BOROUGH OF HIGHTSTOWN
PLANNING BOARD

156 Bank Street, Hightstown, NJ 08520
Phone: 609-490-5100 x617 Fax: 609-371-0267

PLANNING BOARD REGULAR MEETING AGENDA

Hightstown Firehouse

MONDAY, FEBRUARY 13, 2023 - 7:30 P.M.

PLEASE TURN OFF ALL CELL PHONES DURING YOUR ATTENDANCE AT THIS MEETING TO AVOID SOUNDS/RINGING OR CONVERSATIONS THAT MAY INTERFERE WITH THE RECORDING OR THE ABILITY OF ATTENDEES TO HEAR THE PROCEEDINGS. THANK YOU FOR YOUR COOPERATION.

Meeting called to order by Beverly Asselstine

STATEMENT: Adequate notice of this meeting has been given in accordance with the Open Public Meetings Act, pursuant to Public Law 1975, Chapter 231. Said notice was advertised in the Trenton Times and Windsor-Hights Herald as required by law and is posted on the Hightstown Borough website.

Flag Salute

Roll Call – Planning Board

Approval of Agenda

Approval of Minutes

- November 14, 2022 – Regular Virtual Meeting
- January 9, 2023 – Reorganization Meeting

Public Comment

Old Business

- Affordable Housing Plan
- Downtown Redevelopment Area
- Road Improvements to Orchard Avenue, Meadow Drive, Clover Lane & South Main Street
- Master Plan Reexamination

New Business

Committee and Professional Reports

Chairman and Board Member Comments

Adjourn

THE BOROUGH OF HIGHTSTOWN
PLANNING BOARD

REGULAR VIRTUAL MEETING MINUTES
MONDAY, NOVEMBER 14, 2022, 7:30 P.M.

OPEN SESSION

Bev Asselstine, Chairperson, called the meeting to order at 7:32 p.m. and read the Open Public Meetings Act statement: "Adequate notice of this meeting has been given in accordance with the Open Public Meetings Act, pursuant to Public Law 1975, Chapter 231. Said notice was sent to the Trenton Times and the Windsor-Hights Herald and is posted on the Borough's website. Due to Covid-19 and self-distancing protocols, this meeting was held remotely through www.zoom.com."

Flag Salute, led by Mr. Balcewicz

Roll Call – Planning Board

	PRESENT	ABSENT	LATE ARRIVAL
Mayor Quattrone	X		
Councilman Misiura	X		
Ms. Asselstine, Chair	X		
Ms. Jackson, Vice-Chair		X	
Mr. Laudenberger	X		
Mr. Searing	X		
Ms. Watkins	X		
Mr. Balcewicz, Alt. #1	X		
Mr. Cabot, Alt. #2		X	
Mr. Gainey	X		
Mr. Yandoli	X	X	

Also in attendance: Jane Davis – Planning Board Secretary, Alexis Smith – Attorney & Brian Slaugh – Planner, Carmela Roberts – Engineer, George Chin – Zoning Official, Sanjeev Puri – Applicant, Charles Stults – Architect, Lorali Totten – Planner/Engineer, Michael Butler – Applicant's Attorney, Nichole Lvov – Noticed resident, John Newman, CPG, Pavel. Michael Herbert – Attorney (late arrival)

Approval of Agenda

Ms. Asselstine asks for a motion to approve the Agenda with several amendments to reverse order of application hearings and replace Downtown Redevelopment Area Expansion with Stockton Street curbs & sidewalks.

Motion made by Mr. Balcewicz and seconded by Mr. Searing to approve the Agenda with revisions for the November 14, 2022 Planning Board meeting.

Roll Call Vote: Mayor Quattrone, Mr. Misiura, Ms. Asselstine, ~~Ms. Jackson~~, Mr. Laudenberger, Mr. Searing, Ms. Watkins, Mr. Balcewicz, ~~Mr. Cabot~~, Mr. Gainey & Mr. Yandoli. Ms. Jackson & Mr. Cabot were absent. Motion passed 9-0; 2 absences.

THE BOROUGH OF HIGHTSTOWN
PLANNING BOARD

REGULAR VIRTUAL MEETING MINUTES
MONDAY, NOVEMBER 14, 2022, 7:30 P.M.

Public Comment

There were no members of the public, Ms. Asselstine opens & closes public comment.

Resolution

2022-08 – Application #PB2022-03 – 220 / 220A Wilson Avenue – Mr. Balcewicz, Ms. Asslestine & Mr. Laudenberger request several typographical revisions be made prior to approval. With several revisions and clarification from Mr. Herbert, Ms. Asselstine asks for a motion to approve the resolution as amended.

Motion made by Mr. Misiura and seconded by Ms. Watkins.

Roll Call Vote: ~~Mayor Quattrone~~, Mr. Misiura, Ms. Asselstine, ~~Ms. Jackson~~, ~~Mr. Laudenberger~~, ~~Mr. Searing~~, Ms. Watkins, Mr. Balcewicz, ~~Mr. Cabot~~, Mr. Gainey & ~~Mr. Yandoli~~. Ms. Jackson & Mr. Cabot were absent. Motion passed 5-0; 4 abstentions; 2 absences.

Public Hearing

Application #2018-04 – Spring Point at Meadow Lakes – Extension request – Ms. Asselstine introduces the application for an extension and refers to the related Resolution from the original application. The applicant cites the pandemic as a reason that the project had not moved forward within the original time frame, thus needing an extension. The extension would be granted retroactively and through 2023.Ms. Asselstine asks for a motion to approve the extension.

Motion made by Mr. Laudenberger and seconded by Mr. Gainey to approve the extension request for Application 2018-04.

Roll Call Vote: Mayor Quattrone, Mr. Misiura, Ms. Asselstine, ~~Ms. Jackson~~, Mr. Laudenberger, Mr. Searing, Ms. Watkins, Mr. Balcewicz, ~~Mr. Cabot~~, Mr. Gainey & Mr. Yandoli. Ms. Jackson & Mr. Cabot were absent. Motion passed 9-0; 2 absences.

Application #2022-05 – The Peddie School – Use Variance for 301 East Ward St – Ms. Asselstine introduces the Application and defers to Ms. Smith for jurisdiction. Mayor Quattrone & Mr. Misiura recuse themselves due to the type of application being presented to the Board. Mr. Butler briefly explains the Exhibits to be presented and introduces the Applicant's witnesses, Mr. Puri, Mr. Stults and Ms. Totten. Ms. Smith swears in all of the Applicant's testifying parties. This application is proposing a two-family home requiring a D1 type variance or Use variance. Mr. Butler introduces Mr. Puri, the Peddie School's Chief Financial Officer. Mr. Puri gives a brief history of the Peddie School and describes the responsibilities of their faculty, which was the "primary driver for Peddie to buy this property at 301 East Ward Street in January 2022." The intent being that the property has two dwellings rather than one. Mr. Puri continues that it is the School's intention to "make one of the units to be ADA compliant". One of the member's of Peddie's faculty is disabled and the objective is for the unit to be accessible to them. Mr. Butler asks if one of the important goals of Peddie is to

make one of the units ADA compliant, not only for the school but for the future? Mr. Puri confirms that that is correct. They already have an ADA compliant unit on campus, and this will provide flexibility when the need arises. Mr. Butler asks for comments from the Board. Mr. Balcewicz asks who will be living in the units? Mr. Puri responds that himself & his family will be in one unit and the Science teacher will be moving into the ADA unit should the application be approved. Mr. Balcewicz goes on to ask if the property will remain on the tax roll. Mr. Puri confirms that it will remain on the tax roll and agrees to make it a condition of approval. Mr. Slaugh asks if this will be a rental to anyone other than faculty? Mr. Puri replies that it will not be rented out or occupied by anyone other than Peddie School faculty. Mr. Slaugh asks if the School is willing to make that a condition of approval. Mr. Puri agrees to make it a condition. Ms. Watkins asks what the intention of Peddie was when purchasing the residence? Mr. Puri replies that it was purchased with the intent to have 2 faculty families occupy it. Ms. Watkins asks if students will be going to the residence? Mr. Puri states that it would only be for special occasions or events like a holiday party. Mr. Butler clarifies that the intent is not for use as student housing or teaching purposes. Ms. Watkins voices her concern was mainly for student safety as the intersection at Ward Street & Maxwell Avenue can be challenging. Ms. Asselstine addresses this concern since the Borough has an active grant application to redesign that intersection and is part of the mobility plan as part of the Borough Master Plan. Further discussion ensues.

Mr. Butler goes on to introduce Ms. Totten who testifies as the Engineer for the Applicant. Ms. Totten elaborates on her credentials and that she has previously testified in front of the Board. The Board accepts her credentials. Ms. Totten goes on to present Exhibit A-1 (Aerial display dated 11/11/22). She explains some history of the property and that surrounding properties and the lot in question are much larger than the minimum required lot size. Ms. Totten presents Exhibit A-2 (Site Display dated 11/11/22). She explains that the existing driveway on the corner of East Ward Street and Maxwell Avenue will be removed, and a new driveway will be installed. There is currently an existing single water/sewer service and a second service will be added. The landscaping will remain, lighting will be standard residential lighting. The new layout will provide the ability to install the roundabout and lot coverage will decrease. No variance for bulk requirements are required, only a use variance. She confirms that the parking will meet Borough requirements.

Mr. Balcewicz states that there is a shed within the setback line. Ms. Totten agrees that it will be moved to comply so that no variance will be required.

Mr. Slaugh asks if a Right of Way (R.O.W.) dedication will be allowed for this. Ms. Roberts explain that we have plans with a grant application in process and asks for R.O.W. dedication as part of this potential approval. Mr. Butler introduces Mr. Stults as the Applicant's Architect and gives a brief background. Mr. Stults explains the drawings and presents Exhibit A-3 (Architectural sheet A1, first floor plan). It shows the existing residential 3-bedroom unit and the new proposed 3-bedroom unit with handicapped ramp. He also presents and explains Exhibits A-4 (sheet A1.1, new garage plans), Exhibit A-5 (sheet A2 second floor), Exhibit A-6 (sheet A3, exterior elevations) & Exhibit A-7 (sheet A4, exterior elevations). Mr. Searing asks for further explanation on the water/sewer & electrical service locations. Mr. Stults explains that the water/sewer location is yet to

be determined and the service panel may be upgraded, and Peddie maintenance would like to keep access to the maintenance room. Mr. Balcewicz inquires who will be responsible for the utility. Mr. Puri responds that the Peddie School pays for it. Mr. Balcewicz asks what type of wall is between the 2 units? Mr. Stults explains that it will be 6" studs with 2 layers of sheetrock on both sides of the fire rated wall. Mr. Balcewicz asks for a Fire department approval be listed as a condition.

Mr. Butler introduces Ms. Lorali Totten as the Applicant's planner. Ms. Totten introduces herself and presents Exhibit A-1 in support of the D1 variance. The existing building is to be converted into a 2 family "duplex". She testifies that this change promotes general welfare, removes parking in an intersection, complies with the appropriate density, has sufficient space for a residence, provides sufficient parking on site. The site itself if suited for 2 residences as the site is oversized at approximately three times bigger than required and is wider & deeper than other surrounding lots and is the only lot of this size in this particular neighborhood. She goes on to explain possible negative impacts no negligible nuisance and had no impact on the Master Plan. Ms. Totten then explains specials reasons to grant the variance; duplexes were granted on Armellino Court which is directly across from the property in question and the property has enough room for a subdivision. Ms. Totten closes with the statement that benefits in this case outweigh the detriments. Mr. Butler sites reasons to support the D variance as a, e, g, i + j as well as the fact that it will have no impact on the Master Plan.

Ms. Asselstine opens the discussion for comments. Mr. Chin, the Borough Zoning Official asks to consider a K-turn in the driveway so there is no need to back out onto East Ward Street. Ms. Asselstine agrees. Ms. Totten agrees & Mr. Butler states what there is enough room on the property. Mr. Slaugh says that the Board can consider if they want delineation with landscaping at the meeting point as it will reinforce the look of single-family residences. Ms. Totten & Mr. Butler see no reason why not to do so, so long as the windows aren't obstructed. Mr. Slaugh compliments Lorali on her testimony. He agrees with her analysis/testimony and it gives the Board plenty of things to consider.

Ms. Asselstine notes several things for the Board to take into consideration. The Board should look at the uniqueness of this property when considering this in comparison to other lots.

Mr. Laudenberger asks what will happen if Peddie sells the property?

Mr. Slaugh explains that since agreed to rent the property only to the faculty staff and any other owner would need to go before the board for additional approvals.

Ms. Watkins asks M. Slaugh to define "public benefit". Mr. Slaugh explains that it can't *only* benefit the applicant. He goes on to explain that the ADA unit is beneficial to general welfare since it is rare to find a compliant unit. Ms. Asselstine states that the mobility plan is a huge benefit of the R.O.W. dedication.

Ms. Davis shares Exhibit B-1 (Zoning comments from the Zoning Official).

There are no additional comments from the Board Attorney, Planner or Engineer.

Mr. Laudenberger asks why Peddie couldn't keep it as a single-family home? They respond that they think it would be too large for a single-family dwelling. Mr. Slaugh explains that faculty may have difficulty finding housing.

Mr. Butler explains that it's a larger structure to allow staff to be nearby & part of the community.

There are no additional Board member comments.

Ms. Asselstine opens public comments regarding Application PB2022-05.

Nichole L'Vov, 201 East Ward Street – Ms. L'Vov is sworn in by Ms. Smith and comments on a lot line discrepancy discovered during the purchase of her property in the area where the applicant proposes to build a garage. She also voices concern regarding any added noise from traffic or car doors slamming due to the proximity of the new garage and asks if any plans were made to remove the existing landscaping along the property line. She continues that she would prefer to remove the existing fence all together and keep the now mature trees as a buffer.

Mr. Butler assures the resident that nothing will be built across or too close to the shared property line. He also agrees that any repairs needed to be made to the fence or otherwise would be permitted should they need to access it from the neighboring property.

Ms. L'Vov agrees and appreciates that the Peddie School will make renovations to improve the now single family/business that is existing.

Being no further comments, Ms. Asselstine closes public comment period.

Ms. Asselstine & Ms. Smith reiterate the conditions discussed to be included in the approval. The property in question will not be removed from the Borough's tax rolls; the dwelling will not be available for rent now or in the future; only faculty or staff of the Peddie School will occupy the property or the Applicant would need to reapply to the Board; the existing shed will be set to the proper setback line; the Applicant will work with the Borough on a R.O.W. dedication as a part of this project for helping facilitate the municipal aid grant application for this intersection; the Applicant will work with the Borough and the Borough Engineer to split the water and sewer lines into two separate services; the property will maintain a separate electrical service for each unit; documentation of proper approvals will be made for the fire rated separation wall between the units; the driveway will be modified to provide K-turn capability on East Ward Street; landscaping will be provided "between" units to separate the façade in two units; and allow access for repairs and maintenance to any fencing or landscaping.

Mr. Balcewicz adds that he would like to see a positive statement from the fire department regarding access to the property as well as the firewall. Mr. Butler agrees.

Ms. Asselstine asks for a motion to approve the application for a use variance converting the dwelling into a two-family residence subject to the conditions discussed.

Motion made by Mr. Balcewicz and seconded by Mr. Laudenberger to approve Application PB2022-05 with conditions.

Roll Call Vote: ~~Mayor Quattrone~~, ~~Mr. Misiura~~, Ms. Asselstine, ~~Ms. Jackson~~, Mr. Laudenberger, Mr. Searing, Ms. Watkins, Mr. Balcewicz, ~~Mr. Cabot~~, Mr. Gainey & Mr. Yandoli. Mayor Quattrone & Mr. Misiura abstained; Ms. Jackson & Mr. Cabot were absent. Motion passed 9-0; 2 abstentions; 2 absences.

Old Business

Stockton Street Curb & Sidewalk Improvements – Mr. Misiura comments that he would like to see striping in all crosswalks surrounding the intersection at Stockton Street & Oak Lane. Mr. Balcewicz questions why there is no crosswalk on the West side of said intersection. Discussion ensues regarding the length of time and hours during which construction and a detour will be in effect. Mr. Balcewicz asks if a resident can opt out if you've recently replaced the sidewalk on your property. Ms. Roberts responds that residents may not opt out, there is no benefit to doing so and sidewalks must meet ADA standards. Mr. Balcewicz voices concerns with the construction cost distribution between East Windsor and Hightstown.

Affordable Housing Plan – Ms. Asselstine refers to Mr. Slaugh. He refers to and explains the Third Round Housing Element and Fair Share Plan DRAFT. The realistic opportunity to meet our municipal obligation through inclusionary development and identifying and rezoning areas in need of redevelopment. The next step is to accept the proposed draft list or discuss other locations. Discussion ensues. Mr. Misiura confirms that this report accurately depicts what was discussed and requests more time for the members of the Board to digest the information. Mr. Slaugh explains that this is a complete draft, once accepted there would be a need for rezoning, further discussion ensues about the process and timing of a public hearing to adopt and enforce the housing element. This item will be on the December Agenda for further discussion.

New Business

Committee and Professional Reports

Nothing additional to report.

Chairman and Board Member Comments

Ms. Asselstine discusses going back to in person meetings. There is discussion back and forth about going back in January and this topic will be discussed further at December's Planning Board Meeting.

There being no further business, Ms. Asselstine asks for a motion to adjourn. Motion made Mr. Laudenberger. All ayes. Meeting adjourned at 10:45 PM.

Submitted by:

Jane Davis, Planning Board Secretary

BOROUGH OF HIGHTSTOWN
PLANNING BOARD

REORGANIZATION MEETING MINUTES
MONDAY, JANUARY 9, 2023, 7:30 P.M.

OPEN SESSION

Bev Asselstine, Chairperson, called the meeting to order at 7:32 p.m. and read the Open Public Meetings Act statement: "Adequate notice of this meeting has been given in accordance with the Open Public Meetings Act, pursuant to Public Law 1975, Chapter 231. Said notice was sent to the Trenton Times and the Windsor-Hights Herald as required by law and is posted on the Hightstown Borough website."

Flag Salute

Oath of Office

Ms. Asselstine welcomes everybody and swears Mayor Bluth into the Planning Board. Mayor Bluth. Mayor Bluth swears in all new and returning members, Mr. Musing, Mr. Montferrat, Mr. Morgan & Mr. Cabot, simultaneously.

Roll Call

Present: Mayor Bluth, Ms. Asselstine, Mr. Laudenberger, Mr. Montferrat, Mr. Morgan, Mr, Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz, Mr. Cabot

Absent: Mr. Gainey

Also in attendance: Jane Davis, Board Secretary; Michael Herbert, Board Attorney; Carmela Roberts, Board Engineer; Elaine Clisham, Board Planner.

Approval of Agenda

Ms. Asselstine asks for a motion to approve the Agenda as revised prior to the meeting which included the removal removing an item from Old Business.

Moved by Mr. Cabot and seconded by Mr. Laudenberger.

Roll Call Vote: Mayor Bluth, Ms. Asselstine, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mr. Gainey was absent.

Agenda Approved 10-0 with 1 absence.

Mr. Montferrat comments that the Agenda needs to be revised to include Nominations of Officials - Chairperson & Vice Chairperson. Ms. Asselstine concurs and the Agenda is voted on again to include Nomination of Officers.

Moved by Mr. Montferrat and seconded by Ms. Watkins.

Roll Call Vote: Mayor Bluth, Ms. Asselstine, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mr. Gainey was absent.

Agenda Approved 10-0 with 1 absence.

Approval of Minutes

December 12, 2022 – Ms. Asselstine reviews some minor revisions she & Ms. Davis discussed prior to the meeting.

Moved by Mr. Balcewicz and seconded by Ms. Watkins.

Roll Call Vote: Ms. Asselstine, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mayor Bluth, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan & Mr. Musing abstained; Mr. Gainey was absent.

Minutes Approved 5-0 with 5 abstentions & 1 absence.

Public Comment

There were no members of the public in attendance, Ms. Asselstine opens & closes public comment.

Resolutions

The Board reviews all resolutions and

2023-01 – Meeting Schedule 2023 – Mr. Balcewicz comments on the professional's ability to attend meetings that fall on days outside of the typical Monday schedule. There is further discussion, and no revisions are made to the Resolution.

2023-05 – Planning Board Attorney – Mr. Balcewicz comments that the wording of the 2023 fee schedule should match the resolution description. Discussion ensues and the revisions are noted.

Motion made to approve all reorganization resolutions (2023-01 through 2023-06) as discussed, by Mr. Laudenberger and seconded by Mr. Balcewicz.

Roll Call Vote: Mayor Bluth, Ms. Asselstine, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mr. Gainey was absent.

Resolutions 10-0 with 1 absence.

Resolution 2023-01

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

APPROVING THE PLANNING BOARD MEETING SCHEDULE FOR THE YEAR 2023

BE IT RESOLVED by the Planning Board of the Borough of Hightstown that the meetings of the Planning Board for 2023 and for the first meeting in 2024 will begin at 7:30 p.m. and will be held at the Hightstown Firehouse at 140 North Main Street, Hightstown, on the following dates.

2023 SCHEDULED MEETING DATES

MONDAY	February 13
MONDAY	March 13
MONDAY	April 10
MONDAY	May 8
MONDAY	June 12
MONDAY	July 10
MONDAY	August 14
MONDAY	September 11

TUESDAY	October 10
MONDAY	November 13
MONDAY	December 11

2024 REORGANIZATION MEETING

MONDAY	January 8

All relevant documents for scheduled meetings will be made available prior to the meeting at www.hightstownborough.com and in-person by appointment only at 156 Bank Street, Hightstown.

Resolution 2023-02

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

DESIGNATING OFFICIAL NEWSPAPERS

BE IT RESOLVED by the Planning Board of the Borough of Hightstown that the ***Trenton Times*** and ***Cranbury Press Windsor-Hights Herald*** are hereby designated as the official newspapers for the year 2023.

Resolution 2023-03

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

APPOINTING PLANNING BOARD SECRETARY

WHEREAS, there exists a need for a Planning Board Secretary for the Borough of Hightstown Planning Board; and

WHEREAS, it is the desire of the Planning Board to appoint Jane Davis to this position; and

NOW, THEREFORE, BE IT RESOLVED by the Planning Board of the Borough of Hightstown, as follows:

1. Jane Davis is hereby appointed as Planning Board Secretary for the year 2023 at the rate of $24.72 per hour.
2. A copy of this Resolution shall be placed on file with the Borough Clerk.
3. A notice of this action shall be published once in an official newspaper of the Borough as required by law.
4. This Resolution is contingent upon the provision of funding in the Borough's 2023 budget, where funds are being made available.

Resolution 2023-04

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

APPOINTING PLANNING BOARD ENGINEER

WHEREAS, there exists a need for engineering services for the Planning Board of the Borough of Hightstown, and

WHEREAS, Carmela Roberts, Roberts Engineering Group, LLC has served in the previous years as both the Borough Engineer and the Planning Board Engineer, and

WHEREAS, the Planning Board desires the continued services of Ms. Roberts for the 2023 year as the Planning Board Engineer as stated in her "Hourly Fee Schedule" previously approved by Borough Council.

WHEREAS, this contract is awarded as a "non-fair and open contract" pursuant to and in accordance with the Local Unit Pay-to-Play Law.

NOW, THEREFORE, BE IT RESOLVED by the Planning Board of the Borough of Hightstown, as follows:

1. Carmela Roberts is hereby appointed Planning Board Engineer for the 2023 year.
2. A copy of this Resolution shall be placed on file with the Borough Clerk.
3. A notice of this action shall be published once in an official newspaper of the Borough as required by law.

4. This Resolution is contingent upon the provision of funding in the Borough's 2023 budget, where funds are being made available.

Resolution 2023-05

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

APPOINTING AND AUTHORIZING AN AGREEMENT FOR PROFESSIONAL LEGAL SERVICES – PARKER MCCAY P.A.

WHEREAS, there exists the need for specialized legal services for the Planning Board during 2023; and

WHEREAS, it is the desire of Planning Board to appoint **Michael W. Herbert, Parker McCay P.A., Hamilton, New Jersey**, as Planning Board Attorney for the year 2023; and

WHEREAS, the cost for the proposed services shall be as stated in the "2023 Professional Services Agreement" as approved by the Planning Board; and

WHEREAS, funds for this purpose will be made available in the 2023 budget; and,

WHEREAS, the anticipated term of this contract is for the 2023 calendar year, and it may only be renewed upon further action of the Planning Board; and

WHEREAS, this contract is awarded as a "fair and open contract" pursuant to and in accordance with the Local Unit Pay-to-Play Law.

NOW, THEREFORE, BE AND IT IS HEREBY RESOLVED, by the Planning Board of the Borough of Hightstown that the Planning Board Chairman is authorized to execute and the Planning Board Secretary to attest an agreement between the Borough of Hightstown and Parker McCay P.A., for professional legal services for the year 2023.

NOW, THEREFORE, BE IT RESOLVED by the Planning Board of the Borough of Hightstown, as follows:

1. The Chairman and Secretary are hereby authorized and directed to execute an Agreement with Michael W. Herbert, Esq., Parker McCay P.A., 3840 Quakerbridge Road, Suite 200, Hamilton, New Jersey 08619.

2. This Contract is awarded without competitive bidding as a "Professional Service" under the provisions of the Local Public Contracts Law, (N.J.S.A. 40A:11-5(a)) as a contract for services to be performed by a person authorized by law to practice a recognized profession that is regulated by law.

3. A copy of this Resolution and Contract shall be placed on file in the Office of the Borough Clerk.

4. Notice of Adoption of this Resolution should be published in an official Borough newspaper.

2023 PROFESSIONAL SERVICES AGREEMENT

Legal Services – Planning Board

THIS AGREEMENT, made this 9th day of January 2023, by and between the Planning Board of the Borough of Hightstown, County of Mercer, State of New Jersey, hereinafter referred to as the Planning Board, and Michael W. Herbert, Esq., Parker McCay P.A., 3840 Quakerbridge Road, Suite 200, Hamilton, New Jersey 08619; and

WHEREAS, the Planning Board requires the services of an Attorney at Law of New Jersey to serve in the capacity of Planning Board Attorney; and

WHEREAS, the Planning Board has authorized the appointment of Michael W. Herbert, Esq., Parker McCay P.A., 3840 Quakerbridge Rd, Suite 200, Hamilton, New Jersey 08619, to serve as Planning Board Attorney during the Calendar Year 2023, as memorialized by adoption of Resolution 2023-05.

NOW, THERFORE, BE IT HEREBY AGREED by the Planning Board and the Attorney that the Attorney will perform legal services for the Board and the Board will compensate the Attorney for such legal services as follows:

1.	Attorneys	$185.00 per hour
2.	Paralegals/Law Clerks	$100.00 per hour
3.	Meeting Attendance	1-hour minimum

IN WITNESS WHEREOF, the Board and the Attorney have executed this Agreement as of the date first above written.

Resolution 2023-06

BOROUGH OF HIGHTSTOWN PLANNING BOARD
COUNTY OF MERCER, STATE OF NEW JERSEY

APPOINTING AND AUTHORIZING AN AGREEMENT FOR PROFESSIONAL PLANNING SERVICES –BRIAN M. SLAUGH

WHEREAS, there exists the need for specialized planning services for the Planning Board during 2023; and

WHEREAS, it is the desire of Planning Board to appoint Brian M. Slaugh, PP, AICP of the firm Clarke Caton Hintz, 100 Barrack Street, Trenton, New Jersey, as Planning Board Planner for the year 2023; and

WHEREAS, funds for this purpose will be made available in the 2023 budget; and,

WHEREAS, the anticipated term of this contract is for one (1) year, and it may only be renewed upon further action of the Planning Board; and

WHEREAS, this contract is awarded as a "non fair and open contract" pursuant to and in accordance with the Local Unit Pay-to-Play Law.

NOW, THEREFORE, BE IT RESOLVED by the Planning Board of the Borough of Hightstown, as follows:

1. Brian M. Slaugh is hereby appointed Planning Board Planner for the 2023 year.
2. A copy of this Resolution shall be placed on file with the Borough Clerk.
3. A notice of this action shall be published once in an official newspaper of the Borough as required by law.
4. This Resolution is contingent upon the provision of funding in the Borough's 2023 budget, where funds are being made available.

Motion made to approve all reorganization resolutions (2023-01 through 2023-06) as discussed by Mr. Laudenberger and seconded by Mr. Balcewicz.

Roll Call Vote: Mayor Bluth, Ms. Asselstine, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mr. Gainey was absent.

Resolutions 10-0 with 1 absence.

Public Comment

There were no members of the public in attendance, Ms. Asselstine opens & closes public comment.

Nominate Officers

Chairperson – Ms. Asselstine opens the floor to nominations for Chairperson of the Planning Board for the year of 2023.

Mr. Cabot nominates Ms. Asselstine, seconded by Ms. Watkins. Mr. Balcewicz moves to close nominations.

Roll Call Vote: Mayor Bluth, Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Ms. Asselstine abstained; Mr. Gainey was absent.

Chairperson Agenda Approved 9-0 with 1 abstention & 1 absence.

Vice Chairperson – Ms. Asselstine opens nominations for Vice-Chairperson of the Planning Board for the year of 2023.

Ms. Watkins nominates Mr. Laudenberger, seconded by Ms. Asselstine and closes nominations.

Roll Call Vote: Mayor Bluth, Ms. Asselstine; Mr. Laudenberger, Councilmember Montferrat, Mr. Morgan, Mr. Musing, Ms. Watkins, Mr. Yandoli, Mr. Balcewicz & Mr. Cabot voted yes; Mr. Laudenberger abstained; Mr. Gainey was absent.

Agenda Approved 9-0 with 1 abstention & 1 absence.

Subcommittee Appointments

Ms. Asselstine suggests forming a subcommittee for the Master Plan which is set to be reexamined in 2024 after giving an overview of the goals for the next couple of years . She also suggests that the Affordable Housing subcommittee moves to an ad hoc committee and continue to maintain an ad hoc Ordinance Committee.

Architectural Review Committee – John Laudenberger, Jane Davis & George Chin will continue as needed, and Mr. Gainey will be asked if he'd like to continue as a part of this committee.

Cannabis Subcommittee – John Laudenberger, Beth Watkins & Joe Balcewicz will continue.

Master Plan Subcommittee – Ms. Asselstine & Mr. Yandoli volunteer.

Mr. Balcewicz discusses last background of the previous reexaminations. Ms. Asselstine suggests that a bottoms up Master Plan Reexamination be considered due to the extended time period since the last complete reexamination and how much has changed since then. Mr. Balcewicz asks if the Board is required to do a complete reexamination in lieu of the committee writing a draft to be reviewed by the professionals. There is further discussion. Mr. Herbert explains that there isn't a requirement to start new, but just a reexamination. The Master Plan serves as a guide not a rule, but it can be used, for example, when looking at a use variance or other variance application.

Historical Preservation Commission – Mr. Cabot will continue. And notes that they are looking for a new Chair.

Environmental Commission – Mr. Laudenberger will continue.

Old Business

Affordable Housing Plan – Ms. Asselstine introduces Ms. Clisham, to discuss the Affordable housing DRAFT dated January 9, 2022. Ms. Clisham confirms that the only comments received from Ms. Asselstine have been addressed. Ms. She goes on to explain additional background of Affordable Housing, locations being rezoned and the need to annually appoint an affordable housing municipal liaison. Discussion ensues regarding the timeline for the hearing and adoption process. The goal is to have a draft of the Appendices in February, present it to Council in March and hold the hearing at the April Planning Board meeting. Mr. Balcewicz asks about the possibility of imposing Affordable housing requirements on the Rug Mill property. Mr. Laudenberger inquires if anyone is interested in looking at the existing Hightstown Housing Authority as a part of the affordable housing requirements since the 105 units would cover the entire obligation. There is discussion that no such documentation to prove that it meets the obligation exists. Ms. Asselstine thinks that it is worth investigating further for the next round of obligations.

New Business

No new business

Committee and Professional Reports

Ms. Roberts – Announces that there will be lighted pedestrian activated crosswalk signal at Stockton Street & Oak Lane and Broad Street & Franklin Street intersections.

Mr. Yandoli inquires if anything is being done about the intersection at Mercer Street & West Ward Street.

Chairman and Board Member Comments

Mr. Balcewicz comments on the Planning Boards ability to produce minutes in an efficient manner, typically at the next meeting. He also asks for supporting meeting materials documents to be forwarded to the Board in a timely manner.

There being no further business, Ms. Asselstine asks for a motion to adjourn. Motion made Councilmember Montferrat. All ayes. Meeting adjourned at 8:40 PM.

Respectively Submitted by:

Jane Davis, Planning Board Secretary

DRAFT

Preliminary Investigation of An Area in Need of Redevelopment

Main Street Redevelopment Sub-Area 3Expansion

Block 28, Lots 48 - 55

Hightstown Borough, Mercer County, New Jersey

_____, 2023

Prepared by:

Clarke Caton Hintz | 100 Barrack Street | Trenton, New Jersey | 08608

Preliminary Investigation of an Area in Need of Redevelopment

First Expansion of Sub-Area 3 of the Main Street Redevelopment Area

Block 28, Lots 48 - 55

Hightstown Borough, Mercer County, New Jersey

Adopted pursuant to N.J.S.A. 40A:12A-1, *The New Jersey Local Redevelopment and Housing Law,* as a Preliminary Investigation by the Planning Board on _____, 2023.

Implemented by the Borough Council by Resolution _____, adopted on _____, 2023.

Prepared for Hightstown Borough by

Clarke Caton Hintz, P.C.

Brian M. Slaugh, PP, AICP
Principal-in-Charge
NJPP License 3743

A signed and sealed original is on file in the Office of the Planning Board Secretary

Planning Board Members

Beverly Asselstine, *Chair*

Susan Bluth, *Mayor*

Fred Montferrat, *Council Member*

Dimitri Musing, *Class 2*

Nathaniel Gainey, *Class IV*

John Laudenberger, III, *Class IV*

Matthew Morgan, *Class IV*

Beth Watkins, *Class IV*

Chris Yandoli, *Class IV*

Joseph F. Balcewicz, *Alt. 1*

Raymond Cabot, *Alt. 2*

Staff

Planning Board Staff

Jane Davis, *Board Secretary*

Michael Herbert, Esq., *Board Attorney*

Carmela Roberts, PE, CME, *Borough and Board Engineer*

Brian Slaugh, PP, AICP, *Borough and Board Planner*

Clarke Caton Hintz

Brian Slaugh, PP, AICP, *Principal in Charge*

Donna Miller, PP, AICP, CFM

Melissa McMullen, AICP

Christian Kuhn, LLA, ASLA

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INTRODUCTION AND EXECUTIVE SUMMARY

The Borough Council of Hightstown first directed the Planning Board on March 21, 2023 to conduct a study to determine whether the area known as Block 28, Lots 48-55, qualified as an *Area in Need of Condemnation Redevelopment*. This action was memorialized in Resolution 2023-69, adopted pursuant to the criteria established at *N.J.S.A.* 40A:12A-1 *et seq.*, known as the *"Local Redevelopment and Housing Law"* (LRHL). However at a later date, the Borough Council amended its directive to limit the study to only the status of non-condemnation in Resolution 2022-214, which was adopted on November 7, 2022. The two resolutions are found in Appendix A. This means that on further reflection, the Council as a whole determined that condemnation was not necessary to achieve the objectives that might be gained from a redevelopment designation of these properties in the Study Area. Legally, the power of eminent domain cannot be used in any area proposed for redevelopment via the study, otherwise known as the *Preliminary Investigation*.

Subsequent to the Borough Council resolution, the Planning Board directed the Borough Planner to undertake such a study that has resulted in this report. It provides an examination of the existing conditions of the study area, written descriptions and data analysis. The information gathered is compared to the criteria contained within the LRHL and, based on that comparison, a recommendation is made as to whether it should be formally identified as an Area in Need of Non-Condemnation Redevelopment (ANR).

The Study Area is being investigated as an expansion of Sub-Area 3 of the Main Street Redevelopment Area, which had previously been established by the Hightstown Borough Council in 2004. The Study Area is comprised of a series of lots located on the east side of Main Street (or S. Main Street) and west of Peddie Lake, directly south of the municipal parking lot at the new pedestrian bridge over the Rocky Brook at the outfall of the lake. The municipal parking lot and park are located on Block 28, Lots 56-57, comprising 0.74 acres.

The following table lists the key for the study area map on page 3, the owner's name, address of the property, block and lots, and spatial area that comprise the study area.

NJ LHRL:
Redevelopment Process

- Borough Council directs the Planning Board to undertake a preliminary investigation to determine whether or not an identified area requires redevelopment.
- Planning Board conducts an investigation and holds a public hearing on the proposed redevelopment-area designation.
- Based on the Planning Board's recommendation, Borough Council may designate all or some of the study area as an "area in need of redevelopment".
- The Borough Council either prepares a redevelopment plan for the area, or directs the Planning Board to prepare the plan.
- The Borough Council adopts the redevelopment plan.
- The Borough Council or other public agency / authority is designated as the "redevelopment entity" to oversee the implementation of the redevelopment plan.
- The redevelopment entity selects a redeveloper(s) to undertake a project(s) that implements the plan.

Table 1. Tax Parcels in the Study Area.

Map Key	Owner	Address	Block	Lot(s)	Acreage
1	First Baptist Church	131-133 S. Main St.	28	48	0.09
		125 S. Main St.		49	2.05
2	TG Acquisitions, LLC	105 Main St.	28	51, 52, 53	1.33
3	Lakeside 101, LLC	101-103 Main St.	28	54	0.25
		99 Main St.		55	0.13

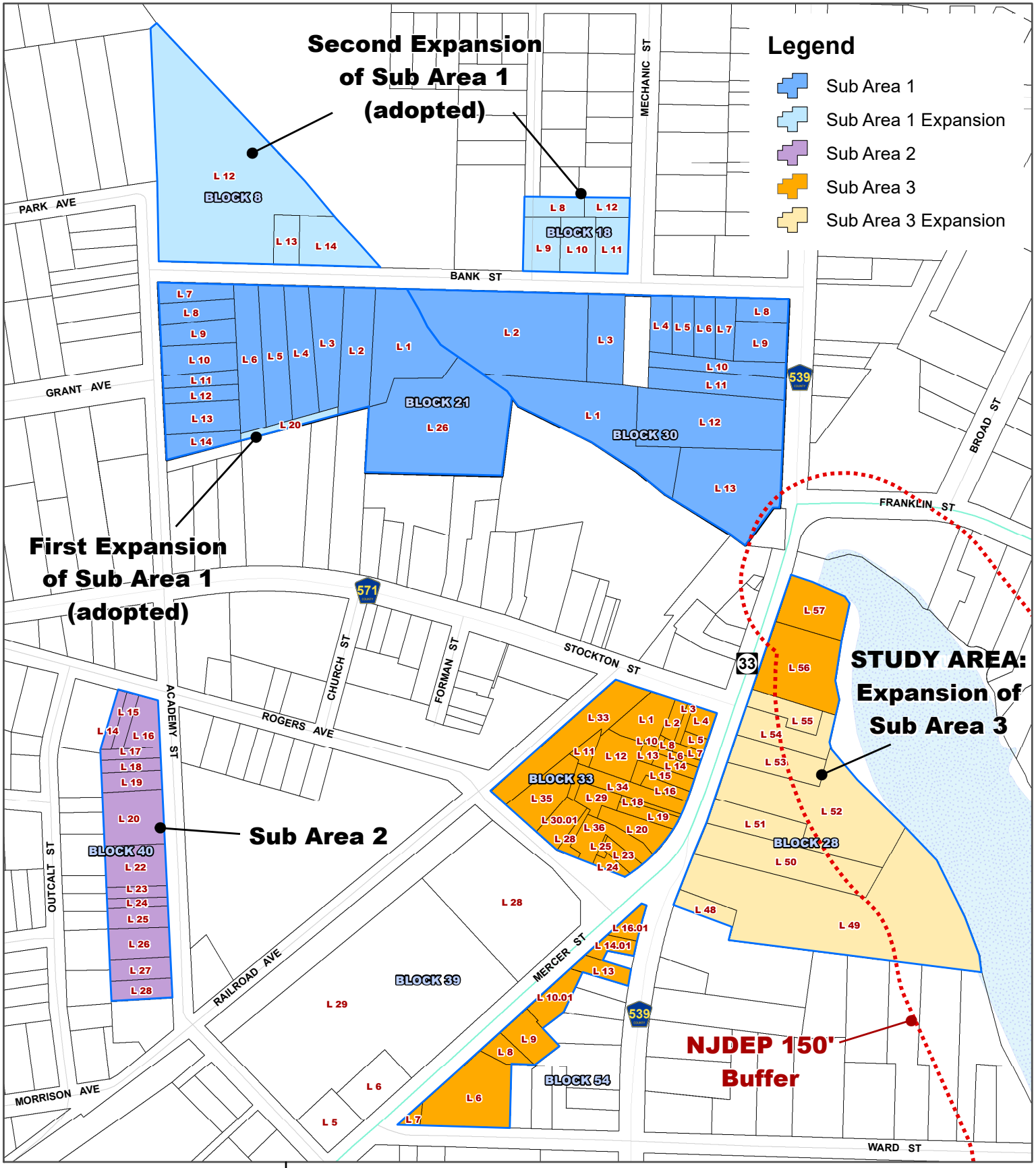
In total the expansion of the Phase III Main Street study area equals **3.85 acres**.

STATUTORY AUTHORITY AND PROCESS

Under the LHRL, municipalities are empowered to determine whether an area is in need of redevelopment, to adopt a redevelopment plan, and to implement and carry out redevelopment projects by following the statutorily defined process set forth in the LHRL (*see sidebar*, prior page). This process may result in the adoption of a redevelopment plan, which is a new set of development concepts, land use and potentially specific development regulations, along with the ability to offer enhanced fiscal tools that may act as incentives to prospective redevelopers. Ultimately, it is a means to lay the groundwork for redevelopment that benefits both the public and private interests.

STUDY AREA DESCRIPTION

The Main Street Redevelopment Area established in 2004 was located in three distinction areas. Sub-Area 1 consisted of the land fronting on the south side of Bank Street between N. Academy and N. Main Streets. Which was later expanded to the north side of Bank Street in 2018. Sub-Area 2 was most of the west side of S. Academy Street between Rogers and Railroad Avenues. Sub-Area 3 includes the block bounded by Railroad and Rogers Avenues, Stockton Street, and Mercer/S. Main Street, as well as the aforementioned municipal parking lots on the east side of S. Main Street. Study Area is located on the south side of the existing Sub-Area 3 of the Main Street Redevelopment Area which presently consists of the municipal parking lots at the outfall of Peddie Lake. The Study Area examining the proposed redevelopment area expansion consists of the properties that make up the Tavern on the Lake eating and drinking establishment, the former Wells Fargo Bank and the First Baptist Church of Hightstown, as well as the public walkways along Peddie Lake. These sites occupy the land between Main Street and Peddie Lake and are the subject of the 2015 Vision Plan and Lakefront Improvements Amendment to the Borough's Master Plan.



Sub-Area 3 Redevelopment Area

Main Street Redevelopment Plan

LOCATION:
Hightstown Borough, Mercer County, NJ

DATE:
January 2023

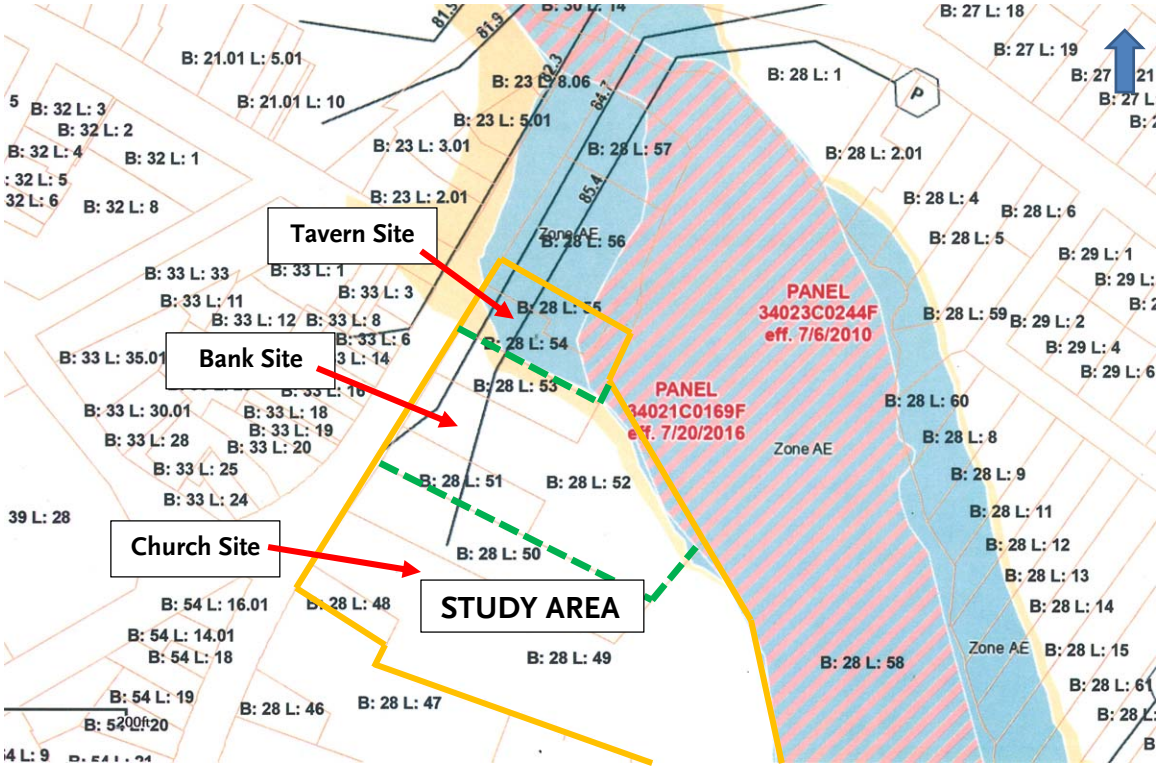
Clarke Caton Hintz
Architecture
Planning
Landscape Architecture

ENVIRONMENTAL CONSTRAINTS

The properties in the Study Area are affected by flood hazard areas and riparian buffers associated with Peddie Lake, which lies along its eastern edge. Additionally, a State endangered species habitat (the wood turtle) is identified along the lake and within the wooded areas adjacent to it. The First Baptist Church's property, which is mostly undeveloped along the lake front, cannot be effectively developed within 150 feet of the edge of the lake, which is the riparian buffer depth. Since Tavern on the Lake and the former Wells Fargo Bank properties have significant impervious surfaces in the riparian buffer area, permitting with NJDEP is expected to focus on reducing imperious surface areas but not to prevent the redevelopment of the property. A 150-foot wide riparian buffer line has been introduced on the Main Street Redevelopment Plan exhibit preceding this page.

Below are the flood hazard areas from the NJ GeoWeb on-line resource which depicts the Floodway as striped in blue and pink, the Flood Hazard Area (100-year flood hazard) in blue and the 500-year flood hazard in tan.

FLOOD HAZARD AREAS IN STUDY AREA



As can be seen, Lots 54 and 55, which comprise the Tavern on the Lake property, are almost entirely located in the 100-year flood hazard area and the rear loading area is in the more hazardous floodway zone. Conversely, only small portions of the former Wells Fargo property

and the First Baptist Church lots are affected by the flood hazard designations. These delineations are approximate and would need to be verified by site-specific surveying and calculations.

2015 VISION PLAN AND LAKEFRONT IMPROVEMENTS AMENDMENT

The main purpose of the redevelopment designation is to facilitate the municipality's vision for the Peddie Lake waterfront in the core of the downtown retail area. This was articulated in the 2015 Vision Plan and Lakefront Improvements Amendment to the Master Plan and followed from the 2014 Master Amendment and Reexamination Report. The report established this goal for the Study Area:

> "*Preserve, protect and enhance Peddie Lake, its environs and open space corridors as valuable natural resources within the central downtown business district. Ultimately removing the parking lot from Memorial Park would be an improvement to Peddie Lake and the downtown as a whole. Businesses that abut the lake and take advantage of the wonderful view should help maintain an enjoyable environment along the lake edge for the public at large; it's in their best interest that this area remain desirable.*" (2014 Re-Examination Report, p. 13)

The goal is based on making the downtown a destination for people that live outside of Hightstown because the population base is too small to support the night time vibrancy desired as a policy objective. An illustrative concept plan was developed to convey these ideas in graphic form, which is depicted below:

The environmental constraints and the preliminary investigation of the conditions in the Study Area will require modification of some of the concepts originally envisioned for the redevelopment of Sub-Area 3, which will be addressed in a subsequent Redevelopment Plan.

REDEVELOPMENT DEFINED

Redevelopment is defined in the LHRL as:

> *Clearance, replanning [sic], development and redevelopment; the conservation and rehabilitation of any structure or improvement, the construction and provision for construction of residential, commercial, industrial, public or other structures and the grant or dedication of spaces as may be appropriate or necessary in the interest of the general welfare for streets, parks, playgrounds, or other public purposes, including recreational and other facilities incidental or appurtenant thereto, in accordance with a redevelopment plan. [N.J.S.A. 40A:12A-3]*

APPLICATION OF REDEVELOPMENT CRITERIA TO THE STUDY AREA

Criteria set forth in the LRHL at *N.J.S.A.* 40A:12A-5 provides the basis for the determination of an Area in Need of Redevelopment. Although there are a variety of factors that could apply to particular properties in a study area, an area qualifies as being in need of redevelopment if it meets at least one of the eight statutory criteria, listed in the sidebar to the right and the following page. These criteria are commonly identified by the letter (a-h) corresponding to the paragraphs of Section 5 of the LRHL. They relate to the impact of a particular area on public health, safety and welfare, primarily through conditions of deterioration, obsolescence, vacancy, title, ownership, destruction by fire or natural disaster and long-standing unimproved conditions not amenable to private sector

Redevelopment Criteria "a" through "d" (*N.J.S.A.* 40A:12A-5)

a. The generality of buildings is substandard, unsafe, unsanitary, dilapidated, or obsolescent, or possess any of such characteristics, or are so lacking in light, air, or space, as to be conducive to unwholesome living or working conditions.

b. The discontinuance of the use of a building or buildings previously used for commercial, retail, shopping malls or plazas, office parks, manufacturing, or industrial purposes; the abandonment of such building or buildings; significant vacancies of such building or buildings for at least two consecutive years; or the same being allowed to fall into so great a state of disrepair as to be untenantable [sic].

c. Land that is owned by the municipality, the county, a local housing authority, redevelopment agency, or redevelopment entity, or unimproved land that has remained so for a period of ten years prior to adoption of the resolution, and that by reason of its location, remoteness, lack of means of access to developed sections or portions of the municipality, or topography, or nature of the soil, is not likely to be developed through the instrumentality of private capital.

d. Areas with buildings or improvements which, by reason of dilapidation, obsolescence, overcrowding, faulty arrangement or design, lack of ventilation, light and sanitary facilities, excessive land coverage, deleterious land use or obsolete layout, or any combination of these or other factors, are detrimental to the safety, health, morals, or welfare of the community.

investment. The absence of any use of the land and an area's relationship to an Urban Enterprise Zone or "smart growth" regions are also addressed in the criteria.

Some lots within the Study Area exhibit conditions that meet a number of the statutory criteria as described below:

CRITERION "B"

Criterion "b" was amended in 2019 to address the lingering effects of the Great Recession and the growing obsolescence of shopping centers and office or industrial parks in New Jersey to lend themselves to easier repurposing for new uses. Arguably this has led to the "warehousing" of New Jersey at least in built up areas.

Block 28, Lots 51-53, which constitute the former Wells Fargo Bank property, has been vacant for more than two years. The building was originally constructed as bank in the 1920's, judging from the architecture of the front façade, and was significantly added onto in the rear sometime in the last 30 years, including the addition of drive-thru lanes. However, the advent of on-line banking, direct deposit of payroll into employees' accounts, and the rise of non-bank financial companies and products has led to a much lower demand for bricks and mortar banks. Since the branch closed more than two years ago, it meets the eligibility Criterion "b".

Criterion "b" does not apply to either the First Baptist Church or to the Tavern on the Lake.

Redevelopment Criteria "e" through "h" (*N.J.S.A.* 40A:12A-5)

e. A growing lack or total lack of proper utilization of areas caused by the condition of the title, diverse ownership of the real properties therein or other similar conditions which impede land assemblage or discourage the undertaking of improvements, resulting in a stagnant and unproductive condition of land potentially useful and valuable for contributing to and serving the public health, safety and welfare, which condition is presumed to be having a negative social or economic impact or otherwise being detrimental to the safety, health, morals, or welfare of the surrounding area or the community in general.

f. Areas, in excess of five contiguous acres, whereon buildings or improvements have been destroyed, consumed by fire, demolished or altered by the action of storm, fire, cyclone, tornado, earthquake or other casualty in such a way that the aggregate assessed value of the area has been materially depreciated.

g. In any municipality in which an enterprise zone has been designated pursuant to the "New Jersey Urban Enterprise Zones Act," P.L. 1983, c.303 (C.52:27H-60 et seq.) *(subject to limited redevelopment powers*)

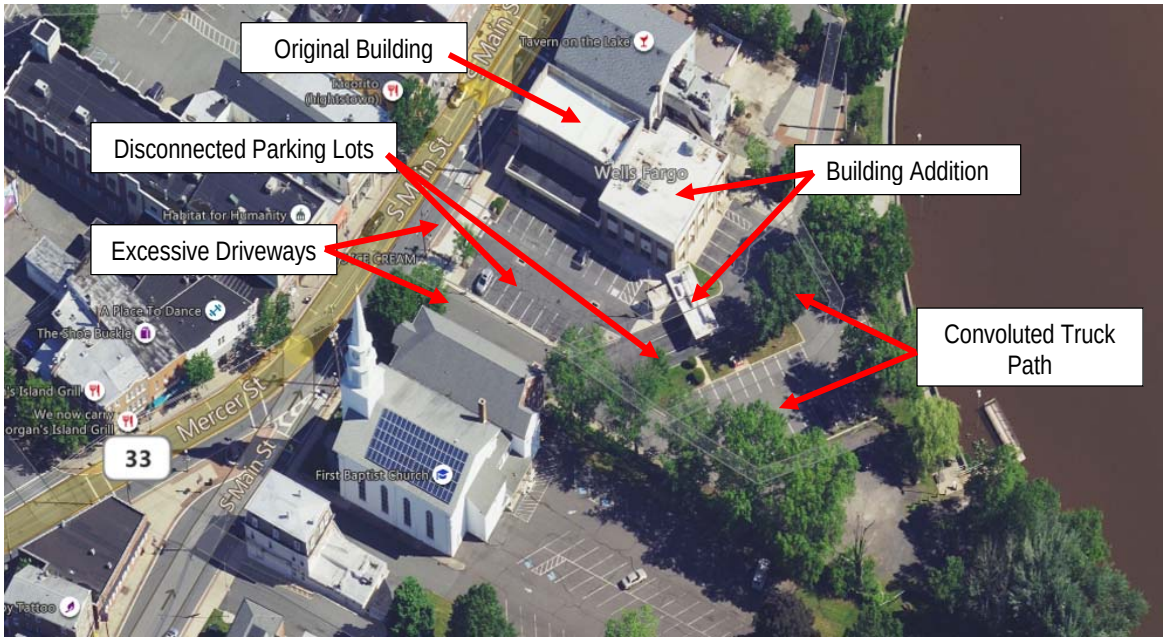
h. The designation of the delineated area is consistent with smart growth planning principles adopted pursuant to law or regulation.

CRITERION "D"

A portion of Block 28 specifically meets the "d" criterion since, "*Areas with buildings or improvements which, by reason of dilapidation, obsolescence, overcrowding, faulty arrangement or design, lack of ventilation, light and sanitary facilities, excessive land coverage, deleterious land use or obsolete layout, or any combination of these or other factors, are detrimental to the safety, health, morals, or welfare of the community.*"

The former Wells Fargo Bank property is a prime example of the growing obsolescence of this land use. As noted in the discussion in the section on Criterion "b", the necessity for bank branches has been lowered due to the rise of on-line banking, the development of new services from digital banking services, to new payment services, and non-bank financial transactions and financial products, including the lessened need for the use of physical cash in the economy. News reports indicated that 2,927 bank branches were closed in 2021 in the U.S. and that Wells Fargo had the largest number at 267[1]. In addition, projections of the number of physical bank branches indicate a steep decline to as few as 15,700 by 2030[2], compared to 72,166 FIDC bank branches operating at the end of 2021[3].

The property has been configured for use as a retail bank as can be seen in the photo below:



Recent Aerial of Study Area (Source: Bing Maps)

On the exterior, the layout of the parking lot has excessive lot coverage and a lack of vegetative cover immediately adjacent to a water body that harbors a threatened species, the wood turtle. The drive-thru lanes are at an approximate 45-degree angle to the main parking lot and there is no interconnection between them. It is common for customers with complex transactions or questions to be asked to stop inside the bank office itself. This arrangement would have required such customers to exit the bank property by vehicle to Main Street and then re-enter the property to the main parking lot to continue their business inside the bank. The original

[1] - https://www.cnbc.com/2022/01/21/banks-close-record-number-of-branches-in-2021-led-by-wells-fargo.html accessed January 9, 2023.
[2] - https://thefinancialbrand.com/news/banking-branch-transformation/research-bank-branches-closed-trend-challenger-online-109762/, accessed January 9, 2023
[3] - https://banks.data.fdic.gov/explore/historical, accessed January 9, 2023

design itself is faulty. While there is an opening in the curb as can be seen in the photograph below, this opening is not wide enough, nor designed for, vehicular travel. Most likely it is intended to allow for stormwater to pass through.

This picture also demonstrates the narrowness and lack of a bypass lane around the drive-thru facility. Bypass lanes allow for a driver to leave the facility after deciding to no longer use the drive thru, often after waiting for an extended period of time. Further, a bypass could also be used to permit the delivery of supplies to the bank or to the Tavern on the Lake. Instead, as the picture on the prior page attests, trucks must navigate several 90° degree turns through the rear parking lot to access the southern driveway to the bank property and exit the site. In general, truck traffic should not be routed through parking aisles. A different parking lot and drive thru design could have avoided these mistakes. These site layout problems add to the obsolete nature of the property and affect its potential for adaptive reuse of the building.

The site has excessive driveways and driveway widths onto S. Main Street. The main parking lot has a width of 40 feet for two-way traffic. The southern driveway, which provides access to the drive-thru area, rear parking area, and serves as the exit for delivery trucks and drivers using one of the exits from the municipal parking lot, is 29 feet. Typically, one driveway of 25 feet is required.

The building consisting of two readily discernible sections. The original bank building which appears to date from the 1920's and has a stone pilaster, cornerstone, base and pediment, with a buff colored brick infill, symmetrical and facing Main Street. While a single story space in the front, it has a two-story height, which was a common means of designing a building to look monumental and substantial, an ideal for bank buildings. The second part is an addition, which suggests it was constructed in the 1980's, mainly due to the use of smoked or colored glass, bronzed anodized aluminum storefront sash and strongly framed window openings. Inside a portion of the first floor of the original building was removed and supported by steel columns to hold a mezzanine on the second floor. It created an open office on the ground

floor past the lobby (see photographs next page). The rest of the building is a series of offices and conferences rooms, but on different levels upstairs because of the mismatch in floor heights between the original mezzanine and the addition. Accordingly, the building is not fully ADA accessible and it would be difficult from a design standard to adapt it to be so, setting aside the expense it would require.

Bank Lobby with Tennessee marble and Reduced Ceiling Height

Columns Obstruct Pedestrian Flow

Kitchenette on Second Floor at Different Level than Addition Level

Lastly, the mechanical systems are located in a partial basement area that is compartmentalized. Access to the systems is down narrow stairs and the existing systems must have been hand carried and assembled piecemeal. Whether modern systems could be placed in the same area under the same scenario is an open question.

Given the design, construction and layout of the building and the site there is little remedy to these problems short of wholly renovating the entire building or replacing the facility and reconstructing the site's environs. Consequently, both the site and the building exhibit substandard and obsolete characteristics sufficient to satisfy Criterion 'd'. Reuse of the property for banking purposes, with the significant contraction in the retail portion of this economic sector seems highly unlikely and without a redevelopment designation, the ability to attract a high quality redevelopment of the site to a new use in line with the Borough's vision will be in jeopardy. The alternative is for the site to sit vacant and become a deteriorating eyesore in the core area of the downtown, which will be a significant detriment to the entire Main Street Redevelopment Area.

Criterion "d" does not apply to either the First Baptist Church or the Tavern on the Lake sites.

CRITERION "H"

"Smart Growth" principles are embodied in the New Jersey State Development and Redevelopment Plan adopted on March 1, 2001 by the State Planning Commission pursuant to the State Planning Act (*N.J.S.A.* 52:18A-196 *et seq.*). Hightstown Borough has been a designated town center placed within Planning Area 2. Centers have been designated by the State Planning Commission as "Smart Growth Areas". Smart Growth Areas have been codified in the lending criteria for the NJ Housing Mortgage Finance Agency, infrastructure development by the Board of Public Utilities and in the expedited permit review allowed under the NJ Department of Environmental Protection in smart growth areas (*N.J.S.A.* 13:1D-144).

The State Plan contains policies that are related to redevelopment and this study. For example, Policy 1: Revitalize the State's Cities and Towns, recommends to, "Leverage private investments in jobs and housing."[4] Policy 3: Promote Economic Growth, Development and Renewal for All, suggests, "Retain and expand businesses, and encourage new, environmentally sustainable businesses in Centers and areas with infrastructure."[5] These policies can be implemented best through the redevelopment plan process.

The State Planning Commission recommends that the response to these policy objectives lies with:

> *Capitaliz[ing] on the opportunities for redevelopment in Centers afforded by redevelopment laws and brownfield redevelopment programs. Establish and maintain a publicly*

4 - NJ *State Development and Redevelopment Plan*, p. 25
5 - *ibid.* p. 51

accessible inventory of sites recommended for redevelopment.[6]

The designation of this Study Area as an area in need of redevelopment is consistent with the State Development and Redevelopment Plan's objectives.

The Office of Planning Advocacy, staff to the State Planning Commission, describes Smart Growth as follows:

> *Smart Growth is the term used to describe well-planned, well-managed growth that adds new homes and creates new jobs, while preserving open space, farmland, and environmental resources. Smart Growth supports livable neighborhoods with a variety of housing types, price ranges and multi-modal forms of transportation. Smart Growth is an approach to land-use planning that targets the State's resources and funding in ways that enhance the quality of life for residents in New Jersey. Smart Growth principles include mixed-use development, walkable town centers and neighborhoods, mass transit accessibility, sustainable economic and social development and preserved green space.*[7]

Redevelopment of this Study Area as well as the existing Sub-Area provides the opportunity to further the following smart growth principles: (1) future development directed to Centers with existing infrastructure; (2), creation of livable and walkable neighborhoods with a variety of housing types and price ranges; and (3), community and stakeholder collaboration in development decision making.

The designation of the Study Area to expand the boundaries of the Main Street Sub-Area 3 demonstrates that positive outcomes can occur from its redevelopment. These parcels can contribute in important ways to the larger redevelopment potential of other areas in downtown Hightstown. Consequently, the redevelopment will further the objectives of Smart Growth development, which is supported by many policies at the state and local level.

While Criterion "h" is not by itself sufficient to designate the Study Area as an Area in Need of Redevelopment, it provides a supporting role to the LRHL definition of a "redevelopment area" or an "area in need of redevelopment". Criterion "h" applies to all of the property in the Study Area.

RECOMMENDATION

This report and appendices constitutes the preparation of a preliminary investigation for determining an Area in Need of Non-Condemnation Redevelopment as directed by the Borough Council of Hightstown Borough. It is the conclusion of this preliminary investigation that three of the properties within the Study Area qualify under the criteria set forth at *N.J.S.A.* 40A:12A-1 *et seq.*, to be designated as an Area in Need of Non-Redevelopment, namely Lots 51,

6 - *ibid.* p. 194

7 - www.nj.gov/dca/osg/smart/index.shtml

52 and 53 in Block 28 on the tax assessment maps of the municipality. The Study Area satisfies criteria "b", "d" and "h" for a number of qualifying reasons and its necessary inclusion in the Main Street Redevelopment: Sub-Area 3 -Redevelopment Area, in order to ensure that the Borough's goals and objectives for redevelopment may be met.

SUBSEQUENT PROCEDURAL STEPS

PUBLIC HEARING

Upon receipt of this preliminary investigation, the Planning Board is required to hold a public hearing. Notices for the hearing are required to be published in the newspaper of record in the municipality once each week for two consecutive weeks, with the last publication no sooner than 10 days from the hearing. A copy of the notice is required to be mailed to the last owner of record of each property within the proposed Redevelopment Area. The newspaper notice must be published in the official newspaper of the municipality.

PLANNING BOARD RECOMMENDATION TO BOROUGH COUNCIL

Once the hearing has been completed, the Planning Board makes a recommendation to the Borough Council that the delineated area, or any part of such an area, should or should not be determined to be an Area in Need of Redevelopment. The Borough Council may then adopt a resolution determining that the delineated area, or portion, is a Redevelopment Area. Notice of such determination is then sent to each objector who has sent in a written objection and the Commissioner of the NJ Department of Community Affairs.

REDEVELOPMENT PLAN

If so designated by the Borough, the next action would be the addition of the parcel to the existing Bank Street Redevelopment Plan. An amendment to the Redevelopment Plan is adopted by ordinance by the Borough Council before any project is initiated. The Redevelopment Plan should be either substantially consistent with the municipal master plan or designed to effectuate the master plan.

Redevelopment Plan: *Required Elements* **(*N.J.S.A.* 40A:12A-7.a)**

- The plan's relationship to definite local objectives as to appropriate land uses, density of population, and improved traffic and public transportation, public utilities, recreational and community facilities and other public improvements.
- Proposed land uses and building requirements in the project area.
- Adequate provision for the temporary and permanent relocation, as necessary, of residents in the project area, including an estimate of the extent to which decent, safe and sanitary dwelling units affordable to displaced residents will be available to them in the existing local housing market.
- An identification of any property within the redevelopment area that is proposed to be acquired in accordance with the redevelopment plan.
- The relationship of the plan to the master plans of contiguous municipalities, the master plan of the county in which the municipality is located, and the State Development and Redevelopment Plan.
- Pursuant to *N.J.S.A.* 40A:12A-7.c., the Redevelopment Plan must also describe its relationship to pertinent municipal development regulations as defined in the "Municipal Land Use Law", *N.J.S.A.* 40:55D-1 *et seq.*

APPENDIX A: RESOLUTIONS 2022-069 AND 2022-214

Request for preliminary investigation to be undertaken by the Planning Board

Resolution 2022-69

BOROUGH OF HIGHTSTOWN
COUNTY OF MERCER
STATE OF NEW JERSEY

RESOLUTION OF THE BOROUGH OF HIGHTSTOWN, IN THE COUNTY OF MERCER, AUTHORIZING AND DIRECTING THE BOROUGH PLANNING BOARD TO DETERMINE WHETHER CERTAIN PROPERTY CONSTITUTES AN AREA IN NEED OF REDEVELOPMENT

WHEREAS, pursuant to the New Jersey Local Redevelopment and Housing Law, N.J.S.A. 40A:12A-1 *et seq.* (the "Redevelopment Law"), municipalities may undertake studies to determine whether certain properties should be designated as an "area in need of redevelopment"; and

WHEREAS, at the February 14, 2022 meeting of the Borough's Planning Board (the "Planning Board"), the Planning Board discussed the proposed Master Plan amendment Visioning for Downtown and Lakeside Improvements and Downtown Redevelopment Area, Phase 3; and

WHEREAS, among other things, the Planning Board noted that there is growing interest in developing other parts of the Borough's downtown area as progress is made in the redevelopment of the Rug Mill Redevelopment Area on the western side of Main Street; and

WHEREAS, based on that discussion, the Planning Board recommended that the Borough Council consider the expansion of the previously designated Downtown Redevelopment Area, Phase 3 to include additional lots on the eastern side of Main Street and the associated Peddie Lake Shoreline, including the parcels designated as Block 28, Lots 48 through 55 on the Borough's tax maps (collectively, the "Study Area"); and

WHEREAS, the Borough desires to authorize and direct the Planning Board to undertake a preliminary investigation to determine whether the Study Area meets criteria for designation as an area in need of redevelopment set forth in the Redevelopment Law; and

WHEREAS, if the Study Area is determined to meet the criteria for designation as an area in need of redevelopment and the Borough so designates the Study Area, then the Borough shall be authorized to use all the powers provided under the Redevelopment Law for use in a redevelopment area, including the power of eminent domain.

NOW, THEREFORE, BE AND IT IS HEREBY RESOLVED by the Mayor and Council of Borough of Hightstown, in the County of Mercer and the State of New Jersey, as follows:

Section 1. The aforementioned recitals are incorporated herein as though fully set forth at length.

Section 2. The Planning Board is authorized and directed to undertake a preliminary investigation and conduct a public hearing to determine whether the Study Area meets criteria necessary for designation as an area in need of redevelopment under the Redevelopment Law and, if the Study Area so qualifies, to recommend whether it should be so designated.

Section 3. In the event the governing body shall designate the Study Area as a redevelopment area, the Borough shall be authorized to use all the powers provided under the Redevelopment Law for use in a redevelopment area, including the power of eminent domain.

Section 4. A copy of this resolution shall be forwarded to the Secretary of the Planning Board for action consistent herewith.

Section 5. This resolution shall take effect immediately.

CERTIFICATION

I hereby certify the foregoing to be a true copy of a resolution adopted by the Borough Council at a meeting held on March 21, 2022.

Margaret Riggio
Borough Clerk

Resolution 2022-214

BOROUGH OF HIGHTSTOWN
COUNTY OF MERCER
STATE OF NEW JERSEY

AMENDING RESOLUTION 2022-069

WHEREAS, on March 21, 2022, Hightstown Borough Council adopted Resolution 2022-069 titled *Resolution of the Borough of Hightstown, in the County of Mercer, Authorizing and Directing the Borough Planning Board to Determine Whether Certain Property Constitutes and Area in Need of Redevelopment*; and

WHEREAS, Council wishes to amend Resolution 2022-069 to include non-condemnation language; and

WHEREAS, Resolution 2022-069 is amended to read as follows:

WHEREAS, pursuant to the New Jersey Local Redevelopment and Housing Law, N.J.S.A. 40A:12A-1 *et seq.* (the "Redevelopment Law"), municipalities may undertake studies to determine whether certain properties should be designated as an "area in need of redevelopment"; and

WHEREAS, at the February 14, 2022 meeting of the Borough's Planning Board (the "Planning Board"), the Planning Board discussed the proposed Master Plan amendment Visioning for Downtown and Lakeside Improvements and Downtown Redevelopment Area, Phase 3; and

WHEREAS, among other things, the Planning Board noted that there is growing interest in developing other parts of the Borough's downtown area as progress is made in the redevelopment of the Rug Mill Redevelopment Area on the western side of Main Street; and

WHEREAS, based on that discussion, the Planning Board recommended that the Borough Council consider the expansion of the previously designated Downtown Redevelopment Area, Phase 3 to include additional lots on the eastern side of Main Street and the associated Peddie Lake Shoreline, including the parcels designated as Block 28, Lots 48 through 55 on the Borough's tax maps (collectively, the "Study Area"); and

WHEREAS, the Borough desires to authorize and direct the Planning Board to undertake a preliminary investigation to determine whether the Study Area meets criteria for designation as an area in need of redevelopment set forth in the Redevelopment Law; and

WHEREAS, if the Study Area is determined to meet the criteria for designation as an area in need of redevelopment and the Borough so designates the Study Area, then the Borough shall be authorized to use all the powers provided under the Redevelopment Law for use in a redevelopment area, excepting the power of eminent domain.

NOW, THEREFORE, BE AND IT IS HEREBY RESOLVED by the Mayor and Council of Borough of Hightstown, in the County of Mercer and the State of New Jersey, as follows:

Section 1. The aforementioned recitals are incorporated herein as though fully set forth at length.

Section 2. The Planning Board is authorized and directed to undertake a preliminary investigation and conduct a public hearing to determine whether the Study Area meets criteria necessary for designation as an area in need of redevelopment under the Redevelopment Law and, if the Study Area so qualifies, to recommend whether it should be so designated.

Section 3. In the event the governing body shall designate the Study Area as a redevelopment area, the Borough shall be authorized to use all the powers provided under the Redevelopment Law for use in a redevelopment area, excepting the power of eminent domain.

Section 4. A copy of this resolution shall be forwarded to the Secretary of the Planning Board for action consistent herewith.

Section 5. This resolution shall take effect immediately.

CERTIFICATION

I hereby certify the foregoing to be a true copy of a resolution adopted by the Borough Council at a meeting held on November 7, 2022.

Margaret Riggio

Margaret Riggio
Borough Clerk

APPENDIX B: RESOLUTION 2023-___

Resolution of findings by the Planning Board and recommendation to Borough Council

APPENDIX C: RESOLUTION 2023-___

Resolution of the Borough Council on the recommendation of Planning Board and establishment of the redevelopment area.

Roberts
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Women Business Enterprise Certified

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February 2, 2023

Mayor and Council
Borough of Hightstown
156 Bank Street
Hightstown, New Jersey 08520

Planning Board
Borough of Hightstown
156 Bank Street
Hightstown, New Jersey 08520

Environmental Commission
Borough of Hightstown
156 Bank Street
Hightstown, New Jersey 08520

Complete Streets Committee
Borough of Hightstown
156 Bank Street
Hightstown, New Jersey 08520

Re: Improvements to Orchard Avenue, Meadow Drive,
Clover Lane, and South Main Street
Borough of Hightstown, Mercer County, New Jersey
Our File No.: H1804

Dear Mayor, Council, Planning Board, Environmental Commission, and Committee:

Enclosed with this letter, please find the following:

1. One (1) copy of an Engineer's Estimated dated February 1, 2023.

2. One (1) digital copy of a plan entitled, "Overall Road Improvements Plan, Improvements to Orchard Avenue, Meadow Drive, Clover Lane, and South Main Street, Borough of Hightstown, Mercer County, New Jersey, dated February 1, 2023."

3. One (1) digital copy of a set of plans entitled, "Improvements to Orchard Avenue, Meadow Drive, Clover Lane, and South Main Street, Borough of Hightstown, Mercer County, New Jersey, dated February 1, 2023." The set consists of 19 sheets.

   * Please note hard copies of the enclosed plan set can be provided upon request.

As you know, the Borough has received NJDOT funding in the amount of $500,000.00 for improvements to Orchard Avenue, Meadow Drive, Clover Lane, and South Main Street (C.R. 539). The requested grant amount was $1,165,000.00. Additionally, water and sewer costs were anticipated to require an additional $507,000 for a total estimated cost of $1,672,000. As a result, Council requested that the proposed sidewalk be eliminated from Orchard Avenue, Meadow Drive, and Clover Lane in an effort to reduce costs by approximately $170,000.

The enclosed Engineer's Estimate shows an approximate construction cost of $1,360,753. Of the total $1,360,753, $951,453 is for capital improvements and $409,300 is for water and sewer improvements. We reduced the estimated capital costs by approximately $215,000 and further reduced water/sewer costs by approximately $100,000 for a total cost savings of approximately $315,000 in keeping with Council's direction.

The proposed improvements on Orchard Avenue, Meadow Drive and Clover Lane include limited sidewalk improvements to deteriorated existing sidewalk, replacement of deteriorated curb, replacement of existing orangeburg sanitary laterals, replacement of a portion of water main which has had a number of recent breaks, stormwater improvements, pavement base repairs, milling and paving, and other incidentals.

The proposed improvements at South Main Street will include curb and sidewalk in order to provide a continuous pedestrian access route to the Borough limits. The proposed curb is to be 8”x9”x18” concrete vertical curb in accordance with County requirements.

The plans will be submitted to the Mercer County Engineer and the Mercer County Soil Conservation District for review and approval prior to advertisement.

Additionally, the bid documents will be submitted to the NJDOT and NJ Infrastructure Bank for review and approval by the funding agencies prior to advertisement for bid.

We anticipate advertisement of the contract in late Summer 2023 or early Fall 2023.

Please review the enclosed plans and provide comment no later than March 15, 2023.

I am available to review with at your respective meetings if requested.

Very truly yours,

Carmela Roberts, P.E., C.M.E.
Borough Engineer

cc: Dimitri Musing, Borough Administrator
Peggy Riggio, RMC, CMR, Borough Clerk
Ken Lewis, Borough Superintendent of Public Works
Bill Searing, Borough Superintendent of AWWTP
Chief Frank Gendron, Borough Police Department
George Lang, Borough CFO
Cameron Corini, PE, CME, Roberts Engineering Group, LLC
Kelly Pham, EIT, Roberts Engineering Group, LLC

Roberts
ENGINEERING GROUP LLC
Women Business Enterprise Certified

1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

ENGINEER'S ESTIMATE
IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE AND SOUTH MAIN STREET

SITUATED IN

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

Our File No.: H1804

February 1, 2023

ITEM	DESCRIPTION	UNITS	QUANTITY	PRICE	TOTAL
1	Mobilization	LS	1	$30,000.00	$30,000.00
2	Clearing Site	LS	1	$20,000.00	$20,000.00
3	Project Video (Non-State Participating)	LS	1	$500.00	$500.00
4	Traffic Director, Flagger	HOUR	200	$75.00	$15,000.00
5	Uniform Traffic Director (Non-State Participating)	HOUR	500	$140.00	$70,000.00
6	Traffic Cones	UNIT	25	$15.00	$375.00
7	Drums	UNIT	15	$25.00	$375.00
8	Breakaway Barricade	UNIT	9	$100.00	$900.00
9	Construction Sign 'B' (60"x30")	UNIT	3	$250.00	$750.00
10	Construction Sign 'C' (72"x60")	UNIT	3	$350.00	$1,050.00
11	Tree Removal, Over 6" to 12" Diameter	UNIT	3	$1,000.00	$3,000.00
12	Tree Planting, 2" Cal.	UNIT	10	$1,000.00	$10,000.00
13	Inlet Filter, Type 2	UNIT	18	$150.00	$2,700.00
14	Repair of Structure, Inlet	UNIT	13	$750.00	$9,750.00
15	Manhole Frame and Cover, Storm	UNIT	1	$750.00	$750.00
16	Bicycle Safe Frame and Grate, Type B	UNIT	6	$750.00	$4,500.00
17	8" Type 'N' Eco Curb Piece	UNIT	18	$750.00	$13,500.00
18	Trench Drain with Frame and Grate	UNIT	1	$2,500.00	$2,500.00
19	Manhole Frame and Cover, Sanitary (Non-State Participating)	UNIT	12	$750.00	$9,000.00
20	Connect to Existing Manhole	UNIT	2	$550.00	$1,100.00
21	Concrete Encasement	LF	90	$50.00	$4,500.00
22	8" DIP Sanitary Sewer Main	LF	90	$200.00	$18,000.00
23	6" PVC Sanitary Lateral (Non-State Participating)	LF	1,744	$150.00	$261,600.00
24	PVC Cleanout, Sanitary (Non-State Participating)	UNIT	68	$750.00	$51,000.00
25	Doghouse Manhole with Frame and Cover, Sanitary Sewer (Non-State Participating)	UNIT	2	$3,500.00	$7,000.00
26	Transfer Existing Water Service (Non-State Participating)	UNIT	2	$1,500.00	$3,000.00
27	6" DIP Water Main (Non-State Participating)	LF	140	$150.00	$21,000.00
28	Fire Hydrant Assembly, Complete (Non-State Participating)	UNIT	1	$10,000.00	$10,000.00
29	6" Cap (Non-State Participating)	UNIT	4	$400.00	$1,600.00
30	6" Gate Valve (Non-State Participating)	UNIT	1	$1,500.00	$1,500.00
31	6" Insertion Valve (Non-State Participating)	UNIT	1	$10,000.00	$10,000.00
32	6"x6" Tee (Non-State Participating)	UNIT	2	$5,000.00	$10,000.00
33	Remove and Reset Stone Steps	SY	3	$250.00	$750.00
34	Remove and Reset Decorative River Stone	SY	11	$100.00	$1,100.00
35	Remove and Reset Brick Sidewalk	SY	5	$100.00	$500.00
36	Hot Mix Asphalt Driveway, 2" Thick	SY	379	$100.00	$37,900.00
37	Concrete Sidewalk, 4" Thick	SY	481	$80.00	$38,480.00

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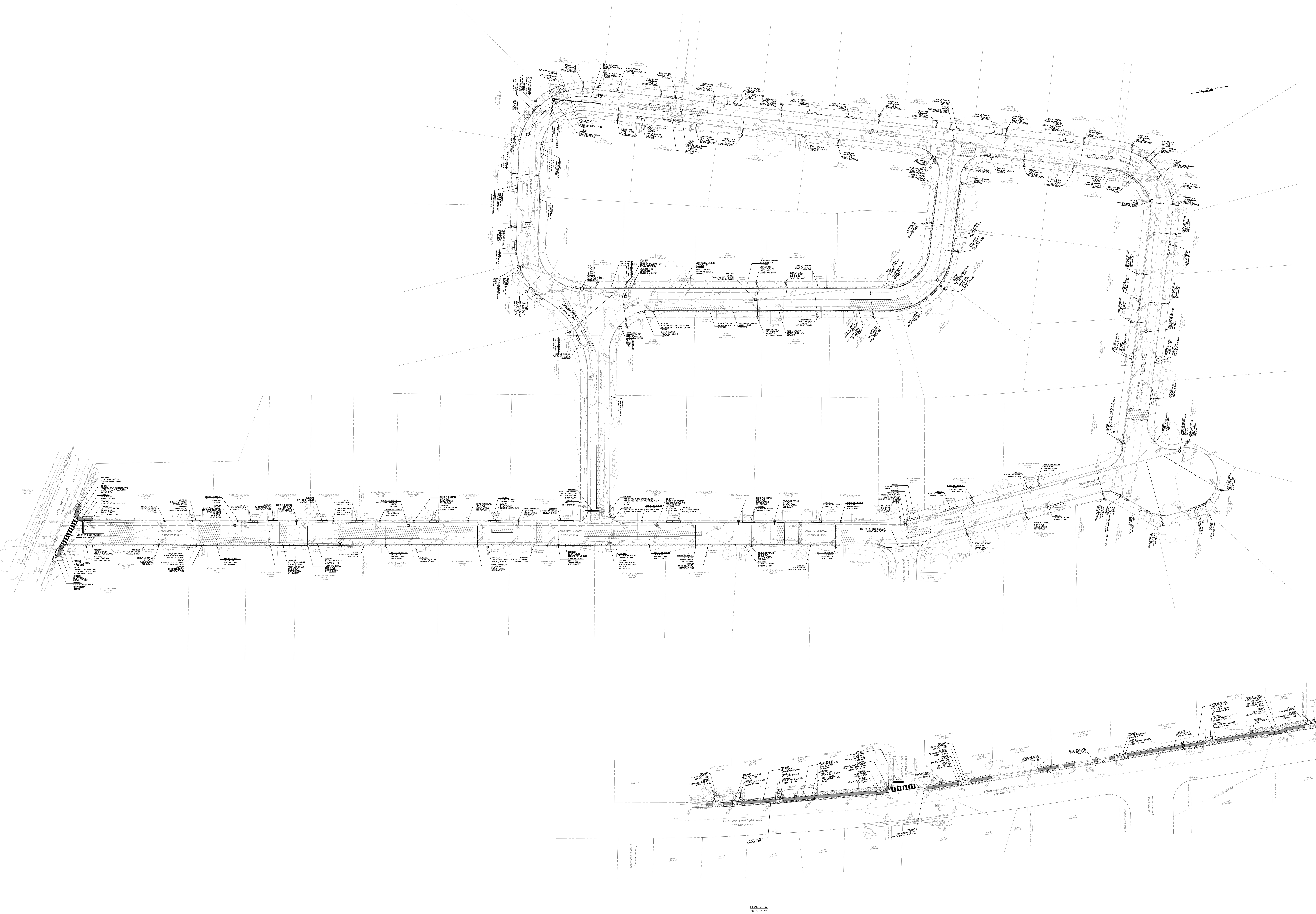
ENGINEER'S ESTIMATE
IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE AND SOUTH MAIN STREET
SITUATED IN
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

Our File No.: H1804
February 1, 2023

ITEM	DESCRIPTION	UNITS	QUANTITY	PRICE	TOTAL
38	Stone Driveway	SY	20	$80.00	$1,600.00
39	Reinforced Concrete Sidewalk, 6" Thick	SY	142	$95.00	$13,490.00
40	Detectable Warning Surface	SY	3	$450.00	$1,350.00
41	Concrete Steps	UNIT	1	$1,000.00	$1,000.00
42	6"x8"x16" Concrete Vertical Curb	LF	3,810	$35.00	$133,350.00
43	8"x9"x18" Concrete Vertical Curb	LF	586	$40.00	$23,440.00
44	HMA Milling, 3" or Less	SY	16,615	$5.00	$83,075.00
45	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick	TON	2,515	$100.00	$251,500.00
46	Hot Mix Asphalt 9.5M64 Leveling Course, Variable Thickness	TON	400	$100.00	$40,000.00
47	Tack Coat	GAL	1,690	$1.00	$1,690.00
48	HMA Pavement Repair	SY	1,595	$50.00	$79,750.00
49	Dense Graded Aggregate, If & Where Directed	CY	50	$25.00	$1,250.00
50	1 1/2" Clean Stone, If & Where Directed	CY	50	$25.00	$1,250.00
51	Regulatory Sign, R1-1 'Stop', 30"x30"	UNIT	4	$350.00	$1,400.00
52	Regulatory Sign, R2-1 'Speed Limit', 24"x30"	UNIT	1	$350.00	$350.00
53	Regulatory Sign, R7-3 'No Parking', 30"X24", with Sign Post	UNIT	1	$350.00	$350.00
54	Warning Sign, W15-2 'Watch Children', 36"x36"x36"	UNIT	2	$350.00	$700.00
55	Street Sign	UNIT	12	$350.00	$4,200.00
56	Traffic Marking, 24" Wide White	LF	195	$20.00	$3,900.00
57	Traffic Marking, 8" Wide White	LF	164	$7.00	$1,148.00
58	Traffic Marking, 4" Wide Yellow	LF	120	$5.00	$600.00
59	Fertilizing and Seeding, Type A-3	SY	1,020	$4.00	$4,080.00
60	Topsoiling, 5" Thick	SY	1,020	$5.00	$5,100.00
61	Fuel Price Adjustment	DOLLAR	5,000	$1.00	$5,000.00
62	Asphalt Price Adjustment	DOLLAR	7,500	$1.00	$7,500.00
63	Allowance	DOLLAR	20,000	$1.00	$20,000.00
TOTAL ESTIMATED COST					**$1,360,753.00**

Carmela Roberts, P.E., C.M.E.
N.J. License No. 34419



PLAN VIEW
SCALE: 1"=20'

LEGEND

EXISTING

	EXISTING STREET ROW LINE
	EXISTING CONCRETE CURB
	EXISTING CONTOURS
	EXISTING SPOT ELEVATION
	EXISTING TREE
	EXISTING DRAINAGE PIPE
	EXISTING UTILITY POLE
	EXISTING PARKING LOT LIGHT
	EXISTING INLETS
	EXISTING WATER SERVICE
	EXISTING GAS SERVICE
	EXISTING OVERHEAD WIRES
	EXISTING FENCE
	EXISTING MANHOLE
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	EXISTING STREET LIGHT

PROPOSED

	PROPOSED SILT FENCE
	PROPOSED INLET PROTECTION
	PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
	PROPOSED CONCRETE VERTICAL CURB
	PROPOSED CONCRETE SIDEWALK
	PROPOSED STONE DRIVEWAY REPAIR
	PROPOSED CONCRETE DRIVEWAY REPAIR
	PROPOSED BIT. DRIVEWAY REPAIR
▨	PROPOSED BASE REPAIR
	TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
X	PROPOSED BUSH OR TREE REMOVAL
TC84.00	PROPOSED TOP OF CURB ELEVATION
84.00	PROPOSED ELEVATION
	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED WATER MAIN FITTING
	PROPOSED MANHOLE, FRAME, AND COVER
	PROPOSED MANHOLE FRAME AND COVER

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Roberts
ENGINEERING GROUP LLC
CERTIFICATE OF AUTHORIZATION: 24GA28159100

CARMELA ROBERTS, PE
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LIC. No. 24GE03441900

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OVERALL ROAD IMPROVEMENTS PLAN

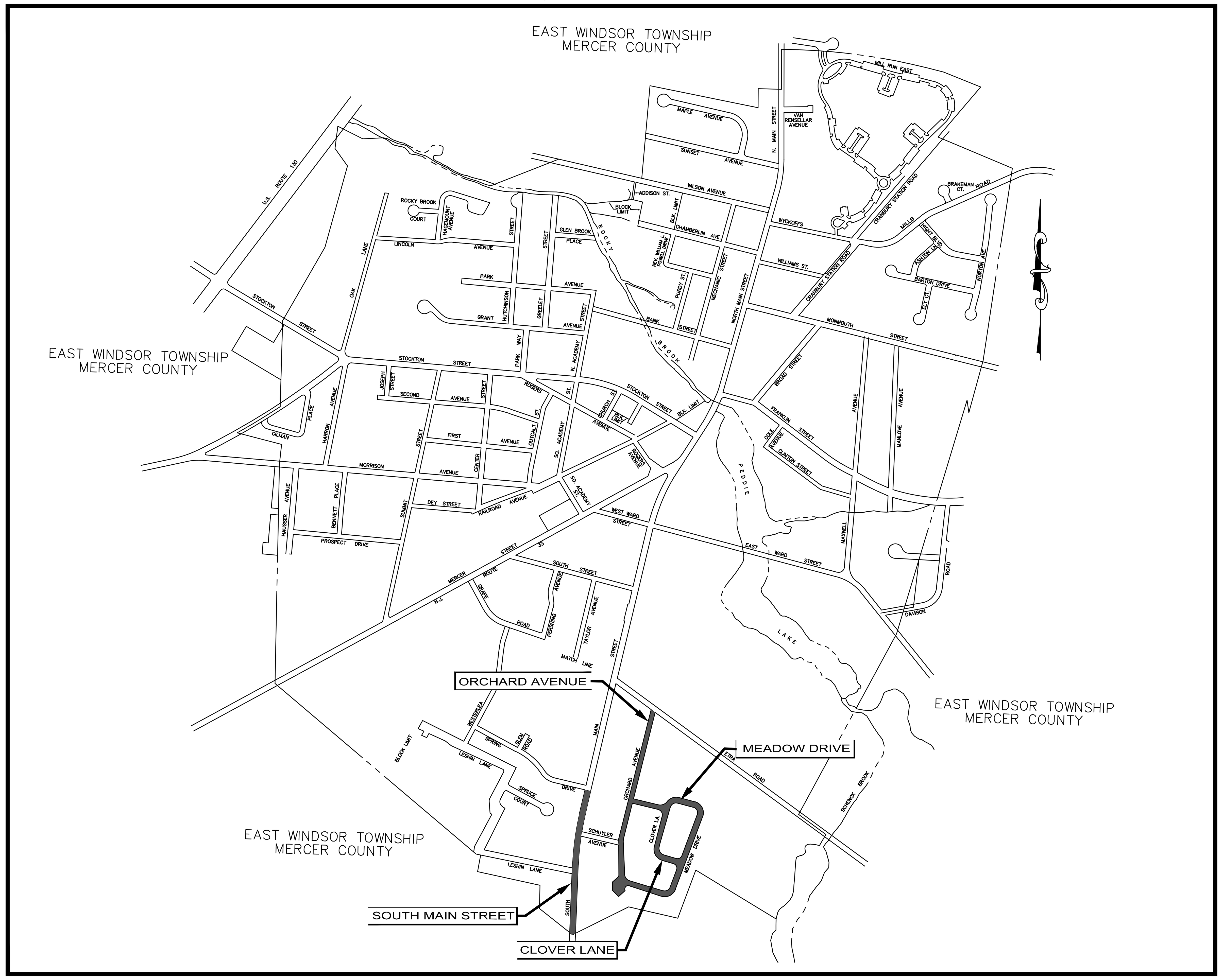
IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: KP	CHECKED BY: CC
DATE: 1/31/23	
SCALE: 1"=20'	
DWG. No.: OVERALL	
SHEET No. 1 OF 1	

IMPROVEMENTS TO
ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

ITEM NO.	DESCRIPTION	UNITS	CONTRACT QUANTITY	PLAN SHEET TOTALS	IF AND WHERE DIRECTED	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES	SHEET	QUANTITIES
1	Mobilization	LS	1	0	1																						
2	Clearing Site	LS	1	0	1																						
3	Project Video	LS	1	0	1																						
4	Traffic Director, Flagger	HOUR	200	0	200																						
5	Uniform Traffic Director	HOUR	500	0	500																						
6	Traffic Cones	UNIT	25	0	25																						
7	Drums	UNIT	15	0	15																						
8	Breakaway Barricade	UNIT	9	9		2	9																				
9	Construction Sign 'B' (60"x30")	UNIT	3	3		2	3																				
10	Construction Sign 'C' (72"x60")	UNIT	3	3		2	3																				
11	Tree Removal, Over 6" to 12" Diameter	UNIT	3	3		4	1	14	2																		
12	Tree Planting, 2" Cal.	UNIT	10	0	10																						
13	Inlet Filter, Type 2	UNIT	18	18		5	2	7	2	8	4	9	2	10	3	11	1	13	2	14	2						
14	Repair of Structure, Inlet	UNIT	13	0	13																						
15	Manhole Frame and Cover, Storm	UNIT	1	1		8	1																				
16	Bicycle Safe Frame and Grate, Type B	UNIT	6	6		5	1	7	2	13	1	14	2														
17	8" Type 'N' Eco Curb Piece	UNIT	18	18		5	1	7	2	8	4	9	2	10	3	13	2	14	4								
18	Trench Drain with Frame and Grate	UNIT	1	1		5	1																				
19	Manhole Frame and Cover, Sanitary	UNIT	12	12		5	1	6	1	7	2	8	2	9	2	10	1	12	1	13	2						
20	Connect to Existing Manhole	UNIT	2	2		9	2																				
21	Concrete Encasement	LF	90	90		9	65	10	25																		
22	8" DIP Sanitary Sewer Main	LF	90	90		9	65	10	25																		
23	6" PVC Sanitary Lateral	LF	1,744	1,744		4	136	5	171	6	188	7	350	8	213	9	194	10	127	11	158	12	106	13	101		
24	PVC Cleanout, Sanitary	UNIT	68	68		4	8	5	10	6	10	7	8	8	8	9	8	10	4	11	4	12	4	13	4		
25	Doghouse Manhole with Frame and Cover, Sanitary Sewer	UNIT	2	2		4	1	5	1																		
26	Transfer Existing Water Service	UNIT	2	2		9	1	10	1																		
27	6" DIP Water Main	LF	140	140		9	75	10	65																		
28	Fire Hydrant Assembly, Complete	UNIT	1	1		9	1																				
29	6" Cap	UNIT	4	4		9	2	10	2																		
30	6" Gate Valve	UNIT	1	1		10	1																				
31	6" Insertion Valve	UNIT	1	1		9	1																				
32	6"x6" Tee	UNIT	2	2		9	1	10	1																		
33	Remove and Reset Stone Steps	SY	3	3		14	3																				
34	Remove and Reset Decorative River Stone	SY	11	11		14	11																				
35	Remove and Reset Brick Sidewalk	SY	5	5		14	5																				
36	Hot Mix Asphalt Driveway, 2" Thick	SY	379	379		4	38	5	46	6	32	7	36	8	39	9	23	10	21	12	20	13	42	14	58	15	24
37	Concrete Sidewalk, 4" Thick	SY	481	481		4	44	14	302	15	135																
38	Stone Driveway	SY	20	20		14	20																				
39	Reinforced Concrete Sidewalk, 6" Thick	SY	142	142		9	25	10	5	13	5	14	85	15	22												
40	Detectable Warning Surface	SY	3	3		4	2	14	1																		
41	Concrete Steps	UNIT	1	1		14	1																				
42	6"x8"x16" Concrete Vertical Curb	LF	3,810	3,810		4	580	5	670	6	310	7	220	8	225	9	220	10	185	12	645	13	655	14	100		
43	8"x9"x18" Concrete Vertical Curb	LF	586	586		14	250	15	336																		
44	HMA Milling, 3" or Less	SY	16,615	16,615		4	1,575	5	1,885	6	1,820	7	2,855	8	1,760	9	1,670	10	1,120	11	1,490	12	1,215	13	1,225		
45	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick	TON	2,515	2,515		4	240	5	285	6	275	7	430	8	265	9	255	10	170	11	225	12	185	13	185		
46	Hot Mix Asphalt 9.5M64 Leveling Course, Variable Thickness	TON	400	400		4	40	5	45	6	45	7	65	8	40	9	40	10	30	11	35	12	30	13	30		
47	Tack Coat	GAL	1,690	1,690		4	160	5	190	6	185	7	290	8	180	9	170	10	115	11	150	12	125	13	125		
48	HMA Pavement Repair	SY	1,595	1,595		4	435	5	440	6	130	7	75	8	80	9	75	10	20	11	110	12	160	13	70		
49	Dense Graded Aggregate, If & Where Directed	CY	50	0	50																						
50	1 1/2" Clean Stone, If & Where Directed	CY	50	0	50																						
51	Regulatory Sign, R1-1 'Stop', 30"x30"	UNIT	4	4		4	1	5	1	8	1	13	1														
52	Regulatory Sign, R2-1 'Speed Limit', 24"x30"	UNIT	1	1		4	1																				
53	Regulatory Sign, R7-3 'No Parking', 30"X24", with Sign Post	UNIT	1	1		15	1																				
54	Warning Sign, W15-2 'Watch Children', 36"x36"x36"	UNIT	2	2		4	1	11	1																		
55	Street Sign	UNIT	12	12		4	2	5	2	7	2	8	2	13	2	14	2										
56	Traffic Marking, 24" Wide White	LF	195	195		4	110	5	15	14	70																
57	Traffic Marking, 8" Wide White	LF	164	164		4	84	14	80																		
58	Traffic Marking, 4" Wide Yellow	LF	120	120		4	60	5	60																		
59	Fertilizing and Seeding, Type A-3	SY	1,020	1,020		4	120	5	105	6	55	7	25	8	25	9	25	10	25	12	120	13	110	14	275	15	135
60	Topsoiling, 5" Thick	SY	1,020	1,020		4	120	5	105	6	55	7	25	8	25	9	25	10	25	12	120	13	110	14	275	15	135
61	Fuel Price Adjustment	DOLLAR	5,000	0	5,000																						
62	Asphalt Price Adjustment	DOLLAR	7,500	0	7,500																						
63	Allowance	DOLLAR	20,000	0	20,000																						



KEY MAP
SCALE 1"=800'

GRAPHIC SCALE
800 0 400 800 1600 3200
(IN FEET)
1 inch = 800 ft.

PROJECT LENGTH (ORCHARD AVENUE) = 1,850 LF
PROJECT LENGTH (MEADOW DRIVE) = 1,575 LF
PROJECT LENGTH (CLOVER LANE) = 675 LF
PROJECT LENGTH (SOUTH MAIN STREET) = 1,900 LF

MAYOR
SUSAN BLUTH

MEMBERS OF COUNCIL
JOSHUA JACKSON, COUNCIL PRESIDENT
JOE CICALESE
CRISTINA FOWLER
TODD FRANTZ
JEET GULATI
FRED MONTFERRAT

SHEET INDEX

UTILITY SERVICE PROVIDERS

PSE&G
DENNIS GUNN
300 CONNECTICUT DRIVE
BURLINGTON, NJ 08016
609-239-2405

VERIZON
KEVIN HELLTHALER
1490 PROSPECT STREET, FLOOR 1
TRENTON, NJ 08638
609-637-4027

JERSEY CENTRAL POWER & LIGHT
GERALD M. RICCIARDI, AREA MANAGER
ONE RIVER CENTRE
331 NEWMAN SPRINGS ROAD, BLDG 3
RED BANK, NJ 07001
732-212-4106

BOROUGH OF HIGHTSTOWN WATER AND SEWER
KENNETH LEWIS, SUPERINTENDENT OF PUBLIC WORKS
BILL SEARING, SUPERINTENDENT OF ADVANCED WASTEWATER TREATMENT PLANT
148 NORTH MAIN STREET
HIGHSTOWN, NJ 08520
609-490-5100

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NOTE:
A. THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019, AS AMENDED BY SPECIAL PROVISIONS, TO GOVERN.
B. THE NJDOT STANDARD CONSTRUCTION DETAILS FOR ROADWAY, TRAFFIC CONTROL, AND BRIDGE BOOKLET (2016); AND THE NJDOT STANDARD ELECTRICAL DETAILS BOOKLET (2007), ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

No.	DATE	REVISIONS	BY	CHECKED

CARMELA ROBERTS, P.E.
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LIC. NO. 34419
IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE PROFESSIONAL IT IS NOT AN ORIGINAL

Roberts
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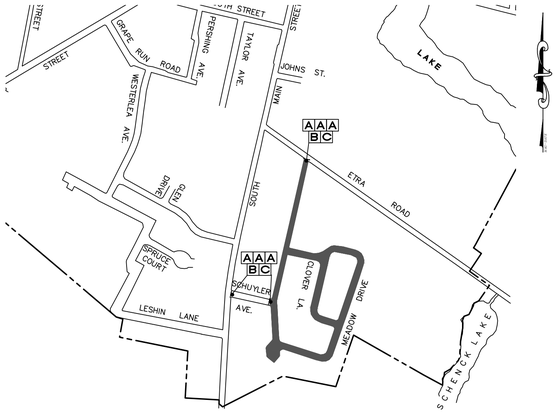
Women Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100
1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

DATE: FEBRUARY 1, 2023
JOB NUMBER H1804
SHEET 1 OF 17

H1804 - IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

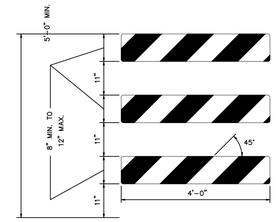


TRAFFIC CONTROL PLAN

SCALE : 1"=600'

TRAFFIC CONTROL SIGNAGE

SIGN	DESIGN	TYPE	SIZE	No. REQUIRED
A		TYPE III LIST		9
B	ROAD CLOSED TO THRU TRAFFIC — TO BE MOUNTED ON BREAKAWAY BARRICADE TYPE III	R11-4	60" x 30"	3
C	BLACK 4" LETTERS — ON OR ABOUT_____, 2023 ORCHARD AVENUE, MEADOW DRIVE AND CLOVER LANE WILL BE UNDER CONSTRUCTION. PLAN AN ALTERNATIVE ROUTE. — ORANGE — TO BE MOUNTED ON TWO BREAKAWAY SIGN POSTS		72" x 60"	3



TYPE III BARRICADE – FRONT VIEW

NOTES:

1. ENSURE THE 8" MIN. x 48", TO 12" MAX. x 48" BARRICADE RAILS TO BE ATTACHED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
2. ENSURE ORANGE AND SILVER (WHITE) STRIPES TO BE RETROREFLECTIVE SHEETING, ASTM D4956 TYPE III. ALTERNATE ORANGE AND SILVER (WHITE) STRIPES 6" WIDE SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.
3. THE FRAMING, RAILS, AND BALLAST FOR BREAKAWAY BARRICADE TO BE NCHRP-350 CRASHED TESTED AND FHWA APPROVED.
4. IF NECESSARY, FABRICATE THE BALLAST AND PLACE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

BREAKAWAY BARRICADES

N.T.S.

CONSTRUCTION SEQUENCE

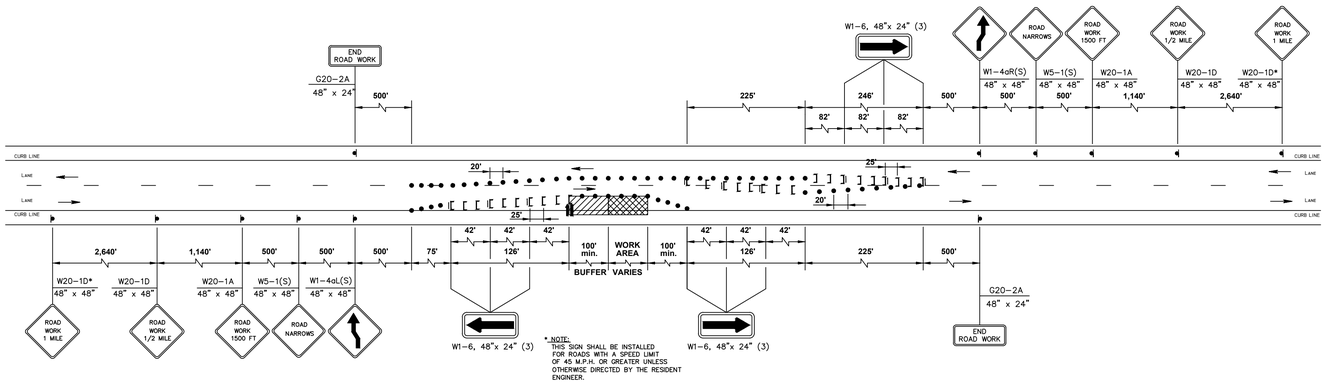
1. INSTALL ADVANCE WARNING SIGNS A MINIMUM OF TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION.
2. INSTALL SIGNS, DRUMS, CONES AND TRAFFIC CONTROL DEVICES SHOWN ON THIS PLAN PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO HAVE THE NECESSARY TRAINED FLAGGERS ON SITE AT ALL TIMES. CONTRACT TO PROVIDE FLAGGER CERTIFICATIONS AT LEAST TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION.
4. POLICE AND THE ENGINEER TO APPROVE TRAFFIC CONTROL LAYOUT PRIOR TO THE START OF WORK.
5. ALL WORKERS TO HAVE SAFETY VESTS AND FOLLOW SAFETY PROCEDURES AT ALL TIMES PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. LANE CLOSURE AND LANE SHIFTS ARE TO BE UTILIZED TO THE GREATEST EXTENT FEASIBLE, SUBJECT TO APPROVAL BY THE ENGINEER AND POLICE DEPARTMENT. LANE CLOSURE AND LANE SHIFTS SHALL BE IN ACCORDANCE WITH NJDOT REQUIREMENTS. CONTRACTOR SHALL PROVIDE CERTIFIED TRAFFIC FLAGGERS.
7. ONLY ONE DETOUR MAY BE IN PLACE AT ANY ONE TIME.
8. CONSTRUCTION WITH STATE RIGHT-OF-WAY SHALL UTILIZE UNIFORMED TRAFFIC DIRECTORS AS WELL AS LANE SHIFTS WITH CERTIFIED FLAGGERS.

REFERENCES:

1. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. HIGHTSTOWN BOROUGH TAX MAPS

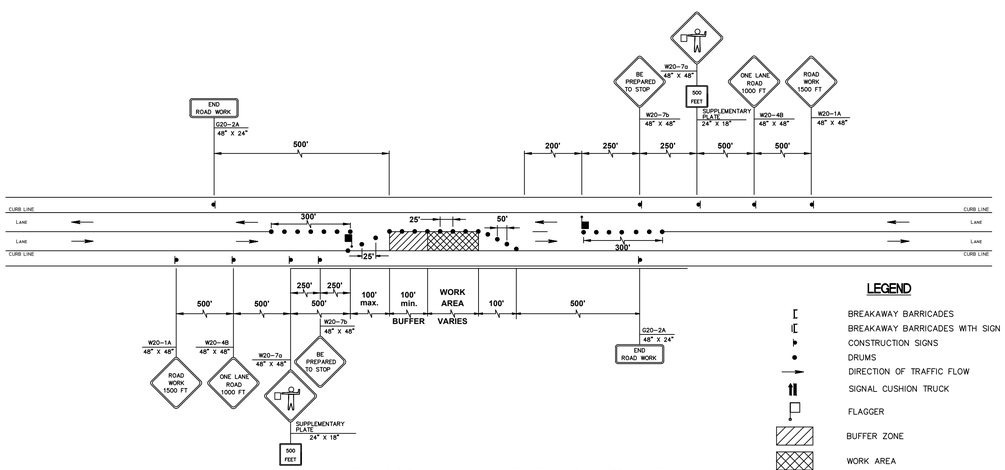
GENERAL NOTES:

1. THE CONTRACTOR IS TO INSPECT ALL TRAFFIC SIGNS EACH DAY TO ASSURE THAT THEY ARE PROPERLY LOCATED AND FUNCTIONING.
2. ADDITIONAL BARRICADES AND SIGNS MAY BE REQUIRED AND SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER OR POLICE DEPARTMENT.
3. ALL SIGNS TO BE CONSTRUCTED OF ALUMINUM WITH HIGH INTENSITY REFLECTIVE COATINGS AND CONFORM TO THE CURRENT EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
4. ALL SIGN POSTS SHALL BE BREAKAWAY.
5. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
6. LANE CLOSING OR LANE SHIFTS PROCEDURES ARE TO BE UTILIZED ON ALL ROADS, SUBJECT TO THE APPROVAL OF THE POLICE DEPARTMENT AND THE ENGINEER. CONTRACTOR TO PROVIDE CERTIFIED TRAFFIC FLAGGERS. TRAFFIC TO BE DETOURED FOR ALL MILLING AND PAVING OPERATIONS.
7. DETOURS ARE TO BE UTILIZED AS SHOWN IN THE BID DOCUMENTS.
8. CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREAS, AND FOR THE ADJACENT PROPERTIES AND PERSONS. ADEQUATE BARRIERS SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS AT ALL ROADWAY INTERSECTIONS. THE CONTRACTOR SHALL BARRICADE ALL UNSAFE OR INJURIOUS CONDITIONS.
9. THE CONTRACTOR SHALL ENSURE FREE AND SAFE PASSAGE OF PERSONS AROUND THE AREA OF CONSTRUCTION. ALL OPERATIONS SHALL BE CONDUCTED SO AS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES, AS WELL AS INJURY TO PERSONS, BOTH PEDESTRIAN AND WORKER ALIKE.
10. ACCESS TO PRIVATE PROPERTY TO BE MAINTAINED AT ALL TIMES.
11. CONTRACTOR TO COORDINATE WITH EMERGENCY SERVICES (POLICE, FIRE, MEDICAL), WASTE DISPOSAL PICKUP, AND SCHOOL BUSSING TO ENSURE NO LOSS OF SERVICE.
12. ALL ROADS WITHIN THE PROJECT AREA SHALL BE OPEN TO TRAFFIC BETWEEN THE HOURS OF 5:00PM AND 8:00AM



2 LANES, UNDIVIDED LANE SHIFT

N.T.S.



(DEY STREET, CENTER STREET AND MERCER STREET)

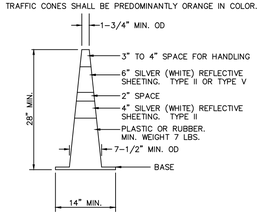
2 LANES, UNDIVIDED, LANE CLOSING W/ FLAGGING

N.T.S.

LEGEND

- BREAKAWAY BARRICADES
- BREAKAWAY BARRICADES WITH SIGN
- CONSTRUCTION SIGNS
- DRUMS
- DIRECTION OF TRAFFIC FLOW
- SIGNAL CUSHION TRUCK
- FLAGGER
- BUFFER ZONE
- WORK AREA

TRAFFIC CONES SHALL BE PREDOMINANTLY ORANGE IN COLOR.

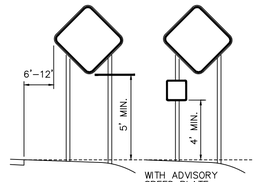


BASES MAY BE OF BREAKAWAY BALLASTED TYPE.

MINOR MANUFACTURER'S VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER.

TRAFFIC CONES

N.T.S.

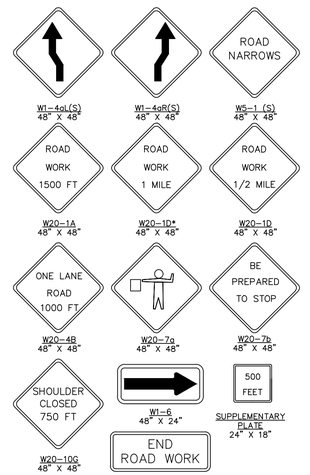


SIGN PLACEMENT

N.T.S.

SIGN CHART

SIGN TYPE	SIZE	No. REQ.
W1-4qL(S)	48" X 48"	3
W1-4qR(S)	48" X 48"	7
W5-1 (S)	48" X 48"	10
W20-1A	48" X 48"	12
W20-1D*	48" X 48"	4
W20-1D	48" X 48"	10
W20-4B	48" X 48"	2
W20-7A	48" X 48"	2
W20-7B	48" X 48"	2
W1-6	48" X 24"	39
G20-2A	48" X 48"	12
SUPPLEMENT	24" X 18"	2



CONSTRUCTION SIGNAGE

N.T.S.

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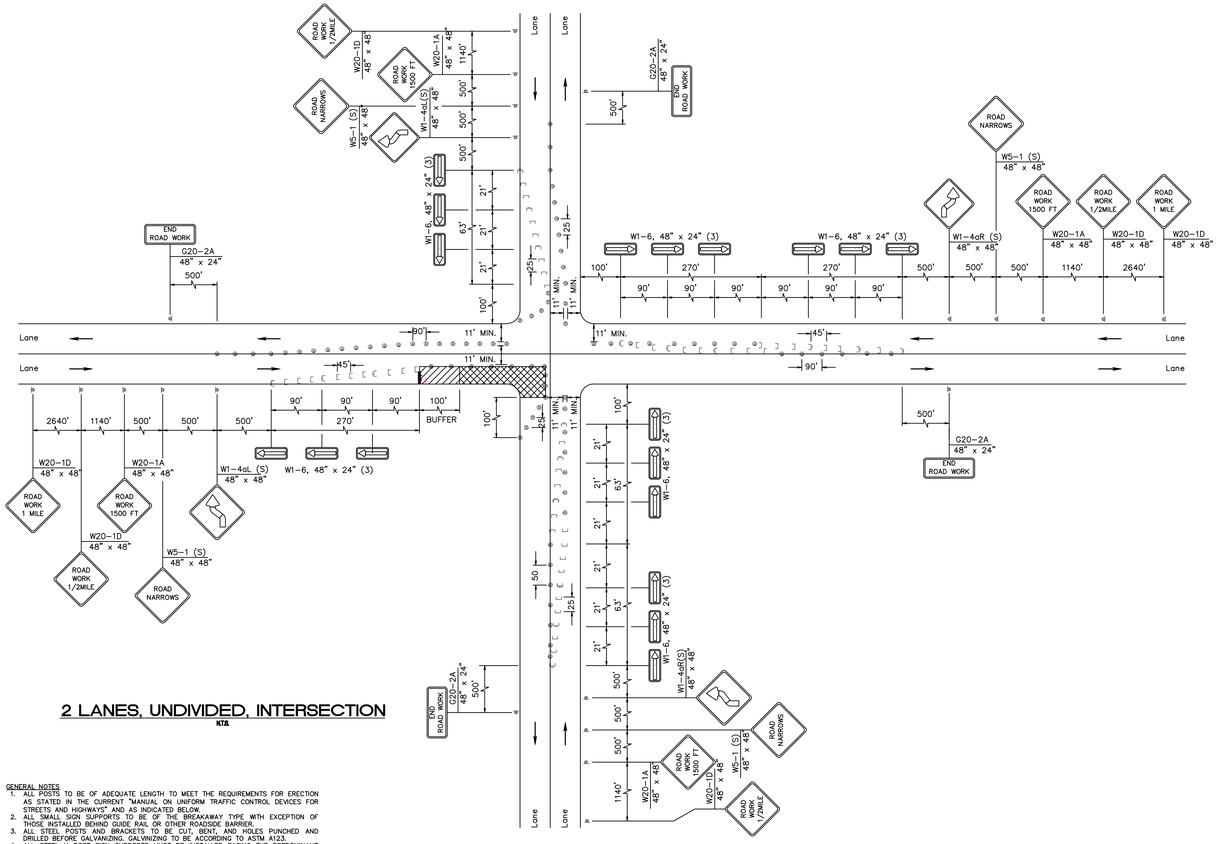
TRAFFIC CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

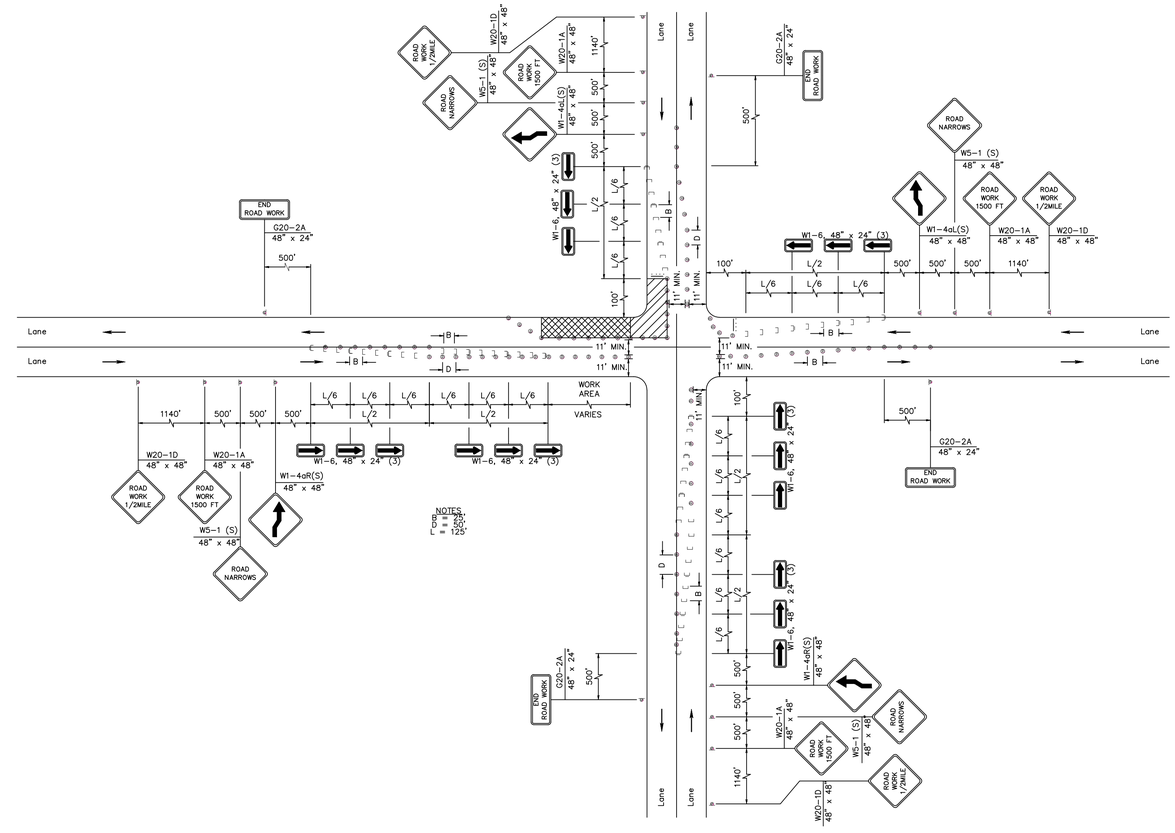
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE:	2/1/2023
SCALE:	As Shown
DWG. No.:	TC1
SHEET No.	2 OF 19



2 LANES, UNDIVIDED, INTERSECTION

N.T.S.



2 LANES, UNDIVIDED, INTERSECTION

N.T.S.

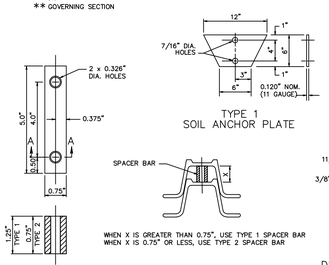
GENERAL NOTES

1. ALL POSTS TO BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
2. ALL SMALL SIGN SUPPORTS TO BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
3. ALL STEEL POSTS AND BRACKETS TO BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING TO BE ACCORDING TO ASTM A123.
4. ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW. USE A MOUNTING BRACKET ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
5. SIGN PANEL SIZES ARE TO DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
6. BOLTS ARE NOT TO PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT ARE TO ENGAGE ALL THREADS IN THE NUT.
7. WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:
   - 7.1. FOR SINGLE POST INSTALLATIONS – THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.
   - 7.2. FOR MULTI-POST INSTALLATIONS – THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET.
   - 7.3. SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) – THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.
   - 7.4. SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) – THE BOTTOM OF THE MAIN SIGN TO BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.
   - 7.5. WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
8. THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:
   - 8.1. FOR URBAN INSTALLATIONS – IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE SO CLOSE TO THE CURB.
   - 8.2. FOR RURAL INSTALLATIONS – 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.
   - 8.3. FOR INTERSTATE AND FREEWAY INSTALLATIONS – 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.
   - 8.4. FOR RAMP INSTALLATIONS – 6 FEET MINIMUM FROM EDGE OF ROAD.
   - 8.5. WHERE BEHIND GUIDE RAIL – 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO SIGN POST.
9. DO NOT INSTALL PERMANENT SIGN SUPPORTS ON SLOPES GREATER THAN 10H:1V, EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE IS TO EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
10. EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
11. DO NOT PLACE STEEL U-POST SIGN SUPPORTS IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
12. TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.

WEIGHT* LBS. / FT.	DIMENSIONS (IN) "A"	"B"	"C"	"D"	AREA IN.²	X-X AXIS** I(IN.⁴)	S(IN.³)	Y-Y AXIS I(IN.⁴)	S(IN.³)
2.50	1.516	3.062	1.278	0.669	0.760	0.228	0.313	0.539	0.352
4.00	1.968	3.500	1.336	0.834	1.187	0.611	0.707	1.161	0.664

* : 5%
** GOVERNING SECTION

TYPE 1 STEEL U-POST PROPERTIES

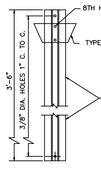


TYPE 1
SOIL ANCHOR PLATE

SECTION A-A

WHEN X IS GREATER THAN 0.75", USE TYPE 1 SPACER BAR
WHEN X IS 0.75" OR LESS, USE TYPE 2 SPACER BAR

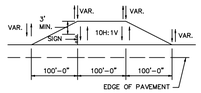
SPACER BAR



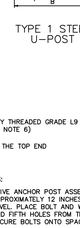
TYPE 1
ANCHOR POST
ASSEMBLY

NOTES:

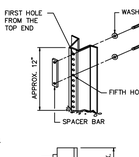
1. ANCHOR POST AND TOP POST TO BE OF EQUAL WEIGHT / FEET.
2. SOIL ANCHOR PLATE TO BE ATTACHED TO ALL ANCHOR POSTS.
3. THE MATERIAL FOR THE SOIL ANCHOR PLATES TO BE CARBON SHEET STEEL.
4. THE STEEL "U" POST TO BE GRADE 60.



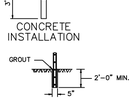
STEEL U-POST GRADING DETAIL



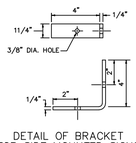
TYPE 1 STEEL
U-POST



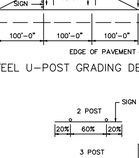
CONCRETE
INSTALLATION



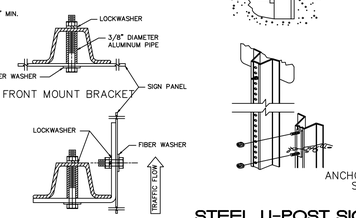
ROCK
INSTALLATION



DETAIL OF BRACKET
FOR SIDE MOUNTED SIGNS



STEEL U-POST SPACING

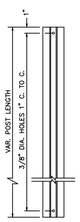


SIDE MOUNT BRACKET

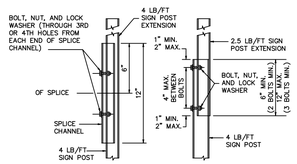
NOTES:

1. DRIVE ANCHOR POST ASSEMBLY TO WITHIN APPROXIMATELY 12 INCHES ABOVE GROUND LEVEL. PLACE BOLT AND WASHER IN FIRST AND FIFTH HOLES FROM THE TOP END, AND SECURE BOLTS ONTO SPACER.
2. DRIVE ANCHOR POST ASSEMBLY TO WITHIN A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL.
3. DIG OUT AROUND BACK OF ANCHOR POST ASSEMBLY TO ALLOW ROOM FOR TOP POST TO BE ATTACHED.
4. NEST TOP POST ASSEMBLY ONTO PROTRUDING ANCHOR POST ASSEMBLY BOLTS, THROUGH THE FIRST AND FIFTH HOLES FROM THE BOTTOM OF THE TOP POST.
5. PLACE AND TIGHTEN A SELF-LOCKING FLANGE NUT ON EACH BOLT. WHEN INSTALLATION IS COMPLETE, TOP OF GROUND POST NOT TO EXCEED 4 INCHES ABOVE GROUND LEVEL.
6. SIZE OF CONNECTOR BOLT FOR TYPE 1, 5/16" x 11/2" SIZE OF CONNECTOR BOLT FOR TYPE 2, 5/16" x 2"
7. THE CONNECTOR BOLTS ARE TO BE FULLY THREADED. EACH CONNECTOR BOLT AND NUT TO BE CLEARLY STAMPED WITH MANUFACTURER'S IDENTIFYING MARK.

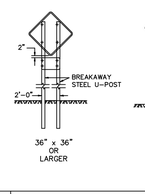
ANCHOR POST ASSEMBLY
SIGN SUPPORTS



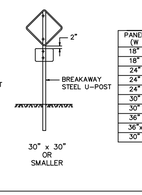
TOP POST
U-POST



SIGN POST EXTENSION
SPLICE DETAILS



36" x 36"
OR
LARGER



30" x 30"
OR
SMALLER

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/ FT)
18" x 18"	1	2.5
18" x 24"	1	2.5
24" x 24"	1	2.5
24" x 30"	1	2.5
24" x 36"	1	2.5
30" x 24"	1	2.5
30" x 30"	1	2.5
36" x 12"	2	2.5
36"x36"x36"	2	2.5
30" x 36"	1	4.0

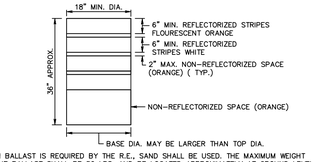
PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
36" x 36"	2	2.5
36" x 48"	2	2.5
45" x 36"	2	2.5
48" x 24"	2	2.5
48" x 36"	2	2.5
48" x 48"	2	4.0
48"x64"x64"	2	2.5
60" x 36"	2	4.0
48" x 60"	2	4.0
60" x 30"	2	4.0

U-POST SELECTION TABLE
BREAKAWAY SIGN SUPPORT

DRUMS SHALL BE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE FLUORESCENT ORANGE AND WHITE RETROREFLECTIVE STRIPES. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE STRIPES, THEY SHALL BE NO MORE THAN 2" WIDE. RETROREFLECTIVE SHEETING FOR STRIPES SHALL CONFORM WITH ASTM D 4956 TYPE VII OR VIII WITH S2 REQUIREMENTS.

THE TOP OF THE DRUM SHALL NOT BE OPEN. DRUMS SHALL BE CONSTRUCTED TO INHIBIT ROLLING
IF KNOCKED OVER.

THE REFLECTORIZED AREA OF DRUMS SHALL BE ROUND EXCEPT THAT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY AS AN 18 INCH DIAMETER ROUND DRUM REGARDLESS OF ORIENTATION, MAY BE USED.



WHEN BALLAST IS REQUIRED BY THE R.E., SAND SHALL BE USED. THE MAXIMUM WEIGHT OF THE BALLAST SHALL BE 50 LBS. AND BE LOCATED APPROXIMATELY AT GROUND LEVEL. ALTERNATE TYPES OF BALLAST SHALL BE APPROVED BY THE R.E..

DRUMS

N.T.S.

STEEL U-POST SIGN SUPPORTS

N.T.S.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Woman Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100

CARMELA ROBERTS, PE
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LIC. No. 24GE03441900

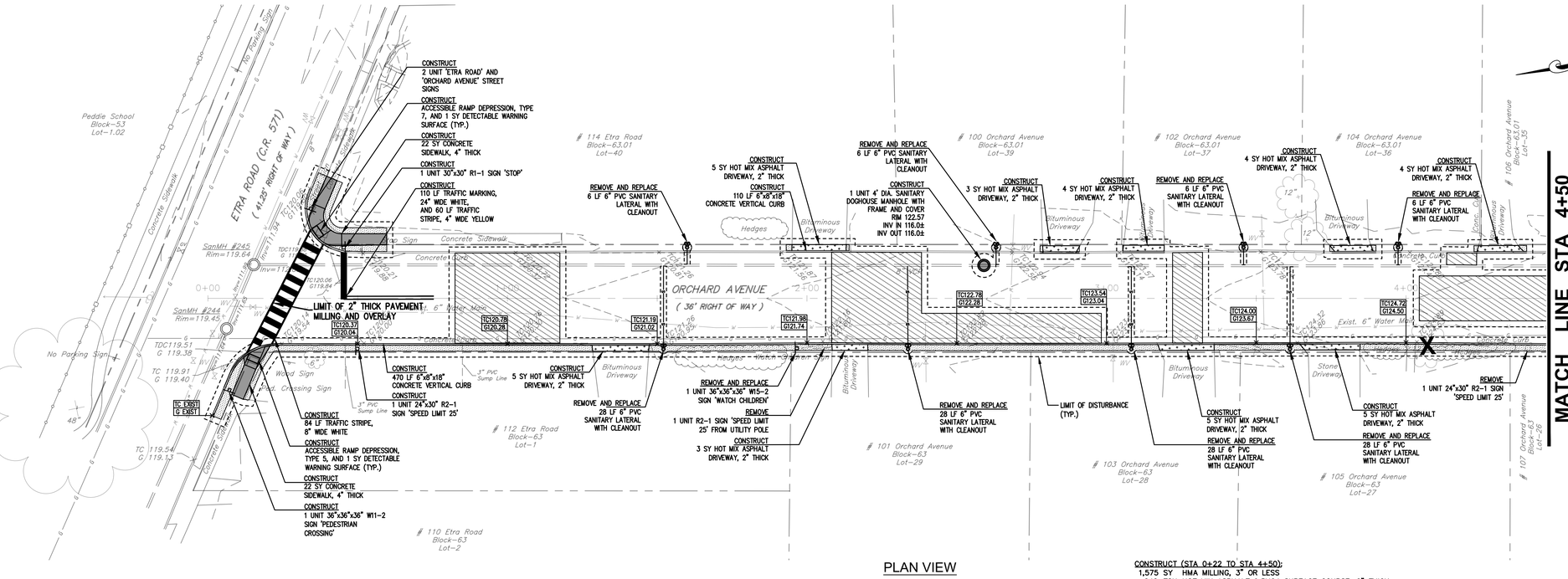
1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

TRAFFIC CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

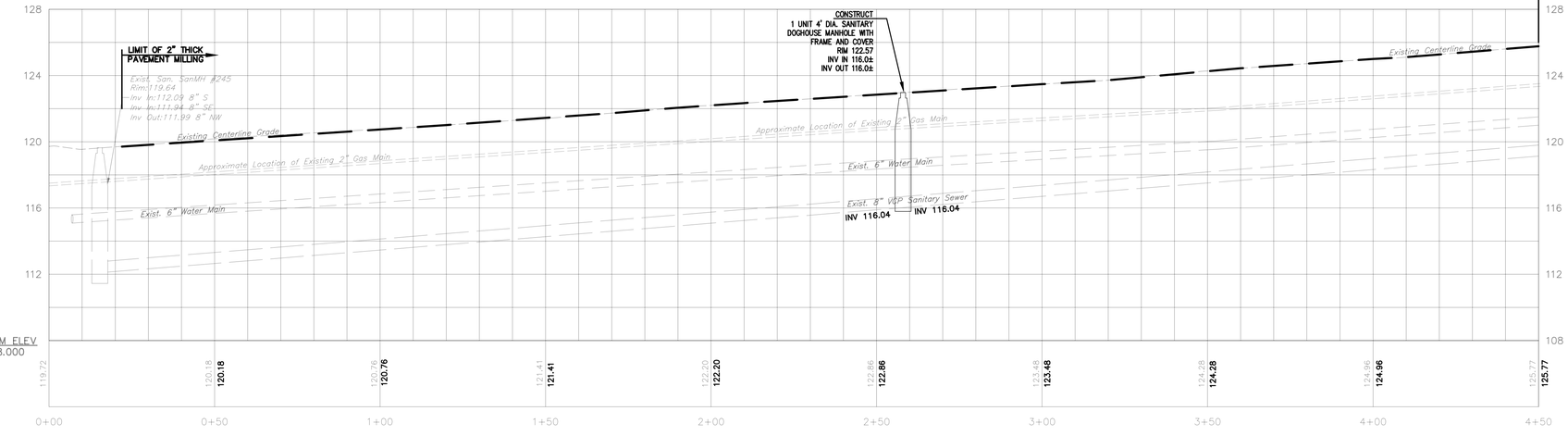
FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE:	2/1/2023
SCALE:	As Shown
DWG. No.:	TC2
SHEET No.	3 OF 19



PLAN VIEW

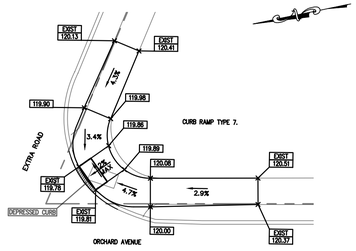
SCALE: 1"=20'

CONSTRUCT (STA 0+22 TO STA 4+50):
- 1,575 SY HMA MILLING, 3" OR LESS
- 240 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
- 40 TON HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
- 160 GAL TACK COAT
- 435 SY HMA PAVEMENT REPAIR
- 120 SY FERTILIZING AND SEEDING, TYPE A-3
- 120 SY TOPSOIL SPREADING, 5" THICK



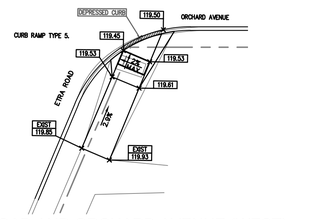
PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



ETRA ROAD AND ORCHARD AVENUE (EAST)

SCALE: 1"=10'



ETRA ROAD AND ORCHARD AVENUE (WEST)

SCALE: 1"=10'

NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE PROVIDED FOR THE FULL WIDTH OF THE CURB DEPRESSION.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STONE DRIVEWAY REPAIR
- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
- 84.00 PROPOSED ELEVATION
- PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER MAIN FITTING
- PROPOSED MANHOLE, FRAME, AND COVER
- PROPOSED MANHOLE FRAME AND COVER

GENERAL NOTES:

1. THIS PLAN REFLECTS EXISTING SITE CONDITIONS AS THE RESULT OF AERIAL PHOTOS, TAX MAPS, AND A FIELD SURVEY PERFORMED BY ROBERTS ENGINEERING GROUP, LLC. DATED SEPTEMBER 18, 2022.
2. RIGHT-OF-WAY AND PROPERTY LINE INFORMATION ARE APPROXIMATE AND ARE BASED UPON TAX MAP INFORMATION AND LIMITED FIELD SURVEYING.
3. THIS PLAN IS NOT INTENDED TO GUARANTEE OWNERSHIP. DOCUMENTS OF RECORD WHICH MAY HAVE BEEN REVIEWED AND CONSIDERED AS PART OF THIS PLAN OF SURVEY ARE NOTED HEREON AND HAVE BEEN OBTAINED BY ROBERTS ENGINEERING GROUP, LLC. THERE MAY EXIST OTHER DOCUMENTS OF RECORD WHICH WOULD AFFECT THIS PLAN.
4. ONLY COPIES OF THE ORIGINAL OF THIS PLAN CLEARLY MARKED WITH THE ENGINEER'S EMBOSSED SEAL SHALL BE CONSIDERED A VALID COPY.
5. BLOCK AND LOT NUMBERS AS SHOWN HEREON ARE BASED UPON THE TAX MAPS OF THE BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY.
6. THIS PLAN IS SUBJECT TO ANY EASEMENTS OR AGREEMENTS, WHICH MAY OR MAY NOT BE OF THE PUBLIC RECORD AND DISCLOSED AT THE TIME OF AN ABSTRACT OF TITLE OR TITLE SEARCH, WHICH MAY BE LOCATED BELOW THE SURFACE OF THE LANDS AND NOT VISIBLE AT THE TIME OF SURVEY. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED UPON ABOVE GROUND STRUCTURES VISIBLE AT THE TIME OF THE FIELD SURVEY AND RECORD OR AS-BUILT DRAWINGS PROVIDED TO ROBERTS ENGINEERING GROUP, LLC.
7. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON; WHEREAS ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PREPARATION OF THIS SURVEY TO LOCATE BURIED UTILITIES OR STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE UNDERGROUND UTILITIES LOCATION SERVICE AT 1-800-242-1776 SHALL BE CONTACTED AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION OR EXCAVATION ACTIVITIES, IN ACCORDANCE WITH APPLICABLE LAWS, RULES, AND REGULATIONS.
8. ALL BUILDINGS, SURFACE AND SUBSURFACE IMPROVEMENTS, ON OR ADJACENT TO THE SITE ARE NOT NECESSARILY SHOWN.
9. HORIZONTAL DATUM BASED UPON GPS OBSERVATIONS (NAD 83).
10. VERTICAL DATUM BASED UPON GPS OBSERVATIONS (NAVD 88) BENCHMARKS AS SHOWN.

CONSTRUCTION NOTES:

1. EXISTING ASPHALT AND CONCRETE DRIVEWAYS TO BE SAW CUT AS NECESSARY. NO SEPARATE PAYMENT.
2. ALL UTILITY VALVE BOXES, MANHOLES, CASTING, COVERS, CONTROL BOXES, ETC. WITHIN THE PROJECT AREA SHALL BE RESET AS REQUIRED.
3. ANY SEDIMENT WASHED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY.
4. THE TEMPORARY RIDING SURFACE OF ALL TRENCHES SHALL BE COLD PATCHED OR BASE PAVED PRIOR TO VEHICULAR ACCESS.

ADDITIONAL NOTES:

1. EXACT LOCATION AND EXTENT OF PAVEMENT BASE REPAIRS TO BE DETERMINED IN THE FIELD BY ENGINEER AFTER MILLING OF ROADWAY.
2. EXISTING UTILITY INFORMATION SHOWN IS APPROXIMATE AND CONTRACTOR TO FIELD VERIFY THROUGH UTILITY MARK-OUT, TEST HOLES (IF AND WHERE DIRECTED) AND FIELD INVESTIGATION AS LOCATIONS, DEPTHS, SIZE, AND QUANTITIES MAY VARY FROM THAT SHOWN ON PLANS.
3. TEMPORARY STOCKPILING ON PAVED SURFACES/ROADWAYS WILL NOT BE PERMITTED.
4. CONTRACTOR TO IMMEDIATELY TRUCK OUT EXCAVATED MATERIAL TO A PROPER OFF-SITE DISPOSAL LOCATION. CONTRACTOR TO FOLLOW PROPER DISPOSAL GUIDELINES AS OUTLINED BY THE MERCER COUNTY SOIL CONSERVATION DISTRICT. OFF-SITE DISPOSAL LOCATION TO BE DETERMINED DURING CONSTRUCTION.

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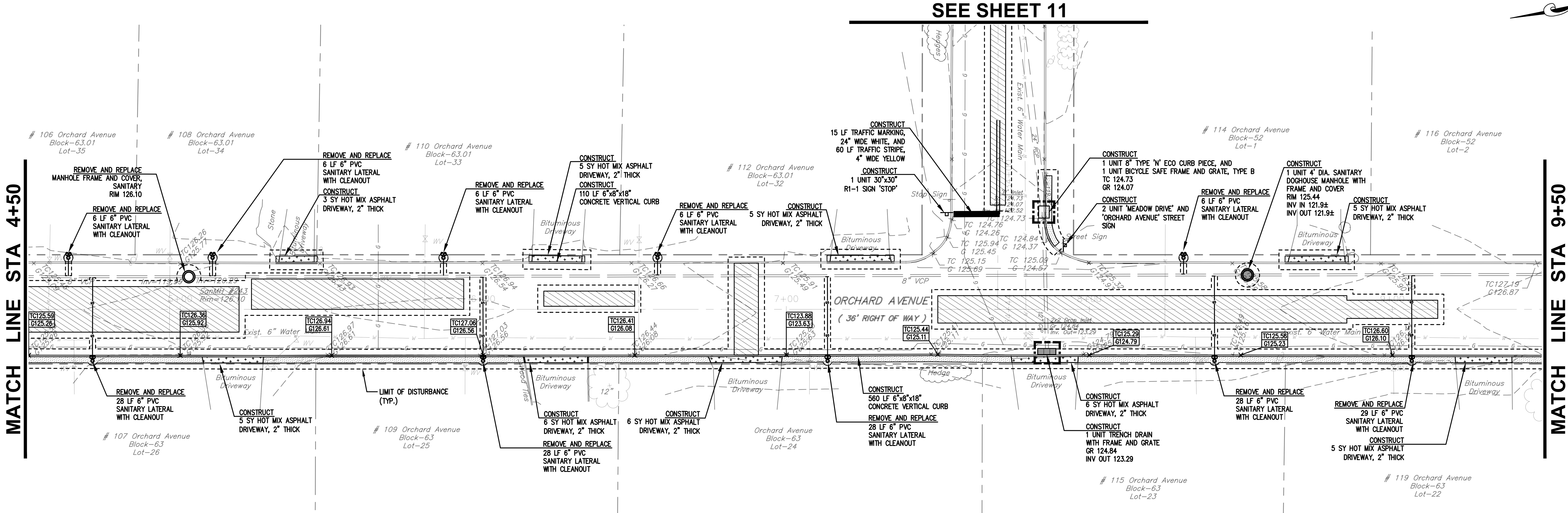
ORCHARD AVENUE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP1	
SHEET No.	4 OF 19

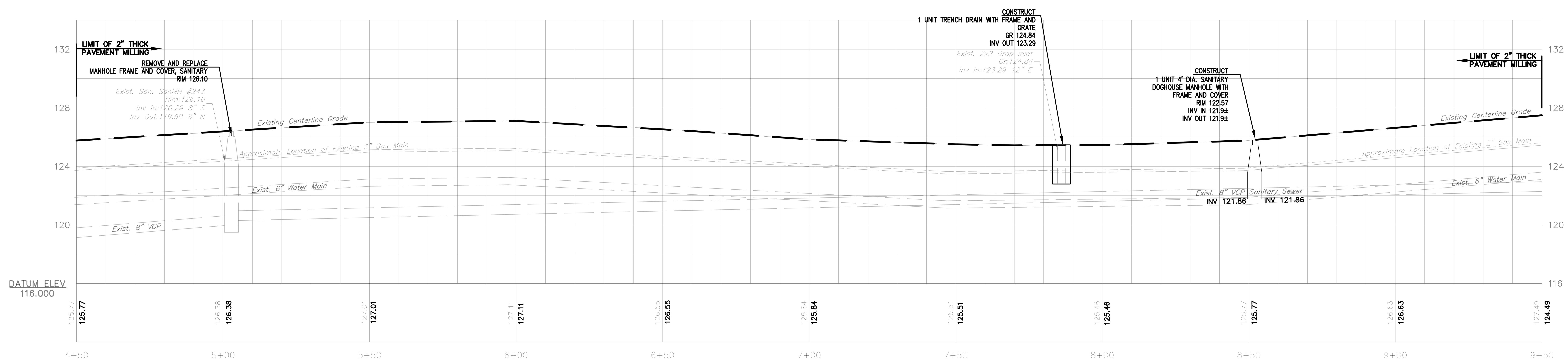


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 4+50 TO STA 9+50):

1,885 SY HMA MILLING, 3" OR LESS
285 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
45 TON HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
190 GAL TACK COAT
440 SY HMA PAVEMENT REPAIR
105 SY FERTILIZING AND SEEDING, TYPE A-3
105 SY TOPSOIL SPREADING, 5" THICK



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
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- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
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NO.	DATE	REVISIONS	BY	CHECKED
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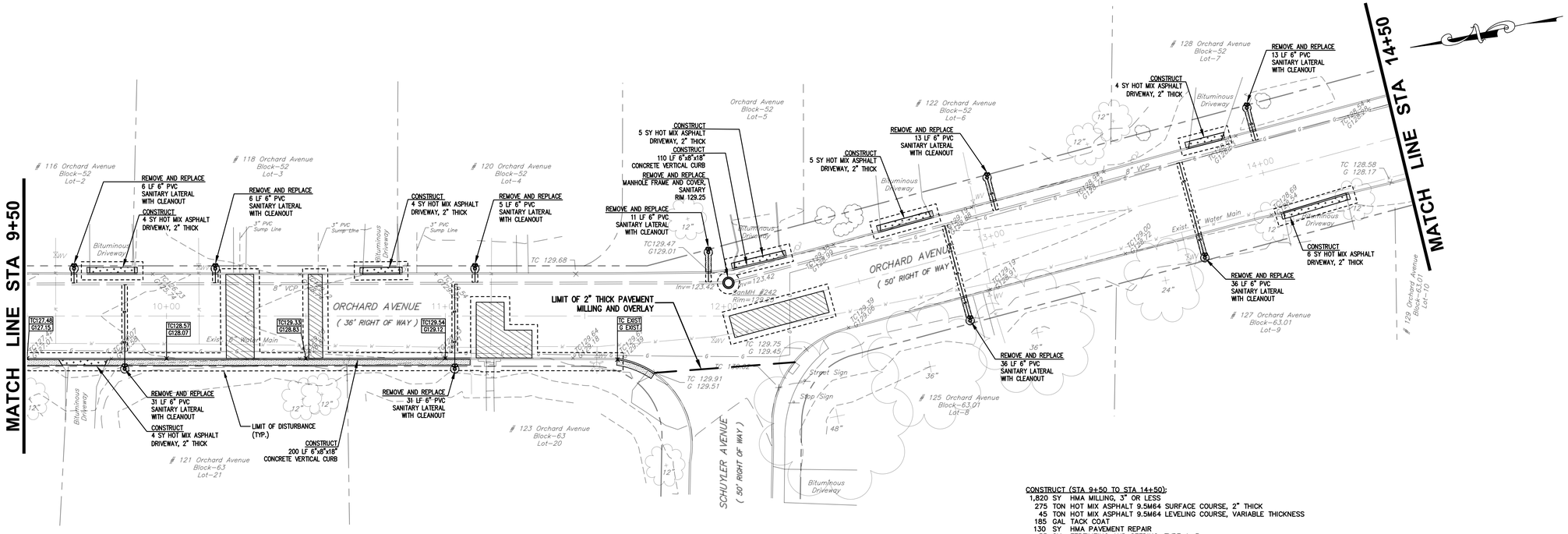
ORCHARD AVENUE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP2	
SHEET No. 5 OF 19	



PLAN VIEW

SCALE: 1"=20'

PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

CONSTRUCT (STA 9+50 TO STA 14+50):

1,820	SY	HMA MILLING, 3" OR LESS
275	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
45	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
185	GAL	TACK COAT
130	SY	HMA PAVEMENT REPAIR
55	SY	FERTILIZING AND SEEDING, TYPE A-3
55	SY	TOPSOIL SPREADING, 5" THICK

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
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- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
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8. ALL BUILDINGS, SURFACE AND SUBSURFACE IMPROVEMENTS, ON OR ADJACENT TO THE SITE ARE NOT NECESSARILY SHOWN.
9. HORIZONTAL DATUM BASED UPON GPS OBSERVATIONS (NAD 83).
10. VERTICAL DATUM BASED UPON GPS OBSERVATIONS (NAVD 88) BENCHMARKS AS SHOWN.

CONSTRUCTION NOTES:

1. EXISTING ASPHALT AND CONCRETE DRIVEWAYS TO BE SAW CUT AS NECESSARY. NO SEPARATE PAYMENT.
2. ALL UTILITY VALVE BOXES, MANHOLES, CASTING, COVERS, CONTROL BOXES, ETC. WITHIN THE PROJECT AREA SHALL BE RESET AS REQUIRED.
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4. THE TEMPORARY RIDING SURFACE OF ALL TRENCHES SHALL BE COLD PATCHED OR BASE PAVED PRIOR TO VEHICULAR ACCESS.

ADDITIONAL NOTES:

1. EXACT LOCATION AND EXTENT OF PAVEMENT BASE REPAIRS TO BE DETERMINED IN THE FIELD BY ENGINEER AFTER MILLING OF ROADWAY.
2. EXISTING UTILITY INFORMATION SHOWN IS APPROXIMATE AND CONTRACTOR TO FIELD VERIFY THROUGH UTILITY MARK-OUT, TEST HOLES (IF AND WHERE DIRECTED) AND FIELD INVESTIGATION AS LOCATIONS, DEPTHS, SIZE, AND QUANTITIES MAY VARY FROM THAT SHOWN ON PLANS.
3. TEMPORARY STOCKPILING ON PAVED SURFACES/ROADWAYS WILL NOT BE PERMITTED.
4. CONTRACTOR TO IMMEDIATELY TRUCK OUT EXCAVATED MATERIAL TO A PROPER OFF-SITE DISPOSAL LOCATION. CONTRACTOR TO FOLLOW PROPER DISPOSAL GUIDELINES AS OUTLINED BY THE MERCER COUNTY SOIL CONSERVATION DISTRICT. OFF-SITE DISPOSAL LOCATION TO BE DETERMINED DURING CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Woman Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100

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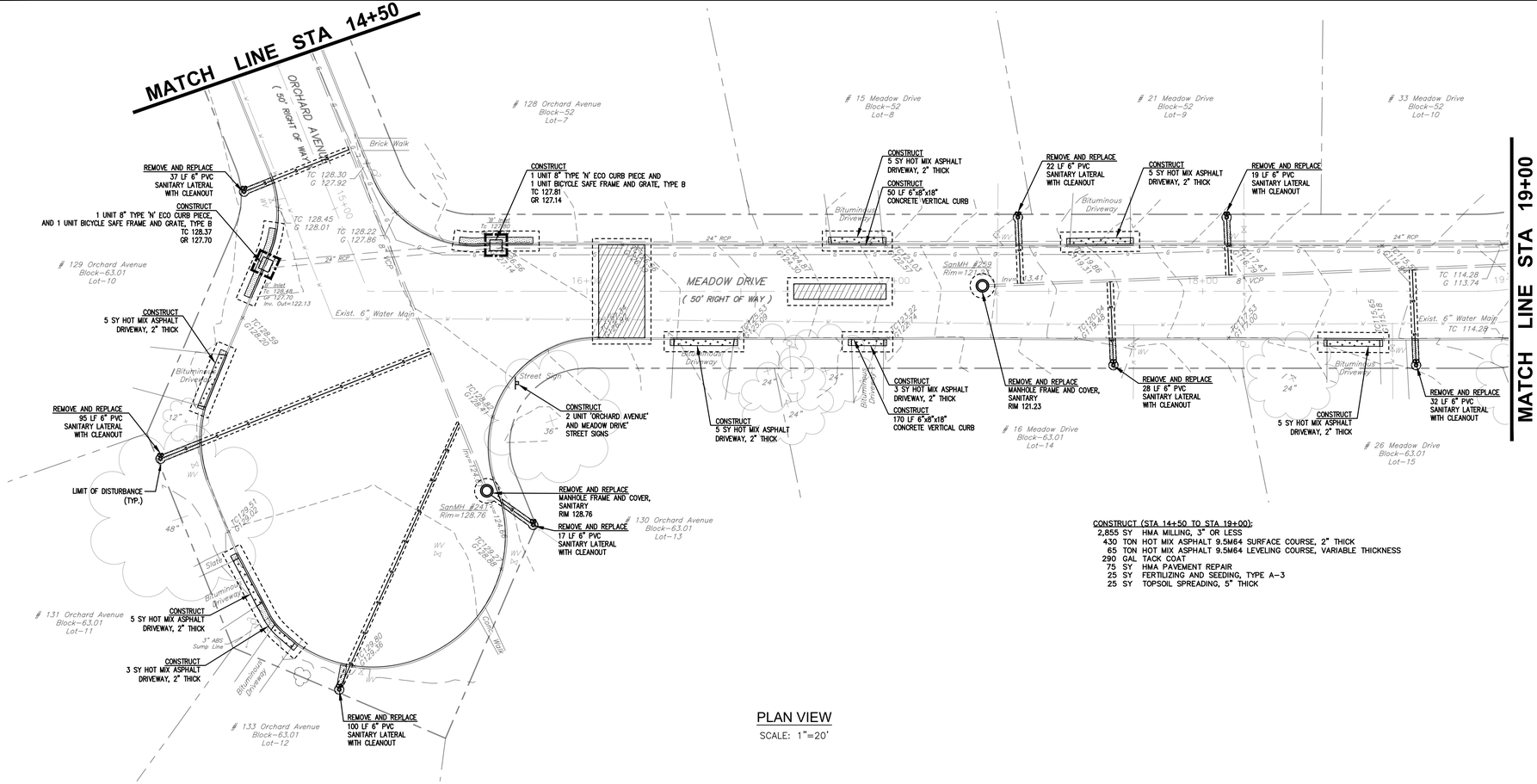
TED W. PIVOVARNICK, PLS
LICENSED PROFESSIONAL LAND SURVEYOR
STATE OF NEW JERSEY LIC. No. 24GS03586800

ORCHARD AVENUE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE:	2/1/2023
SCALE:	1"=20'
DWG. No.:	PP3
SHEET No.	6 OF 19

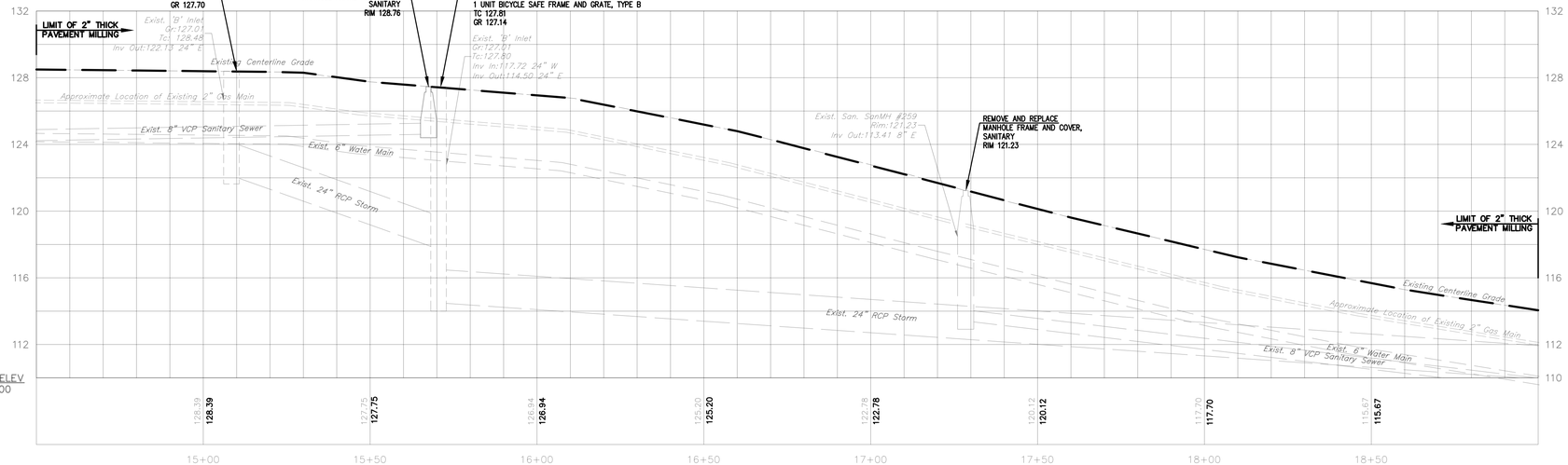


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 14+50 TO STA 19+00):

2,855	SY	HMA MILLING, 3" OR LESS
430	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
65	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
290	GAL	TACK COAT
75	SY	HMA PAVEMENT REPAIR
25	SY	FERTILIZING AND SEEDING, TYPE A-3
25	SY	TOPSOIL SPREADING, 5" THICK



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STONE DRIVEWAY REPAIR
- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
- 84.00 PROPOSED ELEVATION
- PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER MAIN FITTING
- PROPOSED MANHOLE, FRAME, AND COVER
- PROPOSED MANHOLE FRAME AND COVER

GENERAL NOTES:

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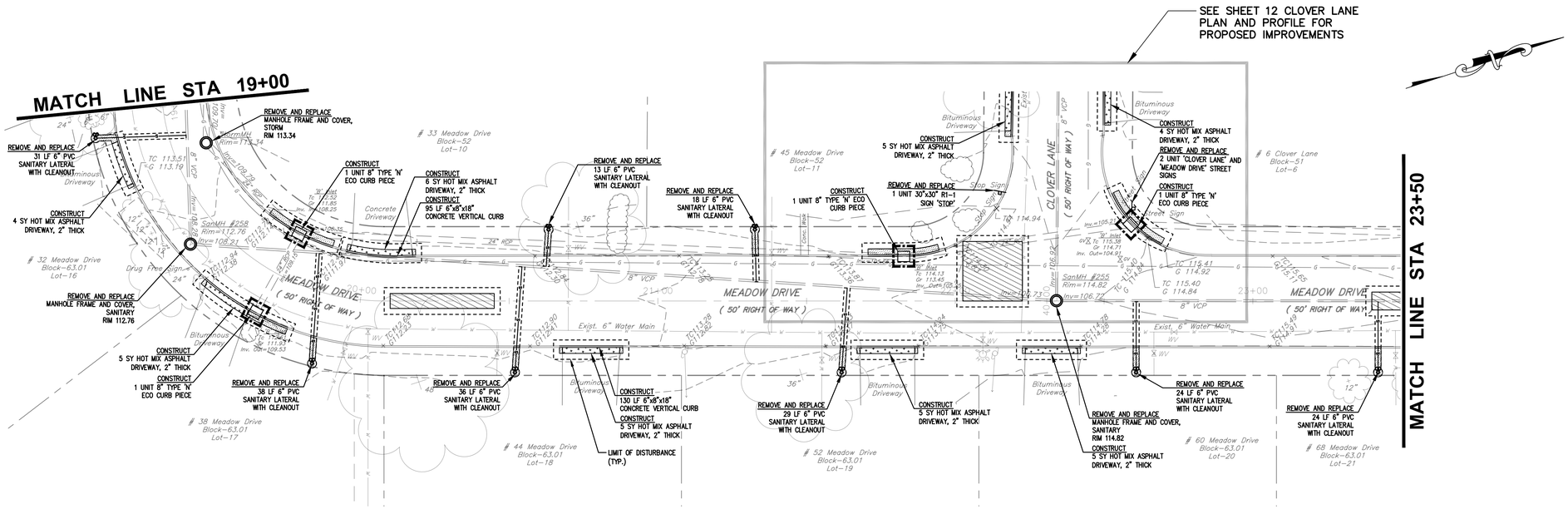
IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

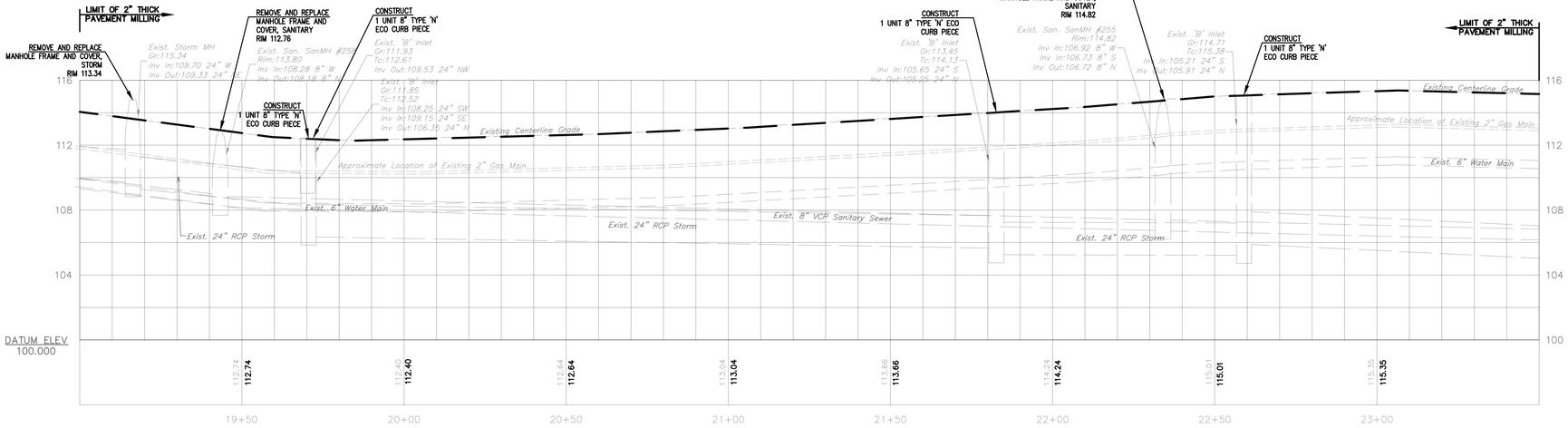
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP4	
SHEET No.	7 OF 19



PLAN VIEW

SCALE: 1"=20'



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

CONSTRUCT (STA 19+00 TO STA 23+50):

1,760 SY HMA MILLING, 3" OR LESS
285 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
40 TON HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
180 GAL TACK COAT
80 SY HMA PAVEMENT REPAIR
25 SY FERTILIZING AND SEEDING, TYPE A-3
25 SY TOPSOIL SPREADING, 5" THICK

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
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GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

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BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
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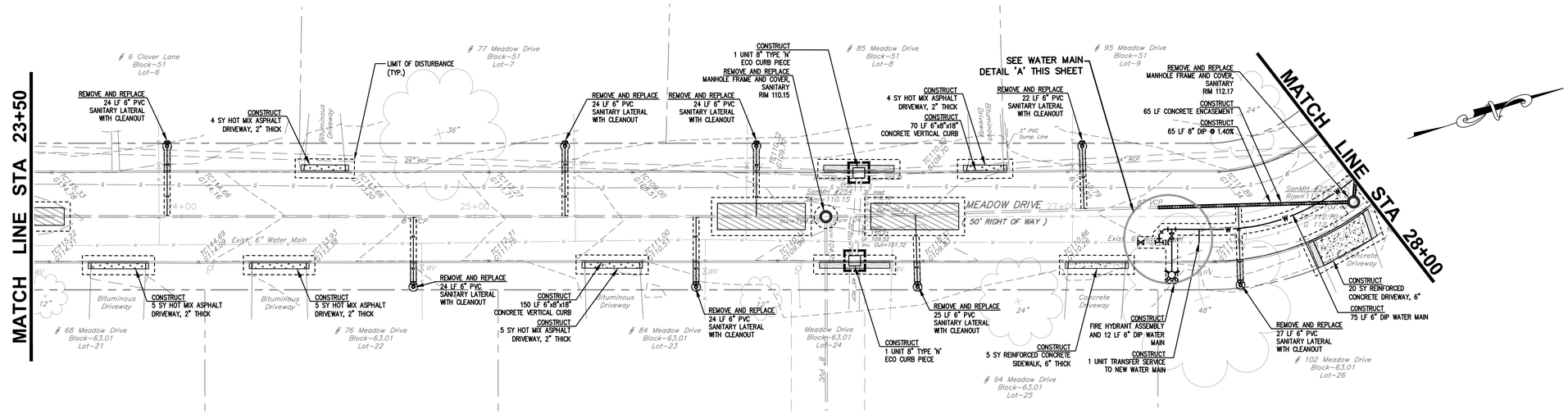
SHEET No.	8 OF 19

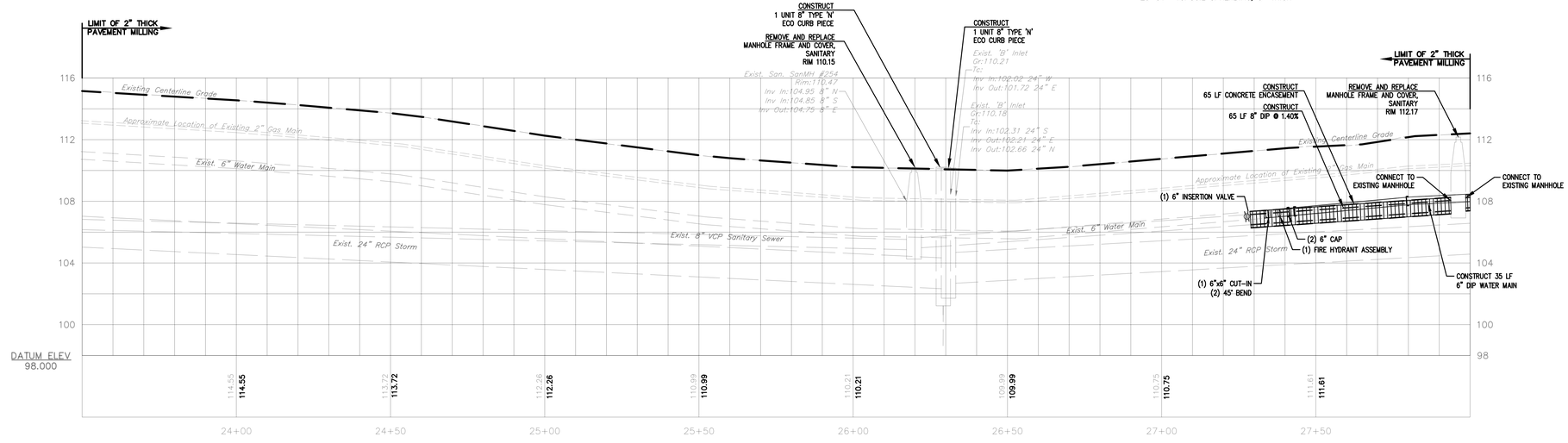


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 23+50 TO STA 28+00):

1,670	SY	HMA MILLING, 3" OR LESS
255	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
40	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
170	GAL	TACK COAT
75	SY	HMA PAVEMENT REPAIR
25	SY	FERTILIZING AND SEEDING, TYPE A-3
25	SY	TOPSOIL SPREADING, 5" THICK



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
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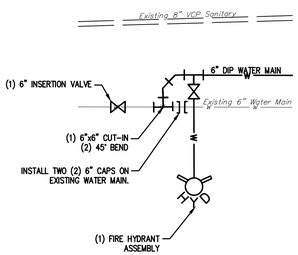

DETAIL 'A'

N.T.S.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- 40 EXISTING CONTOURS
- 41 EXISTING SPOT ELEVATION
- 85.56 x EXISTING TREE
- 15"R RCP EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- TYPE A TYPE B EXISTING INLETS
- W W EXISTING WATER SERVICE
- G G EXISTING GAS SERVICE
- // // EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- WV EXISTING WATER VALVE
- GV EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- SF PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
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ADDITIONAL NOTES:

1. EXACT LOCATION AND EXTENT OF PAVEMENT BASE REPAIRS TO BE DETERMINED IN THE FIELD BY ENGINEER AFTER MILLING OF ROADWAY.
2. EXISTING UTILITY INFORMATION SHOWN IS APPROXIMATE AND CONTRACTOR TO FIELD VERIFY THROUGH UTILITY MARK-OUT, TEST HOLES (IF AND WHERE DIRECTED) AND FIELD INVESTIGATION AS LOCATIONS, DEPTHS, SIZE, AND QUANTITIES MAY VARY FROM THAT SHOWN ON PLANS.
3. TEMPORARY STOCKPILING ON PAVED SURFACES/ROADWAYS WILL NOT BE PERMITTED.
4. CONTRACTOR TO IMMEDIATELY TRUCK OUT EXCAVATED MATERIAL TO A PROPER OFF-SITE DISPOSAL LOCATION. CONTRACTOR TO FOLLOW PROPER DISPOSAL GUIDELINES AS OUTLINED BY THE MERCER COUNTY SOIL CONSERVATION DISTRICT. OFF-SITE DISPOSAL LOCATION TO BE DETERMINED DURING CONSTRUCTION.

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CERTIFICATE OF AUTHORIZATION: 24GA28159100
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Hamilton, New Jersey 08690
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TED W. PIVOVARNICK, PLS
LICENSED PROFESSIONAL LAND SURVEYOR
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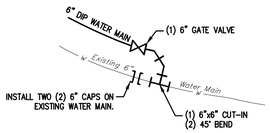
MEADOW DRIVE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP6	
SHEET No.	9 OF 19



DETAIL 'B'

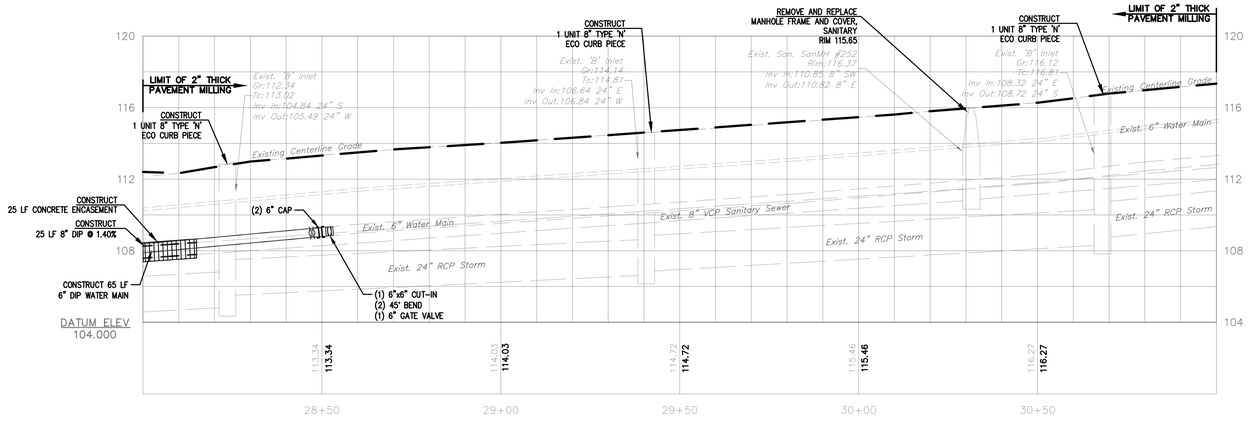
N.T.S.

PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 28+00 TO STA 31+00):

1,120	SY	HMA MILLING, 3" OR LESS
170	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
30	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
115	GAL	TACK COAT
20	SY	HMA PAVEMENT REPAIR
25	SY	FERTILIZING AND SEEDING, TYPE A-3
25	SY	TOPSOIL SPREADING, 5" THICK



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'

VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STONE DRIVEWAY REPAIR
- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
- 84.00 PROPOSED ELEVATION
- PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER MAIN FITTING
- PROPOSED MANHOLE, FRAME, AND COVER
- PROPOSED MANHOLE FRAME AND COVER

GENERAL NOTES:

1. THIS PLAN REFLECTS EXISTING SITE CONDITIONS AS THE RESULT OF AERIAL PHOTOS, TAX MAPS, AND A FIELD SURVEY PERFORMED BY ROBERTS ENGINEERING GROUP, LLC. DATED SEPTEMBER 18, 2022.
2. RIGHT-OF-WAY AND PROPERTY LINE INFORMATION ARE APPROXIMATE AND ARE BASED UPON TAX MAP INFORMATION AND LIMITED FIELD SURVEYING.
3. THIS PLAN IS NOT INTENDED TO GUARANTEE OWNERSHIP. DOCUMENTS OF RECORD WHICH MAY HAVE BEEN REVIEWED AND CONSIDERED AS PART OF THIS PLAN OF SURVEY ARE NOTED HEREON AND HAVE BEEN OBTAINED BY ROBERTS ENGINEERING GROUP, LLC. THERE MAY EXIST OTHER DOCUMENTS OF RECORD WHICH WOULD AFFECT THIS PLAN.
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8. ALL BUILDINGS, SURFACE AND SUBSURFACE IMPROVEMENTS, ON OR ADJACENT TO THE SITE ARE NOT NECESSARILY SHOWN.
9. HORIZONTAL DATUM BASED UPON GPS OBSERVATIONS (NAD 83).
10. VERTICAL DATUM BASED UPON GPS OBSERVATIONS (NAVD 88) BENCHMARKS AS SHOWN.

CONSTRUCTION NOTES:

1. EXISTING ASPHALT AND CONCRETE DRIVEWAYS TO BE SAW CUT AS NECESSARY. NO SEPARATE PAYMENT.
2. ALL UTILITY VALVE BOXES, MANHOLES, CASTING, COVERS, CONTROL BOXES, ETC. WITHIN THE PROJECT AREA SHALL BE RESET AS REQUIRED.
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IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
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DATE: 2/1/2023	
SCALE: 1"=20'	
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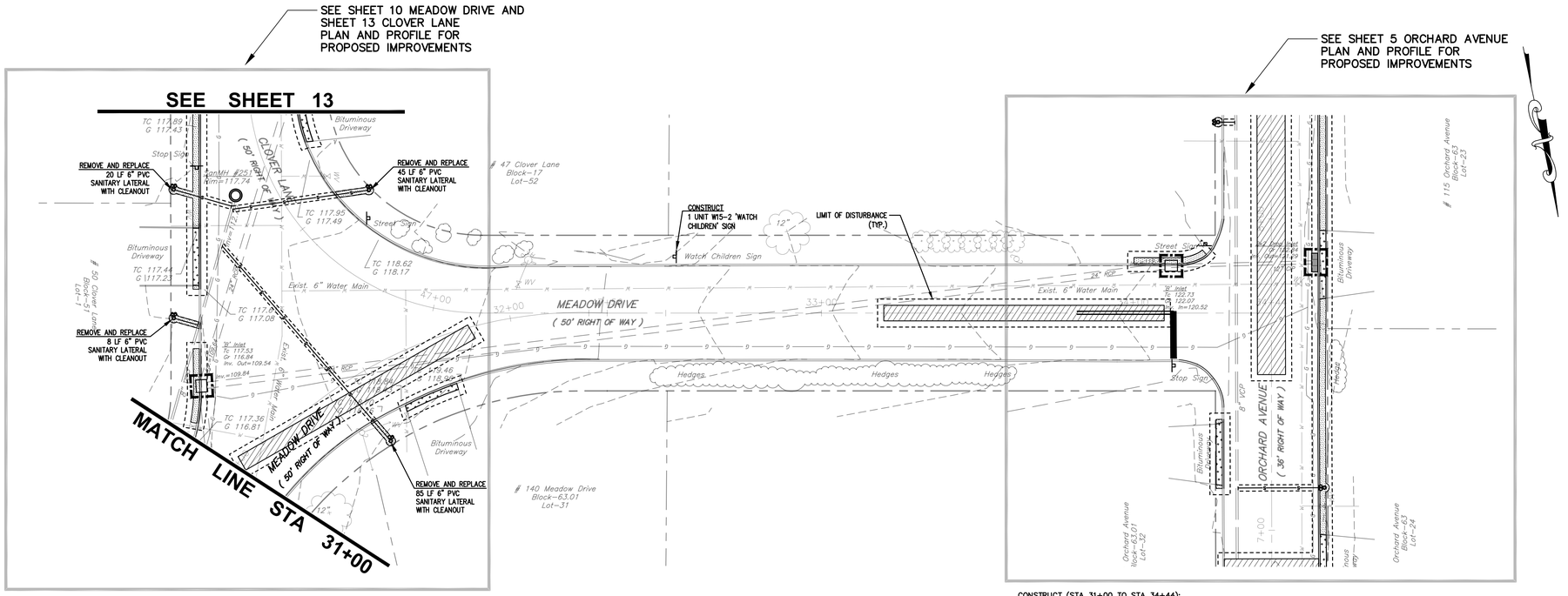
SHEET No.	10 OF 19

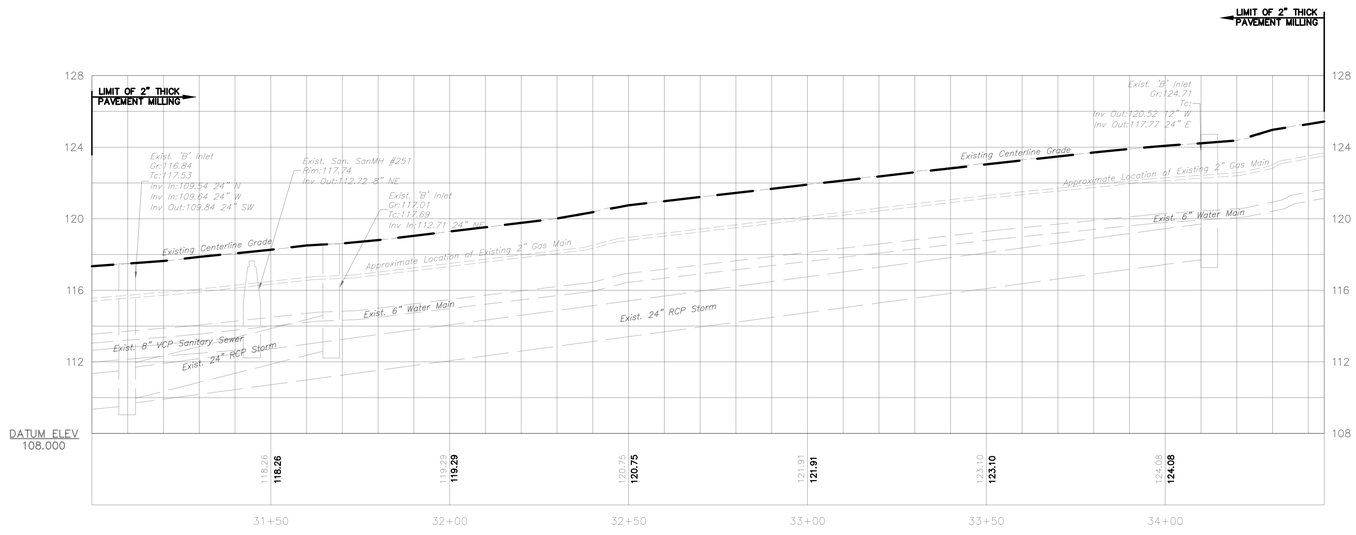


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 31+00 TO STA 34+44):

1,490	SY	HMA MILLING, 3" OR LESS
225	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
35	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
150	GAL	TACK COAT
110	SY	HMA PAVEMENT REPAIR



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'

VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
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- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
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NO.	DATE	REVISIONS	BY	CHECKED

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BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

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SCALE: 1"=20'	
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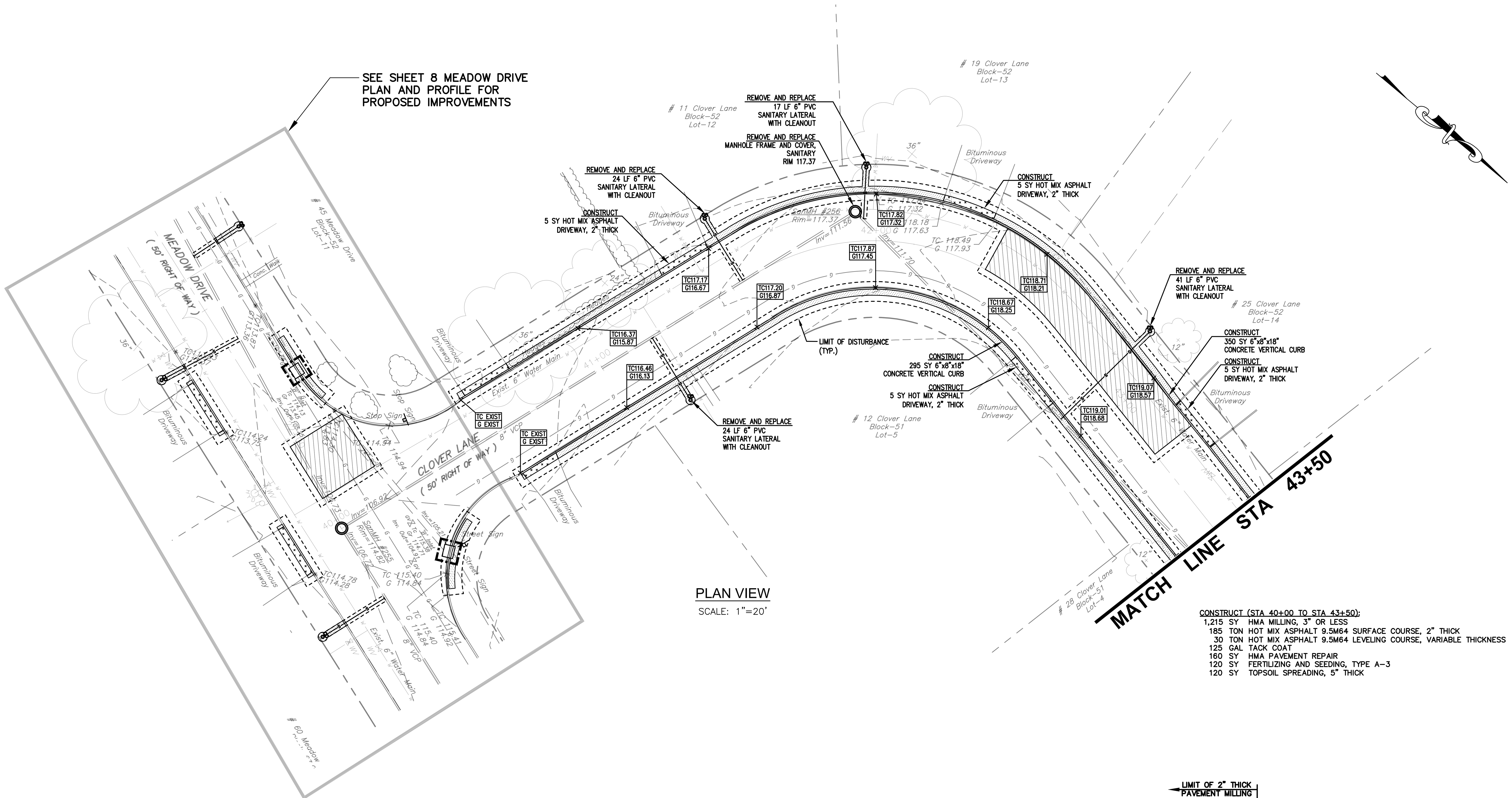
SHEET No.	11 OF 19

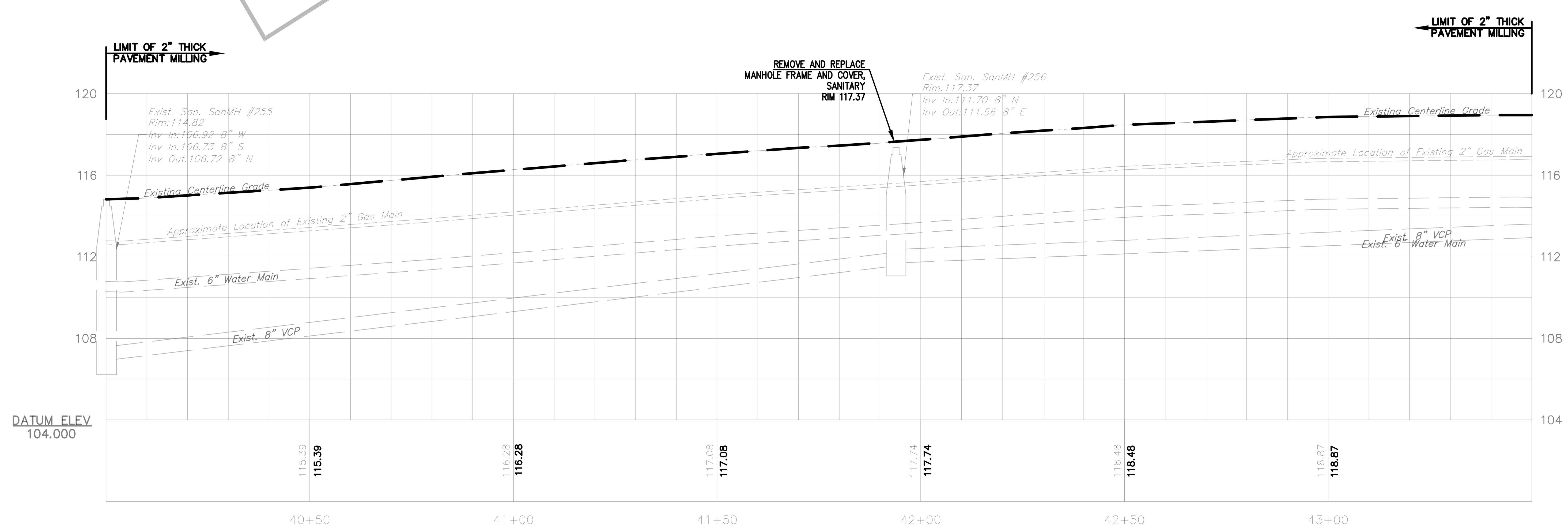


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 40+00 TO STA 43+50):

1,215	SY	HMA MILLING, 3" OR LESS
185	TON	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
30	TON	HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
125	GAL	TACK COAT
160	SY	HMA PAVEMENT REPAIR
120	SY	FERTILIZING AND SEEDING, TYPE A-3
120	SY	TOPSOIL SPREADING, 5" THICK



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VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
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- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
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PROPOSED

- PROPOSED SILT FENCE
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NO.	DATE	REVISIONS	BY	CHECKED
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CLOVER LANE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

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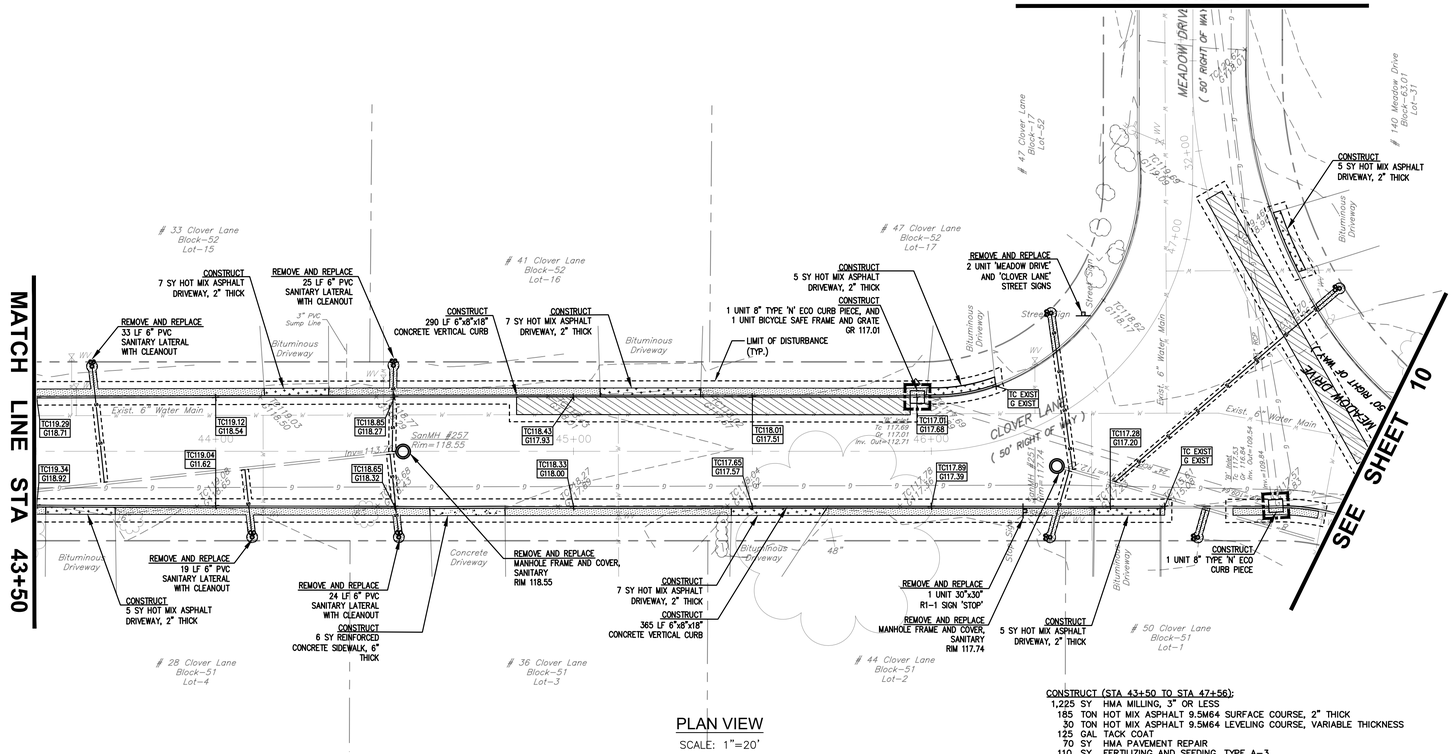
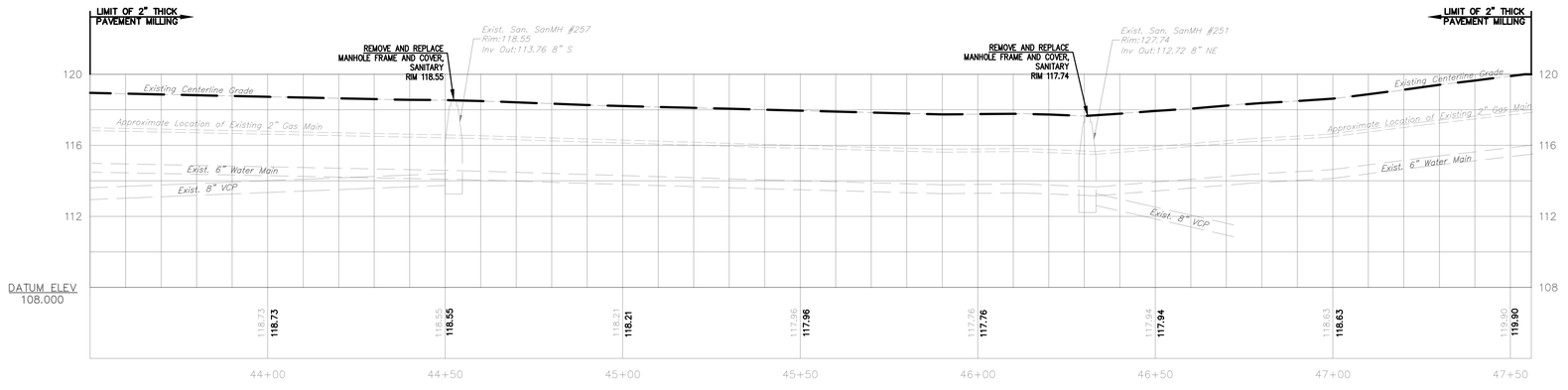


PLAN VIEW

SCALE: 1"=20'

CONSTRUCT (STA 43+50 TO STA 47+56):

1,225 SY HMA MILLING, 3" OR LESS
185 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
30 TON HOT MIX ASPHALT 9.5M64 LEVELING COURSE, VARIABLE THICKNESS
125 GAL TACK COAT
70 SY HMA PAVEMENT REPAIR
110 SY FERTILIZING AND SEEDING, TYPE A-3
110 SY TOPSOIL SPREADING, 5" THICK



PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- 40 EXISTING CONTOURS
- 41 EXISTING SPOT ELEVATION
- 85.56 EXISTING TREE
- 15"ø RCP EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- TYPE A TYPE B EXISTING INLETS
- W W EXISTING WATER SERVICE
- G G EXISTING GAS SERVICE
- // EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- WV EXISTING WATER VALVE
- GV EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- SF PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STONE DRIVEWAY REPAIR
- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- X PROPOSED BUSH OR TREE REMOVAL
- TC84.00 PROPOSED TOP OF CURB ELEVATION
- 84.00 PROPOSED ELEVATION
- W PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER MAIN FITTING
- PROPOSED MANHOLE, FRAME, AND COVER
- PROPOSED MANHOLE FRAME AND COVER

GENERAL NOTES:

1. THIS PLAN REFLECTS EXISTING SITE CONDITIONS AS THE RESULT OF AERIAL PHOTOS, TAX MAPS, AND A FIELD SURVEY PERFORMED BY ROBERTS ENGINEERING GROUP, LLC. DATED SEPTEMBER 18, 2022.
2. RIGHT-OF-WAY AND PROPERTY LINE INFORMATION ARE APPROXIMATE AND ARE BASED UPON TAX MAP INFORMATION AND LIMITED FIELD SURVEYING.
3. THIS PLAN IS NOT INTENDED TO GUARANTEE OWNERSHIP. DOCUMENTS OF RECORD WHICH MAY HAVE BEEN REVIEWED AND CONSIDERED AS PART OF THIS PLAN OF SURVEY ARE NOTED HEREON AND HAVE BEEN OBTAINED BY ROBERTS ENGINEERING GROUP, LLC. THERE MAY EXIST OTHER DOCUMENTS OF RECORD WHICH WOULD AFFECT THIS PLAN.
4. ONLY COPIES OF THE ORIGINAL OF THIS PLAN CLEARLY MARKED WITH THE ENGINEER'S EMBOSSED SEAL SHALL BE CONSIDERED A VALID COPY.
5. BLOCK AND LOT NUMBERS AS SHOWN HEREON ARE BASED UPON THE TAX MAPS OF THE BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY.
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8. ALL BUILDINGS, SURFACE AND SUBSURFACE IMPROVEMENTS, ON OR ADJACENT TO THE SITE ARE NOT NECESSARILY SHOWN.
9. HORIZONTAL DATUM BASED UPON GPS OBSERVATIONS (NAD 83).
10. VERTICAL DATUM BASED UPON GPS OBSERVATIONS (NAVD 88) BENCHMARKS AS SHOWN.

CONSTRUCTION NOTES:

1. EXISTING ASPHALT AND CONCRETE DRIVEWAYS TO BE SAW CUT AS NECESSARY. NO SEPARATE PAYMENT.
2. ALL UTILITY VALVE BOXES, MANHOLES, CASTING, COVERS, CONTROL BOXES, ETC. WITHIN THE PROJECT AREA SHALL BE RESET AS REQUIRED.
3. ANY SEDIMENT WASHED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY.
4. THE TEMPORARY RIDING SURFACE OF ALL TRENCHES SHALL BE COLD PATCHED OR BASE PAVED PRIOR TO VEHICULAR ACCESS.

ADDITIONAL NOTES:

1. EXACT LOCATION AND EXTENT OF PAVEMENT BASE REPAIRS TO BE DETERMINED IN THE FIELD BY ENGINEER AFTER MILLING OF ROADWAY.
2. EXISTING UTILITY INFORMATION SHOWN IS APPROXIMATE AND CONTRACTOR TO FIELD VERIFY THROUGH UTILITY MARK-OUT, TEST HOLES (IF AND WHERE DIRECTED) AND FIELD INVESTIGATION AS LOCATIONS, DEPTHS, SIZE, AND QUANTITIES MAY VARY FROM THAT SHOWN ON PLANS.
3. TEMPORARY STOCKPILING ON PAVED SURFACES/ROADWAYS WILL NOT BE PERMITTED.
4. CONTRACTOR TO IMMEDIATELY TRUCK OUT EXCAVATED MATERIAL TO A PROPER OFF-SITE DISPOSAL LOCATION. CONTRACTOR TO FOLLOW PROPER DISPOSAL GUIDELINES AS OUTLINED BY THE MERCER COUNTY SOIL CONSERVATION DISTRICT. OFF-SITE DISPOSAL LOCATION TO BE DETERMINED DURING CONSTRUCTION.

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CERTIFICATE OF AUTHORIZATION: 24GA28159100
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609-586-1141 Fax 609-586-1143
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STATE OF NEW JERSEY LIC. No. 24GS03586800

CLOVER LANE PLAN & PROFILE AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP10	
SHEET No.	13 OF 19

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
- EXISTING INLETS
- EXISTING WATER SERVICE
- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STONE DRIVEWAY REPAIR
- PROPOSED CONCRETE DRIVEWAY REPAIR
- PROPOSED BIT. DRIVEWAY REPAIR
- PROPOSED BASE REPAIR
- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
- PROPOSED BUSH OR TREE REMOVAL
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED ELEVATION
- PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER MAIN FITTING
- PROPOSED MANHOLE, FRAME, AND COVER
- PROPOSED MANHOLE FRAME AND COVER

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NO.	DATE	REVISIONS	BY	CHECKED

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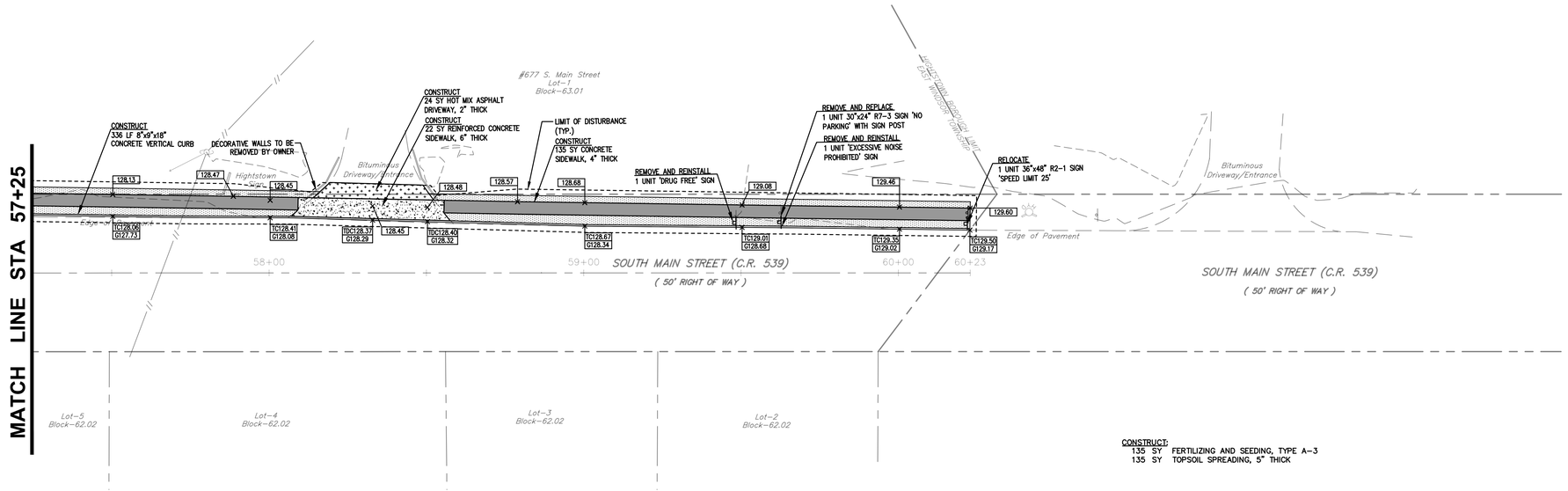
SOUTH MAIN STREET PLAN AND SOIL EROSION & SEDIMENT CONTROL PLAN

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP11	
SHEET No.	14 OF 19



CONSTRUCT:
135 SY FERTILIZING AND SEEDING, TYPE A-3
135 SY TOPSOIL SPREADING, 5" THICK

LEGEND

EXISTING

- EXISTING STREET ROW LINE
- EXISTING CONCRETE CURB
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREE
- EXISTING DRAINAGE PIPE
- EXISTING UTILITY POLE
- EXISTING PARKING LOT LIGHT
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- EXISTING GAS SERVICE
- EXISTING OVERHEAD WIRES
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING STREET LIGHT

PROPOSED

- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED INLET FRAME, GRATE, OR CURB PIECE REPLACEMENT
- PROPOSED CONCRETE VERTICAL CURB
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- TOPSOILING, 5" THICK, FERTILIZING AND SEEDING, TYPE A-3
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GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISIONS	BY	CHECKED

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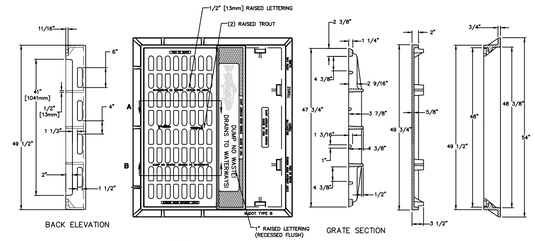
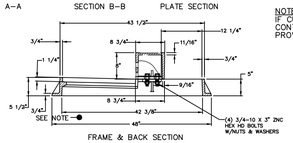
IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

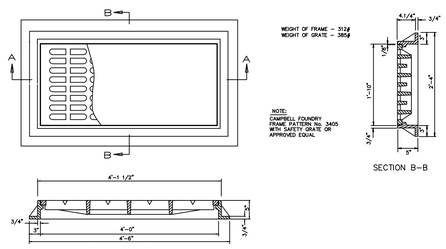
FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: 1"=20'	
DWG. No.: PP12	
SHEET No. 15 OF 19	



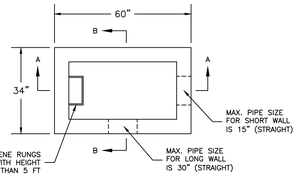
NOTE:
IF CURB HEIGHT IS NOT SHOWN ON PLANS, CONTRACTOR IS TO MEASURE EXISTING AND PROVIDE IN-KIND.



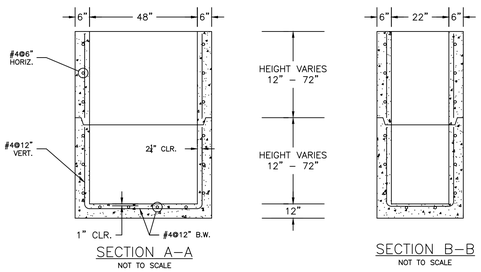
TYPE 'B' FRAME AND GRATE DETAIL
N.T.S.



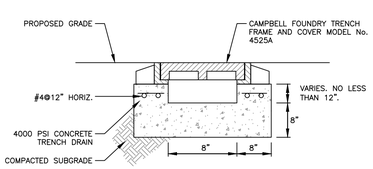
TYPE 'A' INLET FRAME AND GRATE DETAIL
N.T.S.



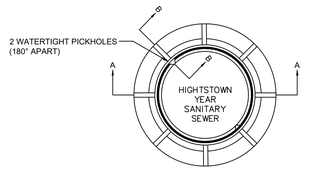
PLAN VIEW
NOT TO SCALE



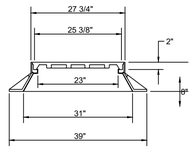
PRECAST TYPE 'A' INLET DETAIL
N.T.S.



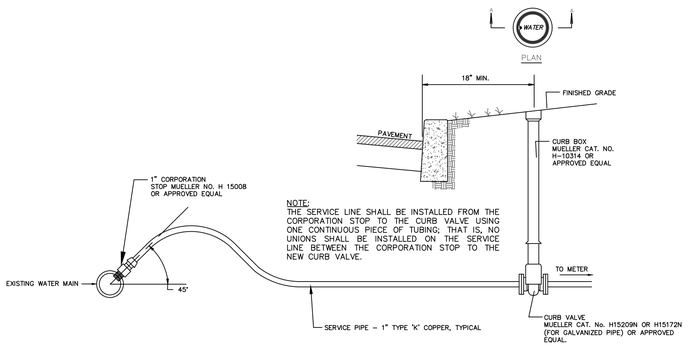
TRENCH DRAIN DETAIL
N.T.S.



NOTES:
1. ALL DIMENSIONS ARE TO BE HELD TO A TOLERANCE OF 1/32" ON ALL CASTINGS TO PERMIT INTERCHANGING OF PARTS.
2. CAMPBELL FOUNDRY #1202B OR EQUAL MIN. WT. 425# WITH FLOW SEAL LID.
3. SUBMIT SHOP DRAWINGS FOR APPROVAL.
4. MANHOLE NUMBERS SHALL BE INDICATED ON CASTINGS, IN A MANNER ACCEPTABLE TO THE BOROUGH ENGINEER.
5. FRAME SHALL BE SET FLUSH WITH THE STABILIZED BASE COURSE PAVING SURFACE ELEVATION. USE RESURFACING MANHOLE EXTENSION RINGS TO ADJUST TO TOP COURSE PAVING SURFACE ELEVATION.

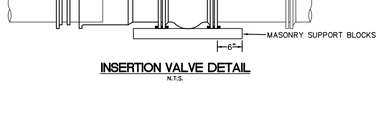


STANDARD FRAME AND COVER DETAIL
N.T.S.

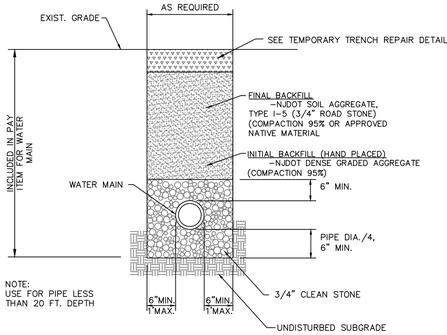


NOTE:
THE SERVICE LINE SHALL BE INSTALLED FROM THE CORPORATION STOP TO THE CURB VALVE USING ONE CONTINUOUS PIECE OF TUBING; THAT IS, NO UNIONS SHALL BE INSTALLED ON THE SERVICE LINE BETWEEN THE CORPORATION STOP TO THE NEW CURB VALVE.

WATER CONNECTION DETAIL
N.T.S.



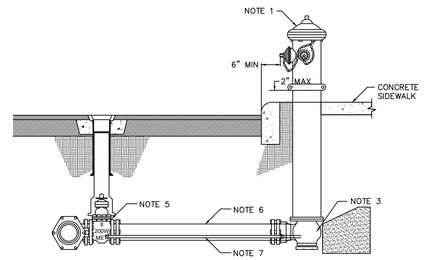
INSERTION VALVE DETAIL
N.T.S.



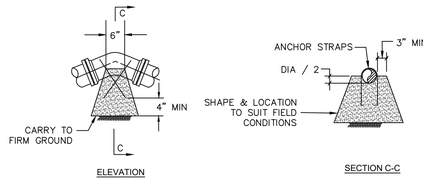
NOTE:
1. THE COST OF PAVEMENT REMOVAL, EXCAVATION, PREPARATION, STONE BEDDING, BACKFILL, COMPACTION, AND DENSE-GRADED AGGREGATE (DGA) SUBBASE, AND ALL ELSE NECESSARY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WATER MAIN.
2. BACKFILL MUST BE COMPACTED IN STRICT-ADHERENCE TO THE PROJECT SPECIFICATIONS.
3. SAND CEMENT BACKFILL IN COUNTY ROAD IS INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE.
4. ALL HDPE WATER MAIN SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED TW, THW, THWN, OR HWMPE INSULATED COPPER, 10 GAUGE OR THICKER WIRE FOR PIPELINE LOCATION PURPOSES BY MEANS OF AN ELECTRONIC LINE TRACER. THE WIRES SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE PIPE. SECTIONS OF WIRE SHALL BE SPLICED TOGETHER USING APPROVED SPLICE CAPS AND WATERPROOF SEALS. TWISTING THE WIRES TOGETHER IS NOT ACCEPTABLE. TRACER WIRE SHALL BE INSTALLED 18-INCHES ABOVE THE TOP OF THE WATER MAIN AND SHALL BE INSTALLED SIMULTANEOUSLY.

WATER MAIN TRENCH IN ROADWAY
N.T.S.

NOTES:
1. HYDRANT SHALL BE MUELLER CENTURION A423 (OR APPROVED EQUAL), 5 ¼" BARREL IN ACCORDANCE W/ ANSI/AWWA C502.
2. STANDPIPE (BREAK – AWAY COUPLING SHALL NOT EXCEED A MAXIMUM OF 5 INCHES FROM THE TOP OF THE CURB TO THE BOTTOM OF THE COUPLING.
3. THE DRAIN VALVE SHALL BE CLEAR OF ANY OBSTRUCTIONS, AND ¾" CLEAN GRAVEL BE PLACED FROM THE BOTTOM TO THE HYDRANT TO A POINT 4" ABOVE THE DRAIN VALVE FOR PROPER DRAINAGE.
4. BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH DETAIL
5. MUELLER RIGHT HAND CLOSE SUPERSEAL RESILIENT WEDGE VALVE
6. 6" DUCTILE IRON CEMENT LINED PIPE PRESSURE CLASS 350
7. ¾" DIAMETER TIE ROD WITH BOLTS – 2 REQUIRED (SIDE VIEW SHOWN), SEE VALVE BOX INSTALLATION DETAIL. JOINT RESTRAINT RETAINER GLANDS MAY BE USED IN PLACE OF TIE RODS.

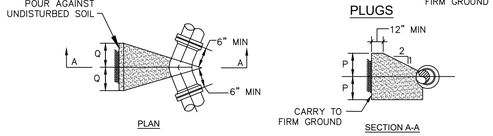


FIRE HYDRANT ASSEMBLY DETAIL
N.T.S.

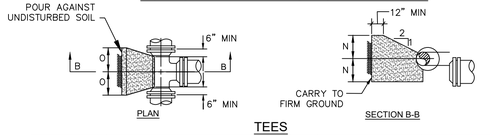


VERTICAL DOWNWARD BENDS

ANCHOR SCHEDULE FOR VERTICAL DOWNWARD BENDS	
SIZE	STRAP SIZE
6" ø	#4 BAR
8" ø	#5 BAR
12" ø	#7 BAR
16" ø	2" X 1/2" FLAT



HORIZONTAL AND VERTICAL UPWARD BENDS



TEES

DESCRIPTION	DIMENSION	4" Ø	6" Ø	8" Ø	10" Ø	12" Ø	14" Ø	16" Ø	20" Ø	24" Ø
TEES	N	0' - 7"	1' - 0"	1' - 3"	1' - 5"	1' - 8"	1' - 11"	2' - 4"	2' - 8"	3' - 2"
	O	0' - 7"	1' - 0"	1' - 10"	1' - 5"	1' - 8"	1' - 11"	2' - 4"	2' - 8"	3' - 2"
90° BENDS	P	0' - 9"	1' - 0"	1' - 3"	1' - 8"	2' - 0"	2' - 3"	2' - 8"	3' - 2"	3' - 9"
	Q	0' - 9"	1' - 4"	1' - 10"	1' - 8"	2' - 0"	2' - 3"	2' - 8"	3' - 2"	3' - 9"
45° BENDS	P	0' - 7"	0' - 9"	1' - 0"	1' - 3"	1' - 5"	1' - 8"	1' - 11"	2' - 4"	2' - 9"
	Q	0' - 7"	0' - 9"	1' - 0"	1' - 3"	1' - 5"	1' - 8"	1' - 11"	2' - 4"	2' - 9"
22½° BENDS	P	0' - 5"	0' - 7"	0' - 9"	0' - 11"	1' - 0"	1' - 2"	1' - 4"	1' - 8"	2' - 0"
	Q	0' - 5"	0' - 7"	0' - 9"	0' - 11"	1' - 0"	1' - 2"	1' - 4"	1' - 8"	2' - 0"
11¼° BENDS	P	0' - 4"	0' - 5"	0' - 6"	0' - 8"	0' - 9"	0' - 10"	1' - 0"	1' - 2"	1' - 5"
	Q	0' - 4"	0' - 5"	0' - 6"	0' - 8"	0' - 9"	0' - 10"	1' - 3"	1' - 2"	1' - 5"
45° BENDS	MIN. CONC.* ANCHORAGE	0.6 CY	1.4 CY	2.5 CY	2.8 CY	3.9 CY	5.2 CY	6.8 CY	10.4 CY	14.9 CY
22½° BENDS	MIN. CONC.* ANCHORAGE	0.3 CY	0.7 CY	1.0 CY	1.4 CY	2.0 CY	2.7 CY	4.6 CY	7.1 CY	9.0 CY
11¼° BENDS	MIN. CONC.* ANCHORAGE	0.2 CY	0.3 CY	0.5 CY	0.7 CY	1.0 CY	1.4 CY	1.8 CY	2.7 CY	3.8 CY
PLUGS	R	1' - 2"	2' - 0"	2' - 4"	2' - 10"	3' - 4"	3' - 10"	4' - 8"	5' - 4"	6' - 4"
	S	1' - 2"	2' - 0"	2' - 4"	2' - 10"	3' - 4"	3' - 10"	4' - 8"	5' - 4"	6' - 4"

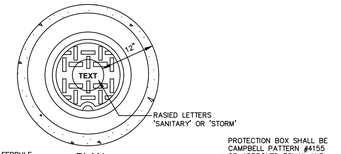
* MIN. CONC. ANCHORAGE WITHOUT BACKFILL AND NO GROUND WATER CONDITION.

NOTE:
THRUST BLOCKS DESIGNED FOR 150 LB PER SQ. IN. TEST PRESSURE & 200 LB PER SQ. FT. SOIL PRESSURE

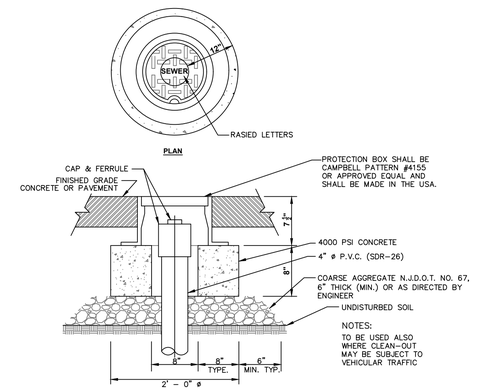
ANCHOR SCHEDULE FOR VERTICAL DOWNWARD BENDS	
SIZE	STRAP SIZE
4" Ø	#3 BAR
6" Ø	#4 BAR
8" Ø	#5 BAR
10" Ø	#6 BAR
12" Ø	#7 BAR
14" Ø	#8 BAR
16" Ø	2" x ½" - FLAT
20" Ø	2 - ½" x ½" - FLAT
24" Ø	3" x ½" - FLAT

NOTE:
CONCRETE THRUST BLOCKS SHALL NOT BE BACKFILLED UNTIL APPROVED BY THE ENGINEER.
POURED CONCRETE THRUST BLOCKS MUST BE ALLOWED TO BECOME STABLE PRIOR TO BACKFILLING AND COMPACTION.

THRUST BLOCK DETAIL
N.T.S.

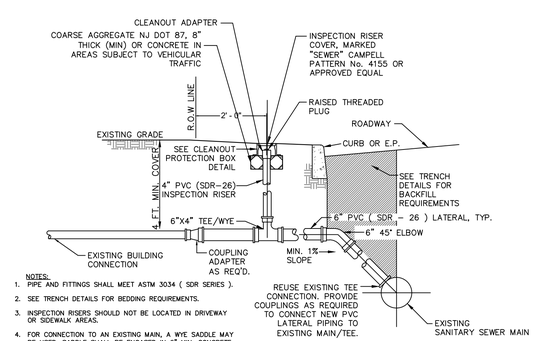


CLEANOUT PROTECTION BOX DETAIL IN UNPAVED AREA
N.T.S.



NOTES:
TO BE USED ALSO WHERE CLEAN-OUT MAY BE SUBJECT TO VEHICULAR TRAFFIC

SANITARY CLEANOUT PROTECTION BOX IN SIDEWALK OR PAVED AREA
N.T.S.



NOTES:
1. PIPE AND FITTINGS SHALL MEET ASTM 3034 (SDR SERIES).
2. SEE TRENCH DETAILS FOR BEDDING REQUIREMENTS.
3. INSPECTION RISERS SHOULD NOT BE LOCATED IN DRIVEWAY OR SIDEWALK AREAS.
4. FOR CONNECTION TO AN EXISTING MAIN, A WYE SADDLE MAY BE USED. SADDLE SHALL BE ENCASED IN 6" MIN. CONCRETE (4000 PSI) AND SHALL UTILIZE STAINLESS STEEL STRAPS. NO BOLTED CONNECTIONS SHALL BE PERMITTED. SADDLES ARE PROHIBITED IN NEW CONSTRUCTION. NO ADDITIONAL PAYMENT.
5. CONTRACTOR IS AUTHORIZED TO INSTALL A 6" PVC SDR-26 LATERAL CONNECTION WHERE EXISTING 6" LATERAL EXISTS.

SANITARY SERVICE LATERAL CONNECTION DETAIL
N.T.S.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Women Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100

Carmela Roberts
CARMELA ROBERTS, PE
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LIC. No. 24GE03441900

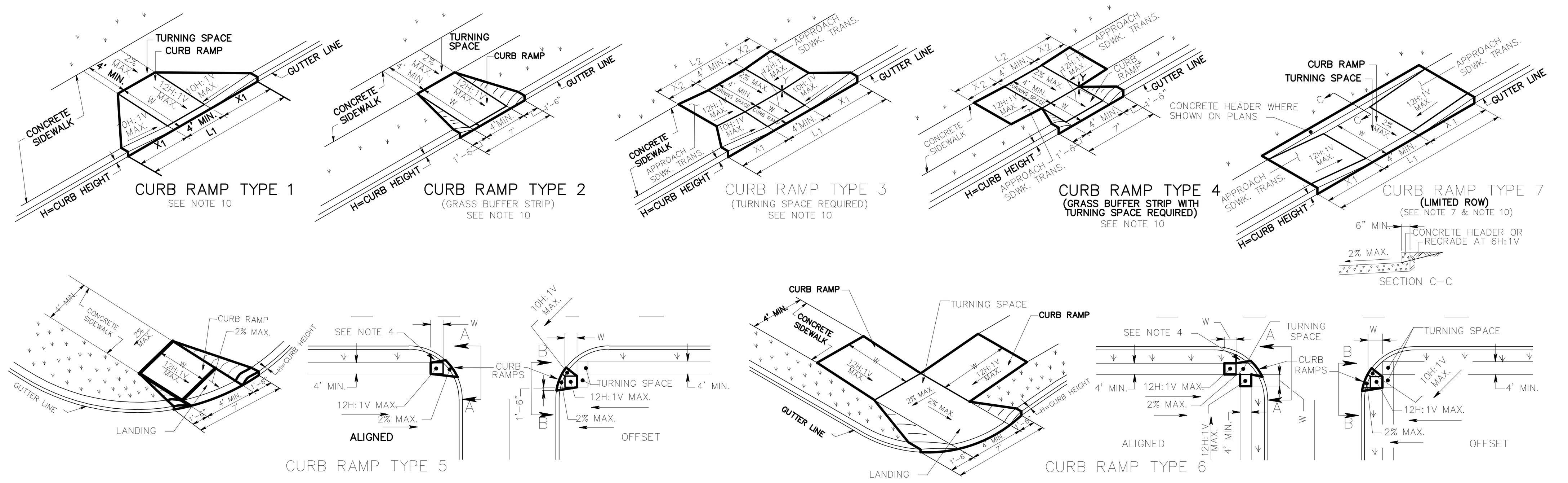
1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

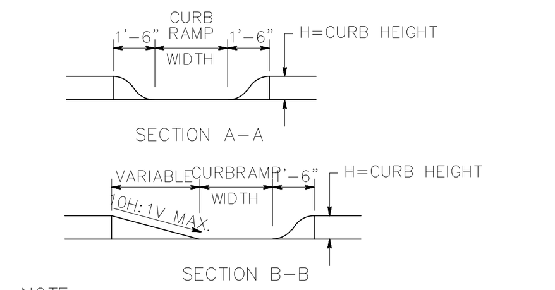
CONSTRUCTION DETAILS

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

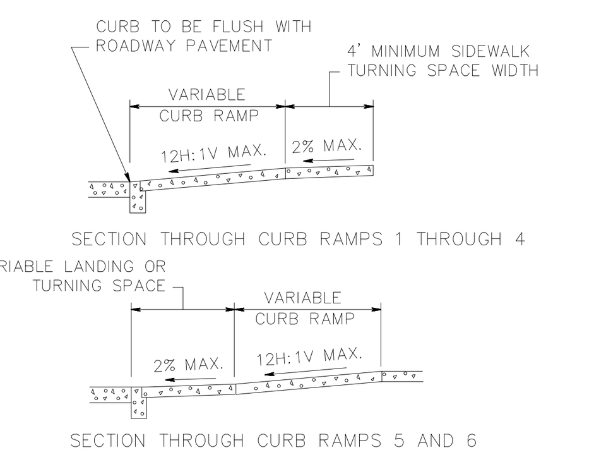
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: NONE	
DWG. No.: CD1	
SHEET No.	16 OF 19

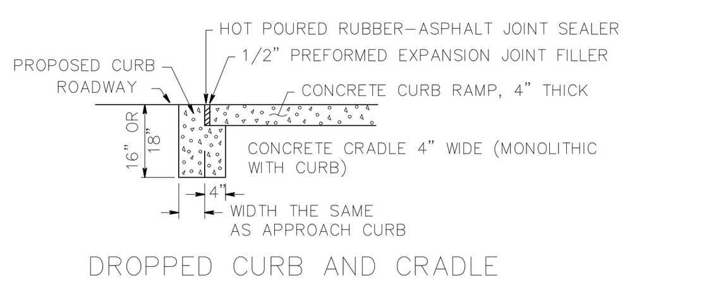




NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).

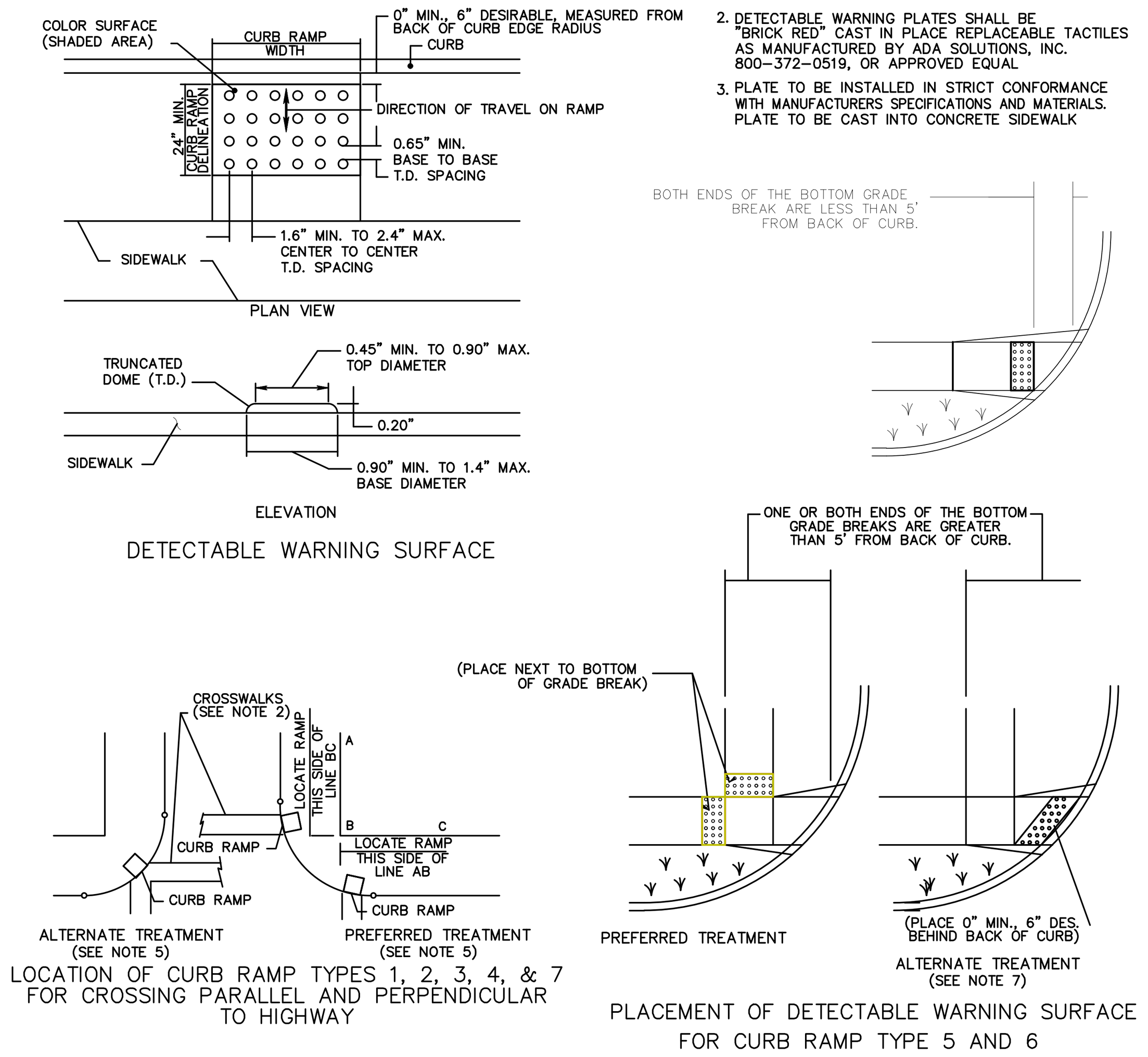


NOTES:
1. KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
2. FOR DIMENSIONS SEE CD–606–3 AND CD–606–4
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT THE ENTIRE WIDTH OF THE RAMP (4 FEET MIN.) AT ALL CURB RAMPS.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
8. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
9. THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X_2 IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.
10. CURB RAMP TYPE 1 THROUGH 7 ARE NORMALLY PLACED ON THE RADIUS RETURN AT THE INTERSECTION AND ON A TANGENT SECTION AS DRAWN.



CURB RAMP DETAILS
N.T.S.

1. DETECTABLE WARNING PLATES TO BE INSTALLED ON HANDICAP RAMP AS PER RAMP DETAIL.
2. DETECTABLE WARNING PLATES SHALL BE "BRICK RED" CAST IN PLACE REPLACEABLE TACTILES AS MANUFACTURED BY ADA SOLUTIONS, INC. 800–372–0519, OR APPROVED EQUAL
3. PLATE TO BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURERS SPECIFICATIONS AND MATERIALS. PLATE TO BE CAST INTO CONCRETE SIDEWALK

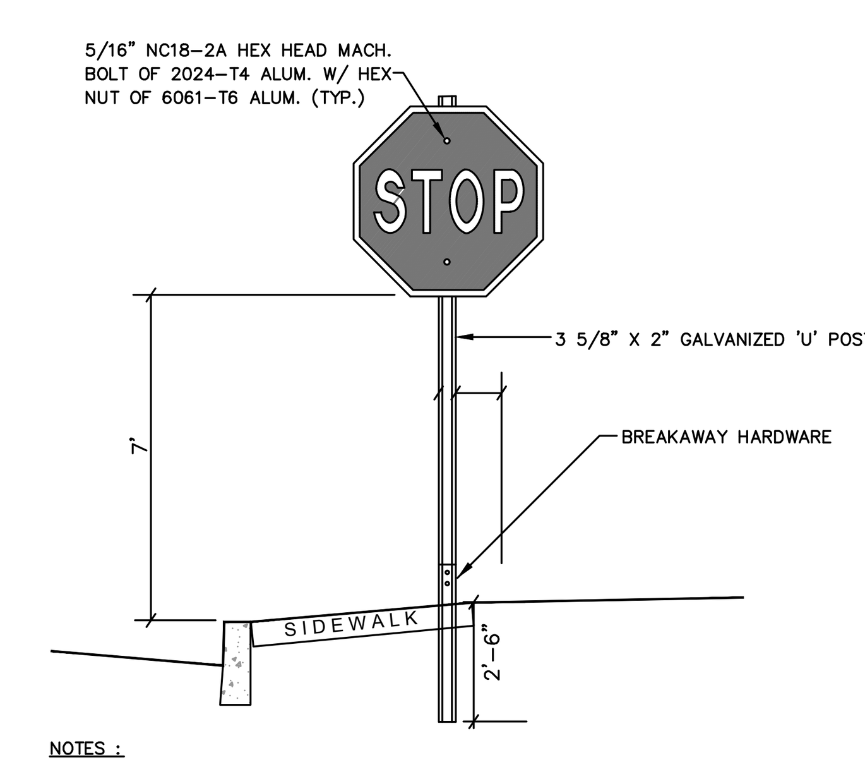


NOTES:
1. KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
2. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
3. FOR NARROW ISLAND WIDTH, SEE PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS DETAIL.
4. FOR MEDIUM AND LARGE ISLAND WIDTH, SEE CURB RAMP TYPE 1 ON NJDOT DRAWING CD–606–1.
5. CONSTRUCT CURB RAMP TYPES 1, 2, 3, 4, & 7 PERPENDICULAR TO CURBLINE, AS SHOWN.
6. IF A CURB RAMP IS REQUIRED, THE LOCATION OF THE DETECTABLE WARNING SURFACE MUST BE AT THE BOTTOM OF THE RAMP AND WITHIN THE REQUIRED DISTANCE FROM THE RAIL.
7. A STANDARD DETECTABLE WARNING SURFACE (DWS) IS NOT AVAILABLE TO FIT THIS APPLICATION, AND THEREFORE ONE WILL NEED TO BE CUSTOMIZED. THE DWS SHOULD COVER THE ENTIRE WIDTH OF THE RAMP. THE ROWS OF DOMES ON THE DWS SHOULD FOLLOW THE DIRECTION OF TRAVEL OF THE RAMP, SO PEDESTRIANS WHO USE MOBILE DEVICES CAN TRACK BETWEEN THE DOMES.

ACCESSIBLE RAMP DELINEATION DETAIL
N.T.S.

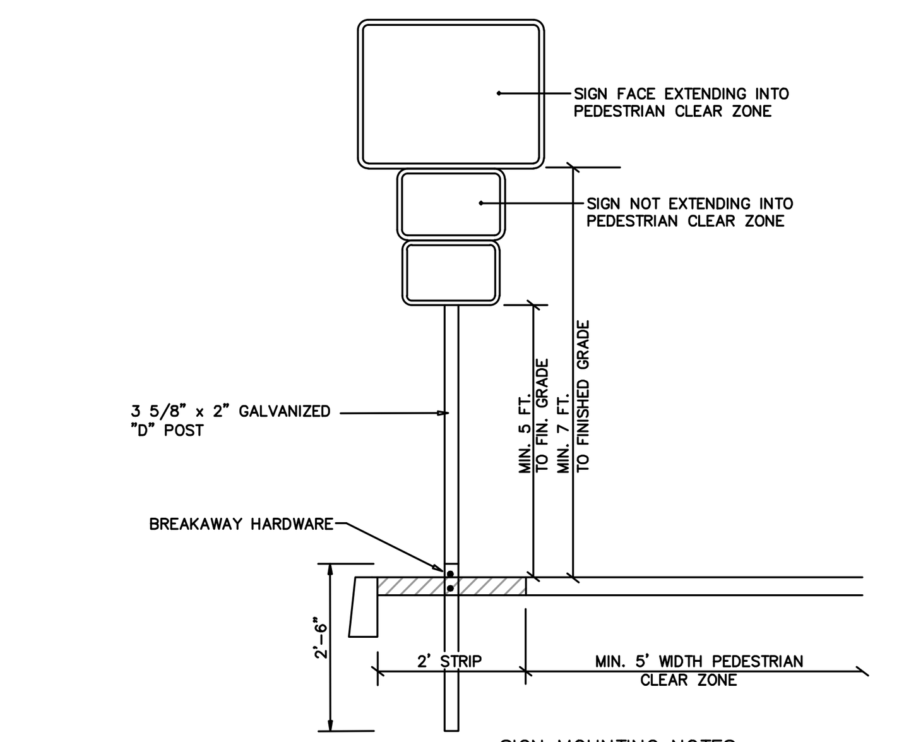
WARNING/REGULATORY SIGN LIST

DESCRIPTION	M.U.T.C.D. SIGN DESIGNATION	QUANTITY	SIZE
STOP	R1-1	4	30"x30"
SPEED LIMIT	R2-1	1	24"x30"
SPEED LIMIT	R2-1	1	36"x48"
NO PARKING	R7-3	1	30"x24"
WATCH CHILDREN	W15-2	2	36"x36"x36"



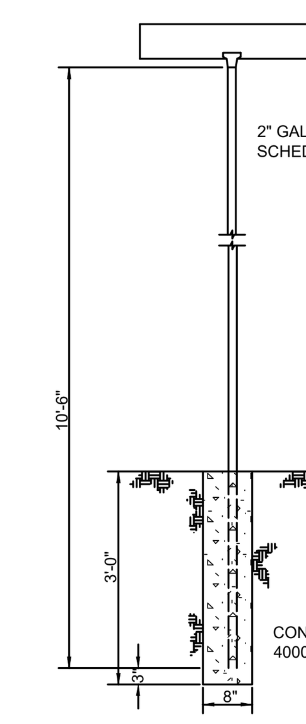
NOTES :
1.) ALL SIGN INSTALLATION SHALL CONFORM TO N.J.D.O.T. STD. SPECIFICATIONS
2.) A RESILENT ASBESTOS OR FIBER 5/16" I.D. WASHER SHALL BE PROVIDED BETWEEN THE BOLT AND THE SIGN FACE
3.) SIGN PLACEMENT SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

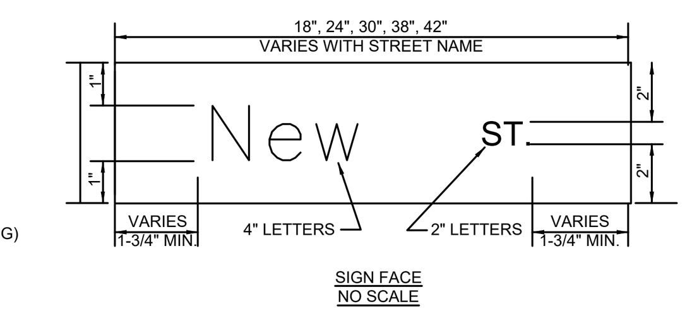
WARNING/REGULATORY SIGN DETAIL
N.T.S.



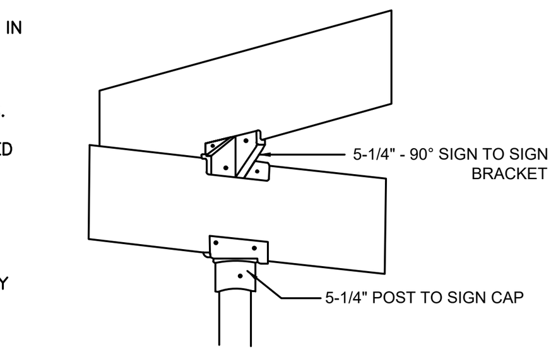
SIGN MOUNTING NOTES:
1.) SIGNS MOUNTED WITH ANY PORTION OF THE SIGN FACE INTRUDING INTO THE PEDESTRIAN CLEAR ZONE SHALL BE INSTALLED AT LEAST 7 FT. MEASURE FROM THE BOTTOM OF THE SIGN TO FINISH GRADE.
2.) SIGNS MOUNTED WITH NO PORTION OF THE SIGN FACE INTRUDING INTO THE PEDESTRIAN CLEAR ZONE SHALL BE INSTALLED AT LEAST 5 FT. MEASURED FROM THE BOTTOM OF THE SIGN TO FINISHED GRADE.
3.) OVERHEAD SIGNS, OR ANY SIGN MOUNTED WITH ANY PORTION OF THE SIGN FACE EXTENDING INTO ANY VEHICULAR MOVEMENT LANE, SHALL PROVIDE A VERTICAL CLEARANCE OF NOT LESS THAN 17 FT. TO THE BOTTOM OF THE SIGN.
4.) SIGN PLACEMENT SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5.) THE COST OF THE POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR SIGNAGE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR FURNISHING AND INSTALLATION OF THE POST.

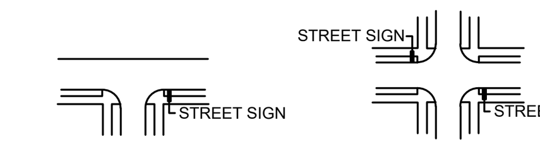
SIGN REPLACEMENT DETAIL
N.T.S.



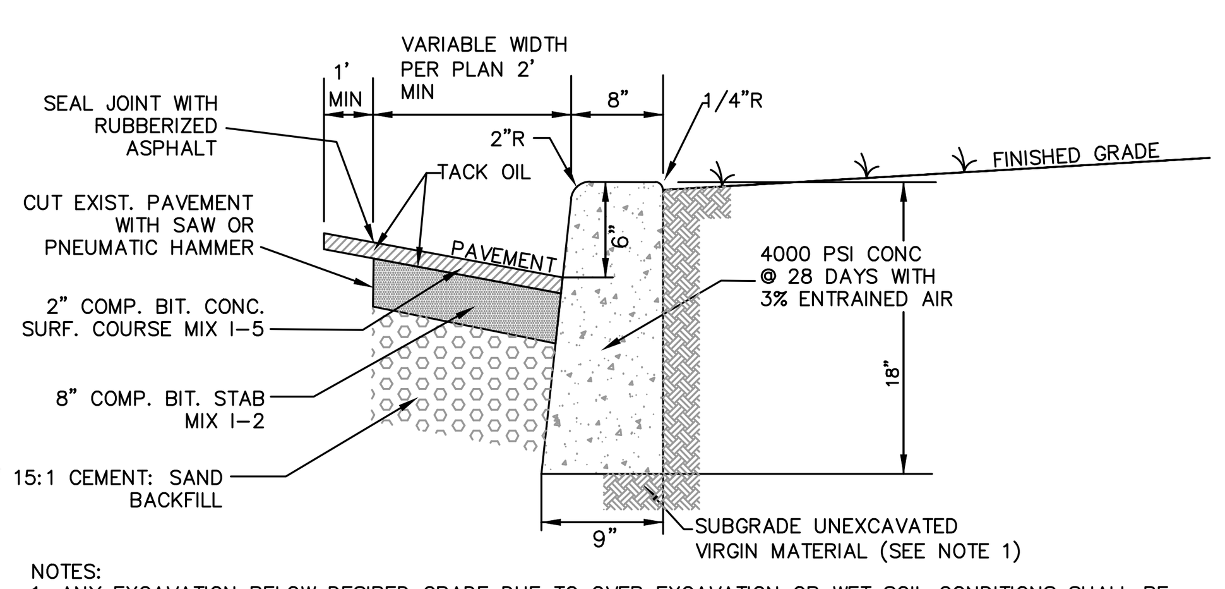


NOTES
1. STANDARD PROCEDURE IS TO CUT IN HALF A 21' STANDARD GALVANIZED PIPE AND MOUNT THE SIGN ON THE UN–THREADED END BY THE 5–1/4" CAP USING FOUR 5/16" SET SCREWS.
2. SIGN BLADES TO BE .080 ANODIZED EXTRUDED ALUMINUM.
3. SIGN FACE TO BE BLACK BACKGROUND WITH WHITE LETTERING AND WHITE PERIMETER BORDER.
4. SIGN POSTS SHALL BE BREAKAWAY AND SHALL MEET MUTCD REQUIREMENTS.





TYPICAL STREET SIGN DETAIL
N.T.S.



NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN STONE.

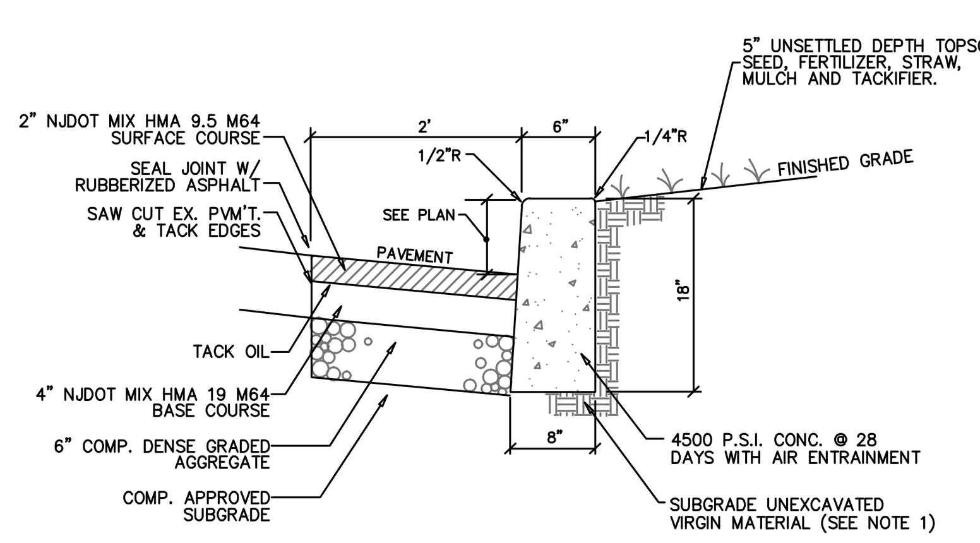
2. EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AT AND ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREFORMED EXPANSION JOINT FILLER, 1/2" THICK, CONFORMING TO NEW JERSEY DEPARTMENT OF TRANSPORATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONTRACTION JOINTS SHALL BE PROVIDED EVERY 10'. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB.

3. CURB SHALL BE TEMPORARILY BACKFILLED TO FINISHED GRADE WITH SOIL BEHIND AND STONE ON THE ROAD SIDE AS SOON AS IT HAS ATTAINED SUFFICENT SUPPORTING STRENGTH OR WITHIN 24 HOURS OF POURING (WHICHEVER IS LESS).

4. WHEN NEW CURB IS INSTALLED ALONG AN EXISTING PAVED AREA, THE EXISTING PAVEMENT SHALL BE CUT 2 FEET IN FRONT OF THE NEW CURB FACE IN A STRAIGHT LINE AT A 45 DEGREE ANGLE WITH A CUTTING WHEEL OR PNEUMATIC HAMMER. THE NEW PAVEMENT SHALL BE TACKED AND BUTTED TO THE EXISTING PAVEMENT, IN ACCORDANCE WITH PAVEMENT WIDENING DETAIL.

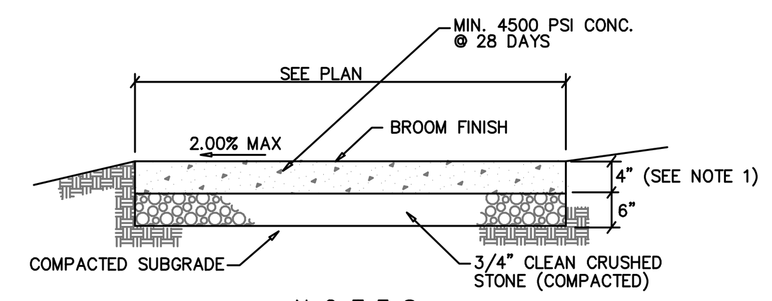
5. FACE FORMING MAY BE USED IF CONTRACTOR CAN DEMSTRATE TO ENGINEER THAT UNDERMINING OF PAVMENT WILL NOT OCCUR AND FURTHER SUBJECT TO APPROVAL BY COUNTY ENGINEER OR COUNTY ROADS. HOWEVER, THE UNIT PRICE BID FOR CURB SHALL INCLUDE 2' MIN. PAVEMENT REPLACEMENT.

8"X9"X18" CONCRETE VERTICAL CURB AND PAVEMENT SECTION - MERCER COUNTY ROAD
N.T.S.



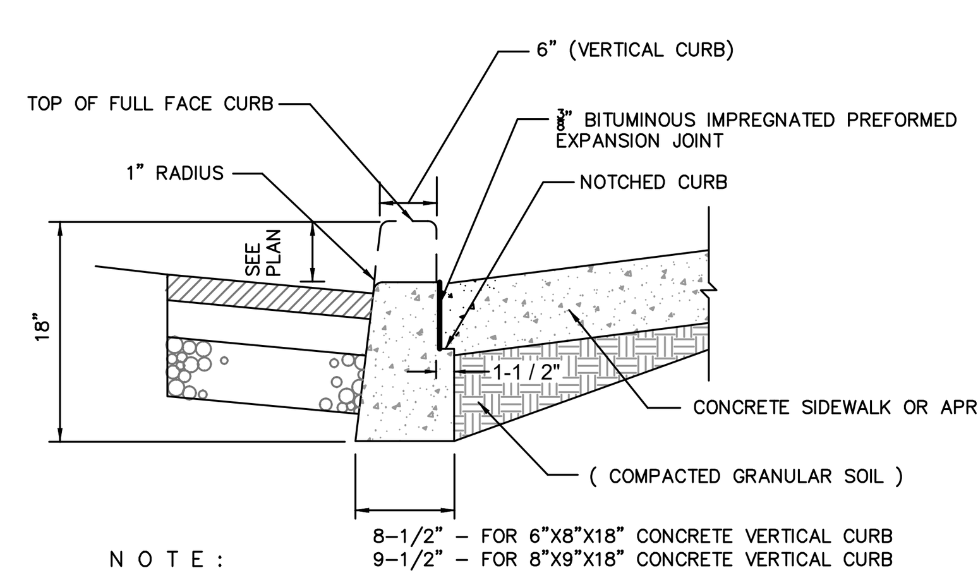
N O T E S:
1.) ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE BOROUGH ENGINEER PRIOR TO POURING.
2.) EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AND AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREMOLDED EXPANSION JOINT FILLER, 1/2" THICK, CONFORMING TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONTRACTION JOINTS SHALL BE PROVIDED EVERY 10'. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB.
3.) CURB SHALL BE TEMPORARILY BACKFILLED TO FINISHED GRADE WITH SOIL BEHIND AND STONE ON THE ROAD SIDE AS SOON AS IT HAS ATTAINED SUFFICIENT SUPPORTING STRENGTH OR WITHIN 24 HOURS OR POURING (WHICH EVER IS LESS).
4.) WHEN NEW CURB IS INSTALLED ALONG AN EXISTING PAVED AREA, THE EXISTING PAVEMENT SHALL BE CUT 2 FEET IN FRONT OF THE NEW CURB FACE IN A STRAIGHT LINE WITH A CUTTING WHEEL OR PNEUMATIC HAMMER. THE NEW PAVEMENT SHALL BE TACKED AND BUTTED TO THE EXISTING PAVEMENT.
5.) THE GRASS AREA BETWEEN THE CURB AND SIDEWALK, AND ALONG OTHER LIMITS OF DISTURBANCE ARE TO RECEIVE 5" OF UNSETTLED DEPTH TOPSOIL, SEED, FERTILIZER, STRAW, MULCH AND TACKIFIER.

6"x8"x18" CONCRETE VERTICAL CURB DETAIL
N.T.S.



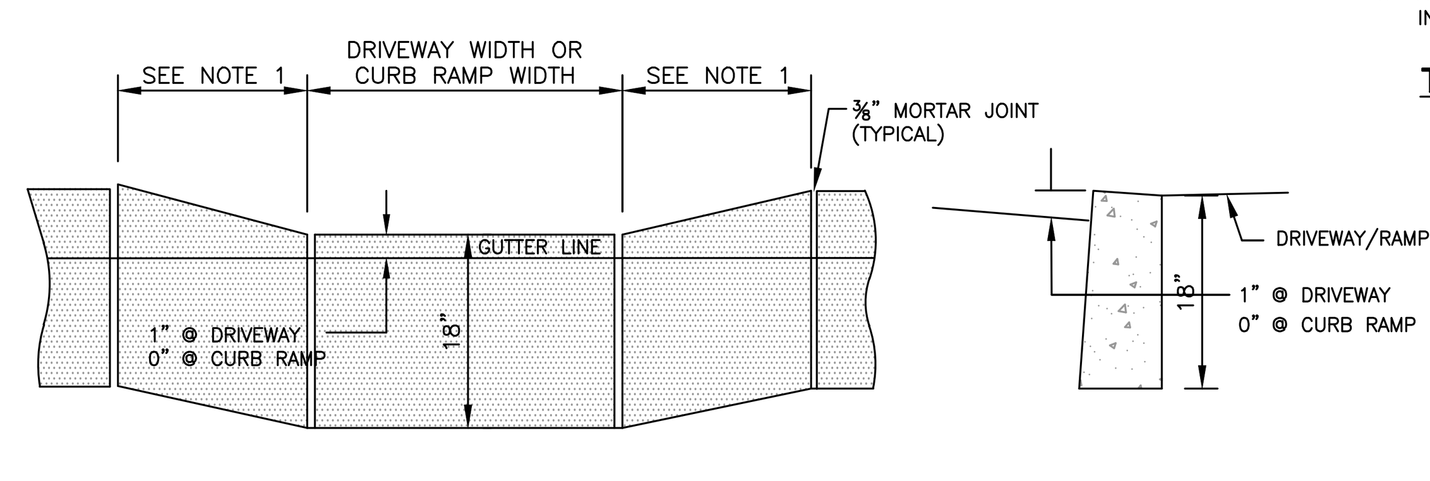
N O T E S:
1.) AT DRIVEWAY CROSSINGS, SIDEWALK SHALL BE 6" THK. AND SHALL CONTAIN No. 10 6" x 6" WIRE MESH 2" UP FROM THE BOTTOM OF THE SIDEWALK.
2.) THE ENGINEER SHALL APPROVE ALL SUBGRADES PRIOR TO THE POURING OF ANY CONCRETE.
3.) EXPANSION JOINTS SHALL BE PROVIDED AT 20' (MAX.) INTERVALS. JOINTS SHALL BE FILLED WITH 1/2" BIT. EXPANSION JOINT FILLER.
4.) PROVIDE HALF DEPTH CONTRACTION JOINTS EVERY 4 FEET. SEE PLANS FOR PATTERNS.

CONCRETE SIDEWALK DETAIL
N.T.S.



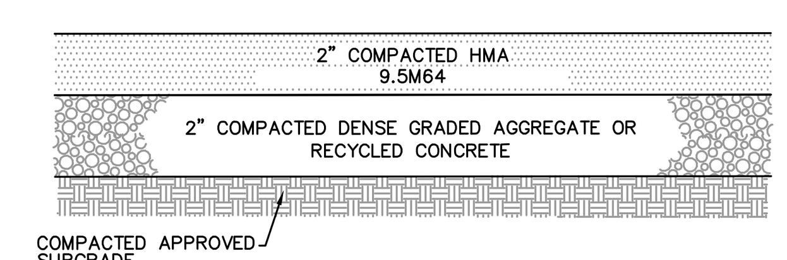
N O T E :
TO BE USED AT ALL DRIVEWAYS AND WHERE 6"x8"x18" CONCRETE VERTICAL CURB IS ADJACENT TO SIDEWALK

NOTCHED CURB DETAIL
N.T.S.

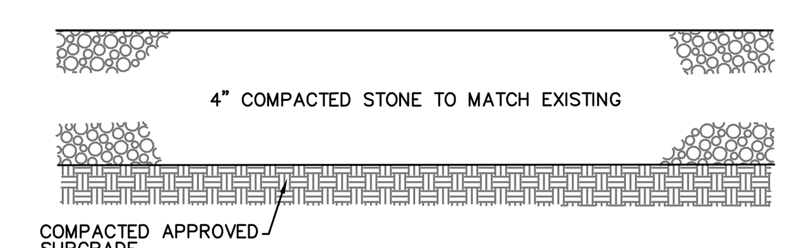


N O T E:
1. CURB TRANSITION FROM FULL FACE TO DEPRESSION SHALL BE 18" IF THERE IS A GRASS STRIP/BUFFER BETWEEN THE CURB AND SIDEWALK. CURB TRANSITION SHALL BE 48" MINIMUM IF THERE IS NO GRASS STRIP/BUFFER BETWEEN CURB AND SIDEWALK.

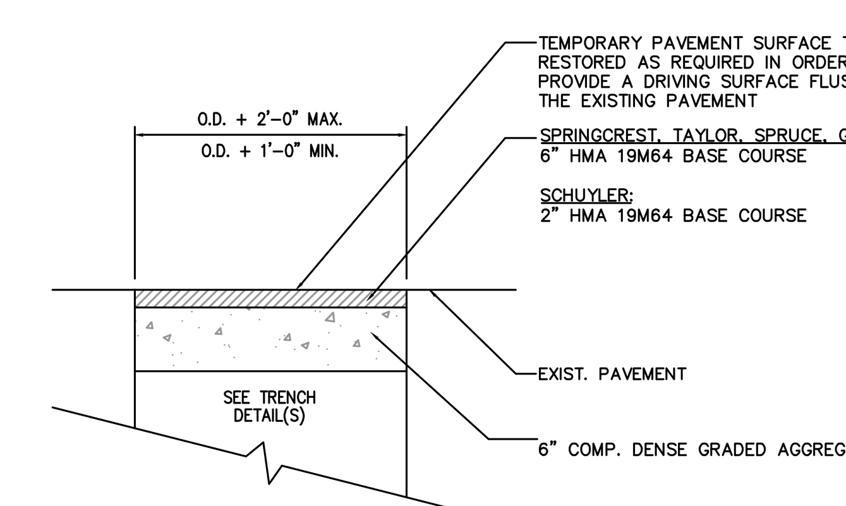
DEPRESSED CURB DETAIL
N.T.S.



HMA DRIVEWAY APRON DETAIL
N.T.S.

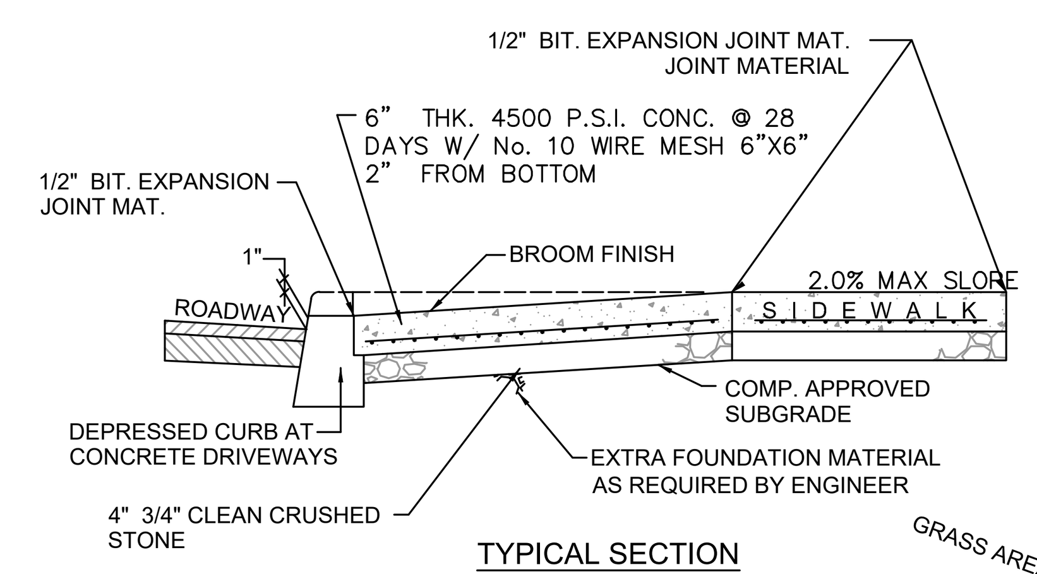


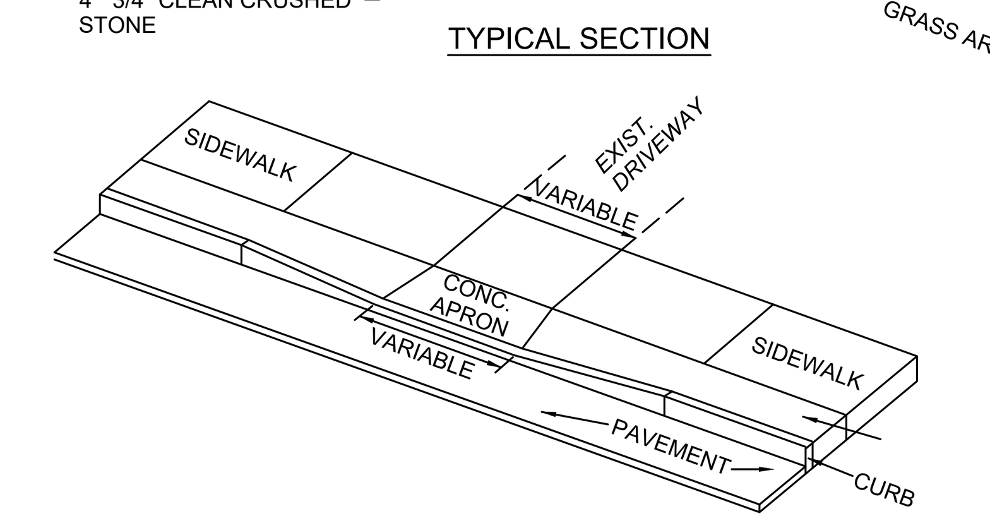
STONE DRIVEWAY APRON DETAIL
N.T.S.



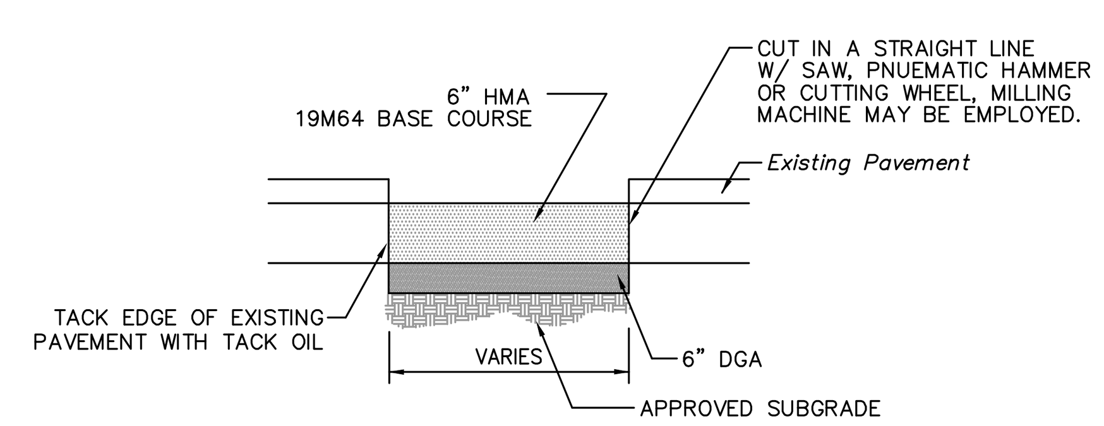
NOTE:
1. ALL PAVEMENT MARKINGS SHALL BE TEMPORARILY REPLACED IN–KIND WITH LATEXPAINT WITH GLASS BEADS FOR REFLECTIVITY.

TEMPORARY PAVEMENT REPLACEMENT
N.T.S.

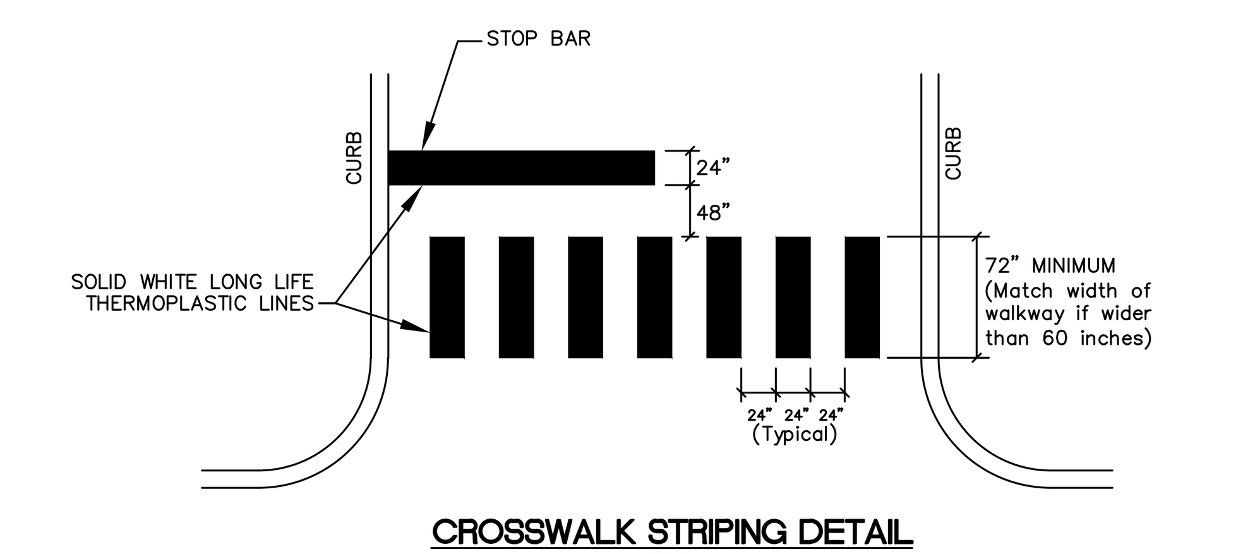




CONCRETE DRIVEWAY APRON
N.T.S.



HMA PAVEMENT REPAIR DETAIL
N.T.S.



CROSSWALK STRIPING DETAIL
N.T.S.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Women Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100
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CARMELA ROBERTS, PE
LICENSED PROFESSIONAL ENGINEER
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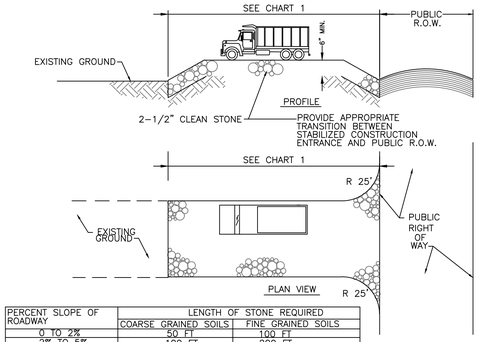
CONSTRUCTION DETAILS

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET
BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE: 2/1/2023	
SCALE: NONE	
DWG. No.: CD2	
SHEET No. 17 OF 19	

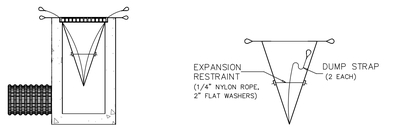


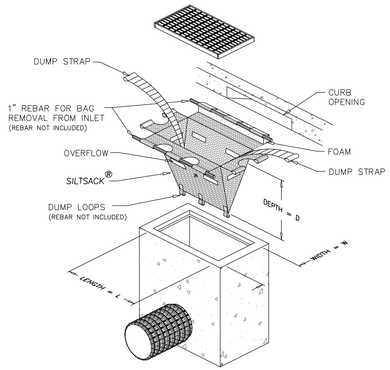
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200 FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

CHART 1

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

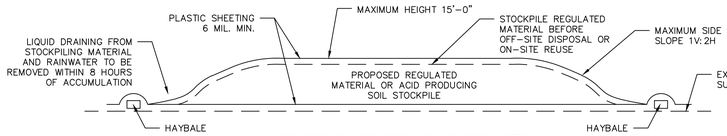




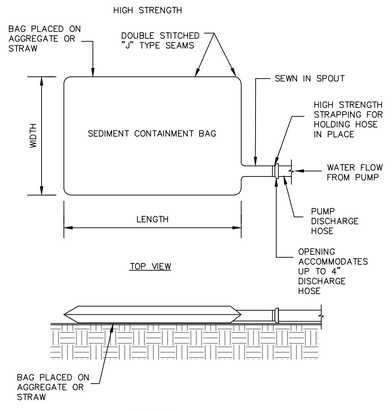
NOTES:

1. FILTER TO REMAIN UNTIL COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF COVER. PERIODIC CHECKS MUST BE MADE AFTER EACH RAINFALL TO EXCAVATE AND REMOVE EXCESS SEDIMENT FROM AROUND INLETS.
2. FILTER INSERT TO BE "SILT SACK" OR APPROVED EQUIVALENT.
3. ALL INLETS TO BE INSTALLED WITH INSERT FILTERING DEVICE.

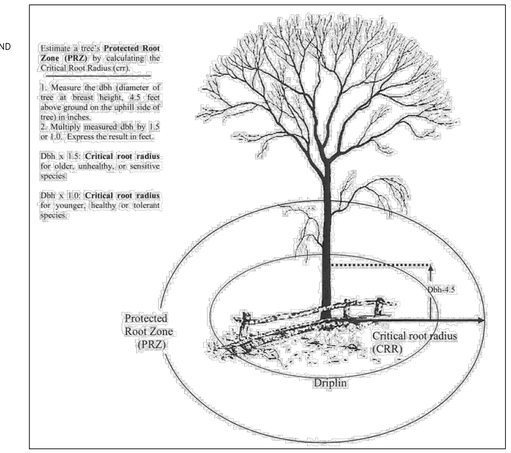
INLET INSERT FILTER PROTECTION
N.T.S.



TEMPORARY STOCKPILING OF REGULATED MATERIAL OR ACID PRODUCING SOIL
N.T.S.



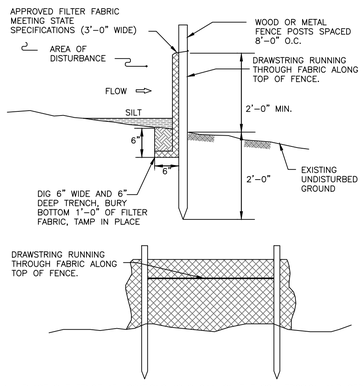
SEDIMENT CONTAINMENT BAG DE-WATERING DETAIL
N.T.S.



NOTES:

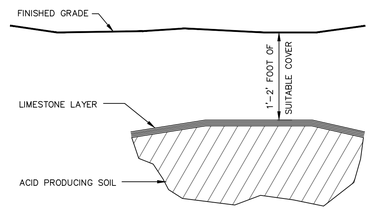
1. GENERAL MECHANICAL DAMAGE FOR CORRECT ROOT ZONE CALCULATION AND PLACEMENT OF TREE PROTECTION SHOWN ABOVE.
2. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
3. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ).
4. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR LICENSED TREE EXPERT.
5. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH AS CLOSE AS POSSIBLE TO THE BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUTS DESTROY A MAJOR DEFENSE SYSTEM OF THE TREE. NO TREE PAINT SHALL BE APPLIED. ALL CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR. CUTS MADE TOO FAR BEYOND THE BRANCH COLLAR MAY LEAD TO EXCESS SPROUTING, CRACKS AND ROT. REMOVAL OF A "V" CROTCH SHOULD BE CONSIDERED FOR FREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.

TREE PROTECTION DETAIL
N.T.S.



1. PLACE SILT FENCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. THE SLOPE OF THE LAND FOR AT LEAST 30 FEET ADJACENT TO ANY SILT FENCE SHALL NOT EXCEED 5 PERCENT.
3. SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE AROUND THE SIDES.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
5. SILT FENCE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR SOIL CONSERVATION DISTRICT.
6. THE BARRIER SHALL BE REMOVED WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD A MIN. DIAMETER THICKNESS OF 1 1/2 INCHES.
8. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
9. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE GROUND. FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

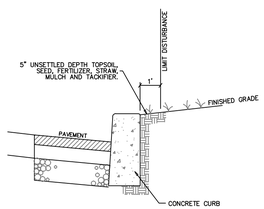
SILT FENCE
N.T.S.



NOTES:

1. ACID PRODUCING SOILS ARE DEFINED AS SOILS CONTAINING IRON SULFIDE MINERALS OR SOIL WITH A pH OF 4.0 OR LESS.
2. IRON SULFIDE MINERALS WILL PRODUCE SULFURIC ACID WHEN EXPOSED TO THE AIR AND SURFACE WATERS.
3. SOIL USED TO COVER ACID PRODUCING SOILS SHALL HAVE A pH OF 5.0 OR MORE.
4. SLOPED AREAS AND AREAS WITH TREE AND SHRUB PLANTINGS WILL BE COVERED WITH 2 FEET OF SUITABLE MATERIAL, THE TOP 5 INCHES SHALL BE TOPSOIL.
5. ACID SOIL BURIAL WILL AVOID AREAS OF RESIDENTIAL LOTS.

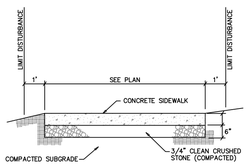
ACID SOIL DETAIL
N.T.S.



NOTE:

1. ALL AREAS OF SOIL DISTURBANCE TO BE RESTORED WITH TOPSOIL, SEED, AND MULCH FOR A MINIMUM THICKNESS OF 5".

TYPICAL LIMIT OF DISTURBANCE AT CURB DETAIL
N.T.S.

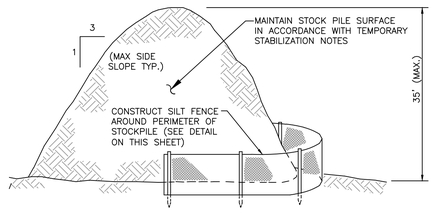


NOTE:

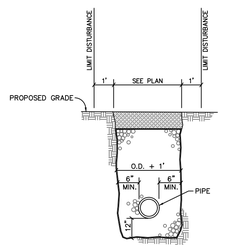
1. ALL AREAS OF SOIL DISTURBANCE TO BE RESTORED WITH TOPSOIL, SEED, AND MULCH FOR A MINIMUM THICKNESS OF 5".

TYPICAL LIMIT OF DISTURBANCE AT SIDEWALKS DETAIL
N.T.S.

NOTE:
SOIL STOCKPILED ON PAVED SURFACES SHALL BE SURROUNDED BY HAY BALES IN ACCORDANCE WITH NJDEP STANDARDS.

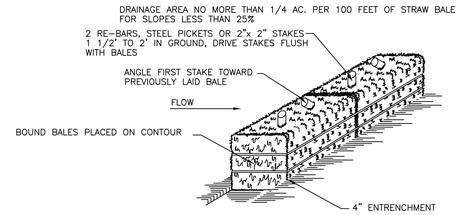


TEMPORARY STOCKPILE DETAIL
N.T.S.



1. ALL AREAS OF SOIL DISTURBANCE TO BE RESTORED WITH TOPSOIL, SEED, AND MULCH FOR A MINIMUM THICKNESS OF 5".

TYPICAL LIMIT OF DISTURBANCE AT TRENCH DETAIL
N.T.S.



NOTES:

1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THIER USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE DETAIL
N.T.S.

REFERENCE:

"STANDARD FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ADOPTED 2014 BY THE NEW JERSEY SOIL CONSERVATION COMMITTEE.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Women Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100

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SOIL EROSION AND SEDIMENT CONTROL DETAILS

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804	DESIGNED BY: CC
DRAWN BY: DA/KP	CHECKED BY: CC
DATE:	2/1/2023
SCALE:	As Shown
DWG. No.:	SD
SHEET No.	18 OF 19

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Where Applicable

On exposed soils that have the potential for causing off-site environmental damage.

Methods and Materials

Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.
B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading .
C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
D. Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.

Seedbed Preparation

A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
C. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

Seeding

A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
   1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
   2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85o F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
   3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85oF. Many grasses become active at 65oF. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

B. **Conventional Seeding** is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.
C. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.
D. **Hydroseeding is** a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. **Mulch shall not be included in the tank with seed**. Short-fibered mulch may be applied with a hydroseeder following seeding. (also see Section 4-Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

Mulching

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

   Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

   Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.
   1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
   2. Mulch Nettings - Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
   3. Crimper (mulch anchoring coulter tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
   4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.
      a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
      b. Use one of the following:
         (1) Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
         (2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch and drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. **M ulch shall not be mixed in the tank with seed**. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.
C. Pelletized mulch - compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

Irrigation (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

Topdressing

Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

Establishing Permanent Vegetative Stabilization

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. **Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once.** Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

TABLE 4-2
PERMANENT STABILIZATION MIXTURES FOR VARIOUS USES

APPLICATION	PLANTING MIXTURES BY SOIL DRAINAGE CLASS/1 (SEE TABLE 4-3)		
	EXCESSIVELY DRAINED	WELL TO MODERATELY WELL DRAINED	SOMEWHAT POORLY TO POORLY DRAINED
RESIDENTIAL/COMMERCIAL LOTS	10, 12, 15	6, 10, 12, 13, 14, 15	16
POND AND CHANNEL BANKS, DIKES, BERMS AND DAMS	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17
DRAINAGE DITCHES, SWALES, DETENTION BASINS	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 16, 17
FILTER STRIPS	12	11, 12	11, 12
GRASSES WATERWAY, SPILLWAYS	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11, 12
RECREATION AREAS, ATHLETIC FIELDS	5, 12, 15, 18	12, 13, 14, 15, 18	16
SPECIAL PROBLEM SITES STEEP SLOPES AND BANKS, ROADSIDES, BORROW AREAS	2, 3, 4, 6	2, 3, 5, 7, 8, 9, 10, 15, 18	2, 9, 10, 11, 12
SAND GRAVEL PITS, SANITARY LANDFILLS	1, 2, 3, 4, 6, 20	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8
DREDGED MATERIAL, SPOILBANKS, BORROW AREAS	2, 3, 6, 20	2, 3, 6, 11	2, 8
STREAMBANKS & SHORELINES	2, 8, 20, 21a	2, 8, 19b, 20, 21a, 21b	2, 8, 19a, 21a, b, c, d
UTILITY RIGHTS-OF-WAY	3, 7, 180	3, 7	8, 9, 17

1. REFER TO SOIL SURVEYS FOR DRAINAGE CLASS DESCRIPTIONS.
2. REFER TO SOIL BIOENGINERING STANDARD FOR ADDITIONAL SEED MIXTURES.
3. SPILLWAYS ONLY.
4. SEE APPENDIX E FOR DESCRIPTION OF TURF GRASSES AND CULTIVARS.

SEED MIXTURES	PLANTING RATE		PLANTING DATES O=OPTIMAL PLANTING PERIOD A=ACCEPTABLE PLANTING PERIOD — PLANT HARDINESS ZONES (SEE FIGURE 4-1)									MAINTENANCE LEVEL	REMARKS
			ZONE 5b, 6a			ZONE 6b			ZONE 7a, 7b				
	lbs/acre	lbs/1000 sq. ft.	3/15-5/31	6/1-7/31	8/1-10/1	3/1-4/30	5/1-8/14	8/15-10/15	2/1-4/30	5/1-8/14	8/15-10/30		
WARM SEASON SEED MIXTURES													
1A. FOR PINELANDS NATIONAL RESERVE SEED MIXTURES SEE TABLE 4-4 PAGE 4-17			O			O			O				
1. SWITCHGRASS AND/OR COASTAL PANICGRASS PLUS OR FLATPEA	15 15 ~~20~~ 20	.35 .35 ~~.45~~ .45	O			O			O			C-D	
2. DEERTONGUE OR SWITCHGRASS REDTOP	15 20 1 ~~[illegible]~~	.35 .45 .1 ~~.23~~	O			O			O			C-D	Use Deertongue if pH <4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover.
3. SWITCHGRASS DEERTONGUE, LITTLE BLUESTONE, SHEEP FESCUE PLUS, PARTRIDGE PEA	15 10 20 20 10	.35 .25 .45 [illegible] .25	O			O			O			C-D	Pinelands mixture.
4. SWITCHGRASS, BIG BLUESTEM LITTLE BLUESTEM, SAND LOVEGRASS, COASTAL PANIC GRASS	10 5 5 4 10	.25 .10 .10 .10 .25	O			O			O			C-D	Native warm-season mixture.
5. BERMUDAGRASS, ZOYSIAGRASS (SEED), ZOYSIAGRASS (SPRIGS)	15 30	.35 .70	O			O			O			A-D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance.
COOL SEASON SEED MIXTURES	130	3	A	A[5]	O	A	A[5]	O	A	A[5]	O		General low-maintenance mixture.
6. FINE FESCUE (BLEND) HARD FESCUE CHEWINGS FESCUE STRONG CREEPING RED FESCUE KENTUCKY BLUEGRASS PERENNIAL RYEGRASS PLUS WHITE CLOVER (SEE NOTE AT RIGHT)	45 20 5	.1 .5 .10	A	A[5]	O	A	A[5]	O	A	A[5]	O	B-D	White clover can be removed when used to establish lawns.
7. STRONG CREEPING RED FESCUE KENTUCKY BLUEGRASSS PERENNIAL RYEGRASS OR REDTOP PLUS WHITE CLOVER	130 50 20 10 5	3 1 .5 .25 .10	A	A[5]	O	A	A[5]	O	A	A[5]	O	B-D	Suitable waterway mix. Canada bluegrass more drought tolerant. Use redtop for increased drought tolerance.
8. TALL FESCUE (TURF-TYPE) OR STRONG CREEPING RED FESCUE OR PERENNIAL RYEGRASS FLATPEA	30 30 30 25	[illegible] [illegible] .7 .60	O	A[6]		O	A[6]		O	A[6]		B-D	Tall fescue best selected for droughty conditions. Use Creeping red fescue in heavy shade. Use Flatpea to suppress woody vegetation.
9. DEERTONGUE REDTOP WILD RYE (ELYMUS) SWITCHGRASS	[illegible] 2 15 25	.45 .05 .35 .60	O			O			O			C-D	Native wet mix.
10. TALL FESCUE (TURF-TYPE) PERENNIAL RYEGRASS OR WHITE CLOVER (SEE NOTE AT RIGHT)	265 20 ~~10~~ 5	6 5 ~~.25~~ .10	O	A[5]	A[5]	O	A[5]	A[5]	O	A[5]	A[5]	C-D	White clover can be excluded on lawn sites.
11. KENTUCKY BLUEGRASS TURF-TYPE TALL FESCUE	~~15~~ 45 22	~~.33~~ 1 5	A	A[5]	O	A	A[5]	O	A	A[5]	O	C-D	Filter strip use for nutrient uptake.
12. TURF-TYPE TALL FESCUE (BLEND OF 3 CULTIVARS)	350	S	A	A[5]	O	A	A[5]	O	A	A[5]	O	C-D	Use in a managed filter strip for nutrient uptake.
13. HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE, PERENNIAL RYE GRASS, KY. BLUEGRASS (BLEND)	175 45 45	4 1 1	A	A[5]	O	A	A[5]	O	A	A[5]	O	A-C	General lawn/recreation.
14. TALL FESCUE KY. BLUEGRASS (BLEND) PERENNIAL RYEGRASS (BLEND)	265 20 20	6 .50 .50	A	A[5]	O	A	A[5]	O	A	A[5]	O	A-B	Athletic field/3 cultivar mix of Kentucky Bluegrass.
15. HARD FESCUE CHEWINGS FESCUE, STRONG CREEPING RED FESCUE, PERENNIAL RYEGRASS	130 45 45 10	3 1 1 .25	A	A[5]	O	A	A[5]	O	A	A[5]	O	C-D	Low-maintenance fine fescue lawn mix.
16. ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	90 130	2.0 3	A	A[5]	O	A	A[5]	O	A	A[5]	O	C-D	Moist shade.
17. CREEPING BENTGRASS CREEPING RED FESCUE ALKALI SALTGRASS	45 45 45	1 1 1	A	A[5]	O	A	A[5]	O	A	A[5]	O	B-D	Use bentgrass under wetter conditions. Saltgrass will only persistent under saline conditions.
18. HARD OR SHEEPS FESCUE N.E. WILDFLOWER MIXTURE	25 12	0.60 0.35	O	A	O	O	A	O	O	A	O	C-D	Regional Wildflower mix. Hydroseeding not recommended.
19. a. SMOOTH CORDGRASS b. SALTMEADOW CORDGRASS	veg veg					O	Before July 1		O	Before July 1		D	Planted in the intertidal zone. Planted above mean high tide.
20. AMERICAN BEACHGRASS COASTAL PANIEGRASS	veg 20	.45				Before April 1			O			D	Coastal Panicgrass may be interseeded between rows of beachgrass.
21. a. PERPLEOSIER WILLOW b. DWARF WILLOW c. REDOSIER DOGWOOD d. SILKY DOGWOOD	veg veg veg veg		Before May 10			Before May 10			Before May 1			D	Also refer to Chapters 16 and 18 of USDA NRCS Engineering Field Handbook.

TABLE 4-3 FOOTNOTES:

1. SEE APPENDIX B FOR DESCRIPTIONS OF TURF GRASS MIXTURES AND CULTIVARS. THE ACTUAL AMOUNT OF WARM-SEASON GRASS MIXTURE USED IN TABLE 3 (SEED MIX 1-7) SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PLS AS DETERMINED BY GERMINATION TESTING RESULTS. NO ADJUSTMENT IS REQUIRED FOR COOL-SEASON GRASSES (SEED MIXTURES 8-20)
2. SEEDING MIXTURES AND/OR RATES NOT LISTED ABOVE MAY BE USED IF RECOMMENDED BY THE LOCAL SOIL CONSERVATION DISTRICT, NATURAL RESOURCES CONSERVATION SERVICE; RECOMMENDATIONS OF RUTGERS COOPERATIVE EXTENSION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISCTRICT. LEGUMES (WHITE CLOVER, FLATPEA, LESPEDEZA) SHOULD BE MIXED WITH PROPER INNOCULANT PRIOR TO PLANTING.
3. SEEDING RATES SPECIFIED ARE REQURIED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE OF THE SEEDED AREA AND MOWED ONCE. GRASS SEED MIXTURE CHECKED BY THE STATE SEED ANALYST, NEW JERSEY DEPARTMENT OF AGRICULTURE, TRENTON, NEW JERSEY, WILL ASSURE TH EPURCHASER THAT THE MIXTURE OBTAINED IS THE MIXTURE ORDERED, PURSUANT TO THE N.J. STATE SEED LAW, N.J.S.A. 4:8-17.13 ET. SEQ.
   O = OPTIMAL PLANTING PERIOD A = ACCEPTABLE PLANTING PERIOD

STANDARD FOR STABILIZATION WITH MULCH ONLY

Where Applicable

This practice is applicable to areas subject to erosion, where the season and other conditions may not be suitable for growing an erosion-resistant cover or where stabilization is needed for a short period until more suitable protection can be applied.

Methods and Materials

Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading
B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

Protective Material

A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen below the mulch.
C. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
D. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.
E. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.
F. Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.
G. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.

Mulch Anchoring - should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slopes.

A. Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
B. Mulch Nettings - Staple paper, cotton, or plastic nettings over mulch. Use degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
C. Crimper Mulch Anchoring Coulter Tool - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.
D. Liquid Mulch-Binders
   1. Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance.
   2. Use one of the following:
      a. Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phyto-toxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
      b. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Where Applicable

On exposed soils that have the potential for causing off-site environmental damage.

Methods and Materials

Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.
B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.
C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. **This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.)**.

Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.
B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.
D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1. and the Acid Producing Soils standard found in Appendix A of the specifications.

Seeding

A. Select seed from recommendations in Table 7-2.

TABLE 7-2
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

SEED SELECTION	SEEDING RATE[1] (POUNDS)		OPTIMUM SEEDING DATE[2] BASED ON PLANT HARDINESS ZONE[3]			OPTIMUM SEED DEPTH[4] (INCHES)
	PER ACRE	PER 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. PERENNIAL RYEGRASS	100	1.0	3/15 - 6/1 8/1 - 9/15	3/1 - 5/15 8/15 - 10/1	2/15 - 5/1 8/15 - 10/15	0.5
2. SPRING OATS	86	2.0	3/15 - 6/1 8/1 - 9/15	3/1 - 5/15 8/15 - 10/1	2/15 - 5/1 8/15 - 10/15	1.0
3. WINTER BARLEY	96	2.2	8/15 - 10/1	8/15 - 10/1	8/15 - 10/15	1.0
4. ANNUAL RYEGRASS	100	1.0	3/15 - 6/1 8/1 - 9/15	3/15 - 6/1 8/1 - 9/15	2/15 - 5/1 8/15 - 10/15	0.5
5. WINTER CEREAL RYE	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0
WARM SEASON GRASSES						
6. PEARL MILLET	20	0.5	6/1 - 8/1	5/15 - 8/15	5/1 - 9/1	1.0
7. MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1 - 8/1	5/15 - 8/15	5/1 - 9/1	1.0

TABLE 7-2 FOOTNOTES:

1. SEEDING RATE FOR WARM SEASON GRASS, SELECTIONS 5 - 7 SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.
2. MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.
3. PLANT HARDINESS ZONE (SEE FIGURE 7-1, PG. 7-4).
4. TWICE THE DEPTH FOR SANDY SOILS

B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.
C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying te mix onto the prepared seedbed. Mulch **shall not** be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc..
D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

Mulching

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

   Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

   Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

   1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a cris-cross and a square pattern. Secure twine around each peg with two or more round turns.
   2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
   3. Crimper (mulch anchoring tool). A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
   4. Liquid Mulch-Binders. - May be used to anchor hay or straw mulch.
      a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
      b. Use one of the following:
         (1) Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
         (2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.
C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to

STANDARDS FOR TOPSOILING

Where Applicable

On exposed soils that have the potential for causing off-site environmental damage.

Materials

A. Topsoil should be friable[1], loamy[2], free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desicate seedlings and adversely impact growth). Topsoil hauled in from offsite should have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
B. Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.

Stripping and Stockpiling

A. Field exploration should be made to determine whether quantity and or quality of surface soil justifies stripping.
B. Stripping should be confined to the immediate construction area.
C. Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5. In lieu of soil tests, see lime rate guide in seedbed preparation for Permanent Vegetative Cover for Soil Stabilization, pg. 4-1.
D. A 4-6 inch stripping depth is common, but may vary depending on the particular soil.
E. Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage.
F. Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

Site Preparation

A. Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence
B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.
C. As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.
D. Immediately prior to topsoiling, the surface should be scarified 6" to 12" where there has been soil compaction. This will help insure a good bond between the topsoil and subsoil. **This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.)**.
E. Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways.

Applying Topsoil

A. Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).
B. A uniform application to a depth of 5 inches (unsettled) is recommended. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1-1).

STANDARD FOR MAINTAINING VEGETATION

Methods and Materials

A preventive maintenance program anticipates requirements and accomplishes work when it can be done with least effort and expense to insure adequate vegetative cover.

Maintenance should occur on a regular basis, consistent with favorable plant growth, soil, and climatic conditions. This involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire control, weed and pest control, reseeding, and timely repairs.

The degree of preventive maintenance needed depends upon the type of vegetation and its proposed function or use.

1. Mowing is a recurring practice and its intensity depends upon the function of the ground cover. On high to moderate (A to B) maintenance areas, such as lawns, certain recreation fields, and picnic areas, mowing will be frequent (2 to 7 day intervals) and typically at a height of 2.5 to 3 inches. Return clippings from mowing (mulching mower) to the turf to reduce the amount of fertilizer needed to maintain the turf by as much as 50%. Some turf mixtures can be managed as naturalized stands requiring only one (cool season mixtures) or two (warm season mixtures) mowings per year. Mowing of naturalized areas is typically done at heights no less than 4 inches and should not bedone between April 1st and July 15th to avoid disturbing ground nesting birds. The large amount of clipping debris generated by mowing naturalized areas will need to be removed and/or dispersed so the vegetation is not smothered. Burning of naturalized areas is another procedure used to manage naturalized turfs. Low maintenance (D) areas may be left unmowed to permit natural succession. See pg. 4-13 footnote #4, Maintenance Levels A, B, C and D in the Standard for Permanent Vegetative Cover, Table 4-3.
2. Incorporation of organic matter (for example, mature compost) into the soil will substantially reduce the need for fertilizer and irrigation inputs.
3. Fertilizer and lime should be applied as needed to maintain a dense stand of desirable species. Frequently mowed areas and those on sandy soils will require more frequent fertilization but at lower nutrient rates per application.
4. Lime requirement should be determined by soil testing every 2 or 3 years. Fertilization may increase the need for liming. Contact the local county extension office for details on soil testing and fertilization and pest control recommendations online at http://njaes.rutgers.edu/county/.
5 Fertilization and additions of other soil amendments are not recommended for managing native vegetation such as in the Pinelands National Reserve. See the Standard for Permanent Vegetative Stabilization for specific requirements in the PNR.
6. Weed invasion may result from abusive mowing and from inadequate fertilizing and liming. Many newly established grasses will not survive if mowed at heights below 2.5 inches and at intervals greater than 7 days. Brush invasion is a common consequence of lack of mowing. The amount of weeds or brush that can be tolerated in any vegetated area depends upon the intended use of the land. Drainage ways are subject to rapid infestation by weed and woody plants. These should be controlled, since they often reduce drainage way efficiency. Control of weeds or brush is accomplished by using herbicides or mechanical methods.
7. Fire hazard is greater where dry vegetation has accumulated. The taller the vegetation, the greater the hazard.
8. Prune trees and shrubs to remove dead or damaged branches. Remove undesirable or invasive plants to maintain integrity of the landscape and enhance quality of permanent vegetative cover.

STANDARD FOR DUST CONTROL

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduced on-site and off-site damage and health hazards and improve traffic safety.

Condition Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on-site and off-site damage is likely without treatment. Consult with local municipal ordinances on any restrictions.

In order to control dust, as often as required during each working day, and particularly prior to the conclusion of each working day areas under immediate construction (including access roads and other areas affected thereby) shall be swept and wet down with water sufficiently to lay dust. In addition, these areas shall be wet down during non-working hours (including weekends) as often as required to keep the dust under control. The use of calcium chloride or petroleum products or other chemicals for dust control is prohibited.

STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL

Where Applicable

This practice is applicable to any high acid-producing soil materials. Such materials have been found in the Coastal Plain areas of Burlington, Camden, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean, Salem and Somerset Counties.

Methods and Materials

1. Limit the excavation area and exposure time when high acid-producing soils are encountered.
2. Topsoil stripped from the site shall be stored separately from temporarily stockpiled high acid-producing soils.
3. Stockpiles of high acid-producing soil should be located on level land to minimize its movement, especially when this material has a high clay content.
4. Temporarily stockpiled high acid-producing soil material to be stored more than 48 hours should be covered with properly anchored, heavy grade sheets of polyethylene where possible. If not possible, stockpiles shall be covered with a minimum of 3 to 6 inches of wood chips to minimize erosion of the stockpile. Silt fence shall be installed at the toe of the slope to contain movement of the stockpiled material. Topsoil shall not be applied to the stockpiles to prevent topsoil contamination with high acid-producing soil.
5. High acid-producing soils with a pH of 4.0 or less or containing iron sulfide (including borrow from cuts or dredged sediment) shall be ultimately placed or buried with limestone applied at the rate of 10 tons per acre (or 450 pounds per 1,000 square feet of surface area) and covered with a minimum of 12 inches of settled soil with a pH of 5.0 or more except as follows:
   a. Areas where trees or shrubs are to be planted shall be covered with a minimum of 24 inches of soil with a pH or 5 or more.
   b. Disposal areas shall not be located within 24 inches of any surface of a slope or bank, such as berms, stream banks, ditches, and others, to prevent potential lateral leaching damages.
6. Equipment used for movement of high acid-producing soils should be cleaned at the end of each day to prevent spreading of high acid-producing soil materials to other parts of the site, into streams or stormwater conveyances, and to protect machinery from accelerated rusting.
7. Non-vegetative erosion control practices (stone tracking pads, strategically placed limestone check dam, sediment barrier, wood chips) should be installed to limit the movement of high acid-producing soils from, around, or off the site.
8. Following burial or removal of high acid-producing soil, topsoiling and seeding of the site (see Temporary Vegetative Cover for Soil Stabilization, Permanent Vegetative Cover for Soil Stabilization, and Topsoiling), **monitoring must continue for a minimum of 6 months** to ensure there is adequate stabilization and that no high acid-producing soil problems emerge. If problems still exist, the affected area must be treated as indicated above to correct the problem.
9. Please also refer oto the Environmental Standards for "Acid Producing Soils" in Attachment A of the specifications.

ADDITIONAL NOTES

The specifications which spell out the environmental and cultural resource protection/restoration from N.J.A.C. 7:22-10.11 and N.J.A.C. 7:22-10.12, and located in Attachment A of the specifications, shall have precedence over other potentially contradictory language contained elsewhere in the design contract documents. In instances where the provisions of a Department-issued permit contradict a provision of the specifications (including those identified in Environmental Assessment Requirements for State Assisted Environmental Infrastructure Facilities, N.J.A.C. 7:22-10), the environmental resources protection and/or restoration and cultural resource mitigation measures identified in the Department-issued permit shall govern.

All activities which are part of the comprehensive environmental infrastructure project(s) for the planning area must conform to the requirements of this section regardless of eligibility of individual components of the project.

MERCER COUNTY SCD
REQUIRED SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Mercer County Soil Conservation District shall be notified 48 hours prior to starting land disturbance activity. Notice may be mailed, faxed or emailed to:
   MCSCD, 508 Hughes Drive, Hamilton Square, NJ 08690
   Phone: (609) 586-9603 Fax: (609) 586-1117 Email: mercersoil@aol.com
2. If applicable to this project, the owner should be aware of his or her obligation to file for a NJPDES Construction Activity Stormwater 5G3 Permit (NJG0088323) via the NJDEP online permitting system (www.nj.gov/dep/online) and to maintain the associated best management practices and Stormwater Pollution Prevention Plan self inspection logbook onsite at all times. This permit must be filed prior to the start of soil disturbance. The online application process will require entry of an SCD certification code, which is provided by the Soil Conservation District upon certification of the Soil Erosion and Sediment Control Plan.
3. The Mercer County Soil Conservation District shall be notified of any changes in ownership.
4. Any changes to the Certified Soil Erosion and Sediment Control Plan, including an increase in the limit of disturbance, will require the submission of revised Soil Erosion and Sediment Control Plans to the District for recertification. The revised plans must meet all current State Soil Erosion & Sediment Control STANDARDS.
5. A copy of the certified Soil Erosion and Sediment Control plan shall be maintained on site at all times.
6. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence as outlined within the Sequence of Construction on the Certified Soil Erosion and Sediment Control Plan, and maintained until permanent protection is established.
7. All work shall be done in accordance with the current STANDARDS for Soil Erosion ad Sediment Control in NJ. If language contained within any other permit for this project is more restrictive than (but no contradictory to) what is contained within these notes or on the Certified Soil Erosion and Sediment Control Plan, then the more restrictive permit requirements shall be followed.
8. The Standard for Stabilized Construction Access requires the installation of a $1\frac{1}{2}$"to $2\frac{1}{2}$" clean stone tracking pad at all construction driveways immediately after initial site disturbance, whether identified on the certified plan or note. The width shall span the full width of egress, and length shall be 50 ft. or more, depending on site conditions and as required by the STANDARD. This shall include individual lot access points within residential subdivisions. If the egress is to a County road, then a 20 ft. long paved transition shall be provided between the edge of pavement and the stone access pad.
9. A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days of preliminary grading, provided that all other requirements related to detention basins, swales and the Sequence of Construction have been met.
10. Any disturbed areas that will left exposed more than 10 days and not subject to construction activity will immediately receive temporary stabilization. If the season prevents establishment of a temporary vegetative cover, or if the area is not topsoiled, then the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acres, according to State STANDARDS. Sloped areas in excess of 3H:1V shall be provided with erosion control blankets. Critical areas subject to erosion (i.e. steep slopes, roadway embankments, environmentally sensitive areas) will receive temporary stabilization immediately after initial disturbance or rough grading.
12. Any steep slopes (i.e. slopes greater than 3:1) receiving pipeline or utility installation will be backfilled and stabilized daily, as the installation proceeds.
13. Permanent vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading and topsoiling. All agronomic requirements contained within the STANDARDS and on the Certified Plan shall be employed. Mulch with binder, in accordance with the STANDARDS, shall be used on all seeded areas. Save all tags and/or bags used for seed, lime and fertilizer, and provide them to the District inspector to verify that mixtures and rates meet the STANDARDS.
14. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, then non-vegetative means of permanent ground stabilization will have to be employed.
15. During the course of construction, soil compaction may occur within haul routes, staging areas and other project areas. In accordance with teh Standard for Topsoiling, compacted surfacesshould be scarified 6" to 12" immediately prior to topsoil application. This will help ensure a good bond between the topsoil and subsoil. this practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).
16. Prior to seeding, topsoil shall be worked to prepare a proper seedbed. This shall include raking of the topsoil and removal of debris and stones, along with other requirements of the Standard for Permanent Vegetative Cover for Soil Stabilization.
17. In accordance with the STANDARD for Management of High Acid Producing Sols, any soil having a pH of 4 or less or containing iron sulfides shall be buried with limestone in accordance with the STANDARD and be covered with a minimum of 12" of soil having a pH of 5 or more prior to topsoil application and seedbed preparation. If the area is to receive tree or shrub plantings, or is located on a slope, then the area shall be covered with a minimum of 24" of soil having a pH of 5 or more.
18. Mulching to the STANDARDS is required for obtaining a Conditional Report of Compliance. Conditional ROC's are only issued when the season prohibits seeding. Permanent stabilization must then be completed during the optimum seeding season immediately followin gthe conditional ROC, or the completion f work in a given area.
19. Hydroseeding is a two-step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed-to-soil contact, and give a visual indication of coverage. Upon completion of the seeding operation, hydromulch should be applied at a minimum rate of 1500 lbs. per acre in second step. The use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the STANDARDS. The use of hydromulch on sloped areas is discouraged.
20. The contractor is responsible for keeping all adjacent roads clean during life of the construction project. All sediment washed, dropped, tracked or spilled onto paved surfaces shall be immediately removed.
21. The developer shall be responsible for remediating any erosion or sediment problems that arise as a result of ongoing construction, and for employing additional erosion and sediment control measures at the request of the Mercer County Soil Conservation District.
22. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
23. All detention/retention basins must be fully constructed (inclusive of all structural components and liners) and permanently stabilized prior to paving or prior to the addition of any impervious surfaces. Permanent stabilization includes, but may not be limited: topsoil, seed, straw mulch and binders or erosion control blankets on all seeding, all agronomic requirements as specified on the Certified Soil Erosion and Sediment Control Plan, installation of the outflow control structures and discharge storm drainage piping, low flow channels, conduit outlet protection, emergency spillways, and lap ring protection.
24. The riding surface of all utility trenches within paved areas shall be $\frac{3}{4}$" clean stone or base pavement until such time as final pavement has been installed. Temporary soil riding surfaces are prohibited.
25. All construction dewatering (trenches, excavations, etc.) must be done through an inlet or outlet filter in accordance with the Standards for Dewatering or as depicted on the Certified Soil Erosion and Sediment Control Plan. Discharge locations for the dewatering operation much contain perennial vegetation or similar stable surface.
26. All swales or channels that will receive runoff from paved surfaces must be permanently stabilized prior to the installation of pavement. If the season prohibits the establishment of permanent stabilization, the swales or channels may be temporarily stabilized in accordance with the STANDARDS.
27. N.J.S.A. 4:24-39 et seq. requires that no Certificate of Occupancy of Temporary Certificate of Occupancy be issued by the Municipality before the provisions of the Certified Soil Erosions and Sediment Control Plan have been satisfied. Therefore, all site work for site plans and all work around individual lots in subdivisions must be completed before the District issues a Report of Compliance of Conditional Report of Compliance, which must be forwarded to the Municipality prior to the issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy, respectively.

Mercer County Soil Conservation District
508 Hughes Drive
Hamilton Square, NJ 08690
(609) 586-9603 Office
(609) 586-1117 Fax

SEQUENCE OF CONSTRUCTION

1. Install traffic control devices. **- 1 Day**
2. Install all soil erosion and sediment control measures as shown on plan and directed. **- 1 Day**
3. Install water improvements. - 1 **Week**
4. Install sanitary improvements. - **3 Weeks**
5. Install stormwater improvements. - 2 **Weeks**
6. Construct curb, sidewalk, ramps and driveway aprons. - 5 **Weeks**
7. Mill and pave. - 2 **Weeks**
8. Install signage and pavement markings. - **1 Week**
9. Install topsoil, seed, lime, fertilizers, mulch, and landscaping. - **1 Week**
10. Stabilize any remaining disturbed areas. - **1 Week**
11. Remove soil erosion control measures. - **1 Day**
12. Remove traffic control devices. - **1 Day**

REFERENCE:
"STANDARD FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ADOPTED 2014 BY THE NEW JERSEY SOIL CONSERVATION COMMITTEE.

NO.	DATE	REVISIONS	BY	CHECKED

Roberts ENGINEERING GROUP LLC
Women Business Enterprise Certified
CERTIFICATE OF AUTHORIZATION: 24GA28159100

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SOIL EROSION & SEDIMENT CONTROL NOTES

IMPROVEMENTS TO ORCHARD AVENUE, MEADOW DRIVE, CLOVER LANE, AND SOUTH MAIN STREET

BOROUGH OF HIGHTSTOWN, MERCER COUNTY, NEW JERSEY

FILE No.: H1804 | DESIGNED BY: CC | DRAWN BY: DA/KP | CHECKED BY: CC
DATE: 2/1/2023
SCALE: As Shown
DWG. No.: SN1
SHEET No. 19 OF 19