TOWNSHIP OF BYRAM
COUNCIL MEETING AGENDA, TUESDAY, JULY 16, 2024
EXECUTIVE SESSION – 6:30 P.M.
REGULAR SESSION – 7:30 P.M.

PLEASE TAKE NOTICE that the regular session part of the meeting starting at 7:30 p.m. will be held in person at 10 Mansfield Drive and via Zoom Webinar. The public may connect using a computer or smart device by clicking on the following link: https://us02web.zoom.us/j/82117363001, or by calling any of the following number's US: +1 646 518 9805 or +1 267 831 0333 to participate. When prompted, enter the Meeting ID Number: 821 1736 3001. The public will have the opportunity to comment at appropriate times during the meeting. Formal action will be taken.

1. **CALL MEETING TO ORDER**
2. **OPEN PUBLIC MEETING STATEMENT**
   This meeting is called pursuant to the provisions of the Open Public Meetings Act. Both adequate and electronic notice of the meeting has been provided, specifying the time, place. In addition, a copy of this notice is available to the public and is on file in the office of the Municipal Clerk, posted on the main door, the bulletin board of the Municipal Building, on the Township website at: https://www.byramtwp.org/index.php/town_hall/township_council, and has been forwarded to those persons requesting notice.
3. **ROLL CALL**
4. **RESOLUTION FOR EXECUTIVE SESSION**
   a. Attorney Client Privilege Communication
      - General
      - Sutton Lane
   b. Contract Negotiations
      - Shared Services – LVR BOE
5. **RETURN TO OPEN SESSION**
6. **PLEDGE OF ALLEGIANCE AND MOMENT OF SILENT REFLECTION**
7. **APPROVAL OF AGENDA**
8. **PRESENTATION OF 2024 JUNE DOBSON SCHOLARSHIP - Edward R. Church**
9. **FLOOD DAMAGE PREVENTION ORDINANCE PRESENTATION– Cory Stoner**
10. **LAKE MANAGEMENT PRESENTATION – Chris Mikolajczyk**
    Byram Township | DRAFT - Township of Byram Lakes and Watersheds Management Plan (byramtwp.org)
11. **REPORTS**
    A. Township Manager
    B. Mayor and Council Members
    C. Township Attorney
12. **PUBLIC PARTICIPATION I –** Meeting open to the public for comments on matters not on the agenda or items on the agenda for which no public discussion is provided.
13. **APPROVAL OF MINUTES**
    - July 2, 2024 Regular & Closed Session Meeting Minutes
14. **CONSENT AGENDA:** These items are considered to be routine by the Members of the Township Council and will be enacted on by one motion. There will be no separate discussion of these items unless a citizen or Council member so requests in which event the item may be removed from the general order of business and considered in its normal sequence on the agenda.
    A. Resolution No. 132-2024 – Resolution Authorizing the Renewal of Liquor License to 239 Route 206 Trading as Stonewood Tavern Valid from 07/01/2024 through 6/30/2025
    B. Resolution No. 133-2024 - Resolution Authorizing Purchase of Ferrara Inferno MVP Heavy Rescue Pumper and Accessories Through Sourcewell National Cooperative #113021-RVG Through Ferrara Fire Apparatus
    C. Resolution No. 134-2024 - Authorization To Execute Change Order No. 1 For Proposed Resurfacing of Various Streets – 2024 (Bridget Way, Catalina Drive, Camelot Drive, Mayfair Lane & Sandra Lane) – Net Decrease of $44,802.96
    D. Resolution No. 135-2024 - Authorization To Execute Change Order No. 1 For Proposed Resurfacing of Manor Drive – Net Decrease of $50,225.97
    E. Resolution No. 136-2024 - Authorization To Execute Change Order No. 1 For Proposed Improvements to Stonehedge Lane – Net Decrease of $52,243.70
15. **APPROVAL OF JULY 16, 2024 BILL LIST**
16. **ORDINANCE – 2nd Reading / Public Hearing**
    - **ORDINANCE 013-2024 - AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE TOWNSHIP OF BYRAM ADOPTING THE MODEL NOISE ORDINANCE OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION ("NJDEP") AND REPLACING THE EXISTING CODE CHAPTER 171 ENTITLED "NOISE"**

      Purpose Statement: The purpose of this ordinance is to repeal the existing noise control ordinance in Code Section 171 and replace it with the current model noise ordinance of the New Jersey Department of Environmental Protection ("NJDEP")
17. **ITEMS FOR DISCUSSION**
    - CO Johnson Field #8
18. **FUTURE AGENDA DISCUSSION ITEMS**
19. **PUBLIC PARTICIPATION II**
20. **EXECUTIVE SESSION – Session II (if necessary)**
21. **ANY OTHER BUSINESS THE COUNCIL DEEMS NECESSARY**
22. **ADJOURNMENT**

From:	Cory Stoner
To:	Joseph Sabatini
Cc:	Cindy Church; Phil Crosson; Thomas Knutelsky
Subject:	Byram Township - Draft Flood Damage Prevention Ordinance
Date:	Wednesday, July 10, 2024 6:40:49 PM
Attachments:	image003.png image001.png image004.png Byram Township - Flood Damage Prevention Ordinance - Draft 07-09-24.docx
Importance:	High

Joe,

Back in May, the NJDEP provided notice that Flood Damage Prevention Ordinances in the State were out of date and needed to be updated. I have included that email below. The key points to note from the May 28th email are as follows:

- Previously, FEMA did a review of our old ordinance models and found them to be non-compliant. There were many gaps and inconsistencies, and there were many individuals responsible for managing the floodplain whose roles were not clearly defined. Based on this review, it was recommended that the state develop a model code coordinated ordinance that incorporates the NFIP regulations with the state regulations (Uniform Construction Code and Flood Hazard Area Control Act) and more clearly defines these roles. All 553 NFIP participating communities in New Jersey are required to update to the Model Code Coordinated Ordinance in order to remain in compliance with the NFIP.

- Then NFIP regulations, in particular 44 CFR 60.1 (d), requires that where there are higher state standards local governments must observe these and they take precedence over minimum NFIP regulations. Adopting this ordinance ensures the Township of Byram is in compliance with the NFIP and all state higher standards.

- When FEMA performs their audit and their findings show the Township is not in compliance with the NFIP, it could lead to suspension from the program. The township would not qualify for any federal disaster assistance and the homeowners in the community would lose their NFIP Flood Insurance.

- The model ordinance should be adopted in its entirety with the exception of the optional higher standards highlighted in blue and teal.

As summarized above and listed in the May 28th email, the adoption of a new ordinance is required to make sure that the Township of Byram is in compliance with the National Flood Insurance Program (NFIP) and assure that the Township and its residents would be eligible for federal disaster assistance and private homeowners could maintain NFIP Flood Insurance.

The attached ordinance will repeal Chapter 136 – Flood Damage Prevention of the Township Code and adopt a new Chapter 136 – Flood Damage Prevention that will follow the model ordinance provided by the NJDEP. This ordinance provides information regarding the purpose

of the ordinance, means of establishing flood hazard areas where development is restricted, outlines the duties and powers of the Floodplain Administrator, describes permitting process, sets violation penalties, and provides other supporting information. Again, this ordinance was prepared utilizing the NJDEP model ordinance. I have modified sections of the ordinance to reflect specific information regarding Byram Township but I have not made any major changes from the guidance provided in the model ordinance.

Note that I have listed the Township Engineer as the Floodplain Administrator. The past ordinance listed the Township Construction Official. As the Floodplain Administrator, the Engineer would be responsible for reviewing a permit application. We will need to discuss how best to handle that requirement.

The NJDEP is requiring that a draft ordinance be submitted to the NJDEP for review by the end of July 2024. The final adoption of the ordinance would then be scheduled for October 2024.

Cory L. Stoner, P.E., P.P., C.M.E.
Harold E. Pellow & Associates, Inc.
17 Plains Road
Augusta, N.J. 07822
Phone: 973.948.6463, Ext. 213
Fax: 973.948.2916
cstoner@hpellow.com
www.hpellow.com

From: Joseph Sabatini <jsabatini@byramtwp.org>
Sent: Tuesday, May 28, 2024 12:58 PM
To: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>; Alex Rubenstein <arubenstein@byramtwp.org>; Cindy Church <cchurch@byramtwp.org>; Construction Official <constructionofficial@byramtwp.org>; Zoning Officer <zoning@byramtwp.org>; Cory Stoner <cstoner@hpellow.com>; Phil Crosson <pcrosson@byramtwp.org>
Cc: Patel, Kunal [DEP] <Kunal.Patel@dep.nj.gov>; Ruggeri, Joseph [DEP] <Joseph.Ruggeri@dep.nj.gov>; Sukkar, Ayah [DEP] <Ayah.Sukkar@dep.nj.gov>; Hofmann, Jack [DEP] <Jack.Hofmann@dep.nj.gov>; Gould, Chris [DEP] <Chris.Gould@dep.nj.gov>; Evans, Tonya <tonya.evans@fema.dhs.gov>; FDPO <FDPO@mbakerintl.com>
Subject: RE: Sussex County - Flood Damage Prevention Ordinance

Hi George,

I apologize for not responding sooner.

As the Township Manager, I should be included on all communications.

The Township's Engineer, Cory Stoner (copied on email), should be the appropriate point of contact for the process of updating the ordinance.

The Township's Construction Official is identified as the local administrator, but this may change with the updated ordinance.

Please let me know if you need anything additional.

Thanks - Joe

Joseph W. Sabatini
Byram Township Manager

Phone: 973.347.2500 x129

10 Mansfield Drive, Stanhope, NJ 07874

From: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>
Sent: Friday, May 24, 2024 4:04 PM
To: Alex Rubenstein <arubenstein@byramtwp.org>; Cindy Church <cchurch@byramtwp.org>; Construction Official <constructionofficial@byramtwp.org>; Zoning Officer <zoning@byramtwp.org>; Joseph Sabatini <jsabatini@byramtwp.org>
Cc: Patel, Kunal [DEP] <Kunal.Patel@dep.nj.gov>; Ruggeri, Joseph [DEP] <Joseph.Ruggeri@dep.nj.gov>; Sukkar, Ayah [DEP] <Ayah.Sukkar@dep.nj.gov>; Hofmann, Jack [DEP] <Jack.Hofmann@dep.nj.gov>; Gould, Chris [DEP] <Chris.Gould@dep.nj.gov>; Evans, Tonya <tonya.evans@fema.dhs.gov>; FDPO <FDPO@mbakerintl.com>
Subject: RE: Sussex County - Flood Damage Prevention Ordinance

Good afternoon,

I am reaching out because we still have not heard back about the point of contact for the Flood Damage Prevention Ordinance adoption. More information is provided in the attached State Letter. ***Please reply at your earliest convenience with the appropriate point of contact for this process.***

I have copied our consultants, my colleagues Ayah Sukkar, Jack Hofmann, Joseph Ruggeri, and Kunal Patel, and Tonya Evans from FEMA who should be included on future correspondence. We look forward to working with your town.

Please note that all ordinances need to be reviewed and approved by our office and FEMA prior to introduction and adoption. *To submit the ordinance, you can*

email all copied on this email and send a word version of the document for our review.

We will be hosting a virtual information session on <u>Tuesday, June 4th at 11am</u> *to go over the adoption process that will be beneficial for whoever is working on the ordinance and the Floodplain Administrator to attend. Please forward as you see fit. See the registration information below.*

https://fema.zoomgov.com/meeting/register/vJItc-igqT8pGnjfc60uPnT-CWBs1FbaOEQ

Should you have any questions please do not hesitate to contact me.

Thanks,
George

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

George Ibrahim, CFM
Environmental Engineer
New Jersey Department of Environmental Protection
Division of Dam Safety and Flood Engineering
609-292-2296
george.ibrahim@dep.nj.gov

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From: Alex Rubenstein <arubenstein@byramtwp.org>
Sent: Monday, May 13, 2024 12:52 PM
To: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>; cchurch (byramtwp.org) <cchurch@byramtwp.org>
Cc: Sukkar, Ayah [DEP] <Ayah.Sukkar@dep.nj.gov>; Hofmann, Jack [DEP] <Jack.Hofmann@dep.nj.gov>; Gould, Chris [DEP] <Chris.Gould@dep.nj.gov>; Ruggeri, Joseph [DEP] <Joseph.Ruggeri@dep.nj.gov>; Patel, Kunal [DEP] <Kunal.Patel@dep.nj.gov>
Subject: [EXTERNAL] RE: Sussex County - Flood Damage Prevention Ordinance

Thank you for your response, I will circulate with our Council.

From: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>
Sent: Wednesday, May 8, 2024 5:06 PM
To: Alex Rubenstein <arubenstein@byramtwp.org>; Cindy Church <cchurch@byramtwp.org>
Cc: Sukkar, Ayah [DEP] <Ayah.Sukkar@dep.nj.gov>; Hofmann, Jack [DEP]

<Jack.Hofmann@dep.nj.gov>; Gould, Chris [DEP] <Chris.Gould@dep.nj.gov>; Ruggeri, Joseph [DEP] <Joseph.Ruggeri@dep.nj.gov>; Patel, Kunal [DEP] <Kunal.Patel@dep.nj.gov>
Subject: RE: Sussex County - Flood Damage Prevention Ordinance

The Honorable Alex Rubenstein, Mayor of Township of Byram

Previously, FEMA did a review of our old ordinance models and found them to be non-compliant. There were many gaps and inconsistencies, and there were many individuals responsible for managing the floodplain whose roles were not clearly defined. Based on this review, it was recommended that the state develop a model code coordinated ordinance that incorporates the NFIP regulations with the state regulations (Uniform Construction Code and Flood Hazard Area Control Act) and more clearly defines these roles. All 553 NFIP participating communities in New Jersey are required to update to the Model Code Coordinated Ordinance in order to remain in compliance with the NFIP. The ordinance models can be found on our website here: https://www.nj.gov/dep/floodcontrol/modelord.htm

Then NFIP regulations, in particular 44 CFR 60.1 (d), requires that where there are higher state standards local governments must observe these and they take precedence over minimum NFIP regulations. Adopting this ordinance ensures the Township of Byram is in compliance with the NFIP and all state higher standards.

To answer your second question, When FEMA performs their audit and their findings show the Township is not in compliance with the NFIP, it could lead to suspension from the program. The township would not qualify for any federal disaster assistance and the homeowners in the community would lose their NFIP Flood Insurance.

The model ordinance should be adopted in its entirety with the exception of the optional higher standards highlighted in blue and teal.

I hope this email has addressed all your questions and concerns. Please feel free to reach out to me with any further questions you may have.

Please kindly provide us with the point of contact for the ordinance adoption process at your earliest convenience. We look forward to working with the Township of Byram.

Thanks,
George

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

George Ibrahim, CFM
Environmental Engineer
New Jersey Department of Environmental Protection
Division of Dam Safety and Flood Engineering
609-292-2296
george.ibrahim@dep.nj.gov

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New Jersey legally privileged and confidential information intended solely for the use of the addressee only. If the reader of this message is not the intended recipient, you are hereby notified that any reading, dissemination, distribution, copying, or other use of this message or its attachments is prohibited. If you have received this message in error, please notify the sender immediately and delete this message.

From: Alex Rubenstein <arubenstein@byramtwp.org>
Sent: Monday, April 29, 2024 7:44 AM
To: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>
Subject: [EXTERNAL] FW: Sussex County - Flood Damage Prevention Ordinance

We've received the attached. I call out the language in this letter:

> Your county has now been selected for a mandatory county-wide adoption. Adoption of a new Model Code Coordinated Ordinance must be completed within 180 days of the date of this letter, October 25th, 2024.

And

> Your community **SHOULD** (emphasis added) adopt the "Riverine" model.

Can you please provide to me the statutory reference that obligates, or mandates that a municipality adopt this ordinance? And secondly, can you provide to us information that should we not comply, what the ramifications to the municipality are?

If the township does choose to adopt such an ordinance, can you provide guidance as to how much of the model we need to mimic?

Thanks for your anticipated cooperation.

--
Alex Rubenstein, Mayor
The Township of Byram
http://www.byramtwp.org
Mobile - 973-214-8835

From: Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>
Sent: Thursday, April 25, 2024 4:57 PM
To: Cindy Church <cchurch@byramtwp.org>
Cc: Construction Official <constructionofficial@byramtwp.org>; Ruggeri, Joseph [DEP] <Joseph.Ruggeri@dep.nj.gov>; Ibrahim, George [DEP] <George.Ibrahim@dep.nj.gov>; Sukkar, Ayah [DEP] <Ayah.Sukkar@dep.nj.gov>; Hofmann, Jack [DEP] <Jack.Hofmann@dep.nj.gov>; Gould, Chris [DEP] <Chris.Gould@dep.nj.gov>; William.Mcdonnell@fema.dhs.gov; Luhrs, Marianne <marianne.luhrs@fema.dhs.gov>; Reinknecht, Dennis [DEP] <Dennis.Reinknecht@dep.nj.gov>
Subject: Sussex County - Flood Damage Prevention Ordinance

Hello Ms. Church

Please be advised that the attached state letter has been mailed to the Township of Byram. At your earliest convenience, please respond back with the point of contact for the ordinance adoption. Additionally, many of our records are out of date for Floodplain Administrators. If we have the incorrect contact information, please ensure that the Floodplain Administrator is aware of this required ordinance update. If our records are incorrect, please let us know so that we can update them. Should you have any questions please do not hesitate to contact me.

Thanks,
George

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

George Ibrahim, CFM
Environmental Engineer
New Jersey Department of Environmental Protection
Division of Dam Safety and Flood Engineering
609-292-2296
george.ibrahim@dep.nj.gov

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ORDINANCE FOR ADOPTION OF THE FLOODPLAIN MANAGEM~~-~~ENT REGULATIONS OF ~~{COMMUNITY}~~THE TOWNSHIP OF BYRAM, SUSSEX COUNTY

ORDINANCE NO. XX-XX

AN ORDINANCE BY THE TOWNSHIP MAYOR AND COUNCIL~~{community's governing body}~~ AMENDING THE ~~{name of community}~~BYRAM TOWNSHIP CODE OF ORDINANCES TO REPEAL ~~{insert appropriate chapter/section numbers}~~CHAPTER 136~~;~~ – FLOOD DAMAGE PREVENTION; TO ADOPT A NEW ~~{insert appropriate chapter/section numbers};~~CHATPER 136 – FLOOD DAMAGE PREVENTION; TO ADOPT FLOOD HAZARD MAPS; TO DESIGNATE A FLOODPLAIN ADMNISTRATOR; AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the Legislature of the State of New Jersey has, in N.J.S.A. 40:48 et seq and N.J.S.A. 40:55D et seq., conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of ~~{name of community}~~Township of Byram, and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

WHEREAS, the ~~{name of community}~~Township of Byram was accepted for participation in the National Flood Insurance Program on January 5, 1984~~{date of regular program entry}~~, and the ~~{community's governing body~~Mayor and Council~~}~~, desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59, 60, 65 and 70 necessary for such participation; and

WHEREAS, the Township of Byram~~{name of community}~~, is required, pursuant to N.J.A.C. 5:23 et seq., to administer and enforce the State building codes, and such building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas; and

WHEREAS, the ~~{name of community}~~Township of Byram is required, pursuant to N.J.S.A. 40:49-5, to enforce zoning codes that secure safety from floods and contain certain provisions that apply to the development of lands; and

WHEREAS, the ~~{name of community}~~ Township of Byram is required, pursuant to N.J.S.A.58:16A-57, within 12 months after the delineation of any flood hazard area, to adopt rules and regulations concerning the development and use of land in the flood fringe area which at least conform to the standards promulgated by the New Jersey Department of Environmental Protection (NJDEP).

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NOW, THEREFORE, BE IT ORDAINED by the ~~{community's governing body}~~Mayor and Council of ~~{name of community}~~the Township of Byram ~~t~~that the following floodplain management regulations are hereby adopted.

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SECTION 1. RECITALS.

The foregoing whereas clauses are incorporated herein by reference and made a part hereof.

SECTION 2. These regulations specifically repeal and replace the following ordinance(s) and regulation(s): Chapter 136 – Flood Damage Prevention ~~{insert citation to existing floodplain management regulations that will be replaced by these regulations and, if applicable, citation(s) to other ordinances that have flood provisions, such as subdivision regulations, that also will be replaced by these regulations}.~~ adopted by the Township Committee (now Township Council) of the Township of Byram 12-7-1983; amended in its entirety 6-21-2011 by Ord. No. 8-2011.

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SECTION 101 SCOPE AND ADMINISTRATION

101.1 Title. These regulations, in combination with the flood provisions of the Uniform Construction Code (UCC) N.J.A.C. 5:23 (hereinafter "Uniform Construction Code," consisting of the Building Code, Residential Code, Rehabilitation Subcode, and related codes, and the New Jersey Flood Hazard Area Control Act (hereinafter "FHACA"), N.J.A.C. 7:13, shall be known as the *Floodplain Management Regulations* of the Township of Byram ~~{name of community}~~ (hereinafter "these regulations").

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101.2 Scope. These regulations, in combination with the flood provisions of the Uniform Construction Code and FHACA shall apply to all proposed development in flood hazard areas established in Section 102 of these regulations.

101.3 Purposes and objectives. The purposes and objectives of these regulations are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas, designed to:

(1) Protect human life and health.

(2) Prevent unnecessary disruption of commerce, access, and public service during times of flooding.

(3) Manage the alteration of natural floodplains, stream channels and shorelines;

(4) Manage filling, grading, dredging and other development which may increase flood damage or erosion potential.

(5) Prevent or regulate the construction of flood barriers which will divert floodwater or increase flood hazards.

(6) Contribute to improved construction techniques in the floodplain.

(7) Minimize damage to public and private facilities and utilities.

(8) Help maintain a stable tax base by providing for the sound use and development of flood hazard areas.

(9) Minimize the need for rescue and relief efforts associated with flooding.

(10) Ensure that property owners, occupants, and potential owners are aware of property located in flood hazard areas.

(11) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.

(12) Meet the requirements of the National Flood Insurance Program for community participation

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set forth in Title 44 Code of Federal Regulations, Section 59.22.

101.4 Coordination with Building Codes. Pursuant to the requirement established in N.J.A.C. 5:23, the Uniform Construction Code, that the ~~{name of community},~~ Township of Byram, administer and enforce the State building codes, the ~~{community's governing body}~~ Mayor and Council of the ~~{name of community},~~ Township of Byram, does hereby acknowledge that the Uniform Construction Code contains certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, these regulations are intended to be administered and enforced in conjunction with the Uniform Construction Code.

101.5 Ordinary Building Maintenance and Minor Work. Improvements defined as ordinary building maintenance and minor work projects by the Uniform Construction Code including non-structural replacement-in-kind of windows, doors, cabinets, plumbing fixtures, decks, walls, partitions, new flooring materials, roofing, etc. shall be evaluated by the Floodplain Administrator through the floodplain development permit to ensure compliance with the Substantial Damage and Substantial Improvement Section 103.14 of this ordinance.

101.6 Warning. The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. Enforcement of these regulations does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

101.7 Other laws. The provisions of these regulations shall not be deemed to nullify any provisions of local, State, or Federal law.

101.8 Violations and Penalties for Noncompliance. No structure or land shall hereafter be constructed, re-located to, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a violation under N.J.S.A. 40:49-5. Any person who violates this ordinance or fails to comply with any of its requirements shall be subject to one (1) or more of the following: a fine of not more than $1250 ~~[or optional higher threshold amount up to $2000 under N.J.S.A 40:49-5]~~, imprisonment for a term not exceeding ninety(90) days or a period of community service not exceeding 90 days.

Each day in which a violation of an ordinance exists shall be considered to be a separate and distinct violation subject to the imposition of a separate penalty for each day of the violation as the Court may determine except that the owner will be afforded the opportunity to cure or abate the condition during a 30 day period and shall be afforded the opportunity for a hearing before the court for an independent determination concerning the violation. Subsequent to the expiration of the 30 day period, a fine greater than $1250 ~~[or optional higher threshold amount up to $2000 under N.J.S.A 40:49-5]~~ may be imposed if the court has not determined otherwise, or if upon reinspection of the property, it is determined that the abatement has not been substantially completed.

Any person who is convicted of violating an ordinance within one year of the date of a previous violation of the same ordinance and who was fined for the previous violation, shall be sentenced by a court to an additional fine as a repeat offender. The additional fine imposed by the court upon a person for a repeated offense shall not be less than the minimum or exceed the maximum fine fixed for a violation of the ordinance, but shall be calculated separately from the fine imposed

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for the violation of the ordinance.

101.8.1 Solid Waste Disposal in a Flood Hazard Area. Any person who has unlawfully disposed of solid waste in a floodway or floodplain who fails to comply with this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than $2500 or up to a maximum penalty by a fine not exceeding $10,000 under N.J.S.A. 40:49-5.

101.9 Abrogation and greater restrictions. These regulations supersede any ordinance in effect in flood hazard areas. However, these regulations are not intended to repeal or abrogate any existing ordinances including land development regulations, subdivision regulations, zoning ordinances, stormwater management regulations, or building codes. In the event of a conflict between these regulations and any other ordinance, code, or regulation, the more restrictive shall govern.

SECTION 102 APPLICABILITY

102.1 General. These regulations, in conjunction with the Uniform Construction Code, provide minimum requirements for development located in flood hazard areas, including the subdivision of land and other developments; site improvements and installation of utilities; placement and replacement of manufactured homes; placement of recreational vehicles; new construction and alterations, repair, reconstruction, rehabilitation or additions of existing buildings and structures; substantial improvement of existing buildings and structures, including repair of substantial damage; installation of tanks; temporary structures and temporary or permanent storage; utility and miscellaneous Group U buildings and structures; and certain building work exempt from permit under the Uniform Construction Code; and other buildings and development activities.

102.2 Establishment of Flood Hazard Areas. The ~~{name of community}~~ Township of Byram was accepted for participation in the National Flood Insurance Program on ~~{date of regular program entry or date of first floodplain management ordinance, whichever is earlier~~January 5, 1984~~}~~.

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The National Flood Insurance Program (NFIP) floodplain management regulations encourage that all Federal, State, and Local regulations that are more stringent than the minimum NFIP standards take precedence in permitting decisions. The FHACA requires that the effective Flood Insurance Rate Map, most recent preliminary FEMA mapping and flood studies, and Department delineations be compared to determine the most restrictive mapping. The FHACA also regulates unstudied flood hazard areas in watersheds measuring 50 acres or greater in size and most riparian zones in New Jersey. Because of these higher standards, the regulated flood hazard area in New Jersey may be more expansive and more restrictive than the FEMA Special Flood Hazard Area. Maps and studies that establish flood hazard areas are on file at the ~~{name and address of the office of the Floodplain Administrator}~~ office of the Township Engineer.

The following sources identify flood hazard areas in this jurisdiction and must be considered when determining the Best Available Flood Hazard Data Area:

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1) **Effective Flood Insurance Study.** Special Flood Hazard Areas (SFHAs) identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "Flood Insurance Study, Sussex County, New Jersey (All Jurisdictions)" dated September 29, 2011~~{full title of the FIS} dated {effective date of FIS}~~ and the accompanying Flood Insurance Rate Maps (FIRM) identified in Table 102.2(1) whose top level document (appendix map) effective date is ~~{effective date of appendix map}~~September 29, 20211 are hereby adopted by reference.

Table 102.2(1)

Map Panel #	Effective Date	Suffix	Map Panel #	Effective Date	Suffix
34037C0315E	09/29/21		34037C0403E	09/29/21	
34037C0318E	09/29/21		34037C0404E	09/29/21	
34037C0319E	09/29/21		34037C0406E	09/29/21	
34037C0383E	09/29/21		34037C0408E	09/29/21	
34037C0384E	09/29/21		34037C0410E	09/29/21	
34037C0391E	09/29/21		34037C0411E	09/29/21	
34037C0392E	09/29/21		34037C0412E	09/29/21	
34037C0401E	09/29/21		34037C0416E	09/29/21	
34037C0402E	09/29/21			09/29/21	

2) **Federal Best Available Information.** ~~The~~ The Township of Byram~~{community name}~~ shall utilize Federal flood information ~~(as listed in the table below~~if available) that provides more detailed hazard information, higher flood elevations, larger flood hazard areas, and results in more restrictive regulations. This information may include but is not limited to preliminary flood elevation guidance from FEMA (such as Advisory Flood Hazard Area Maps, Work Maps or Preliminary FIS and FIRM). ~~Additional Federal Best Available studies issued after the date of this ordinance must also be considered.~~ These studies are listed on FEMA's Map Service Center. This information shall be used for floodplain regulation purposes only.

~~Table 102.2(2)~~

~~Map Panel #~~	~~Preliminary Date~~	~~Map Panel #~~	~~Preliminary Date~~

3) **Other Best Available Data.** ~~{community~~ The Township of Byram ~~name}~~ shall utilize high water elevations from flood events, groundwater flooding areas, studies by federal or state agencies, or other information deemed appropriate by the ~~{name of community~~Township of Byram~~}~~. Other "best available information" may not be used which results in less restrictive flood elevations, design standards, or smaller flood hazard areas than the sources described in Section 102.2 (1) and (2), above. This information shall be used for floodplain regulation purposes only.

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~~Optional Higher Standard – The community may develop more restrictive flood zone mapping with larger areal extents or more restrictive elevations by resolution and incorporating these maps into this ordinance. A record shall be kept in this ordinance of the more restrictive map in the following Table, renumbering subsequent tables, as necessary:~~

~~Table 102.2(3)~~

~~Map Description~~	~~Ordinance Number~~	~~Date Effective~~	~~Date Withdrawn and Ordinance Number~~

4) **State Regulated Flood Hazard Areas.** For State regulated waters, the NJ Department of Environmental Protection (NJDEP) identifies the flood hazard area as the land, and the space above that land, which lies below the "Flood Hazard Area Control Act Design Flood Elevation", as defined in Section 201, and as described in the New Jersey Flood Hazard Area Control Act at N.J.A.C. 7:13. A FHACA flood hazard area exists along every regulated water that has a drainage area of 50 acres or greater. Such area may extend beyond the boundaries of the Special Flood Hazard Areas (SFHAs) as identified by FEMA. The following is a list of New Jersey State studied waters in this community under the FHACA, and their respective map identification numbers.

Table 102.2(~~23 or 4~~)) List of State Studied Waters

Name of Studied Water	File Name	Map Number
Lubbers Run	TBD	TBD
Musconetcong River	TBD	TBD

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~~5) Optional Higher Standard – The most restrictive 0.2% annual chance (500 year) effective or preliminary FEMA flood study is adopted by this ordinance for consideration when establishing the Best Available Flood Hazard Data Area.~~

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~~6) Optional Higher Standard- US Army Corps of Engineers Maps with more restrictive data could be referenced here if the jurisdiction wants to include these maps for construction and decision-making purposes.~~

~~7) Optional Higher Standards for minimum design elevations could be included here if these are more restrictive than the standards referred to in this section.~~

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102.3 Establishing the Local Design Flood Elevation (LDFE).

The Local Design Flood Elevation (LDFE) is established in the flood hazard areas determined in Section 102.2, above, using the best available flood hazard data sources, and the Flood Hazard Area Control Act minimum Statewide elevation requirements for lowest floors in A, Coastal A, and V zones, ASCE 24 requirements for critical facilities as specified by the building code, plus additional freeboard as specified by this ordinance.

At a minimum, the Local Design Flood Elevation shall be as follows:

1) For a delineated watercourse, the elevation associated with the Best Available Flood Hazard Data Area determined in Section 102.2, above plus one foot or as described by N.J.A.C. 7:13 ~~[or higher standard feet]~~ of freeboard; or

2) For any undelineated watercourse (where mapping or studies described in 102.2 (1) and (2) above are not available) that has a contributory drainage area of 50 acres or more, the applicants must provide one of the following to determine the Local Design Flood Elevation:

    a. A copy of an unexpired NJDEP Flood Hazard Area Verification plus one foot ~~or higher standard feet~~ of freeboard and any additional freeboard as required by ASCE 24; or

    b. A determination of the Flood Hazard Area Design Flood Elevation using Method 5 or Method 6 (as described in N.J.A.C. 7:13) plus one foot ~~or [higher standard feet]~~ of freeboard and any additional freeboard as required by ASCE 24. Any determination using these methods must be sealed and submitted according to Section 105.2-3.

3) AO Zones – For Zone AO areas on the municipality's FIRM (or on preliminary flood elevation guidance from FEMA), the Local Design Flood Elevation is determined from the FIRM panel as the highest adjacent grade plus the depth number specified plus one foot ~~[or higher standard feet]~~ of freeboard. If no depth number is specified, the Local Design Flood Elevation is three (3) feet ~~[or more feet]~~ above the highest adjacent grade.

4) Class IV Critical Facilities - For any proposed development of new and substantially improved Flood Design Class IV Critical Facilities, the Local Design Flood Elevation must be the higher of the 0.2% annual chance (500 year) flood elevation or the Flood Hazard Area Design Flood Elevation with an additional 2 feet ~~[or higher standard feet]~~ of freeboard in accordance with ASCE 24.

5) Class III Critical Facilities - For proposed development of new and substantially improved Flood Design Class III Critical Facilities in coastal high hazard areas, the Local Design Flood Elevation must be the higher of the 0.2% annual chance (500 year) flood elevation or the Flood Hazard Area Design Flood Elevation with an additional 1 foot ~~[or higher standard feet]~~ of freeboard in accordance with ASCE 24.

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SECTION 103 DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR

103.1 Floodplain Administrator Designation. The Township Engineer ~~{insert position title}~~ is designated the Floodplain Administrator. The Floodplain Administrator shall have the authority to delegate performance of certain duties to other employees.

103.2 General. The Floodplain Administrator is authorized and directed to administer the provisions of these regulations. The Floodplain Administrator shall have the authority to render interpretations of these regulations consistent with the intent and purpose of these regulations and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of these regulations and the flood provisions of the building code and shall not have the effect of waiving specific requirements without the granting of a variance pursuant to Section 107 of these regulations.

103.3 Coordination. The Floodplain Administrator shall coordinate with the Construction Official to administer and enforce the flood provisions of the Uniform Construction Code.

103.4 Duties. The duties of the Floodplain Administrator shall include but are not limited to:

(1) Review all permit applications to determine whether proposed development is located in flood hazard areas established in Section 102 of these regulations.

(2) Require development in flood hazard areas to be reasonably safe from flooding and to be designed and constructed with methods, practices and materials that minimize flood damage.

(3) Interpret flood hazard area boundaries and provide available flood elevation and flood hazard information.

(4) Determine whether additional flood hazard data shall be obtained or developed.

(5) Review required certifications and documentation specified by these regulations and the building code to determine that such certifications and documentations are complete.

(6) Establish, in coordination with the Construction Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Section 103.14 of these regulations.

(7) Coordinate with the Construction Official and others to identify and investigate damaged buildings located in flood hazard areas and inform owners of the requirement to obtain permits for repairs.

(8) Review requests submitted to the Construction Official seeking approval to modify the strict application of the flood load and flood resistant construction requirements of the Uniform Construction code to determine whether such requests require consideration as a variance pursuant to Section 107 of these regulations.

(9) Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.

(10) Require applicants who propose alteration of a watercourse to notify adjacent jurisdictions and the NJDEP Bureau of Flood Engineering, and to submit copies of such notifications to the Federal Emergency Management Agency (FEMA).

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(11) Inspect development in accordance with Section 106 of these regulations and inspect flood hazard areas to determine if development is undertaken without issuance of permits.

(12) Prepare comments and recommendations for consideration when applicants seek variances in accordance with Section 107 of these regulations.

(13) Cite violations in accordance with Section 108 of these regulations.

(14) Notify the Federal Emergency Management Agency when the corporate boundaries of ~~{name of community}~~ Township of Byram have been modified.

(15) Permit Ordinary Maintenance and Minor Work in the regulated areas discussed in Section 102.2.

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103.5 Use of changed technical data. The Floodplain Administrator and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the Floodplain Administrator or applicant has applied for a Conditional Letter of Map Revision (CLOMR) to the Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency. A revision of the effective FIRM does not remove the related feature(s) on a flood hazard area delineation that has been promulgated by the NJDEP. A separate application must be made to the State pursuant to N.J.A.C. 7:13 for revision of a flood hazard design flood elevation, flood hazard area limit, floodway limit, and/or other related feature.

103.6 Other permits. It shall be the responsibility of the Floodplain Administrator to assure that approval of a proposed development shall not be given until proof that necessary permits have been granted by Federal or State agencies having jurisdiction over such development, including section 404 of the Clean Water Act. In the event of conflicting permit requirements, the Floodplain Administrator must ensure that the most restrictive floodplain management standards are reflected in permit approvals.

103.7 Determination of Local Design Flood Elevations. If design flood elevations are not specified, the Floodplain Administrator is authorized to require the applicant to:

(1) Obtain, review, and reasonably utilize data available from a Federal, State, or other source, or

(2) Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques. Such analyses shall be performed and sealed by a licensed professional engineer. Studies, analyses, and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator. The

accuracy of data submitted for such determination shall be the responsibility of the applicant.

It shall be the responsibility of the Floodplain Administrator to verify that the applicant's proposed Best Available Flood Hazard Data Area and the Local Design Flood Elevation in any development permit accurately applies the best available flood hazard data and methodologies for determining flood hazard areas and design elevations described in 102.2 and 102.3 respectively. This information shall be provided to the Construction Official and documented according to Section103.15.

103.8 Requirement to submit new technical data. Base Flood Elevations may increase or decrease resulting from natural changes (e.g. erosion, accretion, channel migration,

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subsidence, uplift) or man-made physical changes (e.g. dredging, filling, excavation) affecting flooding conditions. As soon as practicable, but not later than six months after the date of a man-made change or when information about a natural change becomes available, the Floodplain Administrator shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 Code of Federal Regulations Section 65.3. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.

103.9 Activities in riverine flood hazard areas. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the Floodplain Administrator shall not permit any new construction, substantial improvement or other development, including the placement of fill, unless the applicant submits an engineering analysis prepared by a licensed professional engineer that demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachment, will not increase the design flood elevation more than 0.2 feet at any point within the community.

103.10 Floodway encroachment. Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land- disturbing-activity, the Floodplain Administrator shall require submission of a certification prepared by a licensed professional engineer, along with supporting technical data, that demonstrates that such development will not cause any increase in the base flood level.

> **103.10.1 Floodway revisions.** A floodway encroachment that increases the level of the base flood is authorized if the applicant has applied for a Conditional Letter of Map Revision (CLOMR) to the Flood Insurance Rate Map (FIRM) and has received the approval of FEMA.

103.11 Watercourse alteration. Prior to issuing a permit for any alteration or relocation of any watercourse, the Floodplain Administrator shall require the applicant to provide notification of the proposal to the appropriate authorities of all adjacent government jurisdictions, as well as the NJDEP Bureau of Flood Engineering and the Division of Land Resource Protection. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

> **103.11.1 Engineering analysis.** The Floodplain Administrator shall require submission of an engineering analysis prepared by a licensed professional engineer, demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will be maintained, neither increased nor decreased. Such watercourses shall be maintained in a manner that preserves the channel's flood-carrying capacity.

103.12 Alterations in coastal areas. The excavation or alteration of sand dunes is governed by the New Jersey Coastal Zone Management (CZM) rules, N.J.A.C. 7:7. Prior to issuing a flood damage prevention permit for any alteration of sand dunes in coastal high hazard areas and Coastal A Zones, the Floodplain Administrator shall require that a New Jersey CZM permit be obtained and included in the flood damage prevention permit application. The applicant shall also provide documentation of any engineering analysis, prepared by a licensed professional engineer, that demonstrates that the proposed alteration will not increase the potential for flood damage.

103.13 Development in riparian zones All development in Riparian Zones as described in N.J.A.C. 7:13 is prohibited by this ordinance unless the applicant has received an individual or

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general permit or has complied with the requirements of a permit by rule or permit by certification from NJDEP Division of Land Resource Protection prior to application for a floodplain development permit and the project is compliant with all other Floodplain Development provisions of this ordinance. The width of the riparian zone can range between 50 and 300 feet and is determined by the attributes of the waterbody and designated in the New Jersey Surface Water Quality Standards N.J.A.C. 7:9B. The portion of the riparian zone located outside of a regulated water is measured landward from the top of bank. Applicants can request a verification of the riparian zone limits or a permit applicability determination to determine State permit requirements under N.J.A.C. 7:13 from the NJDEP Division of Land Resource Protection.

103.14 Substantial improvement and substantial damage determinations. When buildings and structures are damaged due to any cause including but not limited to man-made, structural, electrical, mechanical, or natural hazard events, or are determined to be unsafe as described in N.J.A.C. 5:23; and **f**or applications for building permits to improve buildings and structures, including alterations, movement, repair, additions, rehabilitations, renovations, ordinary maintenance and minor work, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Construction Official, shall:

(1) Estimate the market value, or require the applicant to obtain a professional appraisal prepared by a qualified independent appraiser, of the market value of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.

(2) Determine and include the costs of all ordinary maintenance and minor work, as discussed in Section 101.5, performed in the floodplain regulated by this ordinance in addition to the costs of those improvements regulated by the Construction Official in substantial damage and substantial improvement calculations.

(3) Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, where applicable, to the market value of the building or structure.

~~(4) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage. This determination requires the evaluation of previous permits issued for improvements and repairs over a period of [*insert number*] years prior to the permit application or substantial damage determination as specified in the definition of substantial improvement. This determination shall also include the evaluation of flood related damages over a 10-year period to determine if the costs of repairs at the times of each flood constitutes a repetitive loss as defined by this ordinance.~~

~~(5)~~(4) Notify the applicant in writing when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the building code is required and notify the applicant ~~in writing~~ when it is determined that work does not constitute substantial improvement or repair of substantial damage. The Floodplain Administrator shall also provide all letters documenting substantial damage and compliance with flood resistant construction requirements of the building code to the NJDEP Bureau of Flood Engineering.

103.15 Department records. In addition to the requirements of the building code and these

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regulations, and regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of these regulations and the flood provisions of the Uniform Construction Code, including Flood Insurance Studies, Flood Insurance Rate Maps; documents from FEMA that amend or revise FIRMs; NJDEP delineations, records of issuance of permits and denial of permits; records of ordinary maintenance and minor work, determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the Uniform Construction Code and these regulations including as-built Elevation Certificates; notifications to adjacent communities, FEMA, and the State related to alterations of watercourses; assurance that the flood carrying capacity of altered waterways will be maintained; documentation related to variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to these regulations and the flood resistant provisions of the Uniform Construction Code. The Floodplain Administrator shall also record the required elevation, determination method, and base flood elevation source used to determine the Local Design Flood Elevation in the floodplain development permit.

103.16 Liability. The Floodplain Administrator and any employee charged with the enforcement of these regulations, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by these regulations or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of these regulations shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of these regulations.

SECTION 104 PERMITS

104.1 Permits Required. Any person, owner or authorized agent who intends to conduct any development in a flood hazard area shall first make application to the Floodplain Administrator and shall obtain the required permit. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine that a floodplain development permit or approval is required in addition to a building permit.

104.2 Application for permit. The applicant shall file an application in writing on a form furnished by the Floodplain Administrator. Such application shall:

(1) Identify and describe the development to be covered by the permit.

(2) Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitively locate the site.

(3) Indicate the use and occupancy for which the proposed development is intended.

(4) Be accompanied by a site plan and construction documents as specified in Section 105 of these regulations, grading and filling plans and other information deemed appropriate by the Floodplain Administrator.

(5) State the valuation of the proposed work, including the valuation of ordinary maintenance and minor work.

(6) Be signed by the applicant or the applicant's authorized agent.

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104.3 Validity of permit. The issuance of a permit under these regulations or the Uniform Construction Code shall not be construed to be a permit for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a permit based on submitted documents and information shall not prevent the Floodplain Administrator from requiring the correction of errors. The Floodplain Administrator is authorized to prevent occupancy or use of a structure or site which is in violation of these regulations or other ordinances of this jurisdiction.

104.4 Expiration. A permit shall become invalid when the proposed development is not commenced within 180 days after its issuance, or when the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The Floodplain Administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

104.5 Suspension or revocation. The Floodplain Administrator is authorized to suspend or revoke a permit issued under these regulations wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of this jurisdiction.

SECTION 105 SITE PLANS AND CONSTRUCTION DOCUMENTS

105.1 Information for development in flood hazard areas. The site plan or construction documents for any development subject to the requirements of these regulations shall be drawn to scale and shall include, as applicable to the proposed development:

(1) Delineation of flood hazard areas, floodway boundaries and flood zone(s), base flood elevation(s), and ground elevations when necessary for review of the proposed development. For buildings that are located in more than one flood hazard area, the elevation and provisions associated with the most restrictive flood hazard area shall apply.

(2) Where base flood elevations or floodway data are not included on the FIRM or in the Flood Insurance Study, they shall be established in accordance with Section 105.2.

(3) Where the parcel on which the proposed development will take place will have more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM or in the Flood Insurance Study, such elevations shall be established in accordance with Section 105.2(3) of these regulations.

(4) Location of the proposed activity and proposed structures, and locations of existing buildings and structures; in coastal high hazard areas and Coastal A zones, new buildings shall be located landward of the reach of mean high tide.

(5) Location, extent, amount, and proposed final grades of any filling, grading, or excavation.

(6) Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose. The applicant shall provide an engineering certification confirming that the proposal meets the flood storage displacement limitations of N.J.A.C. 7:13.

(7) Extent of any proposed alteration of sand dunes.

(8) Existing and proposed alignment of any proposed alteration of a watercourse.

(9) Floodproofing certifications, V Zone and Breakaway Wall Certifications, Operations and

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Maintenance Plans, Warning and Evacuation Plans and other documentation required pursuant to FEMA publications.

The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by these regulations but that are not required to be prepared by a registered design professional when it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance.

105.2 Information in flood hazard areas without base flood elevations (approximate Zone A). Where flood hazard areas are delineated on the effective or preliminary FIRM and base flood elevation data have not been provided, the applicant shall consult with the Floodplain Administrator to determine whether to:

(1) Use the Approximation Method (Method 5) described in N.J.A.C. 7:13 in conjunction with Appendix 1 of the FHACA to determine the required flood elevation.

(2) Obtain, review, and reasonably utilize data available from a Federal, State or other source when those data are deemed acceptable to the Floodplain Administrator to reasonably reflect flooding conditions.

(3) Determine the base flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques according to Method 6 as described in N.J.A.C. 7:13. Such analyses shall be performed and sealed by a licensed professional engineer.

Studies, analyses, and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator prior to floodplain development permit issuance. The accuracy of data submitted for such determination shall be the responsibility of the applicant. Where the data are to be used to support a Letter of Map Change (LOMC) from FEMA, the applicant shall be responsible for satisfying the submittal requirements and pay the processing fees.

105.3 Analyses and certifications by a Licensed Professional Engineer. As applicable to the location and nature of the proposed development activity, and in addition to the requirements of this section, the applicant shall have the following analyses signed and sealed by a licensed professional engineer for submission with the site plan and construction documents:

(1) For development activities proposed to be located in a regulatory floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in Section 105.4 of these regulations and shall submit the Conditional Letter of Map Revision, if issued by FEMA, with the site plan and construction documents.

(2) For development activities proposed to be located in a riverine flood hazard area where base flood elevations are included in the FIS or FIRM but floodways have not been designated, hydrologic and hydraulic analyses that demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments will not increase the base flood elevation more than 0.2 feet at any point within the jurisdiction. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.

(3) For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of

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the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained, neither increasing nor decreasing the channel's flood-carrying capacity. The applicant shall submit the analysis to FEMA as specified in Section 105.4 of these regulations. The applicant shall notify the chief executive officer of all affected adjacent jurisdictions, the NJDEP's Bureau of Flood Engineering and the Division of Land Resource Protection; and shall provide documentation of such notifications.

(4) For activities that propose to alter sand dunes in coastal high hazard areas (Zone V) and Coastal A Zones, an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage and documentation of the issuance of a New Jersey Coastal Zone Management permit under N.J.A.C. 7:7.

(5) For analyses performed using Methods 5 and 6 (as described in N.J.A.C. 7:13) in flood hazard zones without base flood elevations (approximate A zones).

105.4 Submission of additional data. When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change (LOMC) from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant.

SECTION 106 INSPECTIONS

106.1 General. Development for which a permit is required shall be subject to inspection. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of these regulations or the building code. Inspections presuming to give authority to violate or cancel the provisions of these regulations or the building code or other ordinances shall not be valid.

106.2 Inspections of development. The Floodplain Administrator shall inspect all development in flood hazard areas authorized by issuance of permits under these regulations. The Floodplain Administrator shall inspect flood hazard areas from time to time to determine if development is undertaken without issuance of a permit.

106.3 Buildings and structures. The Construction Official shall make or cause to be made, inspections for buildings and structures in flood hazard areas authorized by permit in accordance with the Uniform Construction Code, N.J.A.C. 5:23.

1) **Lowest floor elevation**. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

2) **Lowest horizontal structural member.** In V zones and Coastal A zones, upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

3) **Installation of attendant utilities (**electrical, heating, ventilating, air-conditioning, and other service equipment) and sanitary facilities elevated as discussed in Section 801.2.

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4) **Final inspection.** Prior to the final inspection, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

106.4 Manufactured homes. The Floodplain Administrator shall inspect manufactured homes that are installed or replaced in flood hazard areas to determine compliance with the requirements of these regulations and the conditions of the issued permit. Upon placement of a manufactured home, certification of the elevation of the lowest floor shall be submitted on an Elevation Certificate to the Floodplain Administrator prior to the final inspection.

SECTION 107 VARIANCES

107.1 General. The Township Planning Board~~{body to hear variances}~~ shall hear and decide requests for variances. The Township Planning Board~~{body to hear variances}~~ shall base its determination on technical justifications submitted by applicants, the considerations for issuance in Section 107.5, the conditions of issuance set forth in Section 107.6, and the comments and recommendations of the Floodplain Administrator and, as applicable, the Construction Official. The Township Planning Board~~{body to hear variances}~~ has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations.

107.2 Historic structures. A variance to the substantial improvement requirements of this ordinance is authorized provided that the repair or rehabilitation of a historic structure is completed according to N.J.A.C. 5:23-6.33, Section 1612 of the International Building Code and R322 of the International Residential Code, the repair or rehabilitation will not preclude the structure's continued designation as a historic structure, the structure meets the definition of the historic structure as described by this ordinance, and the variance is the minimum necessary to preserve the historic character and design of the structure.

107.3 Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damage during the base flood and create no additional threats to public safety.

107.4 Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analysis and certification required in Section 105.3(1) of these regulations.

107.5 Considerations. In reviewing requests for variances, all technical evaluations, all relevant factors, all other portions of these regulations, and the following shall be considered:

(1) The danger that materials and debris may be swept onto other lands resulting in further injury or damage.

(2) The danger to life and property due to flooding or erosion damage.

(3) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.

(4) The importance of the services provided by the proposed development to the community.

(5) The availability of alternate locations for the proposed development that are not subject

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to flooding or erosion and the necessity of a waterfront location, where applicable.

(6) The compatibility of the proposed development with existing and anticipated development.

(7) The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.

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(8) The safety of access to the property in times of flood for ordinary and emergency vehicles.

(9) The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwater and the effects of wave action, where applicable, expected at the site.

(10) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets, and bridges.

107.6 Conditions for issuance. Variances shall only be issued upon:

(1) Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the building code inappropriate.

(2) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.

(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

(4) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(5) Notification to the applicant in writing over the signature of the Floodplain Administrator that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

SECTION 108 VIOLATIONS

108.1 Violations. Any development in any flood hazard area that is being performed without an issued permit or that is in conflict with an issued permit shall be deemed a violation. A building or structure without the documentation of elevation of the lowest floor, the lowest horizontal structural member if in a V or Coastal A Zone, other required design certifications, or other evidence of compliance required by the building code is presumed to be a violation until such time as that documentation is provided.

108.2 Authority. The Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of property involved, to the owner's agent, or to the person or persons doing the work for development that is not within the scope of the Uniform Construction Code, but is regulated by these regulations and that is determined to be a violation.

108.3 Unlawful continuance. Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to penalties as prescribed by N.J.S.A. 40:49-5 as appropriate.

108.4 Review Period to Correct Violations. A 30-day period shall be given to the property owner as an opportunity to cure or abate the condition. The property owner shall

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also be afforded an opportunity for a hearing before the court for an independent determination concerning the violation. Subsequent to the expiration of the 30-day period, a fine greater than $1,250.00 ~~[or optional higher threshold amount up to $2000.00 under N.J.S.A. 40:49-5]~~ may be imposed if a court has not determined otherwise or, upon reinspection of the property, it is determined that the abatement has not been substantially completed.

SECTION 201 DEFINITIONS

201.1 General. The following words and terms shall, for the purposes of these regulations, have the meanings shown herein. Other terms are defined in the Uniform Construction Code N.J.A.C. 5:23 and terms are defined where used in the International Residential Code and International Building Code (rather than in the definitions section). Where terms are not defined, such terms shall have ordinarily accepted meanings such as the context implies.

201.2 Definitions

30 DAY PERIOD – The period of time prescribed by N.J.S.A. 40:49-5 in which a property owner is afforded the opportunity to correct zoning and solid waste disposal after a notice of violation pertaining to this ordinance has been issued.

100 YEAR FLOOD ELEVATION – Elevation of flooding having a 1% annual chance of being equaled or exceeded in a given year which is also referred to as the Base Flood Elevation.

500 YEAR FLOOD ELEVATION – Elevation of flooding having a 0.2% annual chance of being equaled or exceeded in a given year.

A ZONES – Areas of 'Special Flood Hazard in which the elevation of the surface water resulting from a flood that has a 1% annual chance of equaling or exceeding the Base Flood Elevation (BFE) in any given year shown on the Flood Insurance Rate Map (FIRM) zones A, AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, and AR/AO. When used in reference to the development of a structure in this ordinance, A Zones are not inclusive of Coastal A Zones because of the higher building code requirements for Coastal A Zones.

AH ZONES– Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone.

AO ZONES – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet.

ACCESSORY STRUCTURE – Accessory structures are also referred to as appurtenant structures. An accessory structure is a structure which is on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure. For example, a residential structure may have a detached garage or storage shed for garden tools as accessory structures. Other examples of accessory structures include gazebos, picnic pavilions, boathouses, small pole barns, storage sheds, and similar buildings.

AGRICULTURAL STRUCTURE - A structure used solely for agricultural purposes in which the use is exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including the raising of livestock. Communities must require that new construction or substantial improvements of agricultural structures be elevated or floodproofed to or above the Base Flood Elevation (BFE) as any other nonresidential building. Under some

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circumstances it may be appropriate to wet-floodproof certain types of agricultural structures when located in wide, expansive floodplains through issuance of a variance. This should only be done for structures used for temporary storage of equipment or crops or temporary shelter for livestock and only in circumstances where it can be demonstrated that agricultural structures can be designed in such a manner that results in minimal damage to the structure and its contents and will create no additional threats to public safety. New construction or substantial improvement of livestock confinement buildings, poultry houses, dairy operations, similar livestock operations and any structure that represents more than a minimal investment must meet the elevation or dry-floodproofing requirements of 44 CFR 60.3(c)(3).

AREA OF SHALLOW FLOODING – A designated Zone AO, AH, AR/AO or AR/AH (or VO) on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. AREA OF SPECIAL FLOOD HAZARD – see SPECIAL FLOOD HAZARD AREA

ALTERATION OF A WATERCOURSE – A dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

ASCE 7 – The standard for the Minimum Design Loads for Buildings and Other Structures, referenced by the building code and developed and published by the American Society of Civil Engineers, Reston, VA. which includes but is not limited to methodology and equations necessary for determining structural and flood-related design requirements and determining the design requirements for structures that may experience a combination of loads including those from natural hazards. Flood related equations include those for determining erosion, scour, lateral, vertical, hydrostatic, hydrodynamic, buoyancy, breaking wave, and debris impact.

ASCE 24 – The standard for Flood Resistant Design and Construction, referenced by the building code and developed and published by the American Society of Civil Engineers, Reston, VA. References to ASCE 24 shall mean ASCE 24-14 or the most recent version of ASCE 24 adopted in the UCC Code [N.J.A.C. 5:23].

BASE FLOOD ELEVATION (BFE) – The water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year, as shown on a published Flood Insurance Study (FIS), or preliminary flood elevation guidance from FEMA. May also be referred to as the "100-year flood elevation".

BASEMENT – Any area of the building having its floor subgrade (below ground level) on all sides.

BEST AVAILABLE FLOOD HAZARD DATA - The most recent available preliminary flood risk guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BEST AVAILABLE FLOOD HAZARD DATA AREA- The areal mapped extent associated with the most recent available preliminary flood risk guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BEST AVAILABLE FLOOD HAZARD DATA ELEVATION - The most recent available preliminary

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flood elevation guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BREAKAWAY WALLS – Any type of wall subject to flooding that is not required to provide structural support to a building or other structure and that is designed and constructed such that, below the Local Design Flood Elevation, it will collapse under specific lateral loads such that (1) it allows the free passage of floodwaters, and (2) it does not damage the structure or supporting foundation system. Certification in the V Zone Certificate of the design, plans, and specifications by a licensed design professional that these walls are in accordance with accepted standards of practice is required as part of the permit application for new and substantially improved V Zone and Coastal A Zone structures. A completed certification must be submitted at permit application.

BUILDING – Per the FHACA, "Building" means a structure enclosed with exterior walls or fire walls, erected and framed of component structural parts, designed for the housing, shelter, enclosure, and support of individuals, animals, or property of any kind. A building may have a temporary or permanent foundation. A building that is intended for regular human occupation and/or residence is considered a habitable building.

CONDITIONAL LETTER OF MAP REVISION - A Conditional Letter of Map Revision (CLOMR) is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review that is described in the Letter of Map Change (LOMC) process. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.

CONDITIONAL LETTER OF MAP REVISION - FILL -- A Conditional Letter of Map Revision - Fill (CLOMR-F) is FEMA's comment on a proposed project involving the placement of fill outside of the regulatory floodway that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review that is described in the Letter of Map Change (LOMC) process. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.

CRITICAL BUILDING – Per the FHACA, "Critical Building" means that:

a. It is essential to maintaining continuity of vital government operations and/or supporting emergency response, sheltering, and medical care functions before, during, and after a flood, such as a hospital, medical clinic, police station, fire station, emergency response center, or public shelter; or
b. It serves large numbers of people who may be unable to leave the facility through their own efforts, thereby hindering or preventing safe evacuation of the building during a flood event, such as a school, college, dormitory, jail or detention facility, day care center, assisted living facility, or nursing home.

DEVELOPMENT – Any manmade change to improved or unimproved real estate, including but

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not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, drilling operations and other land-disturbing activities.

DRY FLOODPROOFING – A combination of measures that results in a non-residential structure, including the attendant utilities and equipment as described in the latest version of ASCE 24, being watertight with all elements substantially impermeable and with structural components having the capacity to resist flood loads.

ELEVATED BUILDING – A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns. Solid perimeter foundations walls are not an acceptable means of elevating buildings in V and VE Zones.

ELEVATION CERTIFICATE – An administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support an application for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

ENCROACHMENT – The placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

FEMA PUBLICATIONS – Any publication authored or referenced by FEMA related to building science, building safety, or floodplain management related to the National Flood Insurance Program. Publications shall include but are not limited to technical bulletins, desk references, and American Society of Civil Engineers Standards documents including ASCE 24.

FLOOD OR FLOODING

a. A general and temporary condition of partial or complete inundation of normally dry land areas from:
    1. The overflow of inland or tidal waters.
    2. The unusual and rapid accumulation or runoff of surface waters from any source.
    3. Mudslides (I.e. mudflows) which are proximately caused by flooding as defined in (a) (2) of this definition and are akin to a river or liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
b. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

FLOOD HAZARD AREA DESIGN FLOOD ELEVATION – Per the FHACA, the peak water surface elevation that will occur in a water during the flood hazard area design flood. This elevation is determined via available flood mapping adopted by the State, flood mapping published by FEMA (including effective flood mapping dated on or after January 31, 1980, or any more recent advisory, preliminary, or pending flood mapping; whichever results in higher flood elevations, wider floodway limits, greater flow rates, or indicates a change from an A zone to a V zone or coastal A zone), approximation, or calculation pursuant to the Flood Hazard Area Control

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Act Rules at N.J.A.C. 7:13-3.1 – 3.6 and is typically higher than FEMA's base flood elevation. A water that has a drainage area measuring less than 50 acres does not possess, and is not assigned, a flood hazard area design flood elevation.

FLOOD INSURANCE RATE MAP (FIRM) – The official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY (FIS) – The official report in which the Federal Emergency Management Agency has provided flood profiles, as well as the Flood Insurance Rate Map(s) and the water surface elevation of the base flood.

FLOODPLAIN OR FLOOD PRONE AREA – Any land area susceptible to being inundated by water from any source. See "Flood or flooding."

FLOODPLAIN MANAGEMENT REGULATIONS – Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance, and erosion control ordinance) and other applications of police power. The term describes such State or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

FLOODPROOFING – Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

FLOODPROOFING CERTIFICATE – Certification by a licensed design professional that the design and methods of construction for floodproofing a non-residential structure are in accordance with accepted standards of practice to a proposed height above the structure's lowest adjacent grade that meets or exceeds the Local Design Flood Elevation. A completed floodproofing certificate is required at permit application.

FLOODWAY – The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 0.2 foot.

FREEBOARD – A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

FUNCTIONALLY DEPENDENT USE – A use that cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding and ship repair facilities. The term does not include long-term storage or related manufacturing facilities.

HABITABLE BUILDING– Pursuant to the FHACA Rules (N.J.A.C. 7:13), means a building that is intended for regular human occupation and/or residence. Examples of a habitable building include a single-family home, duplex, multi-residence building, or critical building; a commercial building such as a retail store, restaurant, office building, or gymnasium; an accessory structure that is regularly occupied, such as a garage, barn, or workshop; mobile and manufactured homes, and trailers intended for human residence, which are set on a foundation and/or

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connected to utilities, such as in a mobile home park (not including campers and recreational vehicles); and any other building that is regularly occupied, such as a house of worship, community center, or meeting hall, or animal shelter that includes regular human access and occupation. Examples of a non-habitable building include a bus stop shelter, utility building, storage shed, self-storage unit, construction trailer, or an individual shelter for animals such as a doghouse or outdoor kennel.

HARDSHIP – As related to Section 107 of this ordinance, meaning the exceptional hardship that would result from a failure to grant the requested variance. The Mayor and Council~~{community governing body}~~ requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

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HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed or existing walls of a structure.

HISTORIC STRUCTURE – Any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
c. Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior; or
d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
    1. By an approved State program as determined by the Secretary of the Interior; or
    2. Directly by the Secretary of the Interior in States without approved programs.

LAWFULLY EXISTING – Per the FHACA, means an existing fill, structure and/or use, which meets all Federal, State, and local laws, and which is not in violation of the FHACA because it was established:

a. Prior to January 31, 1980; or
b. On or after January 31, 1980, in accordance with the requirements of the FHACA as it existed at the time the fill, structure and/or use was established.

Note: Substantially damaged properties and substantially improved properties that have not been elevated are not considered “lawfully existing” for the purposes of the NFIP. This definition is included in this ordinance to clarify the applicability of any more stringent statewide floodplain management standards required under the FHACA.

LETTER OF MAP AMENDMENT - A Letter of Map Amendment (LOMA) is an official amendment, by letter, to an effective National Flood Insurance Program (NFIP) map that is requested through the Letter of Map Change (LOMC) process. A LOMA establishes a property's location in relation to the Special Flood Hazard Area (SFHA). LOMAs are usually issued because a property has been inadvertently mapped as being in the floodplain but is actually on natural high ground above the base flood elevation. Because a LOMA officially amends the effective NFIP map, it is a public

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record that the community must maintain. Any LOMA should be noted on the community's master flood map and filed by panel number in an accessible location.

LETTER OF MAP CHANGE – The Letter of Map Change (LOMC) process is a service provided by FEMA for a fee that allows the public to request a change in flood zone designation in an Area of Special Flood Hazard on an Flood Insurance Rate Map (FIRM). Conditional Letters of Map Revision, Conditional Letters of Map Revision – Fill, Letters of Map Revision, Letters of Map Revision-Fill, and Letters of Map Amendment are requested through the Letter of Map Change (LOMC) process.

LETTER OF MAP REVISION - A Letter of Map Revision (LOMR) is FEMA's modification to an effective Flood Insurance Rate Map (FIRM). Letter of Map Revisions are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The LOMR officially revises the Flood Insurance Rate Map (FIRM) and sometimes the Flood Insurance Study (FIS) report, and when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM or FIS report. Because a LOMR officially revises the effective NFIP map, it is a public record that the community must maintain. Any LOMR should be noted on the community's master flood map and filed by panel number in an accessible location.

LETTER OF MAP REVISION – FILL -- A Letter of Map Revision Based on Fill (LOMR-F) is FEMA's modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM) based on the placement of fill outside the existing regulatory floodway may be initiated through the Letter of Map Change (LOMC) Process. Because a LOMR-F officially revises the effective Flood Insurance Rate Map (FIRM) map, it is a public record that the community must maintain. Any LOMR-F should be noted on the community's master flood map and filed by panel number in an accessible location.

LICENSED DESIGN PROFESSIONAL – Licensed design professional shall refer to either a New Jersey Licensed Professional Engineer, licensed by the New Jersey State Board of Professional Engineers and Land Surveyors or a New Jersey Licensed Architect, licensed by the New Jersey State Board of Architects.

LICENSED PROFESSIONAL ENGINEER - A licensed professional engineer shall refer to individuals licensed by the New Jersey State Board of Professional Engineers and Land Surveyors.

LOCAL DESIGN FLOOD ELEVATION (LDFE) – The elevation reflective of the most recent available preliminary flood elevation guidance FEMA has provided as depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM which is also inclusive of freeboard specified by the New Jersey Flood Hazard Area Control Act and Uniform Construction Codes and any additional freeboard specified in a community's ordinance. In no circumstances shall a project's LDFE be lower than a permit-specified Flood Hazard Area Design Flood Elevation or a valid NJDEP Flood Hazard Area Verification Letter plus the freeboard as required in ASCE 24 and the effective FEMA Base Flood Elevation.

LOWEST ADJACENT GRADE – The lowest point of ground, patio, or sidewalk slab immediately next a structure, except in AO Zones where it is the natural grade elevation.

LOWEST FLOOR – In A Zones, the lowest floor is the top surface of the lowest floor of the lowest

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enclosed area (including basement). In V Zones and coastal A Zones, the bottom of the lowest horizontal structural member of a building is the lowest floor. An unfinished or flood resistant enclosure, usable solely for the parking of vehicles, building access or storage in an area other than a basement is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of other applicable non-elevation design requirements of these regulations.

MANUFACTURED HOME – A structure that is transportable in one or more sections, eight (8) feet or more in width and greater than four hundred (400) square feet, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

MANUFACTURED HOME PARK OR SUBDIVISION – A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MARKET VALUE – The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in these regulations, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value shall be determined by one of the following methods (1) Actual Cash Value (replacement cost depreciated for age and quality of construction), (2) tax assessment value adjusted to approximate market value by a factor provided by the tax assessor's office, or (3) established by a qualified independent appraiser.

NEW CONSTRUCTION – Structures for which the start of construction commenced on or after the effective date of the first floodplain regulation adopted by a community; includes any subsequent improvements to such structures. New construction includes work determined to be a substantial improvement.

NON-RESIDENTIAL – Pursuant to ASCE 24, any building or structure or portion thereof that is not classified as residential.

ORDINARY MAINTENANCE AND MINOR WORK – This term refers to types of work excluded from construction permitting under N.J.A.C. 5:23 in the March 5, 2018 New Jersey Register. Some of these types of work must be considered in determinations of substantial improvement and substantial damage in regulated floodplains under 44 CFR 59.1. These types of work include but are not limited to replacements of roofing, siding, interior finishes, kitchen cabinets, plumbing fixtures and piping, HVAC and air conditioning equipment, exhaust fans, built in appliances, electrical wiring, etc. Improvements necessary to correct existing violations of State or local health, sanitation, or code enforcement officials which are the minimum necessary to assure safe living conditions and improvements of historic structures as discussed in 44 CFR 59.1 shall not be included in the determination of ordinary maintenance and minor work.

RECREATIONAL VEHICLE – A vehicle that is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

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~~REPETITIVE LOSS – any flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.~~

RESIDENTIAL – Pursuant to the ASCE 24:

a. Buildings and structures and portions thereof where people live or that are used for sleeping purposes on a transient or non-transient basis;
b. Structures including but not limited to one- and two-family dwellings, townhouses, condominiums, multi-family dwellings, apartments, congregate residences, boarding houses, lodging houses, rooming houses, hotels, motels, apartment buildings, convents, monasteries, dormitories, fraternity houses, sorority houses, vacation time-share properties; and
c. institutional facilities where people are cared for or live on a 24-hour basis in a supervised environment, including but not limited to board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers, convalescent facilities, hospitals, nursing homes, mental hospitals, detoxification facilities, prisons, jails, reformatories, detention centers, correctional centers, and prerelease centers.

SOLID WASTE DISPOSAL – "Solid Waste Disposal" shall mean the storage, treatment, utilization, processing or final disposition of solid waste as described in N.J.A.C. 7:26-1.6 or the storage of unsecured materials as described in N.J.A.C. 7:13-2.3 for a period of greater than 6 months as specified in N.J.A.C. 7:26 which have been discharged, deposited, injected, dumped, spilled, leaked, or placed into any land or water such that such solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

SPECIAL FLOOD HAZARD AREA – The greater of the following: (1) Land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year, shown on the FIRM as Zone V, VE, V1-3-, A, AO, A1-30, AE, A99, or AH; (2) Land and the space above that land, which lies below the peak water surface elevation of the flood hazard area design flood for a particular water, as determined using the methods set forth in the New Jersey Flood Hazard Area Control Act in N.J.A.C. 7:13; (3) Riparian Buffers as determined in the New Jersey Flood Hazard Area Control Act in N.J.A.C. 7:13. Also referred to as the AREA OF SPECIAL FLOOD HAZARD.

START OF CONSTRUCTION – The Start of Construction is as follows:

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a. For other than new construction or substantial improvements, under the Coastal Barrier Resources Act (CBRA), this is the date the building permit was issued, provided that the actual start of construction, repair, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a building on site, such as the pouring of a slab or footing, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured (mobile) home on a foundation. For a substantial improvement, actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

b. For the purposes of determining whether proposed construction must meet new requirements

when National Flood Insurance Program (NFIP) maps are issued or revised and Base Flood Elevation's (BFEs) increase or zones change, the Start of Construction includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. Such development must also be permitted and must meet new requirements when National Flood Insurance Program (NFIP) maps are issued or revised and Base Flood Elevation's (BFEs) increase or zones change.

For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

For determining if new construction and substantial improvements within the Coastal Barrier Resources System (CBRS) can obtain flood insurance, a different definition applies.

STRUCTURE – A walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above ground.

SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 ~~[or optional lower number]~~ percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT – Any reconstruction, rehabilitation, addition, or other improvement of a structure taking place ~~over a [number of years] year period~~, the ~~cumulative~~ cost of which equals or exceeds 50 percent ~~[or optional lower number]~~ of the market value of the structure before the "start of construction" of the improvement. ~~The period of accumulation includes the first improvement or repair of each structure that is permanent subsequent to [date].~~ This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. ~~This term also includes structures which have incurred "repetitive loss" or "substantial damage", regardless of the actual repair work performed.~~ The term does not, however, include either:

a. Any project for improvement of a structure to correct existing violations of State or local health, sanitary or safety code specifications which have been identified by the local code enforcement officer and which are the minimum necessary to assure safe living conditions; or

b. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

UTILITY AND MISCELLANEOUS GROUP U BUILDINGS AND STRUCTURES – Buildings and structures of an accessory character and miscellaneous structures not classified in any special

occupancy, as described in ASCE 24.

VARIANCE – A grant of relief from the requirements of this section which permits construction in a manner otherwise prohibited by this section where specific enforcement would result in unnecessary hardship.

VIOLATION – A development that is not fully compliant with these regulations or the flood provisions of the building code. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION – the height, in relation to the North American Vertical Datum (NAVD) of 1988, (or other datum, where specified) of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

WATERCOURSE. A river, creek, stream, channel, or other topographic feature in, on, through, or over which water flows at least periodically.

WET FLOODPROOFING – Floodproofing method that relies on the use of flood damage resistant materials and construction techniques in areas of a structure that are below the Local Design Flood Elevation by intentionally allowing them to flood. The application of wet floodproofing as a flood protection technique under the National Flood Insurance Program (NFIP) is limited to enclosures below elevated residential and non-residential structures and to accessory and agricultural structures that have been issued variances by the community.

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SECTION 301 SUBDIVISIONS AND OTHER DEVELOPMENTS

301.1 General. Any subdivision proposal, including proposals for manufactured home parks and subdivisions, or other proposed new development in a flood hazard area shall be reviewed to assure that:

(1) All such proposals are consistent with the need to minimize flood damage.

(2) All public utilities and facilities, such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage.

(3) Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from structures.

301.2 Subdivision requirements. Where any portion of proposed subdivisions, including manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:

(1) The flood hazard area, including floodways, coastal high hazard areas, and Coastal A Zones, and base flood elevations, as appropriate, shall be delineated on tentative subdivision plats.

(2) Residential building lots shall be provided with adequate buildable area outside the floodway.

(3) The design criteria for utilities and facilities set forth in these regulations and appropriate codes shall be met.

SECTION 401 SITE IMPROVEMENT

401.1 Encroachment in floodways. Development, land disturbing activity, and encroachments in floodways shall not be authorized unless it has been demonstrated through hydrologic and hydraulic analyses required in accordance with Section 105.3(1) of these regulations, that the proposed encroachment will not result in any increase in the base flood level during occurrence of the base flood discharge. If Section 105.3(1) is satisfied, proposed elevation, addition, or reconstruction of a lawfully existing structure within a floodway shall also be in accordance with Section 801.2 of this ordinance and the floodway requirements of N.J.A.C. 7:13.

~~401.1~~

401.1.1 Prohibited in floodways. The following are prohibited activities:

(1) The storage of unsecured materials is prohibited within a floodway pursuant to N.J.A.C. 7:13.

(2) Fill and new structures are prohibited in floodways per N.J.A.C. 7:13.

401.2 Sewer facilities. All new and replaced sanitary sewer facilities, private sewage treatment plants (including all pumping stations and collector systems) and on-site waste disposal systems shall be designed in accordance with the New Jersey septic system regulations contained in N.J.A.C. 14A and N.J.A.C. 7:9A, the UCC Plumbing Subcode (N.J.A.C. 5:23) and Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwater into the facilities and discharge from the facilities into flood waters, or impairment of the facilities and systems.

401.3 Water facilities. All new and replacement water facilities shall be designed in accordance with the New Jersey Safe Drinking Water Act (N.J.A.C. 7:10) and the provisions of Chapter 7 ASCE 24, to minimize or eliminate infiltration of floodwater into the systems.

401.4 Storm drainage. Storm drainage shall be designed to convey the flow of surface waters to minimize or eliminate damage to persons or property.

401.5 Streets and sidewalks. Streets and sidewalks shall be designed to minimize potential for increasing or aggravating flood levels.

401.6 Limitations on placement of fill. Subject to the limitations of these regulations, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwater, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, when intended to support buildings and structures (Zone A only), fill shall comply with the requirements of the UCC (N.J.A.C. 5:23). Proposed fill and encroachments in flood hazard areas shall comply with the flood storage displacement limitations of N.J.A.C. 7:13.

401.7 Hazardous Materials. The placement or storage of any containers holding hazardous substances in a flood hazard area is prohibited unless the provisions of N.J.A.C. 7:13 which cover the placement of hazardous substances and solid waste is met.

SECTION 501 MANUFACTURED HOMES

501.1 General. All manufactured homes installed in flood hazard areas shall be installed

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pursuant to the Nationally Preemptive Manufactured Home Construction and Safety Standards Program (24 CFR 3280).

501.2 Elevation. All new, relocated, and replacement manufactured homes to be placed or substantially improved in a flood hazard area shall be elevated such that the bottom of the frame is elevated to or above the elevation specified in Section 801.2.

501.3 Foundations. All new, relocated, and replacement manufactured homes, including substantial improvement of existing manufactured homes, shall be placed on foundations as specified by the manufacturer only if the manufacturer's installation instructions specify that the home has been designed for flood-resistant considerations and provides the conditions of applicability for velocities, depths, or wave action as required by 24 CFR Part 3285-302. The Floodplain Administrator is authorized to determine whether the design meets or exceeds the performance necessary based upon the proposed site location conditions as a precondition of issuing a flood damage prevention permit. If the Floodplain Administrator determines that the home's performance standards will not withstand the flood loads in the proposed location, the applicant must propose a design certified by a New Jersey licensed design professional and in accordance with 24 CFR 3285.301 (c) and (d) which conforms with ASCE 24, the accepted standard of engineering practice for flood resistant design and construction.

501.4 Anchoring. All new, relocated, and replacement manufactured homes to be placed or substantially improved in a flood hazard area shall be installed using methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

501.5 Enclosures. Fully enclosed areas below elevated manufactured homes shall comply with the requirements of Section 801.2.

501.6 Protection of mechanical equipment and outside appliances. Mechanical equipment and outside appliances shall be elevated to or above the elevation of the bottom of the frame required in Section 801.2 of these regulations.

> **Exception.** Where such equipment and appliances are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to the elevation required by Section 801.2, the systems and equipment shall be permitted to be located below that elevation. Electrical wiring systems shall be permitted below the design flood elevation provided they conform to the provisions of NFPA 70 (National Electric Code).

SECTION 601 RECREATIONAL VEHICLES

601.1 Placement prohibited. The placement of recreational vehicles shall not be authorized in coastal high hazard areas and in floodways.

601.2 Temporary placement. Recreational vehicles in flood hazard areas shall be fully licensed and ready for highway use and shall be placed on a site for less than 180 consecutive days.

601.3 Permanent placement. Recreational vehicles that are not fully licensed and ready for

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highway use, or that are to be placed on a site for more than 180 consecutive days, shall meet the requirements of Section 801.2 for habitable buildings and Section 501.3.

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SECTION 701 TANKS

701.1 Tanks. Underground and above-ground tanks shall be designed, constructed, installed, and anchored in accordance with ASCE 24 and N.J.A.C. 7:13.

SECTION 801 OTHER DEVELOPMENT AND BUILDING WORK

801.1 General requirements for other development and building work. All development and building work, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in these regulations or the Uniform Construction Code (N.J.A.C. 5:23), shall:

(1) Be located and constructed to minimize flood damage;

(2) Meet the limitations of Section 105.3(1) of this ordinance when located in a regulated floodway;

(3) Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic and hydrodynamic loads, including the effects of buoyancy, during the conditions of flooding up to the Local Design Flood Elevation determined according to Section 102.3;

(4) Be constructed of flood damage-resistant materials as described in ASCE 24 Chapter 5;

(5) Have mechanical, plumbing, and electrical systems above the Local Design Flood Elevation determined according to Section 102.3 or meet the requirements of ASCE 24 Chapter 7 which requires that attendant utilities are located above the Local Design Flood Elevation unless the attendant utilities and equipment are:

i. Specifically allowed below the Local Design Flood Elevation; and

ii. Designed, constructed, and installed to prevent floodwaters, including any backflow through the system from entering or accumulating within the components.

(6) Not exceed the flood storage displacement limitations in fluvial flood hazard areas in accordance with N.J.A.C. 7:13; and

(7) Not exceed the impacts to frequency or depth of offsite flooding as required by N.J.A.C. 7:13 in floodways.

801.2 Requirements for Habitable Buildings and Structures.

1) Construction and Elevation in A Zones not including Coastal A Zones.

a. No portion of a building is located within a V Zone.

b. No portion of a building is located within a Coastal A Zone, unless a licensed design professional certifies that the building's foundation is designed in accordance with ASCE 24, Chapter 4.

c. All new construction and substantial improvement of any habitable building (as defined

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in Section 201) located in flood hazard areas shall have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to or above the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE Chapter 7, and be confirmed by an Elevation Certificate.

d. All new construction and substantial improvements of non-residential structures shall:
    i. Have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to or above the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE Chapter 7, and be confirmed by an Elevation Certificate; or
    ii. Together with the attendant utility and sanitary facilities, be designed so that below the Local Design Flood Elevation, the structure:
        1. Meets the requirements of ASCE 24 Chapters 2 and 7; and
        2. Is constructed according to the design plans and specifications provided at permit application and signed by a licensed design professional, is certified by that individual in a Floodproofing Certificate, and is confirmed by an Elevation Certificate.

e. All new construction and substantial improvements with fully enclosed areas below the lowest floor shall be used solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding. Enclosures shall:

    iii. For habitable structures, be situated at or above the adjoining exterior grade along at least one entire exterior wall, in order to provide positive drainage of the enclosed area in accordance with N.J.A.C. 7:13; enclosures (including crawlspaces and basements) which are below grade on all sides are prohibited;
    iv. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters unless the structure is non-residential and the requirements of 801.2.1(d)ii are met;
    v. Be constructed to meet the requirements of ASCE 24 Chapter 2;
    vi. Have openings documented on an Elevation Certificate; and
    vii. Have documentation that a deed restriction has been obtained for the lot if the enclosure is greater than six feet in height. This deed restriction shall be recorded in the Office of the County Clerk or the Registrar of Deeds and Mortgages in which the building is located, shall conform to the requirements in N.J.A.C.7:13, and shall be recorded within 90 days of receiving a Flood Hazard Area Control Act permit or prior to the start of any site disturbance (including pre-construction earth movement, removal of vegetation and structures, or construction of the project), whichever is sooner. Deed restrictions must explain and disclose that:

        1. The enclosure is likely to be inundated by floodwaters which may result in damage and/or inconvenience.
        2. The depth of flooding that the enclosure would experience to the Flood Hazard Area Design Flood Elevation;
        3. The deed restriction prohibits habitation of the enclosure and explains that converting the enclosure into a habitable area may subject the property owner to enforcement;

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~~f. Enclosures are prohibited for new construction or substantial improvements; OR~~

~~For new construction or substantial improvements, enclosures shall be less than 295 square feet in size.~~

801.3 Garages and accessory storage structures. Garages and accessory storage structures shall be designed and constructed in accordance with the Uniform Construction Code.

801.4 Fences. Fences in floodways that have the potential to block the passage of floodwater, such as stockade fences and wire mesh fences, shall meet the requirements of Section 105.3(1) of these regulations. Pursuant to N.J.A.C. 7:13, any fence located in a floodway shall have sufficiently large openings so as not to catch debris during a flood and thereby obstruct floodwaters, such as barbed-wire, split-rail, or strand fence. A fence with little or no open area, such as a chain link, lattice, or picket fence, does not meet this requirement. Foundations for fences greater than 6 feet in height must conform with the Uniform Construction Code. Fences for pool enclosures having openings not in conformance with this section but in conformance with the Uniform Construction Code to limit climbing require a variance as described in Section 107 of this ordinance.

801.5 Retaining walls, sidewalks, and driveways. Retaining walls, sidewalks and driveways that involve placement of fill in floodways shall meet the requirements of Section 105.3(1) of these regulations and N.J.A.C. 7:13.

801.6 Swimming pools. Swimming pools shall be designed and constructed in accordance with the Uniform Construction Code. Above-ground swimming pools and below-ground swimming pools that involve placement of fill in floodways shall also meet the requirements of Section 105.3(1) of these regulations. Above-ground swimming pools are prohibited in floodways by N.J.A.C. 7:13.

801.7 Roads and watercourse crossings.

(1) For any railroad, roadway, or parking area proposed in a flood hazard area, the travel surface shall be constructed at least one foot above the Flood Hazard Area Design Elevation in accordance with N.J.A.C. 7:13.
(2) Roads and watercourse crossings that encroach into regulated floodways or riverine waterways with base flood elevations where floodways have not been designated, including roads, bridges, culverts, low- water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, shall meet the requirements of Section 105.3(1) of these regulations.

SECTION 901 TEMPORARY STRUCTURES AND TEMPORARY STORAGE

901.1 Temporary structures. Temporary structures shall be erected for a period of less than 180 days. Temporary structures shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood. Fully enclosed temporary structures shall have flood openings that are in accordance with ASCE 24 to allow for the automatic entry and exit of flood waters.

901.2 Temporary storage. Temporary storage includes storage of goods and materials for a period of less than 180 days. Stored materials shall not include hazardous materials.

901.3 Floodway encroachment. Temporary structures and temporary storage in floodways

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shall meet the requirements of Section 105.3(1) of these regulations.

SECTION 1001 UTILITY AND MISCELLANEOUS GROUP U

1001.1 Utility and Miscellaneous Group U. In accordance with Section 312 of the International Building Code, Utility and Miscellaneous Group U includes buildings and structures that are accessory in character and miscellaneous structures not classified in any specific occupancy in the Building Code, including, but not limited to, agricultural buildings, aircraft hangars (accessory to a one- or two-family residence), barns, carports, communication equipment structures (gross floor area less than 1,500 sq. ft.), fences more than 6 feet (1829 mm) high, grain silos (accessory to a residential occupancy), livestock shelters, private garages, retaining walls, sheds, stables, tanks and towers.

1001.2 Flood loads. Utility and miscellaneous Group U buildings and structures, including substantial improvement of such buildings and structures, shall be anchored to prevent flotation, collapse or lateral movement resulting from flood loads, including the effects of buoyancy, during conditions up to the Local Design Flood Elevation as determined in Section 102.3.

1001.3 Elevation. Utility and miscellaneous Group U buildings and structures, including substantial improvement of such buildings and structures, shall be elevated such that the lowest floor, including basement, is elevated to or above the Local Design Flood Elevation as determined in Section 102.3 and in accordance with ASCE 24. Utility lines shall be designed and elevated in accordance with N.J.A.C. 7:13.

1001.4 Enclosures below base flood elevation. Fully enclosed areas below the design flood elevation shall be constructed in accordance with Section 801.2 and with ASCE 24 for new construction and substantial improvements. Existing enclosures such as a basement or crawlspace having a floor that is below grade along all adjoining exterior walls shall be abandoned, filled-in, and/or otherwise modified to conform with the requirements of N.J.A.C. 7:13 when the project has been determined to be a substantial improvement by the Floodplain Administrator.

1001.5 Flood-damage resistant materials. Flood-damage-resistant materials shall be used below the Local Design Flood Elevation determined in Section 102.3.

1001.6 Protection of mechanical, plumbing, and electrical systems. Mechanical, plumbing, and electrical systems, equipment and components, heating, ventilation, air conditioning, plumbing fixtures, duct systems, and other service equipment, shall be elevated to or above the Local Design Flood Elevation determined in Section 102.3.

> **Exception:** Electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall be permitted to be located below the Local Design Flood Elevation provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the Local Design Flood Elevation in compliance with the flood-resistant construction requirements of ASCE 24. Electrical wiring systems shall be permitted to be located below the Local Design Flood Elevation provided they conform to the provisions of NFPA 70 (National Electric Code).

SECTION 3. SEVERABILITY.

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Where any section, subsection, sentence, clause, or phrase of these regulations is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof, other than the part so declared.

SECTION 4. EFFECTIVE DATE.
This ordinance shall take effect on **{insert date}.**

[Jurisdiction to add signature blocks.]

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TOWNSHIP OF BYRAM
SUSSEX COUNTY, NEW JERSEY
RESOLUTION NO. 132 – 2024

RESOLUTION AUTHORIZING THE RENEWAL OF LIQUOR LICENSE TO 239 ROUTE 206 LLC TRADING AS STONEWOOD TAVERN VALID FROM 7/1/2024 THROUGH 6/30/2025

BE IT RESOLVED by the Mayor and Township Council, Township of Byram, Sussex County New Jersey, that the renewal of a Plenary Retail Consumption License be issued to 239 Route 206 LLC trading as Stonewood Tavern located at 239 Route 206 S, Stanhope New Jersey 07874. The same license being No. 1904-33-005-010. Said license shall be valid from July 1, 2024 through June 30, 2025.

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

ATTEST:
I certify that the foregoing resolution was adopted by the Byram Township Council at a meeting held on July 16, 2024.

_____
Cynthia Church, RMC
Township Clerk

RESOLUTION 133-2024

RESOLUTION AUTHORIZING PURCHASE OF FERRARA INFERNO MVP HEAVY RESCUE PUMPER AND ACCESSORIES THROUGH SOURCEWELL NATIONAL COOPERATIVE #113021-RVG THROUGH FERRARA FIRE APPARATUS

BE IT RESOLVED, by the Council of the Township of Byram, Sussex County, State of New Jersey as follows:

WHEREAS, in accordance with the requirements of the Local Public Contract Law P.L. 2011, C.139 (the "Law" or "Chapter 139" and N.J.S.A.52:34-6.2 the regulations promulgated there under in Local Finance Notice LFN 2012-10, the following purchase without competitive bids from vendor with a Sourcewell National Cooperative is hereby approved for municipalities, and;

WHEREAS, the Township of Byram has the need to procure certain Ferrara Fire Apparatus and accessories in accord with the Local Publics Contract Law N.J.S.A. 40A:11-1 et. Seq., and;

WHEREAS, the Township of Byram has previously acted in accord with New Jersey public procurement statutes and regulations as promulgated by formally joining a recognized and compliant national cooperative, being the Sourcewell National Cooperative, and;

WHEREAS, the regulations as set forth within Local Finance Notice LFN 2012-10 have been fully complied with, and;

WHEREAS the equipment and corresponding Sourcewell National Cooperative contract #113021-RVG for Ferrara Fire Apparatus 27855 James Chapel Rd. North, Holden, LA 70744; and

WHEREAS the quoted cost under the Sourcewell National Cooperative is contract $1,266,468.00; and

WHEREAS, the Chief Financial Officer has determined, and certified available funds are available in the amount of $1,266,468.00 from:

Line Item: 04-215-55-054-000 - Bond Ordinance #011-2024 – Acquisition of New Fire Truck

NOW THEREFORE BE IT RESOLVED THAT, the Mayor is hereby authorized to effectuate the purchase of herein approved equipment through Ferrara Fire Apparatus 27855 James Chapel Rd. North, Holden, LA 70744 for the approved cost of $1,266,468.00 from Sourcewell contract #113021-RVG.

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

ATTEST: I certify that the foregoing resolution was adopted by the Byram Township Council at a meeting held on July 16, 2024.

_____

Cynthia Church, RMC
Township Clerk

TOWNSHIP OF BYRAM
RESOLUTION NO. 134-2024

AUTHORIZATION TO EXECUTE CHANGE ORDER NO. 1 FOR PROPOSED RESURFACING OF VARIOUS STREETS – 2024 (BRIDGET WAY, CATALINA DRIVE, CAMELOT DRIVE, MAYFAIR LANE & SANDRA LANE)

WHEREAS, the Township of Byram (Owner) and Riverview Paving, Inc. entered into a contract for proposed resurfacing of various streets – 2024 (Bridget Way, Catalina Drive, Camelot Drive, Mayfair Lane & Sandra Lane) for a total of $329,588.65 as stated in Resolution 090-2024; and

WHEREAS, in the process of completing the work, certain changes were authorized by the Owner as detailed in Change Order No. 1; and

WHEREAS, the revised work was negotiated between the engineer Harold Pellow & Associates and the Contractor and was found to require a net decrease of $44,802.96.

NOW, THEREFORE, BE IT RESOLVED by the Township of Byram in the County of Sussex, State of New Jersey to authorize the Mayor to execute Change Order No. 1 resulting in a net decrease of $44,802.96 resulting in an adjusted contract price of $284,785.69.

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

ATTEST:
I certify that the foregoing Resolution was adopted by the Byram Township Council at a meeting held on July 16, 2024.

_____
Cynthia Church, RMC
Township Clerk

Form SA-1 11/2002

HAROLD E. PELLOW and ASSOCIATES, INC.
17 PLAINS ROAD
AUGUSTA, NJ 07822

CHANGE ORDER NUMBER - 1

Project	PROPOSED IMPROVEMENTS TO VARIOUS STREETS *(Bridget Way, Catalina Drive, Camelot Drive, Mayfair Lane, & Sandra Lane)* - **MILLING & PAVING**
Owner	TOWNSHIP OF BYRAM, MUNICIPAL BUILDING, 10 MANSFIELD DRIVE, STANHOPE, NJ 07874
County	SUSSEX COUNTY
Contractor	RIVERVIEW PAVING, INC., 859 WILLOW GROVE STREET, HACKETTSTOWN, NJ 07840

In accordance with the project Supplementary Specification, the following are changes in the contract.
Location and Reason for Change (Attach additional sheets if required) -

Location: Various Streets (See names of streets above.)
Reason: See reasons below.

ITEM NO.	DESCRIPTION	QUANTITY (+/-)		UNIT PRICE	AMOUNT
	REDUCTION				
2	HMA 9.5M64 SURFACE COURSE, 2" THICK *As-built quantity.*	347.52	TON	$ 78.25	$ 27,193.44
3	FUEL PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 3R below)	100%	L.S.	$ 5,000.00	$ 5,000.00
4	ASPHALT PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 4R below)	100%	L.S.	$ 5,000.00	$ 5,000.00
3R	FUEL PRICE ADJUSTMENT *As per NJDOT Fuel Price Index.*	100%	L.S.	$ 4,940.87	$4,940.87
4R	ASPHALT PRICE ADJUSTMENT *The Asphalt Price Index was $603.00/ton when bid, and when paved in second half of May 2024, it was $584.00/ton, or a $19.00/ton decrease. Therefore, the price escalation for Item #4R is 2,837.48 tons (0.0495 amount of oil in asphalt) = 140.4553($19.00) = $2,668.65.* *As per NJDOT Asphalt Price Index.*	100%	L.S.	$ 2,668.65	$ 2,668.65
				Total REDUCTION:	**$ 44,802.96**

AMOUNT OF ORIGINAL CONTRACT:	**$329,588.65**	**EXTRA:**	
ADJUSTED AMOUNT BASED ON CHANGE ORDER NO. 1:	**$284,785.69**	**SUPPLEMENTAL:**	
		REDUCTION:	**$ 44,802.96**
% CHANGE IN CONTRACT:	**- 13.59%**	**TOTAL CHANGE:**	**$ (44,802.96)**
|(+) Increase or (-) Decrease|			

7/2/24
(Engineer) **(Date)**

(Presiding Officer) **(Date)**

7/1/2024
(Contractor) **(Date)**

6/26/2024

TOWNSHIP OF BYRAM
RESOLUTION NO. 135-2024

AUTHORIZATION TO EXECUTE CHANGE ORDER NO. 1
FOR PROPOSED RESURFACING OF MANOR DRIVE

WHEREAS, the Township of Byram (Owner) and Riverview Paving, Inc. entered into a contract for proposed resurfacing of Manor Drive for a total of $197,879.75 as stated in Resolution 092-2024; and

WHEREAS, in the process of completing the work, certain changes were authorized by the Owner as detailed in Change Order No. 1; and

WHEREAS, the revised work was negotiated between the engineer Harold Pellow & Associates and the Contractor and was found to require a net decrease of $50,225.97.

NOW, THEREFORE, BE IT RESOLVED by the Township of Byram in the County of Sussex, State of New Jersey to authorize the Mayor to execute Change Order No. 1 resulting in a net decrease of $50,225.97 resulting in an adjusted contract price of $147,653.79.

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

ATTEST:
I certify that the foregoing Resolution was adopted by the Byram Township Council at a meeting held on July 16, 2024.

_____
Cynthia Church, RMC
Township Clerk

Form SA-1 11/2002

NEW JERSEY DEPARTMENT OF TRANSPORTATION
STATE AID PROJECTS
CHANGE ORDER NUMBER - 1
Division of Local Aid and Economic Development

Project	PROPOSED IMPROVEMENTS TO MANOR DRIVE - MILLING & PAVING
Owner	TOWNSHIP OF BYRAM, MUNICIPAL BUILDING, 10 MANSFIELD DRIVE, STANHOPE, NJ 07874
County	SUSSEX COUNTY
Contractor	RIVERVIEW PAVING, INC., 859 WILLOW GROVE STREET, HACKETTSTOWN, NJ 07840

In accordance with the project Supplementary Specification, the following are changes in the contract.
Location and Reason for Change (Attach additional sheets if required) -

Location: Manor Drive
Reason: See reasons below.

ITEM NO.	DESCRIPTION	QUANTITY (+/-)		UNIT PRICE	AMOUNT
	REDUCTION				
2	HMA 9.5M64 SURFACE COURSE, 2" THICK *As-built quantity.*	208.02	TON	$ 78.25	$ 16,277.57
3	FUEL PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 3R below)	100%	L.S.	$ 15,000.00	$ 15,000.00
4	ASPHALT PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 4R below)	100%	L.S.	$ 15,000.00	$ 15,000.00
3R	FUEL PRICE ADJUSTMENT *As per NJDOT Fuel Price Index.*	100%	L.S.	$ 2,568.71	$2,568.71
4R	ASPHALT PRICE ADJUSTMENT *The Asphalt Price Index was $603.00/ton when bid, and when paved in second half of May 2024, it was $584.00/ton, or a $19.00/ton decrease. Therefore, the price escalation for Item #4R is 1,466.98 tons (0.0495 amount of oil in asphalt) = 72.6155 ($19.00) = $1,379.69.*	100%	L.S.	$ 1,379.69	$ 1,379.69
			Total REDUCTION:		**$ 50,225.97**

AMOUNT OF ORIGINAL CONTRACT:	$197,879.75	**EXTRA:**	$ -
ADJUSTED AMOUNT BASED ON CHANGE ORDER NO. 1:	$147,653.79	**SUPPLEMENTAL:**	$ -
		REDUCTION:	$ 50,225.97
% CHANGE IN CONTRACT: [(+) Increase or (-) Decrease]	- 25.38%	**TOTAL CHANGE:**	$ (50,225.97) -25.38%

(Engineer) 7/2/24 (Date)

(Presiding Officer) (Date)

(Contractor) 7/1/2024 (Date)

(District Manager (Date)
(Division of Local Aid and Economic Development)

6/26/2024

[Submit two (2) copies to the Division of Local Aid and Economic Development District Office]

TOWNSHIP OF BYRAM
RESOLUTION NO. 136-2024

AUTHORIZATION TO EXECUTE CHANGE ORDER NO. 1
FOR PROPOSED RESURFACING OF STONEHEDGE LANE

WHEREAS, the Township of Byram (Owner) and Riverview Paving, Inc. entered into a contract for proposed resurfacing of Stonehedge Lane for a total of $249,938.35 as stated in Resolution 091-2024; and

WHEREAS, in the process of completing the work, certain changes were authorized by the Owner as detailed in Change Order No. 1; and

WHEREAS, the revised work was negotiated between the engineer Harold Pellow & Associates and the Contractor and was found to require a net decrease of $52,243.70.

NOW, THEREFORE, BE IT RESOLVED by the Township of Byram in the County of Sussex, State of New Jersey to authorize the Mayor to execute Change Order No. 1 resulting in a net decrease of $52,243.70 resulting in an adjusted contract price of $197,694.65.

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

ATTEST:
I certify that the foregoing Resolution was adopted by the Byram Township Council at a meeting held on July 16, 2024.

_____
Cynthia Church, RMC
Township Clerk

Form SA-1 11/2002

NEW JERSEY DEPARTMENT OF TRANSPORTATION
STATE AID PROJECTS
CHANGE ORDER NUMBER - 1
Division of Local Aid and Economic Development

Project	PROPOSED IMPROVEMENTS TO STONEHEDGE LANE - MILLING & PAVING
Owner	TOWNSHIP OF BYRAM, MUNICIPAL BUILDING, 10 MANSFIELD DRIVE, STANHOPE, NJ 07874
County	SUSSEX COUNTY
Contractor	RIVERVIEW PAVING, INC., 859 WILLOW GROVE STREET, HACKETTSTOWN, NJ 07840

In accordance with the project Supplementary Specification, the following are changes in the contract.
Location and Reason for Change (Attach additional sheets if required) -

Location: Stonehedge Lane
Reason: See reasons below.

ITEM NO.	DESCRIPTION	QUANTITY (+/-)		UNIT PRICE	AMOUNT
	REDUCTION				
2	HMA 9.5M64 SURFACE COURSE, 2" THICK *As-built quantity.*	216.79	TON	$ 78.25	$ 16,963.82
3	FUEL PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 3R below)	100%	L.S.	$ 15,000.00	$ 15,000.00
4	ASPHALT PRICE ADJUSTMENT *As per NJDOT Asphalt Price Index.* (See Item 4R below)	100%	L.S.	$ 15,000.00	$ 15,000.00
3R	FUEL PRICE ADJUSTMENT *As per NJDOT Fuel Price Index.*	100%	L.S.	$ 3,424.08	$3,424.08
4R	ASPHALT PRICE ADJUSTMENT *The Asphalt Price Index was $603.00/ton when bid, and when paved in second half of May 2024, it was $584.00/ton, or a $19.00/ton decrease. Therefore, the price escalation for Item #4R is 1,973.21 tons (0.0495 amount of oil in asphalt) = 97.6739 ($19.00) = $1,855.80.*	100%	L.S.	$ 1,855.80	$ 1,855.80
			Total REDUCTION:		**$ 52,243.70**

AMOUNT OF ORIGINAL CONTRACT:	**$249,938.35**	**EXTRA:**	**$ -**
ADJUSTED AMOUNT BASED ON CHANGE ORDER NO. 1:	**$197,694.65**	**SUPPLEMENTAL:**	**$ -**
		REDUCTION:	**$ 52,243.70**
% CHANGE IN CONTRACT: [(+) Increase or (-) Decrease]	**- 20.9%**	**TOTAL CHANGE:**	**$ (52,243.70)**

7/2/24
(Engineer) (Date)

(Presiding Officer) (Date)

7/1/2024
(Contractor) (Date)

(District Manager) (Date)
(Division of Local Aid and Economic Development)

6/26/2024

[Submit two (2) copies to the Division of Local Aid and Economic Development District Office]

TOWNSHIP OF BYRAM
ORDINANCE # 013-2024

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE TOWNSHIP OF BYRAM ADOPTING THE MODEL NOISE ORDINANCE OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION ("NJDEP") AND REPLACING THE EXISTING CODE CHAPTER 171 ENTITLED "NOISE"

Purpose Statement: The purpose of this ordinance is to repeal the existing noise control ordinance in Code Section 171 and replace it with the current model noise ordinance of the New Jersey Department of Environmental Protection ("NJDEP")

171-1 Declaration of Findings and Policy

WHEREAS excessive sound is a serious hazard to the public health, welfare, safety, and the quality of life; and

WHEREAS a substantial body of science and technology exists by which excessive sound may be substantially abated; and

WHEREAS the people have a right to, and should be ensured of, an environment free from excessive sound,

Now THEREFORE, it is the policy of **Byram Township** to prevent excessive sound that may jeopardize the health, welfare, or safety of the citizens or degrade the quality of life.

This ordinance shall apply to the control of sound originating from sources within **Byram Township**.

171-2 Definitions

The following words and terms, when used in this ordinance, shall have the following meanings, unless the context clearly indicates otherwise. Terms not defined in this ordinance have the same meaning as those defined in N.J.A.C. 7:29.

"Construction" means any site preparation, assembly, erection, repair, alteration or similar action of buildings or structures.

"dBC" means the sound level as measured using the "C" weighting network with a sound level meter meeting the standards set forth in ANSI S1.4-1983 or its successors. The unit of reporting is dB(C). The "C" weighting network is more sensitive to low frequencies than is the "A" weighting network.

"Demolition" means any dismantling, destruction or removal of buildings, structures, or roadways.

"Department" means the New Jersey Department of Environmental Protection.

"Emergency work" means any work or action necessary at the site of an emergency to restore or deliver essential services including, but not limited to, repairing water, gas, electricity, telephone, sewer facilities, or public transportation facilities, removing fallen trees on public rights-of-way, dredging navigational waterways, or abating life-threatening conditions or a state of emergency declared by a governing agency.

"Impulsive sound" means either a single pressure peak or a single burst (multiple pressure peaks) that has a duration of less than one second.

"Minor Violation" means a violation that is not the result of the purposeful, reckless or criminally negligent conduct of the alleged violator; and/or the activity or condition constituting the violation has not been the subject of an enforcement action by any authorized local, county or state enforcement agency against the violator within the immediately preceding 12 months for the same or substantially similar violation.

"Motor vehicle" means any vehicle that is propelled other than by human or animal power on land.

"Muffler" means a properly functioning sound dissipative device or system for abating the sound on engines or equipment where such device is part of the normal configuration of the equipment.

"Multi-dwelling unit building" means any building comprising two or more dwelling units, including, but not limited to, apartments, condominiums, co-ops, multiple family houses, townhouses, and attached residences.

"Multi-use property" means any distinct parcel of land that is used for more than one category of activity. Examples include, but are not limited to:

1. A commercial, residential, industrial or public service property having boilers, incinerators, elevators, automatic garage doors, air conditioners, laundry rooms, utility provisions, or health and recreational facilities, or other similar devices or areas, either in the interior or on the exterior of the building, which may be a source of elevated sound levels at another category on the same distinct parcel of land; or

2. A building, which is both commercial (usually on the ground floor) and residential property, located above, below or otherwise adjacent to.

"Noise Control Officer" (NCO) means an employee of a local, county or regional health agency which is certified pursuant to the County Environmental Health Act (N.J.S.A. 26:3A2-21 et seq.) to perform noise enforcement activities or an employee of a municipality with a Department-approved model noise control ordinance. All NCOs must receive noise enforcement training as specified by the Department in N.J.A.C. 7:29 and is currently certified in noise enforcement. The employee must be acting within his or her designated jurisdiction and must be authorized to issue a summons.

"Noise Control Investigator" (NCI) means an employee of a municipality, county or regional health commission that has a Department-approved model noise control ordinance and the employee has not received noise enforcement training as specified by the Department in N.J.A.C. 7:29. However, they are knowledgeable about their model noise ordinance and enforcement procedures. A Noise Control Investigator may only enforce sections of the ordinance that do not require the use of a sound level meter. The employee must be acting within his or her designated jurisdiction and must be authorized to issue a summons.

"Plainly audible" means any sound that can be detected by a NCO or an NCI using his or her unaided hearing faculties of normal acuity. As an example, if the sound source under investigation is a portable or vehicular sound amplification or reproduction device, the detection of the rhythmic bass component of the music is sufficient to verify plainly audible sound. The NCO or NCI need not

determine the title, specific words, or the artist performing the song.

"Private right-of-way" means any street, avenue, boulevard, road, highway, sidewalk, alley or easement that is owned, leased, or controlled by a non-governmental entity.

"Public right-of-way" means any street, avenue, boulevard, road, highway, sidewalk, alley or easement that is owned, leased, or controlled by a governmental entity.

"Public space" means any real property or structures thereon that are owned, leased, or controlled by a governmental entity.

"Real property line" means either (a**)** the vertical boundary that separates one parcel of property (i.e., lot and block) from another residential or commercial property; (b) the vertical and horizontal boundaries of a dwelling unit that is part of a multi-dwelling unit building; or (c) on a multi-use property as defined herein, the vertical or horizontal boundaries between the two portions of the property on which different categories of activity are being performed (e.g., if the multi-use property is a building which is residential upstairs and commercial downstairs, then the real property line would be the interface between the residential area and the commercial area, or if there is an outdoor sound source such as an HVAC unit on the same parcel of property, the boundary line is the exterior wall of the receiving unit). Note- this definition shall not apply to a commercial source and a commercial receptor which are both located on the same parcel of property (e.g., a strip mall).

“Sound production device” means any device whose primary function is the production of sound, including, but not limited to any, musical instrument, loudspeaker, radio, television, digital or analog music player, public address system or sound-amplifying equipment.

“Sound reduction device” means any device, such as a muffler, baffle, shroud, jacket, enclosure, isolator, or dampener provided by the manufacturer with the equipment, or that is otherwise required, that mitigates the sound emissions of the equipment.

"Weekday" means any day that is not a federal holiday, and beginning on Monday at 7:00 a.m. and ending on the following Friday at 6:00 p.m.

"Weekends" means beginning on Friday at 6:00 p.m. and ending on the following Monday at 7:00 a.m.

171-3 Applicability

(A) This model noise ordinance applies to sound from the following property categories:

1. Industrial facilities;
2. Commercial facilities;
3. Community service facilities;
4. Residential properties;
5. Multi-use properties;
6. Public and private right-of-ways;
7. Public spaces; and
8. Multi-dwelling unit buildings.

(B) This model noise ordinance applies to sound received at the following property categories:

1. Commercial facilities;
2. Community service facilities (i.e. non-profits and/or religious facilities)
3. Residential properties;
4. Multi-use properties;
5. Multi-dwelling unit buildings.

(C) Sound from stationary emergency signaling devices shall be regulated in accordance with N.J.A.C. 7:29-1.4, except that the testing of the electromechanical functioning of a stationary emergency signaling device shall not meet or exceed 10 seconds.

171-4 Exemptions

(A) Except as provided in 171-9. and 171-10. below, the provisions of this ordinance shall not apply to the exceptions listed at N.J.A.C. 7:29-1.5.

(B) Sound production devices required or sanctioned under the Americans with Disabilities Act (ADA), FEMA or other government agencies to the extent that they comply with the noise requirement of the enabling legislation or regulation. Devices which are exempted under N.J.A.C. 7:29-1.5 shall continue to be exempted.

(C) Construction and demolition activities are exempt from the sound level limits set forth in tables I and II and III except as provided for in 171-9. below.

171-5 Enforcement Officers

(A) Noise Control Officers shall have the authority within their designated jurisdiction to investigate suspected violations of any section of this ordinance and pursue enforcement activities.

(B) Noise Control Investigators shall have the authority within their designated jurisdiction to investigate suspected violations of any section of this ordinance that do not require the use of a sound level meter (i.e., plainly audible, times of day and/or distance determinations) and pursue enforcement activities.

(C) Noise Control Officers and Investigators may cooperate with NCOs and NCIs of an adjacent municipality in enforcing one another's municipal noise ordinances.

171-6 Measurement Protocols

(A) Sound measurements made by a Noise Control Officer shall conform to the procedures set forth at N.J.A.C. 7:29-2, except that interior sound level measurements shall also conform with the procedures set forth in 171-6(B)of this ordinance and with the definition of "real property line" as contained herein.

(B) When conducting indoor sound level measurements across a real property line the measurements shall be taken at least three feet from any wall, floor or ceiling and all exterior doors and windows may, at the discretion of the investigator, be closed. The neighborhood residual sound level shall be measured in accordance with N.J.A.C. 7:29-2.9(b)2. When

measuring total sound level, the configuration of the windows and doors shall be the same and all sound sources within the dwelling unit must be shut off (e.g., television, stereo). Measurements shall not be taken in areas which receive only casual use such as hallways, closets and bathrooms.

171-7 Maximum Permissible Sound Levels

(A) No person shall cause, suffer, allow, or permit the operation of any source of sound on any source property listed in 171-3(A) above in such a manner as to create a sound level that equals or exceeds the sound level limits set forth in Tables I, II or III when measured at or within the real property line of any of the receiving properties listed in Tables I, II or III except as specified in 171-6(B).

(B) Impulsive Sound

Between 7:00 a.m. and 10:00 p.m., impulsive sound shall not equal or exceed 80 dBA. Between 10:00 p.m. and 7:00 a.m., impulsive sound which occurs less than four times in any hour shall not equal or exceed 80 dBA. Impulsive sound which repeats four or more times in any hour shall meet the requirements as shown in Table I.

TABLE I
MAXIMUM PERMISSIBLE A-WEIGHTED SOUND LEVELS
WHEN MEASURED OUTDOORS

RECEIVING PROPERTY CATEGORY	Residential property, or residential portion of a multi-use property		Commercial facility, non-residential portion of a multi-use property, or community service facility
TIME	7 a.m.-10 p.m.	10 p.m.-7 a.m.	24 hours
Maximum A-Weighted sound level standard, dB	65	50	65

TABLE II
MAXIMUM PERMISSIBLE A-WEIGHTED SOUND LEVELS
WHEN MEASURED INDOORS

RECEIVING PROPERTY CATEGORY	Residential property, or residential portion of a multi-use property		Commercial facility or non-residential portion of a multi-use property
TIME	7 a.m.-10 p.m.	10 p.m.-7 a.m.	24 Hours
Maximum A-Weighted sound level standard, dB	55	40	55

Note: Table II shall only apply when the source and the receptor are separated by a real property line and they also share a common or abutting wall, floor or ceiling, or are on the same parcel of property.

TABLE III
MAXIMUM PERMISSIBLE OCTAVE BAND
SOUND PRESSURE LEVELS IN DECIBELS

Receiving Property Category	**Residential property, or residential portion of a multi-use property**		**Residential property, or residential portion of a multi-use property**		**Commercial facility, non-residential portion of a multi-use property, or community service facility**	**Commercial facility or non-residential portion of a multi-use property**
	OUTDOORS		**INDOORS**		**OUTDOORS**	**INDOORS**
Octave Band Center Frequency, Hz.	**Octave Band Sound Pressure Level, dB**		**Octave Band Sound Pressure Level, dB**		**Octave Band Sound Pressure Level, dB**	**Octave Band Sound Pressure Level, dB**
Time	7 a.m.-10 p.m.	10 p.m.-7 a.m.	7 a.m.-10 p.m.	10 p.m.-7 a.m.	24 hours	24 hours
31.5	96	86	86	76	96	86
63	82	71	72	61	82	72
125	74	61	64	51	74	64
250	67	53	57	43	67	57

500	63	48	53	38	63	53
1,000	60	45	50	35	60	50
2,000	57	42	47	32	57	47
4,000	55	40	45	30	55	45
8,000	53	38	43	28	53	43

Note: When octave measurements are made, the sound from the source must be constant in level and character. If octave band sound pressure level variations exceed plus or minus 2 dB in the bands containing the principal source frequencies, discontinue the measurement.

171-8 Sound Production Devices

No person shall cause, suffer, allow, or permit the operation of any sound production device in such a manner that the sound crosses a property line and raises the total sound levels above the neighborhood residual sound level by more than the permissible sound level limits set forth in Table IV when measured within the residence of a complainant according to the measurement protocol in 171-6(B) of this ordinance. These sound level measurements shall be conducted with the sound level meter set for "C" weighting, "fast" response.

TABLE IV
MAXIMUM PERMISSIBLE INCREASE IN TOTAL SOUND LEVELS
WITHIN A RESIDENTIAL PROPERTY

Weeknights 10:00 p.m. - 7:00 a.m. Weekend nights 11:00 p.m. and 9:00 a.m.	All other times
3 dB(C)	6 dB(C)

171-9 Restricted Uses and Activities

Note: This section is optional; any numbered paragraph may be adopted in its entirety.

The following standards shall apply to the activities or sources of sound set forth below:

A. Power tools, home maintenance tools, landscaping and/or yard maintenance equipment, excluding when used for emergency work, shall not be operated on a residential property between the hours of 8:00 p.m. and 8:00 a.m., unless such activities can meet the applicable limits set forth in Tables I, II and III. At all other times, the limits set forth in Tables I, II and III do not apply. All motorized equipment used in these activities shall be operated with an original, properly functioning, manufacture installed muffler and/or sound reduction device or an original equipment manufacturer (OEM) acoustically equivalent muffler and/or sound reduction device.

B. Power tools, landscaping and/or yard maintenance equipment, excluding when used for

emergency work, shall not be operated on a commercial facility, community service facility, industrial facility, or public space unless such activities can meet the applicable limits set forth in Tables I, II and III. All motorized equipment used in these activities shall be operated with an original, properly functioning, manufacture installed muffler and/or sound reduction device or an OEM acoustically equivalent muffler and/or sound reduction device.

C. Construction and demolition activity, excluding emergency work, shall not be performed between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, or between the hours of 6:00 p.m. and 9:00 a.m. on weekends and federal holidays, unless such activities can meet the applicable limits set forth in Tables I, II and III. At all other times, the limits set forth in Tables I, II or III do not apply. All motorized equipment used in construction and demolition activity shall be operated with an original, properly functioning, manufacture installed muffler and/or sound reduction device or an OEM acoustically equivalent muffler and/or sound reduction device.

D. Motorized snow removal equipment shall be operated with a muffler and/or a sound reduction device when being used for snow removal. At all other times the limits set forth in Tables I, II or III do not apply.

E. All interior and exterior burglar alarm**s** of a building or motor vehicle must be activated in such a manner that the burglar alarm terminates its operation within five (5) minutes for continuous airborne sound and fifteen (15) minutes for intermittent sound after it has been activated. At all other times the limits set forth in Tables I, II or III do not apply.

F. Self-contained, portable, non-vehicular music or sound production devices shall not be operated on a public space or public right-of-way in such a manner as to be plainly audible at a distance of 50 feet in any direction from the operator between the hours of 8:00 a.m. and 10:00 p.m. Between the hours of 10:00 p.m. and 8:00 a.m., sound, operated on a public space or public right-of-way, from such equipment shall not be plainly audible at a distance of 25 feet in any direction from the operator;

G. It shall be unlawful for any property owner or tenant to allow any domesticated or caged animal to create a sound across a real property line which unreasonably disturbs or interferes with the peace, comfort, and repose of any resident, or to refuse or intentionally fail to cease the unreasonable noise when ordered to do so by a Noise Control Officer or Noise Control Investigator. Prima facie evidence of a violation of this section shall include but not be limited to:

(1) Vocalizing (howling, yelping, barking, squawking etc.) for five (5) minutes without interruption, defined as an average of four or more vocalizations per minute in that period; or,

(2) Vocalizing for twenty (20) minutes intermittently, defined as an average of two vocalizations or more per minute in that period.

It is an affirmative defense under this subsection that the dog or other animal was intentionally provoked to bark or make any other noise.

171-10 Motor Vehicles

Violations of each paragraph of this section shall be considered purposeful and therefore non-minor violations.

(A) No person shall remove or render inoperative, or cause to be removed or rendered inoperative or less effective than originally equipped, other than for the purposes of maintenance, repair, or replacement, of any device or element of design incorporated in any motor vehicle for the purpose of noise control. No person shall operate a motor vehicle or motorcycle which has been so modified. A vehicle not meeting these requirements shall be deemed in violation of this provision if it is operated stationary or in motion in any public space or public right-of-way.

(B) No motorcycle shall be operated stationary or in motion unless it has a muffler that complies with and is labeled in accordance with the Federal Noise Regulations under 40 CFR Part 205.

(C) Personal or commercial vehicular music amplification or reproduction equipment shall not be operated in such a manner that it is plainly audible at distance of 25 feet in any direction from the operator between the hours of 10:00 p.m. and 8:00 a.m.

(D) Personal or commercial vehicular music amplification or reproduction equipment shall not be operated in such a manner that is plainly audible at a distance of 50 feet in any direction from the operator between the hours of 8:00 a.m. and 10:00 p.m.

171-11 Enforcement

(A) Violation of any provision of this ordinance shall be cause for a Notice of Violation (NOV) or a Notice of Penalty Assessment (NOPA) document to be issued to the violator by the Noise Control Officer or Noise Control Investigator.

(B) Any person who violates any provision of this ordinance shall be subject to a civil penalty for each offense of not more than the maximum penalty pursuant to N.J.S.A. 40:49-5, which is $2,000 as of December 2014. If the violation is of a continuing nature, each day during which it occurs shall constitute an additional, separate, and distinct offense.

(C) Upon identification of a violation of this Ordinance the Noise Control Officer or Noise Control Investigator shall issue an enforcement document to the violator. The enforcement document shall identify the condition or activity that constitutes the violation and the specific provision of this Ordinance that has been violated. It shall also indicate whether the violator has a period of time to correct the violation before a penalty is sought.

(D) If the violation is deemed by the Noise Control Officer or Noise Control Investigator to be a minor violation (as defined in **171-2** of this ordinance) a NOV shall be issued to the violator.

1. The document shall indicate that the purpose of the NOV is intended to serve as a notice to warn the responsible party/violator of the violation conditions in order to provide them with an opportunity to voluntarily investigate the matter and voluntarily take corrective action to address the identified violation.

2. The NOV shall identify the time period (up to 90 days), pursuant to the Grace Period Law, N.J.S.A. 13:1D-125 et seq. where the responsible party's/violator's voluntary action can prevent a formal enforcement action with penalties issued by the Sussex County Division of Health, or appointed certified NCO/NCI of the Township, or an officer of the Byram Township Police Department. It shall be noted that the NOV does not constitute a formal enforcement action, a final agency action or a final legal determination that a violation has occurred. Therefore, the NOV may not be appealed or contested.

(E) If the violation is deemed by the Noise Control Officer or Noise Control Investigator to be a non-minor violation, the violator shall be notified that if the violation is not immediately corrected, a NOPA with a civil penalty of not more than the maximum penalty allowed pursuant to N.J.S.A. 40:49-5, which is $2,000 as of December 2014, will be issued. If a non-minor violation is immediately corrected, a NOV without a civil penalty shall still be issued to document the violation. If the violation occurs again (within 12 months of the initial violation) a NOPA shall be issued regardless of whether the violation is immediately corrected or not.

(F) The violator may request from the Noise Control Officer or Noise Control Investigator, an extension of the compliance deadline in the enforcement action. The Noise Control Officer or Noise Control Investigator shall have the option to approve any reasonable request for an extension (not to exceed 180 days) if the violator can demonstrate that a good faith effort has been made to achieve compliance. If an extension is not granted and the violation continues to exist after the grace period ends, a NOPA shall be issued.

(G) The recipient of a NOPA shall be entitled to a hearing in a municipal court having jurisdiction to contest such action.

(H) The Noise Control Officer or Noise Control Investigator may seek injunctive relief if the responsible party does not remediate the violation within the period of time specified in the NOPA issued.

(I) Any claim for a civil penalty may be compromised and settled based on the following factors:

1. Mitigating or any other extenuating circumstances;

2. The timely implementation by the violator of measures which lead to compliance;

3. The conduct of the violator; and

4. The compliance history of the violator.

171-12 Consistency, Severability and Repealer

(A) If any provision or portion of a provision of this ordinance is held to be unconstitutional, preempted by Federal or State law, or otherwise invalid by any court of competent jurisdiction, the remaining provisions of the ordinance shall not be invalidated.

(B) All ordinances or parts of ordinances, which are inconsistent with any provisions of this ordinance, are hereby repealed as to the extent of such inconsistencies.

(C) No provision of this ordinance shall be construed to impair any common law or statutory cause of action, or legal remedy there from, of any person for injury or damage arising from any violation of this ordinance or from other law.

Introduced: July 2, 2024 Adopted: July 16, 2024

BYRAM TOWNSHIP COUNCIL

	Councilwoman Franco	Councilman Gallagher	Councilman Proctor	Councilman Roseff	Mayor Rubenstein
Motion					
2nd					
Yes					
No					
Abstain					
Absent					

NOTICE OF ADOPTION

NOTICE is hereby given that Ordinance 013-2024 was introduced and passed first reading at a meeting of the Township Council of the Township of Byram, held at the Byram Township Municipal Building, Mansfield Drive, Byram Township, New Jersey, on the 2nd day of July 2024. The said ordinance was further considered for final adoption at a meeting of the Township Council of The Township of Byram, held at the Byram Municipal Building, 10 Mansfield Drive, Byram Township, New Jersey, on the 16th day of July at 7:30 p.m. at which time all persons were given the opportunity to be heard. It was finally passed and adopted and will be in full force in the Township according to law.

_____
Cynthia Church, RMC
Township Clerk

From:	Joseph Sabatini
To:	Alex Rubenstein; Cindy Church; Cris Franco; Harvey Roseff; John Gallagher; Phil Crosson; Ricky Proctor; T Collins
Cc:	Michael Orgera
Subject:	FW: COJ F8 Scope
Date:	Monday, July 15, 2024 10:19:17 AM
Attachments:	image003.png image004.png image005.png image006.png image007.png image008.png image010.png 2024-07-12 16801 Byram CO Johnson-Field 8-REDUCE SCOPE.pdf 16801-005-BYRAM JOHNSON PARK-FIELD 8 SITE PLAN.pdf

---

FYI – Updated estimate with plans to support tomorrow night's discussion. Estimate includes pumps, controls and wet well for submersible pump. I will be seeking consensus at tomorrow night's meeting to move forward with plan as presented.

Thanks - Joe

Joseph W. Sabatini
Byram Township Manager

Phone: 973.347.2500 x129

10 Mansfield Drive, Stanhope, NJ 07874

From: Denis Keenan <Denis.Keenan@FPAengineers.com>
Sent: Friday, July 12, 2024 3:54 PM
To: Joseph Sabatini <jsabatini@byramtwp.org>
Cc: Phil Crosson <pcrosson@byramtwp.org>
Subject: RE: COJ F8 Scope

Joe

I think what you wrote in your e-mail was accurate. I have updated plans and an updated estimate. Take a look and let me know if you have any questions. If you have no questions, please forward on to the Council.

Denis Keenan, PE, CME, CFM
Regional Manager | Northwest New Jersey
Vice President

Main: 908-850-0977 | **Direct:** 732-312-9792 | **Cell:** 732-245-1983
700 Grand Avenue, Unit 5A, Hackettstown, NJ 07840
fpaengineers.com

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From: Joseph Sabatini <jsabatini@byramtwp.org>
Sent: Wednesday, July 10, 2024 11:27 AM
To: Alex Rubenstein <arubenstein@byramtwp.org>; Cindy Church <cchurch@byramtwp.org>; Cris Franco <cfranco@byramtwp.org>; Harvey Roseff <hroseff@byramtwp.org>; John Gallagher <jgallagher@byramtwp.org>; Phil Crosson <pcrosson@byramtwp.org>; Ricky Proctor <rproctor@byramtwp.org>; T Collins <tcollins@vccslaw.com>
Cc: Michael Orgera <morgera@byramtwp.org>; Denis Keenan <Denis.Keenan@FPAengineers.com>
Subject: COJ F8 Scope

All,

As you know at the June 18 there was a full consensus of the Council to proceed with the engineering and improvement of field 8, to include repairing the drainage problem, replacing irrigation, and replacing the grass surface with sod, and using the ARP money as first money in and backstop with open space funds, as described in the mayor's memo of June 18th.

On July 1 we received revised plans based on the directive of the Council. FPA reworked the plans to remove scope and get the cost down. Attached are a copy of the plans that were presented for review.

The next day we had a meeting with FPA to discuss the revised plans. Based on the discussion it is our understanding the revised scope is follows:

- It was reported they do not believe the revised scope is a compromising solution.
- No longer is it planned to complete a full regrade of the field. Originally it was proposed to strip the entire field and screen the soil. Also, the pitch of the field will not be changing.
- They plan to trench the entire field (every 20 feet), install stoned a perforated pipe in the trenches. Since the entire field is not being regraded, they will no longer be a full layer of stone across the entire field.
- The existing topsoil will be heavily amended with about 2 inches of sand.
- Any extra subsurface soils will not be removed from the site. They are planning to

pile on the woods edge of the field creating a 4-foot-high berm.
- Field irrigation is still included in the scope.
- Also, the field will still be sodded.

It was suggested that the pumps, controls, wet well for the submersible pump are not included in the proposed scope. It has previously been reported that work needs to be done on the existing pump controls as well as replacement of the pumphouse shed. The staff is recommending that the project include these items in the scope. We discussed with FPA to minimally include these items as an add alternate for the bid.

I have included Denis on this email if he wants to add any additional comment.

I would like to have a brief discussion with the Council on Tuesday for final agreement to presented plan. It is critical for the timeline of using ARP funds that we can start the bidding process to be able to award by the end of the year.

I was expecting an updated estimate as well as any final revision of the plans prior to Tuesday. As reported below, it is expected we will receive on Monday.

Please contact me with any questions.

Thanks - Joe

Joseph W. Sabatini
Byram Township Manager

Phone: 973.347.2500 x129

10 Mansfield Drive, Stanhope, NJ 07874

From: Denis Keenan <Denis.Keenan@FPAengineers.com>
Sent: Tuesday, July 9, 2024 2:55 PM
To: Joseph Sabatini <jsabatini@byramtwp.org>
Cc: Phil Crosson <pcrosson@byramtwp.org>; Michael Orgera <morgera@byramtwp.org>; Cindy Church <cchurch@byramtwp.org>
Subject: RE: my motion

Unfortunately I am not in the next 2 days. I just need to back check it. But can't get there by Thursday with vacation. Monday I can do.

Denis Keenan
FPA
908-850-0977

-------- Original message --------
From: Joseph Sabatini <jsabatini@byramtwp.org>
Date: 7/9/24 10:48 AM (GMT-05:00)
To: Denis Keenan <Denis.Keenan@FPAengineers.com>
Cc: Phil Crosson <pcrosson@byramtwp.org>, Michael Orgera <morgera@byramtwp.org>, Cindy Church <cchurch@byramtwp.org>
Subject: RE: my motion

Hi Denis,

I plan to present the final CO8 plans to the Council on Tuesday (7/16).

Can you provide any updated changes to the design document and provided and estimate by noon on Thursday to be included in the Council packets?

Please feel free to contact me with any questions.

Thanks – Joe

Joseph W. Sabatini
Byram Township Manager

Phone: 973.347.2500 x129

10 Mansfield Drive, Stanhope, NJ 07874

From: Denis Keenan <Denis.Keenan@FPAengineers.com>
Sent: Monday, July 1, 2024 5:54 PM
To: Joseph Sabatini <jsabatini@byramtwp.org>
Cc: Phil Crosson <pcrosson@byramtwp.org>; Michael Orgera <morgera@byramtwp.org>
Subject: RE: my motion

Joe

Yes, we did talk about getting you a schedule. Honestly, I was so focused on how we were going to tackle this design and get it under budget the schedule took a back seat.

We have spent a lot of time figuring out how we are going to rework these plans to remove the scope and get the cost down to something we can live with. So I have the attached plans which are updated and are significantly different than what we had last. If you want to have a call to discuss what this scope is we should set that up. I can get you an updated estimate by the end of the week.

If everyone is on board with what I have here, I can pull the specs together in 2 weeks.

Denis Keenan, PE, CME, CFM
Regional Manager | Northwest New Jersey
Vice President

Main: 908-850-0977 | **Direct:** 732-312-9792 | **Cell:** 732-245-1983
700 Grand Avenue, Unit 5A, Hackettstown, NJ 07840
fpaengineers.com

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From: Joseph Sabatini <jsabatini@byramtwp.org>
Sent: Monday, July 1, 2024 4:00 PM
To: Denis Keenan <Denis.Keenan@FPAengineers.com>
Cc: Phil Crosson <pcrosson@byramtwp.org>; Michael Orgera <morgera@byramtwp.org>
Subject: RE: my motion

Hi Denis,

Based on our June 19 meeting you were going to provide a timeline of activities including dates for going out and receiving bids. I do not recall receiving.

Can you please provide? I have a Council Meeting tomorrow night and would like to offer a status.

Thanks – Joe

Joseph W. Sabatini
Byram Township Manager

Phone: 973.347.2500 x129

10 Mansfield Drive, Stanhope, NJ 07874

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS
CO JOHNSON FIELD 8

Byram Township, Sussex County, New Jersey
July 12, 2024

Information contained herein is the engineer's opinion of construction cost. The engineer has no control over cost of labor, materials, equipment or services provided by others and therefore this information is neither guaranteed nor warranted. This information has been prepared for the client and is not intended for use by any other party.

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
CO Johnson Park - Field 8				
1	Mobilization	1 LS	$10,000.00	$10,000.00
2	Survey and Layout	1 LS	$4,500.00	$4,500.00
3	Soil Erosion Control	1 LS	$5,000.00	$5,000.00
4	4" Perf Pipe Drains	4000 LF	$23.00	$92,000.00
5	Topsoil Amendments	1 LS	$15,000.00	$15,000.00
6	Sand	1000 TON	$35.00	$35,000.00
6	Storm Pipe - HDPE	747 LF	$32.00	$23,904.00
7	Yard Inlets	7 EA	$2,800.00	$19,600.00
8	Sod	90150 SF	$1.25	$112,687.50
9	Seed and Stabilize	1 LS	$4,000.00	$4,000.00
10	Pumps and Controls	1 LS	$50,000.00	$50,000.00
11	Wet Well for Submersible Pump *	1 LS	$25,000.00	$25,000.00
12	Irrigation	1 LS	$55,000.00	$55,000.00
			SITE WORK TOTAL	**$451,691.50**
			Project Contingency 10%	**$45,169.15**
			PROJECT BUDGET	**$496,860.65**
	* Budget anticipates utilizing existing storage tank and well pump. Existing storage tank will support the irrigation of 2 athletic fields. Irrigation of more than 2 fields may require an additional storage tank.			





LOCATION MAP

SCALE: 1"=1000'±

SHEET LIST TABLE

Sheet Number	Sheet Title
1	OVERALL SITE PLAN
2	FIELD 8 – EXISTING CONDITIONS PLAN
3	FIELD 8 – DEMOLITION PLAN
4	FIELD 8 – SITE PLAN
5	FIELD 8 – GRADING PLAN
6	FIELD 8 – UTILITY PLAN
7	FIELD 8 – SOIL EROSION SEDIMENT CONTROL PLAN
8	FIELD 8 – SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS
9	FIELD 8 – IRRIGATION SYTEM PLAN
10	FIELD 8 – IRRIGATION PUMP SYSTEM DETAILS
11	FIELD 8 – IRRIGATION SYSTEM DETAILS
12	FIELD 8 – CONSTRUCTION DETAILS

NOTES:

SEE SHEET "2" FOR EXISTING LEGEND & GENERAL NOTES

No.	Date	Revision	Revised By	Checked By

100 0 100 200
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

Hackettstown Office:
700 Grand Avenue, Unit 5A
Hackettstown, NJ 07840
908.850.0977

FPAengineers.com

DENIS F. KEENAN, P.E.
PROFESSIONAL ENGINEER NJ. LIC. NO. 46373

OVERALL SITE PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

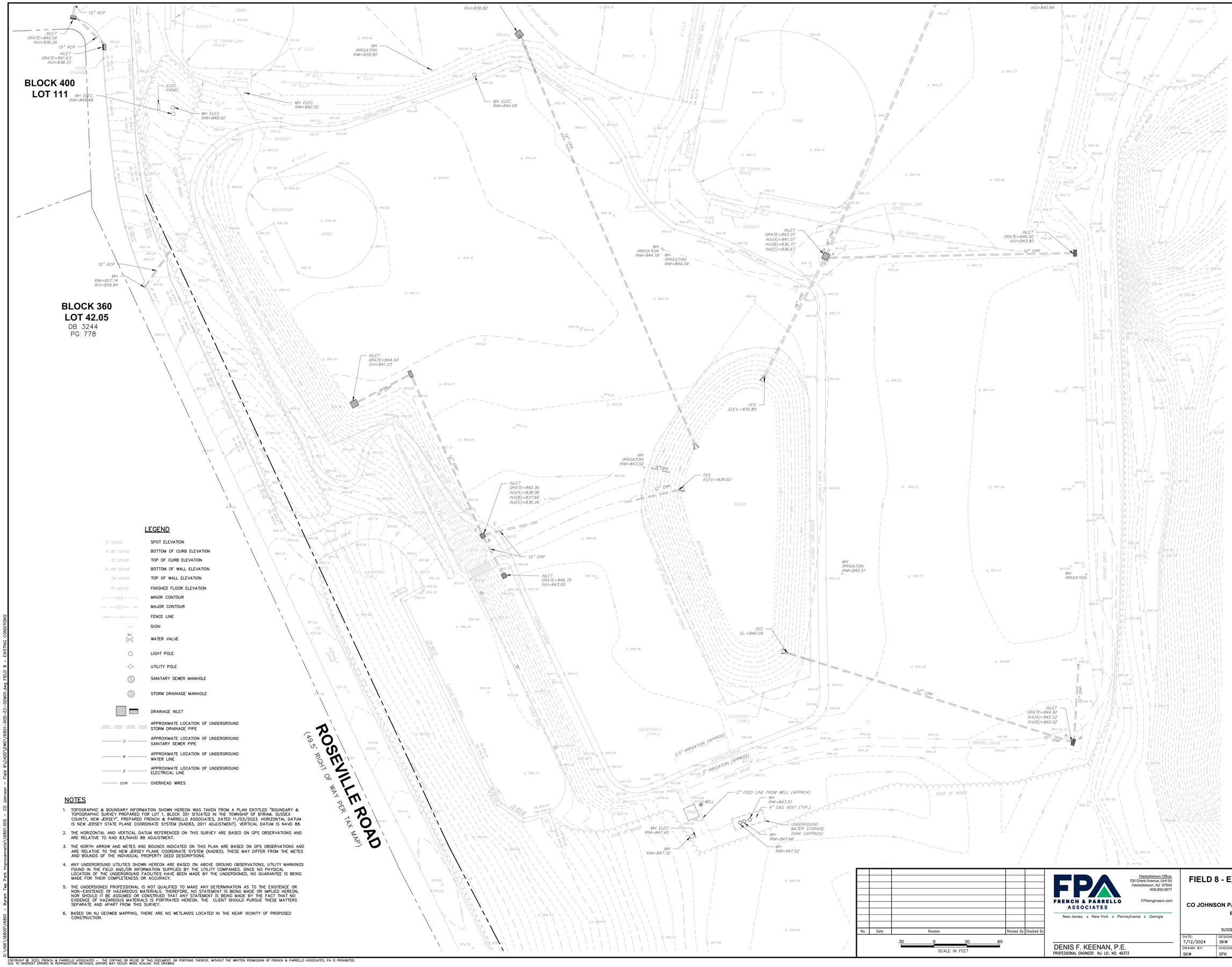
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		1 of 12

O:\16K\16800\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-SP1.dwg OVERALL SITE PLAN

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DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING



LEGEND

X 123.45	SPOT ELEVATION
X BC 123.45	BOTTOM OF CURB ELEVATION
TC 123.45	TOP OF CURB ELEVATION
X BW 123.45	BOTTOM OF WALL ELEVATION
TW 123.45	TOP OF WALL ELEVATION
FF 123.45	FINISHED FLOOR ELEVATION
— 123 —	MINOR CONTOUR
— 130 —	MAJOR CONTOUR
	FENCE LINE
	SIGN
WV	WATER VALVE
	LIGHT POLE
	UTILITY POLE
S	SANITARY SEWER MANHOLE
D	STORM DRAINAGE MANHOLE
	DRAINAGE INLET
	APPROXIMATE LOCATION OF UNDERGROUND STORM DRAINAGE PIPE
S	APPROXIMATE LOCATION OF UNDERGROUND SANITARY SEWER PIPE
W	APPROXIMATE LOCATION OF UNDERGROUND WATER LINE
E	APPROXIMATE LOCATION OF UNDERGROUND ELECTRICAL LINE
OHW	OVERHEAD WIRES

NOTES

1. TOPOGRAPHIC & BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR LOT 1, BLOCK 351 SITUATED IN THE TOWNSHIP OF BYRAM, SUSSEX COUNTY, NEW JERSEY", PREPARED FRENCH & PARRELLO ASSOCIATES, DATED 11/03/2023. HORIZONTAL DATUM IS NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD83, 2011 ADJUSTMENT). VERTICAL DATUM IS NAVD 88.
2. THE HORIZONTAL AND VERTICAL DATUM REFERENCED ON THIS SURVEY ARE BASED ON GPS OBSERVATIONS AND ARE RELATIVE TO NAD 83/NAVD 88 ADJUSTMENT.
3. THE NORTH ARROW AND METES AND BOUNDS INDICATED ON THIS PLAN ARE BASED ON GPS OBSERVATIONS AND ARE RELATIVE TO THE NEW JERSEY PLANE COORDINATE SYSTEM (NAD83); THESE MAY DIFFER FROM THE METES AND BOUNDS OF THE INDIVIDUAL PROPERTY DEED DESCRIPTIONS.
4. ANY UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND OBSERVATIONS, UTILITY MARKINGS FOUND IN THE FIELD AND/OR INFORMATION SUPPLIED BY THE UTILITY COMPANIES. SINCE NO PHYSICAL LOCATION OF THE UNDERGROUND FACILITIES HAVE BEEN MADE BY THE UNDERSIGNED, NO GUARANTEE IS BEING MADE FOR THEIR COMPLETENESS OR ACCURACY.
5. THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO MAKE ANY DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF HAZARDOUS MATERIALS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF HAZARDOUS MATERIALS IS PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.
6. BASED ON NJ GEOWEB MAPPING, THERE ARE NO WETLANDS LOCATED IN THE NEAR VICINITY OF PROPOSED CONSTRUCTION.

No.	Date	Revision	Revised By	Checked By

30 0 30 60
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
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New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

DENIS F. KEENAN, P.E.
PROFESSIONAL ENGINEER NJ. LIC. NO. 46373

FIELD 8 - EXISTING CONDITIONS PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

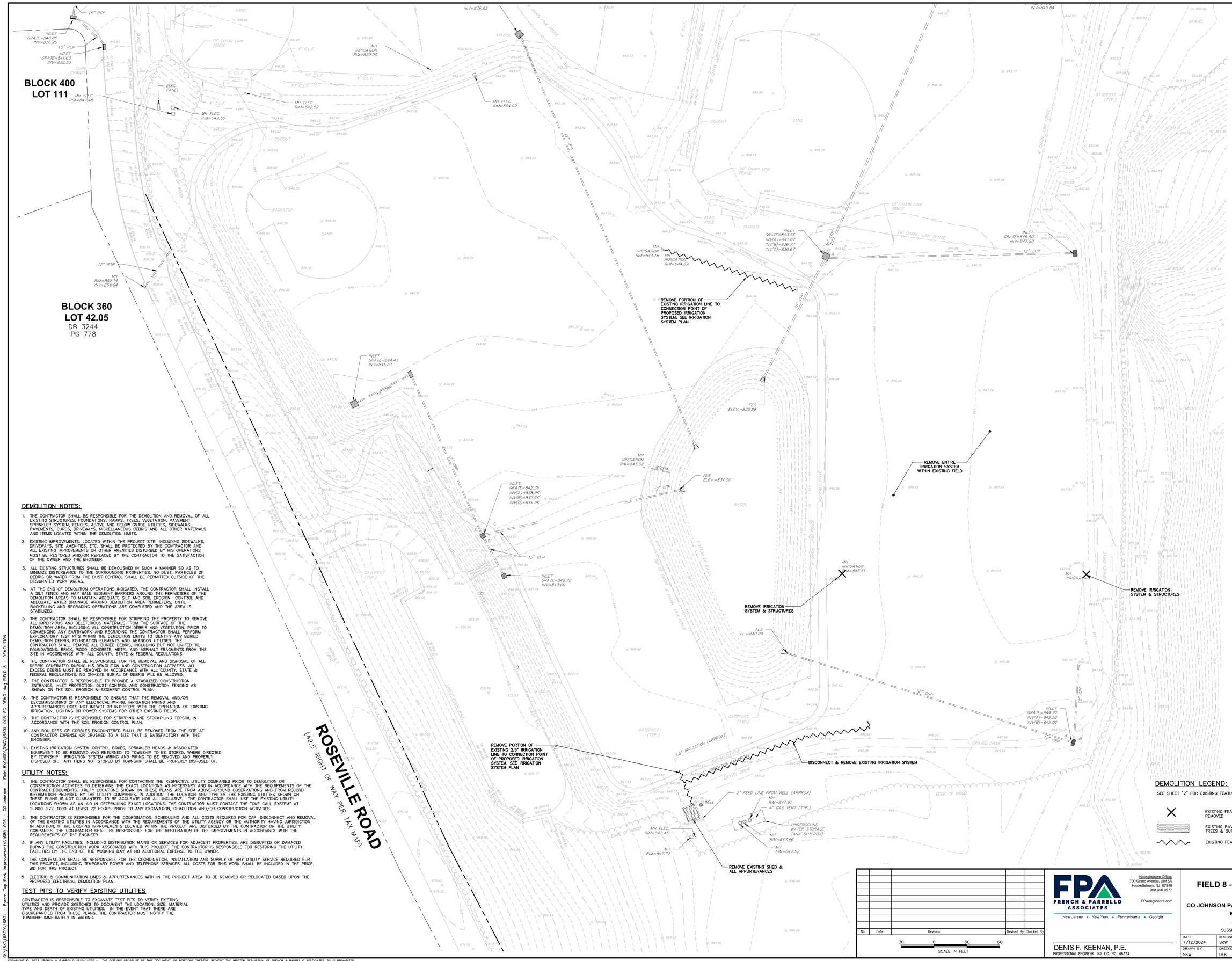
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		2 of 12

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D:\16XX\16800\16801 - Byram Twp Park Improvements\16801.005 - CO Johnson - Field 8\CADD\DWG\16801-005-EC-(DEMO).dwg FIELD 8 - EXISTING CONDITIONS



DEMOLITION NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, FOUNDATIONS, RAMPS, TREES, VEGETATION, PAVEMENT, SPRINKLER SYSTEM, FENCES, ABOVE AND BELOW GRADE UTILITIES, SIDEWALKS, PAVEMENTS, CURBS, DRIVEWAYS, MISCELLANEOUS DEBRIS AND ALL OTHER MATERIALS AND ITEMS LOCATED WITHIN THE DEMOLITION LIMITS.
2. EXISTING IMPROVEMENTS, LOCATED WITHIN THE PROJECT SITE, INCLUDING SIDEWALKS, DRIVEWAYS, SITE AMENITIES, ETC. SHALL BE PROTECTED BY THE CONTRACTOR AND ALL EXISTING IMPROVEMENTS OR OTHER AMENITIES DISTURBED BY HIS OPERATIONS MUST BE RESTORED AND/OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.
3. ALL EXISTING STRUCTURES SHALL BE DEMOLISHED IN SUCH A MANNER SO AS TO MINIMIZE DISTURBANCE TO THE SURROUNDING PROPERTIES, NO DUST, PARTICLES OF DEBRIS OR WATER FROM THE DUST CONTROL SHALL BE PERMITTED OUTSIDE OF THE DESIGNATED WORK AREAS.
4. AT THE END OF DEMOLITION OPERATIONS INDICATED, THE CONTRACTOR SHALL INSTALL A SILT FENCE AND HAY BALE SEDIMENT BARRIERS AROUND THE PERIMETERS OF THE DEMOLITION AREAS TO MAINTAIN ADEQUATE SILT AND SOIL EROSION CONTROL AND ADEQUATE WATER DRAINAGE AROUND DEMOLITION AREA PERIMETERS, UNTIL BACKFILLING AND REGRADING OPERATIONS ARE COMPLETED AND THE AREA IS STABILIZED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPPING THE PROPERTY TO REMOVE ALL IMPERVIOUS AND DELETERIOUS MATERIALS FROM THE SURFACE OF THE DEMOLITION AREA, INCLUDING ALL CONSTRUCTION DEBRIS AND VEGETATION. PRIOR TO COMMENCING ANY EARTHWORK AND REGRADING THE CONTRACTOR SHALL PERFORM EXPLORATORY TEST PITS WITHIN THE DEMOLITION LIMITS TO IDENTIFY ANY BURIED DEMOLITION DEBRIS, FOUNDATION ELEMENTS AND ABANDON UTILITIES. THE CONTRACTOR SHALL REMOVE ALL BURIED DEBRIS, INCLUDING BUT NOT LIMITED TO, FOUNDATIONS, BRICK, WOOD, CONCRETE, METAL AND ASPHALT FRAGMENTS FROM THE SITE IN ACCORDANCE WITH ALL COUNTY, STATE & FEDERAL REGULATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEBRIS GENERATED DURING HIS DEMOLITION AND CONSTRUCTION ACTIVITIES. ALL EXCESS DEBRIS MUST BE REMOVED IN ACCORDANCE WITH ALL COUNTY, STATE & FEDERAL REGULATIONS. NO ON-SITE BURIAL OF DEBRIS WILL BE ALLOWED.
7. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A STABILIZED CONSTRUCTION ENTRANCE, INLET PROTECTION, DUST CONTROL AND CONSTRUCTION FENCING AS SHOWN ON THE SOIL EROSION & SEDIMENT CONTROL PLAN.
8. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE REMOVAL AND/OR DECOMMISSIONING OF ANY ELECTRICAL WIRING, IRRIGATION PIPING AND APPURTENANCES DOES NOT IMPACT OR INTERFERE WITH THE OPERATION OF EXISTING IRRIGATION, LIGHTING OR POWER SYSTEMS FOR OTHER EXISTING FIELDS.
9. THE CONTRACTOR IS RESPONSIBLE FOR STRIPPING AND STOCKPILING TOPSOIL IN ACCORDANCE WITH THE SOIL EROSION CONTROL PLAN.
10. ANY BOULDERS OR COBBLES ENCOUNTERED SHALL BE REMOVED FROM THE SITE AT CONTRACTOR EXPENSE OR CRUSHED TO A SIZE THAT IS SATISFACTORY WITH THE ENGINEER.
11. EXISTING IRRIGATION SYSTEM CONTROL BOXES, SPRINKLER HEADS & ASSOCIATED EQUIPMENT TO BE REMOVED AND RETURNED TO TOWNSHIP TO BE STORED, WHERE DIRECTED BY TOWNSHIP. IRRIGATION SYSTEM WIRING AND PIPING TO BE REMOVED AND PROPERLY DISPOSED OF. ANY ITEMS NOT STORED BY TOWNSHIP SHALL BE PROPERLY DISPOSED OF.

UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES TO DETERMINE THE EXACT LOCATIONS AS NECESSARY AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. UTILITY LOCATIONS SHOWN ON THESE PLANS ARE FROM ABOVE-GROUND OBSERVATIONS AND FROM RECORD INFORMATION PROVIDED BY THE UTILITY COMPANIES. IN ADDITION, THE LOCATION AND TYPE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR SHALL USE THE EXISTING UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. THE CONTRACTOR MUST CONTACT THE "ONE CALL SYSTEM" AT 1-800-272-1000 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, SCHEDULING AND ALL COSTS REQUIRED FOR CAP, DISCONNECT AND REMOVAL OF THE EXISTING UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY AGENCY OR THE AUTHORITY HAVING JURISDICTION. IN ADDITION, IF THE EXISTING IMPROVEMENTS LOCATED WITHIN THE PROJECT ARE DISTURBED BY THE CONTRACTOR OR THE UTILITY COMPANIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENGINEER.
3. IF ANY UTILITY FACILITIES, INCLUDING DISTRIBUTION MAINS OR SERVICES FOR ADJACENT PROPERTIES, ARE DISRUPTED OR DAMAGED DURING THE CONSTRUCTION WORK ASSOCIATED WITH THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE UTILITY FACILITIES BY THE END OF THE WORKING DAY AT NO ADDITIONAL EXPENSE TO THE OWNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION, INSTALLATION AND SUPPLY OF ANY UTILITY SERVICE REQUIRED FOR THIS PROJECT, INCLUDING TEMPORARY POWER AND TELEPHONE SERVICES. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.
5. ELECTRIC & COMMUNICATION LINES & APPURTENANCES WITH IN THE PROJECT AREA TO BE REMOVED OR RELOCATED BASED UPON THE PROPOSED ELECTRICAL DEMOLITION PLAN.

TEST PITS TO VERIFY EXISTING UTILITIES

CONTRACTOR IS RESPONSIBLE TO EXCAVATE TEST PITS TO VERIFY EXISTING UTILITIES AND PROVIDE SKETCHES TO DOCUMENT THE LOCATION, SIZE, MATERIAL TYPE AND DEPTH OF EXISTING UTILITIES. IN THE EVENT THAT THERE ARE DISCREPANCIES FROM THESE PLANS, THE CONTRACTOR MUST NOTIFY THE TOWNSHIP IMMEDIATELY IN WRITING.

DEMOLITION LEGEND:

SEE SHEET "2" FOR EXISTING FEATURES LEGEND & GENERAL NOTES.

- EXISTING FEATURE AND/OR STRUCTURE TO BE REMOVED
- EXISTING PAVEMENT, SIDEWALKS, CURBING, STRUCTURES, TREES & SURFACE FEATURES TO BE REMOVED
- EXISTING FEATURE OR UTILITY TO BE REMOVED

No.	Date	Revision	Revised By	Checked By

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FIELD 8 - DEMOLITION PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		3 of 12

O:\16K\16800\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-EC-DEMO.dwg FIELD 8 – DEMOLITION

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N

NJSPCS

ROSEVILLE ROAD
(49.5' RIGHT OF WAY PER TAX MAP)

RE-GRADE & RE-CONDITION EXISTING FIELD

SEE SOIL EROSION & SEDIMENT CONTROL PLANS FOR "NOTES FOR NATURAL TURF ESTABLISHMENT"

EXISTING WALK TO REMAIN

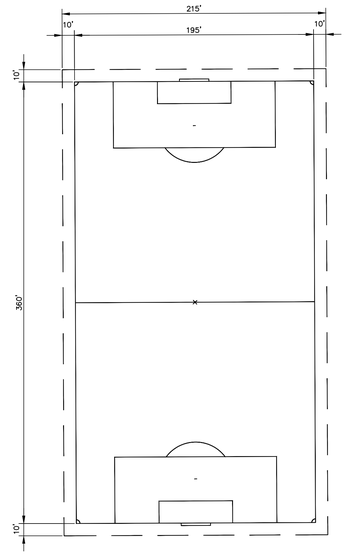
EXISTING FENCE, TO REMAIN

DRAINAGE INLET (TYP)

LIMIT OF FIELD LAYOUT (TYP)

LIMIT OF FIELD SOIL AMENDMENTS & SOD (TYP)

222'
215'
195'
10'
7'
8'
6'
380'
391'
360'



TYPICAL STRIPING -SOCCER

SCALE: 1"=50'

NOTE:
SEE SHEET "2" FOR EXISTING LEGEND

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FIELD 8 - SITE PLAN

FOR
CO JOHNSON PARK - FIELD 8 IMPROVEMENTS
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
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O:\16K\16800\16801 - Byram Twp Park Improvements\16801.005 - CO Johnson - Field 8\CADD\DWG\16801-005-SP1.dwg FIELD 8 SITE PLAN

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N

N.A.S.P.4.S.

YARD INLET
GR 844.92

YARD INLET
GR 847.17

YARD INLET
GR 845.17

YARD INLET
GR 845.42

YARD INLET
GR 845.50

YARD INLET
GR 846.33

PROPOSED 4' MAX HEIGHT BERM COMPRISED OF EXCESS SOIL FROM TRENCH WORK. COVER WITH 4" TOPSOIL & SEED IN ACCORDANCE WITH SUSSEX COUNTY EROSION CONTROL STANDARDS

ROSEVILLE ROAD
(49.5' RIGHT OF WAY PER TAX MAP)

GRADING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN EARTHWORK ANALYSIS AT THE TIME OF BID. AN EFFORT WAS MADE TO BALANCE THE PROPOSED SITE. THE CONTRACTOR SHALL ANTICIPATE MAKING MINOR ADJUSTMENTS IN GRADES FROM WHAT IS SHOWN ON PLAN TO BALANCE CUTS AND FILLS. MODIFICATIONS TO PROPOSED FIELD GRADES TO BE APPROVED BY ENGINEER.

LEGEND

SEE SHEET "2" FOR EXISTING LEGEND

- PROPOSED INLET
- 884 — PROPOSED CONTOUR
- 884.83 × PROPOSED SPOT ELEVATION
- PROPOSED SURFACE FLOW

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FIELD 8 - GRADING PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

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O:\16K\16800\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\GWS\16801-005-GR-GTZ.dwg FIELD 8 GRADING

N

N.S.P.E.S.

YARD INLET
GR 847.17
INV 845.00

YARD INLET
GR 844.92
INV 842.09

INV 841.17

14 LF 8" HDPE
@ 6.57%

210 LF 8" HDPE
@ 1.39%

180 LF 8" HDPE
@ 0.50%

4" PERF PVC (TYP)

TYP 20'

YARD INLET
GR 845.17
INV 843.00

147 LF 8" PERF
HDPE @ 1.00%

YARD INLET
GR 845.42
INV (IN) 841.53
INV (OUT) 840.5±

33 LF 8" PERF
HDPE @ 3.03%

YARD INLET
GR 845.50
INV 842.53

210 LF 8" PERF
HDPE @ 0.86%

YARD INLET
GR 846.33
INV 844.33

EXISTING
UNDERDRAIN TO
REMAIN

PROPOSED 4' MAX HEIGHT BERM
COMPRISED OF EXCESS SOIL FROM
TRENCH WORK. COVER WITH 4"
TOPSOIL & SEED IN ACCORDANCE WITH
SUSSEX COUNTY EROSION CONTROL
STANDARDS

INV 8XX.XX

ROSEVILLE ROAD
(49.5' RIGHT OF WAY PER TAX MAP)

LEGEND

SEE SHEET "2" FOR EXISTING LEGEND

- PROPOSED INLET
- 884 PROPOSED CONTOUR
- PROPOSED STORM PIPING

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FIELD 8 - UTILITY PLAN

FOR
CO JOHNSON PARK - FIELD 8 IMPROVEMENTS
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
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SEE INSET FOR CONTINUATION

BLOCK 400
LOT 111

BLOCK 360
LOT 42.05
DB 3244
PG 778

AREAS RECEIVING SOD WILL UNDERGO SOIL REMEDIATION PER NOTES FOR "NATURAL TURF ESTABLISHMENT" ON SHEET "8", THUS, SOIL COMPACTION TESTING IS NOT NECESSARY IN THESE AREAS. ALL OTHER AREAS TO BE SEEDED WITHIN THE LIMIT OF DISTURBANCE ARE SUBJECT TO COMPACTION TESTING.

SILT FENCE AT LIMIT OF DISTURBANCE (TYP)

YARD INLET GR 844.92

YARD INLET GR 847.17

YARD INLET GR 845.17

YARD INLET GR 845.42

YARD INLET GR 845.50

YARD INLET GR 846.33

SOIL STOCKPILE

LIMIT OF DISTURBANCE (TYP)

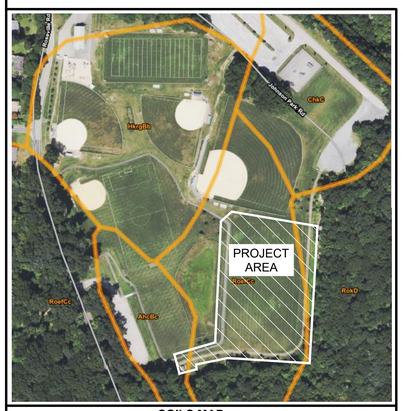
INLET PROTECTION (TYP)

SILT FENCE AT LIMIT OF DISTURBANCE (TYP)

PROPOSED 4' MAX HEIGHT BERM COMPRISED OF EXCESS SOIL FROM TRENCH WORK. COVER WITH 4" TOPSOIL & SEED IN ACCORDANCE WITH SUSSEX COUNTY EROSION CONTROL STANDARDS

SEED ALL CLEARED & DISTURBED AREAS, PROVIDE DEEP SCARIFICATION/TILLAGE 6" MIN DEPTH, THUS SOIL DE-COMPACTION TESTING IS NOT REQUIRED

ROSEVILLE ROAD
(49.5' RIGHT OF WAY PER TAX MAP)



SOILS MAP
SCALE: 1"=200'±
USDA WEB SOIL SURVEY

SEE SHEET "1" FOR CONTINUATION

STABILIZED CONSTRUCTION ENTRANCE

INSET
1" = 30'

SOIL TYPES:
PER USDA WEB SOIL SURVEY

RoefCc	ROCKAWAY LOAM, THIN FRAGIPAN, 8 TO 15 PERCENT SLOPES, EXTREMELY STONY
RokD	ROCKAWAY–CHATFIELD–ROCK OUTCROP COMPLEX, 15 TO 35 PERCENT SLOPES
AhcBc	ALDEN MUCKY SILT LOAM, GNEISS TILL SUBSTRATUM, 0 TO 8 PERCENT SLOPES, EXTREMELY STONY
ChkC	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 0 TO 15 PERCENT SLOPES

LEGEND

SEE SHEET "2" FOR EXISTING LEGEND

- PROPOSED SILT FENCE SOCK
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED INLET PROTECTION
- 846 PROPOSED CONTOUR
- PROPOSED SURFACE FLOW ARROW
- PROPOSED STORM DRAIN
- RECOMENDED SOIL COMPACTION TEST LOCATION
- AREAS OF SOD INSTALLATION

LIMIT OF DISTURBANCE:
111,740 SF (25656 AC)

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FIELD 8 - SOIL EROSION SEDIMENT CONTROL PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

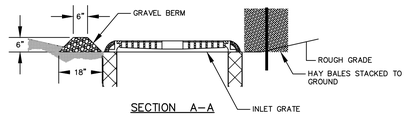
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

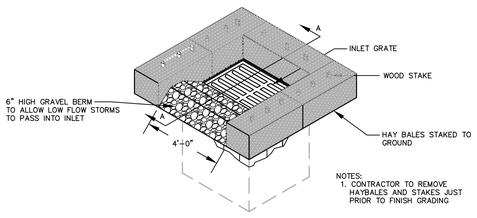
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O:\VER\16800\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-SE1.dwg FIELD 8 – EROSION CONTROL PLAN

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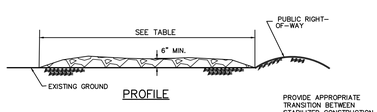


SECTION A–A

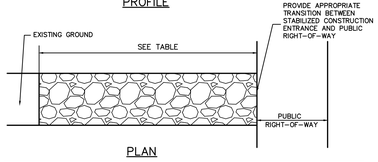


LAWN TYPE INLET FILTER PROTECTION

NOT TO SCALE



PROFILE



PLAN

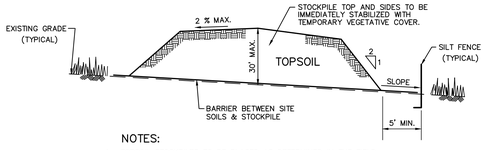
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COURSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FEET	100 FEET
2% TO 5%	100 FEET	200 FEET
> 5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE, AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY	

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE ASTM C–33, SIZE NO. 2 OR 3. USE CLEAN CRUSHED ANGULAR STONES
2. LENGTH – 50 FEET MINIMUM WHERE SOILS ARE COURSE GRAINED (SAND OR GRAVEL), OR 100 FEET MINIMUM WHERE SOILS ARE FINE GRAINED (CLAYS OR SILTS)
3. THICKNESS – NOT LESS THAN 6 INCHES.
4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAIN INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT–OF–WAY MUST BE REMOVED IMMEDIATELY.
7. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE SHALL BE INSTALLED BEFORE INSTALLATION.
8. A CONSTRUCTION ENTRANCE IS REQUIRED TO BE CONSTRUCTED AT EDGE OF PAVEMENT BETWEEN EACH CONSTRUCTED SECTION AND PHASE.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

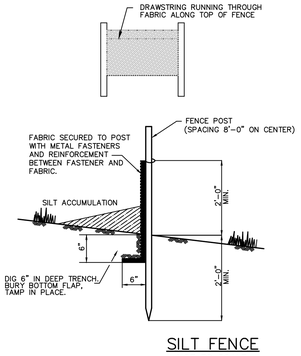


NOTES:

1. TOPSOIL STOCKPILES TO BE PLACED AS DETERMINED IN THE FIELD.
2. STOCKPILE NOT TO BE PLACED IN AREA WITH CONCENTRATED FLOW, WETLANDS, EXTREME SLOPE OR WITHIN 100' OF A NATURAL STREAM.

TEMPORARY SOIL STOCKPILE

NOT TO SCALE



SILT FENCE

NOT TO SCALE

CONSTRUCTION SCHEDULE AND PROCEDURE FOR IMPLEMENTATION OF SOIL EROSION AND SEDIMENT CONTROL MEASURES

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE & SILT FENCE AS SHOWN. (1 WEEK)
2. DEMO EXISTING FEATURES & EQUIPMENT AS SHOWN ON DEMOLITION PLAN. (2 WEEKS)
3. STRIP TOPSOIL FROM FIELDS, ROUGH GRADE, INSTALL STORM DRAINAGE, ELECTRICAL, IRRIGATION SYSTEM & LIGHTING. PREPARE SUBGRADE (3 MONTHS)
4. INSTALL INLET PROTECTION ON PROPOSED INLETS. (2 DAYS)
6. INSTALL PAVED WALKWAYS, CONCRETE PADS & FIELD APPURTENANCES. (3 WEEKS)
7. FINE GRADE SITE, PERFORM SOIL REMEDIATION (3 WEEKS)
8. DEEP SCARIFY SITE IN ACCORDANCE WITH SOIL COMPACTION NOTES (3 DAYS)
9. INSTALL SOD & PERMANENT VEGETATIVE COVER. (2 WEEKS)
10. REMOVE INLET PROTECTION AND SILT FENCE AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED. (ON GOING)

CONSTRUCTION SCHEDULE PROVIDED FOR SOIL EROSION CONTROL PURPOSES ONLY.

GENERAL SEEDING NOTES:

1. STEPS SHALL BE TAKEN TO MINIMIZE SOIL COMPACTION. ALL COMPACTED AREAS SHALL BE RE–TILLED TO A DEPTH OF 4–6 INCHES PRIOR TO TOPSOIL APPLICATION.
2. SEED SHALL BE PLANTED USING A SLIT SEEDER OR SEED DRILL. HYDRO SEEDING IS NOT ACCEPTABLE EXCEPT ON STEEP SLOPES.
3. ALL SEED SHALL BE CURRENT CROP CERTIFIED. APPROVED BY THE TOWNSHIP OR FRENCH & PARRELLO.

SOIL COMPACTION NOTES:

1. PRIOR TO PLACEMENT OF TOPSOIL & ESTABLISHMENT OF PERMANENT COVER, CONTRACTOR SHALL PROVIDE SOIL RESTORATION IN ACCORDANCE WITH "THE STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY", LATEST EDITION. RESTORATION SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MIN DEPTH) OR IN THE ALTERNATIVE, ANOTHER METHOD AS APPROVED BY THE ENGINEER. RESTORATION SHALL OCCUR PRIOR TO THE PLACEMENT OF TOPSOIL.

DUST CONTROL NOTES:

REFER TO "THE STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY", LATEST ADDITION FOR REFERENCE

DUST CONTROL NOTES

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS / ACRE
ANIONIC ASPHALT EMULSION	7 : 1	COARSE SPRAY	1,200
LATEX EMULSION	12.5 : 1	FINE SPRAY	235
RESIN IN WATER	4 : 1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) – SPRAY ON POLYACRYLAMIDE (PAM) – DRY SPRAY	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARDS (PG. 26–1)		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL–TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING–TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING – SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS – SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE – SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OF FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS, OR ACCUMULATION AROUND PLANTS.

STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

NOTES FOR NATURAL TURF ESTABLISHMENT:

A. GENERAL

1. CONTRACTOR SHALL PROVIDE SOIL RESTORATION IN ACCORDANCE WITH "THE STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY", LATEST EDITION.

B. MATERIALS.

1. SEED: ALL SEED SHALL BE FRESH, CLEAN, NEW CROP, CERTIFIED SEED COMPLYING WITH TOLERANCE FOR GERMINATION AND PURITY AND FREE OF MEADOW FESCUE, POA ANNUA, BENT GRASS, BLUEGRASS AND OTHER NOXIOUS WEED SEED IDENTIFIED BY THE NJ DEPARTMENT OF AGRICULTURE, APPROVED BY FRENCH & PARRELLO.

   SEE SEEDING SCHEDULE BELOW

2. PELLETS (MIN 90% SULFUR)
3. TOPSOIL CONDITIONER: VITRIFIED CLAY AMENDMENT, IE. TURFACE MVP.
4. FERTILIZER: COMMERCIAL–BRAND FERTILIZER HAVING A GUARANTEED N:P:K ANALYSIS.
5. COMPOST: TO INCREASE ORGANIC CONTENT CONSISTING ROOT OR VEGETABLE MULCH, ALL–GROW OR MUSHROOM COMPOST.
6. SOD: SEE NOTES BELOW

C. CONSTRUCTION SEQUENCE

STRIPPING/TOPSOILING

1. REMOVE A SUFFICIENT DEPTH OF TOPSOIL TO ELIMINATE 95% OF ALL EXISTING GRASS, WEEDS AND VEGETATION. DEEPER STRIPPING MAY BE REQUIRED IN SELECT AREAS TO FULLY REMOVE FORMER ROOT SYSTEM. SCREEN TOPSOIL AND RESERVE FOR REUSE. SCREENED OVERSIZED MATERIAL, VEGETATION AND ROOTS TO BE DISPOSED OF OFF–SITE.
2. RAKE EXPOSED GROUND SURFACE TO REMOVE ALL WOOD DEBRIS AND COBBLES AND BOULDERS IN EXCESS OF 3 INCHES IN DIAMETER
3. PLACE TOPSOIL AS REQUIRED TO PROVIDE A MINIMUM THICKNESS OF 6 INCHES OF TOPSOIL THROUGHOUT ENTIRE TURF FIELD AREA.

REMEDIATION

1. RESTORATION SHALL BE THROUGH DEEP ROTOTILLING AND/OR DISKING (6" MIN DEPTH) OR IN THE ALTERNATIVE, ANOTHER METHOD AS APPROVED BY THE ENGINEER
2. PRIOR TO TILLING TOPSOIL, APPLY THE FOLLOWING:

   SULFUR: PELLETS AT A RATE OF 20 POUNDS PER 1000 SF

   FERTILIZER: LEBANON PROSCAPE 21–22–4 WITH .08 MESOTRIONE OR APPROVED EQUAL AT 4.3 POUNDS PER 1000 SF

   CONDITIONER: TURFACE MVP OR APPROVED EQUAL AT A RATE OF 120 POUNDS PER 1000 SF

   COMPOST: AS REQ'D TO RAISE ORGANIC CONTENT TO MIN. 5% BY WEIGHT
3. TILL/MIX SOIL AND ADDITIVES SUFFICIENTLY TO PROVIDE UNIFORM DISTRIBUTION THROUGHOUT THE FULL DEPTH.
4. STEPS SHALL BE TAKEN TO MINIMIZE SOIL COMPACTION. ALL COMPACTED AREAS SHALL BE RE–TILLED TO A MINIMUM DEPTH OF 6 INCHES. SOFT AREAS SHALL BE LIGHTLY ROLLED TO PROVIDE UNIFORM, LOOSELY COMPACTED SUBGRADE THROUGHOUT.

SEEDING/MULCHING

1. SEED SHALL BE PLANTED USING A SLIT SEEDER OR SEED DRILL. RAKE AS NECESSARY TO FULLY MIX SEED INTO TOPSOIL.
2. MULCH WITH PENNMULCH SEED ACCELERATOR WITH STARTER FERTILIZER OR APPROVED EQUAL (50 POUNDS PER 1000 SF)

WATERING

1. THE PURPOSE OF IRRIGATION OF NEW SEED SHALL BE TO MAINTAIN MOIST BUT NOT SATURATED SOIL UNTIL THE GRASS SHOOTS ARE AT LEAST 1 INCH HIGH. WATER DAILY, MORE OR LESS DEPENDING ON FREQUENCY OF RAIN, HIGH HEAT AND/OR HIGH WINDS.
2. CONTINUE WATERING DAILY TO PREVENT TOPSOIL FROM DRYING OUT.

MAINTENANCE

1. TWO TO FOUR WEEKS AFTER EMERGENCE, APPLY PROSCAPE 16–25–12 OR APPROVED EQUAL AT A RATE OF 4.3 POUNDS PER 1000 SF. PROVIDE LIGHT WATERING OR RAIN AFTER FERTILIZING TO HELP RINSE FERTILIZER INTO TOPSOIL.

NOTES FOR THE CONSTRUCTION OF SOD:

1. SOD SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS SHEET.
2. LAWN PROTECTION AND MAINTENANCE:

   A. ADEQUATE PROTECTION SHALL BE PROVIDED AT ALL TIMES FOR LAWN AREAS AGAINST DAMAGE OF ANY KIND DURING PLANTING OR OTHER OPERATIONS.

   B. MAINTENANCE SHALL INCLUDE, BUT NOT LIMITED TO, RESODDING, WATERING, REANCHORING, FERTILIZING, MOWING, AND REWORKING AS FOLLOWS:

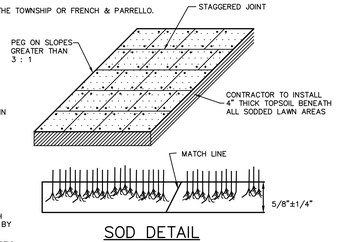
      1. RESODDING AND REFERTILIZING OF AREAS THAT FAIL. FAILURE SHALL MEAN SODDED AREAS THAT BROWN OUT OR AREAS UNABLE TO GROW ENOUGH FOR THREE MOWINGS OR AS DETERMINED BY THE ENGINEER.
      2. CONTRACTOR TO PROVIDE PROPER AND ADEQUATE WATERING INCLUDING, BUT NOT LIMITED TO, THOROUGHLY WATER THE SOD IMMEDIATELY AFTER ROLLING, AND REPEAT EVERY DAY UNTIL THE ROOTS HAVE GROWN INTO THE SOIL AND THE CONTRACTOR IS ABLE TO MOW THREE TIMES AS INDICATED BELOW.
      3. CONTRACTOR SHALL MOW THE GRASS TO A HEIGHT OF 2" TO 2–1/2" WHEN GRASS ATTAINS A HEIGHT OF 3" OR WHEN GROWTH TENDS TO SMOTHER ITSELF.
      4. CONTRACTOR TO REWORK AND RESOD ANY AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS AT THE CONTRACTOR'S EXPENSE.
      5. CONTRACTOR SHALL MAINTAIN SOD FOR AT LEAST 3 PROPER MOWINGS OR UNTIL THE ESTABLISHMENT OF THE SOD IS ACCEPTED BY THE ENGINEER.
      6. SOD SHALL NOT BE INSTALLED UNTIL THE PROPOSED IRRIGATION SYSTEM IS FULLY OPERATIONAL & TESTED.

GENERAL SEEDDING AND SODDING NOTES:

1. STEPS SHALL BE TAKEN TO MINIMIZE SOIL COMPACTION. ALL COMPACTED AREAS SHALL BE RE–TILLED TO A DEPTH OF 4–6 INCHES PRIOR TO SEED APPLICATION.
2. SEED SHALL BE PLANTED USING A SLIT SEEDER OR SEED DRILL. HYDRO SEEDING IS NOT ACCEPTABLE EXCEPT ON STEEP SLOPES.
3. ALL SEED SHALL BE CURRENT CROP CERTIFIED. APPROVED BY THE TOWNSHIP OR FRENCH & PARRELLO.

SOD NOTES :

1. CULTIVATED SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
2. REFER TO "NOTES FOR NATURAL TURF ESTABLISHMENT" ON THE SOIL EROSION & SEDIMENT CONTROL PLANS FOR SOIL REMEDIATION.
3. INSTALLATION & MAINTENANCE OF SOD TO BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
4. PLACE SOD STRIPS ON THE CONTOUR STARTING AT THE BOTTOM.
5. PLACE SOD WITH SNUG EVEN JOINTS THAT ARE STAGGERED.
6. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT.
7. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 OF AN INCH).
8. ANCHOR SOD IN WATER CARRYING CHANNELS WITH HEAVY JUTE OR PLASTIC NETTING.
9. SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH THE SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS. CONTRACTOR TO MAINTAIN SOD AS INDICATED IN THE PROTECTION AND MAINTENANCE SCHEDULE ON THIS SHEET.



SOD DETAIL

N.T.S.

SOD MAKEUP OF "TUCKAHOE BLUEGRASS SOD BLEND"
– 30% P–105 KENTUCKY BLUEGRASS
– 30% BEWTCHED KENTUCKY BLUEGRASS
– 20% MIDNIGHT STAR KENTUCKY BLUEGRASS
– 20% MOONLIGHT KENTUCKY BLUEGRASS
SOD SHALL BE SAND BASED

UPPER DELAWARE CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. THE DISTRICT SHALL BE REPRESENTED AT THE PROJECT PRECONSTRUCTION MEETING WITH THE TOWNSHIP ENGINEER, CONTRACTORS, AND UTILITY REPRESENTATIVES. IF THE TOWNSHIP ENGINEER DOES NOT SCHEDULE A PRECONSTRUCTION MEETING, IT IS THE RESPONSIBILITY OF THE OWNER/APPLICANT TO SCHEDULE ONE BEFORE ANY LAND DISTURBANCE. TWO WEEKS NOTICE MUST BE GIVEN FOR SCHEDULING PRECONSTRUCTION MEETINGS.
2. FAILURE OF THE AFOREMENTIONED PLAN SHALL NOT RELIEVE THE APPLICANT OF ANY OF ITS RESPONSIBILITIES RELEVANT TO THE APPROPRIATE STATUTES. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE DISTRICT IN THE EVENT OF ANY UNFORESEEN PROBLEMS INCURRED DURING CONSTRUCTION.
3. ANY CHANGES OF APPROVED PLANS SHALL REQUIRE AN ADDITIONAL SUBMITTAL TO THE DISTRICT INCLUDING APPROPRIATE RE–REVIEW FEES.
4. A 48 HOUR START OF LAND DISTURBANCE NOTIFICATION SHALL BE GIVEN.
5. IN THAT N.J.S.A. 4–24–39 et seq REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK RELATIVE TO APPROVED PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS WILL BE COMPLETED BEFORE THE DISTRICT ISSUES A CERTIFICATE OF COMPLIANCE. TWO WEEKS NOTICE MUST BE GIVEN TO THE DISTRICT TO SCHEDULE INSPECTION FOR CERTIFICATE OF COMPLIANCE RELEASE.
6. FINAL STABILIZATION OF ALL LAND DISTURBANCES ASSOCIATED WITH UNDERGROUND UTILITIES, IRRESPECTIVE OF PHASING, IS THE ULTIMATE RESPONSIBILITY OF THE OWNER.
7. A CASH BOND OF NOT LESS THAN $2,500 . (PER DISTURBED ACRE OR PART THEREOF, OR A LOT) WILL BE POSTED WITH THE UPPER DELAWARE CONSERVATION DISTRICT DURING THE NON–GROWING SEASON IF A CERTIFICATE OF COMPLIANCE IS NEEDED AND SOIL EROSION AND SEDIMENT CONTROL MEASURES FOR PERMANENT STABILIZATION ARE NOT COMPLETED.
8. SEDIMENT TRACKED ONTO PUBLIC RIGHT–OF–WAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
9. NO BUILDING PERMITS WILL BE RELEASED UNTIL ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWED ON APPROVED PLANS ARE INSTALLED.
10. DUST TO BE CONTROLLED WITH WATER, CALCIUM CHLORIDE OR OTHER METHOD APPROVED BY THE SOIL CONSERVATION DISTRICT.
11. TRACKING PAD TO BE KEPT CLEAN AND REPAIRED AS NECESSARY.
12. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, FEBRUARY 2014.
13. SEE DETAIL SHEETS FOR ADDITIONAL SOIL AND SEDIMENT CONTROL DETAILS.

SEEDING SCHEDULE

1. TEMPORARY SEEDING SHALL CONSIST OF SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1,000 S.F. OR WINTER CEREAL RYE APPLIED AT A RATE OF 2.8 LBS. PER 1,000 S.F.. TEMPORARY SEEDING TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING. IF ANY SERIOUS EROSION PROBLEM OCCURS, THE ERODED AREAS SHALL BE REPAIRED AND STABILIZED WITH A MULCH AS INDICATED IN NOTE 6.
2. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE OR APPROVED EQUAL – OPTIMUM SEEDING DATES ARE BETWEEN APRIL 15 AND NOVEMBER 1:

   KENTUCKY BLUEGRASS (BLEND) @ 0.50#/1000 S.F.
   TALL FESCUE @ .3.7#/1000 S.F.
   PERENNIAL RYEGRASS (BLEND) @ 0.50#/1000 S.F.

   PLEASE NOTE THAT OTHER SEED MIXTURES CAN BE USED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
3. PERMANENT SEEDING TO BE APPLIED BY CONVENTIONAL SEEDING AND/OR HYDROSEEDING, SLOPED AREAS TO BE COVERED WITH MULCH AS INDICATED IN NOTE 6.
4. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE 10–20–10 APPLIED AT A RATE OF 11 LBS. PER 1,000 S.F.. LIMESTONE FOR PERMANENT & TEMPORARY SEEDING SHALL BE APPLIED AT A RATE OF 45 LBS. PER 1,000 S.F..
5. IF SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY OR PERMANENT SEEDING, EXPOSED AREAS TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.
6. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL.
7. ALL SEEDED AREAS SHALL BE MULCHED. MULCH SHALL CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBRE MULCH BINDER, LIQUID MULCH BINDER, OR AN APPROVED EQUAL AT A RATE OF 70–90 LBS. PER 1000 SF.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

Hackettstown Office:
700 Grand Avenue, Unit 5A
Hackettstown, NJ 07840
908.850.0977

FPAengineers.com

DENIS F. KEENAN, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 46373

FIELD 8 - SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

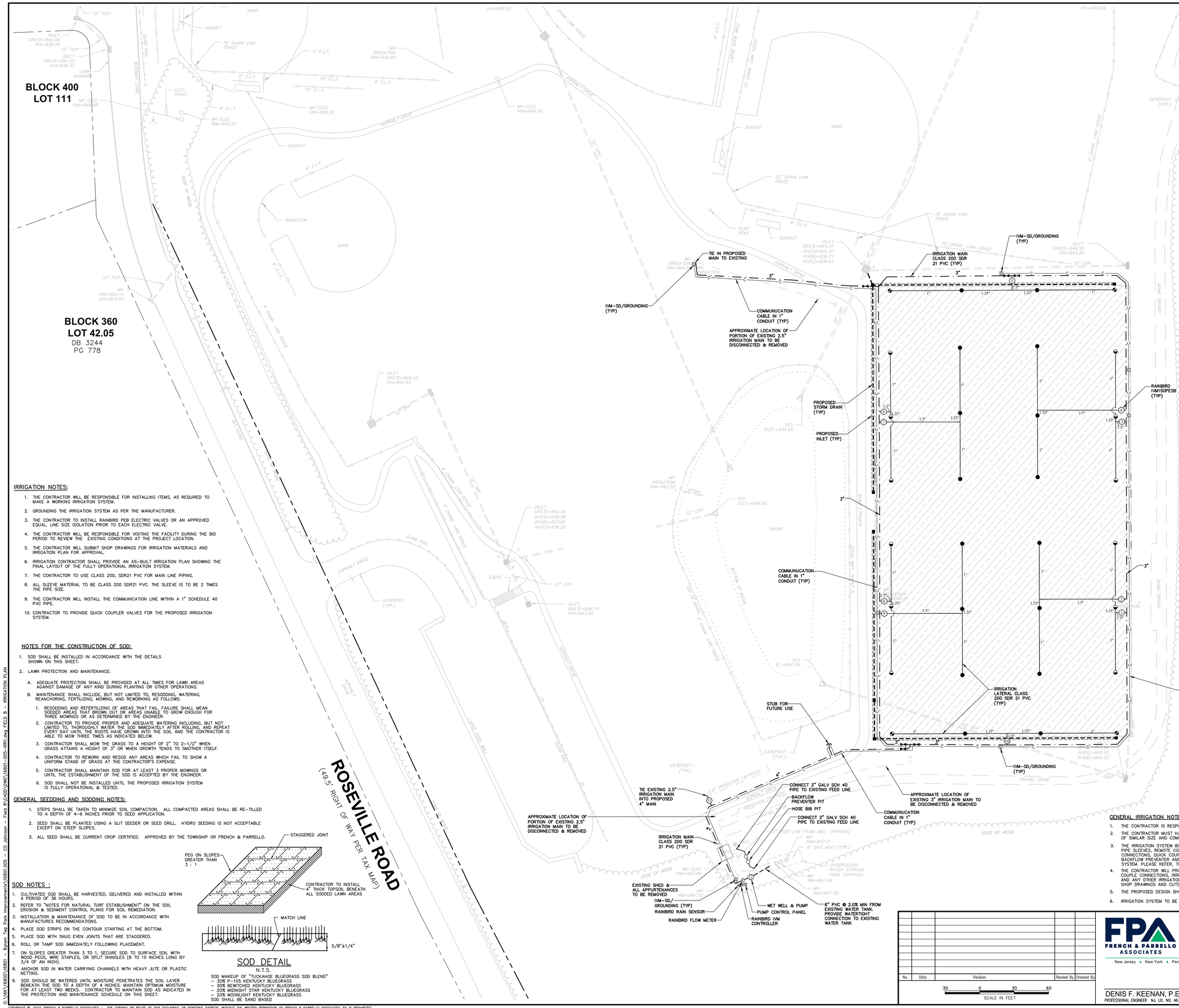
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		8 of 12

G:\BK\16800\16801 – Byram Twp. Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-SET.dwg FIELD 8 – EROSION CONTROL DETAILS

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DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING



IRRIGATION NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING ITEMS, AS REQUIRED TO MAKE A WORKING IRRIGATION SYSTEM.
2. GROUNDING THE IRRIGATION SYSTEM AS PER THE MANUFACTURER.
3. THE CONTRACTOR TO INSTALL RAINBIRD PEB ELECTRIC VALVES OR AN APPROVED EQUAL. LINE SIZE ISOLATION PRIOR TO EACH ELECTRIC VALVE.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE FACILITY DURING THE BID PERIOD TO REVIEW THE EXISTING CONDITIONS AT THE PROJECT LOCATION.
5. THE CONTRACTOR WILL SUBMIT SHOP DRAWINGS FOR IRRIGATION MATERIALS AND IRRIGATION PLAN FOR APPROVAL.
6. IRRIGATION CONTRACTOR SHALL PROVIDE AN AS-BUILT IRRIGATION PLAN SHOWING THE FINAL LAYOUT OF THE FULLY OPERATIONAL IRRIGATION SYSTEM.
7. THE CONTRACTOR TO USE CLASS 200, SDR21 PVC FOR MAIN LINE PIPING.
8. ALL SLEEVE MATERIAL TO BE CLASS 200 SDR21 PVC. THE SLEEVE IS TO BE 2 TIMES THE PIPE SIZE.
9. THE CONTRACTOR WILL INSTALL THE COMMUNICATION LINE WITHIN A 1" SCHEDULE 40 PVC PIPE.
10. CONTRACTOR TO PROVIDE QUICK COUPLER VALVES FOR THE PROPOSED IRRIGATION SYSTEM.

NOTES FOR THE CONSTRUCTION OF SOD:

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   - A. ADEQUATE PROTECTION SHALL BE PROVIDED AT ALL TIMES FOR LAWN AREAS AGAINST DAMAGE OF ANY KIND DURING PLANTING OR OTHER OPERATIONS.
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5. PLACE SOD WITH SNUG EVEN JOINTS THAT ARE STAGGERED.
6. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT.
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8. ANCHOR SOD IN WATER CARRYING CHANNELS WITH HEAVY JUTE OR PLASTIC NETTING.
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SOD DETAIL

N.T.S.

SOD MAKEUP OF "TUCKAHOE BLUEGRASS SOD BLEND"
- 30% P-105 KENTUCKY BLUEGRASS
- 30% BEWITCHED KENTUCKY BLUEGRASS
- 20% MIDNIGHT STAR KENTUCKY BLUEGRASS
- 20% MOONLIGHT KENTUCKY BLUEGRASS

SOD SHALL BE SAND BASED

LEGEND

SEE SHEET "2" FOR EXISTING LEGEND

- RAINBIRD FALCON ROTARY 6.0 GPM
- RAINBIRD FALCON ROTARY 10.0 GPM
- RAINBIRD FALCON ROTARY 12.2 GPM
- RAINBIRD IVM150PESB
- LINE SIZE ISOLATION VALVE
- IVM-SD / GROUNDING
- AREAS OF SOD INSTALLATION & REQUIRED IRRIGATION.

GENERAL IRRIGATION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE WATER COVERAGE IN ALL WATERING AREAS.
2. THE CONTRACTOR MUST HAVE A LICENSE TO INSTALL IRRIGATION IN THE STATE. HE MUST HAVE INSTALLED PROJECTS OF SIMILAR SIZE AND COMPLEXITY TO QUALIFY AS THE IRRIGATION CONTRACTOR.
3. THE IRRIGATION SYSTEM BID ITEM WILL INCLUDE BUT NOT BE LIMITED TO ALL TRENCHING, PIPING, SPRINKLER HEADS, PIPE SLEEVES, REMOTE CONTROL DECODERS, GROUNDING, WIRING, ELECTRICAL POWER CONNECTIONS, WATER CONNECTIONS, QUICK COUPLER VALVES, GATE VALVE, AIR RELEASE VALVE ASSEMBLY, PRESSURE REDUCER ASSEMBLY, BACKFLOW PREVENTER AND ALL OTHER ITEMS NOT SPECIFICALLY MENTIONED TO CONSTRUCT A WORKING IRRIGATION SYSTEM. PLEASE REFER, TO THE IRRIGATION PLAN, SPECIFICATIONS AND DETAILS.
4. THE CONTRACTOR WILL PROVIDE A FINAL IRRIGATION DRAWING SHOWING THE LOCATION OF THE PIPE SLEEVES, QUICK COUPLE CONNECTIONS, IRRIGATION PIPING, LOCATION OF SPRINKLER HEADS, CONNECTION TO THE EXISTING WATER MAINS, AND ANY OTHER IRRIGATION ITEM NEED TO CREATE A WORKING IRRIGATION SYSTEM. THE CONTRACTOR WILL PROVIDE SHOP DRAWINGS AND CUTSHEETS OF THE MATERIAL BEING INSTALLED AS INDICATED IN THE TECHNICAL SPECIFICATIONS.
5. THE PROPOSED DESIGN SHOWN HEREON PREPARED BY AMI CONSULTING, LLC, 759 FENWICK STREET, ALLENTON, PA.
6. IRRIGATION SYSTEM TO BE DESIGNED WITH FACILITIES FOR WINTERIZATION OF THE SYSTEM.

No.	Date	Revision	Revised By	Checked By

30 0 30 60
SCALE IN FEET

FPA FRENCH & PARRELLO ASSOCIATES
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FIELD 8 - IRRIGATION SYTEM PLAN

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

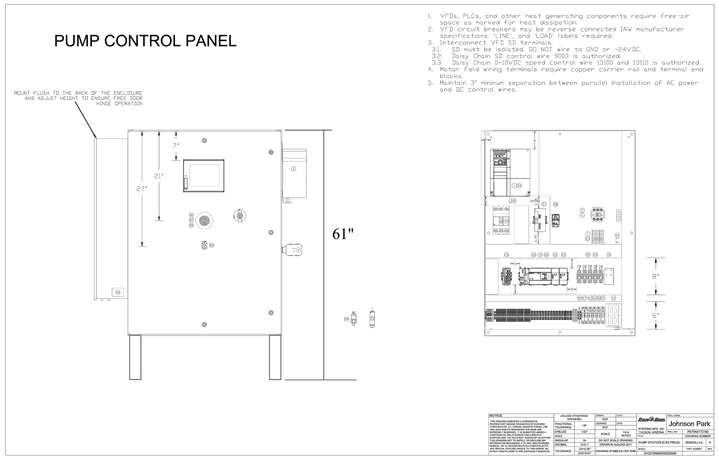
BLOCK 351 LOT 1

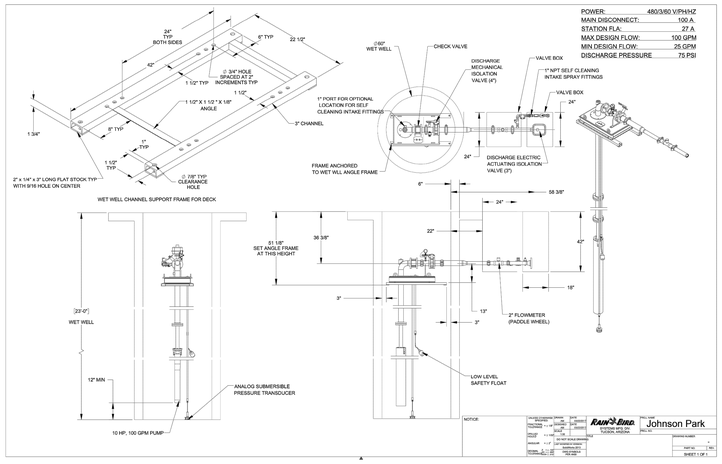
TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		9 of 12

O:\YEAR\16800\16801 - Byram Twp Park Improvements\16801.005 - CO Johnson - Field 8\CADD\DWG\16801-005-IRR1.dwg FIELD 8 - IRRIGATION PLAN

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Pump Station Details

Quantity	*Type*	*Description*
1	**10**	HP MOTOR Submersible main motor: IP68 enclosure, 2-Pole/3600RPM, 1.15SF, operating in accordance with NEMA MG-1 and MG-2
1	**150S100-5**	PUMP Vertical submersible main pump with stainless steel construction of vital pump components including: impellers, diffusers, shafts, vanes, cable guards, couplings, and hardware.

Control Options

Quantity / Type		Options
24V AC	Included	Pump Start Relay -
1		Paddlewheel Flowmeter Upgrade in lieu of flow switch, *includes PLC*
1		8.4 in. color touch screen with ethernet communication capability.
1		Lake level control circuit: Analog submersible transducer. Normal FILL mode and HIGH LEVEL DEWATERING output relay.
1		Rainbird MCA (Monitor -Control-Alert) Pre Installed communication hardware

System Details

Mechanical System

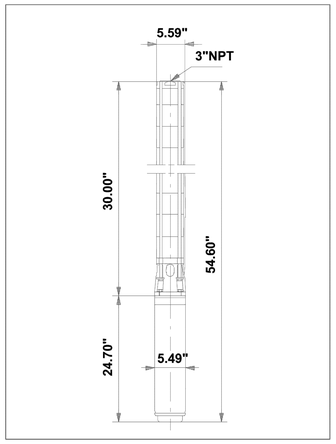
Description

. Variable Frequency Drive [VFD] (Manufactured by Mitsubishi)
. Programmable Logic Controller [PLC] (Manufactured by Mitsubishi)
. 8.4 Color Touch Screen operator interface
. Circuit breaker motor protection
. NEMA 4R electrical enclosure with air circulation fans for cooling
. 4 in. ANSI flanged Discharge station isolation valves
. Individual pump silent check valve and isolation valve
. Flow meter spool with paddle wheel flow meter and OPTO ISOLATOR
. Stainless steel pressure transducer
. Low water level safety float switch to protect against loss of prime
. Liquid filled suction and discharge pressure gauges

Control System

Description

. Automatic pressure ramp-up capability
. VFD fault shutdown
. Automatic system diagnostic utility
. Individual pump lighted HOA switch
. High pressure and low pressure alarms with dry run protection
. Main power line phase/volt monitoring
. Individual motor overload/thermal protection safeties
. Single phase and three phase surge protection safeties

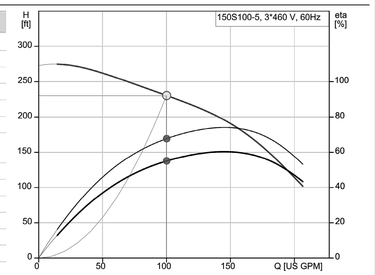


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Created by: Aqua Mist Irrigation
Phone: 201-488-2057
E-Mail: info@aqua-mist.net

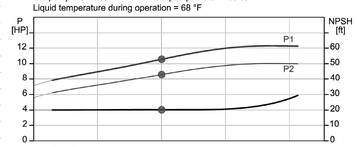
Johnson Park, Byram Twp

Date: 05-14-24

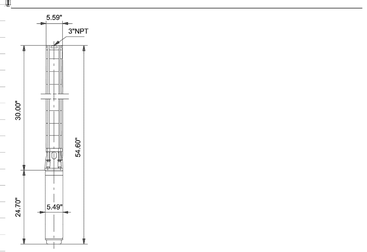
Description	Value
General information:	
Product name:	150S100-5
Product No:	13B63605
EAN number:	5700391427510
Price:	$ 8158
Technical:	
Pump speed on which pump data are based:	3450 rpm
Actual calculated flow:	100 US GPM
Rated flow:	159 US GPM
Resulting head of the pump:	230.3 ft
Rated head:	173.9 ft
Stages:	5
Number of reduced-diameter impellers:	NONE
Shaft seal for motor:	SIC/SICNBR
Approvals:	CULDWUS,CCSAUS
Approvals for drinking water:	PROP65
Curve tolerance:	ISO9906:2012 3B
Model:	B
Motor version:	T40
Return valve:	YES
Materials:	
Pump:	Stainless steel
Pump:	EN 1.4301
Pump:	AISI 304
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Motor:	Stainless steel
Motor:	DIN W.-Nr. 1.4301
Motor:	AISI 304
Installation:	
Maximum ambient pressure:	870.23 psi
Maximum operating pressure:	870.23 psi
Maximum outlet pressure:	123.28 psi
Type of connection:	NPT(F)
Size of connection:	3 inch
Motor diameter:	6 inch
Minimum borehole diameter:	5.71 in
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	5 .. 104 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor type:	MS6000
Motor flange design:	Grundfos
Rated power - P2:	10 HP
Power (P2) required by pump:	10 HP
KVA code:	G
Mains frequency:	60 Hz
Rated voltage:	3 x 440-460-480 V
Service factor:	1.15
Rated current:	17.4-16.8-16.6 A
Starting current:	410-440-470 %
Cos phi - power factor:	0.84-0.83-0.80
Rated speed:	3450-3470-3480 rpm

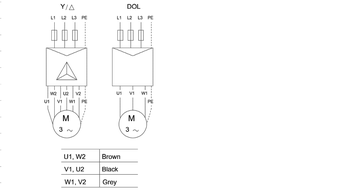


Q = 100 US GPM
Es = 1.313 Wh/gal
Pumped liquid = Water
Eta pump = 67.7 %
H = 230.3 ft
n = 3508 rpm
Density = 62.29 lb/ft³
Eta pump+motor = 55 %
Liquid temperature during operation = 68 °F

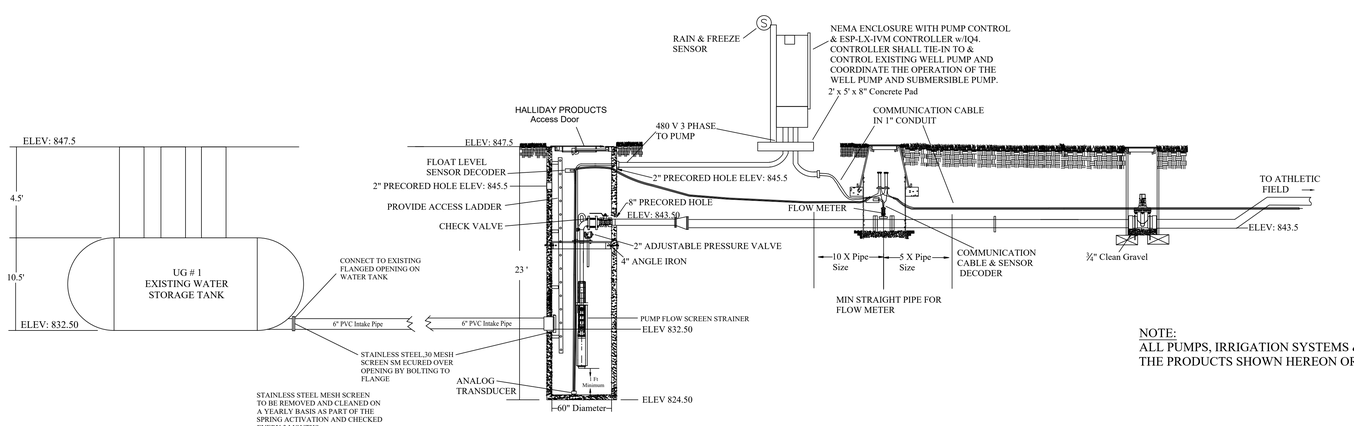


P1 = 7.888 kW
P2 = 8.6 HP
NPSH = 20.19 ft





U1, W2	Brown
V1, U2	Black
W1, V2	Grey



SUBMERSIBLE PUMP DETAIL
NOT TO SCALE

NOTE:
ALL PUMPS, IRRIGATION SYSTEMS & EQUIPMENT SHALL BE THE PRODUCTS SHOWN HEREON OR AN APPROVED EQUAL.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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PROFESSIONAL ENGINEER NJ LIC. NO. 46373

FIELD 8 - IRRIGATION PUMP SYSTEM DETAILS

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

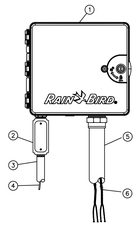
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		10 of 12

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G:\16801\16801\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-IRRI.dwg FIELD 8 – IRRIGATION PUMP SYSTEM DETAILS

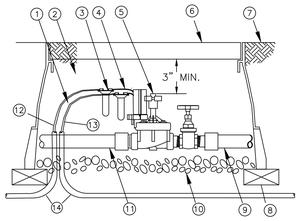


1. TWO-WIRE DECODER CONTROLLER: RAIN BIRD IQ ESP-LX-IVM SATELLITE TWO-WIRE DECODER CONTROLLER WITH IQ4 COMMUNICATION CARTRIDGE IN PLASTIC CABINET WITH WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS TO POWER SUPPLY
4. POWER SUPPLY WIRE
5. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
6. MAXICABLE TWO-WIRE PATH TO DECODERS USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH

NOTES:
1. IQ ESP-LXD CONTROLLER COMES WITH 240 STATIONS.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 5 OHMS OR LESS.
4. INSTALL IQ4 COMMUNICATION CARTRIDGE

IQ ESP-LX-IVM SATELLITE TWO-WIRE DECODER CONTROLLER WITH IQ CONNECTION MODULE AND IQ NCC RS232 CARTRIDGE IN PLASTIC CABINET

NOT TO SCALE



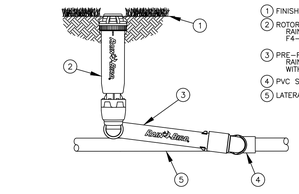
1. RAINBIRD MAXI COMMUNICATION CABLE
2. IVM-SOL
3. DBY WATER PROOF CONNECTION (1 OF 2)
4. SOLENOID WIRE (1 OF 2)
5. REMOTE CONTROL VALVE
6. VALVE BOX WITH COVER: 12-INCH SIZE
7. FINISH GRADE / TOP OF MULCH
8. BRICK (1 OF 4)
9. PVC MAINLINE PIPE
10. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
11. PVC LATERAL PIPE
12. TWO-WIRE CABLE FROM PRIOR DEVICE
13. COMMUNICATION WIRE TO NEXT DEVICE IVM-SOL, IVM-SEN, IVM-SD
14. 1" PVC CONDUIT

NOTES:

. PLACE 3-FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.

IVMPEB DC LATCHING SOLENOID CONNECTION TO VALVE

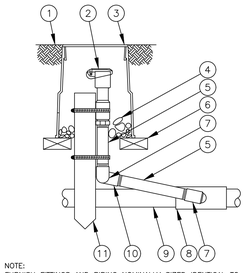
NOT TO SCALE



1. FINISH GRADE
2. ROTOR POP-UP SPRINKLER: RAIN BIRD FALCON 6504 F4-FC/PC-HS
3. PRE-FABRICATED SWING JOINT: RAIN BIRD TSJ-100-PRS WITH 70 PSI PRESSURE REGULATOR
4. PVC SCH 40 TEE OR ELL
5. LATERAL PIPE

ROTOR POP-UP SPRINKLER STAINLESS STEEL FALCON 6504

NOT TO SCALE

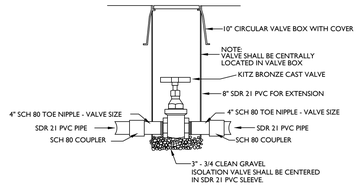


1. FINISH GRADE/TOP OF MULCH
2. QUICK-COUPLING VALVE: RAIN BIRD MODEL 5NP
3. VALVE BOX WITH COVER: RAIN BIRD VB-BRND
4. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
5. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
6. BRICK (1 OF 2)
7. PVC SCH 40 STREET ELL
8. PVC SCH 40 TEE OR ELL
9. PVC MAINLINE PIPE
10. PVC SCH 40 ELL
11. 2" x 2" REBAR STAKE WITH STAINLESS STEEL GEAR CLAMPS OR EQUIVALENT SUPPORT SYSTEM

NOTE:
FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

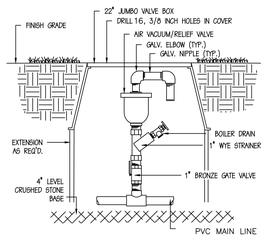
QUICK COUPLER VALVE MODEL 5RC SERIES

NOT TO SCALE



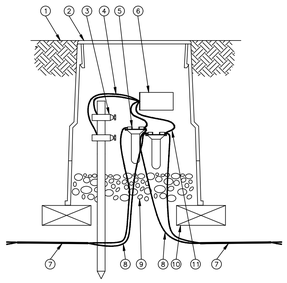
ISOLATION VALVE DETAIL

NOT TO SCALE



AIR-VACUUM RELIEF VALVE ASSEMBLY 8005

NOT TO SCALE

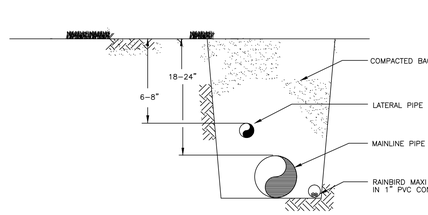


1. FINISH GRADE OR TOP OF MULCH
2. 10-INCH VALVE BOX WITH COVER: RAIN BIRD VB-10RND
3. GROUNDING ROD: 10 OHMS OR LESS
4. GREEN / YELLOW WIRE FROM IVM-SD GROUNDING ROD BRASS CLAMPS (1 OF 2)
5. DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC2S (1 OF 2)
6. LINE SURGE PROTECTOR: IVM - SD
7. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LX-IVM CONTROLLER
8. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR SDI INTERFACE UNIT)
9. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
10. BRICK (1 OF 2)
11. BLUE WIRE FROM LSP-1TURF TO DB SERIES WIRE CONNECTOR

NOTES:
1. IVM-SD SHALL BE INSTALLED EVERY 500 FEET OR EVERY 15 DEVICES, WHICHEVER IS SHORTER
2. IVM-SD SHALL BE INSTALLED AT THE END OF EVERY WIRE RUN

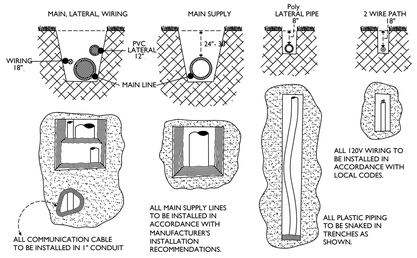
CONNECTING AN IVM-SD TO 2 WIRE PATH

NOT TO SCALE



TRENCH DETAIL

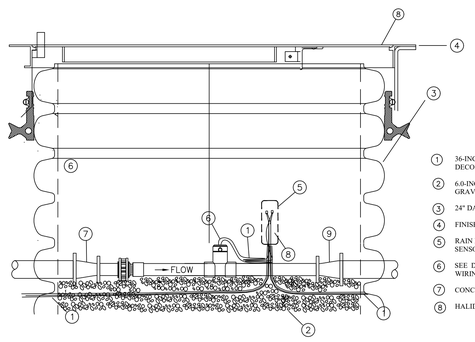
NOT TO SCALE



NOTE: ALL BURIAL DEPTHS AS PER WRITTEN SPECIFICATIONS AND ALL CODES.

TYPICAL TRENCHING DETAIL

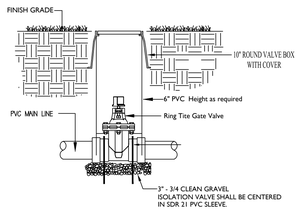
NOT TO SCALE



1. 36-INCH LENGTH OF MAXI CABLE TO SENSOR DECODER
2. 6.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
3. 24" DIAMETER ADS PIPE
4. FINISH GRADE
5. RAIN BIRD FS SERIES 150-400P/FS-100A FLOW SENSOR(S)
6. SEE DETAIL FOR SPLICE. SEE FLOW SENSOR WIRING DETAIL FOR WIRING DIAGRAM
7. CONCENTRIC REDUCER
8. HALIDAY 24" COVER

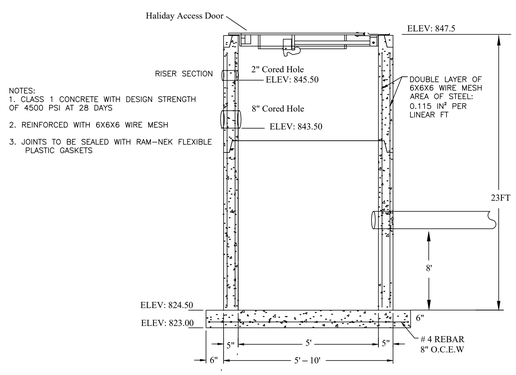
TEE MOUNTED FLOW SENSOR SATELLITE SYSTEM

NOT TO SCALE



4" & LARGER ISOLATION VALVE

NOT TO SCALE



NOTES:
1. CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS
2. REINFORCED WITH 6X6X6 WIRE MESH
3. JOINTS TO BE SEALED WITH RAM-NEK FLEXIBLE PLASTIC GASKETS

BASIN WET WELL DETAIL

NOT TO SCALE

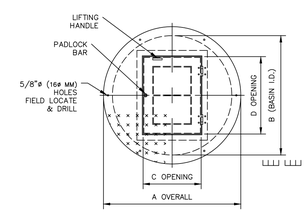
SERIES C1R ACCESS DOOR

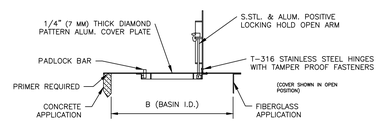
STANDARD FEATURES:

- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- NON-CORROSIVE PADLOCK LOCKING BAR
- VENT COUPLING ON REQUEST
- LARGER SIZES AVAILABLE FOR CONCRETE APPLICATIONS
- SINGLE LEAF CONSTRUCTION
- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- RECESSED HANDLE
- LIFETIME GUARANTE

HALLIDAY PRODUCTS
www.HalidayProducts.com
Phone 800-298-1027
Fax 407-298-4534
Sales@HalidayProducts.com

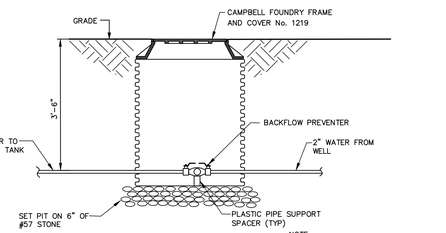
STANDARD SIZES						
QTY.	MODEL NO.	A DIM. INCHES (MM)	B DIM. INCHES (MM)	C DIM. INCHES (MM)	D DIM. INCHES (MM)	UNIT WT. LBS. (KG.)
	C1R64	64 (1626)	60 (1524)			125 (57)





WET WELL ACCESS DOOR DETAIL

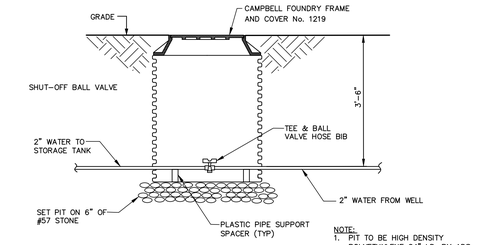
NOT TO SCALE



NOTE:
1. PIT TO BE HIGH DENSITY POLYETHYLENE 24" I.D. BY ADS OR APPROVED EQUAL

BACKFLOW PREVENTER PIT DETAIL

NOT TO SCALE



NOTE:
1. PIT TO BE HIGH DENSITY POLYETHYLENE 24" I.D. BY ADS OR APPROVED EQUAL

HOSE BIB PIT DETAIL

NOT TO SCALE

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DENIS F. KEENAN, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 46373

FIELD 8 - IRRIGATION SYSTEM DETAILS

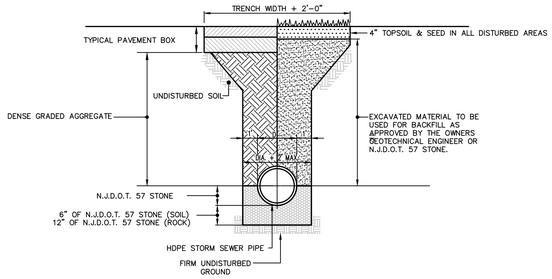
FOR
CO JOHNSON PARK - FIELD 8 IMPROVEMENTS
BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		11 of 12

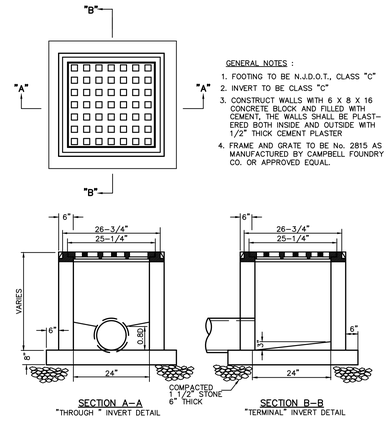
O:\16801\16801 - Byram Twp Park Improvements\16801.005 - CO Johnson - Field 8\CADD\DWG\16801-005-IRR1.dwg FIELD 8 - IRRIGATION DETAILS

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STORM SEWER TRENCH DETAIL

N.T.S.

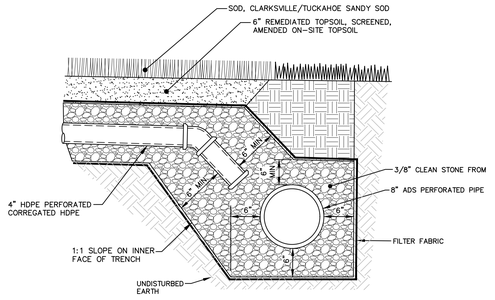


YARD INLET DETAIL

N.T.S.

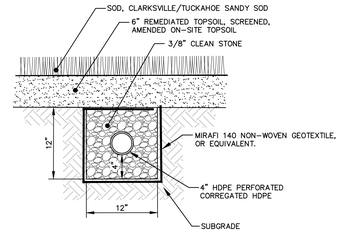
GENERAL NOTES :

1. FOOTING TO BE N.J.D.O.T., CLASS "C"
2. INVERT TO BE CLASS "C"
3. CONSTRUCT WALLS WITH 6 X 8 X 16 CONCRETE BLOCK AND FILLED WITH CEMENT, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
4. FRAME AND GRATE TO BE No. 2815 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.



8" PERFORATED STORM PIPE TRENCH DETAIL

N.T.S.



ENLARGED FIELD-SECTION

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PROFESSIONAL ENGINEER NJ. LIC. NO. 46373

FIELD 8 - CONSTRUCTION DETAILS

FOR

CO JOHNSON PARK - FIELD 8 IMPROVEMENTS

BLOCK 351 LOT 1

TOWNSHIP OF BYRAM
SUSSEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
7/12/2024	SKW	AS NOTED	16801.005
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK		12 of 12

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O:\16K\16800\16801 – Byram Twp Park Improvements\16801.005 – CO Johnson – Field 8\CADD\DWG\16801-005-CDI.dwg DETAILS 1