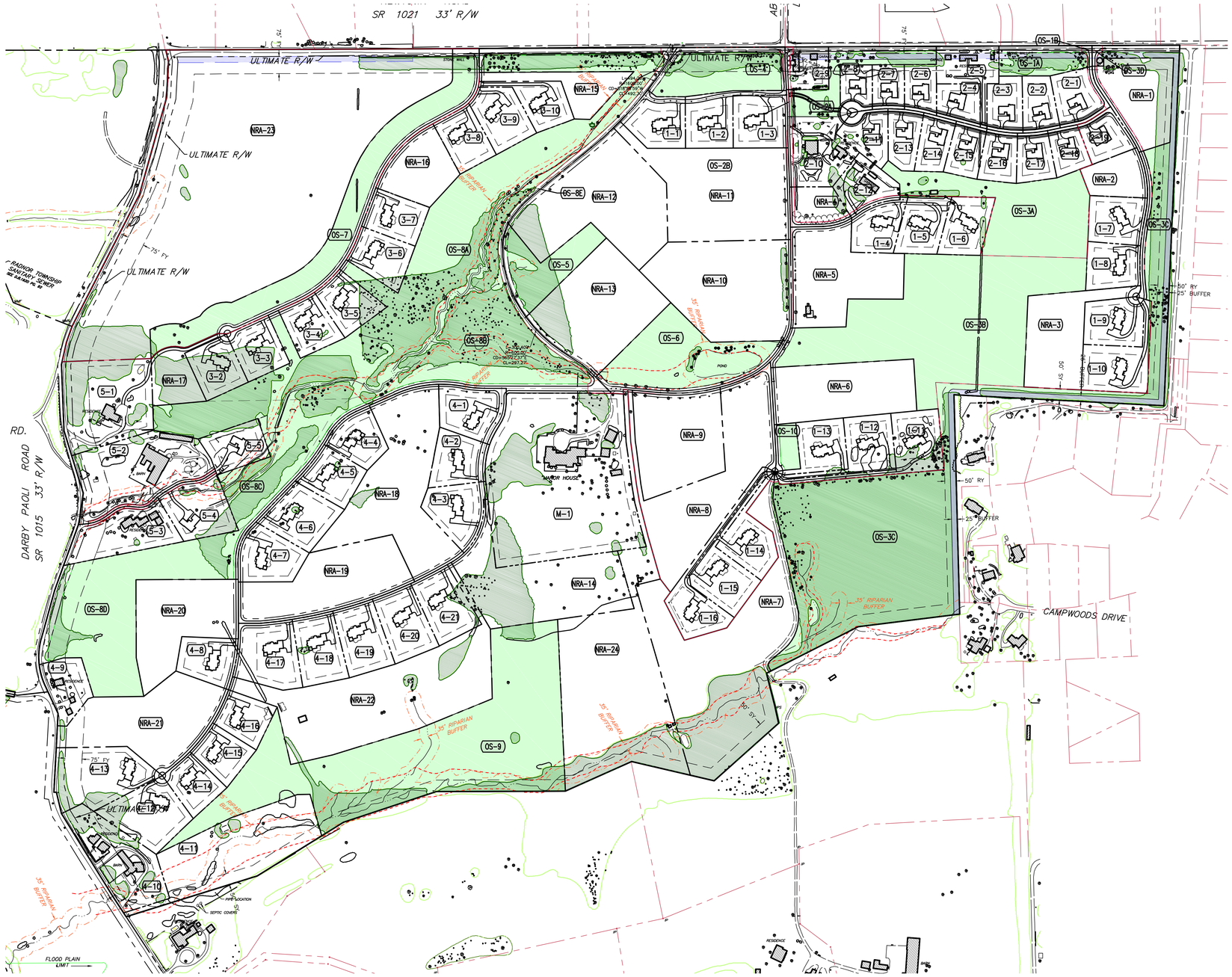


SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
△	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE

NON-EXISTING BUILDINGS SHOWN ON PROPOSED LOTS ARE CONCEPTUAL ONLY AND ARE NOT INTENDED TO REPRESENT THE AREA AND BULK OF THE HOMES TO BE BUILT ON THOSE LOTS

SHEET INDEX:

SHEET 01 – ILLUSTRATIVE SITE PLAN
SHEET 02 – RECORD PLAN INDEX
SHEET 03 – RECORD PLAN – PHASING
SHEET 04 – RECORD PLAN – PHASE 1
SHEET 05 – RECORD PLAN – SHEET I
SHEET 06 – RECORD PLAN – SHEET II
SHEET 07 – RECORD PLAN – SHEET III
SHEET 08 – RECORD PLAN – SHEET IV
SHEET 09 – SHARED DRIVEWAYS OVERVIEW
SHEET 10 – NOTES AND REFERENCES
SHEET 11 – EXISTING TRUST PARCEL PLAN
SHEET 12 – VICINITY PLAN
SHEET 13 – SOIL, VEGETATION, & WATER RESOURCES MAP
SHEET 14 – EXISTING CONDITIONS PLAN – SHEET I
SHEET 15 – EXISTING CONDITIONS PLAN – SHEET II
SHEET 16 – EXISTING CONDITIONS PLAN – SHEET III
SHEET 17 – EXISTING CONDITIONS PLAN – SHEET IV
SHEET 18 – PHASING PLAN
SHEET 19 – OVERALL PAVEMENT MARKING PLAN
SHEET 20 – PAVEMENT MARKING PLAN – SHEET I
SHEET 21 – PAVEMENT MARKING PLAN – SHEET II
SHEET 22 – PAVEMENT MARKING PLAN – SHEET III
SHEET 23 – PAVEMENT MARKING PLAN – SHEET IV
SHEET 24 – OVERALL PCSM PLAN
SHEET 25 – PCSM PLAN – SHEET A
SHEET 26 – PCSM PLAN – SHEET B
SHEET 27 – PCSM PLAN – SHEET C
SHEET 28 – PCSM PLAN – SHEET D
SHEET 29 – PCSM PLAN – SHEET E
SHEET 30 – PCSM PLAN – SHEET F
SHEET 31 – PCSM PLAN – SHEET G
SHEET 32 – PCSM PLAN – SHEET H
SHEET 33 – PCSM PLAN – SHEET I
SHEET 34 – PCSM PLAN – SHEET J
SHEET 35 – PCSM PLAN – SHEET K
SHEET 36 – PCSM PLAN – SHEET L
SHEET 37 – ROADWAY PLAN AND PROFILE – IVY LANE
SHEET 38 – ROADWAY PLAN AND PROFILE – TOWER FIELD LANE
SHEET 39 – ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
SHEET 40 – ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
SHEET 41 – ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
SHEET 42 – ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
SHEET 43 – ROADWAY PLAN AND PROFILE – MURRAY LANE
SHEET 44 – ROADWAY PLAN AND PROFILE – ARDROSSAN DRIVE
SHEET 45 – ROADWAY PLAN AND PROFILE – ARDROSSAN DRIVE
SHEET 46 – ROADWAY PLAN AND PROFILE – TYLER LANE
SHEET 47 – ROADWAY PLAN AND PROFILE – TYLER LANE & THOMAS LANE
SHEET 48 – ROADWAY PLAN AND PROFILE – BINNEY LANE
SHEET 49 – ROADWAY PLAN AND PROFILE – BINNEY LANE
SHEET 50 – ROADWAY PLAN AND PROFILE – WHEELER LANE
SHEET 51 – SANITARY PLAN AND PROFILE
SHEET 52 – SANITARY PLAN AND PROFILE
SHEET 53 – SANITARY PLAN AND PROFILE
SHEET 54 – SANITARY PLAN AND PROFILE
SHEET 55 – SANITARY PLAN AND PROFILE
SHEET 56 – SANITARY PLAN AND PROFILE
SHEET 57 – SANITARY PLAN AND PROFILE
SHEET 58 – SANITARY PLAN AND PROFILE
SHEET 59 – SANITARY PLAN AND PROFILE
SHEET 60 – SANITARY PLAN AND PROFILE
SHEET 61 – SANITARY PLAN AND PROFILE
SHEET 62 – PCSM PLAN AND PROFILE
SHEET 63 – PCSM PLAN AND PROFILE
SHEET 64 – PCSM PLAN AND PROFILE
SHEET 65 – PCSM PLAN AND PROFILE
SHEET 66 – PCSM PLAN AND PROFILE
SHEET 67 – OVERALL EROSION AND SEDIMENTATION CONTROL PLAN
SHEET 68 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 69 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 70 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 71 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 72 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 73 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 74 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE I
SHEET 75 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE II
SHEET 76 EROSION AND SEDIMENTATION CONTROL PLAN – PHASE III
SHEET 77 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE III
SHEET 78 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
SHEET 79 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
SHEET 80 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
SHEET 81 – EROSION AND SEDIMENTATION CONTROL PLAN – PHASE V
SHEET 82 – ROADWAY CONSTRUCTION DETAILS
SHEET 83 – ROADWAY CONSTRUCTION DETAILS
SHEET 84 – ROADWAY CONSTRUCTION DETAILS
SHEET 85 – PCSM DETAILS
SHEET 86 – PCSM DETAILS
SHEET 87 – PCSM DETAILS
SHEET 88 – PCSM DETAILS
SHEET 89 – SANITARY DETAILS
SHEET 90 – EROSION AND SEDIMENTATION CONTROL DETAILS
SHEET 91 – EROSION AND SEDIMENTATION CONTROL DETAILS
SHEET 92 – EROSION AND SEDIMENTATION CONTROL NOTES
SHEET 93 EROSION AND SEDIMENTATION CONTROL DETAILS
SHEET LP-1 – OVERALL FOREST MITIGATION PLAN
SHEET LP-1A – FOREST MITIGATION PLAN
SHEET LP-1B – FOREST MITIGATION PLAN
SHEET LP-1C – FOREST MITIGATION PLAN
SHEET LP-1D – FOREST MITIGATION PLAN
SHEET LP-1E – FOREST MITIGATION PLAN
SHEET LP-1F – FOREST MITIGATION PLAN
SHEET LP-1G FOREST MITIGATION PLAN
SHEET LP-1H FOREST MITIGATION PLAN
SHEET LP-1I FOREST MITIGATION PLAN
SHEET LP-1J FOREST MITIGATION PLAN
SHEET LP-1K FOREST MITIGATION PLAN
SHEET LP-1L FOREST MITIGATION PLAN

FINAL SUBDIVISION AND LAND DEVELOPMENT PLANS for THE ARDROSSAN FARM

RADNOR TOWNSHIP * DELAWARE COUNTY

200 0 100 200 400 800

1 INCH = 200 FT.

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9068

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

Serial Number: 20142030820

DAVID R. FIORELLO — REGISTERED PROFESSIONAL — PENNSYLVANIA — 027478E

ILLUSTRATIVE SITE PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA

APPLICANT
ESNI LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PSR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/29/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 1 OF 93
SCALE: 1" = 200'
FILE NO.: 06-012

RECORD PLAN SHEET 1

RECORD PLAN SHEET 2

RECORD PLAN SHEET 3

RECORD PLAN SHEET 4

SR 1021 33' R/W

NEWTOWN ROAD

ULTIMATE R/W

IVY LANE

ARDROSSAN DRIVE

AYRSHIRE DRIVE

WHEATFIELD LANE

MURRAY LANE

WHEELER LANE

AYRSHIRE DRIVE

L=300.40'
R=600.00'
CD=S63°27'37"E
CL=297.27'

PAPER MILL RD.

DARBY-PAOLI ROAD

SR 1015 66' R/W

PHOMAS LANE

"MANOR HOUSE"

BINNEY LANE

CAMPWOODS DRIVE

WHEELER LANE

KIMBELL RD

PIPE LOCATION

SEPTIC COVERS

SEPTIC COVER

N 03°32'36" W 72.05'

N 10°41'30" W 100.00'

N 25°36'32" W 289.33'

N 40°10'00" W 284.03'

N 02°58'20" W 311.70'

N 07°37'20" W 216.99'

Pc 300.00'
A =271.18'
CH= N 27°47'20" W 206.85'

N 47°57'20" W 28.66'

N 07°57'20" W 103.17'

N 11°54'20" W 344.89'

S 66°37'00" W 11.30'

N 38°17'00" W 95.65'

S 66°37'00" W 310.00'

N 68°32'56" E 192.73'

N 49°41'42" E 198.36'

N 25°07'42" E 142.79'

N 37°29'10" E 146.12'

N 89°23'19" W 79.66'

N 01°07'08" E 459.51'

N 59°59'37" E 486.53'

N 29°59'52" E 217.00'

200 0 100 200 400 800

1 INCH = 200 FT.

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊕UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
SP	SOIL PERC TEST LOCATION
△	PROPOSED TEST PIT LOCATION
DI	PROPOSED TYPE 'M' INLET
2	PROPOSED LOT
OS-2	PROPOSED OPEN SPACE LOT
NR-1	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED NON-RESIDENTIALLY APPROVED LOT

STATE OF PENNSYLVANIA
COUNTY OF DELAWARE SS

ON THIS ____ DAY OF _____, 20____, BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED HIMSELF TO BE THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THE SUBDIVISION PLAN THEREOF WAS MADE AT HIS DIRECTION AND THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

_____
(SIGNATURE)

_____
NOTARY PUBLIC OR OTHER OFFICER

MY COMMISSION EXPIRES:_____

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND TO WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3000 FAX (610) 527-9008

RECORD PLAN INDEX
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

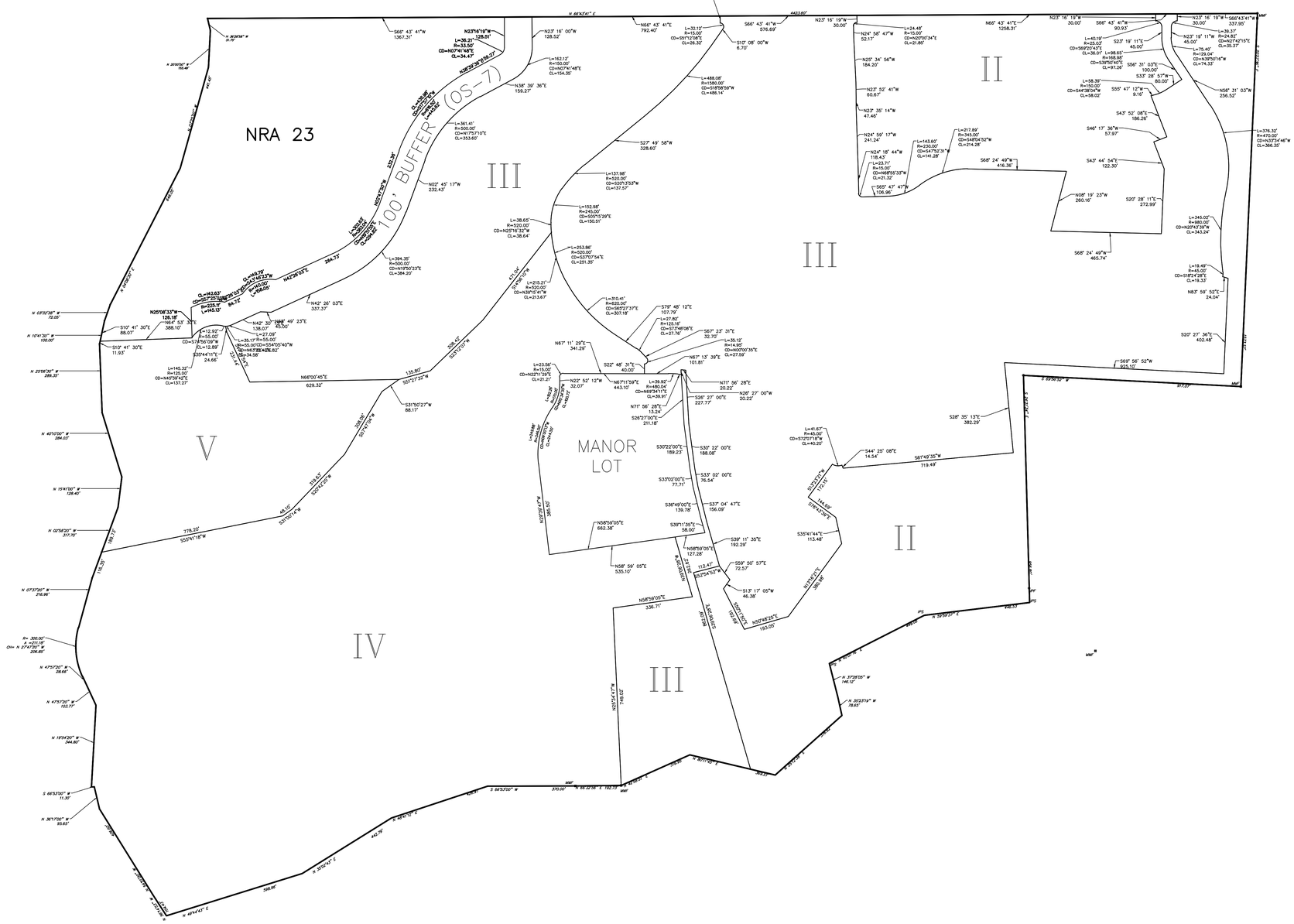
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

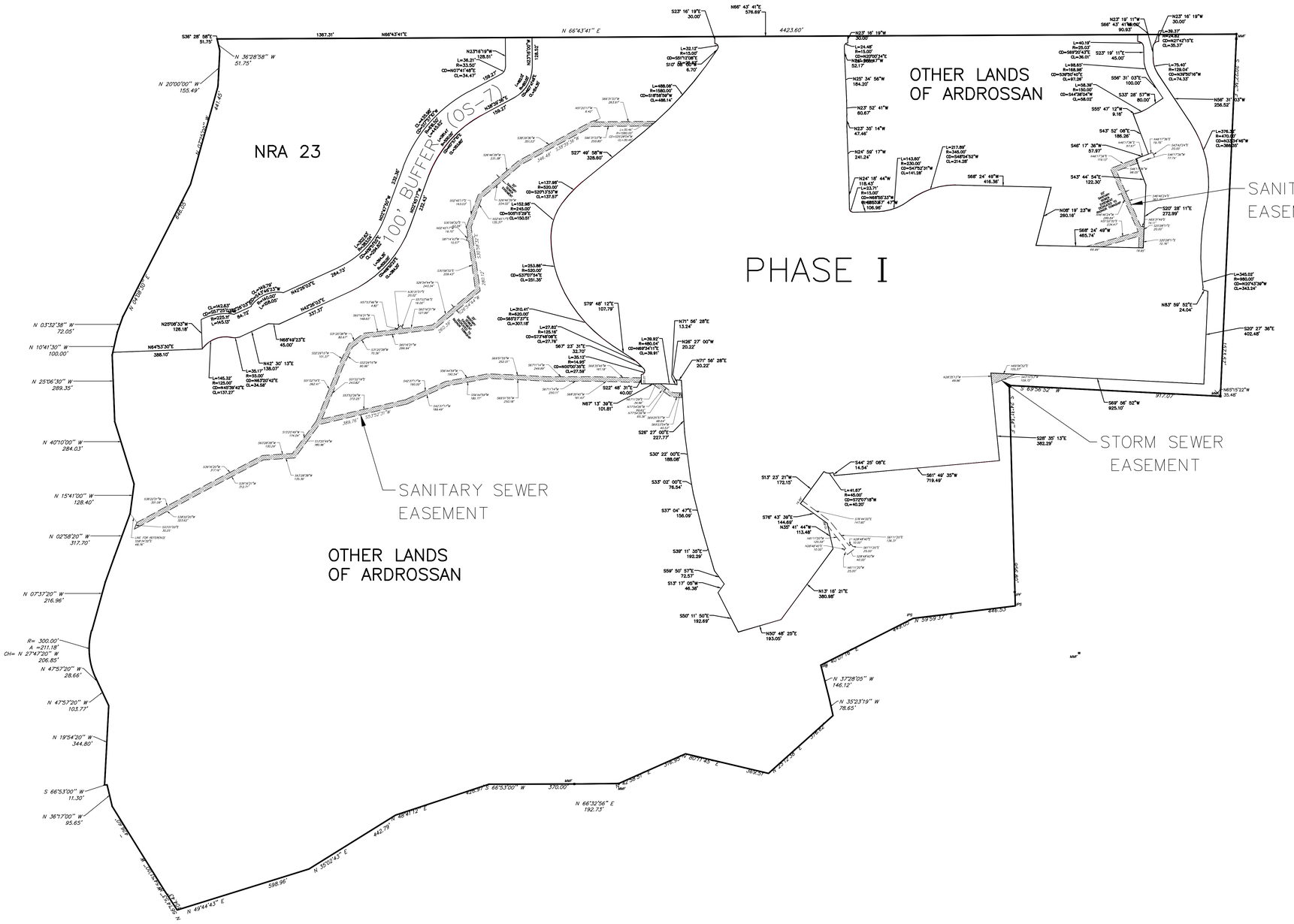
APPLICANT
ESH LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

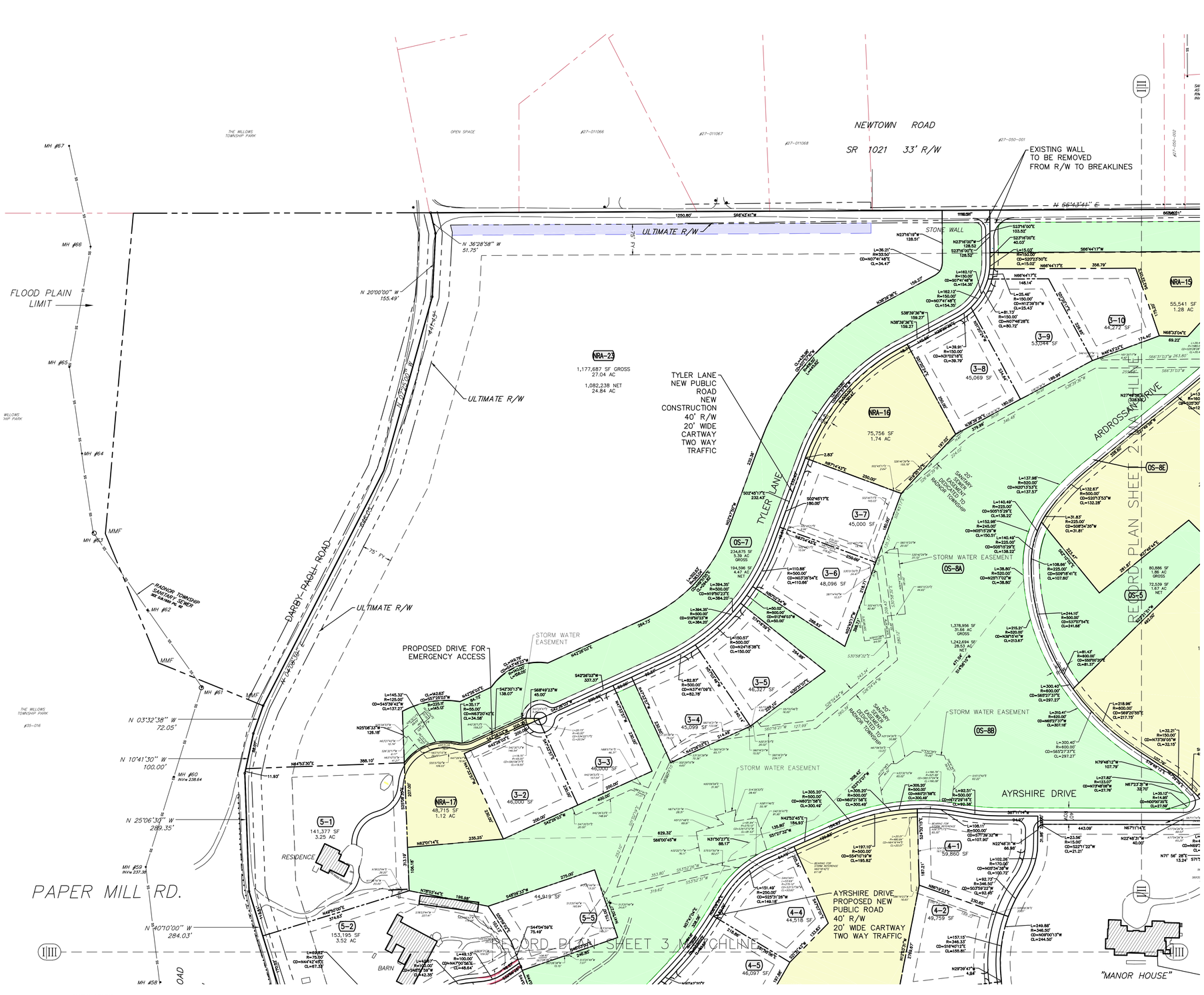
REV'D	DATE	COMMENTS
3	12/8/14	FOR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

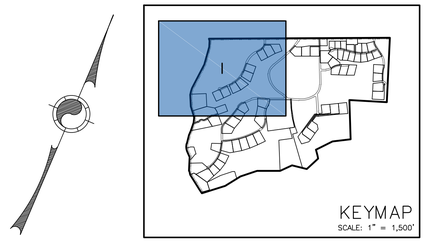
DATE: SEPTEMBER 5, 2014
SHEET NO.
2
OF 93
SCALE: 1" = 200'
FILE NO.: 06-012

N:\PROJECTS\2006\06012\MA\DRAWINGS\06012


NRA 23
100' BUFFER (OS-7)
MANOR LOT
I
II
III
IV
V
N 66°43'41" E 4423.60'
S66° 43' 41"W 1367.31'
N23°16'19"W 126.01'
L=36.22'
R=33.50'
CD=N07°41'48"E
CL=34.47'
N38°39'36"E 159.27'
N23° 16' 00"W 128.52'
N66° 43' 41"E 792.40'
S23° 16' 19"E 30.00'
S66° 43' 41"W 576.69'
S10° 08' 00"W 6.70'
N23° 16' 19"W 30.00'
N66° 43' 41"E 1258.31'
S66°43'41"W 337.95'
N66°00'45"E 629.32'
S31°30'27"W 88.17'
S10° 41' 30"E 88.07'
S10° 41' 30"E 11.93'
N42° 26' 03"E 337.37'
S27° 49' 58"W 328.60'
N02° 45' 17"W 232.43'
S68° 24' 49"W 416.36'
S68° 24' 49"W 465.74'
S20° 28' 11"E 272.99'
S20° 27' 36"E 402.48'
S89° 56' 52"W 925.10'
S43° 52' 08"E 186.26'
S46° 17' 36"W 57.97'
S43° 44' 54"E 122.30'
N08° 19' 23"W 260.16'
N83° 59' 52"E 24.04'
S28° 35' 13"E 382.29'
S44° 25' 08"E 14.54'
S81°49'35"W 719.49'
S35°41'44"E 113.48'
N57°48'25"E 380.98'
N30°11'35"E 749.52'
N58°59'05"E 336.71'
N58° 59' 05"E 535.10'
S58°59'05"W 127.28'
S57°54'52"W 112.47'
N30°22'07"E 385.50'
S30°22'00"E 189.23'
S30° 22' 00"E 188.08'
S26° 23' 00"E 227.77'
N28° 27' 00"W 20.22'
S22° 48' 31"E 40.00'
N67°11'59"E 443.10'
N67° 11' 29"E 341.29'
N22° 53' 12"W 32.07'
S79° 48' 12"E 107.79'
S67° 23' 31"E 32.70'
N67° 13' 39"E 101.81'
N71° 56' 28"E 13.24'
S26°27'00"E 211.18'
S53° 02' 00"E 76.54'
S53°02'00"E 77.71'
S38°49'00"E 139.78'
S37° 04' 47"E 156.09'
S39°11'35"E 58.00'
S39° 11' 35"E 192.29'
S59° 50' 57"E 72.57'
S13° 17' 05"W 46.38'
N50°48'35"E 193.05'
S 66°53'00" W 370.00'
N 88°32'58" E 782.73'
N 30°22'07" E 385.50'
N 49°41'53" E 398.96'
S 49°41'53" W 142.78'
S 66°53'00" W 109.91'
N 30°22'07" E 749.52'
N 01°11'24" E 358.40'
N 30°13'19" E 78.65'
N 37°28'05" W 146.12'
N 75°54'47"W 749.52'
N 47°57'20" W 38.66'
N 47°57'20" W 103.77'
N 15°54'20" W 344.80'
S 66°53'00" W 11.30'
N 38°17'00" W 93.65'
N 47°57'20" W 284.03'
N 15°41'20" W 126.40'
N 02°58'20" W 317.70'
N 07°37'20" W 216.66'
N 47°57'20" W 206.85'
778.20'
S55°41'18"W
S30°41'14"W
S30°42'05"W
S30°41'14"W
S30°42'05"W
S30°41'14"W
S30°42'05


NRA 23
100' BUFFER (OS-7)
PHASE I
OTHER LANDS OF ARDROSSAN
OTHER LANDS OF ARDROSSAN
SANITARY SEWER EASEMENT
SANITARY SEWER EASEMENT
STORM SEWER EASEMENT
S36° 28' 58"E 51.75'
1367.31'
N66°43'41"E
N 66°43'41" E 4423.60'
N 36°28'58" W 51.75'
N 20°00'00" W 155.49'
N 03°32'38" W 72.05'
N 10°41'30" W 100.00'
N 25°06'30" W 289.35'
N 40°10'00" W 284.03'
N 15°41'20" W 128.40'
N 02°58'20" W 317.70'
N 07°37'20" W 216.96'
N 47°57'20" W 28.66'
N 47°57'20" W 103.77'
N 19°54'20" W 344.80'
S 66°53'00" W 11.30'
N 36°17'00" W 95.65'
N 49°44'43" E 598.96'
N 55°00'43" E 442.79'
N 48°41'12" E
S 66°53'00" W 370.00'
N 66°32'56" E 192.73'
N 42°59'51" E
N 20°17'45" E
N 45°12'48" E
N 37°28'05" W 146.12'
N 35°23'19" W 78.65'
N 59°59'37" E 446.53'
N 65°15'23" W 35.48'
S 69°58' 52" W 917.07'
S 28° 35' 13"E 382.29'
S 20° 28' 11"E 272.99'
S 68° 24' 49"W 465.74'
N 83° 59' 52"E 24.04'
S 20° 27' 36"E 402.48'
S 79° 48' 12"E 107.79'
S 26° 27' 00"E 227.77'
S 22° 48' 31"E 40.00'
N 67° 13' 38"E 101.81'
S 30° 22' 00"E 188.08'
S 53° 02' 00"E 76.54'
S 53° 04' 47"E 156.09'
S 38° 11' 26"E 192.29'
S 59° 50' 57"E 72.57'
S 13° 17' 05"W 46.36'
S 50° 11' 50"E 192.69'
N 50° 48' 25"E 183.00'
N 11° 16' 21"E 280.88'
S 44° 25' 08"E 14.54'
S 61° 49' 35"W 719.49'
S 13° 23' 21"W 172.15'
S 76° 43' 39"E 144.69'
N 35° 41' 44"W 113.48'
N 23° 19' 11"W 566° 43' 41"E 90.57'
N 23° 16' 19"W 30.00'
S 23° 19' 11"E 45.00'
S 56° 31' 03"E 100.00'
S 33° 38' 57"W 80.00'
N 56° 31' 03"W 256.52'
S 55° 47' 12"W 5.15'
S 43° 53' 08"E 186.26'
S 46° 17' 38"W 57.97'
S 43° 44' 54"E 122.30'
N 08° 19' 23"W 280.16'
S 68° 24' 49"W 416.36'
N 23° 52' 41"W 60.67'
N 23° 35' 14"W 47.46'
N 24° 59' 17"W 241.24'
N 25° 34' 56"W 184.20'
N 24° 18' 44"W 118.43'
N 27° 23' 53"E 227.70'
S 27° 46' 58"W 328.80'
N 28°08'33"W 126.18'
N 42°26'03"E 284.72'
N 47°36'30"E 337.37'
N 65°49'23"E 45.00'
N 42° 30' 13"E 136.07'
S 84°53'30"E 388.10'
N 23° 16' 19"W 30.00'
S 23° 16' 19"E 30.00'
N 71° 56' 28"E 13.24'
N 26° 27' 00"W 20.22'
N 71° 56' 28"E 20.22'
N 23°16'19"W 126.51'
N 36°28'58"E 108.27'
N 23°16'19"W 126.52'
N 66°43'41"E 108.27'
R= 300.00'
A =211.18'
CH= N 27°47'20" W 206.85'
L=30.15'
R=15.00'
CD=50°12'08"E
CH=25.68'
L=488.08'
R=1580.00'
CD=8°18'38"W
CH=487.64'
L=137.86'
R=320.00'
CD=53°07'53"E
CH=137.53'
L=152.96'
R=245.00'
CD=50°51'29"E
CH=150.61'
L=253.86'
R=320.00'
CD=53°07'54"E
CH=251.30'
L=310.41'
R=520.00'
CD=56°03'37"E
CH=307.18'
L=37.82'
R=135.16'
CD=72°48'08"E
CH=27.78'
L=30.93'
R=460.04'
CD=89°34'41"E
CH=30.91'
L=35.12'
R=14.99'
CD=90°00'35"E
CH=31.59'
L=145.33'
R=125.00'
CD=46°38'42"E
CH=137.37'
L=35.12'
R=30.00'
CD=67°00'48"E
CH=34.58'
L=40.19'
R=25.03'
CD=58°30'47"E
CH=36.01'
L=24.48'
R=15.00'
CD=92°00'34"E
CH=21.90'
L=58.65'
R=169.99'
CD=39°35'10"E
CH=57.98'
L=58.38'
R=150.00'
CD=54°38'04"W
CH=56.02'
L=75.40'
R=129.04'
CD=30°50'04"W
CH=74.33'
L=376.32'
R=470.00'
CD=43°31'46"W
CH=366.93'
L=345.03'
R=860.00'
CD=40°47'39"W
CH=343.24'
L=143.60'
R=330.00'
CD=54°52'31"W
CH=142.38'
L=217.89'
R=345.00'
CD=54°52'53"W
CH=214.28'
L=23.71'
R=15.00'
CD=90°32'33"W
CH=21.33'
L=38.37'
R=24.50'
CD=62°47'43"E
CH=36.47'
L=30.15'
R=15.00'
CD=50°12'08"E
CH=25.68'
L=488.08'
R=1580.00'
CD=8°18'38"W
CH=487.64'
L=137.86'
R=320.00'
CD=53°07'53"W
CH=137.53'
L=152.96'
R=245.00'
CD=50°51'29"W
CH=150.61'
L=253.86'
R=320.00'
CD=53°07'54"W
CH=251.30'
L=310.41'
R=520.00'
CD=56°03'37"W
CH=307.18'
L=37.82'
R=135.16'
CD=72°48'08"W
CH=27.78'
L=30.93'
R=460.04'
CD=89°34'41"W
CH=30.91'
L=35.12'
R=14.99'
CD=90°00'35"W
CH=31.59'
L=145.33'
R=125.00'
CD=46°38'42"W
CH=137.37'
L=35.12'
R=30.00'
CD=67°00'48"W
CH=34.58'
L=40.19'
R=25.03'
CD=58°30'47"W
CH=36.01'
L=24.48'
R=15.00'
CD=92°00'34"W
CH=21.90'
L=58.65'
R=169.99'
CD=39°35'10"W
CH=57.98'
L=58.38'
R=150.00'
CD=54°38'04"E
CH=56.02'
L=75.40'
R=129.04'
CD=30°50'04"E
CH=74.33'
L=376.32'
R=470.00'
CD=43°31'46"E
CH=366.93'
L=345.03'
R=860.00'
CD=40°47'39"E
CH=343.24'
L=143.60'
R=330.00'
CD=54°52'31"E
CH=142.38'
L=217.89'
R=345.00'
CD=54°52'53"E
CH=214.28'
L=23.71'
R=15.00'
CD=90°32'33"E
CH=21.33'
L=38.37'
R=24.50'
CD=62°47'43"W
CH=36.47'
L=30.15'
R=15.00'
CD=50°12'08"W
CH=25.68'
L=488.08'
R=1580.00'
CD=8°18'38"E





SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

100 0 50 100 200 400

1 INCH = 100 FT.

ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 27-011066
MARUCCI GEORGE E JR & SANDRA
904 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4521 PAGE: 2384

MAP/PARCEL#: 27-011067
VEALE TINKHAM III & LOIS
902 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3431 PAGE: 2050

MAP/PARCEL#: 27-011068
VEALE TINKHAM III & LOIS B
900 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3807 PAGE: 0125

MAP/PARCEL#: 27-050001
PARADIS
820 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 4770 PAGE: 1233

MAP/PARCEL#: 27-050002
RONALD & SUZANNE KESICKI
810 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0689

MAP/PARCEL#: 28-025
CIVITELLA
764 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-043001
AMIR L. & MARIA T. ECKER
800 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0694

MAP/PARCEL#: 28-026
COONEY GERALD W & PATRICIA A
500 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4662 PAGE: 0986

MAP/PARCEL#: 28-027
LARSEN KRIK H & PATRICIA
770 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2185 PAGE: 1646

MAP/PARCEL#: 28-028
HANAMIRIAN MARK C & DOROTHY J
768 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1914 PAGE: 0699

MAP/PARCEL#: 28-029
BUCK WILLIAM C & LAURA T
772 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4054 PAGE: 1711

MAP/PARCEL#: 28-030
DEUBER WM M & BARBARA J
776 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-031
BOYLAN FRANCIS TIMOTHY
278 HOTHORPE LANE VILLANOVA, PA 19085
DB#: 3511 PAGE: 1218

MAP/PARCEL#: 28-038
PETTIT DONALD K & COOKE SUZANNE A
275 HOTHORPE LANE, VILLANOVA, PA 19085
DB#: 4807 PAGE: 0926

MAP/PARCEL#: 28-038001
WALTER WILLIAM G & MARY ANN
794 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 896 PAGE: 0276

MAP/PARCEL#: 28-039
MCCOY JOHN H
280 ABRAHAMS LANE VILLANOVA, PA 19085
DB#: 3049 PAGE: 0425

MAP/PARCEL#: 28-045
HARRINGTON C D JR ET UX
757 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2250 PAGE: 0827

MAP/PARCEL#: 29-064
STEWART ANN MUNGER
504 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1503 PAGE: 1785

MAP/PARCEL#: 29-065
MARGOLIS MICHAEL & PATRICIA
508 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1442 PAGE: 1107

MAP/PARCEL#: 29-066
AMBROSIO SALVATORE F & SUZANN
512 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 893 PAGE: 1274

MAP/PARCEL#: 29-067
HERBERT SCOTT H & MICHELLE C
516 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 995 PAGE: 0934

MAP/PARCEL#: 29-068
SPATACCO ANTHONY J & GLORIA A
520 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2769 PAGE: 1914

MAP/PARCEL#: 29-070
RILEY OWEN GUSTUS III & ROSE MARIE R
524 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2236 PAGE: 2252

MAP/PARCEL#: 29-071
LO WILLIAM & BONNIE
528 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4762 PAGE: 1065

MAP/PARCEL#: 29-072
GRINNON SEAN T & MARGARET R
532 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4105 PAGE: 2280

ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 29-073
BACHMAN JOHN B & JUDITH L
536 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1193 PAGE: 0653

MAP/PARCEL#: 29-074
ETEMAD BABAK & MANDANA
540 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4418 PAGE: 1959

MAP/PARCEL#: 29-075
MCGINLEY EDWARD F III
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-075002
MCGINLEY EDWARD F
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-077
VAN RODEN JOHN CROSBY III & ANDREA
749 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 5258 PAGE: 0684

MAP/PARCEL#: 29-076
SNYDER JOHN AVERY
753 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 2631 PAGE: 0789

MAP/PARCEL#: 35-016
RADNOR TOWNSHIP DARBY PAOLI ROAD
301 IVEN AVE RADNOR, PA 19087
DB#: 2344 PAGE: 1015

MAP/PARCEL#: 36-002
RORER GERALD B & ELIZABETH K
765 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 88 PAGE: 2174

MAP/PARCEL#: 36-003
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-003001
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-004
HOPSON MICHAEL & LYNN
756 CAMPWOODS ROAD, VILLANOVA, PA 19085
DB#: 4285 PAGE: 1597

MAP/PARCEL#: 37-001
SNYDER MARTIN AVERY & ANN C
745 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 74 PAGE: 0713

MAP/PARCEL#: 37-002
DONOHUE CORNELIUS M & ANN B
748 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 675 PAGE: 1549

MAP/PARCEL#: 37-003
CLANCY EDWARD P & SARA N
749 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 1917 PAGE: 1433

MAP/PARCEL#: 37-004
BERKOWITZ HENRY D & JULIE S
745 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 4717 PAGE: 1449

MAP/PARCEL#: 37-007
KUMAR GUNDURAJ JAYASHREE
741 CAMP WOODS ROAD VILLANOVA, PA 19085
DB#: 3732 PAGE: 1412

MAP/PARCEL#: 37-086001
ACADEMY OF NOTRE DAME DENAMUR INC
560 SPROUL ROAD VILLANOVA, PA 19085
DB#: 4027 PAGE: 0810

MAP/PARCEL#: 13-031
DAVID B. RUBENSTEIN & MICHELE A KREISLER
140 GOLF HOUSE ROAD, HAVERFORD, PA 19041
DB#2112 PAGE: 2067

MAP/PARCEL#: 43-106
CONKEL
681 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 1966 PAGE: 1144

MAP/PARCEL#: 43-107
JAMES J & MARY H. PURTILL
651 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 3953 PAGE: 1461

ALL UTILITIES SHOWN ON THIS PLAN ARE FROM AVAILABLE RECORDS AND FIELD LOCATIONS. THE CONTRACTOR SHALL CONTACT ALL UTILITIES PRIOR TO CONSTRUCTION AND BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
LANCASTER COUNTY
1-800-242-1776
5 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE052478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

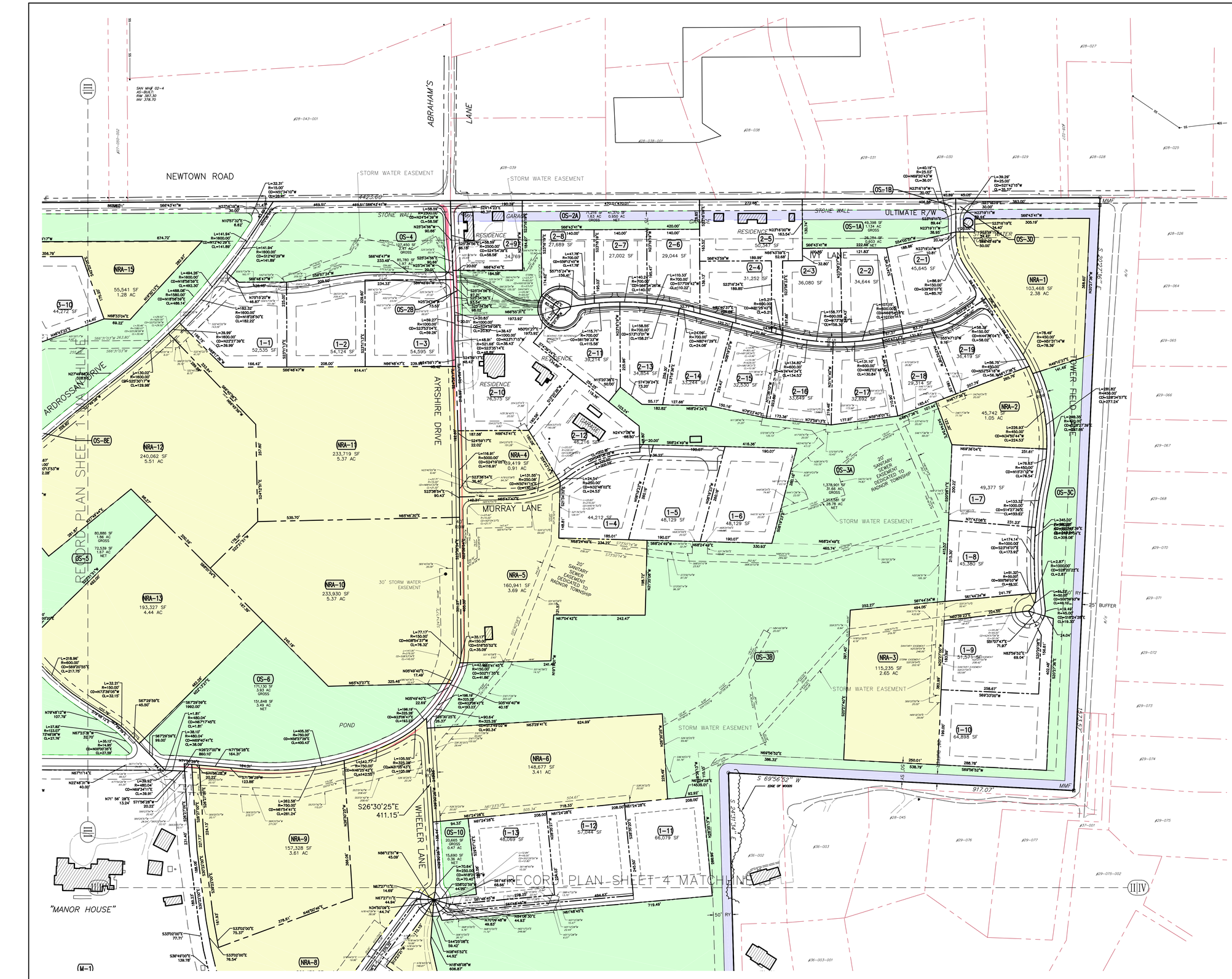
RECORD PLAN - SHEET I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

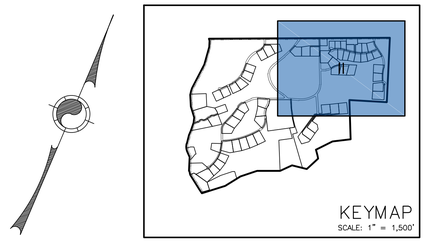
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PSR, TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 5 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012





ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 27-011066
MARUCCI GEORGE E JR & SANDRA
904 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4521 PAGE: 2384

MAP/PARCEL#: 27-011067
VEALE TINKHAM III & LOIS
902 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3431 PAGE: 2050

MAP/PARCEL#: 27-011068
VEALE TINKHAM III & LOIS R
900 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3807 PAGE: 0125

MAP/PARCEL#: 27-050001
PARADIS
820 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 4770 PAGE: 1233

MAP/PARCEL#: 27-050002
RONALD & SUZANNE KESICKI
810 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0689

MAP/PARCEL#: 28-025
CIVITELLA
764 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-043001
AMIR L. & MARIA T. ECKER
800 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0694

MAP/PARCEL#: 28-026
COONEY GERALD W & PATRICIA A
500 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4662 PAGE: 0986

MAP/PARCEL#: 28-027
LARSEN KRIK H & PATRICIA
770 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2185 PAGE: 1646

MAP/PARCEL#: 28-028
HANAMIRIAN MARK C & DOROTHY J
768 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1914 PAGE: 0699

MAP/PARCEL#: 28-029
BUCK WILLIAM C & LAURA T
772 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4054 PAGE: 1711

MAP/PARCEL#: 28-030
DEUBER WM M & BARBARA J
776 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-031
BOYLAN FRANCIS TIMOTHY
278 HOTHORPE LANE VILLANOVA, PA 19085
DB#: 3511 PAGE: 1218

MAP/PARCEL#: 28-038
PETTIT DONALD K & COOKE SUZANNE A
275 HOTHORPE LANE, VILLANOVA, PA 19085
DB#: 4807 PAGE: 0926

MAP/PARCEL#: 28-038001
WALTER WILLIAM G & MARY ANN
794 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 896 PAGE: 0276

MAP/PARCEL#: 28-039
MCCOY JOHN H
280 ABRAHAMS LANE VILLANOVA, PA 19085
DB#: 3049 PAGE: 0425

MAP/PARCEL#: 28-045
HARRINGTON C D JR ET UX
757 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2250 PAGE: 0827

MAP/PARCEL#: 29-064
STEWART ANN MUNGER
504 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1503 PAGE: 1785

MAP/PARCEL#: 29-065
MARGOLIS MICHAEL & PATRICIA
508 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1442 PAGE: 1107

MAP/PARCEL#: 29-066
AMBROSIO SALVATORE F & SUZANN
512 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 893 PAGE: 1274

MAP/PARCEL#: 29-067
HERBERT SCOTT H & MICHELLE C
516 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 995 PAGE: 0934

MAP/PARCEL#: 29-068
SPATACCO ANTHONY J & GLORIA A
520 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2769 PAGE: 1914

MAP/PARCEL#: 29-070
RILEY OWEN GUSTUS III & ROSE MARIE R
524 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2236 PAGE: 2252

MAP/PARCEL#: 29-071
LO WILLIAM & BONNIE
528 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4762 PAGE: 1065

MAP/PARCEL#: 29-072
CRINNION SEAN T & MARGARET R
532 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4105 PAGE: 2280

ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 29-073
BACHMAN JOHN B & JUDITH L
536 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1193 PAGE: 0653

MAP/PARCEL#: 29-074
ETEMAD BABAK & MANDANA
540 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4418 PAGE: 1959

MAP/PARCEL#: 29-075
MCGINLEY EDWARD F III
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-075002
MCGINLEY EDWARD F
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-077
VAN RODEN JOHN CROSBY III & ANDREA
749 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 5258 PAGE: 0684

MAP/PARCEL#: 29-076
SNYDER JOHN AVERY
753 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 2631 PAGE: 0789

MAP/PARCEL#: 35-016
RADNOR TOWNSHIP DARBY PAOLI ROAD
301 IVEN AVE RADNOR, PA 19087
DB#: 2344 PAGE: 1015

MAP/PARCEL#: 36-002
RORER GERALD B & ELIZABETH K
765 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 88 PAGE: 2174

MAP/PARCEL#: 36-003
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-003001
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-004
HOPSON MICHAEL & LYNN
756 CAMPWOODS ROAD, VILLANOVA, PA 19085
DB#: 4285 PAGE: 1597

MAP/PARCEL#: 37-001
SNYDER MARTIN AVERY & ANN C
745 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 74 PAGE: 0713

MAP/PARCEL#: 37-002
DONOHUE CORNELIUS M & ANN B
748 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 675 PAGE: 1549

MAP/PARCEL#: 37-003
CLANCY EDWARD P & SARA N
749 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 1917 PAGE: 1433

MAP/PARCEL#: 37-004
BERKOWITZ HENRY D & JULIE S
745 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 4717 PAGE: 1449

MAP/PARCEL#: 37-007
KUMAR GUNDURAJ JAYASHREE
741 CAMP WOODS ROAD VILLANOVA, PA 19085
DB#: 3732 PAGE: 1412

MAP/PARCEL#: 37-086001
ACADEMY OF NOTRE DAME DENAMUR INC
560 SPROUL ROAD VILLANOVA, PA 19085
DB#: 4027 PAGE: 0810

MAP/PARCEL#: 13-031
DAVID B. RUBENSTEIN & MICHELE A KREISLER
140 GOLF HOUSE ROAD, HAVERFORD, PA 19041
DB#:2112 PAGE: 2067

MAP/PARCEL#: 43-106
CONKEL
681 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 1966 PAGE: 1144

MAP/PARCEL#: 43-107
JAMES J & MARY H. PURTILL
651 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 3953 PAGE: 1461

ALL DRAWINGS, ALL WRITTEN MATERIAL, AND ALL DESIGNS APPEARING HEREIN ARE THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND SHALL NOT BE USED IN ANY WAY WITHOUT THE EXPRESS WRITTEN CONSENT OF MOMENEE & ASSOCIATES, INC.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN. Pennsylvania One Call System, Inc. 1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID R. FIORELLO PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3636 FAX: (610) 527-9068

RECORD PLAN – SHEET II
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERNAL UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 6 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012

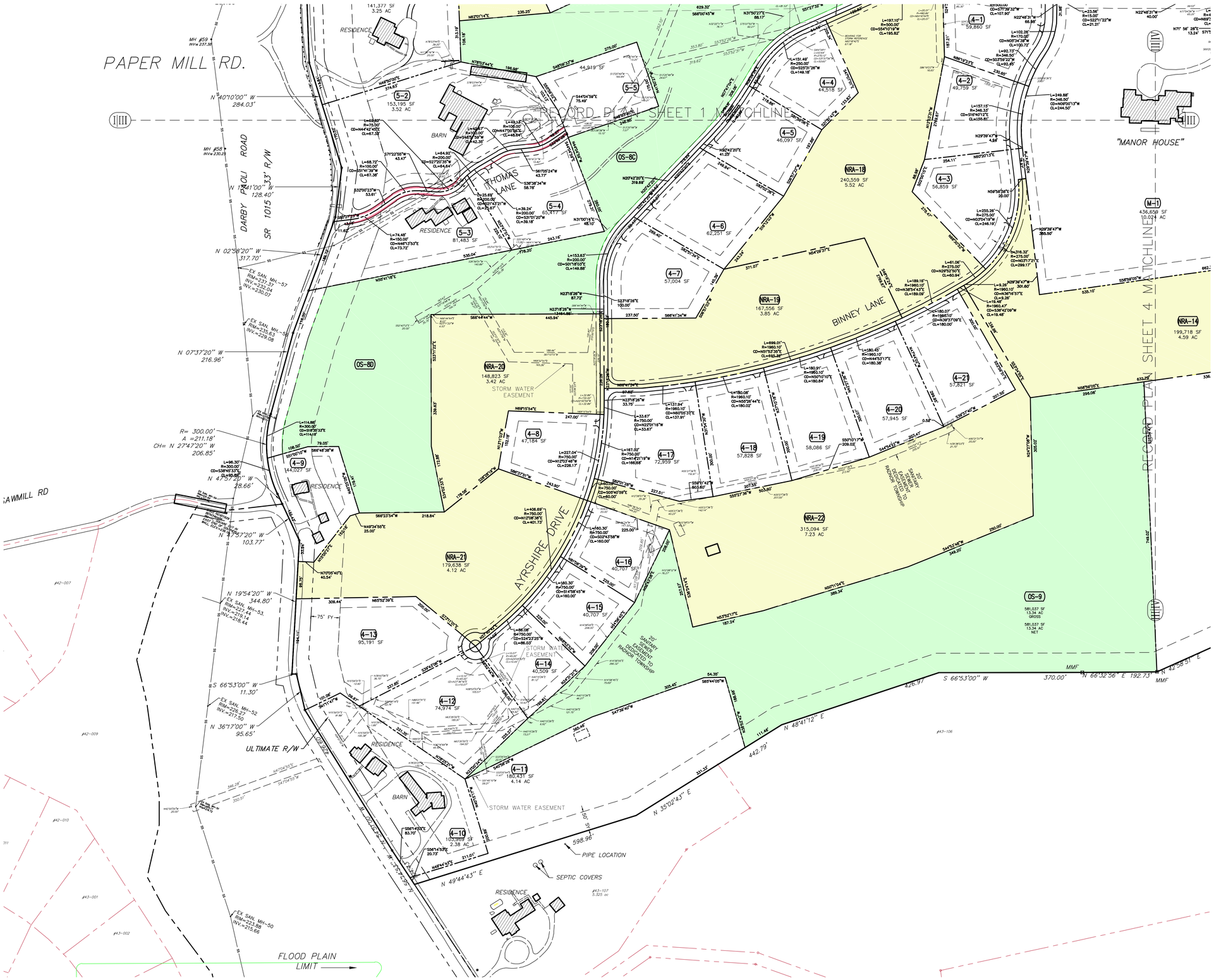
SYMBOL LEGEND

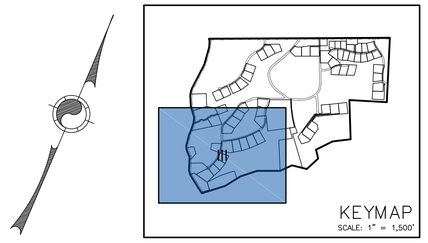
○IPF	IRON PIN FOUND	○UP	EXISTING UTILITY POLE
□CMF	CONCRETE MONUMENT FOUND	×100.00	EXISTING SPOT ELEVATION
□MMF	MARBLE MONUMENT FOUND	×DS 100.00	EXISTING DOOR SILL ELEVATION
□AC	EXISTING AIR CONDITIONER		SOIL PERC TEST LOCATION
○GV	EXISTING GAS VALVE		PROPOSED TEST PIT LOCATION
□GM	EXISTING GAS METER		PROPOSED TYPE 'M' INLET
□EM	EXISTING ELECTRIC METER	(2-2)	PROPOSED LOT
○CO	EXISTING CLEANOUT	(OS-2)	PROPOSED OPEN SPACE LOT
ROH	ROOF OVERHANG	(NRA-1)	PROPOSED NON-RESIDENTIALLY APPROVED LOT
●	EXISTING TREE		

LINETYPE LEGEND

EXISTING PROPERTY LINE	EXISTING TREE LINE
EXISTING RIGHT OF WAY	PROPOSED PROPERTY LINE
EXISTING FENCE	PROPOSED RIGHT OF WAY
EXISTING EASEMENT	PROPOSED BUILDING SETBACK
EXISTING CALCULATED FLOODPLAIN	PROPOSED EASEMENT
EXISTING FEMA FLOODPLAIN	PROPOSED CENTERLINE
EXISTING RIPARIAN BUFFER	
EXISTING STREAM	PROPOSED BUFFER
EXISTING SOILS	PROPOSED OPEN SPACE
EXISTING WETLAND	PROPOSED NON-RESIDENTIALLY APPROVED LOT

100 0 50 100 200 400
1 INCH = 100 FT.





ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 27-011066
MARUCCI GEORGE E JR & SANDRA
904 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4521 PAGE: 2384

MAP/PARCEL#: 27-011067
VEALE TINKHAM III & LOIS
902 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3431 PAGE: 2050

MAP/PARCEL#: 27-011068
VEALE TINKHAM III & LOIS R
900 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3807 PAGE: 0125

MAP/PARCEL#: 27-050001
PARADIS
820 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 4770 PAGE: 1233

MAP/PARCEL#: 27-050002
RONALD & SUZANNE KESICKI
810 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0689

MAP/PARCEL#: 28-025
CIVITELLA
764 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-043001
AMIR L & MARA T. ECKER
800 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0694

MAP/PARCEL#: 28-026
COONEY GERALD W & PATRICIA A
500 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4662 PAGE: 0986

MAP/PARCEL#: 28-027
LARSEN KRIK H & PATRICIA
770 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2185 PAGE: 1646

MAP/PARCEL#: 28-028
HANAMIRIAN MARK C & DOROTHY J
768 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1914 PAGE: 0699

MAP/PARCEL#: 28-029
BUCK WILLIAM C & LAURA T
772 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4054 PAGE: 1711

MAP/PARCEL#: 28-030
DEUBER WM M & BARBARA J
776 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-031
BOYLAN FRANCIS TIMOTHY
278 HOTHORPE LANE VILLANOVA, PA 19085
DB#: 3511 PAGE: 1218

MAP/PARCEL#: 28-038
PETTIT DONALD K & COOKE SUZANNE A
275 HOTHORPE LANE, VILLANOVA, PA 19085
DB#: 4807 PAGE: 0926

MAP/PARCEL#: 28-038001
WALTER WILLIAM G & MARY ANN
794 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 896 PAGE: 0276

MAP/PARCEL#: 28-039
MCCOY JOHN H
280 ABRAHAMS LANE VILLANOVA, PA 19085
DB#: 3049 PAGE: 0425

MAP/PARCEL#: 28-045
HARRINGTON C D JR ET UX
757 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2250 PAGE: 0827

MAP/PARCEL#: 29-064
STEWART ANN MUNGER
504 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1503 PAGE: 1785

MAP/PARCEL#: 29-065
MARGOLIS MICHAEL & PATRICIA
508 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1442 PAGE: 1107

MAP/PARCEL#: 29-066
AMBROSIO SALVATORE F & SUZANN
512 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 893 PAGE: 1274

MAP/PARCEL#: 29-067
HERBERT SCOTT H & MICHELLE C
516 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 995 PAGE: 0934

MAP/PARCEL#: 29-068
SPATACCO ANTHONY J & GLORIA A
520 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2769 PAGE: 1914

MAP/PARCEL#: 29-070
RILEY OWEN GUSTUS III & ROSE MARIE R
524 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2236 PAGE: 2252

MAP/PARCEL#: 29-071
LO WILLIAM & BONNIE
528 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4762 PAGE: 1065

MAP/PARCEL#: 29-072
CRINNION SEAN T & MARGARET R
532 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4105 PAGE: 2280

ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 29-073
BACHMAN JOHN B & JUDITH L
536 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1193 PAGE: 0653

MAP/PARCEL#: 29-074
ETEMAD BABAK & MANDANA
540 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4418 PAGE: 1959

MAP/PARCEL#: 29-075
MCGINLEY EDWARD F III
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-075002
MCGINLEY EDWARD F
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-077
VAN RODEN JOHN CROSBY III & ANDREA
749 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 5258 PAGE: 0684

MAP/PARCEL#: 29-076
SNYDER JOHN AVERY
753 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 2631 PAGE: 0789

MAP/PARCEL#: 35-016
RADNOR TOWNSHIP DARBY PAOLI ROAD
301 IVEN AVE RADNOR, PA 19087
DB#: 2344 PAGE: 1015

MAP/PARCEL#: 36-002
RORER GERALD B & ELIZABETH K
765 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 88 PAGE: 2174

MAP/PARCEL#: 36-003
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-003001
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-004
HOPSON MICHAEL & LYNN
756 CAMPWOODS ROAD, VILLANOVA, PA 19085
DB#: 4285 PAGE: 1597

MAP/PARCEL#: 37-001
SNYDER MARTIN AVERY & ANN C
745 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 74 PAGE: 0713

MAP/PARCEL#: 37-002
DONOHUE CORNELIUS M & ANN B
748 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 675 PAGE: 1549

MAP/PARCEL#: 37-003
CLANCY EDWARD P & SARA N
749 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 1917 PAGE: 1433

MAP/PARCEL#: 37-004
BERKOWITZ HENRY D & JULIE S
745 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 4717 PAGE: 1449

MAP/PARCEL#: 37-007
KUMAR GUNDURAJ JAYASHREE
741 CAMP WOODS ROAD VILLANOVA, PA 19085
DB#: 3732 PAGE: 1412

MAP/PARCEL#: 37-086001
ACADEMY OF NOTRE DAME DENAMUR INC
560 SPROUL ROAD VILLANOVA, PA 19085
DB#: 4027 PAGE: 0810

MAP/PARCEL#: 13-031
DAVID B. RUBENSTEIN & MICHELE A KREISLER
140 GOLF HOUSE ROAD, HAVERFORD, PA 19041
DB#2112 PAGE: 2067

MAP/PARCEL#: 43-106
CONKEL
681 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 1966 PAGE: 1144

MAP/PARCEL#: 43-107
JAMES J & MARY H. PURTILL
651 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 3953 PAGE: 1461

○/IPF	IRON PIN FOUND
□/CMF	CONCRETE MONUMENT FOUND
□/MMF	MARBLE MONUMENT FOUND
□/AC	EXISTING AIR CONDITIONER
○/GV	EXISTING GAS VALVE
□/GM	EXISTING GAS METER
□/EM	EXISTING ELECTRIC METER
○/CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○/UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

100 0 50 100 200 400
1 INCH = 100 FT.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
LAWS OF PENNSYLVANIA REQUIRE 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN. Pennsylvania One Call System, Inc. 1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID R. FIORELLO PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9068

RECORD PLAN – SHEET III
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

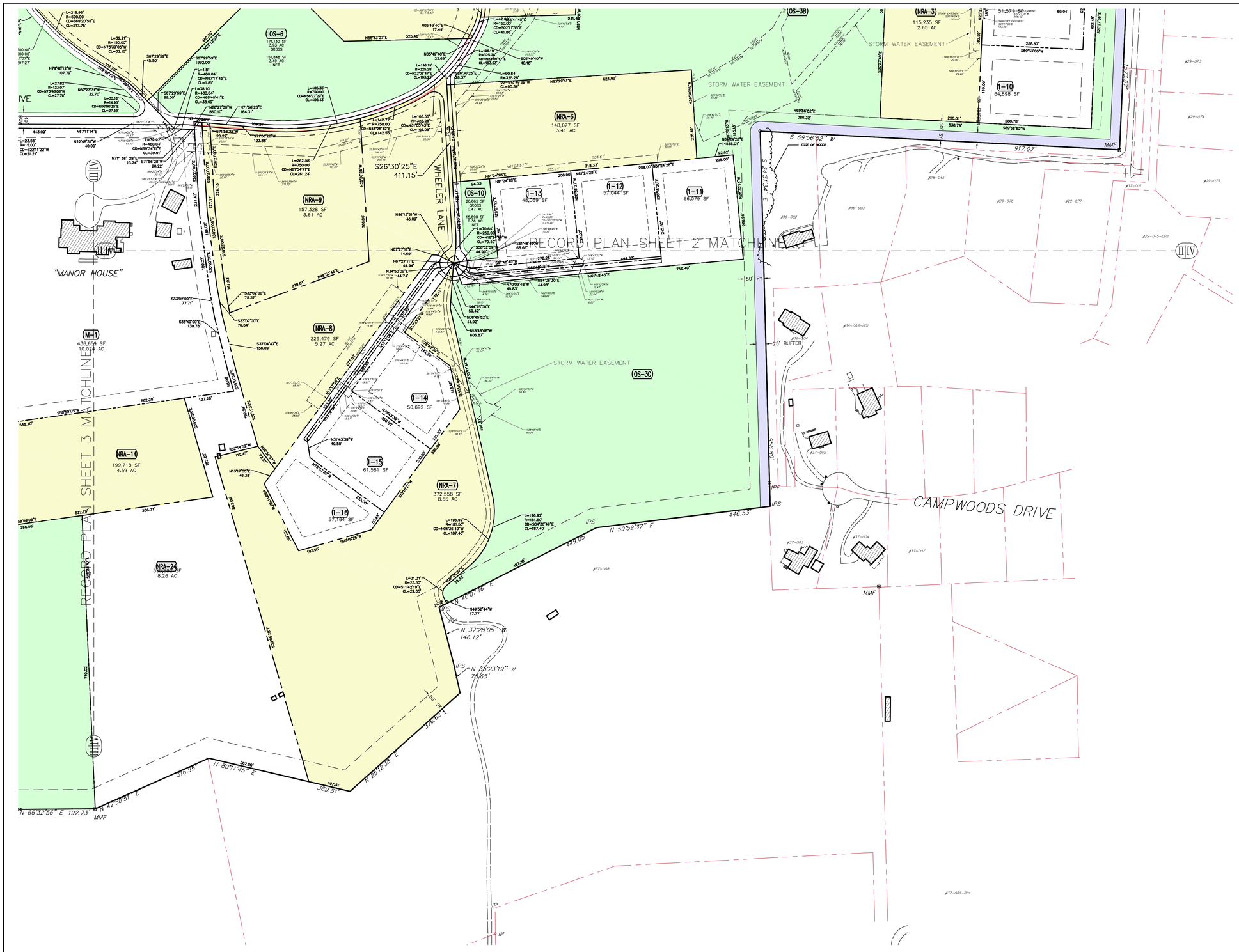
APPLICANT
ESIII LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

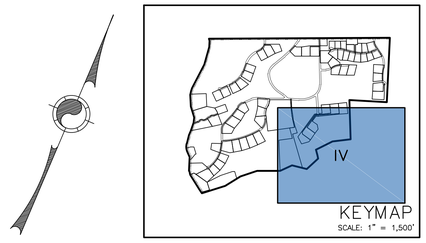
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 7 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\PLANS\DRAWINGS\06012





ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 27-011066
MARUCCI GEORGE E JR & SANDRA
904 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4521 PAGE: 2384

MAP/PARCEL#: 27-011067
VEALE TINKHAM III & LOIS
902 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3431 PAGE: 2050

MAP/PARCEL#: 27-011068
VEALE TINKHAM III & LOIS R
900 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 3807 PAGE: 0125

MAP/PARCEL#: 27-050001
PARADIS
820 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 4770 PAGE: 1233

MAP/PARCEL#: 27-050002
RONALD & SUZANNE KESICKI
810 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0689

MAP/PARCEL#: 28-025
CIVITELLA
764 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-043001
AMIR L & MARIA T. ECKER
800 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 1637 PAGE: 0694

MAP/PARCEL#: 28-026
COONEY GERALD W & PATRICIA A
500 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4662 PAGE: 0986

MAP/PARCEL#: 28-027
LARSEN KRIK H & PATRICIA
770 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2185 PAGE: 1646

MAP/PARCEL#: 28-028
HANAMIRIAN MARK C & DOROTHY J
768 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1914 PAGE: 0699

MAP/PARCEL#: 28-029
BUCK WILLIAM C & LAURA T
772 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 4054 PAGE: 1711

MAP/PARCEL#: 28-030
DEUSER WM M & BARBARA J
776 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: N/A

MAP/PARCEL#: 28-031
BOYLAN FRANCIS TIMOTHY
278 HOTHORPE LANE VILLANOVA, PA 19085
DB#: 3511 PAGE: 1218

MAP/PARCEL#: 28-038
PETTIT DONALD K & COOKE SUZANNE A
275 HOTHORPE LANE, VILLANOVA, PA 19085
DB#: 4807 PAGE: 0926

MAP/PARCEL#: 28-038001
WALTER WILLIAM G & MARY ANN
794 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 896 PAGE: 0276

MAP/PARCEL#: 28-039
MCCOY JOHN H
280 ABRAHAMS LANE VILLANOVA, PA 19085
DB#: 3049 PAGE: 0425

MAP/PARCEL#: 28-045
HARRINGTON C D JR ET UX
757 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2250 PAGE: 0827

MAP/PARCEL#: 29-064
STEWART ANN MUNGER
504 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1503 PAGE: 1785

MAP/PARCEL#: 29-065
MARGOLIS MICHAEL & PATRICIA
508 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1442 PAGE: 1107

MAP/PARCEL#: 29-066
AMBROSIO SALVATORE F & SUZANN
512 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 893 PAGE: 1274

MAP/PARCEL#: 29-067
HERBERT SCOTT H & MICHELLE C
516 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 995 PAGE: 0934

MAP/PARCEL#: 29-068
SPATACCO ANTHONY J & GLORIA A
520 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2769 PAGE: 1914

MAP/PARCEL#: 29-070
RILEY OWEN GUSTUS III & ROSE MARIE R
524 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 2236 PAGE: 2252

MAP/PARCEL#: 29-071
LO WILLIAM & BONNIE
528 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4762 PAGE: 1065

MAP/PARCEL#: 29-072
CRINNION SEAN T & MARGARET R
532 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4105 PAGE: 2280

ADJOINING PROPERTY OWNERS:

MAP/PARCEL#: 29-073
BACHMAN JOHN B & JUDITH L
536 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 1193 PAGE: 0653

MAP/PARCEL#: 29-074
ETEMAD BABAK & MANDANA
540 ATTERBURY ROAD VILLANOVA, PA 19085
DB#: 4418 PAGE: 1959

MAP/PARCEL#: 29-075
MCGINLEY EDWARD F III
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-075002
MCGINLEY EDWARD F
741 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 1156 PAGE: 2340

MAP/PARCEL#: 29-077
VAN RODEN JOHN CROSBY III & ANDREA
749 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 5258 PAGE: 0684

MAP/PARCEL#: 29-076
SNYDER JOHN AVERY
753 NEWTOWN ROAD, VILLANOVA, PA 19085
DB#: 2631 PAGE: 0789

MAP/PARCEL#: 35-016
RADNOR TOWNSHIP DARBY PAOLI ROAD
301 IVEN AVE RADNOR, PA 19087
DB#: 2344 PAGE: 1015

MAP/PARCEL#: 36-002
RORER GERALD B & ELIZABETH K
765 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 88 PAGE: 2174

MAP/PARCEL#: 36-003
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-003001
RORER GERALD B & ELIZ K
761 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 2613 PAGE: 0992

MAP/PARCEL#: 36-004
HOPSON MICHAEL & LYNN
756 CAMPWOODS ROAD, VILLANOVA, PA 19085
DB#: 4285 PAGE: 1597

MAP/PARCEL#: 37-001
SNYDER MARTIN AVERY & ANN C
745 NEWTOWN ROAD VILLANOVA, PA 19085
DB#: 74 PAGE: 0713

MAP/PARCEL#: 37-002
DONOHUE CORNELIUS M & ANN B
748 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 675 PAGE: 1549

MAP/PARCEL#: 37-003
CLANCY EDWARD P & SARA N
749 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 1917 PAGE: 1433

MAP/PARCEL#: 37-004
BERKOWITZ HENRY D & JULIE S
745 CAMPWOODS ROAD VILLANOVA, PA 19085
DB#: 4717 PAGE: 1449

MAP/PARCEL#: 37-007
KUMAR GUNDURAJ JAYASHREE
741 CAMP WOODS ROAD VILLANOVA, PA 19085
DB#: 3732 PAGE: 1412

MAP/PARCEL#: 37-086001
ACADEMY OF NOTRE DAME DENAMUR INC
560 SPROUL ROAD VILLANOVA, PA 19085
DB#: 4027 PAGE: 0810

MAP/PARCEL#: 13-031
DAVID B. RUBENSTEIN & MICHELE A KREISLER
140 GOLF HOUSE ROAD, HAVERFORD, PA 19041
DB#:2112 PAGE: 2067

MAP/PARCEL#: 43-106
CONKEL
681 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 1966 PAGE: 1144

MAP/PARCEL#: 43-107
JAMES J & MARY H. PURTILL
651 DARBY PAOLI ROAD, VILLANOVA, PA 19085
DB#: 3953 PAGE: 1461

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⧉UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
	PROPOSED NON-RESIDENTIALLY APPROVED LOT

100 0 50 100 200 400

1 INCH = 100 FT.

ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD LOCATIONS AND/OR PLANS PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. THE ACCURACY OF THESE LOCATIONS IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E
REGISTERED

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9088

RECORD PLAN - SHEET IV
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

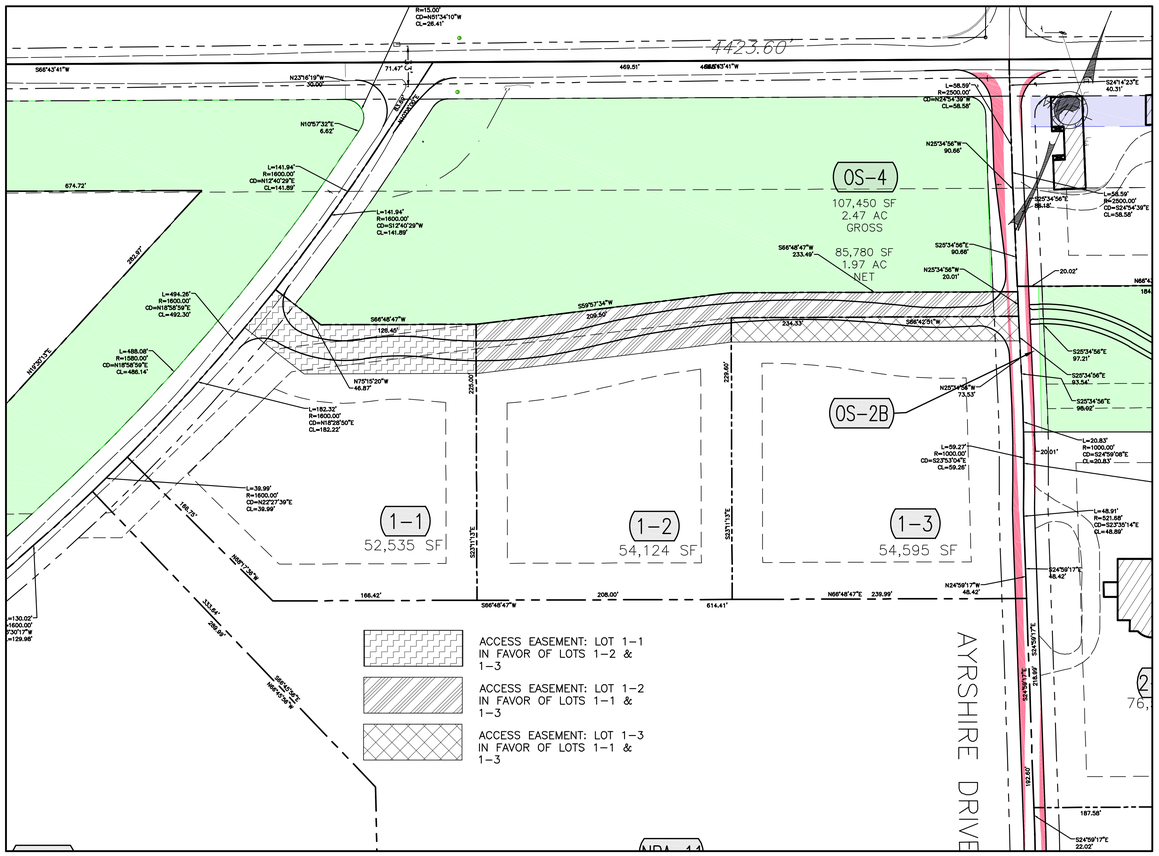
APPLICANT
ESH1 LP
167 TWADDELL MILL ROAD
WILMINGTON, DE 19807

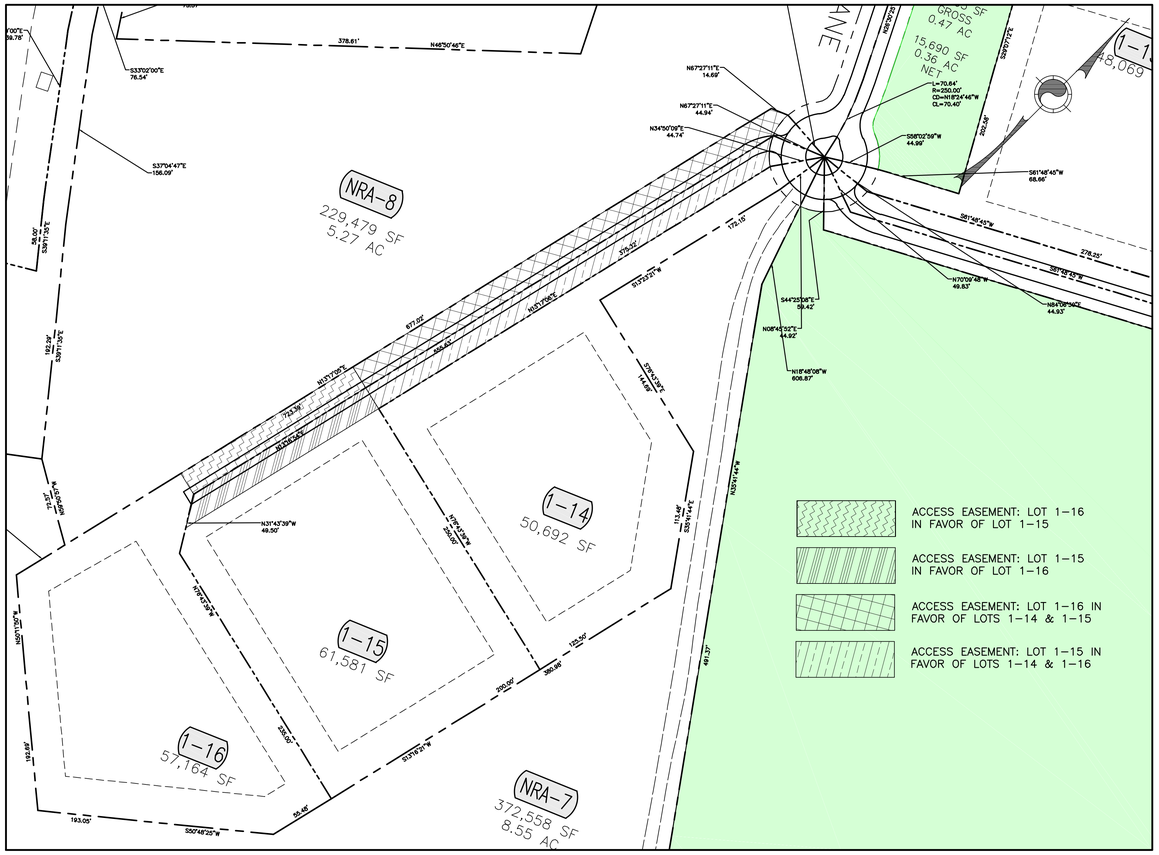
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	FOR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
8
OF 93
SCALE: 1" = 100'
FILE NO.: 06-012

N:\PROJECTS\2006\06012\MA\DRAWINGS\06012





MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9006 FAX: (610) 527-9008

SHARED DRIVEWAYS OVERVIEW
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

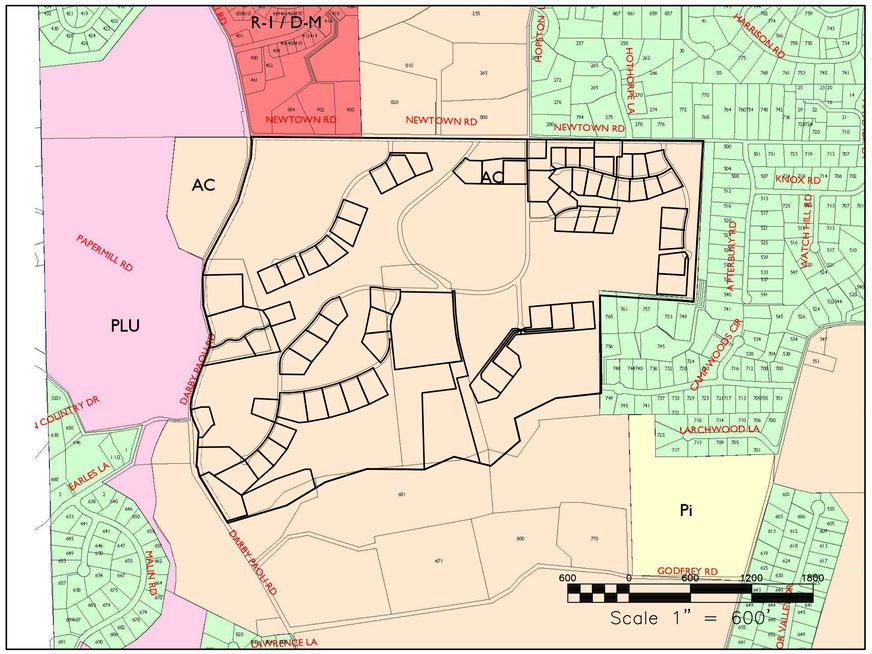
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

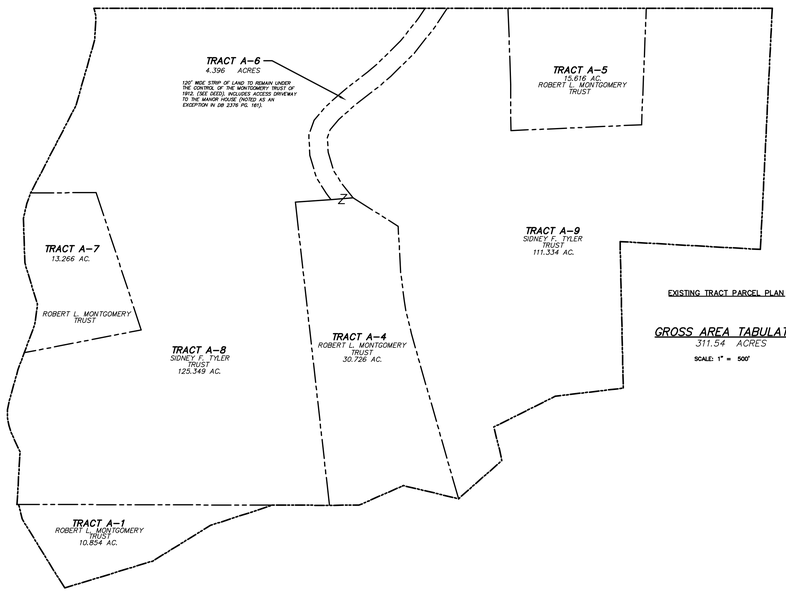
DATE: SEPTEMBER 5, 2014
SHEET NO. 9 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E



LOCATION MAP
SCALE: 1" = 600'



EXISTING TRACT PARCEL PLAN

GROSS AREA TABULATION
311.54 ACRES
SCALE 1" = 500'

ZONING DISTRICT AC RESIDENTIAL DISTRICT

AREA:	2 AC
LOT WIDTH:	80' AT BSBL
BUILDING AREA:	15% MAX
FRONT YARD:	60 FT
SIDE YARD:	50 FT MIN, 40 FT NON-RESIDENTIAL BUILDINGS.
REAR YARD:	60FT

NOTE: THIS SITE TO BE DEVELOPED UNDER DENSITY MODIFICATION REGULATIONS PERMITTED UNDER ARTICLE XIX OF THE RADNOR TOWNSHIP ZONING CODE.

MINIMUM TRACT AREA:	20 AC
PERIMETER BUILDING SETBACK:	75 FT FROM RIGHT OF WAY 50 FT FROM ADJACENT PROPERTY
FRONT YARD:	35 FT FROM OUTSIDE EDGE OF CURB
SIDE YARD:	25 FT
REAR YARD:	30 FT

DENSITY CALCULATIONS PER SECTION 280-92

GROSS AREA: 311.54 ACRES

[AREA NET OF ULTIMATE R/W = 311.54 - 6.73 = 304.81 AC]

DEDUCTIONS:

1/2 FLOOD PLAIN (CALCULATED) = 13.62AC/2 =	6.82 AC
1/2 STEEP SLOPES (> 20%) = 21.94 AC ÷ 2 =	10.97 AC
TOTAL DEDUCTIONS =	17.78 AC

TOTAL ADJUSTED TRACT AREA = 304.81 AC - 17.78 AC = 287.03 AC
PERMITTED DENSITY: 287.03 AC/2 AC ZONING = 143.52 UNITS
NET COMMON OPEN SPACE = 84.056 AC (CLEAR OF ROAD R/W AND BUFFER)
COMMON OPEN SPACE AS A PERCENT OF TOTAL NET TRACT AREA = 27.57%
PERCENT DENSITY INCREASE PERMITTED = 27.57%/3% = 9.19%
BONUS DENSITY PERMITTED BY DENSITY MODIFICATION = 109.19% = 156 UNITS
DENSITY PROPOSED = 76 DWELLING UNITS (72 LOTS)
OVERALL DENSITY: 76 UNITS/304.81 AC = 0.2493 UNITS/ACRE OR 1 UNIT PER 4.01 ACRES

OPEN SPACE CALCULATIONS:
REQUIRED PER SECTION 280-91 = 15%
MINIMUM AREA REQUIRED = 304.81 AC x 15% = 45.72 AC
PROPOSED COMMON OPEN SPACE: 84.07 AC = 27.57% (NET OF ROAD R/W & BUFFER)

PROPOSED STANDARDS:
DENSITY: 76 UNITS/304.81 AC = 0.2493 UNITS/AC
OPEN SPACE RATIO: OPEN SPACE = 84.07 AC/304.81 AC = 27.57%

TOTAL NUMBER OF LOTS: 72
10 LOTS CONTAIN EXISTING STRUCTURES/DWELLINGS. THE BUILDINGS ON LOTS 2-5 & 2-9 CONTAIN 2 UNITS AS A DUPLEX, AND THE BUILDINGS ON LOT 4-10 CONTAIN 3 UNITS.
62 LOTS ARE TO BE SOLD INDIVIDUALLY AND ULTIMATELY BE DEVELOPED BY THE NEW OWNERS WITH NEW SINGLE FAMILY DWELLINGS

DWELLING MIX: SINGLE FAMILY DETACHED

SIZE OF UNITS: 3-5 BEDROOM TYPICAL

CONDITIONAL USE DECISION - ISSUED JANUARY 6, 2014:

THE CONDITIONAL USE REQUEST OF THE APPLICANT IS HEREBY APPROVED FOR THE DEVELOPMENT OF THE SUBJECT PROPERTY INTO UP TO 87 SINGLE FAMILY RESIDENTIAL LOTS AS DEPICTED IN THE PLAN, SUBJECT TO COMPLIANCE WITH ALL OTHER APPLICABLE GOVERNMENTAL ORDINANCES AND REGULATIONS AND THE FOLLOWING SPECIFIC CONDITIONS:

1. ALL NEW CONSTRUCTION PROPOSED FOR LOTS 3-2 THROUGH 3-10 SHALL BE DONE IN A FASHION WHICH PROVIDES FOR MAXIMUM PROTECTION OF THE DARBY- PAOLI/NEWTOWN ROAD VIEWSHED WHEN VIEWED FROM THE INTERSECTION OF THOSE ROADS. THE TOWNSHIP BOARD OF COMMISSIONERS SHALL APPROVE THE ULTIMATE PLACEMENT OF PROPOSED BUILDINGS ON EACH OF THESE LOTS SO AS TO MAXIMIZE THE VIEWSHED FROM THE EXISTING PUBLIC ROADS AND SOFTEN THE IMPACT OF THE VIEW OF THE RESIDENTIAL STRUCTURES TO BE CONSTRUCTED THERE, PRIOR TO THE ISSUANCE OF GRADING AND BUILDING PERMITS.

2. A LANDSCAPE PLAN, IN ACCORDANCE WITH THE RADNOR TOWNSHIP SHADE TREE ORDINANCE, SUFFICIENT TO SCREEN LOTS 3-2 THROUGH 3-10 FROM THE ABOVE REFERENCED INTERSECTION, WITHIN THE 100 FOOT BUFFER STRIP ADJACENT TO THE RYE FIELD, SHALL BE PREPARED AND SUBMITTED AND SUBJECT TO APPROVAL BY THE BOARD OF COMMISSIONERS DURING THE LAND DEVELOPMENT PROCESS.

3. ALL PROPOSED NEW CONSTRUCTION ON ALL LOTS SHALL BE LIMITED IN HEIGHT TO 35 FEET FROM THE AVERAGE GRADE (THE AVERAGE OF THE GRADE TAKEN AT 20 FOOT INTERVALS AROUND THE BUILDING PERIMETER) TO THE TOP OF THE HIGHEST ROOF BEAMS OF A FLAT ROOF WIDTH OR TO THE MEAN LEVEL OF A SLOPED ROOF. PROVIDED THAT CHIMNEYS AND SPIRES SHALL NOT BE INCLUDED IN MEASURING THE HEIGHT. THE HEIGHT SHALL BE MEASURED FROM FINISHED GRADE AND, IN NO EVENT, SHALL ANY FILL MATERIAL RESULT IN AN INCREASE IN BUILDING HEIGHT BEYOND 35 FEET, UNLESS SOIL CONDITIONS NECESSITATE THE PLACEMENT OF FILL, AS DETERMINED BY THE RADNOR TOWNSHIP MUNICIPAL ENGINEER.

4. IN THE EVENT THAT THE APPLICANT, OR ANY OF ITS SUCCESSORS OR ASSIGNS, PROPOSES TO BUILD ANY ADDITIONAL DWELLINGS BEYOND THE PROPOSED MAXIMUM LIMIT OF 64 OR 87, DEPENDING UPON WHICH PLAN IS APPROVED, SUCH ADDITIONAL DEVELOPMENT SHALL BE CONSIDERED THROUGH SUBMISSION OF A NEW CONDITIONAL USE APPLICATION, MEETING ALL ZONING ORDINANCE REQUIREMENTS OF ARTICLE XIX FOR A DENSITY MODIFICATION DEVELOPMENT, AND SHALL REQUIRE A NEW SUBDIVISION APPLICATION. ANY SUCH SUBMISSION SHALL NOT BE CONSIDERED AN AMENDMENT OF THE EXISTING PROPOSED PLAN FOR DEVELOPMENT.

5. THE 100 FOOT PROPOSED BUFFER STRIP ADJACENT TO THE RYE FIELD SHALL CONTAIN NO BUILDINGS OR STRUCTURES; AND SHALL BE DEED RESTRICTED IN A FORM AND MANNER TO THE SATISFACTION OF APPROPRIATE RADNOR TOWNSHIP OFFICIALS.

6. ALL NEW LOTS AND PROPOSED NEW OR EXISTING RESIDENTIAL BUILDINGS SHALL PROVIDE FOR INDIVIDUAL ON-LOT STORM WATER MANAGEMENT THROUGH SEEPAGE PITS OR OTHER NON-STRUCTURAL BMPS IN ACCORDANCE WITH THE RADNOR TOWNSHIP STORM WATER ORDINANCE. ANY AND ALL ROOF DRAINS AND SUMP PUMPS SHALL BE TIED INTO SUCH ON-LOT STORM WATER FACILITIES.

7. THE APPLICANT SHALL PERFORM SUCH STUDIES AND MAKE SUCH IMPROVEMENTS AS ARE NECESSARY IN ORDER TO ESTABLISH SUFFICIENT SEWAGE CAPACITY WITHIN THE TOWNSHIP'S MAIN TRANSMISSION LINE SERVICING THE PROPERTY.

8. THE APPLICANT SHALL MODIFY AND UPDATE THE TRAFFIC IMPACT STUDY WITH REGARD TO CONDUCTING NEW TRAFFIC COUNTS WHEN THE NEARBY SCHOOLS ARE IN SESSION AND RE-EXAMINATION OF ANY INTERSECTION, AS DETERMINED BY THE RADNOR TOWNSHIP TRAFFIC ENGINEER.

9. THE PLAN SHALL BE SUBJECT TO MODIFICATION BY THE BOARD OF COMMISSIONERS OF RADNOR TOWNSHIP, AS APPROPRIATE, DURING THE SUBDIVISION AND LAND DEVELOPMENT REVIEW PROCESS.

RESPECTFULLY SUBMITTED,

/S/ WILLIAM J. BOLLA
WILLIAM J. BOLLA, ESQUIRE
MCNAMARA, BOLLA & PANZER
116 EAST COURT STREET
DOYLESTOWN, PA 18901
HEARING OFFICER

GENERAL NOTES:

1. OWNERS:
THE ROBERT L. MONTGOMERY TRUST DATED 6/4/12,
MELLON BANK, N.A. AND W. GRESHAM O'MALLEY, TRUSTEES:
MONTGOMERY, McCRACKEN, WALKER & RHOADS, LLP
123 SOUTH BROAD STREET
PHILADELPHIA, PA 19109

THE SYDNEY F. TYLER TRUST #6 DATED 5/30/17,
FIRST UNION BANK, TRUSTEE
MONTGOMERY, McCRACKEN, WALKER & RHOADS, LLP
123 SOUTH BROAD STREET
PHILADELPHIA, PA 19109

2. EQUITABLE OWNER/APPLICANT:
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807
ATTN: MR. EDGAR SCOTT III

3. THE INTENT OF THE PLAN IS TO SUBDIVIDE THE TRACT INTO 72 INDIVIDUAL RESIDENTIAL LOTS USING THE DENSITY MODIFICATION OPTION PERMITTED UNDER ARTICLE 19 OF THE RADNOR TOWNSHIP ZONING ORDINANCE. THE EXISTING RESIDENTIAL STRUCTURES ARE TO BE MAINTAINED AND MADE PART OF INDIVIDUAL LOTS. ALL NEW LOTS WITH THE EXCEPTION OF LOT 4-11 WILL BE DEVELOPED WITH SINGLE FAMILY RESIDENCES. LOT 4-11 IS TO BE PURCHASED BY THE ADJOINING PROPERTY OWNER AND BE MERGED WITH THAT LOT. NO ADDITIONAL DEVELOPMENT IS PROPOSED FOR LOT 4-11 AS PART OF THIS APPLICATION. THE OWNER RESERVES THE RIGHT TO INCLUDE LOT 4-11 WITH LOT 4-10.

4. THE EXISTING ENTRY DRIVEWAY WILL REMAIN AS A ONE-WAY STREET AND NEW STREETS WILL BE EXTENDED INTO THE SITE TO SERVE SEVERAL OF THE NEW LOTS. SEVERAL ROADS WILL FOLLOW PORTIONS OF THE EXISTING DRIVEWAYS RUNNING THROUGH THE SITE.

5. LOTS 2-5 AND 2-9 EACH CONTAIN EXISTING DWELLINGS CONTAINING 2 UNITS AS A DUPLEX. THESE UNITS MAY BE SOLD AS A SINGLE LOT OR BE SUBJECT TO A 2-UNIT CONDOMINIUM..

6. LOT 4-10 CONTAIN EXISTING DWELLINGS TOTALING 3 UNITS. THESE UNITS MAY BE SOLD AS A SINGLE LOT OR BE SUBJECT TO A 3-UNIT CONDOMINIUM.

7. PUBLIC WATER SUPPLY AND SANITARY SEWER SERVICE ARE PROPOSED FOR ALL LOTS.

8. DRAINAGE EASEMENTS ARE HEREBY BE CREATED IN ACCORDANCE WITH SECTION 255-35D FOR STREAMS WITHIN THE SITE. LIMIT OF EASEMENT SHALL COINCIDE WITH TOWNSHIP RIPARIAN BUFFER AND/OR THE CALCULATED 100-YEAR FLOODPLAIN WHICHEVER IS GREATER.

9. DARBY CREEK FLOOD PLAIN LIMIT TAKEN FROM FEMA FLOOD INSURANCE RATE MAP #42045C0019F REVISED NOVEMBER 18, 2009. FLOODPLAIN FOR STREAMS WITHIN THE PROJECT LIMIT CALCULATED BY MOMENEE AND ASSOCIATES INC.

10. ALL PROPOSED PUBLIC ROADS, STORM SEWERS AND SANITARY SEWERS TO BE OFFERED FOR DEDICATION.

11. PRIVATE ROADS AND COMMON STORMWATER MANAGEMENT DETENTION SYSTEMS TO BE OWNED AND MAINTAINED BY A HOMEOWNERS ASSOCIATION.

12. THE PROPOSED COMMON OPEN SPACE LAND MAY NOT BE SEPARATELY SOLD, NOR SHALL SUCH LAND BE FURTHER DEVELOPED OR SUBDIVIDED. LOTS IDENTIFIED AS NON-RESIDENTIALLY APPROVED LOTS ARE TO BE HELD AS INVESTMENT PROPERTY AND MAY BE SUBDIVIDED INTO PARCELS FOR THAT PURPOSE, BUT MAY NOT BE USED AS RESIDENTIAL LOTS WITHOUT FURTHER CONDITIONAL USE AND SUBDIVISION APPROVAL.

13. BOUNDARY INFORMATION TAKEN FROM A FIELD VERIFIED SURVEY BY MOMENEE SURVEY GROUP INC., PLAN ENTITLED "BOUNDARY SURVEY OF ARDROSSAN FARM" DATED JULY 27,1999, FILE No. 99079.

14. DEED INFORMATION FURNISHED BY CLIENT: "RECORD OWNER AND LIEN CERTIFICATE" BY COMMONWEALTH LAND TITLE INSURANCE COMPANY, TWO LOGAN SQUARE, 5TH FLOOR, PHILADELPHIA, PA 19103. ORDER NO. D168624ED EFFECTIVE DATE: 08/09/97. PREMISES: PORTION OF ARDROSSAN FARM, RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA.

15. TOPOGRAPHY BY AERIAL DATA REDUCTION ASSOCIATES INC., PENNSAUKEN NJ 08110. NEGATIVE SCALE 1"=500'. DATE OF PHOTOGRAPHY 01/15/97. DIGITAL MAP COMPILATION AT 1"=50'. CONTOUR INTERVAL 2'. MAPPING COMPILED WITHOUT BENEFIT OF A FIELD EDIT. AREAS OBSCURED BY DENSE VEGETATION OR SHADOW ARE ENCLOSED BY A LINE LABELED "DENSE WOODS", "SHADDOW" OR "OBSCURED AREA". WITHIN THESE AREAS THERE IS NO GUARANTEE OR IMPLIED HORIZONTAL OR VERTICAL ACCURACIES.

16. HORIZONTAL AND VERTICAL GROUND CONTROL BY MOMENEE SURVEY GROUP INC.

17. TREE DATA AND LOCATIONS FROM A FIELD SURVEY BY MOMENEE SURVEY GROUP INC. INDIVIDUAL TREES LOCATED IN AREAS OF PROPOSED DEVELOPMENT ONLY

18. WETLAND DELINEATION CONDUCTED BY MARATHON ENGINEERING AND ENVIRONMENTAL SERVICES INC. IN MARCH & APRIL OF 2014.

19. A PENNDOT HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945(P.L.1242, No.428), KNOWN AS THE STATE HIGHWAY LAW BEFORE DRIVEWAY ACCESS TO NEWTOWN ROAD OR DARBY-PAOLI ROAD IS PERMITTED.

20. TEST PITS TO DETERMINE INFILTRATION FEASIBILITY WERE EXCAVATED AND EVALUATED BY EVANS MILL ENVIRONMENTAL, INC. IN APRIL, JUNE AND JULY, 2014.

21. THE EXISTENCE AND/OR LOCATION OF ALL EXISTING AND PROPOSED UTILITY SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION.

22. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.

23. THE RESPONSIBILITY OF THE CONTINUED MAINTENANCE AND OPERATION OF THE COMMON STORMWATER MANAGEMENT SYSTEMS SHALL BE THE OBLIGATION OF THE HOMEOWNERS ASSOCIATION. THE RESPONSIBILITY OF THE CONTINUED MAINTENANCE AND OPERATION OF THE INDIVIDUAL ON-LOT STORMWATER MANAGEMENT SYSTEMS AND OTHER ON-LOT BMP FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.

24. CLEANOUTS SHALL BE PLACED AT ALL GRADE CHANGES OR CHANGES IN ALIGNMENT OF THE RAIN WATER CONDUCTORS.

25. THE COMMON STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED FOR THE IMPERVIOUS COVERAGE SHOWN ON THE PLANS RESULTING FROM THE ROADWAY AND OPEN SPACE IMPROVEMENTS. THESE FACILITIES PROVIDE FOR BOTH RATE CONTROL AND GROUND WATER RECHARGE REQUIREMENTS OF THE TOWNSHIP STORMWATER MANAGEMENT ORDINANCE. IN ADDITION, STORMWATER SYSTEMS 'G' AND 'H' PROVIDE FOR RATE CONTROL FOR LOTS 2-1 THRU 2-4, 2-6 THRU 2-8 AND 2-11 THRU 2-19 FOR UP TO 20,000 SF OF IMPERVIOUS COVER PER LOT. GROUNDWATER RECHARGE FACILITIES FOR THESE LOTS ARE TO BE PROVIDED ON LOT AS PART OF THE DEVELOPMENT BY THE INDIVIDUAL PROPERTY OWNER.

26. STORMWATER MANAGEMENT FOR THE INDIVIDUAL LOTS ARE TO BE PROVIDED BY THE PROPERTY OWNER ON THE INDIVIDUAL LOTS AT TIME OF DEVELOPMENT BY THE INDIVIDUAL OWNERS.

27. THE PHASING DEPICTED ON SHEET XX IS SHOWN FOR THE SALE OF LOTS ONLY. CONSTRUCTION IS PHASED TO EXTEND NECESSARY UTILITIES AND INFRASTRUCTURE TO SERVE EACH DEVELOPMENT PHASE AND IS SHOWN AS PART OF THE SEDIMENTATION AND EROSION CONTROL PLANS FOR EACH PHASE.

28. PRIOR TO THE INSTALLATION OF THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND PRIOR TO SYSTEM BEING RENDERED OPERATIONAL, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER FOR FIELD REVIEW OF THE SITE GRADING, STORMWATER FACILITIES AND GENERAL PCSM PLAN COMPLIANCE IN ORDER TO FACILITATE FINAL CERTIFICATION THAT THE SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN.

29. PARKING IS PROHIBITED ALONG ARDROSSAN DRIVE AND AYRSHIRE DRIVE FROM STATION 0+00 TO STA 22+25. ROADS ARE TO BE POSTED WITH NO PARKING SIGNS.

30. BENCHMARK - USGS NGVD1929 BENCHMARK RM-11, SQUARE CUT IN EAST END OF SOUTHERLY WALL OFSAW MILL ROAD BRIDGE OVER DARBY CREEK, ELEV.=236.18.

31. MONUMENTS ARE TO BE SET AS INDICATED ON THE RECORD PLAN AT ANGLE POINTS OF THE RIGHTS OF WAY. ALL PROPERTY CORNERS ARE TO BE PERMANENTLY MARKED WITH IRON PINS.

32. NO PLANTING OR OTHER STRUCTURES ARE PERMITTED WITHIN THE STORM OR SANITARY SEWER EASEMENTS.

33. ALL SANITARY SEWER PIPES ARE TO BE 8" PVC, SDR-35, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

34. ALL UTILITIES ARE TO BE INSTALLED UNDERGROUND.

35. NO TOPSOIL SHALL BE REMOVED FROM THE SITE.

36. THE FOLLOWING CONDITIONS APPLY WITHIN ALL CLEAR SIGHT TRIANGLES:
a) NO OBSTRUCTIONS TO VISIBILITY FROM 2 1/2 FEET TO 12 FEET IN HEIGHT ABOVE THE EDGE OF PAVING.
b) ANY PLANT MATERIALS MUST BE PROPERTY MAINTAINED TO CONTINUALLY COMPLY WITH THE VISIBILITY REQUIREMENTS AND ARE SUBJECT TO TRIMMING AND REMOVAL BY THE TOWNSHIP.

37. ALL SANITARY FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH RADNOR TOWNSHIP STANDARD SPECIFICATIONS. ALL STORM SEWER AND ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENNDOT FORM 408, LATEST REVISION, AND/OR PENNDOT ROADWAY CONSTRUCTION STANDARDS, AND IN ACCORDANCE WITH RADNOR TOWNSHIP CONSTRUCTION AND MATERIALS SPECIFICATIONS.

38. STORM SEWERS SHALL BE CORRUGATED POLYETHYLENE PIPE (W/SMOOTH INTERIOR) MEETING PENNDOT SPECIFICATIONS.

39. A MINIMUM OF 20 L.F. OF CONCRETE ENCASEMENT SHALL BE PROVIDED FOR THE SANITARY SEWER PIPING WHEN LESS THAN 18" OF VERTICAL CLEARANCE IS PROVIDED WITH ANY WATER MAIN AND STORM SEWER.

40. NO TREES SHALL BE PERMITTED WITHIN TEN FEET OF THE SANITARY SEWER MAIN OR LATERALS.

41. AS REQUESTED BY SECTION 508(6) OF THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, NOTICE IS HEREBY GIVEN THAT A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE "STATE HIGHWAY LAW" (P.L. 1242, NO. 428) BEFORE DRIVEWAY ACCESS TO ROUTE 113, A STATE HIGHWAY, IS PERMITTED. ACCESS TO THE STATE HIGHWAY SHALL BE ONLY AS AUTHORIZED BY A PENN DOT HIGHWAY OCCUPANCY PERMIT.

42. TEN (10) FEET OF HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN SANITARY LATERALS AND WATER SERVICES ON EACH LOT.

43. INDIVIDUAL LOT GRADING PLANS MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE TOWNSHIP ENGINEER AS PART OF A GRADING PERMIT FOR EACH LOT.

44. THE TOWNSHIP SHALL REVIEW ALL PENNDOT SUBMISSIONS, BE GIVEN THE OPPORTUNITY TO ATTEND ALL MEETINGS WITH PENNDOT AND INCLUDED ON ALL CORRESPONDENCE RELATIVE TO PENNDOT SUBMISSIONS.

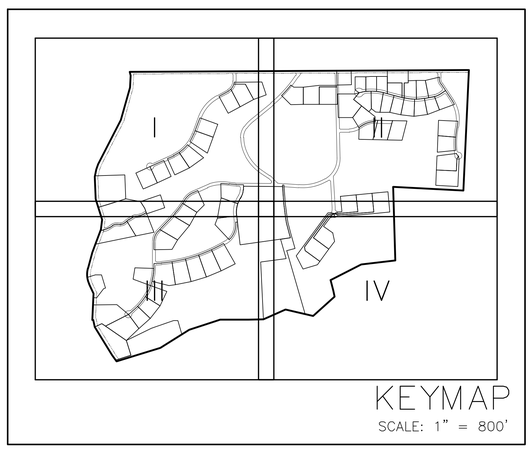
45. THE RYE FIELD BUFFER DESIGNATED AS OPEN SPACE-7, ADJACENT TO NRA-23, IS TO BE DEED RESTRICTED TO PROHIBIT BUILDINGS OR STRUCTURES WITHIN THE BUFFER.

46. ADDITIONAL LANDSCAPE BUFFER SHALL BE PROVIDED ON THE NORTH SIDE OF NEWTOWN ROAD OPPOSITE THE TOWER FIELD LANE ENTRANCE IF REQUESTED BY THE NEIGHBOR.

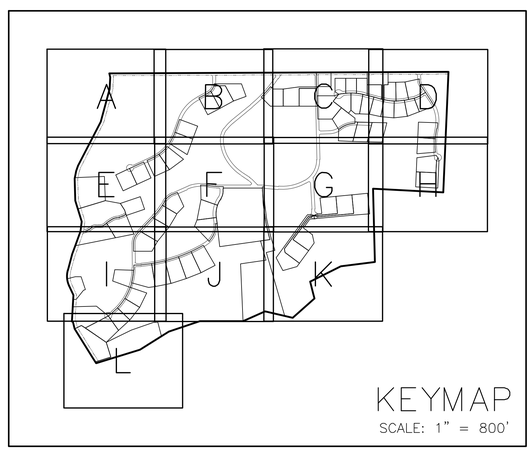
47. THE EXISTING WATER TOWER AT THE INTERSECTION OF NEWTOWN ROAD AND TOWER FIELD LANE IS TO BE PRESERVED IF FEASIBLE.

48. A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

49. LOTS 3-2, 3-3, 3-4 AND 3-5 ARE SUBJECT TO APPROVAL BY THE TOWNSHIP BOARD OF COMMISSIONERS FOR THE PLACEMENT OF PROPOSED BUILDINGS ON EACH OF THESE LOTS PRIOR TO THE ISSUANCE OF GRADING AND BUILDING PERMITS IN ACCORDANCE WITH CONDITION NO. 1 OF THE BOARD'S CONDITIONAL USE DECISION.



KEYMAP
SCALE: 1" = 800'



KEYMAP
SCALE: 1" = 800'

WAIVER REQUESTS:

WAIVERS ARE REQUESTED FROM THE FOLLOWING SECTIONS OF SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

ARTICLE 5: DESIGN STANDARDS:

255-27. STREETS:
255-27 (A-5) CUL-DE-SAC TERMINUS AT ROAD D
255-27 (C-1) 60' R/W, 24' CARTWAY & SIDEWALKS ALONG MINOR COLLECTOR STREETS (NEWTOWN ROAD)
255-27 (C-1) 60' R/W, 24' CARTWAY & SIDEWALKS ALONG PROPOSED LOCAL STREETS
255-27 (D)(1) CULS-DE-SAC; LENGTH
255-27 (D)(2) CULS-DE-SAC; TURNAROUND DIMENSIONS
255-27 (E)(2) R/W WIDTH OF A PRIVATE STREET STREET INTERSECTIONS
255-27 (H)(1) INTERSECTIONS LESS THAN 90 DEGREES FOR ROAD E AT NEWTOWN ROAD, ROAD E AND ROAD C & ROAD C AND ROAD H.

255-36. CURBS
255-36 CURBS WHEN REQUIRED BY THE TOWNSHIP

255.37. SIDEWALKS AND PEDESTRIAN PATHS
255-37 (A) SIDEWALKS AND PATHS WHEN REQUIRED BY THE BOARD OF COMMISSIONERS.

255-38. SHADE TREES
255-38 (A) STREET TREES TO BE PLANTED WHERE STREET TREES DO NOT EXIST
255-38 (B & C) STREET TREE PLANTING INTERVALS

255-39. CROSSWALKS
255.39 (A) INTERIOR CROSSWALK REQUIREMENTS
255-39 (B) CROSSWALK MARKINGS

ARTICLE 6: REQUIRED IMPROVEMENTS:

255-49. STREETLIGHTS
255-49 INSTALLATION OF STREETLIGHTS

255.51. SIDEWALKS
255.51 INSTALLATION OF SIDEWALKS

255.52. CURBS
255.52 INSTALLATION OF CURBS

ROADWAY COMPLIANCE CHART

ROAD	LOTS SERVED	PHASE	TYPE OF ROAD	CONDITION	R.O.W WIDTH REQUIRED	R.O.W WIDTH PROPOSED	EXISTING CARTWAY WIDTH	REQUIRED CARTWAY WIDTH	PROPOSED CARTWAY WIDTH	FLOW TYPE	CONDITION	CUL-DE-SAC R/W RADIUS REQUIRED	CUL-DE-SAC R/W RADIUS PROVIDED	CUL-DE-SAC RADIUS REQUIRED	CUL-DE-SAC RADIUS PROVIDED	CUL-DE-SAC MAX LENGTH REQUIRED	CUL-DE-SAC MAX LENGTH PROVIDED
A IVY LANE	2-1;2-8 2-11 2-13;2-19	2	PUBLIC ROAD	PROPOSED	60'	50'	N/A	24' CURBED	24' CURBED W/ SIDEWALKS	TWO-WAY CUL-DE-SAC	PROPOSED	60'	60'	40'	50' WITH ISLAND	800'	1,217'
B TOWER FIELD DRIVE	1-7;1-10	1	PUBLIC ROAD	PROPOSED	60'	40'	N/A	28' CURBED & 24' CURBED	24' & 20' NO CURBS **	TWO-WAY LOCAL/CUL-DE-SAC	PROPOSED	60'	45'	40'	35' WITH ISLAND	800'	940'
C AYRSHIRE DRIVE	2-10 M-1 4-4;4-8 4-12;4-16	1, 2 & 4	PUBLIC ROAD	EXISTING TO BE WIDENED	60'	40'	12'-16'	28' CURBED & 24' CURBED	18' & 20' NO CURBS ***	TWO-WAY LOCAL/CUL-DE-SAC	EXISTING TO BE WIDENED & PROPOSED	60'	45'	40'	35' WITH ISLAND	800'	811'
D MURRAY LANE	1-4;1-6 2-12	1 & 2	PRIVATE STREET	EXISTING TO BE EXTENDED	60'	40'	12'±	N/A	20' NO CURBS	TWO-WAY PRIVATE STREET	EXISTING TO BE EXTENDED						
E ARDROSSAN DRIVE	1-1;1-3	1, 2 & 4	PUBLIC ROAD	EXISTING	60'	40'	12'-16'	28' CURBED	MAINTAIN EXISTING 12' - 16' NO CURBS	ONE-WAY SOUTHERLY LOCAL	EXISTING						
F TYLER LANE	3-2;3-10 5-1	3	PUBLIC ROAD	PROPOSED	60'	40'	N/A	24' CURBED	20' NO CURBS	TWO-WAY CUL-DE-SAC	PROPOSED	60'	45'	40'	35' WITH ISLAND	800'	1,800'
G BINNEY LANE	4-1;4-3 4-17;4-21	4	PUBLIC ROAD	PROPOSED	60'	40'	N/A	28' CURBED	20' NO CURBS	TWO-WAY LOCAL	PROPOSED						
H WHEELER LANE	1-11;1-16	1	PUBLIC ROAD	EXISTING TO BE RECONSTRUCTED	60'	40'	12'	24' CURBED	20' NO CURBS	TWO-WAY CUL-DE-SAC	EXISTING TO BE WIDENED	60'	45'	40'	35' WITH ISLAND	800'	540'
I THOMAS LANE	5-1;5-3 5-4;5-5	5	PRIVATE STREET	EXISTING TO BE WIDENED	60'	40'	12'±	N/A	20'	TWO-WAY PRIVATE STREET	EXISTING TO BE WIDENED						

** TOWER FIELD LANE CARTWAY WIDTH: 24' FROM STA 0+00 TO STA 3+24, VARIABLE 24 TO 20' FROM STA 3+24 TO STA 4+43.5, AND 20' FROM STA 4+43.5 TO END.

*** AYRSHIRE DRIVE CARTWAY WIDTH: 18' FROM STA 0+00 TO STA 22+00, AND 20' FROM STA 22+00 TO END.

PA ONE CALL SERIAL NUMBER 20142030820
DESIGNATED AREA: ENTIRE PROPERTY
DATE: 08/08/2014 TIME: 08:00 AM
EXCAVATOR: MOMENEE & ASSOCIATES
ADDRESS: 824 COUNTY LINE ROAD
CITY: BRYN MAWR STATE: PA
PHONE: (610) 527-3008 FAX: (610) 527-9068
EMAIL: MOMENEE@VERIZON.NET
CONTACT: DAVID FIORELLO
TYPE OF WORK: SURVEY
DURATION: 3 DAYS
EXPECTED START: 08/13/2014 08:00 AM
MEMBERS: ALL

Serial Number: 20142030820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK MEMBERS FACILITIES
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
REGISTERED
PROFESSIONAL
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3008 FAX: (610) 527-9068

NOTES AND REFERENCES
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

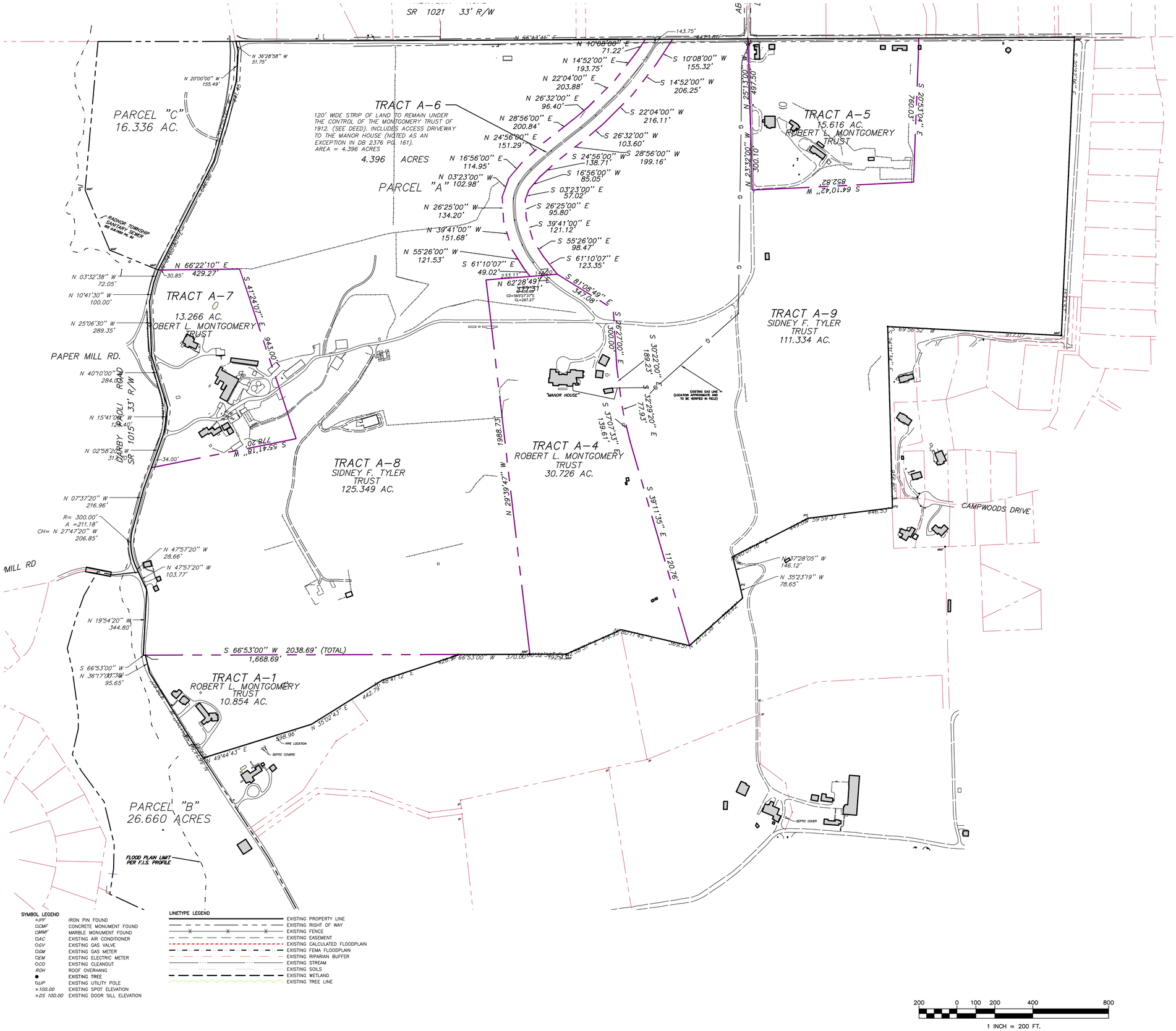
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL: 203-0820
DRAWN BY: JRM
CHECKED BY: DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW NOTES
2	11/26/14	INTERIM UPDATES
1	10/28/14	

DATE: SEPTEMBER 5, 2014
SHEET NO. 10 OF 93
SCALE: AS NOTED
FILE NO.: 06-012

N:\PROJECTS\2006\06012\MA\DRAWINGS\06012


SR 1021 33' R/W
TRACT A-6
120' WIDE STRIP OF LAND TO REMAIN UNDER THE CONTROL OF THE MONTGOMERY TRUST OF 1912. (SEE DEED). INCLUDES ACCESS DRIVEWAY TO THE MANOR HOUSE (NOTED AS AN EXCEPTION IN DB 2376 PG. 161).
AREA = 4.396 ACRES
4.396 ACRES
PARCEL "C"
16.336 AC.
PARCEL "A" 102.98'
TRACT A-5
15.616 AC.
ROBERT L. MONTGOMERY TRUST
TRACT A-7
13.266 AC.
ROBERT L. MONTGOMERY TRUST
TRACT A-9
SIDNEY F. TYLER TRUST
111.334 AC.
TRACT A-4
ROBERT L. MONTGOMERY TRUST
30.726 AC.
TRACT A-8
SIDNEY F. TYLER TRUST
125.349 AC.
TRACT A-1
ROBERT L. MONTGOMERY TRUST
10.854 AC.
PARCEL "B"
26.660 ACRES
PAPER MILL RD.
DARBY PAOLI ROAD
SR 1015 33' R/W
MILL RD
CAMPWOODS DRIVE
"MANOR HOUSE"
EXISTING GAS LINE (LOCATION APPROXIMATE AND TO BE VERIFIED IN FIELD)
RADNOR TOWNSHIP SANITARY SEWER WB 5 & WB 24
PIPE LOCATION
SEPTIC COVERS
SEPTIC COVER
FLOOD PLAIN LIMIT PER F.I.S. PROFILE
N 36°28'58" W 51.75'
N 20°00'00" W 155.49'
N 66°43'44" E 143.75'
N 10°08'00" E 71.22'
N 14°52'00" E 193.75'
N 22°04'00" E 203.88'
N 26°32'00" E 96.40'
N 28°56'00" E 200.84'
N 24°56'00" E 151.29'
N 16°56'00" E 114.95'
N 03°23'00" W
N 26°25'00" W 134.20'
N 39°41'00" W 151.68'
N 55°26'00" W 121.53'
S 61°10'07" E 49.02'
N 62°28'49" E 347.09'
S 10°08'00" W 155.32'
S 14°52'00" W 206.25'
S 22°04'00" W 216.11'
S 26°32'00" W 103.60'
S 28°56'00" W 199.16'
S 24°56'00" W 138.71'
S 16°56'00" W 85.05'
S 03°23'00" E 57.02'
S 26°25'00" E 95.80'
S 39°41'00" E 121.12'
S 55°26'00" E 98.47'
S 61°10'07" E 123.35'
S 81°08'49" E 347.09'
N 25°13'00" W 497.50'
N 23°32'00" W 300.10'
S 20°53'04" E 760.03'
S 64°10'42" W 852.82'
N 03°32'38" W 72.05'
N 10°41'30" W 100.00'
N 25°06'30" W 289.35'
N 66°22'10" E 429.27'
S 41°24'07" E 943.00'
N 40°10'00" W 284.40'
N 15°41'20" W 124.40'
N 02°58'20" W 31.80'
S 55°41'18" W 778.20'
N 07°37'20" W 216.96'
R= 300.00'
A =211.18'
CH= N 27°47'20" W 206.85'
N 47°57'20" W 28.66'
N 47°57'20" W 103.77'
N 19°54'20" W 344.80'
S 66°53'00" W 2038.69' (TOTAL)
1,668.69'
S 66°53'00" W
N 36°17'00" W 95.65'
N 49°44'43" E
N 35°02'43" E 442.79'
S 28°41'12" E
S 66°53'00" W 370.00'
S 16°27'00" E 300.00'
S 30°22'00" E 189.23'
S 32°29'20" E 77.93'
S 37°07'33" E 139.61'
N 29°39'47" W 1988.72'
S 39°11'35" E 1120.76'
N 37°28'05" W 146.12'
N 35°23'19" W 78.65'
S 59°59'37" E 446.53'
S 69°56'52" W 317.07'
N 64°41'47" E 233.51'
N 25°03'16" E
N 66°22'10" E 30.85'
-34.00'
-30.00'
-30.00'
-30

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9008

VICINITY PLAN

FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/28/14	NPDES
3	12/8/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 12 OF 93
SCALE: 1" = 200'
FILE NO.: 06-012

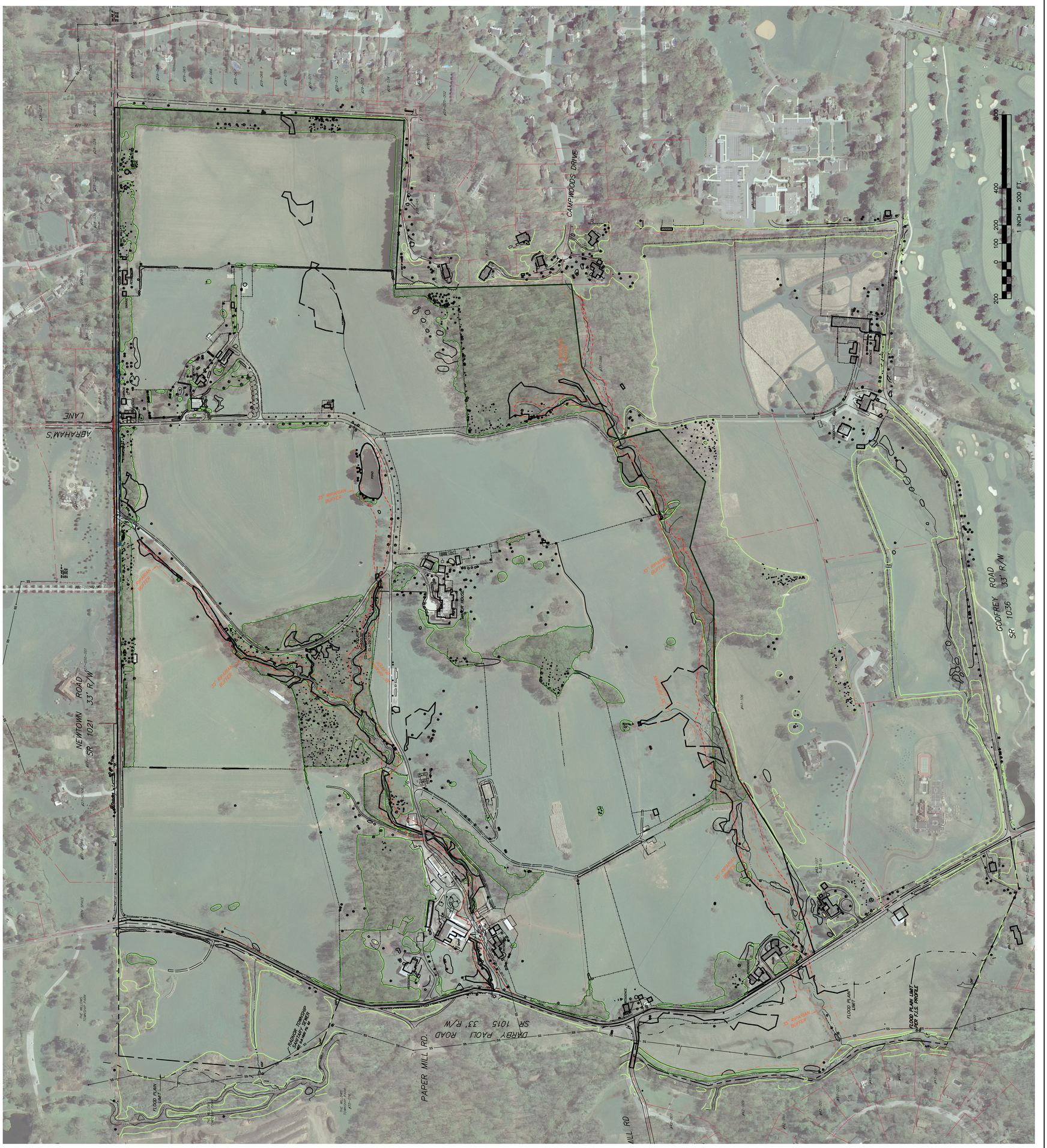
DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE022496

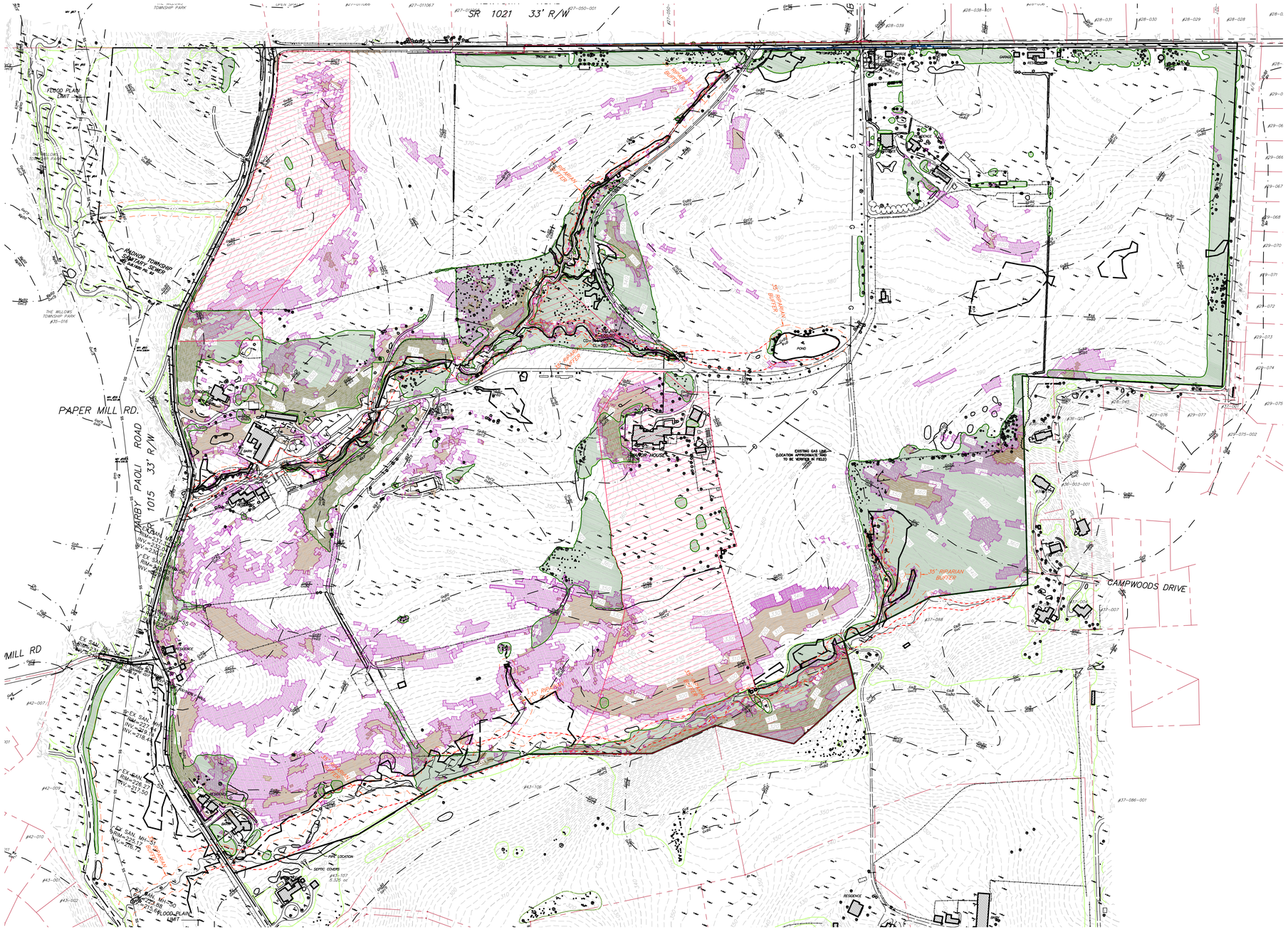
Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
Pennsylvania One Call System, Inc.
1-800-242-1776

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR EXCAVATION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

COPYRIGHT
THESE PLANS AND ASSOCIATED SUBMITTED DRAWINGS ARE THE PROPERTY OF MOMENEE AND ASSOCIATES, INC. ALL RIGHTS RESERVED. THESE PLANS AND ASSOCIATED DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY, WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE AND ASSOCIATES, INC. ANY UNAUTHORIZED REUSE OF THESE PLANS AND DRAWINGS WILL BE AT THE SOLE RISK OF THE USER AND WILL BE FULLY LIABLE FOR ALL DAMAGES RESULTING THEREFROM. THE SALE, TRANSFER OR USE OF THESE PLANS AND DRAWINGS IN ANY FORM OR MANNER BY ANY PERSON OR ENTITY OTHER THAN THE ORIGINAL CLIENT FOR WHOM THEY WERE PREPARED FOR THE ORIGINAL PROJECT IS PROHIBITED AND WITHOUT THE EXPRESS WRITTEN CONSENT OF MOMENEE AND ASSOCIATES, INC. ANY SUCH UNAUTHORIZED USE SHALL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MOMENEE AND ASSOCIATES, INC. THE USER SHALL INDEMNIFY AND HOLD HARMLESS MOMENEE AND ASSOCIATES, INC. AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS FEES AND COSTS ARISING OUT OF OR RESULTING THEREFROM.





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- WETLAND AREAS THAT HAVE NOT BEEN STUDIED

200 0 100 200 400 800

1 INCH = 200 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE SURVEYS AND RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND SHALL REPAIR ANY DAMAGE AT HIS EXPENSE.

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776
Serial Number: 2014203820

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PROFESSIONAL SURVEYOR
PROFESSIONAL LANDSCAPE ARCHITECT
REGISTERED
COMMONWEALTH OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9008 FAX: (610) 527-9088

SOIL, VEGETATION, & WATER RESOURCES MAP

FINAL SUBDIVISION PLANS

THE ARDROSSAN FARM

RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

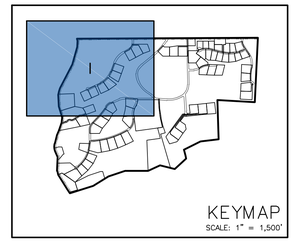
DATE: SEPTEMBER 5, 2014

SHEET NO. 13 OF 93

SCALE: 1" = 200'

FILE NO.: 06-012

M:\PROJECTS\2006\06012\MA\DRAWINGS\06012



SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- WETLAND AREAS THAT HAVE NOT BEEN STUDIED

100 0 50 100 200 400
1 INCH = 100 FT.

ALL UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9606

EXISTING CONDITIONS PLAN - SHEET I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

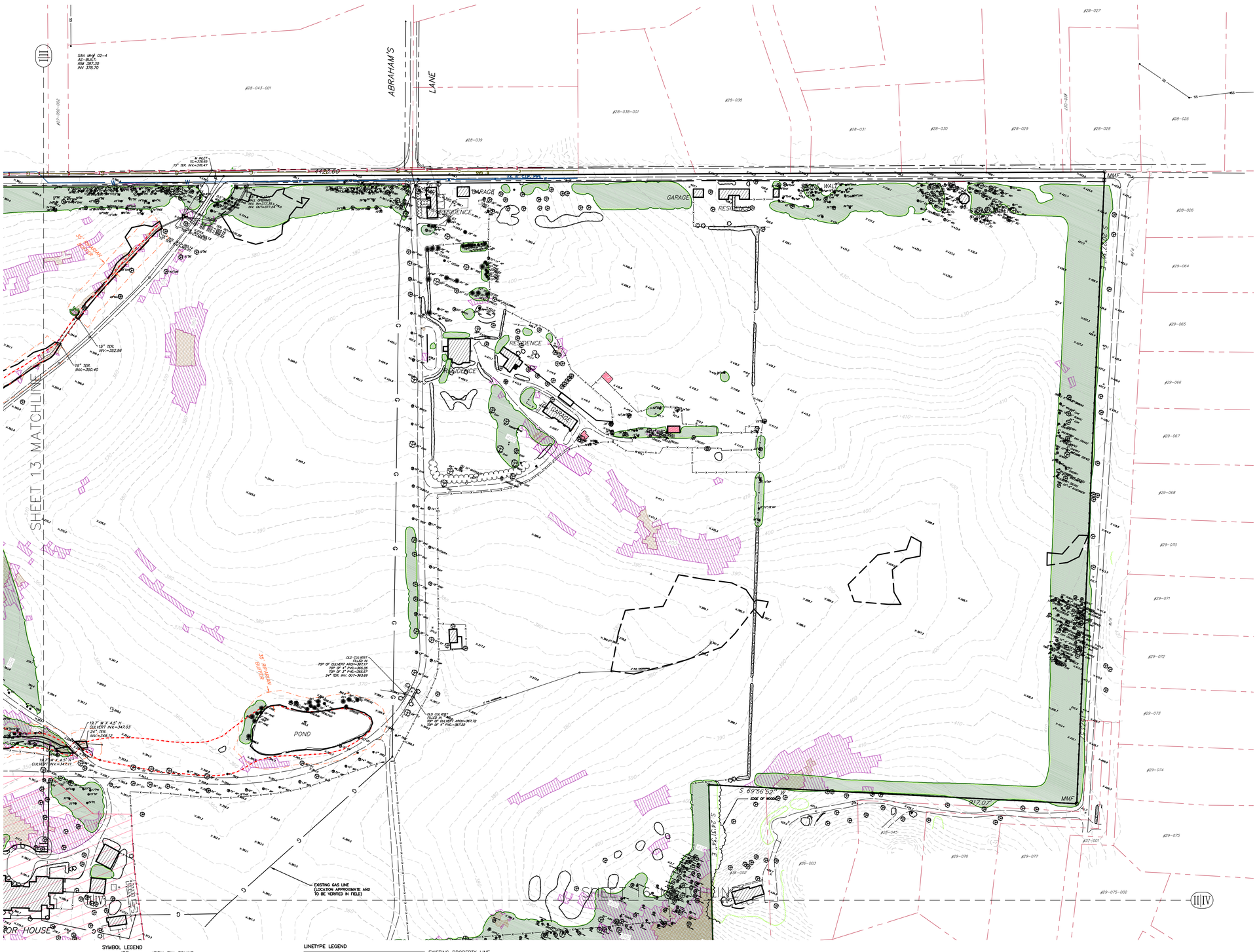
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

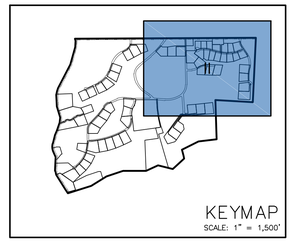
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/18/14	PSR TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 14 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012

J:\PROJECTS\2006\06012\MAP\DRAWINGS\06012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- WETLAND AREAS THAT HAVE NOT BEEN STUDIED

ALL UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITIES AT NO COST TO THE OWNER.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9606

EXISTING CONDITIONS PLAN - SHEET II

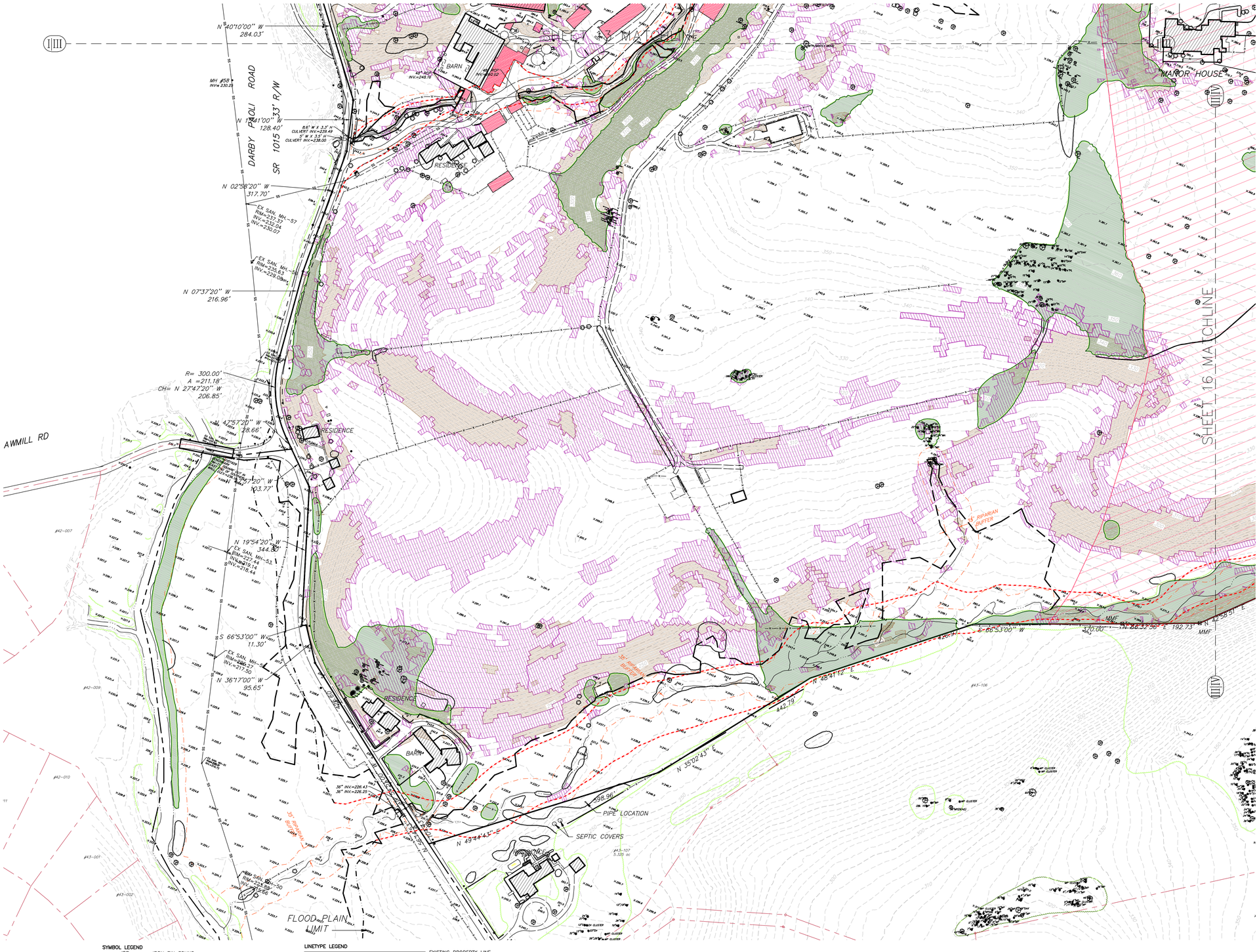
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

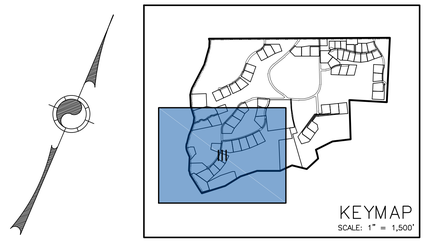
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/18/14	PSR TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 15 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 14 TO 20%
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	WETLAND AREAS THAT HAVE NOT BEEN STUDIED

100 0 50 100 200 400

1 INCH = 100 FT.

ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT — PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3050 FAX (610) 527-9008

EXISTING CONDITIONS PLAN - SHEET III

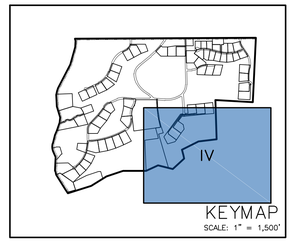
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	PER TOWNSHIP REVIEW
3	12/8/14	NPDES

DATE: SEPTEMBER 5, 2014
SHEET NO. 16 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012



SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- WETLAND AREAS THAT HAVE NOT BEEN STUDIED

100 0 50 100 200 400

1 INCH = 100 FT.

ALL PLANS, DESIGNS, DRAWINGS AND SPECIFICATIONS PREPARED BY MOMENEE & ASSOCIATES, INC. ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF MOMENEE & ASSOCIATES, INC. © COPYRIGHT 2014 MOMENEE & ASSOCIATES, INC. ALL RIGHTS RESERVED

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9068

EXISTING CONDITIONS PLAN – SHEET IV

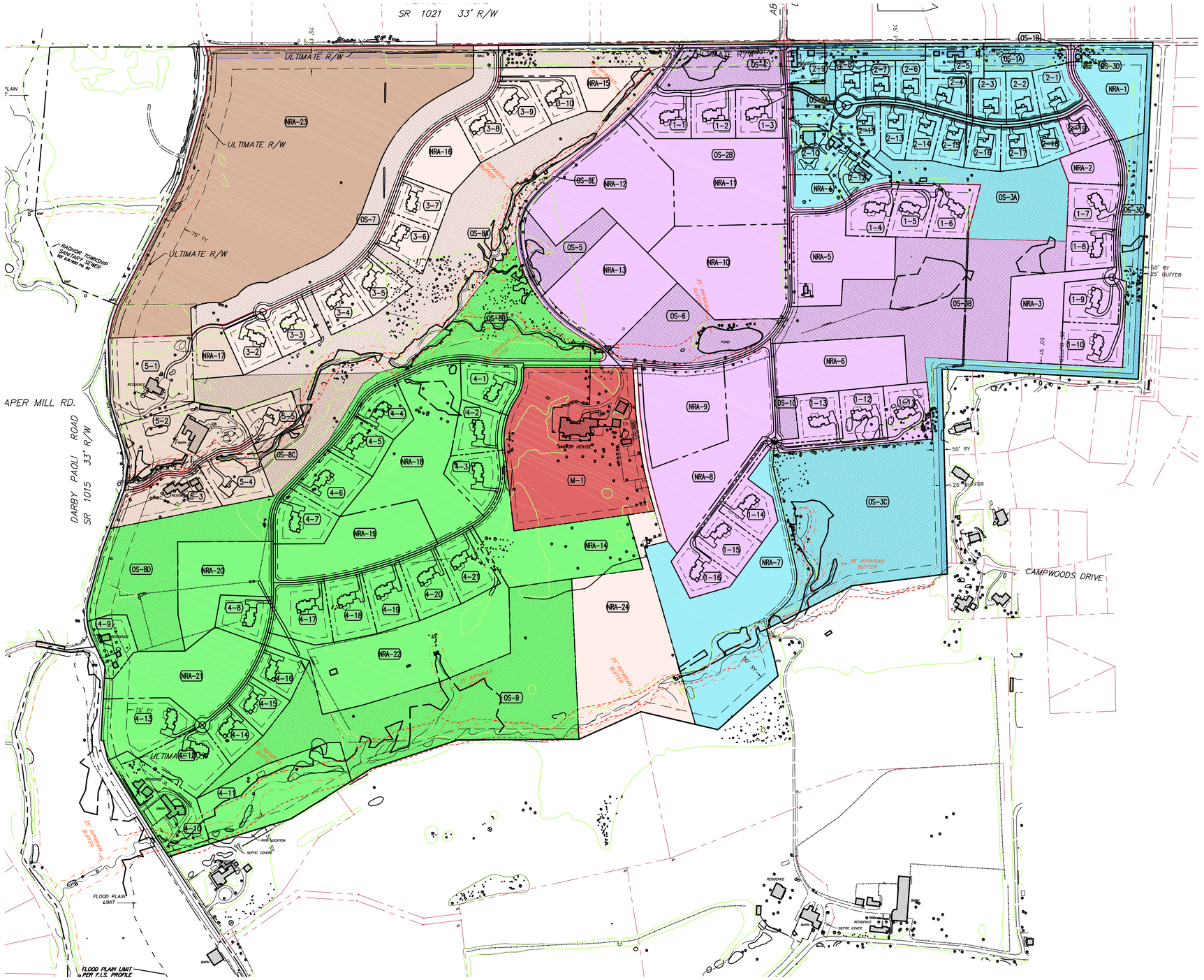
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

NO.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW LETTER DATED 12/5/14
2	11/26/14	INTERIM UPDATES
1	10/29/14	

DATE: SEPTEMBER 5, 2014
SHEET NO. 17 OF 93
SCALE: 1" = 100'
FILE NO.: 06-012



PHASE I

PHASE 1
GROSS AREA = 82.46 AC
NET AREA = 82.00 AC
15% REQUIRED OPEN SPACE = 12.30 AC

AS PART OF PHASE 1, COMMON OPEN SPACE FOR THE RYE FIELD AT THE CORNER OF DARBY-PAOLI AND NEWTOWN ROAD (LOT NRA-22) WILL BE PROVIDED. IN ADDITION, COMMON OPEN SPACE FOR THE MANSION LOT WILL BE PROVIDED.

RYE FIELD NET AREA = 24.84 AC
15% REQUIRED OPEN SPACE = 3.73 AC

MANSION LOT AREA = 10.02 AC.
15% REQUIRED OPEN SPACE = 1.50 AC

TOTAL OPEN SPACE REQUIRED = 17.53 AC

OPEN SPACE PROVIDED = 19.71 ACRES GROSS
18.04 AC NET OF ROAD R/W & BUFFER= 15.43%

PROPOSED LOTS: 17
PROPOSED HOMES: 17 NEW DWELLINGS

PHASE II

PHASE 2
GROSS AREA = 49.79 AC
NET AREA = 48.69 AC
15% REQUIRED OPEN SPACE = 7.30 AC
OPEN SPACE PROVIDED = 23.43 ACRES GROSS
19.80 AC NET OF ROAD R/W & BUFFER = 40.67%

PROPOSED LOTS: 18
PROPOSED HOMES: 13 NEW DWELLINGS / 5 EXISTING RESIDENCES
2 EXISTING RESIDENCE CONTAIN DUPLEX UNITS

PHASE III

PHASE 3
GROSS AREA = 69.15 AC - 27.04 AC RYE FIELD = 40.29 AC
NET AREA = 39.67 AC
15% REQUIRED OPEN SPACE = 5.95 AC
OPEN SPACE PROVIDED = 19.33 ACRES GROSS
17.78 AC NET OF ROAD R/W & BUFFER = 48.73%

PROPOSED LOTS: 9
PROPOSED HOMES: 9 NEW DWELLINGS

PHASE IV

PHASE 4
GROSS AREA = 85.42 AC
NET AREA = 83.89 AC
15% REQUIRED OPEN SPACE = 12.58 AC
OPEN SPACE PROVIDED = 25.73 ACRES GROSS
24.24 AC NET OF ROAD R/W & BUFFER = 28.89%

PROPOSED LOTS: 21
PROPOSED HOMES: 18 NEW DWELLINGS / 2 EXISTING RESIDENCES
1 EXISTING RESIDENCE CONTAINING 3 DWELLING UNITS
1 LOT TO BE MERGED WITH ADJOINING PROPERTY

PHASE V

PHASE 5
GROSS AREA = 16.51 AC
NET AREA = 15.68 AC
15% REQUIRED OPEN SPACE = 2.36 AC
COMMON OPEN SPACE PROVIDED = 4.31 AC = 27.48%

PROPOSED LOTS: 5
PROPOSED HOMES: 2 NEW DWELLINGS / 3 EXISTING RESIDENCES

MANSION HOUSE

MANSION HOUSE
MANSION LOT AREA = 10.02 AC.
15% REQUIRED OPEN SPACE = 1.50 AC
COMMON OPEN SPACE FOR THE MANSION LOT IS BEING PROVIDED AS PART OF PHASE 1.

PROPOSED LOTS: 1
PROPOSED HOMES: 1 EXISTING RESIDENCE

COMMON OPEN SPACE

TOTAL OPEN SPACE
15% REQUIRED OPEN SPACE = 45.72 ACRES
TOTAL OPEN SPACE PROVIDED = 93.63 ACRES GROSS
84.07 AC NET OF ROAD R/W & BUFFER = 27.57%

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊕UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
SP	SOIL PERC TEST LOCATION
△	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
(P)	PROPOSED LOT
(OS)	PROPOSED OPEN SPACE LOT
(NR)	PROPOSED NON-RESIDENTIALLY APPROVED LOT

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE

THE PHASING SHOWN IS FOR THE SALE OF LOTS ONLY. CONSTRUCTION IS TO BE PHASE TO EXTEND NECESSARY UTILITIES AND INFRASTRUCTURE TO SERVE EACH DEVELOPMENT PHASE. SEE CONSTRUCTION PHASING AS SHOWN ON EROSION AND SEDIMENT CONTROL PLANS.

200 0 100 200 400 800
1 INCH = 200 FT.

ALL RIGHTS RESERVED. THIS PLAN IS THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE SPECIFIC PROJECT FOR WHICH IT WAS PREPARED. ANY REPRODUCTION OF THIS PLAN IN WHOLE OR IN PART OR ANY USE OF THE IDEAS AND DESIGNS APPEARING HEREIN FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF MOMENEE & ASSOCIATES, INC. IS PROHIBITED.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK ALL MEMBER FACILITIES.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL — PROVINCE PA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-2080 FAX (610) 527-9068

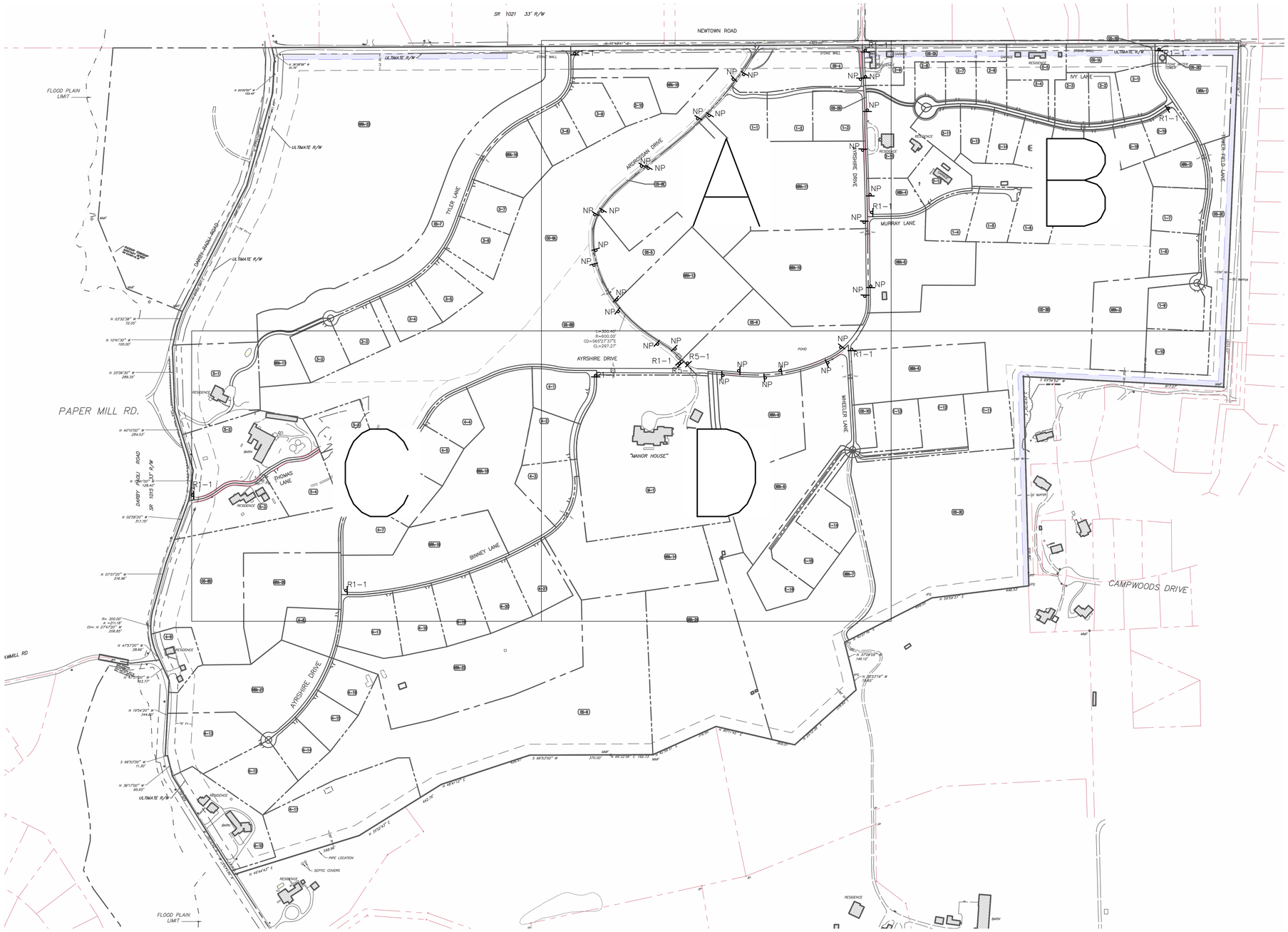
PHASING PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

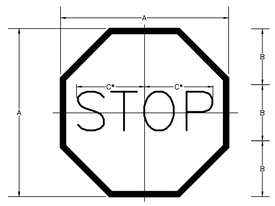
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/8/14	PSR TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 18 OF 93
SCALE: 1" = 200'
FILE NO.: 06-012



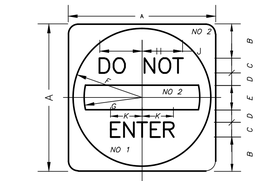


COLOR : LEGEND AND BORDER WHITE (REFLECTORIZED)
BACKGROUND RED (REFLECTORIZED)

* REDUCE SPACING 40%

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BORDER	BLANK STD
30x30	30	10	12.5	C	3/4	B1-30

STOP SIGN (R1-1)



COLOR : NO 1 LEGEND WHITE (REFLECTERIZED)
NO 1 BACKGROUND RED (REFLECTERIZED)
NO 2 BACKGROUND WHITE (REFLECTERIZED)

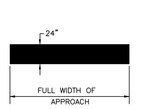
BLANK STD : B3-30

DIMENSIONS (30"x30" SIGN) A	B	C	D	E	F	G	H	J	K	SERIES 1	2
30	6.5	4	2	5	14.5	12.5	9.75	10	7.875	D	D

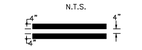
DO NOT ENTER SIGN (R5-1)
N.T.S.

SIGN SIZE 12"x18"
NO PARKING BY ORDER OF FIRE MARSHAL SIGN (B)
N.T.S.

NO PARKING SIGN (NP)



SOLID WHITE STOP BAR



SOLID DOUBLE YELLOW
N.T.S.

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN
	PROPOSED STOP BAR

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE

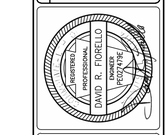
200 0 100 200 400 800

1 INCH = 200 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD LOCATIONS AND/OR AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE LOCATIONS SHOWN ON THE PLANS AND THE FIELD LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES DURING CONSTRUCTION.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PLANS AND 10 WORKING
DAYS NOTICE FOR DESIGN PLANS
Pennsylvania One Call System, Inc.
1-800-242-1776



MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9068

PAVEMENT MARKING PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

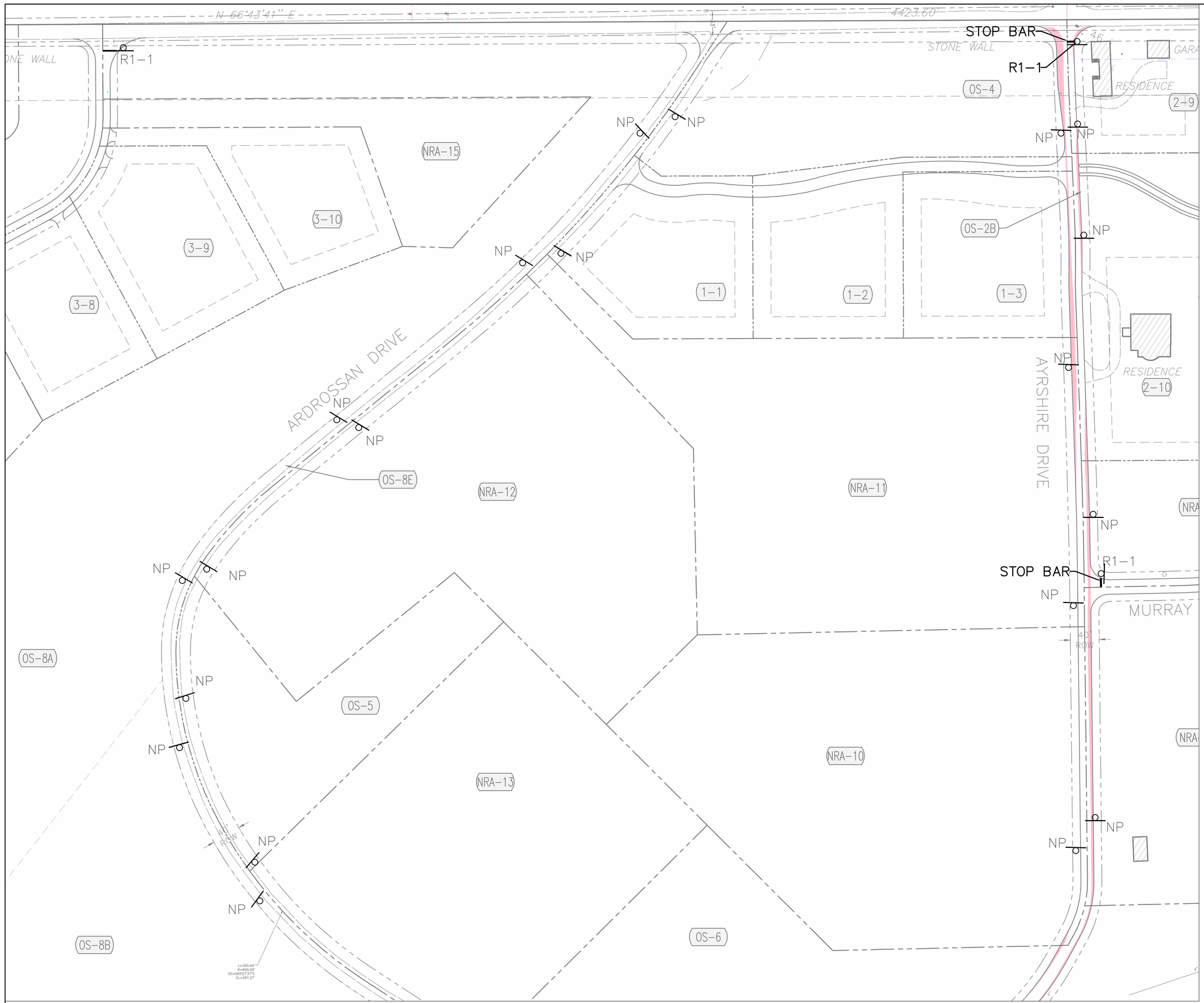
APPLICANT
ESH, LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL: 203-0820
DRAWN BY: JRM
CHECKED BY: DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/29/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 19 OF 93
SCALE: 1" = 200'
FILE NO.: 06-012

N:\PROJECTS\2006\06012\LIVE\DRAWINGS\06012-



A

SYMBOL LEGEND

- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED SIGN
- PROPOSED STOP BAR

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY

SEE SHEET 18 FOR SIGN DETAILS

M:\PROJECTS\2006\06012\sia\DRAWINGS\06012

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-9006 FAX: (610) 527-9008

SIGN PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	TED
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
20
OF 93
SCALE: AS NOTED
FILE NO.: 06-012

GARAGE
OS-2A
75' R/W
GARAGE
STONE WALL
ULTIMATE R/W
R1-1
STOP BAR
OS-1A
RESIDENCE
2-5
STONE WATER TOWER
OS-3D
MMF
S 20°27'36" E
2-8
2-9
2-7
2-6
IVY LANE
2-4
2-3
2-2
2-1
NRA-1
STOP BAR
R1-1
RESIDENCE
2-11
2-13
2-14
2-15
2-16
2-17
2-18
2-19
TOWER FIELD LANE
40' ROW
GARAGE
2-12
NRA-2
NRA-4
OS-3A
OS-3C
RAY LANE
1-4
1-5
1-6
1-7
1-8
50' RY
25' BUFFER
NRA-5
OS-3B
NRA-3
1-9

SEE SHEET 18 FOR SIGN DETAILS

B

SYMBOL LEGEND

PROPOSED LOT
PROPOSED OPEN SPACE LOT
PROPOSED NON-RESIDENTIALLY APPROVED LOT
PROPOSED SIGN
PROPOSED STOP BAR

LINETYPE LEGEND

EXISTING PROPERTY LINE
EXISTING RIGHT OF WAY
PROPOSED PROPERTY LINE
PROPOSED RIGHT OF WAY

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PLANS AND 10 WORKING DAYS NOTICE FOR PREMARKING.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

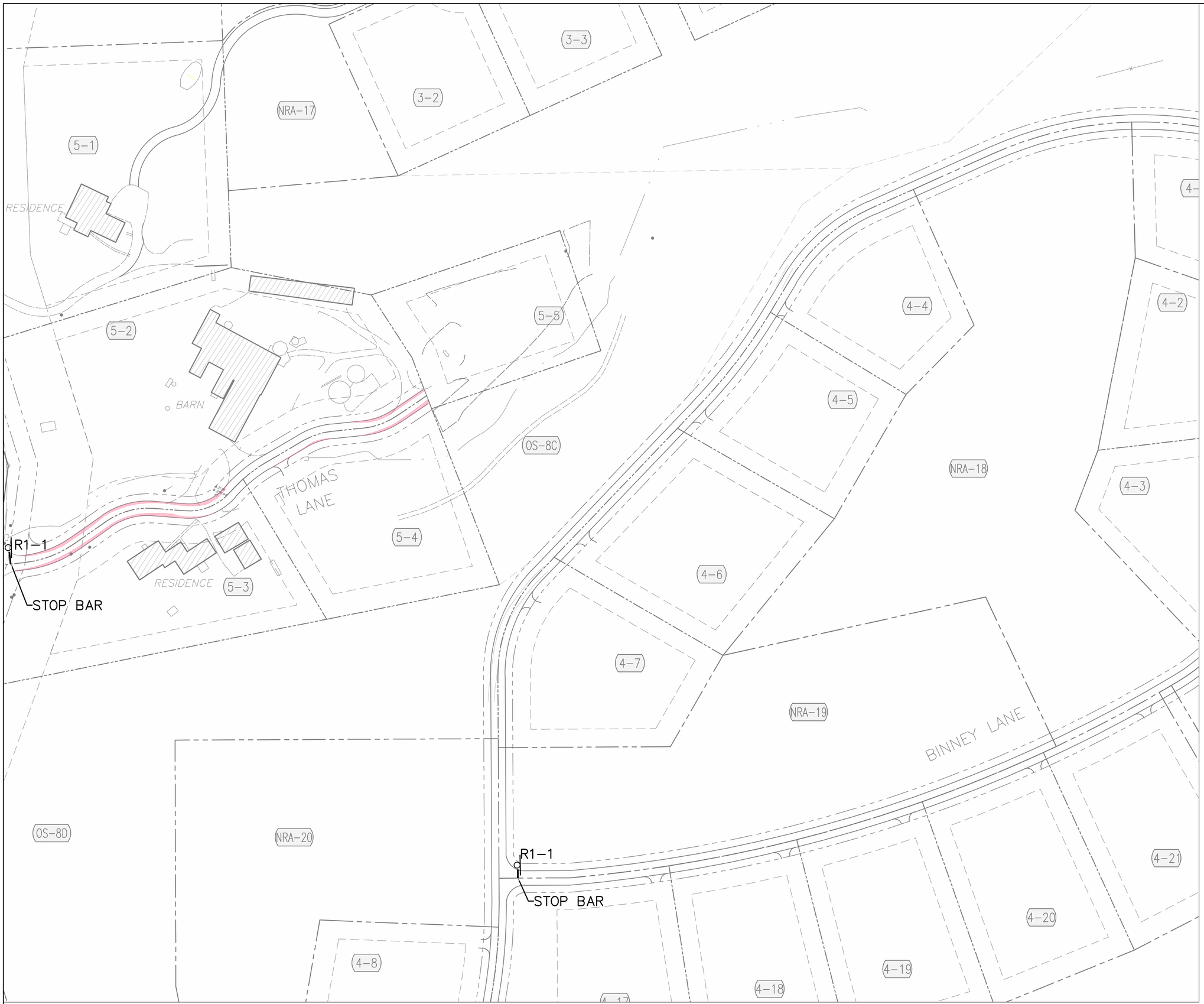
SIGN PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

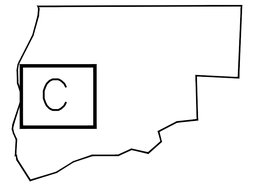
ONE-CALL: 203-0820
DRAWN BY: TED
CHECKED BY: DRF

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NOISES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 21 OF 93
SCALE: AS NOTED
FILE NO.: 06-012





SYMBOL LEGEND

- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED SIGN
- PROPOSED STOP BAR

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY

SEE SHEET 18 FOR SIGN DETAILS

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE SURVEY INFORMATION AND MAY NOT REFLECT THE ACTUAL EXISTENCE OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL PENNSYLVANIA ONE CALL SYSTEM REQUIREMENTS AND SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION AND SHALL COORDINATE WITH THEM THE RELOCATION OF ANY UTILITIES AFFECTED BY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-3636 FAX: (610) 527-9666

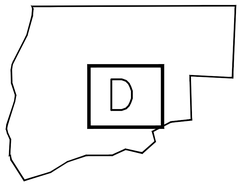
SIGN PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	TED
CHECKED BY:	DRF

APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 22 OF 93
SCALE: AS NOTED
FILE NO.: 06-012



SYMBOL LEGEND

- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED SIGN
- PROPOSED STOP BAR

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY

SEE SHEET 18 FOR SIGN DETAILS

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9068

SIGN PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

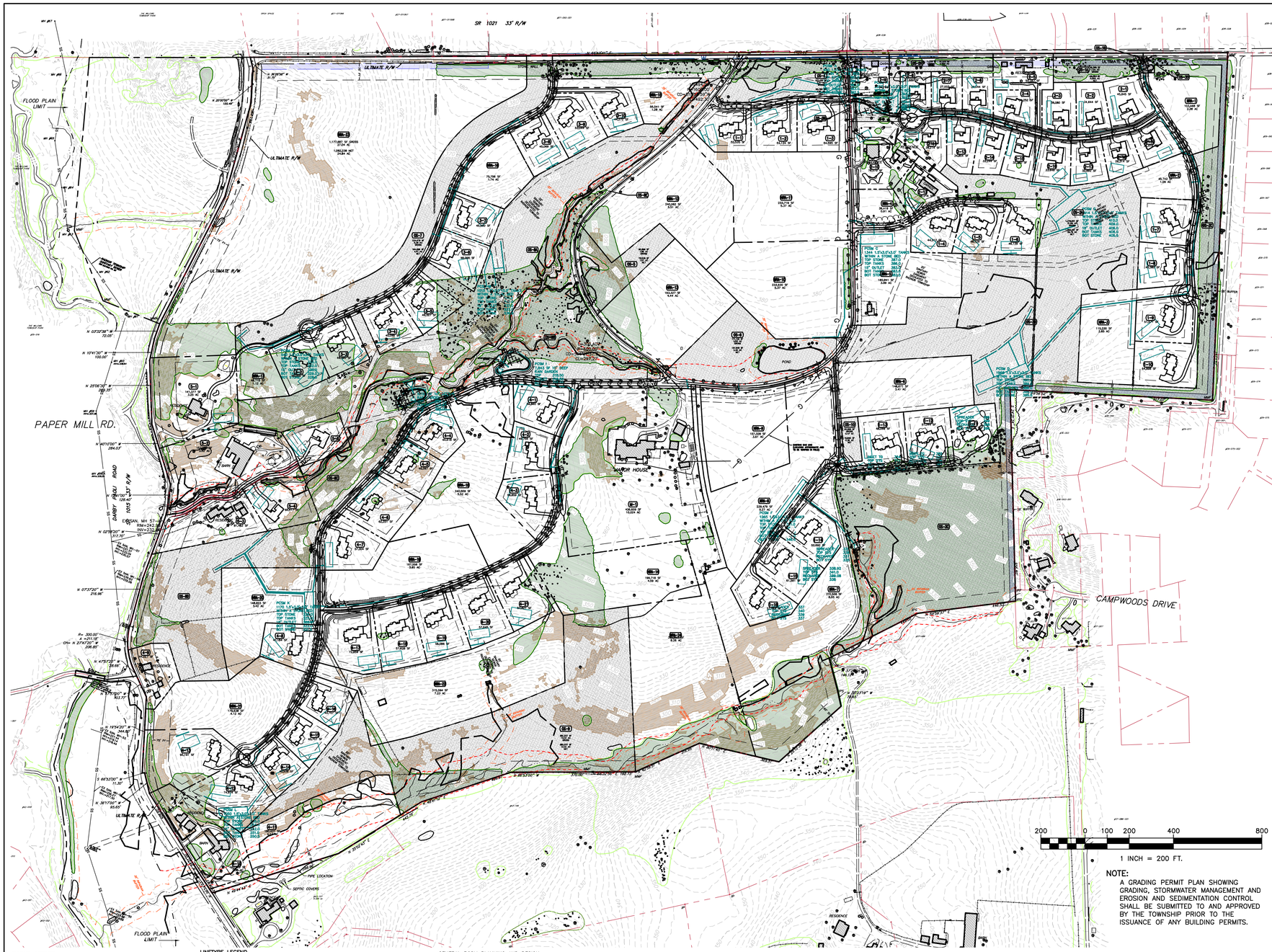
ONE-CALL:	203-0820
DRAWN BY:	TED
CHECKED BY:	DRF

APPLICANT
ESIII LP
167 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
23
OF 93
SCALE: AS NOTED
FILE NO.: 06-012

N:\PROJECTS\2006\06012\PLANS\DRAWINGS\06012



NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY

GENERAL PCSM PLANNING AND DESIGN:

STRUCTURAL AND/OR NONSTRUCTURAL BMPs SHALL BE UTILIZED TO PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF; THESE SHALL INCLUDE BUT ARE NOT LIMITED TO SUBSURFACE INFILTRATION BEDS, BIORETENTION RAIN GARDENS, MINIMIZING TOTAL DISTURBED AREAS, MINIMIZING THE IMPERVIOUS COVER ON SITE, AND PRESERVING THE EXISTING NATURAL RESOURCES.

THE COMBINATION OF THESE FACILITIES AND PRACTICES ARE USED TO MEET THE REGULATORY STANDARD FOR STORMWATER MANAGEMENT, CONTROL GUIDANCE-1 AND LOCAL MUNICIPAL ORDINANCES. REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT REPORT FOR MORE DETAILS AND CALCULATIONS

DISCHARGE FROM THE STRUCTURAL BMPs ARE CONVEYED TO THE EXISTING NATURAL DRAINAGEWAYS WHICH MAINTAINS EXISTING DRAINAGE PATTERNS WITH REDUCTIONS IN OVERALL SITE RUNOFF.

BY IMPLEMENTING THESE MEASURES THE FOLLOWING CRITERIA HAVE BEEN ATTAINED:

- THE PCSM PLAN PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM.
- THE PCSM PLAN PREVENTS AN INCREASE IN THE RATE OF STORMWATER RUNOFF — THE PROPOSED STORMWATER FACILITIES REDUCE THE RATE OF STORMWATER RUNOFF FROM THE 2–YR THROUGH THE 100–YR STORM EVENTS.
- THE PCSM PLAN MINIMIZES ANY INCREASE IN STORMWATER RUNOFF VOLUME — THE STORMWATER FACILITIES ARE DESIGNED TO REDUCE THE POST CONSTRUCTION RUNOFF FOR THE 2–YR STORM EVENT UTILIZING BMPS FOR A 24–HOUR STORM WITH ALL OF IT SPECIAL WATER RESISTING PERVIOUS AREA CONSIDERED AS MEADOW AND 80% OF THE EXISTING IMPERVIOUS COVERAGE CONSIDERED AS A MEADOW CONDITION.
- THE PCSM PLAN MINIMIZES IMPERVIOUS AREA — THE OVERALL IMPERVIOUS COVER IS MINIMIZED ON SITE BY DEVELOPING A NON–TRADITIONAL SUBDIVISION TO SIGNIFICANTLY REDUCE THE AMOUNT OF IMPERVIOUS AREA ON THE PROPERTY. THE PROPOSED DESIGN INCLUDES LOW IMPACT DEVELOPMENT (LID) TECHNIQUES TO REDUCE THE OVERALL IMPERVIOUS COVERAGES AND STORMWATER MANAGEMENT DEMAND PROVIDING FAR LESS DEVELOPMENT THAN WHAT IS PERMITTED BY THE TOWNSHIP ZONING ORDINANCE AND BY REQUESTING WAIVERS OF THE REQUIRED ROADWAY WIDTHS, CUL–DE–SAC RADII, SIDEWALK REQUIREMENTS, AND OTHER DESIGN STANDARDS.
- THE PCSM PLAN MAXIMIZES THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION – THE SITE CURRENTLY DRAINS UNCONTROLLED TO THE THREE SEPARATE WATERSHEDS (CAMP RUN, RYE FIELD, AND WIG WAM RUN). THE RUNOFF FROM THE PROPOSED IMPROVEMENTS IS COLLECTED, MANAGED AND THE SYSTEMS DISCHARGE TO THE EXISTING DRAINAGE WAYS. THE PROPOSED STORMWATER FACILITIES ARE LOCATED WITHIN THE AREAS OF DISTURBANCE NECESSARY FOR CONSTRUCTION IN ORDER TO FURTHER PROTECT THE EXISTING VEGETATION ON SITE. THE OVERALL SITE LAYOUT WAS DESIGNED TO AVOID DISTURBANCE OF THE EXISTING DRAINAGE FEATURES AND TO PROTECT THE EXISTING VEGETATION.
- THE PCSM PLAN MINIMIZES LAND CLEARING AND GRADING – THE PLAN MINIMIZES LAND CLEARING AND GRADING BY MINIMIZING THE AMOUNT OF GRADING TO THE EXTENT FEASIBLE. THE PROPOSED STORMWATER FACILITIES, UTILITIES AND E&S CONTROLS WERE ALSO LOCATED WITHIN THE AREA OF PROPOSED IMPROVEMENTS TO THE EXTENT POSSIBLE. THE OVERALL LAND CLEARING IS GREATLY REDUCED AS A RESULT OF PROVIDING LESS DEVELOPMENT THAN WHAT IS PERMITTED BY THE TOWNSHIP ZONING ORDINANCE AND BY REQUESTING WAIVERS OF THE REQUIRED ROADWAY WIDTHS, CUL–DE–SAC RADII, SIDEWALK REQUIREMENTS, AND OTHER DESIGN STANDARDS.
- THE PCSM PLAN MINIMIZES SOIL COMPACTION – THE CONTRACTOR SHALL MINIMIZE COMPACTION DURING CONSTRUCTION. THE TYPE OF EQUIPMENT USED DURING CONSTRUCTION SHALL NOT CAUSE UNDUE COMPACTION AND TRAFFIC OVER DISTURBED AREAS SHALL BE KEPT AT A MINIMUM.
- THE PCSM UTILIZES OTHER STRUCTURAL OR NONSTRUCTURAL BMPS THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF – THESE SHALL INCLUDE BUT ARE NOT LIMITED TO SUBSURFACE INFILTRATION BEDS, RAIN GARDENS, DISCONNECTION OF IMPERVIOUS AREAS TO VEGETATED SWALES, MAINTAINING EXISTING DRAINAGE PATTERNS, AND PRESERVING EXISTING VEGETATION. THE OVERALL RATE AND VOLUME OF RUNOFF IS REDUCED ON SITE. OTHER BMPS INCLUDE THE INSTALLATION LEVEL SPREADERS AND RIP RAP APRONS. THE COMBINATION OF THESE FACILITIES AND PRACTICES ARE USED TO MEET THE REGULATORY STANDARD FOR CONSTRUCTION STORMWATER MANAGEMENT, CONTROL GUIDANCE–1 AND LOCAL MUNICIPAL ORDINANCES.

OPERATION AND MAINTENANCE NOTES:

1. THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER DRAINAGE FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.

2. THE PROPERTY OWNER SHALL NOT ALTER OR REMOVE THE STORMWATER FACILITIES ON THE SITE.

3. GENERAL OBJECTIVES OF MAINTENANCE ARE TO PREVENT CLOGGING OF THE INLETS, OUTLETS, PREVENT STANDING WATER, AND PREVENT THE GROWTH OF WEEDS AND NOXIOUS PLANTS.

4. REGULAR INSPECTIONS SHOULD BE MADE OF INFILTRATION FACILITIES ESPECIALLY DURING WET WEATHER TO ENSURE THAT THE FACILITY IS MAINTAINING DESIRABLE RETENTION TIMES.

5. ANUALLY ASSESS THE VARIOUS SPECIES OF THE PLANT COVER. IT MAY BE NECESSARY TO SUPPLEMENT AND/OR REMOVE VARIOUS SPECIES DUE TO THEIR GROWING PATTERNS.

6. AFTER ANY STORM RAINFALL EVENT OF A 2–YR OR GREATER MAGNITUDE, THE INFILTRATION BED AND ASSOCIATED OUTLET WORKS SHOULD BE INSPECTED. ANY DAMAGE OR BLOCKAGE TO THE OUTLET STRUCTURES SHOULD BE REPAIRED OR REMOVED IMMEDIATELY. ANY ERODED AREAS SHOULD BE TOPSOILED AND PERMANENTLY SEEDED AND MULCHED.

STORMWATER PERCOLATION NOTES:

DOUBLE RING INFILTROMETER STORMWATER PERCOLATION TESTING WAS PERFORMED ON SITE BY EVANS MILL ENVIRONMENTAL LLC. TESTING WAS PERFORMED THROUGHOUT THE SITE AS NOTED ON THE PLANS.

GENERAL PCSM NOTES:

1. THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPS. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPS TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPS, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

2. THE NPDES BOUNDARY IS EQUAL TO THE LIMITS OF DISTURBANCE OF THE SITE AND ANY OFF–SITE AREAS WITHIN THE LIMITS OF DISTURBANCE THAT ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL. OFF–SITE UTILITIES SUCH AS: UTILITIES AND ROADWAYS.

3. CHAPTER 93 STREAM CLASSIFICATION: CWF, MF
RECEIVING WATER: CAMP RUN / WIG WAM RUN TO DARBY CREEK.

4. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

5. THE RESPONSIBLE PARTY SHALL UTILIZE PROPER HANDLING AND/OR DISPOSAL OF ALL MATERIALS WHICH COULD CAUSE POLLUTION.

6. WHERE POTENTIAL THERMAL IMPACTS TO SURFACE WATERS EXISTS, APPROPRIATE MEASURES SHALL BE TAKEN TO AVOID/MINIMIZE/OR MITIGATE THESE IMPACTS INCLUDING BUT NOT LIMITED TO MINIMIZING IMPERVIOUS, MINIMIZING THE EXTENT AND DURATION OF SITE DISTURBANCE, PROTECTING EXISTING SHADE TREES, INSTALLING NEW PLANTINGS AS SOON AS FEASIBLE, MAXIMIZING VEGETATED SWALES, MINIMIZING DENUDED AND CONCRETE CHANNELS AND MAXIMIZING DETENTION FACILITY AREAS WHILE MINIMIZING POOL DEPTHS.

RECYCLING OR DISPOSAL OF MATERIALS:

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

PCSM WASTE IS LIMITED TO THE SEDIMENT THAT COLLECTS IN INLET SUMPS AND/OR SWM SYSTEMS. THESE STRUCTURES SHALL BE CLEANED OUT IN ACCORDANCE WITH THE PROVIDED OPERATION AND MAINTENANCE REQUIREMENTS OF THOSE STRUCTURES AND DISPOSED OF PROPERLY.

IN THE EVENT A POLLUTION INCIDENT OCCURS WHICH CAUSES OR THREATENS TO CAUSE SURFACE OR GROUNDWATER POLLUTION, THE OWNER SHALL:
(1) PROMPTLY NOTIFY THE DEPARTMENT BY TELEPHONE OF THE LOCATION AND NATURE OF THE DANGER,
(2) NOTIFY ALL KNOWN DOWNSTREAM USERS OF THE WATER,
(3) IMMEDIATELY TAKE ALL NECESSARY STEPS TO PREVENT INJURY TO PROPERTY AND DOWNSTREAM USERS, AND PROTECT WATERS FROM POLLUTION OR DANGER OF POLLUTION,
(4) REMOVE ANY CONTAMINATION FROM AFFECTED GROUND OR SURFACE WATER TO THE EXTENT REQUIRED BY THE DEPARTMENT.

MAINTENANCE OF PERMANENT STORMWATER MANAGEMENT FACILITIES

A. THE RESPONSIBILITY FOR THE INSTALLATION AND MAINTENANCE AND OPERATION DURING CONSTRUCTION OF THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND OTHER FACILITIES SHALL BE THE OBLIGATION OF THE CONTRACTOR.

B. THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND OTHER FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.

C. EFFECTIVE STORMWATER MANAGEMENT SHALL REQUIRE MAINTENANCE AND OPERATION OF DRAINAGE INFRASTRUCTURE FOR PURPOSES OF MAINTAINING FLOW TO PREVENT FLOODING OR EROSIVE CONDITIONS. ALL STORMWATER FACILITY REPAIRS SHALL BE PERFORMED IN A MANNER THAT DOES NOT EXACERBATE EXISTING STORMWATER PROBLEMS.

STORMWATER BMP – INFILTRATION BEDS

1. THE STONE RECHARGE BED MUST BE INSPECTED FOR ROUTINE MAINTENANCE A MINIMUM OF TWO TIMES A YEAR, ONCE IN THE EARLY SPRING AND ONCE IN THE FALL AFTER THE MAJORITY OF THE LEAVES HAVE FALLEN. ANY ACCUMULATED DEBRIS OR SEDIMENT SHALL BE REMOVED AND ANY STRUCTURAL FAILURES SHALL BE REPAIRED.

2. ONCE A YEAR FOLLOWING A STORM EVENT, THE STONE RECHARGE BED MUST BE INSPECTED TO DETERMINE IF IT IS DRAINING WITHIN THE REQUIRED TIME PERIOD (USUALLY TWENTY–FOUR HOURS). THE INSPECTION PORT SHALL BE OPENED AT LEAST TWENTY–FOUR HOURS FOLLOWING A STORM AND THE LEVEL OF WATER IN THE BED NOTED. VENTED CLEAN–OUTS MUST BE CHECKED TO ENSURE OPENINGS ARE CLEAR. ADJUSTMENTS TO THE CLEANOUTS MUST BE MADE IF SOIL OR OTHER LAWN DEBRIS IS OBSERVED TO BE ENTERING THE SYSTEM. IF IT IS DETERMINED THAT THE SYSTEM WILL NOT RECHARGE THE STORMWATER RUNOFF AS DESIGNED, THE SYSTEM WILL NEED TO BE REPAIRED OR REPLACED. THE TOWNSHIP SHALL BE CONTACTED FOR APPROVAL OF ANY MODIFICATION OR REPLACEMENT OF THE SYSTEM.

3. THE OUTLET PIPE OR CONNECTION OF THE OUTLET OF THE BASIN MUST BE CHECKED TO ENSURE THAT IT IS PERMITTING FREE FLOW OF WATER OUT OF THE BASIN. ALSO, THE CONVEYANCE PIPE TO THE EXISTING INLET SHALL BE INSPECTED AND REPAIRED AS REQUIRED.

4. TREES SHALL NOT BE PLANTED OR PERMITTED TO GROW IN THE VICINITY OF STONE RECHARGE BEDS OR STRUCTURES TO ENSURE THAT TREE ROOTS DO NOT PUNCTURE THE FILTER FABRIC OF THE STONE RECHARGE BED OR DAMAGE ANY STORMWATER COLLECTION/CONVEYANCE STRUCTURE.

5. ROOF GUTTER SYSTEMS THAT ARE INTEGRAL WITH THE STONE RECHARGE BED MUST BE FUNCTIONAL. REPAIRS OR REPLACEMENT MUST BE MADE. LEAF GUARDS SHALL BE INSTALLED AND MAINTAINED IN CONJUNCTION WITH GUTTER SYSTEMS.

6. PREVENTATIVE MAINTENANCE SHALL BE PERFORMED WHICH WOULD INCLUDE REMOVAL OF LEAVES FROM GUTTER SYSTEMS AND LAWN AREAS AS SOON AS POSSIBLE TO AVOID CONTAMINATION OR CLOGGING OF THE SYSTEM. LOCATING LANDSCAPE–MULCHED AREAS AWAY FROM CONCENTRATED RUNOFF AREAS OR SWALES THAT COULD WASH MULCH INTO INLETS IS RECOMMENDED.

7. THE PROPERTY OWNER SHALL MAINTAIN RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITY.

STORMWATER FACILITY – INLETS

1. ALL SEDIMENT TRAPS AND INLETS MUST BE VISUALLY INSPECTED FOR ACCUMULATED SOIL AND DEBRIS A MINIMUM OF ONCE A YEAR. INLET GRATES MUST BE KEPT FREE OF LEAVES, STICKS, MULCH, AND OTHER LAWN DEBRIS OR TRASH THAT WOULD PREVENT INFLOW OF RUNOFF. SUMPS IN SEDIMENT TRAPS OR INLET BOTTOMS SHALL BE CLEARED AT THE TIME OF INSPECTION AND AT ANY POINT WHEN SEDIMENT HAS ACCUMULATED TO THE EXTENT THAT DEBRIS IS ABLE TO FLOW INTO THE CONVEYANCE PIPING. ANY WEEP HOLES IN THE BOTTOM OF THE INLETS OR SEDIMENT TRAP SHALL BE CLEARED TO ALLOW WATER TO SEEP OUT.

2. UNSOUND STRUCTURES OR STRUCTURES SHOWING SIGNS OF SOIL ENTERING THE INLET THROUGH CRACKS SHALL BE REPAIRED OR REPLACED ACCORDING TO DESIGN STANDARDS.

STORMWATER BMP – VEGETATED SWALES

1. VEGETATED SWALES SHALL BE INSPECTED ANNUALLY FOR EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION.
2. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES. CORRECT AS NEEDED.
3. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTOR TO DESIGN GRADE.
4. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION. DISPOSE OF CUTTINGS TO A LOCAL COMPOSTING FACILITY. MOW ONLY WHEN SWALE IS DRY AND AVOID RUTTING.
5. INSPECT FOR LITTER.
6. INSPECT FOR UNIFORMITY IN CROSS–SECTION AND LONGITUDINAL SLOPE, AND CORRECT AS NEEDED.
7. INSPECT SWALE INLET AND OUTLET PIPES FOR SIGNS OF EROSION OR BLOCKAGE. CORRECT AS NEEDED.

STORMWATER BMP – RAIN GARDEN

1. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED. DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON. MULCH SHOULD BE RE–SPREAD WHEN EROSION IS EVIDENT AND BE REPLENISHED AS NEEDED. ONCE EVERY 2 TO 3 YEARS THE ENTIRE AREA MAY REQUIRE MULCH REPLACEMENT. RAIN GARDEN AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC. DURING PERIODS OF EXTENDED DROUGHT, RAIN GARDEN AREAS MAY REQUIRE WATERING. TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.

STORMWATER BMP – LANDSCAPE RESTORATION

THE FOLLOWING MAINTENANCE ACTIVITIES SHALL BE PERFORMED ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (> 3 INCH RAINFALL DEPTH):

1. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN > 3 INCHES AT ANY SPOT OR COVERING VEGETATION)

2. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE

3. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION. DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY; MOW ONLY WHEN GROUND IS DRY TO AVOID RUTTING

4. INSPECT FOR LITTER; REMOVE PRIOR TO MOWING

THE FOLLOWING MAINTENANCE ACTIVITIES SHALL BE PERFORMED BI–ANNUALLY:

1. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT

2. RESEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING

3. WATER DURING DROUGHT PERIODS, FERTILIZE AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY

BMP NOTES:

- NS BMP 5.4.2 – PROTECT/CONSERVE/ENHANCE RIPARIAN BUFFERS – ALL PROPOSED WORK WILL BE KEPT OUTSIDE THE LIMITS OF THE DESIGNATED RIPARIAN BUFFERS. NO DISTURBANCE ACTIVITIES WILL BE LOCATED WITHIN THE RIPARIAN BUFFER
- NS BMP 5.6.1 – MINIMIZE TOTAL DISTURBED AREA – TOTAL SITE DISTURBANCE IS LIMITED TO 2.54 ACRES OUT OF THE TOTAL 12.73 ACRE PROPERTY.
- STRUCTURAL BMP 6.4.3 – SUBSURFACE INFILTRATION BED – A SUBSURFACE INFILTRATION BED WILL BE INSTALLED IN ORDER TO PROVIDE TEMPORARY STORAGE AND INFILTRATION OF STORMWATER RUNOFF.
- STRUCTURAL BMP 6.4.8 – VEGETATED SWALE (GRADED SWALE) – GRASS SWALES WILL BE PROVIDED TO FILTER THE RUNOFF PRIOR TO COLLECTION AND CONVEYANCE INTO THE INFILTRATION FACILITIES.
- NS BMP 5.4.1 – PROTECT SENSITIVE/SPECIAL VALUE FEATURES – EXISTING FEATURES ON SITE WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES INCLUDING NATURAL DRAINAGEWAYS, WETLANDS, RIPARIAN BUFFERS, WOODLANDS, AND STEEP SLOPES.
- NS BMP 5.4.3 – PROTECT/UTILIZE NATURAL DRAINAGE FEATURES – THE EXISTING NATURAL DRAINAGE FEATURES WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. THE NATURAL DRAINAGE PATHS WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS:

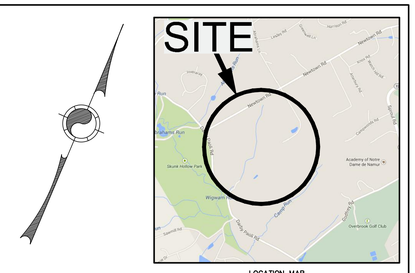
UNTIL THE PERMITTEE OR CO–PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO–PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG–TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

THE 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 SEPARATELY RESPONSIBLE WITH THE LANDOWNER FOR LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.



LOCATION MAP
SCALE: 1" = 2,000'

NOTES:

1) THE STORMWATER MANAGEMENT FACILITIES WERE DESIGNED TO CONTROL THE INCREASE IN RUNOFF GENERATED BY THE NEW IMPROVEMENTS IN ACCORDANCE WITH RADNOR TOWNSHIP REGULATIONS.

2) THE RESPONSIBILITY OF THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.

3) THE TOWNSHIP ENGINEER'S OFFICE SHALL BE NOTIFIED 48 HOURS PRIOR TO THE CONSTRUCTION OF THE SEEPAGE BEDS AND RAIN GARDENS AND PRIOR TO THE START OF EARTHMOVING ACTIVITIES.

4) CLEANOUTS SHALL BE PLACED AT ALL GRADE CHANGES OR CHANGES IN ALIGNMENT OF THE RAIN WATER CONDUCTORS. RAIN WATER CONDUCTORS ARE TO COLLECT ALL ROOF RUNOFF AND CONVEY IT TO THE STORMWATER MANAGEMENT SYSTEM.

5) THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPS. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPS TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPS, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

6) 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 TO 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)(2).

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION

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.

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 (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 P.A.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."

SPECIFIC GEOLOGIC AND SOIL CONDITIONS:
NO SPECIAL SOIL OR GEOLOGIC ISSUES ARE KNOWN.

RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB

THE WILLOWS TOWNSHIP PARK

OPEN SPACE

#27-011066

#27-01106;

SHEET 26 MATCHLINE

SHEET 29 MATCHLINE

ULTIMATE R/W

N 36°28'58" W 51.75'

N 20°00'00" W 155.49'

N 01°25'00" W

MMF

PAOLI ROAD

NRA-23

1,177,687 SF GROSS
27.04 AC

1,082,238 NET
24.84 AC

TEST PIT
#7-19-1
7.71 IN/HR @ 5'

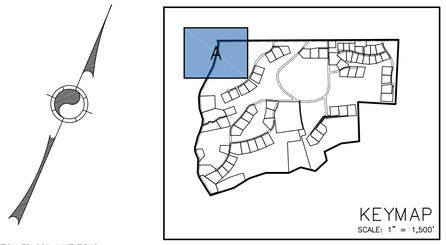
PROPOSED CHANNEL #3.9

75' BY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200

1 INCH = 50 FT.



RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

PROFESSIONAL ENGINEER'S CERTIFICATION
I, DAVID R. FIORELLO, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA AND THAT THIS PLAN CORRECTLY REPRESENTS THE WORK DONE BY ME OR UNDER MY SUPERVISION.

PROFESSIONAL LAND SURVEYOR'S CERTIFICATION
I, JAMES R. MOMENEE, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE COMMONWEALTH OF PENNSYLVANIA AND THAT THIS PLAN CORRECTLY REPRESENTS THE WORK DONE BY ME OR UNDER MY SUPERVISION.

Serial Number: 2014203820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3500 FAX: (610) 527-9508

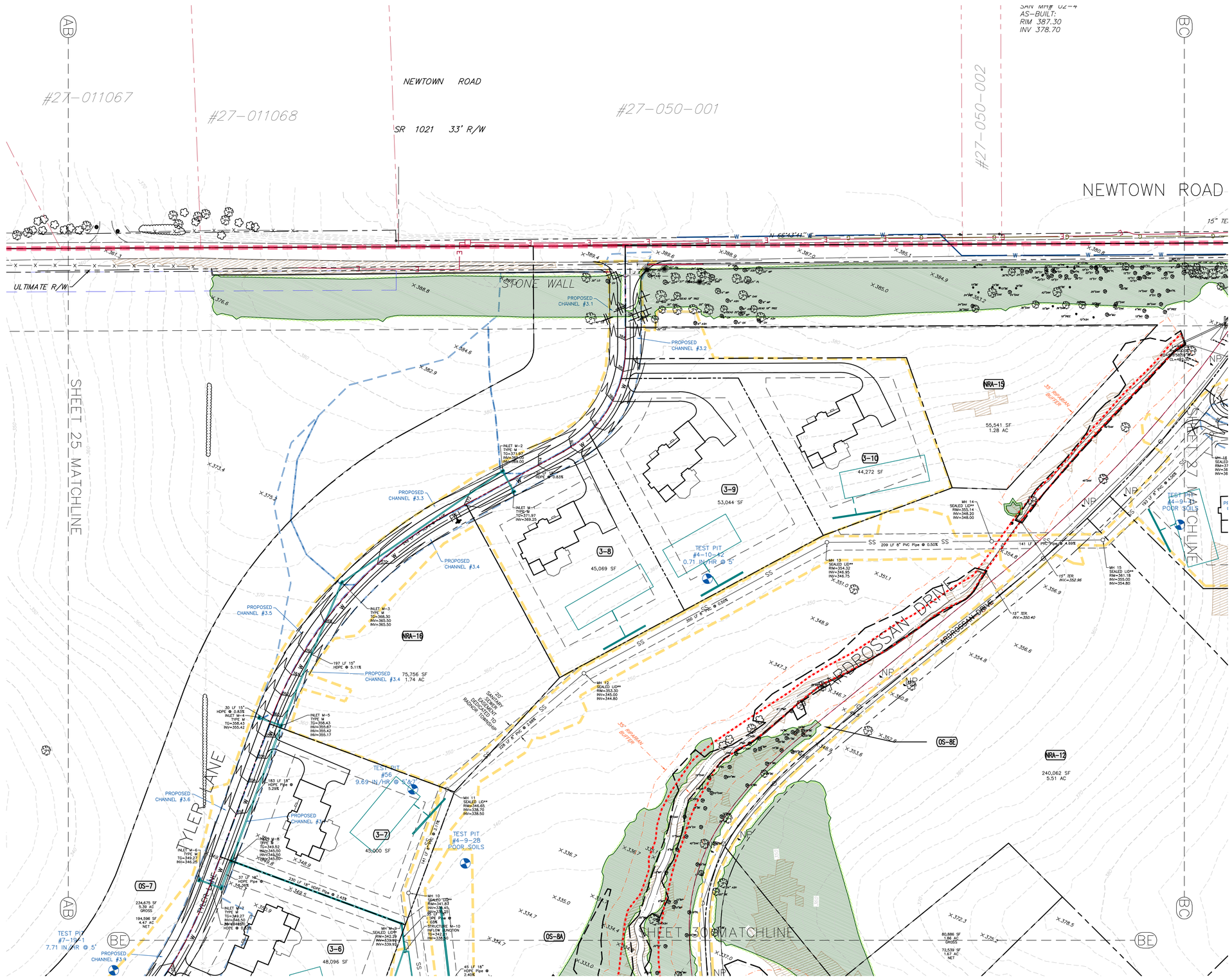
PCSM PLAN - SHEET A
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

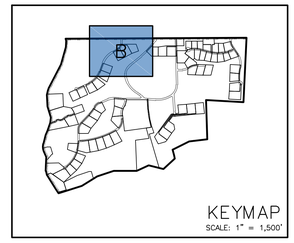
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
25
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

- IRON PIN FOUND
- CMF CONCRETE MONUMENT FOUND
- MMF MARBLE MONUMENT FOUND
- AC EXISTING AIR CONDITIONER
- GV EXISTING GAS VALVE
- GM EXISTING GAS METER
- EM EXISTING ELECTRIC METER
- CO EXISTING CLEANOUT
- RDH ROOF OVERHANG
- EXISTING TREE
- UP EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

PENNSYLVANIA ONE CALL SYSTEM, INC. SERIAL NUMBER: 20142030820 DESIGNATION: ENTIRE AREA DATE: 09/05/2014 TIME: 08:20:00 AM CALLER: DAVID FIORELLO PHONE: (610) 527-3060 EXT: 0 CALLER ADDRESS: 924 COUNTY LINE ROAD BRYN MAWR PA 19010 CALLER FAX: (610) 527-3060 CALLER EMAIL: DFIORELLO@MOMENEE.COM WORK TO BEGIN: 09/10/2014 AFTER 07:00:00 AM WORK TO BE COMPLETED BY: 09/12/2014 AFTER 07:00:00 AM CONFIRMATION NUMBER: 20142030820 MEMBERS: ALL MEMBERS

CALL BEFORE YOU DIG!
Serial Number: 20142030820
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL — PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9068

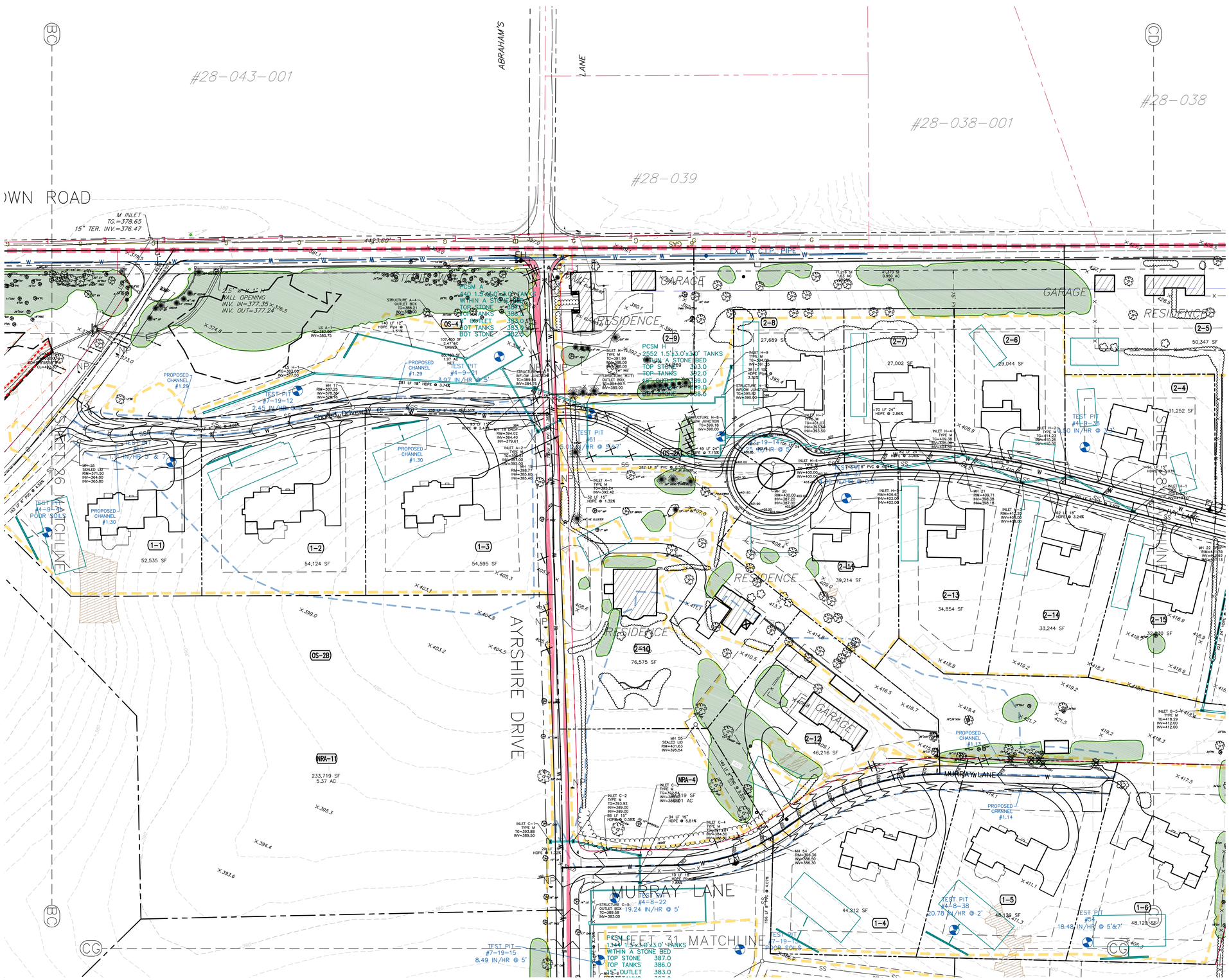
PCSM PLAN - SHEET B
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA

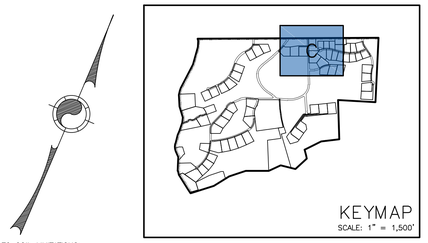
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/8/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 26 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

IPF	IRON PIN FOUND
CMF	CONCRETE MONUMENT FOUND
MMF	MARBLE MONUMENT FOUND
AC	EXISTING AIR CONDITIONER
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
EM	EXISTING ELECTRIC METER
CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
	EXISTING TREE
UP	EXISTING UTILITY POLE
100.00	EXISTING SPOT ELEVATION
DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

50 0 25 50 100 200
1 INCH = 50 FT.

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

THESE PLANS AND/OR DRAWINGS ARE THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND ARE NOT TO BE USED IN ANY WAY WITHOUT THE EXPRESS WRITTEN PERMISSION OF MOMENEE & ASSOCIATES, INC. ANY UNAUTHORIZED USE OF THESE PLANS AND/OR DRAWINGS WILL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MOMENEE & ASSOCIATES, INC.

Serial Number: 20142030820
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK MEMBERS ONLY
Pennsylvania One Call System, Inc.
1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID R. FIORELLO PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3050 FAX (610) 527-9068

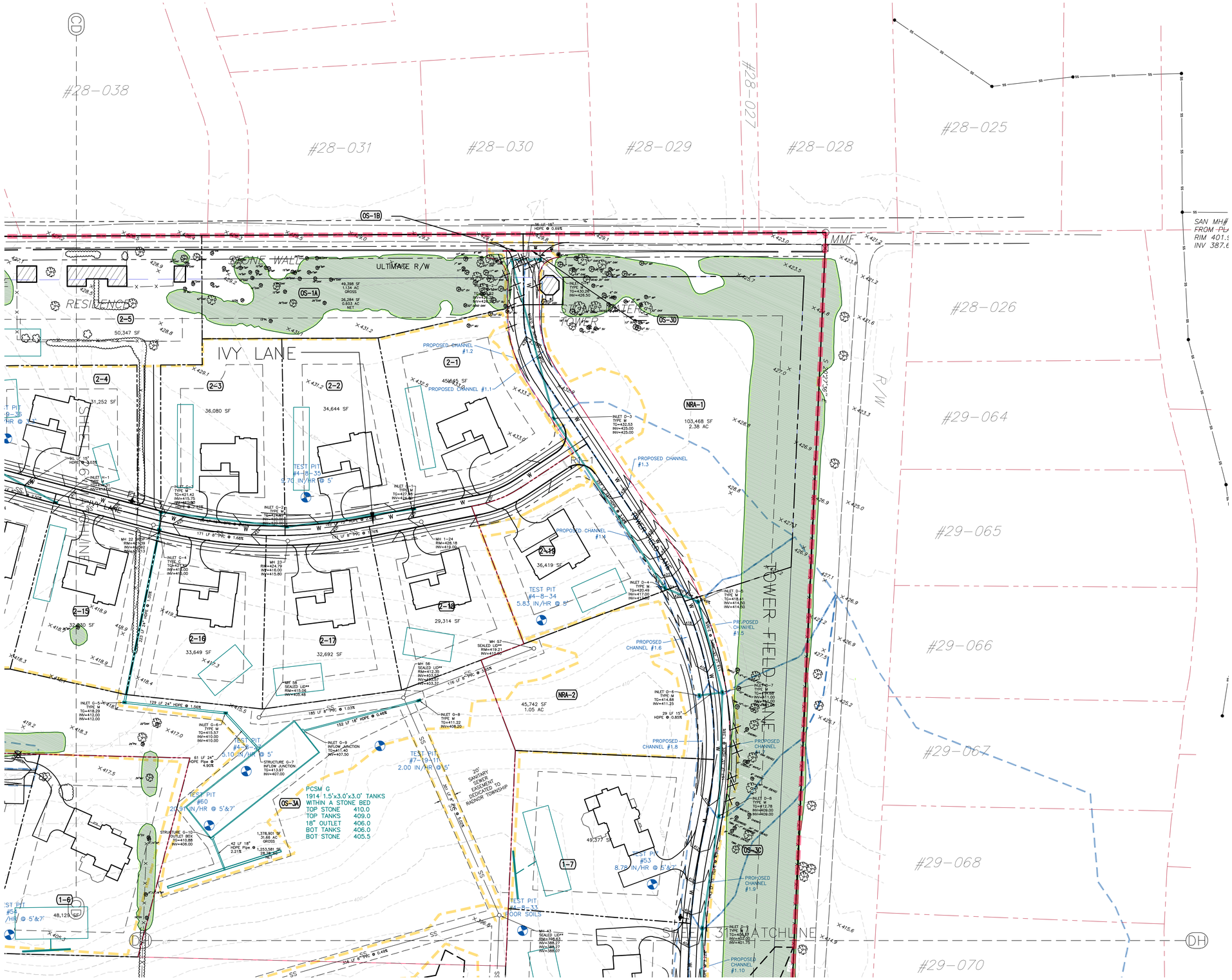
PCSM PLAN – SHEET C
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL: 203-0820
DRAWN BY: JRM
CHECKED BY: DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 27 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012



RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊡ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200
1 INCH = 50 FT.

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON IS A CORRECT PLAN OF THE LANDS OF ESH LP AS SURVEYED BY ME ON 10/28/14 AND THAT THE MONUMENTS AND MARKERS SHOWN HEREON EXIST AS LOCATED AND THAT THE PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

CALL BEFORE YOU DIG!
Serial Number: 201-203-0820
PENNSYLVANIA ONE CALL SYSTEM, INC.
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3006 FAX: (610) 527-9068

PCSM PLAN – SHEET D
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
28
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

G:\PROJECTS\2006\0601\Dwg\DRAWING\D1-0601.2

SHEET 25 MATCHLINE

SHEET 31 MATCHLINE

DARBY PAOLI ROAD

SR 1015

MILL RD.

ULTIMATE R/W

RADNOR TOWNSHIP SANITARY SEWER 48" CMP/RCP

MH #62

MH #61

MH #60
INV16 238.64

MH #59
INV16 237.38

MH #58
INV16 230.25

MMF

N 03°32'38" W 72.05'

N 10°41'30" W 100.00'

N 25°06'30" W 289.35'

N 40°10'00" W 284.03'

N 15°41'30" W 128.40'

TEST PIT #4-8-29
8.40 IN/HR @ 4'

TEST PIT #4-8-44
8.00 IN/HR @ 4'

TEST PIT #7-19-1
7.71 IN/HR @ 5'

PCSM N
540-353.0-330 TANKS
WITHIN A STONE BED
TOP STONE 353.0
TOP TANKS 342.0
15" OUTLET 340.0
BOT TANKS 329.0
BOT STONE 328.5

NRA-17
48,715 SF
1.12 AC

141,377 SF
3.25 AC

3-2
46,000 SF

3-3
46,000 SF

3-4
45,099 SF

5-1

5-2

5-4
65,417 SF

5-5

OS-8C

RESIDENCE

BARN

TYLER LANE

THOMAS LANE

PROPOSED CHANNEL #3.9

PROPOSED CHANNEL #3.10

PROPOSED CHANNEL #3.11

PROPOSED CHANNEL #4.22

PROPOSED CHANNEL #4.23

PROPOSED CHANNEL #4.35

101 LF 15" HDPE Pipe @ 5.12%

110 LF 15" HDPE Pipe @ 5.47%

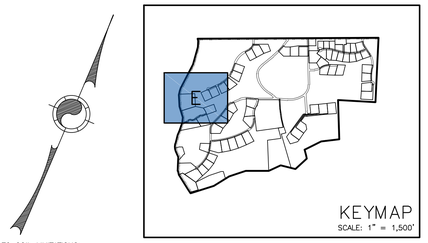
50 LF 8" PVC @ 1.85%

293 LF 8" PVC @ 0.85%

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200

1 INCH = 50 FT.



RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

- IRON PIN FOUND
- CMF CONCRETE MONUMENT FOUND
- MMF MARBLE MONUMENT FOUND
- AC EXISTING AIR CONDITIONER
- GV EXISTING GAS VALVE
- GM EXISTING GAS METER
- EM EXISTING ELECTRIC METER
- CO EXISTING CLEANOUT
- RDH ROOF OVERHANG
- EXISTING TREE
- UP EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND SURVEYOR DAVID R. FIORELLO PROPERTY LINE

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3600 FAX: (610) 527-9008

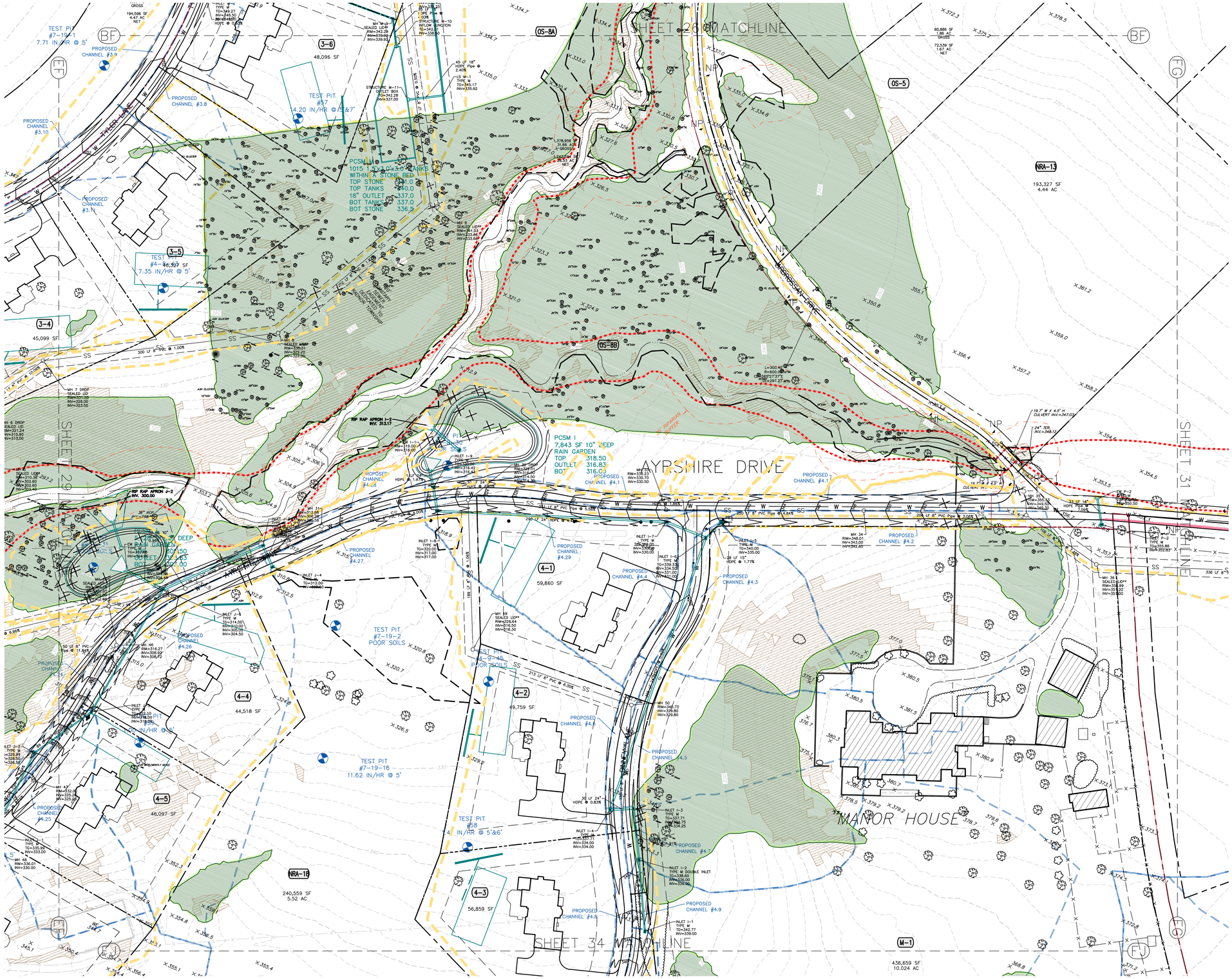
PCSM PLAN – SHEET E
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL: 203-0820
DRAWN BY: JRM
CHECKED BY: DRF

REV.	DATE	COMMENTS
1	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
3	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 29 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012



RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

⌖ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 — PROPOSED GRADING
- W — PROPOSED WATER LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200
1 INCH = 50 FT.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3600 FAX: (610) 527-9068

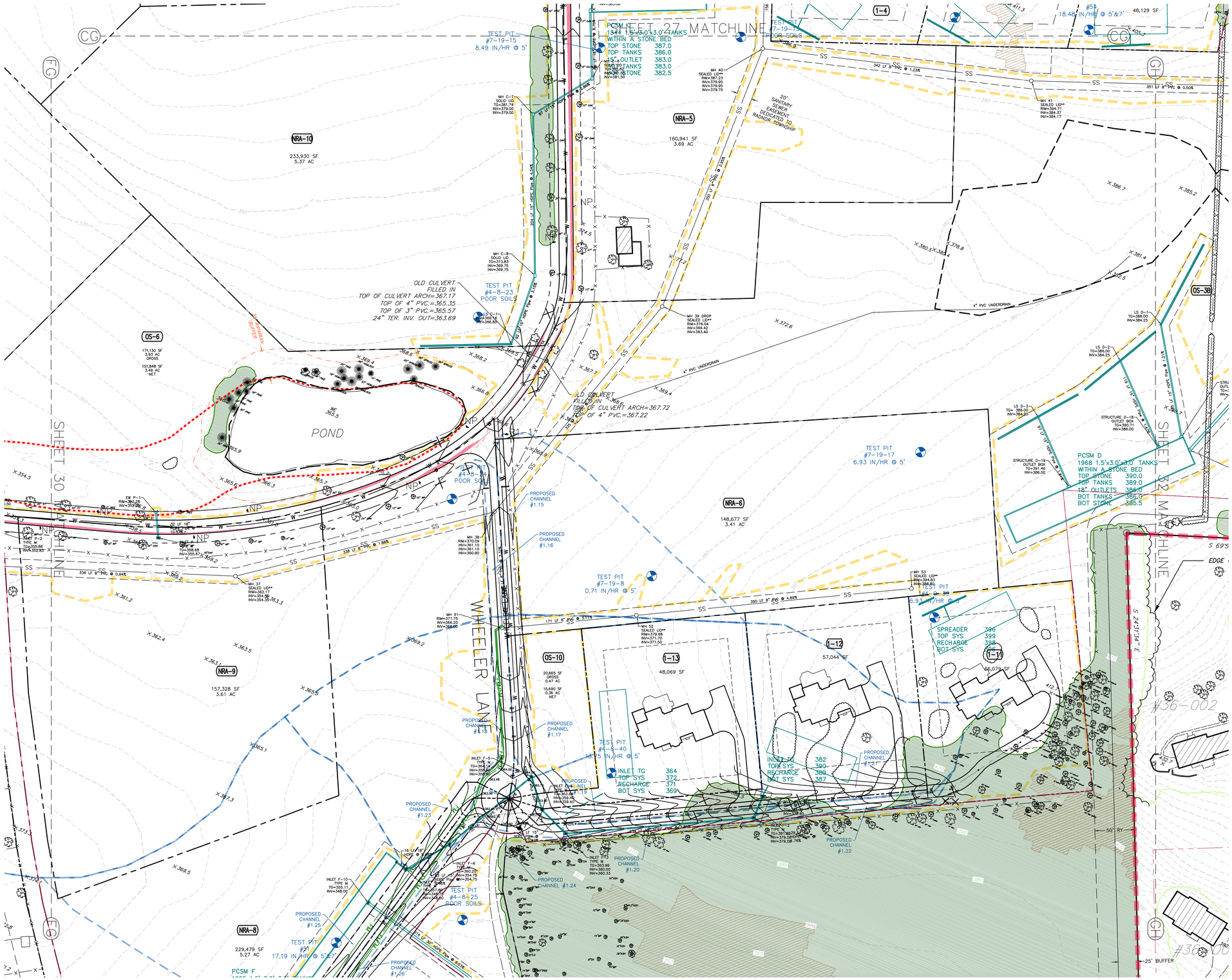
PCSM PLAN – SHEET F
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 30 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012



RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

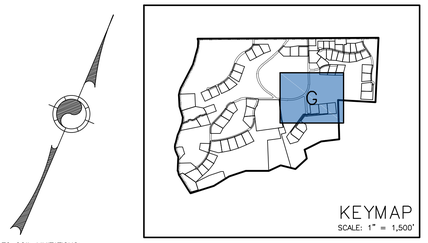
- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- EXISTING OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200
1 INCH = 50 FT.



Serial Number: 20142030820
CALL BEFORE YOU DIG!
STOP
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK WHITE AREAS FOR PREMARK
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL
PROFESSIONAL ENGINEER
PA 074786

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9068

PCSM PLAN – SHEET G
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 31 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

J:\PROJECTS\2006\06012\Jobs\DRAWINGS\06012

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

50 0 25 50 100 200
1 INCH = 50 FT.

RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING FEMA FLOODPLAIN
- EXISTING CALCULATED FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD LOCATIONS AND/OR PLANS OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

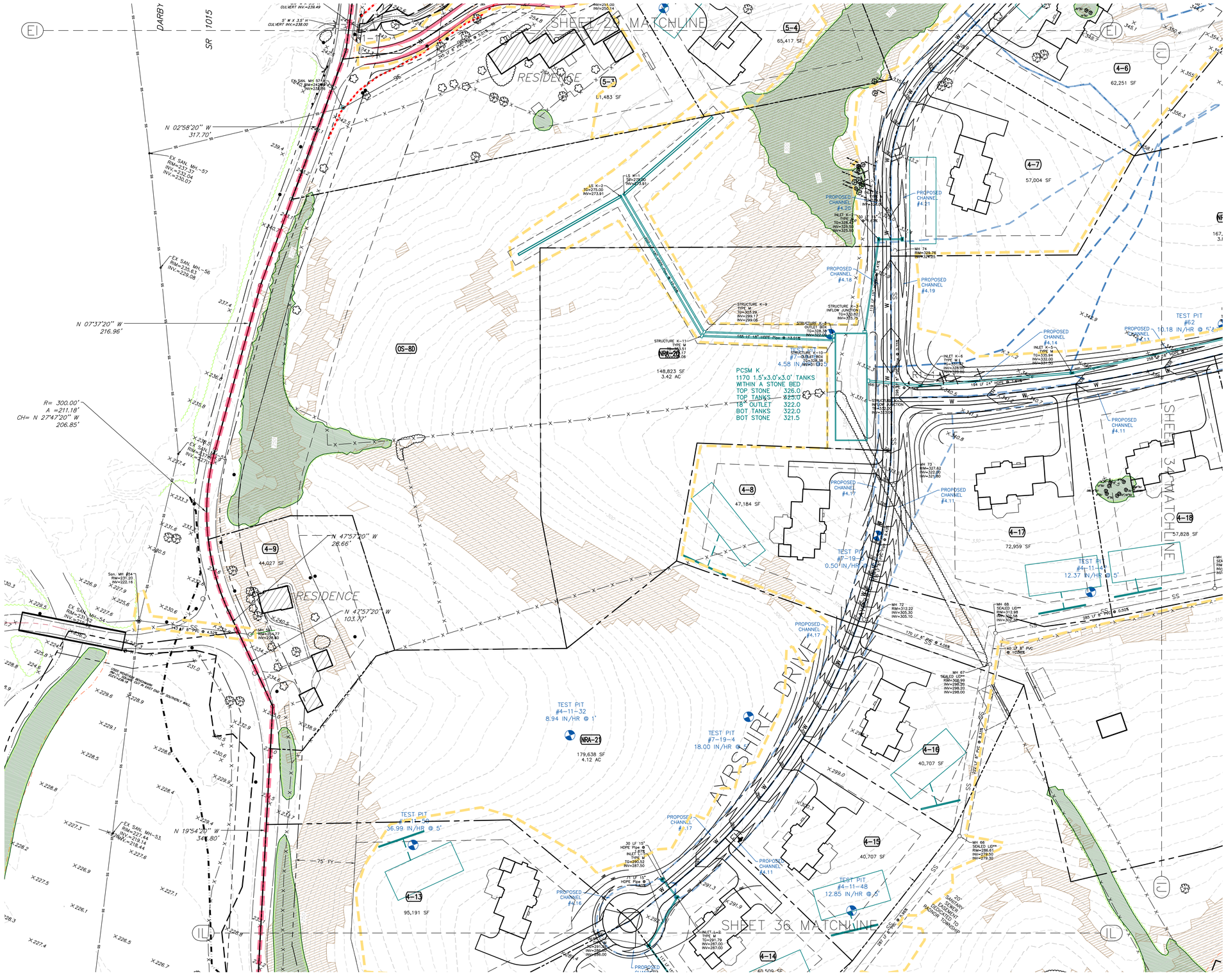
PCSM PLAN - SHEET H
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

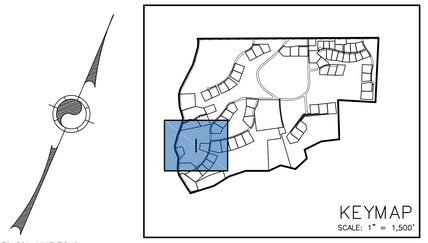
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/28/14	NPDES
3	12/8/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 32 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- NPDES PERMIT BOUNDARY
- LIMIT OF DISTURBANCE
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA
- PHASE 1 BOUNDARY

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9068

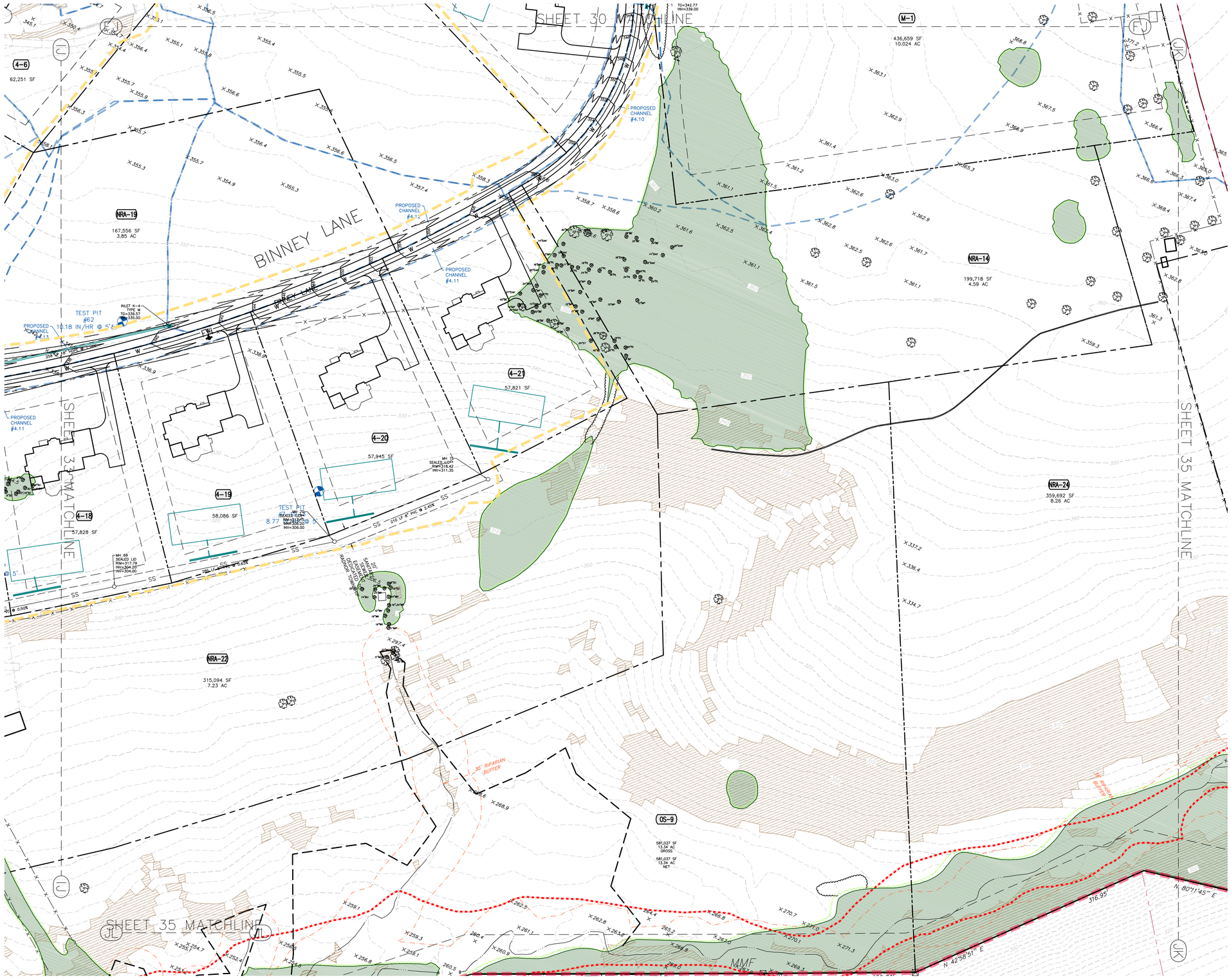
PCSM PLAN - SHEET I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

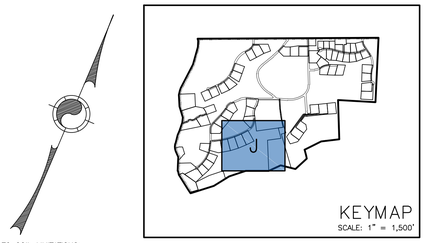
APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	11/6/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 33 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING FEMA FLOODPLAIN
	EXISTING CALCULATED FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES
	NPDES PERMIT BOUNDARY
	LIMIT OF DISTURBANCE
	PCSM DRAINAGE AREA BOUNDARY
	VEGETATED SWALE DRAINAGE AREA
	PHASE 1 BOUNDARY

50 0 25 50 100 200
1 INCH = 50 FT.

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT ALL MONUMENTS AND LOT MARKERS SHOWN HEREON HAVE BEEN SET OR WILL BE SET AS SHOWN.
I HEREBY CERTIFY THAT THE PROPOSED DEVELOPMENT SHOWN ON THIS PLAN IS NOT LOCATED IN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, COMMUNITY PANEL NUMBER 42045C0177F, EFFECTIVE DATE MARCH 2, 2016.
I HEREBY CERTIFY THAT THE PROPOSED DEVELOPMENT SHOWN ON THIS PLAN IS LOCATED IN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, COMMUNITY PANEL NUMBER 42045C0177F, EFFECTIVE DATE MARCH 2, 2016.

Serial Number: 20142032820
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO WORKING MEMBERS OF PA ONE CALL SYSTEM
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-3500 FAX: (610) 527-9068

PCSM PLAN – SHEET J
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

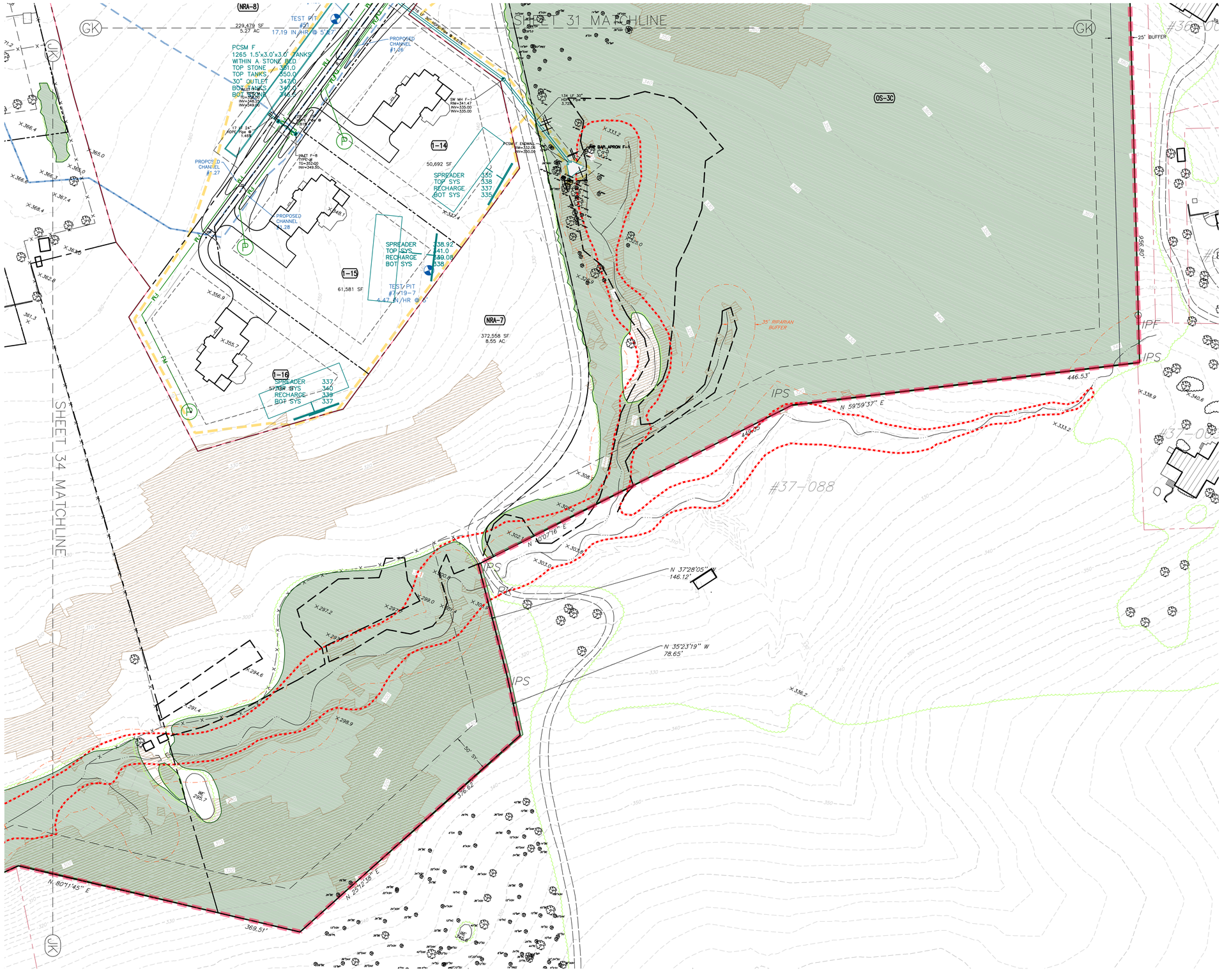
APPLICANT
ESH LP
107 TWATTELL MILL ROAD
WILMINGTON, DE 19807

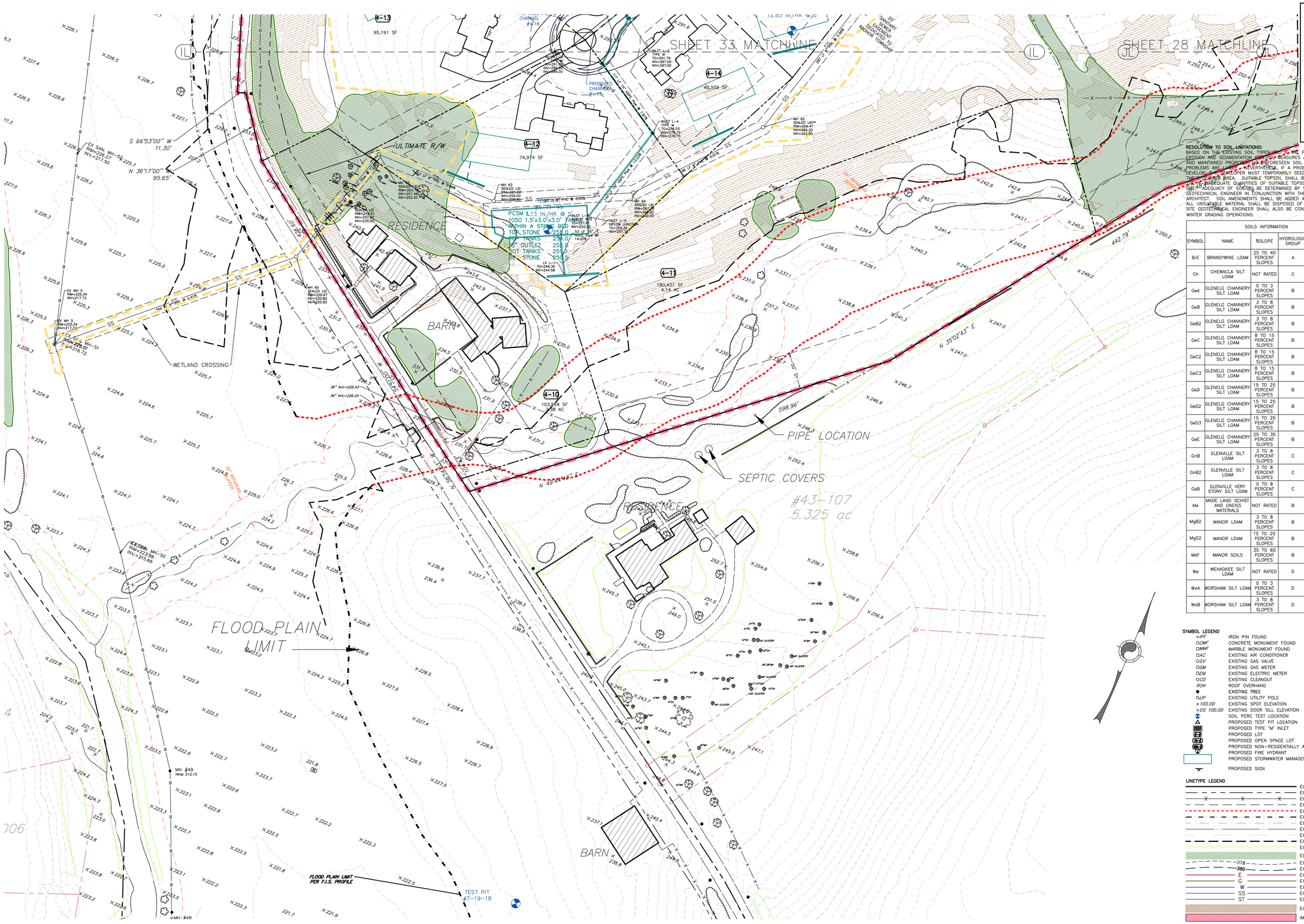
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

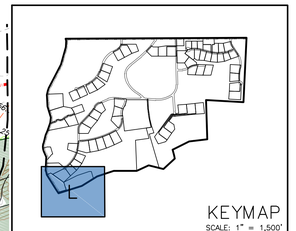
REV.	DATE	COMMENTS
4	10/28/14	INTERIM UPDATES
3	12/8/14	PSR TOWNSHIP REVIEW
2	11/28/14	NPDES

DATE: SEPTEMBER 5, 2014
SHEET NO. 34 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MM\DRAWINGS\06012


SHEET 31 MATCHLINE
SHEET 34 MATCHLINE
(NRA-8)
229,429 SF
5.27 AC
TEST PIT #22
17.19 IN/HR @ 5'-6"
PROPOSED CHANNEL #1.29
PCSM F
1265 1.5'x3.0'x3.0' TANKS
WITHIN A STONE BED
TOP STONE 351.0
TOP TANKS 350.0
30" OUTLET 347.0
BOT TANKS 337.5
BOT STONE 336.5
INV=348.25
INV=348.25
INV=344.00
17 LF 24" ADS N-12 @ 1.48%
INLET F-8 TYPE M TC=352.00 INV=349.50
PROPOSED CHANNEL #1.27
PROPOSED CHANNEL #1.28
1-14
50,692 SF
SPREADER
TOP SYS 345
RECHARGE 338
BOT SYS 337
335
1-15
61,581 SF
SPREADER
TOP SYS 338.92
RECHARGE 341.0
BOT SYS 339.08
338
TEST PIT #7-19-7
4.47 IN/HR @ 5'
1-16
SPREADER
TOP SYS 337
RECHARGE 340
BOT SYS 338
337
(NRA-7)
372,558 SF
8.55 AC
SW MH F-1
RIM=341.47
INV=335.00
INV=335.00
PCSM F ENDWALL
RIM=332.08
INV=330.08
134 LF 30" HDPE @ 3.73%
RIP RAP APRON F-1
OS-3C
25' BUFFER
35' RIPARIAN BUFFER
#37-088
#38-088
IPF
IPS
446.53'
N 59°59'37" E
446.05'
N 00°07'16" E
N 37°28'05" W
146.12'
N 35°23'19" W
78.65'
376.62'
N 80°11'45" E
369.51'
N 25°12'38" E
50' SWM
50' SWM
RIP
RIP
RIP





RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES WITHIN THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY TO ADDRESSEN SOIL LIMITATIONS OR PROBLEMS ARE LIMITED. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE AFFECTED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO THE SITE IF ADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOILS TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

SYMBOL LEGEND

⊕ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING FEMA FLOODPLAIN
	EXISTING CALCULATED FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES
	NPDES PERMIT BOUNDARY
	LIMIT OF DISTURBANCE
	PCSM DRAINAGE AREA BOUNDARY
	VEGETATED SWALE DRAINAGE AREA
	PHASE 1 BOUNDARY

50 0 25 50 100 200
1 INCH = 50 FT.

NOTE:
A GRADING PERMIT PLAN SHOWING GRADING, STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
5 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

PCSM PLAN – SHEET L
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

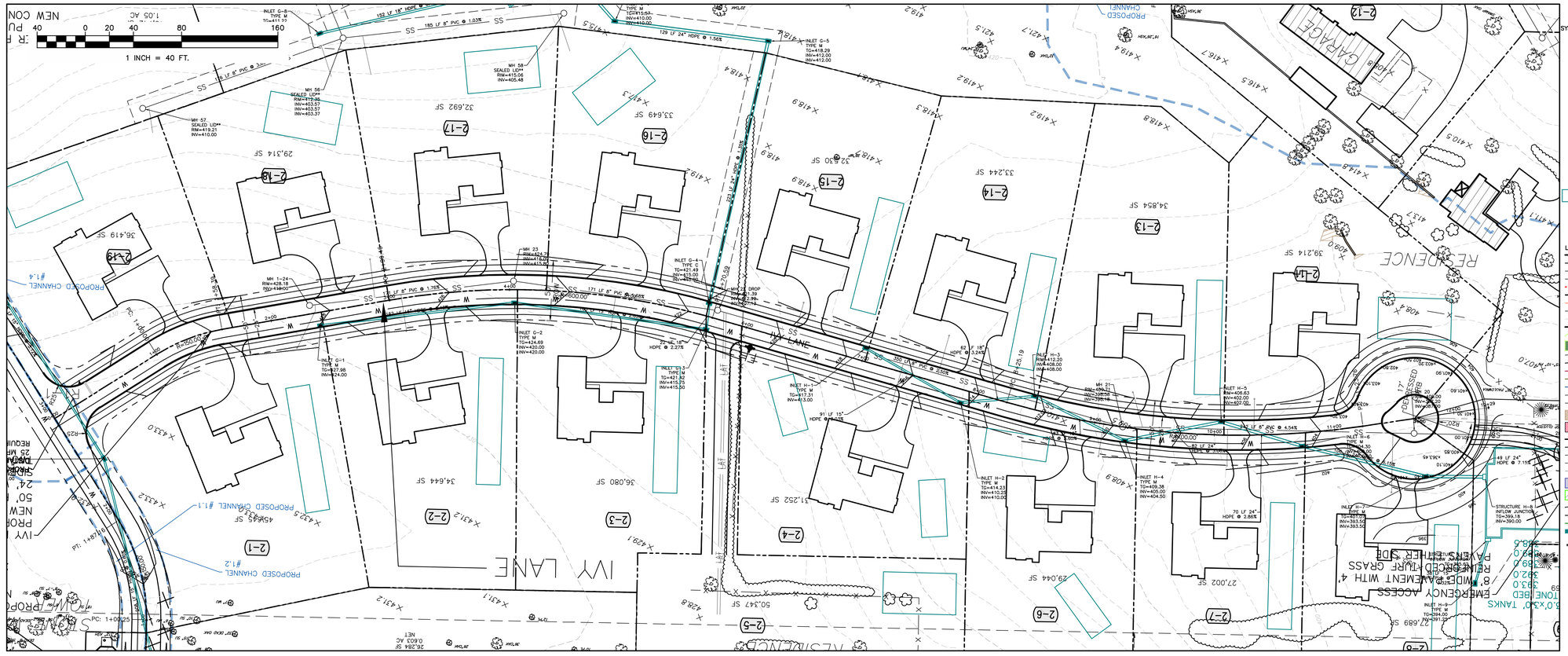
APPLICANT
ESIII LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/28/14	NPDES
3	12/8/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 36 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

ALL DRAWINGS, ALL DESIGNS, ALL PLANS, ALL SPECIFICATIONS, ALL IDEAS, ALL ARRANGEMENTS, ALL PROPOSALS, ALL REPRESENTATIONS, ALL CONCEPTS, ALL FORMS OF WRITTEN MATERIAL, ALL ELECTRONIC FILES, ALL COMPUTER PROGRAMS, ALL COMPUTER DATA, ALL COMPUTER OUTPUT, ALL COMPUTER PRINTOUTS, ALL COMPUTER DISPLAYS, ALL COMPUTER REPRESENTATIONS, ALL COMPUTER SCREENS, ALL COMPUTER MEDIA, ALL COMPUTER HARDWARE, ALL COMPUTER SOFTWARE, ALL COMPUTER FIRMWARE, ALL COMPUTER NETWORKS, ALL COMPUTER SYSTEMS, ALL COMPUTER DEVICES, ALL COMPUTER PERIPHERALS, ALL COMPUTER ACCESSORIES, ALL COMPUTER COMPONENTS, ALL COMPUTER PARTS, ALL COMPUTER SUPPLIES, ALL COMPUTER CONSUMABLES, ALL COMPUTER EQUIPMENT, ALL COMPUTER TOOLS, ALL COMPUTER INSTRUMENTS, ALL COMPUTER APPARATUS, ALL COMPUTER MACHINERY, ALL COMPUTER VEHICLES, ALL COMPUTER CONVEYANCES, ALL COMPUTER STRUCTURES, ALL COMPUTER BUILDINGS, ALL COMPUTER IMPROVEMENTS, ALL COMPUTER FIXTURES, ALL COMPUTER APPURTENANCES, ALL COMPUTER APPLIANCES, ALL COMPUTER FURNISHINGS, ALL COMPUTER DECORATIONS, ALL COMPUTER ORNAMENTS, ALL COMPUTER ART, ALL COMPUTER SCULPTURES, ALL COMPUTER PAINTINGS, ALL COMPUTER DRAWINGS, ALL COMPUTER PHOTOGRAPHS, ALL COMPUTER VIDEOS, ALL COMPUTER AUDIOS, ALL COMPUTER MUSIC, ALL COMPUTER SOUNDS, ALL COMPUTER NOISES, ALL COMPUTER VIBRATIONS, ALL COMPUTER WAVES, ALL COMPUTER RADIATIONS, ALL COMPUTER EMISSIONS, ALL COMPUTER EMANATIONS, ALL COMPUTER EFFLUENTS, ALL COMPUTER WASTES, ALL COMPUTER RESIDUES, ALL COMPUTER BYPRODUCTS, ALL COMPUTER BY-PRODUCTS, ALL COMPUTER SCRAPS, ALL COMPUTER REMNANTS, ALL COMPUTER LEFTOVERS, ALL COMPUTER SURPLUSES, ALL COMPUTER EXCESSES, ALL COMPUTER OVERAGES, ALL COMPUTER SHORTAGES, ALL COMPUTER DEFICITS, ALL COMPUTER LOSSES, ALL COMPUTER GAINS, ALL COMPUTER PROFITS, ALL COMPUTER REVENUES, ALL COMPUTER INCOMES, ALL COMPUTER EARNINGS, ALL COMPUTER WAGES, ALL COMPUTER SALARIES, ALL COMPUTER BENEFITS, ALL COMPUTER PENSIONS, ALL COMPUTER RETIREMENTS, ALL COMPUTER INSURANCES, ALL COMPUTER ANNUITIES, ALL COMPUTER TRUSTS, ALL COMPUTER ESTATES, ALL COMPUTER WILLS, ALL COMPUTER TESTAMENTS, ALL COMPUTER CODICILS, ALL COMPUTER DEEDS, ALL COMPUTER MORTGAGES, ALL COMPUTER LIENS, ALL COMPUTER JUDGMENTS, ALL COMPUTER DECREES, ALL COMPUTER ORDERS, ALL COMPUTER RULINGS, ALL COMPUTER OPINIONS, ALL COMPUTER ADVICE, ALL COMPUTER COUNSEL, ALL COMPUTER GUIDANCE, ALL COMPUTER DIRECTIONS, ALL COMPUTER INSTRUCTIONS, ALL COMPUTER COMMANDS, ALL COMPUTER REQUESTS, ALL COMPUTER DEMANDS, ALL COMPUTER ORDERS, ALL COMPUTER RULINGS, ALL COMPUTER OPINIONS, ALL COMPUTER ADVICE, ALL COMPUTER COUNSEL, ALL COMPUTER GUIDANCE, ALL COMPUTER DIRECTIONS, ALL COMPUTER INSTRUCTIONS, ALL COMPUTER COMMANDS, ALL COMPUTER REQUESTS, ALL COMPUTER DEMANDS



IVY LANE
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- ×DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

REVISIONS	
1	10/28/14
2	11/26/14
3	12/8/14

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

ROADWAY PLAN AND PROFILE - IVY LANE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

REVISIONS		
1	10/28/14	PER TOWNSHIP REVIEW COMMENTS
2	11/26/14	NPDES INTERIM UPDATES
3	12/8/14	

DATE: SEPTEMBER 5, 2014
SHEET NO. 37 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

G:\PROJECTS\2006\06012\dwg\DRAWINGS\06012

40 0 20 40 80 160

1 INCH = 40 FT.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE "M" INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

TOWER FIELD LANE
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

HIGH POINT STA = 2+33.14
HIGH POINT ELEV = 433.56
PVI STA = 2+95.64
PVI ELEV = 435.31
K = 25
225.00VC

LOW POINT STA = 6+41.03
LOW POINT ELEV = 415.64
PVI STA = 5+66.03
PVI ELEV = 416.39
K = 25
150.00VC

HIGH POINT STA = 7+56.56
HIGH POINT ELEV = 414.48
PVI STA = 8+06.56
PVI ELEV = 413.98
K = 25
100.00VC

LOW POINT STA = 10+74.46
LOW POINT ELEV = 403.71
PVI STA = 10+36.96
PVI ELEV = 402.46
K = 25
175.00VC

INLET D-1 TYPE M TG=430.26 INV=426.50
INLET D-2 TYPE M TG=429.52 INV=428.25 INV=426.25
INLET D-3 TYPE M TG=432.53 INV=425.00 INV=425.00
INLET D-4 TYPE M TG=420.49 INV=417.00 INV=417.00
INLET D-5 TYPE M TG=418.41 INV=414.50 INV=414.50
INLET D-6 TYPE M RIM=414.68 INV=411.25
INLET D-7 TYPE M RIM=414.68 INV=411.00 INV=411.00 INV=411.00
INLET D-8 RIM=412.78 INV=409.00 INV=409.00
INLET D-9 RIM=406.37 INV=402.00 INV=401.75
INLET D-10 TYPE M TG=403.07 INV=399.00 INV=398.50
INLET D-11 TYPE M TG=403.07 INV=398.00 INV=398.00
MH D-12 RIM=404.87 INV=397.00 INV=396.50

8" WATER MAIN
208 LF 15" HDPE @ 0.60%
257 LF 15" HDPE @ 3.12%
46 LF 15" HDPE Pipe @ 5.49%
124 LF 18" HDPE @ 2.22%
86 LF 30" HDPE Pipe @ 1.13%
30 LF 24" HDPE @ 1.67%
54 LF 15" HDPE @ 0.60%
29 LF 15" HDPE @ 0.85%
28 LF 24" HDPE @ 1.67%

D-1 TO D-2

D-5 TO D-6

INLET D-8 TO D-9

ROADWAY PLAN AND PROFILE - TOWER FIELD LANE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV'L	DATE	COMMENTS
3	12/8/14	PSR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

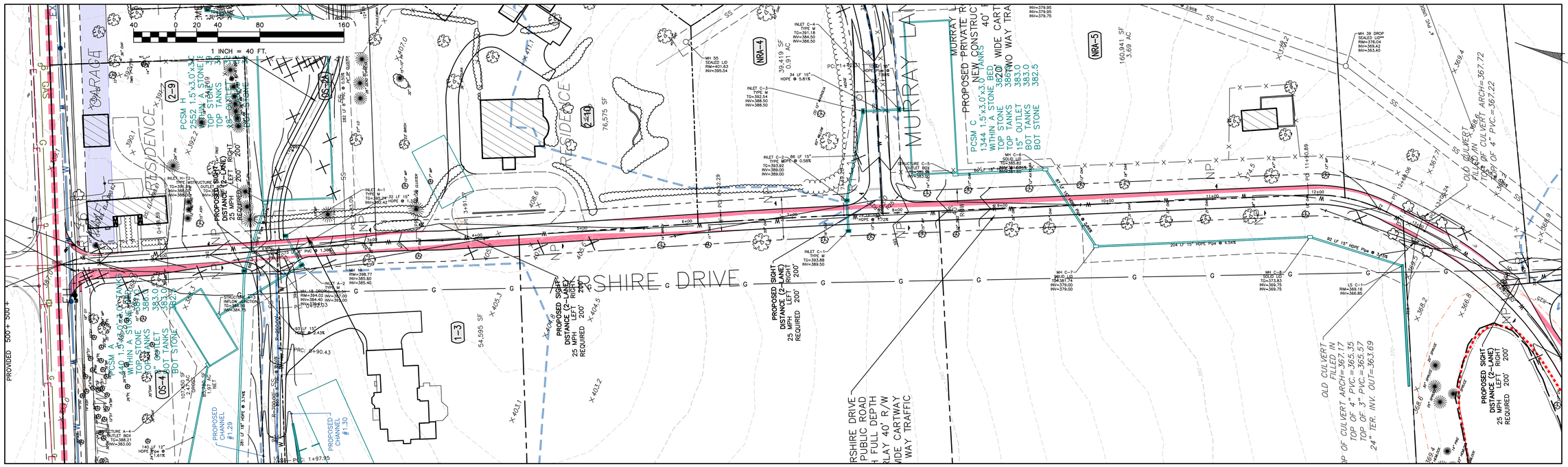
DATE: SEPTEMBER 5, 2014
SHEET NO. 38 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

CALL BEFORE YOU DIG!
Serial Number: 201-203-0820
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

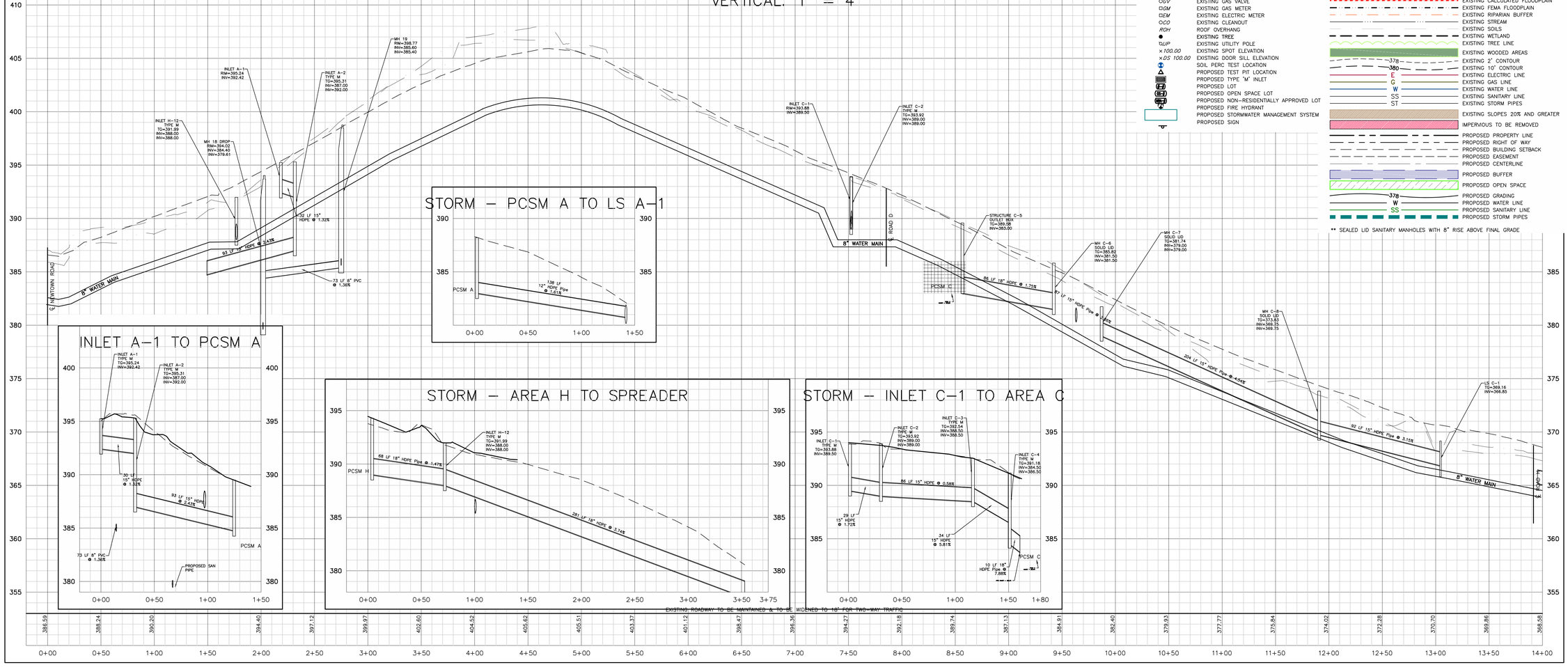
DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9006 FAX: (610) 527-9008

G:\PROJECTS\2006\06012\cad\DRAWINGS\06012



AYRSHIRE DRIVE – 0+00 TO 14+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
◇GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
◇UP	EXISTING UTILITY POLE
x 100.00	EXISTING SPOT ELEVATION
x DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR (378)
- EXISTING 10' CONTOUR (380)
- EXISTING ELECTRIC LINE (E)
- EXISTING GAS LINE (G)
- EXISTING WATER LINE (W)
- EXISTING SANITARY LINE (SS)
- EXISTING STORM PIPES (ST)
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING (378)
- PROPOSED WATER LINE (W)
- PROPOSED SANITARY LINE (SS)
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

ALL DRAWINGS, SPECIFICATIONS AND DESIGNS ARE THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF MOMENEE & ASSOCIATES, INC.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
48 HOURS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9668

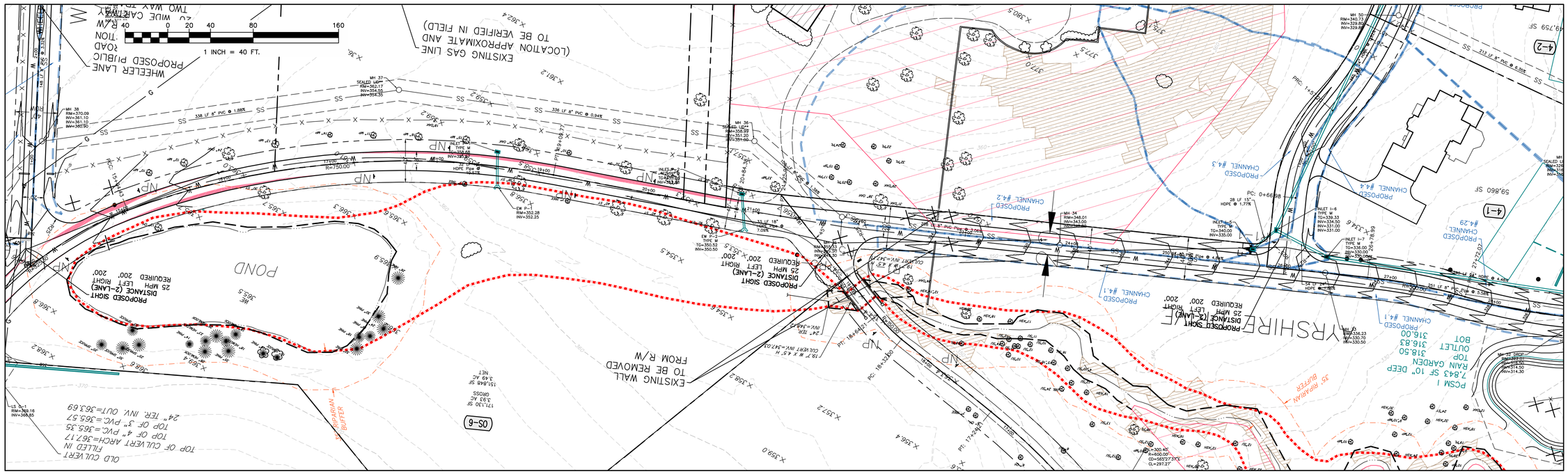
ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

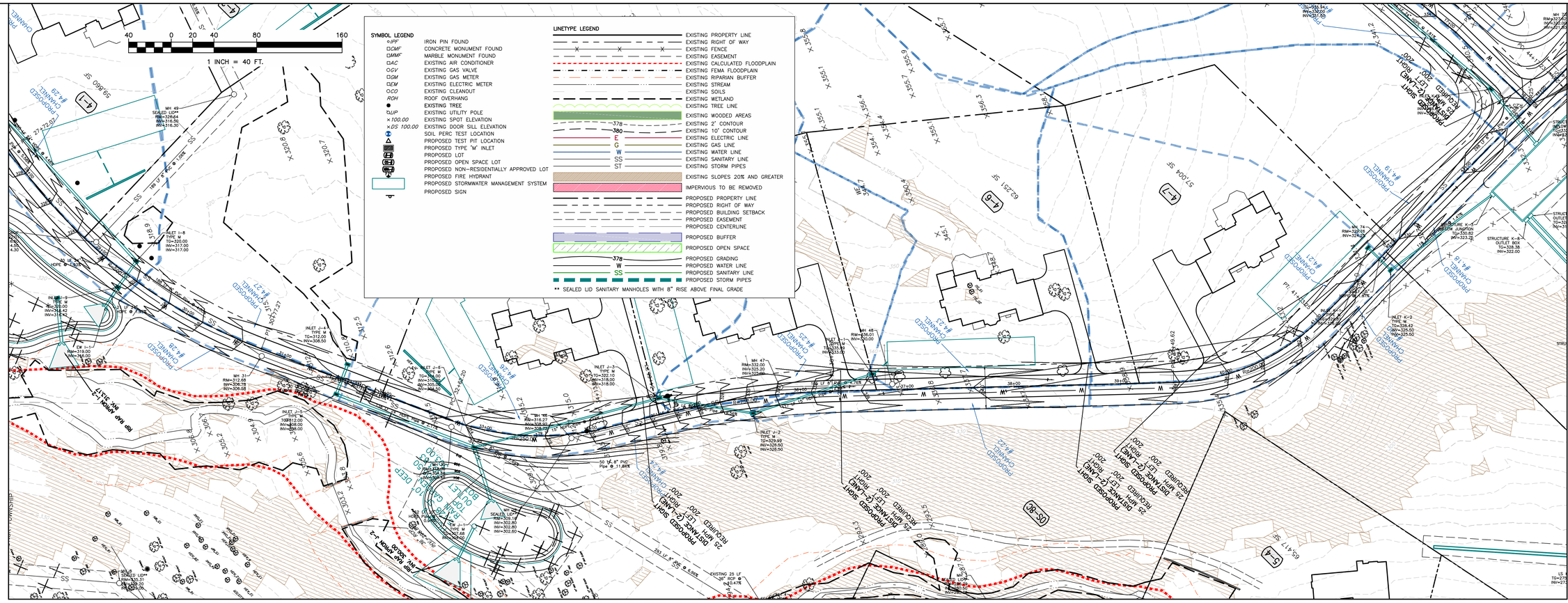
APPLICANT
ESH LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW NOTES
2	11/26/14	INTERIM UPDATES
1	10/28/14	

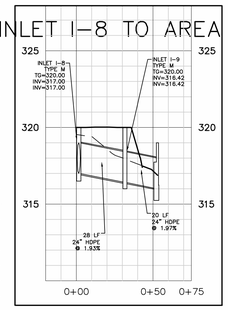
DATE: SEPTEMBER 5, 2014
SHEET NO. 39 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012


1 INCH = 40 FT.
0 20 40 80 160
40
RAW
WHEELER LANE
PROPOSED PUBLIC ROAD
TWO WAY TRAFFIC
25' WIDE CARTWAY
EXISTING GAS LINE
(LOCATION APPROXIMATE AND
TO BE VERIFIED IN FIELD)
EXISTING WALL
TO BE REMOVED
FROM R/W
OLD CULVERT
FILLED IN
TOP OF CULVERT ARCH=367.17
TOP OF 4" PVC=365.35
TOP OF 3" PVC=365.57
24" TER. INV. OUT=363.69
POND
PROPOSED SIGHT
DISTANCE (2-LANE)
25 MPH
LEFT RIGHT
REQUIRED
200'
PROPOSED SIGHT
DISTANCE (2-LANE)
25 MPH
LEFT RIGHT
REQUIRED
200'
AYRSHIRE DRIVE
PROPOSED
CHANNEL #4.1
PROPOSED
CHANNEL #4.2
PROPOSED
CHANNEL #4.3
PROPOSED
CHANNEL #4.4
PROPOSED
CHANNEL #4.5
PCSM 1
7,843 SF 10" DEEP
RAIN GARDEN
TOP 316.83
OUTLET 316.00
BOT
59,860 SF
#4-1
#4-2
#4.29
35' RIPARIAN BUFFER
100' ABRAHAM BUFFER
OS-6
151,848 SF
3.49 AC
NET
171,130 SF
3.93 AC
GROSS
MH 37
SEALED LID**
RIM=362.17
INV=354.50
INV=354.35
MH 39
RIM=370.09
INV=361.10
INV=361.10
INV=360.90
MH 36
SEALED LID**
RIM=358.92
INV=351.20
INV=351.00
MH 34
RIM=348.01
INV=343.00
INV=342.80
MH 50
RIM=340.73
INV=329.80
INV=329.60
MH 33
RIM=336.23
INV=330.70
INV=330.50
INLET I-1
TYPE M
RIM=356.68
INV=352.83
INLET I-2
TYPE M
TG=355.86
INV=352.83
INLET I-3
TYPE M
TG=350.50
INLET I-4
TYPE M
TG=339.33
INV=334.50
INV=331.00
INV=331.00
INLET I-5
RIM=340.00
INV=335.00
INLET I-6
TYPE M
TG=339.33
INV=334.50
INV=331.00
INV=331.00
INLET I-7
TYPE M
TG=338.00
INV=330.00
INV=330.00
INLET I-8
TYPE M
TG=339.33
INV=334.50
INV=331.00
INV=331.00
INLET I-9
TYPE M
TG=336.00
INV=330.00
INV=330.00
INLET I-10
TYPE M
TG=336.00
INV=330.00
INV=330.00
EW P-1
RIM=352.28
INV=352.25
EW P-2
TYPE M
TG=350.50
INV=347.50
EW P-3
TYPE M
TG=340.00
INV=335.00
EW P-4
TYPE M
TG=340.00
INV=335.00
EW P-5
TYPE M
TG=340.00
INV=335.00
EW P-6
TYPE M
TG=340.00
INV=335.00
EW P-7
TYPE M
TG=340.00
INV=335.00
EW P-8
TYPE M
TG=340.00
INV=335.00
EW

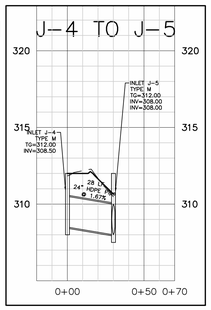


NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

INLET I-8 TO AREA I

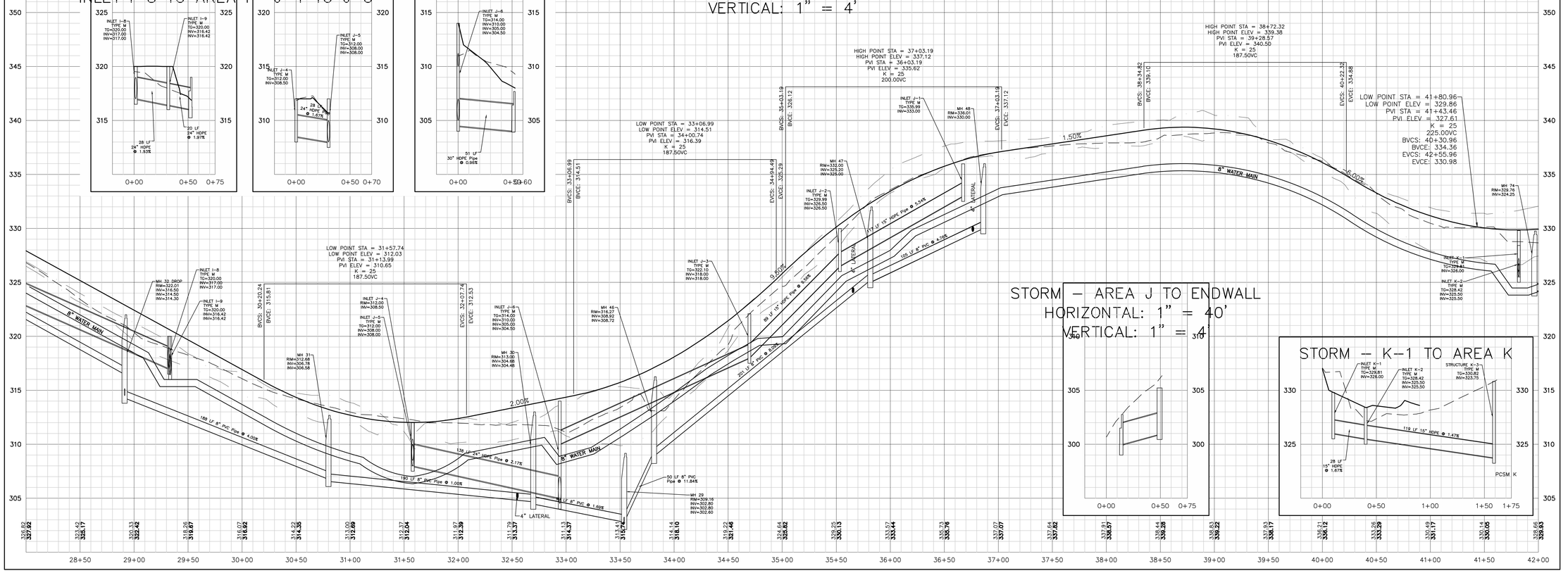


J-4 TO J-5



J-6 TO PCSM J

AYRSHIRE DRIVE – 28+00 TO 42+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



STORM – AREA J TO ENDWALL
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

STORM – K-1 TO AREA K

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTRY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9068

Serial Number: 20141203-0820
CALL BEFORE YOU DIG!
IT'S THE LAW!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE052478E

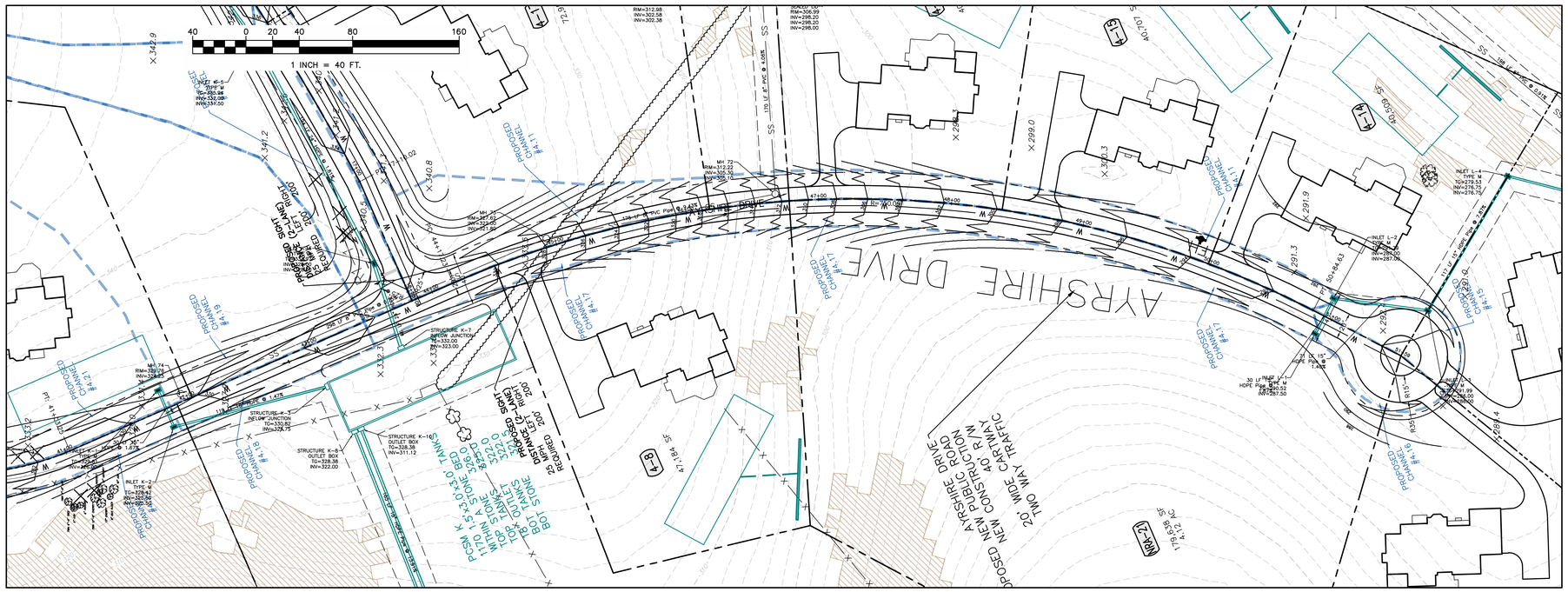
ROADWAY PLAN AND PROFILE – AYRSHIRE DRIVE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/18/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 41 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012


AYRSHIRE DRIVE
1 INCH = 40 FT.
PROPOSED NEW AYRSHIRE DRIVE ALIGNMENT W/ 4.0% CONSTRUCTION GRADING
20' WIDE TWO WAY TRAFFIC
PROPOSED CHANNEL #A-1
PROPOSED CHANNEL #A-2
PROPOSED CHANNEL #A-3
PROPOSED CHANNEL #A-4
PROPOSED CHANNEL #A-5
PROPOSED CHANNEL #A-6
PROPOSED CHANNEL #A-7
PROPOSED CHANNEL #A-8
PROPOSED CHANNEL #A-9
PROPOSED CHANNEL #A-10
PROPOSED CHANNEL #A-11
PROPOSED CHANNEL #A-12
PROPOSED CHANNEL #A-13
PROPOSED CHANNEL #A-14
PROPOSED CHANNEL #A-15
PROPOSED CHANNEL #A-16
PROPOSED CHANNEL #A-17
PROPOSED CHANNEL #A-18
PROPOSED CHANNEL #A-19
PROPOSED CHANNEL #A-20
PROPOSED CHANNEL #A-21
INLET K-1 TYPE M TG=329.81 INV=326.00
INLET K-2 TYPE M TG=328.42 INV=325.50 INV=325.50
INLET K-3 TYPE M TG=330.82 INV=324.75
INLET K-4 TYPE M TG=329.53 INV=276.75 INV=276.75
INLET L-1 TYPE M TG=290.52 INV=287.50
INLET L-2 TYPE M TG=291.79 INV=287.00 INV=287.00
INLET L-3 TYPE M TG=291.99 INV=286.00 INV=286.00
MH 74 RIM=329.76 INV=324.25
MH 73 RIM=327.62 INV=322.00 INV=321.80
MH 72 RIM=312.22 INV=305.30 INV=305.10
MH 71 RIM=312.68 INV=302.58 INV=302.38
MH 70 RIM=306.99 INV=298.20 INV=298.20 INV=298.00
STRUCTURE K-3 INFLOW JUNCTION TG=332.00 INV=323.00
STRUCTURE K-4 INFLOW JUNCTION TG=330.82 INV=324.75
STRUCTURE K-5 OUTLET BOX TG=328.38 INV=311.12
STRUCTURE K-6 OUTLET BOX TG=328.38 INV=322.00
ROSW K-3,K-2,K-1 TANKS WITHIN 1170 LF 36" RCP BOT STONE TOP OUTLETS 2322 CY 2322 CY 2322 CY
ROSW L-3,L-2,L-1 TANKS WITHIN 1170 LF 36" RCP BOT STONE TOP OUTLETS 2322 CY 2322 CY 2322 CY
25 LF 15" HDPE Pipe @ 1.43%
30 LF 15" HDPE Pipe @ 1.67%
30 LF 15" HDPE Pipe @ 1.67%
71 LF 15" HDPE Pipe @ 1.40%
178 LF 15" HDPE Pipe @ 1.43%
178 LF 8" PVC Pipe @ 1.43%
298 LF 8" PVC Pipe @ 0.75%
ROSW
4" LATERAL
4" LATERAL
4" LATERAL

40 0 20 40 80 160

1 INCH = 40 FT.

SYMBOL LEGEND

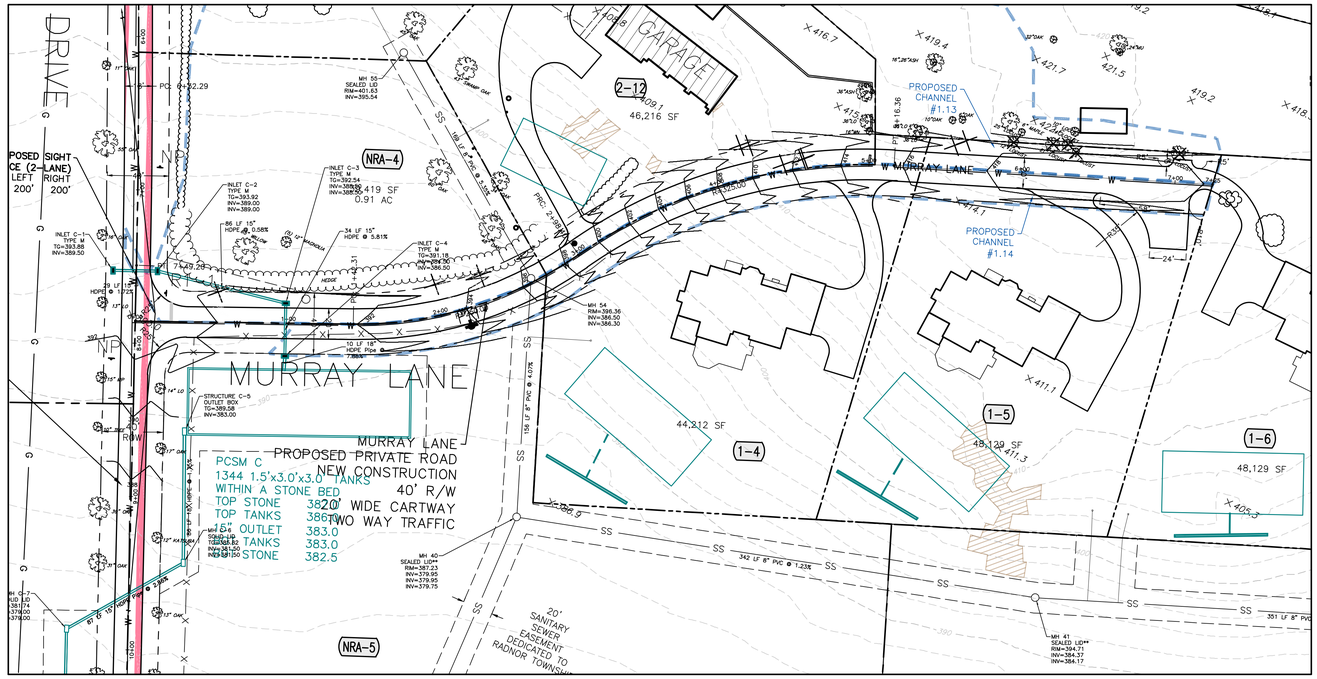
○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

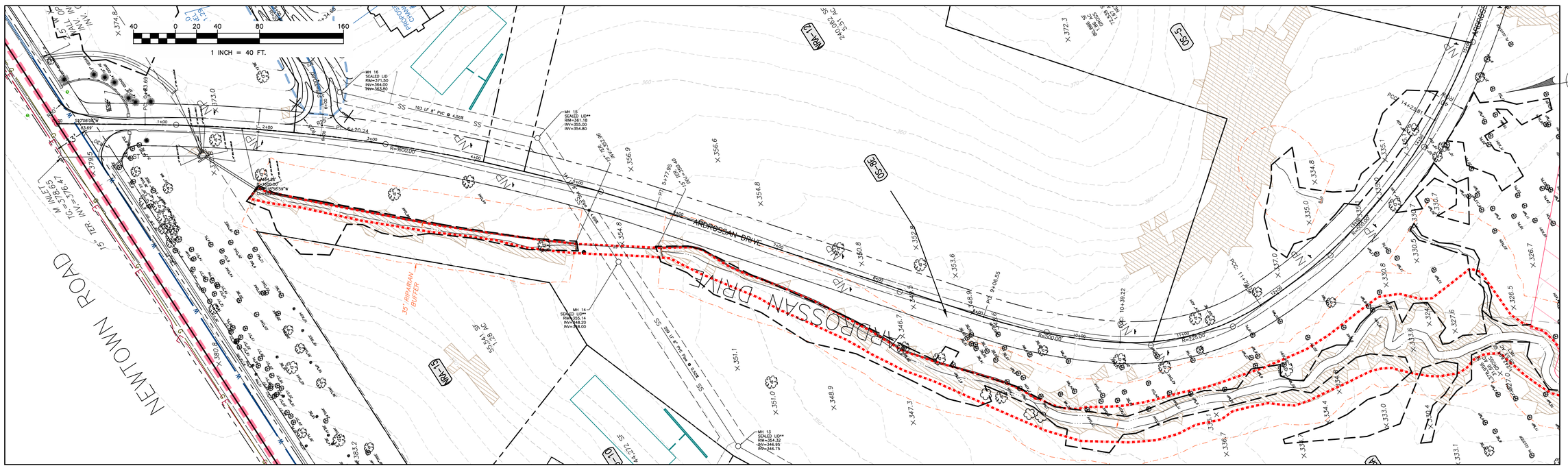
LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

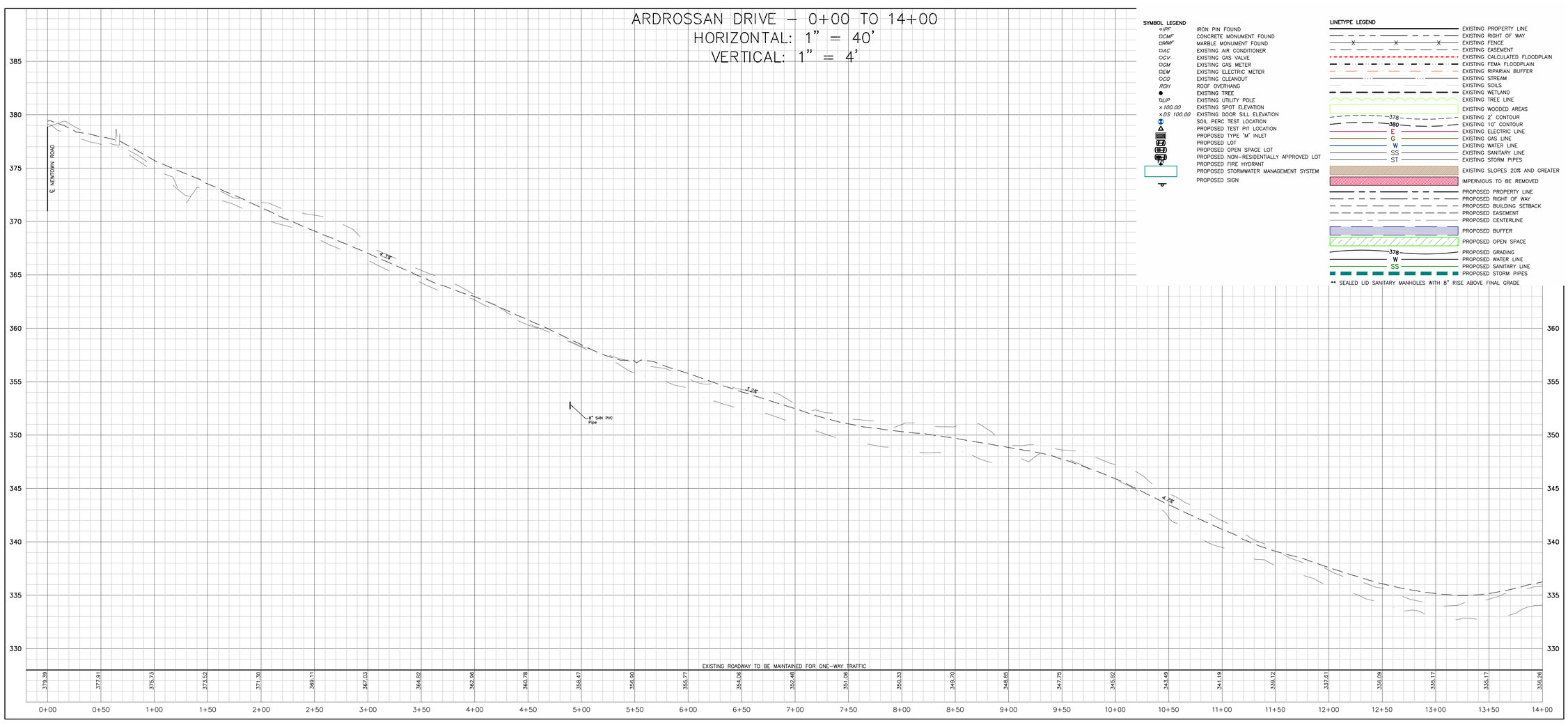
NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH


MURRAY LANE
PROPOSED PRIVATE ROAD
NEW CONSTRUCTION
40' R/W
20' WIDE CARTWAY
TWO WAY TRAFFIC
PCSM C
1344 1.5'x3.0'x3.0 TANKS
WITHIN A STONE BED
TOP STONE 384.0
TOP TANKS 384.0
15" OUTLET 383.0
TANKS 383.0
STONE 382.5
PROPOSED CHANNEL #1.13
PROPOSED CHANNEL #1.14
GARAGE
2-12
46,216 SF
1-4
44,212 SF
1-5
48,129 SF
1-6
48,129 SF
NRA-4
NRA-5
419 SF
0.91 AC
20' SANITARY SEWER EASEMENT DEDICATED TO RADNOR TOWNSHIP
W MURRAY LANE
DRIVE
POSED SIGHT CE (2-LANE) LEFT 200' RIGHT 200'
MH 52 SEALED LID RIM=401.53 INV=395.54
INLET C-2 TYPE M TG=393.92 INV=389.00 INV=389.00
INLET C-3 TYPE M TG=392.54 INV=388.50 INV=388.50
INLET C-4 TYPE M TG=391.18 INV=386.50 INV=386.00
INLET C-1 TYPE M TG=393.88 INV=389.50
STRUCTURE C-5 OUTLET BOX TG=389.58 INV=383.00
MH 54 RIM=386.36 INV=386.50 INV=386.30
MH 40 SEALED LID** RIM=387.23 INV=379.95 INV=379.95 INV=379.75
MH 41 SEALED LID** RIM=394.71 INV=384.37 INV=384.17
MH C-7 LID 381.74 376.00 376.00
86 LF 15" HDPE @ 0.58%
34 LF 15" HDPE @ 5.81%
29 LF 15" HDPE @ 1.72%
10 LF 18" HDPE Pipe @ 7.86%
144 LF 8" PVC @ 4.07%
340 LF 8" PVC @ 1.23%
351 LF 8" PVC
PROP. 2.4% SLOPE
EX. 2.4% SLOPE
EX. 2.31% SLOPE
EX. 2.00% SLOPE
EX. 1.50% SLOPE
EX. 1.36% SLOPE
EX. 1.00% SLOPE
EX. 0.58% SLOPE
EX. 5.81% SLOPE
EX. 1.72% SLOPE
EX. 7.86% SLOPE
EX. 4.07% SLOPE
EX. 1.23% SLOPE
EX. 2.00% SLOPE
EX. 2.31% SLOPE
EX. 1.72% SLOPE
EX. 5.81% SLOPE
EX. 0.58% SLOPE
EX. 1.36% SLOPE
EX. 1.50% SLOPE
EX. 7.86% SLOPE
EX. 4.07% SLOPE
EX. 1.23% SLOPE
EX. 1.00



NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

ARDROSSAN DRIVE – 0+00 TO 14+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



SYMBOL LEGEND

○ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
⊡ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊡ UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

Serial Number: 20142030820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PLANS AND 10 WORKING DAYS NOTICE FOR DESIGN PLANS
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9668

ROADWAY PLAN AND PROFILE – ARDROSSAN DRIVE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

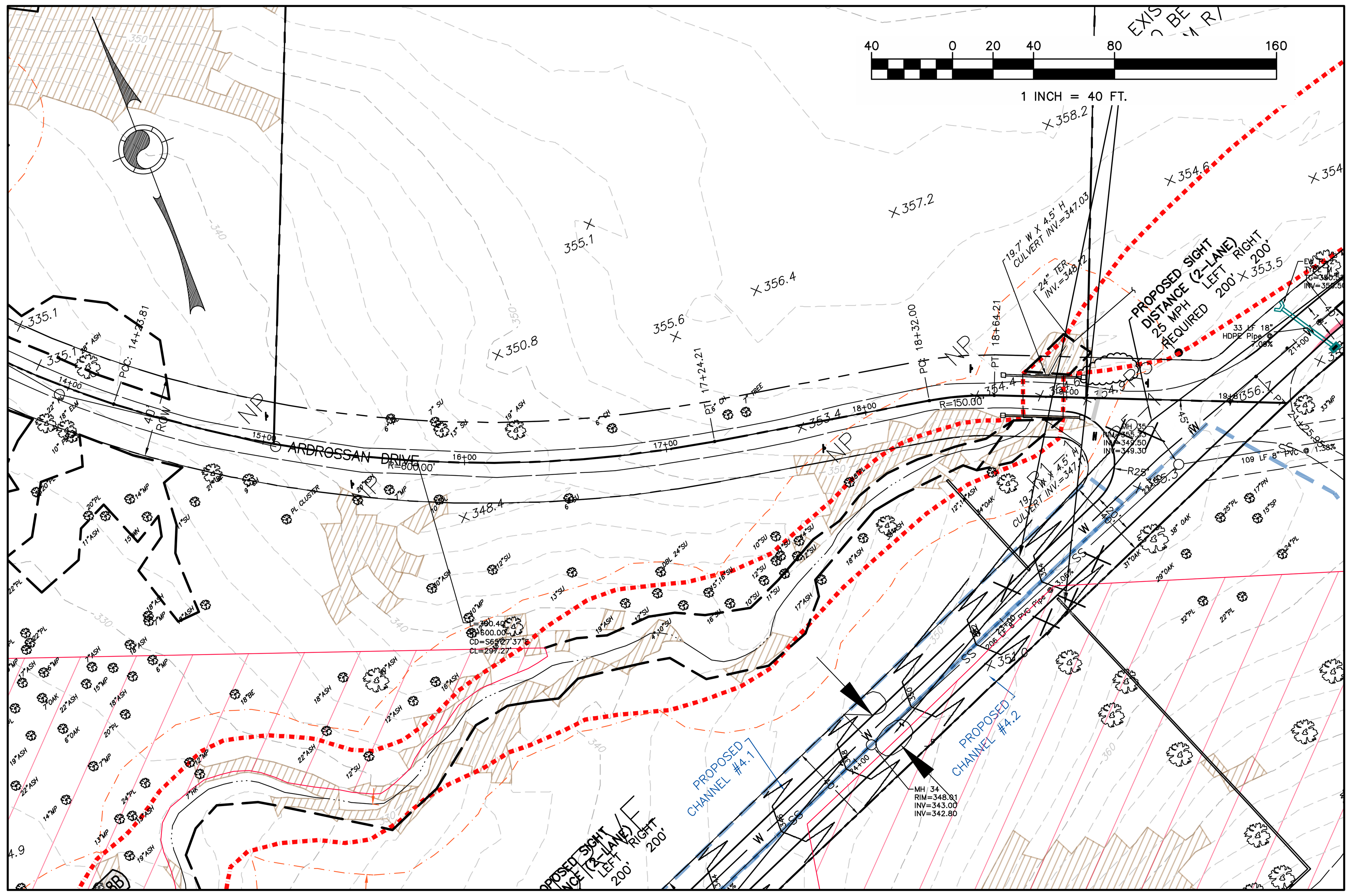
APPLICANT
ESIII LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

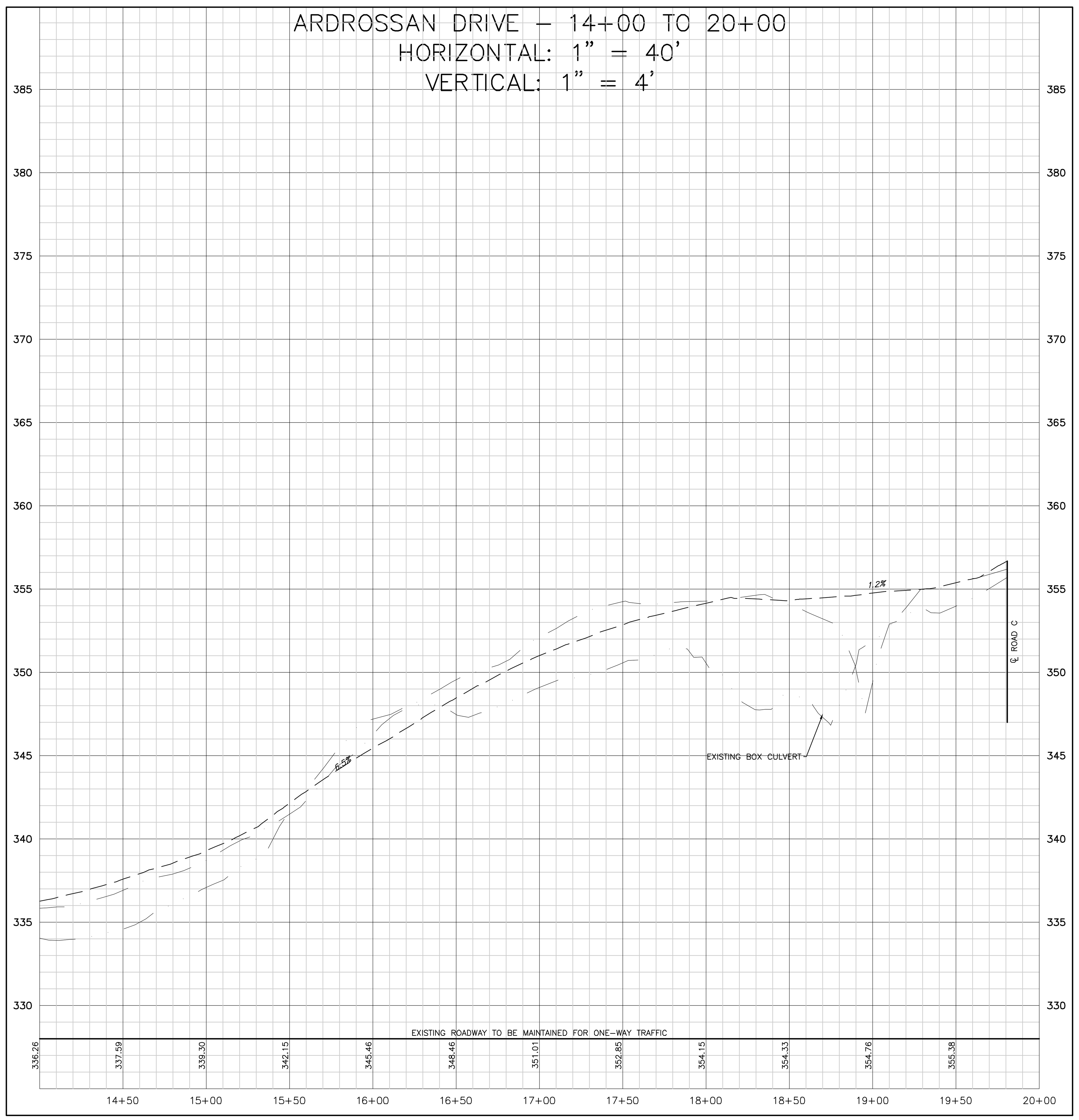
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
44
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\PLANS\DRAWINGS\06012





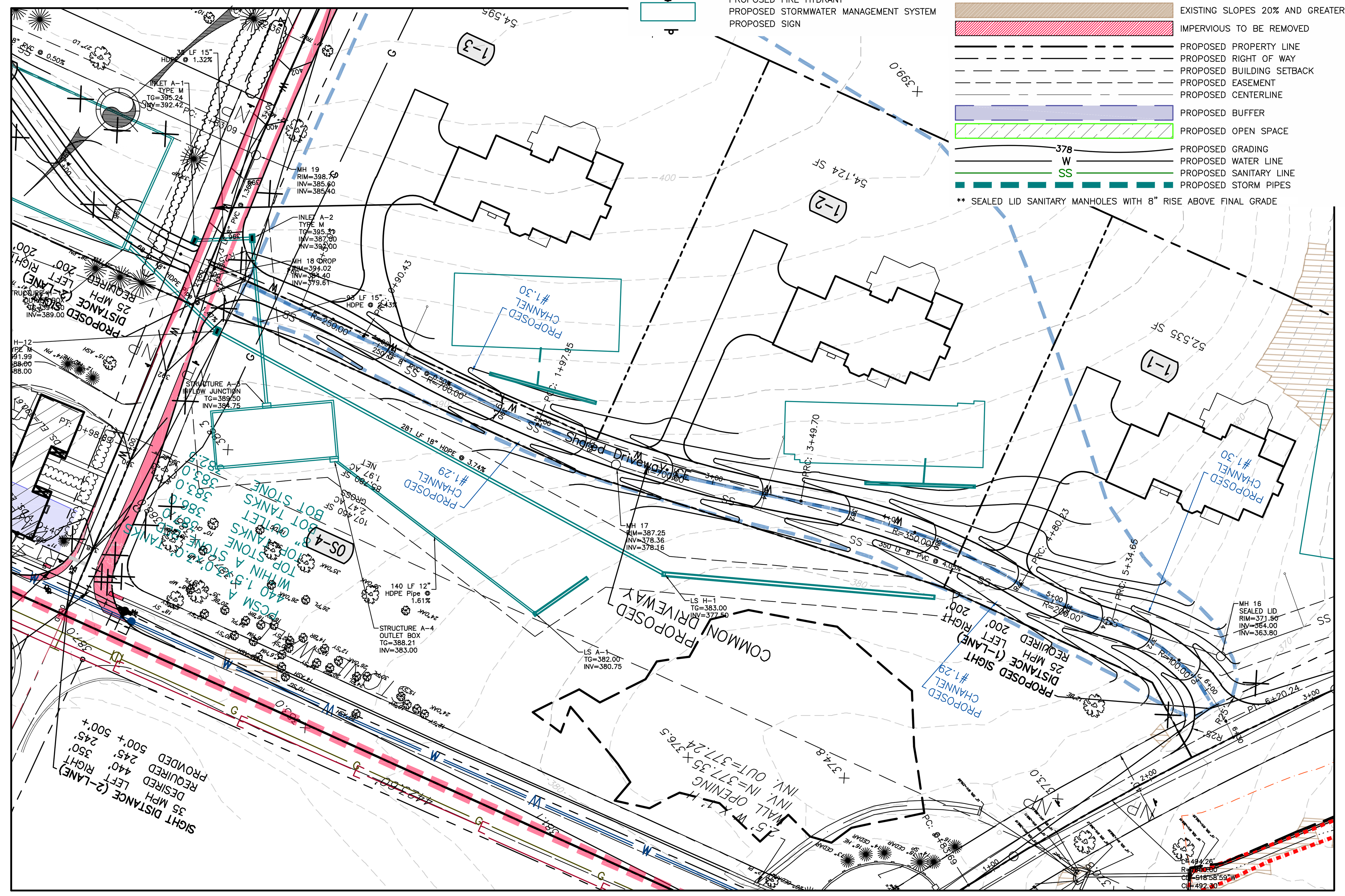
SYMBOL LEGEND

- IPF — IRON PIN FOUND
- CMF — CONCRETE MONUMENT FOUND
- MMF — MARBLE MONUMENT FOUND
- AC — EXISTING AIR CONDITIONER
- GV — EXISTING GAS VALVE
- GM — EXISTING GAS METER
- EM — EXISTING ELECTRIC METER
- CO — EXISTING CLEANOUT
- ROH — ROOF OVERHANG
- EXISTING TREE
- UP — EXISTING UTILITY POLE
- × 100.00 — EXISTING SPOT ELEVATION
- × DS 100.00 — EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

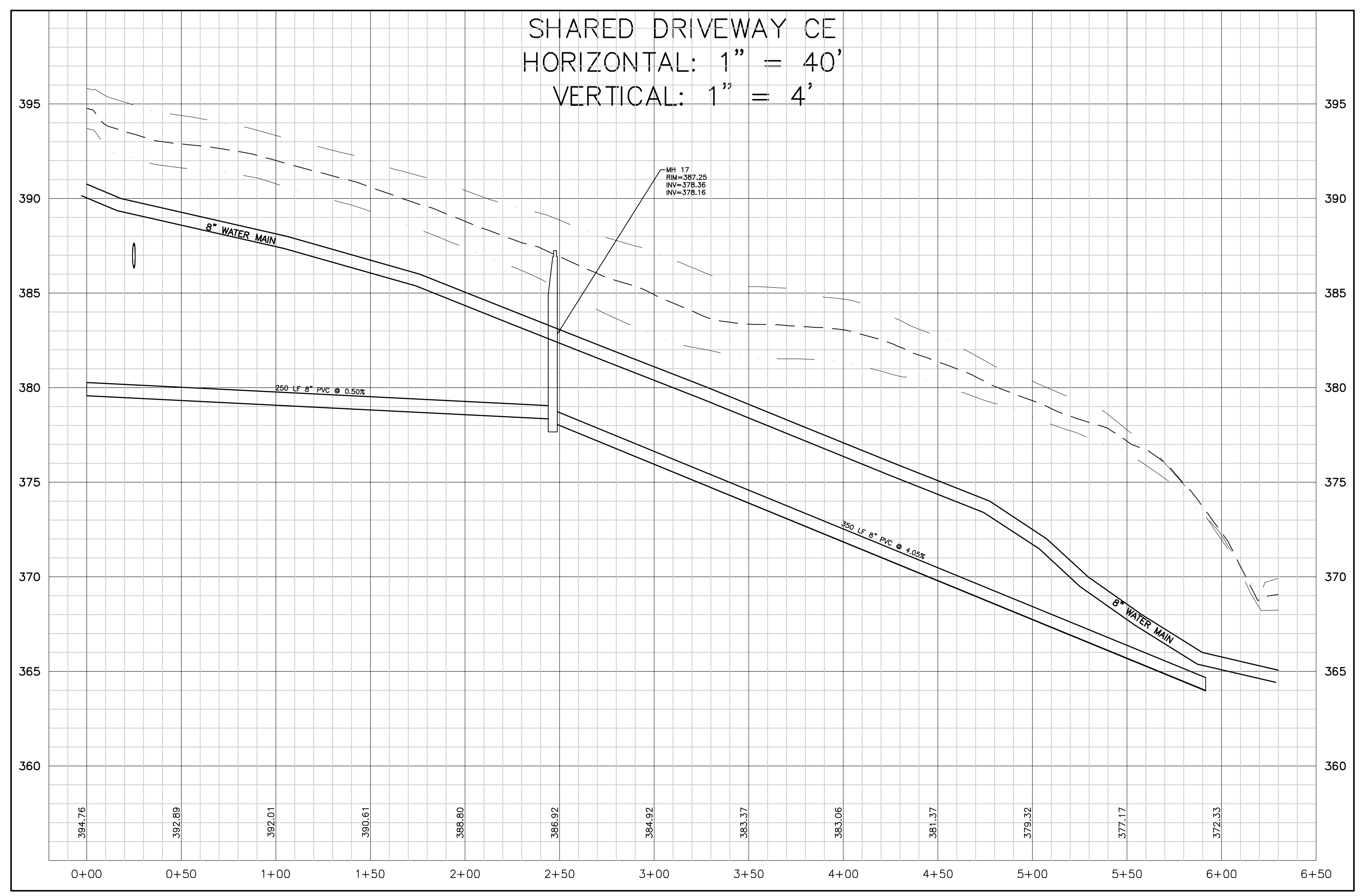
LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 — EXISTING 2' CONTOUR
- 380 — EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 — PROPOSED GRADING
- W — PROPOSED WATER LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE



NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH



COPYRIGHT: MOMENEE AND ASSOCIATES, INC. CONSULTING ENGINEERS, EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND ALL OTHER PROPRIETARY RIGHTS IN THESE PLANS. ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE AND ASSOCIATES. THEY ARE TO BE USED ONLY WITH RESPECT TO THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE AND ASSOCIATES. ANY RE-USE WITHOUT WRITTEN PERMISSION, VERIFICATION, CONSENT OR ADAPTATION BY MOMENEE AND ASSOCIATES, INC. FOR THE SPECIFIC PURPOSE INTENDED, WILL BE AT THE THIRD PARTY'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MOMENEE AND ASSOCIATES, INC. THE THIRD PARTY SHALL FURTHER INDEMNIFY AND HOLD HARMLESS MOMENEE AND ASSOCIATES, INC. FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES ARISING THEREFROM.

Serial Number: 2014-203-0820

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, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER DAVID R. FIORELLO PE027479E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9008

ROADWAY PLAN AND PROFILE – ARDROSSAN DRIVE

FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA

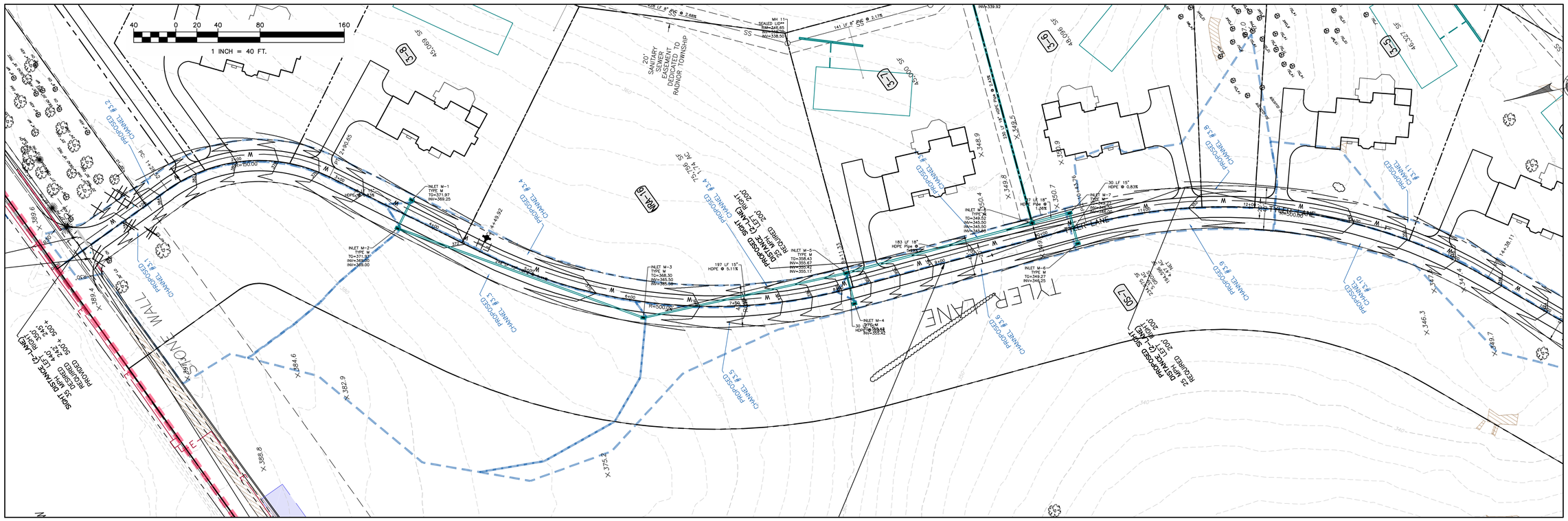
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

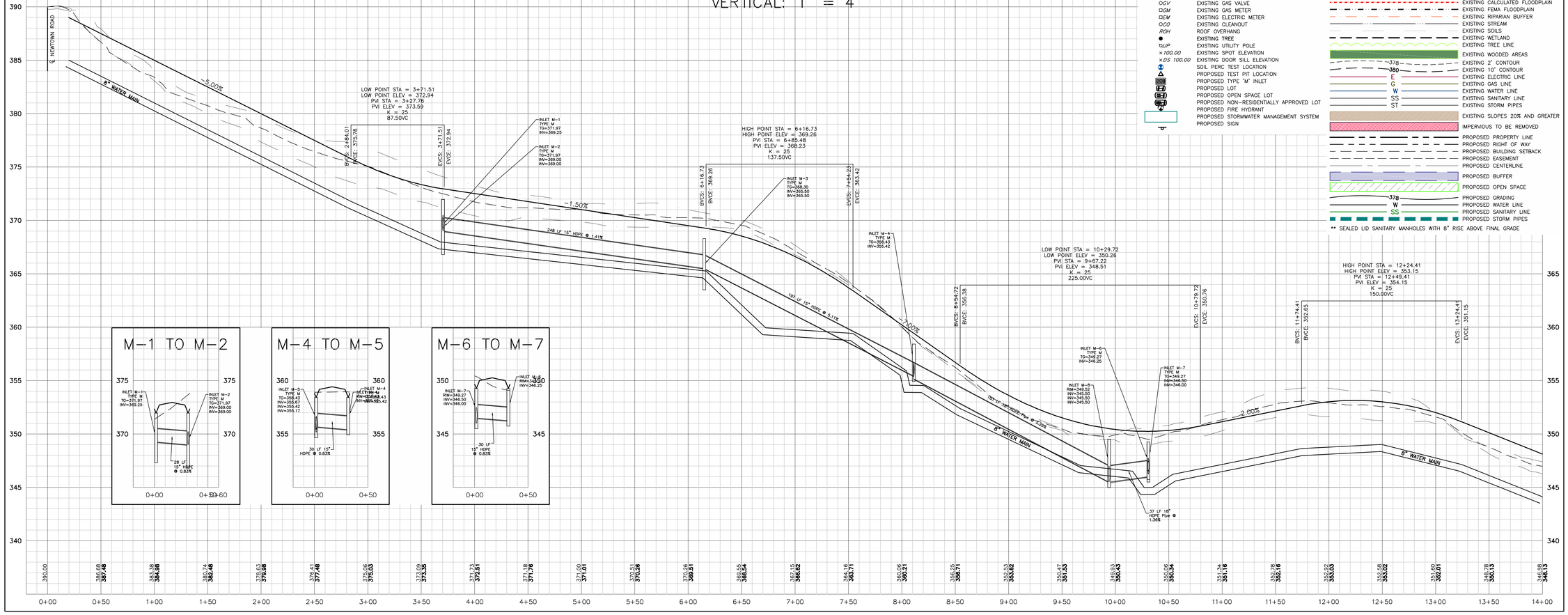
REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 45 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MAI\DRAWINGS\06012



TYLER LANE – 0+00 TO 14+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



SYMBOL LEGEND

⊙IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
◇GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊡UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENTÉE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9500 FAX: (610) 527-9508

ROADWAY PLAN AND PROFILE – TYLER LANE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

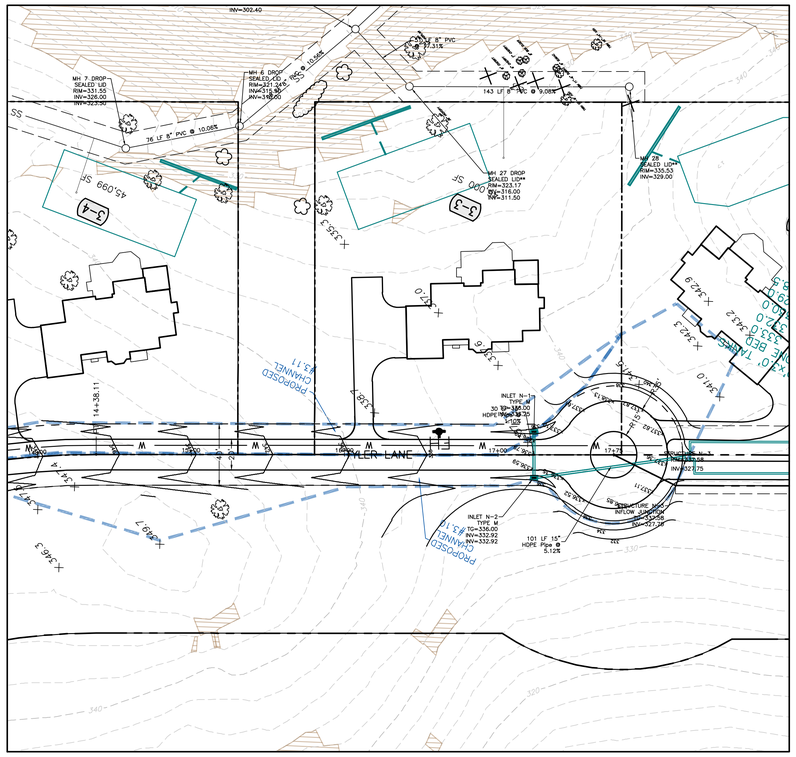
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

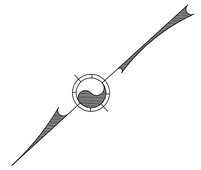
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 46 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\JMA\DRAWINGS\06012





SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

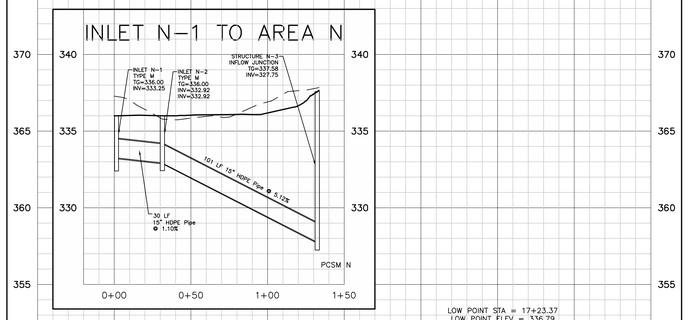
LINETYPE LEGEND

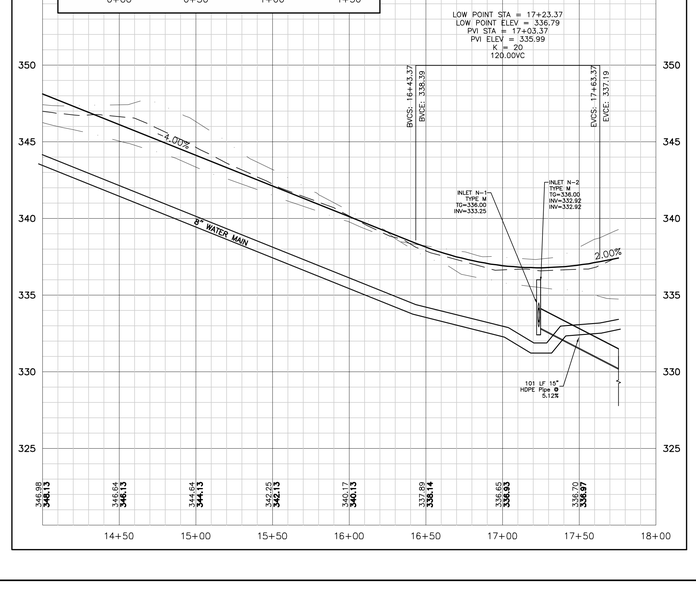
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

TYLER LANE – 14+00 TO 18+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'





1 INCH = 40 FT.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

ROADWAY PLAN AND PROFILE – TYLER LANE & THOMAS LANE

FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

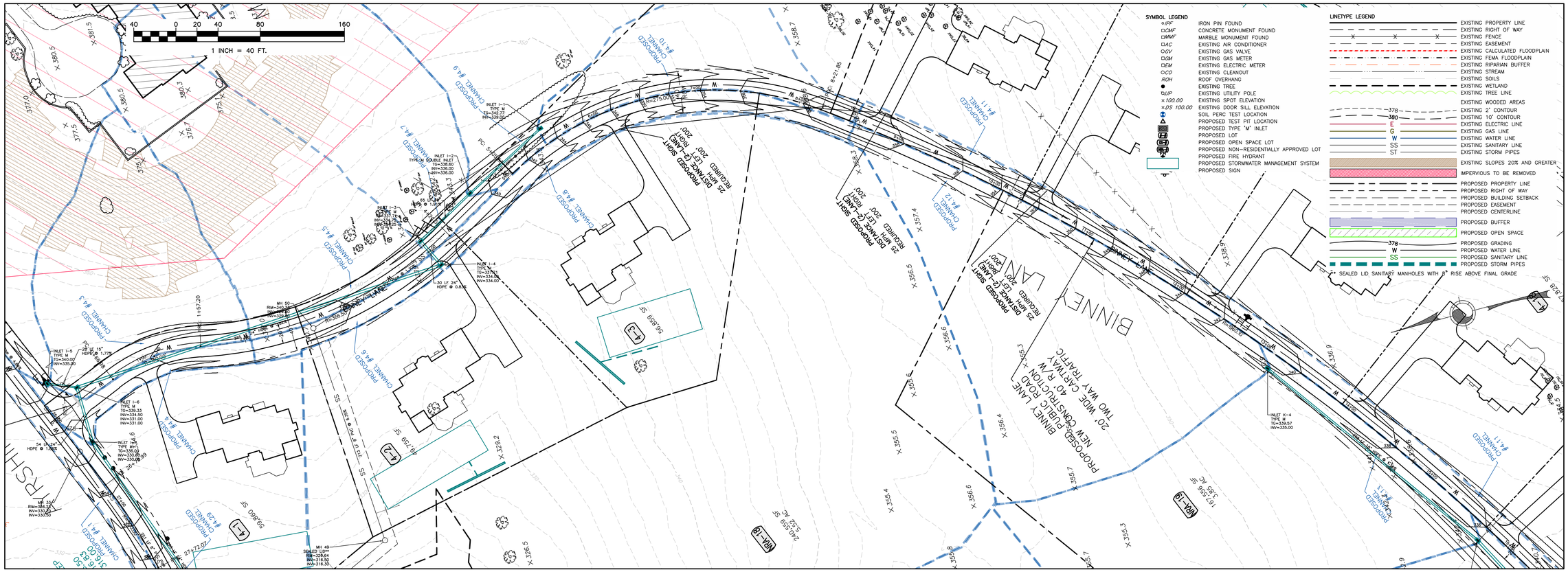
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

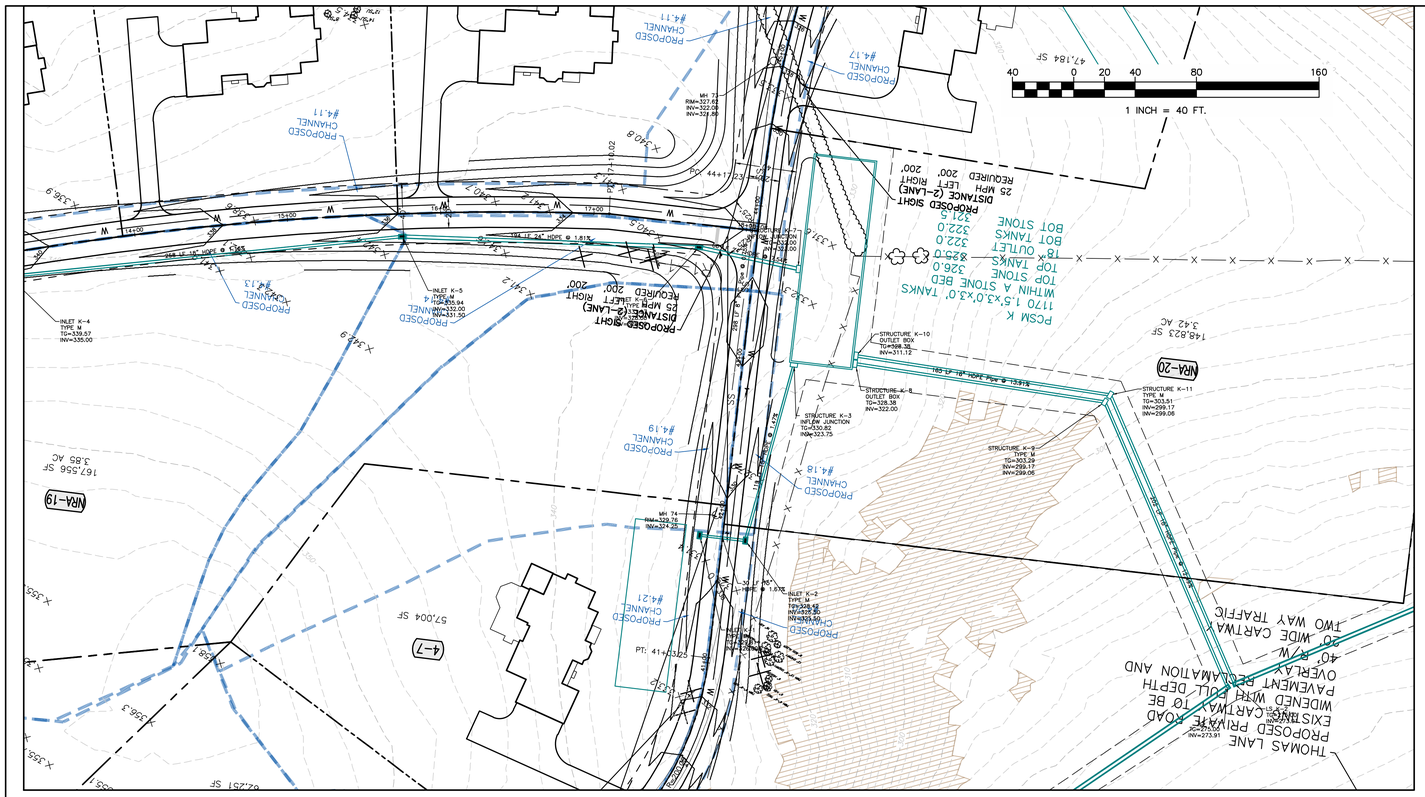
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

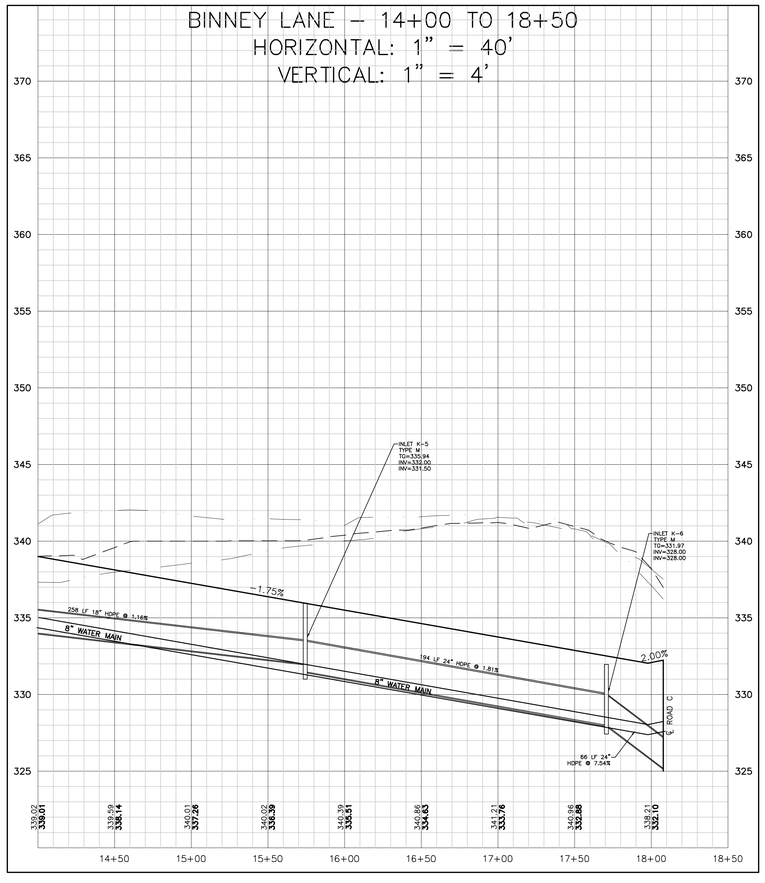
REVI	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

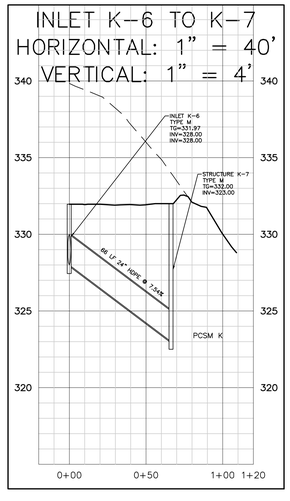
DATE: SEPTEMBER 5, 2014
SHEET NO.
47
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

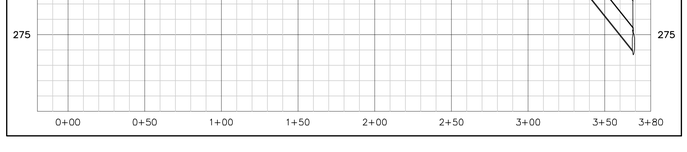
M:\PROJECTS\2006\06012\Met\DRAWINGS\06012


1 INCH = 40 FT.
SYMBOL LEGEND
IRON PIN FOUND
CONCRETE MONUMENT FOUND
MARBLE MONUMENT FOUND
EXISTING AIR CONDITIONER
EXISTING GAS VALVE
EXISTING GAS METER
EXISTING ELECTRIC METER
EXISTING CLEANOUT
ROOF OVERHANG
EXISTING TREE
EXISTING UTILITY POLE
EXISTING SPOT ELEVATION
EXISTING DOOR SILL ELEVATION
SOIL PERC TEST LOCATION
PROPOSED TEST PIT LOCATION
PROPOSED TYPE 'M' INLET
PROPOSED LOT
PROPOSED OPEN SPACE LOT
PROPOSED NON-RESIDENTIALLY APPROVED LOT
PROPOSED FIRE HYDRANT
PROPOSED STORMWATER MANAGEMENT SYSTEM
PROPOSED SIGN
LINETYPE LEGEND
EXISTING PROPERTY LINE
EXISTING RIGHT OF WAY
EXISTING FENCE
EXISTING EASEMENT
EXISTING CALCULATED FLOODPLAIN
EXISTING FEMA FLOODPLAIN
EXISTING RIPARIAN BUFFER
EXISTING STREAM
EXISTING SOILS
EXISTING WETLAND
EXISTING TREE LINE
EXISTING WOODED AREAS
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING SANITARY LINE
EXISTING STORM PIPES
EXISTING SLOPES 20% AND GREATER
IMPERVIOUS TO BE REMOVED
PROPOSED PROPERTY LINE
PROPOSED RIGHT OF WAY
PROPOSED BUILDING SETBACK
PROPOSED EASEMENT
PROPOSED CENTERLINE
PROPOSED BUFFER
PROPOSED OPEN SPACE
PROPOSED GRADING
PROPOSED WATER LINE
PROPOSED SANITARY LINE
PROPOSED STORM PIPES
SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE
BINNEY LANE
PROPOSED PUBLIC ROAD CONSTRUCTION 20' WIDE CARTWAY NEW CARTWAY TRAFFIC TWO WAY TRAFFIC
PROPOSED CHANNEL #4.1
PROPOSED CHANNEL #4.2
PROPOSED CHANNEL #4.3
PROPOSED CHANNEL #4.4
PROPOSED CHANNEL #4.5
PROPOSED CHANNEL #4.6
PROPOSED CHANNEL #4.7
PROPOSED CHANNEL #4.8
PROPOSED CHANNEL #4.9
PROPOSED CHANNEL #4.10
PROPOSED CHANNEL #4.11
PROPOSED CHANNEL #4.12
PROPOSED CHANNEL #4.13
PROPOSED CHANNEL #4.14
PROPOSED CHANNEL #4.15
PROPOSED CHANNEL #4.16
PROPOSED CHANNEL #4.17
PROPOSED CHANNEL #4.18
PROPOSED CHANNEL #4.19
PROPOSED CHANNEL #4.20
PROPOSED CHANNEL #4.21
PROPOSED CHANNEL #4.22
PROPOSED CHANNEL









SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- ×100.00 EXISTING SPOT ELEVATION
- ×DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

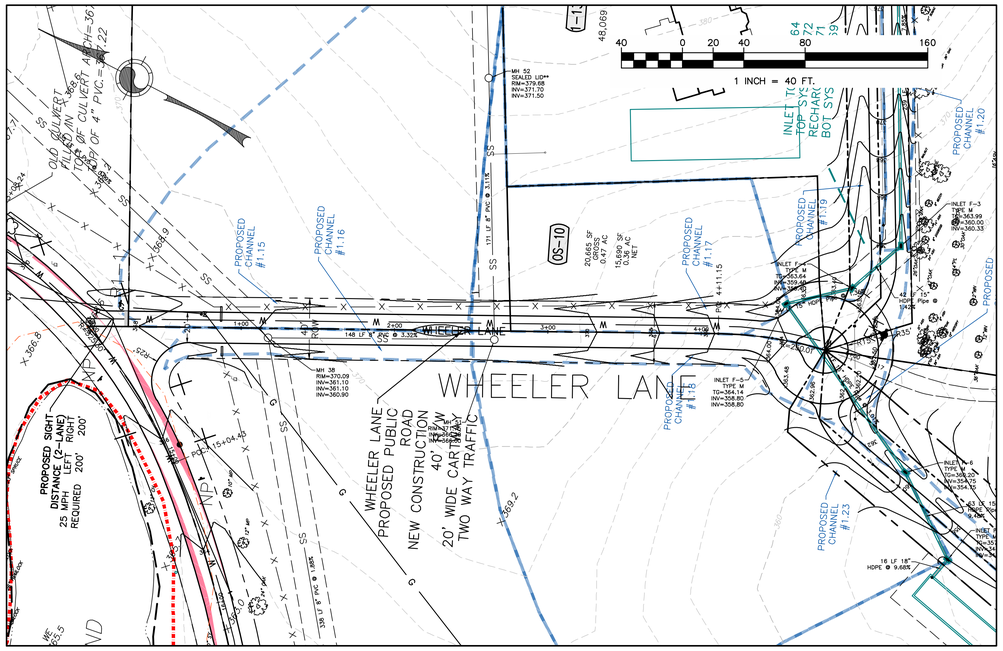
LINETYPE LEGEND

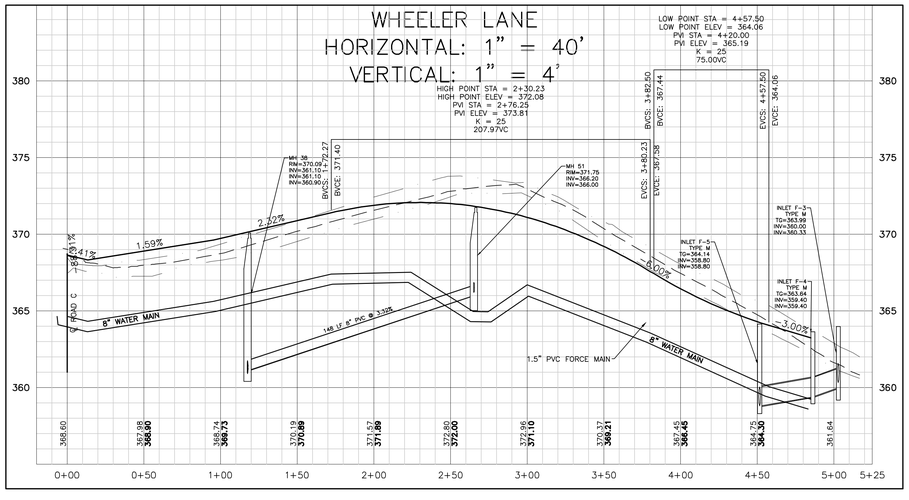
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

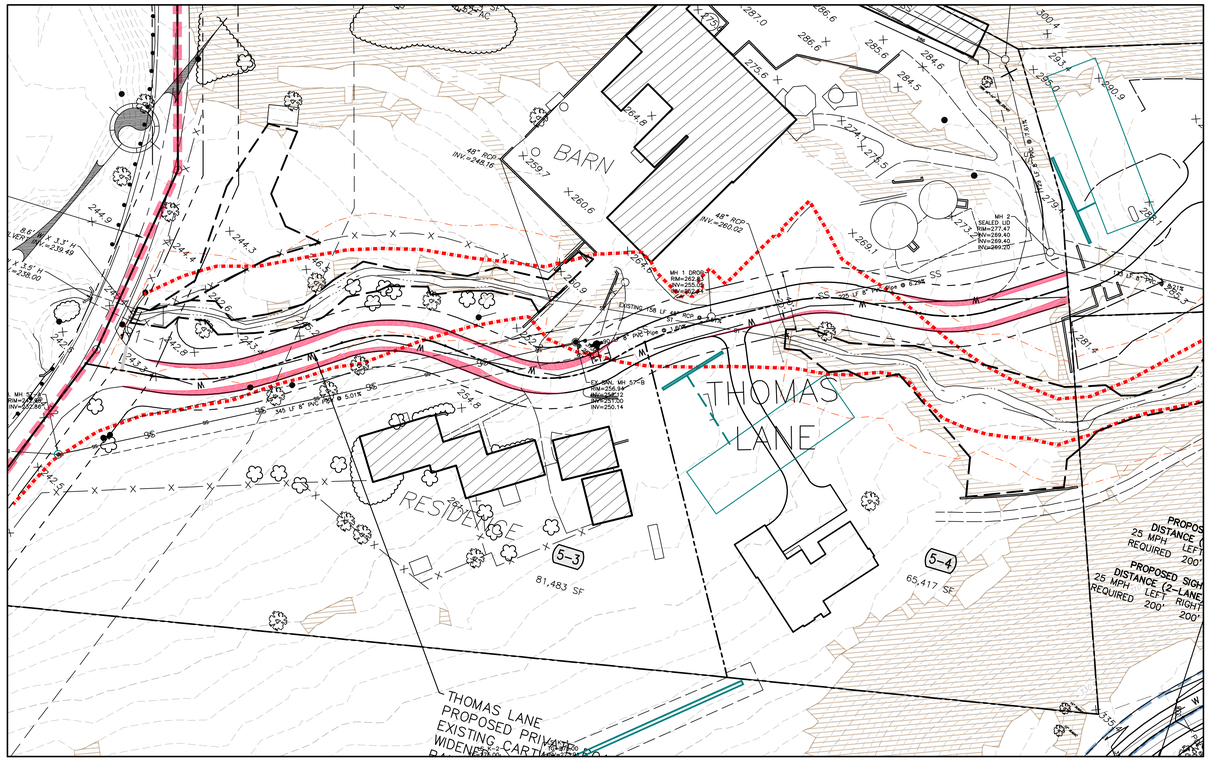
** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

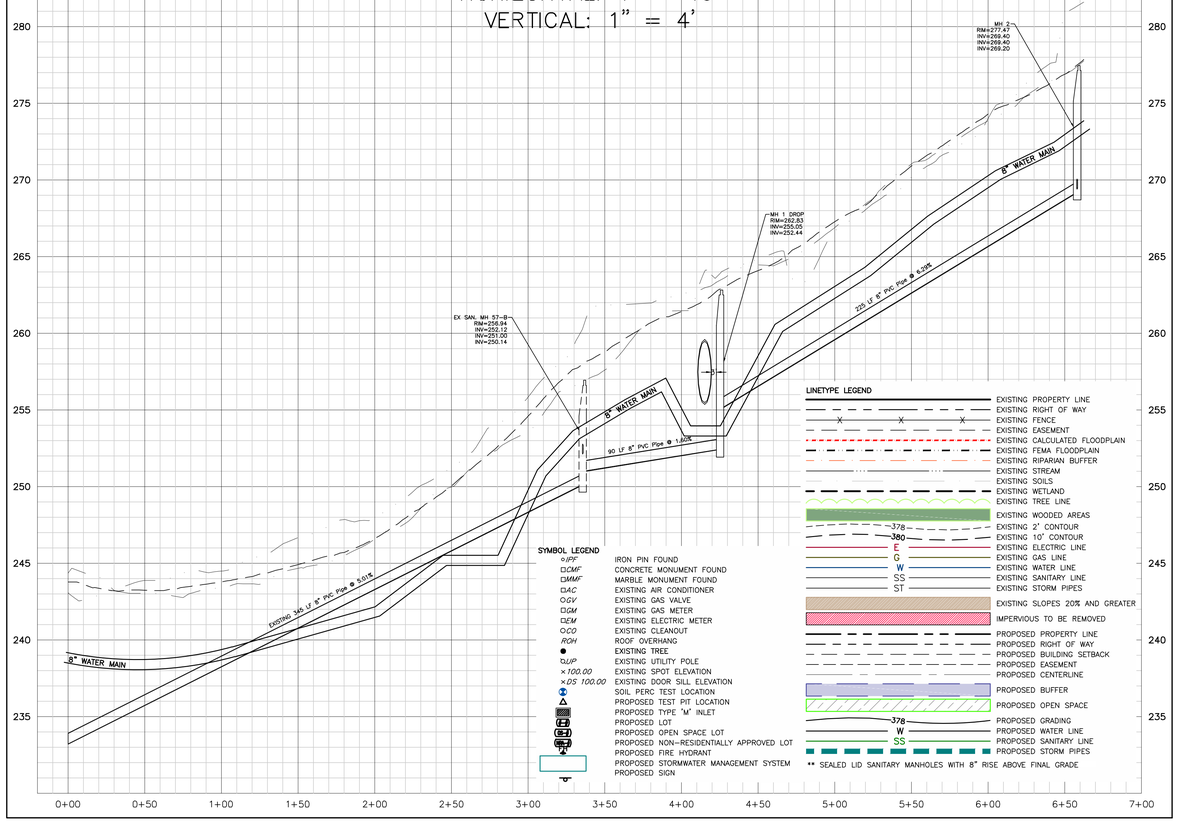
NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

PENNSYLVANIA ONE CALL SYSTEM, INC. PA LAW REQUIRES THAT YOU CALL 3 BUSINESS DAYS BEFORE YOU BEGIN EXCAVATION, DRILLING, BLASTING OR DEMOLITION. CALL 1-800-242-1776 OR 811 OR 1-800-VA1-811 OR 1-800-257-7777 OR 1-800-272-1000 OR 1-800-552-7001 OR 1-800-344-5463 OR 1-800-541-2250 OR 1-800-541-2250 OR 1-800-541-2250









NOTE: ROADWAYS ARE DEVELOPED FOR A DESIGN SPEED OF 25 MPH

CALL BEFORE YOU DIG!
Serial Number: 20142030820
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9688

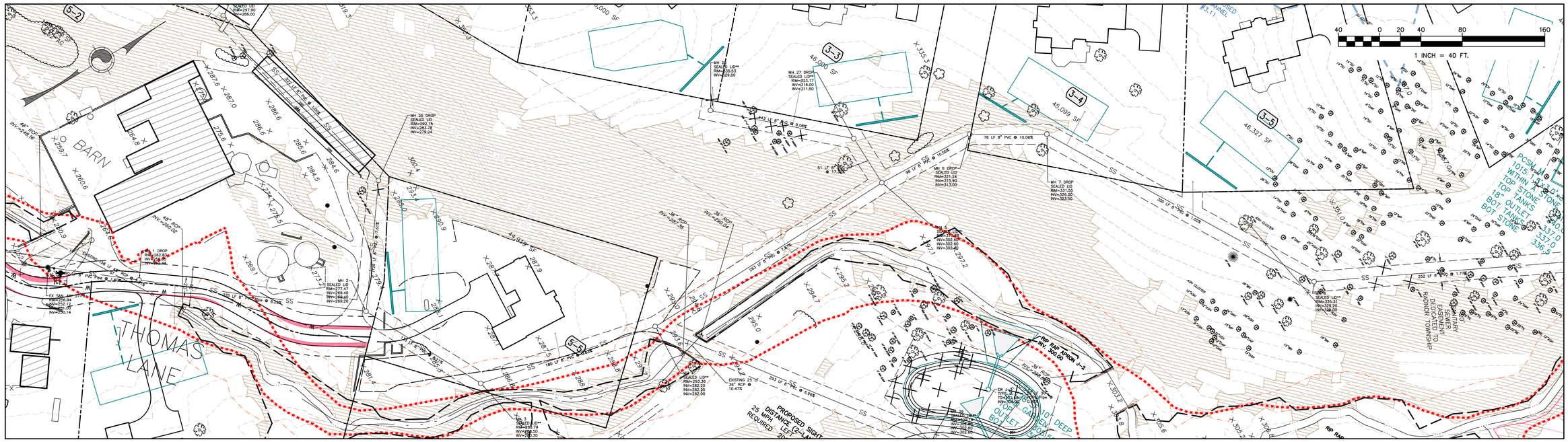
ROADWAY PLAN AND PROFILE - WHEELER LANE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

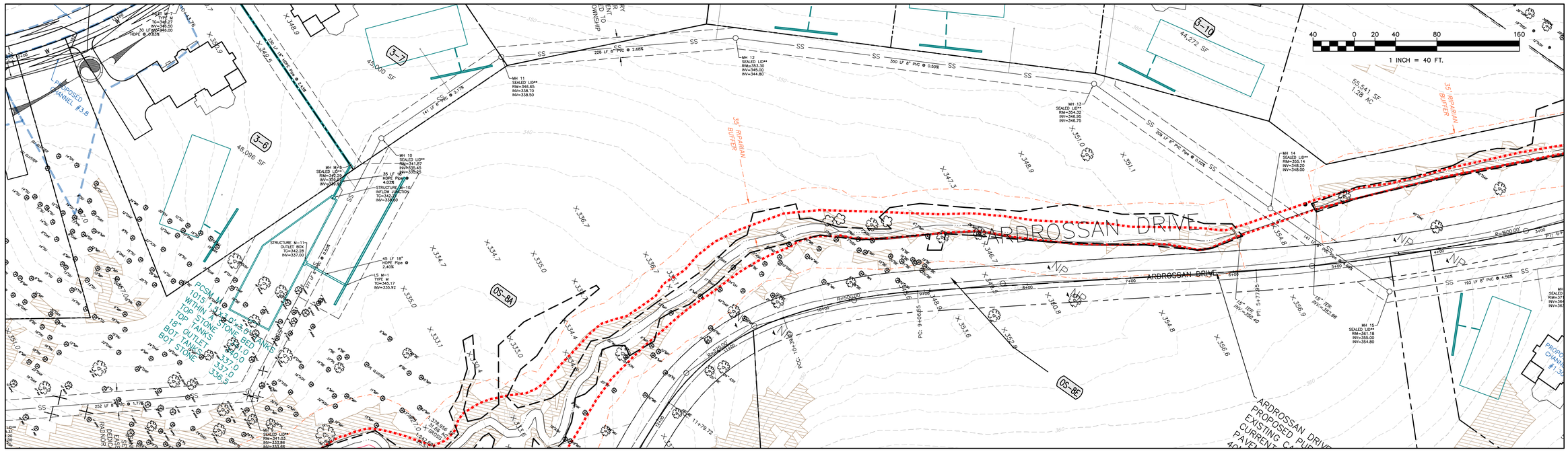
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

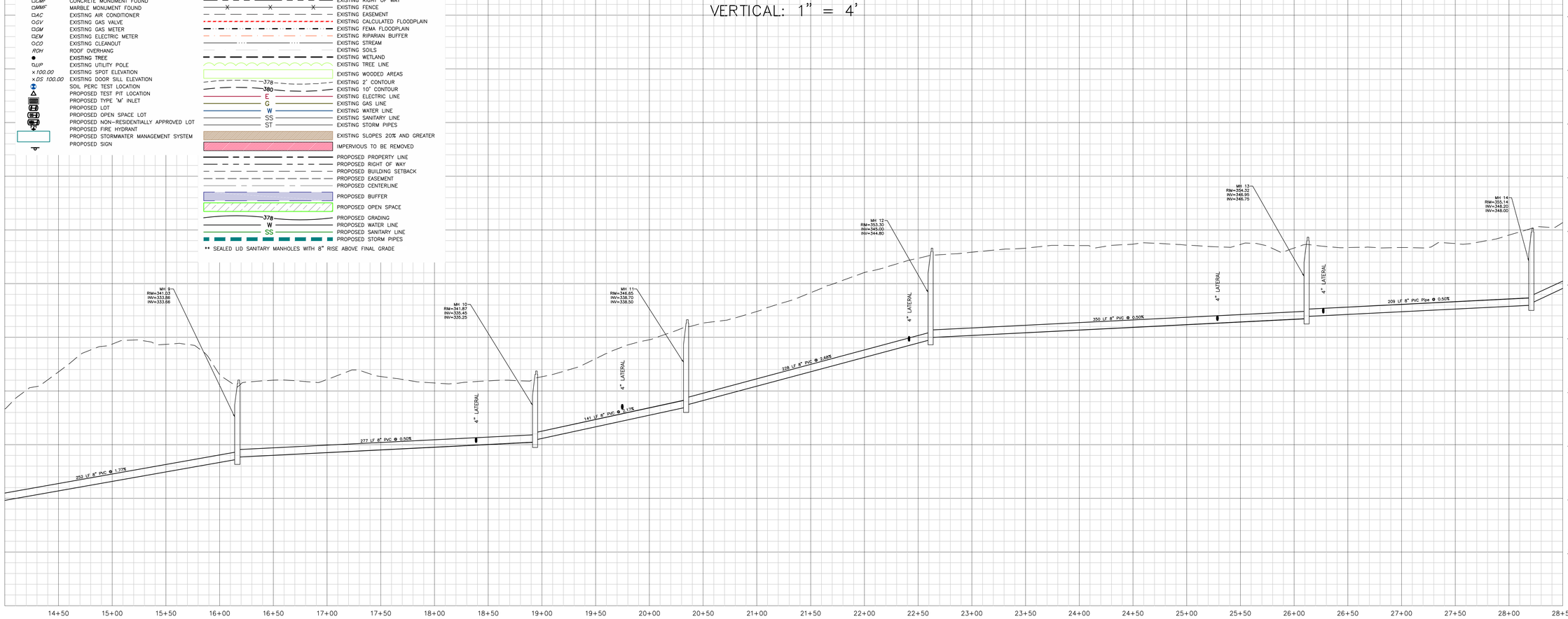
NO.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW LETTER DATED 11/26/14
2	11/26/14	INTERIM UPDATES
1	10/28/14	NPDES

DATE: SEPTEMBER 5, 2014
SHEET NO. 50 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012


S-2
S-3
S-4
S-5
BARN
THOMAS LANE
TOWNSHIP
MH 1 DROP
RIM=262.83
INV=255.05
INV=252.44
MH 2
SEALED LID
RIM=277.47
INV=269.40
INV=269.40
INV=269.20
MH 3
SEALED LID**
RIM=286.79
INV=280.50
INV=280.30
MH 4
SEALED LID**
RIM=293.36
INV=282.20
INV=282.20
INV=282.00
MH 5
SEALED LID
RIM=310.38
INV=302.60
INV=302.60
INV=302.40
MH 6 DROP
SEALED LID
RIM=321.24
INV=313.90
INV=313.00
MH 7 DROP
SEALED LID
RIM=331.55
INV=326.00
INV=323.50
MH 8
SEALED LID**
RIM=335.31
INV=329.20
INV=329.00
EX SAN MH 57-B
RIM=256.94
INV=250.12
INV=250.00
INV=250.14
45,000 SF
46,000 SF
45,099 SF
46,327 SF
PROPOSED SIGHT DISTANCE (2-LANE) 25 MPH LEFT REQUIRED 20
PROPOSED SEPTIC SYSTEM
PROPOSED SAND MOUND SYSTEM
PROPOSED SAND MOUND SYSTEM
PROPOSED SAND MOUND



SAN – EX SAN MH 57–B TO MH 20 STATION 14+50+00 TO 29+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



SYMBOL LEGEND

○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
RDH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

Serial Number: 20141203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PROFESSIONAL ENGINEER

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9468

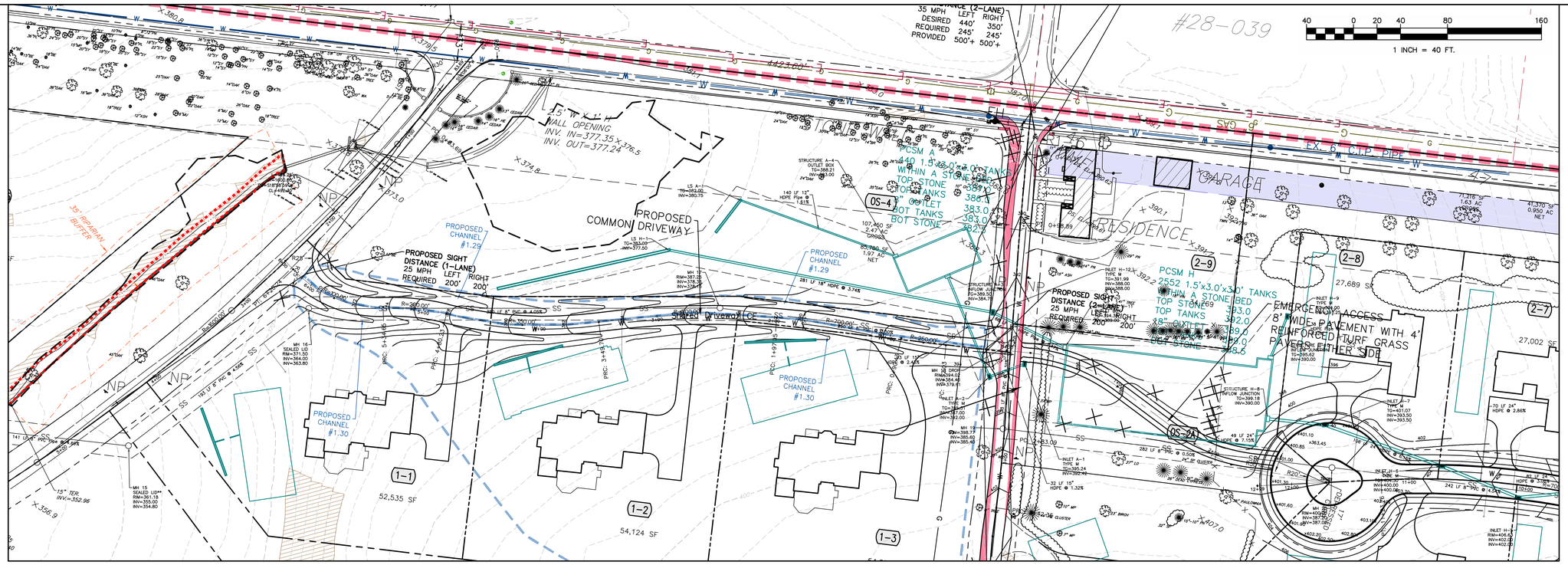
SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

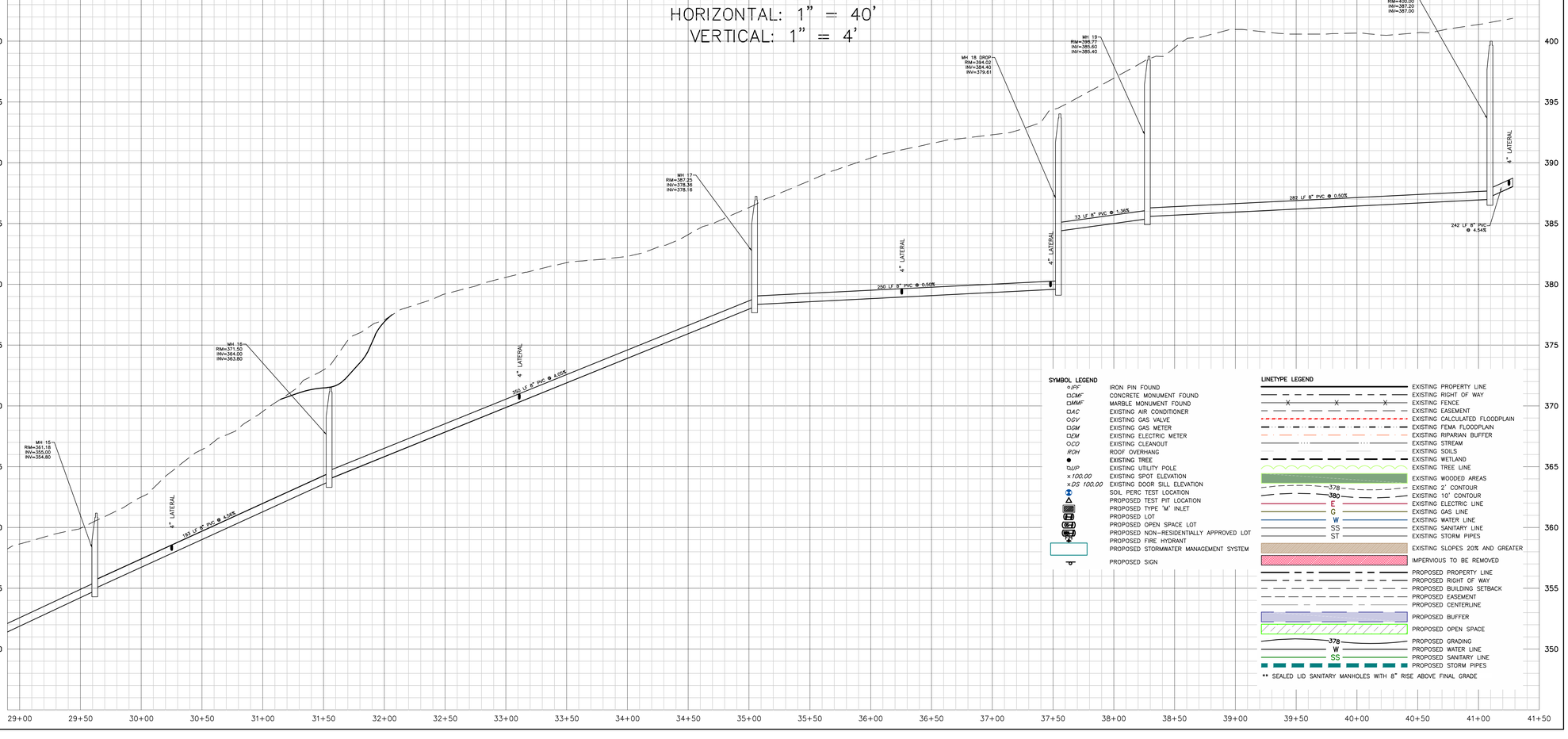
ONE-CALL:	20141203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PSR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/29/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 52 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012



SAN - EX SAN MH 57-B TO MH 20 STATION 29+00 TO 41+50
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK!
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL ENGINEER — PE037478E

SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

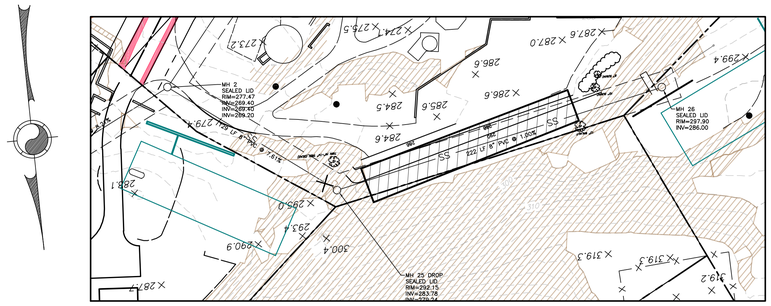
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

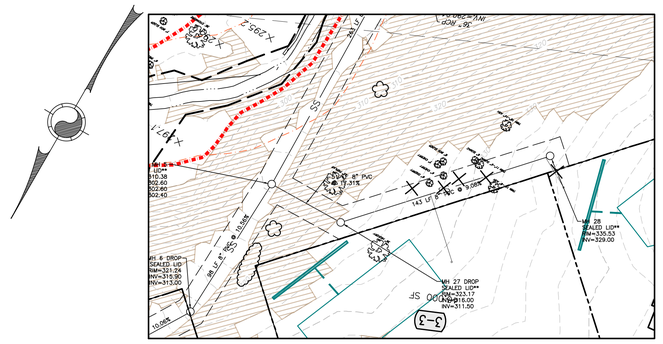
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

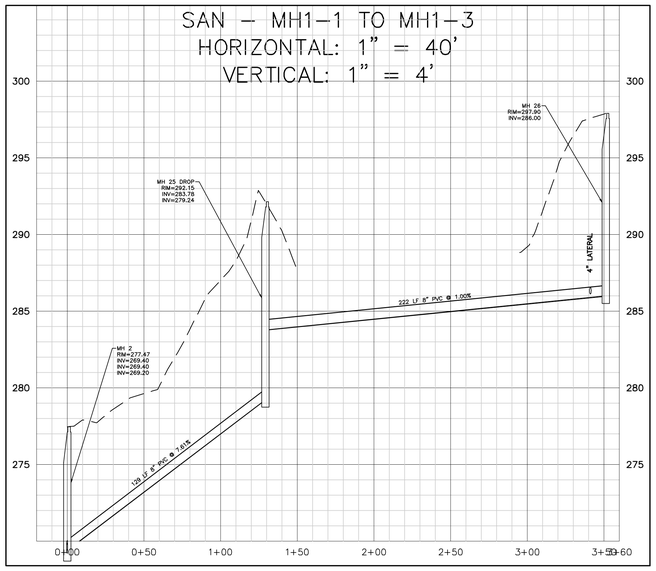
REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/29/14	NPDES
1	10/29/14	INTERIM UPDATES

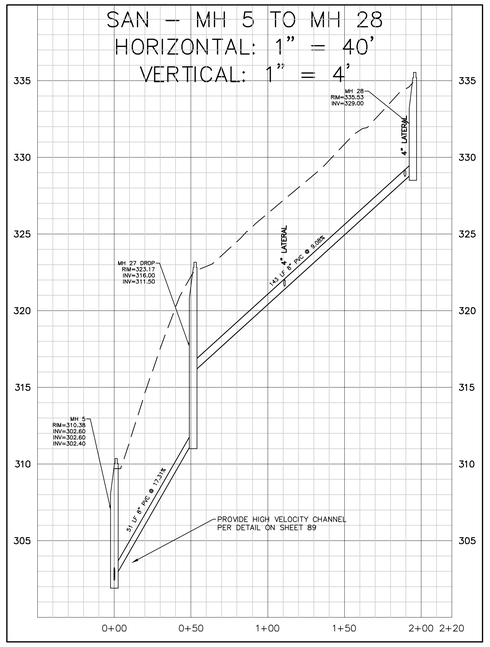
DATE: SEPTEMBER 5, 2014
SHEET NO. 53 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\0602\MA\DRAWINGS\0602









SYMBOL LEGEND

⊕IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON–RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

40 0 20 40 80 160

1 INCH = 40 FT.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES A NOTICE FOR
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3008 FAX: (610) 527-9008

SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

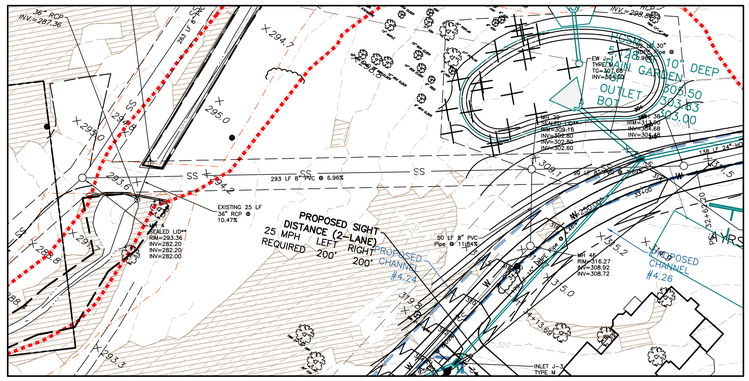
APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

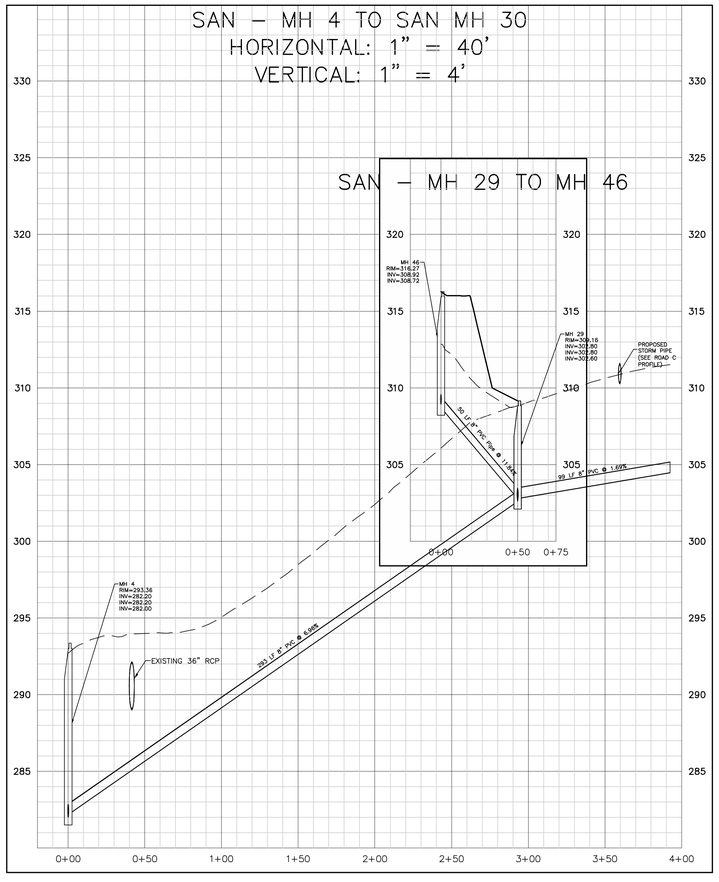
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

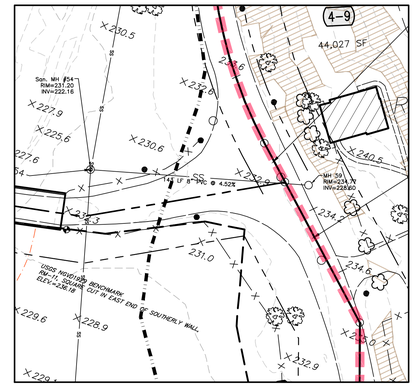
REV'I	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

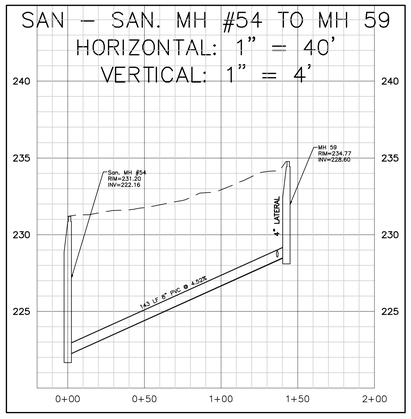
DATE: SEPTEMBER 5, 2014
SHEET NO.
54
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

G:\PROJECTS\2006\0601\Dwg\DRAWINGS\0601-2









1 INCH = 40 FT.

SYMBOL LEGEND

⊙IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
△	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

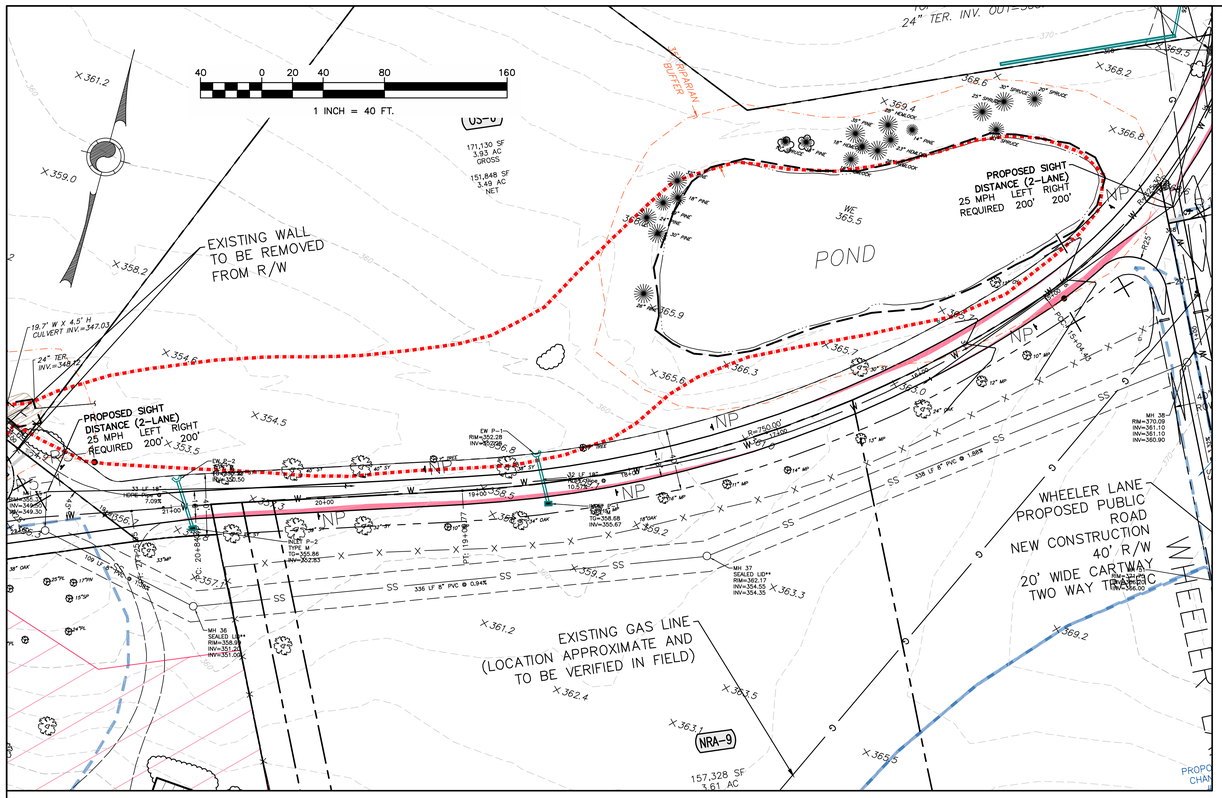
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

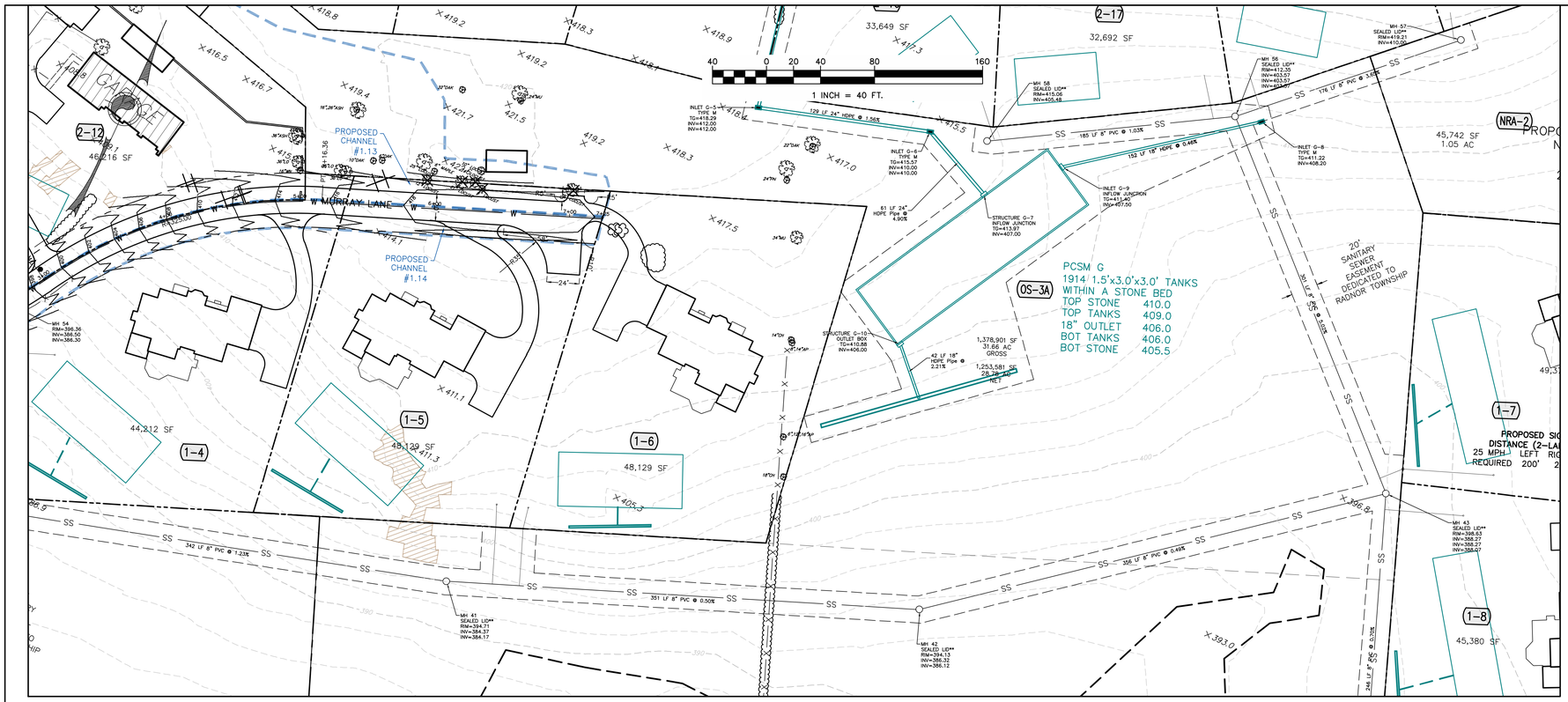
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV#	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW NOTES
2	11/28/14	INTERIM UPDATES
1	10/28/14	

DATE: SEPTEMBER 5, 2014
SHEET NO.
55
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\JMA\DRAWINGS\06012


1 INCH = 40 FT.
EXISTING WALL TO BE REMOVED FROM R/W
PROPOSED SIGHT DISTANCE (2-LANE) 25 MPH LEFT 200' RIGHT 200' REQUIRED
POND
WHEELER LANE PROPOSED PUBLIC ROAD NEW CONSTRUCTION 40' R/W 20' WIDE CARTWAY TWO WAY TRAFFIC
EXISTING GAS LINE (LOCATION APPROXIMATE AND TO BE VERIFIED IN FIELD)
NRA-9
157,328 SF 3.61 AC
171,130 SF 3.93 AC GROSS
151,848 SF 3.49 AC NET
MH 36 SEALED LID** RIM=358.99 INV=351.20 INV=351.00
MH 35 RIM=355.33 INV=349.50 INV=349.30
MH 37 SEALED LID** RIM=362.17 INV=354.55 INV=354.35
MH 38 RIM=370.09 INV=361.10 INV=361.10 INV=360.90
336 LF 8" PVC @ 0.94%
338 LF 8" PVC @ 1.80%
109 LF 8" PVC @ 1.38%
PROPOSED #1 INLET
PROPOSED #2 INLET
PROPOSED #3 INLET
PROPOSED #4 INLET
PROPOSED #5 INLET
PROPOSED #6 INLET
PROPOSED #7 INLET
PROPOSED #8 INLET
PROPOSED #9 INLET
PROPOSED #10 INLET
PROPOSED #11 INLET
PROPOSED #12 INLET
PROPOSED #13 INLET
PROPOSED



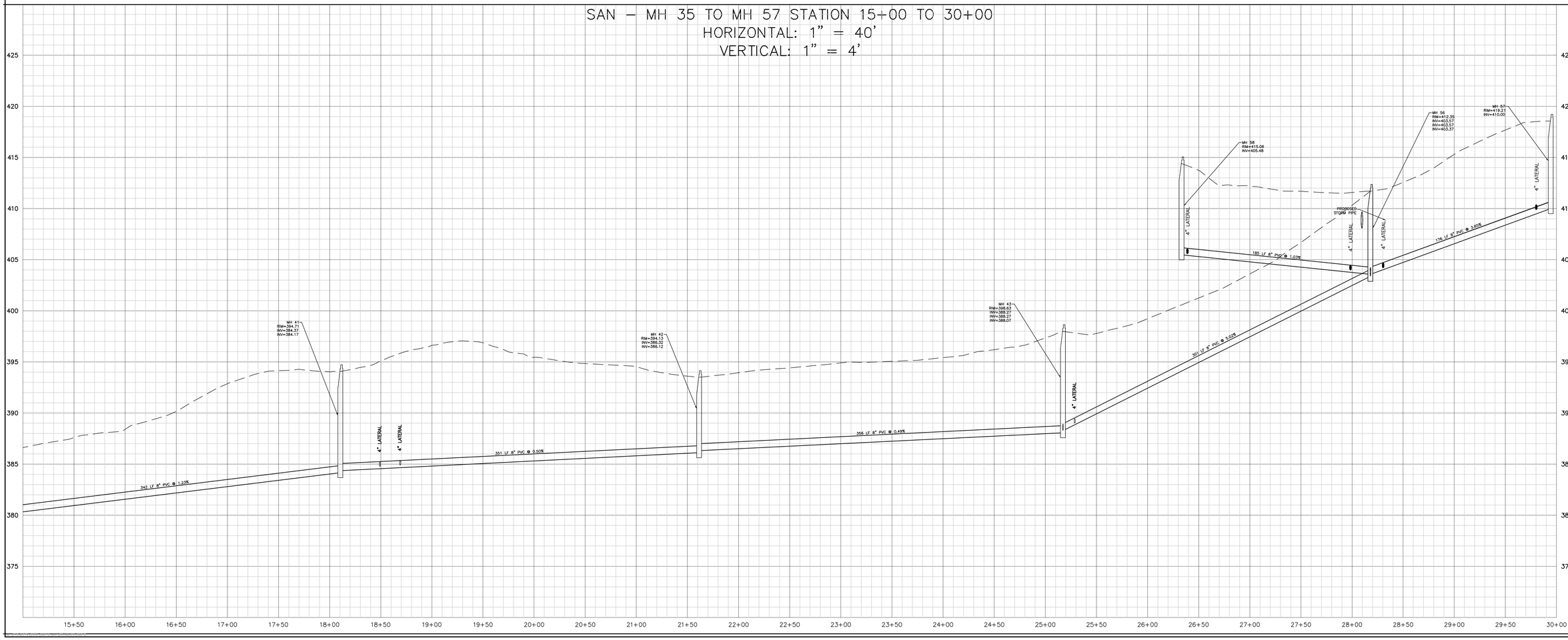
SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

SAN – MH 35 TO MH 57 STATION 15+00 TO 30+00
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



ALL RIGHTS RESERVED. THIS PLAN IS THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR USED IN ANY WAY WITHOUT THE EXPRESS WRITTEN PERMISSION OF MOMENEE & ASSOCIATES, INC. ANY UNAUTHORIZED USE OF THESE PLANS WILL BE SUBJECT TO LEGAL ACTION.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

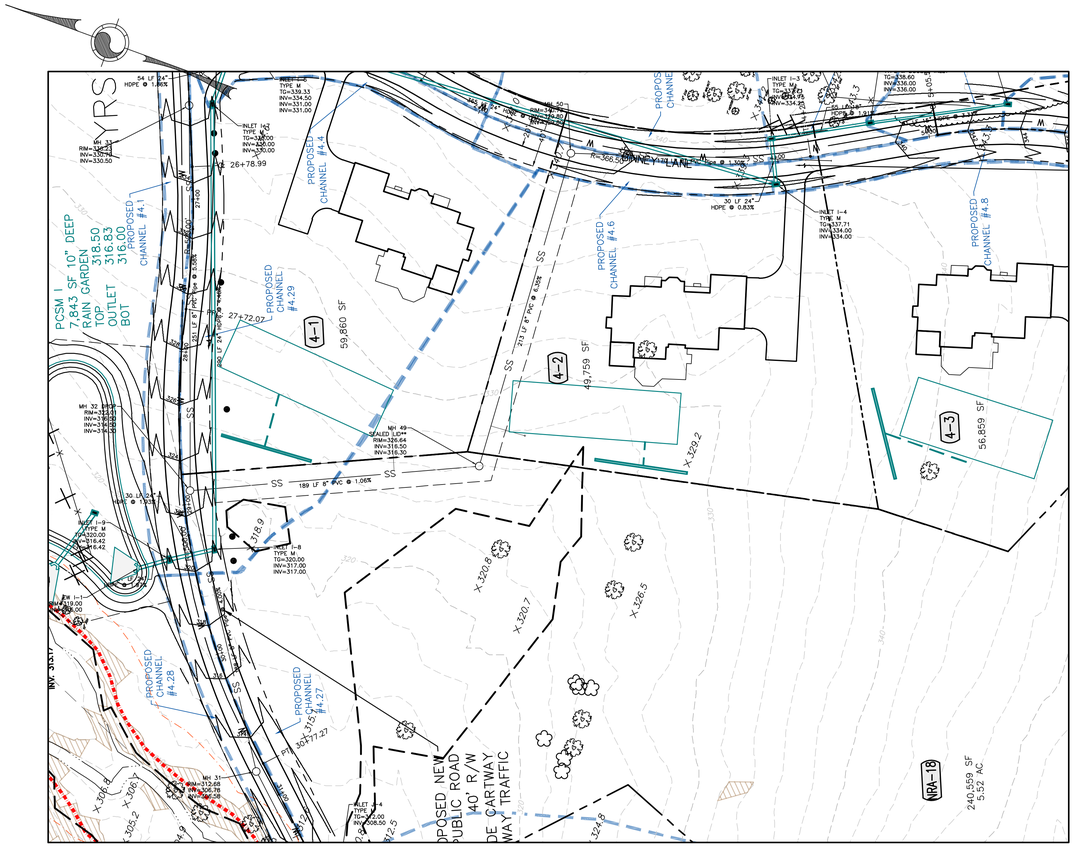
SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.#	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 57 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

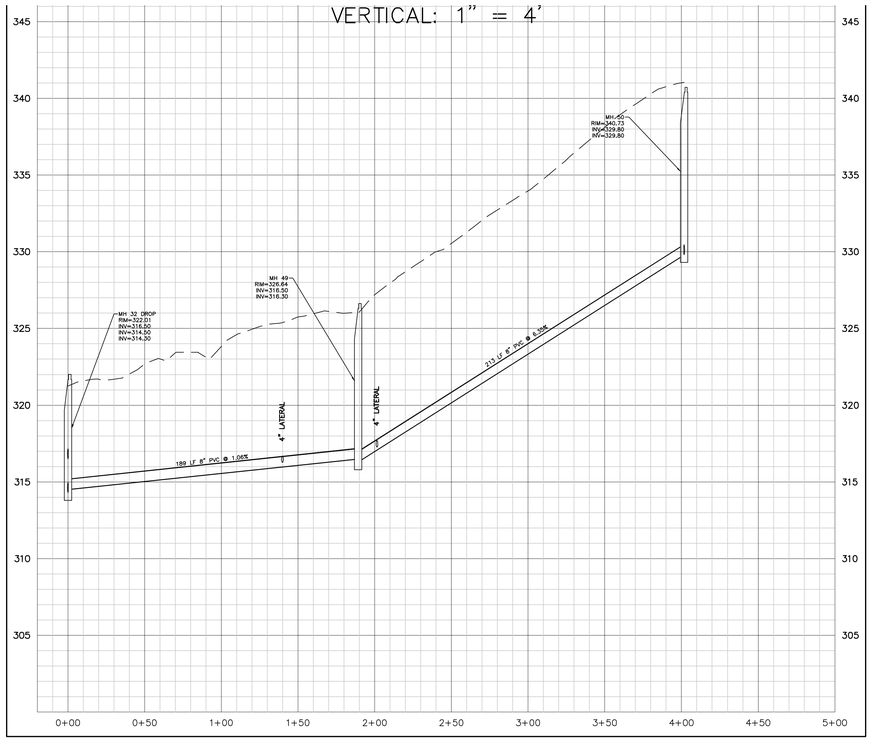


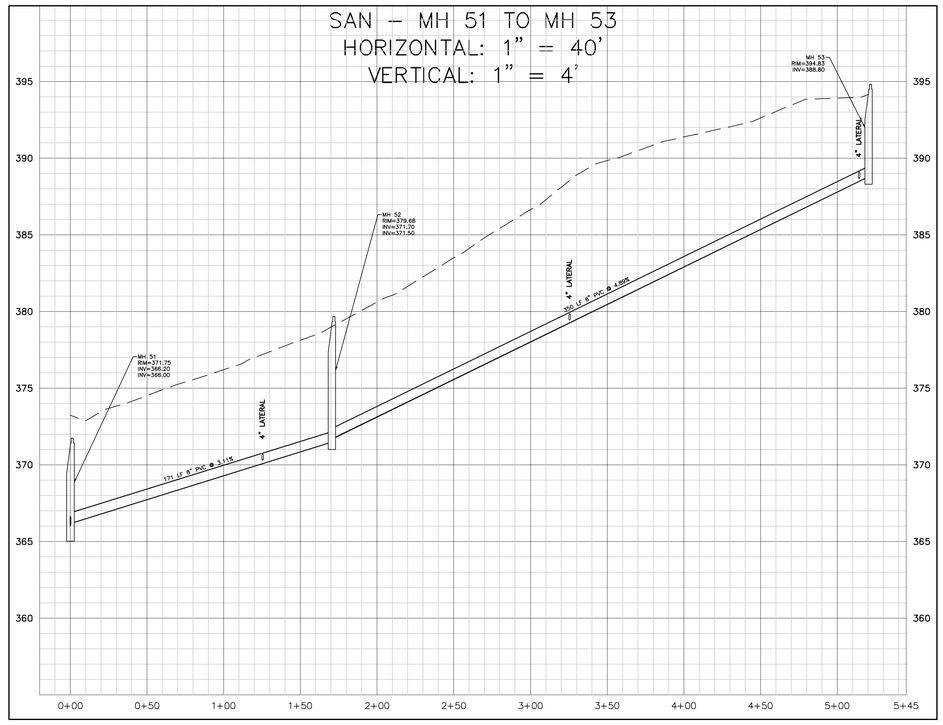
SYMBOL LEGEND

⊙IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
⊙GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
⊙CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊙UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES





40 0 20 40 80 160

1 INCH = 40 FT.

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-9500 FAX: (610) 527-9008

CALL BEFORE YOU DIG!
Serial Number: 20142030820
PENNSYLVANIA ONE CALL SYSTEM, INC.
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARK AS-BUILT LOCATIONS
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

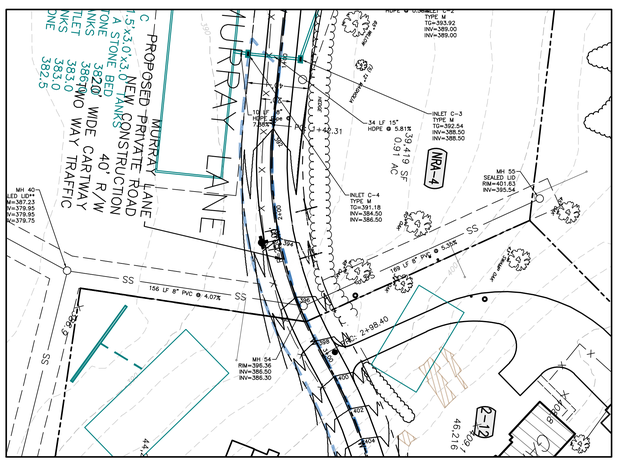
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

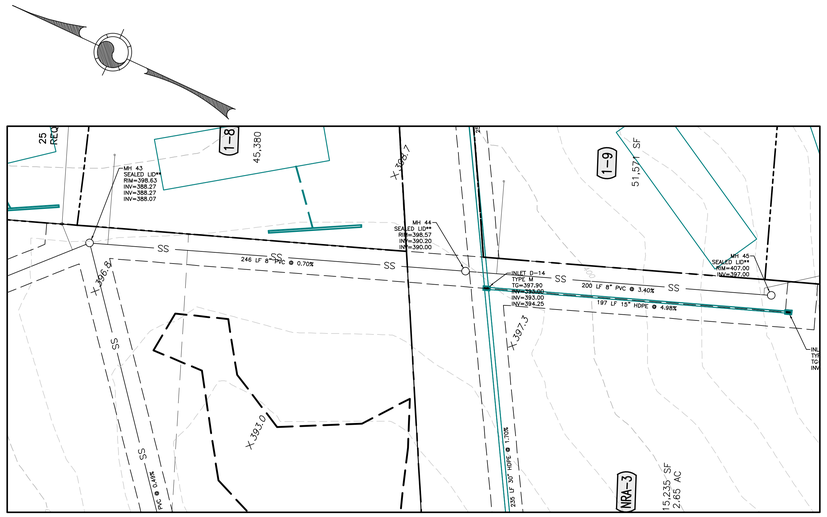
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

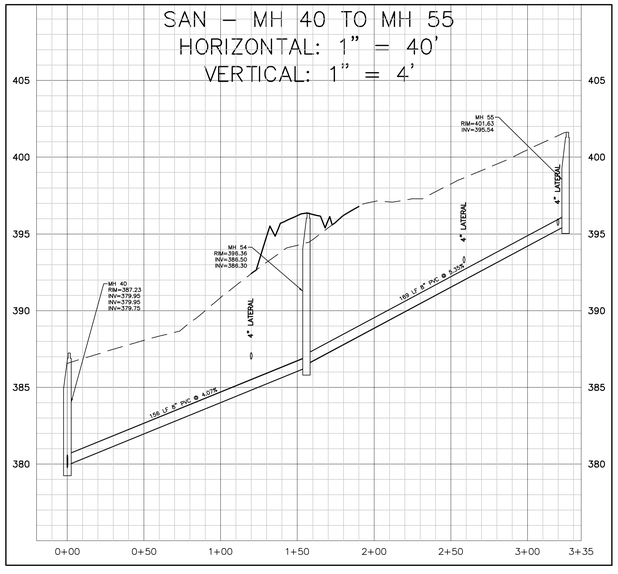
REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

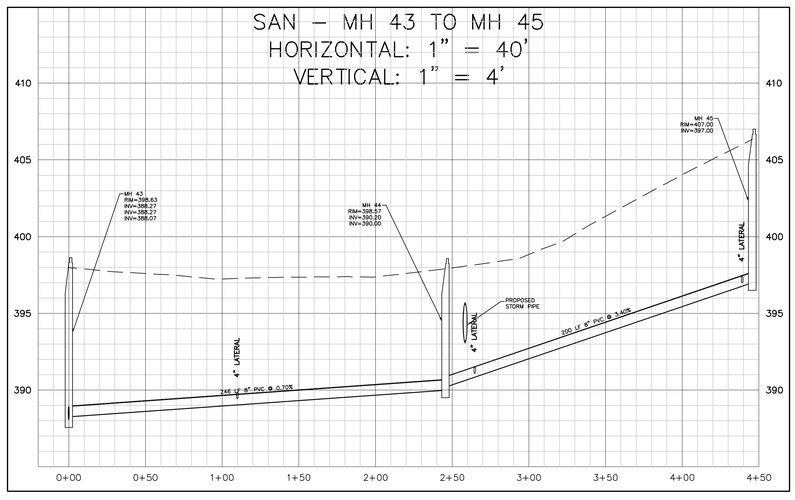
DATE: SEPTEMBER 5, 2014
SHEET NO. 58 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MA\DRAWINGS\06012









SYMBOL LEGEND

⌀IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
□UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED EASEMENT
	PROPOSED ACCESS LINE
	PROPOSED CENTERLINE
	PROPOSED BUILDING SETBACK
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

40 0 20 40 80 160

1 INCH = 40 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON EXISTING SURFACE EVIDENCE AND EXISTING RECORDS. THE EXACT LOCATION AND EXISTENCE OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND SHALL REPAIR ANY DAMAGE DURING CONSTRUCTION AT HIS OWN EXPENSE.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

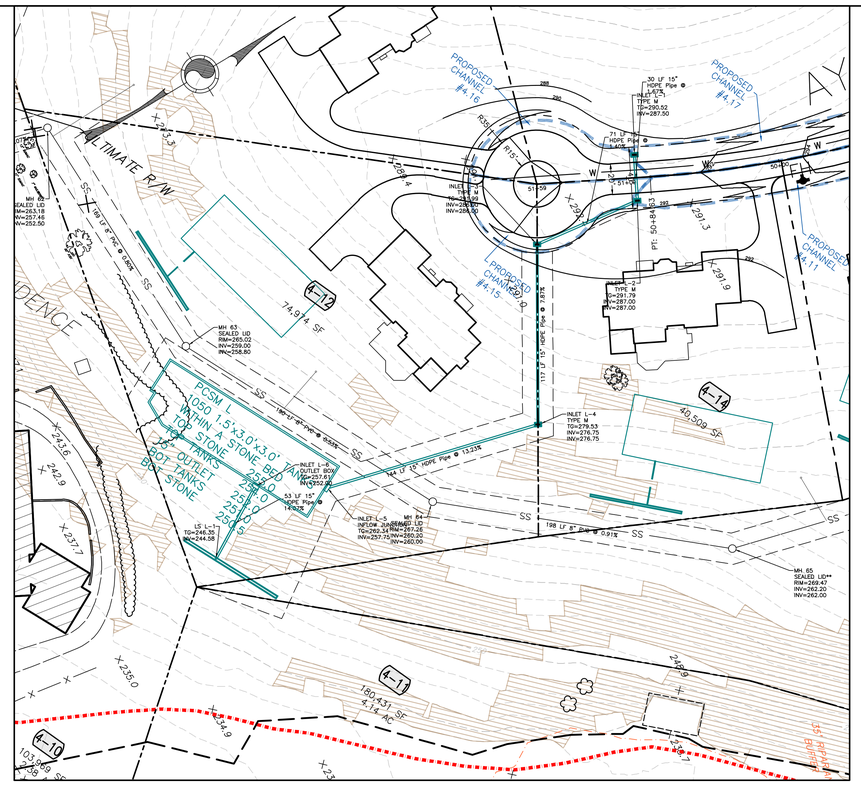
APPLICANT
ESIII LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'I	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
59
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\cad\DRAWINGS\06012

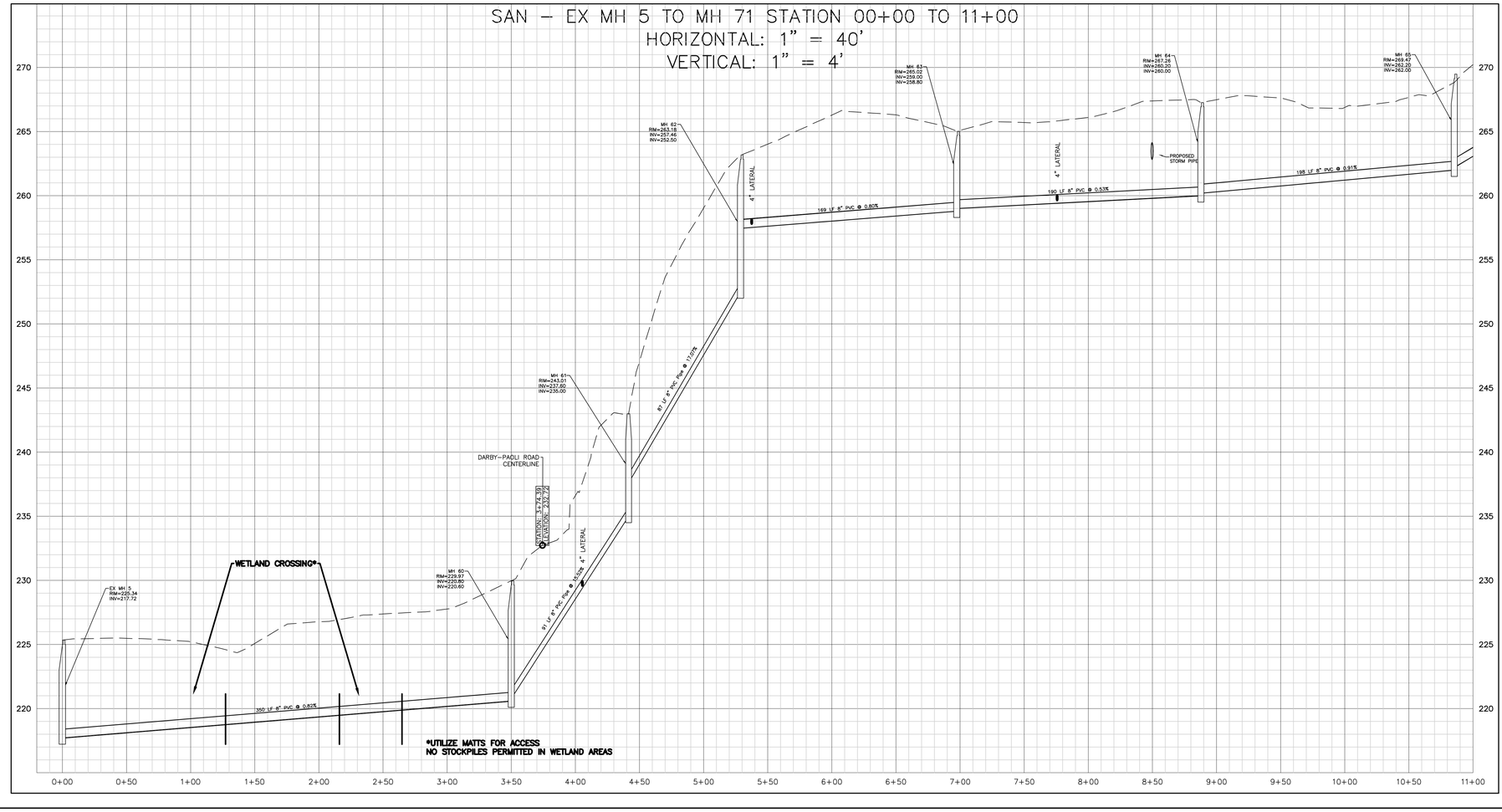


SYMBOL LEGEND

○ IPF	IRON PIN FOUND
□ CMF	CONCRETE MONUMENT FOUND
□ MMF	MARBLE MONUMENT FOUND
□ AC	EXISTING AIR CONDITIONER
○ GV	EXISTING GAS VALVE
□ GM	EXISTING GAS METER
□ EM	EXISTING ELECTRIC METER
○ CO	EXISTING CLEANOUT
RGH	ROOF OVERHANG
●	EXISTING TREE
□ UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
378	PROPOSED BUFFER
	PROPOSED OPEN SPACE
	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES



40 0 20 40 80 160
1 INCH = 40 FT.

Serial Number: 201-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9068

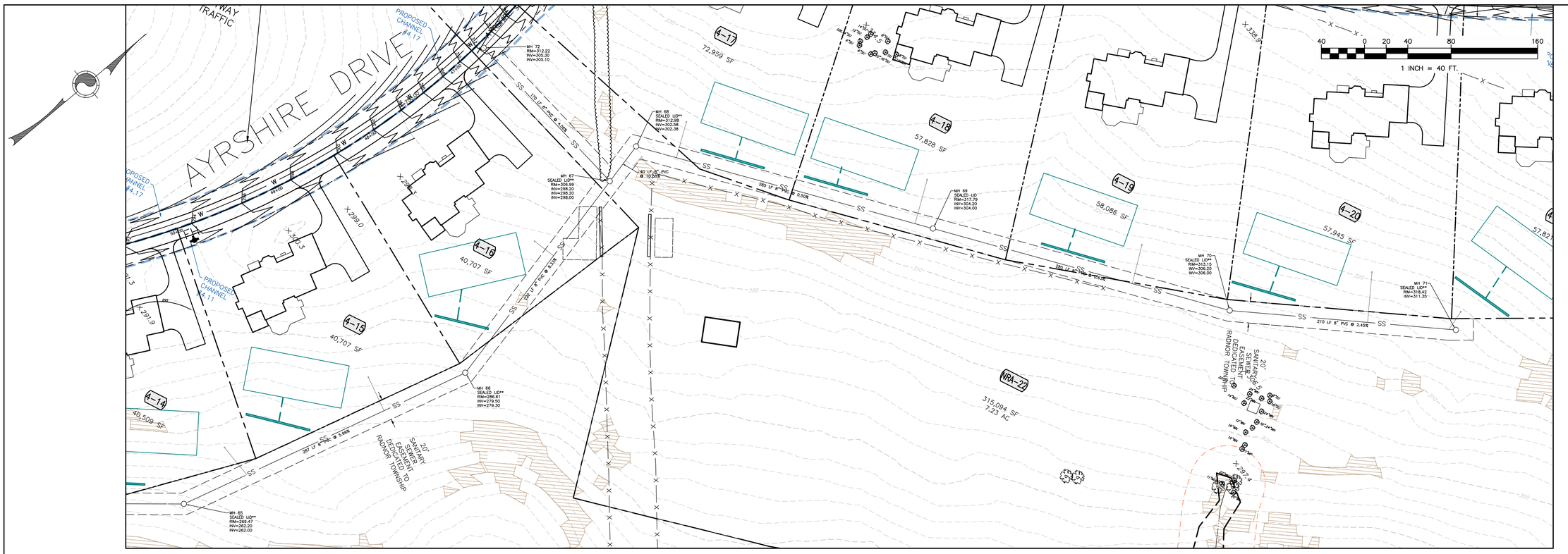
SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

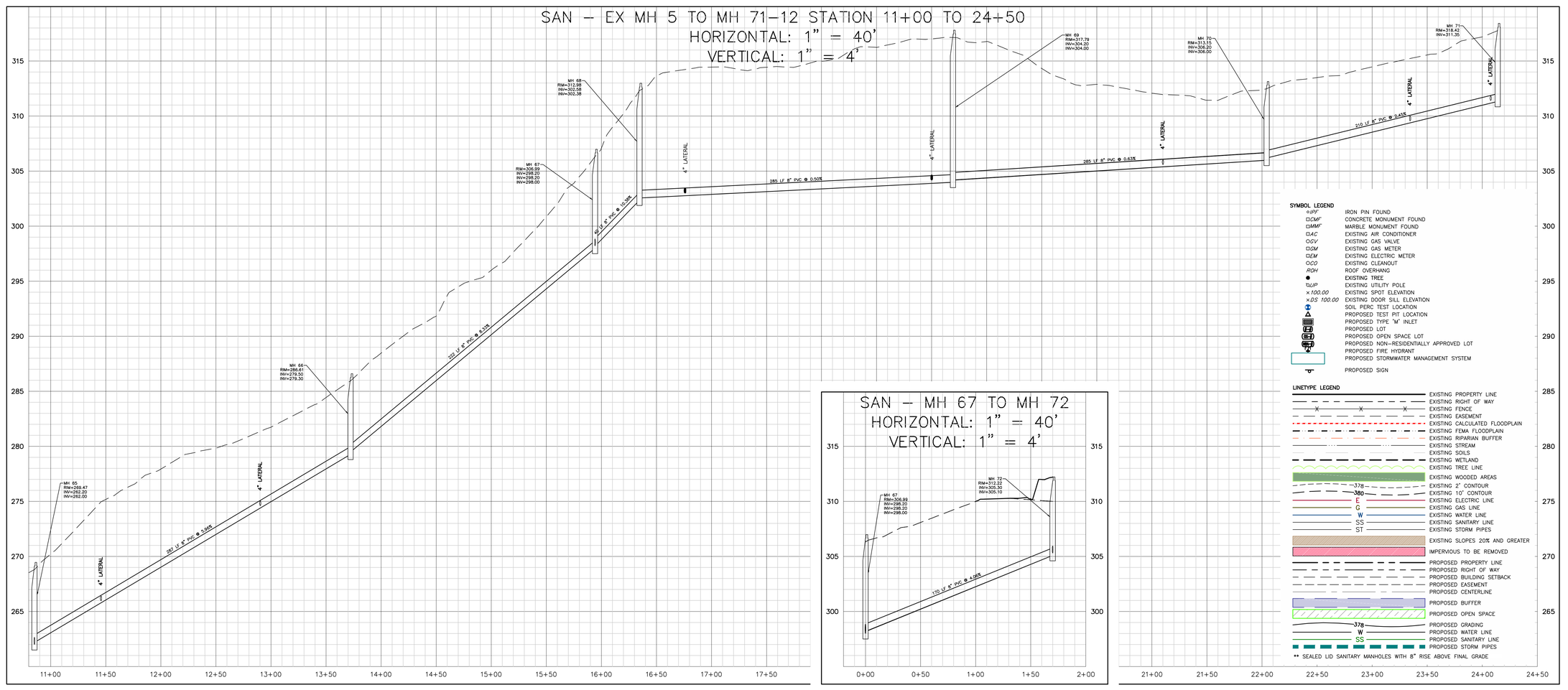
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESIII LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

NO.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW NOTES
2	11/26/14	INTERIM UPDATES
1	10/29/14	

DATE: SEPTEMBER 5, 2014
SHEET NO.
60
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012





SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- x 100.00 EXISTING SPOT ELEVATION
- x 03 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE "M" INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

I HEREBY CERTIFY THAT THE PLANS AND PROFILES SHOWN HEREON ARE CORRECT AND ACCURATE AND THAT ALL MONUMENTS AND LOT MARKERS SHOWN HEREON EXIST AS STATED OR WILL BE SET AS SHOWN ON THE RECORD PLAN. I ALSO CERTIFY THAT THE PROPOSED IMPROVEMENTS SHOWN HEREON ARE DESIGNED IN ACCORDANCE WITH THE RADNOR TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

DAVID R. FIORELLO, REGISTERED PROFESSIONAL ENGINEER, PE032478E

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9698

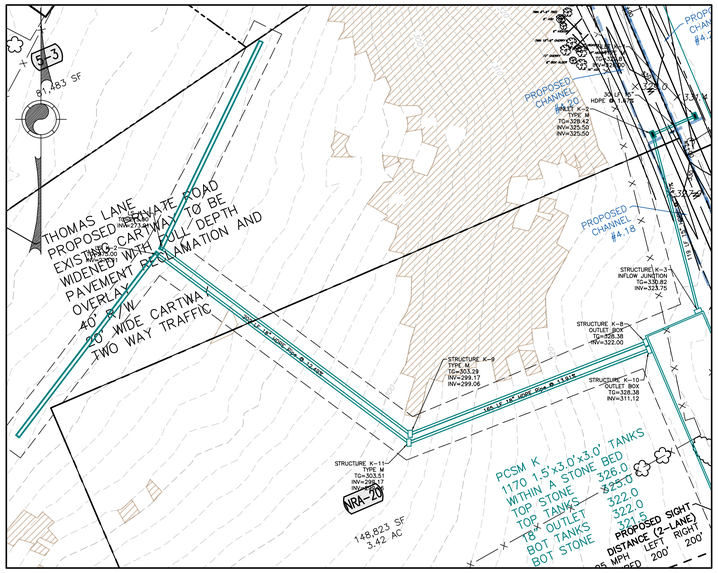
SANITARY PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

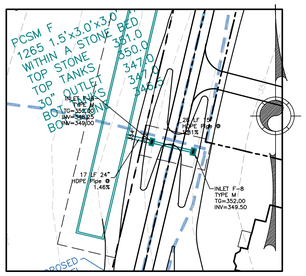
APPLICANT
ESIII LP
102 TWADDELL MILL ROAD
WILMINGTON, DE 19807

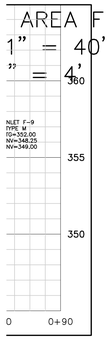
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

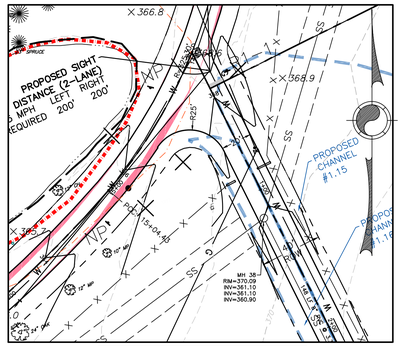
REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/8/14	RSR TOWNSHIP REVIEW

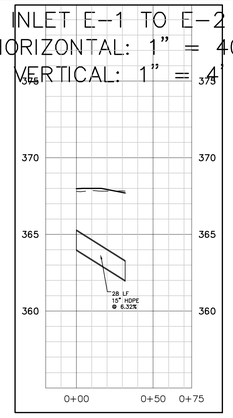
DATE: SEPTEMBER 5, 2014
SHEET NO. 61 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012











SYMBOL LEGEND

⊙IPF	IRON PIN FOUND
⊡CMF	CONCRETE MONUMENT FOUND
⊡MMF	MARBLE MONUMENT FOUND
⊡AC	EXISTING AIR CONDITIONER
⊡GV	EXISTING GAS VALVE
⊡GM	EXISTING GAS METER
⊡EM	EXISTING ELECTRIC METER
⊡CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
⊡UP	EXISTING UTILITY POLE
×100.00	EXISTING SPOT ELEVATION
×DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

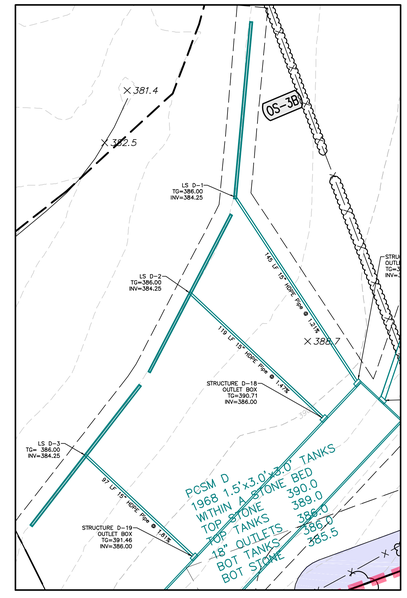
LINETYPE LEGEND

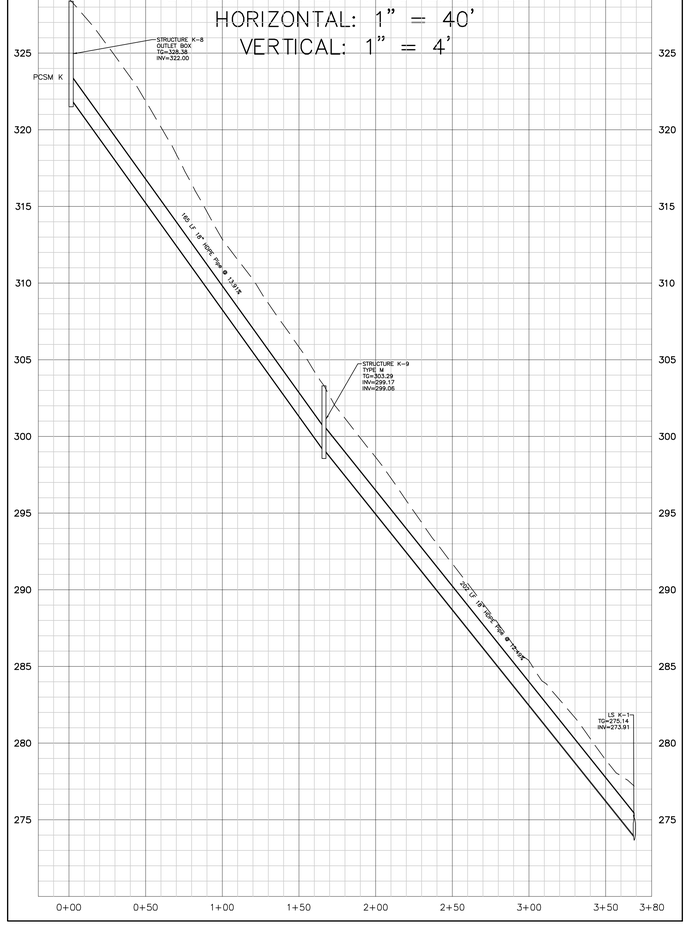
	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

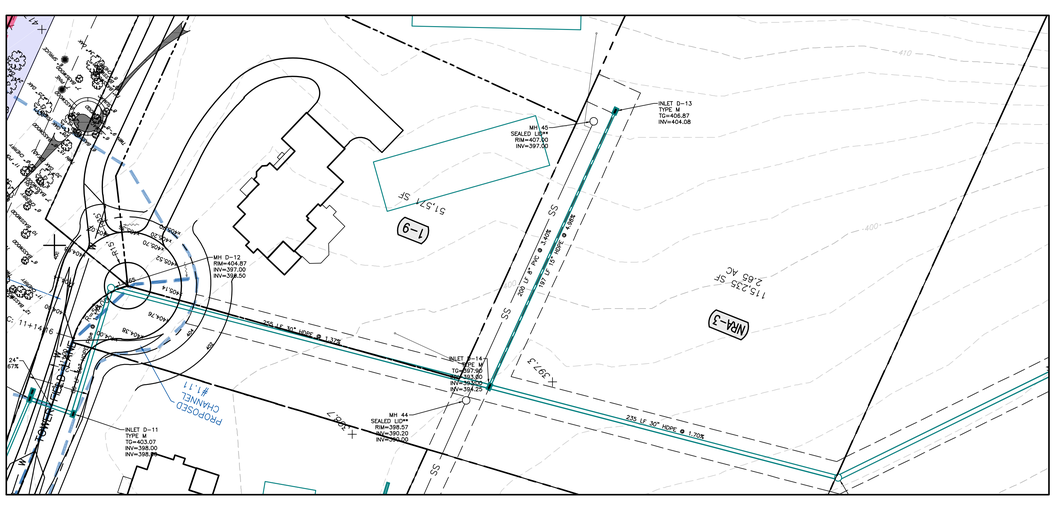
** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE

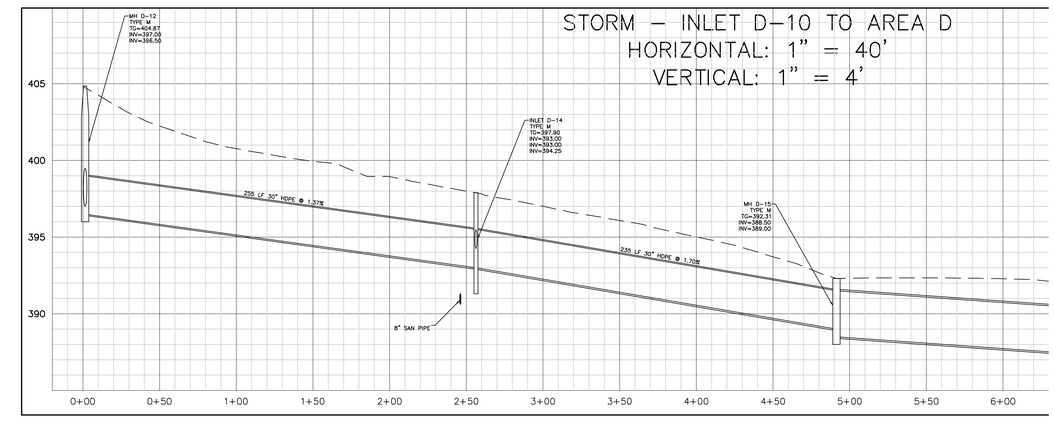
40 0 20 40 80 160

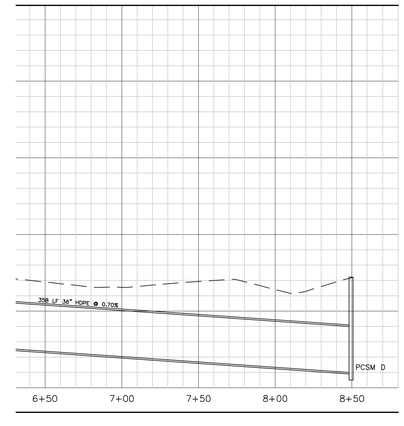
1 INCH = 40 FT.











PENNSYLVANIA ONE CALL SYSTEM, INC.
PENNSYLVANIA LAW REQUIRES THAT YOU NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT LEAST THREE BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION. EXCEPTIONS TO THIS RULE ARE EMERGENCIES AS DEFINED IN THE ACT, AND NORMAL FARMING OPERATIONS. THE PENNSYLVANIA ONE CALL SYSTEM, INC. MUST BE NOTIFIED IN ALL CASES.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES A MINIMUM OF 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE BEFORE YOU EXCAVATE.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

PCSM PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

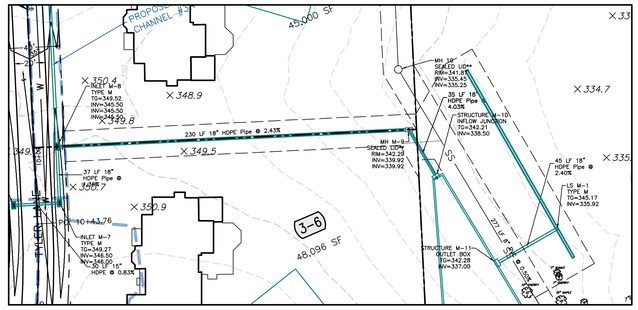
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

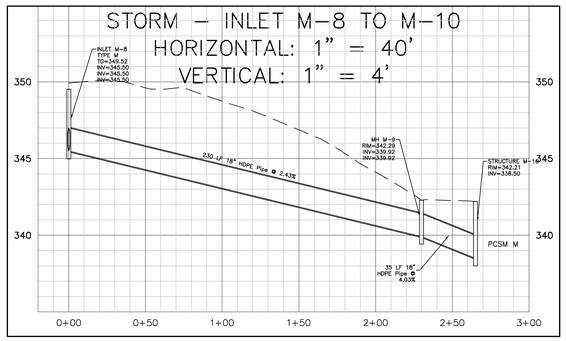
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

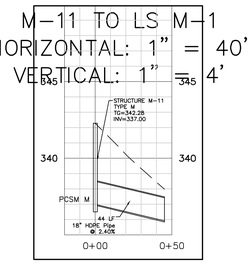
REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/29/14	NPDES
1	10/29/14	INTERIM UPDATES

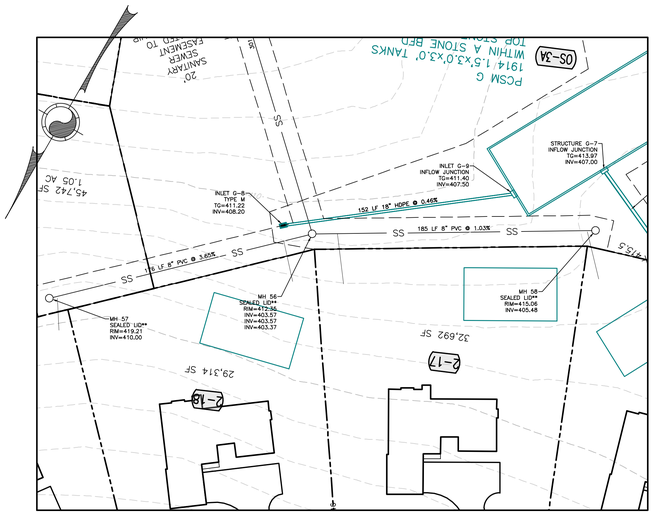
DATE: SEPTEMBER 5, 2014
SHEET NO. 62 OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

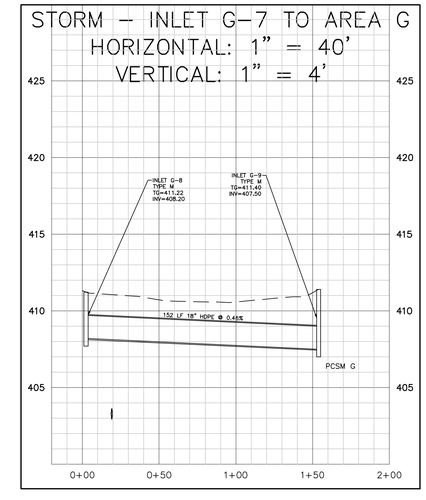
M:\PROJECTS\2006\0607\MA\DRAWINGS\0602

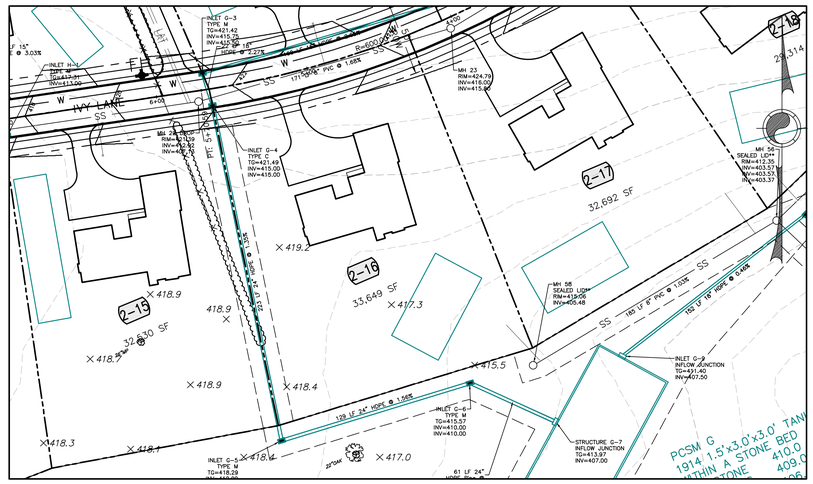


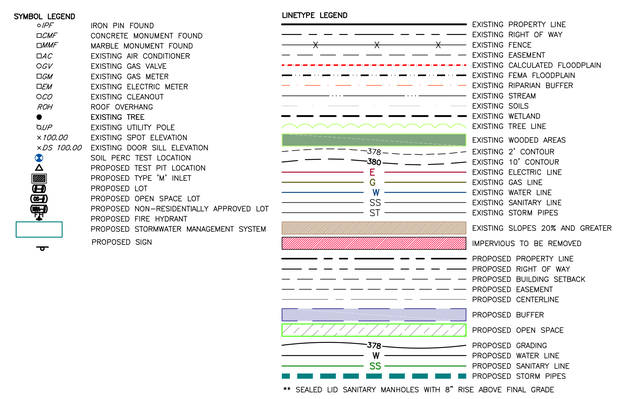












Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PLANS AND 10 WORKING
DAYS NOTICE FOR EXCAVATION PLANS
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED
PROFESSIONAL
ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

PCSM PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH II LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

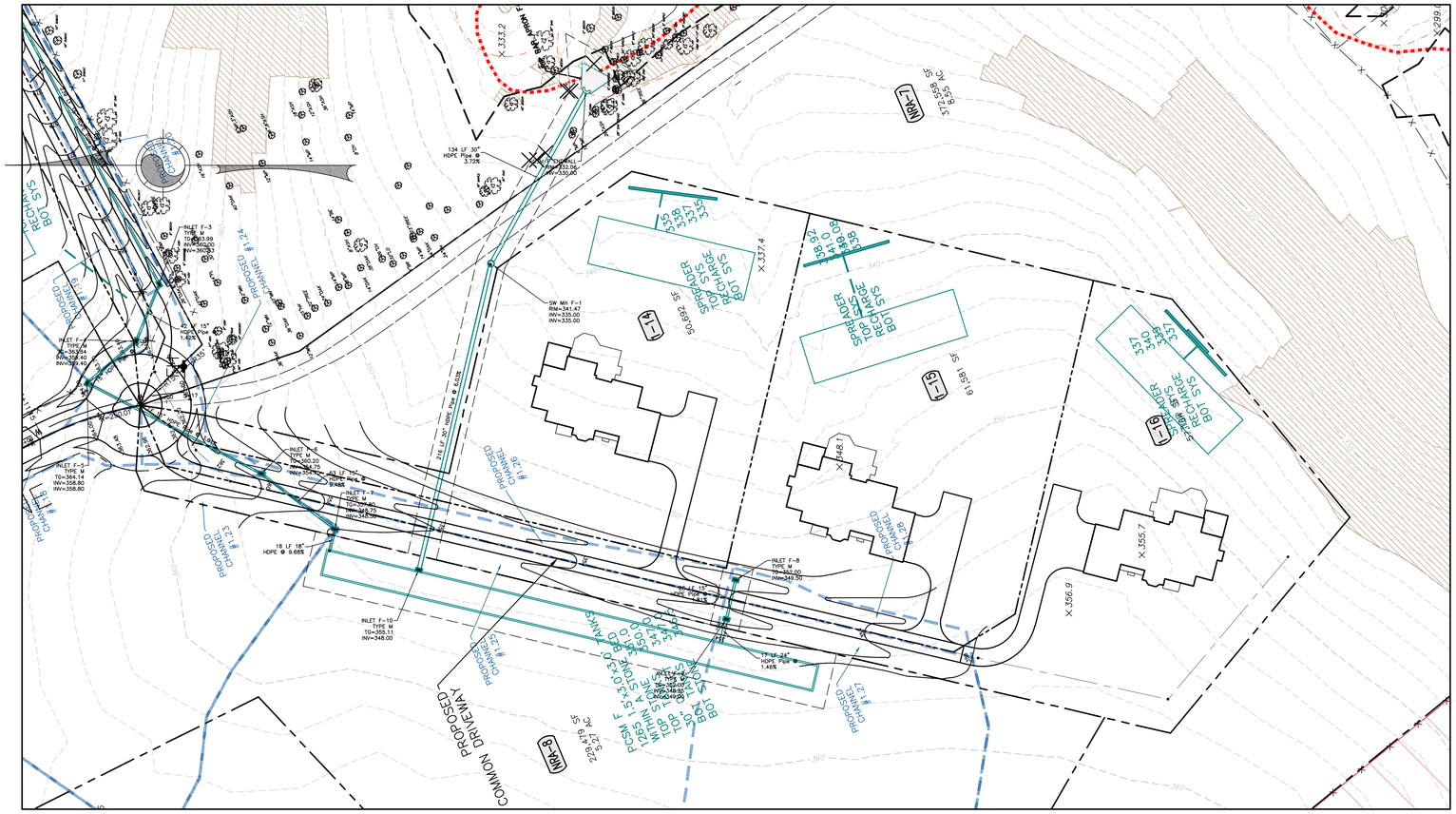
REV'L	DATE	COMMENTS
4	10/28/14	INTERIM UPDATES
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	

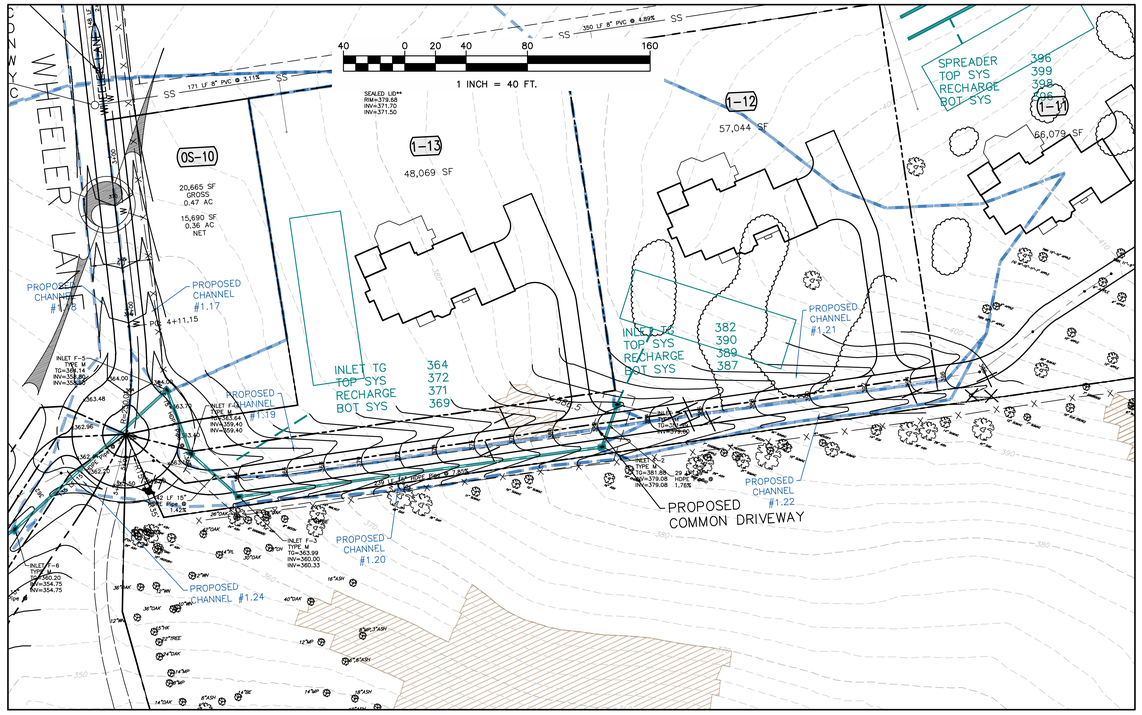
DATE: SEPTEMBER 5, 2014
SHEET NO.
63
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

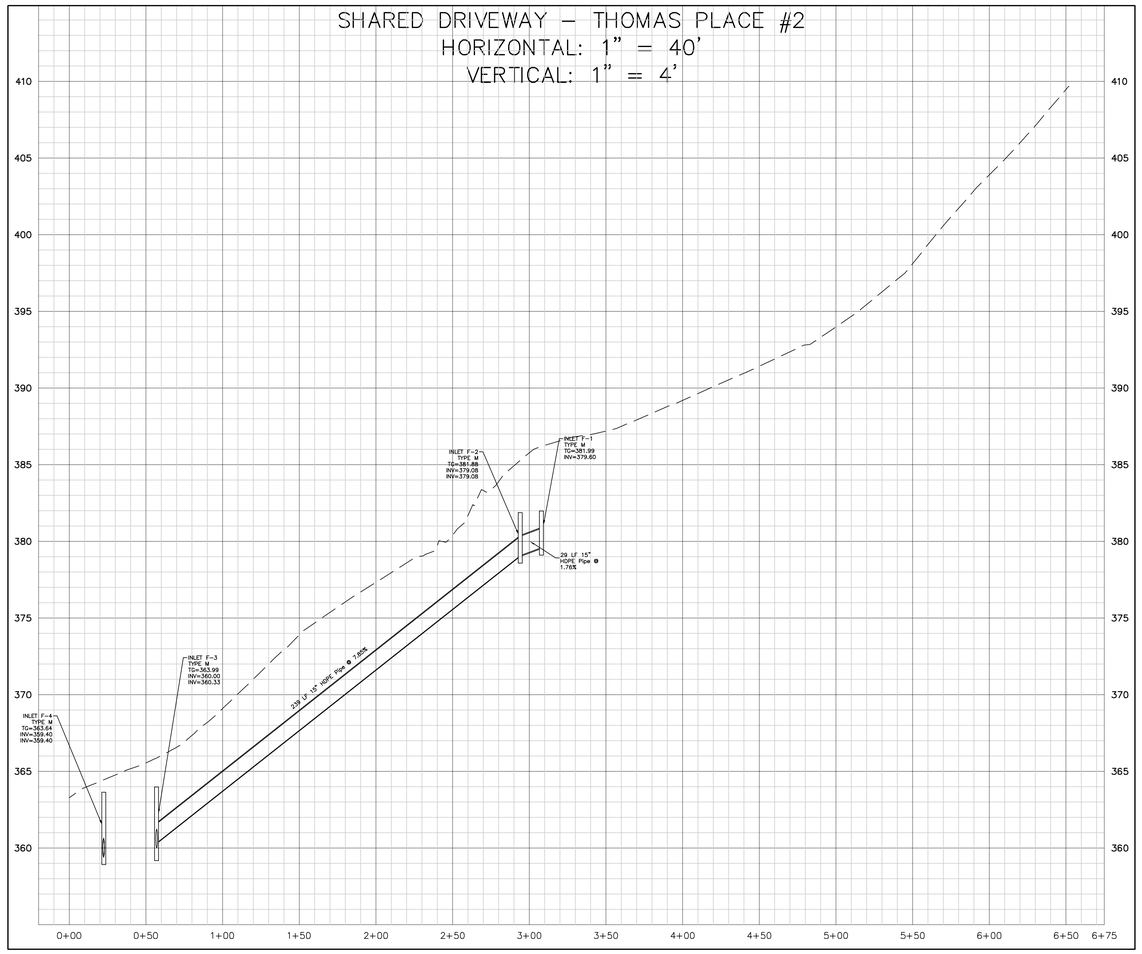
M:\PROJECTS\2006\06012\JMA\DRAWINGS\06012

40 0 20 40 80 160

1 INCH = 40 FT.


PROPOSED COMMON DRIVEWAY
PROPOSED 24' ACCESS EASEMENT
PROPOSED 30' ACCESS EASEMENT
PROPOSED 30' ACCESS EASEMENT
PROPOSED 30





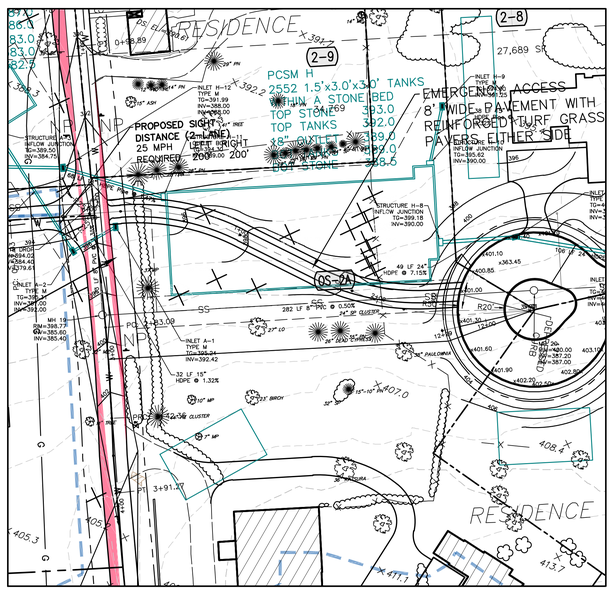
SYMBOL LEGEND

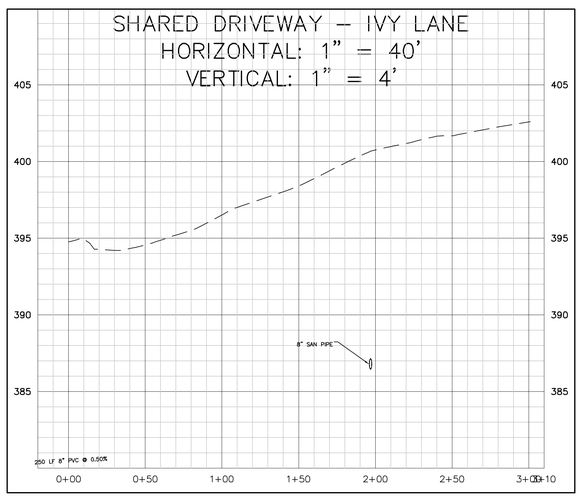
○IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
ROH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC/ TEST LOCATION
	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE "M" INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES

** SEALED LID SANITARY MANHOLES WITH 8" RISE ABOVE FINAL GRADE





MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3060 FAX (610) 527-9068

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL
PROFILE
PROFILE

PCSM PLAN AND PROFILE
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

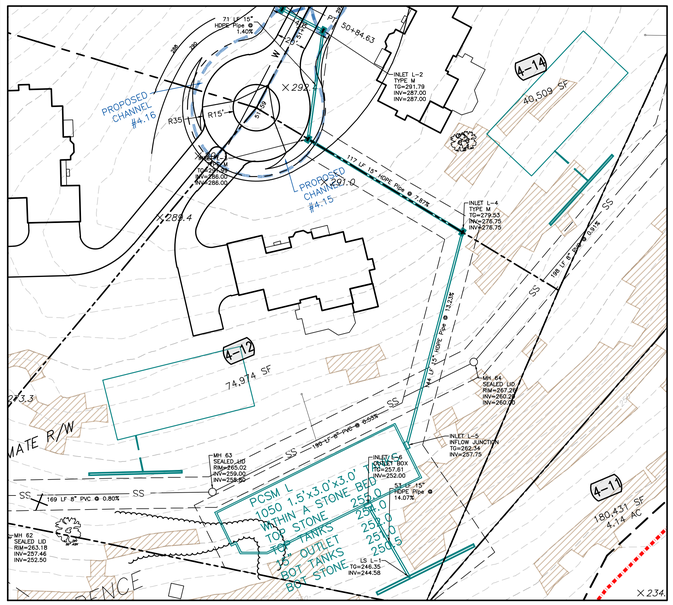
APPLICANT
ESIII LP
102 TWADDELL MILL ROAD
WILMINGTON, DE 19807

REV.	DATE	COMMENTS
3	12/8/14	PSR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
65
OF 93
SCALE: 1" = 40'
FILE NO.: 06-012

ENDWALLS & SPREADERS

PLAN AND PROFILES


PROPOSED CHANNEL #4.16
PROPOSED CHANNEL #4.15
PROPOSED CHANNEL #4.14
PROPOSED CHANNEL #4.28
4-14
40,509 SF
4-12
74,974 SF
4-1
180,431 SF
4.14 AC
INLET L-2 TYPE M TG=291.79 INV=287.00 INV=287.00
INLET L-4 TYPE M TG=279.55 INV=276.75 INV=278.75
INLET L-5 INFLOW JUNCTION TG=260.54 INV=257.75
INLET K-6 TYPE M TG=257.61 INV=252.00
INLET K-7 TYPE M TG=252.00 INV=247.00
MH 63 SEALED LID RIM=265.02 INV=258.06 INV=258.56
MH 62 SEALED LID RIM=263.18 INV=257.46 INV=252.50
MH 64 SEALED LID RIM=267.29 INV=260.29 INV=260.79
169 LF 8" PVC @ 0.80%
179 LF 15" HDPE Pipe @ 4.75%
41 LF 15" HDPE Pipe @ 13.52%
PCSM L 1050 1.5'x3.0'x3.0' TANKS WITHIN A STONE BED TOP STONE 25" OUTLET BOT TANKS BOT STONE
PCSM K 1170 1.5'x3.0'x3.0' TANKS WITHIN A STONE BED TOP STONE 18" OUTLET BOT TANKS BOT STONE
RIP RAP APRON L-2 INV. 313.17
42 LF 24" HDPE Pipe @ 7.93%
INLET I-10 TYPE M TG=318.00 INV=316.42 INV=316.42
INLET I-9 TYPE M TG=319.00 INV=316.00
STRUCTURE K-3 INFLOW JUNCTION TG=330.50 INV=323.75
STRUCTURE K-8 OUTLET BOX TG=328.38 INV=322.00
STRUCTURE K-10 OUTLET BOX TG=328.38 INV=311.12
STRUCTURE K-9 TYPE M TG=303.29 INV=295.17 INV=294.67
PCSM K 1170 1.5'x3.0'x3.0' TANKS WITHIN A STONE BED TOP STONE 18" OUTLET BOT TANKS BOT STONE
INLET P-1 TYPE M TG=356.68 INV=350.67
INLET P-2 TYPE M TG=355.86 INV=352.83
EW P-1 RIM=352.28 INV=350.28
MH 37 SEALED LID** RIM=363.12 INV=354.55
MH 38 SEALED LID** RIM=363.27 INV=354.77
MH 39 SEALED LID** RIM=363.27 INV=354.77
MH 40 SEALED LID** RIM=363.27 INV=354.77
MH 41 SEALED LID** RIM=363.27 INV=354.77
MH 42 SEALED LID** RIM=363.27 INV=354.77
MH 43 SEALED LID** RIM=363.27 INV=354.77
MH

LOCATION MAP
SCALE: 1" = 2,000'

SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

FOR EROSION AND SEDIMENTATION CONTROL PHASING SEE SHEETS 61–74

SYMBOL LEGEND

- IPF — IRON PIN FOUND
- CMF — CONCRETE MONUMENT FOUND
- MMF — MARBLE MONUMENT FOUND
- AC — EXISTING AIR CONDITIONER
- GV — EXISTING GAS VALVE
- GM — EXISTING GAS METER
- EM — EXISTING ELECTRIC METER
- CO — EXISTING CLEANOUT
- ROH — ROOF OVERHANG
- EXISTING TREE
- UP — EXISTING UTILITY POLE
- ×100.00 — EXISTING SPOT ELEVATION
- ×DS 100.00 — EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 — EXISTING 2' CONTOUR
- 380 — EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 — PROPOSED GRADING
- W — PROPOSED WATER LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

200 0 100 200 400 800
1 INCH = 200 FT.

COPYRIGHT: MOMENEE AND ASSOCIATES, INC. CONSULTING ENGINEERS, EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND ALL OTHER PROPRIETARY RIGHTS IN THESE PLANS. ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE AND ASSOCIATES. THEY ARE TO BE USED ONLY WITH RESPECT TO THIS PROJECT AND ARE NEITHER TO BE USED ON ANY OTHER PROJECT, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE AND ASSOCIATES. ANY RE-USE WITHOUT WRITTEN PERMISSION, VERIFICATION, CONSENT OR ADAPTATION BY MOMENEE AND ASSOCIATES, INC. FOR THE SPECIFIC PURPOSE INTENDED, WILL BE AT THE THIRD PARTY'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MOMENEE AND ASSOCIATES, INC. THE THIRD PARTY SHALL FURTHER INDEMNIFY AND HOLD HARMLESS MOMENEE AND ASSOCIATES, INC. FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING THEREFROM.

Serial Number: 2014-203-0820
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, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL ENGINEER DAVID R. FIORELLO PE027479E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-9008

OVERALL EROSION AND SEDIMENTATION CONTROL PLAN
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA

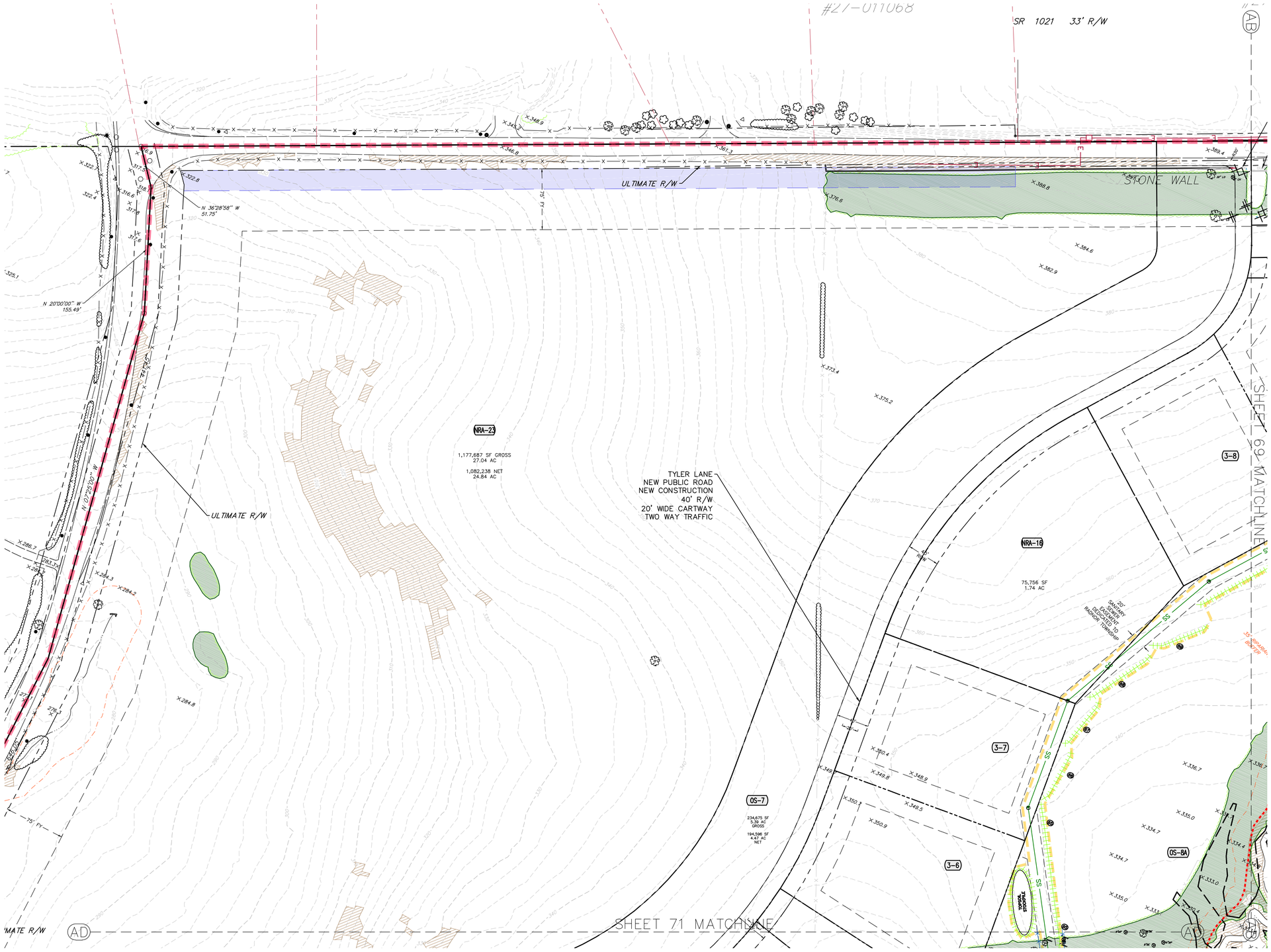
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL: 203-0820
DRAWN BY: JRM
CHECKED BY: DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 67 OF 93
SCALE: 1" = 200'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MAI\DRAWINGS\06012



SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- ×DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE "M" INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE SURVEYS OF VISIBLE EVIDENCE AND EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND SERVICES.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO MARKING OF UNDERGROUND FACILITIES.
Pennsylvania One Call System, Inc.
1-800-242-1776

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9008 FAX: (610) 527-9088

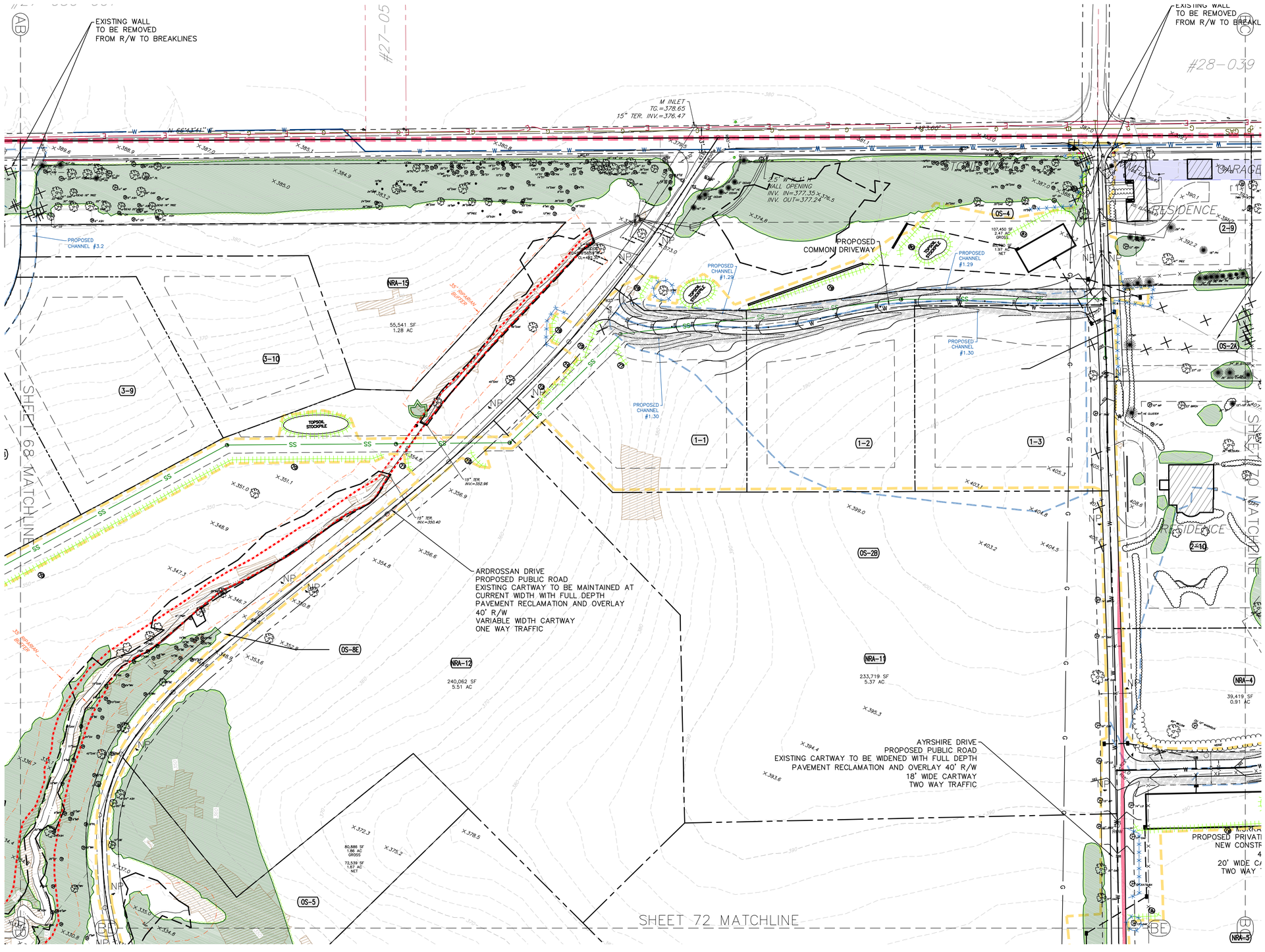
EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

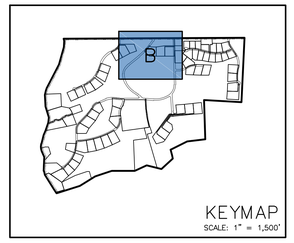
APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 68 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
UNDERGROUND UTILITY LINES MUST BE MARKED A MINIMUM OF 3 WORKING DAYS NOTICE FOR CONSTRUCTION PLANS AND 10 WORKING DAYS NOTICE FOR DESIGN PLANS
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
REGISTERED
PROFESSIONAL LAND SURVEYOR
REGISTERED

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX: (610) 527-9008

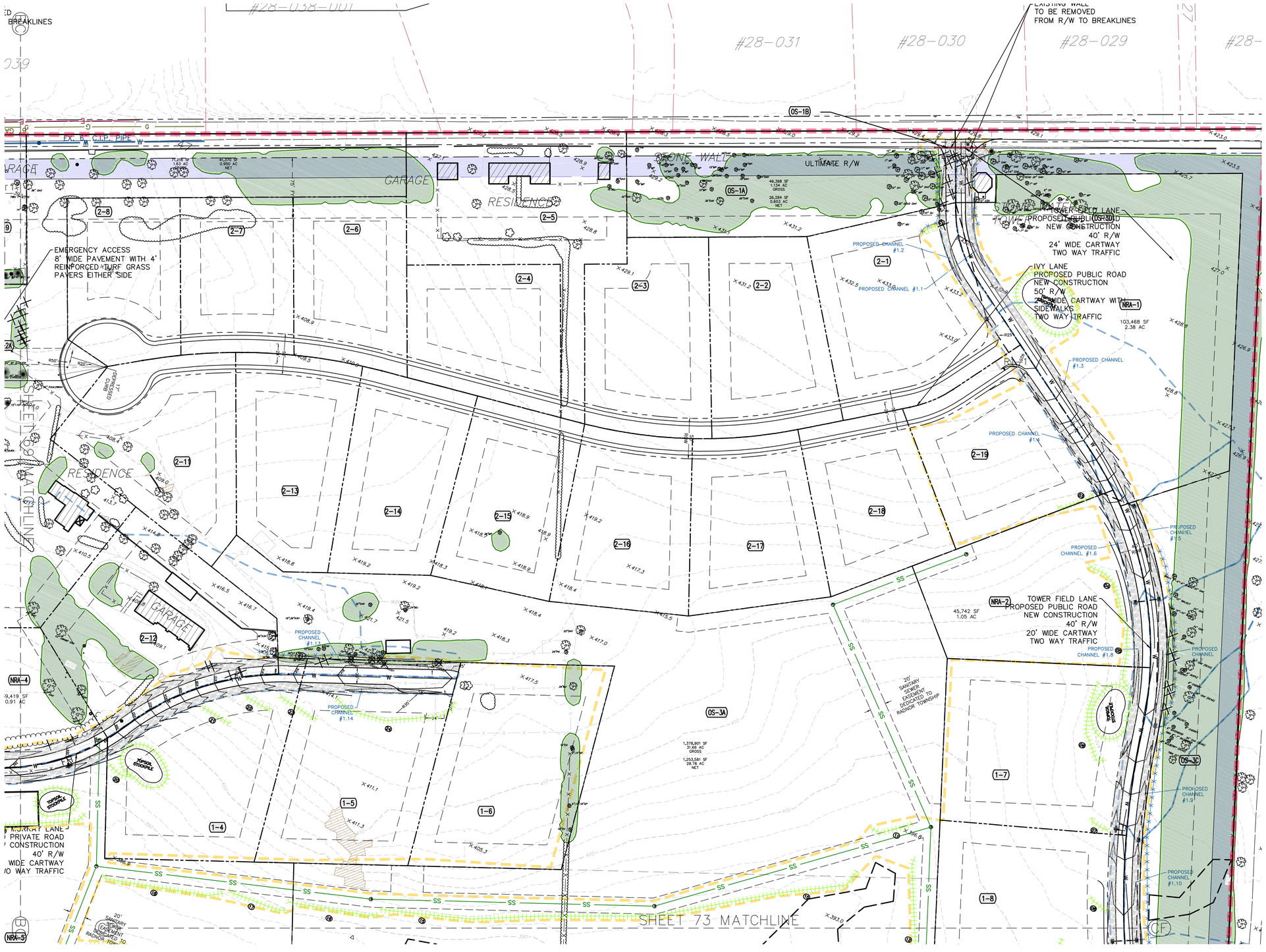
EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

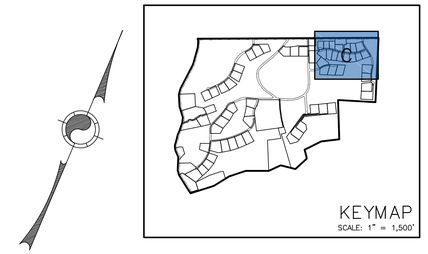
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 69 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- EXISTING SPOT ELEVATION
- EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

PENNSYLVANIA ONE CALL SYSTEM, INC. SERIAL NUMBER: 20142030820 DESIGNATION: PLANNED AREA DATE: 10/28/2014 TIME: 10:28:00 AM

Serial Number: 20142030820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9088

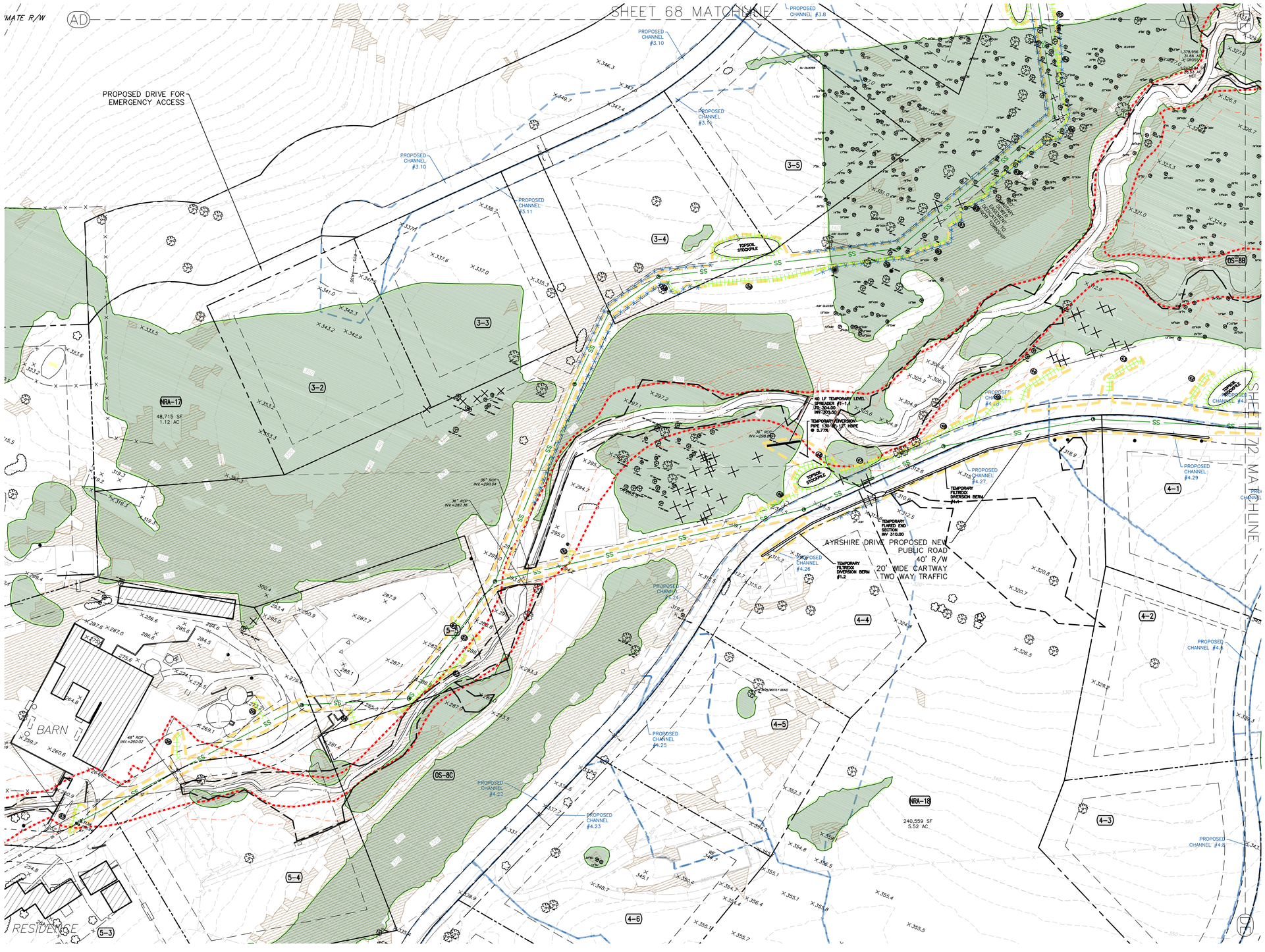
EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

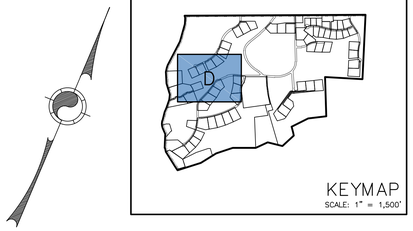
APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	FOR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 70 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- OS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 EXISTING 2' CONTOUR
- 380 EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED

- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 PROPOSED GRADING
- W PROPOSED WATER LINE
- SS PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

PLANS PREPARED IN ACCORDANCE WITH CHAPTER 102 OF THE PA DEP RULES AND REGULATIONS AND THE LATEST EDITION OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL MANUAL. ALL PLANS, DESIGNS, CALCULATIONS, AND REPORTS PREPARED BY MOMENEE & ASSOCIATES, INC. ARE THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF MOMENEE & ASSOCIATES, INC. © COPYRIGHT 2014 MOMENEE & ASSOCIATES, INC. ALL RIGHTS RESERVED.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — PROFESSIONAL ENGINEER — PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH1 LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PDR TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 1
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\0607\MA\DRAWINGS\0607

SHEET 69 MATCHLINE

SHEET 71 MATCHLINE

SHEET 73 MATCHLINE

SHEET 74 MATCHLINE

NRA-13
193,327 SF
4.44 AC

NRA-10
233,930 SF
5.37 AC

NRA-9
160,941 SF
3.69 AC

NRA-9
157,328 SF
3.61 AC

NRA-8
229,479 SF
5.27 AC

OS-6
171,130 SF
3.93 AC GROSS
151,848 SF
3.49 AC NET

OS-10
20,665 SF
0.47 AC GROSS
15,690 SF
0.36 AC NET

POND

MANOR HOUSE

EXISTING WALL TO BE REMOVED FROM R/W

OLD CULVERT FILLED IN
TOP OF CULVERT ARCH=367.17
TOP OF 4" PVC.=365.35
TOP OF 3" PVC.=365.57
24" TER. INV. OUT=363.69

OLD CULVERT FILLED IN
TOP OF CULVERT ARCH=367.72
TOP OF 4" PVC.=367.22

EXISTING GAS LINE
(LOCATION APPROXIMATE AND TO BE VERIFIED IN FIELD)

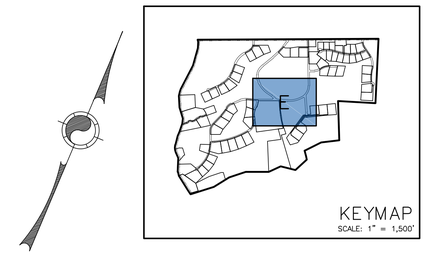
9 WHEELER LANE
PROPOSED PUBLIC ROAD
NEW CONSTRUCTION
40' R/W
20' WIDE CARTWAY
TWO WAY TRAFFIC

PROPOSED COMMON DRIVEWAY

PROPOSED CHANNEL #4.2
PROPOSED CHANNEL #4.3
PROPOSED CHANNEL #4.4
PROPOSED CHANNEL #4.5
PROPOSED CHANNEL #4.7
PROPOSED CHANNEL #4.9
PROPOSED CHANNEL #1.15
PROPOSED CHANNEL #1.16
PROPOSED CHANNEL #1.17
PROPOSED CHANNEL #1.18
PROPOSED CHANNEL #1.19
PROPOSED CHANNEL #1.20
PROPOSED CHANNEL #1.23
PROPOSED CHANNEL #1.24
PROPOSED CHANNEL #1.25
PROPOSED CHANNEL #1.26

TOPSOIL STOCKPILE

M-1
I-13



SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- × 100.00 EXISTING SPOT ELEVATION
- × DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200
1 INCH = 50 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEY AND AVAILABLE RECORDS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION AND REQUEST FIELD LOCATIONS OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND SHALL REPAIR ANY DAMAGE DURING CONSTRUCTION AT NO COST TO THE OWNER.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9068 FAX: (610) 527-9068

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

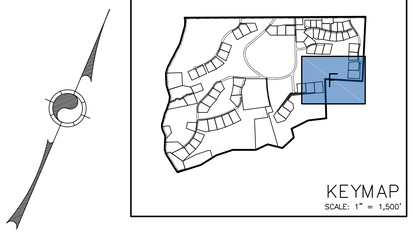
REV'L	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
72
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

G:\PROJECTS\2006\06012\CAD\DRAWINGS\06012

SHEET 70 MATCHLINE

SHEET 72 MATCHLINE



SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- EXISTING SPOT ELEVATION
- EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE SURVEY INFORMATION AND MAY NOT REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO CONSTRUCTION.

Serial Number: 20142030820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTRY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3000 FAX: (610) 527-9008

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

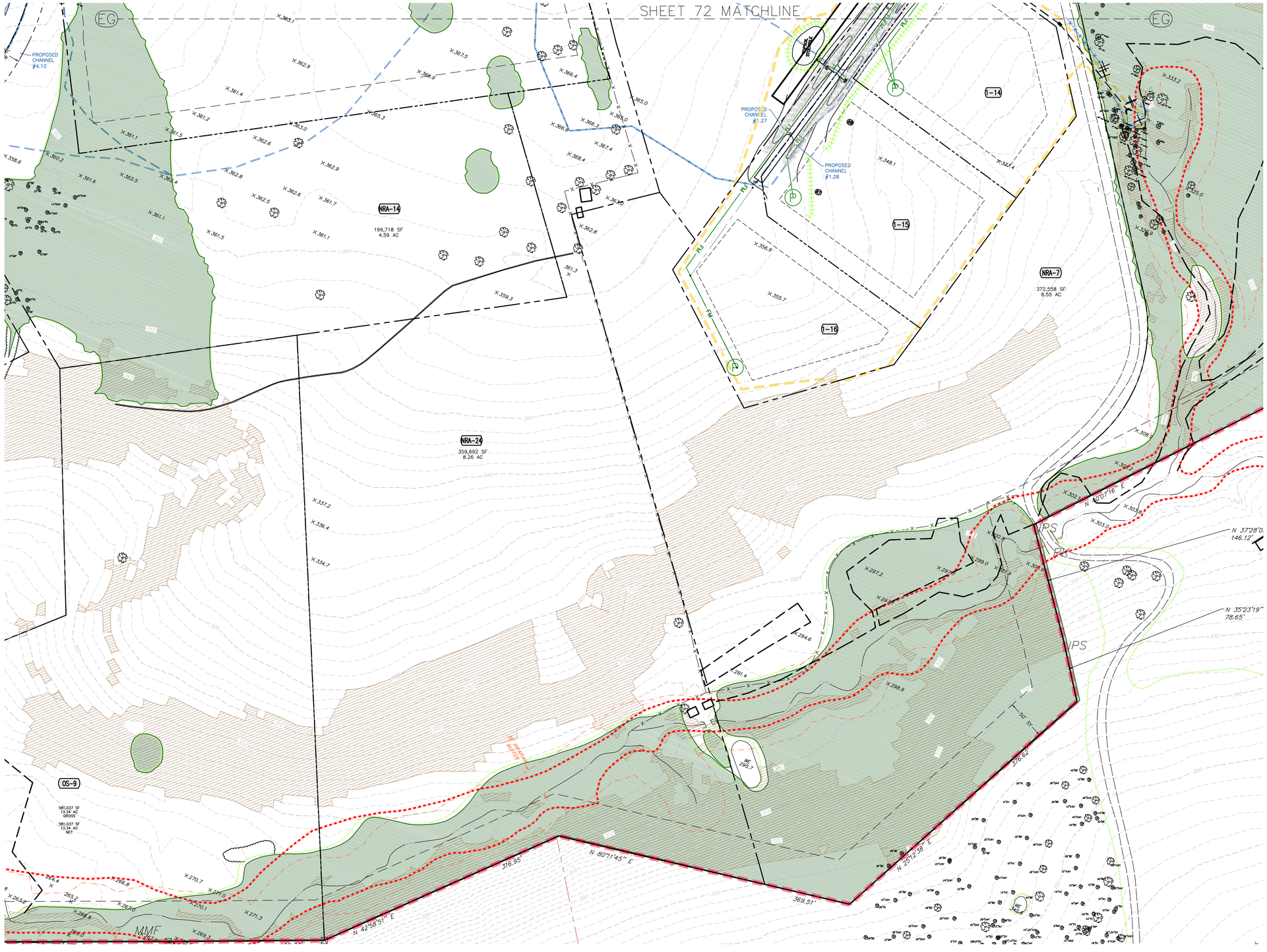
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

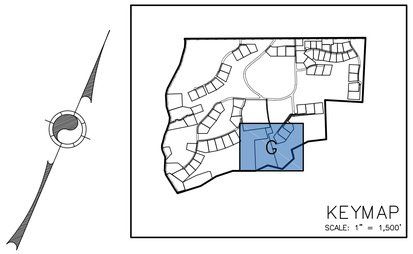
REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
73
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MA\DRAWINGS\06012

SHEET 72 MATCHLINE





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IPF — IRON PIN FOUND
- CMF — CONCRETE MONUMENT FOUND
- MMF — MARBLE MONUMENT FOUND
- AC — EXISTING AIR CONDITIONER
- GV — EXISTING GAS VALVE
- GM — EXISTING GAS METER
- EM — EXISTING ELECTRIC METER
- CO — EXISTING CLEANOUT
- ROH — ROOF OVERHANG
- EXISTING TREE
- UP — EXISTING UTILITY POLE
- × 100.00 — EXISTING SPOT ELEVATION
- × DS 100.00 — EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

PLANS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE (PUCC) AS AMENDED BY ACT 45 OF 1999 AND ACT 119 OF 2000.

Serial Number: 20142030820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E
COMMONWEALTH OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3636 FAX: (610) 527-9088

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE I
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

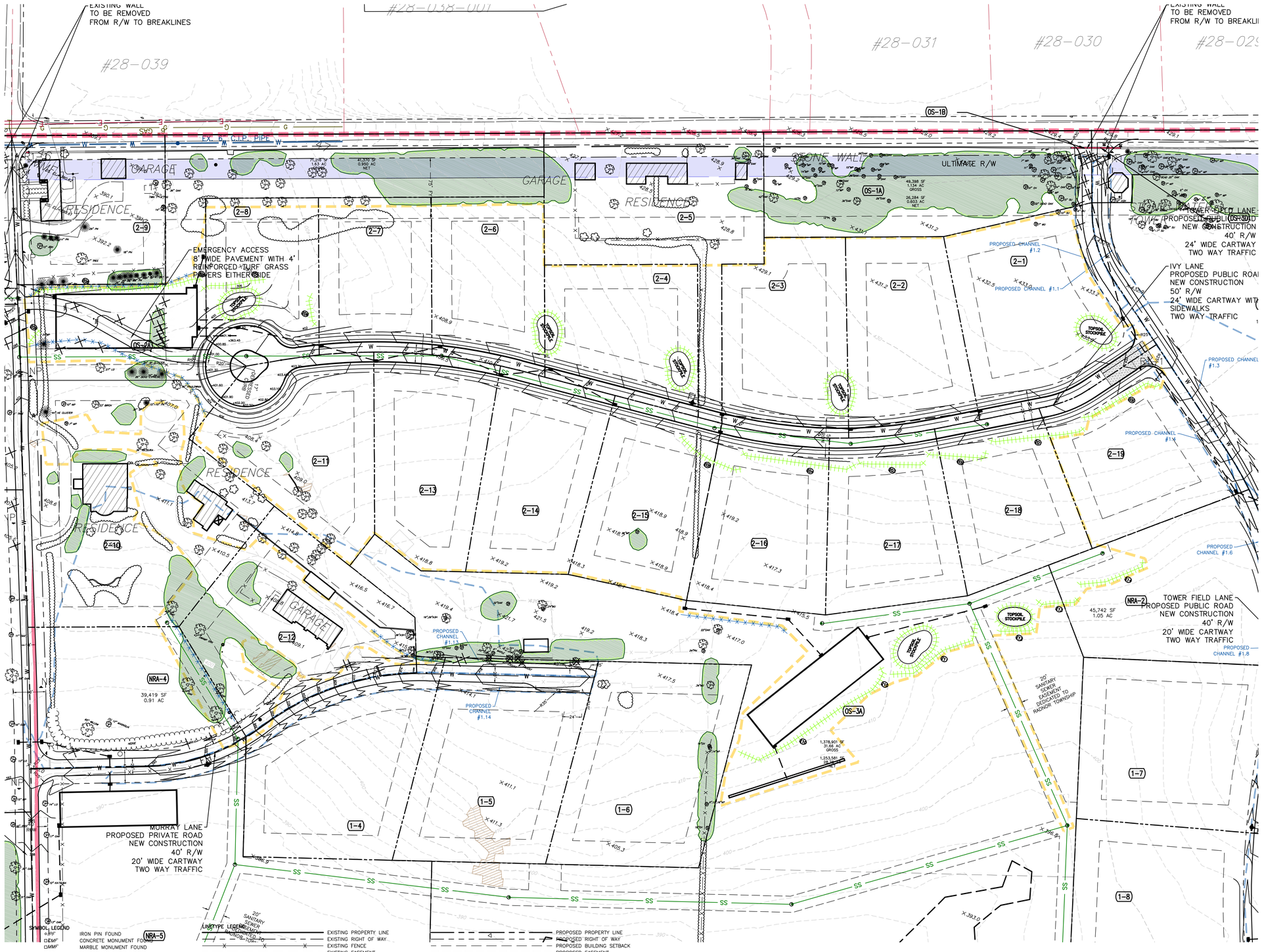
APPLICANT
ESH LP
167 TWADDELL MILL ROAD
WILMINGTON, DE 19807

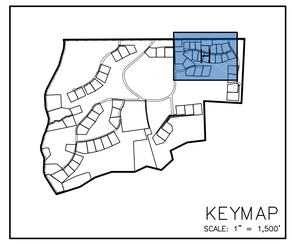
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	FOR TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
74
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

N:\PROJECTS\2006\06012\MA\DRAWINGS\06012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200
1 INCH = 50 FT.

AS BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE AS-BUILT INFORMATION SHOWN HEREON IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
DATE _____
_____
PROFESSIONAL ENGINEER

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR CONSTRUCTION PLANS AND TO MARKING OF UNDERGROUND UTILITIES.
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-9000 FAX: (610) 527-9008

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE II
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

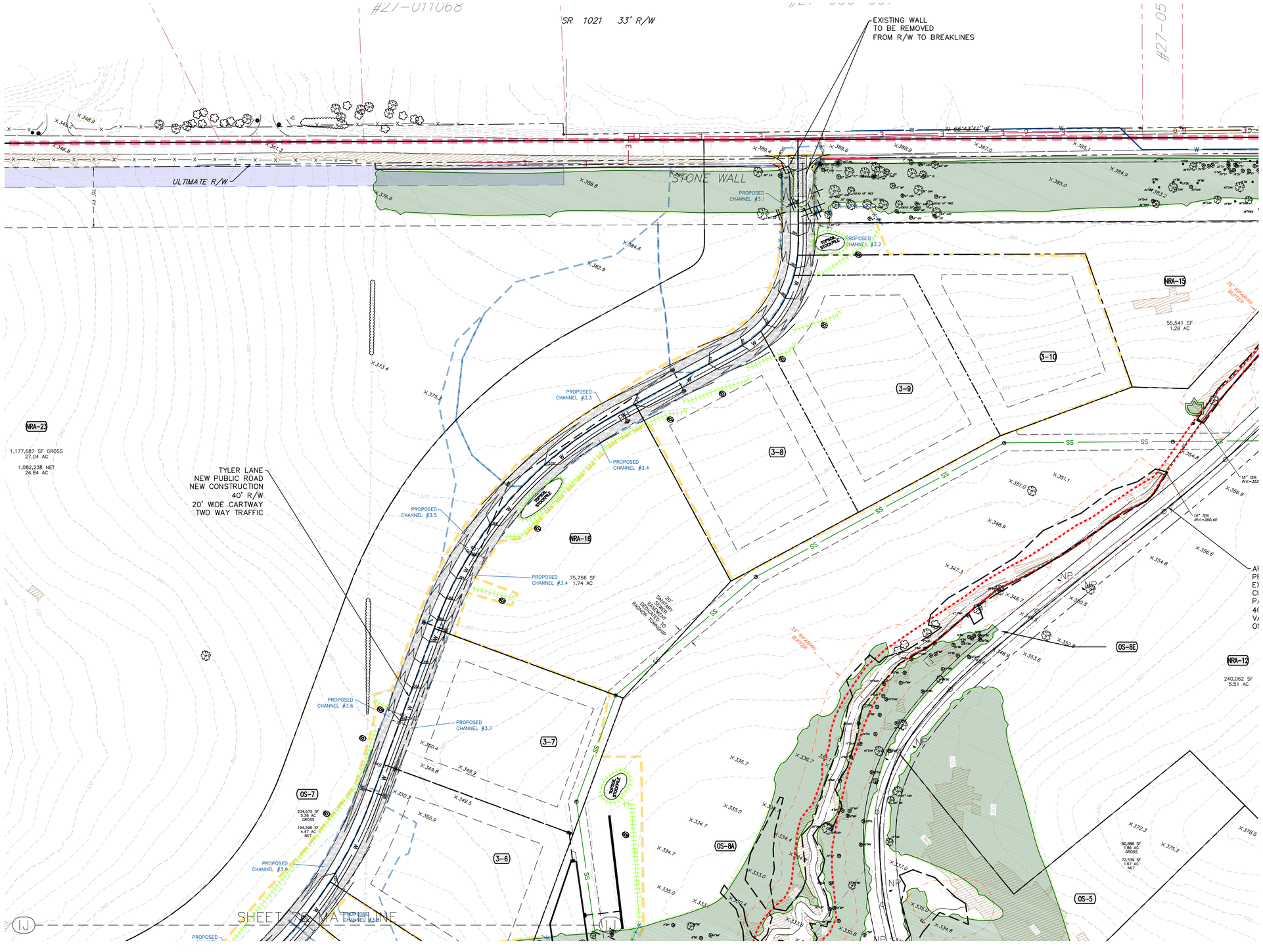
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

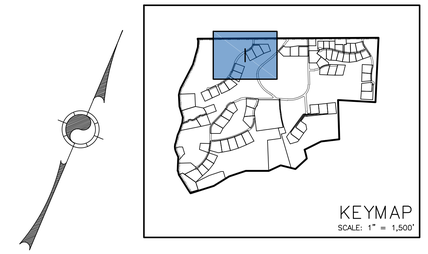
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'L	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
75
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\Mxd\DRAWINGS\06012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- EXISTING SPOT ELEVATION
- EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

ALL UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND/OR PLANS OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO EXCAVATION.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E
REGISTERED

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9008

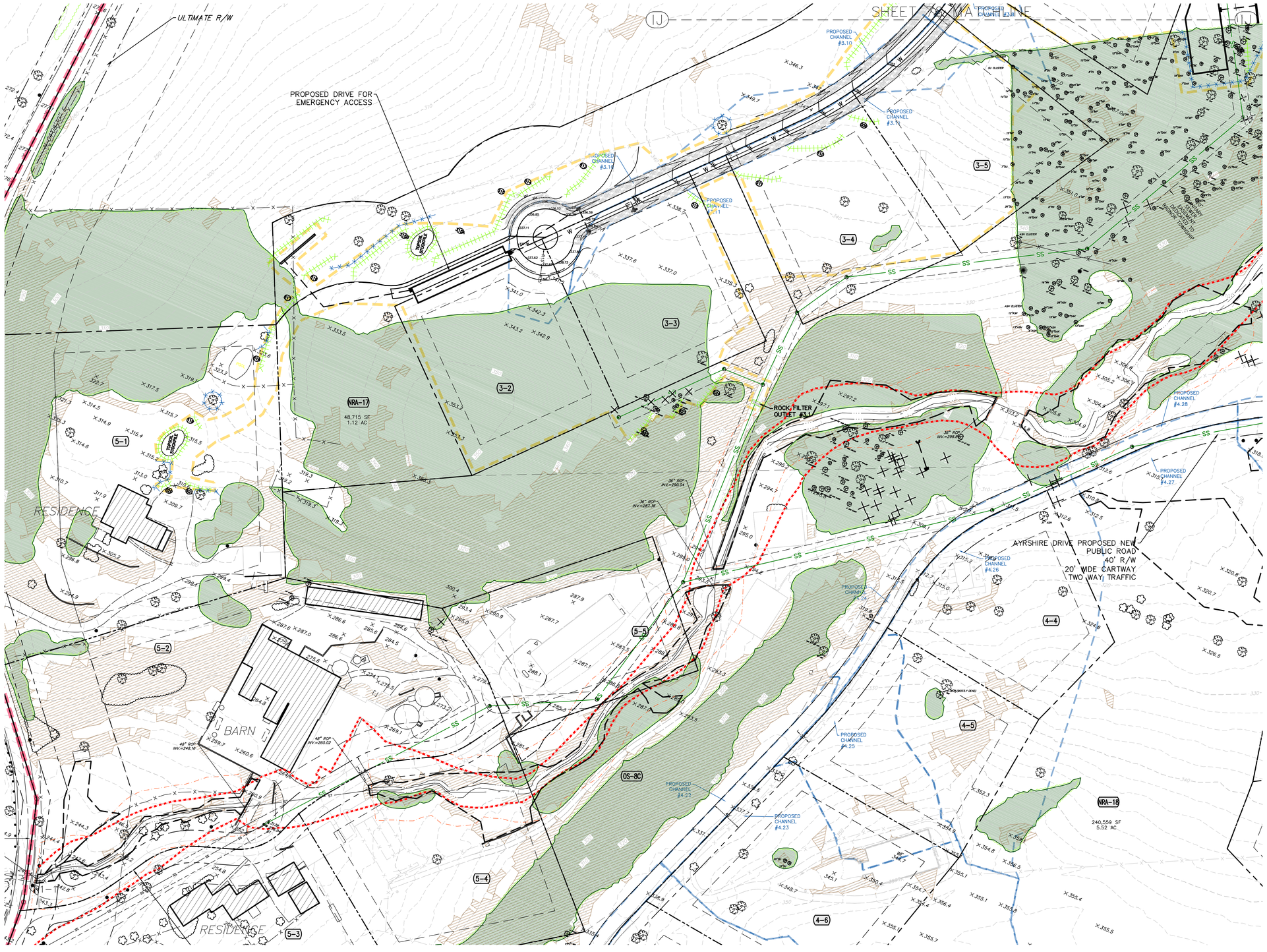
EROSION AND SEDIMENTATION CONTROL PLAN - PHASE III
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

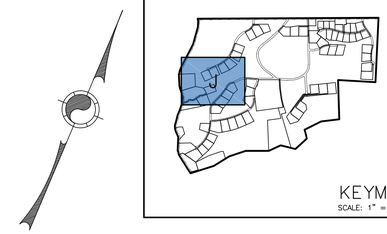
APPLICANT
ESIII LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 76 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- EXISTING AIR CONDITIONER
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING CLEANOUT
- ROOF OVERHANG
- EXISTING TREE
- EXISTING UTILITY POLE
- 100.00 EXISTING SPOT ELEVATION
- DS 100.00 EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- SS EXISTING SANITARY LINE
- ST EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON IS A TRUE AND CORRECT COPY OF THE PLAN FOR THE PROPOSED DEVELOPMENT OF THE LANDS OF ESIII LP AS SURVEYED AND PLANNED BY ME AND THAT ALL MONUMENTS AND LOT MARKERS EXIST OR WILL BE SET AS SHOWN AND THAT ALL DIMENSIONAL DETAILS ARE CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

DAVID R. FIORELLO, PROFESSIONAL ENGINEER, PENNSYLVANIA, PE037478E

Serial Number: 20142032820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

EROSION AND SEDIMENTATION CONTROL PLAN - PHASE III
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

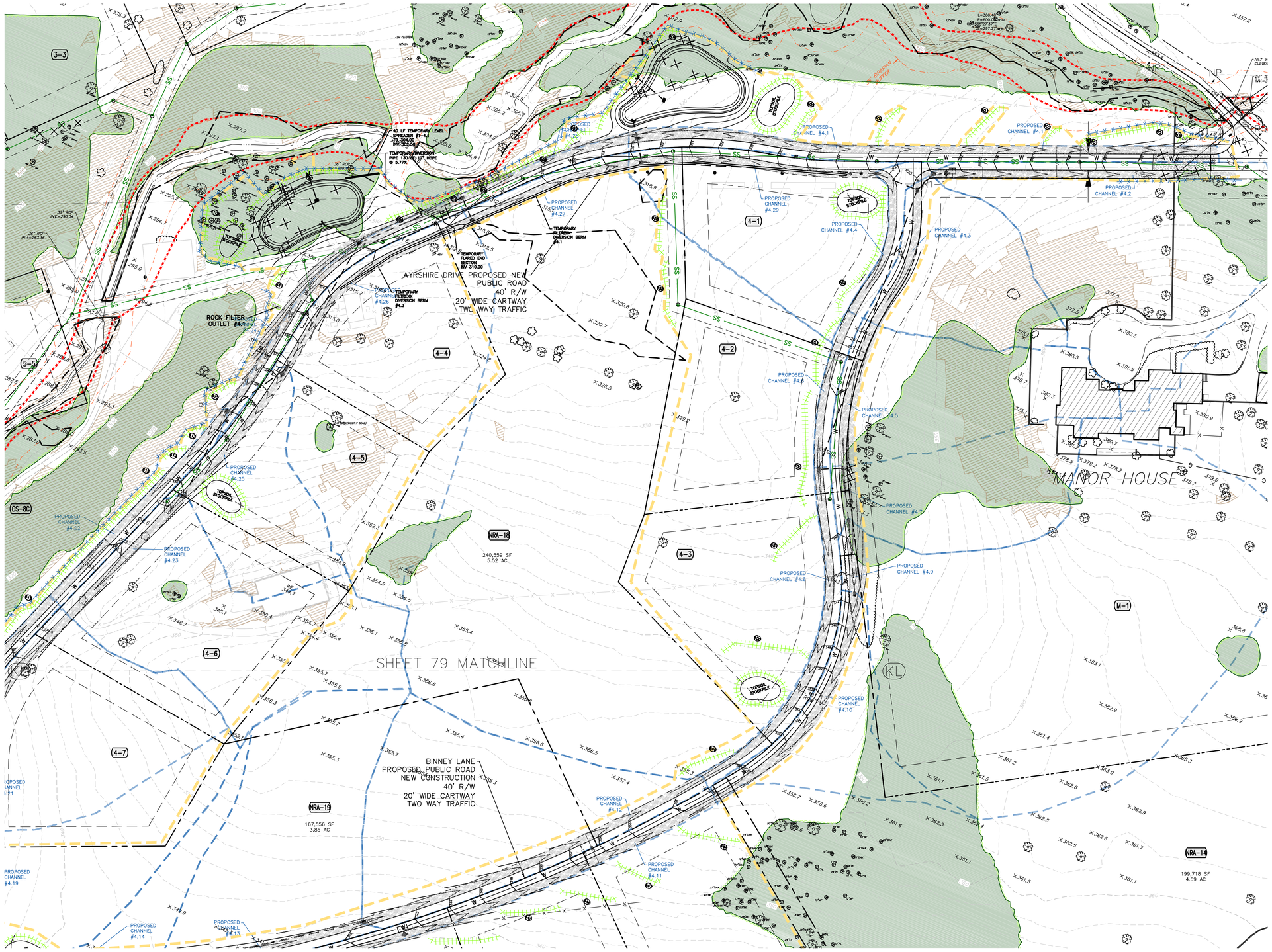
APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

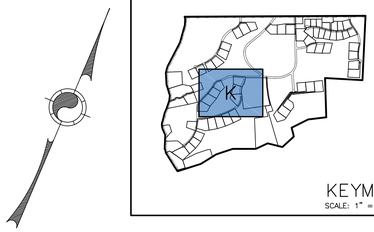
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 7 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\0607\xref\DRAWINGS\0607





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IPF — IRON PIN FOUND
- CMF — CONCRETE MONUMENT FOUND
- MMF — MARBLE MONUMENT FOUND
- AC — EXISTING AIR CONDITIONER
- GV — EXISTING GAS VALVE
- GM — EXISTING GAS METER
- EM — EXISTING ELECTRIC METER
- CO — EXISTING CLEANOUT
- ROH — ROOF OVERHANG
- EXISTING TREE
- UP — EXISTING UTILITY POLE
- × 100.00 — EXISTING SPOT ELEVATION
- × DS 100.00 — EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 — EXISTING 2' CONTOUR
- 380 — EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 — PROPOSED GRADING
- W — PROPOSED WATER LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE SURVEY INFORMATION AND MAY NOT REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ALL UTILITIES AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND SHALL REPAIR ANY DAMAGE DURING CONSTRUCTION AT NO COST TO THE OWNER.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL ENGINEER — PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3636 FAX: (610) 527-9068

EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 78 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

SHEET 78 MATCHLINE

SHEET 79 MATCHLINE

KEYMAP
SCALE: 1" = 1,500'

SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

⊙IPF	IRON PIN FOUND
□CMF	CONCRETE MONUMENT FOUND
□MMF	MARBLE MONUMENT FOUND
□AC	EXISTING AIR CONDITIONER
○GV	EXISTING GAS VALVE
□GM	EXISTING GAS METER
□EM	EXISTING ELECTRIC METER
○CO	EXISTING CLEANOUT
/OH	ROOF OVERHANG
●	EXISTING TREE
○UP	EXISTING UTILITY POLE
× 100.00	EXISTING SPOT ELEVATION
× DS 100.00	EXISTING DOOR SILL ELEVATION
	SOIL PERC TEST LOCATION
△	PROPOSED TEST PIT LOCATION
	PROPOSED TYPE 'M' INLET
	PROPOSED LOT
	PROPOSED OPEN SPACE LOT
	PROPOSED NON-RESIDENTIALLY APPROVED LOT
	PROPOSED FIRE HYDRANT
	PROPOSED STORMWATER MANAGEMENT SYSTEM
	PROPOSED SIGN

LINETYPE LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
X X X	EXISTING FENCE
	EXISTING EASEMENT
	EXISTING CALCULATED FLOODPLAIN
	EXISTING FEMA FLOODPLAIN
	EXISTING RIPARIAN BUFFER
	EXISTING STREAM
	EXISTING SOILS
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING WOODED AREAS
378	EXISTING 2' CONTOUR
380	EXISTING 10' CONTOUR
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
ST	EXISTING STORM PIPES
	EXISTING SLOPES 14 TO 20%
	EXISTING SLOPES 20% AND GREATER
	IMPERVIOUS TO BE REMOVED

	PROPOSED PROPERTY LINE
	PROPOSED RIGHT OF WAY
	PROPOSED BUILDING SETBACK
	PROPOSED EASEMENT
	PROPOSED CENTERLINE
	PROPOSED BUFFER
	PROPOSED OPEN SPACE
378	PROPOSED GRADING
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY LINE
	PROPOSED STORM PIPES
	COMPOST FILTER SOCK
	TREE PROTECTION
	LIMIT OF DISTURBANCE
	EROSION CONTROL BLANKET
	CONSTRUCTION ENTRANCE
	NPDES PERMIT BOUNDARY
	PCSM DRAINAGE AREA BOUNDARY
	VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200
1 INCH = 50 FT.

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT ALL MONUMENTS AND LOT MARKERS SHOWN HEREON EXIST OR WILL BE SET AS SHOWN.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES THAT YOU NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT LEAST 3 WORKING DAYS BUT NOT MORE THAN 10 WORKING DAYS PRIOR TO THE DATE YOU PLAN TO BEGIN EXCAVATION, DEMOLITION OR BLASTING.
Pennsylvania One Call System, Inc.
1-800-242-1776

REGISTERED PROFESSIONAL
DAVID R. FIORELLO
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9008

EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

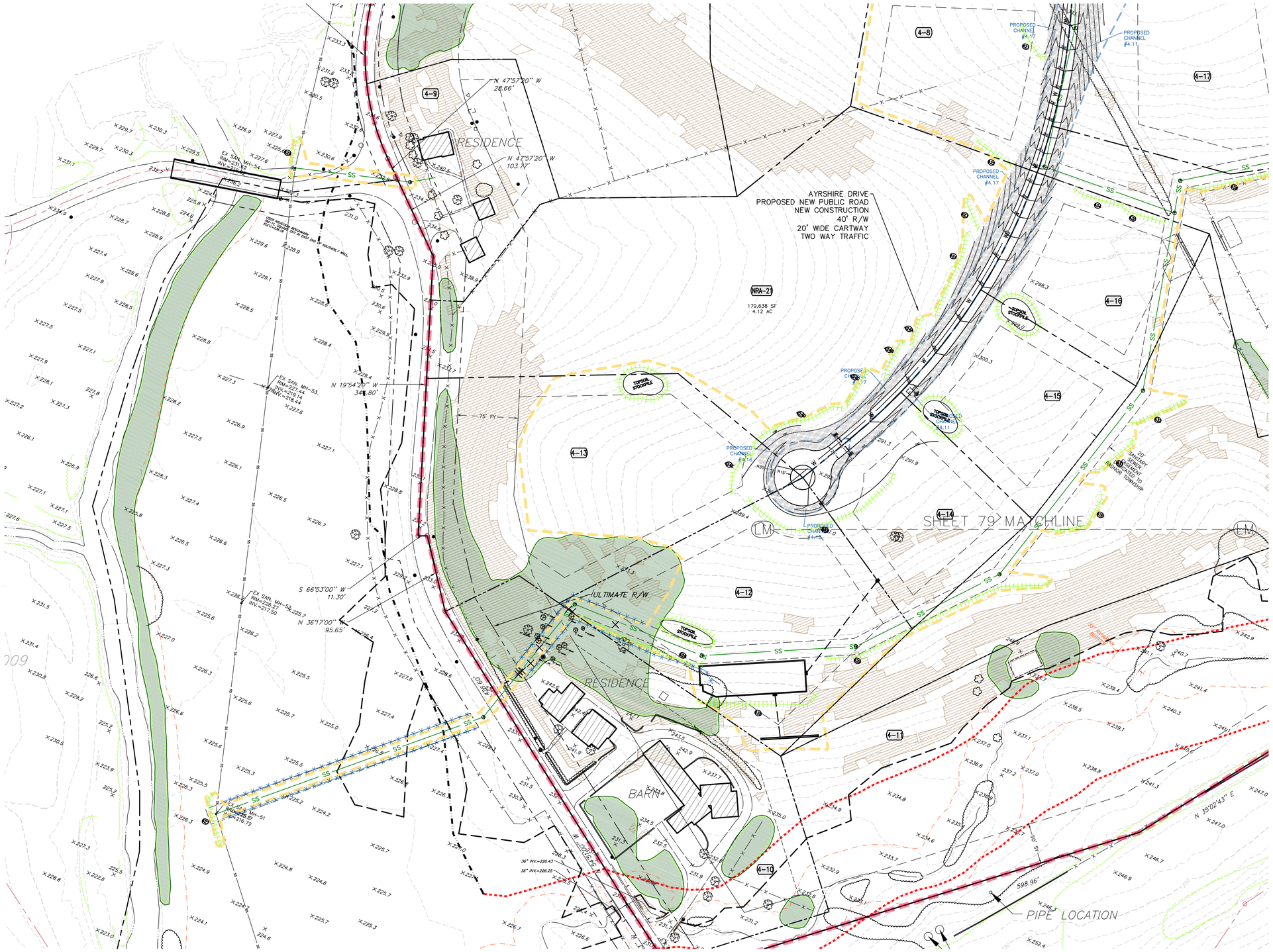
APPLICANT
ESIII LP
127 TWADDELL MILL ROAD
WILMINGTON, DE 19807

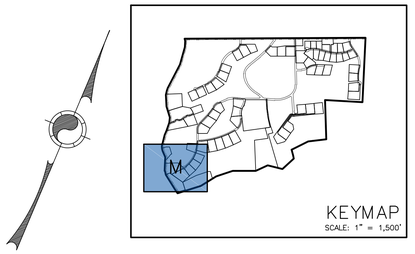
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PDR TOWNSHIP REVIEW
2	11/29/14	NPDES
1	10/29/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
79
OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

M:\PROJECTS\2006\06012\MA\DRAWINGS\06012





SOILS INFORMATION					
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.83
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GsB	GLENVILLE VERY STONY SILT LOAM	0 TO 8 PERCENT SLOPES	C	1.73	2.42
Me	MADE LAND SCHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.49
MkF	MANOR SOILS	35 TO 60 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORSHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORSHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SYMBOL LEGEND

- IPF — IRON PIN FOUND
- CMF — CONCRETE MONUMENT FOUND
- MMF — MARBLE MONUMENT FOUND
- AC — EXISTING AIR CONDITIONER
- GV — EXISTING GAS VALVE
- GM — EXISTING GAS METER
- EM — EXISTING ELECTRIC METER
- CO — EXISTING CLEANOUT
- ROH — ROOF OVERHANG
- EXISTING TREE
- UP — EXISTING UTILITY POLE
- × 100.00 — EXISTING SPOT ELEVATION
- × DS 100.00 — EXISTING DOOR SILL ELEVATION
- SOIL PERC TEST LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- EXISTING EASEMENT
- EXISTING CALCULATED FLOODPLAIN
- EXISTING FEMA FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING STREAM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING TREE LINE
- EXISTING WOODED AREAS
- 378 — EXISTING 2' CONTOUR
- 380 — EXISTING 10' CONTOUR
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY LINE
- ST — EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED BUILDING SETBACK
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- 378 — PROPOSED GRADING
- W — PROPOSED WATER LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- COMPOST FILTER SOCK
- TREE PROTECTION
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

50 0 25 50 100 200

1 INCH = 50 FT.

ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEY AND AVAILABLE RECORDS. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO EXCAVATION AND VERIFY THE EXACT LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND SHALL REPAIR ANY DAMAGE DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG!
Serial Number: 20142030820
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
PE027478E
COMMONWEALTH OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-9068 FAX: (610) 527-9068

EROSION AND SEDIMENTATION CONTROL PLAN – PHASE IV
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESH LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 80 OF 93
SCALE: 1" = 50'
FILE NO.: 06-012

G:\PROJECTS\2006\06012\CAD\DRAWINGS\06012

MOMENEE & ASSOCIATES, INC.

CIVIL ENGINEERS AND LAND SURVEYORS

924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3030 FAX: (610) 527-3038

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
No. PE047476
STATE OF PENNSYLVANIA

Serial Number: 20142030920

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES THREE WORKING DAYS NOTICE FOR EXCAVATION OR DEMOLITION WORK. STOP! CALL 1-800-242-1776
Pennsylvania One Call System, Inc.

CHECKED BY:	DRF
DRAWN BY:	JRM
ONE-CALL:	20142030920

APPLICANT
ESSI LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

EROSION AND SEDIMENTATION CONTROL PLAN – PHASE V

FINAL SUBDIVISION PLANS

THE ARDROSSAN FARM

RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

NO.	DATE	REVISIONS	BY
1	10/28/14	INTERIM UPDATES	MPR
2	11/25/14	PER TOWNSHIP REVIEW COMMENTS	MPR
3	12/18/14		MPR

DATE: SEPTEMBER 5, 2014

SHEET NO. 03 OF 93

SCALE: 1" = 50'

FILE NO.: 06-012

1 INCH = 50 FT.

50 0 25 50 100 200

SYMBOL LEGEND

- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- MARBLE MONUMENT FOUND
- AIR CONDITIONER
- GAS VALVE
- GAS METER
- ELECTRIC METER
- OVERHANG
- CLEANOUT
- TREE
- UTILITY POLE
- TREE LINE
- SPOT ELEVATION
- DOOR SILL ELEVATION
- TEST LOCATION
- PA DEP TEST LOCATION
- PROPOSED INLET
- PROPOSED TYPE 'M' INLET
- PROPOSED LOT
- PROPOSED OPEN SPACE LOT
- PROPOSED NON-RESIDENTIALLY APPROVED LOT
- PROPOSED FIRE HYDRANT
- PROPOSED STORMWATER MANAGEMENT SYSTEM
- PROPOSED SIGN

LINETYPE LEGEND

- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT
- EXISTING FENCE
- EXISTING FEMA FLOODPLAIN
- EXISTING CALCULATED FLOODPLAIN
- EXISTING RIPARIAN BUFFER
- EXISTING SITE/EM
- EXISTING SOILS
- EXISTING WETLAND
- EXISTING WOODED AREAS
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY LINE
- EXISTING STORM PIPES
- EXISTING SLOPES 14 TO 20%
- EXISTING SLOPES 20% AND GREATER
- IMPERVIOUS TO BE REMOVED
- PROPOSED PROPERTY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED CENTERLINE
- PROPOSED CASEMENT
- PROPOSED BUILDING SETBACK
- PROPOSED BUFFER
- PROPOSED OPEN SPACE
- PROPOSED GRADING
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORM PIPES
- TREE PROTECTION
- CUMMOST FILTER SOCK
- LIMIT OF DISTURBANCE
- EROSION CONTROL BLANKET
- CONSTRUCTION ENTRANCE
- NPDES PERMIT BOUNDARY
- PCSM DRAINAGE AREA BOUNDARY
- VEGETATED SWALE DRAINAGE AREA

THOMAS HIGHWAY
PROPOSED PRIVATE ROAD
EXISTING CARTWAY TO BE WIDENED WITH FULL DEPTH PAVEMENT RECLAMATION AND OVERLAY
40' R/W
20' WIDE CARTWAY
TWO WAY TRAFFIC

BINNEY LANE
PROPOSED PUBLIC ROAD
NEW CONSTRUCTION
40' R/W
20' WIDE CARTWAY
TWO WAY TRAFFIC

ARMSHIRE DRIVE PROPOSED NEW PUBLIC ROAD
40' R/W
20' WIDE CARTWAY
TWO WAY TRAFFIC

RESIDENCE

BARN

TENNIS STRUCTURE

SWIMMING POOL

PROPOSED CHANNEL #4.20

PROPOSED CHANNEL #4.21

PROPOSED CHANNEL #4.22

PROPOSED CHANNEL #4.23

PROPOSED CHANNEL #4.24

PROPOSED CHANNEL #4.25

PROPOSED CHANNEL #4.26

PROPOSED CHANNEL #3.11

NRA-17 48,715 SF 1.12 AC

NRA-18 240,559 SF 5.52 AC

NRA-19 167,556 SF 3.85 AC

OS-80

4-1 4-2 4-3 4-4 4-5 4-6 4-7 5-1 5-2 5-3 5-4 5-5 5-6

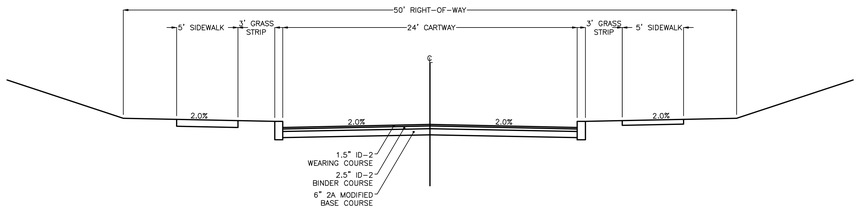
KEYMAP

SCALE: 1" = 1,500'

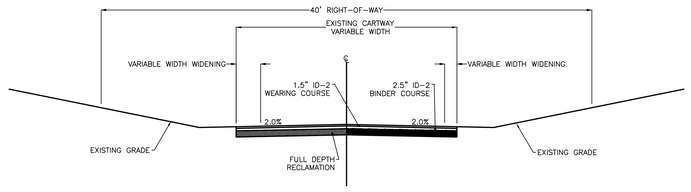
N

NOTES: IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN COORDINATION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

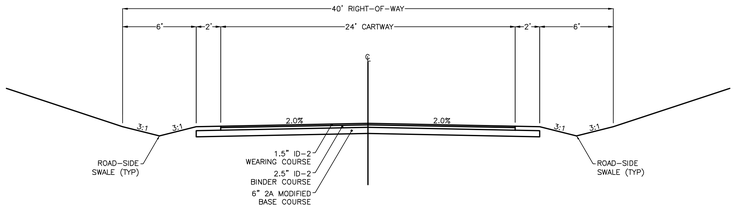
SYMBOL	NAME	%SLOPE	HYDROLOGIC GROUP	DEPTH TO SH WATER	DEPTH TO BEDROCK
SOILS INFORMATION					
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	A	6.6+	5.8.3
Ch	CHEWACLA SILT LOAM	NOT RATED	C	1.50	6.6+
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	B	6.6+	4.98
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	4.16
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	6.6+
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.16
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	6.6+
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	B	6.6+	4.98
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.16
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	6.6+
GeD3	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	4.98
GeE	GLENELG CHANNERY SILT LOAM	25 TO 35 PERCENT SLOPES	B	6.6+	4.98
GnB	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	1.57
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	6.62
GrB2	GLOUCESTER-ROWLAND SILT LOAM	3 TO 8 PERCENT SLOPES	C	1.73	2.42
GsB	MADE LAND SOHIST AND GNEISS MATERIALS	NOT RATED	B	4.98	5.41
Mf	MANOR SOILS	15 TO 60 PERCENT SLOPES	B	6.6+	4.49
MgD2	MANOR LOAM	15 TO 25 PERCENT SLOPES	B	6.6+	7.11
MgB2	MANOR LOAM	3 TO 8 PERCENT SLOPES	B	6.6+	7.11
We	WEHADKEE SILT LOAM	NOT RATED	D	0.26	6.6+
WoA	WORTHAM SILT LOAM	0 TO 3 PERCENT SLOPES	D	0.26	6.6+
WoB	WORTHAM SILT LOAM	3 TO 8 PERCENT SLOPES	D	0.26	6.6+



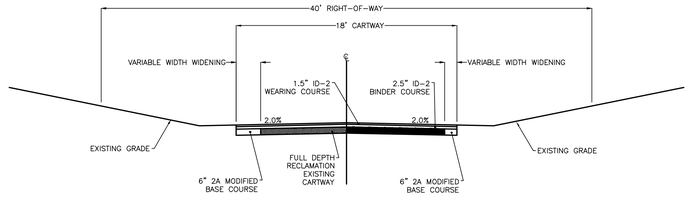
PUBLIC ROAD A
50' R.O.W. & 24' CARTWAY



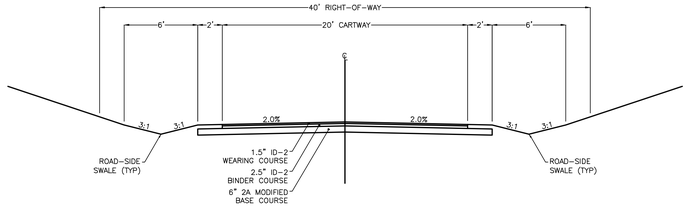
PUBLIC ROAD E
40' R.O.W. & VARIABLE WIDTH CARTWAY



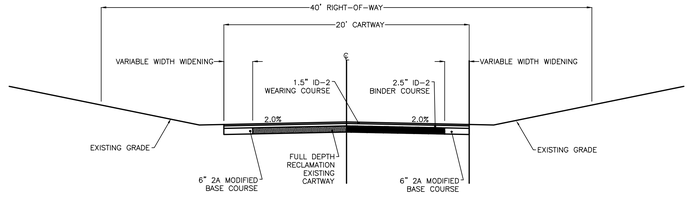
PUBLIC ROAD B
STATION 0+00 TO 4+25
40' R.O.W. & 24'
CARTWAY



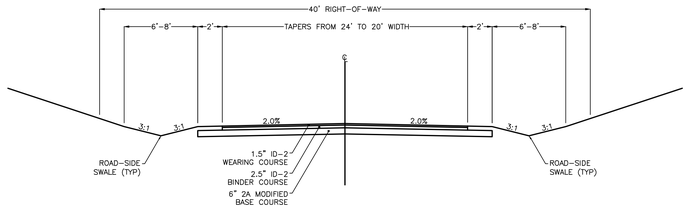
PUBLIC ROAD C
STA 0+00 TO 22+25
40' R.O.W. & 18' CARTWAY



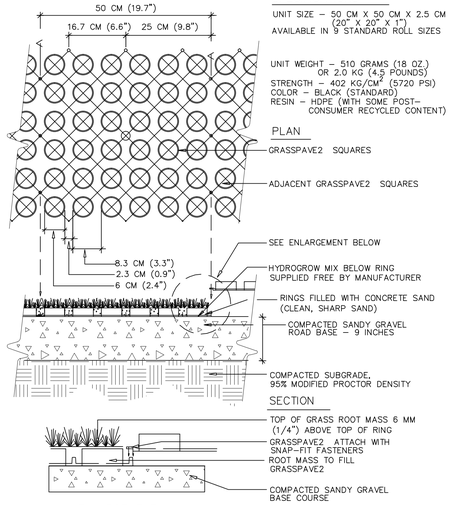
PUBLIC ROAD B STATION 4+43.5 TO 11+92
PUBLIC ROAD C STA 22+25 TO END
PUBLIC ROADS F, G, & H
PRIVATE ROAD D
40' R.O.W. & 20' CARTWAY



PRIVATE ROAD I
40' R.O.W. & 20' CARTWAY



PUBLIC ROAD B
STATION 3+24 TO 4.43.5
40' R.O.W. & VARIABLE WIDTH
CARTWAY

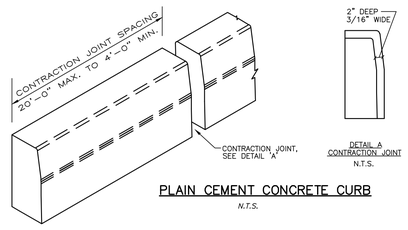


NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

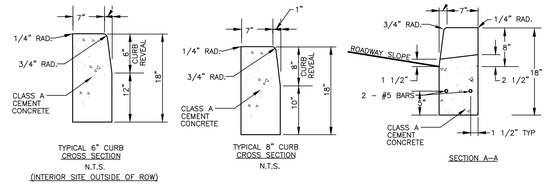
GRASS PAVERS DETAIL
TYPICAL GRASSPAVE2 DETAIL
OR EQUAL
NOT TO SCALE

Invisible Structures, Inc.
1597 COLE BLVD., SUITE 310
GOLDEN, COLORADO 80401
800-233-1505 OR 303-233-8383
FAX: 303-233-8282
www.invisiblestructures.com
rev. 08/02

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 AND 640 FOR PLAIN CEMENT CONCRETE CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.

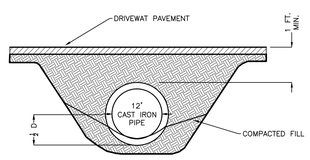


PLAIN CEMENT CONCRETE CURB
N.T.S.



PLAIN CEMENT CONCRETE CURB
N.T.S.

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 AND 640 FOR PLAIN CEMENT CONCRETE CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 1/2" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. IN ACCORDANCE WITH SECTION 141.20.G.(5), CURB TO BE CONSTRUCTED IN UNIFORM LENGTHS OR BLOCKS, SEPARATED BY CONTRACTION JOINTS EVERY TEN FEET (SEE DETAIL 'A') AND EXPANSION JOINTS EVERY 50 FEET (SEE DETAIL 'B').
5. ALL WEARING COURSE SURFACES SHALL BE SEALED TO THE CONCRETE CURB WITH A ONE-FOOT WIDE GRADE BM-1 OR A-1 BITUMINOUS GUTTER SEAL.
6. ALL CONCRETE SHALL BE CURED WITH THE USE OF AN APPROVED WHITE-PIGMENTED CURING COMPOUND.



SECTION VIEW

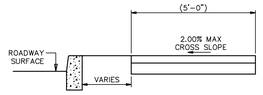
NOTES:

MINIMUM DIAMETER FOR ANY CULVERT IS 12". PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

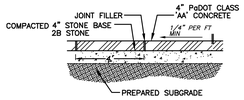
EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.

THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

DRIVEWAY SWALE CROSSING
NOT TO SCALE

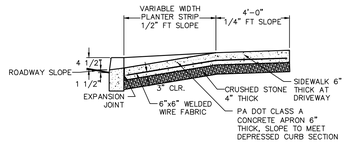


SIDEWALK
TYPICAL SECTION

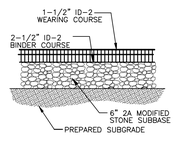


SIDEWALK DETAIL
N.T.S.

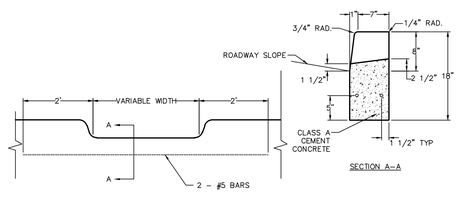
NOTE: THE BED FOR CONCRETE SIDEWALKS SHALL BE THOROUGHLY COMPACTED BY TAMPING AND, WHEN SO COMPACTED, SHALL BE UNIFORMLY 4 INCHES BELOW THE FINISHED SURFACE. ON THIS FOUNDATION SHALL BE CONSTRUCTED A 4 INCH, CONCRETE PAVEMENT. JOINTS SHALL BE MADE EVERY 4 FEET AND A SPACE OF 1/4 INCH TO 1/2 INCH LEFT BETWEEN BLOCKS AT EVERY TENTH JOINT AND FILLED WITH PREPARED JOINT FILLER. ALL CONCRETE SHALL BE CURED WITH THE USE OF AN APPROVED WHITE-PIGMENTED CURING COMPOUND.



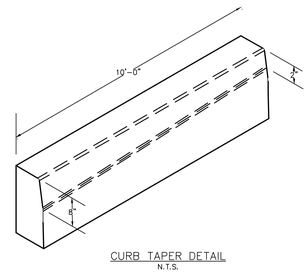
TYPICAL SECTION – APRON & SIDEWALK
N.T.S.



NON-ROADWAY BITUMINOUS PAVING DETAIL
N.T.S.



DEPRESSED CURB FOR DRIVEWAYS
N.T.S.



CURB TAPER DETAIL
N.T.S.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF PUBLICATION 408 AS WELL AS ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE MUNICIPALITY. THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY AT LEAST 24 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING REQUIRED BY THE MUNICIPALITY. THE CONTRACTOR SHALL PROVIDE AS-BUILT PLANS TO THE MUNICIPALITY UPON COMPLETION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL REPAIR ALL DAMAGE AT HIS OWN EXPENSE. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY DEVICES AND SHALL COMPLY WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL REPAIR ALL DAMAGE AT HIS OWN EXPENSE. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY DEVICES AND SHALL COMPLY WITH ALL APPLICABLE REGULATIONS.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
824 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527-3500 FAX: (610) 527-9068

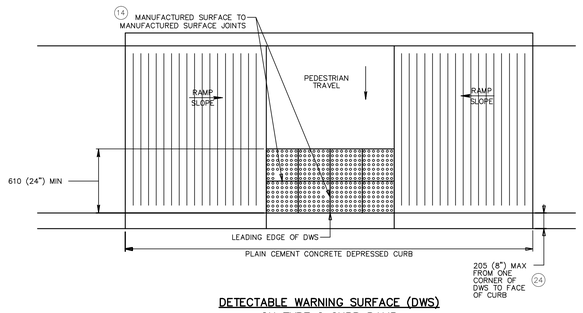
ROADWAY CONSTRUCTION DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

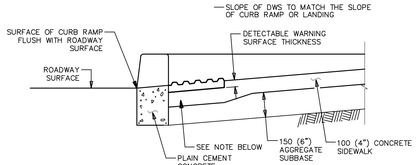
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NOPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
82
OF 93
SCALE: AS NOTED
FILE NO.: 06-012

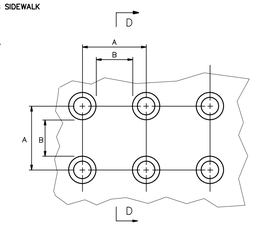


DETECTABLE WARNING SURFACE (DWS) ON TYPE 2 CURB RAMP



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

DETECTABLE WARNING SURFACE EMBEDDING DETAIL



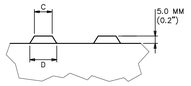
TRUNCATED DOME DIMENSIONS		
DIM	MIN mm (inch)	MAX mm (inch)
A	41 (1.6")	61 (2.4")
B	17 (0.65")	37 (1.5")
C	(13)	(13)
D	23 (0.9")	36 (1.4")

DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAILS

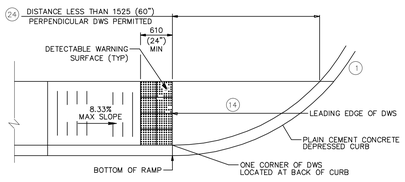
13 THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

14 PLACE ADJACENT DWS TILES WITH MANUFACTURED SURFACE TO MANUFACTURED SURFACE. CUT TILES ALONG THE PERIMETER ONLY.

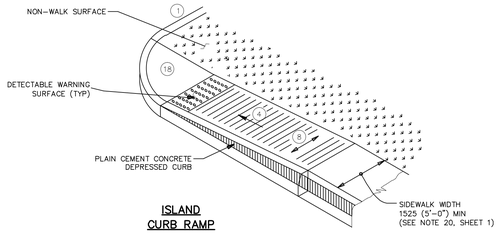
24 LOCATE ONE CORNER OF THE DWS AT THE BACK OF CURB. NO OTHER POINT ON THE LEADING EDGE OF THE DWS MAY BE MORE THAN 1525 (60") AWAY FROM THE BACK OF CURB.



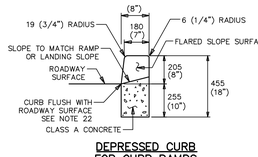
SECTION D–D



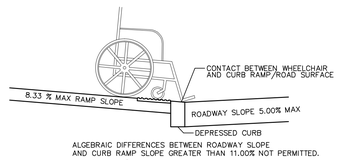
1 CURB TRANSITION 10.00% MAX SLOPE



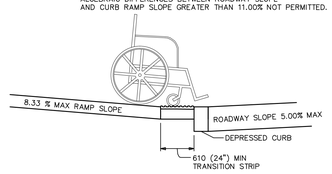
ISLAND CURB RAMP



DEPRESSED CURB FOR CURB RAMPS



ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPE AND CURB RAMP SLOPE GREATER THAN 11.00% NOT PERMITTED.

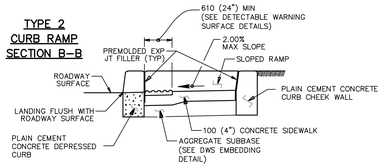


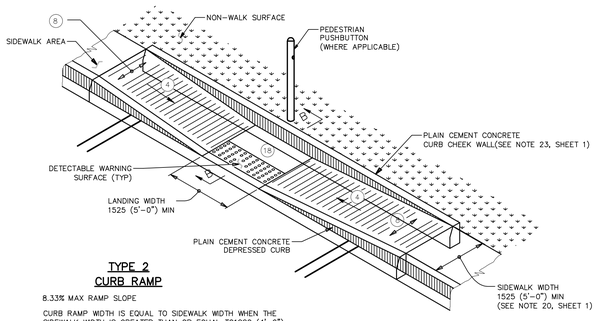
PROVIDE A 610 (24") MIN TRANSITION STRIP IF ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPEAND CURB RAMP SLOPE ARE GREATER THAN 11.00%

TRANSITION STRIP SLOPE NOT TO EXCEED 2.00%

CHANGE OF GRADE LIMITATIONS

TYPE 2 CURB RAMP SECTION B–B





TYPE 2 CURB RAMP

8.33% MAX RAMP SLOPE

CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO1220 (4'–0").

SLOPE: ZERO ±2.00%

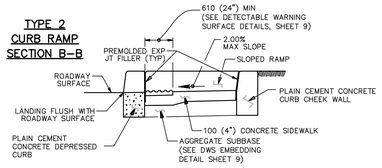
NON–WALK AREA IS AN OBSTRUCTED OR GRASS/NON–PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.

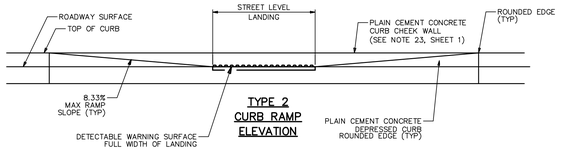
CURB RAMPS REQUIRE A 1220 (4'–0")MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGTUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

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

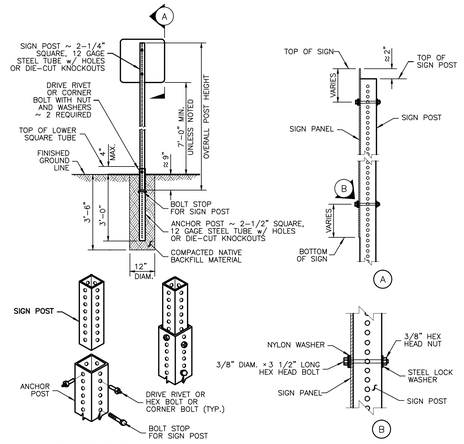
CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON–WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON–WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.

TYPE 2 CURB RAMP SECTION B–B





TYPE 2 CURB RAMP ELEVATION



INSTALLATION INSTRUCTIONS

1. DETERMINE THE PROPER POST LENGTH.
2. DRIVE THE ANCHOR POST INTO THE GROUND, USING A DRIVE CAP, UNTIL ONLY THREE HOLES REMAIN ABOVE THE FINISHED GRADE.
3. SLIDE A MINIMUM OF 12" OF THE SIGN POST INTO THE ANCHOR POST.
4. ATTACH THE SIGN POST TO THE ANCHOR POST WITH TWO CORNER BOLTS AND NUTS (OR ALTERNATELY TWO BOLTS AND NUTS OR TWO DRIVE RIVETS) THROUGH THE TOP TWO HOLES OF THE ANCHOR SLEEVE.
5. TIGHTEN THE BOLTS AND NUTS BY THE TURN–OF–NUT METHOD. BRING NUT TO A SNUG CONDITION TO ENSURE THAT ALL PARTS ARE BROUGHT TOGETHER INTO FULL CONTACT WITH EACH OTHER, THEN TIGHTEN AN ADDITIONAL 1/2 TURN.
6. ALL BOLTS AND/OR DRIVE RIVETS SHALL BE CADMIUM PLATED STEEL.

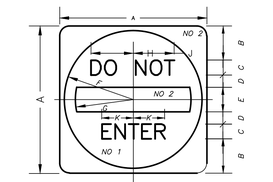
TRAFFIC SIGN POST DETAIL

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

* REDUCE SPACING 40%

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BORDER	BLANK STD
30x30	30	10	12.5	C	3/4	B1–30

STOP SIGN (R1–1)



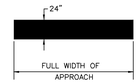
COLOR : NO 1 LEGEND WHITE (REFLECTERIZED)
BACKGROUND RED (REFLECTERIZED)
NO 2 BACKGROUND WHITE (REFLECTERIZED)

BLANK STD : B3–30

DIMENSIONS (30"x30" SIGN)										SERIES	
A	B	C	D	E	F	G	H	J	K	TYP 1	TYP 2
30	6.5	4	2	5	14.5	12.5	9.75	10	7.875	D	D

DO NOT ENTER SIGN (R5–1)

N.T.S.



SOLID WHITE STOP BAR

SOLID DOUBLE YELLOW

N.T.S.

SIGN SIZE 12"x18"
NO PARKING BY ORDER OF FIRE MARSHAL SIGN (B)
N.T.S.

NO PARKING SIGN (NP)

SOILS NOTES:

SITE PREPARATION

THE PROPOSED DEVELOPMENT SHOULD INCLUDE THE COMPLETE REMOVAL OF ALL REMNANT FOUNDATIONS, FLOOR SLABS, CONCRETE PADS, PAVEMENTS AND UTILITIES LOCATED WITHIN AND TEN FEET BEYOND THE PERIMETER OF THE PROPOSED WORK AREA. THE REMAINDER OF THESE STRUCTURES MAY GENERALLY REMAIN IN PLACE IF REMOVED TO A MINIMUM DEPTH OF TWO FEET BELOW FINAL GRADES, PROVIDING THEIR LOCATION DOES NOT CONFLICT WITH OTHER CONSTRUCTION SUCH AS UTILITY INSTALLATION. ACTIVE UTILITIES THAT ARE PRESENT ON SITE SHOULD BE RELOCATED TO AREAS OUTSIDE OF THE PROPOSED BUILDING AREA.

BACKFILL OF ALL DEMOLITION AND UTILITY RELOCATION AREAS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FILL AND COMPACTION CRITERIA SECTION THAT FOLLOWS. THE BACKFILL MATERIAL SHOULD BE INSPECTED AND TESTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER OF RECORD.

PRIOR TO THE PLACEMENT OF ANY REQUIRED FILL, AREAS EXTENDING A MINIMUM OF TEN (10) FEET BEYOND THE PROPOSED CONSTRUCTION SHOULD BE STRIPPED OF ALL TOPSOIL, ROOT MAT, ASPHALT, CONCRETE, STONE, AND OTHER DELETERIOUS MATERIALS. FOLLOWING REMOVAL OF THE SURFACE MATERIALS AND PRIOR TO STRUCTURAL FILL PLACEMENT TO THE PROPOSED GRADES, ALL AREAS SHOULD BE PROOF–ROLLED AND COMPACTED. IT IS RECOMMENDED THAT A STEEL DRUM ROLLER HAVING A MINIMUM STATIC WEIGHT OF TEN (10) TONS BE UTILIZED FOR THIS PURPOSE. PROOF–ROLLING AND COMPACTION PROCEDURES ARE NECESSARY TO COMPACT AND VERIFY THE INTEGRITY OF THE UPPER ZONES OF THE SOILS. ANY LOOSE OR UNSTABLE AREAS ENCOUNTERED DURING PROOF–ROLLING, WHICH ARE THE RESULT OF EXCESSIVE MOISTURE WITHIN THE SOIL MATRIX, CAN BE AERATED AND DRIED IN–PLACE. FOLLOWING ADEQUATE DRYING TIME, THESE SOILS CAN BE DENSIFIED IN–PLACE. ALTERNATELY, ANY LOOSE OR SOFT ZONES OF SOIL CAN BE REMOVED AND REPLACED WITH STRUCTURAL FILL AS OUTLINED IN THE FILL AND COMPACTION SECTIONS BELOW

DUE TO THE FINED–GRAINED NATURE OF THE EXISTING RESIDUAL SOILS, REPEATED CONSTRUCTION TRAFFIC ACROSS THE SITE WILL LEAD TO INSTABILITIES. CONSTRUCTION TRAFFIC SHOULD BE LIMITED ACROSS THE SITE. IT IS RECOMMENDED THAT ALL CONSTRUCTION AREAS, INCLUDING THOSE WHICH WERE EXCAVATED TO ACHIEVE THE PLANNED SUBGRADE ELEVATION, BE PROOF–ROLLED IMMEDIATELY PRIOR TO THE PLACEMENT OF THE SUBBASE STONE AND AGAIN BEFORE THE CONCRETE SLAB OR THE ASPHALT PAVEMENT SECTION. THIS WILL ALLOW FOR SOFT AND WEAK AREAS TO BE OBSERVED AND REMEDIATED, IF REQUIRED.

FILL CRITERIA

FILL MATERIAL, WHICH SUPPORTS FOUNDATIONS, FLOOR SLABS, PAVEMENTS, AS WELL AS MATERIAL USED FOR RETAINING WALL BACKFILL AND TO CONSTRUCT BASIN BERMS, IS CONSIDERED STRUCTURAL FILL. FOLLOWING SITE PREPARATION MEASURES, STRUCTURAL FILL REQUIRED TO ELEVATE THE BUILDING PADS, FIELDS AND PAVEMENT AREAS MAY BE PLACED. IT IS ANTICIPATED THAT EXCAVATIONS TO ACHIEVE THE PROPOSED BUILDING AND SITE GRADES WILL MAKE AVAILABLE THE RESIDUAL SOILS, WEATHERED ROCK, AND POSSIBLY THE BEDROCK FOR USE AS STRUCTURAL FILL. OTHER FILL WILL HAVE TO BE IMPORTED.

THE ADDITION OF WATER MAY BE REQUIRED TO ACHIEVE OPTIMUM MOISTURE CONTENT. EXCAVATED ROCK MAY ALSO BE UTILIZED AS STRUCTURAL FILL PROVIDED IT IS PROCESSED TO LESS THAN 4 INCHES IN SIZE, AND MIXED WITH THE SUITABLE RESIDUAL SOILS TO PROVIDE A WELL–GRADED STRUCTURAL FILL.

SOILS EXCAVATED AT THE SITE SHOULD BE MAINTAINED BY THE CONTRACTOR. IN ORDER TO MINIMIZE PROBLEMS WITH STOCKPILED SOILS BECOMING TOO WET FOR USE AS STRUCTURAL FILL, THE SOILS EXCAVATED AND STOCKPILED SHOULD BE GRADED TO SHED WATER AND ROLLED WITH A SMOOTH DRUM ROLLER. DURING PERIODS OF WET SITE CONDITIONS, TRAVEL UPON THE BUILDING PADS, FIELDS AND WITHIN THE PAVEMENTS SHOULD BE LIMITED TO MINIMIZE DISTURBANCES WHICH WILL LEAD TO INSTABILITIES.

ANY STRUCTURAL OR LOAD BEARING SOIL WHICH IS IMPORTED TO THE SITE (IF REQUIRED) SHOULD MEET THE FOLLOWING CRITERIA: 1) FREE OF ORGANIC MATTER, ASH, CINDERS, AND DEMOLITION DEBRIS, 2) PARTICLE SIZE DISTRIBUTION THAT IS WELL GRADED, 3) PLASTICITY INDEX LESS THAN 10, AND 4) LESS THAN 15 PERCENT BY WEIGHT ROCK FRAGMENTS LARGER THAN 3", LESS THAN 30 PERCENT BY WEIGHT LARGER THAN 3/4" AND LESS THAN 30 PERCENT BY WEIGHT SMALLER THAN THE NO. 200 SIEVE.

THE ABOVE CRITERIA ARE PROVIDED AS A GENERAL GUIDELINE FOR SOIL MATERIALS IMPORTED TO THE SITE. SOIL MATERIALS, AVAILABLE FOR USE AS A STRUCTURAL FILL, SHOULD BE SUBMITTED TO A GEOTECHNICAL ENGINEER FOR EVALUATION PRIOR TO IMPORTATION TO THE SITE.

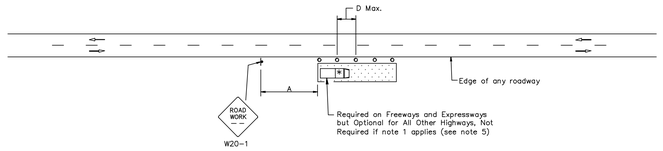
COMPACTION CRITERIA

STRUCTURAL FILL SHOULD GENERALLY BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING EIGHT (8) INCHES IN LOOSE THICKNESS AND COMPACTED WITH A SHEEPSFOOT OR SMOOTH DRUM VIBRATORY ROLLER WITH A MINIMUM STATIC WEIGHT OF 10 TONS. USE OF A SHEEPSFOOT ROLLER WILL AID IN CRUSHING EXCAVATED WEATHERED ROCK MATERIAL FOR USE AS STRUCTURAL FILL. THE FILL SHOULD BE PLACED IN HORIZONTAL LIFTS OF SIX (6) INCHES LOOSE THICKNESS WHERE COMPACTION BY HAND–OPERATED EQUIPMENT IS NECESSARY. THE OPTIMUM LIFT THICKNESS AND NUMBER OF REPETITIONS NECESSARY TO ACHIEVE THE REQUIRED PERCENTAGE COMPACTION VALUES SHOULD BE DETERMINED IN THE FIELD WITH TEST PASSES OF THE CHOSEN COMPACTION EQUIPMENT. THE FILL MATERIAL SHOULD BE PLACED AT, OR DEVIATE NOMINALLY FROM, THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM STANDARD D698 AND COMPACTED TO A MINIMUM PERCENTAGE OF THE MAXIMUM DRY DENSITY AS INDICATED IN THE FOLLOWING TABLE.

FILL AREA	PERCENT OF MAXIMUM DRY DENSITY AS PER ASTM STANDARD D 698
PAVEMENTS, SLAB–ON–GRADE AND FOUNDATION BEARING AREAS	98
WALKWAYS, AND BASIN BERMS	95
NON–STRUCTURAL	92

PLANS PREPARED IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE, 2012 INTERNATIONAL RESIDENTIAL CODE, 2012 INTERNATIONAL PLUMBING CODE, 2012 INTERNATIONAL MECHANICAL CODE, 2012 INTERNATIONAL FUEL GAS CODE, 2012 INTERNATIONAL FIRE CODE, 2012 INTERNATIONAL ENERGY CONSERVATION CODE, 2012 INTERNATIONAL EXISTING BUILDING CODE, 2012 INTERNATIONAL PROPERTY MAINTENANCE CODE, 2012 INTERNATIONAL SWIMMING POOL AND SPA CODE, 2012 INTERNATIONAL GREEN CONSTRUCTION CODE, 2012 INTERNATIONAL CODE COUNCIL PERFORMANCE CODE, 2009 INTERNATIONAL ENERGY CONSERVATION CODE, 2009

PUBLICATION 213
SHORT–TERM STATIONARY OPERATION
ADJACENT TO ANY ROADWAY



CONDITION 1: All Highways (except Freeways and Expressways)
A = 500 ft., W20–1 sign distance plaque to read 500 ft. or "AHEAD"
D = 2 times the normal speed limit

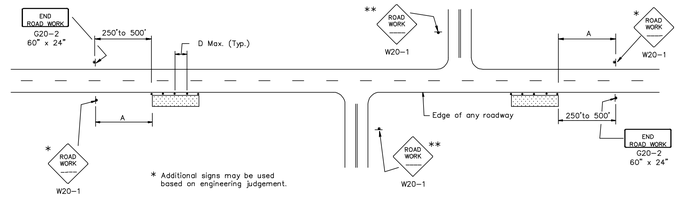
CONDITION 2: For Urban Streets
A = 200 ft. and sign distance plaque to read "AHEAD"
D = 2 times the normal speed limit

CONDITION 3: For Freeways and Expressways
A = 1000 ft., W20–1 sign distance plaque to read 1000 ft. or "AHEAD"
D = 2 times normal speed limit

NOTES
1. Traffic control devices are not required if the work space is outside the highway right–of–way, behind barrier, more than 2' behind curb, or 15' or more from the edge of any roadway.
2. For divided highways and one–way highways where it is physically possible, advance warning signs should also be placed on the left–hand side of the roadway.
3. The W20–1 Sign may be replaced with other appropriate signs (Low Shoulder sign, No Guide Rail sign, and so forth).
4. For operations 60 minutes or less, all traffic control devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.
5. Shadow vehicle shall be equipped with a Truck Mounted Attenuator (TMA) on Expressways and Freeways. Use of a TMA is Optional on all other Highways when a shadow vehicle is used.

PATA 5

PUBLICATION 213
LONG–TERM STATIONARY OPERATION
ADJACENT TO ANY ROADWAY



* Additional signs may be used based on engineering judgement.

Distance plaques on Advance Warning signs shall be the same series type.
Example: either all XXX ft. or all "AHEAD"

CONDITION 1: All Highways (except Freeways and Expressways):
A = 500 ft., W20–1 sign distance plaque to read 500 ft. or "AHEAD"
D = 2 times the normal speed limit.

CONDITION 2: For Urban Streets:
A = 200 ft. and sign distance plaque to read "AHEAD"
D = 2 times the normal speed limit

CONDITION 3: For Freeway and Expressway Highways:
A = 1000 ft., W20–1 sign distance plaque to read 1000 ft. or "AHEAD"
D = 2 times the normal speed limit

NOTES
1. Traffic control devices are not required if the work space is outside the highway right–of–way, behind barrier, more than 2 ft behind curb, or 15 ft or more from the edge of any roadway.
2. For divided highways and one–way highways where it is physically possible, advance warning signs should also be placed on the left–hand side of the roadway.
3. The W20–1 ** Sign may be replaced with other appropriate signs (Low Shoulder Sign, No Guide Rail Sign, and so forth).
4. The W20–1 Sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign prior to the work space.

PATA 24

PUBLICATION 213
SHORT–TERM STATIONARY OPERATION
TWO–LANE, TWO–WAY ROADWAY – INTERSECTION FLAGGING

NOTES
1. All flaggers must be in communication with each other.
2. Each flagger should be clearly visible to traffic for a minimum distance of E.
3. At night, flagger stations shall be illuminated, except in emergencies. See General Notes, sheet 3, note 26.
4. For operations of 15 minutes or less:
   a. The W20–1 Sign is not required.
   b. All channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is present in advance of the work space.
   c. The W20–7A Sign may be eliminated if the flagger is clearly visible to traffic for a minimum distance of E.
5. The buffer space should be extended so that the two–way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
6. When a highway–rail grade crossing exists within the work zone, or it is anticipated that queues resulting from the lane closure might extend through a highway–rail grade crossing, provisions shall be made to eliminate conflicts, which may require placing a flagger at the crossing. Coordination with the railroad is essential.
7. At signalized intersections, contact local municipality for authorization to place signal into flash mode.

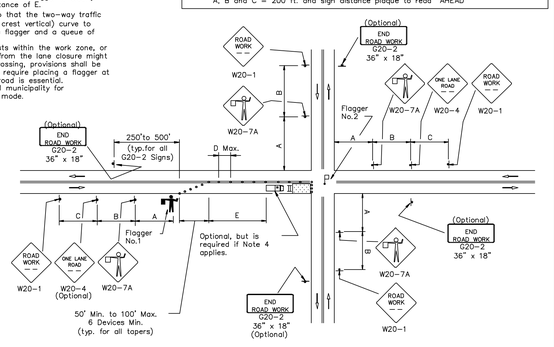
Distance plaques on
Advance Warning signs shall be the same series type.
Example: either all XXX ft. or all "AHEAD"

CONDITION 1: All Highways (except Freeways and Expressways)
A = 500 ft.
B = 500 ft., W20–4 sign distance plaque to read 1000 ft. or "AHEAD"
C = 500 ft., W20–1 sign distance plaque to read 1500 ft. or "AHEAD"

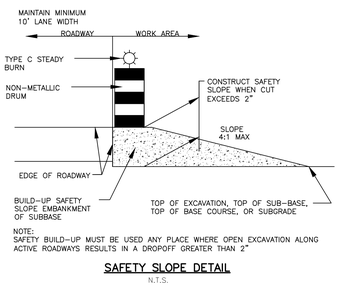
CONDITION 2: For Urban Streets
A, B and C = 200 ft. and sign distance plaque to read "AHEAD"

All Highways (except freeway and expressway)		
	D	E*
MPH	ft	ft
25	50	155
30	60	200
35	70	250
40	80	305
45	90	360
50	100	425
55	110	495

* Distances may be increased for downgrades or other conditions that affect stopping sight distance.

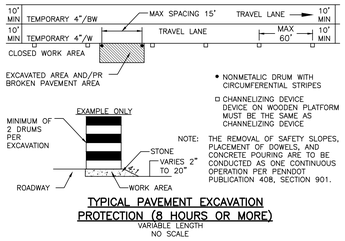


PATA 10b



NOTE:
SAFETY BUILD–UP MUST BE USED ANY PLACE WHERE OPEN EXCAVATION ALONG ACTIVE ROADWAYS RESULTS IN A DROPOFF GREATER THAN 2"

SAFETY SLOPE DETAIL
N.T.S.



NOTE: THE REMOVAL OF SAFETY SLOPES, PLACEMENT OF DOWELS, AND CONCRETE POURING ARE TO BE CONDUCTED AS ONE CONTINUOUS OPERATION PER PENNDOT PUBLICATION 408, SECTION 901.

TYPICAL PAVEMENT EXCAVATION PROTECTION (8 HOURS OR MORE)
VARIABLE LENGTH
NO SCALE

PENNDOT NOTES:
A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO. 428), KNOWN AS THE "STATE HIGHWAY LAW," BEFORE DRIVEWAY ACCESS TO A STATE HIGHWAY IS PERMITTED.

ACCESS TO THE STATE HIGHWAY SHALL BE ONLY AS AUTHORIZED BY A HIGHWAY OCCUPANCY PERMIT. NEITHER THE DEPARTMENT NOR ANY MUNICIPALITY TO WHICH PERMIT ISSUING AUTHORITY HAS BEEN DELEGATED UNDER SECTION 420 OF THE "STATE HIGHWAY LAW" SHALL BE LIABLE IN DAMAGES FOR ANY INJURY TO PERSONS OR PROPERTY ARISING OUT OF THE ISSUANCE OR DENIAL OF A DRIVEWAY PERMIT, OR FOR FAILURE TO REGULATE ANY DRIVEWAY. FURTHERMORE, THE MUNICIPALITY FROM WHICH THE APPROVAL HAS BEEN REQUESTED SHALL NOT BE HELD LIABLE FOR DAMAGES TO PERSONS OR PROPERTY ARISING OUT OF THE ISSUANCE OR DENIAL OF A DRIVEWAY PERMIT BY THE DEPARTMENT.

1) THE CONTRACTOR MUST NOTIFY THE PENNDOT DISTRICT 6 PRESS OFFICE AT 610–205–6800 ABOUT THE PROJECT CONSTRUCTION 2 WEEKS PRIOR TO THE START OF ANY WORK.
2) ALL WORK PERFORMED WITHIN THE STATE HIGHWAY RIGHT–OF–WAY MUST BE IN ACCORDANCE WITH PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION, RC–0M TO 100M, DATED JUNE 6, 2010 (AS AMENDED).
3) ALL CONSTRUCTION MATERIALS AND METHODS FOR WORK PERFORMED WITHIN THE STATE HIGHWAY RIGHT–OF–WAY MUST BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408, LATEST EDITION AND PUBLICATION NO. 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15).
4) ALL WORK PERFORMED WITHIN THE STATE LEGAL RIGHT–OF–WAY MUST BE IN ACCORDANCE WITH PENNDOT PUBLICATION 72M, "STANDARDS FOR ROADWAY CONSTRUCTION" RC–0M TO 100M, AS AMENDED.
5) MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE FIGURES PATA 5, 10B AND 24 FROM PENNDOT PUBLICATION 213, "TEMPORARY TRAFFIC CONTROL GUIDELINES", DATED APRIL 1, 2010 (OR LATEST EDITION AS AMENDED).
6) DO NOT STOP TRAFFIC FLOW WITHIN THE WORK AREA FOR MORE THAN A 5–MINUTE PERIOD AT ANY ONE TIME.
7) NO TRAFFIC RESTRICTIONS OR LANE CLOSURES ARE PERMITTED ON LEGAL HOLIDAYS AND/OR BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM AND 3:00 PM TO 6:00 PM, MONDAY THROUGH FRIDAY.
8) REMOVE ALL SHORT–TERM WZTC SIGNING UPON COMPLETION OF THAT DAY'S WORK PERIOD.
9) ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPROPRIATE SALL LBE ERADICATED BE TH PERMITTEE USING AN ERADICATION METHOD APPROVD BY THE PENNDOT FIELD REPRESENTATIVE. THE PERMITTEE SHALL PLACE ALL REQUIRED NEW PAVEMENT MARKINGS.
10) ALL PAVEMENT MARKINGS OTHER THAN LONGITUDINAL LINES TO BE HOT THERMOPLASTIC ON BITUMINOUS PAVEMENT, INCLUDING LONG AND SHORT LINES AND PAVEMENT MARKING LEGENDS.
11) ALL PAVEMENT MARKINGS DAMAGED BY THE CONSTRUCTION PROJECT MUST BE RESTORED IN–KIND.
12) PAVEMENT MARKING PLACEMENT ON THE STATE HIGHWAY SHALL BE IN ACCORDANCE WITH PUBLICATION 111M, TC–8600 AND TC–8700 SERIES DATED JUNE 23, 2009 (OR LATEST EDITION AS AMENDED).
13) ALL ROADWAY SIGNS DAMAGED BY THE CONSTRUCTION PROJECT MUST BE REPLACED.
14) ALL SIGHT DISTANCE OBSTRUCTIONS (INCLUDING BUT NOT LIMITED TO EMBANKMENTS AND VEGETATION) SHALL BE REMOVED BY THE DEVELOPER (PERMITEE) TO PROVIDE A MINIMUM OF 440 FEET OF SIGHT DISTANCE TO THE LEFT AND A MINIMUM OF 350 FEET TO THE RIGHT FOR A DRIVER EXITING THE PROPOSED ROADWAY ONTO THE STATE HIGHWAY. THE DRIVER MUST BE CONSIDERED TO BE POSITIONED TEN FEET FROM THE NEAR EDGE OF THE CLOSEST HIGHWAY THROUGH TRAVEL LANE (FROM THE CURB LINE IF CURBING IS PRESENT) AT AN EYE HEIGHT THREE FOOT–SIX INCHES (3'–6") ABOVE THE PAVEMENT SURFACE. THE POINT SIGHTED BY THE EXITING DRIVER SHALL BE THREE FOOT–SIX INCHES (3'–6") ABOVE THE PAVEMENT SURFACE LOCATED IN THE CENTER OF THE CLOSEST HIGHWAY TRAVEL LANE DESIGNATED FOR USE BY APPROACHING TRAFFIC. THIS SIGHT DISTANCE SHALL BE MAINTAINED BY THE PERMITEE.
15) THE PERMITTEE SHALL ENSURE THAT THE SIGHT DISTANCE AT THE DRIVEWAYS SERVICING OTHER PROPERTIES OR AT OTHER INTERSECTIONS IS NOT REDUCED [UNLESS EXISTING AND PROPOSED VALUES EXCEED THE DESIRABLE VALUES SPECIFIED IN THE PENNSYLVANIA CODE, TITLE 67. TRANSPORTATION, CHAPTER 441.8.H.1] AS RESULTS OF THE WORK PERFORMED IN ACCORDANCE WITH THE STATE HIGHWAY OCCUPANCY PERMIT.
16) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND PROPOSED STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF CONSTRUCTION.
17) NO UNSUITABLE MATERIAL IS TO BE USED IN ANY PORTION OF THE ROADWAY CONSTRUCTION. REMOVE ANY SUBGRADE THAT CANNOT BE PROPERLY COMPACTED AND THAT IS UNSUITABLE MATERIAL. UNDERCUTTING AND/OR SUBGRADE STABILIZATION MAY BE REQUIRED.
18) A SEPARATE HIGHWAY OCCUPANCY PERMIT APPLICATION MUST BE SUBMITTED TO THE DEPARTMENT FOR THE RELOCATION OF ANY UTILITIES. THE APPLICANT IS RESPONSIBLE FOR FINANCING AND COORDINATING WITH THE APPROPRIATE UTILITY FACILITY AND THE DEPARTMENT REGARDING ANY UTILITY RELOCATIONS.
19) ALL UTILITY RELOCATIONS MUST BE IN ACCORDANCE WITH PENNDOT DESIGN MANUAL PART 5. ALL UTILITY RELOCATION PERMITS TAKE PRECEDENCE OVER THE UTILITY RELOCATION POSITIONS SHOWN ON THE HOP PLANS.
20) SAWLINE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DEEMED NECESSARY BY A PENNDOT REPRESENTATIVE.
21) ALL PROPOSED VERTICAL CURB WITHIN THE RIGHT–OF–WAY OF THE STATE HIGHWAY SHALL HAVE AN 8" REVEAL. ALL SUBSTANDARD OR DAMAGED CURB WITHIN THE LIMITS OF WORK IN THE PENNDOT RIGHT–OF–WAY MUST BE REPLACED, AS NECESSARY.
22) THE APPLICANT WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SIDEWALKS, CURB RAMPS AND DETECTABLE WARNING SURFACES WITHIN OR ALONG THEIR PROPERTY FRONTAGE.

PENNDOT NOTES:
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND PROPOSED STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF CONSTRUCTION.
2. NO UNSUITABLE MATERIAL IS TO BE USED IN ANY PORTION OF THE ROADWAY CONSTRUCTION. REMOVE ANY SUBGRADE THAT CANNOT BE PROPERLY COMPACTED AND THAT IS UNSUITABLE MATERIAL. UNDERCUTTING AND/OR SUBGRADE STABILIZATION MAY BE REQUIRED.
3. MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE FIGURES PATA 5, PATA 10b, PATA 16 AND PATA 24 IN PENNDOT PUBLICATION 213, "WORK ZONE TRAFFIC CONTROL GUIDELINES," AMENDED APRIL 1, 2010, AND TITLE 67 PA CODE, CHAPTER 212, "OFFICIAL TRAFFIC CONTROL DEVICES", DATED FEBRUARY 2008 OR MOST CURRENT.
4. NO TRAFFIC RESTRICTIONS OR LANE CLOSURES ARE PERMITTED ON LEGAL HOLIDAYS AND/OR BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM AND 3:00 PM TO 6:00 PM, MONDAY THROUGH FRIDAY.
5. REMOVE ALL SHORT–TERM WZTC SIGNING UPON COMPLETION OF THAT DAY'S WORK PERIOD.
6. DO NOT STOP TRAFFIC FLOW WITHIN THE WORK AREA FOR MORE THAN A 5–MINUTE PERIOD AT ANY ONE TIME.
7. SAWLINE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DEEMED NECESSARY BY A PENNDOT REPRESENTATIVE.
8. ALL SUBSTANDARD OR DAMAGED CURB WITHIN THE LIMITS OF WORK IN THE PENNDOT RIGHT–OF–WAY MUST BE REPLACED, AS NECESSARY.
9. A SEPARATE HIGHWAY OCCUPANCY PERMIT APPLICATION MUST BE SUBMITTED TO THE DEPARTMENT FOR THE RELOCATION OF ANY UTILITIES. THE APPLICANT IS RESPONSIBLE FOR FINANCING AND COORDINATING WITH THE APPROPRIATE UTILITY FACILITY AND THE DEPARTMENT REGARDING ANY UTILITY RELOCATIONS.
10. ALL UTILITY RELOCATIONS MUST BE IN ACCORDANCE WITH PENNDOT DESIGN MANUAL PART 5. ALL UTILITY RELOCATION PERMITS TAKE PRECEDENCE OVER THE UTILITY RELOCATION POSITIONS SHOWN ON THE HOP PLANS.
11. ALL PAVEMENT MARKINGS OTHER THAN LONGITUDINAL LINES TO BE HOT THERMOPLASTIC ON BITUMINOUS PAVEMENT, INCLUDING LONG AND SHORT LINES.
12. ALL PAVEMENT MARKINGS DAMAGED BY THE CONSTRUCTION PROJECT MUST BE RESTORED IN–KIND.
13. PAVEMENT MARKING PLACEMENT ON THE STATE HIGHWAY SHALL BE IN ACCORDANCE WITH PUBLICATION 111M, 8600 SERIES DATED JUNE 23, 2009.
14. ALL ROADWAY SIGNS DAMAGED BY THE CONSTRUCTION PROJECT MUST BE REPLACED.
15. THE CONTRACTOR MUST NOTIFY THE PENNDOT DISTRICT 6 PRESS OFFICE AT 610–205–6800 ABOUT THE PROJECT CONSTRUCTION 2 WEEKS PRIOR TO THE START OF ANY WORK.
16. ALL WORK IN PA STATE HIGHWAY RIGHT–OF–WAY IS TO BE PERFORMED CONSISTENT WITH THE FOLLOWING:
   16.1. PUBLICATION NO. 408, SPECIFICATIONS.
   16.2. PUBLICATION NO. 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15).
   16.3. PUBLICATION NO. 72, STANDARDS FOR ROADWAY CONSTRUCTION.
   16.4. PUBLICATION NO. 111M, TRAFFIC CONTROL–PAVEMENT MARKINGS AND SIGNING STANDARDS.
   16.5. PUBLICATION NO. 213, TEMPORARY TRAFFIC CONTROL GUIDELINES.
17. ALL SIGHT DISTANCE OBSTRUCTIONS (INCLUDING BUT NOT LIMITED TO EMBANKMENTS AND VEGETATION) SHALL BE REMOVED BY THE PERMITTEE TO PROVIDE A MINIMUM OF 440 FEET OF CONTINUOUS SIGHT DISTANCE TO THE LEFT AND 350 FEET OF CONTINUOUS SITE DISTANCE TO THE RIGHT FOR A DRIVER EXITING THE PROPOSED DRIVEWAY/LOCAL ROAD ONTO THE STATE HIGHWAY. THE DRIVER MUST BE CONSIDERED TO BE POSITIONED 10' FROM THE NEAR EDGE OF THE CLOSEST HIGHWAY THROUGH TRAVEL LANE (FROM THE CURBLINE IF CURBING IS PRESENT) AT AN EYE HEIGHT OF THREE FEET–SIX INCHES (3'–6") ABOVE THE PAVEMENT SURFACE. THE POINT SIGHTED BY THE EXITING DRIVER SHALL BE THREE FEET–SIX INCHES (3'–6") ABOVE THE PAVEMENT SURFACE LOCATED IN THE CENTER OF THE CLOSEST HIGHWAY TRAVEL LANE DESIGNATED FOR USE BY APPROACHING TRAFFIC. THIS SIGHT DISTANCE SHALL BE MAINTAINED BY THE PERMITTEE.
18. THE UNDERGROUND STORMWATER DETENTION SYSTEMS SHALL BE INSPECTED AT LEAST ONCE A YEAR AND AFTER EACH STORM EVENT GREATER THAN 100 YEARS TO ENSURE THAT THE OUTLET CONTROLS ARE WORKING PROPERLY AND ARE NOT CLOGGED. THE UNDERGROUND STORMWATER DETENTION SYSTEM SHALL BE FLUSHED EVERY 2 YEARS TO PREVENT BUILDUP OF DEBRIS AND SEDIMENT. THIS SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE.

ALL PLANS, DESIGNS, DRAWINGS AND SPECIFICATIONS PREPARED BY MOMENEE & ASSOCIATES, INC. ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF MOMENEE & ASSOCIATES, INC. ANY UNAUTHORIZED USE OF THESE PLANS, DESIGNS, DRAWINGS AND SPECIFICATIONS SHALL BE AT THE SOLE RISK AND LIABILITY OF THE PERSON OR ENTITY EMPLOYING FOR SUCH USE.

Serial Number: 2014–203–0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1–800–242–1776

DAVID R. FIORELLO
REGISTERED PROFESSIONAL ENGINEER
PE027478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE: (610) 527–3030 FAX: (610) 527–9068

ROADWAY CONSTRUCTION DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

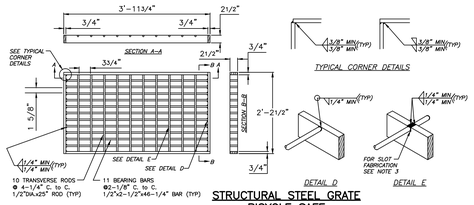
APPLICANT
ESH, LP
167 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE–CALL:	203–0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	11/6/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/29/14	INTERIM UPDATES

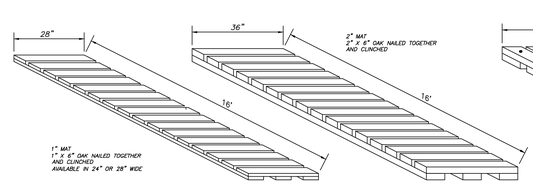
DATE: SEPTEMBER 5, 2014
SHEET NO.
84
OF 93
SCALE: AS NOTED
FILE NO.: 06–012

M:\PROJECTS\2006\06012\CAD\CONSTRUCTION\06012-DET.DGN

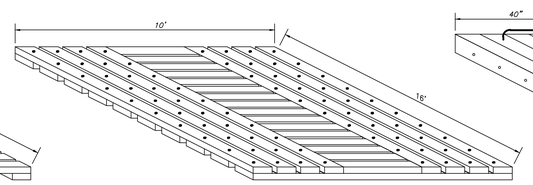


STRUCTURAL STEEL GRATE BICYCLE SAFE

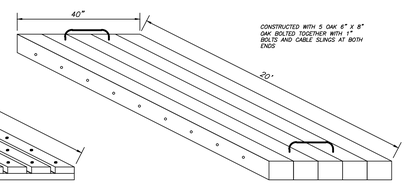
NOTES:
1. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(K). WELDING SHOPS ARE NOT REQUIRED TO BE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFIED.
2. PROVIDE TRANSVERSE RODS, MEETING THE REQUIREMENTS OF AASHTO–M227 OR M255, GRADE 70, 75, OR 80, FLUSH WITH THE GRATE SURFACE.
3. FABRICATE SLOTS BY BURNING, DRILLING, SHEARING OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.
4. REFER TO RC–34, SHEET 3 OF 9 FOR COMPLETE COMPLIANCE WITH DETAIL AND NOTES.



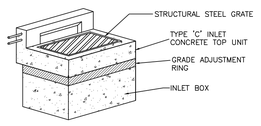
SINGLE–TRACK LOGGING MATS
AVAILABLE IN 14' OR 16' LENGTHS
N.T.S.



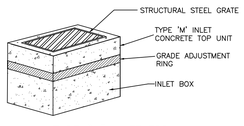
DOUBLE–TRACK LOGGING MAT
CONSTRUCTED WITH 3" X 8" OAK BOLTED TOGETHER WITH ¾" BOLTS
N.T.S.



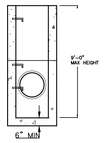
DRAGLINE MAT
AVAILABLE IN 18' OR 20' LENGTHS
N.T.S.

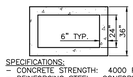


TYPE "C" INLET TOP

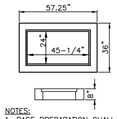


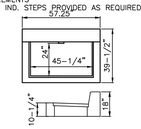
TYPE "M" INLET TOP



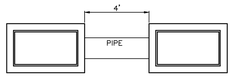


SPECIFICATIONS:
– CONCRETE STRENGTH: 4000 PSI MIN @ 28 DAYS
– REINFORCING STEEL: CONFORMS TO ASTM A615 & A185
– TOP AND PIPES TO BE GROUTED IN PLACE ON SITE BY CONTRACTOR
– DESIGN: TRAFFIC LOADS, HS–20 LOADING
– SPECIAL ORDERS ARE PROVIDED WITH HOLES TO MEET REQUIREMENTS
– M.A. IND. STEPS PROVIDED AS REQUIRED

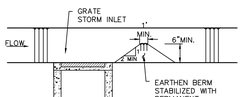


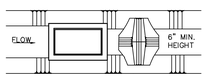


NOTES:
1. BASE PREPARATION SHALL BE A MINIMUM OF 6" OF COMPACTED 2A SUBBASE MATERIAL.
2. PROVIDE STRUCTURAL STEEL GRATES WITH TYPE 'C' & 'M' INLET TOPS.
3. PROVIDE ALL INLET BOTTOMS WITH 1' SUMP AND HOLES TO DRAIN INLET BOTTOM.
4. INSTALL NEW TYPE 'C' INLET TOP UNIT AND NEW BICYCLE SAFE STRUCTURAL STEEL GRATE ON EXISTING INLET AND PROPOSED INLET ALONG PROPERTY FRONTAGE ON LANCASTER AVENUE, MATCH EXISTING ROAD GRADES.
5. INLET GRATES TO BE DEPRESSED 1" AT BACK UNLESS NOTED OTHERWISE
6. COAT ALL SURFACES WITH ANTI–SPALLING COMPOUND.
7. MORTAR GROUT INLET FRAME TO BASIN.
8. AN 8" MAXIMUM LEVELING COURSE MAY BE USED WITH PRECAST INLETS.
9. INLET BOX CONSTRUCTION AS PER PENN–DOT SPECIFICATIONS.
10. CONCRETE BLOCK CONSTRUCTION IS NOT ALLOWED.
11. CAST IN PLACE CONCRETE, PRECAST CONCRETE, AND BRICK ARE THE ONLY APPROVED METHODS OF INLET BOX CONSTRUCTION.

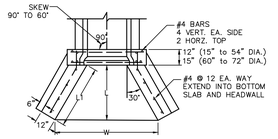


TYPICAL DOUBLE INLET PLACEMENT



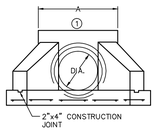


ROADSIDE SWALE
STORM INLET BERM

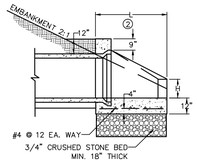


TYPE D–W ENDWALL
N.T.S.

PLAN



END VIEW



SECTION

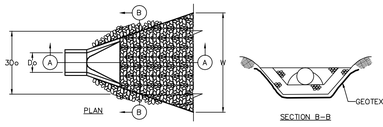
① INSTALLATION OF STANDARD CHAIN LINK FENCE ON HEADWALL TO BE DETERMINED BY THE CHIEF OF DESIGN

② LENGTH OF PAVED OUTLET TO BE BE CHECKED OR DETERMINED BY VELOCITY OF FLOW
CONCRETE – 3,500 PSI AIR – ENTRAINED

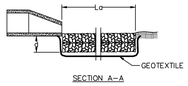
REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 40

DIA.	A	L	L_1	W	H
15"	3'–9"	3'–0"	2'–4"	3'–7"	12"
18"	4'–0"	3'–6"	2'–10"	4'–5"	12"
21"	4'–3"	4'–0"	3'–6"	5'–3"	12"
24"	4'–6"	4'–6"	4'–0"	6'–0"	12"
27"	4'–9"	4'–6"	4'–0"	6'–3"	14"
30"	5'–0"	4'–6"	4'–0"	6'–6"	15"
36"	5'–10"	4'–8"	4'–3"	7'–3"	18"

TYPE "DW" ENDWALL



D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.



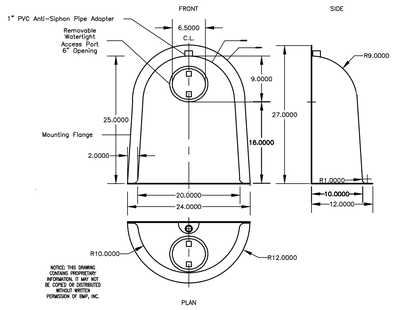
OUTLET NO.	PIPE DIA. Do	TAILWATER CONDITION	Q (CFS)	V (FPS)	RIPRAP SIZE	Lo (ft)	W (ft)
EW F–1	30"	MINIMUM	40.61	17.05	R–5	18.0'	25.5'
EW I–1	24"	MINIMUM	39.98	20.10	R–6	22.0'	28.0'
EW I–2	24"	MINIMUM	39.98	20.10	R–6	22.0'	28.0'
EW J–1	24"	MINIMUM	40.19	22.86	R–6	23.0'	29.0'
EW J–2	24"	MINIMUM	40.19	22.86	R–6	23.0'	29.0'

* REFER TO SWMGT REPORT FOR CALCS. OF ROCK RIPRAP ENERGY DISAPATOR.

* THE ANTICIPATED VELOCITY (V) SHOULD NOT EXCEED THE MAXIMUM PERMISSIBLE SHOWN IN THE PROGRAM MANUAL FOR THE PROPOSED RIPRAP PROTECTION.

RIPRAP APRON OUTLET PROTECTION
N.T.S.

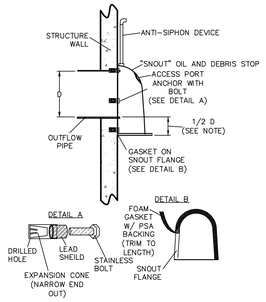
Best Management Products, Inc.
18F SNOUT Oil & Debris Stop



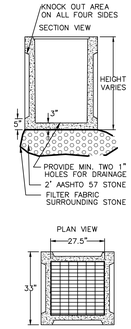
BMP NOTES:

- STRUCTURAL BMP (OTHER) – SNOUTS WITH BIO–SKIRTS – SNOUTS WILL BE INSTALLED WITH BIO–SKIRTS IN ALL INLETS DIRECTLY CONNECTED TO THE SUBSURFACE INFILTRATION BED IN ORDER TO REDUCE GROSS POLLUTANTS SUCH AS FLOATABLES AND TRASH, AS WELL AS FREE OILS AND SEDIMENT. THE BIO–SKIRT REDUCES BACTERIA AND CAPTURES AND RETAINS HYDROCARBONS.

BEST MANAGEMENT PRODUCTS, INC.
"SNOUT" OIL & DEBRIS STOP
INSTALLATION DIAGRAM (TYPICAL)

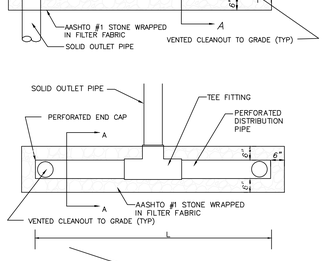


INSTALLATION NOTE:
POSITION HOOD SO THAT BOTTOM FLANGE OF SNOUT IS 1/2 THE PIPE DIAMETER BELOW THE BOTTOM OF THE PIPE FOR PIPES >12" ID. FOR PIPES <10" ID PLACE SNOUT 5" (MIN.) BELOW BOTTOM OF PIPE.



2' x 2' YARD DRAIN
(NON–TRAFFIC BEARING)

Manufactured by
MODERN CONCRETE
or other NPCA certified plant



PIPE PERFORATIONS

REQUIRED 3.31 SQ. IN/SQ. FT
FOR 12"dia. DISTRIBUTION PIPE
C12" = 2*PI*r = 2(PI).5 = 3.14 FT

FOR 1 LF OF PIPE
A12" = 3.14 SQ. FT
AREA OF HOLES = 3.31*3.14 = 10.39 SQ. IN

FOR 3/4"dia. HOLES
A3/4" = 0.442 SQ. IN

NO. HOLES NEEDED =10.39/0.442 = 24 HOLES
USE 6–3/4" dia. HOLES SPACED EQUALLY AROUND THE CIRCUMFERENCE @ 3"o.c. PER LENGTH OF PIPE STARTING @ 1.5" FROM EITHER END OF PIPE.

SECTION A–A

LEVEL SPREADER DETAIL
N.T.S.

PIPE PERFORATIONS

REQUIRED 3.31 SQ. IN/SQ. FT
FOR 15"dia. DISTRIBUTION PIPE
C15" = 2*PI*r = 2(PI).625 = 3.93 FT

FOR 1 LF OF PIPE
A15" = 3.93 SQ. FT
AREA OF HOLES = 3.31*3.93 = 13.01 SQ. IN

FOR 3/4"dia. HOLES
A3/4" = 0.442 SQ. IN

NO. HOLES NEEDED =13.01/0.442 = 30 HOLES
USE 10–3/4" dia. HOLES SPACED EQUALLY AROUND THE CIRCUMFERENCE @ 4"o.c. PER LENGTH OF PIPE STARTING @ 2" FROM EITHER END OF PIPE.

PIPE PERFORATIONS

REQUIRED 3.31 SQ. IN/SQ. FT
FOR 18"dia. DISTRIBUTION PIPE
C18" = 2*PI*r = 2(PI).75 = 4.71 FT

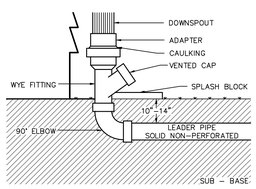
FOR 1 LF OF PIPE
A18" = 4.71 SQ. FT
AREA OF HOLES = 3.31*4.71 = 15.60 SQ. IN

FOR 3/4"dia. HOLES
A3/4" = 0.442 SQ. IN

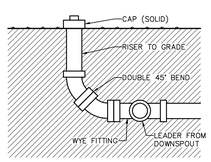
NO. HOLES NEEDED =15.60/0.442 = 36 HOLES
USE 12–3/4" dia. HOLES SPACED EQUALLY AROUND THE CIRCUMFERENCE @ 4"o.c. PER LENGTH OF PIPE STARTING @ 2" FROM EITHER END OF PIPE.

LEVEL SPREADER TABLE

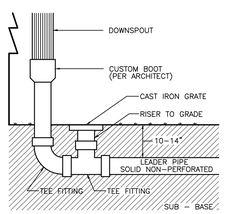
LEVEL SPREADER #	LENGTH "L"	DISTRIBUTION PIPE
SPREADER A	35'	12" HDPE
SPREADER C	115'	15" HDPE
SPREADER D	115'	18" HDPE
SPREADER G	150'	18" HDPE
SPREADER H	150'	18" HDPE
SPREADER N	55'	15" HDPE
SPREADER M	140'	18" HDPE
SPREADER L	70'	15" HDPE
SPREADER K	150'	18" HDPE
SPREADER TYP	60	12" HDPE



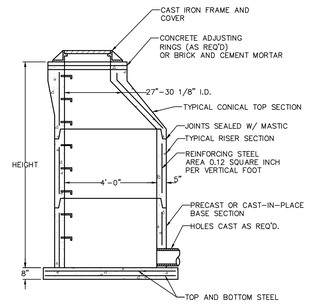
DOWNSPOUT DETAIL IN LANDSCAPE AREA
N.T.S.



TERMINAL CLEANOUT (TYPICAL)
N.T.S.



DOWNSPOUT DETAIL IN PAVED AREA
N.T.S.



PRECAST STORMWATER MANHOLE
N.T.S.

NOTES:
1. PRECAST MANHOLES, MEETING THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 713.2(C), MAY BE SUBSTITUTED FOR TYPES A AND B MANHOLES.
2. PROVIDE MANHOLE STEPS MEETING THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 606.2(C). ALTERNATE CONFIGURATIONS AND DIMENSIONS, AS APPROVED BY THE ENGINEER, MAY BE USED.

ALL RIGHTS RESERVED. THIS PLAN IS THE PROPERTY OF MOMENEE & ASSOCIATES, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF MOMENEE & ASSOCIATES, INC. © COPYRIGHT 2014

Serial Number: 2014–203–0820
CALL BEFORE YOU DIG!
PENNSYLVANIA ONE CALL SYSTEM
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1–800–242–1776

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE037478E

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527–3060 FAX (610) 527–9068

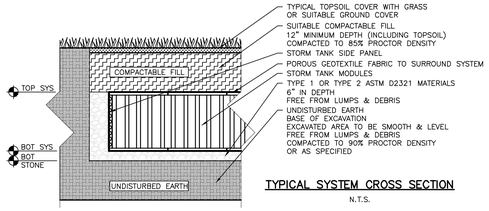
PCSM DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
102 TWADDELL MILL ROAD
WILMINGTON, DE 19807

ONE–CALL:	203–0820
DRAWN BY:	JRM
CHECKED BY:	DRF

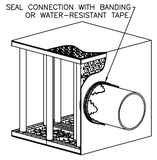
REV.	DATE	COMMENTS
1	10/28/14	INTERIM UPDATES
2	11/26/14	NPDES
3	12/8/14	PER TOWNSHIP REVIEW

DATE: SEPTEMBER 5, 2014
SHEET NO. 85 OF 93
SCALE: AS NOTED
FILE NO.: 06–012



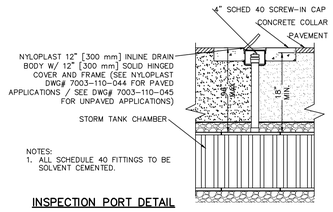
TYPICAL SYSTEM CROSS SECTION

N.T.S.



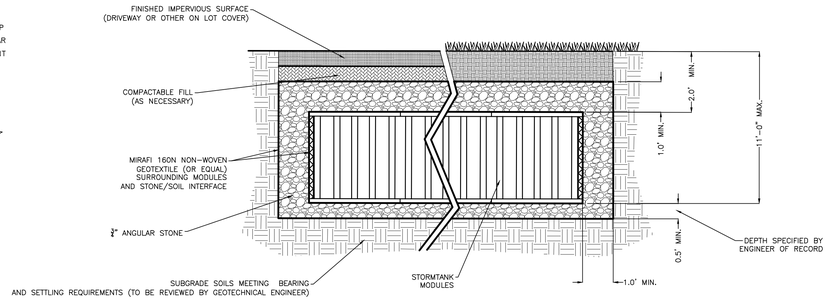
PIPE CONNECTION DETAIL

N.T.S.

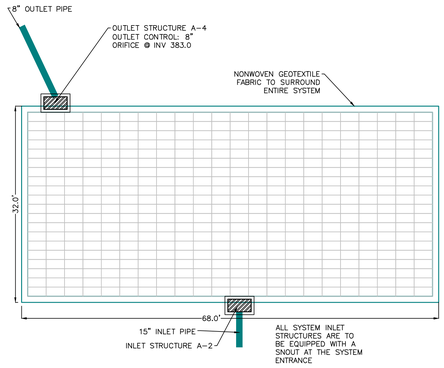


INSPECTION PORT DETAIL

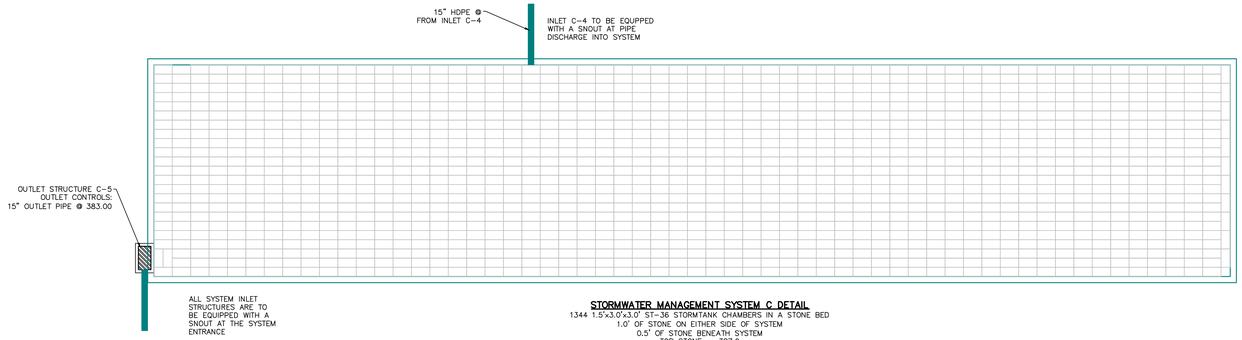
N.T.S.



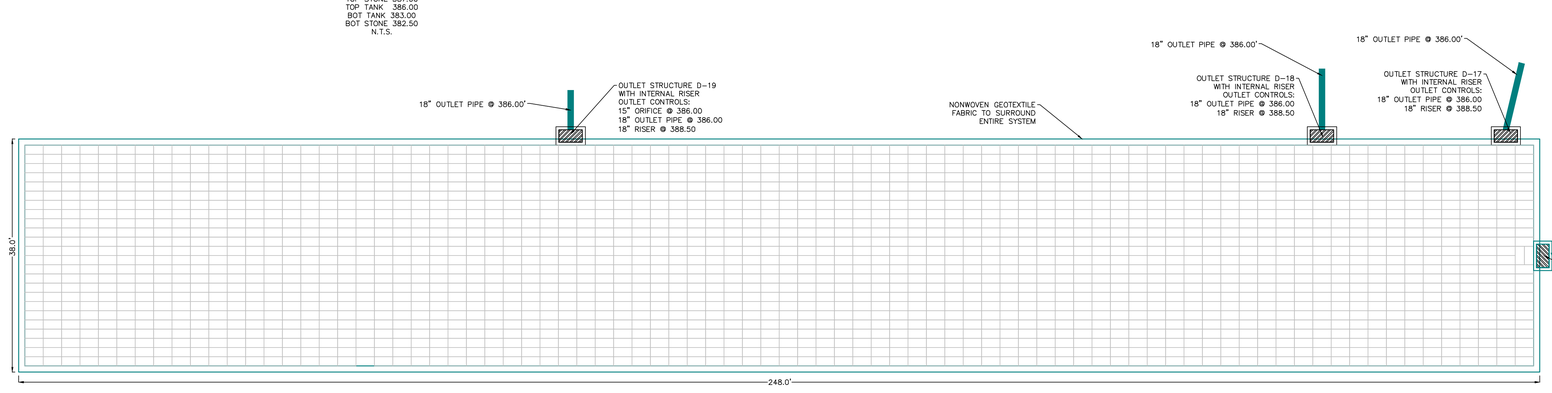
TYPICAL STORMTANK DETAILS



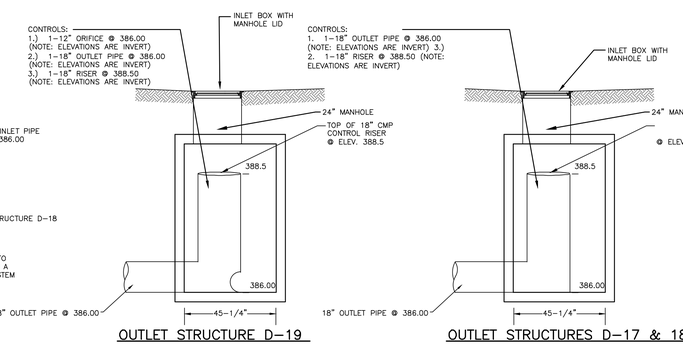
STORMWATER MANAGEMENT SYSTEM A DETAIL
440 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 387.00
TOP TANK 386.00
BOT TANK 383.00
BOT STONE 382.50
N.T.S.



STORMWATER MANAGEMENT SYSTEM C DETAIL
1344 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 387.0
TOP TANKS 386.0
15" OUTLET 383.0
BOT TANKS 383.0
BOT STONE 382.5
N.T.S.

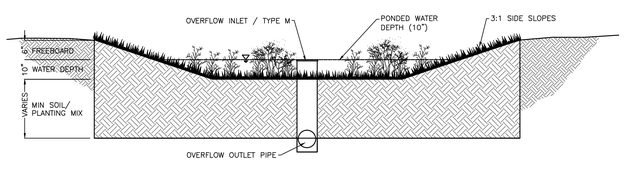


STORMWATER MANAGEMENT SYSTEM D DETAIL
1968 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 390.00
TOP TANK 389.00
BOT TANK 386.00
BOT STONE 385.50
N.T.S.



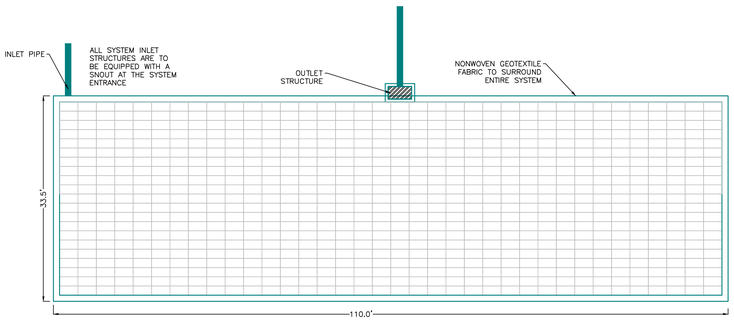
OUTLET STRUCTURE D-19

OUTLET STRUCTURES D-17 & 18

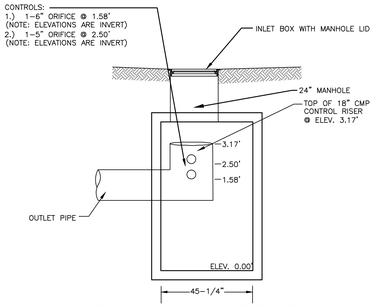


RAIN GARDEN DETAIL

RAIN GARDEN SYSTEM	PCSM "I"	PCSM "J"
TOP OF RAIN GARDEN/BERM ELEV.	318.50	305.50
TOP OF INLET/WATER ELEV.	316.83	303.83
BOTTOM OF GARDEN/TOP OF SOIL ELEV.	316.00	303.00
BOTTOM OF SOIL ELEV.	314.00	301.00
OUTLET PIPE INVERT	313.75	300.75



TYPICAL ON-LOT STORMWATER MANAGEMENT SYSTEM DETAIL
756 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 4.50'
TOP TANK 3.50'
BOT TANK 0.50
BOT STONE 0.00
N.T.S.



TYPICAL ON-LOT OUTLET STRUCTURE

PROFESSIONAL ENGINEER'S CERTIFICATION
I HEREBY CERTIFY THAT THE ENGINEERING PLAN FOR THE EROSION AND SEDIMENT CONTROL PLAN IS ADEQUATE TO MEET THE REQUIREMENTS OF CHAPTER 102 OF THE PENNSYLVANIA CODE AND THE DELAWARE COUNTY SOIL AND WATER CONSERVATION DISTRICT'S REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL.
DAVID R. FIORELLO, PE
PROFESSIONAL ENGINEER

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3050 FAX (610) 527-9008

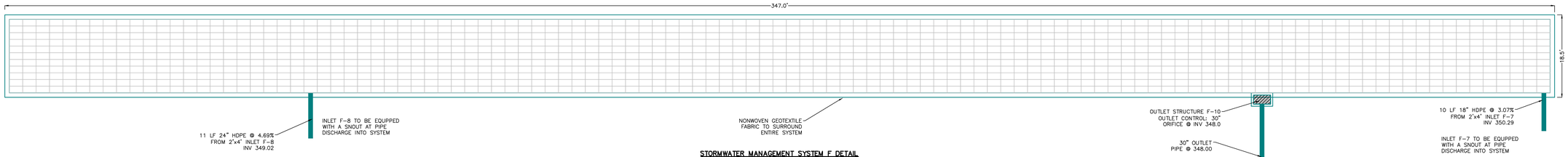
PCSM DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESIII LP
107 TWADDELL MILL ROAD
WILMINGTON, DE 19807

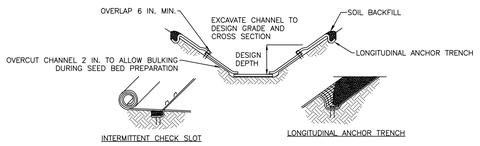
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 86 OF 93
SCALE: AS NOTED
FILE NO.: 06-012

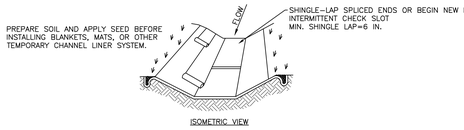


STORMWATER MANAGEMENT SYSTEM F DETAIL
1265 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 352.00
TOP TANK 351.00
BOT TANK 348.00
BOT STONE 347.50
N.T.S.

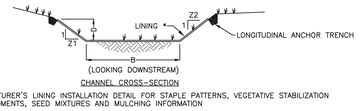


INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH



ISOMETRIC VIEW



CHANNEL CROSS-SECTION

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

NOTES:

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL
NOT TO SCALE

CHANNEL	LOCATION	B	D	F	Z_1	Z_2	*LINING
SWALE #1.1	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.2	TOWER FIELD LANE	1	0.25	0.75	3	3	GRASS
SWALE #1.3	TOWER FIELD LANE	1	0.37	0.63	3	3	GRASS
SWALE #1.4	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.5	TOWER FIELD LANE	1	0.42	0.58	3	3	GRASS
SWALE #1.6	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.7	TOWER FIELD LANE	1	0.42	0.58	3	3	GRASS
SWALE #1.8	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.9	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.10	TOWER FIELD LANE	5	0.40	0.60	3	3	GRASS
SWALE #1.11	TOWER FIELD LANE	1	0.14	0.86	3	3	GRASS
SWALE #1.12	MURRAY LANE	4	0.38	0.62	3	3	GRASS
SWALE #1.13	MURRAY LANE	4	0.31	0.69	3	3	GRASS
SWALE #1.14	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.15	WHEELER LANE	3	0.35	0.65	3	3	GRASS
SWALE #1.16	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.17	WHEELER LANE	1	0.30	0.70	3	3	GRASS
SWALE #1.18	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.19	WHEELER LANE	2	0.36	0.64	3	3	GRASS
SWALE #1.20	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.21	WHEELER LANE	2	0.33	0.67	3	3	GRASS
SWALE #1.22	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.23	WHEELER LANE	2	0.45	0.55	3	3	GRASS
SWALE #1.24	WHEELER LANE	1	0.20	0.80	3	3	GRASS
SWALE #1.25	WHEELER LANE	4	0.45	0.55	3	3	GRASS
SWALE #1.26	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.27	WHEELER LANE	2	0.50	0.50	3	3	GRASS
SWALE #1.28	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.29	SHARE DRIVE CE	1	0.17	0.83	3	3	GRASS
SWALE #1.30	SHARE DRIVE CE	1	0.17	0.83	3	3	GRASS
SWALE #3.1	TYLER LANE	2	0.33	0.67	3	3	GRASS
SWALE #3.2	TYLER LANE	2	0.42	0.58	3	3	GRASS
SWALE #3.3	TYLER LANE	2.5	0.50	0.50	3	3	GRASS
SWALE #3.4	TYLER LANE	2	0.25	0.75	3	3	GRASS
SWALE #3.5	TYLER LANE	2.5	0.25	0.75	3	3	GRASS
SWALE #3.6	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.7	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.8	TYLER LANE	2	0.28	0.72	3	3	GRASS
SWALE #3.9	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.10	TYLER LANE	2	0.30	0.70	3	3	GRASS
SWALE #3.11	TYLER LANE	2	0.25	0.75	3	3	GRASS

CHANNEL	LOCATION	B	D	F	Z_1	Z_2	*LINING
SWALE #4.1	AYRSHIRE DRIVE	2.0	0.25	0.75	3	3	GRASS
SWALE #4.2	AYRSHIRE DRIVE	2.0	0.48	0.52	3	3	GRASS
SWALE #4.3	BINNEY LANE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.4	BINNEY LANE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.5	BINNEY LANE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.6	BINNEY LANE	2.0	0.30	0.70	3	3	GRASS
SWALE #4.7	BINNEY LANE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.8	BINNEY LANE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.9	BINNEY LANE	4.0	0.50	0.50	3	3	GRASS
SWALE #4.10	BINNEY LANE	2.0	0.35	0.65	3	3	GRASS
SWALE #4.11	BINNEY/AYRSHIRE	2.0	0.40	0.60	3	3	GRASS
SWALE #4.12	BINNEY LANE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.13	BINNEY LANE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.14	BINNEY LANE	2.0	0.35	0.65	3	3	GRASS
SWALE #4.15	AYRSHIRE DRIVE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.16	AYRSHIRE DRIVE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.17	AYRSHIRE DRIVE	2.0	0.25	0.75	3	3	GRASS
SWALE #4.18	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.19	AYRSHIRE DRIVE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.20	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.21	AYRSHIRE DRIVE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.22	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.23	AYRSHIRE DRIVE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.24	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.25	AYRSHIRE DRIVE	2.0	0.30	0.70	3	3	GRASS
SWALE #4.26	AYRSHIRE DRIVE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.27	AYRSHIRE DRIVE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.28	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.29	AYRSHIRE DRIVE	2.0	0.35	0.65	3	3	GRASS

CONSTRUCTION SPECIFICATIONS FOR STORMWATER MANAGEMENT SYSTEMS

1. INFILTRATION BMP FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED ANY OF THE INFILTRATION SEEPAGE BEDS, APPROPRIATE MEASURES (i.e. CLEANING THE SOIL/SEDIMENT FROM FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.

2. ALTER AND REFINE THE GRADES AS NECESSARY TO BRING SUBGRADE TO REQUIRED GRADES AND SECTIONS AS SHOWN IN THE DRAWINGS.

3. THE TYPE OF EQUIPMENT USED IN SUBGRADE PREPARATION CONSTRUCTION SHALL NOT CAUSE UNDUE SUBGRADE COMPACTION. TRAFFIC OVER SUBGRADE SHALL BE KEPT AT A MINIMUM.

4. ADDITIONAL INFILTRATION TESTING SHALL BE PERFORMED DURING CONSTRUCTION VERIFYING THAT SUBSOIL COMPACTION DID NOT TAKE PLACE. CALCULATIONS SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW AND APPROVAL. UPON VERIFYING THE SUITABILITY OF THE SOILS, EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM, AS INDICATED ON THE PLANS.

5. INSTALL POLYPROPYLENE NONWOVEN GEOTEXTILE FABRIC WHICH MEETS PADOT CLASS 1 SPECIFICATIONS (i.E., DUPONT TYPAR #3401, AMOCO PROPEX #4545, OR APPROVED EQUAL) ON BOTTOM OF BED AREAS AND TACK UP SIDES OF EXCAVATION. WHERE EDGES OF ROLLS OVERLAP, THEY SHALL DO SO BY AT LEAST EIGHTEEN INCHES. ADEQUATE FABRIC SHALL BE LEFT ON THE ROLLS (NOT CUT FROM SIDE INSTALLATION) TO FACILITATE OVERTOPPING THE SYSTEM AT COMPLETION OF INSTALLATION.

6. ALL STONE FOR THE CONSTRUCTION OF THE OF THE STONE RECHARGE BED SHALL BE UNIFORMLY GRADED AND CLEAN, WASHED, AGGREGATE. THE STONE SHALL MEET PENNDOT/AASHTO #3 SPECIFICATIONS. STONE TO BE CHECKED BY THE DESIGN OR SITE ENGINEER PRIOR TO INSTALLATION.

7. STONE BASE COURSE SHALL BE LAID OVER A DRY SUBGRADE TO A DEPTH SHOWN IN DRAWINGS. DO NOT ROLL OR COMPACT THE STONE BASE COURSE. KEEP THE BASE COURSE CLEAN FROM DEBRIS, CLAY AND ERODING SOIL. INSTALL TANKS AND PIPE AS SHOWN AND BACKFILL WITH STONE.

8. COVER SYSTEM WITH REMAINING FABRIC, ALLOWING OPENINGS FOR ACCESS COVERS.

9. SYSTEM TO BE TOTALLY ENCLOSED IN THE NON-WOVEN GEOTEXTILE FABRIC.

10. STONE RECHARGE BED FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS.

11. THE BOTTOM OF ALL STONE RECHARGE BED'S SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.

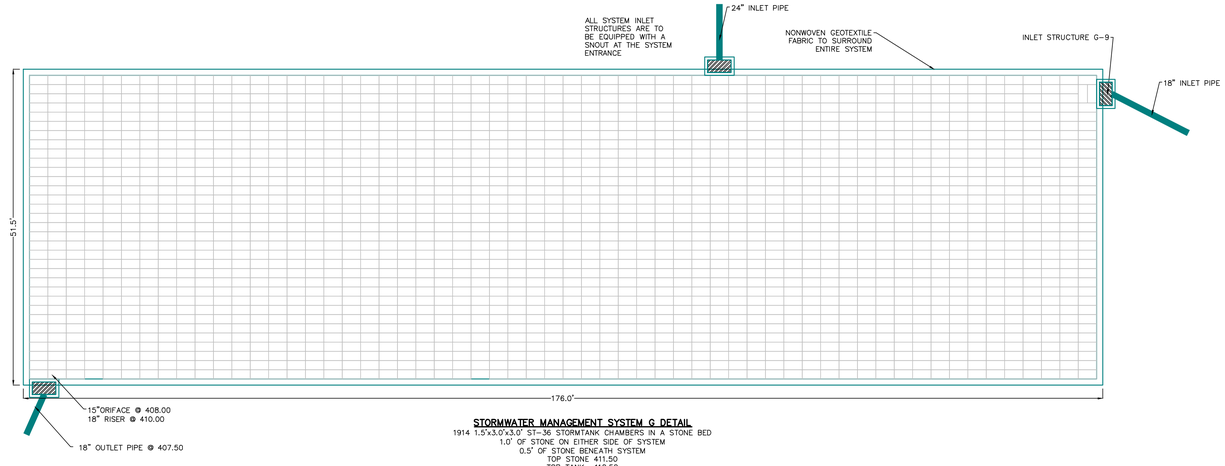
12. INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL ON-LOT SYSTEMS SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES OR DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THESES SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.

13. STONE RECHARGE BEDS SHALL NOT RECEIVE RUNOFF UNTIL THE ENTIRE DRAINAGE AREA CONTRIBUTING TO THE STONE RECHARGE BED HAS ACHIEVED FINAL STABILIZATION.

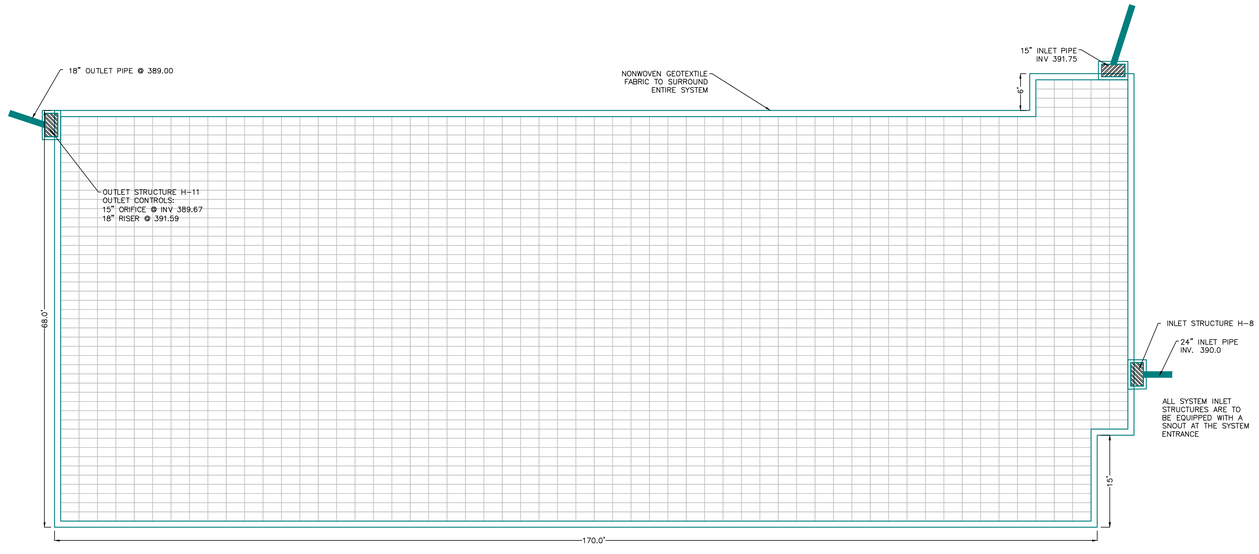
14. AFTER THE INFILTRATION BED IS COMPLETELY INSTALLED, ALL HEAVY CONSTRUCTION EQUIPMENT SHALL BE RESTRICTED FROM THE INFILTRATION BEDS TO ELIMINATE IMPACTS WHICH MAY COMPROMISE IT. IN THE EVENT ANY IMPACTS COMPROMISE THE FUNCTIONALITY OF THE INFILTRATION BEDS, IT MUST BE IMMEDIATELY REPAIRED OR REPLACED TO DESIGN SPECIFICATIONS.

INFILTRATION BMP NOTES:

1. INFILTRATION BMP FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED ANY OF THE INFILTRATION SEEPAGE BEDS, APPROPRIATE MEASURES (i.e. CLEANING THE SOIL/SEDIMENT FROM FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
2. ALL STONE FOR THE CONSTRUCTION OF THE INFILTRATION BMP SHOULD BE UNIFORMLY GRADED AND CLEAN WASHED AGGREGATE.
3. THE BOTTOM OF ALL INFILTRATION BMPs SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.
4. INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL ON-LOT SYSTEMS SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES AND DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.
5. ALL INFILTRATION BMPS SHALL BE LOCATED A MINIMUM OF 10' FROM A BASEMENT WALL.
6. AFTER THE INFILTRATION BED IS COMPLETELY INSTALLED, ALL HEAVY CONSTRUCTION EQUIPMENT SHALL BE RESTRICTED FROM THE INFILTRATION BEDS TO ELIMINATE IMPACTS WHICH MAY COMPROMISE IT. IN THE EVENT ANY IMPACTS COMPROMISE THE FUNCTIONALITY OF THE INFILTRATION BEDS, IT MUST BE IMMEDIATELY REPAIRED OR REPLACED TO DESIGN SPECIFICATIONS.
7. THE PROJECT ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE INITIATION OF ANY E&S OR PCSM CRITICAL STAGE OF CONSTRUCTION AS NOTED ON THE EROSION & SEDIMENTATION CONTROL PLAN AND POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. CRITICAL STAGES INCLUDE THOSE LISTED BELOW AND MORE GENERALLY THE INSTALLATION OF UNDERGROUND TREATMENT OR STORAGE BMPS, STRUCTURALLY ENGINEERED BMPS, OR OTHER BMPS "AS DEEMED APPROPRIATE BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT." THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR PERFORMING ON-SITE INSPECTIONS FOR ALL CRITICAL STAGES IN ORDER TO ENSURE GENERAL PCSM PLAN COMPLIANCE TO FACILITATE FINAL CERTIFICATION THAT THE SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN.



STORMWATER MANAGEMENT SYSTEM G DETAIL
1914 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 411.50
TOP TANK 410.50
BOT TANK 407.50
BOT STONE 407.00
N.T.S.

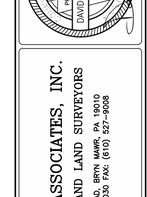


STORMWATER MANAGEMENT SYSTEM H DETAIL
2552 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 393.00
TOP TANK 392.00
BOT TANK 389.00
BOT STONE 388.50
N.T.S.

ALL PROJECTS REQUIRE A PENNSYLVANIA ONE CALL SYSTEM, INC. SERIAL NUMBER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THIS NUMBER PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776 AT LEAST THREE BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOT EXCAVATE UNTIL ALL MEMBERS HAVE MARKED THEIR UNDERGROUND FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL MEMBERS OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE PLANS. THE CONTRACTOR SHALL NOTIFY ALL MEMBERS OF ANY DAMAGE TO THEIR FACILITIES AND SHALL ASSIST IN THE REPAIR OF SUCH DAMAGE.

Serial Number: 2014-203-0820

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS NOTICE FOR DESIGN PHASE.
Pennsylvania One Call System, Inc.
1-800-242-1776



MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9068

PCSM DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

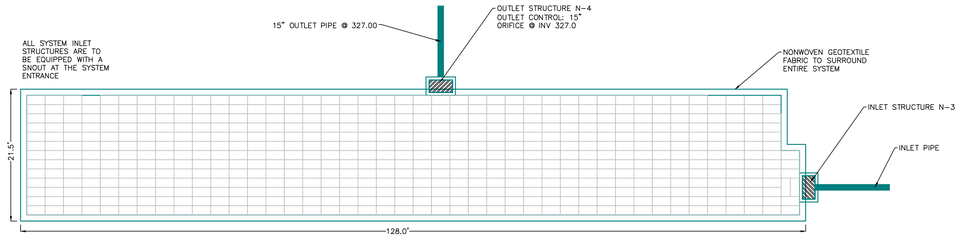
ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH LP
167 TWADELL MILL ROAD
WILMINGTON, DE 19807

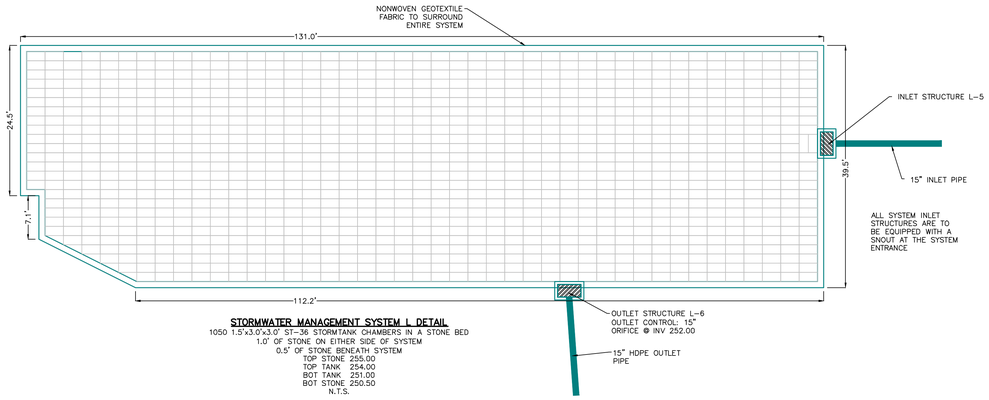
REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO.
87
OF 93
SCALE: AS NOTED
FILE NO.: 06-012

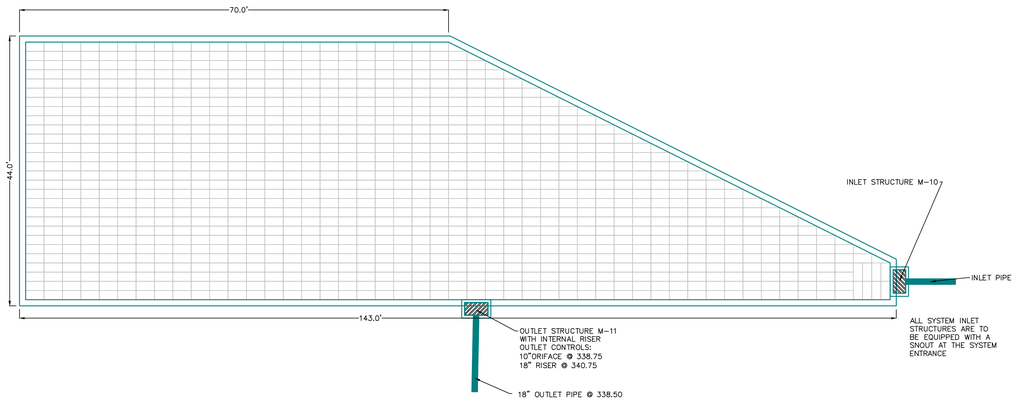
N:\PROJECTS\2006\06078\MA\DRAWINGS\060720D



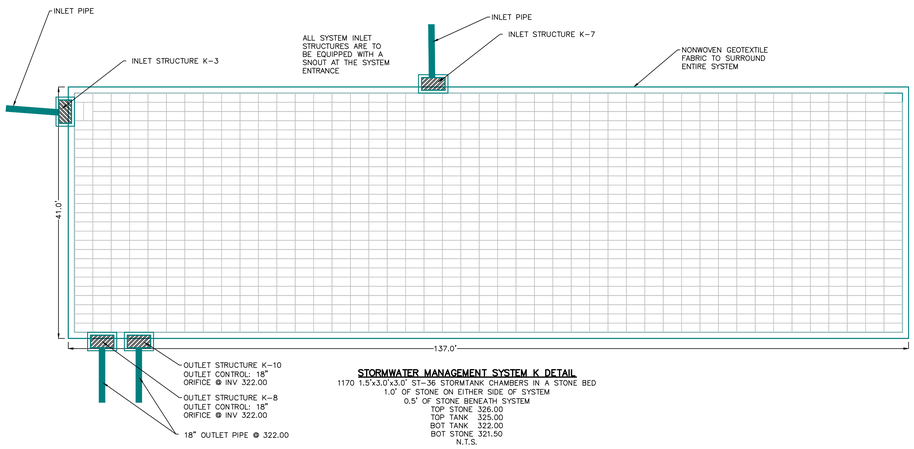
STORMWATER MANAGEMENT SYSTEM N DETAIL
540 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 330.00
TOP TANK 329.00
BOT TANK 326.00
BOT STONE 325.50
N.T.S.



STORMWATER MANAGEMENT SYSTEM L DETAIL
1050 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 255.00
TOP TANK 254.00
BOT TANK 251.00
BOT STONE 250.50
N.T.S.



STORMWATER MANAGEMENT SYSTEM M DETAIL
1016 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 342.50
TOP TANK 341.50
BOT TANK 338.50
BOT STONE 338.00
N.T.S.



STORMWATER MANAGEMENT SYSTEM K DETAIL
1170 1.5'x3.0'x3.0' ST-36 STORMTANK CHAMBERS IN A STONE BED
1.0' OF STONE ON EITHER SIDE OF SYSTEM
0.5' OF STONE BENEATH SYSTEM
TOP STONE 326.00
TOP TANK 325.00
BOT TANK 322.00
BOT STONE 321.50
N.T.S.

CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL BE CLEAN NON-WOVEN GEOTEXTILE (PERMEABLE FILTER FABRIC) CLASS 1 AND SHALL BE IN ACCORDANCE WITH PADOT SPECIFICATION FROM 408. THE TYPE AND/OR THICKNESS SHALL BE DUPONT TYPAR #3401, AMOCO PROPEX #4545 OR APPROVED EQUAL OR AS OTHERWISE INDICATED ON THE PLAN.

2. ALL STONE USED FOR THE CONSTRUCTION OF THE INFILTRATION BMP SHALL BE UNIFORMLY GRADED, CLEAN, AND WASHED CRUSHED STONE AGGREGATE MEETING PENNDOT/AASHTO #3 SPECIFICATIONS.

3. ALL PERSONS ENTERING ACTIVE TANKS, MANHOLES, INLETS, ETC. MUST COMPLY WITH OSHA REQUIREMENTS FOR ENTRY INTO CONFINED SPACES.

4. RAIN WATER CONDUCTORS ARE TO COLLECT ALL ROOF RUNOFF AND CONVEY IT TO THE APPROPRIATE STORMWATER MANAGEMENT FACILITY.

5. CLEANOUTS ARE REQUIRED AT ALL CHANGES IN DIRECTION OF THE ROOF DRAINS AND SANITARY SEWER LATERALS.

6. ALL SEEPAGE BEDS SHALL BE INSTALLED WITH A MINIMUM SEPARATION DISTANCE OF 10 FEET FROM ALL BASEMENT WALLS.

7. ALL CMP AND HCMP SHALL BE ALUMINUM OR ALUMINIZED STEEL.

8. ALL HDPE PIPE SHALL BE SMOOTH INTERIOR FLOW.

9. ALL PVC PIPE SHALL BE SDR 35.

10. THE RISER CONNECTIONS IN THE STORMWATER MANAGEMENT SYSTEM SHALL BE WATERTIGHT. REFER TO DETAILS.

11. PERFORATIONS FOR SHALL SATISFY AASHTO DESIGNATION M36/M 36M-90 FOR CLASS 2 PERFORATIONS. THE PERFORATIONS SHALL BE CIRCULAR HOLES WITH NOMINAL DIAMETERS OF 5/16 TO 3/8 INCH. THE PERFORATIONS SHALL BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE. THE PERFORATIONS SHALL PROVIDE AN OPENING AREA OF NOT LESS THAN 3.3 SQ. IN. PER SQ. FT. OF PIPE SURFACE BASED ON NOMINAL DIAMETER AND LENGTH OF PIPE.

12. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.

13. THE OWNER/CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR ANY/ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF AND CERTIFICATE OF OCCUPANCY ISSUANCE, INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES, SCHEDULING OF FIELD OBSERVATIONS AND COORDINATION WITH REPRESENTATIVES OF THE APPROPRIATE PARTIES. CONTRACTOR IS RESPONSIBLE TO COORDINATE CERTIFICATIONS, SIGN-OFFS, ETC. NECESSARY FOR JOB CLOSEOUT AND ISSUANCE OF CERTIFICATE OF OCCUPANCY.

14. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.

15. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS AND NOTIFY OUR OFFICE IF ACTUAL SITE CONDITIONS DIFFER FROM THAT SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.

16. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD-VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

17. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWNSHIP, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE & DISPOSE OF HAZARDOUS/UNSUITABLE MATERIAL OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES & LAWS.

18. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTINUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.

19. CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURE, ETC. TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES AS NECESSARY TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT TO REMAIN, AND PROVIDE A SAFE WORK AREA.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECT CABLE, CONDUITS AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION.

21. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIR SHALL BE EQUAL TO OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.

22. ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED IN SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.

23. ENGINEER NOT RESPONSIBLE FOR CONSTRUCTION METHODS/MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR RESPONSIBLE FOR DETERMINING METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD WHEN A CONFLICT IS IDENTIFIED.

24. ENGINEER OF RECORD HEREIN IS NOT RESPONSIBLE FOR JOB SITE SAFETY, NOR HAS HE BEEN RETAINED FOR SUCH PURPOSES.

25. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND ANY RECOMMENDATIONS PROVIDED BY THE OWNER'S GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE NO MORE THAN 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD, FIELDS AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.

26. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MIN. SLOPE AGAINST ANY AND ALL CURBS, ISLANDS AND GUTTERS, AND 1.0% MIN. ON GRAVEL, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.

27. LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD-VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

28. IN CASE OF DISCREPANCIES BETWEEN PLANS, THE SITE PLAN WILL SUPERCEDE IN ALL CASES. NOTIFY ENGINEER OF RECORD OF ANY CONFLICT.

29. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER & SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

30. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD). NO UNSUITABLE MATERIAL IS TO BE USED IN ANY PORTION OF THE PAVED AREA OF CONSTRUCTION. REMOVE ANY SUBGRADE THAT CANNOT BE PROPERLY COMPACTED AND THAT IS UNSUITABLE MATERIAL. UNDERCUTTING AND/OR SUBGRADE STABILIZATION MAY BE REQUIRED.

31. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.

32. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY-DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.

33. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.

34. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SITE PRIOR TO COMMENCING CONSTRUCTION.

35. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL FIELD ELEVATIONS PRIOR TO CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL FIELD ELEVATIONS AND ELEVATIONS SHOWN IN THE PRELIMINARY/FINAL SUBDIVISION PLANS, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE OWNER. NEITHER MOMENEE AND ASSOCIATES INC., NOR MOMENEE SURVEY GROUP ARE RESPONSIBLE FOR DESIGN ISSUES THAT MAY ARISE DUE TO DISCREPANCIES BETWEEN ACTUAL SITE ELEVATIONS AND EXISTING AND/OR PROPOSED ELEVATIONS SHOWN IN THE FINAL SUBDIVISION PLANS FOR THIS PROPERTY.

36. GAS AND ELECTRIC SERVICES TO BE DESIGNED IN COORDINATION WITH PECO SERVICE CONTRACT. ALL ELECTRIC AND GAS CONSTRUCTION SHALL BE IN ACCORDANCE WITH PER PECO SPECIFICATIONS.

37. ALL PROPOSED UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND.

38. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408 AND RC STANDARDS (LATEST ADDITIONS).

39. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT HANDICAP ACCESSIBLE SPACES AND LOADING AREAS MAINTAIN A 2% MAXIMUM SLOPE IN ALL DIRECTIONS AND THAT HANDICAP CURB RAMPS MEET THE LATEST ADA REQUIREMENTS FOR ACCESSIBILITY.

CONSTRUCTION TIMING AND SEQUENCE GENERAL NOTES:

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, AND A REPRESENTATIVE FROM THE DELAWARE 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 DELAWARE 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 CONTRACTOR SHALL MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE TO THE EXTENT FEASIBLE BY STAGING CONSTRUCTION ACTIVITIES, WHERE POSSIBLE, ONLY DISTURBING AREAS NEEDED FOR EACH STAGE AND IMMEDIATELY STABILIZING AREAS WHERE CONSTRUCTION HAS CEASED.

PCSM CRITICAL STAGES:

- ADDITIONAL INFILTRATION TESTING
- ALL PCSM FACILITIES
  - POST CONSTRUCTION STORMWATER MANAGEMENT SYSTEM INSTALLATION
  - BIORETENTION RAIN GARDEN INSTALLATION
  - VEGETATED SWALES (GRADED SWALE) INSTALLATION

THE PROJECT ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE INITIATION OF ANY E&S OR PCSM CRITICAL STAGE OF CONSTRUCTION AS NOTED ON THE EROSION & SEDIMENTATION CONTROL PLAN AND POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. CRITICAL STAGES INCLUDE THOSE LISTED ABOVE AND MORE GENERALLY THE INSTALLATION OF UNDERGROUND TREATMENT OR STORAGE BMPS, STRUCTURALLY ENGINEERED BMPS, OR OTHER BMPS "AS DEEMED APPROPRIATE BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT." THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR PERFORMING ON-SITE INSPECTIONS FOR ALL CRITICAL STAGES IN ORDER TO ENSURE GENERAL PCSM PLAN COMPLIANCE TO FACILITATE FINAL CERTIFICATION THAT THE SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN.

SEQUENCE OF BMP INSTALLATION:

1. **CRITICAL STAGE** – UPON FINAL STABILIZATION OF THE CONTRIBUTORY AREA, EXCAVATE FOR AND INSTALL THE PERMANENT STORM WATER SYSTEM AND LEVEL SPREADER. THE INFILTRATION SYSTEM SHALL REMAIN PROTECTED FROM DISTURBANCE UNTIL THE CONTRIBUTORY AREAS ARE COMPLETELY STABILIZED. PRIOR TO THE INSTALLATION OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM AND PRIOR TO THE SYSTEM BEING RENDERED OPERATIONAL, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER FOR FIELD REVIEW OF THE SITE GRADING, STORMWATER FACILITIES AND GENERAL PCSM PLAN COMPLIANCE IN ORDER TO FACILITATE FINAL CERTIFICATION THAT THE SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN.
2. EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM AS INDICATED ON THE PLANS. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE.
3. PLACE THE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE BED. PROVIDE OPENING IN FABRIC FOR OUTFLOW PIPE.
4. PLACE 6" OF AASHTO NO. 57 AGGREGATE IN THE BOTTOM OF THE BED AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE BED IS NOT TORN DURING INSTALLATION. INSTALL STONE TO THE NOTED UNIFORM DEPTH.
5. PLACE SECOND LAYER OF FILTER FABRIC OVER STONE BASE. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE "STORM TANK" UNITS.
6. INSTALL "STORM TANK" UNITS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PRACTICES. CONNECT INLETS TO "STORM TANK" UNITS. INSTALL SEEPAGE BED INFLOW PIPE. INSTALL PERMANENT LEVEL SPREADER AND CONNECT OUTFLOW PIPE TO THE SPREADER.
7. COMPLETELY WRAP "STORM TANK" UNITS WITH FILTER FABRIC.
8. BACKFILL AREA BETWEEN EXCAVATION AND "STORM TANK" UNITS WITH AASHTO NO. 57 AGGREGATE. PLACE AASHTO NO. 57 COARSE OVER TOP OF "STORM TANK" UNITS TO A MINIMUM DEPTH OF 12".
9. COMPLETELY COVER TOP OF AGGREGATE WITH FILTER FABRIC. OVERLAP JOINTS IN FABRIC A MINIMUM OF 12'.
10. BACKFILL AND COMPACT REMAINDER OF EXCAVATION WITH EXCAVATED MATERIAL TO FINAL GRADE.
11. **CRITICAL STAGE – RAIN GARDEN CONSTRUCTION.** INSTALL PROTECTION FENCING AROUND RAIN GARDEN AREAS TO PROTECT AREAS DURING CONSTRUCTION.
12. UPON FINAL STABILIZATION OF THE RESPECTIVE CONTRIBUTARY AREAS, EXCAVATE FOR AND INSTALL THE PERMANENT RAIN GARDENS, OUTLET CONTROLS, AND RIP RAP APRONS. EXCAVATE TO THE BOTTOM OF THE RAIN GARDEN. INSTALL THE GRAVEL BASE AND SURROUND THE GRAVEL WITH GEOTEXTILE FABRIC. INSTALL THE SAND BED AND SURROUND BY GEOTEXTILE FABRIC. INSTALL THE SOIL/PLANTING MIX, PERFORATED UNDERDRAIN, AND THE RISER. THE TOWNSHIP ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE INSTALLATION OF THE RAIN GARDENS. THE RAIN GARDENS SHALL NOT RECEIVE RUNOFF UNTIL THE ENTIRE AREA CONTRIBUTORY TO THE INFILTRATION BMP HAS ACHIEVED FINAL STABILIZATION. THE BOTTOM OF ALL INFILTRATION BMPS SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.
13. CONNECT THE RAIN GARDENS TO THE RIP RAP APRONS. CONNECT THE INLETS TO THE RAIN GARDENS AS SHOWN ON THE PLANS.
14. UPON FINAL GRADING OF RAIN GARDENS, INSTALL VEGETATION WITHIN THE RAIN GARDENS.

PERMANENT STABILIZATION NOTE:
AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

AS-BUILT:
I HEREBY CERTIFY THAT THE ENCLOSED AS-BUILT PLANS, PREPARED BY ME OR UNDER MY SUPERVISION, ARE A CORRECT REPRESENTATION OF THE AS-BUILT CONDITIONS OF THE SITE IMPROVEMENTS AS CONSTRUCTED BY THE CONTRACTOR. I ALSO CERTIFY THAT I AM AWARE THAT THE CONTRACTOR HAS MADE ALL CHANGES IN THE PLANS AND/OR CONSTRUCTION METHODS THAT ARE REFLECTED ON THESE AS-BUILT PLANS AND THAT I HAVE REVIEWED AND APPROVED ALL SUCH CHANGES. I ALSO CERTIFY THAT I AM AWARE THAT THE CONTRACTOR HAS MADE ALL CHANGES IN THE PLANS AND/OR CONSTRUCTION METHODS THAT ARE REFLECTED ON THESE AS-BUILT PLANS AND THAT I HAVE REVIEWED AND APPROVED ALL SUCH CHANGES. I ALSO CERTIFY THAT I AM AWARE THAT THE CONTRACTOR HAS MADE ALL CHANGES IN THE PLANS AND/OR CONSTRUCTION METHODS THAT ARE REFLECTED ON THESE AS-BUILT PLANS AND THAT I HAVE REVIEWED AND APPROVED ALL SUCH CHANGES.
DATE: _____
SIGNATURE: _____

Serial Number: 20140203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PLANS AND TO MARK EXISTING UTILITIES
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO
PROFESSIONAL ENGINEER
REGISTERED PROFESSIONAL
PE037478E
COMMONWEALTH OF PENNSYLVANIA

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010
PHONE (610) 527-3030 FAX (610) 527-9068

PCSM DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

APPLICANT
ESII LP
107 TWADELL MILL ROAD
WILMINGTON, DE 19807

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

REV.	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/26/14	NPDES
1	10/29/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 8 OF 93
SCALE: AS NOTED
FILE NO.: 06-012

CONSTRUCTION TIMING AND SEQUENCE:

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH FOLLOWING SEQUENCE. EACH PHASE SHALL BE COMPLETED BEFORE ANY FOLLOWING PHASE IS INITIATED, OR AS INDICATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH PHASE.

PRIOR TO THE START OF EARTH MOVING ACTIVITIES; THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE PENNSYLVANIA ONE CALL PROCEDURES RELATED TO CONSTRUCTION ACTIVITIES. IN ADDITION TO THESE BASIC REQUIREMENTS THE CONTRACTOR MUST HAVE THE LOCATION FOR ALL EXISTING SANITARY SEWER FEATURES, WITHIN 50-FEET OF THE PROPOSED LIMITS OF DISTURBANCE FOR ANY ACTIVE PHASE OF CONSTRUCTION, BE VERIFIED AND FIELD MARKED.

EACH LOT IS BEING SOLD TO INDIVIDUAL BUYERS AND WILL BE DEVELOPED SEPARATELY FROM THIS PLAN. EACH BUYER WILL BE RESPONSIBLE FOR THE DEVELOPMENT OF THEIR LOT. AN INDIVIDUAL GRADING AND EROSION CONTROL PLAN IS TO BE DEVELOPED FOR EACH LOT DEPICTING THE IMPROVEMENTS PROPOSED FOR THAT LOT. EACH PLAN IS TO BE SUBMITTED TO RADNOR TOWNSHIP FOR APPROVAL PRIOR TO ANY EARTH DISTURBANCE BEING PERMITTED ON THAT LOT.

PHASE I

1. NOTIFY THE TOWNSHIP & DELAWARE COUNTY CONSERVATION DISTRICT THAT CONSTRUCTION IS GOING TO COMMENCE AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES; INCLUDING BUT NOT LIMITED TO: THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, AND A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ANTICIPATED DATE: SPRING 2015.

2. INSTALL EROSION AND SEDIMENTATION CONTROL DEVICES AS LISTED BELOW:

A. INSTALL TREE PROTECTION FENCING WHERE INDICATED ON PLANS. THE LIMIT OF DISTURBANCE AND TREE PROTECTION FENCING IS TO BE FIELD DELINEATED PRIOR TO THE START OF ANY EARTH DISTURBANCE.

B. INSTALL SILT FENCE/SEDIMENT BARRIERS WHERE INDICATED ON PLANS. ADDITIONAL SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADE OF ANY DISTURBANCE AREAS AS NEEDED THROUGHOUT THE ENTIRE PROJECT. INSTALL TEMPORARY FILTREXX DIVERSION BERMS, TEMPORARY CONVEYANCE PIPING, AND LEVEL SPREADER.

C. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN FOR ACCESS FROM DARBY-PAOLI ROAD. THIS ENTRANCE IS TO BE USED DURING THE INSTALLATION OF THE EROSION AND SEDIMENTATION CONTROL DEVICES AND ALL SUBSEQUENT CONSTRUCTION ACTIVITIES FOR THE SANITARY SEWER INSTALLATION.

3. CLEAR AND GRUB THOSE AREAS NECESSARY FOR ACCESS TO AND CONSTRUCTION OF THE SANITARY SEWERS. CLEARING AND GRUBBING SHALL BE STRICTLY LIMITED TO THESE AREAS.

4. REMOVE PORTIONS OF WALL ALONG NEWTOWN ROAD DESIGNATED FOR REMOVAL. STOCKPILE STONE FOR LATER REUSE. CLEAR AND GRUB AREAS NECESSARY FOR INSTALLATION OF STABILIZED CONSTRUCTION ACCESS, AND INSTALL STABILIZED CONSTRUCTION ACCESS FOR ROAD 'A' (TOWER FIELD LANE).

5. CLEAR AND GRUB AREAS FOR ROADWAY 'A' (TOWER FIELD LANE), 'D' (MURRAY LANE) AND 'H' (WHEELER LANE) CONSTRUCTION AND COMMON DRIVEWAYS. STRIP TOPSOIL WITHIN LIMITS OF CONSTRUCTION AND STOCKPILE FOR REUSE. SURROUND STOCKPILES WITH SILT FENCE AND SEED IF NOT TO BE REUSED WITHIN 3 DAYS.

6. CLEAR AND GRUB AREAS FOR STORMWATER MANAGEMENT SYSTEMS A, B, C, D, AND F. STRIP TOPSOIL WITHIN LIMITS OF CONSTRUCTION AND STOCKPILE FOR REUSE. SURROUND STOCKPILES WITH SILT FENCE AND SEED IF NOT TO BE REUSED WITHIN 3 DAYS.

7. STRIP TOPSOIL ALONG AREAS OF SANITARY SEWER CONSTRUCTION AND STOCKPILE FOR REUSE. SURROUND STOCKPILES WITH SILT FENCE AND SEED IF NOT TO BE REUSED WITHIN 3 DAYS. BEGIN INSTALLATION OF SANITARY SEWER LINES INCLUDING CONSTRUCTION OF SANITARY SEWER LINES FROM EX MH@57-B TO MH-19 (INCLUDES MH-1, MH-2, MH-3, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9, MH-10,MH-11, MH-12, MH-13, MH-14, MH-15, MH-16, MH-17, MH-18 &MH-19), CONSTRUCTION OF SANITARY SEWER LINES FROM MH-4 TO MH-45 (INCLUDES, MH-29, MH-30, MH-31, MH-32, MH-33, MH-34, MH-35, MH-36, MH-37, MH-38, MH-39, MH-40, MH-41, MH-42, MH-43, MH-44, AND MH-45), CONSTRUCTION OF SANITARY SEWER LINES FROM MH-38 TO MH-53 (INCLUDES MH-51, MH-52, AND MH-53), CONSTRUCTION OF SANITARY SEWER LINES FROM MH-40 TO MH-55 (INCLUDES MH-54 AND MH-55) AND CONSTRUCTION OF SANITARY SEWER LINES FROM MH 43 TO MH-57 (INCLUDES MH-56 AND MH-57) WITH PLUGGED STUB FOR FUTURE CONNECTION TO MH-58). INSTALLATION OF SEWER LINES INCLUDE THE LATERAL STUBS SERVING INDIVIDUAL LOTS. LIMIT DISTURBANCE AT ANY ONE TIME TO NO MORE THAN TWO MANHOLE RUNS.

8. ROUGH GRADE ROADWAYS AND COMMON DRIVEWAYS AND BEGIN INSTALLATION OF THE STORMWATER INFRASTRUCTURE AS INDICATED ON THE PLANS. IMMEDIATELY STABILIZE ROADSIDE SWALES WITH EROSION CONTROL BLANKETS AS INDICATED ON THE PLANS.

9. INSTALL ALL UTILITY MAINS AND STUBS FOR INDIVIDUAL HOUSING UNITS. FINAL GRADE ROADWAYS AND INSTALL SUBBASE AFTER ALL UTILITIES HAVE BEEN INSTALLED WITHIN THE ROADWAY BED. INSTALL PROPOSED ENTRY WALL FEATURES CONCURRENT WITH ROADWAY CONSTRUCTION.

10. INSTALL ROADWAY B.C.B.C. PAVING.

11. CLEAR AND GRUB AREAS ASSOCIATED WITH ROAD 'C' (AYRSHIRE DRIVE) AND ROAD 'E' (ARDROSSAN DRIVE) WIDENING. STRIP TOPSOIL WITHIN LIMITS OF CONSTRUCTION AND STOCKPILE FOR REUSE. SURROUND STOCKPILES WITH SILT FENCE AND SEED IF NOT TO BE REUSED WITHIN 3 DAYS.

12. BOX OUT AREAS FOR WIDENING AND INSTALL SUBBASE. COMMENCE FULL DEPTH RECLAMATION AND RECONSTRUCTION OF ROADWAY 'C' (AYRSHIRE DRIVE) AND 'E' (ARDROSSAN DRIVE) AND INSTALL B.C.B.C. PAVING

13. INDIVIDUAL LOT DEVELOPMENT MAY COMMENCE UPON PLACEMENT OF B.C.B.C. PAVING.

14. CONCURRENT WITH THE PHASE I CONSTRUCTION ACTIVITIES, INSTALL PLANTED BUFFER IN THE DESIGNATED AREA OF PHASE III. REFER TO LANDSCAPE PLAN FOR INSTALLATION DETAILS.

15. UPON SUBSTANTIAL COMPLETION OF THE ROADWAY AND INFRASTRUCTURE INSTALLATIONS FINAL GRADE ALL AREAS DESIGNATED TO BECOME LAWN AND RESPREAD TOPSOIL, SEED THESE AREAS TO REESTABLISH PERMANENT VEGETATION. STABILIZE SLOPES IN EXCESS OF 3:1 WITH EROSION CONTROL BLANKETS, SEED AND MULCH AS NECESSARY.

16. CRITICAL STAGE – UPON SUBSTANTIAL COMPLETION OF CONSTRUCTION ACTIVITIES AND PERMANENT STABILIZATION WITHIN THE RESPECTIVE CONTRIBUTARY AREAS OF THE PERMANENT STORMWATER SYSTEMS 'A, C, D, &F', EXCAVATE FOR AND INSTALL THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND LEVEL SPREADERS AND OUTLETS AS INDICATED ON THE PLANS AS FOLLOWS:

A. EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM AS INDICATED ON THE PLANS. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE.

B. PLACE THE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE BED. PROVIDE OPENING IN FABRIC FOR OUTFLOW PIPE.

C. PLACE 6" OF AASHTO NO. 57 AGGREGATE IN THE BOTTOM OF THE BED AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE BED IS NOT TORN DURING INSTALLATION. INSTALL STONE TO THE NOTED UNIFORM DEPTH.

D. PLACE SECOND LAYER OF FILTER FABRIC OVER STONE BASE. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE "STORM TANK" UNITS.

E. INSTALL "STORM TANK" UNITS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PRACTICES. CONNECT INLETS TO "STORM TANK" UNITS. INSTALL SEEPAGE BED INFLOW PIPE. INSTALL PERMANENT LEVEL SPREADER AND CONNECT OUTFLOW PIPE TO THE SPREADER.

F. COMPLETELY WRAP "STORM TANK" UNITS WITH FILTER FABRIC.

G. BACKFILL AREA BETWEEN EXCAVATION AND "STORM TANK" UNITS WITH AASHTO NO. 57 AGGREGATE. PLACE AASHTO NO. 57 COARSE OVER TOP OF "STORM TANK" UNITS TO A MINIMUM DEPTH OF 12".

H. COMPLETELY COVER TOP OF AGGREGATE WITH FILTER FABRIC. OVERLAP JOINTS IN FABRIC A MINIMUM OF 12'.

I. BACKFILL AND COMPACT REMAINDER OF EXCAVATION WITH EXCAVATED MATERIAL TO FINAL GRADE.

17. FINAL GRADE THE REMAINDER OF THE SITE AS INDICATED ON PLAN. PLACE TOPSOIL AND FINAL GRADE THOSE AREAS INTENDED TO BE VEGETATED. STABILIZE SLOPES IN EXCESS OF 4:1 WITH SOD OR EROSION CONTROL NETTING AND MULCH. SEED ALL DENUDED AREAS IMMEDIATELY.

18. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. PLEASE NOTE THAT HYDROSEED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

19. INSPECT SEDIMENT BARRIERS WEEKLY AND AFTER EACH RUNOFF EVENT. REPLACE AND REPAIR SEDIMENT BARRIERS AS NECESSARY. INSTALL ROCK FILTER OUTLETS AT ANY POINT WHERE SILT FENCING IS UNDERMINED.

20. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

21. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

WHERE BMPS ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

A. THE LOCATION AND SEVERITY OF THE BMPS FAILURE AND ANY POLLUTION EVENTS.

B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.

C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

22. CONSTRUCTION PHASE COMPLETED. ANTICIPATED DATE: FALL 2015.

CONSTRUCTION TIMING AND SEQUENCE (CONTINUED):

PHASE II

NOTE: THE DEVELOMENT OF PHASE II IS INDEPENDENT OF THE CONSTRUCTION ACTIVITIES IN OTHER PHASES OF THIS PROJECT AND THE DEVELOMENT OF PHASE II MAY COMMENCE AT ANY TIME AFTER PHASE 1 INFRASTRUCTURE CONSTRUCTION IS COMPLETE.

1. NOTIFY THE TOWNSHIP & DELAWARE COUNTY CONSERVATION DISTRICT THAT CONSTRUCTION IS GOING TO COMMENCE. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES; INCLUDING BUT NOT LIMITED TO: THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, AND A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ANTICIPATED DATE: SPRING 2016.

2. INSTALL EROSION AND SEDIMENTATION CONTROL DEVICES AS LISTED BELOW:

A. INSTALL TREE PROTECTION FENCING WHERE INDICATED ON PLANS. THE LIMIT OF DISTURBANCE AND TREE PROTECTION FENCING IS TO BE FIELD DELINEATED PRIOR TO THE START OF ANY EARTH DISTURBANCE.

B. INSTALL SILT FENCE/SEDIMENT BARRIERS WHERE INDICATED ON PLANS. ADDITIONAL SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADE OF ANY DISTURBANCE AREAS AS NEEDED THROUGHOUT THE ENTIRE PROJECT.

C. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN FOR ACCESS FROM ROAD 'A' (TOWER FIELD LANE).

3. CLEAR AND GRUB AREAS FOR ROADWAY CONSTRUCTION, SANITARY SEWER INSTALLATION AND STORMWATER MANAGEMENT SYSTEMS G AND H INSTALLATION. UTILIZE TOPSOIL STOCKPILES AS INDICATED ON THE PLAN, IMMEDIATELY STABILIZE THE STOCKPILES UPON COMPLETION.

4. ROUGH GRADE ROADWAYS AND BEGIN INSTALLATION OF THE STORMWATER INFRASTRUCTURE AND SANITARY SEWER MAINS AND LATERAL STUBS AS INDICATED ON THE PLANS. SANITARY SEWER INSTALLATION INCLUDES CONSTRUCTION OF SANITARY SEWER LINES FROM MH-19 TO MH-24 AND FROM MH-56 TO MH-58 (INCLUDES MH-20, MH-21, MH-22, MH-23, MH-24 AND MH-58) AND THE INSTALLATION OF LATERAL STUBS AND PLUGS.

5. INSTALL ALL UTILITY MAINS AND STUBS FOR INDIVIDUAL HOUSING UNITS. FINAL GRADE ROADWAYS AND INSTALL CURB AND SUBBASE AFTER ALL UTILITIES HAVE BEEN INSTALLED WITHIN THE ROADWAY BED.

6. INSTALL ROADWAY B.C.B.C. PAVING AND INTERNAL SITE SIDEWALKS.

7. UPON SUBSTANTIAL COMPLETION OF THE ROADWAY AND STORMWATER SYSTEM INSTALLATIONS FINAL GRADE ALL AREAS DESIGNATED TO BECOME LAWN AND RESPREAD TOPSOIL, SEED THESE AREAS TO REESTABLISH PERMANENT VEGETATION. STABILIZE SLOPES IN EXCESS OF 3:1 WITH EROSION CONTROL BLANKETS, SEED AND MULCH AS NECESSARY.

8. INSTALL LANDSCAPING, AND EMERGENCY ACCESS PATHWAY AS INDICATED PRIOR TO FINAL GRADING.

9. FINAL GRADE THE REMAINDER OF THE SITE AS INDICATED ON PLAN. PLACE TOPSOIL AND FINAL GRADE THOSE AREAS INTENDED TO BE VEGETATED. STABILIZE SLOPES IN EXCESS OF 4:1 WITH SOD OR EROSION CONTROL NETTING AND MULCH. SEED ALL DENUDED AREAS IMMEDIATELY.

10. CRITICAL STAGE – UPON SUBSTANTIAL COMPLETION OF CONSTRUCTION ACTIVITIES AND PERMANENT STABILIZATION WITHIN THE RESPECTIVE CONTRIBUTARY AREAS OF THE PERMANENT STORMWATER SYSTEMS 'G & H', EXCAVATE FOR AND INSTALL THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND LEVEL SPREADERS AS INDICATED ON THE PLANS AS FOLLOWS:

A. EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM AS INDICATED ON THE PLANS. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE.

B. PLACE THE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE BED. PROVIDE OPENING IN FABRIC FOR OUTFLOW PIPE.

C. PLACE 6" OF AASHTO NO. 57 AGGREGATE IN THE BOTTOM OF THE BED AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE BED IS NOT TORN DURING INSTALLATION. INSTALL STONE TO THE NOTED UNIFORM DEPTH.

D. PLACE SECOND LAYER OF FILTER FABRIC OVER STONE BASE. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE "STORM TANK" UNITS.

E. INSTALL "STORM TANK" UNITS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PRACTICES. CONNECT INLETS TO "STORM TANK" UNITS. INSTALL SEEPAGE BED INFLOW PIPE. INSTALL PERMANENT LEVEL SPREADER AND CONNECT OUTFLOW PIPE TO THE SPREADER.

F. COMPLETELY WRAP "STORM TANK" UNITS WITH FILTER FABRIC.

G. BACKFILL AREA BETWEEN EXCAVATION AND "STORM TANK" UNITS WITH AASHTO NO. 57 AGGREGATE. PLACE AASHTO NO. 57 COARSE OVER TOP OF "STORM TANK" UNITS TO A MINIMUM DEPTH OF 12".

H. COMPLETELY COVER TOP OF AGGREGATE WITH FILTER FABRIC. OVERLAP JOINTS IN FABRIC A MINIMUM OF 12'.

I. BACKFILL AND COMPACT REMAINDER OF EXCAVATION WITH EXCAVATED MATERIAL TO FINAL GRADE.

11. CONSTRUCT EMERGENCY ACCESS PATH FROM END OF ROAD 'A' (IVY LANE) TO ROAD 'C' (AYRSHIRE DRIVE).

12. ONCE THESE MEASURES HAVE BEEN COMPLETED INDIVIDUAL LOT DEVELOPMENT MAY BEGIN.

13. INSTALLATION OF ROADWAY WEARING IS TO BE DELAYED UNTIL THE COMPLETION OF ALL MAJOR CONSTRUCTION ACTIVITIES WITHIN THIS PHASE.

14. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. PLEASE NOTE THAT HYDROSEED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

15. INSPECT SEDIMENT BARRIERS WEEKLY AND AFTER EACH RUNOFF EVENT. REPLACE AND REPAIR SEDIMENT BARRIERS AS NECESSARY. INSTALL ROCK FILTER OUTLETS AT ANY POINT WHERE SILT FENCING IS UNDERMINED.

16. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

17. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

WHERE BMPS ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

A. THE LOCATION AND SEVERITY OF THE BMPS FAILURE AND ANY POLLUTION EVENTS.

B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.

C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

18. CONSTRUCTION COMPLETED. ANTICIPATED DATE: FALL 2016.

PHASE III

NOTE: THE DEVELOMENT OF PHASE III IS INDEPENDENT OF THE CONSTRUCTION ACTIVITIES IN OTHER PHASES OF THIS PROJECT AND THE DEVELOMENT OF PHASE III MAY COMMENCE AT ANY TIME AFTER PHASE 1 INFRASTRUCTURE CONSTRUCTION IS COMPLETE.

1. NOTIFY THE TOWNSHIP & DELAWARE COUNTY CONSERVATION DISTRICT THAT CONSTRUCTION IS GOING TO COMMENCE AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES; INCLUDING BUT NOT LIMITED TO: THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, AND A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION. ANTICIPATED DATE: SPRING 2017.

2. REMOVE PORTIONS OF WALL ALONG NEWTOWN ROAD DESIGNATED FOR REMOVAL. STOCKPILE STONE FOR LATER REUSE. CLEAR AND GRUB AREAS NECESSARY FOR INSTALLATION OF STABILIZED CONSTRUCTION ACCESS, AND INSTALL STABILIZED CONSTRUCTION ACCESS FOR ROAD 'F' (TYLER LANE). THIS ENTRANCE IS TO BE USED DURING THE INSTALLATION OF THE EROSION AND SEDIMENTATION CONTROL DEVICES AND ALL SUBSEQUENT CONSTRUCTION ACTIVITIES FOR THIS PHASE.

3. INSTALL EROSION AND SEDIMENTATION CONTROL DEVICES AS LISTED BELOW:

A. INSTALL TREE PROTECTION FENCING WHERE INDICATED ON PLANS. THE LIMIT OF DISTURBANCE AND TREE PROTECTION FENCING IS TO BE FIELD DELINEATED PRIOR TO THE START OF ANY EARTH DISTURBANCE.

B. INSTALL SILT FENCE/SEDIMENT BARRIERS WHERE INDICATED ON PLANS. ADDITIONAL SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADE OF ANY DISTURBANCE AREAS AS NEEDED THROUGHOUT THE ENTIRE PROJECT.

4. CLEAR AND GRUB AREAS FOR ROADWAY CONSTRUCTION, SANITARY SEWER INSTALLATION AND STORMWATER MANAGEMENT SYSTEMS 'M' AND 'N' INSTALLATION. UTILIZE TOPSOIL STOCKPILES AS INDICATED ON THE PLAN, IMMEDIATELY STABILIZE THE STOCKPILES UPON COMPLETION.

5. ROUGH GRADE ROADWAY AND BEGIN INSTALLATION OF THE STORMWATER INFRASTRUCTURE AND SANITARY SEWER MAINS AND LATERAL STUBS AS INDICATED ON THE PLANS. CONSTRUCTION OF SANITARY SEWER INCLUDES LINES FROM MH-5 TO MH-28 (INCLUDES MH-27 AND MH-28) AND THE INSTALLATION OF LATERAL STUBS AND PLUGS.

6. INSTALL ALL UTILITY MAINS AND STUBS FOR INDIVIDUAL HOUSING UNITS. FINAL GRADE ROADWAYS AND SUBBASE AFTER ALL UTILITIES HAVE BEEN INSTALLED WITHIN THE ROADWAY BED.

7. INSTALL ROADWAY B.C.B.C. PAVING.

8. UPON SUBSTANTIAL COMPLETION OF THE ROADWAY AND STORMWATER SYSTEM INSTALLATIONS FINAL GRADE ALL AREAS DESIGNATED TO BECOME LAWN AND RESPREAD TOPSOIL, SEED THESE AREAS TO REESTABLISH PERMANENT VEGETATION. STABILIZE SLOPES IN EXCESS OF 3:1 WITH EROSION CONTROL BLANKETS, SEED AND MULCH AS NECESSARY.

9. INSTALL LANDSCAPING, AND EMERGENCY ACCESS PATHWAY AS INDICATED PRIOR TO FINAL GRADING.

10. FINAL GRADE THE REMAINDER OF THE SITE AS INDICATED ON PLAN. PLACE TOPSOIL AND FINAL GRADE THOSE AREAS INTENDED TO BE VEGETATED. STABILIZE SLOPES IN EXCESS OF 4:1 WITH SOD OR EROSION CONTROL NETTING AND MULCH. SEED ALL DENUDED AREAS IMMEDIATELY.

11. CRITICAL STAGE – UPON SUBSTANTIAL COMPLETION OF CONSTRUCTION ACTIVITIES AND PERMANENT STABILIZATION WITHIN THE RESPECTIVE CONTRIBUTARY AREAS OF THE PERMANENT STORMWATER SYSTEMS 'M & N', EXCAVATE FOR AND INSTALL THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND LEVEL SPREADERS AS INDICATED ON THE PLANS AS FOLLOWS:

A. EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM AS INDICATED ON THE PLANS. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE.

B. PLACE THE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE BED. PROVIDE OPENING IN FABRIC FOR OUTFLOW PIPE.

C. PLACE 6" OF AASHTO NO. 57 AGGREGATE IN THE BOTTOM OF THE BED AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE BED IS NOT TORN DURING INSTALLATION. INSTALL STONE TO THE NOTED UNIFORM DEPTH.

D. PLACE SECOND LAYER OF FILTER FABRIC OVER STONE BASE. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE "STORM TANK" UNITS.

E. INSTALL "STORM TANK" UNITS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PRACTICES. CONNECT INLETS TO "STORM TANK" UNITS. INSTALL SEEPAGE BED INFLOW PIPE. INSTALL PERMANENT LEVEL SPREADER AND CONNECT OUTFLOW PIPE TO THE SPREADER.

F. COMPLETELY WRAP "STORM TANK" UNITS WITH FILTER FABRIC.

G. BACKFILL AREA BETWEEN EXCAVATION AND "STORM TANK" UNITS WITH AASHTO NO. 57 AGGREGATE. PLACE AASHTO NO. 57 COARSE OVER TOP OF "STORM TANK" UNITS TO A MINIMUM DEPTH OF 12".

H. COMPLETELY COVER TOP OF AGGREGATE WITH FILTER FABRIC. OVERLAP JOINTS IN FABRIC A MINIMUM OF 12'.

I. BACKFILL AND COMPACT REMAINDER OF EXCAVATION WITH EXCAVATED MATERIAL TO FINAL GRADE.

11. ONCE THESE MEASURES HAVE BEEN COMPLETED INDIVIDUAL LOT DEVELOPMENT MAY BEGIN.

12. INSTALLATION OF ROADWAY WEARING IS TO BE DELAYED UNTIL THE COMPLETION OF ALL MAJOR CONSTRUCTION ACTIVITIES WITHIN THIS PHASE.

13. CRITICAL STAGE – UPON SUBSTANTIAL COMPLETION OF CONSTRUCTION ACTIVITIES AND PERMANENT STABILIZATION WITHIN THE RESPECTIVE CONTRIBUTARY AREAS OF THE PERMANENT STORMWATER SYSTEMS 'M & N', EXCAVATE FOR AND INSTALL THE PERMANENT STORMWATER MANAGEMENT SYSTEMS AND LEVEL SPREADERS AS INDICATED ON THE PLANS AS FOLLOWS:

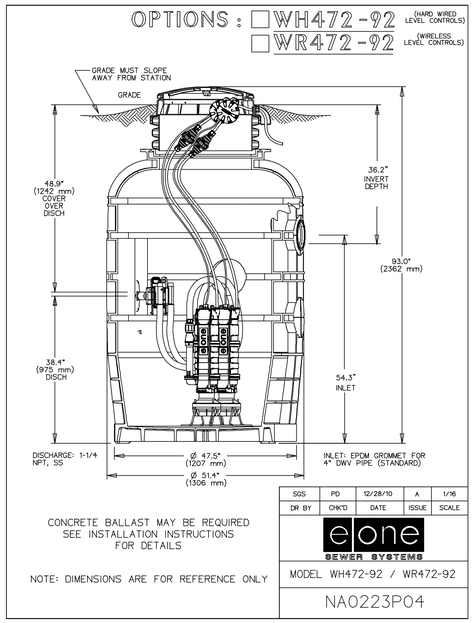
A. EXCAVATE TO THE BOTTOM OF THE PERMANENT SYSTEM AS INDICATED ON THE PLANS. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE.

B. PLACE THE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE BED. PROVIDE OPENING IN FABRIC FOR OUTFLOW PIPE.

C. PLACE 6" OF AASHTO NO. 57 AGGREGATE IN THE BOTTOM OF THE BED AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE BED IS NOT TORN DURING INSTALLATION. INSTALL STONE TO THE NOTED UNIFORM DEPTH.

D. PLACE SECOND LAYER OF FILTER FABRIC OVER STONE BASE. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE "STORM TANK" UNITS.

E



SGS	PD	12/28/10	A	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

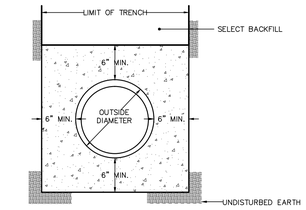
e|one SEWER SYSTEMS

MODEL WH472-92 / WR472-92

NA0223P04

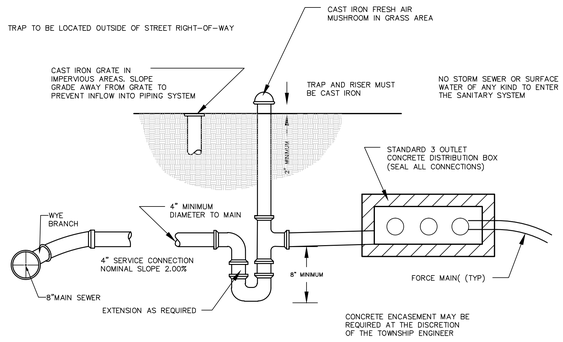
CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

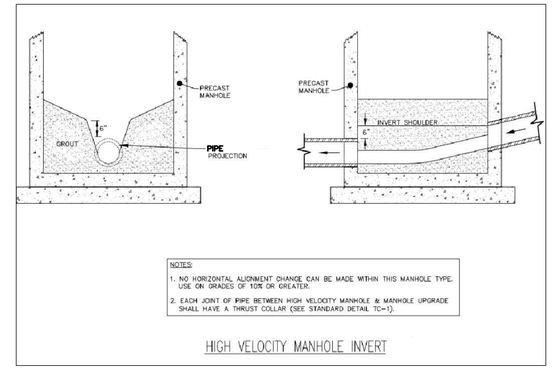


CONCRETE TO BE PENNDOT CLASS A CEMENT CONCRETE

CONCRETE ENCASEMENT
NTS

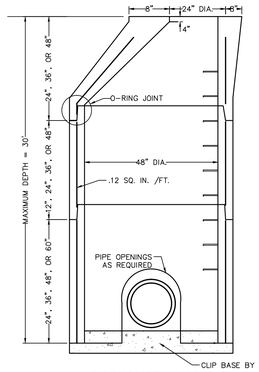


SANITARY SEWER LATERAL TRAP & FORCE MAIN CONNECTION LOTS 1-14, 1-15 & 1-16



NOTES:
1. NO HORIZONTAL ALIGNMENT CHANGE CAN BE MADE WITHIN THIS MANHOLE TYPE. USE ON GRADES OF 10% OR GREATER.
2. EACH JOINT OF PIPE BETWEEN HIGH VELOCITY MANHOLE & MANHOLE UPGRADE SHALL HAVE A THRUST COLLAR (SEE STANDARD DETAIL TC-1).

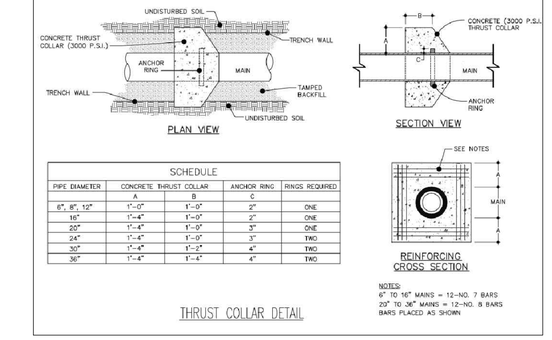
HIGH VELOCITY MANHOLE INVERT



USE CONE OR FLAT TOP 36" CONE AVAILABLE WITH A 30"DIA. OPENING.

NOTES:
1. ALL MANHOLES MEET THE REQUIREMENTS OF ASTM C 478.
2. FC = 4000 PSI @ 28 DAYS; ALL CONCRETE IS AIR ENTRAINED; WELDED WIRE FABRIC CONFORMS TO ASTM A185 & A82. DEFORMED STEEL REINFORCING BAR CONFORM TO ASTM A615 GRADE 60.
3. M.H. WEIGHT: RISER OR CONE = 860 LBS/V.F. STANDARD BASE = 1850 LBS.

DOGHOUSE MANHOLE
NTS

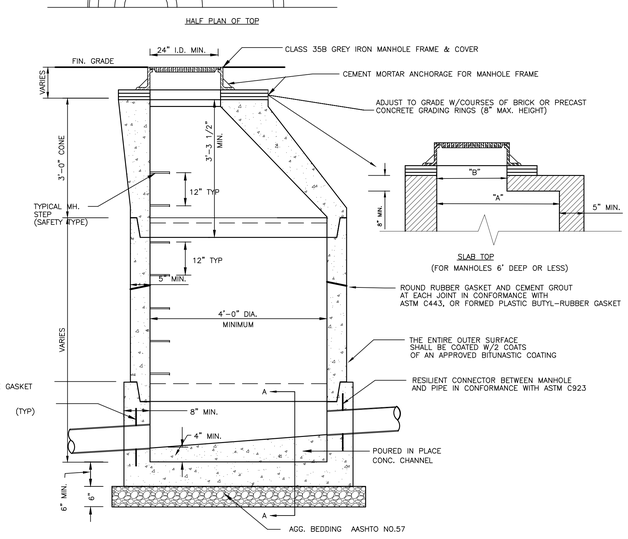


SCHEDULE				
PIPE DIAMETER	CONCRETE THRUST COLLAR		ANCHOR RING	RINGS REQUIRED
	A	B	C	
6", 8", 12"	1'-0"	1'-0"	2"	ONE
15"	1'-4"	1'-0"	2"	ONE
20"	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-3"	4"	TWO
36"	1'-4"	1'-4"	4"	TWO

THRUST COLLAR DETAIL

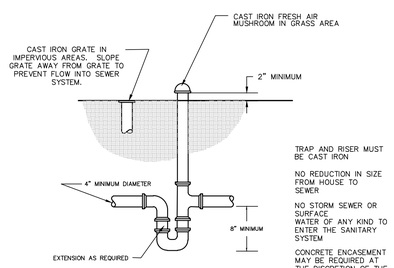
NOTES:
6" TO 16" MAINS = 12-NO. 7 BARS
20" TO 36" MAINS = 12-NO. 8 BARS
BARS PLACED AS SHOWN

HIGH VELOCITY CHANNEL NOTES:
- HIGH VELOCITY CHANNEL AND THRUST COLLARS TO BE PROVIDED FOR PIPE RUN FROM MH-27 TO MH-5.



NOTE:
PRECAST MANHOLE SECTIONS & BASES SHALL BE USED IN LIEU OF BRICK, UNLESS SPECIFICALLY NOTED. OUTSIDE OF MANHOLE TO BE COATED WITH TWO COATS OF BITUMINOUS RESIN.

PRECAST CONCRETE MANHOLE
(SANITARY SEWER)
N.T.S.



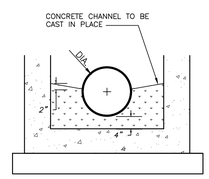
TRAP AND RISER MUST BE CAST IRON

NO REDUCTION IN SIZE FROM HOUSE TO SEWER

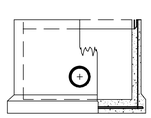
NO STORM SEWER OR SURFACE WATER OF ANY KIND TO ENTER THE SANITARY SYSTEM

CONCRETE ENCASEMENT MAY BE REQUIRED AT THE DISCRETION OF THE TOWNSHIP ENGINEER

SANITARY SEWER LATERAL TRAP
N.T.S.

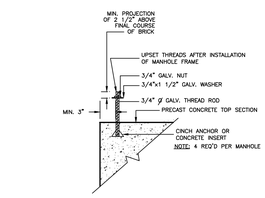


PARTIAL SECTION A-A

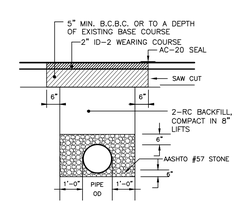


MANHOLE DESIGN SPECIFICATIONS CONFORMS TO: PRECAST REINFORCED CONCRETE MANHOLE SECTIONS: A.S.T.M. DESIGNATION C478, LATEST REVISION. DESIGNED TO MEET RESILIENT CONNECTORS REQUIREMENTS OF A.S.T.M. C-923.

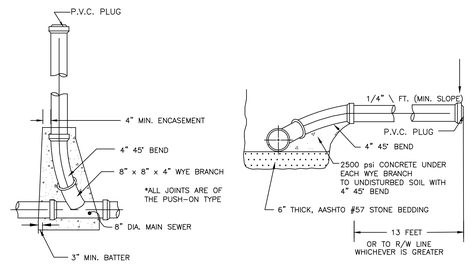
SANITARY SEWER NOTES:
1. THE CONTRACTOR IS TO VERIFY THE EXISTING SANITARY LINES BEFORE CONSTRUCTION.
2. EXFILTRATION TESTS TO BE PERFORMED ON ALL 8" SANITARY SEWER LINES IN ACCORDANCE WITH PA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
3. CONSTRUCTION IN ACCORDANCE WITH TOWNSHIP STANDARDS AND SPECIFICATIONS.



ANCHOR BOLT DETAIL FOR PRE-CAST MANHOLE
N.T.S.

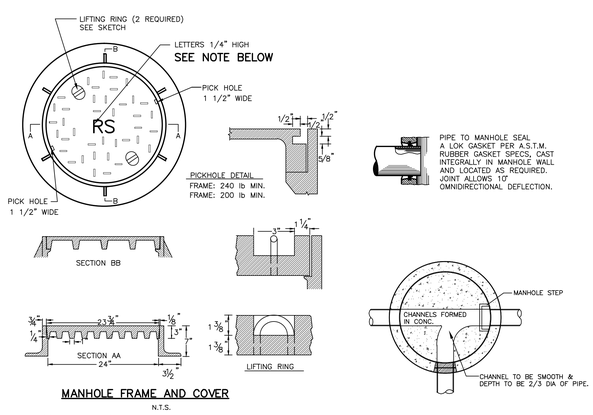


RADNOR TOWNSHIP ROAD RESTORATION
N.T.S.



WYE BRANCH CONNECTION
N.T.S.

SANITARY LATERAL NOTES
- WYE CONNECTIONS AND LATERAL STUBS ARE TO BE INSTALLED AS PART OF THE SEWER MAIN CONSTRUCTION.
- LATERALS ARE TO BE EXTENDED A MINIMUM OF 10-FEET INTO THE AS MEASUED FROM THE R/W LINE OR ADJACENT LOT LINE.
- LATERALS ARE TO BE CAPPED FOR FUTURE CONNECTION BY LOT DEVELOPER AND ENDS OF LATERAL SHALL BE MARKED WITH A 2X4 STAKE.
- CLEANOUTS ARE TO BE PROVIDED AT ALL BENDS ON SANITARY LATERALS.
- THERE SHALL BE A MINIMUM DISTANCE OF 5-FEET BETWEEN LATERALS AND BETWEEN LATERALS AND MANHOLES.

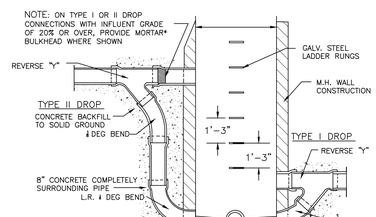


MANHOLE FRAME AND COVER
N.T.S.

LETTERING NOTE:
ALL NEW SANITARY MANHOLE LIDS TO BE LABELED "RS"

STANDARD MANHOLE: NEENAH FOUNDRY COMPANY, TYPE N FRAMED, MANHOLE FRAME AND COVER - CATALOG NUMBER R-1788-A1, SOLID FRAME, HEAVY DUTY. FURNISH WITH FOUR 7/8 INCH ANCHOR HOLES ON 27-15/16 INCH DIAMETER BOLT CIRCLE.

WATERTIGHT MANHOLE: NEENAH FOUNDRY COMPANY, CATALOG NUMBER R-1916-D, SOLID FRAME, HEAVY DUTY. FURNISH WITH FOUR 7/8 INCH ANCHOR HOLES ON 27-15/16 INCH DIAMETER BOLT CIRCLE. ALL MANHOLES NOT LOCATED IN PAVED AREAS ARE TO BE EQUIPTED WITH WATERTIGHT FRAMES AND COVERS



DROP MANHOLE TYPE I OR II
N.T.S.

ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY MOMENEE & ASSOCIATES, INC. ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE & ASSOCIATES, INC. THEY ARE NOT TO BE USED ON ANY OTHER PROJECT. ALL REPRODUCTIONS OF THESE DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY MOMENEE & ASSOCIATES, INC. MUST BEAR THE STATUTORY COPYRIGHT NOTICE. ALL RIGHTS RESERVED.

Serial Number: 2014-203-0820
CALL BEFORE YOU DIG!
PENNSYLVANIA ACT 287 REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS NOTICE FOR DESIGN PHASE
Pennsylvania One Call System, Inc.
1-800-242-1776

DAVID R. FIORELLO — REGISTERED PROFESSIONAL — PROPERTY LINE SURVEYOR

MOMENEE & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
924 COUNTY LINE ROAD, BRYN MAWR, PA. 19010
PHONE: (610) 527-9006 FAX: (610) 527-9008

SANITARY DETAILS
FINAL SUBDIVISION PLANS
THE ARDROSSAN FARM
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

ONE-CALL:	203-0820
DRAWN BY:	JRM
CHECKED BY:	DRF

APPLICANT
ESH1 LP
107 TWADDELL MILL ROAD
WILMINGTON, DE. 19807

REV'D	DATE	COMMENTS
3	12/8/14	PER TOWNSHIP REVIEW
2	11/28/14	NPDES
1	10/28/14	INTERIM UPDATES

DATE: SEPTEMBER 5, 2014
SHEET NO. 90 OF 93
SCALE: AS NOTED
FILE NO.: 06-012

M:\PROJECTS\2006\0607\2\MA\DRAWINGS\0607ZCD

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

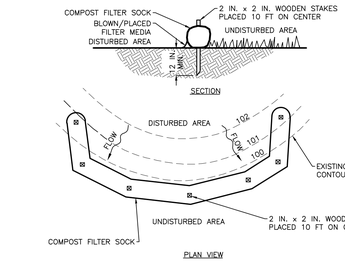
MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		28 PSI	28 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 FUNTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TWO-PLY SYSTEMS	
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND
	FUSION-WELDING JUNCTURES
	3/4"x3/4" 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.

COMPOST STANDARDS

ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

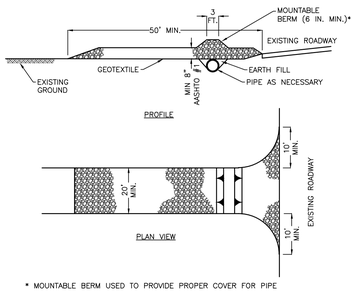


NOTES:

1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE COMPOST 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

NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

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

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

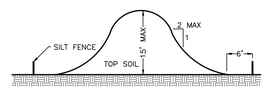
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

#	LOCATION	SIZE (IN)	TOTAL AVG SLOPE (%)	TOT SLOPE LENGTH ABOVE FILTER SOCK
1	N. TOWER FIELD LANE	8" SS	3%	34 (FT)
2	N. TOWER FIELD LANE	8" SS	2%	40
3	N. TOWER FIELD LANE	8" SS	2%	280
4	N. TOWER FIELD LANE	18" SS	7%	255
5	N. TOWER FIELD LANE	18" SS	6%	270
6	S. TOWER FIELD LANE	18" SS	5%	390
7	S. TOWER FIELD LANE	18" SS	4%	395
8	S. TOWER FIELD LANE	24" SS	5%	540
9	S. TOWER FIELD LANE	12" SS	7%	165
10	S. TOWER FIELD LANE	8" SS	6%	145
11	WEST LOT 1-8	32" SS	5%	685
12	WEST LOT 1-8	32" SS	4%	720
12a	NORTH LOT NRA-3	32" SS	6%	550
12b	NORTH LOT NRA-3	32" SS	6%	520
13	WEST LOT NRA-3	32" SS	10%	380
14	WEST LOT NRA-3	32" SS	8%	405
15	SOUTH LOT 1-6	24" SS	5%	525
16	SOUTH LOT 1-5	24" SS	6%	445
17	SOUTH LOT 1-4	32" SS	8%	415
18	SOUTH LOT 1-4	32" SS	7%	470
19	WEST LOT 1-4	24" SS	6%	405
19a	WEST LOT NRA-5	32" SS	5%	530
20	WEST LOT 1-4	24" SS	8%	365
21	NORTH LOT 1-4	18" SS	7%	215
22	NORTH LOT 1-4	8" SS	5%	175
23	NORTH LOT 1-4	8" SS	5%	165
24	NORTH LOT 1-5	8" SS	3%	180
25	SOUTH LOT NRA-5	18" SS	4%	475
26	SOUTH LOT NRA-5	18" SS	4%	475
27	SOUTH LOT NRA-5	24" SS	6%	360
28	EAST LOT OS-6	32" SS	4%	830
28a	EAST LOT OS-6	18" SS	5%	265
29	EAST LOT OS-6	12" SS	4%	315
30	EAST LOT OS-6	8" SS	4%	220
31	EAST LOT OS-6	8" SS	4%	195
32	EAST LOT OS-6	8" SS	4%	240
33	SOUTH LOT OS-6	8" SS	3%	240
34	SOUTH LOT OS-6	18" SS	3%	570
35	SOUTH LOT OS-6	24" SS	5%	440
36	SOUTH LOT OS-6	18" SS	5%	315
37	NORTH LOT M-1	24" SS	11%	290
38	NORTH LOT M-1	32" SS	11%	310
39	NORTH LOT M-1	24" SS	13%	260
40	NORTH LOT M-1	8" SS	7%	135
41	NORHT LOT 4-1	8" SS	6%	155
42	NORHT LOT 4-1	8" SS	7%	150
43	NORTH LOT 4-1	12" SS	8%	155
44	NORTH LOT NRA-18	8" SS	7%	90
45	NORTH LOT NRA-18	8" SS	7%	90
46	NORTH LOT NRA-18	8" SS	7%	90
47	NORTH LOT NRA-18	8" SS	7%	90
48	NORTH LOT 4-4	8" SS	7%	90
49	NORTH LOT 4-4	8" SS	7%	90
50	EAST LOT 5-5	18" SS	8%	250
51	EAST LOT 5-5	32" SS	12%	400
52	EAST LOT 5-5	32" SS	12%	400
53	EAST LOT 5-5	8" SS	5%	50
54	SOUTH LOT 5-5	8" SS	5%	90
55	EAST LOT 5-2	18" SS	11%	200
56	EAST LOT 5-2	32" SS	11%	310
57	SOUTH LOT 5-2	32" SS	9%	415
58	SOUTH LOT 3-4	32" SS	9%	380
59	SOUTH LOT 3-4	24" SS	11%	285
60	S.E. LOT 3-5	24" SS	15%	230
61	S.E. LOT 3-5	18" SS	13%	220
62	S.E. LOT 3-5	18" SS	13%	210
63	S.E. LOT 3-5	18" SS	13%	210
64	EAST LOT 3-6	18" SS	12%	240
65	EAST LOT 3-6	24" SS	10%	285
66	EAST LOT 3-7	18" SS	9%	265
67	EAST LOT 3-7	32" SS	7%	600
68	EAST LOT NRA-16	32" SS	6%	590
69	EAST LOT NRA-16	32" SS	7%	535
70	SOUTH LOT 3-10	32" SS	7%	540
71	SOUTH LOT NRA-15	32" SS	7%	500
72	SOUTH LOT NRA-15	32" SS	9%	390
73	WEST LOT 1-1	24" SS	8%	380
74	WEST LOT 1-1	32" SS	9%	350
75	WEST LOT 1-1	32" SS	9%	350
76	WEST LOT 1-1	32" SS	8%	405
77	WEST LOT 1-1	24" SS	8%	310
78	NORTH LOT 1-1	32" SS	5%	645
79	NORTH LOT 1-2	32" SS	6%	520
80	NORTH LOT 1-2	24" SS	6%	410
80a	NORTH LOT 1-2	24" SS	6%	405
81	NORTH LOT 1-3	24" SS	6%	335
82	WEST LOT 2-9	8" SS	2%	20
83	WEST LOT 2-9	8" SS	2%	20
84	NORTH LOT OS-10	8" SS	3%	30
85	NORTH LOT OS-10	8" SS	5%	135
86	EAST LOT OS-10	18" SS	6%	235
87	WEST LOT 1-15	32" SS	5%	595
88	WEST LOT 1-15 TO 1-14	24" SS	6%	445
89	SOUTH WHEELER LANE	24" SS	8%	380
90	SOUTH WHEELER LANE	32" SS	8%	495
91	SOUTH WHEELER LANE	32" SS	9%	440
92	SOUTH LOT 1-13	32" SS	9%	415
93	SOUTH LOT 1-13	32" SS	10%	345
94	SOUTH LOT 1-13	32" SS	10%	330
95	SOUTH LOT 1-13	24" SS	8%	340
96	SOUTH LOT 1-13	24" SS	8%	290
97	SOUTH LOT 1-13	18" SS	8%	245
98	SOUTH LOT 1-12	18" SS	9%	205
99	SOUTH LOT 1-12	18" SS	10%	170
100	SOUTH LOT 1-12	18" SS	11%	180
101	SOUTH LOT 1-12	18" SS	12%	155
102	SOUTH LOT 1-11	18" SS	9%	195
103	NORTH LOT 1-13	18" SS	11%	180
104	NORTH LOT 1-13	18" SS	7%	270
105	NORTH LOT 1-12	18" SS	7%	215

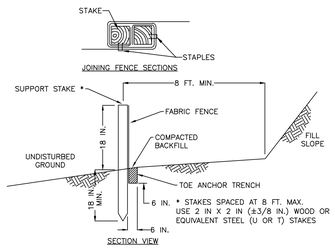


TYPICAL SOIL STOCKPILE CROSS SECTION

N.T.S.

NOTE: SILT FENCE MUST COMPLETELY ENCIRCLE STOCKPILES

NOTE: TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE OR USED AS FILL. TOPSOIL SHALL BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY THE TOPSOIL SHALL BE STABILIZED TO MINIMIZE EROSION DURING STORAGE. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED ON THE SITE.



NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

SYMBOL	LOCATION	SLOPE - %	SLOPE LENGTH ABOVE FENCE (FT)
	STOCKPILES	N/A	N/A

STANDARD CONSTRUCTION DETAIL #4-7
STANDARD SILT FENCE (18" HIGH)

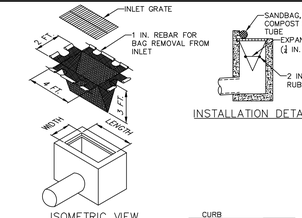
NOT TO SCALE

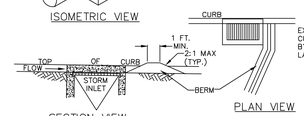
#	LOCATION	SIZE (IN)	TOTAL AVG SLOPE (%)	TOT SLOPE LENGTH ABOVE FILTER SOCK
200	IVY LANE	8" SS	2%	160 (FT)
201	IVY LANE	8" SS	2%	205
202	IVY LANE	8" SS	3%	265
203	IVY LANE	12" SS	3%	335
204	IVY LANE	12" SS	3%	400
205	IVY LANE	18" SS	3%	485
206	IVY LANE	24" SS	5%	460
206a	IVY LANE	18" SS	2%	525
207	IVY LANE	24" SS	4%	625
208	IVY LANE	18" SS	8%	225
209	IVY LANE	12" SS	7%	185
210	EAST LOT 1-6	8" SS	3%	320
211	SOUTH LOT 1-17	24" SS	4%	500
212	SOUTH LOT 1-18	24" SS	6%	440
213	SOUTH LOT 1-18	24" SS	5%	410
214	SOUTH LOT 1-18	24" SS	5%	375

#	LOCATION	SIZE (IN)	TOTAL AVG SLOPE (%)	TOT SLOPE LENGTH ABOVE FILTER SOCK
300	TYLER LANE	8" SS	6%	194 (FT)
301	TYLER LANE	12" SS	6%	212
302	TYLER LANE	18" SS	6%	248
303	TYLER LANE	18" SS	7%	265
304	TYLER LANE	18" SS	6%	307
304A	TYLER LANE	24" SS	4%	490
305	TYLER LANE	12" SS	4%	301
306	TYLER LANE	18" SS	7%	236
307	TYLER LANE	18" SS	6%	285
308A	TYLER LANE	18" SS	9%	235
308	TYLER LANE	24" SS	8%	335
309	TYLER LANE	8" SS	7%	105
310	TYLER LANE	8" SS	3%	103
311	TYLER LANE	8" SS	8%	73
312	TYLER LANE	8" SS	7%	117
313	TYLER LANE	12" SS	6%	229
314	TYLER LANE	18" SS	8%	277
315	TYLER LANE	18" SS	9%	254
315A	TYLER LANE	24" SS	10%	270
315B	TYLER LANE	18" SS	10%	208
316	NRA-17	18" SS	12%	195
317	NRA-17	18" SS	12%	208
318	NRA-17	18" SS	13%	213
319	NRA-17	24" SS	12%	287
320	NRA-17	8" SS	4%	70
321	NRA-17	32" SS	12%	322
322	TYLER LANE	18" SS	12%	186
323	TYLER LANE	18" SS	10%	247
324	TYLER LANE	32" SS	10%	304

#	LOCATION	SIZE (IN)	TOTAL AVG SLOPE (%)	TOT SLOPE LENGTH ABOVE FILTER SOCK
400	AYRSHIRE DRIVE	18" SS	10%	246 (FT)
401	AYRSHIRE DRIVE	24" SS	8%	338
402	AYRSHIRE DRIVE	18" SS	11%	270
403	AYRSHIRE DRIVE	24" SS	11%	311
404	AYRSHIRE DRIVE	24" SS	10%	396
405	AYRSHIRE DRIVE	32" SS	11%	444
406	AYRSHIRE DRIVE	18" SS	6%	250
407	AYRSHIRE DRIVE	8" SS	6%	90
408	AYRSHIRE DRIVE	8" SS	6%	90
409	AYRSHIRE DRIVE	8" SS	6%	90
410	AYRSHIRE DRIVE	8" SS	6%	150
410A	AYRSHIRE DRIVE	8" SS	6%	150
411	AYRSHIRE DRIVE	18" SS	11%	219
412	AYRSHIRE DRIVE	18" SS	12%	226
413	AYRSHIRE DRIVE	18" SS	11%	189
414	AYRSHIRE DRIVE	18" SS	11%	161
415	AYRSHIRE DRIVE	12" SS	10%	162
416	AYRSHIRE DRIVE	18" SS	7%	298
417	AYRSHIRE DRIVE	24" SS	8%	333
418	NEAR LOT 5-3	32" SS	9%	352
418A	AYRSHIRE DRIVE	32" SS	13%	380
419	AYRSHIRE DRIVE	32" SS	7%	492
420	AYRSHIRE DRIVE	32" SS	7%	500
421	AYRSHIRE DRIVE	12" SS	6%	189
422	AYRSHIRE DRIVE	24" SS	11%	265
423	AYRSHIRE DRIVE	32" SS	11%	364
424	AYRSHIRE DRIVE	32" SS	11%	380
425	ALONG MH5 TO MH71	18" SS	15%	216
426	ALONG MH5 TO MH71	8" SS	3%	61
427	ALONG MH5 TO MH71	8" SS	3%	325
428	ALONG MH5 TO MH71	18" SS	13%	188
429	ALONG MH5 TO MH71	18" SS	12%	219
430	ALONG MH5 TO MH71	18" SS	11%	174
431	ALONG MH5 TO MH71	18" SS	10%	172
432	ALONG MH5 TO MH71	18" SS	9%	243
433	AYRSHIRE DRIVE	8" SS	3%	66
434	ALONG MH5 TO MH71	18" SS	13%	231
435	ALONG MH5 TO MH71	24" SS	12%	261
436	ALONG MH5 TO MH71	18" SS	12%	221
437	ALONG MH5 TO MH71	18" SS	8%	275
438	ALONG MH5 TO MH71	18" SS	9%	259
439	ALONG MH5 TO MH71	18" SS	11%	209
440	ALONG MH5 TO MH71	24" SS	13%	267
441	BINNEY LANE	12" SS	3%	350
442	BINNEY LANE	18" SS	6%	287
443	BINNEY LANE	18" SS	6%	281
444	BINNEY LANE	18" SS	7%	227
445	BINNEY LANE	12" SS	7%	169
446	BINNEY LANE	8" SS	5%	107
447	BINNEY LANE	8" SS	5%	111
448	BINNEY LANE	8" SS	6%	35
449	BINNEY LANE	8" SS	7%	30
450	BINNEY LANE	8" SS	8%	123
451	BINNEY LANE	32" SS	5%	742
452	BINNEY LANE	24" SS	13%	287
453	BINNEY LANE	24" SS	15%	251
454	BINNEY LANE	24" SS	15%	248
455	BEHIND LOT 4-1	18" SS	7%	236
456	BEHIND LOT 4-2	24" SS	5%	419
457	BEHIND LOT 4-2	18" SS	7%	290
A	AYRSHIRE DRIVE	8" SS	12%	52
B	AYRSHIRE DRIVE	8" SS	8%	87
C	AYRSHIRE DRIVE	8" SS	7%	85
D	AYRSHIRE DRIVE	8" SS	8%	80
E	AYRSHIRE DRIVE	8" SS	7%	57

#	LOCATION	SIZE (IN)	TOTAL AVG SLOPE (%)	TOT SLOPE LENGTH ABOVE FILTER SOCK
500	LOT 5-2	8" SS	10%	50 (FT)
501	LOT 5-2	8" SS	10%	60
502	LOT 5-2	12" SS	10%	120
503	LOT 5-2	12" SS	10%	140
504	LOT 5-2	24" SS	10%	280
505	LOT 5-2	32" SS	10%	320
506	LOT 5-2	32" SS	10%	320
507	LOT 5-2	32" SS	18%	225
508	LOT 5-5	8" SS	5%	70
510	NE LOT 5-5	18" SS	7%	240
511	NE LOT 5-5	32" SS	24%	140
512	LOT 5-3	8" SS	14%	75





NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

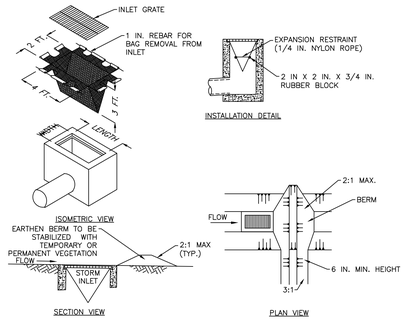
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 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.

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.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED 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 REMAIN PERMANENTLY.

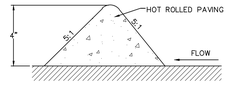
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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 ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

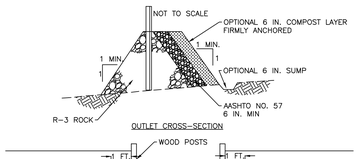
STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE



TEMPORARY PAVED DIVERSION BERM

N.T.S.



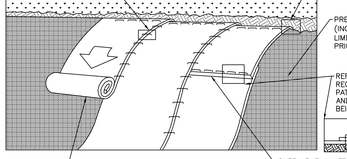
NOTES:

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6
ROCK FILTER OUTLET

NOT TO SCALE


BLANKET EDGES STAPLED AND OVERLAPPED (4 IN. MIN.) STARTING AT TOP OF SLOPE, ROLL BLANKETS IN DIRECTION OF WATER FLOW
INSTALL BEGINNING OF ROLL IN 6 IN. x 6 IN. ANCHOR TRENCH, STAPLE, BACKFILL AND COMPACT SOIL
PREPARE SEED BED (INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED) PRIOR TO BLANKET INSTALLATION
REFER TO MANUF. RECOMMENDED STAPLING PATTERN FOR STEEPNESS AND LENGTH

GENERAL E&S PLANNING AND DESIGN:

THE EROSION AND SEDIMENTATION CONTROL PLAN IS DESIGNED IN ORDER TO DEMONSTRATE THAT THE FOLLOWING CRITERIA HAVE BEEN ATTAINED:

- THE E&S PLAN MINIMIZES THE EXTENT AND DURATION OF EARTH DISTURBANCE TO THE EXTENT POSSIBLE, BY LOCATING THE EROSION CONTROLS WITHIN AREAS THAT WILL ALREADY BE DISTURBED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AND BECAUSE THE CONSTRUCTION SEQUENCE HAS BEEN PREPARED TO LIMIT THE DURATION OF EARTH DISTURBANCE. THE INTENT OF THE PROPOSED DEVELOPMENT IS TO BE A LOW IMPACT DEVELOPMENT TO MINIMIZE THE AMOUNT OF TOTAL EARTH DISTURBANCE AS MUCH AS FEASIBLE. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF EARTH DISTURBANCE TO THE EXTENT FEASIBLE.
- THE E&S PLAN MAXIMIZES PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY LOCATING THE EROSION CONTROLS WITHIN AREAS THAT WILL ALREADY BE DISTURBED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AND BY MAINTAINING THE SURROUNDING VIABLE VEGETATION TO THE EXTENT FEASIBLE. THE PROPOSED SITE LAYOUT HAS BEEN DESIGNED TO AVOID DISTURBANCE OF THE EXISTING DRAINAGE FEATURES AND TO PROTECT THE EXISTING VEGETATION.
- E&S PLAN MINIMIZES SOIL COMPACTION – THE TYPE OF EQUIPMENT USED DURING CONSTRUCTION SHALL NOT CAUSE UNDUE COMPACTION AND TRAFFIC OVER DISTURBED AREAS SHALL BE KEPT AT A MINIMUM IN ORDER TO MINIMIZE SOIL COMPACTION.
- THE E&S PLAN UTILIZES OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF BY OVERSIZING THE FILTER SOCK WHERE FEASIBLE, PROPOSING THE INSTALLATION OF THE STORMWATER FACILITIES AND NEW LANDSCAPING, ETC. AS SOON AS FEASIBLE.
- THE CONTRACTOR SHALL UTILIZE PROPER HANDLING AND/OR DISPOSAL OF ALL MATERIALS WHICH COULD CAUSE POLLUTION.
- WHERE POTENTIAL THERMAL IMPACTS TO SURFACE WATERS EXIST, APPROPRIATE MEASURES SHALL BE TAKEN TO AVOID/MINIMIZE/OR MITIGATE THESE IMPACTS INCLUDING BUT NOT LIMITED TO MINIMIZING IMPERVIOUS AREAS, MINIMIZING THE EXTENT AND DURATION OF SITE DISTURBANCE, PROTECTING EXISTING SHADE TREES, INSTALLING NEW PLANTINGS AS SOON AS FEASIBLE, MAXIMIZING VEGETATED SWALES, MINIMIZING DENUDED AND CONCRETE CHANNELS AND MAXIMIZING DETENTION FACILITY AREAS WHILE MINIMIZING POOL DEPTHS.

EROSION AND SEDIMENT CONTROL NOTES:

1. STOCKPILE HEIGHTS MUST NOT EXCEED 15 FEET. STOCKPILE SLOPES MUST BE 2: 1 OR FLATTER.
2. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE PERMITTEE AND COPERMITTEE SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES AND MAINTAIN AND MAKE AVAILABLE TO THE DELAWARE COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGARDING, RESEEDING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.
4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
5. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE DELAWARE COUNTY CONSERVATION DISTRICT.
6. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
7. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
8. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
9. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
10. ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO THE SEDIMENT TRAPS/BMPS AND TEMPORARY DIVERSION BERMS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE BMP'S.
11. EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
12. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
13. THE PERMITTEE OR CO_PERMITTEE SHALL CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT AT LEAST SEVEN DAYS BEFORE CONSTRUCTION IS TO BEGIN TO DETERMINE IF A PRECONSTRUCTION CONFERENCE IS REQUIRED. THE PERMITTEE, CO_PERMITTEE, AND OTHERS UNDERTAKING THE EARTH DISTURBANCE ACTIVITY MUST ATTEND A PRECONSTRUCTION CONFERENCE WHEN REQUESTED BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE PERMITTEE OR CO-PERMITTEE MUST BRING A COPY OF THEIR NPDES PERMIT, A COPY OF THE STAMPED PLAN FROM THE CONSERVATION DISTRICT, AND ALL ASSOCIATED DEPARTMENT APPROVALS/PERMITS WHICH MUST BE AVAILABLE AT THE CONFERENCE UPON REQUEST. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.
14. UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
15. 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 TO THOSE AREAS DESCRIBED IN EACH STAGE.
16. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES.
17. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
18. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
19. PERMITTEES AND CO_PERMITTEES ARE RESPONSIBLE FOR ENSURING THAT A LICENSED PROFESSIONAL HAVE OVERSIGHT RESPONSIBILITIES FOR THE DESIGN AND PROPER INSTALLATION OF BMPS IDENTIFIED IN THE PCSM PLAN PRIOR TO THE SUBMISSION OF THE NOT FOR THIS PERMIT. THE LICENSED PROFESSIONAL SHALL CERTIFY THAT THE BMPS IDENTIFIED IN THE PLAN HAVE BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLAN. THE INSTALLATION SCHEDULE OF PCSM BMPS AND MAINTENANCE REQUIREMENTS CONTAINED WITHIN THE APPROVED PCSM PLAN MUST BE FOLLOWED; AND FAILURE TO COMPLY WITH THE INSTALLATION SCHEDULE IS A VIOLATION OF THIS PERMIT, THE CLEAN STREAMS LAW, AND THE CLEAN WATER ACT.
20. SEDIMENT MUST BE REMOVED FROM STORM WATER INLET PROTECTION AFTER EACH RUNOFF EVENT.
21. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
22. SOD, MULCH WITH MULCH CONTROL NETTING, OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 4:1 OR STEEPER.
23. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
24. INSPECT SEDIMENT BARRIERS FREQUENTLY, ESPECIALLY AFTER HEAVY STORMS. REPLACE AND REPAIR SEDIMENT BARRIERS AS NECESSARY.
25. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGARDING, RESEEDING, REMULCHING, AND RENETTING, MUST BE DONE IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S, OR MODIFICATIONS TO THOSE INSTALLED WILL BE REQUIRED.
26. SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPE AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
27. THE OPERATOR SHALL REMOVE FROM THIS SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THIS SITE.
28. AN E&S PLAN SHALL BE SUBMITTED TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT AND IMPLEMENTED FOR ALL SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATION.
29. THE NPDES BOUNDARY IS EQUAL TO THE PROPERTY BOUNDARY.
30. THE NORTHERN PORTION OF THE SITE'S RECEIVING WATERCOURSE IS WIG-WAM RUN, A TRIBUTARY TO DARBY CREEK; THE CHAPTER 93 CLASSIFICATION IS CWF AND THE SOUTHERN PORTION OF THE SITE'S RECEIVING WATERCOURSE IS CAMP RUN, A TRIBUTARY TO DARBY CREEK; THE CHAPTER 93 CLASSIFICATION IS CWF, MF.
31. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (E&S MANUAL), COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION NO. 363-2134-008, APRIL 2000, AS AMENDED AND UPDATED. EROSION AND SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED AND PCSM BMPS ARE OPERATIONAL.
32. TOPSOIL TAKEN FROM CONSTRUCTION AREAS SHALL BE SEEDED WITH VEGETATIVE COVER AND STOCKPILED FOR RE-USE IN FINISH GRADING.
33. CRUSHED STONE BASE COURSE TO BE PLACED ON DRIVEWAYS AS SOON AS POSSIBLE AFTER GRADING TO PREVENT EROSION OF SUBGRADE.
34. THE CONTRACTOR SHALL, BY SCHEDULING THE CONSTRUCTION, UTILIZE NEW PLANTINGS AND PROPERLY INSTALL EROSION CONTROL FENCING, HAY BALES AND OTHER EROSION CONTROL MEASURES TO MINIMIZE EROSION DAMAGE.
35. ALL CONSTRUCTION VEHICLES MUST PASS THROUGH A STABILIZED CONSTRUCTION ENTRANCE BEFORE LEAVING THE SITE.
36. PROVIDE CONSTRUCTION FENCING AS NECESSARY TO SECURE THE CONSTRUCTION SITE FROM UNAUTHORIZED ACCESS.
37. GRADING AND EARTHMOVING OPERATIONS SHALL BE MINIMIZED DURING THE PERIOD FROM NOVEMBER 15 TO APRIL 1 WHEN RE-VEGETATION OF EXPOSED GROUND SURFACE IS DIFFICULT. MULCH, STRAW, STONE AND/OR SOD SHALL BE USED TO STABILIZE ALL AREAS DENUDED DURING THIS TIME PERIOD.
38. THE RUNOFF CROSSING TO THE ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE MANAGED SO THAT THE WATER QUALITY / QUANTITY IMPACT IS MINIMIZED TO THE ADJACENT PROPERTIES. ADDITIONAL DIVERSION BERMS, STONED CONSTRUCTION STAGING AREAS, AND INLETS/PIPING SHALL BE PROVIDED AS NECESSARY / DIRECTED IN ORDER TO ENSURE ACCEPTABLE CONDITIONS DURING THE CONSTRUCTION PHASE.

MAINTENANCE OF TEMPORARY SEDIMENTATION CONTROL:

A ROUTINE "END OF DAY CHECK" SHALL BE MADE DURING CONSTRUCTION TO MAKE SURE THAT ALL CONTROL MEASURES ARE WORKING PROPERLY. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL PREVENT ACCELERATED EROSION AND SEDIMENTATION. THERE SHALL BE NO ADVERSE DISCHARGE OF THE SEDIMENT OR OTHER SOLID MATERIALS FROM THE SITE AS A RESULT OF STORMWATER RUNOFF.

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION ON SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

1. STABILIZED CONSTRUCTION ENTRANCE: THE STABILIZED CONSTRUCTION ENTRANCES ARE TO BE CONSTRUCTED PER THE DETAIL. THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.

2. SILT SOCKS: SILT SOCKS SHALL BE INSTALLED PER THE DETAIL. SEDIMENT SHALL BE REMOVED FROM SILT SOCKS WHEN IT REACHES 1/2 THE FENCE HEIGHT OR AS DIRECTED BY THE CONSERVATION DISTRICT OR TOWNSHIP ENGINEER. SILT SOCKS WHICH HAVE BEEN UNDERMINED OR TOPPED WILL BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.

3. ROCK FILTER OUTLETS: ROCK FILTER OUTLETS SHALL BE INSTALLED PER THE DETAIL. SEDIMENT SHALL BE REMOVED FROM BEHIND ROCK FILTER OUTLET AFTER EACH STORM EVENT. WHEN STONE BECOMES CLOGGED WITH SEDIMENT, THE ROCK FILTER OUTLET SHALL BE REPLACED WITH CLEAN STONE.

4. INLET PROTECTION: INLET PROTECTION SHALL BE CONSTRUCTED PER THE DETAIL AND CLEANED AFTER EACH STORM EVENT OR AS DIRECTED BY THE CONSERVATION DISTRICT OR TOWNSHIP ENGINEER.

5. SWALES: ALL SWALES MUST BE TEMPORARY LINED WITH CURLEX TO ALLOW VEGETATION TO ESTABLISH. IF VEGETATION CAN NOT GROW THEN THAT AREA MUST BE SODDED.

6. SEDIMENT DISPOSAL: SILT REMOVED FROM TEMPORARY SEDIMENT CONTROL STRUCTURES SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS LOCATED OUTSIDE OF FLOOD PLAINS, WETLANDS, STEEP SLOPES AND DRAINAGE SWALES.

7. DUST CONTROL: DUST AND OTHER PARTICLES SHALL BE KEPT WITHIN TOLERABLE LIMITS BY USING WATER. APPLICATION SHALL BE AS NEEDED OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE CONSERVATION DISTRICT. USE OF CALCIUM CHLORIDE OR OTHER SIMILAR APPROVED AGENTS SHALL BE LIMITED TO ONLY THOSE PARTICULAR SITUATIONS IN WHICH PERIODIC CLEANING AND/OR WETTING IS NOT FEASIBLE DUE TO CONDITIONS CAUSED BY WEATHER, TRAFFIC, ETC.

8. AIR POLLUTION: BURNING OF TREES, STUMPS, CUTTINGS, AND OTHER PERISHABLE MATERIALS WILL NOT BE PERMITTED UNLESS SPECIFICALLY ALLOWED BY THE MUNICIPALITY. THE PROVISIONS OF THE PENNSYLVANIA AIR POLLUTION CONTROL ACT, JANUARY 8, 1990, AS AMENDED TO DATE, WILL GOVERN AND AREA A PART OF THIS PLAN BY REFERENCE.

9. STREET SWEEPING/VACUUMING – STREET SWEEPING WILL BE PROVIDED TO REMOVE LARGER DEBRIS AND SMALLER PARTICULATE POLLUTANTS, PREVENTING THIS MATERIAL FROM WASHING INTO RECEIVING WATERWAYS/WATERBODIES.

MONITORING, INSPECTION, AND REPORTING REQUIREMENTS:

VISUAL INSPECTIONS
THE PERMITTEE AND CO_PERMITTEE(S) MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGEMENT OF THE NOT BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE VISUAL SITE INSPECTIONS AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL TO ASCERTAIN THAT E&S BMPS AND PCSM BMPS ARE PROPERLY CONSTRUCTED AND MAINTAINED TO EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE AT A MINIMUM:
(1) A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
(2) THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

NONCOMPLIANCE REPORTING
WHERE E&S, PCSM OR PPC BMPS ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO_PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT BY PHONE OR PERSONAL CONTACT AND THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
(1) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;
(2) THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;
(3) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND
(4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

REDUCTION, LOSS, OR FAILURE OF THE BMPS
UPON REDUCTION, LOSS, OR FAILURE OF THE BMPS, THE PERMITTEE AND CO_PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPS OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT. SUCH RESTORED BMPS OR ALTERNATIVE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPS.

TERMINATION OF COVERAGE
NOTE: UPON PERMANENT STABILIZATION OF EARTH DISTURBANCE ACTIVITIES ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT ARE AUTHORIZED BY THIS PERMIT AND WHEN BMPS IDENTIFIED IN THE PCSM PLAN HAVE BEEN PROPERLY INSTALLED, THE PERMITTEE AND/OR CO_PERMITTEE OF THE FACILITY MUST SUBMIT A NOT FORM THAT IS SIGNED IN ACCORDANCE WITH PART B, SECTION 1.C, SIGNATORY REQUIREMENTS, OF THIS PERMIT. ALL LETTERS CERTIFYING DISCHARGE TERMINATION ARE TO BE SENT TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE NOT MUST CONTAIN THE FOLLOWING INFORMATION: FACILITY NAME, ADDRESS, AND LOCATION, OPERATOR NAME AND ADDRESS, PERMIT NUMBER, IDENTIFICATION AND PROOF OF ACKNOWLEDGMENT FROM THE PERSON(S) WHO WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, AND THE REASON FOR PERMIT TERMINATION. UNTIL THE PERMITTEE HAS RECEIVED WRITTEN ACKNOWLEDGEMENT OF THE NOT, THE PERMITTEE WILL REMAIN RESPONSIBLE FOR OPERATING AND MAINTAINING ALL E&S BMPS AND PCSM BMPS ON THE PROJECT SITE AND WILL BE RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

COMPLETION CERTIFICATE AND FINAL PLANS
WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS.

CARE OF EXISTING TREES:

1. TREE PROTECTION FENCING SHALL BE INSTALLED TO PROTECT ALL EXISTING TREES FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION FENCING FOR THE DURATION OF PROJECT.
2. SELECTIVELY PRUNE EXISTING TREES AT THE EDGE OF ALL TREE PROTECTION ZONES, AND OTHER EXISTING TREES AFFECTED BY CONSTRUCTION, UNDER LANDSCAPE ARCHITECT'S DIRECTION. REMOVE SUCKER SHOOTS, DEAD, RUBBING AND DAMAGED BRANCHES.
3. ANY EXCAVATION NEAR ADJACENT ROOT SYSTEMS WILL REQUIRE ROOT PRUNING OF AFFECTED TREE(S).
4. FERTILIZE PRUNED EXISTING TREES WITH 3 TO 4 LBS. OF LIQUID FERTILIZER PER 1,000 SQUARE FEET OF DRIP AREA, OR, 5 GALLONS OF LIQUID FERTILIZER PER CALIPER INCH OF TRUNK DIAMETER.
5. FERTILIZE IN EARLY SPRING BEFORE GROWTH BEGINS.
6. FERTILIZE BEGINNING 2' FROM TRUNK AT INTERVALS 2' TO 3' ON CENTER IN A GRID-LIKE PATTERN TO A DEPTH OF 6-18" WITHIN THE DRIPLINE AND BEYOND WHERE POSSIBLE. INJECTION FERTILIZATION METHOD SHALL BE ACCEPTABLE SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.

PLACING TOPSOIL OR TOPSOIL MIXTURE:

PREPARATION OF AREAS TO BE TOPSOILED
GRADE THE AREAS TO BE COVERED BY TOPSOIL. USING ACCEPTABLE METHODS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE PLACING THE TOPSOIL. REMOVE STONES AND OTHER FOREIGN MATERIAL 2 INCHES OR LARGER IN DIMENSION. REMOVE AND SATISFACTORILY DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL.

PLACING AND SPREADING TOPSOIL
PLACE TOPSOIL ON THE PREPARED AREAS AND, UNLESS OTHERWISE INDICATED, SPREAD AND COMPACT TO A 4-INCH UNIFORM DEPTH ± 1 1/2 INCHES. COMPACT WITH A ROLLER WEIGHING NOT OVER 120 POUNDS PER FOOT WIDTH OF ROLLER OR BY OTHER ACCEPTABLE METHODS, AS DIRECTED. REMOVE OVERDEPTH TOPSOIL, UNLESS OTHERWISE AGREED UPON IN WRITING. DO NOT PLACE TOPSOIL IN A WET OR FROZEN CONDITION.

SEEDING SPECIFICATIONS:
WHERE DENUDED AREAS ARE DESIRED TO BE LAWN:
1. PERFORM ALL CULTURAL OPERATION AT RIGHT ANGLES TO THE SLOPE.
2. APPLY LIME ACCORDING TO TEST OR AT THE RATE OF 25 LBS. OF GROUND LIMESTONE PER 1,000 SQ. FT.
3. APPLY FERTILIZER ACCORDING TO SOIL TEST OR WORK IN DEEPLY 20 LBS. OF 0-20-20 OR EQUIVALENT PER 1,000 SQ. FT. AND AT THE TIME OF SEEDING, WORK INTO THE SURFACE 10 LBS. OF 10-10-10 OR EQUIVALENT PER 1,000 SQ. FT. OR OTHER APPROVED MIXTURE.
4. SMOOTH AND FIRM SEEDED PRIOR TO SEEDING.
5. SEED USING A MIXTURE OF 60% PENNSTAR KENTUCKY BLUEGRASS, 30% PENNLAWN RED FESCUE AND 10% PENNFINE PERENNIAL RYEGRASS AT THE RATE OF FIVE (5) POUNDS PER 1,000 SQ. FT. OR OTHER APPROVED MIXTURE.
6. COVER GRASS AND LEGUME SEEDS WITH 1/4" OF SOIL WITH SOIL EQUIPMENT, MULCH (RATE OF 3 TONS PER ACRE).
7. MOW AS REQUIRED.
8. WHERE SLOPES EXCEED 25% JUTE NETTING OR OTHER APPROVED (EQUAL) SLOPE STABILIZATION MEASURES SHALL BE UTILIZED. IN ADDITION, THE SEEDING SPECIFICATIONS FOR STEEP SLOPES SHALL BE INCREASED TO INCLUDE 3 LBS/1,000 SQ. FT. OF ANNUAL RYEGRASS FOR RAPID VEGETAL ESTABLISHMENT.

PERMANENT STABILIZATION NOTE:
AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

HYDROSEEDING SPECIFICATIONS:

DEFINITION: STABILIZING SEDIMENT PRODUCING AND SEVERELY ERODED AREAS BY ESTABLISHING PERMANENT GRASS COVER.

PURPOSE: TO PROVIDE PERMANENT VEGETATIVE COVER TO CONTROL RAPID RUN-OFF AND EROSION.

PROCEDURE: SURFACE TO BE HYDRO-SEEDED SHALL BE CLEANED OF ALL DEBRIS AND OTHER MATTER HARMFUL TO UNIFORM GERMINATES. A WATER-SLURRY MIXTURE COMPOSED OF THE BELOW MENTIONED "MATERIALS" SHALL BE SPRAYED UNIFORMLY OVER THE AREAS TO BE HYDRO-SEEDED.

MATERIALS:

PERMANENT SEEDING

NAME	DESCRIPTION	APPLICATION RATE (PER ACRE)
1) SEED MIXTURE % BY WEIGHT	60% PENNSTAR KENTUCKY BLUEGRASS	130 LBS
	30% PENNLAWN RED RESCUE	
	10% PENNFINE PERRENIAL RYEGRASS	
2) COMMERCIAL FERTILIZER	10/20/2020	1,000 LBS
3) LIME	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	2 TONS
4) MULCH	HAY OR STRAW	3 TONS
5) SOIL STABILIZER	TERRA TACK OR EQUIVALENT	20 LBS

TEMPORARY SEEDING

1) SEED	ANNUAL RYEGRASS (95% PURE)	40 LBS
2) COMMERCIAL FERTILIZER	5-5-5	1,000 LBS
3) LIME	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	1 TON
4) MULCH	HAY OR STRAW	3 TONS

RECYCLING OR DISPOSAL OF MATERIALS:

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING M

CONSTRUCTION TIMING AND SEQUENCE NOTES:

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, INCLUDING BUT NOT LIMITED TO: THE LAND OWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS, AND A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON SITE PRE-CONSTRUCTION MEETING.

2. 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.

3. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

4. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

5. THE TOWNSHIP ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF EARTHMOVING ACTIVITIES AND PRIOR TO THE INSTALLATION OF THE SANITARY SEWER EXTENSION, STORM SEWER EXTENSION AND STORMWATER MANAGEMENT SYSTEMS.

FILL NOTES:

1. IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE PERMITTEE.

2. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

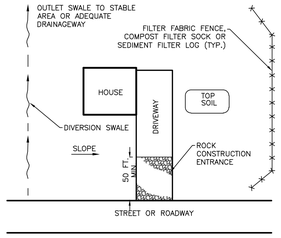
3. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

4. 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 FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

5. ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

6. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM. REGULATED FILL MAY NOT BE USED AT THIS SITE.

RESOLUTION TO SOIL LIMITATIONS:
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.



PLAN VIEW

NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

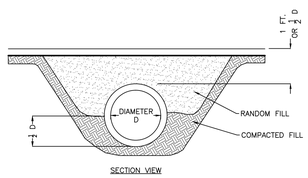
THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPS SHALL BE ADJUSTED ACCORDINGLY.

DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY.

STANDARD CONSTRUCTION DETAIL #10-3
TYPICAL ON-LOT BMPs FOR LOT ALONG ASCENDING OR DESCENDING ROADWAY

NOT TO SCALE



SECTION VIEW

NOTES:

MINIMUM DIAMETER FOR ANY CULVERT IS 12". OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.

PROVIDE SUITABLE OUTLET PROTECTION* AND, WHERE APPROPRIATE, INLET PROTECTION.

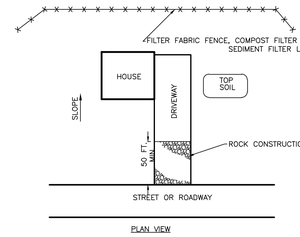
INSPECT CULVERT WEEKLY: REMOVE ANY FLOW OBSTRUCTIONS AND MAKE NECESSARY REPAIRS IMMEDIATELY.

THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

* FOR STEEP SLOPE (>2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R-5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R-6 ROCK SIZE IS RECOMMENDED.

STANDARD CONSTRUCTION DETAIL #3-10
DITCH RELIEF CULVERT

NOT TO SCALE



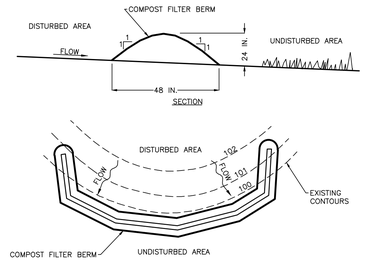
PLAN VIEW

NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

STANDARD CONSTRUCTION DETAIL #10-2
TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

NOT TO SCALE



PLAN VIEW

NOTES:

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

COMPOST FILTER BERMS SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT.

THE MAXIMUM SLOPE LENGTH ABOVE A COMPOST FILTER BERM SHALL NOT EXCEED THAT SHOWN IN TABLE 4.4 OF THE PA DEP EROSION CONTROL MANUAL FOR THE STANDARD SILT FENCE (18 IN. HIGH FENCE).

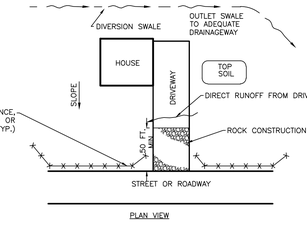
TALL GRASS SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BERM.

ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARD ANY COMPOST FILTER BERM.

STANDARD CONSTRUCTION DETAIL #4-2
COMPOST FILTER BERM

NOT TO SCALE



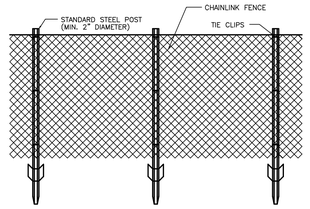
PLAN VIEW

NOTES:

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

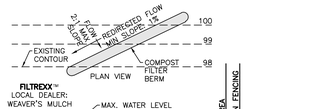
STANDARD CONSTRUCTION DETAIL #10-1
TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

NOT TO SCALE



TEMPORARY CONSTRUCTION FENCING

N.T.S.



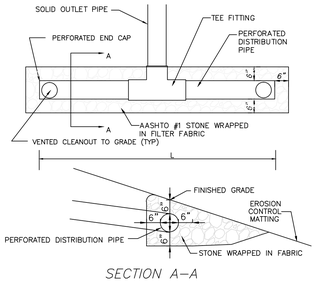
NOTES:
1. ALL MATERIAL TO MEET FILTREXX FILTERSOXX MATERIAL SPECIFICATIONS AND USE FILTREXX GROWINGMEDIA.
2. UPSTREAM SLOPE TO BE LINED WITH LANDLOK S1 LINER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT.
4. BERM SHALL BE REPAIRED IMMEDIATELY UPON DISCOVERY DURING WEEKLY/RAINFALL EVENT INSPECTIONS.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM.
6. THE COMPOST FILTER BERM WILL BE DISPERSED ON SITE AS DIRECTED IN THE CONSTRUCTION TIMING AND SEQUENCE.

COMPOST STANDARDS

pH	5.0 – 8.0
MOISTURE CONTENT	< 60%
PARTICLE SIZE	99% PASSING A 2" SIEVE AND MIN 70% GREATER THAN THE ¾" SIEVE.

TEMPORARY FILTREXX DIVERSION BERM

N.T.S.



SECTION A-A

LEVEL SPREADER DETAIL

N.T.S.

LEVEL SPREADER TABLE

LEVEL SPREADER #	LENGTH "L"	DISTRIBUTION PIPE
TEMPORARY SPREADER	40'	12" HDPE

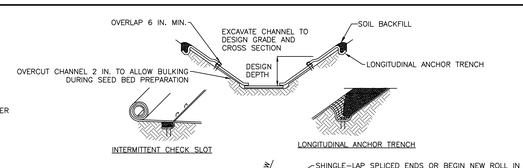
PIPE PERFORATIONS

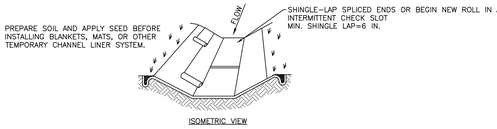
REQUIRED 3.31 SQ. IN/SQ. FT FOR 12"dia. DISTRIBUTION PIPE
C12" = 2*PI*r = 2(PI).5 = 3.14 FT

FOR 1 LF OF PIPE
A12" = 3.14 SQ. FT
AREA OF HOLES = 3.31*3.14 = 10.39 SQ. IN

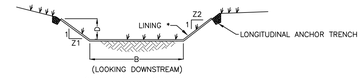
FOR 3/4"dia. HOLES
A3/4" = 0.442 SQ. IN

NO. HOLES NEEDED =10.39/0.442 = 24 HOLES
USE 6-3/4" dia. HOLES SPACED EQUALLY AROUND THE CIRCUMFERENCE @ 3"o.c. PER LENGTH OF PIPE STARTING @ 1.5" FROM EITHER END OF PIPE.





ISOMETRIC VIEW



CHANNEL CROSS-SECTION

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

NOTES:

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE

CHANNEL	LOCATION	B	D	F	Z_1	Z_2	*LINING
SWALE #1.1	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.2	TOWER FIELD LANE	1	0.25	0.75	3	3	GRASS
SWALE #1.3	TOWER FIELD LANE	1	0.37	0.63	3	3	GRASS
SWALE #1.4	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.5	TOWER FIELD LANE	1	0.42	0.58	3	3	GRASS
SWALE #1.6	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.7	TOWER FIELD LANE	1	0.42	0.58	3	3	GRASS
SWALE #1.8	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.9	TOWER FIELD LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.10	TOWER FIELD LANE	5	0.40	0.60	3	3	GRASS
SWALE #1.11	TOWER FIELD LANE	1	0.14	0.86	3	3	GRASS
SWALE #1.12	MURRAY LANE	4	0.38	0.62	3	3	GRASS
SWALE #1.13	MURRAY LANE	4	0.31	0.69	3	3	GRASS
SWALE #1.14	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.15	WHEELER LANE	3	0.35	0.65	3	3	GRASS
SWALE #1.16	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.17	WHEELER LANE	1	0.30	0.70	3	3	GRASS
SWALE #1.18	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.19	WHEELER LANE	2	0.36	0.64	3	3	GRASS
SWALE #1.20	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.21	WHEELER LANE	2	0.33	0.67	3	3	GRASS
SWALE #1.22	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.23	WHEELER LANE	2	0.45	0.55	3	3	GRASS
SWALE #1.24	WHEELER LANE	1	0.20	0.80	3	3	GRASS
SWALE #1.25	WHEELER LANE	4	0.45	0.55	3	3	GRASS
SWALE #1.26	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.27	WHEELER LANE	2	0.50	0.50	3	3	GRASS
SWALE #1.28	WHEELER LANE	1	0.17	0.83	3	3	GRASS
SWALE #1.29	SHARE DRIVE CE	1	0.17	0.83	3	3	GRASS
SWALE #1.30	SHARE DRIVE CE	1	0.17	0.83	3	3	GRASS
SWALE #3.1	TYLER LANE	2	0.33	0.67	3	3	GRASS
SWALE #3.2	TYLER LANE	2	0.42	0.58	3	3	GRASS
SWALE #3.3	TYLER LANE	2.5	0.50	0.50	3	3	GRASS
SWALE #3.4	TYLER LANE	2	0.25	0.75	3	3	GRASS
SWALE #3.5	TYLER LANE	2.5	0.25	0.75	3	3	GRASS
SWALE #3.6	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.7	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.8	TYLER LANE	2	0.28	0.72	3	3	GRASS
SWALE #3.9	TYLER LANE	2	0.17	0.83	3	3	GRASS
SWALE #3.10	TYLER LANE	2	0.30	0.70	3	3	GRASS
SWALE #3.11	TYLER LANE	2	0.25	0.75	3	3	GRASS
SWALE #4.1	AYRSHIRE DRIVE	2.0	0.25	0.75	3	3	GRASS
SWALE #4.2	AYRSHIRE DRIVE	2.0	0.48	0.52	3	3	GRASS
SWALE #4.3	BINNEY LANE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.4	BINNEY LANE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.5	BINNEY LANE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.6	BINNEY LANE	2.0	0.30	0.70	3	3	GRASS
SWALE #4.7	BINNEY LANE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.8	BINNEY LANE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.9	BINNEY LANE	4.0	0.50	0.50	3	3	GRASS
SWALE #4.10	BINNEY LANE	2.0	0.35	0.65	3	3	GRASS
SWALE #4.11	BINNEY/AYRSHIRE	2.0	0.40	0.60	3	3	GRASS
SWALE #4.12	BINNEY LANE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.13	BINNEY LANE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.14	BINNEY LANE	2.0	0.35	0.65	3	3	GRASS
SWALE #4.15	AYRSHIRE DRIVE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.16	AYRSHIRE DRIVE	2.0	0.20	0.80	3	3	GRASS
SWALE #4.17	AYRSHIRE DRIVE	2.0	0.25	0.75	3	3	GRASS
SWALE #4.18	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.19	AYRSHIRE DRIVE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.20	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.21	AYRSHIRE DRIVE	2.0	0.45	0.55	3	3	GRASS
SWALE #4.22	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.23	AYRSHIRE DRIVE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.24	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.25	AYRSHIRE DRIVE	2.0	0.30	0.70	3	3	GRASS
SWALE #4.26	AYRSHIRE DRIVE	3.0	0.50	0.50	3	3	GRASS
SWALE #4.27	AYRSHIRE DRIVE	2.0	0.50	0.50	3	3	GRASS
SWALE #4.28	AYRSHIRE DRIVE	2.0	0.17	0.83	3	3	GRASS
SWALE #4.29	AYRSHIRE DRIVE	2.0	0.35	0.65	3	3	GRASS

SOILS INFORMATION

SYMBOL	NAME	%SLOPE	ERODIBILITY INDEX	HYDROLOGIC GROUP	AGRICULTURAL CAPABILITY CLASS	DRAINAGE	LOAD BEARING CAPACITY	DEPTH TO SH WATER	DEPTH TO BEDROCK	GRAVEL SOURCE	SAND SOURCE	ROADFILL SOURCE	TOPSOIL SOURCE	LOCAL ROADS AND STREETS	POND RESERVOIR AREAS	EMBANKMENTS	IRRIGATION	RESIDENTIAL DEVELOPMENT	LIGHT INDUSTRIAL	SEWAGE LAGOONS	ON-SITE SEPTIC	LAWNS
BrE	BRANDYWINE LOAM	25 TO 40 PERCENT SLOPES	5	A	6E	SOMEWHAT EXCESSIVELY DRAINED	VERY LIMITED	6.6+	5.83	FAIR	FAIR	POOR	POOR	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED
Ch	CHEWACLA SILT LOAM	NOT RATED	5	C	2W	MODERATELY WELL DRAINED	VERY LIMITED	1.50	6.6+	POOR	POOR	FAIR	FAIR	VERY LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED
GeA	GLENELG CHANNERY SILT LOAM	0 TO 3 PERCENT SLOPES	6	B	1	WELL DRAINED	NOT LIMITED	6.6+	4.98	POOR	POOR	GOOD	FAIR	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	SOMEWHAT LIMITED	NOT LIMITED	NOT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	NOT LIMITED
GeB	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	6	B	2E	WELL DRAINED	NOT LIMITED	6.6+	4.16	POOR	POOR	FAIR	POOR	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	SOMEWHAT LIMITED	NOT LIMITED	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	SOMEWHAT LIMITED
GeB2	GLENELG CHANNERY SILT LOAM	3 TO 8 PERCENT SLOPES	6	B	2E	WELL DRAINED	NOT LIMITED	6.6+	6.6+	POOR	POOR	GOOD	FAIR	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	SOMEWHAT LIMITED	NOT LIMITED	SOMEWHAT LIMITED	SOMEWHAT LIMITED	MODERATELY LIMITED	SOMEWHAT LIMITED
GeC	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	6	B	3E	WELL DRAINED	SOMEWHAT LIMITED	6.6+	4.16	POOR	POOR	FAIR	POOR	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED
GeC2	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	6	B	3E	WELL DRAINED	SOMEWHAT LIMITED	6.6+	6.6+	POOR	POOR	GOOD	FAIR	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED
GeC3	GLENELG CHANNERY SILT LOAM	8 TO 15 PERCENT SLOPES	6	B	4E	WELL DRAINED	SOMEWHAT LIMITED	6.6+	4.98	POOR	POOR	GOOD	FAIR	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED	SOMEWHAT LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	SOMEWHAT LIMITED
GeD	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	6	B	4E	WELL DRAINED	VERY LIMITED	6.6+	4.16	POOR	POOR	FAIR	POOR	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED
GeD2	GLENELG CHANNERY SILT LOAM	15 TO 25 PERCENT SLOPES	6	B	4E	WELL DRAINED	VERY LIMITED	6.6+	6.6+	POOR	POOR	FAIR	POOR	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED	VERY LIMITED
GeD3	GLENELG CHANNERY SILT LO