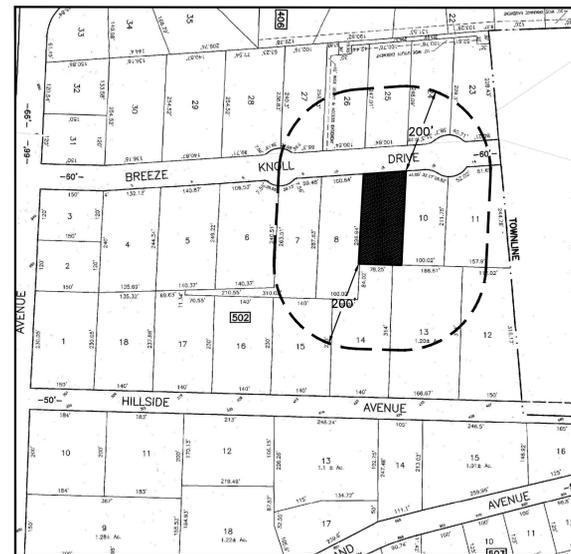


# PROPOSED POOL VARIANCE PLAN

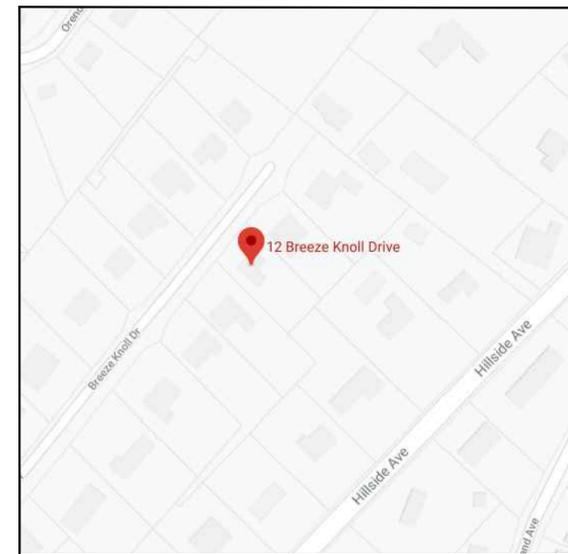
## FOR LOT 9 OF BLOCK 502 SITUATED IN TOWNSHIP OF WESTFIELD, UNION COUNTY, N.J.

### PROPERTY OWNERS WITHIN 200'

BLOCK #	LOT #	NAME & ADDRESS
406	23	BEN-HAYON, ELLAN & ERIN 17 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
406	24	FRANKEL, JEFFRY & CLAUDIA 15 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
406	25	WOLTIZER, NEIL & ABIGAIL 13 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
406	26	SCHAFFER, DEENA 11 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
406	27	McCUE, JAMES & MOLLY TUCKER 7 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	6	BRITAIN, ROBERT & CLEARY, KELLY 6 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	7	URBANO, JOHN & JACQUELINE 8 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	8	BERK, RICHARD 10 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	9	PELLETIER, RONAD & CAROL 12 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	10	JEMAL, DANIEL & LISA 16 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	11	LICHTENSTEIN, GERALYN & DAVID-TRUST 14 BREEZE KNOLL DRIVE, WESTFIELD, NJ 07090
502	12	KING, MICHAEL & LEAH 437 HILLSIDE AVENUE, WESTFIELD, NJ 07090
502	13	FLOOD, JOHN H III & MARIANNE 431 HILLSIDE AVENUE, WESTFIELD, NJ 07090
502	14	SMITH, WILLIAM & MARYANNE 423 HILLSIDE AVENUE, WESTFIELD, NJ 07090
502	15	WARGO, KEITH A & ANNE M 415 HILLSIDE AVENUE, WESTFIELD, NJ 07090



**KEY MAP**  
1"=200'



**LOCATION PLAN**  
NOT TO SCALE

### GENERAL NOTES

- DO NOT SCALE DRAWINGS, AS ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS (STRUCTURES, ETC.) ARE SCHEMATIC ONLY AND ARE PROVIDED TO GIVE THE REVIEWER A CLEARER OVERALL PICTURE OF THE SITE AND THE SURROUNDING TOPOGRAPHY AND PHYSICAL FEATURES.
- THIS IS A POOL GRADING PLAN, AND UNLESS SPECIFICALLY NOTED ELSEWHERE HEREON IS NOT A SURVEY.
- THIS PLAN HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS.
- EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENT AS REQUIRED TO AVOID CONFLICTS.
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- OUTBOUND INFORMATION BASED ON A SURVEY PREPARED BY MORGAN ENGINEERING & SURVEYING, DATED 09/17/18. TOPOGRAPHIC INFORMATION BASED ON FIELD MEASUREMENTS BY MIDSTATE ENGINEERING INC. ON 03/10/20.
- THIS PLAN IS SUBJECT TO CONDITIONS WHICH AN ACCURATE TITLE SEARCH MIGHT DISCLOSE.
- NO ATTEMPT WAS MADE OR LIABILITY IS ASSUMED TO DETERMINE IF ANY PORTION OF THIS PROPERTY IS CLAIMED BY THE STATE OF NEW JERSEY AS TIDELANDS. ENVIRONMENTALLY SENSITIVE AREAS ARE NOT LOCATED BY THIS SURVEY.
- PROPERTY KNOWN AND DESIGNATED AS LOT 9 OF BLOCK 502, SITUATED IN WESTFIELD TOWNSHIP, UNION COUNTY, NEW JERSEY.
- OFFSET DIMENSIONS FROM STRUCTURES TO PROPERTY LINES SHOWN HEREON ARE NOT TO BE USED FOR ESTABLISHING PROPERTY LINES.
- UTILITY LOCATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.
- POOL COMPANY TO INSTALL A CARTRIDGE TYPE FILTER, THEREFOR NO BACKWASHING IS REQUIRED.
- THE PUBLIC SIDEWALK AT THE STREET, IF DAMAGED BY POOL CONSTRUCTION ACTIVITY, MUST BE REPLACED USING 4,500 PSI CONCRETE.

I HEREBY CERTIFY THAT I AM THE RECORD TITLE HOLDERS OF THE LANDS DELINEATED ON THIS MAP AND CONSENT TO THE FILING OF THIS MAP.

### APPLICANT:

RONALD & CAROL PELLETIER  
12 BREEZE KNOLL DRIVE  
WESTFIELD, NJ 07090

DATE

### LEGEND

---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING SURFACE DRAINAGE
---	PROPOSED SURFACE DRAINAGE
○	EXISTING TREE TO REMAIN
○	EXISTING TREE TO BE REMOVED
x 99.0	EXISTING SPOT ELEVATION
x 99.5	PROPOSED SPOT ELEVATION
—G—	EXISTING GAS LINE
—W—	EXISTING WATER LINE
—S—	EXISTING SEWER LINE
—OE—	EXISTING OVERHEAD ELECTRIC
—UE—	EXISTING UNDERGROUND ELECTRIC
---	PROPOSED LIMIT OF DISTURBANCE
---	PROPOSED SILT FENCE
---	PROPOSED FENCE

APPROVED AS A VARIANCE PLAN FOR A RESIDENTIAL HOME BY THE WESTFIELD TOWNSHIP ZONING BOARD ON \_\_\_\_\_

AS APPLICATION NO. \_\_\_\_\_

BOARD CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

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

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

### ZONING ANALYSIS ZONE DISTRICT RS-24

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	24,000 SF	21,758 SF *	21,758 SF *
MINIMUM LOT WIDTH	120 FT	100.64 FT *	100.64 FT *
MINIMUM LOT DEPTH	160 FT	222.24 FT	222.24
MIN. FRONT YARD SETBACK	50 FT	41.7 FT *	41.7 FT *
MIN. SIDE YARD SETBACK	15 FT	15.0 FT	15.0 FT
MIN. REAR YARD SETBACK	30 FT	35.2 FT	35.2 FT
MIN. TOTAL SIDE YARD SETBACK	50 FT	107.2 FT	107.2 FT
MAX. IMPERVIOUS COVERAGE	40%	40.7% *	50.6% @
MAX. BUILDING COVERAGE	15%	14.7%	14.7%
MAX. BUILDING HEIGHT	33.5 FT	<33.5 FT	<33.5 FT
MAX. EAVE HEIGHT	22 FT	<22 FT	<22 FT
MIN. GARAGE	2 CAR	2 CAR	2 CAR
MAX. FLOOR AREA RATION	25%	23.3%	23.3%

\* INDICATES THAT A VARIANCE IS REQUIRED FOR AN EXISTING CONDITION  
@ INDICATES THAT A VARIANCE IS REQUIRED FOR A PROPOSED CONDITION

### LOT COVERAGE

EXISTING:			LOT AREA = 21,758 S.F.
DWELLING & PORCH	3,350 S.F.		
DRIVEWAY (pavers/bitum.)	3,402 S.F.		
FRONT STEPS/WALK (pavers)	344 S.F.		
GARAGE	445 S.F.	EXISTING COVERAGE	
PATIO/STEPS (slate)	1,304 S.F.	8,845 S.F.	
SUBTOTAL	8,845 S.F.	21,758 S.F.	= 40.7%
PROPOSED:			
DRIVEWAY (TBR)	-3,402 S.F.		
FRONT STEPS/WALK (TBR)	-344 S.F.		
PATIO/STEPS (TBR)	-1,304 S.F.		
POOL WATER SURFACE	700 S.F.		
POOL PATIO/COPING	1,084 S.F.		
FILTER PAD	24 S.F.		
FRONT WALK	444 S.F.		
DRIVEWAY	3,519 S.F.	PROPOSED COVERAGE	
PATIO/WALKS AT HOUSE	1,432 S.F.	10,998 S.F.	
SUBTOTAL	2,153 S.F.	21,758 S.F.	= 50.6%

NO.	REVISIONS	DATE	CDL	CDL
1	REV. FENCE PER CLIENT	09/03/20	CWM	CDL

PREPARED FOR  
**POOL VARIANCE PLAN**  
"PELLETIER" 12 BREEZE KNOLL Dr. (SEASONAL WORLD)  
LOT 9 OF BLOCK 502 (Zone R-22)  
TOWNSHIP OF WESTFIELD, UNION COUNTY, NEW JERSEY

<b>MIDSTATE ENGINEERING INC.</b> ENGINEERS, SURVEYORS & PLANNERS 82 WALNUT HILL LANE FREEHOLD, NEW JERSEY 07728 (732) 308-4226 (FAX) 732-308-4190 CERT. OF AUTHORIZATION NO. 04277692	DATE 6/8/20
SCALE 1" = 20'	DRAWN CDL
CHESTER DILORENZO P.E., L.S., P.P. P.E. & L.S. LICENSE NO. 28968 P.P. LICENSE NO. 2871	CHECKED CDL
FILE NO. 12534	
SHEET 1 OF 2	

**LEGEND**

- 99--- EXISTING CONTOUR
- [99] PROPOSED CONTOUR
- 99.5--- EXISTING SURFACE DRAINAGE
- 99.5--- PROPOSED SURFACE DRAINAGE
- 99.5--- EXISTING TREE TO REMAIN
- 99.5--- EXISTING TREE TO BE REMOVED
- 99.5--- EXISTING SPOT ELEVATION
- 99.5--- PROPOSED SPOT ELEVATION
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- S EXISTING SEWER LINE
- OE EXISTING OVERHEAD ELECTRIC
- UE EXISTING UNDERGROUND ELECTRIC
- 99.5--- PROPOSED LIMIT OF DISTURBANCE
- 99.5--- PROPOSED SILT FENCE
- 99.5--- PROPOSED FENCE

**SEEDING MIXES FOR TEMPORARY VEGETATIVE COVER**

**TABLE 2.1**  
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

SEED SELECTIONS	SEEDING RATE (pounds)	OPTIMUM SEEDING DATE	Based on Plant Hardiness Zone*			OPTIMUM SEED DEPTH (inches)
			Zone 5a, 6a	Zone 6b	Zone 7a, b	
<b>COOL SEASON GRASSES</b>						
1. Perennial ryegrass	100	1.0	3/15-6/1	3/15-5/1	2/15-5/1	0.5
2. Spring oats	86	2.0	3/15-6/1	3/15-5/1	2/15-5/1	1.0
3. Winter Barley	96	2.2	3/15-6/1	3/15-5/1	2/15-5/1	1.0
4. Annual ryegrass	100	1.0	3/15-6/1	3/15-5/1	2/15-5/1	0.5
5. Winter Cereal Rye	112	2.8	3/15-6/1	3/15-5/1	2/15-5/1	1.0
<b>WARM SEASON GRASSES</b>						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (Corman or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

- Seeding rate for warm season grasses, selections 5-7 shall be adjusted to reflect the amount of Pure Live Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
- May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
- Plant Hardiness Zone (see Figure 7-1, pg. 7-4).
- Twice the depth for sandy soils.

**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- The Somerset-Union Soil Conservation District shall be notified in writing 48 hours in advance of any land disturbing activity.
- All Soil Erosion and Sediment Control Practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is established.
- Any disturbed areas that will be left exposed more than 30 days and not subject to construction traffic, will immediately require a temporary seeding. If the reason for the establishment of a temporary cover, the disturbed area will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to NJ State Standards.
- Permanent Vegetation shall be seeded or added on all exposed areas within ten (10) days after final grading. Mulch will be used for protection until seeding is established.
- Work shall be completed in accordance with NJ State Standards for Soil Erosion and Sediment Control in New Jersey.
- A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days or preliminary.
- Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e.: steep slopes, roadway embankments) will receive a temporary seeding in combination with straw mulch or suitable equivalent, at a rate of two (2) tons per acre, according to the NJ State Standards.
- Any steep slope receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e.: slopes greater than 3:1).
- Traffic control Standards require the installation of a 50x50x60 pad of 1 1/2" or 2" stone, at all construction driveways.
- At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will involve a significant modification of the vegetative means of permanent ground stabilization, all work to be employed on work around individual lots in subdivisions, will have to be completed prior to the District issuing a Report of Compliance for the issuance of a Certificate of Occupancy by the Municipality.
- Conduit Outlet Protection must be installed at all required outlets prior to the drainage system becoming operational.
- Any changes to the Certified Soil Erosion and Sediment Control Plan will require the submission of revised Soil Erosion and Sediment Control Plans to the District for re-certification. The revised plans must meet all current NJ State Soil Erosion and Sediment Control Standards.
- Muching to the NJ State Standards is required for obtaining a Conditional Report of Compliance. Conditions are only issued when the contractor is responsible for keeping all adjacent roads clean during life of construction project.
- The developer shall maintain any erosion or sediment control measures that arise as a result of ongoing construction at the request of the Somerset-Union Soil Conservation District.
- Hydro seeding is a broadcast seeding method usually involving a truck or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed.
- High acid producing soils, soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of high quality peat or a similar material before initiating seeded preparation. See Standard for Management of High Acid-Producing Soils for specific requirements.
- Unfilled dewatering is not permitted. Necessary precautions must be taken during all dewatering operations to minimize soil transfer. Any dewatering materials used must be in accordance with the Standard for Dewatering.

**PERMANENT STABILIZATION SPECIFICATIONS**

- Site Preparation**
  - Grass as needed and feasible to permit the use of conventional equipment for seeded preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.
  - Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.
  - Conductivity prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading, pg. 19-1.
  - Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
  - Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.
- Seeded Preparation**
  - Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample millers are available from the local Rutgers Cooperative Extension office (<http://njcrop.rutgers.edu/county/>). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-12 or equivalent with 10% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-third the rate determined based on seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
  - Work time and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with 4-1 Standards for Soil Erosion and Sediment Control in New Jersey January 2014.
  - Disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour and continuous uniform seedbed is prepared.
  - High acid producing soils, soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of high quality peat or a similar material before initiating seeded preparation. See Standard for Management of High Acid-Producing Soils for specific requirements.
- Seeding**
  - Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
  - Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
  - Warm-season grasses and legumes which maximize growth at high temperatures, generally 85°F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
  - Cool-season grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65°F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of seed germination preparation to a depth of 1/4 to 1/2 inch by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.
  - Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or catpawker seeder. Except for drilled, hydroseeded or catpawker seedings, seed shall be incorporated into the soil within 24 hours of seeding preparation to a depth of 1/4 to 1/2 inch by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.
  - Hydro seeding is a broadcast seeding method usually involving a truck or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall be applied to the soil surface. Short-fibered mulch may be applied with hydro seeding following seeding. (also see Section 4-Mulching below). Hydro seeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.
  - Mulching**
    - Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be 4-2 Standards for Soil Erosion and Sediment Control in New Jersey January 2014. The mulching requirements are:
    - Straw or Hay, Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except where a crimper is used instead of a liquid mulch-binder (tackifier or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blenders must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.
    - Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square foot sections and distribute 10 to 30 pounds within each section.
    - Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods:
      - Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross pattern. Secure twine around each peg with two or more round turns.
      - Mulch Netting - Use coarse paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
      - Crimper (mulch anchoring tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
      - Liquid Mulch-Binders - May be used to anchor soil, hay or straw mulch.
      - Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
    - Use one of the following:
      - Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
      - Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by manufacturer and remain tacky until germination of grass. Note: All names given above are registered trademarks. This does not constitute a recommendation of these products to the exclusion of other products.
  - Wood-fiber or paper-fiber mulch shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Pelletized mulch, compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on annual or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

**PROPOSED SEQUENCE OF DEVELOPMENT**

- Installation of all sediment and erosion control devices prior to any major soil disturbances or in their proper sequence and maintained until permanent protection is established (1 day installation period).
- Clear and remove all existing vegetation in those areas where necessary. All remaining vegetation to be properly protected and to remain in its natural state (1 day installation period).
- General and preliminary grading in those areas to be developed (1 day installation period).
- Layout and location of the proposed features and utilities (2 day installation period).
- Construction of all proposed sediment and erosion control devices which are affected by the proposed utilities and temporary stabilization of swales and detention basins. Restoration of all sediment control devices disturbed by the utilities installation (1 week installation period).
- Construction of proposed features (topsoiling).
- Final grading of the remainder of disturbed areas of the site (1 day installation period).
- Permanent stabilization of the site with permanent vegetative cover and landscaping (1 day installation period).
- Removal of all temporary sediment and erosion control devices (1 day installation period).

**PERMANENT SEED MIXTURE (from Table 4-3)**  
The following seed mixture shall be used for the lawn area of the property during the warm season (March 1 thru October 15).  
For Forages in Plant Hardiness Zone 6b (see Figure 4-1):  
Tall fescue (turf type) at 265 lb/acre (6.8 lb/1,000 sq ft) or,  
Perennial ryegrass at 200 lb/acre (5.6 lb/1,000 sq ft) or,  
Turf type tall fescue (blend of 3 cultivars) at 350 lb/acre (8.1 lb/1,000 sq ft)

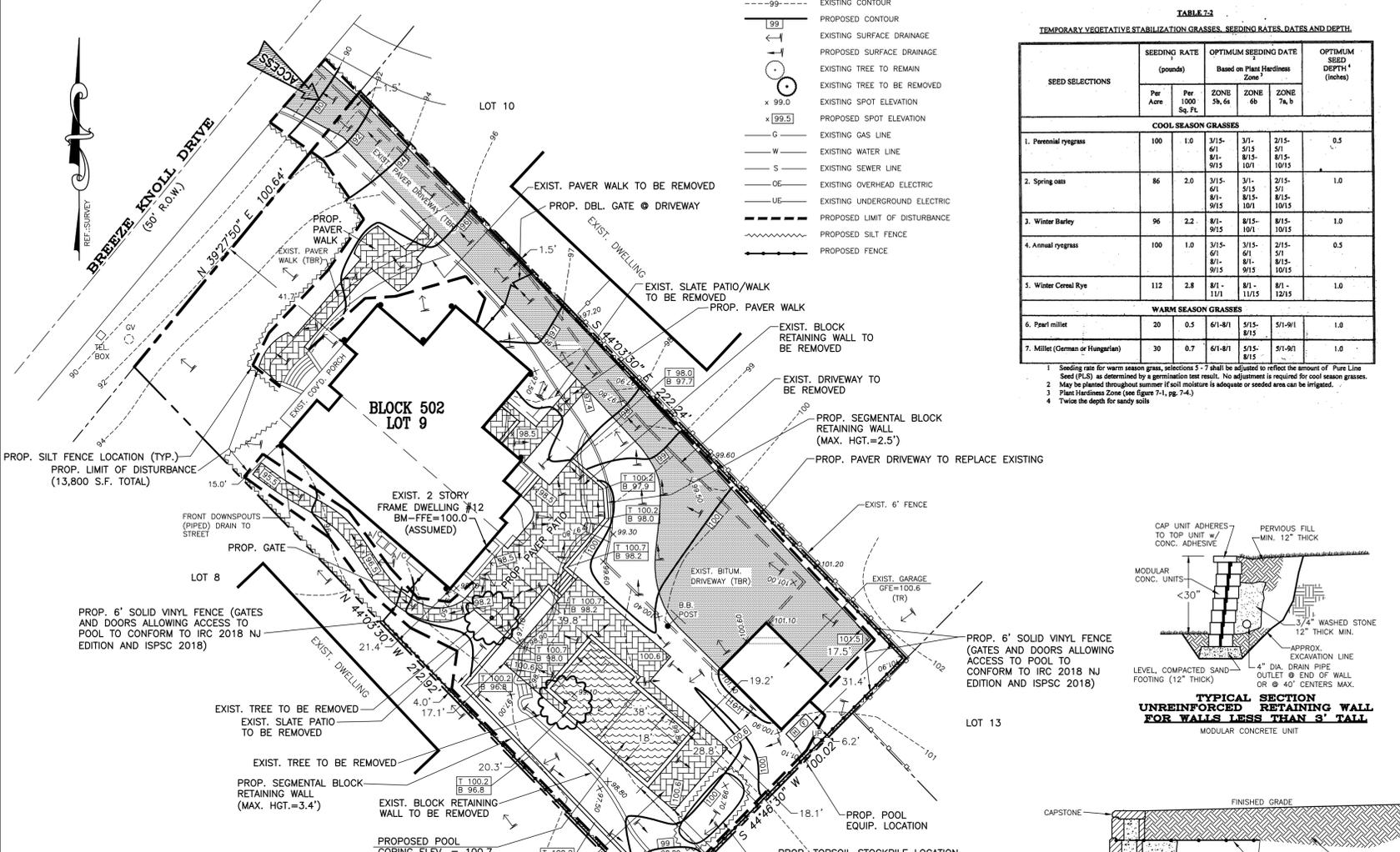
AS DETERMINED BY THE STATE POLICY MAP, THE PROJECT AREA FALLS WITHIN THE METROPOLITAN PLANNING AREA (PA1). UNDER EXISTING CONDITIONS, THE SITE IS NOT COVERED IN WOODY VEGETATION NOR REGROWTH. IN ACCORDANCE WITH THE NEW JERSEY STANDARD FOR LAND GRADING (REVISED 2017), NON WOODY VEGETATED PA1 AREAS FALL UNDER THE SOIL COMPACTION EXEMPTION LIST AS AN "URBAN DEVELOPMENT" AND IS DEFINED BY NJDEP AS "PREVIOUSLY DEVELOPED".

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- THIS PLAN IS SUBJECT TO CONDITIONS WHICH AN ACCURATE TITLE SEARCH MIGHT DISCLOSE.
- NO ATTEMPT WAS MADE OR LIABILITY IS ASSUMED TO DETERMINE IF ANY PORTION OF THIS PROPERTY IS CLAIMED BY THE STATE OF NEW JERSEY AS TIDELANDS, ENVIRONMENTALLY SENSITIVE AREAS ARE NOT LOCATED BY THIS SURVEY.
- PROPERTY KNOWN AND DESIGNATED AS LOT 9 OF BLOCK 502, SITUATED IN WESTFIELD TOWNSHIP, UNION COUNTY, NEW JERSEY.
- OFFSET DIMENSIONS FROM STRUCTURES TO PROPERTY LINES SHOWN HEREON ARE NOT TO BE USED FOR ESTABLISHING PROPERTY LINES.
- UTILITY LOCATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.
- POOL CONSTRUCTION SHALL BE INSTALLED TO INITIAL CARTIDGE TYPE THEREFOR NO BACKWASHING IS REQUIRED.
- THE PUBLIC SIDEWALK AT THE STREET, IF DAMAGED BY POOL CONSTRUCTION ACTIVITY, MUST BE REPLACED USING 4,500 PSI CONCRETE.

**TEMPORARY STABILIZATION SPECIFICATIONS**

- Site Preparation**
  - Grass as needed and feasible to permit the use of conventional equipment for seeded preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.
  - Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.
  - Conductivity prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading, pg. 19-1.
  - Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
  - Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.
- Seeded Preparation**
  - Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample millers are available from the local Rutgers Cooperative Extension office (<http://njcrop.rutgers.edu/county/>). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-12 or equivalent with 10% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-third the rate determined based on seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
  - Work time and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with 4-1 Standards for Soil Erosion and Sediment Control in New Jersey January 2014.
  - Disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour and continuous uniform seedbed is prepared.
  - High acid producing soils, soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of high quality peat or a similar material before initiating seeded preparation. See Standard for Management of High Acid-Producing Soils for specific requirements.
- Seeding**
  - Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
  - Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
  - Warm-season grasses and legumes which maximize growth at high temperatures, generally 85°F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
  - Cool-season grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65°F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of seed germination preparation to a depth of 1/4 to 1/2 inch by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.
  - Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or catpawker seeder. Except for drilled, hydroseeded or catpawker seedings, seed shall be incorporated into the soil within 24 hours of seeding preparation to a depth of 1/4 to 1/2 inch by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.
  - Hydro seeding is a broadcast seeding method usually involving a truck or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall be applied to the soil surface. Short-fibered mulch may be applied with hydro seeding following seeding. (also see Section 4-Mulching below). Hydro seeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.
  - Mulching**
    - Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be 4-2 Standards for Soil Erosion and Sediment Control in New Jersey January 2014. The mulching requirements are:
    - Straw or Hay, Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except where a crimper is used instead of a liquid mulch-binder (tackifier or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blenders must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.
    - Application - Spread mulch uniformly by hand or mechanically so that approximately 90% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square foot sections and distribute 70 to 90 pounds within each section.
    - Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods:
      - Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
      - Mulch Netting - Use coarse paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
      - Crimper (mulch anchoring tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
      - Liquid Mulch-Binders - May be used to anchor soil, hay or straw mulch.
      - Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
    - Use one of the following:
      - Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
      - Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names given above are registered trademarks. This does not constitute a commendation of these products to the exclusion of other products.
  - Wood-fiber or paper-fiber mulch shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Pelletized mulch, compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on annual or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.



**LOT COVERAGE**

EXISTING:	LOT AREA = 21,758 S.F.
DWELLING & PORCH	3,350 S.F.
DRIVEWAY (pavers/bitum.)	3,402 S.F.
FRONT STEPS/WALK (pavers)	344 S.F.
GARAGE	445 S.F.
PATIO/STEPS (slate)	1,304 S.F.
SUBTOTAL	8,845 S.F. = 40.7%
PROPOSED:	
DRIVEWAY (TBR)	-3,402 S.F.
FRONT STEPS/WALK (TBR)	-344 S.F.
PATIO/STEPS (TBR)	-1,304 S.F.
POOL WATER SURFACE	700 S.F.
POOL WATER/COPING	1,084 S.F.
FILTER PAD	24 S.F.
FRONT WALK	444 S.F.
DRIVEWAY	3,510 S.F.
PATIO/WALKS AT HOUSE	1,432 S.F.
SUBTOTAL	2,153 S.F. = 50.6%

**STABILIZATION WITH MULCH ONLY**

- Site Preparation**
  - Grass as needed and feasible to permit the use of conventional equipment for seeded preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading.
  - Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.
- Protective Materials**
  - Unrotted small grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. soil cannot be seen below the mulch.
  - Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
  - Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.
  - Mulch netting, such as paper, jute, excelsior, cotton, or plastic, may be used.
  - Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into inlet and pipe.
  - Gravel, crushed stone, or slag of the size of 3/8 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. See 2 or 3 ASTM C-333 is recommended.
- Mulch Anchoring** - should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and the steepness of slopes:
  - Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
  - Mulch Netting - Use coarse paper, jute, cotton, or plastic nettings over mulch. Use degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
  - Crimper (mulch anchoring tool) - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice offers maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.
  - Liquid Mulch-Binders - Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
- Use one of the following:
  - Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
  - Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates and conditions recommended by the manufacturer and remain tacky until germination of grass.

**SILT FENCE DETAIL**



NO.	REV.	REVISIONS	DATE	DRAWN	CHECKED
1	REV.	FENCE PER CLIENT	09/03/20	CWM	CDL

**POOL AND PATIO GRADING PLAN**  
PREPARED FOR:  
"PELLETIER" 12 BREEZE KNOLL DRIVE (SEASONAL WORLD)  
LOT 9 OF BLOCK 502  
TAX MAP SHEET NO. 5  
SITUATED IN:  
WESTFIELD TOWNSHIP, UNION COUNTY, NEW JERSEY

**MIDSTATE ENGINEERING, INC.**  
ENGINEERS, SURVEYORS & PLANNERS  
82 WALNUT HILL LANE  
FRENCHVILLE, NJ 07728  
(732) 308-4228  
(908) 725-2830  
CERT. OF AUTHORIZATION NO. GA27692

**CHESTER DILORENZO P.E., S.F.P.**  
P.E. & L.S. LICENSE NO. 28966 P.P. LICENSE NO. 28171

DATE: 04/20/20  
SCALE: 1" = 20'  
DRAWN: CDL  
CHECKED: CDL  
FILE NO.: 12543  
SHEET: 2 OF 2