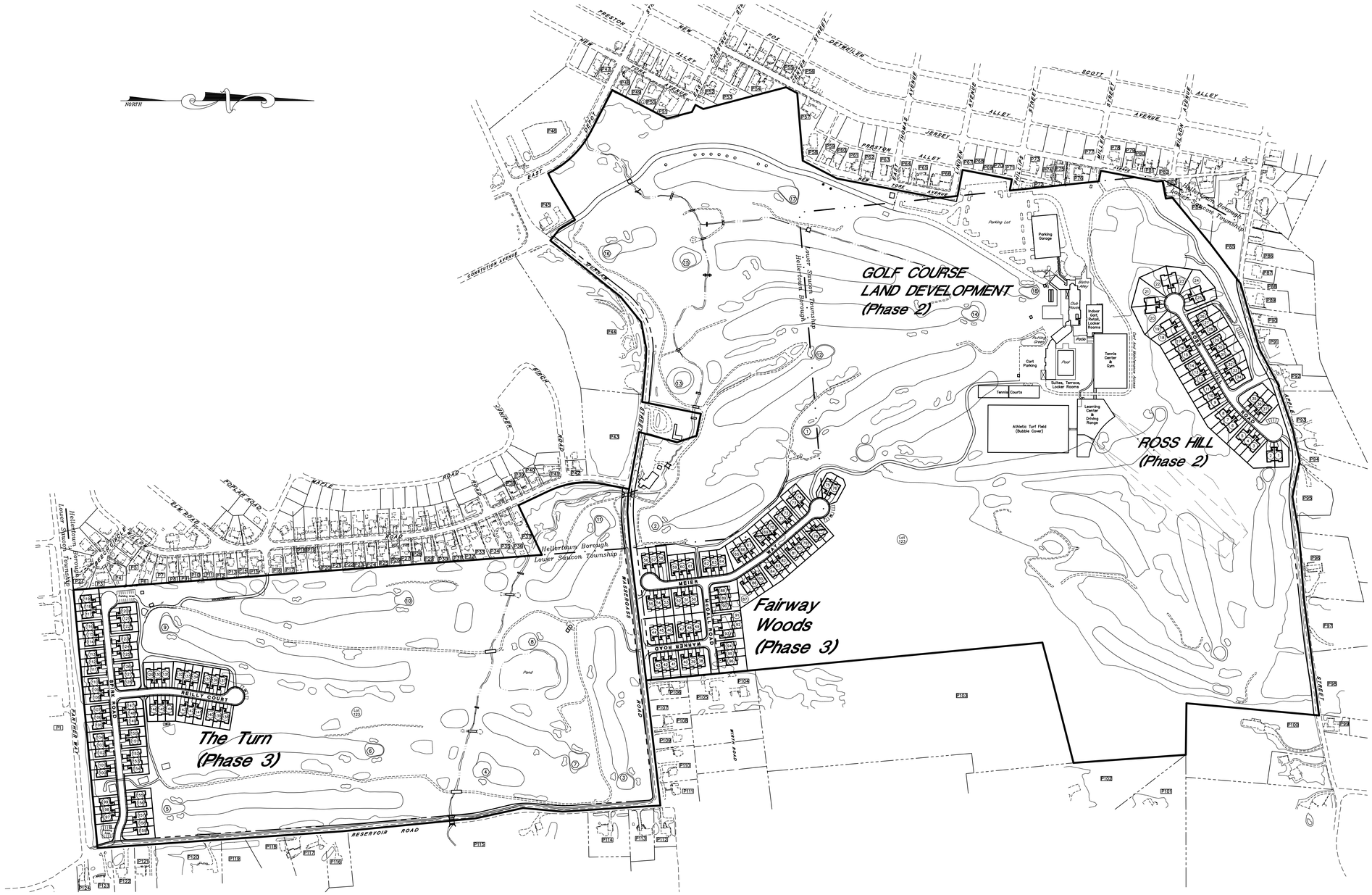
ADJOINING LAND OWNER INFORMATION

TAX PARCEL NUMBER	OWNER NAME	MAP TAG
Q7 20 3 0719E	Saucon Valley School District	P1
Q7SE4D 6 4 0715	Daniel & Lizzett Fernandez	P2
Q7SE4D 6 4A 0715	David R. Schaffstall & Christy A. Healy	P3
Q7SE4A 13 1C 0715	Vincent R. Salerno	P4
Q7SE4A 13 1 0715	Joseph & Kathleen Hagovsky	P5
Q7SE4A 13 1B 0715	Alfred L. & Mary Ann Horvath	P6
Q7SE4A 13 2 0715	Louisa G. McCambridge	P7
Q7SE4A 13 3 0715	Donald W. & Mary C. Elliott	P8
Q7SE4A 13 4 0715	Alan G. & Jill L. Cutting	P9
Q7SE4A 13 5 0715	Wayne L. & Jeanette L. Boucon	P10
Q7SE4A 13 6 0715	Ellen E. Corkery, Et. Al.	P11
Q7SE4A 13 7 0715	Edward M. & Dolores M. Stine	P12
Q7SE4A 13 8 0715	Jacob N. Chapman	P13
Q7SE4A 13 9 0715	Eric Nelson & Bonnie Gordon	P14
Q7SE4A 13 10 0715	David W. & Ellen E. Kemmerer	P15
Q7SE4A 6 1 0715	James F. Koch, Jr.	P16
Q7SE4A 6 2 0715	Janet R. Binsau Revocable Living Trust	P17
Q7SE4A 6 3 0715	Christopher S. Poles & Tara Kirk	P18
Q7SE4A 6 4 0715	Michael John Shaw	P19
Q7SE4A 6 5 0715	Michael Opdyke	P20
Q7SE4A 6 6 0715	David C. & Leah M. Cassella	P21
Q7SE4A 6 7 0715	Dorothy Kluska	P22
Q7SE4A 6 8 0715	Janet R. & Danika A. Binsau	P23
Q7SE4A 6 9 0715	John T. Bennett	P24
Q7SE1D 7 17 0715	Matthew S. & Melonie A. Potter	P25
Q7SE1D 7 16 0715	Lori A. Heimbach	P26
Q7SE1D 7 15 0715	Nancy Devogel	P27
Q7SE1D 7 14 0715	Chas P. & Janice L. Unangst	P28
Q7SE1D 7 13 0715	Bruce N. & Brenda L. Schmidt	P29
Q7SE1D 7 12 0715	Karen L. Wolfinger Stackhouse	P30
Q7SE1D 7 11 0715	Troy Washburn	P31
Q7SE1D 7 9 0715	Dale L. & Stefanie P. Sommons	P32
Q7SE1D 7 8 0715	Pauline J. Bond	P33
Q7SE1D 7 6 0715	Stephen J. Wargo	P34
Q7SE1D 7 5 0715	Beverly L. Rozewicz	P35
Q7SE1D 7 4 0715	James S. Schlener	P36
Q7SE1D 7 3 0715	Kay A. Jones	P37
Q7SE1D 2 12 0715	Ariel H. Merkt	P38
Q7SE1D 2 11 0715	Jason & Michelle Johnson	P39
Q7SE1D 2 10 0715	Jamiel D. Curto	P40
Q7SE1D 2 9 0715	John L. Koskovich	P41
Q7SE1D 1 3 0715	Holly & Kelly Stonebock	P42
Q7SE1D 1 2 0715	Robert G. & Beverly L. Gilman	P43
Q7SE1D 1 1 0715	Robert G. & Beverly L. Gilman	P44
Q7 19 10-1 0715	Kevin J. Lott & Karen Kozak	P45
Q7SW2C 7 1 0715E	Hellertown Borough	P46
Q7SW2C 7 12A 0715	Robert W. & Kimberly L. Johnson	P47
Q7SW2B 15 2 0715	Robert & Melissa Reilly	P48
Q7SW2B 15 3 0715	Julia Blechy	P49
Q7SW2B 15 4 0715	James A. Gavlik	P50
Q7SW2B 15 5 0715	Robert K. & Phyllis B. Scherer	P51
Q7SW2B 9 3 0715	Jason A. Eisenhart & Kristin Garrett	P52
Q7SW2B 9 2 0715	William A. Szabo Jr.	P53
Q7SW2B 9 7 0715	Norman K. & Carol Ann Fetzer	P54
Q7SW2B 8 1 0715	Steven J. & Patricia A. Miga	P55
Q7SW2B 4 9 0715	David P. & Diane E. Shirley	P56
Q7SW2B 5 6 0715	Barbara Brendler	P57
Q7SW2B 5 5 0715	Wm. R. Anderson Jr. & Ann Theo	P58
Q7SW2B 5 4 0715	Christine M. Godorov	P59
Q7SW2B 5 3 0715	Walter & Evonne Noll	P60
Q7SW2B 5 2 0715	Gary A. & Mary Lou Young	P61
Q7SW2B 5 1A 0715	Nicholaos Tomeo & Tara Hughes	P62

TAX PARCEL NUMBER	OWNER NAME	MAP TAG
Q7SW2B 5 1 0715	Joseph J. & Helen L. Chunko	P63
Q7NW3C 18 3 0715	Joshua Cooper & April Lepo	P64
Q7NW3C 18 2 0715	Francis M. & Nydia Schader Family Trust	P65
Q7NW3C 18 1 0715	Damien William Kaufman & Jennifer Boer	P66
Q7NW3C 13 3 0715	David M. & Amy Lamie	P67
Q7NW3C 13 3A 0715	Frank Dakian III	P68
Q7NW3C 13 4 0715	Thomas R. Link III	P69
Q7NW3C 13 5 0715	Francis E. & Ranee A. Anthony	P70
Q7NW3C 13 6 0715	Brett & Amy Ramsberger	P71
Q7NW3C 9 1 0715	Roy B. & Ruth A. Bauder	P72
Q7NW3C 9 2 0715	Paul & Christina Miller	P73
Q7NW3C 9 3A-1 0715	Joseph Trudnlak	P74
Q7NW3C 9 3A 0715	Joseph P. Barrell	P75
Q7NW3C 9 3 0715	Andrew & Sonya Hughes	P76
Q7NW3C 8 1 0715	Mark S. & Johanna S. Chehl	P77
Q7NW3C 4 2 0715	Kim L. & Kathryn E. Griffiths	P78
Q7NW3C 4 1 0715	John K. & Patricia A. Kudera	P79
Q7NW3B 15 3 0715	Shirley M. Matlock	P80
Q7NW3B 15 2 0715	Jennifer L. King	P81
Q7NW3B 15 1 0715	James J. & Marcella A. Straka	P82
Q7 19 32 0719	Robert & Michelle Pacchioli	P83
Q7 19 1A 0715	Michael Exaros & Michelle Sipe	P84
Q7 19 1B 0715	Joseph & Maura Matuczinski	P85
Q7 16 43B 0719	Joanne D. Krycia	P86
Q7 16 43A 0719	Theodore R. & Dolores J. Lander	P87
Q7 16 43C 0719	Craig T. Beers	P88
Q7 16 42 0719	Ian Michael & Jessica L. Scheidler	P89
Q7 16 44 0719E	Hellertown Assembly of God	P90
Q7 16 41 0719	Molly A. Clark	P91
Q7 16 40 0719	Randall & Tammy Gubich	P92
Q7 16 39A 0719	John W. & Constance M. Boyko	P93
Q7 16 39 0719	Theresa Koller	P94
Q7 16 37A 0719E	Hellertown Borough Authority	P95
Q7 16 36 0719	Barbara & Ireneusz Kolodziej	P96
Q7 16 35 0719	Barry L. & Patricia A. Wentzel	P97
Q7 16 35A 0719	Stephen J. Wentzel Jr.	P98
Q7 16 34 0719	Tracey A. Montanari	P99
Q7 19 2 0719	Bradley Jacoby	P100
Q7 19 18B 0719	Bryan J. & Alexandra K. Evans	P101
Q7 19 18A 0719	Jamie Lee Haney & Jonathon W. Treskot	P102
Q7 19 19 0719	William F. Jr. & Melissa M. Mills	P103
Q7 19 23 0719	Joseph & Monica Sofka	P104
Q7 19 23D 0719	Robert K. Coyle Jr.	P105
Q7 19 30 0719	Bruce A. Weikert	P106
Q7 19 28 0719	Deborah Yovish	P107
Q7 19 27 0719	Stephen J. & Sandra J. Mamay	P108
Q7 19 26 0719	Carrie F. Myers & David M. Ackerman	P109
Q7 19 25 0719	Christina L. Koeppel	P110
Q7 19 24 0719	David A. & Michele C. Pearson	P111
Q7 21 17A 0719	Wallace W. Bright	P112
Q7 21 16 0719	Nick H. Boerboon & Morgan Alaina Craft	P113
Q7 21 15A 0719	Stephen & Frances Roseman	P114
Q7 21 15 0719	Mei Xiang	P115
Q7 21 14A 0719	Dustin L. & Lora A. Weiss	P116
Q7 22 2 0719	Joseph R. & Diane M. Luybli	P117
Q7 22 2D-1 0719	Joseph R. & Diane M. Luybli	P118
Q7 22 2D 0719	Kenneth A. & Wanda L. Luybli	P119
Q7 22 2B-1 0719	Michael J. & Laurie A. Luybli	P120
Q7 22 2C 0719	William C. Jr. & Brenda L. Hashagen	P121
Q7 22 2A 0719	James & Patricia Pettit	P122
Q7 22 1B 0719	Joseph & Sheila E. Novak	P123
Q7 22 1A 0719	Keith H. & Jill M. Riefenstahl	P124



STEEL CLUB LAND DEVELOPMENT
PHASE 3 SUBDIVISION SITE PLAN

Lower Saucon Township, Northampton County, Pennsylvania

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Preliminary Plan

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-0581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township, Northampton County, Pennsylvania

SCALE: 1" = 200' | DRAWN BY: EN
DATE: 22 Dec. '22 | FILE: 14191001

OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

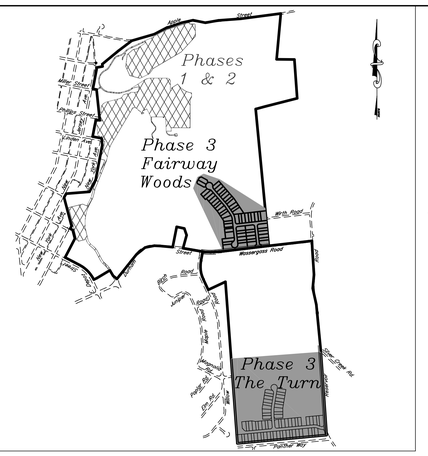
Cover Sheet

SHEET 1 of 22

LOCATION MAP

1" = 1000'

GRAPHIC SCALE

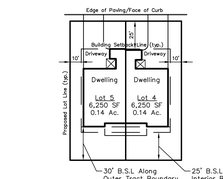


KEY MAP

NTS

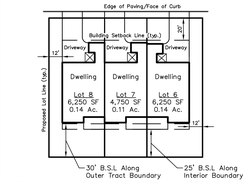
TYPICAL DWELLING DETAIL – DOUBLE

1" = 50'



TYPICAL DWELLING DETAIL – TRIPLE

1" = 50'



IMPERVIOUS SURFACE CALCULATIONS

Existing Impervious Surfaces	
Buildings[1, 4]	54,628 SF
Conc./Paths/Patios/Walls/Walks[1, 4]	172,910 SF
Driveway/Parking[1, 4]	117,490 SF
Courts[1]	+ 45,137 SF
Total Existing Impervious Surfaces	390,165 SF
Existing Impervious Surfaces TBR (Phase2)	
Buildings	5,562 SF
Conc./Paths/Patios/Walls/Walks	30,943 SF
Driveway/Parking	+ 105,489 SF
Total Existing Impervious Surfaces TBR	141,994 SF
Proposed Impervious Surfaces (Phase 2)	
Buildings[2, 3]	210,679 SF
Conc./Paths/Patios/Walls/Walks[2, 4]	76,639 SF
Driveway/Parking[2, 4]	268,590 SF
Courts[2, 3]	+ 113,200 SF
Total Proposed Impervious Surfaces	668,908 SF
Impervious Surface Calculations (Phase 2)	
Total Existing Impervious Surfaces	390,165 SF
Total Existing Impervious Surfaces TBR	– 141,994 SF
Total Proposed Impervious Surfaces	+ 668,908 SF
Total Post-Development Impervious Surface	917,079 SF
Existing Impervious Surfaces TBR (Phase 3)	
Buildings	5,679 SF
Conc./Paths/Patios/Walls/Walks	34,451 SF
Driveway/Parking	+ 8,164 SF
Total Existing Impervious Surfaces TBR	48,294 SF
Proposed Impervious Surfaces (Phase 3)	
Buildings[5, 6]	251,418 SF
Conc./Paths/Patios/Walks[5, 6]	76,174 SF
Driveway/Parking/Roads[5, 6]	+227,974 SF
Total Proposed Impervious Surfaces	555,566 SF
Impervious Surface Calculations (Phase 3)	
Total Existing Impervious Surfaces	917,079 SF
Total Existing Impervious Surfaces TBR	– 48,294 SF
Total Proposed Impervious Surfaces	+555,566 SF
Total Post-Development Impervious Surface	1,424,351 SF
	1,424,048/43,560 = 32.699 Acres
Impervious Surface Ratio	(32.699/146.106)(100) = 22.38%

1 – Existing prior to 5/20/98
2 – Proposed new (Phase 2)
3 – Controlled by proposed stormwater management (Phase 2)
4 – Some of this item to be controlled by proposed stormwater management (Phase 2)
5 – Proposed new (Phase 3)
6 – Some of this item to be controlled by proposed stormwater management (Phase 3)

SITE CAPACITY CALCULATIONS (In Acres)

A. Base Site Area:	
Gross Site Area	225.918
Non–Contiguous Land	0.000
Existing Rights–of–Way	0.000
Required Rights–of–Way of Existing Streets	4.568
Easements And Covenants	– 0.000
Base Site Area	221.350

b. Land w/Resource Restrictions and Resource Protection Land

Resource	Required Preservation	Acres of Land in Resources	Resource Protection Land (Acres x Required Preservation
Flood Plains	100%	8.061	8.061
Flood Plain Soils	100%	1.325	1.325
Wetlands	100%	0.000	0.000
Waters of the U.S./ Commonwealth	100%	0.235	0.235
Lakes/Ponds	100%	1.063	1.063
Environmentally Sensitive Woodlands	85%	43.000	36.550
Steep Slopes Greater than 25%	85%	3.691	3.137
Rock Outcrops	85%	0.000	0.000
Woodlands	80%	11.263	9.010
Steep Slopes Between 15%–25%	70%	9.112	6.378
Steep Slopes Between 8%–15%	60%	15.808	9.485
Total Land in Resources		93.558	
Total Resource Protection Land			75.244

c. Net Buildable Site Area:

Base Site Area	221.350
Subtract Total Resource Protection Land	– 75.244
Net Buildable Site Area	146.106

d. Maximum Number of Permitted Dwelling Units:

Net Buildable Site Area	146.106
Calculate Square Footage of Base Site Area	x 43,560.000
	6,364,477
Divide By Minimum Allowable Lot Area	40,000
Maximum Permitted Quantity of DU's	159.109

e. Maximum Permitted Impervious Surfaces:

Net Buildable Site Area	146.106
Multiply by Max. Permitted Imp. Surfaces Ratio	x 0.250
Max. Permitted Impervious Surfaces	36.527

f. Site Capacity Summary

Base Site Area	221.350
Net Buildable Site Area	146.106
Maximum Permitted Number of DU's	159
Maximum Permitted Imp. Surfaces	36.527

GENERAL NOTES

1. The property boundaries are based on a field survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
2. The contours in the area of the proposed development are based on a field survey. The contours on the rest of the site are based on an aerial survey performed by NorEast Mapping in 2015.
3. All users of this plan are referred to and cautioned to comply with PA Act 287 as amended by PA Act 172, HB 2543, enacted 06–10–1987, and by PA HB 722, P.L. 364, Act 38, enacted 12–12–1991, and by PA HB 2627, Act 187, effective 12–19–96, and by PA Act 199, P.L. 1567, enacted 11–30–2004, and by PA Act 181, P.L. 1593, enacted 11–29–2006.
4. All existing structures shown on this plan within the project site boundary, were constructed prior to 1960. According to courthouse records the country club was constructed in 1947. The pool and tennis courts were constructed in 1960.
5. This plan contains information pertaining to underground utilities which is for general information only, and may not be based on an actual subsurface location survey. All subsurface information shown on this plan needs to be verified by the plan user. The preparer of this plan assumes no responsibility for and makes no representations or warranties as to the accuracy of the location of underground utilities or other underground features. Repair of damages to any underground utilities, structures, and appurtenances will be the sole responsibility of the contractor, and at the contractor's expense.
6. All paving, sidewalk, earthwork and concrete work shall be supplied and constructed in accordance with Pennsylvania Department of Transportation (PennDOT) specifications, Publication 408, latest edition, and shall also conform to all local building codes.
7. Proposed utilities shall be installed in accordance with all utility company and local building code requirements.
8. The contractor performing the work is responsible for contacting "PA ONE CALL" (1–800–242–1776) for location of all underground lines at least one week prior to the beginning of construction.
9. If any conflicts, discrepancies, or other unsatisfactory conditions are discovered, either on the construction documents or the field conditions, the contractor must notify the owner or project engineer immediately and shall not commence operations until the conflicts, discrepancies, or other unsatisfactory conditions are resolved.
10. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Wassergass Road and Warner Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.
11. All residential and non residential units shall be served by public water and sewer provided by the Hellertown Borough Authority.
12. The golf course shall manage the residential common areas and private streets.
13. The easement area that encompasses Meier Way, McCall Road, and Warner Road is both an access easement and a utility easement.
14. The proposed property corners of Lots 64 – 122 shall be marked with a rebar.
15. This plan proposes 59 residential dwellings, (lots 64 – 122).
16. The access and utility easements be owned and maintained by the golf course.
17. All nonresidential uses shall be owned and operated by the same business entity or association as the primary golf course use.
18. The maximum building height shall be 35'. The building height is the vertical distance derived from the average finished grade at the foundation corners of the building or structure to the highest point of the building or structure, excluding a chimney or other similar structure. In the case of single–family dwellings, the measurement shall be from the average roof level for sloping roofs and not the highest point.
19. A zoning permit for tree removal is required for the removal of any trees six (6) inches in diameter or larger measured at a point four feet above grade.
20. The owner shall comply with the neighborhood protection requirements listed in Zoning Ordinance Section 180–96.
21. The utilities to be provided are adequate for the intended use.
22. The Fairway Woods dwelling units are required to provide three off street parking spaces per dwelling unit. Each dwelling unit will have a two car garage and parking for four spaces on the driveway.
23. Prior to the erection of the retaining walls a permit must be obtained from the zoning officer. The retaining walls will be maintained by the golf course.
24. Stormwater roof drains and pipes shall not discharge water over impervious areas.
25. No business signs are proposed with this submission. Any future, proposed signs shall be submitted to the Township Zoning Officer for review.
26. The golf course shall consist of a minimum of 18 holes.
27. The carbonate geology report was prepared by John Kortvely, PG with a revision date of 20 May 2023.

OWNER'S CERTIFICATION

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF NORTHAMPTON

We, the undersigned, the owners of the property shown on this plan, being duly sworn according to law, depose and say that we are the sole owners of this property in peaceful possession of same and that there are no suits pending or affecting the title of same. We further depose and say that this plan was made at our direction, that we desire the same to be recorded, and that we hereby dedicate to the Township of Lower Saucon for public use all the easements and public improvements.

Steel Land LLC

Sworn and subscribed to me this _____ day of _____, 20____.

Notary Public

Recommended for approval by the Lower Saucon Township Planning Commission this _____ day of _____, 20____.

Secretary

Chairman

Approved by the Lower Saucon Township Council this _____ day of _____, 20____.

Secretary

Council President

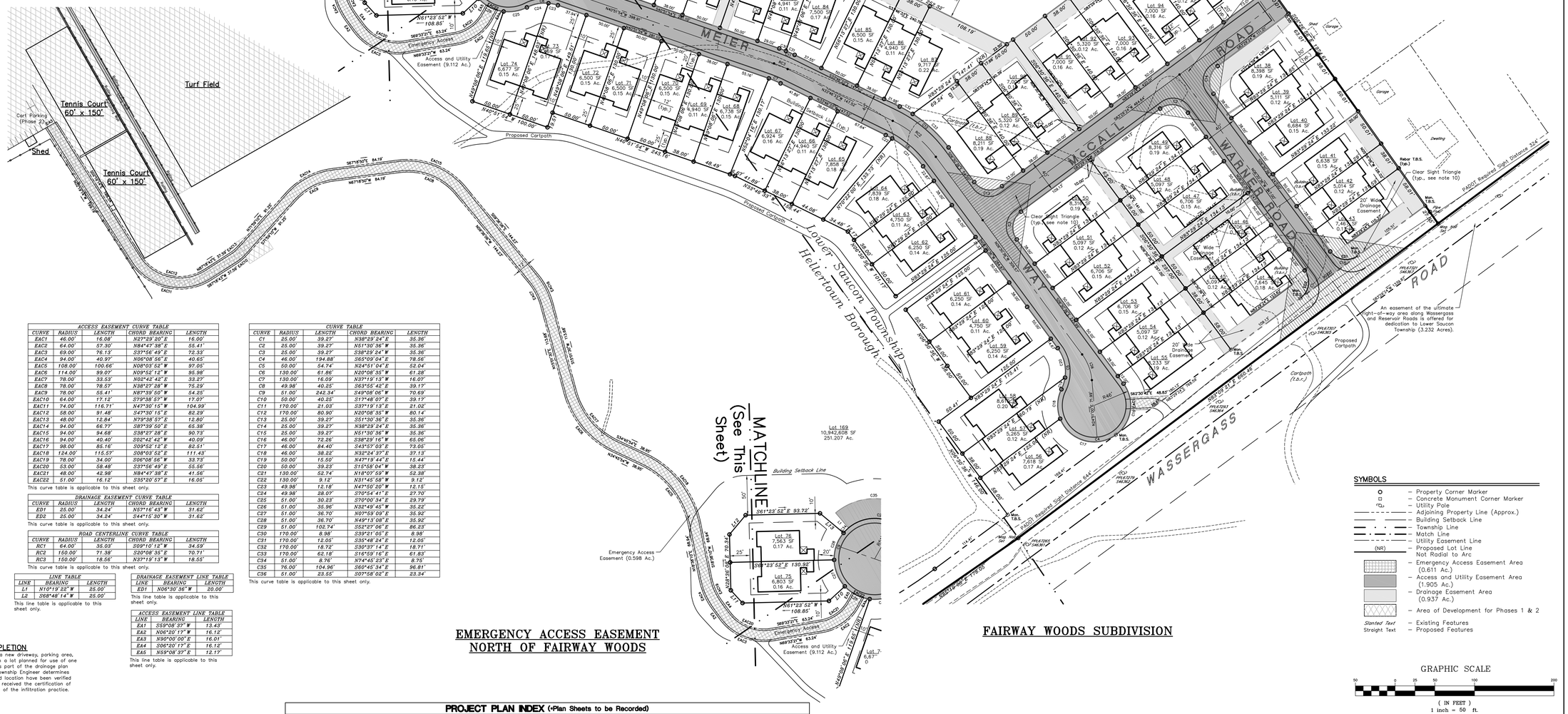
Reviewed by:

Township Engineer

Reviewed by the Lehigh Valley Planning Commission this _____ day of _____, 20____.

Planner

Fairway Woods



EMERGENCY ACCESS EASEMENT NORTH OF FAIRWAY WOODS

FAIRWAY WOODS SUBDIVISION

SYMBOLS

- Property Corner Marker
- Concrete Monument Corner Marker
- Utility Pole
- Adjoining Property Line (Approx.)
- Building Setback Line
- Township Line
- Match Line
- Utility Easement Line
- (NR) – Proposed Lot Line Not Radial to Arc
- Emergency Access Easement Area (0.611 Ac.)
- Access and Utility Easement Area (1.905 Ac.)
- Drainage Easement Area (0.937 Ac.)
- Area of Development for Phases 1 & 2
- *Slanted Text* – Existing Features
- Straight Text – Proposed Features

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

Preliminary Plan

SITE DATA

Tax Parcel Numbers – Q7–19–1D–0719 – Q7SW2B–15–1–0715
– Q7–19–1–0719 – Q7SW2C–3–1–0715
– Q7–19–1D–0715 – Q7SE1D–7–1–0715
– Q7–20–1–0719 – Q7NW3C–13–2–0715
– Q7–19–1E–0719 – Q7NW3C–13–1–0715
– Q7SW2B–6–1–0715 – Q7NW3C–5–1–0715
– Q7SW2B–10–1–0715

Area – 225.918 Acres (Lower Saucon Twp.)
– 54.082 Acres (Hellertown Boro.)

Deed – Book 2018–1 Page 26658

Water – Public

Sewer – Public

Imp. Surface Ratio – 22.98%

ZONING REQUIREMENTS

Zoning District	– R40 (Rural Suburban District)		
Use	Golf Course	Single Family Attached	Single Family Duplex
Min. Lot Area	– 100 Acres	– 4,000 SF	– 6,000 SF
Min. Lot Width	– 150 Feet	– 24 Feet	– 50 Feet
Min. Front Yard	– 50 Feet	– 20 Feet	– 25 Feet
Min. Side Yard	– 50 Feet	– 0' One/12' Both	– 0' One/10' Both
Min. Rear Yard	– 50 Feet	– 25 Feet	– 25 Feet
Min. to Tract Boundary	– N/A	– 30 Feet	– 30 Feet
Max. Bldg. Height	– 35 Feet	– 35 Feet	– 35 Feet
Max. Imp. Surface Ratio	– 25% (for entire site)		
Open Space*	Required		
	– 50% (221.35 Ac. x 0.5 = 110.68 Ac.)		
	Available (including area within Phase 1 development)		
	– 83% (183.61 Ac. / 221.35 Ac. = 0.829)		

*In no case will the Open Space area be reduced below 50%

CARBONATE GEOLOGY NOTES

A Carbonate Geology Report was prepared by John Kortvely, PG. The following comments outline concerns found in his report dated November 9, 2020.

1. For structures within 100 feet of faults, a detailed surface and subsurface investigation shall be performed and procedures provided to mitigate any threat of the feature(s) on groundwater quality and stability of surface and subsurface structures to the satisfaction of the Township. The investigation must be performed by a licensed professional geologist. Structures requiring said investigation are noted on this plan with and asterisk(*).
2. No toxic and hazardous substances shall be located closer than 100 feet to the rim of a sinkhole or 100 feet to ghost lakes, lineaments, fracture traces, disappearing streams, closed depressions, caverns, surface or subsurface pinnacles.
3. All provisions of Township Ordinance 180–96© regarding storage of toxic and hazardous wastes must be complied with.
4. Underground storage tanks shall not be permitted in this district, except for septic tanks for on–lot sewage disposal, propane tanks, and water storage tanks with less than 2,000 gallons' capacity.

STEEL CLUB DESCRIPTION OF THE PHASE 1 PROJECT

Phase 1 consisted of the construction of the cul–de–sac and Bistro Alley (now Steel Alley). Both of these improvements are located at the clubhouse. This phase received a waiver from land development.

STEEL CLULB DESCRIPTION OF THE PHASE 2 PROJECT

Phase 2 consisted of both a land development and a subdivision.
The land development portion included the construction of a two–story driving range, guest suites, tennis center/gym, parking garage, athletic turf field, bocce' ball courts, tennis courts, additional cart parking, reconfiguring the parking lot, and a few miscellaneous upgrades and improvements. The subdivision portion is called Ross Hill and consists of 37 residential units. Phase 2 has received preliminary/final approval from the Lower Saucon Township Council.

NOTICE FOR FLOODPLAIN IDENTIFICATION

The grant of a permit or approval of a subdivision and/or land development plan in or near floodplain areas shall not constitute a representation, guaranty or warranty of any kind by the township or by an official, consultant or employee thereof of the practicability or safety of the proposed use, and the owners hereby agree and acknowledge that such permits or approvals shall not create any liability upon the Township, its official, employees or consultants.

NOTICES FOR DRAINAGE FACILITIES

A. All drainage easements shown on this plan shall be maintained in a grassed or otherwise improved condition in accordance with the grades and designs shown on the approved development plans for this project. All these easements shall be kept free of all obstruction, including but not limited to such obstructions as fill, temporary or permanent structures and plants (other than grass).
B. Drainage easements shall allow passage of stormwater in underground storm sewer piping and associated structures and/or allow passage of stormwater over the surface of the ground and shall allow access across the area for purposes of maintenance of the storm conveyance systems.
C. Existing roadside gutters or swales shall not be obstructed by driveways or other fill or structures.

ACCESS EASEMENT CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
EAC1	46.00'	16.08'	N27°39'30" E	16.00'
EAC2	64.00'	57.30'	N84°47'38" E	55.41'
EAC3	69.00'	76.13'	S37°56'49" E	72.33'
EAC4	94.00'	40.97'	N06°08'56" E	40.65'
EAC5	108.00'	100.66'	N08°03'52" W	97.05'
EAC6	114.00'	99.07'	N09°52'12" W	95.98'
EAC7	78.00'	33.53'	N02°42'42" E	33.27'
EAC8	78.00'	78.57'	N38°27'28" W	75.29'
EAC9	78.00'	55.41'	N87°39'50" W	54.25'
EAC10	64.00'	17.12'	S79°38'57" W	17.07'
EAC11	74.00'	116.71'	N47°30'15" W	104.99'
EAC12	58.00'	91.48'	S47°30'15" E	82.29'
EAC13	48.00'	13.84'	N79°38'57" E	13.80'
EAC14	94.00'	66.77'	S87°39'50" E	65.38'
EAC15	94.00'	94.68'	S38°27'28" E	90.73'
EAC16	94.00'	40.40'	S02°42'42" W	40.09'
EAC17	98.00'	85.16'	S09°52'12" E	82.51'
EAC18	124.00'	115.57'	S08°03'52" E	111.43'
EAC19	78.00'	34.00'	S06°08'56" W	33.73'
EAC20	53.00'	58.48'	S37°56'49" E	55.56'
EAC21	48.00'	42.98'	N84°47'38" E	41.56'
EAC22	61.00'	16.12'	S35°20'57" E	16.05'

This curve table is applicable to this sheet only.

DRAINAGE EASEMENT CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
ED1	25.00'	34.24'	N57°16'43" W	31.62'
ED2	25.00'	34.24'	S44°15'30" W	31.62'

This curve table is applicable to this sheet only.

ROAD CENTERLINE CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
RC1	64.00'	35.03'	S09°10'12" W	34.59'
RC2	150.00'	71.38'	S20°08'35" E	70.71'
RC3	150.00'	18.56'	N37°19'13" W	18.55'

This curve table is applicable to this sheet only.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N10°19'22" W	25.00'
L2	S68°48'14" W	25.00'

This line table is applicable to this sheet only.

DRAINAGE EASEMENT LINE TABLE		
LINE	BEARING	LENGTH
ED1	N06°36'36" W	20.00'

This line table is applicable to this sheet only.

ACCESS EASEMENT LINE TABLE		
LINE	BEARING	LENGTH
EA1	S59°08'37" W	13.43'
EA2	N06°20'17" W	16.12'
EA3	N90°00'00" E	16.01'
EA4	S06°20'17" E	16.12'
EA5	N59°08'37" E	12.17'

This line table is applicable to this sheet only.

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
C1	25.00'	39.27'	N38°52'04" E	35.36'
C2	25.00'	39.27'	N51°30'36" W	35.36'
C3	25.00'	39.27'	S38°29'24" W	35.36'
C4	46.00'	194.88'	S65°03'04" E	78.56'
C5	50.00'	54.74'	N24°51'04" E	52.04'
C6	130.00'	61.86'	N20°08'35" W	61.28'
C7	130.00'	16.09'	N37°19'13" W	16.07'
C8	49.98'	40.25'	S63°55'42" E	39.17'
C9	51.00'	242.34'	S49°08'06" W	70.69'
C10	51.00'	40.25'	S11°48'07" E	39.17'
C11	170.00'	21.03'	S37°19'13" E	21.02'
C12	170.00'	80.90'	N20°08'35" W	80.14'
C13	25.00'	39.27'	S51°30'36" E	35.36'
C14	25.00'	39.27'	N38°29'24" E	35.36'
C15	25.00'	39.27'	N51°30'36" W	35.36'
C16	46.00'	72.26'	S38°29'16" W	65.06'
C17	46.00'	84.40'	S43°57'03" E	73.05'
C18	46.00'	38.22'	N33°24'37" E	37.13'
C19	50.00'	15.50'	N43°11'44" E	15.44'
C20	50.00'	39.23'	S15°58'04" W	38.23'
C21	130.00'	52.74'	N18°07'59" W	52.38'
C22	130.00'	9.12'	N31°43'58" W	9.12'
C23	49.98'	12.18'	N47°50'20" W	12.15'
C24	49.98'	28.07'	S70°54'41" E	27.70'
C25	51.00'	30.23'	S70°00'04" E	29.79'
C26	51.00'	35.96'	N32°49'45" W	35.22'
C27	51.00'	36.70'	N07°59'09" E	35.92'
C28	51.00'	36.70'	N49°13'08" E	35.92'
C29	51.00'	102.74'	S52°27'06" E	86.23'
C30	170.00'	8.98'	S39°21'05" E	8.98'
C31	170.00'	12.05'	S36°48'24" E	12.05'
C32	170.00'	18.72'	S30°37'14" E	18.71'
C33	170.00'	62.19'	S16°59'16" E	61.83'
C34	51.00'	8.76'	N74°45'23" E	8.75'
C35	76.00'	104.96'	S60°45'34" E	96.81'
C36	51.00'	23.55'	S07°58'02" E	23.34'

This curve table is applicable to this sheet only.

CERTIFICATE OF COMPLETION

A certificate of occupancy for a new driveway, parking area, building or land development on a lot planned for use of one or more infiltration practices as part of the drainage plan shall not be issued until the Township Engineer determines the infiltration practice size and location have been verified and the Township Engineer has received the certification of completion for the construction of the infiltration practice.

SURVEYOR'S CERTIFICATION

I, being a registered surveyor of the Commonwealth of Pennsylvania, do hereby certify that this plan, prepared from a field survey, correctly represents the property boundary of the proposed land development, to the best of my knowledge.

Registered Surveyor
Registration No. SU075452

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Date Registered Engineer

Registration No. PE036737–E

ENGINEER'S STORMWATER CERTIFICATION

I, Scott Mease, certify that the proposed facilities are not underlain by carbonate geology.

Registered Engineer

PROJECT PLAN INDEX (*Plan Sheets to be Recorded)

SHEET NO.	TITLE	SHEET NO.	TITLE
1 of 22	Cover Sheet	12 of 22	Utilities Plan – The Turn Subdivision
2 of 22	Record Plan – Fairway Woods Subdivision*	13 of 22	Landscape & Lighting Plan – Fairway Woods Subdivision
3 of 22	Record Plan – The Turn Subdivision*	14 of 22	Landscape & Lighting Plan – The Turn Subdivision
4 of 22	Existing Features/Natural Resources Plan – North*	15 of 22	Erosion and Sedimentation Control Plan – North
5 of 22	Existing Features/Natural Resources Plan – South*	16 of 22	Erosion and Sedimentation Control Plan – South
6 of 22	Grading Plan – Fairway Woods Subdivision	17 of 22	Erosion and Sedimentation Control Plan – Fairway Woods Subdivision
7 of 22	Grading Plan – The Turn Subdivision	18 of 22	Erosion and Sedimentation Control Plan – The Turn Subdivision
8 of 22	Plan & Profile Sheet – Fairway Woods Subdivision	19 of 22	Post–Construction Stormwater Management Plan – North*
9 of 22	Plan & Profile Sheet – The Turn Subdivision	20 of 22	Post–Construction Stormwater Management Plan – South*
10 of 22	Profile Sheet	21 of 22	Post–Construction Stormwater Management Plan – Fairway Woods Subdivision*
11 of 22	Utilities Plan – Fairway Woods Subdivision	22 of 22	Post–Construction Stormwater Management Plan – The Turn Subdivision*

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1–800–242–1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT PHASE 3

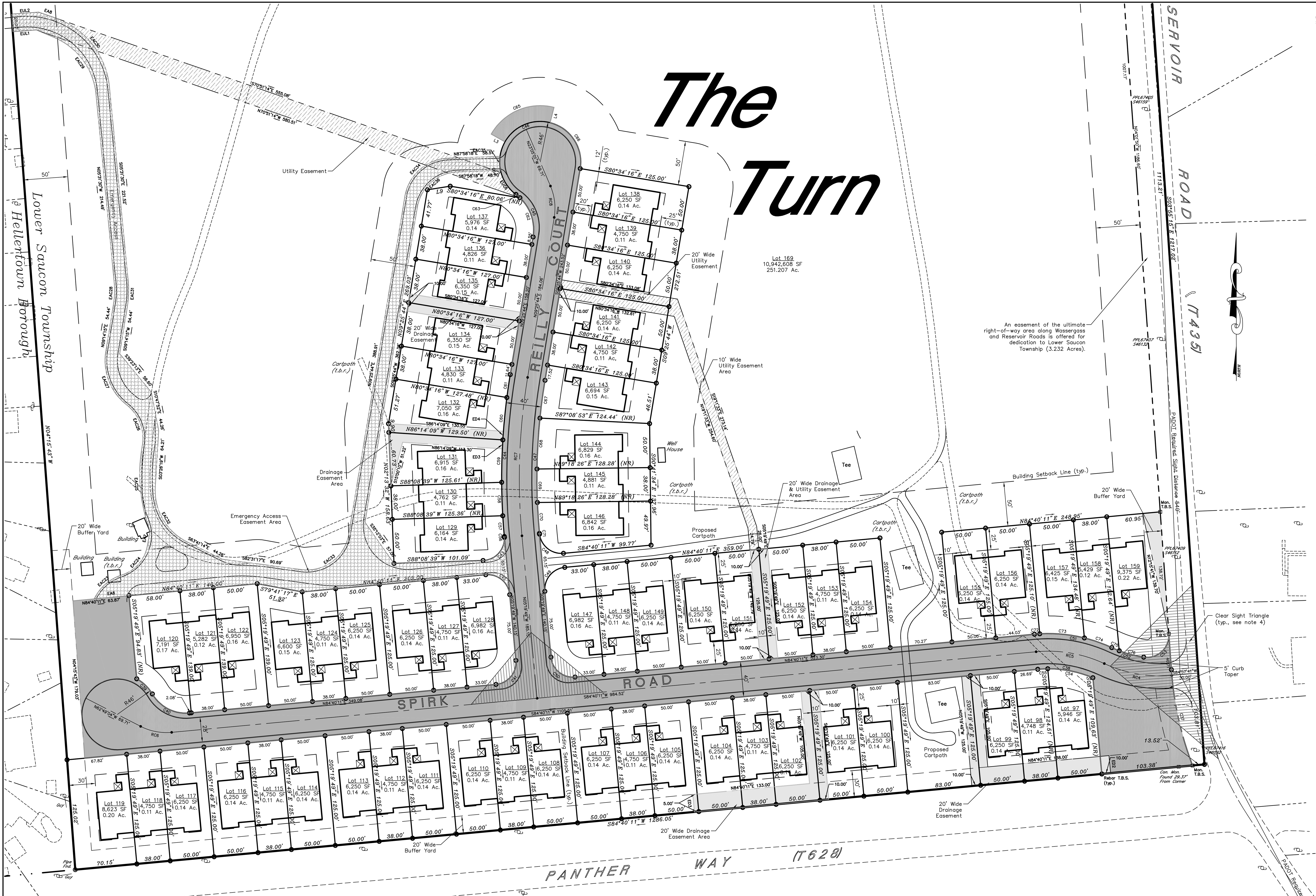
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 50' | SITE ADDRESS: 700 Linden Avenue Hellertown, PA 18055 | DRAWN BY: EN | DATE: 22 Dec. '22 | FILE: 14191002–03

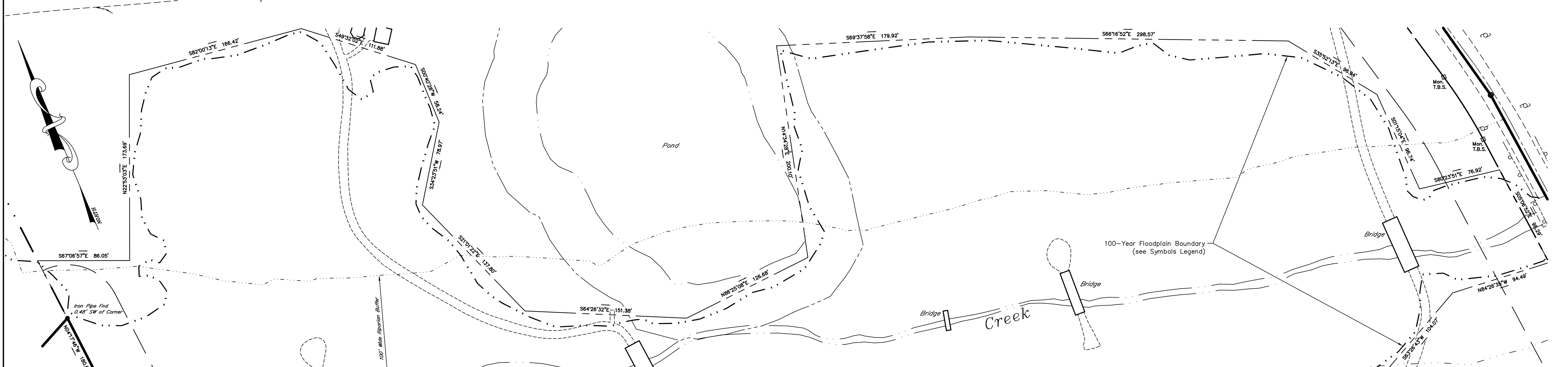
OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Record Plan – Fairway Woods Subdivision

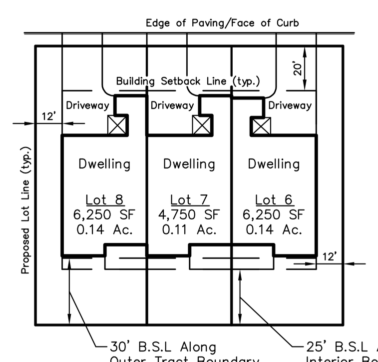
SHEET 2 of 22



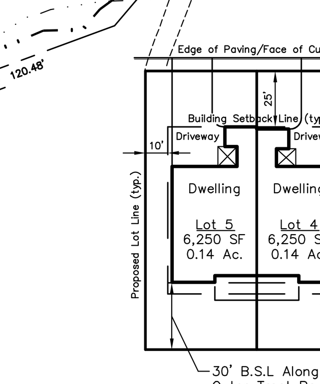
THE TURN SUBDIVISION



STORMWATER EASEMENT
NORTH OF THE TURN



TYPICAL DWELLING DETAIL – TRIPLE
1" = 50'



TYPICAL DWELLING DETAIL – DOUBLE
1" = 50'

GENERAL NOTES

1. The property boundaries are based on a field survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
2. The contours in the area of the proposed development are based on a field survey. The contours on the rest of the site are based on an aerial survey performed by NorEast Mapping in 2015.
3. All users of this plan are referred to and cautioned to comply with PA Act 287 as amended by PA Act 172, HB 2543, enacted 06–10–1987, and by PA HB 722, P.L. 364, Act 38, enacted 12–12–1991, and by PA HB 2627, Act 187, effective 12–19–96, and by PA Act 199, P.L. 1567, enacted 11–30–2004, and by PA Act 181, P.L. 1593, enacted 11–29–2006.
4. All existing structures shown on this plan within the project site boundary, were constructed prior to 1960. According to courthouse records the country club was constructed in 1947. The pool and tennis courts were constructed in 1960.
5. This plan contains information pertaining to underground utilities which is for general information only, and may not be based on an actual subsurface location survey. All subsurface information shown on this plan needs to be verified by the plan user. The preparer of this plan assumes no responsibility for and makes no representations or warranties as to the accuracy of the location of underground utilities or other underground features. Repair of damages to any underground utilities, structures, and appurtenances will be the sole responsibility of the contractor, and at the contractor's expense.
6. All paving, sidewalk, earthwork and concrete work shall be supplied and constructed in accordance with Pennsylvania Department of Transportation (PennDOT) specifications, Publication 408, latest edition, and shall also conform to all local building codes.
7. Proposed utilities shall be installed in accordance with all utility company and local building code requirements.
8. The contractor performing the work is responsible for contacting "PA ONE CALL" (1–800–242–1776) for location of all underground lines at least one week prior to the beginning of construction.
9. If any conflicts, discrepancies, or other unsatisfactory conditions are discovered, either on the construction documents or the field conditions, the contractor must notify the owner or project engineer immediately and shall not commence operations until the conflicts, discrepancies, or other unsatisfactory conditions are resolved.
10. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Spirk Road and Reservoir Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.
11. All residential and non residential units shall be served by public water and sewer provided by the Hellertown Borough Authority.
12. The golf course shall manage the residential common areas and private streets.
13. The easement area that encompasses Spirk Road and Reilly Court is both an access easement and a utility easement.
14. The proposed property corners of Lots 1 – 63 shall be marked with a rebar.
15. This plan proposes 63 residential dwellings, (lots 1 – 63).
16. The access and utility easements will be owned and maintained by the golf course.
17. All nonresidential uses shall be owned and operated by the same business entity or association as the primary golf course use.
18. The maximum building height shall be 35'. The building height is the vertical distance derived from the average finished grade at the foundation corners of the building or structure to the highest point of the building or structure, excluding a chimney or other similar structure. In the case of single–family dwellings, the measurement shall be from the average roof level for sloping roofs and not the highest point.
19. A zoning permit for tree removal is required for the removal of any trees six (6) inches in diameter or larger measured at a point four feet above grade.
20. The owner shall comply with the neighborhood protection requirements listed in Zoning Ordinance Section 180–96.
21. The utilities to be provided are adequate for the intended use.
22. The Turn dwelling units are required to provide three off street parking spaces per dwelling unit. Each dwelling unit will have a two car garage and parking for four spaces on the driveway.
23. Prior to the erection of the retaining walls a permit must be obtained from the zoning officer. The retaining walls will be maintained by the golf course.
24. Stormwater roof drains and pipes shall not discharge water over impervious areas.
25. No business signs are proposed with this submission. Any future, proposed signs shall be submitted to the Township Zoning Officer for review.
26. The golf course shall consist of a minimum of 18 holes.
27. The carbonate geology report was prepared by John Kortvely, PG with a revision date of 20 May 2023.

OWNER'S CERTIFICATION

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF NORTHAMPTON

We, the undersigned, the owners of the property shown on this plan, being duly sworn according to law, depose and say that we are the sole owners of this property in peaceful possession of same and that there are no suits pending or affecting the title of same. We further depose and say that this plan was made at our direction, that we desire the same to be recorded, and that our direction, that we desire the same to be recorded, and that we hereby dedicate to the Township of Lower Saucon for public improvements.

Steel Land LLC

Sworn and subscribed to me this _____ day of _______________, 20____.

Notary Public

Recommended for approval by the Lower Saucon Township Planning Commission this _____ day of _______________, 20____.

Secretary — Chairman

Approved by the Lower Saucon Township Council this _____ day of _______________, 20____.

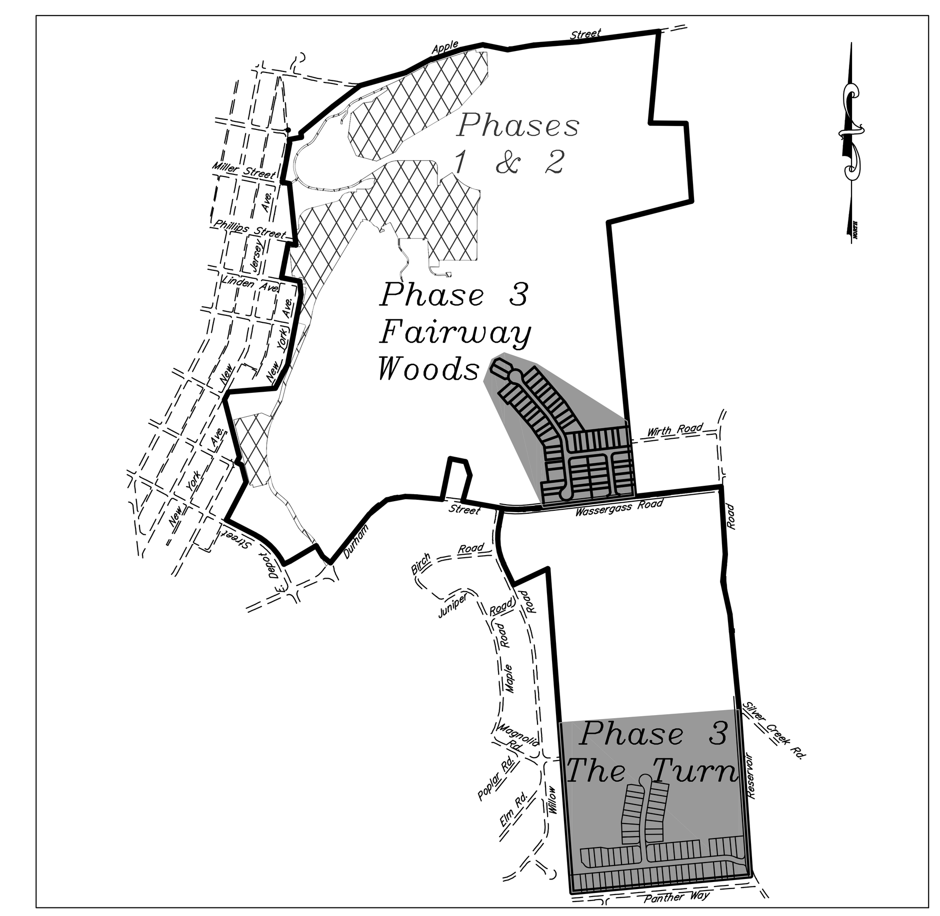
Secretary — Council President

Reviewed by:

Township Engineer

Reviewed by the Lehigh Valley Planning Commission this _____ day of _______________, 20____.

Planner



KEY MAP
NTS

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
C37	380.00'	111.88'	S12°27'55"E	111.48'
C38	130.00'	63.85'	N81°15'38"W	63.21'
C39	46.00'	24.97'	S45°51'31"E	24.67'
C40	44.00'	49.94'	N62°49'04"W	47.30'
C41	25.00'	39.27'	N39°40'11"E	35.36'
C42	25.00'	39.27'	N50°19'49"W	35.36'
C43	25.00'	40.75'	N41°27'04"E	36.38'
C44	720.00'	185.47'	N02°02'57"E	184.96'
C45	50.00'	54.73'	S21°55'53"E	52.04'
C46	46.00'	194.87'	N68°04'07"E	78.56'
C47	680.00'	175.16'	N02°02'57"E	174.68'
C48	25.00'	39.30'	S50°17'36"E	35.38'
C49	25.00'	39.27'	N39°40'11"E	35.36'
C50	25.00'	39.27'	S50°19'49"E	35.36'
C51	170.00'	90.00'	S80°09'47"E	88.96'
C52	130.00'	37.90'	N73°20'56"W	37.77'
C53	25.00'	44.65'	S47°08'02"W	38.95'
C54	130.00'	52.52'	N78°45'55"W	52.17'
C55	130.00'	11.32'	S87°09'55"W	11.32'
C56	720.00'	1.11'	S05°17'10"E	1.11'
C57	720.00'	23.55'	N04°18'18"W	23.54'
C58	720.00'	38.00'	N01°51'21"W	38.00'
C59	720.00'	48.14'	N01°34'17"E	48.13'
C60	720.00'	48.31'	N05°24'32"E	48.30'
C61	720.00'	26.36'	N08°22'48"E	26.36'
C62	50.00'	48.86'	S18°34'01"E	46.94'
C63	50.00'	5.87'	N49°55'49"W	5.87'
C64	46.00'	66.51'	S11°52'16"E	60.87'
C65	64.00'	83.48'	N66°54'59"E	77.69'
C66	46.00'	68.36'	S33°08'38"E	62.24'
C67	680.00'	43.27'	S07°36'21"W	43.26'
C68	680.00'	57.85'	S03°20'44"W	57.84'
C69	680.00'	38.00'	S00°41'34"E	38.00'
C70	680.00'	35.16'	S03°46'31"E	35.15'
C71	680.00'	0.88'	S05°17'36"E	0.88'
C72	170.00'	5.97'	N85°40'31"E	5.97'
C73	170.00'	51.06'	S84°42'51"E	50.87'
C74	170.00'	32.97'	S70°33'10"E	32.92'
C75	130.00'	9.21'	S67°01'34"E	9.21'
C76	130.00'	28.69'	S75°22'44"E	28.63'

This curve table is applicable to this sheet only.

ACCESS EASEMENT CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
EAC23	52.00'	42.64'	N49°07'13"E	41.46'
EAC24	42.00'	45.38'	N41°39'45"E	43.20'
EAC25	180.00'	86.82'	N03°28'43"W	85.98'
EAC26	48.00'	52.19'	N20°48'25"W	49.65'
EAC27	64.00'	68.35'	N21°21'27"W	65.15'
EAC28	96.00'	24.73'	N01°51'23"E	24.67'
EAC29	78.00'	84.04'	N36°23'23"W	80.03'
EAC30	92.00'	104.90'	S38°11'22"E	99.31'
EAC31	112.00'	28.86'	S01°51'23"W	28.78'
EAC32	65.00'	76.15'	S30°07'27"E	71.87'
EAC33	48.00'	73.76'	N53°27'13"E	66.72'
EAC34	52.00'	71.28'	N48°42'01"E	65.83'
EAC35	46.00'	66.51'	N11°52'16"W	60.87'
EAC36	48.00'	65.80'	N48°42'01"E	60.77'

This curve table is applicable to this sheet only.

DRAINAGE EASEMENT CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
ED3	720.00'	10.15'	N03°04'58"E	10.15'
ED4	720.00'	9.85'	N03°52'43"E	9.85'

This curve table is applicable to this sheet only.

ROAD CENTERLINE CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
RC4	150.00'	78.65'	N80°01'02"W	77.75'
RC5	150.00'	79.41'	S80°09'47"E	78.49'
RC6	64.00'	36.32'	S79°04'27"E	35.83'

This curve table is applicable to this sheet only.

DRAINAGE EASEMENT LINE TABLE		
LINE	BEARING	LENGTH
ED2	S05°19'49"E	20.00'
ED3	N05°19'49"W	20.00'

This line table is applicable to this sheet only.

LINE TABLE		
LINE	BEARING	LENGTH
L3	N60°27'01"W	18.00'
L4	N14°17'00"E	18.00'

This line table is applicable to this sheet only.

ACCESS EASEMENT LINE TABLE		
LINE	BEARING	LENGTH
EA6	S84°40'11"W	39.58'
EA7	N10°42'44"E	17.20'
EA8	S70°51'14"E	20.01'

This line table is applicable to this sheet only.

SYMBOLS

- Property Corner Marker
- Concrete Monument Corner Marker
- Utility Pole
- Adjoining Property Line (Approx.)
- Building Setback Line
- Township Line
- 100 Year Floodplain Boundary (based on FEMA FIRM 342095C0329E, effective date 07/16/2014)
- Utility Easement Line
- (NR) – Proposed Lot Line Not Radial to Arc
- Emergency Access Easement Area (0.852 Ac.)
- Access and Utility Easement Area (2.277 Ac.)
- Utility Easement Area (0.400 Ac.)
- Drainage Easement Area (0.447 Ac.)
- *Slanted Text* – Existing Features
- Straight Text – Proposed Features

SITE DATA

Tax Parcel Numbers	– Q7–19–1D–0719 – Q7SW2B–15–1–0715 – Q7–19–1–0719 – Q7SW2C–3–1–0715 – Q7–19–1D–0715 – Q7SE1D–7–1–0715 – Q7–20–1–0719 – Q7NW3C–13–2–0715 – Q7–19–1E–0719 – Q7NW3C–13–1–0715 – Q7SW2B–6–1–0715 – Q7NW3C–5–1–0715 – Q7SW2B–10–1–0715
Area	– 225.918 Acres (Lower Saucon Twp.) – 54.082 Acres (Hellertown Boro.)
Deed	– Book 2018–1 Page 26658
Water	– Public
Sewer	– Public
Imp. Surface Ratio	– 22.98%

ZONING REQUIREMENTS

Zoning District – R40 (Rural Suburban District)

Use	Golf Course	Single Family Attached	Single Family Duplex
Min. Lot Area	– 100 Acres	– 4,000 SF	– 6,000 SF
Min. Lot Width	– 150 Feet	– 24 Feet	– 50 Feet
Min. Front Yard	– 50 Feet	– 20 Feet	– 25 Feet
Min. Side Yard	– 50 Feet	– 0' One/12' Both	– 0' One/10' Both
Min. Rear Yard	– 50 Feet	– 25 Feet	– 25 Feet
Min. to Tract Boundary	– N/A	– 30 Feet	– 30 Feet
Max. Bldg. Height	– 35 Feet	– 35 Feet	– 35 Feet
Max. Imp. Surface Ratio	– 25% (for entire site)		

Storm Drainage General Covenant

The owners, their heirs, assignees, and/or grantees of the property shown on this plan shall be responsible for the operation, maintenance, repair, reconstruction and/or replacement of the stormwater management facilities including but not limited to inlets, outlets, drainage pipes, infiltration basins, and rain gardens which are located within the boundaries of the property. Said maintenance shall include, but not be limited to cleaning, removal of pollutants and debris, repair of erosion conditions, closure of sinkholes, and maintenance of vegetation. The stormwater management facility shall not be altered from design conditions shown on this plan approved by the Township of Lower Saucon without the express written approval of the Township of Lower Saucon. Roadside gutters or swales shall not be obstructed by driveways or other fill or structures. The individual lot owner is responsible to ensure that the lot is graded in conformance with the plan's stormwater design.

Privately Owned Infiltration Practice Facility Covenant

This covenant shall apply to the owners of this lot which contains a privately owned infiltration practice facility according to this plan. A privately owned infiltration practice facility is located on an individually owned lot and consists of an area of excavated earth filled with loose stone or similar material and/or infiltration structures or devices and into which surface water generated by precipitation is directed for infiltration into the ground. The owner is solely responsible for the operation, maintenance, repair, reconstruction, and replacement of any privately owned infiltration practice facility located on their lot. The owner shall deposit funds in amounts to be determined by the Township to cover costs of review and inspection. Prior to issuance of an occupancy permit, the owner's design engineer shall provide a certification to the Township that the infiltration facility was installed in accordance with the approved plans. The operation, maintenance, repair, reconstruction, and replacement of the privately owned infiltration practice facility is subject to inspection by the Township. The Township has the right, but not the obligation, to enter the lot owner's property for the purpose of inspecting the operation and condition of the privately owned infiltration practice facility. The Township may operate, maintain, repair, reconstruct, and/or replace a privately owned infiltration practice facility if, after reasonable notice, the owner fails to properly operate, maintain, repair, reconstruct, or replace the facility. In the event the Township operates, maintains, repairs, reconstructs, and/or replaces a privately owned infiltration practice facility, the Township may charge the owner for the costs of that work, plus a twenty percent (20%) surcharge for administrative expenses, plus the costs expended by the Township if a municipal lien or suit in assumpsit or equity is filed, which expense the owner agrees to assume and pay. This privately owned infiltration practice facility covenant shall be binding upon the property owner, their heirs, successors, and assigns.

Inspection And Specifications

The Township zoning officer shall be notified 72 hours prior to the excavation of the infiltration pit so the zoning officer or its designee can schedule an on–site visit to verify the size of the excavation in accordance with the plan. The infiltration practice aggregate shall be encapsulated in a layer of geotextile fabric meeting the requirements of PennDOT Publication 408, Section 735, construction Class 1.32

ENGINEER'S STORMWATER CERTIFICATION

I, Scott Mease, certify that the proposed facilities are not underlain by carbonate geology.

Registered Engineer

ENGINEER'S CERTIFICATION

I, being a registered engineer in the Commonwealth of Pennsylvania, do hereby certify that the accompanying application, plans, and supporting documentation are true and correct to the best of my knowledge.

Registered Engineer
Registration No. PE036737E

SURVEYOR'S CERTIFICATION

I, being a registered surveyor of the Commonwealth of Pennsylvania, do hereby certify that this plan, prepared from a field survey, correctly represents the property boundary of the proposed land development, to the best of my knowledge.

Registered Surveyor
Registration No. SU075452

STORMWATER MANAGEMENT COVENANT

The owners, their heirs, assignees, and/or grantees of the property shown on this plan shall be responsible for the operation, maintenance, repair, reconstruction and/or replacement of the stormwater management facility. The stormwater management facility shall not be altered from design conditions shown on this plan without written approval of Lower Saucon Township.

Owner's Signature

CARBONATE GEOLOGY NOTES

A Carbonate Geology Report was prepared by John Kortvely, PG. The following comments outline concerns found in his report dated November 9, 2020.

1. For structures within 100 feet of faults, a detailed surface and subsurface investigation shall be performed and procedures provided to mitigate any threat of the feature(s) on groundwater quality and stability of surface and subsurface structures to the satisfaction of the Township. The investigation must be performed by a licensed professional geologist. Structures requiring said investigation are noted on this plan with and asterick(*).
2. No toxic and hazardous substances shall be located closer than 100 feet to the rim of a sinkhole or 100 feet to ghost lakes, lineaments, fracture traces, disappearing streams, closed depressions, caverns, surface or subsurface pinnacles.
3. All provisions of Township Ordinance 180–96G regarding storage of toxic and hazardous wastes must be complied with.
4. Underground storage tanks shall not be permitted in this district, except for septic tanks for on–lot sewage disposal, propane tanks, and water storage tanks with less than 2,000 gallons' capacity.

CALL BEFORE YOU DIG!
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STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1–800–242–1776
PROJECT SERIAL NO.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

Preliminary Plan

Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 50'	SITE ADDRESS: 700 Linden Avenue Hellertown, PA 18055	DRAWN BY: EN
DATE: 22 Dec. '22		FILE: 14191002–03
OWNERS OF RECORD:	Steel Land LLC 8052 William Penn Highway Easton, PA 18045	

Record Plan – The Turn Subdivision

SOILS

Soil survey of Bucks County, PA USDA – NRCS: Soil Map Legend

- CtA – Clarksburg silt loam, 0 to 3 percent slopes, HSG C
- CtB – Clarksburg silt loam, 3 to 8 percent slopes, HSG C
- CnB – Cokesbury silt loam, 3 to 8 percent slopes, HSG D
- GlC – Gladstone gravelly loam, 8 to 15 percent slopes, HSG B
- GmD – Gladstone gravelly loam, 8 to 25 percent slopes, very bouldery, HSG A
- GmF – Gladstone gravelly loam, 25 to 55 percent slopes, very bouldery, HSG A
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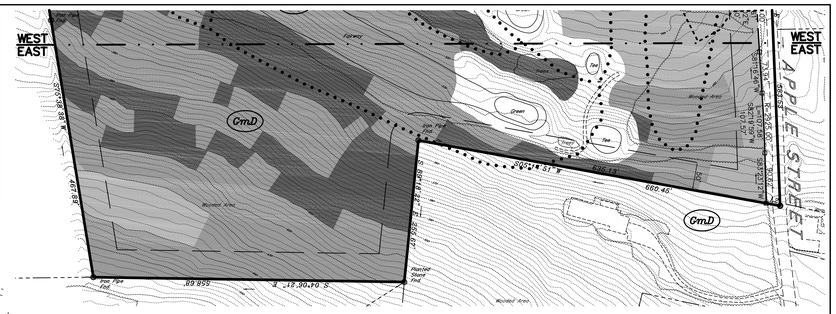
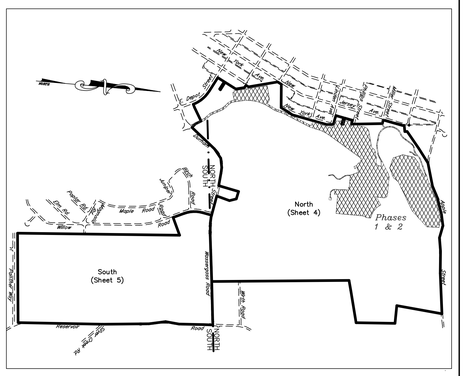
Natural Resource	Total	Allowable Disturbance (%)	Allowable Disturbance	Proposed Disturbance Phase 2	Proposed Disturbance Phase 3 Lots	Proposed Disturbance Phase 3 Golf Course	Proposed Disturbance Total	Remaining Allowable Disturbance Total
Floodplains	8.061	0	0.000	0.000	0.000	0.000	0.000	0.000
Floodplain Soils	6.028	0	0.000	0.000	0.000	0.000	0.000	0.000
Waters of the U.S./ Commonwealth	0.235	0	0.000	0.000	0.000	0.000	0.000	0.000
Lakes & Ponds	1.063	0	0.000	0.000	0.000	0.000	0.000	0.000
Riparian Buffers	9.452	15	1.418	0.000	0.000	0.284	0.284	1.134
Lake & Pond Buffers	1.141	15	0.171	0.000	0.000	0.000	0.000	0.000
Steep Slopes (25%+)	20.586	15	3.088	2.475	0.180	0.302	2.957	0.131
Steep Slopes (15–25%)	28.167	30	8.450	2.428	0.037	0.128	2.593	5.857
Steep Slopes (8–15%)	22.161	40	8.864	3.780	0.004	0.540	4.324	4.540
Woodlands	54.263	20	10.853	5.145	2.652	1.134	8.931	1.922
Environmentally Sensitive Woodlands	43.000	15	6.450	3.297	1.102	1.071	5.470	0.980

NOTE: This table lists only those natural resources present on the site.





KEY MAP

SYMBOLS

- 430 — Existing Contour
- — Limits of Disturbance
- Ho — Soil Type
- — Soil Boundary Line
- — Existing Tree Line
- — 100 Year Floodplain Boundary (based on FEMA FIRM 342095C0329E, effective date 07/16/2014)
- — Pond Margin
- — Riparian Buffer
- — Existing Watercourse
- Hellertown Borough / Lower Saucon Township — Township/Borough Boundary Line
- — Existing Cartpath to be Removed
- NORTH / SOUTH — Matchline
- (T.B.R.) — To Be Removed
- S7 — Sand Trap
- — Steep Slopes, 8–15%
- — Steep Slopes, 15–25%
- — Steep Slopes, 25+%
- — Area of Development for Phases 1 & 2
- — Existing Easements Created for Phase 2 (see Note 1, this sheet)

LINE TABLE		
LINE	BEARING	LENGTH
ED1	S72°49'32"E	20.00'
ED2	S85°19'08"W	21.55'
L1	S41°13'24"E	4.55'
L2	S05°14'51"W	25.32'
L3	S05°26'56"E	27.55'
L4	N84°40'11"E	13.52'
L5	N10°43'02"E	31.80'
L6	S80°02'11"E	27.88'
L7	N87°28'11"W	84.57'
L8	N51°15'33"W	71.88'
L9	N30°59'42"W	90.34'
L10	N51°15'33"W	37.70'
L11	S51°15'33"E	44.18'
L12	S63°53'26"W	50.01'
L13	S62°31'02"E	123.09'
L14	N46°34'06"E	15.87'
L15	N62°31'02"W	128.28'
L16	N62°31'02"W	39.41'
L17	N27°28'58"E	43.54'

LINE TABLE		
LINE	BEARING	LENGTH
L18	N27°27'12"E	62.28'
L19	S05°54'53"E	96.76'
L20	N78°58'02"W	131.58'
L21	N10°51'26"E	115.00'
L22	N79°08'34"W	96.80'
L23	N05°54'53"W	20.89'
L24	S79°08'34"E	90.77'
L25	N10°51'26"E	113.93'
L26	S79°08'34"E	56.44'
L27	N79°07'39"W	53.35'
L28	N04°56'42"W	27.12'
L29	N79°29'13"E	88.96'
L30	N06°33'47"W	33.02'
L31	N52°48'23"E	34.23'
L32	S15°19'10"W	31.37'
L33	S11°12'49"W	33.88'
L34	S10°52'01"W	92.65'
L35	S79°08'53"E	27.94'

This specific line table is applicable to this sheet only.

SITE CAPACITY CALCULATIONS (In Acres)

A. Base Site Area:

Gross Site Area	225.918
Non–Contiguous Land	0.000
Existing Rights–of–Way	0.000
Required Rights–of–Way of Existing Streets	4.568
Easements And Covenants	0.000
Base Site Area	221.350

b. Land w/Resource Restrictions and Resource Protection Land

Resource	Required Preservation	Acres of Land in Resources	Resource Protection Land (Acres x Required Preservation
Flood Plains	100%	8.061	8.061
Flood Plain Soils	100%	1.325	1.325
Wetlands	100%	0.000	0.000
Waters of the U.S./ Commonwealth	100%	0.235	0.235
Lakes/Ponds	100%	1.063	1.063
Environmentally Sensitive Woodlands	85%	43.000	36.550
Steep Slopes Greater than 25%	85%	3.691	3.137
Rock Outcrops	85%	0.000	0.000
Woodlands	80%	11.263	9.010
Steep Slopes Between 15%–25%	70%	9.112	6.378
Steep Slopes Between 8%–15%	60%	15.808	9.485
Total Land In Resources		93.558	
Total Resource Protection Land			75.244

c. Net Buildable Site Area:

Base Site Area	221.350
Subtract Total Resource Protection Land	– 75.244
Net Buildable Site Area	146.106

d. Maximum Number of Permitted Dwelling Units:

Net Buildable Site Area	146.106
Calculate Square Footage of Base Site Area	x 43,560.000
	6,364,377
Divide By Minimum Allowable Lot Area	40,000
Maximum Permitted Quantity of DU's	159.109

e. Maximum Permitted Impervious Surfaces:

Net Buildable Site Area	146.106
Multiply by Max. Permitted Imp. Surfaces Ratio	x 0.250
Max. Permitted Impervious Surfaces	36.527

f. Site Capacity Summary

Base Site Area	221.350
Net Buildable Site Area	146.106
Maximum Permitted Number of DU's	159
Maximum Permitted Imp. Surfaces	36.527

Preliminary Plan

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

SURVEYOR'S CERTIFICATION

I hereby certify that this plan represents a survey and design made by or for me and that all dimensional details are correct to the best of my knowledge and belief.

Registered Engineer
Registration No. SU075452

NOTES

1. The easement areas created as part of the Steel Club Phase 2 Land development are shaded (see symbols legend). Refer to "Steel Club Land Development Phase 2" plans prepared by Mease Engineering, P.C., dated February 20, 2020, last revised October 4, 2022 for easement descriptions.

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

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PROJECT SERIAL NO.

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT PHASE 3

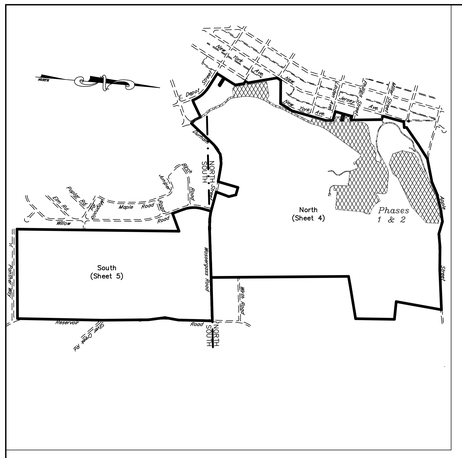
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 100'
DRAWN BY: EN
DATE: 22 Dec. '22
FILE: 14191004–05

OWNERS OF RECORD:
Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Existing Features/Natural Resources Plan – North

SHEET 4 of 22



KEY MAP

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Flood Plain Soils	100%	1.325	1.325
Wetlands	100%	0.000	0.000
Waters of the U.S./ Commonwealth	100%	0.235	0.235
Lakes/Ponds	100%	1.063	1.063
Environmentally Sensitive Woodlands	85%	43.000	36.550
Steep Slopes Greater than 25%	85%	3.691	3.137
Rock Outcrops	85%	0.000	0.000
Woodlands	80%	11.263	9.010
Steep Slopes Between 15%-25%	70%	9.112	6.378
Steep Slopes Between 8%-15%	60%	15.808	9.485
Total Land in Resources		93.558	
Total Resource Protection Land			75.244

c. Net Buildable Site Area:

Base Site Area	221.350
Subtract Total Resource Protection Land	− 75.244
Net Buildable Site Area	146.106

d. Maximum Number of Permitted Dwelling Units:

Net Buildable Site Area	146.106
Calculate Square Footage of Base Site Area	x 43,560.000
	6,364.377
Divide By Minimum Allowable Lot Area	40,000
Maximum Permitted Quantity of DU's	159.109

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SYMBOLS

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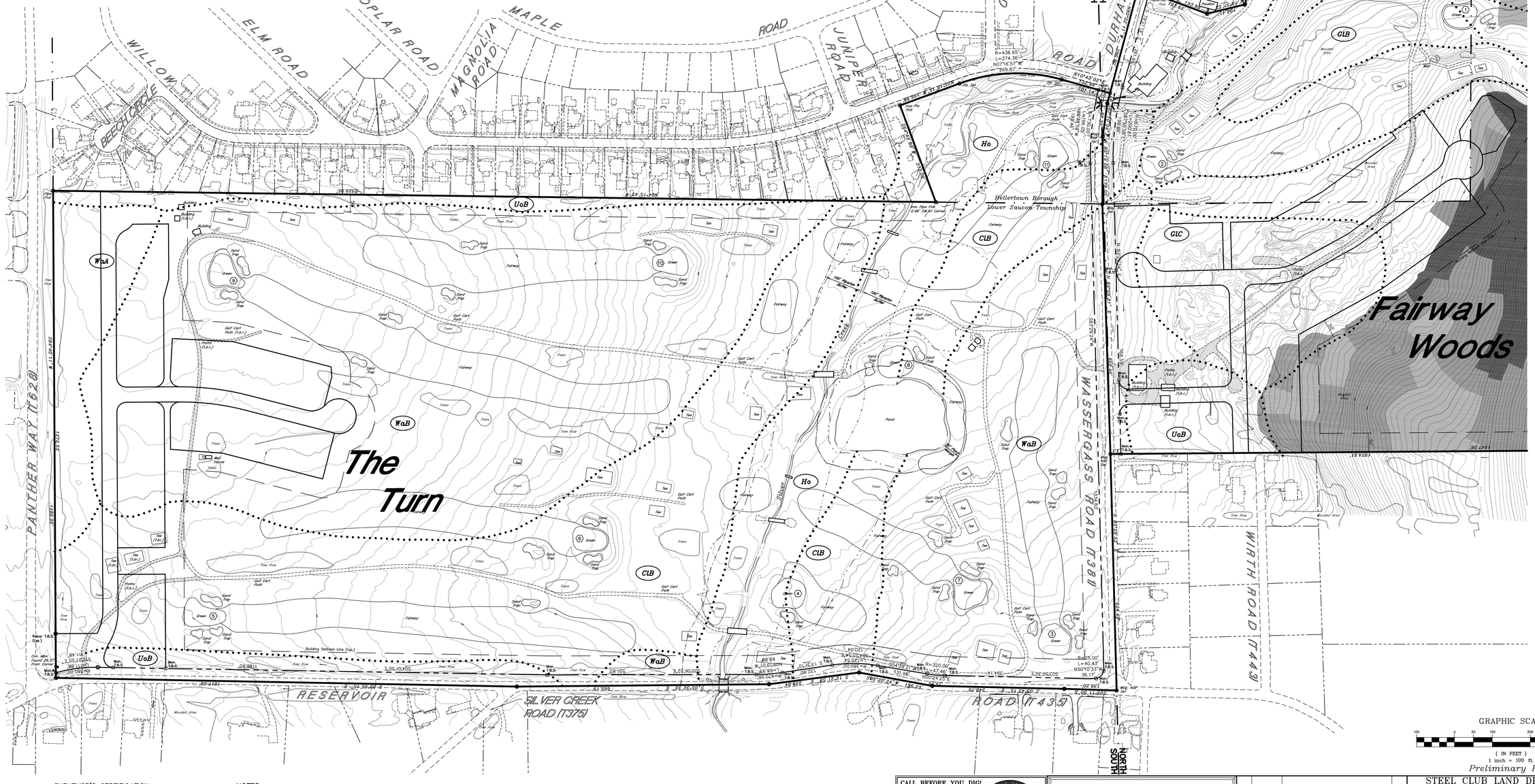
CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	LENGTH
RWC1	25.00'	40.43'	N50°10'33"W	36.17'

This specific curve table is applicable to this sheet only.



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Preliminary Plan

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STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 100'
DRAWN BY: EN
DATE: 22 Dec. '22
FILE: 14191004-05

OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Existing Features/Natural Resources Plan – South

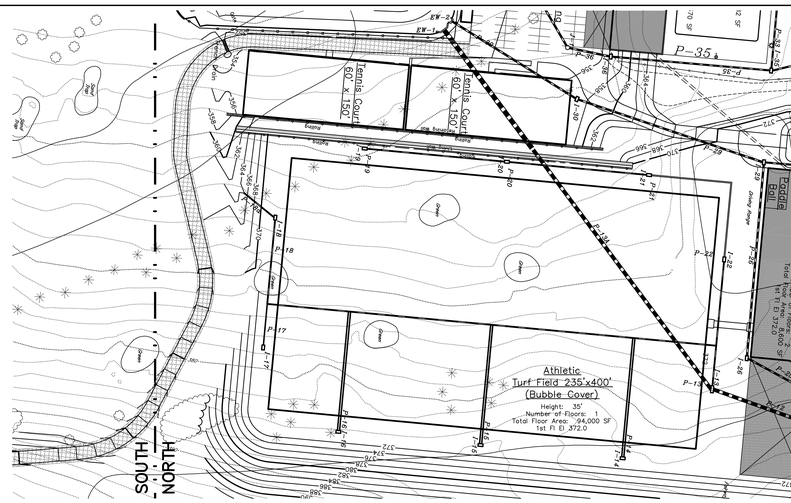
SHEET 5 of 22

NOTES

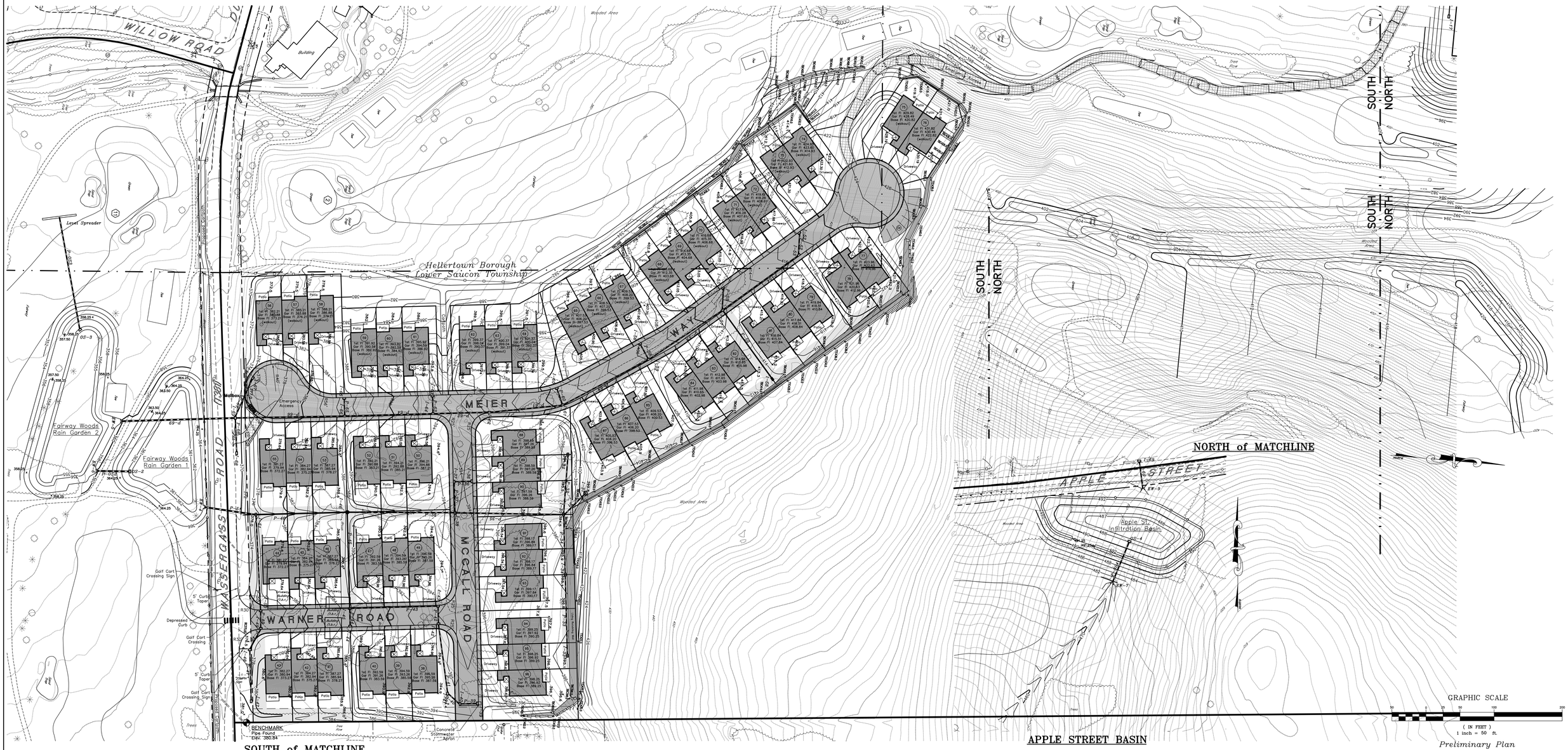
1. Roadside swales shall not be obstructed by grading or driveway construction.
2. All work is to be performed in accordance with Township Ord. 2007-01.
3. Nothing shall be placed in any drainage conveyance facility in such a manner as to obstruct free flow.
4. The property boundaries are based on a field survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
5. The contours in the area of the proposed development are based on a field survey. The contours on the rest of the site are based on an aerial survey performed by NorEast Mapping in 2015.
6. Stormwater roof drains and pipes shall not discharge water over impervious areas.
7. Immediately following construction of the foundation wall, and prior to the erection of the superstructure of any building, the Township shall be furnished with a "Foundation Location and Elevation Survey" plan bearing a certification from the builder's licensed engineer or surveyor indicating compliance with the approved plan. No further construction above the foundation wall will be permitted until the Township has issued approval of the aforementioned foundation plan to the Code Enforcement Officer.
8. An as-built plan may be required by the Township to verify compliance with the issued permit or to document any revisions.
9. A "Certificate of Occupancy" permit will not be issued by the Township until such time as the Township Zoning Officer determines that all earth disturbance has been completed in general conformity with the approved Grading Plan.
10. Any drainage system not operating as planned shall be corrected at the expense of the applicant.
11. Compliance with the building height requirements will be subject to review by the Zoning Officer at time of permit.

SYMBOLS

- Utility Pole
- 470 — Existing Contour
- 450 — Proposed Contour
- Township Line
- Match Line
- Existing Tree Line
- Proposed Tree Line
- (walkout) — Walkout Basement
- 450.00 — Proposed Spot Elevation
- Emergency Access Easement Area
- Access and Utility Easement Area
- Drainage Easement Area
- *Slanted Text* — Existing Features
- Straight Text — Proposed Features



NORTH of MATCHLINE



SOUTH of MATCHLINE

NORTH of MATCHLINE

APPLE STREET BASIN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

Preliminary Plan

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

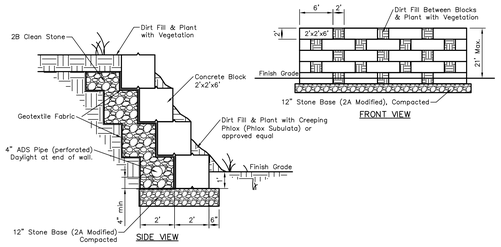
STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 50'
DRAWN BY: TNF
DATE: 22 Dec. '22
FILE: 14191006-07

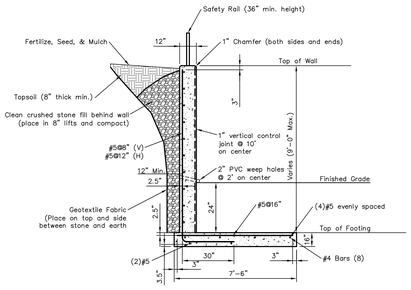
OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Grading Plan — Fairway Woods Subdivision

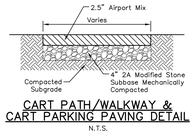
SHEET 6 of 22



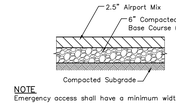
LIVING RETAINING WALL DETAIL
N.T.S.



RETAINING WALL DETAIL
N.T.S.

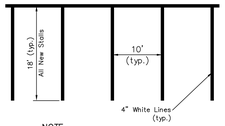


CART PATH/WALKWAY & CART PARKING PAVING DETAIL
N.T.S.



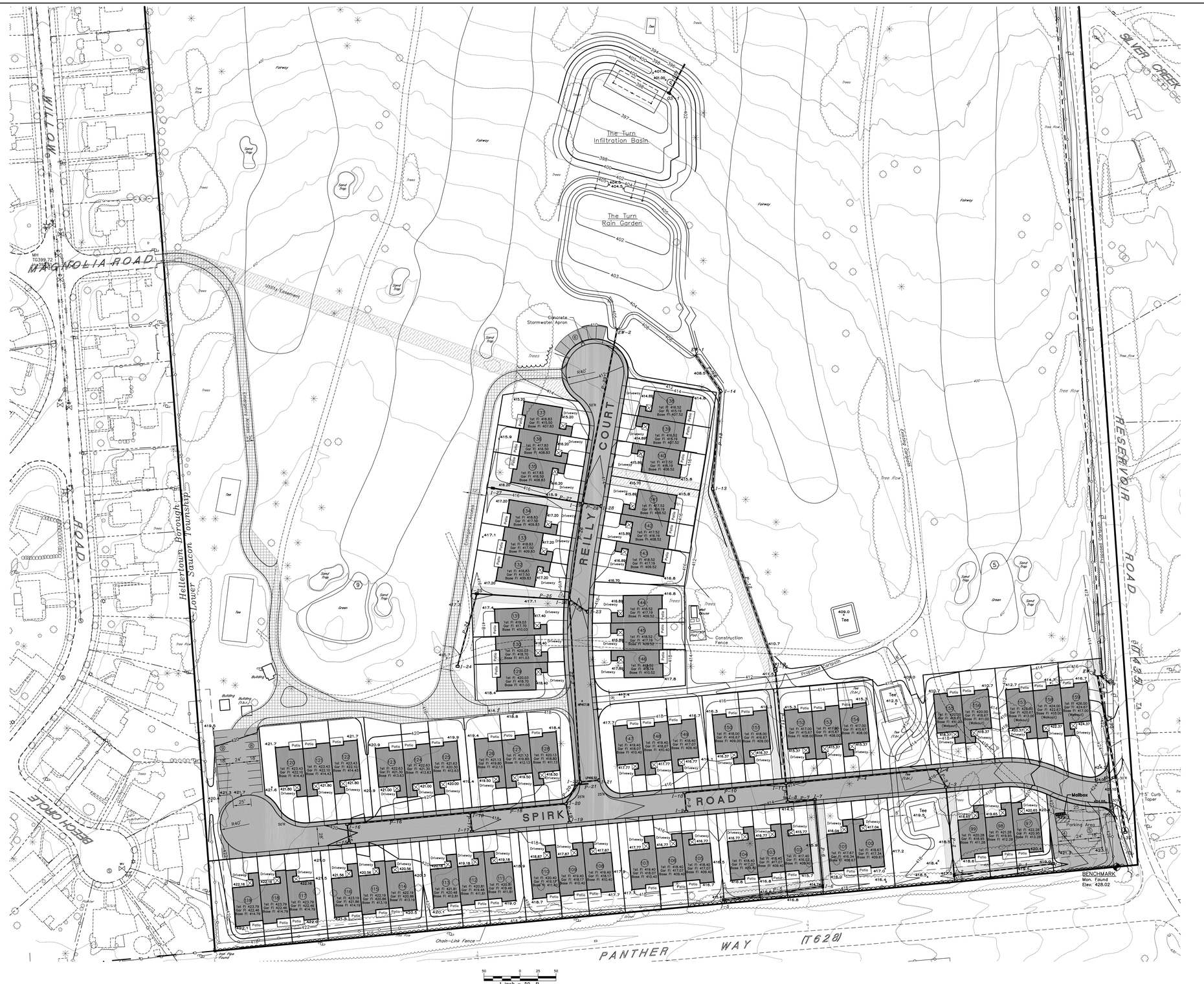
NOTE
Emergency access shall have a minimum width of 12 feet.

ROAD, PARKING, EMERGENCY ACCESS & DRIVEWAY PAVING DETAIL
N.T.S.



NOTE
Refer To Penn Dot 408 Spec. For Paint Type.

NEW PARKING STALL PAINTING
N.T.S.



1 inch = 50 ft.

SITE PLAN
1" = 50'

SYMBOLS

- Utility Pole
- Existing Contour
- Proposed Contour
- Township Line
- Match Line
- Existing Tree Line
- Proposed Tree Line
- Proposed Spot Elevation
- Emergency Access Easement Area
- Access and Utility Easement Area
- Utility Easement Area
- Drainage Easement Area
- Existing Features
- Proposed Features

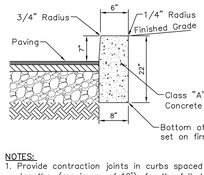
NOTES

1. Roadside swales shall not be obstructed by grading or driveway construction.
2. All work is to be performed in accordance with Township Ord. 2007-01.
3. Nothing shall be placed in any drainage conveyance facility in such a manner as to obstruct free flow.
4. The property boundaries are based on a field survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
5. The contours in the area of the proposed development are based on a field survey. The contours on the rest of the site are based on an aerial survey performed by NorEast Mapping in 2015.
6. Stormwater roof drains and pipes shall not discharge water over impervious areas.
7. Immediately following construction of the foundation wall, and prior to the erection of the superstructure of any building, the Township shall be furnished with a "Foundation Location and Elevation Survey" plan bearing a certification from the builder's licensed engineer or surveyor indicating compliance with the approved plan. No further construction above the foundation wall will be permitted until the Township has issued approval of the aforementioned foundation plan to the Code Enforcement Officer.
8. An as-built plan may be required by the Township to verify compliance with the issued permit or to document any revisions.
9. A "Certificate of Occupancy" permit will not be issued by the Township until such time as the Township Zoning Officer determines that all earth disturbance has been completed in general conformity with the approved Grading Plan.
10. Any drainage system not operating as planned shall be corrected at the expense of the applicant.
11. Compliance with the building height requirements will be subject to review by the Zoning Officer at time of permit.

ENGINEER'S CERTIFICATION

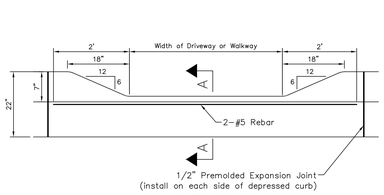
I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E



NOTES:
1. Provide contraction joints in curbs spaced at uniform lengths, (maximum of 10'), for the full depth of the curb.
2. Place 1/2" premolded bituminous expansion joint material at structures and at intervals of 30' or less.
3. Materials and construction shall meet the requirements of PennDOT Publ. 408.

CURB DETAIL
N.T.S.



DEPRESSED CURB
N.T.S.

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PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

Preliminary Plan

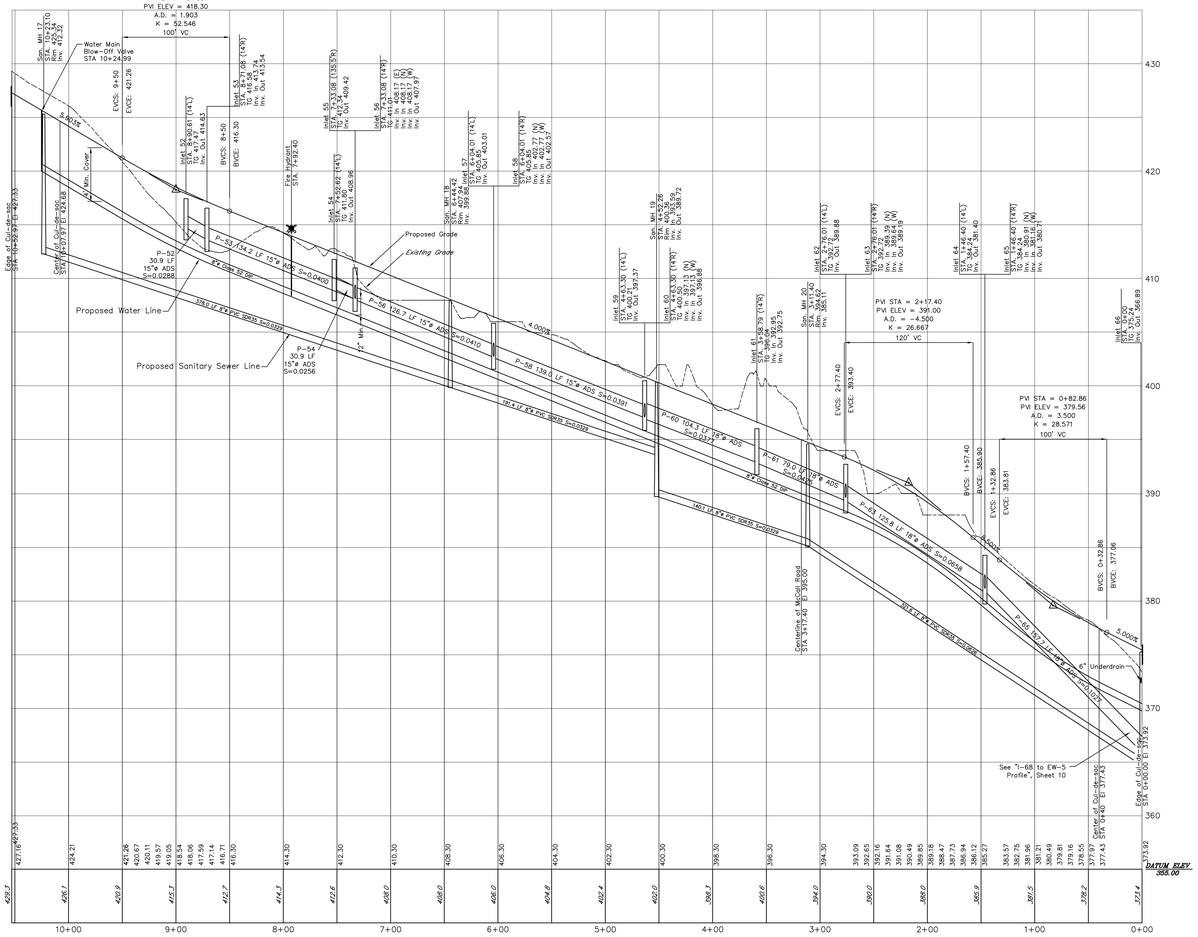
STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted | DRAWN BY: TNF
DATE: 22 Dec. '22 | FILE: 14191D0E-07

OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA. 18045

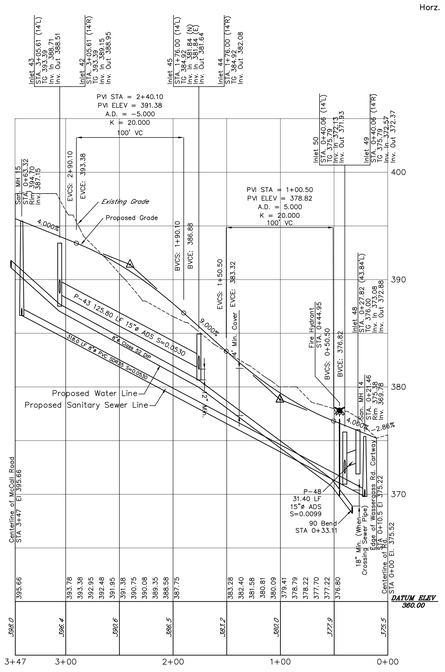
Grading Plan –
The Turn Subdivision

SHEET 7 of 22



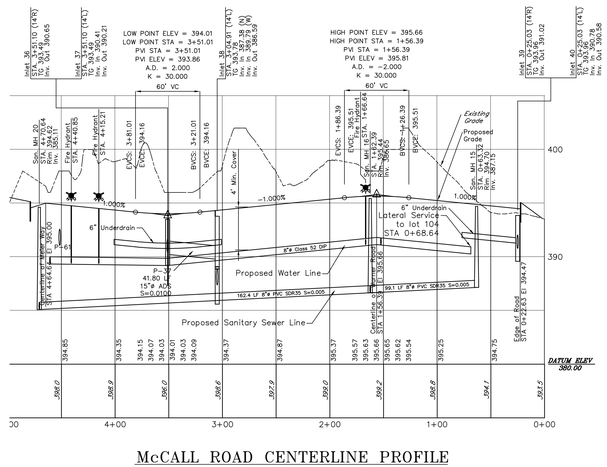
MEIER WAY CENTERLINE PROFILE

Horz. 1" = 50' Vert. 1" = 5'



WARNER ROAD CENTERLINE PROFILE

Horz. 1" = 50' Vert. 1" = 5'



McCALL ROAD CENTERLINE PROFILE

Horz. 1" = 50' Vert. 1" = 5'

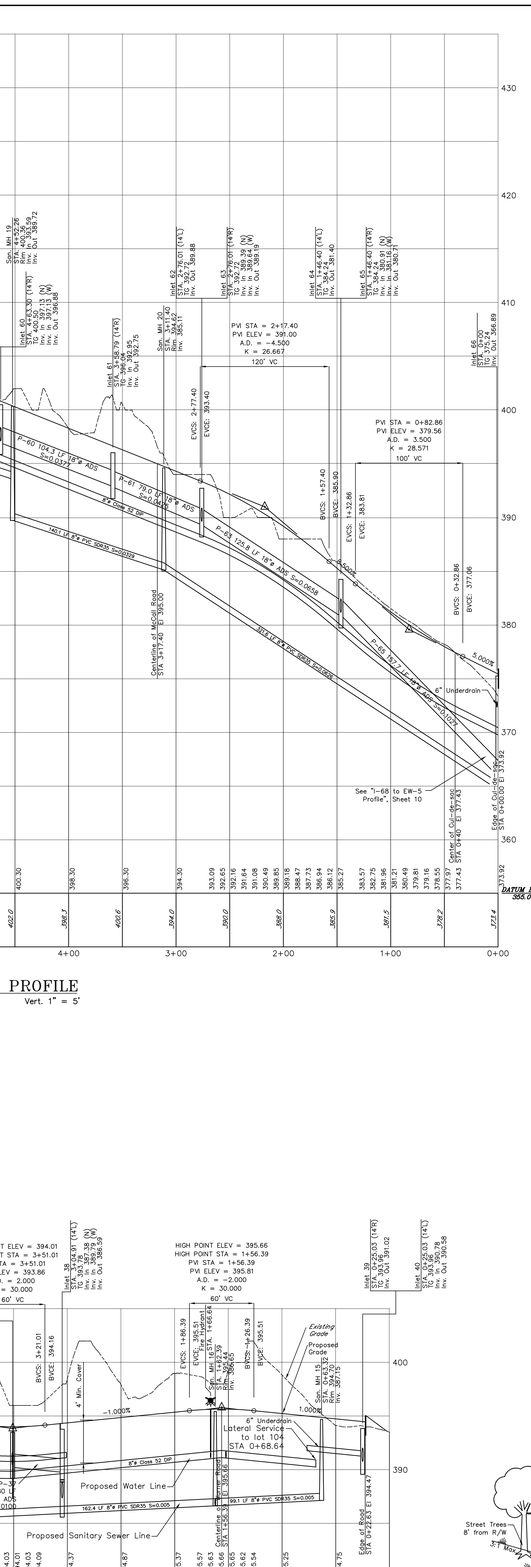
ENGINEER'S CERTIFICATION

I, being a registered engineer in the Commonwealth of Pennsylvania, do hereby certify that the accompanying application, plans, and supporting documentation are true and correct to the best of my knowledge.

Registered Engineer
Registration No. PE036737-E

NOTES

1. All existing utilities are based on approximate location and depths. A PA ONE CALL must be performed prior to any excavation.
2. All water mains are to have a minimum cover of 4'.
3. All water mains and sanitary sewer lines must have a horizontal isolation distance of 10' or a vertical isolation distance of 1.5'.
4. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Wassergass Road and Warner Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.
5. The speed limit of Warner Road, McCall Road, and Meier Way shall be 25 mph.



SIGN SIZE	DIMENSIONS A	B	C	D	E	F	G	SERIES	BORDER	BLANK STD
24x30	24	30	4	2	98	78	E	E	E	4	8	B5-3024

SIGN SIZE	DIMENSIONS A	B	C	SERIES LINE	BORDER	BLANK STD.
30x30	30	10	12.5	15	2	B1-30

SIGN SIZE A x A	DIMENSIONS (INCHES) B	C	D	E	F	MARGIN	BORDER	BLANK STD.
36"x36"	6C	3.5	1	16.8	8.1	0.6	0.8	B3-36

SIGN SIZE A x A	DIMENSIONS (INCHES) B	C	D	E	F	G	MARGIN	BORDER	BLANK STD.
30"x30"	60	4	1	4.8	7.4	14.5	0.5	0.8	B3-30

SIGN SIZE A x A	DIMENSIONS (INCHES) B	C	D	E	MARGIN	BORDER	BLANK STD.
30"x30"	8.1	7.6	11.8	11.4	0.5	0.8	B3-30
36"x36"	10.81	9.1	14.1	13.7	0.6	0.8	B3-36

SIGN NOTES

1. Vertical reflective striping shall be installed on all channel posts.
2. Signs shall be mounted on standard U-channel break-away post assembly.

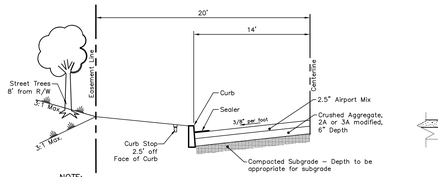
SYMBOLS

- Utility Pole
- 450 — Existing Contour
- 430 — Proposed Contour
- 379.64 — Proposed Spot Elevation
- GAS — Proposed Gas Line
- SAN — Proposed Sewer Line
- WTR — Proposed Water Line
- Existing Water Line
- Proposed Building
- Slanted Text — Existing Features
- Straight Text — Proposed Features

SIGHT DISTANCE TABLE

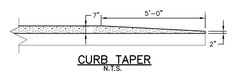
Intersection	Speed Limit	Sight Distance Left Slope	Required	Available	Sight Distance Right Slope	Required	Available
McCall Rd. @ Meier Way	25 mph	4.0%	350'	300'*	4.0%	117'	260'
Warner Rd. @ McCall Rd.	25 mph	0.8%	250'	303'	0.8%	195'	127'*
Warner Rd. @ Wassergass Rd.	40 mph	4.6%	324'	735'	4.6%	644'	720'

*Sight distance ends at cul-de-sac bulb of Meier Way.
**Sight distance ends at termination of McCall Road.

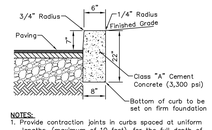


NOTE:
All roots and organic material located within the area of the proposed roadway construction must be removed. The subgrade and stone base shall be thoroughly compacted and any soft spots removed and replaced with stone to the satisfaction of the Township engineer.

NEW ROADWAY CROSS SECTION
N.T.S.

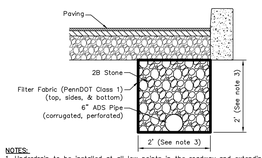


CURB TAPER
N.T.S.



NOTES:
1. Provide contraction joints in curbs spaced at uniform lengths, (maximum of 10 feet), for the full depth of the curb.
2. Place 1/2" premolded expansion joint filler material at intervals of 30 feet or less and against all structures.
3. Materials and construction shall meet the requirements of PennDOT Publ. 408.

CURB DETAIL
N.T.S.



NOTES:
1. Underdrain to be installed at all low points in the roadway and extending 50' in both directions.
2. Underdrain to be connected to inlets where possible or install a 6" underdrain discharge pipe.
3. Where the storm sewer pipes do not permit the full 2 feet depth of stone, the stone width shall be increased to provide a minimum stone cross section area of 4 square feet.

UNDERDRAIN DETAIL
N.T.S.

CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
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PROJECT SERIAL NO. –

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
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1	05/22/23	Per Review Letter Dated 02/16/23	EN

Preliminary Plan

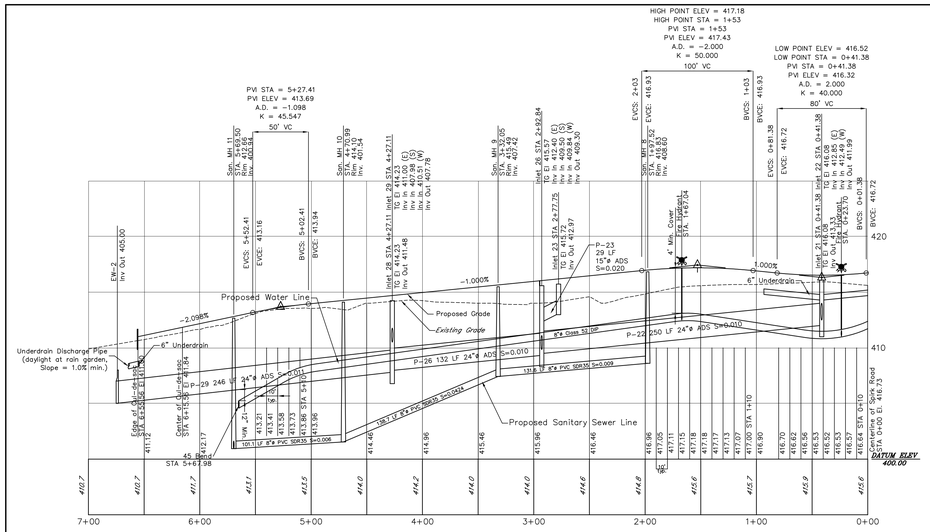
STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted
DATE: 22 Dec. '22
DRAWN BY: DWM
FILE: 14191008-09

OWNERS of RECORD: Steel Land LLC
8052 William Penn HWY
Easton, PA 18045

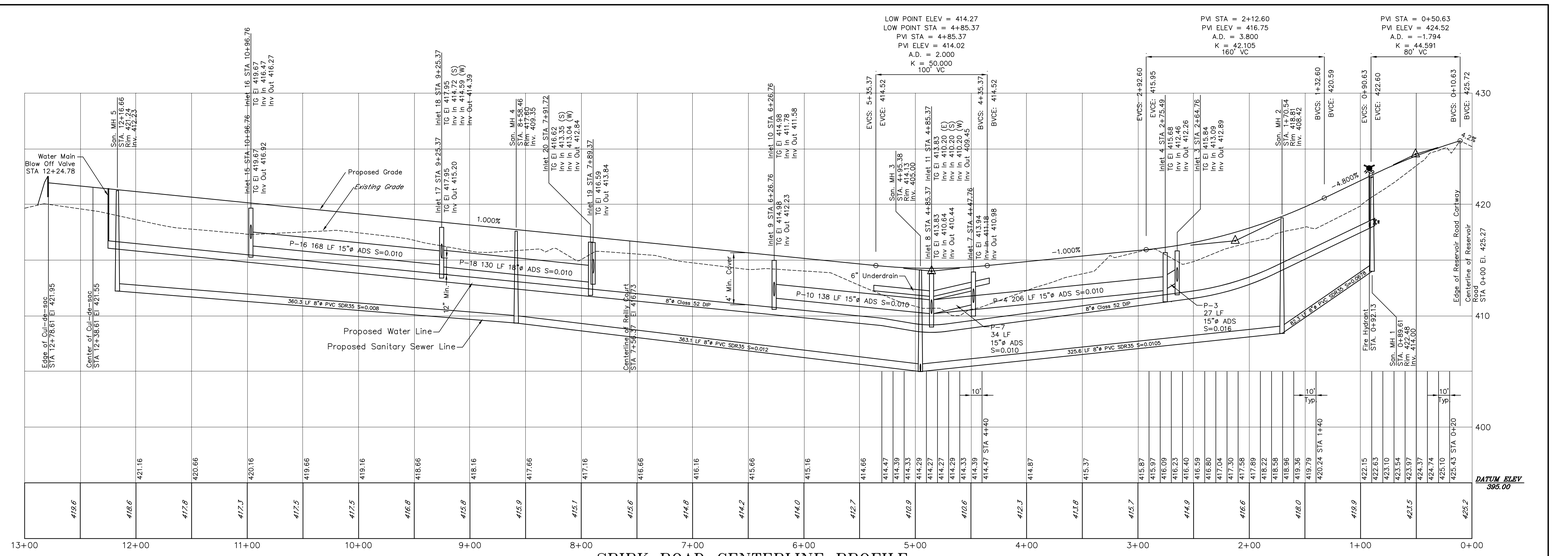
Plan & Profile Sheet – Fairway Woods Subdivision

SHEET 8 of 22



REILLY COURT CENTERLINE PROFILE

Horz. 1" = 50' Vert. 1" = 5'



SPIRK ROAD CENTERLINE PROFILE

Horz. 1" = 50' Vert. 1" = 5'

SITE PLAN

1" = 50'

SIGHT DISTANCE TABLE

Intersection	Speed Limit	Sight Distance Left			Sight Distance Right		
		Slope	Required	Available	Slope	Required	Available
Spirk Rd. @ Reservoir Rd.	40 mph	3.3%	540'	1,000'+	3.3%	460'	465'
Reilly Ct. @ Spirk Rd.	25 mph	1.0%	250'	400'+	1.0%	195'	400'+

SYMBOLS

- UP — Utility Pole
- 425 — Existing Contour
- 430 — Proposed Contour
- 379.64 — Proposed Spot Elevation
- GAS — Proposed Gas Line
- SAN — Proposed Sewer Line
- WTR — Proposed Water Line
- W — Existing Water Line
- Proposed Building
- Stamford Text — Existing Features
- Straight Text — Proposed Features

ENGINEER'S CERTIFICATION

I, being a registered engineer in the Commonwealth of Pennsylvania, do hereby certify that the accompanying application, plans, and supporting documentation are true and correct to the best of my knowledge.

Registered Engineer
Registration No. PE036737-E

NOTES

1. All existing utilities are based on approximate location and depths. A PA ONE CALL must be performed prior to any excavation.
2. All water mains are to have a minimum cover of 4'
3. All water mains and sanitary sewer lines must have a horizontal isolation distance of 10' or a vertical isolation distance of 1.5'
4. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Spirk Road and Reservoir Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.
5. The speed limit of Armour Avenue and Vardon Court shall be 25 mph.

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STEEL CLUB LAND DEVELOPMENT PHASE 3

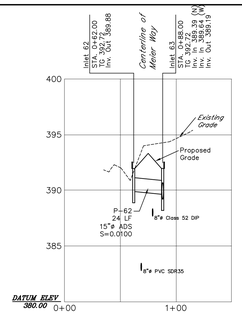
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted
DRAWN BY: DWM
DATE: 22 Dec. '22
FILE: 14191008-09

OWNERS OF RECORD: Steel Land LLC, 8052 William Penn HWY, Easton, PA 18045

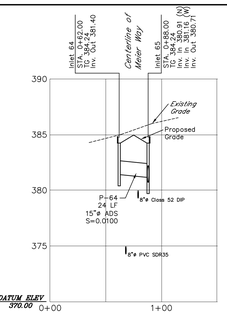
Plan & Profile Sheet – The Turn Subdivision

SHEET 9 of 22



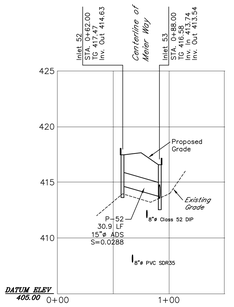
I-62 TO I-63 PROFILE

Horz. 1"=50' Vert. 1"=5'



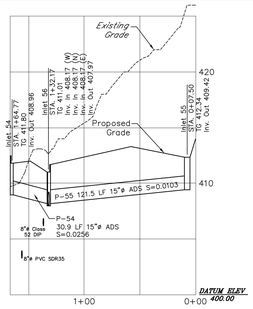
I-64 TO I-65 PROFILE

Horz. 1"=50' Vert. 1"=5'



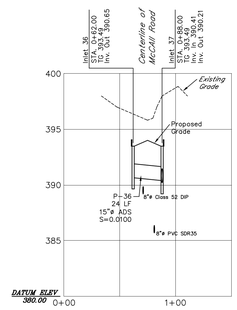
I-52 TO I-53 PROFILE

Horz. 1"=50' Vert. 1"=5'



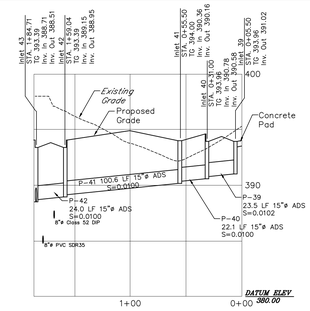
I-54 TO I-55 PROFILE

Horz. 1"=50' Vert. 1"=5'



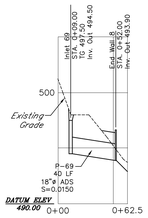
I-36 TO I-37 PROFILE

Horz. 1"=50' Vert. 1"=5'



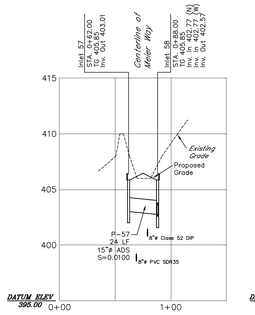
I-39 TO I-43 PROFILE

Horz. 1"=50' Vert. 1"=5'



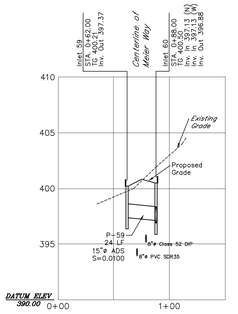
I-69 TO EW-8 PROFILE

Horz. 1"=50' Vert. 1"=5'



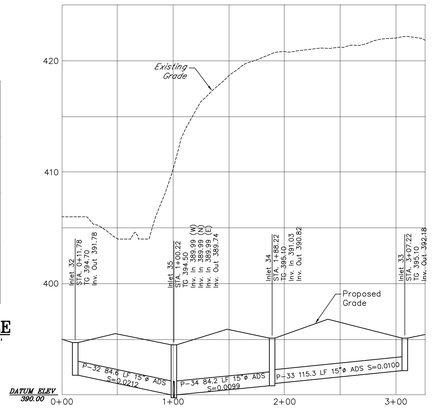
I-57 TO I-58 PROFILE

Horz. 1"=50' Vert. 1"=5'



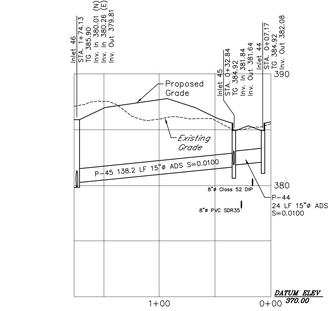
I-59 TO I-60 PROFILE

Horz. 1"=50' Vert. 1"=5'



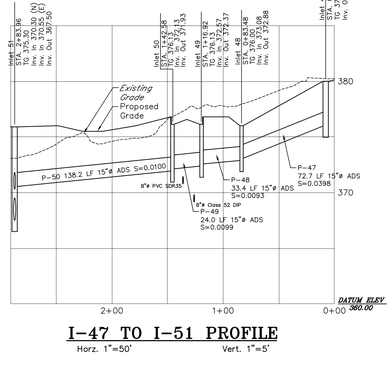
I-32 TO I-33 PROFILE

Horz. 1"=50' Vert. 1"=5'



I-44 TO I-46 PROFILE

Horz. 1"=50' Vert. 1"=5'



I-47 TO I-51 PROFILE

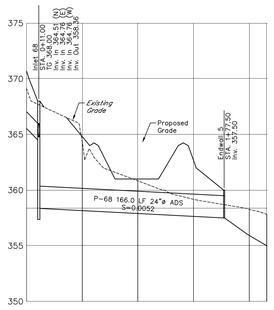
Horz. 1"=50' Vert. 1"=5'

I-66 TO I-67 PROFILE

Horz. 1"=50' Vert. 1"=5'

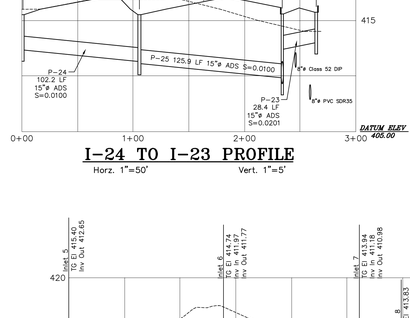
I-31 TO EW-4 PROFILE

Horz. 1"=50' Vert. 1"=5'



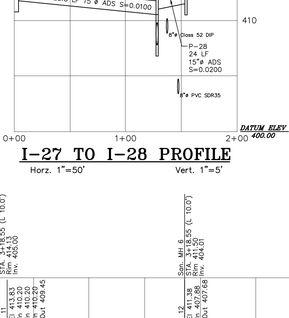
I-68 TO EW-5 PROFILE

Horz. 1"=50' Vert. 1"=5'



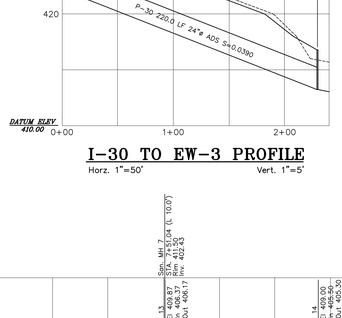
I-24 TO I-23 PROFILE

Horz. 1"=50' Vert. 1"=5'



I-27 TO I-28 PROFILE

Horz. 1"=50' Vert. 1"=5'



I-30 TO EW-3 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-15 TO I-16 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-17 TO I-18 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-19 TO I-21 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-9 TO I-10 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-1 TO I-4 PROFILE

Horz. 1"=50' Vert. 1"=5'

I-5 TO EW-1 PROFILE

Horz. 1"=50' Vert. 1"=5'

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

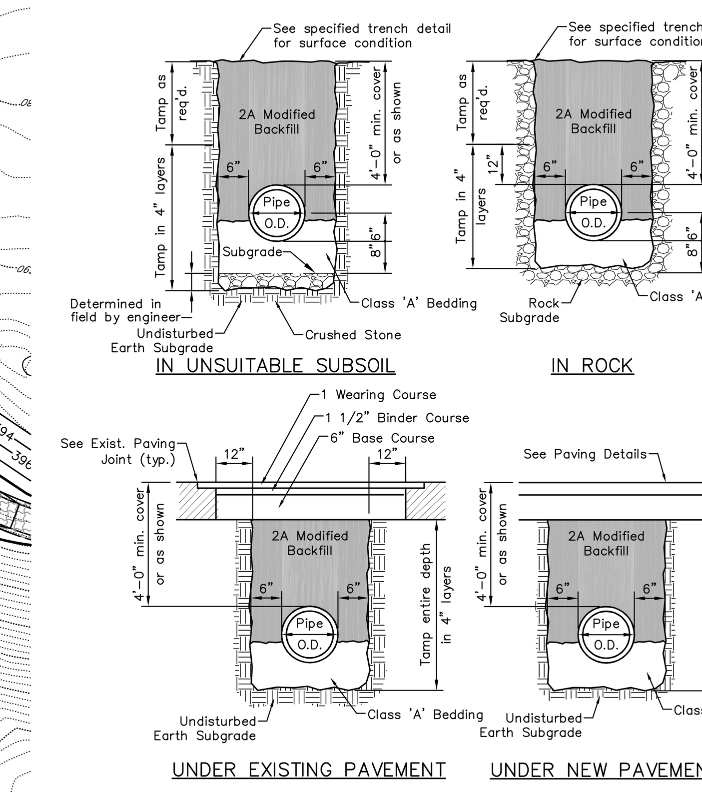
NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania
SCALE: As Noted
DRAWN BY: TNF
DATE: 22 Dec. '22
FILE: 14191010-12
OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045
Profiles Sheet
SHEET 10 of 22

1 inch = 50 ft.

FAIRWAY WOODS SUBDIVISION

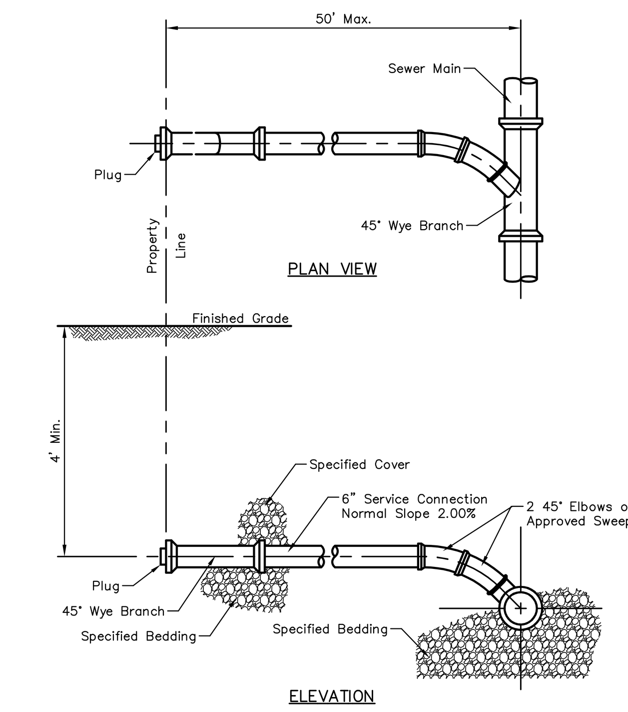
1" = 50'



NOTES:
1. All backfill material is subject to architect/engineer approval.
2. Class 'A' Bedding: approved native soil, coarse sand, gravel. or crushed stone, having a maximum stone size of 1/2 inch.
3. Ordinary Backfill: clean dry earth w/a maximum stone size of 6 inches.
4. Within road rights-of-way, surface restoration, backfill materials, and methods shall meet the appropriate municipal or Penn-DOT requirements.
5. When a trench is within pavement of an existing street or is within the limits of a proposed street pavement, the backfill material shall be 2A coarse aggregate. Stone backfill is not required if the bituminouspaving is not placed for at least six months from the time the trench is backfilled.

TRENCH VARIATIONS

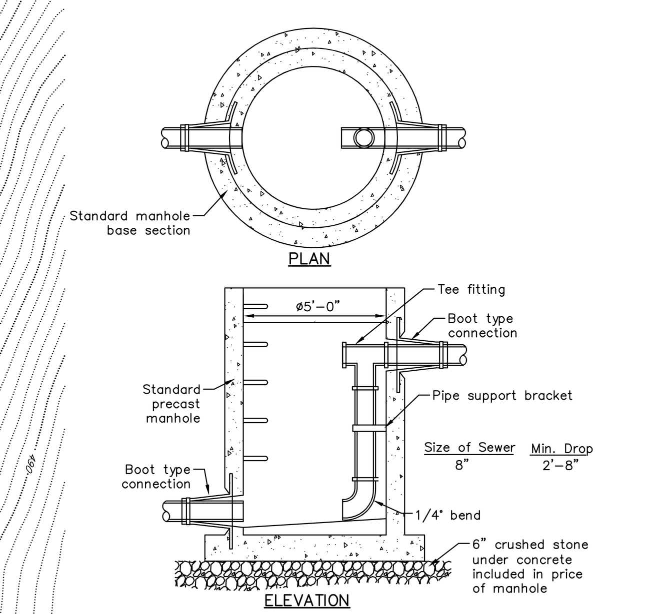
N.T.S.



NOTE:
Specified bedding is a minimum of 6" of PennDOT 2A modified stone or equal.

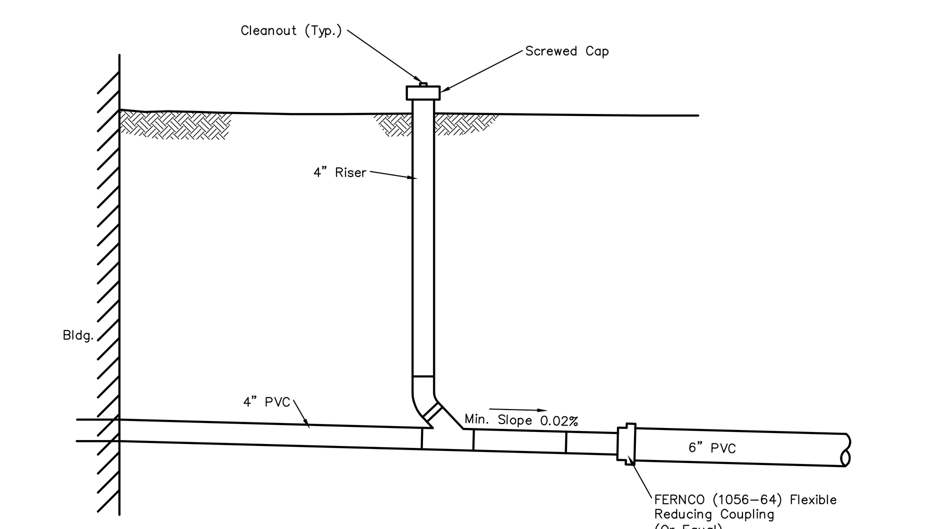
TYPICAL LATERAL CONNECTION

N.T.S.



INSIDE DROP MANHOLE CONNECTION

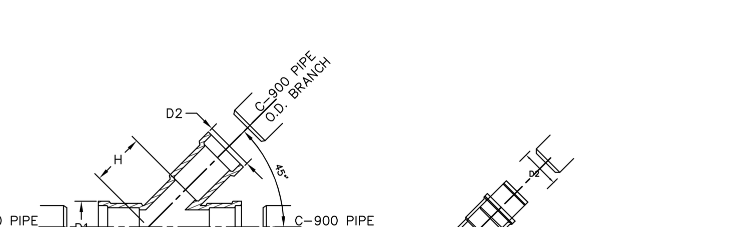
N.T.S.



NOTES:
1. Six inch bedding of 2B (AASHTO 57) stone and one foot cover of same shall be provided around all laterals within right-of-way and on-lot.
2. Backfill around all PVC riser pipes at cleanouts (within right-of-way and on-lot) shall be 2A modified stone.
3. During initial installation all riser pipes shall be extended a minimum five feet above existing grade. After finish grading is performed, risers shall be cut off to a minimum height of six inches above finished grade elevation.
4. All riser pipes shall be fitted with watertight screw type caps.
5. Fernco (1056-64) reducing coupler w/0.375 rubber O-rings (or equivalent) shall be provided for reduction from 6 inch to 4 inch pipe.

ON-LOT TYPICAL LATERAL/CLEANOUT CONSTRUCTION

N.T.S.



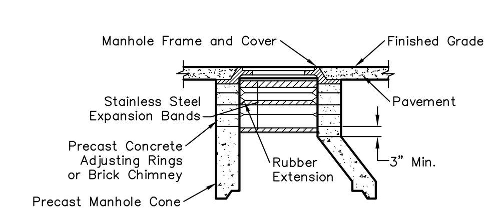
PART #	SIZE	A	B	C	D	H	D1	D2	t	C-900 PIPE O.D. RUN	C-900 PIPE O.D. BRANCH
301-0806	8 x 6	5.38	.88	21.79	11.03	10.15	11.10	8.68	.52	9.050	6.900
301-0804*	8 x 4	5.38	.88	21.79	11.03	15.29	11.10	6.32	.52	9.050	4.800
301-0606	6 x 6	4.78	2.13	21.28	11.72	9.60	8.68	8.68	.47	6.900	6.900
301-0604*	6 x 4	4.78	2.13	21.28	11.72	14.83	8.68	6.32	.47	6.900	4.800
301-0404	4 x 4	4.78	1.50	16.75	8.24	6.74	6.32	6.32	.34	4.800	4.800

SPECIFICATIONS:
MATERIALS: ASTM D1784
JOINTS: ASTM D3139
GASKETS: ASTM F-477
THICKNESS: SDR 18

- ALL DIMENSIONS IN INCHES
- NON PRESSURE RATED

LATERAL WYE

N.T.S.



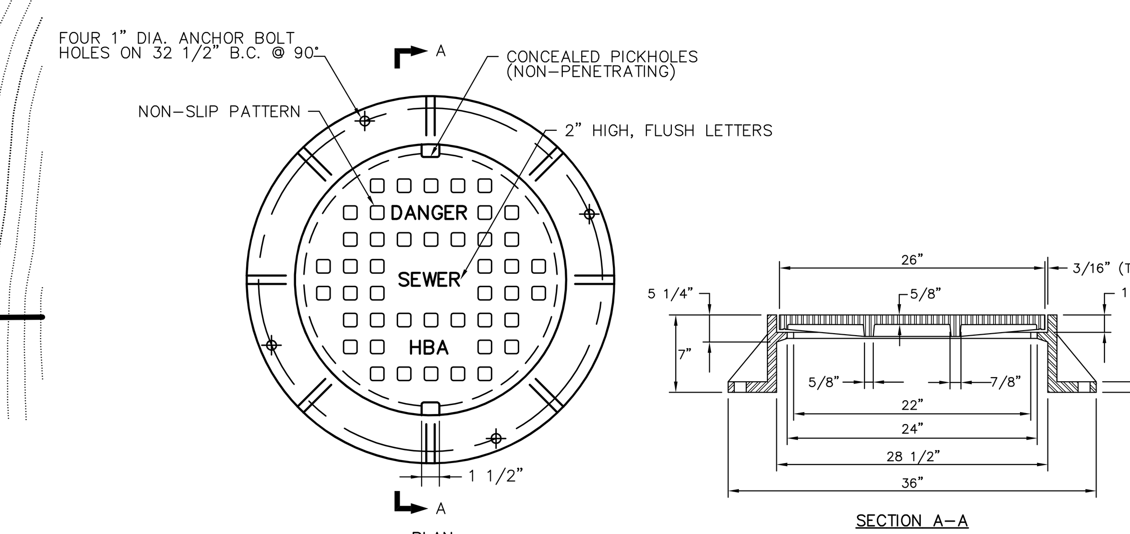
NOTES:
1. The rubber sleeve is available in both standard, an 8.5" wide double pleated, or a 10" wide triple pleated cross sections. The same expansion bands and extensions are used on both.
2. See chimney height table for seal and extension combinations needed to span from the frame to the top of the cone on manholes with various chimney heights. Frame offsets or diameter differentials will reduce the span heights.
3. The top of the cone must have a minimum 3" high vertical surface that is smooth and free of any form offsets or excessive honeycomb. If a 3" high vertical surface is not available due to the existing configuration of the existing manhole cone, one may be created using a cone disk form and a non shrink patching mortar. Plans for a form disk cone are available from Createx Specialty Products.

CHIMNEY HEIGHT TABLE

Combinations of Seals and Extensions	To Span Heights of: w/ Standard Seal	w/ Wide Seal
Seal Only	0 - 4.5	2 - 7.5
Seal + 7 Extension	Over 4.5 - 10.5	Over 7.5 - 13.5
Seal + 10 Extension	Over 10.5 - 13	Over 13.5 - 16
Seal + Mult. Extensions	Over 13	Over 16
Add 6" of coverage for each additional 7" extension		
Add 8.5" of coverage for each additional 10" extension		

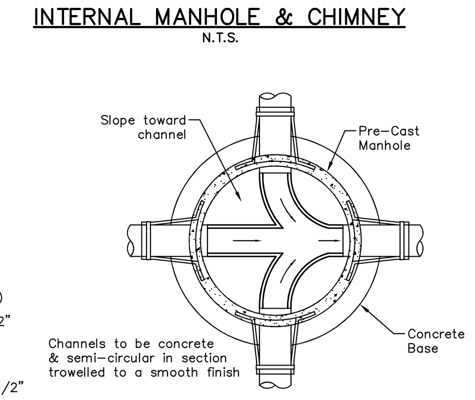
INTERNAL MANHOLE & CHIMNEY

N.T.S.

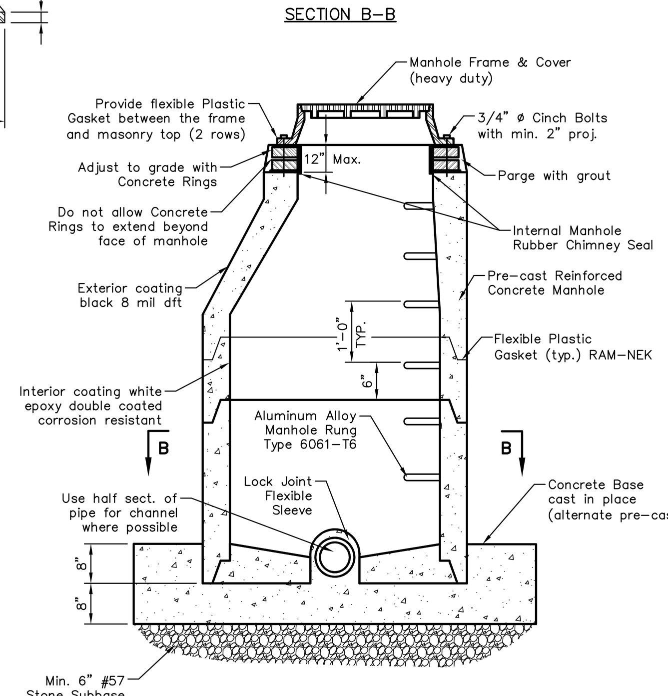


MANHOLE FRAME AND COVER

N.T.S.

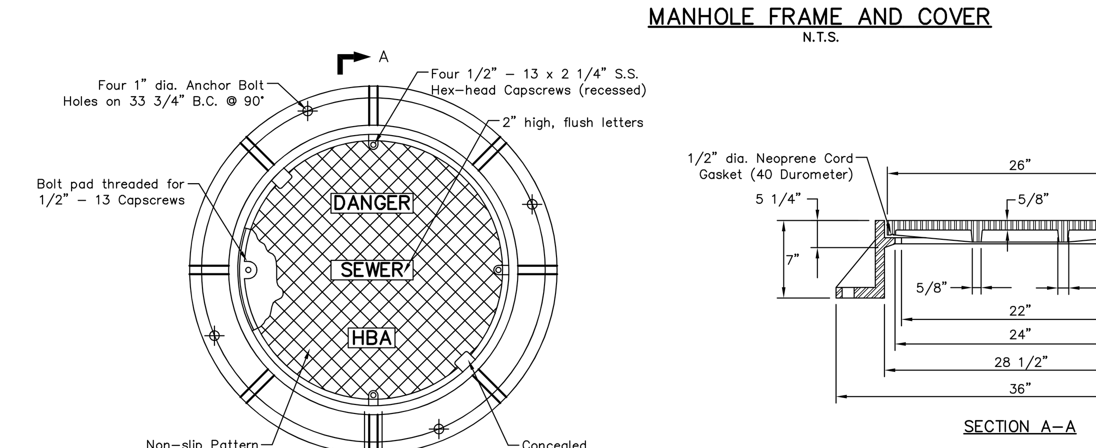


SECTION B-B



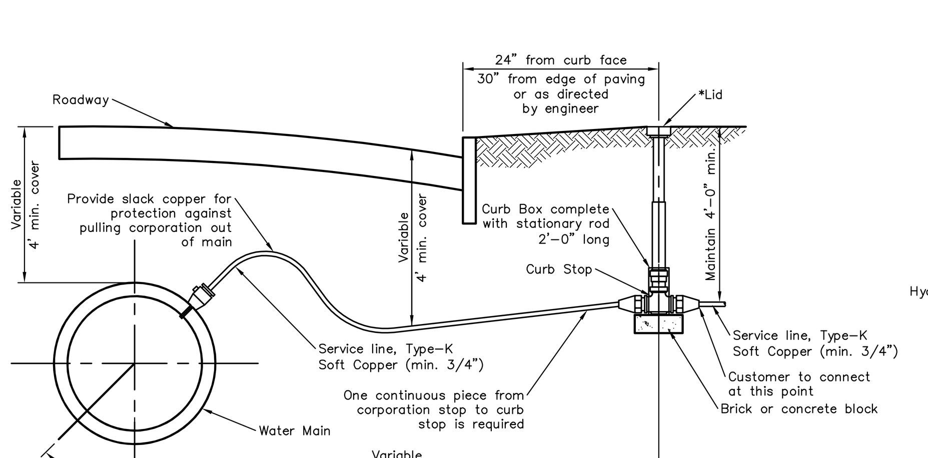
MANHOLE

N.T.S.



WATERTIGHT MANHOLE FRAME

N.T.S.

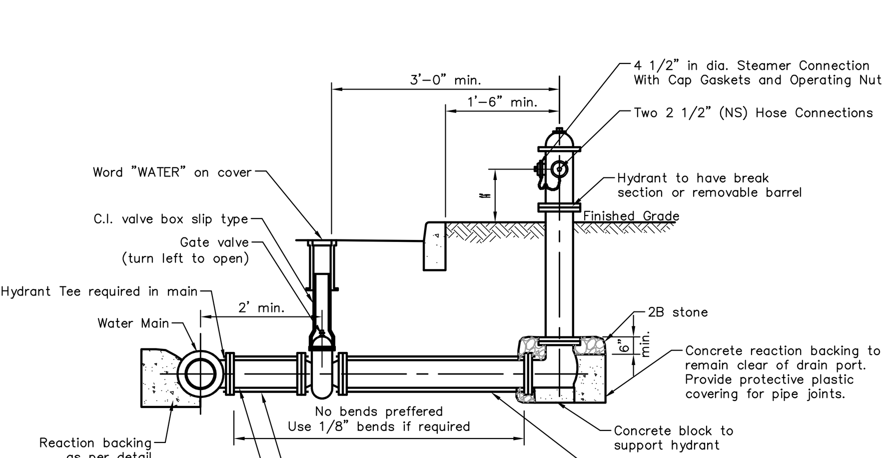


*Curb box lid to be cast iron with the word "WATER" cast integrally on top.

NOTES:
1. Wet tapping under normal line pressure is required
2. Corporation stops: 3/4" Mueller H-15020 or H15069 or approved equal
3. Curb stops: 3/4" Mueller Oriseal H-15201 or approved equal
4. Curb box: Mueller H-10306 with #84233 rod, or approved equal
5. Provide 6" of screenings above and below copper tubing

TYPICAL RESIDENTIAL SERVICE LINE CONNECTION

N.T.S.



NOTES:
1. Gate Valve: Mueller A2360 or approved equal
2. Valve Box: The Central Foundry Company Model B5004 (two piece with 5 1/4" shaft) or approved equal
3. Fire Hydrant: American Daring model B-26-B (supplied with "Stortz" fitting)
4. Hydrant to be placed with steamer connection facing street @ 1'-6" behind face of curb or E.O.P. (typ.)
5. All proposed plumbing to be installed in strict accordance with township specifications.
6. Minimum of 4' of cover over all pipes.

FIRE HYDRANT DETAIL

N.T.S.

SYMBOLS

- 430 — Existing Contour
- 450 — Proposed Contour
- Township Line
- Existing Gas Line
- Proposed Gas Line
- Existing Sanitary Sewer Line
- Proposed Sanitary Sewer Line
- Proposed Sanitary Sewer Manhole
- Existing Water Line
- Proposed Water Line
- Proposed Fire Hydrant
- Utility Easement Line
- Emergency Access Easement Area
- Access and Utility Easement Area
- Drainage Easement Area
- *Slanted Text* — Existing Features
- Straight Text — Proposed Features

NOTES

1. Immediately following construction of the foundation wall, and prior to the erection of the superstructure of any building, the Township shall be furnished with a "Foundation Location and Elevation Survey" plan bearing a certification from the builder's licensed engineer or surveyor indicating compliance with the approved plan. No further construction above the foundation wall will be permitted until the Township has issued approval of the aforementioned foundation plan to the Code Enforcement Officer.
2. An as-built plan may be required by the Township to verify compliance with the issued permit or to document any revisions.
3. Roadside swales shall not be obstructed by grading or driveway construction.
4. All work is to be performed in accordance with Township Ord. 2007-01.
5. Nothing shall be placed in any drainage conveyance facility in such a manner as to obstruct free flow.
6. A "Certificate of Occupancy" permit will not be issued by the Township until such time as the Township Zoning Officer determines that all earth disturbance has been completed in general conformity with the approved Grading Plan.
7. Any drainage system not operating as planned shall be corrected at the expense of the applicant.
8. Compliance with the building height requirements will be subject to review by the Zoning Officer at time of permit.
9. A vertical separation of 18" or a horizontal separation of 10' must be maintained between all between water and sewer mains.
10. All proposed water main connections to existing water mains are to be done via wet tap.

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

Preliminary Plan

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
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PROJECT SERIAL NO.

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Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

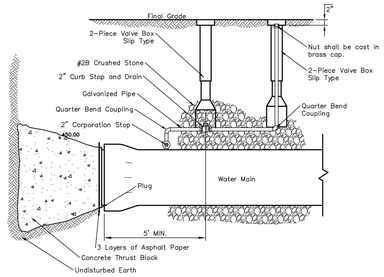
STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

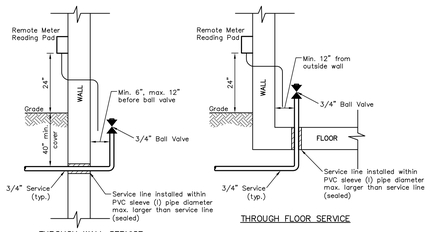
SCALE: As Noted | DRAWN BY: TNF
DATE: 22 Dec. '22 | FILE: 14191010-12

OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Utilities Plan – Fairway Woods Subdivision

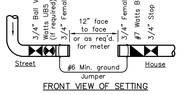


BLOW OFF VALVE DETAIL
N.T.S.



THROUGH WALL SERVICE

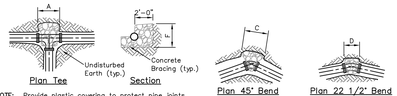
THROUGH FLOOR SERVICE



FRONT VIEW OF SETTING

RESIDENTIAL METER SETTING REQUIREMENTS
N.T.S.

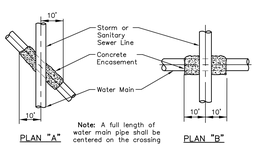
GENERAL NOTES:
1. Notify authority at 610-838-8051 when water service is ready for inspection and testing. Do not backfill any portion of trench prior to approval.
2. Water authority will supply Meter.
3. Meter Stops: 3/4" Mueller type H-14253 or H-14340
4. Meter location must be approved by the authority.
5. All service lines are to be K-type copper tubing only.



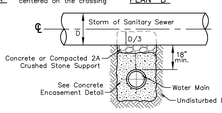
NOTE: Provide plastic covering to protect pipe joints from concrete.

DESIGN PRESSURE	PIPE DIAMETER	REACTION BACKING DIMENSIONS A	B	C	D	E	F
150 PSI	16	5'-0"	7'-9"	8'-0"	2'-9"	–	3'-4"
	12	4'-3"	6'-11"	5'-3"	2'-6"	–	2'-8"
	8	3'-0"	4'-5"	3'-4"	1'-7"	–	1'-8"
	6	2'-3"	3'-4"	2'-5"	1'-2"	–	1'-3"
200 PSI	16	7'-3"	10'-3"	9'-1"	3'-10"	1'-4"	3'-4"
	12	5'-3"	7'-11"	6'-1"	2'-10"	1'-0"	2'-6"
	8	3'-6"	5'-3"	4'-0"	1'-9"	0'-6"	1'-8"
	6	2'-11"	4'-5"	3'-3"	1'-3"	0'-5"	1'-3"
250 PSI	16	8'-1"	12'-3"	9'-7"	4'-3"	1'-6"	3'-4"
	12	6'-4"	9'-11"	7'-0"	3'-0"	1'-1"	2'-6"
	8	4'-2"	6'-11"	4'-7"	1'-11"	0'-7"	1'-8"
	6	3'-10"	5'-8"	3'-9"	1'-10"	0'-6"	1'-3"

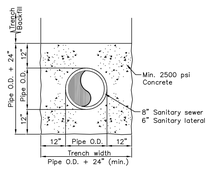
REACTION BACKING
N.T.S.



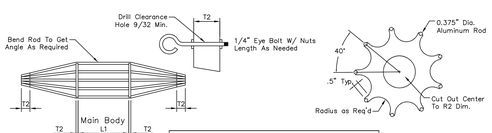
Note: A full length of water main pipe shall be centered on the crossing



WATERLINE CROSSING BENEATH STORM/SANITARY SEWERS
N.T.S.



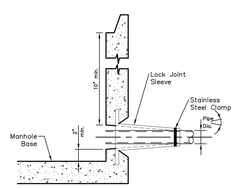
CONCRETE ENCASEMENT
N.T.S.



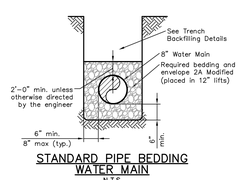
DIMENSIONS							
Pipe Size	L1	L2	R2	T1	T2	Rod Dia.	5% R1
6"	6"	6"	0.75"	.375"	1.0"	.375"	2.78"
8"	6"	6"	1.25"	.375"	1.0"	.375"	3.73"
10"	8"	8"	1.50"	.375"	1.0"	.375"	4.66"
12"	8"	8"	1.75"	.375"	1.0"	.375"	5.55"
15"	9"	9"	2.00"	.375"	1.0"	.375"	6.79"

Note: Weld all rods to Frame

"GO-NO GO" MANDREL
N.T.S.



LOCK JOINT FLEXIBLE MANHOLE SLEEVE
N.T.S.



STANDARD PIPE BEDDING WATER MAIN
N.T.S.

50 0 25 50
1 inch = 50 ft.

THE TURN SUBDIVISION
1" = 50'

SYMBOLS

- 430 — Existing Contour
- 430 — Proposed Contour
- Township Line
- GAS — Existing Gas Line
- GAS — Proposed Gas Line
- SAN — Existing Sanitary Sewer Line
- SAN — Proposed Sanitary Sewer Line
- Proposed Sanitary Sewer Manhole
- W — Existing Water Line
- W — Proposed Water Line
- Proposed Fire Hydrant
- Stanford Text — Existing Features
- Straight Text — Proposed Features
- Utility Easement Line
- Emergency Access Easement Area
- Access and Utility Easement Area
- Utility Easement Area
- Drainage Easement Area

NOTES

1. Immediately following construction of the foundation wall, and prior to the erection of the superstructure of any building, the Township shall be furnished with a "Foundation Location and Elevation Survey" plan bearing a certification from the builder's licensed engineer or surveyor indicating compliance with the approved plan. No further construction above the foundation wall will be permitted until the Township has issued approval of the aforementioned foundation plan to the Code Enforcement Officer.
2. An as-built plan may be required by the Township to verify compliance with the issued permit or to document any revisions.
3. Roadside swales shall not be obstructed by grading or driveway construction.
4. All work is to be performed in accordance with Township Ord. 2007-01.
5. Nothing shall be placed in any drainage conveyance facility in such a manner as to obstruct free flow.
6. A "Certificate of Occupancy" permit will not be issued by the Township until such time as the Township Zoning Officer determines that all earth disturbance has been completed in general conformity with the approved Grading Plan.
7. Any drainage system not operating as planned shall be corrected at the expense of the applicant.
8. Compliance with the building height requirements will be subject to review by the Zoning Officer at time of permit.
9. A vertical separation of 18" or a horizontal separation of 10' must be maintained between all between water and sewer mains.
10. All proposed water main connections to existing water mains are to be done via wet tap.

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer

Registration No. PE036737E

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

Preliminary Plan

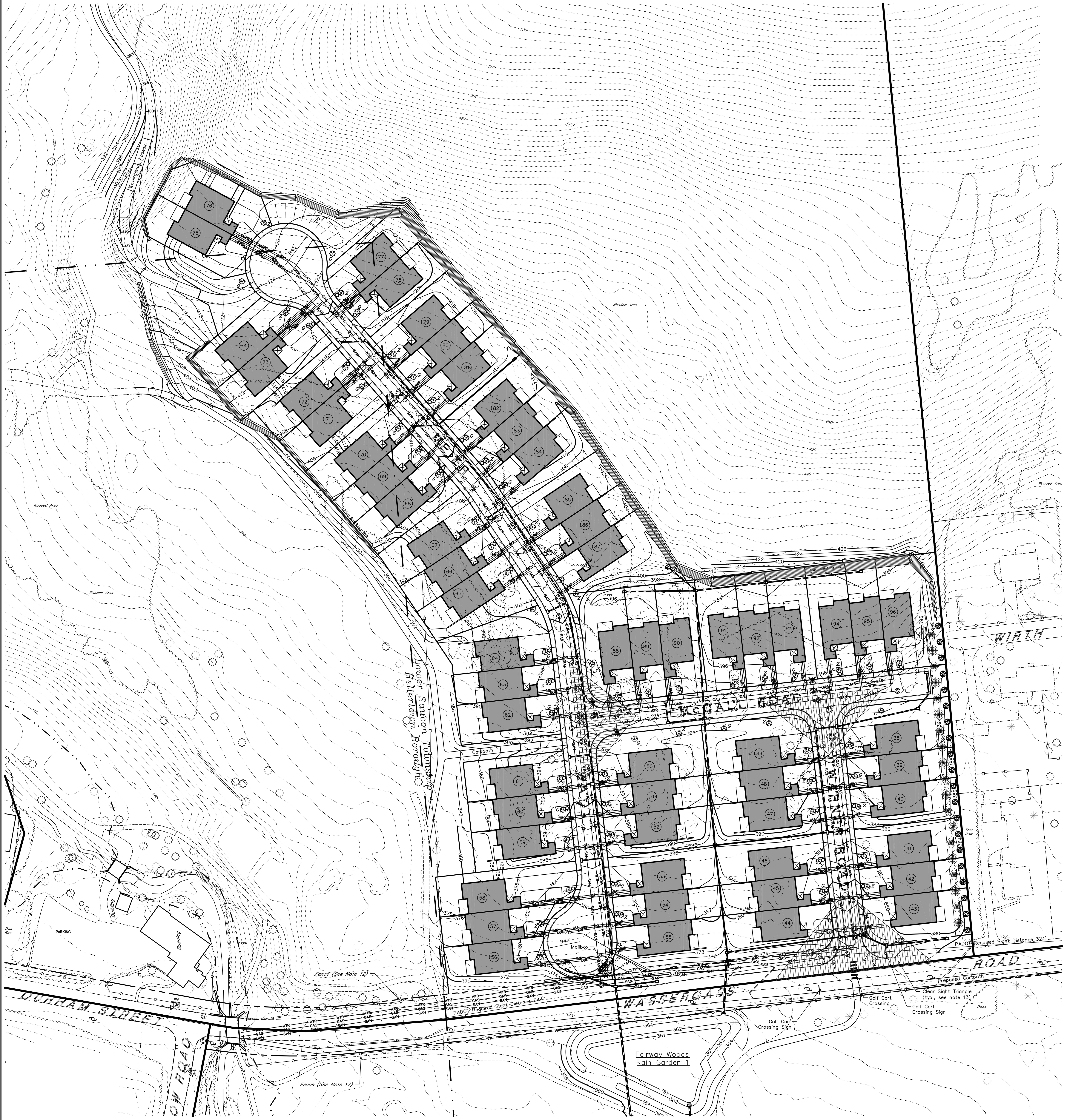
STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted
DRAWN BY: TNF
DATE: 22 Dec. '22
FILE: 14191010-12

OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Utilities Plan – The Turn Subdivision

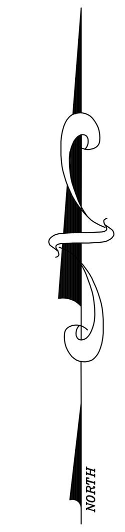
SHEET 12 of 22



1 inch = 50 ft.

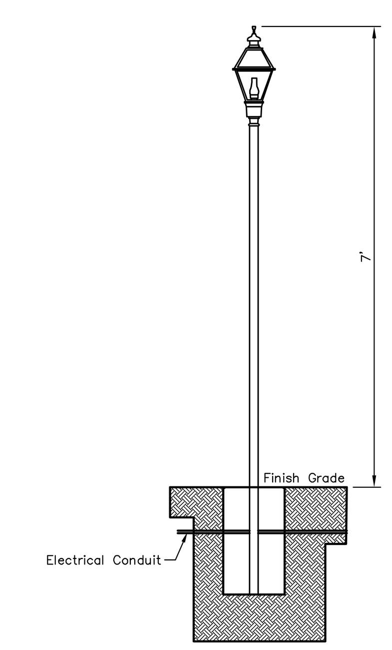
PARTIAL SITE PLAN

1" = 50'



SYMBOLS

- 430 – Existing Contour
- 430 – Proposed Contour
- – Township Line
- – Existing Tree Line
- – Proposed Tree Line
- – Proposed Community Mail Box
- – Proposed Tree
- – Proposed Lamp Post
- *Slanted Text* – Existing Features
- Straight Text – Proposed Features
- – Proposed Building

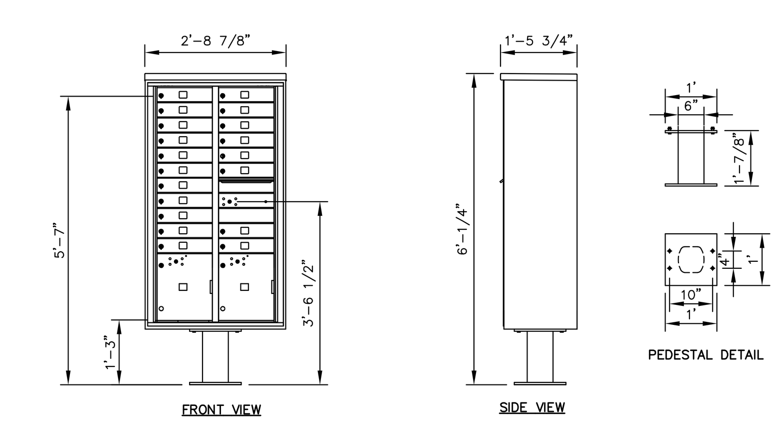


NOTE:

1. Light to be mounted on a 3"ø post with a height of 7' measured from finished grade to top of street light.
2. Light Specifications(or approved equal):
   Make: Quoizel, Inc.
   Model: NY9042K
   Material: Brass
   Finish: Mystic Black
   Bulb Type: B10 CAND
   Wattage: 60w
   Bulb Quantity: 2
   Voltage: 120vAC

LAMP POST LIGHT DETAIL

N.T.S.



NOTES:

1. Mailbox is to be Florenece Manufacturing Company, versatile 4C pedestal mounted mailbox, 4C16D-19-P or approved equal.
2. Install four units side by side

COMMUNITY MAILBOX DETAIL

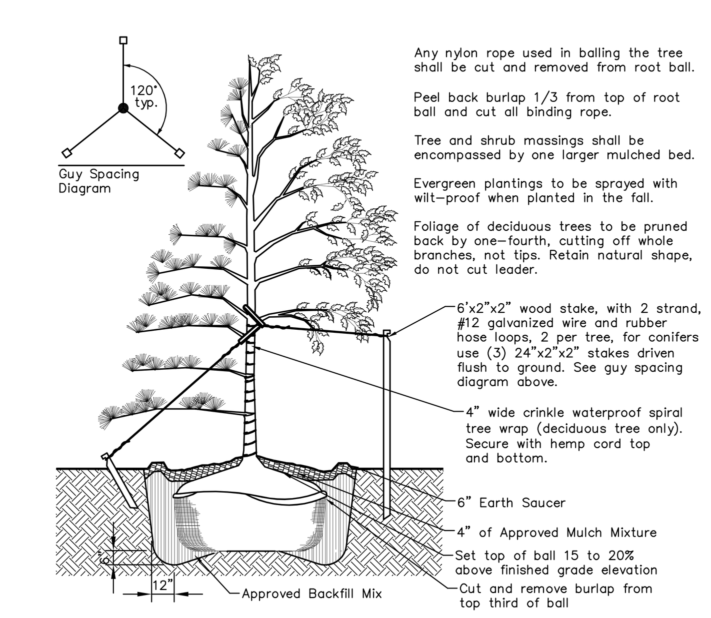
N.T.S.

PLANTING SCHEDULE			
Symbol	Quantity	Common Name	Size/Caliper
G	32	Ginko Tree (Male)	See Note 10
Z	32	Zelkova	See Note 10
(pine symbol)	19	Virginia Pine	See Note 10
(holly symbol)	20	American Holly	5' min.

*or approved alternate trees/shrubs

LANDSCAPING NOTES:

1. Street trees shall be planted eight feet from the right-of-way line on the dwelling side or as shown on plan.
2. Street trees shall be planted at intervals of between 50 and 100 feet, but in no instance shall there be fewer than one tree per lot.
3. Street trees shall have a minimum trunk diameter of 2 1/2 inches measured at a height of six inches above finished grade.
4. Street trees shall have a minimum of a 7-foot single straight stem to the first lateral branches above ground level, and the trunk diameter measured at a height of 3-feet above the finished grade level shall be a minimum of 2 inches.
5. Trees shall be planted and staked in conformance with good landscaping practices. Tree locations shall be adjusted insofar as practical to avoid conflicts with underground utilities.
6. The landscaping and street trees shall be properly maintained by the developer after they are planted for a period of eighteen months. Any plant material that does not survive the eighteen month period must be replaced.
7. Street trees shall be installed in a location so they do not interfere with proposed utilities or driveway lamp posts.
8. Trees shall be of symmetrical growth, free of insect pests and disease, and deemed durable by regional nursery standards.
9. Trees shall have a minimum of a seven-foot single straight stem to first lateral branches above ground level. The trunk diameter measured at a height of three feet above the finished grade level shall be a minimum of two inches.
10. Deciduous trees shall have a minimum trunk diameter of 2 1/2 inches measured at a height of six inches above finished grade. Evergreen trees shall be 6 to 7 feet in height.
11. The tree planting screen shall be placed so that at maturity it will be no closer than three (3) feet to any street or property line.
12. All chain link fence around the perimeter of the golf course is to be removed.
13. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Wassergass Road and Warner Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.



TREE PLANTING DETAIL

N.T.S.

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer

Registration No. PE036737E

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Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

Preliminary Plan

STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted | DRAWN BY: EN

DATE: 22 Dec. '22 | FILE: 14191013-14

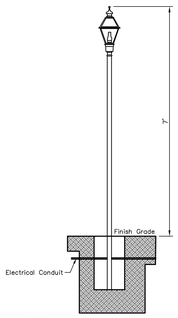
OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Landscape & Lighting Plan – Fairway Woods Subdivision

SYMBOLS

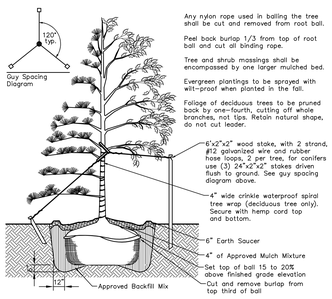
- 450 — Existing Contour
- 430 — Proposed Contour
- Township Line
- Existing Tree Line
- Proposed Tree Line
- Proposed Community Mail Box
- Proposed Tree
- Proposed Lamp Post
- *Slanted Text* — Existing Features
- Straight Text — Proposed Features
- Proposed Building

NORTH



NOTE:
1. Light to be mounted on a 3"ø post with a height of 7' measured from finished grade to top of street light.
2. Light Specifications(or approved equal):
   Make:Quoizel, Inc.
   Model: NY9042K
   Material: Brass
   Finish: Mystic Black
   Bulb Type: B10 CAND
   Wattage: 60w
   Bulb Quantity: 2
   Voltage: 120vAC

LAMP POST LIGHT DETAIL
N.T.S.



Any nylon rope used in balling the tree shall be cut and removed from root ball.

Peel back burlap 1/3 from top of root ball and cut all binding rope.

Tree and shrub massings shall be encompassed by one larger mulched bed.

Evergreen plantings to be sprayed with wilt-proof when planted in the fall.

Foliage of deciduous trees to be pruned back by one-fourth, cutting off whole branches, not tips. Retain natural shape, do not cut leader.

TREE PLANTING DETAIL
N.T.S.

PLANTING SCHEDULE			
Symbol	Quantity	Common Name	Size/Caliper
	37	Ginko Tree (Male)	See Note 10
	36	Zelkova	See Note 10
	19	Virginia Pine	See Note 10
	91	American Holly	5' min.
	130	Moonglow Juniper	5' min.

*or approved alternate trees/shrubs

LANDSCAPING NOTES:

1. Street trees shall be planted eight feet from the right-of-way line on the dwelling side or as shown on plan.
2. Street trees shall be planted at intervals of between 50 and 100 feet, but in no instance shall there be fewer than one tree per lot.
3. Street trees shall have a minimum trunk diameter of 2 1/2 inches measured at a height of six inches above finished grade.
4. Street trees shall have a minimum of a 7-foot single straight stem to the first lateral branches above ground level, and the trunk diameter measured at a height of 3-feet above the finished grade level shall be a minimum of 2 inches.
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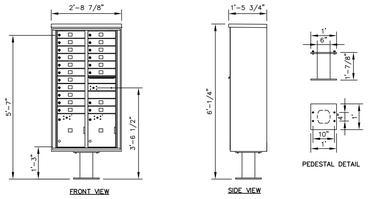
7. Street trees shall be installed in a location so they do not interfere with proposed utilities or driveway lamp posts.
8. Trees shall be of symmetrical growth, free of insect pests and disease, and deemed durable by regional nursery standards.
9. Trees shall have a minimum of a seven-foot single straight stem to first lateral branches above ground level. The trunk diameter measured at a height of three feet above the finished grade level shall be a minimum of two inches.
10. Deciduous trees shall have a minimum trunk diameter of 2 1/2 inches measured at a height of six inches above finished grade. Evergreen trees shall be 6 to 7 feet in height.
11. The tree planting screen shall be placed so that at maturity it will be no closer than three (3) feet to any street or property line.
12. All chain link fence around the perimeter of the golf course is to be removed.
13. A clear sight triangle of 100 feet in all directions shall be provided and maintained at the intersection of Spirk Road and Reservoir Road. A clear sight triangle of 75 feet in all directions shall be provided and maintained at the intersection of all the internal roads. Nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision between the height of 2.5' to 10' above the center line grades of the intersecting streets in the area bounded by the triangular area.



NOTES:
1. Mailbox is to be Florence Manufacturing Company, versatile 4C pedestal mounted mailbox, 4C16D-19-P or approved equal.
2. Install four units side by side

COMMUNITY MAILBOX DETAIL
N.T.S.

50 0 25 50
1 inch = 50 ft.

PARTIAL SITE PLAN
1" = 50'

Preliminary Plan

ENGINEER'S CERTIFICATION

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Registered Engineer
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STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted | DRAWN BY: EN
DATE: 22 Dec. '22 | FILE: 14191013-14

OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Landscape & Lighting Plan – The Turn Subdivision

SHEET 14 of 22

GENERAL NOTES

NOTE:

1. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the Northampton County Conservation District to an on-site preconstruction meeting.
2. Upon installation or stabilization of all perimeter sediment control BMPs, and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the Department or authorized conservation district.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. **Deviation from that sequence must be approved by the Northampton County Conservation District or by the Department prior to implementation. Each step of the sequence shall be completed before proceeding to the next step, except where noted.**
5. The PA Natural Diversity Inventory (PNDI) requires an avoidance measure of 50' from all streams, rivers, creeks, or tributaries, including perennial and intermittent waterways.

CONSTRUCTION SEQUENCE (Anticipated site work schedule: Begin 1/24 End 6/28)

NOTE:

a) All earth disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed before any following stage is initiated. Clearing and grubbing shall be limited only to those areas described in each stage.
b) All proposed structural BMP's, including the infiltration basin, infiltration bed, and rain garden are considered to be Critical Stages of the design by PA-DEP, which require the direct supervision by the Design Engineer during their excavation & installation (to help ensure they are installed & function properly). Please refer to the individual BMP installation sequence(s) and maintenance notes found on the PCSM plans before installation.
c) All E&S controls must be in place and fully functional PRIOR TO work in any area. The developer shall schedule and hold a preconstruction meeting with the Township and Northampton County Conservation District prior to the commencement of earthmoving activities.
d) No more than 15,000 s.f. of disturbed area shall reach final grade before initiating seeding and mulching operations.
e) Any sinkhole encountered during construction shall be remedied. Contact professional geologist and see deatils on Sheet 19.

Day 1 – 25

1. All erosion and sediment controls must be constructed, stabilized, and functional before beginning earth disturbance within the tributary areas of those controls. The limits of disturbance shall be field marked prior to beginning any earth disturbance. The immediate cessation of activity on any disturbed area shall require temporary stabilization consisting of temporary seed and mulch.

Day 26 – 200

2. Install rock construction entrances, silt socks, construction fence, rock filters, diversion socks, and concrete washout structures as shown on sheets 14 to 18. All erosion and sediment controls must be constructed, stabilized, and functional before beginning earth disturbance within the tributary areas of those controls. The limits of disturbance shall be field marked prior to beginning any earth disturbance. The immediate cessation of activity on any disturbed area shall require temporary stabilization consisting of temporary seed and mulch.
3. Remove trees and any existing impervious surfaces that are to be removed within the limits of disturbance. Strip topsoil, perform roadway excavation, install utilities, curbing and install stone base and the maintenance/access road. Stockpile topsoil and stabilize with temporary seed mixture and mulch. The road construction can be performed prior to the installation of the retaining walls along Lots 68-96. These walls shall be constructed prior to the dwelling construction on the affected lots.
4. Rain garden 1 must be complete per the construction sequence on this sheet prior to the discharge of water from end wall 4 (EW-4). Rain garden 2 must be complete per the construction sequence on this sheet prior to the discharge of water from end wall 5 (EW-5).
5. Steps 6 to 10 can be performed simultaneously.
6. Strip topsoil. Stockpile topsoil and stabilize with temporary seed mixture and mulch.
7. Excavate for the building foundations. The excavated material shall be placed in the stock pile/fill areas of the project site. Install living retaining walls and stabilize with temporary seed mixture.
8. The building construction will proceed simultaneously with the following construction sequence items. When the building foundation is backfilled, rough grade the site to proposed contours and stabilize with temporary seed mixture. Install the inlets and pipes. Inlet protection must be installed immediately after inlet installation. Finish installation of utilities. Install sidewalks from driveway to dwelling and lights.
9. Finish driveway and roadway construction.
10. Install street trees, finish grade around dwellings, spread topsoil, seed and mulch all disturbed areas. (All topsoil placement shall be a minimum of 8" thick)
11. All erosion and sediment pollution controls must be properly maintained and cleaned of sediment or replaced when necessary, UNTIL THE SITE IS STABILIZED. (A permanently stabilized site shall mean 70% uniform vegetative cover).

Day 200 – 250

12. Allow silt socks to remain until ground cover is established on disturbed areas.
13. When topsoil piles are removed, seed and mulch the area. Maintain topsoil stockpile silt fence mulch until area is stabilized.
14. Areas that fail to germinate must be reseeded. Seeded areas that wash out must be filled and graded as necessary and then reseeded. North American Green S150 geotextile matting shall be used to hold seed/mulch in place.
15. If at any time prior to site stabilization any erosion or sediment pollution problems occur which require additional controls, immediate action must be taken to correct the problems.
16. Remove all temporary BMP's when the site is stabilized and upon approval of said stabilization by the Northampton County Conservation District, immediately repair and permanently stabilize all disturbed areas associated with the removal of the temporary BMP's.

CONSTRUCTION SEQUENCE: Stormwater BMPs

General Note:

1. The construction of the rain gardens and infiltration basins are critical stages and must be observed by a professional engineer or his representative.

Construction Sequence:

1. Install silt sock downslope of BMP.
2. Remove required trees and existing impervious within the limits of disturbance for construction of the stormwater BMPs.
3. Strip topsoil from the stormwater BMP area. Stockpile topsoil and fill and stabilize with temporary seed mixture and mulch.
4. Construct the BMP and place excavated material in stockpile/fill areas of the project site. Install the outlet structure and emergency spillway with concrete checker blocks.
5. Final grade the BMP area, spread topsoil, seed and mulch all areas not previously completed. (All topsoil placement shall be a minimum of 8" thick).
6. Install silt sock on upslope side of BMP to prevent sedimentation of BMP.

CONSTRUCTION SEQUENCE: Cart Paths

General Note:

1. The construction and demolition of a given cart paths shall be completed with minimal disturbance and in the shortest time frame possible.

Construction Sequence:

1. Install 8" silt sock immediately downslope of cart path.
2. For construction, strip topsoil, install stone base, and final pave. Stockpile topsoil and stabilize with temporary seed mixture and mulch. For demolition, remove existing impervious and install a minimum of 8" of topsoil.
3. Immediately stabilized disturbed area and placed topsoil.

RECYCLING OR DISPOSAL OF MATERIALS

The project applicant or co-applicant shall remove from the site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at the site. Construction waste for the site will be concrete. The contractor shall use the concrete washouts as shown on the plan (See Concrete Washout Detail on Sheet 14).

GEOLOGIC FORMATIONS/SOIL CONDITIONS THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION

Mr. John Kortvely, PG performed soils testing and a site analysis for this project. Several geological features were identified. However, no carbonate features were detected in the field investigation of the soils beneath the proposed BMPs. The site was evaluated for a subsurface infiltration bed, infiltration basin, and rain garden with a number of soil probes/bore holes. Stormwater infiltration was found to be feasible for the site. If unsuitable conditions are encountered during development of the site, a soil scientist should be consulted and alternate locations considered for the affected construction items. If alternate locations are proposed, then a revised E&S plan shall be submitted to Northampton County Conservation District for approval. The contractor shall contact the Township Engineer and the County Conservation District prior to any relocation or reconfiguration.

POTENTIAL THERMAL IMPACTS

Runoff from impervious surfaces will drain over vegetated areas. During construction all runoff that is not impounded will flow to the silt socks before leaving the property. We anticipate that the proposed development will cause no thermal impact associated with the BMPs.

CLEAN FILL & DUE DILIGENCE NOTE

Applicants and/or operators must use environmental due diligence to ensure that the fill material associated with this project qualifies as Clean Fill. Definitions of Clean Fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with the DEP's policy "Management of Fill", document number 258-2182-773.

Clean Fill is defined as uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the 3800-PM-BCW0405a Rev. 3/2019 Instructions – 3 – waters of the Commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.)

Clean Fill affected by a spill or release of a regulated substance: Fill materials affected by a spill or release of a regulated substance may still qualify as clean fill if the testing reveals that the fill material contains concentrations of regulated substances that are below the residential limits in Tables FP1a and FP-1b found in DEP's "Management of Fill" policy. Any person placing clean fill that has been affected by a spill or release of a regulated substance must use Form FP-001 to certify the origin of the fill material and the results of the analytical testing to qualify the material as clean fill. Form FP001 must be retained by the owner of the property receiving the fill and must be kept on-site and made available upon request by DEP or authorized conservation district. Failure to produce the form upon request may result in the revoking, suspension or termination of permit coverage. A copy of Form FP-001 can be found at the end of these instructions.

Environmental Due Diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of DEP's "Management of Fill" policy. Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with DEP's residual or municipal waste regulations in 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable.

SITE SPECIFIC NOTES

1. The contours and existing features are based on a field and aerial survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
2. All users of this plan are referred to and cautioned to comply with PA Act 287 as amended by PA Act 172, HB 2543, enacted 06-10-1987, and by PA HB 722, P.L. 364, Act 38, enacted 12-12-1991, and by PA HB 2827, Act 187, effective 12-19-96, and by PA Act 199, P.L. 1567, enacted 11-30-2004, and by PA Act 181, P.L. 1593, enacted 11-29-2006.
3. Proposed utilities shall be installed in accordance with all utility company and local building code requirements.
4. The contractor performing the work is responsible for contacting "PA ONE CALL" (1-800-242-1776) for location of all underground lines at least one week prior to the beginning of construction.
5. If any conflicts, discrepancies, or other unsatisfactory conditions are discovered, either on the construction documents or the field conditions, the contractor must notify the owner or project engineer immediately and shall not commence operations until the conflicts, discrepancies, or other unsatisfactory conditions are resolved.
6. Bench mark datum is arbitrary.
7. The existing ground cover for the site is meadow cover and woods.
8. The natural resources on the site can be found on sheets 4 and 5.
9. Applicants and/or operators must use environmental due diligence to ensure that the fill material associated with this project qualifies as Clean Fill. All fill material must be used in accordance with the DEP's policy "Management of Fill", document number 258-218-2773.

   Clean Fill
   Uncontaminated, non-water soluble, non-decomposable, inert, solid material.

   Environmental Due Diligence
   Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits.

E&S PLAN PLANNING & DESIGN NOTES

1. The design minimizes extent and duration of earth disturbance. The existing ground cover is meadow and woods.
2. The grading design minimizes the area that must be graded around the proposed features.
3. The design maximizes the protection of existing drainage features and existing vegetation. The existing drainage feature near the site is a swale and Silver Creek which will not be disturbed.
4. The design minimizes soil compaction. Though the limits of disturbance encompass the entire site, the contractor will not disturb areas where no work will be done.
5. The design utilizes structural and nonstructural BMPs that prevent or minimize changes in stormwater runoff.

SYMBOLS

- Matchline
- 450 – Existing Contour
- 450 – Proposed Contour
- CmD – Soil Type
- Soil Boundary Line
- Tree Line
- Limits of Construction/Disturbance
- NPDES Boundary
- Silt Sock
- Diversion Sock
- Stanford Text – Existing Features
- Straight Text – Proposed Features
- Rock Filter
- Topsoil/Fill – Topsoil/Fill Stockpile
- Proposed Building
- Rock Construction Entrance

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

PHASE 3 BUILDING SCHEDULE	
PROJECT	START DATE
Fairway Woods	Jan. 10, 2024
The Turn	Jan 10, 2026

(IN FEET)
1 inch = 100 ft.

PARTIAL SITE PLAN
1" = 100'

Preliminary Plan

CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 100' | DRAWN BY: TNF
DATE: 22 Dec. '22 | FILE: 14191015-16

OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Erosion and Sedimentation Control Plan – North

SHEET 15 of 22

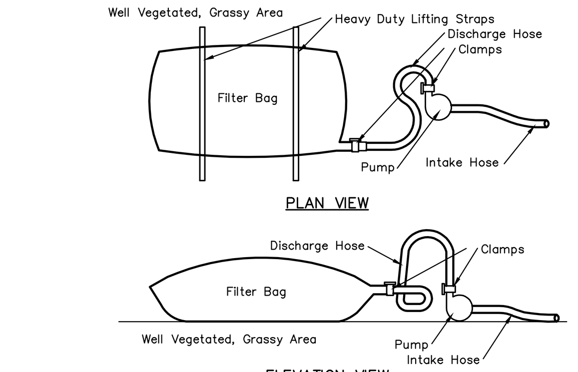
TABLE OF INLET PROTECTION DRAINAGE AREAS

Inlet Number	Drainage Area	BMP Type (Standard Construction Detail)
1	0.292	Detail #4–16
2	0.239	Detail #4–16
3	0.368	Detail #4–16
4	0.439	Detail #4–16
5	0.180	Detail #4–16
6	0.307	Detail #4–16
7	0.387	Detail #4–16
8	0.372	Detail #4–16
9	0.298	Detail #4–16
10	0.188	Detail #4–16
11	0.515	Detail #4–17
12	0.602	Detail #4–16
13	0.100	Detail #4–16
14	0.006	Detail #4–16
15	0.371	Detail #4–16
16	0.266	Detail #4–16
17	0.336	Detail #4–16
18	0.344	Detail #4–16
19	0.261	Detail #4–16
20	0.257	Detail #4–16
21	0.151	Detail #4–16
22	0.237	Detail #4–16
23	0.212	Detail #4–16
24	1.521	Detail #4–18
25	0.198	Detail #4–16
26	0.293	Detail #4–16
27	0.268	Detail #4–16
28	0.269	Detail #4–16
29	0.263	Detail #4–16
30	5.136	Detail #4–16
31	7.419	Detail #4–20
32	0.211	Detail #4–16
33	1.036	Detail #4–20
34	0.556	Detail #4–18
35	0.531	Detail #4–18
36	0.596	Detail #4–17
37	0.062	Detail #4–16
38	0.054	Detail #4–16
39	0.334	Detail #4–16
40	0.047	Detail #4–16
41	0.050	Detail #4–16
42	0.025	Detail #4–16
43	0.027	Detail #4–16
44	0.212	Detail #4–16
45	0.205	Detail #4–16
46	0.468	Detail #4–16
47	0.235	Detail #4–16
48	0.098	Detail #4–16
49	0.275	Detail #4–16
50	0.274	Detail #4–16
51	0.414	Detail #4–16
52	0.298	Detail #4–16
53	0.959	Detail #4–17
54	0.313	Detail #4–16
55	2.471	Detail #4–20
56	0.267	Detail #4–16
57	0.265	Detail #4–16
58	0.265	Detail #4–16
59	0.164	Detail #4–16
60	0.278	Detail #4–16
61	0.051	Detail #4–16
62	0.255	Detail #4–16
63	0.026	Detail #4–16
64	0.183	Detail #4–16
65	0.223	Detail #4–16
66	0.640	Detail #4–17
67	0.196	Detail #4–16
68	0.121	Detail #4–16

EROSION & SEDIMENTATION CONTROL BMP INSPECTION/MAINTENANCE SCHEDULE

	TYPE OF BMP	MAINTENANCE ACTIVITY	FREQUENCY	CLEAN–OUT LEVEL
Temporary	Rock Filter	1. Check for sediment level	After every storm event	When clogged with sediment
Temporary	Erosion Control Blanket	1. Inspect to ensure adequate existing soil cover	After every storm event	N/A
Temporary	Erosion Control Blanket	2. Inspect to ensure that blankets are secured to the soil surface	After every storm event	N/A
Temporary	Rock Construction Entrance	1. Check for appropriate thickness of stone	Daily	N/A
Temporary	Rock Construction Entrance	2. Street sweeping	Daily	N/A
Temporary	Filter Fabric Fence/Silt Sock	1. Check for sediment level	After every storm event	When accumulations reach 1/2 the above ground height
Temporary	Filter Fabric Fence/Silt Sock	2. Inspect to ensure that BMP is not compromised	After every storm event	When accumulations reach 1/2 the above ground height
Temporary	Inlet Protection	1. Check for sediment level	After every storm event	When accumulations reach a depth equal to 1/2 the depth of the stone
Temporary	Diversion Berm	1. Check for sediment level	After every storm event	When accumulations reach 1/2 the effective height
Temporary	Diversion Berm	2. Inspect to ensure that BMP is not compromised	After every storm event	When accumulations reach 1/2 the effective height
Permanent	Grass–Lined Swales	1. Check for erosion problems, damaged vegetation, and sediment accumulation	Weekly or when needed	When sediment > 3 inches at any spot or covering vegetation
Permanent	Grass–Lined Swales	2. Mow and trim vegetation	As needed	
Permanent	Rip–rap Apron	1. Inspect for signs of scour/erosion	Weekly & after storms	N/A

Note: For additional maintenance information pertaining to the individual BMPs, refer to each BMP's respective detail.

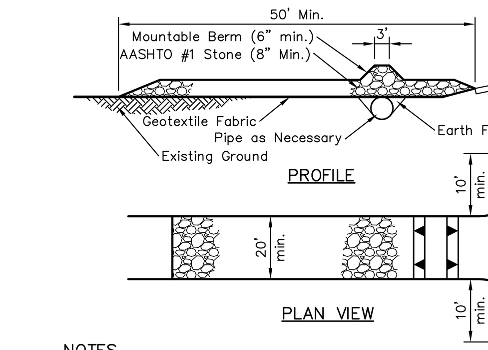


NOTES
1. Low volume filter bags shall be made from non–woven geotextile material sewn with high strength, double stitched "J" type seams. They shall be capable of trapping particles larger than 150 microns. High volume filter bags shall be made from woven geotextiles that meet the following standards:

Property	Test Method	Minimum Standard
Avg. Wide Width Strength	ASTM D–4884	60 lb/in
Grab Tensile	ASTM D–4632	205 lb
Puncture	ASTM D–4633	110 lb
Mullen Burst	ASTM D–3786	350 PSI
UV Resistance	ASTM D–4355	70%
AOS % Retained	ASTM D–4751	80 Sieve

2. A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 1/2 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Bags shall be placed on straps to facilitate removal unless bags come with lifting straps already attached.
3. Bags shall be located in a well–vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile underlayment and flow path shall be provided. Bags may be placed on filter stone to increase discharge capacity. Bags shall not be placed on slopes greater than 5%. For slopes exceeding 5%, clean rock or other non–erodible and non–polluting material may be placed under the bag to reduce slope steepness.
4. No downslope sediment barrier is required for most installations. Compost berm or compost filter sock shall be installed below bags located in HQ or EV watersheds, within 50' of any receiving surface water, or where a grassy area is not available.
5. The pump discharge hose shall be inserted into the bags in the manner specified by the manufacturer and securely clamped. A piece of PVC pipe is recommended for this purpose.
6. The pumping rate shall be no greater than 750 gpm or 1/2 the maximum specified by the manufacturer, whichever is less. Pump intakes shall be floating and screened.
7. Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

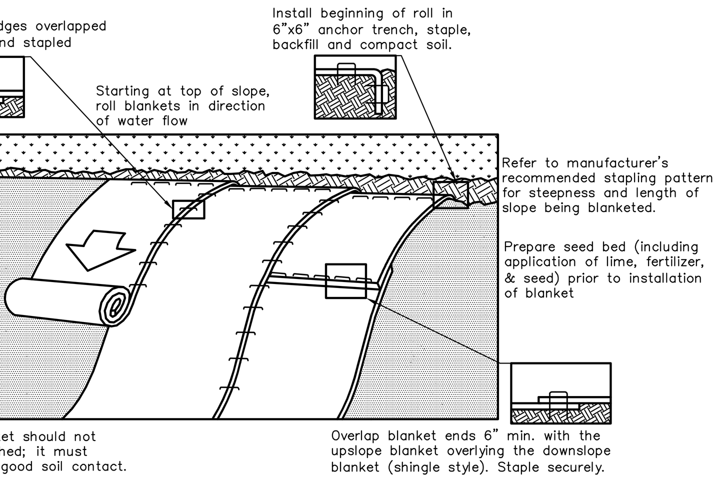
STANDARD CONSTRUCTION DETAIL 3–16 PUMPED WATER FILTER BAG
N.T.S.



NOTES
1. Remove topsoil prior to installation of rock construction entrance. Extend rock over full width of entrance.
2. Runoff shall be diverted from roadway to a suitable sediment removal BMP prior to entering rock construction entrance.
3. Mountable berm shall be installed wherever optional culvert pipe is used and proper pipe cover as specified by manufacturer is not otherwise provided. Pipe shall be sized appropriately for size of ditch being crossed.

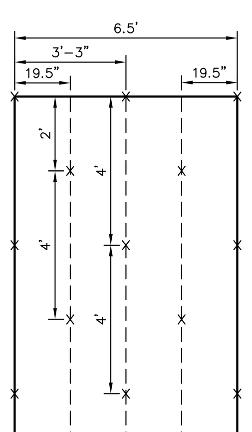
Maintenance: Rock construction entrance thickness shall be constantly maintained to the specific dimensions by adding rock. A stockpile of rock material shall be maintained on site for this purpose. All sediment deposited onto paved roadways shall be removed and returned to the construction site immediately. If excessive amounts of sediment are being deposited on the roadway, extend the length of the rock construction entrance by 50' increments until condition is alleviated or install wash rack. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.
Street Sweeping: Roads will be swept daily with a vacuum sweeper or a sweeper with a catch bin attachment.

STANDARD CONSTRUCTION DETAIL 3–1 ROCK CONSTRUCTION ENTRANCE
N.T.S.

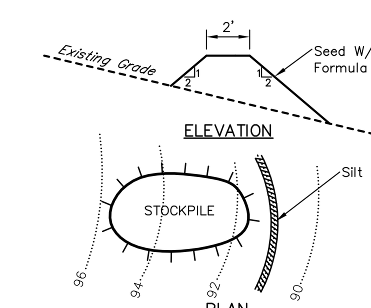


NOTES:
1. Seed and soil amendments shall be applied according to the rates on the plan drawings prior to installing the blanket.
2. Provide anchor trench at toe of slope in similar fashion as at top of slope.
3. Slope surface shall be free of rocks, clods, sticks, and grass.
4. Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.
5. The blanket shall be stapled in accordance with the manufacturer's recommendations.
6. Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.

STANDARD CONSTRUCTION DETAIL #11–1 EROSION CONTROL BLANKET INSTALLATION
N.T.S.

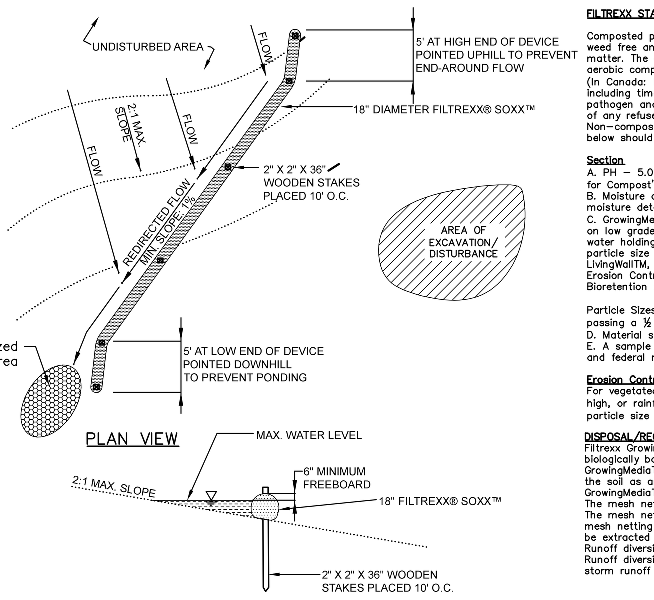


NAG "C" STAPLE PATTERN
N.T.S.



1. Install silt fence downstream of area of stockpile.
2. Place stockpile in areas shown on this drawing without blocking natural drainage patterns.
3. Follow dimensions shown above. Height should not exceed 35 ft. Side slopes should not be steeper than 2(h):1(v).
4. Seed immediately with PennDOT seeding formula "C"

TOPSOIL STOCKPILES & MAINTENANCE
N.T.S.



FILTREXX STANDARD SPECIFICATIONS FOR GROWING MEDIA

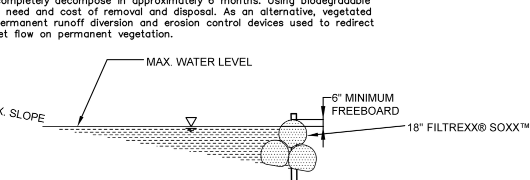
Composted products used for Filtrexx GrowingMediaTM shall be weed free and derived from a well decomposed source of organic matter. The composted products shall be produced using an aerobic composting process meeting USEPA CFR 503 regulations (In Canada: M.O.E. 101, C.C.M.E. Type "A" and Type "AA" regulations), including time and temperature data indicating effective weed seed, pathogen and insect larvae kill. The composted products shall be free of any refuse, contaminants or other materials toxic to plant growth. Non–composted products will not be accepted. Test methods for the items below should follow USCC TMECC guidelines for laboratory procedures:

Section
A. PH – 5.0–8.0 in accordance with TMECC 04.11–A, "Electrometric pH Determinations for Compost"
B. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.
C. GrowingMediaTM to be used with FilterSoxxTM where seeding and/or live stakes are specified; on low grade slopes where vegetation establishment is the priority; or where rainwater absorption, water holding capacity, runoff reduction and infiltration are the priority and meet the following particle size distribution. Examples include Runoff Diversion SoxxTM, ChannelSoxxTM, EdgeSaverTM, LivingWallTM, GreenLoxxTM, FilterCell Flow Diversion SoxxTM, Compost Vegetated CoverTM, Compost Erosion Control BlanketTM, Compost Storm Water BlanketTM, Compost Engineered SoilTM, Compost Bioretention SystemTM, Green Roof GrowingMediaTM.

Particle Sizes – 100% passing a 2 in (50mm) sieve, 99% passing a 1 in (25mm) sieve, minimum of 60% passing a ½ in (12.5mm) sieve in accordance with TMECC 02.02–B, "Sample Sieving for Aggregate Size Classification".
D. Material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.
E. A sample shall be submitted to the Engineer for approval prior to being used and must comply with all local, state and federal regulations.

Erosion Control
For vegetated non FilterSoxxTM applications where slope grades are greater than 3:1, where sheet runoff rate or velocity may be high, or rainfall rate/intensity may be high. Substitution for Section C. Particle Size of Filtrexx GrowingMediaTM shall use the following particle size distribution specification: 99% passing a 1 in (25mm) sieve, maximum of 50% passing a 1/2 in (12.5mm) sieve.

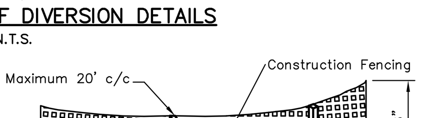
DISPOSAL/RECYCLING Of Growing Media:
Filtrexx GrowingMedia is an organic, composted product manufactured from locally generated organic, natural, and biologically based materials. Once all soil has been stabilized and construction activity has been completed, the GrowingMediaTM may be dispersed with a loader, rake, bulldozer or similar device and may be incorporated into the soil as an amendment or left on the soil surface to aid in permanent seeding or landscaping. Leaving the GrowingMediaTM on site reduces removal and disposal costs compared to other temporary runoff diversion devices. The mesh netting material will be extracted from the GrowingMediaTM and disposed of properly by the Contractor. The mesh netting material is photodegradable and will decompose in 2 to 5 years if left on site. Biodegradable mesh netting material is available and does not need to be extracted and disposed of, as it will completely decompose in approximately 6 months. Using biodegradable Runoff diversion completely eliminates the need and cost of removal and disposal. As an alternative, vegetated Runoff diversion can be left on–site as permanent runoff diversion and erosion control devices used to redirect storm runoff and reduce stress from sheet flow on permanent vegetation.



PYRAMID INSTALLATION – SECTION VIEW

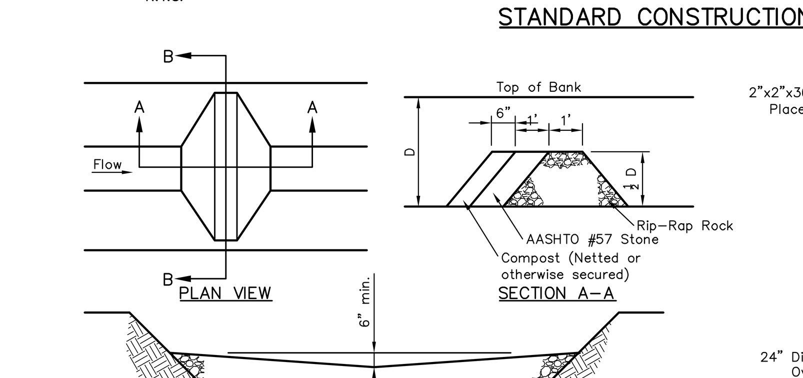
Notes:
1. Remove sediment from the upslope side of the Soxx when accumulation has reached ½ the effective height of Soxx.
2. Slopes greater than 5% may require additional stabilization practices.
3. Socks to be filled with growing media and may be seeded at the time of installation.

FILTREXX RUNOFF DIVERSION DETAILS
N.T.S.



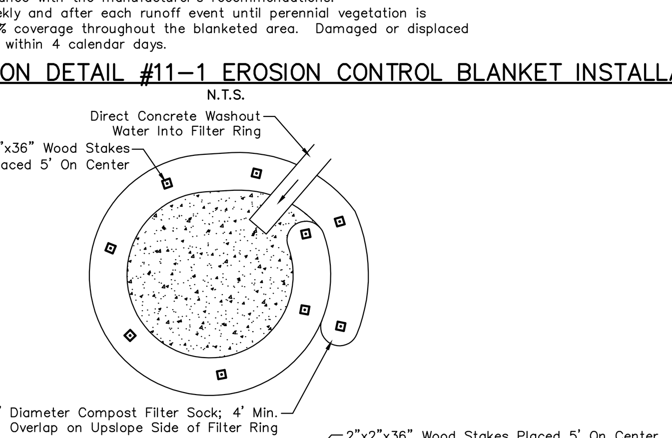
1. Tree protection fence shall be placed the greater of 15' from the trunk of the tree or to the canopy drip line.

TREE PROTECTION/CONSTRUCTION FENCE
N.T.S.



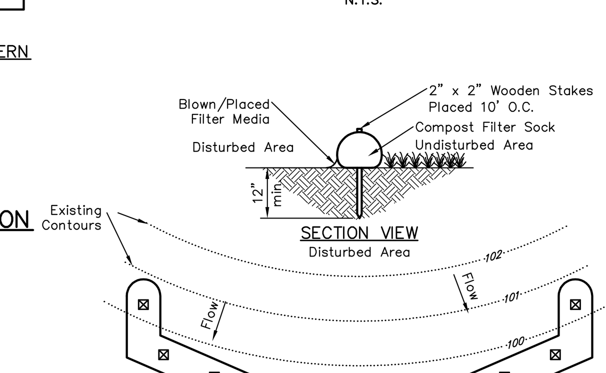
NOTES:
1. A one foot thick layer of AASHTO #57 (or smaller) stone should be placed on the upstream side of the filter. In special protection watersheds, a 6" layer of compost should be placed and anchored on top of the rock filter stone. (NOTE: Filter fabric and straw bales should not be used in rock filters.)
2. Rock filter should be inspected weekly and after each runoff event. Clogged filter stone (AASHTO #57) should be replaced. Needed repairs should be initiated immediately after the inspection.
3. Sediment shall be removed when accumulations reach 1/2 the height of the filter.
4. Immediately upon stabilization of each channel, installer shall remove accumulated sediment, remove rock filter, and stabilize disturbed areas.

STANDARD CONSTRUCTION DETAIL 4–14 ROCK FILTER
N.T.S.



NOTES:
1. Do not place concrete washout facility within 50 feet of storm drains, open ditches, or water bodies.
2. Check concrete washout facility daily to determine if they have been filled to 50% full.
3. When the washout is nearing capacity, remove hardened concrete, vacuum and dispose of liquids in an approved manner. Do not discharge liquids to waterways, storm drains, or directly onto the ground.
4. When materials are removed from the washout make any necessary repairs.
5. Install on flat grade for optimum performance.
6. 18" diameter filter sock may be stacked onto double 24" diameter socks in pyramidal configuration for added height.
7. A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.

STANDARD CONSTRUCTION DETAIL #3–18 CONCRETE WASHOUT
N.T.S.



NOTES
1. Sock fabric shall meet the standards of Table 4.1. Compost shall meet the standards of Table 4.2
2. Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be at least 8 feet upslope at 45° to the main sock alignment. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.
3. Traffic shall not be permitted to cross filter socks.
4. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed in the manner described elsewhere on the plan.
5. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.
6. Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.
7. Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

STANDARD CONSTRUCTION DETAIL #4–1 COMPOST FILTER SOCK
N.T.S.

TABLE 4.1
Compost Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi–Filament Polypropylene (MFPP)	Heavy Duty Multi–Filament Polypropylene (MFPP)
Material Characteristics	Photo–degradable	Photo–degradable	Bio–degradable	Photo–degradable	Photo–degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G–155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Two–ply Systems	
Inner Containment Netting	HDPE biaxial net; Continuously wound; Fusion–welded junctures; 3/4" x 3/4" Max. aperture size
Outer Filtration Mesh	Composite Polypropylene Fabric (woven layer and non–woven fleece mechanically fused via needle punch; 3/16" Max. aperture size

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.

TABLE 4.2
Compost Standards

Organic Matter Content	25% – 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 – 8.5
Moisture Content	30% – 60%
Particle Size	30% – 50% pass through 3/8" sieve
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

MULCH APPLICATION RATES

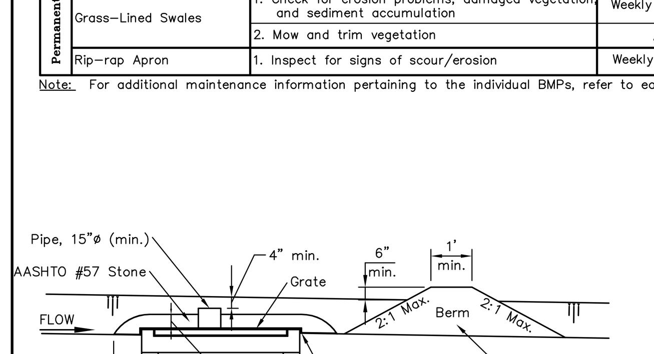
Mulch Type	Application Rates (Min.) Per Acre	Per 1,000 SF	Per 1,000 SY	NOTES
Straw	3 Tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken.
Hay clover	3 Tons	140 lb.	1,240 lb.	Timothy, mixed and timothy or other native forage grasses.
*Wood chips	4–6 Tons	185–275 lb.	1,650–2,500 lb.	May prevent germination of grasses and legumes.
Hydromulch	1 Tons	47 lb.	415 lb.	**Has limitations.

*Not suitable for vegetative cover
**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. The application rate for any hydromulch should be 2,000 lb/acre at a minimum.

GROUND COVER SEED MIXTURES

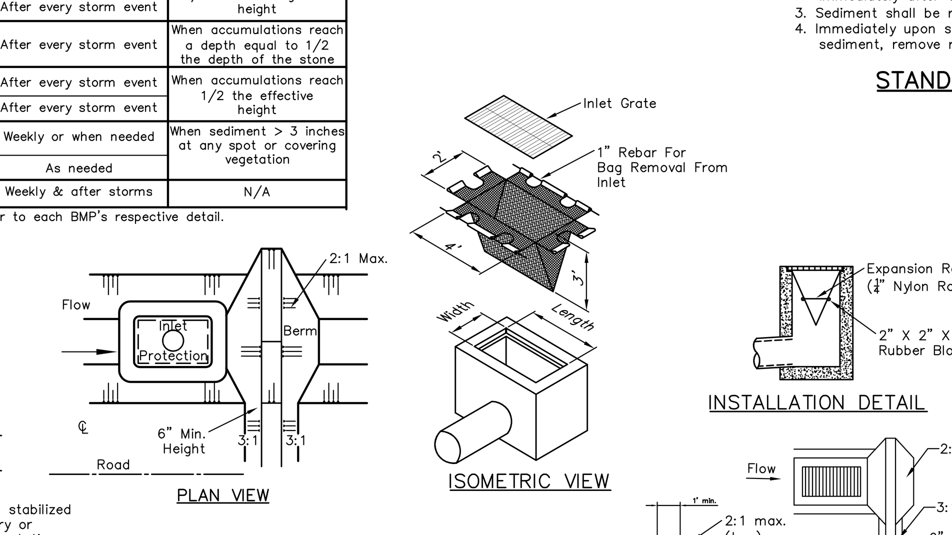
Permanent groundcover
Formula 'B'
mix: 20% perennial rye, 30% red fescue, 50% Kentucky bluegrass
rate: 21 lbs./1,000 S.Y.
mulch: See table below
liming: 2,480 lbs./1,000 S.Y. (Agricultural Lime)
fertilizer: 210 lbs./1,000 S.Y. (10–10–20 Fertilizer)
slow–release nitrogen fertilizer (38–0–0 ureaform): 50 lbs./1,000 S.Y.

Temporary groundcover
Formula 'E'
mix: annual rye
rate: 10 lbs./1,000 S.Y.
mulch: See mulch table
liming: 410 lb/1,000 S.Y. (Not req. for stockpiles)
fertilizer: 100 lb/1,000 S.Y. (10–10–10 fertilizer)



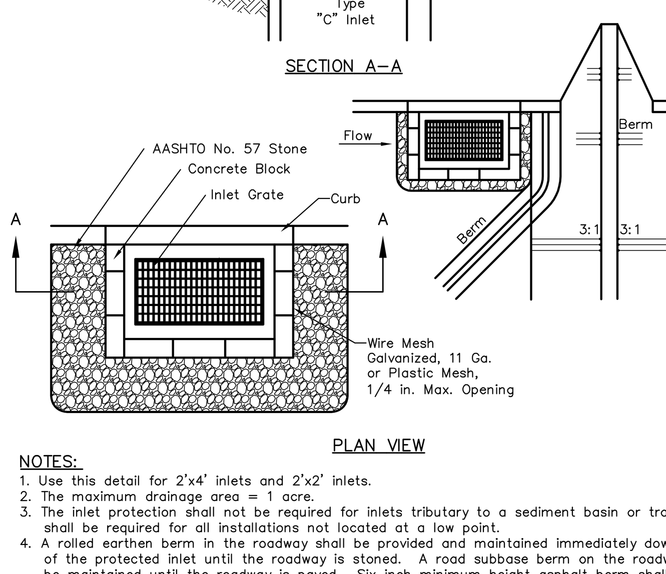
NOTES:
1. Inlet protection shall not be required for inlet tributary to sediment basin or trap. Berms shall be required for all installations not located at a low point.
2. Rolled earthen berm in roadway shall be provided and maintained immediately down gradient of the protected inlet until roadway is stoned. Road subbase berm on roadway shall be maintained until roadway is paved. Earthen berm in channel shall be maintained until permanent stabilization is completed or to remain permanently.
3. Stone inlet protection and berm for a Type "M" inlet can be used in one acre maximum drainage area with 15 in. overflow pipe and 4 in. head. A perforated plate welded to a metal riser may not be substituted for the wire mesh. A slotted plate welded to the riser may be used in conjunction with the wire mesh if calculations are provided to show sufficient capacity of the inlet to accept the peak runoff for a 2–year storm event from the tributary drainage area. Top of pipe shall be at least 6 inches below adjacent roadway if ponded water would pose a safety hazard to traffic. Earthen berm shall be rolled.
4. Sediment shall be removed when it reaches half the height of the stone. Damaged or clogged installations shall be repaired or replaced immediately.
5. For systems discharging to HQ or EV surface water, a 6 in. thick compost layer shall be securely anchored on outside and over top of stone. Compost shall meet the standards in table 4.2 of the PA DEP Erosion Control Manual.
6. Do not use on major paved roadways where ponding may cause traffic hazards.

STANDARD CONSTRUCTION DETAIL #4–20 STONE INLET PROTECTION AND BERM TYPE M INLET
N.T.S.



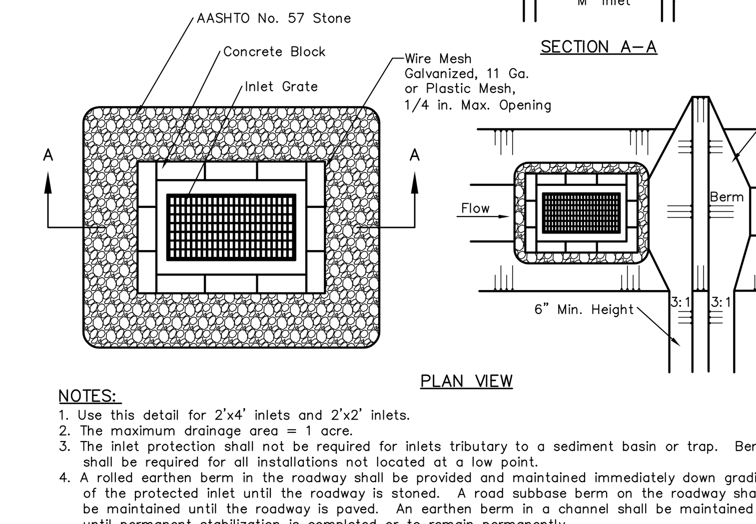
Notes:
1. Maximum drainage area = 1/2 acre.
2. Rolled earthen berm shall be maintained until roadway is stoned. Road subbase berm shall be maintained until roadway is paved. Six inch minimum height asphalt berm shall be maintained until roadway surface receives final coat.
3. At a minimum, the fabric shall have a minimum grab tensile strength of 120 lbs, a minimum burst strength of 200 psi, and a minimum trapezoidal tear strength of 50 lbs. Filter bags shall be capable of trapping all particles not passing a no. 40 sieve.
4. Inlet filter bags shall be inspected on a weekly basis and after each runoff event. Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet. Damaged or clogged bags shall be replaced. A supply shall be maintained on site for replacement of bags. All needed repairs shall be initiated immediately after the inspection. Dispose of accumulated sediment as well as all used bags according to the plan notes.
5. Do not use on major paved roadways where ponding may cause traffic hazards.

STANDARD CONSTRUCTION DETAIL #4–16 FILTER BAG INLET PROTECTION – TYPE M INLET
N.T.S.



NOTES:
1. Use this detail for 2'x4' inlets and 2'x2' inlets.
2. The maximum drainage area = 1 acre.
3. The inlet protection shall not be required for inlets tributary to a sediment basin or trap. Berms shall be required for all installations not located at a low point.
4. A rolled earthen berm in the roadway shall be provided and maintained immediately down gradient of the protected inlet until the roadway is stoned. A road subbase berm on the roadway shall be maintained until the roadway is paved. Six inch minimum height asphalt berm shall be maintained until roadway surface receives final coat.
5. Sediment shall be removed when it reaches half the height of the stone. Damaged or clogged installations shall be repaired or replaced immediately.
6. For systems discharging to HQ or EV surface water, a six inch thick compost layer shall be securely anchored on the outside and over the top of stone. Compost shall meet the standards in table 4.2 of the PA DEP Erosion Control Manual.
7. Don not use on major paved roadways where ponding may cause traffic hazards.

STANDARD CONSTRUCTION DETAIL 4–17 STONE AND CONCRETE BLOCK INLET PROTECTION – TYPE C INLET
N.T.S.



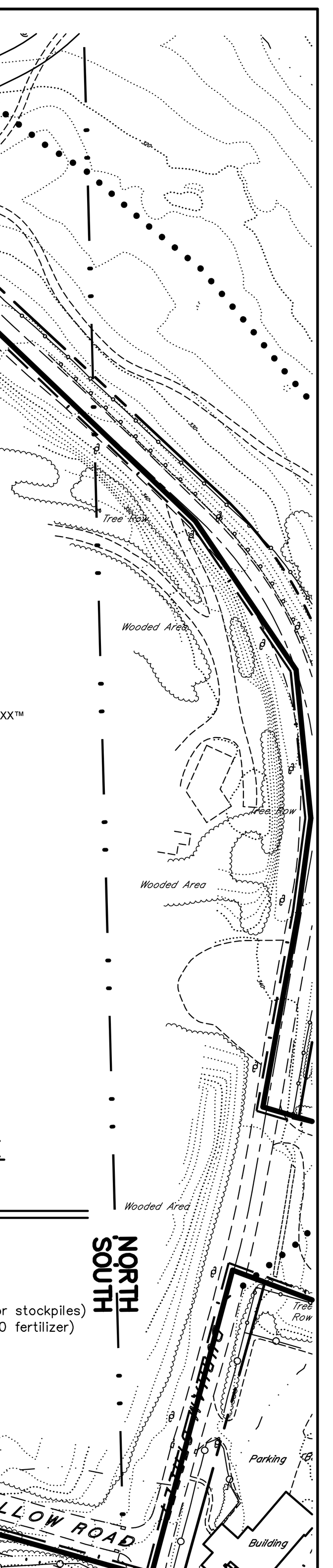
NOTES:
1. Use this detail for 2'x4' inlets and 2'x2' inlets.
2. The maximum drainage area = 1 acre.
3. The inlet protection shall not be required for inlets tributary to a sediment basin or trap. Berms shall be required for all installations not located at a low point.
4. A rolled earthen berm in the roadway shall be provided and maintained immediately down gradient of the protected inlet until the roadway is stoned. A road subbase berm on the roadway shall be maintained until the roadway is paved. An earthen berm in a channel shall be maintained until permanent stabilization is completed or to remain permanently.
5. The top of block shall be at least six inches below the adjacent roads if ponded water would pose a safety hazard to traffic.
6. Sediment shall be removed when it reaches half the height of the stone. Damaged or clogged installations shall be repaired or replaced immediately.
7. For systems discharging to HQ or EV surface water, a six inch thick compost layer shall be securely anchored on the outside and over the top of stone. Compost shall meet the standards in table 4.2 of the PA DEP Erosion Control Manual.

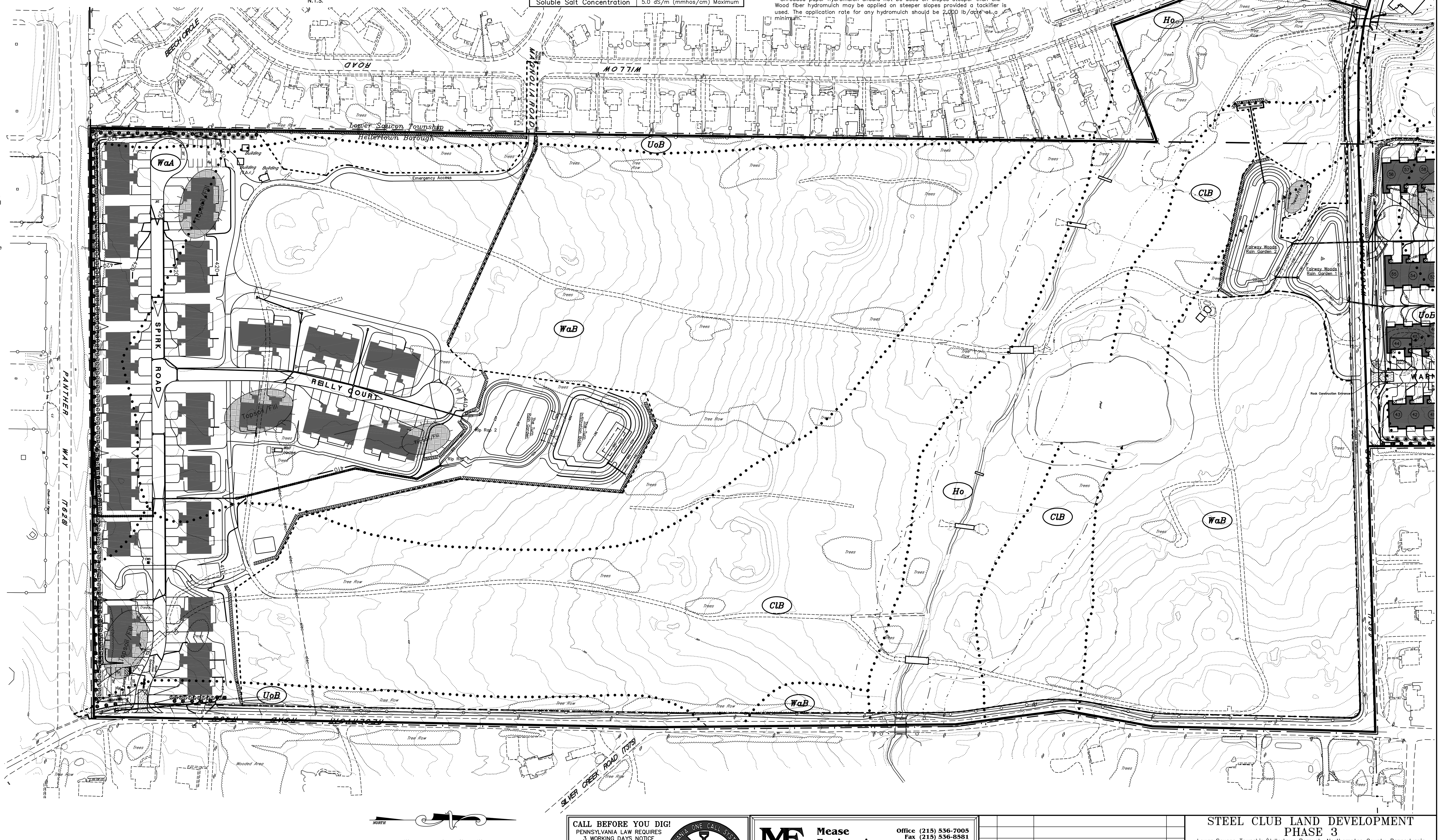
STANDARD CONSTRUCTION DETAIL 4–18 STONE AND CONCRETE BLOCK INLET PROTECTION – TYPE M INLET
N.T.S.

SYMBOLS
- Matchline
- Existing Contour
- Proposed Contour
- Soil Type
- Soil Boundary Line
- Tree Line
- Limits of Construction/Disturbance
- NPDES Boundary
- Silt Sock
- Diversion Sock
- *Slanted Text* – Existing Features
- Straight Text – Proposed Features
- Rock Filter
- Topsoil/Fill Stockpile
- Proposed Building
- Rock Construction Entrance

ENGINEER'S CERTIFICATION
I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E





PARTIAL SITE PLAN
1" = 100'

Preliminary Plan

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1–800–242–1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
516 W. Broad Street
Quakertown, PA 18951
Office (215) 536-7005
Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted | DRAWN BY: TNF
DATE: 22 Dec. '22 | FILE: 14191015–16

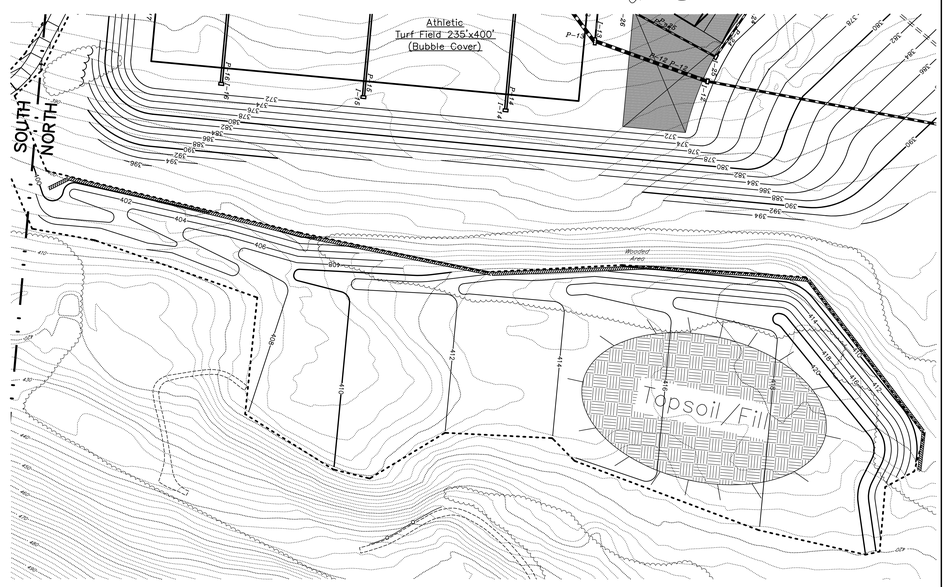
OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Erosion and Sedimentation Control Plan – South

SOUTH of MATCHLINE

50 0 25 50
1 inch = 50 ft.

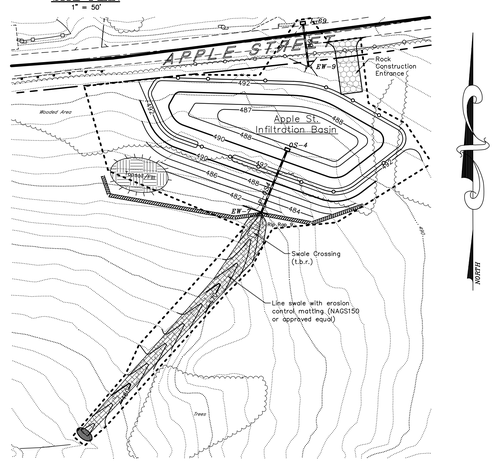
SITE PLAN
1" = 50'



NORTH of MATCHLINE

50 0 25 50
1 inch = 50 ft.

SITE PLAN
1" = 50'



APPLE STREET BASIN

50 0 25 50
1 inch = 50 ft.

SITE PLAN
1" = 50'

SYMBOLS

- Matchline
- Municipal Boundary
- 450 — Existing Contour
- 450 — Proposed Contour
- Limits of Construction/Disturbance
- NPDES Boundary
- Existing Tree Line
- Proposed Tree Line
- Existing Storm Sewer
- Proposed Storm Sewer
- I–1 — Inlet Number
- Existing Waterways
- 100 Year Floodplain
- SSH — Existing Sanitary Sewer Line
- WTR — Existing Water Line
- GAS — Existing Gas Line
- SAN — Proposed Gas Line
- WTR — Proposed Water Line
- GAS — Proposed Gas Line
- Silt Sock
- Diversion Sock
- Rock Filter
- CWS — Concrete Wash Structure
- Inlet Protection
- Topsoil/Fill — Topsoil/Fill Stockpile
- Proposed Building
- (t.b.r.) — To Be Removed
- *Slanted Text* — Existing Features
- Straight Text — Proposed Features

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Registered Engineer
Registration No. PE036737E

Preliminary Plan

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Fax (215) 536-8581
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted — DRAWN BY: TNF
DATE: 22 Dec. '22 — FILE: 14191016-17
OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Erosion and Sedimentation Control Plan – Fairway Woods

SHEET 17 of 22

STANDARD EROSION/SEDIMENTATION CONTROL NOTES

1. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
2. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the Northampton County Conservation District to an on-site preconstruction meeting.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. The PA Natural Diversity Inventory (PND) requires an avoidance measure of 50' from all streams, rivers, creeks, or tributaries, including perennial and intermittent waterways.
5. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
6. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
7. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMP's specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan.
8. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
9. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan map(s) 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. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H:1V or flatter.
10. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
11. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
12. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated.
13. The contractor is responsible for ensuring that any material brought on site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
14. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
15. Until the site is stabilized, all erosion and sediment BMP's shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMP's after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and renetting must be performed immediately. If the E&S BMP's fail to perform as expected, replacement BMP's, or modifications of those installed will be required.
16. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
17. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
18. All sediment removed from BMP's shall be disposed of in the manner described on the plan drawings: Sediment removed from BMP's shall be disposed of on-site in landscaped areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized or placed in soil stockpiles and stabilized.
19. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches — 6 to 12 inches on compacted soils — prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes shall have a minimum of 2 inches of topsoil.
20. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
21. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
22. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
23. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
24. Fill shall not be placed on saturated or frozen surfaces.
25. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
26. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
27. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
28. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
29. E&S BMP's shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the Northampton County Conservation District or the DEP.
30. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S BMP's.
31. After final site stabilization has been achieved, temporary erosion and sediment BMP's must be removed or converted to permanent post construction stormwater management BMP's. Areas disturbed during removal or conversion of the BMP's shall be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
32. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
33. Failure to correctly install E&S BMP's, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMP's may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to $10,000 per day in civil penalties, up to $10,000 in summary criminal penalties, and up to $25,000 in misdemeanor criminal penalties for each violation.
34. Concrete wash water shall be handled in the manner described on the plan drawings. In no case shall it be allowed to enter any surface waters or groundwater systems.
35. All channels shall be kept free of obstructions including but not limited to fill, rocks, leaves, woody debris, accumulated sediment, excess vegetation, and construction material/wastes.
36. Sediment traps shall be kept free of all construction waste, wash water, and other debris having potential to clog the basin/trap outlet structures and/or pollute the surface waters. Any damage that occurs in whole or in part as a result of sediment trap discharge shall be immediately repaired by the permittee in a permanent manner satisfactory to the municipality, local conservation district, and the owner of the damaged property.
37. Upon request, the applicant or his contractor shall provide an as-built (record drawing) for any sediment basin or trap to the municipal inspector, local conservation district or the Department.
38. Erosion control blanketing shall be installed on all slopes 3H:1V or steeper within 50 feet of a surface water and on all other disturbed areas specified on the plan maps and/or detail sheets.
39. A copy of the approved erosion and sediment control plan must be available on the project site at all times.
40. An Inspections and maintenance record must be kept on-site for all E&S controls: Utilize DEP Form 3150-FM-BWEW0083 (last revised 2/2012).

SOILS

Soil Survey of Northampton County, PA USDA – NRCS (2008)

(CrA) Clarksburg silt loam:
Slopes: 0 to 3 percent
Depth to Fragipan: 20 to 36 inches
Depth to Bedrock: 60 to 99 inches
Drainage Class: Moderately well drained
Depth to High Water Table: 18–36 inches
Land Capability Classification: 2w
Hydric Soil: No
Hydrological Soil Group Listing: C

(CrB) Clarksburg silt loam:
Slopes: 3 to 8 percent
Depth to Fragipan: 20 to 36 inches
Depth to Bedrock: 60 to 99 inches
Drainage Class: Moderately well drained
Depth to High Water Table: 18–36 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: C

(CoB) Cokesbury silt loam:
Slopes: 3 to 8 percent
Depth to Fragipan: 20 to 30 inches
Depth to Bedrock: 72 to 99 inches
Drainage Class: Poorly drained
Depth to High Water Table: 0–12 inches
Land Capability Classification: 4w
Hydric Soil: Yes
Hydrological Soil Group Listing: D

(GlB) Gladstone gravelly loam:
Slopes: 3 to 8 percent
Depth to Bedrock: 60 to 80 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: A

(GlC) Gladstone gravelly loam:
Slopes: 8 to 15 percent
Depth to Bedrock: 60 to 67 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 3e
Hydric Soil: No
Hydrological Soil Group Listing: B

(GmD) Gladstone gravelly loam:
Slopes: 8 to 25 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 6s
Hydric Soil: No
Hydrological Soil Group Listing: A

(GmF) Gladstone gravelly loam:
Slopes: 25 to 55 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 7s
Hydric Soil: No
Hydrological Soil Group Listing: A

(GrD) Gladstone–Parker gravelly loam:
Slopes: 15 to 25 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 4e
Hydric Soil: No
Hydrological Soil Group Listing: A

(HaA) Holly silt loam:
Slopes: 0 to 3 percent
Depth to Bedrock: >80 inches
Depth to High Water Table: 0 to 12 inches
Flooding Frequency: Frequent
Ponding Frequency: Occasional
Land Capability Classification: 3w
Hydric Soil: Yes
Hydrological Soil Group Listing: B/D

(UpB) Urban land–Duffield complex:
Slopes: 0 to 8 percent
Depth to Bedrock: 10 to 120 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

(UpD) Urban land–Gladstone complex:
Slopes: 8 to 25 percent
Depth to Bedrock: 10 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 4e
Hydric Soil: No
Hydrological Soil Group Listing: A

(WaA) Washington silt loam:
Slopes: 0 to 3 percent
Depth to Bedrock: 60 to 99 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

(WaB) Washington silt loam:
Slopes: 3 to 8 percent
Depth to Bedrock: 60 to 99 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

Limitations

Soil Names	Outbanks Cave	Corrosive to Concrete/Steel	Droughty	Easily Erodible	Depth To Saturated Zone/Seasonal High Water Table	Hydric/Hydric Inclusions	Low Strength/Landslide Prone	Slow Percolation	Poor Source of Topsoil	Frost Action	Shrink-Swell	Sinkhole	Ponding	Wetness
Clarksburg	X	C/S		X		X		X	X	X	X	X		X
Cokesbury	X				X			X	X	X				
Gladstone	X	C		X			X		X		X	X		
Gladstone–Parker	X	C	X	X			X		X	X	X	X		
Holly	X	C/S			X	X	X	X	X	X	X		X	X
Urban–Duffield	X	C/S		X			X	X	X	X		X	X	X
Urban–Gladstone	X	C		X			X		X			X	X	
Washington	X	S		X		X	X	X	X	X		X	X	X

Limitations and Resolutions:

Outbanks Cave– shoring may be required
Corrosive to Concrete/Steel– contact structural engineer to resolve
Droughty– contact structural engineer to resolve
Easily Erodible– contractor must follow E&S plan
Flooding– pump excess water through filter bag
Depth to Saturated Zone/Seasonal High Water Table– pump excess water through filter bag
Hydric/Hydric Inclusions– pump excess water through filter bag
Low Strength/Landslide Prone– slopes should not exceed 3:1
Slow Percolation– have soils scientist evaluate for on-site sewage
Piping– install anti-seep collar if necessary
Poor Source of Top Soil– additional top soil may need to be delivered
Frost Action– install footers below frost line
Shrink/Swell– foundations are designed to account for this
Potential Sinkhole– a licensed geologist will evaluate any sinkholes if discovered
Ponding– pump excess water through filter bag
Wetness– pump excess water through filter bag

SYMBOLS

- Matchline
- Municipal Boundary
- 410 — Existing Contour
- 450 — Proposed Contour
- Limits of Construction/Disturbance
- NPDES Boundary
- Existing Tree Line
- Proposed Tree Line
- Existing Storm Sewer
- Proposed Storm Sewer
- I–1 — Inlet Number
- Existing Waterways
- 100 Year Floodplain
- 420 — Existing Sanitary Sewer Line
- 417 — Existing Water Line
- 423 — Existing Gas Line
- SAN — Proposed Gas Line
- WTR — Proposed Water Line
- GAS — Proposed Gas Line
- Silt Sock
- Diversion Sock
- Rock Filter
- CWS — Concrete Wash Structure
- Inlet Protection
- Topsoil — Topsoil Stockpile
- Proposed Building
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STEEL CLUB LAND DEVELOPMENT
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SCALE: As Noted | DRAWN BY: TNF
DATE: 22 Dec. '22 | FILE: 14191017-18

OWNERS OF RECORD:
Steel Land LLC
8052 William Penn Highway
Easton, PA. 18045

Erosion and Sedimentation Control Plan – The Turn

SHEET 18 of 22

RECYCLING OR DISPOSAL OF MATERIALS

The project applicant or co-applicant shall remove from the site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at the site. Construction waste for the site will be concrete. The contractor shall use the CWS as shown on the plan (See Concrete Washout Detail on Sheet 14).

GEOLOGIC FORMATIONS/SOIL CONDITIONS THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION

Mr. John Kortvely, PG performed soils testing and a site analysis for this project. Several geological features were identified. However, no carbonate features were detected in the field investigation of the soils beneath the proposed BMPs. The site was evaluated for a subsurface infiltration bed, infiltration basin, and rain garden with a number of soil probes/bore holes. Stormwater infiltration was found to be feasible for the site. If unsuitable conditions are encountered during development of the site, a soil scientist should be consulted and alternate locations considered for the affected construction items. If alternate locations are proposed, then a revised E&S plan shall be submitted to Northampton County Conservation District for approval. The contractor shall contact the Township Engineer and the County Conservation District prior to any relocation or reconfiguration.

POTENTIAL THERMAL IMPACTS

Runoff from impervious surfaces will drain over vegetated areas. During construction all runoff that is not impounded will flow to the silt socks before leaving the property. We anticipate that the proposed development will cause no thermal impact associated with the BMPs.

CLEAN FILL & DUE DILIGENCE NOTE

Applicants and/or operators must use environmental due diligence to ensure that the fill material associated with this project qualifies as Clean Fill. Definitions of Clean Fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with the DEP's policy "Management of Fill", document number 258-2182-773.

Clean Fill is defined as uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the 3800-PM-BCW0405a Rev. 3/2019 Instructions – 3 – waters of the Commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.)

Clean Fill affected by a spill or release of a regulated substance: Fill materials affected by a spill or release of a regulated substance may still qualify as clean fill if the testing reveals that the fill material contains concentrations of regulated substances that are below the residential limits in Tables FP1a and FP-1b found in DEP's "Management of Fill" policy. Any person placing clean fill that has been affected by a spill or release of a regulated substance must use Form FP-001 to certify the origin of the fill material and the results of the analytical testing to qualify the material as clean fill. Form FP001 must be retained by the owner of the property receiving the fill and must be kept on-site and made available upon request by DEP or authorized conservation district. Failure to produce the form upon request may result in the revoking, suspension or termination of permit coverage. A copy of Form FP-001 can be found at the end of these instructions.

Environmental Due Diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of DEP's "Management of Fill" policy. Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with DEP's residual or municipal waste regulations in 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable.

PCSM GENERAL NOTES

1. The design preserves the integrity of stream channels and maintains and protects the physical, biological and chemical qualities of the receiving stream. There will be a decrease in stormwater runoff rate and volume that will be draining off site.
2. The design prevents an increase in the rate of stormwater runoff. The property is located in subarea 135 and 136 of the Saucon Creek watershed. Subareas 135 and 136 requires a 30/70 release rate unless stormwater controls can be designed to prevent an increase in either the rate or volume of runoff discharged from the site. Rate and volume controls were achieved by the design of the BMPs.
3. The design maximizes the protection of existing drainage features and existing vegetation. The design promotes impervious disconnect. The existing drainage features on the site are inlets, swales, and Silver Creek. The proposed PCSM BMPs will reduce the stormwater runoff that drains to these features.
4. The grading is designed to provide sheet flow where ever it is possible.
5. The cover type for the site is meadow, lawn, and woods. There is an existing clubhouse, pool, maintenance buildings, cart paths and paved parking lot as shown on the plan. Additionaly, Phase 2 of this project was previously submitted and approved, including the Ross Hill subdivision and club house improvements.
6. Mr. John Kortvely, PG performed preliminary soils testing for this project. A copy of the soils report is included in Appendix C of the PCSM Report.
7. A portion of Silver Creek exist on site. A future driveway is proposed to cross the creek. Prior to the construction of the future driveway, the necessary General Permits will be obtained from DEP. The receiving watershed for this site is Saucon Creek, which has a DEP classification of CWF, MF.
8. The critical stages are during the construction of all structurally engineered BMPs including the construction of the proposed rain gardens and infiltration basins.
9. The roof downspouts shall direct flow as indicated in the Individual Lot Impervious Surface Tables on this sheet.
10. For any earth disturbance activity to be considered permanently stabilized, the disturbed areas shall be covered with a minimum uniform coverage of mulch and seed, with a density capable of resisting accelerated erosion and sedimentation (70% ground cover) or an acceptable BMP which temporarily minimizes accelerated erosion and sedimentation.

SITE SPECIFIC NOTES

1. The contours and existing features are based on a field and aerial survey performed in 2015. The survey bearing basis and elevations are calculated by the use of GPS based on Pennsylvania South Zone State Plane Coordinate System – NAD83.
2. All users of this plan are referred to and cautioned to comply with PA Act 287 as amended by PA Act 172, HB 2543, enacted 06-10-1987, and by PA HB 722, P.L. 364, Act 38, enacted 12-12-1991, and by PA HB 2627, Act 187, effective 12-19-96, and by PA Act 199, P.L. 1567, enacted 11-30-2004, and by PA Act 181, P.L. 1593, enacted 11-29-2006.
3. This plan contains information pertaining to underground utilities which is for general information only, and may not be based on an actual subsurface location survey. All subsurface information shown on this plan needs to be verified by the plan user. The preparer of this plan assumes no responsibility for and makes no representations or warranties as to the accuracy of the location of underground utilities or other underground features. Repair of damages to any underground utilities, structures, and appurtenances will be the sole responsibility of the contractor, and at the contractor's expense.
4. All paving, sidewalk, earthwork and concrete work shall be supplied and constructed in accordance with Pennsylvania Department of Transportation (PennDOT) specifications, Publication 408, latest edition, and shall also conform to all local building codes.
5. Proposed utilities shall be installed in accordance with all utility company and local building code requirements.
6. Any relocated utility services shall be run underground from existing overhead services.
7. The contractor performing the work is responsible for contacting "PA ONE CALL" (1-800-242- 1776) for location of all underground lines at least one week prior to the beginning of construction.
8. If any conflicts, discrepancies, or other unsatisfactory conditions are discovered, either on the construction documents or the field conditions, the contractor must notify the owner or project engineer immediately and shall not commence operations until the conflicts, discrepancies, or other unsatisfactory conditions are resolved.
9. The NOI applicant is Steel Land LLC attn: David Spirk. The applicant shall be responsible for the operation, maintenance, repair, reconstruction and/or replacement of the stormwater management facilities.
10. The installation of the rain gardens and infiltration basins are critical stages for this project. The licensed design engineer or his representative shall be present on site to inspect the installation of these BMPS.
11. The infiltration area of the rain gardens and infiltration basins shall be protected from disturbance and compaction.
12. As an avoidance measure from U.S. Fish and Wildlife Services, no construction shall occur within 50' of any streams, rivers, creeks, or tributaries. This includes both perennial and intermittent waterways.
13. No roof drain downspouts shall discharge water over impervious surfaces.

Limitations and Resolutions:

Cutbanks Cave– shoring may be required
Corrosive to Concrete/Steel; Droughty– contact structural engineer to resolve
Easily Erodible– contractor must follow E&S plan
Flooding; Depth to Saturated Zone/Seasonal High Water Table; Hydric/Hydric Inclusions;
Ponding; Wetness– pump excess water through filter bag
Low Strength/Landslide Prone– slopes should not exceed 3:1
Slow Percolation– have soils scientist evaluate for on-site sewage
Piping– install anti-seep collar if necessary
Poor Source of Top Soil– additional top soil may need to be delivered
Frost Action– install footers below frost line
Shrink/Swell– foundations are designed to account for this
Potential Sinkhole– a licensed geologist will evaluate any sinkholes if discovered

Limitations

Soil Names	Cutbanks Cave	Corrosive To Concrete/Steel	Droughty	Easily Erodible	Flooding	Depth To Saturated Zone/Seasonal High Water Table	Hydric/Hydric Inclusions	Low Strength/Landslide Prone	Slow Percolation	Piping	Poor Source of Topsoil	Frost Action	Shrink-Swell	Potential Sinkhole	Ponding	Wetness
Clarksburg	X	C/S		X		X	X	X	X	X	X	X	X	X		X
Cokesbury	X					X			X	X		X				
Gladstone	X	C		X			X		X			X	X			
Gladstone-Parker	X	C	X	X			X		X		X	X	X			
Holly	X	C/S			X	X	X	X	X	X	X	X			X	X
Urban-Duffield	X	C/S		X			X	X	X	X	X		X	X		X
Urban-Gladstone	X	C		X			X		X			X	X			
Washington	X	S				X	X	X	X	X		X	X	X		

SOILS

Soil Survey of Northampton County, PA
USDA – NRCS (2008)

(ClA) Clarksburg silt loam:
Slopes: 0 to 3 percent
Depth to Fragipan: 20 to 36 inches
Depth to Bedrock: 60 to 99 inches
Drainage Class: Moderately well drained
Depth to High Water Table: 18-36 inches
Land Capability Classification: 2w
Hydric Soil: No
Hydrological Soil Group Listing: C

(ClB) Clarksburg silt loam:
Slopes: 3 to 8 percent
Depth to Fragipan: 20 to 36 inches
Depth to Bedrock: 60 to 99 inches
Drainage Class: Moderately well drained
Depth to High Water Table: 18-36 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: C

(CnB) Cokesbury silt loam:
Slopes: 3 to 8 percent
Depth to Fragipan: 20 to 30 inches
Depth to Bedrock: 72 to 99 inches
Drainage Class: Poorly drained
Depth to High Water Table: 0-12 inches
Land Capability Classification: 4w
Hydric Soil: Yes
Hydrological Soil Group Listing: D

(GlB) Gladstone gravelly loam:
Slopes: 3 to 8 percent
Depth to Bedrock: 60 to 80 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

(GlC) Gladstone gravelly loam:
Slopes: 8 to 15 percent
Depth to Bedrock: 65 to 67 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 3e
Hydric Soil: No
Hydrological Soil Group Listing: B

(GmD) Gladstone gravelly loam:
Slopes: 8 to 25 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 6s
Hydric Soil: No
Hydrological Soil Group Listing: A

(GmF) Gladstone gravelly loam:
Slopes: 25 to 55 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 7s
Hydric Soil: No
Hydrological Soil Group Listing: A

(GnD) Gladstone-Parker gravelly loam:
Slopes: 15 to 25 percent
Depth to Bedrock: 60 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 4e
Hydric Soil: No
Hydrological Soil Group Listing: A

(Ho) Holly silt loam:
Slopes: 0 to 3 percent
Depth to Bedrock: >80 inches
Depth to High Water Table: 0 to 12 inches
Flooding Frequency: Frequent
Ponding Frequency: Occasional
Land Capability Classification: 3w
Hydric Soil: Yes
Hydrological Soil Group Listing: B/D

(UoB) Urban land-Duffield complex:
Slopes: 0 to 8 percent
Depth to Bedrock: 10 to 120 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

(UpD) Urban land-Gladstone complex:
Slopes: 8 to 25 percent
Depth to Bedrock: 10 to 100 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 4e
Hydric Soil: No
Hydrological Soil Group Listing: A

(WaA) Washington silt loam:
Slopes: 0 to 3 percent
Depth to Bedrock: 60 to 99 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 1
Hydric Soil: No
Hydrological Soil Group Listing: B

(WaB) Washington silt loam:
Slopes: 3 to 8 percent
Depth to Bedrock: 60 to 99 inches
Drainage Class: Well drained
Depth to High Water Table: >80 inches
Land Capability Classification: 2e
Hydric Soil: No
Hydrological Soil Group Listing: B

ENGINEER'S STORMWATER CERTIFICATION

I, Scott Mease, certify that the proposed facilities are not underlain by carbonate geology.

Registered Engineer

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

Ground Cover Seed Mixtures:

Permanent groundcover
Formula 'B'
mix: 20% perennial rye,
30% red fescue,
50% Kentucky bluegrass
rate: 21 lbs./1,000 S.Y.
mulch: See table below
liming: 2,480 lbs./1,000 S.Y. (Agricultural Lime)
fertilizer: 210 lbs./1,000 S.Y. (10-10-20 Fertilizer)
slow-release nitrogen fertilizer
(38-0-0 ureaform):
50 lbs./1,000 S.Y.
Temporary groundcover
Formula 'E'
mix: annual rye
rate: 10 lbs./1,000 S.Y.
mulch: See mulch table
liming: 410 lb/1,000 S.Y. (Not req. for stockpiles)
fertilizer: 100 lb/1,000 S.Y. (10-10-10 fertilizer)

Table of Inlet Drainage Areas

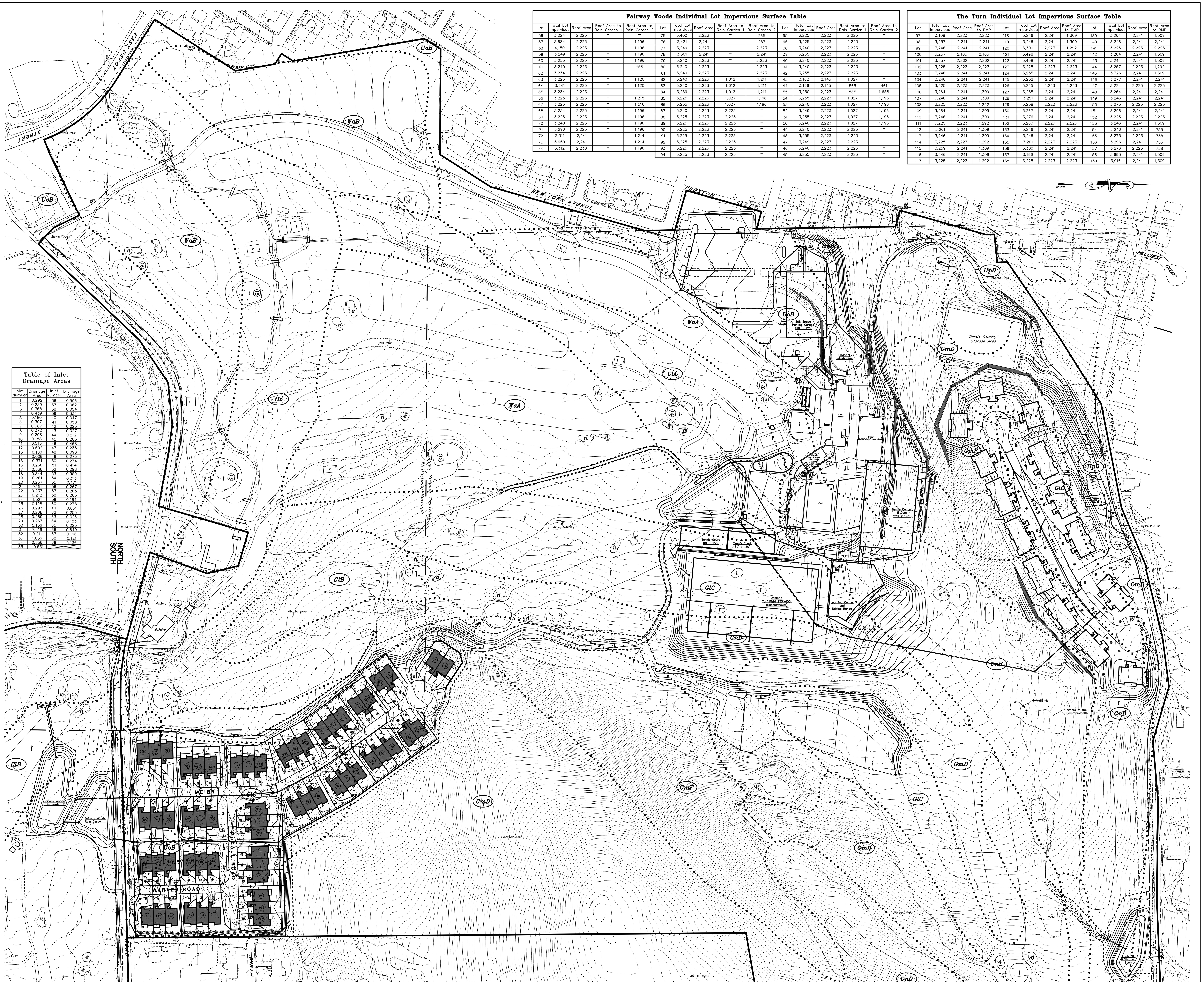
Inlet Number	Drainage Area	Inlet Number	Drainage Area
1	0.292	36	0.596
2	0.239	37	0.062
3	0.368	38	0.054
4	0.439	39	0.334
5	0.180	40	0.047
6	0.307	41	0.050
7	0.387	42	0.025
8	0.372	43	0.027
9	0.298	44	0.212
10	0.188	45	0.205
11	0.515	46	0.468
12	0.602	47	0.235
13	0.100	48	0.098
14	0.006	49	0.275
15	0.371	50	0.274
16	0.266	51	0.414
17	0.336	52	0.298
18	0.344	53	0.959
19	0.261	54	0.313
20	0.257	55	2.471
21	0.151	56	0.267
22	0.237	57	0.265
23	0.212	58	0.265
24	1.521	59	0.164
25	0.198	60	0.278
26	0.293	61	0.051
27	0.268	62	0.255
28	0.269	63	0.026
29	0.263	64	0.183
30	5.136	65	0.223
31	7.419	66	0.640
32	0.211	67	0.196
33	1.036	68	0.121
34	0.556	69	5.136
35	0.531		

Fairway Woods Individual Lot Impervious Surface Table

Lot	Total Lot Impervious	Roof Area	Roof Area to Rain Garden 1	Roof Area to Rain Garden 2	Lot	Total Lot Impervious	Roof Area	Roof Area to Rain Garden 1	Roof Area to Rain Garden 2	Lot	Total Lot Impervious	Roof Area	Roof Area to Rain Garden 1	Roof Area to Rain Garden 2
56	3,224	2,223	–	–	75	3,400	2,223	–	265	95	3,225	2,223	2,223	–
57	3,684	2,223	–	1,196	76	3,421	2,241	–	283	96	3,225	2,223	2,223	–
58	4,150	2,223	–	1,196	77	3,249	2,223	–	2,223	38	3,240	2,223	2,223	–
59	3,249	2,223	–	1,196	78	3,301	2,241	–	2,241	39	3,255	2,223	2,223	–
60	3,255	2,223	–	1,196	79	3,240	2,223	–	2,223	40	3,240	2,223	2,223	–
61	3,240	2,223	–	265	80	3,240	2,223	–	2,223	41	3,240	2,223	2,223	–
62	3,234	2,223	–	–	81	3,240	2,223	–	2,223	42	3,255	2,223	2,223	–
63	3,225	2,223	–	1,120	82	3,240	2,223	1,012	1,211	43	3,162	2,145	1,027	–
64	3,241	2,223	–	1,120	83	3,240	2,223	1,012	1,211	44	3,166	2,145	565	461
65	3,234	2,223	–	–	84	3,259	2,223	1,012	1,211	55	3,250	2,223	565	1,658
66	3,225	2,223	–	1,215	85	3,225	2,223	1,027	1,196	54	3,255	2,223	1,027	1,196
67	3,225	2,223	–	1,516	86	3,255	2,223	1,027	1,196	53	3,240	2,223	1,027	1,196
68	3,234	2,223	–	1,196	87	3,240	2,223	2,223	–	52	3,249	2,223	1,027	1,196
69	3,225	2,223	–	1,196	88	3,225	2,223	2,223	–	51	3,255	2,223	1,027	1,196
70	3,240	2,223	–	1,196	89	3,225	2,223	2,223	–	50	3,240	2,223	1,027	1,196
71	3,296	2,223	–	1,196	90	3,225	2,223	2,223	–	49	3,240	2,223	2,223	–
72	3,311	2,241	–	1,214	91	3,225	2,223	2,223	–	48	3,255	2,223	2,223	–
73	3,659	2,241	–	1,214	92	3,225	2,223	2,223	–	47	3,249	2,223	2,223	–
74	3,312	2,230	–	1,196	93	3,225	2,223	2,223	–	46	3,240	2,223	2,223	–
					94	3,225	2,223	2,223	–	45	3,255	2,223	2,223	–

The Turn Individual Lot Impervious Surface Table

Lot	Total Lot Impervious	Roof Area	Roof Area to BMP	Lot	Total Lot Impervious	Roof Area	Roof Area to BMP	Lot	Total Lot Impervious	Roof Area	Roof Area to BMP
97	3,108	2,223	2,223	118	3,246	2,241	1,309	139	3,264	2,241	1,309
98	3,257	2,241	2,241	119	3,246	2,241	1,309	140	3,246	2,241	2,241
99	3,246	2,241	2,241	120	3,300	2,223	1,292	141	3,225	2,223	2,223
100	3,237	2,185	2,185	121	3,498	2,241	2,241	142	3,264	2,241	1,309
101	3,257	2,202	2,202	122	3,498	2,241	2,241	143	3,244	2,241	1,309
102	3,225	2,223	2,223	123	3,225	2,223	2,223	144	3,257	2,223	1,292
103	3,246	2,241	2,241	124	3,255	2,241	2,241	145	3,326	2,241	1,309
104	3,246	2,241	2,241	125	3,252	2,241	2,241	146	3,277	2,241	2,241
105	3,225	2,223	2,223	126	3,225	2,223	2,223	147	3,224	2,223	2,223
106	3,264	2,241	1,309	127	3,255	2,241	2,241	148	3,264	2,241	2,241
107	3,246	2,241	1,309	128	3,251	2,241	2,241	149	3,246	2,241	2,241
108	3,225	2,223	1.292	129	3,238	2,223	2,223	150	3,275	2,223	2,223
109	3,264	2,241	1,309	130	3,267	2,241	2,241	151	3,296	2,241	2,241
110	3,246	2,241	1,309	131	3,276	2,241	2,241	152	3,225	2,223	2,223
111	3,225	2,223	1,292	132	3,263	2,223	2,223	153	3,246	2,241	1,309
112	3,261	2,241	1,309	133	3,246	2,241	2,241	154	3,246	2,241	755
113	3,246	2,241	1,309	134	3,246	2,241	2,241	155	3,275	2,223	738
114	3,225	2,223	1,292	135	3,261	2,223	2,223	156	3,296	2,241	755
115	3,259	2,241	1,309	136	3,300	2,241	2,241	157	3,276	2,223	738
116	3,246	2,241	1,309	137	3,196	2,241	2,241	158	3,693	2,241	1,309
117	3,225	2,223	1,292	138	3,225	2,223	2,223	159	3,916	2,241	1,309



SYMBOLS

- Matchline
- Municipal Boundary
- 430 Existing Contour
- 450 Proposed Contour
- ToB Soil Type
- Soil Boundary Line
- Limits of Construction/Disturbance
- NPDES Boundary
- R5 Existing Soil Probe
- Existing Tree Line
- Proposed Tree Line
- W W Existing Wetlands
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Waterways
- 100 Year Floodplain
- Proposed Building
- (t.b.r.) To Be Removed
- Slanted Text – Existing Features
- Straight Text – Proposed Features

100 0 50 100
(IN FEET)
1 inch = 100 ft.
PARTIAL SITE PLAN
1" = 100'

Preliminary Plan

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
PROJECT SERIAL NO.
PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG!

Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT PHASE 3

Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: 1" = 100'
DRAWN BY: DWM
DATE: 22 Dec. '22
FILE: 14191019-20

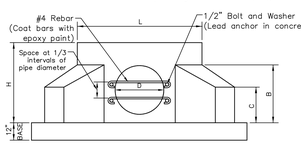
OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Post-Construction Stormwater Management Plan – North

MAINTENANCE/INSPECTION SCHEDULE FOR STORMWATER BMPS

TYPE OF BMP	FREQUENCY	MAINTENANCE/INSPECTION ACTIVITY	REMEDY	CLEAN-OUT LEVEL	RESPONSIBLE PARTY
Storm Sewer	After major storm events (>1 inch rainfall depth)	1. Check for accumulated sediment/debris in storm sewer	Remove sediment/debris	When sediment > 3 inches at any spot or obstructing flow through system	Owner
		2. Check for accumulated sediment/debris in inlet sumps	Remove sediment/debris		
Infiltration Basin	After major storm events (>1 inch rainfall depth)	1. Check for damage to vegetated areas	Reseed affected areas	When debris or sediment accumulations are plainly visible	Owner
		2. Check for signs of erosion	Regrade and reseed affected areas		
		3. Check inlets/catch basins for sediment/debris	Remove sediment/debris		
		4. Check that runoff drains down within 72 hours	Consult design engineer	N/A	
	Every 6 months	1. Check for accumulated sediment/debris in outlet	Remove sediment/debris	When debris or sediment accumulations are plainly visible	
		2. Check for accumulated sediment/debris in basin	Remove sediment/debris		
		3. Check inlet/catch basins for sediment/debris	Remove sediment/debris		
	Every 12 months	1. Check for any settling	Fill-in settled area, regrade, and reseed area	N/A	
	Note: Vehicles access on Subsurface Infiltration areas should be prohibited, and care should be taken to avoid excessive compaction by mowers. If access is needed, use of permeable, turf reinforcement should be considered.				
Rain Garden	After major storm events (>1 inch rainfall depth)	1. Check for damage to vegetated areas	Reseed affected areas	When debris or sediment accumulations are plainly visible	Owner
		2. Check for signs of erosion	Regrade and reseed affected areas		
	Every 6 months	1. Check for accumulated sediment/debris in outlet	Remove sediment/debris		
		2. Check for accumulated sediment/debris in bed area	Remove sediment/debris		
		3. Evaluate health of trees and shrubs	Replace if necessary		
		4. Check for signs of erosion	Regrade, reseed, and mulch affected areas		
	Every 12 months	1. Check for any settling	Fill-in settled area, regrade, and reseed area	N/A	
		2. Inspect for detritus	Remove detritus		
	Every 2 to 3 years	1. Inspect mulch coverage	Replace mulch over entire area		
	Notes: While vegetation is being established, pruning and weeding may be required. Vehicles should not be parked or driven in rain garden bed area, and care should be taken to avoid excessive compaction by mowers. Water vegetation during drought conditions, as necessary.				

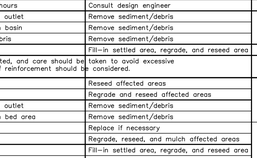
Note: For additional maintenance information pertaining to the individual BMPs, refer to each BMP's respective detail.

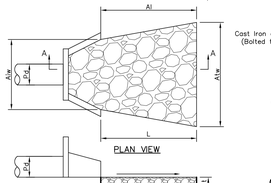


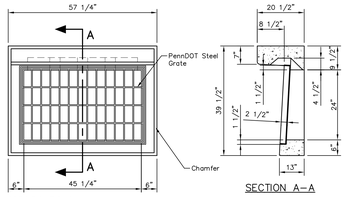
LOCATION	PIPE SIZE	"D"	"L"	"H"	"A"	"B"	"C"
EW-1	18"ø ADS	22"	55"	33"	25"	25"	15"
EW-2	18"ø ADS	22"	55"	33"	25"	25"	15"
EW-3	24"ø ADS	28"	55"	33"	25"	25"	15"
EW-4	24"ø ADS	28"	55"	33"	25"	25"	15"
EW-5	24"ø ADS	28"	55"	33"	25"	25"	15"
EW-6	24"ø ADS	28"	55"	33"	25"	25"	15"
EW-7	18"ø ADS	22"	55"	33"	25"	25"	15"
EW-8	18"ø ADS	22"	55"	33"	25"	25"	15"

Note: Footings for endwall shall be installed at a minimum depth of 30" bellow ground level.

TYPE D-W ENDWALL
N.T.S.

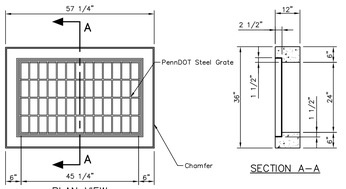






SPECIFICATIONS:
1. Minimum concrete strength 4000psi @ 28 days (PennDOT Class AA)
2. Materials and workmanship in accordance with the requirements. of PennDOT Publication 408, Sections 605 & 714.
3. Steel reinforcement A615 Grade 60 horizontal and vertical.

TYPE C INLET TOP (RC-45M)
N.T.S.



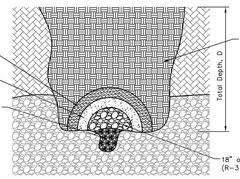
NOTES:
1. Minimum concrete strength 4000psi @ 28 days (PennDOT Class AA)
2. Materials and workmanship in accordance with the requirements. of PennDOT Publication 408, Sections 605 & 714.
3. Steel reinforcement A615 Grade 60 horizontal and vertical.

TYPE M INLET TOP (RC-45M)
N.T.S.

Rip-Rap No.	Pipe Diameter Pd (in)	100 Yr. Flow (cfs)	Rip-Rap Size (R-_)	Rip-Rap Thickness Rt (in)	Apron Length Al (ft)	Apron Initial Width Aiw (ft)	Apron Terminal Width Atw (ft)
1	24	15.49	R-4	18	12	6.00	18.00
2	24	21.26	R-4	18	12	6.00	18.00
3	12	5.62	R-5	27	9	3.00	15.00
4	18	0.21	R-4	18	8	4.50	12.50
5	24	22.61	R-6	36	46	12.00	24.00
	18	19.55					
6	24	26.18	R-6	36	16	6.00	22.00
7	24	21.20	R-5	27	14	6.00	20.00
8	24	10.32	R-5	27	12	6.00	18.00
9	18	10.97	R-7	45	15	4.50	15.00

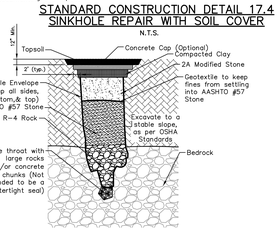
NOTES
1. All aprons shall be constructed to the dimensions shown. Terminal widths shall be adjusted as necessary to match receiving channels.
2. All aprons shall be inspected at least weekly and after each runoff event. Displaced rip-rap within the apron shall be replaced immediately.

STANDARD CONSTRUCTION DETAIL #9-1
RIP-RAP APRON AT ENDWALL
N.T.S.



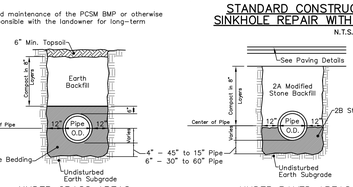
NOTES:
1. Loose material shall be excavated from the sinkhole and exposed solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.
2. Select field stone(s) about 1.5 times larger than solution void(s) to form "bridge." Place rock(s) so no large openings exist along the sides. Stones used for the "bridge" and filters shall have a moderately hard strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.
3. Minimum thickness of R-3 rock is 18". AASHTO #57 stone thickness shall be a minimum of 9" thick. Minimum thickness of Type A sand shall be 9". NOTE: A non-woven geotextile with a burst strength between 100 and 200 psi may be substituted for the AASHTO#57 stone and type A sand.
4. Soil shall be mineral soil with at least 12% fines and overfilled by 5% to allow for settlement. Suitable soil from the excavation may be used. Any available topsoil shall be place on top surface.
5. Detail 17.4 shows a remediation technique which may or may not be utilized depending on the location and proposed use of the area. In all cases of a suspected sinkhole, the site/construction manager shall utilize a licensed professional (P.G. or P.E.) who will inspect the feature and determine the proper remediation technique with respect to the proposed use. The professional will provide a letter to the Township documenting the repair.

STANDARD CONSTRUCTION DETAIL 17.4
SINKHOLE REPAIR WITH SOIL COVER
N.T.S.



NOTES:
1. Loose material shall be excavated from the sinkhole and exposed solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.
2. Geotextile shall be non-woven with a burst strength between 100 and 200 psi.
3. Select field stone(s) about 1.5 times larger than solution void(s) to form "bridge." Place rock(s) so no large openings exist along the sides. Stones used for the "bridge" and filters shall have a moderately hard strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.
4. Minimum thickness of R-4 rock is 18". AASHTO #57 stone thickness shall be 1/4 to 1/2 that of the R-4 rock. Minimum thickness of 2A modified crushed stone shall be 9". AASHTO #57 stone and 2A modified crushed stone shall be compacted after each placement.
5. Compacted clay seal shall be a minimum of 12" thick. Clay shall be placed 6" to 9" lifts and thoroughly compacted.
6. Concrete cap, which is optional, shall be a minimum of 8" thick. Use 4,000 psi concrete with 6" X 6"-6 gauge welded wire fabric, or #3 rebar on 18" O.C. both ways.
7. Topsoil shall be a minimum of 12" thick. Grade for positive drainage away from sinkhole area.
8. Detail 17.3 shows a remediation technique which may or may not be utilized depending on the location and proposed use of the area. In all cases of a suspected sinkhole, the site/construction manager shall utilize a licensed professional (P.G. or P.E.) who will inspect the feature and determine the proper remediation technique with respect to the proposed use. The professional will provide a letter to the Township documenting the repair.

STANDARD CONSTRUCTION DETAIL 17.3
SINKHOLE REPAIR WITH IMPERVIOUS COVER
N.T.S.



STORMWATER PIPE BEDDING DETAILS
N.T.S.

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES

Permit Termination

Upon permanent stabilization of the earth disturbance activity under 102.22(a)(2) (relating to permanent stabilization), and installation of BMPs in accordance with an approved plan prepared and implemented in accordance with 102.4 and 102.8 (relating to erosion and sediment control requirements; and PCSM requirements), the permittee or co-permittee shall submit a notice of termination of the Department or conservation district.

The notice of termination must include:
(1) The facility name, address, and location.
(2) The operator name and address.
(3) The permit number.
(4) The reason for permit termination.
(5) Identification of the persons who have agreed to and will be responsible for long-term operation and maintenance of the PCSM BMPs in accordance with 102.8(m) and proof of compliance with 102.8(m)(2)

PCSM Requirements

PCSM reporting and record keeping. The PCSM Plan, inspection reports and monitoring records shall be available for review and inspection by the Department or the conservation district.

Licensed professional oversight of critical stages. A licensed professional or a designee shall be present onsite and be responsible during critical stages of implementation of the approved PCSM Plan. The critical stages may include the installation of soil amendments, underground treatment or storage BMPs, structurally engineered BMPs, or other BMPs as deemed appropriate by the Department of the conservation district.

Final certification. The permittee shall include with the notice of termination "Record Drawings" with a final certification statement from a licensed professional, which reads as follows: "I, Scott Mease do hereby certify pursuant to the penalties of 18 Pa.C.S.A 4904 to the best of my knowledge, information and belief, that the accompanying record drawings accurately reflect the as-built conditions, are true and correct, and are in conformance with Chapter 102 of the rules and regulations of the Department of Environmental Protection and that the project site was constructed in accordance with the approved PCSM Plan, all approved plan changes and accepted construction practices."

(1) The permittee shall retain a copy of the record drawings as a part of the approved PCSM Plan.
(2) The permittee shall provide a copy of the record drawings as a part of the approved PCSM Plan to the person identified in this section as being responsible for the long-term operation and maintenance of the PCSM BMPs.

PCSM Long Term Operations and Maintenance Requirements

Until the permittee or co-permittee has received written approval of a notice of termination, the permittee or co-permittee will remain responsible for compliance with the permit terms and conditions including long-term operation and maintenance of all PCSM BMPs on the project site and is responsible for violations occurring on the project site. The Department or conservation district will conduct a final inspection and approve or deny the notice of termination with 30 days.

The permittee or co-permittee shall be responsible for long-term operation and maintenance of PCSM BMPs unless a different person is identified in the notice of termination and has agreed to long-term operation and maintenance of PCSM BMPs.

For any property containing a PCSM BMP, the permittee or co-permittee shall record an instrument with the recorder of deeds which will assure disclosure of the PCSM BMP and the related obligations in the ordinary course of a title search of the subject property. The recorded instrument must identify the PCSM BMP, provide for necessary access related to long-term operation and maintenance for PCSM BMPs and provide notice that the responsibility for long-term operation and maintenance of the PCSM BMP is a covenant that runs with the land that is binding upon and enforceable by subsequent grantees, and provide proof of filing with the notice of termination under 102.7(b)(5) (relating to permit termination).

The person responsible for performing long-term operation and maintenance may enter into an agreement with another person including a conservation district, nonprofit organization, municipality, authority, private corporation or other person, to transfer the responsibility for PCSM BMPs or to perform long-term operation and maintenance and provide notice thereof to the Department.

A permittee or co-permittee that fails to transfer long-term operation and maintenance of the PCSM BMP or otherwise fails to comply with this requirement shall remain jointly and severally responsible with the landowner for long-term operation and maintenance of the PCSM BMPs located on the property.

ENGINEER'S STORMWATER CERTIFICATION

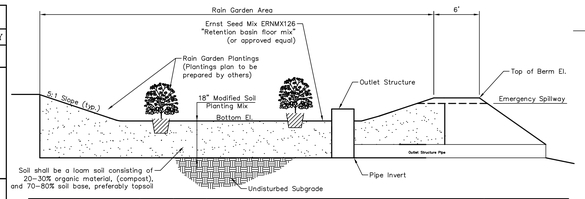
I, Scott Mease, certify that the proposed facilities are not underlain by carbonate geology.

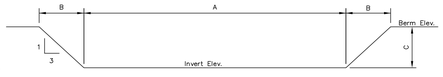
Registered Engineer

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

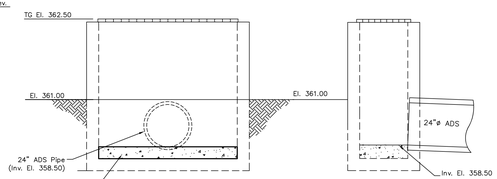
Registered Engineer
Registration No. PE036737E





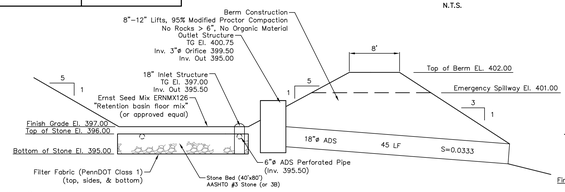
BMP Name	Invert Elev.	Berm Elev.	A	B	C	Spillway Lining
Fairway Woods Rain Garden 1	363.50	364.25	40	2.25	0.75	NAG S150
Fairway Woods Rain Garden 2	357.50	358.25	65	2.25	0.75	NAG S150
The Turn Rain Garden	404.50	405.00	20	1.50	0.50	NAG S150
The Turn Infiltration Basin	401.00	402.00	20	3.00	1.00	NAG S150
Apple Street Infiltration Basin	491.25	492.00	30	2.25	0.75	NAG S150

RAIN GARDEN EMERGENCY SPILLWAY CROSS SECTION
N.T.S.

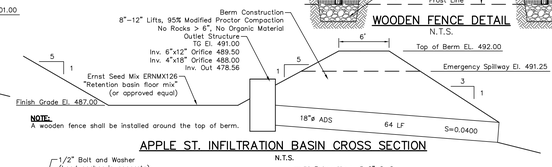


BMP Name	Bottom Elev.	Top of Berm Elev.	Outlet Structure: Riser Type	Top Riser El.	Orifice Size	Orifice El.	Pipe Size	Pipe Invert	Pipe Length (ft.)	Pipe Slope (%)	Emergency Spillway: Invert	Length (ft.)
The Turn Rain Garden	402.00	405.00	(3)18"ø ADS	403.50	–	–	12"ø (3)	401.50	25	1.50	404.50	20
Fairway Woods Rain Garden 1	361.00	364.25	2'x4' Box	362.50	–	–	24"ø	358.50	47	2.13	363.50	40
Fairway Woods Rain Garden 2	355.00	358.25	2'x4' Box	356.75	6"x30"	356.00	18"ø	353.00	167	4.67	357.50	65

RAIN GARDEN CROSS SECTION
N.T.S.

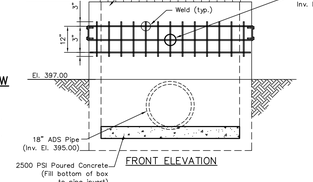


THE TURN INFILTRATION BASIN CROSS SECTION
N.T.S.

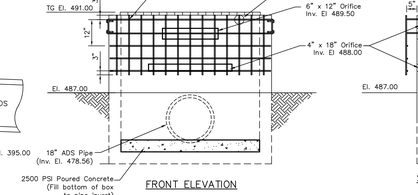


NOTE:
A wooden fence shall be installed around the top of berm.

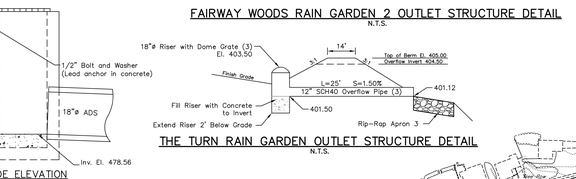
APPLE ST. INFILTRATION BASIN CROSS SECTION
N.T.S.



THE TURN INFILTRATION BASIN OUTLET STRUCTURE DETAIL
N.T.S.

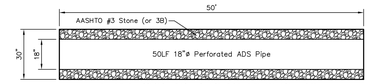


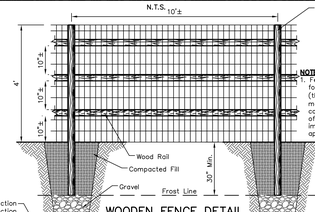
APPLE ST. INFILTRATION BASIN OUTLET STRUCTURE DETAIL
N.T.S.



FAIRWAY WOODS RAIN GARDEN 2 OUTLET STRUCTURE DETAIL
N.T.S.

LEVEL SPREADER PLAN VIEW DETAIL
N.T.S.

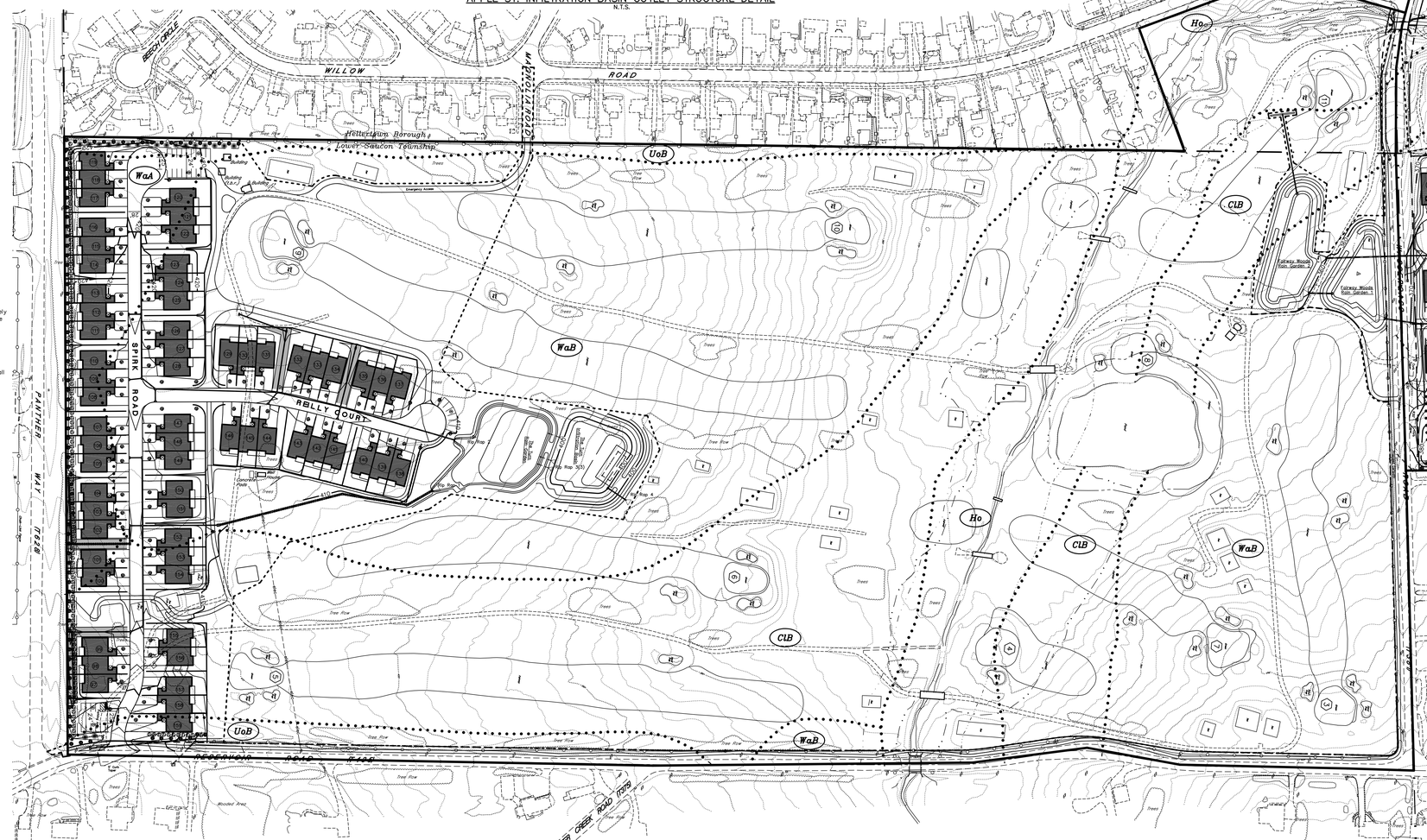




NOTES:
Fencing shall be four foot high split rail fence (three rail) with wire mesh, vinyl (PVC) coated, on the outside of the rails or other impassable barrier as approved by Council.

WOODEN FENCE DETAIL
N.T.S.

THE TURN RAIN GARDEN OUTLET STRUCTURE DETAIL
N.T.S.



SYMBOLS

- Matchline
- Municipal Boundary
- Existing Contour
- 450 — Proposed Contour
- ToB — Soil Type
- Soil Boundary Line
- Limits of Construction/Disturbance
- NPDES Boundary
- Existing Soil Probe
- Existing Tree Line
- Proposed Tree Line
- Existing Wetlands
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Waterways
- 100 Year Floodplain
- Proposed Building
- (t.b.r.) — To Be Removed
- Stanford Text — Existing Features
- Straight Text — Proposed Features

NORTH
100 0 50 100
1 Inch = 100 Ft.

PARTIAL SITE PLAN
1" = 100'

Preliminary Plan

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
STOP!! CALL!!
PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
PROJECT SERIAL NO.

Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	EN

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania
SCALE: As Noted
DRAWN BY: DWM
DATE: 22 Dec. '22
FILE: 14191019-20
OWNERS OF RECORD: Steel Land LLC
8052 William Penn Highway
Easton, PA 18045

Post-Construction Stormwater Management Plan – South

SHEET 20 of 22

INFILTRATION BASIN GENERAL NOTES

SITE PREPARATION
Areas under the embankment and any structural works shall be cleared, grubbed and the topsoil stripped to remove trees, vegetation, roots, and other objectionable material. In order to facilitate clean cut and restoration, the infiltration area will be cleared of all brush and excess trees.

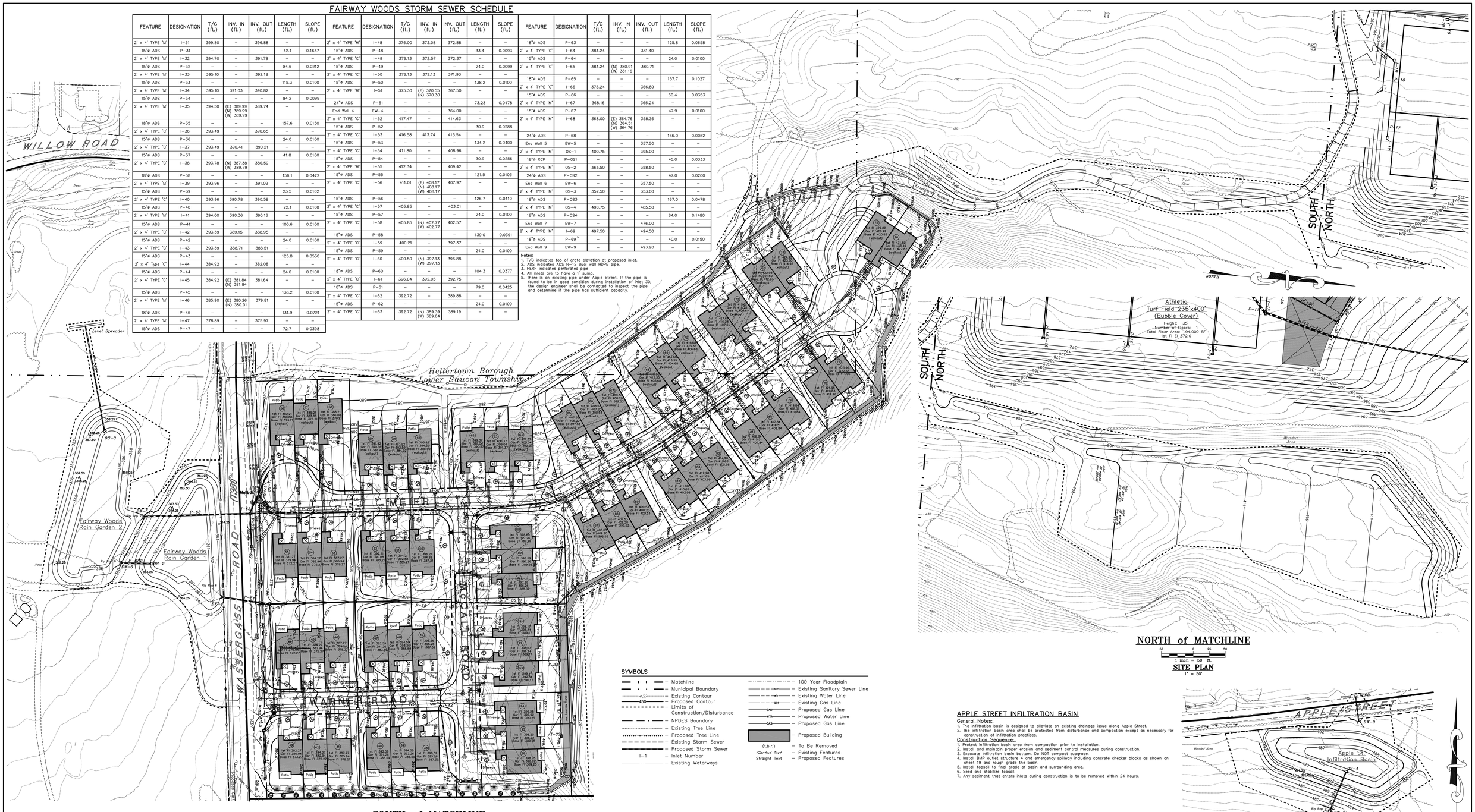
EMBANKMENT
The fill material shall be taken from selected borrow areas. It shall be free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material should contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. The fill material shall be placed in 6 to 8 inch layers and shall be continuous over the entire length of the fill. Fill material must be compacted to a minimum of 95% of Modified Proctor Density as established by ASTM D-1557. Compaction testing by a certified soils engineer/geologists must be completed as directed by the Township Engineer to verify adequate compaction has been achieved.

CUT OFF TRENCH
A cut off trench will be excavated along the centerline dam on earth fill embankments. The minimum depth shall be two feet. The cut off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be four feet but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for the embankment. The trench shall be kept free from standing water during the backfilling operations.

FAIRWAY WOODS STORM SEWER SCHEDULE

FEATURE	DESIGNATION	T/G (ft.)	INV. IN (ft.)	INV. OUT (ft.)	LENGTH (ft.)	SLOPE (ft.)
2' x 4' TYPE 'M'	I-31	399.80	–	396.88	–	–
15"ø ADS	P-31	–	–	–	42.1	0.1637
2' x 4' TYPE 'M'	I-32	394.70	–	391.78	–	–
15"ø ADS	P-32	–	–	–	84.6	0.0212
2' x 4' TYPE 'M'	I-33	395.10	–	392.18	–	–
15"ø ADS	P-33	–	–	–	115.3	0.0100
2' x 4' TYPE 'M'	I-34	395.10	391.03	390.82	–	–
15"ø ADS	P-34	–	–	–	84.2	0.0099
2' x 4' TYPE 'M'	I-35	394.50	(E) 389.99 (N) 389.99 (W) 389.99	389.74	–	–
18"ø ADS	P-35	–	–	–	157.6	0.0150
2' x 4' TYPE 'C'	I-36	393.49	–	390.65	–	–
15"ø ADS	P-36	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-37	393.49	390.41	390.21	–	–
15"ø ADS	P-37	–	–	–	41.8	0.0100
2' x 4' TYPE 'C'	I-38	393.78	(N) 387.38 (W) 389.79	386.59	–	–
18"ø ADS	P-38	–	–	–	156.1	0.0422
2' x 4' TYPE 'M'	I-39	393.96	–	391.02	–	–
15"ø ADS	P-39	–	–	–	23.5	0.0102
2' x 4' TYPE 'C'	I-40	393.96	390.78	390.58	–	–
15"ø ADS	P-40	–	–	–	22.1	0.0100
2' x 4' TYPE 'M'	I-41	394.00	390.36	390.16	–	–
15"ø ADS	P-41	–	–	–	100.6	0.0100
2' x 4' TYPE 'C'	I-42	393.39	389.15	388.95	–	–
15"ø ADS	P-42	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-43	393.39	388.71	388.51	–	–
15"ø ADS	P-43	–	–	–	125.8	0.0530
2' x 4' Type 'C'	I-44	384.92	–	382.08	–	–
15"ø ADS	P-44	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-45	384.92	(E) 381.84 (N) 381.84	381.64	–	–
15"ø ADS	P-45	–	–	–	138.2	0.0100
2' x 4' TYPE 'M'	I-46	385.90	(E) 380.26 (N) 380.01	379.81	–	–
18"ø ADS	P-46	–	–	–	131.9	0.0721
2' x 4' TYPE 'M'	I-47	378.89	–	375.97	–	–
15"ø ADS	P-47	–	–	–	72.7	0.0398
2' x 4' TYPE 'M'	I-48	376.00	373.08	372.88	–	–
15"ø ADS	P-48	–	–	–	33.4	0.0093
2' x 4' TYPE 'C'	I-49	376.13	372.57	372.37	–	–
15"ø ADS	P-49	–	–	–	24.0	0.0099
2' x 4' TYPE 'C'	I-50	376.13	372.13	371.93	–	–
15"ø ADS	P-50	–	–	–	138.2	0.0100
2' x 4' TYPE 'M'	I-51	375.30	(E) 370.55 (N) 370.30	367.50	–	–
24"ø ADS	P-51	–	–	–	73.23	0.0478
End Wall 4	EW-4	–	–	364.00	–	–
2' x 4' TYPE 'C'	I-52	417.47	–	414.63	–	–
15"ø ADS	P-52	–	–	–	30.9	0.0288
2' x 4' TYPE 'C'	I-53	416.58	413.74	413.54	–	–
15"ø ADS	P-53	–	–	–	134.2	0.0400
2' x 4' TYPE 'C'	I-54	411.80	–	408.96	–	–
15"ø ADS	P-54	–	–	–	30.9	0.0256
2' x 4' TYPE 'M'	I-55	412.34	–	409.42	–	–
15"ø ADS	P-55	–	–	–	121.5	0.0103
2' x 4' TYPE 'C'	I-56	411.01	(E) 408.17 (N) 408.17 (W) 408.17	407.97	–	–
15"ø ADS	P-56	–	–	–	126.7	0.0410
2' x 4' TYPE 'C'	I-57	405.85	–	403.01	–	–
15"ø ADS	P-57	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-58	405.85	(N) 402.77 (W) 402.77	402.57	–	–
15"ø ADS	P-58	–	–	–	139.0	0.0391
2' x 4' TYPE 'C'	I-59	400.21	–	397.37	–	–
15"ø ADS	P-59	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-60	400.50	(N) 397.13 (W) 397.13	396.88	–	–
18"ø ADS	P-60	–	–	–	104.3	0.0377
2' x 4' TYPE 'C'	I-61	396.04	392.95	392.75	–	–
18"ø ADS	P-61	–	–	–	79.0	0.0425
2' x 4' TYPE 'C'	I-62	392.72	–	389.88	–	–
15"ø ADS	P-62	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-63	392.72	(N) 389.39 (W) 389.64	389.19	–	–
18"ø ADS	P-63	–	–	–	125.8	0.0658
2' x 4' TYPE 'C'	I-64	384.24	–	381.40	–	–
15"ø ADS	P-64	–	–	–	24.0	0.0100
2' x 4' TYPE 'C'	I-65	384.24	(N) 380.91 (W) 381.16	380.71	–	–
18"ø ADS	P-65	–	–	–	157.7	0.1027
2' x 4' TYPE 'C'	I-66	375.24	–	366.89	–	–
15"ø ADS	P-66	–	–	–	60.4	0.0353
2' x 4' TYPE 'M'	I-67	368.16	–	365.24	–	–
15"ø ADS	P-67	–	–	–	47.9	0.0100
2' x 4' TYPE 'M'	I-68	368.00	(E) 364.76 (N) 364.51 (W) 364.76	358.36	–	–
24"ø ADS	P-68	–	–	–	166.0	0.0052
End Wall 5	EW-5	–	–	357.50	–	–
2' x 4' TYPE 'M'	OS-1	400.75	–	395.00	–	–
18"ø RCP	P-OS1	–	–	–	45.0	0.0333
2' x 4' TYPE 'M'	OS-2	363.50	–	358.50	–	–
24"ø ADS	P-OS2	–	–	–	47.0	0.0200
End Wall 6	EW-6	–	–	357.50	–	–
2' x 4' TYPE 'M'	OS-3	357.50	–	353.00	–	–
18"ø ADS	P-OS3	–	–	–	167.0	0.0478
2' x 4' TYPE 'M'	OS-4	490.75	–	485.50	–	–
18"ø ADS	P-OS4	–	–	–	64.0	0.1480
End Wall 7	EW-7	–	–	476.00	–	–
2' x 4' TYPE 'M'	I-69	497.50	–	494.50	–	–
18"ø ADS	P-69	–	–	–	40.0	0.0150
End Wall 9	EW-9	–	–	493.90	–	–

Notes:
1. T/G indicates top of grate elevation at proposed inlet.
2. ADS indicates ADS N-12 dual wall HDPE pipe.
3. PERF indicates perforated pipe
4. All inlets are to have a 1' sump.
5. There is an existing pipe under Apple Street. If the pipe is found to be in good condition during installation of Inlet 30, the design engineer shall be contacted to inspect the pipe and determine if the pipe has sufficient capacity.



SOUTH of MATCHLINE

50 0 25 50
1 inch = 50 ft.

SITE PLAN
1" = 50'

NORTH of MATCHLINE

50 0 25 50
1 inch = 50 ft.

SITE PLAN
1" = 50'

SYMBOLS

- Matchline
- Municipal Boundary
- 450 Existing Contour
- 450 Proposed Contour
- Limits of Construction/Disturbance
- NPDES Boundary
- Existing Tree Line
- Proposed Tree Line
- Existing Storm Sewer
- Proposed Storm Sewer
- I-1 Inlet Number
- Existing Waterways
- 100 Year Floodplain
- SAN Existing Sanitary Sewer Line
- W Existing Water Line
- G Existing Gas Line
- SAN Proposed Gas Line
- W Proposed Water Line
- GAS Proposed Gas Line
- Proposed Building
- (t.b.r.) To Be Removed
- *Slanted Text* Existing Features
- Straight Text Proposed Features

FAIRWAY WOODS RAIN GARDEN 1

General Notes:
1. The rain garden controls the rate and volume for part of the Fairway Woods subdivision.
2. The rain garden area shall be protected from disturbance and compaction except as necessary for construction of infiltration practices.

Construction Sequence:
1. Protect rain garden area from compaction prior to installation.
2. If possible, install rain garden during later phases of site construction to prevent sedimentation and/or damage from construction activity. Only install pipe runs necessary for the given construction phase in order to prevent sediment from being conveyed to the rain garden. After installation, prevent sediment laden water from entering inlets and pipes. Inlet protection must be installed immediately after installation of the inlet.
3. Install and maintain proper erosion and sediment control measures during construction.
4. Excavate rain garden bottom. Do NOT compact subgrade.
5. Install outlet structure 2 and install emergency spillway including concrete checker blocks as shown on sheet 19 and rough grade the rain garden.
6. Install topsoil to final grade of rain garden and surrounding area.
7. Seed and stabilize topsoil.
8. Do not remove inlet protection or other erosion and sediment control measures until site is fully stabilized.
9. Any sediment that enters inlets during construction is to be removed within 24 hours.

FAIRWAY WOODS RAIN GARDEN 2

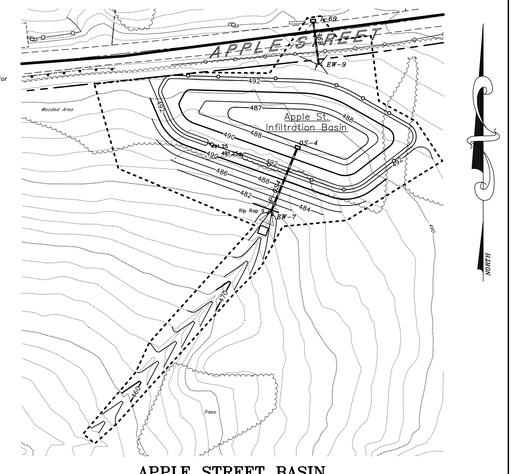
General Notes:
1. The rain garden controls the rate and volume for part of the Fairway Woods subdivision.
2. The rain garden area shall be protected from disturbance and compaction except as necessary for construction of infiltration practices.

Construction Sequence:
1. Protect rain garden area from compaction prior to installation.
2. If possible, install rain garden during later phases of site construction to prevent sedimentation and/or damage from construction activity. Only install pipe runs necessary for the given construction phase in order to prevent sediment from being conveyed to the rain garden. After installation, prevent sediment laden water from entering inlets and pipes. Inlet protection must be installed immediately after installation of the inlet.
3. Install and maintain proper erosion and sediment control measures during construction.
4. Excavate rain garden bottom. Do NOT compact subgrade.
5. Install outlet structure 3 and install emergency spillway including concrete checker blocks as shown on sheet 19 and rough grade the rain garden.
6. Install topsoil to final grade of rain garden and surrounding area.
7. Seed and stabilize topsoil.
8. Do not remove inlet protection or other erosion and sediment control measures until site is fully stabilized.
9. Any sediment that enters inlets during construction is to be removed within 24 hours.

APPLE STREET INFILTRATION BASIN

General Notes:
1. The infiltration basin is designed to alleviate an existing drainage issue along Apple Street.
2. The infiltration basin area shall be protected from disturbance and compaction except as necessary for construction of infiltration practices.

Construction Sequence:
1. Protect infiltration basin area from compaction prior to installation.
2. Install and maintain proper erosion and sediment control measures during construction.
3. Excavate infiltration basin bottom. Do NOT compact subgrade.
4. Install BMP outlet structure 4 and emergency spillway including concrete checker blocks as shown on sheet 19 and rough grade the basin.
5. Install topsoil to final grade of basin and surrounding area.
6. Seed and stabilize topsoil.
7. Any sediment that enters inlets during construction is to be removed within 24 hours.



APPLE STREET BASIN

50 0 25 50
1 inch = 50 ft.

SITE PLAN
1" = 50'

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer
Registration No. PE036737E

Preliminary Plan

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.
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Mease Engineering, P.C.
Office (215) 536-7005
Fax (215) 536-8581
516 W. Broad Street
Quakertown, PA 18951
PROFESSIONAL ENGINEERING & SURVEYING

NO.	DATE	DESCRIPTION	BY
2	08/14/23	Per Review Letter Dated 07/05/23	EN
1	05/22/23	Per Review Letter Dated 02/16/23	TNF

STEEL CLUB LAND DEVELOPMENT
PHASE 3
Lower Saucon Township/Hellertown Borough, Northampton County, Pennsylvania

SCALE: As Noted | DRAWN BY: DWM
DATE: 22 Dec. '22 | FILE: 14191020-21
OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Post Construction Stormwater Management Plan – Fairway Woods

SHEET 21 of 22

STORM SEWER SCHEDULE

FEATURE	DESIGNATION	T/G (ft.)	INV. IN (ft.)	INV. OUT (ft.)	LENGTH (ft.)	SLOPE (ft.)
2' x 4' TYPE 'M'	I-1	419.00	–	415.84	–	–
15"ø ADS	P-1	–	–	–	135.2	0.0100
2' x 4' TYPE 'M'	I-2	417.50	414.49	414.29	–	–
15"ø ADS	P-2	–	–	–	119.9	0.0100
2' x 4' TYPE 'C'	I-3	415.84	413.09	412.89	–	–
15"ø ADS	P-3	–	–	–	26.3	0.0164
2' x 4' TYPE 'C'	I-4	415.68	412.46	412.26	–	–
15"ø ADS	P-4	–	–	–	206.1	0.0100
2' x 4' TYPE 'M'	I-5	415.40	–	412.65	–	–
15"ø ADS (PERF)	P-5	–	–	–	135.2	0.0050
2' x 4' TYPE 'M'	I-6	414.74	411.97	411.77	–	–
15"ø ADS (PERF)	P-6	–	–	–	118.3	0.0050
2' x 4' TYPE 'C'	I-7	413.94	411.18	410.98	–	–
15"ø ADS	P-7	–	–	–	33.8	0.0101
2' x 4' TYPE 'C'	I-8	413.83	410.64	410.44	–	–
15"ø ADS	P-8	–	–	–	24.0	0.0095
2' x 4' TYPE 'C'	I-9	414.98	–	412.23	–	–
15"ø ADS	P-9	–	–	–	24.0	0.0188
2' x 4' TYPE 'C'	I-10	414.98	411.78	411.58	–	–
15"ø ADS	P-10	–	–	–	137.6	0.0100
2' x 4' TYPE 'C'	I-11	413.83	(E) 410.20 (S) 410.20 (W) 410.20	409.45	–	–
24"ø ADS	P-11	–	–	–	154.5	0.0102
2' x 4' TYPE 'M'(2)	I-12	411.38	407.88	407.68	–	–
24"ø ADS (PERF)	P-12	–	–	–	261.5	0.0050
2' x 4' TYPE 'M'	I-13	409.87	406.37	406.17	–	–
24"ø ADS (PERF)	P-13	–	–	–	133.9	0.0050
2' x 4' Type 'M'	I-14	409.00	405.50	405.30	–	–
24"ø ADS (PERF)	P-14	–	–	–	59.4	0.0051
End Wall 1	EW-1	–	–	405.00	–	–
2' x 4' TYPE 'C'	I-15	419.67	–	416.92	–	–
15"ø ADS	P-15	–	–	–	24.0	0.0187
2' x 4' TYPE 'C'	I-16	419.67	416.47	416.27	–	–
15"ø ADS	P-16	–	–	–	167.6	0.0100
2' x 4' TYPE 'C'	I-17	417.95	–	415.20	–	–
15"ø ADS	P-17	–	–	–	24.0	0.0200
2' x 4' TYPE 'C'	I-18	417.95	(S) 414.72 (W) 414.59	414.39	–	–
18"ø ADS	P-18	–	–	–	129.8	0.0100
2' x 4' TYPE 'C'	I-19	416.59	–	413.84	–	–
15"ø ADS	P-19	–	–	–	24.5	0.0200
2' x 4' TYPE 'C'	I-20	416.62	(S) 413.35 (W) 413.04	412.84	–	–
18"ø ADS	P-20	–	–	–	34.6	0.0101
2' x 4' TYPE 'C'	I-21	416.08	–	413.33	–	–
15"ø ADS	P-21	–	–	–	24.0	0.0200
2' x 4' TYPE 'C'	I-22	416.08	(E) 412.85 (W) 412.49	411.99	–	–
24"ø ADS	P-22	–	–	–	249.4	0.0100
2' x 4' TYPE 'C'	I-23	415.72	–	412.97	–	–
15"ø ADS	P-23	–	–	–	28.4	0.0201
2' x 4' TYPE 'M'	I-24	415.50	–	412.32	–	–
15"ø ADS	P-24	–	–	–	102.2	0.0100
2' x 4' TYPE 'M'	I-25	415.50	411.30	411.10	–	–
15"ø ADS	P-25	–	–	–	125.9	0.0100
2' x 4' TYPE 'C'	I-26	415.57	(E) 412.40 (S) 409.50 (W) 409.84	409.30	–	–
24"ø ADS	P-26	–	–	–	131.8	0.0100
2' x 4' TYPE 'M'	I-27	414.50	–	411.75	–	–
15"ø ADS	P-27	–	–	–	123.5	0.0100
2' x 4' TYPE 'C'	I-28	414.23	–	411.48	–	–
15"ø ADS	P-28	–	–	–	24.0	0.0200
2' x 4' TYPE 'C'	I-29	414.23	(E) 411.00 (S) 407.98 (W) 410.51	407.78	–	–
24"ø ADS	P-29	–	–	–	245.1	0.0113
End Wall 2	EW-2	–	–	405.00	–	–
2' x 4' TYPE 'M'	I-30	425.30	–	421.80	–	–
24"ø ADS	P-30	–	–	–	220.0	0.0390
18"ø ADS	P-30a	–	–	–	17.9	0.0260
End Wall 3	EW-2	–	–	413.22	–	–

Notes:
1. T/G indicates top of grate elevation at proposed inlet.
2. ADS indicates ADS N-12 dual wall HDPE pipe.
3. PERF indicates perforated pipe
4. All inlets are to have a 1' sump.

THE TURN INFILTRATION BASIN

General Notes:
1. The infiltration basin controls the rate and volume for The Turn subdivision.
2. The infiltration basin area shall be protected from disturbance and compaction except as necessary for construction of infiltration practices.

Construction Sequence:
1. Protect infiltration basin area from compaction prior to installation.
2. If possible, install infiltration basin during later phases of site construction to prevent sedimentation and/or damage from construction activity. Only install pipe runs necessary for the given construction phase in order to prevent sediment from being conveyed to the basin. After installation, prevent sediment laden water from entering inlets and pipes. Inlet protection must be installed immediately after installation of the inlet.
3. Install and maintain proper erosion and sediment control measures during construction.
4. Excavate infiltration basin bottom. The infiltration trench in the bottom is to be excavated to a uniform, level uncompacted subgrade free from rocks and debris. Do NOT compact subgrade.
5. Place nonwoven geotextile along bottom and sides of trench. Nonwoven geotextile rolls should overlap by a minimum of 16 inches within the trench. Fold back and secure excess geotextile during stone placement.
7. Install inlets and place uniformly graded, clean–washed aggregate in 8–inch lifts, lightly compacting between lifts.
8. Install perforated pipe as indicated on plans. Backfill with uniformly graded, clean–washed aggregate in 8–inch lifts, lightly compacting between lifts.
9. Fold and secure nonwoven geotextile over infiltration bed, with minimum overlap of 16–inches.
10. Install BMP outlet structure 1 and emergency spillway including concrete checker blocks as shown on sheet 19 and rough grade the basin.
10. Install topsoil to final grade of basin and surrounding area.
11. Seed and stabilize topsoil.
12. Do not remove inlet protection or other erosion and sediment control measures until site is fully stabilized.
13. Any sediment that enters inlets during construction is to be removed within 24 hours.

THE TURN RAIN GARDEN

General Notes:
1. The rain garden controls the rate and volume for The Turn subdivision.
2. The rain garden area shall be protected from disturbance and compaction except as necessary for construction of infiltration practices.

Construction Sequence:
1. Protect rain garden area from compaction prior to installation.
2. If possible, install rain garden during later phases of site construction to prevent sedimentation and/or damage from construction activity. Only install pipe runs necessary for the given construction phase in order to prevent sediment from being conveyed to the rain garden. After installation, prevent sediment laden water from entering inlets and pipes. Inlet protection must be installed immediately after installation of the inlet.
3. Install and maintain proper erosion and sediment control measures during construction.
4. Excavate rain garden bottom. Do NOT compact subgrade.
5. Install the outlets structures and install emergency spillway including concrete checker blocks as shown on sheet 19 and rough grade the rain garden.
6. Install topsoil to final grade of rain garden and surrounding area.
7. Seed and stabilize topsoil.
8. Do not remove inlet protection or other erosion and sediment control measures until site is fully stabilized.
9. Any sediment that enters inlets during construction is to be removed within 24 hours.

NOTES

1. All existing utilities are based on approximate location and depths. A PA ONE CALL must be performed prior to any excavation.
2. All water mains are to have a minimum cover of 4'
3. All water mains and sanitary sewer lines must have a horizontal isolation distance of 10' or a vertical isolation distance of 1.5'.
4. All inlets shall be labeled with an embedded plastic disk indicating a prohibition against pollutants.
5. The ADS stormwater pipe shall be smooth lined pipe with watertight joints.
6. Inlet and manhole castings and concrete construction shall be equivalent to PA Department of Transportation design standards.

ENGINEER'S CERTIFICATION

I hereby certify that I have designed all site and public improvements and have identified all floodplain limits as required for this subdivision or land development.

Registered Engineer

Registration No. PE036737E

SITE PLAN
1" = 50'

SYMBOLS

- Matchline
- Municipal Boundary
- Existing Contour
- Proposed Contour
- Limits of Construction/Disturbance
- NPDES Boundary
- Existing Soil Probe
- Existing Tree Line
- Proposed Tree Line
- Existing Storm Sewer
- Proposed Storm Sewer
- I-1 – Inlet Number
- Existing Sanitary Sewer Line
- Existing Water Line
- Existing Gas Line
- Proposed Sanitary Sewer Line
- Proposed Water Line
- Proposed Gas Line
- Proposed Building
- (t.b.r.) – To Be Removed
- *Slanted Text* – Existing Features
- Straight Text – Proposed Features

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STEEL CLUB LAND DEVELOPMENT
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SCALE: As Noted
DRAWN BY: DWM
DATE: 22 Dec. '22
FILE: 14191021-22
OWNERS OF RECORD: Steel Land LLC, 8052 William Penn Highway, Easton, PA 18045

Post Construction Stormwater Management Plan – The Turn

SHEET 22 of 22