FERGUSON TOWNSHIP PLANNING COMMISSION
Regular Meeting Agenda
Monday, March 14, 2022, 6:00 PM

Hybrid Meeting

REMOTE PARTICIPANTS:

Join Zoom Meeting:
https://us02web.zoom.us/j/83268113138
Meeting ID: 832 6811 3138
Zoom Access Instructions

IN-PERSON PARTICIPANTS:

Ferguson Township Municipal Building
Main Meeting Room
3147 Research Drive
State College, PA

I. CALL TO ORDER

II. CITIZENS INPUT

III. APPROVAL OF MINUTES

IV. OLD BUSINESS

1. Draft Ordinance Amendment - §27-710 Wireless Communications Facilities

On January 10, 2022, Chris Schubert, Esq. on behalf of his client, AT&T, submitted an application to request a text amendment to the Traditional Town Development zoning district that was referred to Planning Commission for further review. Planning Commission reviewed a draft amendment as proposed by the applicant at the February 28, 2022, Planning Commission meeting and discussed implementation options for the Township, as well as identified other sections of the Township's ordinances that would need to be amended. Planning Commission directed staff to draft an amendment to §27-710 as discussed.

Provided in the agenda is a draft amendment to §27-710—Wireless Communication Facilities proposed by staff. The amendments included in the agenda are based on research and peer review of other PA Municipalities. Staff has identified additional sections that will need to be amended, §27-303—Traditional Town Development, §27-1102—Definitions, and District Quicks for the RA, AS, RR, C, FG, I and IRD zoning districts and compliance with Act 50 in order to move forward with amendments included in §27-710. Staff is prepared to present the proposed amendments and discuss them with Planning Commission.

Planning Staff is preparing to have all identified amendments included at the next Planning Commission meeting for review and recommendation.

Recommended Motion: Move that the Planning Commission receive and discuss the proposed amendments and provide additional comments to staff for inclusion into the draft text amendment.

Staff Recommendation: That the Planning Commission review the proposed amendment and provide additional comments to staff.

V. NEW BUSINESS

1. **MP Machinery—Parking Analysis/Study**

   Penn Terra Engineering, Inc., on behalf of their client, MP Machinery, has submitted a Parking Analysis/Study for a potential land development plan. Tax parcel 24-433-007-0000, located at 2161 Sandy Drive, MP Machinery is proposing an addition to its existing structure in an effort to provide additional storage and testing areas. The current proposal includes an additional 8,088 square feet to be added to the building.

   Since this proposed use is not included within the Required Off-Street Parking Table, per Chapter 22-5C01.1.B.92, the parking will be determined through a parking analysis/study for Planning Commission to review and recommend the required parking for this project.

   A result of the November 2019 Comprehensive Update, §22-5C01.1.B.92 was a new addition to the Subdivision and Land Development Ordinance and this is the first time Planning Commission is reviewing a request like this.

   Staff has reviewed the study and is recommending that **3** additional parking spaces, for a total of 27 on site, be required for the 8,088 square foot addition.

   Recommended Motion: Move that the Planning Commission review the parking study and recommend that **3** additional parking spaces, for a total of 27, be required with the proposed land development plan to the Board of Supervisors.

   Staff Recommendation: That the Planning Commission recommend that **3** additional parking spaces, for a total of 27 spaces, be required with the proposed Land Development Plan.

2. **Orchard Square Final Land Development Plan**

   The land development plan proposes the construction of a 19,856 square foot Commercial/retail shopping center with associated parking and utilities. As proposed, there will be 3 retail store fronts and 113 parking spaces, including 5 ADA handicap spaces provided. The retail spaces are proposed to be 10,722 square feet, 6,483 square feet and 2,566 square feet.

   Staff has reviewed the proposed Orchard Square Final Land Development Plan and is recommending conditional approval pending outstanding comments as included in the agenda packet.

Recommended Motion: Move that the Planning Commission make a recommendation to the Board of Supervisors to conditionally approve the Orchard Square Final Land Development Plan pending outstanding comments included in the agenda.

Staff Recommendation: That the Planning Commission recommend conditional approval to the Board of Supervisors.

VI. OFFICIAL REPORTS AND CORRESPONDENCE

1. Board of Supervisors
2. CRPC Report
3. Land Development Plans
4. Staff Updates

VII. ADJOURNMENT

FERGUSON TOWNSHIP PLANNING COMMISSION
REGULAR MEETING MINUTES
MONDAY, FEBRUARY 28, 2022
6:00 PM

ATTENDANCE

The Planning Commission held its second meeting of the month on Monday, February 28, 2022, as a zoom meeting. In attendance:

Commission:
Jeremie Thompson – Chair
Jerry Binney – Vice Chair
Shannon Holliday
Bill Keough
Lisa Rittenhouse – Alternate
Dr. Ellen Taricani
Ralph Wheland
Qian Zhang - Alternate

Staff:
Jenna Wargo - Planning & Zoning Director
Kristina Bassett - Community Planner
Jeff Ressler - Zoning Administrator

Others in attendance: Rhonda Demchak, Recording Secretary; Wes Glebe, Ferguson Township Resident; Cristine Bailey, Ferguson Township Resident; Chris Schubert, Esquire; Chris Rogan, Ferguson Township Resident; Christopher Lash, Project Manager, Jacobs; Jim Maund, Ferguson Township Resident

I. CALL TO ORDER

Ms. Wargo took roll call, and the Planning Commission had a quorum.

Mr. Thompson called the Ferguson Township Planning Commission's regular meeting to order on Monday, February 28, 2022, at 6:00 p.m. Mr. Thompson noted that the Planning Commission meeting had been advertised in accordance with the PA Sunshine Act as a virtual zoom meeting with space available in the Township main meeting room for any public members to participant. Persons attending and wanted to participate were asked to enter their name, municipality, and topic by utilizing the Q&A bubble at the bottom of the screen. The chat feature is no longer available on zoom.

II. CITIZEN INPUT

There were none.

III. APPROVAL OF MINUTES

Dr. Taricani moved that the Planning Commission ***approve*** the February 14, 2022, Regular Meeting Minutes. Mr. Binney seconded the motion.

Mr. Thompson noted that there is no longer a chat featured available during the meetings.

The motion passed unanimously.

IV. OLD BUSINESS

1. 264 Sycamore Drive/Sycamore Land Development Plan Revision

Ms. Basset reported that due to recent price spikes in some materials (supply chain issues, etc.) the Rogan's have made some changes to their house plans to simplify construction and reduce size slightly. That resulted in a layout that is a bit different

than the plan previously reviewed by Planning Commission at their February 14, 2022, meeting. Ms. Bassett shared her screen to show the plan.

Mr. Chris Rogan noted that construction costs are changing daily, and they had to modify the garage.

Mr. Wheland asked if the Fire Suppression System was a requirement. Ms. Bassett stated it was a comment from the Fire Chief.

Mr. Thompson noted that Sycamore Drive is narrow, and it is challenging getting fire apparatus to the location.

Ms. Zhang asked if the water lines are running into the ditch and are their concerns with water corrosion. Mr. Rogan stated that it is a graded area. Ms. Holliday also questioned the possible water corrosion. Ms. Wargo stated that staff has no concerns. Ms. Rittenhouse stated it is common in developments and there should not be any concerns.

Mr. Keough spoke about concerns with Fire Suppression System from 10-15 years ago and stated people would leave for the winter only to come back where the system had failed. Mr. Thompson noted that with technology, residents can watch their residences from a far.

Mr. Keough moved that the Planning Commission make a recommendation to the Board of Supervisors to ***approve*** 264 Sycamore Drive/Rogan Preliminary/Final Land Development Plan. Mr. Wheland seconded the motion. The motion passed unanimously.

2. Amendment to Chapter 16, Parks and Recreation, Part 1, Section 106 and 107, Chapter 22, Subdivision and Land Development, and Chapter 27, Zoning by Amending Sections as Described in the Attached Exhibits

Ms. Wargo noted that on November 16, 2019, the Township completed its comprehensive update to the Zoning and Subdivision and Land Development Ordinances. Since the amendments, staff have been tracking errors and omissions while interpreting the ordinances and is recommending additional amendments to address these issues. The Board was provided the draft that was last reviewed by the Planning Commission and made additional amendments to be included. Those updates include amendments to Supplemental Regulation (§27-700) and Definitions (§27-1102).

Ms. Wargo noted the Board has reviewed serval times with the latest being at their February 8th worksession. There are two outstanding issues they would like to discuss that involve B&B's, places of assembly, and food trucks. Big changes that were not included in the September draft were a definition for the storage of land clearing material. Another change was the Supplemental Regulations that are captured in zoning that still had parking requirements in the zoning ordinance. Ms. Wargo stated that there will be a future resolution for food trucks operating in parks.

Mr. Thompson noted that any changes would require a vote. Ms. Wargo stated that any recommended changes will be summarized in a memo to be included in the agenda packet to the Board.

Ms. Holliday inquired about the food trucks operating in parks. Ms. Wargo stated that food trucks are not permitted in parks but want to change so that they are

permitted in some of the parks that have parking capacity.

Mr. Binney questioned the language under 16-107 B. that states *not to adversely limit allowances as provided in Ferguson Township's Code of Ordinances*. Ms. Wargo noted that the Township Solicitor reviewed. Ms. Binney suggested adding more words so that the language is clearer. Mr. Keough concurred with Mr. Binney.

Mr. Keough expressed concerns with the lack of selling concessions for clubs such as soccer and softball tournament. Mr. Wheland suggested having a statement be included on what would be allowed. Mr. Keough will inform the Park Authority about the issue to review.

Under Places of Assembly, Mr. Keough expressed concerns with identifying them as either community, neighborhood, or regional. Mr. Keough suggested to identify them as small, medium, or large places of assembly.

Mr. Binney asked if the goal of the classifications is for the Township to control the site and parking as opposed to what occurs at the places of assembly. Ms. Wargo stated that the goal of the amendments is to have an objective view of the types of places of assembly.

Mr. Keough stated there has been an effort to ban county auctions at the Baileyville Community Center. Ms. Rittenhouse asked if Mr. Keough's concern is the square footage. Mr. Keough noted that the Baileyville Community Center is approved for 83 people, but during the warm season, auctions are held outside.

Mr. Keough asked what the status is in the western part of the township regarding Rocksprings Water Authority supplying water to the hydrants. Ms. Wargo reported that the issue is ongoing because the fire company can't connect to the hydrants and the Board will be reviewing. Mr. Keough stated that where the ordinance refers to subdivision and land developments located outside of the regional area with regards to water storage systems should be looked at closer. Ms. Wargo stated that it is on her radar and will make note of it.

Mr. Wheland moved that the Planning Commission make a recommendation to the Board of Supervisors to ***approve*** the Proposed Amendments. Dr. Taricani seconded the motion. The motion passed unanimously.

3. Ordinance Amendment Application—Traditional Town Development Zoning District

Ms. Wargo reported that on January 10, 2022, Chris Schubert, Esq. on behalf of his client, AT&T, submitted an application for a text amendment to the Traditional Town Development zoning district. Planning Commission heard a presentation from the applicant at the February 14, 2022, Planning Commission meeting. Provided in the agenda is a Staff Report and a draft amendment to §27-710—Wireless Communication Facilities proposed by the applicant. The applicant is prepared to present the proposed amendments. Mr. Wargo reported that they met with Mr. Schubert last week to review the comments from the last Planning Commission meeting.

Mr. Schubert reviewed the red lined version of the Ferguson Township Code, Chapter 27, Part 7, Section 710 Wireless Communications Facilities that was included in the packet.

Dr. Taricani asked if there are any dangers to people or other devices with the 5G. Mr. Schubert stated that there is no danger. The applicant must produce an Electric & Magnetic Frequency (EMF) Report. The FCC regulates the power that comes from the facilities. Dr. Taricani asked if the FCC reevaluates. Mr. Schubert noted there is not a regulation to reevaluate, but if other co-locaters come on to the tower, they would have to produce an EMF report as well.

Mr. Keough asked what the protocol is when a co-locater comes on board, is there a process or protocol. Mr. Schubert stated that under federal and state regulations, they would need to apply for a building and electrical permit. The Township would review against the code requirements. They would have to establish that the facilities would meet the EMF and supply a structural report.

Mr. Keough asked if Mr. Schubert is agreeing to the conditional use. Mr. Schubert stated that the applicant would agree to the conditional use.

Ms. Wargo stated that she needs more time to get the Act 50 included and review other ordinances in PA on the amendments. Ms. Wargo would like the Township Solicitor to review before moving forward.

Ms. Zhang asked if it could be revised so that the Township could review on a case-by-case basis. Mr. Schubert stated that any new tower built outside of the right-of-way and under 200 feet would not be subject to any review. Mr. Schubert noted that with the proposed change especially in the TTD any new tower would require a Conditional Use approval.

Mr. Wes Glebe, Ferguson Township Resident asked about an access road. Mr. Schubert noted that it will be to the left of the tower. There will be no trees removed and a barrier such as a gate will need to be installed.

Mr. Keough stated that moving forward with the modifications would be appropriate but suggested having some sort of barrier around the tower to keep people away/off it. The vicinity is populous with college students. Mr. Thompson noted that with technology today there are other alternatives. Mr. Schubert stated there will be cameras in the vicinity that will monitor 24/7.

Mr. Keough moved that the Planning Commission ***direct*** staff to research the proposed Wireless Communication Facilities ordinance and include amendments for compliance with the Small Wireless Facilities Deployment Act (Act 50) that was adopted in June 2021 to allow for Conditional Use in the TDD. Ms. Holliday seconded the motion. The motion passed unanimously.

Mr. Keough stated that in the rural end of the Township there is a great need of service upgrades to the wireless system and suggested placing towers in that area.

Ms. Wargo asked if the motion was Conditional Use solely for TTD or Conditional use as Mr. Schubert presented as all towers being proposed. Ms. Wargo stated that most municipalities permit all towers by Conditional Use. Mr. Keough suggested having a legislative review as this moves forward and has no issue moving forward throughout the Township.

V. NEW BUSINESS

1. Community Planning – Three Essential Questions for Better Planning

Included in the agenda is an article from the APA, Planning Advisory Service. The article proposes three essential questions to direct intentions across all our work by asking:

1. Who is helped?
2. Who is harmed?
3. Who is missing?

As Planning Commissioners, asking these essential questions can create a foundation for good planning practice. Asking and answering these three questions.

Mr. Wheland suggested adding another question, what are the unintended consequences.

Mr. Keough noted sometimes basic common sense gets lost.

Ms. Rittenhouse asked why the chat feature was disable from zoom. Mr. Thompson noted that the outgoing manager made that decision because it wasn't being monitored. Ms. Wargo stated that there were conversations going on that were not captured in the minutes. Ms. Rittenhouse suggested adding the chat feature back for just the members of the Planning Commission to save time. Ms. Wargo will inquire with the Acting Manager.

Mr. Keough asked Ms. Rittenhouse for a small report on the housing inventory in the region. Ms. Rittenhouse stated that houses coming onto the market in State College and Bellefonte will go under contract within 7 days. The inventory is short with only 9 properties in Bellefonte and approximately 12 listings in State College. Ms. Rittenhouse stated that we need to allow builders to build and be able to approve the land development plans.

Mr. Glebe expressed concerns with the staffing issue at the hospital and the housing inventory.

VI. COMMUNICATIONS TO THE COMMISSION

Mr. Thompson received a text communication from another Planning Commission member in another municipality inquiring about getting gift cards. Mr. Thompson reported that it was a scam. Later in the day a Ferguson Township Planning Commission member received a text communication claiming to be Mr. Thompson. This too was a scam.

VII. OFFICIAL REPORTS AND CORRESPONDENCES

A. Board of Supervisors

Ms. Wargo noted that the Board met on February 15th. They discussed the SALDO and will advertise for public hearing on March 15th; strategic plan update; agricultural security area; and Ms. Martin was appointed as acting Township Manager.

B. CRPC Meeting

Dr. Taricani reported they meet later in the week and will have a report at the next meeting.

C. Land Development Plans

Ms. Bassett reviewed the following:

a. Farmstead View Subdivision – 3rd Staff review completed; comments delivered
b. 264 Sycamore Dr LDP – Revised Review
c. CVIM – 2026 Sandy Dr – Under 2nd Staff Review
d. JL Cidery Proposed Deck – Withdrawn
e. Peace Center and Cemetery – Awaiting Response
f. Orchard Square Final LDP –1st Staff Review
g. Centre Animal Hospital – Awaiting Response
h. Fusion Japanese Steakhouse – Under First Staff Review
i. Subdivision of an Imp Property on Blue Course Drive

Jim Maund, Ferguson Township Resident noted he lives close to the Farmstead View Subdivision and expressed concerns with a tree that is to be taken down. Mr. Maund asked if there is a way to work with the developer to save the tree. Ms. Bassett stated that she heard from a lot of people about saving the tree and the Tree Commission has recommended to save the tree. The Tree Commission received a response back from the developer and it doesn't appear it can be saved. Ms. Wargo stated that the Board makes the final decision regarding the tree.

Mr. Glebe asked for an update regarding the Bobby Rahal suit. The suit went to the Zoning/Hearing Board in December and the variance request was not granted. Bobby Rahal appealed and will be meeting on March 22nd.

D. Staff Updates

Ms. Wargo reported that the new Administrative Assistant for Planning and Zoning will be starting on March 15th.

Mr. Keough asked if there was any feedback on the TSD rewrites and RFP. Ms. Wargo stated that the RFP closed on February 18th and staff will be meeting tomorrow to review the respondents. There were only two that were received. Mr. Keough stated that just because there were two applicants, we shouldn't feel obligated to appoint one of the two if they are not going to do the job that the Township needs. Ms. Wargo concurred with Mr. Keough. Mr. Thompson concurred as well.

VIII. Adjournment

Mr. Binney made a motion to adjourn the February 28, 2022, Planning Commission meeting at 8:40 p.m. Ms. Holliday seconded the motion. The motion passed unanimously.

Respectfully Submitted,

Rob Crassweller, Secretary
For the Planning Commission

§ 27-710 **Wireless Communications Facilities.**
[Ord. No. 1049, 11/18/2019]

1. Intent. The wireless communications facilities (WCF) regulations are intended to achieve the following:

   A. To provide a competitive and wide range of communications services.

   B. To encourage the shared use of existing communication towers, buildings and structures.

   C. To ensure compliance with federal and state regulations.

   D. To promote the health, safety and welfare of Township residents and businesses with respect to wireless communications facilities.

   E. To address modern and developing technologies including, but not limited to, distributed antenna systems, data collection units, cable Wi-Fi and other communications facilities.

   F. To establish procedures for design, siting, construction, installation, maintenance and removal of both tower-based and non-tower-based wireless communications facilities in the Township, including facilities both inside and outside of the public rights-of-way.

   G. To protect Township residents and businesses from potential adverse impacts of wireless communications facilities and preserve, to the extent permitted under law, the visual character of established communities and the natural beauty of the landscape.

2. General Requirements for All Tower-Based Wireless Communications Facilities. The following regulations shall apply to all tower-based wireless communications facilities:

   A. Standard of Care. Any tower-based WCF shall be designed, constructed, operated, maintained, repaired, modified and removed in strict compliance with all current applicable technical, safety, and safety-related codes including, but not limited to, the most recent editions of the American National Standards Institute (ANSI) Code, National Electrical Safety Code, National Electrical Code, as well as the accepted and responsible workmanlike industry practices of the National Association of Tower Erectors. Any tower-based WCF shall at all times be kept and maintained in good condition, order and repair by qualified maintenance and construction personnel, so that the same shall not endanger the life of any person or any property in the Township.

   B. Wind. Any tower-based WCF structures shall be designed to withstand the effects of wind according to the standard designed by the ANSI as prepared by the engineering departments of the Electronics Industry Association, and Telecommunications Industry (ANSFEINTIA-222-E Code, as amended).

   C. Height. Any tower-based WCF shall be designed at the minimum functional height and shall not exceed a maximum total height of ~~200~~ 300 feet, or ~~40~~50 feet when located within the ROW, which height shall include all subsequent additions or alterations. Height shall be measured from the average natural grade to the top point of the communications tower or antenna, whichever is greater. All tower-based WCF applicants must submit documentation to the Township justifying the total height of the structure. Tower-based WCF constructed outside the ROW ~~at a height~~

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~~greater than 200 feet but not to exceed 300 feet~~ shall be permitted as a conditional use in the RA, AR, RR, C, FG, TTD, I and IRD zoning ~~D~~districts by the Board of Supervisors if the following criteria are met:

(1) The applicant shall provide documentation to the Township which details the commitment to provide capacity on the proposed tower-based WCF to more than one provider. The document must also describe whether ~~the~~ additional tower height ~~that~~ is required to provide the capacity to the additional provider(s) and if so,~~. The document shall~~ also show that by providing the additional height and capacity, there will not be a need from the involved companies for an additional tower outside the ROW within a radius of one mile of the site. The burden of proof shall be on the applicant to show that the proposed tower is the minimum height needed to provide the required service.

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(2) If the proposed tower-based WCF is greater than 199 feet and less than 300 feet in height, ~~T~~the applicant shall provide documentation to the Township that the additional height ~~limitation of 200 feet~~ will ~~require~~ render the construction of two or more towers as nonessential and that by permitting an increase in the height of the tower, only one tower will be required. The burden of proof shall be on the applicant to show that the proposed tower is the minimum height needed to provide the required services. The purpose of this ~~conditional use~~provision is to permit an increase in the height of one tower to reduce the need for additional towers.

(3) Provide evidence satisfactory to the Board of Supervisors that the design of the tower-based WCF effectively minimizes its visual impact. Tower-based WCFs shall employ stealth technology, which may include painting the tower portion silver or another color, utilizing a galvanized or "self-rusting" finish, or designing as a tree or other structure as approved by the Board of Supervisors.

(4) A plan shall be required for all wireless communication facilities showing the antenna array, support structure, building, fencing, buffering, access, and such other information as the Township may require illustrating the relationship between the proposed facility and adjacent structures and property lines.

(5) Setback and Location requirements may be modified by conditional use if the Board of Supervisors finds that placement of a wireless communication facility with support structure in a particular location will reduce its visual impact, or for other reasons as presented during the hearing; for example, if adjacent to trees or a structure which may provide a visual screen.

(6) Comply with the standards of approval for all wireless communication facilities as set forth in this chapter §27-710.

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D. Public Safety Communications. No tower-based WCF shall interfere with public safety communications or the reception of broadband, television, radio or other communication services enjoyed by occupants of nearby properties.

E. Maintenance. The following maintenance requirements shall apply:

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(1) Any tower-based WCF shall be fully automated and unattended on a daily basis and shall be visited only for maintenance or emergency repair, except as permitted and in accordance this section.

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(2) Such maintenance shall be performed to ensure the upkeep of the facility in order to promote the safety and security of the Township's residents.

(3) All maintenance and activities shall utilize the best available technology for preventing failures and accidents.

F. Radio Frequency Emissions. No tower-based WCF may, by itself or in conjunction with other WCF, generate radio frequency emissions in excess of the standards and regulations of the Federal Communications Commission (FCC) including, but not limited to, the FCC Office of Engineering Technology Bulletin 65 entitled "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields," as amended. The applicant shall provide, upon request, a statement from a qualified licensed and professional registered engineer that the non-ionizing electromagnetic radiation (NIER) emitted from the tower-based WCF, when measured in conjunction with the emissions from all communications antenna on the tower, does not result in an exposure at any point on or outside such facility which exceeds the lowest applicable exposure standards established by the FCC or the ANSI.

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G. Historic Buildings or Districts. No tower-based WCF may be located on or within 200 feet of a site that is listed on an historic register, a site listed for inclusion on the historic register, or in an officially designated state or federal historic district.

H. Identification. All tower-based WCF shall post a notice in a readily visible location identifying the name and phone number of a party to contact in the event of an emergency, subject to approval by the Township. The notice shall not exceed two square feet in gross surface area and shall maintain the contact party.

I. Lighting. Tower-based WCF shall not be artificially lighted, except as required by the Federal Aviation Administration and as may be approved by the Township. If lighting is required, the applicant shall provide a detailed plan for sufficient lighting, demonstrating as unobtrusive and inoffensive an effect as is permissible under state and federal regulations. No flag shall be located on the structure that requires lighting.

J. Appearance. Towers shall be galvanized and/or painted with a rust-preventive paint of an appropriate color as determined by the Township Planning and Zoning Director to harmonize with the surroundings.

K. Noise. Tower-based WCF shall be operated and maintained so as not to produce noise in excess of applicable noise standards under state law and Chapter **10**, Part **3**, of the Ferguson Township Code of Ordinances, except in emergency situations requiring the use of a backup generator, where such noise standards may be exceeded on a temporary basis only.

L. Aviation Safety. Tower-based WCF shall comply with all federal and state laws and regulations concerning aviation safety.

M. Retention of Experts. The Township may hire any consultant(s) and/or expert(s) necessary to assist the Township in reviewing and evaluating the application for approval of the tower-based WCF and, once approved, in reviewing and evaluating any potential violations of the terms and conditions of this section. The applicant and/or owner of the WCF shall reimburse the Township for all costs of the Township's consultant(s) in providing expert evaluation and consultation in connection with these activities.

N. Timing of Approval. Within 30 calendar days of the date that an application for a tower-based WCF is filed with the Township, the Township shall notify the applicant, in writing, of any information that may be required to complete such application. All complete applications for tower-based WCF shall be acted upon within 150 days of the receipt of a fully completed application for the approval of such tower-based WCF, and the Township shall advise the applicant, in writing, of its decision. If additional information is requested by the Township to complete an application, the time required by the applicant to provide the information shall not be counted toward the 150-day review period.

O. Nonconforming Uses. Nonconforming tower-based WCF which are hereafter damaged or destroyed due to any reason or cause may be repaired and restored at their former location, but must otherwise comply with the terms and conditions of this section. Co-location of facilities may be permitted on nonconforming structures in accordance with standards established in the Pennsylvania Wireless Broadband Collocation Act.

P. Removal. In the event that use of a tower-based WCF is planned to be discontinued, the owner shall provide written notice to the Township of its intent to discontinue use and the date when the use shall be discontinued. Unused or abandoned WCF or portions of WCF shall be removed as follows:

(1) All unused or abandoned tower-based WCF and accessory facilities shall be removed within six months of the cessation of operations at the site unless a time extension is approved by the Township.

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(2) If the WCF and/or accessory facility is not removed within six months of the cessation of operations at a site, or within any longer period approved by the Township, the WCF and accessory facilities and equipment may be removed by the Township and the cost of removal assessed against the owner of the WCF.

(3) Any unused portions of tower-based WCF, including antennas, shall be removed within six months of the time of cessation of operations. The Township must approve all replacements of portions of a tower-based WCF previously removed.

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Q. Application Fees. The Township may assess appropriate and reasonable application fees directly related to the Township's actual costs in reviewing and processing the application for approval of a tower-based WCF, as well as related inspection, monitoring and related costs.

3. Tower-Based Wireless Communications Facilities Outside the Rights-of-Way. The following regulations shall apply to tower-based wireless communications facilities located outside of the right-of-way (ROW):

A. ~~Permitted Only in Certain Zones. No tower-based WCF shall be permitted within 500 feet of the nearest adjoining property line.~~Tower Setbacks and Location. A tower-based WCF located outside of the ROW shall comply with the following:

(1) The tower shall be located at least half (1/2) the height of the tower from all adjoining property lines.

(2) Towers shall not be closer than 300 feet to any residential building.

(3) Towers shall not be closer than 3,000 feet to any other existing tower-based WCF located outside of the ROW.

(4) Tower-based WCF shall only be permitted as designated in zoning districts as identified within the chapter.

B. Evidence of Need. It is required that the applicant for the placement of a tower-based WCF that will exceed ~~40~~50 feet in height shall submit to Ferguson Township evidence of the need for the tower-based WCF in the proposed location and that the applicant has exhausted all alternatives to locate on an existing tower or structure (co-location). In addition, the applicant must demonstrate via written evidence from a qualified, licensed, and professional engineer that, in terms of location and construction, there are no existing towers, tower-based WCF, buildings, structures, elevated tanks or similar uses able to provide the platform for the antenna within a one-mile radius of the chosen location, unless the applicant can demonstrate to the satisfaction of the Township that a different distance is more reasonable. Co-location is not possible if:

(1) Coverage diagrams and technical reports demonstrate that co-location on an existing tower-based WCF is not technically possible in order to serve the desired need.

(2) Planned equipment would exceed the structural capacity of existing towers within the Township, considering existing and planned use of those towers and existing towers cannot be reinforced to accommodate planned or equivalent equipment at a reasonable cost.

(3) Planned equipment will cause radio frequency (RF) interference with other existing or planned equipment for that tower and the interference cannot be prevented at a reasonable cost.

(4) Existing or approved towers do not have the space on which planned equipment can be placed so it can function effectively and at least in parity with other similar equipment in place or planned.

(5) Other reasons can be demonstrated to the satisfaction of the Township that make it impractical to place the equipment planned by the applicant on existing and approved towers.

C. Sole Use on a Lot. A tower-based WCF is permitted as the sole use on a lot subject to the minimum lot size and setbacks complying with the requirements of the applicable zoning district.

D. Combined with Another Use. A tower-based WCF may be permitted on a property with an

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existing use or on a vacant parcel in combination with another agricultural, industrial, commercial, or municipal use, subject to the following conditions:

(1) The existing use on the property may be any permitted use in the applicable zoning district and need not be affiliated with the communications facility.

(2) Minimum Lot Area. The minimum lot shall comply with the requirements for the applicable zoning district and shall be the area needed to accommodate the tower-based WCF, the communications facility building, security fence, and buffer planting.

(3) Minimum Setbacks. The ~~tower-based WCF and~~ accompanying communications facility building and equipment shall comply with the requirements for the applicable zoning district.~~, provided that no tower-based WCF shall be located within 500 feet of the nearest adjoining property line.~~

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E. Notice. Upon receipt of a letter of a complete application by the Township for a tower-based WCF, the applicant shall mail notice thereof to the owner or owners of every property within 500 radial feet of the parcel or property of the proposed facility. The applicant shall provide the Township with evidence that the notice was mailed out to applicable property owners.

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F. Design and Construction.

(1) The WCF shall employ the most current stealth technology available in an effort to appropriately blend into the surrounding environment and minimize aesthetic impact. The application of the stealth technology chosen by the WCF applicant shall be subject to the approval of the Township.

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(2) To the extent permissible under applicable law, any height extensions to an existing tower-based WCF shall require prior approval of the Township. The Township reserves the right to deny such requests based upon aesthetic and land use impact, or any other lawful considerations related to the character of the Township.

(3) Any proposed tower-based WCF shall be designed structurally, electrically, and in all respects to accommodate both the WCF applicant's antennas and comparable antennas for at least two additional users if the tower is over 100 feet in height or for at least one additional user if the tower is over 60 feet in height. Tower-based WCF must be designed to allow for future rearrangement of antennas upon the tower and to accept antennas mounted at various heights.

(4) Guy wires are not permitted. The monopole must be self-supporting.

G. Surrounding Environs. A soil report complying with the standards of Appendix I: Geotechnical Investigations, ANSI/EIA/TIA-222-G Manual, as amended, shall be submitted to the Township to document and verify design specifications of the foundation for the tower-based WCF.

H. Fence/Screen.

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(1) A security fence of approved design, of not less than eight feet in height and no greater than 10 feet in height, shall completely enclose the tower-based WCF. The fencing required in must also have a one-foot barbed arm slanted at a 45° angle which runs along the entire top of the fence unless the Board of Supervisors waives such requirement.

(2) The applicant shall submit a landscaping plan. Sites in which communications towers are located shall be required to comply with the following landscape requirements:

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(a) Landscaping, consisting of evergreen plantings which shall reach a height of at least eight feet within five years of planting shall be required at the perimeter of the security fences and WCF. Existing wooded areas, tree lines and hedgerows adjacent to the facility shall be preserved and used to substitute or meet a portion of the buffer yard requirements. When the WCF is located in a developed ~~commercial or industrial~~ area, the Board of Supervisors may waive the buffer yard regulations in exchange for another type of screening which is compatible with the surrounding land use.

(3) Where feasible/appropriate, the tower or antenna shall be constructed to blend in with the surrounding area.

(4) No signs or any form of advertising of any kind shall be permitted on the WCF or antennas. However, one sign, not to exceed two square feet in gross surface area, which identifies the phone number and contact in the event of an emergency is required. In addition, "No Trespassing" signs may be placed on the security fencing in accordance with the Township's Sign Ordinance (Chapter **19**).

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I. Accessory Equipment.

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(1) Ground-mounted equipment associated with, or connected to, a tower-based WCF shall be underground, if possible. In the event that an applicant can demonstrate that the equipment cannot be located underground to the satisfaction of the Township Engineer, then the ground-mounted equipment shall be screened from public view using stealth technologies, as described above.

(2) All buildings and structures associated with a tower-based WCF shall be architecturally designed to blend into the environment in which they are situated and shall meet the minimum setback requirements of the underlying zoning district.

J. Access Road. An access road, turnaround space and parking shall be provided to ensure adequate emergency and service access to tower-based WCF. Maximum use of existing roads, whether public or private, shall be made to the extent practicable. Road construction shall at all times minimize ground disturbance and the cutting of vegetation. Road grades shall closely follow natural contours to assure minimal visual disturbance and minimize soil erosion. The vehicular access to the tower-based WCF and communications facility building shall meet the applicable municipal street standards for private streets and/or driveway standards. Where applicable, the WCF owner shall present documentation to the Township that the property owner has granted an easement for the proposed facility.

K. Inspection. The Township reserves the right to inspect any tower-based WCF to ensure compliance with the provisions of this section and any other provisions found within the Township Code of Ordinances or state or federal law. The Township and/or its agents shall have the authority to enter the property upon which a WCF is located at any time, upon reasonable notice to the operator, to ensure such compliance.

4. Tower-Based Wireless Communications Facilities Inside the Rights-of-Way. The following regulations shall apply to tower-based wireless communications facilities located in the rights-of-way (ROW):

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Commented [WJ1]: This whole section should be repealed in its entirety and replaced with a Small Cell Facilities ordinance.

A. Permitted Where Aboveground Utility Infrastructure Exists. No tower-based wireless communications facilities shall be located in areas where utility infrastructure is installed underground.

(1) In areas not served by aboveground utility infrastructure, tower-based WCF may be constructed at intersections of arterial and arterial street classifications and arterial and collector street classifications to provide coverage and capacity.

B. Evidence of Need. It is required that the applicant for the placement of a tower-based WCF shall submit to Ferguson Township evidence of the need for the tower-based WCF in the proposed location and that the applicant has exhausted all alternatives to locate on an existing tower or structure (co-location). In addition, the applicant must demonstrate via written evidence from a qualified, licensed, professional engineer that, in terms of location and construction, there are no existing towers, tower-based WCF, buildings, structures, elevated tanks or similar uses able to provide the platform for the antenna within a 1/2-mile radius of the chosen location, unless the applicant can demonstrate to the satisfaction of the Township that a different distance is more reasonable. Co-location is not possible if:

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(1) Capacity diagrams and technical reports demonstrate that co-location on an existing tower-based WCF is not technically possible in order to serve the desired need.

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(2) Planned equipment would exceed the structural capacity of existing towers within the Township, considering existing and planned use of those towers and existing towers cannot be reinforced to accommodate planned or equivalent equipment at a reasonable cost.

(3) Planned equipment will cause radio frequency (RF) interference with other existing or planned equipment for that tower and the interference cannot be prevented at a reasonable cost.

(4) Existing or approved towers do not have the space on which planned equipment can be placed so it can function effectively and at least in parity with other similar equipment in place or planned.

(5) Other reasons can be demonstrated to the satisfaction of the Township that make it impractical to place the equipment planned by the applicant on existing and approved towers.

C. Notice. Upon submission of an application for a tower-based WCF, the applicant shall mail

notice thereof to the owner or owners of every property within 500 feet of the parcel or property of the proposed facility. The applicant shall provide the Township with evidence that the notice was mailed out to applicable property owners.

D. Co-Location. An application for a new tower-based WCF in the ROW shall not be approved unless the Township finds that the proposed wireless communications equipment cannot be accommodated on an existing structure, such as a utility pole. Any application for approval of a tower-based WCF shall include a comprehensive inventory of all existing towers and other suitable structures within a 1/2-mile radius from the point of the proposed tower, unless the applicant can show to the satisfaction of the Township that a different distance is more reasonable, and shall demonstrate conclusively why an existing tower or other suitable structure cannot be utilized. Co-location shall not be permitted on ornamental streetlight fixtures.

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E. Time, Place, and Manner. The Township shall determine the time, place, and manner of construction, maintenance, repair, and/or removal of all tower-based WCF in the ROW based on public safety, traffic management, physical burden on the ROW, and related considerations. For public utilities, the time, place, and manner requirements shall be consistent with the police powers of the Township and the requirements of the Public Utility Code.

F. Equipment Location. Tower-based WCF and accessory equipment shall be located so as not to cause any physical or visual obstruction to pedestrian or vehicular traffic, or to otherwise create safety hazards to pedestrians and/or motorists or to otherwise inconvenience public use of the ROW as determined by the Township in addition:

(1) In no case shall ground-mounted equipment, walls, or landscaping be located within 18 inches of the face of the curb. In the absence of a curb, facility must be located outside the safe clear zone of the roadway as determined by Public Works Director.

(2) Ground-mounted equipment that cannot be underground shall be screened, to the fullest extent possible, through the use of landscaping or other decorative features to the satisfaction of the Township.

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(3) Required electrical meter cabinets shall be screened to blend in with the surrounding area to the satisfaction of the Township.

(4) Any graffiti on the tower or any accessory equipment shall be removed at the sole expense of the owner within 10 business days of notice of the existence of the graffiti.

(5) Any underground vaults related to tower-based WCF shall be reviewed and approved by the Township.

G. Design Regulations.

(1) The WCF shall employ the most current stealth technology available in an effort to appropriately blend into the surrounding environment and minimize the aesthetic impact. The application of the stealth technology chosen by the WCF applicant shall be subject to the approval of the Township.

(2) Any height extensions to an existing tower-based WCF shall require prior approval of the Township, and shall not increase the overall height of the tower-based WCF to more than 50 feet. The Township reserves the right to deny such requests based upon aesthetic and land use impact or any other lawful considerations related to the character of the Township.

(3) Guy wires are not permitted. The monopole must be self-supporting.

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H. Additional Antennas. As a condition of approval for all tower-based WCF in the ROW, the WCF applicant shall provide the Township with a written commitment that it will allow other service providers to co-locate antennas on tower-based WCF where technically and economically feasible. The owner of a tower-based WCF shall not install any additional antennas without obtaining the prior written approval of the Township.

I. Relocation or Removal of Facilities. Within 60 days following written notice from the Township, or such longer period as the Township determines is reasonably necessary or such shorter period in the case of an emergency, an owner of a tower-based WCF in the ROW shall, at its own expense, temporarily or permanently remove, relocate, change, or alter the position of any WCF when the Township, consistent with its police powers and the applicable public utility commission regulations, shall determine that such removal, relocation, change, or alteration is reasonably necessary under the following circumstances:

(1) The construction repair, maintenance, or installation of any Township or other public improvement in the right-of-way.

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(2) The operations of the Township or other governmental entity in the right-of-way.

(3) Vacation of a street or road or the release of a utility easement.

(4) An emergency as determined by the Township.

J. Compensation for ROW Use. In addition to the permit fees, every tower-based WCF in the ROW is subject to the Township's right to fix annually a fair and reasonable compensation to be paid for use and occupancy of the ROW. Such compensation for ROW use shall directly related to the Township's actual ROW management costs including, but not limited to, the costs of the administration and performance of all reviewing, inspecting, permitting, supervising, and other ROW management activities by the Township. The owner of each tower-based WCF shall pay an annual fee to the Township to compensate the Township for the Township's costs incurred in connection with the activities described above. The annual ROW management fee for tower-based WCF shall be determined by the Township and authorized by resolution of the Board of Supervisors and shall be based on the Township's actual ROW management costs as applied to such tower-based WCF.

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K. Restoration Deposit. Prior to the issuance of a permit, the owner of each individual tower-based WCF shall, at its own cost and expense, deliver a restoration deposit in an amount determined by the Director of Public Works, or his designee. The return of the deposit shall be contingent upon the proper restoration of the ROW and compliance with the terms and conditions of this section. Upon installation of the tower-based WCF, the applicant shall notify the Township that

the site is ready for inspection. The Public Works Director or his designee shall inspect the site and, if it is found to be satisfactory, the restoration deposit shall be refunded to the applicant within 30 days. The restoration deposit may be forfeited in whole or in part to the Township if any work is found to be incomplete or not in compliance with all applicable standards.

5. General Requirements for All Non-Tower-Based Wireless Communications Facilities.

A. For the purposes of this section, the regulations shall only apply to non-tower-based wireless communications facilities that are not regulated by the Pennsylvania Wireless Broadband Collocation Act, except where noted or where otherwise permitted by law.

B. The following regulations shall apply to all non-tower-based wireless communications facilities that do not substantially change the physical dimensions of the wireless support structure to which they are attached, as defined above:

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(1) Permitted in All Zones Subject to Regulations. Non-tower-based WCF are permitted in all zones subject to the restrictions and conditions prescribed below and subject to the prior written approval of the Township.

(2) Standard of Care. Any non-tower-based WCF shall be designed, constructed, operated, maintained, repaired, modified, and removed in strict compliance with all current applicable technical, safety, and safety-related codes, including, but not limited to, the most recent editions of the American National Standards Institute (ANSI) Code, National Electrical Safety Code, and National Electrical Code. Any non-tower-based WCF shall at all times be kept and maintained in good condition, order, and repair by qualified maintenance and construction personnel, so that the same shall not endanger the life of any person or any property in the Township.

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(3) Wind. Any non-tower-based WCF structure shall be designed to withstand the effects of wind according to the standard designed by the American National Standards Institute as prepared by the engineering departments of the Electronics Industry Association, and Telecommunications Industry Association (ANSI EIA/TIA-222-G, as amended).

(4) Public Safety Communications. No non-tower-based WCF shall interfere with public safety communications or the reception of broadband, television, radio, or other communication services enjoyed by occupants of nearby properties.

(5) Aviation safety Non-tower-based WCF shall comply with all federal and state laws and regulations concerning aviation safety.

(6) Radio Frequency Emissions. No non-tower-based WCF shall, by itself or in conjunction with other WCF, generate radio frequency emissions in excess of the standards and regulations of the FCC, including, but not limited to, the FCC Office of Engineering Technology Bulletin 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields," as amended.

(7) Removal. In the event that the use of a non-tower-based WCF is discontinued, the owner

shall provide written notice to the Township of its intent to discontinue use and the date when the use shall be discontinued. Unused or abandoned WCF or portions of WCF shall be removed as follows:

(a) All abandoned or unused WCF and accessory facilities shall be removed within three months of the cessation of operations at the site unless a time extension is approved by the Township.

(b) If the WCF and/or accessory facilities are not removed within three months of the cessation of operations, or within any longer period of time approved by the Township, the WCF and/or associated facilities and equipment may be removed by the Township and the cost of removal assessed against the owner of the WCF.

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(8) Timing of Approval. Within 30 calendar days of the date that an application for a non-tower-based WCF is filed with the Township, the Township shall notify the applicant, in writing, of any information that may be required to complete such application. Within 60 calendar days of receipt of a complete application, the Township shall make its final decision on whether to approve the application and shall advise the applicant, in writing, of such decision. If additional information was requested by the Township to complete an application, the time required by the applicant to provide the information shall not be counted toward the Township's sixty-day review period. This standard shall only apply to facilities that are regulated by the Pennsylvania Wireless Broadband Collocation Act.

(9) Application Fees. The Township may assess appropriate and reasonable permit fees directly related to the Township's actual costs in reviewing and processing the application for approval of a non-tower-based WCF, as well as related inspection, monitoring and related costs. Such fees may be assessed by applicable federal or state statute for relevant co-located facilities and other non-tower-based WCF.

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C. The following regulations shall apply to all non-tower-based wireless communications facilities that substantially change the wireless support structure to which they are attached:

(1) Permitted in All Zones Subject to Regulations. Non-tower-based WCF are permitted in all zones subject to the restrictions and conditions prescribed below and subject to the prior written approval of the Township.

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(2) Standard of Care. Any non-tower-based WCF shall be designed, constructed, operated, maintained, repaired, modified, and removed in strict compliance with all current applicable technical, safety, and safety-related codes, including but not limited to the most recent editions of the American National Standards Institute (ANSI) Code, National Electrical Safety Code, and National Electrical Code. Any non-tower-based WCF shall at all times be kept and maintained in good condition, order, and repair by qualified maintenance and construction personnel, so that the same shall not endanger the life of any person or any property in the Township.

(3) Wind. Any non-tower-based WCF structure shall be designed to withstand the effects of wind according to the standard designed by the American National Standards Institute as

prepared by the engineering departments of the Electronics Industry Association, and Telecommunications Industry Association (ANSI EIA/TIA-222-G, as amended).

(4) Public Safety Communications. No non-tower-based WCF shall interfere with public safety communications or the reception of broadband, television, radio, or other communication services enjoyed by occupants of nearby properties.

(5) Historic Buildings. Non-tower WCF may not be located on a building or structure that is on an historic register or a building or structure listed for inclusion on a historic register.

(6) Aviation Safety. Non-tower-based WCF shall comply with all federal and state laws and regulations concerning aviation safety.

(7) Maintenance. The following maintenance requirements shall apply:

(a) The non-tower-based WCF shall be fully automated and unattended on a daily basis and shall be visited only for maintenance or emergency repair.

(b) Such maintenance shall be performed to ensure the upkeep of the facility in order to promote the safety and security of the Township's residents.

(c) All maintenance activities shall utilize nothing less than the best available technologies for preventing failures and accidents.

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(8) Radio Frequency Emissions. No non-tower-based WCF shall, by itself or in conjunction with other WCF, generate radio frequency emissions in excess of the standards and regulations of the FCC, including, but not limited to, the FCC Office of Engineering Technology Bulletin 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields," as amended.

(9) Removal. In the event that the use of a non-tower-based WCF is discontinued, the owner shall provide written notice to the Township of its intent to discontinue use and the date when the use shall be discontinued. Unused or abandoned WCF or portions of WCF shall be removed as follows:

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(a) All abandoned or unused WCF and necessary facilities shall be removed within three months of the cessation of operations at the site unless a time extension is approved by the Township.

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(b) If the WCF or accessory facility is not removed within three months of the cessation of operations, or within any longer period of time approved by the Township, the WCF and/or associated facilities and equipment may be removed by the Township and the cost of removal assessed against the owner of the WCF.

(c) Timing of Approval. Within 30 calendar days of the date that an application for a non-tower-based WCF is filed with the Township, the Township shall notify the applicant, in writing, of any information that may be required to complete such

application. Within 60 calendar days of receipt of a complete application, the Township shall make its final decision on whether to approve the application and shall advise the applicant, in writing, of such decision. If additional information was requested by the Township to complete an application, the time required by the applicant to provide the information shall not be counted toward the Township's sixty-day review period. This standard shall only apply to facilities that are regulated by the Pennsylvania Wireless Broadband Collocation Act.

(d) Retention of Experts. The Township may hire any consultant(s) and/or expert(s) necessary to assist the Township in reviewing and evaluating the application for approval of the non-tower-based WCF and, once approved, in reviewing and evaluating any potential violations of the terms and conditions of this section. The applicant and/or owner of the WCF shall reimburse the Township for all costs of the Township's consultant(s) in providing expert evaluation and consultation in connection with these activities.

(e) Restoration Deposit. Prior to the issuance of a permit, the owner of each individual tower-based WCF shall, at its own cost and expense, deliver a restoration deposit in an amount determined by the Director of Public Works, or his designee. The return of the deposit shall be contingent upon, where applicable, the proper restoration of the ROW and compliance with the terms and conditions of this section. Upon installation of the tower-based WCF, the applicant shall notify the Township that the site is ready for inspection. The Public Works Director or his designee shall inspect the site and, if it is found to be satisfactory, the restoration deposit shall be refunded to the applicant within 30 days. The restoration deposit may be forfeited in whole or in part to the Township if any work is found to be incomplete or not in compliance with all applicable standards.

(f) Permit Fees. The Township may assess appropriate and reasonable permit fees directly related to the Township's actual costs in reviewing and processing the application for approval of a non-tower-based WCF, as well as related inspection, monitoring and related costs.

6. Non-Tower-Based Wireless Communications Facilities Outside the Rights-of-Way. The following additional regulations shall apply to non-tower-based wireless communications facilities located outside the rights-of-way that substantially change the wireless support structure to which they are attached:

A. Development Regulations. Non-tower-based WCF shall be co-located on existing structures such as existing building or tower-based WCF subject to the following conditions:

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(1) Such WCF does not exceed a maximum height of 10 feet above the permitted height of any structure in the applicable zoning district.

(2) If the WCF applicant proposes to locate the communications equipment in a separate building, the building shall comply with the minimum requirements for the applicable zoning district.

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(3) A six-foot-high security fence with evergreen screening shall surround any separate communications equipment building. Vehicular access to the communications equipment building shall not interfere with the parking or vehicular circulations on the site for the principal use.

B. Design Regulations.

(1) Non-tower-based WCF shall employ stealth technology and be treated to match the supporting structure in order to minimize the aesthetic impact. The application of the stealth technology chosen by the WCF applicant shall be subject to the approval of the Township.

(2) Non-tower-based WCF which are mounted to a building or similar structure may not exceed a height of 15 feet above the roof or parapet, whichever is higher, unless the WCF applicant obtains a conditional use approval.

(3) All non-tower-based WCF applicants must submit documentation to the Township justifying the total height of the non-tower structure. Such documentation shall be analyzed in context of such justification on an individual basis.

(4) Antennas, and their respective accompanying support structures, shall be no greater in diameter than any cross-sectional dimension that is reasonably necessary for their proper functioning.

(5) Noncommercial Usage Exemption. The design regulations enumerated in § **27-710**, Subsection 6A(2), shall not apply to direct broadcast satellite dishes installed for the purpose of receiving video and related communications services at residential dwellings.

C. Removal, Replacement, and Modification.

(1) The removal and replacement of non-tower-based WCF and/or accessory equipment for the purpose of upgrading or repairing the WCF is permitted, so long as such repair or upgrade does not increase the overall size of the WCF or the numbers of antennas.

(2) Any material modification to a WCF shall require prior amendment to the original permit or authorization.

D. Inspection. The Township reserves the right to inspect any WCF to ensure compliance with the provisions of this section and any other provisions found within the Township Code of Ordinances or state or federal law. The Township and/or its agents shall have the authority to enter the property upon which a WCF is located at any time, upon reasonable notice to the operator, to ensure such compliance.

7. Non-Tower-Based Wireless Communications Facilities in the Rights-of-Way. The following additional regulations shall apply to all non-tower-based wireless communications facilities located in the rights-of-way:

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A. Location. Non-tower-based WCF in the ROW shall be co-located on existing poles, such as utility poles. Co-location shall not be permitted on ornamental streetlight fixtures.

B. Design Requirements.

(1) WCF installations located above the surface grade in the public ROW including, but not limited to, those on streetlights and joint utility poles, shall consist of equipment components that are no more than six feet in height and that are compatible in scale and proportion to the structures upon which they are mounted. All equipment shall be the smallest and least visibly intrusive equipment feasible.

(2) Antennas and all support equipment shall be treated to match the supporting structure. WCF and accompanying equipment shall be painted, or otherwise coated, to be visually compatible with the support structure upon which they are mounted.

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C. Compensation for ROW Use. In addition to the permit fees as described in § **27-710**, Subsection 5B(9), and otherwise herein, every non-tower-based WCF in the ROW is subject to the Township's right to fix annually a fair and reasonable compensation to be paid for use and occupancy of the ROW. Such compensation for ROW use shall directly related to the Township's actual ROW management costs including, but not limited to, the costs of the administration and performance of all reviewing, inspecting, permitting, supervising, and other ROW management activities by the Township. The owner of each non-tower-based WCF shall pay an annual fee to the Township to compensate the Township for the Township's costs incurred in connection with the activities described above. The annual ROW management fee for non-tower-based WCF shall be determined by the Township and authorized by resolution of the Board of Supervisors and shall be based on the Township's actual ROW management costs as applied to such non-tower-based WCF.

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D. Time, Place, and Manner. The Township shall determine the time, place, and manner of construction, maintenance, repair, and/or removal of all non-tower-based WCF in the ROW based on public safety, traffic management, physical burden on the ROW, and related considerations. For public utilities, the time, place, and manner requirements shall be consistent with the police powers of the Township and the requirements of the Public Utility Code.

E. Equipment Location. Non-tower-based WCF and accessory equipment shall be located so as not to cause any physical or visual obstruction to pedestrian or vehicular traffic, or to otherwise create safety hazards to pedestrians and/or motorists or to otherwise inconvenience public use of the ROW as determined by the Township. In addition:

(1) In no case shall ground-mounted equipment, walls, or landscaping be located within 18 inches of the face of the curb. In the absence of a curb, facility must be located outside the safe clear zone of the roadway as determined by Public Works Director.

(2) Ground-mounted equipment shall be located underground. In the event an applicant can demonstrate, to the satisfaction of the Township Engineer, that ground-mounted equipment cannot be underground, then all such equipment shall be screened, to the fullest extent possible, through the use of landscaping or other decorative features to the

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satisfaction of the Township.

(3) Required electrical meter cabinets shall be screened to blend in with the surrounding area to the satisfaction of the Township.

(4) Any graffiti on the tower or any accessory equipment shall be removed at the sole expense of the owner within 10 business days of notice of the existence of the graffiti.

(5) Any underground vaults related to tower-based WCF shall be reviewed and approved by the Township.

F. Relocation or Removal of Facilities. Within 60 days following written notice from the Township, or such longer period as the Township determines is seasonably necessary, or such other period in the case of an emergency, an owner of a WCF in the ROW shall, at its own expense, temporarily or permanently remove, relocate, change, or alter the position of any WCF when the Township, consistent with its police powers and applicable Public Utility Commission regulations, shall have determined that such removal, relocation, change, or alteration is reasonably necessary under the following circumstances:

(1) The construction, repair, maintenance, or installation of any Township or other public improvement in the right-of-way.

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(2) The operations of the Township or other governmental entity in the right-of-way.

(3) Vacation of a street or road or the release of a utility easement.

(4) An emergency as determined by the Township.

G. Visual and/or Land Use Impact. The Township retains the right to deny an application for the construction or placement of a non-tower-based WCF based upon visual and/or land use impact.

8. Violations Applicable to All Wireless Communications Facilities.

A. Penalties. Any person violating any provision of this section shall be subject, upon finding by a Magisterial District Judge, to a penalty not exceeding $500, for each and every offense, together with attorneys' fees and costs. A separate and distinct violation shall be deemed to be committed each day on which a violation occurs or continues to occur. In addition to an action to enforce any penalty imposed by this section and any other remedy at law or in equity, the Township may apply to a federal district court for an injunction or other appropriate relief at law or in equity to enforce compliance with or restrain violation of any provision of this section.

B. Determination of Violation. In the event a determination is made that a person has violated any provision of this section, such person shall be provided written notice of the determination and the reasons therefor. Except in the case of an emergency, the person shall have 30 days to cure the violation. If the nature of the violation is such that it cannot be fully cured within such time

period, the Township may, in its reasonable judgment, extend the time period to cure, provided that person has commenced to cure and is diligently pursuing its efforts to cure. If the violation has not been cured within the time allowed, the Township may take any and all actions authorized by this section and/or federal and/or Pennsylvania law and regulations.

9. Miscellaneous.

A. Police Powers. The Township, by granting any permit or taking any other action pursuant to this section, does not waive, reduce, lessen, or impair the lawful police powers vested in the Township under applicable federal, state, and local laws and regulations.

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B. Severability. If any section, subsection, sentence, clause, phrase, or word of this section is for any reason held illegal or invalid by any court of competent jurisdiction, such provision shall be deemed a separate, distinct, and independent provision, and such holding shall not render the remainder of this section invalid.

PARKING ANALYSIS/STUDY FOR MP MACHINERY

Prepared by PennTerra Engineering, Inc.
March 8, 2022

MP Machinery and Testing, located at Tax Parcel 24-433-,007-,000- and at 2161 Sandy Drive, State College, Ferguson Township, Centre County, Pennsylvania, is planning to add on to its existing building to provide additional material storage (for testing operations) and testing areas with an 8,088 square feet addition to the existing building.

The current Ferguson Township Ordinances (*Chapter 22 Subdivision & Land Development- Part 5.C OFF-STREET PARKING & LOADING, 22-5C01. General Regulation. 1.B.92.)* requires the preparation of a parking study to determine needs for the determination of the Ferguson Township Planning Commission. This document represents that required study, and is intended for the review and determination of the Ferguson Township Planning Commission, so that the planned land development and building expansion for MP Machinery & Testing can proceed.

Our goals for this parking study are:

1. To rationally determine and provide the necessary off-street parking spaces for facility operations.
2. To minimize impervious coverage. A key goal in development is ALWAYS to minimize site impact specific to reducing impervious coverage. This is a best practice for costs and especially for the environment.
3. And to obtain clear direction from Ferguson Township regarding off-street parking so that we (PennTerra Engineering and MP Machinery & Testing) can move this project forward.

Background/Historical Data for Consideration

MP Machinery was developed in 1997 per the recorded Plan- PB 54, Page 7. The project's required parking at that time was as follows.

Office:	1 space for each 250 square feet. There is 1,764 square feet of office space according to the recorded plan The required parking spaces for the OFFICE use is 7.06 spaces.
Laboratory:	1 space for each 350 square feet. There is 4,860 square feet of laboratory and testing space in the building. The (then) required parking spaces for the laboratory use is 13.89 spaces.

In 1997, the total required parking for MP Machinery & Testing was 21 spaces. Refer to the recorded Plan as attached at the rear of this report.

The actual constructed parking lot and parking spaces for the facility are 24 parking spaces as can be viewed on the attached EXISTING CONDITIONS PLAN.

PennTerra Engineering posed several questions to the developer and owner, Dr. Michael P. Manahan, Sr., Executive Chairman of MP Machinery & Testing, LLC. Those questions and responses by Dr. Manahan follow.

A. How many spaces do you NEED?
B. Wondering if for actual and historical purposes, whether the Building Addition will not create a need?

Couple of (additional) questions...

1. Briefly explain/classify the need for the Building Addition. Is it just additional Laboratory or storage/material space? ***It is for both lab and for storage. We will initially need about 70% for storage and 30% for lab.***

2. Will the Building addition result in additional employees? ***No.***

3. Do you need the Breezeway connecting the buildings? ***Yes. That 20 feet is critical for access and delivery. Note that I own the lot next to that side of the property. We can ask the township to approve a move of that boundary. Alternatively, I am planning to build on the lot next door, and we could put a lot there and put an agreement in place for the two businesses to share the parking lot.***

Regarding the Parking Study, I have some additional questions.

1. Correct me if I am wrong, you really do not need additional spaces for your building with the addition. ***We currently have a parking lot that provides 24 spaces, including a handicapped accessible space. MP feels that the firm does not need any additional parking spaces to accommodate the proposed building expansion.***

2. I assume that you have a business where you really do not have too many 'visitors?' ***MP has had one or two visitors per year over the past 25 years, as customers do not come to this location. Rather, MP travels from this location to its customers.***

3. How many employees do you have currently? ***MP Machinery and Testing has six employees, and has never had more than five over the past 25 years. MP does not plan on hiring any more employees because of this expansion, which is mostly for storage. Due to plans for the intended Building Expansion, MP Machinery has hired their maximum number f employees, ever to be eight.***

4. Are they 8:00 AM to 4:30 PM type of work hours? ***Our hours are 7:30 am to 4:40 pm.***

Mr. Manahan has supplied some additional data to consider as the development of the planned Building Addition and site improvements are designed. That data follows.

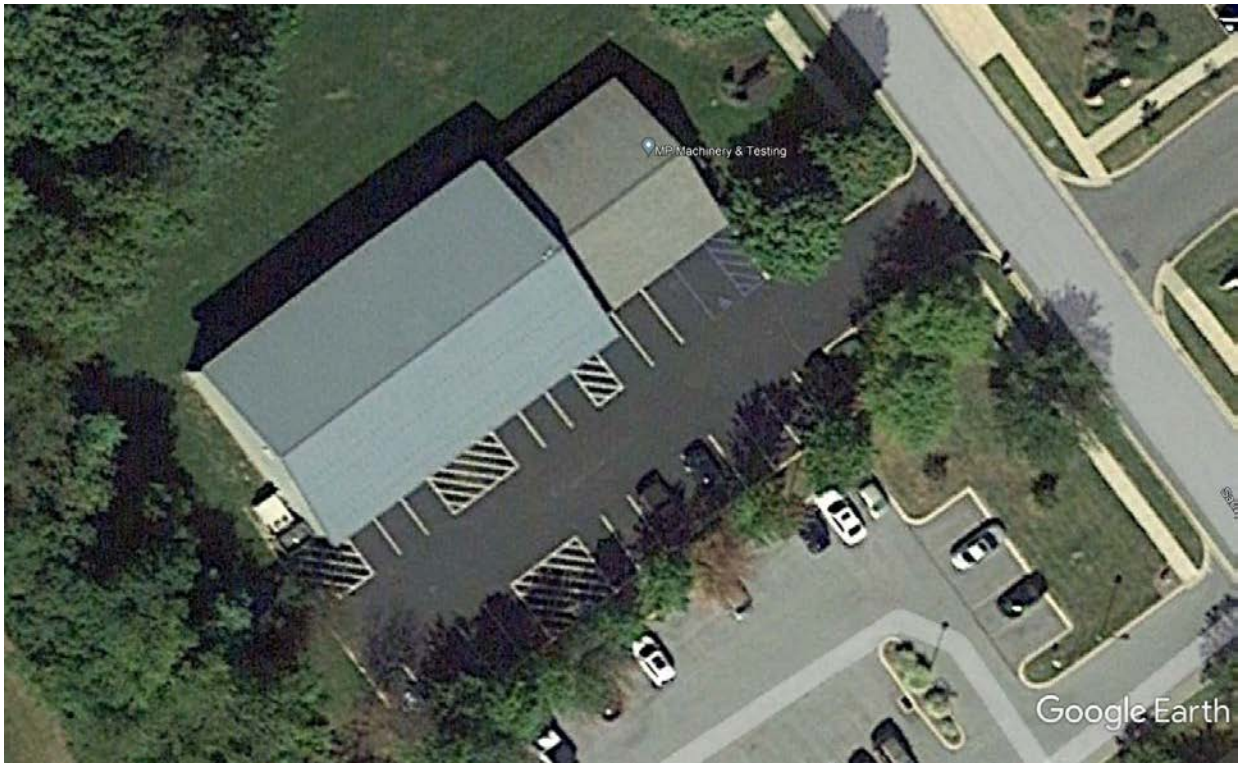
- Solely for the sake of convenience, MP proposes a few additional parking spaces by the new addition. These are identified on the Planned Site Development Plan part of this Study.
- MP needs a driveway in the back of the building for 18 wheelers to drive through. There is a high bay door in the rear of the new building, and they need to take deliveries there.

Available data on parking usage at the property:

Google Earth® has free, publicly available aerial photography that shows MP Machinery and Testing in operation at the Sandy Drive site in August 2012, September 2015, April 2016 and September 2020.

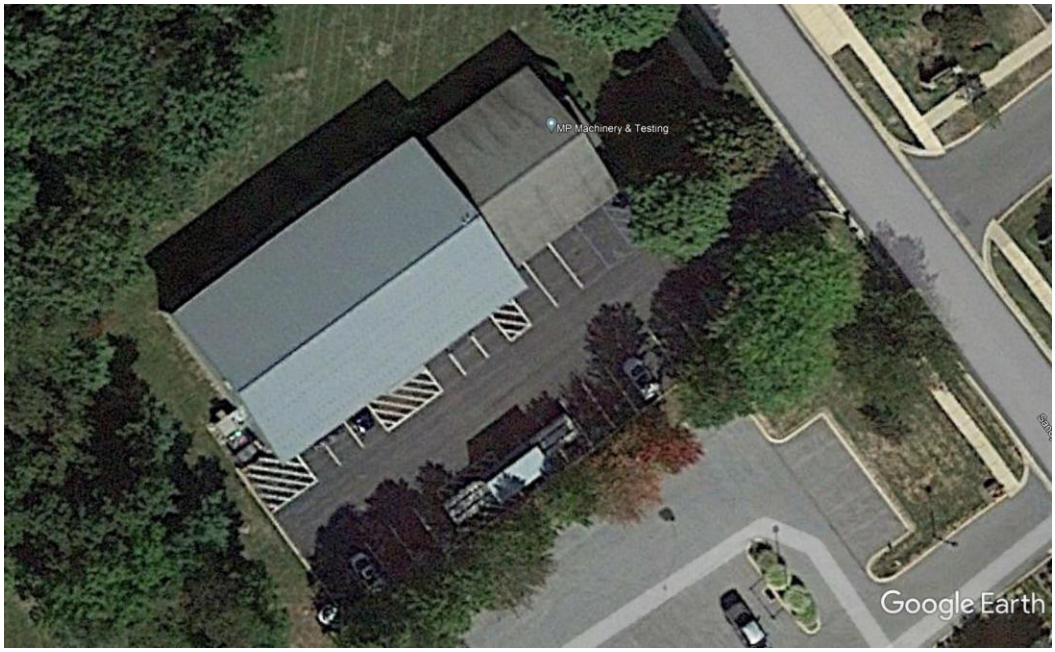
The August 2012 photograph below shows four vehicles on site.

The September 2015 imagery below shows three vehicles in the parking lot.



The April 2016 imagery below shows five vehicles in the 24-space parking field.

The September 2020 imagery below shows only two vehicles on site.



Additionally, the Centre County GIS Aerial photography from 2020 shown below depicts nine vehicles in the 24-space parking lot.

2161

Results/Analysis of Viewed Aerial Photography and Considerations of Building Use

- The existing 24 space parking field never appears to be full, or even at half of its capacity.
- The information provided by Dr. Manahan is supported by the historical aerial photography. The on-line aerial mapping evidence provided by Google Earth® and the Centre County GIS aerial on five random days scattered across the past nine years corroborates our client's claim that the site's current parking is more than adequate.

Opinion for Development

It is the opinion of our firm that the historical information suggests that in the interests of efficiency and the environment, additional parking is not needed to support the planned 8,000 square feet building addition at MP Machinery and Testing, which is located at Tax Parcel 24-433-,007-,000- and at 2161 Sandy Drive, State College, Ferguson Township, Centre County, Pennsylvania.

PennTerra Engineering, as civil engineering and site designers plans to increase the 24-parking space field to 26 spaces, and to bring the parking lot into compliance with the current standards of the Township of Ferguson (i.e., adding a landscaping island, etc.). Additionally, the plan to add six additional parallel spaces at the rear of the building will be made to provide convenience parking spaces for the direct access of the new building addition. Refer to the PROPOSED SITE LAYOUT & PARKING PLAN for the site with the additional 8 parking spaces.

The conclusions in this report are based upon observations and information available, known and declared at the date of the investigation and/or the time of the preparation of this report. Our services were performed using the degree of engineering skill normally exercised by practicing consulting engineers. No other warranty is expressed or implied.

The report reviewers may use this data to determine their own opinion or to aid them as they deem fit. PennTerra Engineering is not subject to litigation or responsibility of any sort related to the results of our findings.

PTE reserves the right to amend and/or supplement this report in the event that new or additional documentation, occurrence or evidence becomes available with respect to the investigation and analysis. You are advised to notify PTE immediately if this occurs. If you have any questions with regards to the conclusions in this report, or if you require additional documentation, please feel free to contact us.

Respectfully Submitted,

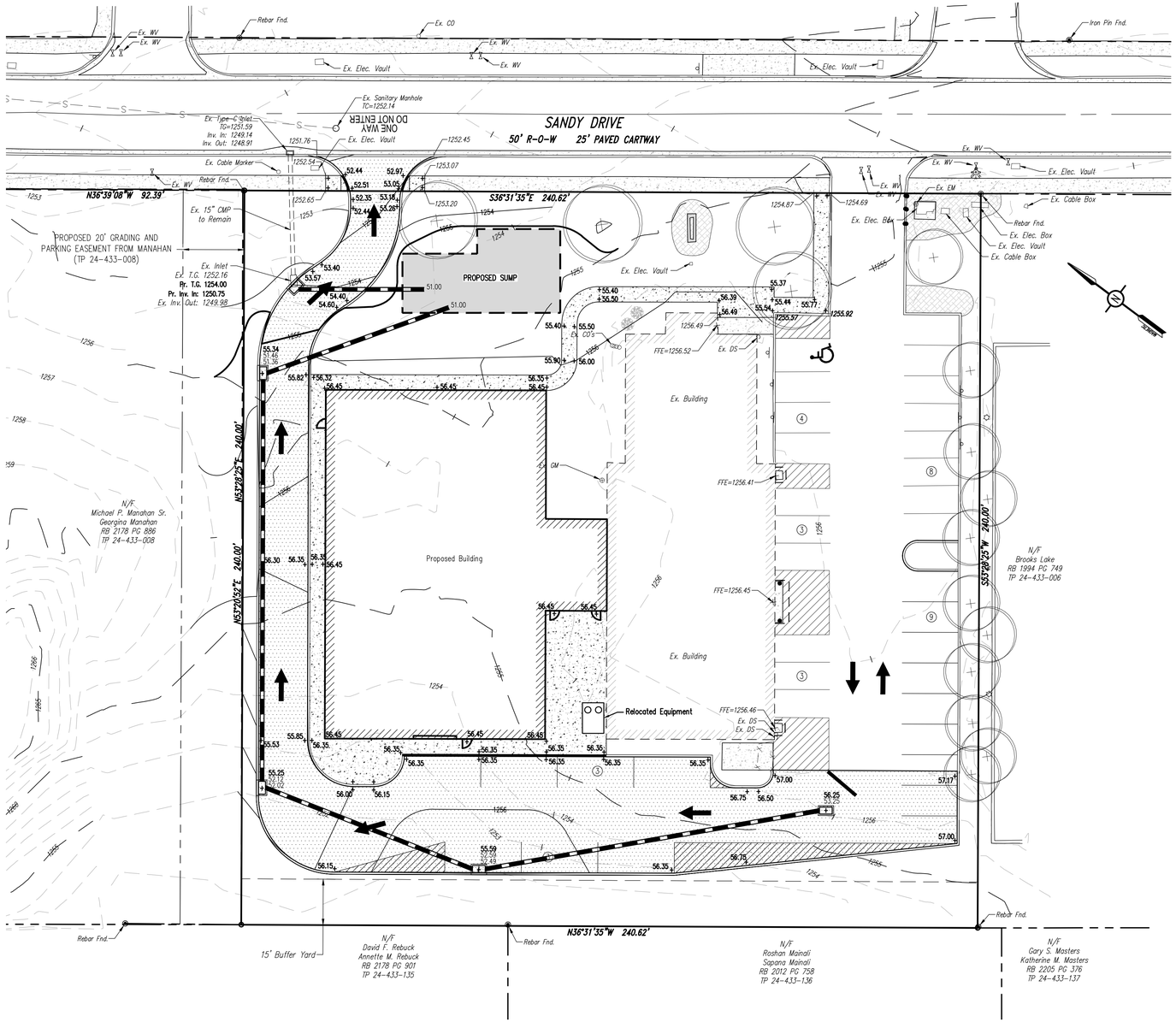
Chad Stafford

Chad Stafford, P.E.

and

Lee Slusser

Lee C. Slusser, AICP, Project Manager
PennTerra Engineering, Inc.



EXISTING FEATURES LEGEND

- Existing Building
- Existing Curbing & Edge of Pavement
- Existing Concrete Areas
- Existing Landscaped Areas
- Existing Retaining Wall
- Existing Contours w/ Elevation (1's & 2's)
- Existing Contours w/ Elevation (5's & 10's)
- Existing Sanitary Sewer w/ Manhole
- Existing Water Service Lateral
- Existing Storm Sewer Line w/ Inlet
- Existing Fire Hydrant
- Existing Manhole
- Existing Storm Sewer Inlet Type-M
- Existing Storm Sewer Inlet Type-C
- Existing Utility Main Valve
- Existing Utility Lateral Valve
- Existing Utility Meter
- Existing Bollard
- Existing Clean-Out
- Existing Light Pole/Standard
- Existing Flood Light
- Existing Sign
- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Shrub

SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Roadway Center Line
- Property Corner Found
- Property Corner To Be Set

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE AREAS
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PennTerra ENGINEERING INC.

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Designer	MJA
Draftsman	MJA
Proj.Manager	CDS
Surveyor	XXX
Perimeter Ck.	
Book	XXX Pg XXX
File	21316 – MD
Layout	PROPOSED LAYOUT

Date	Description

REVISIONS

MP MACHINERY AND TESTING

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT PLANS

PROPOSED SITE LAYOUT & PARKING

PROJECT NO.	
21316	
DATE	
MARCH 9, 2022	
SCALE	SHEET NO.
1" = 20'	1

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TOWNSHIP OF FERGUSON
3147 Research Drive • State College, Pennsylvania 16801
Telephone: 814-238-4651 • Fax: 814-238-3454
www.twp.ferguson.pa.us

TO: Planning Commission

FROM: Kristina Bassett, Community Planner

DATE: March 14, 2022

SUBJECT: Orchard Square Final Land Development Plan

The land development plan proposes the construction of a 19,856 square foot Commercial/retail shopping center with associated parking and utilities. As proposed, there will be 3 retail store fronts and 113 parking spaces, including 5 ADA handicap spaces provided. The retail spaces are proposed to be 10,722 square feet, 6,483 square feet and 2,566 square feet.

The lot, Tax Parcel 24-4-67F, is 0.115 acres. It is located in the General Commercial (C) Zoning District and within the Corridor Overlay District.

Staff has reviewed the proposed Orchard Square Final Land Development Plan and is not recommending any conditions be included with the plan.

Recommended Motion: the Planning Commission make a recommendation to the Board of Supervisors to approve the Orchard Square Final Land Development Plan pending outstanding comments attached below.

Staff Recommendation: The Planning Commission make a recommendation to the Board of Supervisors to approve the Orchard View Final LDP, dated February 4, 2022 and last revised on March 6, 2022 pending outstanding comments.

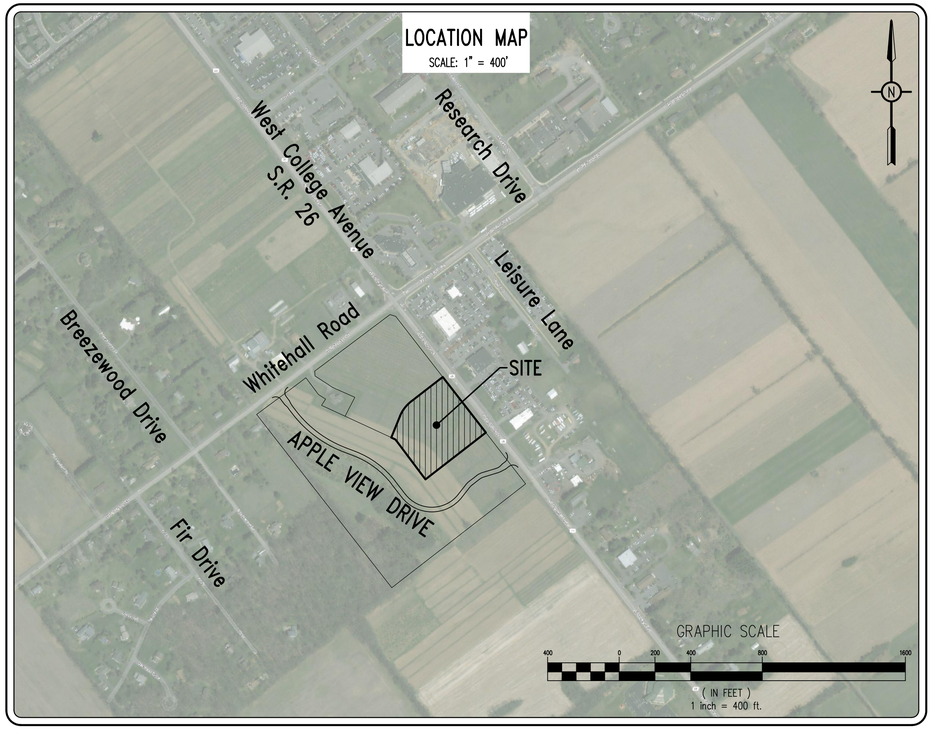
ORCHARD SQUARE

FINAL LAND DEVELOPMENT PLAN

FERGUSON TOWNSHIP * CENTRE COUNTY * PENNSYLVANIA

FEBRUARY 4, 2022

LAST REVISED MARCH 4, 2021



PennTerra
ENGINEERING, INC.

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6.B	GRADING ENLARGEMENT PLAN AT BUILDING
7	UTILITY PLAN
8	LANDSCAPING PLAN
9	LIGHTING PLAN
10	SITE CROSS SECTIONS
11	GENERAL SITE DETAILS
12	GENERAL SITE AND SIGN DETAILS
13	CURB RAMP DETAILS
14	UTILITY DETAILS
ES1	EROSION & SEDIMENTATION CONTROL PLAN
ES2	EROSION & SEDIMENTATION CONTROL NARRATIVE
ES3	EROSION & SEDIMENTATION CONTROL DETAILS

ACT 287 UTILITY INFORMATION
(SERIAL NUMBER: 20183162948)

SANITARY SEWER
UNIVERSITY AREA JOINT AUTHORITY
1576 SPRING VALLEY ROAD
STATE COLLEGE, PA 16801
PHONE: (814) 238-9662

PUBLIC WATER
STATE COLLEGE BOROUGH WATER AUTHORITY
1201 WEST BRANCH ROAD
STATE COLLEGE, PA 16801
PHONE: (814) 238-6766

NATURAL GAS
COLUMBIA GAS OF PENNSYLVANIA
2550 CAROLEAN INDUSTRIAL DRIVE
STATE COLLEGE, PA 16801
PHONE: (814) 238-6775

ELECTRIC
WEST PENN POWER COMPANY
2800 EAST COLLEGE AVENUE
STATE COLLEGE, PA 16801
PHONE: (814) 237-5721

TELEPHONE
VERIZON
224 SOUTH ALLEN STREET
STATE COLLEGE, PA 16801
PHONE: (814) 231-6511

CABLE TELEVISION
COMCAST
60 DECIBEL ROAD
STATE COLLEGE, PA 16801
PHONE: (800) 992-3515

STORM SEWER
FERGUSON TOWNSHIP
3147 RESEARCH DRIVE
STATE COLLEGE, PA 16801
PHONE: (814) 238-4651

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BEFORE YOU DIG ANYWHERE IN
PENNSYLVANIA ! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY

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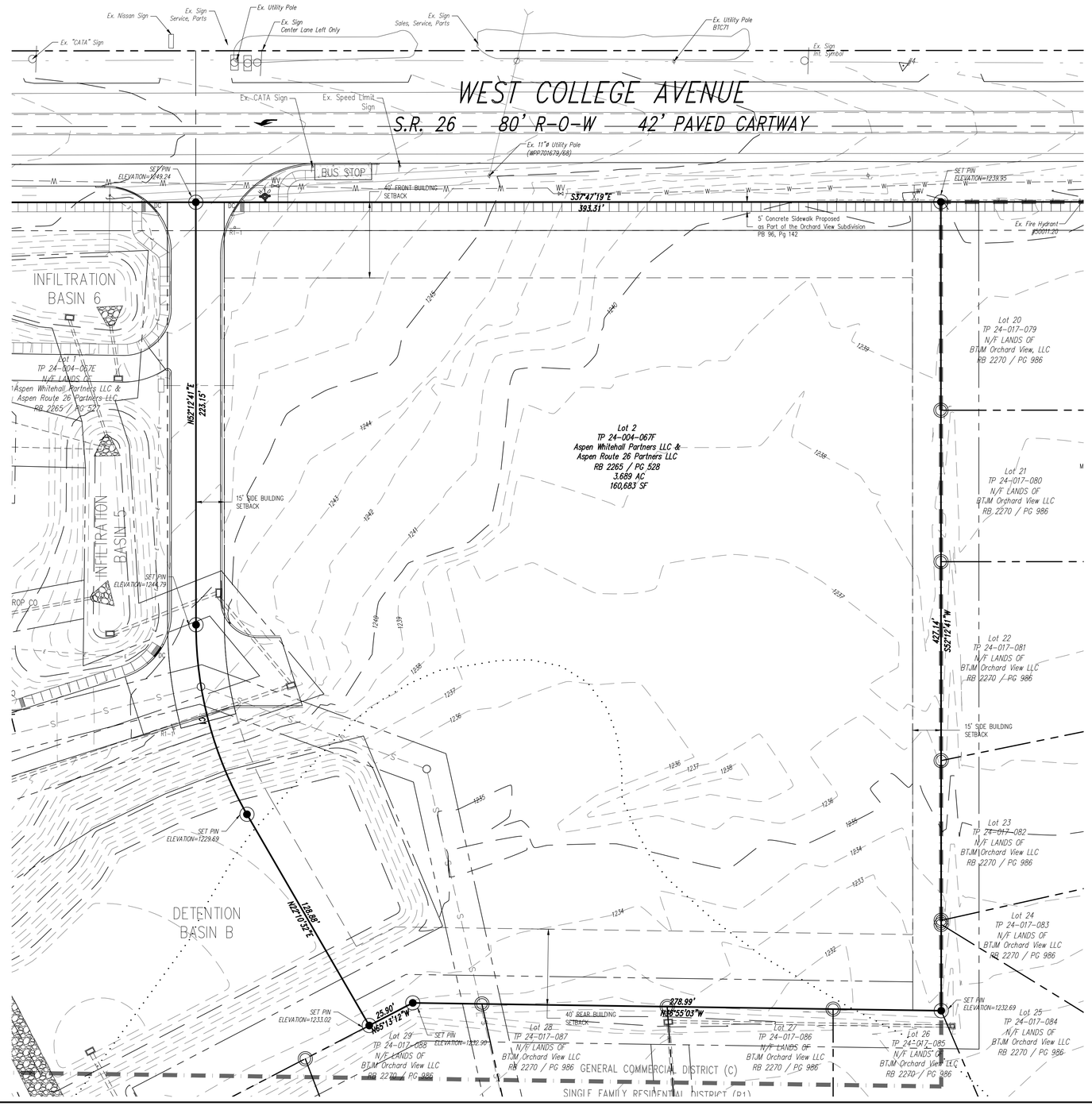
GENERAL SITE DEMOLITION NOTES

1. The Contractor is responsible for obtaining all local and state permits required for demolition work.
2. The Contractor shall indemnify and hold harmless the Owner and/or architect and engineer for any and all injuries and/or damages to personnel, equipment and/or existing facilities in the demolition and construction described in the plans and specifications.
3. Existing conditions as depicted on these plans are general and illustrative in nature and do not include mechanical, electrical and miscellaneous structures. It is the responsibility of the Contractor to examine the site and be familiar with existing conditions prior to bidding on the demolition work for this project. If conditions encountered during examination are significantly different than those shown, the Contractor shall notify the architect and engineer immediately.
4. All existing utilities not to be removed or abandoned are to remain operational at all times. Appropriate existing utilities shall remain in service until replacement/relocated utilities are operational.
5. All demolition waste and construction debris shall be removed by the Contractor and disposed of in a state approved waste site and in accordance to all local and state codes and permit requirements.
6. All utility removal, relocation, cutting, capping and/or abandonment shall be coordinated with the appropriate utility company.
7. The burning of cleared material and debris shall not be allowed.
8. Erosion and sedimentation control measures around areas of demolition shall be installed prior to initiation of demolition activities. Refer to plan and details for site specific information including tree protection details, if necessary.
9. Asbestos or hazardous materials, if found on site, shall be removed by a licensed hazardous materials Contractor. Contractor shall notify Owner immediately if hazardous materials are encountered.
10. Contractor shall protect all corner pins, monuments, property corners, and benchmarks during demolition activities. If disturbed, Contractor shall have disturbed items reset by a licensed surveyor at no additional cost to the Owner.
11. Contractor shall adhere to all local, state, federal, and OSHA regulations operating demolition equipment around utilities.
12. Contractor shall provide and maintain traffic control measures in accordance with the PennDOT standards, and as required by local agencies working in and/or along streets, roads, highways, etc. It shall be the Contractor's responsibility to obtain approval and coordinate with local and/or state agencies regarding the need, extent, and limitations associated with installing and maintaining traffic control measures.
13. Contractor shall protect at all times adjacent structures and items from damage due to demolition activities.
14. Contractor shall coordinate existing facilities utility disconnects with the Owner a minimum 7 days prior to anticipated demolition of structures.
15. Contractor shall refer to Construction Plans for other pertinent information where applicable.
16. Contractor shall replace or repair to Owner's satisfaction all curb, utilities, sidewalks, landscaping, etc. damaged during construction that are not indicated to be removed.
17. Contractor shall be responsible for all costs and work required to adjust existing and proposed utilities and appurtenances to finish grades within the limit of work.
18. All paving to be removed shall be sawcut to provide a sharp clean edge. All sidewalks to be removed shall be sawcut at the nearest joint. Existing pavement shall be removed as required for new curb, walkway, or utility construction.
19. Contractor shall verify the location of manholes, inlets valves, etc. Contractor shall test pit existing utilities as deemed necessary within the limits of construction to determine the exact location and depth as required. Report any discrepancies from that indicated on the plan to the architect. All existing utilities shall be retained unless marked otherwise, and appurtenances shall be adjusted to final grade. Damage to existing conditions and utilities to remain shall be repaired as required to the Owner's satisfaction at the expense of the Contractor.
20. Contractor shall coordinate with utilities companies on installation, relocation or replacement of electrical, phone, gas and cable services.



SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Zoning Boundary
- Property Corner Found
- Property Corner To Be Set
- PennTerra Control Point
- Project Benchmark

EXISTING FEATURES LEGEND

- Existing Curbing & Edge of Pavement
- Existing Bituminous Areas
- Existing Contours w/ Elevation (1's & 2's)
- Existing Contours w/ Elevation (5's & 10's)
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Gas Line
- Existing Underground Electric
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign
- Existing Soil Limit Line / Boundary
- HaB Existing Soil Type

EXISTING CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD DIRECTION	CHORD	DELTA
C1	104.85'	200.00'	53.66'	N 37° 11' 36" E	103.65'	30° 02' 10"

PennTerra ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOHN C. SEPP ENGINEER 040003-E

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL NEVIN L. GROVE LAND SURVEYOR No. SU061171

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-02-EX.CON & DEMO.
Layout	EX. CON & DEMO

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. 2

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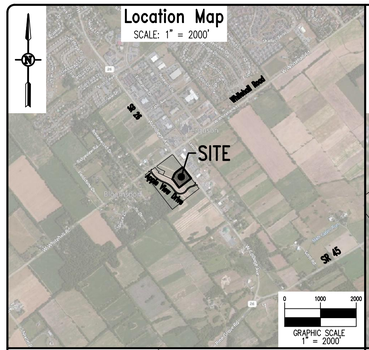

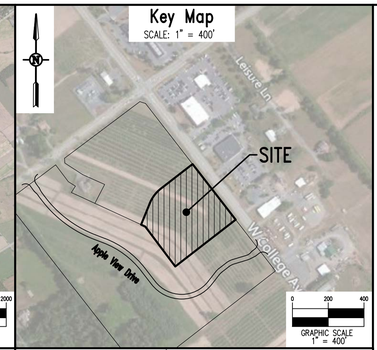

Owner's Certification

State of _____
County of _____

On this the _____ day of _____, 20_____,

personally appeared before me and certified that they were the owners of the properties shown on this plan and acknowledge the same to be their act and plan and designs, the same to be recorded as such, according to the law.

_____

witness my hand and seal, this date _____

_____
Notary Public Commission Expires

Owner's Certification

State of _____
County of _____

On this the _____ day of _____, 20_____,

personally appeared before me and certified that they were the owners of the properties shown on this plan and acknowledge the same to be their act and plan and designs, the same to be recorded as such, according to the law.

_____

witness my hand and seal, this date _____

_____
Notary Public Commission Expires

Township Planning Commission

Ferguson Township Planning Commission Approved

_____
Chair Date

_____
Secretary Date

Township Supervisors

Ferguson Township Supervisors Approved

_____
Chair Date

_____
Secretary Date

Township Engineer Certification

I, _____, have reviewed and hereby certify that the plan meets all engineering design standards and criteria of the Ferguson Township Code of Ordinances.

Design Engineer Certification

I, _____, hereby certify that this plan meets all design requirements of the Subdivision and Land Development Ordinance, Zoning Ordinance and all other applicable Chapters of the Ferguson Township Code.

Professional Land Surveyor Certification

I, Nevin L. Grove, a Professional Land Surveyor in the Commonwealth of Pennsylvania, do hereby certify that this plan correctly represents the tracts of lands as shown.

_____
Signature Date

Fire Chief Certification

I have reviewed and hereby certify that the location of Fire Lanes and Fire Hydrants shown on this plan are adequate.

_____
Fire Chief Date

Recorder's Stamp Here

Project Notes:

1. General Site Information:
   - a. Owner Information: Aspen Whitehall Partners LLC / Aspen Route 26 Partners LLC, 116 Union Avenue, Altoona, PA 16602
   - b. Tax Parcel Numbers: 24-04-067F
   - c. Deed Information: Record Book 2265, Page 528
   - d. Total Parcel Area: 3.689 AC (160,683 SF)
   - e. Property Address: 3283 West College Avenue, State College, PA 16801; Suites 100, 108, and 112
   - f. Municipality: Ferguson Township
   - g. Zoning: General Commercial District (C); Corridor Overlay District
   - h. Existing Site Use: Vacant Lot
   - i. Proposed Site Use: Commercial Shopping Center
   - j. Minimum Lot Size: 0.115 AC (5,000 SF)
   - k. Maximum Building Coverage: 45% (72,307 SF)
   - l. Proposed Building Coverage: 12% (19,862 SF)
   - m. Maximum Building Height: 40'
   - n. Proposed Building Height: 26'
   - o. Maximum Impervious: 80% (128,546 SF)
   - p. Proposed Impervious: Pavement – 1.30 AC (56,581 SF); Sidewalk – 0.18 AC (7,840 SF); Building – 0.46 AC (19,862 SF)
   - q. Total Impervious: 84,283 SF (52%)
   - r. Source Water Protection: The site is within the Ferguson Township Source Water Protection Overlay District II
2. Building Setbacks:
   - a. Zoning (General Commercial/Corridor Overlay):
     - Front: 50' – Reduced to 40' per below
       If a property is located within the General Commercial Zoning District, the setback may be reduced to 40' when abutting a corridor street per §27-210.1.C.(2)(b).
     - Side: 15'
     - Rear: 50' – Reduced to 40' per below
       Rear yard setback as designated in the underlying zoning may be reduced up to 10 feet when the designated rear yard does not abut a corridor street §27-210.1.C.(2)(d).
3. Parking:
   - a. Required Parking Spaces:
     - General Retail (10,370 SF): 1 space per 200 SF of Net Floor Area (NFA)
     - General Retail (6,330 SF): 1 space per 200 SF of Net Floor Area (NFA)
     - General Retail (2,395 SF): 1 space per 200 SF of Net Floor Area (NFA)
   - b. Parking Calculation:
     - 10,370 SF General Retail Store / 200 SF NFA = 52 Spaces
     - 6,330 SF General Retail / 200 SF NFA = 32 Spaces
     - 2,395 SF General Retail / 200 SF NFA = 12 Spaces
     - Total Parking Spaces Required = 96 Spaces
   - c. Total Parking Spaces Provided:
     - 116 Spaces including 5 ADA Handicap Spaces
   - d. Bicycle Parking Calculation:
     - Short Term: General Retail (19,095 SF): 1 space per 5,000 SF of Net Floor Area (NFA)
       19,095 SF General Retail / 5,000 SF NFA = 4 Short Term Bicycle Parking Spaces
     - Long Term: General Retail (19,095 SF): 1 space per 10,000 to 12,000 SF of Net Floor Area (NFA)
       19,095 SF General Retail / 12,000 SF NFA = 2 Long Term Bicycle Parking Spaces
4. Act 287 Utility Information: (Serial Number: 20183162948)
   All utility locations should be verified prior to any construction. utility information and locations should be considered approximate. contractor shall notify pa one call prior to any excavation.
   - a. Water: State College Borough Water Authority, 1201 West Branch Road, State College, PA 16801; (814) 238-6766
   - b. Sanitary Sewer: University Area Joint Authority, 1576 Spring Valley Road, State College, PA 16801; (814) 238-9662
   - c. Telephone: Verizon, 224 South Allen Street, State College, PA 16801; (814) 231-6511
   - d. Electric: West Penn Power Company, 2800 East College Avenue, State College, PA 16801; (814) 237-5721
   - e. Cable television: Comcast, 60 Decibel Road, State College, PA 16801; (800) 992-3515
   - f. Gas: Columbia Gas of Pennsylvania, 2550 Carolean Drive, State College, PA 16801; (814) 238-6775
   - g. Storm Sewer: Ferguson Township, 3147 Research Drive, State College, PA 16801; (814) 238-4651
5. Natural Site Features & Survey Information:
   - a. Soil limits and descriptions have been taken from the Natural Resources Conservation Service Web Soil Survey dated March 2019.
   - b. There are not wetlands on the site according to the National Wetland Inventory Mapping (U.S. Fish & Wildlife Service) for State College, PA last updated March 2019.
   - c. There are no portions of this site located within a Zone 'A' 100-year Flood Plain according to the Federal Emergency Management Agency (FEMA) Map Number 42027C619F, effective date May 4, 2009.
   - d. Contours shown are taken from survey data collected in the field by PennTerra Engineering, Inc.
   - e. Horizontal Datum is Pennsylvania North Zone State Plane Coordinates, North American Datum of 1983 (PA NAD83) U.S. Feet.
   - f. Elevation Datum is the North American Vertical Datum of 1988 (NAVD 88).
   - g. The Project Benchmark is a masonry nail set on the southwest corner of the electric vault located on Tax Parcel 24-004-067A along West Whitehall Road. Elevation = 1254.41'.
6. Easement Information:
   - a. All lots may be subject to future easements in favor of utility companies. Any future easements will be reflected in the deed for said lot.
7. All pedestrian walkways, open space lots, drainage easements, detention basins, and all drainage structures located outside of the street R-O-W shall be maintained by Aspen Whitehall Partners LLC./Aspen Route 26 Partners LLC.
8. For additional information, refer to:
   - a. "Harner Farm Final Subdivision Plan", prepared by PennTerra Engineering, Inc., dated April 19, 2019, last revised May 27, 2020 and recorded at Centre County Recorder of Deeds in Book 95, Page 196 on September 22, 2020.
   - b. "Orchard View Preliminary/Final Subdivision Plan", prepared by PennTerra Engineering, Inc., dated May 14, 2019, last revised April 8, 2021, and recorded at Centre County Recorder of Deeds in Book 96, Page 142 on May 5, 2021.
   - c. "State College, PA (Whitehall Road) Sheetz Preliminary/Final Land Development Plan", prepared by PennTerra Engineering, Inc., dated April 19, 2019, last revised January 27, 2021 and recorded at Centre County Recorder of Deeds in Book 96, Page 124 on April 6, 2021.
   - d. "Stormwater Management Agreement (Declaration of Stormwater Access and Maintenance Easement) for 3261 West College Avenue" dated February 5, 2021 and Recorded at the Centre County Recorder of Deeds in Record Book 2269, Page 823.
   - e. "Harner Farm Final Subdivision Plan, Stormwater Management Site Plan", prepared by PennTerra Engineering, Inc., dated January 27, 2020 last revised May 27, 2020 and as-built approval of the Stormwater Management Site Plan by Ferguson Township.
   - f. "Orchard Square Preliminary Land Development Plan, Erosion and Sedimentation Control Plan", Prepared by PennTerra Engineering, Inc., Dated August 11, 2021 last revised November 29, 2021 with final signature approval by Ferguson Township on February 3, 2022.
   - g. "Preliminary Geologic Investigation-Harner Farms", prepared by CMT Laboratories, Inc., dated May 1, 2019.
   - h. "Orchard Square Stormwater Management Site Plan", Prepared by PennTerra Engineering, Inc., Dated August 11, 2021, last revised November 29, 2021. See Note 8.i below.
   - i. A Stormwater Management Agreement, (Declaration of Stormwater Access and Maintenance Easement) for the Orchard Square Land Development, including the approved Orchard Square Stormwater Management Site Plan, was recorded at the Centre County Recorder of Deeds in RB 2287, PG 663 on February 3, 2022.
9. Face area and height for all signs shall conform to the Ferguson Township Sign Ordinance.
10. The date of application for a Zoning Permit is August 11, 2021.
11. This Record Plan Conforms with the plan receiving final approval by the Ferguson Township Board of Supervisors on _____, 2022. All Improvements are or will be installed in accordance with such plan in a manner and time so specified therein.
12. No proposed structures will have a built-in fire suppression system.
13. As-Built drawings/documentation (including verification of infiltration testing) of the stormwater management facilities must be prepared in accordance with Chapter 26 (§26-402.D.4.) and submitted to Ferguson Township at the completion of construction as a prerequisite of issuance of Occupancy Permit or release of the Surety Bond. A narrative and photographic documentation for critical stages of construction and for the infiltration surface prior to placement of filter fabric/amended soils must be submitted to Ferguson Township.
14. A Stormwater Management Site Plan/PCSM Plan have been prepared for State College PA (Whitehall Road) Lot 2, dated August 11, 2021 and last revised November 29, 2021.
15. A Soil Erosion & Sedimentation Control Plan have been prepared for State College PA (Whitehall Road) Lot 2, dated August 11, 2021 and last revised November 29, 2021. Approved on December 17, 2021.
16. A highway occupancy permit is required pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1242, No. 428), known as the "State Highway Law", before driveway access to a State Highway is permitted. The PennDOT Highway Occupancy Permit 020027434 was issued for the construction of the existing shared access drive with TP 24-004-67E at West College Avenue.
17. A pre-construction conference is required prior to starting work on the stormwater management BMPs.
18. Approved Stormwater Management Site Plans must be on site at all times during construction.
19. A Declaration of Easements, Covenants, and Restrictions (ECR) between the owners of Tax Parcel 24-004-067E (Lot 1) and Tax Parcel 24-004-67F (Lot 2), and the Leaseholder of Lot 1 (Sheetz, Inc.) for the construction and maintenance of shared access and stormwater management facilities located on Lots 1 and 2. The ECR Agreement is recorded in RB 2265, PG 666 at the Centre County Recorder of Deeds Office.
20. Per Appendix A, Source Water Protection Overlay District Map, dated January 2, 2019. The development site is within the Township-wide Source Water Protection Zone II Overlay District and is not within 10,000 feet of any of the existing public wells shown in the map.
21. Storage and Use of Chemicals shall be comply with all associated state and federal laws.

PennTerra ENGINEERING INC.

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REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
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NEVIN L. GROVE
LAND SURVEYOR
No. SU061171
Seal

Designer CJW
Draftsman CJW
Proj.Manager MAT
Surveyor MAK/JDF
Perimeter Ck.
Book 543 Pg 1
File 17125.10-FINAL-03-SIGNATURES & NOTES
Layout SIG&NOTES

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

SIGNATURES & NOTES

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE NONE
SHEET NO. 3

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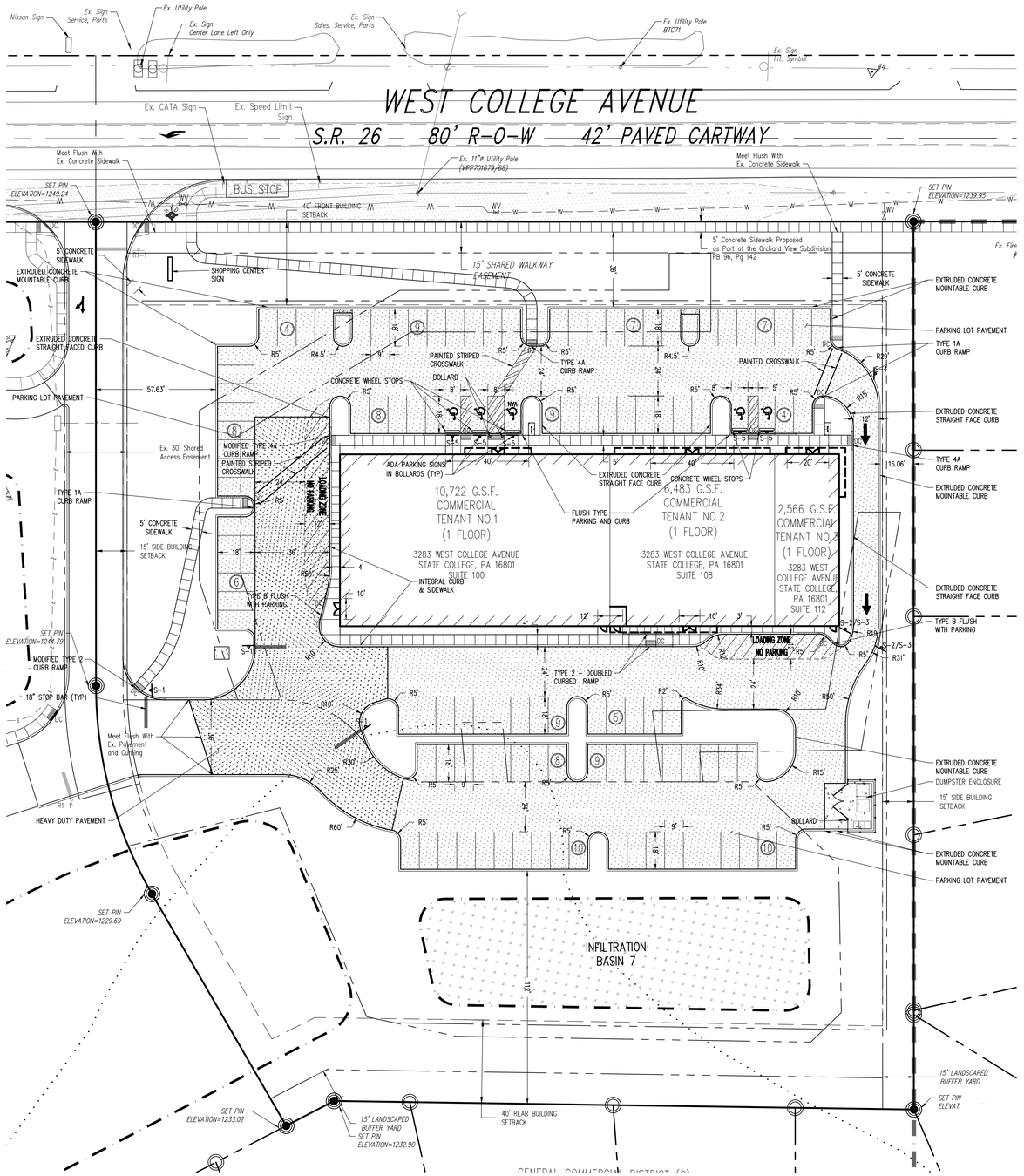
CONSTRUCTION NOTES

1. Field survey data prepared by PennTerra Engineering, Inc. Contractor shall field verify all information and contact the site Owner or Owner's representative in the event of a discrepancy.
2. The Project Benchmark is a masonry nail set on the southwest corner of the electric vault located on Tax Parcel 24-004-067A along West Whitehall Road. Elevation = 1254.41'.
3. The Contractor shall verify the location of manholes, inlets valves, etc. Contractor shall test pit existing utilities as deemed necessary within the limits of construction to determine the exact location and depth as required. All existing utilities shall be retained unless marked otherwise, and appurtenances shall be adjusted to final grade. Damage to existing conditions and utilities to remain shall be repaired as required to the Owner's satisfaction at the expense of the Contractor. Contractor shall notify Owner or Owner's representative in the event of potential conflicts or discrepancies of exiting utilities.
4. All areas disturbed during construction, not designated to receive paving or mulch, shall be fine graded, topsoiled, & seeded unless otherwise noted in the construction drawings, site specifications or instructed by the Owner.
5. The Contractor shall repair or replace all curb, pavement, utilities, sidewalks, landscaping, etc., within the site damaged during construction that are not indicated to be removed. All repairs or replacements are at the Contractor's expense.
6. The Contractor shall be responsible for all costs and work required to adjust existing and proposed utilities and appurtenances to finished grades within the limits of work.
7. The Contractor shall be responsible for coordination with utility companies on location/removal and/or replacement of electrical, phone, gas, sanitary, water, and cable services.
8. All paving to be removed shall be sawcut to provide a sharp clean edge. Existing bituminous pavement shall be removed as required for new curb, walkway, or utility construction. Refer to detail sheets for specific curb type of installation. Contractor shall then mill and/or patch bituminous paving and install scratch course as required to meet existing or proposed grades. All new bituminous paving joints shall be sealed with AC-20. It there a new standard?
9. The Contractor shall verify elevations of existing paving at new paving connection locations before the paving subbase installation and report any discrepancies that will affect the drainage of the areas to the Owner's representative.
10. The Contractor shall notify Owner's testing agency before any placement and compaction of fills on the site. Fill areas shall be prepared and compacted per the project specifications and certified by the Owner's testing agency. Contractor shall be responsible for removal, retesting, and replacement of fills not meeting the specifications. The Contractor is also responsible for all expenses associated with replacement of fills not meeting the specifications.
11. The Contractor shall notify assigned inspection agency before any retaining wall construction. Retaining walls shall be constructed per the project specification approved building permit and certified by the assigned inspection agency.
12. The Contractor shall maintain one set of contract documents on site to be utilized for record documents. Field records of the depth and locations of all underground service utilities (water, sanitary sewer, storm drains, primary and secondary electric, gas, and cable television) shall be added to the record set by the Contractor as well as all field revisions and adjustments
13. The Contractor shall contact PA one call system @ 1-800-242-1776 at least three (3) days before construction activities.
14. All fill material brought on to the job by the Contractor must comply with all applicable D.E.P. regulations regarding clean fill.
15. The Contractor shall provide and maintain traffic control measures in accordance with the PennDOT standards, and as required by local agencies when working in and/or along streets, roads, highways, etc. It shall be the Contractor's responsibility to obtain approval of the traffic control plan?
16. The Contractor shall refer to the architectural plans for the exact location of utility entrances, building dimensions, roof leaders exit doors, exit ramps, and porches. All site work shall be done in accordance with the plans prepared by PennTerra Engineering, the current regulations of the governing municipality, and all other pertinent federal, state & local laws. Any conflicts between the architectural plans and site plans shall be reported immediately to the Owner's representative.
17. The Contractor shall comply at all times with applicable federal, state and local laws, provisions, and policies governing safety and health, including the Federal Construction Safety Act (Public Law 91-54), Federal Register, Chapter XVII, Part 1926 of Title 29 regulations, occupational safety and health regulations for construction, and subsequent publications updating these regulations.
18. All site work shall be done in accordance with the plans prepared by PennTerra Engineering Inc., the current requirements of the Ferguson Township, Centre County, the applicable sections of the PennDOT Standard Specifications for Roadway Construction, and all other pertinent federal and state laws.
19. Any areas designated for approved septic systems must remain undisturbed. Any damage to approved septic areas shall be the responsibility to the contractor.
20. The storage or removal of excess topsoil shall be coordinated with the owner or owner's representative.



SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Zoning Boundary
- Property Corner Found
- Property Corner To Be Set
- PennTerra Control Point
- Project Benchmark

EXISTING FEATURES LEGEND

- Existing Curbing & Edge of Pavement
- Existing Bituminous Areas
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED HEAVY DUTY PAVEMENT AREAS
- PROPOSED STORMWATER BASIN/ BEST MANAGEMENT PRACTICE (BMP) FACILITIES
- PROPOSED PAINTED SITE CROSSWALK
- PROPOSED PAINTED HANDICAPPED PARKING SYMBOLS
- PROPOSED TRAFFIC FLOW ARROWS (NOT PAINTED)
- PROPOSED PARKING STALL COUNT
- PROPOSED SIGN W/ LABEL
- PROPOSED DEPRESSED CURB W/ CURB TRANSITION
- PROPOSED HANDICAPPED RAMP

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

PennTerra ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003-E
Seal

Seal

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-05-GEOMETRY
Layout	GEOMETRY

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

GEOMETRY & MATERIALS PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. 5

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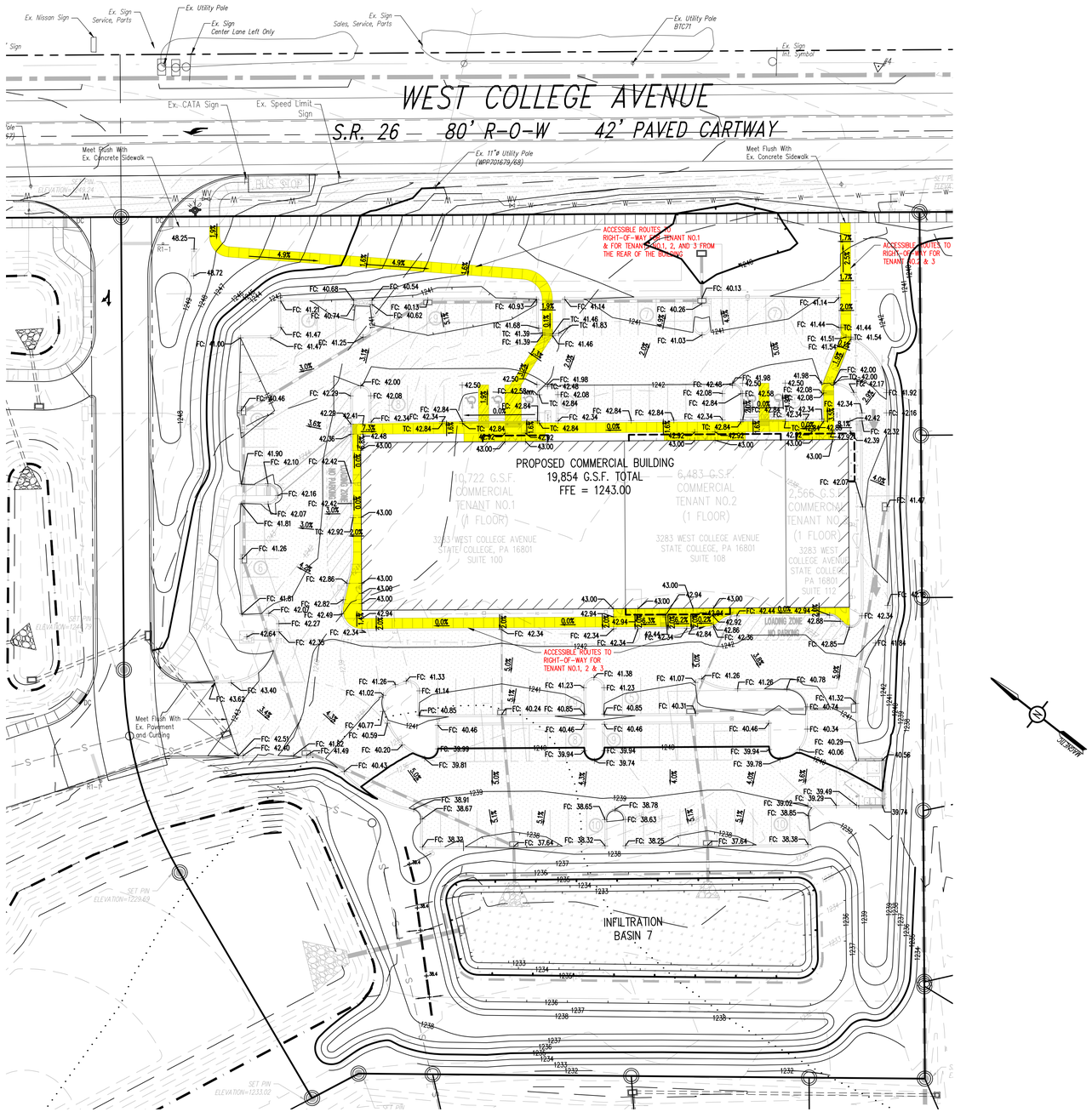
GRADING NOTES

1. The Contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid. Submission of a bid shall be construed to mean the Contractor has reviewed the site and is familiar with conditions and constraints of the site. Should this be in the General Construction notes?
2. Before excavation, all underground utilities shall be located in the field by the proper authorities. The Contractor shall notify pa one call 1-800-242-1776. The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the Contractor to determine the existence and exact location of all utilities and underground structures.
3. All existing trees, vegetation, pavements, concrete foundations, structures and organic topsoil shall be stripped and removed from new construction areas unless noted otherwise.
4. Maximum slopes shall be 3:1 (horizontal:vertical) unless noted otherwise.
5. All areas not paved shall be sodded, topsoiled, seeded, mulched or landscaped unless otherwise noted in the construction drawings, site specifications or instructed by the Owner.
6. Contractor shall refer to the geotechnical report prior to initiation of any earthwork activity.
7. Contractor shall refer to other plans within this construction set for other pertinent information.
8. The maximum slope within all the handicapped spaces shall be 2.00% in any direction.
9. The maximum slope for all on-site sidewalks shall be 4.90% with a maximum cross slope of 2.00% and curb ramps shall have a maximum slope of 8.30%
10. Proposed spot elevation are to bottom of curb unless noted otherwise.
11. The Contractor shall notify Owner's testing agency before any placement and compaction of fills on the site. Fill areas shall be prepared and compacted per the project specifications and certified by the Owner's testing agency. Contractor shall be responsible for removal, retesting, and replacement of fills not meeting the specifications. The Contractor is also responsible for all expenses associated with replacement of fills not meeting the specifications.
12. All fill material brought on to the job by the Contractor must comply with all applicable D.E.P. regulations regarding clean fill.
13. Refer to the latest version of the Orchard Square Stormwater Management Site Plan set.

ADA ACCESSIBILITY GUIDELINES

Notable Guidelines per 2010 ADA Standards for Accessible Route Design:

1. The running slope of walking surfaces shall not be steeper than 1:20, and the cross slope of walking surfaces shall not be steeper than 1:48.
2. The clear width of walking surfaces shall be 36 inches minimum.
3. Handrails shall be provided along accessible route walking surfaces with running slopes steeper than 1:20 except at curb ramps.
4. Door openings shall provide a clear width of 32 inches minimum. Openings more than 24 inches deep shall provide a clear opening of 36 inches minimum.
5. Ramp runs shall have a running slope not steeper than 1:12, and the cross slope of ramp runs shall not be steeper than 1:48.
6. The rise for any ramp run shall be 30 inches maximum.
7. Ramps shall have landings at the top and bottom of each ramp run, and must comply with Section 405.7 of the 2010 ADA Standards
8. Curb ramps shall not be steeper than 1:20, curb ramp side flares shall not be steeper than 1:10, and landings shall be provided at the tops of curb ramps.
9. Curb ramp landings shall be 36 inches minimum, and the landing clear width shall be at least as wide as the curb ramp (excluding flared sides).
10. Parking spaces shall comply with Section 502 of the 2010 ADA Standards.
11. Handicap car parking spaces shall be 96 inches wide minimum and van parking spaces shall be 132 inches wide minimum, and shall have an adjacent access aisle complying with Section 502.3 of the 2010 ADA Standards.
12. Access aisles serving car and van parking spaces shall be 60 inches wide minimum, and shall extend the full length of the parking space(s) they serve.
13. Reference 2010 ADA Standards for Accessible Route Design for additional information.



SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Zoning Boundary
- Property Corner Found
- Property Corner To Be Set
- PennTerra Control Point
- Project Benchmark

EXISTING FEATURES LEGEND

- Existing Curbing & Edge of Pavement
- Existing Bituminous Areas
- Existing Contours w/ Elevation (1's & 2's)
- Existing Contours w/ Elevation (5's & 10's)
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign
- Existing Soil Limit Line / Boundary
- Existing Soil Type

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED MINOR CONTOURS W/ ELEVATION (1's & 2's)
- PROPOSED MAJOR CONTOURS W/ ELEVATION (5's & 10's)
- 69.87 — PROPOSED SPOT ELEVATION
- 2.0% — PROPOSED GRADE SLOPE
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER ROOF DRAIN
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C
- PROPOSED STORMWATER BASIN/ BEST MANAGEMENT PRACTICE (BMP) FACILITIES
- PROPOSED PAINTED SITE CROSSWALK
- VAN — PROPOSED PAINTED HANDICAPPED PARKING SYMBOLS
- PROPOSED TRAFFIC FLOW ARROWS (NOT PAINTED)
- 152 — PROPOSED PARKING STALL COUNT
- PROPOSED SIGN W/ LABEL
- DEPRESSED CURB TRANSITION CURB — PROPOSED DEPRESSED CURB W/ CURB TRANSITION
- PROPOSED HANDICAPPED RAMP
- ADA ACCESSIBLE ROUTE TO R-O-W

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003-E

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-06-GRADING
Layout	GRADING

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

GRADING & STORMWATER MANAGEMENT PLAN

PROJECT NO.
17125.10

DATE
FEBRUARY 4, 2022

SCALE
1" = 30'

SHEET NO.
6.A

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SURVEY FEATURES LEGEND

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EXISTING FEATURES LEGEND

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- Existing Contours w/ Elevation (5's & 10's)
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- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED MINOR CONTOURS W/ ELEVATION (1's & 2's)
- PROPOSED MAJOR CONTOURS W/ ELEVATION (5's & 10's)
- PROPOSED SPOT ELEVATION
- PROPOSED GRADE SLOPE
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER ROOF DRAIN
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C
- PROPOSED STORMWATER BASIN/ BEST MANAGEMENT PRACTICE (BMP) FACILITIES
- PROPOSED PAINTED SITE CROSSWALK
- PROPOSED PAINTED HANDICAPPED PARKING SYMBOLS
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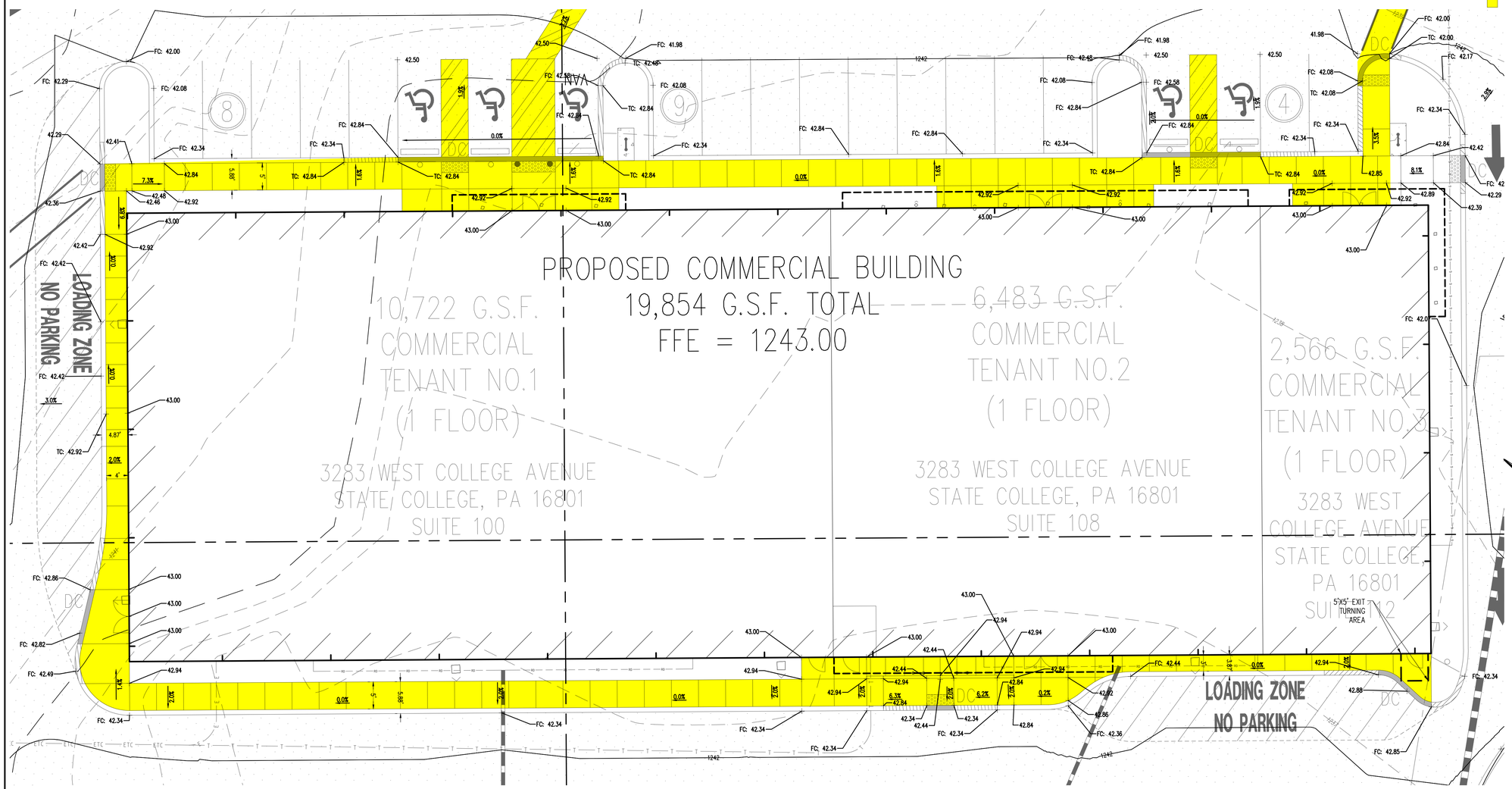
- PROPOSED DEPRESSED CURB W/ CURB TRANSITION
- PROPOSED HANDICAPPED RAMP
- ADA ACCESSIBLE ROUTE TO R-O-W



GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

PennTerra
ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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Book	543 Pg 1
File	17125.10–FINAL–06.B–GRADING ENLARGEMENT
Layout	GRADING

Date	Description
03/04/2022 CJW	REVISED PER TWP COMMENTS

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

GRADING ENLARGEMENT PLAN AT BUILDING

PROJECT NO. 17125.10

DATE FEBRUARY 4, 2022

SCALE 1" = 10'

SHEET NO. **6.B**

P:\lddproj\2017\17125.10\Design\plot files\final plans\17125.10-FINAL-06.B-GRADING ENLARGEMENT.dwg, 3/7/2022 12:26:08 PM, 1:1

UTILITY NOTES

1. All site work shall be done in accordance with the plans prepared by PennTerra Engineering Inc., the current requirements of the governing municipality, the applicable sections of the PennDOT standard specifications for roadway construction and all other pertinent federal and state laws.
2. The Contractor shall comply at all times with applicable federal, state and local laws, provisions, and policies governing safety and health, including the federal construction safety act (public law 91–54). federal register, chapter xvii, part 1926 of title 29 regulations, occupational safety and health regulations for construction, and subsequent publications updating these regulations.
3. The Contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid. submission of a bid shall be construed to mean the Contractor has reviewed the site and is familiar conditions and constraints of the site.
4. Before excavation, all underground utilities shall be located in the field by the proper authorities. the Contractor shall notify pa one call at 1–800–242–1776. The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the Contractor to determine the existence and exact location of all utilities and underground structures
5. It is the responsibility of the Contractor to bid and perform all utility work in compliance to all applicable local and state codes and regulations. The Contractor shall be responsible for all fees associated with the installation, testing and final acceptance of all proposed utilities construction.
6. Contractor shall be responsible for all fees associated with the installation, inspection, testing and final acceptance of all proposed utility construction.
7. Contractor shall coordinate with the appropriate utility company on the addition, removal and/or relocation of utilities and utility poles and the extension of all proposed utilities to the proposed facilities.
8. All utilities shall be installed in accordance with the specifications of the respective utility company. It is the responsibility of the Contractor to ensure all utilities are installed correctly to meet project requirements whether performed by the Contractor or not.
9. Contractor shall verify all utility service connections at the proposed building with the architectural/mechanical/plumbing/electrical plans.
10. An as–built drawing of new utility services shall be prepared by the Contractor and submitted to the Owner upon completion of the project.
11. All sanitary sewer & water lines shall have 4' minimum coverage.
12. All water service lines shall be constructed with 48" minimum cover.
13. All public water main construction and all private water main & lateral service construction shall be in accordance with the water authority's standards and specifications.
14. All 8" public water lines shall be ductile iron pile class 52 min manufactured in accordance with AWWA C150 & C151 standards, & shall be cement lined, and bituminous seal coated inside & out in accordance with AWWA C140 standards.
15. All private water mains shall be ductile iron Class 52 min manufactured in accordance with ANSI/AWWA C150 & C151 standards, & shall be cement lined, and bituminous seal coated inside & out in accordance with ANSI/AWWA C140 standards.
16. All 6" water service lines to fire hydrants off of the 8" water main shall be ductile iron Class 52 manufactured in accordance with ANSI/AWWA C150 & C151 standards, shall be cement lined & shall be bituminous seal coated inside & out in accordance with ANSI/AWWA C140 standards. PVC is acceptable to some authorities.
17. All sanitary sewer service laterals shall be in accordance the sanitary sewer authority's standards and specifications. PVC pipe material shall be as shown on plan.

STATE COLLEGE BOROUGH WATER AUTHORITY
All private water main & lateral service construction shall be in accordance with State College Borough Water Authority's (SCBWA) "material & installation specifications for "private" distribution lines, service lines & fire hydrants", latest edition

All water line pipes shall meet the State College Borough Water Authority's "public water main, service connections & fire hydrant specifications for Contractor installation" as well as "material & installation specifications for "private" distribution lines, service lines & fire hydrants", latest edition.

UNIVERSITY AREA JOINT AUTHORITY
Sanitary sewer laterals & clean–outs beyond UAJA's utility easement shall be PVC schedule 40 in accordance with UAJA specifications. Sanitary sewer laterals within the utility easement shall be PVC SDR–35.

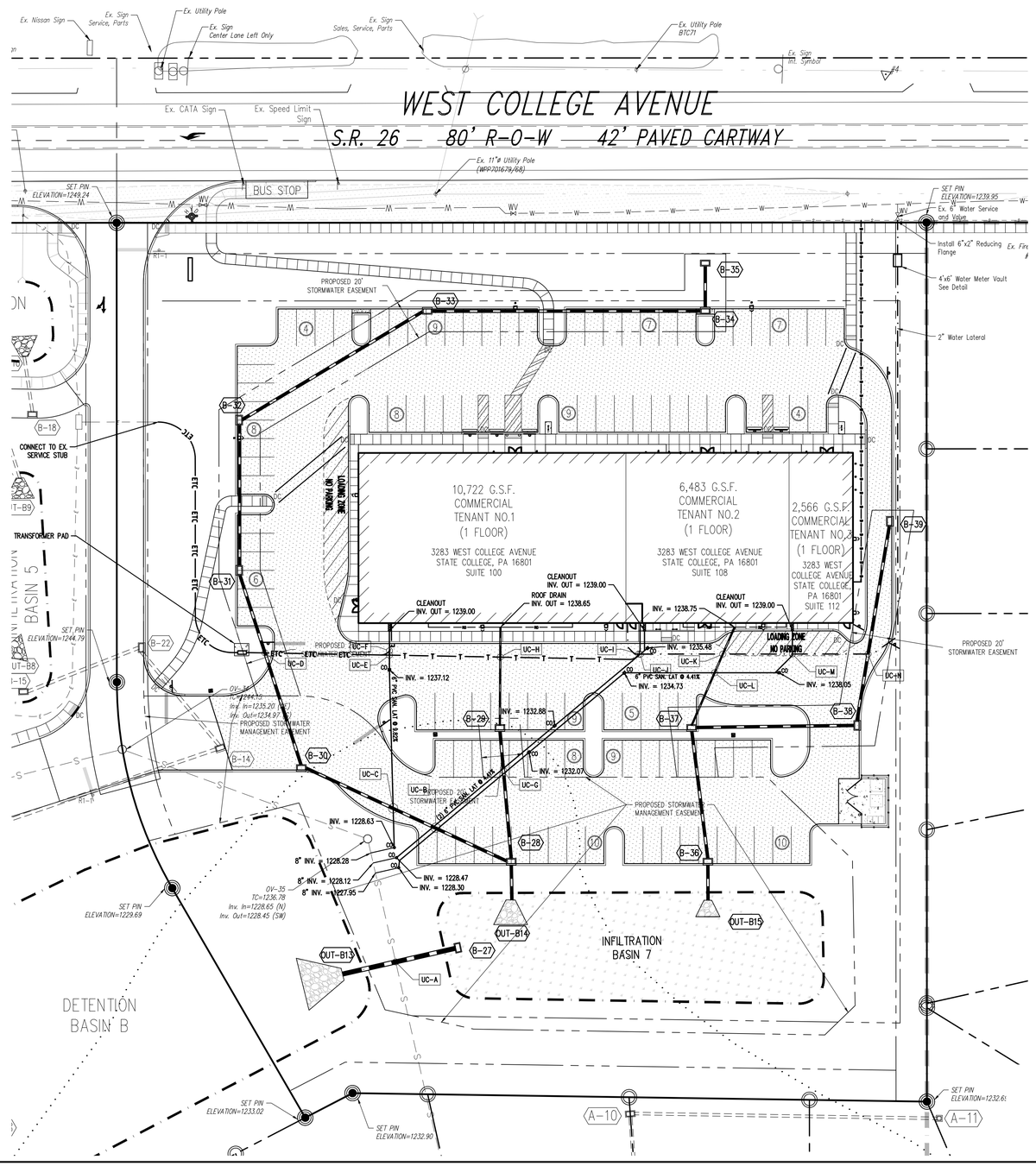
Contractor shall coordinate depths of non–gravity utility lines gravity line inverts & other non–gravity lines to obtain adequate depths, clearances, & coverage.

The Contractor shall refer to the architectural plans for the exact location of utility entrances, building dimensions, roof leaders exit doors, exit ramps, and porches. All site work shall be done in accordance with the plans prepared by PennTerra Engineering, the current regulations of the governing municipality, and all other pertinent federal, state & local laws. Any conflicts between the architectural plans and site plans shall be reported immediately to the Owner's representative

UTILITY CROSSING TABLE

CROSSING KEY	GROUND ELEV.	UTILITY	INVERT ELEV.	CLEARANCE BETWEEN LINES
UC–A	1235.43	24" STORM	1230.47	3.32'
		8" SANITARY MAIN	1226.48	
UC–B	1238.72	15" STORM	1233.15	3.15'
		(2) 6" SANITARY LAT.	1229.50	
UC–C	1239.47	15" STORM	1233.66	2.66'
		6"SANITARY LAT.	1230.50	
UC–D	1242.80	4" ELECTRIC SERVICE	1239.97	4.43'
		15" STORM	1234.29	
UC–E	1242.11	4" TELECOM SERVICE	1239.28	1.00'
		6" SANITARY LAT.	1237.78	
UC–F	1242.20	4" ELECTRIC SERVICE	1239.37	1.00'
		6" SANITARY LAT.	1237.87	
UC–G	1239.86	15" STORM	1235.70	3.79'
		(2) 6" SANITARY LAT.	1231.41	
UC–H	1242.01	8" ROOF DRAIN	1238.15	1.00'
		*4" TELECOM SERVICE	1236.82	
UC–I	1242.13	4" TELECOM SERVICE	1239.30	1.17'
		WATER LAT.	1237.80	
UC–J	1242.13	WATER LAT.	1237.80	2.02'
		6"SANITARY LAT	1235.28	
UC–K	1242.13	8" ROOF DRAIN	1238.54	1.00'
		*WATER LAT.	1237.21	
UC–L	1241.62	8" ROOF DRAIN	1238.40	1.23'
		6" SANITARY LAT.	1236.67	
UC–M	1241.92	6" SANITARY LAT.	1238.52	1.00'
		*WATER LAT.	1237.37	
UC–N	1242.22	15" STORM	1237.57	1.00'
		*WATER LAT.	1236.24	

*NOTE: UTILITY LINES DENOTED BY (*) ARE TO BE DEFLECTED UNDER THE CROSSING UTILITY LINE TO ACHIEVE THE CLEARANCE BETWEEN LINES LISTED ABOVE.



SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Zoning Boundary
- Property Corner Found
- Property Corner To Be Set
- PennTerra Control Point
- Project Benchmark

EXISTING FEATURES LEGEND

- Existing Curbing & Edge of Pavement
- Existing Bituminous Areas
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Underground Electric
- Existing Gas Line
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED 6" PVC SANITARY SEWER LATERAL W/ CLEAN OUT
- PROPOSED SINGLE UNIT DOMESTIC WATER SERVICE LATERAL W/ CURB BOX
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER 6" ROOF DRAIN
- PROPOSED GAS LINE
- PROPOSED COMBINE ELECTRIC AND TELECOM UTILITY CONDUIT
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C
- PROPOSED WATER SERVICE VALVE
- PROPOSED CLEAN–OUT
- PROPOSED CLEAN–OUT W/ CONC. PAD
- PROPOSED STORMWATER BASIN/ BEST MANAGEMENT PRACTICE (BMP) FACILITIES
- PROPOSED PAINTED SITE CROSSWALK
- PROPOSED PAINTED HANDICAPPED PARKING SYMBOLS
- PROPOSED TRAFFIC FLOW ARROWS (NOT PAINTED)
- PROPOSED PARKING STALL COUNT
- PROPOSED SIGN W/ LABEL
- PROPOSED DEPRESSED CURB W/ CURB TRANSITION
- PROPOSED HANDICAPPED RAMP
- PROPOSED LIGHT FIXTURE & POLE
- PROPOSED LIGHT FIXTURE
- PROPOSED LIGHT FIXTURE
- UTILITY CROSSING LABEL

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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Perimeter Ck.	
Book	543 Pg 1
File	17125.10–FINAL–07–UTILITIES
Layout	UTILITIES

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

UTILITY PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. 7

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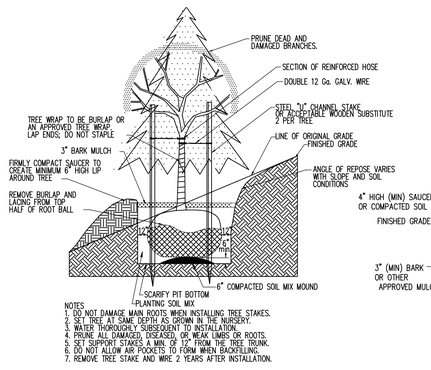
PLANTING SCHEDULE

SYMBOL	KEY	QTY	COMMON NAME	BOTANICAL NAME	SIZE
CANOPY TREES					
	T-1	5	Japanese Zelkova	Zelkova serrata	2" Cal.
	T-2	4	Scarlet Oak	Quercus coccinea	2" Cal.
	T-3	6	London Planetree	Platanus x acerifolia	2" Cal.
	T-4	10	Armstrong Maple	Acer x freemani 'Armstrong'	2" Cal.
	T-5	6	Silver Linden	Tilia tomentosa	2" Cal.
	T-6	6	Thornless Honeylocust	Gleditsia triacanthos inermis	2" Cal.
	T-7	5	Red Sunset Maple	Acer rubrum 'Red Sunset'	2" Cal.
	T-8	3	Kwanzan Cherry	Prunus serrulata 'Kwanzan Cherry'	2" Cal.
UNDERSTORY/EVERGREEN TREES					
	E-1	20	Norway Spruce	Picea abies	6' Ht.
	E-2	16	Red Pine	Pinus resinosa	6' Ht.
	E-3	23	Concolor Fir	Abies concolor	6' Ht.
SHRUBS					
	S-1	41	Ninebark	Physocarpus opulifolius	36"
	S-2	63	Ruby Slipper Oakleaf Hydrangea	Hydrangea quercifolia 'Ruby Slipper'	36"
	S-3	20	Burkwood Viburnum	Viburnum x burkwoodi	36"
	S-4	47	Bottlebrush Buckeye	Aesculus parviflora	36"
	S-5	58	Red Chokeberry	Aronia arbutifolia	36"
	S-6	25	Red Twig Dogwood	Cornus sericea	36"
	S-7	42	Pink Summersweet	Clethra alnifolia 'Rosea'	36"
	S-8	69	Densiformis Yew	Taxus x media 'Densiformis'	36"
	S-9	10	English Spreading Yew	Taxus baccata "Repandens"	36"
	S-10	20	Elijah Blue Fescue	Festuca ovina glauca "Elijah Blue"	3.5" Pots 15" O.C.

NOTE: ALL TREES AND SHRUBS SHALL BE PLANTED IN ACCORDANCE WITH THE "GUIDE TO PLANTING IN FERGUSON TOWNSHIP".

LANDSCAPE NOTES

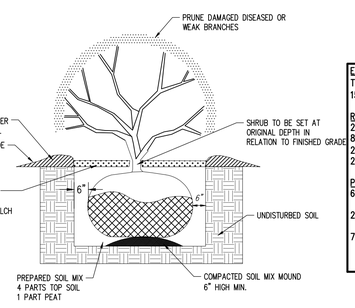
1. Trees are to be mulched individually in a 4' diameter circle.
2. The mulch is to be double shredded hardwood bark mulch, well-aged and dark in color. Apply the mulch 3-4" thick.
3. Plant material substitutions may only be permitted at the approval of the owner and approving municipality prior to planting.
4. Any plantings which do not survive for a period of one year from the date of planting are to be replaced by the landscape contractor at no additional cost to the Owner.
5. All new plant material is to be kept watered by the landscape contractor when working on site until acceptance of the completion of the landscape or end of the season (then resume next season until project is completed). The owner will be responsible for watering thereafter.
6. All disturbed areas not being planted in trees or shrubs are to be fine graded with 6" of topsoil and seeded with a hardy perennial grass seed mixture and mulched with straw.
7. Grass must be 2 inches high over 90% of the seeded areas prior to acceptance by the owner.
8. All caliper measurements for landscaping shall be measured at 6" above the root ball.
9. Quantities of plant material noted on the planting schedule are to be verified with quantities shown on the plan which will have priority.
10. See sheet ES2 for lawn and basin bottom seed mixes.



NOTES
1. DO NOT DAMAGE MAIN ROOTS WHEN INSTALLING TREE STAKES.
2. SET TREE AT SAME DEPTH AS GROWN IN THE NURSERY.
3. WATER THOROUGHLY SUBSEQUENT TO INSTALLATION.
4. PRUNE ALL DAMAGED, DISEASED, OR WEAK LIMBS OR ROOTS.
5. SET SUPPORT STAKES A MIN. OF 12" FROM THE TREE TRUNK.
6. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
7. REMOVE TREE STAKE AND WIRE 2 YEARS AFTER INSTALLATION.

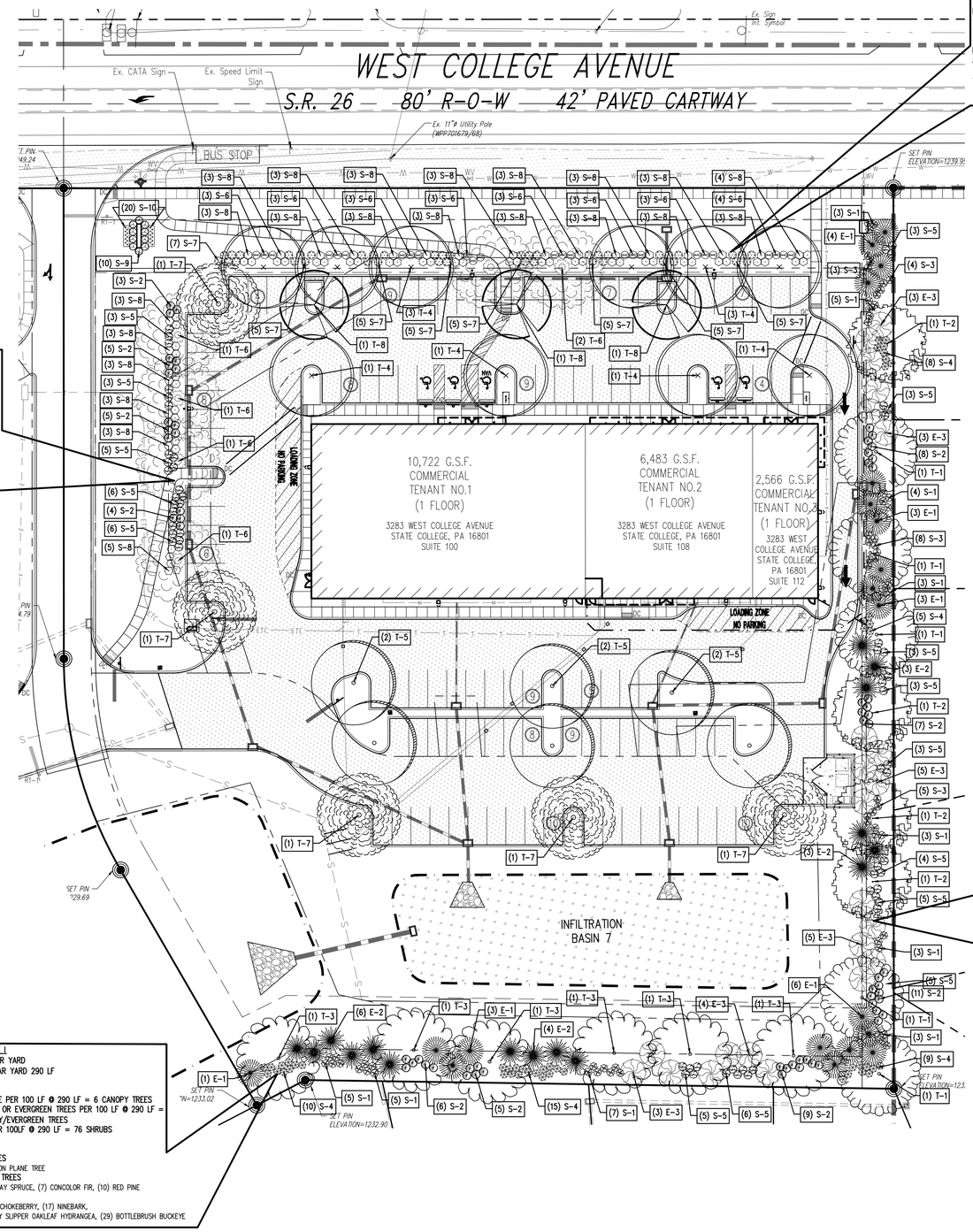
TYPICAL TREE PLANTING (ON SLOPES)

NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL

NOT TO SCALE



CORRIDOR OVERLAY DISTRICT
PARKING BUFFER
12' WIDE - 270 LF

REQUIRED
1 CANOPY/EVERGREEN TREE PER 35 LF @ 270 LF = 8 TREES
15 SHRUBS PER 35LF @ 270 LF = 116 SHRUBS

PROPOSED
8 CANOPY/EVERGREEN TREES
(6) ARMSTRONG MAPLE, (2) Thornless Honeylocust
116 SHRUBS
(25) RED TWIG DOGWOOD, (42) PINK SUMMERSWEET, (49) DENSIFORMIS YEW

CORRIDOR OVERLAY DISTRICT
PARKING BUFFER
10' WIDE - 136 LF

REQUIRED
1 CANOPY/EVERGREEN TREE PER 35 LF @ 136 LF = 4 TREES
15 SHRUBS PER 35LF @ 136 LF = 59 SHRUBS

PROPOSED
4 CANOPY/EVERGREEN TREES
(4) Thornless Honeylocust
60 SHRUBS
(17) RUBY SLIPPER OAKLEAF HYDRANGEA, (20) DENSIFORMIS YEW, (23) RED CHOKEBERRY

EX. GROUP USE I
TYPE "D" BUFFER YARD
15' WIDE - SIDE YARD 427 LF

REQUIRED
2 CANOPY TREE PER 100 LF @ 427 LF = 9 CANOPY TREES
8 UNDERSTORY OR EVERGREEN TREES PER 100 LF @ 427 LF = 35 UNDERSTORY/EVERGREEN TREES
26 SHRUBS PER 100LF @ 427 LF = 112 SHRUBS

PROPOSED
9 CANOPY TREES
(5) KATSURA TREE, (4) SCARLET OAK
35 EVERGREEN TREES
(6) CONCOLOR FIR, (13) NORWAY SPRUCE, (16) RED PINE
112 SHRUBS
(24) NINEBARK, (26) RUBY SLIPPER OAKLEAF HYDRANGEA, (20) BURKWOOD VIRBURNUM, (18) BOTTLEBRUSH BUCKEYE, (24) RED CHOKEBERRY

EX. GROUP USE I
TYPE "D" BUFFER YARD
15' WIDE - REAR YARD 290 LF

REQUIRED
2 CANOPY TREE PER 100 LF @ 290 LF = 6 CANOPY TREES
8 UNDERSTORY OR EVERGREEN TREES PER 100 LF @ 290 LF = 24 UNDERSTORY/EVERGREEN TREES
26 SHRUBS PER 100LF @ 290 LF = 76 SHRUBS

PROPOSED
6 CANOPY TREES
(6) LONDON PLANE TREE
24 EVERGREEN TREES
(7) NORWAY SPRUCE, (7) CONCOLOR FIR, (10) RED PINE
77 SHRUBS
(11) RED CHOKEBERRY, (17) NINEBARK, (20) RUBY SLIPPER OAKLEAF HYDRANGEA, (29) BOTTLEBRUSH BUCKEYE

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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Designer CJW
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Perimeter Ck.
Book 543 Pg 1
File 17125.10-FINAL-09-LANDSCAPE
Layout LANDSCAPE

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

LANDSCAPING PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. 8

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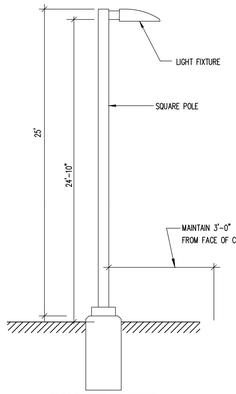
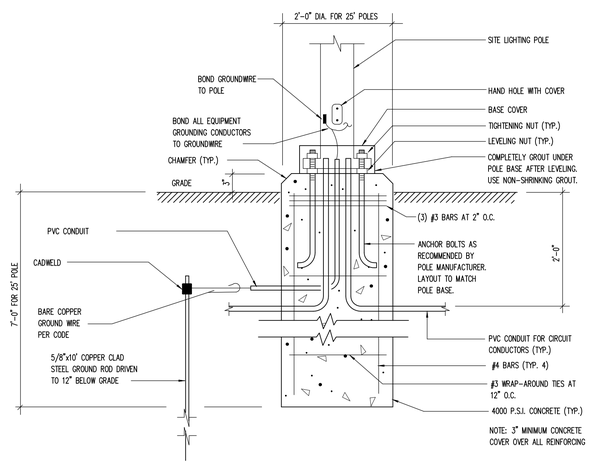
ELECTRICAL NOTES

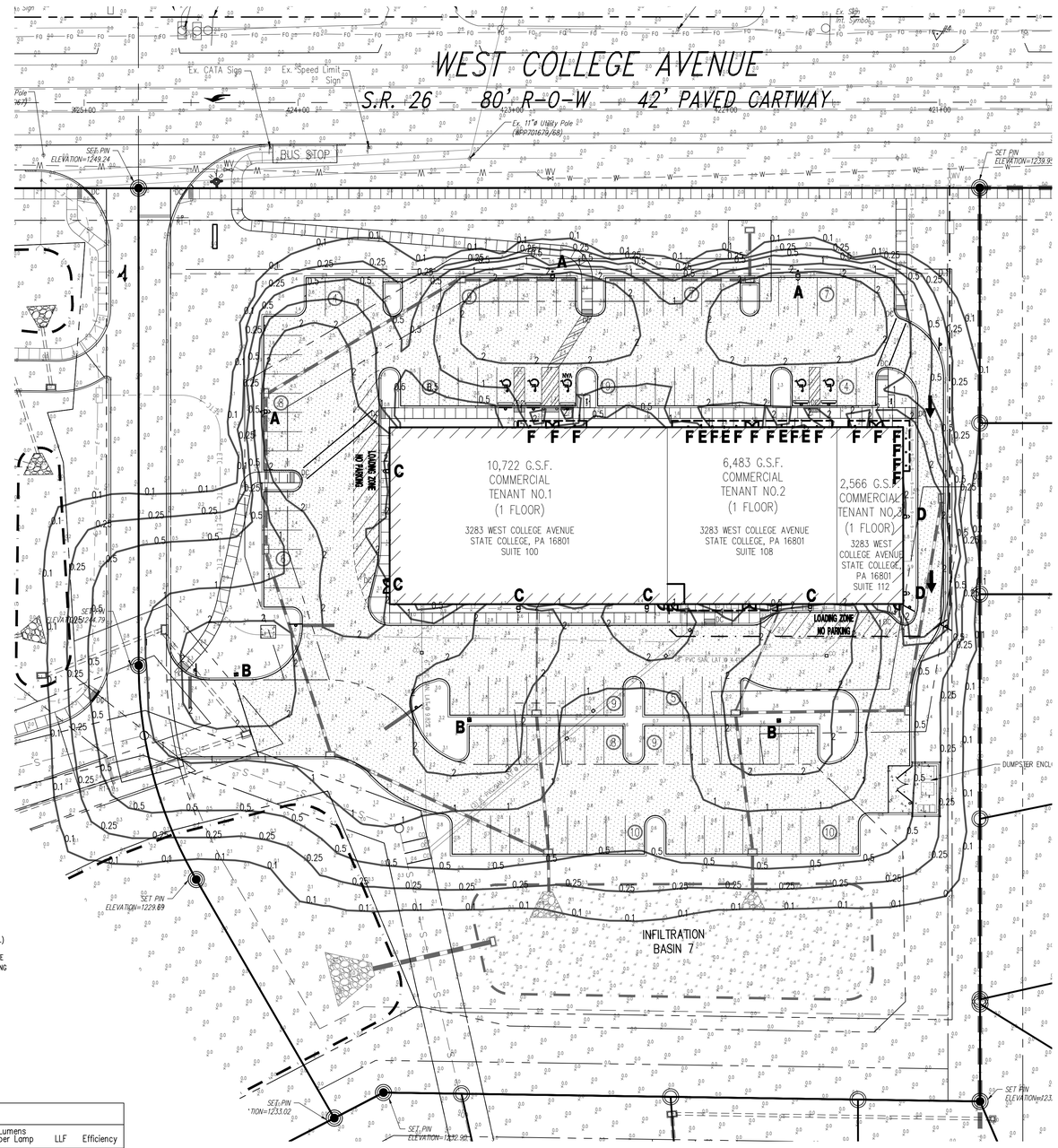
1. Electrical contractor shall verify and coordinate all existing and new underground facilities with all contractors, utility companies, etc. before beginning any underground construction.
2. Wiring under all pavement surfaces shall be in PVC conduit size as indicated – minimum size 1". Electrical contractor shall field verify location of all roadways, walkways, patios, terraces, etc. and provide conduit under all locations for wiring access.
3. All circuits shall be complete with ground wire.
4. All conduit shall be set at a minimum depth of 24".
5. All wiring trenches shall be run as close as possible to all curbs – no wiring shall run through the center of any island, planter, terrace, courtyard, etc. Electrical contractor shall verify conduit location in the field before excavating.
6. Contractor shall provide electrical design services and drawings per latest building & electrical code standards for lighting connections, circuitry & controller, and shall be responsible for any code approvals for the design.
7. Proposed fixtures for curfew lighting shall be installed on same circuit to be set to remain on past after-business hours. All other proposed fixtures shall be set to be turned off for after-business hours.
8. Electrical installation for lighting shall include required wiring and conduit to 5' outside of the building. Building contractor to supply control panels, timing clocks and connection to exterior wiring.



SITE LIGHTING POLE DETAIL – TYPE A & B FIXTURES

NOT TO SCALE





SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Zoning Boundary
- Property Corner Found
- Property Corner To Be Set

EXISTING FEATURES LEGEND

- Existing Curbing & Edge of Pavement
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Overhead Utility Line w/ Pole
- Existing Underground Electric
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Sign

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED 6" PVC SANITARY SEWER LATERAL W/ CLEAN OUT
- PROPOSED SINGLE UNIT DOMESTIC WATER SERVICE LATERAL W/ CURB BOX
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER ROOF DRAIN
- PROPOSED GAS LINE
- PROPOSED COMBINED UTILITY CONDUIT
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C
- PROPOSED CLEAN-OUT
- PROPOSED CLEAN-OUT W/ CONC. PAD
- PROPOSED STORMWATER BASIN/ BEST MANAGEMENT PRACTICE (BMP) FACILITIES
- PROPOSED PAINTED SITE CROSSWALK
- PROPOSED PAINTED HANDICAPPED PARKING SYMBOLS
- PROPOSED TRAFFIC FLOW ARROWS (NOT PAINTED)
- PROPOSED PARKING STALL COUNT
- PROPOSED SIGN W/ LABEL
- PROPOSED DEPRESSED CURB W/ CURB TRANSITION
- PROPOSED HANDICAPPED RAMP

LIGHTING LEGEND

- FOOT CANDLES AT GROUND ELEVATION
- FOOT CANDLE CONTORS

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PAVED AREA		2.0 fc	6.9 fc	0.4 fc	17.3:1	5.0:1
TRESPASS		0.3 fc	6.9 fc	0.0 fc	+ N/A	N/A

LUMINAIRE SCHEDULE

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Filename	Lumens per Lamp	LLF	Efficiency
	A	3	LSI INDUSTRIES, INC	SLM-LED-24L-SIL-FT-40--70CRI-IL	SLICE MEDIUM LED, 24,000 lms, FORWARD THROW DISTRIBUTION, 4,000 CCT 70 CRI, INTEGRAL LOUVER HSS, 25' MOUNTING HEIGHT	SLM-LED-24L-SIL-FT-40-70CRI-IL.IES	15717	1	100%
	B	3	LSI INDUSTRIES, INC	SLM-LED-24L-SIL-5W-40-70CRI	SLICE MEDIUM LED, 24,000 lms, TYPE V DISTRIBUTION, 4,000 CCT 70 CRI, 25' MOUNTING HEIGHT	SLM-LED-24L-SIL-5W-40-70CRI.IES	23670	1	100%
	C	5	EATON – McGRAW-EDISON (FORMER COOPER LIGHTING)	GWC-AF-01-LED-E1-T4FT-600	GALLEON WALL LUMINAIRE (1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS, 11' MOUNTING HEIGHT	GWC-AF-01-LED-E1-T4FT-600.ies	263	1	100%
	D	2	EATON – McGRAW-EDISON (FORMER COOPER LIGHTING)	GWC-AF-01-LED-E1-T4W-600	GALLEON WALL LUMINAIRE (1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS, 8' MOUNTING HEIGHT	GWC-AF-01-LED-E1-T4W-600.ies	260	1	100%
	E	4	BOOM Converted by LUMCat V 07.01.2015 / M.S.		31074 LED 5.3W, 7' MOUNTING HEIGHT	31074_BEGA_IES.ies	318	1	100%
	F	16	COOPER LIGHTING SOLUTIONS – HALO (FORMERLY EATON)	SMD6R6927WH	6" Round Surface Mount, 600 lm, (42) 2700K CCT, 90 CRI LEDS, 10' MOUNTING HEIGHT	SMD6R6927WH.ies	18	1	100%

PennTerra ENGINEERING INC.

CENTRAL PENNSYLVANIA REGION OFFICE:
3075 ENTERPRISE DRIVE
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Fax: 814-237-2308

LANCASTER REGION OFFICE:
3904 B ABEL DRIVE
COLUMBIA, PA 17512
PH: 717-522-5031
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REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003-E

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-10-LIGHTING
Layout	LIGHTING

Date	Description
03/04/2022 CJW	REVISED PER TWP COMMENTS

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

LIGHTING PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. 9

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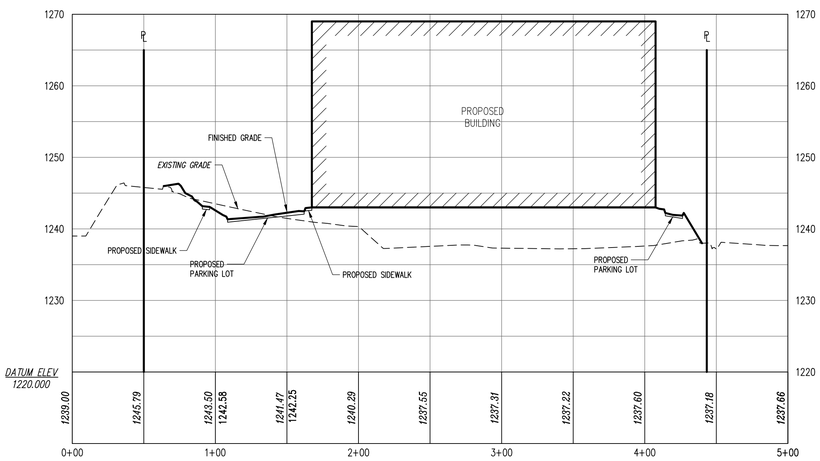
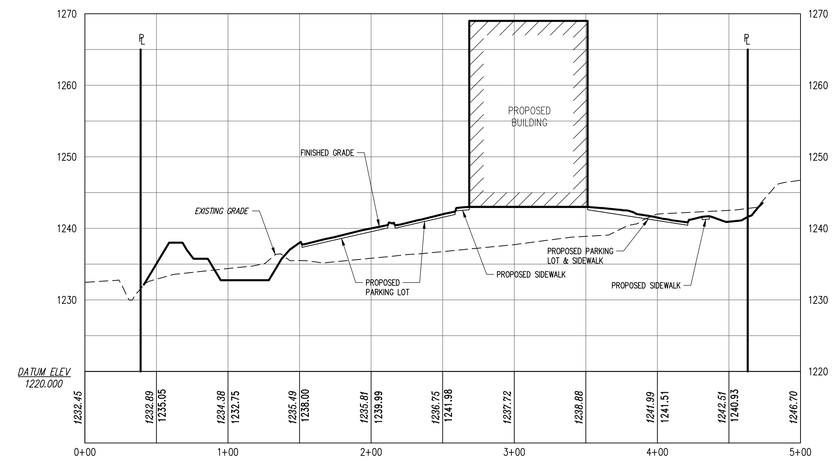


SITE SECTION A–A1

SCALE: HORIZONTAL – 1"=50'
VERTICAL – 1"=5'



SITE SECTION B–B1

SCALE: HORIZONTAL – 1"=50'
VERTICAL – 1"=5'

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JOHN C. SEPP
ENGINEER
040003–E

Seal

Seal

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10–FINAL–11–SECTION
Layout	SECTIONS

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

SITE CROSS SECTIONS

PROJECT NO.
17125.10

DATE
FEBRUARY 4, 2022

SCALE
1" = 50'

SHEET NO.
10

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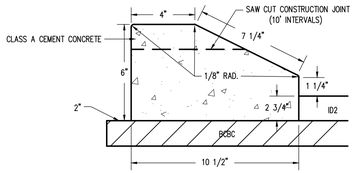
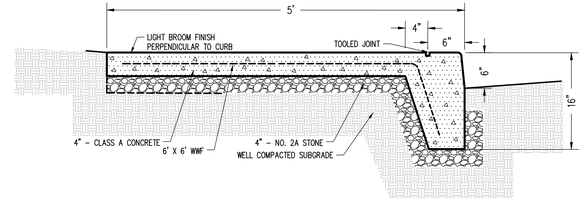


NOTE: IF WEARING COURSE IS NOT TO BE PLACED WITHIN 30 DAYS, SEAL ALONG THE CURB AND ROAD SURFACE WITH AC-20.

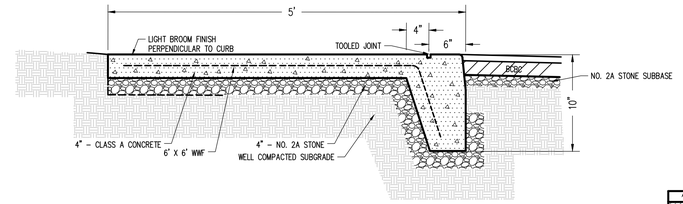
EXTRUDED CONCRETE MOUNTABLE CURB DETAIL

NOT TO SCALE
PD5004



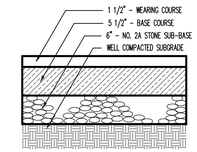
INTEGRAL CURB & SIDEWALK 5' WIDE

NOT TO SCALE



INTEGRAL CURB & SIDEWALK 5' WIDE FLUSH WITH ADA PARKING

NOT TO SCALE

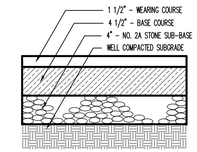


NOTES:
1. WEARING COURSE SHALL BE: SUPERPAVE 9.5MM WEARING COURSE, PG 64-22, SRL-L, < 0.3 TO 3.0 MILLION ESASLS, 50 GYRATION.

2. BASE COURSE SHALL BE: SUPERPAVE 25MM BASE COURSE, PG 64-22, < 0.3 TO 3.0 MILLION ESASLS, 50 GYRATION.

DRIVEWAY ENTRANCE PAVEMENT SECTION

NOT TO SCALE

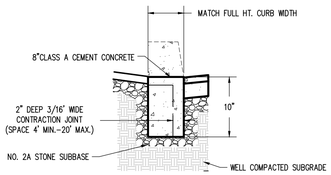


NOTES:
1. WEARING COURSE SHALL BE: SUPERPAVE 9.5MM WEARING COURSE, PG 64-22, SRL-L, < 0.3 MILLION ESASLS, 50 GYRATION.

2. BASE COURSE SHALL BE: SUPERPAVE 25MM BASE COURSE, PG 64-22, < 0.3 MILLION ESASLS, 50 GYRATION.

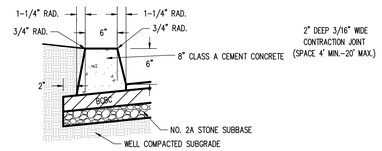
PARKING LOT PAVEMENT SECTION

NOT TO SCALE



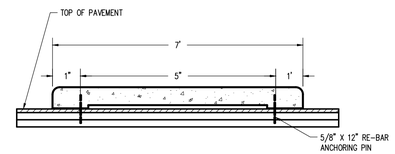
DEPRESSED CONCRETE CURB

NOT TO SCALE



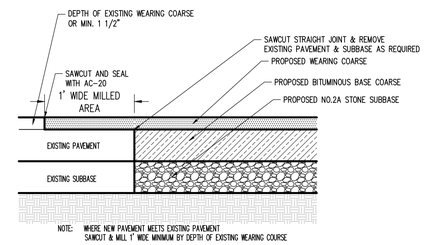
6" EXTRUDED STRAIGHT FACE CONCRETE CURB

NOT TO SCALE
PD5000



CONCRETE BUMPER BLOCK

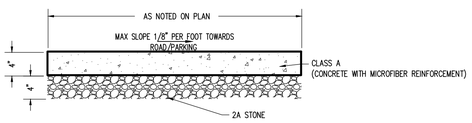
NOT TO SCALE
PD5023



NOTE: WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT SAWCUT & MILL 1' WIDE MINIMUM BY DEPTH OF EXISTING WEARING COURSE

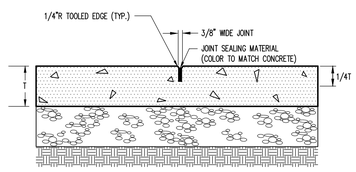
PAVEMENT NOTCH DETAIL

NOT TO SCALE



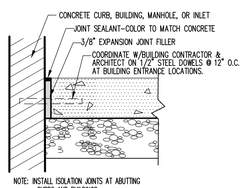
5' CEMENT CONCRETE SIDEWALK

NOT TO SCALE



CONCRETE CONTROL JOINT

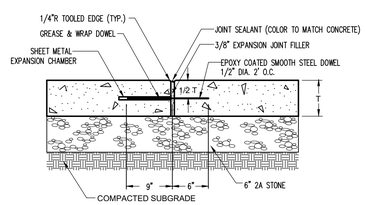
NOT TO SCALE



NOTE: INSTALL ISOLATION JOINTS AT ABUTTING CURBS AND BUILDINGS

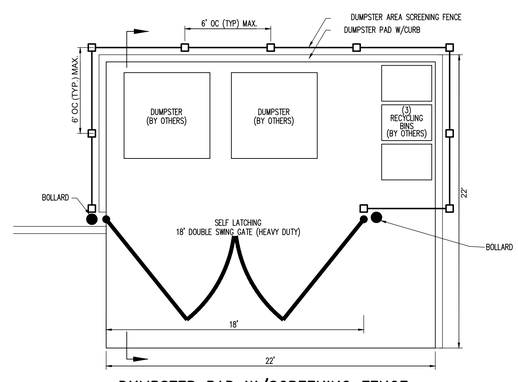
CONCRETE ISOLATION JOINT

NOT TO SCALE



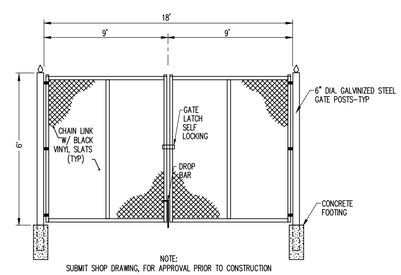
CONCRETE EXPANSION JOINT

NOT TO SCALE



DUMPSTER PAD W/SCREENING FENCE

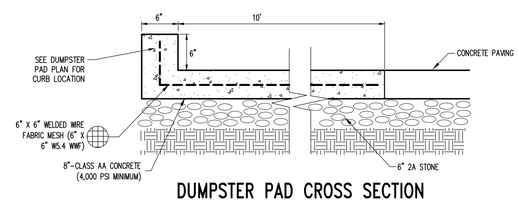
NOT TO SCALE



NOTE:
SUBMIT SHOP DRAWING, FOR APPROVAL PRIOR TO CONSTRUCTION

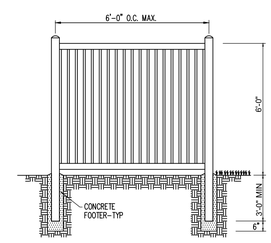
DUMPSTER SCREENING GATE

NOT TO SCALE



DUMPSTER PAD CROSS SECTION

NOT TO SCALE



1. FENCE SHALL BE BUFFTECH CHESTERFIELD 'CERTAGRAIN', 6' HIGH, COLOR NATURAL CLAY, PRIVACY FENCE BY CERTAINTEED OR APPROVED EQUAL MATCHING TIMBER DESIGN.
2. REFER TO WEBSITE FOR ADDITIONAL INSTALLATION AND PRODUCT INFORMATION.
http://www.certainteed.com/products/fence-railing-deck/fence/bufftech

DUMPSTER & BUFFER YARD SCREENING FENCE

NOT TO SCALE

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JOHN C. SEPP
ENGINEER
040003-E

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-11-DETAILS
Layout	DETAILS (1)

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

GENERAL SITE DETAILS

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE N.T.S
SHEET NO. 11

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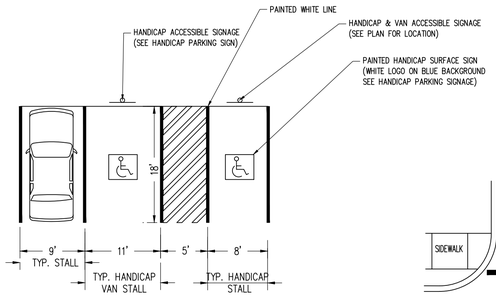
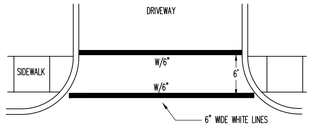


TYPICAL HANDICAP PARKING

NOT TO SCALE



CROSSWALK DETAIL

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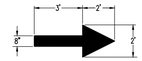
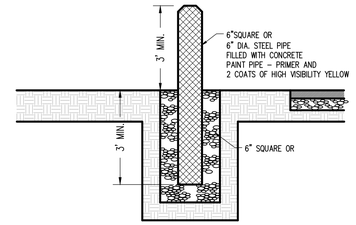


TRAFFIC DIRECTION ARROWS

NOT TO SCALE

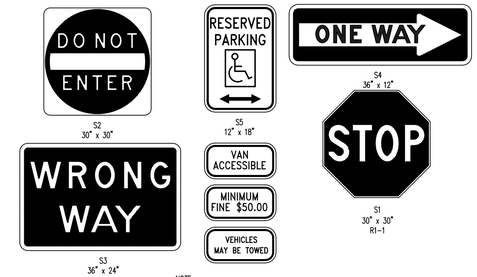
PAINTED STOP BAR

NOT TO SCALE



STEEL BOLLARD DETAIL

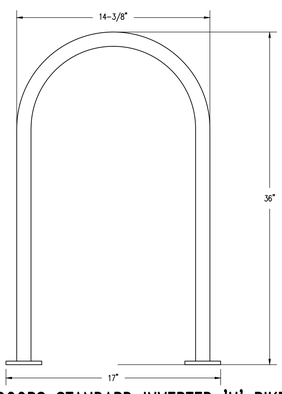
NOT TO SCALE



NOTE:
1. SIGNS TO BE PENNDOT TYPE III HIGH INTENSITY SHEETING OR BETTER.

SIGN DETAILS

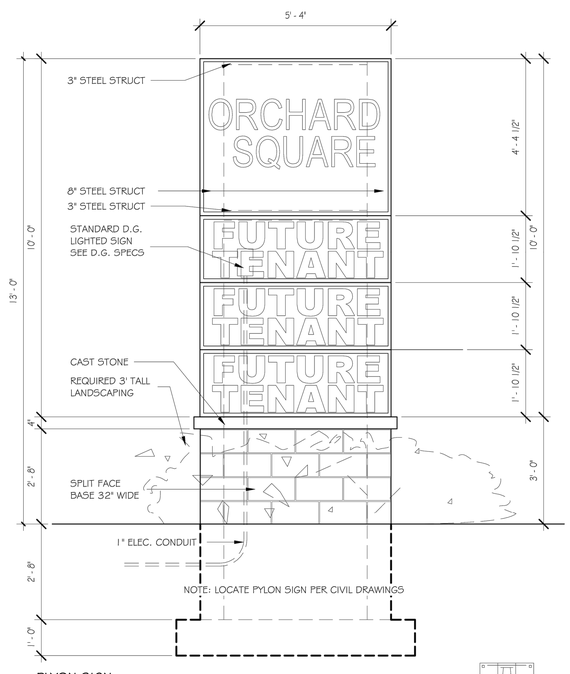
NOT TO SCALE



BELSON OUTDOORS STANDARD INVERTED 'U' BIKE RACK

NOT TO SCALE

NOTES:
1. USE MODEL 5801SM FROM BELSON OUTDOORS OR APPROVED EQUAL.
2. COLOR TO BE SELECTED BY ARCHITECT
3. BIKE RACKS SHALL HAVE 36" CLEARANCE FROM ANY OTHER BIKE RACKS, WALLS, DOORS, POST, COLUMNS OR EXTERIOR LANDSCAPING.

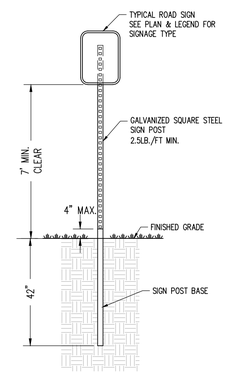


PLYON SIGN

Scale: 1/2" = 1'-0"

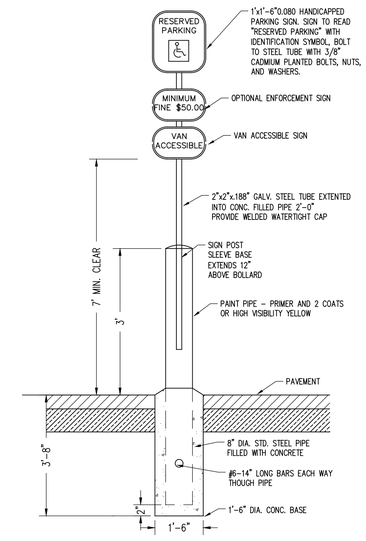
Date: 1/18/2022

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR SIGN STRUCTURAL AND DESIGN INFORMATION.



SIGN POST

NOT TO SCALE



HANDICAPPED PARKING SIGN SHALL CONFORM WITH STATE AND LOCAL CODES AND REGULATIONS.

HANDICAP SIGN POST

NOT TO SCALE

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ENGINEERING INC.

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JOHN C. SEPP
ENGINEER
040003-E

Designer	CJW
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Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-11-DETAILS
Layout	DETAILS (4)

03/04/2022 REVISED PER TWP COMMENTS CJW

Date	Description

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

GENERAL SITE AND SIGN DETAILS

PROJECT NO.
17125.10

DATE
FEBRUARY 4, 2022

SCALE: N.T.S

SHEET NO.: 12

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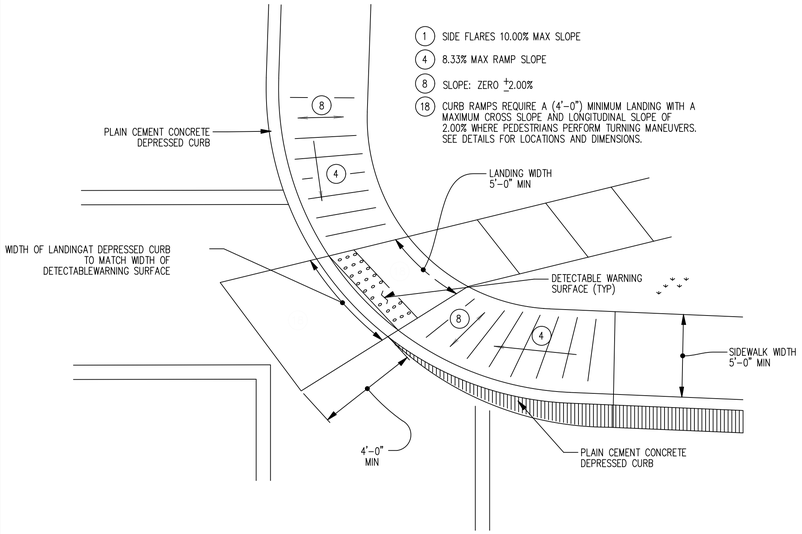
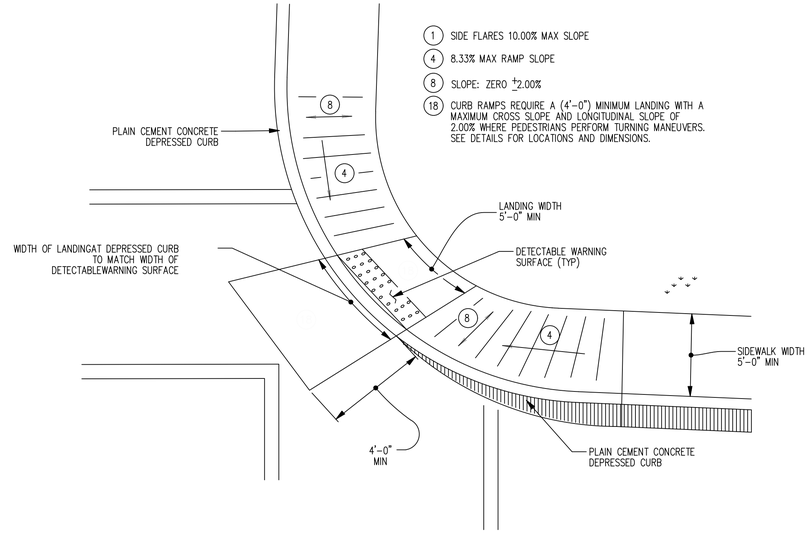


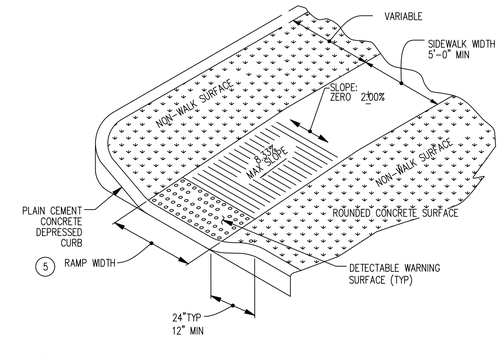
CURB RAMP – MODIFIED TYPE 2

NOT TO SCALE



CURB RAMP – TYPE 2

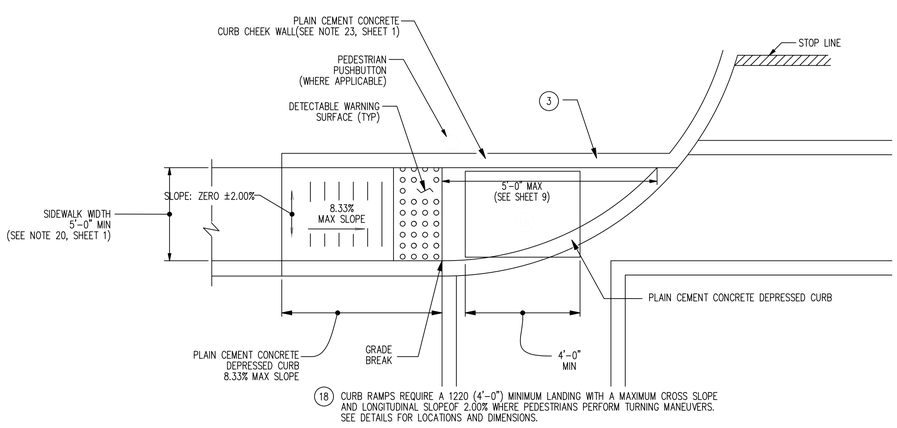
NOT TO SCALE



5 CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0".

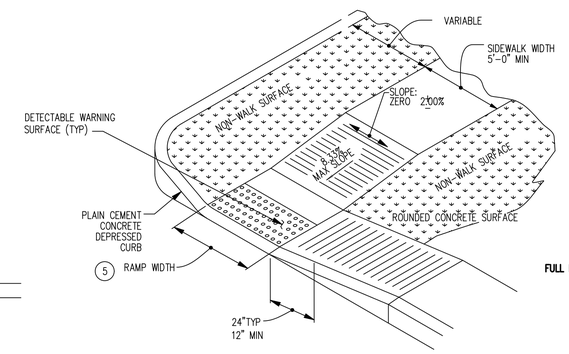
CURB RAMP – TYPE 4A – PARALLEL

NOT TO SCALE



TYPE 1A CURB RAMP

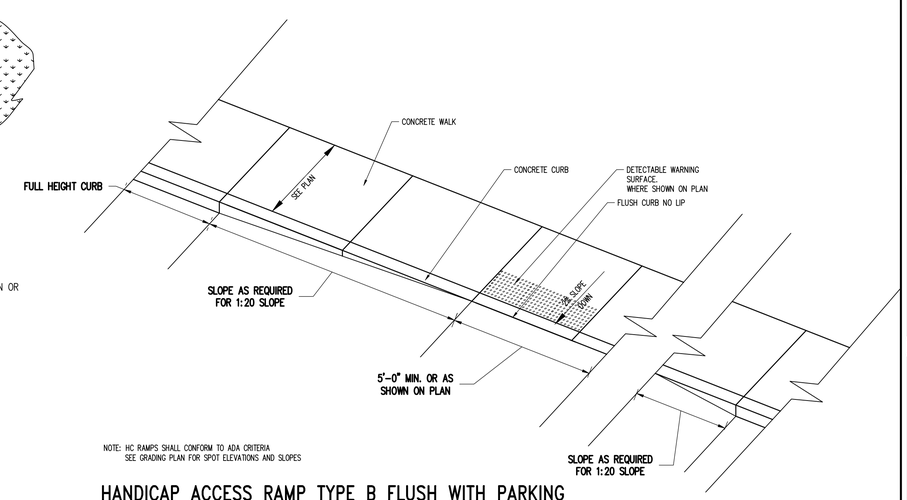
NOT TO SCALE



5 CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0".

CURB RAMP – MODIFIED TYPE 4A – PARALLEL

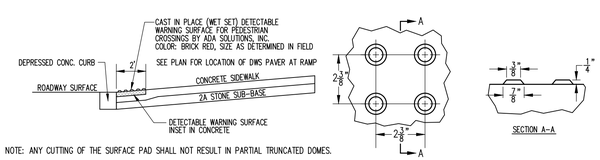
NOT TO SCALE



NOTE: HC RAMPS SHALL CONFORM TO ADA CRITERIA
SEE GRADING PLAN FOR SPOT ELEVATIONS AND SLOPES

HANDICAP ACCESS RAMP TYPE B FLUSH WITH PARKING

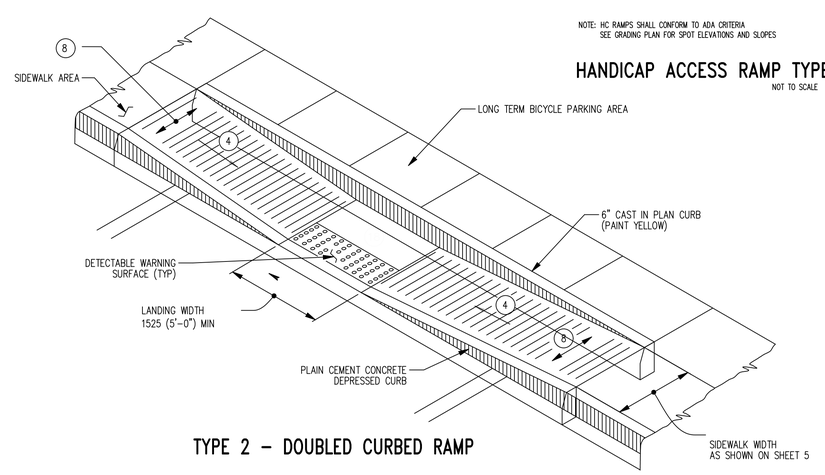
NOT TO SCALE



NOTE: ANY CUTTING OF THE SURFACE PAD SHALL NOT RESULT IN PARTIAL TRUNCATED DOMES.

DETECTABLE WARNING SERVICE / RAMP CROSS SECTION

NOT TO SCALE



TYPE 2 – DOUBLED CURBED RAMP

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003-E

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-11-DETAILS
Layout	DETAILS (3)

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

CURB RAMP DETAILS

PROJECT NO. 17125.10

DATE FEBRUARY 4, 2022

SCALE N.T.S

SHEET NO. 13

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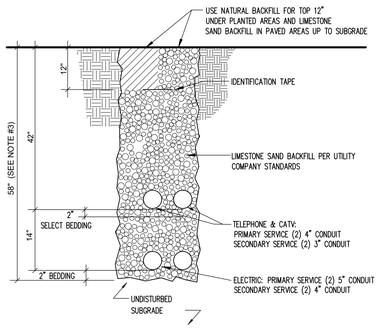
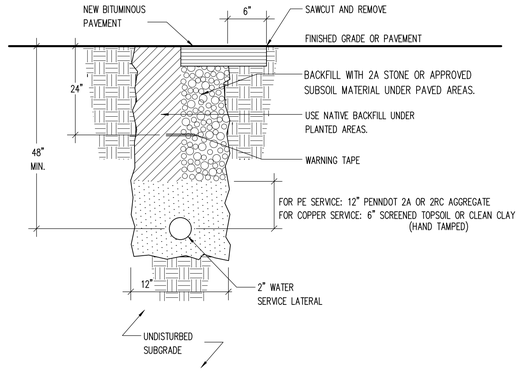


NOTES:
1. LIMESTONE SAND BACKFILL PER UTILITY COMPANY STANDARDS.
2. REFER TO UTILITY COMPANY DESIGN PLANS FOR LOCATIONS AND SIZES OF PVC CONDUITS.
3. REDUCE DEPTH OF TRENCH TO 44" PRIMARY POWER IS NOT INCLUDED.
4. INSTALL CONDUIT FOR POWER, TELEPHONE, & CATV AS SHOWN ON UTILITY PROVIDER PLANS.

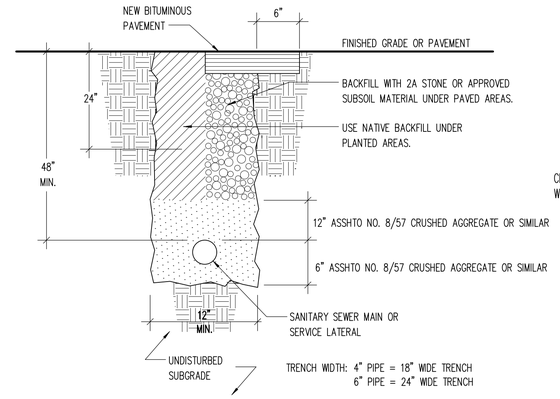
ELEC., TELE. & CATV TRENCH

NOT TO SCALE



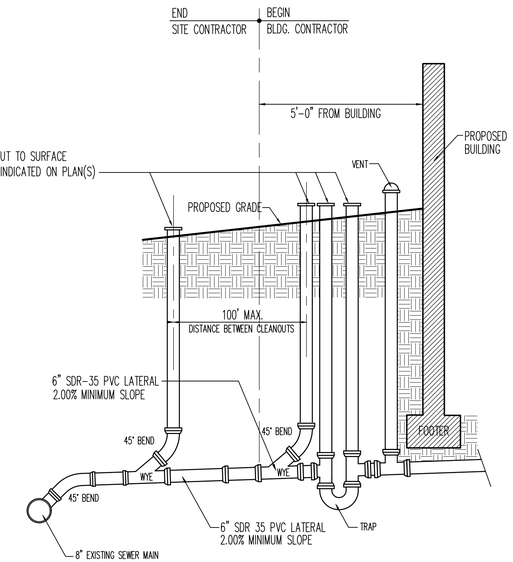
WATER LATERAL TRENCH DETAIL

NOT TO SCALE



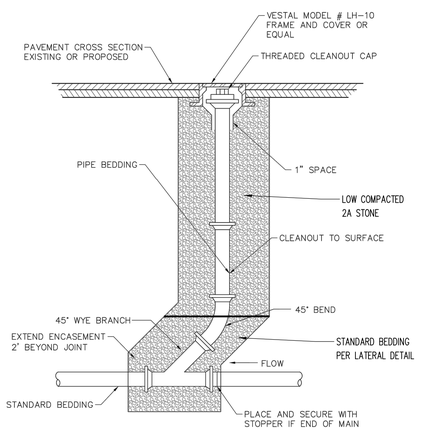
SANITARY LATERAL TRENCH DETAIL

NOT TO SCALE

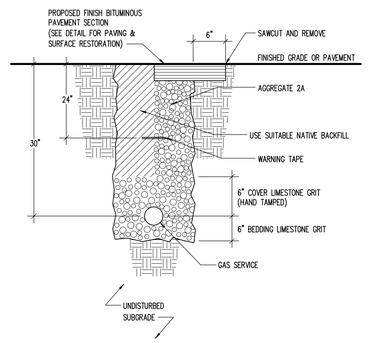


TRAP CONNECTION DETAIL

NOT TO SCALE

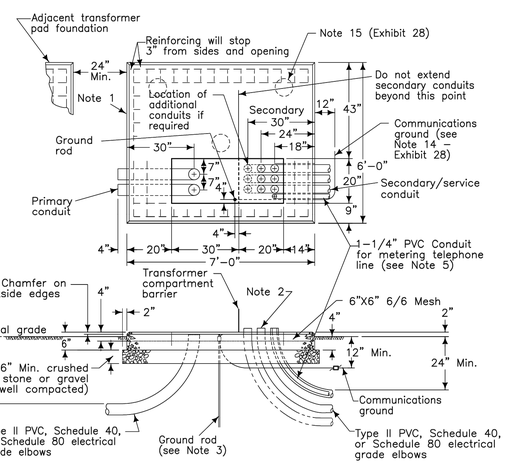


CLEANOUT CONSTRUCTION DETAIL FOR PAVED AREAS



NATURAL GAS SERVICE TRENCH DETAIL

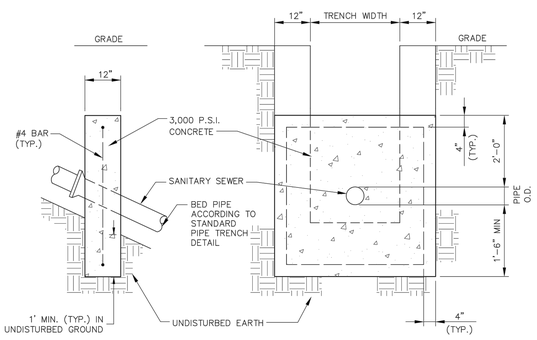
NOT TO SCALE



NOTES:

1. Refer to Exhibit 28 for concrete pad foundation, pad-mounted transformer General Notes.
2. Secondary conduits should not extend more than 2 inches (maximum) above the top of foundation. Primary conduits should be cut off 2 inches below the top of foundation to allow for terminating the cables.
3. Customer shall furnish and install one 5/8-inch diameter x 8-foot ground rod, grounding connections, and #6 AWG copper communications ground wire (minimum length of wire required – 7-1/2 feet).
4. See Exhibit 22 for clearance from the building wall or other parts of building.
5. When required, extend 1-1/4-inch conduit to location at the customer's building where telephone line service can be made available at the telephone demarcation point.

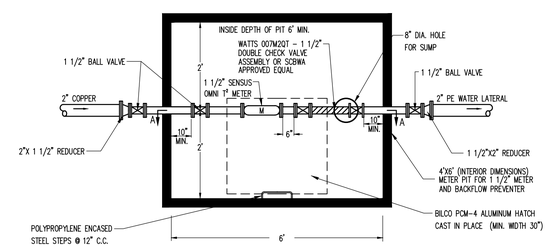
CONCRETE FLAT-PAD FOUNDATION PAD-MOUNTED TRANSFORMER 75 TO 500 KVA, THREE-PHASE, 34.5 KV & BELOW HIGH-SIDE	FirstEnergy. Service Guide	REV. 0
	EXHIBIT 26	DATE 8/14

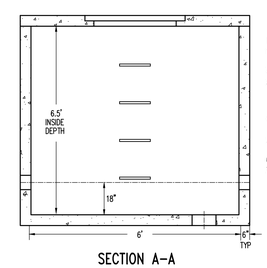


MAXIMUM SPACING CHART	
SLOPE	SPACING
20% TO 35%	36'
35% TO 50%	24'
50% AND OVER	16'

PIPE ANCHOR FOR STEEP SLOPE SEWERS

NOT TO SCALE





SECTION A-A

NOT TO SCALE

NOTES:
1. PIT MAY BE PRECAST OR BUILT ON SITE WITH CONCRETE BLOCKS WITH PRIOR APPROVAL OF MATERIALS AND METHOD OF CONSTRUCTION BY THE AUTHORITY.
2. HATCH LOCATION MAY BE MOVED WITH AUTHORITY APPROVAL.
3. MEGA-LUGS MUST BE USED ON ALL FITTINGS OR THE FITTINGS MUST BE RODDED (4" MIN.) AND ANCHORED IN CONCRETE IF DUCTILE IRON PIPE IS USED.
4. CONCRETE THRUST BLOCKS MUST BE USED ON ALL UNDERGROUND BENDS AND TEE'S IF DUCTILE IRON PIPE IS USED.
5. IF 4" PIPE IS USED, METER PIT MUST BE LARGER FOR THE ADDITIONAL FITTING.
6. NOT SOLDER JOINTS ALLOWED INSIDE PIT OR UNDERGROUND.
7. METER SETTING INSIDE THE PIPE SHALL CONSIST OF: GATE/BALL VALVE, METER, BACKFLOW PREVENTER, PRESSURE REDUCING VALVE(optional) & GATE/BALL VALVE.

1 1/2" METER & DOUBLE CHECK VALVE ASSEMBLY

NOT TO SCALE

PennTerra ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JOHN C. SEPP 040003-E

Designer	CJW
Draftsman	CJW
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10-FINAL-11-DETAILS
Layout	DETAILS (2)

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

UTILITY DETAILS

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE N.T.S
SHEET NO. 14

P:\ldatproj\2017\17125.10\Design\plot files\final plans\17125.10-FINAL-11-DETAILS.dwg, 3/7/2022 12:35:48 PM, 1:1

STORMWATER MANAGEMENT NOTES

1. All site work shall be done in accordance with the plans prepared by PennTerra Engineering, inc., the current requirements of the governing municipality, the applicable sections of the PennDOT standard specifications for roadway construction, and all other pertinent federal and state laws.
2. The Contractor shall comply at all times with applicable federal, state and local laws, provisions, and policies governing safety and health, including the federal construction safety act, as amended.
3. The Contractor shall be responsible for examining the areas and conditions under which the project is to be constructed prior to the submission of a bid. Submission of a bid to be constructed to mean the Contractor has reviewed the site and is familiar with conditions and constraints of the site,
4. Before excavation, all underground utilities shall be located in the field by the proper authorities. The Contractor shall notify pa one call 1-800-242-1776. The location of all utilities and underground structures are approximate and may not all be shown. It is the responsibility of the Contractor to determine the existence and exact location of all utilities and underground structures.
5. An as-built drawing of new utility services shall be prepared by the Contractor and submitted to the Owner upon completion of the project.
6. All storm pipe shall be as noted. All joints shall be watertight.
7. Contractor shall refer to other plans within this construction set for other pertinent information.
8. Co-permittee requirements: Contractor to complete Pennsylvania Department of Environmental Protection (D.E.P.) forms and make application to become co-permittee of the individual NPDES permit prior to commencing any land disturbance. Contractor shall assume full responsibility for any fines or other measures assessed by regulatory agencies due to improper or deficient installation and / or maintenance of the temporary erosion and sedimentation control measures and post-construction stormwater measures installed. Contractor shall remain a co-permittee of the National Pollutant Discharge Elimination System (NPDES) permit until the notice of termination of the NPDES permit has been issued by the PA D.E.P.
9. Notice of termination services: Contractor shall be responsible for the services for the notice of termination of the NPDES permit. This includes but is not limited to the following:
   a. Have a licensed professional or designee on-site to observe the critical stages of construction noted in the post-construction stormwater management plan. The licensed professional or designee will be responsible for signing the required certification forms and certifying that the facilities have been built according to the approved plans, processing and recording any required forms and the as-built survey through the PA D.E.P. until the notice of termination is received.
   b. Prepare an as-built topographic survey sealed by a licensed surveyor from the commonwealth of Pennsylvania of the stormwater management facilities (infiltration basin, rain garden and outlet structures, outlet pipes, tops of berms and spillways).
   c. Provide double-ring infiltrometer tests as outlined in the December 2006 PA D.E.P. Stormwater BMP manual of the produced basin bottom soil mix prior to installation to certify that the soil mix meets the infiltration requirements noted on the plans.
10. Contractor shall have a licensed professional submit as-built drawings/documentation (including verification of infiltration testing) of the stormwater management facilities prepared in accordance with chapter ___ of the governing municipality's code of ordinances and submitted to the governing municipality at the completion of construction as a prerequisite of issuance of occupancy permit or release of the surety bond. A narrative and photographic documentation for critical stages of construction and for the infiltration surface prior to placement of filter fabric/amended soils must also be submitted to the governing municipality.
11. As-built infiltration testing in infiltration basins shall be performed at the top of the finished native soil layer prior to topsoil placement. This testing is in addition to the testing identified in Note 9.c. The number of infiltration tests performed shall be in accordance with the governing municipality's code of ordinances.

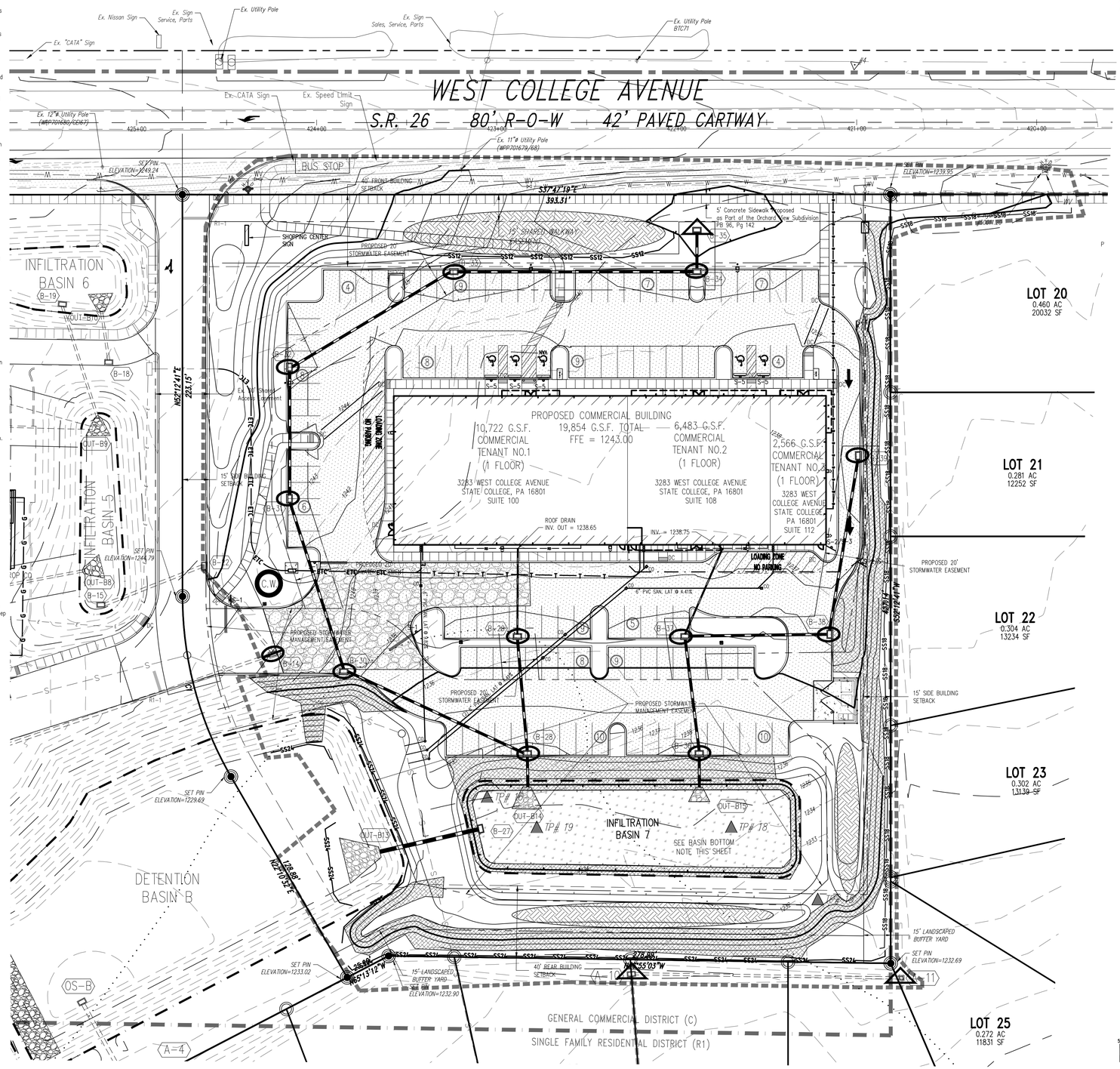
CRITICAL STAGES OF CONSTRUCTION NOTES

The following stages of construction require that a licensed professional or designee registered within the Commonwealth of Pennsylvania be present onsite. Notice shall be given two weeks prior to commencing construction activities for which the licensed professional be present. The general site contractor shall be responsible for supplying & coordinating the licensed professional. The licensed professional will be required to certify and seal as-built drawings at the end of construction that the stormwater facilities have been built to the specifications on the post construction stormwater management plans and details. The contractor shall then file this certification with the Centre County Conservation District when the Notice of Termination (NOT) document is completed.

1. In order to ensure the basin floor is not compacted, equipment shall not be permitted to operate within the basin when the floor is less than 36" from subgrade elevation. A typical infiltration facility bottom excavation detail has been provided on the plans for construction. Alternatively, the contractor may develop their own plan and methods for bottom excavation. The contractor must review the proposed plan/methods with the licensed professional during the coordination meeting.
2. Once subgrade of the facility has been reached, and prior to topsoil placement, the licensed professional and responsible testing firm shall be notified to schedule infiltration testing verification of the subgrade.
3. A typical rock over excavation detail has been provided on the plans. Once subgrade of the basin floor has been reached, the contractor shall request the licensed professional review the subgrade to determine if rock over excavation is required.
4. Infiltration testing of the final basin floor elevation to verify infiltration rates of the soil mixture (i.e. topsoil and amendments) placed on the basin floor is required. The contractor shall coordinate infiltration testing with the licensed professional and responsible testing firm. It is recommended that this soil mixture also be tested prior to placement.
5. The contractor must notify the licensed professional of the installation of the outlet structure, outfall pipe and anti-seep collars prior to backfill to ensure installation has been completed in accordance with the approved plan.
6. Compaction testing reports are required on the basin berm. The contractor shall coordinate compaction testing with the licensed professional and responsible testing firm.
7. Berms shall be installed and compacted in conformance with the requirements of the local municipality's Stormwater Management Ordinance. If the municipality does not specify compaction requirements, then all berms shall be in installed as follows:
   a. Whenever berm fill material in excess of 3 feet in height is to be used, each layer of compacted fill shall be tested to determine its density per ASTM D2922 or ASTM D3017.
   b. All berm lifts shall be 8" or less.
   c. The density of each layer shall be 98% of a Standard Proctor Density analysis per ASTM D698.
8. All proposed vegetation within the limits of construction shall be established to a 70% uniform vegetated cover prior to final notice of termination certification.

BASIN BOTTOM NOTE

The Infiltration Basin Bottom must be protected from compaction and sedimentation at all times during construction. Infiltration Basin Bottom 7 shall be initially excavated to be 1 foot above the final bottom elevation, as indicated on the Staging of Earth Moving Activities Sequence Step D on Sheet ES2. The basin bottom shall remain at this interim elevation through construction until site stabilization is achieved, as indicated on the Staging of Earth Moving Activities Sequence Step L on Sheet ES2.



SURVEY FEATURES LEGEND

- Property Line, Lot Line or Right of Way Line
- Adjoining Property Line
- Building Setback Line
- Easement Line
- Project Benchmark

SOILS LEGEND

Soil cover on the site consists of:
HaA – Hagerstown Silt Loam, 0–3% Slopes
HaB – Hagerstown Silt Loam, 3–8% Slopes

- Existing Soil Limit Line / Boundary
- HaB — Existing Soil Type

EXISTING FEATURES LEGEND

- EXISTING BUILDING — Existing Building
- Existing Curbing & Edge of Pavement
- Existing Concrete Areas
- Existing Gravel Areas
- Existing Fence / Type
- 1109 — Existing Contours w/ Elevation (1's & 2's)
- 1110 — Existing Contours w/ Elevation (5's & 10's)
- Existing Storm Sewer Line w/ Inlet

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING — PROPOSED BUILDING
- PROPOSED CURBING & EDGE OF PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE AREAS
- PROPOSED BITUMINOUS PAVEMENT AREAS
- PROPOSED RETAINING WALL
- 1109 — PROPOSED MINOR CONTOURS W/ ELEVATION (1's & 2's)
- 1110 — PROPOSED MAJOR CONTOURS W/ ELEVATION (5's & 10's)
- PROPOSED STORM SEWER W/ TYPE C INLET
- PROPOSED STORM SEWER ROOF DRAIN
- PROPOSED STORM SEWER TRENCH DRAIN
- PROPOSED FIRE HYDRANT
- MH — PROPOSED UTILITY MANHOLE
- PROPOSED 18"ø UTILITY POLE
- PROPOSED STORM SEWER INLET – TYPE M
- PROPOSED STORM SEWER INLET – TYPE C

EROSION & SEDIMENTATION CONTROL LEGEND

- NPDES BOUNDARY LINE
- LIMIT OF DISTURBANCE
- CONSTRUCTION ENTRANCE
- INLET PROTECTION–TYPE M
- INLET PROTECTION–TYPE C
- INLET PROTECTION–TYPE C–FILTER BAG
- RIP–RAP APRON
- EROSION CONTROL LINING (CURLEX II OR APPROVED EQUAL)
- TOPSOIL STOCKPILE
- SS12 — 12" SILT SOCK
- SS18 — 18" SILT SOCK
- SS24 — 24" SILT SOCK
- C.W. — CONCRETE WASHOUT AREA

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

PennTerra ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003–E

Designer	CJW
Draftsman	XXX
Proj.Manager	MAT
Surveyor	MAK/JDF
Perimeter Ck.	
Book	543 Pg 1
File	17125.10–FINAL–E&S–01–PLAN
Layout	E&S–PLAN

Date	Description
03/04/2022	REVISED PER TWP COMMENTS CJW

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

EROSION & SEDIMENTATION CONTROL PLAN

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE 1" = 30'
SHEET NO. ES1

P:\ldd\proj\2017\17125.10\Designlplot files\final plans\17125.10-FINAL-E&S-01-PLAN.dwg, 3/7/2022 12:37:05 PM, 1:1

Standard Erosion and Sediment Control 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 Centre County 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 discharge 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 buy qualifying as clean fill due to analytical testing.
13. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and renetting must be performed immediately. If the E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
14. 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.
15. 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.
16. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
17. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches – 6 to 12 inches on compacted soils – prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes shall have a minimum of 2 inches of topsoil.
18. 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.
19. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
20. 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.
21. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
22. Fill shall not be placed on saturated or frozen surfaces.
23. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
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 to schedule a final inspection.
31. 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.
32. All channels shall be kept free of obstructions including but not limited to fill, rocks, leaves, woody debris, accumulated sediment, excess vegetation, and construction material/wastes.
33. Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work area in the manner described in this plan until such restoration is complete.
34. Channels having stone linings must be sufficiently over-excavated so that the design dimensions will be provided <u>after</u> placement of the protective lining.

Staging of Earthmoving Activities

Notes:

1. A licensed professional or designee shall be present during construction of the basin. The contractor must coordinate with this responsible party prior to construction.
2. The proposed infiltration basins must be protected from compaction and sedimentation. Excavation within the proposed infiltration basin bottoms at any point during construction must be made in accordance with the infiltration basin bottom excavation detail found on the stormwater management details sheet.
3. The infiltration basin shall be constructed to interim elevations during the erosion and sedimentation stage. The interim elevations for all infiltration basins are higher than final grade. In locations where stormsewer outlet into the infiltration basin, the basin may be excavated to final grade within a footprint area necessary to accommodate the rip-rap apron at the outlet.

Sequence: All earth disturbance activities shall proceed in accordance with the following staging of earthmoving activities. Each stage shall be completed before a subsequent stage in initiated.

A. Install the rock construction entrance. for the site at the location shown on the Erosion and Sedimentation Control Plan (E&SCP).
B. Install the entire site perimeter silt sock, where shown on the E&SCP.
C. Strip the topsoil Infiltration Basin 7 and stockpile at the location shown on the E&SCP. Seed the stockpile with the temporary seeding mixture and repair silt sock if damaged.
D. Commence with construction of the proposed Infiltration Basin 7 (refer to Notes above). Construction of the basin shall include the outlet structure, outlet pipe and anti-seep collars. Stabilize the basin bottom with the temporary seeding mixture and sides with topsoil and appropriate permanent seeding mixture.
E. Strip the topsoil from the remaining site construction area and stockpile at the location shown on the E&SCP. Seed the stockpile with the temporary seeding mixture and repair silt sock if damaged.
F. Begin the rough grading of the remainder of the site.
G. Once final grade of the building is reached, commence with the building construction. Continue with all other parking and driveway construction.
H. Commence with construction of all utilities. All utilities are to be installed at the rate of the length of the utility that can be installed and backfilled in one day. All stormsewer shall be installed beginning at the downstream end and working upstream. Any erosion controls disturbed from the installation of these utilities shall be repaired or replaced properly at the end of each day. Inlet protection shall be placed immediately on all newly installed inlets and outlet protection installed at outlets.
I. Continue with the site driveway and parking construction until all utilities are installed. Bring them to sub grade and stabilize with stone.
J. Begin the paving operations, thus removing the rock construction entrance. All curbing and sidewalks shall also be installed.
K. Check all erosion controls on a daily basis and make any needed repairs or replacements as needed immediately. Any erosion control disturbed or removed by the installation of utilities shall be repaired or replaced to proper functioning condition by the end of that same day. All areas abandoned for more than four (4) days are to be seeded with the temporary seeding mixture
L. Current regulations state: (a) Upon completion of an earth disturbance activity or any stage or phase of an activity, the site shall be immediately seeded, mulched or otherwise protected from accelerated erosion and sedimentation. (b) Erosion and sediment control BMP's shall be implemented and maintained until the permanent stabilization is completed. (c) For an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following: (1) A minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation. (2) An acceptable BMP which permanently minimizes accelerated erosion and sedimentation. Once stabilization has been achieved, all temporary erosion and sediment controls may be removed as follows:
   - Finalize the Infiltration Basin Construction. Apply the appropriate permanent seeding to all disturbed areas of the basin.
   - Remove all temporary controls, such as silt sock, topsoil stockpiles and inlet protection. Any areas disturbed by the removal of these controls shall be stabilized immediately with a permanent seeding mixture. Install Flexstorm Pure Inlet Filters within the appropriate inlets.

Temporary Control Measures

Temporary control measures will be implemented to ensure that erosion is minimized and that sediment is retained during construction. The rock construction entrance will be provided at the site entrance to prevent tracking of sediment from the site. Silt sock will be placed at the locations shown on the Erosion and Sedimentation Control Plan to provide proper filtration of the site runoff. Inlet protection will be installed at inlets to prevent the sedimentation of the storm sewer systems.

Temporary seeding on all disturbed areas shall be done immediately after grading is finished and shall consist of the following:

Item	Rate
1. Agricultural grade limestone	1 ton / acre
2. Fertilizer 10-10-10	500 lbs. / acre
3. Annual ryegrass	40 lbs. / acre
4. Mulch (straw)	3 tons / acre

Permanent Control Measures

Permanent control measures include the storm sewer, curbing, basin and seeding / landscaping.

Permanent seeding on all disturbed areas may consist of the following:

Soil Enhancements: For permanent seeding outside of the basin bottom, it is recommended that site specific soil testing be performed. Lieu of soil test recommendations, use the following acceptable schedule:

Apply 6 tons/acre (240 lbs/1,000 s.f.) Dolomoitic Limestone and 1,000 lbs/acre (25 lbs/1,000 s.f) of 10-20-20 fertilizer before seeding. Harrow or disc into upper three inches of soil.
Permanent seeding on all basin bottom areas may consist of the following:

Permanent seeding on Infiltration Basin Bottom may consist of the following:

Item	Rate
1. Seed Mixture Consists of:	
ERNMIX-180 by Ernst Seeds (or equal)	20 lbs. / acre (pure live seed)
2. Lolium multiflorum (Annual Ryegrass)	30 lbs. / acre (pure live seed)
3. Mulch	3 tons / acre

Permanent seeding on all Basin Sides and other 3:1 slopes may consist of the following:

Item	Rate
1. Seed Mixture Consists of:	
ERNMIX-181-1 (Spring-Sept.1)/ERNMIX 181-2 (Sept.1-Feb15) by Ernst Seeds (or equal)	45 lbs. / acre (pure live seed)
2. Lolium multiflorum (Annual Ryegrass)	25 lbs. / acre (pure live seed)
3. Mulch	3 tons / acre

Permanent seeding on all other disturbed areas may consist of the following:

Item	Rate
1. Seed Mixture Consists of:	
50% Poa pratensis (Kentucky Bluegrass)	
30% Festuca rubra (Creeping Red Fescue)	
20% Lolium perenne L. (Perennial Rye)	102 lbs. / acre
2. Mulch	3 tons / acre

For lawn areas, a suitable lawn mixture, such as Agway's Royal Green, shall be substituted for Item 3 of the permanent seeding mixture and applied at the rate directed by the manufacturer.

*Mulching: Apply mulch immediately after seeding and anchor properly with an anchoring tool or following one of the methods listed below.

1) Tracking: The process of cutting mulch into the soil via equipment that runs n tracks, is employed primarily on slopes 3:1 or steeper.
2) Mulch Nettings: Staple lightweight biodegradable paper, plastic or cotton netting over the mulch according to the manufacturer's recommendations.
3) Synthetic Binders: Synthetic binders such as acrylic DLR (AGRI-TAC), DCA-70, Petroset or Terratack may be used at rates recommended by the manufacturer to anchor mulch material.
4) Wood Cellulose Fiber: The fiber binder shall be applied at a net dry weight of 750 lb/acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs of wood cellulose fiber per 100 gallons.
5) Peg & Twine: Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more turns.

Maintenance Program

During construction, the contractor will be responsible for maintenance and repair of all erosion and sedimentation control facilities. These facilities should be inspected weekly and after every runoff event. Any erosion control disturbed during construction or found to be inadequate upon inspection shall be repaired or replaced within 24 hours after the disturbance or the discrepancy is discovered. All inspections and repairs shall be documented within a written report and retained for record keeping. The maintenance of the erosion control facilities will include the following:

Construction Entrance:
a. The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measure used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of- Any section of the filter fabric fence which has been undermined or topped must be immediately replaced with a rock filter outlet.

Inlet Protection:
a. Sediment shall be removed from the structure and spread over an existing stockpile with controls already in place, or spread over an existing windrow and seeded with the temporary seeding mixture.

a. The structure should be checked regularly to ensure its soundness. If the stone filter has been disturbed and cannot perform its proper protective function, additional stone should be installed to provide adequate filtration.

Spoil Materials:
a. All sediment removed from erosion and sedimentation pollution control facilities shall be spread over spoil areas with controls already in place. Stabilize the spoil material with the temporary seeding mixture.

Permanent Seeding:
a. If the vegetative cover is not established uniformly by the third mowing, the contractor shall reapply topsoil if necessary and seed and mulch as needed to provide adequate cover.

Silt Socks:
a. The Contractor shall maintain the socks in a functional condition at all times and it shall be routinely inspected.
b. Where the sock requires repair, it will be routinely repaired.
c. The contractor shall remove sediment collected at the base of the sock when they reach 1/2 of the exposed height of the sock, or as directed by the Engineer. Alternatively, rather than create a soil disturbing activity, the engineer may call for additional sock to be added at areas of high sedimentation, placed immediately on top of the existing sediment laden sock. The sock will be dispersed on site when no longer required, as determined by the Engineer.

Recycling and Disposal of Materials

The operator shall remove from the site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 PA. Code 260.1et seq., 271.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes.

Wastes generated during the construction of this project shall be recycled if at all possible. Any materials that cannot be recycled or reused shall be disposed of at a Pennsylvania Department of Environmental Protection approved landfill. If soil and/or rock disposal areas are required, erosion and sedimentation controls shall be implemented at these areas. Any excess soil waste may only be disposed of at an approved E&S/NPDES permitted site.

Responsibitlies for Fill Materials

The contractor is responsible to use environmental due diligence to ensure any fill material required to be imported to or exported from the site qualifies as Clean Fill.

Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.)

Environmental due diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the Department's policy "Management of Fill".

Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with the Department's municipal or residual waste regulations based on 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable.

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COMMONWEALTH OF PENNSYLVANIA
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Surveyor: MAK/JDF
Perimeter Ck.:
Book: 543 Pg: 1
File: 17125.10-FINAL-E&S-02-NARRATIVE
Layout: E&S NARRATIVE

Date	Description
03/04/2022 CJW	REVISED PER TWP COMMENTS

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

EROSION & SEDIMENTATION CONTROL NARRATIVE

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE N.T.S
SHEET NO. ES2

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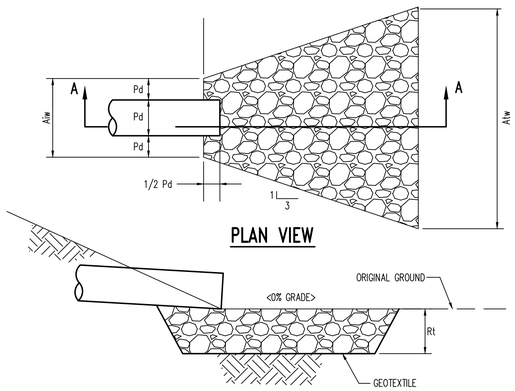


PLAN VIEW

SECTION A–A

OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE (R–_)	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
OUT–B13	24	R–4	18	20	6.00	26.00
OUT–B14	18	R–4	18	12	4.50	12.00
OUT–B15	15	R–4	18	8	3.75	11.75

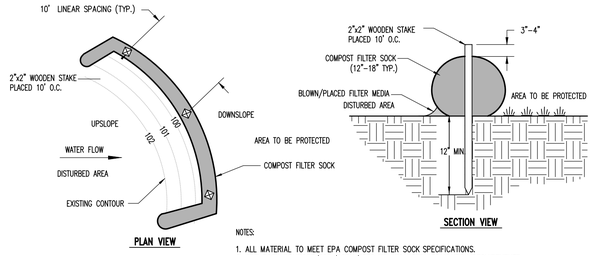
NOTES:
1. All aprons shall be constructed to the dimensions shown. Terminal widths shall be adjusted as necessary to match receiving channels.

2. All aprons shall be inspected at least weekly <u>and</u> after each runoff event. Displaced riprap within the apron shall be replaced immediately.

3. Extend riprap on back side of apron to at least ½ depth of pipe on both sides to prevent scour around the pipe.

RIPRAP APRON

NOT TO SCALE



NOTES:
1. ALL MATERIAL TO MEET EPA COMPOST FILTER SOCK SPECIFICATIONS.
2. SILT SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILT SOCKS DEPICTED ARE FOR USE ON MINIMAL SLOPES. GREATER SLOPES MAY REQUIRE LARGER SILT SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

TABLE 4.1
Compost Sock Fabric Minimum Specifications

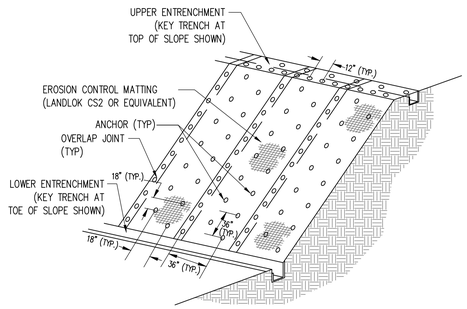
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropelene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years
Two-Ply Systems					
Inner Containment Netting				HDPE biaxial net	
				Continuously wound	
				Fusion-welded junctures	
				3/4"x3/4" Max. aperture size	
Outer Filtration Mesh				Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)	
				3/16" Max. aperture size	
Sock fabrics composed of burlap may be used on projects lasting 6 months or less.					

TABLE 4.2
Compost Standards

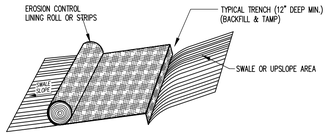
Organic Matter Content	25%–100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5–8.5
Moisture Content	30%–60%
Particle Size	30% – 50% pass through 3/8" sieve
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

COMPOST FILTER SOCK DETAIL

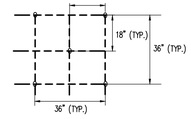
NOT TO SCALE



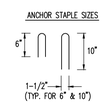
ON SLOPES



INSTALLATION NOTES:
1. PRIOR TO EROSION CONTROL LINING INSTALLATION, STABILIZATION SHALL BE AS FOLLOWS:
   A. SPREAD TOPSOIL
   B. SEED SLOPE WITH THE PERMANENT SEEDING MIXTURE.
   C. BEGIN APPROPRIATE SLOPE MATTING INSTALLATION AS FOLLOWS BELOW
2. BURY TOP END OF THE STRIPS IN A TRENCH 12" DEEP (MIN.) X 6" WIDE (MIN.)
3. TAMP TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES 12" SPACING --- 4" AWAY FROM TRENCH.
4. OVERLAP AND BURY UPPER END OF LOWER STRIP. OVERLAP END OF TOP STRIP 4" AND STAPLE.
5. INSTALL DOUBLE ROW OF STAPLES AT EACH STRIP END (4" ABOVE AND BELOW TRENCH).
6. OVERLAP STRIPS AND STAPLE EVERY 18" O.C. ALONG OVERLAP IF MULTIPLE STRIPS ARE REQUIRED ALONG WIDTH OF SLOPE.



TYPICAL ANCHORING PATTERN



EROSION CONTROL LINING INSTALLTION

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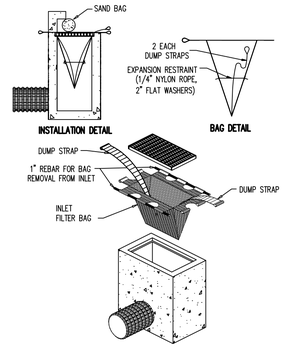


INLET FILTER BAG (TYPE C)

NOT TO SCALE

INLET FILTER BAG NOTES:

FILTER BAG SHOULD TRAP PARTICLES LARGER THAN 150 MICRONS.

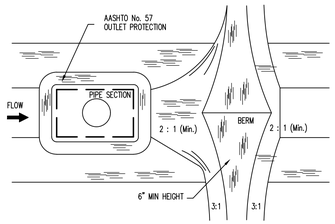
WHEREVER FILTER BAGS ARE USED THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS.

INLET FILTER BAGS SHOULD BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.

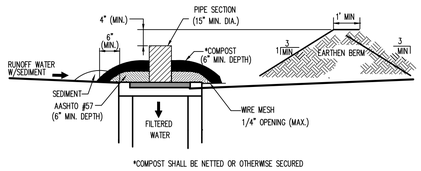
FILTER BAGS SHOULD BE CLEANED AND/OR REPLACED WHEN BAG IS 1/2 FULL

DAMAGED FILTER BAGS SHOULD BE REPLACED.

NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION.



PLAN

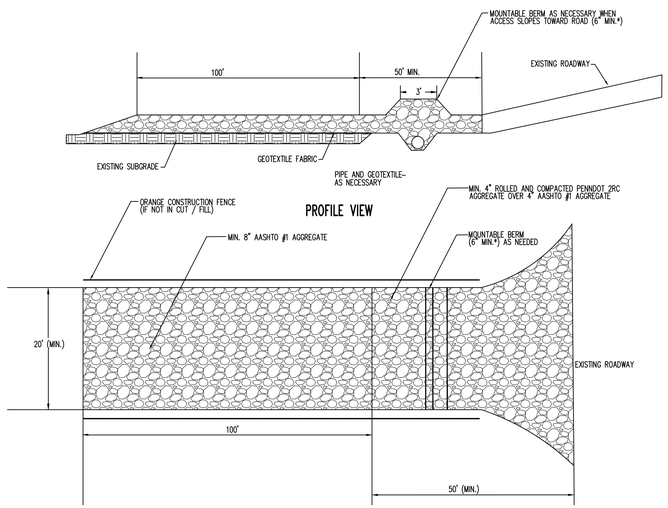


*COMPOST SHALL BE NETTED OR OTHERWISE SECURED

SECTION

DROP INLET FILTER W/ EARTHEN BERM (TYPE M)

NOT TO SCALE

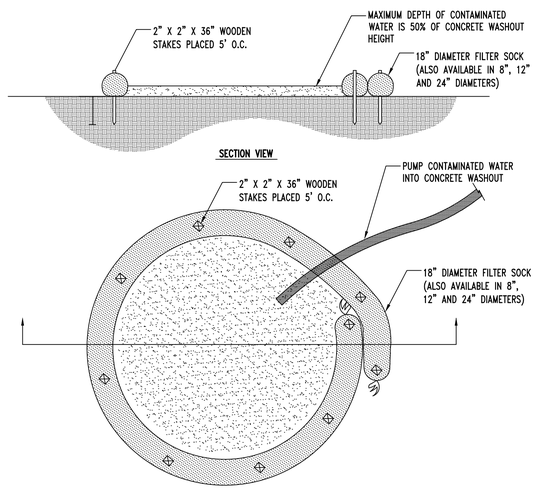


*MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

PLAN VIEW

ROCK CONSTRUCTION ENTRANCE

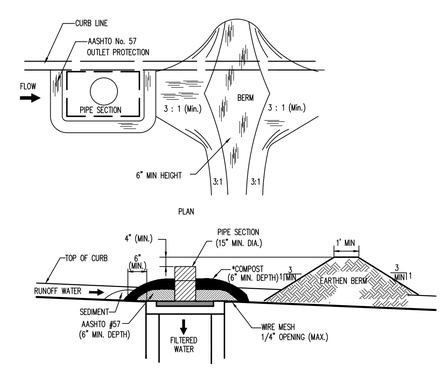
NOT TO SCALE



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. CONCRETE WASHOUT MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY
3. CONCRETE WASHOUT MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION
4. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE FILTER SOCKS.

CONCRETE WASHOUT AREA

NOT TO SCALE



SECTION

DROP INLET FILTER W/ EARTHEN BERM (TYPE C)

NOT TO SCALE

PennTerra ENGINEERING INC.

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOHN C. SEPP
ENGINEER
040003–E

Designer CJW
Draftsman XXX
Proj.Manager MAT
Surveyor MAK/JDF
Perimeter Ck.
Book 543 Pg 1
File 17125.10–FINAL–E&S–03–DETAILS
Layout E&S–DETAILS (1)

03/04/2022 REVISED PER TWP COMMENTS CJW

Date	Description

REVISIONS

ORCHARD SQUARE

FERGUSON TOWNSHIP
CENTRE COUNTY
PENNSYLVANIA

FINAL LAND DEVELOPMENT PLAN

EROSION & SEDIMENTATION CONTROL DETAILS

PROJECT NO. 17125.10
DATE FEBRUARY 4, 2022
SCALE N.T.S
SHEET NO. ES3

P:\sdtproj\2017\17125.10\Design\dot files\final plans\17125.10-FINAL-E&S-03-DETAILS.dwg, 3/7/2022 12:38:08 PM, 1:1

17125.10

Penn Terra
ENGINEERING, INC.

3075 Enterprise Drive, Suite 100, State College, PA 16801
Phone: (814) 231-8285 Fax: (814) 237-2308
www.pennterra.com

March 7, 2022

Jenna Wargo, AICP
Director of Planning & Zoning
Ferguson Township
3147 Research Drive
State College, Pennsylvania 16801

RE: Orchard Square Final Land Development Plan

Dear Jenna,

In regard to comments received on the above-referenced project, we offer the following responses:

COMMUNITY PLANNER COMMENTS (dated February 24, 2022)
Please change all instances of Chairman to Chair (Planning Commission Signature Block)
These have all been revised.

ZONING OFFICER COMMENTS (dated March 3, 2022)

1. Proposed street address and address for each unit, if applicable, must be included on the plan. (Chapter 22, Section 401.1.A.3.q) Addresses for each unit need to be shown on the plan.
   The street address and unit numbers have been added to the Record Plan, Sheet 4 and Note 1.e. on Sheet 3
2. A time extension must be submitted with any revised plan. (Chapter 22, Section 303)
   Enclosed.
3. A digital copy of the plan in accordance with Township requirements must be provided to the Township prior to final plan signature. (Chapter 22, Section 307.7)
   Acknowledged.
4. Surety must be posted for all public improvements. (Chapter 22, Section 304)
   As discussed, no surety will be required
5. The plan must be signed, all fees paid to the Township, and the plan recorded within the plan deadline.
   Acknowledged.
6. When parking bays incorporate more than ten (10) parking spaces in a continuous row, a raised island shall be incorporated within the parking bay for every ten (10) parking spaces. (Chapter 27, Section 707.16.D)
   Tas discussed, islands have been added to the plan. One island is at 11 parking spaces but we've added an additional island to compensate for that.
7. Two (2) sections through the site showing buildings, light fixtures and standards, one (1) section to be from side yard to side yard, and the other to be from front yard to rear yard must be included on the plan. (Chapter 22, Section 401.C.1.j)
   Two cross sections have been added to the plans. See Sheet ??.
8. Yard setback lines as required by the Township Zoning Chapter must be included on the Record Plan. (Chapter 22, Section 403.J)
   The yard setback lines are shown and labeled on the Record Plan and listed on the Signature & Notes Plan.
9. Approved house numbers must be included on the Record Plan. (Chapter 22, Section 403.K)
   The approved street address and unit numbers have been added to the Record Plan, Sheet 4 and Note 1.e. on Sheet 3

10. Approved lot numbers must be included on the Record Plan. (Chapter 22, Section 403.K)
    The street address and unit numbers have been added to the Record Plan, Sheet 4 and Note 1.e. on Sheet 3
11. Utility easements must be included on the Record Plan. (Chapter 22, Section 403.L)
    All utility easements are shown in the Record Plan, Sheet 4.
12. Drainage easements must be included on the Record Plan. (Chapter 22, Section 403.L)
13. ***All drainage easements are shown in the Record Plan, Sheet 4.***
14. Lands reserved or dedicated for public use must be included on the Record Plan. (Chapter 22, Section.403.M)
    There are none.
15. Location of monuments must be included on the Record Plan. (Chapter 22, Section 403.N)
    Locations of property pins are included on the Record Plan.
16. Location of markers must be included on the Record Plan. (Chapter 22, Section 403.N)
17. ***Locations of property pins are included on the Record Plan.***
18. Elevation of monuments must be included on the Record Plan . (Chapter 22, Section 403.N)
    Elevations or property pins are included on the Record Plan.
19. Elevation of markers must be included on the Record Plan. (Chapter 22, Section 403.N)
20. ***Elevations or property pins are included on the Record Plan.***
21. Completed signature blocks as required in [Chapter 22, Section 401] must be included on the Record Plan. (Chapter 22, Section 401)
    All signatures will be obtained prior to final plan approval.
22. All existing and proposed structures must be included on the plan. (Chapter 22, Section 403.P)
    These are shown on the plans.
23. The following statement must be included on the Record Plan: This Record Plan conforms with the Plan receiving final approval by the Ferguson Township Board of Supervisors on _____. All improvements are or will be installed in accordance with such Plan in a manner and time so specified therein. (Chapter 22, Section 403.Q)
    This statement is on the plan. See Note 11 on Sheet 3.

CENTRE REGIONAL PLANNING AGENCY (dated February 18, 2022)

1. On Sheet 3, Project Note 1b. states the incorrect tax parcel number. Correct the tax parcel number.
   The correct Tax Parcel Number has been shown on the plan.
2. The Centre Region Bike Plan and the Ferguson Township Official Map identify a proposed bike facility in the S.R. 26/West College Avenue Corridor. Consideration should be given to the plan and official map recommendations.
   Acknowledged.
3. Ferguson Township Code States: §22-5C02 1.E(1) Location.(a) Short-term bicycle parking must be located either a) within 50 feet of the main public entrance of the building or facility, or b) no further than the nearest motor vehicle parking space to the main public entrance (excluding parking for individuals with disabilities), whichever is closer. If the new development or major renovation contains multiple buildings or facilities, the required short-term bicycle parking shall be distributed to maximize convenience and use. Clarify that the locations meet the ordinance.
   One of the short term bike racks for Tenant Space No. 1 has been relocated to meet this requirement.
4. Ferguson Township Code States: §22-5CO2 1.F Additional Requirements Applicable to Long-Term Bicycle Parking Only. Long-term bicycle parking shall be provided in either 1) bike lockers or 2) indoor rooms or areas specifically designated for bicycle parking (including designated areas of an indoor parking facility), and shall satisfy the following requirements, in addition to the associated requirements above:

a. Location. Long-term bicycle parking may be located either on or off site. If located off site, it shall be no more than 300 feet from the main public entrance.
b. Requirements for Indoor Long-Term Bicycle Parking. Long-term located in designated indoor rooms or areas shall contain bike racks or comparable devices. Such rooms shall be designed to maximize visibility of all portions of the room or designated area from the entrance. Supplemental security measures (such as limiting access to a designated indoor bike parking room to persons with a key, smart card, or code) are optional. Clarify that the location meets the ordinance.
The long term parking meets the ordinance as it was approved on the preliminary plan by the Ferguson Township staff. The long term parking will be utilized by employees of the tenants at the building. The employee entrances are located at the rear of the building where the long term bicycle parking is.

5. Ferguson Township Code States: §22-5CO2 1.D.(3) All bike racks shall be located at least 36 inches in all directions from any obstruction, including but not limited to other bike racks, walls, doors, posts, columns, or exterior or interior landscaping. Sheet 11 should be updated to clarify this requirement.
This has been noted on the detail on Sheet 11 as requested

TOWNSHIP ARBORIST (dated February 8, 2022)

1. Page 8 - Landscape Plan - Planting Schedule -Canopy Trees Key T-1 Katsura tree - Cercidiphyllum japonica is not on Official Township Plant List (Chapter 25, Section 201 (Reserved) (Resolution 2021-20)
This tree was on a previous approved township list and for some reason like several other plants removed on the updated list. The tree has been revised to a Japanese Zelkova.
2. Page 8 – Landscape Plan – Typical Tree Planting and Typical Shrub Planting Detail - does not represent current industry standards. Suggest refreshing details to indicate root flare above finished grade in order to indicate tree and shrubs are planted at proper depth.
The existing planting details will remain for this plan, as they were already approved on the preliminary plan. However, please forward us your recommended township approved planting details and we'll include them on future Ferguson Township plans.
3. Page 8 – Landscape Plan – Buffer Yard Plantings – Although planting density and evergreen species meet ordinance requirements, the proposed planting of evergreen trees at current spacing is very tight. Current plan will create conflicts with canopy trees and understory shrubs in relatively short time. I would like to suggest using smaller understory tree species to prevent competition, overcrowding, and tree/shrub/plant mortality.
The plants will remain as approved on the Preliminary LDP and to meet the required planting densities for the Ferguson Township buffer yard and parking lot screening requirements. However, due to the zoning officer's comment, three parking islands were added in the from parking area and smaller canopy trees from the Official Ferguson Township list are proposed at those new islands following your recommendation.

TOWNSHIP ENGINEER CONSULTANT (February 11, 2022)

1. Site grading has been revised in multiple areas around the perimeter of the site and the pond, which may result in minor drainage area modifications.
The drainage area changes due to the minor grading changes are insignificant. As recommended, minor modifications will be documented/updated with the as-built stormwater management submission package.
2. A sidewalk and some parking areas have been relocated/revised, which may result in a modification to the site impervious area.
As recommended, minor modifications will be documented/updated with the as-built stormwater management submission package.

3. The lighting plans on the Final Land Development Plans are consistent with the Preliminary Land Development Plans regarding lighting fixture types, locations, and mounting heights. The proposed lighting meets the requirements outlined in §4-126 of the Township Code relative to the use of cutoff luminaires.
   Acknowledged
4. The lighting does not exceed the allowable maximum maintained luminance levels at the property lines as outlined in §4-127.C. of the Township ordinance requirements.
   Acknowledged

Enclosed please find the following materials:

- Four sets of the revised plan

If you have any questions, please don't hesitate to contact me.

Regards,

Mark Torretti
Project Manager

Enclosure

Cc: File No. 17125.10
Justin Mandel