

**BID NO. 2022-06-13**

TOWNSHIP OF PISCATAWAY  
MIDDLESEX COUNTY  
NEW JERSEY

**TOWNSHIP OF PISCATAWAY**

**2022- SECOND ROAD IMPROVEMENTS PHASE-III**

**MAYOR**

BRIAN WAHLER

**PISCATAWAY TOWNSHIP COUNCIL**

MICHELE LOMBARDI, COUNCIL PRESIDENT

FRANK UHRIN, COUNCIL VICE PRESIDENT

GABRIELLE CAHILL

JAMES BULLARD

STEVE D. CAHN

KAPIL K. SHAH

LINWOOD D. ROUSE

**BUSINESS ADMINISTRATOR**

TIMOTHY J. DACEY

**TOWNSHIP CLERK**

MELISSA A. SEADER

**PROJECT MANAGER**

JOSEPH HERRERA, CFM/ALAIMO GROUP

COMMUNITY DEVELOPMENT/ENGINEERING

455 HOES LANE PISCATAWAY, NJ 08854

**ANY QUESTIONS MUST BE E-MAILED TO [Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org) NO LATER THAN JUNE 13, 2022. @ 12noon. PHONE CALLS WILL NOT BE ACCEPTED THERE WILL BE NO EXCEPTIONS.**

Bid Opening Date: Thursday, June 23, 2022 AT 2:00 PM

**BIDDER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

\_\_\_\_\_  
**TEL. NO.:** \_\_\_\_\_

**EMAIL:** \_\_\_\_\_

NOTICE TO BIDDERS  
TOWNSHIP OF PISCATAWAY  
MIDDLESEX COUNTY, NEW JERSEY

NOTICE IS HEREBY GIVEN that sealed bids will be received by the Business Administrator or designated representative, for the Township of Piscataway, on THURSDAY, JUNE 23, 2022 at 2:00PM prevailing time in Council Chambers, Township of Piscataway, Administration Building, 455 Hoes Lane, Piscataway, NJ 08854 at which time and place bids will be publicly read by live broadcast via zoom as listed below. Bids will be publicly opened and reviewed for completeness for the following:

**“2022-SECOND AVENUE ROAD IMPROVEMENTS PHASE-III”**

Bids must be made on standard proposal form, be enclosed in a sealed package bearing the name and address of bidder and the words **“2022-SECOND AVENUE ROAD IMPROVEMENTS PHASE-III”** on the outside and delivered to the Township Purchasing office only, 455 Hoes Lane, Piscataway, NJ 08854 during regular business hours, 8:30 am to 12:20 pm and 1:30 pm to 4:30 pm., Monday through Friday, excluding holidays. *Please, be advised that the municipal building is closed daily between 12:20 PM and 1:30 PM for lunch. Bidders must call the purchasing office at 732-562-2321 to drop off the sealed bid. The Municipal building is closed to the public due to the Covid-19.*

Bids Specifications, Plans and instructions to bidders may be obtained at:  
<http://bids.piscatawaynj.org/>

Question and Answer Due Date: June 13, 2022 by 12 Noon, E-mail only to:  
[Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org)

Addenda may be downloaded from the Township website <http://bids.piscatawaynj.org/>

***PLEASE, MAKE SURE TO DROP OFF YOUR SEALED BID BY OR BEFORE 12:00NOON ON 6/23 /2022. BID WILL BE OPEN VIA ZOOM AT 2:00PM.***

**During the Covid-19 pandemic, while the statewide “State of Emergency” declaration is still in effect in according with Executive Order 107 all proposal packets will only be read and opened electronically “BROADCAST LIVE” via ZOOM Bid opening. The Municipal building is closed due to the Covid-19 restrictions.**

**Once the bid opening is concluded bidders must call the Purchasing Agent @ 732-562-2321 to set an appointment if bidders wishes to review any of the bids.**

**All bids shall be kept sealed , and will be received and publicly opened on the proposal opening date and time in the Township Council Chambers using Virtual teleconferencing which can be access by logging in to zoom in the following manner:**

**Join Zoom Meeting:**

Piscataway Purchasing is inviting you to a scheduled Zoom meeting.

Topic: 2022-SECOND AVENUE ROAD IMPROVEMENTS PHASE-III

Time: Jun 23, 2022 02:00 PM Eastern Time (US and Canada)

<https://us02web.zoom.us/j/87089045877?pwd=bmhYREV1cHNNdzRzYmswNGZqdURhQT09>

Meeting ID: 870 8904 5877

Passcode: 619914

One tap mobile

+13017158592,,87089045877#,,,,\*619914# US (Washington DC)

+13126266799,,87089045877#,,,,\*619914# US (Chicago)

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Meeting ID: 870 8904 5877

Passcode: 619914

**Bid Packet Marked “ORIGINAL” (1) Photo Copy of the Original “TRUE COPY”**

Bids can be hand delivered to the Municipal Building by calling the Purchasing Agent in Purchasing@732-562-2321. If using an outside delivery and/or messenger service (i.e. Federal Express, UPS, etc.), please note the following: **The Township will not be responsible for deliveries made prior to or after normal business hours, or to any other office, or for the failure of a bidder to affix the label provided with the bid package on the courier envelope.** Name of Bid must appear on the Outside of the FEDEX /UPS Envelope.

Surety in the form of a bid bond, certified check or Cashier’s Check in the amount of ten percent (10%) of the total price bid, but not in excess of \$20,000.00, payable unconditionally to the Township of Piscataway shall submit with the bid. The successful bidder will be required to furnish a Performance Bond in the Amount of 100% of total bid. Bidders shall comply with the requirements of N.J.S.A.10:5-31 and N.J.A.C. 17-27 et seq. Division of Purchasing.

**Bid NO: 2022-06-13**

**TOWNSHIP OF PISCATAWAY: “SECOND AVENUE ROAD IMPROVEMENTS PHASE-III”**

**PRE-BID Conference / Site Visit Date: N/A-CONTRACTORS ARE STRONGLY ENCOURAGED TO VISIT THE PROJECT LOCATION.**

**Bidder’s Electronic Question Due Date: JUNE 13, 2022 @12NOON**

**[Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org)**

*Please, make sure your Sealed Bid is dropped off by or before 12NOON ON 6/23/2022.*

**Bid Submission Due Date: THURSDAY, JUNE 23, 2022 - 2 PM**

*Bidders must call the purchasing office at 732-562-2321 to drop off the sealed bid. The Municipal building is closed to the public due to the Covid-19.*

**Bid Opening via ZOOM @2pm: Instructions below:**

**During the Covid-19 pandemic, while the statewide “State of Emergency” declaration is still in effect in according with Executive Order 107 all proposal packets will only be read and opened electronically “BROADCAST LIVE” via ZOOM Bid opening. The Municipal building is closed due to the Covid-19 restrictions. Once the bid opening is concluded bidders must call the Purchasing Agent @ 732-562-2321 to set an appointment if bidders wishes to review any of the bids.**

**All bids shall be kept sealed , and will be received and publicly opened on the proposal opening date and time in the Township Council Chambers using Virtual teleconferencing which can be access by logging in to zoom in the following manner:**



**Join Zoom Meeting:**

Topic: BID OPENING: SECOND AVENUE ROAD IMPROVEMENTS PHASE-III

Piscataway Purchasing is inviting you to a scheduled Zoom meeting.

Topic: 2022-SECOND AVENUE ROAD IMPROVEMENTS PHASE-III

Time: Jun 23, 2022 02:00 PM Eastern Time (US and Canada)

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+1 646 876 9923 US (New York)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

Meeting ID: 870 8904 5877

Passcode: 619914

REQUIRED: (1) Bid Packet Clearly Marked "ORIGINAL", Documents all filled out & Signed in Blue Ink.

" ONLY (1) ORIGINAL CERTIFIED BID BOND IS REQUIRED" IN THE ORIGINAL BID PACKET.

REQUIRED: (1) a Photo Copy of the Original Bid Clearly Marked "TRUE COPY"  
No original documents in the true copy.

**PLEASE, MAKE SURE YOUR SEALED BID ARRIVES BEFORE OR BY 12 NOON ON 6/23/2022.**

**BID WILL BE OPEN VIA ZOOM AT 2PM.**

# THE TOWNSHIP OF PISCATAWAY



## INSTRUCTIONS TO BIDDERS

PAGES 1-55



MARIA E. VALENTE-CAEMMERER

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Purchasing Agent/Township Secretary

**BID BOILER PLATE**

**CONSTRUCTION  
PROJECT**

Revised June 2018

Piscataway  
**CONSTRUCTION PROJECT**  
Bid Specifications  
&  
General Requirements  
For

**PISCATAWAY TOWNSHIP**  
**SECOND AVE IMPROVEMENTS PHASE-III**  
**BID NO: 2022-06-13**

**Thursday, June 23, 2022**

Bid Opening Date

**2:00 p.m.**

Bid Opening Time

"Broadcast live **Via ZOOM**"

Opening Location: 455 Hoes Lane  
Piscataway, NJ 08854

**MARIA E. VALENTE-CAEMMERER**

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Purchasing Agent/Township Secretary

The Township of Piscataway

**REQUEST FOR BIDS**  
CONSTRUCTION ROAD IMPROVEMENTS  
**Bid Advertisement**

The Township of Piscataway, New Jersey, hereby advertises for competitive bids in accordance with N.J.S.A. 40A:11 et seq., for

**Bid No: 2022-06-13 “SECOND AVENUE IMPROVEMENTS-PHASE-III”**

All necessary bid specifications and bid forms & Plans may be secured at: <http://bids.piscatawaynj.org/>

Joseph Herrera, CFM/Alaimo Group  
Department of Community Development/Division of Engineering  
455 Hoes Lane  
Piscataway, NJ 08854

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Purchasing Agent  
Township of Piscataway, NJ  
Phone: 732-562-2320  
E-mail: [purchasing@piscatawaynj.org](mailto:purchasing@piscatawaynj.org)

Bidders may contact the Purchasing office by E-mail only at: [Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org) regarding questions or additional information about the bid specifications. **By June 13, 2022 @12noon.**

Bids must be sealed and delivered to the Purchasing Office of the Piscataway Township **on or before** date and time indicated below. The envelope to bear the following information:

Title: **SECOND AVENUE IMPROVEMENTS PHASE-III**  
Bid No: **2022-6-13**  
Bidders Name:  
Bidders Address:  
Date: **Thursday, June 23, 2022**  
Time: **2:00 p.m. (BROADCAST LIVE VIA ZOOM)**

The bid opening process will begin on the above advertised date and time ‘**BROADCAST LIVE VIA ZOOM**’ Administrative offices located at 455 Hoes Lane, Piscataway, NJ 08854. Bids may be submitted to the Purchasing office at the bid opening meeting, prior to the advertised date and time. On the advertised date and time, the Purchasing Agent shall publicly receive and open all bids. **LIVE BROADCAST VIA ZOOM. No bids shall be received after the time designated in the advertisement.** (N.J.S.A. 40A:11-1 et. seq.,)The Township of Piscataway does not accept electronic (e-mail) submission of bids.

***Bidders must call the purchasing office at 732-562-2321 to drop off the sealed bid. The Municipal building is closed to the public due to the Covid-19.***

During the Covid-19 pandemic, while the statewide “State of Emergency” declaration is still in effect in according with Executive Order 107 all proposal packets will only be read and opened electronically “BROADCAST LIVE” via ZOOM Bid opening. The Municipal building is closed due to the Covid-19 restrictions. Once the bid opening is concluded bidders must call the Purchasing Agent @ 732-562-2321 to set an appointment if bidders wishes to review any of the bids.

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N/A

There will be a pre-bid meeting on \_\_\_\_\_ . While attendance is not mandatory, all prospective bidders are strongly encouraged to attend this important meeting, which will be held in the, **CONTRACTOR, IS ALWAYS ENCOURGE TO GO TO VIEW THE ROAD PROJECT.**

All bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq., Affirmative Action Against Discrimination (N.J.A.C. 17:27-1 et seq.) An Initial Project Workforce Report will be required from the successful contractor. (Form AA-201).

Statement of Ownership Requirement: Pursuant to N.J.S.A. 52:25-24.2, Bidders shall submit a statement setting forth the names and addresses of all persons and entities that own ten percent or more of its stock or interest of any type at all levels of ownership.

**Each bid shall be accompanied by a bid bond, cashier's check or certified check made payable to the Township of Piscataway, for ten percent (10%) of the amount of the total bid, however, not to exceed \$20,000.00. Bidders must use Piscataway Bid Bond Form in the required documents section.**

Bidders are required by law to submit a Statement of Ownership Disclosure form statement setting forth the names and addresses of all persons and entities that own ten (10%) percent or more of its stock or interest of any type at all levels of ownership.

The bid package will also include other documents that must be completed and returned with the bid. Failure to comply with Instructions to Bidders and to complete and submit all required forms, may be cause for disqualification and rejection of the bid.

Contractors bidding on this project are to comply with the requirements of the New Jersey Prevailing Wage Act pursuant to N.J.S.A. 34:11-56.25 et seq.

All contractors named and Subcontracts in this proposal, shall possess a **valid Public Works Contractor's Registration Certificate pursuant to N.J.S.A. 34:11-56.48 et seq.**, at the time the proposal is received by the Township of Piscataway.

The Township of Piscataway reserves the right to reject any or all bids, pursuant to N.J.S.A. 40A:11-1 et. seq., and to waive any informalities that may be in the best interest of the Township.

MARIA E. VALENTE-CAEMMERER

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**Purchasing Agent/Township Secretary**





***Bidders must call the purchasing office at 732-562-2321 to drop off the sealed bid. The Municipal building is closed to the public due to the Covid-19.***

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**Passcode: 619914**

There will be a pre-bid meeting on   N/A  . While attendance is not mandatory, all prospective bidders are strongly encouraged to view the road project site.

All bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq., Affirmative Action Against Discrimination (N.J.A.C. 17:27-1 et seq.). An Initial Project Workforce Report will be required from the successful contractor. (Form AA-201).

Contractors bidding on this project are to comply with the requirements of the New Jersey Prevailing Wage Act pursuant to N.J.S.A. 34:11-56.25 et seq.

Each bid shall be accompanied by a bid bond, cashier's check or certified check made payable to the The Township of Piscataway, for ten percent (10%) of the amount of the total bid, however, not to exceed \$20,000.00. Bidders must use Piscataway Bid Bond Form attached to this Bid in the required documents.

Bidders are required by law to submit a Statement of Ownership Disclosure form statement setting forth the names and addresses of all persons and entities that own ten (10%) percent or more of its stock or interest of any type at all levels of ownership.

Statement of Ownership Requirement: Pursuant to N.J.S.A. 52:25-24.2, Bidders shall submit a statement setting forth the names and addresses of all persons and entities that own ten percent or more of its stock or interest of any type at all levels of ownership.

The bid package will also include other documents that must be completed and returned with 40A;11-1 et seq., the bid. Failure to comply with Instructions to Bidders and to complete and submit all required forms, may be cause for disqualification and rejection of the bid.

The Township of Piscataway reserves the right to reject any or all bids pursuant to N.J.S.A. 40A:11-1 et seq., and to waive any informalities that may be in the best interests of the Township.

MARIA E. VALENTE-CAEMMERER

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**Purchasing Agent/Township Secretary**

# TABLE OF CONTENTS

Review all sections that may affect your work and include applicable requirements. All contracts are based on scope information within the whole document set and are not limited to “trade” drawings and specifications.

<u>Section Title</u>	
<b><u>BID SPECIFICATIONS &amp; GENERAL REQUIREMENTS</u></b>	
	Bid Advertisement
	Table of Contents Bidding Manual
	Ethics in Purchasing Statement to Vendors
	<b><i>Advisory Information for Bidders</i></b>
	1. Promptness of Bid Submittal
	2. Parking
	3. Mail
	4. UPS/FED EX
	5. Hand Deliver Bids – Suggested Practice
	Bid Checklist (A)
	Reminder Checklist (B)
	Return the entire original bid packet intact by the indicated deadline.
<b><u>GENERAL SPECIFICATIONS (for Bidding)</u></b>	
1, 2	<b><i>Instructions to Bidders</i></b>
3	Bid Opening
4	Affirmative Action Requirements
5	American Goods
6	Americans with Disabilities Act; Facilities for Handicapped Persons
7	Anti-Discrimination Provisions—N.J.S.A. 10:2-1
8	Architect or Construction Contract Disputes; Alternate Dispute Resolution Process
9	Bid Guarantee and Bonding Requirements
10	Township Performance Payment Bond Form and Instructions
11	Bid Proposal Form
12	Bidder Comment Sheet
13	Bidder's Responsibility for Bid Submittal
14	Business Registration Certificate
15	Challenges to Bid Specifications
16	Change Orders
17	Contracts
18	Contractor's Registration Evidence
19	Contractor/Vendor Requirements—Office of the New Jersey State Comptroller
20	Debarment, Suspension, or Disqualification
21	Documents, Missing/Illegible

22	Document Signature- Original; Blue Ink
23	Duplicate copy; must be a "PHOTO COPY" of the ORIGINAL.

<u>Section Title</u>	
24	Equipment Certification
25	Examination of Specifications, Acknowledgement
26	False Material Representation
27	Force Majeure
28	Insurance and Indemnity
29	Interpretations and Addenda
30	Iran Disclosure of Investment Activities
31	Liability - Copyright
32	Liquidated Damages
33	Maintenance Bonds
34	Non-Collusion Affidavit
35	Notice (Authorization) to Proceed
36	Payments
37	Payment, Partial, Withholding and Prompt
38	Performance Review
39	Pre-Bid Meeting; Attendance Strongly Encouraged
40	Pre-Qualification of Bidders
41	Prevailing Wages: Construction, Alterations, Repairs
42	Qualification of Bidders
43	Resident Citizens; Preferred in Employment on Public Works Contracts
44	Renewal of Contract
45	Right to Know Law
46	Statement of Ownership Disclosure
47	Subcontracting Disclosure Statement
48	Subcontracting: Prohibitions: Hold Harmless
49	Sworn Contractor Certification; Qualifications and Credentials
50	Taxes; Contractor's Use of Tax ID Number
51	Termination of Contract
52	Withdrawal of Bids
53	Cover Page, Name , Address, Phone number, E-mail Address

**SUPPLEMENTAL SPECIFICATIONS:**

- Award of Contract
- Experience
- Number of Working Days
- Pre-Bid Meeting
- Trade Classification

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**TECHNICAL SPECIFICATIONS**

**BID DOCUMENTS AND REQUIRED DOCUMENTATION**

Acknowledgement of Addenda
Affidavit Attesting to Compliance with Prevailing wage Law of NJ
Bidder's Comment Form
Contractor Questionnaire/Certification
Contractor's Registration Certification
Equipment Certification
Iran Disclosure of Investment Activities
Non-Collusion Affidavit
Pre-Qualification Affidavit—No Material Adverse Change
Prevailing Wages Certification
Pay to Play Form
Statement of Ownership Disclosure Form
Subcontractor's Disclosure Statement
1. Plumbing and Gas Fitting Work
2. Refrigeration, Heating & Ventilation Systems & Equipment
3. Electrical Work; Tele-Data, Fire Alarm or Security Systems
4. Structural Steel & Iron Work
5. Other Trades
Sworn Contractor Certification; Qualifications and Credentials
Appendix A -- Americans with Disabilities Act of 1990
Exhibit B --Mandatory Language Equal Employment Opportunity
AA201 Instructions for Completing the Initial Project Workforce Report
AA202 Monthly Project Workforce Report-Construction & Instructions
Township Performance Payment Bond Form with Bid Document & Instructions
Appendix Section
Model Performance Bond – <i>Sample</i>
Surety Disclosure Statement and Certification - <i>Sample</i>
Sample of Certificate Of Employee Information Report
Sample of Sate of New Jersey Business Registration Certificate
Sample of W-9
Sample of Certificate of Insurance
Sample of Bid Bond Form
Sample of Piscataway Performance Bond Form
Sample of NJ Labor Payroll Forms
Sample of NJ AA-202 Forms
Sample of NJ AA-201 Forms
Sample of NJ AA-302 forms

## ETHICS IN PURCHASING

### **Township Responsibility**

#### **Recommendation of Purchases**

It is the desire of The Township of Piscataway to have all employees and officials practice exemplary ethical behavior in the procurement of goods, materials, supplies, and services.

Officials and employees who recommend purchases shall not extend any favoritism to any vendor. Each recommended purchase should be based upon quality of the items, service, price, delivery, and other applicable factors in full compliance with N.J.S.A. 40A:11-1 et seq.,

#### **Solicitation/Receipt of Gifts – Prohibited**

Officials and employees are prohibited from soliciting and receiving funds, gifts, materials, goods, services, favors, and any other items of value from vendors doing business with The Township of Piscataway or anyone proposing to do business with the Township.

### **Vendor Responsibility**

#### **Offer of Gifts, Gratuities -- Prohibited**

Any vendor doing business or proposing to do business with The Township of Piscataway, shall neither pay, offer to pay, either directly or indirectly, any fee, commission, or compensation, nor offer any gift, gratuity, or other thing of value of any kind to any official or employee of The Township of Piscataway or to any member of the official's or employee's immediate family.

#### **Vendor Influence -- Prohibited**

No vendor shall cause to influence or attempt to cause to influence, any official or employee of the Township of Piscataway, in any manner which might tend to impair the objectivity or independence of judgment of said official or employee.

### **Vendor Certification**

Vendors or potential vendors will be asked to certify that no official or employee of The Township of Piscataway or immediate family members are directly or indirectly interested in this request or have any interest in any portions of profits thereof. The vendor participating in this request must be an independent vendor and not an official or employee of the Township.

MARIA E. VALENTE-CAEMMERER

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Purchasing Agent/ Township Secretary

## TOWNSHIP OF PISCATAWAY

### ADVISORY INFORMATION FOR BIDDERS

1. PROMPTNESS OF BID SUBMITTAL

It is the responsibility of the bidder to ensure that their bid is presented in a sealed envelope and submitted to the Purchasing Office, prior to the advertised bid date and time **Via ZOOM**. The advertised bid date and time for this bid is on **Thursday, June 23, 2022 @ 2:00pm**. No bids shall be received after the time designated in the bid advertisement. No extensions or exceptions will be made. The Purchasing Office is opened Monday through Friday from 8:30am – 4:30pm and closed for lunch from 12:20pm to 1:30pm. Once again, bids will not be received after the time designated in the advertisement. Bidders must call Purchasing @732-562-2321 to hand deliver the sealed bid. The Municipal Building is closed due to the Covid-19.

2. PARKING

***Allow enough time to locate a parking space.***

3. MAIL

Mail is brought to the Clerk's Offices in mailbags, approximately 11:30am each day. The mail is then sorted within the Township system, by departments. The Clerk's Office routinely receives its mail at approximately 11:30am. The Clerk will personally turn it in to the Purchasing Agent before the advertised date and time.

4. UPS / FED EX / AND OTHER EXPRESS DELIVERY SERVICES

Deliveries of this type usually begin at 9:00 a.m. These items are brought only to the Clerk's Office. The Clerks Office then calls the various departments with a request to pick up their items. The Clerk will personally turn it in to the Purchasing Agent before the advertised date and time.

5. HAND DELIVER BIDS – SUGGESTED PRACTICE

Keeping the aforementioned items in mind, the Township suggests that bidders arrange to hand deliver their bid to the Purchasing Office to the Purchasing Agent before the advertised date and time. Please understand that bids arriving after the advertised bid date and time, for any reason, cannot be accepted, opened or considered.

**Submission of (1) Original Bid in [Blue Ink](#) and (1) Photo Copy of the original marked "TRUE COPY".**

***Required (1) Original Bid Bond only with the Original bid packet.***

***All bids are to be submitted in duplicate; one (1) Original; one (1) Photo Copy of the Original Marked "TRUE COPY. No originals in the True copy***

***Bidders must call the purchasing office at 732-562-2321 to drop off the sealed bid. The Municipal building is closed to the public due to the Covid-19.***

During the Covid-19 pandemic, while the statewide “State of Emergency” declaration is still in effect in according with Executive Order 107 all proposal packets will only be read and opened electronically “BROADCAST LIVE” via ZOOM Bid opening. The Municipal building is closed due to the Covid-19 restrictions. Once the bid opening is concluded bidders must call the Purchasing Agent @ 732-562-2321 to set an appointment if bidders wishes to review any of the bids.

All bids shall be kept sealed , and will be received and publicly opened on the proposal opening date and time in the Township Council Chambers using Virtual teleconferencing which can be access by logging in to zoom in the following manner:

**Join Zoom Meeting:**

**Piscataway Purchasing is inviting you to a scheduled Zoom meeting.**

**Topic: 2022-SECOND AVENUE ROAD IMPROVEMENTS PHASE-III**

**Time: Jun 23, 2022 02:00 PM Eastern Time (US and Canada)**

**Join Zoom Meeting**

**<https://us02web.zoom.us/j/87089045877?pwd=bmhYREV1cHNNdzRzYmswNGZqdURhQT09>**

**Meeting ID: 870 8904 5877**

**Passcode: 619914**

**One tap mobile**

**+13017158592,,87089045877#,,,,\*619914# US (Washington DC)**

**+13126266799,,87089045877#,,,,\*619914# US (Chicago)**

**Dial by your location**

**+1 301 715 8592 US (Washington DC)**

**+1 312 626 6799 US (Chicago)**

**+1 646 876 9923 US (New York)**

**Meeting ID: 870 8904 5877**

**Passcode: 619914**



## Township of Piscataway

### BID CHECKLIST (A)

A. Bid packages must be submitted in duplicate on the proposed forms as provided, and in the manner designated. The Township of Piscataway will accept one original bid package and one copy of the bid package. Please include all items, organized as follows:

1. Addenda, Acknowledgement
2. Americans with Disabilities Act—Acknowledgement
3. Bid Proposal Form
4. Bid Guarantee (Bid Bond, Cashier's Check, or Certified Check)
5. Business Registration Certificate -- New Jersey—Submit with bid or prior to award of contract
6. Certificate (Consent) from Surety
7. Contractor Questionnaire / Certification
8. Contractor's Registration Certification
9. Contractor Registration Certificate—Submit with bid or prior to award of contract
10. Equipment Certification
11. Iran Disclosure of Investment Activities
12. Non-Collusion Affidavit
13. Notice of Classification Form
14. Prequalification Affidavit—No Material Adverse Change
15. Prevailing Wages Certification
16. Statement of Ownership Disclosure
17. Subcontractor's Disclosure Statement and all required attachments for subcontractors.
18. Sworn Contractor Certification; Qualifications and Credentials
19. Bidder Comment Form - Optional
20. Bid Cover Page, with name ,address ,phone number, E-mail address **REQUIRED**
21. Hold Harmless Agreement
22. Pay to Play form
23. Affidavit Attesting to Compliance with Prevailing Wages Laws of NJ

Failure to submit the above listed documents with the bid package may be cause for rejection of the entire bid for being non-responsive

## THE TOWNSHIP OF PISCATAWAY

### BID CHECKLIST (B)

#### B. Reminder Checklist

As a courtesy, the Office of the Purchasing Agent has prepared this reminder checklist to items pertaining to this bid. The checklist is not considered to be all-inclusive. Bidders are to read and become familiar with all instructions outlined in the bid package.

<u>Item</u>	<u>Yes</u>	<u>No</u>
1. Have you verified your pricing to ensure accuracy?		
2. Have you answered every question fully and accurately?		
3. Have you signed all your documents ( <b>Blue Ink</b> )? No facsimile signature.		
4. Have you prepared all documents for submission?		
5. Did you make a copy of the bid package for your records?		
6. Did you make a Photo Copy of the original and marked "True Copy" of the original bid for the Township? No Original documents on the True Copy.		
7. Did you submit a signed Bid Guarantee? Signed Consent of Surety? Only one original is <u>required</u> in the Original Bid packet.		
8. Did you correctly address the envelope, title of bid?		
9. Have you allowed ample time for the bid to reach the Clerk's Office?  _____		
10. <b>REQUIRED:</b> Bid Cover Page: Name, Address, Phone Number, E-mail Address?		

Bid No. 2022-06-13

# THE TOWNSHIP OF PISCATAWAY

## SECOND AVENUE IMPROVEMENTS PHASE-III



# GENERAL SPECIFICATIONS

Pages



**MARIA E. VALENTE-CAEMMERER**

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Purchasing Agent/Township Secretary

**THE TOWNSHIP OF PISCATAWAY**  
**SECOND AVENUE IMPROVEMENTS PHASE-III**

**INSTRUCTIONS TO BIDDERS**

**1. BIDS ARE TO BE SUBMITTED TO:**

\_\_\_\_\_  
Division of Purchasing/ Attention Purchasing Agent  
The Township of Piscataway  
455 Hoes Lane  
Piscataway, New Jersey 08854

BY: **2:00 p.m.** PREVAILING TIME

ON: **Thursday, June 23, 2022**

By mail, delivery service or in person. Bids that are submitted are to be sealed and will be unsealed and announced at the bid opening meeting.

- 2. Bid Packages to be submitted in Duplicate.** Bids must be placed in a *sealed* envelope/package marked as shown below on the front of the envelope/package. Bid packages must be submitted **in duplicate** on the proposed bid submittal forms as provided, and in the manner designated. The Township of Piscataway requires one original bid package, one duplicate true copy of the bid package. The extra copies are necessary for processing of the bids. Bidders should also keep a complete copy of the bid packet, exactly as submitted.

Outside of Envelope Label Information:

Township: **THE TOWNSHIP OF PISCATAWAY**  
Bid Number: **2022-06-13**  
Project: **SECOND AVENUE IMPROVEMENTS PHASE-III**  
Bid Date: **Thursday, June 23, 2022**  
Bid Time: **2:00pm (BROADCAST LIVE Via ZOOM)**

Bidder: *Name of Company*  
*Address*  
*City,*  
*State, Zip*

**Failure to properly label the bid envelope may be cause for the rejection of the bid.**

The Township of Piscataway does not accept electronic (e-mail) submission of bids.

**3. BID OPENING MEETING**

All bids will be publicly received and unsealed by the Purchasing Agent opened at the above address and read beginning at **2:00pm** on **Thursday, June 23, 2022**. Bidders and/or their authorized agents, and the general public are invited to be present at the bid opening **Via ZOOM**. It is the responsibility of each bidder to ensure that their bid is complete and presented to the Purchasing Agent prior to the advertised bid date and time. No bids shall be received or accepted by The Township of Piscataway after the advertised bid date and time.

## **BIDDING REQUIREMENTS**

### **4. AFFIRMATIVE ACTION—EQUAL EMPLOYMENT OPPORTUNITY IN PUBLIC CONTRACTS--EEO**

The construction contractor shall complete and submit an Initial Project Workforce Report, **Form AA-201** upon notification of award by the governing body. Proper completion and submission of this Report shall constitute evidence of the contractor's compliance with the regulations. Failure to submit this form may result in the contract being terminated. The contractor also agrees to submit a copy of the Monthly Project Workforce Report, **Form AA-202** once a month thereafter for the duration of the contract to the Department of Labor Workforce and Development and to The Township of Piscataway Public Agency Compliance Officer.

All bidders should familiarize themselves with N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27-1.1 et seq. MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE—EXHIBIT B. If awarded a contract, your company/firm will be required to comply with the above requirements.

All relevant questions should be related to:

Department of Treasury  
Division of Purchase and Property  
Contract Compliance and Audit Unit  
EEO Monitoring Program—PO Box 206  
Trenton, New Jersey 08625-0206  
(609) 292-5473

### **5. AMERICAN GOODS**

In accordance with N.J.S.A. 40A:11-1 et seq., only manufactured products of the United States, wherever available, and where possible are to be used with this project.

### **6. AMERICANS WITH DISABILITIES ACT; FACILITIES FOR HANDICAPPED PERSONS**

The contractor must comply with all provisions of Title II of the Americans with Disabilities Act (ADA), P.L. 101-336, in accordance with 42 U.S.C. 5121.01 et seq. The Township of Piscataway further recognizes that all specifications for the construction, remodeling or renovation of any public building shall provide facilities for the physically handicapped.

It is further recommended that bidders are required to read the Americans with Disabilities language form that is included in these specifications. The form shall be signed to show agreement with the provisions of Title II of the Act and the provisions are to be made a part of the contract. The signed form shall be submitted with the bid proposal. The contractor is obligated to comply with the Act and to hold the owner harmless.

**7. ANTI-DISCRIMINATION PROVISIONS—N.J.S.A. 10:2-1**

N.J.S.A. 10:2-1. Antidiscrimination provisions. Every contract for or on behalf of the State or any county or municipality or other political subdivision of the State, or any agency of or authority created by any of the foregoing, for the construction, alteration or repair of any public building or public work or for the acquisition of materials, equipment, supplies or services shall contain provisions by which the contractor agrees that:

a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;

c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

No provision in this section shall be construed to prevent the township from designating that a contract, subcontract or other means of procurement of goods, services, equipment or construction shall be awarded to a small business enterprise, minority business enterprise or a women's business enterprise pursuant to P.L..).

**8. ARCHITECT OR CONSTRUCTION DISPUTES; ALTERNATIVE DISPUTE RESOLUTION PROCESS**

All disputes relating to construction contracts or relating to contracts for engineers or architects, surveyors, design or skilled services relating to construction contracts for prompt payment issues shall be submitted to the following Alternative Dispute Resolution process (“ADR”):

All disputes shall first be submitted to the architect of record, if there is one, for a determination. If thirty (30) days pass without a determination by the architect or a determination is made that does not resolve the dispute, then the claims shall be submitted for non-binding mediation by a single mediator.

The mediation shall be held where the project is located before a mediator who is mutually acceptable to the parties. The parties shall share the mediator’s fees equally. If the dispute is submitted for mediation the neutral party involved must demonstrate knowledge of the Local Public Contracts Law.

Nothing shall prevent either party from seeking injunctive or declaratory relief in court at any time.

The alternative dispute resolution practices required by this section shall not apply to disputes concerning the bid solicitation process, or to the formation of contracts.

The Bidder further agrees to include a similar provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors to include similar mediation provisions in all agreements with subcontractors, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements. The arbitration of claims is expressly excluded under this Contract.

If the parties cannot resolve their dispute through the mediation process, the parties are free to file an action in the appropriate court of law.

**\*\*AIA- Document's will Not be accepted by The Township of Piscataway. Sample of acceptable Bid Bond Form in the bid.**

**9. BID GUARANTEE AND BONDING REQUIREMENTS**

**A. Bid Guarantee** Bidders shall submit with their bid package a bid guarantee made payable to: The Township of Piscataway ("Township"). The guarantee shall be in the form of a certified check, cashier's check or bid bond in the amount of 10% of the bid, but not in excess of \$20,000. Such deposit shall be forfeited upon refusal of a bidder to execute a contract. Any bid in the form of a check shall be returned when the contract is executed and surety (performance) bond filed with the Township.

The bid guarantee check for unsuccessful bidders, if requested, will be returned as soon after the bid opening as possible, but in no event later than (10) days after the bid opening.

Please note: Uncertified business checks, personal checks or money orders are not acceptable.

All bid bonds submitted must be signed and witnessed with original signatures. The Township will not accept facsimile or rubber stamp signatures on the bid bond. **Failure to sign the bid bond by either the Surety or Principal, and/or failure to submit the properly executed bid bond with the bid package, shall be deemed cause for disqualification and rejection of the bid.**

The Attorney-in-Fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the Power of Attorney. The Township of Piscataway will only accept bid bonds from companies that are licensed and qualified to do business in the State of New Jersey. Such a list may be available upon request to the State of New Jersey, Department of Banking and Insurance, P.O. 040, Trenton, New Jersey 08625. **Failure to submit a properly executed bid guarantee shall be cause for disqualification and rejection of bid.**

Please note: The name, address and phone number of the Bond Underwriter as well as the Bond Number shall be included with all bonds submitted to the Township.

**B. Certificate (Consent) of Surety—N.J.S.A. 40A:11-1 et seq.,**

Each bidder must submit with his bid a certificate from a surety company stating that the surety company will provide the contractor with a performance bond in an amount equal to the amount of the contract (N.J.S.A. 40A-11-1 et seq.). Such surety company must be licensed and qualified to do business in the State of New Jersey. All certificate (consent) of surety documents must be signed with original signatures.

The Township will not accept facsimile or rubberstamp signatures. The certificate (consent) of surety, together with a power of attorney must be submitted with the bid. Submission of a Consent of Surety which contains any prior conditions upon the Surety's issuance of the required Bonds (other than the award of the contract) may be cause for rejection of the bid.

(1) Original Bid Bond with the Original bid packet only.

**\*\*AIA- Document's will Not be accepted by The Township of Piscataway. Sample of acceptable Bid Bond Form in the bid.**

**Failure to sign the Certificate (Consent) of Surety by either the Surety or Principal, and/or failure to submit the properly executed Certificate (Consent) of Surety with the bid package, shall be deemed cause for disqualification and rejection of the bid.**



**\*\*AIA- Documents will Not be accepted by The Township. Once awarded Bidders must use Township Performance Payment Bond Form in the bid(-Sample)**

**C. Performance Bond--(N.J.S.A. 2A:44-143/2A:44-147)**

The successful contractor shall furnish a Performance, Payment and Completion Bond in a sum of at least one hundred percent (100%) of the total amount payable by the terms of his Contract. Such written guarantee shall be made payable to the Township of Piscataway and shall be in the form required by Statute. Attached to the performance bond shall be a Surety Disclosure Statement and Certification which shall be complete in all respects and duly acknowledged according to law. A model Surety Disclosure Statement and Certification is presented in the Appendix Section of this proposal.

Such bond shall further carry a stipulation that no advance, premature, excessive or delayed payments by the Township shall in any way affect the obligation of the Surety on its bond.

Such bond shall further stipulate that no payments made to the contractor, nor partial or entire use of occupancy of the work by the Township shall be an acceptance of any work or materials not in accordance with this Contract and the Surety shall be equally bound to the same extent as the Contractor.

It is expressly stipulated that the Surety for the Contractor on the project shall be obligated to make periodic inquiries of the Township at reasonable times, to determine whether its Principal has performed or was performing the Contract in accordance with all its terms and conditions, particularly in relation to the progress payments scheduled under said Contract with the Township.

In the event the Contractor defaults or fails to perform or finish the work prescribed under the Contract for any reason whatsoever, it shall become the unqualified obligation the Surety for the defaulting contractor to complete the Contract in accordance with its terms following receipt of notice from the Township of such default.

The Township shall only accept one payment and performance bond to cover this public works contract. The performance bond shall contain language as found in N.J.S.A. 2A:44-14. The bond form language is presented in the Appendix Section of this proposal.

Such Performance, Payment and Completion Bond shall be executed and delivered to The Township of Piscataway when so requested by the Notice to Proceed Letter or within ten (10) days after the award of contract.

The Township of Piscataway will only accept performance bonds from surety companies that are licensed and qualified to do business in the State of New Jersey, and if the amount of the bond is \$850,000 but not more than \$3.5 million, the surety shall hold a current certificate of authority, issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. 9305. (N.J.S.A. 2A:44-143 (b))

Please note: The name, address, and phone number of the Bond Underwriter as well as the Bond Number shall be included with all bonds submitted to The Township of Piscataway and must be duly signed with original signatures.

When applicable, for multi-year contracts and for extension of contracts, the Performance Bond may be re-submitted each year on the contract anniversary date for one hundred per cent (100%) of the contract amount.

**\*\*AIA- Document's will Not be accepted by The Township of Piscataway. Bidders must use Township Performance Payment Bond Form in the bid. Sample of Township Form in the bid.**

**BID RESULTS.** Preliminary bid results you can E-mail [purchasing@piscatawaynj.org](mailto:purchasing@piscatawaynj.org) generally within **24-36 hours after date and time of bid opening**

## **10. BID PROPOSAL FORM**

All bids are to be written in by typewriter or ink in a legible manner on the official Bid Proposal Form. Any bid price showing any erasure or alteration must be initialed by the bidder in ink, at the right margin next to the altered entry. Failure to initial any erasure or alteration may be cause to disqualify that particular bid entry. If the disqualified entry is a required one, the entire bid may be subject to rejection, so please fill out all entries with care.

### *Business Organization*

Each Bid Proposal Form must give the full business address, business phone, fax, e-mail, the contact person of the bidder, and be signed by an authorized representative as follows:

- Bids by partnerships must furnish the full names of all partners and must be signed in the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing.
- Bids by corporations must be signed in the legal name of the corporation, followed by the name of the State in which incorporated and must contain the signature and designation of the president, secretary or other person authorized to bind the corporation in the matter.
- Bids by sole-proprietorship shall be signed by the proprietor.
- When requested, satisfactory evidence of the authority of the officer signing shall be furnished.

The Bid Proposal Form must be duly signed by the authorized representative of the company, at the end of the Bid Proposal Form. **Failure to sign in Blue Ink the Bid Proposal Form may be cause to disqualify the entire bid.** If the Bid Proposal Form contains more than one sheet, then bidders are requested to affix the company name and address on each intervening sheet between the front sheet and the signature sheet which already bear the company information.

The Township of Piscataway will not consider any bid on which there is any alteration to, or departure from, the bid specifications. Bidders are not to make any changes on the Bid Proposal Form, or qualify their bid with conditions differing from those defined in the contract documents. If bidders do make changes on the Bid Proposal Form, except as noted above for initialed clerical mistakes, it may be cause to disqualify that particular bid as non-responsive. (N.J.S.A. 40A:11-1 et seq.,)

The bidder also conveys by submitting a bid that the company he represents is financially solvent, experienced in and competent to perform the type of work so specified.

## 11. **BIDDER COMMENT SHEET**

This form is for the Bidder's use in offering voluntary alternates, or other comments intended to afford the Township information or opportunities to improve the quality of the project, without invalidating the bid proposal. It may *not* be used to take exception to specific conditions of the project defined in the contract documents which the Bidder does not like. The bid provided must be based upon the plans and specifications, and all contract conditions, as stated. If these documents or conditions contain some untenable item, or extremely expensive provision, for example, to which the Bidder wishes to raise objection, this must be done at the pre-bid meeting, or in writing to the Purchasing office at: [Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org) through the question process outlined in the Instructions to Bidders. Such inquiries will have response issued by addendum only, and the resulting decision circulated to all bidders of record.

## 12. **BIDDER'S RESPONSIBILITY FOR BID SUBMITTAL**

It is the responsibility of the bidder to ensure that their bid is presented to The Township of Piscataway and officially received before the advertised date and time of the bid. It is understood and agreed upon that any person in The Township of Piscataway will be absolved from responsibility for the premature opening of any bid not properly labeled and sealed. Failure to properly label the bid envelope may be cause for the rejection of the bid. **PROPERLY NAME OF THE BID: OUTSIDE OF THE ENVELOPE MUST BE LABEL CLEAR.**

**QUESTIONS REGARDING PLANS & SPECIFICATIONS.** Should any bidder be in doubt as to the intent of the Plans and Specifications, he should immediately notify the Purchasing Agent in writing, who will send a written addendum to all bidders covering the point in question. Bidders may not rely upon oral before submitting bids, the bidder shall apply in writing to the Purchasing Agent for clarification or interpretation of any conflicting information between two or more statements in the Plans and Specifications. If such clarification is not requested before bidding, the bidder shall be responsible for doing such work and furnishing such materials, as is necessary to comply with whichever interpretation of the Plans and Specifications the Engineer may, during construction, judge to be proper. Question to be E-mailed to [Purchasing@piscatawaynj.org](mailto:Purchasing@piscatawaynj.org)

### **13. BUSINESS REGISTRATION CERTIFICATE (N.J.S.A. 52:32-44)**

Pursuant to N.J.S.A. 52:32-44 as amended, a contractor shall provide the contracting agency with the business registration of the contractor and that of any named subcontractor prior to the time a contract, purchase order, or other contracting document is awarded or authorized. At the sole option of the contracting agency, the requirement that a contractor provide proof of business registration may be fulfilled by the contractor providing the contracting agency sufficient information for the contracting agency to verify proof of registration of the contractor, or named subcontractors, through a computerized system maintained by the State.

#### Request of the Township

All bidders or companies providing responses for requested proposals, are **requested** to submit with their response package a copy of their "New Jersey Business Registration Certificate" as issued by the Department of Treasury of the State of New Jersey.

**The Township reminds all respondents that failure to submit the New Jersey Business Registration Certificate prior to the award of contract will result in the rejection of the proposal.**

A subcontractor named in a bid or other proposal made by a contractor to a contracting agency shall provide a copy of its business registration to any contractor who shall provide it to the contracting agency pursuant to the provisions of subsection b. of this section. No contract with a subcontractor shall be entered into by any contractor under any contract with a contracting agency unless the subcontractor first provides the contractor with proof of a valid business registration.

The contractor shall maintain and submit to the contracting agency a list of subcontractors and their addresses that may be updated from time to time during the course of the contract performance. A complete and accurate list shall be submitted before final payment is made for goods provided or services rendered or for construction of a construction project under the contract. A contracting agency shall not be responsible for a contractor's failure to comply with this subsection.

A contractor or a contractor with a subcontractor that has entered into a contract with a contracting agency, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury the use tax due pursuant to the "Sales and Use Tax Act," P.L.1966, c.30 (C.54:32B-1 et seq.) on all their taxable sales of tangible personal property delivered into this State.

**STATE OF NEW JERSEY**  
**BUSINESS REGISTRATION CERTIFICATE**  
 FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS

DEPARTMENT OF TREASURY  
 DIVISION OF REVENUE  
 PO BOX 252  
 TRENTON, N.J. 08646-0252


TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT  
 TAXPAYER IDENTIFICATION#: 970-097-382/500  
 ADDRESS: 847 ROEBLING AVE  
 TRENTON NJ 08611  
 EFFECTIVE DATE: 01/01/01  
 FORM-BRC(08-01)

TRADE NAME: CLIENT REGISTRATION  
 SEQUENCE NUMBER: 0107330  
 ISSUANCE DATE: 07/14/04

Acting Director  
*John S. Tully*

This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.

**SAMPLES OF**  
**NEW JERSEY**  
**BUSINESS REGISTRATION**  
**CERTIFICATES**

 **STATE OF NEW JERSEY**  
**BUSINESS REGISTRATION CERTIFICATE**

Taxpayer Name: TAX REG TEST ACCOUNT  
 Trade Name:  
 Address: 847 ROEBLING AVE  
 TRENTON, NJ 08611  
 Certificate Number: 1093907  
 Date of Issuance: October 14, 2004

For Office Use Only:  
 20041014112823533

**N.J.S.A. 54:49-4.1: Violations of Registration Requirements; Penalties.**

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001, c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L.1977, c.110 (C.5:12-92), or that provides false information of business registration under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency or under a casino service industry enterprise contract.

**14. CHALLENGES TO BID SPECIFICATIONS (N.J.S.A. 40A:11-1 et seq.,)**

Any prospective bidder who wishes to challenge a bid specification shall file such challenges in writing with the Purchasing Agent no less than three (3) days prior to the opening of bids. Challenges filed after that date shall be considered void and having no impact on The Township of Piscataway or the award of a contract.

**15. CHANGE ORDERS (N.J.A.C. 6A:26-4.9, 4.10 et seq.) (N.J.A.C. 5:30-11.1 et seq.)**

**The Township Approval Required; Prior to Issuance of Change Order (N.J.A.C. 5:30-11.2)**

Change orders may be approved by The Township of Piscataway in an amount up to twenty percent (20%) when necessitated by one of the following:

- Emergencies consistent with N.J.S.A. 40A:11-1 et. Seq.;
- Unforeseeable physical conditions; or
- Minor modification to the project/scope that achieve cost savings, improve service or resolve construction conditions.

**Contractors are prohibited to perform any change order unless so directed in writing by the Township, Office of the Purchasing Agent.**

## 16. CONTRACTS

### A. Award of Contract; Rejection of Bid

The contract shall be awarded, if at all, to the lowest responsible bidder as determined by the Township. The Township of Piscataway reserves the right to reject any or all bids as authorized by the Local Public Contracts Law, and to waive any informalities the Township feels are in the best interests of the Township.

#### Award the Contract or Reject All Bids--Sixty (60) Days

Pursuant to N.J.S.A. 40A:11-1 et seq., The Township of Piscataway shall award the contract or reject all bids within sixty (60) days of the advertised date and time, except that bids of any bidders who consent thereto may, at the request of the Township, be held in consideration for such longer period as may be agreed.

### B. Equal Prices

Pursuant to the statute when two or more bidders submit equal prices and the prices are the lowest responsible bids, the Township may award the contract to the vendor whose response, in the discretion of the Township, is the most advantageous, price and other factors considered.

EQUAL OR TIE BID. The Township of Piscataway reserves the right to award at their discretion, in the best interest of the Township and with reference to the information submitted with the proposals, to any of the tie bidders.

UNIT PRICES. All unit prices, and all lump sum prices, in the bid proposal shall include all applicable fees, cost, and tax (if any) relating to project, and all charges for overhead, profit, insurance, etc. The successful bidder will not be responsible for real property tax on any property of the Owner, including the site of the project. Bid proposal amount will exclude all Federal Excise Tax and sales tax of all states, except those if any.

PRICING ERROR. If a pricing error is discovered after bid opening between the unit price and the total extended price, the unit price shall prevail.

RIGHTS RESERVED BY TOWNSHIP. The Township reserves the right to reject any and all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed most favorable to the Township of Piscataway, New Jersey, at the time and under the conditions stipulated. Proposals incorporating deviations which, in the judgment of the Purchasing Agent, are a clear departure from the intent and purpose of these specifications will not be considered.

### C. Return of Contracts and Related Contract Documents

Upon written notification of award of contract by the Township, the contractor shall sign and execute a formal contract agreement between the township and Contractor and return the executed contracts along with:

1. Performance Bond in the total amount of the contract.
2. Insurance Certificate with The Township of Piscataway named as an additional insured.
3. Affirmative Action Form AA-201 - Initial Project Workforce Report - Yellow copy.
4. Other required documents as may be outlined in bid specifications & Instructions.

The above documents may also be required for submission with the official Notice to Proceed. The contracts and related documents shall be returned to the Office of the Purchasing Agent within **ten (10) days of receipt of notification**. Failure to execute the contract and return said contract and related required documents within the prescribed time may be cause for the annulment of award by the Township with the bid security becoming property of the Township.

D. Alterations of Contract

The Township of Piscataway reserves the right to alter or amend the contract by adding to or subtracting from the work herein specified, such additions or omissions being done under the general conditions of these specifications and the terms of the Contract. No changes shall be permitted from the specifications except that the same be in writing and the amount of the extra compensation or credit stipulated therein. Refer to Change Order Section.

E. Term of Contract

The contractor, to whom the contract is awarded, will be required to do and perform the work/services and to provide and furnish the materials in connection therewith in accordance with **the plans and specifications on or before the date listed in the Technical Specifications.**

F. Purchase Order Required

No contractor shall commence any public works project until he is in receipt of an approved purchase order authorizing work to begin. (See Notice (Authorization) to Proceed)

**TERM/COMPLETION OF THE PROJECT: AS PER SPECIFICATION/PROPOSAL PAGES**



## **17. CONTRACTOR'S REGISTRATION EVIDENCE**

### A. Valid Certificate – Receipt of Bid

All contractors must adhere to the provisions of the Public Works Contractor Registration Act – N.J.S.A. 34:11-56.48 et seq. The PWCRA requires that “*No contractor shall bid on any contract for public work . . . unless the contractor is registered pursuant to this act.*” The law requires that all contractors and sub-contractors named in the proposal possess a valid certificate at the time the proposal is received by the contracting unit, in this case the Township.

### B. Submission of Certificate – Receipt of Bid--Requested; Prior to Award--Mandatory

All bidders **are requested** to submit with the bid package a current Public Works Contractor Registration Certificate that was issued prior to the receipt of the bid.

The contractor who most likely is to be considered for the contract award, must submit a copy of the current Public Works Contractor Registration Certificate, and if applicable, copies of certifications of all listed subcontractors, prior to the award of contract. **If the successful contractor fails to provide copies of certificates prior to the award of contract, the bid may be rejected as non-responsive.**

For more information contact:

Contractor Registration Unit  
Division of Wage and Hour Compliance  
New Jersey Department of Labor & Workforce Development  
PO Box 389  
Trenton, New Jersey 08625-0389  
Tel: 609-292-9464  
Fax: 609-633-8591  
E-mail: [wage.hour@dol.nj.gov](mailto:wage.hour@dol.nj.gov)  
Website: [lwd.dol.state.nj.us/labor/wagehour/content/contact\\_us.html](http://lwd.dol.state.nj.us/labor/wagehour/content/contact_us.html)

## **18. CONTRACTOR/VENDOR REQUIREMENTS—OFFICE OF THE NEW JERSEY STATE COMPTROLLER**

Contractors/vendors doing business with The Township of Piscataway are reminded of the following legal requirements pertaining to the Office of the New Jersey State Comptroller:

### **A. Access to Relevant Documents and Information—N.J.S.A. 52:15C-14 (d)**

Private vendors or other persons contracting with or receiving funds from a unit in the Executive branch of State government, including an entity exercising executive branch authority, independent State authority, public institution of higher education, or unit of local government or the township shall upon request by the State Comptroller provide the State Comptroller with prompt access to all relevant documents and information as a condition of the contract and receipt of public monies. The State Comptroller shall not disclose any document or information to which access is provided that is confidential or proprietary. If the State Comptroller finds that any person receiving funds from a unit in the Executive branch of State government, including an entity exercising executive branch authority, independent State authority, public institution of higher education, or unit of local government or the township refuses to provide information upon the request of the State Comptroller, or otherwise impedes or fails to cooperate with any audit or performance review, the State Comptroller may recommend to the contracting unit that the person be subject to termination of their contract, or temporarily or permanently debarred from contracting with the contracting unit.

### **B. Maintenance of Contract Records—N.J.A.C. 17:44-2.2**

Relevant records of private vendors or other persons entering into contracts with covered entities are subject to audit or review by OSC pursuant to N.J.S.A. 52:15C-14(d).

The contractor/vendor to whom a contract has been awarded, shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

## **19. DEBARMENT, SUSPENSION, OR DISQUALIFICATION – (N.J.A.C. 17:19-1.1 et seq.)**

The Township of Piscataway will not enter into a contract for work with any person, company or firm that is on the State Department of Labor and Workforce Development; Prevailing Wage Debarment List, or the State of New Jersey Consolidated Debarment Report ([www.state.nj.us/treasury/debarred](http://www.state.nj.us/treasury/debarred)) or the Federal System for Award—SAM.gov.

All bidders are required to submit a sworn statement indicating whether or not the bidder is, at the time of the bid, included on the State Department of Labor and Workforce Development; Prevailing Wage Debarment List or the State of New Jersey Consolidated Debarment Report, or the Federal Debarred Vendor List--Excluded Parties List System, through the System for Award Management portal—SAM.gov.

**20. DOCUMENTS, MISSING/ILLEGIBLE**

The bidder shall familiarize himself with all forms provided by the Township that are to be returned with the bid. If there are any forms either missing or illegible, it is the responsibility of the bidder to contact the Purchasing Agent during regular business hours or the JOSEPH HERRERA of the project as outlined in the bid advertisement for duplicate copies of the forms. This must be done before the bid date and time. The Township accepts no responsibility for duplicate forms that were not received by the bidder in time for the bidder to submit with his bid.

**\*Forms provided by The Township of Piscataway that must be returned with bid are referenced in the proceeding checklist.**

**21. DOCUMENT SIGNATURES – ORIGINAL; BLUE INK**

All documents returned to the Township shall be signed in ink (blue) with an original signature. Failure to sign and return all required documents with the bid package may be cause for disqualification and for the bid to be rejected pursuant to N.J.S.A 40A:11-1 et seq., (non-responsive). The Township will not accept facsimile or rubber stamp signatures.

**Checklist of Required Documents (Forms Provided in Bid Package)**

• Acknowledgement of Addenda
• Americans with Disabilities Act Bidders affidavit
• Bid Proposal Form
• Bidder Comments Form—optional Bid Bond Form
• Bid Cover Page Certification of last page
• Contractor Questionnaire/Certification
• Contractor’s Registration Certification Cover Sheet with Contractors Information
• Equipment Certification Exhibit “B” Hold Harmless Agreement Insurance Requirements
• Iran Disclosure of Investment Activities
• Non-Collusion Affidavit Plan & Experience Pay to Play Form
• Prequalification Affidavit
• Prevailing Wages Certification
• Statement of Ownership Disclosure
• Subcontractor’s Disclosure Statement
• Sworn Contractor Certification; Qualifications and Credentials

*Please check your bid package for these forms!*

**Reminder –**

**(1) Original Bid and (1) Photo Copy of Original marked “True Copy”.**

Bid packages are to be submitted in duplicate on the proposed forms as provided and the manner designated. The Township of Piscataway will accept one original bid package, one true copy of the original bid package.

**22. EQUIPMENT CERTIFICATION (N.J.S.A. 40A:11-1 et seq.,)**

Each bidder shall provide a certification showing that he owns, leases or controls all the necessary equipment required by the specifications. If the bidder is not the actual owner or lessee of any such equipment, he shall submit a certificate stating the source from which the equipment will be obtained and shall obtain a certificate from the owner and person in control of the equipment, definitely granting to the bidder the control of the equipment required during such time as may be necessary for the completion of that portion of the contract for which it is necessary.

The certificates are to be submitted with the bid. If the contract involves the installation of a manufactured system which requires the contractor to have special knowledge or training, or to be specifically certified by the manufacturer to install their system, this form is used to submit such required evidence of the bidder’s approval from the manufacturer.

**23. EXAMINATION OF SPECIFICATIONS, ACKNOWLEDGEMENT**

The bidder, by submitting a proposal, acknowledges that he has carefully examined the bid specifications, documents, addenda (if any), and the site; and that from his investigation, he has satisfied himself as to the nature and location of the work, the general and local conditions and all matters which may in any way affect the work or its performance, and that as a result of such examination, he fully understands the intent and purpose thereof, his obligations thereunder, and that he will not make any claim for, or have any right to damages, because of the lack of any information.

Each bidder submitting a bid for a service contract shall include in his bid price all labor, materials, equipment, services, and other requirements necessary, or incidental to, the completion of the work, and other pertinent work as hereinafter described, in accordance with the bid specifications and documents.

**TERM/COMPLETION OF THE PROJECT: AS PER SPECIFICATION/PROPOSAL PAGES**

## **24. FALSE MATERIAL REPRESENTATION/TRUTH IN CONTRACTING**

A person commits a crime if the person knowingly makes a material representation that is false in connection with the negotiation, award or performance of a government contract. If the contract amount is for \$25,000.00 or above, the offender is guilty of a crime of the second degree. If the contract amount exceeds \$2,500.00, but is less than \$25,000.00, the offender is guilty of a crime of the third degree. If the contract amount is for \$2,500.00 or less, the offender is guilty of a crime of the fourth degree.

Bidder should be aware of the following statutes that represent "Truth in Contracting" laws:

- N.J.S.A. 2C:21-34, et seq. governs false claims and representations by bidders. It is a serious crime for the bidder to knowingly submit a false claim and/or knowingly make material misrepresentation.
- N.J.S.A. 2C:27-10 provides that a person commits a crime if said person offers a benefit to a public servant for an official act performed or to be performed by a public servant, which is a violation of official duty.
- N.J.S.A. 2C:27-11 provides that a bidder commits a crime if said person, directly or indirectly, confers or agrees to confer any benefit not allowed by law to a public servant.
- Bidder should consult the statutes or legal counsel for further information.

## **25. FORCE MAJEURE**

Neither party shall be liable in damages for any failure, hindrance or delay in the performance of any obligation under this Agreement if such delay, hindrance or failure to perform is caused by conditions beyond the control of either party, including, but not limited to, Acts of God, flood, fire, war or the public enemy, explosion, government regulations whether or not valid (including the denial or cancellation of any export or other necessary license), court order, state funding, or other unavoidable causes beyond the reasonable control of the party whose performance is affected which cannot be overcome by due diligence.

Vendors, and/or contractors who have a contract with The Township of Piscataway to provide goods or services cannot unilaterally claim an increase in the cost of the contract because of Force Majeure.

**26. INSURANCE AND INDEMNIFICATION**

The bidder to whom the contract is awarded for any service work or construction work shall secure, pay the premiums for and keep in force until the contract expires, insurance of the types and amounts listed as listed:

General Liability	\$2,000,000. General Aggregate
	\$1,000,000. Products
	\$1,000,000. Bodily Injury Property Damage & Personal Injury Combined
	\$1,000,000. Each Occurrence
	\$ 100,000 Pollution Cleanup
	\$ 50,000. Fire Damage
	\$ 5,000. Medical Expense
Excess Umbrella Liability	\$4,000,000
	\$1,000,000 Sexual Harassment
Comprehensive Automobile Liability Coverage	\$1,000,000 Combined Single Limit Bodily Injury/Property Damage

**(A) Insurance Certificate – When Required**

- The contractor shall present to The Township of Piscataway an insurance certificate in the above types and limits before any work or service begins.
- Automobile liability insurance coverage shall be included for any vehicle used by the contractor.
- The certificate holder shall be as follows:

The Township of Piscataway  
c/o Office of the Purchasing Agent  
455 Hoes Lane  
Piscataway, New Jersey 08854

Additional Insured Clause-- The contractor must include the following clause on the insurance certificate.

**“The Township of Piscataway is named as an additional insured”**

**OTHER INSURANCES**

**WORKERS COMPENSATION** Evidence of adequate Workers Compensation Insurance as required by the laws of the State of New Jersey and the United States, must be available for perusal. The minimum limits are the following, unless a greater amount is required by law:

Bodily Injury by Accident	\$1,000,000. Each Accident
Bodily Injury by Disease	\$1,000,000. Policy Limit
Bodily Injury by Disease	\$1,000,000. Each Employee
Contract Liability	Same as General Liability

**(B) Indemnification**

The contractor shall assume all risk of and responsibility for, and agrees to indemnify, defend, and save harmless the Township and its agents, employees and Township members, from and against any and all claims, demands, suits, actions, recoveries, judgments and costs and expenses (including, but not limited to, attorney's fees) in connection therewith on account of the loss of life or property or injury or damage to any person, body or property of any person or persons whatsoever, which shall arise from or result directly or indirectly from the work and/or materials supplied under this contract or the performance of services by the contractor under the agreement or by a party for the whole contract is liable. This indemnification obligation is not limited by, but is in addition to, the insurance obligations contained in this agreement.

The Contractor is to assume all liability of every sort incident to the work, including property damage caused by him or his men or by any subcontractor employed by him or any of the subcontractor's men.

**(C) Builders Risk      **Applicable**    **X Not Applicable****

The contractor shall obtain and pay for within their bid, a Builder's Risk Policy providing coverage for all risk of physical loss or damage to the property in an amount equal to the total project value, less excavations and foundations.

The policy must be maintained for the duration of the project from the beginning of construction until:

- (i) written acceptance by **Joseph Herrera, CFM/ Alaimo Group** or substantial completion, and
- (ii) a temporary certificate of occupancy or certificate of occupancy has been issued.

A copy of the policy must be delivered to The Township of Piscataway before construction begins. All of the contractor's policies, with the exception of workers' compensation, shall be endorsed naming the Township, its elected and appointed officials, and employees as additional insureds.

**27. INTERPRETATIONS AND ADDENDA (N.J.S.A. 40A:11-1 et seq.,)**

No interpretation of the meaning of the specifications will be made to any bidder orally. Every request for such interpretations should be made in writing to the Purchasing Agent or the **Joseph Herrera, CFM/Alaimo Group** of Record and must be received by same at least ten (10) business days, not including Saturdays, Sundays and holidays, prior to the date fixed for the opening of bids to be given consideration. Any and all interpretations and any supplemental instructions will be distributed in the form of written addenda to the specifications. The addenda will be provided by The Township of Piscataway in accordance with N.J.S.A 40A:11-1 et seq., to the bidder by certified mail, certified fax or delivery service, no later than seven (7) days, not including Saturdays, Sundays, or holidays prior to the date for acceptance of the bids. All addenda so issued shall become part of the contract document.

ADDENDA. It shall be understood that any addendum issued from time to time to provide additional information to the bidders shall become an integral part of this bid package. Receipt of Addendum shall be acknowledged by the bidders in the space provided therefore on the "Bid Proposal Form. Log onto Township bid website at [www.piscatawaynj.org](http://www.piscatawaynj.org) for any addendums.

**28. IRAN DISCLOSURE OF INVESTMENT ACITIVITIES- (N.J.S.A. 40A:11-1 et seq., )**

The Township of Piscataway, pursuant to N.J.S.A. 40A:11-1 et seq., shall implement and comply with Public Law 2012, c.25, Disclosure of Investment Activities in Iran—N.J.S.A. 52:32-55 et seq.,

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract, must complete a certification attesting, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury’s Chapter 25 list as a person or entity engaging in investment activities in Iran.

The Chapter 25 list is found on the Divisions website

<http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>.

If the Township determines that a person or entity has submitted a false certification concerning its engagement in investment activities in Iran under section 4 of P.L.2012, c.25 (C.52:32-58), the Township shall report to the New Jersey Attorney General the name of that person or entity, and the Attorney General shall determine whether to bring a civil action against the person to collect the penalty prescribed in paragraph (1) of subsection a. of section 5 of P.L.2012, c.25 (C.52:32-59).

In addition, bidders must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes on the lower portion of the enclosed form.

The Township has provided within the specifications, a Disclosure of Investments Activities certification form for all persons or entities, that plan to submit a bid, respond to a proposal, or renew a contract with the Township, to complete, sign and submit with the proposal.

**JANUARY 29, 2021 UPDATE IRAN INVESTMENTS DISCLOSURE DOCUMENT FOR BIDS DOCUMENTS**

Subject: Iran Investment Disclosure Now Pre-Award

Effective January 29, 2021, P.L. 2021, c. 4 amends the law requiring vendor and contractor disclosure of investment activities in Iran. The law allows the Iran investment disclosure form to be submitted prior to contract award and at the time the contract is renewed rather than with the bid or RFP submission. Although the law refers to State contracts, it also applies to contracting units subject to the Local Public, Public School, and County College Contracts Laws because N.J.S.A. 40A:11-2.1; 18A:18A-49.4; and 18A:64A-25.43, respectively, require these contracting units to follow the Iran disclosure procedure for State contracts. Contracting units are encouraged to review the new law with legal counsel and revise their procurement forms as necessary.

**Failure to complete, sign, certify and submit the Disclosure of Investment Activities in Iran form with the bid/proposal shall be cause for rejection of the proposal.**

**29. LIABILITY – COPYRIGHT**

The contractor (vendor) shall hold and save the Township, its officials and employees, harmless from liability of any nature or kind for or on account of the use of any copyrighted or un-copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of his contract.



### 30. LIQUIDATED DAMAGES

The contractor agrees to substantially complete this construction project to the complete satisfaction of The Township of Piscataway by the stated contract completion date or within the number of working days so specified in the contract.

Failure to complete the project within the specified time frame or contract completion date shall lead to The Township of Piscataway assessing liquidated damages against the contractor in accordance with and pursuant to N.J.S.A. 40A:11-1 et seq.,

For each calendar day thereafter that the work included under this contract remains uncompleted in accordance with the provision of the contract or not completed to the satisfaction of the Township, the Township shall assess liquidated damages as follows:

<u>Amount of Contract</u> <u>Range of Amount</u>	<u>Liquidated Damages</u>
\$ 20,000 and less than \$ 50,000	\$ 200.00 per calendar day
50,001 and less than \$ 100,000	300.00 per calendar day
100,001 and less than \$ 250,000	500.00 per calendar day
251,001 and less than \$ 500,000	1,000.00 per calendar day
500,000 and less than \$1,000,000	2,000.00 per calendar day
1,000,000 and over	2,500.00 per calendar day

The Township may assess liquidated damages by deducting the amount from monies which may due or become due to the contract.

The Township may also assess the contractor additional damages for costs the Township may incur because each day the project remains uncompleted. These costs include but are not limited to:

- Construction management fees
- Architect/engineer fees
- administrative costs
- Any inspector or inspectors necessarily employed by The Township of Piscataway on the work, for any number of days in excess of the number allowed in the specifications

The Township of Piscataway may also assess against all monies owed to the contractor, liquidated damages for the violation of any terms and conditions of the contract or agreement by the contractor or the failure to perform said contract or agreement in accordance with its terms and conditions or the terms or conditions of the "Local Public Contracts Law," in accordance with and pursuant to N.J.S.A. 40A:11-1 et seq.,

31. **MAINTENANCE BONDS**       **Required**       Not Required

When required by the Township, the contractor shall furnish a Maintenance Bond for the total sum of the contract price, indemnifying The Township of Piscataway against defects in construction for a period of two **(2) years** after the completion of the work, general wear and tear excepted.

The condition of this obligation is such that if the successful contractor shall indemnify and hold harmless The Township of Piscataway from and against all losses, costs, damages and expenses, whatsoever, which the Township may suffer or compelled to pay by reason of the failure of the successful contractor to indemnify the Township against defects in construction for a period of two **(2) years** after the completion of the work.

32. **NON-COLLUSION AFFIDAVIT** (N.J.S.A. 52:34-15)

A notarized Non-Collusion Affidavit shall be submitted with the bid/proposal. The bidder/respondent has to certify that he has not directly or indirectly, entered into any agreement, participated in any collusion, discussed any or all parts of this proposal with any potential bidders, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named bid, and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that The Township of Piscataway relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said bid.

The respondent has to further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees of bona fide established commercial or selling agencies maintained by the respondent.

The Township of Piscataway has provided a Non-Collusion Affidavit form here within the specifications package. All respondents are to complete, sign, have the signature notarized and submit the form with the proposal response.

**Failure to submit the Non-Collusion Affidavit with the proposal may be cause for the disqualification of the proposal.**

33. **NOTICE (AUTHORIZATION) TO PROCEED**

The contractor shall not perform any work, or provide any services, materials, supplies until a Notice (Authorization) to Proceed is received from the Office of the Purchasing Agent

The Township of Piscataway only recognizes the receipt by the contractor of an approved signed purchase order as a Notice to Proceed. No word of mouth, phone, fax, e-mail, letter or other form of communication to proceed is a valid Notice to Proceed.

It is the intention of the Township to officially notify the Contractor, to whom the contract was awarded, through a Notice to Proceed letter issued by the Purchasing Agent. A purchase order will accompany the Notice to Proceed letter. The contractor shall submit certain documents to the Township as so requested in the Notice to Proceed letter.

**34. PAYMENTS**

Every effort will be made to pay vendors and contractors within thirty (30) to sixty (60) days provided The Township of Piscataway receives the appropriate documentation including but not limited to:

- Signed voucher by vendor
- Packing slips
- Invoices

Payment will be rendered upon completion of services or delivery of full order to the satisfaction of the Township, unless otherwise agreed to by written contract or mandated by State Law\*. The Township may, at its discretion make partial payments.

All payments are subject to approval by The Township of Piscataway at a public meeting. Payment may be delayed from time to time depending on The Township of Piscataway meeting schedule.

**35. PAYMENT, PARTIAL, WITHHOLDING**

**A. Contract Thresholds; Partial Payments/Withholding**

1. Contracts – Less than \$100,000 – Lump Sum Payment

Public works contracts less than \$100,000 shall be paid in one lump total sum, upon completion of the project and to the satisfaction of the Township

Contracts – Exceeding \$100,000 – Monthly Payments

Public works contracts that exceed \$100,000 shall be paid with partial payments on a monthly basis for work that was completed to the satisfaction of the Township.

3. Withholding of Monies – Percentage to be Withheld

The Township of Piscataway shall withhold the following percentages of outstanding balances of monies owed to contractors:

Balances Exceeding \$500,000 -- Two (2%) Per Cent

Balances Less than \$500,000 -- Five (5%) Per Cent

The amounts withheld shall be returned to the contracts upon fulfillment of the terms of the contract.

**B. Prompt Payment**

The Township of Piscataway will provide payment in accordance with the “Prompt Payment” law as codified in N.J.S.A. 2A:30A-1 et seq. All payments to contractors are subject to approval by The Township of Piscataway at a public meeting.

The Township of Piscataway generally holds its Agenda, and its Regular Public Meetings twice or more each month. It is at these meetings that The Township of Piscataway reviews payment of bills.

All bills submitted to the Township for approval and payment pursuant to N.J.S.A. 2A:30A-1 et seq. must comply with the following provisions. The “billing date” shall be the date that the contractor signs the certification on the voucher/purchase order that the work has been performed. These bills include all bills for improvements to real property and contracts for engineers, architects, surveyors, design or skilled services relating to construction work.

Bills that are required to be approved by an engineering or architecture firm (prior to submission to the Township for approval) for purposes of confirmation of successful completion of construction work, shall be approved or disapproved within twenty (20) days of submission of same to the architect or engineer. If bills are disapproved or monies withheld from payment, the notice of the reason for same shall be given within the same twenty (20) days to the contract.

The Township must approve payment of all bills. For the Township to consider a bill for approval it must be submitted to the Purchasing Agent at least two weeks prior to a scheduled/or re-scheduled Township meeting date. If the Township, or any agent or officer of the Township, determines that the bill is not approved then notice of the disapproval shall be sent to the contractor with five (5) days of the Township meeting on which the bill was listed for approval. If the bill is approved by the Township, then payment shall be made to the contractor with seven (7) days of the Township meeting as per the “payment cycle.”

**Release of Liens**

Neither the final payment nor any part of the retained percentage shall become due until the Contractor delivers to The Township of Piscataway a complete Release of all Liens arising out of this Contract and an affidavit that so far as he has knowledge or information, the releases include all labor and material for which a lien could be filed, but the Contractor may, if any subcontractor refuses to furnish a release in full, furnish a bond satisfactory to the Township, to indemnify him against any liens. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to The Township of Piscataway all monies that the latter may be compelled to pay in discharging such a lien, including all costs and reasonable attorney's fees

### **36. PRE-BID MEETING; ATTENDANCE STRONGLY ENCOURAGED!**

The pre-bid meeting is an important part of the bidding process. It permits all bidders to have an equal understanding of the procurement/contracting requirements and of the scope of work involved. Although pre-bid meetings are not mandatory, all potential bidders are strongly encouraged to attend. **Please review the General Specifications for a pre-bid meeting announcement.** Any or all changes to the bid specifications discussed as a result of the pre-bid meeting will be formalized in the form of a written addenda to the specifications and distributed in accordance with N.J.S.A. 40A:11-1 et seq.,

It is anticipated that the pre-bid meeting (if any) scheduled for this project will have an agenda format such as:

A. Registration Period

At this time all attendees will be asked to register to attend this meeting. Proper photo identification is required. Plans and specifications may be available for purchase from the Architect/Engineer of Record. Attendance will be recorded.

B. Review of Procurement/Contracting Requirements—Purchasing Agent

The Purchasing Agent will review the major components of the procurement and contracting requirements of the bid.

C. Scope of Work and Scheduled Completion Time—**Joseph Herrera, CFM/Alaimo Group.**

**Joseph Herrera, CFM/Alaimo Group**, of Record, in conjunction with the Division of Engineering and the Purchasing Agent will review the scope of the work that is requested and completion time requirements ( **As per Specifications Number of Working Days**). A review of the plans and any drawings may take place.

D. Walkthrough of Facility/Site

**Joseph Herrera, CFM/Alaimo Group**, in conjunction with the Division of Engineering and/or the Purchasing Agent, may conduct a facility site walkthrough with all interested parties.

E. Questions; Clarifications—Official Addenda Process (**June 13 ,2022 @12noon\_** on the Bid)

Potential bidders are permitted to ask questions during the process. Questions of substantial measure or questions that require clarification of work to be completed may be answered at the meeting, however, **Joseph Herrera, CFM/Alaimo Group** shall answer all such questions in writing in the form of an official addenda. To: [purchasing@pisatawaynj.org](mailto:purchasing@pisatawaynj.org)

Any and all answers to questions, interpretations or any supplemental instructions will be distributed in the form of a written official addenda to the specifications. The official addenda will be provided by the Purchasing Agent's Office of the Township in accordance with N.J.S.A. 40A:11-1 et seq., to the bidder by E-mail to: [purchasing@pisatawaynj.org](mailto:purchasing@pisatawaynj.org) , no later than seven (7) days, not including Saturdays, Sundays, or holidays prior to the date for acceptance of the bids. All addenda so issued shall become part of the bid and contract document.

### **37. PRE-QUALIFICATION OF BIDDERS**

All bidders shall furnish satisfactory evidence that he and his subcontractors have sufficient means and experience in the type of work to complete the project in accordance with the bid specifications. A subcontractor listing and bidder's personnel and experience sheet shall be submitted to the Township as part of the bidding documents. Where the bidder intends to subcontract any portion of the project, the cost of which will exceed \$20,000.00, the subcontractor shall be pre-qualified to perform the work and the bidder shall submit the requisite documentation pertaining to the sub-contractor in accordance with Paragraphs A and B above. The Township may make such additional investigations as it deems necessary to determine the ability, competence and financial responsibility of the bidder to perform the work. The bidder shall furnish the Township with the information and data for this purpose upon request. The Township reserves the right to reject any bid if the information fails to establish to the Township's satisfaction that the bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated here.

### **38. PREVAILING WAGES: CONSTRUCTION, ALTERATIONS, REPAIRS**

The State of New Jersey Prevailing Wage Act, Chapter 150 Laws of 1963 with applicable statewide wage Department of Labor and Workforce Development in conformance with N.J.S.A. 34:11-56.25 et seq., may be included in these bid contract documents. Copies of these wage rates may be obtained from the State Department of Labor and Workforce Development, and/or viewed at <http://lwd.dol.state.nj.us/> the Prevailing Wages Determination Section.

#### **Compliance with New Jersey Prevailing Wage Act**

Every contractor and subcontractor performing services in connection with this project, shall pay all workers a wage rate not less than the published prevailing wage rates, for the locality the work is being performed, as designated by the New Jersey Department of Labor and Workforce Development.

#### **Certified Payrolls**

Every contractor agrees to submit to The Township of Piscataway a certified payroll for each payroll period within ten (10) days of the payment of wages. The contractor further agrees that no payments will be made to the Contractor by the Township, if certified payrolls are not received by the Township. It is the Contractor's responsibility to insure timely receipt by the district of certified payrolls.

#### **Submission of Affidavit**

Before final payment, the contractor shall furnish The Township of Piscataway with an affidavit stating that all workers have been paid the prevailing rate of wages in accordance with State of New Jersey requirements. The contractor shall keep an accurate record showing the name, craft, or trade and actual hourly rate of wages paid to each workman employed by him in connection with this work. Upon request, the Contractor(s) and each Subcontractor shall file written statements certifying to the amounts then due and owing to any and all workmen for wages due on account of the work. The statements shall be verified by the oaths of the Contractor or Subcontractor, as the case may be.

#### **Posting of Prevailing Wages**

The contractor and subcontractor shall post the prevailing wage rates for each craft and classification involved in the work, including the effective date of any changes thereof, in prominent and easily accessible places at the Site of the work and in such place or places as used to pay workmen their wages. N.J.S.A. 34:11-56.32.

## **PREVAILING WAGE ACT.**

Pursuant to N.J.S.A. 34:11-56.25 et seq., the Contractors on projects for public work shall adhere to all requirements of the New Jersey Prevailing Wage Act. The contractor shall be required to submit a certified payroll record to the Township within ten (10) days of the payment of the wages. In the event it is found that any worker, employed by the Contractor or any subcontractor has been paid a rate of wages less than the prevailing wage required to be paid, the Township may terminate the Contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and the contractor and subcontractor then be required to continue the work to completion or otherwise.

The Contractor is also responsible for obtaining and submitting all subcontractors' certified payroll records within the aforementioned time period. The Contractor shall submit said certified payrolls in the form set forth in N.J.A.C. 12:60- 6.1(c). It is the Contractor's responsibility to obtain any additional copies of the certified payroll form to be submitted by contacting the New Jersey Department of Labor and Workforce Development, Division of Workplace Standards.

Additional information is available at [http://lwd.dol.state.nj.us/labor/wagehour/wagerate/pwr\\_construction.html](http://lwd.dol.state.nj.us/labor/wagehour/wagerate/pwr_construction.html)

### **Prevailing Wages Certification—Submission with Bid**

The bidder shall submit a Prevailing Wages Certification with its bid package.

### **Non-compliance Statement**

If it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, the Township, may begin proceedings to terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable for any excess costs occasioned thereby to the public body.

## **39. QUALIFICATION OF BIDDERS - Contractor Questionnaire Certification Form**

The Township of Piscataway may make such investigations as it seems necessary to determine the ability of the bidder to perform the terms of the contract. The bidder shall complete a Contractor Questionnaire Certification Form and return same with the bid and shall furnish all information to the Township as the Township may require to determine the contractor's ability to perform the duties and obligations as outlined in these specifications.

All bidders are reminded that bids may be rejected as not being responsive pursuant to N.J.S.A. 40:11-1 et seq., and therefore bidders are asked to complete the Questionnaire and to provide any supporting documentation with the bid package.

## **40. RESIDENT CITIZENS; PREFERRED IN EMPLOYMENT ON PUBLIC WORKS CONTRACTS**

All bidders are to familiarize themselves with N.J.S.A. 34:9-2, which requires the contractor of any public work project to give preference in employment on the project, to citizens of the state of New Jersey. If the terms and conditions of N.J.S.A. 34:9-2 are not complied with, the contract shall be voidable. The Township is obligated to file with the Commissioner of Labor, the names and addresses of all contractors holding contracts with this project.



#### **41. RENEWAL OF CONTRACT; AVAILABILITY AND APPROPRIATION OF FUNDS**

The Township of Piscataway may, at its discretion, request that a contract that is subject to renewal, be renewed in full accordance with N.J.S.A. 40:11-1 et seq., The Purchasing Agent may negotiate terms for a renewal of contract proposal and present such negotiated proposal to the Township. The Township of Piscataway is the final authority in awarding renewals of contracts. All multi-year contracts and renewals are subject to the availability and appropriation annually of sufficient funds as may be needed to meet the extended obligation.

#### **42. RIGHT TO KNOW LAW**

All potentially hazardous materials or substances must be properly labeled in full accordance with the New Jersey Right to Know Law - N.J.S.A. 34:5A-1 et seq. All contractors or vendors who need additional information about the New Jersey Right to Know Law are to contact the:

New Jersey Department of Health and Senior Services  
Right to Know Program  
CN 368  
Trenton, New Jersey 08625-0368  
[www.nj.gov/health/workplacehealthandsafety/right-to-know/](http://www.nj.gov/health/workplacehealthandsafety/right-to-know/)

#### **NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT**

The manufacturer or supplier of chemical substances or mixtures shall label them in accordance with the N.J. Worker and Community Right to Know Law (N.J.S.A. 34:5A-1 et seq., and N.J.A.C 8:59-2 et seq.). All direct use containers shall bear a label indicating the chemical name(s) and Chemical Abstracts Service number(s) of all hazardous substances in the container, and all other substances which are among the five most predominant substances in the container, or their trade secret registry number(s) pursuant to N.J.A.C. 8:59-5. "Container" means a receptacle used to hold a liquid, solid or gaseous substance such as bottles, bags, barrels, cans, cylinders, drums and cartons. (N.J.A.C. 8:59-1.3). Further, all applicable Material Safety Data Sheets (MSDS) - hazardous substance fact sheet - must be furnished. All containers which are stored at owner facilities by subcontractors shall display RTK labeling. Vendors with questions concerning labeling should contact the New Jersey Department of Health and Senior Services Right to Know Program for assistance in developing proper labels.

**43. STATEMENT OF OWNERSHIP** (N.J.S.A. 52:25-24.2)

**Statement of Ownership**

No business organization, regardless of form of ownership, shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the bid or accompanying the bid of said business organization, bidders shall submit a statement setting forth the names and addresses of all persons and entities that own ten percent or more of its stock or interest of any type at all levels of ownership.

The included Statement of Ownership shall be completed and attached to the bid proposal. This requirement applies to all forms of business organizations, including, but not limited to, corporations and partnerships, publicly-owned corporations, limited partnerships, limited liability corporations, limited liability partnerships, sole proprietorship, and Subchapter S corporations. **Failure to submit a disclosure document shall result in rejection of the bid as it cannot be remedied after bids have been opened.**

Not-for-profit entities should fill in their name, check the not-for-profit box, and certify the form. No other information is required.

**44. SUBCONTRACTING: Subcontractor Disclosure Statement**

Pursuant to N.J.S.A. 40A:11-1 et seq., any bidder who bids for the overall contract and who will subcontract the following work:

- Plumbing and gas fitting work;
- Refrigeration, heating and ventilating systems and equipment;
- Electrical work, tele-data, fire alarm or security systems; and
- Structural steel and ornamental iron work;

**Documents to be Submitted: All Subcontractors**

The prime contractor (bidders) who will be using a subcontractor on any part of this bid, shall identify the subcontractor(s) on the appropriate form and submit with the bid package the following subcontractor documents at the time indicated in the box below:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
Estimated Value of Contract – Subcontractor	For Subcontractors in the four major branches listed above: <i><u>Submit with Bid</u></i>	For all other Subcontractors: <i><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></i>
\$2,000 through \$5,999	Contractor's Registration Certificate	
\$6,000 through \$17,499	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

Failure to identify in the Subcontractor's Disclosure Statement the names and addresses of any or all subcontractors required to be named in the bid, or to submit with the bid the appropriate documents for each such subcontractor, may be cause for the bid to be rejected as being non-responsive.

Contractors are reminded that the subcontractors listed on the forms provided by the township may not be changed later, except in the case of failure in performance or other contract breach where a change is needed to protect the township.

**\*\*\*\*If Subcontractor is not applicable please write in N/A and SIGN PAGE.**

#### **45. SUBCONTRACTING: PROHIBITIONS: HOLD HARMLESS**

Prime contractors, with whom The Township of Piscataway have an executed contract, may not subcontract any part of any work done for the Township without first receiving written approval from the Township. Contractors seeking to use subcontractors must first complete the Request to Sub Contract Form as provided by the Building Services Department.

##### **Subcontractors Prohibited to Sub Contract**

It is the responsibility of the prime contractor to ensure that no subcontractor who has received written permission to do work for The Township, subcontracts any of its/their work without first receiving written approval from the prime contractor **and** the Division of Engineering or his designee.

The prime contractor assumes all responsibility for work performed by subcontractors. The prime contractor must also provide to the Township Purchasing Office the following documents secured from all approved subcontractors:

- Insurance Certificate as outlined in the bid specifications;
- Affirmative Action Evidence as outlined in the bid specifications;
- Written certification that the subcontractor shall adhere to prevailing wages as provided through New Jersey State Law;
- Evidence of Performance Security;
- Documents listed in the Subcontractor Document Submissions list.

In cases of subcontracting, The Township of Piscataway shall only pay the prime contractor. It is the sole responsibility of the prime contractor to ensure that all subcontractors are paid. The Township of Piscataway shall not be responsible for payments to subcontractors and shall be held harmless against any or all claims generated against prime contractors for non-payment to subcontractors.

##### **Penalties – Unauthorized Subcontractors**

The Township of Piscataway shall deduct the amount of \$1,000.00 (one thousand dollars) per day as a penalty, for each day a prime contractor uses a subcontractor without first receiving **written** permission from the Building Services Department.

#### **46. TAXES; Contractor's Use of Township's Tax Identification Number—Prohibited**

As a New Jersey governmental entity, The Township of Piscataway is exempt from the requirements under New Jersey state sales and use tax (N.J.S.A. 54:32B-1 et seq.), and does not pay any sales or use taxes. Bidders should note that they are expected to comply with the provisions of said statute and the rules and regulations promulgated thereto to qualify them for examinations and reference to any and all labor, services, materials and supplies furnished to the Township. Contractors may not use the Township's tax identification number to purchase supplies, materials, service or equipment, for this project.

A contractor may qualify for a New Jersey Sales Tax Exemption on the purchase of materials, supplies and services when these purchases are used exclusively to fulfill the terms and conditions of the contract with the Township. All contractors are referred to New Jersey Division of Taxation—Tax Bulletin S&U-3 and in particular, Contractor's Exempt Purchase Certificate (Form ST-13). Again, contractors are not permitted to use the Township's tax identification number to purchase supplies, materials, services of equipment.

**Attached in the bid for the Contractor- ST-13 FORM.**

#### **ST-13 FORM WILL BE ATTACHED TO THE CONTRACT ONCE AWARDED.**

##### **New Jersey State Sales and Use Tax Exemption**

Materials and equipment purchases for permanent installation in the project will be exempt from the New Jersey State Sales and Use Tax. Each Bidder shall take this exemption into account in calculating his bid. It shall be the Contractor's responsibility to file the necessary exemption applications.

**W-9- Required**-Sample in the bid W-9 May be submitted with the bid for faster process. Successful bidder/respondent shall complete W-9 Form and submit to Purchasing prior to contract award. Than form is available at the following link: [www.irs.gov/pub/irs-pdf/fw9.pdf](http://www.irs.gov/pub/irs-pdf/fw9.pdf).

#### **47. Play to Play-NOTICE OF DISCLOSURE REQUIREMENT**

Business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at [www.elect.state.nj.us](http://www.elect.state.nj.us).

#### **48. TERMINATION OF CONTRACT**

If the Township determines that the contractor has failed to comply with the terms and conditions of the bid and/or proposal upon which the issuance of the contract is based or that the contractor has failed to perform said service, duties and or responsibilities in a timely, proper, professional and/or efficient manner, then the Township shall have the authority to terminate the contract upon written notice setting forth the reason for termination and effective date of termination.

Termination by the Township of the contract does not absolve the contractor from potential liability for damages caused the District by the contractor's breach of this agreement. The Township may withhold payment due the contractor and apply same towards damages once established. The Township will act diligently in accordance with governing statutes to mitigate damages. Damages may include the additional cost of procuring said services or goods from other sources.

The contractor further agrees to indemnify and hold the District harmless from any liability to subcontractors or suppliers concerning work performed or goods provided arising out of the lawful termination of this agreement.

#### **49. WITHDRAWAL OF BIDS**

##### **Before the Bid Opening**

The Purchasing Agent may consider a written request from a bidder to withdraw a bid if the written request is received by the Purchasing Agent before the advertised time of the bid opening. Any bidder who has been granted permission by the Purchasing Agent to have his/her bid withdrawn cannot re-submit a bid for the same advertised bid project. That bidder shall also be disqualified from future bidding on the same project if the project is re-bid.

##### **After the Bid Opening**

The Township of Piscataway may consider a written request from a bidder to withdraw a bid, if the written request is received by the Purchasing Agent within five (5) business days after the bid opening. A request to withdraw a bid after the specified number of days will not be honored.

The contractor/vendor who wishes to withdraw a bid must provide a certification supported by written factual evidence that an error or omission was made by the contractor and that the error or omission was a substantial computational error or an unintentional omission or both.

The request to withdraw a bid after the bid opening may be reviewed by the Purchasing Agent, the Division of Engineering, other interested administrators; and Joseph Herrera, CFM of Record for the project (if necessary) and/or the Township Attorney and a recommendation will be made to the Township. If the Township of Piscataway grants permission to have the bid withdrawn the contractor/vendor shall be disqualified from bidding on the same project if the project is re-bid. If the contractor/vendor fails to meet the burden of proof to have the bid withdrawn the request to withdraw the bid will be denied and if the contractor/vendor fails to execute the contract the bid guarantee will be forfeited and become property of the Township.

**TERM/COMPLETION OF THE PROJECT:** As per specifications/Proposal pages.

**50. WORK HOURS / INSPECTION**

The contractor shall work only during the normal work hours of the Township unless authorized by the Township Engineer/ DPW to do otherwise. Overtime shall be considered those hours before 8:30 A.M and after 4:30 P.M. Monday thru Friday. In addition, Saturday, Sunday and all Township holidays will be considered overtime. The Contractor will be responsible to pay all overtime worked by the Township Inspector or Representative. There shall be an inspector on the job site at all times when the contractor is working.

# Supplemental Specifications

## SECOND AVENUE IMPROVEMENTS PHASE-III

### AWARD OF CONTRACT

The Township of Piscataway intends to award the contract for the project as follows:

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### EXPERIENCE

The Township of Piscataway requires evidence from all bidders that they have completed work or projects of a similar nature as outlined in the bid package. Bidders are to provide evidence of satisfactory completion of work of similar nature as outlined in the bid from other governmental bodies \_\_\_\_\_ ( \_\_\_\_\_ ) for at least (5 ) years. As per Specifications.

### NUMBER OF WORKING DAYS; TIME OF COMPLETION

The contractor agrees to substantially complete this Construction Project to the satisfaction of The Township of Piscataway within (as per spec's) working days from the receipt of the official Notice to Proceed and purchase order. The Township has defined a working day as a calendar day. As per Specifications.

The number of working days set by the Township may be extended by mutual agreement between the contractor and the district. The mutual agreement shall be in writing and will be considered an addendum to the contract.

### RE-BID MEETING

A pre-bid meeting for this project is scheduled for ( Site Visit Not Mandatory)

N/A

Month / Day / Year

10:00 am

The Township of Piscataway

The purpose of this meeting is to review the legal and technical requirements of the bid proposal. While attendance is not mandatory, prospective bidders are strongly encouraged to attend this important meeting. Addenda to this bid proposal may be issued as a result of the pre-bid meeting.



**TRADE CLASSIFICATION(S) (Optional)**

**A. Bidder:**

For the purpose of this Construction Project bid, each bidder shall be classified by the State of New Jersey—Division of Property Management and Construction in the following trade(s):

Classification Code  
\_\_\_\_\_ (List Code #)

Classification Trade Name  
\_\_\_\_\_ (List name of trade)

Proof of classification shall be submitted with the bid package in the form of a current Notice of Classification as issued by the New Jersey Division of Property Management and Construction.

**B. Subcontractor:**

For the purpose of this Construction Project bid, each bidder shall use a subcontractor that is properly classified by the State of New Jersey—Division of Property Management and Construction in the following trade(s):

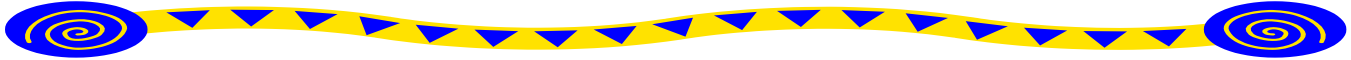
Classification Code  
\_\_\_\_\_ (List Code #)

Classification Trade Name  
\_\_\_\_\_ (List name of trade)

Proof of classification, in the form of a current Notice of Classification form, for each Sub-Contractor, shall be submitted by the bidder with the bid package for any estimated subcontractor work exceeding \$20,000.00.

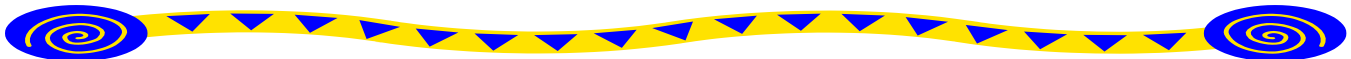
# THE TOWNSHIP OF PISCATAWAY

## SECOND AVENUE IMPROVEMENTS PHASE-III



# BID DOCUMENTS AND REQUIRED DOCUMENTATION

All documents in this section shall be completed, signed and submitted with the bid package – Failure to submit the bid documents and other documents so specified may be cause to reject the bid for being non-responsive.



**MARIA E.VALENTE-CAEMMERER**

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Purchasing Agent/Township Secretary

***To be completed, signed and returned with Bid***

**ACKNOWLEDGEMENT OF ADDENDUM**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

The bidder acknowledges receipt of the hereinafter enumerated Addenda which have been issued during period of bidding and agrees that said Addenda shall become a part of this contract. The bidder shall list below the numbers and issuing dates of the Addenda.

<u>ADDENDA NO.</u>	<u>ISSUING DATES</u>
_____	_____
_____	_____
_____	_____
_____	_____

**No Addenda Received**

Name of Company \_\_\_\_\_

Address \_\_\_\_\_ P.O. Box \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_

Name of Authorized Representative \_\_\_\_\_

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_



**The Township of Piscataway  
CONTRACTOR QUESTIONNAIRE/CERTIFICATION**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022- 06-13**

**Bid Date: Thursday June 23, 2022**

Name of Company \_\_\_\_\_

Street Address \_\_\_\_\_ P.O. Box \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Business Phone Number ( ) \_\_\_\_\_ Extension \_\_\_\_\_

Emergency Phone Number ( ) \_\_\_\_\_

FAX NO. ( ) \_\_\_\_\_ E-Mail \_\_\_\_\_

FEIN No. \_\_\_\_\_

**Questionnaire**

1. How many years have you been engaged in the contracting business under your present firm or trading name?  
\_\_\_\_\_ Years

2. Have you ever failed to complete any work awarded to your company?

Yes  No

If yes, explain \_\_\_\_\_  
\_\_\_\_\_

3. Have you ever defaulted on a contract?

Yes  No

If yes, explain \_\_\_\_\_  
\_\_\_\_\_

4. Have you or other principals of your company been debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded from participation in any public works projects by any federal, state, or local agencies, including any "**prior negative experience**" disqualification pursuant to N.J.S.A. 40A:11-1 et seq.,?

Yes  No

If yes, explain \_\_\_\_\_  
\_\_\_\_\_

***(Form continued on next page)***

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

\_\_\_\_\_  
Name of Company

**Experience – Educational Facilities:**

The Township of Piscataway requires evidence from all bidders that they have completed work or projects of a similar nature as outlined in the bid package. Bidders are to provide evidence of satisfactory completion of work of similar nature as outlined in the bid from \_\_\_\_\_ (\_\_\_\_) Townships in New Jersey within the past \_\_\_\_\_ ( 5 ) years. Bidders are to complete the section on experience and provide supporting documentation with the bid package. **As Per Specifications.**

A. Title of Work/Project: \_\_\_\_\_  
Name of Township: \_\_\_\_\_  
Name of Town Official: \_\_\_\_\_ Title \_\_\_\_\_  
Phone Number \_\_\_\_\_ E-Mail \_\_\_\_\_  
Date(s) of Project: \_\_\_\_\_

B. Title of Work/Project: \_\_\_\_\_  
Name of Township: \_\_\_\_\_  
Name of Town Official: \_\_\_\_\_ Title \_\_\_\_\_  
Phone Number \_\_\_\_\_ E-Mail \_\_\_\_\_  
Date(s) of Project: \_\_\_\_\_

C. Title of Work/Project: \_\_\_\_\_  
Name of Township: \_\_\_\_\_  
Name of Town Official: \_\_\_\_\_ Title \_\_\_\_\_  
Phone Number \_\_\_\_\_ E-Mail \_\_\_\_\_  
Date(s) of Project: \_\_\_\_\_

**References**

**Architects**--List names of architects that you have worked with on projects within the last five (5) years.

	<u>Firm</u>	<u>Principal</u>	<u>Phone Number</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

***(Form continued on next page)***

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

\_\_\_\_\_  
Name of Company

**Bank**--List name of principal bank with which your company does business.

Bank

Officer

Phone Number

\_\_\_\_\_

**Trade**--List names of companies within your trade with which your company does business:

Firm

Principal

Phone Number

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

***(Form continued on next page)***

**To be completed, signed and returned with Bid**

**Contractor Questionnaire/Certification--page 4**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

\_\_\_\_\_  
Name of Company

**Certifications**

• **Debarment**

I certify that the entity listed on the form or any person employed by this entity, are not presently on the following:

- New Jersey Department of Treasury – Consolidated Debarment Report
- NJ Department of Labor and Workforce Development– Prevailing Wage Debarment List
- Federal Debarred Vendor List—System for Award Management (SAM.gov)

• **Direct/Indirect Interests**

I declare and certify that no member of the Township of Piscataway, nor any officer or employee or person whose salary is payable in whole or in part by said the Township or their immediate family members are directly or indirectly interested in this bid or in the supplies, materials, equipment, work or services to which it relates, or in any portion of profits thereof. If a situation so exists where a Township member, employee, officer of the Township has an interest in the bid, etc., then please attach a letter of explanation to this document, duly signed by the president of the firm or company.

• **Gifts; Gratuities; Compensation**

I declare and certify that no person from my firm, business, corporation, association or partnership offered or paid any fee, commission or compensation, or offered any gift, gratuity or other thing of value to any Township official, Township member or employee of the Township.

• **Vendor Contributions**

I declare and certify that I fully understand N.J.A.C. 6A:23A-6.3 (a) (1-4) concerning vendor contributions to Township members.

• **False Material Representation/Truth in Contracting**

I further certify that I understand that it is a crime in the second degree in New Jersey to knowingly make a material representation that is false in connection with the negotiation, award or performance of a government contract. I further acknowledge my understanding of the New Jersey Truth in Contracting Laws.

\_\_\_\_\_  
President or Authorized Agent

\_\_\_\_\_  
**Signature**



**CONTRACTOR REGISTRATION CERTIFICATION**

Division of Engineering

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

It is the determination of The Township of Piscataway that this is a public works project which contract amount in total will exceed \$2,000.00 (two thousand dollars), therefore, pursuant to the Construction Project Contractor Registration Act -- N.J.S.A. 34:11-56.48 et seq., contractors are to be aware of the following:

No contractor shall bid on any contract for Construction project as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

I certify that our company understands that the project of The Township of Piscataway requires that all Contractors and Subcontractors listed in this proposal possess a valid Contractor Registration Certificate at the time the proposal is received by the Township and furthermore certify that I will provide copies of the valid certificates prior to the award of contract.

Name of Company\_\_\_\_\_

Authorized Agent\_\_\_\_\_ Title\_\_\_\_\_

**Authorized Signature**\_\_\_\_\_

**EQUIPMENT CERTIFICATION**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday June 23, 2022**

In accordance with 40A:11-1 et seq., I hereby certify that

A) \_\_\_\_\_ (*Name of Company*) owns all the necessary equipment as required by the specifications and to complete the specified Construction project.

**or**

B) \_\_\_\_\_ (*Name of Company*) leases or controls all the necessary equipment as required by the specifications and to complete the specified Construction project.

**PLEASE NOTE:** If your company is not the actual owner of the equipment, **you shall Submit with the bid**

1. A certificate stating the source from which the equipment will be obtained and
2. Obtain and submit with the bid a certificate from the owner and person in control of the equipment, definitely granting to the bidder the control of the equipment required during such time it may be necessary for the completion of that portion of the contract for which said equipment will be necessary.

Name of Company \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

**Authorized Signature** \_\_\_\_\_

**To be completed, signed and returned with Bid**

**STATE OF NEW JERSEY -- DIVISION OF PURCHASE AND PROPERTY  
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**

Quote Number:

Bidder/Offeror:

**PART 1: CERTIFICATION**

**BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.**

**FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.**

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a bidder's proposal non-responsive.** If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

**PLEASE CHECK THE APPROPRIATE BOX:**

I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. **I will skip Part 2 and sign and complete the Certification below.**

**OR**

I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

**PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN**

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

**EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ADDITIONAL ACTIVITIES ENTRY" BUTTON.**

Name	<input type="text"/>	Relationship to Bidder/Offeror	<input type="text"/>
Description of Activities	<input type="text"/>		
Duration of Engagement	<input type="text"/>	Anticipated Cessation Date	<input type="text"/>
Bidder/Offeror Contact Name	<input type="text"/>	Contact Phone Number	<input type="text"/>

**ADD AN ADDITIONAL ACTIVITIES ENTRY**

Certification: I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder; that the State of New Jersey is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):

Signature:

**Do Not Enter PIN as a Signature**

Title:

Date:

**NON-COLLUSION AFFIDAVIT**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

Re: Bid Proposal for the Township of Piscataway.

**Bid No. 2022-06-13**

STATE OF \_\_\_\_\_

**Bid Date: Thursday June 23, 2022**

:SS:

COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_ of the City of \_\_\_\_\_

in the County of \_\_\_\_\_ and the State of \_\_\_\_\_

of full age, being duly sworn according to law on my oath depose and say that:

I am \_\_\_\_\_ (Position in Company)

of the firm of \_\_\_\_\_ and the bidder making the Proposal for the above names contract, and that I executed the said Proposal with full authority so to do; that I have not, directly or indirectly, entered into any agreement, participated in any collusion, discussed any or all parts of this proposal with any potential bidder, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named bid, and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the Township of Piscataway relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said bid.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees of bona fide established commercial or selling agencies maintained by

\_\_\_\_\_  
**(Print Name of Contractor)**

\_\_\_\_\_  
**(SIGNATURE OF CONTRACTOR)**

**PREVAILING WAGES CERTIFICATION**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

It is the determination of the Township of Piscataway that this is a public works project that in total will exceed \$2,000.00 (two thousand dollars), therefore prevailing wages rules and regulations apply as promulgated by the New Jersey Prevailing Wage Act and in conformance with N.J.S.A. 34:11-56:25 et seq.

**Certification**

1. I certify that our company understands that this project of the Township of Piscataway requires prevailing wages to be paid in full accordance with the law.
2. I further certify that all subcontractors named in this bid understand that this project requires the subcontractor to pay prevailing wages in full accordance with the law.

**Non-compliance Statement**

If it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, The Township, may begin proceedings to terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable for any excess costs occasioned thereby to the public body.

**NOTIFICATION OF VIOLATIONS – New Jersey Department of Labor and Workforce Development**

Has the bidder or any person having an “interest” with the bidder, been notified by the New Jersey Department of Labor and Workforce Development by notice issued pursuant to N.J.S.A. 34:11-56:37 that he/she has been in violation for failure to pay prevailing wages as required by the New Jersey Prevailing Wage Act within the last five (5) years?

\* Yes \_\_\_\_\_

No \_\_\_\_\_

\*If yes, please attach a signed document explaining any/or all administrative proceedings with the Department within the last five (5) years. Please include any pending administrative proceedings with the Department if any.

**Submission of Certified Payroll Records**

All certified payroll records are to be submitted to the person named below who is coordinating the activities for the project:

\_\_\_\_\_  
JOSEPH HERRERA, CFM DIVISION OF ENGINEERING/DIVISION OF PURCHASING  
The Township of Piscataway

Name of Company \_\_\_\_\_

Authorized Agent \_\_\_\_\_

Authorized Signature \_\_\_\_\_

**To be completed, signed and returned with Bid/Proposal**

**STATEMENT OF OWNERSHIP DISCLOSURE**

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

**This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.**

Name of Organization: \_\_\_\_\_

Organization Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

**Part I Check the box that represents the type of business organization:**

- Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type)       Limited Liability Company (LLC)
- Partnership       Limited Partnership       Limited Liability Partnership (LLP)
- Other (be specific): \_\_\_\_\_

**Part II Check the appropriate box**

The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

**OR**

No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address

**Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II**

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above.** The disclosure shall be continued until names and addresses of every non-corporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address

**Part IV Certification**

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that **The Township of Piscataway** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with **The Township of Piscataway** to notify **The Township of Piscataway** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting **The Township of Piscataway** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

**This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.**

***To be completed, signed and returned with Bid***

**SUBCONTRACTOR'S DISCLOSURE FORM**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

The \_\_\_\_\_ *(Name of Bidding Company)*

**Please Check One!** \_\_\_\_\_ will sub-contract a portion of this project.  
 \_\_\_\_\_ will not sub-contract any portion of this project.

**Authorized Agent** \_\_\_\_\_ **Title** \_\_\_\_\_

**Signature of Bidder** \_\_\_\_\_ **Date** \_\_\_\_\_

If the bidder is not going to subcontract any portion of this project, the bidder need not complete any further part of this document.

If the bidder will subcontract any of the following:

- Plumbing/gas fitting work;
- Refrigeration/heating/ventilating systems & equipment
- Electrical work, tele-data, fire alarm or security systems
- Structural steel/ornamental iron work

the bidder must do the following:

- Identify the contract number and type of work he intends to subcontract;
- Provide the name, address and other pertinent information about the subcontractor;\*
- If the cost of the work by the subcontractor shall exceed the amounts listed below, the bidder shall provide in the bid package submission the following documents:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i>For Subcontractors in the four major branches listed above</i>	<i>For all other Subcontractors</i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
\$2,000 through \$5,999	Contractor's Registration Certificate	
\$6,000 through \$17,499	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

Please list subcontractor(s) on the following pages. Bidders may make extra copies of the following pages.

*\* Failure to identify the names and addresses of any subcontractors required to be named in the bid, or to submit the appropriate documents for each such subcontractor, may be cause for the bid to be rejected as being non-responsive.*

***(Form continued on next page)***



**Subcontractor's Disclosure Statement (Continued)**

**Return With Bid**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

**1. Sub-Contractor for PLUMBING AND GAS FITTING WORK**

Name of Subcontracting Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_ FEIN No: \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

Will the cost of sub-contract exceed \$20,000.00?

\_\_\_\_\_ Yes Estimated Value of Contract \$ \_\_\_\_\_

\_\_\_\_\_ No Estimated Value of Contract \$ \_\_\_\_\_

If checked **yes**, the sub-contractor must be pre-qualified to perform the work. The bidder must provide in the bid package the following:

- The subcontractor's Notice of Classification;
- The subcontractor's Total Amount of Uncompleted Contracts; and
- Other documents that are required:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i>For Subcontractors in the four major branches listed above</i>	<i>For all other Subcontractors</i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
\$2,000 through \$5,999	Contractor's Registration Certificate	
\$6,000 through \$17,499	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

**Certification of Equipment**

The \_\_\_\_\_ hereby certifies the above named  
*Name of Bidding Company*  
subcontractor has the personnel, equipment, experience, financial and sufficient means to complete their portion of the contract in full accordance with the bid specifications.

\_\_\_\_\_  
**Authorized Agent (Print) -- Bidder**

\_\_\_\_\_  
**Signature of Authorized Agent—Bidder**  
**(Form continued on next page)**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

**2. Sub-Contractor for REFRIGERATION, HEATING & VENTILATING SYSTEMS AND EQUIPMENT**

Name of Subcontracting Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_ FEIN No: \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

Will the cost of sub-contract exceed \$20,000.00?

\_\_\_\_\_ Yes Estimated Value of Contract \$ \_\_\_\_\_

\_\_\_\_\_ No Estimated Value of Contract \$ \_\_\_\_\_

If checked **yes**, the sub-contractor must be pre-qualified to perform the work. The bidder must provide in the bid package the following:

- The subcontractor's Notice of Classification;
- The subcontractor's Total Amount of Uncompleted Contracts; and
- Other documents that are required:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i>For Subcontractors in the four major branches listed above</i>	<i>For all other Subcontractors</i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
\$2,000 through \$5,999	Contractor's Registration Certificate	
\$6,000 through \$17,499	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

**Certification of Equipment**

The \_\_\_\_\_ hereby certifies the above named  
*Name of Bidding Company*  
subcontractor has the personnel, equipment, experience, financial and sufficient means to complete their portion of the contract in full accordance with the bid specifications.

\_\_\_\_\_  
**Authorized Agent (Print) -- Bidder**

\_\_\_\_\_  
**Signature of Authorized Agent—Bidder**  
**(form continued on next page)**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

**3. Sub-Contractor for ELECTRICAL WORK; TELE-DATA, FIRE ALARM OR SECURITY SYSTEMS**

Name of Subcontracting Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_ FEIN No: \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

Will the cost of sub-contract exceed \$20,000.00?

\_\_\_\_\_ Yes Estimated Value of Contract \$ \_\_\_\_\_

\_\_\_\_\_ No Estimated Value of Contract \$ \_\_\_\_\_

If checked **yes**, the sub-contractor must be pre-qualified to perform the work. The bidder must provide in the bid package the following:

- The subcontractor's Notice of Classification;
- The subcontractor's Total Amount of Uncompleted Contracts; and
- Other documents that are required:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i>For Subcontractors in the four major branches listed above</i>	<i>For all other Subcontractors</i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
\$2,000 through \$5,999	Contractor's Registration Certificate	
\$6,000 through \$17,499	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

**Certification of Equipment**

The \_\_\_\_\_ hereby certifies the above named  
*Name of Bidding Company*

subcontractor has the personnel, equipment, experience, financial and sufficient means to complete their portion of the contract in full accordance with the bid specifications.

\_\_\_\_\_  
**Authorized Agent (Print) -- Bidder**

\_\_\_\_\_  
**Signature of Authorized Agent—Bidder**

**(form continued on next page)**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

**4. Sub-Contractor for STRUCTURAL STEEL & IRON WORK**

Name of Subcontracting Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_ FEIN No: \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

Will the cost of sub-contract exceed \$20,000.00?

\_\_\_\_\_ Yes Estimated Value of Contract \$ \_\_\_\_\_

\_\_\_\_\_ No Estimated Value of Contract \$ \_\_\_\_\_

If checked **yes**, the sub-contractor must be pre-qualified to perform the work. The bidder must provide in the bid package the following:

- The subcontractor's Notice of Classification;
- The subcontractor's Total Amount of Uncompleted Contracts; and
- Other documents that are required:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i><u>For Subcontractors in the four major branches listed above</u></i>	<i><u>For all other Subcontractors</u></i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
\$2,000 through \$5,999	Contractor's Registration Certificate	
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\$17,500 through \$19,999	Contractor's Registration Certificate New Jersey Business Registration Certificate	
\$20,000 or more	Contractor's Registration Certificate New Jersey Business Registration Certificate	

**Certification of Equipment**

The \_\_\_\_\_ hereby certifies the above named  
*Name of Bidding Company*

subcontractor has the personnel, equipment, experience, financial and sufficient means to complete their portion of the contract in full accordance with the bid specifications.

\_\_\_\_\_  
**Authorized Agent (Print) -- Bidder**

\_\_\_\_\_  
**Signature of Authorized Agent—Bidder**

**(form continued on next page)**

**To be completed, signed and returned with Bid**

(IF APPLICABLE)

**Subcontractor's Disclosure Statement**  
**Other Trades**  
**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Bid No. 2022-06-13**

**Bid Date: Thursday, June 23, 2022**

**5. Name of Trade/Type of Work** \_\_\_\_\_

Name of Subcontracting Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_ FEIN No: \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

Will the cost of sub-contract exceed \$20,000.00?

\_\_\_\_\_ Yes Estimated Value of Contract \$ \_\_\_\_\_

\_\_\_\_\_ No Estimated Value of Contract \$ \_\_\_\_\_

If checked **yes**, the sub-contractor must be pre-qualified to perform the work. The bidder must provide in the bid package the following:

- The subcontractor's Notice of Classification;
- The subcontractor's Total Amount of Uncompleted Contracts; and
- Other documents that are required:

<b><u>SUBCONTRACTOR DOCUMENT SUBMISSIONS</u></b>		
<i><u>Estimated Value of Contract – Subcontractor</u></i>	<i><u>For Subcontractors in the four major branches listed above</u></i>	<i><u>For all other Subcontractors</u></i>
	<b><u>Submit With Bid</u></b>	<b><u>Submit Within ten (10 Days of Receipt of Notice of Award</u></b>
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**Certification of Equipment**

The \_\_\_\_\_ hereby certifies the above named  
*Name of Bidding Company*

subcontractor has the personnel, equipment, experience, financial and sufficient means to complete their portion of the contract in full accordance with the bid specifications.

\_\_\_\_\_  
**Authorized Agent (Print) -- Bidder**

\_\_\_\_\_  
**Signature of Authorized Agent—Bidder**

**SECOND AVENUE IMPROVEMENTS PHASE-III**

**Sworn Contractor Certification; Qualifications and Credentials**

Pursuant to N.J.S.A. 40A:11-1 et seq., a pre-qualified contractor seeking to bid Construction Projects, and any subcontractors, that are required to be named under N.J.S.A. 40A:11-1 et seq., shall, as a condition of bidding, submit this Sworn Contractor Certification regarding qualifications and credentials.

I, \_\_\_\_\_, the principal owner or officer of the company certify that the forging statements are true and our firm has the following qualifications and credentials:

1. A current, valid certificate of registration issued pursuant to "The Construction Project Contractor Registration Act," N.J.S.A. 34:11-56:48 et seq. A copy of which is submitted with its bid;
2. A current, valid Certificate of Authority (Business Registration) to perform work in New Jersey issued by the Department of Treasury, a copy of which is submitted with its bid;
3. A current valid contractor trade license required under applicable New Jersey Law for any specialty trade or specialty area in which the firm seeks to perform work, a copy of which is submitted with its bid;
4. During the term of The Township project, I as principal owner or officer of the company or corporation, as contractor, will have in place a suitable quality control and quality assurance program and an appropriate safety and health plan.

Name of Company \_\_\_\_\_

Print Name of Owner or Officer \_\_\_\_\_

**Signature of Owner or Officer** \_\_\_\_\_

**AMERICANS WITH DISABILITIES ACT OF 1990**  
**Equal Opportunity for Individuals with Disability**

The contractor and The Township of Piscataway (hereafter "owner") do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S121 01 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant there unto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim, If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the *owner shall* expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

Name of Company \_\_\_\_\_

Authorized Agent \_\_\_\_\_

Title or Position \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**EXHIBIT "B"**  
**MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE**  
**N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)**  
**N.J.A.C. 17:27-1.1 et seq.**  
**CONSTRUCTION CONTRACTS**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program, may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- (A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.
- (B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:
- (1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
  - (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;



(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

#### EXHIBIT B (Continued)

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and nondiscrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

(Revised: January, 2016)

**EXHIBIT B (Continued)**

DATED: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

**BID BOND**

BOND NO. \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS**, That we, \_\_\_\_\_  
as Principal, and \_\_\_\_\_, a corporation duly organized under the laws of the State of \_\_\_\_\_, as Surety, are held and firmly bound unto the Township of Piscataway as Obligee, in the sum of Ten Percent (10%) of the Total Bid, Not to Exceed Twenty Thousand Dollars (\$20,000.00) for the payment of which Principal and Surety Bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally.

**WHEREAS**, Principal has submitted a bid for \_\_\_\_\_,  
the "Project."

**NOW, THEREFORE**, if the Obligee shall make any award according to the terms of said bid and the Principal shall enter into a contract with said Obligee in accordance with the terms of said bid and give bond for the faithful performance thereof within the time specified; or if no time is specified within thirty days after the date of said award; or if the Principal shall, in the case of failure so to do, shall pay to the Obligee the difference, not to exceed the amount of this Bond, between the amount specified in bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void: otherwise to remain in full force and effect.

Signed and sealed this \_\_\_ day of \_\_\_\_\_, 20\_\_

Surety: \_\_\_\_\_

By: \_\_\_\_\_

Witness: \_\_\_\_\_

Principal: \_\_\_\_\_

By: \_\_\_\_\_

Witness: \_\_\_\_\_

**BIDDER'S AFFIDAVIT**

I, \_\_\_\_\_, being duly sworn, deposes that he/she

resides at \_\_\_\_\_

\_\_\_\_\_

and that he/she is the \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Name of Bidder)

I am duly authorized to sign the bid and that bid is the true offer of the bidder, that the seal attached thereto is the seal of the bidder, and that each, every and all the declarations and statements contained in the bid and any and all affidavits, questionnaires and documents submitted pursuant to the proposal forbids are true to the best of my knowledge and belief.

\_\_\_\_\_  
(Affiant)

## HOLD HARMLESS AGREEMENT

“To the fullest extent permitted by law, \_\_\_\_\_  
(Name of Contractor/Vendor/Facility User) agrees to defend, pay on behalf of, indemnify, and hold harmless the Township of Piscataway, its elected and appointed officials, its agents, employees and volunteers and others working on behalf of the Township of Piscataway, against any and all claims, demands, suits, or loss including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the Township of Piscataway, its elected and appointed officials, its agents, employees, volunteers or others working on behalf of the Township of Piscataway, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, which arises out of or is in any way connected for associated with this contract”

By: \_\_\_\_\_  
Contractor/Vendor/Facility User

\_\_\_\_\_  
Township Of Piscataway

\_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Printed Name of Above)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City, State, Zip)

\_\_\_\_\_  
(Phone)

**PLAN, EXPERIENCE AND EQUIPMENT QUESTIONNAIRE**

Submitted to \_\_\_\_\_

)A Corporation

By \_\_\_\_\_ )A Copartnership

)An Individual

Principal Office \_\_\_\_\_

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.

1) In what manner have you inspected the proposed work? (explain in detail)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2) Explain your plan or layout for performing the proposed work.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3) The work, if awarded to you, will have the personal supervision of whom?

\_\_\_\_\_

4.1) How many years has your organization been in business under your present name?

\_\_\_\_\_

4.2) Have you ever failed to complete any work awarded to you? Yes \_\_\_\_ No \_\_\_\_  
(If yes, attach additional sheet with details and explanation.)

5) Do you intend to sublet any portion(s) of this work? Yes \_\_\_\_ No \_\_\_\_  
If yes, state amount of sub-contract, and if known, the name and address of the sub-contractor, amount and type of his equipment and financial responsibility.

6.) What equipment do you own that is available for and intended to be used on the present project?

QUANTITY	ITEM	DESCRIPTION, SIZE, CAPACITY, ETC	CONDITION	YEARS OF SERVICE	PRESENT LOCATION

7.) What equipment do you intend to purchase or lease for use on the proposed work, should the contract be awarded to you?

QUANTITY	ITEM	DESCRIPTION, SIZE, CAPACITY, ETC	APPROXIMATE COST	
			PURCHASE	LEASE

8) Have you made contracts or received firm offers for all materials prices used in preparing your proposal ? Yes \_\_\_\_ No \_\_\_\_ **Do not** give names of dealers or manufacturers.





**I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.**

DATED: \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City, State, Zip Code)

# C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

## Public Agency Instructions

This page provides guidance to public agencies entering into contracts with business entities that are required to file Political Contribution Disclosure forms with the agency. **It is not intended to be provided to contractors.** What follows are instructions on the use of form local units can provide to contractors that are required to disclose political contributions pursuant to N.J.S.A. 19:44A-20.26 (P.L. 2005, c. 271, s.2). Additional information on the process is available in Local Finance Notice 2006-1 ([www.nj.gov/dca/lgs/lfnslfnmenu.shtml](http://www.nj.gov/dca/lgs/lfnslfnmenu.shtml)).

1. The disclosure is required for all contracts in excess of \$17,500 that are **not awarded** pursuant to a “fair and open” process (N.J.S.A. 19:44A-20.7).
2. Due to the potential length of some contractor submissions, the public agency should consider allowing data to be submitted in electronic form (i.e., spreadsheet, pdf file, etc.). Submissions must be kept with the contract documents or in an appropriate computer file and be available for public access. **The form is worded to accept this alternate submission.** The text should be amended if electronic submission will not be allowed.
3. The submission must be **received from the contractor and** on file at least 10 days prior to award of the contract. Resolutions of award should reflect that the disclosure has been received and is on file.
4. The contractor must disclose contributions made to candidate and party committees covering a wide range of public agencies, including all public agencies that have elected officials in the county of the public agency, state legislative positions, and various state entities. The Division of Local Government Services recommends that contractors be provided a list of the affected agencies. This will assist contractors in determining the campaign and political committees of the officials and candidates affected by the disclosure.
  - a. The Division has prepared model disclosure forms for each county. They can be downloaded from the “County PCD Forms” link on the Pay-to-Play web site at [www.nj.gov/dca/lgs/p2p](http://www.nj.gov/dca/lgs/p2p). They will be updated from time-to-time as necessary.
  - b. A public agency using these forms **should edit them to properly reflect the correct legislative district(s)**. As the forms are county-based, **they list all legislative districts in each county. Districts that do not represent the public agency should be removed from the lists.**
  - c. Some contractors may find it easier to provide a single list that covers all contributions, regardless of the county. These submissions are appropriate and should be accepted.
  - d. The form may be used “as-is”, subject to edits as described herein.
  - e. The “Contractor Instructions” sheet is intended to be provided with the form. It is recommended that the Instructions and the form be printed on the same piece of paper. The form notes that the Instructions are printed on the back of the form; where that is not the case, the text should be edited accordingly.
  - f. The form is a Word document and can be edited to meet local needs, and posted for download on web sites, used as an e-mail attachment, or provided as a printed document.
5. It is recommended that the contractor also complete a “Stockholder Disclosure Certification.” This will assist the local unit in its obligation to ensure that contractor did not make any prohibited contributions to the committees listed on the Business Entity Disclosure Certification in the 12 months prior to the contract. (See Local Finance Notice 2006-7 for additional

information on this obligation) A sample Certification form is part of this package and the instruction to complete it is included in the Contractor Instructions. **NOTE: This section is not applicable to Boards of Education.**

# C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

## Contractor Instructions

Business entities (contractors) receiving contracts from a public agency that are NOT awarded pursuant to a “fair and open” process (defined at N.J.S.A. 19:44A-20.7) are subject to the provisions of P.L. 2005, c. 271, s.2 (N.J.S.A. 19:44A-20.26). This law provides that 10 days prior to the award of such a contract, the contractor shall disclose contributions to:

- any State, county, or municipal committee of a political party
- any legislative leadership committee\*
- any continuing political committee (a.k.a., political action committee)
- any candidate committee of a candidate for, or holder of, an elective office:
  - of the public entity awarding the contract
  - of that county in which that public entity is located
  - of another public entity within that county
  - or of a legislative district in which that public entity is located or, when the public entity is a county, of any legislative district which includes all or part of the county

The disclosure must list reportable contributions to any of the committees that exceed \$300 per election cycle that were made during the 12 months prior to award of the contract. See N.J.S.A. 19:44A-8 and 19:44A-16 for more details on reportable contributions.

N.J.S.A. 19:44A-20.26 itemizes the parties from whom contributions must be disclosed when a business entity is not a natural person. This includes the following:

- individuals with an “interest” ownership or control of more than 10% of the profits or assets of a business entity or 10% of the stock in the case of a business entity that is a corporation for profit
- all principals, partners, officers, or directors of the business entity or their spouses
- any subsidiaries directly or indirectly controlled by the business entity
- IRS Code Section 527 New Jersey based organizations, directly or indirectly controlled by the business entity and filing as continuing political committees, (PACs).

When the business entity is a natural person, “a contribution by that person’s spouse or child, residing therewith, shall be deemed to be a contribution by the business entity.” [N.J.S.A. 19:44A-20.26(b)] The contributor must be listed on the disclosure.

Any business entity that fails to comply with the disclosure provisions shall be subject to a fine imposed by ELEC in an amount to be determined by the Commission which may be based upon the amount that the business entity failed to report.

The enclosed list of agencies is provided to assist the contractor in identifying those public agencies whose elected official and/or candidate campaign committees are affected by the disclosure requirement. It is the contractor’s responsibility to identify the specific committees to which contributions may have been made and need to be disclosed. The disclosed information may exceed the minimum requirement.

The enclosed form, a content-consistent facsimile, or an electronic data file containing the required details (along with a signed cover sheet) may be used as the contractor’s submission and is disclosable to the public under the Open Public Records Act.

The contractor must also complete the attached Stockholder Disclosure Certification. This will assist the agency in meeting its obligations under the law. **NOTE: This section does not apply to Board of Education contracts.**

\* N.J.S.A. 19:44A-3(s): “The term "legislative leadership committee" means a committee established, authorized to be established, or designated by the President of the Senate, the Minority Leader of the Senate, the Speaker of the General Assembly or the Minority Leader of the General Assembly pursuant to section 16 of P.L.1993, c.65 (C.19:44A-10.1) for the purpose of receiving contributions and making expenditures.”







**List of Agencies with Elected Officials Required for Political Contribution Disclosure**  
**N.J.S.A. 19:44A-20.26**

**County Name:**

State: Governor, and Legislative Leadership Committees

Legislative District #s:

State Senator and two members of the General Assembly per district.

County:

Freeholders

County Clerk

Sheriff

{ County Executive }

Surrogate

Municipalities (Mayor and members of governing body, regardless of title):

**USERS SHOULD CREATE THEIR OWN FORM, OR DOWNLOAD  
FROM [WWW.NJ.GOV/DCA/LGS/P2P](http://WWW.NJ.GOV/DCA/LGS/P2P) A COUNTY-BASED,  
CUSTOMIZABLE FORM.**

**STOCKHOLDER DISCLOSURE CERTIFICATION**

**Name of Business:**

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

**OR**

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

**Check the box that represents the type of business organization:**

Partnership

Corporation

Sole Proprietorship

Limited Partnership

Limited Liability Corporation

Limited Liability Partnership

Subchapter S Corporation

**Sign and notarize the form below, and, if necessary, complete the stockholder list below.**

Stockholders:

Name:	Name:
Home Address:	Home Address:
Name:	Name:
Home Address:	Home Address:
Name:	Name:
Home Address:	Home Address:

Subscribed and sworn before me this ____ day of _____, 2 ____.	_____
(Notary Public)	(Affiant)
My Commission expires:	_____
	(Print name & title of affiant)
	(Corporate Seal)

**TOWNSHIP OF PISCATAWAY**

455 Hoes Lane  
Piscataway, N.J. 08854

**AFFIDAVIT ATTESTING TO**  
**COMPLIANCE WITH PREVAILING WAGE LAWS**  
**OF NEW JERSEY**

I, \_\_\_\_\_ of the organization/firm of  
\_\_\_\_\_ in the (City, Town, Borough) of  
\_\_\_\_\_ State of \_\_\_\_\_ and being of  
full age, being duly sworn according to law on my oath depose and say that:

I am the Bidder making the proposal for the labor and materials relative  
to: \_\_\_\_\_, in  
the amount of \$ \_\_\_\_\_, and that I executed the said proposal with full authority to do so;  
that said **bidder IS AND WILL BE IN FULL COMPLIANCE with the Prevailing Wage  
laws of the State of New Jersey.**

PRINT: Name, Address and other contact information of Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone \_\_\_\_\_ fax \_\_\_\_\_

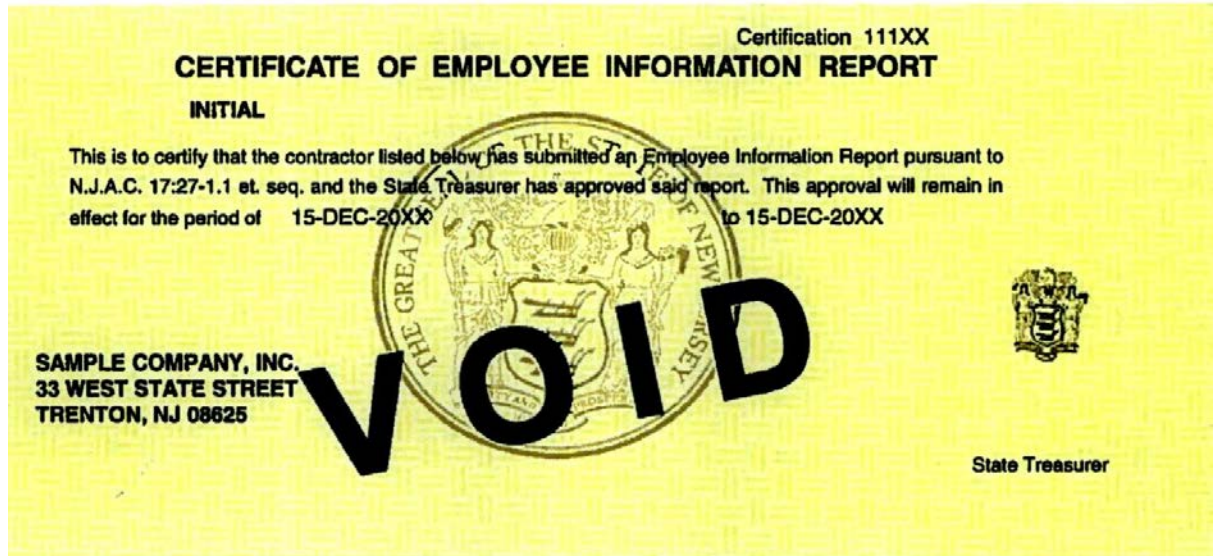
Email address \_\_\_\_\_

By: \_\_\_\_\_  
(signature of authorized representative)

\_\_\_\_\_  
(Print name of authorized representative)

Date \_\_\_\_\_

**SAMPLE CERTIFICATE OF EMPLOYEE INFORMATION REPORT**



**REQUIRED**

Bid No. 2022- 06-13

**I have read this Bid in its entirety and hereby affirm that the Provider agrees to all terms and acknowledge as outlined in the instructions to bidders.**

DATED: \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City, State, Zip Code)

PAGE

# **TOWNSHIP OF PISCATAWAY**

**TO All Bidders:**

## **REMINDER!**

**Did you sign all of the bid documents?**

**All bid documents returned to the Township shall be signed with original signatures. Please use [Blue Ink](#).**

**The Township will not accept facsimile or rubber stamp signatures.**

**Failure to sign and submit all bid documents may be cause for disqualification and rejection of the bid.**

**One “Original” and (One “True Copy” of the Original)**

.....  
**Cover Page with Name, Address, Phone Number, E-mail Address.**

**Return the entire original bid packet intact by the indicated deadline.**

Please check the Website: [www.piscatawaynj.org](http://www.piscatawaynj.org) for any Addendum

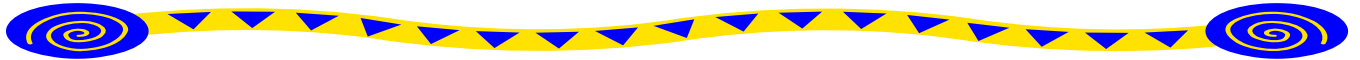
**Instructions: (Click on Home Page, EGov, Bids Download, Print)**

**Any Addendum must be submitted with Acknowledgement Addenda Form.**

E-mail questions to: [purchasing@piscatawaynj.org](mailto:purchasing@piscatawaynj.org)

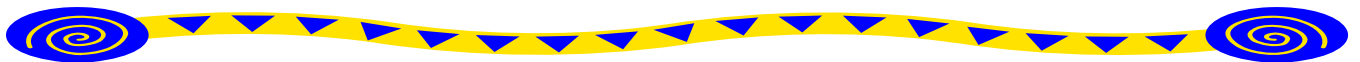
**732-562-2321 (The Division of Purchasing)**

# THE TOWNSHIP OF PISCATAWAY



# TECHNICAL /SPECIFICATIONS

Pages 1-223



MARIA E. VALENTE-CAEMMERER

---

Purchasing Agent/Township Secretary

**TECHNICAL SPECIFICATIONS  
FOR**

***TOWNSHIP OF PISCATAWAY  
SECOND AVENUE ROAD IMPROVEMENTS – PHASE III***

**MIDDLESEX COUNTY, NEW JERSEY  
CONTRACT NO. 2022-1**

**FEBRUARY 2022**

\_\_\_\_\_  
DATE:

Richard A. Alaimo, P.E.  
N.J. Professional Engineer  
License No. 13195

ALAIMO GROUP  
CONSULTING ENGINEERS  
200 HIGH STREET, MOUNT HOLLY, NEW JERSEY 08060  
(609) 267-8310  
OUR FILE NO. A-1010-0016-000 (S2816)



**TABLE OF CONTENTS**

**SPECIFICATIONS**

**PAGE NO.**

DIVISION 01 - GENERAL REQUIREMENTS

Statement of Work .....01 11 10-1 to 5  
Cash Allowances .....01 21 00-1 to 4  
Measurement and Payment .....01 22 00-1 to 4  
Substitutions .....01 25 13-1 to 4  
Construction Schedules .....01 32 16-1 to 3  
Shop Drawings, Product Data and Samples .....01 33 23-1 to 10  
Testing Laboratory Services .....01 45 29-1 to 4  
Maintenance and Protection of Traffic .....01 55 26-1 to 9  
Temporary Soil Erosion and Sediment Control .....01 57 13-1 to 5  
Field Engineering .....01 71 23-1 to 3  
Cleaning and Restoration .....01 74 00-1 to 6

DIVISION 02 – EXISTING CONDITIONS

Subsurface Investigation .....02 32 19-1 to 2

DIVISION 31 - EARTHWORK

Clearing Site ..... 31 10 00-1 to 5  
Excavating, Filling and Grading ..... 31 23 00-1 to 21  
Excavation (Unclassified) ..... 31 23 10-1 to 5

DIVISION 32 – EXTERIOR IMPROVEMENT

Milling of Hot Mix Asphalt ..... 32 01 16-1 to 5  
Hot Mix Asphalt ..... 32 12 16-1 to 15  
Concrete Unit Paving ..... 32 14 13-1 to 8

**TABLE OF CONTENTS (Continued)**

**SPECIFICATIONS**

**PAGE NO.**

DIVISION 32 – EXTERIOR IMPROVEMENT (Con’t)

Roadway Concrete .....	32 16 14-1 to 13
Stone Curb.....	32 16 40-1 to 5
Traffic Stripes and Markings.....	32 17 23-1 to 5
Modular Block Retaining Walls (Keystone Wall) .....	32 32 23-1 to 7
Timber Retaining Walls .....	32 32 29-1 to 5
Irrigation System .....	32 84 23-1 to 10
Seeding .....	32 92 19-1 to 12
Landscape Planting .....	32 93 00-1 to 12

DIVISION 33 - UTILITIES

Gravity Sanitary Sewer Piping Systems.....	33 31 12-1 to 13
Storm Sewer System .....	33 40 00-1 to 20

SECTION 01 11 00  
(01010)  
STATEMENT OF WORK

TOWNSHIP OF PISCATAWAY  
SECOND AVENUE ROAD IMPROVEMENTS – PHASE III  
CONTRACT NO. 2022-1

1.01 IN GENERAL, the work of this project consists of the reconstruction of Second Avenue in the Township of Piscataway, Middlesex County, New Jersey complete as specified within these Contract Documents and shown on the Drawings entitled:

- “Second Avenue Road Improvements – Phase III, Contract No. 2022-1, prepared by the Alaimo Group, and consisting of forty-one (41) drawings as listed at the end of this Statement of Work. The Drawings are appended to these Specifications.

The drawings are appended to these Specifications.

1.02 DESCRIPTION OF WORK

A. The work includes, but is not limited to, the following items:

1. Maintenance and protection of traffic; traffic control plan; maintaining vehicle access to cross streets and adjacent properties; furnishing signs, drums, barricades, cones, flagman and all else required to maintain, protect and control traffic.
2. Soil erosion and sediment control improvements and practices.
3. Clearing site.
4. Roadway excavation, unclassified. All surplus material to be disposed of by Contractor.
5. Dense Graded Aggregate Base or Subbase for replacement pavement, road construction and driveway restoration.
6. Hot Mix Asphalt 19M64 Base Course.
7. Hot Mix Asphalt 9.5M64 Surface Course.

8. Belgian block curb.
9. Reset castings and valve boxes.
10. Inlet construction with new grates, frames and curb pieces. Also included is storm sewer improvements as noted.
11. Removal and replacement of inlet grates and inlet curb pieces.
12. Sign relocation.
13. Topsoiling, 4" thick with seed, fertilizer, lime and mulch.
14. Reset property corner monumentation where required.
15. Traffic stripes.
16. Disposal of regulated material, if and where directed, including testing.
17. Construction layout, record plan preparation, pre-construction video recording; and contract closeout documentation.
18. Final site clean-up and restoration.
19. **ADA Compliance and As-built Certification:** The Contractor shall provide to the *ENGINEER* for record purposes as-built drawings and a certification that the curb ramps as constructed do not exceed the slopes shown on the construction drawings. The certification shall be signed by the contractor, and signed and sealed by a Land Surveyor registered in the State of New Jersey retained by the Contractor. Where cross slopes, longitudinal slopes and dimensions exceed those shown on the design drawings, the ramp(s) shall be removed and replaced to the proper slopes and dimensions by the Contractor at no additional cost to the *OWNER*.

B. An Asphalt Price Adjustment Allowance and a Fuel Price Adjustment are provided in each contract.

C. Police traffic directors and police traffic directors with police vehicles will be required and an allowance has been provided in the Proposal section.

D. **Unspecified Construction Work**

Any unforeseen work, material, or item not shown or specified on the contract drawings and specifications may be required in the event the *ENGINEER* approves the need for additional work deemed to be necessary for the completion

of the project. Unspecified construction must comply with the requirements of the specifications and as directed by the *ENGINEER*.

The *ENGINEER* shall notify the Contractor of the necessity for work, stipulating its character and extent. Upon receipt of such notification, the Contractor shall notify the *ENGINEER*, in writing, of the fair compensation, for which he proposes to perform the required work.

No work shall be performed unless it has been ordered in writing as such by the *ENGINEER* before the said work started.

1. Payment

Payment allowance shall include, but not limited to material, labor, equipment, supplies, storage, removal, testing, restoration, and all as necessary to complete the work. No additional payment will be made for the Unspecified Construction Work.

1.03 COORDINATION

- A. Contractor shall coordinate his operations with those of the *OWNER* and Residents. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work.
- B. Contractor shall provide written notice to all residents affected by the proposed construction not more than 96 hours nor less than 48 hours prior to commencing work on any street, roadway or adjacent property. Such notice shall contain the Contractor’s name, address and telephone number, the name of the person in charge of the work and a brief description of the work to be done. The Contractor shall submit a draft of the residential notification to the *ENGINEER* for approval 72 hours prior to issuing the notice.
- C. Work on municipal streets is limited to the hours of 8:30 A.M. to 4:30 P.M., Monday through Friday unless otherwise approved. All municipal roads shall be surfaced, open and ready for traffic by 4:30 P.M. each day.
- D. All streets under construction shall be swept clean and all debris removed at the end of each week. To minimize the potential for delay, no work or street closure will be permitted on holidays as follows:

If Holiday Falls On	No Work or Street Closures Permitted
Sunday or Monday	6:00 A.M. Friday until Noon Tuesday
Tuesday	6:00 A.M. Friday until Noon Wednesday

Wednesday	6:00 A.M. Tuesday until Noon Thursday
Thursday	6:00 A.M. Wednesday until Noon Monday
Friday	6:00 A.M. Thursday until Noon Monday

- E. Contractor shall lay out and install his work at such time or times and in such manner as to facilitate general progress of the project.
- F. Coordinate all work as further described in the General Conditions of the *Contract Documents*.

#### 1.04 DRAWINGS

- A. The following Drawings prepared by Alaimo Group, Consulting Engineers, are appended hereto and are a part of these Contract Documents:

### SECOND AVENUE – PHASE III

<u>Sheet No.</u>	<u>Title</u>
1.	Title Sheet
2.	Existing Conditions Plan
3.	Legend, Abbreviations and Typical Section
4.	Estimate of Quantities
5.	Construction Tie Sheet
6.	Plan – Sta. 122+00 thru Sta. 129+75
6A.	Profile – Sta. 122+00 thru Sta. 129+75
7.	Plan and Profile – Sta. 129+75 thru Sta. 138+73.10
7A.	Profile – Sta. 129+75 thru Sta. 138+73.10
8.	Grading Plan
9.	Cross Sections – Sta. 122+00 thru Sta. 123+00
10.	Cross Sections – Sta. 123+39.10 thru Sta. 124+00
11.	Cross Sections – Sta. 124+50.19 thru Sta. 125+50
12.	Cross Sections – Sta. 125+60.60 thru Sta. 126+23.80
13.	Cross Sections – Sta. 126+50 thru Sta. 127+19
14.	Cross Sections – Sta. 127+50 thru Sta. 128+00
15.	Cross Sections – Sta. 128+21.40 thru Sta. 128+50
16.	Cross Sections – Sta. 128+55.20 thru Sta. 129+00
17.	Cross Sections – Sta. 129+22.80 and Sta. Sta. 129.50
18.	Cross Sections – Sta. 129+69.80 and Sta. 130+00
19.	Cross Sections – Sta. 130+24.30 and Sta. 130+50
20.	Cross Sections – Sta. 130+80.60 and Sta. 131+00
21.	Cross Sections – Sta. 131+03.10 and Sta. 131+50

22. Cross Sections – Sta. 131+90.40 and Sta. 132+00
23. Cross Sections – Sta. 132+29.70 and Sta. 132+50
24. Cross Sections – Sta. 133+00 and Sta. 133+08
25. Cross Sections – Sta. 133+34.90 and Sta. 133+50
26. Cross Sections – Sta. 133+96.60 and Sta. 134+00
27. Cross Sections – Sta. 134+18 and Sta. 134+50
28. Cross Sections – Sta. 135+00 and Sta. 135+08.10
29. Cross Sections – Sta. 135+50 and Sta. 136+00
30. Cross Sections – Sta. 136+24.40 and Sta. 136+50
31. Cross Sections – Sta. 137+00 and Sta. 138+00
32. Cross Sections – Sta. 138+50 and Sta. 139+25
33. Maintenance and Protection of Traffic Notes, Details and Detour Plan
34. Soil Erosion and Sediment Control Plan
35. Soil Erosion and Sediment Control Notes and Details
36. Construction Details
37. Construction Details
38. Landscape Plan – Sta. 122+00 to Sta. 129+75
39. Landscape Plan – Sta. 129+75 to Sta. 138+73.10

B. The following Drawings, prepared by the New Jersey Department of Transportation, are also a part of these Contract Documents only to the extent required for the construction of the specified improvements:

1. Sheet 39/146, CD-602-3: Inlets, Type B1, B2 and B, B1 & B2 Modified.
2. Sheet 54/164: Construction Details.
3. Sheet 55/164: Construction Details.

1.05 The above Statement of Work outlines the general items and distribution of work, and should not be construed as being all-inclusive.

\*\*\*\*END OF STATEMENT OF WORK\*\*\*\*

SECTION 01 21 00  
(01021)  
CASH ALLOWANCES

PART 1 - GENERAL

1.01 SUMMARY

- A. To provide adequate budget and bonding to cover items not precisely determined or foreseen by the *OWNER* prior to bidding, allow within the proposed Contract Sum the amounts described in this Section.
- B. Related work:
  - 1. Other provisions concerning Cash Allowances may be stated in other Sections of these *Specifications*.

1.02 DESCRIPTION

- A. *CONTRACTOR* shall include in the Contract Price all allowances named and shall cause the Work so covered to be done for such sums within the limit of the allowances as may be acceptable to the *ENGINEER*.
- B. *CONTRACTOR* agrees that the allowances include the cost to *CONTRACTOR* (less any applicable trade discounts) of materials, equipment and labor required by the allowances to be delivered to the site, less applicable taxes; and *CONTRACTOR'S* costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances. No demand for additional payment on account of any thereof will be valid.
- C. Prior to work being performed, an appropriate Change Order will be issued as recommended by *ENGINEER* to reflect actual amounts due *CONTRACTOR* on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted. Funds remaining in any Allowance at closeout of Contract will be credited to the *OWNER* by Change Order.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.



- B. Submit cost proposals for purchase of products included in the allowances.
- C. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for each allowance.

1.04 COORDINATION

- A. *ENGINEER* will consult with Contractor for consideration and selection of products and materials and consult with *OWNER* for final selection. *ENGINEER* will notify Contractor of final selection and prepare a Change Order.
- B. Contractor shall assist the *ENGINEER* in selection of products and materials, obtain proposals from suppliers and offer recommendations.
- C. Upon notification of selection by *ENGINEER/OWNER*, Contractor shall execute purchase agreement with designated supplier/installer and process shop drawings, product data, and samples.
- D. Contractor shall inspect products and materials upon delivery for completeness, damage, and defects and resolve any claims for damage.

1.05 SPECIFIC CASH ALLOWANCES

- A. Allowance for Uniformed Police Traffic Directors
  - 1. The local police department has made a “*good faith effort on the part of the contracting unit, to reasonably estimate the total cost of traffic control personnel, vehicles, equipment, administrative, or any other costs associated with additional traffic control requirements required by the contracting unit, or any other public entity affected by the project, above and beyond the bidder's traffic control personnel, vehicles, equipment, and administrative costs.*”
  - 2. There is included in the Contract price an Allowance to cover the cost of providing Uniformed Police Traffic Directors, if and where required by the local police department. The local police department will provide the uniformed police traffic directors and the *CONTRACTOR* will be billed directly for the unit cost per hour for each director furnished, as well as vehicles, equipment, and administrative costs. The *OWNER* will reimburse the *CONTRACTOR* for the invoice cost of the uniformed police traffic directors in accordance with the General Conditions. *CONTRACTORS’* costs for overhead, profit and other expenses contemplated for the allowances shall be included in the overall Contract

Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

B. Asphalt Price Adjustments:

1. In accordance with P.L.2009, Chapter 187 [N.J.S.A. 40A:11-16(d)] asphalt price adjustments will be made for all Hot Mix Asphalt whenever the quantity of Hot Mix Asphalt used on the project is 1000 or more tons. The asphalt price adjustment shall be calculated in accordance with the formula and relevant instructions published in the most recent edition of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction as revised by the "Standard Inputs" periodically issued by the Department. All invoices for payment shall be accompanied by the calculation of any asphalt price adjustment and a showing of the current month's Asphalt Price Index and the Basic Asphalt Price Index. No adjustments will be made for Tack Coat or Prime Coat.
2. "Asphalt Price Index" means the Asphalt Price Index as determined and published by the New Jersey Department of Transportation.
3. "Basic Asphalt Price Index" means the Basic Asphalt Price Index as published by the New Jersey Department of Transportation in its "Standard Specifications for Road and Bridge Construction", as revised by the "Standard Inputs" periodically issued by the New Jersey Department of Transportation.
4. There is included in the Proposal an allowance in an amount sufficient to account for any asphalt price adjustments required under the Contract.

C. Fuel Price Adjustments:

1. In accordance with P.L.2009, Chapter 187 [N.J.S.A. 40A:11-16(d)] fuel used on this project may be eligible for fuel price adjustment. Fuel that is eligible for a fuel price adjustment shall be the sum of the quantities of the eligible pay items in the contract times the fuel usage factors as determined by the Department of Transportation. The types of fuel furnished shall be at the option of the contractor.
2. The fuel requirement for items not determined by the Department of Transportation to be eligible, and for pay items in the bid specifications calling for less than 500 gallons of fuel, shall not be eligible for a fuel price adjustment. If more than one pay item has the same nomenclature but with different thicknesses, depths, or types, each individual pay item must require 500 gallons or more of fuel to be eligible for a fuel price adjustment. If more than one pay item has the exact same nomenclature,

similar pay items shall be combined and then this combination must require 500 gallons or more of fuel to be eligible for the fuel price adjustment.

3. Fuel price adjustments shall not be made in those months for which the monthly fuel price index has changed by less than five percent from the basic fuel price.
4. “Fuel Price Index” means the Fuel Price Index as determined and published by the New Jersey Department of Transportation.
5. “Pay Item” means a specifically described item of work for which the bidder provides a per unit or lump sum price in a bid specification as determined and published by the New Jersey Department of Transportation.
6. There is included in the Proposal an allowance in an amount sufficient to account for any fuel price adjustments required under the Contract.

\*\*\*\*\*END OF SECTION\*\*\*\*\*

SECTION 01 22 00  
(01025)  
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Requirements for determining measurement and payment of work specified on Unit basis or Lump Sum basis.
2. Requirements for a Schedule of Values.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 00 41 00: Proposal*

1.02 DESCRIPTION

A. Unit price items:

1. Measurement of units of work for which payment will be made by unit prices are defined herein.
2. Payment for the units of work will be determined by multiplying the unit prices stated within the bid, times the quantity of the unit of work as determined by the measurement provisions stated herein. Payment for the units of work shall fully compensate the *CONTRACTOR* for furnishing all materials, labor, equipment, services, tools and all else incidental and necessary to complete the work.

B. Lump sum items:

1. Measurement of quantities of work will be estimated based on the accepted schedule of values as specified herein.

2. Payment for the quantities of work indicated in the accepted schedule of values will be at the prices stated in the accepted schedule of values, not to exceed the lump sum stated within the bid. Payment for the work to be performed under the lump sum shall fully compensate the *CONTRACTOR* for furnishing all material, labor, equipment, services, tools and all else incidental and necessary to complete the work.
- C. No specific measurement and payment will be made herein for work having no separate payment, but the costs thereof shall be included in the prices bid for the various other items of related work listed herein and in the *PROPOSAL*.

### 1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Schedule of values:
1. Submit a Schedule of Values for the work at the Pre-Construction Conference. Schedule shall reflect the specified construction stages if any, and the component parts of each stage.
  2. Upon request, support the values with data, which will substantiate their correctness.
  3. The Schedule of Values, unless objected to by the *ENGINEER*, shall be used only as the basis for the Contractor's Applications for Payments.
- C. Form and content of Schedule of Values:
1. Type Schedule on 8½ x 11 in. white paper *CONTRACTOR'S* standard forms and automated printout will be considered for approval by *ENGINEER* upon *CONTRACTORS* request. Identify schedule with:
    - a. Title of project and location.
    - b. *ENGINEER* and project number.
    - c. Name and address of *CONTRACTOR*.
    - d. Contract designation.
    - e. Item designation as listed in the *PROPOSAL*.

- f. Date of submission.
- D. Schedule shall list the installed value of each of the items listed in the Proposal for all of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- E. In the case of Lump Sum items, each item shall be divided into its component parts and be shown on a subschedule.
- F. Follow the 48 Division Construction Specification Institute (CSI) format for listing component items of each payment item listed in the *PROPOSAL*.
- G. The sum of all values listed in the schedule shall equal the total Contract Price.

## PART 2 - PAYMENT

### 2.01 GENERAL

- A. The *CONTRACTOR* shall receive and accept the compensation provided for in the Contract as full payment for furnishing all labor, materials, tools, equipment and incidentals necessary to the completed work, and for performing all work contemplated and embraced under the Contract in a complete and acceptable manner; also, except where specifically provided elsewhere in the *Contract Documents*, for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, or for the action of the elements, or for any unforeseen difficulties which may be encountered during the prosecution of the work until acceptance by the *OWNER*; also, except where specifically provided elsewhere in the *Contract Documents*, for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract.
- B. If the payment clause relates to any unit price in the *PROPOSAL* and requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other Pay Item which may appear elsewhere in the *Contract Documents*.
- C. The *CONTRACTOR* shall receive payments in accordance with the completion of work as identified by the *Construction Schedules, Section 01 32 16*.

2.02 LIQUIDATED DAMAGES

- A. The *OWNER* will suffer significant financial loss if the project, or each stage thereof, is not substantially complete on the date(s) set forth in the *Contract Documents*. The *CONTRACTOR* and his surety shall be liable for and shall pay to the *OWNER* the sum stipulated, as fixed and agreed, as liquidated damages for each calendar day of delay until the project, or each stage thereof, is substantially complete.
  
- B. Liquidated damages in the amounts specified in the *PROPOSAL* will be assessed as required by the General Provisions and the Contract and collected through Current Estimate/Voucher deduct items implemented at completion of the various stages of construction specified.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 25 13  
(01640)  
SUBSTITUTIONS

1.01 GENERAL

- A. Work included:
  - 1. Procedures for requesting use of products, materials or methods in place of those specified.
- B. Related requirements:
  - 1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
  - 2. *Section 01 33 23: Shop Drawings, Product Data and Samples*

1.02 SUBSTITUTIONS

- A. After Notice to Proceed, *ENGINEER* will consider formal request from *CONTRACTOR* for products, materials or methods in place of those specified.
- B. Submit six (6) copies of Request for Substitution together with Submittal Transmittal Form contained in *Section 01 33 23*. Include in request as applicable:
  - 1. Complete data substantiating compliance of proposed substitution with *Contract Documents*.
  - 2. For products:
    - a. Product identification, including manufacturer's name and address.
    - b. Manufacturer literature:
      - (1) Product description.
      - (2) Performance and test data.
      - (3) Reference standards.
    - c. Samples.



- d. Name and address of similar projects on which product was used, and date of installation.
  3. For construction methods:
    - a. Detailed description of proposed method.
    - b. Drawings illustrating methods.
  4. Itemized comparison of proposed substitution with product or method specified.
  5. Names of facilities at which the substitute material or product has been successfully used in a similar situation.
  6. Relation to separate contracts.
- C. In making requests for substitution, *CONTRACTOR* represents:
1. He has personally investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
  2. He will provide the same guarantee for substitution as for product or method specified.
  3. He will coordinate installation of accepted substitution into work making such changes as may be required for work to be completed in all respects.
  4. In the event the *CONTRACTOR* chooses to furnish and install a system or item of equipment of different arrangement from that shown or specified, and receives approval to do so, he shall furnish and install any additional wiring, conduit or other materials required by the system at no additional cost to the *OWNER*.
  5. He waives all claims for additional costs related to substitutions which consequently become apparent.
  6. Cost data is complete and includes all related costs under this contract.
  7. Redesign due to *CONTRACTOR'S* substitution shall be accomplished by a registered professional engineer in the State of New Jersey and will be subject to review and approval by the *ENGINEER* before implementation. Whether or not the *ENGINEER* accepts a proposed substitute, *CONTRACTOR* shall be responsible for all costs incurred for any redesign required as a result of any requested substitution. *ENGINEER* shall record

time required for review of *CONTRACTOR'S* submitted redesign and *OWNER* will deduct from *CONTRACTOR'S* payments all costs of the *OWNER's ENGINEER* in performing said review. *ENGINEER* shall bill the *OWNER* at the billing rates current at the time of review.

- D. Substitutions will not be considered if:
1. They are indicated or implied on shop drawings of product data submittals without formal request submitted in accordance with Paragraph 1.02.
  2. Acceptance will require substantial revision of *Contract Documents*.
  3. *OWNER* or *ENGINEER* determines that the substitutions will cause operational issues.
- E. If accepted, the *ENGINEER* will approve the substitution in writing.

\*\*\*\*END OF SECTION\*\*\*\*



SECTION 01 32 16  
(01310)  
CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Promptly after award of the contract, the *CONTRACTOR* shall prepare and submit to the *ENGINEER* estimated construction progress schedules for the work, with subschedules of related activities, which are essential to its progress.
2. Submit revised progress schedules monthly.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 11 00: Statement of Work*
3. *Section 01 33 23: Shop Drawings, Product Data and Samples*

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

1.03 FORM OF SCHEDULES

A. Prepare schedules in the form of a horizontal bar chart.

1. Provide separate horizontal bar for each trade or operation.
2. Horizontal time scale: Identify the first workday of each week.
3. Scale and spacing: To allow space for notation and future revisions.

4. Minimum sheet size: 18-inch by 24-inch.
- B. Format of listings: The chronological order of the start of each item of work.
- C. Identification of listings: By major specification section numbers.

#### 1.04 CONTENT OF SCHEDULES

- A. Construction progress schedule:
  1. Show the complete sequence of construction by activity.
  2. Show the dates for the beginning, and completion of each element of construction.
  3. Show projected percentage of completion for each item, as of the first day of each month.
- B. Provide subschedules to define critical portions of prime schedules.

#### 1.05 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
  1. Major changes in scope.
  2. Activities modified since previous submission.
  3. Revised projections of progress and completion.
  4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
  1. Problem areas, anticipated delays, and the impact on the schedule.
  2. Corrective action recommended, and its effect.
  3. The effect of changes on schedules of other prime contractors.

## 1.06 SUBMISSIONS

- A. Submit initial schedules within five (5) days after Notice to Proceed.
  - 1. *ENGINEER* will review schedules and return review copy within ten (10) days after receipt.
  - 2. If required, resubmit within seven (7) days after return of review copy.
- B. Submit revised progress schedules with each application for payment.
- C. Submit one (1) reproducible transparency and one (1) opaque reproduction.

## 1.07 DISTRIBUTION

- A. Distribute copies of the reviewed schedules to:
  - 1. Job site file.
  - 2. Subcontractors.
  - 3. Other concerned parties.
- B. Instruct recipients to report promptly to the *CONTRACTOR*, in writing, any problems anticipated by the projection shown in the schedules.

## PART 4 - PAYMENT

### 4.01 CONSTRUCTION SCHEDULES

- A. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
- B. Include all costs for the *CONSTRUCTION SCHEDULES* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 33 23  
(01340)  
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Prepare and submit to the *ENGINEER* a Schedule of Submittals showing all submittals required by the Specification sections or the Drawings.
2. Prepare and submit to *ENGINEER* shop drawings, product data and samples required by the Specification sections.

B. Related Requirements:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 25 13: Substitutions*

C. Payment:

1. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
2. Include all costs for the *SHOP DRAWINGS, PRODUCT DATA AND SAMPLES* in the prices bid for the various related items of work as designated in the *PROPOSAL*.
3. Shop drawings, product data and samples are an integral part of the construction process and are required as part of the construction contract. *CONTRACTOR'S* failure to provide shop drawings, product data and samples in a complete and timely manner may affect his payment and/or completion schedule. No extension of time will be granted due to untimely or incomplete submittals.

## 1.02 DEFINITIONS

- A. Shop drawings are original drawings, diagrams, schedules and other data specifically prepared for the work by the *CONTRACTOR* or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work.
- B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information prepared by the manufacturer and furnished by the *CONTRACTOR* to illustrate materials or equipment for some portion of the work. All such data shall be the manufacturer's current materials.
- C. Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the work will be judged.

## 1.03 SCHEDULING

- A. Schedule submission for shop drawings, product data and samples at least twenty-one (21) days before dates reviewed submittals will be needed.
- B. Shop drawings for equipment foundations will not be reviewed by the *ENGINEER* until shop drawings for equipment have been submitted and approved.

## 1.04 PRESENTATION

- A. Present drawings and product data in a clear and thorough manner.
- B. Drawings and product data shall be clear, concise, readable and legible.
- C. Second, third, fourth, etc., generation photocopies are frequently illegible and may not be accepted as a required submission.
- D. Drawings and product data sent via facsimile (fax) machine are frequently illegible and may not be accepted as a required submission.
- E. *ENGINEER* will notify *CONTRACTOR* in the event submittals are illegible. No time extensions shall be allowed as a result of resubmittals due to illegibility.



## 1.05 SUBMITTALS

### A. Schedule of Submittals:

1. Prepare and submit for approval a schedule showing each and every submittal required by the Contract Documents and their initial submittal dates required for coordination of the work.
2. Organize the schedule by the applicable specification Section number.
3. Submit the schedule within fourteen (14 days) after Notice to Proceed.
4. The schedule shall reflect the overall job schedule sequence so as to cause no delay in the Work of other Contractors, if any.
4. Revise and resubmit the schedule for approval when requested.
5. Prepare and transmit each submittal sufficiently in advance of scheduled performance to allow for adequate review and processing time, including time for re-submittal if necessary.
6. If processing time for a particular submittal will be critical to progress of the work, so advise on the submittal.
7. No extension of time will be authorized because of the contractor's failure to transmit submittals sufficiently in advance of the work.

### B. Shop drawings:

1. Original drawings, prepared by *CONTRACTOR*, subcontractor, supplier or distributor, that illustrate some portion of the work; showing fabrication, layout, setting or erection details.
2. Present drawings in a clear and thorough manner: Details shall be identified by reference to sheet and detail, schedule or room numbers shown on *Contract Drawings*.
3. Minimum sheet size: 11 inches by 17 inches.

### C. Product data:

1. Preparation:
  - a. Clearly mark each copy to identify pertinent products or models.

- b. Show performance characteristics and capacities.
  - c. Show dimensions and clearances required.
  - d. Show wiring or piping diagrams and controls.
2. Manufacturer's standard schematic drawings and diagrams:
- a. Modify drawings and diagrams to delete information not applicable to the work.
  - b. Supplement standard information to provide information specifically applicable to the work.
3. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data:
- a. Clearly mark each copy to identify pertinent materials, products or models.
  - b. Show dimensions and clearances required.
  - c. Show compliance with referenced standards.
- D. Samples:
1. Office samples will be of sufficient size and quantity to clearly illustrate:
- a. Functional characteristics of product or material with integrally related parts and attachment devices.
  - b. Full range of color, texture, and pattern.
  - c. After review samples will be retained by *ENGINEER*. Upon completion of the work, *CONTRACTOR* may submit written request for return of samples.

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission.

- B. Determine and verify:
1. Field measurements.
  2. Field construction criteria.
  3. Catalog numbers and similar data.
  4. Conformance with specifications.
- C. Coordinate each submittal with requirements of the work and of the *Contract Documents*.
- D. **All copies of all** shop drawings, product data and samples shall be accompanied by a transmittal containing Contractor Certification that he has determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and that he has checked and coordinated each item with other related submittals and all other contract requirements. **A copy of the required Submittal Form is included at the end of this specification section.**
- E. *CONTRACTOR'S* responsibility for errors and omissions in submittals is not relieved by *ENGINEER'S* review of submittals.
- F. *CONTRACTOR'S* responsibility for deviations in submittals from requirements of *Contract Documents* is not relieved by *ENGINEER'S* review of submittals, unless *ENGINEER* gives written acceptance of specific deviations.
- G. Notify *ENGINEER*, in writing at time of submission, of deviations in submittals from requirements of *Contract Documents*.
- H. Begin no fabrication or work that requires submittals until return of submittals with *ENGINEER'S* stamp and initials or signature indicating review and that no further submissions are required. Any manufacturing done, shipment made, workmanship performed, or work installed before the required shop drawings, product data and samples are returned indicating that no further submissions are required will be at the sole expense and responsibility of the *CONTRACTOR* and subject to rejection.

#### 1.07 ENGINEERS RESPONSIBILITIES

- A. Engineering duties:

1. Review submittals with reasonable promptness.
  2. Review for:
    - a. Design concept of project.
    - b. Information given in *Contract Documents*.
  3. Review of separate item does not constitute review of an assembly in which item functions.
  4. Affix stamp and initials or signature certifying to review of submittal.
  5. Return submittals to *CONTRACTOR* for distribution or resubmission.
- B. The *ENGINEER* shall review all shop drawings, product data and samples. The submittal shall be marked as follows:
1. No exceptions taken; no further submission required.
  2. Note markings; no further submission required.
  3. Note markings; further submission required.
  4. Rejected.
- C. The *ENGINEER* will review the original submittal and one resubmittal at no additional cost to the *CONTRACTOR*.
- D. In the event there are more than two (2) submittals for the given product, the *ENGINEER* shall record the time required for the subsequent reviews. The *ENGINEER* shall deduct the cost of said review(s) from the current estimate, defining amounts due the *CONTRACTOR*. The costs shall be based upon the same rates paid to the *ENGINEER* by the *OWNER* for similar work.
- E. In the event that any submittal is rejected and a new submittal is prepared that must be resubmitted for review by the *CONTRACTOR*, the resubmittal shall be counted as the third submittal for the purposes of determining review costs(s).

#### 1.08 SUBMISSION REQUIREMENTS

- A. Make submittals so as to cause no delay in the work or in the work of any other *CONTRACTOR*.

- B. Number of submittals required:
1. Shop drawings: Submit six (6) opaque reproductions, two (2) copies of which will be retained by *ENGINEER*.
  2. Product data: Submit six (6) copies, two (2) copies of which will be retained by *ENGINEER*.
  3. Samples: Submit number stated in each specification section.
- C. Accompany submittals with Submittal Transmittal Form contained herein, in duplicate containing:
1. Date of submission and dates of any previous submissions.
  2. Project title and contract number.
  3. *CONTRACTOR'S* name.
  4. The number of each shop drawing, product data and sample submitted.
  5. Notification of deviations from *Contract Documents*.
  6. Other pertinent data.
- D. Submittals shall include:
1. Date and revision date.
  2. Project title and number.
  3. The names of:
    - a. *ENGINEER*
    - b. *CONTRACTOR*
    - c. Subcontractor
    - d. Supplier
    - e. Manufacturer
    - f. Separate details when pertinent.

4. Identification of product or materials.
5. Field dimensions, clearly identified as such.
6. Specification Section number.
7. Relation to adjacent or critical features of the work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Identification of deviations from *Contract Documents*.
10. Identification of revisions on resubmittals.
11. An 8-inch by 3-inch blank space for *CONTRACTOR* and *ENGINEER* stamps.
12. *CONTRACTOR'S* stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of *Contract Documents*.

#### 1.09 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the *ENGINEER* and resubmit until no further submissions are required.
- B. Shop drawings and product data:
  1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
  2. Clearly indicate any and all changes made to the submittal.
- C. Samples: Submit new samples as required for initial submittals.

#### 1.10 DISTRIBUTION

- A. Distribute reproductions of shop drawings and copies of product data that carry the *ENGINEER* stamp to:
  1. Subcontractors.

2. Supplier.
  3. Contractor's file.
- B. Distribute samples that carry the *ENGINEER* stamp as directed by *ENGINEER*.

\*\*\*\*END OF SECTION\*\*\*\*

# SUBMITTAL TRANSMITTAL FORM

\_\_\_\_\_  
**CONTRACTOR NAME**

\_\_\_\_\_  
Contract #

\_\_\_\_\_  
Project Title

\_\_\_\_\_  
Date of this Submission

\_\_\_\_\_  
Date of Prior Submission

\_\_\_\_\_  
Submittal Number

Specification Section #: \_\_\_\_\_ Paragraph #: \_\_\_\_\_ Drawing #: \_\_\_\_\_ Detail/Section #: \_\_\_\_\_

**TYPE OF SUBMITTAL:**

Shop Drawings    Product Data    Sample    Test Report    Color Charts    O&M Manuals

Engineering Drawings    Engineering Calculations    Other

**IS THIS A:**

Complete Submission    Partial Submission    Resubmission    Substitution

(Substitutions must be identified and accompanied by a Request for Substitution in accordance with Section 01 25 13)

**LIST EACH ITEM SUBMITTED**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List and describe any deviations from the Contract Documents (attach additional sheets as required)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONTRACTOR CERTIFICATION**

By this submittal, the Contractor named above hereby represents that he has determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and has checked and coordinated each item with other applicable shop drawings and all contract requirements, except for the specific deviations noted.

\_\_\_\_\_  
Signature of Contractor's Authorized Representative

\_\_\_\_\_  
Date

PISCATAWAY TOWNSHIP  
Contract No. 2022-1

A-1010-0016-000/S2816  
February 2022

Shop Drawings, Product Data  
and Samples  
**01 33 23-10**



SECTION 01 45 29  
(01410)  
TESTING LABORATORY SERVICES

1.01 GENERAL

- A. *CONTRACTOR* shall employ and pay for the services of an Independent Testing Laboratory to perform specified testing. Include such costs in overall contract price.
1. Employment of the laboratory shall in no way relieve *CONTRACTOR'S* obligations to perform the work of the contract.
  2. Employment of the laboratory shall in no way relieve *CONTRACTOR'S* obligations to perform the work of the contract.
- B. Related requirements specified elsewhere:
1. Inspections and testing required by law, ordinances, rules, regulations, orders or approval of public authorities: General Conditions.
  2. Certification of products. The respective sections of these *Specifications*.
  3. Laboratory testing, sampling required, and standards for testing: See each Specification Section listed below:
    - a. *Section 31 23 00: Excavating, Filling and Grading*
    - b. *Section 32 12 16.13: Hot Mix Asphalt Paving*
    - c. *Section 32 16 14: Roadway Concrete*
    - d. *Section 32 92 19: Seeding*

1.02 QUALIFICATION OF LABORATORY

- A. Meet “Recommended Requirements for Independent Laboratory Qualification”, published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E-329, “Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.”

- C. Authorized to operate in the state in which the project is located, and acceptable to *OWNER*.
- D. Testing equipment: Calibrated at reasonable intervals by devices of accuracy traceable to either:
  - 1. National Bureau of Standards.
  - 2. Accepted values of natural physical constants.
- E. If requested by *ENGINEER*, submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during the most recent tour of inspection.

1.03 LABORATORY DUTIES

- A. Cooperate with *ENGINEER* and *CONTRACTOR*. Provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials.
  - 1. Comply with specified standards for testing.
  - 2. Ascertain compliance of materials with requirements of *Contract Documents*.
- C. Promptly notify *ENGINEER* and *CONTRACTOR* of observed irregularities or deficiencies of work or products.
- D. Promptly submit six (6) copies of written report of each test and/or inspection to *ENGINEER*. Each report shall include:
  - 1. Date issued.
  - 2. Project title and number.
  - 3. Testing laboratory name, address and telephone number.
  - 4. Name and signature of laboratory inspector.
  - 5. Date and time of sampling or inspection.
  - 6. Record of temperature and weather condition.

7. Date of test.
  8. Identification of product and specification section.
  9. Location of sample or test in the project.
  10. Type of inspection or test.
  11. Results of tests and compliance with *Contract Documents*.
  12. Interpretation of test results, when requested by *ENGINEER*.
- E. Perform additional tests as required by *ENGINEER* or the *OWNER*.

1.04 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
1. Release, revoke, alter or enlarge on requirements of *Contract Documents*.
  2. Approve or accept any portion of the work.
  3. Perform any duties of the *CONTRACTOR*.

1.05 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to work.
- B. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the design mix proposed to be used for concrete, and other material mixes, which require control by the testing laboratory.
- D. Furnish incidental labor and facilities:
1. To provide access to work to be tested.
  2. To obtain and handle samples at the project site or at the source of the product to be tested.
  3. To facilitate inspections and tests.

4. For storage and curing of test samples.
- E. Notify laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.
- F. Make arrangements with laboratory and pay for additional samples and tests required for *CONTRACTOR'S* convenience.
- G. Employ and pay for the services of a separate, equally qualified independent testing laboratory to perform additional sampling and testing required when initial tests indicate work does not comply with *Contract Documents*.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 55 26  
(01570)  
MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 - GENERAL

1.01 SUMMARY

A. Description:

1. Provide for maintenance and protection of traffic as specified herein and in Section 159 of the NJDOT Standard Specifications.
2. Preparation of a traffic control plan.
3. Before beginning work on any phase of the project, furnish and install all construction signs, barricades, traffic guides, lights and other devices necessary to protect the public during construction.
4. Do not occupy with equipment, materials or personnel any roadway or sidewalk areas within or adjacent to the project that is open to traffic except as necessary during actual working hours.
5. Repair any damage to newly constructed or existing pavements as directed by *ENGINEER* at *CONTRACTOR'S* expense or repairs will be made by others and the cost of such repairs will be charged against *CONTRACTOR*.
6. Uniformed Law Enforcement Officers with Police Vehicles are required for this project. The Local police department has made a “*good faith effort on the part of the contracting unit, to reasonably estimate the total cost of traffic control personnel, vehicles, equipment, administrative, or any other costs associated with additional traffic control requirements required by the contracting unit, or any other public entity affected by the project, above and beyond the bidder's traffic control personnel, vehicles, equipment, and administrative cost... The contracting unit shall not be responsible for additional traffic control costs beyond the number of working days specified in the construction contract in accordance with section 17 of P.L.1971, c. 198 (C.40A:11-17), when such a delay is caused by the contractor and liquidated damages have been assessed. (P.L.2006, c9) (N.J.S.A.40A:11-23.1)*”

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 32 16: Construction Schedules*
3. *Section 01 32 34: Construction Video Recording*
4. *Section 01 74 00: Cleaning and Restorations*
5. *Section 31 23 00: Excavating, Filling and Grading*
6. *Section 32 12 16: Hot-Mix Asphalt*

1.02 REFERENCE STANDARDS

A. New Jersey Department of Transportation:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications).

B. U.S. Department of Transportation, Federal Highway Administration:

1. Manual on Uniform Traffic Control Devices, current edition. (MUTCD)

1.03 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Traffic control plan:

1. Within ten (10) days after Notice to Proceed and before work on the project begins submit to the *ENGINEER* a Traffic Control Plan for the maintenance and protection of traffic.
2. Show type and location of barricades, lights, cones, barrels, signs and other devices.

C. Copies of all notices as specified herein.

- D. Name, address, phone number and contact person supplying traffic control devices.

1.04 QUALITY ASSURANCE

A. Traffic directors:

1. Traffic directors shall be trained flaggers, in good physical condition including sight and hearing, mentally alert, and shall have a courteous but firm manner, neat appearance and a sense of responsibility for the safety of the public. Traffic directors shall wear an orange or fluorescent orange garment such as a shirt, jacket or vest. This garment shall be reflectorized for nighttime operations with reflective material that shall be orange in color. When controlling traffic, traffic directors shall be equipped with STOP/SLOW paddles and shall follow the procedures stipulated for flaggers in the Manual on Uniform Traffic Control Devices.
2. Where local ordinance requires, traffic directors shall be uniformed police officers. A uniformed police officer shall operate traffic signals when manual control of the signals is required.

B. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

C. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

- D. Basis of acceptance:
  - 1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.05 PROJECT CONDITIONS

- A. Except as necessary during actual working hours, and then only with the specific authorization of the *ENGINEER* or jurisdictional authority, the *CONTRACTOR* shall not occupy with his equipment, materials or personnel any roadway or sidewalk area within or adjacent to the project that is open to traffic.
- B. No equipment or machinery having crawler tracks or other heavy treads that mar or damage pavements shall be permitted to move over or operate from newly constructed or existing pavements unless such equipment or machinery is moved on suitable pontoons or trailers or operated on heavy planking or other suitable platforms.
- C. The *CONTRACTOR* shall provide for prompt removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked or otherwise deposited thereon by his hauling and other operations whenever the accumulation is sufficient to cause the formation of mud, interfere with drainage, damage pavements, create a traffic hazard or dust condition.
- D. The *CONTRACTOR* shall cease work in existing roads when snow is imminent. The *CONTRACTOR* is not responsible for snow removal on any roads in which he is working. He shall however park his equipment in such a manner as not to hinder the removal of snow by other agencies. The *CONTRACTOR* shall make suitable provisions to mark the location of equipment and all other obstructions in the event of deep snow.
- E. The requirements of the agency having jurisdiction over the roadways in which the *CONTRACTOR* is working shall govern.
- F. The *CONTRACTOR* may be required to provide, in addition to flagmen, uniformed traffic officers to fulfill the expressed needs of the municipality or any governmental agency having jurisdiction and shall coordinate with the local police department to determine their requirements.



## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Materials may be new or used but must be suitable for the intended purpose and must not violate requirements of applicable codes and standards.
- B. All materials shall conform to Section 159 of the Standard Specifications, as amended
- C. All traffic control devices shall be NCHRP 350 compliant with the exception of portable, trailer mounted devices including area lighting supports, flashing arrow panels, temporary traffic signals, and variable message signs used in or adjacent to the travel way.

### 2.02 PAVEMENT MARKINGS

- A. Temporary pavement markings shall be reflectorized plastic tape specifically designed for this purpose conforming to Section 159 of the NJDOT Standard Specifications. Color shall be yellow.
- B. Painted temporary pavement markings shall be completely dry before opening roadway to traffic.

### 2.03 TEMPORARY CONSTRUCTION SIGNS

- A. Temporary construction signs shall conform to Part 6, Section B of the MUTCD and be Regulatory or Warning signs as appropriate.

### 2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 GENERAL

- A. Keep the portion of the project being used by public traffic, whether it be through or local traffic, in such condition that pedestrian and vehicular traffic will be adequately and safely accommodated, both temporarily and permanently.
- B. Erect, and/or maintain in substantial manner and good condition striping, barricades, signs, lights, traffic signals, cones, and other warning and danger signals and devices, including flagmen and uniformed traffic directors, appropriate and adequate for the specific needs.
  - 1. When construction signs conflict with existing signs, the existing signs shall be covered.
  - 2. When construction signs are no longer required, they shall be removed. If they are temporarily not required, such as overnight, they shall be either temporarily removed or covered.
  - 3. Signs covered from view of the traveling public shall be completely covered with opaque material securely fastened so that it does not blow in the wind.
  - 4. Burlap or plastic shopping bags shall not be used.
- C. Traffic control devices are to be provided at work sites, closed roads, intersections, open excavations, locations of material storage, standing equipment and other obstructions, at points where usable traffic width of road is reduced, at points where traffic is diverted from its normal course or lanes, and other places of danger to vehicular or pedestrian traffic or to completed work.
- D. Establish, repair, replace and relocate signs, lights, warning and protective services as required.
- E. Do not permit equipment or machinery having crawler tracks or other heavy treads that mar or damage pavements to move over or to operate from newly constructed or existing pavement unless such equipment or machinery is moved on suitable pontoons or trailers.
- F. The *CONTRACTOR* shall provide for prompt removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked or otherwise deposited thereon by his hauling and other operations whenever the accumulation is sufficient to cause the formation of mud, interfere with drainage, damage

pavements, create a traffic hazard or dust condition. All streets under construction shall be swept clean and all debris removed at the end of each week.

- G. During any suspension of the work, the *CONTRACTOR* shall make passable and shall open to traffic such portions of the project and temporary roadways or portions thereof as may be agreed upon between the *CONTRACTOR* and the *ENGINEER* and the jurisdictional authority for the temporary accommodation of necessary traffic during the anticipated period of suspension. When work is resumed, the *CONTRACTOR* shall replace or renew all work or materials lost or damaged because of such temporary use of the project and shall complete the project in every respect as though its prosecution had been continuous and without interference.

### 3.02 EMERGENCY ACCESS

- A. All streets and building access points shall be maintained such that Emergency Vehicles and Personnel shall have complete 24-hour access.

### 3.03 PRIVATE DRIVEWAYS

- A. Notify owners of adjoining properties at least twenty-four (24) hours prior to beginning any work which will interfere with their passage.
- B. Provide means of access for pedestrian and vehicular traffic at all private driveways and occupied buildings affected by the work of this contract.
- C. During construction in the vicinity of driveways, access width at driveway entrance shall be plainly marked by lights and other devices as necessary.

### 3.04 DIVERSION OF TRAFFIC

- A. Any restriction or diversion of traffic at any time shall be subject to approval of the Local Police Department.
- B. Notify Municipal Police and Fire Departments at least twenty-four (24) hours prior to closing of any roadway to traffic.
- C. In accordance with N.J.S.A. 27:3A (P.L. 1983, c.84), the *CONTRACTOR* shall give seventy-two (72) hours notice (by the erection and maintenance of signs near the affected area) whenever a township road must be closed to vehicular traffic for a period of forty-eight (48) hours or more.

- D. In case of emergency, “every effort shall be made to notify the public as soon as possible of the closing.”

### 3.05 APPLICATION

- A. Barricades:
  - 1. Comply with the requirements of Section 159 of the Standard Specifications.

### 3.06 UNIFORMED POLICE TRAFFIC DIRECTORS

- A. Uniformed police traffic directors shall be provided when and where called for by the jurisdictional authority.
- B. The *CONTRACTOR* may, with the permission of the respective police department, secure the services of uniformed police officers to direct traffic in those parts of the project under the jurisdiction of the respective municipality.
- C. These directors shall be responsible and trained in their duties to direct pedestrian and vehicular traffic, shall act in conformance with the police department and while serving as traffic directors on this project, shall not be required to perform any other duties.
- D. Flagmen who are normally hired to do other work on the project during the same work period shall not be considered as uniformed police traffic directors.
- E. When controlling traffic, uniformed police traffic directors shall follow the procedures stipulated for flagmen in the MUTCD.

### 3.07 TRAFFIC DIRECTORS, FLAGGERS

- A. When required, provide Traffic Directors, Flaggers complying with Subsection 159.03.08 of the Standard Specifications.

## PART 4 - QUANTITY AND PAYMENT

### 4.01 MAINTENANCE AND PROTECTION OF TRAFFIC

- A. Payment will be made at the lump sum price bid in the *PROPOSAL* under the item *MAINTENANCE AND PROTECTION OF TRAFFIC* which price shall

include temporary traffic control devices and measures, traffic control plan and all else specified or required to provide for maintenance and protection of traffic.

4.02 UNIFORM LAW ENFORCEMENT OFFICERS WITH POLICE VEHICLES

- A. Quantity: The quantity for which payment will be made will be for the number of man-hours that uniform law enforcement officers with police vehicles, as required by the authority having jurisdiction are actually on site directing traffic, if and where directed.
  
- B. Payment: Payment for Uniformed Police Traffic Directors will be made on a man-hour basis under the allowance for the invoice cost per man-hour for the item *UNIFORM LAW ENFORCEMENT OFFICERS WITH POLICE VEHICLES*, which price shall include the Director and any equipment necessary or required when required by the authority having jurisdiction.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 57 13  
(01563)  
TEMPORARY SOIL EROSION AND SEDIMENT CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Provide temporary control measures for the life of the contract as shown on Plans, to control erosion and sedimentation through use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, and other erosion control devices or methods.
2. Control soil erosion to the maximum extent practicable commensurate with reasonable and economical construction practices.
3. The temporary control provisions contained herein shall be coordinated with the permanent erosion control features (grass, pavement and other restorations) specified elsewhere to the extent practical to assure economical, effective and continuous erosion control throughout the construction and post-construction period.
4. The erosion control measures shall be continued until the construction is complete and final restorations installed.
5. Wherever construction exposes work, which is subject to erosion control measures or other work to be completed within such areas shall follow as soon after exposure as practicable.
6. All erosion and sedimentation control measures shall be constructed and maintained in accordance with the “Standards for Soil Erosion and Sediment Control in New Jersey”, prepared by the New Jersey State Soil Conservation Committee, 1999. [NJAC 7:22-10.11(c) 2]

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 10 00: Clearing Site*

3. *Section 31 23 00: Excavating, Filling and Grading*
4. *Section 32 92 19: Seeding*

#### 1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
  1. Complete materials list of all materials proposed to be furnished and installed under this section.
- C. Manufacturer's recommended installation procedures.

#### 1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
  1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

### PART 2 - PRODUCTS

#### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

#### 2.02 MATERIALS

- A. All materials and methods of construction shall be in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, 1999.

- B. Mulches may be hay, straw, fiber mates, netting, wood cellulose, corn or tobacco stalks, bark, corncoobs, wood chips, or other suitable material and shall be reasonably clean and free of noxious weeds and deleterious materials.
- C. Grass shall be a quick growing species (such as rye grass, Italian rye grass, or cereal grasses) suitable to the area providing a temporary cover.
- D. Fertilizer and soil conditioners shall be a standard commercial grade.
- E. Others materials.
  - 1. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

#### 3.02 PRECONSTRUCTION CONFERENCE

- A. At the preconstruction conference or prior to the start of the applicable construction, the *CONTRACTOR* shall submit for acceptance his schedules for accomplishment of temporary and permanent erosion control work, as are applicable for excavation work, and any other elements of the project which may contribute to ground erosion or siltation. No work shall be started until the erosion control measures are in place.

#### 3.03 INSTALLATION

- A. Limit the surface area of erodible earth material exposed by excavation and grading operations, and provide immediate permanent or temporary pollution



control measures to prevent contamination of adjacent streams, water courses, or bodies of water. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains, and use of temporary mulches, mats, seeding or other control devices or methods as necessary to control erosion. Cut slopes shall be temporarily seeded and mulched as the excavation proceeds to the extent considered desirable and practicable.

- B. All erosion and sedimentation control measures shall be in place prior to any grading operations or construction of proposed facilities and shall be maintained until construction is complete and the construction area is stabilized. After restoration is complete, temporary control measures shall be removed and disposed of properly. [NJAC 7:22-10.11(c) 1].
- C. Disturbed areas that will be exposed in excess of 10 days shall be temporarily seeded and/or mulched until proper weather conditions exist for establishment of a permanent vegetative cover except in areas where final restoration is expected to be completed within seven (7) days after the completion of construction, in which case no temporary protective measures will be required. If final restoration is expected to begin more than seven (7) days and completed more than thirty (30) days after the start of construction, seeding shall be required for temporary protection, except where seasonal conditions are not suitable for growing vegetation. In this case, mulch may be applied until conditions are suitable for establishing vegetative cover or until final restoration is implemented. [NJAC 7:22-10.11(c) 3]
- D. Temporary control measures will be used to correct conditions that develop during construction that are needed prior to installation or permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.
- E. Where erosion is likely to be a problem, excavation and grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately; otherwise temporary erosion control measures may be required between successive construction stages.
- F. Limit the area of excavation and grading operations in progress commensurate with progress in keeping the finish permanent pollution control measures current in accordance with the accepted schedule. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified.

- G. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal or state or location agencies, the more restrictive laws, rules, or regulations shall apply.
- H. The *CONTRACTOR* will be responsible for maintaining all soil erosion and sediment control measures in an acceptable manner. All temporary measures shall be removed by, the *CONTRACTOR* at completion of project after permanent measures are in place and have been accepted.

#### PART 4 - PAYMENT

##### 4.01 TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES

- A. No separate measurement will be made for the work of this section.
- B. Payment will be made for the lump sum price bid in the Proposal for the item *TEMPORARY SOIL EROSION AND SEDIMENT CONTROLS* which price shall include all materials, equipment, labor, and tools necessary and shall include those items, which are considered to be an integral part of this work that may be specified elsewhere in these *Specifications*.
- C. In case of repeated failures on the part of the *CONTRACTOR* to control erosion, pollution, and/or siltation, the *OWNER* reserves the right to employ outside assistance or to use his own forces to provide the necessary corrective measures. Such incurred costs will be charged to the *CONTRACTOR*.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 71 23  
(01050)  
FIELD ENGINEERING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Section includes:

1. Provide such field engineering services as are required for proper completion of the work including, but not necessarily limited to:
  - a. Construction Layout consisting of establishing and maintaining line, grade, and location for work to be performed under this contract.
  - b. Structural design of shores, forms, and similar items provided by the *CONTRACTOR* as part of his means and methods of construction.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 33 23: Shop Drawings, Product Data and Samples*

C. Payment:

1. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
2. Include all costs for *FIELD ENGINEERING* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit name and address of Surveyor to *ENGINEER*.

- C. Submit copies of forms proposed as use for cut sheets.
- D. Submit copies of cut sheets.
- E. On request of *ENGINEER*, submit documentation to verify accuracy of Construction Layout.
- F. Submit certificate signed by registered surveyor certifying that elevations and locations of improvements are in conformance or nonconformance with *Contract Documents*.
- G. Submit Record Plans in accordance with *Section 01 78 39*.
  - 1. Record Plans shall contain certification, signed by registered surveyor, certifying that elevations and locations of improvements are in conformance or nonconformance with *Contract Documents*.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. New Jersey Licensed Land Surveyor shall be employed by *CONTRACTOR* to perform, all Construction Layout.
- C. Professional Engineer shall be employed by, *CONTRACTOR* for design of shores, forms and similar items.

1.04 OWNER'S ENGINEER RESPONSIBILITIES

- A. Provide location and elevation of basic vertical control points for use by *CONTRACTOR'S* Surveyor for performing Construction Layout.
- B. Provide basic horizontal control points for use by *CONTRACTOR'S* Surveyor for performing Construction Layout.
- C. Existing basic horizontal and vertical control points for the project are those designated on drawings.

1.05 CONTRACTOR'S SURVEYOR RESPONSIBILITIES

- A. Construction layout:
1. Establish lines and levels, locate and layout, by instrumentation and similar appropriate means, all work under this contract.
  2. All work shall be done using cut sheets unless otherwise authorized by the *ENGINEER*.
- B. Check all established lines and levels, locations and layout for all work under this contract both before and during construction.
- C. Cut Sheets:
1. Prior to beginning excavation and grading operations, prepare cut sheets showing station, offset, proposed grade, existing grade, and cuts or fills required to attain required grade.
  2. Maximum stationing interval shall be 50' on straight runs and 25' on long curves unless otherwise approved by *ENGINEER*.
  3. Forward copies of all cut sheets prepared during the course of work to the *ENGINEER* at least forty-eight (48) hours prior to beginning excavation or grading operations.
  4. Format and content of cut sheets are subject to *ENGINEER'S* review in accordance with *Section 01 33 23*, and only such cut sheets bearing *ENGINEER'S* stamp shall be used for the construction.
- D. Locate and protect control points provided by *OWNER'S ENGINEER* prior to starting work, and preserve all permanent control points during construction.
1. Make no changes or relocations without prior written notice to *ENGINEER*, and the *ENGINEER'S* approval.
  2. Report to *ENGINEER* when any control point is lost or disturbed.
  3. Points lost, damaged, displaced or removed through fault of the *CONTRACTOR*, which are still required for completion of work, as determined by *OWNER'S ENGINEER*, shall be replaced by *OWNER'S ENGINEER* at a charge to *CONTRACTOR* for actual cost of the work.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 01 74 00  
(01710)  
CLEANING AND RESTORATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Maintain premises and public properties free from accumulations of waste, debris and rubbish caused by work operations.
2. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials; clean all sight exposed surfaces; leave project clean and ready for occupancy.
3. At completion of work, restore or replace, any public or private property disturbed or damaged by *CONTRACTOR'S* work operations to a condition at least equal to that existing prior to beginning work, or as otherwise specified. Materials, equipment and methods, shall be approved by the *ENGINEER*.
4. In landscaped areas, environmental features shall be replaced or restored to pre-disturbance conditions or better. This includes sodding, replacement of trees, shrubs, fences, drives and other landscape features in-kind. [NJAC 7:22-10.11(e) 5]
5. Final restoration shall be undertaken as soon as an area is no longer needed for construction, stockpiling or access. Excavated material unsuitable for backfill as set forth in NJAC 7:14-2.13 and considered to be solid waste pursuant to NJAC 7:26-1.6 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by NJDEP. Excess excavated material which is not considered to be solid waste pursuant to NJAC 7:26-1.6 shall be graded or removed in accordance with NJAC 7:22-10.11(l)3 and *Section 31 23 00, Excavating, Filling and Grading*. When access roads are no longer needed, road fill shall be removed and the access area shall be restored to pre-disturbance conditions. Care shall be taken to avoid damage to adjacent vegetation and to prevent the formation of depressions that would serve as mosquito pools. [NJAC 7:22-10.11(e) 1]

- B. Related work:
1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
  2. General requirements for cleaning and restorations: See the General Conditions.
  3. In addition to standards described in the Section, comply with requirements for cleaning and restorations as described in pertinent other Sections of these *Specifications*.
- C. References:
1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications).

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

### 2.02 MATERIALS

- A. All materials shall comply with the Standard Specifications.
- B. Grass restorations: All grass restoration materials shall conform to specification *Section 32 92 23, Sodding*.
- C. Pavement restorations: All paving materials shall conform to specification *Section 32 12 16, Hot Mix Asphalt*.

- D. Restoration of concrete curbs, sidewalks and driveways: All materials shall conform to specification *Section 32 16 14, Roadway Concrete*.
- E. Restoration of other concrete structures: All materials shall comply with the applicable sections of the Standard Specifications.
- F. All other materials: As approved by the *ENGINEER* or authorities having jurisdiction.

## PART 3 - EXECUTION

### 3.01 REQUIREMENTS OF REGULATORY AGENCIES

- A. Dispose of all non-recyclable solid waste materials in permanently established licensed OSWA (Office of Solid Waste Administration, New Jersey Department of Environmental Protection) landfills, or in temporary landfill sites approved by OSWA.
- B. Dispose of all recyclable materials such as concrete, asphalt, wood waste, yard waste and similar materials at a recycling facility properly licensed to accept such waste materials.
- C. Waste materials include, but are not limited to, concrete, blacktop, trees, stumps, lumber and timbers, unacceptable backfill material including heavy clay soils, organic materials, silts and rock.

### 3.02 SAFETY REQUIREMENTS

- A. Hazards control:
  - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
  - 2. Prevent accumulation of wastes, which create a hazardous condition.
  - 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws:
  - 1. Do not burn or bury rubbish and waste materials on project site.



2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.
3. Do not dispose of wastes into streams or waterways.

### 3.03 CLEANING DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from site periodically and legally dispose at location provided by *CONTRACTOR*.

### 3.04 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.
- C. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- D. Handle waste or surplus materials in a controlled manner with as few handlings as possible; do not drop or throw material from heights.
- E. The *CONTRACTOR* shall employ construction methods and means that will keep flying dust to the minimum. He shall provide for the laying of water on the Project, and on roads, streets and other areas immediately adjacent to the Project limits, wherever traffic, or buildings that are occupied or in use, are affected by such dust caused by his hauling or other operations. The *CONTRACTOR* shall control dust using water. The cost of carrying out the foregoing provisions shall be included in the prices bid for the various items in the Contract.
- F. The *CONTRACTOR* shall provide for prompt removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked or otherwise deposited thereon by his hauling and other operations whenever the accumulation is sufficient to cause the formation of mud, interfere with drainage, damage pavements or create a traffic hazard.

- G. 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. [NJAC 7:22-10.11 (m)]

### 3.05 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Remove all temporary buildings and structures built by *CONTRACTOR*, all temporary works; tools, machinery or other construction equipment furnished by him.
- E. Clean insides of manholes, valve boxes, inlets or other structures constructed, reconstructed or reset during *CONTRACTOR'S* operations to remove debris, excess mortar or foreign materials.
- F. Prior to final acceptance, *CONTRACTOR* shall conduct an inspection of all work areas to verify that the entire work is clean.

### 3.06 RESTORATIONS

- A. General:
  - 1. All existing structures, unpaved areas and paved areas disturbed or damaged during the work under this Contract shall be restored or replaced to a condition at least equal to that existing prior to beginning work, or as otherwise specified.
  - 2. The methods of conducting this work shall, as a minimum, conform to the Standard Specifications.
- B. Grass restorations: All grass restorations shall comply with the specification *Section 32 92 23, Sodding*.

- C. Pavement restorations: All pavement restorations shall conform to specification *Section 32 12 16, Hot Mix Asphalt*.
- D. Restoration of concrete curbs, sidewalks and driveways: All materials shall conform to specification *Section 32 16 14, Roadway Concrete*.
- E. All other restorations: Restore in accordance with applicable Articles of the Standard Specifications, or as approved by the *ENGINEER* or authorities having jurisdiction.

#### PART 4 - PAYMENT

##### 4.01 CLEANING AND RESTORATIONS

- A. All costs for *CLEANING AND RESTORATIONS* shall be included in prices bid for various items scheduled in the *PROPOSAL*.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 02 32 19  
(02010)  
SUBSURFACE INVESTIGATION

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Excavation of test pits to ascertain the location of buried utilities or subsurface conditions.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 32 12 16: Hot-Mix Asphalt*
4. *Section 32 92 19: Seeding*
5. *Section 32 92 23: Sodding*

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PREPARATION

- A. Before laying pipes or constructing any structures, the *CONTRACTOR* shall ascertain the location and grade of utility pipes and other subsurface structures, which may interfere with such construction. Test pits shall be excavated wherever necessary to obtain the required information, subject to the approval of the *ENGINEER*.

- B. Prior to performing any excavation work, contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.

### 3.02 EXECUTION

- A. The approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the work are shown on the plans. The accuracy and completeness of, this information is not guaranteed by the *ENGINEER* and the bidder is advised to ascertain for himself all the facts concerning the location of these utilities.
- B. The *CONTRACTOR* shall adhere to Section 105.07, Cooperation with Utilities, of the Standard Specifications regarding location of and construction around public utilities.
- C. All test pits shall be backfilled with the material excavated. All backfill shall be thoroughly compacted in accordance with *Section 31 23 00, Excavating, Filling and Grading*. In paved areas, the disturbed area shall be restored in accordance with *Section 32 12 16, Hot-Mix Asphalt*.
- D. The *CONTRACTOR* shall permit the *OWNERS* of the utilities or their agents, access to the site of the work at all times, in order to relocate or protect their facilities, and he shall cooperate with them in performing this work.
- E. The *CONTRACTOR* shall cooperate with the utility owners concerned and shall notify them not less than ten (10) days in advance of the time he proposes to perform any work that will endanger or affect their facilities.

### PART 4 - PAYMENT

### PART 4 - PAYMENT

#### 4.01 TEST PITS

- A. The quantity of *TEST PITS* for which payment will be made will be for the number of test pits excavated with the approval of the *ENGINEER*, measured in units. A test pit shall consist of approximately 216 cubic feet.
- B. Payment will be made for the quantity as above determined, measured in units, at the unit price per Test Pit in the *PROPOSAL* under the item *TEST PITS*, which price shall include the cost of excavation, backfilling, temporary restorations, all labor and equipment, and all else necessary therefore and incidental thereto.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 31 10 00  
(02110)  
CLEARING SITE

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Removal and resetting of street and road signs, mail boxes and other structures as shown, or as directed by the *ENGINEER*.
2. Removal and disposal of trees, brush, weeds, roots, matted leaves, small structures, debris, and other objectionable material, vegetation, and growth. This work also includes trimming of trees branches and shrubs.
3. Removal and disposal of culverts, and other structures; pipe, inlets, and manholes; sidewalks, driveways, curbs, and gutters and existing electrical material and equipment together with backfilling the existing holes remaining after removal of such items.
4. Removal and disposal of structures and all other obstructions which are designated for removal by the *ENGINEER* during construction and for which payment is not otherwise provided in the Contract.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 57 13: Temporary Soil Erosion and Sediment Control Measures*
3. *Section 31 23 00: Excavating, Filling and Grading*
4. *Section 32 16 14: Roadway Concrete*
5. *Section 33 40 00: Storm Sewer System*

C. References:

1. New Jersey State Highway Department Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications).
  - a. Section 201: Clearing Site
  - b. Section 917: Landscaping Materials
2. New Jersey Administrative Code:
  - a. N.J.A.C. 5:23-8.1(c) (pertaining to educational facilities and public buildings as defined in N.J.A.C. 5:23-8.2).
  - b. N.J.A.C. 7:26; Solid Waste Rule.
3. Code of Federal Regulations:
  - a. 29 CFR 1926; Safety and Health Regulations for Construction.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit receipts for disposal of all materials.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Tree paint: "Treekote" as manufactured by Walter E. Clark & Sons, Inc., Corinth, TX, 940-321-2596 or equivalent.

2.02 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Protection: Roads, structures, pavement areas, grass or landscaping to, remain shall be protected by *CONTRACTOR* in a manner approved by the *ENGINEER*.
- B. Prior to performing any excavation work, contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.

### 3.02 CONSTRUCTION

- A. Clearing Site shall conform to Section 201 of the Standard Specifications, and as designated on Plans or as directed by the *ENGINEER*, except that Paragraph of said Section entitled, "Demolition" shall not apply to this Contract.
- B. Clear the project site within the limits of construction shown on the Plans, or as directed by the *ENGINEER*. [NJAC 7:22-10.11(d)]
- C. Repair all injuries to bark, trunk, limbs and roots of remaining plants by properly dressing, cutting, bracing, and painting using approved tree surgery methods, tools and equipment.
- D. Trees, shrubs, and other landscape features within the limits of construction that do not interfere with the Project shall not be removed but shall be protected during the progress of the Work.
- E. Clear designated areas of brush, weeds, roots, debris, and other unsuitable material.
- F. Trim tree branches overhanging proposed structures and pavements.
  - 1. Trim tree branches overhanging roadways, driveways, or other paved areas to height of sixteen feet.
- G. Remove designated trees including grinding stump and surface roots to 12" below grade and backfill void with Soil Aggregate I-13 as specified in *Section 31 23 00, Excavating, Filling and Grading* and 6" of topsoil and seed as specified in *Section 32 92 23, Sodding*.
- H. Remove and reset existing structures.



- I. Remove and reset mailboxes to locations approved by their *OWNERS* and the *ENGINEER* so as to be accessible to Mailman without his having to leave the mail vehicle.
- J. Remove and reset street signs as directed by *OWNER*.
- K. Remove existing structures required for construction of roadways, driveways or other paved areas. Notify property owners forty-eight (48) hours prior to removal of privately owned structures.
  - 1. Coordinate removal of privately owned structures with individual property owners.
  - 2. Remove privately owned structures desired to be retained by property owner in a manner, which will minimize damage. If desired, property owner shall be given opportunity to remove said structures himself, provided this work is completed within time limit which will not conflict with *CONTRACTOR'S* operations.
  - 3. Upon removal, property owner shall be given opportunity to remove privately owned structures from the project site.
  - 4. Coordinate this work with *ENGINEER*.
  - 5. This work shall be subject to approval of *ENGINEER*.
- L. Grade all grubbed and cleared areas as specified in *Section 31 23 00, Excavating, Filling and Grading*.

### 3.03 CLEANING

- A. Dispose of accumulated waste materials as specified in *Section 01 74 00, Cleaning and Restorations*.

## PART 4 - PAYMENT

### 4.01 SITE CLEARING

- A. Payment will be made on a lump sum basis under the item *CLEARING SITE* in the *PROPOSAL*.

#### 4.02 TREE REMOVAL

- A. Quantity: The quantity for which payment will be made will be for the number of trees removed as shown on the Plans or as directed by the *ENGINEER*.
- B. Payment: Payment will be made for the quantity as above determined, measured in units at the unit price bid in the Proposal for the item *TREE REMOVAL, (0" - 18" Diameter)*, which prices shall include removal and disposal of tree, grinding stump and surface roots to 12" below grade, backfilling of void with Soil Aggregate I-13, topsoiling, fertilizing and sodding, and all other work required for a complete restoration.

#### 4.03 RELOCATION OF SIGNS

- A. The quantity for which payment will be made will be for the number of signs actually relocated as designated, measured in units.
- B. Payment will be made for the quantity of signs actually relocated at the unit price bid in the Proposal for the various items of *RELOCATE SIGN*, which price shall include removal of the sign, safe storage and resetting the signs in the new location, complete as specified and shown on the drawings.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 31 23 00  
(02220)  
EXCAVATING, FILLING AND GRADING

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Stripping, storage and redistribution of topsoil.
2. Excavating for footings and foundations and dewatering.
3. Filling and backfilling to attain indicated grades.
4. Rough and finish grading of the site.
5. Furnishing and installing broken stone subbase material for slabs, foundations and structures.
6. Furnishing and installing Dense Graded Aggregate subbase material for pavements and other structures.
7. Providing borrow material.
8. Compaction, subgrade preparation.
9. Disposal of excess material.
10. Testing Services.
11. Any additional work as may be specified in the Statement of Work.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 57 13: Temporary Soil Erosion and Sediment Control Measures*
3. *Section 31 10 00: Clearing Site*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
  - a. Section 204: Borrow Excavation
  - b. Sections 301: Subbase
  - c. Subsection 301.05: Compaction
  - d. Subsection 901.03: Aggregate, Coarse
  - e. Subsection 901.03.01: Broken Stone
  - f. Subsection 901.03.02: Washed Gravel
  - g. Subsection 901.10: Dense Graded Aggregate
  - h. Subsection 901.11: Soil Aggregates
2. American Society for Testing and Materials (ASTM):
  - a. D-698: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
  - b. D-1556: Density and Unit Weight of Soil in Place by the Sand-Cone Method.
  - c. D-1557: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
  - d. D-4254: Test Method for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
  - e. D-2166: Unconfined Compressive Strength of Cohesive Soil.
  - f. D-2922: Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth).

1.02 DEFINITIONS

- A. Excavation: Removal and disposal of all material encountered when establishing required grade elevations, including pavements and other obstructions visible on

the ground surface, and underground structures and utilities indicated to be demolished and removed.

- B. Unauthorized excavation: Removal of materials beyond specified subgrade elevations without approval of *ENGINEER*.

### 1.03 SUBMITTALS

- A. Comply with the provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. All materials shall be accompanied by a delivery ticket indicating the name and address of the supplier and the origin of the material.
- C. Every load of incoming fill material shall meet current NJDEP Residential Direct Contact Soil Remediation Standards and be certified by the Generator/Agent as clean fill consistent with NJDEP regulations at NJAC 7:27D-4.2 and NJAC 7:26E-2. Delivery slips showing and certifying that the material meets this criteria shall be provided for each load of material entering the site.
- D. Test reports:
  - 1. One optimum moisture, maximum density curve for each type of soil encountered, including a complete test report as specified in ASTM D-1557.
  - 2. Field Density test reports.
  - 3. Report of actual Unconfined Compressive Strength and/or results of bearing tests for each stratum encountered at footing subgrades. The report shall be prepared in accordance with ASTM D-2166.
  - 4. Test reports on all borrow material and select backfill material in accordance with the following standards:
    - a. Particle Size Analysis of Soils: ASTM D-422.
    - b. Liquid Limit, Plastic Limit and Plasticity Index of Soils: ASTM D-4318.
  - 5. Submit test reports as specified in the Specification Section entitled, "Testing Laboratory Services".

- E. Submit mix designs for Controlled Low Strength Material. Each mix design shall be submitted on Portland cement concrete mix design forms utilized by the NJDOT giving the source of materials and test data.

1.04 QUALITY ASSURANCE

- A. Requirements of regulatory agencies:
  - 1. All excavations shall be in compliance with Federal Occupational Safety and Health Act and rules and regulations of State of New Jersey Department of Labor and Workforce Development, "Construction Safety Act," N.J.S.A. 34:5-166, et seq.
  - 2. Comply with the requirements of the High Voltage Proximity Act; N.J.S.A. 34:6-47.1.
  - 3. Excavation work shall be in compliance with applicable requirements of other governing authorities having jurisdiction.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Transport materials from outside project limits in accordance with General Conditions, paragraph entitled, "Operations and Storage Areas."

1.06 PROJECT CONDITIONS

- A. Site information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that *OWNER* will not be responsible for interpretations or conclusions drawn there from by *CONTRACTOR*. Data are made available for the convenience of *CONTRACTOR*.
- B. Prior to performing any excavation work, contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.
- C. Existing utilities:
  - 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Utility Owner immediately for directions. Cooperate with *OWNER* and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of Utility Owner.

2. Do not interrupt existing utilities serving facilities occupied and used by *OWNER* or others, except when permitted in writing by *ENGINEER* and then only after acceptable temporary utility services have been provided.
- C. Weather conditions: Do not place, spread, roll or fill material during freezing, raining, or otherwise unfavorable weather conditions. Do not resume work until conditions are favorable as determined by the *ENGINEER*.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. General: All fill and backfill materials shall be subject to the approval of the *ENGINEER*.
- B. Notifications:
1. For approval of borrow materials, notify the *ENGINEER* at least five (5) working days in advance of intention to import material, designate the proposed borrow area, and perform sampling and testing at *CONTRACTOR'S* expense, if directed by the *ENGINEER*, to prove the quality and suitability of the material.
  2. For approval of on-site materials, notify the *ENGINEER* at least five (5) working days in advance of placing material and perform sampling and testing at the Contractor's expense to prove the quality and suitability of the material.
- C. All materials provided shall be free of contaminants or hazardous materials and substances that may be harmful to human, animal, plant or aquatic life and shall meet any applicable NJDEP regulations regarding the material composition.

### 2.02 MATERIALS

- A. On-Site Fill and Backfill:
1. On-site material may be used for fill and backfill subject to the approval of the *ENGINEER*, and only in accordance with the following:
    - a. Topsoil: Topsoil excavated from on-site may be used to conduct topsoil construction providing that the excavated topsoil complies with the requirements described in *Section 32 92 23, Sodding*. The

*OWNER* makes no representation that the topsoil on-site is suitable for reuse. The Contractor shall remove excess excavated topsoil from the site unless otherwise shown on the drawings.

- b. On-site materials used for structural filling and backfilling shall be free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and shall conform to the requirements for Soil Aggregate I-13 of Section 901 of the Standard Specifications.

B. Borrow material:

- 1. All borrow material shall meet current NJDEP Residential Direct Contact Soil Remediation Standards and be certified by the Generator/Agent as clean fill consistent with NJDEP regulations at NJAC 7:27D-4.2 and NJAC 7:26E-2.
- 2. General fill and Backfill (Non-Structural):
  - a. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and conforming to the requirements for Soil Aggregate I-13, of Subsection 901.11 of the Standard Specifications, except as modified by the supplemental requirements below:
    - (1) Containing no rocks or lumps over four inches in greatest dimension.
    - (2) Composed of soil aggregate, or soil aggregate and rock. The portion passing the four-inch sieve shall contain not more than twelve percent (12%) by weight of material passing the number 200 sieve. When composed of soil aggregate and rock, the proportion of soil aggregate shall not be less than that required to fill all the rock voids.
  - b. General fill material may be used for:
    - (1) Backfill of demolition work that is not beneath or within ten feet (10') horizontally of any tank, structure, footing or foundation or behind retaining walls.
    - (2) General filling and backfilling that is not beneath or within ten feet (10') horizontally of any tank, structure, footing or foundation or behind retaining walls. General fill may be used under exterior paved areas and in trenches, however,



that are not within ten feet (10') horizontally of foundations.

3. Trench Backfill, Structural Fill and Backfill Material:
  - a. Shall conform to the requirements specified for on-site fill material except as modified by the supplemental requirements below:
  - b. Backfill material shall be Soil Aggregate designation I-13 unless otherwise designated on the Plans. Soil Aggregate backfill materials, when designated, shall conform to Subsection 901.11 of the Standard Specifications.
4. Broken stone material:
  - a. Broken stone subbase material under slabs, foundations and structures shall conform to Subsection 901.03.01 of the Standard Specifications and meeting the gradations specified in Table 901.03-1. Size shall be #57 unless otherwise shown on the Plans.
  - b. Trench stabilization material for bedding shall conform to the above requirements. Size shall be #57 unless otherwise shown on the Plans.
5. Dense Graded Aggregate:
  - a. Dense Graded Aggregate for bituminous and concrete pavements and other structures shall conform to the requirements in Subsection 901.10 of the Standard Specifications and shall be virgin materials.
  - b. Dense Graded Aggregate for Stone Paving shall conform to the above requirements except that recycled concrete aggregate, blast furnace slag or Recycled Asphalt (RAP) shall not be used.

## 2.03 OTHER MATERIALS

- A. All other materials, not specifically described for a complete and proper installation, shall be as selected by the *CONTRACTOR* and approved by the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine the areas and conditions under which excavating, filling and grading are to be performed and notify the *ENGINEER*, in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

### 3.02 PREPARATION

- A. Prior to commencement of work, establish location and extent of all utilities in the work areas. Maintain, protect as required existing utilities that pass through the work area.
- B. Prior to excavation in pavement areas, cut existing pavement vertically with sharp tool on a straight line to the limits of excavation shown on Plans or as directed by the *ENGINEER*. Maintain cut straight and neat, or recut and dress as directed by the *ENGINEER*.
- C. Protection of persons and property:
  - 1. Barricade open excavations occurring as part of this work and post with warning lights as required to protect persons on the site. Operate warning lights as recommended by authorities having jurisdiction.
  - 2. Protect trees, shrubs, lawns and other features remaining as part of final landscaping.
  - 3. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
  - 4. Refer to paragraphs of General Conditions regarding protection of vegetation and structures.
  - 5. In the event of damage, immediately make all repairs and replacements to the approval of the *ENGINEER* at no cost to the *OWNER*.

### 3.03 CONSTRUCTION

- A. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.
- B. Use of explosives: The use of explosives is not permitted.
- C. Dust control:
  - 1. Use all means necessary to control dust on and near the work if such dust is caused by the *CONTRACTOR'S* operations during performance of the work or if resulting from the conditions in which the *CONTRACTOR* leaves the site.
  - 2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and concurrent performance of other work on the site.
- D. Excavation:
  - 1. Unauthorized excavation: Unauthorized excavation, including remedial work directed by the *ENGINEER*, shall be at the *CONTRACTOR'S* expense. Under footings, foundation bases, retaining walls, and other structures, fill unauthorized excavation by removing all loosened material and extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation. Lean concrete fill may be used to bring subgrade elevations to proper positions when acceptable to the *ENGINEER*. Under pipes, fill unauthorized excavation by removing all loosened material and providing broken stone material as required to attain a firm and unyielding subgrade and/or foundation and to attain required grade elevations to the approval of the *ENGINEER*.
  - 2. Additional excavation:
    - a. When excavation has reached required subgrade elevations, notify the *ENGINEER* who will make an inspection of conditions.
    - b. If unsuitable bearing materials are encountered at the required subgrade elevations, carry excavations deeper and replace the excavated material as directed by the *ENGINEER*.

- c. Removal of unsuitable material and its replacement as directed will be paid on the basis of contract conditions relative to changes in work if payment has not been provided for in the *PROPOSAL*.
3. Stability of excavations:
- a. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space.
  - b. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
4. Shoring and bracing:
- a. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.
  - b. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.
  - c. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
  - d. Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.
  - e. In the event of damage to such improvements, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
  - f. Arrange bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.
  - g. Exercise care in the drawing and removal of sheeting, shoring, bracing and timbering to prevent collapse and caving of the excavation faces being supported.

5. Dewatering:
  - a. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area.
  - b. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
  - c. Convey water removed from excavations and rainwater to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.
  
6. Material storage:
  - a. Stockpile satisfactory excavated materials where directed until required for use as backfill or fill. Place, grade and shape stockpiles for proper drainage.
  - b. Only environmentally suitable stockpile sites may be used for the purposes of staging or storing materials, equipment and suitable trench backfill material. Environmentally suitable sites must be level, and devoid of mature stands of natural vegetation. Drainage facilities and features, wetlands, vernal habitats and stream corridors are not environmentally suitable sites. [NJAC 7:22-10.11(l)1]
  - c. The boundary of the stockpile area shall be clearly marked by hay bales, silt fencing or another appropriate method. Where fill is to be stored in excess of 10 days, a suitable means of protecting excavated material from wind and water erosion shall be employed. Erosion control methods may include one or more of the following: mulching, sprinkling, silt fencing, hay baling and stone covering. [NJAC 7:22-10.11(l)2]
  - d. Locate and retain soil materials away from edge of excavations.
  - e. Dispose of excess soil material and waste materials as herein specified. Excavated material unsuitable for backfilling shall be

kept separate from other materials excavated, and disposed of. Materials suitable for backfilling shall not be disposed of until completion of filling or backfilling operations.

7. Excavation for structures:
  - a. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection.
  - b. In excavating for footings and foundations, take care not to disturb bottom excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.
8. Excavation for pavements: Cut surface under pavements to comply with cross-sections, elevations and grades as shown.
9. Excavation for trenches:
  - a. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
    - (1) Maximum trench width to a point one foot (1') above the outside top of pipe shall be the pipe inner diameter plus eighteen inches (18") for pipe less than or equal to eighteen inches (18") in inner diameter. For pipe greater than eighteen inches (18") in inner diameter, the maximum initial trench width shall be two (2) times the pipe inner diameter.
    - (2) Maximum trench width at ground surface where limited, shall be as shown on Plans.
  - b. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations. Beyond the building perimeter, keep bottoms of trenches for which elevations are not given sufficiently below finish grade to avoid freeze-ups.
  - c. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one (1) day.

- d. Grub roots and stumps within six inches (6") of outside surface of pipe bottom and sides to minimum depth of six inches (6") below grade. Backfill trenches with concrete where trench excavations pass within eighteen inches (18") of column or wall footings and which are carried below the bottom of such footings, or which pass under wall footings. Place concrete to the level of the bottom of adjacent footing.
  - e. Pipe bedding shall be as shown on Plans.
10. Cold weather protection: Protect excavation bottoms against freezing when atmospheric temperature is less than thirty-five degrees (35°).
- E. Backfill, fill and compaction:
- 1. General:
    - a. Place acceptable material in layers to required subgrade elevations.
    - b. Fills: Use material obtained from on-site excavation, except use borrow material when specified and/or shown on the Plans or as directed by the *ENGINEER*.
    - c. Backfilling: Use material obtained from on-site excavation, except use select backfill when specified and/or shown where indicated on Plans or as directed by the *ENGINEER*. Backfill above top of pipe, with material free from stones, rock fragments, dirt clogs or frozen material greater than two inches (2") in largest dimension.
    - d. Do not provide borrow material until all acceptable excavated materials on the site have been utilized in the work.
    - e. Place the various types of materials in the areas as designated on the Plans, or as directed by the *ENGINEER*.
  - 2. Backfill excavation as promptly as work permits, but not until completion of the following:
    - a. Acceptance by *ENGINEER* of construction below finish grade including, where applicable, damp proofing, waterproofing and perimeter insulation.
    - b. Inspection, testing, approval and recording locations of underground utilities.

- c. Removal of concrete formwork.
  - d. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
  - e. Removal of trash and debris.
  - f. Permanent or temporary horizontal bracing is in place on horizontally supported walls.
3. Backfilling prior to approvals:
- a. Should any of the work be so enclosed or covered up before it has been approved, uncover all such work at no additional cost to the *OWNER*.
  - b. After the work has been completely tested, inspected and approved, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the *OWNER*.
4. Ground surface preparation prior to filling:
- a. Remove vegetation, debris, unsatisfactory soil materials, obstructions and deleterious materials from existing ground surface to a depth of not less than four inches (4") and not more than six inches (6") prior to placement of fills. Plow, strip or break-up sloped surfaces steeper than one (1) vertical to four (4) horizontal to a depth of not less than six inches (6") so that fill material will bond with existing surface.
  - b. When existing ground surface has a density less than that specified under "Compaction," for the particular area classification, break up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
5. Placement and compaction:
- a. Place backfill materials in layers not more than six inches (6") in loose depth.



- b. Control soil compaction during construction providing minimum percentage of density specified for each area classification listed below.
- c. Building and pavement areas are defined, for the purpose of this Paragraph, as extending a minimum of five feet (5') beyond the building and/or pavement.
- d. Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D-1557; and not less than the following percentages of relative density determined in accordance with ASTM D-4254, for soils which will not exhibit a well-defined moisture-density relationship.
  - (1) Structures: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
  - (2) Building Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
  - (3) Lawn or Unpaved Areas: Compact top six inches (6") of subgrade and each layer of backfill or fill material at 90 percent (90%) maximum dry density.
  - (4) Walkways: Compact top six inches (6") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
  - (5) Pavement Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
  - (6) Subbase Materials: Compact each layer of subbase material to 95 percent (95%) of maximum dry density.
  - (7) Trench Stabilization Materials: Compact each layer of material to 95 percent (95%) of maximum dry density.
- e. Moisture control:
  - (1) Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent

free water appearing on surface during or subsequent to compaction operations.

- (2) Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- (3) Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

- f. Puddling or jetting will not be permitted.
- g. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice, or other unsuitable materials.
- h. Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.
- i. Compact backfill to height of two feet (2') above top of pipe using approved flat-faced mechanical tampers. Compact backfill more than two feet (2') above top of pipe using approved vibratory mechanical tampers.

F. Grading:

1. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

2. Grading outside building lines:

Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes, and as follows:

- a. Lawn or unpaved areas: Finish area to receive topsoil to within not more than 0.10 feet above or below the required subgrade elevations.
- b. Walks: Shape surface of areas under walks to line, grade and cross-section, with finish surface not more than 0.10 feet above or below the required subgrade elevation.

- c. Pavement: Shape surface of areas under pavement line, grade and cross-section, with finish surface not more than ½ inch above or below the required subgrade elevation.
  - 3. Grading surface of materials under building slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of ½ inch when tested with a ten-foot (10') straightedge.
  - 4. Compaction: After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.
  - 5. Treatment after grading:
    - a. After grading is completed and the *ENGINEER* has finished his inspection, permit no further excavating, filling or grading except with the approval of and inspection of the *ENGINEER*.
    - b. Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.
  - 6. Subgrade preparation: All subgrade preparation shall be performed in accordance with the applicable Sections of the Standard Specifications except as may be modified by this Specification Section.
- G. Dense Graded Aggregate Subbase and Base Course:
- 1. General:
    - a. Subbase Course consists of placing dense graded aggregate subbase material in layers of specified thickness over subgrade surface to support pavements and structures, as shown on Plans.
    - b. Provide subbase course in accordance with Section 301 of the Standard Specifications, except as otherwise modified by this Specification Section.
  - 2. Grade control: During construction, maintain lines and grades including crown and cross-slope of subbase course.
  - 3. Placing:
    - a. Prior to placing subbase course under bituminous concrete or other non-Portland cement concrete surfaces, apply an herbicide to the

subgrade material. The type of herbicide and the method of application shall be approved by the *ENGINEER* prior to beginning this work.

- b. Place subbase course material on prepared subgrade in layers of uniform thickness, conforming to indicate cross-section and thickness. Maintain optimum moisture content for compacting subbase material during placement operations.
- c. When a compacted subbase course is shown to be eight inches (8") or less, place material in a single layer. When shown to be more than eight inches (8") thick, place material in equal layers, except no single layer shall be more than eight inches (8") in thickness when compacted.
- d. Spread, shape and compact all subbase course material deposited on the subgrade during the same day.

I. Broken (crushed) stone subbase course:

- 1. General: Broken Stone Subbase Course consists of placing material in layers of specified thickness, over subgrade surface to support structures as shown on the Plans.
- 2. Placing: Place Broken Stone Subbase Course as specified for Quarry Blend Stone Subbase Course.

3.04 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove waste materials, including excess excavated material, trash and debris, and dispose of it off the Owner's property.
- B. Excavated material unsuitable for backfill as set forth in N.J.A.C. 7:14-2.13, considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 and meeting the requirements for I.D.27 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by NJDEP. [NJAC 7:22-10.11(e)1]

3.05 FIELD QUALITY CONTROL

- A. Quality control testing during construction: Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.

1. Perform field density tests in accordance with ASTM D-1556 (Sand Cone Method), or ASTM D-2922 (Nuclear Method).
2. Footing subgrades: For each strata of soil on which footings will be placed, conduct at least one (1) test to verify required design bearing capacities. Test shall be performed by a qualified soils Engineer licensed in the State of New Jersey. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata, when acceptable to *ENGINEER*.
3. Number of field density tests shall be provided in accordance with the following minimum test schedule:
  - a. Minimum Compaction Testing Frequency

Location	Frequency
Buildings and structures	1 test group <sup>a</sup> for every 5,000 square feet
Road	1 test group <sup>a</sup> for every 300 linear feet of road
Parking Lots	1 test group <sup>a</sup> for every 10,000 square feet
Unpaved areas	1 test group <sup>a</sup> for every 20,000 square feet
Pipe Trench	1 test group for every 300 linear feet

<sup>a</sup> one test group consists of compaction tests on each layer of fill and backfill material.

- b. One test whenever there is a definite suspicion of a change in the quality of moisture control or effectiveness of compaction.
  4. Take all tests at locations as directed by the *ENGINEER*.
- B. If in the opinion of *ENGINEER* based on testing service reports, subgrade or fills that have been placed are below specified density, provide additional compaction and testing as directed by the *ENGINEER* at no expense to the *OWNER*. This shall include compaction and testing at areas initially tested and at other locations as directed.
- C. Additional requirements for testing are described in the Specification Section entitled, "Testing Laboratory Services."

### 3.06 PROTECTION

- A. Protection of graded areas:

1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
  2. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.
- B. Reconditioning compacted areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

#### PART 4 - PAYMENT

##### 4.01 EXCAVATION, FILLING AND GRADING

- A. No separate measurement or payment shall be made for this item, except as designated for the various items of *EXCAVATION, FILLING AND GRADING* in the *PROPOSAL*. All other work including earthwork for piping and structures shall be paid for under the prices submitted for the various related items of work listed in the *PROPOSAL*. The costs for the work of this section shall include line-cutting existing pavements whenever encountered; stripping and storage of topsoil; excavation of all materials encountered of whatever nature; dewatering; shoring and bracing; stripping of surfaces; placing and compacting excess materials in fill areas; disposal of unsuitable or surplus materials; trench excavation; backfilling; site grading including shaping and dressing of slopes and other surfaces; compaction; subgrade and subbase preparation; testing; and all other incidental or necessary work.

##### 4.02 EMBANKMENT

- A. Measurement: The quantity for which payment will be made will be for the volume of material provided, measured in place, as specified and shown on the Plans, or as directed by the *ENGINEER*.
- B. Payment: Will be made on a cubic yard basis under the item *EMBANKMENT* “\_\_” in the *PROPOSAL*, which price shall include cost of excavating and hauling; placing and compacting the material and forming and shaping the fill areas and slopes; and all other incidental or necessary work.

##### 4.03 DENSE GRADED AGGREGATE BASE COURSE

- A. Measurement: The quantity for which payment will be made will be for the area of material provided, measured in place, as specified and shown on the Plans, or as directed by the *ENGINEER*.

- B. Payment: Will be made for the quantity as above determined, measured in square yards, at the unit price bid for the item *DENSE GRADED AGGREGATE BASE COURSE, 6" THK* and *DENSE GRADED AGGREGATE, 4" THK (DRIVEWAYS)*, in the *PROPOSAL*, which price shall include subgrade preparation, Dense Graded Aggregate, disposal of excavated material, grading, compacting and all other incidental or necessary work.

4.04 DENSE GRADED AGGREGATE FOR REPLACEMENT PAVEMENT

- A. There will be no separate measurement and no separate payment for Dense Graded Aggregate furnished and installed for replacement pavement along new concrete curb construction. Include the cost of Dense Graded Aggregate for replacement pavement associated with curb construction in the price bid in the Proposal per linear foot of *REPLACEMENT CONCRETE VERTICAL CURB*.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 31 23 10  
(02223)  
EXCAVATION (UNCLASSIFIED)

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Excavation and disposal of all materials of whatever nature encountered.
2. Grading, compacting and subgrade preparation.
3. Disposal of unsuitable and surplus materials.
4. Excavation and disposal of regulated material.
5. All other work as specified.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
  - a. Section 202: Excavation
  - b. Section 203: Embankment
  - c. Subsection 301.03.01A: Preparing Subgrade

PART 2 - PRODUCTS

No materials are involved.



## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Field measurements:
  - 1. Layout work limits. Coordinate this work with the *ENGINEER*.
  - 2. Set grade stakes.
- B. Prior to commencement of work, establish location and extent of all utilities in the work areas. Maintain, protect as required existing utilities, which pass through the work area. Contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.
- C. Prior to excavating, cut existing pavement vertically with sharp tool on a straight line at a distance of six (6") inches beyond limits of excavation shown on plans. Maintain cut straight and neat, or recut and dress as directed by the *ENGINEER*.

### 3.02 PROTECTION

- A. Protect trees, shrubs, lawns and other features remaining as part of final landscaping.
- B. Protect curbs, inlets, manholes, utility poles, and all other existing structures to remain.
- C. Refer to paragraphs of General Conditions and Supplementary Conditions regarding protection of vegetation and structures.
- D. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- E. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- F. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

### 3.03 EXCAVATION

- A. Methods of construction for excavation and grading shall conform to Sections 202, 203 and 301.03.01 of the Standard Specifications.

- B. Unstable or unsuitable material encountered at the prescribed bottom limits of roadway excavation shall be removed within limits as directed by the *ENGINEER*. Backfill the excavated areas with suitable material obtained from project excavation as directed by the *ENGINEER*.

### 3.04 GRADING

- A. Grade project site to required levels, profiles, contours, and elevations, ready for finish grading and paving.
- B. Grades shall be uniform levels or slopes between points where elevations are given or between such points and existing finished grades. Abrupt change in slopes shall be rounded.
- C. Use all means necessary to prevent dust being a nuisance to the public.
- D. Soil shall not be worked, or fill placed, during freezing weather, when frozen, or unstable due to excessive moisture.

### 3.05 COMPACTION

- A. Compact any embankment for this project as specified in Subsection 203.03.02C, Directed Method or Subsection 203.03.02D, Density Control Method, of the Standard Specifications. Embankment material shall be free of stumps, brush, weeds, roots, and other material that may decay.
- B. Compact subgrade in all paved areas as specified in Subsection 301.03.01A of the Standard Specifications.
- C. Dispose of surplus or unsuitable excavated materials.

### 3.06 EXCAVATING REGULATED MATERIAL

- A. Regulated material excavation consists of excavation and management of material of whatever nature encountered that is classified as regulated or hazardous in the NJDEP Solid Waste Regulations, N.J.A.C. 7:26-1 *et seq.* or N.J.A.C. 7:26-8.
- B. Handle regulated material according to applicable Federal, State, and local laws, rules, and regulations; and as specified in 202.03.04. Dispose of regulated material as specified in 202.03.08. Sampling and analysis to be included.

- C. The person approving the disposal of regulated material shall be a licensed Site Remediation Professional (LSRP) provided by the Contractor.

### 3.07 DISPOSAL OF REGULATED MATERIAL

- A. Load, transport, and dispose of regulated material that the LSRP determines to be excess, unusable, or unsuitable for the Project according to Federal, State, and local laws, rules, and regulations and as specified in 202.03.07.B. Pay fees associated with removal and disposal of regulated materials.
- B. Submit the results of material sampling and analysis, waste facility applications and acceptance documentation, and fee payment requirements to the LSRP at least 15 days before planned removal of regulated material. Submit to the LSRP a bill of lading for each truckload of regulated material removed from the Project Limits. Ensure that the bill of lading and waste manifest include the following information:
  - 1. Transport subcontractor name, address, permit number, and telephone number.
  - 2. Type and quantity of material removed.
  - 3. Weight of vehicle with weigh slip.
  - 4. Recycling or disposal facility name, address, permit number, and telephone number.
  - 5. Date removed from the Project Limits.
  - 6. Signature of transport vehicle operator.
- C. The LSRP will sign the bills of lading for the Contractor as the generator of the Project Limits. Submit one (1) copy of the bill of lading to the Township by the end of each working day that the transport vehicle leaves the site.
- D. The licensed hauler shall transport the regulated material to the disposal/recycling facility with no unauthorized stops in between, except as required by regulatory authority. The hauler shall use appropriate vehicles and operating practices to prevent spillage or leakage from occurring during transport. Remove excess soil adhering to the wheels or under carriage of the vehicles before leaving the Project Limits. If soil or water escapes to the public roads, immediately clean the road to restore it to the original condition and immediately notify the LSRP. Do not transport regulated material over public roads if they contain free liquid or are sufficiently wet to be potentially flowable during transport.

- E. Submit one (1) copy of the documentation of the disposal facility's acceptance of the regulated material, including the weight ticket slips, to the Township and the county of origin with fifteen (15) days of acceptance at the disposal facility.
- F. Immediately submit written notification to the LSRP if problems arise, regarding the facility chosen to accept the regulated material for off-site management, that would require the return of waste, or if the chosen facility has violated any environmental regulation that may result in regulatory enforcement action. Propose an alternate disposal facility, and obtain the LSRP and Township approval of off-site management at such facility.

#### PART 4 - PAYMENT

##### 4.01 ROADWAY EXCAVATION, UNCLASSIFIED

- A. Quantity: The quantity for which payment will be made will be for the volume or area actually excavated and removed within the limits shown on the Plans or as directed by the *ENGINEER*.
- B. Payment: Will be made for the quantity as above determined, measured in cubic yards at the unit price bid in the *PROPOSAL* for the various related items of *ROADWAY EXCAVATION, UNCLASSIFIED*, which price shall include the cost of line-cutting of the existing pavement; excavation of the materials encountered; stripping and storage of topsoil; transportation of the excavated materials, disposal of the materials excavated; the excavation of unstable or unsuitable material encountered at the prescribed bottom limits of roadway excavation and the installation of suitable material obtained from project excavation; the shaping and dressing of slopes, shoulders, and other surfaces; all grading, compaction and subgrade preparation, the disposal of all excess or unsuitable materials; and all other incidental or necessary work.

##### 4.02 EXCAVATION AND DISPOSAL OF REGULATED MATERIAL

- A. Quantity: The quantity for which payment will be made will be for the volume actually excavated, removed, and disposed of as directed by the *ENGINEER*.
- B. Payment: Will be made for the quantity as above determined, measured in cubic yards, at the price per ton bid in the *PROPOSAL* for the item *EXCAVATION AND DISPOSAL OF REGULATED MATERIAL*, which price shall include testing; excavation and disposal of the materials encountered; transportation of the excavated materials, disposal of the materials excavated; the disposal of all excess or unsuitable materials; and all other incidental or necessary work.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 01 16  
(02511)  
MILLING OF HOT MIX ASPHALT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Milling of asphalt pavement to the depth, cross slope and profile shown on the Plans or as directed by the *ENGINEER*.
  - a. Millings shall be the property of the Contractor and be disposed of off-site.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 32 12 16: Hot Mix Asphalt*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications)
  - a. Subsection 401.03.01:Preparing Existing Pavement.

1.02 QUALITY ASSURANCE

A. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.

2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. No materials are involved.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to the work of this section, carefully inspect the work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

- A. Existing Pavement Surfaces:
  1. Remove loose and foreign material from existing pavement surfaces immediately before application of paving.
  2. Use self-propelled mechanical sweepers. Supplement with hand brooming as required.
  3. Pay particular attention to cleaning of gutterlines and outer edges of pavement areas.
  4. Remove all weeds, grass or other vegetative matter growing in pavement areas, particularly along curbs.

B. Recycling of Material:

1. If the milled material is to be recycled, the pavement shall be cleared of all debris and power broomed to remove fine particles prior to milling.
2. On shoulders, before brooming, any built-up berm shall be removed as necessary to expose the full width of pavement and prevent soil and grass from contaminating the milled material.

3.03 EQUIPMENT

- A. Equipment shall conform to Subsection 401.02.02 of the Standard Specifications as amended.
- B. Milling machines shall be a self-propelled, power operated planting, grinding or cutting machine capable of variable operating speeds and removing, without heat and in one pass, pavement up to a maximum thickness of 4 inches.
- C. The equipment shall be capable of establishing profile grades by referencing from either the existing pavement or from an independent grade control and shall be capable of controlling cross slope elevations.
- D. The equipment shall remove milled material from the surface and shall prevent dust and other particulate matter from the milling and loading operations escaping into the air.
- E. If teeth in the milling drum become dislodged or broken, they shall be replaced immediately with teeth that are of the same length as the remaining teeth in that row.
- F. Grade control for the machine shall be the ski or stringline type. Milling by automatic grade controls will be required except where intersections or other conditions interfere with its operation.
- G. If the milled material is to be salvaged for recycling, the milling equipment, where practical, shall be operated in such a manner as to produce milled material with 95 percent of the material passing a 2½ inch sieve.

3.04 CONSTRUCTION

- A. Construction shall conform to Subsection 401.03.01A of the Standard Specifications, as amended.

B. Test Strip:

1. A test strip of approximately 500 square yards shall be constructed within the proposed limits of milling prior to commencement of the milling operations.
2. The test strip shall be used to determine the machine and drum speeds of operation which will produce the proper pavement texture and to determine the proper cross slope and cutting depth required to remove all ruts and corrugations.
3. The milling operation may begin when the above criteria have been established and approved. The machine shall be operated at the speeds, cross slope and cutting depth determined during the test strip milling.
4. Test strips shall be constructed for each milling machine used. If the area to be milled is less than 2500 square yards, or if milling is an alternative method for asphalt pavement removal, a test strip may not be required.

C. Milling:

1. Milling shall start at the low side of the pavement cross section and progress toward the high side.
2. Provisions shall be made for removal of any water that may be trapped due to the milling operation, such as by lateral saw cuts into the shoulder area.
3. In the event that all milled areas that are opened to traffic have not been milled to a flush surface by the end of the work day, the longitudinal edges of the milled area, exceeding 1½ inches in height, shall be sloped and a smooth transition shall be provided at the transverse edges.
4. Pavement to be milled in areas not accessible to the milling machine shall be removed by other equipment.
5. The *CONTRACTOR* at his own expense shall remove any pavement below the specified level of milling that becomes dislodged or delaminated prior to resurfacing and replace with hot mix asphalt prior to resurfacing.
6. The depth of the completed milling when measured from the original pavement to the top of the high spots of the textured surface shall be equal to the depth of cut shown on the Plans.



3.05 OPENING TO TRAFFIC

- A. Pavement areas that will be opened to traffic before resurfacing shall be free from gouges, continuous grooves, ridges and delaminating areas.
- B. Pavements shall have a uniformly textured appearance consisting of discontinuous longitudinal striations which shall not deviate more than 1 inch in 200 feet from a line parallel to the center of the roadway and not exceed 0.375 inch depth.
- C. Milled pavement surfaces shall provide a skid resistance not less than that of the original pavement prior to milling and shall permit passage of highway traffic at the posted speed limit without vehicle operators experiencing impaired directional control.

3.06 CLEANING

- A. The surface of the milled area shall be swept clean prior to being opened to traffic and prior to the following construction or resurfacing stage.
- B. Sweepings shall be disposed of in accordance with *Section 01 74 00, Cleaning and Restorations*.

PART 4 - PAYMENT

4.01 MILLING

- A. Quantity: The quantity of milling for which payment will be made will be the area actually milled in accordance with the Plans or as directed by the *ENGINEER*. No deductions shall be made for areas occupied by manholes or similar structures.
- B. Payment: Payment for milling will be made for the quantity as above determined, at the price per square yard bid for the item *MILLING*, which price shall include the cost of providing test strips; removal and disposal of asphalt pavement and base courses; all labor; equipment and all else necessary or required, complete as specified and shown on the Plans.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 12 16  
(02513B)  
HOT-MIX ASPHALT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Construction of Hot Mix Asphalt Base course.
2. Construction of Hot Mix Asphalt Surface course. (No recycled material shall be permitted in HMA Surface and Leveling Course Job Mix.)
3. Construction of Hot Mix Asphalt Leveling course. (No recycled material shall be permitted in HMA Surface and Leveling Course Job Mix.)
4. Sawcutting.
5. Core samples for testing.
6. All paving work as further described in the Statement of Work.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 31 23 10: Excavation, Unclassified*
4. *Section 32 17 23: Traffic Stripes and Markings*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
  - a. Section 401: Hot Mix Asphalt (HMA) Courses.

- b. Subsection 302.03.01: Preparation of Subgrade or Base Course.

## 1.02 DEFINITIONS

- A. Subgrade: The surface of the roadbed upon which the first layer of the pavement structure and/or shoulder section is constructed (See figure 101-1 of the Standard Specifications).
- B. Pavement Structure: The combination of surface course and base course, and when specified, a subbase course, placed on a subgrade to support the traffic load and distribute it to the roadbed (See figure 101-1 of the Standard Specifications). These various courses are defined as follows:
  - 1. Surface Course: One or more layers of specified material of designed thickness on a base course or a subbase.
  - 2. Base Course: One or more layers of specified material of designed thickness placed on the subgrade or subbase.
  - 3. Subbase: One or more layers of specified material of designed thickness placed on the subgrade.
  - 4. Leveling Course: An asphalt course of variable thickness used to eliminate irregularities in the contour of an existing surface prior to placement of an overlay.
- C. Pavement Base Repairs: Removal and replacement of existing *Pavement Structure* and designated portion of *Subgrade* in areas to be overlaid.

## 1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
  - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
  - 2. *Specifications* and other data required that demonstrate compliance with the specified requirements.

- C. Job mix formula requirements:
  - 1. Provide job mix formulas for each required Hot Mix Asphalt mixture as specified in Section 902.02.03 of the Standard Specifications.
  - 2. Submit for the *ENGINEER's* approval prior to beginning paving operations.
- D. Mix design and control requirements: The design and control requirements for all paving mixtures shall conform to Section 902, of the Standard Specifications.
- F. Submit results of producers sampling and tests on forms acceptable to the *ENGINEER*. Forms shall be signed by producer's quality control technician and forwarded to the *ENGINEER* as directed.

#### 1.04 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
  - 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
  - 2. Qualifications of Hot Mix Asphalt producer: Use only materials which are furnished by a bulk Hot Mix Asphalt producer regularly engaged in the production of Hot Mix Asphalt.
- B. Qualifications of workmen:
  - 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  - 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
  - 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Producer's sampling and testing for conformance to job mix formula and mix design requirements:

1. Methods and rates of sampling Hot Mix Asphalt mixtures shall conform to Subsection 902.02.04 of the Standard Specifications with the following exceptions:
    - a. Sampling shall be performed by the producer's quality control technician unless otherwise directed by the *ENGINEER*.
    - b. For small scale projects where it is not possible to attain the minimum lot size specified, a total of five (5) samples shall be taken at random for each type of mix specified.
  2. Testing of Hot Mix Asphalt mixtures to determine the quantity of bitumen, gradation of the aggregate, and conformance to mix design requirements shall be performed by the producer's quality control technician as specified in Subsection 902.02.04 of the Standard Specifications.
- D. Preparation of mixtures: The preparation of all Hot Mix Asphalt mixtures shall conform to Section 902 of the Standard Specifications.
- E. Paving Plan:
1. At least twenty (20) days before placing the HMA surface course, submit a detailed plan of operation to the *ENGINEER* for approval that includes the following:
    - a. Asphalt paving construction technologist (APCT), certified by the Society of Asphalt Technologist of New Jersey, Inc. The Department will accept the equivalent certification by the Mid-Atlantic Regional Technician Certification Program.
    - b. Size and description of crew.
    - c. Number, type, and mode of equipment.
    - d. Lighting plan for nighttime operations as specified in Subsection 108.06 of the Standard Specifications.
    - e. Method of locating and maintaining joint locations if sawing and sealing.
    - f. Manufacturer's recommendations for heating and applying joint sealant.

- g. Paving procedures for maintaining continuous operation as specified in Subsection 401.03.03.D of the Standard Specifications.
  - h. Manufacturer's recommended laydown temperature for modified binders.
  - i. Paving sequence. Ensure that the HMA surface course is constructed for the full width of the traveled way, shoulder, and auxiliary lanes as a single paving operation.
  - j. Schedule, hours of operation, and production rates for the Project.
  - k. Plant locations.
  - l. Method of maintaining HMA temperature during transportation.
  - m. Method of constructing and compacting joints as specified in Subsection 401.03.03.E of the Standard Specifications.
  - n. Quality control plan outlining the use of the thin lift nuclear density gauge, quality control cores, and the control of the compaction process.
2. Do not begin paving until the *ENGINEER* approves this plan. Submit an adjusted pavement plan before making adjustments to the paving operation.

1.05 WEATHER LIMITATIONS

- A. HMA mixtures shall be placed when the combinations of lift thickness and base surface temperatures are within the limits shown in Table 401.03.03-1 of the Standard Specifications (shown below), when it is not raining, and when the base is in a satisfactory condition. For other than surface courses, in case of sudden rain, the placing of mixture then in transit from the plant may be permitted, if laid at proper temperature, and if the base is free of pools of water. Such permission shall in no way waive any of the requirements of the specification.
- B. Base temperature will be measured on the surface on which the lift will be placed. Lift thickness will mean the compacted lift thickness.

**Table 401.03.03-1 Minimum Base Temperature**

<b>Lift Thickness, inches</b>	<b>Minimum Base Temperature, °F</b>
≤1	50
1-2	41
≥2	32

- C. If the mix contains modified binder, the minimum base temperature shall be 50°F, regardless of lift thickness.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. The quality of materials and performance of work specified in this section shall be in accordance with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications).

### 2.02 MATERIALS

- A. Hot Mix Asphalt Surface Course:
1. Materials: Section 401.
  2. Mixture: Mix Designation 9.5M64, Subsection 902.02.01.
- B. Hot Mix Asphalt Base Course and Leveling Course:
1. Material: Section 401.
  2. Mixture: Mix Designation 19M64, Subsection 902.02.01.
- C. Tack coat: Tack Coat 64-22 conforming to Subsection 902.01.01.
- D. Prime coat: Grade MC-30 or Grade MC-70 cutback asphalt: Subsection 902.01.02.
- E. Asphalt Binder: Performance Grade 64-22; Subsection 902.01.01.

- F. Joint sealer: Hot-poured rubber asphalt or cold-poured type sealer complying with Subsection 914.02 of the Standard Specifications.
- G. Joint Adhesive: Polymerized Joint Adhesive conforming to Subsection 914.03.

## 2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

- A. HMA Pavement repairs:
  - 1. *ENGINEER* will mark limits of repair areas in the field. Coordinate this work with the *ENGINEER* prior to beginning repairs.
  - 2. Prior to excavating, saw cut existing pavement parallel and perpendicular to the roadway baseline and 3-inches away, at the closest point, from the damaged area to be repaired. For larger areas, the Contractor may use a milling machine for removal of HMA pavement.
  - 3. Remove existing pavement structure, subgrade material, earth, rock, stone and all other materials encountered to the depth indicated.
  - 4. Promptly dispose of excavated materials.



5. Prepare subgrade for repair as specified in Subsection 302.03.01 of the Standard Specifications.
6. Apply polymerized joint adhesive or tack coat to the vertical surfaces of the openings.
7. Backfill with HMA as specified for the roadway surface. Ensure that the temperature of the HMA when placed is at least 250 °F, and compact as specified in Subsection 401.03.03.F. Compact areas not accessible to rollers with a vibratory drum. Compact until the top of the patch is flush with the adjacent pavement surface.

B. Proof roll:

1. Proof roll subgrade surfaces using heavy, rubber-tired rollers, or loaded dump truck.
  - a. Check for unstable areas.
  - b. Check for areas requiring additional compaction.
2. Notify *ENGINEER* of unsatisfactory conditions.
3. Do not begin paving work until such conditions have been corrected and are ready to receive paving.

C. Surface preparation:

1. Earth and subbase surfaces:
  - a. Remove loose and foreign material from compacted subgrade surface immediately before application of paving.
  - b. Use power broom or blowers and hand brooming as required.
  - c. Do not displace subgrade material.
2. Existing pavement surfaces:
  - a. Remove loose and foreign material from existing pavement surfaces immediately before application of paving.
  - b. Use self-propelled mechanical sweepers. Supplement with hand brooming as required.

- c. Pay particular attention to cleaning of gutterlines and outer edges of pavement areas.
    - d. Remove all weeds, grass or other vegetative matter growing in pavement areas, particularly along curbs.
  - 3. Minor patching:
    - a. Existing pavement surfaces: Fill in depressions, and patch pavement in overlay areas that are not marked out for pavement repairs. Patch as directed by *ENGINEER* in the field.
- D. Sawcutting:
  - 1. Before removal of asphalt materials, a full depth sawcut shall be performed where shown, to provide for the complete removal of said material without damage to the remaining adjacent material.
  - 2. The saw shall be capable of providing a neat cut, the full depth in a single pass.

### 3.03 EXECUTION

- A. The method of construction to include Hot Mix Asphalt plant and equipment, pavers, vehicles for transporting asphalt, rollers, and all construction methods shall conform to Section 401 of the Standard Specifications, except as modified by the Supplemental Requirements herein:
- B. Prime coat (subbase surfaces):
  - 1. Apply Prime Coat in accordance with Subsection 401.03.02 of the Standard Specifications.
  - 2. Uniformly apply at rate of 0.15 to 0.35 gallon per square yard over compacted and cleaned subbase surface.
  - 3. Apply enough material to penetrate and seal, but not flood the surface.
  - 4. Allow to cure and dry as long as required to attain penetration and evaporation of volatile components, and in no case less than twelve (12) hours unless otherwise acceptable to the *ENGINEER*.

C. Tack Coat:

1. When HMA is placed on existing Portland cement concrete, existing HMA, or newly constructed HMA on which traffic has been maintained, the paved surface shall be given an application of tack coat material, uniformly sprayed and conforming to Subsection 401.03.02. The application is not acceptable if the material is streaked or ribboned.
2. Contact surfaces of pavement cold joints, curbing, gutters, manholes, and other similar structures shall be painted with a thin uniform coating of tack coat material just before the placing of the HMA mixture against them.
3. Apply to edges of paving where pavement repairs are to be made.
4. Apply tack coat material at a spraying temperature of 325°F as specified in Subsection 401.03.02 of the Standard Specifications.
5. Apply at rate of 0.06 to 0.14 gallons per square yard immediately prior to placing pavement as specified in Subsection 401.03.02 of the Standard Specifications.
6. All uncoated or lightly coated areas shall be corrected. All areas showing an excess of bituminous material shall be corrected by removing the excess material.
7. No more tack coat should be applied than can be covered in the same day.
8. Traffic control shall be provided to prevent vehicles from riding on surfaces upon which tack coat has been applied.
9. Take precautions to insure tack coat is not applied to exposed surfaces or curbs or other exposed surfaces. Tack coat so applied, shall be removed by *CONTRACTOR* at no additional cost to *OWNER*.

D. All longitudinal cold joints in HMA paving shall be sealed with polymerized joint adhesive that is a hot-applied and conforming to Subsection 914.03 and Table 914.03-1.

E. Perform work as additionally described in the Statement of Work.

F. General surface requirements:

1. Test finished surface of each concrete course for smoothness using a ten (10) foot straightedge.

2. The straightedges shall have projections on the bottom at each end, either built-in or firmly attached, so that it is supported six (6") inches above the pavement surface at the ends. It shall be free from warp and deflection, subject to approval by the *ENGINEER*, and furnished by the *CONTRACTOR* without additional compensation.
3. Check surfaced areas at intervals and in directions specified by *ENGINEER*.
4. Check surfaces for pavement smoothness immediately after initial compaction, and correct variations by removing or adding material as may be necessary. Then rolling shall be continued as specified.
5. Immediately after final rolling and while the pavement is still hot, the smoothness of the course shall be checked again and all projections or depressions, exceeding the specified tolerances shall be corrected by removing defective work and replacing it with new surface course as specified. Portions of the surface otherwise unsatisfactory shall be replaced to the satisfaction of the *ENGINEER*.
6. Finished surfaces shall be free of all roller marks, ridges and voids.

### 3.04 FIELD QUALITY CONTROL

- A. Taking of pavement cores and testing for the determination of conformance to control air voids will be performed by the *ENGINEER* at his discretion as specified herein.
- B. Air Voids Acceptance Plan:
  1. Pavement lots are defined as approximately 15,000 square yards of pavement in Surface area. If pavement lot area is less than 5000 square yards, the *ENGINEER* may waive the air voids requirements.
  2. The *ENGINEER* will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program. The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.
  3. The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 1.

4. The Laboratory will determine air voids from 5 (Five) 6 inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The Laboratory will determine air voids of cores from the values for the maximum specific gravity of the mix and the bulk specific gravity of the core. The Laboratory will determine the maximum specific gravity of the mix according to NJDOT B-3 and AASHTO T 209, except that minimum sample size may be waived in order to use a 6-inch diameter core sample. The Laboratory will determine the bulk specific gravity of the compacted mixture by testing each core according to AASHTO T 166.
5. The Laboratory will calculate the in-place air voids of each completed lot outside the acceptable range of 2 percent air voids to 8 percent air voids.
6. The *ENGINEER* will assess a reduction in lot due to nonconformance to air voids according to the Table 401.03.03-3 of the NJDOT Standard Specifications, 2007.

Table 401.03.03-3 Reduction for Nonconformance to Air Voids Requirements	
Lot Average Air Void Value (Five Samples)	Reduction Per Lot (Percent of Lot)
0.0 to 1.9	10
2.0 to 8.0	0
8.1 to 9.0	5
9.1 to 10.0	15
10.1 to 12.0	30
Over 12.0	Remove & Replace

7. If the average air voids for the lot is greater than 12.0 percent, remove and replace the lot. The replacement work is subject to the same requirements as the initial work.

C. Thickness Requirements:

1. Taking of pavement cores and testing for the determination of conformance to pavement thickness will be performed by the *ENGINEER* at his discretion in accordance with Subsection 406.14 of the Standard Specifications and as modified herein.
2. The minimum acceptable thickness on resurfacing projects for all pavement courses will be the specified thickness. Results of this check on pavement course minimum thickness will be used to determine payment reduction as follows:

$$1 - \frac{\text{Average lot thickness}}{\text{Specified lot thickness}} \times 100 = \text{Percent Reduction}$$

3. The minimum acceptable thickness on new construction or complete reconstruction projects shall be in accordance with the NJDOT Special Provisions for State Aid Projects, 2011 Edition.

D. Surface Course Rideability Requirements:

1. Base courses will not be acceptable if exceeding ¼ inch in ten feet (10') when tested in any direction.
2. Intermediate courses and surface courses will not be acceptable if exceeding ⅛-inch in ten feet (10') for roadway paving when tested in any direction.
3. The paving operation is acceptable if the surface course is in substantial conformity with the ⅛-inch in 10 feet surface tolerance. Should the surface be found not in conformity, the *ENGINEER* may direct that paving operations be discontinued until mutually acceptable paving methods or equipment is utilized.
4. Additional compensation or an extension of contract time will not be permitted because of revised methods or equipment necessary to produce a HMA surface in substantial conformity with a ⅛-inch in 10 feet surface tolerance.

- E. *CONTRACTOR* shall employ and pay for the services of an Independent Testing Laboratory acceptable to the *ENGINEER* to perform additional field quality control sampling and testing when initial tests performed by the *ENGINEER* indicate work does not comply with the *Contract Documents*. All sampling and testing shall be performed as specified herein.

- F. Areas of pavement removed for field quality control testing shall be replaced by the *CONTRACTOR* as follows:

1. Clean debris from core area. Cut all exposed pavement edges vertical.
2. Apply tack coat to exposed surfaces before installing replacement pavement.
3. Fill core area with surface course mixture for the full depth of the core.

4. Compact and grade mixture; seal repaired area with tack coat; and apply thin layer of sand over tack coat in a manner satisfactory to the *ENGINEER*.

### 3.05 CLEANING

- A. Clean exposed surface of all grease, dirt and other foreign materials.
- B. Touch up all marred or abraded surfaces in accordance with manufacturer's directions.

## PART 4 - PAYMENT

### 4.01 HMA BASE COURSE and HMA SURFACE COURSE

- A. Quantity: The quantity for which payment will be made will be for the area of mixture accepted and complete in place as specified and shown on Plans, or as directed by the *ENGINEER*, provided that pavement not meeting the requirements for conformance to job mix formula, control air voids and thickness as specified will be paid for at an adjusted contract unit price as specified.
- B. Payment: Will be made for quantity as above determined, measured in square yards, at the contract unit price for the various items of *HMA BASE COURSE* and *HMA SURFACE COURSE* in the *PROPOSAL*, which prices shall include costs of the pavement complete, tack coat, joint adhesive, and all else necessary or required, complete as specified and shown on the Plans.

### 4.02 HOT MIX ASPHALT LEVELING COURSE

- A. Quantity: Will be made for the number of tons of mixture accepted and complete in place as specified and shown on the Plans or as directed by the *ENGINEER*, provided that pavement not meeting the requirements for conformance to job mix formula and air voids, as specified in the Standard Specifications will be paid for at an adjusted contract unit price as specified in said Sections.
- B. Payment: Will be made for quantity as above determined, measured in tons, at the contract unit price for the item *HOT MIX ASPHALT LEVELING COURSE* in the *PROPOSAL*, which price shall include cost of the pavement complete, tack coat, and all else necessary or required, complete as specified and shown on the Plans.

- 4.03 TACK COAT No separate payment will be made for providing *TACK COAT* as specified. Include all costs in the respective unit prices submitted for the various items listed in the *PROPOSAL*.
- 4.04 PRIME COAT No separate payment will be made for providing *PRIME COAT* as specified. Include all costs in the respective unit prices submitted for the various items listed in the *PROPOSAL*.
- 4.05 PATCHING of CORE AREAS taken for field quality control purposes: No separate payment will be made for patching of core areas as specified. Include all costs in the respective unit prices submitted for the various items listed in the *PROPOSAL*.
- 4.06 POLYMERIZED JOINT ADHESIVE: No separate payment will be made for providing *POLYMERIZED JOINT ADHESIVE* as specified. Include all costs in the respective unit prices submitted for the various items listed in the *PROPOSAL*.

\*\*\*\*END OF SECTION\*\*\*\*



SECTION 32 14 13  
(02532)  
CONCRETE UNIT PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Resetting of existing concrete unit paving.
2. Accessories.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 32 16 14: Roadway Concrete*

C. References:

1. American Society for Testing and Materials:
  - a. ASTM C-33, Standard Specification for Concrete Aggregates
  - b. ASTM C-136, Method for Sieve Analysis for Fine and Course Aggregate

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.

2. Specifications and other data required that demonstrate compliance with the specified requirements.
  3. Submit sieve analyses for grading of bedding and joint sand.
- C. Samples:
1. Submit two (2) full size samples of concrete unit pavers proposed for use.
  2. Submit one (1) 2 foot sample of aluminum edge restraint proposed for use.
- D. Submit results of compaction testing.

### 1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of workmen:
1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
  3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance:
1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.

- B. Deliver aggregates and store in segregated areas to prevent mixing with foreign materials.
- C. Bedding and joint sand shall be covered with a secure waterproof covering to prevent exposure to rainfall or removal by wind.

#### 1.05 ENVIRONMENTAL CONDITIONS

- A. Do not install sand or pavers during heavy rain or snowfall.
- B. Do not install sand and pavers over frozen base materials.
- C. Do not install frozen or saturated sand.

### PART 2 - PRODUCTS

#### 2.01 GENERAL

- A. Proprietary Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

#### 2.02 CONCRETE UNIT PAVERS

- A. Reuse existing pavers.

#### 2.03 SUBBASE AND BEDDING MATERIALS

- A. Dense Graded Aggregate for subbase shall conform to *Section 31 23 00, Excavating, Filling and Grading*.
- B. Bedding and Joint Sand:
  - 1. Clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.

2. Do not use mason sand or sand conforming to ASTM C 144 for the bedding sand.
3. Bedding Sand: Conform to the grading requirements of ASTM C 33 with modifications as shown in Table 1.

Table 1  
Grading Requirements for Bedding Sand  
ASTM C 33

<u>Sieve Size</u>	<u>Percent Passing</u>
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	95 to 100
No. 8 (2.36 mm)	85 to 100
No. 16 (1.18 mm)	50 to 85
No. 30 (0.600 mm)	25 to 60
No. 50 (0.300 mm)	10 to 30
No. 100 (0.150 mm)	2 to 10
No. 200 (0.075 mm)	0 to 1

4. Joint Sand: Conform to the grading requirements of ASTM C 144 as shown with modifications in Table 2 below:

Table 2  
Grading Requirements for Joint Sand

<u>Sieve Size</u>	<u>ASTM C 144 Natural Sand Percent Passing</u>	<u>ASTM C 144 Manufactured Sand Percent Passing</u>
No. 4 (4.75 mm)	100	100
No. 8 (2.36 mm)	95 to 100	95 to 100
No. 16 (1.18 mm)	70 to 100	70 to 100
No. 30 (0.600 mm)	40 to 75	40 to 100
No. 50 (0.300 mm)	10 to 35	20 to 40
No. 100 (0.150 mm)	2 to 15	10 to 25
No. 200 (0.075 mm)	0 to 1	0 to 10

#### 2.04 LANDSCAPE FABRIC

- A. Non-woven, needle-punched, UV stabilized polypropylene fabric with the following physical properties:

<u>Properties</u>	<u>Test Method</u>	<u>Typical Value</u>
Basic Weight	ASTM D-3776	3.3oz/sy

Grab Tensile	ASTM D-4632	70/80 lbf - MD/CD
Grab Elongation	ASTM D-4632	45/43% - MD/CD
Trap. Tear Strength	ASTM D-4533	30/34 lbf - MD/CD
Water Flow Rate	ASTM D-4491	150 gal/min/sf
AOS	ASTM D-4751	70
Puncture	ASTM D-4833	55 lb
Burst Strength	ASTM D-3786	178 psi

B. Material Standard: “Nilex Landscape Fabric” or equivalent.

C. Acceptable manufacturers:

1. NILEX CORPORATION  
15171 East Fremont Drive  
Centennial, Colorado 80112  
Tele: (303) 766-2000  
Fax: (303) 766-1110
2. Or equivalent.

## 2.05 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to all work of this section, verify that this installation may properly commence.
- B. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
  1. Verify that earthwork is completed to correct line and grade.
  2. Verify that forms conform to line, grade and dimensions shown on Plans.
  3. Verify that subgrade is smooth, compacted and free of excessive moisture.

- C. In the event of discrepancy, immediately notify the *ENGINEER*.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

### 3.02 INSTALLATION

- A. Excavate and prepare Subgrade in accordance with *Section 31 23 00*. Compaction testing shall be performed in accordance with *Section 31 23 00*, except that the frequency of testing on roadways shall be doubled. Frequency of testing for pedestrian walks shall be one test group for every 300 linear feet of walk.
- B. Install landscape fabric (weed barrier) in accordance with manufacturer's directions. Do not disturb subgrade.
- C. Construct Dense Graded Aggregate Subbase in accordance with *Section 31 23 00, Excavating, Filling and Grading*.
- D. Edge restraint:
  - 1. Reinstall edge restraint to match existing.
- E. Spread bedding sand evenly over the base course and screed to a nominal 1 in. thickness, not exceeding 1½" thickness.
  - 1. Do not disturb screeded sand.
  - 2. Screeded area shall not substantially exceed that which is covered by pavers in one day.
  - 3. Do not use bedding sand to fill depressions in the base surface.
- F. Lay pavers in pattern(s) to match existing unless otherwise shown on drawings. Place units hand tight without using hammers. Make horizontal adjustments to placement of laid pavers with rubber hammers and pry bars as required.
- G. Provide joints between pavers between 1/16 in. and 3/16 in. wide. Joint (bond) lines shall not deviate more than ±1/2 in. (±15 mm) over 50 ft. (15 m) from string lines.
- H. Fill gaps at the edges of the paved area with cut pavers or edge units.
- I. Keep skid steer and forklift equipment off newly laid pavers.

- J. Use a low-amplitude plate compactor capable of at least minimum of 4,000 lbf (18 kN) at a frequency of 75 to 100 Hz to vibrate the pavers into the sand. Remove any cracked or damaged pavers and replace with new units.
- K. Simultaneously spread, sweep and compact dry joint sand into joints continuously until full. This will require at least 4 to 6 passes with a plate compactor. Do not compact within 6 ft of unrestrained edges of paving units.
- L. All work within 6 ft. of the laying face shall be left fully compacted with sand-filled joints at the end of each day or compacted upon acceptance of the work. Cover the laying face or any incomplete areas with plastic sheets overnight if not closed with cut and compacted pavers with joint sand to prevent exposed bedding sand from becoming saturated from rainfall.
- M. Allow excess joint sand to remain on surface to protect pavers from damage. Remove excess sand when directed by *ENGINEER*.
- N. Surface shall be broom clean after removal of excess joint sand.

### 3.03 FIELD QUALITY CONTROL

- A. The final surface tolerance from grade elevations shall not deviate more than  $\pm \frac{1}{8}$  in. ( $\pm 10$  mm) under a 10 ft (3 m) straightedge.
- B. Check final surface elevations for conformance to drawings.
- C. The surface elevation of pavers shall be  $\frac{1}{8}$ -in. to  $\frac{1}{4}$ - in. above adjacent drainage inlets, concrete collars or channels.
- D. There shall be no greater than  $\frac{1}{8}$ -in. difference in height between adjacent pavers.

### 3.04 CLEANING

- A. Clean concrete pavers in accordance with the manufacturer's written recommendations.

### 3.05 PROTECTION

- A. Protect finished work from pedestrian and vehicular traffic until acceptance by *OWNER*.

PART 4 - PAYMENT

4.01 RESETTING EXISTING CONCRETE PAVERS

- A. Quantity and Payment: No separate measurement or payment shall be made for this item. Include all costs for *RESETTING EXISTING CONCRETE PAVERS* in the prices bid for the various related items of work as designated in the Proposal. Prices shall include cost of excavation and grading, subgrade preparation, weed barrier, aggregate subbase, sand bedding, resetting pavers and edging, furnishing and installing new pavers and edging as required; joint sane, restorations, and all other work as specified and shown on Plans.

\*\*\*\*END OF SECTION\*\*\*\*



SECTION 32 16 14  
ROADWAY CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Concrete curb.
2. Concrete sidewalk.
3. Concrete driveways and aprons.
4. Concrete cradle for Belgian block curb
5. Detectable warning surfaces

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 45 29: Testing Laboratory Services*
3. *Section 31 23 00: Excavating, Filling and Grading*
4. *Section 31 23 10: Excavation (Unclassified)*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
  - a. Section 405: Concrete Surface Course
  - b. Section 606: Sidewalks, Driveways and Islands
  - c. Section 607: Curb
  - d. Subsection 903.10: Curing Materials
  - e. Subsection 914.01: Preformed Expansion Joint Filler
  - f. Subsection 914.02: Joint Sealer, Hot-Poured

2. American Society for Testing and Materials (ASTM):
  - a. ASTM C94: Specification for Ready Mixed Concrete
  - b. ASTM A185: Welded Steel Wire Fabric for Concrete Reinforcement.
3. American Concrete Institute (ACI):
  - a. ACI 301: Specification for Structural Concrete

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23 (01340), Shop Drawings, Product Data and Samples.*
- B. Submit NJDOT *Certificate of Compliance* conforming to Subsection 106.07 of the Standard Specifications for all materials and assemblies specified herein.
- C. Submit a plan for hot and cold weather concreting as required by Subsection 504.03.02C of the Standard Specifications. Include the method that will be used to ensure that the temperature of the concrete is between 50°F and 90°F during mixing and placing.
- D. Submit sample concrete delivery slip.
- E. Manufacturer's product data:
  1. Complete materials list of all materials proposed to be furnished and installed under this section including but not limited to:
    - a. Concrete Accessories
    - b. Admixtures
    - c. Joint systems and fillers
  2. Specifications and other data required that demonstrate compliance with the specified requirements.
- F. Mixes:
  1. Submit mix designs for each required class of concrete. All concrete mix designs for the various classes of concrete shall be NJDOT approved and

list the approved serial numbers as assigned by the New Jersey Department of Transportation, Bureau of Materials. Submit Certification of Compliance for each mix.

G. Concrete delivery slips:

1. Submit two (2) legible copies of the delivery slip for each load of concrete to the *ENGINEER* or his representative. Delivery slips shall conform to ASTM C-94 and shall show:
  - a. Name of ready-mix batch plant,
  - b. Serial number of ticket,
  - c. Date,
  - d. Truck number,
  - e. Name of purchaser,
  - f. Specific designation of job (name and location),
  - g. Specific class or designation of the concrete in conformance with that employed in job,
  - h. Amount of concrete in cubic yards,
  - i. Time loaded or, of first mixing of cement and aggregates,
  - j. Water added by receiver of concrete and his initials,
  - k. Type and brand, and amount of cement,
  - l. Type and brand, and amount of admixtures,
  - m. Information necessary to calculate the total mixing water. Total mixing water includes free water on the aggregates, batch water including ice batched at the plant, wash water retained in the mixing drum, and water added by the truck operator from the mixer tank.
  - n. Maximum size of aggregate,
  - o. Weights of fine and coarse aggregate,

- p. Ingredients certified as being previously approved,
- q. Signature or initials of ready-mix representative.
- r. The batch plant shall indicate the amount of water that may be added at the jobsite without altering the water/cement ratio by adding the following statement to each batch ticket and filling in the blanks:

*“No more than \_\_\_ . \_\_\_ Gals/CY  
of water may be added at the site.”*

- 2. Record on each delivery slip the location where placed in the work and the time of placement.

### 1.03 QUALITY ASSURANCE

- A. Obtain cementitious materials from same source throughout.
- B. Perform all work in accordance with the NJDOT Standard Specifications for Road and Bridge Construction, 2007 as modified herein.
- C. Concrete testing:
  - 1. The testing services described in NJDOT Standard Specifications, Table 903.03.06-4 which include compressive strength, air-content, slump and temperature tests shall be accomplished as specified in *Section 01 45 29* of the Specifications and the test results submitted to the *ENGINEER* for approval.
  - 2. For nonstructural concrete with concrete lots consisting of 20 cubic yards or less the testing of the concrete may be waived by the *ENGINEER* provided the contractor submits for approval successful field tests that were performed by an approved testing lab on the same approved concrete mix and whose tests were performed within 90 days of the concrete pour whose testing is to be waived.
- D. Qualifications of workmen:
  - 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.

2. Provide adequate numbers of workmen and concrete finishers skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

#### 1.04 PROJECT CONDITIONS

##### A. Cold Weather Placement:

1. Do not apply lining mortar when ambient temperatures are expected to fall below 45°F or 7° C within 72 hours of placement. Both ambient and substrate temperatures must be at least 45° F or 7° C at the time of placement.
2. Low substrate and ambient temperatures slow down rate of set and strength development. Protect the new liner from freezing.
3. Maintain the protective measures for at least 5 days. Ensure that the temperature of the liner is maintained between 45 and 100°F for 5 days after placement. The *ENGINEER* will check the temperature of the concrete. If the temperature of the concrete falls below 45°F within 5 days after placing, the *ENGINEER* may direct the liner be removed and replaced. If the temperature of the concrete rises above 100°F, the *ENGINEER* may direct the protective measures to be removed..

##### B. Hot Weather Concreting:

1. Do not apply liner mortars when ambient and surface temperatures are 100° F or 35° C and above. Shade the material and prepare the surface to keep it cool.
2. To extend working time, mix the material with cool water or ice-cooled water. Be certain the substrate is saturated surface-dry (SSD) before application begins.
3. Proper curing is required. Begin curing within 5 minutes after finishing.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

#### A. Concrete:

1. All cementitious materials shall be from a single source throughout the project.
2. Concrete for curb and islands shall conform to Section 607 of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1 (NJDOT 2007).
3. Concrete for sidewalks, curb ramps, driveways and aprons shall conform to Section 606 of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1 (NJDOT 2007).
4. Concrete for swales and gutters shall conform to the requirements of Section 405, Concrete Surface Course, of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1 (NJDOT, 2007).
5. Concrete for equipment pads shall conform to Section 606 of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1 (NJDOT 2007).
6. Exposed Aggregate Concrete for sidewalks, curb ramps, driveways and aprons shall conform to Section 606 of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1.

#### B. Joint filler:

1. Bituminous cellular type, conforming to Section 914.01 of the Standard Specifications.

#### C. Reinforcing:

1. Conforming to Subsection 905.01.03 of the Standard Specifications.
2. Welded wire fabric conforming to ASTM A-185, gage and mesh as shown, in flat sheets or rolls.

#### D. Curing Materials:

1. Curing Compound: Clear, transparent curing and sealing compound complying with ASTM C-1315, Type 1, Class A.

- a. “VOCOMP-30” by W.R. Meadows.
- b. “Spray-Cure & Seal Plus, by ChemMasters
- c. “Luster Seal WB300” by Euclid Chemical Co.
- d. “Kure-N-Seal 25LV” by Sonneborne
- e. Or equivalent.

E. Detectable Warning Surfaces for Piscataway Township

Detectable warning surfaces shall be of the type which can be set into uncured cast-in-place concrete. Glue/stick-on type warning surfaces shall not be allowed. Vitrified Polymer Composite (VPC) cast in place detectable/tactile warning surface tiles shall be an epoxy polymer composition with an ultraviolet stabilized coating employing aluminum oxide particles in the truncated domes. The tile shall incorporate an in-line pattern of truncated domes measuring nominal 0.2” height, 0.9” base diameter, and 0.45” top diameter, spaced center to center 2.35” as measured on a diagonal and 1.67” as measured side by side. For wheelchair safety the field area shall consist of a non-slip surface with a minimum of 40-90° raised points 0.045” high, per square inch; “Armor-Tile” as manufactured by England Plastics, Incorporated, (800) 682, 2525, or approved equal.

2.02 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to all work of this section, verify that this installation may properly commence.
- B. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
  - 1. Verify that earthwork is completed to correct line and grade.

2. Verify that forms conform to line, grade and dimensions shown on Plans.
  3. Verify that subgrade is smooth, compacted and free of excessive moisture.
- C. In the event of discrepancy, immediately notify the *ENGINEER*.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

### 3.02 PREPARATION

- A. Coordinate with *ENGINEER* for marking out of sidewalk and apron removal limits.
- B. Excavate subgrade and set forms so that finished work conforms to lines and grades shown or as directed by the *ENGINEER*. Excavation shall conform to the requirements of *Section 31 23 00, Excavating, Filling and Grading*.
- C. Saw cutting:
1. When encountered, saw cut existing concrete and paving to provide clean joints.
  2. Saw cuts shall be made with an approved power saw full depth in order to prevent damage to the existing pavement, sidewalk, driveways or curbs and to provide a neat edge for the adjacent proposed sidewalk, driveways, or curbs as shown on the plans or as directed by the *ENGINEER*.
- D. Prepare subgrade as specified in the applicable sections of the Standard Specifications.

### 3.03 INSTALLATION - GENERAL

- A. Construction shall conform to the requirements described herein and as shown on the Drawings.
- B. Restorations shall be performed as specified in the section entitled, *Cleaning and Restorations*.

### 3.04 INSTALLATION – CURBS

- A. Construction shall conform to Subsection 607.03 of the Standard Specifications except as modified herein.



- B. Joints:
1. Install ½ inch thick expansion joints at equal intervals, not to exceed twenty feet (20'). Install additional expansion joints where curb abuts sidewalk or other structures. Insert expansion joint material ¼-inch from the top and face of curb.
  2. Construct contraction joints midway between expansion joints.
- C. Place concrete according to the requirements specified in Subsection 504.03.02.C and 607.03.01.D of the Standard Specifications.
- D. Finish the top and front face of the concrete curb in accordance with the requirements specified herein and in Subsection 607.03.01.E of the Standard Specifications.
- E. Protect and cure concrete according to the requirements specified herein and in Subsection 607.03 of the Standard Specifications using the materials specified herein.
- F. Backfill behind all new curb at the end of each day.

### 3.05 INSTALLATION – SIDEWALKS AND DRIVEWAYS

- A. Construction shall conform to Subsection 606.03.02 of the Standard Specifications except as modified herein.
- B. Sleeves: Sleeves for sign or delineator posts shall be filled with sand and sealed with hot-poured joint sealer immediately after installation and shall be resealed if and when posts are installed.
- C. Welded wire mesh shall be provided when shown in accordance with Subsection 606.03.02D.
- D. Joints:
1. Construct ½-inch wide expansion joints, placed at intervals of approximately 16 feet, with preformed joint filler. If the sidewalk, driveway, or island is constructed on a concrete surface, install expansion joints directly over the expansion joints in the underlying concrete surface. Construct expansion joints around all appurtenances, such as manholes and utility poles, and between new concrete and any fixed structure, such

as a curb, walls, buildings, or bridges. Ensure that the expansion joint material extends for the full depth.

2. Construct contraction joints at 4' intervals between expansion joints.
  3. Clean the top and ends of expansion joint material of all excess concrete, and trim the expansion joint material slightly below the surface of the concrete.
- E. Place concrete according to the requirements specified in Subsection 504.03.02.C and 606.03.02.F of the Standard Specifications.
- F. Finish concrete in accordance with the requirements specified herein and in Subsection 606.03.02.G of the Standard Specifications.
- G. Protect and cure concrete according to the requirements specified herein and in Subsection 606.03.02.H of the Standard Specifications using the materials specified herein.
- H. Backfill adjacent to all new sidewalk and driveways at the end of each day.

### 3.06 FIELD QUALITY CONTROL

- A. Concrete testing shall be performed in accordance with the NJDOT Standard Specifications at the discretion of the *ENGINEER*.
- B. Rejection Criteria: The *ENGINEER* will reject concrete for any of the following reasons:
1. The information for batching and delivery tickets is not complete, does not agree with the mix design, or is not supplied to the *ENGINEER*.
  2. The mixer fails to maintain the manufacturer's stated speed of rotation for both mixing and agitation, or is not able to properly discharge the concrete.
  3. The *ENGINEER* observes improper batching, lack of uniform distribution of constituents throughout the load, or balling of the cement and aggregates.
  4. Water has been added while the truck is in route to the work site.
  5. The concrete is not discharged within the specified time limit, or if the revolution counter shows a total of more than the 300 revolutions. However, if the load has been partially discharged and if the concrete yet to be discharged conforms to the specified ranges for slump and entrained

air without further addition of water or admixtures, then the Engineer may allow the use of the concrete.

6. The slump or air content does not comply with specified requirements.
7. The concrete has been tempered.
8. Water is added after the truck has partially discharged.
9. The indicator on the revolution counter shows that the instrument has been turned off or tampered with.
10. The temperature of the concrete does not comply with requirements.
11. The water-cement ratio of the load is greater than the allowable maximum water-cement ratio for the class of concrete.

C Maintain records of placed concrete items. Record date, location of pour, quantity and air temperature.

3.07 FINISHING (From NRMCA CIP-14, Finishing Concrete Flatwork)

- A. Deposit concrete as near as possible to its final location.
- B. Do not add water to increase slump.
- C. Spread concrete using a hoe or square ended shovel. Do not use a garden rake as it causes segregation.
- D. Consolidate and strike-off concrete using a screed. Do NOT use a jitterbug or vibrating screed when slump exceeds 3". Vibrating Screeds should be moved rapidly to ensure consolidation but avoid working up an excessive layer of mortar on the surface.
- E. LEVEL the concrete using a bull float, darby or highway straight edge as soon as it has been struck off.
- F. WAIT for the concrete to stop bleeding and until the water sheen has left the surface. Any finishing operations done while the concrete is still bleeding will result in later problems such as dusting, scaling, crazing, delamination and blisters. During this period, protect the concrete against evaporation if conditions are hot, dry or windy.
- G. EDGE the concrete.

- H. JOINT the concrete.
- I. FLOAT the concrete by hand or machine to embed the large aggregate. NEVER float the concrete when there is bleed water on the surface.
- J. TROWEL the concrete when required for the final finish. DO NOT trowel air-entrained concrete.
- K. TEXTURE the concrete using a broom to provide a non-slip surface.
- L. DO NOT sprinkle water or cement on concrete while finishing as this can cause dusting or scaling.
- M. CURE the concrete using the specified Curing and Sealing compound.
  - 1. Apply two (2) coats of the specified curing and sealing compound at right angles to one another and in accordance with the manufacturer's directions.
  - 1. DO NOT apply curing and sealing compound to concrete that is still bleeding or has a visible water sheen on the surface.
- N. In severe conditions slab protection may be required before finishing is complete.

### 3.08 PROTECTING CONCRETE STRUCTURES

- A. Protect concrete as specified for various concrete structures specified herein.
- B. Post warning tape around flatwork such as pavement, sidewalks, driveways, and islands during the curing period. Provide wet burlap or polyethylene sheeting to protect the edges and surface of the plastic concrete from precipitation.
- C. Ensure that salt or brackish water does not come in contact with the concrete for a period of 28 days after being placed.

## PART 4 - PAYMENT

### 4.01 REPLACEMENT CONCRETE VERTICAL CURB

- A. Quantity: The quantity for which payment will be made will be for the lengths actually constructed, measured in the field, in locations as directed by the *ENGINEER* or as shown on the Plans.

- B. Payment: Payment will be made for the quantity as above determined, measured in linear feet, at the unit price per linear foot bid in the *PROPOSAL* for the item of *REPLACEMENT CONCRETE VERTICAL CURB*, which price shall include the costs of excavation, removal and disposal of earth or existing paving; saw cutting of existing paving when encountered; curb construction; joints; backfill; grass and pavement restorations and all else necessary or required, complete as specified and shown on the Plans. Depressed curb, when required, shall be included under this item.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 16 40  
(02531)  
STONE CURB

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Granite Block Curb.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 31 23 10: Excavation (Unclassified)*
4. *Section 32 12 16: Hot Mix Asphalt*
5. *Section 32 16 14: Roadway Concrete*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 and all amendments thereto (Standard Specifications):
  - a. Section 607: Curb
  - b. Subsection 903.10: Curing Materials
  - c. Subsection 914.01: Preformed Expansion Joint Filler
2. American Society for Testing and Materials:
  - a. ASTM C94: Specification for Ready Mixed Concrete
  - b. ASTM C-615; Specification for Granite Dimension Stone.

- c. ASTM C-616: Standard Specification for Quartz-Based Dimension Stone.
- d. ASTM C-629: Specifications for Slate Dimension Stone.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit NJDOT *Certificate of Compliance* conforming to Subsection 106.07 of the Standard Specifications for all materials and assemblies specified herein.
- C. Provide submittals for concrete materials as specified in *Section 32 16 14: Roadway Concrete*.
- D. Manufacturer's product data:
  - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
  - 2. Specifications and other data required that demonstrate compliance with the specified requirements.

1.03 QUALITY ASSURANCE

- A. Perform all work in accordance with the NJDOT Standard Specifications for Road and Bridge Construction, 2007 as modified herein.
- B. Qualifications of workmen:
  - 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  - 2. Provide adequate numbers of workmen and concrete finishers skilled in the necessary crafts and properly informed of the methods and materials to be used.
  - 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Concrete: Concrete for curb foundation shall conform to Section 607 of the Standard Specifications and shall be "Class B" as shown in Table 903.03.06-1 (NJDOT 2007).
- B. Joint filler: Bituminous cellular type, conforming to Section 914.01 of the Standard Specifications.
- C. Mortar: ASTM C-270, Type S
- D. Belgian Block:
  - 1. Unless otherwise specified, Belgian Block shall be quarry-split granite block conforming to Subsection 910.04 of the Standard Specifications.
  - 2. New Belgian Block shall meet the requirements of ASTM C-615.
  - 3. New Belgian Block shall generally measure 5" - 6" wide x 7" x 12" long x 14" high.
  - 4. Salvaged block shall be sound, free of cracks, splits or other defects that would impair its strength or durability.

### 2.02 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to all work of this section, verify that this installation may properly commence.
- B. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
  - 1. Verify that earthwork is completed to correct line and grade.



2. Verify that forms conform to line, grade and dimensions shown on Plans.
  3. Verify that subgrade is smooth, compacted and free of excessive moisture.
- C. In the event of discrepancy, immediately notify the *ENGINEER*.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

### 3.02 PREPARATION

- A. Coordinate with *ENGINEER* for marking out of sidewalk and apron removal limits.
- B. Excavate subgrade and set forms so that finished work conforms to lines and grades shown or as directed by the *ENGINEER*. Excavation shall conform to the requirements of *Section 31 23 00, Excavating, Filling and Grading*.
- C. Saw cutting:
1. When encountered, saw cut existing concrete and paving to provide clean joints.
  2. Saw cuts shall be made with an approved power saw full depth in order to prevent damage to the existing pavement, sidewalk, driveways or curbs and to provide a neat edge for the adjacent proposed sidewalk, driveways, or curbs as shown on the plans or as directed by the *ENGINEER*.
- D. Prepare subgrade as specified in the applicable sections of the Standard Specifications.

### 3.03 INSTALLATION

- A. Do not use existing stone with cracks, splits or other defects that would impair its strength or durability.
- B. All concrete work shall comply with *Section 32 16 14: Roadway Concrete*.
- C. Install in full bed of concrete.
- C. Remove concrete and mortar on face of stone as work progresses.

- E. Between stone curb and adjacent concrete surface, expansion joints shall be provided and filled with ¼" preformed bituminous joint filler and sealed with hot-poured joint sealer.
- E. Install ½ inch thick expansion joints at equal intervals, not to exceed twenty feet (20'). Install additional expansion joints where curb abuts sidewalk or other structures. Insert expansion joint material ¼ inch thick from the top and face of curb.
- F. Construct contraction joints midway between expansion joints.
- G. Stone shall be set neat and true to line and grade. Misaligned sections shall be reset as required.
- H. Use masonry saws to cut stone to correct length or shape. Do not break.
- I. Construct stone curb as shown on the Plans.
- J. Backfill behind all new curb at the end of each day.

### 3.04 PROTECTION

- A. Protect new curbing for a minimum of seven (7) days.
- B. Method of protection shall be approved by the *ENGINEER* prior to beginning work under this section.

## PART 4 PAYMENT

### 4.01 GRANITE BLOCK CURB

- A. Quantity: The quantity for which payment will be made will be for the length of new Belgian block curb actually constructed, measured in the field, in locations as directed by the *ENGINEER* or as shown on the Plans.
- B. Payment: Will be made for the quantity as above determined, measured in linear feet, at unit price per linear foot bid in the *PROPOSAL* for the item of *GRANITE BLOCK CURB*, which price shall include cost of excavation, removal and disposal of existing pavements when encountered; backfill; Belgian block curb construction; Class B concrete cradle around Belgium block curb; joints; pavement restorations; and all else necessary or required, complete as specified and shown on the Plans.

\*\*\*\*\*END OF SECTION\*\*\*\*\*

SECTION 32 17 23  
(02580)  
TRAFFIC STRIPES AND MARKINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Pavement striping and markings for roadway.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 32 12 16: Hot Mix Asphalt*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
  - a. Section 610: Traffic Stripes, Traffic Markings and Rumble Stripes
  - b. Section 912: Paints, Coatings, Traffic Stripes and Traffic Markings

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data required that demonstrate compliance with the specified requirements.

C. Manufacturer's recommended installation procedures.

### 1.03 QUALITY ASSURANCE

#### A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

#### B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

#### C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

### 1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

#### A. Comply with provisions of *Section 01 66 00, Storage and Protection*.

#### B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.

#### C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.

#### D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Materials shall conform to the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications), as amended unless otherwise indicated.
- B. Colors shall be white or yellow for traffic striping and marking and curb delineation.
- C. Color shall be blue for marking of accessible parking spaces.
- D. All traffic paint shall comply with N.J.A.C. 7:27-23.

### 2.02 MATERIALS

- A. Thermoplastic Traffic Paint: Subsection 912.03.02.
- b. Glass Beads: Subsection 912.03.02.

### 2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

- A. Remove, immediately prior to striping or marking, all dirt, oil, grease, existing types of traffic stripes or traffic markings and other foreign material including curing compound on new portland cement concrete, from the surface areas on which the various traffic stripes or traffic markings are to be placed. Clean the pavement one inch (1") beyond the perimeter of where the stripe or marking is to be placed.
- B. Apply a primer-sealer conforming to NJDEP Volatile Organic Content (VOC) requirements to the areas of bituminous concrete surfaces, when recommended by the manufacturer, and to the areas of Portland cement concrete surfaces where long life thermoplastic traffic markings are to be placed.

### 3.03 EXECUTION

- A. Methods of construction shall conform to Section 610 of the Standard Specifications as amended by the Supplementary Specifications.
- B. Application of Thermoplastic Traffic Stripes shall conform to Subsection 610.03.02 of the Standard Specifications.

### 3.04 FIELD QUALITY CONTROL

- A. Replace, at no cost to the *OWNER*, all types of traffic stripes or traffic markings determined to be in nonconformance with the specifications, or not placed at the locations or in the dimensions specified on the plans. Remove the defective stripes or markings according to Section 610 of the Standard Specifications.
- B. Replace defective traffic stripes and traffic markings for the reasons specified in Subsection 610 of the Standard Specifications.
- C. Remove, at no cost to the *OWNER*, all interim traffic paint where the interim broken lines will be directly under long life material or are not in line with the location of the permanent long life epoxy resin broken lines by more than a line width.
- D. Replace all existing pavement reflectors that have been marred by striping or marking materials as a result of improperly located traffic stripes or traffic markings.

3.05 OPENING TO TRAFFIC.

- A. Complete each application of all types of traffic stripes or traffic markings and allow to thoroughly dry before opening them to traffic.
- B. Should ambient and surface temperatures be below minimums specified for various materials, with approval, traffic stripes or traffic markings may be placed at temperatures as low as 35 degrees F in order to open the traveled way to traffic.
- C. Placement of long-life epoxy resin or thermoplastic may be delayed for up to four days after paving.
- D. As a minimum, center lines on undivided roadways and broken lines between lanes shall be delineated before the traveled way is opened. Unless directed, temporary pavement markers shall be used for the interim delineation until permanent stripes and markings are applied. The *ENGINEER* will determine when the traveled way is to be opened.

PART 4 - PAYMENT

4.01 TRAFFIC STRIPES

- A. Quantity: The quantity for which payment will be made will be the length of four-inch wide stripes actually painted (excluding gaps) as specified and shown on the Plans or as directed by the *ENGINEER*.
- B. Payment: Payment will be made for the quantity as above determined, measured in linear feet, at the price per linear foot bid in the *PROPOSAL* for the item of *TRAFFIC STRIPES, LONG LIFE, THERMOPLASTIC, 24" WIDE*, which price shall include cleaning pavement surface, painting stripes, application of glass beads, and all else necessary or required, complete as specified and shown on the Plans.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 32 23  
(02901)  
MODULAR BLOCK RETAINING WALLS  
(Keystone Wall)

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Relocating existing modular block retaining wall.
2. Drainage aggregate
3. Backfill
4. Adhesives
5. Installing modular block retaining wall, if and where directed.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data required that demonstrate compliance with the specified requirements.



#### 1.04 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

#### 1.05 PRODUCT DELIVERY STORAGE AND HANDLING

A. Comply with provisions of *Section 01 66 00, Storage and Protection*.

B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.

C. Replacements:

1. In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
2. Exposed faces of concrete wall units shall be free of chips, cracks, stains, and other imperfections detracting from their appearance, when viewed from a distance of 10 feet.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Proprietary Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

### 2.02 MODULAR CONCRETE RETAINING WALL UNITS

- A. Reuse existing retaining wall blocks or furnish and install supplemental blocks matching color texture of existing block.

### 2.03 ACCESSORIES

- A. Construction adhesive: Keystone Kap Seal or equivalent.
- B. Shear Connectors: Reuse existing.

### 2.04 FILL MATERIALS

- A. Base leveling pad material: Compacted crushed stone base, non-reinforced concrete, or subsoil as shown on the drawings.

### 2.05 GEOTEXTILE FILTER FABRIC

- A. Geotextile filter fabric shall be 4.0 oz/sy, polypropylene, needle punched non-woven fabric.

### 2.06 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 INSTALLATION

- A. General: Install the work of this section in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
- B. Excavation:
  - 1. Excavate to the lines and grades shown on the construction drawings. Obtain the *ENGINEER'S* approval of excavation prior to placement of leveling material or fill soils.
  - 2. Over-excavation of deleterious soils and replacement with suitable fill, when approved in advance by the *ENGINEER*, will be paid at unit cost rates.
  - 3. Be careful not to disturb embankment and foundation materials beyond lines shown.
- C. Base leveling pad:
  - 1. Place leveling pad material to the lines and grades shown on the construction drawings.
  - 2. Compact granular leveling pad material to a minimum of 95 percent of the maximum density as determined by ASTM D 698 or 90 percent of the maximum density as determined by ASTM D 1557 (Modified Proctor).
  - 3. Compact crushed stone leveling pad to yield (Proctor testing does not apply).

4. Prepare leveling pad to ensure full contact to the base surface of the concrete units.

D. Modular unit installation:

1. General: Erect units in accordance with manufacturer's instructions and recommendations, and as specified herein.
2. Place first course of concrete wall units on the prepared base material. Check units for level and alignment. Maintain the same elevation at the top of each unit within each section of the base course.
3. Ensure that foundation units are in full contact with natural or compacted soil base.
4. Place concrete wall units side-by-side for full length of wall alignment. Alignment may be done, by using a string line measured from the back of the block. Gaps are not allowed between the foundation concrete wall units.
5. Check each course for level and alignment. Adjust units as necessary to maintain level and alignment prior to proceeding with each additional course.

3.03 BACKFILL PLACEMENT

- A. Place fill and compact in lifts not exceeding 6 to 8 inches (loose thickness) where hand-operated compaction equipment is used, and not exceeding 12 inches (loose thickness) where heavy, self-propelled compaction equipment is used.
  1. Only lightweight hand-operated compaction equipment is allowed within 4 feet of the back of the retaining wall units. If the specified compaction cannot be achieved within 4 feet of the back of the retaining wall units, replace the reinforced soil in this zone with drainage aggregate material.

3.04 CAP UNIT INSTALLATION

- A. Apply adhesive to the top surface of the unit below and place the cap unit into desired position.
- B. Cut cap units as necessary to obtain the proper fit.
- C. Backfill and compact to top of cap unit.

### 3.05 SITE CONSTRUCTION TOLERANCES

#### A. Site Construction Tolerances :

1. Vertical Alignment: Plus or minus 1½ inches over any 10-foot distance, with a maximum differential of 3 inches over the length of the wall.
2. Horizontal Location Control from Grading Plan:
  - a. Straight Lines: Plus or minus 1½ inches over any 10-foot distance.
  - b. Corner and Radius Locations: Plus or minus 12 inches.
  - c. Curves and Serpentine Radii: Plus or minus 2 feet.
3. Immediate Post Construction Wall Batter: Within 2 degrees of the design batter of the concrete retaining wall units.
4. Bulging: Plus or minus 1¼ inches over any 10-foot distance.

### 3.06 FIELD QUALITY CONTROL

- #### A. Correct work that does not meet these specifications or the requirements shown on the Drawings.

### 3.07 CLEANING

- #### A. Clean exposed surface of all grease, dirt and other foreign materials.
- #### B. Touch up all marred or abraded surfaces in accordance with manufacturer's directions.

## PART 4 - PAYMENT

### 4.01 MODULAR BLOCK RETAINING WALLS

- #### A. No separate measurement and no separate payment shall be made for this item. Include all costs for *MODULAR BLOCK RETAINING WALLS* in the lump sum bid in the Proposal for the item Relocate or Reset Driveway Block Walls, Lighting and Lawn Sprinkler.

- B. The cost for this item shall include all materials, equipment, labor, and tools necessary and shall include those items, which are considered to be an integral part of this work, which may be specified elsewhere in these specifications.

4.02 MODULAR BLOCK RETAINING WALLS (IF AND WHERE DIRECTED)

- A. Separate payment will be made for this item. Include all costs for *MODULAR BLOCK RETAINING WALLS* as indicated under the specific proposal item.
- B. The cost for this item shall include all materials, equipment, labor, and tools necessary and shall include those items, which are considered to be an integral part of this work, which may be specified elsewhere in these specifications.

\*\*\*\*END OF SECTION

SECTION 32 32 29  
(02902)  
TIMBER RETAINING WALLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Construction of new landscape timbers and relocation/resetting of salvageable timbers.
2. Reconstruction and repair of existing landscape timbers.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavation, Grading and Filling*
3. *Section 32 92 19: Seeding*
4. *Section 32 92 23: Sodding*

1.02 REFERENCES

A. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications

1. Section 510: Timber Structures
2. Subsection 919.01: Geotextiles

1.03 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

- B. Manufacturer's product data:
  - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
  - 2. Specifications and other data required to demonstrate compliance with the specified requirements.
- C. Submit copies of all delivery slips to the *ENGINEER*.

#### 1.04 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
  - 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of workmen:
  - 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  - 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
  - 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

#### 1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.



D. Delivery and storage:

1. Deliver all materials to the job site with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
2. Lumber and timber stored at the construction site shall be kept in orderly piles or stacks. Treated material shall be open-stacked on supports at least 12 inches above the ground surface to avoid absorption of ground moisture and permit air circulation and it shall be stacked and stickered to permit free circulation of air between the tiers and courses. Protection from the weather shall be provided by a suitable covering. The ground underneath and in the vicinity of the timber shall be cleared of weeds and rubbish. The storage area shall be chosen or constructed so that water will not collect under or near the stored timber.
3. Treated timber shall be carefully handled without sudden dropping, breaking of outer fibers, bruising, or penetrating the surface with tools. It shall be handled with web slings. Cant hooks, peaveys, pikes, or hooks shall not be used. When metal bands are used to bundle members, corner protectors shall be provided to prevent damage to the treated timber.

PART 2 - PRODUCTS

2.01 TIMBER

- A. Timber shall be 7" x 9" or 7" x 8" or closely match the cross-sectional dimensions of the existing ties and be not less than 6' long.
- B. Sawn Lumber and Timber shall conform to the requirements of the National Design Specification for Wood Construction by the National Forest Products Association.
- C. All sawn lumber and timber shall be Southern Pine, visually graded by Southern Pine Inspection Bureau (SPIB) in accordance with the current National Design Specification for Wood Construction.
  1. Timbers shall be commercial grade No. 2 or better.
- D. Pressure treatment shall be in accordance with AWWA Use Category **UC4B**, Commodity Specification A.
  1. Preservatives and Retentions:

<u>Waterborne (ACZA)</u>	<u>Species</u>
0.6 pcf	Southern Pine
0.6 pcf	Douglas Fir

- E. Each piece of treated timber or lumber shall bear a legible brand, mark or tag indicating the name of the treater and the specification symbol or specification requirements to which the treatment conforms. Treated wood products bearing the quality mark of the American Wood Preservers Association (AWPA) will be acceptable. The *ENGINEER* reserves the right to test all materials after delivery to the job site and to reject all materials, which do not meet the specified requirements; provided that, at the jobsite inspection, conformance within 5 percent of specified requirements will be acceptable. Inspection at the job site may include assay to determine retention of preservatives and extraction and analysis of preservative to determine its quality.

## 2.02 GEOTEXTILES

- A. Conforming to the requirements of Section 919.01 for Subsurface Drainage Geotextile.

## 2.03 OTHER MATERIALS

- A. Reinforcing Bars:
1. Provide Grade 60 deformed billet steel bars complying with ASTM A615, galvanized with a Class 1 coating conforming to ASTM A-767.
- B. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.

- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 INSTALLATION

- A. Layout proposed wall location prior to beginning excavation. Be sure excavation is complete before beginning tie placement.
- B. Excavate trench beneath the bottom timber and install 6" of #57 stone.
- C. For timbers set more than one timber\_\_\_\_\_ 75% of the bottom tie shall be buried below proposed grade.
- D. Backfill and compact behind ties as tie placement progresses.
- E. Drill and spike all ties together with #6 reinforcing bars 3' long, spaced 6" from each end of each tie. All spikes and reinforcing bars shall be countersunk 1" and hole filled with bitumastic material. Ties shall be placed in a running bond pattern with all ends cut square.
- F. Treat field cuts, holes, and other penetrations in accordance with AWPA M4.
- G. Final layer of backfill shall be 4" of topsoil placed even with top of timbers and fine graded to match the surrounding grounds.

### 3.03 CLEANING

- A. Remove and dispose of all cutoffs and other debris.
- B. Sweep up all dust.

## PART 4 - PAYMENT

### 4.01 CONSTRUCTION OF LANDSCAPE TIMERS AND RELOCATION OF EXISTING LANDSCAPE TIMBERS

- A. Quantity and Payment: No separate measurement or payment shall be made for this item. Include all costs for *RELOCATE OR RESET LANDSCAPE TIMBERS* in the prices bid for the various related items of work as designated in the Proposal. Prices shall include cost of excavation, new timbers where required, stone bedding, spikes and all else necessary or required for a complete installation.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 84 23  
(02810)  
IRRIGATION SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Resetting and modification of existing irrigation system where shown.
2. Piping.
3. Wiring and associated electrical work.
4. Testing of system.
5. Record drawings.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 74 00: Cleaning and Restorations*
3. *Section 31 23 00: Excavation, Filling and Grading*

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Materials list:

1. Submit complete list of materials proposed for installation with manufacturers catalog data.

C. “As-Built” irrigation drawings:

1. Prepare “Record Drawing” which shows final locations of the relocated pipe, valves and all sprinkler heads.

### 1.03 QUALITY ASSURANCE

#### A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

#### B. Qualifications of Installer:

1. The irrigation contractor shall be a Certified Landscape Irrigation Contractor in accordance with N.J.S.A. 45:5AA-3 or a Master Plumber licensed in accordance with N.J.S.A. 45:14C as permitted by N.J.S.A. 45:5AA-3.

#### C. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

### 1.04 DELIVERY, STORAGE AND HANDLING

#### A. Comply with provisions of *Section 01 66 00, Storage and Protection*.

#### B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.

#### C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.

#### D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in

strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

#### 1.05 WARRANTY AND WARRANTY REPAIRS

- A. The *CONTRACTOR* shall be responsible for all costs of repair work during maintenance period.

### PART 2 - PRODUCTS

#### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

#### 2.02 PIPE

- A. PVC pipe 2" and smaller shall be solvent weld conforming to ASTM D2241, SDR21 with a pressure rating of 200 psi or ASTM D1785, Schedule 40, 80 or 120 with a pressure rating of not less than 200 psi and shall be NSF certified for potable water.
- B. PVC pipe 2½" and larger shall be belled end, rubber gasket joint conforming to ASTM D2241, SDR 21, with a pressure rating of 200 psi and shall be NSF certified for potable water.
- C. Exposed PVC Piping (Bridge Crossings):
  - 1. PVC pipe 4" to 12" shall be belled end, rubber gasket, restrained joint pipe conforming to ASTM D2241, SDR 21, with a pressure rating (PR) of 200 psi and shall meet requirements of the National Sanitation Foundation for potable water.
  - 2. Pipe shall be manufactured with impact modifiers and Ultra Violet light inhibitors for use above ground.

- 3. Pipe shall be “Certa-Lok Yelomine” restrained joint piping as manufactured by Certainteed Corporation.
- D. Steel pipe shall be Schedule 40, galvanized conforming to ASTM A53.
- E. Ductile iron pipe for road crossings shall conform to AWWA C151.

#### 2.03 FITTINGS

- A. Fittings for PVC pipe 2" and smaller shall be solvent weld, Schedule 40, polyvinyl chloride (PVC) or rubber gasket, IPS, PVC fittings as specified below meeting the requirements of the National Sanitation Foundation for potable water.
- B. Threaded PVC pipe fittings shall be Schedule 80 conforming to ASTM D2464.

#### 2.04 SOLVENT CEMENT

- A. Conforming to ASTM D2564.

#### 2.05 SWING JOINTS

- A. Swing joints for sprinkler heads shall be Spears Type 5807 or equal by Lasco or Dura, with male pipe thread at both ends. Swing joints shall have adjustment on 3 planes and be rated at 200 psi combined loading.
- B. Swing joints for Quick Coupling Valves shall be field assembled from Schedule 40 galvanized pipe. Exterior of pipe shall be epoxy coated.

#### 2.06 UNDERGROUND WARNING TAPE

- A. Metallic detection tape, as manufactured by Seton Corp., New Haven, Conn. 6" wide by .0045" thick and marked “Buried Water Line Below” or “Buried Electric Line Below” as appropriate.

#### 2.07 WIRE

- A. Control Wiring (24 volt AC):
  - 1. Control wiring for the 24 VAC remote control irrigation valves shall be single strand copper wire with UF polyethylene insulation rated for a

minimum of 300 VAC. All control wiring shall have a soft drawn single strand copper conductor of the color specified as follows:

2. Valve common wires shall be AWG wire with white insulation, while control wires to the valves shall be AWG wire with red insulation. Additional colors as approved by the ENGINEER shall be used for the Greens and Tees. These color assignments shall be adhered to unless otherwise specified. Minimum wire size shall be #14 AWG for control wires and #12 AWG for common wire.

B. Splices:

1. Splice kits as manufactured by 3M, specifically “Scotch Lock” and “DBY” kits shall be used in accordance with manufacturer’s recommendations. No other splice kits will be acceptable.

2.08 OTHER MATERIALS

- A. All other materials required for the work of this section but are not specifically specified shall be as selected by the Contractor, subject to the approval of the *ENGINEER*.
- B. Concrete for thrust blocks shall be Class B conforming to the requirements for Thrust Blocks in Subsection 903.03 and Table 903.03.06 of the Standard Specifications.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
- C. In the event of discrepancy, immediately notify the *ENGINEER*.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.



### 3.02 PREPARATION

- A. Layout sprinkler system and adjust location as required to obtain complete coverage.
- B. In addition to the inspection made by the *ENGINEER*, the Contractor shall carefully examine all pipe before placing the same in the trench. Any pieces which are broken or show evidence of cracks or fractures shall be rejected by him. Such inspection shall carry with it the responsibility on the part of the Contractor for the removal at his own expense of all pipe, special castings, and appurtenances, incorporated in the work, and when under test are found to be cracked or otherwise defective.

### 3.03 INSTALLATION

- A. General:
  - 1. Install the sprinkler system after the completion of site grading.
  - 2. The Contractor shall be responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at no additional cost to the *OWNER*.
  - 3. Perform the Work of this Section in accordance with all pertinent codes and regulations.
- B. Excavating and trenching: As specified in *Section 31 23 00*, except as modified by the Supplemental Requirements below:
  - 1. Trenching:
    - a. Excavate trench to pipe grade depth.
    - b. Make width of trench at least 6 inches or 1½ times the diameter of pipe, whichever is wider.
    - c. Backfill and hand tamp any over-excavation prior to installing piping.
    - d. In soils containing rock or other hard material that might damage pipe, excavate trenches deeper than required; and then backfill to pipe grade with selected fine earth or sand.

- e. Keep trenches free of obstructions and debris that would damage pipe.
- f. Do not mix subsoil with topsoil.
- g. Install underground warning tape above all sprinkler system lines and wiring at a depth of 8" to 10" below grade.

C. Piping system:

- 1. Trenches for pipe lines shall be of sufficient depths to provide the minimum cover from finish grade as follows:
  - a. 24" minimum cover over main lines.
  - b. 12" minimum cover over lateral lines to heads.
- 2. Pitch: Down at not less than 3 inches per 100 feet in direction of drain valves.
- 3. Clearances:
  - a. Maintain 6 inches minimum horizontal clearances between lines.
  - b. Maintain a minimum of 1 inch (25mm) vertical clearance between lines crossing at an angle greater than 45 degrees.

D. Pipe line assembly:

- 1. Install valves where shown and group together where practical; place no closer than 12 inches to walk edges, buildings, and walls.
- 2. Plastic pipe and fittings shall be assembled as recommended by manufacturer of the pipe. Pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before assembly.
- 3. Snake pipe from side to side of trench bottom to allow for expansion and contraction.
- 4. Make all connections between plastic pipe and metal valves or steel pipe with threaded fittings.

E. Sprinkler heads:

- 1. Install all sprinklers in accordance with manufacturer's requirements.

F. Wiring:

1. Do not yank, stretch, or excessively pull wire during installation. Provide a minimum of one foot of slack, in an expansion coil, in each 100 feet of wire. Lay wire on a firm, even bed in the trench, which shall support the wire its entire length. At splice locations, provide sufficient slack to allow the splice to be raised a minimum of 24 inches above grade for inspection. Take strict precautions to ensure that wires are not cut, scraped or nicked during installation. Do not lay wire above, or on top of, the pipe, except where pipe and wire are being vibratory plowed simultaneously.
2. Accurately locate the valve box with measurements on the drawing of record. All wiring shall be buried to a depth of at least 18 inches (minimum) on to the depth of the pipe when new pipe is installed. Wire splices shall be kept to an absolute minimum number.
3. All wiring to be installed shall be sized as required.
4. Control system communication cable shall be of a different color than the 115 VAC power wires.
5. All wire passing under existing or future paving, construction, etc., shall be encased in plastic or galvanized steel conduit extending at least 12 inches beyond edges of paving or construction.
6. Splice all wires to requirements of local wire code regulations or to the manufacturer's Specifications, whichever is more restrictive. Make all splices by baring a minimum of three-quarters inch of copper conductors, and soldering the leads together. Make the splice using connector kits in strict accordance with manufacturer's recommendations, especially concerning ambient temperature during installation.
7. Only one splice shall be put in a splice kit. All splices not located at sprinkler heads or isolation valves or controller sites shall be placed in a valve box. Accurately mark the locations on the As-Built drawings.
8. Control wire splices will be allowed only on runs of more than 500 feet.
9. Make all splices waterproof.

G. Backfill: As specified in *Section 31 23 00* except as modified below:

1. Do not backfill until system has been tested and accepted.

2. For first 3 inches over pipe, backfill with soil or sand fine enough to pass 1/4 inch sieve, and compact in accordance with *Section 31 23 00*.
3. Fill remainder of trench to within 3 inches of top with excavated soil, and compact in accordance with *Section 31 23 00*.
4. Fill top 4 inches with topsoil and compact in accordance with *Section 31 23 00*.
5. Dress off all areas to finished grades.

### 3.04 INSPECTION

- A. Do not enclose or cover any work until it has been inspected.

### 3.05 FIELD QUALITY CONTROL

#### A. Flushing:

1. After all piping, risers, and valves are in place and connected, but prior to installation of sprinkler heads, quick coupler assemblies, and hose valves, thoroughly flush piping system under a full head of water.
2. Maintain flushing for five minutes through furthestmost valve.
3. After flushing, cap all risers.

#### B. Tests:

1. Upon completion of this portion of the work and prior to acceptance by the *OWNER*, make all required tests and adjustments for free and smooth operation.
2. Secure all approvals from agencies having jurisdiction.
3. Conduct tests in presence of *ENGINEER*. All testing is at Contractor's expense.
4. Pressure test:
  - a. Hydrostatically test the piping system in place before backfilling.

- b. Center load piping with small amount of backfill to prevent arching or slipping under pressure.
  - c. Apply a continuous and static water pressure of 100 p.s.i. when welded plastic joints have cured at least 24 hours and with the riser capped as follows:
    - (1) Main lines and submains to be tested for 2 hours.
    - (2) Lateral lines to be tested for 1 hour.
  - d. Repair leaks resulting from tests.
  - e. Retest the system until test pressure can be maintained for duration of the test.
5. Operation test:
- a. At conclusion of pressure test, install sprinkler heads, quick coupling assemblies, and hose valves, and test entire system for operation under normal operating pressure and conditions using irrigation controller.
  - b. Test is acceptable if system operates in a satisfactory manner, with uniform coverage of areas to be sprinkled.

### 3.06 CLEANING

- A. Clean exposed surface of all grease, dirt and other foreign materials.
- B. Comply with *Section 01 74 00, Cleaning and Restorations*.

## PART 4 - PAYMENT

### 4.01 IRRIGATION SYSTEM

- A. Quantity and Payment: No separate measurement or payment shall be made for this item. Include all costs for *IRRIGATION SYSTEM* in the prices bid for the various related items of work as designated in the Proposal. Prices shall include cost of excavation and repairing of any and all damaged irrigation pipes, sprinklers, and wire encountered during construction.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 92 19  
(02933)  
SEEDING

PART 1 GENERAL

1.01 DESCRIPTION

A. Work included:

1. Restoration of all grass areas disturbed by Contractors operations.
2. Preparation of subgrade.
3. Furnishing and placing topsoil.
4. Seeding.
5. Fertilizing.
6. Mulching.
7. Maintenance.

B. Related Work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications).

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples.*

- B. Manufacturer's product data:
1. Complete materials list of all materials proposed to be furnished and installed under this section.
  2. Specifications and other data required to demonstrate compliance with the specified requirements.
  3. Manufacturer's descriptive literature and printed application instructions for erosion control mulching blanket.
- C. Delivery slips:
1. Accompany all shipments of topsoil with delivery slip showing the product weight and name of supplier.
  2. Each shipment of grass seed mixture shall be accompanied by a certified weight slip and an analysis of the composition, purity, and germination of the seed mixture, certified by the seed house and furnished at the time of delivery. All tags and labels shall comply with N.J.S.A. 4:8-17.15.
  3. Each shipment of fertilizer shall be accompanied by a certified analysis of the composition in compliance with the requirements of P.L. 2010, c. 112 (N.J.S.A.58:10A-61, et. seq.).
  4. Submit delivery slip to *ENGINEER* at end of each working day.
- D. Test reports:
1. Submit results of test report for pH analysis of soil, and when ground limestone is required, the total amount of magnesium and calcium oxides required.
- E. Submit copy of Professional Fertilizer Applicators' license.
- F. Manufacturer's recommended installation procedures.

### 1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Fertilizer shall be applied by or under the supervision of a Professional Fertilizer Applicator certified in accordance with the requirements of P.L. 2010, c. 112 (N.J.S.A.58:10A-61, et. seq.).
2. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
3. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
4. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

1.05 PROJECT CONDITIONS

A. Environmental requirements:



1. Plant seed on unfrozen soil. Soil shall be friable condition at time of seeding.
  2. Do not perform seeding when wind exceeds 15 mph.
  3. Do not seed between calendar dates from May 15<sup>th</sup> to August 15<sup>th</sup>, and from October 15<sup>th</sup> to March 1<sup>st</sup>, except when weather and soil conditions are favorable as determined by *ENGINEER*.
  4. Do not apply synthetic plastic emulsion binder or vegetable based gel binder during rain or freezing weather.
- B. Perform mulching only after preceding related work is accepted.
- C. Restrict foot and vehicular traffic from mulched areas to end of maintenance period.
- D. Disturbed areas that will be exposed in excess of 10 days shall be temporarily seeded and/or mulched until proper weather conditions exist for establishment of a permanent vegetative cover. [N.J.A.C. 7:22-10.11(c) 3]

#### 1.06 GUARANTEE

- A. If a satisfactory stand of lawn and grass has not been produced, the Contractor shall renovate and reseed the lawn and unsatisfactory portions thereof immediately, or if after September 1, during the next planting season. If a satisfactory stand of lawn and grass develops by July 1 of the following year, it will be accepted. If it is not accepted, a complete replanting will be required during the planting season meeting all of the requirements specified under CONSTRUCTION METHODS.
- B. A satisfactory stand is defined as a section of lawn that has:
1. No bare spots larger than 3 square feet.
  2. Not more than 10 percent of total area with bare spots larger than 1 square foot.
  3. Not more than 15 percent of total area with bare spots larger than 6 inches square.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

### 2.02 TOPSOIL

- A. Topsoil shall not contain stones, lumps, roots, or similar objects larger than 2 inches in any dimension and shall have not less than a 5.8 pH value. When the topsoil has less than a 5.8 pH value, it shall be increased by applying pulverized limestone at a rate necessary to attain a 6.5 pH value. When the topsoil has greater than a 7.0 pH value, it shall be decreased to attain a 6.8 pH value. The method to decrease the soil pH shall be submitted for approval before work.
- B. Unacceptable Topsoil Sources.
  - 1. Material stripped from the following sources shall not be considered suitable for use as topsoil:
    - a. Soils having less than 4.1 pH value or greater than 7.0.
    - b. Chemically contaminated soils.
    - c. Areas from which the original surface has been stripped and/or covered over such as borrow pits, open mines, demolition sites, dumps, and sanitary landfills.
    - d. Wet excavation.
  - 2. Topsoil furnished from sources outside the limits of the Project shall have a minimum organic content of not less than 2.75 percent by weight. When the organic content is less than 2.75 percent, it shall be increased by adding peat conforming to Subsection 917.02.02 at a rate necessary to attain this minimum organic content. The organic content of soils will be determined according to AASHTO T 194 except that the sample is to be taken from oven-dried soil passing a No. 10 sieve. The organic content of

all topsoil used for planting shall conform to the requirements specified above.

C. Gradation of Topsoil Sources:

1. The gradation of the topsoil furnished from sources outside the limits of the Project will be determined using the Bouyoucos Hydrometer Analysis conforming to AASHTO T 88. The gradation of the topsoil shall be within the following:

a. Not more than 20 percent of the material submitted from an off-site sample shall be retained on a No. 10 sieve.

b. If more than one-half of the sand is smaller than 20 mils:

	Percent
Sand (80 mils to 2 mils)	40 - 80
Silt (2 mils to 0.2 mils)	0 - 30
Clay (0.2 mils and smaller)	0 - 30

c. If more than one-half of the sand is larger than 20 mils:

	Percent
Sand (80 mils to 2 mils)	40 – 80 or 40 - 75
Silt (2 mils to 0.2 mils)	0 – 30 or 0 - 30
Clay (0.2 mils and smaller)	15 – 30 or 0 – 30

2. Material outside these ranges is not suitable for use as topsoil.

2.03 SOIL CONDITIONERS

A. Fertilizer: Conforming to Subsection 917.03 of the Standard Specifications and the requirements of P.L. 2010, c. 112 (N.J.S.A.58:10A-61, et. seq.).

B. Organic material: Conforming to Subsection 917.02.02 of the Standard Specifications.

C. Lime: Conforming to Subsection 917.04 of the Standard Specifications.

2.04 HAY OR STRAW MULCH

A. Hay:

1. Use clean timothy, redtop, or native grasses approved by the *ENGINEER*.

- 2. Not ground or chopped into short pieces.
- B. Salt hay:
  - 1. Use clean salt meadow grasses approved by *ENGINEER*.
  - 2. Not ground or chopped into short pieces.
- C. Straw:
  - 1. Threshed, unrotted stalks of rye, barley, or wheat; relatively free from seeds, noxious weeds, and other foreign material.
  - 2. Not ground or chopped into short pieces.
- D. Hay and straw mulch binder materials:
  - 1. Vegetable based gels:
    - a. Materials which can be classified as naturally occurring powder based hydrophilic additives formulated to provide gels, which when applied under satisfactory curing conditions, will form membraned networks of water insoluble polymers. Physiologically harmless and not having phytotoxic or crop damaging properties.
  - 2. High polymer synthetic plastic emulsion:
    - a. Miscible with all normally available water when diluted to any proportion. No longer soluble or dispersible in water after adequate drying, but tacky until grass seed has germinated. Physiologically harmless, and not having any phytotoxic or crop damaging properties.

2.05 SEED MIXTURE

A. Type “G” Seed Mixture as follows:

<b>Seed Mixture Type “G”</b>			
Kind of Seed	Minimum Purity %	Minimum Germination %	Application Rate pounds/acre
‘Millennium’ Tall Fescue	95	80	150

'Brooklawn' Kentucky Bluegrass	95	85	50
'Manhattan 4' Perennial Rye	95	85	50
		Total	<u>250 pounds/acre</u>

1. Seed Mixture Type "G" is available through F.M. Brown's Sons, Inc., 205 Woodrow Avenue, P.O. box 2116, Sinking Springs, PA 19608, telephone 800-345-3344, fax 610-678-7023, or equivalent. Tags and/or identification slips clearly denoting the mix shall be supplied to the *ENGINEER* before sowing.

B. Use clean, dry, new crop seed, use certified seed.

2.06 WATER: POTABLE

2.07 OTHER MATERIALS

A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that clearing, earthwork, grading and other preceding work affecting ground surface have been completed.
- B. Verify that trees, shrubs, and other plants to remain as part of final landscaping have been identified.
- C. Assure that area to be topsoiled is cleared, shaped, dressed, and approved by *ENGINEER*.
- D. Verify that soil is unfrozen and within allowable moisture content.
- E. Do not proceed with topsoiling, seeding or mulching until conditions are satisfactory.

### 3.02 INSTALLATION

- A. Preparation of Subgrade: After rough grading is completed and before topsoil is spread, thoroughly scarify ground to minimum depth of eight (8) inches with a toothed ripping machine by running in two (2) directions at right angles over the entire surface to be planted.
- B. Topsoiling:
1. Topsoil shall be replaced with adequate amounts of topsoil material to restore the disturbed area to its original, pre-disturbance grade and depth of topsoil but not less than 4". [N.J.A.C. 7:22-10.11(e) 2]
  2. Spread topsoil over the prepared rough grade using a rubber-tired tractor with grader blade or equivalent not weighing more than 3-1/2 tons.
  3. Place an even layer that will produce a prescribed compacted thickness of four (4) inches unless otherwise indicated.
  4. Provide required topsoil from approved sources located outside project limits if quantity of topsoil obtained from stripping is insufficient for the project requirements.
  5. Rake the topsoiled area to a uniform grade so that all areas drain, as indicated on the grading plan.
  6. Lightly compact with a cultipacker before planting grass.
  7. Remove stones, lumps, roots, and other objects larger than one (1) inch in any dimension from graded topsoil surface.
- C. Liming and fertilizing:
1. Apply lime uniformly at the rate of 135 lbs per 1,000 square feet with a mechanical spreader to the entire area for grass, or at the rate determined from soil test.
  2. Apply commercial fertilizer at the rate of 12 lbs per 1,000 square feet distributing uniformly with a mechanical spreader, or at rate determined from soil test.

D. Seeding:

1. Time of Seeding: Conduct seeding under favorable weather conditions during seasons which are normal for such work as given in the New Jersey Soil Erosion and Sediment Control Standards, 1999.
2. Broadcast half of seed with mechanical seeder.
3. Broadcast remaining half of seed at right angles to first seeding pattern, using same broadcast method.
4. Apply seed at the rate indicated on the drawings.
5. Cover seed to depth of 1/8 inch by raking or other method approved by *ENGINEER*.
6. Roll seeded area with roller weighing maximum of 150 pounds per foot of width.
7. Water seeded area until water penetrates to a depth of 3 to 4 inches.
8. Finished seeded areas shall be smooth, even, and to prescribed lines and contour.

E. Mulching:

1. Apply straw mulch to seeded areas within five (5) days of seed application. [N.J.A.C. 7:22-10.11(e) 3]
2. Leave all mulch in place and allow to disintegrate, except remove excessive amounts of straw when directed by the *ENGINEER*.
3. Spread hay or straw uniformly in layer 1 to 1½ inches thick, loose measurement.
4. Bind mulch in place using vegetable based gels or synthetic emulsion.
5. In areas where pedestrian traffic would make use of binder objectionable, *ENGINEER* may direct spreading of small quantities of topsoil on the mulch as an alternative method of securing the mulch in place.

3.03 LAWN ESTABLISHMENT

A. Watering:

1. Keep soil moist during seed germination period.
  2. Method of watering shall provide equal distribution and coverage to all areas seeded.
  3. Contractor shall water area to a depth of 2" once a week until final acceptance.
- B. Mowing: Mow unacceptable weedy areas in fertilized and seeded areas as directed by *ENGINEER* if, prior to the establishment of a satisfactory stand of grass, an excess amount of weed growth becomes established. Mow at Contractor's expense.
- C. Relime, refertilize, reseed and remulch as directed by the *ENGINEER*, all seeded areas which become eroded or otherwise disturbed; or which require mowing of weedy areas in order to establish acceptable turf.
- D. Relime, refertilize, reseed and remulch as directed by *ENGINEER*, spots larger than one square foot not having uniform stand of grass practically weed free, and not containing plants in reasonable proportion to the various kinds of seed in the grass seed mixture.
- E. Perform all lawn establishment work in accordance with the specifications without additional compensation.
- F. Establishment period to extend until acceptance of project by *ENGINEER*.

### 3.04 MAINTENANCE

- A. Maintenance Period: Begin maintenance immediately after each portion of lawn is planted and continue until project acceptance.
- B. Maintenance Operations: Water to keep surface soil moist. Repair washed out areas by filling with topsoil, liming, fertilizing, and seeding. Replace mulch on banks when washed or blown away. Repair fence, mow to 2 inches after grass reaches 3 inches in height, and mow frequently enough to keep grass from exceeding 3½ inches.

### 3.05 CLEANING

- A. Immediately clean spills, soil, and conditioners on paved and finished areas



- B. Distribute, stockpile, or haul topsoil in excess of the quantity required for the project as directed by the *ENGINEER*
- C. Dispose of protective barricades and warning signs at termination of maintenance period.

## PART 4 - PAYMENT

### 4.01 TOPSOILING

- A. Quantity: The quantity for which payment will be made will be for the surface area of the prescribed compacted thickness of topsoil actually placed as specified and shown on Plans, or as directed by the *ENGINEER*.
- B. Payment: Will be made for quantity as above determined, measured in square yards, at price per square yard bid for the item *TOPSOILING* in the Proposal, which price shall include cost of preparation of the topsoil subsoil; preparing stripped material for topsoil and placing it; furnishing, cleaning and placing topsoil obtained from sources outside the project limits including furnishing and incorporating organic material, if required; grading the topsoil; raking as required; retopsoiling and regrading of areas which become eroded or otherwise disturbed; and all other work specified and shown on the Plans.

### 4.02 FERTILIZING, SEEDING, AND MULCHING

- A. Quantity: The quantity for which payment will be made will be for the area actually fertilized and seeded as specified and shown on Plans, or as directed by the *ENGINEER*.
- B. Payment: Will be made for quantity as above determined, measured in square yards, at price per square yard bid for the various items of *FERTILIZING, SEEDING, AND MULCHING* in the Proposal, which prices shall include cost of furnishing and placing topsoil, seed mixture, lime, fertilizer, mulch, raking; rolling; reliming, refertilizing, and reseeded where required; watering; mowing; maintenance and all other work specified and shown on Plans.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 32 93 00  
(02950)  
LANDSCAPE PLANTING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Restoration of existing landscaped areas.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 32 92 19: Seeding*

1.02 SUBMITTALS

A. Submittals:

1. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples.*

B. Samples:

1. Mulch: 1 cubic foot packed in sample bag.

1.03 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER.*

- B. Qualifications of workmen:
1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
  3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection:
1. Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage:
1. Delivery:
    - a. Deliver fertilizer to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to this specification.
  2. Storage:
    - a. Existing plant stock:
      - (1) Heel-in immediately upon removal if not to be planted within four (4) hours.
    - b. Protect roots of plant material from drying or other possible injury.

- c. Store plants in shade and protect from weather.
  - d. Maintain and protect plant material not to be planted within four (4) hours.
3. Handling:
- a. Do not drop plants.

1.05 PROJECT CONDITIONS

A. Planting season:

- 1. Plant broadleaf and coniferous evergreen trees, shrubs, vines, and ground covers between August 15<sup>th</sup> and September 15<sup>th</sup> and between April 15<sup>th</sup> and May 15<sup>th</sup>. Plant deciduous trees, shrubs, vines and perennials between October 15<sup>th</sup> and November 15<sup>th</sup> and between March 15<sup>th</sup> and May 15<sup>th</sup>. These planting seasons may be extended or shortened according to prevailing weather and soil conditions, as directed by the *ENGINEER*.
- 2. For all planting during an extension of the spring planting season, the plant material shall be moved with roots balled; the trunk, branches and foliage shall be sprayed with an antidesiccant with shall be mixed and applied according to the directions of the manufacturer; and the trees and shrubs shall be trimmed and thinned to reduce the amount of foliage and help balance the loss of roots due to transplanting.
- 3. The Contractor shall assume all extra risk or cost of planting when it is performed out of the regular prescribed seasons.

B. Perform actual planting only when weather and soil conditions are suitable in accordance with locally accepted practice.

1.06 WARRANTY AND WARRANTY REPAIRS

- A. The *CONTRACTOR* shall be responsible for all costs of warranty repair work including removal and replacement during the maintenance period.
- B. Guarantee existing moved plant material through one full growing season after all plants are installed.
- C. Replacement plants under this guarantee shall be guaranteed for one full growing season from date of installation.

- D. Repair damage to other plants or lawns during plant replacements at no cost to the *OWNER*.

## 1.07 SCHEDULING

- A. Install trees, shrubs, ground cover plants and other landscaping materials before lawns are installed.

## PART 2 PRODUCTS

### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

### 2.02 PLANT MATERIALS

- A. Reuse existing plants.

### 2.03 PLANTING SOIL

- A. Comply with *Section 32 92 19, Seeding*.

### 2.04 FERTILIZER

- A. Section 917.03, except as supplemented or modified herein.
- B. Chemical Type:
  - 1. Commercial fertilizer, uniform in composition, free flowing, conforming to state and federal laws, and suitable for application with equipment designed for that purpose.

2. Contain following minimum percentages of plant food by weight:
  - a. 10 available nitrogen
  - b. 10 available phosphorus
  - c. 10 available potash.

2.05 TOP MULCH

- A. Match existing.

2.06 WRAPPING MATERIAL

- A. Two (2) thicknesses of creped paper cemented together with bituminous material.
- B. Width of wrapping material: 8 to 10 inches.
- C. Twine for tying: Lightly tarred medium or coarse sisal yarn.

2.07 GUYING AND STAKING MATERIAL

- A. Stakes for tree support:
  1. Construction grade white cedar.
  2. Minimum nominal size: 2 inches x 2 inches or 2½ inch in diameter x 9 feet long and pointed at one end.
  3. Cross braces or stakes: Nominal 1 inch x 4 inch boards.
- B. Guying wire: Annealed, galvanized iron or steel 14 gauge wire.
- C. Hose:
  1. Type: New or used 2-ply reinforced rubber or plastic.
  2. Minimum Size: ¾-inch.

2.08 WATER

- A. Quality: Potable.
- B. Source: To be provided by the Contractor.

2.09 LANDSCAPE EDGING

- A. Match existing.

2.10 LANDSCAPE FABRIC

- A. Fabric shall be woven, needle punched or non-woven and treated for protection against deterioration due to ultraviolet radiation. Fabric shall be minimum 99 percent opaque to prevent photosynthesis and seed germination from occurring, yet allowing air, water and nutrients to pass thru to the roots. Minimum weight shall be 4 ounces per square yard with a minimum thickness of 20 mils with a 20-year (minimum) guarantee.
- B. Fabric shall be Dewitt medium weight fabric, or equivalent.

2.11 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.

- C. Verify final grades have been established prior to beginning planting operations, mulching, constructing tree wells.
- D. Do not begin planting or wrapping of trees until deficiencies are corrected or plants replaced.

### 3.02 PREPARATION

- A. Stake out locations for plants. Establish mulch restoration limits.
- B. Do not begin excavation until stake out of plant locations and mulching limits are acceptable to *ENGINEER*.

### 3.03 EXCAVATION FOR PLANTING

- A. Pits and Trenches:
  - 1. Shape:
    - a. Vertical sides and flat bottom.
    - b. Plant pits to be square or circular.
  - 2. Size:
    - a. For Trees:
      - 1. Depth: Minimum two feet (2') from finish grade and increased as necessary to accommodate ball or roots and at least six inches (6") compacted topsoil below ball.
      - 2. Width or diameter: 1½ feet (1½') greater than diameter of ball.
    - b. For Shrubs:
      - 1. Depth: Minimum 16 inches (16") increased as necessary to accommodate ball and at least six inches of topsoil below ball.
      - 2. Minimum width of diameter: One foot (1') greater than diameter of ball.



- B. Planting beds:
1. Remove existing soil from planting beds to a depth of six inches (6") and replace with planting soil, if soil from bed cannot be made acceptable by adding organic materials as nutrients.
  2. Bring beds to smooth, even surface conforming to established grades after full settlement has occurred.
- C. Disposal of excess soil:
1. Use acceptable excess excavated topsoil to form watering basins around plants, where specified, or waste over nearby low or rough lawn areas as directed.
  2. Dispose of unacceptable or unused excess soil as directed by the *ENGINEER*.

### 3.04 PLANTING

- A. General:
1. Center plant in pit or trench.
  2. Face for best effect.
  3. Set plant plumb and hold rigidly in position until soil has been tamped firmly around ball or roots.
  4. Use only planting soil for backfill.
  5. Place sufficient planting soil under plant to bring top of root ball level to finish grade of surrounding ground.
  6. Backfill pit or trench with planting soil in 9-inch layers and water each layer thoroughly to settle soil.
  7. After soil settles fill pit with planting soil, water and leave pit surface even with finish grade of surrounding ground.
  8. Watering Basin:
    - a. Construct a topsoil berm four inches (4") above finish grade, forming a watering basin with a level bottom around each plant.

- b. Size: Diameter of the planting pit.
- c. Do not construct watering basins for plant material transplanted from box-grown stock.

B. Fertilizer application:

- 1. Plants shall be fertilized before they are mulched, except that trees and shrubs not fertilized before June 1 shall be mulched but not fertilized until after October 1 of the same year. Fertilizer shall be applied at the following rates:
  - a. Trees: 1½ pounds per inch of caliper.
  - b. Shrubs: ½ pound per foot of height.
  - c. Vines, ground covers and perennials: ½ pound per plant.
- 2. Rake back mulch and work fertilizer into upper two inches (2") of soil.
- 3. Water until root structure of plant is wet.
- 4. Replace mulch in same manner as originally placed within two (2) days after fertilizing.

C. Watering: Water when soil moisture is below optimum level for best plant growth.

3.05 MULCHING

- A. Mulch planting pits, trenches, and areas within two (2) days after planting.
- B. Cover watering basin or bed evenly with two inches (2") of mulch material.
- C. Water thoroughly immediately after mulching.
- D. Hose down planting area with fine spray to wash mulch from leaves of plants.

3.06 GUYING AND STAKING OF TREES

- A. Stake trees on plant list:

1. Stake installation:
  - a. Drive stakes perpendicularly into ground at edge of root ball.
  - b. Number of stakes/caliper of tree: three (3).
2. Tying and cross-bracing:
  - a. For trees 2½ inches caliper or under:
    - (1) Place stake toward prevailing wind.
    - (2) Tie tree with double strand of guy wire run through an acceptable length of rubber hose.
    - (3) Cross sheathed guy wire once between stake and tree to prevent direct contact between stake and tree.

### 3.07 PRUNING

- A. Prune minimum necessary to remove injured twigs and branches, deadwood and suckers.
- B. Remove ⅓ to ¼ branching structure to compensate for loss of roots during transportation.

### 3.08 WRAPPING

- A. Wrap plants promptly after planting.
- B. Spirally wrap from bottom to top to height of second branch.
- C. Overlap wrapping approximately two inches (2").
- D. Tie wrapping securely in place.

### 3.09 CLEANING

- A. Sweep and wash paved surfaces.
- B. Remove planting debris from project site.

### 3.10 PLANT ESTABLISHMENT PERIOD AND REPLACEMENTS

- A. The acceptability of the transplanted material furnished and planted as specified will be determined at the end of a period of establishment during which all possible means shall be employed to preserve the plants in a healthy growing condition. Planting will be determined as established one (1) year from the date of acceptance of the planting. The dates of planting acceptance are June 1 for the spring planting and December 1 for the fall planting. Care during the establishment period shall include watering, weeding, spraying with insecticides or fungicides, pruning, and repairing and adjusting guys and stakes.
- B. All plants that are not alive and healthy at the end of the plant establishment period shall be replaced in kind, quantity, and size with acceptable live, healthy plants installed as originally specified. The *ENGINEER* may permit substitute varieties of plants to be used.
- C. Replacement planting shall conform to the requirements for initial planting except as follows:
  - 1. Existing wood chips shall be removed and may be reused if salvageable and conforming to Subsection 909.04.
  - 2. Backfilling may be made with excavated material that does not contain wood chips or other objectionable material.
  - 3. Replacement plantings shall be made at no cost to the *OWNER*.
  - 4. Replacement of evergreen materials shall be performed from March 1 to May 1 and from August 15 to December 1. Replacement of deciduous material shall be performed from March 1 to May 1 and from October 15 to December 1.
  - 5. All stakes, guys, and guy wires shall be removed two weeks before the conclusion of the one-year plant establishment period.
  - 6. At the conclusion of the two (2) year plant establishment period, all weeds, debris, and damaged plant material shall be removed and disposed of. Holes resulting from the theft of plants shall be filled. Treat all planting beds with a pre-emergence herbicide.

### 3.13 FINAL INSPECTION AND ACCEPTANCE

- A. Request final inspection for acceptance upon completion of all work.

- B. Replace rejected material with acceptable plant material as soon as possible within acceptable planting dates.

#### PART 4 - PAYMENT

##### 4.01 LANDSCAPE PLANTINGS

- A. Quantity: The quantity for which payment will be made will be for the number of each size and type of landscape planting actually installed, measured in the field, in locations shown or as directed by the *ENGINEER*.
- B. Payment: Payment will be made for the quantity as above determined, measured in units, at the unit price bid in the *PROPOSAL* for the various items of *LANDSCAPE PLANTINGS*, which price shall include cost of the plant; planting mixture; mulch; staking and guying; excavation; backfill; fertilizer; limestone; and all else necessary or required, complete as specified and shown on the Plans.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 33 31 12  
(02730)  
GRAVITY SANITARY SEWER PIPING SYSTEMS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Gravity sanitary sewer pipe and fittings.
2. Underground pipe markers.
3. Wye branches and tees.
4. Sanitary Laterals.
5. Bedding and cover materials.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. American Society for Testing and Materials (ASTM):
  - a. ASTM C-478: Precast Reinforced Concrete Manhole Sections
  - b. ASTM C-913: Precast Concrete Water and Wastewater Structures.
  - c. ASTM C-923: Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals
  - d. ASTM D-3034: Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
  - e. ASTM D-3212: Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

- f. ASTM F-679: PVC Large Diameter Plastic Gravity Sewer Pipe and Fittings.
- 2. American Association of State Highway and Transportation Officials:
  - a. M-45: Aggregate for Masonry Mortar.
- 3. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019 and all amendments thereto (Standard Specifications).

#### 1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
  - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
  - 2. Specifications and other data required that demonstrate compliance with the specified requirements.
- C. Shop drawings for manholes showing precise dimensions of the work of this section, and all other data needed to ensure proper and adequate provisions in construction to accommodate the work of this section.
- D. Submit NJDOT *Certificate of Compliance* conforming to Subsection 106.07 of the Standard Specifications for all materials and assemblies specified herein.
- E. Manufacturer's recommended installation procedures.

#### 1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
  - 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

- B. Qualifications of workmen:
1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
  2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
  3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance:
1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Storage of materials:
1. Store materials to prevent physical damage.
  2. Store pipe and fittings off ground to prevent dirt and debris from entering.
  3. Store flexible gasket materials and joint primer or adhesive compounds, in cool dry place. Keep rubber gaskets clean, away from oil, grease, excessive heat, and out of direct rays of sun.



- E. Handling of materials:
1. Protect materials during transportation and installation to avoid physical damage.
  2. Use extra care in cold weather when flexibility and impact resistance of PVC pipe is reduced.
  3. Do not install out-of-round pipe.
  4. Unload pipe to prevent abrasion.
  5. Do not drag or push pipe when handling or distributing on project site.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the maintenance period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 P.V.C. GRAVITY SEWER PIPE AND FITTINGS:

- A. ASTM D-3034; SDR 35; Sizes 4" through 15".
- B. ASTM F-679; Sizes 18" through 48".

- C. ASTM F-794; Sizes 4" through 48".
- D. P. V. C. Sewer Fittings:
  - 1. ASTM F-1336; SDR 26; Sizes 4" through 15".
  - 2. Provide saddle adaptor for pipe conforming to ASTM F-679 and ASTM F-794.
- E. Pipe joints:
  - 1. Joint design: ASTM D-3212, Push-On Type Joint using an elastomeric ring gasket. Infiltration shall not exceed 50 gallons/inch diameter/mile/day.
  - 2. Joint material: Elastomeric ring rubber gasket, ASTM D-3212.
  - 3. Joint material Primer/Adhesive: As provided or specified by pipe manufacturer.

## 2.03 DUCTILE IRON PIPE

- A. Ductile iron pipe shall comply with ANSI/AWWA C151/A21.51.
- B. Pressure class:
  - 1. Restrained Push-on or Mechanical Joint:
    - a. 4" through 12"- Pressure Class 350.
    - b. 14" through 24"- Pressure class 250.
    - c. 30" through 64"- Pressure Class 150
- C. Pipe Fittings:
  - 1. Ductile Iron fittings shall conform to ANSI/AWWA-C110/A21.10 or ANSI/AWWA-C153/A21.53.
- D. Coatings and Linings:
  - 1. Exterior coatings:
    - a. All pipe and fittings to be buried or installed in valve pits shall be coated on the outside with asphaltic material at least 1 mil thick

and conforming to the requirements of ANSI/AWWA C110/A21.10, or ANSI/AWWA C153/A21.53.

- b. Fittings coated with fusion-bonded epoxy shall be permitted for buried or exposed service.

2. Interior Linings:

- a. All ductile iron pipe and fittings for sanitary sewer service shall not be cement mortar lined but shall be lined with “Protecto 401 Ceramic Epoxy™”, 40 mils DFT, or equivalent.

E. Joints for ductile iron pipe and fittings:

- 1. Joints shall be restrained push-on or mechanical joints using a single elongated gasket to effect the joint seal for non-pressure or gravity applications unless otherwise indicated on Plans.

F. Gaskets:

- 1. Gaskets shall conform to ANSI/AWWA-C111/A21.11 for mechanical or push-on joints.
- 2. Gasket lubricants shall be water-soluble and not have deteriorating effects on the pipe or rubber gaskets.
- 5. Gasket lubricants shall be supplied by the pipe manufacturer.

F. Plugs:

- 1. Flat plugs for mechanical joints.
- 2. Restrained plugs for push-on joints.

2.04 PIPE COUPLINGS

A. Acceptable manufacturers:

- 1. The Ford Meter Box Company, Inc.
- 2. Smith-Blair, Inc.
- 3. JCM Industries, Inc

4. Or equivalent.
- B. Sleeve couplings:
1. Couplings for connecting pipe shall be full circle Type 304 stainless steel sleeve couplings with Nitrile gaskets and Type 304 stainless steel bolting. The nuts shall be fluoropolymer coated to prevent galling.

## 2.05 DEEP-CUT LATERAL RISERS

- A. Deep - cut lateral risers shall be manufactured products produced from SDR 35 PVC pipe and SDR 26 fittings and contain slip joints, settlement joints and/or casings of various designs produced by manufacturers regularly engaged in the manufacture of these items.
- B. Acceptable products
1. *B & H Riser*  
Bates & Harrington, Inc.  
Madison Heights, VA.  
Tel: 434-929-0783
  2. *Deep Burial System*  
Plastic Trends, Inc.  
Shelby Township, MI.  
Tel: 586-781-2700
  3. Or equivalent

## 2.06 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

- A. Inspection by Contractor:
  - 1. Check pipe for following information which shall be clearly marked on each pipe section:
    - a. Pipe type and SDR number.
    - b. Nominal pipe size.
    - c. The PVC cell classification, for example 12454-B.
    - d. Name or trademark of manufacturer.
    - e. The ASTM Specification designation.
  - 2. Check fittings for the following markings:
    - a. The ASTM Specification designation.
    - b. Manufacturer's name or trademark.
    - c. Nominal size.
    - d. The material designation PVC, PSM.
  - 3. Inspect pipe for defects prior to placement in trench. The pipe and fittings shall be free from visible cracks, holes, foreign inclusions or other injurious defects.

4. Assure that all materials are to the type specified and are not defective. Unmarked pipe or pipe and materials not meeting Specification requirements shall be removed from the site as directed by the *ENGINEER*.

### 3.03 EXCAVATION FOR TRENCHES

- A. Comply with the requirements of *Section 31 23 00, Excavation, Grading and Filling*.
- B. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
  1. Maximum trench width to a point one foot above the outside top of pipe shall be the pipe outer diameter plus sixteen inches.
  2. Maximum trench width at ground surface shall be as required for depth of pipe.
- C. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations.
- D. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one day.
- E. Grub roots and stumps within six inches of outside surface of pipe bottom and sides to minimum depth of six inches below bottom of trench.
- F. Install pipe bedding of material approved for initial backfill in accordance with the details shown on the Plans and as specified herein.

### 3.04 INSTALLATION - PIPE

- A. Lay pipe only in presence of *ENGINEER*. *ENGINEER* may order removal and relaying of pipe not so laid.
- B. Fine grade trench bottom so that pipe is supported for its full length.
- C. Lay pipe to lines and grades shown on Plans. Face socket end of pipe in direction of pipe laying.

- D. Do not lay pipe on unsuitable material, in wet trench, or in same trench with another pipe or utility.
- E. Lower pipe into trench with ropes, machinery, or other means approved by *ENGINEER*.
- F. General Procedure for Joining Pipe:
1. DO NOT USE EXCAVATING EQUIPMENT TO SHOVE PIPE SECTIONS TOGETHER.
  2. Hold pipe securely and in proper alignment when joining.
  3. Do not disturb previously made joints. Check completed piping to assure joints are intact. Insure placement of backfill over pipe is accomplished without disturbing pipe position.
  4. Do not allow earth, stones, or other debris to enter pipe or fittings.
  5. Method of installing joint materials and joining piping shall be in strict accordance with manufacturer's printed instructions as approved by the *ENGINEER*.
- G. Backfill and compaction:
1. Initial backfill:
    - a. Initial backfill material shall be as shown on the drawings and as specified in *Section 31 23 00, Excavation, Grading and Filling*.
    - b. Install initial backfill material shall be as shown on the plan details for the type of pipe being used.
    - c. Material shall be placed under the pipe haunch to provide adequate side support. Material shall be installed entire trench width and shall be tamped and rodded to insure full contact with pipe at haunch up to the spring line.
    - d. Little or no tamping of the initial backfill directly over the pipe shall be done.
  2. Final backfill: See *Section 31 23 00, Excavation, Grading and Filling*.

### 3.05 INSTALLATION - SANITARY LATERALS

- A. Sewer laterals in streets and rights-of-way shall be six inches (6").
- B. All laterals shall be installed with the same construction procedure as the sewer main.
- C. Construct laterals from wye branch to terminal point shown.
- D. Where depth of main pipeline warrants, construct riser type laterals from wye branch.
- E. Maintain 4 feet minimum depth of cover over pipe.
- F. Maintain minimum 5 feet separation distance between laterals.
- G. Install watertight plug, braced to withstand pipeline test pressure thrust, at termination of lateral. Install temporary marker stake extending from end of lateral to 12 inches above finished grade. Paint top 6 inches of stake with fluorescent orange paint.

### 3.06 CLEANING

- A. Comply with requirements of *Section 01 77 00, Cleaning and Restorations*.
- B. Remove and dispose of all debris.

### 3.07 TESTING

- A. Deflection testing:
  - 1. For pipe conforming to the requirements of ASTM D3034 Maximum allowable pipe deflection (reduction in vertical inside diameter) shall be 7½%.
  - 2. Deflection tests shall be successfully performed on the complete installation by means of one of the following methods prior to the acceptance of construction.
    - a. “Go-No-Go” mandrel properly sized.
    - b. Calibrated television.



B. Lamping:

1. *ENGINEER* will lamp all installed pipe between manholes. Sewer lines shall meet the following standards to pass the lamping inspection.
  - a. Barrel of pipe shall have no vertical deflection (not to be confused with the deflection test), and at least seventy-five percent of barrel shall be visible in the horizontal direction.
  - b. Pipe not meeting this Specification shall be relaid and relamped until compliance is achieved at no additional cost to *OWNER*.

C. Air testing:

1. Air testing shall conform to the requirements of *Section 33 01 32, Testing Sanitary Sewer Systems* except as herein modified.
2. The minimum time duration for a low pressure exfiltration pressure drop between two consecutive manholes shall not be less than shown in Table 1.
3. The prescribed drop shall not exceed .5 psi from 3.5 to 3.0 psi in excess of the groundwater pressure above the top of the sewer.

TABLE 1  
MINIMUM DURATION FOR AIR TEST PRESSURE DROP

Pipe Size		Time
<u>Inches</u>	<u>mm.</u>	<u>Minutes</u>
4	100	2½
6	150	4
8	200	5
10	225	6½
12	305	7½
15	380	9½

PART 4 - PAYMENT

4.01 SANITARY SEWER LATERALS

- A. Quantity: The quantity for which payment will be made will be for the number of laterals actually constructed as specified and shown on the Plans or as directed by the *ENGINEER*.
- B. Payment: Payment will be made for the quantity as above determined, measured in units, as the unit price per lateral bid in the Proposal for the various items of *SANITARY SEWER LATERALS (4'-8' Deep) and DEEP CUT SANITARY SEWER LATERALS (Greater than 8' Deep)*, which prices shall include trenching, backfilling [with select backfill] [trench stabilization material] and compacting as elsewhere specified; sheathing; shoring; bracing; dewatering; pumping; pipe; fittings, riser pipe; concrete encasement; cleanouts and all other piping to the right of way; marking stake; interconnection to existing piping; restoration of disturbed areas; curb; sidewalk; driveways, mailboxes, and any other appurtenances public or private and all else necessary or required, complete as specified and shown on the Plans.

\*\*\*\*END OF SECTION\*\*\*\*

SECTION 33 40 00  
(02722)  
STORM SEWER SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Relocation of Schedule 80 PVC roof drain leader.
2. Replacement of reinforced concrete pipe as/if required incidental to inlet removal and construction.
3. Inlets.
4. Resetting castings.
5. Replace manhole casting.
6. Repair of inlets.
7. Replacement of existing grates with bicycle safe grates.
8. Replacement of existing inlet curb pieces.
9. Storm sewer piping.
10. Flared end sections.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. American Society for Testing and Materials (ASTM):
  - a. ASTM C-270: Mortar for Unit Masonry.

- b. ASTM C-443: Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
  - c. ASTM C-913: Precast Concrete Water and Wastewater Structures.
  - d. ASTM C-923: Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes and Laterals.
2. American Association of State Highway and Transportation Officials:
- a. AASHTO M105: Standard Specification for Gray Iron Castings.
3. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007, and all amendments thereto (Standard Specifications):
- a. Section 601: Pipe
  - b. Section 602: Drainage Structures

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit NJDOT *Certificate of Compliance* conforming to Subsection 106.07 of the Standard Specifications for all materials and assemblies specified herein.
- C. Submit a plan for hot and cold weather concreting as required by Subsection 504.03.02C of the Standard Specifications. Include the method that will be used to ensure that the temperature of the concrete is between 50°F and 90°F during mixing and placing.
- D. Submit sample concrete delivery slip.
- E. Manufacturer's product data:
  - 1. Complete materials list of all materials proposed to be furnished and installed under this section including but not limited to:
    - a. Concrete Accessories
    - b. Admixtures
    - c. Joint systems and fillers

2. Specifications and other data required that demonstrate compliance with the specified requirements.

F. Mixes:

1. Submit mix designs for each required class of concrete. All concrete mix designs for the various classes of concrete shall be NJDOT approved and list the approved serial numbers as assigned by the New Jersey Department of Transportation, Bureau of Materials. Submit Certification of Compliance for each mix.

G. Concrete delivery slips:

1. Submit two (2) legible copies of the delivery slip for each load of concrete to the *ENGINEER* or his representative. Delivery slips shall conform to ASTM C-94 and shall show:
  - a. Name of ready-mix batch plant,
  - b. Serial number of ticket,
  - c. Date,
  - d. Truck number,
  - e. Name of purchaser,
  - f. Specific designation of job (name and location),
  - g. Specific class or designation of the concrete in conformance with that employed in job,
  - h. Amount of concrete in cubic yards,
  - i. Time loaded or, of first mixing of cement and aggregates,
  - j. Water added by receiver of concrete and his initials,
  - k. Type and brand, and amount of cement,
  - l. Type and brand, and amount of admixtures,
  - m. Information necessary to calculate the total mixing water. Total mixing water includes free water on the aggregates, batch water including ice batched at the plant, wash water retained in the

mixing drum, and water added by the truck operator from the mixer tank.

- n. Maximum size of aggregate,
- o. Weights of fine and coarse aggregate,
- p. Ingredients certified as being previously approved,
- q. Signature or initials of ready-mix representative.
- r. The batch plant shall indicate the amount of water that may be added at the jobsite without altering the water/cement ratio by adding the following statement to each batch ticket and filling in the blanks:

*“No more than \_\_ . \_\_ Gals/CY  
of water may be added at the site.”*

- 2. Record on each delivery slip the location where placed in the work and the time of placement.

### 1.03 QUALITY ASSURANCE

#### A. Qualifications of manufacturer:

- 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

#### B. Qualifications of workmen:

- 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
- 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
- 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

- C. Basis of acceptance:
  - 1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the maintenance period.

1.06 PROJECT CONDITIONS

- A. Utility castings shall be, at all times during construction, set and reset as necessary, at an elevation which is at or near the currently existing surface.
- B. Castings shall only be raised or lowered to the final proposed elevation(s) immediately prior to final paving operations.
- C. If it is necessary to leave a raised or lowered casting overnight, it shall be adequately marked by a lighted barricade and/or such other means as deemed appropriate in the interest of the protection of public health and safety.

- D. Bituminous fillets, if used, shall extend a minimum of 2 feet beyond edge of casting and be removed immediately prior to paving.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

### 2.02 PVC PIPE

- A. Pipe shall conform to ASTM D1785:
1. Schedule 80.
  2. PVC compounds shall be Class 12454-B, 12454-C or 14333-D conforming to ASTM D-1784.
  3. Pipe shall be marked in accordance with ASTM D-1785 and bear the mark of the testing agency that verified the suitability of the material for Potable Water Service.
- B. Fittings for use with ASTM D1785, Schedule 80 pressure pipe:
1. Glued or threaded fittings:
    - a. Socket fittings conforming to ASTM D2466 for Schedule 40 PVC pipe.
    - b. Socket fittings conforming to ASTM D2467 for Schedule 80 PVC pipe.
    - c. Threaded fittings conforming to ASTM D2464 for Schedule 80 pipe.



2. Gasketed fittings:
  - a. Fittings for iron pipe size pipe shall be manufactured in one piece of injection molded PVC compound meeting ASTM D1784. Fittings shall be Class 200 and conform to requirements of DR 21. Fittings shall be designed to withstand a minimum of 630 psi quick burst pressure at 73 degrees F., tested in accordance with ASTM D1599. Bell shall be gasketed joint conforming to ASTM 3139 with gaskets conforming to ASTM F477. (Push-on joint) (or) (Mechanical Joint) Ductile Iron Fittings meeting AWWA C153 shall be allowed as alternative when PVC sizes are not available.

2.03 CORRUGATED POLYETHYLENE PIPE

- A. Acceptable Manufacturers (Polyethylene Pipe):
  1. Advanced Drainage Systems  
Columbus, Ohio  
(614) 457-3051
  2. Hancor, Inc.  
Findlay, Ohio  
(419) 422-6521
  3. Or equivalent.
- B. Sizes 3" - 10": A.A.S.H.T.O. Designation M252.
  1. Type C: Corrugated inside and out.
  2. Type S: Corrugated outside with smooth interior liner.
  3. Type CP: Type C with Class 2 perforations.
  4. Type SP: Type S with Class 1 or 2 perforations.
- C. Sizes 12" - 60": A.A.S.H.T.O. Designation M294.
  1. Type C: Corrugated inside and out.
  2. Type S: Corrugated outside with smooth interior liner.
  3. Type CP: Type C with Class 2 perforations.
  4. Type SP: Type S with Class 1 or 2 perforations.
- D. Type S and SP pipe and fittings shall have rubber gasket silt tight joints. Pipe and fittings not having rubber gasket sand tight joints shall be rejected and removed from the site within 24 hours. Butyl-Rubber tape shall not be used.

- E. Fittings for type C or CP pipe shall be snap fittings and non-perforated end-plugs supplied by the pipe manufacturer.
- F. Filter wrap shall be of spun-bonded 100% nylon and shall be factory applied to the tubing.
- G. Flared End Sections: Manufacturer's Standard, conforming to the requirements for pipe specified.

2.04 CORRUGATED POLYETHYLENE EDGE DRAINS

A. Materials:

- 1. Edge drains shall comply with ASTM D7001, Class B.

B. Requirements:

1. Dimensions:

- a. Nominal size: The nominal sizes of the edge drains shall be 12" and 18" wide.
- b. Inside and outside dimensions: The inside and outside dimensions and tolerances for the 12" and 18" edge drains are as follows:

<b>OUTSIDE DIMENSIONS</b>		
Nominal Size	Width	Thickness
12"	13"	1.5"
18"	18"	1.5"
<b>INSIDE DIMENSIONS</b>		
Nominal Size	Width	Thickness
12"	12"	0.750"
18"	17.25"	0.815"

- 2. Perforations: Unless otherwise specified, the perforations shall be cleanly cut and uniformly spaced along both sides of the oblong pipe. The perforation specifications are as follows:

Slot Length (maximum) =	1.125" (29 mm)
Slot Width (maximum) =	0.150" (4 mm)
Water Inlet Area (minimum) =	12"/15.0 sq. in./ft.
	18"/20.0 sq. in./ft.

3. Fitting requirements:
  - a. Standard fittings include in-line couplings, end outlets, side outlet, and end caps.
  - b. Fittings shall not reduce the inside open flow area of the oblong pipe.
  - c. Couplings shall be corrugated to match the corrugations of the oblong pipe and shall provide sufficient longitudinal strength to assure alignment and prevent separation at the joints.

C. Filter Fabric:

1. Unless otherwise specified, the oblong pipe shall be wrapped with a non-woven polypropylene geotextile with the following minimum properties:

<b>Fabric Properties</b>	<b>Test Method</b>	<b>Average Roll Values, Min.</b>
Grab Tensile Strength (lbs.) (weakest principal direction)	ASTM D4632	120
Grab Elongation (%) (weakest principal direction)	ASTM D4632	60
Trapezoidal Tear (lbs.) (weakest principal direction)	ASTM D4533	40
Puncture (lbs.)	ASTM D3786	30
Permittivity (sec-1)	ASTM D4491	0.7
ADS (U.S. Sieve Size)	ASTM D4751	60
U.V. Resistance (% strength retained after 150 hrs. xenon arc)	ASTM D4355	70

2.05 CONCRETE

- A. Cast-in-place concrete for drainage structures shall conform to Section 602 of the Standard Specifications and shall be “Class B” as shown in Table 903.03.06-1 (NJDOT, 2007).
- B. Concrete Pipe Plugs: Concrete for pipe plugs shall be “Class B” as shown in Table 903.03.06-1 (NJDOT 2007).

2.06 INLETS AND CATCH BASINS

- A. Materials for brick or concrete block inlets shall conform to Subsection 602.02.01 of the Standard Specifications, except as modified herein

- B. Pre-cast concrete inlets shall conform to ASTM C913.
- C. Ladder rungs:
  - 1. Conforming to ASTM C478 and AASHTO M199.
  - 2. Manhole steps shall be made of polypropylene plastic over ½" steel reinforcing. Manhole steps shall be Model No. 004-500 or No. 004-501 as manufactured by MA Industries, Peachtree City, Georgia, or equivalent.
- D. Joint construction shall be in accordance with ASTM C443. Water tightness shall be provided by either an all weather butyl material conforming to ASTM C990 and as approved by the engineer or a rubber gasket conforming to ASTM C443. Gasket for precast inlet sections shall conform to ASTM C443 or AASHTO M198.
- E. Rubber gasket pipe to structure seal for pre-cast inlets shall conform to ASTM C923 and be cast integrally in structure wall.
- F. Non-shrink mortar for pipe to structure seal for masonry inlets shall be as approved by *ENGINEER* before construction.

## 2.07 CASTINGS

- A. Castings shall conform to Section 603 of the Standard Specifications and be as shown on the drawings.
- B. Bicycle safe gratings shall be Part No. 2617-0362 (21¾" x 47¾") as manufactured by the Campbell Foundry Company or equivalent.
- C. Alternate inlet curb pieces:
  - 1. Alternate inlet curb pieces shall be as shown in the Campbell or Bridgestate Foundry Catalog, Millennium Edition and designated as shown therein.
  - 2. A Type "N-Eco" curb piece shall have 2" high x 6" wide slots on the vertical face together with a 1" high x full width slot on the vertical face, a non-skid top surface and be 6" or 8" high, as shown.
- D. Extension rings:
  - 1. Extension Rings shall conform to Subsection 909.03 of the Standard Specifications.

2. Steel or extension rings of non-metal material shall not be used.
- E. Acceptable manufacturers:
1. Campbell Foundry Company
  2. Bridgestate Foundry Corporation
  3. Or equivalent.

## 2.08 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Examination of PVC Pipe:
1. Check pipe for following information, which shall be clearly marked on each pipe section:
    - a. Pipe type and SDR number.
    - b. Nominal pipe size.
    - c. The PVC cell classification, for example 12454-B.
    - d. Name or trademark of manufacturer.
    - e. The ASTM Specification designation.

2. Check fittings for the following markings:
    - a. The ASTM Specification designation.
    - b. Manufacturer's name or trademark.
    - c. Nominal size.
    - d. The material designation PVC.
  3. Inspect pipe for defects prior to placement in trench. The pipe and fittings shall be free from visible cracks, holes, foreign inclusions or other injurious defects.
- D. Assure that all materials are of the type specified and are not defective. Unmarked pipe, defective pipe or fittings that cannot be repaired in field to satisfaction of the *ENGINEER*, or pipe and materials not meeting Specifications requirements shall be removed from the site as directed by the *ENGINEER*.
- E. Begin work only when unsatisfactory conditions are corrected.

### 3.02 EXCAVATION FOR TRENCHES

- A. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
- B. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations.
- C. Grub roots and stumps within six inches of outside surface of pipe bottom and sides to minimum depth of six inches below bottom of trench.
- D. Install pipe bedding of material approved for initial backfill in accordance with the details shown on the Plans and as specified herein.

### 3.03 INSTALATION – GENERAL

- A. General: Install the work of this section in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
- B. Lay pipe only in the presence of the *ENGINEER*. *ENGINEER* may order removal and relaying of pipe not so laid.

- C. Fine grade trench bottom so that pipe is supported for its full length.
- D. Lay pipe to lines and grades shown on the Drawings. Face socket end of pipe in direction of pipe laying.
- E. Do not lay pipe on unsuitable material, in wet trench, or in same trench with another pipe or utility.
- F. General procedure for joining pipe:
  - 1. DO NOT USE EXCAVATING EQUIPMENT TO SHOVE PIPE SECTIONS TOGETHER.
  - 2. Hold pipe securely and in proper alignment when joining.
  - 3. Do not disturb previously made joints. Check completed piping to assure joints are intact. Insure backfilling is accomplished without disturbing pipe position.
  - 4. Do not allow earth, stones, or other debris to enter pipe or fittings.

### 3.04 INSTALLATION – PVC PIPE

- A. Place pipe sections on select backfill material and complete joints in accordance with the pipe manufacturer's printed instruction as submitted to the *ENGINEER*.
- B. Backfill and compaction:
  - 1. Initial backfill:
    - a. Initial backfill material shall be soil aggregate designation I-8 conforming to the requirements of Subsection 901.09, Table 901.2 of the Standard Specifications, or stone crushings to conform with AASHTO designation M-43 (ASTM designation D448), size No. 8, 1/8" to 3/8" clean, free flowing and shall meet all ASTM C-33 requirements for quality and soundness.

### 3.05 INSTALLATION – MANHOLES AND INLETS

- A. General:

1. The general method of construction shall conform to Section 603 of the Standard Specifications. The inlets shall be constructed as shown on the Drawings.

B. Inlets:

1. Concrete block shall be laid with broken joints. All horizontal joints, and all keyways of vertical joints shall be filled with 1:2 cement-sand mortar. All horizontal joints shall be not more than  $\frac{3}{8}$ -inch wide. The outside wall shall be plastered with a minimum of  $\frac{1}{2}$ - inch thickness of 1:2 cement-sand mortar, troweled to a smooth finish.
2. To provide temporary drainage at such inlets as the *ENGINEER* may direct, omit one or more blocks in whichever course or courses of the structure as the *ENGINEER* may determine during construction. Prior to construction of base and pavement courses at inlets where blocks are temporarily omitted, place the required blocks and complete the inlet walls.
3. Inlets shall be constructed as follows:
  - a. Inside inlet dimensions: As shown on Plan details.
  - b. Base: 4,000 psi air entrained concrete, 8 inches thick; place on a bedding of  $\frac{3}{4}$ - inch size stone, 8-inches in thickness.
  - c. Walls: 6-inches thick.
  - d. The inlet walls at pipe openings shall be sealed with non-shrink mortar.
  - e. Steps: Place 12-inches on center; and firmly embedded in the inlet wall.
  - f. Grate: Set to the required finished grade elevation, and firmly bedded in 1:2 cement-sand mortar.
  - g. All construction methods shall be subject to approval of the *ENGINEER*.
4. The construction of the inlets shall include all construction necessary to connect the inlets to the existing or proposed storm drainage pipe.



C. Setting castings:

1. Frames shall be well set in mortar, making a watertight joint, and shall be adjusted so that the rim is approximately ¼- inch above finished grade. Cover and frame shall have a shop coat of asphaltic pitch and shall have a field coat of similar paint after the frame is set in final position. Steps shall be provided in the manhole as shown on the Drawings.
2. If castings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The casting shall not be disturbed until the mortar or concrete has set.
3. When castings are to be placed upon previously constructed masonry, the bearing surface of masonry shall be brought to line and grade and present an even bearing surface in order that the entire face or back of the casting will come in contact with the masonry. Castings shall be set in mortar beds or anchored to the masonry as indicated.

3.06 REPAIR OF INLETS

- A. The work shall consist of cleaning the existing structure including the removal and disposal of any debris, replacement of any damaged or missing block and/or brick, replacement of any loose or missing mortar, replacement of any loose or missing ladder rungs, reparging of walls, patching of channels, replacing any missing bolts in the casting, and any work necessary to repair the existing inlets and manholes.
- B. All work and materials shall conform to the Standard Specifications and be approved by the *ENGINEER*.

3.07 RECONSTRUCTION OF EXISTING INLETS

- A. This work shall consist of the removal and disposal of any debris, removing the existing castings, removal of walls and ladder rungs to the necessary depth, disposal of the masonry, reconstruction of the walls, providing new ladder rungs, backfilling with Soil Aggregate I-13, compaction, and setting existing castings at the specified grade.
- B. All work and materials shall comply with the Standard Specifications and be approved by the *ENGINEER*.

3.08 REPLACEMENT BICYCLE SAFE GRATES

- A. Where indicated on the Drawings or as directed by the *ENGINEER*, remove existing grates from existing inlets and replace them with the specified bicycle safe grates. The existing grates shall be removed and disposed of by the Contractor.

3.09 REPLACEMENT OF EXISTING MANHOLE CASTINGS

- A. This work shall consist of the removal and disposal of the existing manhole frame and lid, any debris, removing the existing mortar, furnishing and installing new casting in fresh mortar at the specified grade, and providing new manhole lid.
- B. All work and materials shall comply with the Standard Specifications and be approved by the *ENGINEER*.

3.10 REPLACEMENT CURB PIECES

- A. Remove curb pieces of existing inlets and install new “N-Eco” curb pieces. Dispose of materials removed from existing structure.
- B. Bolt the curb piece to the frame before setting the frame in concrete or mortar. Ensure that all castings are set firm and snug.

3.11 RESETTING CASTINGS AND GRATES

- A. Reset existing castings and grates in strict conformance with utility company or municipal regulations, and as directed in the field by the *ENGINEER*, or the utility owner.
- B. The masonry or concrete of existing structures shall be added to or removed as necessary to conform to new surface grades and elevations.
  - 1. All work shall conform to Section 602 of the Standard Specifications.
  - 2. The reset castings and grates shall be well bedded in mortar, making a watertight joint.
- C. Use of Extension Rings and Frames:
  - 1. Maximum rise of extension rings shall not exceed 4-inches.
  - 2. Minimum rise shall be such that new lids or grates are not required.

3. Extension rings shall be installed in accordance with Section 602 of the Standard Specifications.
- D. Replace in kind, castings and grates damaged due to *CONTRACTOR'S* work operations or due to vehicular traffic at no additional cost to the *OWNER*.

### 3.12 RESETTING WATER VALVE BOXES

- A. Coordinate with local water company for resetting of water valve boxes.

### 3.13 CLEANING

- A. Comply with requirements of *Section 01 74 00, Cleaning and Restorations*.
- B. Remove and dispose of all debris.

## PART 4 - PAYMENT

### 4.01 INLET CONSTRUCTION

- A. Quantity: The quantity for which payment will be made will be the number of each type of inlet constructed as specified and shown on the Drawings. Measurement for depth shall be from lowest invert to finished grate elevation.
- B. Payment: Will be made for the quantity as above determined at the unit prices bid for the various items of *INLETS* in the Proposal which prices shall include excavation, backfill, sheathing, shoring, bracing, pumping, manhole or inlet construction complete, all materials including castings and ladder rungs, grates, curb pieces, plastering, waterproofing, and all else necessary or required, complete as specified and shown on the Drawings.

### 4.02 CORRUGATED POLYETHYLENE PIPE

- A. Quantity: The quantity for which payment will be made will be for the lengths of pipe actually installed as specified and shown on the Drawings, or as directed by the *ENGINEER*.
- B. Payment: The quantity for which payment shall be made will be for the length of pipe as above determined, measured in linear feet, at the price per linear foot bid for the item *CORRUGATED POLYETHYLENE PIPE, TYPE \_\_\_\_* in the

Proposal, which price shall include site clearing; excavation; disposal of surplus or unsuitable material; sheathing, shoring, bracing; pumping; providing pipe, select backfill material, compaction; subgrade preparation, restorations, and all work specified and shown on Drawings.

#### 4.03 CORRUGATED POLYETHYLENE PIPE UNDERDRAINS

- A. Quantity: The quantity for which payment will be made will be for the lengths of pipe actually installed as specified and shown on the Drawings, or as directed by the *ENGINEER*.
- B. Payment: The quantity for which payment shall be made will be for the length of pipe as above determined, measured in linear feet, at the price per linear foot bid for the item *CORRUGATED POLYETHYLENE PIPE UNDERDRAIN* in the Proposal, which price shall include site clearing; excavation; disposal of surplus or unsuitable material; sheathing, shoring, bracing; pumping; providing pipe and construction fabric membrane, select backfill material, compaction; subgrade preparation, restorations, and all work specified and shown on Drawings.

#### 4.04 PRECAST CONCRETE FLARED END SECTION

- A. Quantity: The quantity for which payment will be made will be for the number of units actually constructed as specified and shown on the Drawings.
- B. Payment: Payment will be made for the quantity as above determined, measured in units, at the unit price bid in the Proposal for the various items of *PRECAST CONCRETE FLARED END SECTION*, which price shall include excavation; backfill, compaction, subgrade preparation; sheathing, shoring, bracing, pumping, and providing flared end section, grading of ground surfaces adjacent to end section; and all else necessary or required, complete as specified and shown on Drawings.

#### 4.05 EXCAVATION AND REPAIR OF STORM SEWER PIPE JOINTS

- A. Quantity: The quantity for which payment will be made will be for the number of joints excavated and repaired as specified and shown on the Drawings or as directed by the *ENGINEER*.
- B. Payment: Will be made for the quantity as above determined, measured in units at the unit price bid in the Proposal for the item *STORM SEWER JOINT REPAIR*, which price shall include dewatering; line cutting of pavement; excavation; joint cleaning; mortar; Geotextile fabric; select backfill; compaction; pavement

restoration, disposal of unsuitable or surplus material and all else necessary or required.

#### 4.06 RECONSTRUCTION OF INLETS

- A. Quantity: The quantity for which payment will be made will be for the number of inlets actually reconstructed as specified, measured in the field as shown on the Drawings.
- B. Payment: Will be made for the quantity as above determined, measured in units at the unit price bid in the Proposal for the various items of *INLET RECONSTRUCTION*, which price shall include all work specified or required, complete as specified and shown on the Drawings.

#### 4.07 REPLACEMENT INLET HEAD (Curb Pieces)

- A. Quantity: The quantity for which payment will be made will be for the number of inlet heads (curb pieces) actually replaced (not associated with new inlet construction) as specified, measured in the field, as shown or directed.
- B. Payment: Payment will be made for the quantity as above determined, at the unit price bid in the Proposal for the item of *INLET HEAD, TYPE "N-ECO"*, which prices shall include all materials and labor necessary to replace the existing inlet head and dispose of the existing inlet head as specified.

#### 4.08 REPLACEMENT BICYCLE SAFE GRATES

- A. Quantity: The quantity for which payment will be made will be for the number of grates actually replaced as specified, measured in the field, as shown or directed.
- B. Payment: Payment will be made for the quantity as above determined, at the unit price bid in the Proposal for the various items of *REPLACEMENT BICYCLE SAFE GRATES*, which prices shall include all materials and labor necessary to replace and dispose of the existing grates as specified.

#### 4.09 RESETTING CASTINGS

- A. Quantity: The quantity for which payment will be made will be for the number of castings and valve boxes reset as specified and shown on the Plans, or as directed by the *ENGINEER*.

- B. Payment: Will be made for the quantity as above determined, at the unit price bid in the Proposal for the respective items of *RESET CASTINGS* and *RESET VALVE BOXES*, which price shall include traffic control devices and all else necessary or required, complete as specified and shown on the Plans.

#### 4.10 RELOCATION OF ROOF DRAIN LEADERS

- A. Quantity: The quantity for which payment will be made will be for the number of Schedule 80 PVC leaders actually relocated or replaced as specified and shown on the Drawings, or as directed by the *ENGINEER*.
- A. Payment: The quantity for which payment shall be made will be for the number of roof drain leaders actually relocated as above determined, measured in units, at the price bid for the various items of *RELOCATE ROOF LEADER* in the Proposal, which price shall include site clearing; excavation; disposal of surplus or unsuitable material; providing pipe, select backfill material, compaction; subgrade preparation, restorations, and all work specified and shown on Drawings.

#### 4.11 MANHOLE CASTINGS

- A. Quantity: The quantity for which payment will be made will be for the number of new manhole castings actually installed as specified, measured in the field as shown on the Drawings.
- B. Payment: Will be made for the quantity as above determined, measured in units, at the unit price bid in the Proposal for the item *NEW MANHOLE CASTING*, which price shall include all work specified or required, complete as specified and shown on the Drawings.

\*\*\*\*END OF SECTION\*\*\*\*

Bid No: 2022-06-13

# THE TOWNSHIP OF PISCATAWAY



# PLANS PAGES

Pages 1 of 42



**MARIA E. VALENTE-CAEMMERER**

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Purchasing Agent/Township Secretary

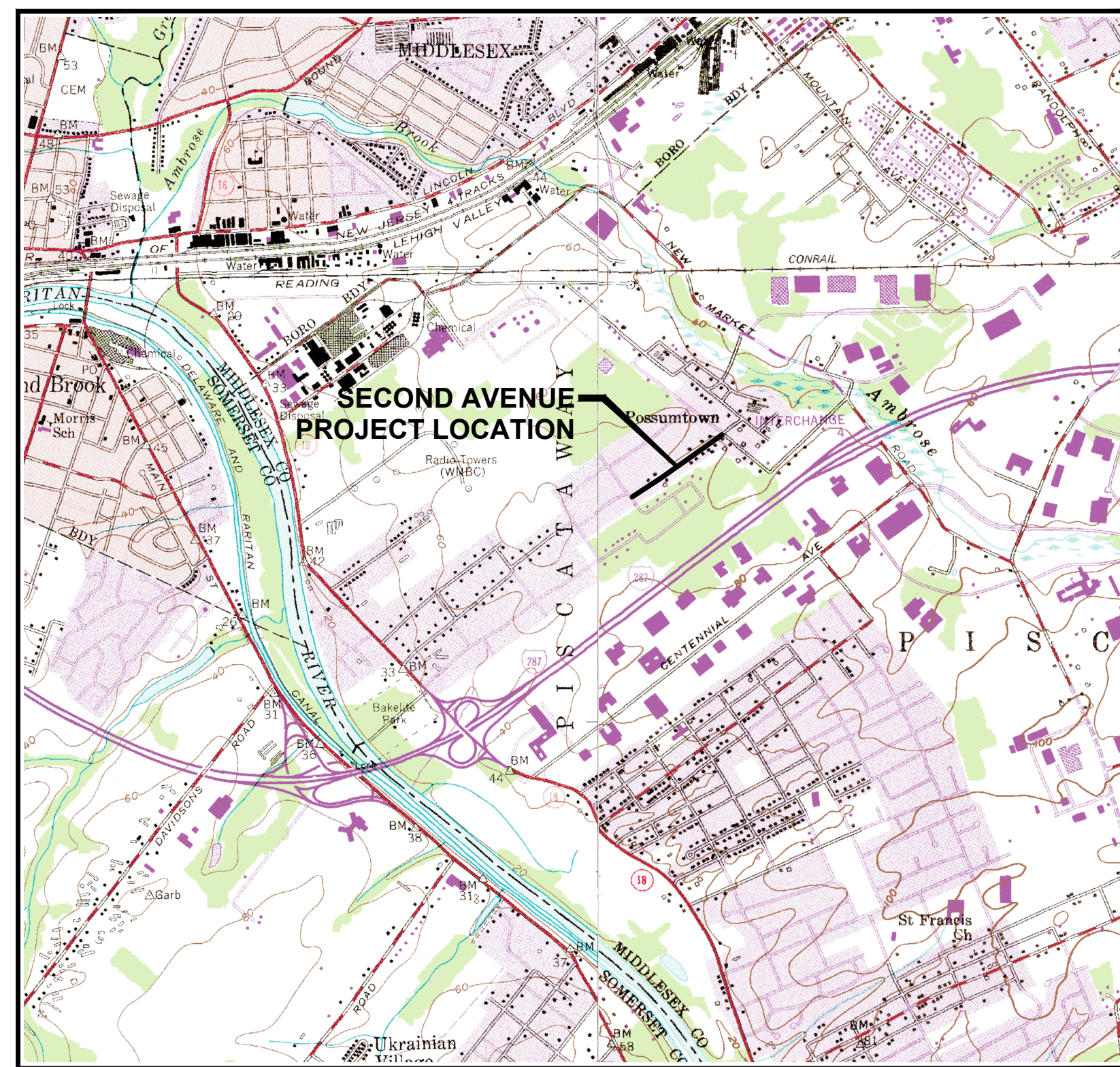


# TOWNSHIP OF PISCATAWAY MIDDLESEX COUNTY, NEW JERSEY

## 2ND AVENUE IMPROVEMENTS PHASE III (ELWOOD STREET TO HANCOCK ROAD)

CONTRACT NO. 2022-1

FEBRUARY 2022



SOURCE: U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE, BOUND BROOK AND PLAINFIELD, NEW JERSEY

### LOCATION MAP

SCALE: 1" = 2000'

2019 NJDOT STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION  
AS AMENDED, TO GOVERN.

### INDEX OF DRAWINGS

1. TITLE SHEET
2. EXISTING CONDITIONS PLAN
3. LEGEND, ABBREVIATIONS AND TYPICAL SECTION
4. ESTIMATE OF QUANTITIES
5. CONSTRUCTION TIE SHEET
6. PLAN - STA. 122+00 THRU STA 129+75
- 6A. PROFILE - STA. 122+00 THRU STA 129+75
7. PLAN - STA. 129+75 THRU STA. 138+73.10
- 7A. PROFILE - STA. 129+75 THRU STA. 138+73.10
8. GRADING PLAN
9. CROSS SECTIONS - STA. 122+00 THRU STA. 123+00
10. CROSS SECTIONS - STA. 123+39.10 THRU STA. 124+00
11. CROSS SECTIONS - STA. 124+50 AND STA. 125+50
12. CROSS SECTIONS - STA. 125+60.60 AND STA. 126+23.80
13. CROSS SECTIONS - STA. 126+50 AND STA. 127+19
14. CROSS SECTIONS - STA. 127+50 AND STA. 128+00
15. CROSS SECTIONS - STA. 128+21.40 AND STA. 128+50
16. CROSS SECTIONS - STA. 128+55.20 THRU STA. 129+00
17. CROSS SECTIONS - STA. 129+22.80 AND STA. 129+50
18. CROSS SECTIONS - STA. 129+69.80 AND STA. 130+00
19. CROSS SECTIONS - STA. 130+24.30 AND STA. 130+50
20. CROSS SECTIONS - STA. 130+80.60 AND STA. 131+00
21. CROSS SECTIONS - STA. 131+03.10 AND STA. 131+50
22. CROSS SECTIONS - STA. 131+90.40 AND STA. 132+00
23. CROSS SECTIONS - STA. 132+29.70 AND STA. 132+50
24. CROSS SECTIONS - STA. 133+00 AND STA. 133+08
25. CROSS SECTIONS - STA. 133+34.90 AND STA. 133+50
26. CROSS SECTIONS - STA. 133+96.60 AND STA. 134+00
27. CROSS SECTIONS - STA. 134+18 AND STA. 134+50
28. CROSS SECTIONS - STA. 135+00 AND STA. 135+08.10
29. CROSS SECTIONS - STA. 135+50 AND STA. 136+00
30. CROSS SECTIONS - STA. 136+24.40 AND STA. 136+50
31. CROSS SECTIONS - STA. 137+00 AND STA. 138+00
32. CROSS SECTIONS - STA. 138+50 AND STA. 139+25
33. MAINTENANCE AND PROTECTION OF TRAFFIC NOTES, DETAILS AND DETOUR PLAN
34. SOIL EROSION AND SEDIMENT CONTROL PLAN
35. SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
36. CONSTRUCTION DETAILS
37. CONSTRUCTION DETAILS
38. LANDSCAPE PLAN - STA. 122+00 THRU STA 129+75
39. LANDSCAPE PLAN - STA. 129+75 THRU STA. 138+73.10

### Utility Contacts

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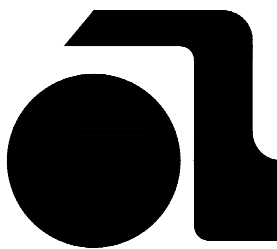
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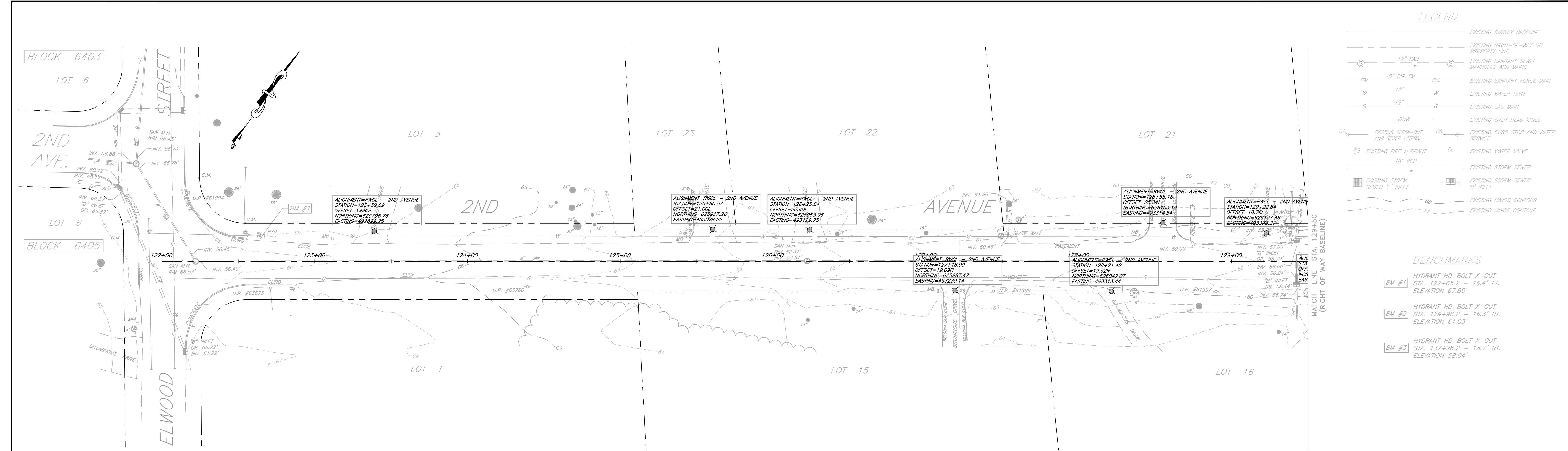
### MAYOR AND COUNCIL

<b>BRIAN C. WAHLER</b>	<b>MAYOR</b>
<b>KAPIL K. SHAH</b>	<b>COUNCIL PRESIDENT</b>
<b>MICHELE LOMBARDI</b>	<b>COUNCIL VICE PRESIDENT</b>
<b>GABRIELLE CAHILL</b>	<b>COUNCILWOMAN</b>
<b>LINWOOD D. ROUSE</b>	<b>COUNCILMAN</b>
<b>FRANK UHRIN</b>	<b>COUNCILMAN</b>
<b>JAMES BULLARD</b>	<b>COUNCILMAN</b>
<b>STEVEN D. CAHN</b>	<b>COUNCILMAN</b>
<hr/>	
<b>TIMOTHY J. DACEY</b>	<b>BUSINESS ADMINISTRATOR</b>
<b>MELISSA SEADER</b>	<b>MUNICIPAL CLERK</b>
<b>GUY GASPARI, PE, PLS, CPWM</b>	<b>DIRECTOR OF PUBLIC WORKS</b>
<b>CHARLES CARLEY, PE</b>	<b>MUNICIPAL ENGINEER</b>

NO RECYCLED MATERIAL SHALL BE  
PERMITTED IN THE H.M.A. SURFACE  
COURSE MIX AND LEVELING COURSE MIX

APPROVED  Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS	DATE	BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDC 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	PROJECT NO.: A-1010-0016-000	SHEET 1
					FILE NO.:	



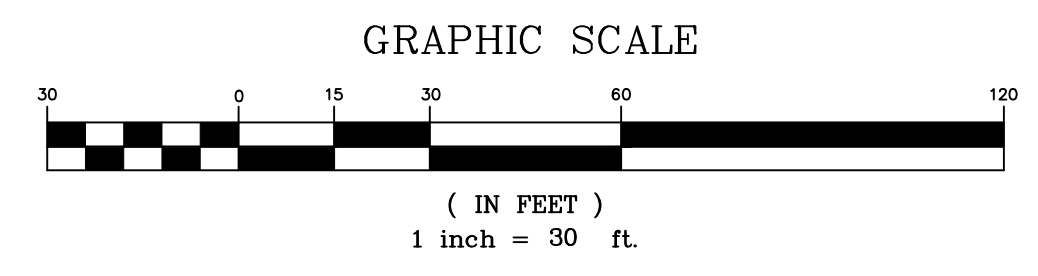
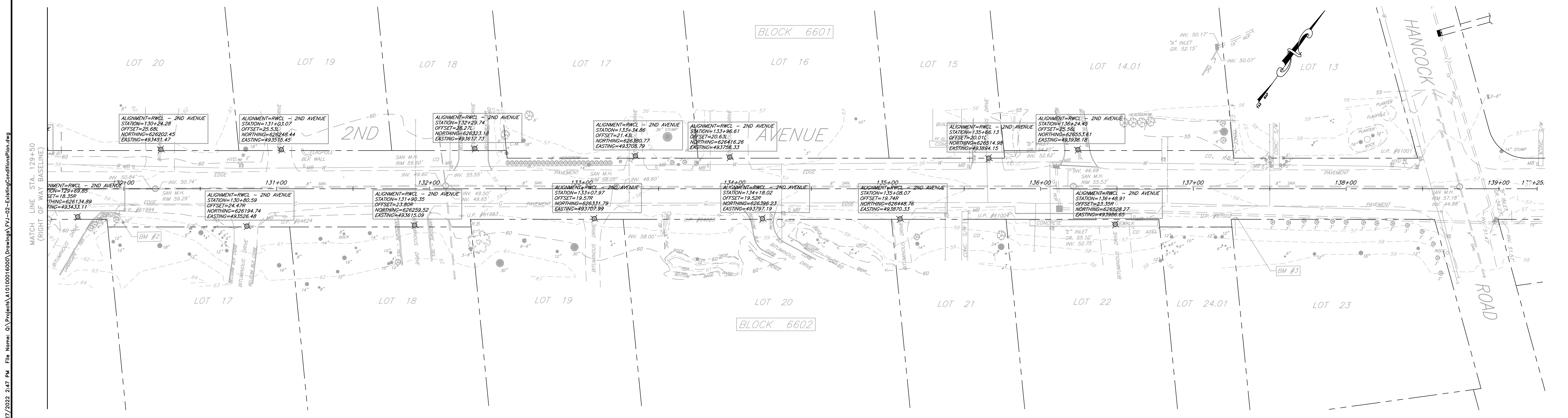


**LEGEND**

	EXISTING SURVEY BASELINE
	EXISTING RIGHT-OF-WAY OR PROPERTY LINE
	12" SAN
	10" DIP FM
	12" W
	10" W
	G
	OHW
	CO
	HYD
	CS
	18" RCP
	EXISTING STORM SEWER
	EXISTING STORM SEWER 'E' INLET
	EXISTING WATER VALVE
	EXISTING STORM SEWER 'B' INLET
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR

**BENCHMARKS**

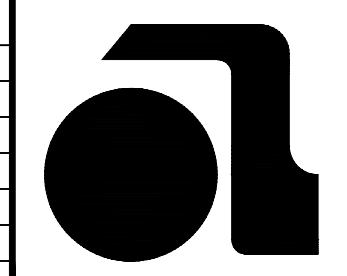
BM #1	HYDRANT HD-BOLT X-CUT STA. 122+65.2 - 16.3' RT. ELEVATION 67.86'
BM #2	HYDRANT HD-BOLT X-CUT STA. 129+96.2 - 16.3' RT. ELEVATION 61.03'
BM #3	HYDRANT HD-BOLT X-CUT STA. 137+28.2 - 18.7' RT. ELEVATION 58.04'



- NOTES:**
1. A SURVEY WAS PERFORMED BY ALAIMO GROUP, MARCH 2021.
  2. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

APPROVED:  
**Richard A. Alaimo**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



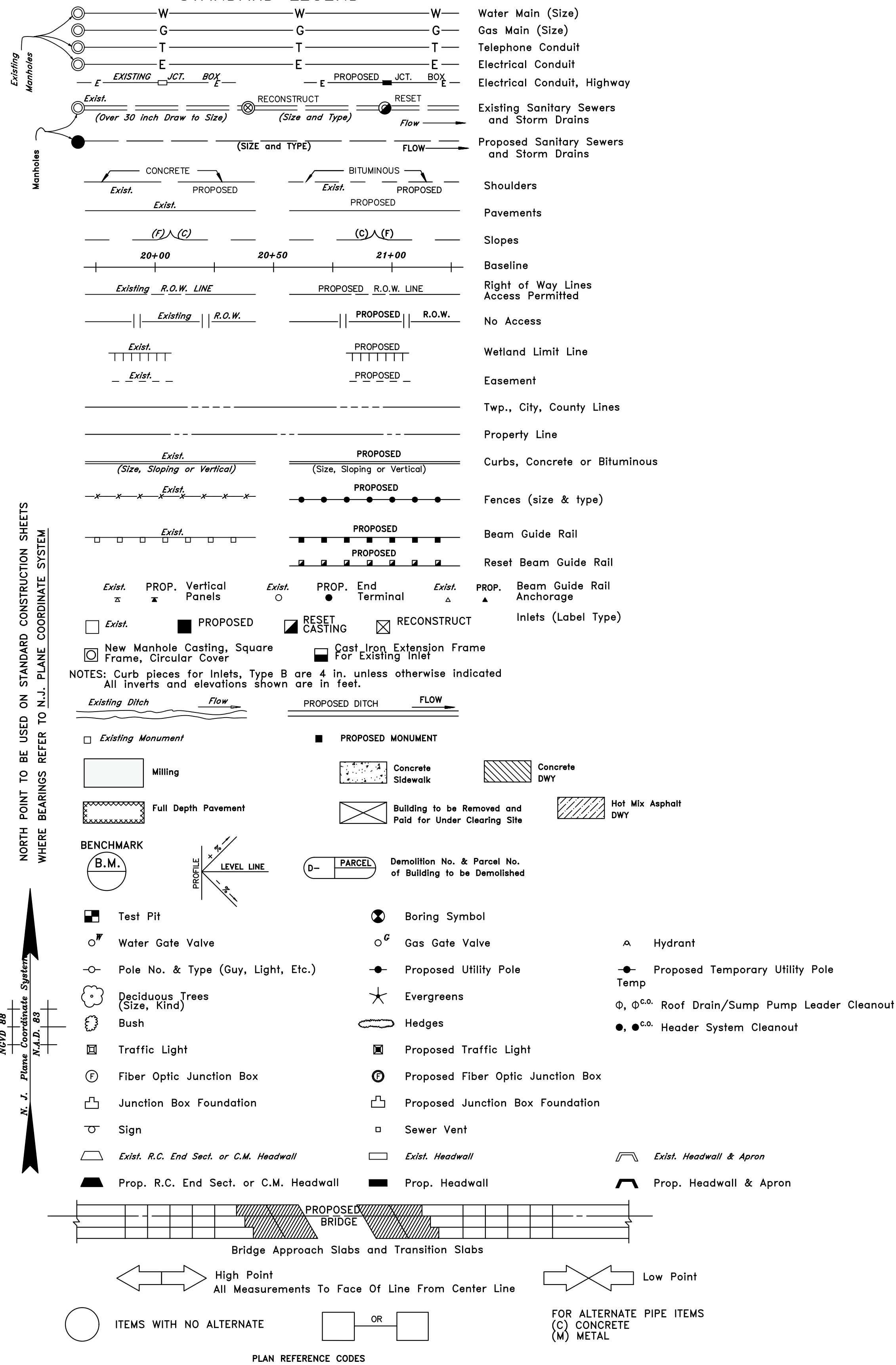
**ALAIMO GROUP**  
Consulting Engineers  
NJDC 24GA2988400  
200 HIGH STREET MOUNT HOLLY, N.J.  
2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III  
(ELWOOD STREET TO HANCOCK ROAD)**  
**EXISTING CONDITIONS PLAN  
STA. 122+00 THRU STA. 138+73.10**  
SCALE: 1" = 30'

CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>2</b>
PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	CHECKED BY: <b>PAC</b>
CONTRACT NO.: <b>2022-1</b>	DEPT. HEAD:	FILE NO.:

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NEW JERSEY DEPARTMENT OF TRANSPORTATION  
STANDARD LEGEND



ABBREVIATIONS

B. B.L.	BENCH MARK	J.B.	JUNCTION BOX	R.C.P.	REINFORCED CONCRETE PIPE
B.M.	BITUMINOUS	LT., RT.	LEFT, RIGHT	ROW, R.O.W.	RIGHT OF WAY
BIT., BITUM.	BOTTOM OF CURB	L.O.C.	LIMIT OF CONSTRUCTION	R.R.	RAILROAD
BC	BUILDING	L.O.P.	LIMIT OF PAVEMENT (PAVING)	RTE., RT.	ROUTE
BLDG.	CENTERLINE	L.O.M.	LIMIT OF MILLING	SAN.	SANITARY
C. C.L.	CAST IRON PIPE	M.B.	MAILBOX	SOWK.	SIDEWALK
C.I.P.	CLEAN OUT	MAX.	MAXIMUM	S.H.D.	STATE HIGHWAY DEPARTMENT
C.O.	CORRUGATED METAL PIPE	M.E.	MEET EXISTING	SHLD.	SHOULDER
C.M.P.	CONCRETE	MIN.	MINIMUM	S.L.	SURVEY LINE
CONC.	PROPOSED CONCRETE MONUMENT (RIGHT-OF-WAY)	NO.	NUMBER	STY.	STORY
C.M.	CULVERT	N.T.S.	NOT TO SCALE	T	TANGENT
CULV.	CUT SLOPE LABEL	PAV.T.	PAVEMENT	TBA	TO BE ABANDONED
C	CURB RAMP	PC, P.C.	POINT OF CURVATURE	TBR	TO BE REMOVED
CR	DIAMETER	PI	POINT OF INTERSECTION	TBRS	TO BE RESET
D. DIA.	DROP CURB	P.G.L.	PROFILE GRADE LINE	TC	TOP OF CURB
D.C.	DEPRESSED CURB DRIVEWAY	P.L.	PROPERTY LINE, PROFILE LINE	TDP	TOP OF DEPRESSED CURB
DEP., DP	EASTBOUND, WESTBOUND	PK	PARKER KAYLON MASONRY NAIL	TEL.	TELEPHONE
DWY	NORTHBOUND, SOUTHBOUND	PCC, P.C.C.	POINT OF COMPOUND CURVATURE	TEMP.	TEMPORARY
E.B., W.B.	ELEVATION	P.O.C.	POINT ON CURVE	TCE, T.C.E.	TEMPORARY CONSTRUCTION EASMENT
N.B., S.B.	EXISTING	P.O.L.	POINT ON LINE	THK., TH.	THICK
EL., ELEV.	EXISTING	P.O.T.	POINT ON TANGENT	TYP.	TYPICAL
EXIST.	FACE OF CURB	PRC, P.R.C.	POINT OF REVERSE CURVE	U.D.	UNDERDRAIN
FC	FILL SLOPE LABEL	PROP.	PROPOSED	UP, U.P.	UTILITY POLE
GR.	GRATE	PSE	PROPOSED PERMANENT SIDEWALK EASEMENT	VCT	VERTICAL CURB TRANSITION
H.C.	HANDICAP RAMP	PRE	PROPOSED RIGHT-OF-WAY EASEMENT	VAR.	VARIABLE, VARIES
HT.	HEIGHT	PT, P.T.	POINT OF TANGENCY	WM	WATER METER
H.W.	HEADWALL	PVC, P.V.C.	POLYVINYL CHLORIDE PIPE, POINT OF VERTICAL CURVATURE		
HYD.	HYDRANT	PVI, P.V.I.	POINT OF VERTICAL INTERSECTION		
INV.	INVERT	PVT, P.V.T.	POINT OF VERTICAL TANGENCY, PAVEMENT		
IP	IRON PIN	R	RADIUS		
		RCCP, R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE		
		T.C.E.	TEMPORARY CONSTRUCTION EASEMENT		

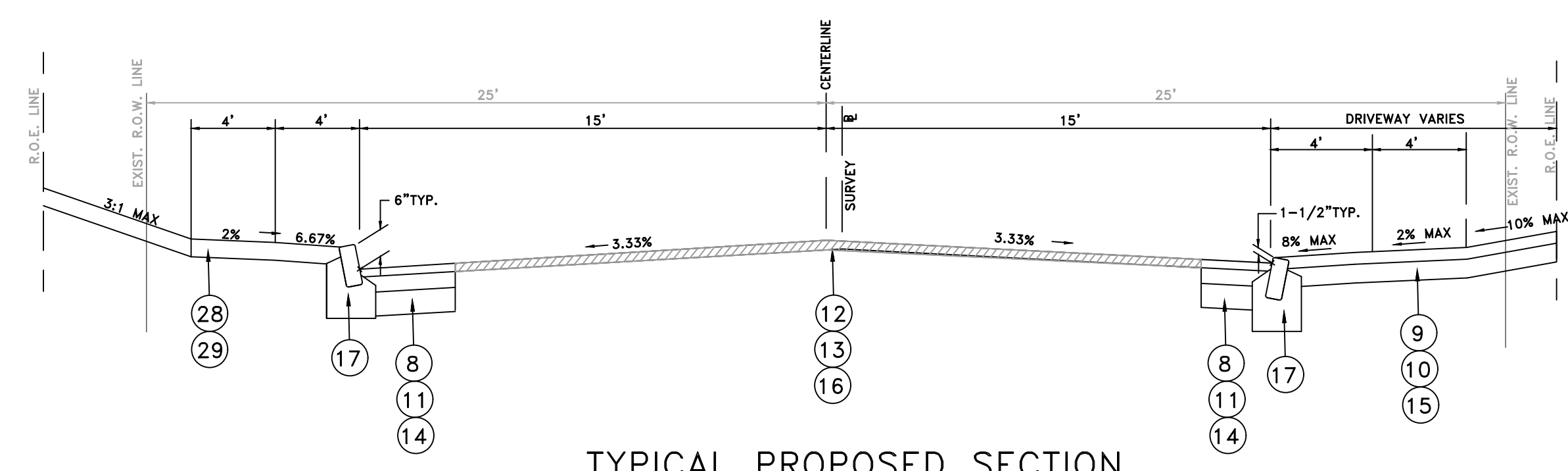
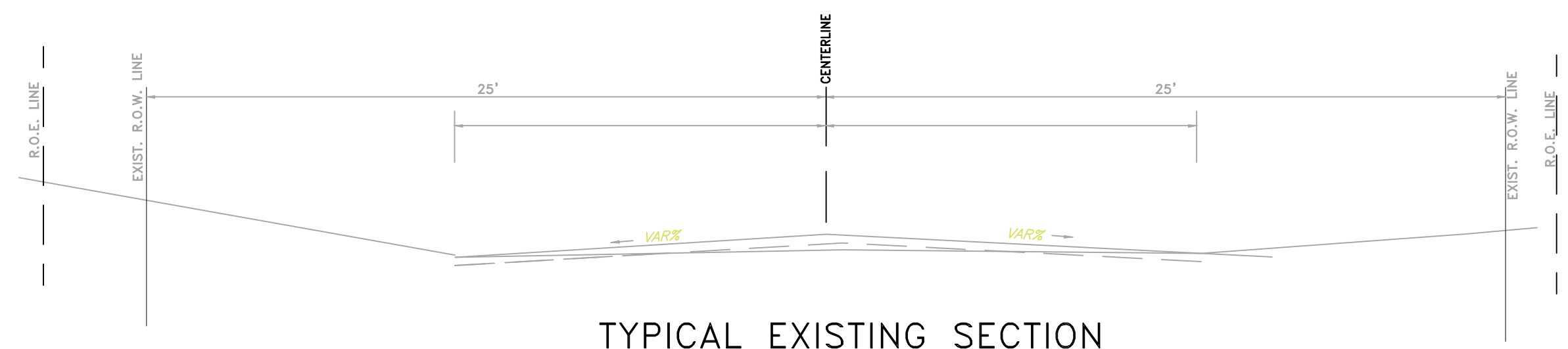
**LEGEND**

**EXISTING**

WV = WATER VALVE  
 GV = GAS VALVE  
 MH = MANHOLE  
 Type "B" INLET  
 Type Double "B" INLET  
 U.P. # 61465 UTILITY POLE  
 CITY INLET #2 TEXT INDICATES EXISTING ITEM  
 --- PROPERTY LINE  
 TC=42.30 EXISTING TOP OF CURB ELEV.  
 TDC=42.30 EXISTING TOP OF DEPRESSED CURB ELEV.

**PROPOSED**

PRO- DRIVEWAY, 6" THK.  
 (10) CONSTRUCTION ITEM NUMBER  
 L.O.C. LIMIT OF CONSTRUCTION  
 DC DEPRESSED CURB  
 ROADWAY EXCAVATION  
 PAVEMENT MILLING  
 T.C.E. TEMPORARY CONSTRUCTION EASEMENT  
 TS TOP/TOE SLOPE  
 R.O.W. RIGHT - OF - WAY  
 R.O.E. RIGHT - OF - ENTRY AREA



CONSTRUCTION NOTES:

- ALL MAIL BOXES AND PAPER BOXES ARE TO BE RESET IN ACCORDANCE WITH US POSTAL REGULATIONS AND TO BE PAID FOR UNDER CLEARING SITE.
  - REFER TO PROFILE FOR CENTERLINE ELEVATIONS REFER TO CROSS SECTIONS FOR GUTTERLINE AND TOP CURB ELEVATIONS
  - ALL EXISTING ROOF LEADERS SHALL BE PIPED TO EXISTING STORM INLETS OR MANHOLES, PROVIDE 6" TO 8" PVC STORM PIPE AND CLEANOUTS AS NEEDED.
  - THE CONTRACTOR IS RESPONSIBLE TO CONTACT ALL RESPECTIVE UTILITY COMPANIES TO DETERMINE THEIR SCHEDULE FOR PERFORMING UTILITY RELOCATION AND INSTALLATION WORK AND SHALL SCHEDULE THE WORK ACCORDINGLY SO AS NOT TO INTERFERE WITH THE WORK OF THE UTILITY COMPANIES.
  - THE CONTRACTOR IS RESPONSIBLE FOR ANY COST ASSOCIATED WITH POTENTIAL UTILITY RELOCATION INCLUDING BUT NOT LIMITED TO: POLES, HYDRANTS, VALVES, BOXES, ETC.
- (8) = ROADWAY EXCAVATION UNCLASSIFIED, 13" DEPTH  
 (9) = ROADWAY EXCAVATION UNCLASSIFIED, VAR. DEPTH, DRIVEWAYS  
 (9A) = EXCAVATION TEST PITS  
 (10) = DENSE GRADED AGGREGATE, 4" THK. (DRIVEWAYS)  
 (11) = DENSE GRADED AGGREGATE, 6" THK.  
 (12) = PAVEMENT MILLING, 0" TO 4" DEPTH  
 (13) = HMA 9.5M64 SURFACE COURSE, 2" THK.  
 (14) = HMA 19M64 BASE COURSE, 5" THK.  
 (15) = HMA 9.5M64 SURFACE COURSE, 4" THK. (DRIVEWAYS)  
 (16) = HMA 19M64 LEVELING COURSE, VAR. THK.  
 (17) = BELGIUM BLOCK CURB  
 (28) = TOPSOIL, 4" THICK  
 (29) = FERTILIZER, SEED AND STRAW MULCH

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APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	2ND AVENUE IMPROVEMENTS PHASE III (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: FEB. 2022 DESIGNED BY: JRD/KS DRAWN BY: DMM CHECKED BY: FILE NO.:
	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY		PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b>	<b>LEGEND, ABBREVIATIONS AND TYPICAL SECTION</b>	SCALE: NONE


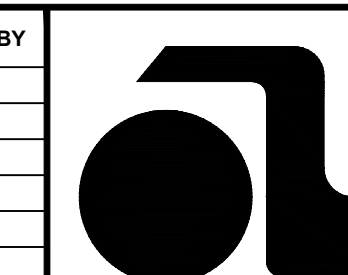


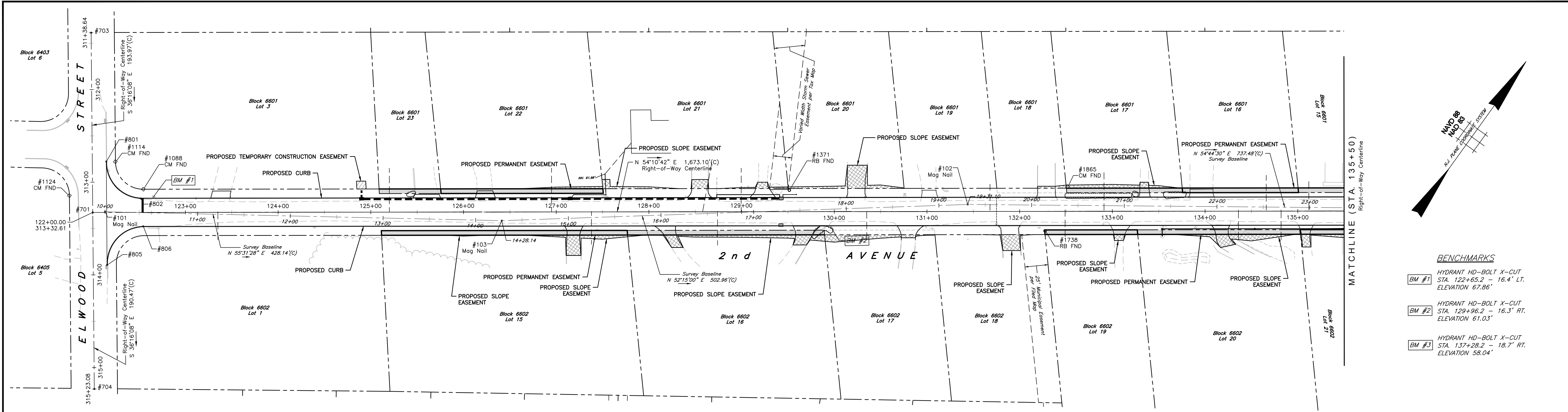
# ESTIMATE OF QUANTITIES

ITEM No.	DESCRIPTION	NJ DOT SECTION	UNIT	SECOND AVENUE																SHEET TOTALS	IF AND WHERE DIRECTED	CONTRACT QUANTITY	AS-BUILT QUANTITY	ITEM No.
				PLAN SHT. NO. 6 STA. 122+15± THRU STA. 129+75		PLAN SHT. NO. 7 STA. 129+75 THRU STA. 138+59±																		
				AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN					
<b>ROADWAY</b>																								
1	CONSTRUCTION LAYOUT	157	LUMP SUM																		LUMP SUM	1		
2	TEMPORARY SOIL EROSION AND SEDIMENT CONTROL	158	LUMP SUM																		LUMP SUM	2		
3	CONSTRUCTION SIGNS	159	S.F.																			3		
4	BREAKAWAY BARRICADES	159	UNIT																			4		
5	TRAFFIC CONES	159	UNIT																			5		
6	POLICE TRAFFIC DIRECTORS	159	ALLOWANCE																		ALLOWANCE	6		
6A	POLICE TRAFFIC DIRECTOR WITH POLICE VEHICLES	159	ALLOWANCE																		ALLOWANCE	6A		
7	SITE CLEARING & RESTORATION INCL. RELOCATE / REPLACE LANDSCAPING	201	LUMP SUM																		LUMP SUM	7		
8	EXCAVATION UNCLASSIFIED, 13" DEPTH	202	C.Y.		1,066		1,231												2,297	153	2,450	8		
9	EXCAVATION UNCLASSIFIED, VAR. DEPTH	202	C.Y.		387		484												871	179	1050	9		
9A	EXCAVATION, TEST PITS ( if and where directed ) ( 216 CF/EACH )	202	UNIT																	15	15	9A		
9B	EXCAVATION, REGULATED MATERIAL ( if and where directed )	202	TON																	100	100	9B		
9C	DISPOSAL of REGULATED MATERIAL INCLUDE SOIL TESTING & SOIL ANALYSIS ( if and where directed )	202	ALLOWANCE																		ALLOWANCE	9C		
10	DENSE GRADED AGGREGATE, 4" THK. (DRIVEWAYS)	302	S.Y.		191		400												591	34	625	10		
11	DENSE GRADED AGGREGATE, 6" THK.	302	S.Y.		2,610		2,980												5,590	35	5625	11		
12	NO BID ITEM																					12		
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THK.	401	TON		310		351												661	14	675	13		
14	HOT MIX ASPHALT 19M64 BASE COURSE, 5" THK.	401	TON		768		877												1,645	15	1,660	14		
15	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 4" THK. (DRIVEWAYS)	401	TON		45.5		98												143.5	16.5	160	15		
16	CONCRETE SIDEWALK, 4" THK.	606	S.Y.				14												14	11	25	16		
17	GRANITE BLOCK CURB	607	L.F.		1,550		1,917												3,467	33	3,500	17		
17A	DEPRESSED CONCRETE CURB at ADA RAMP	607	L.F.		8		8												16	8	24	17A		
18	NO BID ITEM																					18		
19	TRAFFIC STRIPES, LONG LIFE, THERMOPLASTIC, 24" WIDE	610	L.F.		15		15												30		30	19		
19A	TRAFFIC STRIPES, LONG LIFE, THERMOPLASTIC, 4" WIDE	610	L.F.		760		885												1,695	55	1,700	19A		
20	RESET CASTING	652	UNIT		2		5												7		7	20		
21	RESET WATER VALVE BOXES	652	UNIT		3		5												8		8	21		
22	RECONSTRUCT INLET TYPE 'B'	602	UNIT		1		1												2		2	22		
23	BICYCLE SAFE GRATE	602	UNIT				2												2		2	23		
24	INLET HEAD, TYPE 'N-ECO' (DRAINS TO WATERWAY) & BICYCLE SAFE GRATE	602	UNIT		2		1												3		3	24		
25	INLET, TYPE 'B', 0' TO 6' DEPTH	602	UNIT		3														3		3	25		
26	NO BID ITEM																					26		
27	INLET REPAIR	602	UNIT				1												1		1	27		
28	RELOCATE SIGNS WITH ANCHOR PLATES	612	UNIT				1												1		1	28		
29	TOPSOILING, 4" THK.	804	S.Y.		1,429		1,753												3,182	118	3,300	29		
30	FERTILIZING, SEED AND STRAW MULCH	804	S.Y.		1,429		1,753												3,182	118	3,300	30		
31	NO BID ITEM																					31		
32	4" PVC ROOF LEADER LATERAL AND CLEANOUT	601	L.F.		60		58												118	12	130	32		
33	8" PIPE AND CLEANOUT	601	L.F.		48		268												48		48	33		
34	TREE REMOVAL, 6" TO 18" DIA.	802	UNIT		4		6												10		10	34		
35	TREE REMOVAL, 18" TO 36" DIA.	802	UNIT		1														1		1	35		
36	LANDSCAPING (NEW SHADE TREES) (if and where directed)	811	UNIT		10		10												20		20	36		
37	RESET PROPERTY CORNER MONUMENTATION (IN-KIND)	157	UNIT				4												4		4	37		
38	RESET BRICK RETAINING WALL		L.F.				15												15		15	38		
39	REPLACEMENT/RESET DRIVEWAY PAVERS		S.F.																			39		
40	DRIVEWAY RESTORATION ( IN-KIND )		S.Y.		59														59	16	75	40		
41	RESET LANDSCAPEING TIES		L.F.		25		56												81	19	100	41		
42	15" REINFORCED CONCRETE FLARED END SECTION	601	UNIT		1														1		1	42		
43	15" RCP, CL-IV	601	L.F.		455														455	45	500	43		
44	ASPHALT PRICE ADJUSTMENT	160	ALLOWANCE																		ALLOWANCE	44		
45	FUEL PRICE ADJUSTMENT	160	ALLOWANCE																		ALLOWANCE	45		
46	UNEXPECTED CONSTRUCTION WORK (if and where directed)		ALLOWANCE																		ALLOWANCE	46		
47	TACK COAT	401	GALLON		425		425												850		850	47		
48	SANITARY SEWER PIPE & CLEANOUT (if and where directed)	652	L.F.		100														100		100	48		

**NOTE:**  
 1. THE ESTIMATE OF QUANTITIES IS PROVIDED FOR THE CONTRACTORS CONVENIENCE IN DETERMINING THE APPROXIMATE SCOPE OF WORK ASSOCIATED WITH EACH STREET. SHOULD A DISCREPANCY OCCUR BETWEEN THE QUANTITIES SHOWN ON THE DRAWINGS AND THE QUANTITIES SHOWN IN THE PROPOSAL SECTION THOSE SHOWN IN THE PROPOSAL SECTION SHALL GOVERN.  
 2. IF AND WHERE DIRECTED QUANTITY WILL ONLY BE PAID IF CONSTRUCTED.

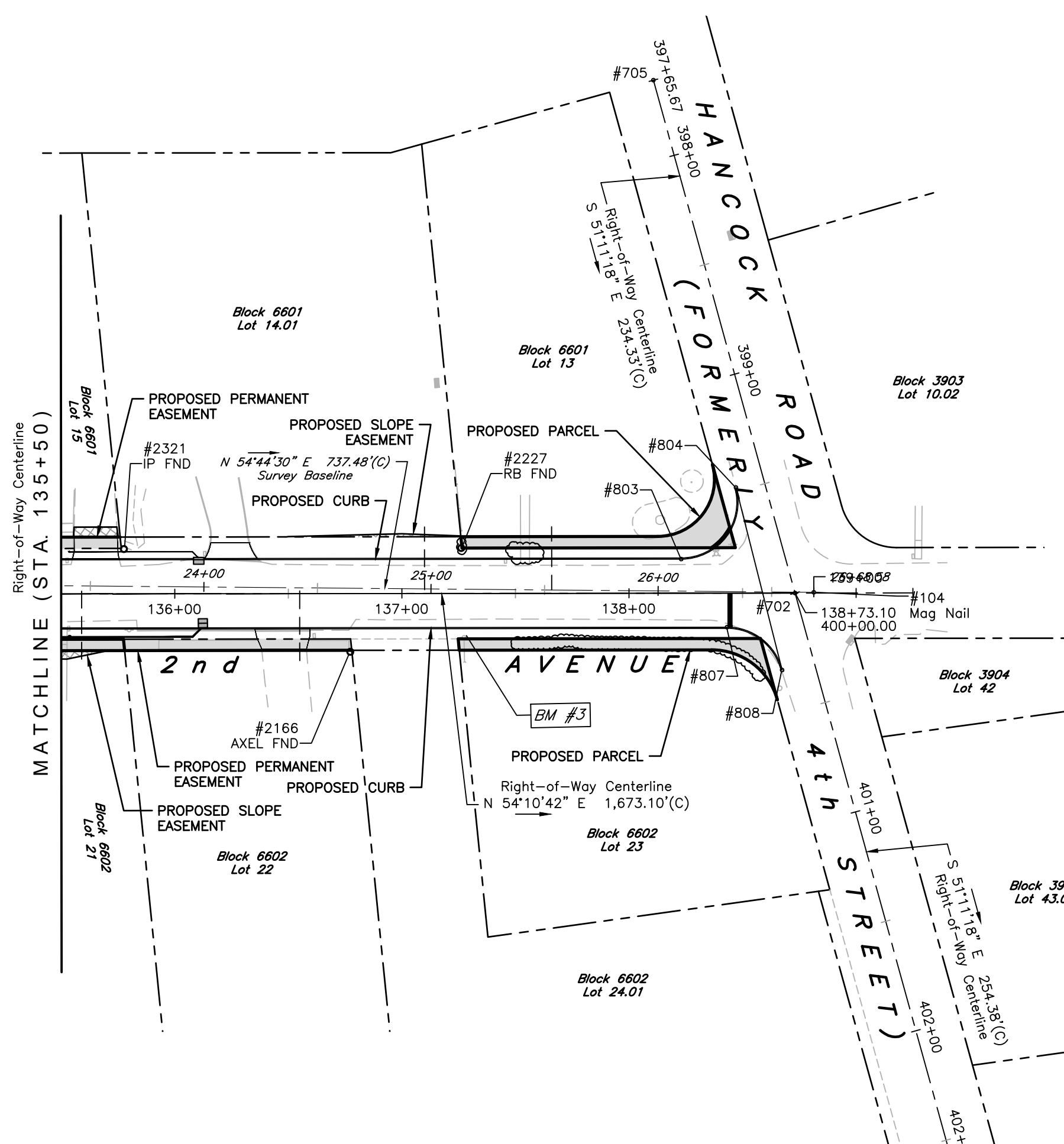
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APPROVED: <div style="text-align: center;">   <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY										 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)  <b>ESTIMATE OF QUANTITIES</b>  SCALE: NONE	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>  PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>JRD/KS</b> DRAWN BY: <b>JRD</b> CHECKED BY: <b>JRD</b> DEPT. HEAD: <b>JRD</b>	SHEET <b>4</b>  FILE NO.:
NO.	DATE	BY																



**BENCHMARKS**

BM #1	HYDRANT HD-BOLT X-CUT STA. 122+65.2 - 16.4' LT. ELEVATION 67.86'
BM #2	HYDRANT HD-BOLT X-CUT STA. 129+96.2 - 16.3' RT. ELEVATION 61.03'
BM #3	HYDRANT HD-BOLT X-CUT STA. 137+28.2 - 18.7' RT. ELEVATION 58.04'



**CONSTRUCTION POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
801	625752.3580	492777.8894	CURB - PC/MATCH	RWCL - 2nd Avenue	122+14.69	-54.95' L
802	625741.6404	492831.3091	CURB - PT	RWCL - 2nd Avenue	122+51.73	-15.00' L
803	626661.2666	494105.3868	CURB - PC	RWCL - 2nd Avenue	138+23.03	-15.00' L
804	626700.9215	494106.5433	CURB - END/MATCH	RWCL - 2nd Avenue	138+47.18	-46.48' L
805	625662.2398	492843.7853	CURB - PC/MATCH	RWCL - 2nd Avenue	122+15.38	56.68' R
806	625718.8786	492851.0330	CURB - PT	RWCL - 2nd Avenue	122+54.40	15.00' R
807	626648.7106	494139.2503	CURB - PC	RWCL - 2nd Avenue	138+43.14	15.00' R
808	626647.5589	494169.9927	CURB - END/MATCH	RWCL - 2nd Avenue	138+67.39	33.93' R

RWCL = RIGHT-OF-WAY CENTERLINE

**SURVEY BASELINE POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
101	625707.5351	492808.4657	BEGIN	SBL - 2nd Avenue	10+00.00	0.00'
103	625949.8842	493161.4080	PI	SBL - 2nd Avenue	14+28.14	0.00'
102	626257.8081	493559.0963	PI	SBL - 2nd Avenue	19+31.10	0.00'
104	626683.5278	494161.2868	END	SBL - 2nd Avenue	26+68.58	0.00'

SBL = SURVEY BASELINE

**RIGHT-OF-WAY CENTERLINE POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
701	625699.2020	492798.1430	BEGIN	RWCL - 2nd Avenue	122+00.00	0.00'
702	626678.4086	494154.7654	END	RWCL - 2nd Avenue	138+73.10	0.00'

RWCL = RIGHT-OF-WAY CENTERLINE

**SURVEY BASELINE POINT TABLE [TIED TO RIGHTS-OF-WAY CENTERLINE]**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
101	625707.5351	492808.4657	BEGIN	RWCL - 2nd Avenue	122+13.25	-0.72' L
103	625949.8842	493161.4080	PI	RWCL - 2nd Avenue	126+41.27	9.34' R
102	626257.8081	493559.0963	PI	RWCL - 2nd Avenue	131+43.95	-7.58' L
104	626683.5278	494161.2868	END	RWCL - Hancock Road	400+01.87	-8.08' L

RWCL = RIGHT-OF-WAY CENTERLINE

**RIGHT-OF-WAY CENTERLINE POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
703	625855.5867	492683.3977	BEGIN	RWCL - Elwood Street	311+38.64	0.00'
701	625699.2020	492798.1430	INT	RWCL - Elwood Street	313+32.61	0.00'
704	625545.6388	492910.8180	END	RWCL - Elwood Street	315+23.08	0.00'

RWCL = RIGHT-OF-WAY CENTERLINE

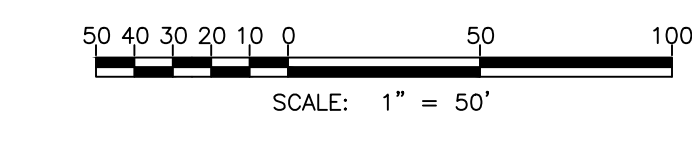
**RIGHT-OF-WAY CENTERLINE POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
705	626825.2763	493972.1750	BEGIN	RWCL - Hancock Road	397+65.67	0.00'
702	626678.4086	494154.7654	INT	RWCL - Hancock Road	400+00.00	0.00'
706	626518.9723	494352.9815	END	RWCL - Hancock Road	402+54.38	0.00'

RWCL = RIGHT-OF-WAY CENTERLINE

**SURVEY CONTROL POINT TABLE**

POINT No.	NORTHING	EASTING	DESCRIPTION	BASELINE	STATION	OFFSET
1124	625699.2479	492767.0705	CM FND	SBL - 2nd Avenue	9+61.18	-16.60' L
1114	625757.8577	492785.9005	CM FND	SBL - 2nd Avenue	10+09.88	-54.26' L
1088	625751.4123	492827.7610	CM FND	SBL - 2nd Avenue	10+40.74	-25.25' L
1371	626157.8347	493393.9789	RB FND	SBL - 2nd Avenue	17+39.34	-22.04' L
1738	626283.4596	493643.4957	RB FND	SBL - 2nd Avenue	20+14.83	27.78' R
1865	626336.3701	493635.2070	CM FND	SBL - 2nd Avenue	20+38.60	-20.21' L
2321	626521.4664	493903.6992	IP FND	SBL - 2nd Avenue	23+64.69	-16.36' L
2166	626542.9961	494010.9905	AXEL FND	SBL - 2nd Avenue	24+64.73	27.99' R
2227	626608.6331	494023.9218	RB FND	SBL - 2nd Avenue	25+13.18	-18.14' L



- NOTES:**
- A SURVEY WAS PERFORMED BY ALAIMO GROUP, FEBRUARY 2021.
  - UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

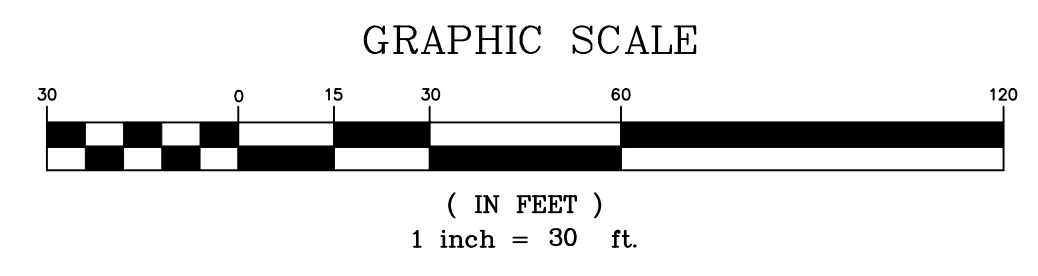
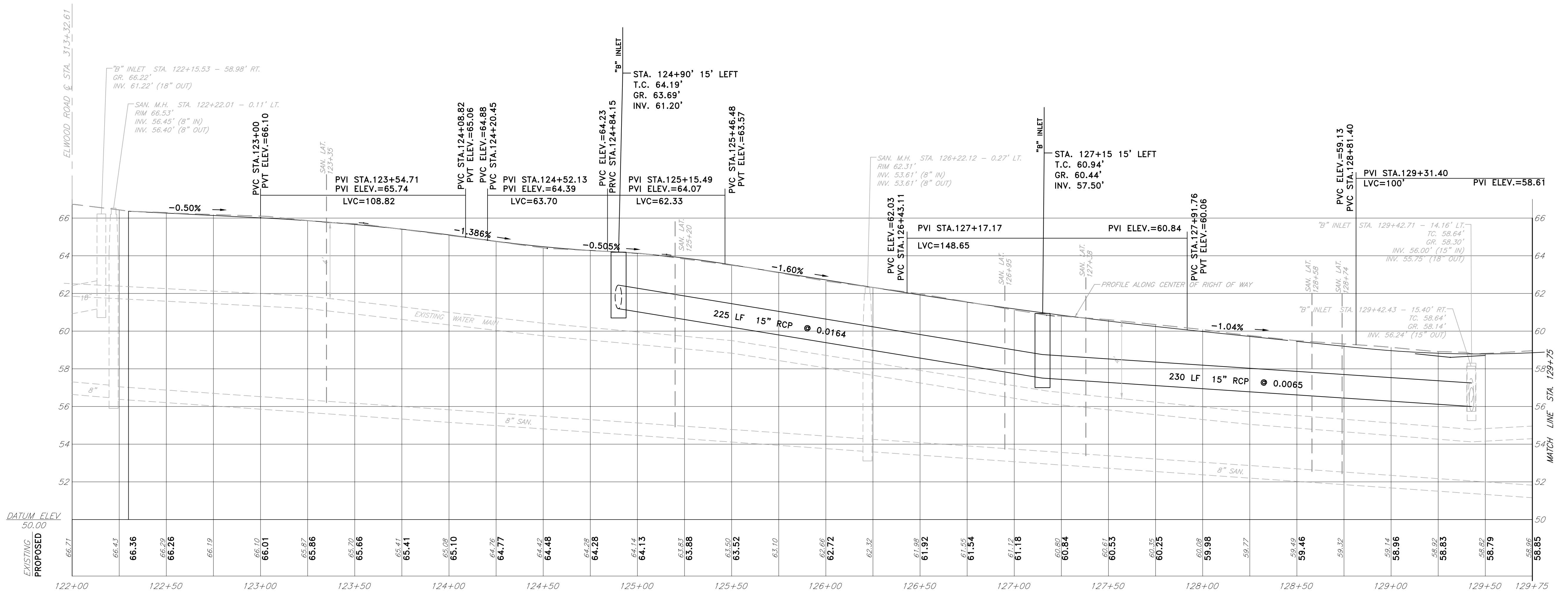
APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>5</b>
	<b>CONSTRUCTION TIES</b>		PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	CHECKED BY: <b>CFC</b>	

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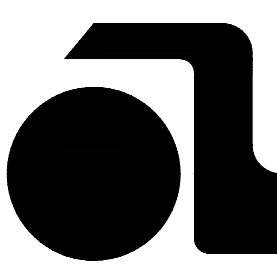
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APPROVED:

**Richard A. Alaimo**  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



**ALAIMO GROUP**  
 Consulting Engineers  
 NJDCA 24GA27988400

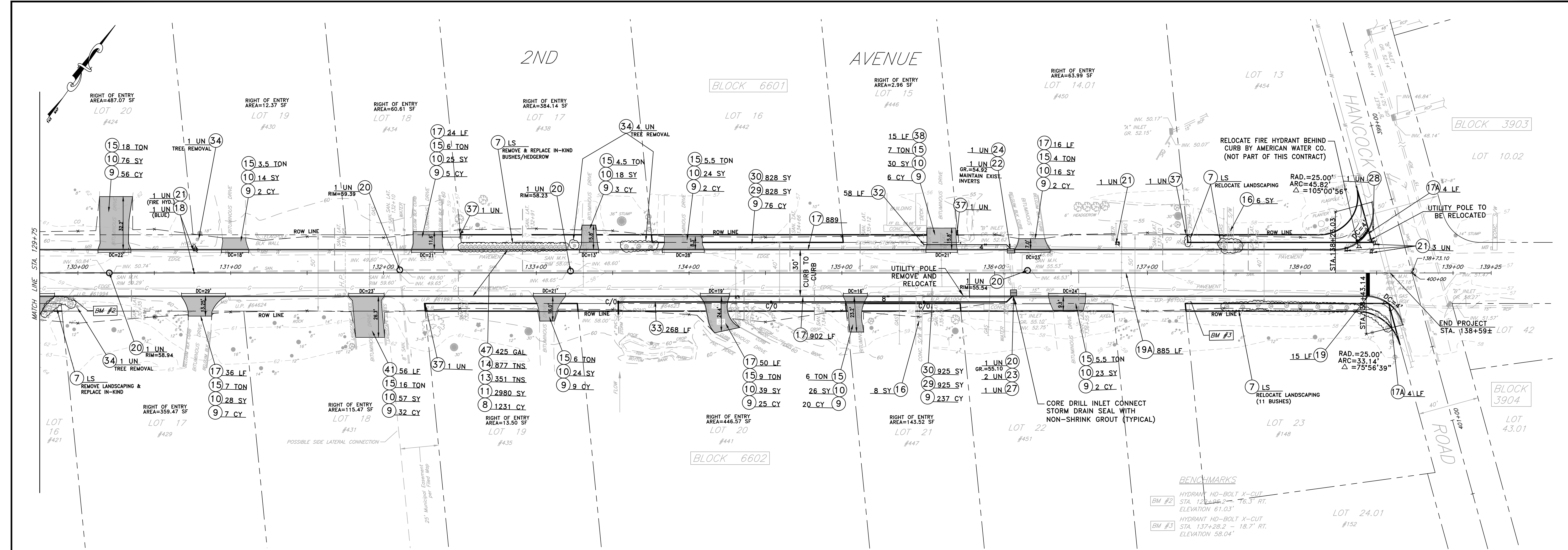
200 HIGH STREET MOUNT HOLLY, N.J.  
 2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III**  
 (ELWOOD STREET TO HANCOCK ROAD)

**PROFILE**  
 STA. 122+00 THRU STA. 129+75

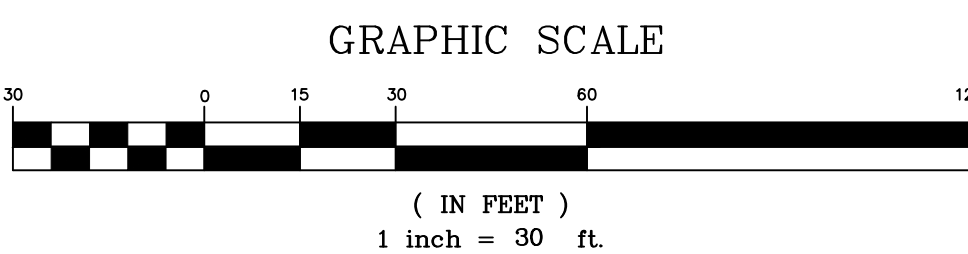
SCALE: HORIZ.: 1" = 30' VERT.: 1" = 3'

CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>		DATE: <b>FEB, 2022</b>	SHEET <b>6A</b>
PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY		PROJECT NO.: <b>A-1010-0016-000</b>	FILE NO.:
DESIGNED BY: <b>KS/JRD</b>		CHECKED BY: <b>PAC/DMM</b>	DEPT. HEAD:
DRAWN BY: <b>PAC/DMM</b>		CONTRACT NO.: <b>2022-1</b>	



**LEGEND**

- EXISTING**
- WV \* WATER VALVE
  - GV \* GAS VALVE
  - MH O MANHOLE
  - INLET TYPE "B" INLET
  - INLET TYPE DOUBLE "B" INLET
  - U.P. # 61465 UTILITY POLE
  - CITY INLET #2 TEXT INDICATES EXISTING ITEM
  - PROPERTY LINE
  - TC=42.30 EXISTING TOP OF CURB ELEV.
  - TDC=42.30 EXISTING TOP OF DEPRESSED CURB ELEV.
- PROPOSED**
- PROP- DRIVEWAY, 6" THK.
  - (10) CONSTRUCTION ITEM NUMBER
  - L.O.C. LIMIT OF CONSTRUCTION
  - DC DEPRESSED CURB
  - DISTURBANCE OUTSIDE RIGHT-OF-WAY
  - T.C.E. TEMPORARY CONSTRUCTION EASEMENT
  - TS TOP/TOE SLOPE
  - PAVEMENT CORE LOCATION



- NOTES:**
- A SURVEY WAS PERFORMED BY ALAIMO GROUP, FEBRUARY 2021.
  - UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

**CONSTRUCTION NOTES:**

- ALL MAIL BOXES AND PAPER BOXES ARE TO BE RESET IN ACCORDANCE WITH US POSTAL REGULATIONS AND TO BE PAID FOR UNDER CLEARING SITE.
- REFER TO PROFILE FOR CENTERLINE ELEVATIONS. REFER TO CROSS SECTIONS FOR GUTTERLINE AND TOP CURB ELEVATIONS.
- ALL EXISTING ROOF LEADERS SHALL BE PIPED TO EXISTING STORM STORM INLETS OR MANHOLES, PROVIDE 6" TO 8" PVC STORM PIPE AND CLEANOUTS AS NEEDED.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE REMOVAL OR RELOCATION OF UTILITY POLES, OR ANY ABOVE ON UNDERGROUND UTILITIES THAT ARE IN CONFLICT WITH PROPOSED IMPROVEMENTS.
- DETECTABLE WARNING SURFACES SHALL BE OF THE TYPE WHICH CAN BE SET INTO UNCURED CAST-IN-PLACE CONCRETE. GLUE/STICK-ON TYPE WARNING SURFACE SHALL NOT BE ALLOWED. VITRIFIED POLYMER COMPOSITE (VPC) CAST-IN-PLACE DETECTABLE / TACTILE WARNING SURFACE TILES SHALL BE AN EPOXY POLYMER COMPOSITION WITH AN ULTRA VIOLET STABILIZED COATING EMPLOYING ALUMINUM OXIDE PARTICLES IN THE TRUNCATED DOMES. THE TILE SHALL INCORPORATE AN IN-LINE PATTERN OF TRUNCATED DOMES MEASURING NOMINAL 0.2" HEIGHT, 0.9" BASE DIAMETER, AND 0.45" TOP DIAMETER, SPACED CENTER TO CENTER 2.35" AS MEASURED ON A DIAGONAL AND 1.67" AS MEASURED SIDE BY SIDE. FOR WHEELCHAIR SAFETY THE FIELD AREA SHALL CONSIST OF A NON-SLIP SURFACE WITH A MINIMUM OF 40-90° RAISED POINTS 0.045" HIGH, PER SQUARE INCH; "ARMOR-TILE" AS MANUFACTURED BY ENGLAND PLASTICS INC. TEL-800-682-2525, OR APPROVED EQUIVALENT.
- TEST PITS TO BE PERFORMED TO LOCATE SANITARY SEWER LATERALS AND OTHER UTILITIES POTENTIAL CONFLICTS WITH STORM SEWER CONSTRUCTION. UTILITY COMPANY TO BE CONTACTED, SERVICES MARKED-OUT IN FIELD, AND TEST PITS TO BE PERFORMED ACCORDINGLY AS PER SPEC SECTION 02 32 19 - SUBSURFACE INVESTIGATION.
- SANITARY SEWER LATERAL LOCATION PROVIDED BY TOWNSHIP TV INSPECTION REPORT DATED 2/25/2022.

**2nd AVENUE (FROM STA. 129+75 THRU STA. 138+59±): ESTIMATE OF QUANTITIES**

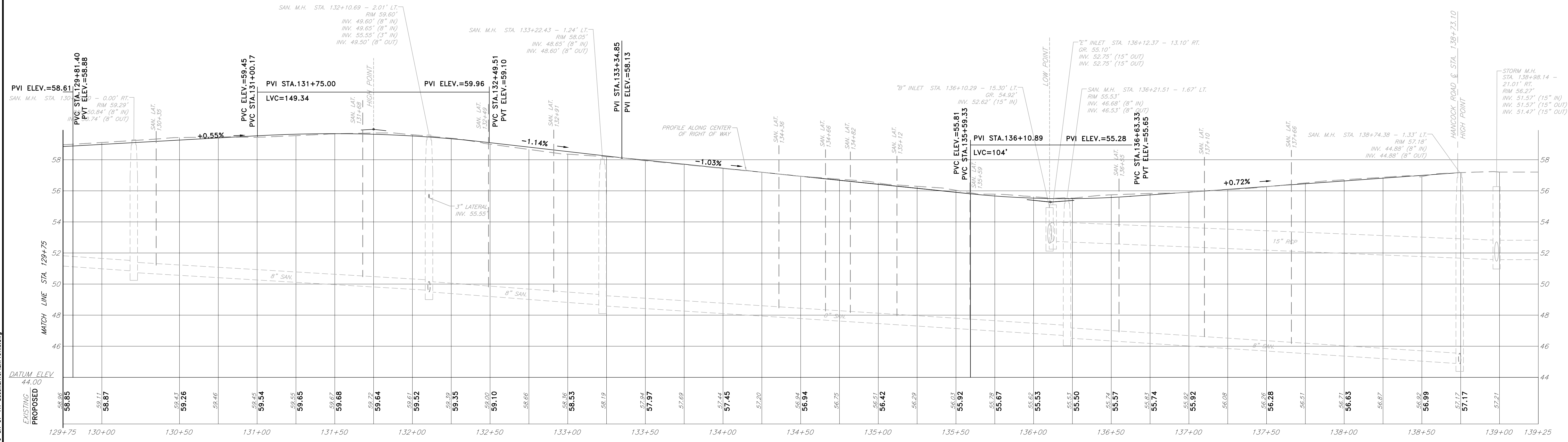
ITEM NO.	ITEM DESCRIPTION	UNIT	PLAN TOTAL
7	SITE CLEARING & RESTORATION INCL. RELOCATE / REPLACE LANDSCAPING	L.S.	-
8	ROADWAY EXCAVATION UNCLASSIFIED, 13" DEPTH	C.Y.	1,231
9	ROADWAY EXCAVATION UNCLASSIFIED, VAR. DEPTH (DRIVEWAYS)	C.Y.	484
9A	EXCAVATION, TEST PITS (If and where directed)	UNIT	6
10	DENSE GRADED AGGREGATE, 4" THK. (DRIVEWAYS)	S.Y.	400
11	DENSE GRADED AGGREGATE, 6" THK.	S.Y.	2980
13	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THK.	TON	351
14	HOT MIX ASPHALT 19M64 BASE COURSE, 5" THK.	TON	877
15	HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 4" THK. (DRIVEWAYS)	TON	98
16	CONCRETE SIDEWALK, 4" THK.	S.Y.	14
17	BELGIAN BLOCK CURB	L.F.	1,917
17A	DEPRESSED CONCRETE CURB AT ADA RAMP	L.F.	8
19	TRAFFIC STRIPES, LONG LIFE, THERMOPLASTIC, 24" WIDE	L.F.	15
19A	TRAFFIC STRIPES, LONG LIFE, THERMOPLASTIC, 4" WIDE	L.F.	885
20	RESET CASTING	UNIT	5
21	RESET WATER VALVE BOXES	UNIT	5
22	RECONSTRUCT INLET, TYPE "B", 0' TO 6'	UNIT	1
23	BICYCLE SAFE GRATE	UNIT	2
24	INLET HEAD, TYPE "N-ECO" (DRAINS TO WATERWAY) AND BICYCLE SAFE GRATE	UNIT	1
27	INLET REPAIR	UNIT	1
28	RELOCATE SIGNS WITH ANCHOR PLATES	UNIT	1
29	TOPSOILING, 4" THK.	S.Y.	1,753
30	FERTILIZING AND SEEDING	S.Y.	1,753
32	4" PVC ROOF LEADED LATERAL AND CLEANOUT	L.F.	58
33	8" PIPE AND CLEANOUT	L.F.	268
34	TREE REMOVAL, 6" TO 18" DIA.	UNIT	6
37	RESET PROPERTY CORNER MONUMENTATION (IN-KIND)	UNIT	4
38	RESET BRICK RETAINING WALL	L.F.	15
41	RESET LANDSCAPING TIES	L.F.	56
47	TACK COAT	GAL.	425

NOTE: THE ESTIMATE OF QUANTITIES IS PROVIDED FOR THE CONTRACTORS CONVENIENCE IN DETERMINING THE APPROXIMATE SCOPE OF WORK ASSOCIATED WITH EACH STREET. SHOULD A DISCREPANCY OCCUR BETWEEN THE QUANTITIES SHOWN ON THE DRAWINGS AND THE QUANTITIES SHOWN IN THE PROPOSAL SECTION OF THE PROJECT MANUAL, THOSE SHOWN IN THE PROJECT MANUAL SHALL GOVERN.

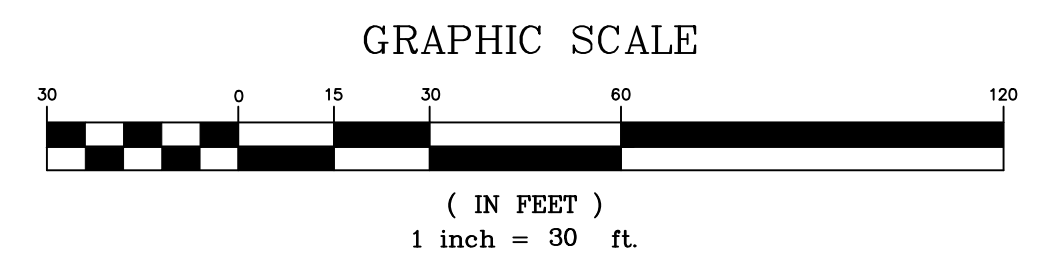
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APPROVED:  <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD) <b>PLAN</b> STA. 129+75 THRU STA. 138+59± SCALE: HORIZ.: 1" = 30' VERT.: 1" = 3'	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b> PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>PAC</b> CHECKED BY: <b>PAC</b> DEPT. HEAD: <b>PAC</b>	SHEET <b>7</b> FILE NO.:
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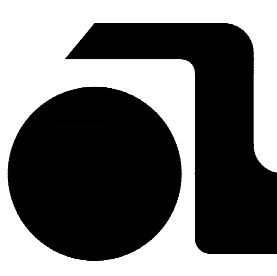
- NOTES:**
1. A SURVEY WAS PERFORMED BY ALAIMO GROUP, FEBRUARY 2021.
  2. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



APPROVED:

**Richard A. Alaimo**  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



**ALAIMO GROUP**  
 Consulting Engineers  
 NJDCA 24GA27988400  
 200 HIGH STREET MOUNT HOLLY, N.J.  
 2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III**  
 (ELWOOD STREET TO HANCOCK ROAD)

**PROFILE**  
 STA. 129+75 THRU STA. 138+73.10

SCALE: HORIZ.: 1" = 30' VERT.: 1" = 3'

CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>7A</b>
PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DESIGNED BY: <b>PAC/JRD</b>	FILE NO.:
PROJECT NO.: <b>A-1010-0016-000</b>	DRAWN BY: <b>PAC/DMM</b>	
CONTRACT NO.: <b>2022-1</b>	CHECKED BY:	
	DEPT. HEAD:	

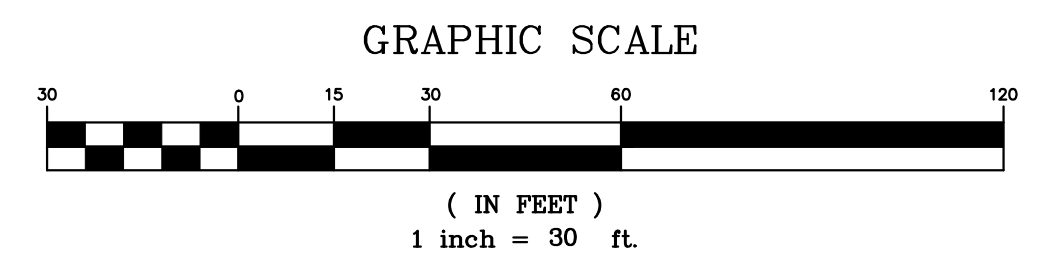


**BENCHMARKS**

- BM #1 HYDRANT HD-BOLT X-CUT  
STA. 122+65.2 - 16.4' LT.  
ELEVATION 67.66'
- BM #2 HYDRANT HD-BOLT X-CUT  
STA. 129+96.2 - 16.3' RT.  
ELEVATION 61.03'
- BM #3 HYDRANT HD-BOLT X-CUT  
STA. 137+28.2 - 18.7' RT.  
ELEVATION 58.04'



NOTES:  
 1. A SURVEY WAS PERFORMED BY ALAIMO GROUP, MARCH 2021.  
 2. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



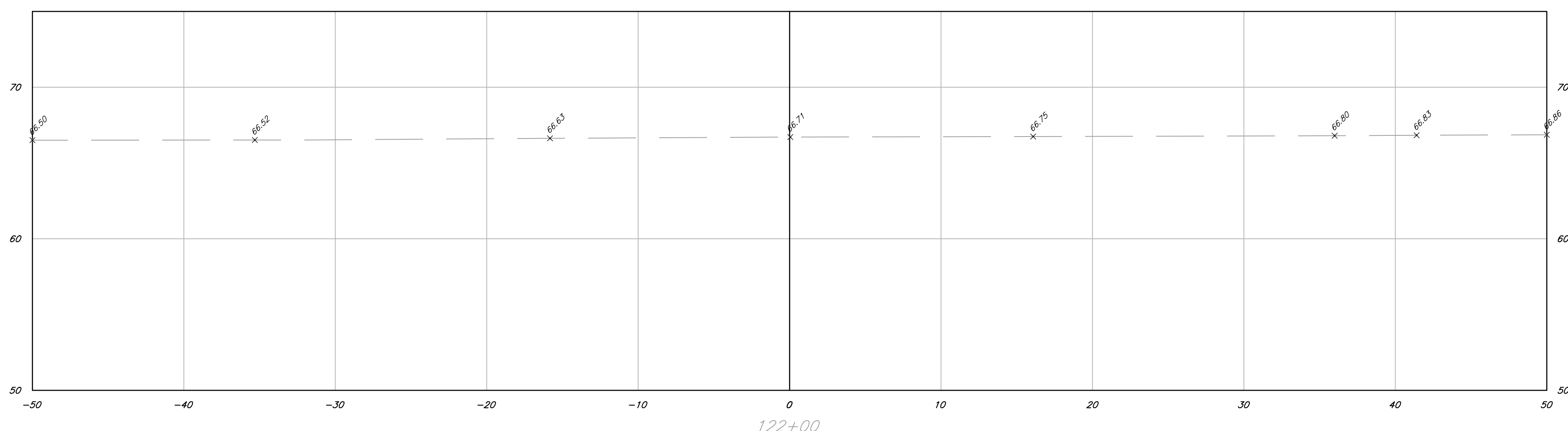
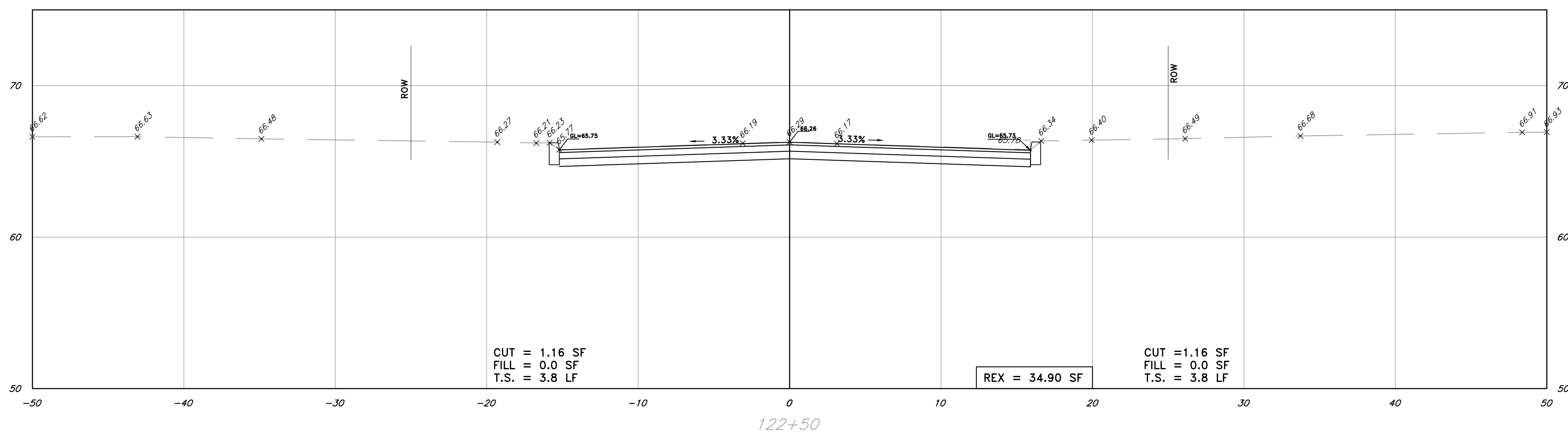
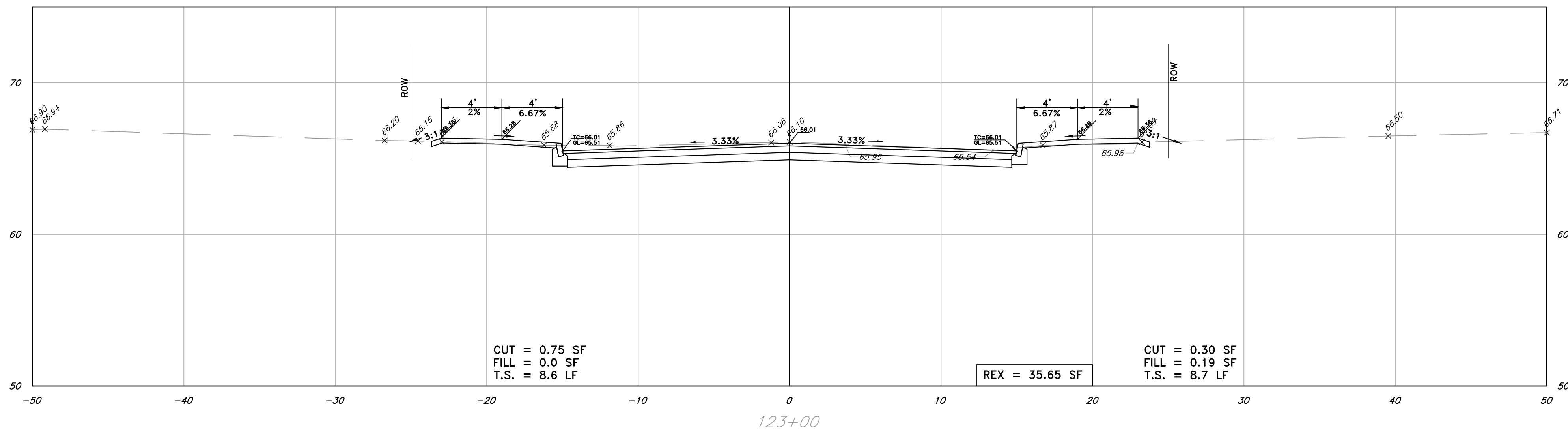
APPROVED:  
**Richard A. Alaimo**  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

**ALAIMO GROUP**  
 Consulting Engineers  
 NJDCA 24GA27988400  
 200 HIGH STREET MOUNT HOLLY, N.J.  
 2 MARKET STREET PATERSON, N.J.

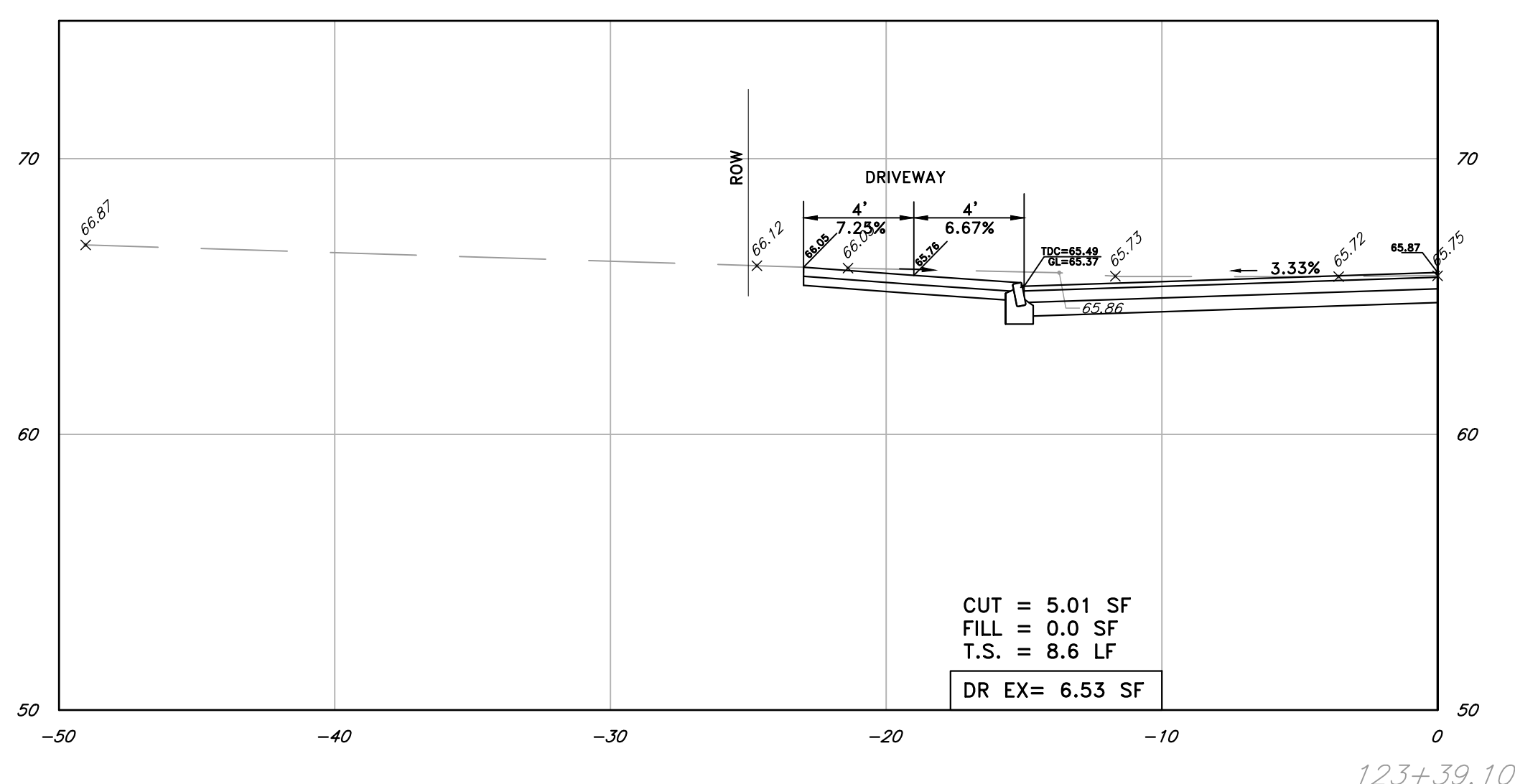
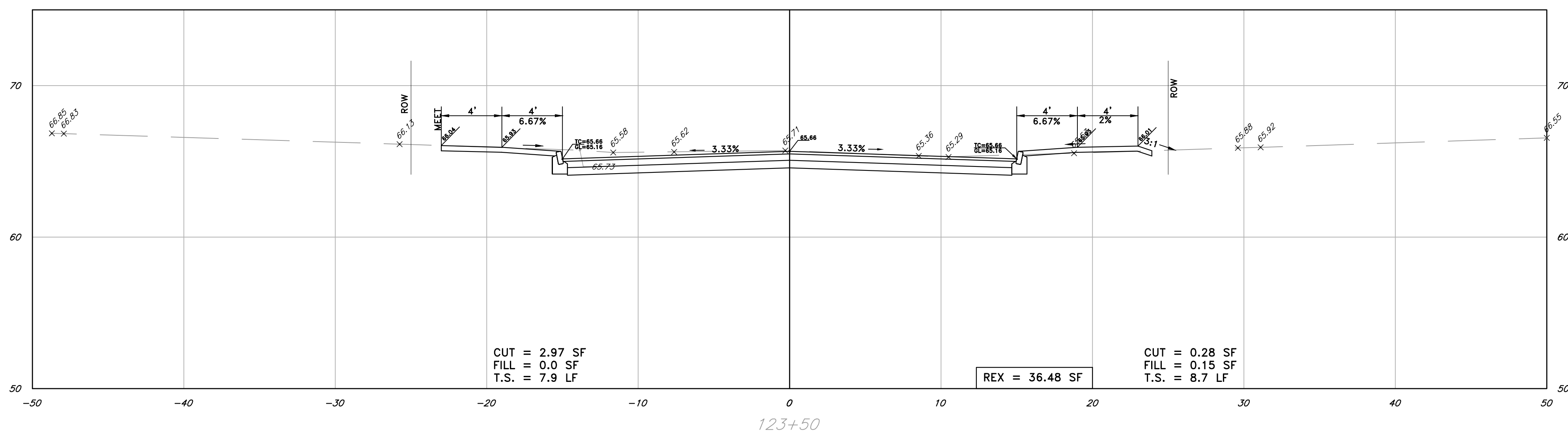
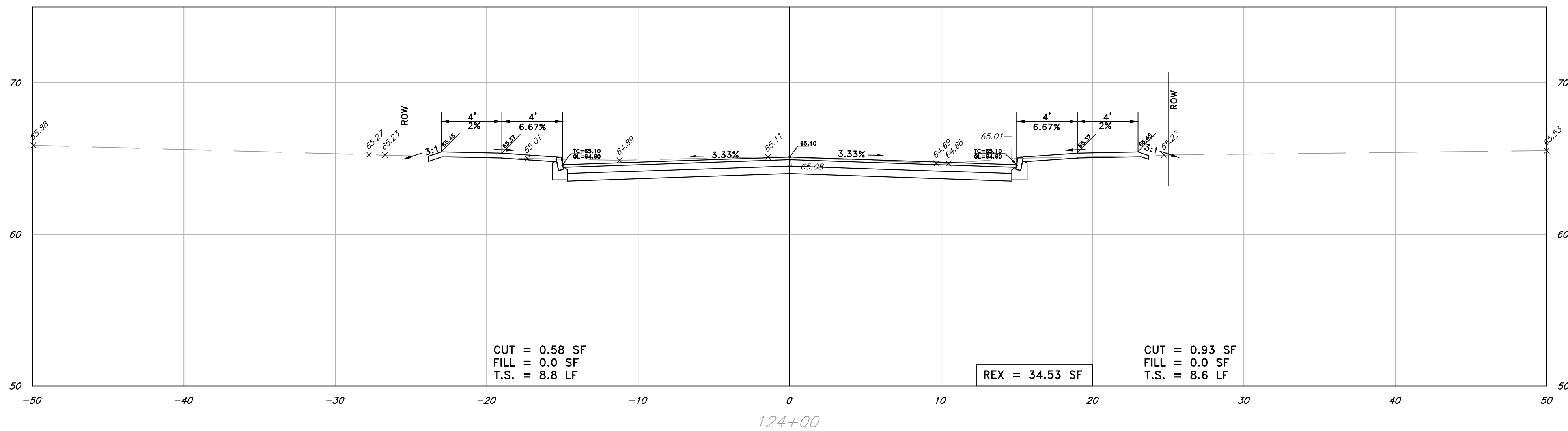
**2ND AVENUE IMPROVEMENTS PHASE III**  
 (ELWOOD STREET TO HANCOCK ROAD)  
**GRADING PLAN**  
 STA. 122+00± THRU STA. 139+25  
 SCALE: 1" = 30'

CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: A-1010-0016-000 CONTRACT NO.: 2022-1	DATE: <b>FEB. 2022</b>	DESIGNED BY: <b>KS/JRD</b>	DRAWN BY: <b>MAC</b>	CHECKED BY:	DEPT. HEAD:	SHEET <b>8</b>	FILE NO.:
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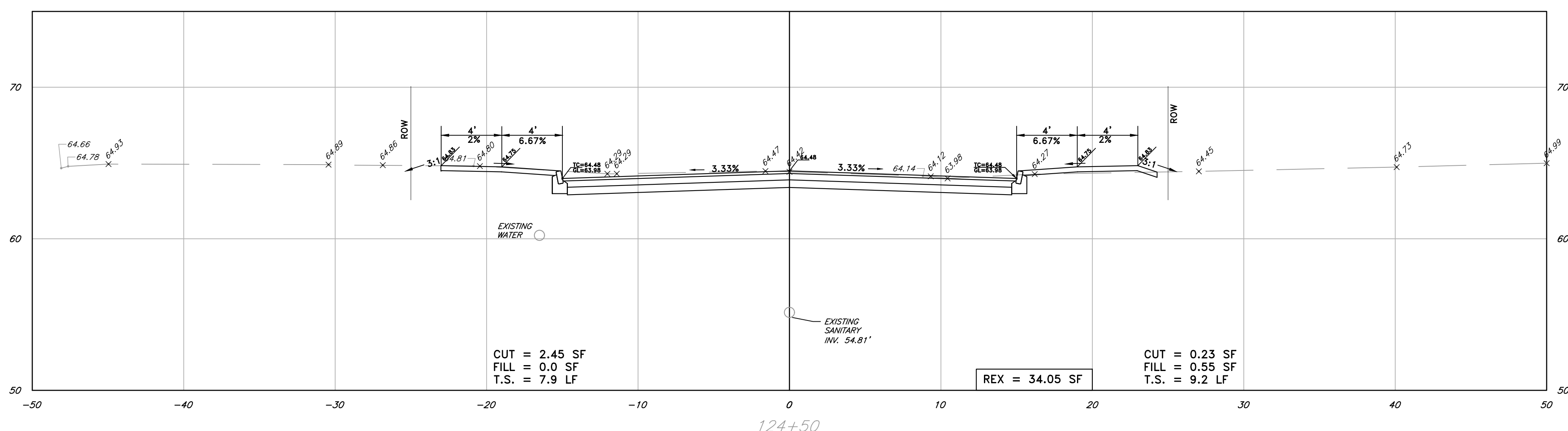
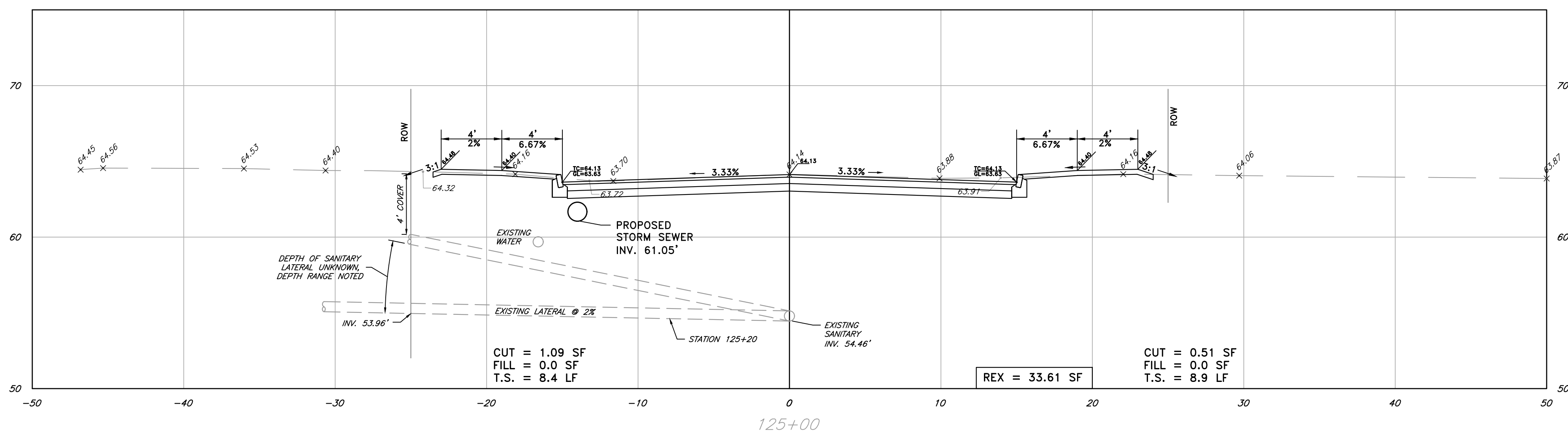
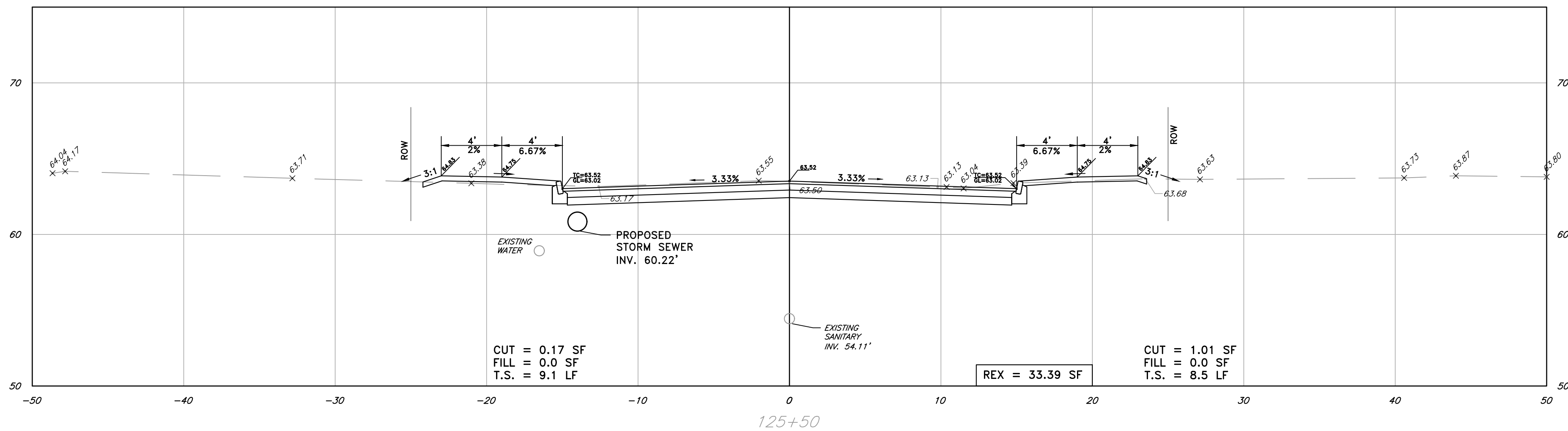
APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY										 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD) <b>2ND AVENUE</b> STA. 122+00 THRU STA. 123+00 <b>CROSS SECTIONS</b> SCALE: 1" = 5'	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b> PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>WFL/MAC</b> CHECKED BY: PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b> DEPT. HEAD:	SHEET <b>9</b> FILE NO.:
NO.	DATE	BY																



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APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS	DATE	BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>10</b>
	STA. 123+39.10 THRU STA. 124+00 <b>CROSS SECTIONS</b>	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>		DESIGNED BY: <b>KS</b>	DRAWN BY: <b>WFL/MAC</b>	CONTRACT NO.: <b>2022-1</b>	CHECKED BY:

SCALE: 1" = 5'

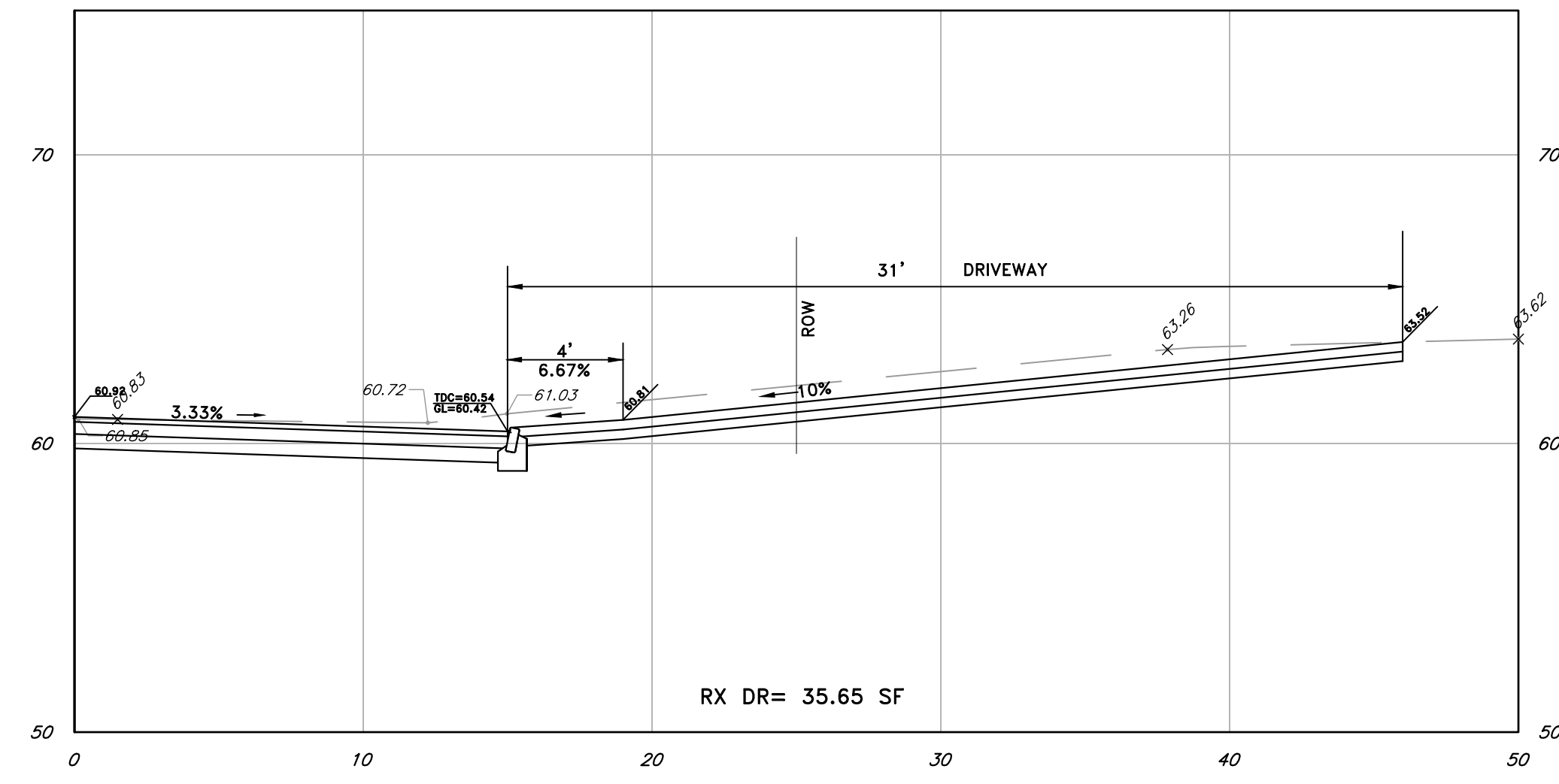


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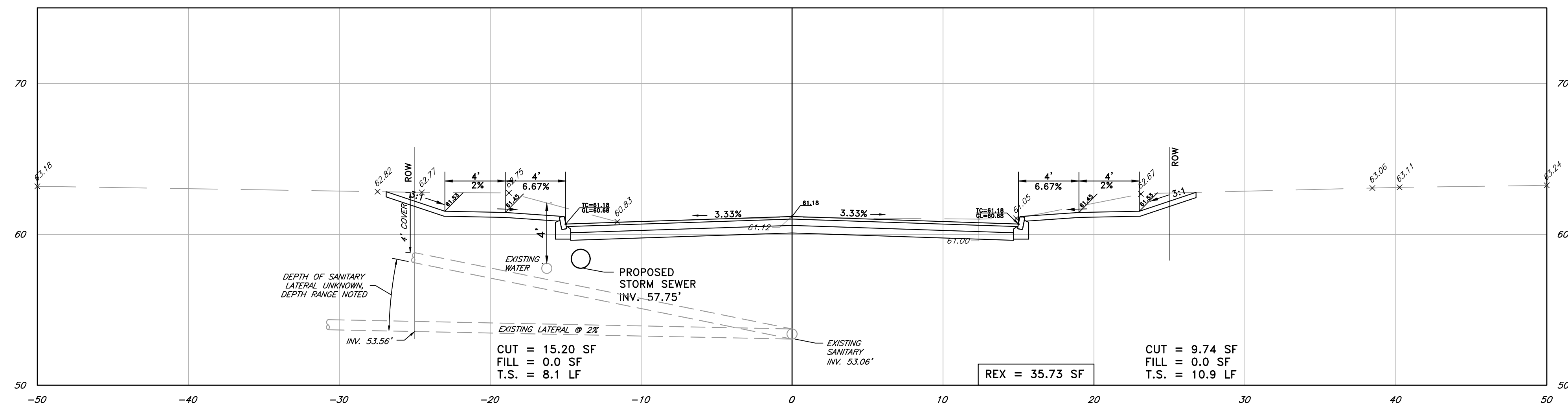
APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY										 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)  <b>2ND AVENUE</b> STA. 124+50 THRU STA. 125+50 CROSS SECTIONS  SCALE: 1" = 5'	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>  PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>WFL/MAC</b> CHECKED BY:  DEPT. HEAD:  PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b>	SHEET  <b>11</b>  FILE NO.:
NO.	DATE	BY																



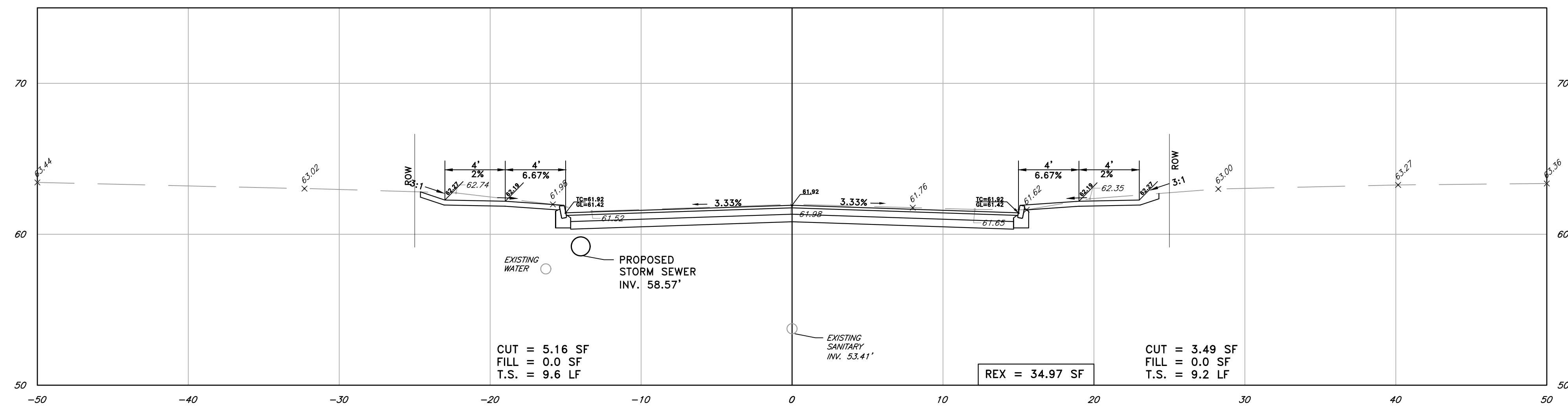
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127+19



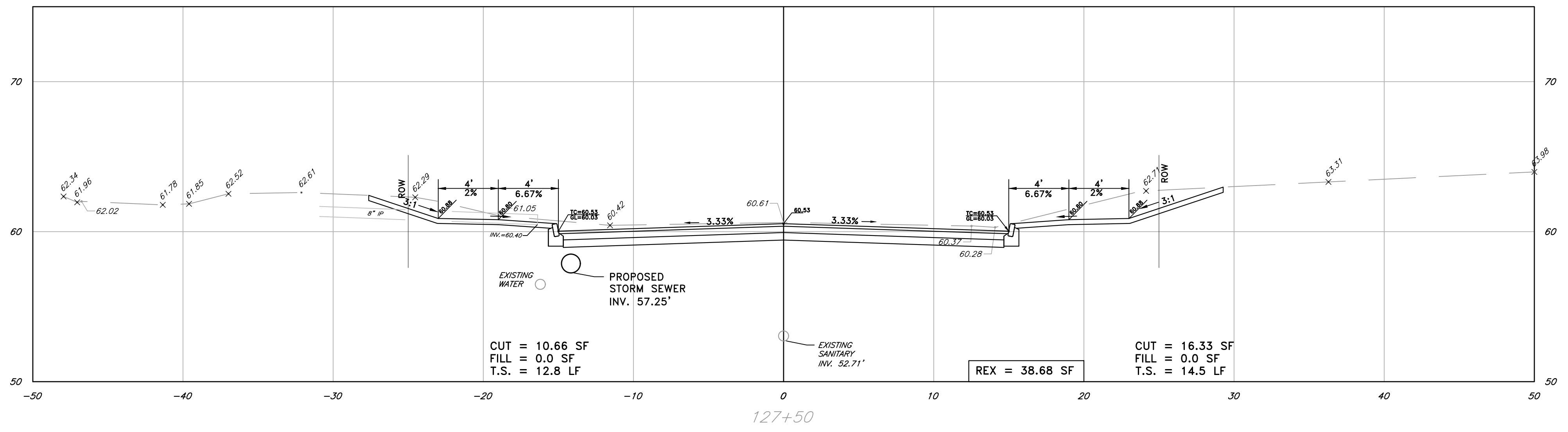
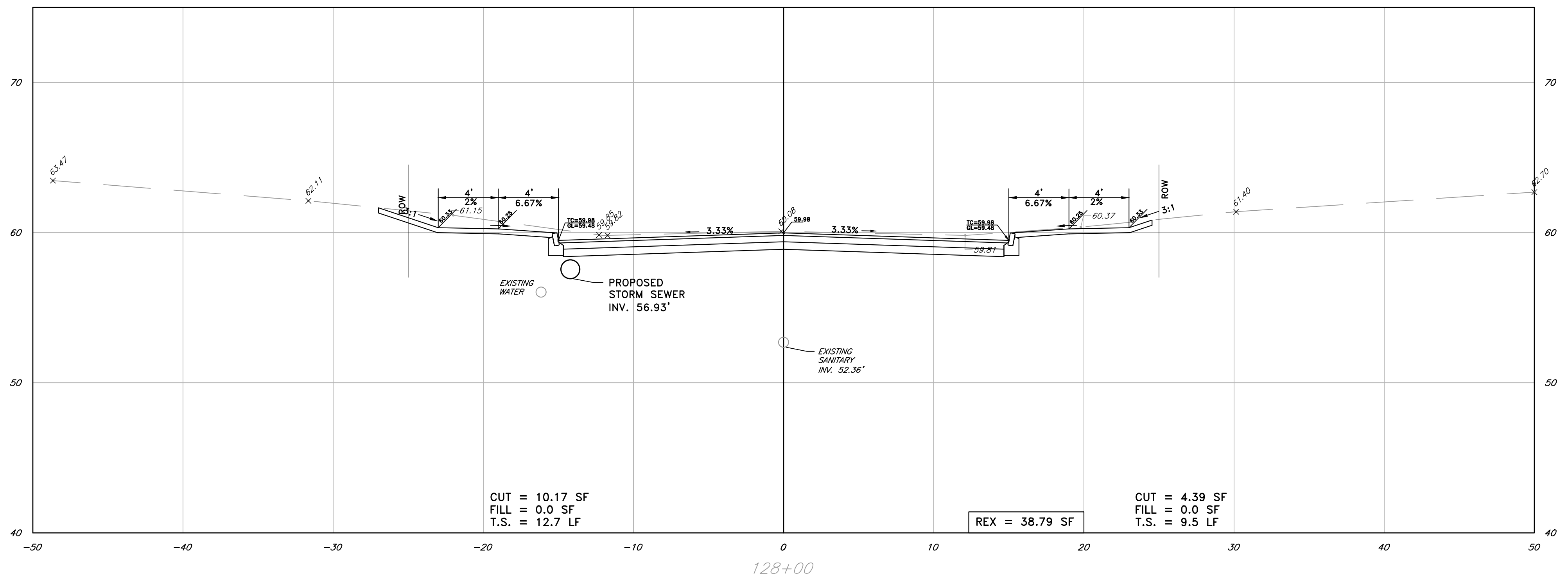
127+00



126+50

APPROVED: <div style="text-align: center;">   <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY										 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD) <b>2ND AVENUE</b> STA. 126+50 THRU STA. 127+19 <b>CROSS SECTIONS</b>	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b> PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>WFL/MAC</b> CHECKED BY: PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b> DEPT. HEAD:	SHEET <b>13</b> FILE NO.:
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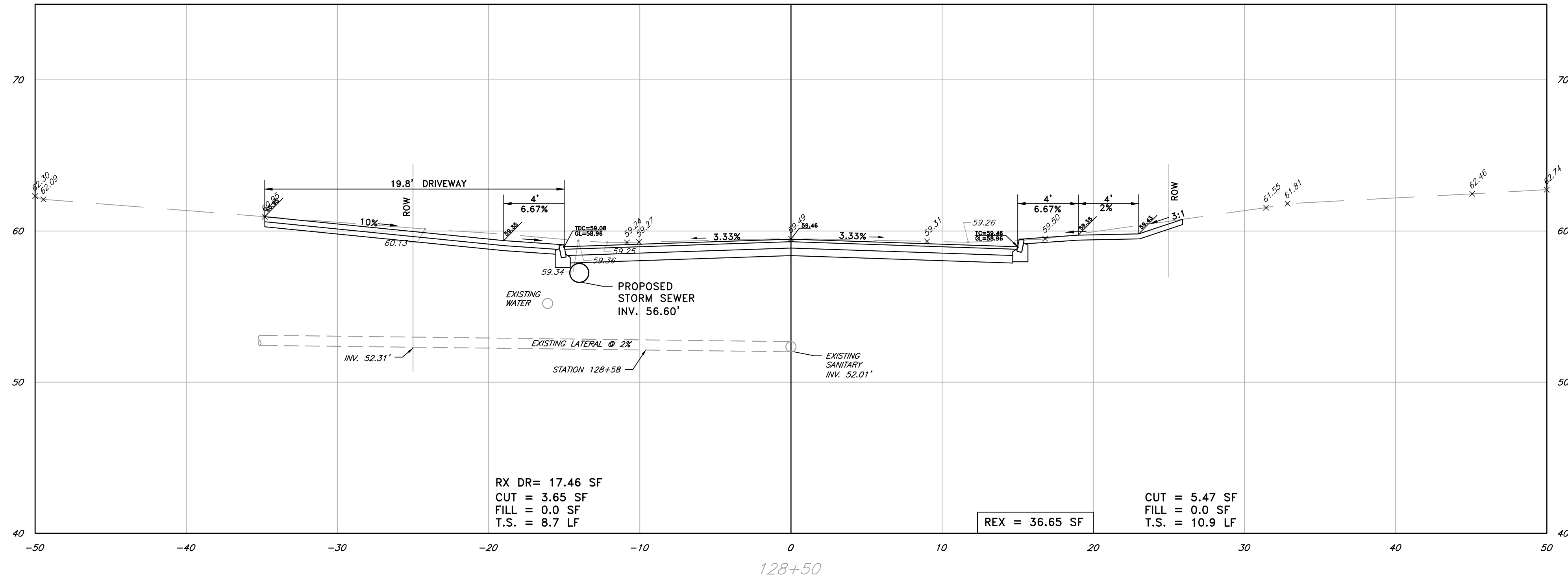
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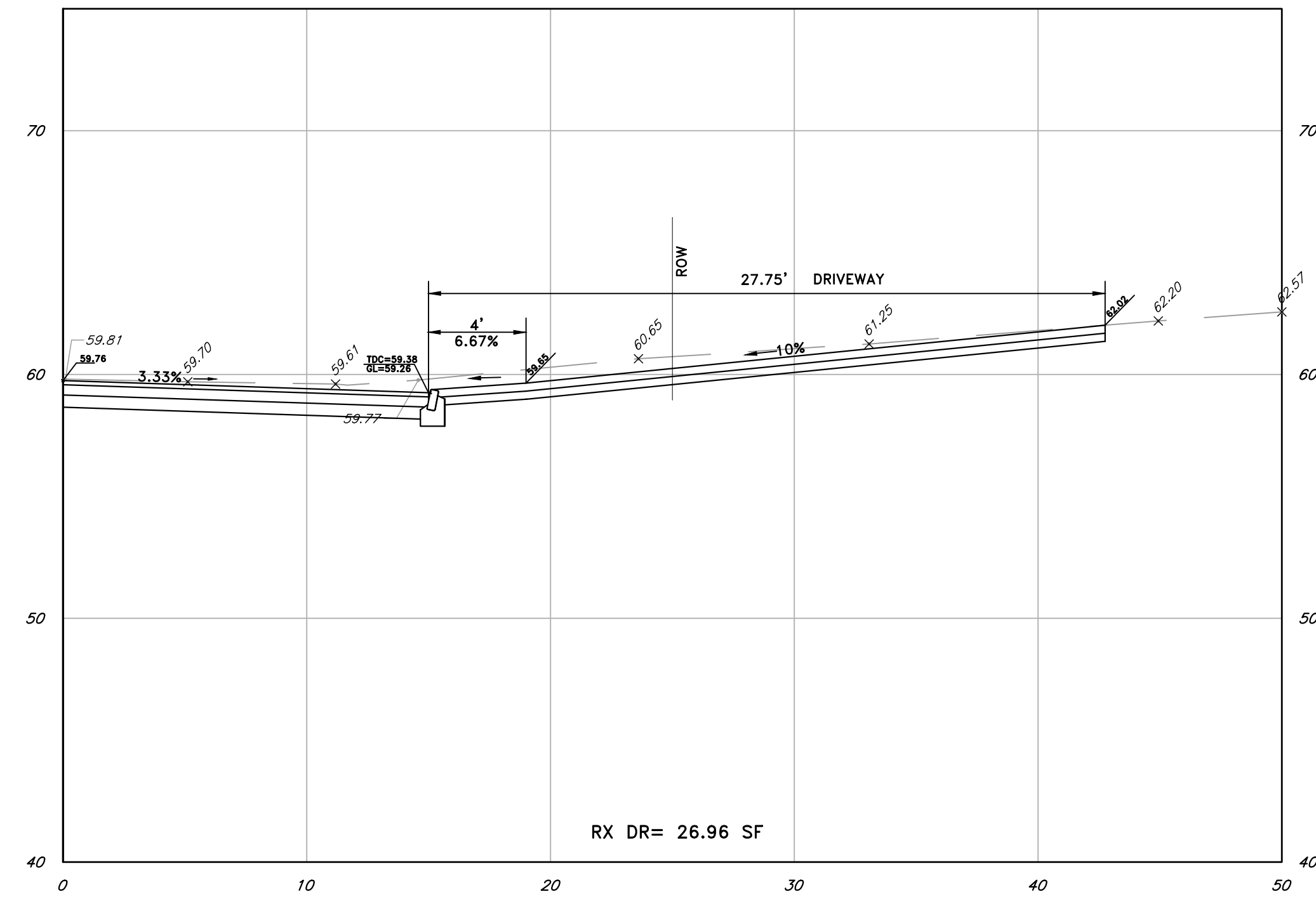
APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS	DATE	BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>14</b>	
						<b>2ND AVENUE</b> STA. 127+50 THRU STA. 128+00 CROSS SECTIONS	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	DESIGNED BY: <b>KS</b>
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128+50

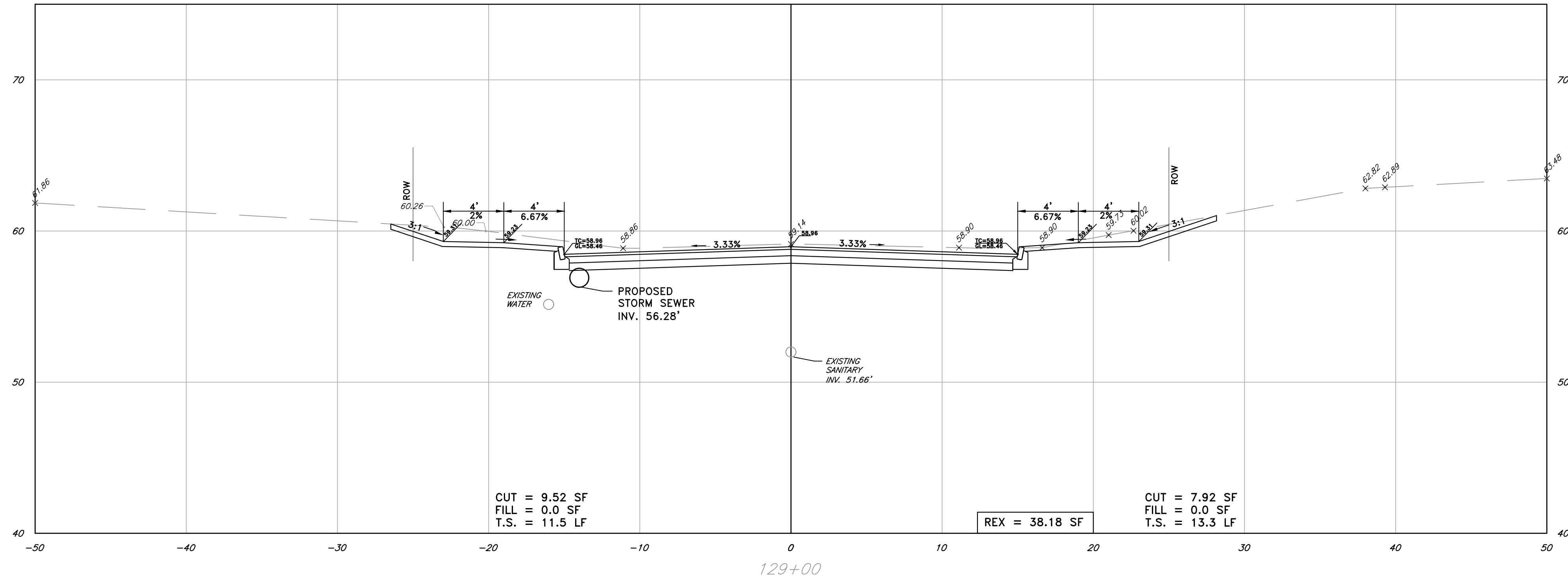


128+21.40

APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	DATE	BY													<p> <b>ALAIMO GROUP</b>            Consulting Engineers            NJDCA 24GA27988400            200 HIGH STREET MOUNT HOLLY, N.J.            2 MARKET STREET PATERSON, N.J.         </p>	<p> <b>2ND AVENUE IMPROVEMENTS PHASE III</b>            (ELWOOD STREET TO HANCOCK ROAD)         </p> <p> <b>2ND AVENUE</b>            STA. 128+21.40 THRU STA. 128+50            CROSS SECTIONS         </p> <p>SCALE: 1" = 5'</p>	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b> PROJECT LOCATION: <b>PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY</b> PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b>	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>WFL/MAC</b> CHECKED BY: <b> </b> DEPT. HEAD: <b> </b>	SHEET <div style="font-size: 24pt; font-weight: bold;">15</div> FILE NO.:
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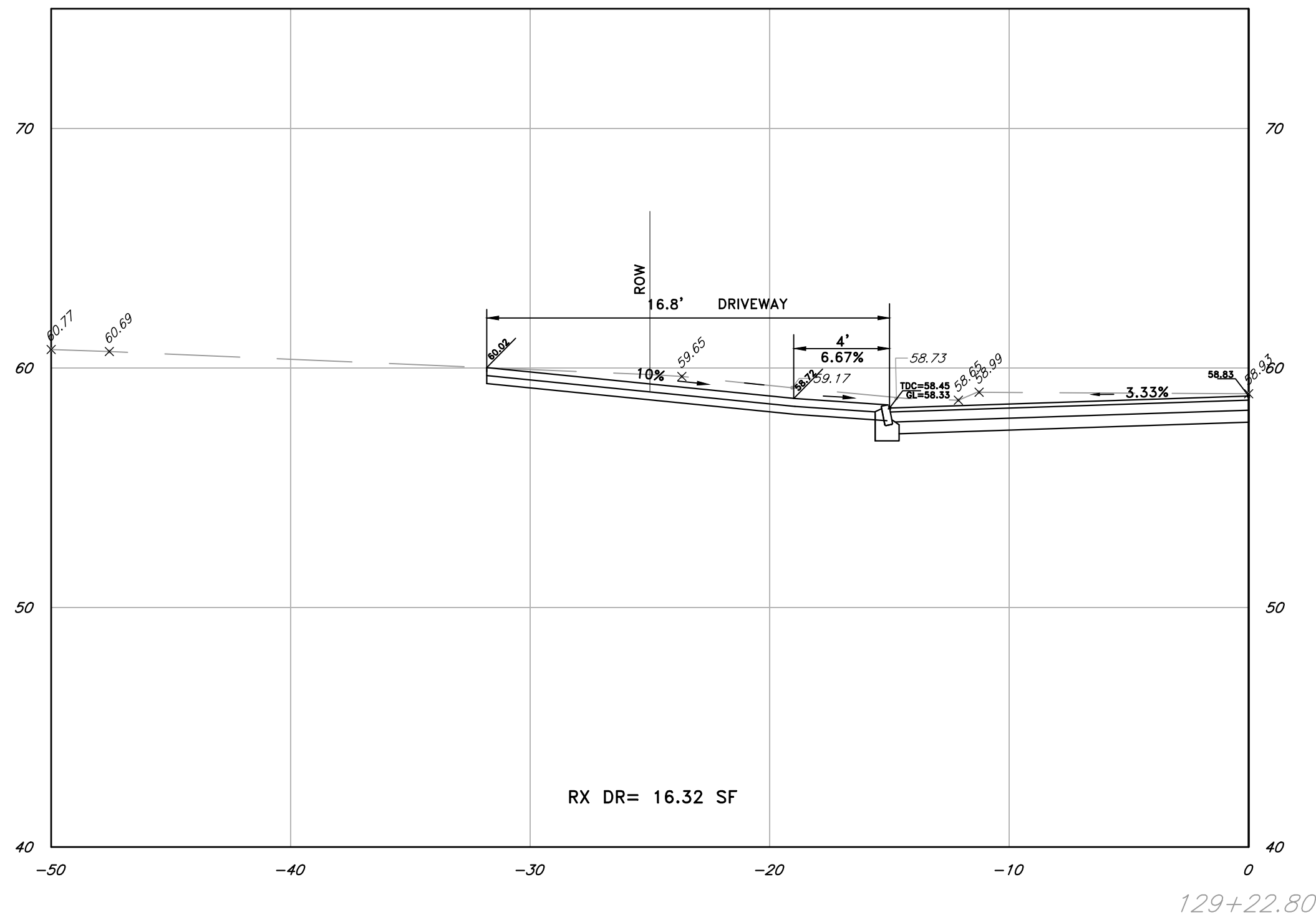
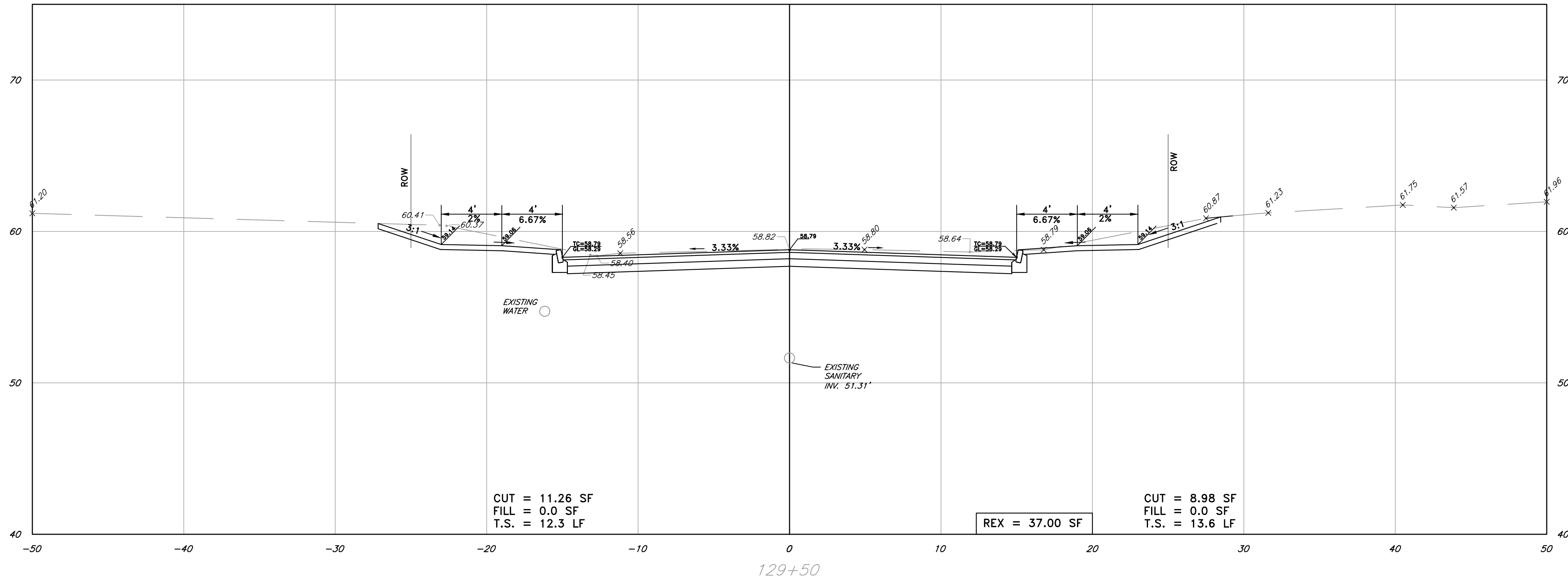


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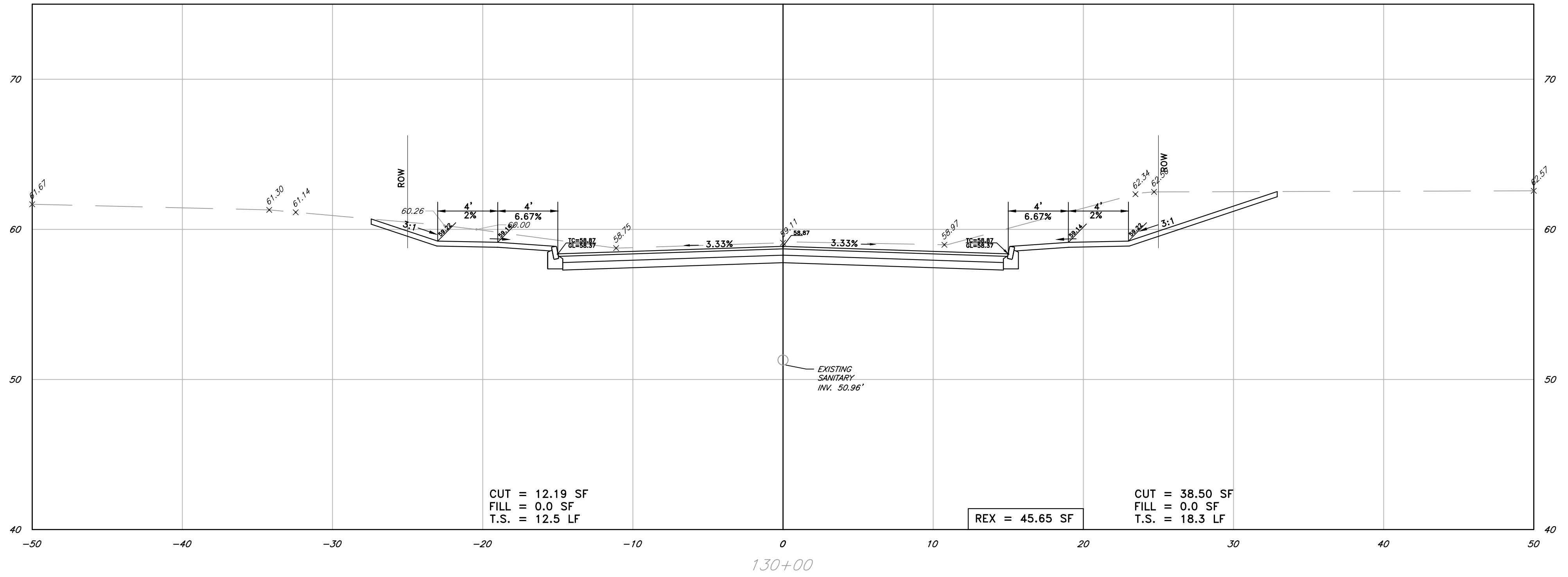


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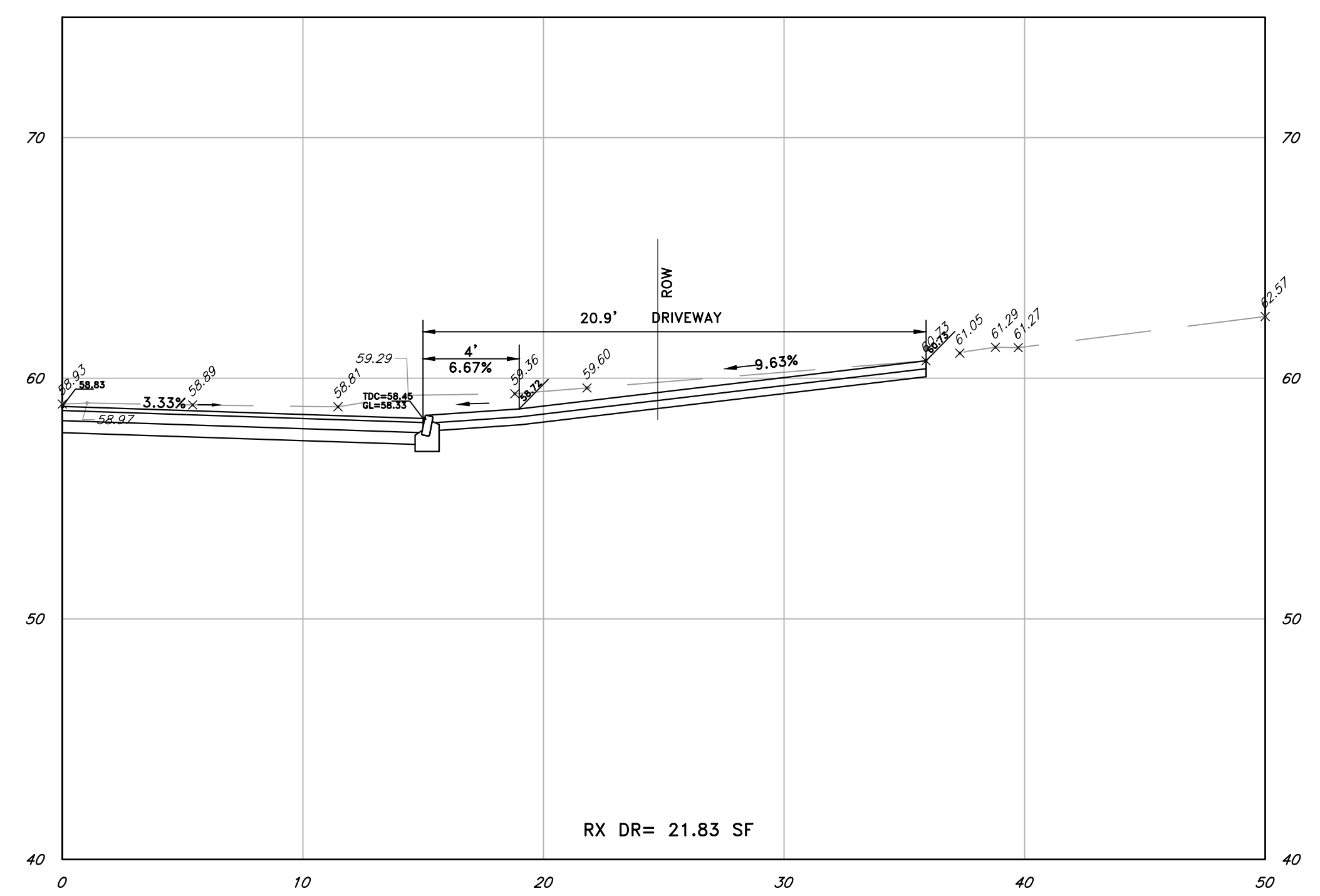
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REVISIONS	DATE	BY																			

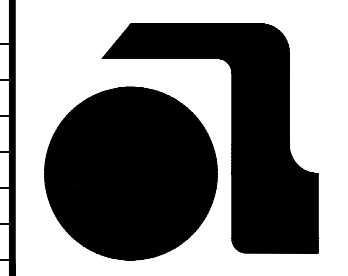


130+00



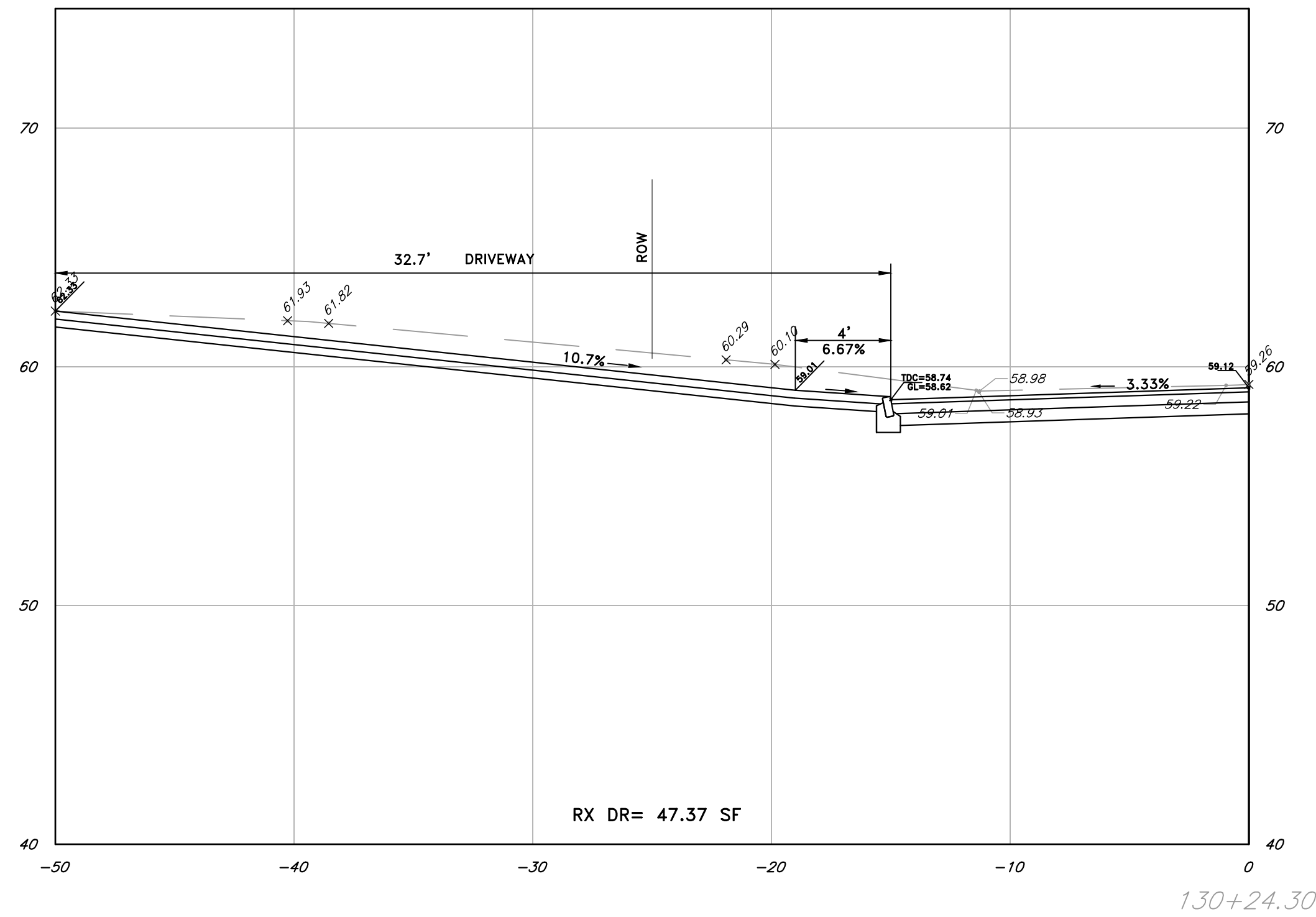
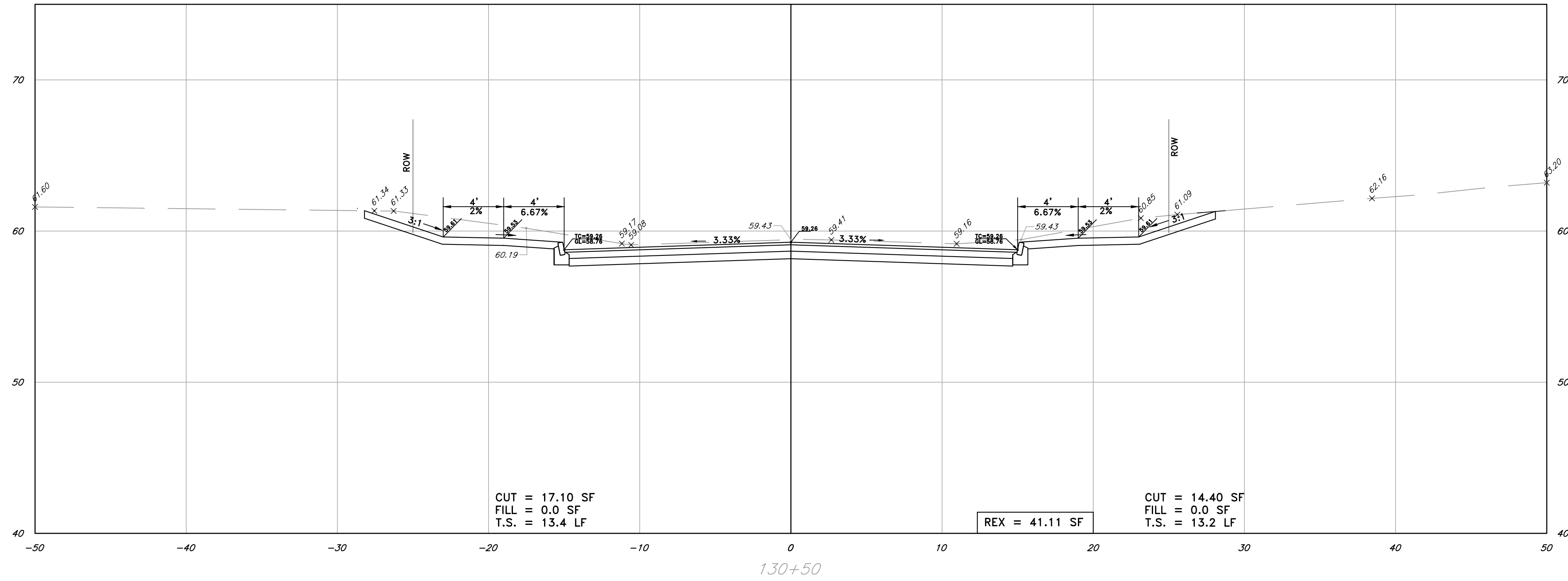
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APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS <table border="1"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY													 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b>	SHEET <b>18</b>
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PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY		PROJECT NO.: <b>A-1010-0016-000</b>	CONTRACT NO.: <b>2022-1</b>	DRAWN BY: <b>WFL/MAC</b>	CHECKED BY: _____	FILE NO.: _____															

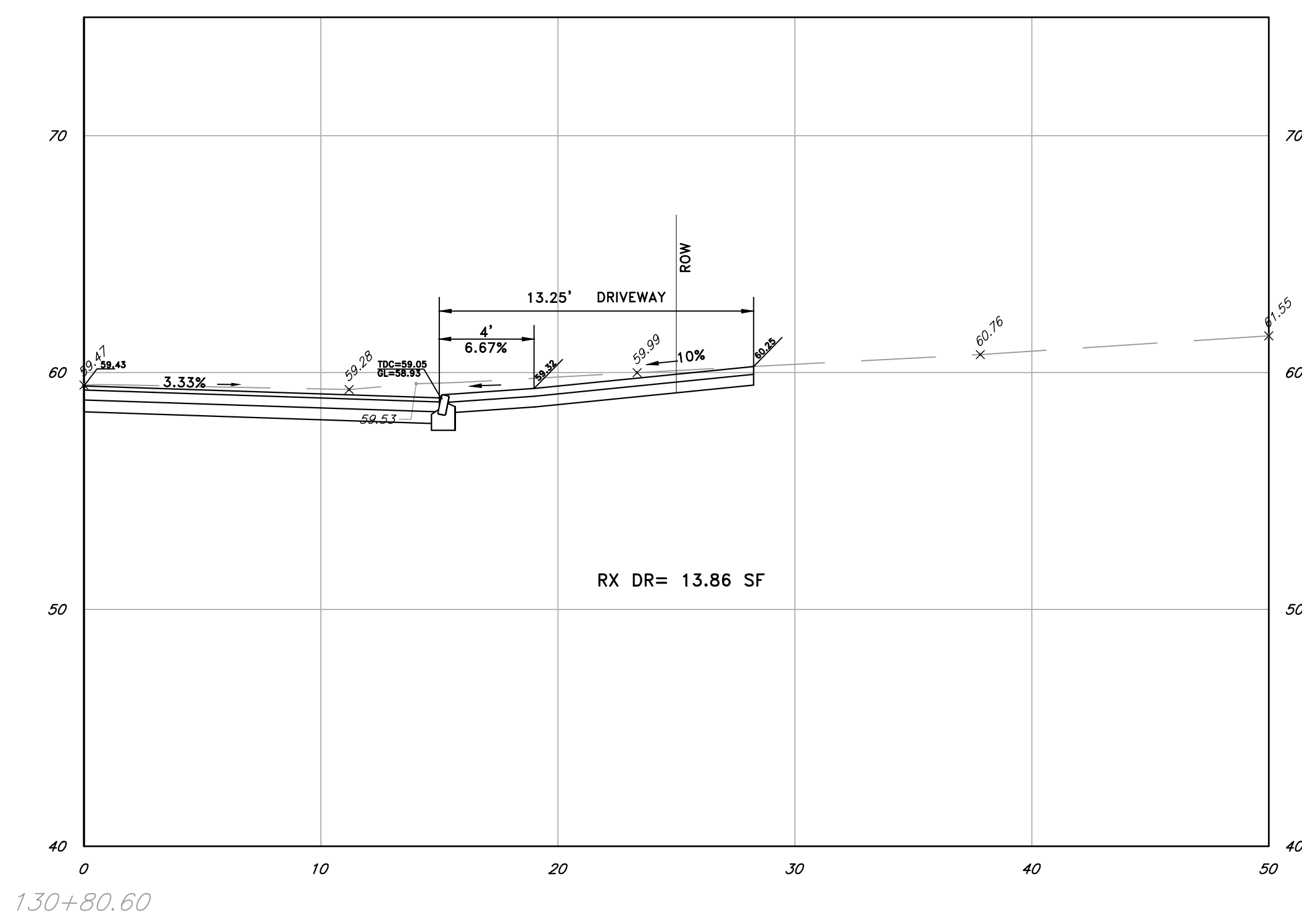
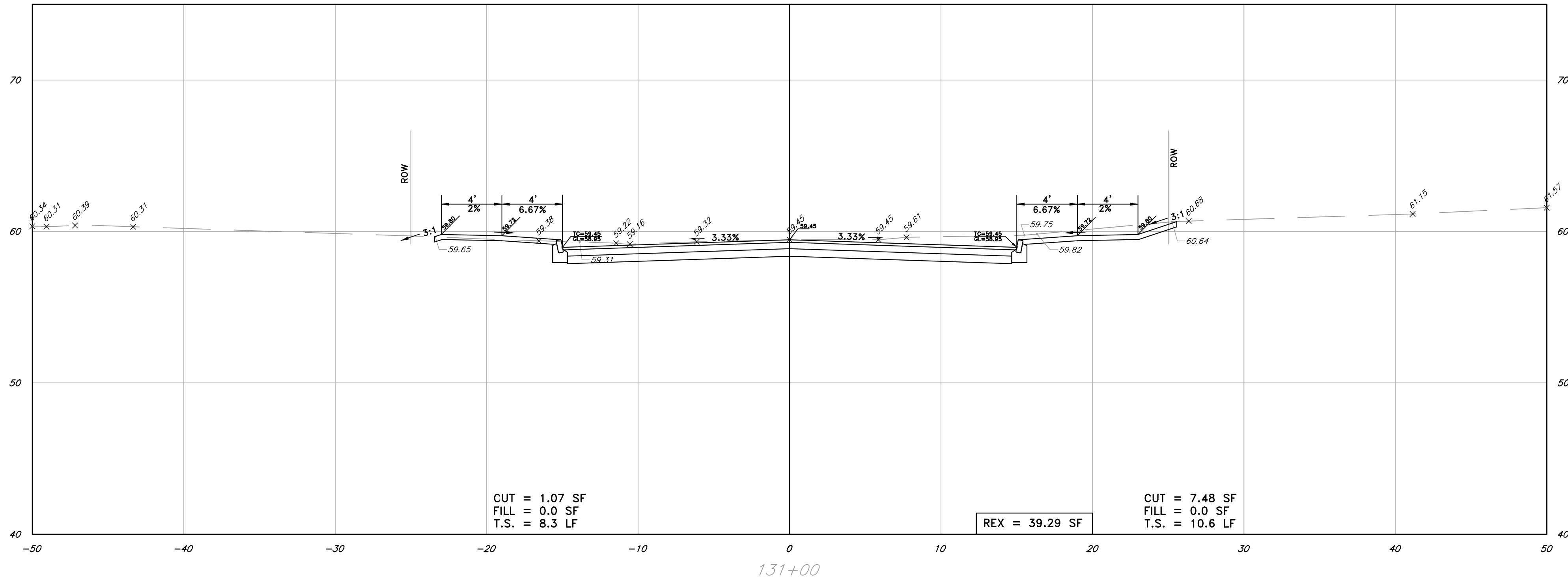
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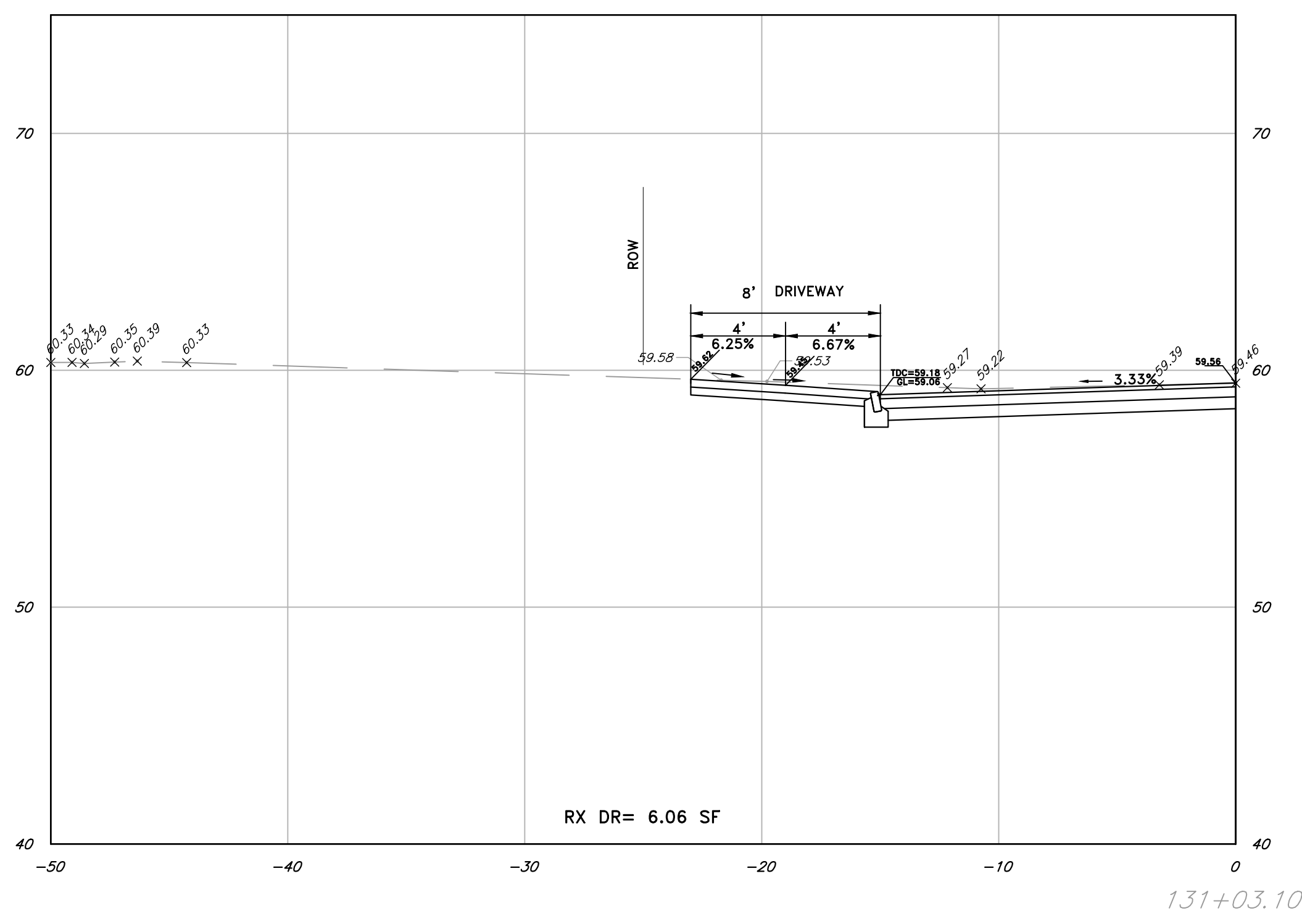
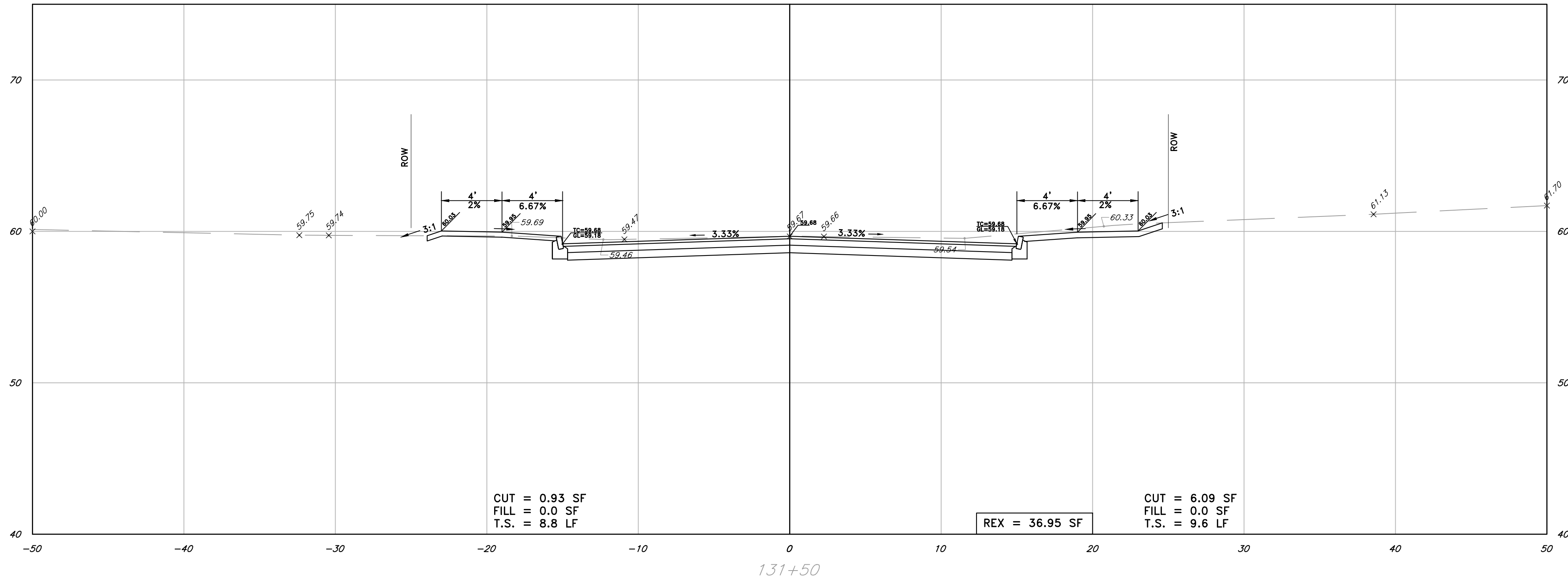
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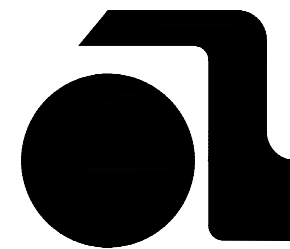
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REVISIONS	DATE	BY



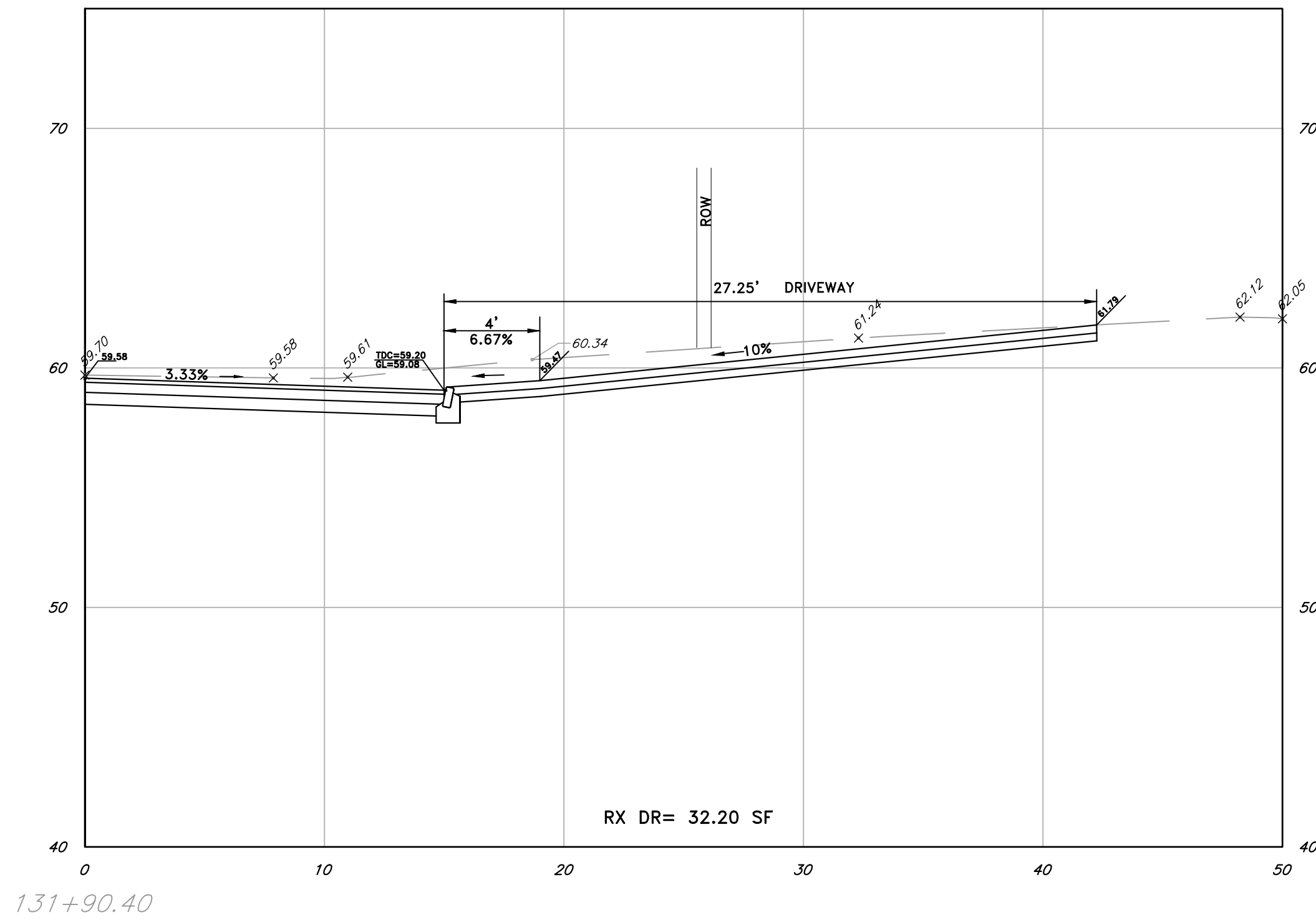
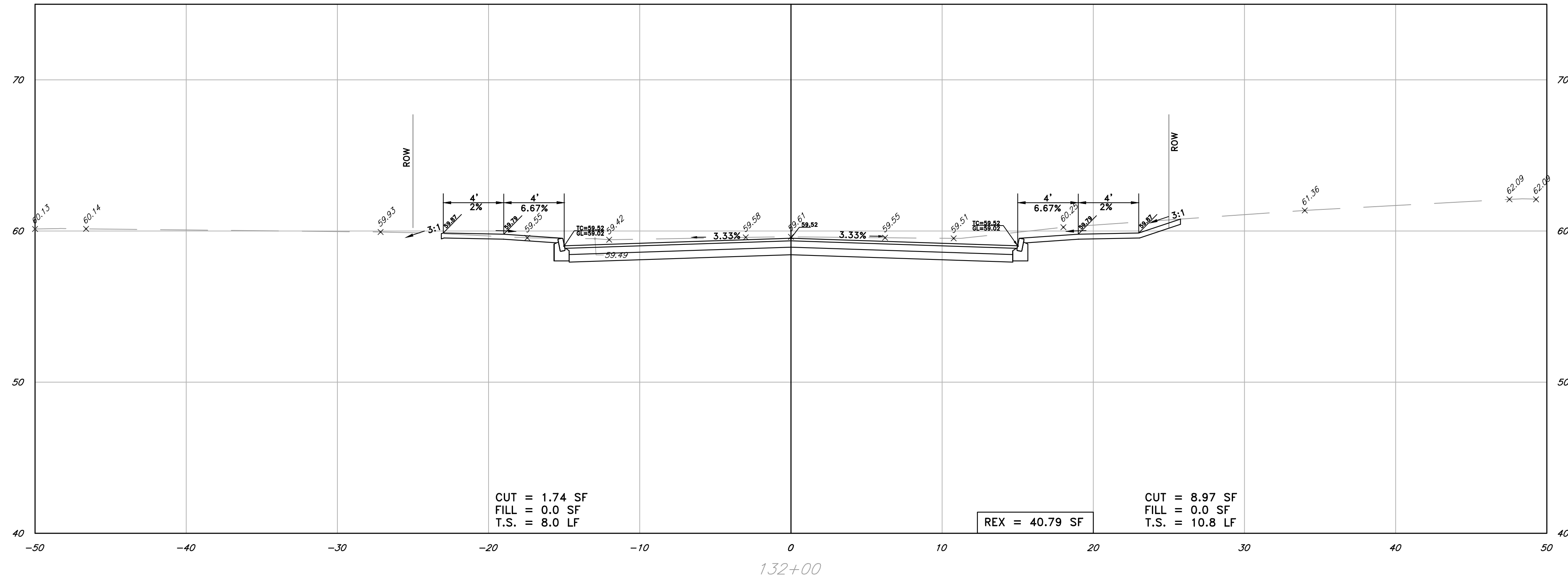
**ALAIMO GROUP**  
 Consulting Engineers  
 NJDCA 24GA27988400  
 200 HIGH STREET MOUNT HOLLY, N.J.  
 2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III**  
 (ELWOOD STREET TO HANCOCK ROAD)  
**2ND AVENUE**  
 STA. 131+03.10 THRU STA. 131+50  
 CROSS SECTIONS  
 SCALE: 1" = 5'

CLIENT: **TOWNSHIP OF PISCATAWAY**  
 PROJECT LOCATION: **PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY**  
 PROJECT NO.: **A-1010-0016-000**  
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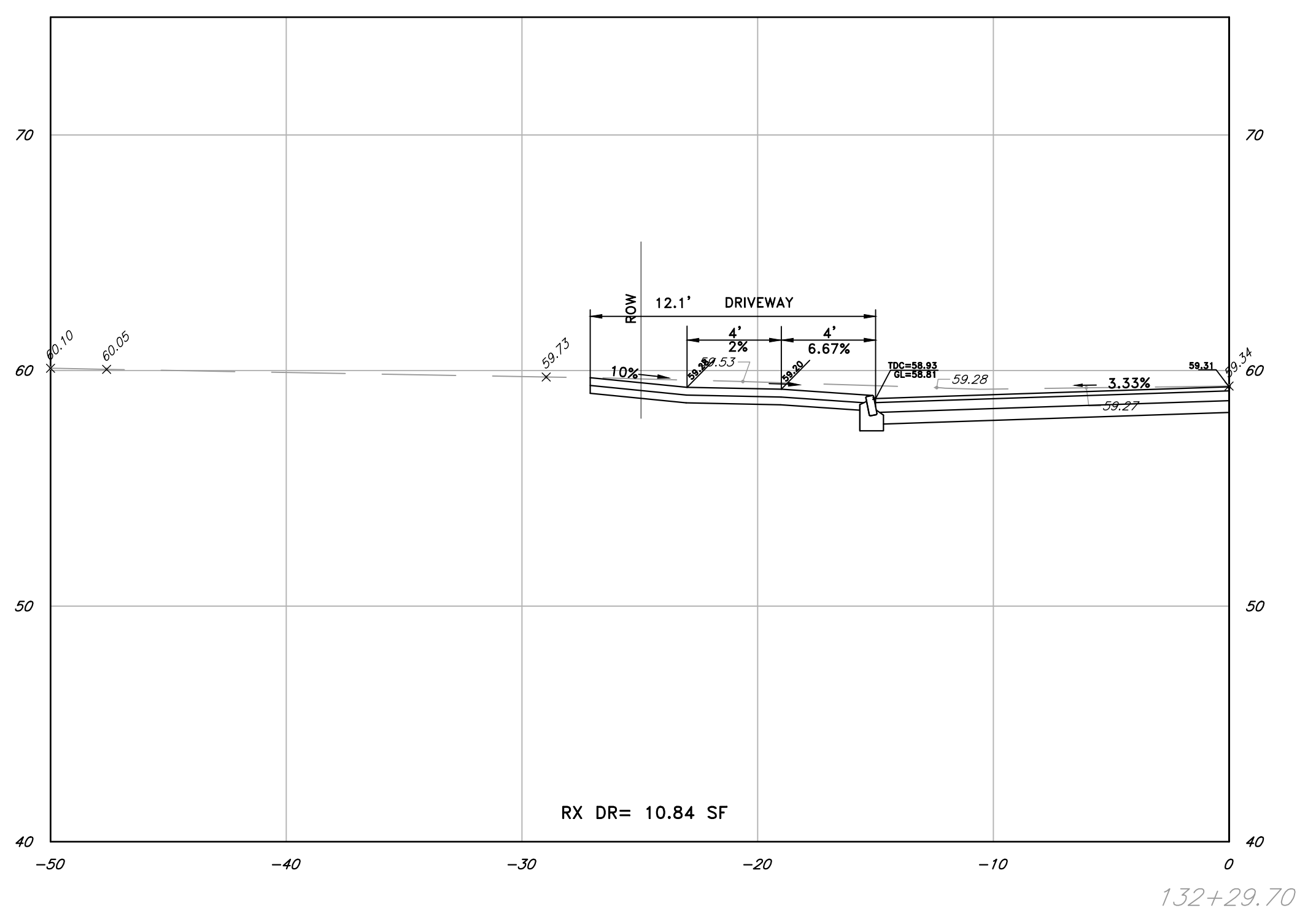
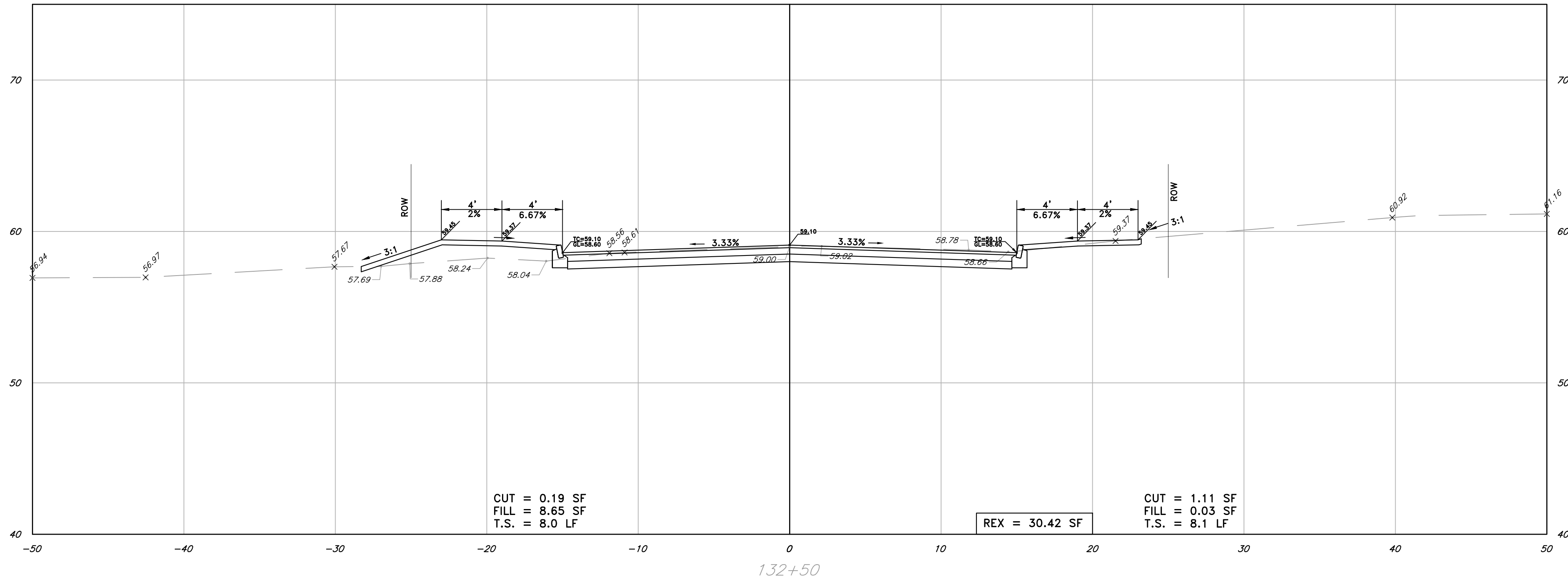
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						<b>2ND AVENUE</b> STA. 131+90.40 THRU STA. 132+00 CROSS SECTIONS	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>
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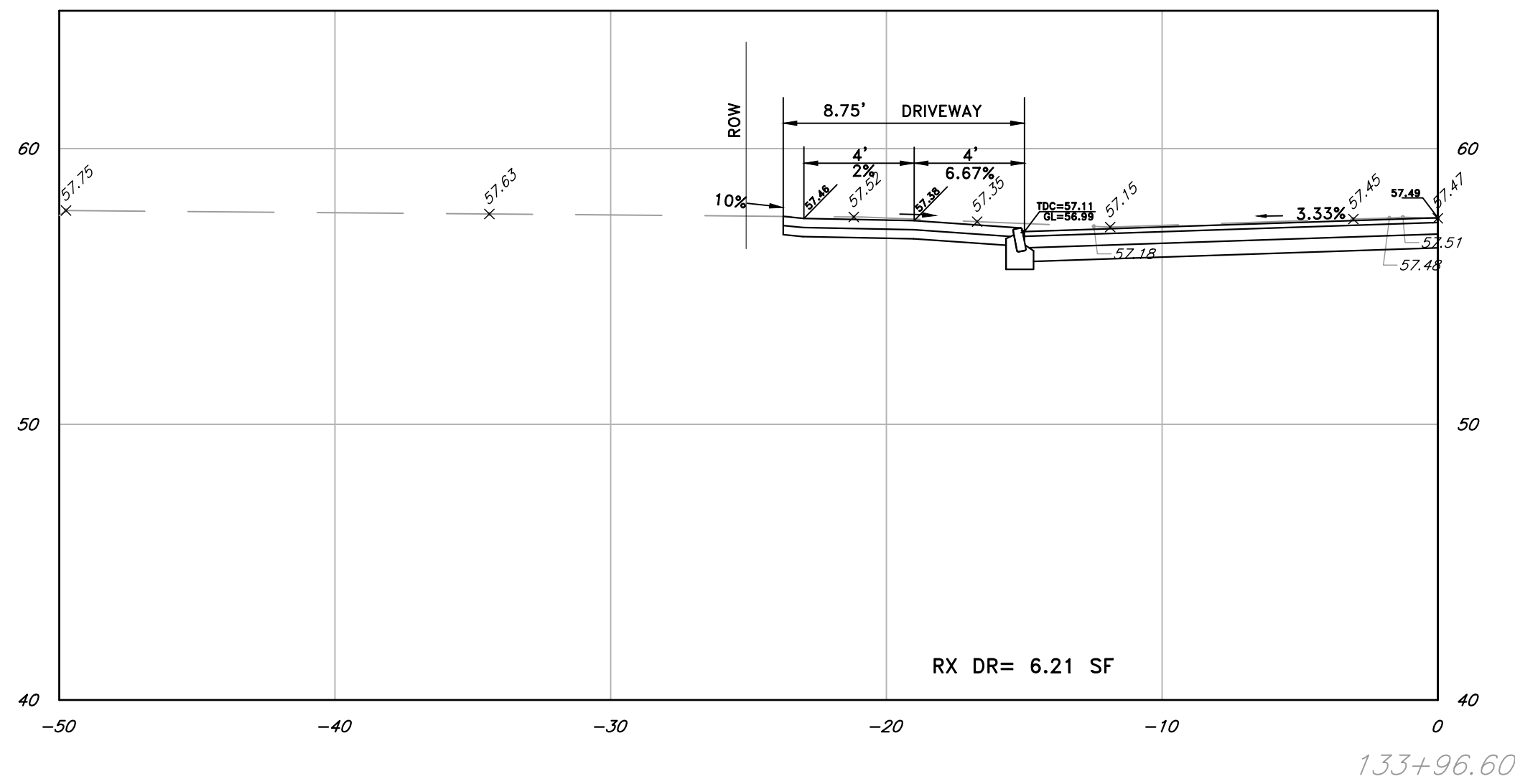
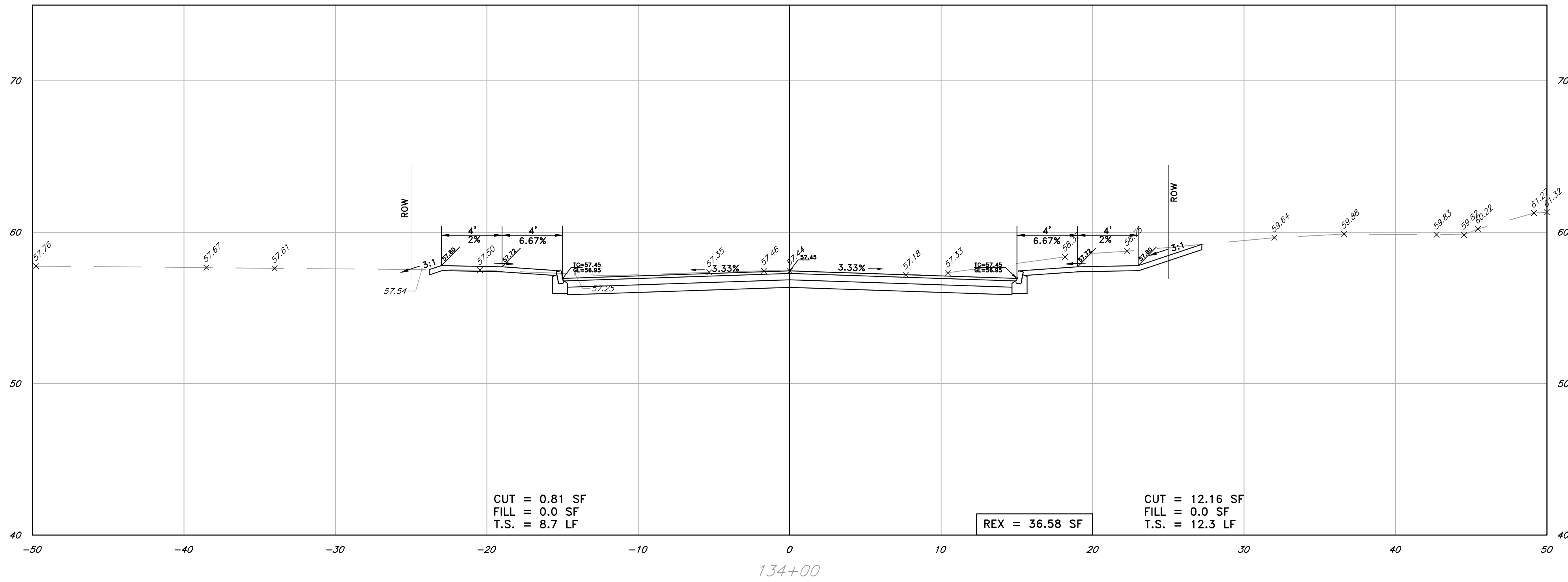
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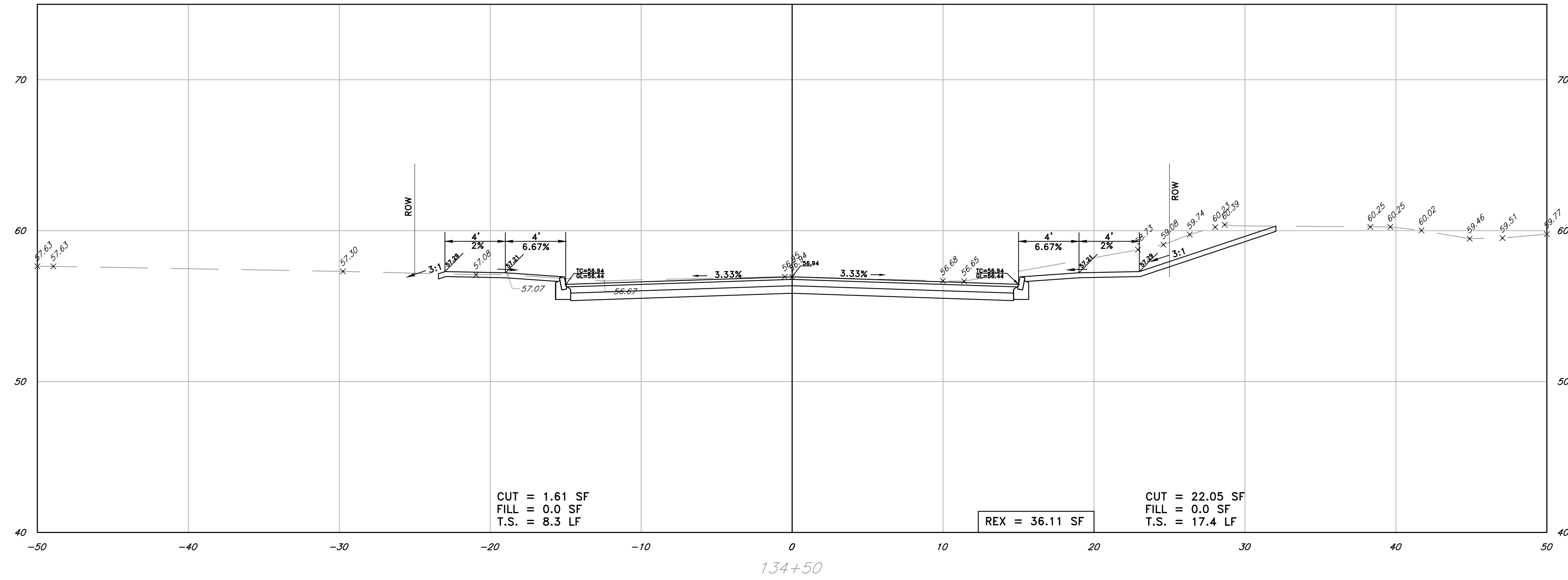


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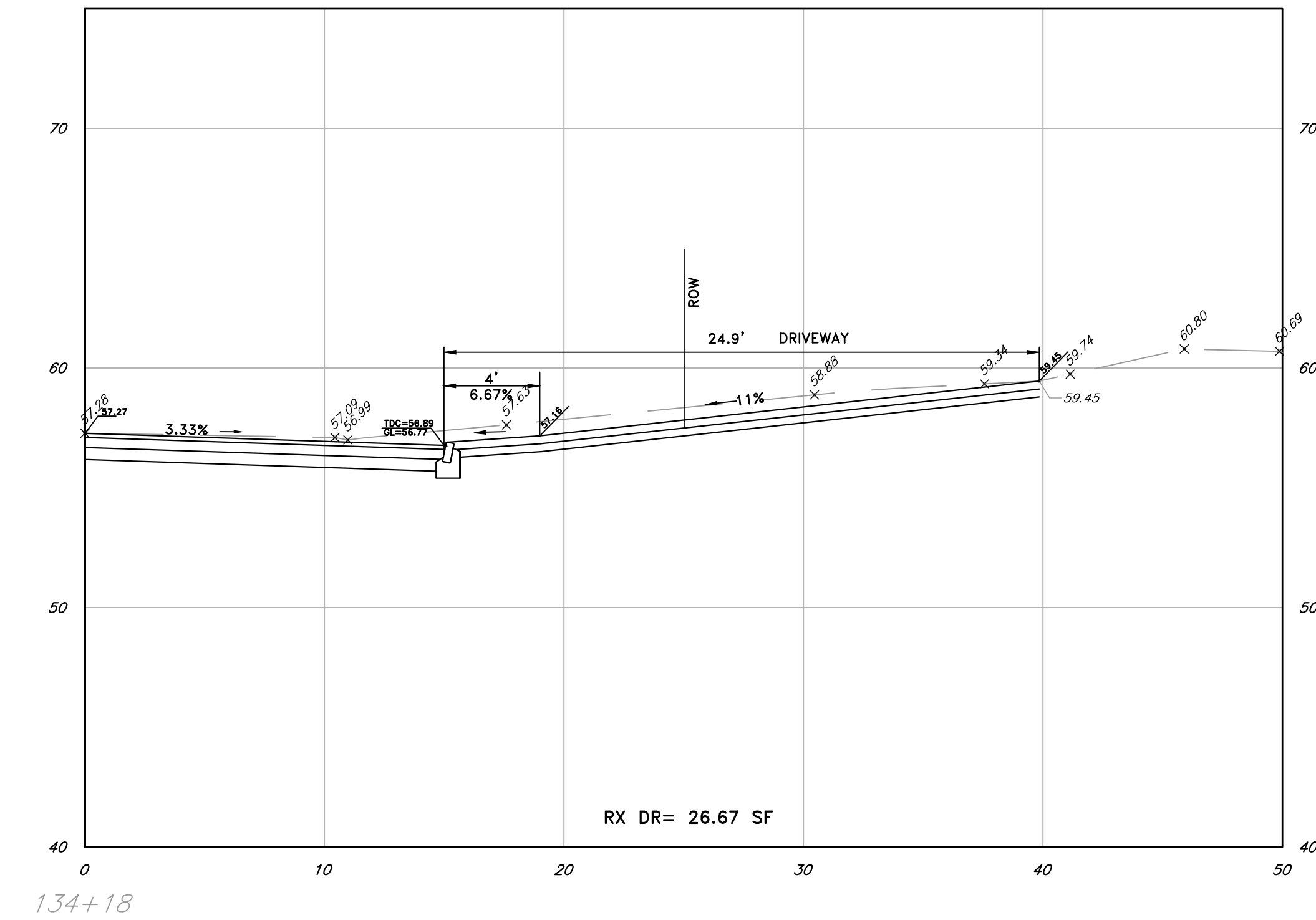


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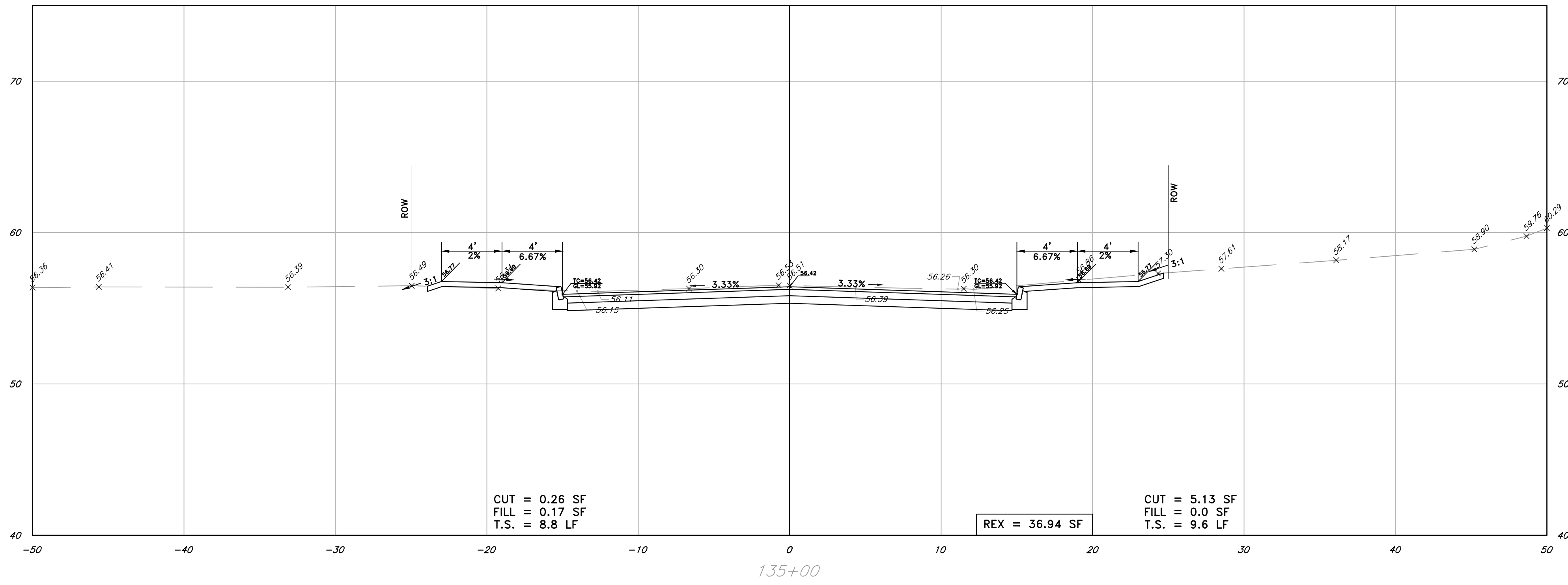
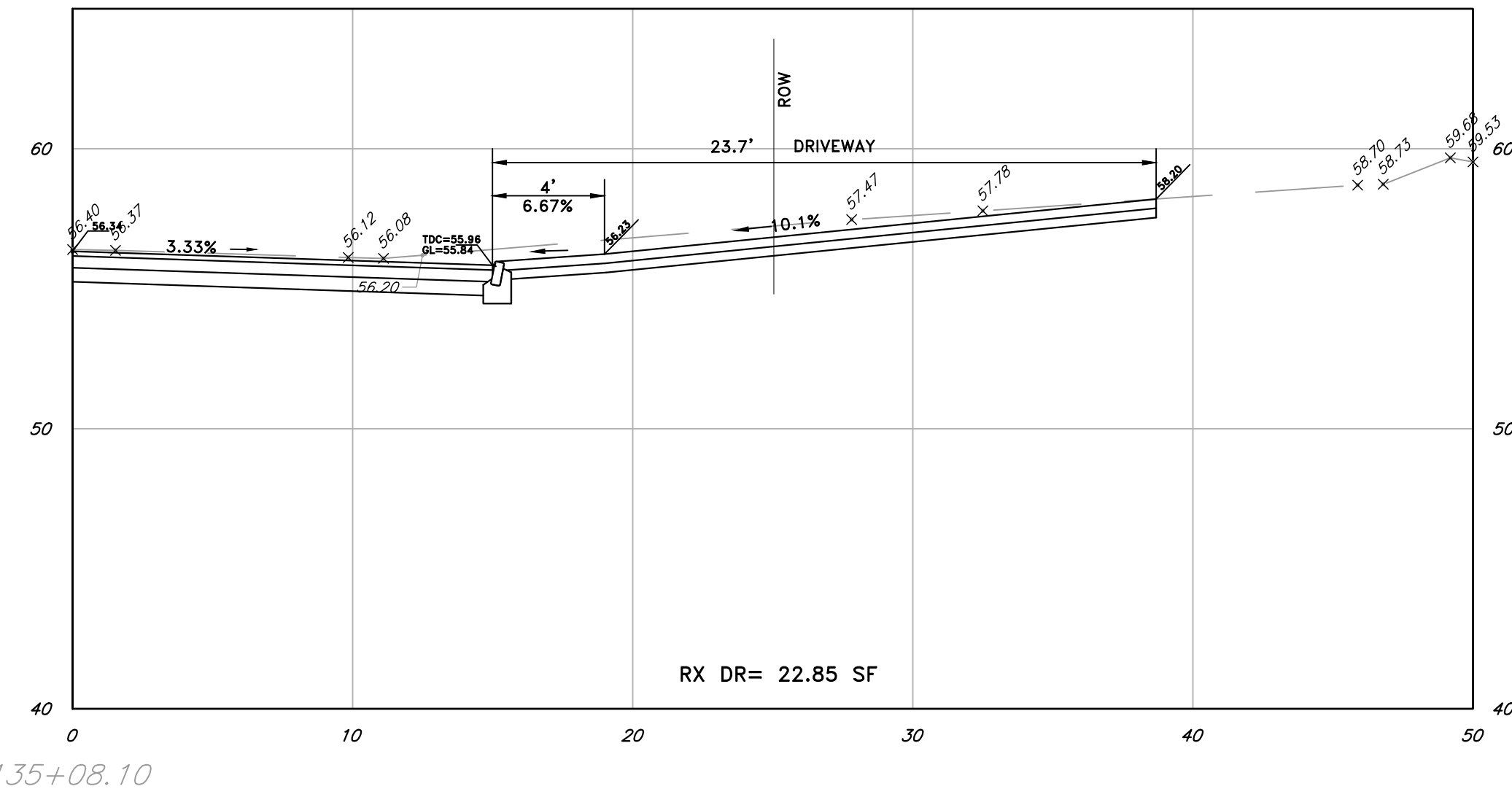
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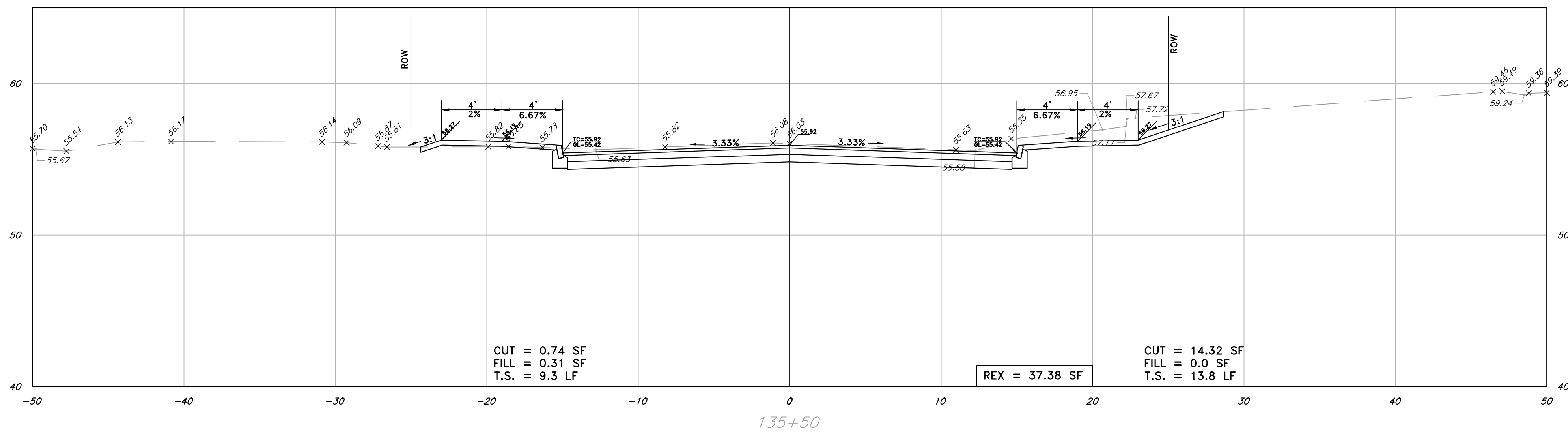
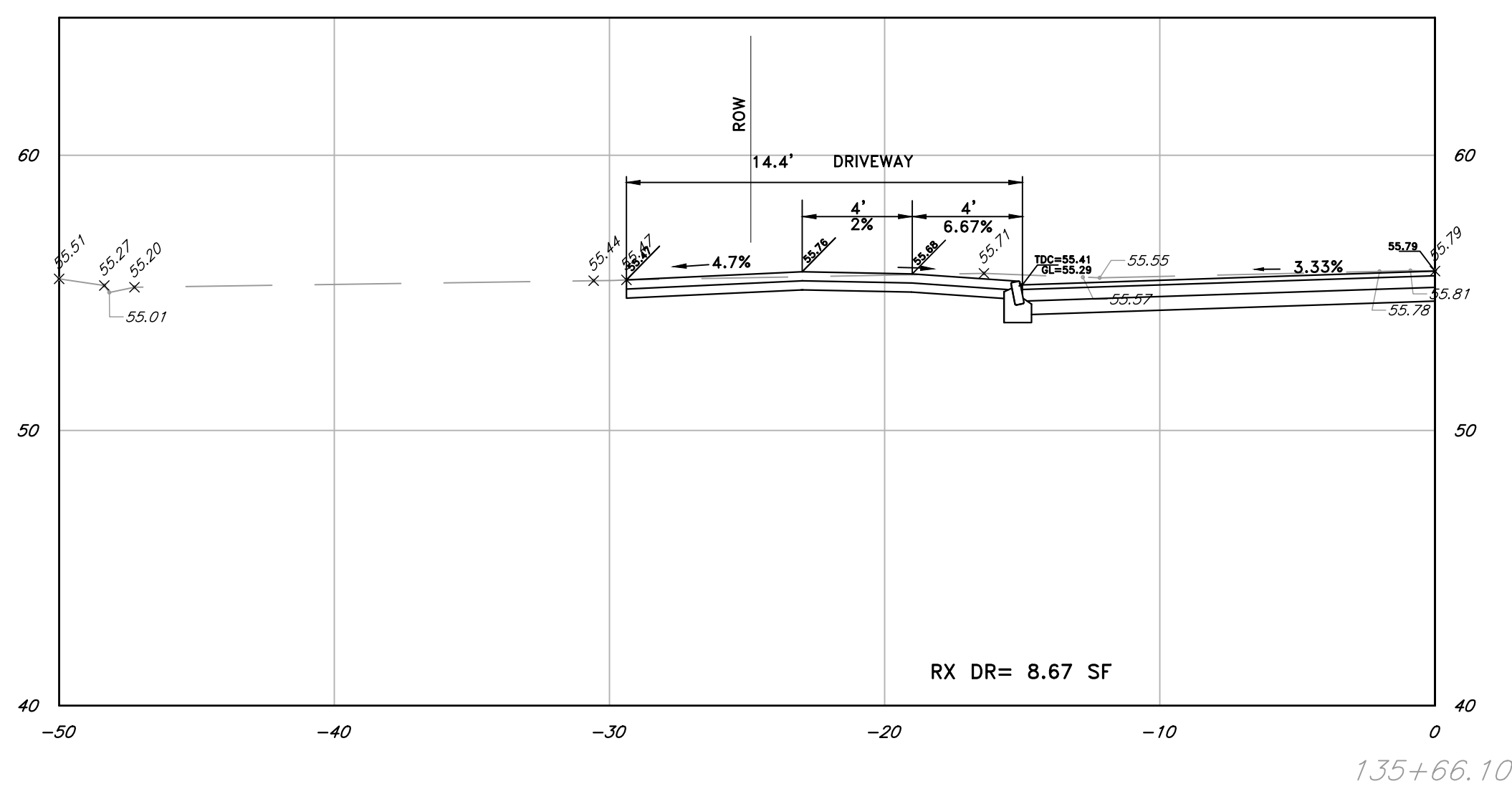
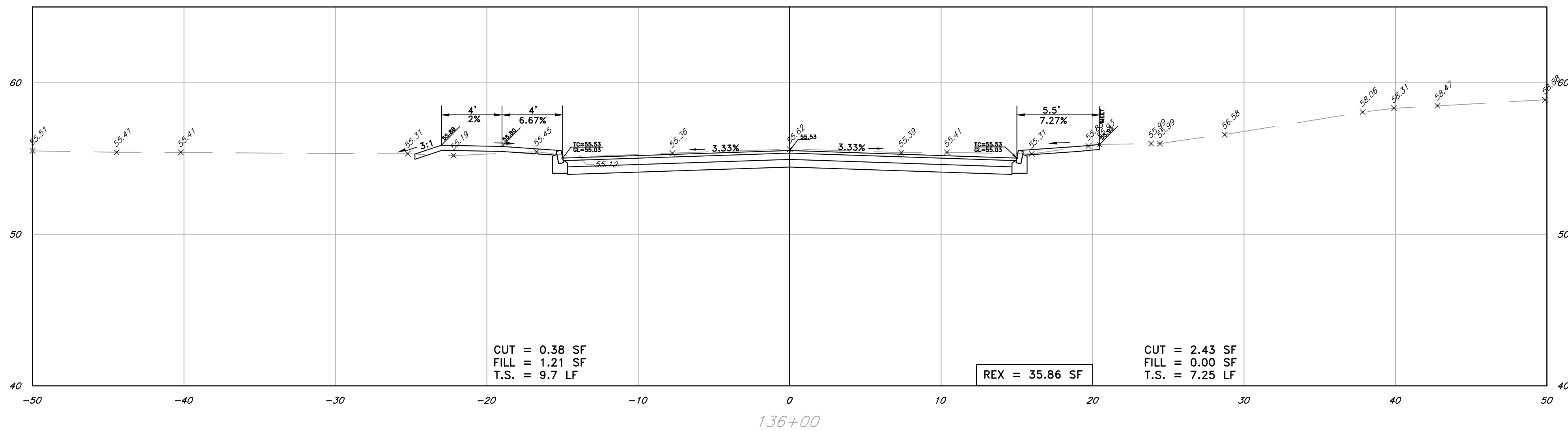
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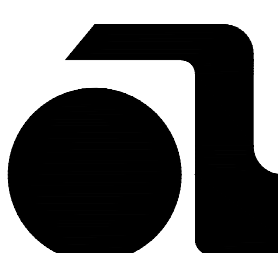
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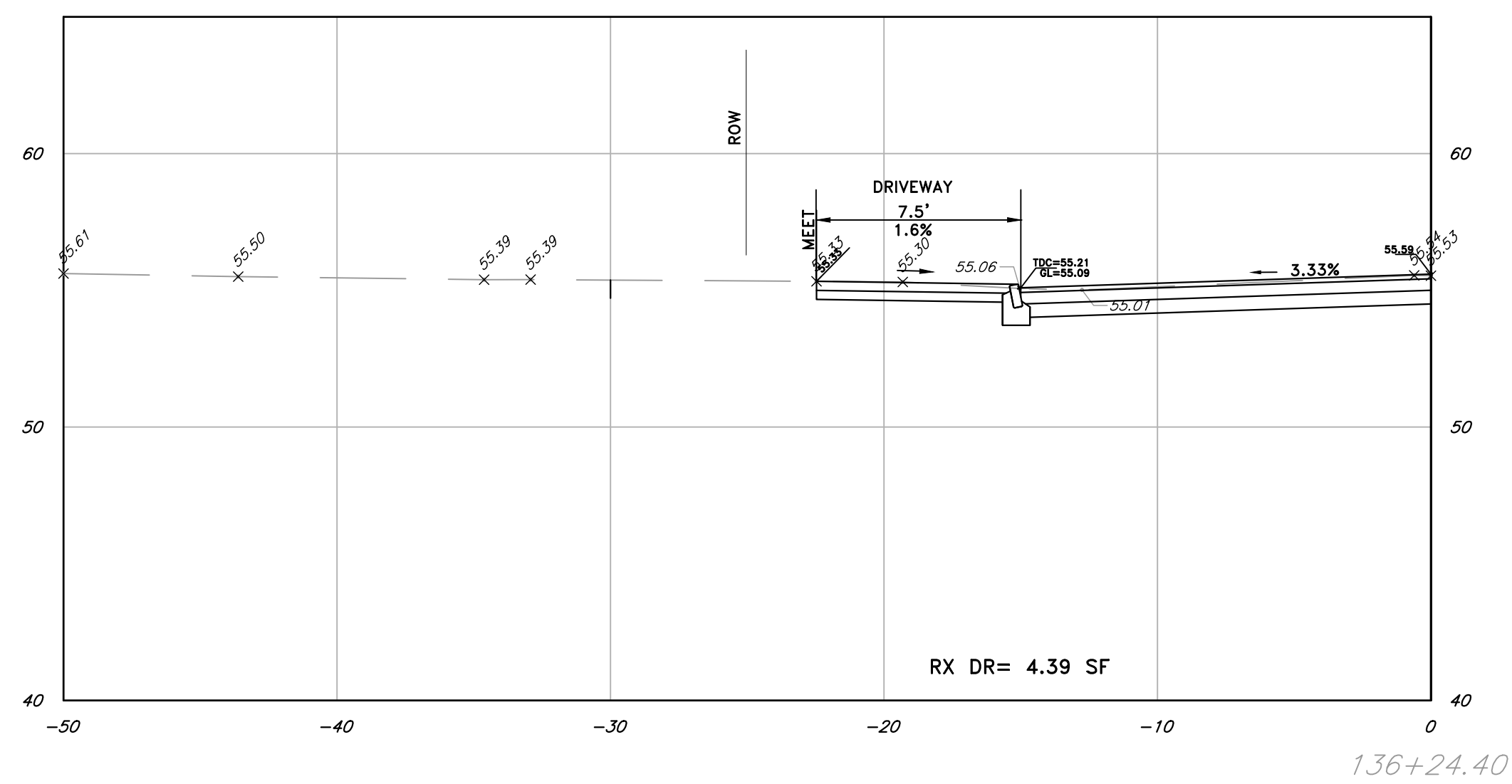
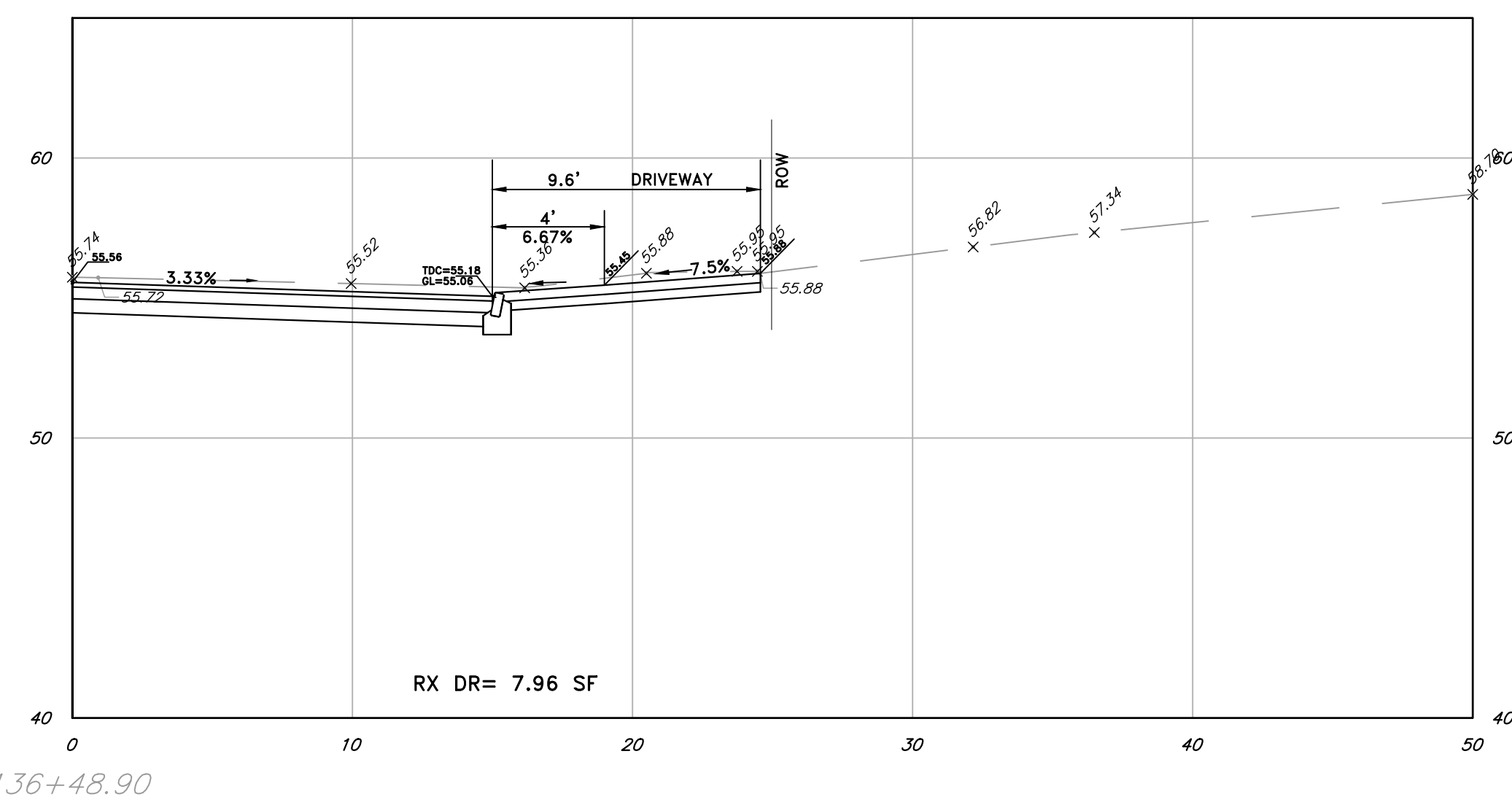
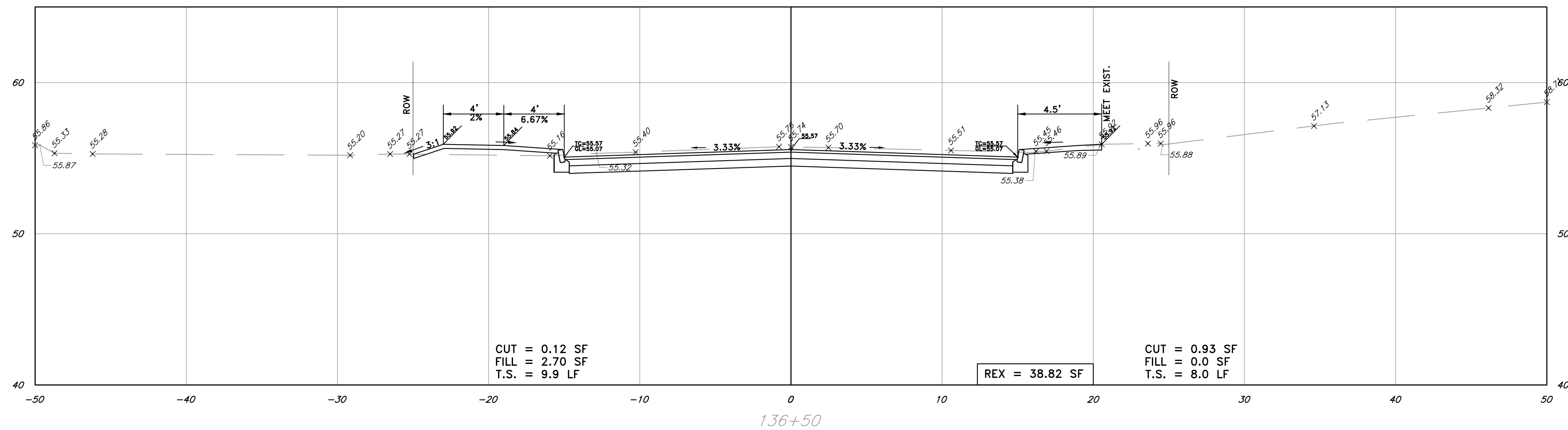
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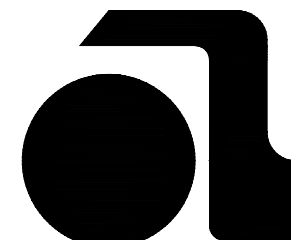
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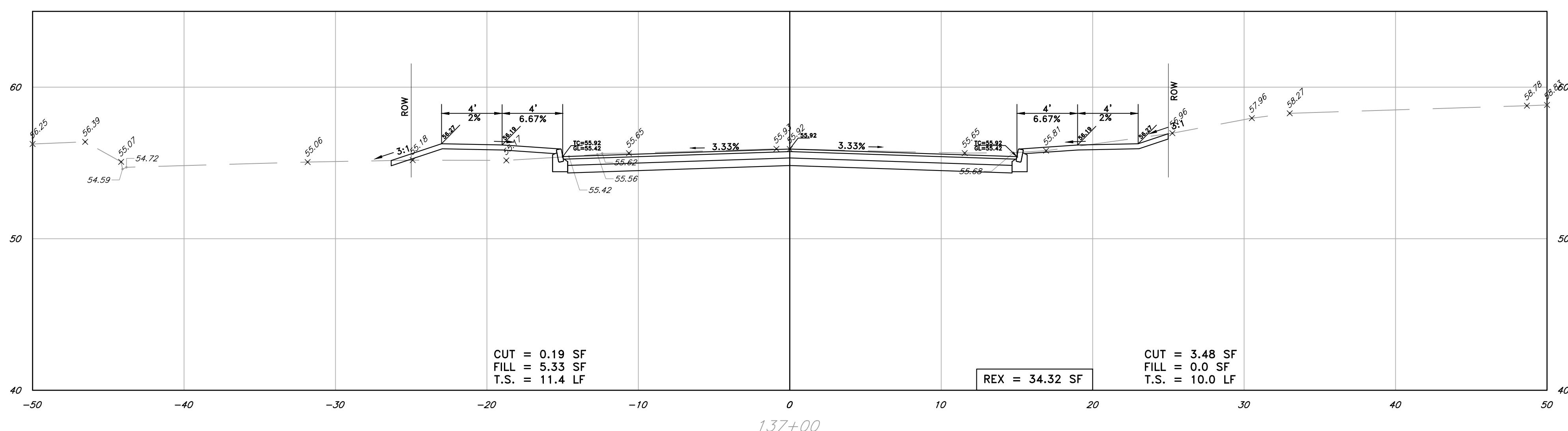
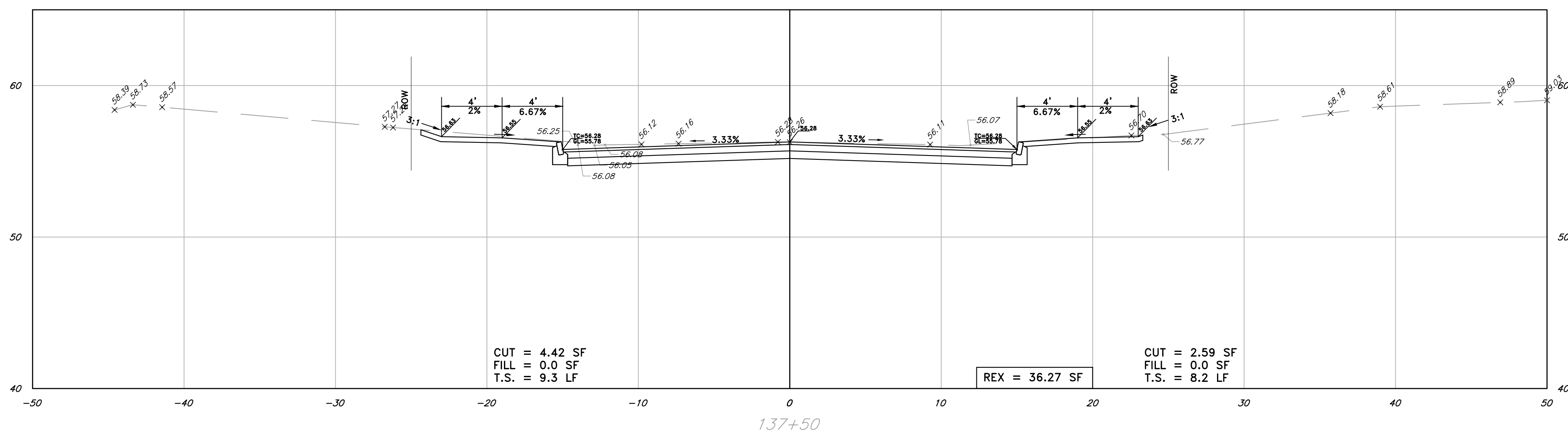
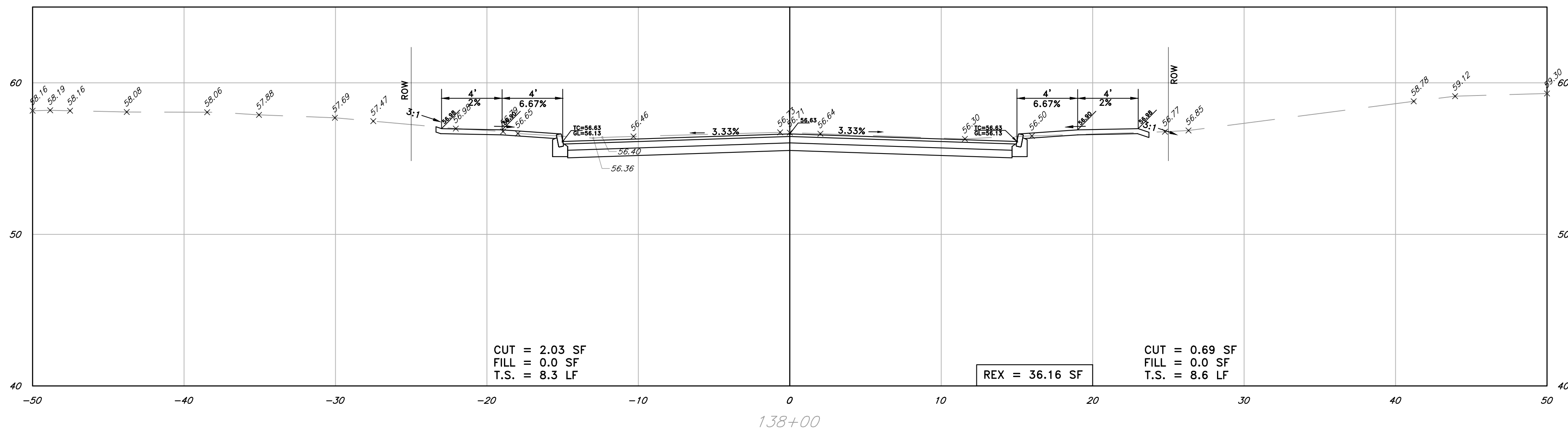


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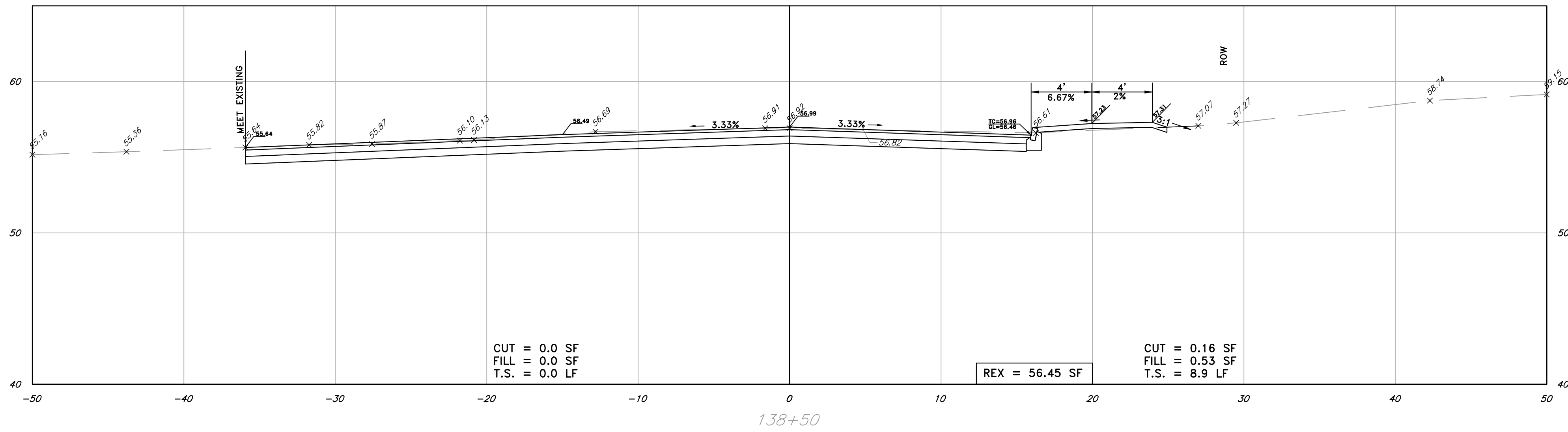
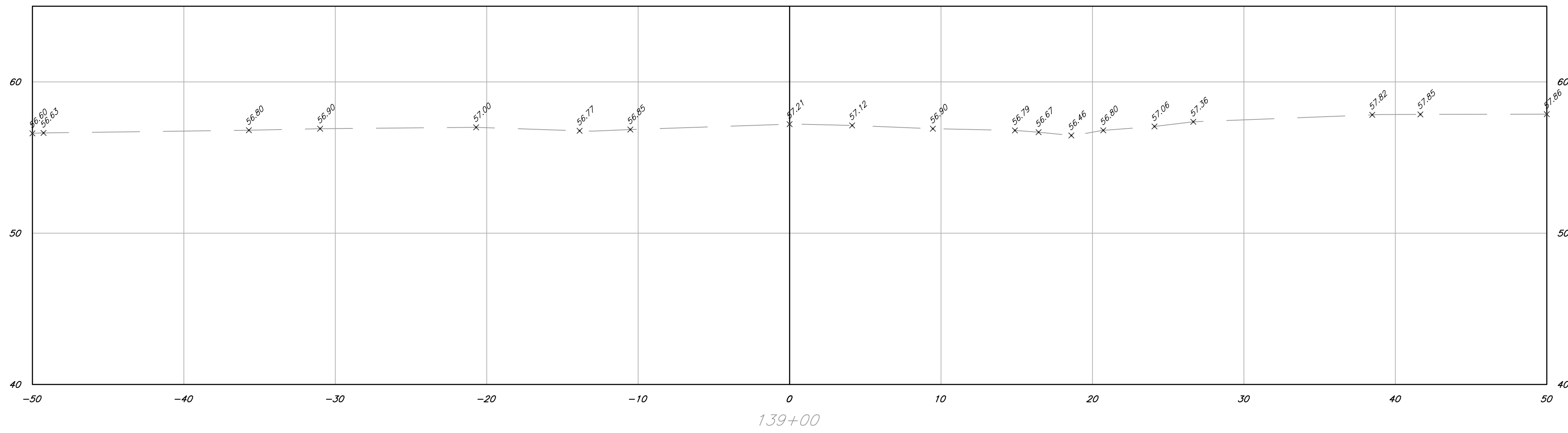
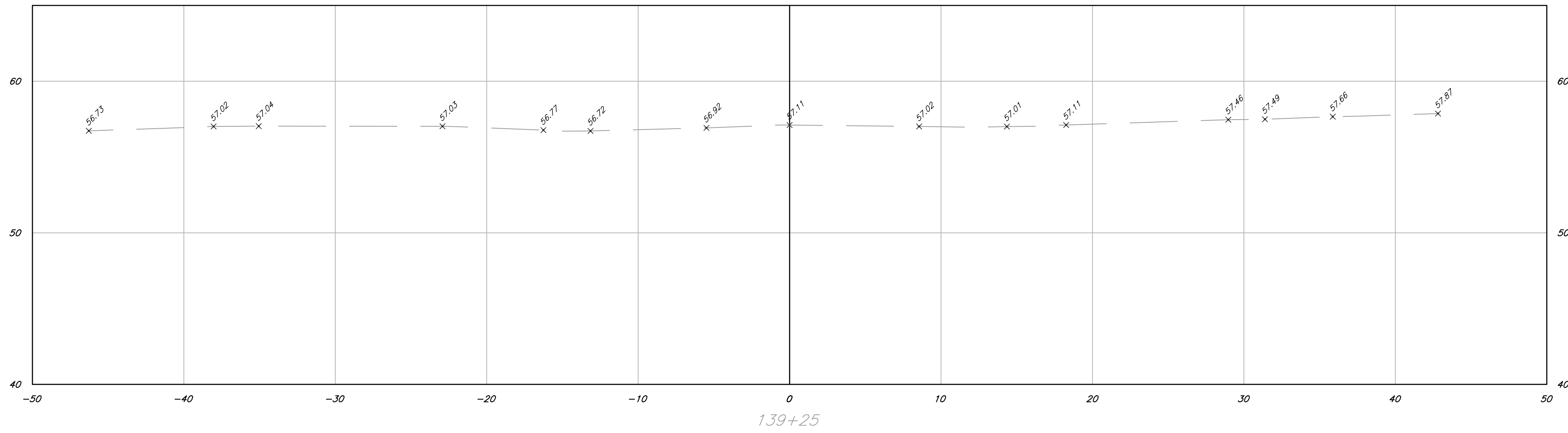
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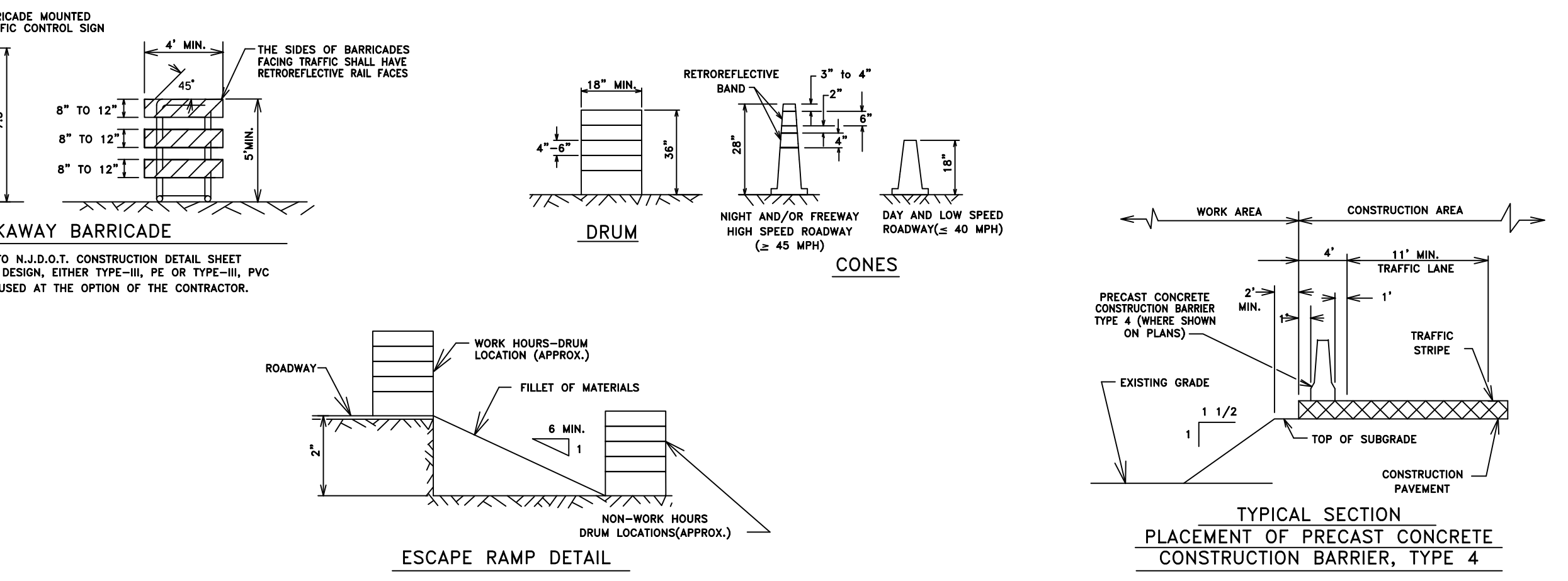
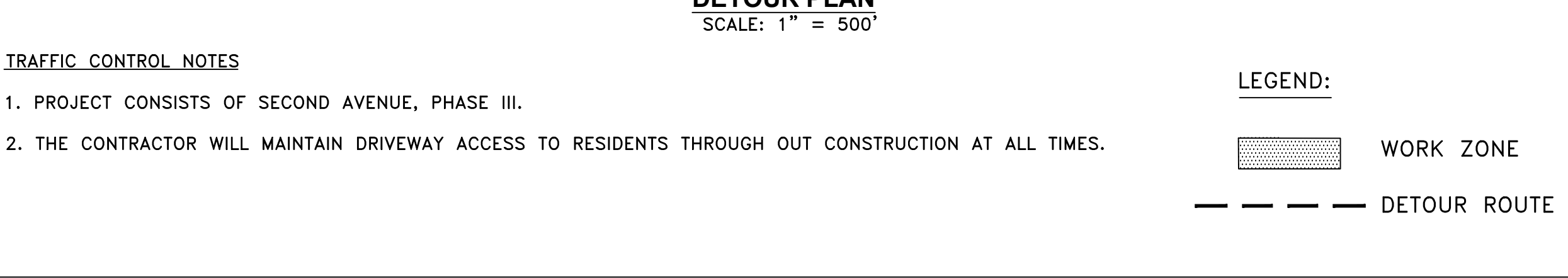
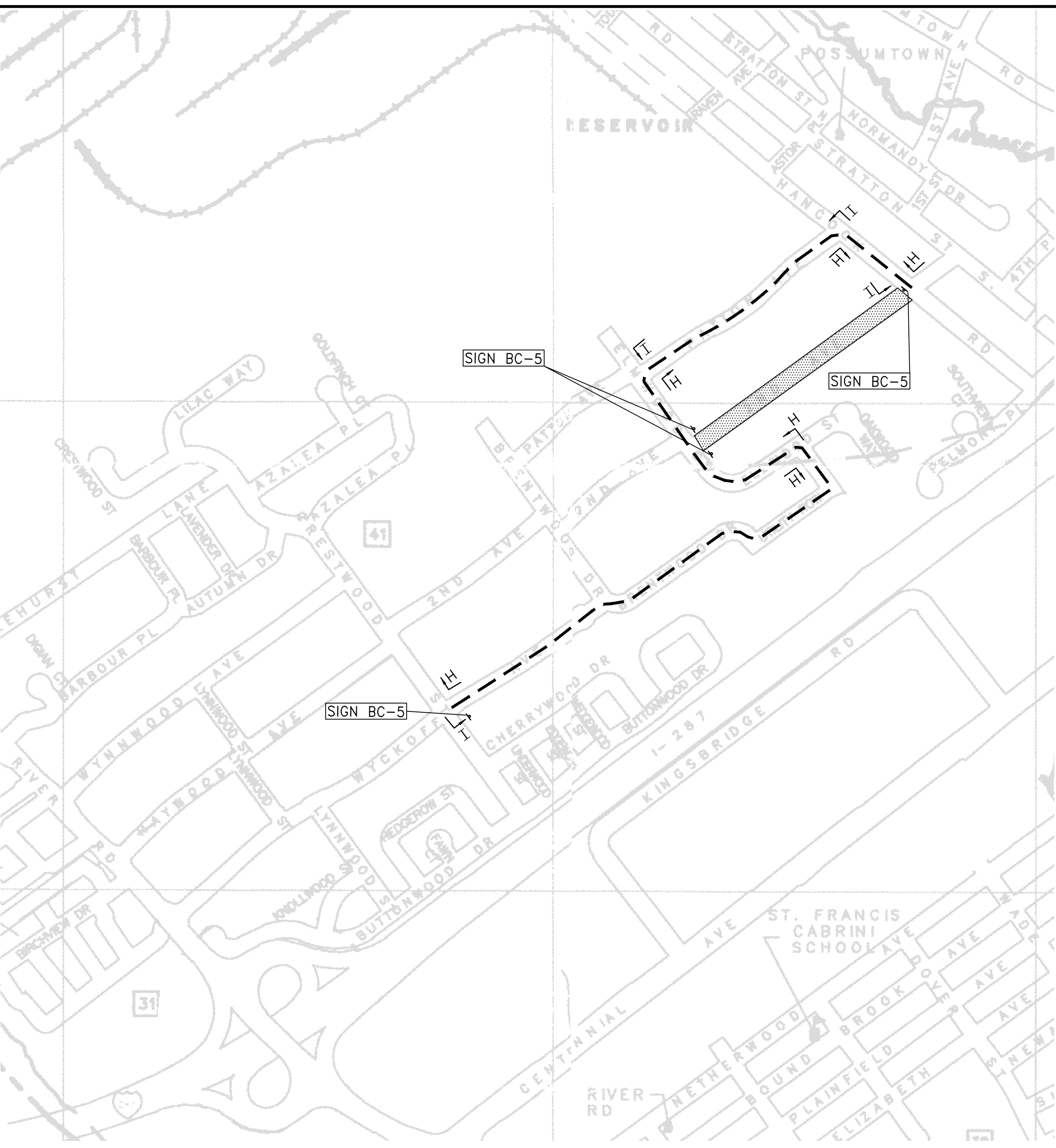
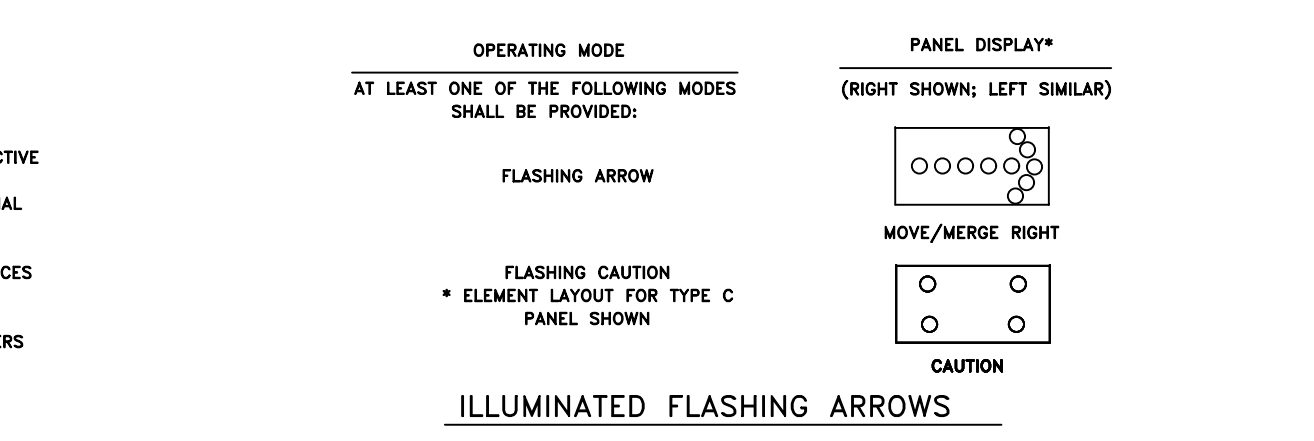
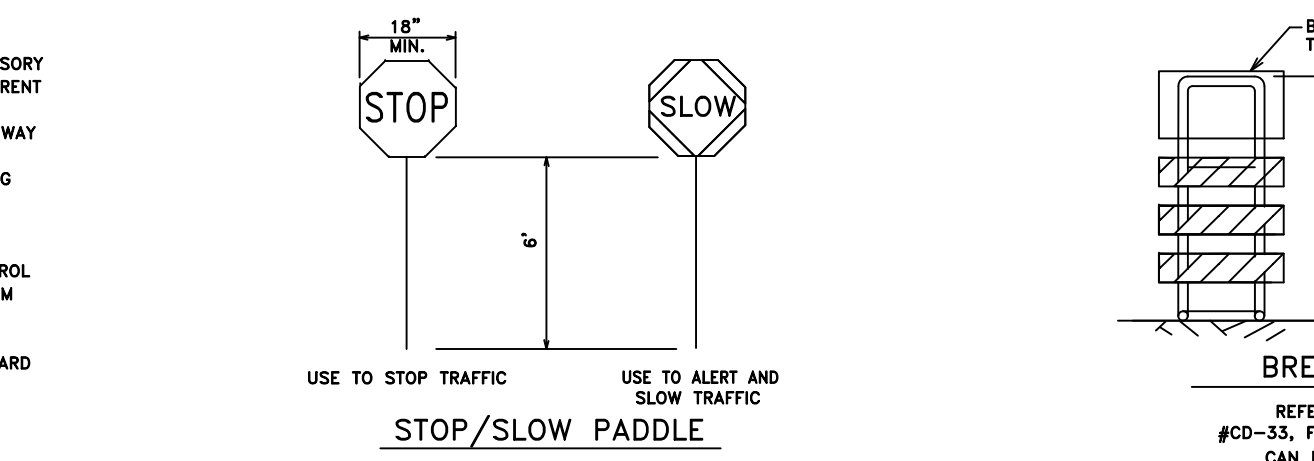
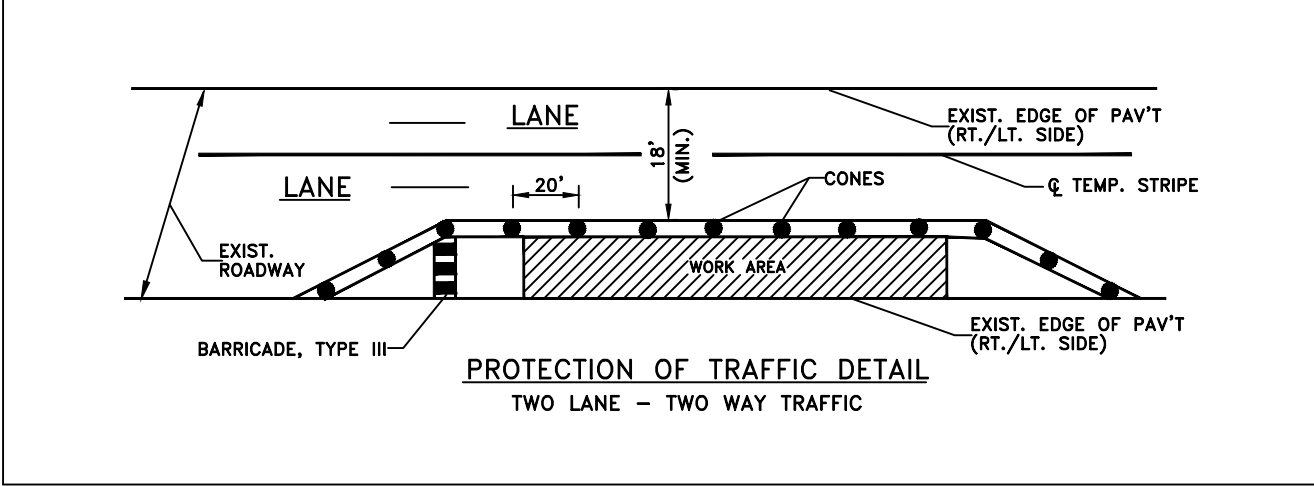
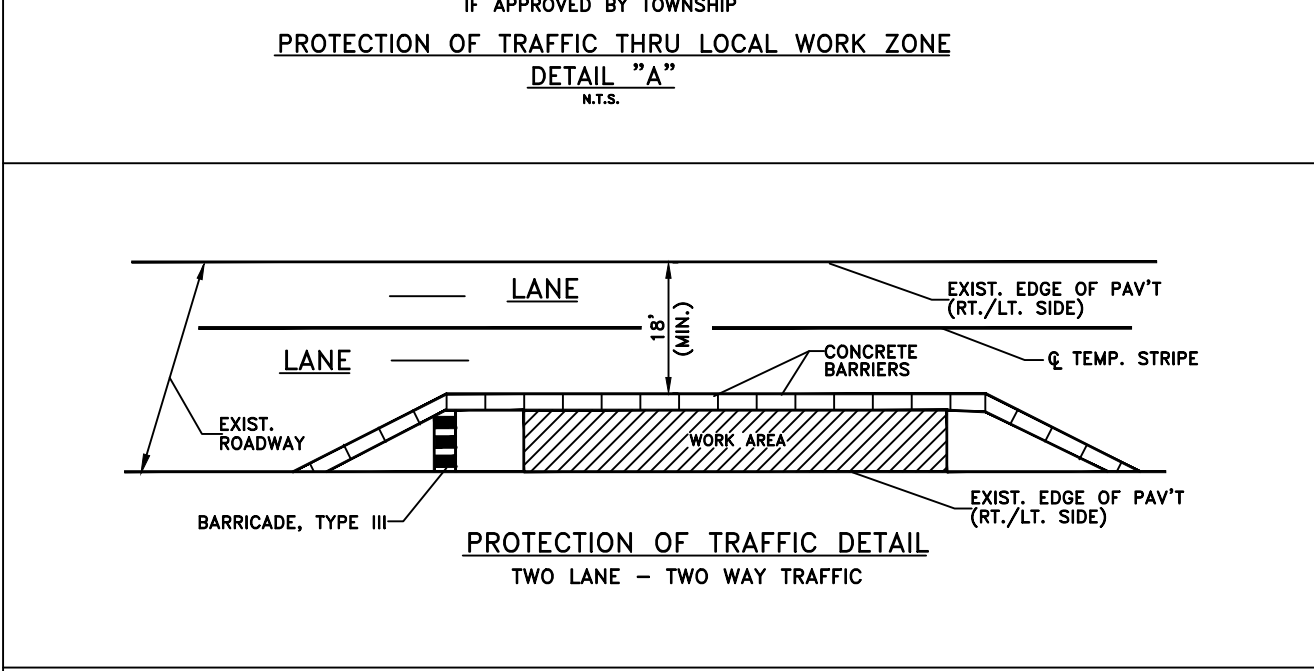
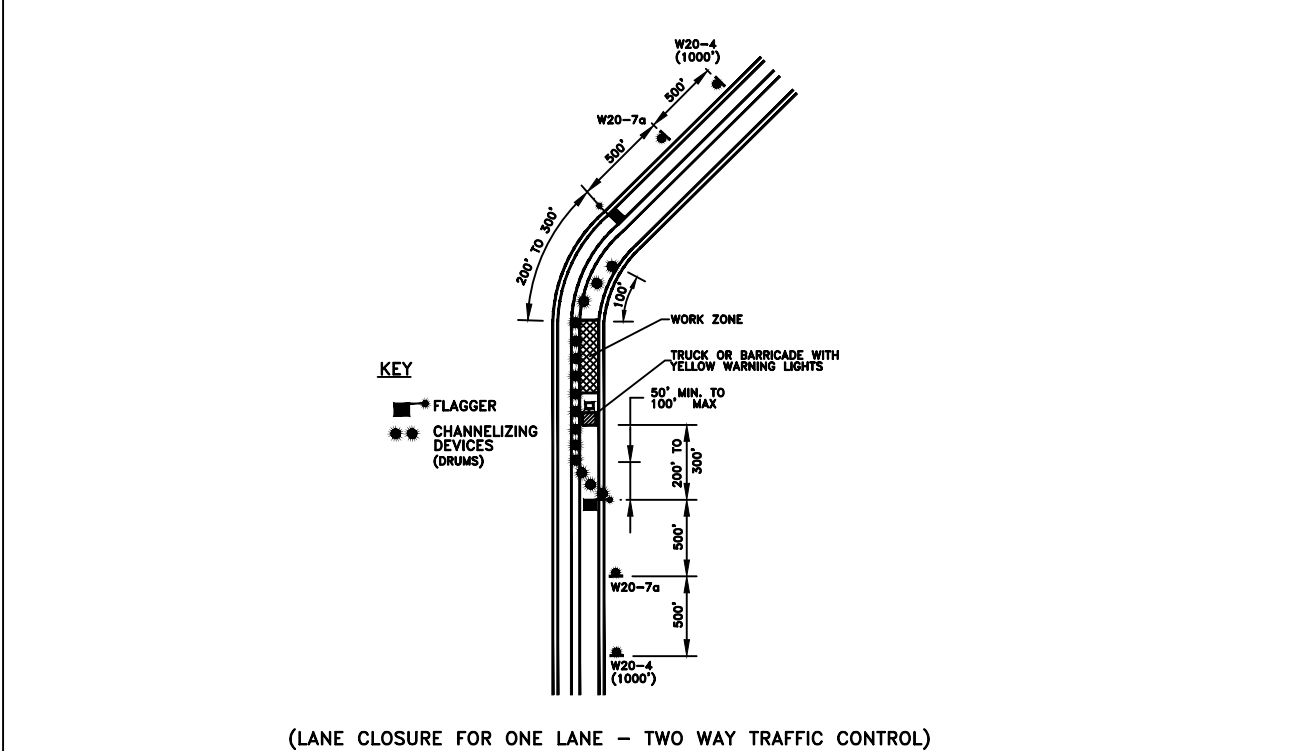


APPROVED: <div style="text-align: center;"> <b>Richard A. Alaimo</b>            PROFESSIONAL ENGINEER            NEW JERSEY LICENSE NO. 13195         </div>	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>																DATE <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>						BY <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>						 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	2ND AVENUE IMPROVEMENTS PHASE III (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>32</b>
<b>2ND AVENUE</b> STA. 138+50 THRU STA. 139+25 CROSS SECTIONS	PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	DESIGNED BY: <b>KS</b>	DRAWN BY: <b>WFL/MAC</b>	CHECKED BY: 	CONTRACT NO.: <b>2022-1</b>	DEPT. HEAD: 	FILE NO.: 																									

STANDARD CONSTRUCTION SIGNS							
LEGEND	SIGN	TYPE	SIZE	LEGEND	SIGN	TYPE	SIZE
		COLOR				COLOR	
A	ROAD CLOSED	R11-2 BLACK ON WHITE	48"x30"	A-A	BRIDGE OUT AHEAD	BLACK ON ORANGE	48"x48"
B	BRIDGE OUT	BLACK ON WHITE	48"x30"	B-B	ONE LANE ROAD AHEAD	W20-4 BLACK ON ORANGE	48"x48"
C	ROAD CLOSED - FEET AHEAD LOCAL TRAFFIC ONLY	R11-3 BLACK ON WHITE	60"x30"	C-C	ONE LANE ROAD AHEAD	BLACK ON ORANGE	48"x48"
D	BRIDGE OUT - MILES AHEAD LOCAL TRAFFIC ONLY	BLACK ON WHITE	60"x30"	D-D	RIGHT LANE CLOSED - FT	W20-5R BLACK ON ORANGE	48"x48"
E	ROAD CLOSED LOCAL TRAFFIC ONLY	BLACK ON WHITE	60"x24"	E-E	LEFT LANE CLOSED - FT	W20-5L BLACK ON ORANGE	48"x48"
F	BRIDGE OUT LOCAL TRAFFIC ONLY	BLACK ON WHITE	60"x24"	F-F	NO FEET	W20-7a SUPPLEMENTAL PLATE	48"x48" 24"x18"
G	BURLINGTON COUNTY	M1-6 YELLOW ON BLUE	24"x24"			BLACK ON ORANGE	
H	DETOUR	M4-9XR BLACK ON ORANGE	30"x24"	G-G	BE PREPARED TO STOP	W20-7b BLACK ON ORANGE	36"x36"
I	DETOUR	M4-9XL BLACK ON ORANGE	30"x24"	H-H		W21-1A BLACK ON ORANGE	36"x36"
J	DETOUR	M4-10R BLACK ON ORANGE	48"x18"	I-I	ROAD MACHINERY AHEAD	W21-3 BLACK ON ORANGE	36"x36"
K	DETOUR	M4-10L BLACK ON ORANGE	48"x18"	J-J	SHOULDER WORK	W21-5 BLACK ON ORANGE	30"x30"
L	DETOUR	M4-9L BLACK ON ORANGE	30"x24"	K-K	SURVEY CREW	W21-6 BLACK ON ORANGE	30"x30"
M	END DETOUR	M4-8a BLACK ON ORANGE	24"x18"	L-L		W4-2R BLACK ON ORANGE	48"x48"
N	ROAD WORK NEXT MILES	G20-1 BLACK ON ORANGE	60"x24"	M-M		W4-2L BLACK ON ORANGE	48"x48"
O	PILOT CAR FOLLOW ME	G20-4 BLACK ON ORANGE	36"x18"	N-N	ROAD NARROWS	W5-1 BLACK ON ORANGE	48"x48"
P	END ROAD WORK	G20-2A BLACK ON ORANGE	48"x24"	O-O	NARROW BRIDGE	W5-2 BLACK ON ORANGE	48"x48"
Q		W6-3 BLACK ON ORANGE	48"x48"	P-P	UNEVEN LANES	W8-11 BLACK ON ORANGE	36"x36"
R	DETOUR	M4-9R BLACK ON ORANGE	30"x24"	Q-Q	LANE ENDS MERGE LEFT	W9-2L BLACK ON ORANGE	48"x48"
S	DETOUR	M4-9X BLACK ON ORANGE	30"x24"	R-R	LANE ENDS MERGE RIGHT	W9-2R BLACK ON ORANGE	48"x48"
T	ROAD WORK AHEAD	W20-1 BLACK ON ORANGE	48"x48"	S-S	35 M.P.H.	W13-1 BLACK ON ORANGE	24"x24"
U	ROAD WORK AHEAD	BLACK ON ORANGE	48"x48"	T-T	TRAFFIC FINES DOUBLED IN WORK AREA	5" C 7" D 5" C	R(N)5-17(S) 48"x30"
V	DETOUR AHEAD	W20-2 BLACK ON ORANGE	48"x48"	U-U		W1-6R BLACK ON ORANGE	48"x24"
W	DETOUR AHEAD	BLACK ON ORANGE	48"x48"	V-V		W1-6L BLACK ON ORANGE	48"x24"
X	ROAD CLOSED AHEAD	W20-3 BLACK ON ORANGE	48"x48"	X-X			
Y	ROAD CLOSED AHEAD	BLACK ON ORANGE	48"x48"	Y-Y			
Z	BRIDGE OUT AHEAD	BLACK ON ORANGE	48"x48"	Z-Z			

SPECIAL SIGNS							
LEGEND	SIGN	TYPE	SIZE	LEGEND	SIGN	TYPE	SIZE
		COLOR				COLOR	
BC-1	THIS BRIDGE WILL BE CLOSED ON OR ABOUT [DATE PLATE] SEEK ALTERNATE ROUTES	4" C 4" C	60"x30"			BLACK ON ORANGE	
BC-2	THIS ROAD WILL BE CLOSED ON OR ABOUT [DATE PLATE] SEEK ALTERNATE ROUTES	4" C 4" C	60"x30"			BLACK ON ORANGE	
BC-3	THIS ROAD WILL BE UNDER CONSTRUCTION ON OR ABOUT [DATE PLATE]	4" C 6" C 4" C	60"x30"			BLACK ON ORANGE	
BC-4	THIS INTERSECTION WILL BE CLOSED ON OR ABOUT [DATE PLATE] SEEK ALTERNATE ROUTES	4" C 4" C 4" C	60"x30"			BLACK ON ORANGE	
BC-5	STREET NAME CLOSED AT STREET NAME LOCAL TRAFFIC ONLY	6" C 7" C 6" C	72"x48"			BLACK ON ORANGE	
BC-6	STREET NAME	4" C	36"x12"			BLACK ON ORANGE	

ITEM	DESCRIPTION	PLAN QTY.	QTY. USED	LEGEND
				ARROW PANEL
				ARROW PANEL SUPPORT OR TRAILER
				CHANNELIZING DEVICE
				DIRECTION OF TRAFFIC
				FLAGGER
				SIGN(SHOWN FACING LEFT)
				PORTABLE CONCRETE BARRIER
				PORTABLE CONCRETE BARRIER WITH WARNING LIGHTS
				SURVEYOR
				TRAFFIC OR PEDESTRIAN SIGNAL
				TRUCK MOUNTED ATTENUATOR
				TYPE-III BREAKAWAY BARRICADE
				CHANGEABLE MESSAGE SIGN SUPPORT OR TRAILER
				WARNING LIGHT
				WORK SPACE
				WORK VEHICLE

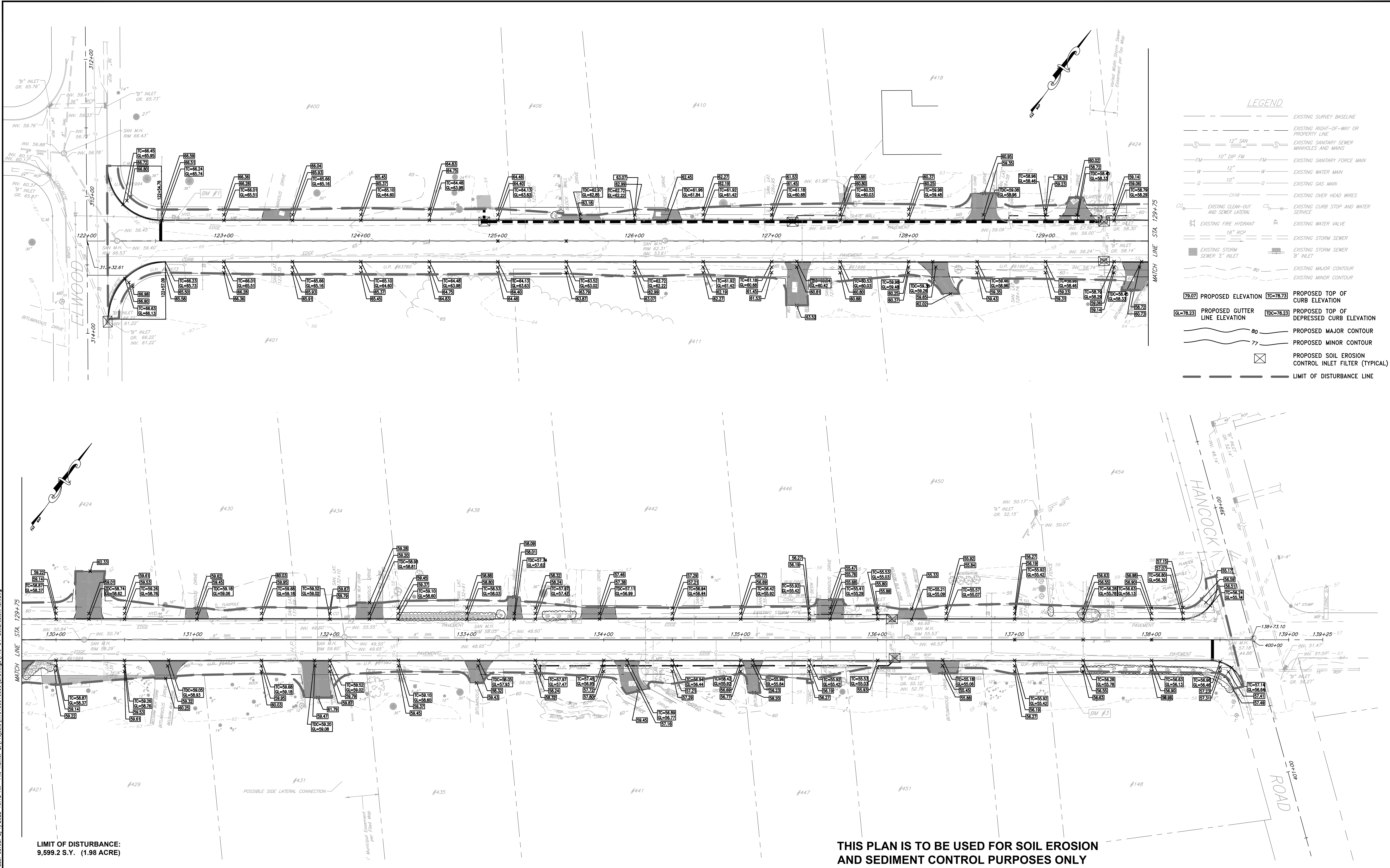


**TRAFFIC CONTROL NOTES**

- TRAFFIC IS TO BE MAINTAINED IN ACCORDANCE WITH PART VI, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, AND IS DIRECTED BY THE RESIDENT ENGINEER.
- THE CONTRACTOR IS TO HAVE ON HAND AT ALL TIMES AN ADEQUATE NUMBER OF DRUMS, BARRICADES, SIGNS, AND OTHER DEVICES AS MAY BE NECESSARY TO PROTECT THE TRAVELING PUBLIC (INCLUDING PEDESTRIANS) FROM OPERATIONS.
- AT LEAST TWO TRAFFIC DIRECTORS SHALL BE ON DUTY AT EACH WORK SITE WHENEVER THE CONTRACTOR HAS WORKMAN OR EQUIPMENT WITHIN THE CARRYWAY AND AT OTHER TIMES WHEN DIRECTED BY THE ENGINEER, OR OTHER INDIVIDUAL HAVING JURISDICTION.
- MESSAGE BOARDS TO BE PLACED AND ACTIVATED ON ROADWAY FOR ADVANCE WARNING 60 TO 90 FEET PRIOR TO BEGINNING CONSTRUCTION. MESSAGE TO READ "ROAD BETWEEN \_\_\_\_\_ AND \_\_\_\_\_ WILL BE UNDER CONSTRUCTION ON OR ABOUT \_\_\_\_\_ THRU \_\_\_\_\_ SEEK ALTERNATE ROUTE."

APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	<b>ALAIMO GROUP</b> Consulting Engineers NJCSA 24GA27988400 200 HIGH STREET 2 MARKET STREET MOUNT HOLLY, N.J. PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD) <b>MAINTENANCE AND PROTECTION OF TRAFFIC NOTES, DETAILS AND DETOUR PLAN</b> SCALE: NONE	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b> PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>DMM</b> CHECKED BY: PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b> DEPT. HEAD:	SHEET <b>33</b> FILE NO.:
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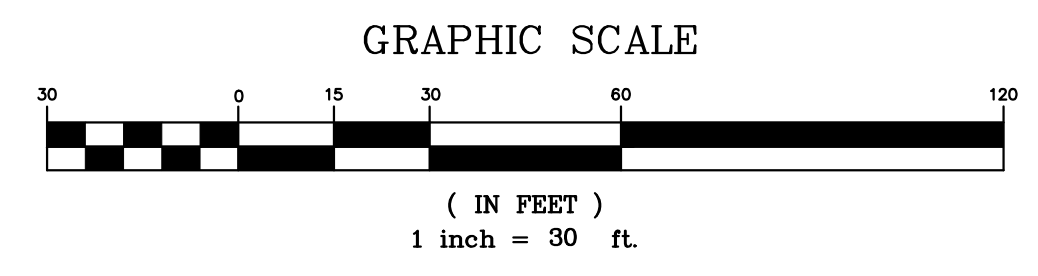
**LEGEND**

- EXISTING SURVEY BASELINE
- - - EXISTING RIGHT-OF-WAY OR PROPERTY LINE
- 12" SAN --- EXISTING SANITARY SEWER MANHOLES AND MAINS
- FM 10" DIP FM FM EXISTING SANITARY FORCE MAIN
- W 12" W EXISTING WATER MAIN
- G 10" G EXISTING GAS MAIN
- OHW --- EXISTING OVER HEAD WIRES
- EXISTING CLEAN-OUT AND SEWER LATERAL --- EXISTING CURB STOP AND WATER SERVICE
- EXISTING FIRE HYDRANT --- EXISTING WATER VALVE
- 18" RCP --- EXISTING STORM SEWER
- EXISTING STORM SEWER 'E' INLET --- EXISTING STORM SEWER 'B' INLET
- EXISTING MAJOR CONTOUR --- EXISTING MINOR CONTOUR
- 79.07 PROPOSED ELEVATION TC=78.73 PROPOSED TOP OF CURB ELEVATION
- GL=78.23 PROPOSED GUTTER LINE ELEVATION TDC=78.23 PROPOSED TOP OF DEPRESSED CURB ELEVATION
- 80 --- PROPOSED MAJOR CONTOUR
- 77 --- PROPOSED MINOR CONTOUR
- ☒ PROPOSED SOIL EROSION CONTROL INLET FILTER (TYPICAL)
- LIMIT OF DISTURBANCE LINE

**LIMIT OF DISTURBANCE:**  
9,599.2 S.Y. (1.98 ACRE)

**THIS PLAN IS TO BE USED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY**

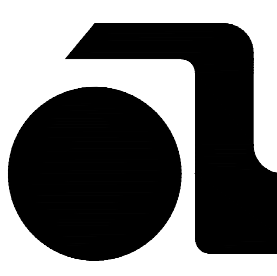
- NOTES:**
- A SURVEY WAS PERFORMED BY ALAIMO GROUP, MARCH 2021.
  - UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



APPROVED:

**Richard A. Alaimo**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



**ALAIMO GROUP**  
Consulting Engineers  
NJDC 24GA27988400

200 HIGH STREET MOUNT HOLLY, N.J.  
2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III**  
(ELWOOD STREET TO HANCOCK ROAD)

**2nd AVENUE PHASE III**  
SOIL EROSION AND  
SEDIMENT CONTROL PLAN

SCALE: 1" = 30'

CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>34</b>
PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	CHECKED BY: <b>MAC/DMM</b>
CONTRACT NO.: <b>2022-1</b>	DEPT. HEAD:	FILE NO.:



SOIL EROSION AND SEDIMENT CONTROL NOTES

- The Freehold Soil Conservation District shall be notified forty-eight (48) hours in advance of any soil disturbing activity.
- All Soil Erosion and Sediment Control practices are to be installed prior to soil disturbance, or in their proper sequence, and maintained until permanent protection is established.
- Any changes to the Certified Soil Erosion and Sediment Control Plans will require the submission of revised Soil Erosion and Sediment Control Plans to the District for re-certification. The revised plans must meet all current State Soil Erosion and Sediment Control Standards.
- N.J.S.A 4:24-39 et. Seq. requires that no Certificates of Occupancy be issued before the District determines that a project or portion thereof is in full compliance with the Certified Plan and Standards for Soil Erosion and Sediment Control in New Jersey and a Report of Compliance has been issued. Upon written request from the applicant, the District may issue a Report of Compliance with conditions on a lot-by-lot or section-by-section basis, provided that the project or portion thereof is in satisfactory compliance with the sequence of development and temporary measures for soil erosion and sediment control have been implemented, including provisions for stabilization and site work.
- Any disturbed areas that will be left exposed more than sixty (60) days, and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of 2 to 2 1/2 tons per acre, according to the Standard for Stabilization with Mulch Only.
- Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. soil stockpiles, steep slopes and roadway embankments) will receive temporary seeding in combination with straw mulch or a suitable equivalent, and a mulch anchor, in accordance with State Standards.
- A sub-base course will be applied immediately following rough grading and installation of improvements to stabilize streets, roads, driveways, and parking areas. In areas where no utilities are present, the sub-base shall be installed within fifteen (15) days of the preliminary grading.
- The Standard for Stabilized Construction Access requires the installation of a pad of clean crushed stone at points where traffic will be accessing the construction site. After interior roadways are paved, individual lots require a stabilized construction access consisting of one inch to two inch (1" - 2") stone for a minimum length of ten feet (10') equal to the lot entrance width. All other access points shall be blocked off.
- All soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public right-of-ways will be removed immediately.
- Permanent vegetation is to be seeded or sodded on all exposed areas within ten (10) days after final grading.
- At the time that 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 it 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, non-vegetative means of permanent ground stabilization will have to be employed.
- In accordance with the Standard for Management of High Acid Producing Soils, any soil having a pH of 4 or less or containing iron sulfides shall be ultimately placed or buried with limestone applied at the rate of 10 tons/acre, (or 450 lbs/1,000 sq ft of surface area) and covered with a minimum of 12" of settled soil with a pH of 5 or more, or 24" where trees or shrubs are to be planted.
- Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
- Unfiltered dewatering is not permitted. Necessary precautions must be taken during all dewatering operations to minimize sediment transfer. Any dewatering methods used must be in accordance with the Standard for Dewatering.
- Should the control of dust at the site be necessary, the site will be sprinkled until the surface is wet, temporary vegetative cover shall be established or mulch shall be applied as required by the Standard for Dust Control.
- Stockpile and staging locations established in the field shall be placed within the limit of disturbance according to the certified plan. Staging and stockpiles not located within the limit of disturbance will require certification of a revised Soil Erosion and Sediment Control Plan. Certification of a new Soil Erosion and Sediment Control Plan may be required for these activities if an area greater than 5,000 square feet is disturbed.
- All soil stockpiles are to be temporarily stabilized in accordance with Soil Erosion and Sediment Control note #6.
- The property owner shall be responsible for any erosion or sedimentation that may occur below stormwater outfalls or offsite as a result of construction of the project.

DUST CONTROL

DUST CONTROL SHALL BE IN ACCORDANCE WITH 4.10.1 OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY". THE FOLLOWING METHODS WILL BE USED FOR CONTROLLING DUST.

- APPLICATION OF MULCH AND/OR VEGETATIVE COVER AS SPECIFIED IN SEEDING, LIMING, FERTILIZING, AND MULCHING SPECIFICATIONS.
- TILLAGE TO ROUGHEN THE SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. PROCEED FROM THE WINDWARD SIDE OF THE SITE WITH CHISEL TOOTH PLOWS, TWELVE INCH (12") APART, OR SPRING TOOTHED HARROWS.
- SPRINKLING - SITE IS SPRINKLED UNTIL SURFACE IS WET. SPRINKLING SHOULD BE DONE PERIODICALLY THROUGHOUT THE CONSTRUCTION PERIOD AS REQUIRED TO CONTROL DUST.

SEEDING, LIMING AND FERTILIZING RATES

- SEED BED PREPARATION AND SEEDING:

- WORK APPROVED RATES OF LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF APPROXIMATELY FOUR INCHES (4") WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION MUST BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED.
- APPLY SEED UNIFORMLY BY GRAIN DRILL OR GRASS SEEDER TO A DEPTH OF APPROXIMATELY ONE QUARTER TO ONE HALF INCH (1/4" TO 1/2"), ONE QUARTER INCH (1/4") DEEPER ON COARSE TEXTURED SOIL.

PERMANENT SEED MIXTURES (TYPE 14 PER TABLE 4-2 / 4-3)

	ACCEPTABLE PLANTING DATES	RATES
TALL FESCUE	3/1 - 4/30	6.0 lb./1000 S.F.
PERENNIAL RYEGRASS (BLEND)	5/1 - 8/14	0.5 lb./1000 S.F.
KENTUCKY BLUEGRASS (BLEND)	8/15 - 10/15	0.5 lb./1000 S.F.

- AFTER SEEDING, FIRM THE SOIL WITH A CORRUGATED ROLLER TO ASSURE GOOD SEED TO SOIL CONTACT, TO RESTORE CAPILLARITY AND IMPROVE SEEDLING EMERGENCE.

- AREAS THAT ARE TEMPORARILY SEEDED SHALL BE PROTECTED BY PERENNIAL RYE GRASS AND MULCH. SEED SHALL BE APPLIED AT THE RATE OF ONE (1) LBS. PER 1,000 SF. IF THE INITIAL SEEDING DOES NOT TAKE, THE AREA SHALL BE RESEED. MULCH SHALL BE APPLIED AT A RATE OF 1 1/2 TO 2 TONS PER ACRE.

- ALL SEED BED AREAS SHALL BE LIMED IN ACCORDANCE TO SOIL TESTING OR THE FOLLOWING RATES WILL APPLY:

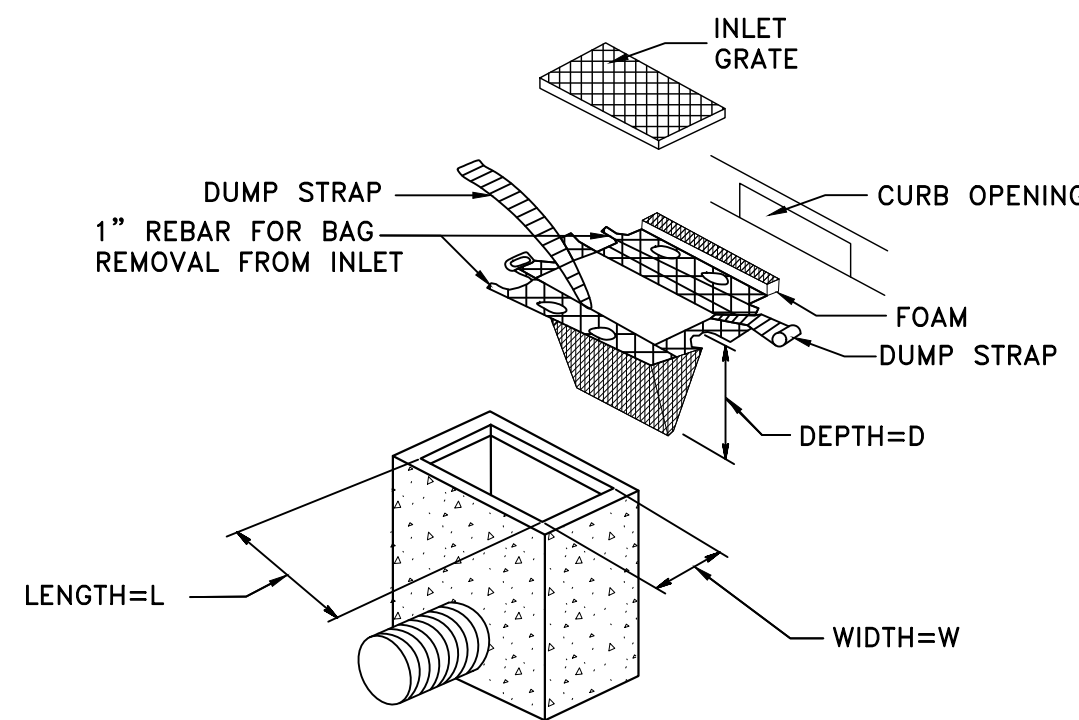
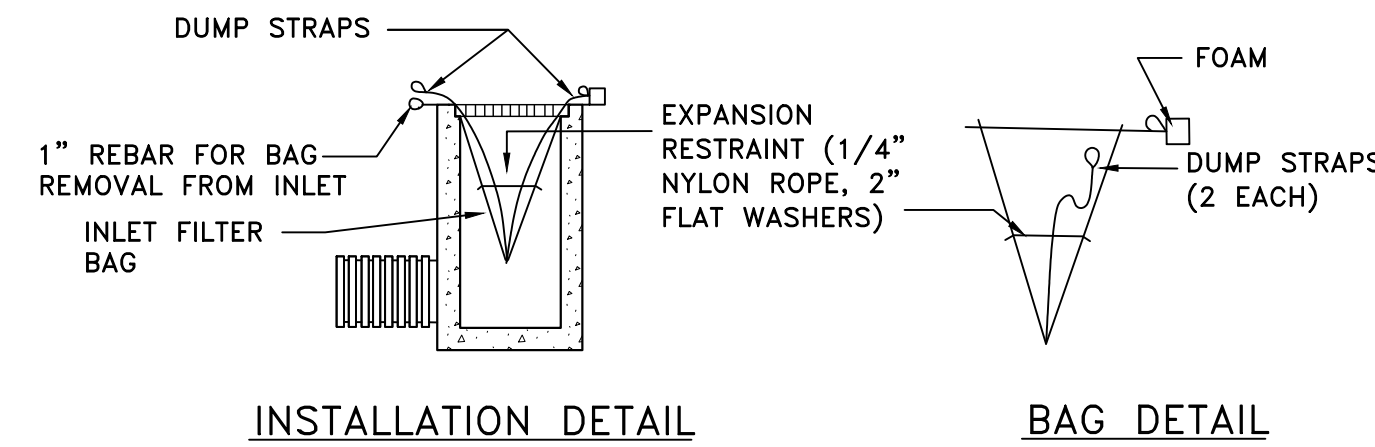
SOIL TEXTURES	TONS/ACRE	LBS./1,000 SF
CLAY, CLAY LOAM AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

ALL SEED BED AREAS SHALL BE FERTILIZED AT THE RATE DETERMINED BY SOIL ANALYSIS AND APPROVED BY THE ENGINEER OR THE DISTRICT, OR THE FOLLOWING RATE WILL APPLY, OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN:

10-20-10    ●    11 LBS. / 1,000 SQ. FT.

- AREAS RECEIVING PERMANENT SEEDING SHALL BE MULCHED AT A RATE OF 2 TO 2 1/2 TONS PER ACRE.

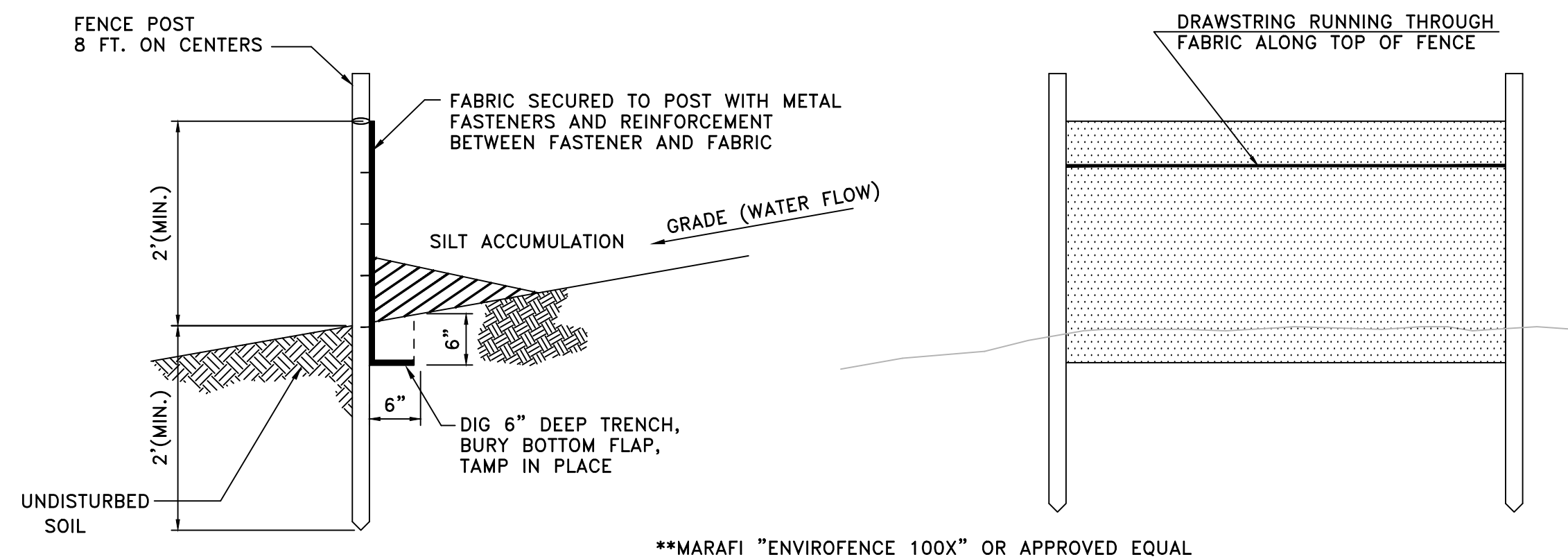
- AREAS TO BE STABILIZED WITH MULCH ONLY SHALL BE MULCHED WITH UNROTTED SMALL GRAIN STRAW, OR SALTHAY AT 2 TO 2 1/2 TONS PER ACRE, SPREAD UNIFORMLY AND ANCHORED WITH A MULCH ANCHORING TOOL.



NEW JERSEY DEPARTMENT OF TRANSPORTATION  
**DETAIL 1 SOIL EROSION AND SEDIMENT CONTROL MEASURES**  
 INLET FILTERS, TYPE 2  
 SCALE: N.T.S.

SILT FENCE / SEDIMENT CONTROL SYSTEM INSTALLATION PROCEDURE

- EXCAVATE A 6"x6" TRENCH ALONG THE LOWER PERIMETER OF THE SITE.
- UNROLL THE SILT FENCE FILTER FABRIC\*\* AND POSITION THE POLES AGAINST THE BACK(DOWNSTREAM) WALL OF THE TRENCH.
- LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL.



**DETAIL 2 SILT FENCE**  
 SCALE: N.T.S. ( IF AND WHERE REQUIRED )

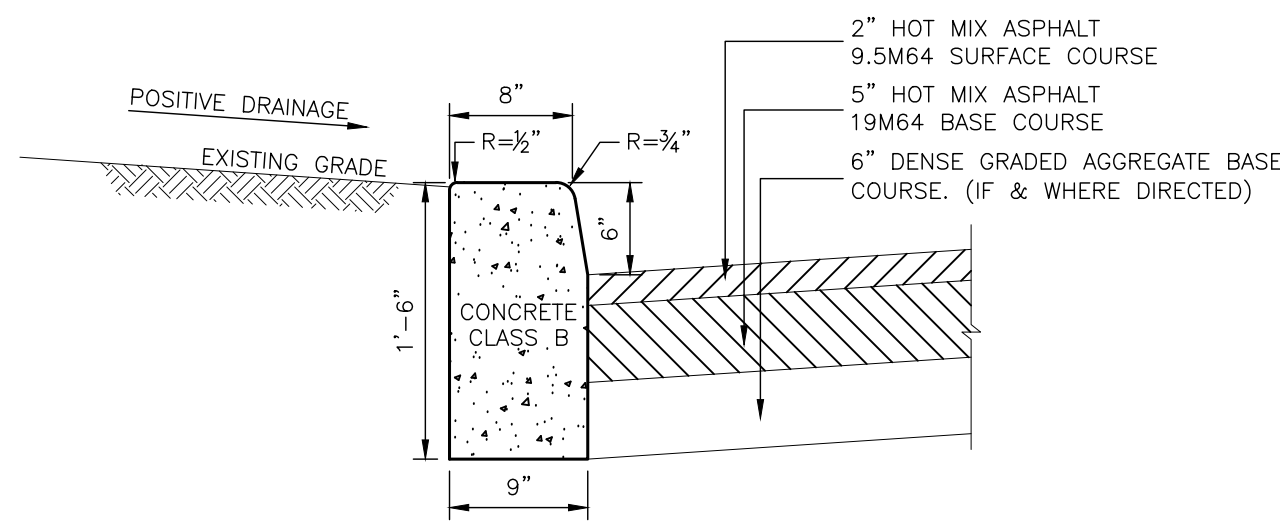
CONSTRUCTION SEQUENCE FOR SOIL EROSION CONTROL MEASURES:

- INSTALL EROSION CONTROL MEASURES.
- PERFORM THE MILLING OPERATIONS, IF REQUIRED.
- PERFORM THE CONCRETE REPLACEMENT WORK
- BASE COURSE PAVING AND SURFACE COURSE PAVING.
- APPLY PERMANENT VEGETATIVE COVER IN ALL DISTURBED AREAS.
- REMOVE SOIL EROSION MEASURES WHEN SITE IS STABILIZED AND APPROVED BY DISTRICT.

APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	2ND AVENUE IMPROVEMENTS PHASE III (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: TOWNSHIP OF PISCATAWAY	DATE: FEB. 2022 DESIGNED BY: KS DRAWN BY: DMM CHECKED BY:	SHEET <b>35</b>
			PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: A-1010-0016-000 CONTRACT NO.: 2022-1	FILE NO.:	

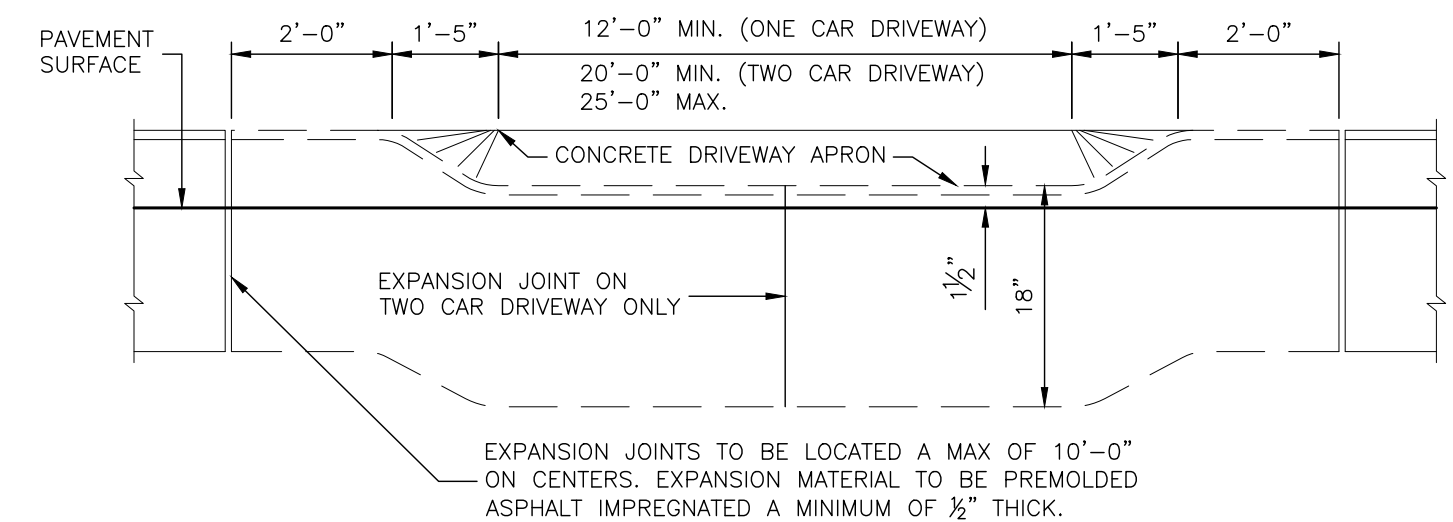
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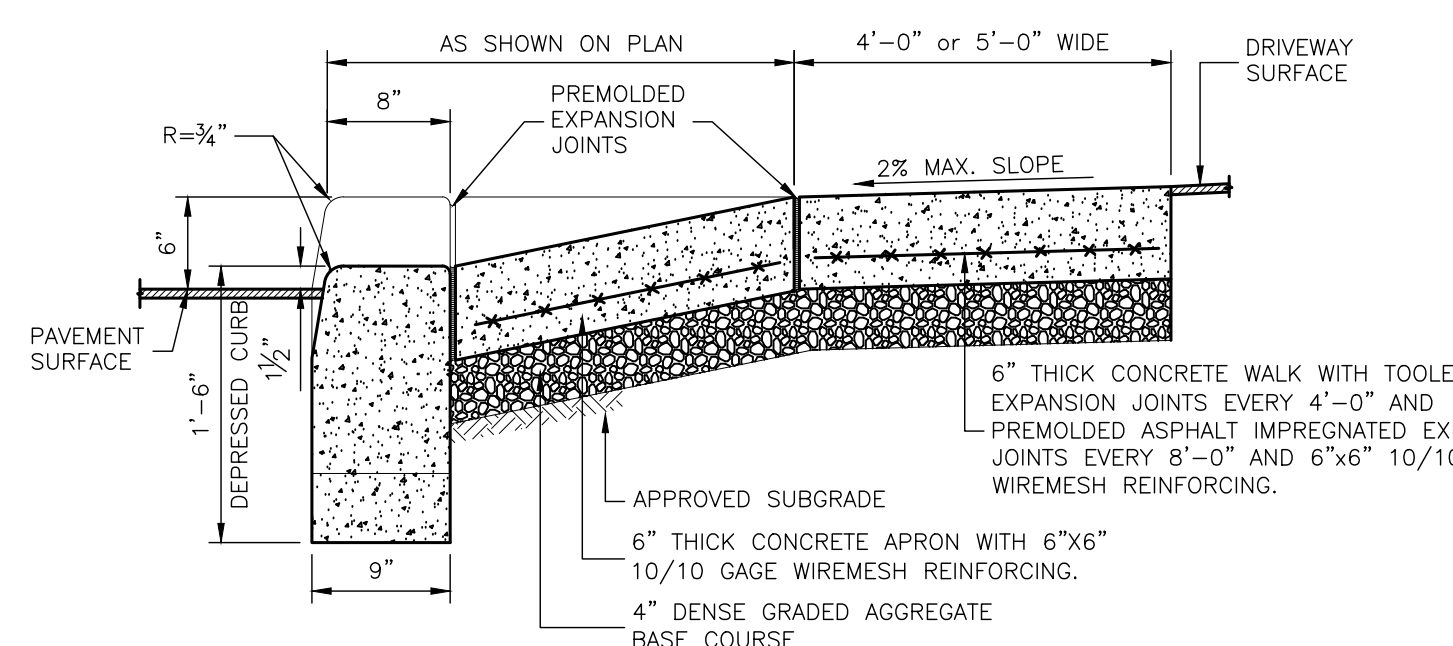


1. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 10'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER COMPLYING WITH THE REQUIREMENTS OF A.A.S.H.T.O. SPEC. M-213, RECESSED 1/2" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THROUGH AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB. DISTURBANCE AND SUBSEQUENT RESTORATION OF THE AREA BEHIND THE CURB SHALL BE LIMITED TO A MAXIMUM OF 2 FEET. PAYMENT FOR ANY PAVEMENT RESTORATION ASSOCIATED WITH CURB CONSTRUCTION SHALL BE INCLUDED IN THE BID ITEM 8"x9"x18" CONCRETE VERTICAL CURB.
2. EXPANSION JOINTS SHALL ALSO BE INSTALLED WHERE THE CURB IS ADJACENT TO SIDEWALKS AND CATCH BASINS.
3. CURB AT DRIVEWAYS AND ENTRANCES SHALL BE DEPRESSED SO THAT THE TOP OF THE CONCRETE IS 1-1/2 INCHES ABOVE THE ADJACENT PAVEMENT.
4. CONCRETE SHALL BE AIR ENTRAINED 4500 P.S.I. AT 28 DAY TEST CONCRETE SHALL BE CURED WITH A COLORLESS CURING COMPOUND, AND FOLLOW ALL GUIDELINES AS SPECIFIED IN THE 2007 NJDOT.

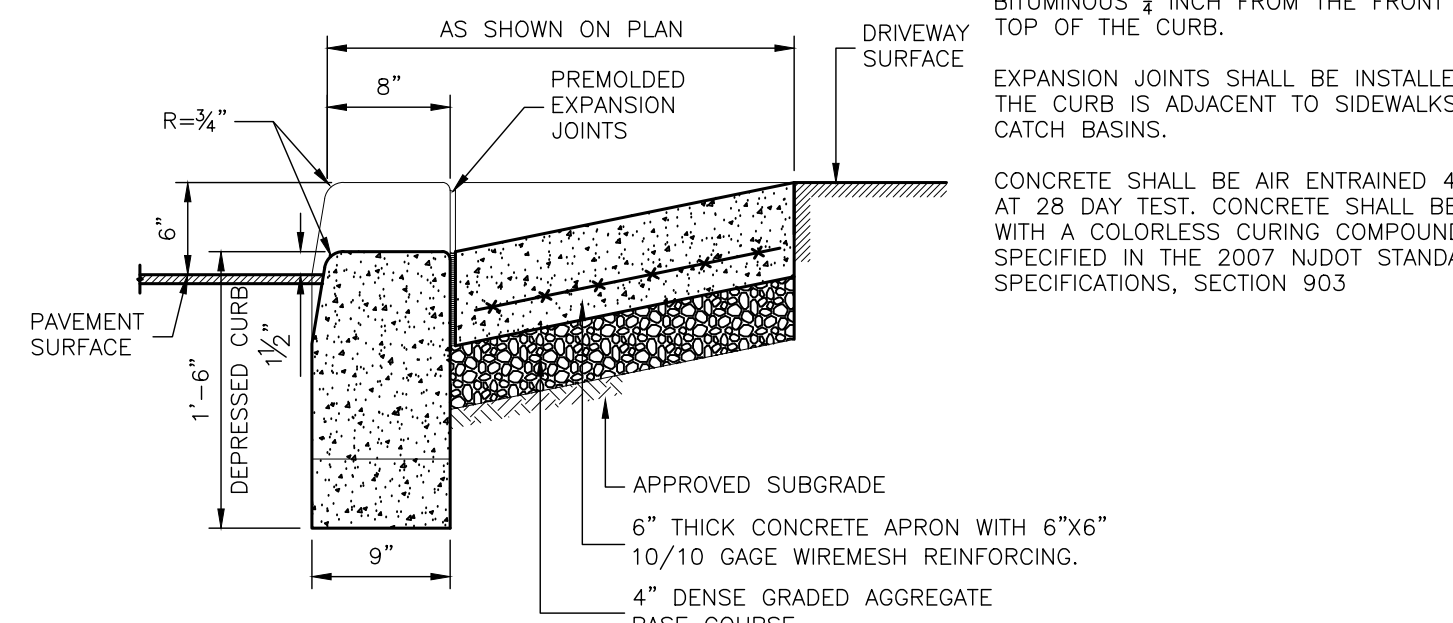
**8"x9"x18" CONCRETE VERTICAL CURB**  
N.T.S.



**ELEVATION**

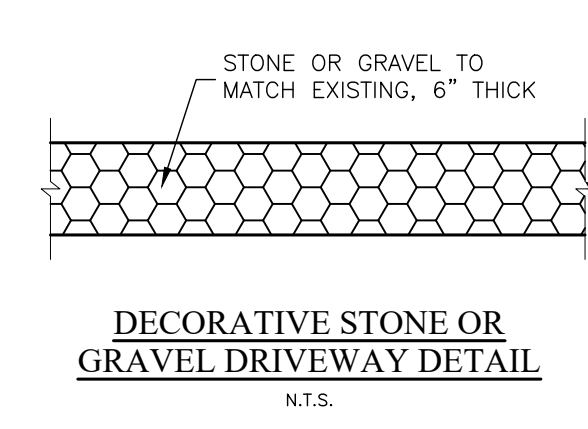


**SECTION WITH SIDEWALK**

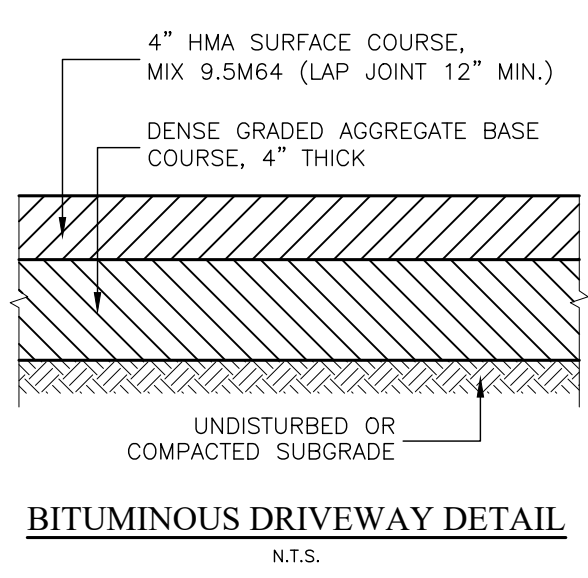


**SECTION WITHOUT SIDEWALK**

**DEPRESSED CURB, DRIVEWAY ENTRANCE APRON & SIDEWALK DETAIL**



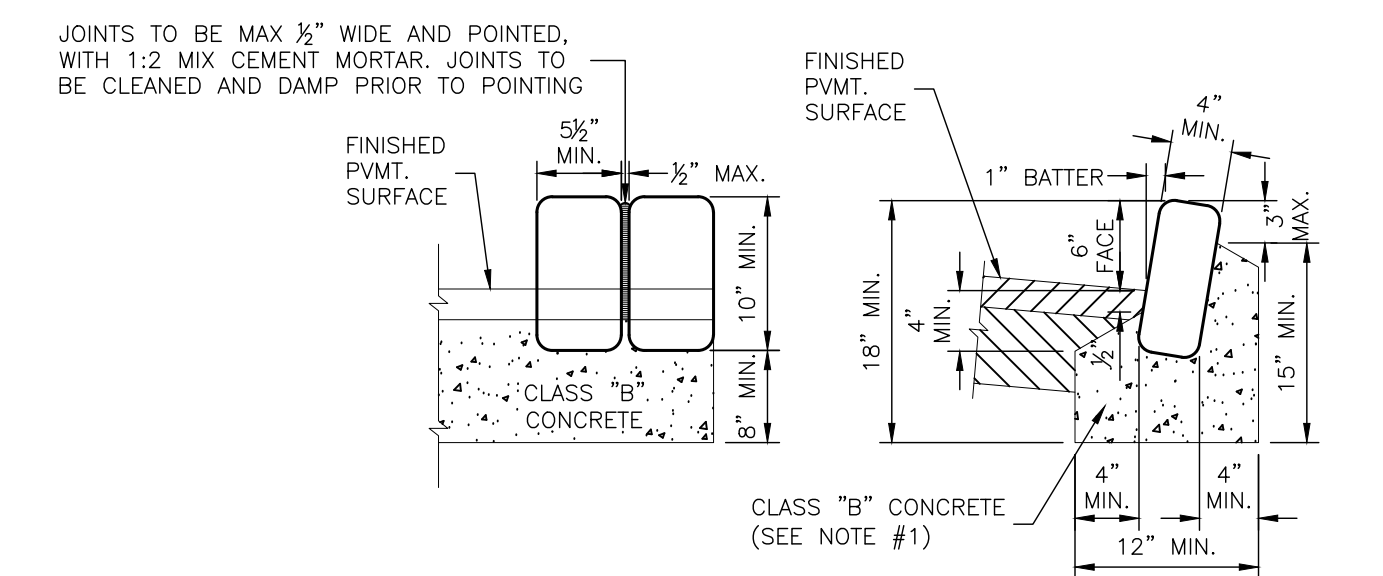
**DECORATIVE STONE OR GRAVEL DRIVEWAY DETAIL**  
N.T.S.



**BITUMINOUS DRIVEWAY DETAIL**  
N.T.S.

**GRANITE BLOCK CURB NOTES:**

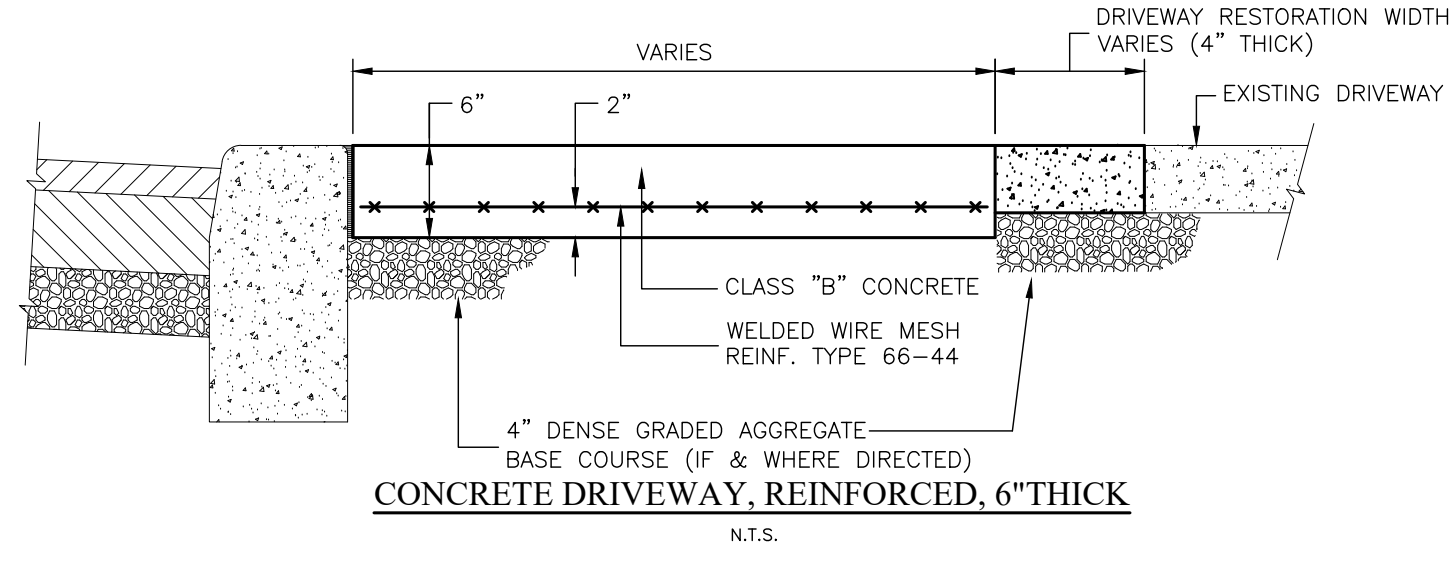
1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY COMPRESSIVE TEST.
2. ALL CONCRETE IS TO BE PROPERLY CURED USING A CURING COMPOUND, SALT HAY, BURLAP OR OTHER METHOD ACCEPTABLE BY THE TOWNSHIP ENGINEER.
3. CONCRETE SLUMP TO BE 3" (±1"), OR AS DIRECTED BY THE TOWNSHIP ENGINEER.
4. CONTRACTORS TO NOTIFY TOWNSHIP ENGINEER 24 HOURS PRIOR TO POURING.



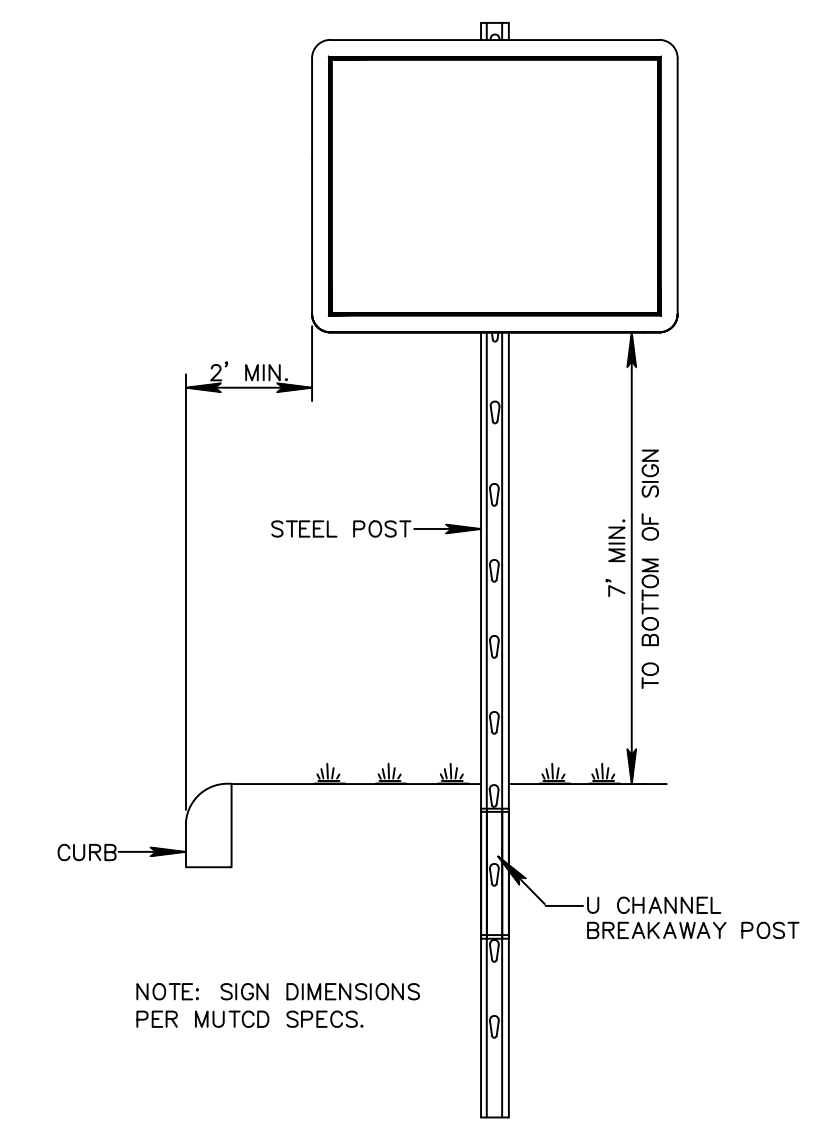
**GRANITE BLOCK CURB**  
N.T.S.

**DRIVEWAY REPAIR CONSTRUCTION NOTES:**

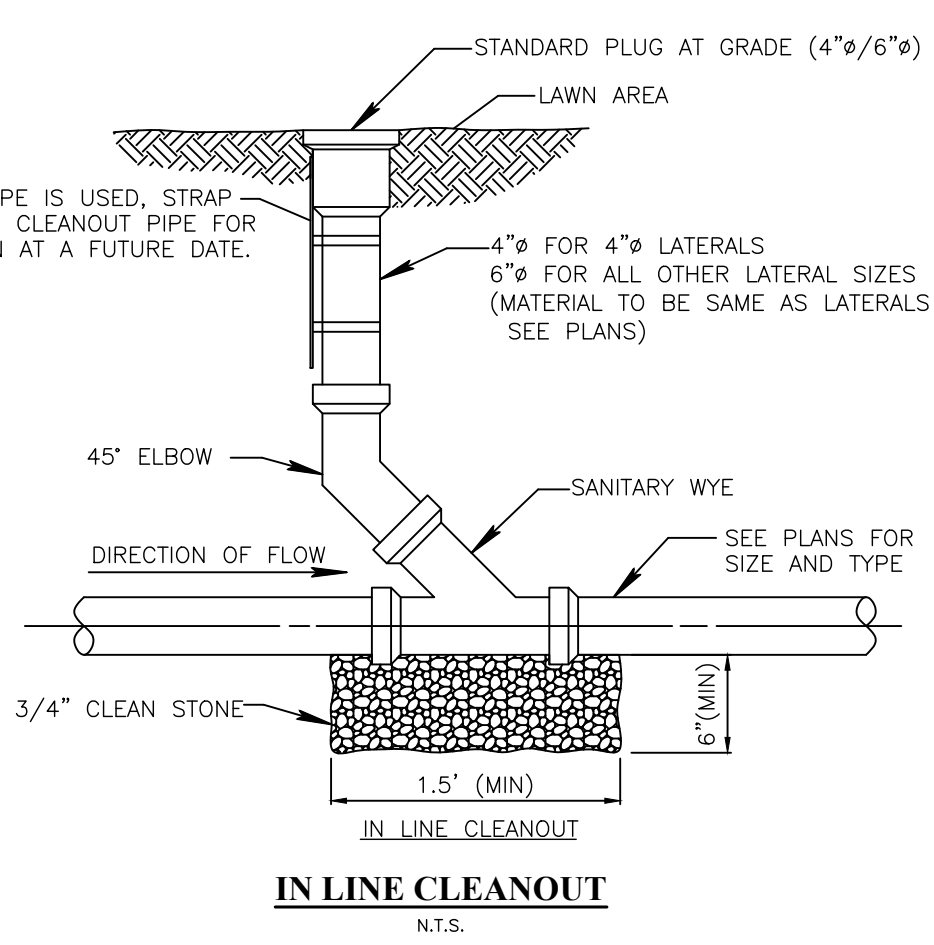
1. ALL MATERIAL, REPAIR STRIPS AND EXCAVATION FOR DRIVEWAY CONSTRUCTION TO BE INCLUDED IN THE BID PRICE FOR HMA DRIVEWAY, CONCRETE DRIVEWAY OR CONCRETE CURB.
2. HOT MIX ASPHALT DRIVEWAY SURFACE COURSE TO BE MIX 9.5M64
3. LENGTH OF DRIVEWAY WORK WILL BE 10' MAX. UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED.
4. MAINTAIN EXISTING DIRECTION OF DRAINAGE FLOW IN DRIVEWAY.
5. DENSE GRADE AGGREGATE BASE COURSE SHALL BE USED TO PROVIDE TEMPORARY ACCESS DURING DRIVEWAY CONSTRUCTION.
6. NO HOT MIX ASPHALT BASE COURSE IS REQUIRED FOR DRIVEWAY.



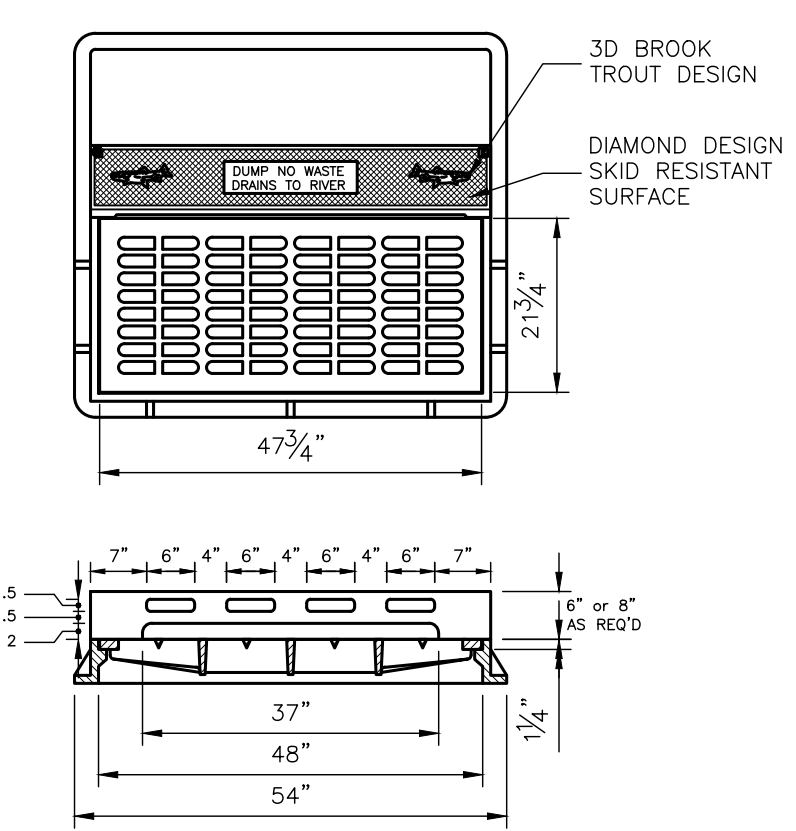
**CONCRETE DRIVEWAY, REINFORCED, 6" THICK**  
N.T.S.



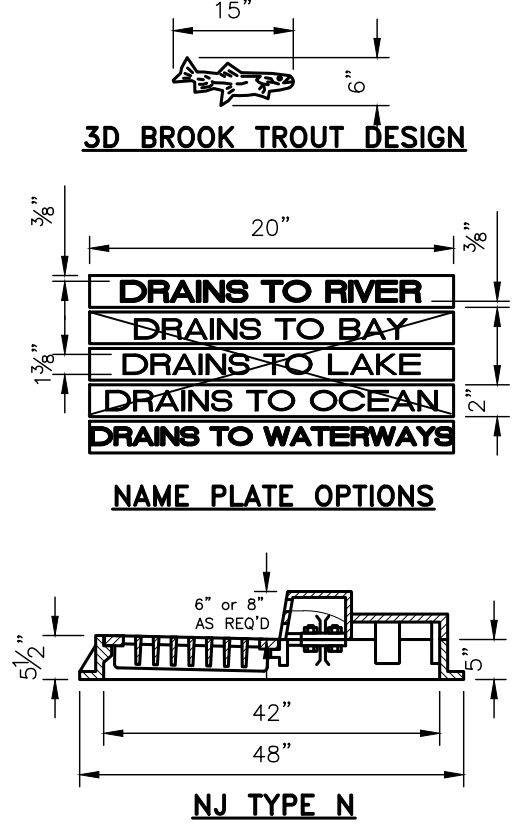
**ROADSIDE SIGN POST DETAIL**  
N.T.S.



**IN LINE CLEANOUT**  
N.T.S.



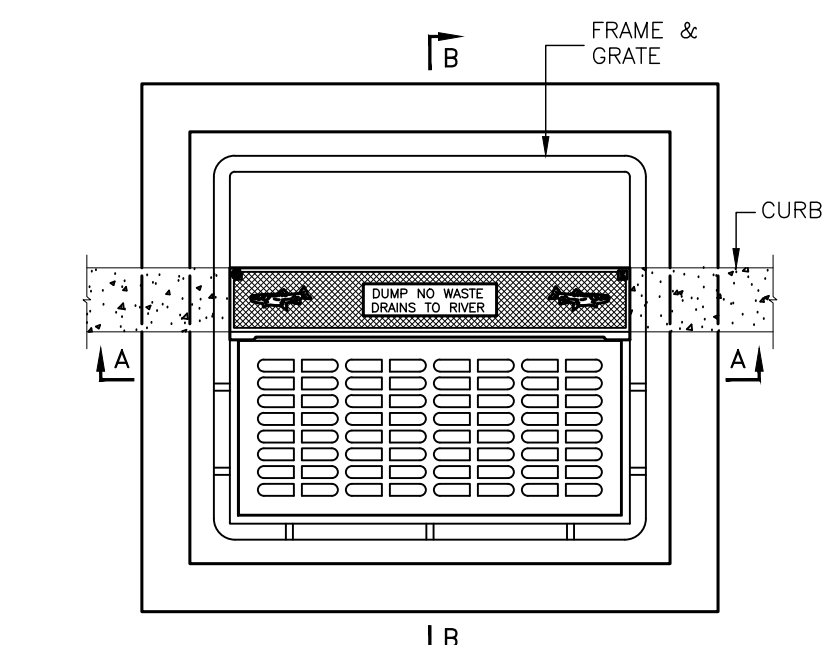
- NOTES:**
1. MATERIALS: GREY CAST IRON ASTM A48-83, CLASS 30B.
  2. AASHTO HS20-44 HIGHWAY LOADING.
  3. SUPPLIED WITHOUT SURFACE COATING.



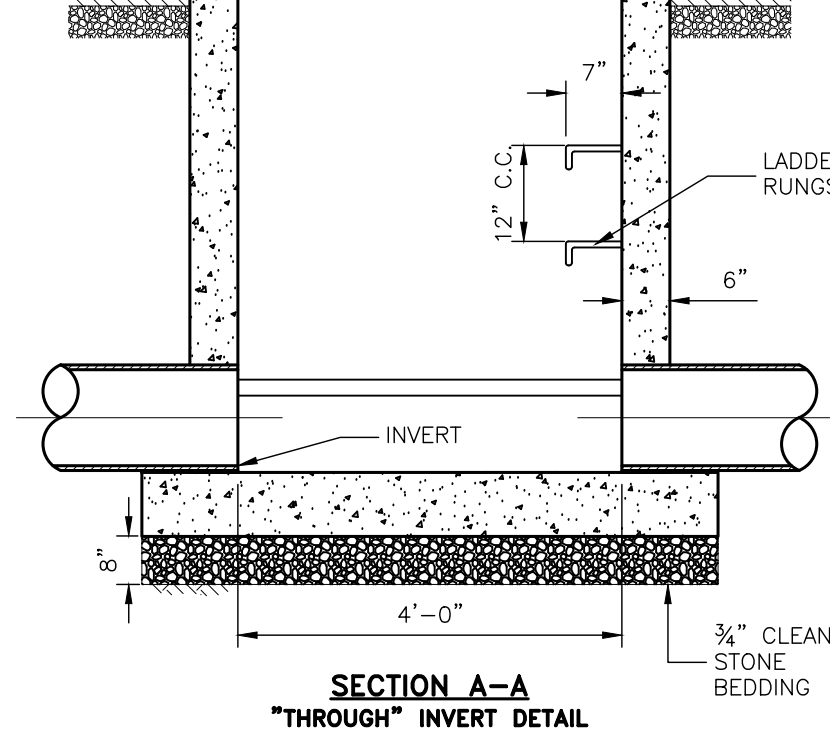
**CURB PIECE TYPE N - ECO NOTES:**

1. IN RETROFIT SITUATIONS THIS CURB PIECE (HEAD) WILL FIT EXISTING CAMPBELL FOUNDRY CO. MANUFACTURED CURB INLETS FOR NJDOT TYPES B, B-1, B-2, D, D-1, AND D-2.
2. NAMEPLATE MESSAGE CAN BE MODIFIED TO YOUR SPECIFIC NEEDS WITHIN AREA SHOWN.

**CURB INLET WITH BICYCLE SAFE GRATE AND ECO CURB PIECE TYPE 'N'**  
(CAMPBELL FOUNDRY COMPANY PATTERN NO. 2618)  
N.T.S.



**SECTION A-A "THROUGH" INVERT DETAIL**



**SECTION B-B "TERMINAL" INVERT DETAIL**

**NOTES:**

1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS, BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
2. THIS INLET MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE, WITH 1/2" CEMENT PLASTER TROWELED TO A SMOOTH FINISH.
3. PROVIDE COPOLYMER POLYPROPYLENE PLASTIC LADDER RUNGS @ 12" C.C., LADDER RUNGS FACING TRAFFIC.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NOS. 2617 & 2618 OR APPROVED EQUAL.
5. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH OR 8'-0" MEASURED FROM THE TOP OF GRATE TO INVERT, SHALL BE 12" THICK IF CONCRETE, OR DOUBLE BLOCK IF BLOCK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
6. CLASS 'C' CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE OR CONCRETE OR CONCRETE BLOCK AND CLASS 'B' CONCRETE TO BE USED IF PRECAST CONCRETE.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. FRAME AND GRATE TO BE CAMPBELL FOUNDRY - 2618 CURB INLET-NJ TYPE B WITH BICYCLE SAFE GRATE AND TYPE 'N' ECO CURB PIECE W/ LETTERING "DUMP NO WASTE" (FISH) "DRAINS TO WATERWAY". ADJUST TO GRADE WITH CONCRETE BRICK (MAX. 12") OR CONCRETE GRADE RING AS REQUIRED. FRAME TO BE SET IN FULL BED OF STIFF MORTAR.

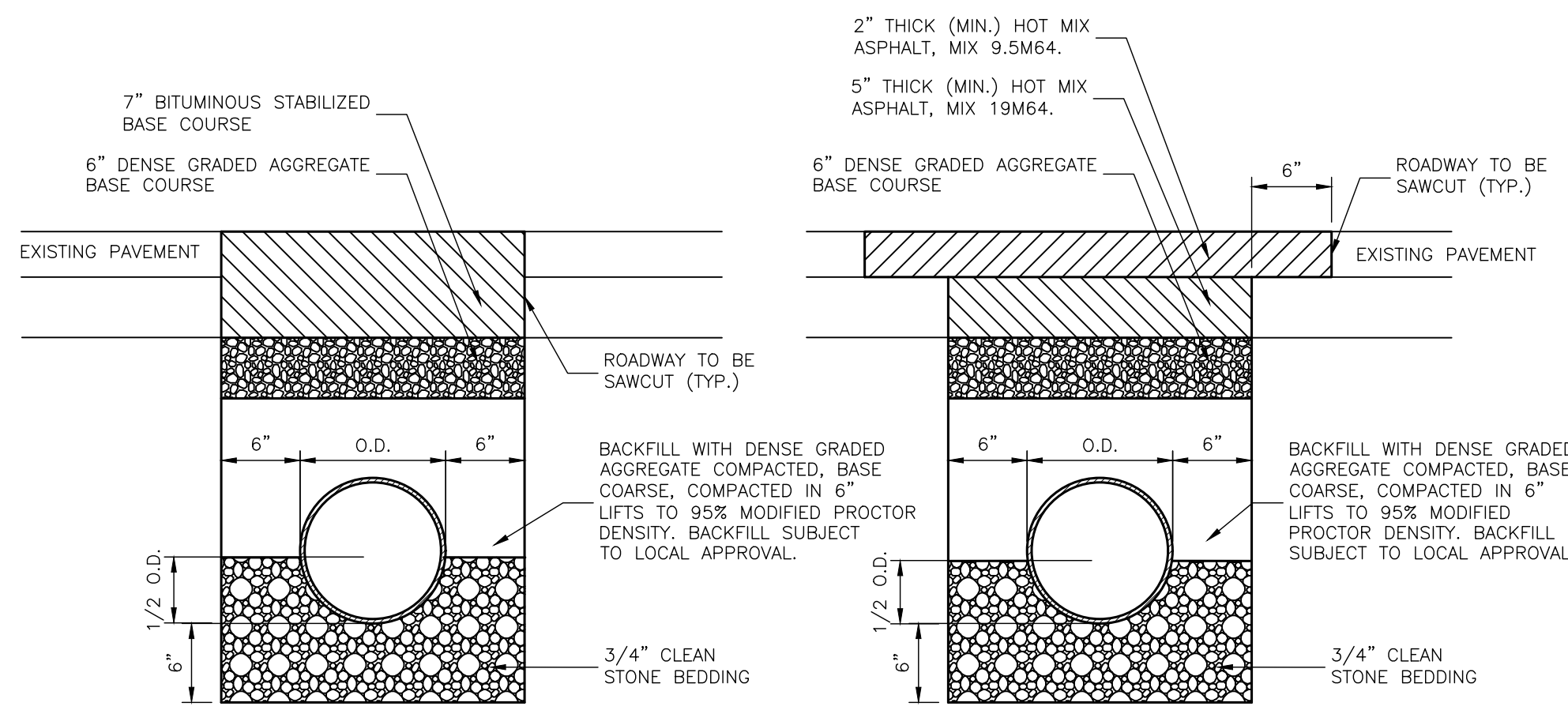
**TYPE "B" INLET WITH BICYCLE GRATE**  
N.T.S.

**"TERMINAL" INVERT DETAIL**  
N.T.S.

APPROVED: <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS	DATE	BY		<b>ALAIMO GROUP</b> Consulting Engineers NJCA 24GA27988400 200 HIGH STREET 2 MARKET STREET MOUNT HOLLY, N.J. PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT:	TOWNSHIP OF PISCATAWAY	DATE:	FEB 2022	SHEET	36
	CONSTRUCTION DETAILS		PROJECT LOCATION:				PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.:	A-1010-0016-000	CHECKED BY:	DMM	FILE NO.:
SCALE: NONE		CONTRACT NO.:		2022-1		DEPT. HEAD:						

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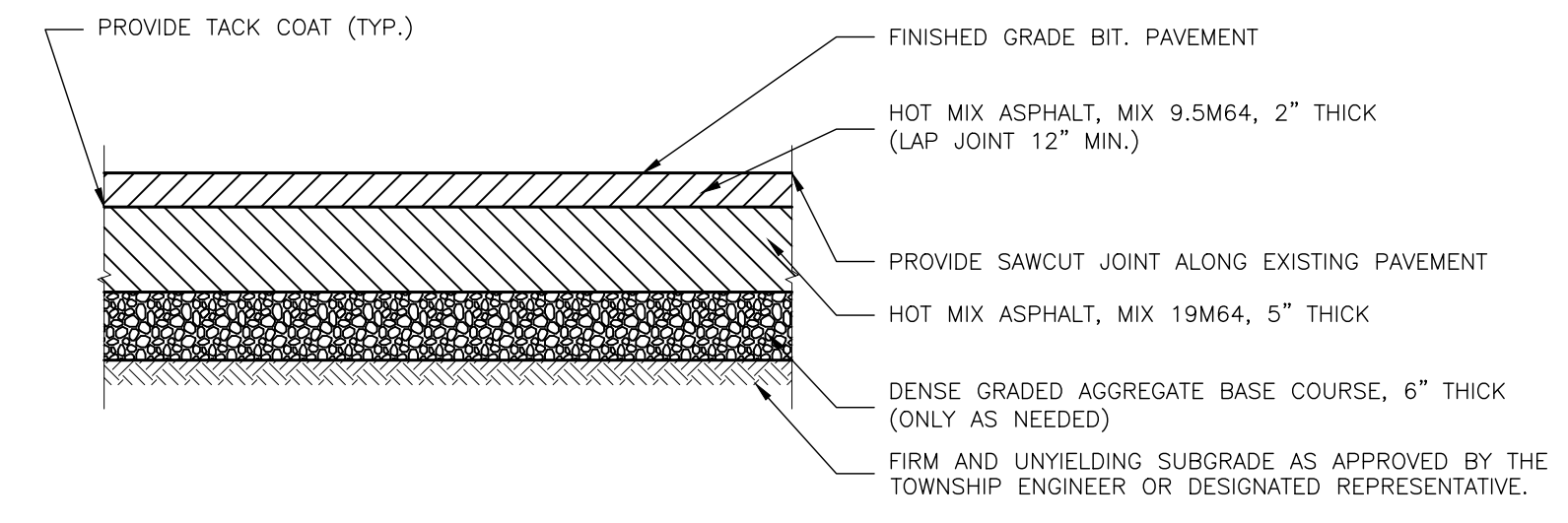


**TEMPORARY PAVEMENT PATCHING**

**PERMANENT PAVEMENT REPAIR**

**NOTES:**  
 INITIAL TRENCH REPAIR WILL CONSIST OF 6" DENSE GRADED AGGREGATE AND 7" BITUMINOUS STABILIZED BASE COURSE TO MEET EXISTING GRADE. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MILL 2" OF THE STABILIZED BASE COURSE AND PLACE 2" OF BITUMINOUS SURFACE COURSE. THIS TYPE OF TRENCH REPAIR SHALL BE PROVIDED. THE COST OF DENSE GRADED AGGREGATE, PIPE BEDDING, AND PAVEMENT REPAIR CONSISTING OF BITUMINOUS SURFACE COURSE, BITUMINOUS STABILIZED BASE COURSE, AND DENSE GRADED AGGREGATE AS INDICATED ON THE DETAILS SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED PIPE BID ITEMS.

**TRENCH DETAIL FOR PIPE WITHIN ROADWAY**  
 N.T.S.

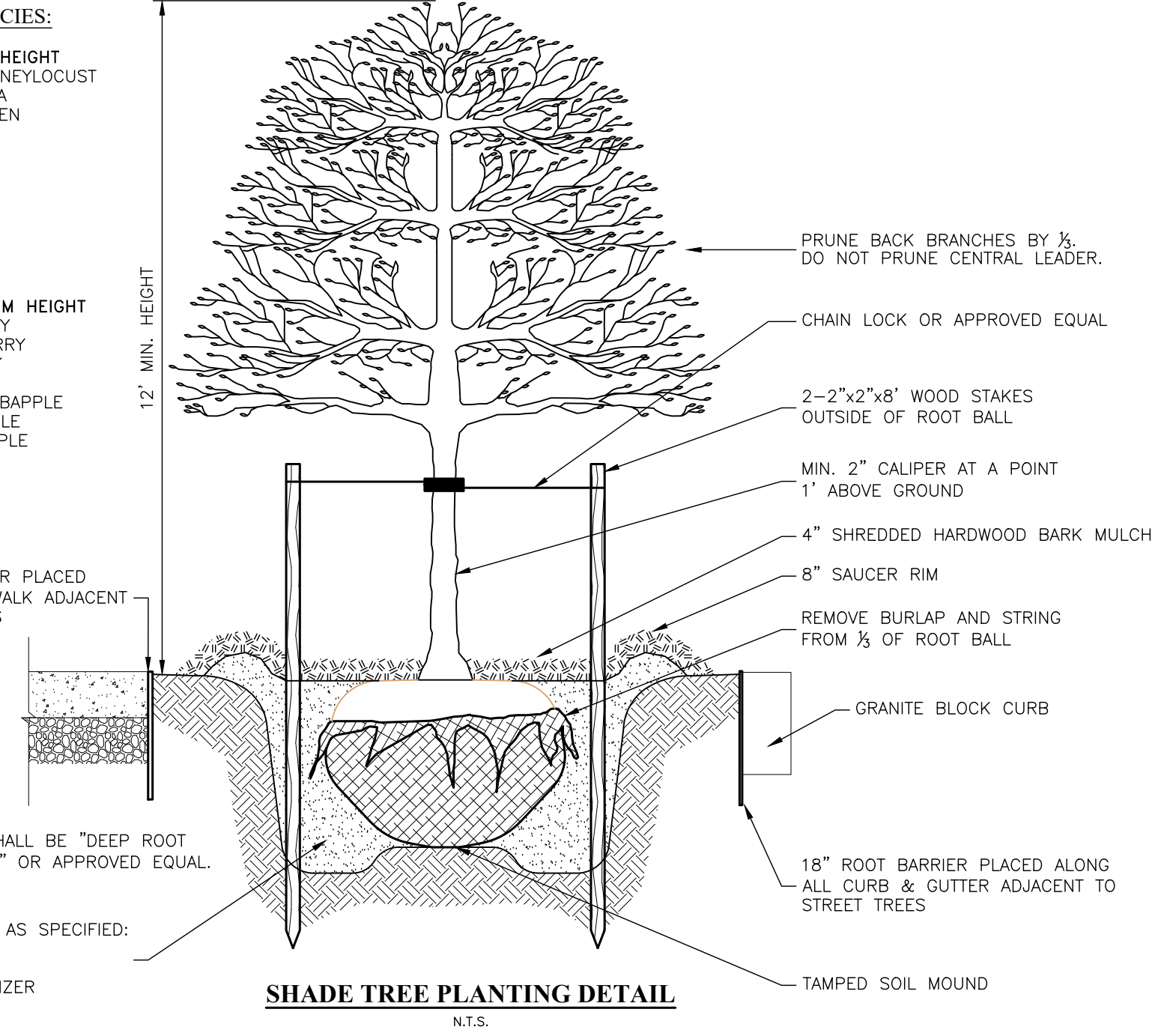


**NOTES:**  
 1. THIS PAVEMENT SECTION SHALL APPLY TO ALL PROPOSED PAVEMENT.  
 2. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH NJDOT STANDARD SPECIFICATIONS, 2007 EDITION, AS AMENDED.

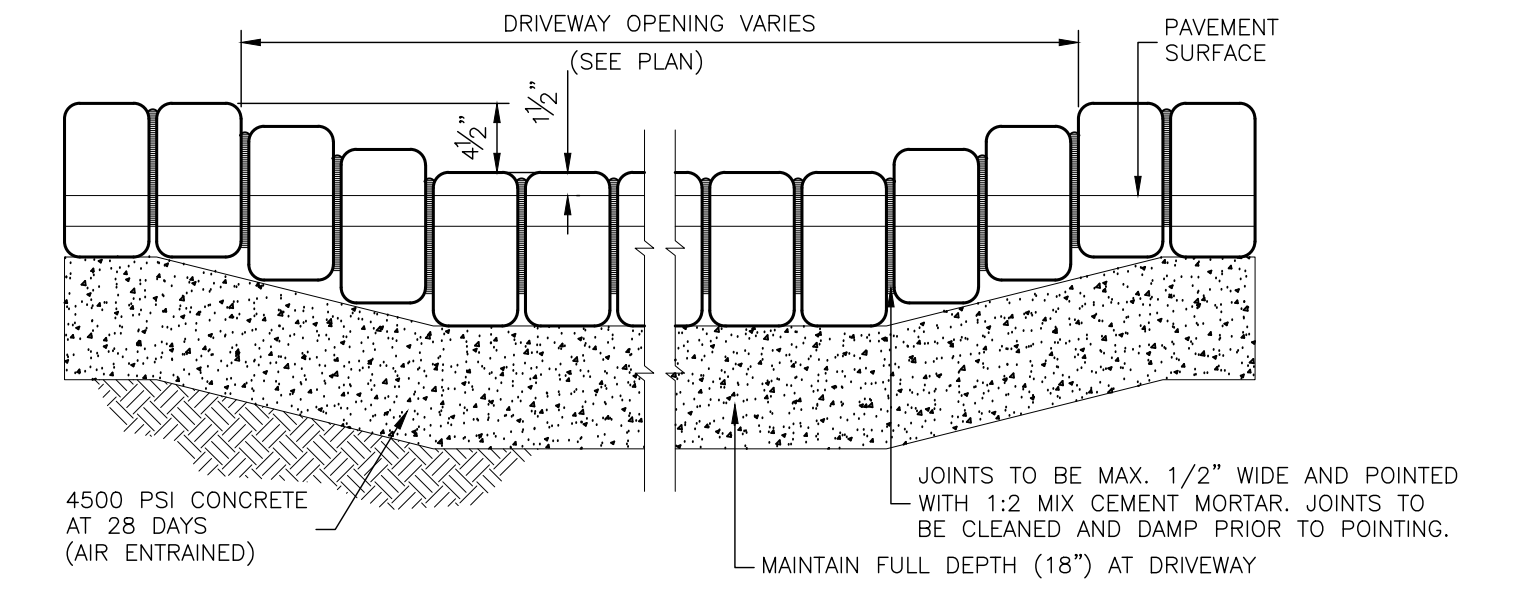
**BITUMINOUS ROADWAY PAVEMENT SECTION**  
 N.T.S.

**APPROVED SPECIES:**

- HABITAT - TALL HEIGHT**  
 SHADEMASTER HONEYLOCUST  
 JAPANESE PAGODA  
 GREENSPIRE LINDEN  
 LONDON PLANE  
 RED MAPLE  
 SUGAR MAPLE  
 PIN OAK  
 RED OAK  
 WILLOW OAK  
 SWEETGUM  
 ZELKOVA
- HABITAT - MEDIUM HEIGHT**  
 ACCOLADE CHERRY  
 AMANOGAWA CHERRY  
 KWANZAN CHERRY  
 YOSHINO CHERRY  
 PINK SPIRES CRABAPPLE  
 RADIANT CRABAPPLE  
 SIBERIAN CRABAPPLE  
 AMUR MAPLE  
 HEDGE MAPLE



**SHADE TREE PLANTING DETAIL**  
 N.T.S.



**DEPRESSED GRANITE BLOCK CURB AT DRIVEWAYS**  
 N.T.S.

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APPROVED:  
**Richard A. Alaimo**  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. 13195

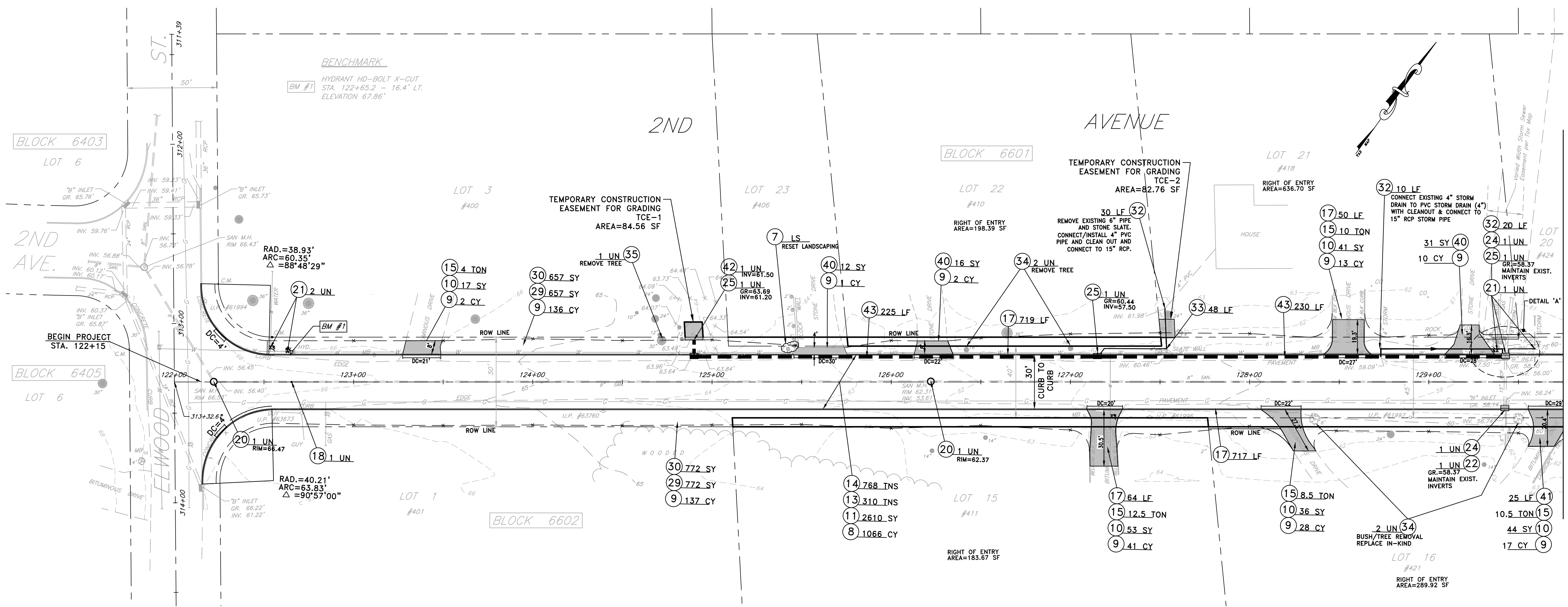
REVISIONS	DATE	BY

**ALAIMO GROUP**  
 Consulting Engineers  
 NJDCA 24GA27988400  
 200 HIGH STREET MOUNT HOLLY, N.J.  
 2 MARKET STREET PATERSON, N.J.

**2ND AVENUE IMPROVEMENTS PHASE III**  
 (ELWOOD STREET TO HANCOCK ROAD)  
 CONSTRUCTION DETAILS  
 SCALE: NONE

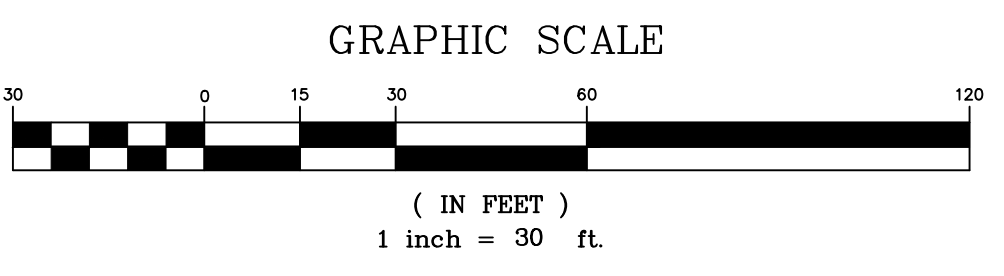
CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>37</b>
PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	DESIGNED BY: <b>KS</b>
CONTRACT NO.: <b>2022-1</b>	DRAWN BY: <b>DMM</b>	CHECKED BY:
	DEPT. HEAD:	FILE NO.:

Plotted: 3/17/2022 10:12 AM Last saved: 3/17/2022 10:30 AM File Name: G:\Projects\A10100016000\Drawings\FV-35-39-SecondAveLandscapePlan.dwg



**LEGEND**

- EXISTING**
- WV<sup>M</sup> WATER VALVE
  - GV<sup>\*</sup> GAS VALVE
  - MHO MANHOLE
  - INLET TYPE "B" INLET
  - INLET TYPE DOUBLE "B" INLET
  - U.P. # 61465 UTILITY POLE
  - CITY INLET #2 TEXT INDICATES EXISTING ITEM
  - PROPERTY LINE
  - TC=42.30 EXISTING TOP OF CURB ELEV.
  - TDC=42.30 EXISTING TOP OF DEPRESSED CURB ELEV.
- PROPOSED**
- PROP- DRIVEWAY, 8" THK.
  - ⑩ CONSTRUCTION ITEM NUMBER
  - L.O.C. LIMIT OF CONSTRUCTION
  - DC DEPRESSED CURB
  - DISTURBANCE OUTSIDE RIGHT-OF-WAY
  - T.C.E. TEMPORARY CONSTRUCTION EASEMENT
  - TS TOP/TOE SLOPE
  - PAVEMENT CORE LOCATION



- NOTES:**
- A SURVEY WAS PERFORMED BY ALAIMO GROUP, MARCH 2021.
  - UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

**CONSTRUCTION NOTES:**

- ALL MAIL BOXES AND PAPER BOXES ARE TO BE RESET IN ACCORDANCE WITH US POSTAL REGULATIONS AND TO BE PAYED FOR UNDER CLEARING SITE.
- REFER TO PROFILE FOR CENTERLINE ELEVATIONS. REFER TO CROSS SECTIONS FOR GUTTERLINE AND TOP CURB ELEVATIONS.
- ALL EXISTING ROOF LEADERS SHALL BE PIPED TO EXISTING STORM STORM INLETS OR MANHOLES, PROVIDE 6" TO 8" PVC STORM PIPE AND CLEANOUTS AS NEEDED.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE REMOVAL OR RELOCATION OF UTILITY POLES, OR ANY ABOVE ON UNDERGROUND UTILITIES THAT ARE IN CONFLICT WITH PROPOSED IMPROVEMENTS.
- DETECTABLE WARNING SURFACES SHALL BE OF THE TYPE WHICH CAN BE SET INTO UNCURED CAST-IN-PLACE CONCRETE. GLUE/STICK-ON TYPE WARNING SURFACE SHALL NOT BE ALLOWED. VITRIFIED POLYMER COMPOSITE (VPC) CAST-IN-PLACE DETECTABLE / TACTILE WARNING SURFACE TILES SHALL BE AN EPOXY POLYMER COMPOSITION WITH AN ULTRA VIOLET STABILIZED COATING EMPLOYING ALUMINUM OXIDE PARTICLES IN THE TRUNCATED DOMES. THE TILE SHALL INCORPORATE AN IN-LINE PATTERN OF TRUNCATED DOMES MEASURING NOMINAL 0.2" HEIGHT, 0.9" BASE DIAMETER, AND 0.45" TOP DIAMETER, SPACED CENTER TO CENTER 2.35" AS MEASURED ON A DIAGONAL AND 1.67" AS MEASURED SIDE BY SIDE. FOR WHEELCHAIR SAFETY THE FIELD AREA SHALL CONSIST OF A NON-SLIP SURFACE WITH A MINIMUM OF 40"-90" RAISED POINTS 0.045" HIGH, PER SQUARE INCH; "ARMOR-TILE" AS MANUFACTURED BY ENGLAND PLASTICS INC. TEL-800-682-2525, OR APPROVED EQUIVALENT.

SEE SHEET 37 FOR TREE PLANTING DETAIL.

2nd AVENUE (FROM STA. 122+15± THRU STA. 129+75): ESTIMATE OF QUANTITIES			
ITEM NO.	LANDSCAPING (IF AND WHERE DIRECTED)	UNIT	PLAN TOTAL
36	RED MAPLE, 2" - 2 1/2" CALIPEN, B & B, COMPLETE IN PLACE	UNIT	5
37	KWANZAN CHERRY, 2" - 2 1/2" CALIPEN, B & B, COMPLETE IN PLACE	UNIT	5

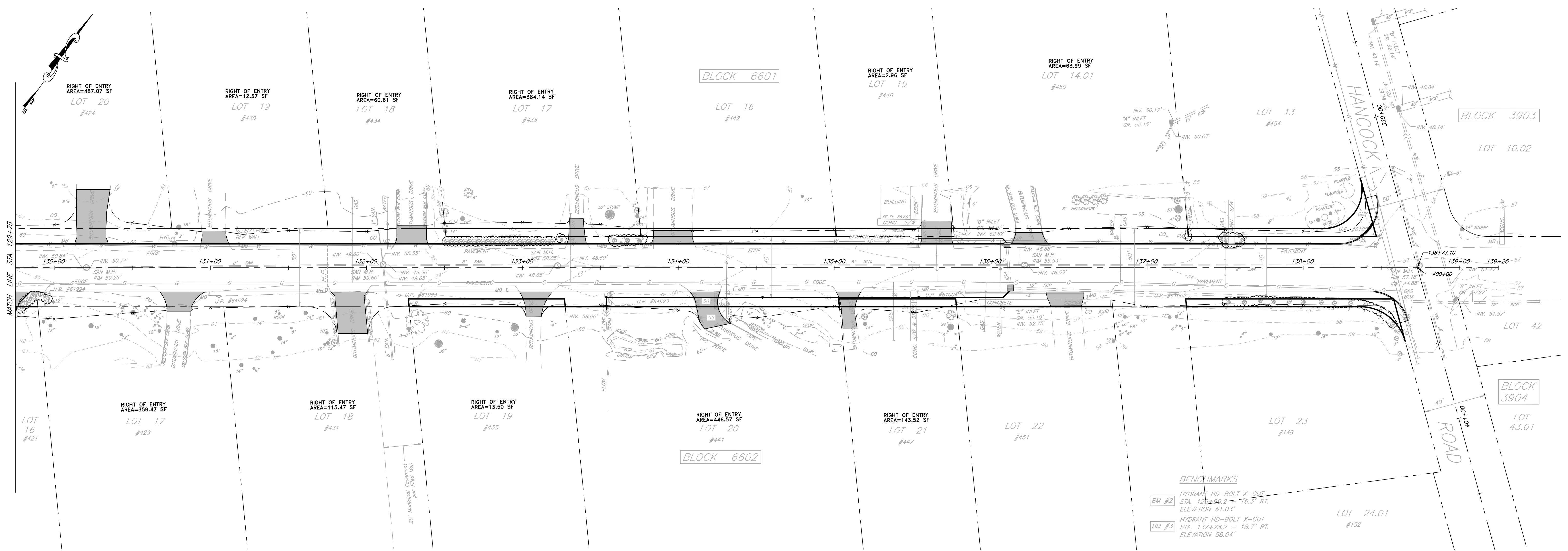
NOTE: THE ESTIMATE OF QUANTITIES IS PROVIDED FOR THE CONTRACTORS CONVENIENCE IN DETERMINING THE APPROXIMATE SCOPE OF WORK ASSOCIATED WITH EACH STREET. SHOULD A DISCREPANCY OCCUR BETWEEN THE QUANTITIES SHOWN ON THE DRAWINGS AND THE QUANTITIES SHOWN IN THE PROPOSAL SECTION OF THE PROJECT MANUAL, THOSE SHOWN IN THE PROJECT MANUAL SHALL GOVERN.

APPROVED:  <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>	DATE: <b>FEB. 2022</b>	SHEET <b>38</b>
	LANDSCAPE PLAN STA. 122+15± THRU STA. 129+75		PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: <b>A-1010-0016-000</b>	CONTRACT NO.: <b>2022-1</b>	CHECKED BY: <b>PAC/DMM</b>

SCALE: 1" = 30'



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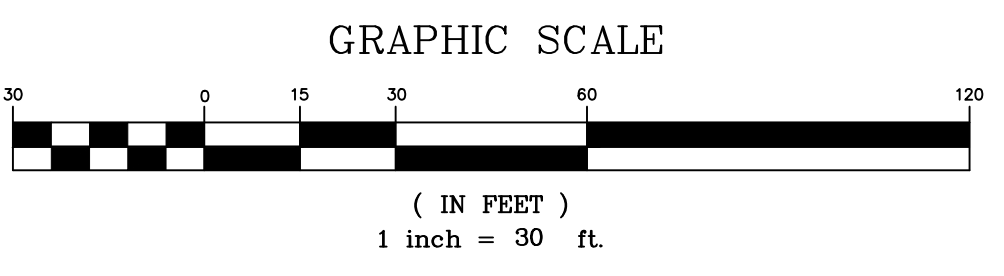


**LEGEND**

- EXISTING**
- WV \* WATER VALVE
  - GV \* GAS VALVE
  - MH O MANHOLE
  - TYPE "B" INLET
  - TYPE DOUBLE "B" INLET
  - U.P. # 61465 UTILITY POLE
  - CITY INLET #2 TEXT INDICATES EXISTING ITEM
  - PROPERTY LINE
  - TC=42.30 EXISTING TOP OF CURB ELEV.
  - TDC=42.30 EXISTING TOP OF DEPRESSED CURB ELEV.

- PROPOSED**
- PROP- DRIVEWAY, 6" THK.
  - ⑩ CONSTRUCTION ITEM NUMBER
  - L.O.C. LIMIT OF CONSTRUCTION
  - DC DEPRESSED CURB
  - DISTURBANCE OUTSIDE RIGHT-OF-WAY
  - T.C.E. TEMPORARY CONSTRUCTION EASEMENT
  - TS TOP/TOE SLOPE
  - PAVEMENT CORE LOCATION

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- DETECTABLE WARNING SURFACES SHALL BE OF THE TYPE WHICH CAN BE SET INTO UNCURED CAST-IN-PLACE CONCRETE. GLUE/STICK-ON TYPE WARNING SURFACE SHALL NOT BE ALLOWED. VITRIFIED POLYMER COMPOSITE (VPC) CAST-IN-PLACE DETECTABLE / TACTILE WARNING SURFACE TILES SHALL BE AN EPOXY POLYMER COMPOSITION WITH AN ULTRA VIOLET STABILIZED COATING EMPLOYING ALUMINUM OXIDE PARTICLES IN THE TRUNCATED DOMES. THE TILE SHALL INCORPORATE AN IN-LINE PATTERN OF TRUNCATED DOMES MEASURING NOMINAL 0.2" HEIGHT, 0.9" BASE DIAMETER, AND 0.45" TOP DIAMETER, SPACED CENTER TO CENTER 2.35" AS MEASURED ON A DIAGONAL AND 1.67" AS MEASURED SIDE BY SIDE. FOR WHEELCHAIR SAFETY THE FIELD AREA SHALL CONSIST OF A NON-SLIP SURFACE WITH A MINIMUM OF 40"-90" RAISED POINTS 0.045" HIGH, PER SQUARE INCH; "ARMOR-TILE" AS MANUFACTURED BY ENGLAND PLASTICS INC. TEL-800-682-2525, OR APPROVED EQUIVALENT.

SEE SHEET 37 FOR TREE PLANTING DETAIL.

2nd AVENUE (FROM STA. 129+75 THRU STA. 138+59±): ESTIMATE OF QUANTITIES			
ITEM NO.	LANDSCAPING (IF AND WHERE DIRECTED)	UNIT	PLAN TOTAL
36	RED MAPLE, 2" - 2 1/2" CALIPEN, B & B, COMPLETE IN PLACE	UNIT	5
37	YOSHINO CHERRY, 2" - 2 1/2" CALIPEN, B & B, COMPLETE IN PLACE	UNIT	5

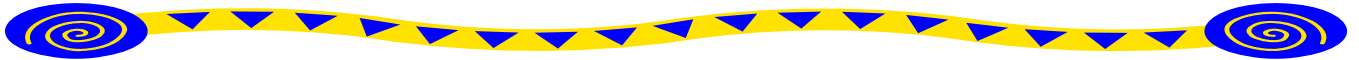
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APPROVED:  <b>Richard A. Alaimo</b> PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 <b>ALAIMO GROUP</b> Consulting Engineers NJDCA 24GA27988400 200 HIGH STREET MOUNT HOLLY, N.J. 2 MARKET STREET PATERSON, N.J.	<b>2ND AVENUE IMPROVEMENTS PHASE III</b> (ELWOOD STREET TO HANCOCK ROAD)  <b>LANDSCAPE PLAN</b> STA. 129+75 THRU STA. 138+59±  SCALE: 1" = 30'	CLIENT: <b>TOWNSHIP OF PISCATAWAY</b>  PROJECT LOCATION: PISCATAWAY TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: <b>FEB. 2022</b> DESIGNED BY: <b>KS</b> DRAWN BY: <b>PAC/DMM</b> CHECKED BY: <b>PAC/DMM</b> DEPT. HEAD: PROJECT NO.: <b>A-1010-0016-000</b> CONTRACT NO.: <b>2022-1</b>	SHEET <b>39</b>  FILE NO.:
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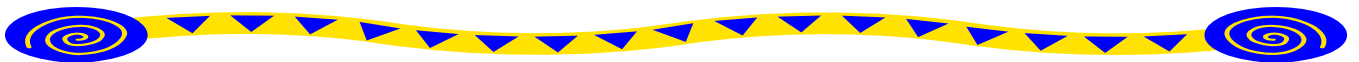


# THE TOWNSHIP OF PISCATAWAY



# PROPOSAL SHEETS

Page 1-12



MARIA E. VALENTE-CAEMMERER

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Purchasing Agent/Township Secretary

**PROPOSAL**

Proposed project known as “**SECOND AVENUE ROAD IMPROVEMENTS – PHASE III**”

Gentlemen:

The undersigned hereby declare that they have carefully examined the site, plans and specifications for the construction of the proposed project known as ; “ **SECOND AVENUE ROAD IMPROVEMENTS – PHASE III**” for which receipt of bids has been advertised, and having examined the Special and General Instructions to Bidders, plans and specifications on file in the Office of the Township Engineer, as well as the site of the work, will contract to do all of the work and furnish all the labor, supervision, materials, tools and equipment mentioned in the said plans and specifications, for the entire work in the manner prescribed therein, at the unit prices specified for the various items below and for the resulting lump sum given below.

The undersigned, its representatives, consultants or assistants agrees to save the Township of Piscataway, harmless with respect to any claim or claims of liability, which may be incurred by reason of, or in connection with the performance of said work including, but not limited to blasting work and the existence of open trenches.

It is understood that a certain amount of money will be available for work proposed, and that the actual work to be performed and the materials to be furnished may be increased or decreased to bring the cost of the work within the amount available.

It is further understood that the price herein bid and the lump sum stated below are to remain firm for a period of 240 days from “notice to proceed.

**SCHEDULE OF PRICES**

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
1.	Lump Sum	Construction Layout.	\$ _____ Lump Sum	\$ _____
2.	Lump Sum	Temporary Soil Erosion and Sediment Control.	\$ _____ Lump Sum	\$ _____
3.	200 S.F.	Construction Signs.	\$ _____ per S.F.	\$ _____
			\$ _____ Total	\$ _____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
4.	20 UNITS	Breakaway Barricades.	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
5.	50 UNITS	Traffic Cones.	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
6.	Allowance	Police Traffic Directors.	\$ <u>Seven Thousand Eight Hundred</u> Lump Sum	\$ <u>7,800.00</u>
6.A.	Allowance	Uniformed Law Enforcement Officers with Police Vehicles.	\$ <u>Five Thousand Dollars</u> Lump Sum	\$ <u>5,000.00</u>
7.	Lump Sum	Site Clearing and Restoration	\$ _____ Lump Sum	\$ _____
8.	2,450 C.Y.	Roadway Excavation Unclassified, 13" depth.	\$ _____ per C.Y.	\$ _____
			\$ _____ Total	\$ _____
9.	1,050 C.Y.	Roadway Excavation Unclassified, Variable Depth/Driveways.	\$ _____ per C.Y.	\$ _____
			\$ _____ Total	\$ _____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
9.A.	15 UNITS	Excavation for Test Pits (if and where directed).	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
9.B.	100 TONS	Excavation, Regulated Material (if & where directed).	\$ _____ per Ton	\$ _____
			\$ _____ Total	\$ _____
9.C.	ALLOWANCE	Disposal of Regulated Material, if and where directed, as called for in specifications, complete, including testing.	\$ <u>Ten Thousand Dollars</u> _____ LS	\$ <u>10,000.00</u> _____
10.	625 S.Y.	Dense Graded Aggregate, 4" thick (driveways).	\$ _____ per S.Y.	\$ _____
			\$ _____ Total	\$ _____
11.	5,625 S.Y.	Dense Graded Aggregate, 6" thick.	\$ _____ per S.Y.	\$ _____
			\$ _____ Total	\$ _____
12.		NO BID ITEM		
13.	675 TONS	Hot Mix Asphalt, 9.5M64 Surface Course, 2" thick.	\$ _____ per Ton	\$ _____
			\$ _____ Total	\$ _____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
14.	1,660 TONS	Hot Mix Asphalt, 19M64 Base Course, 5" thick.	\$_____ per Ton	\$_____
			\$_____ Total	\$_____
15.	160 TONS	Hot Mix Asphalt, 9.5M64 Surface Course, 4" thick (Driveways).	\$_____ per Ton	\$_____
			\$_____ Total	\$_____
16.	25 S.Y.	Concrete Sidewalk, 4" thick.	\$_____ per Ton	\$_____
			\$_____ Total	\$_____
17.	3,500 L.F.	Granite Block Curb.	\$_____ per L.F.	\$_____
			\$_____ Total	\$_____
17.A.	50 L.F.	Depressed Concrete Curb at ADA Ramp.	\$_____ per L.F.	\$_____
			\$_____ Total	\$_____
18.		NO BID		
19.	30 L.F.	Traffic Stripes, Long Life Thermoplastic, 24" wide.	\$_____ per L.F.	\$_____
			\$_____ Total	\$_____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
19.A.	1,700 L.F.	Traffic Stripes, Long Life Thermoplastic, 4" wide.	\$_____ per L.F.	\$_____
			\$_____ Total	\$_____
20.	7 UNIT	Reset Castings	\$_____ per Unit	\$_____
			\$_____ Total	\$_____
21.	8 UNITS	Reset Water Valve Boxes	\$_____ per Unit	\$_____
			\$_____ Total	\$_____
22.	2 UNITS	Reconstruct Inlet, Type "B"	\$_____ per Unit	\$_____
			\$_____ Total	\$_____
23.	2 UNITS	Bicycle Safe Grate	\$_____ per Unit	\$_____
			\$_____ Total	\$_____
24.	3 UNITS	Inlet, Type "E-NCO" (Drains to Waterway) & Bicycle Safe Grate	\$_____ per Unit	\$_____
			\$_____ Total	\$_____
25.	3 UNITS	Inlet, Type "B", 0' to 6' depth	\$_____ per Unit	\$_____
			\$_____ Total	\$_____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
26.		NO BID		
27.	1 UNIT	Inlet Repair	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
28.	1 UNIT	Relocate Signs with Anchor Plates.	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
29.	3,300 S.Y.	Topsoiling, 4" thick.	\$ _____ per S.Y.	\$ _____
			\$ _____ Total	\$ _____
30.	3,300 S.Y.	Fertilizing, Seeding and Mulch.	\$ _____ per S.Y.	\$ _____
			\$ _____ Total	\$ _____
31		NO BID ITEM		
32.	130 L.F.	4" PVC Roof Leader and Cleanout.	\$ _____ per L.F.	\$ _____
			\$ _____ Total	\$ _____
33.	48 L.F.	8" Pipe and Cleanout.	\$ _____ per L.F.	\$ _____
			\$ _____ Total	\$ _____



<u>ITEM</u>	<u>ESTIMATED</u>	<u>DESCRIPTION</u>	
<u>NO.</u>	<u>QUANTITY</u>		
<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>			

34.	10 UNITS	Tree Removal, 6" to 18" diameter, as shown on plans and as called for in specifications, complete in place. (0" to 6" trees covered under site clearing).	
		\$ _____ per Unit	\$ _____
		\$ _____ Total	\$ _____

35.	1 UNIT	Tree Removal, over 18" to 36" diameter, as shown on plans and as called for in specifications, complete in place.	
		\$ _____ per Unit	\$ _____
		\$ _____ Total	\$ _____

**NEW SHADE TREES**

	5 UNITS	Red Maple, 2" – 2½" caliper, B&B, as called for in specifications, complete in place.	
		\$ _____ per Unit	\$ _____
		\$ _____ Total	\$ _____

	5 UNITS	Red Oak, 2" – 2½" caliper, B&B, as called for in specifications, complete in place.	
		\$ _____ per Unit	\$ _____
		\$ _____ Total	\$ _____

5 UNITS		Kwanzan Cherries, 2" – 2½" caliper, B&B, as called for in specifications, complete in place.	
		\$ _____ per Unit	\$ _____
		\$ _____ Total	\$ _____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
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5 UNITS		Yoshino Cherry, 2" – 2½" caliper, B&B, as called for in specifications, complete in place.		
		\$_____ per Unit		\$_____
		\$_____ Total		\$_____

THE ABOVE UNITS AND EXTENDED COST SHOULD BE USED TO DETERMINE THE LUMP SUM LANDSCAPING AMOUNTS FOR THIS ITEM NUMBER 36 (NEW SHADE TREES).

36.	20 UNIT	Landscaping (New Shade Trees), if and where Directed.		
		\$_____ per Unit		\$_____
		\$_____ Total		\$_____

37.	4 UNITS	Reset Property Corner Monumentation (In-kind).		
		\$_____ per Unit		\$_____
		\$_____ Total		\$_____

38.	15 L.F.	Reset Brick Retaining Wall.		
		\$_____ per L.F.		\$_____
		\$_____ Total		\$_____

39.	100 S.F.	Replacement/Reset Driveway Pavers.		
		\$_____ per S.F.		\$_____
		\$_____ Total		\$_____

40.	75 S.Y.	Driveway Restoration (In-Kind).		
		\$_____ per S.Y.		\$_____
		\$_____ Total		\$_____

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>	
41.	100 L.F.	Reset Landscaping Ties.	\$ _____ per L.F.	\$ _____
			\$ _____ Total	\$ _____
42.	1 UNIT	15" Reinforced Concrete Flared End Sections.	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____
43.	500 L.F.	15" RCP, CL-IV.	\$ _____ per L.F.	\$ _____
			\$ _____ Total	\$ _____
44.	ALLOWANCE	Asphalt Price Adjustment.		
			\$ <u>Eleven Thousand Six Hundred Dollars</u> Allowance	\$ <u>11,600.00</u>
45.	ALLOWANCE	Fuel Price Adjustment.		
			\$ <u>Ten Thousand Six Hundred Dollars</u> Allowance	\$ <u>10,600.00</u>
46.	ALLOWANCE	Unexpected Construction Work (if & where directed).		
			\$ <u>One Hundred Fifty Thousand Dollars</u> Allowance	\$ <u>150,000.00</u>
47.	850 GAL	Tack coat.	\$ _____ per Unit	\$ _____
			\$ _____ Total	\$ _____

<u>ITEM</u>	<u>ESTIMATED</u>	<u>DESCRIPTION</u>	
<u>NO.</u>	<u>QUANTITY</u>		
<u>UNIT PRICE WRITTEN IN BOTH WORDS AND NUMERICAL FIGURES</u>			

48.	100 L.F.	Sanitary Sewer Pipe and Cleanout (if and where directed)	
		\$_____ per Unit	\$_____
		\$_____ Total	\$_____

**ITEM NOS. 1 THROUGH 48, TOTAL PRICE BID FOR SECOND AVENUE ROAD IMPROVEMENTS – PHASE III, CONTRACT NO. 2022-1**  
**(Total bid to be written in both words and numerical figures.)**

\$\_\_\_\_\_

\$\_\_\_\_\_

\_\_\_\_\_  
 Signature of Authorized Representative

No bid items required for Item Nos. 12, 18, 26, and 31.

THE WORK UNDER THIS CONTRACT SHALL BE COMPLETED WITHIN 90 (NINETY) CONSECUTIVE CALENDAR DAYS.

Accompanying this Proposal is a Proposal Guaranty in a form of a \_\_\_\_\_

for the sum of \_\_\_\_\_ \$ \_\_\_\_\_  
payable to the Township of Piscataway which we hereby agree to be forfeited as liquidated

damages, and not as a penalty, if in case the sum \_\_\_\_\_

---

\_\_\_\_\_ is found to be the lowest submitted in the manner required and is accepted by the Township of Piscataway, and if the undersigned shall fail to execute a contract with your Honorable Body under the conditions of this Proposal or to furnish the bond required within the time provided therefore. Otherwise, said guaranty is to be returned to the undersigned.

If the bidder is a corporation or partnership, state name in full.

---

Bidders must submit prices and proposal security for all Items 1 through 48 inclusive.

---

SIGNED: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DATE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

SIGNED: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DATE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

Bid No: 2022- 06-13

# THE TOWNSHIP OF PISCATAWAY

THESE SAMPLE PAGES ARE **NOT** REQUIRED BACK WITH SEALED BID DOCUMENTS



## SAMPLE-BID REQUIRED DOCUMENTS ONCE AWARD

All documents in this section must be submitted with the awarded Contract –These documents are **REQUIRED ONCE AWARDED ONLY.** Failure to submit the documents and other documents with the contract may be cause to reject the bid for being non-responsive.



**MARIA E. VALENTE-CAEMMERER**

Purchasing Agent/Township Secretary

**Sample: Required ONLY Once Awarded:**

**Sample -AA-201**

**Sample -AA-202**

**Sample – W-9**

**Sample –Certificate of Insurance**

**Sample- NJ Payroll Forms**

**Sample-W-9**

**Sample-ST-13**

**SAMPLE: PERFORMANCE PAYMENT BOND FORM**

**(ANY “AIA Document” ARE NOT ACCEPTABLE )**

**THESE SAMPLE PAGES DO NOT HAVE TO BE  
RETURNED WITH SEALED BID.**



# STATE OF NEW JERSEY

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

FORM AA-201  
Revised 11/11

## INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

Official Use Only

Assignment

Code

For instructions on completing the form, go to: [http://www.state.nj.us/treasury/contract\\_compliance/pdf/aa201ins.pdf](http://www.state.nj.us/treasury/contract_compliance/pdf/aa201ins.pdf)

1. FID NUMBER		2. CONTRACTOR ID NUMBER		5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDCING CONTRACT Name: _____ Address: _____	
3. NAME AND ADDRESS OF PRIME CONTRACTOR (Name) _____ (Street Address) _____ (City) _____ (State) _____ (Zip Code) _____				CONTRACT NUMBER _____ DATE OF AWARD _____ DOLLAR AMOUNT OF AWARD _____	
4. IS THIS COMPANY MINORITY OWNED <input type="checkbox"/> OR WOMAN OWNED <input type="checkbox"/>				6. NAME AND ADDRESS OF PROJECT Name: _____ Address: _____	
9. TRADE OR CRAFT				7. PROJECT NUMBER _____	
8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? YES <input type="checkbox"/>				COUNTY _____	

9. TRADE OR CRAFT	PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE - IN DATE	PROJECTED COMPLETION DATE
	MALE		FEMALE		MALE		FEMALE			
	J	AP	J	AP	J	AP	J	AP		
1. ASBESTOS WORKER										
2. BRICKLAYER OR MASON										
3. CARPENTER										
4. ELECTRICIAN										
5. GLAZIER										
6. HVAC MECHANIC										
7. IRONWORKER										
8. OPERATING ENGINEER										
9. PAINTER										
10. PLUMBER										
11. ROOFER										
12. SHEET METAL WORKER										
13. SPRINKLER FITTER										
14. STEAMFITTER										
15. SURVEYOR										
16. TILER										
17. TRUCK DRIVER										
18. LABORER										
19. OTHER										
20. OTHER										

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

\_\_\_\_\_  
(Signature)

10. \_\_\_\_\_ (Please Print Your Name) \_\_\_\_\_ (Title)

\_\_\_\_\_  
(Area Code) (Telephone Number) (Ext.) \_\_\_\_\_ (Date)

**INSTRUCTIONS FOR COMPLETING THE INITIAL PROJECT**

**WORKFORCE REPORT – CONSTRUCTION (AA201)**

**DO NOT COMPLETE THIS FORM FOR GOODS AND/OR SERVICE CONTRACTS**

1. Enter the Federal Identification Number assigned to the contractor by the Internal Revenue Service, or if a Federal Employer Identification Number has been applied for but not yet issued, or if your business is such that you have not or will not receive a Federal Identification Number, enter the social security number assigned to the single owner or one partner, in the case of a partnership.
2. Note: The Department of Labor & Workforce Development, Construction EEO Monitoring Program will assign a contractor ID number to your company. This number will be your permanently assigned contractor ID number that must be on all correspondence and reports submitted to this office.
3. Enter the prime contractor's name, address and zip code number.
4. Check box if Company is Minority Owned or Woman Owned
5. Enter the complete name and address of the Public Agency awarding the contract. Include the contract number, date of award and dollar amount of the contract.
6. Enter the name and address of the project, including the county in which the project is located.
7. Note: A project contract ID number will be assigned to your firm upon receipt of the completed Initial Project Workforce Report (AA201) for this contract. This number must be indicated on all correspondence and reports submitted to this office relating to this contract.
  8. Check "Yes" or "No" to indicate whether a Project Labor Agreement (PLA) was established with the labor organization(s) for this project.
9. Under the Projected Total Number of Employees in each trade or craft and at each level of classification, enter the total composite workforce of the prime contractor and all subcontractors projected to work on the project. Under Projected Employees enter total minority and female employees of the prime contractor and all subcontractors projected to work on the project. Minority employees include Black, Hispanic, American Indian and Asian, (J=Journey worker, AP=Apprentice). Include projected phase-in and completion dates.
10. Print or type the name of the company official or authorized Equal Employment Opportunity (EEO) official include signature and title, phone number and date the report is submitted.

This report must be submitted to the Public Agency that awards the contract and the Department of Labor & Workforce Development, Construction EEO Compliance Monitoring Program after notification of award, but prior to signing the contract.

**THE CONTRACTOR IS TO RETAIN A COPY AND SUBMIT COPY TO THE PUBLIC AGENCY AWARDING THE CONTRACT AND FORWARD A COPY TO:**

**NEW JERSEY DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
CONSTRUCTION EEO COMPLIANCE MONITORING UNIT  
P.O. BOX 209  
TRENTON, NJ 08625-0209  
(609) 292-9550**

# Township of Piscataway

## **ONCE AWARDED:**

(Piscataway Township Performance Payment Bond Form only -  
Sample in bid)

A. Model Performance Bond Form - *Sample*

B. Surety Disclosure Statement and Certification – *Sample*

C. PISCATAWAY PERFORMANCE BOND FORM- SAMPLE

# SAMPLE

## TO CONTRACTOR:

Have your bonding company complete the enclosed Performance/Payment Bond. In order to expedite the process by which your Performance/Payment Bond will be approved by our township attorney, you must use the enclosed form. Please fill out the numbered highlighted areas and have all required signatures in place. The Township will not review any alternative forms and they will be returned to you.

### **Please fill out the highlighted areas numbered as follows:**

1. Full name of Contractor
2. Indicate whether a Corporation, Partnership or Individual
- 3, 3A, 3B Full name of Bonding Company, State, and Office Address
4. Amount of contract in words and figures
5. Date of Bond (Supplied by bonding company - cannot be prior to date of contract)
6. Date of Contract (Found on first page of contract at top)
7. Title and/or description of contract
8. Full name of Contractor
9. Full name of Contractor
10. Same date as Item # 5

### **Accompanying documents from the bonding company must include the following:**

1. Financial Statement
  2. Surety Disclosure Statement and Certification
- A Power of Attorney should be provided for the individual executing the bond on behalf of the surety.

**PERFORMANCE PAYMENT BOND MUST BE SIGNED AND SEALED BY ALL  
PARTIES INDICATED ON PAGE 2**

# SAMPLE

Performance Payment Bond

## PERFORMANCE PAYMENT BOND

Know all men by these presents, that we, **(1)** \_\_\_\_\_ a  
**(2)** \_\_\_\_\_ the undersigned as Principal and  
**(3)** \_\_\_\_\_ of the State of **(3A)** \_\_\_\_\_  
 duly authorized to do business in the State of New Jersey, having an office at  
**(3B)** \_\_\_\_\_, New Jersey, as Surety, are  
 hereby held and firmly bound unto the Township of Piscataway, 455 Hoes Lane, Piscataway, New Jersey  
 08854 in the penal sum of  
**(4)** \_\_\_\_\_  
 (\$ \_\_\_\_\_) DOLLARS,

for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our  
 heirs, executors, administrators, successors and assigns.

**(5)** Signed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

The condition of the above obligation is such that whereas, the above named principal did on the  
**(6)** \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, enter into a contract with the Township  
 of Piscataway, 455 Hoes Lane, Piscataway, New Jersey 08854 for  
**(7)** \_\_\_\_\_

which said contract is made a part of this the bond the same as though set forth herein;

Now, if the said **(8)** \_\_\_\_\_ shall well and faithfully do and perform the  
 things agreed by **(9)** \_\_\_\_\_ to be done and performed according to the  
 terms of said contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S. 2A:44-143 for  
 labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or  
 machinery furnished, used or consumed in the carrying forward, performing or completing of said contract,  
 we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S.  
 2A: 44-143 having a just claim, as well as for the oblige herein; then this obligation shall be void; otherwise  
 the same shall remain in full force and effect; it being expressly understood and agreed that the liability of  
 the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as  
 herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the  
 terms of the said contract or in or to the plans or specifications therefore shall in anywise affect the  
 obligation of said surety on its bond.

Recovery of any claimant under the bond shall be subject to the conditions and provisions of this article  
 to the same extent as if such conditions and provisions were fully incorporated in the form set forth above.

# SAMPLE

## Performance Payment Bond

This bond shall not be subject to cancellation either by the principal or by the surety for any reason until such time as all improvements subject to the bond have been accepted by the municipality.

This bond shall be deemed continuous in form and shall remain in full force and effect until the improvements are accepted by the municipality and the bond is released, or until default is declared, or until the bond is replaced by another bond meeting applicable legal requirements. Upon approval or acceptance of all improvements by the municipality, or upon replacement of this bond by another bond, liability under this bond shall cease.

The aggregate liability of the surety shall not exceed the sum set forth above.

In the event that the improvements subject to this bond are not completed within the time allowed under the contract or bid documents (hereinafter the "Contract") between principal and municipality, the municipal governing body may, at its option, and upon at least 30 days prior written notice to the principal and to the surety by personal delivery or by certified or registered mail or courier, declare the principal to be in default and, in the event that the surety fails or refuses to complete the work in accordance with the terms and conditions of said Contract, claim payment under this bond for the cost of completion of the work. In the event that any action is brought against the principal under this bond, written notice of such action shall be given to the surety by the municipality by personal delivery or by registered or certified mail or courier at the same time.

The surety shall have the right to complete the work in accordance with the terms and conditions of said Contract, either with its own employees or in conjunction with the principal or another contractor; provided, however, that the surety in its sole discretion, may make a monetary settlement with the municipality as an alternative to completing the work.

This bond shall insure to the benefit of the municipality only and no other party shall acquire any rights hereunder.

In the event that this bond shall for any reason cease to be effective prior to the approval or acceptance of all improvements, a cease and desist order may be issued by the governing body, in which case all work shall stop until such time as a replacement guarantee acceptable to municipality becomes effective.

# SAMPLE

Performance Payment Bond

**IN WITNESS WHEREOF** , this instrument is executed in two (2) counterparts each of which shall be deemed an original , this the **(10)** \_\_\_\_\_ day of \_\_\_\_\_ , 20

**Attest :**

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Typed or Printed)

\_\_\_\_\_  
Principal Secretary

\_\_\_\_\_  
(Typed or Printed)

**By:** \_\_\_\_\_ (s)

\_\_\_\_\_  
Address

**SEAL :**

\_\_\_\_\_  
Witness to Princip

\*\*\*\*\*

**Attest :**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Surety Secretary

**By:** \_\_\_\_\_ (s)

\_\_\_\_\_  
Attorney-in-fact

**SEAL :**

\_\_\_\_\_  
Address

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
Address

# SAMPLE

# SAMPLE

## CONTRACTOR INSURANCE REQUIREMENTS

### Contractors

When the municipality lets work to a contractor, it is expected and required the contractor provide the municipality with the following minimum amount of insurance.

**a) Small Service and Repair Contractors**

- General Liability, including Products/Completed
- Operations – Limit \$500,000 CSL
- Authority to be named as additional insured
- Auto Liability: Limit \$500,000 CSL
- Coverage to include “Non-Owned and Hired Automobiles”
- Workers’ Compensation Insurance – statutory limits

**b) Larger Contractors** (Includes contractors that are doing new construction or major alterations):

Requirements are same as above with exception of limits which are to be \$ 1 Million CSL for both General and Automobile Liability.

**Note: No work shall be allowed to begin without property Insurance Certificates on file with the member municipality and approved by the Insurance producer. Also, refer back to Item #9 in the underwriting section of the Policies and Procedures Manual for Insurance requirements for pyrotechnic contractors.**

### ADDITIONAL INSURED

The Township of Piscataway must be named additional Insured.  
The description of the Goods & Services must be listed.



**SAMPLE CERTIFICATE OF INSURANCE**



**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)

PRODUCER Applicants Insurance Company Name and Address	THIS CERTIFICATION IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED Applicants Company Name and Address	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIODS INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSURANCE TYPE (ACORD LTR #)	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
1	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GENT. AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PERIOD <input type="checkbox"/> SUBJECT <input type="checkbox"/> LOCATION	Policy Number		Term	EACH OCCURRENCE \$ \$1,000,000 DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPROP AGG \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	Policy Number		Term	CORRECTED SINGLE LIMIT (EA OCCURRENCE) \$ \$1,000,000 BODILY INJURY (EA OCCURRENCE) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
2	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE RETENTION \$	Policy Number		Term	EACH OCCURRENCE \$ \$2,000,000 AGGREGATE \$ \$ \$
3	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETORS/PARTNERS/EXECUTIVE OFFICERS/EMBER EXCLUDED? If yes, describe below SPECIAL PROVISIONS below OTHER	Policy Number If applicable		Term	<input type="checkbox"/> WC STATUS <input type="checkbox"/> OTHER <input type="checkbox"/> TORT LIMITS E.L. EACH ACCIDENT \$ \$100,000 E.L. DISEASE - EA EMPLOYEE \$ \$100,000 E.L. DISEASE - POLICY LIMIT \$ \$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Leave Blank **NAME OF PROJECT AND LOCATION**

CERTIFICATE HOLDER ATTN: TOWSHIP OF PISCATAWAY 455 HOES LANE PISCATAWAY, NJ 08854	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE
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# SAMPLE

## TAXPAYER IDENTIFICATION

Form **W-9**  
(Rev. November 2017)  
Department of the Treasury  
Internal Revenue Service

### Request for Taxpayer Identification Number and Certification

Give Form to the  
requester. Do not  
send to the IRS.

Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
	<input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____ <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ▶ _____	<input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate  Exempt payee code (if any) _____  Exemption from FATCA reporting code (if any) _____  <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 and avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1, *So Sign What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social Security number	Employer identification number
<input type="text"/> <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	Signature of U.S. person ▶	Date ▶
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### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*

**SAMPLE**

To be completed by contractor  
and retained by seller.

**FORM ST-13**

**CONTRACTOR'S EXEMPT PURCHASE CERTIFICATE**

TO: \_\_\_\_\_ (Name of Seller) \_\_\_\_\_ (Date)

\_\_\_\_\_  
(Address of Seller)

The materials, supplies, or services purchased by the undersigned are for exclusive use in erecting structures, or building on, or otherwise improving, altering or repairing real property of the exempt organization, governmental entity, or qualified housing sponsor named below and are exempt from Sales and Use Tax under N.J.S.A. 54:32B-8.22.

THIS CONTRACT COVERS WORK TO BE PERFORMED FOR: (Check one)

EXEMPT ORGANIZATION

Name of Exempt Organization \_\_\_\_\_

Address \_\_\_\_\_

Exempt Organization Number \_\_\_\_\_

NEW JERSEY OR FEDERAL GOVERNMENTAL ENTITY

Name of Governmental Entity \_\_\_\_\_

Address of Governmental Entity \_\_\_\_\_

QUALIFIED HOUSING SPONSOR

Name of Qualified Housing Sponsor \_\_\_\_\_

Address of Qualified Housing Sponsor \_\_\_\_\_

ADDRESS OR LOCATION OF CONTRACT WORK SITE: (property must be owned or leased by one of the above)

\_\_\_\_\_

I, the undersigned contractor, hereby verify and affirm that all of the information shown on this certificate is true.

\_\_\_\_\_  
Name of Contractor as registered with the New Jersey Division of Taxation

**SAMPLE**

\_\_\_\_\_  
Address of Contractor

\_\_\_\_\_  
Signature of Contractor or Authorized Employee

See INSTRUCTIONS on reverse side.

1. **Good Faith-** To act in good faith means to act in accordance with standards of honesty. In general, registered sellers who accept exemption certificates in good faith are relieved of liability for the collection and payment of sales tax on the transactions covered by the exemption certificate.

In order for good faith to be established, the following conditions must be met:

- (a) Certificate must contain no statement or entry which the seller knows is false or misleading;
- (b) Certificate must be an official form or a proper and substantive reproduction, including electronic;
- (c) Certificate must be filled out completely;
- (d) Certificate must be dated and include the purchaser's New Jersey tax identification number or, for a purchaser that is not registered in New Jersey, the Federal employer identification number or out-of-State registration number. Individual purchasers must include their driver's license number; and
- (e) Certificate or required data must be provided within 90 days of the sale.

The seller may, therefore, accept this certificate in good faith as a basis for exempting sales to the signatory purchaser and is relieved of liability even if it is determined that the purchaser improperly claimed the exemption.

2. **Improper Certificate** - Sales transactions which are not supported by properly executed exemption certificates are deemed to be taxable retail sales. In this situation, the burden of proof that the tax was not required to be collected is upon the seller.
3. **Correction of Certificate** - In general, sellers have 90 days after the date of sale to obtain a corrected certificate where the original certificate lacked material information required to be set forth in said certificate or where such information is incorrectly stated.
4. **Additional Purchases by Same Purchaser** - This Certificate will serve to cover additional purchases by the same purchaser of the same general type of property or service. However, each subsequent sales slip or purchase invoice based on this Certificate must show the purchaser's name, address and Certificate of Authority Number for purpose of verification.
5. **Retention of Certificates** - Certificates must be retained by the seller for a period of not less than four years from the date of the last sale covered by the certificate. Certificates must be in the physical possession of the seller and available for inspection on or before the 90th day following the date of the transaction to which the certificate relates.

#### 6. Definitions:

**"Contractor"** - means any individual, partnership, corporation or other commercial entity engaged in any business involving erecting structures for others, or building on, or otherwise improving, altering, or repairing real property of others.

**"Exempt Organization"** - is any organization which holds a valid exempt organization permit issued pursuant to the provisions of N.J.S.A. 54:32B-9(b) which has issued an ST-5 Exempt Organization Certificate to the contractor.

**"New Jersey or Federal Governmental Entity"** - is any agency, instrumentality, political subdivision, authority, or public corporation of the governments of the United States of America or the State of New Jersey. Governmental agencies, instrumentalities or political subdivisions of states other than New Jersey do not qualify for exemption.

**"Qualified Housing Sponsor"** - is any person, partnership, corporation or association certified by the New Jersey Housing and Mortgage Finance Agency to have obtained financing, in addition to federal, state or local government subsidies, for a housing project from the New Jersey Housing and Mortgage Finance Agency pursuant to N.J.S.A. 55:14K-1, et seq. and has issued a New Jersey Sales and Use Tax Housing Sponsor Letter of Exemption to the contractor.

PRIVATE REPRODUCTION of Contractor's Exempt Purchase Certificates may be made without the prior permission of the Division of Taxation.

#### FOR MORE INFORMATION:

Call the Customer Service Center (609) 292-6400. Send an e-mail to [nj.taxation@treas.state.nj.us](mailto:nj.taxation@treas.state.nj.us). Write to: New Jersey Division of Taxation, Information and Publications Branch, PO Box 281, Trenton, NJ 08695-0281.

**PAYROLL**

(For Contractor's Optional Use; See Instructions at [www.dol.gov/whd/forms/wh347instr.htm](http://www.dol.gov/whd/forms/wh347instr.htm))



Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

NAME OF CONTRACTOR  OR SUBCONTRACTOR  ADDRESS OMB No.: 1235-0008  
Expires: 01/31/2015

PAYROLL NO. FOR WEEK ENDING PROJECT AND LOCATION PROJECT OR CONTRACT NO.

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	(4) DAY AND DATE OT OR ST. HOURS WORKED EACH DAY	(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
							FICA	WITH- HOLDING TAX		OTHER	TOTAL DEDUCTIONS	
			O									
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SAMPLE

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

**Public Burden Statement**

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210



# SAMPLE

## INSTRUCTIONS FOR COMPLETING MONTHLY PROJECT WORKFORCE REPORT- ( AA202)

1. Enter the prime contractor's name, address and zip code number.
2. Enter the **CONTRACTOR ID NUMBER** assigned by the Dept. of Labor & Workforce Development Construction EEO Compliance Monitoring Program.
3. Enter the Federal Identification Number assigned to the contractor by the Internal Revenue Service, or if a Federal Employer Identification Number has not been applied for or issued, or if your business is such that it will not receive a Federal Identification Number, enter the Social Security Number of the owner or of one partner, in the case of a partnership.
4. Reporting Period - enter the beginning and ending dates of the month for the report being submitted. (i.e., 1/1/00 – 1/31/00).
5. Enter the complete name of the public agency awarding the contract. Include the date of contract award.
6. Enter the name and location of the project, including the county in which the project is located.
7. Enter the **PROJECT NUMBER** assigned by the Dept. of Labor & Workforce Development Construction EEO Compliance Monitoring Program.
8. Enter the company name(s) of the contractor(s) performing work at the construction site. List the prime contractor first with subcontractor(s) following.
9. Enter the total percent (%) of project work the contractor or subcontractor has completed, to date.
10. Identify the trades or crafts applicable to the prime contractor and each subcontractor listed in column #8. Use a single line for each trade or craft.
11. Enter the total number of employees for each contractor at each level of classification (J=Journeyworker, AP=Apprentice) and the total number of each minority group - Black, Hispanic, American Indian, Asian and Female. Note: Column A shall include Total Number of employees. Columns B-E shall also include minority females. Column F shall include both non-minority and minority females.
12. Enter the total number of minority employees for each employer at each level of classification. Note: This shall be the sum of columns B-E.
13. Enter the Total Monthly work hours for all employees in each craft at each level of classification.  
(A) Enter the Total Monthly minority work hours for each craft at each level of classification (Columns B-E).  
(B) Enter the Total Monthly female work hours for each craft at each level of classification (Column F).
14. (A) Enter the Total Monthly PERCENT of minority work hours for each craft at each level of classification.  
(B) Enter the Total Monthly PERCENT of female work hours for each craft at each level of classification.
15. Enter the Total Cumulative work hours for each craft at each level of classification.  
(A) Enter the Total Cumulative minority work hours for each craft at each level of classification.  
(B) Enter the Total Cumulative female work hours for each craft at each level of classification.
16. (A) Enter the Cumulative Percent of minority work hours for each craft at each level of classification.  
(B) Enter the Cumulative Percent of female work hours for each craft at each level of classification.
17. Print or type the name of the company official submitting the report; include signature, title, telephone number, and date the report is submitted.

THE CONTACTOR SHOULD RETAIN ONE COPY AND SUBMIT A COPY TO THE PUBLIC AGENCY WHICH AWARDED THE CONTRACT. ANOTHER COPY MUST BE FORWARDED TO:

New Jersey Department of Labor & Workforce Development  
Construction EEO Compliance Monitoring Program  
PO Box 209  
Trenton, NJ 08625-0209  
609 292-9550

# State Of New Jersey

Department of Labor & Workforce Development  
Construction EEO Compliance Monitoring Program

**MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION**

For instructions on completing the form, go to: <a href="http://www.state.nj.us/treasury/contract_compliance/pdf/aa202ins.pdf">http://www.state.nj.us/treasury/contract_compliance/pdf/aa202ins.pdf</a>		3. F ID or SS Number	
1. Name and address of Prime Contractor  (NAME)	2. Contractor ID Number	4. Reporting Period	
(ADDRESS)		5. Public Agency Awarding Contract	Date of Award
(CITY)		6. Name and Location of Project	
(STATE)		County	7. Project ID Number
(ZIP CODE)			

8. CONTRACTOR NAME (LIST PRIME CONTRACTOR WITH SUBS FOLLOWING)	9. PERCENT OF WORK COMPLETED	10. TRADE OR CRAFT	CLASSIFICATION (SEE REVERSE)	11. NUMBER OF EMPLOYEES						12. TOTAL	13. WORK HOURS		14. % OF WORK HRS		15. CUM. WORK HRS		16. CUM. % OF W/H			
				A.	B.	C.	D.	E.	F.	NO. OF MIN. EMP.	TOTAL WORK HOURS	A.	B.	A.	B.	TOTAL WORK HOURS	A.	B.	A.	B.
				TOTAL	BLACK	HISPANIC	AMERICAN INDIAN	ASIAN	FEMALES			MIN. W/H	FEMALE W/H	% OF MIN. W/H	% OF FEMALE W/H	MIN. HOURS	FEMALE HOURS	% OF MIN. W/H	% OF FEM. W/H	
			J																	
			AP																	
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			J																	
			AP																	

SAMPLE

17. COMPLETED BY (PRINT OR TYPE)

(NAME)	(SIGNATURE)	(TITLE)

(AREA CODE)	(TELEPHONE NUMBER)	(EXT.)	(DATE)



# THE TOWNSHIP OF PISCATAWAY



LAST PAGE