



TRI-STATE ENGINEERS AND LAND SURVEYORS, INC.

Civil Engineers ▪ Sanitary Engineers ▪ Municipal Engineers ▪ Land Surveyors ▪ Land Planners

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February 13, 2023

Project No: 22-03012

Mr. Kenneth Farrall, PLS, Planning and Zoning Director
Bensalem Township
2400 Byberry Road
Bensalem, PA 19020

**RE: Lot Line Change Plan Review
1206 Crespo Lane
TMP # 02-019-197
Bensalem Township, Bucks County, PA
Project No. BTSO.00230**

Dear Mr. Farrall:

On behalf of our client, Iftikhar Chaudhry, enclosed please find a Subdivision package consisting of the following documents for the above referenced project:

1. 12 *hard copies* & 1 *digital copy* – Lot Line Change Plans (Full Set), dated 04/11/2022 last revised 1/2/23
2. 1 *hard copies* & 1 *digital copy* – Soil Testing Results (Penns Trail Environmental)
3. 1 *hard copies* & 1 *digital copy* – Buck County Conservation District Adequate Letter

The following is a point-by-point response (shown in Bold) to TPD's review letter dated November 18th, 2022

A. Zoning Ordinance Comments

1. Sec. 232-125. – Area regulations
 - a. Not more than 35% of the net lot area may be covered by impervious cover including the building area. In the existing condition for parcel 02-072-478, the impervious cover is 44.7%, an existing non-conforming condition. In the proposed condition, the impervious cover is improved at 38.9% including the gravel areas. The zoning table on the plans should be revised accordingly.
 - b. One front yard shall be provided not less than 35 feet in depth. The existing front yard for TMP-02-078-478 is 28.8 feet deep, measured to the front sidewalk. The zoning table lists the dimension as 36.6 feet. The zoning table should be revised, and a note added that this is an existing non-conforming condition. The dimension on the plans should also be updated accordingly.

Response: After conversations with the township engineer, these comments are no longer applicable.

B. Subdivision and Land Development Ordinance Comments.

1. Sec. 201-41. – Preliminary plan requirements.

- a) Please update the adjacent parcel labels to include the land use and zoning classification of each parcel.

Response: The parcel labels have been updated.

- b) Please add the elevation to all existing lot line monuments.

Response: Elevations have been added to all existing monuments.

- c) The parcel lot line for parcel 02-072-478 should be a solid dark line.

Response: The parcel lot line has been revised to be a solid dark line.

- d) The location map should be updated as it should be at a scale sufficient to show the relation of the property to adjoining properties, streets, roads, and municipal boundaries existing within 2,500 feet of parcel 02-072-478.

Response: The location map has been revised.

- e) The soils type and their associated boundaries (taken from the United States Soil Conservation Service Maps) should be added to the plans.

Response: The soils type has been added to the plan. Additionally, the entire site is OTHELLO SILT LOAMS.

- f) All existing sewer lines, water lines, fire hydrants, utility transmission lines, culverts, bridges, railroads, or other manmade features within the boundaries of parcel 02-072-478.

Response: Additional topographic and survey was completed to show as much manmade features within the boundaries.

- g) The proposed contours for all areas where the grades are being altered shall be added to the plans and shown as solid lines and the elevations clearly labeled.

Response: Propose contours have been added to the plan set.

- h) Provide the size and material of each existing water, sanitary sewer and storm sewer lines and other drainage facilities along with the connections of any proposed lines or facilities.

Response: Additional topographic and survey was completed to show these features. Additionally, there are no proposed connections.

2. Sec. 201-106. – Environmental protection and open space preservation.

- a) All lots shall provide proper drainage away from buildings. Please provide the proposed grading for the location of the removal of the building extension at the rear of the principal dwelling.

Response: The proposed grading has been shown on the plan set.

- b) All drainage provisions shall be designed to adequately handle the surface run-off and carry it to the nearest suitable outlet. Please provide the existing storm drain structures that the proposed storm drainage system is tying into.

Response: The proposed stormwater management system is an on-lot underground seepage pit. The stormwater will not be discharged off site.

- c) Existing trees and tree lines should be shown on the plans for review. The lot is required to have five (5) street trees planted along the frontage of Crespo Lane and two (2) trees planted within the lot.

Response: The existing trees along Crespo Lane, in front of our site have been shown on the plans.

- d) Provide a tree protection zone (TPZ) on the Erosion Sediment Control Plan along with the appropriate details.

Response: The existing trees along Crespo Lane, in front of our site have been shown on the plans.

C. Stormwater Management Ordinance Comments

1. Sec. 196.6. – Exemptions.

- a) The total impervious surface of the proposed conditions is greater than 5,000 square feet therefore the project is not exempt from peak rate control requirements, or volume control requirements and shall provide a stormwater management (SWM) site plan.

Response: Through conversations with the township engineer the project only increases the impervious surface by 1,716 sf. This calculation is shown on sheet 2 of 5. Additionally the stormwater management system was sized to include the existing basketball court as well.

2. Sec. 196-31. – General requirements.

- a) A separate SWM plan should be provided in accordance with Section 196-47 of Bensalem Township Ordinance.

Response: Through conversations with the township engineer this comment is no longer applicable.

- b) For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this chapter. Please update the impervious surfaces table to include the gravel surfaces.

Response: Through conversations with the township engineer this comment is no longer applicable due to landscaping gravel not being compacted and not considered impervious.

- c) Infiltration BMPs should be spread out, made as shallow as practicable, and located to maximize the use of natural on-site infiltration features while still meeting the other requirements of this chapter.

Response: Understood

- d) Infiltration BMPs should be spread out, made as shallow as practicable, and located to maximize the use of natural on-site infiltration features while still meeting the other requirements of this chapter.

Response: Understood

- e) Storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.
 - a. It is noted, based on the provided calculations the proposed seepage pit meets volume control. However, infiltration testing information per Appendix C of the PA BMP Manual should be provided for review.
 - b. Please provide calculations for the peak rate control capacities.

Response: Soil testing was performed and copy of the results have been attached.

- f) The design storm volumes to be used in the analysis of peak rates of discharge should be obtained from the Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA).

Response: Through conversations with the township engineer this comment is no longer applicable due to the project being within the exemption threshold.

3. Sec. 196-31. – General requirements.

- a) Infiltration BMPs intended to receive runoff from developed areas shall be selected based on the suitability of soils and site conditions.

Response: Soil testing has been performed and the soils were deemed suitable for infiltration.

4. Sec. 196-35. – Stormwater peak rate control and management districts.

- a) Proposed conditions rates of runoff from any regulated activity shall not exceed the peak release rates of runoff from existing conditions for the 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year design storms.

Response: Through conversations with the township engineer this comment is no longer applicable due to the project being within the exemption threshold.

5. Sec. 196-35. – Calculation methodology.

- a) Please identify the methodology utilized and provide the associated calculations for review.

Response: The proposed system was designed using the simplified method for small projects.

6. Sec. 196-47. – SWM site plan requirements.

- a) The accompanying information should either be provided in the post stormwater management plan or on the SWM site plan. Please provide the following information:

- i. All reviews and letters of adequacy from the Conservation District for the erosion and sedimentation control plan.

Response: Understood, a copy of the approval has been attached.

- ii. General description of proposed SWM techniques

Response: An underground on-lot seepage pit has been designed to capture the additional impervious generated by the project.

- iii. Complete hydraulic and hydrologic computations, volume control and peak rate control should be addressed

Response: Through conversations with the township engineer this comment is no longer applicable due to the project being within the exemption threshold.

- b) The SWM site plan shall provide the location of all on site existing and proposed utilities, sanitary sewers, on-site septic systems, wells, water lines and stormwater BMPs.

Response: Additional survey has been added to the plan set to show additional utilities

- c) The stormwater system, being tied into, shall also be depicted with the grate and invert elevations.

Response: The project proposes an on-lot seepage pit, this on-lot system will not tie into any existing stormwater management system.

- d) The impervious areas with the listing of total amount of impervious surfaces, to include the gravel areas, and the total land disturbance.

Response: Through conversations with the township engineer this comment is no longer applicable due to landscaping gravel not being compacted and not considered impervious.

- e) Pre-and post- drainage area maps including drainage areas to each inlet or structure, and an overall post construction stormwater management plan should be provided for review.

Response: Through conversations with the township engineer this comment is no longer applicable due to the project being within the exemption threshold.

- f) The locations and minimum setback distances of existing on-lot wastewater and water supply well, if applicable should be added to the plans.

Response: The existing lot is serviced by public water and sewer.

- g) Any existing trees and tree lines on the property should be shown.

Response: The existing trees have been shown on the lot.

- h) The following signature block for the Design Engineer: "I, (Design Engineer), on this date (date of signature), hereby certify that the SWM Site Plan meets all design standards and criteria of The Neshaminy Creek Watershed Act 167 Stormwater Management Ordinance or Plan."

Response: This signature block has been added to the plan.

- i) A statement, signed by the applicant or site owner, acknowledging that any revision to the approved SWM site plan must be approved by the Township and that a revised E&S plan may be required to be submitted to the Conservation District.

Response: This signature block has been added to the plan.

- j) Additionally, the statement should also include a note a note acknowledging that the stormwater BMPs are fixtures that cannot be altered or removed unless approved by the Township.

Response: This statement has been added to the owners signature block.

7. Sec. 196-61. – Design criteria.

- a) Storm sewer pipes or other structure shall be reinforced concrete pipe and have a minimum grade of ½ 0/0 and a minimum inside diameter of 18 inches. It is noted that 6" PVC pipe is proposed. A larger HDPE might be more appropriate for this design.

Response: The only proposed pipe proposed outside of the on-lot seepage pit, is the 6" PVC roof leaders. 6" PVC is an industry standard size and material used for roof leaders.

- b) The storm drain system shall be designed to carry a 100-year peak flow rate. Provide the appropriate calculations and list the 100-year peak flow rate into each inlet on the drawings.

Response: Through conversations with the township engineer this comment is no longer applicable due to the project being within the exemption threshold.

- c) The downstream storm drain system that the on-site system is tying into should be added to the plans and calculations to ensure capacity.

Response: Due to the proposed increase in stormwater runoff being handled by an on-lot seepage pit and not discharging off site, this comment is no longer applicable.

- d) A certification from an experienced soils scientist should be provided that includes at a minimum, the locations and results of all test borings, test pits or augur holes in order to determine the type of soil, seasonal high-water level and slope and depth to bedrock. Soils testing should be conducted per PA BMP Manual Appendix C.

Response: Soil testing has been performed by Penns Trail Environmental.

- e) Permeability testing results should be provided for review. Permeability testing should be conducted per PA BMP Manual Appendix C.

Response: Soil testing results have been attached for review.

General Comments

1. Any references to "Borough" should be revised to Bensalem Township or Township.

Response: All references have been borough have been removed.

2. Remove the signature block: "I, Larry Young on this date (09/19/22), Have reviewed and hereby certify that the drainage plan meets all design standards and criteria of The Neshaminy Creek Watershed Act 167 Stormwater Management Ordinance." A similar statement is required to be added to the Stormwater management (SWM) Site Plan.

Response: This signature block has been removed and the new signature block has been added to the site plan.

3. The 2nd Stormwater Management certification statement on sheet 1 should be removed as a similar note is to be added to the SWM Site Plan.

Response: This signature block has been removed and the new signature block has been added to the site plan.

If you have any questions or require additional information, please do not hesitate to contact Cody Spadaccino at 215-357-5950 ext. 102.

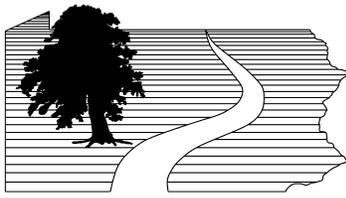
Sincerely,

James Oakes

James Oakes PLS

Tri-State Engineers & Land Surveyors, Inc.

joakes@tse-ls.com



Penn's Trail Environmental, LLC
21 East Lincoln Ave - Suite 160
Hatfield, PA 19440
Phone: (215) 362-4610
e-mail: staff@pennstrail.com

Iftikhar Chaudhry
1206 Crespo Lane
Bensalem, PA 19020

January 30, 2023

RE: Stormwater Infiltration Report
1206 Crespo Lane Tract
Bensalem Twp., Bucks Co., PA
PTE #1112-1

Dear Mr. Chaudhry;

Penn's Trail Environmental, LLC has performed a subsurface soil and permeability investigation on the referenced parcel. The intent of this investigation was to evaluate the subsurface soil profile and determine the permeability characteristics of the area indicated for proposed stormwater disposal via infiltration. A test excavation was developed with a backhoe and described in accordance with United States Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) methodology. In-situ permeability testing was conducted using the Double Ring Infiltrometer (DRI) method as described by ASTM-D3385-09 standards.

Current regulation requires that stormwater control be designed for this proposed new land development project. Permeability testing is required to determine if infiltrative capacity of the subsoil is present. The test location was positioned at the direction of the project engineer. Depth of testing was determined by final constructed grade of the stormwater facility or adjusted for shallow bedrock or groundwater encountered in the test excavation. A backhoe was required for excavation of the test probe and establishment of the double rings.

A soil profile description was developed at the test point and includes information such as texture, structure, soil depth, and indication (or lack thereof) of a seasonal high-water table or restricted drainage as would be indicated by redoximorphic features.

Redox features often occur when infiltrating water encounters a slowly permeable layer as it moves downward through the soil profile. These features do not indicate a true water table or zone that is saturated for prolonged periods by regional groundwater at this site. Regional groundwater was not encountered at this site.

Pre-development USDA-NRCS soil mapping at this site, or more specifically the test location, was the Urban Land - Othello soil series. The Othello series consists of very deep, poorly drained soils formed in silty eolian deposits and/or fluvio-marine sediments. Saturated hydraulic conductivity is moderately high in the solum. Diagnostic horizons and other diagnostic soil characteristics recognized in this pedon are an ochric epipedon from 0 to 14 inches (Oi, A and Eg horizons), an argillic horizon from 14 to 42 inches (Btg1, Btg2 and 2Btg3 horizons), and aquic conditions from 3 inches to a depth of 80 inches is periodically saturated (endosaturation).

The soil at the testing location was found to be better drained than mapped. The soils derived primarily from gneiss are more accurately classified as Gladstone soil series and taxadjuncts thereto. While deviation from published mapping was encountered at this site, this investigation was not conducted for the purpose of disputing current mapping or as a re-mapping effort.

A soil profile of the backhoe excavated test pit was developed to a depth at or near final constructed grade of proposed stormwater control facility. The most restrictive barriers from

the point of infiltration to contacting the base flow groundwater table were determined. The most common of these barriers in our region include restrictive soil horizons, varying lithology, fracturing of the bedrock or insufficient fracturing of the bedrock, and encountering groundwater among other factors. Subsequent detailed testing more accurately predicts the ability of the soil to efficiently infiltrate stormwater and has been attached.

Testing sought to identify zones that would potentially allow the infiltration of stormwater. The testing protocol used considers regional construction practices, the likelihood of “silting in” during and following construction and the subsurface characteristics of the soil and geology. The determination at this site was that no restrictive condition was encountered to establish installation depth for infiltration of stormwater. The double rings were established at a level with sufficient residual subsoil above groundwater and bedrock to seat and seal the rings permitting unsaturated flow through the soil to the water table.

The recommended acceptable range for subsurface disposal of stormwater is 0.10 inches per hour to 10.0 inches per hour according to current BMP guidance. Surface basins where additional storage is economical can have much slower rates and still provide some infiltration. Our office recommends that the design engineer assume zero infiltration for any stormwater area which achieves less than 0.10 inches per hour.

There are various means to arrive at an infiltrative rate for the substratum following testing. Our method is to average the last four stabilized readings as established in the PA BMP Manual. Another is to use the “last” reading as is common for percolation testing for wastewater disposal. Averaging more accurately reflects what would likely occur during a rain (soil saturation) event.

Testing was conducted at a discreet location selected by the project engineer using double ring infiltrometers. Data sheets containing the information recorded for the soil profile descriptions and double ring infiltrometers have been included as attachments to this report. A table summarizing the field data can be found below:

Stormwater Testing Summary						
Test Location	Depth of Test Pit Inches	Depth to Water Inches	Depth to Rock Inches	Depth of Testing Inches	Infiltration Rate Inches per hour	Geometric Mean Inches per hour
1A	92	---	---	66	4.27	3.74
1B	92	---	---	66	3.27	

The soils encountered demonstrated good infiltration rates. Subsurface conditions may change following construction and resultant redirection of surface water following development. Results suggest that the infiltration rates at tested locations 1A and 1B are within the recommended guidelines even after a safety factor of two is applied. The geometric mean of infiltration rates 1A and 1B best represents the infiltration rate at test location 1. The geometric mean better represents the infiltration rate than average results which also fall within the recommended 0.10 to 10.0 inches per hour range after a safety factor of two is applied.

In tested location stormwater control devices can include surface and subsurface facilities that allow the design engineer flexibility in reducing velocity containing and disposing of stormwater on this site in select areas due to the sandy composition of the soil at this site. Surface features such as vegetated swales and berms can be employed to reduce overland flow and retain water in-situ thus extending contact time and providing for additional infiltration.

Our findings are a result of testing conducted in specific locations and conditions. Should evidence contrary to the findings in this report be discovered prior to, during, or after construction of the stormwater control devices, our office must be notified immediately so our recommendations can be reviewed and revised if necessary.

Penn's Trail Environmental, LLC expresses no guarantee that the soil conditions following excavation will be identical to those encountered during this investigation. We recommend that caution is exercised during construction to minimize compaction, or other disturbance in those areas intended for use as infiltration areas.

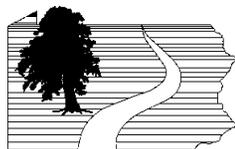
Please review the enclosed information and if any questions arise do not hesitate to contact our office.

Sincerely,
Penn's Trail Environmental, LLC



Paul A. Golrick
Soil Scientist

Penn's Trail Environmental, LLC



21 East Lincoln Ave - Suite 160
 Hatfield, PA 19440
 ph. (215) 362-4610

Date: 1/30/23 Pit # 1 PTE # 1112-1
 Project: 1206 Crespo Lane Tract
 Location: 1206 Crespo Lane Tract
Bensalem Twp., Bucks Co., PA
 Soil Series Gladstone

Horizon	Depth (in.)	Color	Redox Features	Texture	Structure	Consistence	Boundary
Ap	0-7	10YR 3/4		sandy loam	moderate medium gr	very friable	clear smooth
Bt	7-29	10YR 6/6		sandy loam	moderate medium sbk	friable	clear irregular
C1	29-74	10YR 5/2		sandy loam	weak medium sbk	very friable	clear irregular
C2	74-92	10YR 5/2		channery sandy loam	weak fine sbk	friable	

Soil Scientist: Terry Harris

Notes

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Ultisol

DRAINAGE CLASS

Well Drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Residuum

BEDROCK LITHOLOGY

Gneiss

REDOX FEATURES

Abundance

Few <2%

Common .. 2-20%

Many >20%

Contrast

faint

hue & chroma of matrix and redox are closely related.

distinct

matrix & redox features vary 1-2 units of hue and several units of chroma & value.

prominent

Matrix & redox features vary several units in hue, value & chroma.

STRUCTURE

Grade

Structureless - No observable aggregation or arrangement of lines of weakness.

Weak - Poorly formed, indistinct peds barely observable in place.

Moderate - Well-formed, distinct peds moderately durable & evident in place.

Strong - Durable peds evident in undisturbed soil & become separated when disturbed.

COURSE FRAGMENTS (% of profile)

15-35% **35-65%** **>65%**

gravelly very gravelly extremely gravelly

channery very channery extremely channery

cobbly very cobbly extremely cobbly

flaggy very flaggy extremely flaggy

stony very stony extremely stony

BOUNDARY

Distinctness

abrupt ... <1" (thick)

gradual ... 2.5-5"

clear ... 1-2.5"

diffuse ... >5"

Topography

smooth - boundary is nearly level

wavy - pockets with width greater than depth

irregular - pockets with depth greater than width

broken - boundary is discontinuous

and interrupted

Type

pl - platy

pr - prismatic

cpr - columnar

gr - granular

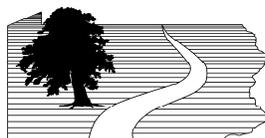
abk - angular blocky

sbk - subangular blocky

Double Ring Infiltrometer Data Reporting Sheet

Job Name:	1206 Crespo Lane Tract	Job #:	1112-1
Location:	1206 Crespo Lane	Date:	1/30/2023
Township:	Bensalem	Ring #:	1A
County:	Bucks	Technician:	Terry Harris
Witness:	-----	Tax Parcel:	02-072-478
Water Temp:	40's °F	Weather:	sunny 50's °F
Test Depth:	66 inches	pH:	6.9

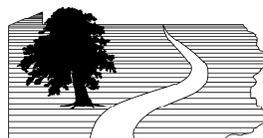
Time (hr:min)	Interval (min)	Inner Ring Drop (in)	Inner Ring Volume change (ml)	Outer Ring Drop (in)	Outer Ring Volume Change (ml)	Rate (ml/min)	Infiltration rate (in/hr)
8:05 AM	X		fill		fill	X	X
8:35 AM	30	3 2/8	1,510	2 7/8	2,380	50.33	6.52
9:05 AM	30	2 3/8	1,120	1 5/8	1,370	37.33	4.83
9:15 AM	10	6/8	330	6/8	570	33.00	4.27
9:25 AM	10	7/8	400	5/8	510	40.00	5.18
9:35 AM	10	5/8	280	5/8	490	28.00	3.63
9:45 AM	10	5/8	310	5/8	510	31.00	4.01
<i>Average</i>	X		330.00		520.00	33.00	4.27



Double Ring Infiltrometer Data Reporting Sheet

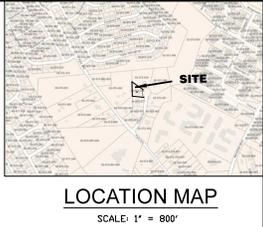
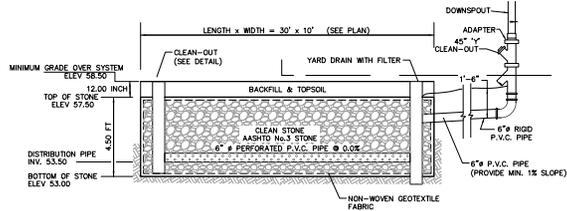
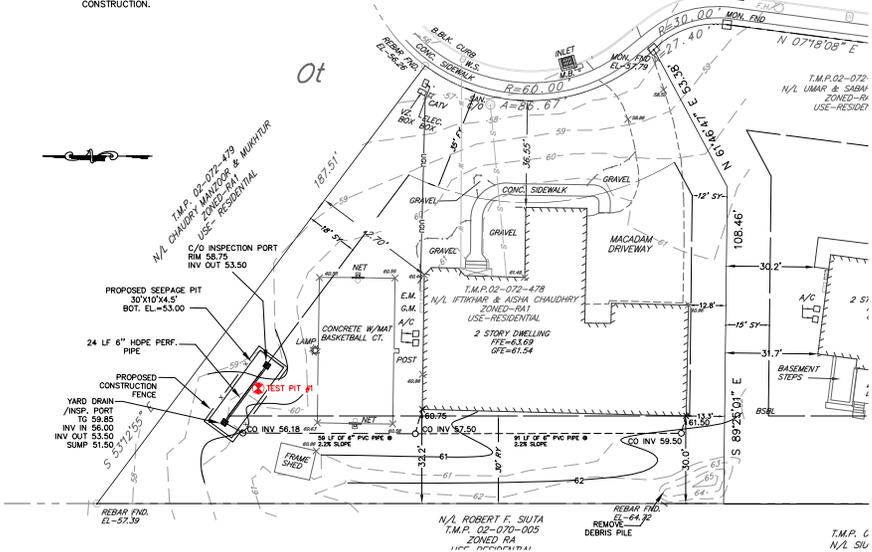
Job Name:	1206 Crespo Lane Tract	Job #:	1112-1
Location:	1206 Crespo Lane	Date:	1/30/2023
Township:	Bensalem	Ring #:	1B
County:	Bucks	Technician:	Terry Harris
Witness:	-----	Tax Parcel:	02-072-478
Water Temp:	40's °F	Weather:	sunny 50's °F
Test Depth:	66 inches	pH:	6.9

Time (hr:min)	Interval (min)	Inner Ring Drop (in)	Inner Ring Volume change (ml)	Outer Ring Drop (in)	Outer Ring Volume Change (ml)	Rate (ml/min)	Infiltration rate (in/hr)
8:05 AM	X		fill		fill	X	X
8:35 AM	30	2 7/8	1,350	3 1/8	2,540	45.00	5.83
9:05 AM	30	2 1/8	980	2 5/8	2,160	32.67	4.23
9:15 AM	10	4/8	240	6/8	600	24.00	3.11
9:25 AM	10	5/8	290	6/8	610	29.00	3.75
9:35 AM	10	4/8	210	5/8	490	21.00	2.72
9:45 AM	10	5/8	270	5/8	520	27.00	3.50
<i>Average</i>	X		252.50		555.00	25.25	3.27



NOTE: EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO THE START OF CONSTRUCTION.

CRESPO LANE (50' WIDE)



- NOTES:**
- SUBSURFACE INFILTRATION BED FILTER FABRIC AND STONE SHALL 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 THE FABRIC, STONE, BED, ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
 - ALL STONE FOR THE CONSTRUCTION OF THE SUBSURFACE INFILTRATION BEDS SHALL BE UNIFORMLY GRADED AND CLEAN WASHED AGGREGATE.
 - THE BOTTOM OF ALL SUBSURFACE INFILTRATION BEDS SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.
 - CONTRACTOR SHALL MINIMIZE DISTURBANCE TO SUBGRADE DURING CONSTRUCTION.
 - A MINIMUM SOIL DEPTH OF TWENTY-FOUR (24) INCHES SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE INFILTRATION BED AND THE LIMITING ZONE (SEASONALLY HIGH WATER TABLE OR TOP OF BEDROCK), IN ORDER TO DETERMINE IF THE MINIMUM 24\"/>
- CONSTRUCTION REQUIREMENTS:**
- EXCAVATION FOR THE INFILTRATION FACILITY SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE SEEPAGE BED/BENCH OR LIKE FACILITY.
 - THE BOTTOM OF THE BED AND/OR TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
 - ONLY CLEAN AGGREGATE, FREE OF FINES, SHALL BE ALLOWED.
 - THE TOP AND SIDES OF ALL SEEPAGE BEDS, TRENCHES, OR LIKE FACILITIES SHALL BE COVERED WITH DRAINAGE FILTRATION FABRIC.

STORMWATER MANAGEMENT CALCULATIONS:

STORMWATER MANAGEMENT HAS BEEN DESIGNED IN ACCORDANCE WITH THE SMALL PROJECT STORMWATER MANAGEMENT (SWM) SITE PLAN REGULATIONS PER BENSALEM TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 196.

- IMPERVIOUS SURFACE TWP 02-072-078:
 - EXISTING: 0.0 SF
 - PROPOSED: 3,026.5 SF
 - NET CHANGE: 3,026.5 SF (INCLUDES BUILDING ADDITION (1,720 SF) AND BASKETBALL COURT (1,306.5))
- STORMWATER MANAGEMENT WILL BE PROVIDED TO CAPTURE THE RUNOFF FROM ALL NEW IMPERVIOUS (3,026.5 SF).
- RECHARGE VOLUME CALCULATION:
 - $R_v = (2.0 \text{ INCH RAINFALL} \times 3,026.5 \text{ SF}) / 12 = 504.42 \text{ OF}$
 - $R_v = 505 \text{ OF}$

UNDERGROUND SEEPAGE BED SIZING:

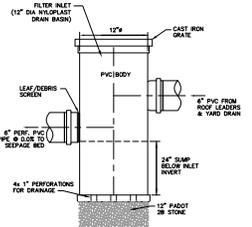
- REQUIRED VOLUME:
 - 505 OF / 40% = 1,262.5 OF REQUIRED
 - ASSUMES 40% VOID RATIO IN STONE BED
- PROVIDED VOLUME (UNDERGROUND SEEPAGE BED):
 - LENGTH x WIDTH x DEPTH = 30' x 10' x 4.5' = 1,350 OF (SEE DETAIL BELOW)
 - BED STORAGE:
 - LENGTH x WIDTH x DEPTH = 30' x 10' x 4.5' = 1,350 x 40% = 540.00 OF
 - TOTAL STORAGE = 540.00 OF

DRAIN TIME CALCULATION:

- TOTAL RUNOFF STORAGE PROVIDED:
 - VOLUME OF RUNOFF REQUIRED = 505 OF
 - PROPOSED FACILITY: 30' x 10' x 4.5' (1,350 CU/FT STONE = 540 CU/FT STORAGE AT 40% VOID)
- DRAIN TIME (UNDERGROUND SEEPAGE BED):
 - INFILTRATION RATE: 5 M/HR
 - 540 cu/ft x 12in/1 ft
 - 300 sq ft x 3 in/hr
 - TIME TO DRAIN: 43.2 HRS

POST-CONSTRUCTION BMPs OPERATIONS & MAINTENANCE PROCEDURES:

- THE PROPOSED STORMWATER MANAGEMENT FACILITY OPERATES UNDER PASSIVE HYDRAULIC CONDITIONS. THE HOMEOWNER IS TO OWN AND MAINTAIN THE UNDERGROUND INFILTRATION BED. THE UNDERGROUND INFILTRATION BED SHOULD BE INSPECTED ON AN ANNUAL BASIS AND AFTER VERY LARGE RAINFALL EVENTS. THIS PERIODIC INFILTRATION BED INSPECTIONS SHOULD INCLUDE INSPECTION OF THE UNDERGROUND PIPING SYSTEM THROUGH THE CLEANOUTS TO IDENTIFY ANY REQUIRED STRUCTURAL REPAIRS. MAINTENANCE INCLUDES TRASH REMOVAL.
- THE OWNER OF THE LOT SHALL SIGN AN OPERATIONS AND MAINTENANCE AGREEMENT WITH BRISTOL TOWNSHIP FOR THE PROPOSED STORMWATER FACILITIES AND BMPs. THIS AGREEMENT SHALL BE IN A FORM ACCEPTABLE TO THE TOWNSHIP SOLLICITOR AND EXECUTED BY THE OWNER AND BRISTOL TOWNSHIP AND BE RECORDED AT THE BUCKS COUNTY COURTHOUSE AS A RESTRICTIVE DEED COVENANT THAT RUNS WITH THE LAND AND SHALL BE TRANSFERRED WITH TRANSFER OF OWNERSHIP.
- THE MUNICIPALITY SHALL PROVIDE CONSTRUCTION OBSERVATION FOR THE STORMWATER MANAGEMENT FACILITIES, AS DEEMED NECESSARY BY THE MUNICIPAL REPRESENTATIVES.
- NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY STORMWATER MANAGEMENT BMP FACILITIES, AREA, OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL FROM THE MUNICIPALITY MUST BE OBTAINED.
- THE TOWNSHIP SHALL HAVE THE RIGHT TO ACCESS THE PROPERTY TO PERFORM INSPECTIONS. THE TOWNSHIP ALSO HAS THE RIGHT TO PERFORM MAINTENANCE FOR THE PRESERVATION AND FUNCTION OF THE STORMWATER FACILITIES. IF EVENT THE OWNER DOES NOT PERFORM THE REQUIRED MAINTENANCE, THE TOWNSHIP ALSO HAS THE RIGHT TO INVOICE THE HOMEOWNER FOR ANYWHERE THE TOWNSHIP PERFORMS.
- THE OWNER HEREBY GRANTS THE TOWNSHIP A BLANKET EASEMENT TO ENTER THE PROPERTY TO PERFORM THE NECESSARY INSPECTIONS REQUIRED.
- NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER FACILITY OR BMP WHICH WOULD LIMIT OR ALTER THE FUNCTIONING OF SUCH STORMWATER FACILITY OR BMP WITHOUT THE WRITTEN APPROVAL OF THE MUNICIPALITY.
- DURING CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE TOWNSHIP ENGINEER'S OFFICE THREE DAYS PRIOR TO THE CONSTRUCTION OF THE PROPOSED INFILTRATION BMP STORMWATER MANAGEMENT FACILITY.
- AN AS-BUILT LOT PLAN OF ALL STORMWATER BMPs ARE REQUIRED UPON THE COMPLETION OF CONSTRUCTION.

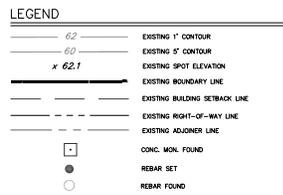


- NOTES:**
- 12\"/>

FILTER INLET DETAIL NOT TO SCALE

STORMWATER MANAGEMENT NOTES:

- NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY STORMWATER MANAGEMENT (SWM) BEST MANAGEMENT PRACTICES (BMPs), FACILITIES, AREA, OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL OF THE MUNICIPALITY HAS BEEN OBTAINED.
- NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER FACILITY OR BMP OR WITHIN A DRAINAGE EASEMENT WHICH WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER FACILITY OF BMP WITH THE WRITTEN APPROVAL OF THE MUNICIPALITY.
- THE APPLICANT GRANTS THE TOWNSHIP A BLANKET EASEMENT FOR ALL STORMWATER FACILITIES ON-SITE TO ALLOW THE TOWNSHIP TO PERFORM INSPECTIONS AND EMERGENCY MAINTENANCE, IF NECESSARY, OF THE SWM FACILITIES.



Penn's Trail Environmental, LLC
Stormwater Test Pit 1/30/2023

<p>NOTE: ALL DOCUMENTS PREPARED BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT THEY ARE NOT INTENDED OR REPRESENTED TO BE SURVEY FOR REUSE BY OWNERS OR OTHERS. THE EXTENT OF THE PROJECT OR ON ANY OTHER PROJECT MAY REUSE WITHOUT WRITTEN PERMISSION OR OBSERVATION BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. FOR THE SPECIFIC PURPOSE INTENDED WILL BE THE OWNERS SOLE RESPONSIBILITY WITHOUT LIABILITY. LEGAL EXPOSURE TO TRI-STATE ENGINEERS & LAND SURVEYORS, INC. AND OWNERS SHALL REMAIN AND FIELD KNOWLEDGE. TRI-STATE ENGINEERS & LAND SURVEYORS, INC. FORMAL CLAIMS, DAMAGES, LOSSES, AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.</p>	<p>Pennsylvania One Call System, Inc. 2022-1303006 Call Before You Dig In Pennsylvania 1-800-242-1776</p> <p>State Law Requires Construction Phase: Three working Days Notice Facility Owners: Member of One Call System</p>	<p>OWNER OF RECORD: TWP 02-072-478 ETRIKER & SIVIA CHAUDHRY 1208 CRESPO LANE BENSALEM, PA. 19020</p> <p>Job No: 22-03012 Date: 04-11-2022 Scale: 1"=20'</p> <p>Permit No.: 02-072-478</p> <p>Acreage: 21.926 ± SF/0.5026 AC. (TO TITLE LINE)</p> <p>Designed By: STAFF Drawn By: STAFF Checked By: JAO</p>	<p>1 PER TWP ENGINEERS REVIEW LETTER DATED 10/22/22 C.S.</p> <p>REVISION DESCRIPTION DATE DRAWN BY</p> <p>SCALE IN FEET</p>	<p>TRI-STATE ENGINEERS & LAND SURVEYORS, INC. CIVIL ENGINEERS • MUNICIPAL ENGINEERS • LAND SURVEYORS • LAND PLANNERS • LANDSCAPE ARCHITECTS 801 WEST STREET ROAD, FEASTERTVILLE, PENNSYLVANIA 19035 PHONE: 215-357-2550 FAX: 215-357-2535</p> <p>FOUNDED 1958</p>	<p>T.M.P. 02-072-478 1206 CRESPO LANE</p> <p>SITE PLAN</p> <p>BENSALEM TOWNSHIP BUCKS COUNTY, PA</p>	<p>SHEET 3 OF 5</p>
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ZONING DATA SUMMARY:

- 1. SITE ADDRESS: 1206 CRESPO LANE, BENSALEM, PA 19020
- 2. MUNICIPALITY: BENSALEM TOWNSHIP
- 3. TAX MAP NO.: 02-072-478 AND 02-072-477
- 4. LOT AREA: 02-072-478: GROSS/NET = 21,936.8 S.F. TO DEED LINE 02-072-477: GROSS/NET = 21,255.2 S.F. TO DEED LINE
- 5. ZONING DISTRICT: R-A-1 (RESIDENTIAL DISTRICT A-1)
- 6. PROPOSED USE: DETACHED DWELLING

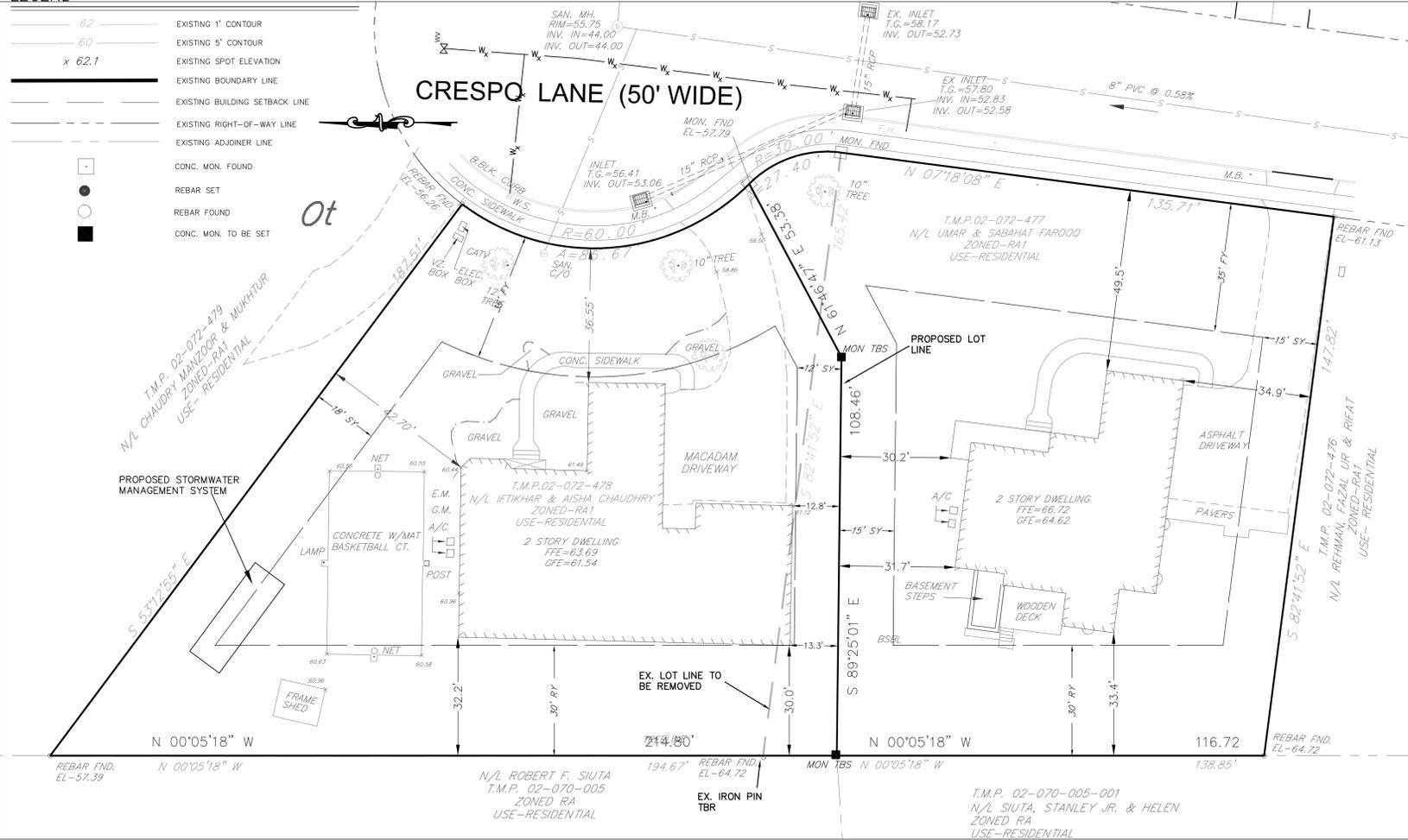
	REQUIRED	TMP-02-072-478		TMP-02-072-477	
		EXISTING	PROPOSED	EXISTING	PROPOSED
A. MINIMUM LOT AREA	20,000 S.F.	21,936.8 S.F.	22,878.05 S.F.	21,255.2 S.F.	20,314.00 S.F.
B. MINIMUM LOT WIDTH AT B.S.B.L.	80 FT.	129.4 FT.	125.2 FT.	135.71 FT.	140.8 FT.
C. MINIMUM FRONT YARD	35 FT.	36.6 FT.	36.6 FT.	49.5 FT.	49.5 FT.
D. MINIMUM REAR YARD	30 FT.	20.3 FT.**	30.0 FT.	33.4 FT.	33.4 FT.
E. MINIMUM SIDE YARD	12 FT./30 FT. AGR.	0.0 FT./42.7 FT.	12.8 FT./55.5 FT.	34.9 FT./75.3 FT.	30.2 FT./65.1 FT.
F. MAX. BUILDING COVERAGE (TOTAL)	30 %	24.60 %	19.07 %	13.50 %	13.31 %
G. MAX. IMP. SUR. RATIO (TOTAL)	35 %	40.40 % **	34.78 %	25.70 %	26.89 %
H. MAXIMUM BUILDING HT.	35 FT.	< 35 FT.	< 35 FT.	< 35 FT.	< 35 FT.

** - DENOTES EXISTING NON-CONFORMITY.

IMPERVIOUS SURFACE BREAKDOWN	TMP-02-072-478		TMP-02-072-477	
	EXISTING	PROPOSED	EXISTING	PROPOSED
• DWELLING WITH ATT. GARAGE	5,269.1 S.F.	4,363.0 S.F.	2,704.1 S.F.	2,704.1 S.F.
• DRIVEWAY	1,827.2 S.F.	1,827.2 S.F.	1,914.4 S.F.	1,914.4 S.F.
• COVERED PORCH	27.6 S.F.	27.6 S.F.	166.2 S.F.	166.2 S.F.
• STEPS & WALKS	297.4 S.F.	297.4 S.F.	670.7 S.F.	670.7 S.F.
• CONC. SPORT COURT	1,306.5 S.F.	1,306.5 S.F.	0.0 S.F.	0.0 S.F.
• SHED	126.8 S.F.	126.8 S.F.	0.0 S.F.	0.0 S.F.
• A/C UNITS	8.3 S.F.	8.3 S.F.	8.0 S.F.	8.0 S.F.
TOTAL IMPERVIOUS	8,862.9 S.F.	7,956.8 S.F.	5,463.4 S.F.	5,463.4 S.F.

LEGEND

- 62 - EXISTING 1' CONTOUR
- 60 - EXISTING 5' CONTOUR
- x 62.1 - EXISTING SPOT ELEVATION
- - - - - EXISTING BOUNDARY LINE
- - - - - EXISTING BUILDING SETBACK LINE
- - - - - EXISTING RIGHT-OF-WAY LINE
- - - - - EXISTING ADJOINER LINE
- - CONC. MON. FOUND
- - REBAR SET
- - REBAR FOUND
- - CONC. MON. TO BE SET



GENERAL NOTES:

- SITE TAX MAP PARCEL NUMBER T.M.P. 02-072-478. GROSS AREA 0.5036 ACRES / 21,936.8 S.F. (TO TITLE LINE). T.M.P. 02-072-477. GROSS AREA 0.4890 ACRES / 21,255.2 S.F. (TO TITLE LINE).
- PLAN REFERENCES: DEEDS, TAX MAPS AND LOT 4 ON A FILED MAP OF "RECORD SUBDIVISION PLAN FOR CRESPO ESTATES" BY VAN CLEEF ENGINEERING ASSOCIATES, NOVEMBER 7, 2002, LATEST REVISED FEBRUARY 16, 2004, RECORDED MAP 12, 2004 AS PLAN BOOK 317, PAGE 69. IN THE BUCKS COUNTY OFFICE OF THE RECORDER OF DEEDS IN DOVLESTOWN, PA. INSTRUMENT NO. 20060729.
- THE ELEVATIONS SHOWN ON THIS PLAN ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).
- THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO EASEMENTS AND DOCUMENTS (RECORDED AND UNRECORDED).
- A BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED FOR T.M.P. 02-072-478 BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. IN MARCH 2022.
- A BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED FOR T.M.P. 02-072-477 BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. IN MAY 2022.
- LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKS BY UTILITY OWNERS, AND/OR ABOVE GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE, ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWING. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF THE FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY TRI-STATE ENGINEERS AND LAND SURVEYORS, INC.
- SURVEY BENCHMARK - CONCRETE MONUMENT BETWEEN COMMON LINES OF 02-072-478 AND 02-072-477 (SHOWN) INV. ELEV. = 58.66
- THE PROPERTY IS DESIGNATED AS ZONE X (AREAS TO BE DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP OF BUCKS COUNTY, MAP NUMBER 42017C0589), EFFECTIVE MARCH 16, 2015.
- NO STEEP SLOPES, WOODLANDS OR FLOODPLAIN EXISTS ON THIS PROPERTY. ACCORDING TO THE US FISH AND WILDLIFE NATIONAL WETLANDS INVENTORY MAPPER, NO WETLANDS ARE MAPPED ON THIS PROPERTY.
- A PENNSYLVANIA ONE-CALL WAS MADE ON MAY 10, 2022 FOR THE REFERENCED SITE AND SERIAL #20221303008 WAS ASSIGNED.
- THE PROPERTY IS LOCATED IN STORMWATER MANAGEMENT DISTRICT (C), WHICH IS COVERED WITHIN THE NESHAMINY CREEK WATERSHED ACT 607 STORMWATER MANAGEMENT ORDINANCE.
- THERE ARE NO CURRENT DEED RESTRICTIONS IMPOSED ON THIS PROPERTY.
- THE APPLICANT SHALL NOTIFY THE TOWNSHIP ENGINEERS OFFICE A MINIMUM OF THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION AND THREE (3) DAYS PRIOR TO THE CONSTRUCTION OF THE PROPOSED INFILTRATION BMP STORMWATER MANAGEMENT FACILITY.
- THE OWNER(S) WILL BE REQUIRED TO ENTER INTO AN OPERATION AND MAINTENANCE AGREEMENT WITH BENSALEM TOWNSHIP FOR THE STORMWATER FACILITY PROPOSED ON THE LOT.
- NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER FACILITY OR BMP OR WITHIN A DRAINAGE EASEMENT WHICH WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER FACILITY OR BMP WITHOUT WRITTEN APPROVAL OF THE TOWNSHIP.
- NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER A STORMWATER MANAGEMENT (SWM) BEST MANAGEMENT PRACTICES (BMP'S) FACILITIES, AREA OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL OF THE MUNICIPALITY HAS BEEN OBTAINED.
- A BLANKET EASEMENT IS GRANTED TO THE MUNICIPALITY FOR THE PURPOSES OF INSPECTIONS AND EMERGENCY MAINTENANCE, IF NECESSARY, TO THE PROPOSED STORMWATER BMP'S.
- THE OWNER(S) OF THE LOT SHALL SIGN AN OPERATIONS AND MAINTENANCE AGREEMENT WITH BENSALEM TOWNSHIP FOR THE PROPOSED STORMWATER FACILITIES AND BMP'S. THIS AGREEMENT SHALL BE EXECUTED BY THE OWNER AND BENSALEM TOWNSHIP AND BE RECORDED AT THE BUCKS COUNTY COURTHOUSE.
- THE TOWNSHIP SHALL INSPECT ALL PHASES OF THE INSTALLATION OF THE BMP'S AND/OR STORMWATER MANAGEMENT FACILITIES AS DEEMED APPROPRIATE BY THE MUNICIPALITY. ALSO, THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEERS OFFICE THREE (3) DAYS PRIOR TO THE CONSTRUCTION OF THE PROPOSED INFILTRATION BMP STORMWATER MANAGEMENT FACILITY.
- THE PROPOSED STORMWATER MANAGEMENT PRACTICES (BMP'S) SHOWN ON THESE PLANS ARE A BASIC AND PERIPHERAL PART OF THE STORMWATER MANAGEMENT SYSTEM OF THE PROPOSED SITE LOCATED IN BENSALEM TOWNSHIP, BUCKS COUNTY, AND AS SUCH ARE TO BE PROTECTED AND PRESERVED IN ACCORDANCE WITH THIS PLAN BY THE HOMEOWNERS, AND SUCCESSORS OF THESE LANDS, BENSALEM TOWNSHIP AND/OR ITS AGENTS RESERVE THE RIGHT AND PRIVILEGE TO ENTER UPON THESE LANDS FROM TIME TO TIME FOR THE INSPECTION OF SAID FACILITIES IN ORDER TO DETERMINE THAT THE STRUCTURAL AND DESIGN INTEGRITY IS BEING MAINTAINED BY THE HOMEOWNER, AND THE PROPER OPERATION AND MAINTENANCE ARE BEING CONDUCTED. THIS SHALL BE UNDERSTOOD AS A GRANT OF A BLANKET EASEMENT TO BENSALEM TOWNSHIP, AN OPERATION & MAINTENANCE AGREEMENT SHALL BE EXECUTED.
- THE TOWNSHIP HAS THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY. THESE STORMWATER FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL OF THE TOWNSHIP HAS BEEN OBTAINED.
- THE HOMEOWNER IS RESPONSIBLE FOR MAINTENANCE OF PROPOSED STORMWATER MANAGEMENT FACILITIES AS REFERENCED ON THIS PLAN. THE SITE OWNER OF THIS TRACT HOLDS BENSALEM TOWNSHIP HARMLESS FOR ANY STORMWATER RUNOFF DIRECTED OFF-SITE. ALSO, THE HOMEOWNER SHALL EXECUTE AN OPERATIONS AND MAINTENANCE AGREEMENT WITH BENSALEM TOWNSHIP FOR THE MAINTENANCE OF THE BMP'S.

STORMWATER MANAGEMENT NOTES:

- NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY STORMWATER MANAGEMENT (SWM) BEST MANAGEMENT PRACTICES (BMP'S), FACILITIES, AREAS OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL OF THE MUNICIPALITY HAS BEEN OBTAINED.
- NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER FACILITY OR BMP OR WITHIN A DRAINAGE EASEMENT WHICH WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER FACILITY OF BMP WITH THE WRITTEN APPROVAL OF THE MUNICIPALITY.
- THE APPLICANT GRANTS THE TOWNSHIP A BLANKET EASEMENT FOR ALL STORMWATER FACILITIES ON-SITE TO ALLOW THE TOWNSHIP TO PERFORM INSPECTIONS AND EMERGENCY MAINTENANCE, IF NECESSARY, OF THE SWM FACILITIES.

BMPs OPERATION & MAINTENANCE:

- THE PROPOSED STORMWATER MANAGEMENT FACILITY OPERATES UNDER PASSIVE HYDRAULIC CONDITIONS. THE HOMEOWNER IS TO OWN AND MAINTAIN THE UNDERGROUND INFILTRATION BED (I.E. BALLAST PIT).
- INFILTRATION BED SHOULD BE INSPECTED AT LEAST FOUR (4) TIMES ANNUALLY AS WELL AS AFTER LARGE STORM EVENTS. THE PERIODIC INFILTRATION BED INSPECTIONS SHOULD INCLUDE INSPECTION OF THE HARD INLETS, PIPING, AND THE BED AREA BY USING THE CLEAN-OUTS TO IDENTIFY ANY REQUIRED STRUCTURAL REPAIRS. MAINTENANCE INCLUDES TRASH REMOVAL.
- REMOVE SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL FROM A DRY WELL.
- REGULARLY CLEAN OUT GUTTERS AND ENSURE PROPER CONNECTIONS TO THE DRY WELL.
- REPLACE THE FILTER SCREEN THAT INTERCEPTS THE ROOF RUNOFF AS NECESSARY.

PROJECT NARRATIVE

THE EXISTING BUILDING ADDITION LOCATED ON TMP 02-072-478 IS ENCRANCHING ONTO TMP 02-072-477. THE PROJECT PROPOSES TO PERFORM A LOT LINE CHANGE BETWEEN THE TWO PARCELS AND REMOVE THE BUILDING ADDITION WHICH WILL THEN BRING TMP 02-072-478 INTO COMPLIANCE. TMP 02-072-477 WILL REMAIN IN COMPLIANCE.



LOCATION MAP

SCALE: 1" = 800'

CERTIFICATION OF TRUE OWNERSHIP

WE, AS AUTHORIZED OFFICERS OF _____, DO HEREBY CERTIFY THAT THE TITLE OF THE PROPERTIES PRESENTED ARE IN THE NAME OF _____ AS RECORDED IN THE OFFICE OF RECORDER OF DEEDS, BUCKS COUNTY, PENNSYLVANIA IN PLAN BOOK _____ PAGE _____

OWNER'S CERTIFICATION OF INTENT

TO ALL WHOM THESE PRESENTS MAY COME, I (WE) _____ SEND GREETINGS. KNOW YE THAT I (WE) HAVE LAID OUT UPON MY (OUR) LANDS, SITUATE IN THE TOWNSHIP OF BENSALEM, COUNTY OF BUCKS AND COMMONWEALTH OF PENNSYLVANIA, INTENDED TO BE FORTHWITH RECORDED. WITNESS MY (OUR) HAND AND SEAL THIS _____ DAY OF _____, 20____.

ATTEST: _____ (NAME OF CORPORATION) PRESIDENT

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF BUCKS, ON THE _____ DAY OF _____, 20____, BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF PROPERTY SHOWN HEREON, SITUATE IN THE TOWNSHIP OF BENSALEM, COUNTY OF BUCKS AND COMMONWEALTH OF PENNSYLVANIA AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

(NOTARY PUBLIC) MY COMMISSION EXPIRES THE _____ DAY OF _____, 20____.

CERTIFICATION OF TRUE OWNERSHIP

WE, AS AUTHORIZED OFFICERS OF _____, DO HEREBY CERTIFY THAT THE TITLE OF THE PROPERTIES PRESENTED ARE IN THE NAME OF _____ AS RECORDED IN THE OFFICE OF RECORDER OF DEEDS, BUCKS COUNTY, PENNSYLVANIA IN PLAN BOOK _____ PAGE _____

OWNER'S CERTIFICATION OF INTENT

TO ALL WHOM THESE PRESENTS MAY COME, I (WE) _____ SEND GREETINGS. KNOW YE THAT I (WE) HAVE LAID OUT UPON MY (OUR) LANDS, SITUATE IN THE TOWNSHIP OF BENSALEM, COUNTY OF BUCKS AND COMMONWEALTH OF PENNSYLVANIA, INTENDED TO BE FORTHWITH RECORDED. WITNESS MY (OUR) HAND AND SEAL THIS _____ DAY OF _____, 20____.

ATTEST: _____ (NAME OF CORPORATION) SECRETARY

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF BUCKS, ON THE _____ DAY OF _____, 20____, BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF PROPERTY SHOWN HEREON, SITUATE IN THE TOWNSHIP OF BENSALEM, COUNTY OF BUCKS AND COMMONWEALTH OF PENNSYLVANIA AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

(NOTARY PUBLIC) MY COMMISSION EXPIRES THE _____ DAY OF _____, 20____.

PROFESSIONAL ENGINEER'S CERTIFICATION

I, _____, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE METES AND BOUNDS, AS SHOWN, AND THE LOTS, LAND, STREETS, HIGHWAYS, EASEMENTS AND UTILITIES AS SURVEYED AND PLOTTED BY ME FOR THE OWNERS OR AGENTS.

I FURTHER CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT PLAN, INCLUDING THE AMENDED ZONING ORDINANCE OF THE TOWNSHIP OF BENSALEM, IN WHICH THIS SUBDIVISION AND LAND DEVELOPMENT IS LOCATED.

REGISTERED PROFESSIONAL ENGINEER P.E. PE 053219E (REGISTRATION NUMBER)

PROFESSIONAL SURVEYOR'S CERTIFICATION

I, _____, A REGISTERED PROFESSIONAL SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE METES AND BOUNDS, AS SHOWN, AND THE LOTS, LAND, STREETS, HIGHWAYS, EASEMENTS AND UTILITIES AS SURVEYED AND PLOTTED BY ME FOR THE OWNERS OR AGENTS.

REGISTERED PROFESSIONAL SURVEYOR P.E. SU 075403 (REGISTRATION NUMBER)

TOWNSHIP ENGINEER

THIS SUBDIVISION PLAN WAS REVIEWED BY THE TOWNSHIP ENGINEER, _____, P.E., FOR BENSALEM TOWNSHIP ON THIS _____ DAY OF _____, 20____.

APPROVAL OF THE BUCKS COUNTY PLANNING COMMISSION

BECF NO. _____ PROCESSED AND REVIEWED. REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE. CERTIFIED THIS DATE _____.

CHAIRMAN, BUCKS COUNTY PLANNING COMMISSION _____ EXECUTIVE DIRECTOR, BUCKS COUNTY PLANNING COMMISSION _____ APPROVAL OF THE COUNCIL OF THE TOWNSHIP OF BENSALEM THIS _____ DAY OF _____, 20____.

CERTIFICATION FOR RECORDING

RECORDED IN THE OFFICE OF RECORDER OF DEEDS AT DOVLESTOWN, PENNSYLVANIA IN PLAN BOOK _____ PAGE _____ ON THE _____ DAY OF _____, 20____.

NOTE
ALL DOCUMENTS PREPARED BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS OR EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT, ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY TRI-STATE ENGINEERS & LAND SURVEYORS, INC. FOR THE SPECIFIC PURPOSE INTENDED WILL BE THE OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO TRI-STATE ENGINEERS & LAND SURVEYORS, INC. AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS TRI-STATE ENGINEERS & LAND SURVEYORS, INC. FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

Penncsylvania One Call System, Inc.
2022-1303006
Call Before You Dig in Pennsylvania
1-800-242-1776

State Law Requires Construction Phase: Three working Days Notice Design Phase: Ten working Days Notice Facility Owners: Member of One Call System

OWNER OF RECORD TMP 02-072-478 IFTIKHAR & AISHA CHAUDHRY 1206 CRESPO LANE BENSALEM, PA. 19020	Job No. 22-03012	Date: 04-11-2022	Scale: 1"=20'
TMP 02-072-477 UMAR & SABHAT FAROOQ 1206 CRESPO LANE BENSALEM, PA. 19020	Tax Parcel No.: 02-072-478	Acresage: 21,936.8 SF/0.5036 AC (TO TITLE LINE)	No. of Lots: 1
Designed By: STAFF	Drawn By: STAFF	Checked By: JAO	

REVISION	DESCRIPTION	DATE	CLAS
1	PER TWP ENGINEERS REVIEW LETTER DATE 11/18/22D	2/2/23	CLS

SCALE IN FEET
0 20 40 80

TRI-STATE ENGINEERS & LAND SURVEYORS, INC.
CIVIL ENGINEER • MUNICIPAL ENGINEERS • LAND SURVEYORS • LAND PLANNERS • LANDSCAPE ARCHITECT
801 WEST STREET ROAD, FEASTERTVILLE, PENNSYLVANIA 19053
PHONE: 215-357-5950 FAX: 215-357-2836

FOUNDED 1959

T.M.P. 02-072-478
1206 CRESPO LANE

LOT LINE CHANGE PLAN

SHEET 1 OF 5

BENSALEM TOWNSHIP
BUCKS COUNTY, PA

22-03012



BUCKS COUNTY CONSERVATION DISTRICT

1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901-5550
(215) 345-7577

In Pursuit of Environmental Excellence

10/18/2022

Iftikhar & Aisha Chaudhry
1206 Crespo Lane
Bensalem, PA 19020

SUBJECT: Chaudry - 1206 Crespo Ln Lot Change Plan
TMP #: 2-72-478
TOTAL ACRES: 0.52 ACRES T.B.D: 0.52
DATE OF PLAN: 04/11/2022 SHEETS: 4 & 5 of 5
LOCATION: 1206 Crespo Lane
Bensalem Township, Bucks County, PA

Dear Sir / Madam:

This is a review by the Conservation District of the erosion and sediment pollution control plan created for the above-mentioned site. Any revisions made to these approved drawings must be submitted to the Conservation District for review and approval.

The plan submitted appears to be **ADEQUATE** for erosion and sediment pollution control and meets the minimum requirements of the Pennsylvania Department of Environmental Protection (Pa.DEF) Rules and Regulations, Chapter 102, Erosion Control, relating to the Pennsylvania Clean Streams Law.

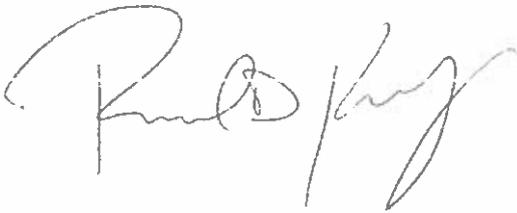
Pre-construction meetings are mandatory for non-residential projects with at least 5000 square feet of earth disturbance, all residential projects of three or more units, or at the discretion of the inspector. Failure to adhere to this policy will result in immediate and automatic revocation of your erosion & sediment control adequacy letter. To arrange a pre-construction meeting, please contact the inspector listed below.

At the pre-construction meeting, the erosion and sediment control plan indicated in the Conservation District official letter of adequacy must have the same date as the plan produced by the developer of agent. If the plan dates are not identical, the meeting will be terminated, without

exception.

The BCCD requires a notification of three (3) working days prior to site disturbance in order to perform the necessary erosion and sediment pollution control inspections. Call the inspector listed below. As the erosion and sediment pollution controls are implemented, they must be maintained and checked frequently. Failure to begin earthmoving within two (2) years will require a resubmission of the erosion and sediment pollution control plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Rich Krasselt". The signature is fluid and cursive, with the first name "Rich" being more prominent than the last name "Krasselt".

Rich Krasselt
Environmental Protection Specialist II

cc:
/E & S File / Municipal File / BCPC
/Tri-State Engineers & Land Surveyors
801 West Street Road
Feasterville, PA 19053
/Bensalem Township
/Bensalem Township Engineer