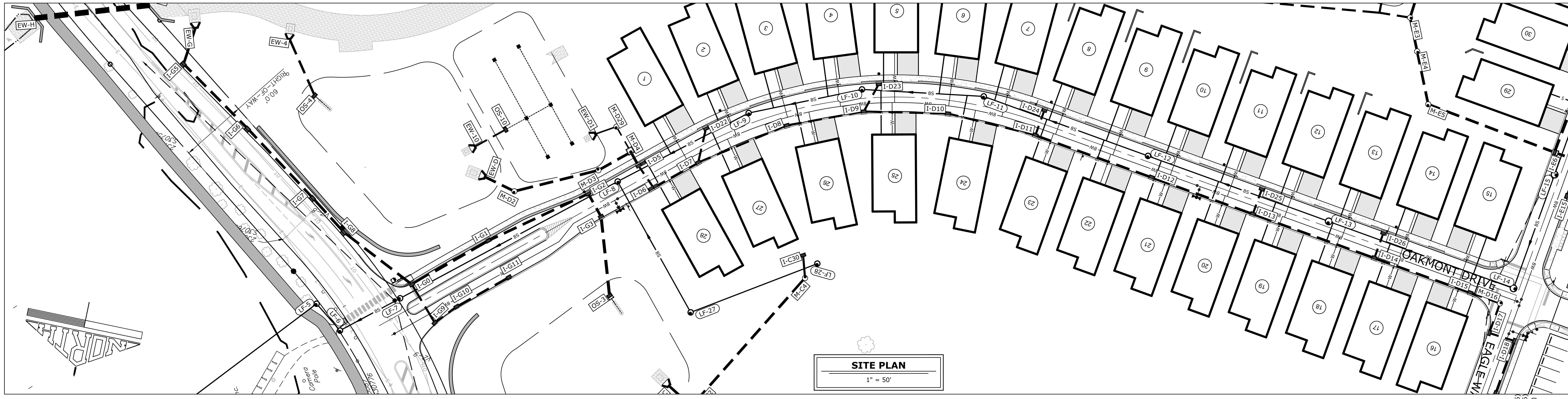
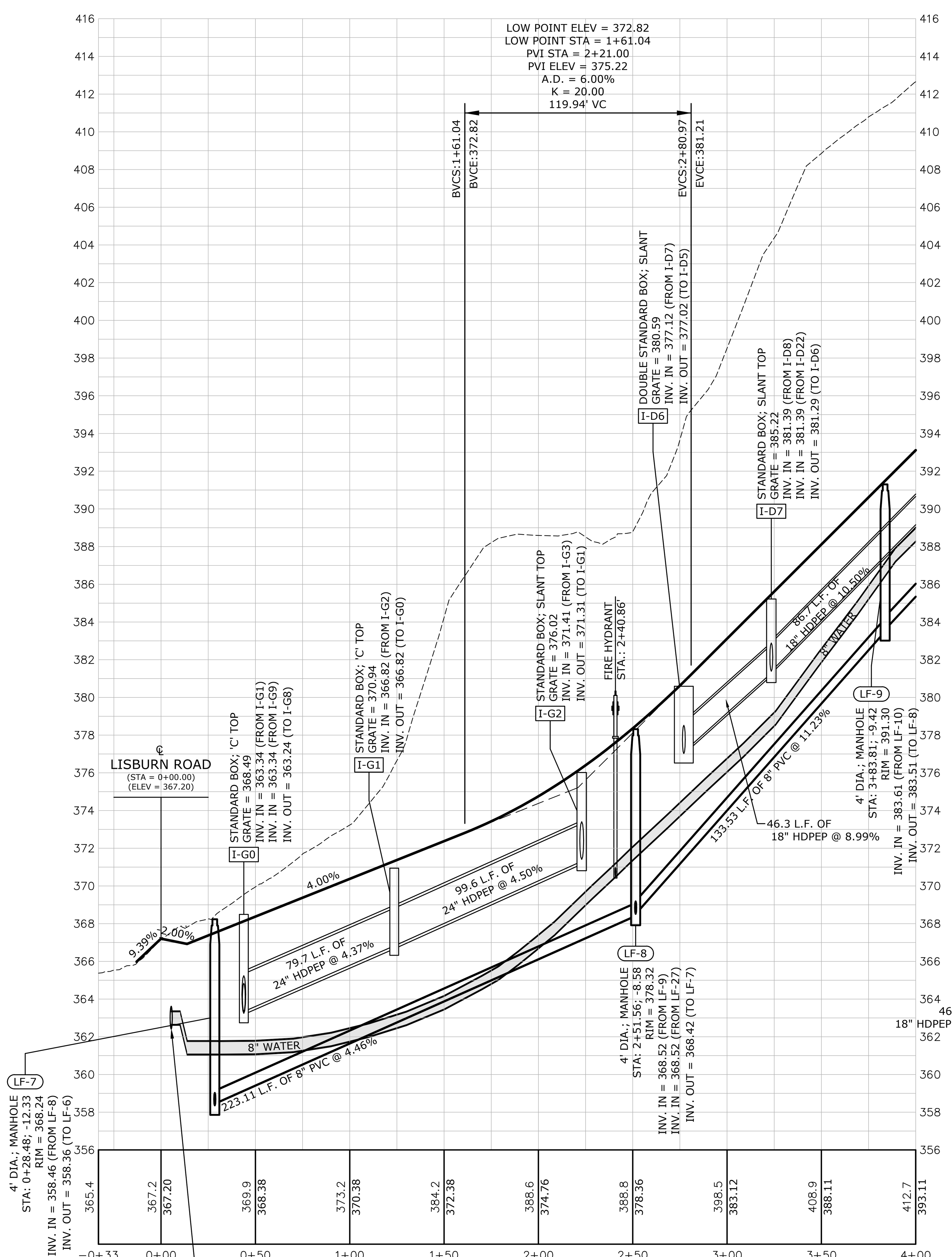
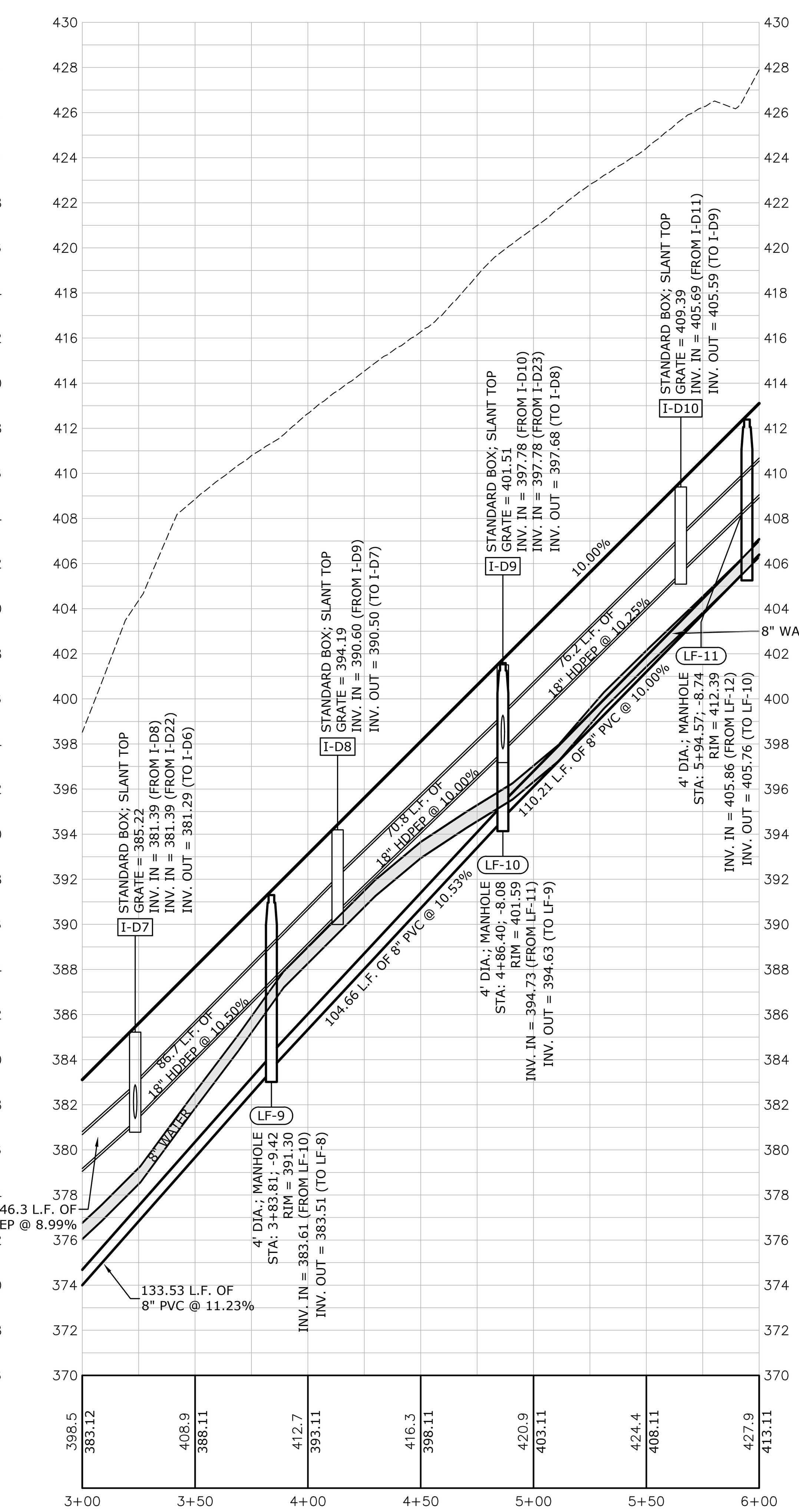


SITE PLAN

1" = 50'



OAKMONT DRIVE
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'



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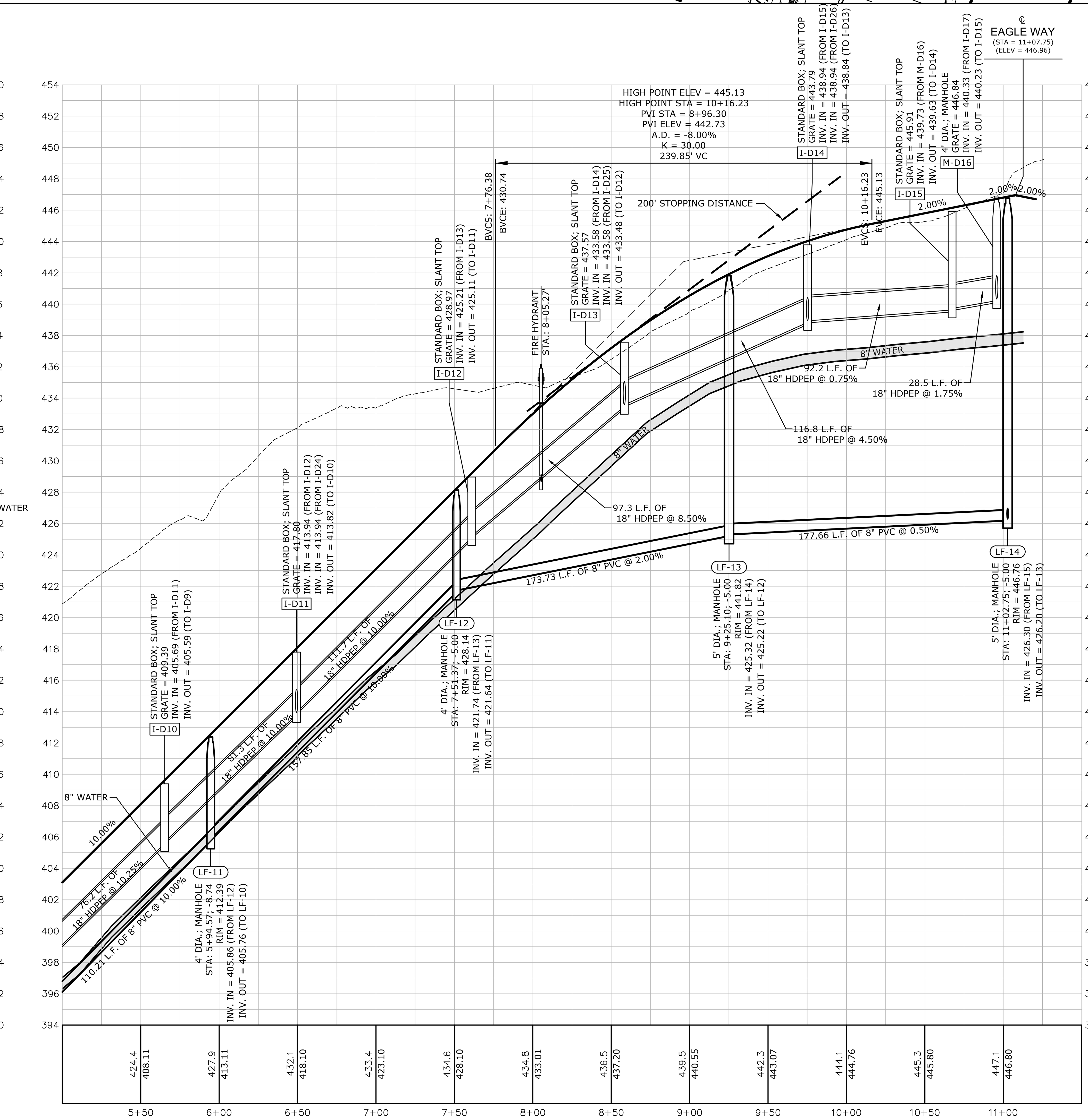

OAKMONT DRIVE
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

LEGEND

------------ EXISTING GRADE ——— PROPOSED GRADE

SCRIPT:

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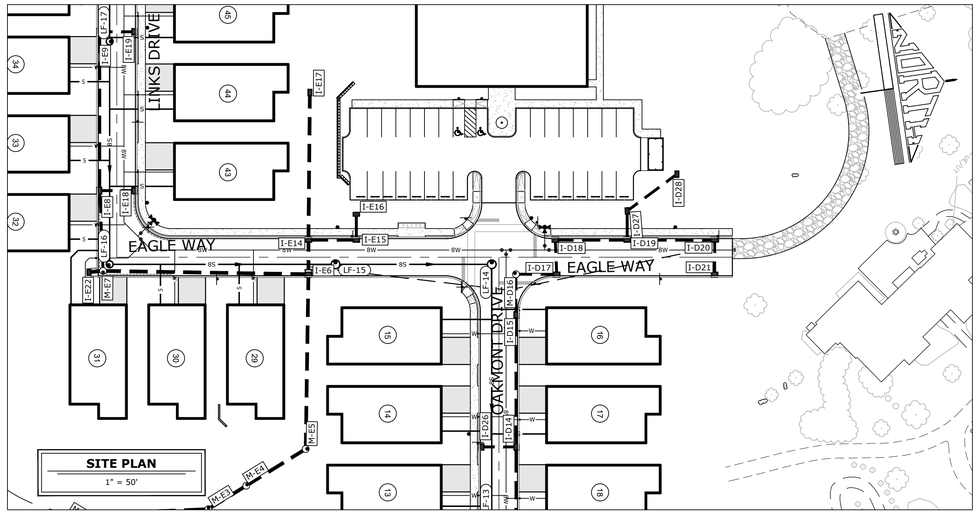
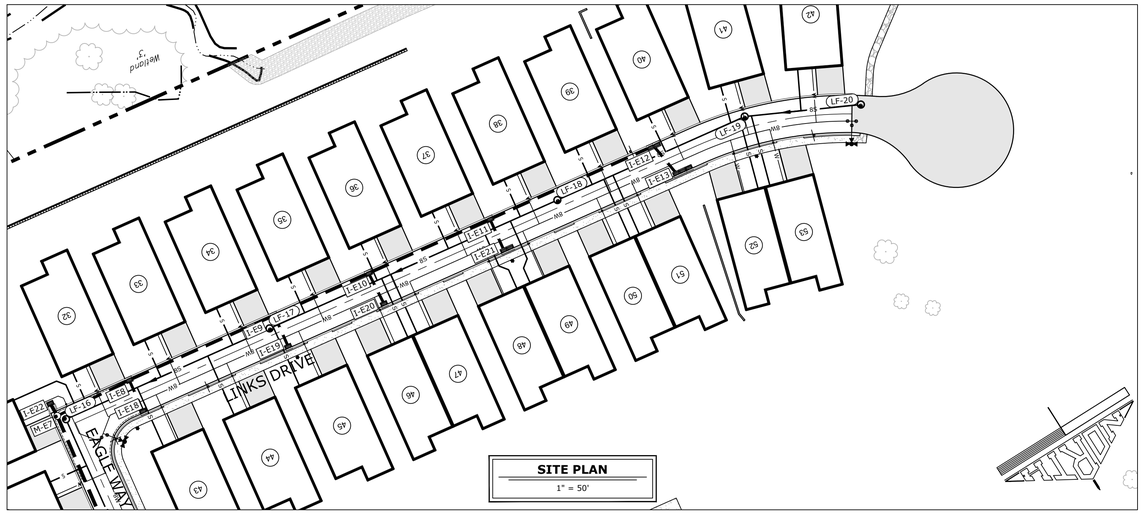
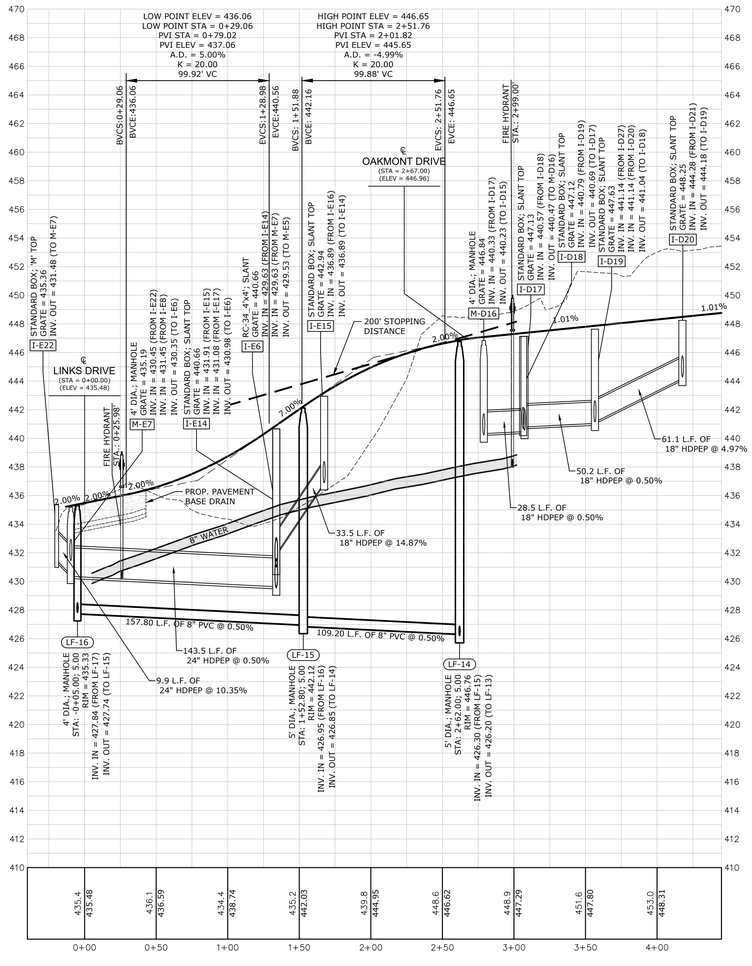
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-39 OF 57



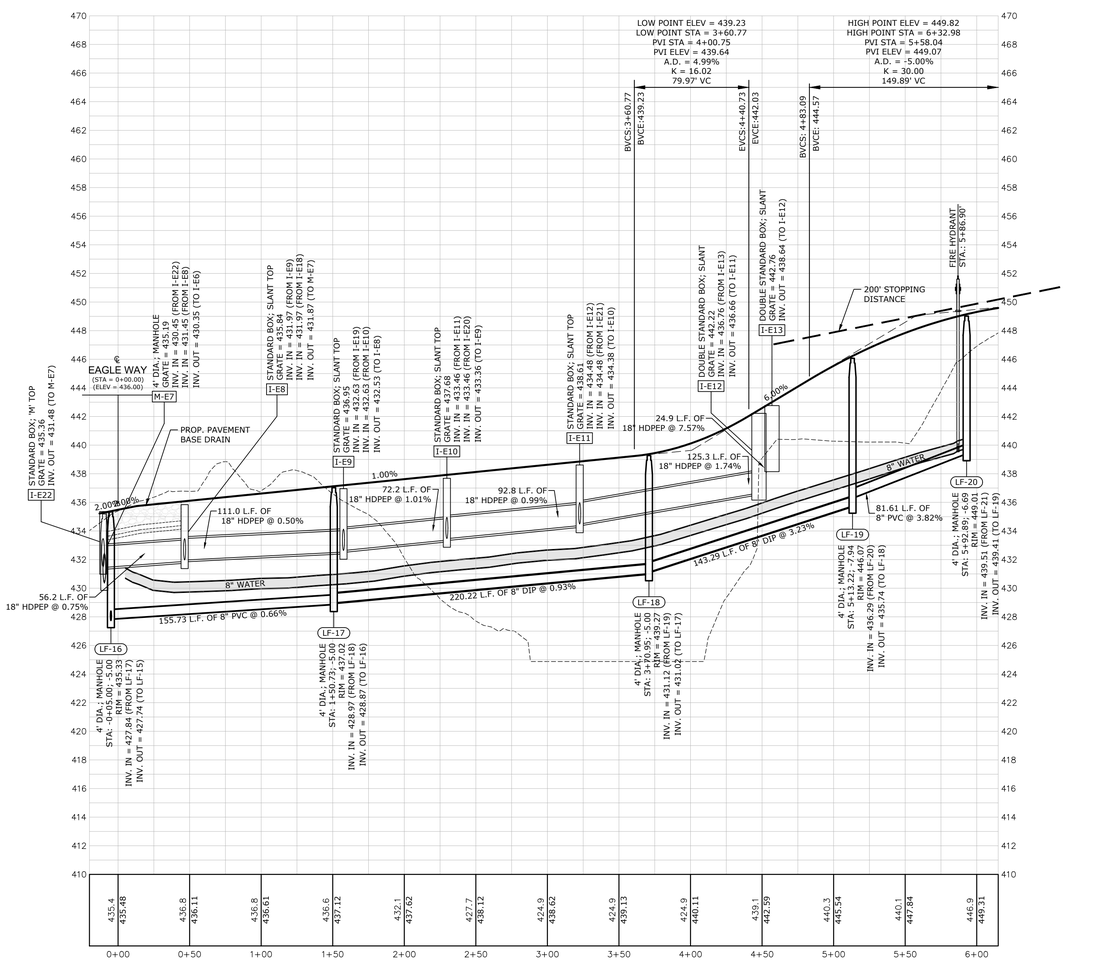




LEGEND

EXISTING GRADE ——— PROPOSED GRADE

EAGLE WAY
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'



LINKS DRIVE
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

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MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-40 OF 57

XREFS: ExistingLayout,Layout-HOP-Profiles-Utilities
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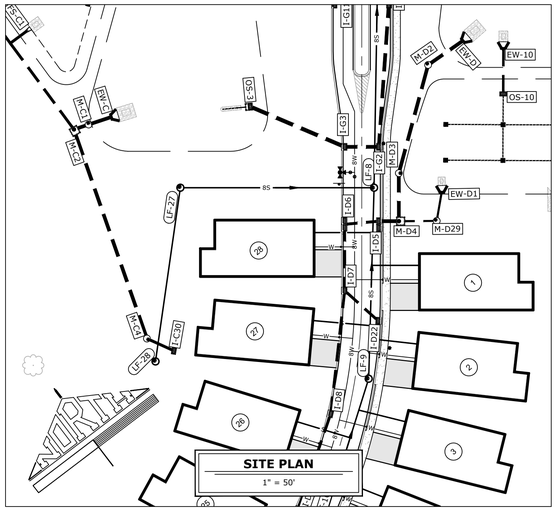
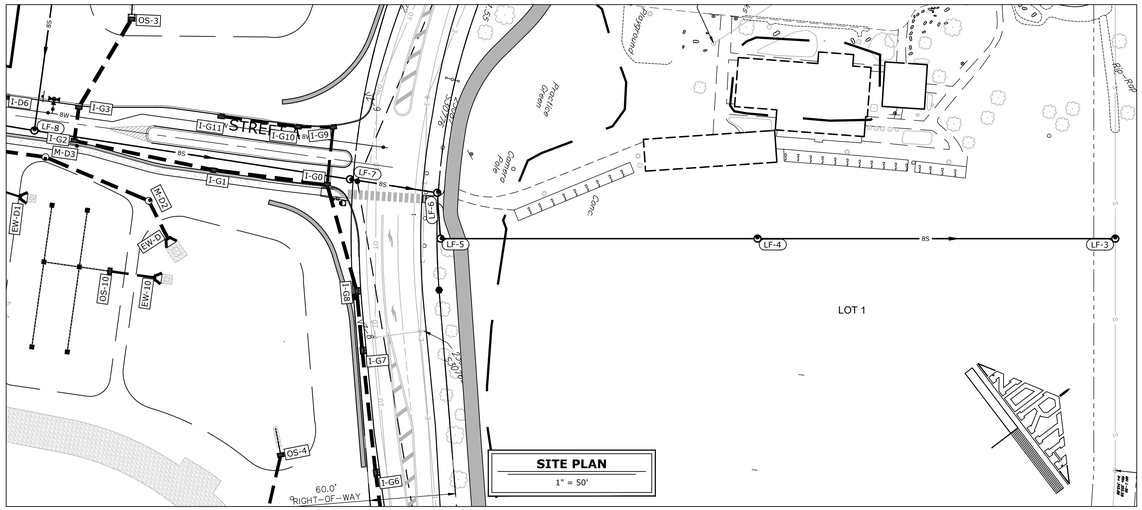
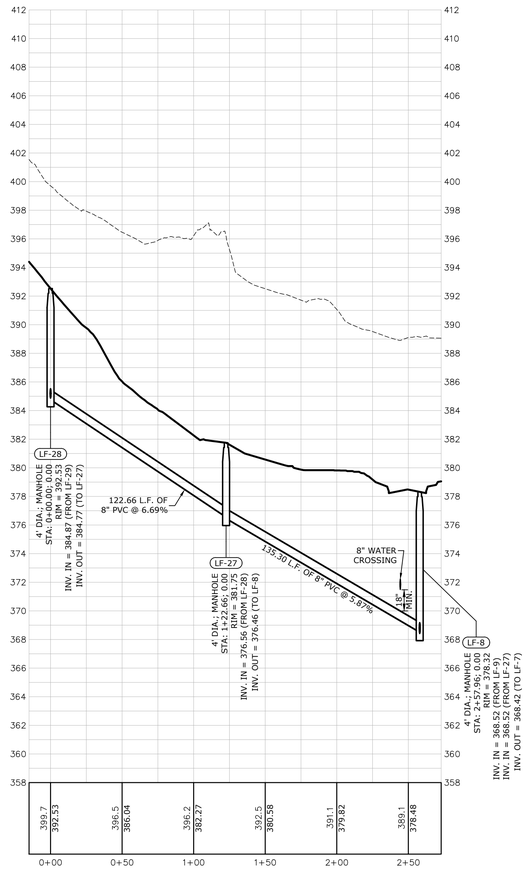
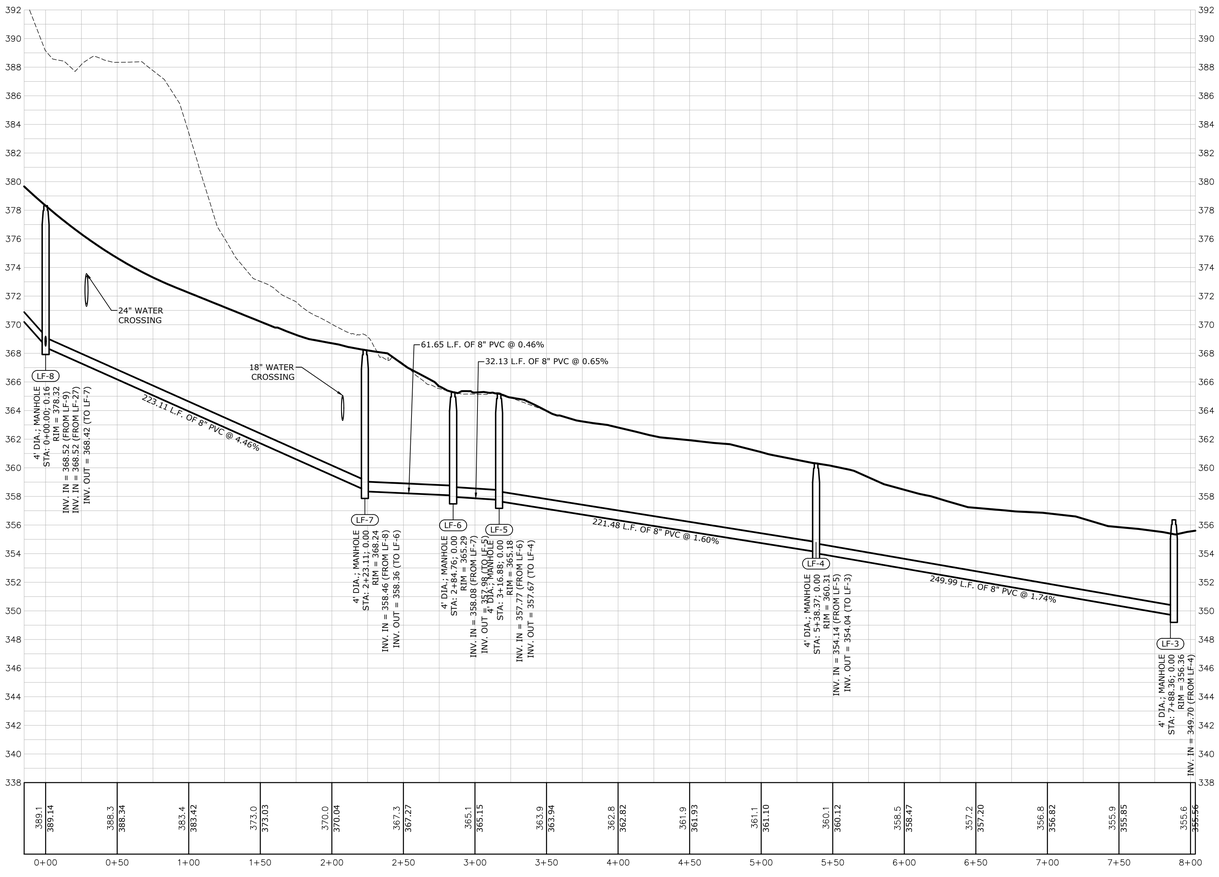






LF-28 TO LF-8
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'



LF-8 TO LF-3
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

LEGEND

EXISTING GRADE — PROPOSED GRADE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SANITARY SEWER PROFILES

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-41 OF 57

XREFS: Existing Profiles-Utilities Layout Layout-HOP
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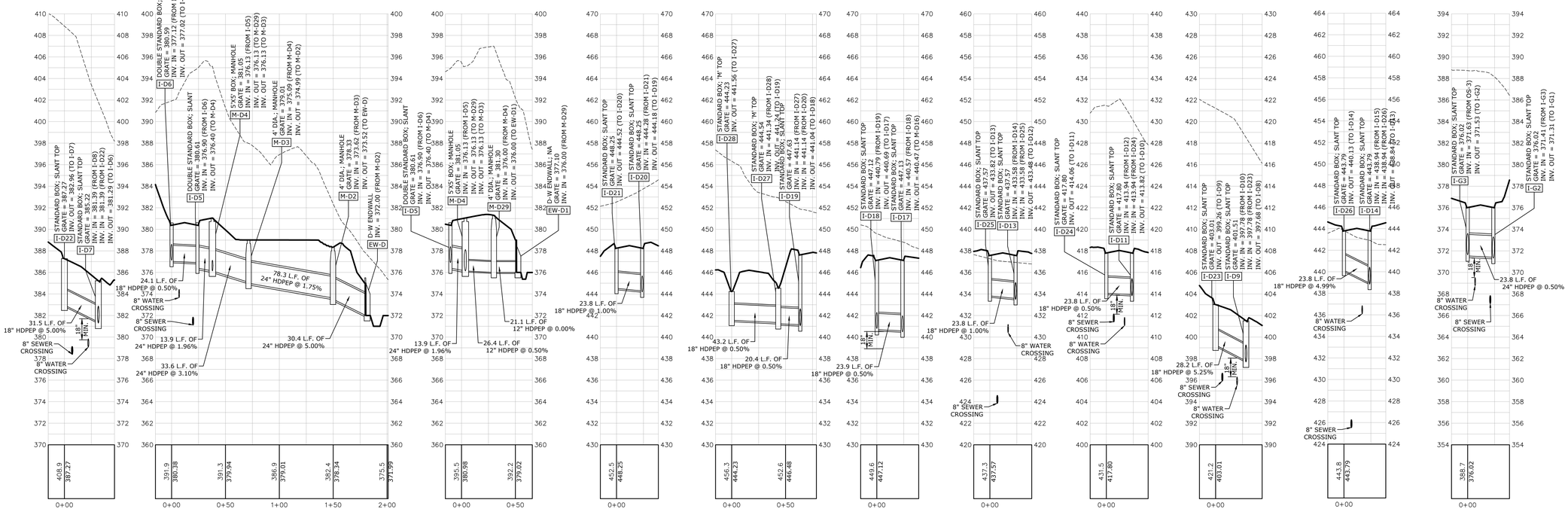


I-D22 TO I-D7
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D6 TO EW-D
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D5 TO EW-D1
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D21 TO I-D20
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D28 TO I-D19
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D18 TO I-D17
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

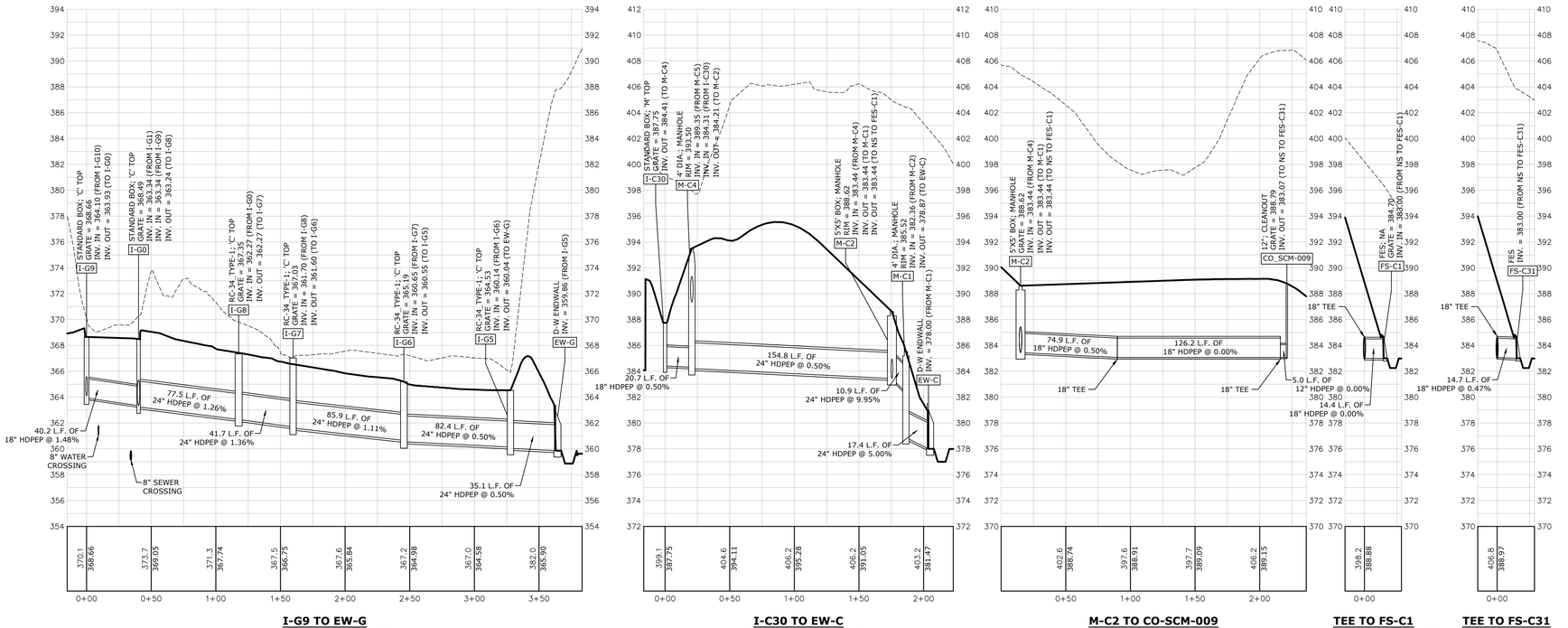
I-D25 TO I-D13
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D24 TO I-D11
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D23 TO I-D9
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-D26 TO I-D14
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-G3 TO I-G2
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'



I-G9 TO EW-G
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

I-C30 TO EW-C
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

M-C2 TO CO-SCM-009
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

TEE TO FS-C1
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

TEE TO FS-C31
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"= 5'

LEGEND

EXISTING GRADE ——— PROPOSED GRADE

XREFS: Existing-GIS-Survey;Existing Floodplain;Layout;Layout-HOP-Profiles-Utilities
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plat2-PCSM-Profiles-Storm.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

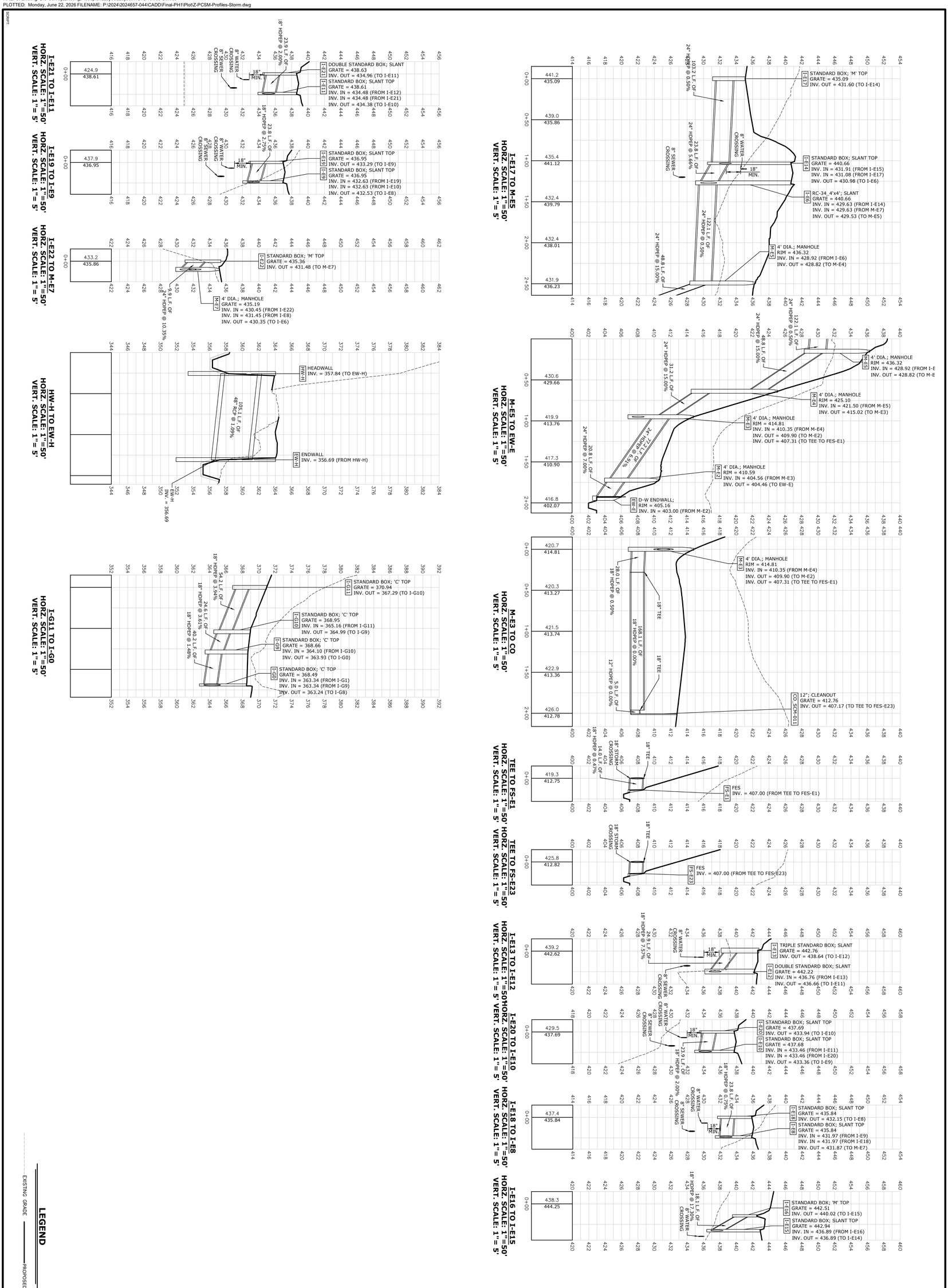
0' 40' 80'
SCALE: 1" = 40'

LIBERTY FORGE
FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN
LOWER ALLEN & UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY, PA
STORM PROFILES

Land Planning
Landscape Architecture
Civil Engineering
Corporate Offices:
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com
Regional Offices:
York, Harrisburg, and Paoli
RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-42 OF 57

XREFS: Existing-GIS-Survey;Existing;Floodplain;Layout;Layout-HOP;Profiles-Utilities
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-PCSM-Profiles-Storm.dwg



Land Planning
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Suite 101, Lancaster, PA 17603
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RGS ASSOCIATES

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

STORM PROFILES

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

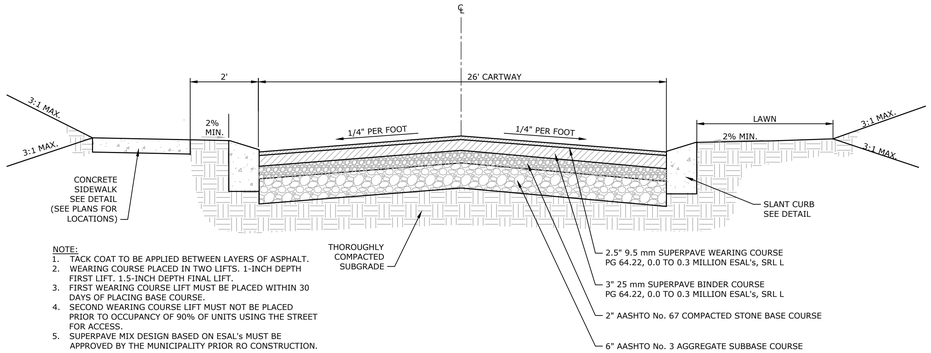
0' 40' 80'
SCALE: 1" = 40'

SEAL

SEAL

NO	DATE	REVISION

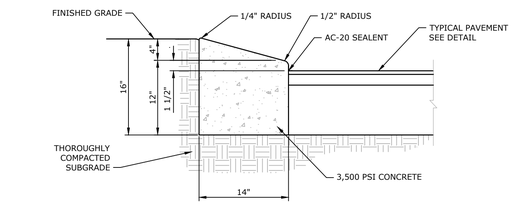
DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE RIBEGER, RLA
SHEET NO.: LD-43 OF 57



NOTE:
1. TACK COAT TO BE APPLIED BETWEEN LAYERS OF ASPHALT.
2. WEARING COURSE PLACED IN TWO LIFTS. 1-INCH DEPTH FIRST LIFT. 1.5-INCH DEPTH FINAL LIFT.
3. FIRST WEARING COURSE LIFT MUST BE PLACED WITHIN 30 DAYS OF PLACING BASE COURSE.
4. SECOND WEARING COURSE LIFT MUST NOT BE PLACED PRIOR TO OCCUPANCY OF 90% OF UNITS USING THE STREET FOR ACCESS.
5. SUPERPAVE MIX DESIGN BASED ON ESAL's MUST BE APPROVED BY THE MUNICIPALITY PRIOR RO CONSTRUCTION.

1 STREET CROSS SECTION W/ SLANT CURBS

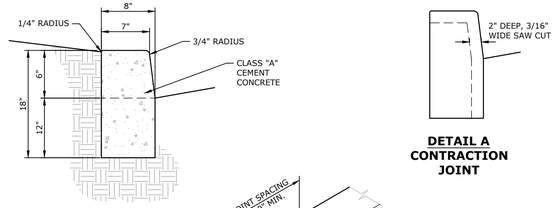
NOT TO SCALE



NOTES:
1. EXPANSION JOINTS SHALL CONSIST OF 1/2" THICK PREMOLDED EXPANSION JOINT FILLER MATERIAL. EXPANSION JOINTS SHALL BE LOCATED AT ALL STRUCTURES AT THE END OF THE WORK DAY AND AT INTERVALS OF 100 FEET. CUT MATERIAL TO CONFORM WITH CROSS SECTIONAL AREA OF CURB.
2. CONTRACTION JOINTS SHALL CONSIST OF A 2" DEEP, 3/16" WIDE SAW CUT AND BE PLACED AT UNIFORM LENGTHS OF 20 FOOT INTERVALS MAXIMUM AND 4 FOOT INTERVALS MINIMUM.
3. AC-20 SEALANT TO BE APPLIED ALONG JOINTS BETWEEN PAVEMENT AND CURB.

2 CONCRETE SLANT CURB

NOT TO SCALE

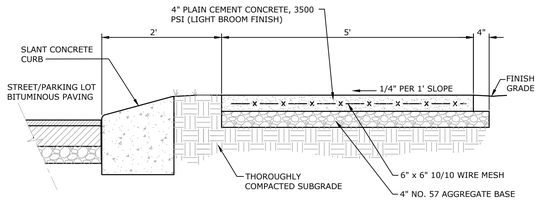


DETAIL A
CONTRACTION JOINT

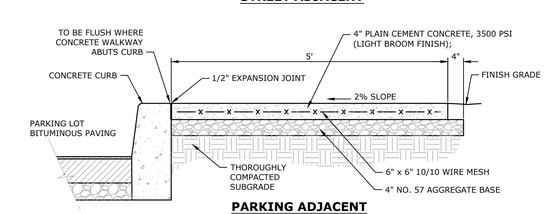
NOTES:
1. EXPANSION JOINTS SHALL CONSIST OF 1/2" THICK PREMOLDED EXPANSION JOINT FILLER MATERIAL. EXPANSION JOINTS SHALL BE LOCATED AT ALL STRUCTURES AT THE END OF THE WORK DAY AND AT INTERVALS OF 100 FEET. CUT MATERIAL TO CONFORM WITH CROSS SECTIONAL AREA OF CURB.
2. CONTRACTION JOINTS SHALL CONSIST OF A 2" DEEP, 3/16" WIDE SAW CUT AND BE PLACED AT UNIFORM LENGTHS OF 20 FOOT INTERVALS MAXIMUM AND 4 FOOT INTERVALS MINIMUM.

3 PLAIN CEMENT CONCRETE CURB

NOT TO SCALE



STREET ADJACENT

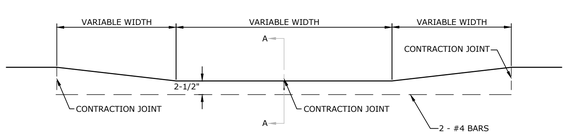


PARKING ADJACENT

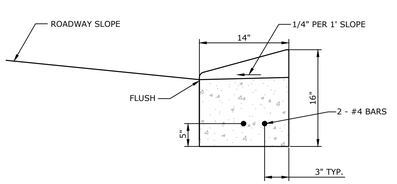
NOTES:
1. CONCRETE SHALL BE PLACED SO THAT THERE IS A SEPARATE JOINT EVERY FIVE (5) FEET WITH AN EXPANSION JOINT EVERY TWENTY (20) FEET.
2. THERE SHALL BE ONE-HALF (1/2) INCH PRE-MOLDED EXPANSION JOINTS BETWEEN EVERY FIFTH SECTION AND BETWEEN ALL POINTS WHERE CONCRETE SIDEWALK ABUTS CONCRETE CURB.

4 TYPICAL CONCRETE SIDEWALK SECTION

NOT TO SCALE



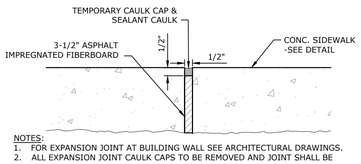
DEPRESSED CURB AREA



SECTION A-A

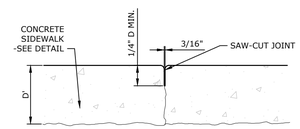
7 DEPRESSED CURB

NOT TO SCALE



NOTES:
1. FOR EXPANSION JOINT AT BUILDING WALL SEE ARCHITECTURAL DRAWINGS.
2. ALL EXPANSION JOINT CAULK CAPS TO BE REMOVED AND JOINT SHALL BE FILLED WITH A GRAY OR LIMESTONE COLORED, SELF-LEVELING, POLYURETHANE PROFESSIONAL GRADE EXTERIOR CAULKING SEALANT.

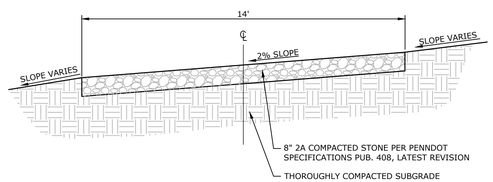
EXPANSION JOINT



CONTROL JOINT

5 CONCRETE PAVEMENT EXPANSION AND SAW-CUT CONTROL JOINTS

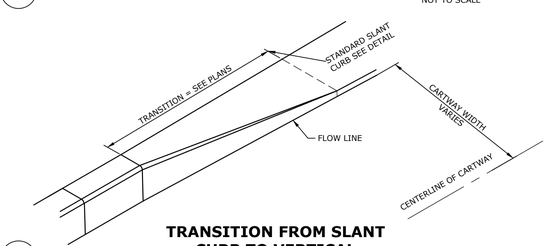
NOT TO SCALE



SECTION

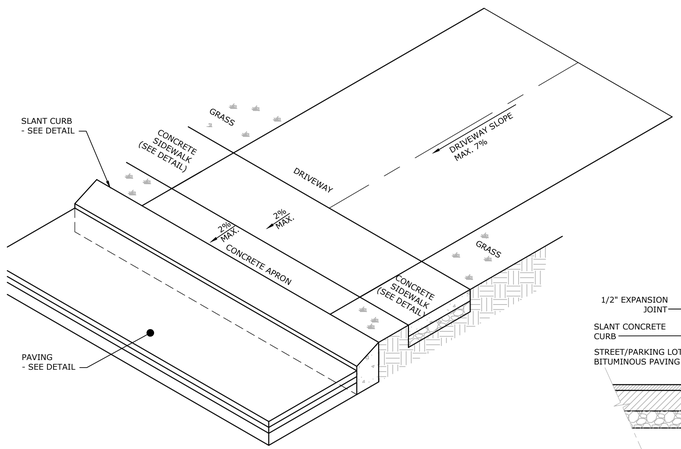
8 EMERGENCY ACCESS DRIVE

NOT TO SCALE



9 TRANSITION FROM SLANT CURB TO VERTICAL

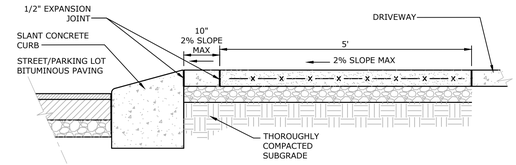
NOT TO SCALE

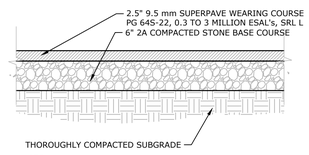


NOTE:
1. CONCRETE SHALL BE PLACED SO THAT THERE IS A SEPARATION JOINT EVERY FIVE (5) FEET WITH AN EXPANSION JOINT EVERY TWENTY (20) FEET.
2. THERE SHALL BE ONE-HALF (½) INCH PRE-MOLDED EXPANSION JOINTS BETWEEN ALL POINTS WHERE THE CONCRETE APRON ABUTS CONCRETE CURB AND CONCRETE SIDEWALK.

6 CONCRETE DRIVEWAY & APRON

NOT TO SCALE

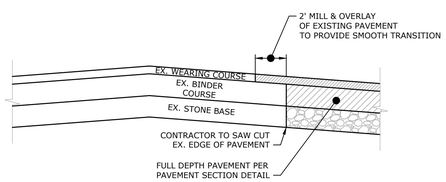




NOTE:
1. TACK COAT TO BE APPLIED BETWEEN LAYERS OF ASPHALT.

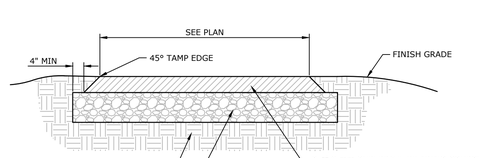
10 PAVING CROSS-SECTION DRIVEWAYS

NOT TO SCALE



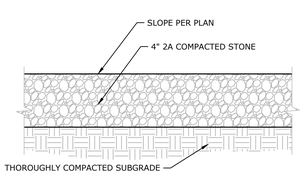
11 MILLING AND OVERLAY

NOT TO SCALE



12 BITUMINOUS TRAIL

NOT TO SCALE



SECTION

13 TEMPORARY TRAIL PAVEMENT

NOT TO SCALE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD.
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

CUMBERLAND COUNTY, PA

LOWER ALLEN & UPPER ALLEN TOWNSHIP

SITE DETAILS

Land Planning
Landscape Architecture
Civil Engineering

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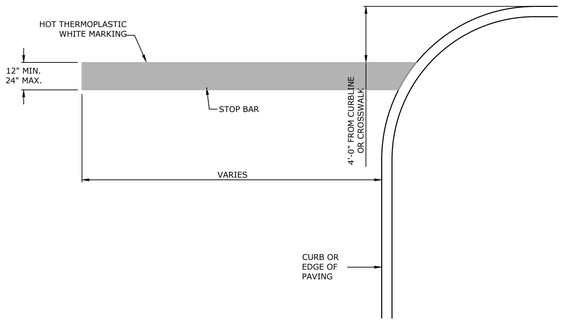
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-44 OF 57

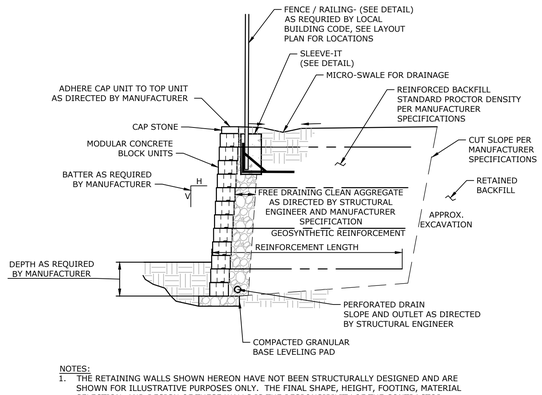
XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Details.dwg
SCRIPT:



NOTES:
1. PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES AND AT A MINIMUM AMBIENT OR SURFACE TEMPERATURE OF 50 DEG. F (10 DEG C) OR AS RECOMMENDED BY MANUFACTURER.
2. ALL PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS MOST CURRENT VERSION AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

1 ON-SITE TRAFFIC STOP PAVEMENT MARKING

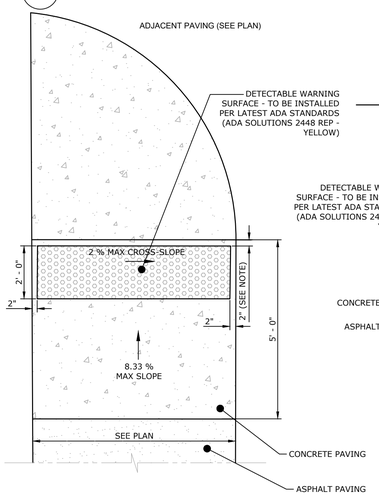
NOT TO SCALE

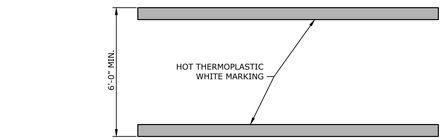


NOTES:
1. THE RETAINING WALLS SHOWN HEREON HAVE NOT BEEN STRUCTURALLY DESIGNED AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL SHAPE, HEIGHT, FOOTING, MATERIAL SELECTION, AND DESIGN OF THESE WALLS IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. MODULAR BLOCK RETAINING WALLS SHOWN ON THESE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL COMPUTATIONS, DESIGN, CONSTRUCTION SPECIFICATIONS, AND APPLICABLE BUILDING PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE LAYOUT AND GRADING OF THE RETAINING WALLS ASSUMES NO STORM RUNOFF OVER THE TOP OF THE WALL. IF SITE CONDITIONS ARE NOT AS ASSUMED CONTACT THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OF THE RETAINING WALL.

5 MODULAR BLOCK RETAINING WALL

NOT TO SCALE



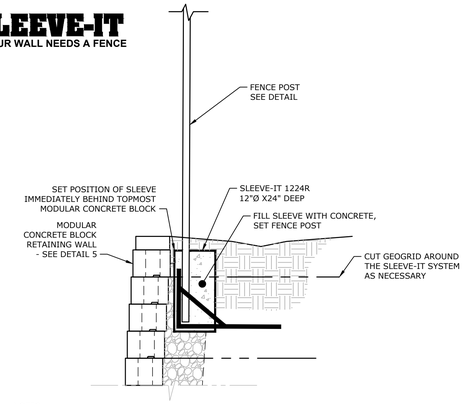


NOTES:
1. PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES AND AT A MINIMUM AMBIENT OR SURFACE TEMPERATURE OF 50 DEG. F (10 DEG C) OR AS RECOMMENDED BY MANUFACTURER.
2. ALL PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS MOST CURRENT VERSION AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2 TYPICAL CROSSWALK

NOT TO SCALE

SLEEVE-IT
WHEN YOUR WALL NEEDS A FENCE



NOTES:
1. THIS DETAIL IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY.
2. SLEEVE-ITS, MANUFACTURED BY STRATA SYSTEMS, INC., 380 DAHLONEGA ROAD, CUMMING, GA 30040 (800)-680-7750, OR EQUAL SHALL BE INSTALLED.
3. THE CONTRACTOR SHALL INSTALL THE SLEEVE-ITS PER THE MANUFACTURER'S SPECIFICATIONS.

6 FENCE POST INSTALLATION USING SLEEVE-IT

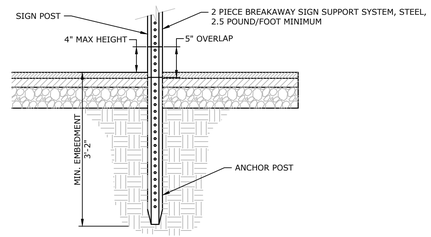
NOT TO SCALE

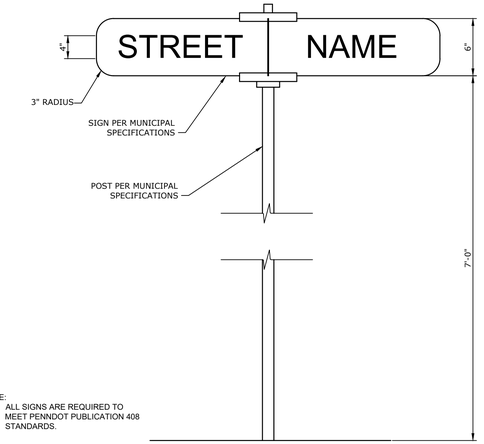
SIGN	MUTCD CODE
STOP	R1-1
NO PARKING	R7-302
NO PARKING (SYMBOL)	R8-3A
HANDICAP PARKING	R7-8
VAN ACCESIBLE	R7-8P
STREET	D3-1
SPEED LIMIT	R2-1

NOTES:
1. ALL SIGNS ARE REQUIRED TO MEET PENNDOT PUBLICATION 408 STANDARDS.
2. POSTS SHALL BE SQUARE BREAKAWAY POST SYSTEM CONSISTING OF A 14 GAUGE GALVANIZED STEEL SQUARE POST, 3'-6" ANCHOR AND A 12 GAUGE 2.25" TOP SECTION.
3. THE POST SHALL BE CORNER WELDED WITH 7/16" HOLES ON CENTER, ON ALL FOUR SIDES AND BASE, ONLY THE HOLES USED FOR MOUNTING SIGNS SHALL BE PUNCHED OUT. THE COATING SHALL BE HOT DIPPED GALVANIZED WITH A COATING DESIGNATION OF G-140.
4. A COMPLETE POST SYSTEM SHALL CONSIST OF AN ANCHOR SECTION OF AT LEAST 3'-6" LONG, A SQUARE TOP POST AT LEAST TEN FEET LONG, A CORNER BOLT AND A RAIN CAP.
5. ANY FREESTANDING SIGN IN A PARKING LOT SHALL BE MOUNTED AS SHOWN. PROVIDE SIGNAGE ON BOTH SIDES OF POST WHEN REQUIRED
6. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PUBLICATION 408 AND TC-8702B.

3 SIGN DETAIL

NOT TO SCALE

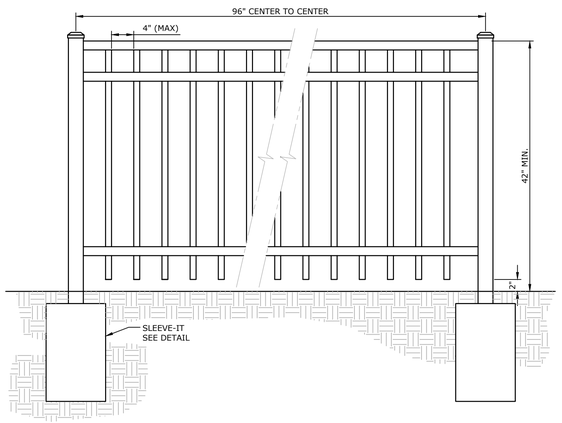




NOTE:
1. ALL SIGNS ARE REQUIRED TO MEET PENNDOT PUBLICATION 408 STANDARDS.

4 STREET NAME SIGN

NOT TO SCALE



NOTES:
1. RAILING TYPE, MANUFACTURER & COLOR TO BE SELECTED BY OWNER OR OWNER'S REPRESENTATIVE.

7 3-RAIL ALUMINUM RETAINING WALL RAILING DETAIL

NOT TO SCALE

NOTES:
1. DETECTABLE WARNING SURFACE (DWS) TO BE SET A MINIMUM OF 2" BEHIND THE BACK OF CURB OR SIDEWALK EDGE AT THE CLOSEST POINT.

8 DETECTABLE WARNING SURFACE (DWS) DETAIL

NOT TO SCALE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD.
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP | CUMBERLAND COUNTY, PA

SITE DETAILS

Land Planning
Landscape Architecture
Civil Engineering

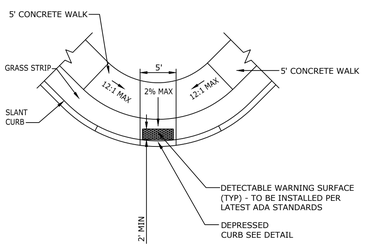
Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

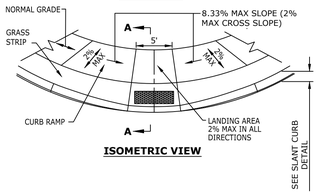
RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-45 OF 57

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Details.dwg
SCRIPT:



PLAN VIEW



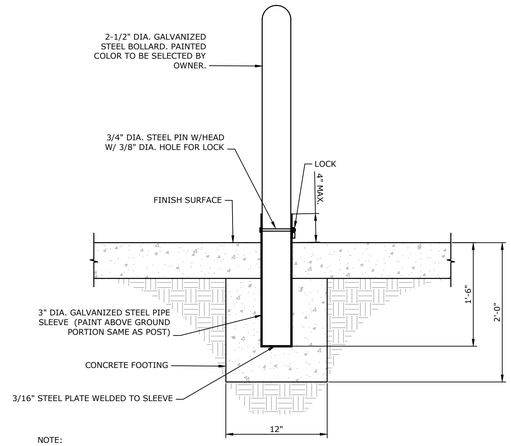
ISOMETRIC VIEW

NOTES:

1. PROVIDE ½" EXPANSION JOINT MATERIAL WHERE CURB CUT RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
2. PROVIDE SLIP RESISTANT TEXTURE ON CURB CUT RAMP BY COURSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB CUT RAMP INCLUDING FLARED SIDE RAMPS.

1 ADA CURB RAMP TYPE A DETAIL

NOT TO SCALE



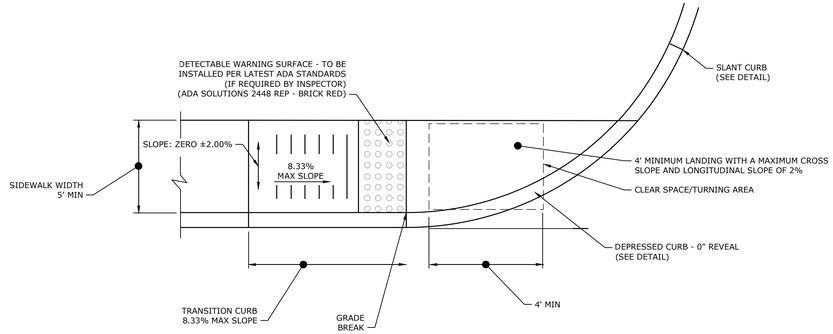
NOTE:
DRILL A 13/16" DIA. HOLE THRU BOTH THE POST AND SLEEVE FOR PIN PLACEMENT

2 REMOVABLE BOLLARD

NOT TO SCALE

NOTES:

1. LIGHT FIXTURE TO ACRON STYLE BY PPL ELECTRIC OR APPROVED EQUAL.
2. LIGHT POLE FOUNDATION BASE SHOWN HEREON HAVE NOT BEEN STRUCTURALLY DESIGNED AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL SIZE, DIMENSIONS AND REINFORCEMENT OF THESE FOUNDATION BASES IS THE RESPONSIBILITY OF THE CONTRACTOR.

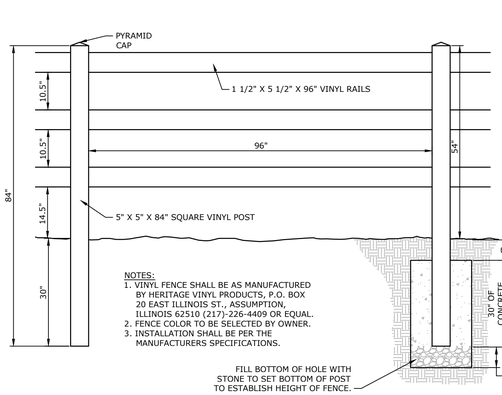


NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS OF PENNDOT RC-67M.
2. IF APPLICABLE, CONSTRUCTION SHALL CONFORM TO APPROVED PENNDOT IMPROVEMENT PLANS.
3. CONTRACTOR TO CONFIRM LOCAL MUNICIPAL REQUIREMENTS CONFORM TO THIS DETAIL PRIOR TO CONSTRUCTION. DESIGN ENGINEER TO BE NOTIFIED OF ANY DISCREPANCIES.

3 CURB RAMP TYPE 1A, RC-67M (DIAGONAL)

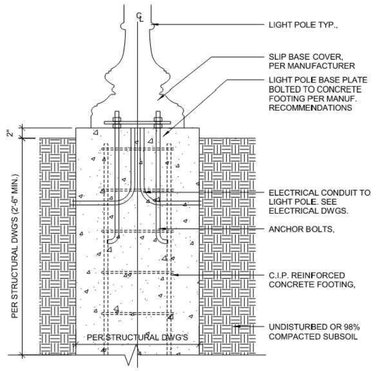
NOT TO SCALE



NOTES:
1. VINYL FENCE SHALL BE AS MANUFACTURED BY HERITAGE VINYL PRODUCTS, P.O. BOX 20 EAST ILLINOIS ST., ASSUMPTION, ILLINOIS 62510 (217)-226-4409 OR EQUAL.
2. FENCE COLOR TO BE SELECTED BY OWNER.
3. INSTALLATION SHALL BE PER THE MANUFACTURERS SPECIFICATIONS.

4 3-RAIL VINYL FENCE

NOT TO SCALE



FOUNDATION BASE

5 FIXTURE
LIGHTPOLE FOUNDATION & FIXTURE DETAIL

NOT TO SCALE

SUN VALLEY LIGHTING

AREA & ROADWAY LIGHTING

TCL SERIES - PLED

TRADITIONAL COACH LANTERN

PROJECT NAME:

PROJECT TYPE:

Luminaire
Heavy cast corrosion resistant low copper aluminum (A356 alloy, <0.2% copper) traditionally styled housing and top. Minimum wall thickness is .188". Top hinges for easy access. Silicone gasket between housing and hood. Luminaire base has 3" I.D. opening for tenon. All hardware is stainless steel.

Diffuser
No Lens Open Frame is standard. Option of Clear Patterned Acrylic (CPA) or White Acrylic (WA) Lens Panels. Lenses are mechanically fastened to the frame and sealed with closed cell silicone gasketing.

PLED™ Optics
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a macro-reflector inside the refractor redirects the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. No lens fixture option will provide 'dot' no uplight optical package.

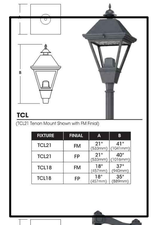
Ambiance Low Luminance Lens
Optional Ambiance Lens (AL) provides low luminance reduced glare distributions. Lens diffuses the PLED Optics and provides a more uniform appearance across the aperture reducing glare at all angles. Lens is provided with an aluminum frame and is sealed to the housing with high temp gasketing.

LED Emitters
High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L84 of 60,000 hours (TM-21 calculated at 6x Test Time).

True Amber LED's residual True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. Integral terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50-60Hz or 347V-480V, 50-60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3kV internal surge protection. Luminaire supplied with 20kV surge protector for field installation.)

Finish
Super TGIC polyester powder coating is applied onto a metal substrate this has been prewashed with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



TCL
(TCL21 Tenon Mount Shown with FM Finial)

FIXTURE	FINIAL	A	B
TCL21	FM	21" (533mm)	41" (1041mm)
	FP	21" (533mm)	40" (1016mm)
TCL18	FM	18" (457mm)	37" (940mm)
	FP	18" (457mm)	36" (914mm)

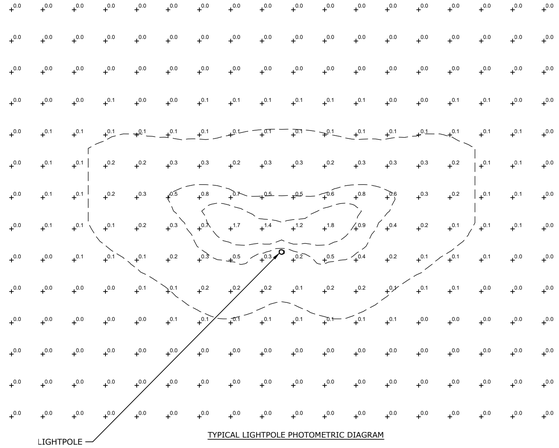
TCL-PM
(TCL18 Pendant Mount Shown)

FIXTURE	A	B
TCL21-PM	21" (533mm)	32" (813mm)
TCL18-PM	18" (457mm)	33.5" (851mm)

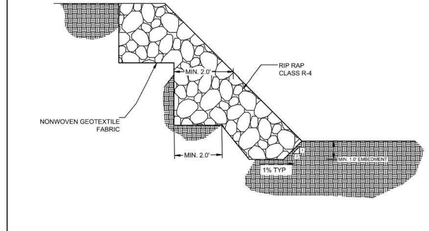
BAA compliant — U.S. Listed for Wet Location — 2024185

U.S. Pole Company Inc. | 640 West Avenue O, Palmdale, CA 93551 | Phone (661) 583-8900 | www.uspoly.com

An Employee Owned Company



TYPICAL LIGHTPOLE PHOTOMETRIC DIAGRAM



6 RIPRAP SLOPE STABILIZATION

NOT TO SCALE

53-6 GRUMBACHER ROAD
YORK, PENNSYLVANIA 17406
PHONE: (717) 767 - 4288
FAX: (717) 767 - 5658

CUT SLOPE REMEDIATION DETAIL

APPLICABLE SLOPES 1H:1V TO 2H:1V

PROJECT NO.: 18:6304-A
SCALE: NTS
DATE: 06/18/2026

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SITE DETAILS

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
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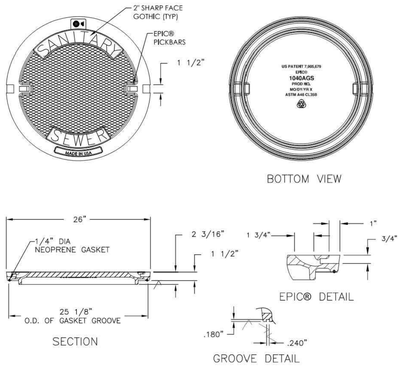
Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.: LD-46 OF 57

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\PlotZ-Details.dwg
SCRIPT:

1040AGS Cover



Product Number
00104032

Design Features
-Materials
Gray Iron (CL35B)
-Load Rating
Heavy Duty
-Open Area
n/a
-Coating
Dipped
-✓ Designates Machined Surface

Certification
- ASTM A48
-
-
-Country of Origin: USA

Drawing Revision
04/26/2008 Designer: DEP
10/28/2016 Revised By:DAE

Disclaimer
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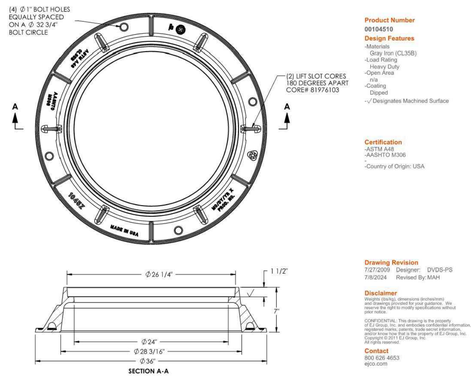
Contact
800 626 4653
ejco.com

NOTE:
1. NO SUBSTITUTION FOR THE MANUFACTURER OR MAKE OF THE MANHOLE FRAMES AND COVERS.

1 SANITARY SEWER COVER DETAIL
NOT TO SCALE

1045Z Frame



Product Number
00104519

Design Features
-Materials
Gray Iron (CL35B)
-Load Rating
Heavy Duty
-Open Area
n/a
-Coating
Dipped
-✓ Designates Machined Surface

Certification
-ASTM A48
-AASHTO M306
-
-Country of Origin: USA

Drawing Revision
7/27/2009 Designer: DVDS-PS
7/8/2024 Revised By: MAH

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NOTE:
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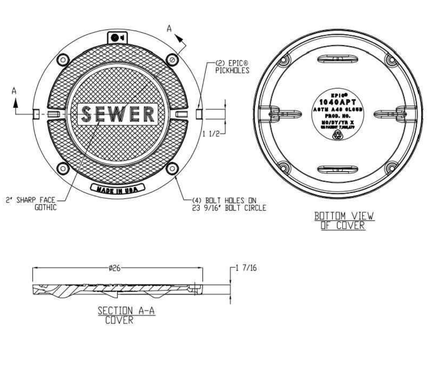
2 SANITARY SEWER FRAME DETAIL
NOT TO SCALE

1040APT Cover



Product Number
001040663

Design Features
-Materials
Gray Iron (CL35B)
-Load Rating
Heavy Duty
-Open Area
n/a
-Coating
Undipped
-✓ Designates Machined Surface

Certification
- ASTM A48
-
-Country of Origin: USA

Drawing Revision
9/5/2023 Designer: MAH
10/6/2023 Revised By:MAH

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NOTE:
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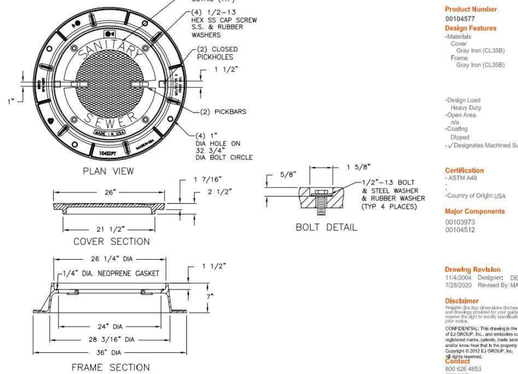
3 SANITARY SEWER BOLT COVER DETAIL
NOT TO SCALE

1040APT 1045ZPT Assembly



Product Number
00104577

Design Features
-Materials
Cover
Gray Iron (CL35B)
Frame
Gray Iron (CL35B)

-Design Load
Heavy Duty
-Open Area
n/a
-Coating
Dipped
-✓ Designates Machined Surface

Certification
- ASTM A48
-
-Country of Origin: USA

Major Components
00103973
00104512

Drawing Revision
11/4/2004 Designer: DEW
7/28/2020 Revised By: MAH

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NOTE:
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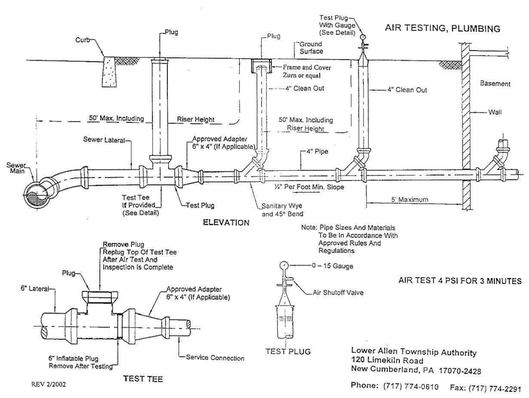
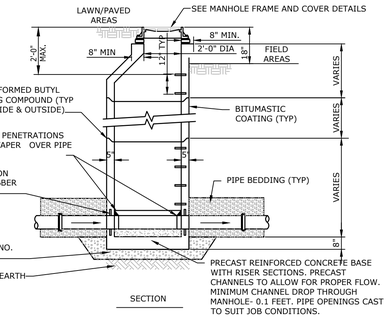
4 SANITARY SEWER BOLT FRAME DETAIL
NOT TO SCALE



5 TYPICAL SANITARY LATERAL DETAIL
NOT TO SCALE

NOTES:

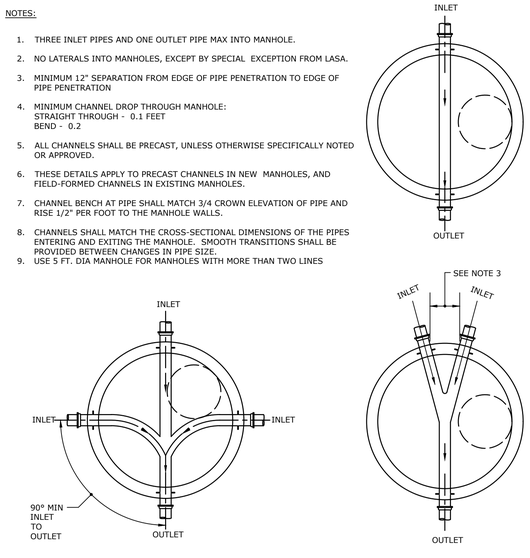
1. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6") SEE FRAME & COVER DETAILS
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/ INSIDE DROP MANHOLE DETAILS.
4. FOR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



6 4' & 5' DIAMETER STANDARD SANITARY MANHOLE DETAIL
NOT TO SCALE

NOTES:

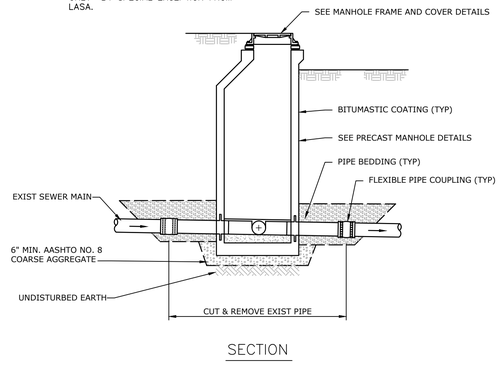
1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO MANHOLE.
2. NO LATERALS INTO MANHOLES, EXCEPT BY SPECIAL EXCEPTION FROM LASA.
3. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION
4. MINIMUM CHANNEL DROP THROUGH MANHOLE:
STRAIGHT THROUGH - 0.1 FEET
BEND - 0.2
5. ALL CHANNELS SHALL BE PRECAST, UNLESS OTHERWISE SPECIFICALLY NOTED OR APPROVED.
6. THESE DETAILS APPLY TO PRECAST CHANNELS IN NEW MANHOLES, AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
7. CHANNEL BENCH AT PIPE SHALL MATCH 3/4 CROWN ELEVATION OF PIPE AND RISE 1/2" PER FOOT TO THE MANHOLE WALLS.
8. 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.
9. USE 5 FT. DIA MANHOLE FOR MANHOLES WITH MORE THAN TWO LINES



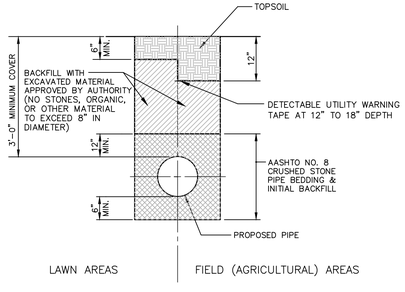
7 PRECAST CHANNEL DETAILS
NOT TO SCALE

NOTES:

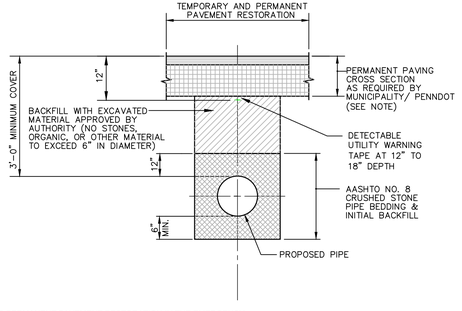
1. INSTALL MANHOLE ON EXISTING SEWER MAIN AS FOLLOWS:
A. BYPASS FLOW
B. CUT EXISTING PIPE
C. INSTALL MANHOLE W/ PRECAST BASE, AS SHOWN ON DETAIL.
2. DOGHOUSE MANHOLES MAY BE USED ONLY BY SPECIAL EXCEPTION FROM LASA.



8 NEW MANHOLE ON EXISTING MAIN DETAIL
NOT TO SCALE



9 TRENCH RESTORATION LAWN/FIELD AREAS
NOT TO SCALE



NOTE:
1. FOR PERMANENT PAVEMENT RESTORATION IN THE EMERGENCY ACCESS DRIVE, PAVING CROSS-SECTION TO MEET THE REQUIREMENTS OF THE PAVING STREET CROSS-SECTION.

10 TRENCH RESTORATION PAVEMENT
NOT TO SCALE

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-Details.dwg
SCRIPT:

NO. | DATE | REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE
FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN
LOWER ALLEN & UPPER ALLEN TOWNSHIP | CUMBERLAND COUNTY, PA
SANITARY SEWER & WATER DETAILS

Land Planning
Landscape Architecture
Civil Engineering
Corporate Office:
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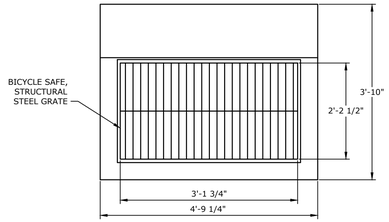
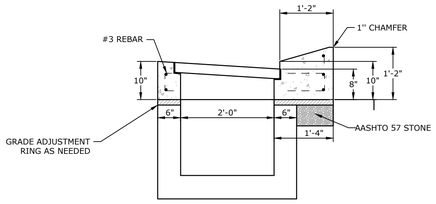
York, Harrisburg, and Paoli
RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.:
LD-47 OF 57



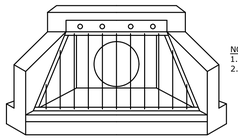
PLAN



SECTION

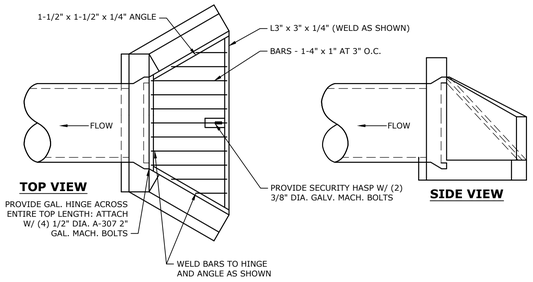
1 SLANT CURB CONCRETE INLET TOP

NOT TO SCALE



ISOMETRIC

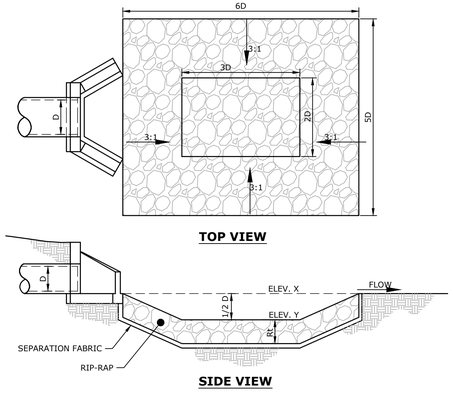
NOTES:
1. MATERIAL SHALL BE GALVANIZED OR ALUMINUM.
2. DIMENSION APPROPRIATELY FOR SIZE OF HEADWALL UTILIZED.



TOP VIEW **SIDE VIEW**

5 TRASH RACK

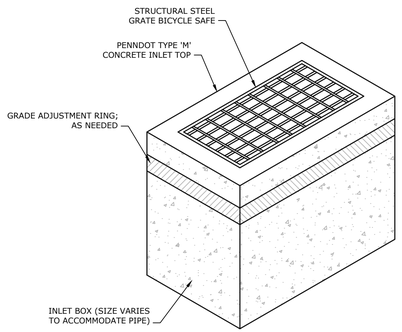
NOT TO SCALE



TOP VIEW **SIDE VIEW**

9 PLUNGE POOL

NOT TO SCALE



NOTE:
1. MATERIAL AND CONSTRUCTION BASED ON PennDOT STANDARDS

2 TYPE "M" INLET

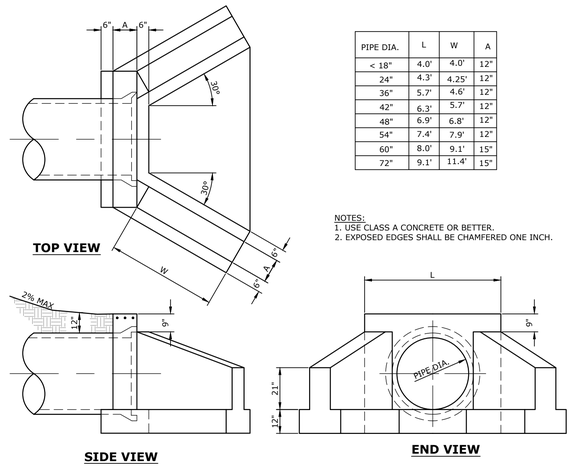
NOT TO SCALE

NOTES:
1. MATERIAL CONTAINING NO DEBRIS, ORGANIC MATTER, FROZEN MATERIAL OR LARGE STONES WITH A DIAMETER GREATER THAN ONE-HALF THE THICKNESS OF THE COMPACTED LAYERS BEING PLACED.
2. COMPACT TOP 3'-0" OF SUBGRADE TO 100% IN ACCORDANCE WITH PUBLICATION 408, SECTION 206.3.
3. PIPE DIAMETERS FROM 4- THROUGH 48-INCH INSTALLED IN TRAFFIC AREAS (AASHTO H-25 OR HS-25 LOADS) MUST HAVE AT LEAST ONE FOOT OF COVER OVER THE PIPE CROWN, WHILE 54- AND 60-INCH PIPES MUST HAVE AT LEAST 24 INCHES OF COVER. WHERE PAVEMENT IS INVOLVED, SUB-BASE MATERIAL CAN BE CONSIDERED IN THE MINIMUM BURIAL DEPTH. WHILE RIGID PAVEMENTS CAN BE INCLUDED IN THE MINIMUM COVER, THE THICKNESS OF FLEXIBLE PAVEMENTS SHOULD NOT BE INCLUDED IN THE MINIMUM COVER.
4. THE BACKFILL ENVELOPE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS OF ASTM D2321. THE BACKFILL ENVELOPE MUST BE OF THE TYPE AND COMPACTION LISTED BY THE MANUFACTURER, AND MEET CLASS III MATERIAL COMPACTED TO 90% STANDARD PROCTOR DENSITY.

6 STORM PIPE BEDDING AND TRENCH BACKFILL DETAIL - THERMOPLASTIC PIPE

NOT TO SCALE

ENDWALL ID	D	2D	3D	5D	6D	1/2D	ELEV. X	ELEV. Y	RIPRAP SIZE	RIPRAP THICKNESS (Rt)
EW-C	2.00	4.0	6.00	10.00	12.0	1.000	378.00	377.00	4	12
FS-C1	1.50	3.0	4.50	7.50	9.0	0.750	383.00	382.25	4	12
FS-C31	1.50	3.0	4.50	7.50	9.0	0.750	383.00	382.25	4	12
EW-D	2.00	4.0	6.00	10.00	12.0	1.000	372.00	371.00	4	12
EW-D1	1.00	2.0	3.00	5.00	6.0	0.500	376.00	375.50	4	12
EW-E	2.00	4.0	6.00	10.00	12.0	1.000	403.00	402.00	4	12
FS-E1	1.50	3.0	4.50	7.50	9.0	0.750	407.00	406.25	4	12
FS-E23	1.50	3.0	4.50	7.50	9.0	0.750	407.00	406.25	4	12
EW-4	1.50	3.0	4.50	7.50	9.0	0.750	368.00	367.25	4	12
EW-9	1.25	2.5	3.75	6.25	7.5	0.625	378.00	377.38	4	12
EW-10	1.25	2.5	3.75	6.25	7.5	0.625	372.00	371.38	4	12
EW-11	1.25	2.5	3.75	6.25	7.5	0.625	403.00	402.38	4	12
EW-G	2.00	4.0	6.00	10.00	12.0	1.000	359.86	358.86	4	12
HW-H	4.00	N/A	N/A	20.00	24.0	2.000	358.34	356.34	4	12
EW-H	4.00	N/A	N/A	20.00	24.0	2.000	357.19	355.19	4	12



PIPE DIA.	L	W	A
< 18"	4.0'	4.0'	12"
24"	4.3'	4.25'	12"
36"	5.7'	4.6'	12"
42"	6.3'	5.7'	12"
48"	6.9'	6.8'	12"
54"	7.4'	7.9'	12"
60"	8.0'	9.1'	15"
72"	9.1'	11.4'	15"

NOTES:
1. USE CLASS A CONCRETE OR BETTER.
2. EXPOSED EDGES SHALL BE CHAMFERED ONE INCH.

SIDE VIEW **END VIEW**

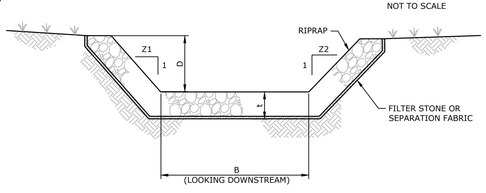
3 TYPE D-W ENDWALL

NOT TO SCALE

NOTES:
1. MATERIAL CONTAINING NO DEBRIS, ORGANIC MATTER, FROZEN MATERIAL OR LARGE STONES WITH A DIAMETER GREATER THAN ONE-HALF THE THICKNESS OF THE COMPACTED LAYERS BEING PLACED.
2. COMPACT TOP 3'-0" OF SUBGRADE TO 100% IN ACCORDANCE WITH PUBLICATION 408, SECTION 206.3.

7 STORM PIPE BEDDING AND TRENCH BACKFILL DETAIL - CONCRETE PIPE

NOT TO SCALE



CHANNEL CROSS-SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	RIPRAP GRADATION (R-__)	RIPRAP DEPTH t (IN)	UNDERLAYMENT	UNDERLAYMENT THICKNESS t (IN)
1-C	ALL	1	1	3	3	4	18	AASHTO #3	6 in
12-A	ALL	3	1	3	3	4	18	AASHTO #3	6 in

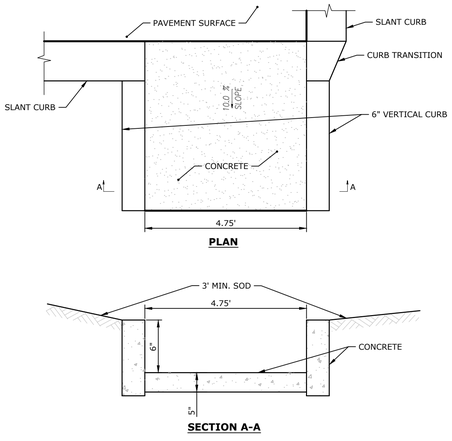
NOTES:
1. FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.
2. CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.
3. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.
4. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
5. THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

10 RIPRAP CHANNEL

NOT TO SCALE

4 4' DIAMETER STORM SEWER MANHOLE

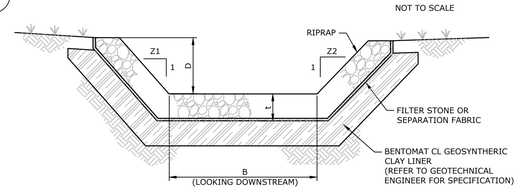
NOT TO SCALE



PLAN **SECTION A-A**

8 CONCRETE FLUME

NOT TO SCALE



CHANNEL CROSS-SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	RIPRAP GRADATION (R-__)	RIPRAP DEPTH t (IN)	UNDERLAYMENT	UNDERLAYMENT THICKNESS t (IN)
6-B	ALL	4.0	2.0	3	3	6	36	AASHTO #3	6 in
6-C	ALL	3.0	3.0	3	3	6	36	Geotextile	N/A
6-D	ALL	3.0	2.0	3	3	6	36	Geotextile	N/A
6-E	ALL	3.5	1.5	3	3	6	36	AASHTO #3	6 in
6-F	ALL	3.0	1.5	3	3	6	36	AASHTO #3	6 in

NOTES:
1. FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.
2. CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.
3. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.
4. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
5. THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

11 RIPRAP CHANNEL WITH CLAY LINER

NOT TO SCALE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

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STORM DETAILS

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RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.: LD-48 OF 57

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\Final-PH1\PlotZ-PCSM-Details.dwg
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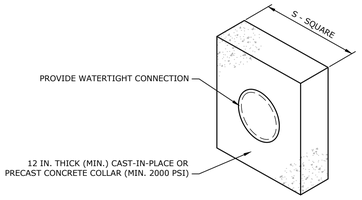


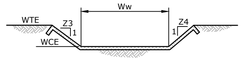
BASIN OR TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
SCM-003	24	84	2	5.4	18.5
SCM-004	18	66	2	5	17
SCM-005	24	96	2	3.7	19.5

NOTES:

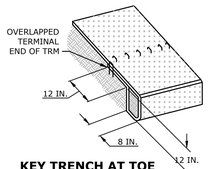
1. ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.
3. COLLARS SHOULD NOT BE LOCATED CLOSER THAN 2 FEET TO A PIPE JOINT.
4. THE FIRST PIPE JOINT MUST BE LOCATED WITHIN 4 FEET OF THE RISER STRUCTURE.

1 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS

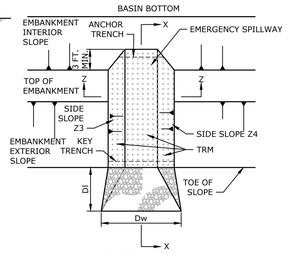
NOT TO SCALE



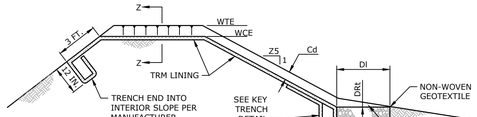
WEIR SECTION Z-Z



KEY TRENCH AT TOE OF SLOPE OF SPILLWAY



PLAN VIEW RIPRAP OUTLET DISSIPATER



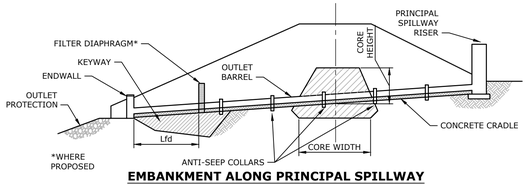
EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY SECTION X-X

NOTES:

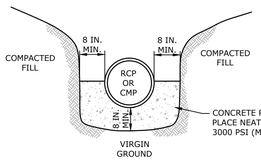
1. HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
2. DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
3. RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
4. THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

5 STANDARD CONSTRUCTION DETAIL #7-13 SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINING DETAIL

NOT TO SCALE



EMBANKMENT ALONG PRINCIPAL SPILLWAY



CROSS-SECTION AT OUTLET BARREL

DIAMETER (IN.)	SIDE (IN.)	TOTAL BOTTOM (IN.)	BELOW PIPE (IN.)
12	8.00	32.00	8.00
15	8.00	35.56	8.00
18	8.00	39.04	8.00
21	8.00	42.52	8.00
24	8.00	46.00	8.00
27	8.25	49.98	8.00
30	8.50	53.96	8.00
33	8.75	58.18	8.25
36	9.00	62.16	9.00
42	9.50	69.88	10.50
48	10.00	77.84	12.00
54	10.50	86.04	13.50
60	11.00	94.00	15.00

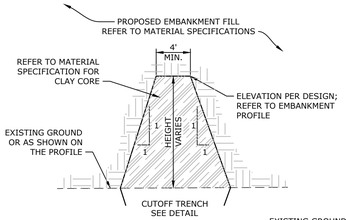
NOTES:

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. FILTER DIAPHRAGM LOCATION (Lfd) SHALL BE AS SHOWN IN FIGURE 7.8 OF THE PA DEP EROSION CONTROL MANUAL.

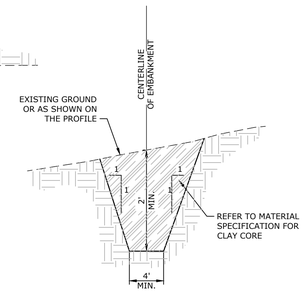
2 CONCRETE CRADLE FOR BASIN OR TRAP OUTLET BARREL

NOT TO SCALE

STANDARD CONSTRUCTION DETAIL #7-13												
BASIN NO.	WEIR					LINING		CHANNEL		DISSIPATER		
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PTRN	Z5 (FT)	DEPTH Cd (FT)	LENGTH DI (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R-__)	RIPRAP THICK. DRt (IN)
3	3	3	385.00	383.50	50	ECP-2	3.5	3	1.00	5	50	3	9
4	3	3	378.00	376.50	30	ECP-2	3.5	3	1.00	5	30	3	9
5	3	3	410.00	408.00	50	ECP-2	3.5	3	1.00	5	50	3	9



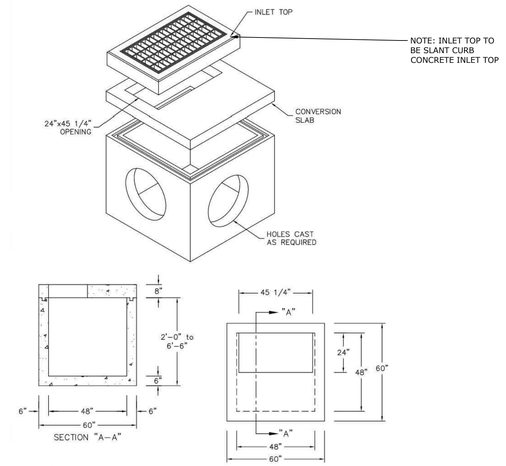
CORE TRENCH



CUTOFF TRENCH

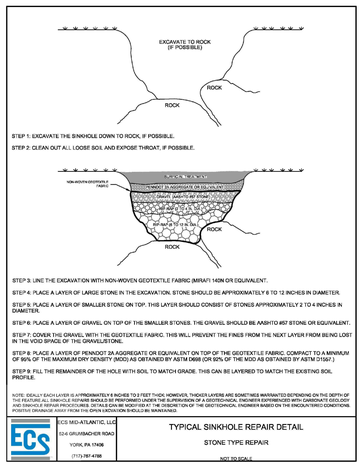
3 CORE TRENCH & CUTOFF TRENCH

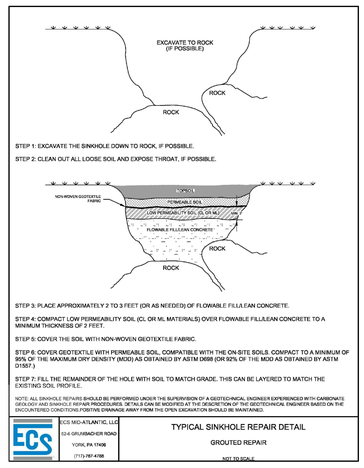
NOT TO SCALE



4 4' X 4' INLET BOX DETAIL

NOT TO SCALE





6 SINKHOLE REPAIR DETAILS

NOT TO SCALE

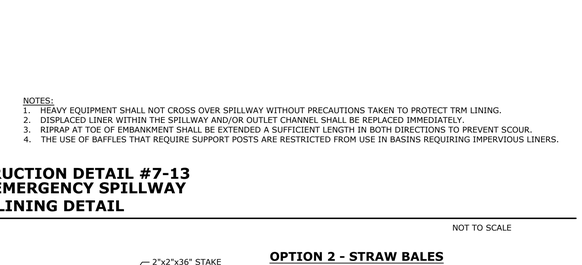
STANDARD CONSTRUCTION DETAIL # 6-1 - VEGETATED CHANNEL							
CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
1-A	ALL	1	1.0	7	3	3	ECP-2
1-B	ALL	1	1.0	7	3	3	ECP-2
2-A	ALL	1	1.0	7	3	3	ECP-2
3-A	ALL	2	1.0	8	3	3	ECP-2
4-A	ALL	1	1.5	10	3	3	ECP-2
4-B	ALL	1	1.5	10	3	3	ECP-2

NOTES:

1. ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
2. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
   SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
3. NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

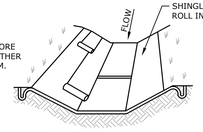
8 STANDARD CONSTRUCTION DETAIL #6-1 VEGETATED CHANNEL

NOT TO SCALE



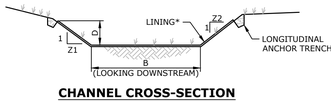
INTERMITTENT CHECK SLOT **LONGITUDINAL ANCHOR TRENCH**

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM.



MIN. SHINGLE LAP = 6 IN.

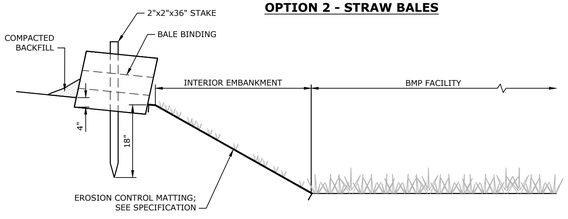
ISOMETRIC VIEW



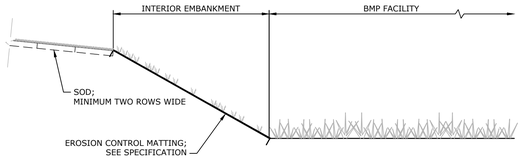
CHANNEL CROSS-SECTION

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

OPTION 1 - COMPOST FILTER SOCK



OPTION 2 - STRAW BALES



OPTION 3 - SOD

NOTES:

1. DURING FACILITY INSTALLATION OR CONVERSION, THE CONTRACTOR SHALL IMPLEMENT AT LEAST ONE, OR A COMBINATION OF THE SPECIFIED PROTECTION OPTIONS IN ORDER TO ENSURE THAT THE FACILITY IS SUFFICIENTLY PROTECTED FOLLOWING PLACEMENT OF THE SOIL MEDIA, VEGETATION, OUTLET CONTROL STRUCTURE, OR SIMILAR.
2. FILTER SOCK INSTALLATION SHALL FOLLOW THE INSTALLATION PROCEDURES IDENTIFIED IN THE COMPOST FILTER SOCK DETAIL.
3. STRAW BALE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE PA EROSION AND SEDIMENTATION CONTROL MANUAL.
4. ALL SOD SHALL BE HEALTHY AND VIGOROUS UPON ARRIVAL TO THE SITE. ALL NECESSARY IRRIGATION OF THE SOD FOLLOWING PLACEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL PORTIONS OF SOD WHICH FAIL TO ESTABLISH AND SUSTAIN GROWTH SHALL BE REMOVED AND REPLACED IMMEDIATELY.
5. BMP PROTECTION SHALL BE MAINTAINED UNTIL THE UPLAND DRAINAGE AREA TRIBUTARY TO THE BMP ACHIEVES A UNIFORM VEGETATIVE COVER OF AT LEAST 70%.

7 TYPICAL BMP PROTECTION DETAIL

NOT TO SCALE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

CUMBERLAND COUNTY, PA

LOWER ALLEN & UPPER ALLEN TOWNSHIP

STORM DETAILS

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: 717.715.1396
www.rgsassociates.com

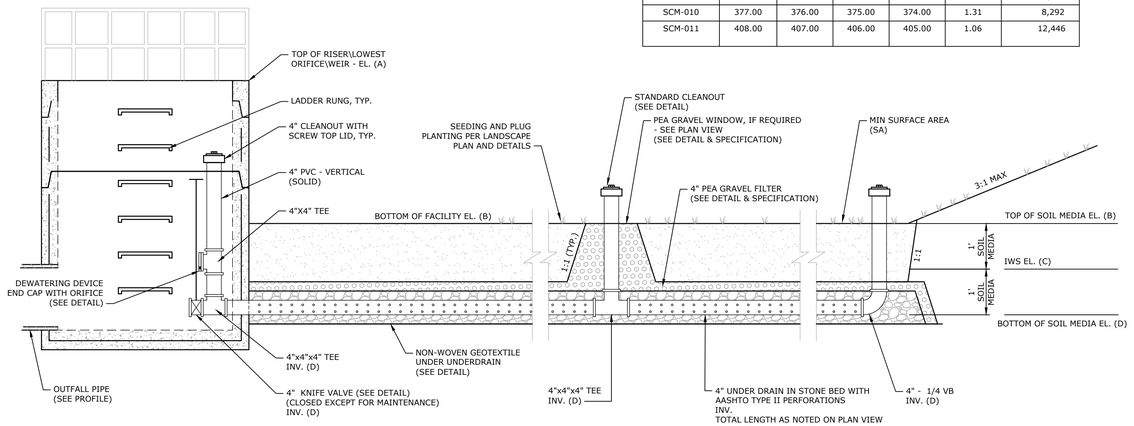
Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-49 OF 57

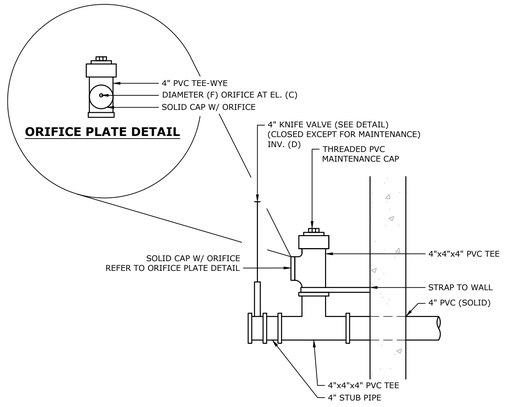
XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final PH1\Plot\Z-PCSM-Details.dwg
SCRIPT:

MRC BIO-RETENTION FACILITY						
FACILITY ID	ELEV (A)	ELEV (B)	ELEV (C)	ELEV (D)	ORIFICE DIA (F) IN	AREA PER CELL (SF)
SCM-009	384.00	383.00	382.00	381.00	1.19	12,509
SCM-010	377.00	376.00	375.00	374.00	1.31	8,292
SCM-011	408.00	407.00	406.00	405.00	1.06	12,446

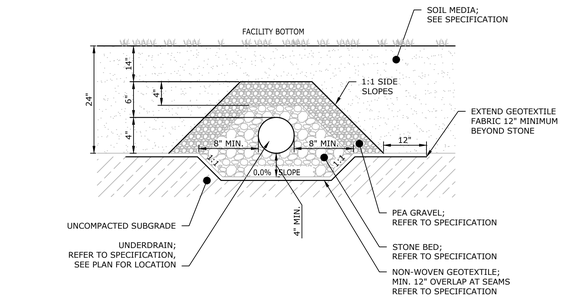


1 MRC - BIO-RETENTION FACILITY

NOT TO SCALE

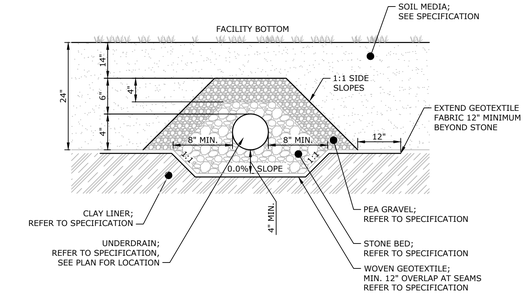


DEWATERING DEVICE SIDE VIEW



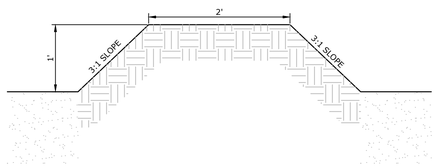
2 TYPICAL CLEANOUT WITH PEA GRAVEL WINDOW

NOT TO SCALE



3 UNDERDRAIN WITH CLAY LINER

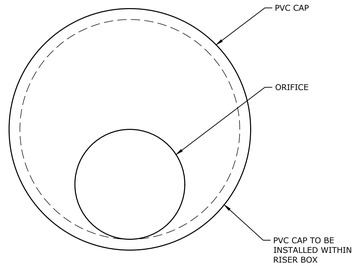
NOT TO SCALE



4 MRC EARTHEN BERM DETAIL

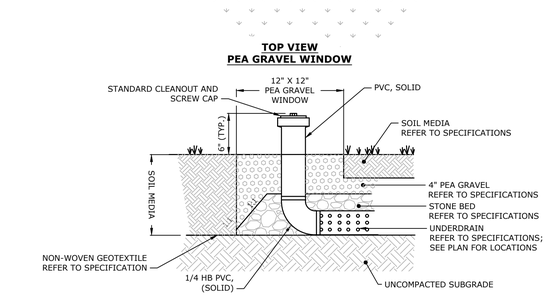
NOT TO SCALE

FACILITY ID	PVC CAP		ORIFICE	
	D (IN.)	INVERT	D (IN.)	INVERT
SCM-009	4	382	1.19	382
SCM-010	4	375	1.31	375
SCM-011	4	406	1.06	406



5 DEWATERING DEVICE END CAP

NOT TO SCALE

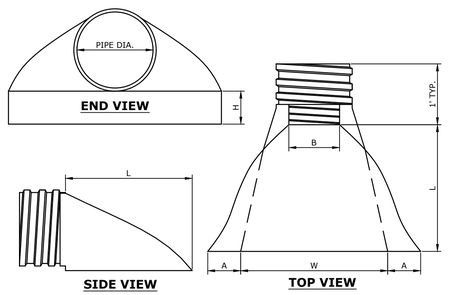


TOP VIEW PEA GRAVEL WINDOW

6 UNDERDRAIN DETAIL - MRC FACILITY

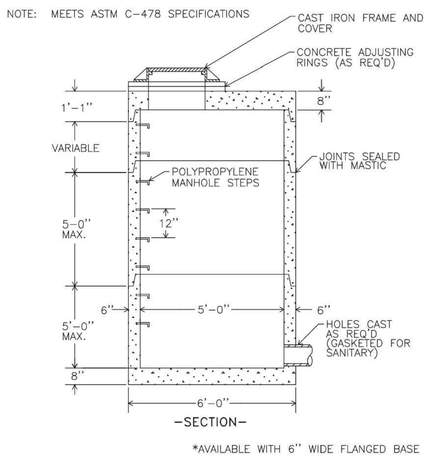
NOT TO SCALE

PIPE DIAMETER	DIMENSIONS, INCHES					
	PART NO.	A, ±1	B MAX	H, ±1	L, ±1	W, ±2
12, 15	1210 NP	6.5	10	6.5	25	29
18	1810 NP	7.5	15	6.5	32	35
24	2410 NP	7.5	18	6.5	36	45
30	3010 NP	10.5	NA	7.0	53	68
36	3610 NP	10.5	NA	7.0	53	68



7 FLARED END SECTION

NOT TO SCALE



8 5' DIAMETER PRECAST CONCRETE MANHOLE

NOT TO SCALE

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-PCSM-Details.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

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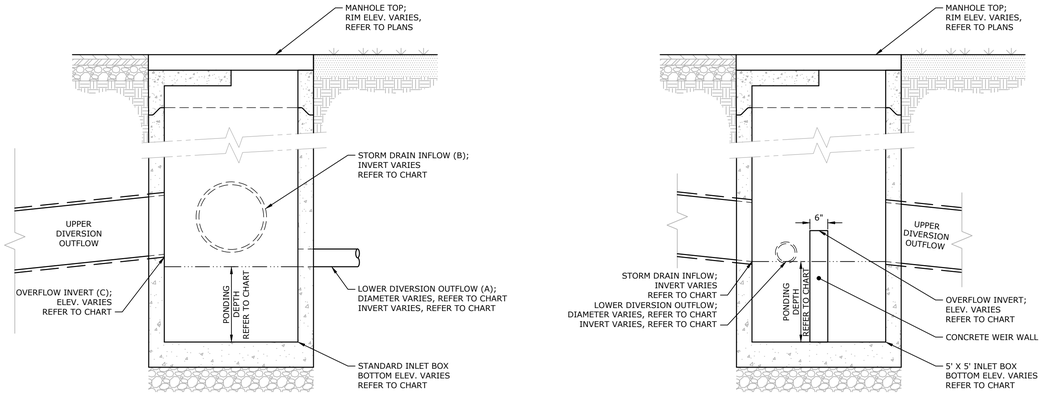
RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-50 OF 57



OPTION 1

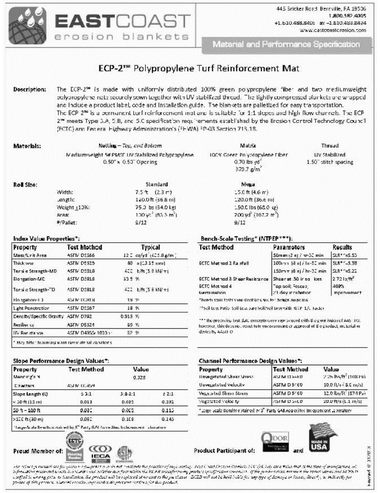
OPTION 2

FACILITY ID	FACILITY DIVERSION STRUCTURE	DIVERSION PIPE DIAMETER (IN.)	DIVERSION PIPE INVERT (A)	INFLOW INVERT (B)	OVERFLOW INVERT (C)	STRUCTURE SUMP ELEVATION	OPTION
SCM-009	C2	18	383.44	383.44	386.50	4	2
SCM-010	D4	15	376.13	376.13	378.80	3.13	2
SCM-011	E3	18	407.31	410.35	409.90	4	1

NOTES:
1. REFER TO THE TYPICAL DIVERSION STRUCTURE BLOCKING DETAIL FOR FACILITY PROTECTION DURING CONSTRUCTION.

1 TYPICAL DIVERSION STRUCTURE

NOT TO SCALE



EASTCOAST erosion blankets
443 Striker Road Bronville, FA 28536
1.800.MD.4005
+1.630.488.8400 or +1.630.668.8444
www.eastcoasterosion.com

Material and Performance Specification

ECP-2™ Polypropylene Turf Reinforcement Mat

Description: The ECP-2™ is made with uniformly distributed 100% green polypropylene fiber- and two medium-weight polypropylene nets bound/sewn together with UV stabilized thread. The lightly compressed blankets are wrapped and reduced to a manageable size, and packaged in a protective plastic netting. The blankets are palletized for easy transportation. The ECP 2™ is a permanent turf reinforcement mat and is suitable for 1:1 slopes and High flow channels. The ECP 2™ meets Type 2.A, 2.B, and 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) TP-03 Section 7113.

Materials:

Netting – Top and Bottom	Matrix	Thread
Ultraviolet light stabilized Polypropylene 0.90" x 0.52" Opening	100% Green Polypropylene Fiber 0.70 lbs per yd³ 329.2 g/m³	UV Stabilized 1.50" stitch spacing

Roll Size:

	Standard	Mega
Width:	7.5 ft (2.3 m)	15.0 ft (4.6 m)
Length:	140.0 ft (46.8 m)	280.0 ft (86.4 m)
Weight ±10%:	79.2 lbs (44.0 kg)	320.0 lbs (145.0 kg)
Area:	1050 yd² (85.3 m²)	2100 yd² (167.2 m²)
#/Pallet:	6/12	6/12

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D5261	12 oz/yd² (407.8 g/m²)
Thickness	ASTM D1777	80 mil (2.03 mm)
Tensile Strength-MD	ASTM D5035	422 lb/ft (6.16 kN/m)
Elongation-MD	ASTM D5035	43.5 %
Tensile Strength-TD	ASTM D5035	422 lb/ft (6.16 kN/m)
UV Stability @ 3	ASTM D4355 @	90 %
Light Penetration	ASTM D6567	28 %
Density/Specific Gravity	ASTM D792	0.913 %
Resilience	ASTM D6524	80 %
CO Exchange	ASTM D6614	37 %

* Min. Ave. Roll Value based on typical roll dimensions

Slope Performance Design Values*:

Property	Test Method	Value	
Manning's n		0.028	
C Factors	ASTM D6459		
Slope Length (L)	≤ 3:1	3:1 to 2:1	≥ 2:1
≤ 20 ft (6 m)	0.013	0.021	0.041
20 ft – 100 ft	0.021	0.025	0.052
>100 ft (30 m)	0.021	0.028	0.043

* Length is the horizontal projection and the C Factor is for uniform flow conditions on a uniform slope

Bench-Scale Testing (NTP ED-****):**

Test Method	Parameters	Results
ECTC Method 3 Ero Shear	50mm (2 in) w/ 2 min	0.67 lb/ft²
	100mm (4 in) / 60 min	0.67 lb/ft²
	150mm (6 in) / 30 min	0.67 lb/ft²
ECTC Method 3 Par Resistance	Shear at 50 yr. loss	2.72 lb/ft²
ECTC Method 4 Sediment Retention	Trap soil: %Loss: (1 day or shorter)	99% (approximate)

*Results taken from representative sample testing

**Full scale Rolled Erosion Control Product (RECP) Testing

***Reference to the ASTM, ECTC, or other standard number, name, and revision (i.e. D6459, ECTC Method 2, etc.). Specify if the test was performed as an exact duplicate of the standard or if deviations were made. Also, indicate if the test was performed by an independent laboratory or in-house.

Channel Performance Design Values*:

Property	Test Method	Value
Unvegetated Shear (max)	ASTM D6460	2.25 lb/ft² (108 Pa)
Unvegetated Velocity	ASTM D6460	20.0 ft/s (6.1 m/s)
Vegetated Shear Stress	ASTM D7207	12.0 lb/ft² (575 Pa)
Vegetated Velocity	ASTM D7207	20.0 ft/s (6.1 m/s)

* Values were derived from full scale testing conducted in accordance with the above listed test methods. Results may be extrapolated to other slope lengths, gradients, soil types, and vegetation densities. Actual performance may vary. It is the responsibility of the user to determine the suitability of any information or material for the use contemplated, and its manner of use. The manufacturer makes no warranties, express or implied, except that the material is manufactured to meet specified physical properties. The manufacturer's liability is limited to the value of the material. Any use of this material shall be at user's own risk and the user assumes all liability for any loss, injury, or damage to persons or property arising out of the use of the material. Any implied warranty of merchantability or fitness is expressly disclaimed.

Product Member of: ECTC, IECA, ASTM

Product Participant of: ECTC and USA

2 ECP-2 MATERIAL SPECIFICATION

NOT TO SCALE

ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet
EroNet™ S75® Erosion Control Blanket

DESCRIPTION

The short-term single net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.52 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S75 shall meet Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) TP-03 Section 7113?

Material Content		
Matrix	100% Straw Fiber	0.5 lbs/sq yd (0.27 kg/m²)
Netting	Top side only, lightweight photodegradable	1.5 lb/1000 sq ft (0.73 kg/100 sm)
Thread	Degradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	6.5 ft (1.2 m)	15 ft (4.57 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	112 ft (34.14 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)	100 lbs (45.36 kg)
Area	80 sq yd (66.9 sm)	909 sq yd (83.83 sm)	200 sq yd (167.22 sm)

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.30 in. (7 mm)
Resiliency	ECTC Guidelines	78.8%
Water Absorbency	ASTM D797	300%
Mass/Unit Area	ASTM D6475	9.76 oz/sy (332 g/sm)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.39 oz-in
Light Penetration	ASTM D6567	6.0%
Tensile Strength - MD	ASTM D6818	122.4 lbs/ft (5.84 kN/m)
Elongation - MD	ASTM D6818	36.7%
Tensile Strength - TD	ASTM D6818	79.2 lbs/ft (3.77 kN/m)
Elongation - TD	ASTM D6818	26.8%
Biomass Improvement	ASTM D7322	300%

Design Permissible Shear Stress	
Unvegetated Shear Stress	1.55 psf (74 Pa)
Unvegetated Velocity	5.00 fps (1.52 m/s)

Slope Design Data: C Factors			
Slope Gradients (S)			
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.029	N/A	N/A
20-50 ft	0.11	N/A	N/A
≥ 50 ft (15.2 m)	0.19	N/A	N/A

NTPEP Large-Scale Slope Testing
ASTM D6459 - C factor = 0.012

Roughness Coefficients – Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 – 2.0 ft	0.055-0.021
≥ 2.0 ft (0.60 m)	0.021

NORTH AMERICAN GREEN
Western Green
41205 E. Boonville-New Harmony Rd.
Evansville, IN 47725
nagreen.com
800-772-2040

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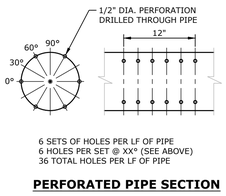
EC_RMX_NPGS_S75_7.20

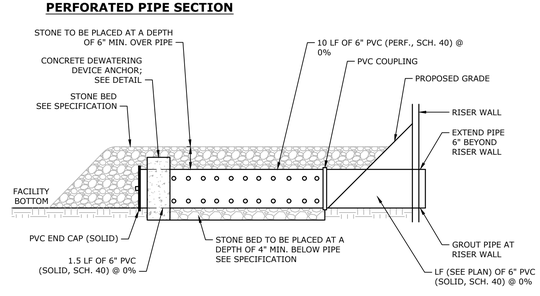
3 NAG-75 MATERIAL SPECIFICATION

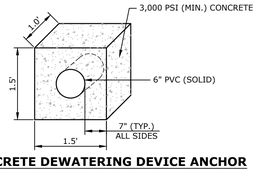
NOT TO SCALE



6 SETS OF HOLES PER LF OF PIPE
6 HOLES PER SET @ XX° (SEE ABOVE)
36 TOTAL HOLES PER LF OF PIPE

PERFORATED PIPE SECTION





CONCRETE DEWATERING DEVICE ANCHOR

4 DEWATERING DEVICE (SCM 001 - 006)

NOT TO SCALE

PERMANENT SEEDING
RAIN GARDEN MIX

RAIN GARDEN MIX
ERNMIX-180 (SPECIES LIST BELOW)

SEEDING RATE
20-40 LBS/AC

SEEDING DATES
AUGUST 15 TO OCTOBER 15

SEED TYPE	% BY WEIGHT
SCHIZACHYRIUM SCOPARIUM, FORT INDIANTOWN GAP-PA ECOTYPE	25.60 %
ELYMUS VIRGINICUS, MADISON-NY ECOTYPE	20.00 %
CAREX VULPINOIDEA, PA ECOTYPE	9.00 %
ECHINACEA PURPUREA	8.00 %
CHASMANTHIUM LATIFOLIUM, WV ECOTYPE	7.80 %
PANICUM RIGIDULUM, PA ECOTYPE	6.80 %
COREOPSIS LANCEOLATA	3.00 %
RUDBECKIA HIRTA	3.00 %
VERBENA HASTATA, PA ECOTYPE	2.50 %
CHAMAECRISTA FASCICULATA, PA ECOTYPE	2.00 %
PANICUM CLANDESTINUM, TIOGA	2.00 %
ASCLEPIAS INCARNATA, PA ECOTYPE	1.50 %
HELIOPSIS HELIANTHOIDES, PA ECOTYPE	1.50 %
PENSTEMON DIGITALIS, PA ECOTYPE	1.30 %
ZIZIA AUREA, PA ECOTYPE	1.20 %
PYCNANTHEMUM TENUIFOLIUM	0.70 %
ASTER NOVAE-ANGLIAE	0.50 %
BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE	0.50 %
JUNCUS EFFUSUS	0.50 %
JUNCUS TENUIS, PA ECOTYPE	0.50 %
SENNA HEBECARPA, VA & WV ECOTYPE	0.50 %
VERNONIA NOVEBORACENSIS, PA ECOTYPE	0.50 %
MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE	0.30 %
ASTER LATERIFLORUS	0.20 %
SOLIDAGO NEMORALIS, PA ECOTYPE	0.20 %
ASTER PILOSUS, PA ECOTYPE	0.10 %
EUPATORIUM PERFOLIATUM, PA ECOTYPE	0.10 %
MIMULUS RINGENS, PA ECOTYPE	0.10 %
SOLIDAGO JUNCEA, PA ECOTYPE	0.10 %

(SEE SHEET SW-106 & SW-107)

FOR ADDITIONAL INFORMATION ON SEED MIX CONTACT:
ERNST CONSERVATION SEEDS
1-800-873-3321 www.ernstseed.com

NOTE: PERMANENT AND FULL ESTABLISHMENT OF THE SPECIFIED BMP SEED MIXTURE (OR APPROVED EQUAL) IS REQUIRED. MEASURES TO ENSURE THE FULL AND PROPER GERMINATION OF THE SEED SHALL BE IMPLEMENTED ACCORDINGLY DURING THE SEEDING OF THE BOTTOM, INCLUDING: WATERING OVERSEEDING, RESEEDING, EROSION PREVENTION MEASURES, SEED WASHING PREVENTIONS MEASURES, STABILIZATION MEASURES, WEED CONTROL, ETC.

5 RAIN GARDEN MIX DETAIL

NOT TO SCALE

SCM-001 PLUG PLANTING LIST

PERENNIALS (BOTANICAL NAME - COMMON NAME)
- AGASTACHE FOENICULUM - BLUE GIANT HYSSOP
- ASCLEPIAS INCARNATA - SWAMP MILKWEED
- ASTER NOVAE-ANGLIAE - NEW ENGLAND ASTER
- ASTER NOVI-BELGII - NEW YORK ASTER
- COREOPSIS TRIPTERIS - TALL TICKSEED
- EUPATORIUM FISTULOSUM - TRUMPETWEED
- EUPATORIUM PERFOLIATUM - BONESET
- EUPATORIUM PURPUREUM - JOE PYE WEED
- HELENIUM AUTUMNALE - COMMON SNEEZEWEED
- HELIOPSIS HELIANTHOIDES - OXEYE SUNFLOWER
- IRIS VERSICOLOR - HARLEQUIN BLUEFLAG
- IRIS VIRGINICA - VIRGINIA IRIS
- LOBELIA CARDINALIS - CARDINAL FLOWER
- LOBELIA SIPHILITICA - BLUE LOBELIA
- MONARDA BRADBURIANA - EASTERN BEEBALM
- MONARDA DIDYMA 'JACOB CLINE' - SCARLET BEEBALM
- PYCNANTHEMUM MUTICUM - CLUSTERED MOUNTAINMINT
- SENECIO AUREUS - GOLDEN RAGWORT
- VERBANA HASTATA - BLUE VERVAIN
- VERNONIA NOVEBORACENSIS - NEW YORK IRONWEED

GRASSES AND SEDGES (BOTANICAL NAME - COMMON NAME)
- CAREX BICKNELLI - BICKNELL'S SEDGE
- CAREX EBURNEA - BRISTLELEAF SEDGE
- CAREX CHEROKEENSIS - CHEROKEE SEDGE
- CAREX EMORYI - EMORY'S SEDGE
- CAREX SCOPARIA - BLUNT BROOM SEDGE
- CAREX VULPINOIDEA - FOX SEDGE
- CHASMANTHIUM LATIFOLIUM - INDIAN WOOD OATS
- ELYMUS HYSTRIX - BOTTLEBRUSH GRASS
- JUNCUS EFFUSUS - COMMON RUSH
- JUNCUS TENUIS - POVERTY RUSH
- PANICUM VIRGATUM - SWITCHGRASS
- SCHIZACHYRIUM SCOPARIUM - LITTLE BLUESTEM

PLUG INSTALLATION NOTES

1. THE REQUIRED PLUG COUNT IS BASED ON PLUGS BEING PLANTED IN A GRID PATTERN AT 72" ON-CENTER WITHIN THE BASIN BOTTOM.
2. 30% OF BASIN PLUG PLANTINGS SHALL BE COMPRISED OF A MINIMUM OF 10 PERENNIAL SPECIES FROM THE PROVIDED SPECIES LIST. THE REMAINING 70% OF BASIN PLUG PLANTINGS SHALL BE COMPRISED OF 6 GRASS AND SEDGE SPECIES FROM THE PROVIDED SPECIES LIST.
3. CONTRACTOR SHALL CONTACT RGS LANDSCAPE ARCHITECT FOR ALTERNATE PLUG SPECIES SHOULD PROVIDED SPECIES NOT BE AVAILABLE.
4. PLUGS SHALL ONLY BE INSTALLED WHEN THEY ARE IN ACTIVE GROWTH. CONSULT PLANT SUPPLIER FOR GUIDANCE ON THE PLANTING PERIODS AND TIMING. INSTALLATION OUTSIDE OPTIMAL PLANTING PERIODS COULD RESULT IN PLANT LOSS.
5. PROCEED WITH WORK ONLY WHEN PRESENT AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING WITHOUT EXCESSIVE SOIL COMPACTION AND/OR UNNECESSARY PLANT DAMAGE. AVOID PLANTING IN EXCESSIVELY MOIST CONDITIONS UNLESS PLANTING IN HYDRIC SOILS.
6. CONTRACTOR TO LAYOUT AND INSTALL PLUGS AS SOON AS POSSIBLE FOLLOWING PLANT DELIVERY TO SITE.
7. IF PLANTING MUST BE DELAYED DUE TO WEATHER OR CONSTRUCTION DELAYS, MOVE PLUGS TO A PROTECTED AND SHADED AREA. IRRIGATE AS NEEDED.
8. THOROUGHLY WATER PLUG TRAYS PRIOR TO PLUG REMOVAL AND PLANTING.
9. PLUG SPECIES ARE TO BE DISTRIBUTED ACROSS THE FACILITY AT THE SPECIFIED SPACING IN A RANDOM FASHION.
10. CONTRACTOR SHALL ONLY REMOVE PLUGS FROM TRAYS BY PUSHING PLANTS UP THROUGH THE BOTTOM OF THE LINER. DO NOT PULL THE PLANTS BY THEIR FOLIAGE.
11. CONTRACTOR SHALL NOT 'TEASE' THE PLUG ROOTS SYSTEMS APART AS IS CUSTOMARY WITH OTHER CONTAINERIZED PLANTS WITH DENSE ROOT SYSTEMS.
12. PLUGS SHALL BE PLANTED SO THAT THE TOP OF THE PLUG SOIL MEDIA IS FLUSH WITH THE FINISHED GRADE. LIGHTLY TAMP THE SURROUNDING SOIL TO INCREASE SOIL-ROOT CONTACT AND TO MINIMIZE FROST HEAVING POTENTIAL.
13. PLUGS SHALL BE WATERED IMMEDIATELY FOLLOWING PLANTING TO REDUCE AIR POCKETS AND TO MAXIMIZE CONTACT BETWEEN THE PLUG ROOTS AND PREPARED SOIL.
14. MONITOR NEW PLANTINGS FOR SIGNS OF DISEASES, PESTS AND WATER STRESS.
15. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO KEEP NEW PLANTINGS FREE OF UNDESIRABLE AND INVASIVE SPECIES.
16. CONTRACTOR SHALL REMOVE ALL CUT VEGETATION TO ENSURE STORMWATER MANAGEMENT CONTROL STRUCTURES ARE KEPT CLEAR AND FREE OF DEBRIS.
17. ONCE PLUGS ARE INSTALLED, THE BASIN BOTTOM SHALL BE OVERSEEDED WITH THE SEED MIX ERNMX-180 (ERNST RAIN GARDEN MIX)
18. PRIOR TO FINAL SEEDING/PLANTING OF THE STORMWATER MANAGEMENT FACILITIES, THE CONTRACTOR SHALL PROVIDE POST-CONSTRUCTION INFILTRATION TESTING IN THE BIO-RETENTION FACILITIES TO DETERMINE ACTUAL DEWATERING RATES. RESULTS TO BE PROVIDED TO PROJECT'S LANDSCAPE ARCHITECT AND/OR CIVIL ENGINEER WHO WILL THEN RECOMMEND ANY REQUIRED ADJUSTMENTS TO PROPOSED PLANTINGS. FINAL PLANT SPECIES SELECTIONS MAY BE MODIFIED AS NECESSARY BASED UPON ACTUAL FIELD-CONDITION INFILTRATION RATES.

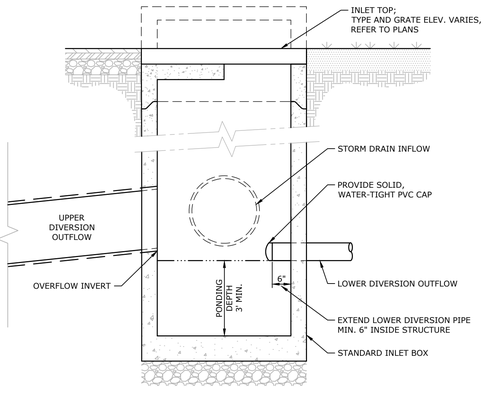
MRC PLUG CALCULATION

FACILITY NAME	BASIN BOTTOM (SF.)	PLUG SPACING (IN.)	REQUIRED PLUGS
SCM-009	12,509 SF.	72	338
SCM-010	8,357 SF.	72	226
SCM-011	12,440 SF.	72	336

AREA OF PLUG PLANTING
(SEE SHEET LD-52 TO LD-55)

6 MRC PLUG PLANTING DETAIL

NOT TO SCALE



NOTES:
1. CONTRACTOR TO PROVIDE SOLID, WATER TIGHT PVC CAP TO BLOCK LOWER DIVERSION OUTFLOW TO INFILTRATION BEDS WHILE SITE IS STILL DISTURBED. CAP SHALL REMAIN UNTIL SITE HAS BEEN PERMANENTLY STABILIZED.
2. CONTRACTOR TO CUT LOWER DIVERSION OUTFLOW PIPE FLUSH WITH INSIDE WALL OF STRUCTURE AND INSTALL SNOUT ONCE THE SITE HAS BEEN PERMANENTLY STABILIZED.
3. REFER TO THE TYPICAL DIVERSION STRUCTURE DETAIL FOR ELEVATIONS AND LOCATIONS ASSOCIATED WITH THE DIVERSION STRUCTURES.

7 TYPICAL DIVERSION STRUCTURE BLOCKING

NOT TO SCALE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD.
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

STORM DETAILS

Land Planning
Landscape Architecture
Civil Engineering

Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
(717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

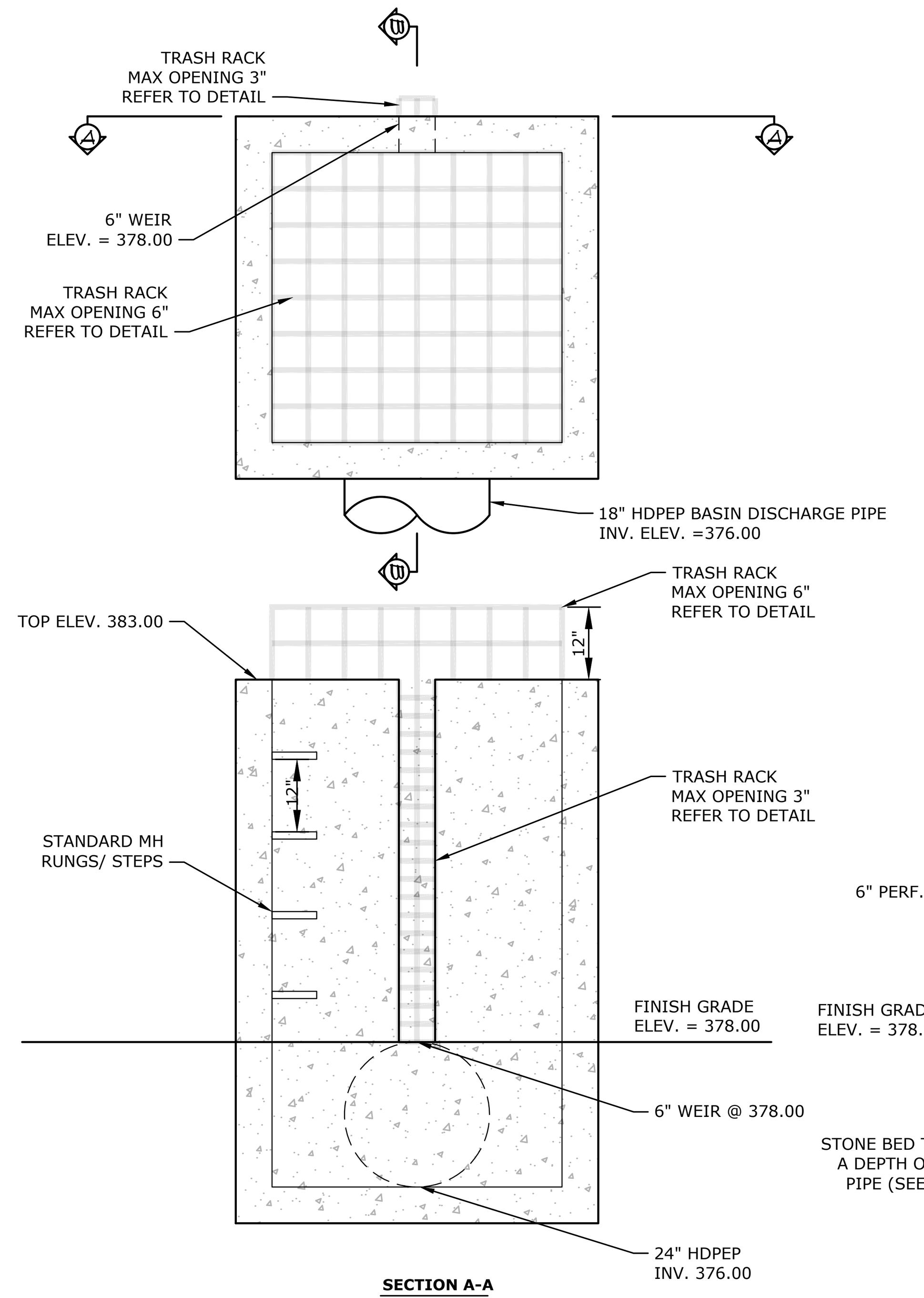
RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-51 OF 57

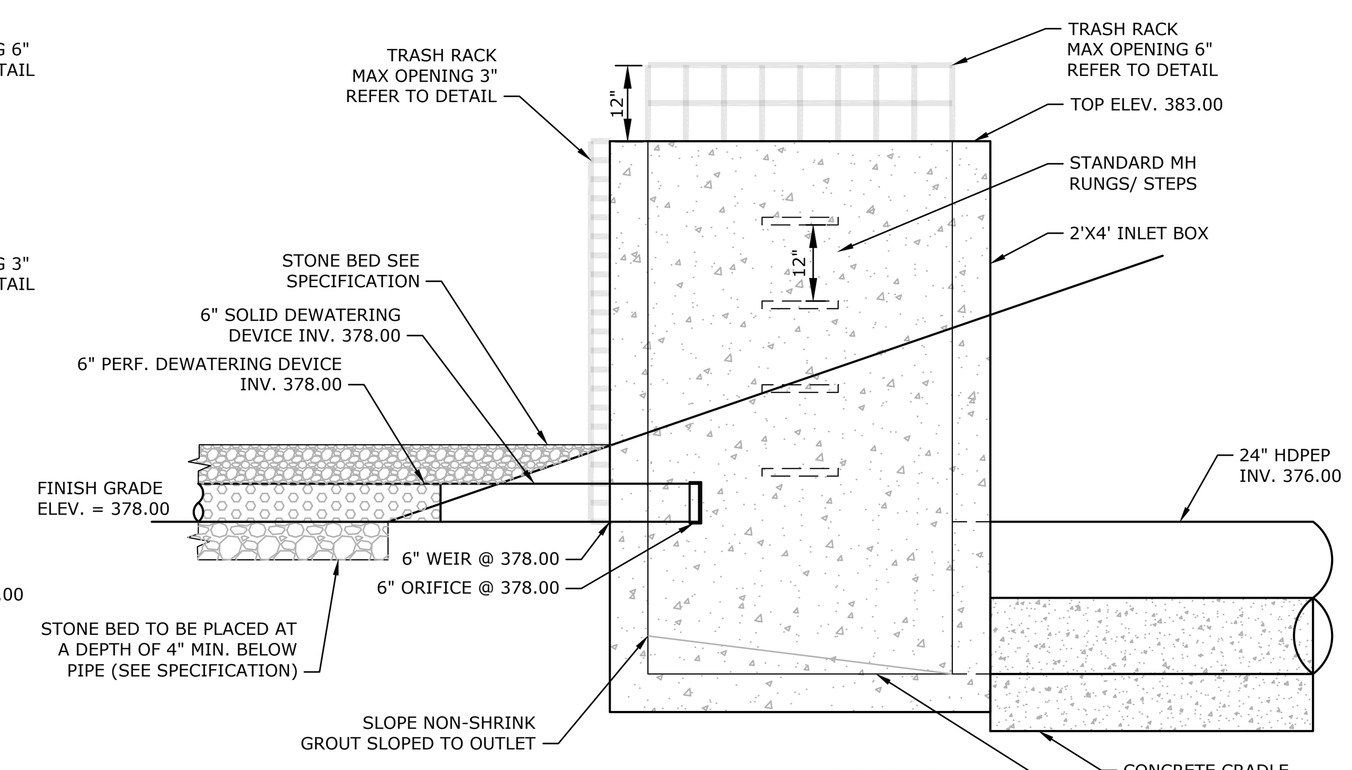
XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CAD\Final PH1\Plot\Z-PCSM-Details.dwg
SCRIPT:

CENTERLINE CURVE DATA							
SEGMENT	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH	DELTA - Δ	STREET NAME
CLC-30	30.00'	19.98'	10.38'	S64°02'21"E	19.61'	38°09'19"	SCM-003 CENTERLINE EMBANKMENT PROFILE
CLC-31	30.00'	51.04'	34.19'	N86°17'59"E	45.10'	97°28'39"	SCM-003 CENTERLINE EMBANKMENT PROFILE
CLC-32	30.00'	37.56'	21.69'	N2°19'32"E	35.16'	71°44'25"	SCM-003 CENTERLINE EMBANKMENT PROFILE

CENTERLINE LINE DATA			
SEGMENT	LENGTH	DIRECTION	STREET NAME
CL-30	14.89'	S83°07'00"E	SCM-003 CENTERLINE EMBANKMENT PROFILE
CL-31	44.34'	S44°57'41"E	SCM-003 CENTERLINE EMBANKMENT PROFILE
CL-32	65.53'	N37°33'40"E	SCM-003 CENTERLINE EMBANKMENT PROFILE
CL-33	25.20'	N38°11'45"E	SCM-003 CENTERLINE EMBANKMENT PROFILE
CL-34	12.58'	N38°11'45"E	SCM-003 CENTERLINE EMBANKMENT PROFILE
CL-35	58.06'	N33°32'40"W	SCM-003 CENTERLINE EMBANKMENT PROFILE



SECTION A-A
NTS



SECTION B-B
NTS

1 **SCM-003 OUTLET STRUCTURE (OS-3)**

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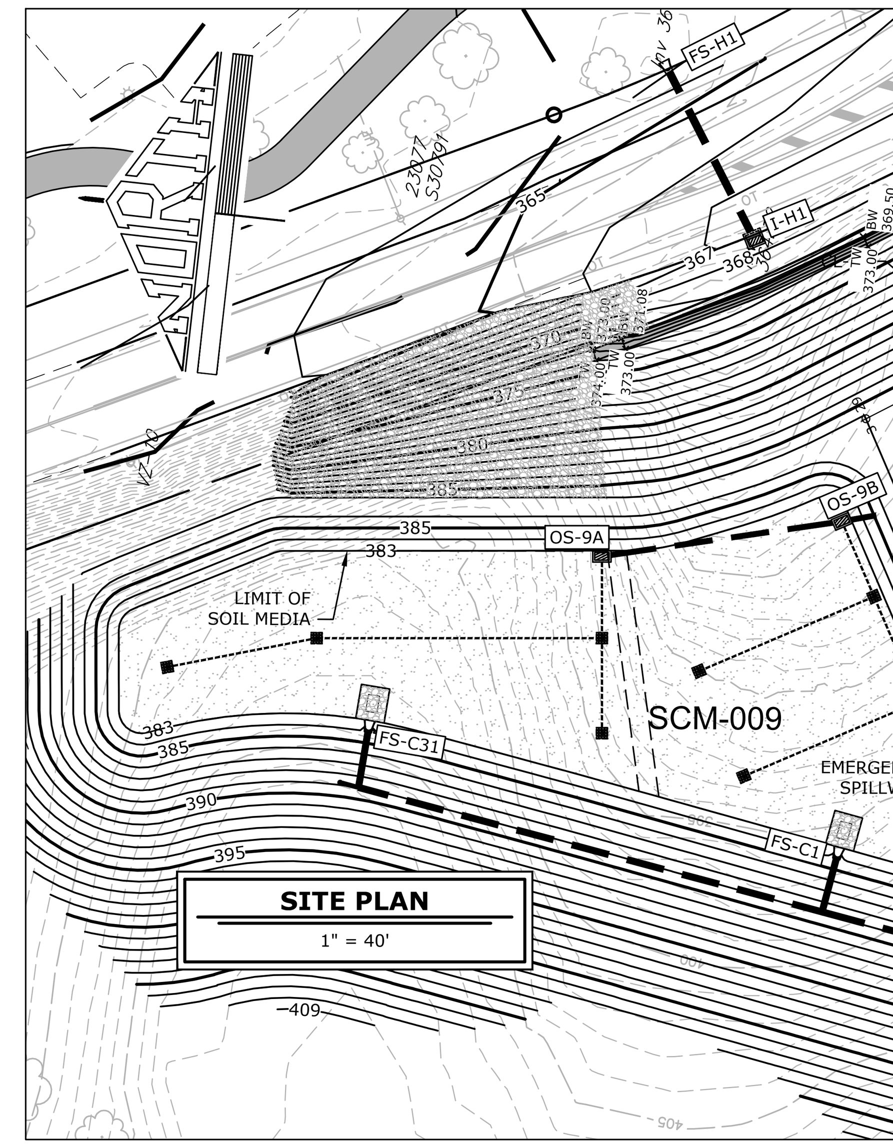
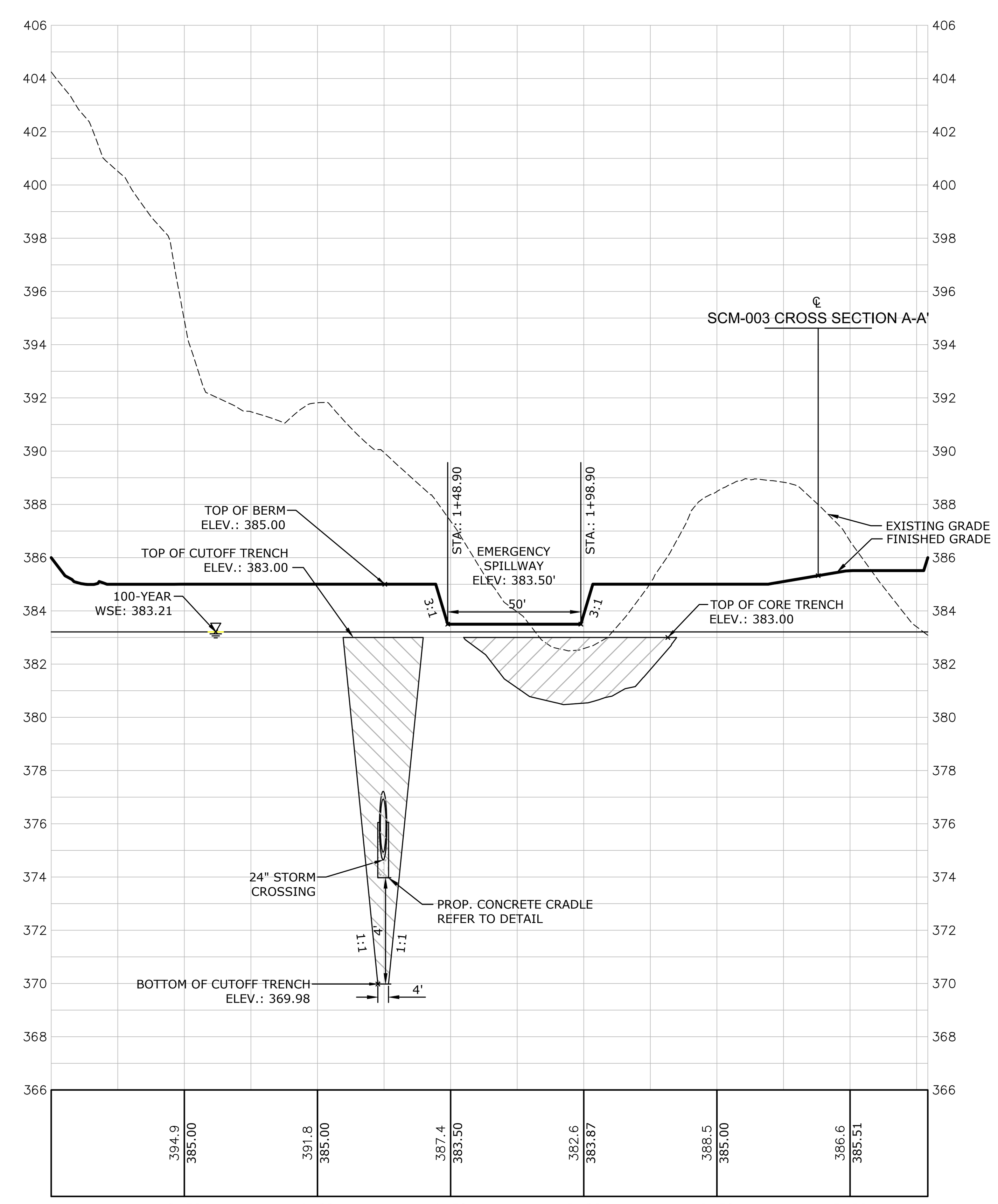
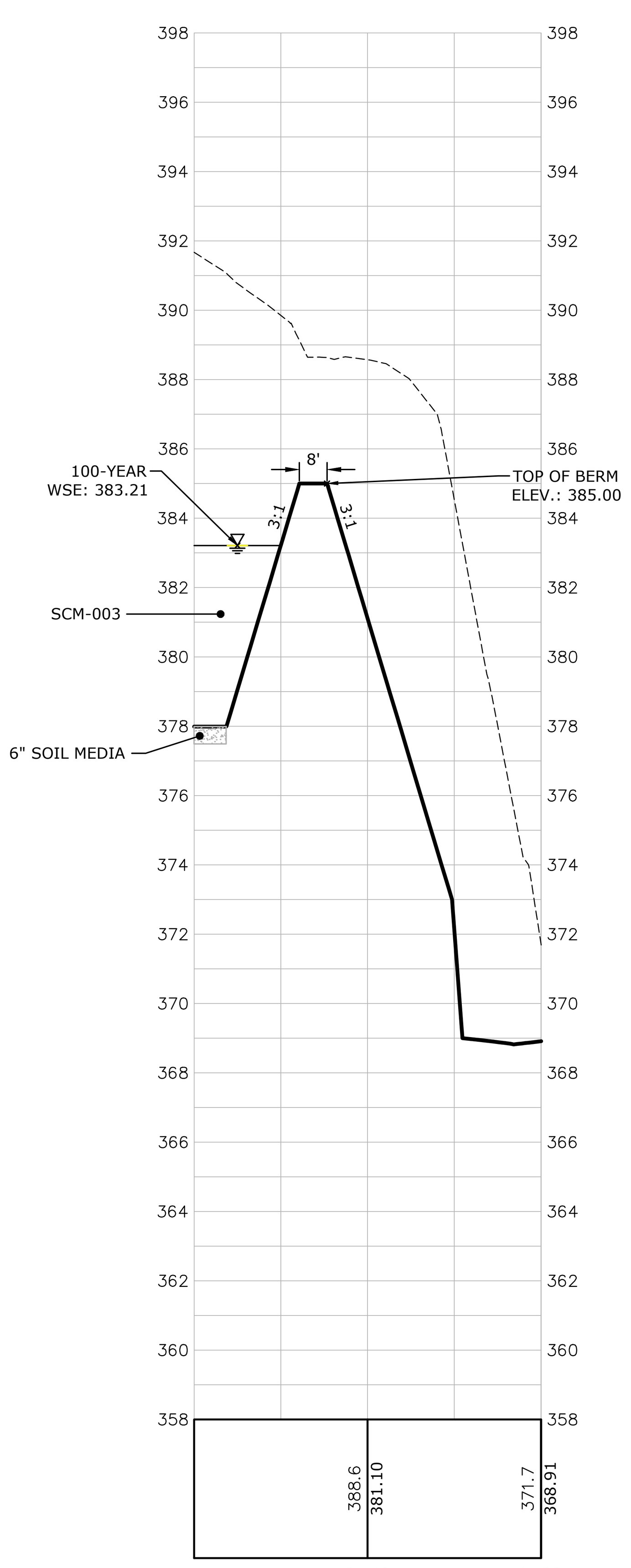


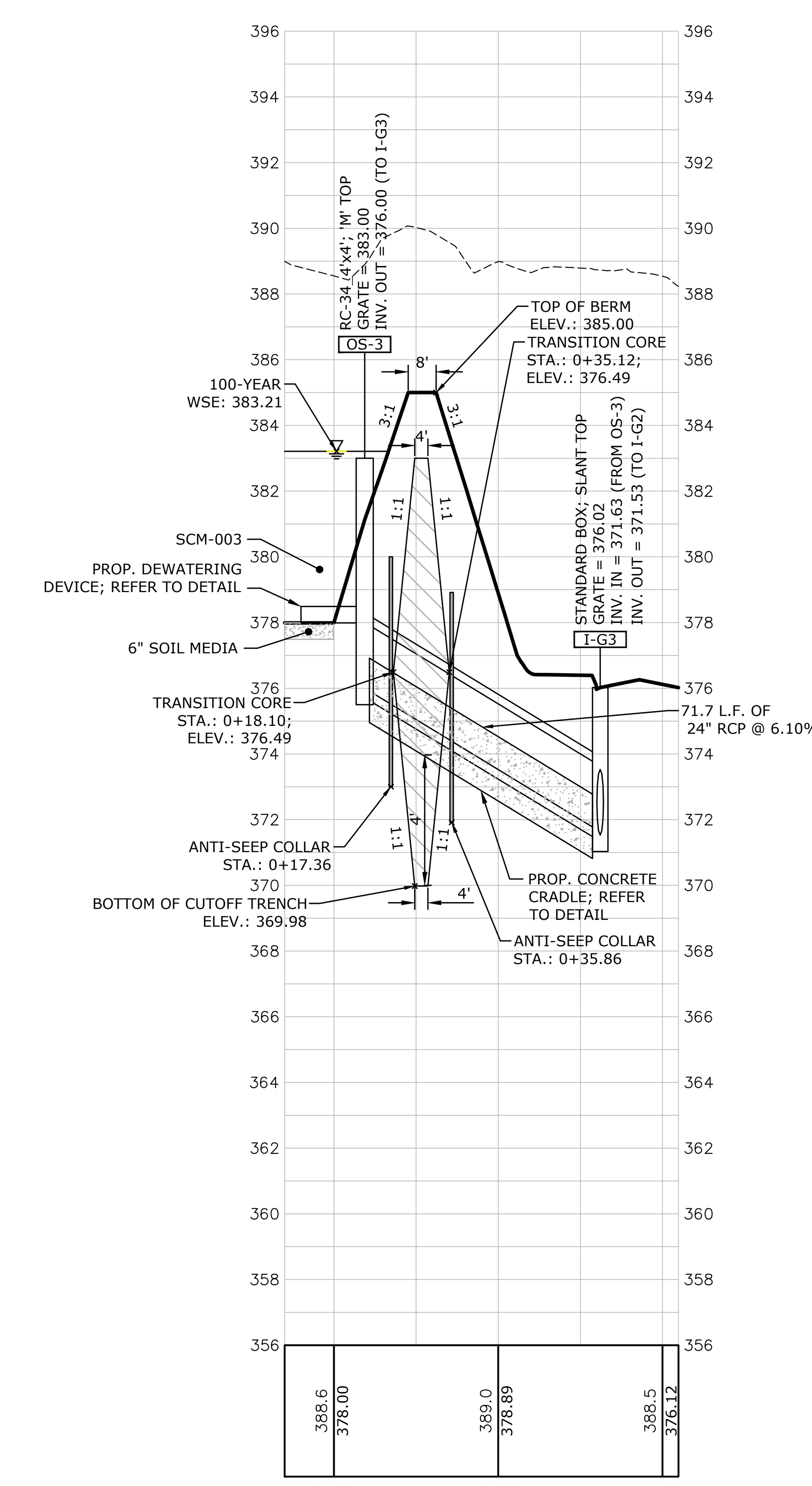
SITE PLAN
1" = 40'



SCM-003 CENTERLINE EMBANKMENT PROFILE
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'



SCM-003 CROSS SECTION A-A'
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'



OS-3 TO I-G3
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'

LEGEND

EXISTING GRADE — PROPOSED GRADE

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SCM 003 FACILITY PLAN

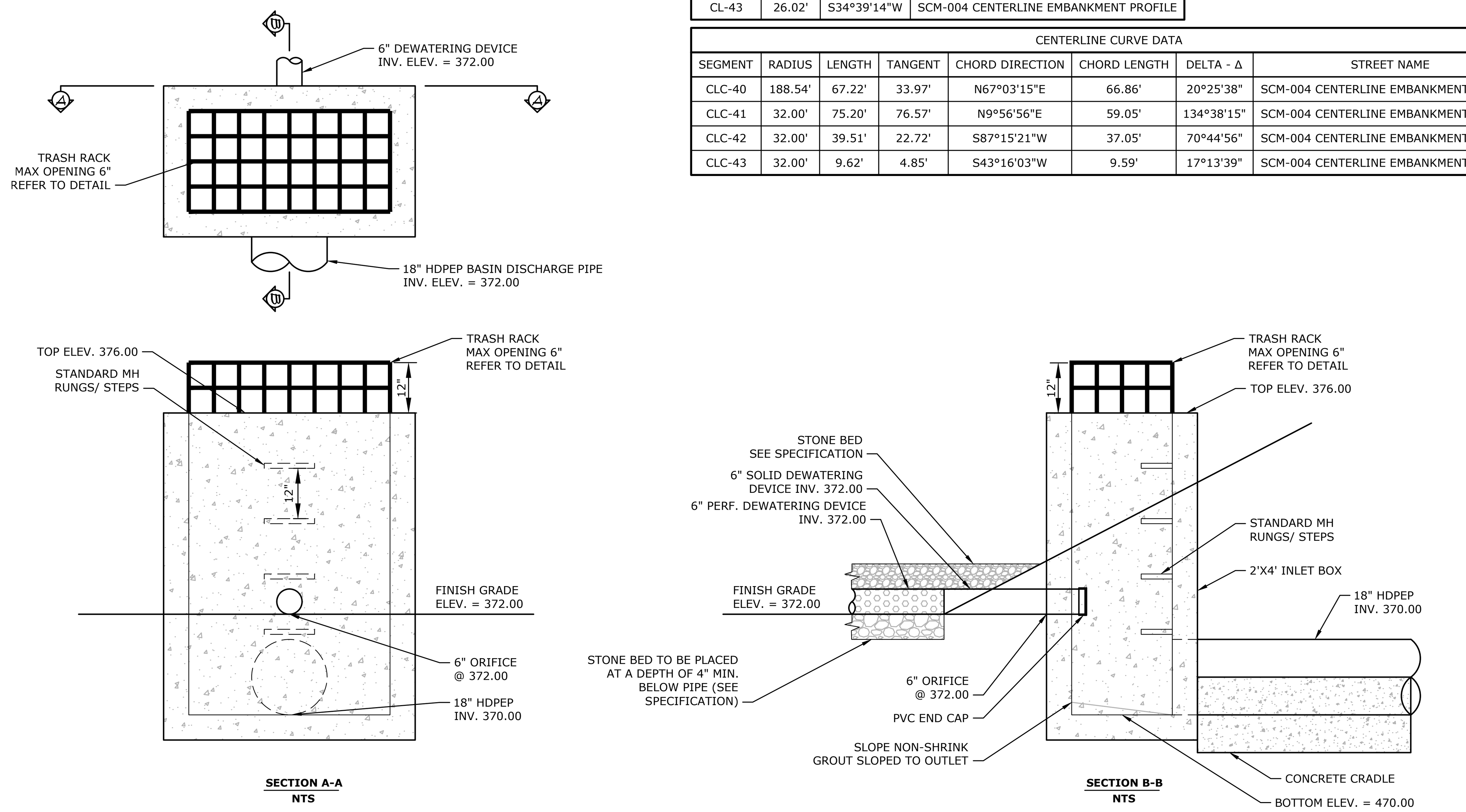
RGS ASSOCIATES
Land Planning
Landscape Architecture
Civil Engineering
Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com
Regional Offices:
York, Harrisburg, and Paoli

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-52 OF 57

XREFS: EG;Existing;Profiles-Utilities;Floodplain;Layout;Layout-HOP;Basin-Outlet-Structure;PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-PCSM-Profiles-Basin.dwg
SCRIPT:

CENTERLINE LINE DATA			
SEGMENT	LENGTH	DIRECTION	STREET NAME
CL-40	35.86'	N56°50'25"E	SCM-004 CENTERLINE EMBANKMENT PROFILE
CL-41	106.90'	N57°22'12"W	SCM-004 CENTERLINE EMBANKMENT PROFILE
CL-42	60.61'	S51°52'53"W	SCM-004 CENTERLINE EMBANKMENT PROFILE
CL-43	26.02'	S34°39'14"W	SCM-004 CENTERLINE EMBANKMENT PROFILE

CENTERLINE CURVE DATA							
SEGMENT	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH	DELTA - Δ	STREET NAME
CLC-40	188.54'	67.22'	33.97'	N67°03'15"E	66.86'	20°25'38"	SCM-004 CENTERLINE EMBANKMENT PROFILE
CLC-41	32.00'	75.20'	76.57'	N9°56'56"E	59.05'	134°38'15"	SCM-004 CENTERLINE EMBANKMENT PROFILE
CLC-42	32.00'	39.51'	22.72'	S87°15'21"W	37.05'	70°44'56"	SCM-004 CENTERLINE EMBANKMENT PROFILE
CLC-43	32.00'	9.62'	4.85'	S43°16'03"W	9.59'	17°13'39"	SCM-004 CENTERLINE EMBANKMENT PROFILE



1 **SCM-004 OUTLET STRUCTURE (OS-4)**

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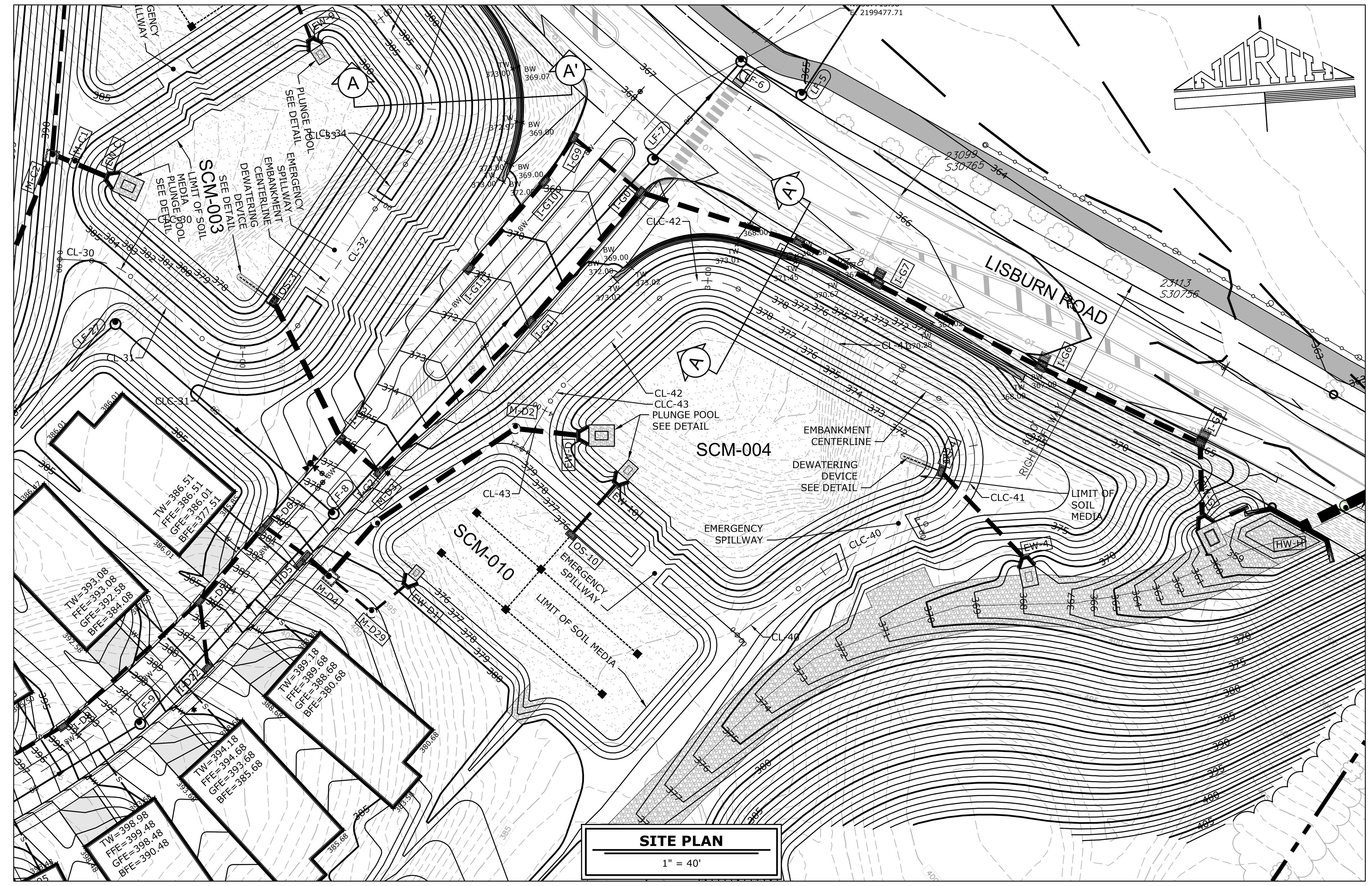

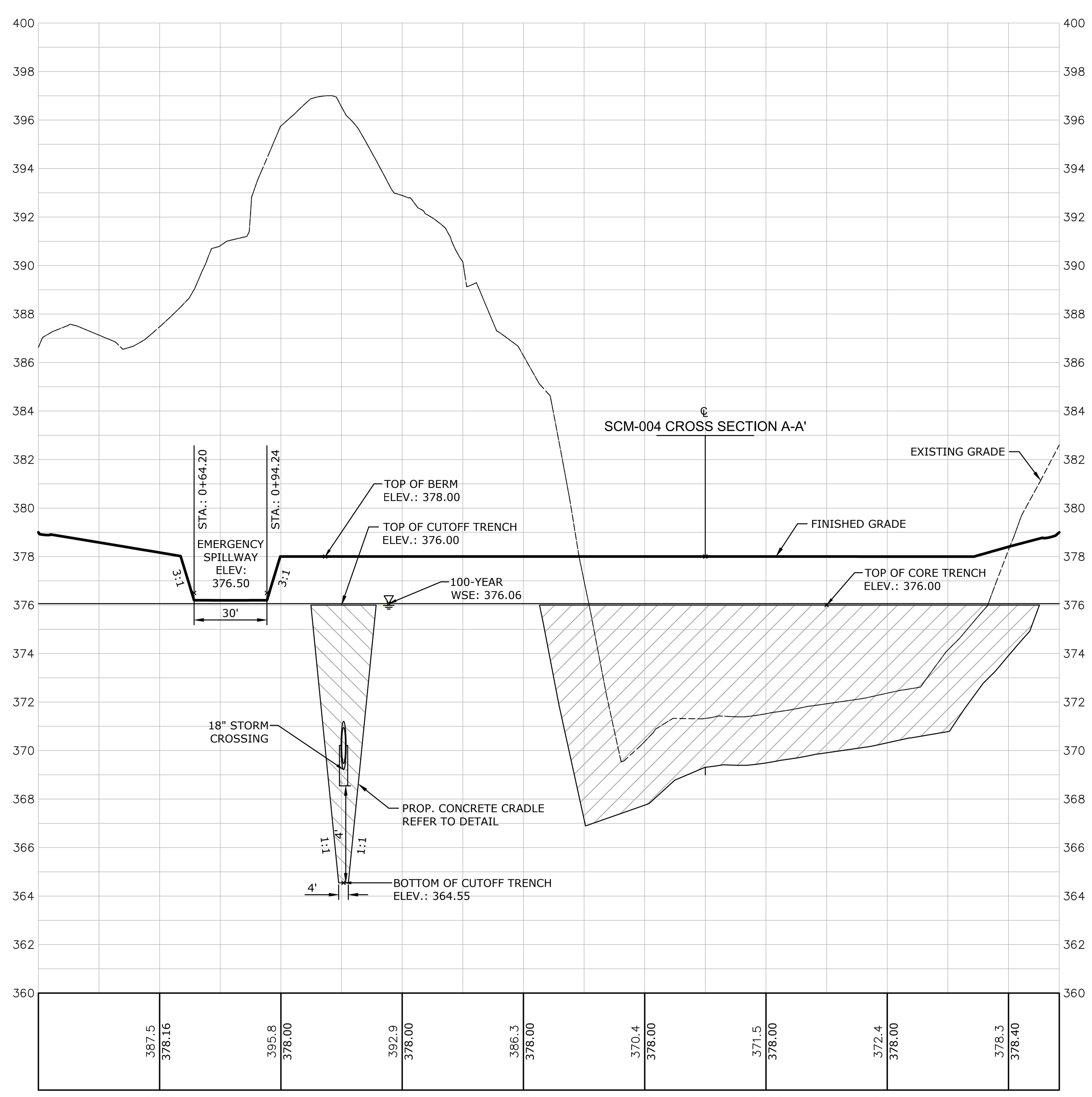

SCM-004 CENTERLINE EMBANKMENT PROFILE
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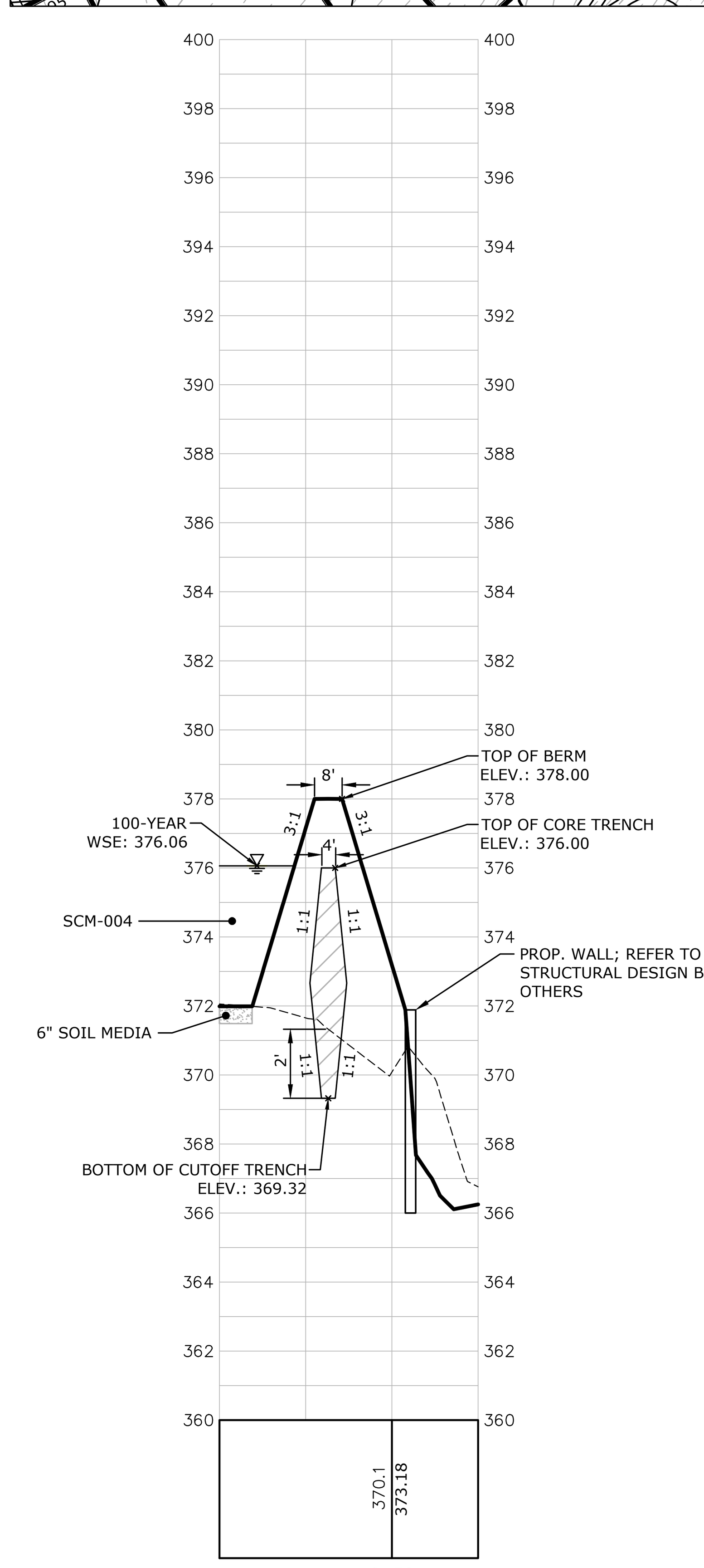
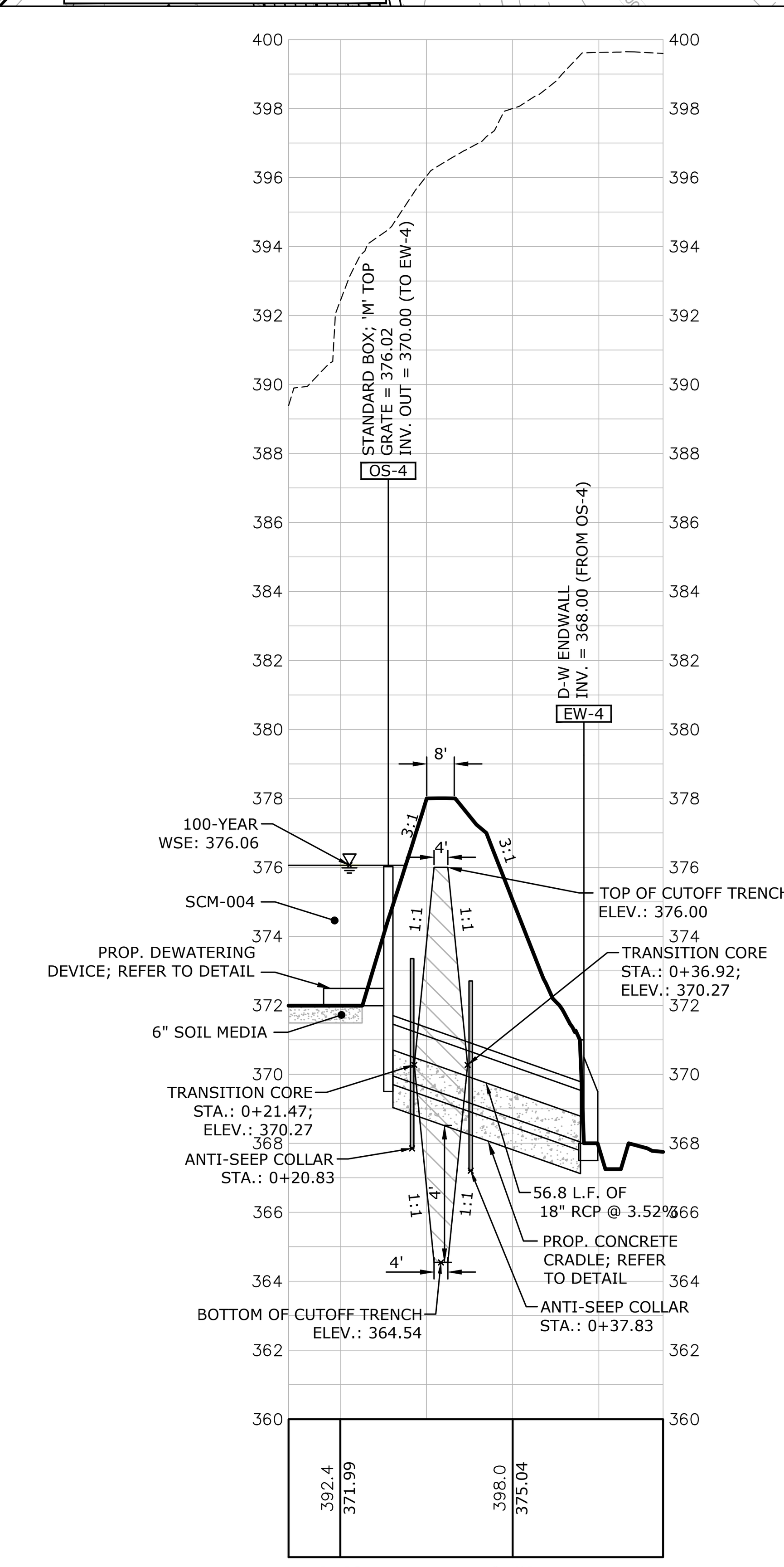
VERT. SCALE: 1"= 4'



SCM-004 CROSS SECTION A-A'
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'



OS-4 TO EW-4
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'

LEGEND

EXISTING GRADE (dashed line) — PROPOSED GRADE (solid line)

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SCM 004 FACILITY PLAN

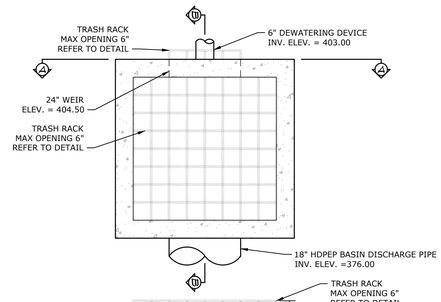
Land Planning
Landscape Architecture
Civil Engineering
Corporate Office:
53 West James Street
Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com
Regional Offices:
York, Harrisburg, and Paoli
RGS ASSOCIATES

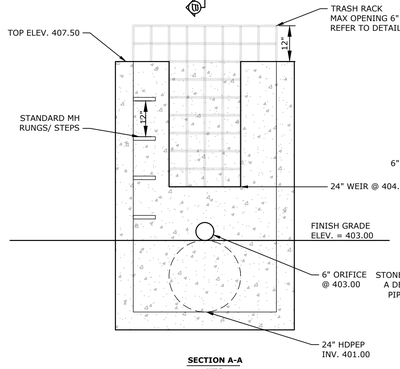
DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-53 OF 57

XREFS: EG;Existing;Profiles-Utilities;Floodplain;Layout;Layout-HOP;Basin-Outlet-Structure;PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-PCSM-Profiles-Basin.dwg
SCRIPT:

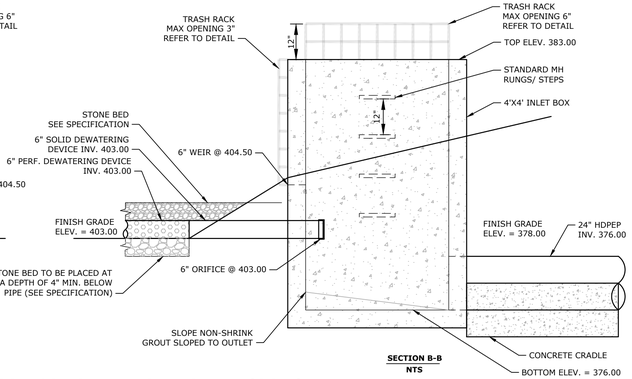
CENTERLINE LINE DATA			
SEGMENT	LENGTH	DIRECTION	STREET NAME
CL-50	35.39'	S54°56'20"E	SCM-005 CENTERLINE EMBANKMENT PROFILE
CL-51	95.77'	N75°44'27"E	SCM-005 CENTERLINE EMBANKMENT PROFILE
CL-52	14.15'	N70°06'05"E	SCM-005 CENTERLINE EMBANKMENT PROFILE
CL-53	8.21'	N32°53'52"E	SCM-005 CENTERLINE EMBANKMENT PROFILE
CL-54	29.00'	N12°35'45"W	SCM-005 CENTERLINE EMBANKMENT PROFILE

CENTERLINE CURVE DATA							
SEGMENT	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH	DELTA - Δ	STREET NAME
CLC-50	28.00'	21.30'	11.19'	S76°43'41"E	20.79'	43°34'40"	SCM-005 CENTERLINE EMBANKMENT PROFILE
CLC-51	496.00'	49.71'	24.88'	N78°36'43"E	49.69'	5°44'32"	SCM-005 CENTERLINE EMBANKMENT PROFILE
CLC-52	146.00'	94.83'	49.15'	N57°08'02"E	93.17'	37°12'50"	SCM-005 CENTERLINE EMBANKMENT PROFILE
CLC-53	104.00'	57.31'	29.40'	N54°18'51"E	56.59'	31°34'28"	SCM-005 CENTERLINE EMBANKMENT PROFILE
CLC-54	28.00'	18.18'	9.42'	N51°29'58"E	17.86'	37°12'12"	SCM-005 CENTERLINE EMBANKMENT PROFILE
CLC-55	28.00'	22.23'	11.74'	N10°09'03"E	21.65'	45°29'38"	SCM-005 CENTERLINE EMBANKMENT PROFILE





SECTION A-A
NTS



SECTION B-B
NTS

1 **SCM-005 OUTLET STRUCTURE (OS-5)**

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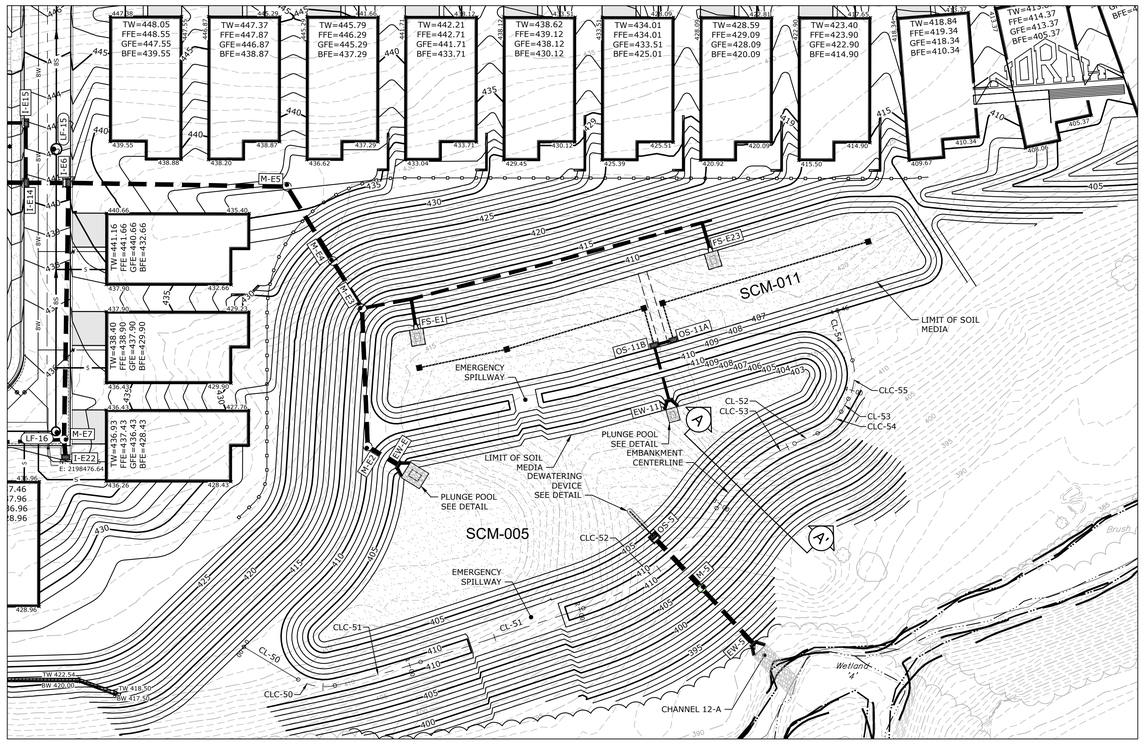
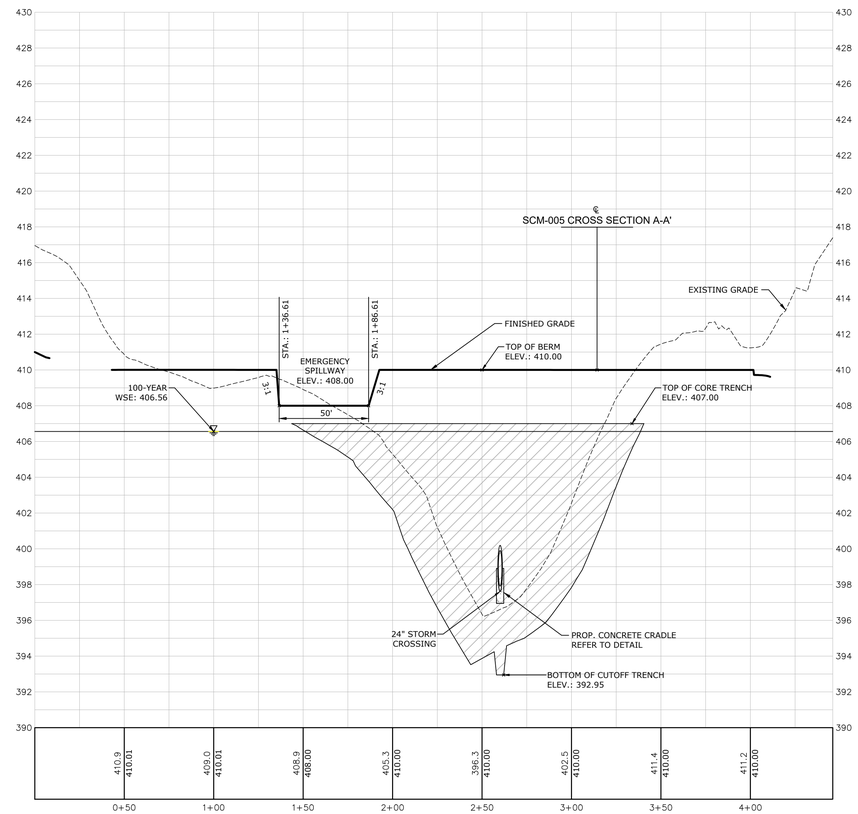
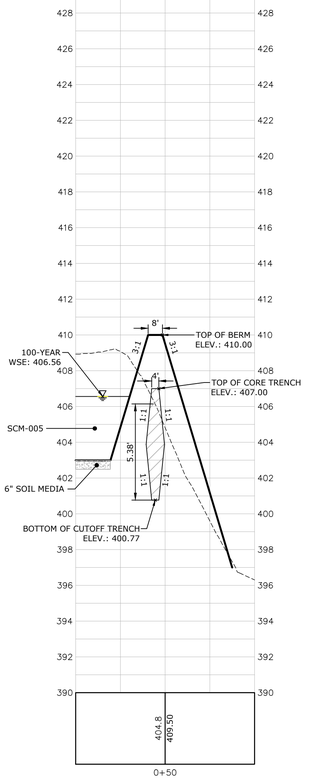




SCM-005 CENTERLINE EMBANKMENT PROFILE
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'



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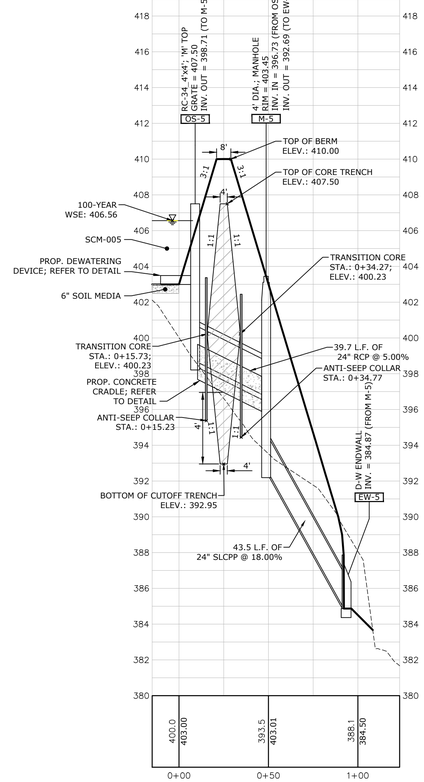
VERT. SCALE: 1"= 4'



OS-5 TO M-5
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'

LEGEND
EXISTING GRADE
PROPOSED GRADE

NO.	DATE	REVISION

SEAL

SEAL

CLIENT:
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SCM 005 FACILITY PLAN

Land Planning
Landscape Architecture
Civil Engineering

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Suite 101, Lancaster, PA 17603
Phone: (717) 715-1396
www.rgsassociates.com

Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-54 OF 57

XREFS: EG-Existing Profiles-Utilities-Floodplain-Layout-Layout-HOP-Basin-Outlet-Structure-PG-PH1
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-PCSM-Profiles-Basin.dwg
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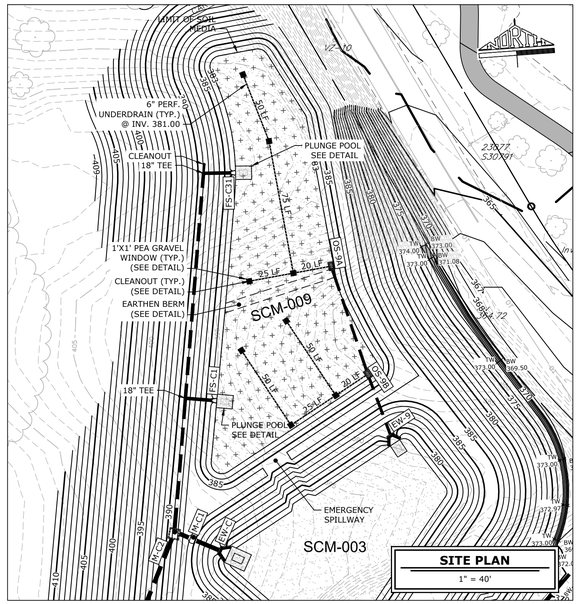
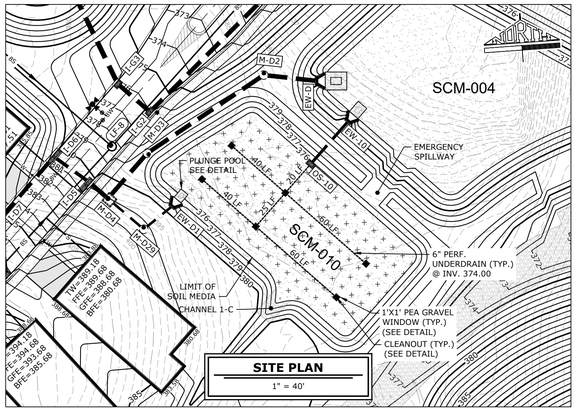
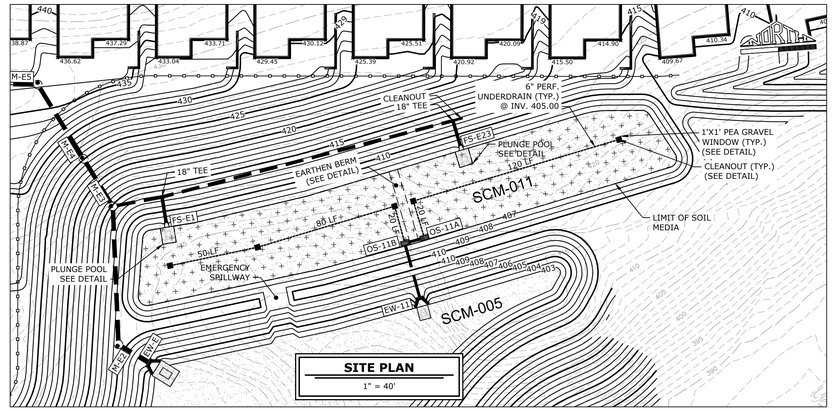
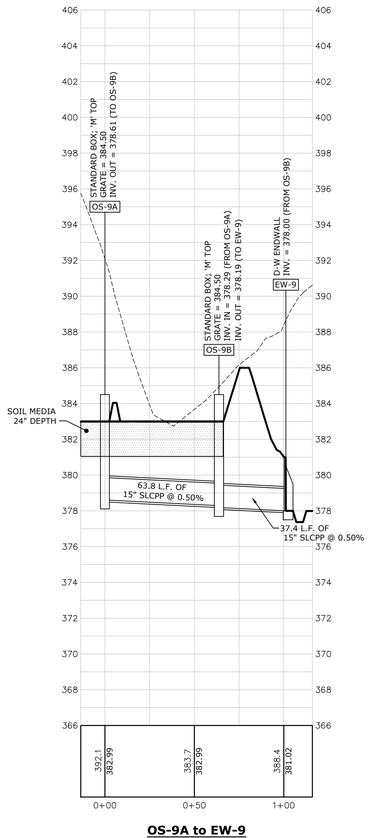


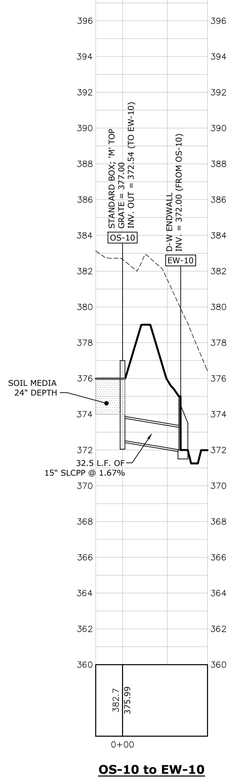
AREA OF PLUG PLANTING AND RAIN GARDEN SEED MIX







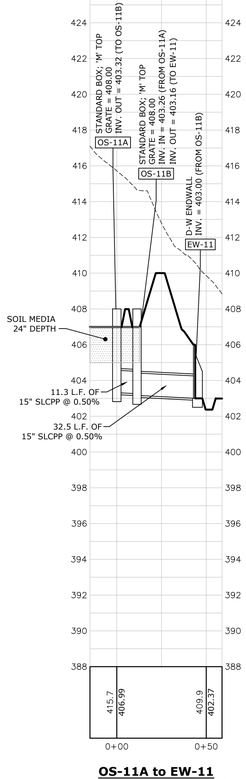
OS-9A to EW-9
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'



OS-10 to EW-10
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'

LEGEND

EXISTING GRADE — PROPOSED GRADE



OS-11A to EW-11
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"= 4'

XREFS: Existing;EG;Profiles-Utilities;Layout;PG-PH1
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NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

SCM 009, 010 & 011 FACILITY PLAN

Land Planning
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DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-55 OF 57

STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS

A. SITE PREPARATION
1. AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORK SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED.
2. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.
3. AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS.
4. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.
5. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE EMBANKMENT AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.
6. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

B. EARTH FILL - MATERIAL
1. THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS.
2. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUTOFF TRENCH SHALL BE IN ACCORDANCE WITH THE MATERIAL SPECIFICATIONS INCLUDED ON THIS PLAN. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.
3. MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

C. EARTH FILL - PLACEMENT
1. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL.
2. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL.
3. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT.
4. THE PRINCIPAL SPILLWAY (I.E. OUTLET STRUCTURE AND DISCHARGE PIPE) MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

D. COMPACTION
1. THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A SHEEPSFOOT OR VIBRATORY ROLLER.
2. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED.
3. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.
4. WHEN REQUIRED BY THE REVIEWING AGENCY, THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/-2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).

E. CUT OFF TRENCH
1. THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS.
2. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET.
3. THE DEPTH SHALL BE AT LEAST TWO FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS.
4. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER.
5. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

F. EMBANKMENT CORE
1. THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS.
2. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET.
3. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS.
4. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER.
5. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF EMBANKMENT.

G. STRUCTURE BACKFILL WITH FLOWABLE FILL
1. BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL.
2. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE.
3. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE.
4. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.
5. THE MIXTURE SHALL HAVE A 100-200 PSI; 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHM-CM.
6. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND, ON THE SIDES OF THE PIPE.
7. FLOWABLE FILL ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS.
8. AVERAGE SLUMP OF THE FILL SHALL BE 7" TO ASSURE FLOWABILITY OF THE MATERIAL.
9. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE.
10. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE.
11. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

H. PIPE CONDUITS
1. ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

I. REINFORCED CONCRETE PIPE - MATERIALS
1. REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

J. REINFORCED CONCRETE PIPE - BEDDING
1. REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES.
2. WHERE A CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD.
3. GRAVEL BEDDING IS NOT PERMITTED.

K. REINFORCED CONCRETE PIPE - LAYING PIPE
1. BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM.
2. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL.
3. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED.
4. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE.
5. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

L. REINFORCED CONCRETE PIPE - BACKFILLING
1. SHALL CONFORM TO "STRUCTURE BACKFILL".

M. CONCRETE STRUCTURES
1. CONCRETE SHALL MEET THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, SECTIONS 605, 606 AND 714; AND AS MODIFIED HEREON.
2. REINFORCEMENT SHALL MEET THE MINIMUM REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, SECTION 709.

N. ROCK RIPRAP
1. ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408.

STABILIZATION SPECIFICATIONS

1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
4. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
5. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
6. 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.
7. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.
8. STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL. THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3:1. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. (NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED). A WOOD CELLULOSE FIBER MAY BE SPREAD OVER THE STRAW MULCH AT A RATE OF 1,500 LB./ACRE.
9. TRACKING SLOPES IS REQUIRED BY RUNNING TRACKED MACHINERY UP AND DOWN THE SLOPE, LEAVING TREAD MARKS PARALLEL TO THE CONTOUR. (NOTE: IF A BULLDOZER IS USED, THE BLADE SHALL BE UP.) CARE SHOULD BE EXERCISED ON SOILS HAVING A HIGH CLAY CONTENT TO AVOID OVER-COMPACTION.

TEMPORARY SEEDING SPECIFICATIONS

1. IN ORDER TO ESTABLISH A QUICK GRASS COVER OVER DISTURBED AREAS, A TEMPORARY SEED MIXTURE SHALL BE USED AS FOLLOWS:

SPECIES:	PENNDOT FORMULA E
% PURE LIVE SEED:	86%
APPLICATION RATE:	48 LB./ACRE
FERTILIZER TYPE:	5-5-5
FERTILIZE RATE:	1,000 LB./ACRE
LIMING RATE:	1 T./ACRE
MULCH TYPE:	STRAW
MULCHING RATE:	3 T./ACRE

2. STABILIZATION EFFORTS DURING THE NON-GERMINATING PERIOD, OCT. 15 TO MARCH 15, SHOULD BE MULCHED WITH CLEAN STRAW. (EQUIVALENT TO 0.75" TO 1" DEEP). CLEAN STRAW MULCH SHOULD NOT BE FINELY CHOPPED OR BROKEN DURING APPLICATION.
3. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR.
4. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
5. ALL AREAS SHALL BE TEMPORARILY STABILIZED UPON CESSATION OF WORK FOR 4 DAYS OR MORE, OR AS SOON AS ANY DISTURBED AREA REACHES ITS FINAL GRADE.

PERMANENT SEEDING SPECIFICATIONS

1. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION, UNLESS OTHERWISE DIRECTED BY THE OWNER AS FOLLOWS:

TOPSOIL PLACEMENT DEPTH:	6 IN.
SPECIES:	PENNDOT FORMULA B
% PURE LIVE SEED:	83%
APPLICATION RATE:	203 LB./ACRE
FERTILIZER TYPE:	38-0-0
FERTILIZE RATE:	242 LB./ACRE
LIMING RATE:	2 T./ACRE
MULCH TYPE:	STRAW
MULCHING RATE:	3 T./ACRE
ANCHOR MATERIAL:	WOOD FIBER
ANCHOR METHOD:	HYDRAULICALLY
RATE OF ANCHOR MATERIAL APPL.:	774 LB./ACRE
SEEDING SEASON DATE:	MARCH 15 - JUNE 1/AUGUST 1 TO OCTOBER 15

2. ALL DISTURBED AREAS WITH STEEP SLOPES SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION, UNLESS OTHERWISE DIRECTED BY THE OWNER AS FOLLOWS:

TOPSOIL PLACEMENT DEPTH:	6 IN.
SPECIES:	PENNDOT FORMULA D
% PURE LIVE SEED:	82%
APPLICATION RATE:	242 LB./ACRE
FERTILIZER TYPE:	38-0-0
FERTILIZE RATE:	242 LB./ACRE
LIMING RATE:	2 T./ACRE
MULCH TYPE:	STRAW
MULCHING RATE:	3 T./ACRE
ANCHOR MATERIAL:	WOOD FIBER
ANCHOR METHOD:	HYDRAULICALLY
RATE OF ANCHOR MATERIAL APPL.:	774 LB./ACRE
SEEDING SEASON DATE:	MARCH 15 - JUNE 1/AUGUST 1 - OCTOBER 15

3. MULCHING SHALL BE USED TO PROTECT SEEDING AND HELP IN PREVENTING RUNOFF.
   A. CLEAN STRAW MULCH SHALL BE REQUIRED IN ALL DISTURBED AREAS (EQUIVALENT TO 0.75" TO 1" DEEP). CLEAN STRAW MULCH SHOULD NOT BE FINELY CHOPPED OR BROKEN DURING APPLICATION.
   B. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR.
   C. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH.
   D. SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
   E. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
   F. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED.
4. FOR FURTHER INFORMATION ON SEED MIXES, SEE THE E & S WORKSHEETS IN THE CHAPTER 102 REGULATIONS.
5. WELL IN ADVANCE OF THE NEED TO PERMANENTLY SEED ANY DISTURBED AREA, THE CONTRACTOR SHALL OBTAIN AND FORWARD A SOIL AGRONOMY TESTING REPORT FROM AN APPROVED SOILS LABORATORY SUCH AS THE PENNSYLVANIA STATE UNIVERSITY'S AGRICULTURAL ANALYTICAL SERVICES LABORATORY. THE REPORT SHALL DETERMINE THE ACTUAL LIME AND FERTILIZER RATES FOR THE ON-SITE TOPSOIL. THE CONTRACTOR SHALL FORWARD THE FINAL REPORT TO THE LANDSCAPE ARCHITECT OR CLIENT'S REPRESENTATIVE UPON RECEIPT.
6. ALL SOIL AMENDMENTS SHALL BE INSTALLED PER THE SOIL AGRONOMY REPORT, AND SHALL BE PROVIDED BY THE CONTRACTOR.
7. APPLY AMENDMENTS ON-SITE, AND MIX SOIL TO FULLY ADDRESS ALL EXISTING SOIL DEFICIENCIES. DO NOT APPLY AMENDMENTS NOR TILL IF EXISTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.

SCM TYPE	FACILITY NOS.	CONSTRUCTION NOTES	CRITICAL STAGES OF PROFESSIONAL OVERSIGHT	OPERATION AND MAINTENANCE
RAIN GARDEN / BIO-RETENTION PA DEP (MRC) SCM 6.4.5	SCM-009 SCM-010 SCM-011	• AT ALL TIMES DURING CONSTRUCTION THE FACILITY SHALL BE PROTECTED FROM COMPACTION (WITHIN TWO FEET OF THE SUBGRADE OF THE FACILITY). • THE FACILITY MAY NOT RECEIVE RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO FACILITY HAS RECEIVED FINAL STABILIZATION. • UPLAND TRIBUTARY CONVEYANCE FACILITIES SHALL BE FLUSHED AND SEDIMENT REMOVED. • CONTRACTOR SHALL PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE FACILITY. • CONTRACTOR SHALL USE LOW-PRESSURE EQUIPMENT AND UTILIZE NON-INFILTRATION AREAS FOR EQUIPMENT STAGING TO PERFORM EXCAVATION AND INSTALLATION. • SEDIMENT LADEN OVERBURDEN AND DEPOSITION SHALL BE REMOVED FROM THE FACILITY TO PROVIDE A FREE DRAINING SUBGRADE. • PLACEMENT OF THE SOIL MEDIA SHALL BE DONE IN TWO (2) LIFTS TO THE DEPTH SHOWN ON THE DETAIL. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY. • PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT. • EROSION CONTROL BLANKET OR HYDROSEED SHALL BE APPLIED TO THE BOTTOM OF THE FACILITY TO PROMOTE EARLY STABILIZATION AND ESTABLISHMENT. • PLANT VEGETATION ACCORDING WITH THE APPROVED PCSM PLAN AND DETAILS.	1. REVIEW MATERIAL COMPONENTS OF THE FACILITY (SEE MATERIAL SPECIFICATIONS): A. SOIL MEDIA (MATERIAL RECEIPT AND TESTING RESULTS OR PRE-CERTIFIED MEDIA RECEIPT) B. SEPARATION FABRIC C. GEOTEXTILE D. OUTFALL BARREL PIPE E. ANTI-SEEP COLLAR F. CORE MATERIAL 2. CUTOFF TRENCH AND CLAY CORE. 3. INSTALLATION OF OUTFALL BARREL, CONCRETE CRADLE, AND ANTI-SEEP COLLAR. 4. FIELD MEASURE EXCAVATED BOTTOM FOR GENERAL CONFORMANCE WITH THE REQUIRED SURFACE AREA OF BED. 5. REVIEW OF FACILITY BOTTOM TO CONFIRM A FREE-DRAINING (UN-COMPACTED), SEDIMENT FREE SUBGRADE. 6. PLACEMENT OF SOIL MEDIA TO DEPTH SPECIFIED ON PLAN. 7. VISUAL INSPECTION OF RISER STRUCTURE, TRASH RACK, EMERGENCY SPILLWAY, AND REMAINING APPURTENANCES.	GENERAL REQUIREMENTS: • THE AREAS OF VEGETATION WHICH FAIL TO SUSTAIN YEARLY GROWTH ARE TO BE REPLANTED OR RESEEDED ON A YEARLY BASIS OR UNTIL CONSISTENT GERMINATION CAN BE SUSTAINED. SHRUBS, FORBS OR GRASSES WHICH ARE DEAD ARE TO BE REPLACED DURING GERMINATION PERIODS. • VEGETATION ON THE EMBANKMENT AND SIDESLOPES SHALL BE MOWED ANYTIME THE VEGETATION IS GREATER THAN 6" IN HEIGHT OR AS REQUIRED BY THE MUNICIPALITY • MATERIALS THAT ARE REMOVED MUST BE DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS. • CARE SHALL BE TAKEN NOT TO DAMAGE THE REMAINING STRUCTURES/PIPING WITHIN THE FACILITY, DURING THE MAINTENANCE OPERATIONS. REGULAR MAINTENANCE: (AFTER EACH MEASURABLE STORM EVENT (0.25 INCH OR GREATER) OR A MINIMUM OF TWICE PER YEAR): • REMOVE ACCUMULATED SEDIMENT, TRASH, AND DEBRIS FROM THE FACILITY • REFER TO THE BMP SEEDING SPECIFICATIONS AND OPERATION AND MAINTENANCE NOTES INCLUDED AS PART OF THE PROJECT'S LANDSCAPE PLAN FOR ANNUAL MAINTENANCE REQUIREMENTS; REMOVE CLIPPINGS AND INVASIVE PLANTS • IF 72 HOURS AFTER A RAINFALL EVENT, PONDING WATER IS FOUND WITHIN THE PRINCIPAL SPILLWAY OR ON THE SURFACE ABOVE THE FACILITY, THE FACILITY IS NOT OPERATING PROPERLY. • IF THE FACILITY IS NOT DRAINING PROPERLY, UTILIZE THE UNDERDRAIN SYSTEM (IF APPLICABLE) OR PUMP FOR DEWATERING. •• REMOVE AND REPLACE AREAS OF SOIL MEDIA WHICH APPEAR TO HAVE SEDIMENT ACCUMULATION, CLOGGED, OR HOLDING WATER. •• INSPECT THE FACILITY FOR RILLS ON THE EMERGENCY SPILLWAY, INTERIOR, AND EXTERIOR EMBANKMENT SLOPES. • REPAIR RILL AREAS WITH CLEAN FILL AND TOPSOIL WITH LIGHT TAMPING; RESEED DISTURBED AREAS. • INSPECTION PRINCIPAL SPILLWAY OUTLET STRUCTURE, OUTFALL BARREL, VELOCITY DISSIPATER, AND REMAINING APPURTENANCES. • CONTACT PROJECT ENGINEER FOR REPAIR SOLUTIONS IF THESE COMPONENTS ARE DAMAGED. DOCUMENTATION REQUIREMENTS: • PREPARE ANNUAL INSPECTION REPORTS AS REQUIRED BY THE MUNICIPAL ORDINANCE AND STORMWATER AGREEMENT. • PREPARE AND MAINTAIN INSPECTION, REPAIR, AND REPLACEMENT LOGS/REPORTS IN ACCORDANCE WITH PA DEP CHAPTER 102 REGULATIONS AND THE CONDITIONS OF THE NPDES PERMIT.
DRY EXTENDED DETENTION BASIN PA DEP SCM 6.6.3	SCM-003 SCM-004 SCM-005	1. AT ALL TIMES DURING CONSTRUCTION THE FACILITY SHALL BE PROTECTED FROM COMPACTION (WITHIN TWO FEET OF THE SUBGRADE OF THE FACILITY). 2. THE FACILITY MAY NOTE RECEIVE RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO FACILITY HAS RECEIVED FINAL STABILIZATION. 3. UPLAND TRIBUTARY CONVEYANCE FACILITIES SHALL BE FLUSHED AND SEDIMENT REMOVED. 4. CONTRACTOR SHALL PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE FACILITY. 5. CONTRACTOR SHALL USE LOW-PRESSURE EQUIPMENT AND UTILIZE NON-INFILTRATION AREAS FOR EQUIPMENT STAGING TO PERFORM EXCAVATION AND INSTALLATION. 6. SEDIMENT LADEN OVERBURDEN AND DEPOSITION SHALL BE REMOVED FROM THE FACILITY TO PROVIDE A FREE DRAINING SUBGRADE. 7. PLACEMENT OF THE SOIL MEDIA SHALL BE DONE IN TWO (2) LIFTS TO THE DEPTH SHOWN ON THE DETAIL. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY. 8. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT. 9. EROSION CONTROL BLANKET OR HYDROSEED SHALL BE APPLIED TO THE BOTTOM OF THE FACILITY TO PROMOTE EARLY STABILIZATION AND ESTABLISHMENT. 10. PLANT VEGETATION ACCORDING WITH THE APPROVED PCSM PLAN AND DETAILS.	1. REVIEW MATERIAL COMPONENTS OF THE FACILITY (SEE MATERIAL SPECIFICATIONS): A. SOIL MEDIA (MATERIAL RECEIPT AND TESTING RESULTS OR PRE-CERTIFIED MEDIA RECEIPT) B. SEPARATION FABRIC C. GEOTEXTILE D. OUTFALL BARREL PIPE E. ANTI-SEEP COLLAR F. CORE MATERIAL 2. CUTOFF TRENCH, CLAY CORE, AND CLAY LINER 3. INSTALLATION OF OUTFALL BARREL, CONCRETE CRADLE, AND ANTI-SEEP COLLAR. 4. FIELD MEASURE EXCAVATED BOTTOM FOR GENERAL CONFORMANCE WITH THE REQUIRED SURFACE AREA OF BED. 5. REVIEW OF FACILITY BOTTOM TO CONFIRM A FREE-DRAINING (UN-COMPACTED), SEDIMENT FREE SUBGRADE. 6. PLACEMENT OF SOIL MEDIA TO DEPTH SPECIFIED ON PLAN. 7. VISUAL INSPECTION OF RISER STRUCTURE, TRASH RACK, EMERGENCY SPILLWAY, AND REMAINING APPURTENANCES.	GENERAL REQUIREMENTS: • THE AREAS OF VEGETATION WHICH FAIL TO SUSTAIN YEARLY GROWTH ARE TO BE REPLANTED OR RESEEDED ON A YEARLY BASIS OR UNTIL CONSISTENT GERMINATION CAN BE SUSTAINED. SHRUBS, FORBS OR GRASSES WHICH ARE DEAD ARE TO BE REPLACED DURING GERMINATION PERIODS. • MATERIALS THAT ARE REMOVED MUST BE DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS. • CARE SHALL BE TAKEN NOT TO DAMAGE THE REMAINING STRUCTURES/PIPING WITHIN THE FACILITY, DURING THE MAINTENANCE OPERATIONS. REGULAR MAINTENANCE: (AFTER EACH MEASURABLE STORM EVENT (0.25 INCH OR GREATER) OR A MINIMUM OF TWICE PER YEAR): • REMOVE ACCUMULATED SEDIMENT, TRASH, AND DEBRIS FROM THE FACILITY • REFER TO THE BMP SEEDING SPECIFICATIONS AND OPERATION AND MAINTENANCE NOTES INCLUDED AS PART OF THE PROJECT'S LANDSCAPE PLAN FOR ANNUAL MAINTENANCE REQUIREMENTS; REMOVE CLIPPINGS AND INVASIVE PLANTS • IF 72 HOURS AFTER A RAINFALL EVENT, PONDING WATER IS FOUND WITHIN THE PRINCIPAL SPILLWAY OR ON THE SURFACE ABOVE THE FACILITY, THE FACILITY IS NOT OPERATING PROPERLY. •• IF THE FACILITY IS NOT DRAINING PROPERLY, UTILIZE THE UNDERDRAIN SYSTEM (IF APPLICABLE) OR PUMP FOR DEWATERING. •• REMOVE AND REPLACE AREAS OF SOIL MEDIA WHICH APPEAR TO HAVE SEDIMENT ACCUMULATION, CLOGGED, OR HOLDING WATER. • INSPECT THE FACILITY FOR RILLS ON THE EMERGENCY SPILLWAY, INTERIOR, AND EXTERIOR EMBANKMENT SLOPES. •• REPAIR RILL AREAS WITH CLEAN FILL AND TOPSOIL WITH LIGHT TAMPING; RESEED DISTURBED AREAS. • INSPECTION PRINCIPAL SPILLWAY OUTLET STRUCTURE, OUTFALL BARREL, VELOCITY DISSIPATER, AND REMAINING APPURTENANCES. •• CONTACT PROJECT ENGINEER FOR REPAIR SOLUTIONS IF THESE COMPONENTS ARE DAMAGED. DOCUMENTATION REQUIREMENTS: • PREPARE ANNUAL INSPECTION REPORTS AS REQUIRED BY THE MUNICIPAL ORDINANCE AND STORMWATER AGREEMENT. • PREPARE AND MAINTAIN INSPECTION, REPAIR, AND REPLACEMENT LOGS/REPORTS IN ACCORDANCE WITH PA DEP CHAPTER 102 REGULATIONS AND THE CONDITIONS OF THE NPDES PERMIT.
CONVEYANCE FACILITIES PA DEP SCM	ALL STORM DRAIN AND CHANNELS	1. ALL STORM DRAIN AND CONVEYANCE SWALES SHALL BE INSTALLED AT THE LOCATION AND IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS INCLUDED ON THIS PLAN, UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY.	1. VERIFICATION OF INLET STRUCTURE LOCATION, SIZE, DEPTH, AND CONNECTING PIPE INVERTS OR CHANNEL GEOMETRY	GENERAL REQUIREMENTS: • THE FACILITY SHALL ALSO BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES (BUT NOT LIMITED TO THE PA DEP AND THE TOWNSHIP) IN THE EVENT OF A SPILL AND CLEANUP OPERATION. • CLEAN OUT AND DISPOSE OF ACCUMULATED OIL, GREASE, AND SEDIMENTS. REMOVE ACCUMULATED TRASH AND DEBRIS. THE CLEAN OUT AND DISPOSAL TECHNIQUES SHOULD BE ENVIRONMENTALLY ACCEPTABLE AND IN ACCORDANCE WITH LOCAL REGULATIONS. SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND SWM FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL DISPOSE OF REMOVED SEDIMENT AND DEBRIS IN ACCORDANCE WITH THE RECYCLING AND DISPOSAL NOTES. REGULAR MAINTENANCE (AFTER EACH MEASURABLE STORM EVENT (0.25 INCH OR GREATER) OR A MINIMUM OF TWICE PER YEAR): • REMOVE ACCUMULATED SEDIMENT, TRASH, AND DEBRIS FROM THE FACILITY. • CLEAN OUT AND DISPOSE OF ACCUMULATED OIL, GREASE, AND SEDIMENTS. REMOVE ACCUMULATED TRASH AND DEBRIS. THE CLEAN OUT AND DISPOSAL TECHNIQUES SHOULD BE ENVIRONMENTALLY ACCEPTABLE AND IN ACCORDANCE WITH LOCAL REGULATIONS. SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND SWM FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL DISPOSE OF REMOVED SEDIMENT AND DEBRIS IN ACCORDANCE WITH THE RECYCLING AND DISPOSAL NOTES. DOCUMENTATION REQUIREMENTS: • PREPARE ANNUAL INSPECTION REPORTS AS REQUIRED BY THE MUNICIPAL ORDINANCE AND STORMWATER AGREEMENT. • PREPARE AND MAINTAIN INSPECTION, REPAIR, AND REPLACEMENT LOGS/REPORTS IN ACCORDANCE WITH PA DEP CHAPTER 102 REGULATIONS AND THE CONDITIONS OF THE NPDES PERMIT.
OUTLET PROTECTION (NOT A PCSM SCM)		1. RIP-RAP APRONS/PLUNGE POOLS SHALL BE INSTALLED AT THE LOCATION AND IN ACCORDANCE WITH THE DETAILS INCLUDED ON THIS PLAN.	1. VISUAL INSPECTION OF THE RIP-RAP APRONS/PLUNGE POOLS TO ENSURE INSTALLATION IS IN GENERAL CONFORMANCE WITH THE PLAN.	GENERAL REQUIREMENTS: • THE FACILITY SHALL ALSO BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES (BUT NOT LIMITED TO THE PA DEP AND THE TOWNSHIP) IN THE EVENT OF A SPILL AND CLEANUP OPERATION. • CLEAN OUT AND DISPOSE OF ACCUMULATED OIL, GREASE, AND SEDIMENTS. REMOVE ACCUMULATED TRASH AND DEBRIS. THE CLEAN OUT AND DISPOSAL TECHNIQUES SHOULD BE ENVIRONMENTALLY ACCEPTABLE AND IN ACCORDANCE WITH LOCAL REGULATIONS. SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND SWM FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL DISPOSE OF REMOVED SEDIMENT AND DEBRIS IN ACCORDANCE WITH THE RECYCLING AND DISPOSAL NOTES. REGULAR MAINTENANCE (AFTER EACH MEASURABLE STORM EVENT (0.25 INCH OR GREATER) OR A MINIMUM OF TWICE PER YEAR): • REMOVE ACCUMULATED SEDIMENT, TRASH, AND DEBRIS FROM THE FACILITY. • CLEAN OUT AND DISPOSE OF ACCUMULATED OIL, GREASE, AND SEDIMENTS. REMOVE ACCUMULATED TRASH AND DEBRIS. THE CLEAN OUT AND DISPOSAL TECHNIQUES SHOULD BE ENVIRONMENTALLY ACCEPTABLE AND IN ACCORDANCE WITH LOCAL REGULATIONS. SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND SWM FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL DISPOSE OF REMOVED SEDIMENT AND DEBRIS IN ACCORDANCE WITH THE RECYCLING AND DISPOSAL NOTES. DOCUMENTATION REQUIREMENTS: • PREPARE ANNUAL INSPECTION REPORTS AS REQUIRED BY THE MUNICIPAL ORDINANCE AND STORMWATER AGREEMENT. • PREPARE AND MAINTAIN INSPECTION, REPAIR, AND REPLACEMENT LOGS/REPORTS IN ACCORDANCE WITH PA DEP CHAPTER 102 REGULATIONS AND THE CONDITIONS OF THE NPDES PERMIT.

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OPERATION & MAINTENANCE NOTES

NOT TO SCALE

NO	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
343 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

LOWER ALLEN & UPPER ALLEN TOWNSHIP — CUMBERLAND COUNTY, PA

OPERATION & MAINTENANCE NOTES

Land Planning
Landscape Architecture
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RGS ASSOCIATES

DATE:	JUNE 22, 2026
PROJECT NO.:	2024657-044
MANAGER:	JAKE KRIEGER, RLA
SHEET NO.:	LD-56 OF 57

XREFS: Details
PLOTTED: Monday, June 22, 2026 FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot\Z-PCSM-Details.dwg
SCRIPT:

MATERIAL SPECIFICATIONS

MATERIAL	PLAN DESIGNATION	SPECIFICATION / TEST METHOD	SIZE	NOTES
STORMWATER CONVEYANCE				
WATER TIGHT (WT) STORM DRAIN	SLCPP	AASHTO M252, TYPE S (4- THROUGH 10-INCH) AASHTO M294, TYPE S (12- THROUGH 60-INCH) ASTM F2306	REFER TO PROFILE	
SOIL TIGHT (ST) STORM DRAIN	HDPEP	AASHTO M252, TYPE S (4- THROUGH 10-INCH) AASHTO M294, TYPE S (12- THROUGH 60-INCH) ASTM F2306	REFER TO PROFILE	
ROOF LEADER	SDR-35 OR HDPEP	SDR-35 (PS46) - ASTM D3034 (4"-15") (PRODUCT STANDARD) - ASTM F477 (GASKET) - ASTM D3212 (INTEGRAL BELL JOINT) HDPEP - ASTM F758 (TYPE PS 28) - AASHTO M252-S, OR - AASHTO M294-S	REFER TO PROFILE	
STORMWATER MANAGEMENT				
EROSION CONTROL BLANKET	ECB	REFER TO THE MATERIAL AND PERFORMANCE SPECIFICATIONS INCLUDED ON THE PLAN.		COCONUT MATTING, ECS-1B, NAG S75, OR EQUIVALENT
CLAY CORE		SOIL CLASSIFIED AS CL OR CH, PER THE UNIFIED SOIL CLASSIFICATION SYSTEM, HAVING A MINIMUM OF 70% FINES (PASSING THE NO. 200 SIEVE). A MINIMUM LIQUID LIMIT (LL) OF 40 AND MINIMUM PLASTICITY INDEX (PI) OF 20. DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY (ASTM D-698) WITH A MOISTURE CONTENT WITHIN 3% +/- OF THE OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR), UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER	REFER TO EMBANKMENT PROFILES AND/OR CROSS-SECTIONS	FOR MORE INFORMATION, REFER TO SECTION B. OF THE "STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS" FOR EARTH FILL MATERIAL.
NON-WOVEN GEOTEXTILE FABRIC		ASTM D-4632 (TENSILE STRENGTH, 100 LBS) ASTM D-4632 (ELONGATION 50% MIN.) ASTM D-6241 (PUNCTURE, 250 LBS) ASTM D-4533 (TRAPEZOID TEAR STRENGTH, 45 LBS) ASTM D-4751 (AOS SIEVE NO. 70) ASTM D-4491 (PERMITTIVITY 1.7 SEC^{-1} MIN.) ASTM D-4355 (ULTRAVIOLET RESISTANCE 70% @ 500 HRS) ASTM D-4491 (WATER FLOW RATE 120 GPM/SF)		MIRAFI 140N, GEOTEX 451, OR EQUIVALENT
SEPARATION FABRIC		ASTM D-5261 (WEIGHT - 12 OZ/SY, MIN) ASTM D-4632 (GRAB TENSILE STRENGTH 290 LBS) ASTM D-4632 (ELONGATION 50% MIN) ASTM D-6241 (PUNCTURE, 775 LBS MIN., 2 IN. FLAT ROD) ASTM D-4533 (TRAPEZOID TEAR STRENGTH, 100 LBS) ASTM D-4751 (AOS SIEVE NO. 80 TO NO. 120) ASTM D-4491 (PERMITTIVITY 0.7 SEC^{-1}) ASTM D-4355 (ULTRAVIOLET RESISTANCE 70% @ 500 HRS)	REFER TO PENNDOT SPECIFICATION SECTION 735.1 - GEOTEXTILES	PENNDOT CLASS 4, TYPE A, EQUIVALENT OR BETTER NON-WOVEN, NEEDLE PUNCHED FABRIC
STONE BED		AASHTO-M-43	0.375"-0.75"	DOUBLE WASHED NO. 57 STONE (WASH LOSS OF NO MORE THAN 1.49%)
RIVER ROCK		N/A	1"-3"	DELAWARE RIVER JACKS
UNDER DRAIN PIPE		ASTM F758 (TYPE PS 28), AASHTO-M-278, AASHTO M252-SP, OR AASHTO M294-SP AASHTO CLASS II (PERFORATION PATTERN)	RIGID SCHEDULE 40 PVC, SDR35, OR HDPEP	MINIMUM OF 6" OF GRAVEL OVER CROWN OF PIPES. PERFORATIONS IN UNDERDRAIN ARE ONLY FOR SECTIONS OF PIPE WITHIN STONE BED. PERFORATIONS SHALL BE LOCATED IN THE OUTSIDE VALLEYS OF THE CORRUGATIONS, BE CIRCULAR OR SLOTTED DEPENDING ON THE PIPE DIAMETER, AND EVENLY SPACED AROUND THE CIRCUMFERENCE AND LENGTH OF THE PIPE.
DISTRIBUTION PIPE		ASTM F758 (TYPE PS 28), AASHTO-M-278, AASHTO M252-SP, OR AASHTO M294-SP AASHTO CLASS II (PERFORATION PATTERN)	RIGID SCHEDULE 40 PVC, SDR35, OR HDPEP	MINIMUM OF 6" OF GRAVEL OVER CROWN OF PIPES. PERFORATIONS IN UNDERDRAIN ARE ONLY FOR SECTIONS OF PIPE WITHIN STONE BED. PERFORATIONS SHALL BE LOCATED IN THE OUTSIDE VALLEYS OF THE CORRUGATIONS, BE CIRCULAR OR SLOTTED DEPENDING ON THE PIPE DIAMETER, AND EVENLY SPACED AROUND THE CIRCUMFERENCE AND LENGTH OF THE PIPE.
TOPSOIL (AS PART OF PCSM BMP - SOIL MEDIA COMPOSITION)		ASTM D5268 - STANDARD SPECIFICATION FOR TOPSOIL ASTM D4972 - TEST METHOD OF pH FOR SOILS	<u>% BY WEIGHT:</u> SAND: 25-75%; SILT: 15-40%; CLAY: 5-20% ORGANIC CONTENT: 2-8%; pH: 7.5; SOLUBLE SALTS: <500 PPM	THE CLAY CONTENT OF THE TOPSOIL SHALL BE LESS THAN 10%; SILT SHALL BE LESS THAN 35%. TOPSOIL SHALL BE A LOAMY SAND, CLAY LOAM, LOAM, SILT LOAM, OR SANDY CLAY LOAM; SUITABLE FOR FINAL USE, FREE OF ALL DEBRIS AND ROCKS OVER 3" IN DIAMETER. TOPSOIL MUST ALSO BE FREE OF VIABLE PLANTS OR PLANT PARTS. ALL TOPSOIL SHALL BE TESTED BY A REPUTABLE LABORATORY FOR PH AND SOLUBLE SALTS. IF NEEDED, PH CORRECTION MATERIAL SHALL BE APPLIED AT A RATE SUFFICIENT TO CORRECT THE PH TO A RANGE OF 6.0 TO 7.0. SOLUBLE SALTS SHALL NOT BE HIGHER THAN 500 PARTS PER MILLION.
HARDWOOD MULCH		N/A	MAXIMUM 3" IN SIZE PIECES	COMPOSITION BY VOLUME: 70% SHREDDED BARK, 30% SHREDDED HARDWOOD COLOR: BROWN FREE OF TRASH, DEBRIS AND OTHER NON-ORGANIC MATERIALS
SAND		CLEAN AASHTO-M-6 OR ASTM-C-33 CONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.
COMPOST		CERTIFIED BY THE U.S. COMPOSTING COUNCIL'S SEAL OF TESTING PROGRAM (STA)	N/A	PARAMETER: ALLOWABLE RANGE pH: 5.5 - 8.0; MOISTURE CONTENT: 35% -55%; C:N RATIO: 15-30:1; ORGANIC MATTER: >40%; PARTICLE SIZE: <1 INCH; SOLUBLE SALTS: <4.0 mmhos (dS); BULK DENSITY: < 1000LBS/ CUYD; FOREIGN MATTER < 1% BU WEIGHT
PEA GRAVEL		ASTM D-448	0.125" - 0.375"	DOUBLE WASHED NO. 8 OR NO. 9 STONE (WASH LOSS OF NO MORE THAN 1.49%)
SOIL MEDIA		N/A	THE STANDARD RATIO OF MATERIAL WITHIN THE SOIL MEDIA SHALL BE: 50% SAND; 20% COMPOST/MUSHROOM SOIL; 30% TOPSOIL *PERCENTAGES ARE BY VOLUME; % BY WEIGHT: SAND: 40-80%; SILT: 10-20%; CLAY 5-12%; ORGANIC MATTER: 4-10%	A BLEND OF A RATIO OF SAND, TOPSOIL AND ORGANICS FOR THE PURPOSE OF FILTERING STORMWATER, PROMOTING EVAPOTRANSPIRATION, AND PLANT GROWTH WITHIN THE FACILITY. <u>GENERAL CRITERIA:</u> THE MATERIAL SHALL BE LOOSE AND EASILY BROKEN INTO SMALL PIECES. IT SHALL BE WELL MIXED AND HOMOGENOUS PRIOR TO PLACEMENT. IT SHALL BE FREE OF WOOD PIECES, PLASTIC, AND OTHER FOREIGN MATTER. IT SHALL HAVE NO VISIBLE FREE WATER. IT SHALL BE CLASSIFIED AS A USDA SOIL TYPE OF SILT LOAM, LOAMY SAND, SANDY LOAM OR LOAM. <u>PERFORMANCE STANDARD:</u> THE MIXTURE SHALL PROVIDE A MINIMUM IN SERVICE FLOW RATE/HYDRAULIC CONDUCTIVITY (ASTM F1815) 75% PROCTOR (ASTM D698) 2-6 IN/HR. PROVIDE LAB TEST REPORT FOR VERIFICATION AS WELL AS A 1 GALLON SAMPLE TO BE HELD FOR COMPARISON. <u>ALTERNATE SOIL MEDIA SPECIFICATIONS:</u> THE CONTRACTOR MAY SUBMIT AN ALTERNATE MIX DESIGN FOR APPROVAL TO THE LICENSED PROFESSIONAL PROVIDED THAT IT MEETS THE MINIMUM PERFORMANCE REQUIREMENTS OF THE SPECIFIED MIX. MINIMUM SUBMITTALS INCLUDE TESTING DOCUMENTATION, EXAMPLES OF SUCCESSFUL IMPLEMENTATION FOR SIMILAR PROJECTS, AND OTHER RELEVANT INFORMATION AS THEY RELATE TO INFILTRATION, WATER QUALITY AND VEGETATION GROWTH.
STORMWATER MANAGEMENT FACILITY OUTFALL BARREL	RCP	ASTM C76 (CLASS IV) ASTM C361 (JOINTS AND GASKETS)	REFER TO PROFILE	
CONCRETE STRUCTURES				
INLETS, MANHOLES, PIPES, AND CULVERTS	FOR STRUCTURES OUTSIDE OF THE STATE RIGHT-OF-WAY. FOR ALL STRUCTURES WITHIN THE STATE RIGHT-OF-WAY ALONG LISBURN ROAD (S.R. 2017) REFER TO HIGHWAY OCCUPANCY (HOP) PLANS PREPARED BY OTHERS.	REFER TO PENNDOT'S PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION (RC), RC-34 STANDARDS.	REFER TO PLAN	CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT'S PUBLICATION 408, AS SPECIFIED. LADDER RUNGS SHALL BE PROVIDED WITHIN ALL STORMWATER STRUCTURES WHICH EXCEED 5-FOOT IN HEIGHT. INLETS MUST BE SIZED TO ACCEPT THE SPECIFIED PIPE SIZES WITHOUT KNOCKING OUT ANY OF THE INLET CORNERS. ALL PIPES ENTERING OR EXITING INLETS SHALL BE CUT FLUSH WITH THE INLET WALL. INLETS SHALL NOT HAVE A SUMP CONDITION IN THE BOTTOM, UNLESS DESIGNED AS A WATER QUALITY INLET. OUTLET PIPES SHALL BE FLUSH WITH THE BOTTOM OF THE BOX OR CONCRETE CHANNELS SHALL BE POURED.
REINFORCED CONCRETE HEADWALLS AND END SECTIONS	FOR STRUCTURES OUTSIDE OF THE STATE RIGHT-OF-WAY. FOR ALL STRUCTURES WITHIN THE STATE RIGHT-OF-WAY ALONG LISBURN ROAD(S.R. 2017) REFER TO HIGHWAY OCCUPANCY (HOP) PLANS PREPARED BY OTHERS.	REFER TO PENNDOT'S PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION (RC), RC-34 STANDARDS.	REFER TO PLAN	CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT'S PUBLICATION 408, AS SPECIFIED.
GRATES		REFER TO PENNDOT'S PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION (RC), LATEST EDITION.	REFER TO PLAN	ALL INLETS IN PAVED AREAS SHALL HAVE HEAVY-DUTY BICYCLE-SAFE GRATING.
FRAMES / TOP UNITS / GRADE ADJUSTMENT RINGS	FOR STRUCTURES OUTSIDE OF THE STATE RIGHT-OF-WAY. FOR ALL STRUCTURES WITHIN THE STATE RIGHT-OF-WAY ALONG LISBURN ROAD(S.R. 2017) REFER TO HIGHWAY OCCUPANCY (HOP) PLANS PREPARED BY OTHERS.	REFER TO PENNDOT'S PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION (RC), RC-34 STANDARDS.	REFER TO PLAN	ALL FRAMES, CONCRETE TOP UNITS, AND GRADE ADJUSTMENT RINGS SHALL BE SET IN A BED OF FULL MORTAR ACCORDING TO PUBLICATION 408.
CONCRETE				CONCRETE SHALL MEET THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, SECTIONS 605, 606 AND 714.
REINFORCEMENT				REINFORCEMENT SHALL MEET THE MINIMUM REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, SECTION 709.
SANITARY SEWER				
GRAVITY SEWER PIPE	PVC	SDR-35 (PS46)/SDR-26 (PS115) ASTM D3034 (PRODUCT STANDARD) ASTM F477 (GASKET) ASTM D3212 (INTEGRAL BELL JOINT)	REFER TO PROFILE	
GRAVITY SEWER PIPE	DIP	ANSI/AWWA C150 (THICKNESS DESIGN OF PIPE) ANSI/AWWA C151 (CENTRIFUGALLY CAST DIP) ANSI/AWWA C153 (FITTINGS) ANSI/AWWA C111 (RUBBER GASKET JOINTS) ANSI/AWWA C104 (CEMENT MORTAR LINING)	REFER TO PROFILE	
WATER				
WATER DISTRIBUTION PIPE	DIP	ANSI/AWWA C150 (THICKNESS DESIGN OF PIPE) ANSI/AWWA C151 (CENTRIFUGALLY CAST DIP) ANSI/AWWA C153 (FITTINGS) ANSI/AWWA C111 (RUBBER GASKET JOINTS) ANSI/AWWA C104 (CEMENT MORTAR LINING)	REFER TO PROFILE	
WATER LATERAL	WHC	TYPE K - COPPER	REFER TO DETAIL	
SITE FEATURES AND LANDSCAPING				
TOPSOIL		ASTM D5268 - STANDARD SPECIFICATION FOR TOPSOIL ASTM D4972 - TEST METHOD OF pH FOR SOILS	SEE GRADATION OF ASTM STANDARD	TOPSOIL MUST BE FREE OF LARGE DEBRIS, ROOTS, ROCKS, BRUSH, SOD, FROZEN PARTICLES, OR OTHER FOREIGN OR OBJECTIONABLE MATERIAL THAT WOULD INHIBIT VEGETATIVE ESTABLISHMENT AND GROWTH TO MEET THE PROJECT REQUIREMENTS. TOPSOIL MUST BE SUITABLE TO SUPPORT A DENSE AND DIVERSE VEGETATIVE COVER, AS DIRECTED BY THE OWNER OR LANDSCAPE ARCHITECT.
HARDWOOD MULCH		N/A	MAXIMUM 3" IN SIZE PIECES	COMPOSITION BY VOLUME: 70% SHREDDED BARK, 30% SHREDDED HARDWOOD COLOR: BROWN FREE OF TRASH, DEBRIS AND OTHER NON-ORGANIC MATERIALS

1 **MATERIAL SPECIFICATIONS**

NOT TO SCALE

XREFS: Details
PLOTTED: Monday, June 22, 2026
FILENAME: P:\2024\2024657-044\CADD\Final-PH1\Plot2-PCSM-Details.dwg
SCRIPT:

NO.	DATE	REVISION

SEAL

SEAL

CLIENT
EG STOLTZFUS LAND LLC
345 CHAMP BLVD
MANHEIM, PA 17545
(717) 723-4324

SCALE: AS NOTED

LIBERTY FORGE

FINAL PHASE 1 SUBDIVISION & LAND DEVELOPMENT PLAN

CUMBERLAND COUNTY, PA

LOWER ALLEN & UPPER ALLEN TOWNSHIP

MATERIAL SPECIFICATIONS

Land Planning
Landscape Architecture
Civil Engineering

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Regional Offices:
York, Harrisburg, and Paoli

RGS ASSOCIATES

DATE: JUNE 22, 2026
PROJECT NO.: 2024657-044
MANAGER: JAKE KRIEGER, RLA
SHEET NO.:
LD-57 OF 57