



**Hazardous Tree Removals**  
**Approved for removal by Township Arborist**

Chanticleer Gardens  
786 Church Road  
33" Black Walnut Tree  
Large crack in trunk at the base

239 Pembroke Avenue  
36" Pin Oak  
Half dead canopy  
30" Norway Maple  
Tree is hollow

166 Biddulph Road  
50" Sugar Maple  
Entirely decayed main central stem and large vertical crack at the base  
Multiple cables in the canopy  
Main central leader is now dead and crack seems to have opened

207 Atlee Road  
48" White Ash  
Large wood decay mushrooms or Bracket Fungus  
Deteriorated bark – large hollow opening -3' deep at base

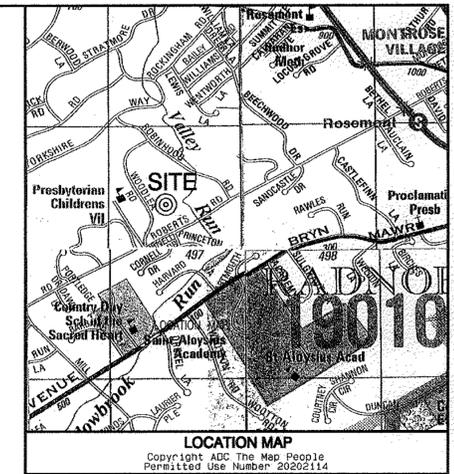
NOTE: ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 267 OF 1974 AS AMENDED BY ACT 199 OF 2004. SERIAL #



| IMPERVIOUS CALCULATIONS |              |
|-------------------------|--------------|
|                         | EXISTING     |
| RESIDENCE               | 2,664        |
| SHED                    | 136          |
| POOL HOUSE              |              |
| DRIVEWAY                | 2,220        |
| POOL COPING             | 192          |
| WALKWAYS / PATIOS       | 410          |
| WALLS                   | 184          |
| <b>IMPERVIOUS TOTAL</b> | <b>5,806</b> |
| BUILDING COVERAGE       | 5.9%         |
| IMPERVIOUS COVERAGE     | 12.2%        |

BULK ZONING (R-1 DISTRICT)

|                       | REQUIRED                | EXISTING              |
|-----------------------|-------------------------|-----------------------|
| LOT AREA              | 1 ACRE MIN              | 1,096 AC<br>47,750 SF |
| LOT WIDTH @ BLDG LINE | 120' MIN                | 120.1'                |
| BUILDING SETBACKS     |                         |                       |
| FRONT YARD            | 60' MIN                 | 63.7'                 |
| SIDE YARD             | 25' MIN                 | 31.1'                 |
| SIDE YARD AGGREGATE   | 60' MIN                 | 68.3'                 |
| REAR YARD             | 40' MIN                 | 211.4'                |
| BUILDING COVERAGE     | 15% MAX                 | 5.9%<br>2,800 SF      |
| IMPERVIOUS COVERAGE   | 22% MAX                 | 12.2%<br>5,806 SF     |
| BUILDING HEIGHT       | 35' OR<br>3 STORIES MAX | < 35'                 |



**GENERAL NOTES:**

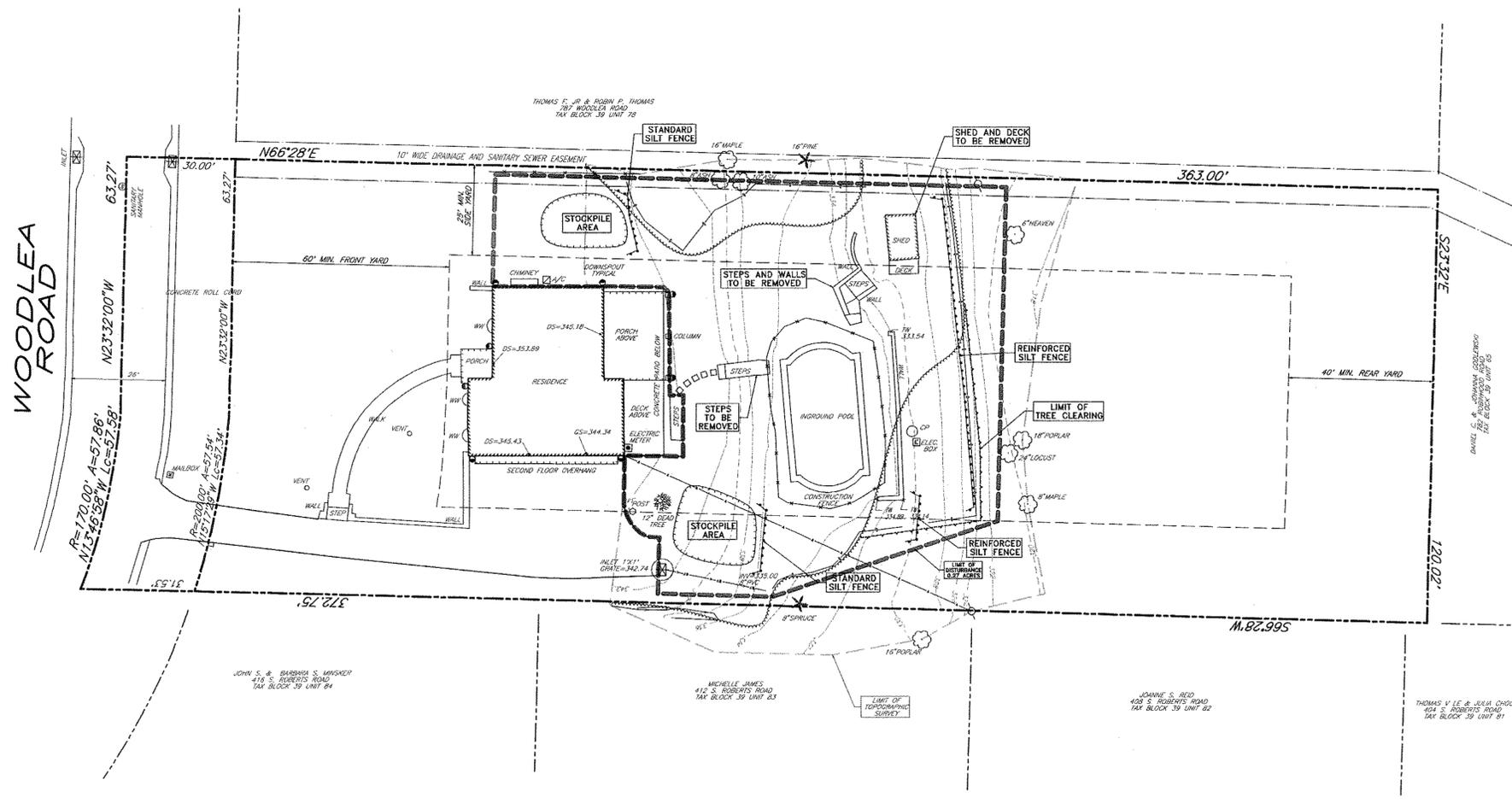
- ALL WOODY VEGETATION TO BE RETAINED WITHIN 25' OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT DRILINES OR AS SHOWN ON PLANS. TOWNSHIP ARBORIST MUST APPROVE THE LOCATION OF THE TREE PROTECTION FENCE PRIOR TO START OF EARTH WORK.
- TREES SHALL BE TREATED TO PROTECT THE ROOT SYSTEM PRIOR TO CONSTRUCTION WHERE IMPROVEMENTS ARE SHOWN WITHIN THE DRILINES OF TREES TO REMAIN.
- WHERE EXCAVATION TRENCHES ARE PROPOSED WITHIN THE DRILINES OF TREES, ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION.
- SHOULD ANY TREES NOT SCHEDULED OR PERMITTED TO BE REMOVED BE IRREPARABLY DAMAGED DURING CONSTRUCTION AND DIE WITHIN EIGHTEEN (18) MONTHS OF THE CONCLUSION OF CONSTRUCTION ACTIVITIES, THOSE TREES WILL BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 101-9A(2).
- THE TOWNSHIP ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE, COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 267 OF 1974 AS AMENDED BY ACT 199 OF 2004.
- CONTRACTOR TO PROTECT OR RELOCATE UTILITIES AS NEEDED.
- NEWLY GRADED SLOPES OF OVER 25% MUST BE STABILIZED WITH SOD OR EROSION CONTROL BLANKET.
- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE DETENTION BASIN AND OTHER STORMWATER FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEANING THE SEDIMENT TRAP AND THE INLET "SUMP" AREA A MINIMUM OF TWO TIMES A YEAR - ONCE IN THE SPRING AND ONCE IN THE FALL AFTER ALL LEAVES HAVE FALLEN. THIS CAN BE DONE USING A WET/DRY VACUUM TO REMOVE ALL DEBRIS FROM THE STRUCTURES.
- NO GRADING CHANGES SHALL BE SHOWN WITHIN THREE (3) FEET OF THE PROPERTY LINE IN ORDER TO ENSURE TRANSITION TO THE GRADING ON THE ADJOINING PROPERTY.
- GRADING AND EARTHMOVING OPERATIONS SHALL BE MINIMIZED DURING THE PERIOD FROM NOVEMBER 15 TO APRIL 1 WHEN RE-VEGETATION OF EXPOSED GRADING SURFACE IS DIFFICULT. MUD, STUMP, STUMPS AND/OR SOD SHALL BE USED TO STABILIZE ALL AREAS DENuded DURING THIS TIME PERIOD.
- MAINTAIN MINIMUM COVER OVER ALL EXISTING AND PROPOSED UTILITIES AT ALL TIMES PER PIPE BEDDING DETAIL.
- NO IMPERVIOUS COVER SHALL BE PERMITTED WITHIN THE DRILINES OF TREES TO REMAIN WITHOUT APPROVAL FROM THE TOWNSHIP ARBORIST. THE TOWNSHIP ARBORIST MUST APPROVE THE LOCATION AND EXTENT OF THE FENCING.
- DOWNSPOTS TO BE CONNECTED TO SEEPAGE LEADER ARE SHOWN ON PLANS. ALL CONNECTED DOWNSPOTS SHALL HAVE ROOF LEADER CLEANOUT INSTALLED AS PER THE DETAILS ON SHEET 3.
- CLEANOUTS SHALL BE INSTALLED AT ALL PIPE JUNCTIONS AND BEING GREATER THAN 45 DEGREES.
- NOTE TO CONTRACTOR: THIS PLAN CAN BE USED FOR CONSTRUCTION ONLY AFTER ALL REQUIRED AGENCY APPROVALS ARE FINALIZED, PERMITS ARE ISSUED AND WRITTEN AUTHORIZATION TO PROCEED IS GRANTED BY THE OWNER.
- A CUT AND FILL ANALYSIS WAS NOT PERFORMED AND MATERIAL BALANCE IS NEITHER IMPLIED NOR GUARANTEED. PROPOSED GRADINGS MAY NOT NECESSARILY INCORPORATE SPREADING OF CUT MATERIAL NOR DO THEY PRECLUDE THE NEED FOR IMPORTING FILL MATERIAL TO OBTAIN THE GRADES SHOWN ON THE PLAN. EXCESS MATERIAL MAY BE SPREAD THROUGHOUT THE PROJECT AREA AFTER CONSULTING WITH THE DESIGN ENGINEER AND TOWNSHIP REGARDING IMPACT TO EXISTING AND PROPOSED DRAINAGE PATTERNS OR STORMWATER FACILITIES. IMPORTED MATERIAL MUST BE CLEAN FILL AS DESIGNATED BY THE PAPER.

**SWMP OPERATION AND MAINTENANCE**

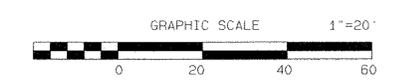
- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE DETENTION BASIN AND OTHER STORMWATER FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEANING THE SEDIMENT TRAP AND THE INLET "SUMP" AREA A MINIMUM OF TWO TIMES A YEAR - ONCE IN THE SPRING AND ONCE IN THE FALL AFTER ALL LEAVES HAVE FALLEN. THIS CAN BE DONE USING A WET/DRY VACUUM TO REMOVE ALL DEBRIS FROM THE STRUCTURES.
- RESPONSIBLE PARTY: SEE CLIENT CONTACT INFORMATION

**LEGEND (not all items are used on the plans)**

| EXISTING                |           |
|-------------------------|-----------|
| AERIAL UTILITY LINE     | —A—A—     |
| COMMUNICATIONS LINE     | —C—C—     |
| ELECTRIC LINE           | —E—E—     |
| FIBER OPTIC LINE        | —F—F—     |
| GAS LINE                | —G—G—     |
| SANITARY FORCE MAIN     | —F—M—     |
| SANITARY GRAVITY PIPE   | —S—       |
| STORMWATER PIPE         | —S—T—     |
| TV LINE                 | —T—T—     |
| UTILITY TRENCH          | —US—US—   |
| WATER LINE              | —W—W—     |
| 2 FT. CONTOUR INTERVAL  | —2—       |
| 10 FT. CONTOUR INTERVAL | —10—      |
| MALIBOX                 | □         |
| TREES                   | ○         |
| RAINWATER DOWNSPOUT     | ○         |
| FIRE HYDRANT            | ○         |
| WATER VALVE             | ○         |
| GAS VALVE               | ○         |
| ELECTRIC BOX/METER      | ○         |
| GROUND LAMP             | ○         |
| LIGHT                   | ○         |
| SIGN                    | ○         |
| MANHOLE                 | ○         |
| INLET                   | ○         |
| VENT                    | ○         |
| POWER POLE              | ○         |
| TRAFFIC SIGNAL POLE     | ○         |
| SETBACK LINE            | — — — — — |
| PROPERTY LINE           | — — — — — |
| RIGHT-OF-WAY LINE       | — — — — — |
| EASEMENT LINE           | — — — — — |



**SOILS INFORMATION**  
(per USDA Web Soil Survey)  
GeB2 - GLENELG CHANNARY SILT LOAM  
S - 8% SLOPES, MODERATELY ERODED  
HYDROLOGIC SOIL GROUP B  
WELL DRAINED  
DEPTH TO LITHIC BEDROCK: > 200 CM  
Me - MADE LAND, SCHIST AND GNEISS MATERIALS  
HYDROLOGIC SOIL GROUP C  
WELL DRAINED  
DEPTH TO LITHIC BEDROCK: > 200 CM



- SURVEY NOTES:**
- THIS IS THE SAME PREMISES DESCRIBED IN RECORD BOOK 3362 PAGE 259 RECORDED AT THE DELAWARE COUNTY RECORDER OF DEEDS AND SHOWN AS LOT 39 ON A MAP OF PROPERTY OF THOMAS H. KELLEY, DATED MAY 16, 1955 BY M.R. AND J.B. YERKES.
  - THIS PLAN IS BASED UPON A FIELD SURVEY BY YERKES ASSOCIATES, INC., IN AUGUST, 2014.
  - ELEVATION DATUM APPROXIMATE USGS
  - THIS PLAN HAS BEEN PREPARED WITHOUT THE AID OF A TITLE REPORT.
  - THIS PREMISES MAY HAVE UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATION NOR SHOWN.

**CLIENT / APPLICANT**  
EDWARD S. AND TRACY d'ENTREMONT JR.  
791 WOODLEA ROAD  
BRYN MAWR, PA 19010

**ENGINEER**  
L. PATRICK SPELLMAN, P.E.  
YERKES ASSOCIATES, INC.  
1444 PHOENIXVILLE PIKE  
WEST CHESTER, PA 19380  
(610) 644-4254

**TOTAL LOT AREA = 47,750 SQUARE FEET**

|     |           |                              |
|-----|-----------|------------------------------|
| 1   | 03-16-15  | ADDED POOL NOTES AND DETAILS |
| 0   | 1-31-2015 | PROGRESS PRINTS              |
| NO. | DATE      | REVISION COMMENT             |

**EXISTING FEATURES, DEMOLITION AND EROSION CONTROL PLAN**

**GRADING PERMIT PLANS**  
PREPARED FOR

**EDWARD S. JR. AND TRACY S. d'ENTREMONT**  
791 WOODLEA ROAD

RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**Yerkes**  
YERKES ASSOCIATES, INC.  
CONSULTING ENGINEERS • LAND SURVEYORS • LAND PLANNERS

1444 PHOENIXVILLE PIKE • P.O. BOX 1568 • WEST CHESTER, PA 19380  
TEL: (610) 644-4254 • FAX: (610) 640-0771

PROJECT - B-14-6770  
DATE - FEBRUARY 4, 2015  
SCALE - 1" = 10'  
DRAWN - EJS  
CHECKED - LPS  
CAD FILE - B6770 ENG  
TAX PARCEL - 36070522600

PLAN NO.  
**D-36-39-78**

**SHEET 1 OF 4**

PLOTTED: 3/16/2015 5:11:15 PM BY: E:\YERKES\B-14-6770 d'Entremont\BDRK\_Quadline-2015-03-16-14-6770 PERMIT.dwg



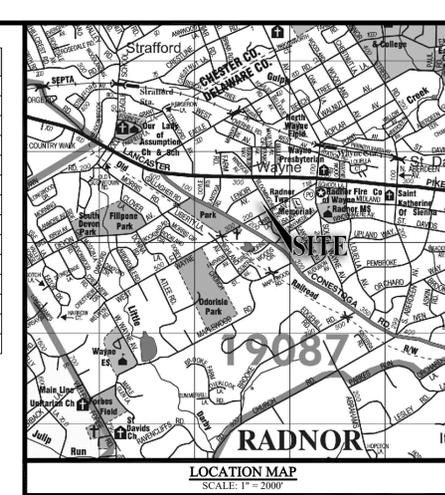






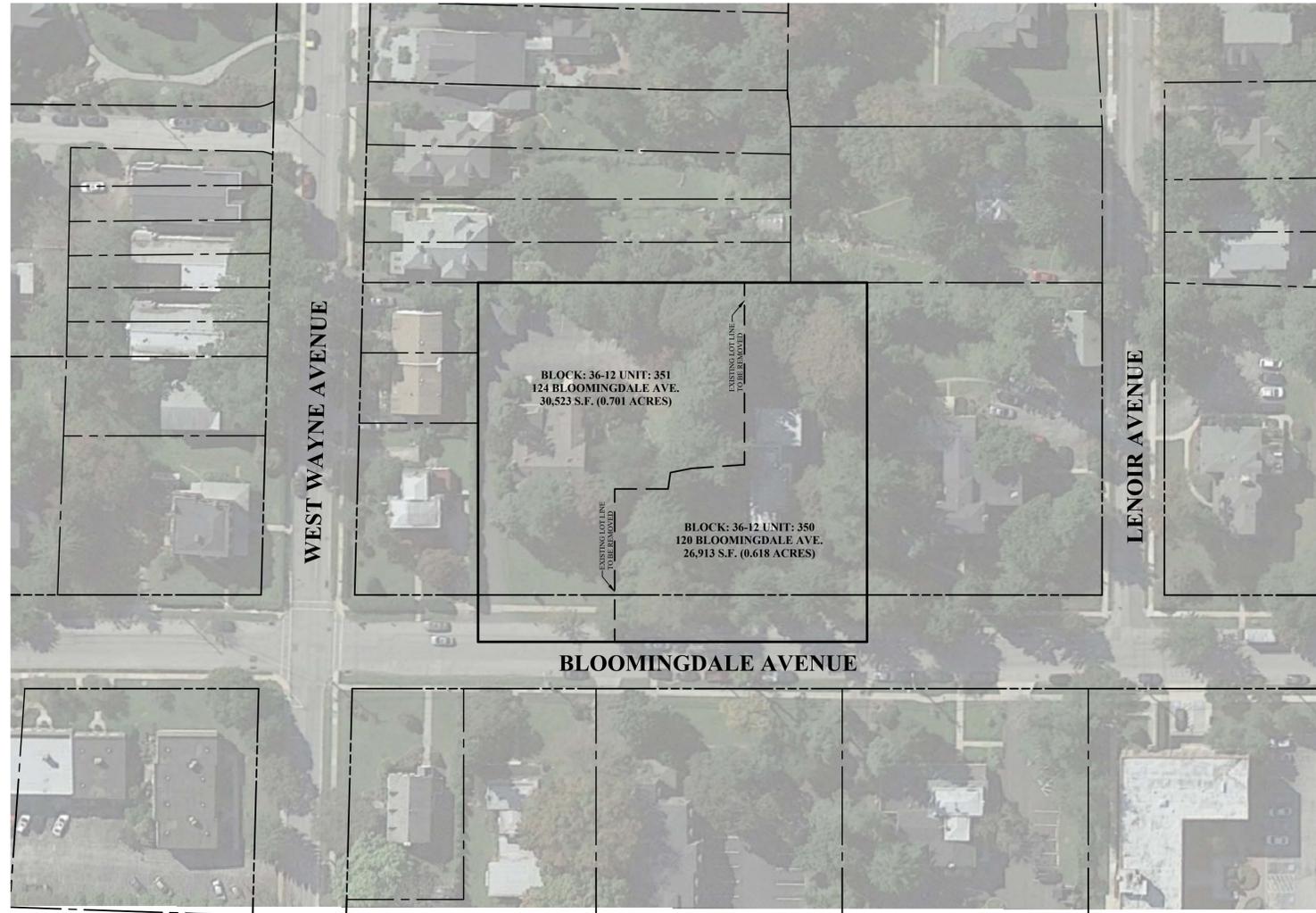
# REVISED PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN FOR 120 & 124 BLOOMINGDALE AVENUE RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

| SHEET INDEX |   |
|-------------|---|
| SHEET 01    | COVER SHEET                                     |
| SHEET 02    | TITLE PLAN                                      |
| SHEET 03    | EXISTING FEATURES AND NATURAL RESOURCE PLAN     |
| SHEET 04    | DEMOLITION PLAN                                 |
| SHEET 05    | LAYOUT & GEOMETRY PLAN                          |
| SHEET 06    | GRADING & UTILITY PLAN                          |
| SHEET 07    | POST CONSTRUCTION STORMWATER MANAGEMENT PLAN    |
| SHEET 08    | SEDIMENTATION & EROSION CONTROL PLAN            |
| SHEET 09    | SEDIMENTATION & EROSION CONTROL DETAILS & NOTES |
| SHEET 10    | LANDSCAPING PLAN                                |
| SHEET 11    | SEWER PROFILES & RECHARGE BED DETAILS           |
| SHEET 12    | VEHICLE TURNING TEMPLATE                        |
| SHEET 13    | CONSTRUCTION DETAILS                            |
| SHEET 14    | CONSTRUCTION DETAILS                            |



**GENERAL NOTES:**

- PROPOSED USE: (6) SIX RESIDENTIAL DWELLING UNITS (5 NEW, 1 EXISTING). EXISTING UNIT IS CURRENTLY A COMMERCIAL USE, WHICH IS AN EXISTING NON-CONFORMING USE.
- SITE INFORMATION:  
ZONING: R-5, RESIDENTIAL  
UPIS: 36-6-327.8, BLOCK 12, UNIT 350 (26,912.3 S.F., 0.618 ACRES)  
36-6-327.9, BLOCK 12, UNIT 351 (30,523 S.F., 0.700 ACRES)  
BEING: 120 & 124 BLOOMINGDALE AVE., WAYNE, PA 19087
- EXISTING BOUNDARY & TOPO INFORMATION TAKEN FROM EXISTING DEEDS AND ACTUAL FIELD SURVEY PERFORMED SEPTEMBER, 2014 BY INLAND DESIGN, LLC, EXTON, PA.
- BLOCK 36-12, UNIT 350 AND BLOCK 36-12, UNIT 351 SHALL BE CONSOLIDATED INTO A SINGLE LOT FOR THE LAND DEVELOPMENT PLAN.
- PROPERTY TO BE SERVED BY PUBLIC WATER AND SEWER.
- ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DELAWARE COUNTY, PENNSYLVANIA, MAP NUMBER 42045C00177, THERE IS NO 100-YEAR FLOOD PLAIN LOCATED ON THIS PROPERTY.
- ACCORDING TO THE THE PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, THE GEOLOGY OF THE SITE IS CHARACTERIZED AS PRECAMBRIAN (MGP), THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.
- THE SITE IS TRIBUTARY TO DARBY CREEK, WHICH IS DESIGNATED AS COLD WATER FISHES (CWF) & MIGRATORY FISHES (MF) BY CHAPTER 93.
- ACCORDING TO THE NATIONAL WETLAND INVENTORY MAP, THERE ARE NO WETLANDS LOCATED WITHIN THE AREA OF THE SITE.
- LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON FIELD SURVEY OF ABOVE-GROUND, VISIBLE STRUCTURES, AND PLOTTING OF UTILITY INFORMATION CONTAINED IN PLANS AVAILABLE AT THE TIME OF SURVEY, AS LISTED IN THE UTILITY REFERENCE PLANS. AVAILABLE AS-BUILT PLANS AND UTILITY MARK-OUTS DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, DEPTH, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.
- COMMON DRIVE, STORMWATER MANAGEMENT SYSTEM, AND OPEN SPACE SHALL BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.
- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 213, LATEST EDITION. IF A LANE CLOSURE OR PARTIAL LANE CLOSURE IS NECESSARY FOR CONSTRUCTION, THE APPLICANT SHALL NOTIFY THE TOWNSHIP (3) THREE DAYS IN ADVANCE PRIOR TO THE LANE CLOSURE.
- BLOOMINGDALE AVENUE IS CLASSIFIED AS A LOCAL STREET WHICH REQUIRES A 60 FOOT RIGHT-OF-WAY. A 60 FOOT RIGHT-OF-WAY ALONG BLOOMINGDALE AVENUE IS PROVIDED.
- GRADING PLANS AND EROSION & SEDIMENTATION CONTROL PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO ISSUING ANY BUILDING PERMITS.
- TWO (2) PARKING SPACES ARE PROVIDED FOR EACH PROPOSED DWELLING WITHIN THE GARAGES SHOWN ON THE PLAN.
- THE ROOMS IN THE PROPOSED NEW UNITS WILL MEET OR EXCEED THE SIZE REQUIREMENTS INDICATED IN ZONING CODE SECTION §280-35.B(6).



**REQUESTED ZONING VARIANCE:**

- A VARIANCE FROM CODE §280-112.D(8) TO ALLOW LOCATION OF THE PROPOSED RETAINING WALL IN THE STEEP SLOPE AREA.

**R-5 RESIDENTIAL:**

AREA AND BULK REGULATIONS (MULTIPLE DWELLINGS)  
TOTAL LOT AREA = 57,433 S.F. (1.318 ACRES)

| DESCRIPTION                    | R-5 REQUIRED                           | PROPOSED            |
|--------------------------------|--|---------------------|
| MIN. LOT AREA                  | LOT AREA PER DWELLING UNIT: 5,445 S.F. | 9,572 S.F. PER UNIT |
| MAX. DENSITY                   | 1 UNIT/5,445 S.F. (10 PERMITTED)       | 6 UNITS             |
| MIN. LOT WIDTH @ BUILDING LINE | 100 FT.                                | 249.7 FT.           |
| BUILDING AREA (MAX.)           | 30% MAX.                               | 16.9% (9,731 S.F.)  |
| MIN. FRONT YARD                | 50 FT.                                 | 50 FT.              |
| MIN. SIDE YARD                 | 30 FT.                                 | 6.4 FT. *           |
| MIN. REAR YARD                 | 30 FT.                                 | 30 FT.              |
| MAX. IMPERVIOUS COVERAGE       | 36% MAX.                               | 34.7% (19,957 S.F.) |
| MAX. BUILDING HEIGHT           | 40 FT. MAX.                            | < 40 FT.            |
| MAX. BUILDING SIZE             | 160 FT. LENGTH OR DEPTH                | 120 FT.             |
| HABITABLE FLOOR AREA           | 600 S.F. MIN.                          | > 600 S.F.          |
| RIPARIAN BUFFER SETBACK        | 35 FT.                                 | N/A                 |
| * EXISTING NON-CONFORMITY      |  |                     |

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF CHESTER :  
ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 2014 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN \_\_\_\_\_ PERSONALLY APPEARED BO ERIXSON WHO ACKNOWLEDGES HIMSELF TO BE THE MANAGING MEMBER OF 115 STRAFFORD AVENUE, LLC A LIMITED LIABILITY CORPORATION, AND THAT AS SUCH BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED BY SIGNING THE NAME OF THE CORPORATION BY HIMSELF.

MANAGING MEMBER \_\_\_\_\_

WITNESS MY HAND AND NOTARIAL SEAL, THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC \_\_\_\_\_

DELAWARE COUNTY PLANNING COMMISSION

PROCESSED AND REVIEWED, A REPORT HAS BEEN PREPARED BY THE DELAWARE COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.

CERTIFIED THIS DATE \_\_\_\_\_

FOR THE DIRECTOR \_\_\_\_\_

RECORDED IN THE DELAWARE COUNTY COURTHOUSE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2014, IN PLAN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_.

CERTIFICATE OF CONFORMANCE:

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THESE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, BUILDING, SANITATION AND OTHER APPLICABLE TOWNSHIP ORDINANCES AND REGULATIONS.

*Charles A. Dobson* 04/01/2015  
CHARLES A. DOBSON (DATE)

RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS:

I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS.

RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP ZONING OFFICER:

I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP ZONING OFFICER.

RADNOR TOWNSHIP ZONING OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP ENGINEER:

I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP ENGINEER.

RADNOR TOWNSHIP ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP BOARD OF COMMISSIONERS:

I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP BOARD OF COMMISSIONERS.

PRESIDENT \_\_\_\_\_ DATE \_\_\_\_\_

SECRETARY \_\_\_\_\_ DATE \_\_\_\_\_

**EQUITABLE OWNER / APPLICANT:**

115 STRAFFORD AVENUE, LLC  
ATTN: BO ERIXSON  
110 NORTH PHOENIXVILLE PIKE  
SUITE 100  
MALVERN, PA 19355

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UPI: 36-6-327.8 & 36-6-327.9

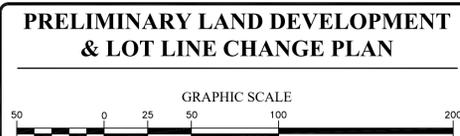


Pennsylvania One Call System  
PA act 172 of 1986 requires three working days notice  
Serial Numbers:  
20142730827

**INLAND DESIGN**  
Civil Engineers, Surveyors & Land Development Consultants  
16 Hagerty Blvd.  
West Chester, PA 19382  
www.InlandDesign.net  
Phone: (484) 947-2928  
Fax: (484) 947-2946  
Info@InlandDesign.net



| No. | Date:      | Description:  |
|-----|------------|---|
| 1   | 01-30-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014. |
| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |

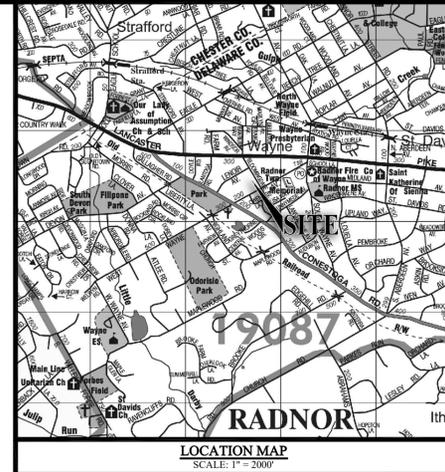


Date: 10/3/2014  
Scale: 1" = 50'  
Drawn by: TAH  
Checked by: CAD  
Project No. 10432

COVER SHEET FOR  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

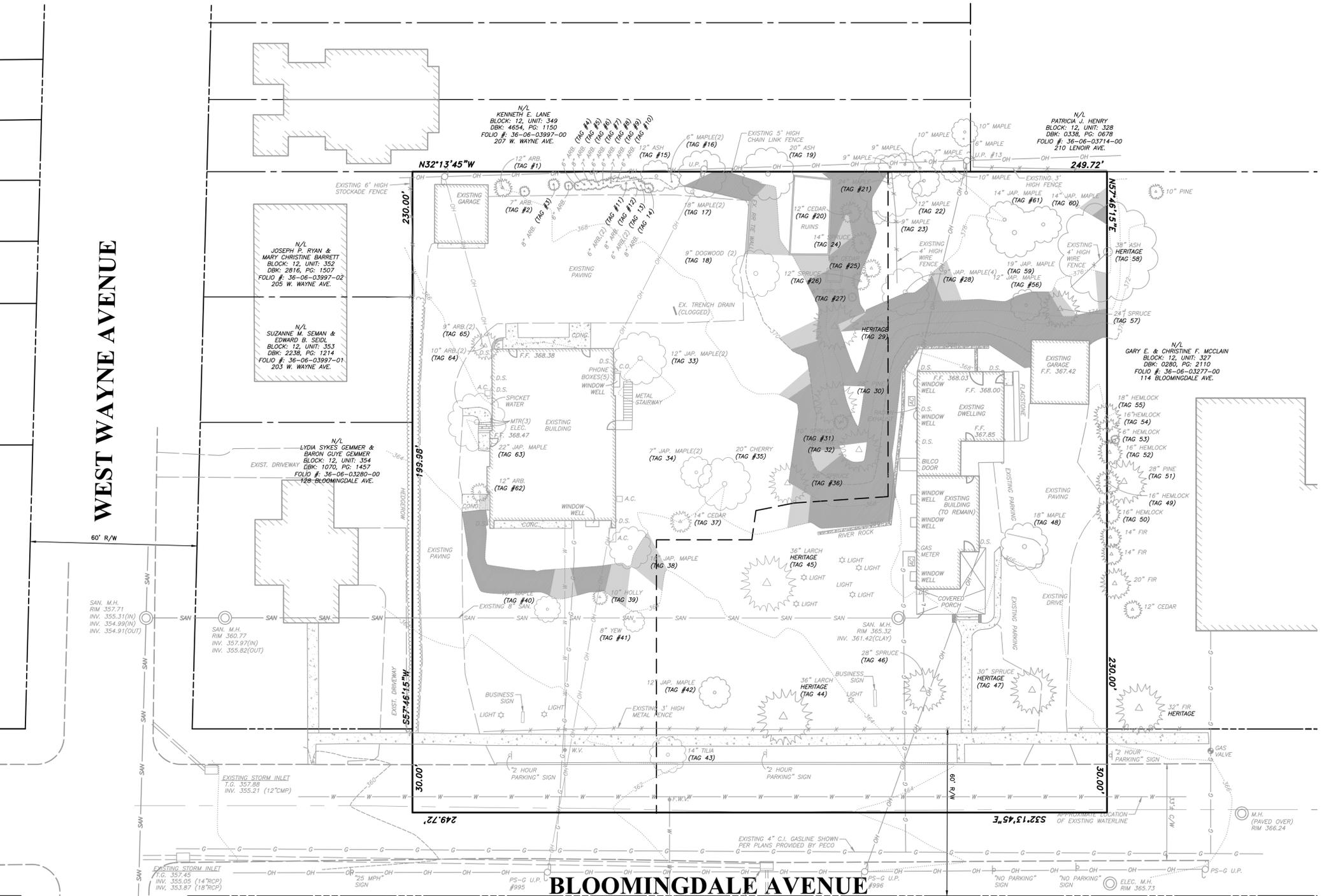
SHEET  
**1**  
OF 14





WEST WAYNE AVENUE

60' R/W



**LEGEND**

|  |                                     |
|--|-------------------------------------|
|  | PROPERTY BOUNDARY                   |
|  | ADJOINING PROPERTY LINE             |
|  | EXISTING RIGHT OF WAY LINE          |
|  | EXISTING EASEMENT LINE              |
|  | EXISTING 2' CONTOUR                 |
|  | EXISTING 10' CONTOUR                |
|  | EXISTING TREE SYMBOLS               |
|  | EXISTING UTILITY POLE               |
|  | EXISTING SIGN                       |
|  | EXISTING FENCE LINE                 |
|  | EXISTING STORM STRUCTURES & PIPE    |
|  | EXISTING SANITARY STRUCTURES & PIPE |
|  | EXISTING CURB CENTERLINE            |
|  | EXISTING ROAD CENTERLINE            |
|  | EXISTING WATER LINE                 |
|  | EXISTING GAS LINE                   |
|  | EXISTING FIRE HYDRANT               |
|  | STEEP SLOPE 14% UP TO 20%           |
|  | STEEP SLOPE 20% AND UP              |

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
|--------|---------------------------------------|-------|--------------------------|----------------|-------------------|------------------|-----------------|-----------------------|
| Md     | MAN MADE GABBRO AND DIABASE MATERIALS | N/A   | N/A                      | N/A            | N/A               | N/A              | 6c              | C                     |

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

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UPI: 36-6-327.8 & 36-6-327.9



Pennsylvania One Call System  
 PA, act 172 of 1986 requires three working days notice  
 Serial Numbers:  
**20142730827**

PENNSYLVANIA ACT 187 REQUIREMENTS:  
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 Fax: (484) 947-2946  
 Info@InlandDesign.net



| No. | Date:      | Description:  |
|-----|------------|---|
| 1   | 01-30-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 01-24-2014. |
| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |

**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE

20 0 10 20 40 80  
 (IN FEET)  
 1 Inch = 20'

Date: 10/3/2014  
 Scale: 1" = 20'  
 Drawn by: TAH  
 Checked by: CAD  
 Project No: **10432**

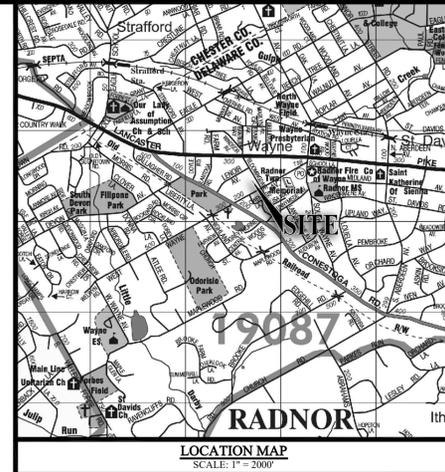
**EXISTING FEATURES AND NATURAL RESOURCE PLAN FOR**

**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**

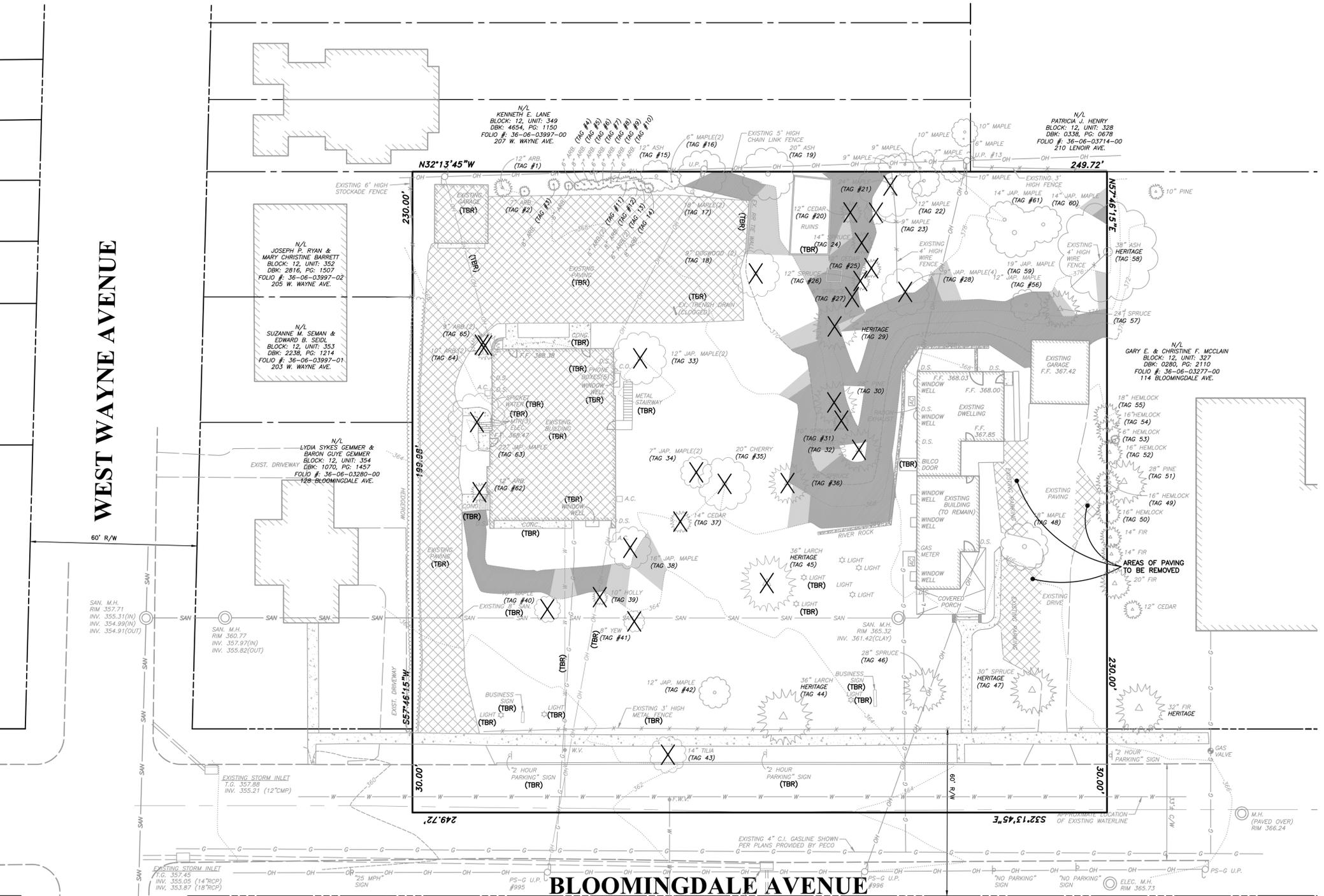
**3**

**OF 14**



**WEST WAYNE AVENUE**

60' R/W



- LEGEND**
- PROPERTY BOUNDARY
  - ADJOINING PROPERTY LINE
  - EXISTING RIGHT OF WAY LINE
  - EXISTING EASEMENT LINE
  - EXISTING 2\"/>
- (T.B.R.)**
- EXISTING TREE TO BE REMOVED
  - EXISTING STRUCTURE / PAVING TO BE REMOVED
  - STEEP SLOPE 14% UP TO 20%
  - STEEP SLOPE 20% AND UP

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
|--------|---------------------------------------|-------|--------------------------|----------------|-------------------|------------------|-----------------|-----------------------|
| Md     | MAN MADE GABBRO AND DIABASE MATERIALS | N/A   | N/A                      | N/A            | N/A               | N/A              | 6c              | C                     |

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

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UPI: 36-6-327.8 & 36-6-327.9



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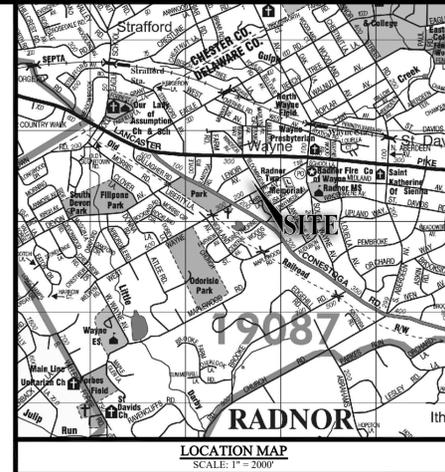
**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE

Date: 10/3/2014  
Scale: 1" = 20'  
Drawn by: TAH  
Checked by: CAD  
Project No: **10432**

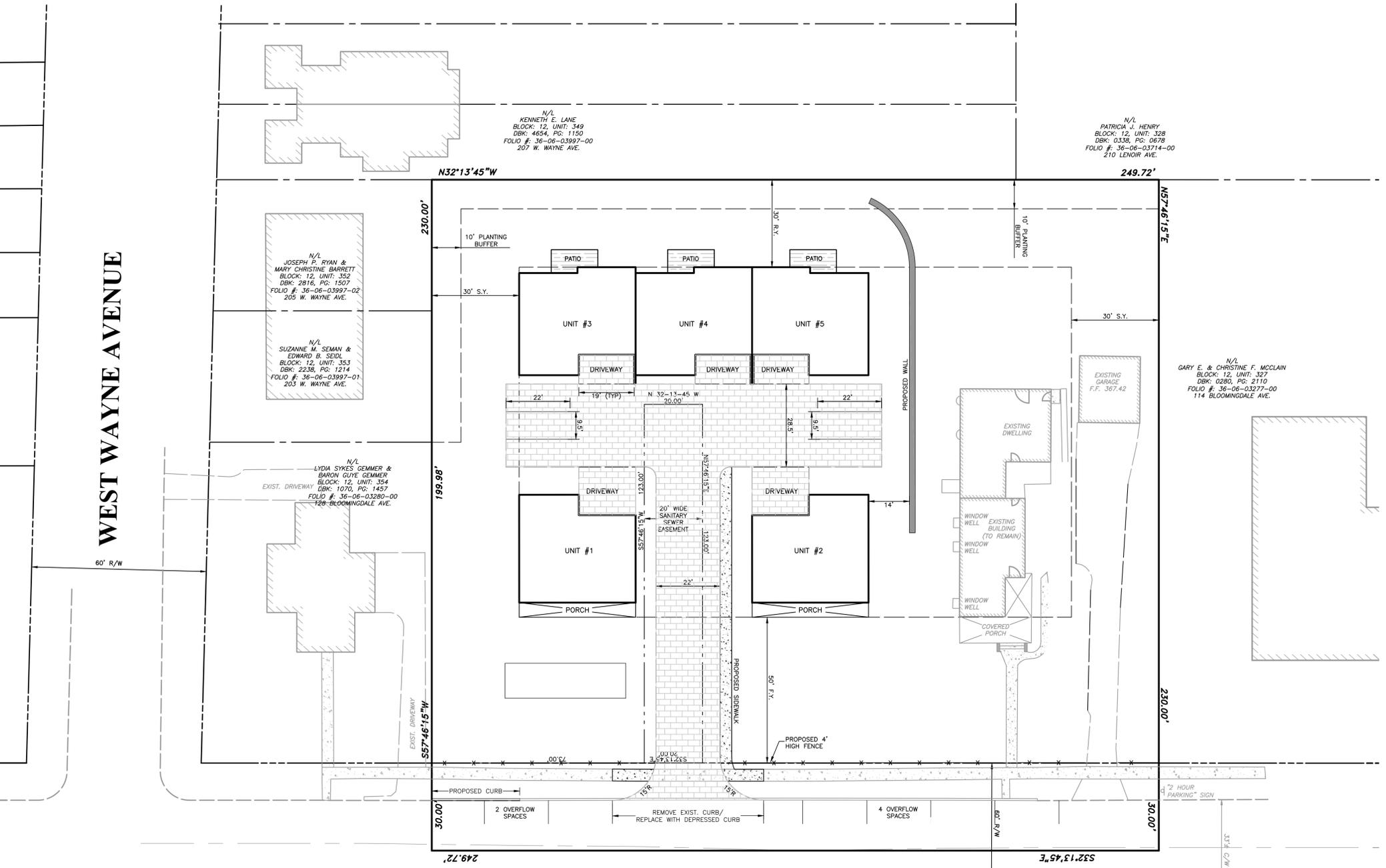
**DEMOLITION PLAN FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**  
**4**  
**OF 14**



**WEST WAYNE AVENUE**

**BLOOMINGDALE AVENUE**



**LEGEND**

|  |                                     |
|--|-------------------------------------|
|  | PROPERTY BOUNDARY                   |
|  | ADJOINING PROPERTY LINE             |
|  | EXISTING RIGHT OF WAY LINE          |
|  | EXISTING EASEMENT LINE              |
|  | EXISTING 2' CONTOUR                 |
|  | EXISTING 10' CONTOUR                |
|  | EXISTING TREE SYMBOLS               |
|  | EXISTING UTILITY POLE               |
|  | EXISTING SIGN                       |
|  | EXISTING FIRE HYDRANT               |
|  | EXISTING FENCE LINE                 |
|  | EXISTING STORM STRUCTURES & PIPE    |
|  | EXISTING SANITARY STRUCTURES & PIPE |
|  | EXISTING CURB LINE                  |
|  | EXISTING ROAD CENTERLINE            |
|  | EXISTING WATER LINE                 |
|  | EXISTING GAS LINE                   |
|  | ULTIMATE RIGHT OF WAY LINE          |
|  | PROPOSED EASEMENT LINE              |
|  | PROPOSED 2' CONTOUR                 |
|  | PROPOSED 10' CONTOUR                |
|  | PROPOSED SPOT ELEVATION             |
|  | PROPOSED FENCE LINE                 |
|  | PROPOSED STORM STRUCTURES & PIPE    |
|  | PROPOSED SANITARY STRUCTURES & PIPE |
|  | PROPOSED SANITARY LATERAL           |
|  | PROPOSED ROAD CENTERLINE            |
|  | PROPOSED ROAD / PAVING              |
|  | PROPOSED WATER LINE                 |
|  | PROPOSED WATER LATERAL              |
|  | PROPOSED SANITARY LATERAL           |

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
|--------|---------------------------------------|-------|--------------------------|----------------|-------------------|------------------|-----------------|-----------------------|
| Md     | MAN MADE GABBRO AND DIABASE MATERIALS | N/A   | N/A                      | N/A            | N/A               | N/A              | 6c              | C                     |

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

**LOT 1 IMPERVIOUS COVERAGE**

| DESCRIPTION             | AREA               |
|-------------------------|--------------------|
| BUILDINGS               | 9,731 S.F.         |
| PAVING                  | 8,706 S.F.         |
| DECK, PATIOS & WALKS    | 1,325 S.F.         |
| WALL                    | 193 S.F.           |
| <b>TOTAL IMPERVIOUS</b> | <b>19,955 S.F.</b> |

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UPJ: 36-6-327.8 & 36-6-327.9

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**CHARLES A. DOBSON**  
 REGISTERED PROFESSIONAL ENGINEER  
 PENNSYLVANIA

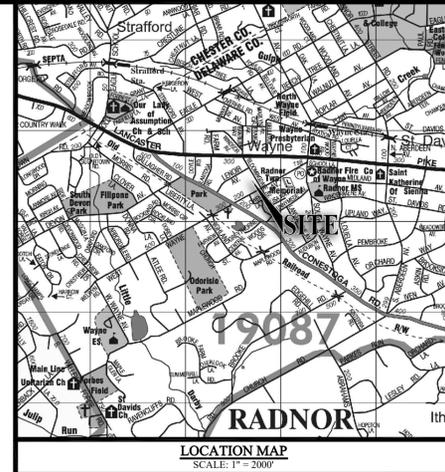
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**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**  
  
 GRAPHIC SCALE  
 20 0 10 20 40 60 80  
 (IN FEET)  
 1 Inch = 20'

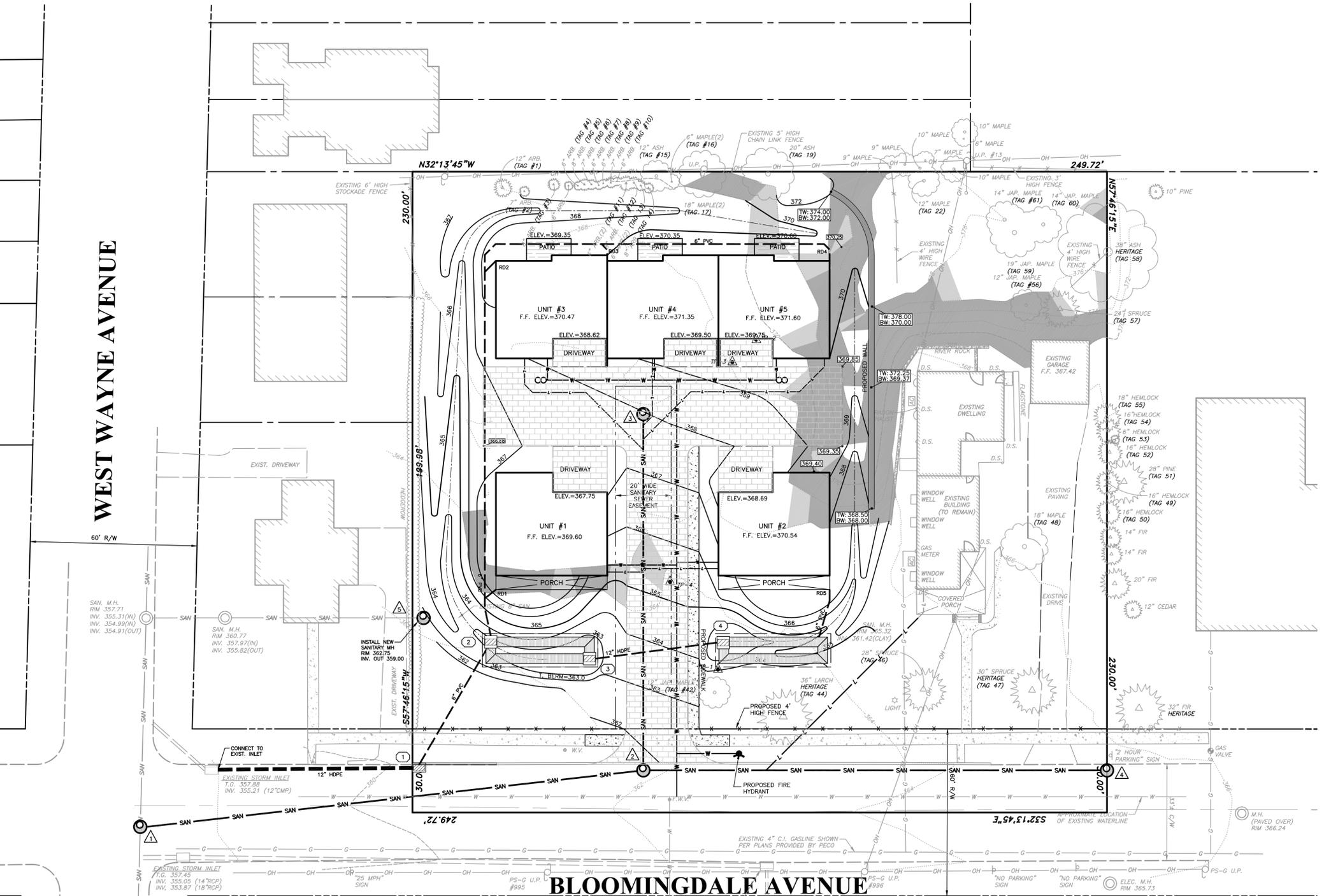
Date: 10/3/2014  
 Scale: 1" = 20'  
 Drawn by: TAH  
 Checked by: CAD  
 Project No: **10432**

**LAYOUT & GEOMETRY PLAN**  
 FOR  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**  
  
**5**  
**OF 14**



**WEST WAYNE AVENUE**



**LEGEND**

|  |                                     |
|--|-------------------------------------|
|  | PROPERTY BOUNDARY                   |
|  | ADJOINING PROPERTY LINE             |
|  | EXISTING RIGHT OF WAY LINE          |
|  | EXISTING EASEMENT LINE              |
|  | EXISTING 2' CONTOUR                 |
|  | EXISTING 10' CONTOUR                |
|  | EXISTING TREE SYMBOLS               |
|  | EXISTING UTILITY POLE               |
|  | EXISTING SIGN                       |
|  | EXISTING FIRE HYDRANT               |
|  | EXISTING FENCE LINE                 |
|  | EXISTING STORM STRUCTURES & PIPE    |
|  | EXISTING SANITARY STRUCTURES & PIPE |
|  | EXISTING CURB LINE                  |
|  | EXISTING ROAD CENTERLINE            |
|  | EXISTING ROAD / PAVING              |
|  | EXISTING WATER LINE                 |
|  | EXISTING GAS LINE                   |
|  | ULTIMATE RIGHT OF WAY LINE          |
|  | PROPOSED EASEMENT LINE              |
|  | PROPOSED 2' CONTOUR                 |
|  | PROPOSED 10' CONTOUR                |
|  | PROPOSED SPOT ELEVATION             |
|  | PROPOSED FENCE LINE                 |
|  | PROPOSED STORM STRUCTURES & PIPE    |
|  | PROPOSED SANITARY STRUCTURES & PIPE |
|  | PROPOSED SANITARY LATERAL           |
|  | PROPOSED ROAD CENTERLINE            |
|  | PROPOSED ROAD / PAVING              |
|  | PROPOSED WATER LINE                 |
|  | PROPOSED WATER LATERAL              |
|  | PROPOSED SANITARY LATERAL           |
|  | STEEP SLOPE 14% UP TO 20%           |
|  | STEEP SLOPE 20% AND UP              |

**BLOOMINGDALE AVENUE**

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
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 Info@InlandDesign.net

COMMONWEALTH OF PENNSYLVANIA  
 REGISTERED PROFESSIONAL ENGINEER  
 CHARLES A. DOBSON  
 ENGINEER NO. 000004

| No. | Date:      | Description:  |
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| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |

**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE

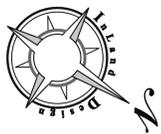
(IN FEET)  
1 Inch = 20'

Date: 10/3/2014  
Scale: 1" = 20'  
Drawn by: TAH  
Checked by: CAD  
Project No: 10432

**GRADING & UTILITY PLAN**  
FOR  
**BLOOMINGDALE AVE., LLC**  
120 & 124 BLOOMINGDALE AVE.  
WAYNE, PA 19087  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

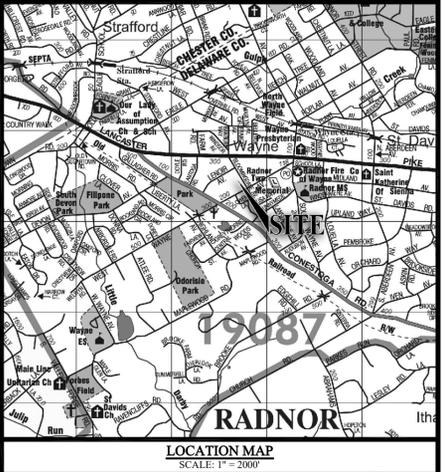
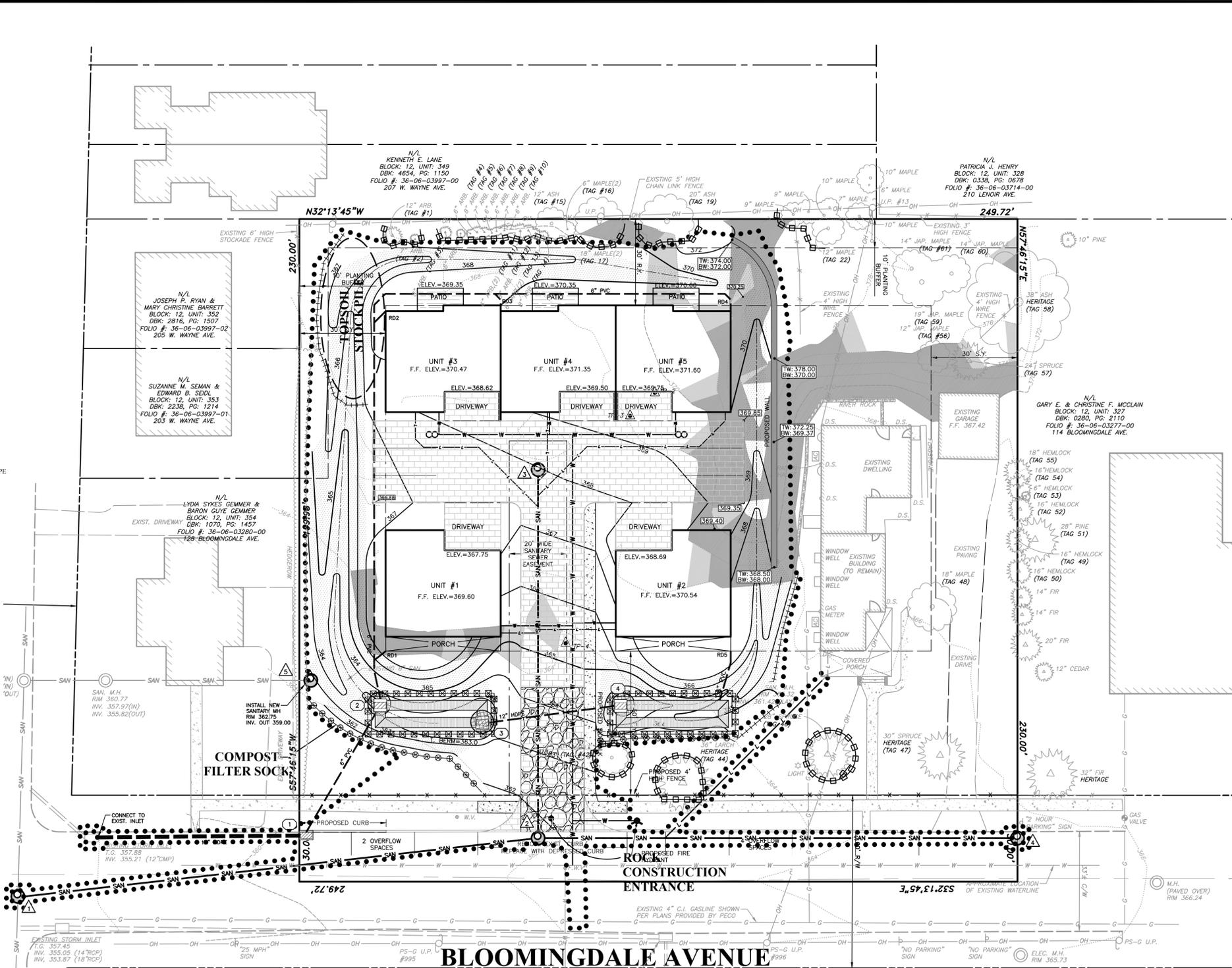
**SHEET**  
**6**  
OF 14





**LEGEND**

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING TREE SYMBOLS
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING FIRE HYDRANT
- STEEP SLOPE 14% - 20%
- STEEP SLOPE 20% + UP
- ULTIMATE RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURE AND PIPE
- PROPOSED SANITARY STRUCTURE AND PIPE
- PROPOSED SANITARY LATERAL
- PROPOSED ROAD CENTERLINE
- PROPOSED ROAD / PAVING
- PROPOSED WATER LINE
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY LATERAL
- STEEP SLOPE 14% UP TO 20%
- STEEP SLOPE 20% AND UP
- 18" SILT FENCE
- TREE PROTECTION FENCE
- ORANGE CONSTRUCTION FENCE
- LIMIT OF DISTURBANCE BOUNDARY
- ROCK CONSTRUCTION ENTRANCE
- INLET SEDIMENT FILTER
- EROSION CONTROL BLANKET



- SEQUENCE OF CONSTRUCTION**
- 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. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS, A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON SITE PRE-CONSTRUCTION MEETING.
1. DELINEATE LIMITS OF DISTURBANCE AS SHOWN ON THE PLAN.
  2. INSTALL ROCK CONSTRUCTION ENTRANCE, SILT FENCE, SEDIMENT TRAP AND TREE PROTECTION FENCING AS SHOWN ON THE PLAN AND ACCORDING TO THE DETAILS. PLACE BARRIER FENCE AROUND THE PROPOSED RECHARGE BED TO PROTECT THE AREA FROM ANY EQUIPMENT TRAFFIC UNTIL THE RECHARGE BED IS READY FOR INSTALLATION. PERFORM SITE DEMOLITION AS SHOWN ON THE DEMOLITION PLAN.
  3. STRIP TOPSOIL FROM ALL AREAS TO BE DISTURBED AND STOCKPILE AS SHOWN ON THE PLAN.
  4. PLACE STONE IN THE AREAS OF THE PROPOSED COMMON DRIVEWAYS TO PROVIDE A MUD FREE ACCESS TO THE AREAS OF CONSTRUCTION.
  5. BEGIN HOME CONSTRUCTION.
  6. COMPLETE BULK EARTHWORK RELATED TO GRADING OF THE SITE INCLUDING DRIVEWAYS, LANDSCAPE BUFFER AREAS AND LAWN AREAS.
- NOTE: UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITIES THAT WILL EXCEED 4 DAYS, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.**
7. INSTALL ALL UNDERGROUND UTILITIES AND THE PAVERS. THE RECHARGE BEDS (SEE SEPARATE SEQUENCE OF CONSTRUCTION) SHALL NOT BE CONSTRUCTED UNTIL ALL AREAS DRAINING TO THEM ARE PERMANENTLY STABILIZED. ONCE THE RECHARGE BEDS ARE INSTALLED, PLACE INLET PROTECTION AS SHOWN ON THE PLAN AND IN THE DETAIL.
  8. COMPLETE FINE GRADING OF THE DRIVEWAYS AND PARKING AREAS AND INSTALL STONE BASE COURSE AND PAVING.
  9. PLACE EROSION CONTROL BLANKET AS SHOWN ON THE PLAN AND IN THE DETAIL. INSTALL PROPOSED GUTTERS, DOWNSPOUTS AND ROOF LEADERS FOR THE BUILDINGS. ONCE THE RECHARGE BEDS ARE INSTALLED CONNECT THE ROOF LEADERS TO THE RECHARGE BED AS SHOWN ON THE PLAN.
  10. INSTALL PERMANENT SEEDING AND MULCH ON ALL DISTURBED AREAS IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS SHOWN ON THE PLAN. REMOVE THE SEDIMENT TRAP AND INSTALL LANDSCAPING AS SHOWN ON THE PLAN AND IN THE DETAIL.
- NOTE: UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITIES THAT WILL EXCEED 4 DAYS, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.**
11. ONCE ALL AREAS HAVE BEEN PERMANENTLY STABILIZED (DETERMINED BY MINIMUM 70% ESTABLISHED GRASS COVER), REMOVE ALL REMAINING EROSION CONTROLS MEASURES AND STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF THE EROSION CONTROLS MEASURES. THE DELAWARE COUNTY CONSERVATION DISTRICT SHALL PERFORM A SITE INSPECTION AND ISSUE APPROVAL OF STABILIZED AREAS PRIOR TO THE REMOVAL OF THE TEMPORARY EROSION CONTROL MEASURES.

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
|--------|---------------------------------------|-------|--------------------------|----------------|-------------------|------------------|-----------------|-----------------------|
| Md     | MAN MADE GABBRO AND DIABASE MATERIALS | N/A   | N/A                      | N/A            | N/A               | N/A              | 6c              | C                     |

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**BLOOMINGDALE AVENUE**

LIMIT OF DISTURBANCE BOUNDARY: 34,147 SF S.F. (0.78 AC.)

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UPI: 36-6-327.8 & 36-6-327.9

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**COMMONWEALTH OF PENNSYLVANIA**  
 REGISTERED PROFESSIONAL ENGINEER  
**CHARLES A. DOBSON**  
 No. 00000474

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**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

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 20 0 10 20 40 80  
 (IN FEET)  
 1 Inch = 20'

Date: 10/3/2014  
 Scale: 1" = 20'  
 Drawn by: TAH  
 Checked by: CAD  
 Project No: **10432**

**SEDIMENTATION AND EROSION CONTROL PLAN FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

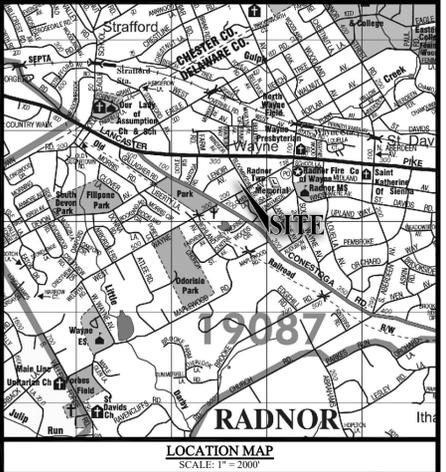
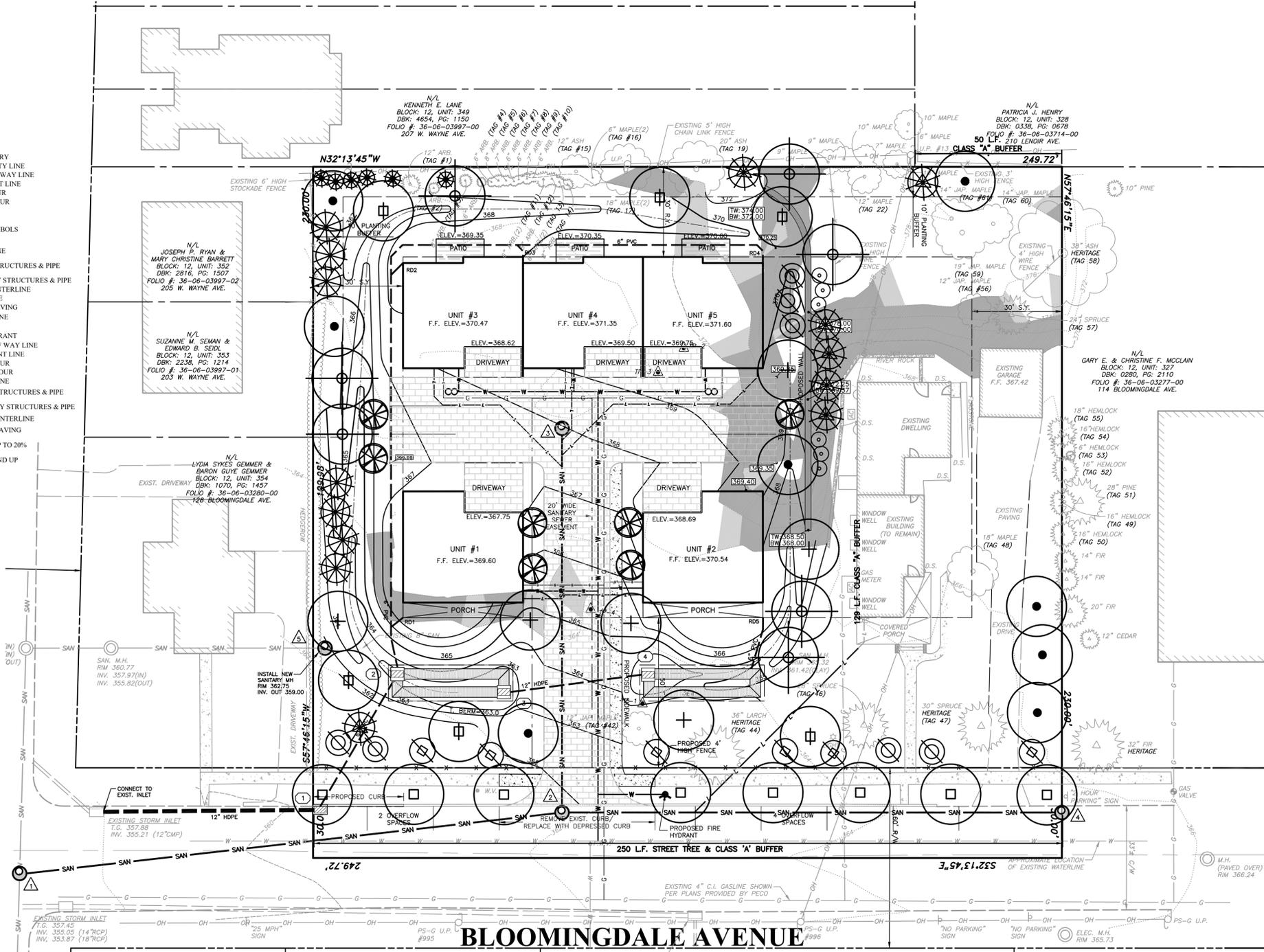
**SHEET**  
**8**  
 OF 14





**LEGEND**

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING TREE SYMBOLS
- EXISTING FENCE LINE
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING FIRE HYDRANT
- ULTIMATE RIGHT OF WAY LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED ROAD / PAVING
- STEEP SLOPE 14% UP TO 20%
- STEEP SLOPE 20% AND UP



**TREE LEGEND**

- RED MAPLE (AR)
- WILLOW LEAF OAK (QP)
- ZELKOVA (ZK)
- GINKGO (GB)
- HONEY LOCUST (GT)
- FLOWERING DOGWOOD (CK)
- EASTERN REDBUD (CC)
- AUTUMNALIS CHERRY (PC)
- WHITE PINE (PS)
- NORWAY SPRUCE (PA)
- "GREEN GIANT" ARBOR VITAE (TH)
- NORTHERN BAYBERRY (BB)

**BLOOMINGDALE AVENUE**

GABRIELLA AND BOWES ASSOCIATES, LLC  
 EILEEN W. WARE, DANE M. CLASSEN & NINA W. WARE, TRUSTEES UNDER WILL OF FRANK M. WARE, JR.  
 R-B WAYNE  
 R-B WAYNE

**PLANT LIST**

| KEY                     | BOTANICAL NAME              | COMMON NAME             | QTY. | CAL.        | HT.    | WIDTH | ROOT  | REMARKS                   |
|-------------------------|-----------------------------|-------------------------|------|-------------|--------|-------|-------|---------------------------|
| <b>CANOPY TREES</b>     |                             |                         |      |             |        |       |       |                           |
| AR                      | ACER RUBRUM *OCTOBER GLORY* | OCTOBER GLORY RED MAPLE | 8    | 2 1/2" MIN. | 10-12' | 8-10' | B&B   | MATCHED SPECIMEN 5' CLEAR |
| GB                      | GINKGO BILOBO               | GINKGO MALE SPECIES     | 8    | 2 1/2" MIN. | 10-12' | 8-10' | B&B   | MATCHED SPECIMEN 5' CLEAR |
| GT                      | GLEDISTIA TRICANTHOS        | HONEY LOCUST            | 6    | 2 1/2" MIN. | 10-12' | 8-10' | B&B   | MATCHED SPECIMEN 5' CLEAR |
| QP                      | QUERCUS PHellos             | WILLOW LEAF OAK         | 6    | 2 1/2" MIN. | 10-12' | 8-10' | B&B   | MATCHED SPECIMEN 5' CLEAR |
| ZK                      | ZELKOVA SERRATA             | ZELKOVA                 | 7    | 2 1/2" MIN. | 10-12' | 8-10' | B&B   | MATCHED SPECIMEN 5' CLEAR |
| <b>EVERGREEN TREES</b>  |                             |                         |      |             |        |       |       |                           |
| PA                      | PICEA ABIES                 | NORWAY SPRUCE           | 7    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| PS                      | PINUS STROBUS               | WHITE PINE              | 7    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| TH                      | THUJA "GREEN GIANT"         | GREEN GIANT ARBORVITAE  | 6    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| <b>FLOWERING</b>        |                             |                         |      |             |        |       |       |                           |
| CC                      | CERCIS CANADENSIS           | EASTERN REDBUD          | 6    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| CK                      | CORNUS KOUSA                | JAP. FLOWERING DOGWOOD  | 7    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| PC                      | PRUNUS AUTUMNALIS           | AUTUMNALIS CHERRY       | 7    |             | 6-8'   | 4-5'  | B&B   | MATCHED SPECIMEN          |
| <b>EVERGREEN SHRUBS</b> |                             |                         |      |             |        |       |       |                           |
| BB                      | MYRICA PENNSYLVANICA        | NORTHERN BAYBERRY       | 6    |             | 2-4"   | 2-4"  | CONT. |                           |

**SOILS DESCRIPTION (ENTIRE SITE WITHIN Me SOIL)**

| SYMBOL | DESCRIPTION                           | SLOPE | AVAILABLE WATER CAPACITY | DRAINAGE CLASS | DEPTH TO S.H.W.T. | DEPTH TO BEDROCK | CAPABILITY UNIT | HYDROLOGIC SOIL GROUP |
|--------|---------------------------------------|-------|--------------------------|----------------|-------------------|------------------|-----------------|-----------------------|
| Md     | MAN MADE GABBRO AND DIABASE MATERIALS | N/A   | N/A                      | N/A            | N/A               | N/A              | 6c              | C                     |

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

**LANDSCAPING COMPLIANCE CHART**

| REPLACEMENT TREE REQUIREMENTS                               |   |                              |                                 |                                 |
|---|---|------------------------------|---------------------------------|---------------------------------|
| TREE SIZE TO BE REMOVED                                     | # TO BE REMOVED   | # OF CANOPY TREE REPLACEMENT | # OF FLOWERING TREE REPLACEMENT | # OF EVERGREEN TREE REPLACEMENT |
| 6" - 18" DBH  | 20 TREES (1:1 REPLACEMENT)  | 0 TREES                      | 10 TREES                        | 10 TREES                        |
| 19" - 29" DBH   | 6 TREES (3:1 REPLACEMENT)   | 12 TREES                     | 3 TREES                         | 3 TREES                         |
| 30" - GREATER DBH   | 2 TREES (6:1 REPLACEMENT)   | 8 TREES                      | 2 TREES                         | 2 TREES                         |
| TOTAL:  | 28 TREES  | 20 TREES                     | 15 TREES                        | 15 TREES                        |
| STREET TREE REQUIREMENTS                                    |   |                              |                                 |                                 |
| LENGTH OF STREET  | STREET TREE REQUIREMENT   | # OF CANOPY TREES            | # OF FLOWERING TREES            | # OF EVERGREEN TREES            |
| 250 L.F. ALONG BLOOMINGDALE AVENUE                          | 1 SHADE TREE PER 30 L.F.  | 8 TREES                      | 0 TREES                         | 0 TREES                         |
| TOTAL:  |   | 8 TREES                      | 0 TREES                         | 0 TREES                         |
| CLASS 'A' BUFFER REQUIREMENTS                               |   |                              |                                 |                                 |
| LENGTH OF PROPERTY LINE                                     | BUFFER REQUIREMENTS   | # OF CANOPY TREES            | # OF FLOWERING TREES            | # OF EVERGREEN TREES            |
| (60 L.F. ALONG UNIT 328) & 250 L.F. ALONG BLOOMINGDALE AVE. | 1 CANOPY TREE / 40 L.F. 1 FLOWERING TREE / 60 L.F. 1 EVERGREEN TREE / 60 L.F. | 7 TREES                      | 5 TREES                         | 5 TREES                         |
| TOTAL:  |   | 7 TREES                      | 5 TREES                         | 5 TREES                         |
| TOTAL TREE PLANTING REQUIREMENTS                            |   |                              |                                 |                                 |
| CATEGORY  | # OF CANOPY TREES   | # OF FLOWERING TREES         | # OF EVERGREEN TREES            |                                 |
| REPLACEMENT TREES   | 20 TREES  | 15 TREES                     | 15 TREES                        |                                 |
| STREET TREES  | 8 TREES   | 0 TREES                      | 0 TREES                         |                                 |
| CLASS 'A' BUFFER  | 7 TREES   | 5 TREES                      | 5 TREES                         |                                 |
| TOTAL:  | 35 TREES  | 20 TREES                     | 20 TREES                        |                                 |

SEE SHEET 13 FOR NOTES & DETAILS

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UPI: 36-6-327.8 & 36-6-327.9

Pennsylvania One Call System  
 PA, act 172 of 1986 requires three working days notice  
 Serial Numbers:  
**20142730827**

PENNSYLVANIA ACT 187 REQUIREMENTS:  
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 www.InlandDesign.net

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 Fax: (484) 947-2946  
 Info@InlandDesign.net

CHARLES A. DOBSON  
 REGISTERED PROFESSIONAL ENGINEER  
 PENNSYLVANIA

| No. | Date:      | Description:  |
|-----|------------|---|
| 1   | 01-30-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014. |
| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |

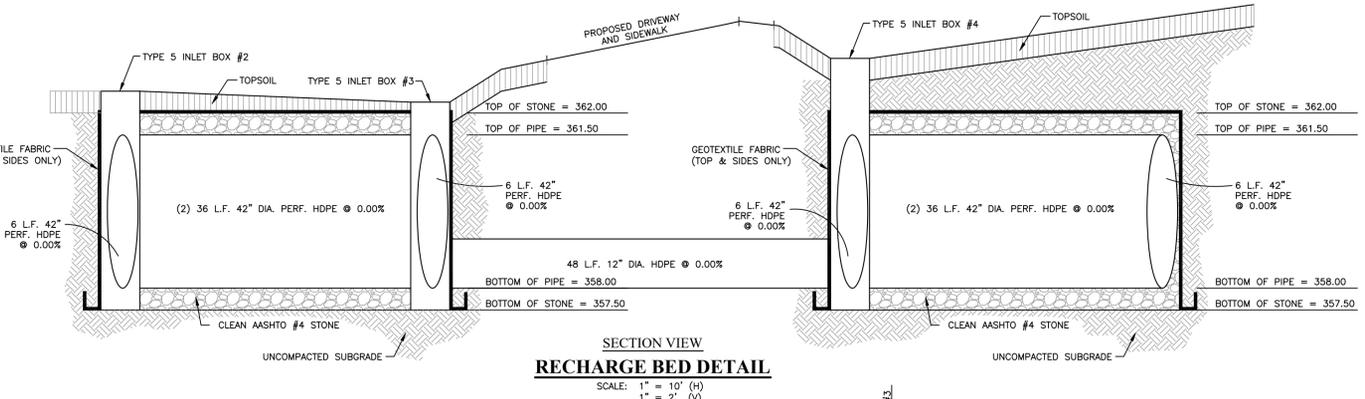
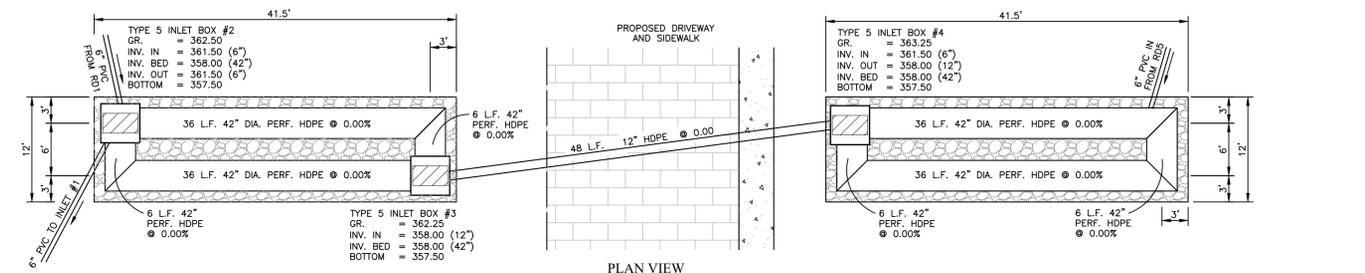
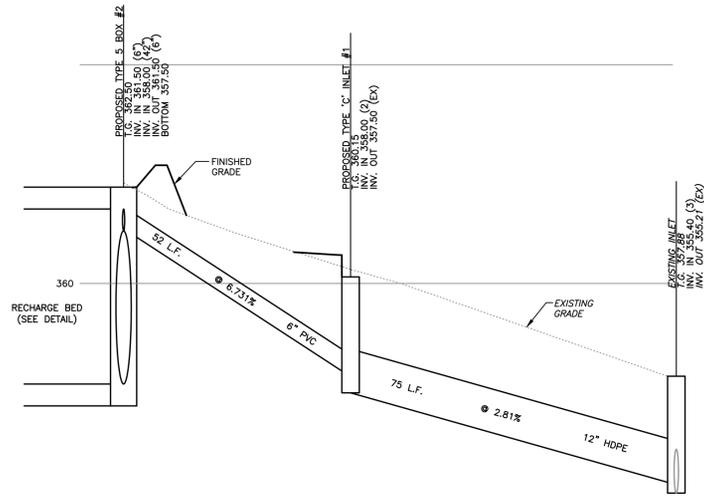
**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE  
 20 0 10 20 30 40 50 60 70 80  
 (IN FEET)  
 1 Inch = 20'

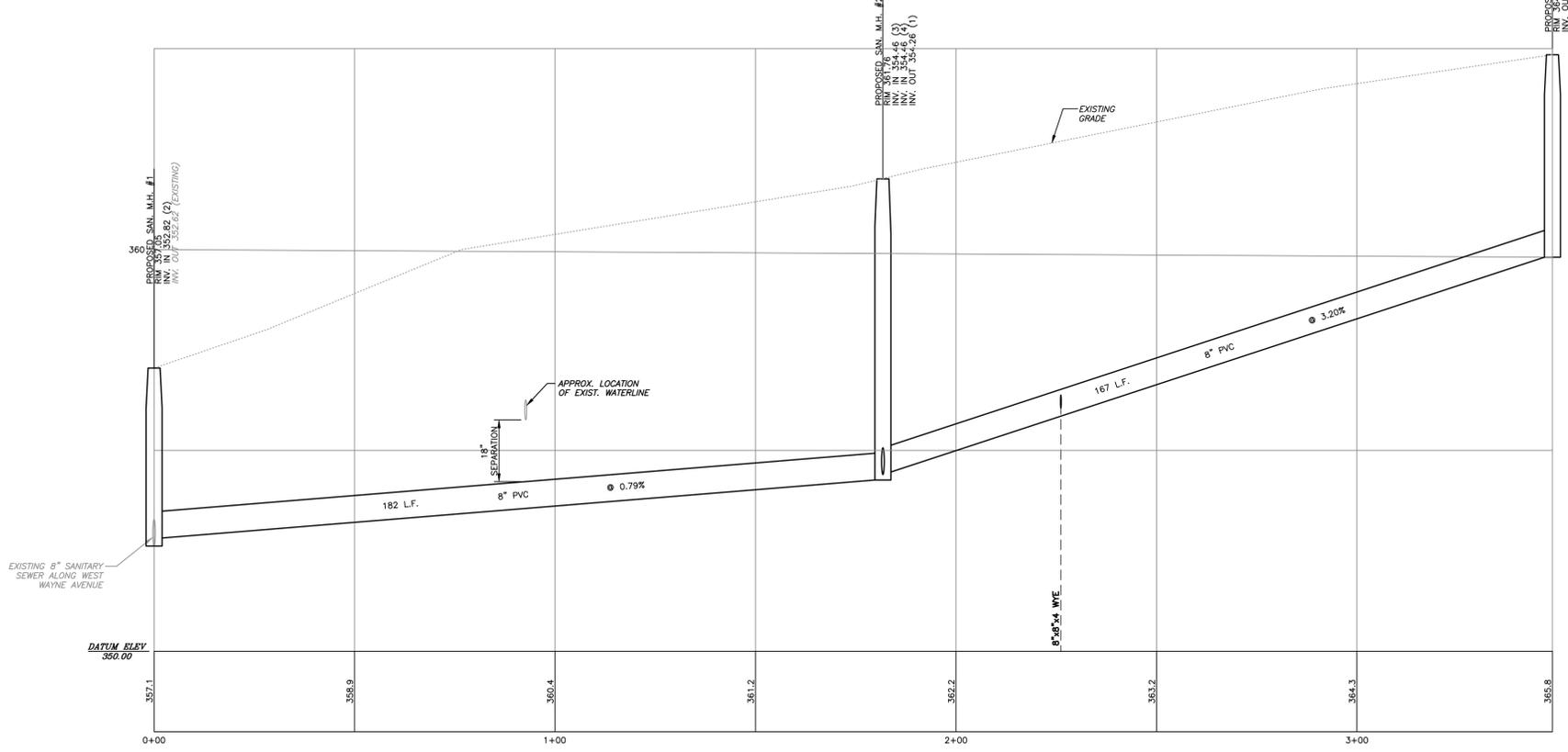
Date: 10/3/2014  
 Scale: 1" = 20'  
 Drawn by: TAH  
 Checked by: CAD  
 Project No: 10432

**LANDSCAPING PLAN FOR BLOOMINGDALE AVE., LLC**  
 120 & 124 BLOOMINGDALE AVE.  
 WAYNE, PA 19087  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

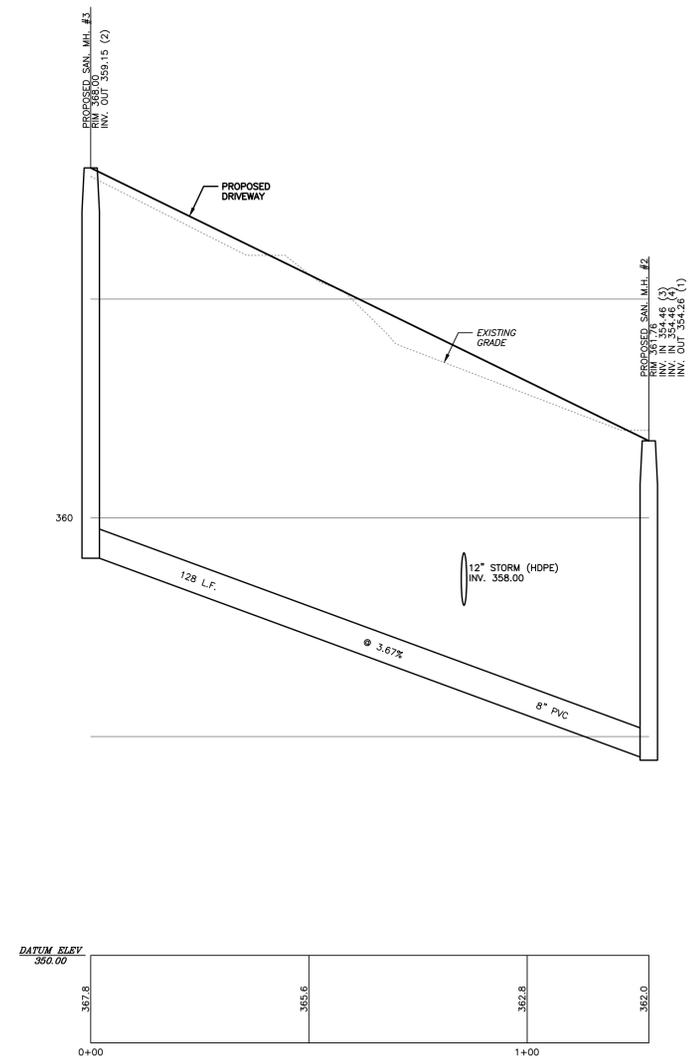
**SHEET 10 OF 14**



**STORM SEWER PROFILE FROM INLET #2 TO EXISTING INLET**  
 SCALE: HORIZ. 1"=20'  
 VERT. 1"=2'



**SANITARY SEWER PROFILE FROM MANHOLE #4 TO MANHOLE #1**  
 SCALE: HORIZ. 1"=20'  
 VERT. 1"=2'



**SANITARY SEWER PROFILE FROM MANHOLE #3 TO MANHOLE #2**  
 SCALE: HORIZ. 1"=20'  
 VERT. 1"=2'

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 Fax: (484) 947-2946  
 Info@InLandDesign.net

REGISTERED PROFESSIONAL ENGINEER  
**CHARLES A. DOBSON**  
 No. 000004  
 PENNSYLVANIA

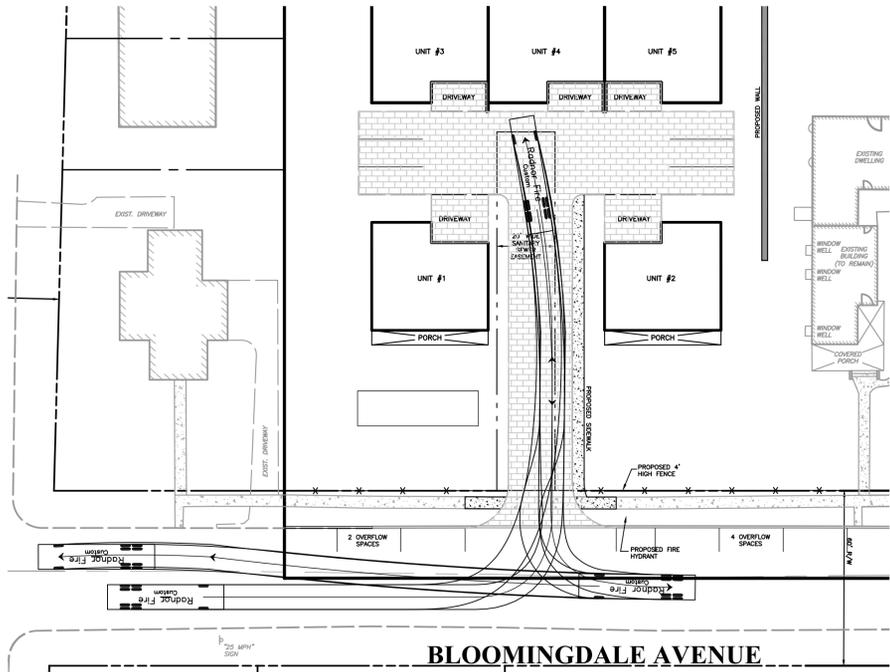
| No. | Date:      | Description:  |
|-----|------------|---|
| 1   | 01-30-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014. |
| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |

**PRELIMINARY LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

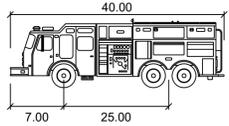
Date: 10/3/2014  
 Scale: AS NOTED  
 Drawn by: TAH  
 Checked by: CAD  
 Project No: **10432**

**SEWER PROFILES & RECHARGE BED DETAILS**  
 FOR  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**  
**11**  
 OF 14



**BLOOMINGDALE AVENUE**



**FIRE TRUCK TURNING TEMPLATE**

Radnor Fire

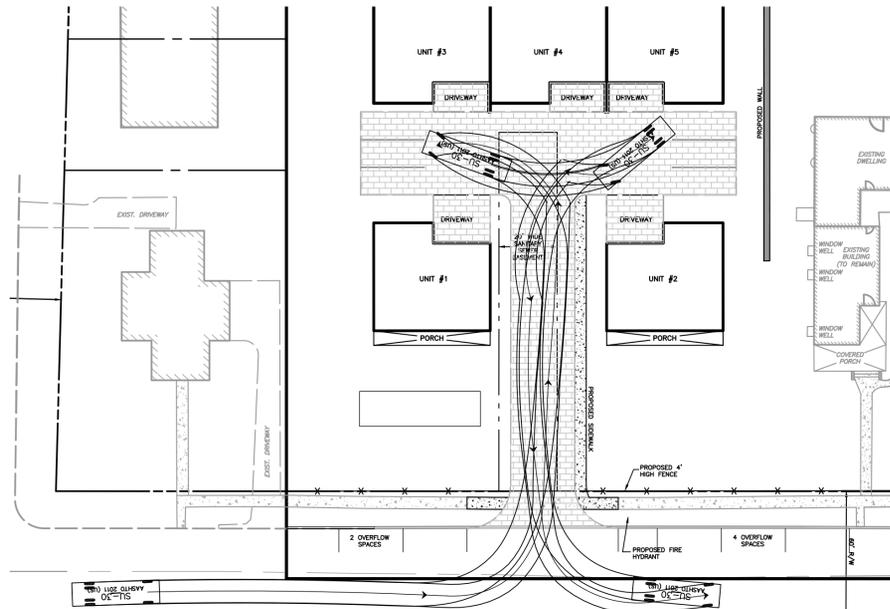
feet

Width : 8.50

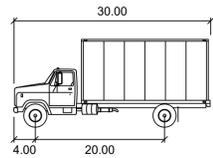
Track : 8.50

Lock to Lock Time : 6.0

Steering Angle : 42.0



**BLOOMINGDALE AVENUE**



**BOX TRUCK TURNING TEMPLATE**

BOX TRUCK

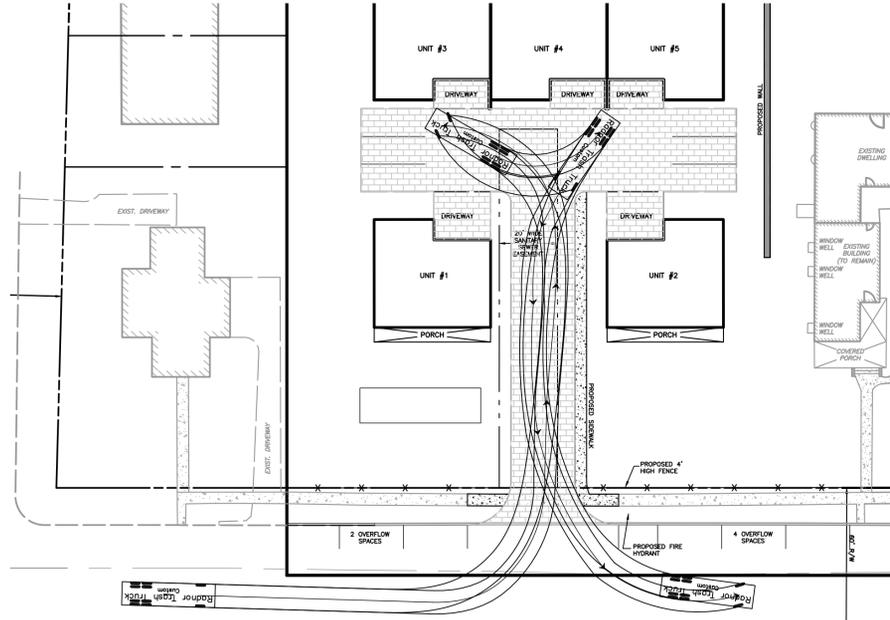
feet

Width : 8.00

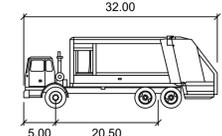
Track : 8.00

Lock to Lock Time : 6.0

Steering Angle : 31.8



**BLOOMINGDALE AVENUE**



**TRASH TRUCK TURNING TEMPLATE**

Radnor Trash Truck

feet

Width : 8.00

Track : 8.00

Lock to Lock Time : 6.0

Steering Angle : 27.4

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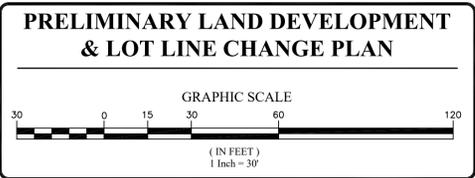
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| No. | Date:      | Description:  |
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| 2   | 04-01-2015 | PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015. |
|     |            |   |
|     |            |   |
|     |            |   |
|     |            |   |
|     |            |   |
|     |            |   |
|     |            |   |
|     |            |   |



Date: 10/3/2014  
Scale: 1" = 30'  
Drawn by: TAH  
Checked by: CAD  
Project No. 10432

**VEHICLE TURNING TEMPLATE PLAN FOR**

**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**

**12**

**OF 14**





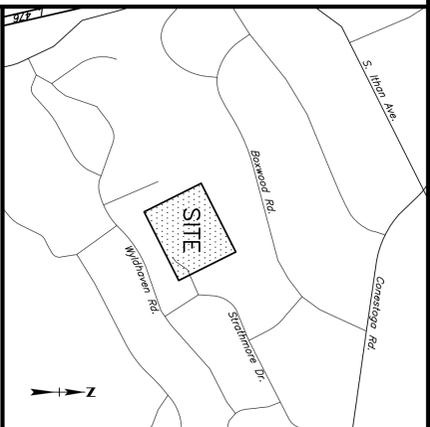
1. (DESIGN ENGINEER), HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL THE DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

1. (APPLICANT), HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED STORMWATER MANAGEMENT SITE PLAN MUST BE APPROVED BY THE MUNICIPALITY AND THAT A REVISION EROSION & SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE CONSERVATION DIVISION.



LEGEND

|     |                            |
|-----|----------------------------|
| --- | EX. BOUNDARY               |
| --- | EX. ADJACENT OWNER         |
| --- | EX. RIGHT-OF-WAY           |
| --- | EX. CONTIGUOUS 1'-INTERVAL |
| --- | EX. CONTIGUOUS 5'-INTERVAL |
| --- | EX. BLDG. STRUCK LINE      |
| --- | EX. BLDG.                  |
| --- | EX. EDGE OF PAVING         |
| --- | EX. CURB                   |



- GENERAL NOTES:
- OWNER/APPLICANT: PROTRACTER SERVICES, INC. 404 CHESWICK PLACE, ROSEMONT, PA 19010
  - PROPERTY INFORMATION: MAP NUMBER 36-07-04340-50, MFD NUMBER 36-39-0011000, MFD NUMBER 36-39-0011000, SITE ADDRESS: 404 CHESWICK PLACE, ROSEMONT, PA 19010 (3.9662 ACRES), TOTAL LOT AREA = 433,000 SF (9.9662 ACRES)
  - BOUNDARY AND TOPOGRAPHY AS SHOWN TAKEN FROM DEEDS AND FROM A FIELD SURVEY PERFORMED BY PROTRACT ENGINEERING IN FEBRUARY 2015.
  - PROTRACT ENGINEERING, INC. DOES NOT GUARANTEE THE STRUCTURES SHOWN ON THE EXISTING ASSESSOR'S ATTACHMENT ENGINEERING, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE AND BELIEF. WE SHOWN TO COMPLY WITH ACT 187, THE ALL UNDERGROUND UTILITIES BEFORE THE START OF WORK.
  - ZONING INFORMATION: ZONED R-1 RESIDENCE DISTRICT
- | REGULATIONS             | REQUIRED | EXISTING | PROPOSED |
|-------------------------|----------|----------|----------|
| MIN LOT AREA            | 1.20 AC  | 9.99 AC  | 9.99 AC  |
| MIN LOT WIDTH (AT BLDG) | 120 FT   | 725 FT   | 725 FT   |
| MIN SIDE YARD           | 25 FT    | 63.9 FT  | 63.9 FT  |
| MIN REAR YARD           | 40 FT    | 150.1 FT | 150.1 FT |
| MIN REAR YARD CLEARANCE | 30 FT    | 157.8 FT | 157.8 FT |
| MAX INTERLUDES COVERAGE | 22 %     | 32 %     | 32 %     |

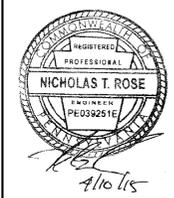
SITE PLAN  
PREPARED FOR  
**404 CHESWICK PLACE**

**ProTract**  
Engineering, Inc.

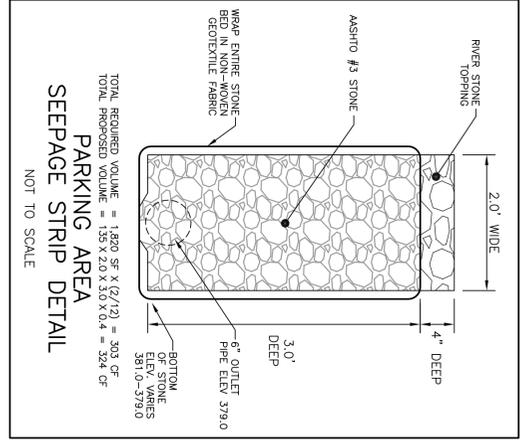
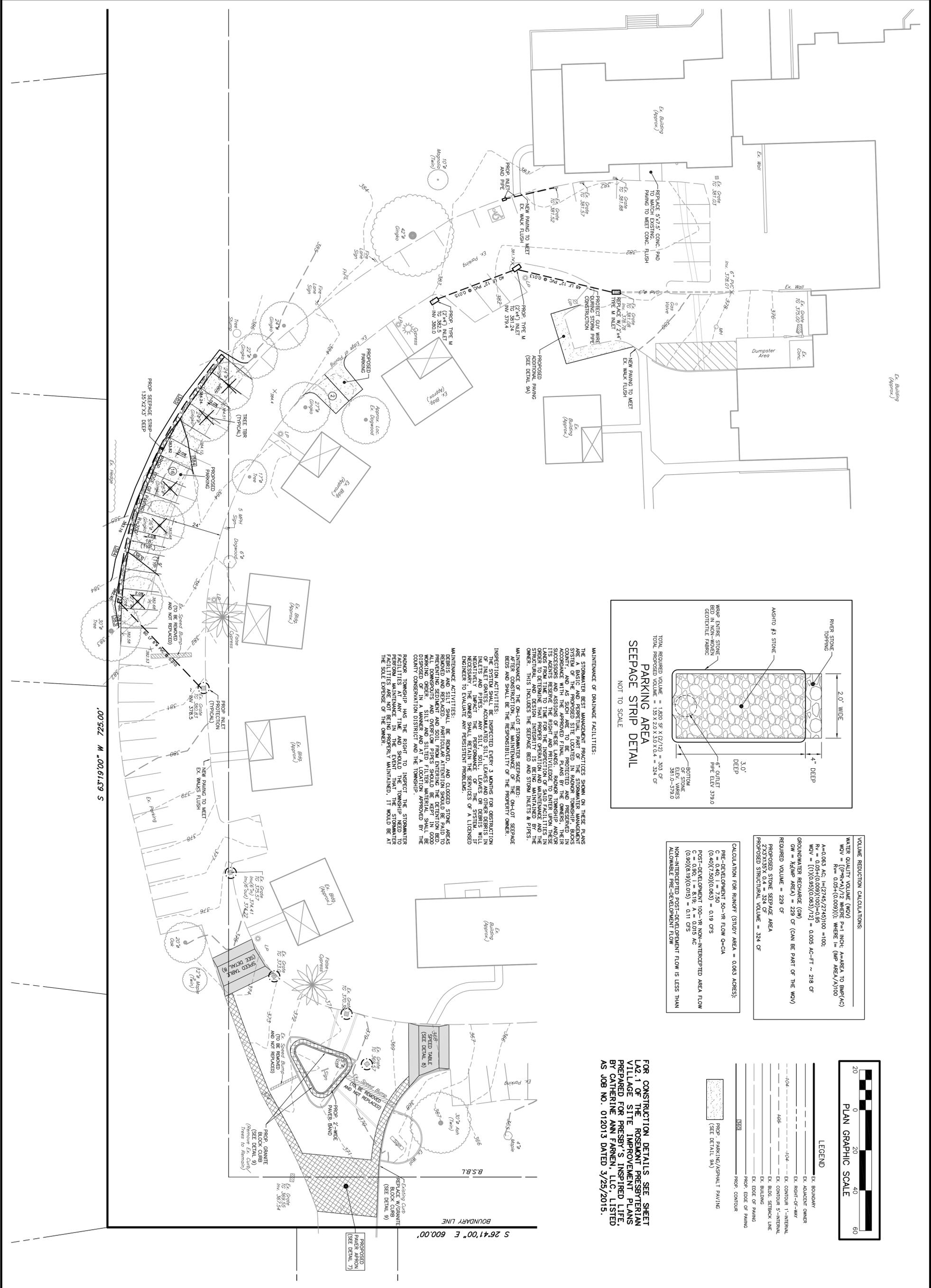
64 East Moreland Avenue, P.O. Box 58  
Hatboro, Pennsylvania 19040

Phone (215)442-9230  
Fax (215)442-9238

|              |          |                       |         |
|--------------|----------|-----------------------|---------|
| Township     | RADNOR   |                       |         |
| County       | DELAWARE |                       |         |
| Date         | 3-25-15  |                       |         |
| Scale        | 1"=40'   |                       |         |
| Sheet Number | 1 of 3   |                       |         |
| No.          | 04-10-15 | STORMWATER MANAGEMENT | DBR     |
| Date         |          | Description           | By      |
|              | H2226    | BASE.DWG              | EMS/NTR |







**VOLUME REDUCTION CALCULATIONS:**

WATER QUALITY VOLUME (WQV)  
 $WQV = [(P-R)(A)/12]$  WHERE P=1 INCH, A=AREA TO BURF(CF)  
 $R = 0.05+(0.009)(I)$  WHERE I= (IMP AREA/A)/100  
 $A = 0.063 \text{ AC} = (2745/2745)100 = 100$   
 $R = 0.05+(0.009)(100) = 0.95$   
 $WQV = [(1)(0.95)(0.063)/12] = 0.005 \text{ AC-FT} \approx 218 \text{ CF}$

GROUNDWATER RECHARGE (GW)  
 $GW = K(IMP \text{ AREA}) = 229 \text{ CF (CAN BE PART OF THE WQV)}$

REQUIRED VOLUME = 229 CF

PROPOSED STONE SEEPAGE AREA  
 $2.3 \times 135 \times 0.4 = 324 \text{ CF}$

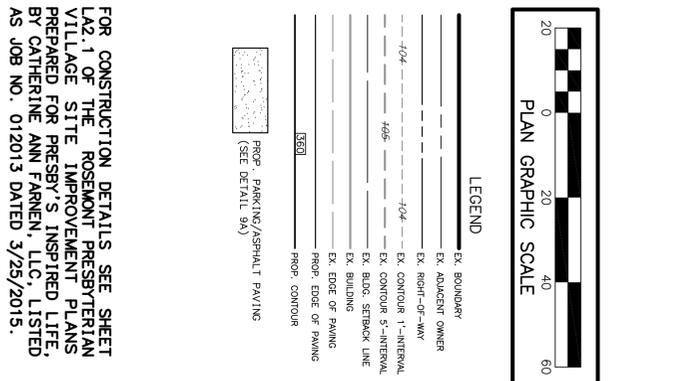
PROPOSED STRUCTURAL VOLUME = 324 CF

**CALCULATION FOR RUNOFF (STUDY AREA = 0.063 ACRES):**

PRE-DEVELOPMENT 50-YR FLOW Q=CIA  
 $C = 0.40; I = 1.50$   
 $Q = (0.40)(1.50)(0.063) = 0.19 \text{ CFS}$

POST-DEVELOPMENT 100-YR NON-INTERCEPTED AREA FLOW  
 $C = 0.90; I = 6.18; A = 0.05 \text{ AC}$   
 $Q = (0.90)(6.18)(0.05) = 0.28 \text{ CFS}$

NON-INTERCEPTED POST-DEVELOPMENT FLOW IS LESS THAN ALLOWABLE PRE-DEVELOPMENT FLOW



FOR CONSTRUCTION DETAILS SEE SHEET LA2.1 OF THE ROSEMONT PRESBYTERIAN VILLAGE SITE IMPROVEMENT PLANS PREPARED FOR PRESBY'S INSPIRED LIFE, BY CATHERINE ANN FARNEN, LLC, LISTED AS JOB NO. 012013 DATED 3/25/2015.

**MAINTENANCE OF DRAINAGE FACILITIES:**

THE STORMWATER BEST MANAGEMENT PRACTICES SHOWN ON THESE PLANS ARE A BASIC AND PERPETUAL PART OF THE STORMWATER MANAGEMENT SYSTEM FOR THE PROJECT. THE RESPONSIBILITY FOR THE MAINTENANCE OF THIS SYSTEM SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. IN ACCORDANCE WITH THE APPROVED FINAL PLANS BY THE OWNERS, THEIR SUCCESSORS AND ASSIGNS OF THESE LANDS, THE TOWNSHIP AND/OR COUNTY ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY MAINTENANCE OR REPAIRS REQUIRED TO MAINTAIN THE PROPER OPERATION AND MAINTENANCE OF THE SYSTEM FROM TIME TO TIME FOR THE INSPECTION OF SAID FACILITIES IN ORDER TO DETERMINE THAT PROPER OPERATION AND MAINTENANCE AND THE OWNER. THIS INCLUDES THE SEEPAGE BED AND STORM INLETS & PIPES.

**MAINTENANCE OF THE ON-LOT STORMWATER SEEPAGE BED:** ON-LOT SEEPAGE BEDS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

**INSPECTION ACTIVITIES:**

THE SYSTEM SHALL BE INSPECTED EVERY 3 MONTHS FOR OBSTRUCTION OF INLET GRATES, ACCUMULATED SLILT, LEAVES AND OTHER DEBRIS IN NEARBY AND ADJACENT AREAS. THE SYSTEM SHALL BE MAINTAINED IN SUCH A MANNER AS TO PREVENT THE PERFORMANCE LEAKS OR OTHER PROBLEMS. THE OWNER SHALL RETAIN THE SERVICES OF A LICENSED ENGINEER TO EVALUATE ANY PERSISTENT PROBLEMS.

**MAINTENANCE ACTIVITIES:**

DEBRIS AND SLILT SHALL BE REMOVED, AND CLOGGED STONE AREAS SHALL BE CLEANED. THE SYSTEM SHALL BE MAINTAINED IN SUCH A MANNER AS TO PREVENT THE PERFORMANCE LEAKS OR OTHER PROBLEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER. A SILT AND SLOTTED FILTER MATERIAL SHALL BE INSTALLED AT ALL DOWNSPOUTS AND OVERFLOW PIPES. THE COUNTY CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY MAINTENANCE OR REPAIRS REQUIRED TO MAINTAIN THE PROPER OPERATION AND MAINTENANCE OF THE SYSTEM FROM TIME TO TIME FOR THE INSPECTION OF SAID FACILITIES IN ORDER TO DETERMINE THAT PROPER OPERATION AND MAINTENANCE AND THE OWNER. THIS INCLUDES THE SEEPAGE BED AND STORM INLETS & PIPES.

DRIVEWAY, PARKING AND STORMWATER PLAN

PREPARED FOR

**404 CHESWICK PLACE**

**ProTract**  
Engineering, Inc.

64 East Moreland Avenue, P.O. Box 58  
Hatboro, Pennsylvania 19040

Phone (215)442-9230  
Fax (215)442-9238

|                |          |               |          |             |                       |                  |         |
|----------------|----------|---------------|----------|-------------|-----------------------|------------------|---------|
| Township       | RADNOR   |               |          |             |                       |                  |         |
| County         | DELAWARE |               |          |             |                       |                  |         |
| Date           | 3-25-15  |               |          |             |                       |                  |         |
| Scale          | 1"=20'   |               |          |             |                       |                  |         |
| Sheet Number   | 3 of 3   |               |          |             |                       |                  |         |
| No.            | 1        | Date          | 04-10-15 | Description | STORMWATER MANAGEMENT | DBR              |         |
| Project Number | H2226    | CAD File Name | BASE.DWG | File Number |                       | Drafter/Engineer | EMS/NTR |

**Application for Clearing Permit  
Radnor Township  
Engineering Department  
301 Iven Ave., Wayne, Pa 19087  
610 688-5600**

PERMIT NO. C15-03  
Date: 4-13  
Shade Tree Date: 4-22  
Approved / Denied / Re-submit \_\_\_\_\_  
Twp. Arborist \_\_\_\_\_  
Dir. Of Public Works \_\_\_\_\_

The undersigned hereby makes application for Clearing Permit under Ordinance # 94-19 and any amendments thereof.

Location: 702 Southwinds Dr

Number of trees to be removed 22 Number of trees to be replanted 0 - tree fund

Owner of Property: Marisa + Eugene Tilghman 215-850-1763 Phone  
Address: 702 Southwinds Drive marisatilghman@gmail.com Email

Does work affect any other property in any way? YES  
If so, please describe: \_\_\_\_\_

Plans submitted 18 copies of sealed plans TITLE: \_\_\_\_\_  
Photos, etc DATE: \_\_\_\_\_  
PREPARED BY: \_\_\_\_\_

Prepared by Pa. Registered Surveyor: \_\_\_\_\_ Pa. Registered Engineer: \_\_\_\_\_

Plans must show: Replacement Trees and Calculations \_\_\_\_\_ Is Property on Septic \_\_\_\_\_

Contours Map \_\_\_\_\_ Silt Fence \_\_\_\_\_ Boundaries \_\_\_\_\_ Shrubs \_\_\_\_\_  
Trees over 6" Diameter \_\_\_\_\_ Proposed Work \_\_\_\_\_ Owners \_\_\_\_\_  
Buildings \_\_\_\_\_ Classification of Soils \_\_\_\_\_ Street & Lot Lines \_\_\_\_\_

Area of Site to be Cleared (SQ.FT) \_\_\_\_\_

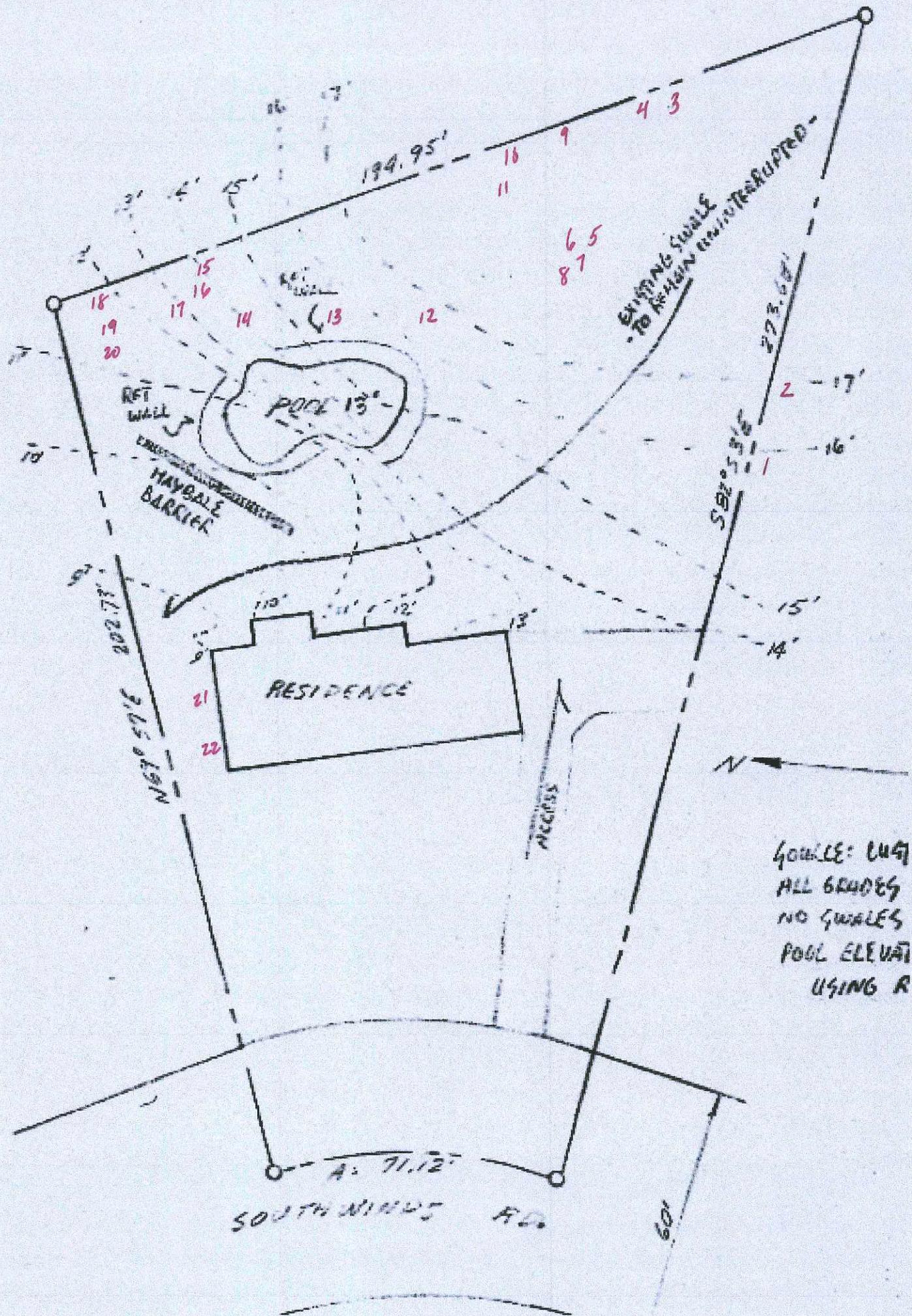
Work to start \_\_\_\_\_ Will be finished \_\_\_\_\_

Company Doing Work Ricks Tree Service (Must be registered with the Twp.)

Received from applicant \$ \_\_\_\_\_

Signature of Owner [Signature] or Applicant \_\_\_\_\_

Permit Void if work not started in 6 months **PERMIT FEES**  
\$ 20.00 Per Acre or Part Thereof  
Minimum Charge \$ 80.00



SOURCE: USG  
 ALL GRADES  
 NO SWALES  
 POOL ELEVATION  
 USING R

Replacement Tree Formula for 702 Southwinds Dr

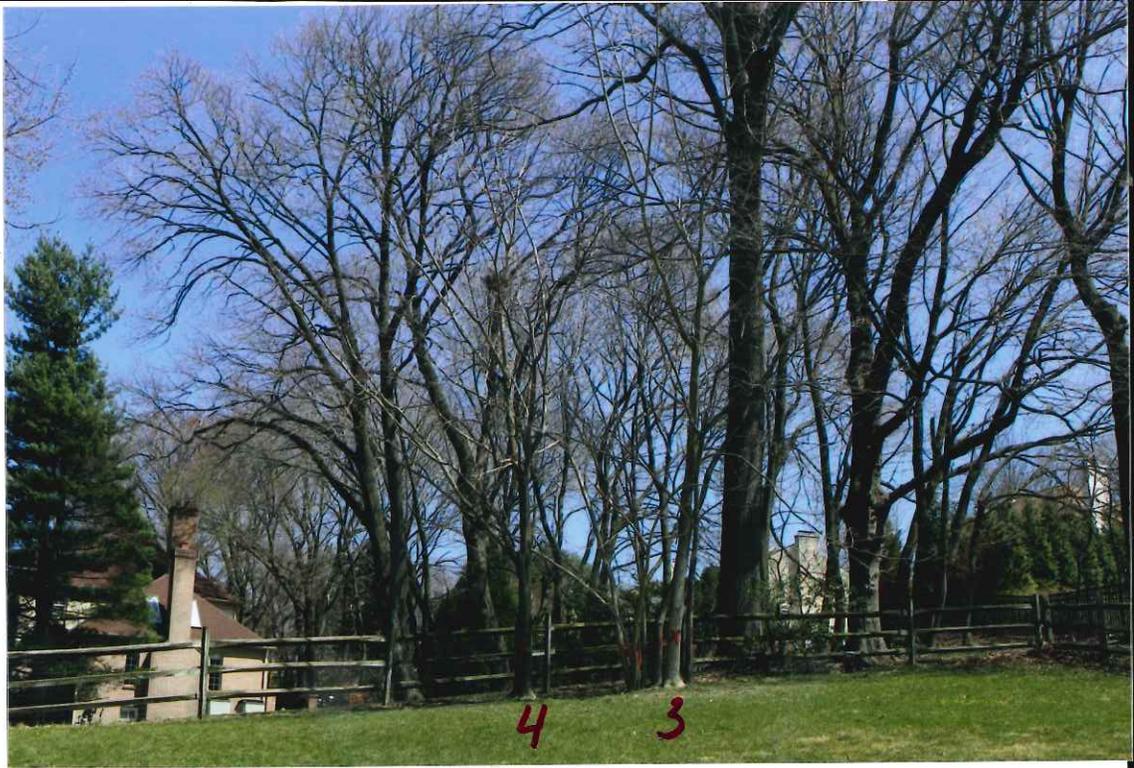
22 Trees to be removed all with a diameter between 6 inches and 19 inches = 21 replacement trees

1 Tree to be removed with a diameter between 19 inches and 29 inches = 2 replacement trees.

Total replacement trees needed = 23 trees.

We do not believe we could reasonably add this many trees to the property so we seek to contribute to the Commemorative Shade Tree fund in lieu of planting a large amount of additional trees.











NOTE: ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004.

**SOILS INFORMATION (IN PROJECT AREA)**

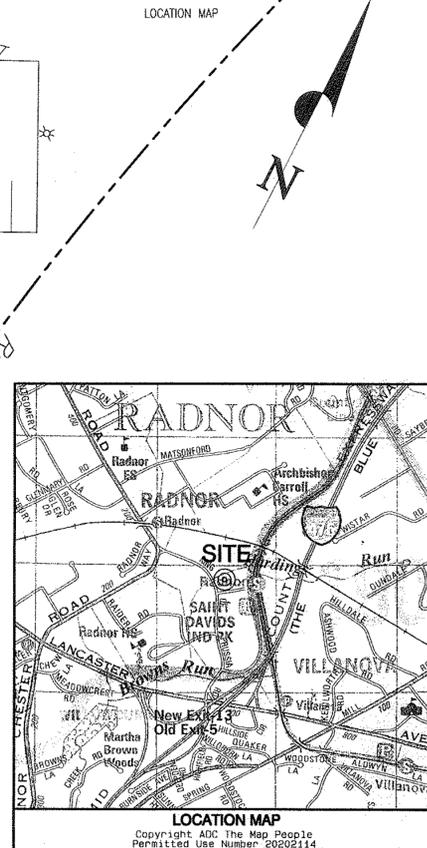
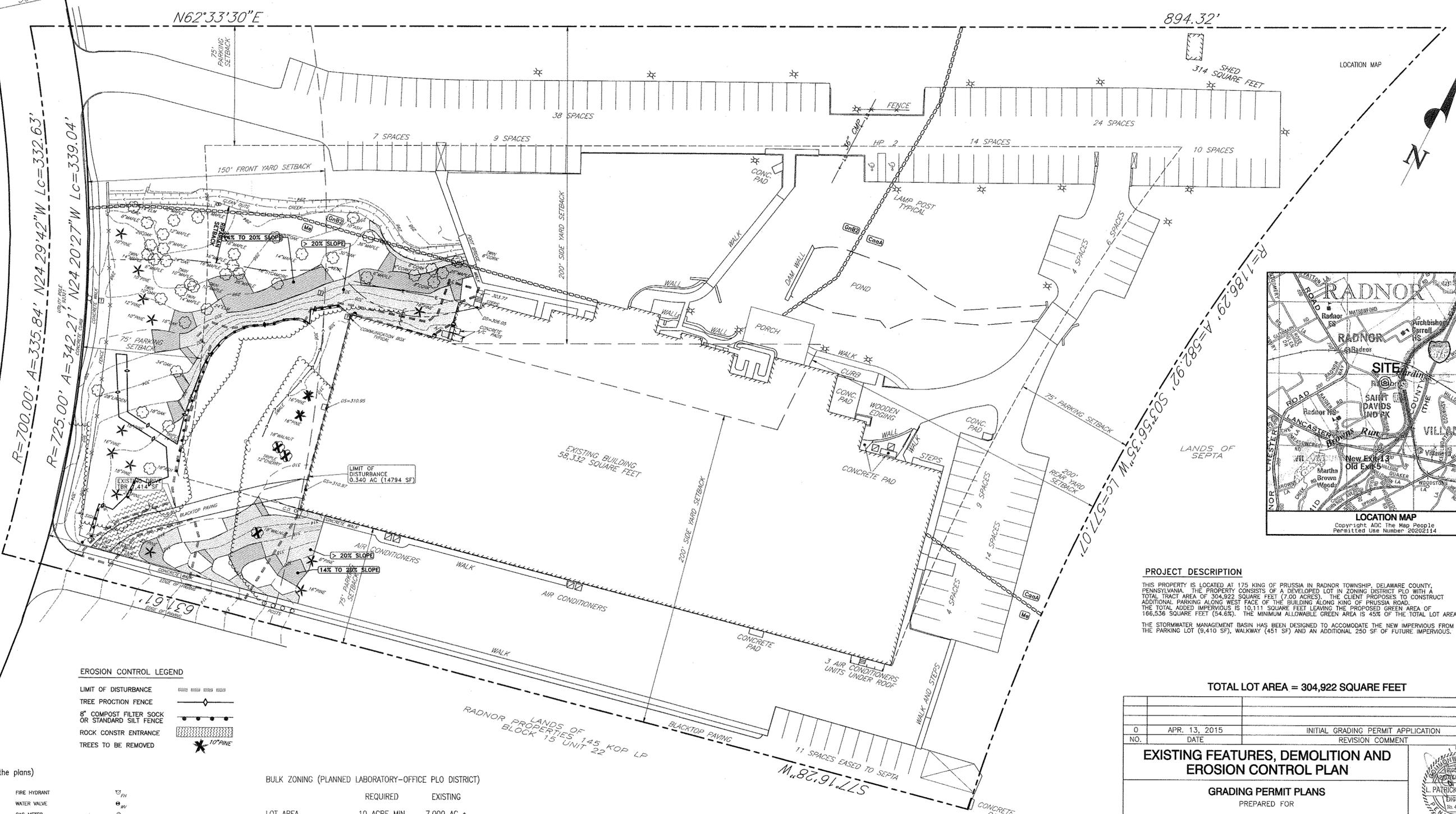
(per USDA Web Soil Survey)  
 Me - MADE LAND, SCHIST AND GNEISS MATERIALS  
 0 - 8% SLOPES, MODERATELY ERODED  
 HYDROLOGIC SOIL GROUP C  
 WELL DRAINED  
 DEPTH TO LITHIC BEDROCK: > 200 CM

**PARKING: (INFORMATION PROVIDED BY RADNOR RACQUET CLUB):**

| REQUIRED                   | EXISTING                 |
|----------------------------|--------------------------|
| RECREATION AND OFFICE AREA | 52 PER APPEAL #1399      |
| RESTAURANT SEATS           | 3 SEATS = 1 SPACE        |
| RESTAURANT EMPLOYEES       | 2 EMPLOYEES = 1 SPACE    |
| TOTAL REQUIRED             | 32 EMPLOYEES = 16 SPACES |
| EXISTING PROVIDED          | 138 SPACES               |
| PROPOSED                   | 141 SPACES               |

LANDS OF  
 RADNOR PROPERTIES 201 KOP LP  
 BLOCK 15 UNIT 24

KING OF PRUSSIA ROAD



**EROSION CONTROL LEGEND**

|   |               |
|---|---------------|
| LIMIT OF DISTURBANCE                          | —●—●—●—●—     |
| TREE PROTECTION FENCE                         | —◇—◇—◇—◇—     |
| 8" COMPOST FILTER SOCK OR STANDARD SILT FENCE | —●●●—●●●—●●●— |
| ROCK CONSTRUCTION ENTRANCE                    | —■—■—■—■—     |
| TREES TO BE REMOVED                           | ★             |

**LEGEND (not all items are used on the plans)**

| EXISTING                |            |
|-------------------------|------------|
| AERIAL UTILITY LINE     | —A—A—A—    |
| COMMUNICATIONS LINE     | —C—C—C—    |
| ELECTRIC LINE           | —E—E—E—    |
| FIBER OPTIC LINE        | —F—F—F—    |
| GAS LINE                | —G—G—G—    |
| SANITARY FORCE MAIN     | —F—M—      |
| SANITARY GRAVITY PIPE   | —S—        |
| STORMWATER PIPE         | —S—T—      |
| TV LINE                 | —T—T—T—    |
| UTILITY TRENCH          | —US—US—US— |
| WATER LINE              | —W—W—W—    |
| 2 FT. CONTOUR INTERVAL  | —2—        |
| 10 FT. CONTOUR INTERVAL | —10—       |
| MAILBOX                 | —MB—       |
| TREES                   | —T—        |
| RAINWATER DOWNSPOUT     | —DS—       |

**BULK ZONING (PLANNED LABORATORY-OFFICE PLO DISTRICT)**

|                       | REQUIRED    | EXISTING                 |
|-----------------------|-------------|--------------------------|
| LOT AREA              | 10 ACRE MIN | 7,000 AC *<br>304,922 SF |
| LOT WIDTH @ BLDG LINE | 300' MIN    | 380.5'                   |
| BUILDING SETBACKS     |             |                          |
| FRONT YARD            | 150' MIN    | 150'                     |
| SIDE YARD             | 200' MIN    | 75' & 172' *             |
| REAR YARD             | 200' MIN    | 77' *                    |
| BUILDING COVERAGE     | 30% MAX     | 19.5%<br>59,590 SF       |
| GREEN AREA            | 45% MIN     | 57.5%<br>175,333 SF      |
| BUILDING HEIGHT       | 38'         | < 38'                    |

\* EXISTING NON-CONFORMING

**IMPERVIOUS CALCULATIONS**

|                         | EXISTING       |
|-------------------------|----------------|
| BUILDINGS               | 59,590         |
| WALK                    | 5,100          |
| PATIO                   | 1,805          |
| DRIVES                  | 62,545         |
| DECK                    |                |
| OTHER                   | 549            |
| <b>IMPERVIOUS TOTAL</b> | <b>129,589</b> |
| BUILDING COVERAGE       | 19.54%         |
| IMPERVIOUS COVERAGE     | 42.50%         |
| GREEN AREA              | 57.50%         |

- SURVEY NOTES:**
- THIS IS THE SAME PREMISES DESCRIBED IN RECORD BOOK 1946 PAGE 1559 RECORDED AT THE DELAWARE COUNTY RECORDER OF DEEDS.
  - THIS PLAN IS BASED UPON EXISTING BOUNDARY INFORMATION AND A FIELD SURVEY IN MARCH 2015 FOR TOPOGRAPHY SHOWN. THIS PREMISES HAS UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN.
  - THIS PLAN IS BASED UPON A PARTIAL FIELD SURVEY.
  - THIS PLAN WAS PREPARED WITHOUT THE AID OF A TITLE REPORT.
  - THIS PREMISES HAS 141 PARKING SPACES INCLUDING 2 HANDICAPPED PARKING SPACES.

**OWNER/ APPLICANT**  
 LLOYD GOODMAN  
 RADNOR RACQUET CLUB  
 175 KING OF PRUSSIA ROAD  
 WAYNE, PA 19087

**ENGINEER**  
 L. PATRICK SPELLMAN, P.E.  
 YERKES ASSOCIATES, INC.  
 1444 PHOENIXVILLE PIKE  
 WEST CHESTER, PA 19380  
 (610) 644-4254

**PROJECT DESCRIPTION**

THIS PROPERTY IS LOCATED AT 175 KING OF PRUSSIA IN RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA. THE PROPERTY CONSISTS OF A DEVELOPED LOT IN ZONING DISTRICT PLO WITH A TOTAL TRACT AREA OF 304,922 SQUARE FEET (7.00 ACRES). THE CLIENT PROPOSES TO CONSTRUCT ADDITIONAL PARKING ALONG WEST FACE OF THE BUILDING ALONG KING OF PRUSSIA ROAD. THE TOTAL ADDED IMPERVIOUS IS 10,111 SQUARE FEET LEAVING THE PROPOSED GREEN AREA OF 186,538 SQUARE FEET (54.6%). THE MINIMUM ALLOWABLE GREEN AREA IS 45% OF THE TOTAL LOT AREA. THE STORMWATER MANAGEMENT BASIN HAS BEEN DESIGNED TO ACCOMMODATE THE NEW IMPERVIOUS FROM THE PARKING LOT (9,410 SF), WALKWAY (451 SF) AND AN ADDITIONAL 250 SF OF FUTURE IMPERVIOUS.

**TOTAL LOT AREA = 304,922 SQUARE FEET**

|     |               |                                    |
|-----|---------------|------------------------------------|
| NO. | DATE          | REVISION COMMENT                   |
| 0   | APR. 13, 2015 | INITIAL GRADING PERMIT APPLICATION |

**EXISTING FEATURES, DEMOLITION AND EROSION CONTROL PLAN**

**GRADING PERMIT PLANS**  
 PREPARED FOR  
**WEST PARKING LOT AT RADNOR RACQUET CLUB**  
**175 KING OF PRUSSIA ROAD**  
**WAYNE, PA 19087**

RADNOR TOWNSHIP \* DELAWARE COUNTY \* PENNSYLVANIA

**Yerkes**  
 CONSULTING ENGINEERS \* LAND SURVEYORS \* INSPECTORS

**YERKES ASSOCIATES, INC.**  
 1444 PHOENIXVILLE PIKE \* P.O. BOX 1568 \* WEST CHESTER, PA 19380  
 TEL: (610) 644-4254 \* FAX: (610) 640-0771

PROJECT - B-15-6784  
 DATE - APRIL 13, 2015  
 SCALE - 1" = 30'  
 DRAWN - LPS  
 CHECKED - LPS  
 CAD FILE - B6784.ENG  
 TAX PARCEL - 3602016001  
 PLAN NO. **D-36-15-23**  
**SHEET 1 OF 3**

DATE: 4/13/2015 10:30:15 AM FILE: 15-6784-15-15-6784 - BARBER - 175 King of Prussia (Con) Eng (2015-04-13 10:30:15) - 13 86784 - Eng

NOTE: ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004.



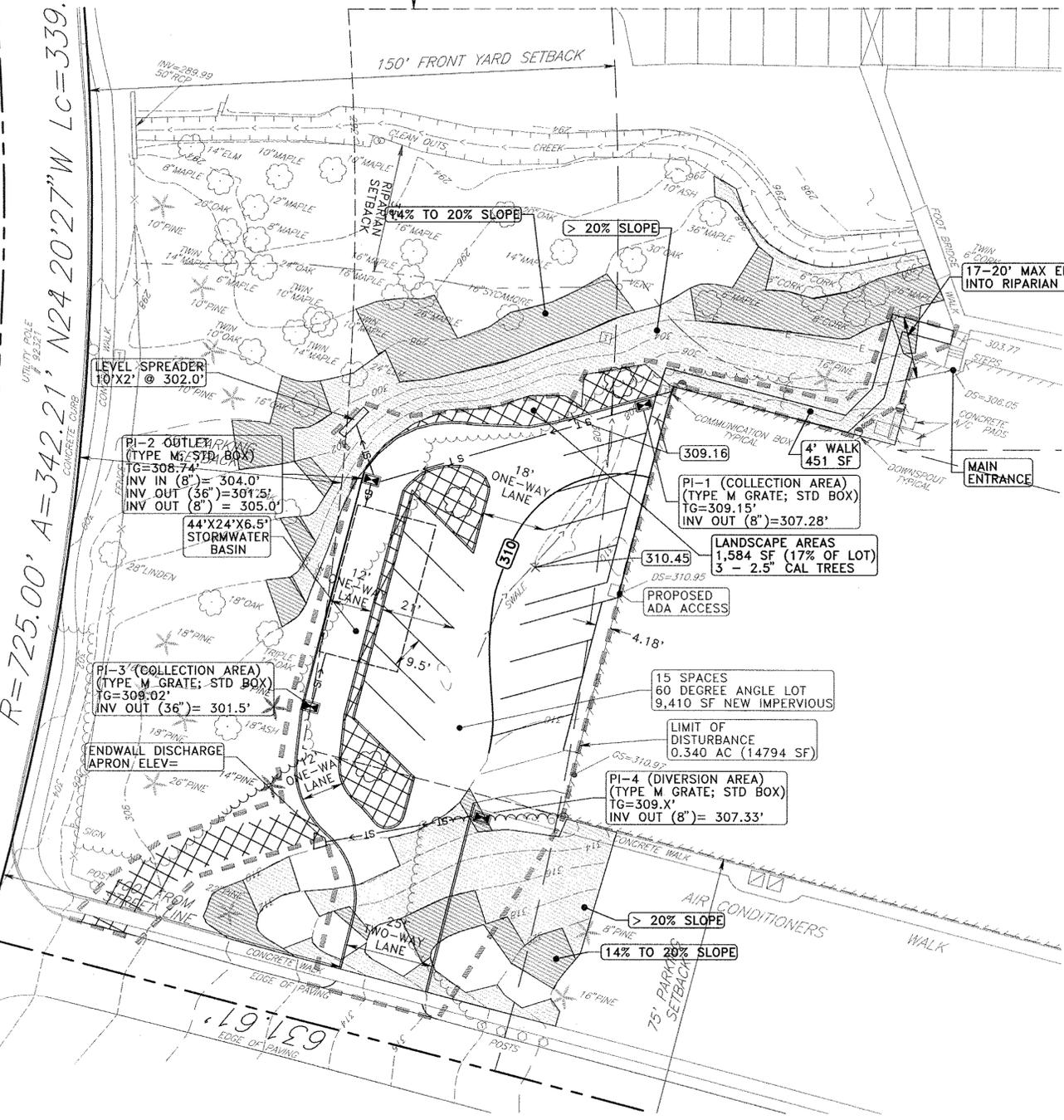
**LEGEND (not all items are used on the plans)**

| EXISTING                | PROPOSED |
|-------------------------|----------|
| AERIAL UTILITY LINE     | A-A      |
| COMMUNICATIONS LINE     | C-C      |
| ELECTRIC LINE           | E-E      |
| FIBER OPTIC LINE        | F-F      |
| GAS LINE                | G-G      |
| SANITARY FORCE MAIN     | F-M      |
| SANITARY GRAVITY PIPE   | S        |
| STORMWATER PIPE         | ST       |
| TV LINE                 | T-T      |
| UTILITY TRENCH          | UG       |
| WATER LINE              | W-W      |
| 2 FT. CONTOUR INTERVAL  | 165      |
| 10 FT. CONTOUR INTERVAL | 165      |
| MALIBOX                 | MB       |
| TREES                   | T        |
| RAINWATER DOWNSPOUT     | DNS      |
| FIRE HYDRANT            | FH       |
| WATER VALVE             | WV       |
| GAS METER               | GM       |
| GAS VALVE               | GV       |
| ELECTRIC BOX/METER      | EM       |
| GROUND LAMP             | GL       |
| LIGHT                   | L        |
| SIGN                    | S        |
| MANHOLE                 | MANHOLE  |
| INLET                   | INLET    |
| VENT                    | V        |
| POWER POLE              | PP       |
| TRAFFIC SIGNAL POLE     | TSP      |
| SETBACK LINE            | SL       |
| PROPERTY LINE           | PL       |
| RIGHT-OF-WAY LINE       | R/W      |
| EASEMENT LINE           | EL       |

- GENERAL NOTES**
- ALL WOODY VEGETATION TO BE RETAINED WITHIN 25' OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT DRIP LINES OR AS SHOWN ON PLANS. TOWNSHIP ARBORIST MUST APPROVE THE LOCATION OF THE TREE PROTECTION FENCE PRIOR TO START OF EARTH WORK.
  - TREES SHALL BE TREATED TO PROTECT THE ROOT SYSTEM PRIOR TO CONSTRUCTION WHERE IMPROVEMENTS ARE SHOWN WITHIN THE DRIP LINES OF TREES TO REMAIN.
  - WHERE EXCAVATION TRENCHES ARE PROPOSED WITHIN THE DRIP LINES OF TREES, ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION.
  - SHOULD ANY TREES NOT SCHEDULED OR PERMITTED TO BE REMOVED BE IRREPARABLY DAMAGED DURING CONSTRUCTION AND DIE WITHIN EIGHTEEN (18) MONTHS OF THE CONCLUSION OF CONSTRUCTION ACTIVITIES, THOSE TREES BE REPLACED.
  - THE TOWNSHIP ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
  - ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATES FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004.
  - THE CONTRACTOR SHALL PROTECT OR RELOCATE UTILITIES AS NEEDED.
  - NO GRADING CHANGES SHALL BE SHOWN WITHIN THREE (3) FEET OF THE PROPERTY LINE IN ORDER TO ENSURE TRANSITION TO THE GRADING ON THE ADJOINING PROPERTY.
  - 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 SOO SHALL BE USED TO STABILIZE ALL AREAS DENuded DURING THIS TIME PERIOD.
  - MAINTAIN MINIMUM COVER OVER ALL EXISTING AND PROPOSED UTILITIES AT ALL TIMES PER PIPE BEDDING DETAIL.
  - NOTE TO CONTRACTOR: THIS PLAN CAN BE USED FOR CONSTRUCTION ONLY AFTER ALL REQUIRED AGENCY APPROVALS ARE FINALIZED, PERMITS ARE ISSUED AND WRITTEN AUTHORIZATION TO PROCEED IS GRANTED BY THE OWNER.
  - A CUT AND FILL ANALYSIS WAS NOT PERFORMED AND MATERIAL BALANCE IS NEITHER IMPLIED NOR GUARANTEED. PROPOSED GRADES MAY NOT NECESSARILY INCORPORATE SPREADING OF CUT MATERIAL NOR DO THEY PRECLUDE THE NEED FOR IMPORTING FILL MATERIAL TO OBTAIN THE GRADES SHOWN ON THE PLAN. EXCESS MATERIAL MAY BE SPREAD THROUGHOUT THE PROJECT AREA AFTER CONSULTING WITH THE DESIGN ENGINEER AND TOWNSHIP REGARDING IMPACT TO EXISTING AND PROPOSED DRAINAGE PATTERNS OR STORMWATER FACILITIES. IMPORTED MATERIAL MUST BE CLEAN FILL AS DESIGNATED BY THE OWNER.

KING OF PRUSSIA

R=700.00' A=335.84' N24 29'42" W Lc=332  
 R=725.00' A=342.21' N24 20'27" W Lc=339



- SWMP OPERATION AND MAINTENANCE**
- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE DETENTION BASIN AND OTHER STORMWATER FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEANING THE SEDIMENT TRAP AND THE INLET "SWMP" AREA A MINIMUM OF TWO TIMES A YEAR - ONCE IN THE SPRING AND ONCE IN THE FALL AFTER ALL LEAVES HAVE FALLEN. THIS CAN BE DONE USING A WET/DRY VACUUM TO REMOVE ALL DEBRIS FROM THE STRUCTURES.
  - RESPONSIBLE PARTY: SEE CLIENT CONTACT INFORMATION

**NOTE:**  
 IF ANY UNFORESEEN ISSUES ARE ENCOUNTERED DURING THE CONSTRUCTION OF THE UNDERGROUND SEEPAGE BED INCLUDING BUT NOT LIMITED TO GROUND WATER, AN ALTERNATE DESIGN WILL BE FORWARDED TO THE TOWNSHIP ENGINEER FOR CONSIDERATION AND APPROVAL PRIOR TO INSTALLATION OF THE SYSTEM.

**PIPE NOTES:**

PIPE MATERIAL:  
 8" HDPE DBL WALLED FOR INLET AND BASIN PIPES.

PIPE COVER:  
 6" MINIMUM UNDER FOOT TRAFFIC CONDITIONS.  
 12" MINIMUM UNDER VEHICLE TRAFFIC CONDITIONS.

INLET SUMPS:  
 6" MINIMUM FOR COLLECTION INLETS.  
 12" MINIMUM BASIN STRUCTURES.

**BULK ZONING (PLANNED LABORATORY-OFFICE PLO DISTRICT)**

|                       | REQUIRED    | EXISTING                 | PROPOSED                 |
|-----------------------|-------------|--------------------------|--------------------------|
| LOT AREA              | 10 ACRE MIN | 7,000 AC *<br>304,922 SF | 7,000 AC *<br>304,922 SF |
| LOT WIDTH @ BLDG LINE | 300' MIN    | 380.5'                   | 380.5'                   |
| BUILDING SETBACKS     |             |                          |                          |
| FRONT YARD            | 150' MIN    | 150'                     | 150'                     |
| SIDE YARD             | 200' MIN    | 75 & 172' *              | 75 & 172' *              |
| REAR YARD             | 200' MIN    | 77' *                    | 77' *                    |
| BUILDING COVERAGE     | 30% MAX     | 19.5%<br>59,590 SF       | 19.5%<br>59,590 SF       |
| GREEN AREA            | 45% MIN     | 57.5%<br>175,333 SF      | 54.6%<br>166,636 SF      |
| BUILDING HEIGHT       | 38'         | < 38'                    | < 38'                    |

\* EXISTING NON-CONFORMING

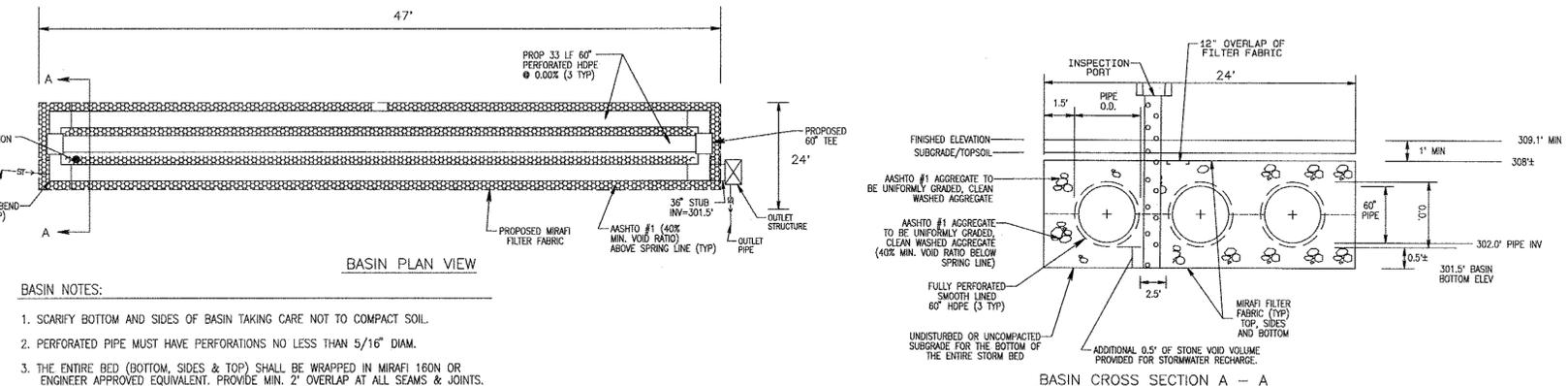
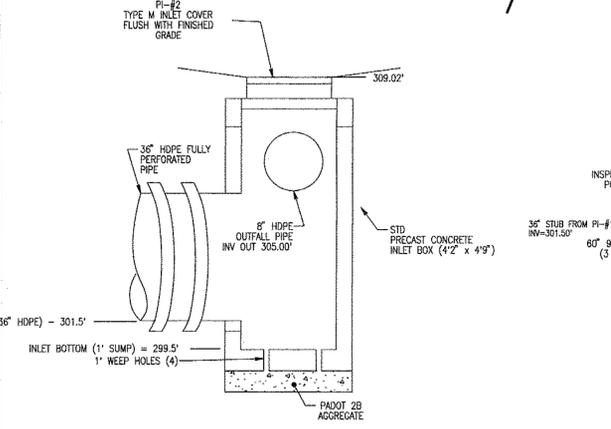
**IMPERVIOUS CALCULATIONS**

|                         | EXISTING       | REMOVED      | NEW           | PROPOSED       |
|-------------------------|----------------|--------------|---------------|----------------|
| BUILDINGS               | 59,590         |              |               | 59,590         |
| WALK                    | 5,100          |              |               | 5,100          |
| PATIO                   | 1,805          |              |               | 1,805          |
| DRIVES                  | 62,545         | 1,414        | 9,410         | 70,541         |
| DECK                    |                |              |               | 0              |
| OTHER                   | 549            |              | 701           | 1,250          |
| <b>IMPERVIOUS TOTAL</b> | <b>129,589</b> | <b>1,414</b> | <b>10,111</b> | <b>138,286</b> |
| BUILDING COVERAGE       | 19.5%          |              |               | 19.5%          |
| IMPERVIOUS COVERAGE     | 42.3%          |              |               | 45.4%          |
| GREEN AREA              | 57.5%          |              |               | 54.6%          |

**PROJECT DESCRIPTION**

THIS PROPERTY IS LOCATED AT 175 KING OF PRUSSIA IN RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA. THE PROPERTY CONSISTS OF A DEVELOPED LOT IN ZONING DISTRICT PLO WITH A TOTAL TRACT AREA OF 304,922 SQUARE FEET (7.00 ACRES). THE CLIENT PROPOSES TO CONSTRUCT ADDITIONAL PARKING ALONG WEST FACE OF THE BUILDING ALONG KING OF PRUSSIA ROAD. THE TOTAL ADDED IMPERVIOUS IS 10,111 SQUARE FEET LEAVING THE PROPOSED GREEN AREA OF 166,536 SQUARE FEET (54.6%). THE MINIMUM ALLOWABLE GREEN AREA IS 45% OF THE TOTAL LOT AREA. THE STORMWATER MANAGEMENT BASIN HAS BEEN DESIGNED TO ACCOMMODATE THE NEW IMPERVIOUS FROM THE PARKING LOT (9,410 SF), WALKWAY (451 SF) AND AN ADDITIONAL 250 SF OF FUTURE IMPERVIOUS.

**TOTAL LOT AREA = 47,750 SQUARE FEET**



- BASIN NOTES:**
- SCARIFY BOTTOM AND SIDES OF BASIN TAKING CARE NOT TO COMPACT SOIL.
  - PERFORATED PIPE MUST HAVE PERFORATIONS NO LESS THAN 5/16" DIAM.
  - THE ENTIRE BED (BOTTOM, SIDES & TOP) SHALL BE WRAPPED IN MIRAFI 180N OR ENGINEER APPROVED EQUIVALENT. PROVIDE MIN. 2" OVERLAP AT ALL SEAMS & JOINTS. WHERE PROTRUSIONS OR PENETRATIONS OCCUR, GEOTEXTILE SHALL BE AFFIXED.
  - CARE SHOULD BE TAKEN IN THE PLACING OF STONE ATOP THE GEOTEXTILE SO AS TO AVOID TEARING OR RIPPING OF THE FABRIC. STONE SHOULD NOT BE DUMPED UNTIL A 6" LAYER OF STONE IS IN PLACE.
  - TOWNSHIP ENGINEER MUST BE NOTIFIED 48 HOURS BEFORE SEEPAGE BED INSTALLATION.

**SITE IMPROVEMENTS PLAN**

**GRADING PERMIT PLANS**

PREPARED FOR

**WEST PARKING LOT AT RADNOR RACQUET CLUB**

**175 KING OF PRUSSIA ROAD WAYNE, PA 19087**

RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**Yerkes**

**YERKES ASSOCIATES, INC.**

CONSULTING ENGINEERS • LAND SURVEYORS • INSPECTORS

1444 PHOENIXVILLE PIKE • P.O. BOX 1568 • WEST CHESTER, PA 19380  
 TEL: (610) 644-4254 • FAX: (610) 640-0771

PROJECT - B-15-6784  
 DATE - APRIL 13, 2015  
 SCALE - 1" = 20'  
 DRAWN - LPS  
 CHECKED - LPS  
 CAD FILE - B6784.ENG  
 TAX PARCEL - 36020116001

PLAN NO. **D-36-15-23**

**SHEET 2 OF 4**

PLOTTED: 4/13/2015 1:28:15 PM - 6783-B-15-6784 - B6784 - 175 King of Prussia (Cadd) (PA) 2015-04-13 6784-Eng.dwg

**EROSION AND SEDIMENT CONTROL NARRATIVE**

This project consists of the construction of a single family residence with related driveway, utilities, and stormwater detention basin.

**Construction Sequence**

1. Install tree protection.
2. Install silt fence properly at the locations shown on the plan.
3. Install the stabilized construction entrance as shown on the plan.
4. Install inlet protection device as shown on the plan.
5. Strip and stockpile topsoil from area of proposed construction. Place a sediment barrier completely around the stockpile. Limit oil disturbance to immediate areas of construction.
6. Perform rough grading. Spread topsoil and immediately stabilize area with permanent ground cover.
7. Strip and stockpile topsoil from area of proposed residence and driveway. Place a sediment barrier completely around the stockpile and stabilize with permanent ground cover.
8. Proceed with construction of residence and driveway to completion.
9. Perform sanitary sewer extension and install grinder pumps and force mains.
10. Construct infiltration basin.
11. Place driveway subbase to appropriate grades.
12. Install the binder and wearing courses.
13. Fine grade all disturbed areas. Spread topsoil and stabilize work areas with permanent ground cover.
14. Remove sediment barriers only after a good stand of permanent ground cover has been established on site. Remove any accumulated silt from inside of the detention basin; spread straw cover and stabilize with permanent ground cover. In other disturbed areas, if necessary, reseed the disturbed areas with permanent ground cover.
15. All erosion and sedimentation controls must be maintained in proper working order. Inspect the controls daily on a weekly basis and after each rainfall event. All silt fences, grassed waterways, grassed swales or other erosion control measures must be inspected, repaired, replaced, reseeded or removed as necessary. Any preventive and/or remedial maintenance work required to the controls must be performed immediately.
16. Core shall be taken by the contractor to prevent silt and sediment deposition on adjacent properties. Runoff from disturbed areas must pass through a sediment filtering device before being discharged from the site.
17. Erosion and sedimentation controls must be constructed, stabilized and fully functional before any general site disturbance will be allowed within the tributary areas of those controls.

Anticipated Start of Construction January 2009  
Anticipated Completion of Construction December 2011

**Surface Stabilization Criteria**

Disturbed areas are to be stabilized with permanent or temporary ground cover immediately after construction. All disturbed areas on which activities have ceased and which will remain undisturbed for more than 30 days must be stabilized immediately. During non-permitting periods mulch must be used to stabilize the area. All seeding to be done in accordance with PennDOT Specifications, Publication 408 (current revision); Section 805.

1. Temporary Cover: Seed with a mixture of 50% winter rye and 50% annual ryegrass at 10#/1000 S.F.
2. Permanent Cover:
  - a) Slopes less than 3:1 are to be seeded with PennDOT Seed Formula B.
  - b) Slopes 3:1 or steeper are to be seeded with PennDOT Seed Formula C or as specified on the Landscaping Plan.

Seed Formula Application Period  
Formula A and C Except September and October\*  
Formula B and D March 1 through June 1  
August 1 through October 1  
Formula E Anytime

\*Any grass portion of formula may be applied during September and October with the crown vetch portion applied after October 31st.

Do not apply seed if soil is frozen or there is a high probability of the soil becoming frozen for an extended period of time. Seed may be placed in lieu of seeding during non-permitting periods.

A non-permitting period is the period of time during a calendar year that seed can not be applied.

**Soil Supplements:** Supplements are to be uniformly applied to all areas that permanent cover is to be applied.

- a) Pulverized Agricultural Limestone 800#/1000 S.F.
- b) 10-20-20 Analysis Commercial Fertilizer 192#/1000 S.F.
- c) 15-0-0 Urea-Form Fertilizer 50#/1000 S.F.
- d) 18-0-0 Sulphur Coated Urea-Form Fertilizer 53#/1000 S.F.
- e) 15-0-0 Sulphur Coated Urea-Form Fertilizer\* 59#/1000 S.F.
- f) 31-0-0 IBDU Fertilizer 51#/1000 S.F.

\*DO NOT APPLY IN LIQUID SLURRY

Mulch: Seeded areas are to be mulched as specified immediately after application of seed. All mulch application is to be in accordance with PennDOT Specifications Publication 408 (current revision); Section 805.

Straw with acceptable blinder 1200#/1000 S.F.  
Wood-Chippings 500#/1000 S.F.

**Temporary Control Methods**

1. Stabilized construction entrance
2. Sediment barrier
3. Straw and/or wood chip mulch
4. Silt fence
5. Limit disturbance to immediate work area
6. Temporary ground cover

**Permanent Control Methods**

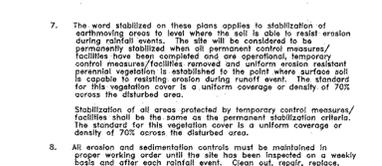
1. Stormwater management system
2. Paved surfaces with permanent ground cover
3. Permanent ground cover

**Maintenance Program**

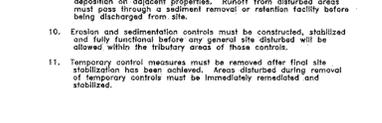
1. Contractor is responsible for installing and maintaining all erosion control measures during construction.
2. The current owner will be responsible for maintaining the erosion control measures in good condition after completion of construction and expiration of any contractor's warranty obligation.
3. Vegetation shall be mowed whenever necessary to maintain a pleasing appearance and discourage weed growth. All local regulations will be complied with.
4. Areas that contain sod shall be checked very carefully to ensure tight joints between the sod strips are tight and secure. Where sod joint separation is in evidence, a complete inspection of each joint shall be made to determine the cause of the separation. If sod joint separation occurs, the sod strip shall be replaced. If the sod strip is damaged, it shall be replaced. The sod strip shall be relayed with tight joints and pegging.
5. Seeded areas that have washed away shall be filled and graded as necessary and then reseeded. A silt fence or straw cover will be applied to retain the seed until it has a chance to root properly.
6. The above procedure shall be repeated after each sizeable storm until no more signs of erosion are evident. All monthly inspections thereafter, inspections and necessary cleaning will be done.
7. After slope and swales are established, weekly inspections shall be made to determine the durability of the stabilization measures. An inspection of all facilities will be made after every storm to determine their resistance to driving rain.
8. Any silt fence or straw/dike which has been either undermined or topped is to be replaced immediately with rock filter outlets.
9. Sedimentation barriers shall be maintained in good repair at all times during construction. Sediment is to be removed, spread and stabilized on site when built up has accumulated to the specified elevation of each one-half of fence height.
10. Stabilized construction entrance is to be replaced with clean stone when it becomes clogged with sediment.
11. Until the site is stabilized, all erosion and sedimentation controls must be maintained properly. Maintenance must include inspections of all erosion and sedimentation controls after each storm event and on a weekly basis. All preventive and remedial maintenance work including clean out, repair, replacement, regrading, reseeding and mulching must be performed immediately.

**General Notes**

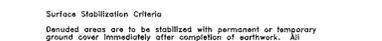
1. Disturbed areas on which activities have ceased and which will remain exposed for more than 30 days, must be seeded and mulched immediately. During non-permitting periods, mulch must be applied at the recommended rate. Disturbed areas which will be established within one year may be seeded and mulched with a quick growing temporary seeding mixture and mulch. Disturbed areas which are either of final grade or will not be re-disturbed within one year must be seeded and mulched with a permanent seed mixture and mulch.
2. Construction operations shall be carried out in a manner such that all erosion and any water pollution is minimized. State and local laws concerning pollution abatement shall be followed.
3. Should unforeseen erosive conditions develop during construction, the Contractor shall take immediate action to remedy such conditions and to prevent damage to adjacent properties as a result of increased runoff and/or sediment displacement. Special attention should be given to frozen slopes. Stockpiles of wood chips, haybales, crushed stone or other materials shall be held in readiness to deal immediately with emergency problems of erosion.
4. The Contractor is advised to become thoroughly familiar with the provisions of Articles 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
5. The permittee (applicant/owner) is to be responsible for the proper construction, stabilization and maintenance of all temporary and permanent erosion and sedimentation controls.
6. Protection of existing trees and shrubs shall be taken by the Contractor to eliminate unnecessary damage.



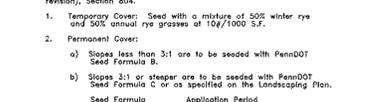
**COMPOST FILTER SOCK**  
NOT TO SCALE



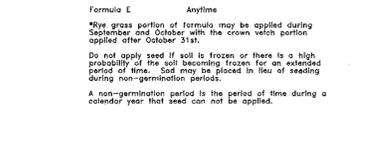
**TYPICAL TOPSOIL STOCKPILE**  
NOT TO SCALE



**ROCK FILTER OUTLETS**  
NOT TO SCALE



**TREE PROTECTION**  
NOT TO SCALE



**TREE PROTECTION BARRIER FENCING**  
NOT TO SCALE

| Formula   | Material                               | Weight | Rate | Application |
|-----------|--|--------|------|-------------|
| FORMULA A | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
|           | Creeping Red Fescue or Chewings Fescue | 20     | 80   | 0.15 4.0    |
|           | Creeping Red Fescue or Chewings Fescue | 20     | 80   | 0.15 4.0    |
| FORMULA B | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA C | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA D | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA E | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |

Minimum 10% broadcast and 90% normal spread.

**Hydroseeding Specifications**

| Material | Descriptions  | Per 1000 S.F. |
|----------|---|---------------|
| (1)      | Seed Mixture Penntown Fescue - 10% Kentucky Bluegrass - 45% | 27 lbs.       |
| (2)      | Commercial Fertilizer                                       | 200 lbs.      |
| (3)      | Lime Ground Agricultural Limestone                          | 800 lbs.      |
| (4)      | Wood Cellulose fiber with appropriate tack coat             | 750 lbs.      |

Procedure: Surface to be hydroseeded shall be cleaned of all debris and other matter harmful to uniform germination. A water-slurry mixture composed of the above "Materials" items (1) through (3) inclusive, shall be sprayed uniformly over the area to be hydroseeded. Immediately thereafter, item (4) "mulch" shall be blown on same area and tack-coated. Rates and types of materials shall be as specified.

**Maintenance and Guarantee**

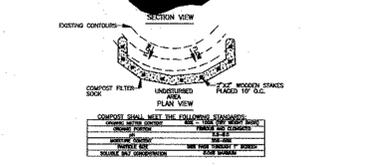
The Contractor shall guarantee a good stand of grass in the swales and on banks. The means of guarantee shall be watering, mowing, regrading, reseedling and reseeding to the satisfaction of the owner and consulting engineer until final acceptance. Any area within final fall to show a uniform stand within one year shall be reseeded and mulched at the Contractor's expense with the same seed mixture originally used thereon. Eroded areas shall be repaired and restored to finished grade prior to reseeded and mulching. All such regrading, erosion, reseeded and mulching shall be repeated until the entire site is permanently stabilized.



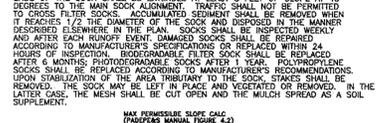
**TYPICAL TREE PLANTING DETAIL**  
NOT TO SCALE



**MASSSED SHRUB OR GROUND COVER PLANTING DETAIL**  
NOT TO SCALE



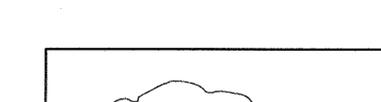
**COMPOST FILTER SOCK**  
NOT TO SCALE



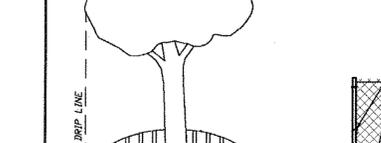
**TYPICAL TOPSOIL STOCKPILE**  
NOT TO SCALE



**ROCK FILTER OUTLETS**  
NOT TO SCALE



**TREE PROTECTION**  
NOT TO SCALE



**TREE PROTECTION BARRIER FENCING**  
NOT TO SCALE

| Formula   | Material                               | Weight | Rate | Application |
|-----------|--|--------|------|-------------|
| FORMULA A | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
|           | Creeping Red Fescue or Chewings Fescue | 20     | 80   | 0.15 4.0    |
|           | Creeping Red Fescue or Chewings Fescue | 20     | 80   | 0.15 4.0    |
| FORMULA B | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA C | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA D | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |
| FORMULA E | Perennial Ryegrass (Latin multigrass)  | 20     | 80   | 0.15 4.0    |
|           | Annual Ryegrass (Latin multigrass)     | 20     | 80   | 0.15 4.0    |

Minimum 10% broadcast and 90% normal spread.

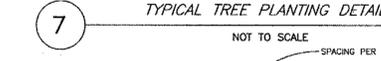
**Hydroseeding Specifications**

| Material | Descriptions  | Per 1000 S.F. |
|----------|---|---------------|
| (1)      | Seed Mixture Penntown Fescue - 10% Kentucky Bluegrass - 45% | 27 lbs.       |
| (2)      | Commercial Fertilizer                                       | 200 lbs.      |
| (3)      | Lime Ground Agricultural Limestone                          | 800 lbs.      |
| (4)      | Wood Cellulose fiber with appropriate tack coat             | 750 lbs.      |

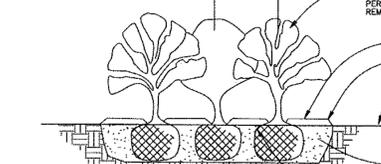
Procedure: Surface to be hydroseeded shall be cleaned of all debris and other matter harmful to uniform germination. A water-slurry mixture composed of the above "Materials" items (1) through (3) inclusive, shall be sprayed uniformly over the area to be hydroseeded. Immediately thereafter, item (4) "mulch" shall be blown on same area and tack-coated. Rates and types of materials shall be as specified.

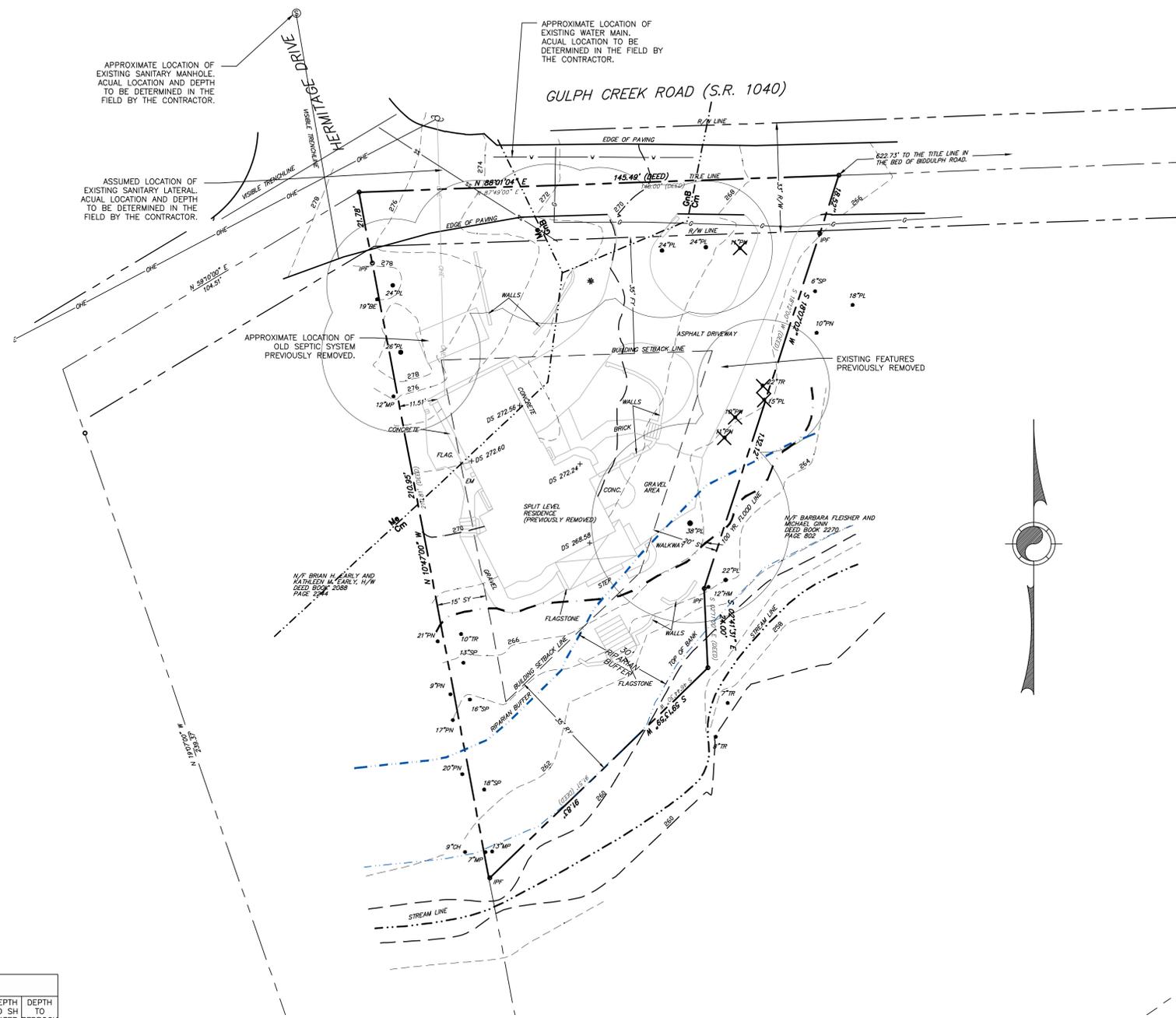
**Maintenance and Guarantee**

The Contractor shall guarantee a good stand of grass in the swales and on banks. The means of guarantee shall be watering, mowing, regrading, reseedling and reseeding to the satisfaction of the owner and consulting engineer until final acceptance. Any area within final fall to show a uniform stand within one year shall be reseeded and mulched at the Contractor's expense with the same seed mixture originally used thereon. Eroded areas shall be repaired and restored to finished grade prior to reseeded and mulching. All such regrading, erosion, reseeded and mulching shall be repeated until the entire site is permanently stabilized.



**TYPICAL TREE PLANTING DETAIL**  
NOT TO SCALE





APPROXIMATE LOCATION OF EXISTING SANITARY MANHOLE. ACTUAL LOCATION AND DEPTH TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

ASSUMED LOCATION OF EXISTING SANITARY LATERAL. ACTUAL LOCATION AND DEPTH TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

APPROXIMATE LOCATION OF EXISTING WATER MAIN. ACTUAL LOCATION TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

APPROXIMATE LOCATION OF OLD SEPTIC SYSTEM PREVIOUSLY REMOVED.

EXISTING FEATURES PREVIOUSLY REMOVED

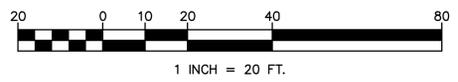
N.F. BRIAN H. EARLY AND NATHALEEN M. EARLY, H/W DEED BOOK 2268 PAGE 2244

N.F. BARBARA FLEISHER AND MICHAEL GONG DEED BOOK 2270 PAGE 802

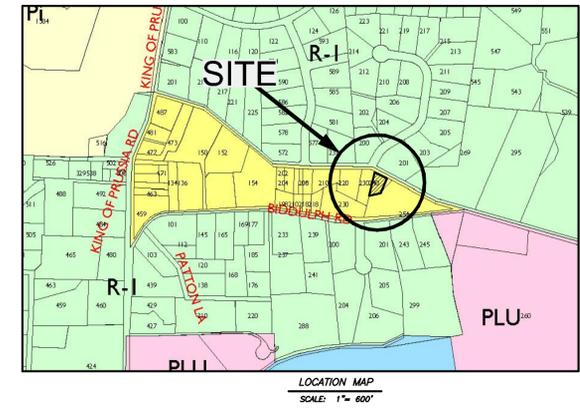
| SOILS INFORMATION |                                       |                       |                  |                   |                     |
|-------------------|---------------------------------------|-----------------------|------------------|-------------------|---------------------|
| SYMBOL            | NAME                                  | %SLOPE                | HYDROLOGIC GROUP | DEPTH TO SH WATER | DEPTH TO SH BEDROCK |
| Cm                | CODORUS SILT LOAM                     | NOT RATED             | C                | 2.26              | 7.11                |
| OnB               | GLENVILLE SILT LOAM                   | 3 TO 8 PERCENT SLOPES | C                | 1.73              | 1.57                |
| Me                | MADE LAND SCHIST AND GNEISS MATERIALS | NOT RATED             | B                | 4.98              | 5.41                |

Serial Number: 263-6341  
**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

- LEGEND**
- PROPERTY LINE
  - OVERHEAD ELECTRIC LINE
  - GAS LINE
  - BUILDING SETBACK LINE
  - 100 YR. FLOOD LINE
  - STREAM LINE
  - TOP OF BANK
  - RIPARIAN BUFFER
  - SOILS BOUNDARY
  - PROPERTY CORNER
  - IFF
  - IFS
  - EM
  - POWER POLE
  - LIGHT STANDARD
  - + DS 28000
  - + 28000
  - 15' TR
  - ✕ TREE TO BE REMOVED



ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM FIELD LOCATIONS BY VISUAL ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.  
 ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.  
 AS PER ACT 187 HOUSE BILL 9857, BEFORE THE START OF ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY THE NOTIFIED UTILITY COMPANIES THROUGH THE PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.  
 SERIAL # 2636341



**TREE IDENTIFICATION**

|    |                |    |              |
|----|----------------|----|--------------|
| AP | APPLE          | LN | LINDEN       |
| BE | BEECH          | MA | MAGNOLIA     |
| BR | BIRCH          | MP | MAPLE        |
| CA | CHAGAPPLE      | MU | MULBERRY     |
| CE | CECILE         | OC | OCCIDENTALS  |
| CH | CHERRY         | PA | PALMOLIA     |
| CN | CHESTNUT       | PL | POPLAR       |
| CW | COTTONWOOD     | PN | PINE         |
| DD | DOGWOOD        | PR | PEAR         |
| GK | GINKGO         | RW | REDWOOD      |
| HA | HACKBERRY      | RY | RYEBAR       |
| HK | HICKORY        | SU | SUMAC        |
| HM | HEMLOCK        | SA | SASSAPARILLA |
| HL | HOLLY          | SG | SWEET GUM    |
| HC | HORSE CHESTNUT | SP | SPRINGE      |
| LA | LARCH          | WN | WALNUT       |
| LO | LOCUST         | WO | WILLOW       |

**ZONING DISTRICT R-3 (RESIDENCE DISTRICT)**

|                     |                               |
|---------------------|-------------------------------|
| LOT AREA            | 10,000 S.F. MIN.              |
| LOT WIDTH           | 70' MIN. AT THE BUILDING LINE |
| BUILDING AREA       | 25% MAX.                      |
| FRONT YARD          | 35' MIN.                      |
| SIDE YARD           | 15' MIN., 35' AGGREGATE       |
| REAR YARD           | 35' MIN.                      |
| BUILDING HEIGHT     | 35' MAX.                      |
| IMPERVIOUS COVERAGE | 35% MAX.                      |
| RIPIARIAN SETBACK   | 30 FEET                       |

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP LATEST EDITION.

**SOURCE OF TITLE:**  
 DEED BOOK 5578 PAGE 493

**PARCEL NUMBER:**  
 36-02-00849-00

**VERTICAL DATUM:**  
 FEMA "RM-1" ELEV. 264.25 AS SHOWN ON BELOW REFERENCED FLOOD MAP

**TOTAL AREA: (TO THE TITLE LINE)**  
 18,263 SF/0.42 ACRES

**NET AREA: (TO THE ROAD R/W)**  
 15,933 SF/0.37 ACRES

**ERROR OF CLOSURE:**  
 1: 100,000

**FLOODWAY NOTE:**  
 INFORMATION TAKEN FROM FEMA PANEL 01F COMMUNITY NUMBER 4204288 WITH AN EFFECTIVE DATE OF AUGUST 1, 1977

**EXISTING IMPERVIOUS COVERAGE (PRIOR TO SITE DEMOLITION):**  
 HOUSE 1,732 S.F.  
 DRIVEWAY 2,051 S.F.  
 PORCH 328 S.F.  
 WALLS, WALKS, PATIOS ETC. 1,716 S.F.  
 TOTAL 5,725 S.F.  
 % OF THE TOTAL AREA 31.35%

- NOTES:**
- BOUNDARY AND TOPOGRAPHY FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY OF 240 GULPH CREEK ROAD" PREPARED BY MOMENEE SURVEY GROUP INC. DATED OCTOBER 13, 2005. FILE NO: 05-440
  - THE NOTED SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE REPORT PROVIDED BY THE CLIENT.
  - SOIL INFORMATION TAKEN FROM THE SOIL SURVEY FOR CHESTER AND DELAWARE COUNTIES PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.

MOORE AND ASSOCIATES, INC. CONSULTING ENGINEERS AND LAND SURVEYORS  
 1000 W. MARKET STREET, SUITE 200, COLLEGEVILLE, PA 19342  
 (610) 261-1100  
 FAX (610) 261-1101  
 WWW.MOOREANDASSOCIATES.COM

Serial Number: 263-6341  
**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

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

**GRADING PERMIT PLAN**

EXISTING CONDITIONS / DEMOLITION PLAN  
 240 GULPH CREEK ROAD  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

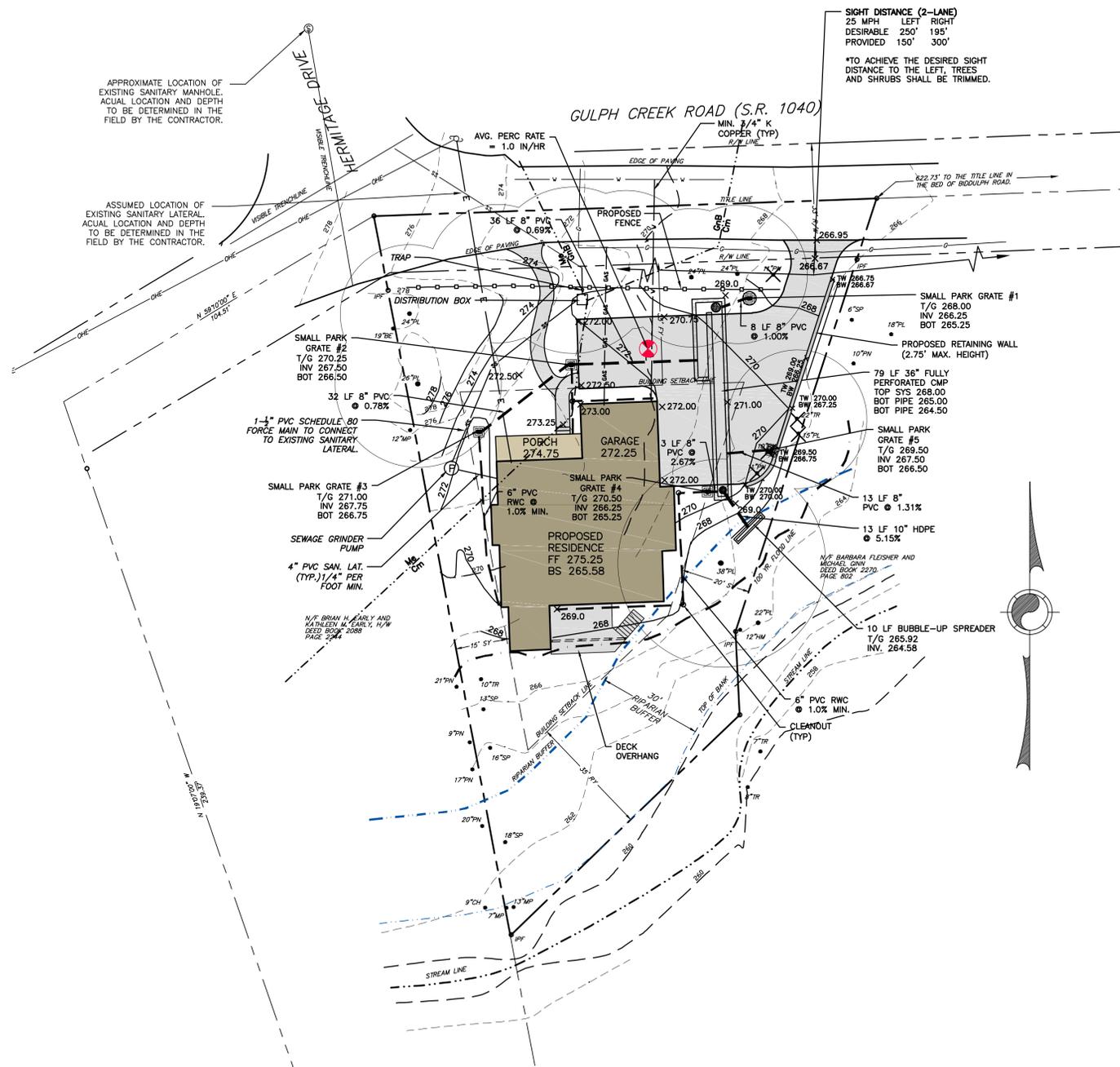
|                    |  |
|--------------------|--|
| ONE-CALL: 263-6341 | OWNER/APPLICANT  |
| DRAWN BY: BDM      | TWINING CORPORATE CENTER LLC                               |
| CHECKED BY: DRF    | 100 COLLEGEVILLE PIKE, SUITE 100<br>COLLEGEVILLE, PA 19342 |

|      |          |                  |  |
|------|----------|------------------|--|
| 1    | 3/12/13  | LAYOUT REVISIONS |  |
| 2    | 12/15/13 | HOUSE ELEVATION  |  |
| 3    | 6/24/13  | NEW LAYOUT       |  |
| 4    | 8/6/09   | PER TWP. ENG.    |  |
| 5    | 6/22/09  | NEW HOUSE        |  |
| 6    | 2/7/08   | SHADE TREE       |  |
| REV. | DATE     | COMMENTS         |  |

DATE: JANUARY 20, 2006  
 SHEET NO. 1  
 OF 4  
 SCALE: 1" = 20'  
 FILE NO.: 05-440

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE EXISTING CONDITIONS ARE AS SHOWN AND THAT THIS DRAINAGE PLAN COMPLIES WITH ALL THE DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

KEVIN R. MOMENEE, P.E. DATE



**STORMWATER MANAGEMENT FACILITY MAINTENANCE PLAN**

THE STORMWATER MANAGEMENT SYSTEM ON THIS LOT CONSISTS OF A SUBSURFACE DETENTION/RECHARGE BASIN. THE BASIN IS COMPRISED OF FULLY PERFORATED CORRUGATED METAL PIPE WITHIN A STONE BED SURROUNDED BY FILTER FABRIC. AN INTERNAL CONTROL RISER ALLOWS CONTROLLED DISCHARGE OF FLOWS FROM THE SYSTEM. WATER RUNOFF IS DIRECTED TO THE BASIN VIA ROOF DRAINS, A SERIES OF SMALL PARK GRATES, AND PIPING WHICH CAPTURE AND COLLECT RUNOFF FROM THE BUILDING, PORTIONS OF THE DRIVEWAY, AND SOME OTHER AREAS ON THE PROPERTY. THE INLETS ARE PROVIDED WITH A ONE FOOT SUMP BELOW THE INLET AND OUTLET PIPES SO THAT DEBRIS CAN BE COLLECTED PRIOR TO FLOWING INTO THE SUBSURFACE PIPE SYSTEM.

THE SUBSURFACE BASIN IS DESIGNED TO PROMOTE GROUND WATER RECHARGE. A CONTROL STRUCTURE WITHIN THE SYSTEM DISCHARGES TO A PROPOSED LEVEL SPREADER WHERE THE DISCHARGE MAY BE DISSIPATED TO GRADE IN AN UN-CONCENTRATED MANNER. AN ACCESS MANHOLE WITH A LADDER IS PROVIDED AT THE END OF THE SUBSURFACE PIPE SYSTEM TO FACILITATE ACCESS AND MAINTENANCE OF THE SYSTEM.

THE RESPONSIBILITY FOR THE CONTINUED OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES ON THIS LOT IS THAT OF THE PROPERTY OWNER.

MAINTENANCE OF THE FACILITIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1. THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT IMPEDE THE FLOW OF WATER DRAINING TO THE STORMWATER MANAGEMENT BASIN.
2. ALL ROOF DOWNSPOUTS, INLETS, CURB OPENINGS AND OTHER WATER WAYS SHALL BE KEPT OPEN AND OPERATION TO PASS THE FLOW OF WATER TO THE BASIN AS INTENDED.
3. GRASS AND LANDSCAPING IN THE VICINITY OF ALL INLETS SHALL BE KEPT TRIM AND FREE FROM DEBRIS ACCUMULATION, AND DOWNSPOUTS AND INLETS SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER TO AND WITHIN THEM.
4. INLET SUMPS SHALL BE CLEANED OF ACCUMULATED DEBRIS BEFORE ANY DEBRIS CAN BE DISCHARGED INTO THE SYSTEMS. INLET STRUCTURES SHALL BE INSPECTED AT LEAST MONTHLY TO INSURE THAT THEY ARE CLEAN AND REMAIN OPERATIONAL.
5. SUBSURFACE PIPES SHALL BE INSPECTED ON AN ANNUAL BASIS TO INSURE THAT THEY ARE CLEAN AND OPERATIONAL. ANY ACCUMULATED DEBRIS AND SILT SHALL BE REMOVED IN A TIMELY MANNER. THE SUBSURFACE PIPES SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER WITHIN THEM.
6. PROMPT REMEDIAL MEASURES ARE TO BE TAKEN IN THE EVENT OF ANY BLOCKAGE OR MALFUNCTION OF THE SYSTEM.

THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT TAKE ANY MEASURES TO DISRUPT OR IN ANY WAY IMPAIR THE EFFECTIVENESS OF THE BASIN OR ITS CONTROLS. THIS INCLUDES ALTERATION OF GRADES IN ANY MANNER THAT WOULD DIRECT RUNOFF AWAY FROM INLET COLLECTION POINTS.

**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.

**TREE REPLACEMENT NOTES**

- TREES TO BE REMOVED:
- 1 - 10" PINE
  - 2 - 11" PINE
  - 1 - 15" POPLAR
  - 1 - 22" TREE

NOTE: 5 TREES ARE PERMITTED TO BE REMOVED WITHOUT THE NEED TO PROVIDE REPLACEMENT TREES. NO REPLACEMENT TREES ARE REQUIRED AS A PART OF THIS PROJECT.

**ZONING DISTRICT R-3(RESIDENCE DISTRICT)**

|                     |                               |
|---------------------|-------------------------------|
| LOT AREA            | 10,000 S.F. MIN.              |
| LOT WIDTH           | 70' MIN. AT THE BUILDING LINE |
| BUILDING AREA       | 25% MAX.                      |
| FRONT YARD          | 35' MIN.                      |
| SIDE YARD           | 15' MIN., 35' AGGREGATE       |
| REAR YARD           | 35' MIN.                      |
| BUILDING HEIGHT     | 35' MAX.                      |
| IMPERVIOUS COVERAGE | 35% MAX.                      |
| RIPIARIAN SETBACK   | 30 FEET                       |

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP' LATEST EDITION.

**SOURCE OF TITLE:**  
DEED BOOK 5578 PAGE 493

**PARCEL NUMBER:**  
36-02-00849-00

**VERTICAL DATUM:**  
FEMA "RM-1" ELEV. 264.25 AS SHOWN ON BELOW REFERENCED FLOOD MAP

**TOTAL AREA: (TO THE TITLE LINE)**  
18,263 SF/0.42 ACRES

**NET AREA: (TO THE ROAD R/W)**  
15,933 SF/0.37 ACRES

**ERROR OF CLOSURE:**  
1: 100.000

**FLOODWAY NOTE:**  
INFORMATION TAKEN FROM FEMA PANEL 01F  
COMMUNITY NUMBER 420428B WITH AN EFFECTIVE DATE OF AUGUST 1, 1987

**EXISTING IMPERVIOUS COVERAGE (PRIOR TO SITE DEMOLITION):**

|                           |            |
|---------------------------|------------|
| HOUSE                     | 1,732 S.F. |
| DRIVEWAY                  | 2,051 S.F. |
| PORCH                     | 226 S.F.   |
| WALLS, WALKS, PATIOS ETC. | 1,718 S.F. |
| TOTAL                     | 5,727 S.F. |
| % OF THE TOTAL AREA       | 31.35%     |

**PROPOSED IMPERVIOUS COVERAGE:**

|               |                  |
|---------------|------------------|
| HOUSE & PORCH | 2,748 SF         |
| DRIVEWAY      | 2,570 SF         |
| DECK          | 298 SF           |
| WALKS, MISC.  | 290 SF           |
| TOTAL         | 5,906 SF (32.3%) |

NET INCREASE 181 SF  
MAX. ALLOWABLE 6,392 SF (35.0%)

**NOTES:**

- 1.) BOUNDARY AND TOPOGRAPHY FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY OF 240 GULPH CREEK ROAD" PREPARED BY MOMENEE SURVEY GROUP INC. DATED OCTOBER 13, 2005. FILE NO: 05-440
- 2.) THE NOTED SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE REPORT PROVIDED BY THE CLIENT.
- 3.) THE TOWNSHIP ENGINEER'S OFFICE SHALL BE NOTIFIED 48 HOURS PRIOR TO THE CONSTRUCTION OF THE SEEPAGE BED AND RAIN GARDENS AND PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
- 4.) ON-SITE TREES ARE TO BE SAVED AND PRESERVED WHEREVER POSSIBLE.
- 5.) ALL WOODY VEGETATION TO BE RETAINED WITHIN TWENTY-FIVE FEET OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT THE DRIPLINES.
- 6.) GRADE CHANGES AROUND THE DRIPLINES OF TREES TO BE RETAINED SHALL BE MINIMIZED. TREATMENT OF THE TREES PRIOR TO CONSTRUCTION TO PROTECT THE ROOT SYSTEM SHALL BE PERFORMED.
- 7.) ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION. TREE LIMBS MUST BE CUT BACK IN PROPORTION TO THE ROOT AREA LOSS.
- 8.) ON-SITE TREES TO BE SAVED SHALL BE PREPARED FOR CONSTRUCTION BY APPROPRIATE CROWN AND DEEP ROOTING FERTILIZATION AND PROTECTED BY APPROPRIATE FENCING. ALL TREES ARE TO BE DEEP ROOT FERTILIZED USING 16-32-16 SLOW RELEASE, WATER DISPERSABLE @ 15 LBS. PER 100 GALLON OR EQUAL.

**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.

**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 SYSTEM SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES AND DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THE SYSTEM. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.
- 5) 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.

**SOILS INFORMATION**

| SYMBOL | NAME                                  | %SLOPE                | HYDROLOGIC GROUP | DEPTH TO SH WATER | DEPTH TO BEDROCK |
|--------|---------------------------------------|-----------------------|------------------|-------------------|------------------|
| Cm     | CODORUS SILT LOAM                     | NOT RATED             | C                | 2.26              | 7.11             |
| GhB    | GLENVILLE SILT LOAM                   | 3 TO 8 PERCENT SLOPES | C                | 1.73              | 1.57             |
| Me     | MADE LAND SCHIST AND GNEISS MATERIALS | NOT RATED             | B                | 4.98              | 5.41             |

Serial Number: 263-6341

**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

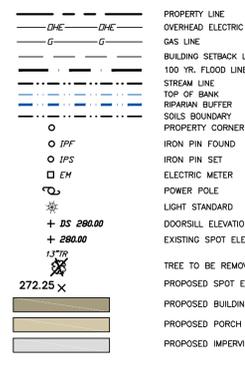
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AS PER ACT 187 HOUSE BILL 0667, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776, THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.

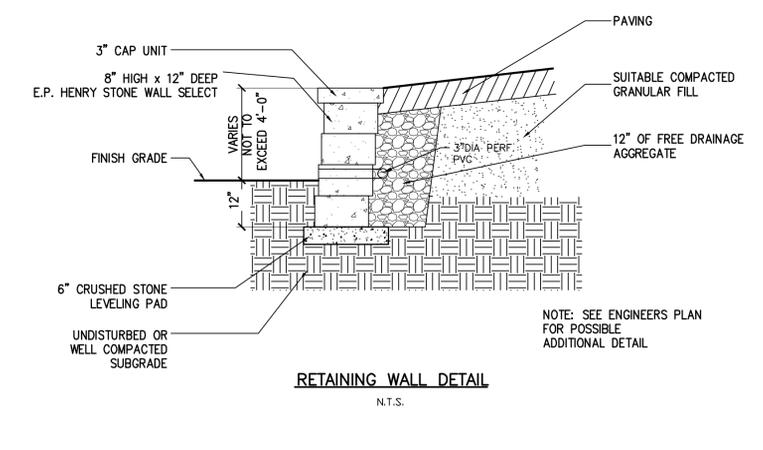
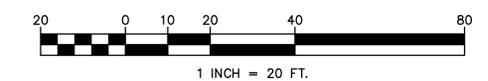
SERIAL # 2636341

**LEGEND**



**TREE IDENTIFICATION**

|    |                |    |             |
|----|----------------|----|-------------|
| AP | APPLE          | LN | LINDEN      |
| BE | BEECH          | MA | MAGNOLIA    |
| BR | BIRCH          | MP | MARLE       |
| CA | CORNBAPPLE     | MU | MULBERRY    |
| CE | CEDAR          | OC | OCCIDENTALS |
| CH | CHERRY         | PA | PALLOONA    |
| CN | CHESTNUT       | PL | POPLAR      |
| CW | COTTONWOOD     | PN | PINE        |
| DC | DOGWOOD        | PR | PEAR        |
| DK | GINO           | RN | REINWOOD    |
| HA | HACKBERRY      | SU | SYCAMORE    |
| HK | HICKORY        | SA | SASSAPARASS |
| HM | HEMLOCK        | SC | SWEET GUM   |
| HL | HOLLY          | SP | SPRUCE      |
| HC | HORSE CHESTNUT | WN | WALNUT      |
| LA | LARCH          | WD | WILLOW      |
| LD | LOCUST         |    |             |



Serial Number: 263-6341

CALL BEFORE YOU DIG!

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

**MOMENEE & ASSOCIATES, INC.**

CIVIL ENGINEERS AND LAND SURVEYORS

924 COUNTY LINE ROAD, BRYN MAWR, PA 19010  
PHONE: (610) 527-3030 FAX: (610) 527-9008

**GRADING PERMIT PLAN**

GRADING & UTILITY PLAN  
240 GULPH CREEK ROAD  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

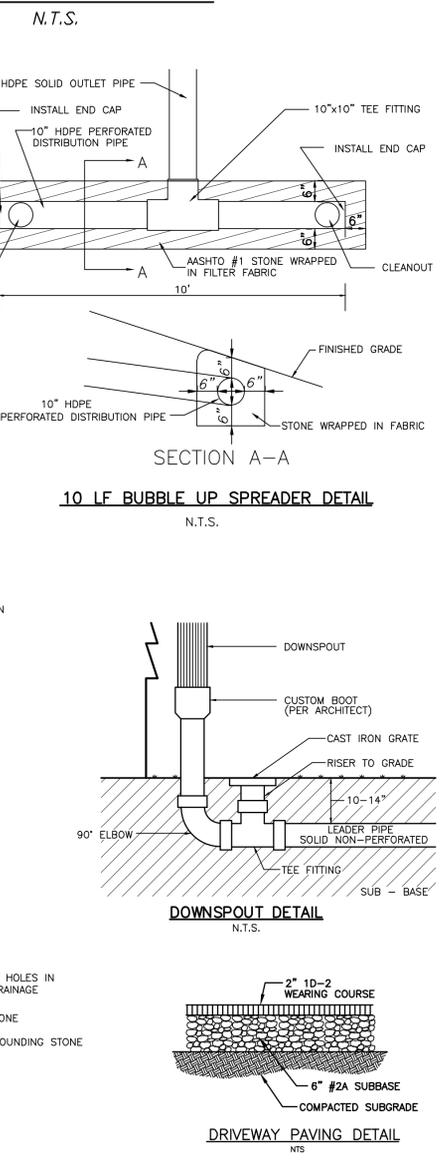
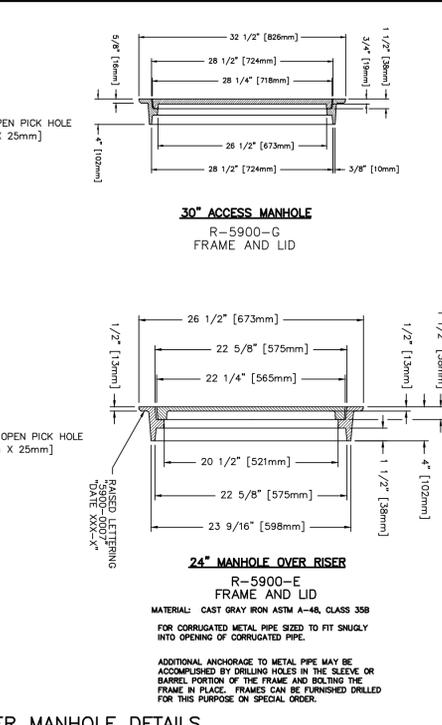
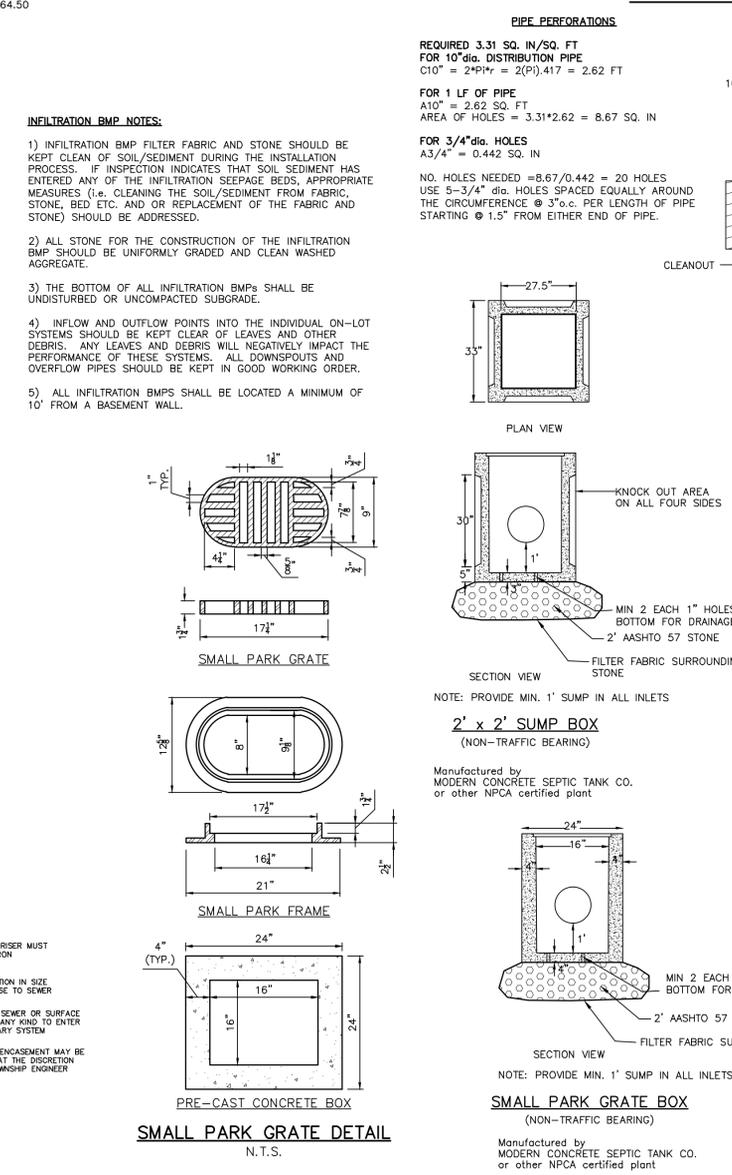
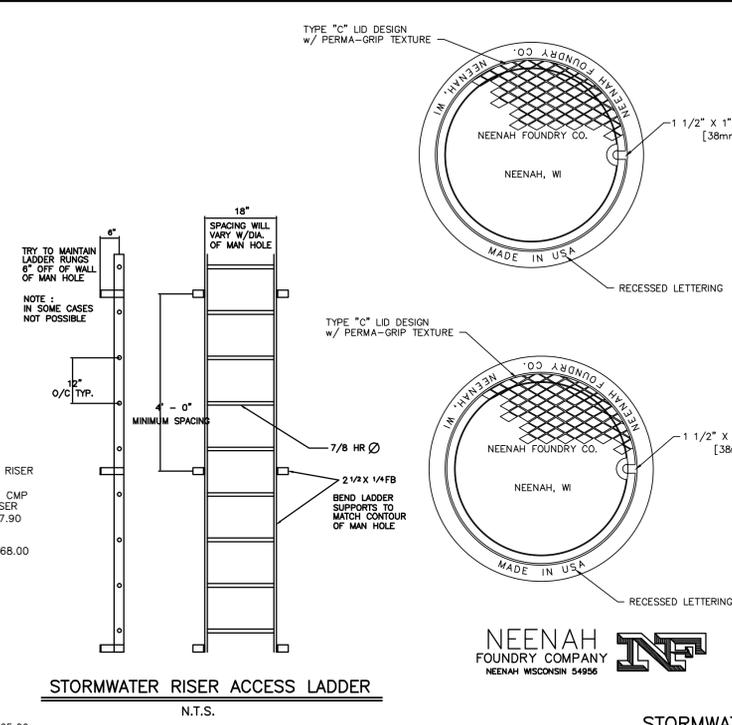
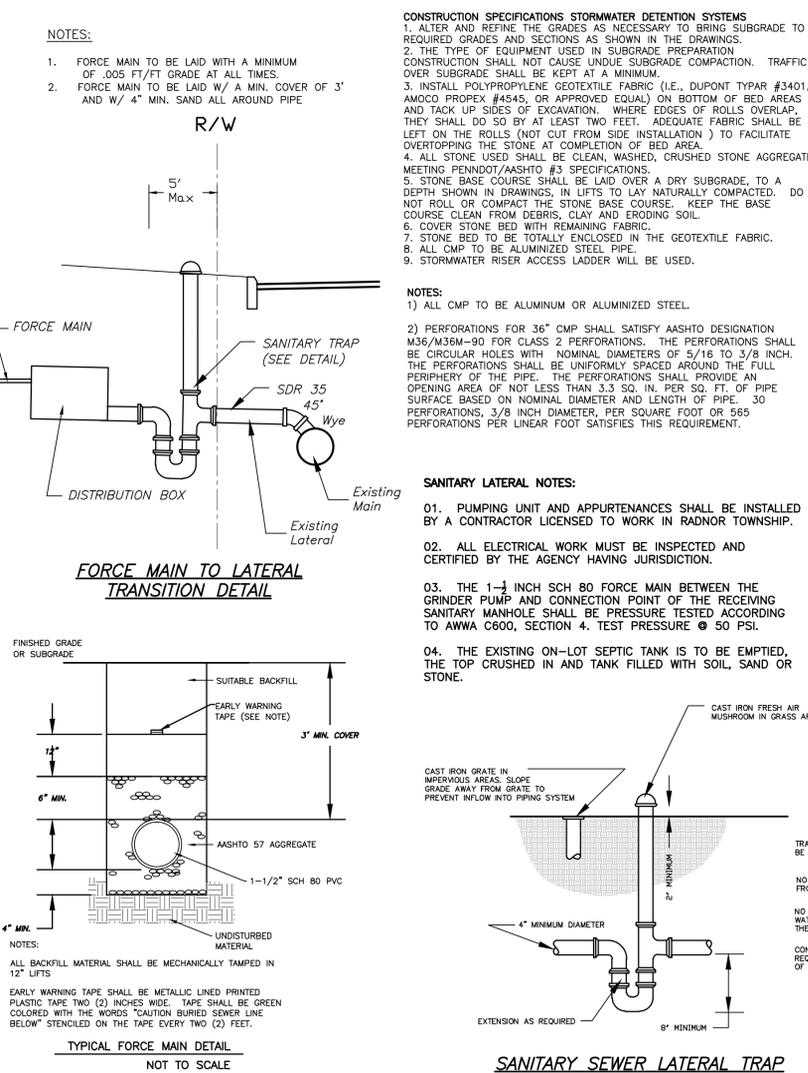
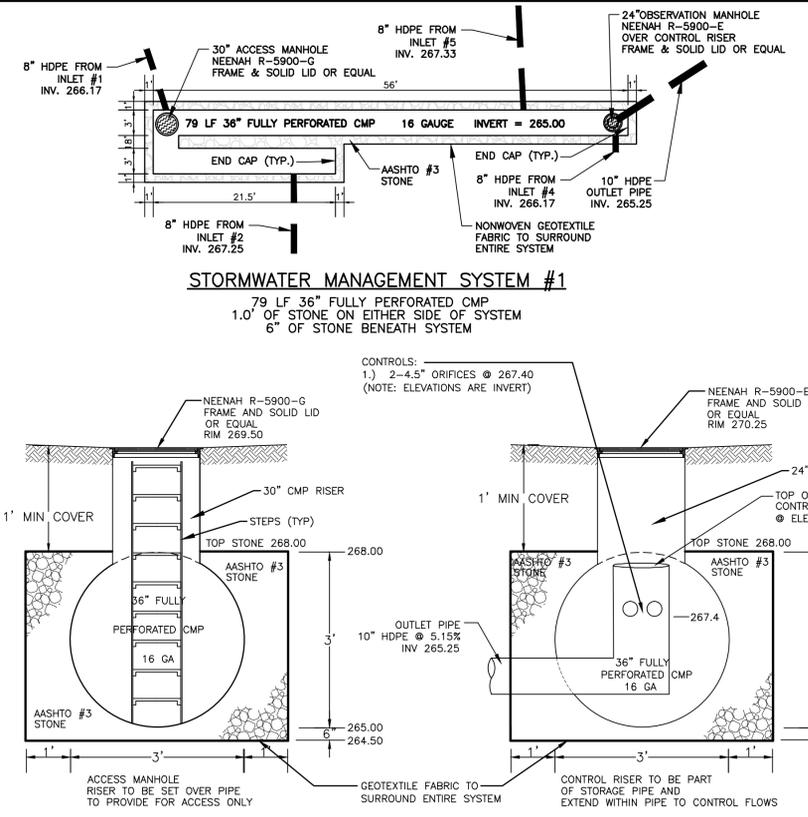
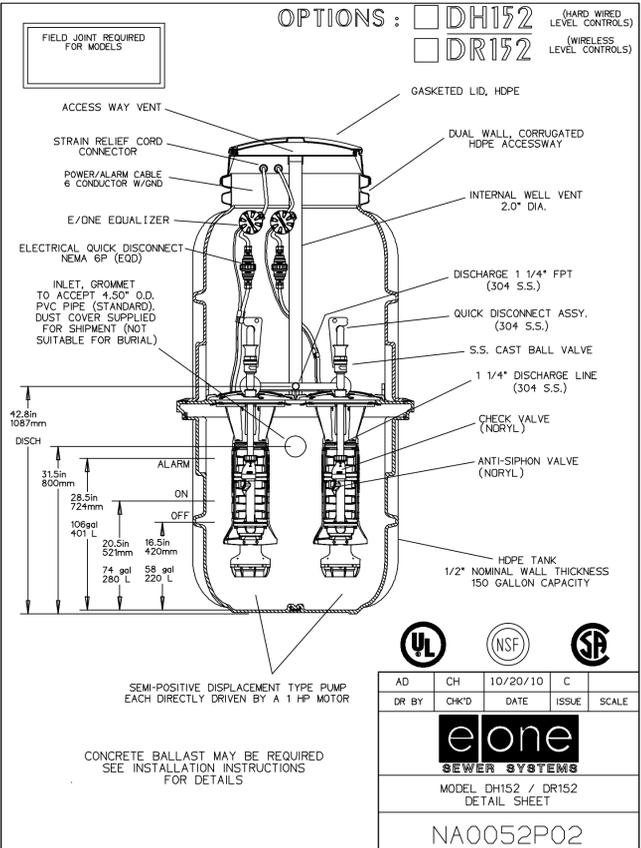
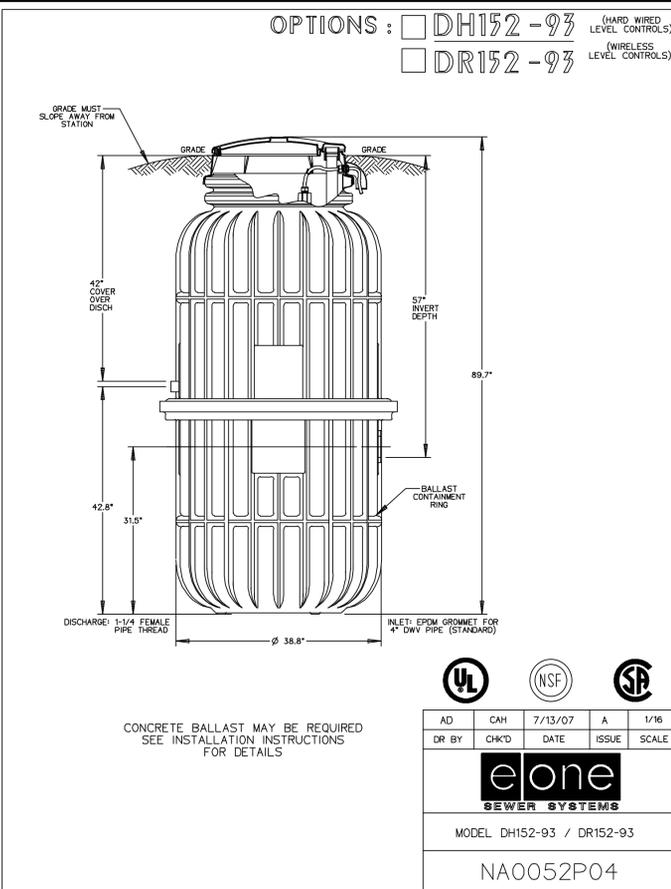
ONE-CALL: 263-6341  
DRAWN BY: BDM  
CHECKED BY: DRF

OWNER/APPLICANT  
TWINING CORPORATE CENTER LLC  
100 COLLEGEVILLE PIKE, SUITE 205  
COLLEGEVILLE, PA 19342

| REV. | DATE    | COMMENTS         |
|------|---------|------------------|
| 1    | 6/13/06 | LAYOUT REVISIONS |
| 2    | 6/14/06 | HOUSE ELEVATION  |
| 3    | 6/24/06 | NEW LAYOUT       |
| 4    | 6/26/06 | PER TWP. ENG.    |
| 5    | 6/22/06 | NEW HOUSE        |
| 6    | 6/27/06 | SHADE TREE       |
| REV. |         |                  |

DATE: JANUARY 20, 2006  
SHEET NO. 2 OF 4  
SCALE: 1" = 20'  
FILE NO.: 05-440





Serial Number: 263-6341

CALL BEFORE YOU DIG!  
 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE STOP CALL

Professional Engineer  
 KEVIN R. MOMENEE  
 PENNSYLVANIA LICENSE # 000003056

**MOMENEE & ASSOCIATES, INC.**  
 CIVIL ENGINEERS AND LAND SURVEYORS

924 COUNTY LINE ROAD, BRYN MAWR, PA 19010  
 PHONE: (610) 527-3030 FAX: (610) 527-9008

NEENAH FOUNDRY COMPANY  
 NEENAH WISCONSIN 54956

# 240 RADNOR CHESTER ROAD

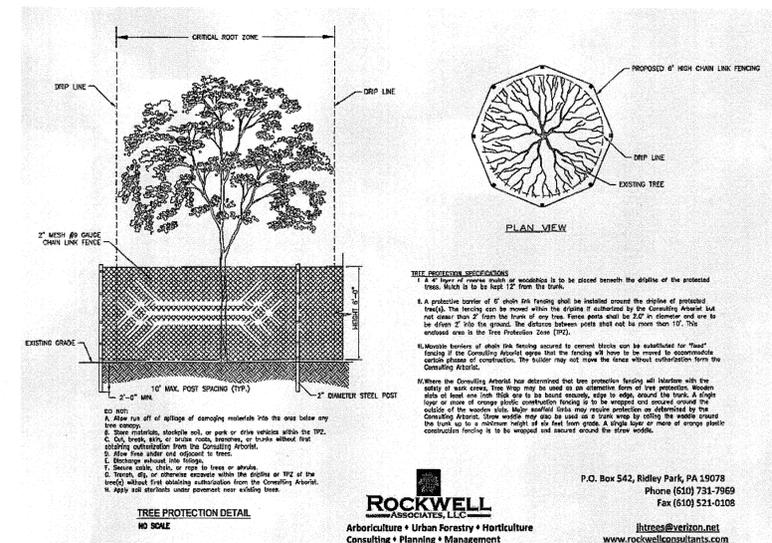
## GRADING PERMIT APPLICATION FOR DRIVEWAY RELOCATION

**PROPERTY OWNER**  
 240 RADNOR CHESTER ROAD INVESTMENT LP.  
 PO BOX 545  
 OCEAN BEACH, FL 33443  
 ATTN: SHELDON GROSS

**ENGINEER**  
 NAVE NEWELL, INC.  
 900 WEST VALLEY ROAD, SUITE 1100  
 WAYNE, PA 19087  
 ATTN: TIMOTHY J. BRENNAN, PE

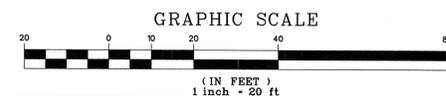
### PLAN INDEX

| PAGE NO. | DESCRIPTION                                    | START DATE     | REVISION DATE |
|----------|--|----------------|---------------|
| 1 OF 5   | EXISTING FEATURES / DEMOLITION PLAN            | MARCH 24, 2015 | -             |
| 2 OF 5   | CONSTRUCTION IMPROVEMENTS PLAN                 | MARCH 24, 2015 | -             |
| 3 OF 5   | EROSION AND SEDIMENTATION CONTROL PLAN         | MARCH 24, 2015 | -             |
| 4 OF 5   | EROSION AND SEDIMENTATION CONTROL DETAIL SHEET | MARCH 24, 2015 | -             |
| 5 OF 5   | CONSTRUCTION DETAIL SHEET                      | MARCH 24, 2015 | -             |



**LEGEND**

|  |   |
|--|---|
|  | PROPERTY LINE   |
|  | ADJACENT PROPERTY LOT LINE                              |
|  | LEGAL RIGHT-OF-WAY                                      |
|  | EXISTING EDGE OF PAVEMENT                               |
|  | EXISTING CURB   |
|  | EXISTING CONCRETE SIDEWALK                              |
|  | EXISTING BUILDING                                       |
|  | EXISTING SIGN   |
|  | EXISTING VEGETATION                                     |
|  | EXISTING LIGHT POLE                                     |
|  | EXISTING INLET  |
|  | EXISTING STORMWATER SEWER                               |
|  | EXISTING WATER LINE WITH MANHOLE AND VALVE              |
|  | EXISTING GAS LINE                                       |
|  | EXISTING OVERHANG WIRE WITH GUY WIRE                    |
|  | EXISTING SANITARY SEWER WITH MANHOLE                    |
|  | EXISTING UNDERGROUND COMMUNICATION LINE WITH MANHOLE    |
|  | EXISTING MAJOR CONTOUR                                  |
|  | EXISTING MINOR CONTOUR                                  |
|  | EXISTING CURB / RETAINING WALL / STRIPING TO BE REMOVED |
|  | EXISTING ASPHALT / CONCRETE TO BE REMOVED               |
|  | EXISTING ASPHALT TO BE MILLED AND OVERLAID              |
|  | EXISTING LIGHT POLE TO BE REMOVED                       |
|  | EXISTING TREE TO BE REMOVED                             |
|  | TREE PROTECTION FENCE                                   |



| REVISIONS | NO. | DESCRIPTION | DATE | CHK'D BY |
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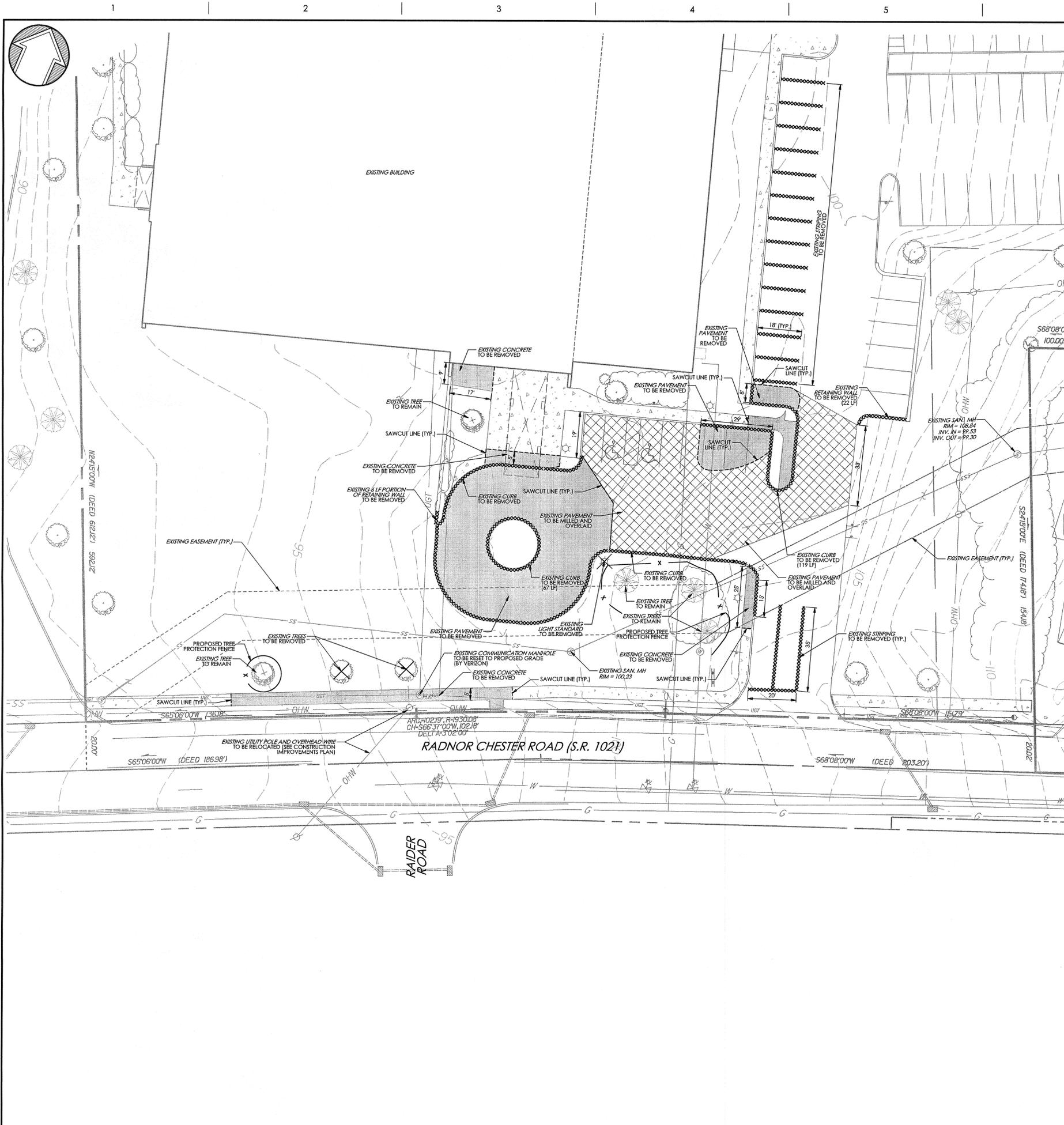


**EXISTING FEATURES / DEMOLITION PLAN**

**240 RADNOR CHESTER ROAD**  
**DRIVEWAY RELOCATION**

LOCATION: **RADNOR TOWNSHIP, DELAWARE COUNTY, PA**

|             |             |              |     |
|-------------|-------------|--------------|-----|
| project no. | 2013-111.00 | drawn by:    | MMB |
| date:       | 3/24/15     | chk'd by:    | DAT |
| scale:      | 1" = 20'    | approved by: | TJB |
| sheet no.   | 1 of 5      |              |     |



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**SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED EES PLAN. A COPY OF THE APPROVED DRAWINGS MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL HAVE THE LANDOWNER, THE LANDOWNER'S APPROPRIATE MUNICIPAL OFFICIALS, AND THE E&S PLAN PREPARER TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- 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 1-800-242-1774 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE TOWNSHIP PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S B&S SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAS BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATIONS SHOWN ON THE PLAN MAPS (IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE TOWNSHIP.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601.2 ET SEQ. 271.1, AND 267.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNSEED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BODILY FLUIDS SHALL BE STORED IN A TANK APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL E&S PLAN MATERIALS ARE CLEAN FILL. FORM #P-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- VEHICLES AND EQUIPMENT MAY ONLY ENTER AT DESIGNATED CONSTRUCTION ENTRANCES.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND REMEDIAL MAINTENANCE SHALL BE PERFORMED IMMEDIATELY UPON DISCOVERY TO PERFORM AS EXPECTED. REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL PLACED TO 2 FEET AND TO 2 FEET AND MULCHING. FILL OUTLINES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTERIORS OF BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES, OR PER DIRECTION OF LICENSED GEOTECHNICAL SPECIALIST FOR PROJECT.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED NON-GERMINATING AREAS, MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION CRITERIA. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE TOWNSHIP.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE TOWNSHIP FOR AN INSPECTION PRIOR TO REMOVAL OF THE E&S BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL ARE TO BE DONE WHILE THE GERMINATING SEASON IS IN PROGRESS.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE TOWNSHIP TO SCHEDULE A FINAL INSPECTION.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.
- UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE PROTECTED FROM THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- CHANNELS HAVING RIPRAP, RENO MATTERS, OR CARBON LININGS MUST BE SUFFICIENTLY OVER-DRAINED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED PER DIRECTION OF LICENSED GEOTECHNICAL SPECIALIST FOR PROJECT.

**GENERAL CONSERVATION NOTES AND SPECIFICATIONS**

INTENT OF CONSERVATION PROGRAM: THE INTENT OF THIS PROGRAM IS TO PREVENT ACCELERATED EROSION OF THE EXPOSED SOILS DURING THE CONSTRUCTION AND PERMANENT LIFE PERIODS OF THE DEVELOPMENT. THE PROGRAM REQUIRES PROTECTION OF ALL SEDIMENTS ON THE CONSTRUCTION SITE TO MINIMIZE THE IMPACT OF DEVELOPMENT ON EXISTING STREAMS AND ADJACENT PROPERTY OWNERS. THESE OBJECTIVES WILL BE ACHIEVED BY MINIMIZING THE EXPOSURE TIME OF POTENTIALLY ERODIBLE SOILS TO RUNOFF AND INSTALLATION OF THE TEMPORARY CONSTRUCTION. THE INTENT OF THIS PROGRAM SHOULD BE UNDERSTOOD AND IMPLEMENTED THROUGHOUT THE ENTIRE DEVELOPMENT. THE VARIOUS CONSTRUCTION TRAPS SHOULD BE APPROVED OF THIS PROGRAM AND DIRECTED TO PREVENT UNDUE DISTURBANCE OF PREPARED AND PROTECTED SURFACES.

**SURFACE STABILIZATION CRITERIA:** ALL DENuded SOIL SURFACES, INCLUDING SOIL STOCKPILES, ARE SUBJECT TO EROSION AND SHALL BE STABILIZED EITHER TEMPORARILY OR PERMANENTLY, IMMEDIATELY DURING NON-GERMINATING PERIODS. MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION. ALL DISTURBED ZONES AND VEGETATED REGIONS SHALL BE STABILIZED, PREFERABLY WITH A PERMANENT TREATMENT AS FOLLOWS:

- SEEDING & MULCHING SPECIFICATIONS**
- TEMPORARY:** SEEDING SHALL BE COMMON RYE GRASS APPLIED AT 45 LBS. PER ACRE. LIVING TO BE APPLIED AT 1 TON/ACRE. 50-50 FERTILIZER TO BE APPLIED AT 1000 LBS/ACRE. HAY OR STRAW MULCH TO BE APPLIED AT 3 TONS/ACRE.
- PERMANENT:** SEEDING SHALL BE 15% KENTUCKY BLUEGRASS, 35% KENTUCKY 31 FESCUE, 25% CHEVENS FESCUE, 15% PERENNIAL RYE GRASS, AND 10% RECLAIMED REDTOP AT A RATE OF 40 LBS. PER ACRE. LIVING TO BE APPLIED AT 3 TONS/ACRE. 10-20-30 FERTILIZER TO BE APPLIED AT 1000 LBS/ACRE. HAY OR STRAW MULCH TO BE APPLIED AT 3 TONS/ACRE.

THE NON-GERMINATING PERIODS ARE BETWEEN 6/15 THROUGH 8/15 AND 9/30 THROUGH 4/15. AREAS DISTURBED DURING THESE PERIODS MUST BE LIMED, FERTILIZED, SEEDED AND MULCHED IMMEDIATELY FOLLOWING THE END OF THOSE PERIODS. TOPSOIL TAKEN FROM CONSTRUCTION AREAS SHALL BE SEEDING WITH VEGETATIVE COVER AND STOCKPILES FOR REUSE IN FINISH GRADING. THERE IS TO BE NO EARTH DISTURBANCE OR VEGETATIVE CLEARING IN AREAS OUTSIDE OF THE DELINEATED AREAS TO BE DISTURBED.

**GENERAL NOTES FOR UTILITY CONSTRUCTION**

- EXCAVATED MATERIAL SHOULD BE STAGED ON THE UPSTREAM SIDE OF A TRENCH, AND THE DAILY EXTENT OF TRENCHING SHOULD NOT EXCEED WHAT CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.
- EROSION CONTROL BLANKET SHOULD BE PLACED OVER DISTURBED AREAS (NOT INCLUDING AREAS OF PROPOSED ROADWAYS DURING CONSTRUCTION ACTIVITIES).

**SEQUENCE OF CONSTRUCTION**

- PRIOR TO THE START OF CONSTRUCTION, SCHEDULE A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF RADNOR TOWNSHIP, THE SITE CONTRACTOR, THE DESIGN ENGINEER, AND THE PROJECT OWNER.
- RELOCATE UTILITY POLE AND RESTRING WIRES. RESET COMMUNICATIONS MANHOLE TO FINAL GRADE.
- INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING SILT FENCE, INLET PROTECTION, AND ROCK CONSTRUCTION ENTRANCE.
- INSTALL TREE PROTECTION FENCE.
- REMOVE VEGETATION.
- RELOCATE LIGHT STANDARD.
- INSTALL TEMPORARY EXISTING ASPHALT, CONCRETE, AND CURB.
- PERFORM DEMOLITION OF EXISTING RETAINING WALLS.
- REMOVE PAVEMENT STRIPING.
- INSTALL TRENCH INLET AND STORMWATER CONVEYANCE PIPE (TO EXISTING TYPE IN-LET WITHIN RADNOR CHESTER ROAD).
- BEGIN BULK EARTHWORK ACTIVITIES THAT INVOLVE MIGRATION OF MATERIAL FROM THE SOUTHWEST TO THE NORTHEAST OF THE CONSTRUCTION AREA (INCLUDING CONSTRUCTION OF THE BIOSWALE).
- INSTALL RETAINING WALL.
- ROUGH GRADE NEW DRIVEWAY TO RADNOR CHESTER ROAD, MILL AND OVERLAY EXISTING PAVEMENT WHERE REQUIRED. INSTALL CURB, BASE, AND BINDER COURSE.
- INSTALL CURB RAMPS AND SIDEWALK.
- INSTALL STRIPING.
- UPON COMPLETE STABILIZATION OF SITE AND CESSATION OF CONSTRUCTION ACTIVITIES, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND TREE PROTECTION FENCE.

**MAINTENANCE PROGRAM FOR TEMPORARY SEDIMENTATION CONTROL STRUCTURES**

MAINTENANCE OF ALL TEMPORARY SEDIMENTATION CONTROL STRUCTURES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND AS STATED BELOW:

- SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF THE ABOVE-GROUND HEIGHT OF SILT FENCING.
- SEDIMENT REMOVED FROM THE FACILITIES MAY BE REINCORPORATED INTO THE SITE'S EARTHWORK, AS FILL OR TAKEN TO A SAFE, APPROVED LOCATION UNTIL THE SITE IS STABILIZED. ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY.

**MAINTENANCE OF TEMPORARY SEDIMENTATION CONTROL STRUCTURES**

MAINTENANCE OF ALL TEMPORARY SEDIMENTATION CONTROL STRUCTURES SHALL BE IN ACCORDANCE WITH THESE PLANS. INSPECTION AND MAINTENANCE OF ALL FACILITIES SHALL BE MADE AFTER EACH RAIN STORM EVENT AND ON A WEEKLY BASIS.

**SEDIMENT DISPOSAL**

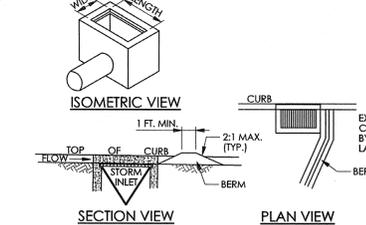
SILT REMOVED FROM TEMPORARY SEDIMENT CONTROL STRUCTURES SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS LOCATED OUTSIDE OF FLOOD PLAINS, WETLANDS, STEEP SLOPES, AND DRAINAGE SWALES. AREAS OF SEDIMENT DISPOSAL SHALL BE CONSIDERED C.V.A.

**DUST CONTROL**

DUST AND OTHER PARTICULATES SHALL BE KEPT WITHIN TOLERABLE LIMITS BY USING WATER. APPLICATION SHALL BE AS NEEDED OR AS DIRECTED BY THE TOWNSHIP ENGINEER.

**CRITICAL VEGETATION AREAS (C.V.A.)**

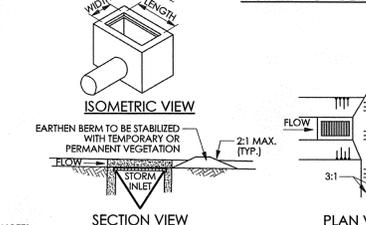
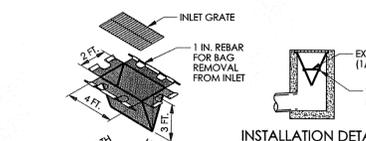
CRITICAL VEGETATION AREAS ARE TO BE GRADED, HYDROSEEDED AND MULCHED WITHIN 10 DAYS OF THE BEGINNING OF EXCAVATION. IN GENERAL CRITICAL VEGETATION AREAS ARE DEFINED AS CUT SLOPES STEEPER THAN 3:1. ALL FILL SLOPES STEEPER THAN 4:1 AND IN ALL DRAINAGE SWALES.



**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.

**STANDARD CONSTRUCTION DETAIL #4-15  
FILTER BAG INLET PROTECTION - TYPE C INLET**

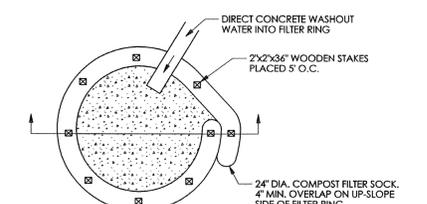
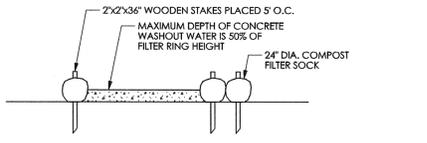
NOT TO SCALE



**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.

**STANDARD CONSTRUCTION DETAIL #4-16  
FILTER BAG INLET PROTECTION - TYPE M INLET**

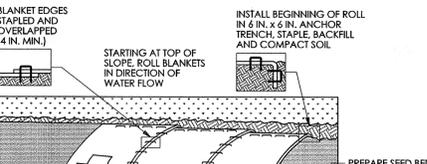
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**NOTES:**  
1. A SUITABLE IMPERVIOUS GEO-MEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.  
2. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.  
3. 18" DIAMETER FILTER SOCKS MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.  
4. ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.

**CONTROLLED NON-DISCHARGE  
CONCRETE WASH OUT**

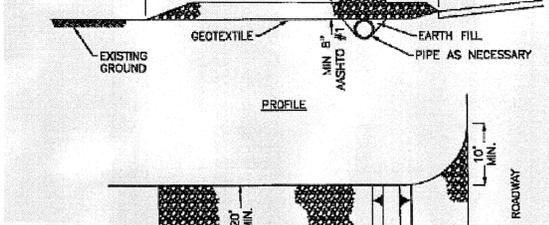
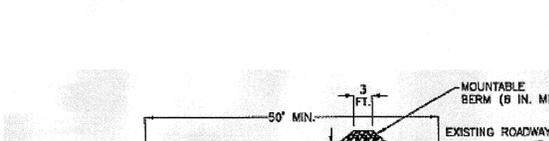
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**NOTES:**  
SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.  
SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS.  
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.  
THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.  
BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

**STANDARD CONSTRUCTION DETAIL #11-1  
EROSION CONTROL BLANKET INSTALLATION**

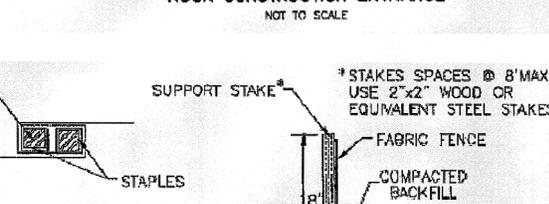
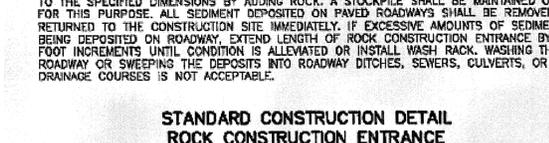
NOT TO SCALE



**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.

**STANDARD CONSTRUCTION DETAIL  
ROCK CONSTRUCTION ENTRANCE**

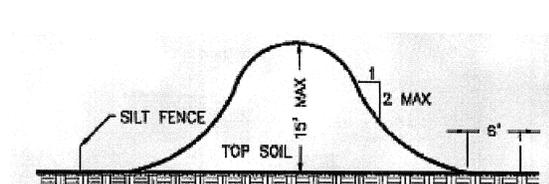
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**NOTES:**  
1. FILTER FABRIC FENCE MUST BE PLACED AT LEVEL GRADE. BOTH ENDS OF THE BARRIER MUST BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN BARRIER ALIGNMENT.  
2. ANY SILT FENCING WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY. SEE ROCK FILTER OUTLET DETAIL.  
3. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT THE FENCE.

**STANDARD SILT FENCE**

N.T.S.



**NOTE:** SILT FENCE MUST COMPLETELY ENCIROLE 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.

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| REVISIONS | no. | description | date: | checked by: |
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SEALED

*John J. Sumner*

PA 19387

PROFESSIONAL ENGINEER

NO. 1000000000

STATE OF PENNSYLVANIA

NO. 1000000000

STATE OF PENNSYLVANIA

**EROSION AND SEDIMENTATION CONTROL DETAIL SHEET**

**240 RADNOR CHESTER ROAD DRIVEWAY RELOCATION**

LOCATION: RADNOR TOWNSHIP, DELAWARE COUNTY, PA

DRAWING NAME: EROSION AND SEDIMENTATION CONTROL DETAIL SHEET

|             |             |              |     |
|-------------|-------------|--------------|-----|
| project no. | 2013-111.00 | drawn by:    | JMS |
| date:       | 3/24/15     | chk'd by:    | DAT |
| scale:      | N.T.S.      | approved by: | TJB |
| sheet no.   |             |              |     |

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**4 of 5**





**RADNOR TOWNSHIP SHADE TREE COMMISSION**  
*Hazardous Tree Report*

Resident Chanticleer Gardens

Address 786 Church Road, Wayne (attn: Jeff Lynch)

Tree (Type, species, size, diameter at breast height) \_\_\_\_\_  
33" diameter Black walnut tree

Certified arborist's narrative report (attach separate sheet if required) \_\_\_\_\_  
Tree has large crack in trunk at base. Recommend immediate removal

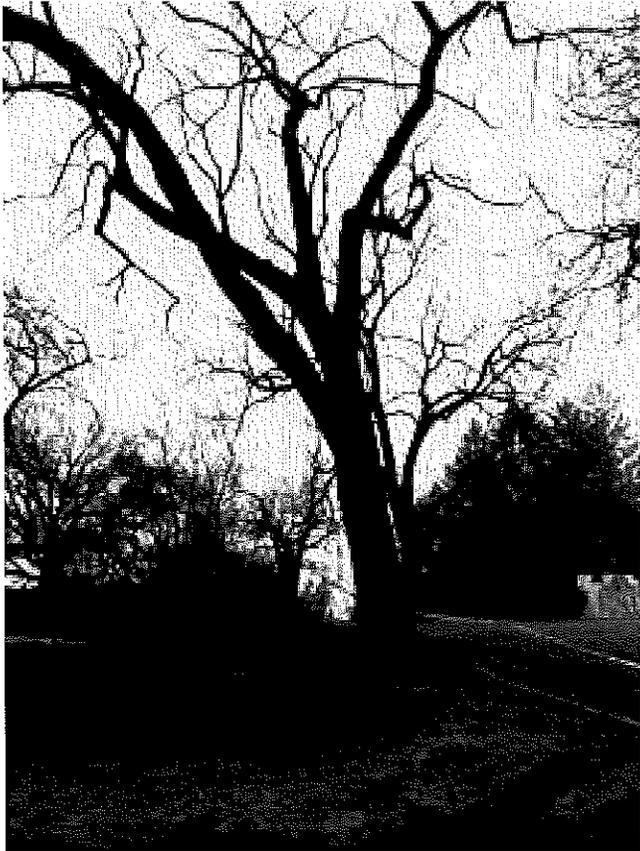
Certified arborist's name, address and # \_\_\_\_\_  
James B. Ward, #PD-0053

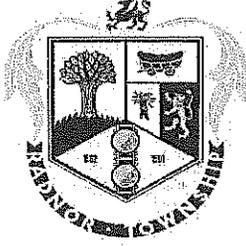
Pictures attached X Plot plan drawing attached \_\_\_\_\_

Township arborist's report (attach separate sheet if required) \_\_\_\_\_

**Shade Tree Commission removal recommended yes / no**

*The General Powers and Duties of the Shade Tree Commission section of the Ordinance (126.5 B) stipulates: In case of immediate necessity for the protection of life or property. Any shade or street tree described in this ordinance may be removed without first obtaining a permit, after inspection by a member(s) of the Shade Tree Commission or its designee.*





**RADNOR TOWNSHIP SHADE TREE COMMISSION**  
*Hazardous Tree Report*

Resident Dr. John Farber

Address 239 Pembroke Avenue, Wayne, pa 19087

Tree (Type, species, size, diameter at breast height) (1) 36" diameter Pin Oak,  
(1) 30" Norway Maple

Certified arborist's narrative report (attach separate sheet if required) \_\_\_\_\_  
36" diameter Pin Oak has a half dead canopy. The tree is in decline.  
30" Norway Maple. This tree is totally hollow.  
Recommend removal of both trees.

Certified arborist's name, address and # James B. Ward, Certified Arborist PD - 0053  
John B. Ward & Co.

Pictures attached X Plot plan drawing attached \_\_\_\_\_

Township arborist's report (attach separate sheet if required) \_\_\_\_\_

**Shade Tree Commission removal recommended yes / no**

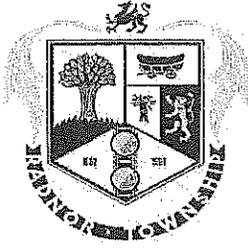
*The General Powers and Duties of the Shade Tree Commission section of the Ordinance (126.5 B) stipulates: In case of immediate necessity for the protection of life or property. Any shade or street tree described in this ordinance may be removed without first obtaining a permit, after inspection by a member(s) of the Shade Tree Commission or its designee.*

36" diameter Pin Oak  
Farber Residence



30" diameter Norway Maple





**RADNOR TOWNSHIP SHADE TREE COMMISSION**  
*Hazardous Tree Report*

Resident Dolores Wood

Address 166 Biddulph Road, Radnor, PA 19087

Tree (Type, species, size, diameter at breast height) (1) 50" diameter Sugar Maple

Certified arborist's narrative report (attach separate sheet if required) \_\_\_\_\_

This tree has an entirely decayed main central stem and large vertical crack at the base. we have been caring for this tree for over 25 years and have multiple cables in the canopy of this tree at this time. At this point I feel the tree is now a hazard. The main central leader, which is the main supporting leader for the entire tree is now dead and the crack seems to have opened. Recommend immediate removal

Certified arborist's name, address and # James B. Ward, Certified Arborist PD - 0053  
John B. Ward & Co.

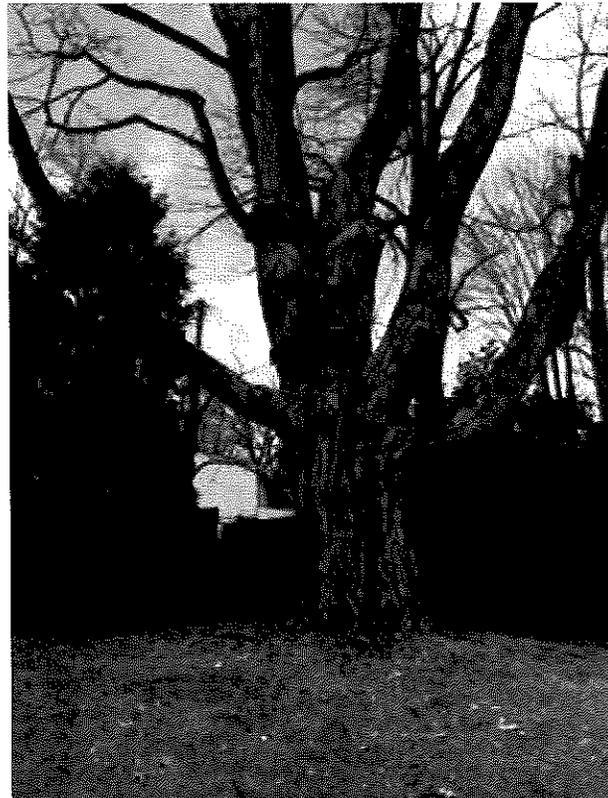
Pictures attached \_\_\_\_\_ Plot plan drawing attached \_\_\_\_\_

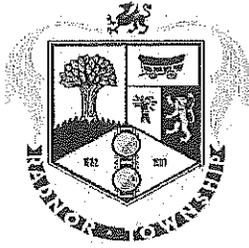
Township arborist's report (attach separate sheet if required) \_\_\_\_\_

**Shade Tree Commission removal recommended yes / no**

*The General Powers and Duties of the Shade Tree Commission section of the Ordinance (126.5 B) stipulates: In case of immediate necessity for the protection of life or property. Any shade or street tree described in this ordinance may be removed without first obtaining a permit, after inspection by a member(s) of the Shade Tree Commission or its designee.*

Dolores Wood  
Sugar Maple





**RADNOR TOWNSHIP SHADE TREE COMMISSION**  
*Hazardous Tree Report*

Resident Skip Kunda

Address 207 Atlee Road, Wayne

Tree (Type, species, size, diameter at breast height) 48" diameter White ash

Certified arborist's narrative report (attach separate sheet if required) \_\_\_\_\_  
see attached report

Certified arborist's name, address and # James B. Ward, PD-0053

Pictures attached X Plot plan drawing attached \_\_\_\_\_

Township arborist's report (attach separate sheet if required) \_\_\_\_\_

**Shade Tree Commission removal recommended yes / no**

*The General Powers and Duties of the Shade Tree Commission section of the Ordinance (126.5 B) stipulates: In case of immediate necessity for the protection of life or property. Any shade or street tree described in this ordinance may be removed without first obtaining a permit, after inspection by a member(s) of the Shade Tree Commission or its designee.*



March 31, 2015

Mr. Skip Kunda  
207 Atlee Road  
Wayne, PA 19087

Job Number: 27879  
Home Number: (610) 324-7900  
email: skipkunda@gmail.com

**Tree Assessment -**

I did inspect the condition of the large 48" diameter White ash growing on the far side of your property fence along W. Wayne Avenue. The tree at the base along its south side, exhibits large wood decay mushrooms or Bracket Fungus. At closer inspection at the soil line close to the fence, the bark has deteriorated away and a large hollow opening is clearly visible. This decayed opening is very deep and is nearly 3 feet deep at the base.

This large decayed area and the size of the tree located in a heavily trafficked area, very close to your house, is very concerning to me. I would recommend immediate removal of this tree before a heavy weather event brings it down.



Sincerely,  
James B. Ward,  
ISA Certified Arborist PD-0053  
Member American Society of Consulting Arborists

CARING FOR THE MAIN LINE'S CANOPY SINCE 1957

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