ABINGTON TOWNSHIP

AUGUST 8, 2024

BOARD OF COMMISSIONERS WORKING SESSION

TOWNSHIP OF ABINGTON

BOARD OF COMMISSIONERS WORKING SESSION

A G E N D A
August 8, 2024
7:30 PM

There are three ways for the public to participate in the meeting: in-person, online or by phone. Residents who wish to attend in person can do so in the Abington Township Board Room located at 1176 Old York Road, Abington, PA 19001, 2nd Floor. Alternative means of public participation are offered for those who do not wish to or are unable to attend the meetings in person. Residents who wish to participate in the meeting remotely can access the meeting online by a computer, iPad, iPhone, or Android at https://us06web.zoom.us/j/88216803878. This link will enable residents to hear the meeting, see presentations, and ask questions. There will be no video interaction capabilities. Residents, who are unable to join online, can listen to and participate in the meeting by calling 1-929-436-2866 and entering the meeting ID number 882-1680-3878 when prompted.

CALL TO ORDER

CONSIDER APPROVAL OF MINUTES

a. Motion to approve the Minutes from the Working Session of July 11, 2024.

PUBLIC COMMENT ON AGENDA ITEMS

UNFINISHED BUSINESS

NEW BUSINESS

a. Presentation of SD-21-03 - 365 Cedar Road Final Major Subdivision Land Development plan.

ADJOURNMENT

BOARD POLICY ON PUBLIC PARTICIPATION

For Information Purposes Only

The Township shall conduct business in accordance with the Commonwealth of Pennsylvania Laws governing the conduct of public meetings and only establish guidelines that shall govern public participation at meetings consistent with the law.

Each commenter shall:

- Direct their comments to the Presiding Officer;
- Speak from the podium or into a microphone designated by the presiding officer;
- State their name for the record;
- Either orally or in writing provide their address for the record;
- Have a maximum of three minutes to make their comments. Each commenter when speaking to a specific agenda item, is to keep their comments relative to that identified agenda item;
- Speak one time per agenda item;
- When commenting on non-agenda items, the commenter is to keep their comments related to matters of the Township of Abington, Montgomery County, Pennsylvania.
- State a question to the Presiding Officer after all commenters have spoken, and;
- Be seated after speaking or upon the request of the presiding officer;
- Not engage in debate, dialogue or discussion;
- Not disrupt the public meeting, and;
- Exercise restraint and sound judgement in avoiding the use of profane language, and the maligning of others.

Board of Commissioners Working Session July 11, 2024

The stated Working Session of the Board of Commissioners of the Township of Abington was held on Thursday, July 11, 2024 via webinar and in-person at the Township Administration Building, Abington, PA, with President Hecker presiding.

CALL TO ORDER: 7:50 p.m.

PRESENT: Commissioners BRODSKY, DiPLACIDO, LANEY-MARTIN, WINEGRAD, HENRY, ZAPPONE, YOUNG GERTZ, SPIEGELMAN, BOLE, SCHREIBER, BOWMAN, VAHEY, HECKER
Excused: Commissioners ROTHMAN, BROWNE

Also Present: Township Manager Manfredi
Township Solicitor Clarke

CONSIDER APPROVAL OF MINUTES:

President Hecker made a MOTION, seconded by Commissioner Spiegelman to approve the minutes from the Working Session of May 9, 2024.

MOTION was ADOPTED 13-0.

UNFINISHED BUSINESS: None.

NEW BUSINESS:

Presentation of the Preliminary/Final Major Subdivision and Land Development for LD-23-03 – 1583 Rothley Avenue:

Ms. Amee Farrell, Attorney representing the applicant, said proposed is to redevelop 1583 Rothley Avenue in which the applicant received zoning relief from the Zoning Hearing Board and a recommendation for approval of the preliminary/final plan by the Planning Commission. Also, the applicant received review letters from the Township Engineer, County Planner as well as the EAC and will comply. The applicant requested a recommendation for approval of the preliminary/final plan.

This property historically has been used for commercial/manufacturing on the first floor and an office or apartment above in which the building is currently dilapidated and in disrepair. Also, there is a significant slope from the back corner to the street and there is an unrestricted driveway opening.

The proposed redevelopment is to retain the existing building but clad it with new improved materials and gut the interior so that the two-story building will become three townhomes. It is currently located on two parcels and the proposal is to consolidate it to a single property. The existing impervious surface will be modified to six parking spaces as required for townhomes and shorten the unrestricted curb cut down to 20 ft. channelizing the driveway as an entry/exit point for the residents. The balance of the site will become green and landscaped with interior pedestrian connections out to the street and new sidewalk.

Zoning relief was granted to permit townhomes within the Medium High Density Residential District. The plan has been revised in response to comments made by the Township consultants. Also, the applicant will provide an easement to the adjacent neighbor so he will have a driveway access point to park his vehicle.

HVAC will be small residential condenser units each independently controlled for the three townhomes. Also, each townhome will have its own area for trash and recycling totes. The discharge drain at the crosswalk and ADA ramp has been relocated to the downslope as requested by the Township Engineer.

Regarding landscaping, proposed trees along the southern property line will be spread out with modified species, types and locations; topsoil depths were improved throughout the site; we changed to an erosion control seed mixture on the steep slopes and created additional parking lot screening. Also, the EAC suggested that some of the shrubs in the parking island be swapped out for a tree, and the applicant's landscape architect feels there is not enough room for a tree to thrive, so shrubs will remain there. The plan is to retain the existing building and layout of the three proposed units were presented.

Waivers requested by the applicant - Section 146-9. A (1) and (2) - Preliminary and Final Plan Stages; Section 146.11. B (7) – Utilities; Section 146.11. J – Recreational Facilities Plan; Section 146-33. C – Drainage Location; Section 146-33. D – Drainage Size, Grade and Type; Section 146-43 C (a) – Cut and Fill Slopes.

Mr. Chad Brensinger, Project Engineer, said since it is a small site, most pipes are smaller but still meet conveyance capacity. Also, 15% is a gradual steep slope and we will provide proper groundcover on the steeper slopes.

Mr. Khal Hassan, Township Engineer, said he has reviewed this project as plans have been modified and the applicant received variances from the ZHB subject to certain conditions in which the applicant must comply. He supports waivers requested by the applicant and he will defer to the Board of Commissioners to consider the plan preliminary as final in which he supports.

The utility waiver is usually granted on smaller projects as it is not feasible to show an area three or four times the size of the project and the information provided by the applicant is sufficient. He has no issues with waivers for the location for drainage as well as the pipe size as all drainage will be contained within the site. The Board may wish to consider approval of the plan contingent that the applicant addresses all comments as listed in review letters from the Township Engineer and all Township's consultants.

President Hecker asked for any comments from Commissioners.

Commissioner Laney Martin said the neighbors she spoke with are excited about the property being developed, although one neighbor expressed concern about privacy and asked about the windows from the new building directly aligning with their adjacent building.

Ms. Farrell replied there are building code requirements for the location of windows. Each townhome will have a bedroom window, and only the middle unit will have a window facing the adjacent property, but we will do whatever we can to lessen the impact.

Commissioner Laney Martin clarified that an easement will be provided to the neighbor so he can use his driveway. Is that correct?

Ms. Farrell replied yes, part of the neighbor's driveway is located on 1583 Rothley property, and we have no objection for the neighbor to continue parking in the driveway and there will be an easement.

Commissioner Laney Martin clarified that the existing structure and foundation of the building will be redeveloped and improved as it is an old building that has been in disrepair. Is that correct?

Ms. Farrell replied yes, this will be a complete gut right down to the foundation, and structural drawings are required. Additional work will need to be done as it is an existing building and the Township's inspectors will make sure all requirements are met and the building is safe, which is part of the building permit process.

President Hecker asked for any public comment.

Adele Kubel, resident, expressed concern that we need homes that people can buy and afford to live in. We do not need people who will become renters for a lifetime and struggle to keep up with rent increases every year. "Abington already has many apartments and homes not maintained and fails to hold corporations and these slumlords accountable for all this damage."

Joe Rooney, resident, asked for the lot size.

Ms. Farrell replied 12,233 sq. ft.

Mr. Rooney commented that he assumes these will be rentals because of the layout and there will be people we don't know living in three rowhomes in Roslyn. The EAC indicated that this plan will increase the impervious surface, and if that's true, will this become the default position for developers building townhomes on12,000 sq. ft. lots in Roslyn or even Ardsley.

Ms. Farrell replied there has not been a determination as to whether these three individual units will be for rent or for sale. Impervious coverage ticked up slightly to 40.5% and 55% is permitted in this zoning district, so even though there is a slight increase because of the configuration of the parking lot, we are still 15% under allowable impervious for the lot, and the tradeoff will be met with all new landscaping.

Lora Lehmann, resident, expressed concern that this property changed lives in this neighborhood. The preliminary and final land development is being pushed together, which takes a month away from people like herself and the neighbors to research whether this building was condemned. Also, she believes "the variances and waivers were illegally approved, and it is supposed to be incompliance with the character of the neighborhood."

Mr. Hassan said he does not agree with the statements by Ms. Lehmann. There are no nonconformities and reviews were done by his office as well as other agencies that are accurate and in accordance with codes and requirements. Also, the Board of Commissioners did not approve a variance, it was approved by the Zoning Hearing Board.

President Hecker clarified that this matter will be listed on the agenda at the August voting meeting. Is that correct?

Manager Manfredi replied that is correct.

ADJOURNMENT: 8:29 p.m.

Respectfully submitted,

Liz Vile, Minutes Secretary

BOARD OF COMMISSIONERS WORKING SESSION

AGENDA ITEM

August 8, 2024

DATE

AGENDA ITEM NUMBER

Administration

DEPARTMENT

FISCAL IMPACT
Cost > $10,000
Yes ☐ No ☐

PUBLIC BID REQUIRED
Cost > $20,100
Yes ☐ No ☐

AGENDA ITEM:

SD-21-03 -365 Cedar Road

EXECUTIVE SUMMARY:

Under this current final subdivision and land development plans submission, the Applicant is proposing the same site improvements as noted in the attached Executive Summary. In addition to the proposed underground stormwater BMPs no.1 and 2 located to the rear of proposed Lots 6 and 7, the Applicant has since modified the proposed stormwater pipe conveyance of the proposed new road, Lincoln Lane (formerly proposed Independence Circle). The Applicant is now proposing to capture and convey a portion of the stormwater runoff on the new roadway in front of the proposed adjoining Lots 3 and 4 side property line and discharge to the proposed vegetative swale located to the rear of these new lots. The entire stormwater pipe conveyance of the roadway was previously proposed to route to the proposed new inlet at the end of the cul-de-sac to discharge to the underground stormwater BMP located to the rear of new Lot 7.

PREVIOUS BOARD ACTIONS:

2/22/22 - Mr. Rosen made a MOTION, seconded by Ms. Gauthier to recommend approval of the Major Subdivision and Land Development Plan for 365 Cedar Road subject to the conditions that the applicant provide a traffic study; that the applicant develop one less lot to eliminate the water mitigation in the roadway and maintain the 30-ft. cartway; also, that the Township meet with the surrounding neighbors.
5/12/22 - The Board of Commissioners made a motion to defer the agenda item to a future Board of

Commissioners meeting.
1/12/23 - The project was approved by the Board of Commissioners.
7/25/23 - THe Planning Commission reviewed and approved Component 4A
8/10/23 - The Board of Commissioners approved the Sewage Facilities Planning Module.
7/23/24 - Planning Commission Meeting

RECOMMENDED BOARD ACTIONS:

Presentation of SD-21-03 - 365 Cedar Road Final Major Subdivision Land Development plan.

July 15, 2024

ABINT130022

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: SD-21-03-365 Cedar Road (Yannessa Subdivision)
PARID: 30-00-07112-00-4 / TMID: 30086 020
Final Major Subdivision and Land Development Plans
Executive Summary

Dear Mr. Manfredi:

We have received a copy of the Final Major Subdivision and Land Development Plans consisting of seventeen (17) sheets dated November 22, 2021, last revised March 26, 2024, and received on May 10, 2024 as prepared by Eastern/Chadrow Associates, Inc. located at 333 E. Street Road in Warminster, PA for the above referenced project.

This project is located within the R2-Low-Medium Density Residential Zoning District. The subject parcel is fronted by Cedar Road (SR 2058) (60 FT R/W) to the north; residential apartments zoned in the AO-Apartment-Office Zoning District to the south; and residential properties zoned in the R2-Low-Medium Density Residential Zoning District to the east and west.

Under the preliminary subdivision and land development plans submission, the Applicant proposed to demolish the existing features on the site and to subdivide the existing 177,620 SF (4.0776 acres) parcel into seven (7) individual lots ranging from 15,164 SF to 27,283 SF instead of the eight (8) individual lots originally proposed for the site; and to construct a single-family detached dwelling on each lot, as well as associated, sidewalk, curbing, driveway, streetlights, and stormwater management facilities. Access to/from the site will be by way of one new cul-de-sac roadway named Lincoln Lane (formerly proposed Independence Circle) that will intersect with Cedar Road (SR 2058) as a new T-intersection. Each new dwelling is proposed to be served by public water and sewer service. In addition, the Applicant proposed stormwater management facilities to the rear of Lots 6 and 7. Other site improvements included widening of the proposed road from 24-feet wide to 30-feet wide; street lighting; and landscaping.

The Applicant subsequently went before the Abington Township Planning Commission on February 22, 2022 and obtained conditional preliminary plans approval recommendation. The Applicant appeared before the Abington Board of Commissioners on January 12, 2023 and was granted conditional preliminary plans approval in accordance with the Township solicitor's approval letter dated February 3, 2023.

Under this current final subdivision and land development plans submission, the Applicant is proposing the same site improvements as noted above. In addition to the proposed underground stormwater BMPs no.1 and 2 located to the rear of proposed Lots 6 and 7, the Applicant has since modified the proposed stormwater pipe conveyance of the proposed new road, Lincoln Lane (formerly proposed Independence Circle). The Applicant is now proposing to capture and convey a portion of the stormwater runoff on the new roadway in front of the proposed adjoining Lots 3 and 4 side property line and discharge to the proposed vegetative swale

located to the rear of these new lots. The entire stormwater pipe conveyance of the roadway was previously proposed to route to the proposed new inlet at the end of the cul-de-sac to discharge to the underground stormwater BMP located to the rear of new Lot 7.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C04203G, effective March 2, 2016, the tract is identified to be within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. Therefore, based on the FEMA determination, the tract is not located within the Floodplain Conservation District. Based on the plans and FIRM map, and as confirmed by the Applicant, there are no wetlands that exist on site.

The Applicant has identified areas of precautionary steep slopes (greater than 15% to 25%) and prohibitive steep slopes (greater than 25%), located primarily at the front and rear of the site. Although there are existing steep slopes identified on the site, these areas do not span five contiguous 10-foot contour intervals; and therefore, the site is determined to be located outside the steep slope conservation overlay district.

Waivers Received:

The Abington Township Board of Commissioners granted the following Subdivision and Land Development Ordinance (SALDO) waivers for the preliminary major subdivision and land development plans at the regularly scheduled meeting held on January 12, 2023:

1. **Section 146-11.A(4) – Property Identification Plan –** requiring the plan to supply the tax parcel information, owner's name, lot area, location of property lines and names of landowners for all properties within 400 feet of the site involved in the application. The Board of Commissioners has GRANTED a partial waiver from the Ordinance to provide an annotated aerial due to the size and scope of the project.

2. **Section 146-11.B(3) – Existing Features Plan –** requiring the plan to supply the location of property lines and names of landowners for all properties within 400 feet of the site involved in the application. The Board of Commissioners has GRANTED this partial waiver from the Ordinance due to the size and scope of the project.

3. **Section 146-25.D – Curb –** requiring a minimum radius of 20 feet. The Board of Commissioners has GRANTED this waiver from the Ordinance contingent on Applicant provide turning templates which demonstrate that emergency services and sanitation vehicles can adequately maneuver into and out of the site.

4. **Section 146-33.D – Drainage Size, Grade and Type –** requiring a minimum internal diameter of fifteen inches (15") and a minimum grade of one-half percent (0.5%) of reinforced cement concrete pipe. The Board of Commissioners has GRANTED this waiver contingent on demonstration of stormwater calculations that the proposed pipe design adequately conveys stormwater runoff.

5. **Section 146-43.C(3)(a) – Grading for Drainage –** requiring cut and fill slopes not to be fifteen percent (15%) or steeper. The Board of Commissioners has GRANTED this waiver from the Ordinance due to the size and scope of the project along with the existing conditions.

Issues:

- Building Coverage - The Applicant shall clarify and confirm the actual building coverage on each proposed lot during the land development plans application process rather than wait until building permits application.

- Impervious Coverage - The Applicant shall clarify and confirm the actual impervious coverage on each proposed lot during the land development plans application process rather than wait until building permits application.

- Stormwater Conveyance - The Applicant was requested to consider redirecting the stormwater runoff from proposed Lincoln Lane between proposed Lots 3 and 4 to directly tie into proposed inlet 3 at the end of the cul-de-sac to be conveyed to proposed BMP #2 instead of an open discharge to a swale in the rear yards of proposed Lots 4 through 6. A proposed snout to be added to the storm inlets will meet water pre-treatment compliance requirements. The Applicant will be required to update its stormwater management report calculations by modifying the pipe conveyance calculations and seek an amended minor NPDES permit approval from MCCD.

- Turning Templates – The Applicant shall provide roadway turning templates showing emergency vehicles and sanitation vehicles are able to adequately and safely maneuver into/out of the site entrance and at the cul-de-sac area.

Summary:

The Applicant would be eligible for Final Major Land Development Plans approval contingent the Applicant adequately addressed all review comments prior to recording plans review.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI ASSOCIATES INC.

Khaled Hassan

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

U:\ACCOUNTS\ABINT\ABINT130022 - SD-21-03ÛYANNESSA SUBDIVISION 365 CEDAR\ADMIN\SD-21-03-PC MTG EXEC SUMMARY - 365CEDARRD YANNESSA 07.15.24.DOCX

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
06-0	MONTGOMERY COUNTY	ABINGTON TOWNSHIP	N/A	2058	0030	6

HIGHWAY OCCUPANCY PERMIT PLAN

FOR

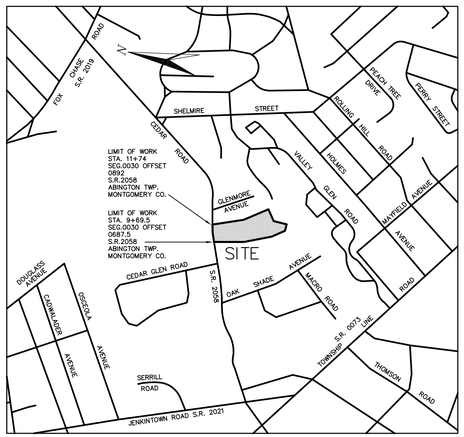
365 CEDAR ROAD SUBDIVISION

S.R. 2058 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

FROM STA. 9+70 TO STA. 11+74, LENGTH 204 FEET, 0.0386 MILES
FROM SEG. 0030, OFFSET 0688 TO SEG. 0030, OFFSET 0892

EPS APPLICATION NUMBER 300222
365 CEDAR ROAD
S.R. 2058, CEDAR ROAD
ELKINS PARK, PA 19027

SHEET INDEX BLOCK	
DESCRIPTION	SHEET
TITLE SHEET	1
GENERAL NOTES AND TRAFFIC CONTROL	2
PEDESTRIAN DETOUR PLAN, ROAD IMPROVEMENT PLAN AND DRIVEWAY PROFILE	3
SIGHT DISTANCE PLAN	4
INTERSECTION DETAIL AND ADA RAMP PLAN	5
VEHICLE MANEUVERABILITY PLAN	6



LOCATION MAP
SCALE: 1" = 800'
0 800 1,600

DESIGN DESIGNATION – S.R. 2058

HIGHWAY CLASSIFICATION	– URBANIZED POPULATION, 200,000+
ROADWAY TYPOLOGY	–
DESIGN SPEED	– 35 MPH
PAVEMENT WIDTH	– 46.5'
SHOULDER WIDTH	– 0'

DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

TRAFFIC DATA

CURRENT A.D.T.	8,026 – 2023
DESIGN YEAR A.D.T.	8,026 – 2023
D.H.V.	–
D	–
T	–
TRUCK	– 3%

STOP–CALL BEFORE YOU DIG!
1-800-242-1776
PENNSYLVANIA ONE CALL SYSTEM, INC.
SERIAL No.20171532707 CONTACTED: 6-2-2017

LIST OF PUBLIC UTILITIES FOR ABINGTON

USER	ADDRESS	TELEPHONE
1.TOWNSHIP OF ABINGTON	1176 OLD YORK RD. ABINGTON, PA.19001	215–884–5000
2.AQUA PENNSYLVANIA, INC.	762 LANCASTER AVE. BRYN MAWR,PA. 19010	1–800–711–4779
3.BELL TELEPHONE CO. of PA.	104 WITMER RD. HORSHAM,PA. 19044	215–956–2623
4.PHILADELPHIA ELECTRIC Co.	400 PARK AVE. WARMINSTER PA. 18974	OUTSIDE PA. 412–323–7100 IN PA. 800–242–1776
5.PENNA. DEPT. OF TRANSPORTATION	EAST NORRITON TWP.,P.O. BOX 350 NORRISTOWN,PA.	1–215–275–2368

PENNSYLVANIA LAW REQUIRES 3 TO 10 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE BASED ON PROJECT COMPLEXITY AND 10 WORKING DAYS DESIGN STAGE – STOP CALL 1–800–242–1776

THE PA ONE CALL NOTIFICATIONS PERFORMED DURING PROJECT DEVELOPMENT ARE AS FOLLOWS:

PRELIMINARY DESIGN SERIAL No.20171532707 ON 6–2–2017 FOR ABINGTON TOWNSHIP

FINAL DESIGN SERIAL No.XXXX ON XXXX FOR ABINGTON TOWNSHIP

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
LAWRENCE J. BYRNE
ENGINEER 40487–E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

12 FEBRUARY 2024

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672–8671 FAX (215) 672–6765
EST. 1967

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
06-0	MONTGOMERY COUNTY	S.R. 2058	0030	2 OF 6
ABINGTON TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

"DRIVEWAYS AND LOCAL ROADS"

1. THE EXISTING SPEED LIMIT ON S.R. 2058 IS 35 M.P.H.

2. THE RIGHT-OF-WAY IS FREE ACCESS.

3. ALL WORK IN PA STATE HIGHWAY RIGHT-OF-WAY IS TO BE PERFORMED CONSISTENT WITH THE FOLLOWING:
   1. PENNDOT PUBLICATION 13M, DESIGN MANUAL PART 2 - HIGHWAY DESIGN
   2. PENNDOT PUBLICATION 34, APPROVED AGGREGATE PRODUCERS (BULLETIN 14)
   3. PENNDOT PUBLICATION 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15)
   4. PENNDOT PUBLICATION 41, PRODUCERS OF BITUMINUOUS MATERIALS (BULLETIN 41)
   5. PENNDOT PUBLICATION 42, PRODUCERS OF READY-MIX CONCRETE (BULLETIN 42)
   6. PENNDOT PUBLICATION 46, TRAFFIC ENGINEERING MANUAL
   7. PENNDOT PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION
   8. PENNDOT PUBLICATION 111, PAVEMENT MARKINGS AND SIGNING STANDARDS
   9. PENNDOT PUBLICATION 212, OFFICIAL TRAFFIC CONTROL DEVICES
   10. PENNDOT PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES
   11. PENNDOT PUBLICATION 408, SPECIFICATIONS
   12. PENNDOT PUBLICATION 888 STORMWATER CONTROL MEASURES MANUAL
   13. PENNDOT PUBLICATION 584 PENNDOT DRAINAGE MANUAL

4. DETAILS, OTHER THAN THOSE INDICATED, ARE ON THE FOLLOWING STANDARD DRAWINGS:
   RC-64M CURBS AND GUTTERS
   RC-67M CURB RAMPS AND SIDEWALKS
   (Provide the Roadway Construction and any other standards here)

5. THE DRIVEWAY HAS BEEN DESIGNED (AND WILL BE CONSTRUCTED AND MAINTAINED) CONSISTENT WITH TITLE 67, CHAPTER 441 REGULATIONS.

6. PA STATE HIGHWAY RIGHT-OF-WAY MAY NOT BE USED FOR PARKING.

7. PERMITTEE IS RESPONSIBLE FOR MAINTENANCE OF ALL AUTHORIZED STRUCTURES, FACILITIES AND DRAINAGE.

8. PERMITTEE IS RESPONSIBLE FOR MAINTENANCE OF ALL AUTHORIZED SIGNS AND PAVEMENT MARKINGS.

9. CONTACT PENNSYLVANIA ONE-CALL (1-800-242-1776) THREE WORKING DAYS BEFORE EXCAVATION OR DEMOLITION WORK. SERIAL NUMBER _ FOR (list Municipality).

10. ANTICIPATED AVERAGE DAILY TRAFFIC (ADT) FOR THE PROPOSED ACCESS IS:
    70 CARS
    ___SINGLE UNIT TRUCKS AND COMBINATIONS.

11. DISTANCE TO THE NEAREST INTERSECTION IS: RT. 310 FT LT. 295 .
    DISTANCE TO THE NEAREST TRAFFIC SIGNAL IS 2,000 FEET.
    DISTANCE TO THE NEAREST OPPOSITE DRIVEWAY IS: RT. _____ LT. 295 .
    DISTANCE TO THE NEAREST ADJACENT DRIVEWAY IS: RT. 310 LT. _____ .

12. IF A TRAFFIC SIGNAL IS WITHIN 500 FEET OF THE SITE, CALL THE DISTRICT TRAFFIC ENGINEER AT __AT LEAST 3 DAYS PRIOR TO THE START OF WORK.

13. THIS PERMIT MAY BE RESTRICTED ON WORKING HOURS AND TIMES FOR HOLIDAYS, WEEKENDS, AND SPECIAL OR UNFORESEEN EVENTS AND WILL REQUIRE APPROVAL FROM THE COUNTY OFFICE PRIOR TO WORKING DURING THESE PERIODS.

14. THE PERMITTEE'S CONTRACTOR SHALL SAWCUT AND REMOVE SHOULDER MATERIAL AS NECESSARY TO ENSURE THE PAVEMENT REPLACEMENT IS ADJACENT TO THE FULL -DEPTH PAVEMENT OF THE TRAVEL LANE.

15. FINAL APPROVAL OF THE PROPOSED SAWCUT LOCATION WILL BE AT THE DISCRETION OF THE INSPECTOR-IN-CHARGE AND WILL BE CONFIRMED AT THE PRE-CONSTRUCTION MEETING. IF THE SAWCUT MUST BE LOCATED WITHIN A TRAVEL LANE, IT WILL BE NECESSARY TO MILL AND OVERLAY THE TRAVEL LANE TO PREVENT A JOINT IN A WHEEL PATH.

16. THE PROPOSED PAVEMENT SECTION MUST BE AS INDICATED ON THE PLAN, OR MATCH THE EXISTING AS FOUND IN THE FIELD, WHICHEVER IS GREATER.

17. PRIOR TO AN OVERLAY, BITUMINOUS OR CONCRETE BASE REPAIR OR JOINT REPLACEMENT MAY BE REQUIRED. REPAIR/REPLACEMENT WILL BE AT THE DISCRETION OF THE INSPECTOR -IN-CHARGE.

18. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPROPRIATE SHALL BE ERADICATED BY THE PERMITTEE. THE PERMITTEE SHALL PLACE ALL REQUIRED NEW PAVEMENT MARKINGS.

19. ALL PAVEMENT MARKINGS OTHER THAN LONGITUDINAL LINES TO BE HOT THERMOPLASTIC (PENNDOT PUBLICATION 111, TC-8600).

20. MATCH EXISTING PAVEMENT MARKINGS AT THE LIMITS OF WORK.

21. MATERIAL CERTIFICATION MUST BE PROVIDED, BY AN APPROVED MANUFACTURER LISTED IN THE DEPARTMENT'S PUBLICATION 35 (BULLETIN 15), FOR ALL MATERIALS AND STRUCTURES WITHIN PENNDOT RIGHT-OF-WAY.

22. THE PERMITTEE SHALL CONTACT THE COUNTY MAINTENANCE MANAGER AT THE TIME OF THE GUIDE RAIL REMOVAL; ALL EXISTING GUIDE RAIL TO BE REMOVED SHALL BE TRANSPORTED TO AND STORED AS PER THE DIRECTION FROM THE COUNTY MAINTENANCE MANAGER OR THEIR REPRESENTATIVE.

23. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS, INCLUDING THOSE THAT ARE OUTSIDE OF PENNDOT LEGAL RIGHT-OF-WAY, SHALL BE CONSTRUCTED TO COMPLY WITH THE REQUIREMENTS OF THE U.S. ACCESS BOARD, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) OF THE ACCESSIBILITY GUIDELINES OF BUILDINGS AND FACILITIES (ADAAG). PENNDOT "DESIGN MANUAL PART 2", CHAPTER 6, AND PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION (PENNDOT PUBLICATION 72M, RC-67M) PROVIDE GUIDANCE ON ADA ACCESSIBLE DESIGN FOR PEDESTRIAN FACILITIES AND CAN BE UTILIZED FOR REFERENCE.

24. ALL SLOPE MEASUREMENTS WILL BE INSPECTED/VERIFIED WITH A 2-FOOT SMART LEVEL.

25. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF THE CONSTRUCTION.

26. MODIFICAITONS TO EXISTING DRAINAGE STRUCTURES MAY RESULT IN THE NEED TO REPLACE THE STRUCTURE. REPLACEMENT WILL BE AT THE DISCRETION OF THE INSPECTOR -IN-CHARGE.

27. STRUCTURAL STEEL BICYCLE SAFE GRATES MUST BE PROVIDED FOR ALL INLETS WITHIN THE ROADWAY PAVEMENT OF THOSE THAT MAY RECEIVE BICYCLE TRAFFIC (PENNDOT PUBLICATION 72M, RC-45M).

28. THE RESPONSIBILITY FOR ENSURING THAT ALL UTILITY POLES WITHIN THE PROPOSED PAVING ARE RELOCATED OUTSIDE OF PAVED AREAS AND SHOULDERS SHALL BE THAT OF THE PERMITTEE. THE UTILITY POLES MUST BE RELOCATED BEFORE THE START OF ANY PAVING OPERATIONS.

29. THE PERMITTEE IS RESPONSIBLE FOR THE COORDINATION OF RELOCATING ANY CONFLICTING UTILITIES WHICH ARE A RESULT OF THESE IMPROVEMENTS.

30. ALL UTILITY RELOCATION PERMITS TAKE PRECEDENCE OVER THE UTILITY RELOCATION POSITIONS SHOWN ON THE HOP PLANS.

31. SEE LIST OF PUBLIC UTILITIES ON TITLE SHEET.

32. Boundary and Penndot Right-of-Way determined from records provided by Penndot Records Retention Unit, District 6, King of Prussia, Pa. Deeds and various plans of record recorded in the office of Recorder of Deeds, Doylestown, Pa.

33. The contractor is required to submit a road restriction form to the District 6-0 Press Office one (1) week in advance of any closures and two (2) weeks in advance of any full closure that necessitate a detour. The form is available online at PENNDOT.GOV/DISTRICT6/ROADRESTRICTIONFORM or by calling (610-205-6797.

MAINT ENANCE AND PROT ECTION OF T RAFFIC (MPT) NOT ES

1. THIS WORK CONSISTS OF THE MAINTENANCE AND PROTECTION OF TRAFFIC AND THE PROTECTION OF THE PUBLIC WHEN APPROACHING AND DEPARTING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION.

2. FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION AND AT ALL OTHER TIMES CONSISTENT WITH THE METHODS INDICATED ON THESE DRAWINGS AND THE FOLLOWING:
   1. PENNDOT PUBLICATION 35;
   2. PENNDOT PUBLICATION 46;
   3. PENNDOT PUBLICATION 72M;
   4. PENNDOT PUBLICATION 111;
   5. PENNDOT PUBLICATION 212;
   6. PENNDOT PUBLICATION 213;
   7. PENNDOT PUBLICATION 236;
   8. PENNDOT PUBLICATION 408; AND
   9. MUTCD, LATEST PENNDOT ADOPTED EDITION.

3. REMOVE THESE DEVICES IMMEDIATELY UPON COMPLETION OF THE WORK. PENNDOT WILL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY DEPARTMENT FORCES.

4. PERMITTEE MUST ARRANGE FOR INSPECTION OF ALL TRAFFIC CONTROL DEVICES PRIOR TO START OF WORK.

5. COVER OR REMOVE ALL CONFLICTING SIGNS AND ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.

6. MOUNT ALL LONG-TERM ADVANCE WARNING SIGNS ON TYPE III BARRICADES UNLESS OTHERWISE NOTED OR INSTRUCTED BY DISTRICT OFFICE.

7. ALL SIGNS AND DEVICES TO BE MAINTAINED IN NEW OR LIKE NEW CONDITION.

8. DRIVEWAYS WILL BE KEPT ACCESSIBLE AT ALL TIMES. LOCATE ALL SIGNS SO THAT SIGHT DISTANCES WILL NOT BE OBSTRUCTED AT DRIVEWAYS AND LOCAL ROADS.

9. ALL CHANNELIZING DEVICES, BARRICADES, AND SIGNS SHALL HAVE TYPE III OR BETTER PRISMATIC RETROREFLECTIVE SHEETING. SHEETING SHALL BE APPROVED AND LISTED IN PENNDOT PUBLICATION 35 (BULLETIN 15).

10. NO TRAFFIC RESTRICTIONS OR LANE CLOSURES ARE PERMITTED BETWEEN 6:00 AM AND 9:00 AM AND BETWEEN 3:00 PM AND 6:00 PM MONDAYS THROUGH FRIDAYS OR ON LEGAL HOLIDAYS AND WEEKENDS ASSOCIATED WITH LEGAL HOLIDAYS. ALL RESTRICTIONS AND CLOSURES ARE TO BE REMOVED BY NOON ON THE DAY PRIOR TO THE LEGAL HOLIDAY.

11. PERMITTEE SHALL NOTIFY LOCAL EMERGENCY AUTHORITIES (E.G., POLICE, FIRE, MEDICAL), AFFECTED BUSINESSES, SCHOOL DISTRICT(S), THE GENERAL PUBLIC, THE DISTRICT PERMIT MANAGER AND THE DISTRICT APRAS COORDINATOR AT LEAST 14 DAYS PRIOR TO ANY SIGNIFICANT TRAFFIC IMPACTS (E.G., LATERAL WIDTH RESTRICTIONS LESS THAN 16 FEET, DETOURS).

12. MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE PATA DRAWINGS PATA 101-A, PATA 201A and PATA 201-A IN PENNDOT PUBLICATION 213, " WORK ZONE TRAFFIC CONTROL GUIDELINES", APRIL 2022 EDITION AND TITLE 67 PA CODE, CHAPTER 212 "OFFICIAL TRAFFIC CONTROL DEVICES" DATED MARCH 2008 OR MOST CURRENT.

13. DROPOFFS CREATED BY CONSTRUCTION OPERATIONS SHALL BE TREATED CONSISTENT WITH PUBLICATION 408, SECTION 901.3(J).

14. REMOVE ALL SHORT-TERM WORK ZONE TRAFFIC CONTROL SIGNING UPON COMPLETION OF THAT DAY'S WORK PERIOD.

15. RESTRICTING TRAFFIC FLOW WITHIN THE WORK AREA SHALL BE MINIMIZED TO PREVENT TRAFFIC CONGESTION AND UNSAFE TRAFFIC CONDITIONS.

16. NOTIFY THE LOCAL MUNICIPALITY WHERE SIGNALIZED INTERSECTIONS FALL WITHIN THE WORK ZONE. DO NOT FLAG A SIGNALIZED INTERSECTION WITHOUT THE MUNICIPALITY PLACING THE SIGNAL ON FLASH.

17. THE CONTRACTOR SHALL COMPLY WITH ACT 229 OF DECEMBER 2002 DURING CONSTRUCTION ACTIVITIES WITHIN PENNDOT'S RIGHT-OF-WAY.

SEQUENCE OF CONSTRUCTION NARRATIVE

1. Install PATA 201-A traffic control devices prior to starting construction. PATA 201-A traffic control devices shall be left in place for the duration of construction along the state highway. Install pedestrian detour signs once work has begun.
2. During periods of active construction within the right-of-way utilize PATA 102 traffic control devices. Active construction periods shall include installation of curb, sidewalk and utilities.
3. Remove all traffic control devices upon completion of work within and adjacent to the state highway.

PATA 101-A

1. The shadow vehicle and TTC devices are not required if the work space is outside the highway right-of-way, behind barrier, more than 2' behind curb, or 15' or more from the edge of the roadway.

2. For operations of 60 minutes or less, all TTC devices may be eliminated if a shadow vehicle is present and the operation does not proceed against normal traffic flow.

3. When a shadow vehicle is not used, distance A is measured from the ROAD WORK sign.

Signs
ROAD WORK AHEAD
W20-1

Sign Spacing, Channelizing Device Spacing, and Roll Ahead Space				
Speed	Channelizing Devices Spacing	Sign Spacing		Roll Ahead Space
		Urban	Rural	
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	H (Feet)
25	50	100 - 200	500 - 800	150
30	60	100 - 200	500 - 800	150
35	70	100 - 200	500 - 800	150
40	80	350 - 500	500 - 800	150
45	90	350 - 500	500 - 800	150
50	100	350 - 500	500 - 800	250
55	110	350 - 500	500 - 800	250

PATA 102

1. For operations of ≤5 minutes or less:
   a) The ROAD WORK sign is not required.
   b) All channelizing devices may be eliminated if a shadow vehicle is present and the operation does not proceed against normal traffic flow.

2. When a shadow vehicle is not used, distance E is measured from the end of the taper to the beginning of the work space.

Signs
ROAD WORK AHEAD
W20-1

Sign Spacing, Channelizing Device Spacing, Buffer Space, and Roll Ahead Space					
Speed	Channelizing Devices Spacing	Sign Spacing		Buffer Space	Roll Ahead Space
		Urban	Rural		
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	E (Feet)	H (Feet)
25	50	100 - 200	500 - 800	155	150
30	60	100 - 200	500 - 800	200	150
35	70	100 - 200	500 - 800	250	150
40	80	350 - 500	500 - 800	305	150
45	90	350 - 500	500 - 800	360	150
50	100	350 - 500	500 - 800	425	250
55	110	350 - 500	500 - 800	495	250

Taper Lengths and Minimum Number of Channelizing Devices		
Speed	Shoulder Taper: 1/3L	
S (MPH)	Length (Feet)	Minimum Number Of Devices
25	45	6
30	60	6
35	85	6
40	110	6
45	180	6
50	200	6
55	220	6

PATA 201-A

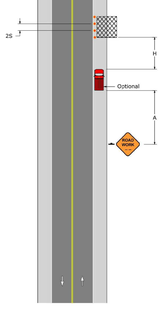
1. TTC devices are not required if the work space is outside the highway right-of-way, behind barrier, more than 2' behind curb, or 15' or more from the edge of the roadway.

2. When a shadow vehicle is not used, distance A is measured from the ROAD WORK sign location to beginning of the work space.

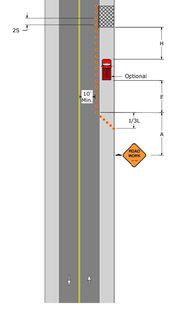
Signs	
ROAD WORK AHEAD	END ROAD WORK
W20-1	G20-2

Sign Spacing, Channelizing Device Spacing, and Roll Ahead Space				
Speed	Channelizing Devices Spacing	Sign Spacing		Roll Ahead Space
		Urban	Rural	
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	H (Feet)
25	50	100 - 200	500 - 800	150
30	60	100 - 200	500 - 800	150
35	70	100 - 200	500 - 800	150
40	80	350 - 500	500 - 800	150
45	90	350 - 500	500 - 800	150
50	100	350 - 500	500 - 800	250
55	110	350 - 500	500 - 800	250

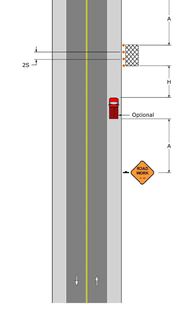
PATA 101-A

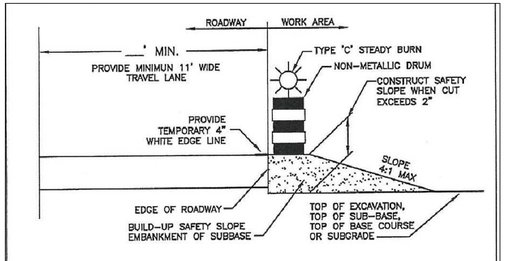


PATA 102



PATA 201-A





NOTES:

SAFETY BUILD-UP MUST BE USED ANY PLACE WHERE OPEN EXCAVATION ALONG ACTIVE ROADWAYS RESULTS IN A DROPOFF GREATER THAN 2".

A TEMPORARY 4" WHITE EDGE LINE SHALL BE PROVIDED IF THE EXISTING EDGE LINE IS TO BE REMOVED. MINIMUM EFFECTIVE LANE WIDTHS OF ___' SHALL BE PROVIDED. PROVIDE TEMPORARY PAVING AS REQUIRED TO MAINTAIN EFFECTIVE LANE WIDTH.

DROP-OFF DETAIL
(NOT TO SCALE)

GENERAL NOTES AND TRAFFIC CONTROL

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

12 FEBRUARY 2024

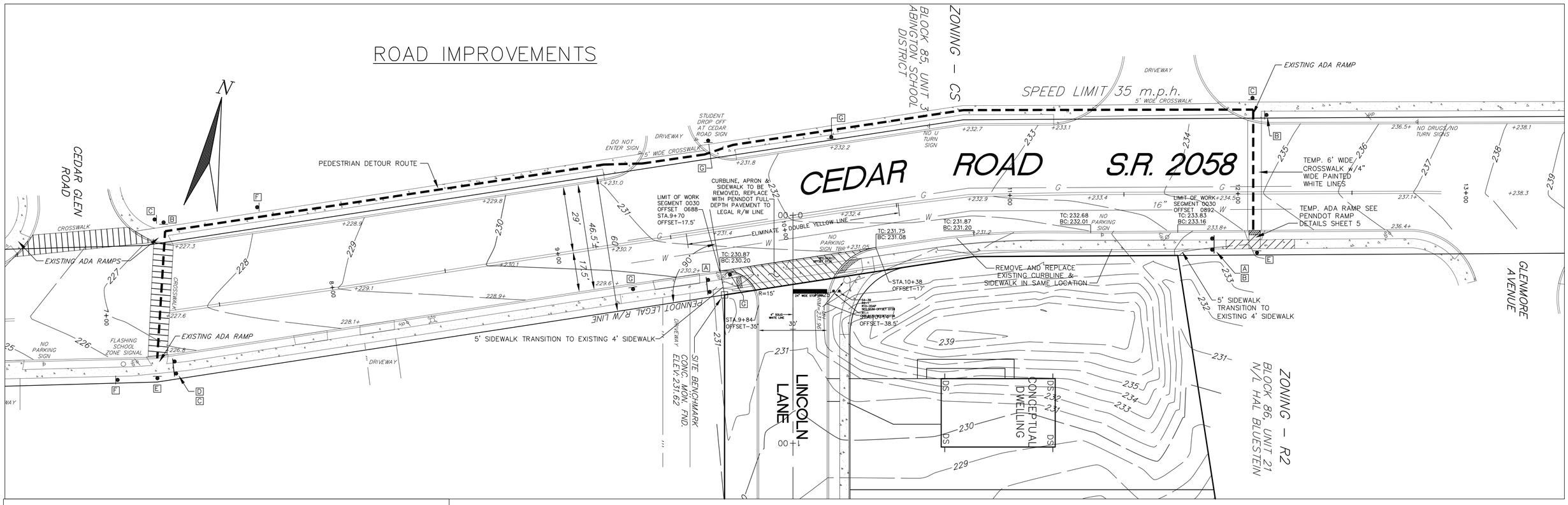
EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

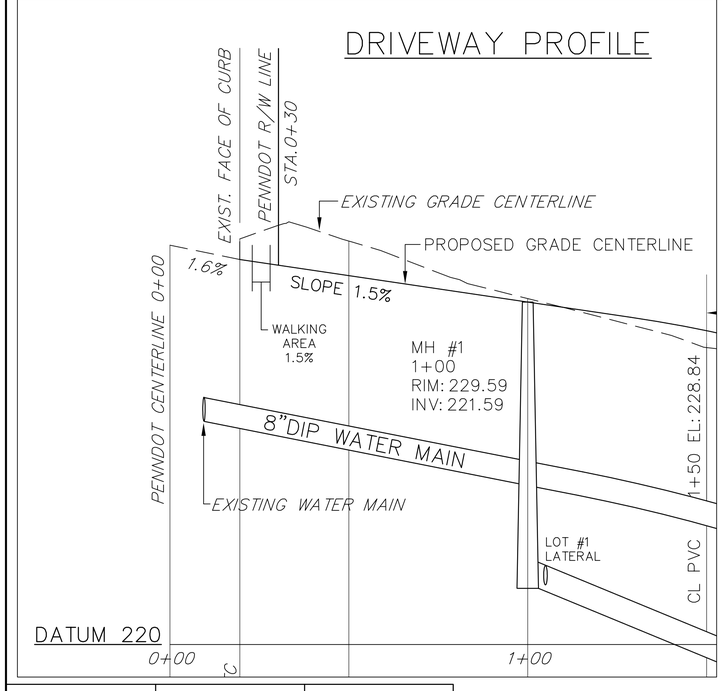
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
06-0	MONTGOMERY COUNTY	S.R. 2058	0030	3 OF 6
ABINGTON TOWNSHIP				

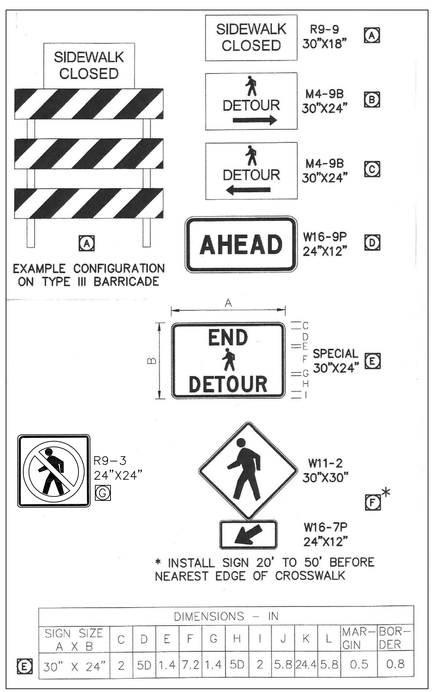
REVISION NUMBER	REVISIONS	DATE	BY

ROAD IMPROVEMENTS

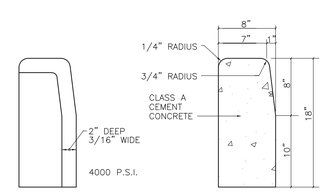


DRIVEWAY PROFILE



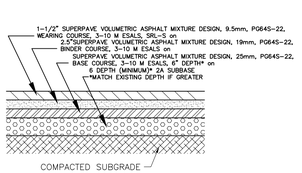


DIMENSIONS - IN													
SIGN SIZE A X B	C	D	E	F	G	H	I	J	K	L	MARGIN	BORDER
30" X 24"	2	5D	1.4	7.2	1.4	5D	2	5.8	24.4	5.8	0.5	0.8

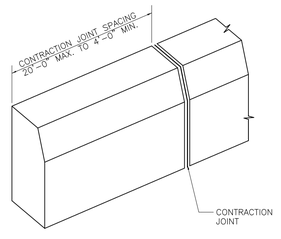


DETAIL A
CONTRACTION JOINT

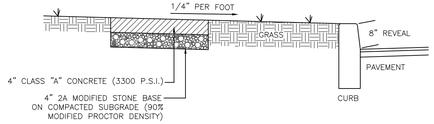
TYPICAL CROSS SECTION



SECTION OF ROADWAY
NOT TO SCALE



PLAIN CEMENT CONCRETE CURB
NOT TO SCALE



CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTES:

1. THE PENNDOT PRESSOFFICE SHALL BE CONTACTED AT 610-205-6800 FOURTEEN (14) DAYS PRIOR TO COMMENCING WORK, NOTIFY LOCAL EMERGENCY OFFICES (POLICE, FIRE, AMBULANCE, POST OFFICE, AND LOCAL SCHOOL DISTRICT) TWO (2) WEEKS PRIOR TO DETOUR.
2. ACCESS SHALL BE MAINTAINED TO ALL EXISTING DRIVEWAYS AND WALKWAYS DURING CONSTRUCTION, PROVIDE TEMPORARY ACCOMMODATIONS AND ACCESS THROUGH THE WORK ZONE FOR ALL PROPERTIES.
3. ALL SIDEWALK CLOSED SIGNS SHALL BE INSTALLED TO COMPLETELY BARRICADE THE SIDEWALK AND ALL DETOUR SIGNS SHALL BE INSTALLED TO NOT REDUCE THE SIDEWALK WIDTH, THIS MAY REQUIRE THE USE OF 24" TYPE II BARRICADES.
4. ENSURE AN ACCESSIBLE ROUTE IS MAINATAINED ALONG THE DETOUR ROUTE AT ALL TIMES.
5. THE SPECIAL SIGN SHALL CONFORM TO THE FOLLOWING:
   A. 5" SERIES LETTERING
   B. REDUCE LETTERING TO FIT ORANGE REFLECTORIZED BACKGROUND
   C. BLACK LEGEND

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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ENGINEER 40487-E

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EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

PEDESTRIAN DETOUR PLAN, ROAD IMPROVEMENT PLAN AND DRIVEWAY PROFILE

SCALE:
HORZ-1"=20'
VERT-1"=2'

0 2 20 4 40 6 60

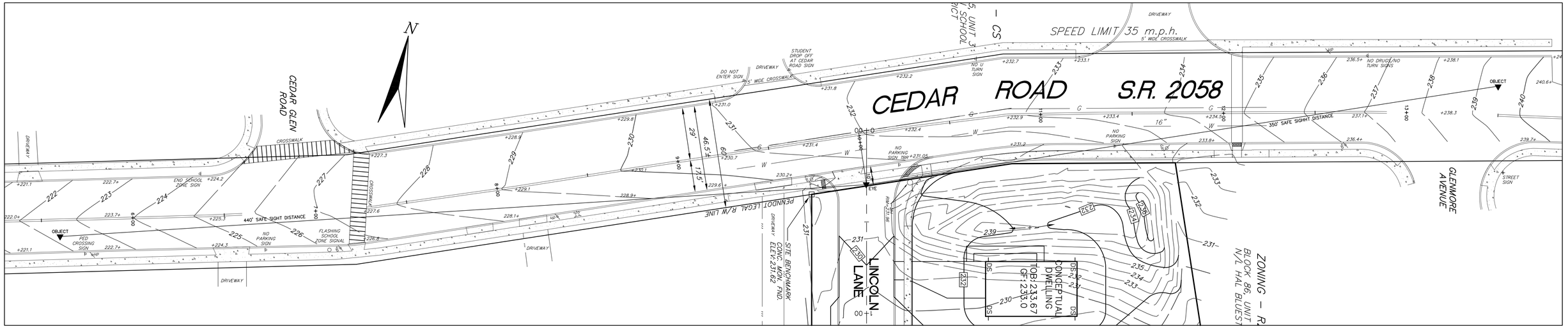
12 FEBRUARY 2024

DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

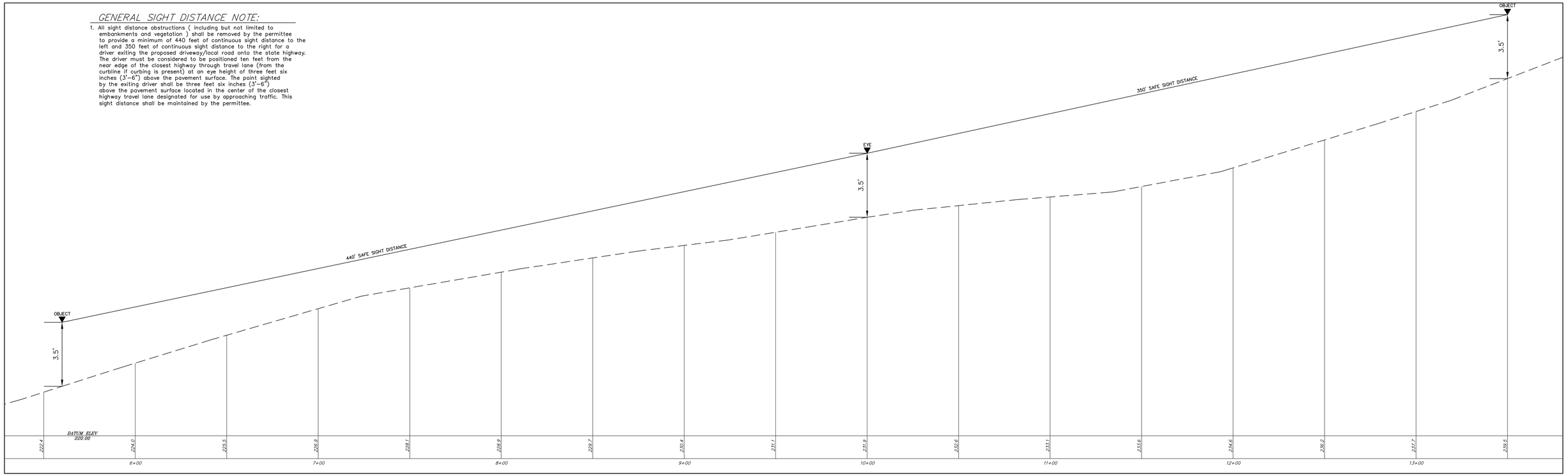
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
06-0	MONTGOMERY COUNTY	S.R. 2058	0030	4 OF 6
	ABINGTON TOWNSHIP			

REVISION NUMBER	REVISIONS	DATE	BY



GENERAL SIGHT DISTANCE NOTE:

1. All sight distance obstructions (including but not limited to embankments and vegetation) shall be removed by the permittee to provide a minimum of 440 feet of continuous sight distance to the left and 350 feet of continuous sight distance to the right for a driver exiting the proposed driveway/local road onto the state highway. The driver must be considered to be positioned ten feet from the near edge of the closest highway through travel lane (from the curbline if curbing is present) at an eye height of three feet six inches (3'-6") above the pavement surface. The point sighted by the exiting driver shall be three feet six inches (3'-6") above the pavement surface located in the center of the closest highway travel lane designated for use by approaching traffic. This sight distance shall be maintained by the permittee.



DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

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40487-E

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LAND SURVEYOR
NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

SIGHT DISTANCE PLAN

SCALE:
HORZ-1"=25'
VERT-1=2.5'

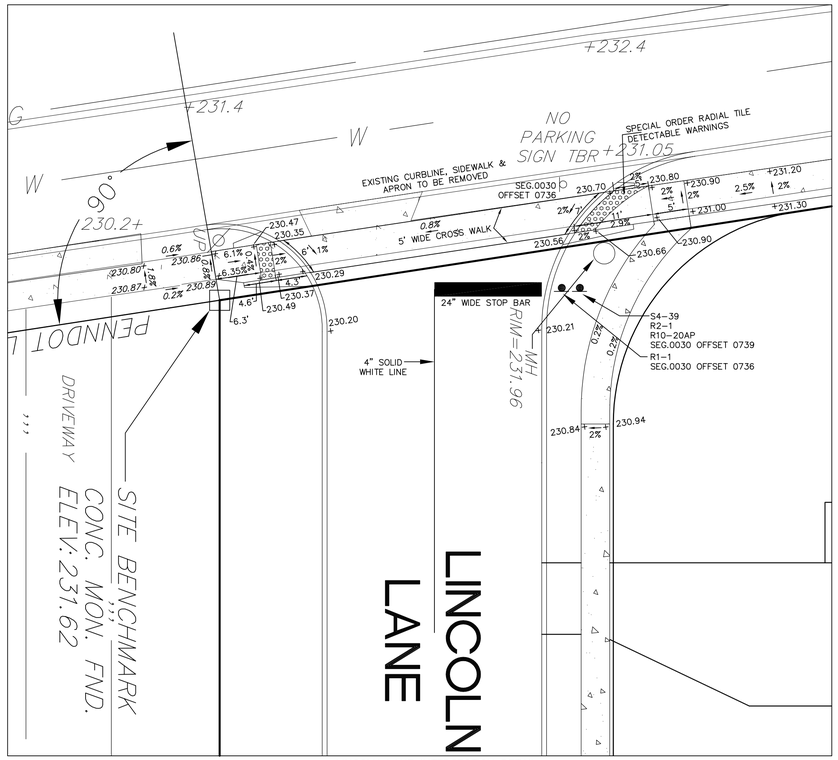
0 2.5 5.0 7.5 25 50 75

12 FEBRUARY 2024

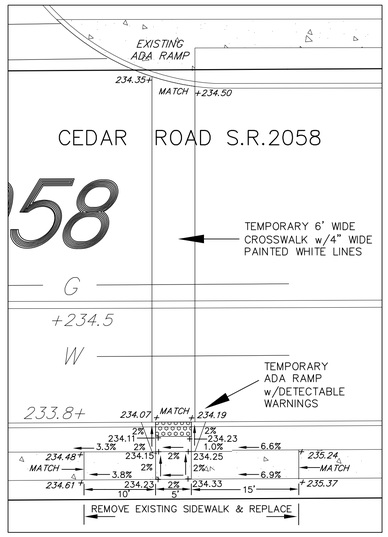
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
06-0	MONTGOMERY COUNTY	S.R. 2058	0030	5 OF 6
	ABINGTON TOWNSHIP			

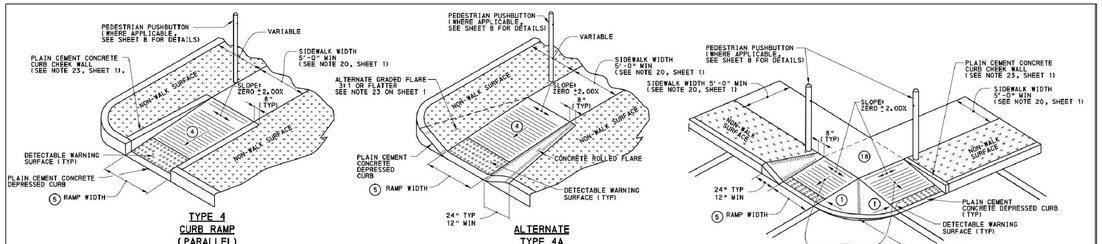
REVISION NUMBER	REVISIONS	DATE	BY



LINCOLN LANE INTERSECTION DETAIL



TEMPORARY CROSSWALK & ADA RAMP DURING CONSTRUCTION OF LINCOLN LANE



(1) SIDE FLARES 10.00% MAX SLOPE.
(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.
(5) CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0".
(6) SLOPE VARIES SEE RAMP DETAILS.
(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

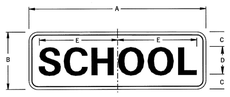
CURB RAMPS AND SIDEWALKS
NEW CONSTRUCTION OR
ALTERATION DETAILS
TYPE 4 CURB RAMPS AND
TYPICAL ELEVATIONS

RECOMMENDED FEB. 19, 2021 — CHIEF, HWY. DELIVERY DIVISION
RECOMMENDED FEB. 19, 2021 — DIRECTOR, BUREAU OF PROJECT DELIVERY
SHT 4 OF 14
RC-67M

S4-3P
SCHOOL PANEL

(a) Justification. The School Panel (S4-3P) shall be used in conjunction with the Speed Limit Sign (R2-1) in accordance with Department regulations. The S4-3P panel shall be mounted directly above the R2-1 sign. The School Panel (S4-3P) may be used to supplement the School Sign (S1-1). When used with the S1-1 sign, the S4-3P panel shall be mounted below the S1-1 sign.

(b) Size. The 36" x 12" size should be used on roadways that have four or more lanes with posted speed limits of 40 MPH or higher.



DIMENSIONS – IN						
SIGN SIZE A x B	C	D	E	MAR-GIN	BOR-DER	BLANK STD.
24" x 8"	2	4D	10.1	0.4	0.6	———
36" x 12"	3	6D	15.2	0.5	0.8	———

COLOR:
LEGEND AND BORDER: BLACK (NON-REFLECTORIZED)
BACKGROUND: FLUORESCENT YELLOW GREEN (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations

S4_3.DGN

R2-1
SPEED LIMIT SIGN

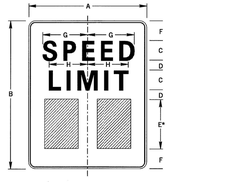
The Speed Limit Sign (R2-1) shall be authorized for use to display the maximum legal speed limit on a highway. When used as a variable speed limit sign, speed display module(s) may be attached to the sign or inserted through cut-outs in the sign substrate.

The R2-1 Sign shall be placed at intervals as specified in Department regulations. The standard size signs shall be as follows:

(1) 24" x 30". All single lane conventional highways having any speed limit.

(2) 30" x 36". Multi-lane conventional highways regardless of speed limit.

(3) 48" x 60". Expressways and freeways.



DIMENSIONS – IN										
SIGN SIZE A x B	C	D	E	F	G	H	MAR-GIN	BOR-DER	BLANK STD.
24" x 30"	4E	2	10E	4	9.6	7.3	0.4	0.6	B5-3024
30" x 36"	5E	2	12E	5	12	9.1	0.6	0.8	B5-3630
48" x 60"	8E	6	20E	6	19.1	14.6	0.8	1.2	B5-6048

* OPTICALLY SPACE NUMERALS ABOUT VERTICAL ℄

COLOR:
LEGEND AND BORDER: BLACK (NON-REFLECTORIZED)
BACKGROUND: WHITE (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations

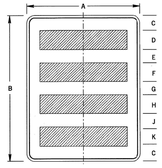
R2_1.DGN

R10-20AP
RESTRICTED HOURS PLAQUE

The Restricted Hours Plaque (R10-20AP) may be used as a supplemental sign beneath any turn prohibition sign or the No Turn On Red Square-Shaped Sign (R10-11B) to designate the effective hours of the restriction. The R10-20AP plaque may also be used in conjunction with the Speed Limit Sign (R2-1) when identifying a school zone speed limit and the No Parking Symbol Sign (R8-3).

The R10-20AP plaque shall have a maximum of three lines, except when used for a school zone speed limit on roadways with a normal speed limit of 35 MPH or less. The first line may be used to designate the effective days of the week.

The R10-20AP plaque shall be mounted below the primary sign, and shall have the same width as the primary sign.



DIMENSIONS – IN										
SIGN SIZE A x B	C	D	E	F	G	H	J	K	MAR-GIN	BOR-DER	BLANK STD.
24" x 12"	4	4*	–	–	–	–	–	–	0.4	0.6	B5-2412
24" x 18"	3.6	4*	2.8	4*	–	–	–	–			B5-2418
24" x 24"	3.2	4*	2.8	4*	2.8	4*	–	–			B3-24
24" x 30"	2.8	4*	2.8	4*	2.8	4*	2.8	4*			B5-3024
30" x 15"	5	5*	–	–	–	–	–	–	0.6	0.8	B5-3015
30" x 24"	5	5*	4	5*	–	–	–	–			B5-3024
30" x 30"	4	5*	3.5	5*	3.5	5*	–	–			B3-30
30" x 36"	3.8	5*	2.8	5*	2.8	5*	2.8	5*			B5-3630

* CHOOSE STANDARD ALPHABETS SERIES FOR BEST FIT

COLOR:
LEGEND AND BORDER: BLACK (NON-REFLECTORIZED)
BACKGROUND: WHITE (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations

R10_20A.DGN

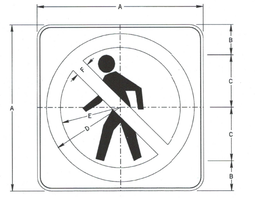
R9-3
NO PEDESTRIAN CROSSING SIGN

(a) Justification. The No Pedestrian Crossing Sign (R9-3) shall be authorized for use at locations where there is existing or potential pedestrian activity, and an engineering study determines the need to restrict pedestrian movement. The sign shall be used to restrict pedestrians if a physical barrier is infeasible, and shall be used to supplement a physical barrier. The engineering study shall be approved by the District Traffic Engineer and Assistant District Executive, and shall document that at least one of the following conditions is satisfied:

(1) Where the District Traffic Engineer and Assistant District Executive agree that pedestrian accommodation should not be installed for an approach due to pedestrian crash history or geometrics.
(2) When there is no room to safely walk at one or both ends of the normal pedestrian crossing area (i.e., there is no sidewalk, no accessible route, or paved shoulders are less than 4 feet wide).
(3) A clearly marked, safe alternate pedestrian crossing point is provided within 300 feet away.

The appropriate Use Crosswalk Plaque (R9-3BPR or R9-3BPL) or other special sign plaque, as necessary, should be used beneath the R9-3 sign to provide adequate pedestrian guidance to the appropriate crossing.

(b) Placement. When used, the R9-3 sign should be positioned on the far end of the normal crosswalk area, facing pedestrians that would desire to cross the roadway.

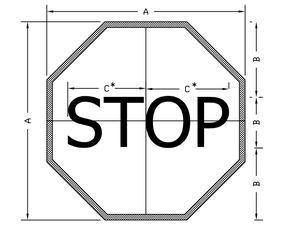


DIMENSIONS – IN								
SIGN SIZE A x A	B	C	D	E	F	MAR-GIN	BOR-DER	BLANK STD.
18" x 18"	3.4	5.6	8	6.4	1.6	0.4	0.4	B3-18
24" x 24"	4.4	7.6	10.6	8.6	2	0.4	0.6	B3-24

COLOR:
SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)
CIRCLE AND DIAGONAL: RED (REFLECTORIZED)
BACKGROUND: WHITE (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations

R9_3A.DGN



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

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BORDER	BLACK STD
30x30	30	10	12-1/2	C	3/4	B1-30

* Reduce spacing 40%

STOP SIGN (R1-1)
NTS.

INTERSECTION DETAIL AND ADA RAMP PLAN

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER — 40487-E
LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR — NO. 75128
EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

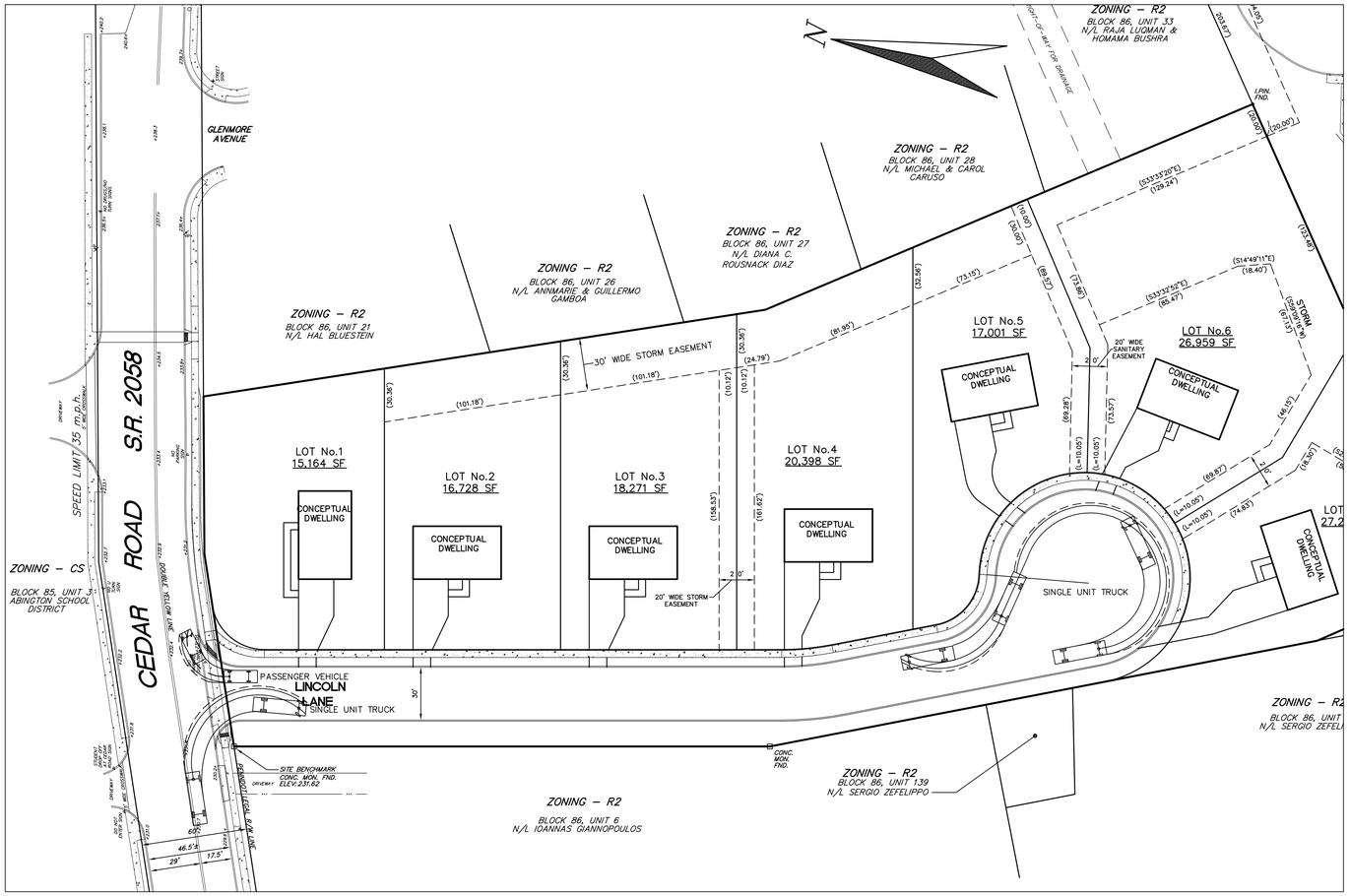
SCALE: 1"=10' (0, 10, 20, 30) 12 FEBRUARY 2024

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
06-0	MONTGOMERY COUNTY	S.R. 2058	0030	6 OF 6
ABINGTON TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



Design Controls and Criteria

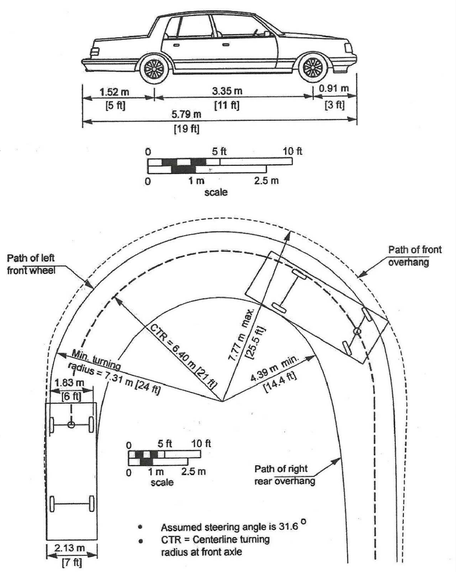


Exhibit 2-3. Minimum Turning Path for Passenger Car (P) Design Vehicle

AASHTO—Geometric Design of Highways and Streets

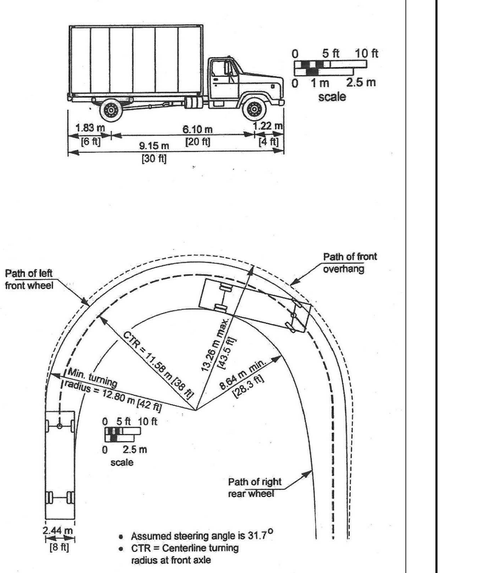


Exhibit 2-4. Minimum Turning Path for Single-Unit (SU) Truck Design Vehicle

VEHICLE MANEUVERABILITY PLAN

SCALE: 1"=40' 0 40 80 120 12 FEBRUARY 2024

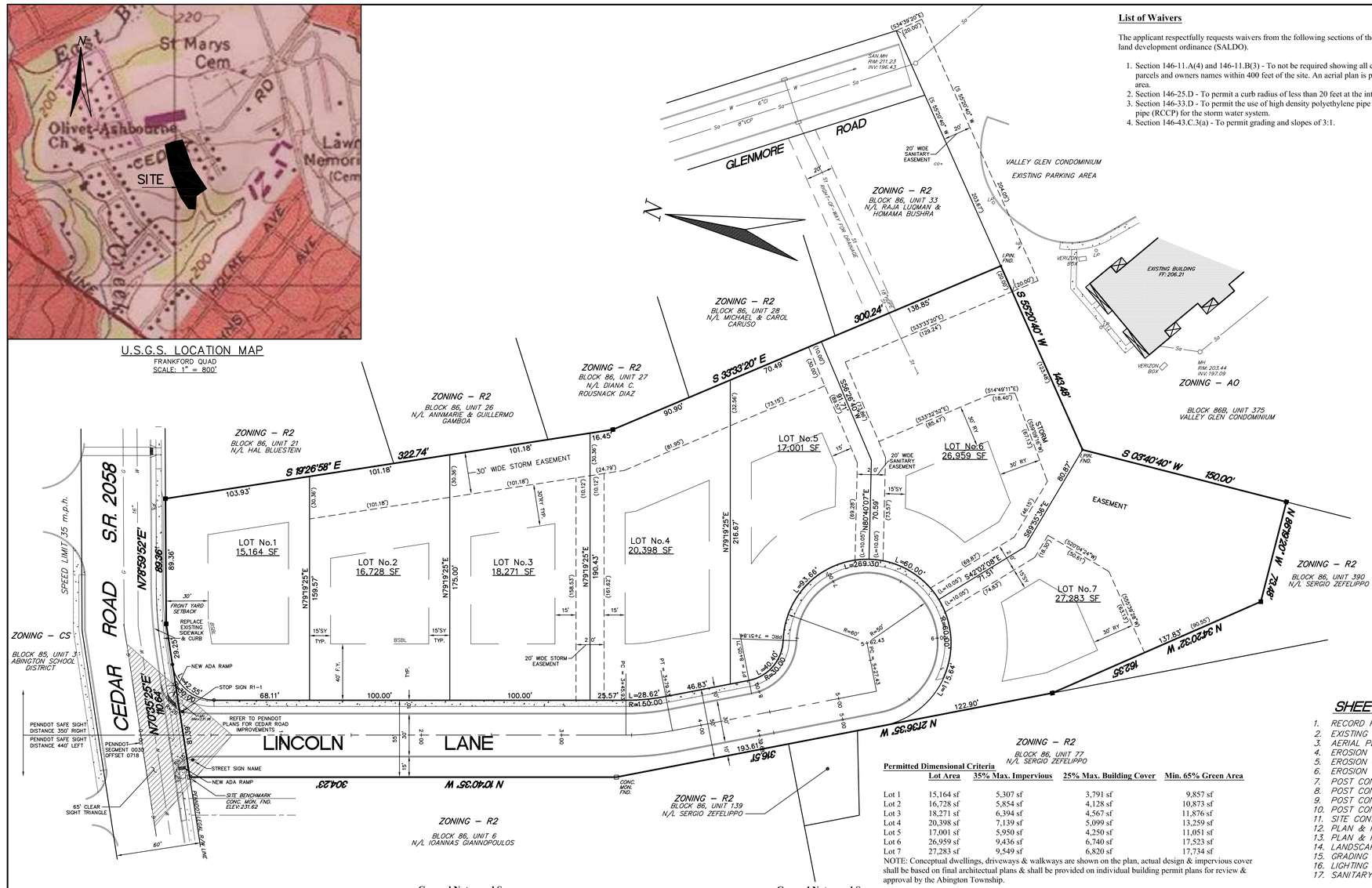
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER 40487-E — LAWRENCE J. BYRNE
LAWRENCE J. BYRNE PROFESSIONAL ENGINEER LICENSE No.40487

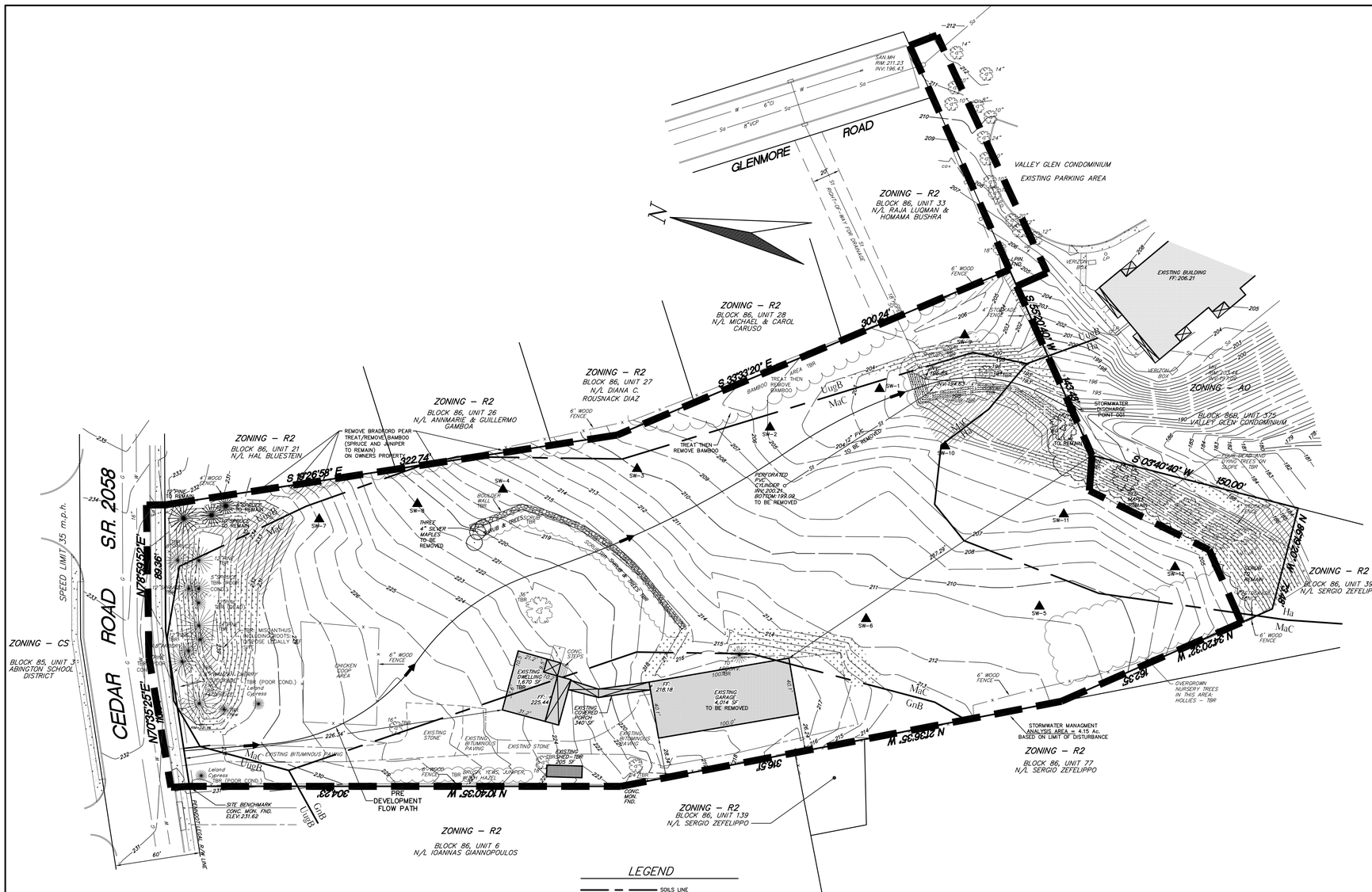
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL LAND SURVEYOR NO. 75128 — EDMUND A. CHADROW, III
EDMUND A. CHADROW, III PROFESSIONAL LAND SURVEYOR LICENSE No.75128

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

DESIGN BY: ECA	DRAWN BY: EAC	CHECKED BY: LJB

U.S.G.S. LOCATION MAP
FRANKFORD QUAD
SCALE: 1" = 800'


GLENMORE ROAD
ZONING – R2
BLOCK 86, UNIT 33
N/L RAJA LUQMAN & HOMAMA BUSHRA
ZONING – R2
BLOCK 86, UNIT 28
N/L MICHAEL & CAROL CARUSO
ZONING – R2
BLOCK 86, UNIT 27
N/L DIANA C. ROUSNACK DIAZ
ZONING – R2
BLOCK 86, UNIT 26
N/L ANNMARIE & GUILLERMO GAMBOA
ZONING – R2
BLOCK 86, UNIT 21
N/L HAL BLUESTEIN
ZONING – R2
BLOCK 86, UNIT 6
N/L IOANNAS GIANNOPOULOS
ZONING – R2
BLOCK 86, UNIT 139
N/L SERGIO ZEFELIPPO
ZONING – R2
BLOCK 86, UNIT 77
N/L SERGIO ZEFELIPPO
ZONING – R2
BLOCK 86, UNIT 390
N/L SERGIO ZEFELIPPO
ZONING – AO
BLOCK 86B, UNIT 375
VALLEY GLEN CONDOMINIUM
VALLEY GLEN CONDOMINIUM
EXISTING PARKING AREA
EXISTING BUILDING
FF: 206.21
ZONING – CS
BLOCK 85, UNIT 3
ABINGTON SCHOOL DISTRICT
CEDAR ROAD S.R. 2058
LINCOLN LANE
SPEED LIMIT 35 m.p.h.
LOT No.1
15,164 SF
LOT No.2
16,728 SF
LOT No.3
18,271 SF
LOT No.4
20,398 SF
LOT No.5
17,001 SF
LOT No.6
26,959 SF
LOT No.7
27,283 SF
EASEMENT
20' WIDE SANITARY EASEMENT
30' WIDE STORM EASEMENT
20' WIDE STORM EASEMENT
REPLACE EXISTING SIDEWALK & CURB
NEW ADA RAMP
STOP SIGN R1-1
STREET SIGN NAME
NEW ADA RAMP
SITE BENCHMARK
CONC. MON. FND. ELEV.231.62
REFER TO PENNDOT PLANS FOR CEDAR ROAD IMPROVEMENTS
PENNDOT SAFE SIGHT DISTANCE 350' RIGHT
PENNDOT SAFE SIGHT DISTANCE 440' LEFT
PENNDOT SEGMENT 0030 OFFSET 0718
65' CLEAR SIGHT TRIANGLE
S 19°26'58" E 322.74'
S 33°33'20" E 300.24'
S 55°20'40" W 138.85'
S 55°20'40" W 143.48'
S 03°40'40" W 150.00'
N 21°36'35" W 316.57'
N 10°40'35" W 304.23'
N 34°20'32" W 162.35'
N 78°59'52" E 89.36'
N 11°35'25" E 10.64'
N 79°19'25" E 216.67'
N 79°19'25" E 159.57'
N 79°19'25" E 175.00'
N 79°19'25" E 190.43'
N 89°40'07" E 70.50'
S 69°55'35" E 78.98'
N 34°20'32" W 78.98'
L=269.30'
L=60.00'
L=93.66'
L=28.62'
R=50.00'
R=60'
R=80'
PRC = 7+51.84
PCC = 8+21.43
PT = 8+40.40
R=440.00'
L=75.64'
122.90'
46.83'
193.61'
25.57'
68.11'
100.00'
90.90'
103.93'
101.18'
70.49'
16.45'
80.87'
137.83'
(S 34°39'20" E 20.00')
(S 55°20'40" W 20')
(S 55°20'40" W 204.68')
(S 55°20'40" W 203.57')
(S 55°20'40" W 20.00')
(S 55°20'40" W 129.24')
(S 55°20'40" W 123.48')
(S 14°49'11" E 18.40')
(S 03°40'40" E 150.00')
(S 03°40'40" E 80.87')
(S 03°40'40" E 65.47')
(S 03°40'40" E 69.28')
(S 03°40'40" E 69.87')
(S 03°40'40" E 74.83')
(S 03°40'40" E 46.15')
(S 03°40'40" E 18.50')
(S 03°40'40" E 50.61')
(S 03°40'40" E 63.57')
(S 03°40'40" E 60.55')
(S 33°33'20" E 73.19')
(S 33°33'20" E 129.24')
(S 33°33'20" E 32.56')
(S 33°33'20" E 91.95')
(S 33°33'20" E 10.00')
(S 33°33'20" E 30.00')
(S 33°33'20" E 24.79')
(S 33°33'20" E 10.12')
(S 33°33'20" E 30.36')
(S 33°33'20" E 101.18')
(S 33°33'20" E 30.36')
(S 33°33'20" E 101.18')
(S 33°33'20" E 30.36')
(S 33°33'20" E 89.36')
(S 33°33'20" E 158.57')
(S 33°33'20" E 161.62')
(S 33°33'20" E 158.57')
(S 33°33'20" E 175.00')
(S 33°33'20" E 159.57')
(S 33°33'20" E 89.36')
(S 33°33'20" E 30.36')
(S 33°33'20" E 101.18')
(S 33°33'20" E 30.36')
(S 33°33'20" E 101.18')
(S 33°33'20" E 30.36')
(S 33°33'20" E 103.93')
(S 33°33'20" E 90.90')
(S 33°33'20" E 70.49')
(S 33°33'20" E 16.45')
(S 33°33'20" E 80.87')
(S 33°33'20" E 137.83')
(S 33°33'20" E 122.90')
(S 33°33'20" E 46.83')
(S 33°33'20" E 193.61')
(S 33°33'20" E 316.57')
(S 33°33'20" E 304.23')
(S 33°33'20" E 162.35')
(S 33°33'20" E 78.98')
(S 33°33'20" E 216.67')
(S 33°33'20" E 159.57')
(S 33°33'20" E 175.00')
(S 33°33'20" E 190.43')
(S 33°33'20" E 70.50



Demolition Notes:

1. The firm or engineer of record is not responsible for job site safety or supervision. Contractor is to proceed with the demolition in a systematic and safe manner, following all the OSHA requirements, to insure public and contractor safety.

2. All demolition activities are to be performed in accordance with these plans, specifications, and referenced documents as well as all federal, state and local regulations. Any discrepancies or deviations shall be identified by the contractor to the engineer in writing for resolution prior to initiation of activity.

3. Prior to starting any demolition contractor is responsible for/to:

   A. Ensure copies of all permits and approvals are on site for review.

   B. The required soil erosion and sediment control measures shall be in place prior to site disturbance.

   C. All utilities and services, including but not limited to gas, water, electric, sanitary and storm sewer, telephone, cable, fiber optic cable, etc. Within the limits of disturbance, shall be vertically and horizontally located. The contractor shall use and comply with the requirements of the applicable utility notification system to locate all the underground utilities.

   D. Protect and maintain in operation, all active systems that are not being removed during all demolition activities.

   E. Familiarize themselves with the applicable utility service provider requirement and is responsible for all coordination regarding utility demolition as identified or required for project. The contractor shall provide the owner written notification that the existing utilities and services have been terminated and abandoned in accordance with jurisdiction and utility company requirements.

   F. Coordination with utility companies regarding working "off-peak" hours or on weekends as may be required to minimize the impact on the affected parties.

   G. A complete inspection for contaminants, by a licensed environmental testing agency, of all buildings and/or structures to re removed shall be done in accordance with all applicable local, state, and federal environmental regulations. All contaminants shall be removed and disposed of by a federally licensed contractor in accordance with federal state, and local regulations. All environmental work including hazardous material soils, asbestos, or other referenced or implied herein is solely the responsibility of the owner's environmental consultant.

4. The contractor shall provide all the "means and methods" necessary to prevent movement, settlement, or collapse of existing structures, and any other improvements that are remaining on or off site.

5. Explosives shall not be used without prior written consent of both the owner and applicable governmental authorities. All the required permits and explosive control measures that are required by the federal, state, and local governments shall be in place prior to starting an explosive program. The contractor is also responsible for all inspection and seismic vibration testing that is required to monitor the effects on all local structures.

6. Contractor shall provide traffic control and generally accepted safe practices in conformance with: the "manual on uniform traffic control," as well as federal, state, and local regulations when demolition related activities impact roadways or roadway rights-of-way,

7. The contractor shall conduct demolition activities in such a manner to insure minimum interference with roads, streets, sidewalks, walkways, and other adjacent facilities. Street closure permits must be received from the appropriate governmental authority where required.

8. Use dust control measures to limit the amount of airborne dust and dirt rising and scattering in the air to within federal, state, and/or local standards. After the demolition is complete, adjacent structures and improvements shall be cleaned of all dust and debris caused by the demolition operations. The contractor is responsible for returning all adjacent areas to their "pre-demolition" condition.

9. The contractor is responsible to safeguard the site as necessary to perform the demolition in such a manner as to prevent the unauthorized entry of persons at any time.

10. This demolition plan is intended to identify those existing items/conditions which are to be removed. It is not intended to provide direction other than that all methods and means are to be in accordance with state, federal local and jurisdictional requirements. The contractor shall be responsible for all OSHA and other safety precautions necessary to provide a safe work site.

11. The demolition contractor is responsible for all repairs of damage to all items that are to remain as a result of his activities. All repairs shall use new material. The repairs shall restore the item to the pre-demolition condition.

12. Debris shall not be buried on the subject site. All excavated material and debris (solid waste) shall be disposed of in accordance with all town, county, state, and federal laws and applicable codes. The contractor shall properly remove and dispose of hazardous/unsuitable material off-site in accordance with all applicable codes, ordinances, and laws.

13. Demolition of existing structures and foundations should include full removal of all remnant utilities, footings, foundation walls and slabs. Remnant foundations and slabs may remain in place two feet below pavement subgrade and landscaped areas, provided they are adequately broken to promote positive drainage and that they will not interfere with future construction.

14. All areas of building demolition and pavement removal which shall be converted to lawn areas shall be provided with a minimum of 6 inches of topsoil set at the proposed final grades.

LEGEND

- SOILS LINE
- +100.2 EXISTING SPOT ELEVATION
- 100 EXISTING CONTOUR
- EXISTING MONUMENT
- FENCE
- UTILITY POLE
- CONCRETE CURB
- W EXISTING WATERLINE
- So EXISTING SANITARY SEWER
- St EXISTING STORM SEWER
- EXISTING MANHOLE
- CONCRETE SIDEWALK OR PAD
- EDGE OF PAVING
- 15–25% SLOPES
- 25+% SLOPES
- STORMWATER MANAGEMENT AREA BASED ON LIMIT OF DISTURBANCE
- SW-1 STORMWATER TEST PIT

STOP–CALL BEFORE YOU DIG!

1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC.
SERIAL No.20171532707 CONTACTED: 6–2–2017

ACT 187 USERS LIST FOR ABINGTON

USER	ADDRESS	TELEPHONE
1. TOWNSHIP OF ABINGTON	1176 OLD YORK RD. ABINGTON, PA.19001	215–884–5000
2. AQUA PENNSYLVANIA, INC.	762 LANCASTER AVE. BRYN MAWR,PA. 19010	1–800–711–4779
3. BELL TELEPHONE CO. of PA.	104 WITMER RD. HORSHAM,PA. 19044	215–956–2623
4. PHILADELPHIA ELECTRIC Co.	400 PARK AVE. WARMINSTER PA. 18974	OUTSIDE PA. 412–323–7100 IN PA. 800–242–1776
5. PENNA. DEPT. OF TRANSPORTATION	EAST NORRITON TWP.,P.O. BOX 350 NORRISTOWN,PA.	1–215–275–2368

SHEET 2 of 17

SD–21–03–FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT
REV. 3–26–2024 PER MCCD LETTER DATED 3–15–2024
REV. 12–20–2023 PER MCCD & PENNDOT COMMENTS
REV. 5–31–2023 AS PER APPROVED TOWNSHIP RESOLUTION
REV. 9–16–2022 AS PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487–E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

EXISTING FEATURES/DEMOLITION PLAN/ERSAM PLAN
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: 1"=40' 0 40 80 120 22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672–8671 FAX (215) 672–6765
EST. 1967

COMM.#9442
FB–341/12

E–2541–2

OWNERS LIST

Parid 30-00-22488-00-9
Block 85, Unit 2
Area: 7.57 Ac.
Convent of Saint Basil the Great

Parid 30-00-07064-00-7
Block 85, Unit 3
Area: 25.99 Ac.
Abington School District

Parid 30-00-06968-00-4
Block 85, Unit 4
Area: 18,700 s.f.
Jeffrey M. & Jacqueline E. Kohl

Parid 30-00-07088-00-1
Block 86, Unit 5
Area: 80,400 s.f.
Francis Edward & Rovilie Arguelles

Parid 30-00-07108-00-8
Block 86, Unit 6
Area: 68,400 s.f.
Ioannis Giannopoulos & Catherine Anastasopoulou

Parid 30-00-24288-00-9
Block 86, Unit 21
Area: 18,400 s.f.
Hal Bluestein

Parid 30-00-24284-00-4
Block 86, Unit 26
Area: 15,930 s.f.
Annemarie & Guillermo Gamboa

Parid 30-00-24280-00-8
Block 86, Unit 27
Area: 16,560 s.f.
Diana Rousnack Diaz

Parid 30-00-24276-00-3
Block 86, Unit 28
Area: 16,822 s.f.
Michael & Carol Caruso

Parid 30-00-24316-00-8
Block 86, Unit 29
Area: 17,200 s.f.
Joshua A. & Ellen J. Waters

Parid 30-00-24312-00-3
Block 86, Unit 30
Area: 16,445 s.f.
Paul & Gloria Gross

Parid 30-00-24308-00-7
Block 86, Unit 31
Area: 16,583 s.f.
Chan Pho Sok & Melissa D. Clark-Pho

Parid 30-00-24304-00-2
Block 86, Unit 32
Area: 17,883 s.f.
Michael P. & Rose M. McConnell

Parid 30-00-24272-00-7
Block 86, Unit 33
Area: 16,034 s.f.
Luqman Rajan & Bushra Homama

Parid 30-00-47572-00-8
Block 86, Unit 42
Area: 15,600 s.f.
Adam & Amanda Klein

Parid 30-00-47576-00-4
Block 86, Unit 43
Area: 17,200 s.f.
Kamil El & Danny Wright

Parid 30-00-47580-00-9
Block 86, Unit 44
Area: 20,400 s.f.
Jeanette Weiss

Parid 30-00-47584-00-5
Block 86, Unit 45
Area: 23,135 s.f.
Nicolas Rodriguez

Parid 30-00-47588-00-1
Block 86, Unit 46
Area: 20,811 s.f.
Ryan & Jennifer Williams

Parid 30-00-47592-00-6
Block 86, Unit 47
Area: 18,487 s.f.
Andrew & Karen Goode

Parid 30-00-47596-00-2
Block 86, Unit 48
Area: 16,162 s.f.
Maria Radu & Marius Edu

Parid 30-00-07104-00-3
Block 86, Unit 77
Area: 3.61 Ac.
Sergio Zefelippo Jr.

Parid 30-00-07100-00-7
Block 86, Unit 78
Area: 37,207 s.f.
Sergio Zefelippo, Jr.

Parid 30-00-07096-00-2
Block 86, Unit 79
Area: 15,000 s.f.
Maria Rosa Zefelippo

Parid 30-00-07092-00-6
Block 86, Unit 80
Area: 16,800 s.f.
Christopher Lim & Karen Y Can Tu

Parid 30-00-07104-10-2
Block 86, Unit 139
Area: 2,673 s.f.
Sergio Zefelippo Jr.

Parid 30-00-07112-02-2
Block 86, Unit 390
Area: 16,057 s.f.
Sergio Zefelippo Jr.

Parid 30-00-23977-09-9
Block 86B, Unit 375
Area: 23.63 Ac.
Valley Glenn Condominium



SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

SHEET 3 of 17

REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 PER APPROVED TOWNSHIP RESOLUTION
REV. 9-16-2022 PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
LAWRENCE J. BYRNE
ENGINEER 40487-E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

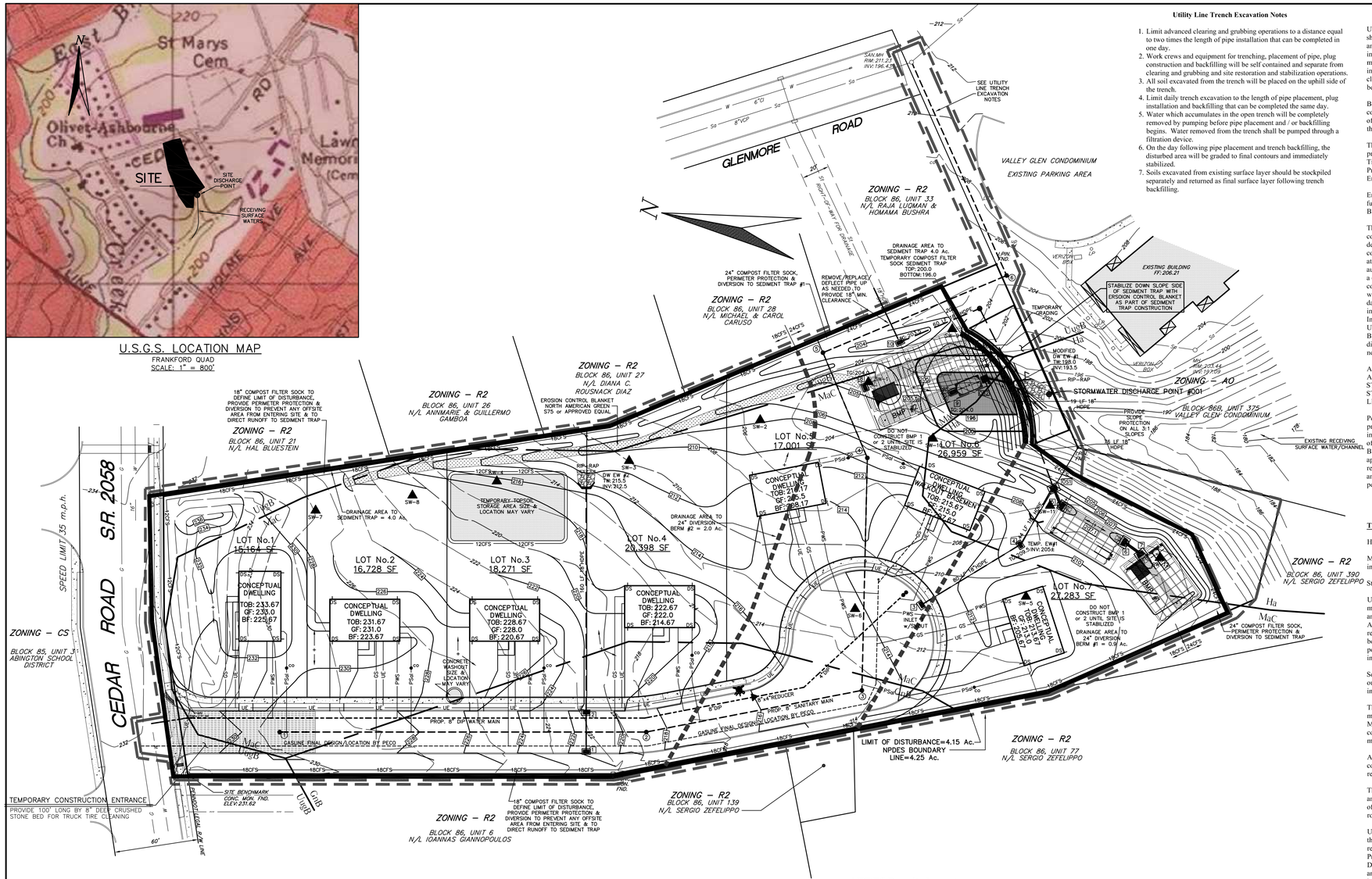
AERIAL PLAN
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

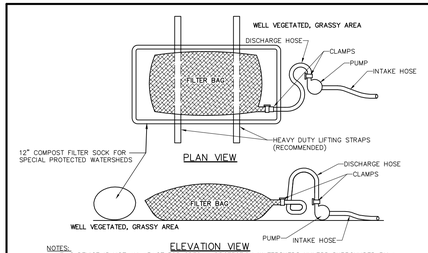
SCALE: 1"=100' 0 100 200 300 22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

E-2541-3

U.S.G.S. LOCATION MAP
FRANKFORD QUAD
SCALE: 1" = 800'


GLENMORE ROAD
CEDAR ROAD S.R. 2058
SPEED LIMIT 55 m.p.h.
ZONING – R2
BLOCK 86, UNIT 33
N/L RAJA LUGMAN & HOMAMA BUSHRA
ZONING – R2
BLOCK 86, UNIT 28
N/L MICHAEL & CAROL CARUSO
ZONING – R2
BLOCK 86, UNIT 27
N/L DIANA C. ROUSNACK DIAZ
ZONING – R2
BLOCK 86, UNIT 26
N/L ANNMARIE & GUILLERMO GAMBOA
ZONING – R2
BLOCK 86, UNIT 21
N/L HAL BLUESTEIN
ZONING – CS
BLOCK 85, UNIT 3
ABINGTON SCHOOL DISTRICT
ZONING – R2
BLOCK 86, UNIT 6
N/L IOANNAS GIANNOPOULOS
ZONING – R2
BLOCK 86, UNIT 139
N/L SERGIO ZEFELIPPO
ZONING – R2
BLOCK 86, UNIT 77
N/L SERGIO ZEFELIPPO
ZONING – R2
BLOCK 86, UNIT 390
N/L SERGIO ZEFELIPPO
ZONING – AO
BLOCK 86B, UNIT 375
VALLEY GLEN CONDOMINIUM
VALLEY GLEN CONDOMINIUM
EXISTING PARKING AREA
EXISTING BUILDING FF: 206.21
LOT No.1 16,164 SF
LOT No.2 16,728 SF
LOT No.3 18,271 SF
LOT No.4 20,398 SF
LOT No.5 17,001 SF
LOT No.6 26,959 SF
LOT No.7 27,283 SF
CONCEPTUAL DWELLING TOB: 233.67 GF: 233.0 BF: 225.67
CONCEPTUAL DWELLING TOB: 231.67 GF: 231.0 BF: 223.67
CONCEPTUAL DWELLING TOB: 228.67 GF: 228.0 BF: 220.67
CONCEPTUAL DWELLING TOB: 222.67 GF: 222.0 BF: 214.67
CONCEPTUAL DWELLING TOB: 217.17 GF: 216.5 BF: 209.17
CONCEPTUAL DWELLING TOB: 215.67 GF: 215.0 BF: 207.67
CONCEPTUAL DWELLING TOB: 215.0 GF: 214.3 BF: 206.3
STORMWATER DISCHARGE POINT #001
TEMPORARY CONSTRUCTION ENTRANCE
PROVIDE 100' LONG BY 8" DEEP CRUSHED STONE BED FOR TRUCK TIRE CLEANING
SITE BENCHMARK CONC. MON. FND. ELEV: 231.62
PROP. 8" DIP WATER MAIN
PROP. 8" SANITARY MAIN
GASLINE FINAL DESIGN/LOCATION BY PECO
LIMIT OF DISTURBANCE=4.15 Ac.
NPDES BOUNDARY LINE=4.25 Ac.
SEE UTILITY LINE TRENCH EXCAVATION NOTES
DRAINAGE AREA TO SEDIMENT TRAP 4.0 Ac.
TEMPORARY COMPOST FILTER SOCK SEDIMENT TRAP TOP: 200.0 BOTTOM: 196.0
24" COMPOST FILTER SOCK, PERIMETER PROTECTION & DIVERSION TO SEDIMENT TRAP #1
REMOVE/REPLACE/ DEFLECT PIPE UP AS NEEDED, TO PROVIDE 18" MIN. CLEARANCE
18" COMPOST FILTER SOCK TO DEFINE LIMIT OF DISTURBANCE, PROVIDE PERIMETER PROTECTION & DIVERSION TO PREVENT ANY OFFSITE AREA FROM ENTERING SITE & TO DIRECT RUNOFF TO SEDIMENT TRAP
EROSION CONTROL BLANKET NORTH AMERICAN GREEN S75 or APPROVED EQUAL
TEMPORARY TOPSOIL STORAGE AREA SIZE & LOCATION MAY VARY
DRAINAGE AREA TO SEDIMENT TRAP = 4.0 Ac.
DRAINAGE AREA TO 24" DIVERSION BERM #2 = 2.0 Ac.
DRAINAGE AREA TO 24" DIVERSION BERM #1 = 0.9 Ac.
DO NOT CONSTRUCT BMP 1 or 2 UNTIL SITE IS STABILIZED
CONCRETE WASHOUT SIZE & LOCATION MAY VARY
STABILIZE DOWN SLOPE SIDE OF SEDIMENT TRAP WITH EROSION CONTROL BLANKET AS PART OF SEDIMENT TRAP CONSTRUCTION
MODIFIED DW EW #1 TW:198.0 INV:193.5
DW EW #2 TW:215.5 INV:212.5
TEMP. EWP 5 INV: 205.6
RIP-RAP
PROVIDE SLOPE PROTECTION ON ALL 3:1 SLOPES
19 LF 18" HDPE
16 LF 18" HDPE
EXISTING RECEIVING SURFACE WATER/CHANNEL
SILT FENCE
SAN MH RIM 211.23 INV: 196.43
VERIZON BOX
TEMPORARY GRADING
MIN. 5%
MAX. 10%
MIN. 203.44 INV: 197.09
MIN. 204.44 INV: 197.09
MIN. 205.44 INV: 197.09
MIN. 206.44 INV: 197.09
MIN. 207.44 INV: 197.09
MIN. 208.44 INV: 197.09
MIN. 209.44 INV: 197.09
MIN. 210.44 INV: 197.09
MIN. 211.44 INV: 197.09
MIN. 212.44 INV: 197.09
MIN.



NOTES:

- THIS DEVICE IS NOT AN ABACT FOR SPECIAL PROTECTION WATERSHEDS UNLESS SURROUNDED BY A COMPOST FILTER SOCK OR OPERATED IN CONJUNCTION WITH A SUMP PIT.
- LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%, FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

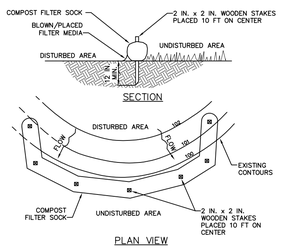
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST FILTER SOCK OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

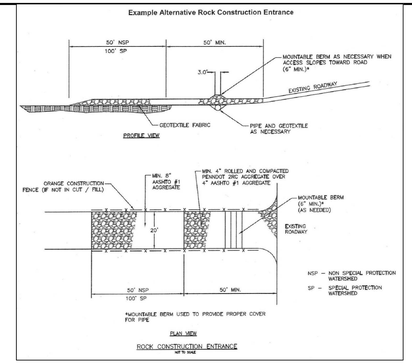
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG
NOT TO SCALE



NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK
NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

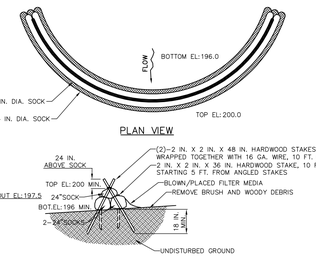
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



DESIGN NOTES:

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

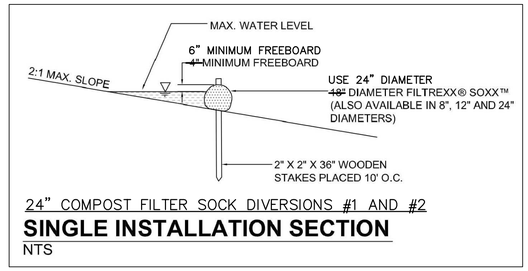
COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

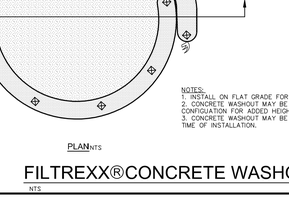
PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

STANDARD CONSTRUCTION DETAIL #3-11
COMPOST SOCK SEDIMENT TRAP
NOT TO SCALE



24" COMPOST FILTER SOCK DIVERSIONS #1 AND #2
SINGLE INSTALLATION SECTION
NTS

Compost Filter Sock Sedlment Trap Design
Contributing Area = 4 Acres
Bottom Elevation = 196.0 (30' x 50') = 1,500 square feet
Top Elevation = 200.0 (60' x 60') = 3,600 square feet
Required cleanout storage elevation based on 700 cubic feet x 4 acres = 2,800 cubic feet occurs at elevation 197.5. See stage storage calculations in narrative.
Required storage elevation based 2,000 cubic feet x 4 acres = 8,000 cubic feet occurs at elevation 199.4. See stage storage calculation in narrative.
Total available storage volume = 10,200 cubic feet at elevation 200.0.
Use 2- 24" base bottom socks and 1 - 24" top sock.



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED, A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET
NOT TO SCALE

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED, A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET
NOT TO SCALE

FILTREXX® CONCRETE WASHOUT
NTS

APPENDIX C - STANDARD E&S PLAN NOTES

1. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
2. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
5. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
6. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan.
7. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan maps(s) in the amount necessary to complete the finish grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H:1V or flatter.
9. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
10. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271. 1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
11. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated.
12. The contractor is responsible for ensuring that any material brought on site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
13. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
14. Vehicles and equipment may neither enter directly nor exit directly from lots (specify lot numbers) onto (specify road names)
15. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and reetting must be performed immediately. If the E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
16. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
17. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
18. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
19. Areas which are to be top soiled shall be scarified to a minimum depth of 3 to 5 inches - 6 to 12 inches on compacted soils - prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill out slopes shall have a minimum of 2 inches of topsoil.
20. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
21. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
22. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
23. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
24. Fill shall not be placed on saturated or frozen surfaces.
25. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
26. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
27. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
28. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
29. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the Department.
30. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S BMPs.
31. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
32. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
33. Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to $10,000 per day in civil penalties, up to $10,000 in summary criminal penalties, and up to $25,000 in misdemeanor criminal penalties for each violation.

Construction Sequence

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEDE IN ACCORDANCE WITH THE FOLLOWING SEQUENCE.

The permittee or co-permittee shall contact the PADEP or County Conservation District at least seven days before construction is to begin to schedule a preconstruction conference. The permittee, co-permittee, and others undertaking the earth disturbance activity must attend a preconstruction conference when requested by the PADEP or County Conservation District. The permittee or co-permittee must bring a copy of their NPDES permit, a copy of the stamped plan from the PADEP or County Conservation District, and all associated department approvals/permits which must be available at the conference upon request. Also, at least 3 days before starting any earth disturbance activities, all contactors involved in those activities shall notify the Pennsylvania One Call System Incorporated at 1-800-242-1776 for buried utilities locations.

A Pennsylvania Licensed professional or designee shall be onsite for implementation of critical stages of the Post Construction Stormwater Management Plan. Critical stages shall include the installation of the stormwater management basins, BMP 1 and BMP 2.
The municipality shall inspect all phases of the installation of the best management practices (BMP's) and/or stormwater management (SWM) facilities as deemed appropriate by the municipality. During construction, the contractor must notify the township engineer's office three (3) days prior to the construction of the proposed BMP stormwater management facility.

STAGE 1 - Shall consist of initial installation of erosion control facilities and site preparation.

Install construction entrance in accordance with the plan and details. Install sediment trap consisting of compost filter sock berm and temporary grades in accordance with the plan and details. Install Erosion Control Blanket on the slopes and channel downslope of the sediment trap as part of the sediment trap construction. Install 24" compost filter sock diversion berms to direct upstream areas to the sediment trap. Install perimeter 18" compost filter sock along the east and west property lines. The perimeter compost filter sock shall be used to direct onsite areas to the sediment trap, define the limit of disturbance and to prevent any offsite flows from entering the disturbed area. Install inlet #1 (manhole #1 and temporary end wall #1 to direct offsite runoff from Glenmore Road around the compost filter sock sediment trap and to the existing channel. Begin demolition of existing structures to be removed. See demolition plan and notes. Begin bulk excavation and rough grading of the site, which shall include excavation of the roadway, building areas, driveways, and yard areas. Upon completion of rough site grading, install the erosion control blanket in the diversion berm / swale area along the west property line. Stockpile topsoil and excess material where indicated on the plan (or export if required), seed with temporary seed mixture and surround with compost filter sock or silt fence. Refer to "Standard note to comply with NPDES Checklist Item #3.b.xv". All erosion and sediment controls identified above must be implemented to prevent sediment and potential contaminants from leaving the site before proceeding to stage 2. Stage 1 shall be considered complete when the above items are complete.

STAGE 2 - Shall consist of site utility installation, roadway and building construction.

Upon completion of Stage 1 begin construction of the sanitary sewer main from the existing manhole at the terminus of Glenmore Road. See utility line trench installation notes. Install site utilities and storm water inlets and collection system. Install temporary end wall #2 to direct runoff from inlet 4 towards the sediment trap. Upon completion of all utilities, storm collection and conveyance facilities and service laterals within the road right of way install curb, roadway stone base and binder paving course. Begin construction of buildings, individual on lot utility services and driveways.

Pumping of any sediment laden water from excavated areas (foundations, trenches etc.) must be pumped through a sediment filter bag (see detail on erosion control detail sheet). Discharge from the sediment filter bag must flow towards the perimeter silt sock or silt fence, sediment trap and/or undisturbed stabilized area prior to leaving the site.

Inspect the silt sock and/or silt fence and other erosion control facilities after every rainfall runoff event. Sediment shall be removed where accumulation reaches 1/3 the height of the silt fence and elevation 199.0 for the sediment trap. All erosion control facilities shall be maintained in accordance with the details. Any sediment on the roadway must be cleared immediately.

Upon stabilization of the contributing drainage areas begin construction BMP #1 and permanent end wall #1. Remove temporary end wall #1 and connect pipe from MH #1 to permanent end wall #1. Remove temporary end wall #2 and connect outlet structure from BMP #1 to permanent end wall #1. Temporary sediment trap grades will overlap with the final grades of BMP #2. Relocate or adjust sediment trap compost filter socks and perimeter compost filter sock as needed. Final grades shall be established as practical. Upon stabilization of contributing drainage area begin construction of BMP #2. Compost filter sock sediment trap, perimeter 24" and 18" compost filter sock shall remain in place during construction of BMP #2 and until site is stabilized. The underground stormwater basins BMP #1 and BMP #2 shall be protected from sediments by use of inlet protection or other appropriate methods. Refer to the Underground Basin Construction Sequence and Guidelines located on the Post Construction Stormwater Management Detail sheet. All stone that makes up the infiltration Stormwater Management Practice must remain free of sediment. If sediment enters the stone, the contractor may be required to remove the sediment and replace with clean washed stone. Stockpile excess material from the basin areas where indicated on the plan (or export if required), seed with temporary seed mixture and surround with silt fence. Refer to "Standard note to comply with NPDES Checklist Item #3.b.xv".

Stage 2 must be implemented before proceeding to stage 3. Stage 2 shall be considered complete when the above items are complete.

STAGE 3 - Shall consist of final site construction and stabilization.

Upon completion of stage 2, finalize construction of buildings, driveways, paved areas, site utilities and final grades as per the approved plans. Distribute topsoil, plant landscaping and stabilize disturbed areas in accordance with the seeding and mulching guidelines found on the plans. After final site stabilization has been achieved, temporary erosion and sediment BMP's and controls (sediment trap, compost filter sock, stabilized construction entrance etc.) must be removed. Areas disturbed during removal of the BMP's must be stabilized immediately by the operator. During non - germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within one year shall be stabilized in accordance with the temporary vegetation stabilization specifications. Disturbed areas which are at finished grade or will not be re-disturbed within one year shall be stabilized in accordance with the permanent vegetative specifications. An area shall be considered to have achieved final stabilization when it has a minimum 70% perennial vegetative cover or other cover sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

TOTAL AREA TO BE DISTURBED IS APPROXIMATELY = 4.1 ACRES

OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R--	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Alw (FT)	APRON TERMINAL WIDTH Atw (FT)
1	18	4	18	20	6	14
2	18	3	9	9	4.5	9
Temp1	18	4	18	10	4.5	10

NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET
WITH FLARED END SECTION OR ENDWALL
NOT TO SCALE

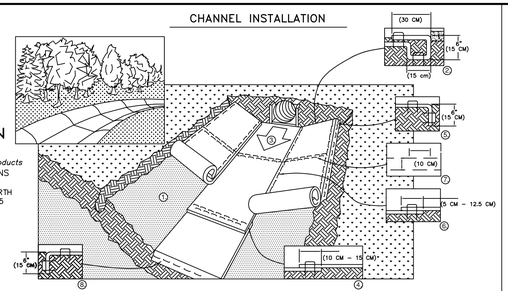
SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

SHEET 5 of 17

RE

CHANNEL INSTALLATION

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM®, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM -15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM -12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

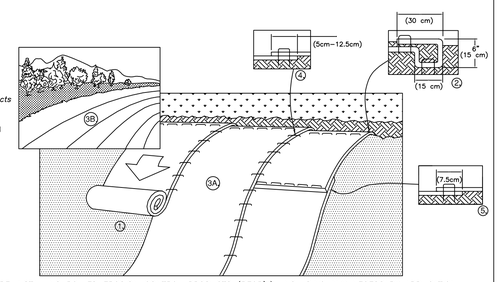
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

REV. 01/05

SLOPE INSTALLATION

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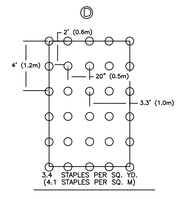
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM®, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

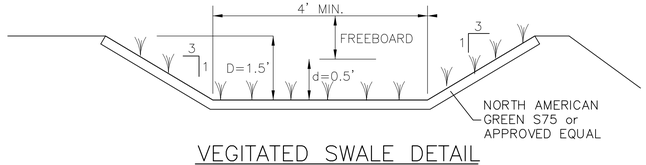
REV. 01/05

STAPLE PATTERN GUIDE
6.67' (2.03 M) WIDE ROLLS

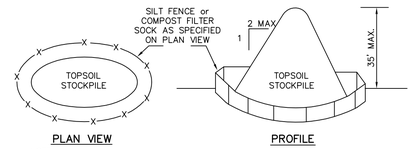
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3.4 STAPLES PER SQ. YD.
(4.1 STAPLES PER SQ. M)



VEGITATED SWALE DETAIL
NOT TO SCALE



PLAN VIEW PROFILE

NOTE:
1. SILT FENCE or COMPOST FILTER SOCK AS SPECIFIED ON PLAN VIEW MUST BE PLACED AROUND THE PERIMETER OF ALL STOCKPILES.
2. IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WHICH WILL REAMIN IN PLACE 20 DAYS OR MORE.

TEMPORARY TOPSOIL STOCKPILE
NTS

SEED MIX FOR VEGETATED SWALES
Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

ERNST SEEDS

Date: October 10, 2023

Native Detention Area Mix - ERNMX-183

	Botanical Name	Common Name	Price/Lb
26.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.10
25.00 %	*Panicum virgatum, 'Carthage', NC Ecotype*	Switchgrass, 'Carthage', NC Ecotype	11.49
24.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.34
20.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
3.00 %	*Juncus effusus*	Soft Rush	48.00
1.00 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	48.00
1.00 %	*Panicum rigidulum, PA Ecotype*	Redtop Panicgrass, PA Ecotype	57.60

100.00 % **Mix Price/Lb Bulk: $19.36**

Seeding Rate: 20 lb per acre, or 1/2 lb per 1,000 sq ft. For a cover crop: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre).

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

The native grasses, sedges and rushes establish quickly in areas where mowing is not anticipated. With a high seed count per pound, it can achieve native establishment with minimum risk and tolerate low-fertility. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

STANDARD WORKSHEET #21
Temporary and Permanent Stabilization Specifications

PROJECT NAME:_____ LOCATION:_____
PREPARED BY:_____ DATE:_____
CHECKED BY:_____ DATE:_____

SPECIFICATIONS: The Department recommends the use of the Penn State publication "Erosion Control & Conservation Plantings on Noncropland" as the standard to use for the selection of species, seed specifications, mixtures, liming and fertilizing, time of seeding, and seeding methods. Specifications for these items may also be obtained from Penn DOT's Publication # 408, Section 804 or by contacting the applicable county conservation district. Upon selection of a reference, that reference must be used to provide all specifications for seeding, mulching, and soil amendments. The following specification will be used for this project:

TEMPORARY

SPECIES:	Winter Rye
% PURE LIVE SEED:	90%
APPLICATION RATE:	150 lbs/acre
FERTILIZER TYPE:	10-10-10
FERTILIZER APPL. RATE:	435 lbs/acre
LIMING RATE:	1.0 tons/acre
MULCH TYPE:	Straw
MULCHING RATE:	3.0 tons/acre

PERMANENT

TOPSOIL PLACMENT DEPTH	4 inch min
SPECIES:	50% Kentucky Blue Grass, 40% Red Fescue,10% Perennial Rye Grass
% PURE LIVE SEED:	90-90-95
APPLICATION RATE:	150 lbs./acre
FERTILIZER TYPE:	10-20-20
FERTILIZER APPL. RATE:	600 lbs./acre
LIMING RATE:	0.5 tons/acre
MULCH TYPE:	Straw
MULCHING RATE:	3 tons/acre
ANCHOR MATERIAL:	Cellulose fiber
ANCHORING METHOD:	Hydro Spray
RATE OF ANCHOR MATERIAL APPL.:	800 lbs/acre
SEEDING SEASON DATES:	Early Spring to Late Fall

PERMANENT - STEEP SLOPE

TOPSOIL PLACEMENT DEPTH	4 inch min.
SPECIES:	50% Kentucky Blue Grass, 40% Red Fescue,10% Perennial Rye Grass
% PURE LIVE SEED:	90-90-95
APPLICATION RATE:	150 lbs/acre
FERTILIZER TYPE:	10-20-20
FERTILIZER APPL. RATE:	600 lbs/acre
LIMING RATE:	0.5 ton/acre
MULCH TYPE:	Straw
MULCHING RATE:	3 tons/acre
ANCHOR MATERIAL:	Emulsified Asphalt
ANCHORING METHOD:	Spray
RATE OF ANCHOR MATERIAL APPL.:	100 gal/acre
SEEDING SEASON DATES:	Early Spring to Late Fall

Temporary Stabilization and Permanent Stabilization

Hay or straw mulch must be applied at 3.0 tons per acre.

Mulch with mulch control netting or erosion control blankets must be installed on all slopes 3:1 or steeper.

Straw mulch shall be applied in long strands, not chopped or finely broken.

Until the site is stabilized, all erosion and sediment BMP's must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMP's after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regarding, reseeding, remulching, and renetting, must be done immediately. If erosion and sediment control BMP's fail to perform as expected, replacement BMP's, or modifications to those installed will be required. E&SPCPM p. 168

Sediment removed from BMP's shall be disposed of in landscape areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or placed in topsoil stockpiles.

The operator shall remove from this site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at this site.

An E&S Plan shall be submitted to the department or authorized conservation district and implemented for all spoil and borrow areas, regardless of their location.

Upon completion or temporary cessation of the earth disturbance activity the project site shall be immediately stabilized in accordance with the recommendations contained in the Erosion and Sediment Pollution Control Program Manual (E&S Manual), Commonwealth of Pennsylvania, Department of Environmental Protection No. 363-2134-008, April 2000, as amended and updated. Erosion and sediment control BMPs shall be implemented and maintained until permanent stabilization is completed and PCSM BMPs are operational.

Soils Limitation and Resolutions for Appendix E

Limitation	Resolution
* Cutbacks & cave in	**All applicable OSHA standards in regards to trenching and excavation must be implemented at all times.**
* Corrosive	**Suitable precautions should be taken to protect concrete and steel underground pipes, conduits and storage tanks. Utilize PVC or HDPE pipe as applicable.**
Droughty	Provide soil amendments such as compost or organic material.
* Easily erodible	**Stabilize immediately with suitable protection such as erosion control blanket, hydroseeding, sod etc.**
* Flooding	**No work or earth disturbance in flooded soils without proper dewatering.**
* Seasonal High Water	**Dewater excavated areas and trenches by pumping through filter bag or sediment trap. If possible drain by gravity under drain to stabilized areas or sediment traps.**
* Hydric soils	**Remove and replace with suitable material as needed.**
* Low Strength/Landslide	**All applicable OSHA standards in regards to slope construction must be implemented at all times. Minimize slope steepness. Remove and replace with suitable material as needed.**
* Slow Percolation	**Dewater excavated areas and trenches by pumping through filter bag or sediment trap. If possible drain by gravity under drain to stabilized areas or sediment traps. Provide applicable soils testing prior to design of BMP's. Utilize amended soils. Remove and replace with suitable material as needed.**
* Piping	**Utilize water tight pipes and appropriately designed materials and construction techniques.**
* Poor Topsoil	**Perform soils testing and supplement the soils as recommended with organic material, Lime and fertilizer.**
* Frost Action	**Precautions are needed to prevent damage, especially to roadways. Suitable design shall be utilized.**
Shrink-Swell	Remove and replace with suitable material as needed.
Potential Sinkhole	Applicable to carbonate areas. Perform site specific investigation to determine if sink holes and carbonate features are present. Remediate as necessary based on site specific recommendation.
Ponding	No work or earth disturbance in flooded or ponding soils without proper dewatering.
* Wetness	**No work or earth disturbance in flooded or ponding soils without proper dewatering. Allow wet soils to dry out as needed.**

*** Limitations for Glenelg silt loam, Hatboro silt loam, Manor loam and Urban land - Udorthents.**

The onsite Soils are classified as :
GnB - Glenelg Silt Loam, 3% to 8% slopes -HSG "B"
Ha - Hatboro Silt Loam - HSG "B/D"
MaC - Manor Silt Loam, 8% to 15% slopes - HSG "B"
UugB - Urban Land - Udorthents, schist and gneiss complex, 0% to 8% slopes - HSG "C"
UugD - Urban Land - Udorthents, schist and gneiss complex, 8% to 25% slopes - HSG "C"

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

SHEET 6 of 17

REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 AS PER APPROVED TOWNSHIP RESOLUTION
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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
LAWRENCE J. BYRNE
ENGINEER 40487-E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

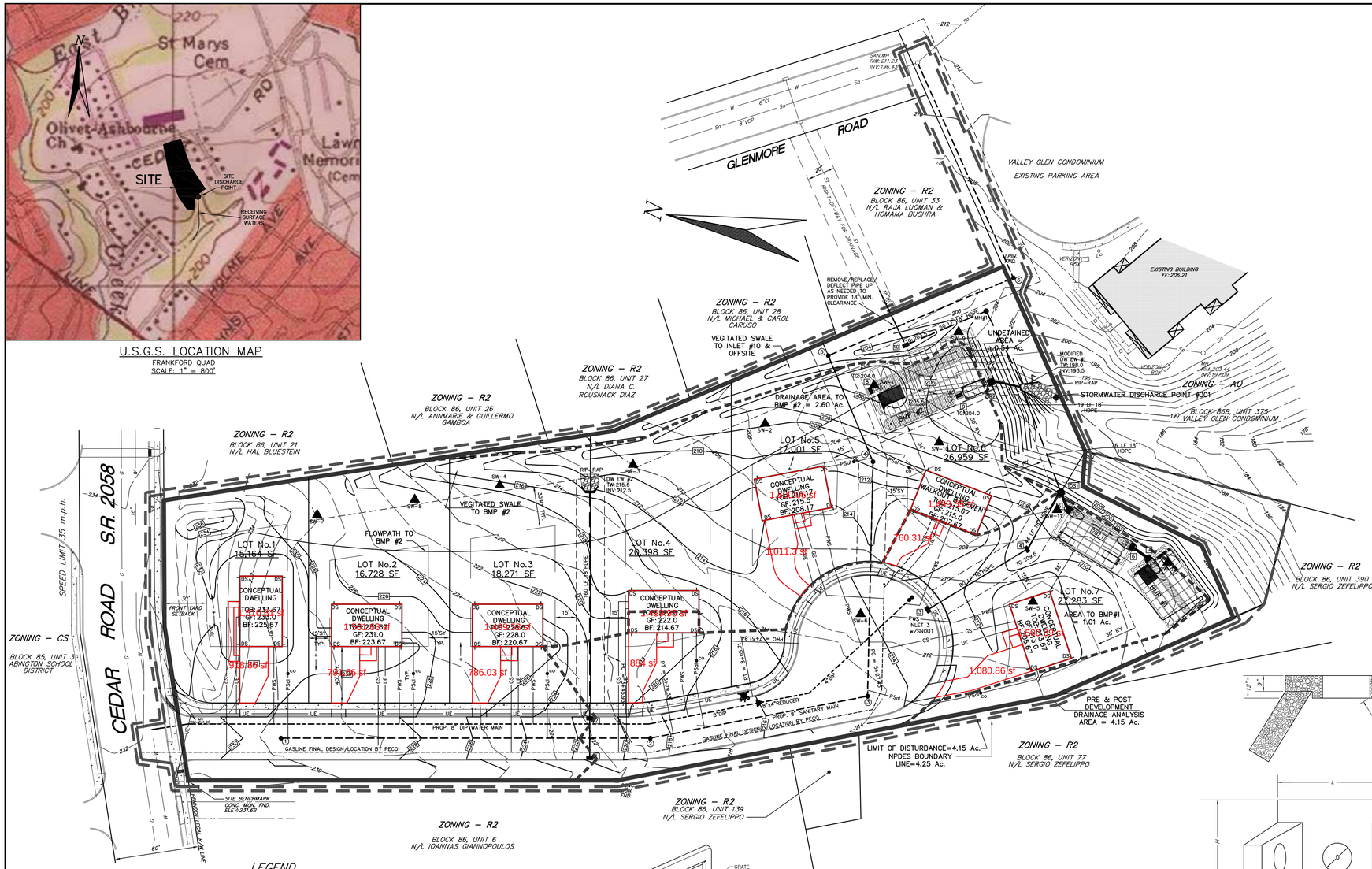
EROSION & SEDIMENT CONTROL PLAN DETAILS
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

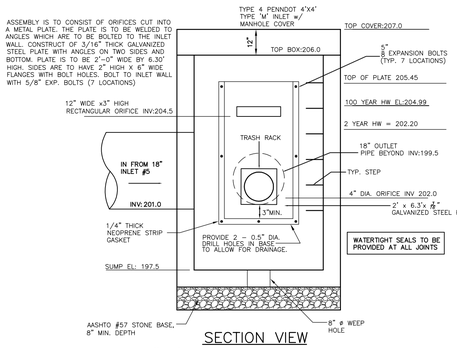
E-2541-6

U.S.G.S. LOCATION MAP
FRANKFORD QUAD
SCALE: 1" = 800'



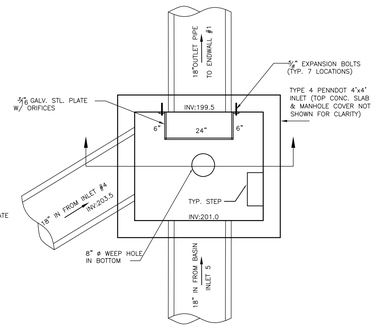
NPDES Permit plan notes:

1. The nearest receiving surface water is the Jenkintown Creek which is part of the Tacony Creek watershed management district "B". The PA Chapter 93 existing and designated use classification is WWF (Warm Water Fishes) and MF (Migratory fishes).
2. The responsible party is the owner: Paul Yannessa
   403 Longfield Road
   Glenside, PA 19038
   215-840-3260
3. It shall be responsibility of the owner to maintain the stormwater management system on the site. Maintenance shall be as indicated on these

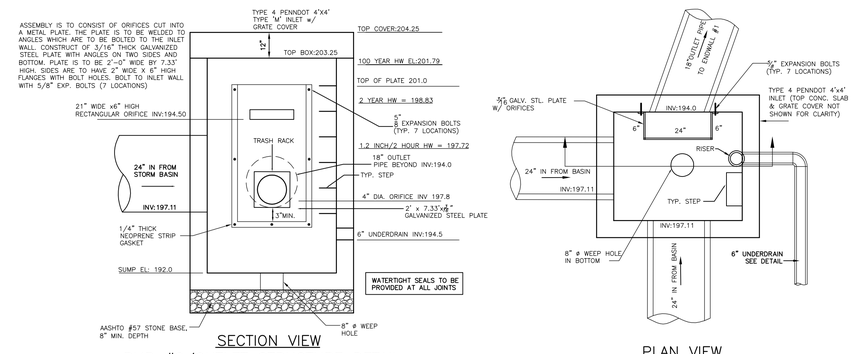


SECTION VIEW

BMP #1/OUTLET STRUCTURE DETAIL



PLAN VIEW

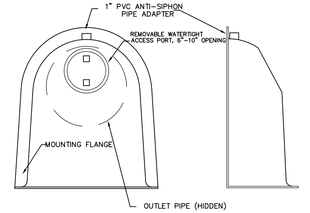


SECTION VIEW

BMP #2/OUTLET STRUCTURE DETAIL

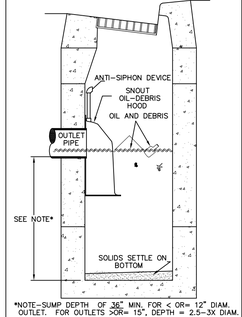
PLAN VIEW

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



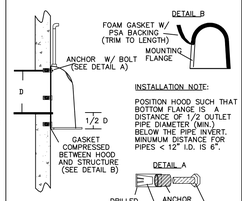
*NOTE-SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES ≤12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

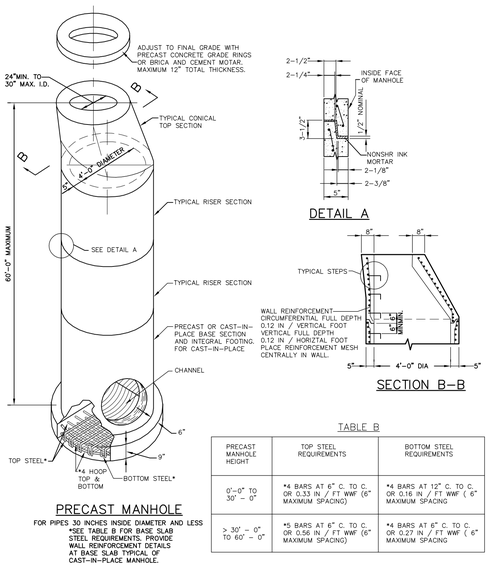
US Patent # 6126817

INSTALLATION DETAIL



HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	SP-SN



DETAIL A

SECTION B-B

TABLE B

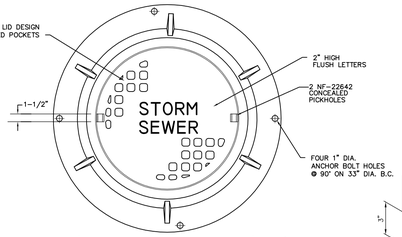
PRECAST MANHOLE HEIGHT	TOP STEEL REQUIREMENTS	BOTTOM STEEL REQUIREMENTS
0'-0" TO 30" - 0"	*4 BARS AT 6" C. TO C. OR 0.33 IN / FT WWF (6" MAXIMUM SPACING)	*4 BARS AT 12" C. TO C. OR 0.16 IN / FT WWF (6" MAXIMUM SPACING
> 30" - 0" TO 60" - 0"	*5 BARS AT 6" C. TO C. OR 0.56 IN / FT WWF (6" MAXIMUM SPACING)	*4 BARS AT 6" C. TO C. OR 0.27 IN / FT WWF (6" MAXIMUM SPACING

PRECAST MANHOLE

FOR PIPES 30 INCHES INSIDE DIAMETER AND LESS
*SEE TABLE B FOR BASE SLAB STEEL REQUIREMENTS. PROVIDE WALL REINFORCEMENT DETAILS AT BASE SLAB TYPICAL OF CAST-IN-PLACE MANHOLE.

STANDARD MANHOLES
PRECAST MANHOLES DETAIL

NTS

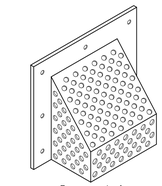


MATERIAL QUALITY: ASTM A48 CLASS 35B FOR GRAY IRON, NO COATING

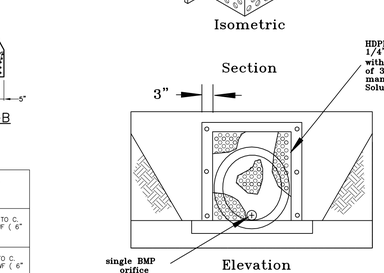
REFERENCE: NEENAH FOUNDARY, CATALOG No. R1642

STANDARD FRAME & COVER

N.T.S.

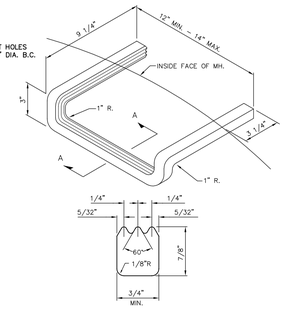


Isometric



TRASH RACK DETAIL

NTS.



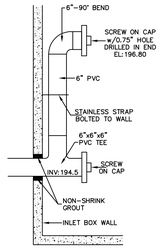
SECTION A-A

NOTES:

1. STEPS TO BE FABRICATED OF ALUMINUM ALLOY 6061-T6(EXTRUDED).
2. PORTIONS OF STEPS TO BE EMBEDDED IN WALLS OF MANHOLES OR CHAMBERS TO BE DIPPED IN HEAVY BODIED BITUMINOUS PAINT, OR PROVIDE PLASTIC INSERT.

ALUMINUM MANHOLE STEP

NTS.



UNDERDRAIN DETAIL

NTS.

Underground Basin Construction Sequence and Guidelines

Refer to ADS Storm Pipe Manufacturers Technical General Notes and latest Installation Instructions prior to beginning system installation. Shop drawing of the proposed system and materials shall be provided to the municipal engineer prior to system installation.

1. Areas for proposed subsurface infiltration systems shall be clearly marked before any site work begins to avoid soil disturbance and compaction during construction. If areas are compacted during construction additional infiltration testing may be required.
2. Provide erosion and sedimentation control protection on the site such that construction runoff is directed away from the proposed subsurface infiltration system. Install inlet sediment protection as required.
3. If the infiltration area is being used as a sediment basin during construction the bottom elevation of the sediment basin must be a minimum of 2 feet above the infiltration bed invert elevation.
4. Complete site elevation grading and stabilize the soil disturbed within the limit of disturbance. Do not finalize the subsurface infiltration system's excavation and construction until the drainage area is fully stabilized.
5. Excavate subsurface infiltration area to proposed invert depth and manually grade and scarify the existing soil surface. The bottom of the infiltration bed shall be at a level grade.
6. Existing subgrade shall NOT be compacted or subject to excessive construction equipment prior to placement of geotextile and stone bed. If it is essential that equipment be used in the excavated area, all equipment must be approved by the Engineer. Use of equipment with narrow tracks or tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction and shall not be used. Should the subgrade be compacted during construction additional testing of soil infiltration rates and system redesign may be required.
7. Place geotextile and recharge bed aggregate immediately after approval of subgrade preparation to prevent accumulation of debris or sediment. Prevent runoff and sediment from entering the storage bed during the placement of the geotextile and aggregate bed.
8. Place geotextile in accordance with manufacturer's standards and recommendations. Adjacent strips of filter fabric shall overlap a minimum of 16 inches. Fabric shall be secured at least 4 feet outside of bed.
9. Install aggregate course in lifts of 6-8 inches. Lightly compact each layer with equipment, keeping equipment movement over storage bed subgrades to a minimum. Install aggregate to grades indicated on the drawings.
10. Complete surface grading above subsurface infiltration system, using suitable lightweight construction equipment and operate the machinery outside the basin whenever possible to avoid excess compaction.

Construction Sequence

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEDE IN ACCORDANCE WITH THE FOLLOWING SEQUENCE.

The permittee or co-permittee shall contact the PADEP or County Conservation District at least seven days before construction is to begin to schedule a preconstruction conference. The permittee, co-permittee, and others undertaking the earth disturbance activity must attend a preconstruction conference when requested by the PADEP or County Conservation District. The permittee or co-permittee must bring a copy of their NPDES permit, a copy of the stamped plan from the PADEP or County Conservation District, and all associated department approvals/permits which must be available at the conference upon request. Also, at least 3 days before starting any earth disturbance activities, all contactors involved in those activities shall notify the Pennsylvania One Call System Incorporated at 1-800-242-1776 for buried utilities locations.

A Pennsylvania Licensed professional or designee shall be onsite for implementation of critical stages of the Post Construction Stormwater Management Plan. Critical stages shall include the installation of the stormwater management basins, BMP 1 and BMP 2.
The municipality shall inspect all phases of the installation of the best management practices (BMP's) and/or stormwater management (SWM) facilities as deemed appropriate by the municipality. During construction, the contractor must notify the township engineer's office three (3) days prior to the construction of the proposed BMP stormwater management facility.

STAGE 1 - Shall consist of initial installation of erosion control facilities and site preparation.

Install construction entrance in accordance with the plan and details. Install sediment trap consisting of compost filter sock berm and temporary grades in accordance with the plan and details. Install Erosion Control Blanket on the slopes and channel downslope of the sediment trap as part of the sediment trap construction. Install 24" compost filter sock diversion berms to direct upstream areas to the sediment trap. Install perimeter 18" compost filter sock along the east and west property lines. The perimeter compost filter sock shall be used to direct onsite areas to the sediment trap, define the limit of disturbance and to prevent any offsite flows from entering the disturbed area. Install inlet #10, manhole #1 and temporary end wall #1 to direct offsite runoff from Glenmore Road around the compost filter sock sediment trap and to the existing channel. Begin demolition of existing structures to be removed. See demolition plan and notes. Begin bulk excavation and rough grading of the site, which shall include excavation of the roadway, building areas, driveways, and yard areas. Upon completion of rough site grading, install the erosion control blanket in the diversion berm / swale area along the west property line. Stockpile topsoil and excess material where indicated on the plan (or export if required), seed with temporary seed mixture and surround with compost filter sock or silt fence. Refer to "Standard note to comply with NPDES Checklist Item #3.b.xv". All erosion and sediment controls identified above must be implemented to prevent sediment and potential contaminants from leaving the site before proceeding to stage 2. Stage 1 shall be considered complete when the above items are complete.

STAGE 2 - Shall consist of site utility installation, roadway and building construction.

Upon completion of Stage 1 begin construction of the sanitary sewer main from the existing manhole at the terminus of Glenmore Road. See utility line trench installation notes. Install site utilities and storm water inlets and collection system. Install temporary end wall #2 to direct runoff from inlet 4 towards the sediment trap. Upon completion of all utilities, storm collection and conveyance facilities and service laterals within the road right of way install curb, roadway stone base and binder paving course. Begin construction of buildings, individual on lot utility services and driveways.

Pumping of any sediment laden water from excavated areas (foundations, trenches etc.) must be pumped through a sediment filter bag (see detail on erosion control detail sheet). Discharge from the sediment filter bag must flow towards the perimeter silt sock or silt fence, sediment trap and/or undisturbed stabilized area prior to leaving the site.

Inspect the silt sock and/or silt fence and other erosion control facilities after every rainfall runoff event. Sediment shall be removed where accumulation reaches 1/3 the height of the silt fence and elevation 199.0 for the sediment trap. All erosion control facilities shall be maintained in accordance with the details. Any sediment on the roadway must be cleared immediately.

Upon stabilization of the contributing drainage areas begin construction BMP #1 and permanent end wall #1. Remove temporary end wall #1 and connect pipe from MH #1 to permanent end wall #1. Remove temporary end wall #2 and connect outlet structure from BMP #1 to permanent end wall #1. Temporary sediment trap grades will overlap with the final grades of BMP #2. Relocate or adjust sediment trap compost filter socks and perimeter compost filter sock as needed. Final grades shall be established as practical. Upon stabilization of contributing drainage area begin construction of BMP #2. Compost filter sock sediment trap, perimeter 24" and 18" compost filter sock shall remain in place during construction of BMP #2 and until site is stabilized. The underground stormwater basins BMP #1 and BMP #2 shall be protected from sediments by use of inlet protection or other appropriate methods. Refer to the Underground Basin Construction Sequence and Guidelines located on the Post Construction Stormwater Management Detail sheet. All stone that makes up the infiltration Stormwater Management Practice must remain free of sediment. If sediment enters the stone, the contractor may be required to remove the sediment and replace with clean washed stone. Stockpile excess material from the basin areas where indicated on the plan (or export if required), seed with temporary seed mixture and surround with silt fence. Refer to "Standard note to comply with NPDES Checklist Item #3.b.xv".

Stage 2 must be implemented before proceeding to stage 3. Stage 2 shall be considered complete when the above items are complete.

STAGE 3 - Shall consist of final site construction and stabilization.

Upon completion of stage 2, finalize construction of buildings, driveways, paved areas, site utilities and final grades as per the approved plans. Distribute topsoil, plant landscaping and stabilize disturbed areas in accordance with the seeding and mulching guidelines found on the plans. After final site stabilization has been achieved, temporary erosion and sediment BMP's and controls (sediment trap, compost filter sock, stabilized construction entrance etc.) must be removed. Areas disturbed during removal of the BMP's must be stabilized immediately by the operator. During non - germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within one year shall be stabilized in accordance with the temporary vegetation stabilization specifications. Disturbed areas which are at finished grade or will not be re-disturbed within one year shall be stabilized in accordance with the permanent vegetative specifications. An area shall be considered to have achieved final stabilization when it has a minimum 70% perennial vegetative cover or other cover sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

TOTAL AREA TO BE DISTURBED IS APPROXIMATELY = 4.1 ACRES

NOTE IF CONTAMINATED SOILS ARE ENCOUNTERED ON SITE: (1) contaminated soil shall be disposed of at either a) an approved disposal facility with an approved and current PADEP Soil Waste Management permit, or b) an approved landfill (typically disposal at a landfill does not require a Waste permit), and (2) "Waste materials, scrap or excess construction materials shall be collected, stored and disposed of in accordance with the Solid Waste Management Act (35 P. S. § § 6018.1018.1003), the Municipal Waste Planning, Recycling and Waste Reduction Act (53 P. S. § § 4000.101-4000.1904), The Clean Streams Law (35 P. S. § 691.1-691.1001) and related rules and regulations. (Title 25, Chapter 105, Section 46a)

ONLY INLET 3 SHALL BE PROVIDED WITH A SNOUT, MODEL 24F

NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS OF PROPOSED STUCTURES & MATERIALS AS REQUIRED BY THE TOWNSHIP ENGINEER. ALL MATERIALS SHALL BE PENNDOT BULLETIN 15 APPROVED PRODUCTS.

SHEET 8 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
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PROFESSIONAL LAND SURVEYOR
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POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

365 CEDAR ROAD

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR

PAUL YANNESSA

22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

E-2541-8

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED, UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

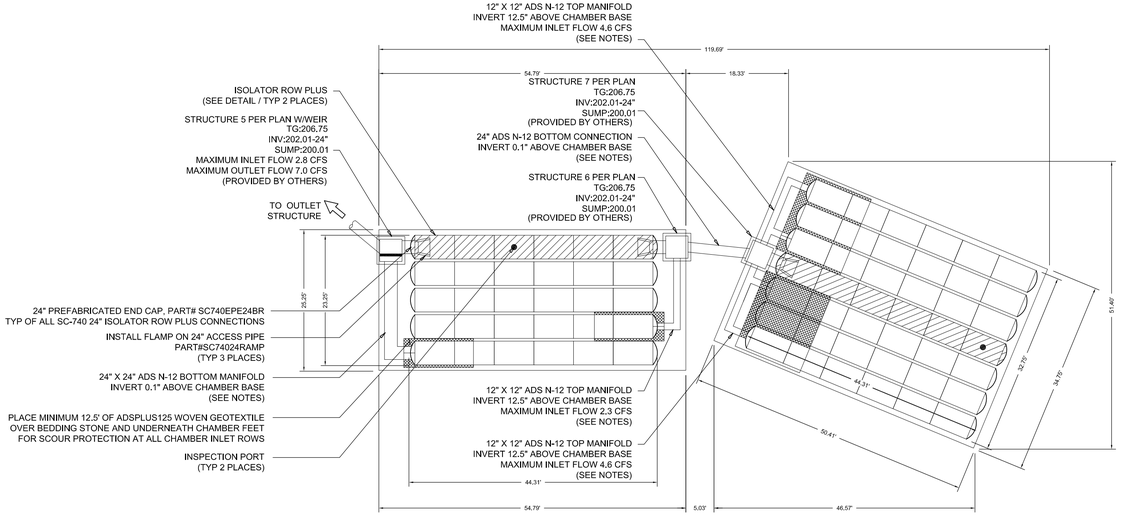
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT - BASIN #1	
72	STORMTECH SC-740 CHAMBERS
24	STORMTECH SC-740 END CAPS
12	STONE ABOVE (in)
18	STONE BELOW (in)
40	% STONE VOID
8,269	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
3142	SYSTEM AREA (ft²)
331	SYSTEM PERIMETER (ft)
PROPOSED ELEVATIONS - BASIN #1	
212.50	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
206.50	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
206.00	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
206.00	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
206.00	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
205.50	TOP OF STONE
204.50	TOP OF SC-740 CHAMBER
203.04	12" TOP MANIFOLD INVERT
202.01	24" BOTTOM MANIFOLD INVERT
202.01	24" ISOLATOR ROW PLUS CONNECTION INVERT
202.00	BOTTOM OF SC-740 CHAMBER
200.50	BOTTOM OF STONE

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- THE SITE DESIGN ENGINEER MUST REVIEW THE PROXIMITY OF THE CHAMBERS TO THE SLOPE AND CONSIDER EFFECTS OF POSSIBLE SATURATED SOILS ON THE SLOPE'S INTEGRITY.

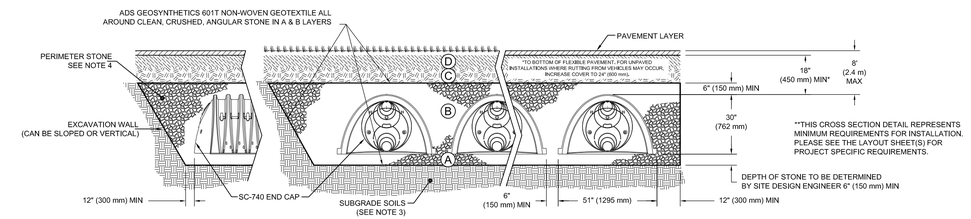


BMP No.1 DETAIL
NTS.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

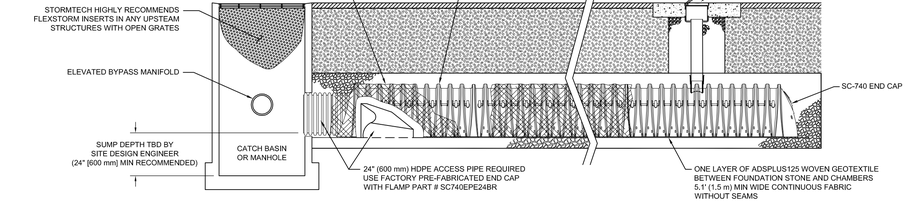
MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION. a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



SC-740 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.1. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

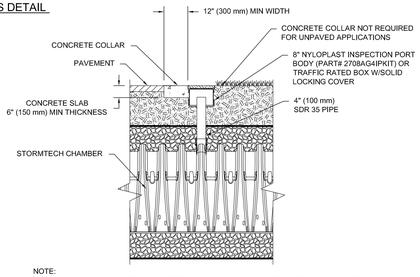
STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY. THE SYSTEM SHALL BE CONSIDERED AS FAILED IF THE ISOLATOR ROW IS COMPLETELY FILLED WITH SEDIMENT,TRASH OR OTHER DEBRIS AND FAILS TO DRAIN DOWN OVER 72 HOURS AS OBSERVED. IF THE SYSTEM DOES FAIL AS A RESULT OF IMPROPER MAINTENANCE OVER AN EXTENDED PERIOD OF TIME THEN IMMEDIATE WATER JETTING AND VACCUMING OF THE ISOLATOR ROW WILL BE REQUIRED. IF THE ISOLATOR ROW CAN NOT BE CLEANED OUT BY JETTING AND VACTORING THEN EXCAVATION OF THE ISOLATOR ROW AND REPLACEMENT MAY BE REQUIRED.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" PVC INSPECTION PORT DETAIL
(SC SERIES CHAMBER)
NTS

SHEET 9 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT
REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 AS PER APPROVED TOWNSHIP RESOLUTION
REV. 9-16-2022 AS PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E
LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128
EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS BMP #1
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

E-2541-9

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-4500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75+YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/IN/IN. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

1. STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
12. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

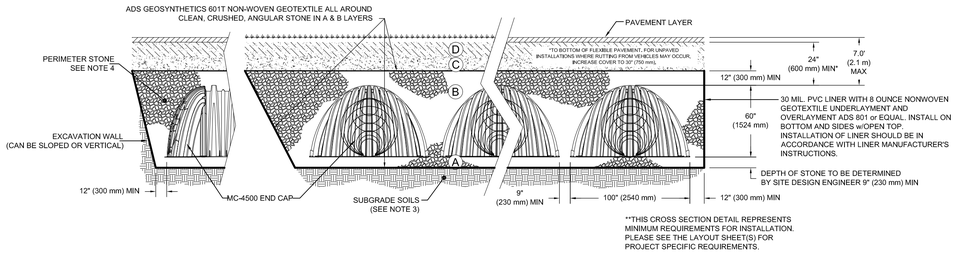
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - I) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - II) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.1. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

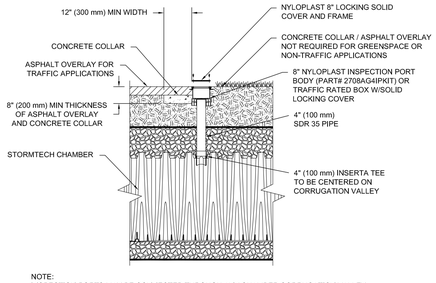
STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY. THE SYSTEM SHALL BE CONSIDERED AS FAILED IF THE ISOLATOR ROW IS COMPLETELY FILLED WITH SEDIMENT, TRASH OR OTHER DEBRIS AND FAILS TO DRAIN DOWN OVER 72 HOURS AS OBSERVED. IF THE SYSTEM DOES FAIL AS A RESULT OF IMPROPER MAINTENANCE OVER AN EXTENDED PERIOD OF TIME THEN IMMEDIATE WATER JETTING AND VACCUMING OF THE ISOLATOR ROW WILL BE REQUIRED. IF THE ISOLATOR ROW CAN NOT BE CLEANED OUT BY JETTING AND VACTORING THEN EXCAVATION OF THE ISOLATOR ROW AND REPLACEMENT MAY BE REQUIRED.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)
NTS

NOTES

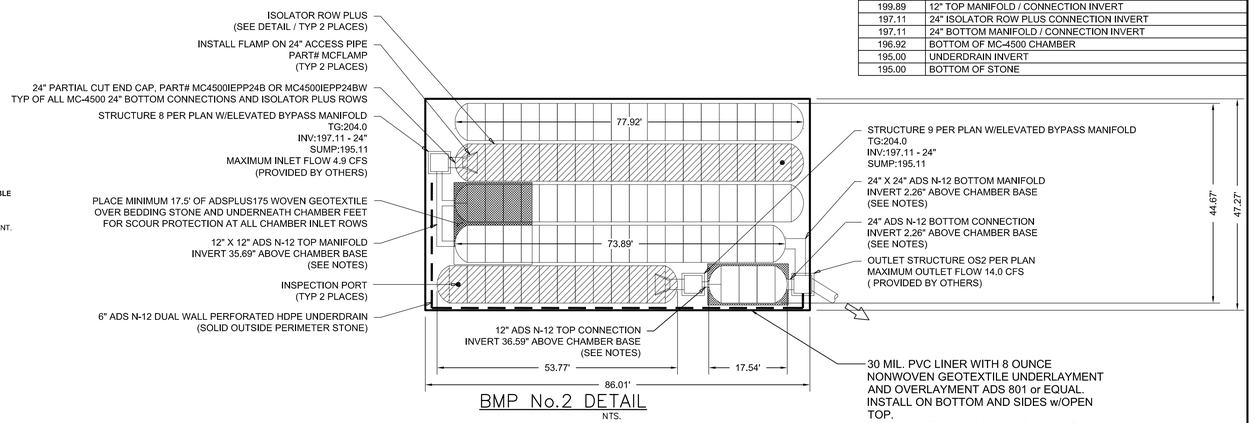
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- THE SITE DESIGN ENGINEER MUST REVIEW THE PROXIMITY OF THE CHAMBERS TO THE SLOPE AND CONSIDER EFFECTS OF POSSIBLE SATURATED SOILS ON THE SLOPE'S INTEGRITY.

PROPOSED LAYOUT - BASIN #2

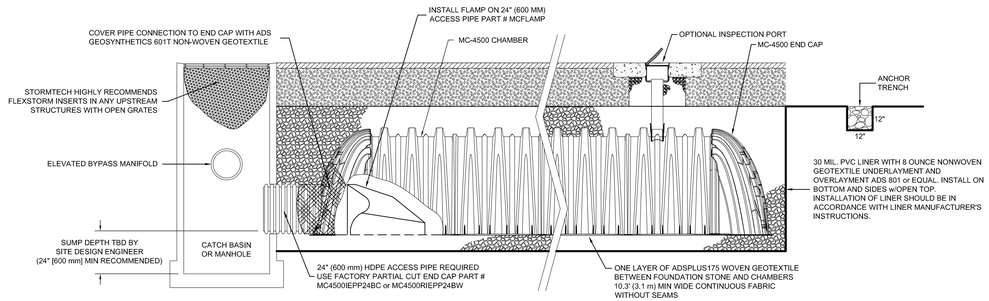
86	STORMTECH MC-4500 CHAMBERS
12	STORMTECH MC-4500 END CAPS
12	STONE ABOVE (in)
23	STONE BELOW (in)
40	% STONE VOID
18,653	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
4065	SYSTEM AREA (ft²)
267	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - BASIN #2

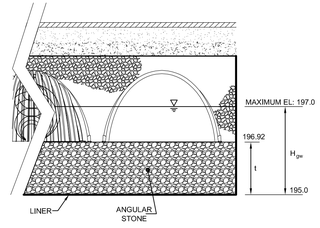
208.92	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
204.42	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
203.92	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
203.92	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
203.92	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
202.92	TOP OF STONE
201.92	TOP OF MC-4500 CHAMBER
199.89	12" TOP MANIFOLD / CONNECTION INVERT
197.11	24" ISOLATOR ROW PLUS CONNECTION INVERT
197.11	24" BOTTOM MANIFOLD / CONNECTION INVERT
196.92	BOTTOM OF MC-4500 CHAMBER
195.00	UNDERDRAIN INVERT
195.00	BOTTOM OF STONE



BMP No.2 DETAIL
NTS.



MC-4500 ISOLATOR ROW PLUS DETAIL
NTS



Anti flotation buoyancy Calculations

Increased foundation stone option
H gw x (62.4 lb/cf) = (Y stone x t) / SF
Where:
H gw = height of groundwater above liner bottom = (197.0 -195.0) 2 ft.
Y stone = bulk density of bedding stone = 85 lb/cf
t = thickness of stone bedding = (196.92 - 195.0) = 1.96 ft.
Buoyancy force = 2 ft. x 62.4 lb/cf =124.8 lbs
Weight of bedding stone = 1.96 ft. x 85 lb/cf = 166.6 lbs
Safety Factor = 166.6 lbs / 124.8 lbs = 1.33

SHEET 10 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT
REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128

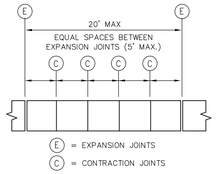
EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS BMP #2
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

22 NOVEMBER 2021

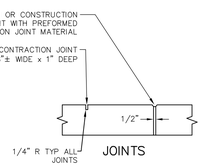
EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

E-2541-10

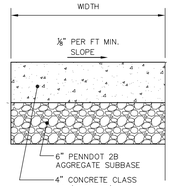


JOINT SPACING

USE JOINT SPACING AS SHOWN EXCEPT WHERE OTHERWISE INDICATED.



JOINTS

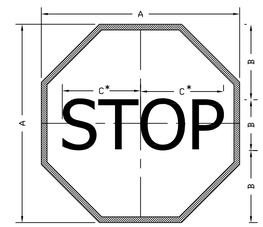


INSTALLATION NOTES:
1. ALL CONSTRUCTION TO CONFORM WITH PENNDOT PUBLICATION 408, LATEST EDITION.
2. ALL CONCRETE TO BE CLASS AA 3500 PSI.
3. MINIMUM WIDTHS AND MINIMUM SLOPES PER SALDO 513; 526.10; 706.3 & 809, AS APPLICABLE.
4. THIS STANDARD IS NOT INTENDED FOR SIDEWALK WHICH CROSSES A DRIVEWAY.
5. INSTALLATION OF CURB RAMPS FOR ACCESSIBILITY SHALL MEET ADA REQUIREMENTS AND SHALL BE IN ACCORDANCE WITH PENNDOT DETAILS RC-67, LATEST EDITION. PENNDOT DETAILS ARE INCLUDED HEREWITH BY REFERENCE.

SIDEWALK REPAIR AND REPLACEMENT STANDARDS:
1. SIDEWALKS SHALL BE REPLACED WHEN THE FOLLOWING CONDITIONS OCCUR:
   A. EVIDENCE OF DETERIORATED CONDITION.
   B. SIDEWALKS SECTIONS WITH VERTICAL MISALIGNMENTS GREATER THAN 1/4".

CONCRETE SIDEWALK INSTALLATION

07/29/2009
104C
NTS



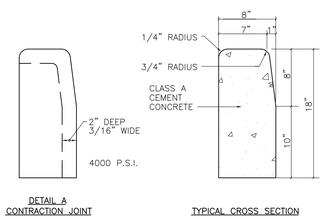
COLOR: LEGEND & BORDER WHITE (REFLECTORIZED)
BACKGROUND RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BORDER	BLACK STD
30x30	30	10	12-1/2	C	3/4	B1-30

* Reduce spacing 40%

STOP SIGN (R1-1)

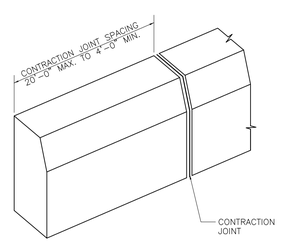
NTS.



DETAIL A CONTRACTION JOINT

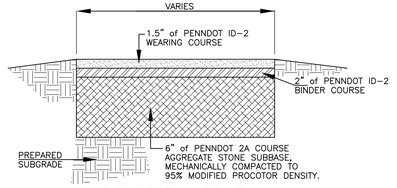
TYPICAL CROSS SECTION

TYPICAL CROSS SECTION



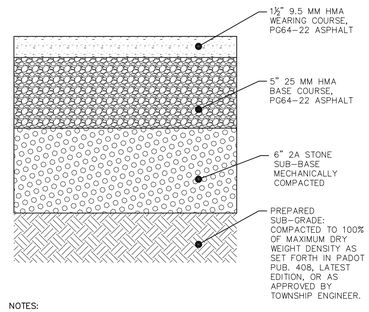
PLAIN CEMENT CONCRETE CURB

NOT TO SCALE



RESIDENTIAL DRIVEWAY PAVING SECTION

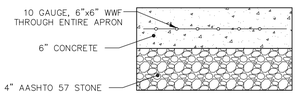
NOT TO SCALE



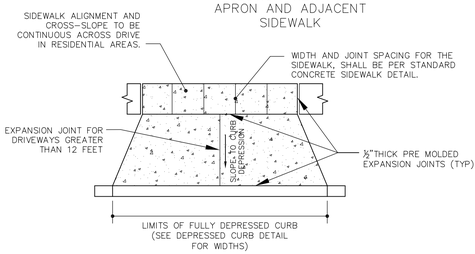
NOTES:
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF PADOT PUBLICATION 408, LATEST EDITION.
2. EXISTING ROADWAYS ALONG THE FRONTAGE OF THE DEVELOPED PROPERTY SHALL RECEIVE MILL AND OVERLAY OF WEARING COURSE IF ANY OF THE FOLLOWING CONDITIONS ARE NOTED AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES:
1. ALLIGATOR SURFACE, CRACKING OR OTHER DETERIORATION.
2. DIPS, DEPRESSIONS OR OTHER IRREGULARITIES CAUSING PONDING.
3. POT HOLES OR OTHER SURFACE BREAKS.
4. EXCESSIVE SURFACE SCARRING CAUSED BY CONTRACTORS EQUIPMENT (I.E. BULLDOZER TRACKS).

PAVEMENT DETAIL OF TOWNSHIP ROADS

07/29/2009
4R



SECTION VIEW FOR APRON AND ADJACENT SIDEWALK

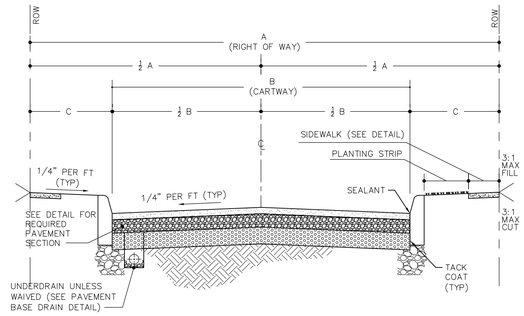


INSTALLATION NOTES:
1. ALL CONSTRUCTION TO CONFORM WITH PENNDOT PUBLICATION 408, LATEST EDITION.
2. ALL CONCRETE TO BE CLASS AA 3500 PSI.
3. ALL DRIVEWAYS OR APRONS CONSTRUCTED ADJACENT TO CURB SHALL HAVE DEPRESSED CURB INSTALLED IN ACCORDANCE WITH THE DEPRESSED CONCRETE CURB FOR DRIVEWAYS DETAIL.

DRIVEWAY APRON REPLACEMENT STANDARDS – DRIVEWAY APRONS SHALL BE REPLACED WHEN THE FOLLOWING CONDITIONS OCCUR:
1. EVIDENCE OF DETERIORATED CONDITION.
2. APRONS PLACED WITH VERTICAL MISALIGNMENT OF 1/2" HIGHER OR LOWER THAN REQUIRED DEPRESSED CURB HEIGHT.

CONCRETE APRON DETAIL FOR DRIVEWAYS

07/29/2009
105C



STREET CLASSIFICATION*	A (MIN. ROW)	B (MIN. CARTWAY)	C
LOCAL ROAD/STREET	50'	30'	10'

NOTES:
1. ALL CONSTRUCTION TO CONFORM TO PENNDOT PUBLICATION 408, LATEST EDITION.
2. ALL NEW STREETS SHALL BE PROPERLY POSTED W/SPEED LIMIT SIGNS IN ACCORDANCE WITH DESIGN SPEED.
3. REQUIRED MINIMUM WIDTH OF PLANTING STRIP AND SIDEWALK PER SALDO SECTION 513.1.
4. THE SIDEWALK IS NOT REQUIRED TO BE LOCATED IN THE RIGHT OF WAY FOR MARGINAL ACCESS STREETS.
5. AN EASEMENT SHALL BE PROVIDED FOR ALL PROPOSED SIDEWALKS NOT LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY. THE SIDEWALK SHALL BE MAINTAINED IN ACCORDANCE WITH "SIDEWALKS LOCATED WITHIN THE STREET RIGHT-OF-WAY", AS SPECIFIED ABINGTON TOWNSHIP CODE OF ORDINANCES.
6. A TACK COAT SHALL BE APPLIED TO ALL VERTICAL SURFACES BELOW PAVING LINE. IF BASE COURSE IS IN PLACE FOR MORE THAN 30 DAYS THE SURFACE MUST BE CLEANED AND TACK COATED PRIOR TO INSTALLATION OF THE WEARING COURSE.
7. ALL ASPHALT JOINTS INCLUDING ALONG THE CURB LINE SHALL BE SEALED WITH ASPHALT PG64-22 SEALANT OR APPROVED EQUAL.

TYPICAL ROADWAY SECTION FOR TOWNSHIP ROADS

07/29/2009
1R

I. CONSTRUCTION OBSERVATION
DURING THE COURSES OF CONSTRUCTION OF ROADS THE ENGINEER MUST BE NOTIFIED 24 HOURS PRIOR TO THE FOLLOWING OPERATIONS:
1. PREPARATION OF THE SUBGRADE
2. LAYING AND ROLLING OF THE SUBBASE
3. LAYING AND ROLLING OF THE BINDER COURSE
4. LAYING AND ROLLING OF THE WEARING COURSE
5. POURING OF CONCRETE CURBS
6. POURING OF CONCRETE SIDEWALKS
7. POURING OF CONCRETE APRONS
8. TRENCH BACKFILL FOR ALL UTILITIES.

THE FOLLOWING ITEMS WILL BE CAUSE FOR REJECTION OF THE PAVING, CURBS, DRIVEWAY APRONS, AND SIDEWALKS BY THE ENGINEER.

II. PAVING
1. ALLIGATOR SURFACE, CRACKING OR OTHER DETERIORATION INDICATING SUBGRADE FAILURE.
2. DIPS OR DEPRESSIONS INDICATING EXCESSIVE SETTLEMENT UNDER THE PAVING, INCLUDING TRENCHES SUCH AS FOR WATER LINE, SEWER LINE, GAS LINE.
3. POT HOLES OR OTHER SURFACE BREAKS.
4. EXCESSIVE SURFACE SCARRING CAUSED BY CONTRACTORS EQUIPMENT (I.E. BULLDOZER TRACKS).
5. IRREGULARITIES CAUSING PONDING.
6. PAVING DOES NOT MEET DRAINAGE STANDARDS.

III. CURBS
1. METHODS AND MATERIALS NOT MEETING MINIMUM SPECIFICATIONS PROVIDED IN THE DETAIL.
2. CHIPS MORE THAN ¼ INCH DEEP.
3. CRACKS OF ANY WIDTH.
4. MISALIGNMENT MORE THAN ¼ INCH IN ANY DIRECTION AT CRACKS OR JOINTS.
5. WORK NOT COMPLETED IN COMPLIANCE WITH PENNDOT PUBLICATION 408.

IV. CURBS (DEPRESSED)
1. METHODS AND MATERIALS NOT MEETING MINIMUM SPECIFICATIONS PROVIDED IN THE DETAIL.
2. ANY DEPRESSED CURB THAT IS FORMED BY CHIPPING OUT OF STRAIGHT CURB. DEPRESSED CURBS MUST BE MADE BY COMPLETE REMOVAL OF THE STRAIGHT CURB TO THE NEAREST JOINT BEYOND THE DEPRESSED AREA AND NEW DEPRESSED CURB SECTIONS POURED.
3. ANY DEPRESSED CURB THAT HAS A LIP MORE THAN 1 ½ INCHES ABOVE THE EDGE OF PAVING AT DRIVEWAY APRONS OR MORE THAN ¾ INCH AT CURB RAMPS.
4. CHIPS MORE THAN ¼ INCH DEEP.
5. CRACKS OF ANY WIDTH.
6. MISALIGNMENT MORE THAN ¼ INCH IN ANY DIRECTION AT CRACKS OR JOINTS.
7. WORK NOT COMPLETED IN COMPLIANCE WITH PENNDOT PUBLICATION 408.

V. DRIVEWAY APRON
1. METHODS AND MATERIALS NOT MEETING MINIMUM SPECIFICATIONS PROVIDED IN THE DETAIL.
2. CRACKS OF ANY WIDTH.
3. CHIPS MORE THAN ¼ INCH DEEP.
4. MISALIGNMENT MORE THAN 1/4 INCH IN ANY DIRECTION AT JOINTS.
5. NO MONOLITHIC POURS BETWEEN CURB & APRON, APRON & SIDEWALK.
6. WORK NOT COMPLETED IN COMPLIANCE WITH PENNDOT PUBLICATION 408.

VI. SIDEWALK
1. METHODS AND MATERIALS NOT MEETING MINIMUM SPECIFICATIONS PROVIDED IN THE DETAIL.
2. ANY DRIVEWAY BLOCK FORMING PART OF THE SIDEWALK, WHICH DOES NOT CORRESPOND TO DRIVE APRON.
3. ANY CRACK, OTHER THAN AT AN EXPANSION OR CONTRACTION JOINT OF ANY WIDTH.
4. MISALIGNMENT IN A VERTICAL DIRECTION MORE THAN 1/4 INCH AT ANY CRACK OR JOINT.
5. INSTALLATION OF CURB RAMPS FOR HANDICAP ACCESS SHALL MEET ADA REQUIREMENTS AND SHALL BE IN ACCORDANCE WITH PENNDOT DETAILS RC-67, LATEST EDITION. PENNDOT DETAILS ARE INCLUDED HEREWITH BY REFERENCE.
6. WORK NOT COMPLETED IN COMPLIANCE WITH PENNDOT PUBLICATION 408.

ROADWAY DEDICATION CHECKLIST FOR ENGINEERS APPROVAL

07/29/2009
2R

NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS OF PROPOSED STUCTURES & MATERIALS AS REQUIRED BY THE TOWNSHIP ENGINEER. ALL MATERIALS SHALL BE PENNDOT BULLETIN 15 APPROVED PRODUCTS.

SHEET 11 of 17 *SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT*

REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 AS PER APPROVED TOWNSHIP RESOLUTION
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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E

LAWRENCE J. BYRNE PROFESSIONAL ENGINEER LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128

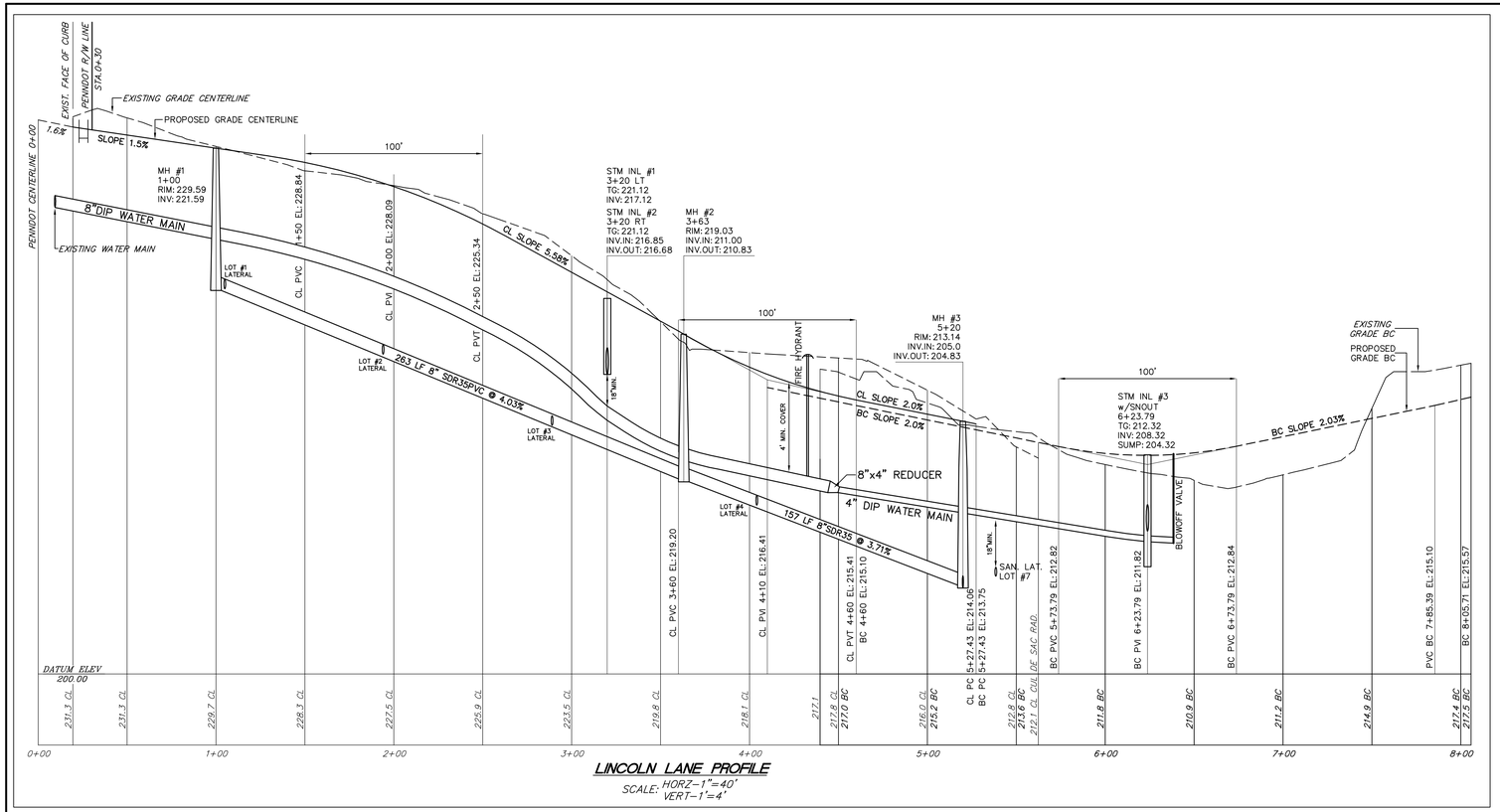
EDMUND A. CHADROW, III PROFESSIONAL LAND SURVEYOR LICENSE No.75128

CONSTRUCTION DETAILS
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

22 NOVEMBER 2021

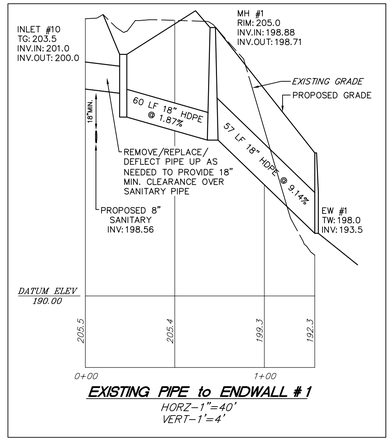
EASTERN/CHADROW ASSOCIATES, INC.
*333 E. STREET ROAD * WARMINSTER, PA. 18974 * (215) 672-8671 FAX (215) 672-6765*
EST. 1967

E-2541-11



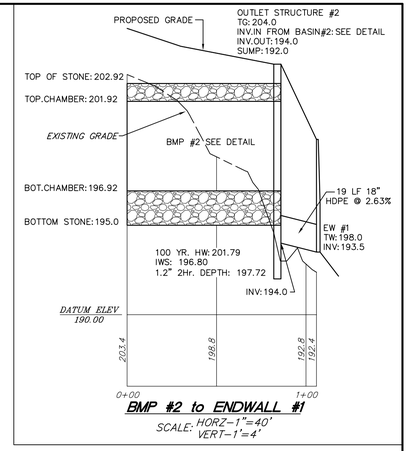
LINCOLN LANE PROFILE

SCALE: HORZ–1"=40'
VERT–1'=4'



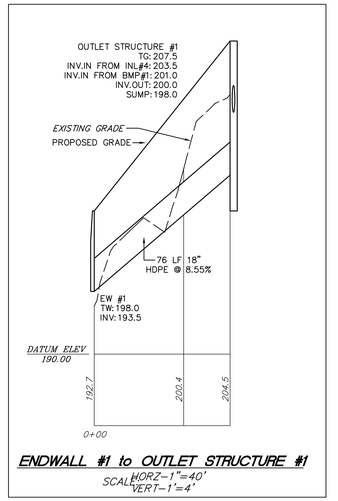
EXISTING PIPE to ENDWALL #1

HORZ–1"=40'
VERT–1'=4'



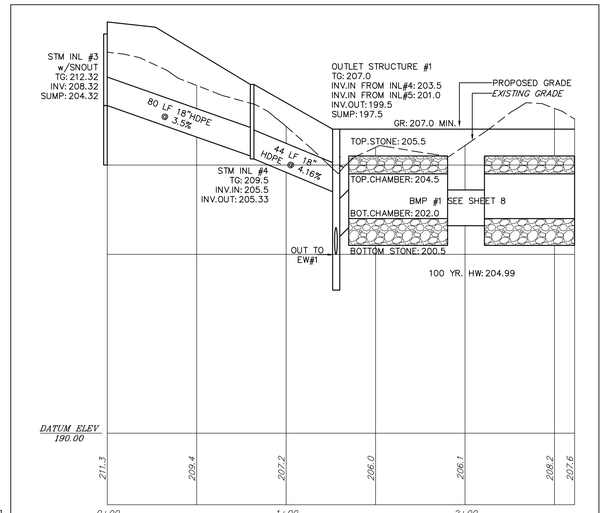
BMP #2 to ENDWALL #1

SCALE: HORZ–1"=40'
VERT–1'=4'



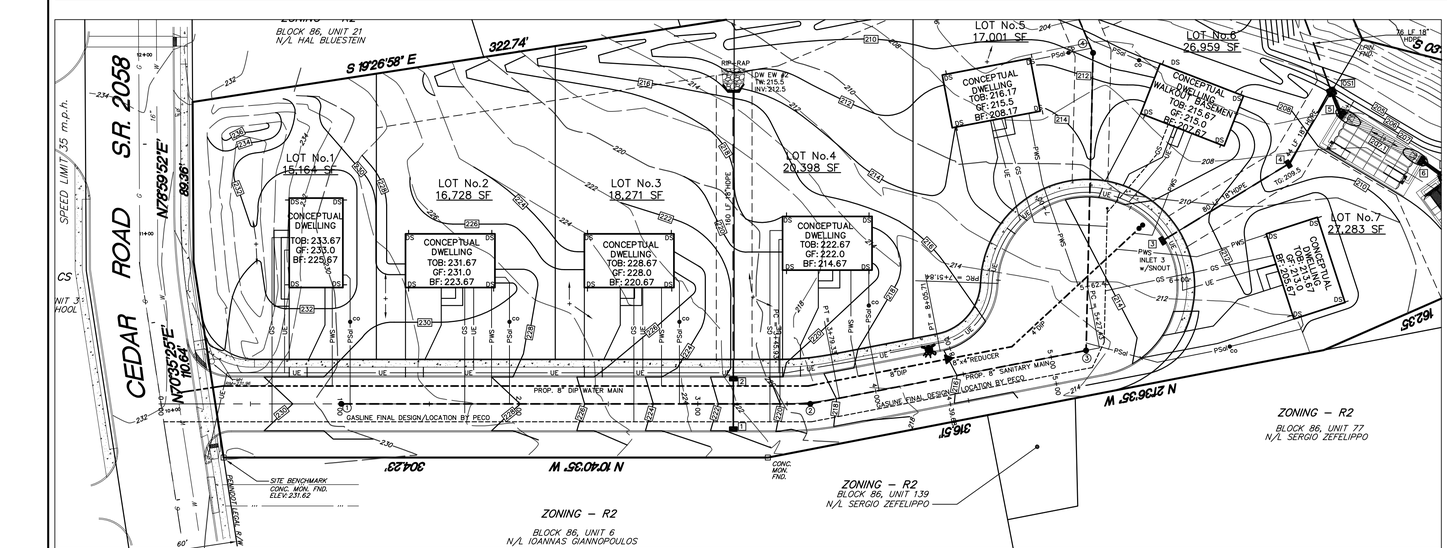
ENDWALL #1 to OUTLET STRUCTURE #1

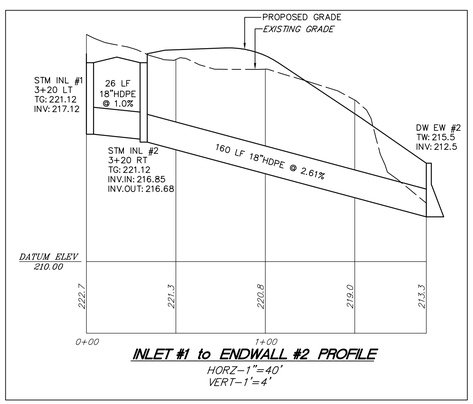
SCALE: HORZ–1"=40'
VERT–1'=4'



INLET #3 to BMP #1

SCALE: HORZ–1"=40'
VERT–1'=4'





INLET #1 to ENDWALL #2 PROFILE

HORZ–1"=40'
VERT–1'=4'

SHEET 12 of 17

SD–21–03–FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV. 3–26–2024 AS PER MCCD LETTER OF 3–15–2024
REV. 12–20–2023 PER MCCD & PENNDOT COMMENTS
REV. 5–23–2023 AS PER APPROVED TOWNSHIP RESOLUTION
REV. 9–16–2022 AS PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
LAWRENCE J. BYRNE
ENGINEER 40487–E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487E

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

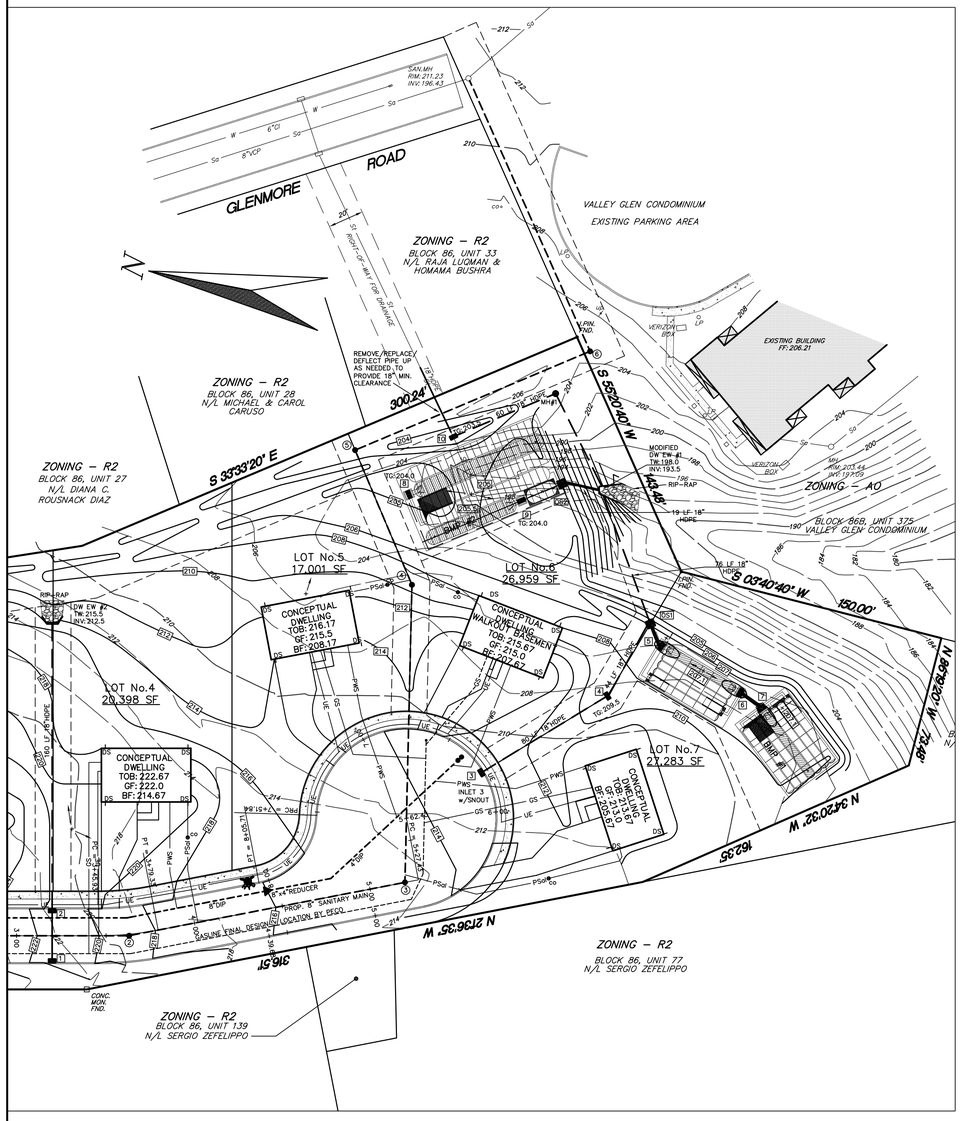
EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No. 75128

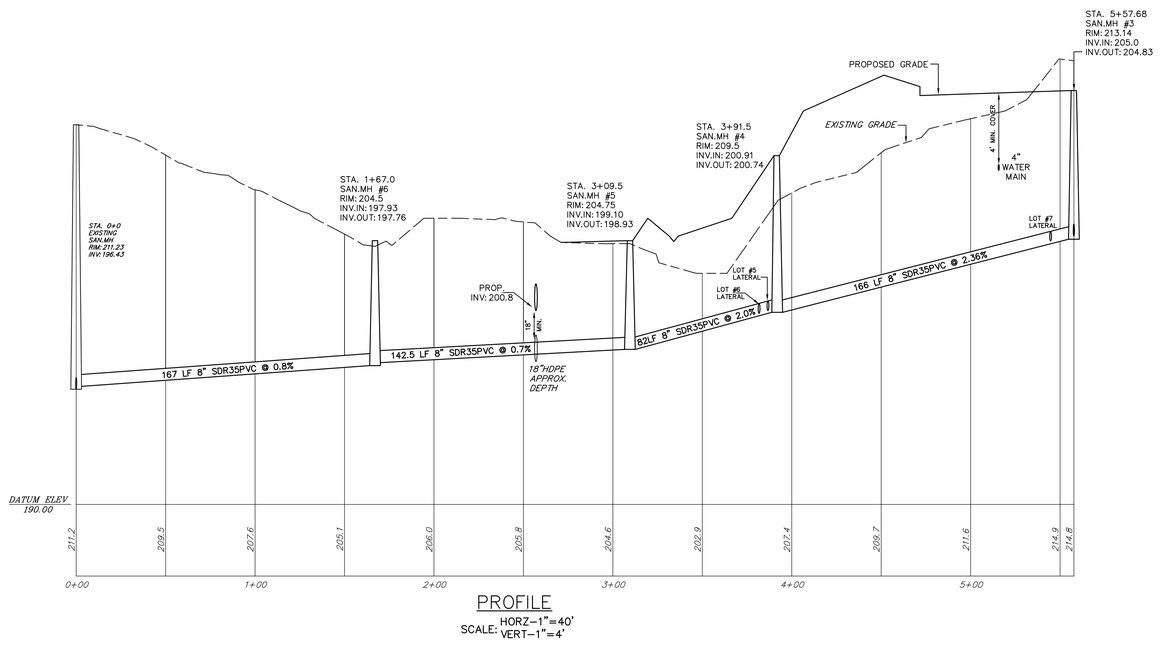
PLAN & PROFILE – LINCOLN LANE & MISC. PIPE RUNS
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: 1"=40' 0 40 80 120 22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672–8671 FAX (215) 672–6765
EST. 1967

E–2541–12





PROFILE

SCALE: HORZ–1"=40'
VERT–1"=4'

SHEET 13 of 17

SD–21–03–FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV. 3–26–2024 AS PER MCCD LETTER OF 3–15–2024
REV. 12–20–2023 PER MCCD & PENNDOT COMMENTS
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COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL – LAWRENCE J. BYRNE – ENGINEER 40487–E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA – REGISTERED PROFESSIONAL – EDMUND A. CHADROW, III – LAND SURVEYOR NO.75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

PLAN & PROFILE – SANITARY SEWER EASEMENT
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: 1"=40' 0 40 80 120 22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672–8671 FAX (215) 672–6765
EST. 1967

E–2541–13

LEGEND

- EXISTING TREES TO REMAIN
- EXISTING BRUSH/SCRUB TO REMAIN
- EXISTING TREES TO BE REMOVED
- EXISTING BRUSH/SCRUB TO BE REMOVED
- TBR — TO BE REMOVED
- 3"-3.5" CAL REPLACEMENT TREES (44)
- 2.5" CAL STREET TREES (36)
- TREE PROTECTION FENCE

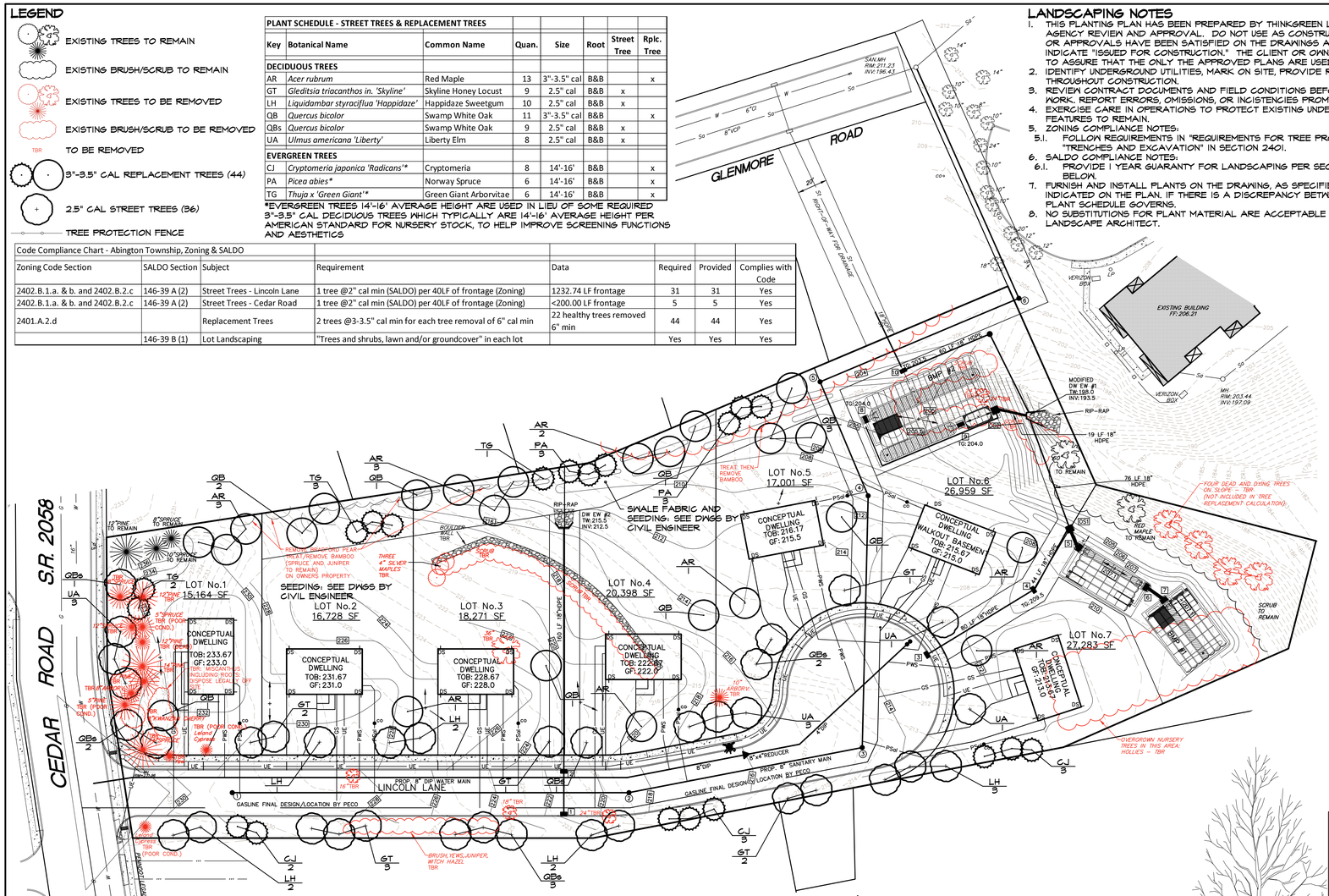
PLANT SCHEDULE - STREET TREES & REPLACEMENT TREES							
Key	Botanical Name	Common Name	Quan.	Size	Root	Street Tree	Rplc. Tree
DECIDUOUS TREES							
AR	*Acer rubrum*	Red Maple	13	3"-3.5" cal	B&B		x
GT	*Gleditsia triacanthos in. 'Skyline'*	Skyline Honey Locust	9	2.5" cal	B&B	x	
LH	*Liquidambar styraciflua 'Happidaze'*	Happidaze Sweetgum	10	2.5" cal	B&B	x	
QB	*Quercus bicolor*	Swamp White Oak	11	3"-3.5" cal	B&B		x
QBs	*Quercus bicolor*	Swamp White Oak	9	2.5" cal	B&B	x	
UA	*Ulmus americana 'Liberty'*	Liberty Elm	8	2.5" cal	B&B	x	
EVERGREEN TREES							
CJ	*Cryptomeria japonica 'Radicans'**	Cryptomeria	8	14'-16'	B&B		x
PA	*Picea abies**	Norway Spruce	6	14'-16'	B&B		x
TG	*Thuja x 'Green Giant'**	Green Giant Arborvitae	6	14'-16'	B&B		x

*EVERGREEN TREES 14'-16' AVERAGE HEIGHT ARE USED IN LIEU OF SOME REQUIRED 3"-3.5" CAL DECIDUOUS TREES WHICH TYPICALLY ARE 14'-16' AVERAGE HEIGHT PER AMERICAN STANDARD FOR NURSERY STOCK, TO HELP IMPROVE SCREENING FUNCTIONS AND AESTHETICS

Code Compliance Chart - Abington Township, Zoning & SALDO							
Zoning Code Section	SALDO Section	Subject	Requirement	Data	Required	Provided	Complies with Code
2402.B.1.a. & b. and 2402.B.2.c	146-39 A (2)	Street Trees - Lincoln Lane	1 tree @2" cal min (SALDO) per 40LF of frontage (Zoning)	1232.74 LF frontage	31	31	Yes
2402.B.1.a. & b. and 2402.B.2.c	146-39 A (2)	Street Trees - Cedar Road	1 tree @2" cal min (SALDO) per 40LF of frontage (Zoning)	<200.00 LF frontage	5	5	Yes
2401.A.2.d		Replacement Trees	2 trees @3-3.5" cal min for each tree removal of 6" cal min	22 healthy trees removed 6" min	44	44	Yes
	146-39 B (1)	Lot Landscaping	"Trees and shrubs, lawn and/or groundcover" in each lot		Yes	Yes	Yes

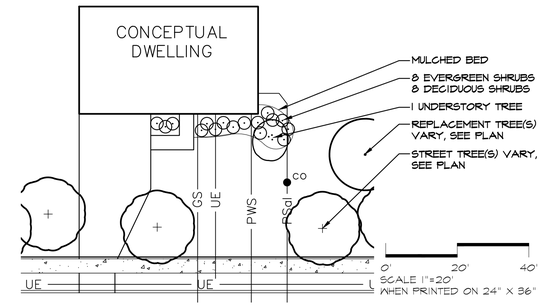
LANDSCAPING NOTES

1. THIS PLANTING PLAN HAS BEEN PREPARED BY THINKGREEN LLC FOR THE PURPOSE OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. DO NOT USE AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OR APPROVALS HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION." THE CLIENT OR OWNER, AND CONTRACTOR, ARE RESPONSIBLE TO ASSURE THAT THE ONLY THE APPROVED PLANS ARE USED FOR BIDDING AND CONSTRUCTION.
2. IDENTIFY UNDERGROUND UTILITIES, MARK ON SITE, PROVIDE REPORT TO OWNER, MAINTAIN MARKINGS THROUGHOUT CONSTRUCTION.
3. REVIEW CONTRACT DOCUMENTS AND FIELD CONDITIONS BEFORE STARTING EACH PORTION OF THE WORK. REPORT ERRORS, OMISSIONS, OR INCISTENCIES PROMPTLY TO LANDSCAPE ARCHITECT.
4. EXERCISE CARE IN OPERATIONS TO PROTECT EXISTING UNDERGROUND AND SURFACE UTILITIES, AND FEATURES TO REMAIN.
5. ZONING COMPLIANCE NOTES:
   - 5.I. FOLLOW REQUIREMENTS IN "REQUIREMENTS FOR TREE PROTECTION ZONES," "HAZARDOUS ACTS," AND "TRENCHES AND EXCAVATION" IN SECTION 2401.
6. SALDO COMPLIANCE NOTES:
   - 6.I. PROVIDE 1 YEAR GUARANTY FOR LANDSCAPING PER SECTION 146-39. REFER TO WARRANTY NOTE BELOW.
7. FURNISH AND INSTALL PLANTS ON THE DRAWING, AS SPECIFIED AND IN THE QUANTITIES OF SYMBOLS INDICATED ON THE PLAN. IF THERE IS A DISCREPANCY BETWEEN THE PLAN AND PLANT SCHEDULE, THE PLANT SCHEDULE GOVERNS.
8. NO SUBSTITUTIONS FOR PLANT MATERIAL ARE ACCEPTABLE UNLESS APPROVED BY THE TOWNSHIP AND LANDSCAPE ARCHITECT.
9. PLANT MATERIAL SHALL MEET THE STANDARDS OF AMERICAN STANDARD FOR NURSERY STOCK BY AMERIHORT.
10. ROOT BALLS OF PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN, DRYING OR FROST. PLANT ROOT SYSTEMS SHALL BE KEPT MOIST UNTIL PLANTED.
11. PLANT STOCK WILL BE INSPECTED ON SITE PRIOR TO INSTALLATION. PLANTING STOCK OF INSUFFICIENT SIZE AND/OR QUALITY SHALL NOT BE INSTALLED. REJECTED MATERIAL SHALL BE REMOVED FROM THE SITE AND REPLACED WITH ACCEPTABLE MATERIALS AT NO ADDITIONAL COST.
12. PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAILS, NOTES, AND TOWNSHIP REQUIREMENTS.
13. PROVIDE SOIL TESTING TO DETERMINE APPLICATION RATES OF FERTILIZER AND OTHER AMENDMENTS.
14. NOTIFY ALL UTILITY COMPANIES AND LOCATE ALL UTILITIES PRIOR TO EXCAVATION FOR PLANTING. LOCATIONS OF PROPOSED TREES SHALL BE ADJUSTED AS FIELD CONDITIONS WARRANT TO AVOID CONFLICTS WITH EXISTING AND PROPOSED (AND COMPLY WITH TOWNSHIP CODE).
15. TREES AND SHRUBS ARE TO BE MULCHED WITH A LAYER OF TRIPLE SHREDDED BARK MULCH (SEE DETAILS FOR DEPTHS).
16. PLANTING SHALL OCCUR IN SEASONS APPROPRIATE FOR EACH PLANTING TYPE AND SPECIES.
17. WARRANTY. PLANT MATERIAL SHALL BE WARRANTED FOR ONE YEAR. ANY PLANT MATERIAL 25% OR MORE OF WHICH IS DEAD, OR IN UNHEALTHY CONDITION, SHALL BE CONSIDERED DEAD. A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED OR 25% OF THE CROWN IS DEAD. DEAD PLANT MATERIAL SHALL BE REPLACED AND INSTALLED ACCORDING TO THE APPROVED PLANTING PRACTICES.
18. VISIT THE SITE PRIOR TO COMMENCING WORK TO REVIEW EXISTING CONDITIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES WHICH MAY AFFECT WORK.
19. MAINTAIN PLANTINGS AS REQUIRED BY THE TOWNSHIP, AT A MINIMUM.
20. SEE EROSION AND SEDIMENT CONTROL DRAWINGS / CIVIL DWGS FOR SEEDING REQUIREMENTS.
21. REVIEW/USE THIS PLAN ONLY FOR LANDSCAPING.



1 / 12 PLAN
1"=40' when printed on 24"x36" sheet

0' 40' 80'
SCALE 1"=40'
WHEN PRINTED ON 24" X 36"



2 / 12 TYPICAL LOT LANDSCAPING PLAN
1"=20' when printed on 24"x36" sheet

PLANT SCHEDULE - LOT LANDSCAPING						
Key	Botanical Name	Common Name	Quan.	Size	Root	Comment
UNDERSTORY TREES						
AC	*Amelanchier canadensis*	Shadblow Serviceberry	-	6'	B&B/Cont	multistem
BN	*Betula nigra*	River Birch	-	6'	B&B/Cont	multistem
HC	*Halesia carolinia*	Carolina Silverbell	-	6'	B&B/Cont	multistem
MV	*Magnolia virginiana*	Sweetbay	-	6'	B&B/Cont	multistem
		TOTAL	**7**			
SHRUBS						
CAH	*Clethra alnifolia 'Hummingbird'*	Hummingbird Summersweet	-	24"	Cont	
IVH	*Itea virginica 'Henry's Garnet'*	Henry's Garnet Sweetspire	-	24"	Cont	
JVG	*Juniperus virginiana 'Gray Owl'*	Gray Owl Juniper	-	24"	Cont	
PJA	*Pieris japonica*	Japanese Pieris	-	24"	Cont	
PLS	*Prunus laurocerasus 'Schipkaensis'*	Schipka Cherry Laurel	-	24"	Cont	
		TOTAL	**112**			

NOTE: FINAL TREE/SHRUB SELECTIONS & LOCATIONS AS DETERMINED BY CONTRACTOR BASED ON SUN/SHADE, AVAILABILITY, AND AESTHETICS WITH REVIEW BY OWNER'S REPRESENTATIVE

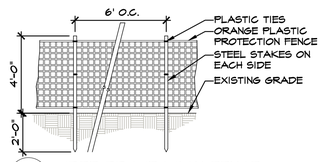
STOP—CALL BEFORE YOU DIG!

1-800-242-1776

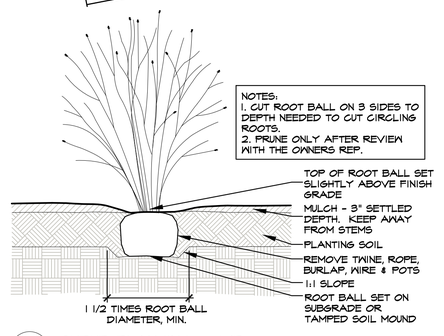
PENNSYLVANIA ONE CALL SYSTEM, INC.
SERIAL No.20171532707 CONTACTED: 6-2-2017

ACT 187 USERS LIST FOR ABINGTON

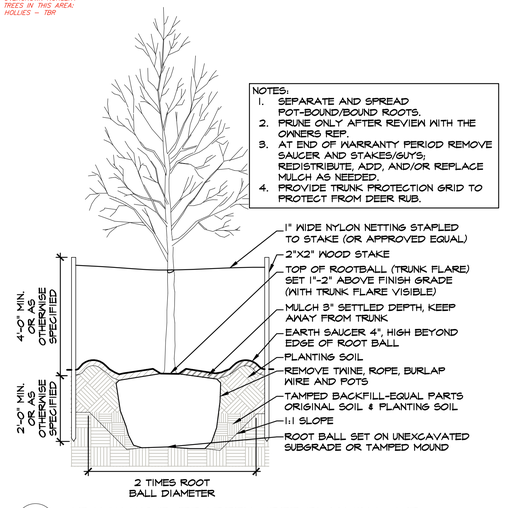
USER	ADDRESS	TELEPHONE
1. TOWNSHIP OF ABINGTON	1176 OLD YORK RD. ABINGTON, PA.19001	215-884-5000
2. AQUA PENNSYLVANIA, INC.	762 LANCASTER AVE. BRYN MAWR,PA. 19010	1-800-711-4779
3. BELL TELEPHONE CO. of PA.	104 WITMER RD. HORSHAM,PA. 19044	215-956-2623
4. PHILADELPHIA ELECTRIC Co.	400 PARK AVE. WARMINSTER PA. 18974	OUTSIDE PA. 412-323-7100 IN PA. 800-242-1776
5. PENNA. DEPT. OF TRANSPORTATION	EAST NORRITON TWP.,P.O. BOX 350 NORRISTOWN,PA.	1-215-275-2368



3 / 12 TREE PROTECTION FENCE
N.T.S.



4 / 12 SHRUB PLANTING - TYP.
N.T.S.



5 / 12 DECIDUOUS/EVERGREEN TREE PLANTING-TYP.
N.T.S.

SHEET 14 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV 9/15/2023

Landscape Plan Prepared By:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas J Johnston, RLA
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No.LA001722

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

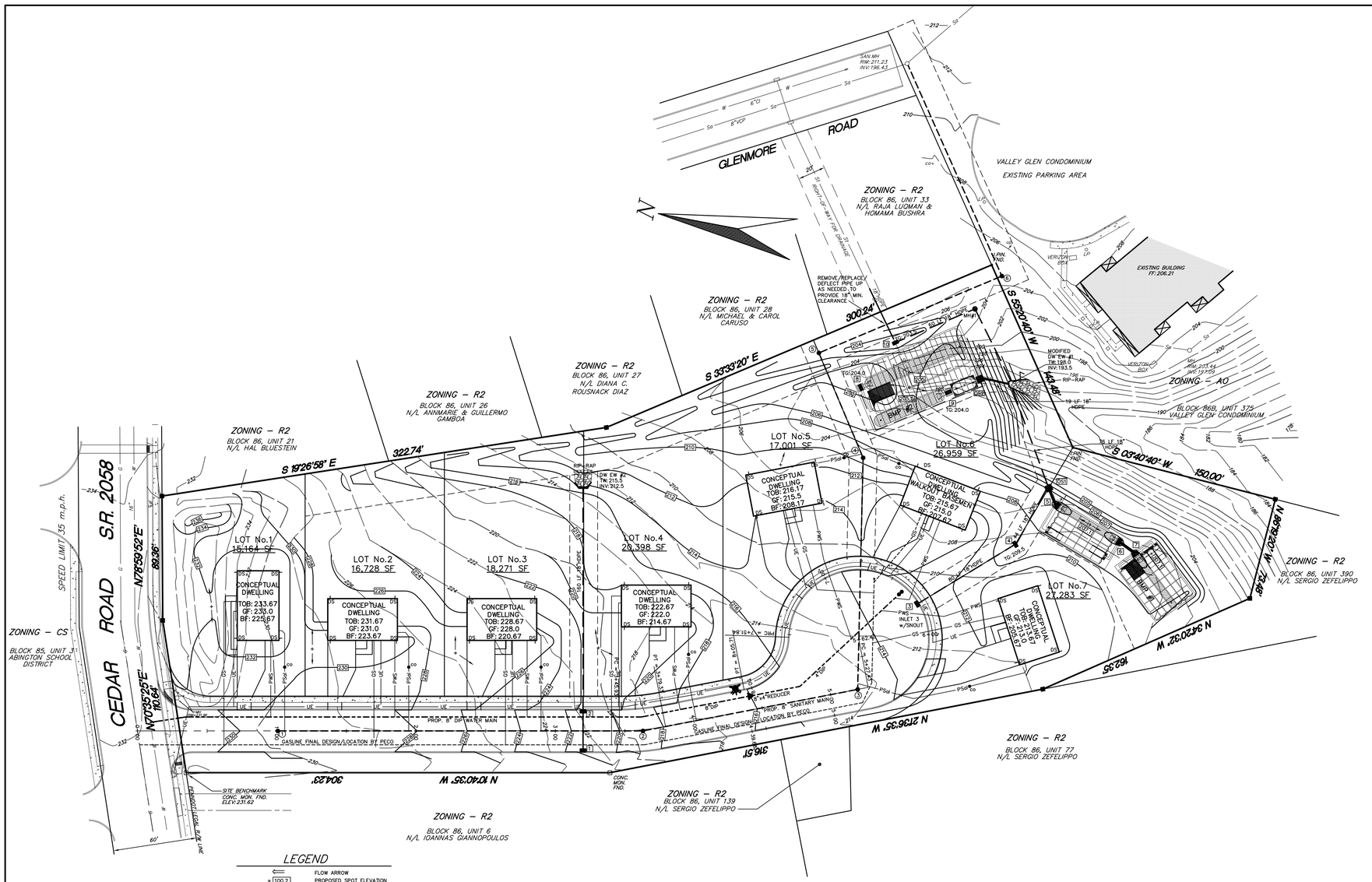
LANDSCAPE PLAN & PCSM PLAN
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: AS NOTED
16 SEPTEMBER 2022
REV 24 MAY 2023 PER TWP APPROVAL RESOLUTIONS

EASTERN/CHADROW ASSOCIATES, INC.
339 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

COMM.#9442
FB-341/12

E-2541-11



Standard grading & utility notes:

1. All contractors working on this project shall comply with the requirements of p.l. 852, no. 287 December 10, 1974 as amended on December 12 1986, p.l. 1574, 60. 172. Contractor must notify PA One Call System, Inc. Three days prior to construction: 1-800-242-1776.
2. The location of all existing and proposed services are approximate and must be confirmed independently prior to commencement of any construction or excavation. Sanitary sewer and all other utility service connection points shall be confirmed independently by the contractor in the field prior to the commencement of construction. All discrepancies shall, be reported immediately in writing to the engineer. Construction shall commence beginning at the lowest intent (point of connection) and progress up gradient. Proposed interface points (crossings) with existing underground utilities shall be field verified by test pit prior to commencement of construction.
3. All utilities and services, including but not limited to gas, water, electric, sanitary and storm sewer, telephone, cable, fiber optic cable, etc. Within the limits of disturbance, shall be vertically and horizontally located. The contractor shall use and comply with the requirements of the applicable utility notification system to locate all the underground utilities. The contractor is responsible for repairs of damage to any existing utilities during construction, at no cost to the owner.
4. It is the responsibility of the contractor to review all of the drawings, specifications, and referenced documents associated with the project work scope prior to the initiation of construction. Should the contractor find a conflict with the documents relative to the specifications or applicable codes, it is the contractor's responsibility to notify the project engineer of record in writing prior to the start of construction. Failure by the contractor to notify the project engineer shall constitute acceptance of full responsibility by the contractor to complete the scope of work as defined by the drawings and in full compliance with local regulations and codes.
5. The contractor is responsible for coordination of site plan documents and architectural design for exact building utility connection locations, door access, and exterior grading. The utility service sizes are to be determined by architect. The contractor shall coordinate installation of utilities/services with the individual companies.
6. All new utilities/services, including electric, telephone, cable TV, etc. Are to be installed underground. All new utilities/services shall be installed in accordance with the providers installation specifications and standards.
7. Site grading shall be performed in accordance with these plans. Subbase material for sidewalks, curb, or asphalt shall be free of organics and other unsuitable materials. Should subbase be deemed unsuitable by owner or owner's representative, subbase is to be removed and filled with approved fill material compacted to 95% optimum density (as determined by modified proctor method).
8. No excavation or fill shall be made with a face steeper than two (2) horizontal to one (1) vertical (2:1).
9. Burying of trees, stumps, or construction material is prohibited.
10. The contractor shall comply to the fullest extent with the latest standards of OSHA directives, or any other agency having jurisdiction for excavation and trenching procedures. The contractor is responsible for determining the 'means and methods" required to meet the intent and performance criteria of OSHA, as well as any other entity that has jurisdiction for excavation and/or trenching procedures.
11. Pavement shall be saw cut in straight lines to the full depth of the existing pavement. All debris from removal operations shall be removed from the site at the time of excavation. Stockpiling of debris will not be permitted. Areas of existing pavement that are to be replaced with lawn areas shall be provided with a minimum of 6 inches of topsoil.
12. The tops of existing manholes, inlet structures, and sanitary cleanout tops shall be adjusted, if required, to match the grading and utility plan(s).
13. In case of discrepancies between plans, the site / record plan will supersede in all cases. The engineer of record must be immediately notified in writing of any conflicts.
14. The contractor shall be required to secure all necessary permits (including D.E.P., etc.) For all off site haul and/or burrow sites. Contractor shall supply a copy of approvals to engineer and owner prior to initiating work.
15. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge, including sewage, process wastewater, and wash water to enter the waters of the Commonwealth is prohibited.
16. Roof downspouts shall not discharge over a sidewalk.

SHEET 15 of 17

SD–21–03–FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV. 3–26–2024 PER MCCD LETTER DATED 3–15–2024
REV. 12–20–2023 PER MCCD & PENNDOT COMMENTS
REV. 5–31–2023 AS PER APPROVED TOWNSHIP RESOLUTION
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
LAWRENCE J. BYRNE
ENGINEER 40487–E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA
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EDMUND A. CHADROW, III
LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
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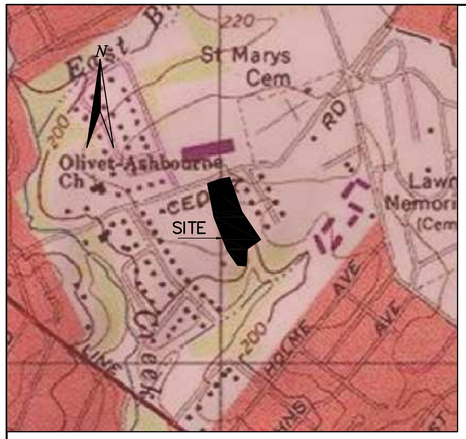
GRADING & UTILITY PLAN
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: 1"=40' 0 40 80 120 *22 NOVEMBER 2021*

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672–8671 FAX (215) 672–6765
EST. 1967

COMM.#9442
FB–341/12

E–2541–15



U.S.G.S. LOCATION MAP
FRANKFORD QUAD
SCALE: 1" = 800'

Luminaire Schedule								
Symbol	Qty	Label	[MANUFAC]	Description	Arrangement	LLD	LDD	LLF
——B	3	Type S2R 129	Leotek Electronics USA LLC	GCM3-60J-MV-40K-2R-GY-190-PCR7-CR/RWL-S/RME-XBP	SINGLE	0.900	0.800	0.720
——B	1	Type S4 130	Leotek Electronics USA LLC	GCM3-60J-MV-40K-4-GY-190-PCR7-CR/RWL-S/RME-XBP	SINGLE	0.900	0.800	0.720

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	LVRatio	Grid Z
Cedar Road	Illuminance	Fc	1.30	3.1	0.4	3.25	7.75	N.A.	0
Cul-de-sac	Illuminance	Fc	0.95	3.3	0.2	4.75	16.50	N.A.	0

THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURERS.

ANY SUBSTITUTION REQUESTS MUST BE SUBMITTED 15 DAYS PRIOR TO THE BID AND MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE FIXTURES IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN.

ALL EXTERIOR LIGHTING PLANS SHALL BE SUBMITTED 15 DAYS PRIOR TO THE BID TO THE LOCAL LIGHTING AUTHORITY TO DETERMINE IF ALL OF THE LOCAL LIGHTING REQUIREMENTS HAVE BEEN MET.

INSTALLATION NOTES:

1.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL EXISTING UNDERGROUND STRUCTURES AND UTILITIES, SUCH AS WATER MAINS, SANITARY AND STORM SEWERS, TELEPHONE AND ELECTRIC CONDUITS, AND GAS LINES, ETC. AND ABOVE GROUND UTILITIES WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION OPERATIONS.
2.) DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATIONS, INVERTS, AND DIMENSIONS IN THE FIELD PRIOR TO THE COMMENCEMENT OF WORK.
3.) THE PENNSYLVANIA ONE CALL NUMBER IS 1-800-242-1776. THE CONTRACTOR IS REQUIRED TO SUBMIT VERIFICATION TO THE MUNICIPALITY THAT A ONE "ONE-CALL" HAS BEEN PLACED PRIOR TO THE START OF DEMOLITION WORK.
4.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FROM THE MUNICIPALITY RELATIVE TO THE PROPOSED PROJECT.
5.) THE CONTRACTOR SHALL REPAIR ALL UTILITY TRENCHING WORK LOCATED WITHIN EXISTING PAVED STREETS.
6.) THE CONTRACTOR SHALL COMPLY WITH ALL CITY, STATE, AND FEDERAL REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
7.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL.
8.) THE CONTRACTOR SHALL REMOVE ALL TEMPORARY FENCING, GATES, COVERED PEDESTRIAN WALKWAYS, TRAFFIC BARRIERS, AND SIGNAGE AT THE COMPLETION OF THE PROJECT. ALL AREAS DISTURBED AS A RESULT OF THE INSTALLATION OF THESE TEMPORARY CONTROLS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
9.) THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF SHOWN IN THE LUMINAIRE SCHEDULE.
10.) THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED.
11.) ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
12.) THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.

LIGHTING CONTROLS AND SURGE PROTECTION: ALL NEW FIXTURES ARE TO BE EQUIPPED WITH DIMONOFF RME-XBP PHOTOCELLS AND ABLE POWER PRODUCTS RWL-S SURGE DEVICE. FIXTURES MUST BE EQUIPPED WITH ALL-MODE PROTECTION (L-N, L-G, N-G). SURGE PROTECTION INTEGRAL TO THE PHOTOCONTROL SHOULD HAVE 3 MODES OF PROTECTION, LINE-TO-NEUTRAL, LINE-TO-GROUND AND NEUTRAL-TO-GROUND, THE MINIMUM SURGE PROTECTION SPECIFICATIONS SHOULD BE 10KA IN, 25KA IMAX AND 20KV UOC.

SET ONE SMART PHOTOCELL TO CONTROL ALL OTHER SITE LIGHTING FIXTURES (DIMONOFF #RME-XBP).

POLE NOTES:
30' ROUND STEEL POLES TO BE SUPPLIED BY LEOTEK ELECTRONICS, USA. AND INSTALLED PER MANUFACTURE'S REQUIREMENTS.

ARM NOTES:
6' ARM TO BE SUPPLIED BY LEOTEK ELECTRONICS, USA.

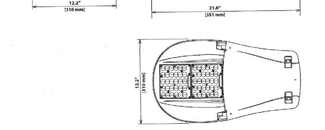
PLEASE CONTACT INDEPENDENCE LIGHTING FOR PRICING AND AVAILABILITY:
KENT LAZOR
PHONE: 610-363-5271
EMAIL: KLAZOR@COMCAST.NET

LE TEK
...LITE ON GRID.JP

Project
Type
Catalog No.

GreenCobra™ Midsize LED Street Light
GCM J-Series Specification Data Sheet

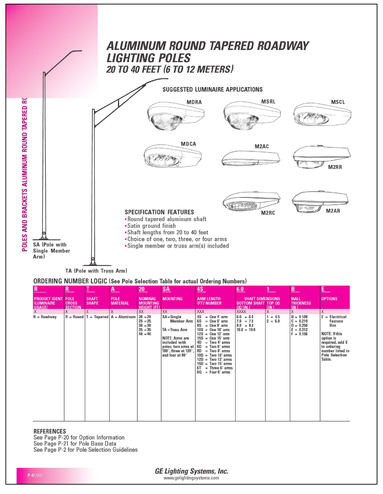
Luminaire Data
Weight 11 lbs [5.0 kg]
EPA 0.44 ft²

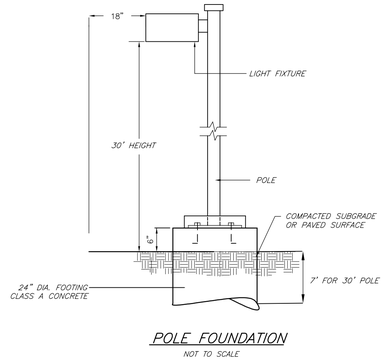


Ordering Information
Sample Catalog No. GCM2-60J-MV-30K-2R-GY-130-PCR7-WL

Model*	LED Code	Voltage	Color Temperature	Distribution	Finish[1]	Output Code[1]
GCM1* GCM2* GCM3*	60J	MV 120-277V HV 347-480V	30K 3000K 40K 4000K 50K 5000K	2R Type 2 3R Type 3R 3F Type 3F 4 Type 4 5 Type 5	GY Gray DB Dark Bronze BK Black	Refer to Page 3 to select the performance code.

Options	
FOC[1]	Fixed Output Code
LPCR	Less Photocontrol Receptacle
PCR7[1]	ANSI 7-wire Photocontrol Receptacle
PCR7-CR[1]	Control Ready 7-wire PC Receptacle
MSL3	Motion Sensor, L3 Lens
MSL7	Motion Sensor, L7 Lens
WL	Utility Wattage Label
4B	4-Bolt Mounting Bracket
RWG	Rubber Wildlife Guard
SWTB	Straight Wire Terminal Block
BBL	Bubble Level
DSC	Door Safety Cable
CF[1]	Coastal Paint Finish
SP2[1]	Extreme Surge Protection, 20KV/10KA, Fail-to-on
LSSP2[1]	Extreme Surge Protection, Fail-to-off, 20kV/10kA Rating





POLE FOUNDATION
NOT TO SCALE

SHEET 16 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT
REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 AS PER APPROVED TOWNSHIP RESOLUTION
REV. 9-16-2022 AS PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E
LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128
EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

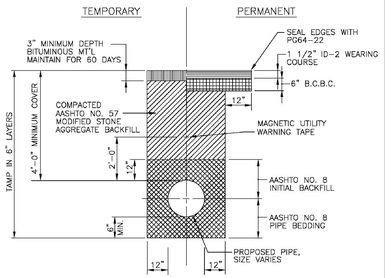
LIGHTING PLAN
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

SCALE: 1"=40' — 0 40 80 120 — 22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

COMM.#9442
FB-341/12

E-2541-16

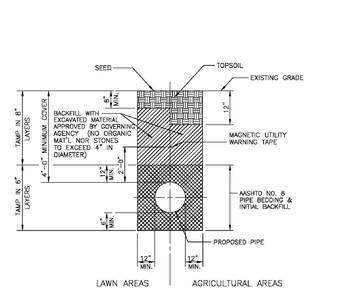


ALL WORK TO BE DONE IN ACCORDANCE WITH PADOT PUBLICATION 408

Township of Abington
STANDARD DETAIL - SANITARY SEWER

BACKFILL AND PAVEMENT RESTORATION DETAIL FOR STATE / TWP. ROADS

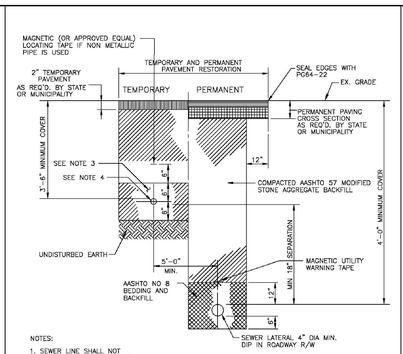
DATE: OCTOBER 2015
DETAIL: 1



Township of Abington
STANDARD DETAIL - SEWER SYSTEM

TRENCH RESTORATION LAWN / AGRICULTURAL AREAS

DATE: NOVEMBER 2015
DETAIL: 2

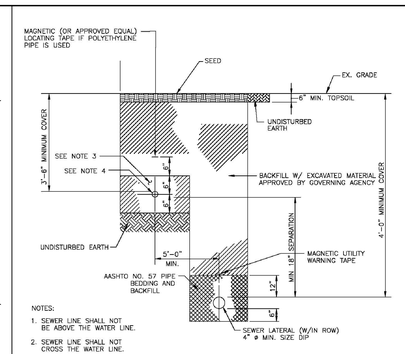


NOTES:
1. SEWER LINE SHALL NOT BE ABOVE THE WATER LINE.
2. SEWER LINE SHALL NOT CROSS THE WATER LINE.
3. BACKFILL TRENCH IN ACCORDANCE WITH LOCAL WATER SUPPLIER
4. WATER SERVICE LINE IN ACCORDANCE WITH LOCAL WATER SUPPLIER
5. BACKFILLING AND ROAD RESTORATION SHALL BE IN ACCORDANCE WITH PADOT PUBLICATION 408.

Township of Abington
STANDARD DETAIL - SANITARY SEWER

COMBINED TRENCH DETAIL-SEWER LATERAL/ WATER SERVICE LINE STATE / TWP. ROADS

DATE: OCTOBER 2015
DETAIL: 3

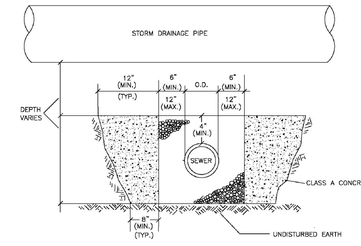


NOTES:
1. SEWER LINE SHALL NOT BE ABOVE THE WATER LINE.
2. SEWER LINE SHALL NOT CROSS THE WATER LINE.
3. TRENCH BACKFILL IN ACCORDANCE WITH LOCAL WATER SUPPLIER
4. WATER SERVICE LINE IN ACCORDANCE WITH LOCAL WATER SUPPLIER

Township of Abington
STANDARD DETAIL - SEWER SYSTEM

COMBINED TRENCH DETAIL-SEWER LATERAL/ WATER SERVICE LINE LAWN/AGRICULTURAL AREAS

DATE: NOVEMBER 2015
DETAIL: 4



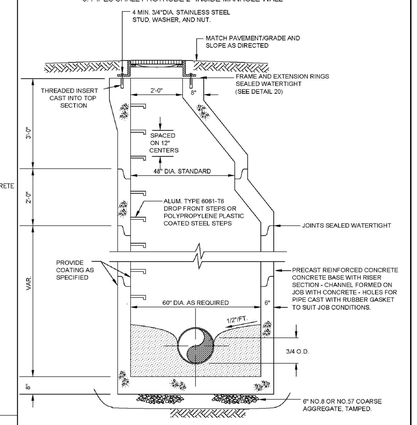
NOTES:
1. PIERS TO BE 5 FT. LONG CENTERED ON STORM DRAIN.
2. USE 3000 PSI CLASS A CONCRETE.
3. FORM PIERS AGAINST SOLID TRENCH WALLS.
4. PIERS REQUIRED WHEN CLEARANCE BETWEEN PIPES IS LESS THAN 18".
5. MAINTAIN SLOPE OF EACH UTILITY AT CROSSING.

Township of Abington
STANDARD DETAIL - SEWER SYSTEM

GRAVITY SEWER CROSSING DETAIL USING PIER SUPPORTS

DATE: NOVEMBER 2015
DETAIL: 7

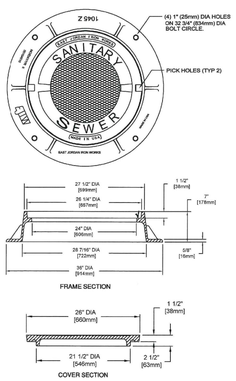
NOTE: 1. BOLTING OF MANHOLE FRAME AND COVER NOT REQUIRED FOR MANHOLES INSTALLED IN PAVED SURFACES.
2. ALL STONE GRADATIONS ARE AASHTO CLASSIFICATION.
3. PIPES SHALL PROTRUDE 2" INSIDE MANHOLE WALL



Township of Abington
STANDARD DETAIL - SANITARY SEWER

PRECAST CONCRETE MANHOLE W./ PRECAST CONCRETE BASE

DATE: NOVEMBER 2015
DETAIL: 10



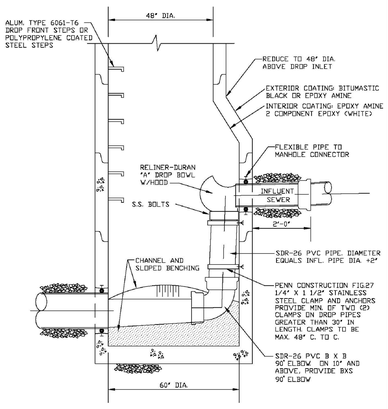
Castings to be treated by the manufacturer with water-based, black asphaltic, environmentally safe coating, free of surface rust, before leaving the foundry.

√ MACHINED SURFACE

Township of Abington
STANDARD DETAIL - SEWER SYSTEM

STANDARD MANHOLE FRAME & COVER DETAIL

REVISED: JANUARY 2021
DATE: NOVEMBER 2015
DETAIL: 11

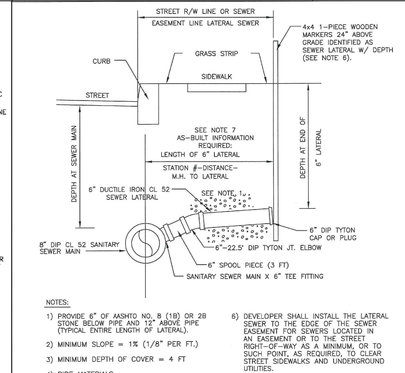


NOTES: 5' DIAMETER MANHOLE TO BE UTILIZED FOR INSIDE DROP MANHOLE
PIPED DROP TO BE USED FOR VERTICAL ELEVATION CHANGE GREATER THAN 2 FT.

Township of Abington
STANDARD DETAIL - SEWER SYSTEM

PRECAST SANITARY MANHOLE INSIDE DROP CONNECTION (8" - 24" SEWERS)

DATE: NOVEMBER 2015
DETAIL: 13

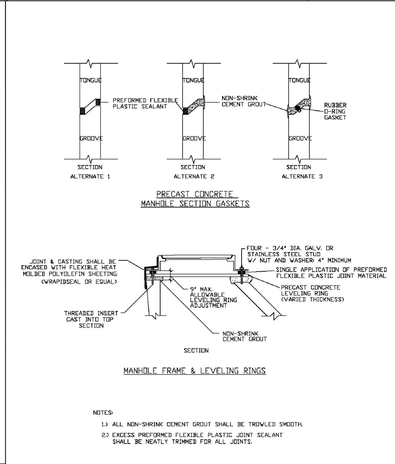


NOTES:
1) PROVIDE 6" OF AASHTO NO. 8 (1B) OR 2B STONE BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL).
2) MINIMUM SLOPE = 1% (1/8" PER FT.)
3) MINIMUM DEPTH OF COVER = 4 FT
4) PIPE MATERIALS: ALL PIPES TO BE DUCTILE IRON PIPE CLASS 52 WALL THICKNESS
5) DEVELOPER SHALL TEST AGAINST 6" TYTON CAP OR PLUG.
6) DEVELOPER SHALL INSTALL THE LATERAL SEWER TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.
7) INFORMATION THAT IS REQUIRED FOR RECORD PLANS

Township of Abington
STANDARD DETAIL - SEWER SYSTEM

SEWER LATERAL INSTALLATION DETAIL

DATE: JANUARY 2106
DETAIL: 18



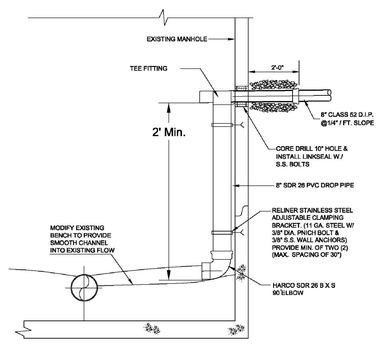
NOTES:
1.) ALL NON-SHRINK CEMENT GROUT SHALL BE TROWLED SMOOTH.
2.) EXCESS PREFORMED FLEXIBLE PLASTIC JOINT SEALANT SHALL BE NEATLY TRIMMED FOR ALL JOINTS.

Township of Abington
STANDARD DETAIL - SANITARY SEWER

MANHOLE GASKETS, LEVELING RINGS, AND BOLTED FRAME DETAIL

DATE: NOVEMBER 2015
DETAIL: 20

NOTE: WHEN THE DISTANCE BETWEEN THE INVERT OF THE PROPOSED LATERAL AND THE SPRING LINE OF THE EXISTING SEWER IS LESS THAN 24", THE PROPOSED LATERAL SHALL CONNECT INTO THE MANHOLE AT THE SPRING LINE ELEVATION.

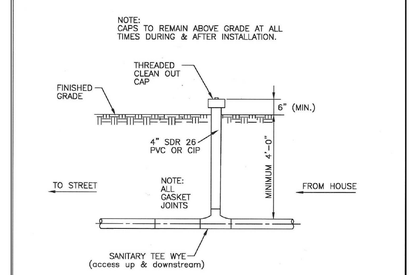


Township of Abington
STANDARD DETAIL - SANITARY SEWER SYSTEM

8" LATERAL CONNECTION TO AN EXISTING SANITARY MANHOLE

DATE: SEPT. 2015
DETAIL: 28

NOTE: CAPS TO REMAIN ABOVE GRADE AT ALL TIMES DURING & AFTER INSTALLATION.



Township of Abington
STANDARD DETAIL - SEWER SYSTEM

TYPICAL BUILDING SEWER CLEANOUT ASSEMBLY

DATE: JANUARY 2016
DETAIL: 38

SHEET 17 of 17

SD-21-03-FINAL MAJOR SUBDIVISION & LAND DEVELOPMENT

REV. 3-26-2024 PER MCCD LETTER DATED 3-15-2024
REV. 12-20-2023 PER MCCD & PENNDOT COMMENTS
REV. 5-31-2023 AS PER APPROVED TOWNSHIP RESOLUTION
REV. 9-16-2022 AS PER TOWNSHIP REVIEW

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — LAWRENCE J. BYRNE — ENGINEER 40487-E

LAWRENCE J. BYRNE
PROFESSIONAL ENGINEER
LICENSE No.40487

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — EDMUND A. CHADROW, III — LAND SURVEYOR NO. 75128

EDMUND A. CHADROW, III
PROFESSIONAL LAND SURVEYOR
LICENSE No.75128

SANITARY SEWER DETAILS
365 CEDAR ROAD
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
MADE FOR
PAUL YANNESSA

22 NOVEMBER 2021

EASTERN/CHADROW ASSOCIATES, INC.
333 E. STREET ROAD • WARMINSTER, PA. 18974 • (215) 672-8671 FAX (215) 672-6765
EST. 1967

E-2541-17

WASTEWATER DEPARTMENT

George Wrigley, Director

May 15, 2024

Paul Yannessa
43 Longfield Road
Glenside, PA 19038

RE: Final Land Development Plans for 365 Cedar Road: Sanitary Sewer review

Dear Mr. Yannessa:

The Township of Abington Wastewater Utilities Department has reviewed the submitted plans dated November 22, 2021 and last revised March 26, 2024, prepared by Eastern/Chadrow Associates, Inc. Sheet No. 1 of 17 through No. 17 of 17 with regards to sanitary sewers.

The sanitary sewer lateral for Lot No.7 should be relocated to the left side of the house structure from the indicated right side. The proposed location on the right side will place the pipe too close to the driveway and the roots of the proposed trees and shrubs along the property line.

The proposed location of the trees and shrubs along the right property lines for Lot No.1 and Lot No. 4 will place their roots to close to the sanitary sewer lateral pipe. Either the trees and shrubs or the sewer pipe should be relocated to provide a minimum 10 foot separation for root growth.

Should you have any questions or require any additional information, please contact me at 215-884-8329 or email at gwrigley@abingtonpa.gov.

Sincerely,

George R. Wrigley

George R. Wrigley, Director
Abington Wastewater Utilities Department

pc: Thomas McAneney, Abington Fire & Emergency Services (Code)
Terry Castorina, Abington Executive Assistant
Khaled R. Hassan, PE, Pennoni
Allison A. Lee, PE, Pennoni
Eastern/Chadrow Associates, Inc., Applicant's Engineer

Thomas Hecker, *Board President*
Matthew Vahey, *Board Vice President*
Richard J. Manfredi, *Township Manager*

TOWNSHIP OF ABINGTON

May 31st, 2024

Paul Yannessa

Re: SD-24-01 – 365 Cedar RD (Development of existing parcel into 7 lots)
Parcel(s) 30-00-07112-00-4

Thank you for the opportunity to review the submitted plans for Final Subdivision and Land Development at 365 Cedar Road Elkins Park, PA 19027. The project outlined is for the division of 1 parcel into 7 lots.

I have reviewed the submitted Full Plan Set originally dated 22 November 2021 and since revised most recently on 3-26-2024. Currently, I have the following concern.

Access Roads
Abington SALDO 146-41 B(1)a states "Fire lanes shall permit access to every building by fire-fighting equipment. Fire lanes shall be of an all-weather surface not less than 20 feet of unobstructed width, able to withstand live loads (with a thirty-ton minimum) of fire-fighting apparatus and have a minimum vertical clearance of 14 feet; and they shall be located not less than five feet nor more than 30 feet from any structure. The grade of the fire lane shall be within the limits established by the Fire Marshal." The current width of the roads throughout the development is 30 feet on the plan, and I see two required spots on each lot, but I do not see the street parking plan. Where will parking be planned on the street?

Aside from the above issue, I have no other concerns currently with the Final Subdivision and Land Development at 365 Cedar Road Elkins Park, PA 19027 proposed in these plans.

Should you have any questions or concerns, please feel free to contact me at 267-536-1089 or via email at CPlatz@AbingtonPA.gov or FireMarshal@AbingtonPA.gov.

Sincerely,

Chris Platz

Chris Platz,
Fire Marshal

1176 Old York Road, Abington PA 19001 | www.abingtonpa.gov | 267-536-1000 | TTY/TTD: 9-1-1 | Fax 215-884-8271

June 7, 2024

ABINT130022

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: SD-21-03-365 Cedar Road (Yannessa Subdivision)
PARID: 30-00-07112-00-4 / TMID: 30086 020
Final Major Subdivision and Land Development Plans Review (1st Submission)

Dear Mr. Manfredi:

We have received a copy of the Final Major Subdivision and Land Development Plans consisting of seventeen (17) sheets dated November 22, 2021, last revised March 26, 2024, and received on May 10, 2024 as prepared by Eastern/Chadrow Associates, Inc. located at 333 E. Street Road in Warminster, PA for the above referenced project.

Under the initial preliminary subdivision and land development plans submission, the Applicant was proposing to demolish an existing residential dwelling, covered porch, garage, shed, and boulder wall; and subdivide the existing 177,620 SF (4.0776 acres) parcel into eight (8) individual lots ranging from 15,022 SF to 21,514 SF. Along with the subdivision, the Applicant is proposing to construct a single-family detached dwelling on each lot, as well as associated, sidewalk, curbing, driveway, streetlights, and stormwater management facilities. Access to/from the site will be by way of one new cul-de-sac roadway named Independence Circle (now renamed to Lincoln Lane) that will intersect with Cedar Road (SR 2058) as a new T-intersection. Each new dwelling is proposed to be served by public water and sewer service.

Under the second preliminary subdivision and land development plans Submission, the Applicant modified the site layout to propose demolition of the existing features on the site and to subdivide the existing 177,620 SF (4.0776 acres) parcel into seven (7) individual lots ranging from 15,164 SF to 27,283 SF instead of the eight (8) individual lots under the first submission. In addition, the Applicant relocated and revised the stormwater management facilities from beneath the proposed cul-de-sac to the rear of proposed new Lots 6 and 7. Other site improvement changes included widening of the proposed road from 24-feet wide to 30-feet wide, and additional street lighting and landscaping were provided.

The Applicant subsequently went before the Abington Township Planning Commission on February 22, 2022 and obtained conditional preliminary plans approval recommendation. The Applicant appeared before the Abington Board of Commissioners on January 12, 2023 and was granted conditional preliminary plans approval in accordance with the Township solicitor's approval letter dated February 3, 2023.

Under this current final subdivision and land development plans submission, the Applicant is proposing the demolition of the existing features on the site as noted above and subdivide the existing 177,620 SF (4.0776 acres) parcel into seven (7) individual lots ranging from 15,164 SF to 27,283 SF to construct single-family detached dwellings and associated site improvements as approved under the preliminary major subdivision and land development plans submission. In addition to the proposed underground stormwater BMPs no.1 and 2 located to the rear of proposed Lots 6 and 7, the Applicant has since modified the proposed stormwater

pipe conveyance of the proposed new road, Lincoln Lane (formerly Independence Circle). The Applicant is now proposing to capture and convey a portion of the stormwater runoff on the new roadway in front of the proposed adjoining Lots 3 and 4 side property line and discharge to the proposed vegetative swale located to the rear of these new lots. The entire stormwater pipe conveyance of the roadway was previously proposed to route to the proposed new inlet at the end of the cul-de-sac to discharge to the underground stormwater BMP located to the rear of new Lot 7. Each new dwelling is proposed to be served by public water and sewer service.

This project is located within the R2-Low-Medium Density Residential Zoning District. The subject parcel is fronted by Cedar Road (SR 2058) (60 FT R/W) to the north; residential apartments zoned in the AO-Apartment-Office Zoning District to the south; and residential properties zoned in the R2-Low-Medium Density Residential Zoning District to the east and west.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C04203G, effective March 2, 2016, the tract is identified to be within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. Therefore, based on the FEMA determination, the tract is not located within the Floodplain Conservation District. Based on the plans and FIRM map, and as confirmed by the Applicant, there are no wetlands that exist on site.

The Applicant has identified areas of precautionary steep slopes (greater than 15% to 25%) and prohibitive steep slopes (greater than 25%), located primarily at the front and rear of the site. Although there are existing steep slopes identified on the site, these areas do not span five contiguous 10-foot contour intervals; and therefore, the site is determined to be located outside the steep slope conservation overlay district.

Waivers Received

The Abington Township Board of Commissioners granted the following Subdivision and Land Development Ordinance (SALDO) waivers for the preliminary major subdivision and land development plans at the regularly scheduled meeting held on January 12, 2023:

1. **Section 146-11.A(4) – Property Identification Plan** – requiring the plan to supply the tax parcel information, owner's name, lot area, location of property lines and names of landowners for all properties within 400 feet of the site involved in the application. The Board of Commissioners has GRANTED a partial waiver from the Ordinance to provide an annotated aerial due to the size and scope of the project.

2. **Section 146-11.B(3) – Existing Features Plan –** requiring the plan to supply the location of property lines and names of landowners for all properties within 400 feet of the site involved in the application. The Board of Commissioners has GRANTED this partial waiver from the Ordinance due to the size and scope of the project.

3. **Section 146-25.D – Curb** – requiring a minimum radius of 20 feet. The Board of Commissioners has GRANTED this waiver from the Ordinance contingent on Applicant provide turning templates which demonstrate that emergency services and sanitation vehicles can adequately maneuver into and out of the site.

4. **Section 146-33.D – Drainage Size, Grade and Type** – requiring a minimum internal diameter of fifteen inches (15") and a minimum grade of one-half percent (0.5%) of reinforced cement concrete pipe. The Board of Commissioners has GRANTED this waiver contingent on demonstration of stormwater calculations that the proposed pipe design adequately conveys stormwater runoff.

5. **Section 146-43.C(3)(a) – Grading for Drainage** – requiring cut and fill slopes not to be fifteen percent (15%) or steeper. The Board of Commissioners has GRANTED this waiver from the Ordinance due to the size and scope of the project along with the existing conditions.

The following documents have been reviewed:

Title	Sheet	Dated	Revised
Land Development Plans			
Record Plan of Subdivision *	1 of 17	11/22/21	03/26/24
Existing Features/Demolition/ERSAM Plan	2 of 17	11/22/21	03/26/24
Aerial Plan	3 of 17	11/22/21	03/26/24
Erosion & Sediment Control Plan	4 of 17	11/22/21	03/26/24
Erosion & Sediment Control Details Plan	5 of 17	11/22/21	03/26/24
Erosion & Sediment Control Details Plan	6 of 17	11/22/21	03/26/24
Post Construction Stormwater Management Plan *	7 of 17	11/22/21	03/26/24
Post Construction Stormwater Management Details Plan	8 of 17	11/22/21	03/26/24
Post Construction Stormwater Management Details BMP #1	9 of 17	11/22/21	03/26/24
Post Construction Stormwater Management Details BMP #1	10 of 17	11/22/21	03/26/24
Site Construction Details Plan	11 of 17	11/22/21	03/26/24
Plan & Profile – Lincoln Lane & Misc. Pipe Runs	12 of 17	11/22/21	03/26/24
Plan & Profile – Sanitary Sewer Easement	13 of 17	11/22/21	03/26/24
Landscape Plan & PCSWM	14 of 17	11/22/21	03/26/24
Grading & Utility Plan	15 of 17	11/22/21	03/26/24
Lighting Plan	16 of 17	11/22/21	03/26/24
Sanitary Sewer Details	17 of 17	11/22/21	03/26/24
HOP Plans			
Title Sheet	1 of 6	02/12/24	-----
General Notes and Traffic Control	2 of 6	02/12/24	-----
Pedestrian Detour Plan, Road Improvement Plan and Driveway Profile	3 of 6	02/12/24	-----
Sight Distance Plan	4 of 6	02/12/24	-----
Intersection Detail and ADA Ramp Plan	5 of 6	02/12/24	-----
Vehicle Maneuverability Plan	6 of 6	02/12/24	-----
Reports			
Post Construction Stormwater Management Report	138 pages	11/22/21	03/26/24
Erosion and Sediment Control Report	63 Pages	11/22/21	12/20/23

*** Denotes Plans to be Recorded**

We have performed a review of the above referenced plans for compliance with the Zoning Ordinance (Chapter 162); Subdivision and Land Development Ordinance (Chapter 146); Stormwater Management Ordinance (Chapter 142) and our previous review letter dated October 10, 2022. We offer the following outstanding comments for your consideration (utilizing the same numbering scheme as the previous reviews):

ZONING COMMENTS

5. ***Per §402 Figure 4.1 – Dimensional Regulations –*** *The maximum building area shall be twenty-five (25) percent.*

   The Applicant has indicated that the building coverage will be less than the maximum twenty-five (25) percent. The Applicant shall provide building coverage calculations showing compliance with this section of the code on the plans for each lot.

The Applicant is showing the 25% maximum building coverage area permitted for each proposed lot; however, the Applicant did not provide calculations showing the actual building coverage proposed for each lot. Based on our measurements of the dwelling sizes proposed, it appears the Applicant is in compliance with this dimensional requirement. The Applicant shall provide the 25% proposed maximum building coverage calculations for each lot to ensure compliance with this Code Section.

On the Record Plan (Sheet 1), the Permitted Dimensional Criteria Table is providing the 25% maximum building coverage for each lot and the Zoning data listed in Note 4 of the General Notes and Summary is still showing "less than 25%" building coverage being provided. A note was also provided under the Permitted Dimensional Criteria Table stating that the conceptual dwellings, driveways & walkways are shown on the plan, and the actual design & impervious coverage shall be based on final architectural plans & shall be provided on the individual building permit plans for review and approval. Based on our measurements and calculations of the proposed conceptual dwellings, we measured each conceptual dwelling size to be approximately 1,500 SF which will result in less than 10% of the building coverage for each lot which should comply with the required 25% maximum building coverage permitted for each lot; however the Applicant shall clarify and confirm by showing the square footage of each conceptual dwelling and building coverage on the plan for each lot to ensure compliance with this Code Section.

6. ***Per §402 figure 4.1 – Dimensional Requirements –*** *The maximum impervious coverage area shall be thirty-five (35) percent.*

   The Applicant has indicated that the impervious coverage will be less than thirty-five (35) percent. The Applicant shall provide the impervious coverage calculations showing compliance with this section of the code on the plans for each lot.

   The Applicant is showing the 35% maximum impervious coverage area permitted for each proposed lot; however, the Applicant did not provide calculations showing the actual impervious coverage proposed for each lot. Based on our measurements of the impervious coverages proposed, it appears the Applicant is in compliance with this dimensional requirement. The Applicant shall provide the 35% proposed maximum impervious coverage calculations for each lot to ensure compliance with this Code Section.

   On the Record Plan (Sheet 1), the Permitted Dimensional Criteria Table is providing the 35% maximum impervious coverage for each lot and the Zoning data listed in Note 4 of the General Notes and Summary is still showing "less than 35%" impervious coverage being provided. A note was also provided under the Permitted Dimensional Criteria Table stating that the conceptual dwellings, driveways & walkways are shown on the plan, and the actual design & impervious coverage shall be based on final architectural plans & shall be provided on the individual building permit plans for review and approval. Based on our measurements and calculations of the proposed impervious areas, we measured the impervious coverage to range from approximately 2,200 SF to 2,581 SF which will result in approximately 8% to 10% of the impervious coverage for each lot which should comply with the required 35% maximum impervious coverage permitted for each lot; however, the Applicant shall clarify and confirm by showing the square footage of the impervious coverage on the plan for each lot to ensure compliance with this Code Section.

7. ***Per §402 figure 4.1 – Dimensional Requirements –*** *The minimum green area shall be sixty-five (65) percent.*
   The Applicant has indicated that the green area will be greater than thirty-five (65) percent. The Applicant shall provide the green area calculations showing compliance with this section of the code on the plans for each lot.

The Applicant is showing the 65% minimum green area permitted for each proposed lot; however, the Applicant did not provide calculations showing the actual green area proposed for each lot. Based on our measurements of the impervious coverages proposed, it appears the Applicant is in compliance with this dimensional requirement. The Applicant shall provide the 65% proposed minimum green area calculations for each lot to ensure compliance with this Code Section.

On the Record Plan (Sheet 1), the Permitted Dimensional Criteria Table is providing the 65% minimum green area for each lot and the Zoning data listed in Note 4 of the General Notes and Summary is still showing "more than 65%" green area being provided. Based on our measurements and calculations of the proposed impervious areas for each lot as noted above, the resulting green area for each lot ranging from at 84% to 92% should comply with the required 65% minimum green area for each lot; however, the Applicant shall clarify and confirm by showing the green area percentage on the plan for each lot to ensure compliance with this Code Section.

CHAPTER 146
SUBDIVISION & LAND DEVELOPMENT COMMENTS

24. ***Per §146.41.B.(4)(d) – Fire hydrants and fire connection –*** *A working hydrant shall be located within 500 feet of all buildings under construction. On-site hydrants and access roads shall be installed prior to and during construction. An unobstructed roadway with a stone base capable of supporting 30 tons shall be provided to allow passage of fire-fighting equipment to any building under construction.*

    The Applicant is proposing a new fire hydrant at the end of the cul-de-sac in front of lot line of Lots 7 and 8. The location of the proposed fire hydrant exceeds the distance from the dwelling on Lot 1. There is an existing fire hydrant along Cedar Road (SR 2058) located at the far end of the adjacent parcel (345 Cedar Road). The Applicant shall show the existing fire hydrant along Cedar Road and confirm on the plans that the existing fire hydrant is located within the 500 feet distance to the proposed dwelling on Lot 1.

    The Applicant has adjusted the location of the proposed new fire hydrant on the plans to be located in front of the western corner of proposed Lot 5 adjacent to proposed Lot 4, which will be in compliance with the required 500 feet location from all proposed conceptual dwellings as shown on the plan. We defer to the Fire Marshal for approval of the fire hydrant location.

CHAPTER 142
STORMWATER MANAGEMENT COMMENTS

28. ***Per §142-302.B.(2).(b).[25] – SWM Site Plan Requirements –*** *A statement, signed by the Applicant, acknowledging that any revision to the approved drainage plan must be approved by the Township and that a revised erosion and sediment control plan must be submitted to the County Conservation District for approval.*

    The Applicant shall add this statement to the Post-Construction Stormwater Management Plan.

    The Applicant has added a statement on the Post Construction Stormwater Management Plan which references Municipality. The Applicant shall revise this statement to reflect Township as opposed to Municipality.

The municipal engineer certification block on the PCSM Plan (Sheet 7) shall reference Municipal Ordinance no. 2100 instead of Chapter 142.

GENERAL STORMWATER MANAGEMENT COMMENTS

33. *The Raingarden Section Detail on Sheet 7 shall provide the 100-year storm water elevation which is currently not shown on the detail provided.*

    Since the previous submission, the Applicant has removed the raingardens and is now providing underground BMPs for stormwater management. The Applicant shall provide the basin elevations for both BMPs and provide the 100-year stormwater elevations to ensure the BMP adequately captures the required 100-year storm event.

    The PCSM Report provided by the Applicant only includes up to the 50-year storm event. Calculations for the 100-year storm event shall be provided, and the 100-year stormwater elevation shall be provided in the proposed elevations tables for BMPs #1 and #2 on the plans to ensure the BMPs are able to adequately capture the 100-year storm event.

34. *The Applicant shall confirm the bottom of the basin elevation. On the section detail, the basin bottom is labeled as 202 and the bottom of the amended soils elevation is also labeled as 202.*

    Since the previous submission, the Applicant has removed the raingardens and is now providing underground BMPs for stormwater management. The Applicant shall provide the basin elevations for both BMPs and provide the 100-year stormwater elevations to ensure the BMP adequately captures the required 100-year storm event.

    The PCSM Report provided by the Applicant only includes up to the 50-year storm event. Calculations for the 100-year storm event shall be provided, and the 100-year stormwater elevation shall be provided in the proposed elevations tables for BMP's #1 and #2 on the plans to ensure the BMPs are able to adequately capture the 100-year storm event.

NEW GENERAL STORMWATER MANAGEMENT COMMENTS

1. The Applicant should consider redirecting the stormwater runoff from proposed Lincoln Lane between proposed Lots 3 and 4 to the tie into proposed inlet 3 at the end of the cul-de-sac to be conveyed to proposed BMP #2 instead of to the rear of proposed Lots 3 and 4 as approved under the preliminary subdivision and land development plans. We are concerned of the pipe and endwall opening adjacent to the rear yards of the proposed residential properties and added flows being conveyed through the rear of the proposed residential properties of Lots 4, 5, and 6 before being captured by proposed inlet no. 8 at BMP #2. The Applicant may also consider providing a type M inlet instead of a pipe opening and end wall and tie the flows to proposed inlet no. 8 to minimize the stormwater runoff being conveyed to the rear of the residential properties.

GENERAL COMMENTS

41. *The Applicant shall provide a typical roadway detail for the proposed residential street, specifying the different pavement layer, materials, and depths.*

    The Applicant has provided a Typical Roadway Section for Township Roads; however, there is no Superpave 19.mm binder course layer for the pavement detail shown. The Applicant shall revise the typical pavement detail to match the pavement layers, materials, and depths as shown on the PennDOT HOP plans, but using a Superpave WMA, SRL-H mix which is the most current approved PennDOT mix design for roadways.

42. *The Applicant shall provide our office with legal descriptions and exhibits for each lot and stormwater easements for review and approval prior to the recording of the plans.*

    No descriptions for the individual lots and the stormwater easements have been provided. The Applicant shall provide our office with the legal descriptions for review and approval.

    Descriptions of each lot as well as the 30' wide storm easement, 20' wide storm easement, 20' wide sanitary easement, variable width storm easement, and the Lincoln Lane Right-of-Way shall be provided to our office for review and approval.

44. *Applicant shall provide roadway turning templates showing emergency vehicles and sanitation vehicles are able to adequately and safely maneuver into/out of the site entrance and at the cul-de-sac area.*

    No turning templates showing emergency vehicles and sanitation vehicles has been provided. The Applicant shall submit these turning templates for review and approval.

    Turning templates have been provided in the HOP Plans; however, these turning templates are for passenger cars and single-unit trucks. Templates for the Abington Township fire truck and a refuse collection truck shall be provided for review and approval. These templates shall be included in the land development plan set.

We have received the following documents/permits/reviews:

- AQUA Water Will Serve Letter (August 19, 2019)
- Erosion & Sediment Control Report (November 22, 2021)
- Post Construction Stormwater Management Plan (November 22, 2021)
- Application for SD/LD (November 23, 2021)
- Waiver Request Letter (November 23, 2021)
- MCPC Request for Review Letter (November 23, 2021)
- Sanitary Sewer Availability Letter (December 6, 2021)
- Sanitary Sewer Easement Description & Exhibit (December 6, 2021)
- Sanitary Sewer Review (May 15, 2024)
- Fire Marshal Review Letter (December 7, 2021; May 31, 2024)
- EAC & STC Joint Review (February 2, 2022)
- MCPC Review (February 18, 2022)
- NPDES Permit (April 30, 2024)
- Traffic Review (June 4, 2024)

We have not received the following documents/permits/reviews:

- Sewer Planning Module Approval
- HOP Permit
- Financial Escrow
- BMP O&M Agreement
- Legal Descriptions & Exhibits for each lot and easement

SUMMARY

Since the outstanding Zoning comments can be addressed without the need to go before the Zoning Hearing Board by making revisions to the plans, we recommend Final Major Subdivision and Land Development Plans approval contingent the Applicant adequately addresses the above referenced review comments prior to recording plans approval.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI ASSOCIATES INC.

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

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June 14, 2024

MEMO
To: Nicholas Brown, Chair – Abington Township Planning Commission
From: Abington Township Shade Tree Commission
RE: SD-21-03 - 365 Cedar Road Yannessa Property – Final Major Subdivision and Land Development Plan - Resubmission
Plan Set Date: 03/26/2024

Site Summary
Owner: Paul Yannessa
Zone – R-2 – Low-Medium Density Residential District
Watershed –East Branch Jenkintown Creek, Tookany/Tacony-Frankford
Environmental Features: Precautionary and Prohibitive Steep Slopes, Numerous Trees (one shown at 36" caliper)
Proposal: 7 lot subdivision plan for single family detached houses – access via new Driveway and Cul-de-Sac
Current Use – Residential (Existing dwelling and garage, chicken coop, stone wall, and miscellaneous vegetation)

Dear Chairperson Brown,

Joe Ascenzi and Trish Gallagher of the Abington Township Shade Tree Commission (STC) visited the site of the proposed subdivision on May 25, 2024, and reviewed the above referenced subdivision plan and our prior comment letter dated February 2, 2022. We offer the following comments.

1. The existing features map provides the current inventory of trees ≥ 10" DBH per SLDO 146.11 B. (11), the trees to be removed, and replacement provisions. The plant schedule for street trees and replacement trees includes primarily native trees, which is preferred. We noted that the proposed evergreen trees are a mix of native and non-native species, but this mix is acceptable to provide species diversity for long term survival.
2. With respect to the plant schedule for the lot landscaping, the trees specified are native trees and are a good mix. Note that river birch (*Betula nigra*) is a shade tree (as opposed to an understory tree) and can reach heights of 40 to 70 feet. Shade trees are preferable in subdivisions if they are located away from utility wires; however, if understory trees are desired, fringe tree (*Chionanthus virginicus*) or PA native dogwood (*Cornus florida*) could be substituted. In terms of shrubs, the selections include primarily native species and include pollinators, which is desirable. However, Japanese Pieris (*Pieris japonica*) is not recommended in this location. In foundation plantings, the climate is too hot for this plant, and it will be susceptible to spider mites and lace bugs. Boxwood (Buxus sempervirens),

although a non-native, is recommended for this location because it can tolerate heat. Please provide a list of perennial plants that will be used for individual lot landscaping.

3. Please confirm that the permanent steep slope seeding mixture proposed in the Erosion and Sediment Control Detail notes on Sheet 6 is equivalent to utilizing steep slope seed mixes containing native species (Such as: ERNMX -181 (Native Steep Slope Mix w/Annual Ryegrass), which help stabilize the landscape and reduce runoff and sedimentation.

Thank you for your consideration of our comments and recommendation and please let us know if you have any questions.

Respectfully submitted,

Trish Gallagher

Trish Gallagher
Abington Township STC Co-chair

cc: Richard Manfredi
Michael Narcowich
Planning Commission Members
EAC

ljbyrnepe@gmail.com

From: ePermitting Help <penndotepermittinghelp@pa.gov>
Sent: Wednesday, July 21, 2021 8:29 AM
To: pyannessa@gmail.com; LJByrnePE@gmail.com; fhanney@pa.gov; jotten@pa.gov; slapenta@pa.gov; c-smccutch@pa.gov; scburton@pa.gov; ajparker@mccormicktaylor.com; mdidomenico@abington.org
Cc: RA-PDEPSPROD@pa.gov
Subject: :: Scoping Meeting Application - Returned - Application Number is : S0620210040 (Sent on: 07/21/2021 08:29:14 AM)

PennDOT has completed its review of the TIS Determination and Scoping Meeting Application.

Please address the following comments below, and resubmit the application to PennDOT for review.

PennDOT Review Comments :

1. The applicant must apply for a Business Partner ID (BPID). The BPID will be used in the establishment of a billing account for the invoicing of inspection costs. For information on obtaining a BPID, please visit: https://www.dot14.state.pa.us/eps/home/manageBPRegistration.jsp (please make sure that you follow the instructions that are in the PINK area). After a BPID is obtained and activated by the system administrator, please provide the following information in the applicant contact. Contact information (name/title/phone/email) for a general contact person (person that typically deals with the Highway Occupancy Permit application process). Contact information (name/title/phone/email) for a billing contact person (person that typically deals with the Highway Occupancy Permit invoicing process)
2. Please be advised that pursuant to and in accordance with Title 67, Chapter 441.8(h) (2) (IV) of the code, the Safe Stopping Sight Distance is the absolute minimum acceptable sight distance for any driveway. It is the designer?s responsibility to ensure that this minimum requirement is satisfied.
3. Please be advised, the Department is now requiring a cost estimate be entered into EPS prior to HOP issuance. This cost estimate must include all work proposed within the Department?s Right-of-Way including signal equipment, all roadway work, pavement markings and signage plus a 15% contingency to be entered into the Fee information & Estimate Construction Cost section in the Application setup box. Further, this section requires the cost estimate to be broken down into site frontage costs and off- site improvements costs. Please enter this information in the manner required. This cost estimate will be the basis for the value of the Letter of Credit the Department will require as security prior to the start of actual construction.
4. This review is preliminary in nature. The Department reserves the right to make additional comments when the application includes the submission of detailed plans and stormwater calculations. If you have any questions pertaining to the technical aspects of this review, please contact the Department's representative, Scott Burton at scburton@pa.gov or 610-205-6727.
5. Please be advised, the connection to, or the installation of a new closed drainage system within the Departments Right-of-Way requires a separate permit application in the name of the municipality for the maintenance of this system. Please submit the application as Permit Type: Miscellaneous, Permit Subtype: Curb, sidewalk, drainage or other application, Permit Use: Drainage for maintenance of the drainage system.
6. The ingress curb return encroaches in front of the adjacent property. Revise the design or obtain permission from the effected property owner.
7. Parking must be prohibited for 40' on both sides of the proposed local road. This is necessary to obtain sufficient unobstructed sight distance and to ensure safe and efficient ingress/egress. Coordinate with the municipality regarding this issue and provide the appropriate signage.
8. Be advised, a condition statement must be provided stating that the Permittee must transfer the Highway Occupancy Permit to Abington Township once the local road has been accepted by the municipality.
9. Based upon the size and scope of the project, the Department will not require a TIA/TIS. Further, the Department does not feel that a meeting is needed at this time. Finally, a full HOP submittal may be made in the next review cycle.
10. * Upon resubmission, the applicant's engineer should put together a letter that describes how each comment has been addressed and where each can be found in the plan set. A copy of these comments and any previously submitted plans should also be provided. Further, if the applicants engineer has made any design changes independent of PennDOT reviewer comments, they must include a section in the response-to-comments letter that describes the

additional design changes.* Additional comments may follow upon review of the resubmitted application. If you have any questions pertaining to the technical aspects of this review, please contact the Department's representative, Scott Burton, P.E., P.T.O.E. at 610.205.6727 or scburton@pa.gov.* For guidance on Highway Occupancy Permit applications refer to PA Code Title 67, Chapter 441, Chapter 459 and PennDOT Publication 282. This will help expedite the review. 11. Truck turning templates must be provided for the largest vehicle anticipated to access the site. Further, optimize the design to ensure that the local road intersection with the state road can safely and efficiently accommodate said design vehicle. This design vehicle may become a condition on the permit and be recorded.

Click here to access the Scoping Application

PENNDOT EPERMIT - PLEASE DO NOT REPLY TO THIS EMAIL
