

**SPECIFICATIONS
FOR
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET (CR601) CORRIDOR
CITY OF PLAINFIELD, COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT NUMBER HSIP 0601 (301)
BA#5-2018; UNION COUNTY ENGINEERING PROJECT #2014-044**

SEPTEMBER 2018

**UNION COUNTY OFFICIALS
BOARD OF CHOSEN FREEHOLDERS**

Sergio Granados, Chairman
Bette Jane Kowalski, Vice Chairman
Bruce H. Bergen, Freeholder
Angel G. Estrada, Freeholder
Angela R. Garretson, Freeholder
Christopher Hudak, Freeholder
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Alexander Mirabella, Freeholder
Rebecca Williams, Freeholder

CLERK OF THE BOARD
James E. Pellettiere, RMC

COUNTY MANAGER
Edward T. Oatman

**DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND
FACILITIES MANAGEMENT**
Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

**COUNTY ENGINEER
DIVISION OF ENGINEERING**
Thomas O. Mineo, P.E.
2325 South Avenue
Scotch Plains, New Jersey 07076
Telephone: (908) 789-3675
Fax: (908) 789-3674

PREPARED BY:
Michael Baker International
300 American Metro Boulevard, Suite 1574
Hamilton, New Jersey 08648

**COUNTY OF UNION
NOTICE TO BIDDERS**

Sealed bids will be received by the director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on October 16, 2018 at 10:30 a.m., prevailing time, in the 3rd Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**INTERSECTION IMPROVEMENT – WEST SEVENTH STREET (CR601) CORRIDOR
CITY OF PLAINFIELD, COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT NUMBER HSIP 0601 (301)
BA#5-2018; UNION COUNTY ENGINEERING PROJECT #2014-044**

Bid Packages may be obtained at no charge by registering and downloading at <http://ucnj.org/bid-specs>. Bid Packages may also be obtained in person from the Division of Engineering at 2325 South Avenue, Scotch Plains, New Jersey 07076 between 8:30 a.m. and 4:00 p.m. weekdays upon payment of a non-refundable money order or bank check in the amount of \$275.00 made payable to the County of Union. No Personal / Company checks will be accepted. Requests for mailing of specifications will not be honored. For further information please call 908-789-3675.

The County reserves the right to reject any and all bids and to waive any and all informalities in the bid in accordance with the New Jersey Local Public Contracts Law.

Bids shall be submitted in a sealed envelope and clearly marked with the subject of the bid, name and address of the bidder, phone & fax number, and date of the bid opening. Each bid must be delivered to reach the Division of Purchasing prior to the stated time of the opening of the bids. The County will not be responsible for late delivery by the U.S. Mail or any other carrier. If hand delivered, please note that parking and security access at the County Complex may cause delays and bidders should take them into consideration in order to submit a timely bid. **No** late bids will be accepted.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

LAURA M. SCUTARI, QPA, MPA, DIRECTOR OF PURCHASING

**UNION COUNTY BOARD
OF CHOSEN FREEHOLDERS**

We're Connected to You!

**INTERSECTION IMPROVEMENT – WEST SEVENTH STREET (CR601) CORRIDOR
CITY OF PLAINFIELD, COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT NUMBER HSIP 0601 (301)
BA#5-2018; Union County Engineering Project #2014-044**

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Contractor Business Registration Certificate
Affirmative Action Requirement
Experience Statement
Certificate of Bidder Showing Ability to Perform Contract
Non-Collusion Affidavit
Contractor Registration Advisement
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Contractor Performance Record
Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders
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**UNION COUNTY BOARD OF CHOSEN FREEHOLDERS
INSTRUCTIONS TO BIDDERS AND FORMS**

DEFINITIONS

Wherever reference is made to the County, Title of Project, Bidder, or Vendor/Contractor they shall be as follows:

OWNER/COUNTY:

Union County Board of Chosen Freeholders
UC Administration Building, 6th Floor
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Laura M. Scutari, QPA, MPA, Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548

**TITLE OF PROJECT: Intersection Improvement – West Seventh Street (CR6010 Corridor
City of Plainfield, County of Union, New Jersey
Federal Project Number HSIP 0601 (301)
BA#5-2018; Union County Engineering Project #2014-044**

BIDDER: Bidder shall be a single overall contract bidder

ENGINEER:

Michael Baker International, Inc.
300 American Metro Boulevard, Suite 154
Hamilton, New Jersey 08648

COUNTY ENGINEER AND/OR CONSTRUCTION MANAGER (as applicable):

COUNTY ENGINEER:

Thomas O. Mineo, P.E.
Union County
Division of Engineering
2325 South Avenue
Scotch Plains, NJ 07076
Office: (908) 789-3675
Facsimile: (908) 789-3674
Email: tmineo@ucnj.org

**CONSTRUCTION ADMINISTRATION AND INSPECTION: Dewberry Engineers, Inc.
200 Broadacres Drive, Suite 410
Bloomfield, NJ 07003**

GENERAL SPECIFICATIONS

1. BID FORM

Bids for this Work will be enclosed in a sealed envelope addressed to the Purchasing Division, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207, with the full name of the Project clearly marked on the outside. Refer to the sheet marked "Notice of Bid (Advertisement)" for the correct name of the Project. Bidders must submit their bids on the attached pricing sheet (Bid Form), in a sealed envelope addressed to the County and bearing on the outside: the name of the Bidder, Bidder's business address, and the title of the Project.

The Division of Purchasing will receive the bids for this Work at the Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey on the date and time noted on the sheet marked "**Notice of Bid (Advertisement)**".

The County will not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that the bids are presented to the Purchasing Division at the time and at the place designated.

Bids will be accepted only on the Bid Form supplied. Bids on forms other than the original supplied herein will be rejected. The "complete" Bid Documents includes the Bid Bond, Bid Form, Bidder's Checklist, Consent of Surety, Ownership Disclosure Certification, Non-Collusion Affidavit, and any other documents noted in these Instructions to Bidders or Contract Document to be submitted with this Bid.

The bidder will state in the bidding sheet the price per unit of measure for each scheduled Item of Work for which he will agree to carry out the Work, and the Total Bid Price for the construction of the Project.

The prices in the Bid Form shall be typed or written in pen and ink. Erasures or alterations must be initialed by the bidder in ink.

The bidding sheet for this Project may include a fixed amount as a Bid Allowance. If applicable, all bidders are required to add this fixed amount to their base bid and to include this additional amount in their Bid Bond. This sum will be included in the Contract as well as the performance, labor and materials bond. Payment by the County will be made to the Contractor from these funds only upon the completion of extra Work pursuant to a written Change Order(s) signed by the County's Engineer or his designee and the Contractor, prior to the commencement of such Work. Work commenced prior to written approval by the County shall be done at Contractor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the Change Order(s). See Section 37, Change Orders, of these general specifications for further details.

Refer to Bid Document Submission Checklist for all required documents.

In the event there is a discrepancy between the unit price given and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

Insert applicable alternates, if any have been specified, applicable to the Bidder's Work. All alternates MUST be bid upon. Any Bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The Bidder shall clearly designate whether the change in price is an addition or subtraction, by using either a "+" sign or the word "addition", or in the alternative, a "-" sign or the word "minus". If there is no other change in price, the Bidder shall insert "NC" or "No Charge".

When two or more low bids are equal in all respects, awards will be made according to the provisions of N.J.S.A. 40A:11-6.1(d).

Where unit prices have already been established by the Contract Documents, the Bidder agrees that such unit prices shall prevail. All unit prices, whether filled in by the Bidder or established by the Contract Documents, shall become part of the Contract. No bid will be considered or award made, unless applicable unit prices, as required, are filled in.

The County reserves the right to reject any or all bids and also reserves the right to waive any informality in the bids received so long as said waiver is not of a response which is considered to be material and non-waivable pursuant to law.

The County of Union has the right to reject any and all bids from any bidder that is in, or contemplates bankruptcy of any chapter of nature. Said bidder shall notify the County, in writing, of any condition or knowledge of the same.

Conditional bids will not be accepted. Bids may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof or in accordance with the provisions of N.J.S.A. 40A:11-23.3 discussed below. Bids received after the advertised time shall not be considered. Bidders shall be solely responsible for premature opening or late delivery of bids not properly marked, addressed, or directed.

2. WITHDRAWAL OF BID DUE TO MISTAKE

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an **unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.**

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to Laura M. Scutari, QPA, MPA, Director, Division of Purchasing, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, Laura M. Scutari, QPA, Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid **shall** contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the County's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

The County will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS

The County may make such investigation as it deems necessary to determine the ability of the Bidders to perform the Work, which includes investigation of any and all subcontractors listed with the bid. The Bidder shall furnish any information and data for this purpose as the County may request.

4. INTERPRETATIONS AND ADDENDA

Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to the County Engineer or Design Professional as the case may be and with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County Engineer will be in the form of an addendum to the Contract Documents or clarification and will be furnished to all prospective bidders. Oral explanations or instructions given before the award of the Contract will not be binding. Bidders are required to bring to the attention of the County Engineer, the discovery of any apparent ambiguity, inconsistency, error, discrepancy, omission in the Contract Documents for interpretation and correction at least ten (10) working days before opening of bids with the exception of Saturdays, Sundays and holidays.

All Addenda issued through the Offices of the County Engineer are amendments to the Contract Documents and shall be considered in preparing bids. Same shall become part of the Contract Documents.

Addenda take precedence over all earlier documents and over each other according to the latest date. Addenda unless themselves interpretive remain subject to interpretation the same as any other document incorporated in the Contract.

Addenda may be issued by the County Engineer up to seven (7) working days prior to the opening of bids. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders are to keep themselves currently acquainted with the Contract Documents during the entire bidding period and make inquiry on their own initiative as to issuance of any Addenda. Receipts of all Addenda shall be acknowledged on the “*Acknowledgement of Receipt of Changes*” included in the bid package and must be submitted with the bid.

5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS

At the time of the opening of bids, each Bidder will be presumed to have inspected the site(s) and to have read, and be thoroughly familiar with the Contract Documents. The failure or neglect of any Bidder to receive or examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to its bid.

The Bidder shall examine the contents of the Project Manual and the set of Drawings and assure itself that all pages of the Specifications, Drawings, and other Contract Documents are included in the documents obtained for bidding purposes. Should the Specifications, Drawings, and other Contract Documents be incomplete, the Bidder shall notify the County Engineer in writing, who will supply the Bidder with any missing pages of Specifications, Drawings, or other Contract Documents. The lack of such written notification by the Bidder will be construed as evidence that the Specifications, Drawings, or other Contract Documents supplied it for bidding purposes are full and complete and as a waiver of any subsequent claim to the contrary.

6. BID AND PERFORMANCE GUARANTEE

Each bidder must furnish a Bid Bond, Certified Check or Bank Cashier’s Check in the amount of ten percent (10%) of the Bid. Checks shall be drawn to the order of the County of Union, New Jersey, not to exceed \$20,000.

Each bidder must furnish with the bid a certificate from a Surety Company, i.e. Consent of Surety, stating that in the event of the contract being awarded to said bidder, such Surety Company will provide the Contractor with Bonds guaranteeing the faithful performance of the Work in accordance with the plans and specifications, and the payment for labor, materials, and all other indebtedness which may accrue on the account of this Work. A Performance, Labor and Materials bond will be furnished by the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

A one-year Maintenance Bond will be required upon acceptance of the Project by the County in the amount as stated in Section 15 of the General Specifications. Bonds will be written by a firm authorized to issue the bonds under the laws of the State of New Jersey and be in a form acceptable to the County Counsel.

N.J.S.A. 40A:11-1.1 et seq. allows the prime Contractor to furnish the Performance Security for his Subcontractors. The County of Union requires Performance Security to be furnished by the prime contractor for the entire job in the total amount of the contract.

The County of Union shall award the contract or reject all bids within sixty (60) days; except that the bids of any bidders who consent thereto may, at the request of the County be held for consideration for such longer periods as may be agreed.

The County will return all certified checks or cashier's checks after the proposals have been opened, read, tabulated and checked except those of the three (3) bidders who have bid the lowest total price for carrying out the Project. The County will return the checks of these bidders when a contract is awarded to the successful bidder within ten (10) days after the award of the contract.

If the successful bidder refuses or neglects to sign the said Agreement and furnish the required bonds, the Bid Bond will be held and used by the County to offset any damages for such refusal or neglect.

7. COMMENCEMENT AND COMPLETION

Work will not commence until a Notice to Proceed is received from the County Engineer.

Upon substantial completion of the Project, the Contractor must request a joint inspection with the County Engineer. Upon completion of this inspection, the County Engineer will prepare a list of incomplete or incorrect items (punch list) and have Contractor initial and date same. The Contractor shall rectify all deficiencies noted on the punch list within 30 calendar days of receipt of the list. The County Engineer may approve extensions for extenuating circumstances.

8. BIDDER AFFIDAVIT

All Bidders are required to complete, sign, and submit with their Bid, the attached "Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders". (See form enclosed)

9. BID SECURITY

All Bidders are required to submit a form of Bid Security with their bids.
(Bid Bond or Certified Funds)

The Bid Security shall be in the amount of ten percent (10%) of the Bid, but not in excess of Twenty Thousand Dollars (\$20,000.00), and payable to the order of the "County of Union."

10. LABOR AND MATERIALS

The prices will cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. N.J.S.A. 54:32B-1 et seq. exempts all materials sold to the County of Union from sales or use taxes and should not be included in the prices provided on the Bidding Sheet.

11. INSURANCE REQUIREMENTS

The County of Union requires all contractors to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the contractor must accept the applicable insurance requirements, as set forth below, as part of any contract awarded to it by the County.

Contractor shall carry and maintain at all times while the contract is in full force and effect, the following insurance coverage with an insurance company or companies acceptable to the County, with limits not less than those shown below. A Certificate of Insurance shall be filed with the County prior to commencement of any Work indicating the following:

- a) Commercial General Liability (CGL): Coverage for all operations including, but not limited to, contractual, products and completed operations, and personal injury with limits no less than \$5,000,000 per occurrence/\$10,000,000 aggregate. The County of Union, its Board of Chosen Freeholders, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and non-contributory basis to the County of Union, et al.
- b) Automobile Liability: Coverage for all owned, non-owned and hired vehicles with limits not less than \$5,000,000 per occurrence, combined single limits (CSL) or its equivalent.
- c) Workers Compensation: As required by the State of New Jersey and Employers Liability with limits not less than \$1,000,000 per accident for bodily injury or disease.

- d) Professional Liability (if design/build): Coverage with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate
- e) Contractor's Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors & Omissions (if project involves environmental hazards): Coverage with limits no less than \$1,000,000 per occurrence or claim/\$2,000,000 aggregate.
- f) Builders Risk (for major renovations): During the course of construction utilizing an "All Risk" coverage form with limits equal to the completed value of the project and no coinsurance penalty provisions.

Where applicable, a waiver of subrogation in favor of the County of Union, its Board of Chosen Freeholders, officers, employees, agents, servants and the State of New Jersey is to be included in those policies of insurance where permitted by law.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Special Risks or Circumstances: The County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

12. INDEMNIFICATION REQUIREMENTS

The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

"To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the owner and the owner's consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor's work under this contract, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the County and the County's consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claim, damage, loss,

cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the County or the County's consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder."

13. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall hold the County harmless from loss on account thereof.

14. PLANS AND SPECIFICATIONS

In carrying out the Work, the plan(s) and the specifications will be followed by the Contractor. Minor alterations in the plan may be made or permitted by the County Engineer from time to time and, if no additional Work is necessary, there will be no additional charge for carrying out such minor alterations.

The Contractor shall provide the County Engineer a set of reproducible as-built drawings upon completion of the Project. The Contractor shall maintain an updated construction progress plan in the Project field office at all times.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to these specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified. The entire Work must be carried on and completed to the satisfaction of the County. The Standard Specifications are amended as follows:

"Any reference to the Commissioner, Department, Department Laboratory, Engineer or Inspector should be redefined to be the County of Union".

15. GUARANTEE AGAINST DEFECTIVE WORK

Prior to final payment being made or before the release of the performance security required by Section 3 above, the Contractor and Surety shall execute and deliver to the County an original Maintenance Bond with an original signature and seal having a penal sum equal to:

- A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is \$50,000.00 or less;
- B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than \$50,000.00 but less than \$250,000.00; and,
- C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is \$250,000.00 or more.

The Bond and Surety shall be satisfactory to the Union County Counsel. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A:44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall also provide that the Contractor and the Surety guarantee to replace for the said period of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the County Engineer. If the Contractor refuses or neglects to do such Work in the time specified, the County Engineer may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the County a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the County. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to County Counsel.

16. TRAFFIC AND STREET MAINTENANCE

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be

established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the County Engineer.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the County Engineer.

Use of Traffic Control Officers shall be determined by the County in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the County shall have provided an allowance for same as set forth in the Bid Form.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, Union County employees to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the County Engineer.

17. CONTRACTOR'S EMPLOYEES

The Contractor must employ only suitable and competent labor in the Work, and must remove from the Work any incompetent, unsuitable, or disorderly person upon complaint from the County Engineer.

The parties to any contract resulting from this proposal do hereby agree that the provisions of N.J.S.A. 10:2-1 through 10:2-4 (discrimination in employment on public works contracts): 34:11-56.25 et seq. (payment of prevailing rate of wages determined pursuant to N.J.S.A. 34:11-56.30 by the Commissioner), and the Rules and Regulations

promulgated pursuant thereto, are hereby made a part of any contract and are binding upon them.

There will be no discrimination against any employee who is employed in the Work to be covered by any contract resulting from this bid because of age, race, creed, color, national origin, ancestry, marital status or sex.

Any person, firm, or corporation violating the provisions of this Section will be deemed and judged a disorderly person.

18. OWNERSHIP DISCLOSURES REQUIRED

Pursuant to P.L. 1977, N.J.S.A. 52:25-24.2, the Bidder shall submit with its Bid, or prior to receipt of bids, a statement setting forth the names and addresses of all stockholders in the corporation or partnership bidding who own ten percent (10%) or greater interest therein. (See forms attached)

19. NON-COLLUSION AFFIDAVIT

The Bidder shall submit with its bid either the attached completed "Non-Collusion Affidavit" or a statement of non-collusion with verbiage similar to same.

20. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES

The successful bidder shall be required to complete and submit an Initial Project Workforce Report, New Jersey Department of Treasury Form AA-201, upon notification of award. Failure to submit this completed form may result in the Contract being terminated.

The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Board.

21. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56.25 et seq, requires that the following additional conditions be strictly followed. The bidders represent that he is not listed or is not on record in the Office of the Commissioner or the Department of Labor and Industry as one who failed to pay prevailing wages in accordance with the provisions of this Act. The bidder agrees to the inclusion of a contract provision upon award which specifically requires said Contractor to fully comply with each and all of the requirements of the aforesaid Act as it relates to prevailing rates

of wages on public contracts as set forth in the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150 and P.L. 1974, Chapter 64.

A Copy of the Prevailing Wage Rates is attached for your reference. Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at the time the contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the contract, verification must be made with the Public Contracts section, to insure that the rates contained in this determination are still prevailing.

The Contractor agrees to abide and be bound by each and all of the said statutory provisions with respect to the payment of prevailing rates of wages, and acknowledges that the County reserves the right to terminate the Contractor's (or his subcontractors') right to proceed with the scope of Work, or such portion thereof that relates to the failure to pay prevailing rates of wages. In such event or under the terms of N.J.S.A. 34:11-56.27, the Contractor and his surety will be liable to the County of Union for any excess costs occasioned by such a violation.

The Contractor or subcontractors for this Project will post the Prevailing Wage Rates for each craft and classification involved as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the Work or at such place or places as are used by them to pay workmen their wages.

The County of Union requires a copy of payroll records from the Contractor and subcontractors. Payroll records shall be submitted with each voucher request for payment. Prevailing wage rates may be obtained from the New Jersey Labor, Division of Workplace Standards, Public Contracts Section, (609-292-2259).

In addition to compliance with the New Jersey Prevailing Wage Act, the County requires compliance with procedures established by Resolution No. 2014-0408 adopted by the Union County Board of Chosen Freeholders on May 8, 2014. The resolution is furnished in Section 51 of these General Specifications.

UNION LABOR IS PREFERRED ON ALL COUNTY WORK

The foregoing reference to specific laws will not be deemed to be a limitation of obligation of the Contractor to perform his obligations in full compliance with the provisions and requirements of all federal and state statues and local ordinances applicable to the Work to be done under the contract.

It is agreed and understood that any contracts and/or orders placed as a result of this proposal will be governed and construed and the rights and obligations of the

parties hereto will be determined in accordance with the laws of the State of New Jersey.

Upon completion of the Work, the Contractor will furnish a Certification of Compliance with the New Jersey Prevailing Wage Act. The certificate in a form acceptable to County Counsel is a condition of the final payment. (See form attached)

22. BRAND NAME OR EQUAL

When the Specifications, Forms, and other Contract Documents use “brand name or equivalent” or similar language, the listed brand name shall serve as a reference or point of comparison for the functional or operational characteristic desired for the goods or services being requested. Where a bidder attempts to submit an equivalent product for a brand name, it shall be the responsibility of the bidder to fully describe and document the product to be provided with the bid in order to establish the equivalence claim.

- A. If the Bidder proposes to offer substitute goods as an equal to those specified herein, the bidder shall so indicate with the Bid Proposal. For the purposes of this paragraph, a proposed item shall be considered equal to goods specified herein if:
 - 1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods specified herein, or performing with existing equipment; and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.

- B. To offer substitute goods as an equal to those specified herein, it is necessary that:
 - 1. The Bidder submits sufficient information with its bid to permit the County to determine that the goods are equivalent to the brand name goods specified herein, including, but not necessarily limited to the brand, catalog number and specifications/data sheets;
 - 2. The Bidder fully identifies and describes the variations of the goods from the brand name goods specified herein

on a separate sheet that is to be submitted with the bid proposal. Bidder's literature WILL NOT suffice in explaining exceptions to these specifications.

3. The Bidder certifies that the goods (i) are similar in substance to the brand name goods specified, and (ii) are suited to the same use as the item specified;
- C. The County shall be allowed a reasonable time within which to evaluate the Bidder's proposal to offer substitute goods as an equal to those specified herein. The County shall be the sole judge of acceptability. No "or-equal" goods shall be ordered, delivered, assembled, set-up or utilized until the County's evaluation is complete. The County's determination as to equivalency shall be deemed final and absolute.

In the event the Bidder does not provide sufficient supporting documentation with the bid, it will be presumed and required that the brand name goods and services as described in the specifications will be provided.

23. LINES AND GRADES

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

24. NUMBER OF WORKING DAYS

In accordance with N.J.S.A. 40A:11-17, the Work for the within Project shall be completed as specified on the Time of Completion Form. See form attached

There shall be taken a deduction from the contract price, or any wages paid by the County, to any inspector(s) necessarily employed by it on the Work, for any number of days in excess of the number allowed in the specifications.

25. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)

Pursuant to N.J.S.A. 2A:30A-1 et seq., payment to the Contractor, other than for Work done pursuant to a contact allowance, where applicable, shall be processed and paid as follows:

1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the

public meeting following 20 calendar days of the billing date as defined in the statute.

2. If the billing is approved, said bill shall be paid in the payment cycle following the meeting.

26. STOPPING WORK ON ACCOUNT OF BAD WEATHER

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to the Standard and Technical Specifications for specific items.

27. ACCESS FOR OTHER CONTRACTORS

The Contractor for this Work will give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

28. CONDEMNED MATERIALS AND WORK

Any materials and or part of the Work that may be condemned by the County Engineer will be removed and replaced by the Contractor or otherwise rectified, as may be directed by the County Engineer. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

29. STORAGE

In the event that it is necessary for the Contractor to stockpile or store materials or equipment on the job site, the Contractor shall inform the County of such necessity and the County may offer available space, if any, for storage of such materials or equipment. The Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by the Contractor will be at the Contractor's sole risk. The County will not be responsible for loss of or damage to said materials or equipment for any cause whatsoever. The Contractor shall take necessary measures to protect any such storage area and shall be responsible for any and all damages.

30. FINAL CLEAN UP

Upon completion of the Work, the Contractor will remove all equipment, unused materials, rubbish, etc., and will repair, or replace in an a manner acceptable to the

County Engineer, all areas that may have been damaged in the prosecution of the Work. Same shall be a condition precedent to final payment. Should said Contractor fail to comply with this requirement, the County shall undertake the clean-up with its own forces and charge the cost of same against the Contractor's contract balance.

31. SUB-LETTING OF WORK

Except for the List of Subcontractors, pursuant to N.J.S.A. 40A:11-16 (See form attached), no portion of the Work will be sublet by the Contractor to any other entities, except with the consent of the County Engineer. A complete list of subcontractors must be submitted to the County Engineer at the preconstruction meeting. If the job does not warrant a preconstruction meeting, the Contractor must submit such list prior to the start of Work.

All Subcontractors will be subject to N.J.S.A. 34:11-56 et al.

N.J.S.A. 40A:11-16 requires the bidder to list in the bid sheets the name or names of all subcontractors involved in the following types of Work: plumbing and gas fitting and all kindred work, steam and hot water heating, ventilating apparatus, steam power plants and kindred work, electrical work, ornamental iron work, and structural steel. In addition, the County may require the identification of specific additional subcontractors. If these trades are expected to be part of the contract, such subcontractors should be listed on the "Subcontractor Identification Statement List of Subcontractors" and Bidder shall certify same on the accompanying sheet titled "Subcontractor Identification Certification". (See forms attached) **Bidder's failure to submit these two forms shall be considered a material defect and result in rejection of Bidder's bid.** Substitutions of any listed subcontractors pursuant to N.J.S.A. 40A:11-16 will not be permitted except with the consent of the County Engineer.

32. SAFETY

The Contractor shall observe all rules and regulations of the Federal, State, and local health officials. Attention is directed to Federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the County Engineer, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for

products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Workforce Development and Commerce shall be observed.

33. QUALITY, SAFETY AND PERFORMANCE STANDARDS

All goods and services must be constructed and provided with the highest quality materials and workmanship. It is the intent of these specifications that only equipment equal to, or exceeding, the standard specified will be acceptable in order to protect the safety of the occupants of the Building.

34. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, will be carried out as shown on said plan.

35. PERMITS

The Contractor will obtain all necessary permits required by law and provide the County with necessary approvals prior to commencement of permitted Work.

36. CONTRACTOR TO PROVIDE PROOF OF PAYMENT

Upon the completion of the Work, the Contractor will furnish a General Release as proof that all claims for labor, materials, etc., have been settled by the Contractor. The General Release, in a form acceptable to County Counsel, is a condition of final payment.

37. CHANGE ORDERS

Change Order Procedures shall comply with N.J.A.C. 5:30-11.1 et seq., "Change Orders and Open End Contracts" and subsequent provisions of the New Jersey Administrative Code.

38. SUPPLEMENTAL WORK

In case any supplemental work is necessary, it will be performed by the Contractor at a price fixed by agreement between the Contractor and the County Engineer and approved by the County as specified in Section 36. The Contractor will do no supplemental work on any character, for which the Contractor will demand pay, except upon the written order of the County.

39. FORM OF CONTRACT

The Contract will be subject to all statutory provisions on the matter of Public Works, Public Contracts, The Law Against Discrimination, the Laws Governing Affirmative Action and Prevailing Rates of Wages under the laws of New Jersey.

The Agreements shall be executed by both parties not later than twenty-one (21) days from the date of the award by the County (Sundays and holidays excluded); however, such time frame may be extended by agreement of the parties.

40. PROGRESS PAYMENTS

Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

(Refer to the Owner/Contractor Agreement for Retainage and other conditions pertaining to payment and the application of N.J.S.A. 2A:30A-1 et seq.)

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

No payment shall be made without Contractor having provided all submittals set forth in this Section, and the approval of same by the County.

For contracts exceeding \$100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than \$100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his option, deposit with the County Counsel negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is

made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: **a)** Maintenance Bond (see Section 6 of these general specifications); **b)** Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 21 and 51); and **c)** General Release (see Section 36) in a form satisfactory to County Counsel; **d)** complete set of as-built plans in the latest AutoCad on compact disc; and **e)** a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc.

41. INSPECTION

The Work must be done in accordance with the plans and specifications, and will be inspected by the County Engineer. An inspector may be placed upon the Work at any time by the County Engineer to see that the plans, specifications, and instructions of the County Engineer are carried out. In connection herewith, bidders are referred to N.J.S.A. 40A:11-17.

42. DAMAGES

The Contractor will be held responsible for all damages that may occur to Work, or to persons or property by reason of the nature of the Work or from the elements, or by reason of inadequate protection of the Work, or from any carelessness or negligence on his part or on the part of his employees. The County will withhold payments on the Work until all suits or claims for damages sustained on, or by reason of, this Work will have been settled by the Contractor.

The construction and final completion of this Work will be guaranteed by the Contractor. Any damages that may be done to the Work or any part thereof, by the elements or otherwise, during its construction, will be made good by the Contractor.

43. LIQUIDATED DAMAGES

If the Project is not completed within the time specified herein or within such further time as may have been granted by the County Engineer, then the Contractor hereby agrees to pay to the County as liquidated damages, but not as a penalty, \$1,000.00 per day for each and every calendar day that he is in default on time to complete the Work. The said sum will be deducted from moneys due the Contractor and if the damages exceed this amount, then the Contractor or his Surety Company will pay the excess. These damages may be waived at the option of the County.

44. AFFIRMATIVE ACTION REQUIREMENTS

EXHIBIT B (Revised 4/10)

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

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, up-grading, 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 Division 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 Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, 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 Division, 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;

(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 non-discrimination 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 Division. 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 Division, 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 Division.

(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 Division and submitted promptly to the Division 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 Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, 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 Division 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 Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division 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 Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

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45. INVESTMENT ACTIVITIES IN IRAN

Pursuant to P.L. 2012, c.25, codified as N.J.S.A. 2:32-55 et seq., prohibits State and local public contracts with persons or entities engaging in certain investment activities in energy or finance sectors of Iran.

46. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (N.J.S.A. 34:11-56.48 et. seq.)

Pursuant to the above-referenced law, Bidders are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received. Bidders are notified of this requirement of their compliance. Such certificates or applications shall also be provided for each Subcontractor furnishing plumbing and gas fitting, steam and hot water heating and ventilating apparatus, and all kindred work, steam power plants and kindred work, electrical work, structural steel and ornamental iron work, and such other subcontractors as the specifications require relative to prior identification.

47. UTILITIES

Attention of the bidder is directed to the fact that 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 and described herein. The accuracy and completeness of this information is not guaranteed by the County Engineer and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

The Contractor will not proceed with his Work until he has made diligent inquiries of all public utility and municipal officials to determine the exact location of all underground structures and pipes within the site of the Project. The Contractor will notify utility owners not less than ten (10) days in advance of the time he proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call**. In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the owner and the County Engineer. The Contractor will, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities

and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general specifications. The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

48. MATERIAL COMPLIANCE AND SHOP DRAWINGS

The Contractor will require the manufacturer or supplier to furnish three (3) copies of Certification of Compliance with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the County Engineer; one copy will be retained by the Contractor. Certificates of Compliance will contain the following information:

1. Project to which material is consigned;
2. Name of the Contractor to which the material is supplied;
3. Kind of material supplied;
4. Quantity of material represented by the Certificate;
5. Means of identifying the consignment, such as label marking, seal number, etc.;
6. Date and method of shipment;
7. That the material is in conformity with the pertinent specifications stated in the certificate; and
8. Signature of a person having legal authority to bind the supplier.

The Contractor will submit to the County Engineer for his approval five (5) copies of complete and fully detailed shop or working drawings for those items listed in the beginning of the technical specifications.

Each drawing will identify the name of the job, location and Contractor.

All drawings will be approved in accordance with the standard specifications. Refer to the Technical Specifications for specific items.

All materials or articles used in the Work will be of American manufacture, insofar as same are available, in conformance with N.J.S.A. 40A:11-18.

49. PRECONSTRUCTION

In order to provide full coordination of this Project among the parties concerned, the County Engineer will arrange for a preconstruction meeting between the Contractor, County Engineer and other interested parties as soon as possible after the contract is executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the County through its designated representatives.

50. DISPUTES UNDER THE CONTRACT

A dispute arising under the Contract shall be submitted in writing to the County Engineer with all facts and supporting data. The County Engineer will review the dispute and issue his decision or request additional facts or documentation after which he will render his decision.

In the event the dispute is not then resolved, the matter shall, pursuant to law, be submitted to mediation before being submitted to a court of competent jurisdiction venued in Union County.

The County Engineer will notify the County Counsel when a matter is to be submitted to mediation. The County Counsel will communicate with the parties and inform them of the procedures to be followed in making such a submission.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

51. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE New Mandatory Requirement -Effective 1/18/2010

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue; or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at <http://www.state.nj.us/treasury/revenue/busregcert.htm>. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

Note: A NJ Certificate of Authority is not acceptable.

FAILURE to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of contract shall be cause to reject the bid.

FAILURE of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction Work as well as non-construction bids.

IN ADDITION:

N.J.S.A. 52:32-44 imposes the following requirements on Contractors and all subcontractors that knowingly provide goods or perform services for a Contractor fulfilling this contract:

- 1) the Contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the Contractor;
- 2) subcontractors through all tiers of a project must provide written notice to their subcontractors and suppliers to submit proof of business registration and subcontractors shall collect such proofs of business registration and maintain them on file;

- 3) prior to receipt of final payment from a contracting agency, the Contractor must submit to the contacting agency an accurate list of all subcontractors and suppliers or attest that none was used; and,
- 4) during the term of this contract, the Contractor and its affiliates shall collect and remit, and shall notify all subcontractors and their affiliates that they must collect and remit, to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act, (*N.J.S.A. 54:32B-1 et seq.*) on all sales of tangible personal property delivered into this State.

A Contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements are available by calling (609) 292-9292.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

52. BID PROTEST – LEGAL FEES AND COSTS

In the event a Bidder unsuccessfully challenges a Bid Submission by filing an action in a court of law concerning same, said Bidder shall be responsible for payment of reasonable legal costs and fees incurred by the County relating to said protest.

53. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

Bidder shall comply with the requirements of N.J.S.A. 40A:11-18 and use only manufactured and farm products of the United States, wherever available, for the Project.

54. NEW JERSEY PAY-TO-PLAY REQUIREMENTS

This Contract is required by law to be publicly advertised for bids. As such, lists of political contributions pursuant to N.J.S.A. 19:44A-1 et seq. are NOT REQUIRED to be provided with the bids.

55. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION

Pursuant to N.J.S.A. 40A:11-20 entitled Certificate of Bidder Showing Ability to Perform Contract, the County requires a Certification from all bidders submitting a bid showing that the Bidder owns, leases, or controls all necessary equipment required by the Project Plans and Specifications. All bidders shall provide this information at the time of the bid opening using the attached form entitled, "CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT".

If the Bidder is not the actual owner of the equipment, it shall state the source from which the equipment will be obtained and shall attach a certificate from the owner or person in control of the equipment demonstrating that the equipment owner has granted the Bidder control of the requisite equipment during such time as may be necessary for completion of the portion of the contract for which the equipment is necessary.

56. NEW JERSEY SALES AND USE TAX REQUIREMENTS,

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.),

regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein "affiliate" shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).

EDWARD T. OATMAN
COUNTY MANAGER

LAURA M. SCUTARI, QPA, MPA
DIRECTOR / DIVISION OF PURCHASING

BID DOCUMENT SUBMISSION CHECKLIST

ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED
BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.

DATE COMPLETED: _____

PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF THE SURETY AND BID BOND DOCUMENTS.

IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED / EXECUTED AND INCLUDED THE FOLLOWING FORMS:

_____ Bid Form Page (**Signed, Dated and Bid on all alternatives applicable to the Work**).

_____ Security in the form of:

- _____ Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or
- _____ Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00

_____ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00. If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract. The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

_____ STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (**Fill out 2 pages completely**)

_____ SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **BOTH** of the following documents:

- Subcontractor Identification Statement: List of Subcontractors (**only for certain types of work**)
- Subcontractor Identification Certification

_____ Acknowledgement of Addendum form: (**This form is to be used only when an addendum has been added to the specifications**).

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided must show that the Bidder was registered at the time of receipt of bids or the bid will be rejected.

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** of all named or listed subcontractors (List of Subcontractors) in a Construction bid should be included with the bid as the BRC(s) must be received by the County prior to the award of the contract. Each subcontractor's certificate provided must show that the subcontractor was registered at the time of the receipt of bids or the bid will be rejected.

- _____ Affirmative Action Requirement
- _____ Experience Statement
- _____ Certificate of Bidder showing ability to perform Contract
- _____ Non-Collusion Affidavit – Fill out completely and notarize
- _____ Certificates from New Jersey Department of Labor – Public Works Contractor Registration Act. **(Only for certain types of work)**
- _____ Federal Attachments **(If applicable)**
- _____ NJDPMC Certificate / Notice of Classification **(If applicable)**
- _____ Americans with Disabilities Act
- _____ Statement of Bidder's Qualifications
- _____ Contractor Performance Record
- _____ Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders
- _____ Prior Negative Experience Questionnaire
- _____ Contractor's Certification of Compliance – New Jersey Prevailing Wage Act
- _____ Uncompleted Contracts Affidavit **(For Bidder, if applicable) MUST ALSO PROVIDE DPMC FORM 701**
- _____ Certificate of Insurance Statement
- _____ Collection of Use Tax on Sales to Local Government Statement
- _____ Time of Completion
- _____ Disclosure of Investment Activities in Iran form

I HAVE TAKEN THE FOLLOWING ACTIONS:

- _____ Visited the site and attended the Pre-Bid Meeting **(Where applicable)**
- _____ Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.
- _____ Reviewed Bond Requirements
- _____ Provided Proof of Compliance with New Jersey Prevailing Wage Act
- _____ Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO DIVISION OF ENGINEERING AT 908-789-3675

BIDDING DOCUMENTS

The Bidding Documents consist of the following items:

- **ADDENDA, if issued**
- **CLARIFICATIONS, if issued**
- **INSTRUCTION TO BIDDERS**
- **BID FORM**
- **SPECIFICATIONS:** **As outlined in the Table of Contents and included in the Project Manual.**
- **DRAWINGS:** **As per List of Drawings, indicated on the Project Title Sheet.**

BID FORM

I/We have carefully examined the plans, specifications, and advertisement for bid for the

**INTERSECTION IMPROVEMENTS – WEST SEVENTH STREET (CR 601) CORRIDOR
CITY OF PLAINFIELD, COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT NO. HSIP 0601 (301)
BA#5-2018; UNION COUNTY ENGINEERING PROJECT #2014-044**

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

BASE BID ITEMS NUMBERS:

SEQ NO	ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANT	UNIT PRICE	AMOUNT
1	151006M	PERFORMANCE BOND AND PAYMENT BOND	LS	LS		
2	152004P	OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE	LS	LS		
3	152015P	POLLUTION LIABILITY INSURANCE	LS	LS		
4	153003P	PROGRESS SCHEDULE	LS	LS		
5	153005M	PROGRESS SCHEDULE UPDATE	U	5		
6	154003P	MOBILIZATION	LS	LS		
7	157004M	CONSTRUCTION LAYOUT	LS	LS		
8	158030M	INLET FILTER TYPE 2, 2' X 4'	U	16		
9	158063P	CONCRETE WASHOUT SYSTEM	LS	LS		
10	158069M	OIL-WATER SEPARATOR	U	1		
11	158072M	OIL ONLY EMERGENCY SPILL KIT, TYPE 1	U	1		
12	158084M	EROSION CONTROL SEDIMENT REMOVAL	CY	17		
13	159003M	BREAKAWAY BARRICADE	U	26		
14	159006M	DRUM	U	59		
15	159009M	TRAFFIC CONE	U	59		
16	159012M	CONSTRUCTION SIGNS	SF	770		
17	159029M	PORTABLE VARIABLE MESSAGE SIGN W/REMOTE COMMUNICATION	U	2		
18	159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	U	2		
19	159126M	TEMPORARY TRAFFIC STRIPES, 4"	LF	1,500		
20	159135M	TEMPORARY PAVEMENT MARKERS	U	72		
21	159138M	HMA PATCH	T	28		
22	159141M	TRAFFIC DIRECTOR, FLAGGER	HOURL	60		
23	160004M	FUEL PRICE ADJUSTMENT	LS	LS		
24	161003P	FINAL CLEANUP	LS	LS		
25	201003P	CLEARING SITE	LS	LS		
26	202006M	EXCAVATION, TEST PIT	CY	20		
27	202009P	EXCAVATION, UNCLASSIFIED	CY	157		
28	202021P	REMOVAL OF PAVEMENT	SY	537		

SEQ NO	ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANT	UNIT PRICE	AMOUNT
29	203021P	I-14 SOIL AGGREGATE	CY	68		
30	302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	SY	494		
31	401009P	HMA MILLING, 3" OR LESS	SY	2,651		
32	401027M	POLYMERIZED JOINT ADHESIVE	LF	1,100		
33	401030M	TACK COAT	GAL	300		
34	401061M	HOT MIX ASPHALT 12.5 M E SURFACE COURSE	T	359		
35	401084M	HOT MIX ASPHALT 19 M 64 INTERMEDIATE COURSE	T	53		
36	401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	T	202		
37	405015P	CONCRETE SURFACE COURSE, 12" THICK	SY	14		
38	601120P	12" REINFORCED CONCRETE PIPE	LF	8		
39	602012M	INLET, TYPE B	U	6		
40	602024M	INLET, TYPE B-1	U	2		
41	602096M	INLET CONVERTED TO MANHOLE	U	2		
42	602105M	SET INLET TYPE B, CASTING	U	10		
43	606012P	CONCRETE SIDEWALK, 4" THICK	SY	477		
44	606039P	HOT MIX ASPHALT DRIVEWAY, 6" THICK	SY	9		
45	606051P	CONCRETE DRIVEWAY, 6" THICK	SY	18		
46	606084P	DETECTABLE WARNING SURFACE	SY	24		
47	607021P	9" X 18" CONCRETE VERTICAL CURB	LF	985		
48	610003M	TRAFFIC STRIPES, 4"	LF	1,426		
49	610008M	TRAFFIC MARKINGS, SYMBOLS	SF	2,151		
50	610014M	TRAFFIC MARKING LINES, 8"	LF	1,219		
51	610036M	REMOVAL OF TRAFFIC STRIPES	LF	345		
52	612003P	REGULATORY AND WARNING SIGN	SF	337		
53	651255M	RESET WATER VALVE BOX	U	10		
54	652432M	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	U	11		
55	653084M	RESET GAS VALVE BOX	U	4		
56	701015P	2" RIGID METALLIC CONDUIT	LF	188		
57	701027P	2" RIGID NONMETALLIC CONDUIT	LF	60		
58	701033P	4" RIGID NONMETALLIC CONDUIT	LF	1,038		
59	701099M	17" X 30" JUNCTION BOX	U	13		
60	701123M	FOUNDATION, TYPE SFT	U	4		
61	701132M	FOUNDATION, TYPE P-MC	U	3		
62	701135M	FOUNDATION, TYPE SPF	U	9		
63	701192P	GROUND WIRE, NO. 8 AWG	LF	1,017		
64	701213P	SERVICE WIRE, NO. 6 AWG	LF	816		
65	702009M	CONTROLLER, 8 PHASE	U	3		
66	702018M	PEDESTRIAN SIGNAL STANDARD	U	9		
67	702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	LF	1,937		

SEQ NO	ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANT	UNIT PRICE	AMOUNT
68	702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	LF	3,899		
69	702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	LF	3,766		
70	702036M	TRAFFIC SIGNAL HEAD	U	36		
71	702039M	PEDESTRIAN SIGNAL HEAD	U	24		
72	702041M	PUSH BUTTON ASSEMBLIES, TYPE APS	U	12		
73	702045M	IMAGE DETECTOR	U	6		
74	702060M	CONTROLLER TURN-ON	U	3		
75	702062M	APS CONTROL UNIT	U	3		
76	702101M	UNINTERRUPTIBLE POWER SUPPLY	U	3		
77	804006P	TOPSOILING, 4" THICK	SY	302		
78	806003P	FERTILIZING AND SEEDING, TYPE A	SY	302		
79	809003M	STRAW MULCHING	SY	302		
80	N99991M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA15	U	1		
81	N99992M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA20	U	3		
82	N99993M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA25	U	4		
83	N99994M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA30	U	4		
84	N99995M	FOUNDATION, TYPE SFT-H	U	8		

TOTAL BASE BID ITEM NUMBERS 1 THROUGH 84 AMOUNT:

Written _____

Figures _____

Bidder's Name _____

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

_____ (hereinafter called Surety), organized and existing under the laws of the State of _____ duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of One Dollar (\$1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration, hereby certifies and agrees that if the contract for which the attached proposal is made be awarded to _____ (hereinafter called Contractor) for the performance of certain work and labor or the supplying of certain materials, or both, as more particularly set forth in said proposal and described for purposes of this instrument as a proposal for _____ to the COUNTY OF UNION and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance, labor and material payment and will provide the Contractor with a performance, labor and material payment bond in the full amount of the contract price.

NOTE:
Expiration date
Needed if Annual
Surety

NAME OF INSURANCE COMPANY
ADDRESS: _____

ORIGINAL SIGNATURE
ATTORNEY-IN-FACT FOR INSURANCE CO.

NOTE: PROOF OF AUTHORITY OF OFFICERS OF SURETY COMPANY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.

BIDDER SIGNATURE PAGE

THE BIDDER MUST READ THE FOLLOWING INSTRUCTIONS TO COMPLETE THIS PAGE:

1. If doing business under a **trade name, partnership or a sole proprietorship**, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the **owner**, or a **partner** and **witnessed** by a **notary public**.
2. If a **Corporation**, the bid must be signed by the **President** or **Vice President** and **witnessed** by a **Corporate Secretary** (corporate title must be exact) and **affix corporate seal**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
3. Other persons **authorized** by **corporate resolution** to execute agreements in its behalf may also sign the bid documents (pages). **Copy of a resolution must accompany the bid.**
4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.
5. You **cannot** witness your own signature.

NAME OF BIDDER

ADDRESS OF BIDDER

**ORIGINAL SIGNATURE
CORPORATE SECRETARY**

**PRINT NAME AND TITLE
CORPORATE SECRETARY**

TEL: _____
FAX: _____
E-Mail: _____

BY: _____
ORIGINAL SIGNATURE

Corporate Seal

PRINT OR TYPE NAME AND TITLE

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY SUPPLY THE INFORMATION REQUESTED ON THIS PAGE, YOUR BID MAY BE REJECTED.

Bidder's Name _____

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: _____

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

- 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)**

STATEMENT OF OWNERSHIP DISCLOSURE - CONTINUED

(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

STATEMENT OF OWNERSHIP DISCLOSURE - CONTINUED

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 noncorporate 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 **County of Union** 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 **County of Union** to notify the **County of Union** 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 **County of Union** to declare any contract(s) resulting from this certification void and unenforceable.

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

Bidder's Name _____

SUBCONTRACTOR IDENTIFICATION STATEMENT

LIST OF SUBCONTRACTORS

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications (including, but not limited, to satisfying any DPMC Classification requirements).

CHECK THIS BOX IF NONE OF THE ABOVE LISTED TRADES OR THOSE REQUIRED TO BE IDENTIFIED IN THE SPECIFICATIONS ARE TO BE USED TO PERFORM THE WORK

In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors:

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE BID PACKAGE.

(Continued on following page)

Bidder's Name _____

SUBCONTRACTOR IDENTIFICATION CERTIFICATION

Note the law does not permit the listing of alternate subcontractors. However, multiple subcontractors for the same trade are permitted to be named provided the bidder meets the following requirements:

- Bidder identifies each subcontractor named for that category;
- Bidder states the scope of work, goods and services (the portion of the work) to be performed by each subcontractor; and
- Bidder provides the price quote provided by each subcontractor.

The bidder is advised that any change of subcontractor(s) from ones listed herein is subject to the County's approval. Change of subcontractor(s) will be approved only if made for good cause and not as a result of an arbitrary purpose.

The undersigned Bidder certifies and declares that the subcontractors listed above shall be used as subcontractors to complete certain portions of the work in this project as set forth in N.J.S.A. 40A: 11-16.

Witness

Date _____

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

Bidder's Name: _____

ACKNOWLEDGMENT OF ADDENDUM

COUNTY OF UNION

(Name of Construction /Public Works Project)

(Project or Bid Number)

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick- up, etc.)	Date Received

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

New Mandatory Requirement - Effective 1/18/2010

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue; or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at www.nj.gov/treasury/revenue/taxreg.htm. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

Note: A NJ Certificate of Authority is not acceptable.

FAILURE to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of a contract shall be cause to reject the bids.

FAILURE of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction work as well as non-construction bids.

IN ADDITION:

The contractor shall provide written notice to all **subcontractors and suppliers** not specifically named on the bid of the responsibility to register and submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

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 business registration information 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.

Bidder's Name _____

BUSINESS REGISTRATION
Mandatory Requirement

P.L. 2009, c.315, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be:

- A copy of a Business Registration Certificate issued by the Department of Treasury, Division of Revenue; or
- A copy of the web printed version provided by the NJ Division of Revenue

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

DEPARTMENT OF TREASURY
DIVISION OF REVENUE
PO BOX 352
TRENTON, NJ 08646

TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT
TRADE NAME: CLIENT REGISTRATION
TAXPAYER IDENTIFICATION: 070-007-382/000
SEQUENCE NUMBER: 0107510
ADDRESS: 847 ROEBLING AVE
TRENTON NJ 08611
ISSUANCE DATE: 07/14/04
EFFECTIVE DATE: 01/01/01

Accepted for
Signature: [Handwritten Signature]

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

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:
20041014112623533

ATTACH BRC HERE

Bidder's Name _____

AFFIRMATIVE ACTION REQUIREMENT

REQUIRED AFFIRMATIVE ACTION EVIDENCE

General Requirements of P.L. 1975, c. 127: You are hereby put on notice that:

CONSTRUCTION CONTRACTS: The successful contractor must submit within three (3) days of the notice of intent to award or the signing of the contract the initial project manning report (A.A.201). This report should be submitted at the time the signed contract is returned to the County of Union. Attention: *Affirmative Action Officer*.

If the successful contract does not submit the initial project manning report (A.A.201) within the three (3) days from the time the signed contract is returned to the County of Union, the County of Union WILL declare the contractor non-responsive and award the contract to the next lowest responsible bidder.

NAME OF BIDDER

ORIGINAL SIGNATURE

PRINT OR TYPE NAME AND TITLE

DATE THIS FORM IS COMPLETED

EXPERIENCE STATEMENT

I hereby certify that my company has performed the following private or public work, which is relevant to this bid. I further certify that my company has never defaulted under any contract. Should you not sign this form due to prior defaults, please provide details on an attached sheet.

Witness

Date

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET.

Bidder's Name _____

NON-COLLUSION AFFIDAVIT

(N.J.S.A. 52:34-15)

STATE OF _____)
)
COUNTY OF _____) **SS:** _____

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 _____ of the firm of _____, the bidder making the proposal for the above named project, and that I executed the said proposal for the above named project, and that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participation in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this Affidavit are true and correct, and made with full knowledge that the COUNTY OF UNION, NEW JERSEY relies upon the truth of the statements contained in said proposal and in the statements contained in the affidavit in awarding the contract for the said project.

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 or bonafide established commercial or selling agencies maintained by _____ (N.J.S.A. 52:34-15).

NAME OF BIDDER

ORIGINAL SIGNATURE ONLY

NOTE: The person who signed the bidder signature page for the bidder should sign this form also.

Subscribed and sworn before me
this ____ day of _____, 200____.

Notary Public of the State of _____
My commission expires: _____

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON-COLLUSION, YOUR BID MAY BE REJECTED.

Contractor Registration Advisement
For Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), became effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in Section 2 of P.L. 1963, c.150 (C:34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300.00 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the, Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information can be obtained by contacting:

Contractor Registration Unit
New Jersey Department of Labor
Division of Wage & Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
Telephone: 609-292-9464
Fax: 609-633-8591
E-mail: contreg@dol.state.nj.us

Bidder's Name _____

AMERICANS WITH DISABILITIES ACT
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C.S12.101 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 thereto, 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 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 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 this Agreement or otherwise at law.

Name _____ (Please print or type)

Signature _____ Date _____

Bidder's Name _____

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1. _____
(Name of Bidder)

2. _____
(Permanent Main Office Address)

3. _____
(When Organized)

4. _____
(If a Corporation, where incorporated)

5. Number of years your organization has been engaged in construction or contracting business under present firm or trade name? _____

6. How many years of experience in construction work has your organization had (a) as a general contractor? And/or (b) As a subcontractor? _____

7. Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate dates of completion) _____

8. General character of work performed by you. _____

9. Have you ever failed to complete any work awarded to you? _____

10. Have you ever defaulted on a Contract? _____ If so, complete details, including where and why?

Bidder's Name _____

STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

11. Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name? If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete. _____

12. List your major equipment available for this Contract.

13. Experience in the construction work similar in importance to this Project.

14. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? _____. If so, list prior classification.

15. Background and experience of the principal members of your organization, including the officers.

Individual's Name	Present Position or Office	Yrs. of Construction Experience	Magnitude & Type of Work	In What Capacity

16. Bank Reference. (Name, Address, Phone, Representative) _____
17. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the proper agency? _____
18. The undersigned, hereby authorizes and requests any person, firm or corporation to furnish any information requested by the proper agency in verification of the responses comprising this Statement of Bidder's Qualifications.
17. Bidder's telephone number, fax number and e-mail address (if applicable).
- Phone _____
- Fax _____
- E-mail _____
- Mobile _____

Dated at _____ this _____ day of __, 20__.

BIDDER (Signature)

BIDDER (Print Name)

Subscribed and sworn to before me
this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20__.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH
YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD

List all contracts completed by you below or provide separate form.

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub-Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

* If answer is YES, provide explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles, liens, claims and notices filed against contracts listed in preceding item "Performance Record" on an attached sheet.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD
CERTIFICATION

The information above is true and complete to the best of my knowledge and belief.

(Name of Organization)

(Signature)

(Title)

Subscribed and sworn to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/
Specify Other State

My Commission Expires _____, 20__.

PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE

(N.J.S.A. 40A:11-4)

1. Within the past ten (10) years, have you been found, through either court adjudication, arbitration, mediation, or other contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or perform goods or services; or failed to complete a contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

2. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to utilize the services of another contractor to provide the goods or perform the services or to correct or complete the contract?

_____ yes _____ no If yes, please provide full, detailed explanation.

3. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to look to your surety for completion of the contract or tender of the costs of completion?

_____ yes _____ no If yes, please provide full, detailed explanation.

4. Within the past ten (10) years, have you been debarred or suspended from contracting with any of the agencies or department of the executive branch of the State of New Jersey at the time of the contract award, where the action was based on failure to perform a contract for goods or services with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

Bidder's Name _____

PRIOR NEGATIVE EXPERIENCE CERTIFICATION

I hereby certify that the above statements are true and accurate as of this _____
day of _____, 20__.

Name of Contractor

By _____
(Signature of Authorized Representative)

Subscribed and sworn to before me
this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/
Specify Other State

My Commission Expires _____, 20__.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

CONTRACTOR'S CERTIFICATION OF COMPLIANCE - NEW JERSEY PREVAILING WAGE ACT

TO: County of Union
Division of Engineering
2325 South Avenue
Scotch Plains, New Jersey 07076

CONTRACT:

PROJECT: _____

In accordance with the requirements of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al *, the undersigned contractor on the public work being performed for:

COUNTY OF UNION

hereby certifies that he/she has complied with the contract requirements regarding the payment of the minimum prevailing wages established under "The New Jersey Prevailing Wage Act" N.J.S.A. 34:11-56 et al.

CONTRACTOR: _____
ADDRESS: _____

BY: _____
ORIGINAL SIGNATURE ONLY

STATE OF NEW JERSEY
COUNTY OF _____

Being by me duly sworn according to law, on his oath deposes and says that _____ is _____ of _____ the above named contractor, and that the facts set forth in the above statement are true.

Subscribed and sworn before me
this ____ day of _____, 200__.

Notary Public: _____
My Commission Expires: _____

* N.J.S.A. 34:11-56.33 requires the contractor and subcontractor to file written statements with the public body in form satisfactory to the Commissioner certifying to the amounts then due and owing from such contractor and subcontractor filing such statement to any and all workmen for wages due on account of the public work, setting forth therein the names of the persons whose wages are unpaid and the amount due to each respectively. Union County will withhold the amount so deducted for the benefit of the workmen whose wages are unpaid as shown by the verified statement filed, and will pay directly to any workman the amount shown by such statement to be due to him for such wages. Such payment shall thereby discharge the obligation of the contractor to the person receiving such payment to the extent of the amount thereof.

Bidder's Name _____

UNCOMPLETED CONTRACTS AFFIDAVIT
(To be Submitted with DPMC Form 701)

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS

ENTITY	PROJECT TITLE	ORIGINAL CONTRACT AMOUNT	UNCOMPLETED AMOUNT AS OF BID OPENING DATE	NAME AND TELEPHONE NUMBER OF PARTY TO BE CONTACTED FROM ENTITY FOR VERIFICATION

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$ _____

Sworn and Subscribed to Before me

This _____ day of _____, 20____

Notary Public

BIDDER:

(Signature)

(Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

CERTIFICATE OF INSURANCE STATEMENT

The Bidder fully understands the County of Union insurance requirements as stated in the Instructions to Bidders as well as the Owner/Contractor Agreement and agrees to provide all insurance required by these documents prior to the issuance of the Notice to Proceed.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT

The Bidder fully understands the requirements of the use tax on sales to local governments as stated in the General Conditions to the Contract for Construction and the Instructions to Bidders, and agrees at all times to comply with the "Contractor Use Tax Collection Legislation", as defined therein, and the terms relating thereto contained in the Contract Documents.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

Bidder's Name _____

TIME OF COMPLETION

The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within **One-Hundred and Eighty Days (180) calendar days** from the date of the notice to proceed.

I, _____ of _____
NAME (Print or type) COMPANY

Agree to complete work in the time frame specified _____
SIGNATURE

SITE VISIT – GENERAL CONTRACTOR

I, _____ of _____
NAME (Print or type) COMPANY

Visited the site of the work on _____
SIGNATURE

Bidder's Name _____

**COUNTY OF UNION NEW JERSEY
Division of Purchasing
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM**

Solicitation Number: _____

Vendor/Bidder: _____

PART 1

CERTIFICATION

VENDOR/BIDDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES
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 nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of the Treasury's Chapter 25 list as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found on the Department's website at <http://www.state.nj.us/treasury/pdf/Chapter25List.pdf>. Vendors/Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a Vendor's/Bidder's proposal non-responsive.** If the Director of the Division of Purchase and Property finds a person or entity to be in violation of the 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.

CHECK THE APPROPRIATE BOX

A. I certify, pursuant to Public Law 2012, c.25, that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the N.J. Department of Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). Disregard Part 2 and complete and sign the Certification below.

OR

B. I am unable to certify as above because the Vendor/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 information 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 ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

If you checked Box "B" above, provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, engaged in investment activities in Iran by completing the information below.

ENTITY NAME: _____
RELATIONSHIP TO VENDOR/BIDDER: _____
DESCRIPTION OF ACTIVITIES: _____
DURATION OF ENGAGEMENT: _____
ANTICIPATED CESSATION DATE: _____
VENDOR/BIDDER CONTACT NAME: _____
VENDOR/BIDDER CONTACT PHONE#: _____

Attach Additional Sheets If Necessary

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the County of Union, New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the County of Union to notify the County of Union 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. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.

Signature

Date

Print Name and Title

Revised 10/19/17

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2007 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Special Provisions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

Such Standard Specifications are made a part of these Specifications by this reference and will not be repeated herein. It is the responsibility of prospective bidders to familiarize themselves with these Standard Specifications, copies of which may be examined at the office of the Engineer and may be obtained, upon payment of the cost thereof, from:

Department of Transportation
State of New Jersey
1035 Parkway Avenue
Trenton, New Jersey 08625

The Notice to Bidders (Advertisement), Proposal, General Conditions, Instructions to Bidders, Special Provisions, Project Plans and/or Technical Specifications shall govern and prevail in the case of conflict between them and the Standard Specifications.

In these Standard Specifications the words "COMMISSIONER" or "DEPARTMENT" shall refer to and mean the person, persons, body, board or agent legally empowered to enter into contracts and otherwise legally act for the Owner. The words "RESIDENT ENGINEER (RE)", "ENGINEER" or "STATE" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "INSPECTOR" shall mean the authorized project representative of the Engineer with the authority as hereinbefore defined. The word "LABORATORY" shall mean and refer to the Engineer who may, at his discretion, and with the consent of the Owner, employ qualified technical personnel or testing laboratories to assist him in fulfilling the duties normally assigned to the "LABORATORY" in these Standard Specifications.

When reference is made herein to the bulletins, standards, specifications, publications or requirements of the Manual on Uniform Traffic Control Devices (MUTCD), Institute of Traffic Engineers (ITE), Federal Highway Administration (FHWA), American Association of State Highway Officials (AASHTO), the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE) or similar national or regional societies, associations, institutes or organizations; the requirements of the bulletins, specifications, publications or requirements referred to shall be considered a part of these Specifications by such reference and shall not be repeated herein but shall have the same import and be as binding as if herein set forth in full.

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
50.18	31.85	82.03	83.03	85.38

CLASSIFICATIONS:

A-Frame

Backhoe (combination)

Boom Attachment on loaders (Except pipehook)

Boring & Drilling Machine

Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer

Bulldozer, finish grade

Cableway

Carryall

Concrete Pump

Concrete Pumping System (Pumpcrete & similar types)

Conveyor, 125 feet or longer

Drill Doctor (Duties include dust collector and maintenance)

Front End Loader (2 cu. yds. but less than 5 cu. yds.)

Grader, finish

Groove Cutting Machine (ride-on type)

Heater Planer

Hoist: Outside Material Tower Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type) * receives an additional \$1.00 per hour on 100 ft. up to 199 ft. total height, and an additional \$2.00 per hour on 200 ft. and over total height.

Hydraulic Crane (10 tons & under)

Hydraulic Dredge

Hydro-Axe

Hydro-Blaster

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
50.18	31.85	82.03	83.03	85.38

CLASSIFICATIONS:

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

Pan

Paver, concrete

Plate & Frame Filter Press

Pumpcrete (unit type)

Pumpcrete, Squeezecrete, or Concrete Pumping machine (regardless of size)

Scraper

Side Boom

Straddle Carrier (Ross and similar types)

Whiphammer

Winch Truck (hoisting)

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
48.27	31.85	80.12	81.12	83.47

CLASSIFICATIONS:

- Asphalt Curbing Machine
- Asphalt Plant Engineer
- Asphalt Spreader
- Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)
- Autograde Curecrete Machine (CMI & similar types)
- Autograde Tube Finisher & Texturing Machine (CMI & similar types)
- Bar Bending Machines (Power)
- Batcher, Batching Plant, & Crusher [On Site]
- Belt Conveyor System
- Boom-Type Skimmer Machine
- Bridge Deck Finisher
- Bulldozer (all sizes)
- Captain (Power Boats)
- Car Dumper (railroad)
- Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)
- Compressor (2 or 3 battery)
- Concrete Breaking Machine
- Concrete Cleaning/Decontamination Machine
- Concrete Finishing Machine
- Concrete Saw or Cutter (ride-on type)
- Concrete Spreader (Hetzl, Rexomatic & similar types)
- Concrete Vibrator

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
48.27	31.85	80.12	81.12	83.47

CLASSIFICATIONS:

- Conveyors - under 125 feet
- Crane Signalman
- Crushing Machine
- Directional Boring Machine
- Ditching Machine - Small (Ditchwitch, Vermeer or similar types)
- Dope Pot - Mechanical (with or without pump)
- Dumpster
- Elevator
- Fireman
- Fork Lift (Economobile, Lull & similar types)
- Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)
- Generator (2 or 3 battery)
- Giraffe Grinder
- Goldhofer/Hydraulic Jacking Trailer
- Grader & Motor Patrols
- Grout Pump
- Gunnite Machine (Excluding nozzle)
- Hammer - Vibratory (in conjunction with generator)
- Heavy Equipment Robotics - Operator/Technician
- Hoist (roof, tigger, aerial platform hoist, house car)
- Hopper
- Hopper Doors (power operated)
- Ladder (motorized)

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
48.27	31.85	80.12	81.12	83.47

CLASSIFICATIONS:

Laddervator

Locomotive (Dinky-type)

Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled
ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Rod Bending Machines

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

OPERATING ENGINEERS Rates Expiration Date : 03/31/2020

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
48.27	31.85	80.12	81.12	83.47

CLASSIFICATIONS:

Tug Captains

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System -
Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
44.93	31.85	76.78	77.78	80.13

CLASSIFICATIONS:

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

Tire Repair & Maintenance

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
42.35	31.85	74.20	75.20	77.55

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date : 03/31/2020

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
52.51	31.85	84.36	85.36	87.71

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
51.77	31.85	83.62	84.62	86.97

CLASSIFICATIONS:

- Autograde Pavement Profiler (CMI & similar types)
- Autograde Pavement Profiler - Recycle Type (CMI & similar types)
- Autograde Placer/Trimmer/Spreader Combination (CMI & similar types)
- Autograde Slipform Paver (CMI & similar types)
- Backhoe (Excavator)
- Central Power Plant
- Concrete Paving Machine
- Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft.
- Draglines
- Drill, Bauer, AMI and similar types
- Drillmaster, Quarrymaster
- Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill
- Elevator Grader
- Field Engineer-Chief of Party
- Front End Loader (5 cu. yards or larger)
- Gradall
- Grader, Rago
- Helicopter Co-Pilot
- Helicopter Communications Engineer
- Juntann Pile Driver
- Locomotive (large)
- Mucking Machine

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
51.77	31.85	83.62	84.62	86.97

CLASSIFICATIONS:

Pavement & Concrete Breaker (Superhammer & Hoe Ram)

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine

Vacuum Truck

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
46.64	31.85	78.49	79.49	81.84

CLASSIFICATIONS:

- Chipper
- Compressor (single)
- Concrete Spreader (small type)
- Conveyor Loader (Except elevator graders)
- Engines, Large Diesel (1620 HP) & Staging Pump
- Farm Tractor
- Fertilizing Equipment (operation & maintenance)
- Fine Grade Machine (small type)
- Form Line Grader (small type)
- Front End Loader (under 1 cubic yard)
- Generator (single)
- Grease, Gas, Fuel, & Oil Supply Trucks
- Heaters (Nelson or other type)
- Lights - portable generating light plant
- Mixer, Concrete (small)
- Mulching Equipment (operation & maintenance)
- Power Broom or Sweeper
- Pump (diesel engine & hydraulic - regardless of power)
- Pump (larger than 2 inch suction, including submersible pumps)
- Road Finishing Machine (small type)
- Roller - grade, fill, or stone base
- Seeding Equipment (operation & maintenance)
- Sprinkler & Water Pump Trucks

OPERATING ENGINEERS Rates Expiration Date : 03/31/2020

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
46.64	31.85	78.49	79.49	81.84

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including propane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and maintenance)

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
53.59	31.85	85.44	86.44	88.79

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
58.27	31.85	90.12	91.12	93.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
57.27	31.85	89.12	90.12	92.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

OPERATING ENGINEERS **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
53.77	31.85	85.62	86.62	88.97

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
56.27	31.85	88.12	89.12	91.47

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
52.77	31.85	84.62	85.62	87.97

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 03/31/2020**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
55.40	31.85	87.25	88.25	90.60

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
51.34	31.85	83.19	84.19	86.54

CLASSIFICATIONS:

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
48.68	31.85	80.53	81.53	83.88

CLASSIFICATIONS:

- Aerial Platform Used On Hoists
- Apprentice Engineer/Oiler with Compressor or Welding Machine
- Captain (Power Boats)
- Compressor (2 or 3 in battery)
- Concrete Cleaning/Decontamination Machine Operator
- Conveyor or Tugger Hoist
- Directional Boring Machine
- Elevator or House Car
- Fireman
- Forklift
- Generator (2 or 3)
- Heavy Equipment Robotics, Operator/Technician
- Maintenance Utility Man
- Master Environmental Maintenance Technician
- Tug Master (Power Boats)
- Ultra High Pressure Waterjet Cutting Tool System Operator/Maintenance Technician
- Vacuum Blasting Machine Operator/Maintenance Technician
- Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
47.15	31.85	79.00	80.00	82.35

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
45.39	31.85	77.24	78.24	80.59

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
52.96	31.85	84.81	85.81	88.16

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
42.35	31.85	74.20	75.20	77.55

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 03/31/2020**

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
52.10	31.85	83.95	84.95	87.30

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
60.29	31.85	92.14	93.14	95.49

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) 100 tons and over and Tower Cranes.

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
58.63	31.85	90.48	91.48	93.83

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), 100 tons and over and Tower Crane.

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
55.79	31.85	87.64	88.64	90.99

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
54.13	31.85	85.98	86.98	89.33

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date : 03/31/2020

Effective Dates:

07/01/2018			01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
55.79	31.85	87.64	88.64	90.99

CLASSIFICATIONS:

Helicopter Pilot & Engineer

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST **Rates Expiration Date : 03/31/2020**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
51.77	31.85	83.62	84.62	86.97

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
44.93	31.85	76.78	77.78	80.13

CLASSIFICATIONS:

Driller's Helper

FREE AIR TUNNEL JOBS Rates Expiration Date : 02/28/2021

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.75	30.28	73.03	75.78	78.28

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.45	30.28	72.73	75.48	77.98

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

FREE AIR TUNNEL JOBS **Rates Expiration Date : 02/28/2021**

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
41.95	30.28	72.23	74.98	77.48

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
44.45	30.28	74.73	77.48	79.98

CLASSIFICATIONS:

Blaster

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
41.40	30.28	71.68	74.43	76.93

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
41.05	30.28	71.33	74.08	76.58

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.90	30.28	71.18	73.93	76.43

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

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FREE AIR TUNNEL JOBS Rates Expiration Date : 02/28/2021

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.50	30.28	70.78	73.53	76.03

CLASSIFICATIONS:

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

DRILL FOR GROUND WATER SUPPLY **Rates Expiration Date : 03/31/2020**

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
50.52	31.85	82.37	83.37	85.72

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2018		01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total
43.68	31.85	75.53	76.53	78.88

CLASSIFICATIONS:

Driller's Helper

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date : 09/30/2018**

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.

Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.

OVERTIME:

Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

10/01/2017

Rate	Fringe	Total
38.18	14.33	52.51

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2017

Rate	Fringe	Total
33.03	13.92	46.95

CLASSIFICATIONS:

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

Effective Dates:

10/01/2017

Rate	Fringe	Total
31.09	13.77	44.86

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date : 09/30/2018**

Effective Dates:

10/01/2017

Rate	Fringe	Total
30.24	13.40	43.64

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2017

Rate	Fringe	Total
29.26	13.32	42.58

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2017

Rate	Fringe	Total
24.30	12.62	36.92

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

MICROSURFACING/SLURRY SEAL Rates Expiration Date : 02/28/2018

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates.

SHIFT DIFFERENTIALS:

Any shift starting at 3:30 PM or later shall receive an additional \$0.35/hr

OVERTIME:

Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

Effective Dates:

03/01/2017

Rate	Fringe	Total
36.50	21.27	57.77

CLASSIFICATIONS:

Foreman

Effective Dates:

03/01/2017

Rate	Fringe	Total
33.80	21.27	55.07

CLASSIFICATIONS:

Box man

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Squeegee man

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Effective Dates:

03/01/2017

Rate	Fringe	Total
30.30	21.27	51.57

CLASSIFICATIONS:

Cleaner, Taper

ASPHALT LABORERS - SOUTH Rates Expiration Date : 02/28/2021

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.25	30.28	72.53	75.28	77.78

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.80	30.28	71.08	73.83	76.33

CLASSIFICATIONS:

Head Raker

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.65	30.28	70.93	73.68	76.18

CLASSIFICATIONS:

Raker, Screedman, Luteman

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Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.40	30.28	70.68	73.43	75.93

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen,
Painters, Shovelers, Roller Boys

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.50	30.28	70.78	73.53	76.03

CLASSIFICATIONS:

Milling Controller

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.70	30.28	70.98	73.73	76.23

CLASSIFICATIONS:

Traffic Control Coordinator

TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH **Rates Expiration Date : 10/16/2018**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

SHIFT DIFFERENTIAL:

Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional \$1.00 per hour.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 10% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:

- 1st year on the job - 70% of Helper wage rate
- 2nd year on the job - 80% of Helper wage rate
- 3rd year on the job - 90% of Helper wage rate
- All helpers receive full fringe benefit rate.

Effective Dates:

10/17/2017

Rate	Fringe	Total
31.62	25.55	57.17

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

10/17/2017

Rate	Fringe	Total
39.69	25.55	65.24

CLASSIFICATIONS:

Driller

Effective Dates:

10/17/2017

Rate	Fringe	Total
45.73	25.55	71.28

CLASSIFICATIONS:

Foreman

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date : 02/28/2021**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.00	30.28	70.28	73.03	75.53

CLASSIFICATIONS:

"D" Rate:

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.70	30.28	70.98	73.73	76.23

CLASSIFICATIONS:

"C" Rate:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker or lute man

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date : 02/28/2021**

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.95	30.28	71.23	73.98	76.48

CLASSIFICATIONS:

"B" Rate:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
44.50	30.28	74.78	77.53	80.03

CLASSIFICATIONS:

"A" Rate:

blaster

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.25	30.28	72.53	75.28	77.78

CLASSIFICATIONS:

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
43.25	30.28	73.53	76.28	78.78

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date : 02/28/2021**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.00	30.28	70.28	73.03	75.53

CLASSIFICATIONS:

basic, landscape, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers; tree cutter, timberman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.00	30.28	70.28	73.03	75.53

CLASSIFICATIONS:

wagon drill or drill master helper; powder carrier; magazine tender; signal man

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date : 02/28/2021**

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.70	30.28	70.98	73.73	76.23

CLASSIFICATIONS:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.70	30.28	70.98	73.73	76.23

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
44.50	30.28	74.78	77.53	80.03

CLASSIFICATIONS:

blaster

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.25	30.28	72.53	75.28	77.78

CLASSIFICATIONS:

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
43.25	30.28	73.53	76.28	78.78

CLASSIFICATIONS:

general foreman

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date : 02/28/2021**

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.95	30.28	71.23	73.98	76.48

CLASSIFICATIONS:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date : 06/03/2019

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

PER DIEM PAYMENT:

In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: \$42.50; Pipeline Journeyman Welder: \$102.50; and Pipeline Helper: \$42.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

NOTES:

- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive \$1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid \$1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and/or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid \$2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive \$3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
 - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
 - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate \$1.00 per hour above the regular helper rate for the days involved.
- Welders working on "hot work" shall be paid \$2.00 per hour above the regular rate for each day engaged in such work. "Hot work" is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

06/08/2018

Rate	Fringe	Total
54.61	29.59	84.20

CLASSIFICATIONS:

Pipeline Journeyman Welder

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PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date : 06/03/2019

Effective Dates:

06/08/2018

Rate	Fringe	Total
54.61	29.59	84.20

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

06/08/2018

Rate	Fringe	Total
33.55	20.42	53.97

CLASSIFICATIONS:

Pipeline Helper

PIPELINE - GAS DISTRIBUTION **Rates Expiration Date : 10/31/2020**

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

SHIFT DIFFERENTIALS:

An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

	11/05/2017		11/01/2018	11/01/2019
Rate	Fringe	Total	Total	Total
58.83	22.55	81.38	82.96	84.63

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

	11/05/2017		11/01/2018	11/01/2019
Rate	Fringe	Total	Total	Total
58.83	22.55	81.38	82.96	84.63

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

	11/05/2017		11/01/2018	11/01/2019
Rate	Fringe	Total	Total	Total
37.68	16.74	54.42	56.00	57.67

CLASSIFICATIONS:

Pipeline Helper

ASPHALT LABORERS- NORTH **Rates Expiration Date : 02/28/2021**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
42.25	30.28	72.53	75.28	77.78

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.95	30.28	71.23	73.98	76.48

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.70	30.28	70.98	73.73	76.23

CLASSIFICATIONS:

Asphalt Raker or Lute Man

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS- NORTH Rates Expiration Date : 02/28/2021

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
40.00	30.28	70.28	73.03	75.53

CLASSIFICATIONS:

Asphalt Laborer

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date : 11/30/2021**

Electrician-Utility Work (North)

(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).

These rates apply to work contracted for by the following utility companies:

Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.

These rates do not apply to work on substations or switching stations.

For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.

3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

Four 10-hour days may worked, at straight time, between 7:00 AM and 6:30 PM, Monday through Thursday.

RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
53.70	35.97	89.67	92.06	94.45	96.84

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
50.66	33.94	84.60	86.85	89.11	91.36

CLASSIFICATIONS:

Journeyman Lineman

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date : 11/30/2021

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
50.66	33.94	84.60	86.85	89.11	91.36

CLASSIFICATIONS:

Special License Operator

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
50.16	33.60	83.76	85.98	88.22	90.44

CLASSIFICATIONS:

Transit Man

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
48.64	32.58	81.22	83.38	85.53	87.70

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
42.56	28.51	71.07	72.96	74.84	76.73

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
63.33	42.43	105.76	108.56	111.38	114.19

CLASSIFICATIONS:

General Foreman

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
58.26	39.03	97.29	99.88	102.47	105.05

CLASSIFICATIONS:

Assistant General Foreman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date : 11/30/2021**

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
56.74	38.01	94.75	97.27	99.79	102.32

CLASSIFICATIONS:

Line Foreman

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
41.04	27.49	68.53	70.35	72.17	73.99

CLASSIFICATIONS:

Street Light Mechanical Leader

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
39.01	26.13	65.14	66.88	68.62	70.34

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
39.01	26.13	65.14	66.88	68.62	70.34

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
38.51	25.80	64.31	66.01	67.71	69.43

CLASSIFICATIONS:

Street Light Mechanic

Effective Dates:

	12/05/2017		12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
38.51	25.80	64.31	66.01	67.71	69.43

CLASSIFICATIONS:

Line Equipment Mechanic

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date : 11/30/2021**

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
32.93	22.06	54.99	56.46	57.91	59.38

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
30.40	20.36	50.76	52.12	53.47	54.80

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

12/05/2017			12/02/2018	12/01/2019	11/29/2020
Rate	Fringe	Total	Total	Total	Total
50.16	33.60	83.76	85.98	88.22	90.44

CLASSIFICATIONS:

Line Equipment Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date : 12/04/2021**

Electrician-Utility Work (South)

(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).

These rates apply to work contracted for by the following utility company:

Atlantic City Electric.

These rates do not apply to work on substations or switching stations.

For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

When two (2) or three (3) shifts are worked the following shall apply:

1st shift (between the hours of 8:00 AM and 4:30 PM)

2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

RECOGNIZED HOLIDAYS:

New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

WORKING RULES:

There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.

Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.

On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices. Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

Effective Dates:

12/03/2017

Rate	Fringe	Total
60.25	46.05	106.30

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date : 12/04/2021**

Effective Dates:

12/03/2017

Rate	Fringe	Total
53.66	42.21	95.87

CLASSIFICATIONS:

Foreman

Effective Dates:

12/03/2017

Rate	Fringe	Total
50.84	40.58	91.42

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/03/2017

Rate	Fringe	Total
47.07	38.39	85.46

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/03/2017

Rate	Fringe	Total
47.07	38.39	85.46

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/03/2017

Rate	Fringe	Total
47.07	38.39	85.46

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/03/2017

Rate	Fringe	Total
47.07	38.39	85.46

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date : 12/04/2021

Effective Dates:

12/03/2017

Rate	Fringe	Total
47.07	38.39	85.46

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/03/2017

Rate	Fringe	Total
37.66	32.92	70.58

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/03/2017

Rate	Fringe	Total
32.95	30.18	63.13

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/03/2017

Rate	Fringe	Total
30.60	28.82	59.42

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/03/2017

Rate	Fringe	Total
28.24	27.44	55.68

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/03/2017

Rate	Fringe	Total
25.89	26.08	51.97

CLASSIFICATIONS:

Groundman 1st Year

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date : 12/04/2021

Effective Dates:

12/03/2017

Rate	Fringe	Total
20.71	23.07	43.78

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date : 02/28/2021

****THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY****

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
64.13	30.28	94.41	97.91	101.16

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
63.68	30.28	93.96	97.46	100.71

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date : 02/28/2021**

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
62.93	30.28	93.21	96.71	99.96

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
66.68	30.28	96.96	100.46	103.71

CLASSIFICATIONS:

Blaster

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
62.10	30.28	92.38	95.88	99.13

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
61.58	30.28	91.86	95.36	98.61

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

Effective Dates:

	09/01/2018		03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
61.35	30.28	91.63	95.13	98.38

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date : 02/28/2021

Effective Dates:

09/01/2018			03/01/2019	03/01/2020
Rate	Fringe	Total	Total	Total
60.75	30.28	91.03	94.53	97.78

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)



Contractor Manpower Project Reporting CC-257R

We are pleased to announce that workforce reporting information (Form CC-257) is now available on the internet through the New Jersey portal at <http://www.state.nj.us>. To access this application, you will need: **1)** to be registered with the New Jersey portal; and **2)** to receive an authorization code (via email) that will provide you with the link to the application. If you already have a portal account, you do not need to register again. The instructions below explain the registration process for a portal account.

New Jersey Portal Registration Instructions

Please follow these instructions carefully.

If you have already registered on the New Jersey portal and need to enter an Authorization Code for a new application, go to <http://www.state.nj.us> and follow the instructions beginning at Step 7 below.

1. Open an Internet browser and type <http://www.state.nj.us> in the address box and press <Enter>
2. At the top left (under the “Home” tab) are the “Login” and “Register” boxes for the portal
3. Click on “Register”
4. In the dialog box entitled “Create Your My New Jersey Account,” enter a Logon ID and Password of your choosing and the rest of the requested information. Be sure to include a challenge question and valid email address in case you forget your password. (This is the account your Portal password will be sent to if you forget it. You will not be able to get into the application if you do not log onto the Portal)
5. Now that you have created your account, logout. The next step is to verify the existence of your new account.
6. Log in your account using your newly created Logon ID and Password.

Activating Authorization Code

Authorization codes will be sent via email under separate cover after you have emailed the following to trnsport@dot.state.nj.us

1. Company Name
2. Email Address for company Official or CEO
3. Company’s Federal Identification Number
4. Contact Person’s Name (this should be the person who registered the account and will be logging on and supplying the requested employment data)
5. Contact Person’s email address

New Jersey Portal Registration Instructions - continued

Once you receive the code, follow the instructions below which provide access to the CC-257R reporting program.

7. Once logged into the Portal, select “enter authorization code.”
8. Follow the instructions carefully. Type the code in the text box labeled, “Enter your authorization code” and click the “Finished” button. Note that the code is case sensitive.
9. The system will log you out.
10. Log into your account. Your new application will have a link under the NJDOT heading.

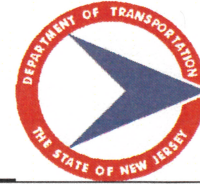
Please Note

1. Under no circumstances should you give your authorization code to another user. This code has been personalized for your particular need.
2. The state job number specific to the project is needed for reporting.
3. If you have questions and/or problems with any of these steps please send an email to the following address: transport@dot.state.nj.us

Also Note

1. Federal Executive Order 11246 requires workforce reporting to be completed each month by both prime and subcontractors.
2. These reports are to be submitted by the 10th day of each month during the term of the contract, and include the total work hours for each employee classification in each trade in the covered area for the monthly reporting period.
3. The prime contractor submits a report for its total workforce and is responsible for ensuring that its subcontractors submit their respective reports.
4. Questions concerning the workforce report should be directed to the NJDOT, Division of Civil Rights/Affirmative Action at **1-609-530-3888**.

New Jersey Department of Transportation
1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600



Baseline Document Change Announcement

ANNOUNCEMENT: BDC18S-05

DATE: May 08, 2018

SUBJECT: Visits to the Project Limits
- **Revision to Subsection 102.04 of the 2007 Standard Specifications for Road and Bridge Construction**

Subsection 102.04 of the 2007 Standard Specifications has been revised to clarify the intent of contact information to the Bidder in order to visit the Project Limits. Also, advance written notice has been revised to visit the Project Limits.

The following revisions have been incorporated into the Standard Inputs (SI 2007) as of May 08, 2018.

102.04 EXAMINATION OF CONTRACT AND PROJECT LIMITS
THE FIRST PARAGRAPH IS CHANGED TO:

The Bidder shall carefully examine the Contract and the Project Limits of the proposed Project before submitting a bid. The Bidder shall provide written notice to the Project Manager, as specified in the Special Provisions, at least 48 hours in advance of any visits to the Project Limits. The Bidder shall ensure that staff visiting the Project Limits have proper identification.

1*****1

COMPLETE AND INCLUDE THE FOLLOWING

Project Manager:
E-mail Address:
Mailing Address:

1*****1

Implementation Code H (HIGH PRIORITY)

Changes must be implemented in all applicable Department projects scheduled for advertisement at least one month after the date of the BDC announcement.

If necessary, addenda must be issued to incorporate the changes. The changes should NOT be incorporated if issuance of addenda will require a postponement of the receipt of bids.

Recommended By:

Approved By:

Paul F. Schneider
Paul F. Schneider
Director
Capital Program Support

Eli D. Lambert III
Eli D. Lambert III, P.E.
Assistant Commissioner
Capital Program Management

SPECIAL PROVISIONS

INTERSECTION IMPROVEMENTS CITY OF PLAINFIELD WEST SEVENTH STREET (CR 601)

COUNTY OF UNION, NEW JERSEY FEDERAL PROJECT NO. HSIP 0601(301)

AUTHORIZATION OF CONTRACT

The contract for this project is authorized by the provisions of local public contracts law, NJSA 40A: 11-1 et seq and Title 23 of the United States Code - Highways.

SPECIFICATIONS TO BE USED

The 2007 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation as amended herein will govern the construction of this Project and the execution of the Contract.

These Supplemental Specifications consist of the following:

Pages 1 to 106 inclusive.

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county, select the construction type heading: HIGHWAY.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, et seq.).

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work, and declare the Contractor in default.

The NJDOT must report all suspected or reported violations to the federal agency providing the funding for the project.

Contractor's compliance is required with the Copeland "Anti-Kickback" Act, (40 U.S.C. 3145), as supplemented by the Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or In Part by Loans or Grants from the United States"). Each contractor or subcontractor is prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The NJDOT must report all suspected or reported violations to the federal agency providing the funding for the project.

The following information is located at the end of these Special Provisions:

1. Disadvantaged Business Enterprise Utilization. (Federal Aid Project Attachment 1).
2. Specific Equal Employment Opportunity Responsibilities on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 2).

3. Requirements for Affirmative Action to Ensure Equal Employment Opportunity on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 3).
4. Federal Equal Employment Opportunity Contract Specifications for NJDOT Federal Aid Projects. (Federal Aid Project Attachment 4).
5. State of New Jersey Mandatory Equal Employment Opportunity Language on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 5).
6. Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 6).
7. Payroll Requirements for NJDOT Federal Aid Projects. (Federal Aid Project Attachment 7).
8. FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts. (Federal Aid Project Attachment 8).
9. State Mandatory Addendum to FHWA 1273 Required Contract Provision, Federal Aid Construction Contracts as Amended or Supplemented. (Federal Aid Project Attachment 9).
10. Federal Mandatory Equal Opportunity Language on Federal Aid Projects. (Federal Aid Project Attachment 10).
11. Byrd Anti-Lobbying Certification. (Federal Aid Project Attachment 11).

GENERAL

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation. Prior to the start of construction the contractor must submit a Material Questionnaire (SA-11) listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of Transportation source will be considered non-participating. The contractor is also notified that the District Office, Division of Local Aid and Economic Development must be notified of the construction commencement date at least five (5) calendar days prior to the start of construction.

Award of contract and subletting will not be permitted to, materials will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, General Services Administration, CN-039, Trenton NJ 08625 (609-633-3990).

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "basis of payment" clause provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2007 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2007 Standard Specifications unless otherwise noted.

Henceforth in this supplementary specification whenever reference to the State, Commissioner, Department, Engineer or Inspector is made, it is construed to mean the particular municipality or county executing this contract.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – GENERAL INFORMATION

101.02 ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS ARE ADDED:

ADA	Americans with Disabilities Act
CFR	Code of Federal Regulations
CUF	Commercially Useful Function
DCR/AA	New Jersey Department of Transportation, Division of Civil Rights and Affirmative Action
EEO	Equal Employment Opportunity
GFE	Good Faith Effort
OJT	On-The-Job-Training
USC	United States Code
USDOL	United States Department of Labor

101.03 TERMS

THE FOLLOWING TERMS ARE CHANGED.

Contractor. The individual, firm, partnership, corporation, joint venture, or any acceptable combination thereof contracting with the Department for performance of the Contract. For the purpose of carrying out the Contract, it also means the Contractor's representative.

department: Shall be defined as the contracting agency.

resident engineer (RE) shall be defined as a representative of the contracting agency.

pavement structure. The combination of pavement, base courses, 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). These various courses are defined as follows:

1. **pavement.** One or more layers of specified material of designed thickness at the top of the pavement structure.
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.

Subcontractor. An individual, firm, partnership, corporation, joint venture, or any acceptable combination thereof, to which the Contractor subcontracts part of the Work pursuant to 108.01.

THE FOLLOWING TERM IS ADDED.

Commercially Useful Function. Occurrences in which the subcontractor is be responsible for the execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved., and with respect to materials and supplies used on the contract, prepares the estimate, negotiates price, determines quality and quantity, orders the material, arranges delivery, installs (where applicable), and pays for the material and supplies itself for the project.

Discrimination. That act (or action) whether intentional or unintentional, through which a person in the United States, solely because of race, creed, color, national origin, age, ancestry, nationality, sex (including pregnancy and sexual harassment), marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, or disability has been otherwise subjected to unequal treatment.

Federal Aid Project. Any agreement or modification thereof between NJDOT and any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Federal government or borrowed on the credit of the Federal government pursuant to any program involving a grant, contract, loan, insurance or guarantee under which the NJDOT itself participates in the construction work.

Federal Aid Project Attachments. Attachments to the Contract Special Provision document, used for Federal aid projects.

ITS commissioning. Completion of Level A testing of an Intelligent Transportation System per [704.03.01](#). This does not constitute Acceptance by the Department of the work.

State Funded Project Attachments. Attachments to the Contract Special Provision document, used for wholly state funded contracts.

Special Provisions. Project specific specifications, non-standard specifications, and requirements for the performance of prescribed work which, in addition to the Standard Specifications, is part of the Contract documents.

101.04 INQUIRIES REGARDING THE PROJECT

1. Before Award of Contract.

THE FIRST PARAGRAPH IS CHANGED TO:

Submit inquiries and/or view other questions/answers by following the format prescribed on the project's electronic bidding web page.

THE SECOND PARAGRAPH IS CHANGED TO:

The deadline for submitting inquiries is 12:00 noon, 7 days before the opening of bids.

2. After Award of Contract.

COUNTY ENGINEER
DIVISION OF ENGINEERING
Thomas O. Mineo, P.E.
2325 South Avenue
Scotch Plains, New Jersey 07076
Telephone: (908) 789-3675
Fax: (908) 789-3674

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.01 QUALIFICATION TO BID

SECOND CRITERIA IS CHANGED TO:

2. Before the receipt of the bid or accompanying the bid, the Bidder has disclosed ownership as required by N.J.S.A. 52:25-24.2.

102.02 BIDDER REGISTRATION AND DOWNLOADING OF THE PROPOSAL DOCUMENTS

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The Bidder shall not alter or in any way change the software.

102.03 REVISIONS BEFORE SUBMITTING A BID

THE SECOND PARAGRAPH IS CHANGED TO:

The Bidder shall acknowledge all addenda posted through the Department's website. The addenda acknowledgement folder is included in the Department's electronic bidding file. The Department has the right to reject the bid if the Bidder has not acknowledged all addenda posted.

102.04 EXAMINATION OF CONTRACT AND PROJECT LIMITS

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

The structures and the location(s) of lead paint, if any, are listed in the Special Provisions.

2. Utility Agreements.

THE LAST SENTENCE IS DELETED.

3. Existing Plans and As-Built.

ENTIRE PART IS CHANGED TO:

The Department will provide a list of existing structures bearing structure numbers within the Project on the Plans. The Department will list the existing plans including structural plans, contour maps and as-built plans used in the development of the Contract in the Special Provisions. The Bidder may download the existing

plans including structural plans, contour maps and as-built plans of Department-owned facilities through the electronic bidding process along with the Proposal documents. The Bidder shall obtain plans of municipality-owned or county-owned facilities through the municipality or county. The Bidder shall verify information obtained from the existing documents with regard to its application to bidding and performing the Contract.

Existing Plans including structural plans, contour maps and as-built plans used are as follows:

a.

102.07 PREPARATION OF THE BID

THE FOLLOWING IS ADDED AFTER THE FIFTH PARAGRAPH:

On Federal aid projects, all Bidders shall keep records of all DBE and non-DBE firms that provide a bid or quote to the Bidder for the Contract for use in providing the information to the Department in the development of a Bidder's List. The records will include the name, address, phone number, E-mail address, DBE/ESBE status of the firm, NAICS Code(s) applicable to the kind of work the firm would perform on the project and type of work for subcontracted work for each DBE and non-DBE firm that provides a bid or quote for the Contract. This information shall be made available to the Department upon request.

For each Federal aid contract that they submit a Bid, each Bidder shall prepare a CR-261 - DBE and non-DBE Firms Providing a Bid or Quote for the Contract form. All Bidders are required to submit this information on a yearly basis to the Department, with the information submitted to the Division of Civil Rights and Affirmative Action by September 30 of each year.

102.09 PROPOSAL BOND

THE FIFTH PARAGRAPH IS CHANGED TO:

The Department will not accept Proposal Bonds that do not comply in all respects with the provisions of N.J.A.C. 16:44-7.3(e) and that are not substantiated by a valid power of attorney executed by the Surety.

102.10 SUBMISSION OF BIDS

THE SECOND PARAGRAPH IS CHANGED TO:

The Bidder shall ensure delivery of its bid with all required components and attachments, including, but not limited to the following:

1. Schedule of Items.
2. Proposal Electronic Bidding File with Bidder's Certification.
3. For wholly State funded contracts, acknowledgement of compliance with the registrations specified in 102.01.
4. For wholly State funded contracts, acknowledgement of compliance with N.J.S.A. 19:44A-20.13, et seq.
5. Proposal Bond form.
6. Other related documents as specified in the Contract.
7. On the Disclosure of Investment Activities in Iran (Form DC-16) provided by the Department, certify pursuant to N.J.S.A. 52:32-58, that neither the bidder, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the bidder is unable to so certify, the bidder shall provide a detailed and precise description of such activities to the Department.
8. For Federal Aid Projects exceeding a bid amount of \$100,000 or more, Bidder shall certify to the Byrd Anti-Lobbying Act requirements under 31 USC 1352.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

A directory of certified Disadvantaged Small Businesses Enterprise firms can be found in the New Jersey Unified Certification Program Vendor Certification database, online at <https://njucp.dbesystem.com/>.

A directory of certified Emerging Small Business Enterprise firms can be found in the Emerging Small Business Program online directory at <http://www.state.nj.us/transportation/business/civilrights/pdf/ESBEDirectory.pdf>.

A directory of registered Small Businesses Enterprise firms can be found in the New Jersey Selective Assistance Vendor Information (NJSAVI) database online at https://www20.state.nj.us/TYTR_SAVI/vendorSearch.jsp.

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS
CITY OF PLAINFIELD, COUNTY OF UNION
FEDERAL PROJECT NO. HSIP 0601(301)

All of the above directories are to be used as a source of information only and does not relieve the Bidder of their responsibility to seek out Enterprises not listed, prior to bidding.

102.13 CONSIDERATION OF BIDS

THE FOLLOWING SUBPART IS ADDED:

102.13.01 Bidder Pre-Award Requirements

A. Federal Aid Projects

1. **Contract DBE Goal.** On projects having a Contract DBE goal, the Bidder shall ensure that DBEs have an equal opportunity to receive and participate in the performance of contracts and subcontracts in Federal aid projects with the Department. The Bidder shall take all necessary and reasonable steps in accordance with 49 CFR, Part 26 to ensure that DBEs are given equal opportunity to compete for and to perform on the Department's Federal aid projects. The Bidder shall not discriminate in the award and performance of any Contract obligation including, but not limited to, its performance of its obligations on USDOT assisted contracts as specified in Section 107.

a. The Bidder shall demonstrate commitment of meeting the Contract DBE goal that is specified in the Contract.

(1) Submit to DCR/AA at time of Bid, or within 5 days after bid opening as a matter of responsibility:

- (i) a completed and signed Form CR-266 – Schedule of DB/ESBE/SBE Participation for each DBE firm being used to meet the Contract goal. Revisions to the CR-266 will not be accepted after its initial submission and before award of the Contract.
- (ii) a completed and signed Verification of DBE/ESBE/SBE Firm (Form CR-273) for each firm listed on the CR-266 to demonstrate direct written confirmation from each DBE firm of willingness to participate on the Contract, confirming the kind and amount of work that was provided on the Contractor's CR-266, and, if applicable,
- (iii) a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for all Regular Dealers/Suppliers listed on the CR-266 form, and, if applicable,
- (iv) a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for all DBE trucking firms listed on the CR-266.

Firms listed on the CR-266 will not be counted toward the Contract DBE goal unless completed and signed CR-273 form(s), and applicable CR-272 and CR-274 form(s) are submitted to the DCR/AA within the 5 days after bid opening. The CR-273, CR-272, and CR-274 forms must be completed and signed by each respective DBE firm.

These forms must be submitted through a designated email - DOT-CR.Verifications@dot.nj.gov.

(2) If, at time of Submission, the commitment to meet the Contract DBE goal is not shown on the CR-266, the Bidder must submit at time of Bid, or within 5 days after bid opening, documented evidence of good faith effort(s) to attain the Contract DBE goal, for review and approval by the DCR/AA. Submittal of such information does not imply DCR/AA approval. The Department's DCR/AA has sole authority to determine whether the Bidder met the Contract DBE goal or made adequate good faith efforts to do so.

(i) Good faith efforts are actions taken to achieve a DBE goal or other requirement of the DBE Program which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement, including affirmative action measures designed to implement the established objectives of an affirmative action plan that a Bidder may utilize to obtain DBE participation. Efforts to include firms not certified as DBEs in New Jersey are consequently not good faith efforts to meet the DBE Contract goal. Good faith effort actions include, but are not limited to:

- (a) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the Contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or

written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project. The Bidder shall solicit this interest as early in the bidding process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The Bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- (b) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the Bidder might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
- (c) Providing interested DBEs with adequate information about the Plans, specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.
- (d)i Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.
- (d)ii Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as Contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Bidder's failure to meet the Contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the work of a Contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (e)i Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the Contract DBE goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the Bidder to accept unreasonable quotes in order to satisfy the Contract goals.
- (e)ii A Bidder's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the Bidder has the ability and/or desire to perform the Contract work with its own forces does not relieve the Bidder of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.
- (f) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Bidder.
- (g) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, but not directly or indirectly providing equipment, supplies or materials to the DBE.

- (h) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- (3) If the Department determines that the apparent lowest responsive Bidder has failed to meet the Contract DBE Goal and made adequate good faith efforts to do so, the Department must, before awarding the Contract, provide the Bidder an opportunity for Administrative Reconsideration.

The apparent lowest responsive Bidder will have the opportunity to provide written documented evidence or argument concerning the issue of whether it met the Contract DBE goal or made adequate good faith efforts to do so to an official who did not take part in the original determination that the Bidder failed to meet the Contract DBE goal or made adequate good faith effort to do so, pursuant to 49 C.F.R. 26.53(d). The apparent lowest responsive bidder has the opportunity to meet in person with the Reconsideration Official to discuss the issue of whether it met the Contract DBE goal or made adequate good faith efforts to do so.

Within 1 State business day of being notified by the Department that it is not a responsible bidder because it failed to meet the Contract DBE goal and made adequate good faith efforts to do so, a Bidder may make a request for administrative reconsideration in writing to the New Jersey Department of Transportation, Director, Division of Procurement, PO Box 605, Trenton, New Jersey, 08625-0605. The Bidder must specify one of the following types of administrative reconsideration in its request:

- (i) **Written Review by the Department.** If the Bidder seeks written review by the Department it must submit written documented evidence or argument proving the Bidder met the Contract DBE goal at time of Bid, or submitted adequate good faith efforts to do so within 5 days after bid opening, to the Department within 2 State business days of the Bidder's request for Administrative Reconsideration.
- (ii) **In-Person Meeting.** If the Bidder seeks an in-person meeting by the Department it must submit written documented evidence or argument proving the Bidder met the Contract DBE goal at time of Bid, or submitted adequate good faith efforts to do so within 5 days after bid opening, to the Department within 2 State business days of the Bidder's request for Administrative Reconsideration. The in-person meeting will be scheduled by the Department as soon as time permits.

If the timeframe for a Bidder's request for Administrative Reconsideration, or submission of written documented evidence or argument proving the Bidder met the Contract DBE goal or submitted adequate good faith effort to do so falls on a weekend or holiday, the written requests are due to the Department on the next State business day. The Department, at its discretion, may not review or consider any documentation or argument in its administrative reconsideration that was not contained in the Bidder's request for written review or in-person meeting with the Department.

Once the Reconsideration Official has made a determination, the Department will send the Bidder a written decision on reconsideration, explaining the basis for finding that the Bidder did or did not meet the DBE goal or make an adequate good faith effort to do so.

Failure to follow this request procedure may result in the Bidder's waiver of the right for Administrative Reconsideration under this Section.

The result of the reconsideration process is not administratively appealable to the USDOT.

- 2. **Contract ESBE Goal.** Where a Contract ESBE goal is set, the Bidder shall follow all requirements and the same administrative reconsideration procedures of Section 102.13.

B. State Funded Projects

- 1. **Contract SBE Goal.** On wholly State funded contracts having a Contract SBE goal, the Bidder shall ensure that SBEs have an equal opportunity to receive and participate in the performance of contracts and subcontracts financed in whole with state funds in performing work with the Department. The Bidder shall take all necessary and reasonable steps to ensure that SBEs are given equal opportunity to compete for and to

perform on the Department's wholly state funded projects. The Bidder shall not discriminate in the award and performance of any Contract obligation including, but not limited to, its performance of its obligations on wholly state funded contracts as specified in Section 107.

a. The Bidder shall demonstrate commitment of meeting the Contract SBE goal that is specified in the Contract.

- (1) Submit to DCR/AA at time of Bid, or within 5 days after bid opening as a matter of responsibility:
 - (i) a completed and signed Form CR-266 - Schedule of DBE/ESBE/SBE Participation for each SBE firm being used to meet the Contract goal. Revisions to the CR-266 will not be accepted after its initial submission and before award of the Contract.
 - (ii) a completed and signed Verification of DBE/ESBE/SBE Firm (Form CR-273) for each firm listed on the CR-266 to demonstrate direct written confirmation from each SBE firm of willingness to participate on the Contract, confirming the kind and amount of work that was provided on the Contractor's CR-266, and, if applicable,
 - (iii) a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for all Regular Dealers/Suppliers listed on the CR-266 form, and, if applicable,
 - (iv) a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for all SBE trucking firms listed on the CR-266.

Firms listed on the CR-266 will not be counted toward the Contract SBE goal unless completed and signed CR-273 form(s), and applicable CR-272 and CR-274 form(s) are submitted to the DCR/AA within the 5 days after bid opening. The CR-273, CR-272, and CR-274 forms must be completed and signed by each respective SBE firm.

These forms must be submitted through a designated email: DOT-CR.Verifications@dot.nj.gov.

- (2) If, at time of Submission, commitment to meet the Contract SBE goal is not shown on the CR-266, the Bidder must submit at time of Bid, or within 5 days after bid opening, documented evidence of good faith effort(s) to attain the Contract SBE goal, for review and approval by the DCR/AA. Submittal of such information does not imply DCR/AA approval. The Department's DCR/AA has sole authority to determine whether the Bidder met the Contract SBE goal or made adequate good faith efforts to do so.
 - (i) Good faith efforts are actions taken to achieve a SBE goal or other requirement of the SBE Program which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement, including affirmative action measures designed to implement the established objectives of an affirmative action plan that a Bidder may utilize to obtain SBE participation. Efforts to include firms not registered as SBEs in New Jersey are consequently not good faith efforts to meet the SBE Contract goal. Good faith effort actions include, but are not limited to:
 - (a) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified SBEs that have the capability to perform the work of the Contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all SBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the SBE directory) and which are located in the area or surrounding areas of the project. The Bidder shall solicit this interest as early in the bidding process as practicable to allow the SBEs to respond to the solicitation and submit a timely offer for the subcontract. The Bidder should determine with certainty if the SBEs are interested by taking appropriate steps to follow up initial solicitations.
 - (b) Selecting portions of the work to be performed by SBEs in order to increase the likelihood that the SBE goals will be achieved. This includes, where appropriate, breaking out Contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate SBE participation, even when the Bidder might otherwise prefer to perform these work items with its own forces. This may include,

where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates SBE participation.

- (c) Providing interested SBEs with adequate information about the Plans, specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.
- (d)i Negotiating in good faith with interested SBEs. It is the Bidder's responsibility to make a portion of the work available to SBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available SBE subcontractors and suppliers, so as to facilitate SBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of SBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for SBEs to perform the work.
- (d)ii A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including SBE subcontractors, and would take a firm's price and capabilities as well as Contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using SBEs is not in itself sufficient reason for a Bidder's failure to meet the Contract SBE goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the work of a Contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from SBEs if the price difference is excessive or unreasonable.
- (e)i Not rejecting SBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the Contract SBE goal. Another practice considered an insufficient good faith effort is the rejection of the SBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the Bidder to accept unreasonable quotes in order to satisfy the Contract goals.
- (e)ii A Bidder's inability to find a replacement SBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original SBE. The fact that the Bidder has the ability and/or desire to perform the Contract work with its own forces does not relieve the Bidder of the obligation to make good faith efforts to find a replacement SBE, and it is not a sound basis for rejecting a prospective replacement SBE's reasonable quote.
- (f) Making efforts to assist interested SBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- (g) Making efforts to assist interested SBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, but not directly or indirectly providing equipment, supplies or materials to the SBE.
- (h) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of SBEs.

The above pre-award requirements shall be followed on projects where a Contract SBE goal is set.

102.15 DISQUALIFICATION OF BIDDERS

THE ENTIRE SUBSECTION IS CHANGED TO:

The Department will disqualify a Bidder and reject a bid submitted by that Bidder if the Bidder is determined by the Department to lack responsiveness. Failure of a Bidder to follow the requirements of 102.10 demonstrates a lack of responsiveness.

The Department will disqualify a Bidder and reject a bid submitted by that Bidder if the Bidder is determined by the Department to lack responsibility. Factors demonstrating a lack of responsibility include, but are not limited to:

1. Evidence of collusion among Bidders.
2. Uncompleted work, which in the opinion of the Department, might hinder or prevent completion of additional work if awarded.
3. Failure to submit at time of bid or within 5 days of bid opening, a completed and signed CR-266 – Schedule of Disadvantaged Business Enterprise/Emerging Small Business Enterprise/Small Business Enterprise Participation.
4. Failure to submit within 5 days of bid opening, proof of documented evidence of good faith efforts to meet the Contract goal, if the Bidder fails to meet the Contract DBE, ESBE or SBE goal.
5. Failure to submit within 5 days of bid opening, a completed and signed Confirmation of DBE/ESBE/SBE Firm (Form CR-273) for each DBE/ESBE/SBE firm listed on the CR-266.
6. Failure to submit within 5 days of bid opening, a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for each DBE/ESBE/SBE firm listed on the CR-266, if applicable.
7. Failure to submit within 5 days of bid opening, a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for each DBE/ESBE/SBE Regular Dealer/Supplier listed on the CR-266, if applicable.
8. Failure of the bidder to meet the Contract DBE, ESBE or SBE goal, or make adequate good faith efforts to do so.
9. Submission of a materially unbalanced bid. A materially unbalanced bid is a bid where there is a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid, which is structured on the basis of nominal prices for some work and inflated prices for other work, will result in the lowest ultimate cost to the Department.
10. Lack of competency or lack of adequate machinery, plant, or other equipment.
11. Unsatisfactory performance on previous or current contracts.
12. Questionable moral integrity as determined by the Attorney General of New Jersey or the Department.
13. Any other outward actions or lack of action that demonstrates the Bidder is not responsible.
14. Disqualification, suspension, or debarment of an individual, firm, partnership, corporation, joint venture, or any combination as required by N.J.A.C. 16:44-11.1 for state projects.
15. Disqualification, suspension, or debarment of an individual firm, partnership, corporation, joint venture, or any combination as required by N.J.A.C. 16:44-11.1 or Federal Government's System for Award Management (SAM), located at https://www.sam.gov/portal/SAM/#1for_federally_assisted_contracts.

SECTION 104 – SCOPE OF WORK

104.03.01 Authority to Make Changes

THE FOLLOWING PARAGRAPHS ARE ADDED AFTER THE THIRD PARAGRAPH:

DBE, ESBE or SBE goals apply to work performed through Field Orders and Change Orders. On Federal aid projects, the Contractor is responsible for complying with the DBE program, rules and regulations of 49 CFR Part 26, the requirements as specified in 105.02.05, Federal Aid Project Attachments 1 through 7, and FHWA-1273 for this work. On State funded projects, the Contractor is responsible for complying with SBE program rules and regulations, the requirements as specified in 105.02.05, and State Funded Project Attachments 1 through 6 for this work.

Contractor resubmission of CR-266, CR-273, CR-272 and CR-274 may be required on the work performed through Field Orders and Change Orders.

104.03.03 Types of Changes

3. Changes in the Character of Work.

a. Differing Site Condition.

THE SECOND PARAGRAPH IS CHANGED TO:

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS
CITY OF PLAINFIELD, COUNTY OF UNION
FEDERAL PROJECT NO. HSIP 0601(301)

The Department will make payment for increased costs resulting from a Type 1 or Type 2 Differing Site Condition as a change in the character of work; however, the Department will not consider making payment for a differing site condition unless the resulting change in cost exceeds \$7,500. Except, if the Contractor incurs cost as the result of multiple differing site conditions, with the cost of each separate differing site condition having a value of at least \$1,500 but not more than \$7,500, the Department will consider making payment for such costs if the aggregate cost of the multiple differing site conditions exceeds \$7,500. If the change in cost exceeds these amounts, the Department will base the modification on the total cost of the change, and the Department will not deduct the threshold amount of \$7,500 from the cost of the change.

104.03.04 Contractual Notice

THE SECOND PARAGRAPH IS CHANGED TO:

Immediately provide written notice to the RE of a circumstance that is believed to be a change to the Contract. If notice is not provided on Contractual Notice (Form DC-161), include the following in the initial written notice:

1. A statement that this is a notice of a change.
2. The date when the circumstances believed to be a change were discovered.
3. A detailed and specific statement describing the nature and circumstances of the change.
4. If the change will or could affect costs to the Department.
5. If the change will or could affect Contract Time as specified in 108.11.01.C.

In addition to the hard copy of the notice, email the notice to the RE. It is not necessary to attach listed documents to the email.

104.03.08 Force Account

7. Equipment.

a. Contractor-Owned Equipment.

PART 1 IS CHANGED TO:

- 1 The Department will calculate the "rental" hourly rates by dividing the monthly rate by 176. The Department will not use weekly, daily, or hourly rates. The Department will apply rental hourly rates for every hour the equipment is in active use, except that for any 30-day period, the Department will limit the total amount paid for each piece of equipment to a maximum of the monthly rate.

THE FOLLOWING PART IS ADDED:

6. The Department will make payment for costs for transporting equipment to and from the work site, if said costs are solely required as a direct result of the Force Account activity.

THE SECOND PARAGRAPH IS CHANGED TO:

The payment established is full payment for all equipment costs, including the cost of fuel, repairs, maintenance, depreciation, storage and incidentals.

10. Subcontractors.

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will make payment for markup on subcontracted work at the rate of 5 percent applied on the total amount of all costs for subcontracted force account work up to \$500,000 and 2% applied on the total amount of all costs for subcontracted force account work over \$500,000.

104.03.09 Delay Damages

1. Non-Productive Activity.

e. Equipment.

THE FIRST SENTENCE IS CHANGED TO:

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS
CITY OF PLAINFIELD, COUNTY OF UNION
FEDERAL PROJECT NO. HSIP 0601(301)

If as the result of the delay, equipment cannot be used for any active work, and is directed by the RE to remain on the work site during the delay, the Department will make payment as specified in 104.03.08.7.a.5.

SECTION 105 – CONTROL OF WORK

105.01 AUTHORITY OF THE DEPARTMENT

THE FOLLOWING NEW SUBPART IS ADDED:

105.01.01 RE

THE LAST PARAGRAPH IS CHANGED TO:

The RE has the authority to suspend the Work wholly or in part and to suspend Estimates, as specified in 109.05, for failure of the Contractor to correct conditions unsafe for the workers or the general public, for failure to carry out provisions of the Contract, including but not limited to DBE/ESBE/SBE program regulations in the administration of the Contract, or for failure to comply with RE direction. The RE also has the authority to suspend the Work wholly or in part for unsuitable weather, for conditions considered unsuitable for the prosecution of the Work or portion of the Work, or for any other condition or reason deemed to be in the interest of the public.

105.02.01 Labor and Equipment

THE FIRST PARAGRAPH OF PART 1 IS CHANGED TO:

- 1. Labor.** Employ workers that have sufficient skill and experience to properly perform the work assigned to them. Do not engage or employ current Department employees or workers that would cause the worker to be in violation of N.J.S.A. 52:13D-17. Do not engage or employ any former federal, state, or municipal worker who has been personally or individually debarred or subject to a forfeiture of public office pursuant to N.J.S.A. 2C:51-2.

THE FOLLOWING SUBPART IS ADDED:

105.02.05 Civil Rights Requirements

The Contractor is obligated to comply with Title VI of the Civil Rights Act of 1964, 49 CFR Part 21 and 28 CFR Section 50.3, 2 C.F.R. Part 200 and 2 C.F.R. Part 200 Appendix II and any other Rules relative to Nondiscrimination as they may be amended from time to time, which are herein and incorporated by reference and made part of the Contract. The Contractor in the performance of the Contract agrees to comply with nondiscrimination regulations and other requirements as specified in Section 107. Failure of a Contractor to comply with the nondiscrimination provisions of the Contract may result in the actions as set forth as specified in Sections 105, 108 and 109.

The source of funding determines which EEO regulations and goals (Federal and/or State goals) apply to a specific project.

- 1. Federal Aid Projects.** On contracts containing Federal funding, Federal EEO regulations and goals apply as specified in Federal Aid Project Attachments 1 through 11. The DCR/AA monitors and reviews these projects on behalf of the Federal Highway Administration (FHWA), under Federal statutes (23 USC 140) and rules (23 CFR 230, 2 CFR Part 200).

Comply with the DBE/ESBE program, rules and regulations of 49 CFR Part 26 in the administration of the Contract. Failure to do so is a material breach of the Contract and may result in termination of the Contract, or other such actions that the Department or the FHWA deem appropriate which may include, but are not limited to, denial or limit of credit toward the Contract goal, payment being delayed or withheld as specified in Section 105, assessing sanctions as set forth in 49 CFR Part 26, and default as specified in Section 108. Deliberate attempts by the Contractor or subcontractors to circumvent or commit fraud in the DBE/ESBE program may result in termination of the Contract as specified in Section 108, investigation by the Department's Inspector General, and prosecution by the State Attorney General's Office.

Ensure compliance with the labor standards provisions of the Contract. Submit weekly certified payrolls as required in the Contract. Monitor and verify the owner-operator status of all DBE and non-DBE truckers working on Federal aid projects used for the Contract. Submit the DBE Trucking Verification (Form CR-274) to the Department. Failure of a Contractor to meet the requirements of this paragraph may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

Obtain subcontract agreements as specified in Section 108. Failure of a Contractor to meet this requirement may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

The Contractor is responsible for compliance by any subcontractor, lower tier subcontractor as specified in Section 108. On Federal aid construction contracts, utilize a DBE that performs a commercially useful function (CUF) and performs the work committed to at the time of Contract award. Monitor and report DBE participation on the Contract, on a monthly basis.

The Contractor is required to make good faith effort as defined in 23 CFR Part 230 and 41 CFR Part 60 in meeting the Equal Employment Opportunity, Affirmative Action, on-the-job training and female and minority work hour goals. Ensure compliance by subcontractors and lower tier subcontractors. Failure of the Contractor, subcontractor or lower tier subcontractor to meet these requirements may result in the denial or limit of credit toward the Contract goal, payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

Utilize the specific DBEs listed to perform the work and supply the materials for which each is listed on the CR-266 unless prior written consent from the DCR/AA is obtained. Unless DCR/AA consent is provided, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

The Contractor is responsible for Equal Employment Opportunity requirements of the Contract, including Affirmative Action, EEO workforce and On-The-Job Training. Failure by the Contractor to meet the requirements of the Affirmative Action Program for Equal Employment Opportunity may result in payment being delayed or withheld as specified in Section 105 pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

The Contractor is responsible for compliance with the Trainee program. Failure to meet this requirement may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

The Contractor and subcontractors are required to provide all information and reports as specified in Section 107.

a. Disadvantaged Business Enterprise/Emerging Small Business Enterprise Goals for this Contract

This Contract includes a goal of awarding a percentage of the Total Contract Price to subcontractors, transaction expeditors, regular dealers, manufacturers and truckers qualifying as certified DBEs/ESBEs as specified in Federal Aid Project Attachment 1 – Disadvantaged Business Enterprise Utilization on Federal Aid Projects or Federal Aid Project Attachment 1 – Emerging Small Business Enterprise Utilization on Federal Aid Projects, of the Special Provisions.

To receive DBE credit toward meeting a contract goal in the context of the contract award process, a DBE firm must be certified before the due date for bids or offers on the Contract, as stated in 49 CFR Part 26.81(c). There may be situations after the award of the Contract, however, in which it is appropriate to count DBE credit for the use of a DBE firm certified after the contract is executed. To be eligible to obtain DBE credit, a DBE firm must be certified before the subcontract on which it is working is executed.

A Contractor is deemed to have satisfied the requirements of the DBE Program if the Contractor meets the Contract DBE goal or the approved DBE commitment, or demonstrates an adequate GFE. Failure to

meet the Contract DBE goal or the approved DBE commitment, without demonstrating an adequate GFE, is considered a material breach of the Contract.

The Contract DBE goal or the approved DBE commitment may be changed by the Department based on changes in the Work that increase or decrease work assigned to approved DBEs, or to create potential DBE subcontracting opportunities regarding the Contract. The Department's DCR/AA will evaluate these changes in the Work in the same manner that the original Contract DBE goal or the approved DBE commitment was established. Submit a Revised CR-266 when the Contract DBE goal or the approved DBE commitment is increased or decreased; in such circumstances, the Contractor shall meet the Modified DBE goal or demonstrate an adequate GFE.

If the Contractor fails to meet the Contract DBE goal, without demonstrating an adequate GFE, the Department will make a payment reduction from the total amount of payments made to the Contractor equal to the value of the DBE goal not attained as follows:

$$\text{DBE Goal Payment Reduction} = (\text{CG} - \text{AG}) \times \text{CP}$$

Where:

CG = Contract DBE Goal percentage, or approved DBE commitment, or if modified by the Department, the Modified DBE Contract Goal percentage.

AG = Attained DBE Goal percentage = (total dollar amount paid to DBE suppliers and DBE subcontractors divided by CP) plus the percent value attributed to the Contractor's GFE approved by the Department.

CP = Total Adjusted Contract Price less the payment adjustments for FINAL LAYOUT, PERFORMANCE BOND AND PAYMENT BOND, and DBE Goal Payment Reduction.

b. Trainees

This Contract includes a trainee goal which is part of the Contractor's equal employment opportunity affirmative action program, on-the-job training aimed at developing full journey people in the type of craft or job classification involved on the project as specified in Section H of Federal Aid Project Attachment 2 – Specific Equal Employment Opportunity Responsibilities on NJDOT Federal Aid Projects, of the Special Provisions.

- 2. Wholly State Funded Contracts.** On contracts containing wholly State funding, State EEO regulations and goals apply as specified in State Funded Project Attachments 1 to 6 of the Special Provisions. The DCR/AA monitors and reviews these projects in conjunction with the New Jersey Department of Labor under New Jersey Statutes N.J.S.A. 10:5-31 et seq. and P.L. 1975 Chapter 27 and their accompanying rules.

The Contractor is obligated to comply with the SBE program, rules and regulations in the administration of the Contract. Failure to do so is a material breach of the Contract and may result in termination of the Contract, or other such remedy that the Department deems appropriate which may include, but is not limited to, rejection of bids, denial or limit of credit toward the Contract SBE goal, payment being delayed or withheld as specified in Section 105, assessing sanctions, liquidated damages as specified in Section 108, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108. Deliberate attempts by the Contractor or subcontractor to circumvent or commit fraud in the SBE program may result in termination of the Contract as specified in Section 108, investigation by the Department's Inspector General, and prosecution by the State Attorney General's Office.

Ensure compliance with the labor standards provisions of the Contract. Submit weekly certified payrolls as required in the Contract. Monitor and verify the status of all truck owner-operators working on wholly State funded highway construction projects used for the Contract. Failure of a Contractor may result in payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

Obtain subcontract agreements as specified in Section 108. Failure of a Contractor may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

The Contractor is responsible for compliance by any subcontractor, lower tier subcontractor as specified in Section 108. Utilize a SBE that performs a commercially useful function (CUF) and performs the work committed to at the time of contract award. Monitor and report SBE participation on the project, on a monthly basis. Failure of a subcontractor or lower tier subcontractor may result in denial or limit of credit toward the Contract SBE goal, payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

The Contractor is required to make good faith effort as defined in N.J.A.C. 17:27-1.1, et seq. in meeting the Equal Employment Opportunity, Affirmative Action, on-the-job training and female and minority work hour goals. Failure of a subcontractor or lower tier subcontractor may result in denial or limit of credit toward the Contract SBE goal, payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

Utilize the specific SBEs listed to perform the work and supply the materials for which each is listed on the CR-266 unless prior written consent from the DCR/AA is obtained. Unless DCR/AA consent is provided, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed SBE.

The Contractor is responsible for Equal Employment Opportunity requirements of the Contract, including Affirmative Action. EO workforce and On-The-Job Training. Failure by the Contractor to meet the requirements of the Affirmative Action Program for Equal Employment Opportunity may result in payment being delayed or withheld as specified in Section 105 pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

The Contractor and subcontractors are required to provide all information and reports as specified in Section 107.

a. Small Business Goals for This Project

NOTE: SUBCONTRACTING GOALS ARE NOT APPLICABLE IF THE CONTRACTOR IS A REGISTERED SMALL BUSINESS ENTERPRISE (SBE) FIRM.

This Contract includes a goal of awarding a percentage of the Total Contract Price to subcontractors, transaction expeditors, regular dealers, manufacturers and truckers qualifying as SBEs as specified in State Funded Project Attachment 1 – Small Business Enterprise Utilization Attachment for Wholly State Funded Projects, of the Special Provisions.

To receive SBE credit toward meeting a contract goal in the context of the contract award process, a SBE firm must be registered before the due date for bids or offers on the Contract. There may be situations after the award of the Contract, however, in which it is appropriate to count SBE credit for the use of a SBE firm registered after the contract is executed. To be eligible to obtain SBE credit, a SBE firm must be registered before the subcontract on which it is working is executed.

If a prospective Small Business Enterprise fails to meet the eligibility standards for participation the department's Small Business Program, the Contractor shall, make reasonable outreach efforts to replace that ineligible subcontractor with a registered Small Business whose participation is sufficient to meet the goal for the contract.

Prospective Small Businesses whose registration applications are denied or rejected by the New Jersey Commerce and Growth Commission are ineligible for participation on the project to meet Small Business goals, regardless of any pending appeal action in progress.

A Contractor is deemed to have satisfied the requirements of the SBE Program if the Contractor meets the Contract SBE goal or the approved SBE commitment, or demonstrates an adequate GFE. Failure to meet the Contract SBE goal or the approved SBE commitment, without demonstrating an adequate GFE, is considered a material breach of the Contract.

The Contract SBE goal or the approved SBE commitment may be changed by the Department based on changes in the Work that increase or decrease work assigned to approved SBEs, or to create potential SBE subcontracting opportunities regarding the Contract. The Department's DCR/AA will evaluate these changes in the Work in the same manner that the original Contract SBE goal or the approved SBE commitment was established. Submit a Revised CR-266 when the Contract SBE goal or the approved

SBE commitment is increased or decreased; in such circumstances, the Contractor shall meet the Modified SBE goal or demonstrate an adequate GFE.

If the Contractor fails to meet the Contract SBE goal, without demonstrating an adequate GFE, the Department will make a payment reduction from the total amount of payments made to the Contractor equal to the value of the SBE goal not attained as follows:

$$\text{SBE Goal Payment Reduction} = (\text{CG} - \text{AG}) \times \text{CP}$$

Where:

CG = Contract SBE Goal percentage, or approved SBE commitment, or if modified by the Department, the Modified SBE Contract Goal percentage

AG = Attained SBE Goal percentage = (total dollar amount paid to SBE suppliers and SBE subcontractors divided by CP) plus the percent value attributed to the Contractor's GFE approved by the Department.

CP = Total Adjusted Contract Price less the payment adjustments for FINAL LAYOUT, PERFORMANCE BOND AND PAYMENT BOND, and SBE Goal Payment Reduction.

105.01.03 Contractor Performance Evaluation

Pursuant to N.J.A.C. 16:44-1 et seq., the Department will assign Performance Evaluation ratings to determine the Contractor's Work Classification Limit.

The RE will perform a Contractor Performance Evaluation using the Department's form DC-83 that is current at the time of bid. The Department's form DC-83 is available at <http://www.state.nj.us/transportation/eng/forms/>. The RE will perform the Contractor Performance Evaluation at the end of the annual rating period, which extends from January 1 through December 31, if the value of work performed is at least 25% of the Total Adjusted Contract Price or has a value of more than \$1 million. If a Project is completed prior to the end of the regular annual rating period, the RE will perform the Contractor Performance Evaluation when the Department initiates a Certificate of Completion. The Department may extend the rating period or decide to not perform a Contractor Performance Evaluation Rating at its sole discretion, and will provide the Contractor with written notification of a decision to extend a rating period or to not perform a Contractor Performance Evaluation Rating. The RE will provide the Contractor with the breakdown and weighting of the Quality/Contract Compliance subcategories at the preconstruction conference. The Contractor Performance Evaluation process is not an administrative process and is contractual in nature.

Meet with the RE to review the Contractor Performance Evaluation rating when requested by the RE. A protest regarding the Performance Evaluation rating will be resolved through the Rating Review meeting process specified in this Subpart and not through the Contractual Claim Resolution Process specified in Subsection 107.12.

The Contractor may only protest a Contractor Performance Evaluation rating of less than 70. If the Contractor receives a Contractor Performance Evaluation rating of less than 70, the Contractor may protest the assigned rating by submitting a request for a Rating Review meeting with the Department Manager as specified in Subsection 101.04 (2) of the Special Provisions, responsible for the administration of the construction. Submit a written request for a Rating Review meeting to the Department Manager within 15 days of receiving the Contractor Performance Evaluation Rating from the RE. Provide with the request for a Rating Review Meeting a specific and detailed statement of the reasons for the protest and provide a copy of any documents that the Contractor wants the Department to consider. The Contractor waives its right to protest a Contractor Performance Evaluation Rating if it does not submit a written request for a Rating Review meeting within 15 days of the Contractor's receipt of the Contractor Performance Evaluation Rating.

The Department Manager will schedule and hold a meeting to review the Contractor's Performance Evaluation with the Contractor and hear the Contractor's protest within 30 days of receiving the Contractor's request for a Rating Review meeting. The Department Manager will issue a written decision upholding or adjusting the Performance Evaluation rating within 10 days of conducting the Rating Review meeting.

105.05 WORKING DRAWINGS

THE SECOND PARAGRAPH IS CHANGED TO:

Ensure that working drawing submissions also conform to the Department design manuals and other Department standards for the proposed work. After Award, the Department will provide additional formatting information, the number of copies required, and the address of the receiving designated design unit.

THE THIRD PARAGRAPH IS CHANGED TO:

Submit working drawings on 22 × 36-inch sheets. The Department may approve the use of 8-1/2 x 11 inch sheet on a case by case basis. Submit design calculations required for the working drawings on 8-1/2 × 11-inch paper. Submit 7 copies of the working drawings to the designated design unit for review with a copy of the transmittal letter to the RE. For railroad-carrying structures, submit 4 additional copies to the designated design unit. Submit an additional copy for each outside testing agency or authority involved in the Project.

THE NINTH PARAGRAPH IS CHANGED TO:

Submit working drawings for certification or approval as specified in Table 105.05-1. This list is not all inclusive. Ensure that the working drawings submitted for approval are signed and sealed by a Professional Engineer. The working drawings submitted for certification are not required to be signed and sealed by a Professional Engineer unless they alter the original Contract

TABLE 105.05-1 IS CHANGED TO:

Table 105.05 1 – Working Drawing Submission Category	
Certified	Approved
Breakaway I-Beam GA Sign Support Posts	Demolition Plans
Catalog Cuts	Erection Plans
Electrical Items Not Pre-Qualified	Other work shown on the Plans as conceptual
Sign Legends	
Sign Support Structures	

THE FIRST PARAGRAPH UNDER PART 1 OF TENTH PARAGRAPH IS CHANGED TO:

1. **Certified Working Drawings.** For working drawings requiring certification, include 2 blank blocks directly above the title block. Designate one block for design unit certification, and designate the other block for the Contractor’s approval stamp and a signed statement stating that the Contract has not been altered. The Department will require 30 days for review and certification or rejection and return of certified working drawings.

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

1. **Certified Working Drawings.** The Department will require 30 days for review and certification or rejection and return of certified working drawings.

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

2. **Approved Working Drawings.** The Department will require 45 days for review and approval or rejection and return of working drawings.

105.07.01 Working in the Vicinity of Utilities

A. Initial Notice.

THE FOLLOWING IS ADDED:

The corporations, companies, agencies, or municipalities owning or controlling the utilities, and the name and contact information of their local representative are as listed below:

Comcast
c/o Joe Demeter, Construction Coordinator
800 Rahway Ave
Union, NJ 07083
732.602.7444 ext 6202241 (o)
908.851.8892 (f)

NJ American Water Company
c/o Brad Cole, Project Manager
120 Raider Blvd.
Hillsborough, NJ 08844
908.431.3230 (o)
908.431.3260 (f)
bradley.cole@amwater.com

PSE&G (Electric)
c/o Burk Lambertson, Sr. Engineering Plant Supervisor
472 Weston Canal Road
Somerset, NJ 08873
732.764.3160 (o)
burk.lambertsonJr@pseg.com

PSE&G (Gas)
c/o James Cavanagh
40 Rock Avenue
Plainfield, NJ 07063
908.668.3840 (o)
james.cavanagh@pseg.com

Verizon
c/o Thomas Grabowski
Centralized Engineering Services
6000 Hadley Road
South Plainfield, NJ 07081
908.412.6169 (o)
thomas.j.grabowski@one.verizon.com

B. Locating Existing Facilities.

PART (2) IS CHANGED TO:

2. For the Department's fiber optic network, Obtain and complete the fiber optic markout request form as specified in the Special Provisions. Submit a fiber optic markout request form to the Traffic Operations location specified in the Special Provisions for the markout. The Traffic Operations will complete the markout within 15 days of the receipt. Provide the RE a copy of the markout, and maintain the markout until construction operations in the vicinity of the Department's fiber optic network are completed.

Fiber Optic Markout Form is available at:
<http://www.state.nj.us/transportation/eng/elec/ITS/requests.shtm>

Bureau of Traffic Operations, North Region (TOCN)
670 River Drive
Elmwood Park, NJ 07407-1347
Telephone: 732-697-7360

3.

Bureau of Electrical Maintenance, North Region
200 Stierli Court
Mt. Arlington, NJ 07856-1322
Telephone: 973-770-5065

C. Protection of Utilities.

THE SECOND PARAGRAPH IS CHANGED TO:

Protect and support existing Department electrical and ITS facilities and ensure that there is no interruption of service. Use hand tools only while working within two feet of the fiber optic network. At least 30 days before beginning the work, submit a plan to the RE for approval showing the method of support and protection. When access to Traffic Operation Centers, communication hubs, ITS cabinets or any other ITS facilities is required to perform work, submit a request for access to ITS facilities. Ensure that the request for access is made at least five working days before any work is scheduled, using the online form as specified in the Special Provisions.

<http://www.state.nj.us/transportation/eng/elec/ITS/access.shtm>

THE FOURTH PARAGRAPH IS CHANGED TO:

Access within railroad right-of-way is restricted. Before beginning work within the railroad ROW or on railroad facilities, obtain the railroad's written approval for access, the method of construction, and the schedule of the work. Provide a copy of the submittal and approval to the RE. Comply with the railroad's requirements for working within the railroad right-of-way.

THE FOLLOWING IS ADDED TO THE SIXTH PARAGRAPH

Ensure that the work is performed following the railroad's access and safety restrictions.

SECTION 106 – CONTROL OF MATERIAL

106.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that materials furnished for the Project are new, unless otherwise specified in the contract. Comply with 2 CFR 200.322 Procurement of Recovered Materials "to the highest percentage of recovered materials practicable" where the purchase price of the covered item listed exceeds \$10,000. Use materials that conform to the requirements of the contract. When required by the Contract, use only products and suppliers listed on the QPL. Use sources of materials that have been approved by the Department on a Materials Questionnaire as specified in 106.04.

106.02 DEPARTMENT-FURNISHED MATERIAL

106.03 FOREIGN MATERIALS

1. Wholly State-Funded Projects

THE ENTIRE TEXT IS CHANGED TO:

Due to the requirements of MAP-21 (Moving Ahead for Progress in the 21st Century Act), comply with the Federal Aid Project requirements specified under Subpart 2.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

For steel and iron products incorporated into the Project, provide a certification from the manufacturer stating the country where the steel or iron product was melted and manufactured including application of coatings which protect or enhance the value of the material. Ensure that 4 copies of the manufacturer's certification are provided with each

delivery of steel and iron products. Retain 1 copy and submit 3 copies to the RE. Ensure that the certification includes, materials description, quantity of material represented by the certification, country of manufacture, and notarized signature of a person having legal authority to bind the supplier. If a Certification of Compliance as specified in 106.07 contains a statement regarding the country of manufacture, a separate certification is not necessary.

106.04 MATERIALS QUESTIONNAIRE

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

For ITS systems as specified in Section 704, obtain approval of system working drawings including individual components and Electrical material instead of submitting a materials questionnaire.

106.07.01 Certification of Compliance

THE ENTIRE TEXT IS CHANGED TO:

Submit manufacturer's Certifications of Compliance stating that the materials and/or assemblies fully comply with the requirements of the Contract when required by the Contract or requested by the Department.

Ensure that Manufacturer's Certification of Compliance contains the following information:

1. Project Name.
2. Name of the Contractor.
3. Material description.
4. Quantity of material represented by the certification.
5. Means of identifying the consignment, such as label marking or seal number.
6. Date and method of shipment.
7. A statement that the material conforms to the Contract material requirements and that representative samples have been sampled and tested.
8. If the submission is for an assembly of materials, a statement that the assembly conforms to the Contract.
9. Signature of a person having legal authority to bind the supplier.
10. Typed or printed name of the person who signed the certification.

Before incorporating the materials into the Project, obtain 3 copies of the manufacturer's Certifications of Compliance for materials, components, and manufactured items that are accepted by certification. Retain 1 copy and submit 2 copies to the RE. With the Certification of Compliance, provide a transmittal identifying the Item for which it is submitted. For products that contain steel or iron, attach additional documents as required by the certification procedures as specified in 106.07.02. The Contractor may submit the Certifications of Compliance electronically to the RE in a scanned document. Include the transmittal and all backup documentation in the scanned document.

The Department has the right to sample and test materials or assemblies accepted on the basis of Certifications of Compliance at any time. The Department will reject materials or assemblies, whether in place or not, if found not to be in conformance with the Contract requirements.

The Department will not make payment for an Item for which material is accepted on the basis of a Certification of Compliance until the RE has received the required Certification of Compliance and has inspected and accepted the material or assembly.

106.07.02 Certification for Iron and Steel

THE ENTIRE TEXT IS CHANGED TO:

- A. Precast Concrete Steel and Concrete Pipe Certification of Compliance.** For precast concrete and concrete pipe items, a Buy America Compliance Plan is required to confirm that the material meets the Buy America requirements as specified in 106.03. The ME will periodically audit compliance with the program at the precast plant. If the precast concrete item is not inspected by ME, submit a Certification of Compliance for the precast concrete item as required in 106.07.01. When a Certification of Compliance is submitted, ensure that the Certification of Compliance contains a statement that the reinforcing steel used in the precast concrete item complies with the Buy America requirements as specified in 106.03
- B. Step Certification of Compliance.** For products that contain steel or iron components and are not covered in 106.07.02.A, step Certification of Compliance is required to confirm that the item meets the Buy America requirements as specified in 106.03. A step certification is a process under which each handler (e.g., supplier,

fabricator, manufacturer, processor, coating facility) of the iron and steel components certifies that the steel and iron components were of domestic origin and that their step in the process was domestically performed.

Every step in the process from melting to coating must be performed in the United States in order for the steel or iron component to be considered domestic and must be documented by step certification. If a domestic source for a steel or iron component cannot be found, submit a request for waiver to the Department. Do not purchase non-domestic steel or iron components without the express written consent of the Department.

Ensure that 3 copies of the Contractor's Certification of Compliance (Form DC-17) and the step Certifications of Compliance are provided for items containing steel or iron. Retain 1 copy and submit 2 copies to the RE. The Contractor may submit the DC-17 and the step certifications electronically in a scanned document.

Ensure that step Certifications of Compliance contain the following information:

1. Name of the Company supplying the material.
2. Name and location of the Company the material was shipped to.
3. Material description.
4. Quantity of material represented by the Certification.
5. Means of identifying the consignment, such as label marking or seal number.
6. Date and method of shipment.
7. A statement that the material conforms to the Contract material requirements and to the Buy America requirements in 106.03.
8. A statement that all steel or iron components in the material or assembly were "melted and manufactured in the US", unless there is non-domestic steel or iron in the material or assembly.
9. If there is non-domestic steel or iron in the assembly, describe in detail the non-domestic steel or iron material and the quantity. Attach a copy of the Department's approval for the use of non-domestic steel or iron components.
10. Signature of a person having legal authority to bind the supplier.
11. Typed or printed name of the person who signed the certification.

The Department will not make payment for work containing steel or iron materials until the RE has received the required DC-17 and step Certifications of Compliance, has inspected and accepted the material or assembly.

106.09 SUBSTITUTES FOR PROPRIETARY ITEMS

THE FOLLOWING NEW SECTION IS ADDED:

106.10 USE OF UNITED STATES FLAG VESSELS

For Federal-Aid projects, comply with the Cargo Preference Act of 1954 as amended (46 U.S.C. 1241(b)) and the requirements of 46CFR381. Use privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liner and tankers) whenever shipping any equipment, material or commodities pursuant to this contract to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels, and ensure that within 20 days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside the United States, submit a legible copy of a rated "on-board" commercial ocean bill-of-lading in English for each shipment of cargo to the RE and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 in accordance with 46 CFR 381.7(a)-(b).

SECTION 107 – LEGAL RELATIONS

107.02 DISCRIMINATION IN EMPLOYMENT ON PUBLIC WORKS

THE TITLE AND ENTIRE SUBSECTION IS CHANGED TO:

107.02 NONDISCRIMINATION

It is the policy of the Department that anyone performing work under any program, activity, or Contract with the Department, shall not discriminate on the basis of race, creed, color, national origin, age, ancestry, nationality, marital or

domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran's status, income level or ability to read, write or speak English.

Pursuant to N.J.S.A. 10:2-1, the Contractor agrees that 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 their behalf of such contractor or subcontractor, shall by reason 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 employments relates;

No Contractor, subcontractor, nor any person acting on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of the 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.

There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50 for each person for each day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and this contract may be terminated by the Department, 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 Department of any prior violation of this section of the contract.

Standard Title VI Assurance. During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), in accordance with Title VI /Nondiscrimination Assurance – Appendix A, USDOT Order 1050.2A agrees as follows:

1. **Compliance with Regulations:** The Contractor will comply with the Acts and Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which herein incorporated by reference and made a part of this Contract.
2. **Nondiscrimination:** The Contractor, with regard to the Work performed by it during the Contract, will not discriminate on the grounds race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran's status, income level or ability to read, write or speak English in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurement of Materials and Equipment:** In all solicitations, either by competitive bidding, negotiation made by the Contractor for Work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this Contract and the Acts and Regulations relative to nondiscrimination on the grounds of race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran's status, income level or ability to read, write or speak English.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA, to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Non-Compliance:** In the event of a Contractor's noncompliance with the Nondiscrimination provisions of this Contract, the Recipient will impose such Contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding payments to the Contractor under the Contract until the Contractor complies; and/or
2. Cancelling, terminating, or suspending a Contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interest of the United States.

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") in accordance with the Title VI /Nondiscrimination Assurance – Appendix E, USDOT Order 1050.2A, agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252); and 49 CFR Part 21.
2. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601);
3. Section 162(a) of the Federal Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.);
4. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended; and 49 C.F.R. Part 27;
5. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.);
6. Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended;
7. The Civil Rights Restoration Act of 1987, (PL 100-209);
8. Title II and III of the Americans with Disabilities Act (42 U.S.C. § 12131- - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
9. The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123);
10. Executive Order 12898, Federal Actions to address Environmental Justice in Minority Populations and Low Income Populations;
11. Executive Order 13166, Improving Access to services for Persons with Limited English Proficiency (70 Fed. Reg. at 74087 to 74100);
12. 23 CFR Part 230 (EEO, Affirmative Action & OJT)
13. 49 CFR Part 26
14. Executive Order 11246 as amended
15. Section 503 of the Rehabilitation Act of 1973 as amended
16. Section 4212 of the Vietnam Era Veteran's Readjustment Assistance Act, as amended
17. New Jersey Statutes N.J.S.A. 10:5-31 et seq.
18. New Jersey P.L. 1975 Chapter 27

107.03 AFFIRMATIVE ACTION, DISADVANTAGED BUSINESS ENTERPRISES, OR EMERGING SMALL BUSINESS ENTERPRISE

THE TITLE AND ENTIRE SUBSECTION IS CHANGED TO:

107.03 AFFIRMATIVE ACTION, DISADVANTAGED BUSINESS ENTERPRISES OR EMERGING SMALL BUSINESS ENTERPRISES, AND SMALL BUSINESS ENTERPRISES

It is the public policy of the State and of the United States that no individual, group, firm, corporation or joint venture working on or seeking to work on a Public Works Project should be discriminated against on the basis of race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, liability for military service, affectional or sexual orientation, atypical cellular or blood trait, or genetic information (including the refusal to submit to genetic testing). The Department has developed Affirmative Action, Disadvantaged Business Enterprise, or Emerging Small Business Enterprise Programs to implement this policy, and the regulations and requirements applicable to the Contract are contained in the Special Provisions. The Department will resolve conflicts between these regulations and requirements and the other provisions of the Contract to further the above stated public policy.

Contract Assurance. The Contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49

CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsive.

107.04 NEW JERSEY CONTRACTUAL LIABILITY ACT

THE FOURTH PARAGRAPH IS CHANGED TO:

For purposes of determining the date of “completion of the contract” pursuant to N.J.S.A. 59:13-5, “completion of the contract” occurs on the date that the Contractor provides written notice to the Department of acceptance of the Proposed Final Certificate or conditional acceptance of the Proposed Final Certificate or the 30th day after the Department issues the Proposed Final Certificate, whichever event occurs first.

107.09 INDEPENDENT CONTRACTOR

THE ENTIRE SUBSECTION IS CHANGED TO:

The relationship of the Contractor to the State is that of an independent contractor. Conduct business consistent with such status. Do not hold out or claim to be an officer or employee of the Department by reason hereof. Do not make a claim, demand, or application to or for the rights or privileges applicable to an officer or employee of the Department, including, but not limited to, Workers Compensation Insurance, unemployment insurance benefits, social security coverage, or retirement membership or credit.

107.12 THE CONTRACTOR CLAIM RESOLUTION PROCESS

107.12.01 Satisfying the Notice Requirements

THE FOLLOWING IS ADDED TO THE SECOND PARAGRAPH:

Upon request, provide the RE with 3 copies of all documentation submitted in support of the claim.

107.12.02 Steps

3. Step III, Claims Committee.

THE SECOND PARAGRAPH IS CHANGED TO:

The Claims Committee will not review a claim or combination of claims valued less than \$250,000 until after the receipt of conditional release as specified in 109.11. If the Contract is 75 percent complete or greater as measured by Contract Time or Total Adjusted Contract Price, the Claims Committee will not review a claim or combination of claims valued more than \$250,000 until after receipt of conditional release as specified in 109.11. If the Claims Committee does not review a claim or combination of claims before Completion, the Claims Committee will review the claim or combination of claims at a single session of the Claims Committee after the receipt of the conditional release as specified in 109.11 and all claims have been reviewed at Steps I and II of the Claims Resolution Process. When reviewing a combination of claims, the Claims Committee will not review any individual claim valued less than \$20,000.

THE FOLLOWING SUBSECTION IS ADDED:

107.14 PATENTED DEVICES, MATERIALS, AND PROCESSES

THE FOLLOWING IS ADDED

Observe 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements” and any implementing regulations set forth by the USDOT, FHWA or FAA if State contract is for the performance of experimental, developmental, or research work funded under a Federal Aid Project.

107.17 COMMUNICATION WITH THE NEWS MEDIA

Do not communicate with the news media or issue a news release without obtaining a prior written approval from the Department.

SECTION 108 – PROSECUTION AND COMPLETION

108.01 SUBCONTRACTING

THE FOLLOWING PARAGRAPH IS ADDED BEFORE THE FIRST PARAGRAPH:

Do not discriminate on the grounds of race, creed, color, national origin, age, ancestry, nationality, marital/domestic partnership/civil union status, gender, disability, religion, affectional or sexual orientation, gender identity or expression, family status, atypical cellular or blood trait, genetic information, military service, or veterans status, in the selection and retention of subcontractors, including procurement of materials and leases of equipment. In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurement of materials, or leases of equipment, each potential subcontractor or firm will be notified by the Contractor of the Contractor's obligations under this Contract and the Acts and Regulations relative to Nondiscrimination.

THE FOLLOWING IS ADDED AFTER THE THIRD SENTENCE IN THE FIRST PARAGRAPH:

Ensure that DBEs/ESBEs have an equal opportunity to receive and participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds in performing work with the Department. Ensure that SBEs have an equal opportunity to receive and participate in the performance of contracts financed in whole with State funds in performing work with the Department.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

On Federal aid projects, the Contractor shall not terminate a DBE subcontractor, lower tier DBE subcontractor, DBE transaction expeditor, DBE regular dealer, DBE supplier, DBE manufacturer and DBE trucker or an approved substitute DBE firm without prior written consent of DCR/AA. Prior to replacement of the DBE or ESBE firm, the Contractor shall in writing, notify the DBE or ESBE firm and the DCR/AA of its intent to terminate and/or substitute a DBE or ESBE firm, and the reason for the request. The Contractor must give the DBE or ESBE 5 days to respond to the Contractor's notice and advise the DCR/AA and the Contractor of reasons why, if any, it objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the DCR/AA may provide a response period shorter than five days. At the time the Contractor requests termination or replacement of a DBE or ESBE firm, the Contractor must submit documentation to the DCR/AA of its good faith efforts in accordance with 49 CFR Part 26.53 if they are replacing the terminated DBE/ESBE with a non-DBE or non-ESBE firm. The DCR/AA must approve the termination and substitution of all DBE or ESBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers. The Contractor needs to show they began good faith efforts to replace or substitute with another DBE or ESBE well in advance of the request to terminate or substitute. The Department's DCR/AA has sole authority to approve the termination, replacement or substitution of DBE/ESBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers.

On wholly state funded projects, the Contractor shall not terminate a SBE subcontractor, lower tier SBE subcontractor, SBE transaction expeditor, SBE regular dealer, SBE manufacturer and SBE trucker, or an approved substitute SBE firm, without prior written consent of DCR/AA. Prior to replacement of the SBE firm, the Contractor shall in writing, notify the SBE firm and the DCR/AA of its intent to terminate and/or substitute a SBE firm, and the reason for the request. The Contractor must give the SBE 5 days to respond to the Contractor's notice and advise the Department and the Contractor of reasons why, if any, it objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the DCR/AA may provide a response period shorter than 5 days. At the time the Contractor requests termination or replacement of a SBE firm, the Contractor must submit documentation to the DCR/AA of its good faith efforts if they are replacing the terminated SBE firm with a non-SBE firm. The DCR/AA must approve the termination and substitution of all SBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers. The Contractor needs to show they began good faith efforts to replace with another SBE

well in advance of the request to terminate or substitute. The Department's DCR/AA has sole authority to approve the termination, replacement or substitution of SBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers.

1. Values and Quantities.

THE FOLLOWING IS ADDED TO FIRST PARAGRAPH:

1.

Specialty Items are as listed below:

Electrical wire items.

2. Limits and Restrictions.

PART 3 IS CHANGED TO:

3. The Contractor is barred from subcontracting to firms and individuals suspended or debarred by the Department or included in the State of New Jersey Consolidated Debarment Report maintained by the Department of the Treasury, Division of Building and Construction, Bureau of Contractor Prequalification. The Contractor must certify that neither the individual, partnership, corporation, joint venture, or limited liability corporation applying to do subcontract work nor any of its corporate officers, stockholders, partners, or members are collectively or individually suspended, debarred, proposed for debarment, disqualified, declared ineligible, or voluntarily excluded from doing business by this or any other State or sub-division thereof or listed in the Federal Government's System for Award Management (SAM), located at: <https://www.sam.gov/portal/SAM/#1>.

3. Subcontract Requirements.

THE ENTIRE PART 3 IS CHANGED TO:

3. **Subcontract Requirements.** Ensure that subcontract agreements include the following Contract provisions:
 - a. **Federal Aid Projects.** When subcontracting work on a Federal Aid project, ensure the following are included in the subcontract agreement.
 1. Disadvantaged Business Enterprise Utilization (Federal Aid Project Attachment 1), or Emerging Small Business Enterprise Utilization (Federal Aid Project Attachment 1).
 2. Specific Equal Employment Opportunity Responsibilities on NJDOT Federal Aid Projects (Federal Aid Project Attachment 2).
 3. Requirements for Affirmative Action to Ensure Equal Employment Opportunity on NJDOT Federal Aid Projects (Federal Aid Project Attachment 3).
 4. Federal Equal Employment Opportunity Contract Specifications for NJDOT Federal Aid Projects (Federal Aid Project Attachment 4).
 5. State of New Jersey Mandatory Equal Employment Opportunity Language on NJDOT Federal Aid Projects (Federal Aid Project Attachment 5).
 6. Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints on NJDOT Federal Aid Projects (Federal Aid Project Attachment 6).
 7. Payroll Requirements for NJDOT Federal Aid Projects (Federal Aid Project Attachment 7).
 8. FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts as amended or supplemented (Federal Aid Project Attachment 8).
 9. State Mandatory Addendum to FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts as Amended or Supplemented (Federal Aid Project Attachment 9).
 10. Federal Mandatory Equal Opportunity Language on Federal Aid Projects (Federal Aid Project Attachment 10).
 11. Byrd Anti-Lobbying Certification (Federal Aid Project Attachment 11).
 12. The Standard Title VI Assurance found in Subsection 107.02, as amended or supplemented.
 13. General Wage Determinations Issued Under the Davis-Bacon and Related Acts.
 14. New Jersey Department of Labor Prevailing Wage Rate Determination.
 15. New Jersey Department of Transportation Code of Ethics for Vendors.
 16. Subsection 107.04 as amended or supplemented.
 17. Subsection 106.10 as amended or supplemented.

18. The Contract Assurance found in Subsection 107.03, as amended or supplemented.

b. Wholly State Funded Projects. When subcontracting work on a wholly State funded project, ensure the following are included in the subcontract agreement.

1. Small Business Enterprise Utilization on Wholly State Funded Projects (State Funded Project Attachment 1).
2. State of New Jersey Equal Employment Opportunity Special Provisions for Wholly State Funded Projects (State Funded Project Attachment 2).
3. Requirements for Affirmative Action to Ensure Equal Employment Opportunity on Wholly State Funded Projects (State Funded Project Attachment 3)
4. Investigating, Reporting and Resolving Employment Discrimination and Sexual Harassment Complaints on Wholly State Funded Projects (State Funded Project Attachment 4)
5. Payroll Requirements for Wholly State Funded Projects (State Funded Project Attachment 5).
6. Americans with Disabilities Act Requirements for Wholly State Funded Projects (State Funded Project Attachment 6).
7. New Jersey Department of Labor Prevailing Wage Rate Determination.
8. New Jersey Department of Transportation Code of Ethics for Vendors.
9. Subsection 107.04 as amended or supplemented.
10. The Standard Title VI Assurance found in Subsection 107.02, as amended or supplemented.

THE THIRD PARAGRAPH IS CHANGED TO:

If a partial quantity of work for a unit price Item is subcontracted, the Department will determine the value of the work subcontracted by multiplying the price of the Item by the quantity of units to be performed by the subcontractor.

THE FOURTH PARAGRAPH IS CHANGED TO:

If only a portion of work of an Item is subcontracted, the Department will determine the value of work subcontracted based on the value of the work subcontracted as indicated in the subcontract agreement and as shown in a breakdown of cost submitted by the Contractor.

3. Subcontract Requirements. Ensure that subcontract agreements include the following Contract provisions:

a. Federal Aid Projects.

THE FOLLOWING PART IS ADDED:

14. Subsection 106.10 as amended or supplemented.

108.02 COMMENCEMENT OF WORK

THE SUBPART 4 IN THE FIRST PARAGRAPH IS CHANGED TO:

4. Progress schedule as specified in 153.03

108.06 NIGHT OPERATIONS

2. Visibility Requirements for Workers and Equipment.

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that workers wear a 360° high-visibility retroreflective safety garment meeting ANSI/ISEA Class 3, Level 2 standards.

108.07.02 Changes to the Traffic Control Plan (TCP)

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Submit requests for changes to the TCP to the RE for approval at least 30 days before the change is needed.

108.08 LANE OCCUPANCY CHARGES

THE SECOND PARAGRAPH IS CHANGED TO:

The RE will keep record of each occurrence as well as the cumulative amount of time that a lane is kept closed beyond the lane closure schedule and provide the record to the Contractor. The Department will calculate the lane occupancy charge by multiplying the length of time of the delayed opening, in minutes, by the rate of \$10 per minute per lane, unless otherwise specified in the Special Provisions. The total amount per day for the lane occupancy charge that the Department will collect will not exceed \$10,000.00.

108.09 MAINTENANCE WITHIN THE PROJECT LIMITS

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

- 6. Access to ITS devices and their respective controllers and meter cabinets is maintained throughout the duration of the project.

108.10 CONTRACT TIME

The Contract time for Substantial Completion shall be 180 consecutive calendar days, commencing on date to be specified in a written Notice to Proceed of the Owner. The Contract time for Final Completion shall be 180 consecutive calendar days, commencing on date to be specified in a written Notice to Proceed of the Owner.

108.11.01 Extensions to Contract Time

B. Types of Delays.

1. Non-Excusable Delays.

THE FOLLOWING IS ADDED:

For work performed by Utilities, delays up to 30 percent of the estimated duration specified in 105.07.02 are considered non-excusable. The duration includes both the advance notice and the completion of the work by the Utility.

For delays caused by Railroads, delays up to 30 percent of the estimated availability specified in 105.07 are considered non-excusable.

2. Excusable, Non-Compensable Delays.

b. Utilities.

THE FOLLOWING IS ADDED:

For delays caused by Railroads, when the availability to access is reduced by more than 30 percent greater than the estimated availability specified in 105.07.

THE LAST PARAGRAPH IS CHANGED TO:

If approved excusable, non-compensable delays exceed a total of 90 days, the time in excess of 90 days will become excusable and compensable as specified in 108.11.01.B.3.

108.14 DEFAULT AND TERMINATION OF CONTRACTOR’S RIGHT TO PROCEED

LIST (1) OF THE FIRST PARAGRAPH IS CHANGED TO:

- 1. Fails to begin construction operations within 40 days of execution of the Contract.
- 2. Fails to comply with Contract requirements regarding minimum wage payments, 49 CFR Part 26 et seq., the DBE program requirements, SBE program requirements, and equal employment opportunity requirements

THE FOLLOWING IS ADDED AFTER THE 2ND PARAGRAPH:

If the Department directs the Surety to complete the Contract, and the Surety elects to use a completion-contractor to perform the Work, the Surety must promptly submit to the Department a request for approval of the proposed completion-contractor as a subcontractor as per Section 108.01. The Department has the right to reject a request by the Surety to use the Contractor as the completion-contractor, either directly or under the direction of a consultant to the Surety. In addition, the Department has the right to reject a request by the Surety to contract with employees of the

Contractor, directly or under the direction of a consultant to the Surety, to complete the Contract. The Department's right to reject contained in this paragraph is based on the sole discretion of the Department.

108.19 COMPLETION AND ACCEPTANCE

THE FOLLOWING IS ADDED:

No Incentive Payment for Early Completion is specified for this project.

108.20 LIQUIDATED DAMAGES

THE FOLLOWING IS ADDED:

Liquidated damages are as per Section 43 'Liquidated Damages' in the General Specifications.

SECTION 109 – MEASUREMENT AND PAYMENT

109.01 MEASUREMENT OF QUANTITIES

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will designate Items as Measured Items or as Proposal Items by having a suffix of M or P in the Item number respectively. The Department will measure quantities of Measured Items for payment.

THE LAST SENTENCE OF THE LAST PARAGRAPH IS CHANGED TO:

The Department will measure quantities for Proposal Items that are designated on the Plans as "if and where directed" for payment when the RE directs work using the "if and where directed" quantity.

109.02 SCOPE OF PAYMENT

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The Department will not make additional or separate payment for work or portion of work unless specifically provided for in the "Measurement and Payment" Subsection.

109.05 ESTIMATES

THE SECOND PARAGRAPH IS CHANGED TO:

Pay subcontractors and suppliers for satisfactory performance of their work no later than 30 days from receipt of each payment made by the Department.

Pay subcontractors and suppliers the full amount of retainage no later than 30 days from receipt of payment made by the Department for the subcontractor's or supplier's work.

The RE will provide a summary of the Estimate to the Contractor. Before the issuance of each payment, certify, on forms provided by the Department, that:

1. Each subcontractor or supplier has been paid the amount due, including retainage, from the previous progress payment and will be paid the amount due from the current progress payment, including retainage, for the subcontractor or supplier's work that was paid by the Department.
2. There exists a valid basis under the terms of the subcontractor's or supplier's contract to withhold payments from the subcontractor or supplier, and therefore payment is withheld.

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

If the Contractor fails to pay the subcontractor or supplier within 30 days after the subcontractor or supplier satisfactorily completes the specified work, the Department may withhold progress payments from the Contractor, until the Contractor pays the subcontractor or supplier all delinquent amounts due, or the Contract is terminated, or the matter is resolved under N.J.S.A. 52:32-40 and N.J.S.A. 52:32-41.

If the Department receives an allegation from a subcontractor or a supplier that the Contractor has not paid the subcontractor or supplier the amount due from a previous progress payment, including retainage, submit to the RE within 10 days of a request made by the RE, evidence that payment has been made.

THE EIGHTH PARAGRAPH IS CHANGED TO:

From the total Estimate amount, excluding amounts for subcontracted work on Federal aid projects, the Department will deduct and retain 2 percent until Substantial Completion.

THE TENTH PARAGRAPH IS CHANGED TO:

The RE has the right to not process an Estimate when, in the judgment of the RE, the Work is not performed or proceeding as specified in the Contract or following the Department giving the Contractor and Surety notice of default as specified in 108.14.

109.06 MATERIALS PAYMENTS AND STORAGE

THE TEXT BEFORE THE LIST UNDER THE FIRST PARAGRAPH IS CHANGED TO:

The Contractor may request payment for the cost of materials, including the storage cost, not incorporated into the Work. If approved by the RE, the Department will make payment for the cost of materials, including storage costs if such payment exceeds \$25,000; however, the amount of payment may not exceed 85 percent of the bid price for the associated Item. The Department will not make payment for such materials until the RE is satisfied that:

109.07 BONDS POSTED IN LIEU OF RETAINAGES

THE FIRST PARAGRAPH IS CHANGED TO:

The Contractor may deposit negotiable bonds of the State or any of its political subdivisions, which have been approved by the Department, in an escrow account to secure release of all or a portion of the retainage withheld as specified in [109.05](#). Establish the account under the provisions of an escrow agreement to be entered into between the Contractor, the Department, and a bank located in the State that is an authorized depository with a trust department. Pay the charges of the bank for services rendered according to the terms and conditions of the escrow agreement.

109.09 AUDITS

THE FOLLOWING IS ADDED:

Pursuant to N.J.S.A. 52:15C-14(d), relevant records of private vendors or other persons entering into contracts with the Department are subject to audit or review by the New Jersey Office of the State Comptroller. Therefore, the Contractor shall maintain all documentation related to products, transactions or services under the 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.

DIVISION 150 – CONTRACT REQUIREMENTS

SECTION 151 – PERFORMANCE BOND AND PAYMENT BOND

151.03.01 Performance Bond and Payment Bond

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Submit the broker's fees, the certified rate schedule, paid invoices and the report of execution for the bond to the RE.

151.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM'S PAY UNIT IS REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
PERFORMANCE BOND AND PAYMENT BOND	DOLLAR

SECTION 152 – INSURANCE

152.03.01 Owner's and Contractor's Protective Liability Insurance

A. Policy Requirements.

THE FOURTH SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that policies are underwritten by companies with a current A.M. Best rating of A- with a Financial Size Category of VII or better.

3. Owner's and Contractor's Protective Liability Insurance.

THE ENTIRE TEXT IS CHANGED TO:

Procure a separate Owner's and Contractor's Protective Liability Insurance Policy with a minimum limit of liability in the amount of \$4,000,000 per occurrence as a combined single limit for bodily injury and property damage. Ensure the policy is endorsed to include Severability of Interest/Separation of Insureds clause. Ensure the policy names the State, its officers, employees, and agents as additional insured. Provide documentation from the insurance company that indicates the cost of the Owner's and Contractor's Protective Liability Insurance Policy.

Ensure the policy is endorsed to include per project aggregate.

6. Marine Liability Insurance.

THE ENTIRE TEXT IS CHANGED TO:

If construction operations require the Contractor to use a boat, procure Marine Liability Insurance with a minimum limit of liability in the amount of \$2,000,000 per occurrence. Ensure the policy is endorsed to include:

1. Personal injury.
2. Contractual liability.
3. Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles.
4. Per project aggregate.

Ensure the policy names the State, its officers, employees, and agents as additional insured.

152.03.02 Railroad Protective Liability Insurance

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure the policy is endorsed to include per project aggregate.

THE THIRD PARAGRAPH IS CHANGED TO:

Ensure the policy is endorsed to include Severability of Interest/Separation of Insureds clause. Submit the policy for railroad protective liability insurance and endorsements to the Comprehensive General Liability Insurance to the railroad WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS CITY OF PLAINFIELD, COUNTY OF UNION FEDERAL PROJECT NO. HSIP 0601(301)

company for approval. The Department will list the name and address of the railroad company representative in the Special Provisions. Construction operations will not be permitted on railroad property before approval of insurance by the railroad company. Reconcile all policy requirements to the satisfaction of the railroad company and the RE.

152.03.03 Pollution Liability Insurance

SUBPART 9 IS ADDED TO THE THIRD PARAGRAPH:

- 9. Per project aggregate.

152.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS' PAY UNITS ARE REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE	DOLLAR
RAILROAD PROTECTIVE LIABILITY INSURANCE	DOLLAR
POLLUTION LIABILITY INSURANCE	DOLLAR

THE LAST PARAGRAPH IS CHANGED TO:

The Department will make initial payment for OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE, RAILROAD PROTECTIVE LIABILITY INSURANCE, and POLLUTION LIABILITY INSURANCE at the lesser of the bid amount, or actual costs as documented from paid invoices. If the Bid amount is greater than the amount indicated on the documented paid invoices, the Department will make payment for any remainder, up to the Bid amount, with the final monthly Estimate.

SECTION 153 – PROGRESS SCHEDULE

153.03.01 CPM PROGRESS SCHEDULE

THE THIRD PARAGRAPH IS CHANGED TO:

The Contractor may propose alternate staging. Ensure that proposed alternate staging does not interfere with work done by Others without written concurrence from the affected Others. The Department may reject the proposed alternate staging if it causes an increase to the cost of work done by Others. The Contractor is responsible for the cost of changes or additional work required as a result of completing the work according to the proposed alternate staging.

1. Preliminary Schedule Submission.

THE SECOND PARAGRAPH IS CHANGED TO:

The RE may require 3 color paper copies of the preliminary schedule, Gantt Chart, as specified in 153.03.02.2.e, and a network diagram (PERT) printed on 36 × 22-inch plans detailing the activity relationships.

2. Baseline Schedule Submission.

THE LAST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The RE may require the Contractor to submit 3 color paper copies of the baseline schedule.

THE SECOND PARAGRAPH PART 3 IS CHANGED TO:

- 3. The RE may require 3 color paper copies of the tabular reports, as specified in 153.03.02.2, and a printed network diagram (PERT) on 36 × 22-inch sheets detailing the activity relationships.

153.03.02 CPM Progress Schedule Updates

THE LAST PARAGRAPH IS CHANGED TO:

If the project falls behind schedule for nonexcusable delays, so that the schedule indicates that the Work will not be completed by the Completion date, as specified in 108.10, take the necessary steps to improve progress. Under such circumstances, the RE may direct the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, and supplement its construction plant. Furthermore, the RE may require the

Contractor to submit for approval a recovery schedule showing how the Contractor proposes to meet the directed acceleration.

2. Tabular Reports.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

The RE may require 3 color paper copies of the longest path sort, total float sort, responsibility sort, area sort, and Gantt chart.

153.03.03 Bar Chart Progress Schedule and Updates

A. Schedule.

THE THIRD SENTENCE OF THE THIRD PARAGRAPH IS CHANGED TO:

Provide 3 color paper copies of a bar chart progress schedule or similar type that is acceptable to the RE for approval as follows:

THE FOLLOWING IS ADDED:

If the project falls behind schedule for nonexcusable delays, so that the schedule indicates that the Work will not be completed by the Completion date, as specified in 108.10, take the necessary steps to improve progress. Under such circumstances, the RE may direct the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, and supplement its construction plant. Furthermore, the RE may require the Contractor to submit for approval a recovery schedule showing how the Contractor proposes to meet the directed acceleration.

153.04 MEASUREMENT AND PAYMENT

THE THIRD PARAGRAPH IS CHANGED TO:

If the Contractor's CPM Progress Schedule update is not approved by the date of the progress meeting for the following update, the Department will assess liquidated damages to recover the Department's increased administrative costs. The Department will assess damages for each delinquent update as follows:

THE FOLLOWING SECTION IS DELETED:

SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS

157.03.01 Construction Layout

THE SEVENTH PARAGRAPH IS CHANGED TO:

Provide the Utilities with the layout needed to install relocated utility facilities and coordinate the Work. Ensure that relocated facilities do not conflict with proposed construction, including High Voltage Proximity Act conflicts.

THE FOLLOWING IS ADDED AFTER THE NINTH PARAGRAPH:

For each bridge and sign structure within the Project Limits, provide the RE as-built measurements of the vertical under clearance at each lane line, shoulder line, curb line and edge of pavement line under a structure to the nearest inch. For each bridge structure, provide vertical under clearance measurements at each fascia beam.

157.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM'S PAY UNIT IS REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
CONSTRUCTION LAYOUT	DOLLAR

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will adjust payment for CONSTRUCTION LAYOUT based on the final contract amount and will calculate as follows:

$$CL = \frac{CL_B \times (C_F - E_F)}{C_O - E_O}$$

Where:

CL = Adjusted payment for CONSTRUCTION LAYOUT.

CL_B = Bid price for CONSTRUCTION LAYOUT.

C_O = Original Contract Price.

C_F = Final Contract Price.

E_F = Total of CL_B and the final cost for PERFORMANCE BOND AND PAYMENT BOND, Incentive/Disincentives for completion/interim completion, and claim settlements.

E_O = Total of CL_B, and PERFORMANCE AND PAYMENT BOND.

SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL AND WATER QUALITY CONTROL

158.03.02 SESC Measures

8. Inlet Filters. Provide Type 1 and Type 2 inlet filters as follows:

a. Type 1.

THE ENTIRE TEXT IS CHANGED TO:

For a new inlet structure without a casting, mold welded steel wire fabric around the inlet walls. Extend the welded steel wire a minimum of 6 inches down each side of the structure. Secure geotextile to the welded wire fabric. Place No. 2 coarse aggregate against the inlet structure to hold the inlet filter in place.

For an inlet structure with a casting and exposed exterior walls, place geotextile under the casting and extend it a minimum of 6 inches below the top of the exposed walls. Place No. 2 coarse aggregate around the drain hole opening.

For an existing inlet structure without exposed exterior walls, place geotextile under the grate and extend the geotextile for a minimum of 6 inches beyond the grate.

For an inlet with a curb piece and without exposed exterior walls, ensure that the opening in the curb piece has a height of 2 inches. If the opening is greater than 2 inches, achieve the 2 inch opening size by wrapping the geotextile around an appropriately sized piece of lumber. Place the lumber against the vertical opening.

19. Oil-Only Emergency Spill Kit.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Include Oil-only Emergency Spill Kit, Type 1 consisting of the following:

SECTION 159 – TRAFFIC CONTROL

159.02.01 Materials

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS REFERENCES:

Box Beam for Construction Barrier Curb 913.04

THE FOLLOWING IS ADDED:

Provide temporary crash cushions, inertial barrier systems as specified in 611.02. Provide temporary compressive crash cushions as specified for compressive crash cushions in 611.02.

159.02.02 Equipment

THE FOLLOWING IS ADDED TO THE LIST OF EQUIPMENT REFERENCES:

Portable Variable Message Sign w/Remote Communication.....1001.04

159.03.02 Traffic Control Devices

2. Construction Barrier Curb.

THE ENTIRE TEXT IS CHANGED TO:

Alternate A or B construction barrier curb may be used interchangeably in any location. The Contractor may use construction barrier curb that is constructed using gray or white concrete. Do not place different colors of construction barrier curb in a continuous run. Do not use construction barrier curb having any of the following deficiencies:

1. Exposed steel at the connector flangeway.
2. Exposed reinforcement steel.
3. Cracking through the cross section.
4. An area of concrete missing larger than a 3-inch by 3-inch right triangle.
5. Debris in the keyway.
6. Non-functioning anchor bolt holes.
7. Non-functioning anchor rod hole.
8. Paint applied to the surface.
9. Objects protruding from the surface.
10. Previous repairs.
11. Do not use damaged, kinked or bent connection key or box beam stiffener.

At least 30 days before delivering construction barrier curb to the Project Limit, provide the RE notice that the barrier curb is available for inspection. The RE will inspect the barrier curb and approve individual pieces for delivery to the Project Limits.

Ensure that anchor pins do not project above the plane of the barrier curb. Install the Construction Barrier Curb stiffened with box beams as indicated in the contract documents.

Replace construction barrier curb that does not meet the specified requirements. Do not patch or repair construction barrier curb.

Provide top and side mounted flexible delineators on the construction barrier curb. For delineators located on the right side when facing in the direction of traffic, ensure that the retroreflective sheeting is white. For delineators located on the left side when facing in the direction of traffic, ensure that the retroreflective sheeting is yellow. Attach flexible delineators according to the manufacturer's recommendations.

Starting at the beginning of the construction barrier curb section mount top delineators at 100-foot intervals on tangent sections, or curves of radii greater than 1,910 feet, and at 50-foot intervals on curves of radii of 1,910 feet or less.

Mount side delineators at the lead end of each barrier segment with the top of the delineator 3 inches from the top of the barrier.

5. Temporary Crash Cushion

THE SECOND SENTENCE IS CHANGED TO:

Install temporary compressive crash cushions as specified for compressive crash cushions in 611.03.02.

6. Traffic Control Truck with Mounted Crash Cushions.

THE LAST SENTENCE IS CHANGED TO:

Submit drawings to the RE detailing the manner of securing the ballast, signed and sealed by a Professional Engineer, certifying that it is capable of withstanding the impact forces for which the impact attenuator is rated.

THE FOLLOWING IS ADDED TO THE SECOND PARAGRAPH:

- 8. Portable Variable Message Sign with Remote Communication (PVMSRC).** Place the PVMSRC at the locations directed by the RE for the duration of the project. Ensure that a designated representative familiar with the operation and programming of the unit is available on the Project for On-Site Configuration. Only display messages on the PVMSRC authorized by the Department for the Project in accordance with the plans or as directed by the RE and make the signs available for use remotely from the Traffic Operation Center (TOC) specified in [105.07.01.B](#). Program within 8 hours, any message requested by the RE to be displayed on the PVMS at a scheduled time and verify that the message is displayed correctly and notify the RE. If the PVMSRC fails to function, repair the equipment within 48 hours of receiving notice from the Department that the PVMSRC is not functioning.

Integrate the PVMSRC for remote operation from TOC using Vanguard DMS software or the Department's central DMS control software at the time of installation as directed by the RE.

Provide for one week of testing by the TOC for remotely operating the PVMSRC before the start of construction operations that require lane or shoulder closures, or other impacts to traffic. At least 10 days before testing, submit to the RE for approval a plan for any work to be completed in the TOC. Submit a request to the RE at least 4 days in advance to access the TOC for any work.

159.03.06 Temporary Traffic Stripes and Temporary Traffic Markings

THE SUBPART HEADING AND THE ENTIRE TEXT IS CHANGED TO:

159.03.06 Traffic Stripes, Latex ,Traffic Markings Lines, Latex and Traffic Markings Symbols, Latex

Apply latex traffic stripes and latex markings when they are required for 14 days or less. Apply epoxy traffic stripes and thermoplastic markings as specified in 610.03.01 and 610.03.02 when they are required for more than 14 days. Apply latex traffic stripes and latex markings when the ambient and surface temperatures are at least 45 °F and rising and the surface temperature is no more than 140 °F. Apply the latex paint in a wet film thickness of 6 ± 1 mil. Apply glass beads to the wet paint in a uniform pattern and at the rate of 12 pounds per gallon of paint.

159.03.08 Traffic Direction

A. Flagger.

THE LAST SENTENCE IS CHANGED TO:

Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures.

B. Police.

THE FOURTH PARAGRAPH IS DELETED.

159.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
PORTABLE VARIABLE MESSAGE SIGN WITH REMOTE COMMUNICATION	UNIT
PORTABLE TRAILER MOUNTED CCTV CAMERA ASSEMBLY	UNIT
TEMPORARY CRASH CUSHION, COMPRESSIVE BARRIER, TYPE____, WIDTH____	UNIT
TEMPORARY CRASH CUSHION, LOW MAINTENANCE COMPRESSIVE BARRIER, TYPE____, WIDTH____	UNIT
TRAFFIC STRIPES, LATEX ____"	LINEAR FOOT
TRAFFIC MARKINGS LINES, LATEX ____"	LINEAR FOOT
TRAFFIC MARKINGS SYMBOLS, LATEX	SQUARE FOOT

THE FOLLOWING ITEMS ARE DELETED:

<i>Item</i>	<i>Pay Unit</i>
TEMPORARY TRAFFIC STRIPES, ____"	LINEAR FOOT
TEMPORARY TRAFFIC MARKINGS	SQUARE FOOT
TEMPORARY CRASH CUSHION, ____	UNIT

THE SECOND PARAGRAPH IS CHANGED TO:

For traffic control devices measured by the linear foot or unit basis that are specified in 159.03.02, the Department will make payment for the maximum quantity in service at one time as required by the Contract. For CONSTRUCTION SIGNS, the Department will make payment for the maximum quantity of specific sign types in service at one time as required by the Contract. If a particular sign type has more than one unique text, each sign with a unique text will be considered to be a specific sign type. The Department will make payment for 50 percent of the Contract bid price for traffic control devices specified in 159.03.02 that are measured on a linear foot, square foot or unit basis upon approved placement. The Department will prorate the balance of payment over the duration of the Contract.

THE FOLLOWING IS ADDED

If after being notified by the Department that the PORTABLE VARIABLE MESSAGE SIGN WITH REMOTE COMMUNICATION or PORTABLE TRAILER MOUNTED CCTV CAMERA ASSEMBLY has failed to function and the equipment has not been restored to good working order within 48 hours, the Department will make payment reductions as follows:

For each occasion the equipment was not restored within 48 hours the Department will assess a liquidated damage of \$250 for every 48 hours period the equipment is not functioning.

The Department will not include payment for epoxy traffic stripes and thermoplastic traffic markings and symbols under TRAFFIC STRIPES LATEX, TRAFFIC MARKINGS LINES, LATEX and TRAFFIC MARKINGS SYMBOLS, LATEX. The Department will make payment for epoxy traffic stripes and thermoplastic traffic markings under TRAFFIC STRIPES, TRAFFIC MARKINGS LINES, and TRAFFIC MARKINGS SYMBOLS as specified in [610.04](#).

SECTION 160 – PRICE ADJUSTMENTS

160.03.01 Fuel Price Adjustment

THROUGHOUT THIS SUBPART, TABLE 161.03.01-1 IS CHANGED TO TABLE 160.03.01-1

THE THIRD PARAGRAPH IS CHANGED TO:

If the as-built quantity of an Item listed in Table 160.03.01-1 differs from the sum of the quantities in the monthly Estimates, and the as-built quantity cannot be readily distributed among the months that the Item listed in Table 160.03.01-1 was constructed, then the Department will determine fuel price adjustment by distributing the difference in the same proportion as the Item's monthly Estimate quantity is to the total of the Item's monthly estimates.

THE 13TH AND 15TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

SOIL AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard

THE 25 TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

HOT MIX ASPHALT ___ ___ ___ BASE COURSE	2.50 Gallons per Ton
---	----------------------

THE FOLLOWING ARE ADDED TO TABLE 160.03.01-1

Items	Fuel Usage Factor
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton

160.03.02 Asphalt Price Adjustment

NOTE 1 OF THE THIRD PARAGRAPH IS CHANGED TO:

- The Department will determine the weight of asphalt binder for price adjustment by multiplying the percentage of new asphalt binder in the approved job mix formula by the weight of the item containing asphalt binder. If a Hot Mix Asphalt item has a payment unit other than ton, the Department will apply an appropriate conversion factor to determine the number of tons used.

THE FOURTH PARAGRAPH IS CHANGED TO:

For TACK COAT and PRIME COAT, the Department will calculate asphalt price adjustments by the following formula:

$$A = B \times [(MA - BA)/BA] \times C \times M \times G$$

Where:

- A = Asphalt Price Adjustment
- B = Bid Price for Tack Coat/Prime Coat
- MA = Monthly Asphalt Price Index
- BA = Basic Asphalt Price Index
- C = Petroleum Content of the Tack Coat and Prime Coat in Percent by Volume:
 - Use 100% for cutbacks and Tack Coat 64-22
 - 60% for Polymer Modified Tack Coat
 - 60% for RS or similar type emulsions
- M = Percentage of Bid Price Applicable to Materials Only: Use 82%
- G = Gallons of Tack Coat and Prime Coat Furnished and Applied

160.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS' PAY UNITS ARE REVISED TO:

<i>Item</i>	<i>Pay Unit</i>
FUEL PRICE ADJUSTMENT	DOLLAR
ASPHALT PRICE ADJUSTMENT	DOLLAR

DIVISION 200 – EARTHWORK

SECTION 201 – CLEARING SITE

201.03.01 Clearing Site

B. Clearing and Grubbing.

THE FOLLOWING IS ADDED:

Dispose of material and debris as specified in 201.03.09.

THE FOLLOWING IS ADDED:

The Department will make payment for the Item CLEARING SITE up to 90% of the total bid price in incremental amounts commensurate with the work completed. Payment of the balance of the total bid price, less all prior payments, with not be paid until Substantial Completion.

C. Mailbox and Sign Relocation.

THE FOLLOWING IS ADDED:

Remove existing signs and their associated sign supports as directed by the plans. Dispose of material and debris as specified in 201.03.09.

SECTION 202 – EXCAVATION

202.02 MATERIALS

THE FIRST IN THE LIST IS CHANGED TO:

Coarse Aggregate (No. 57, or 67)..... 901.03

202.03.03 Excavating Unclassified Material

A. Excavating.

THE FIRST PARAGRAPH IS CHANGED TO:

The Department, as the generator, is solely responsible for the designation of excavated material. Unclassified excavation consists of excavation and management of material of whatever nature encountered, except for regulated material, pavement removal and acid producing soil.

B. Temporarily Storing.

THE FOLLOWING SENTENCE IS ADDED AFTER THE SECOND SENTENCE OF THE FIRST PARAGRAPH:

Do not commingle different types or classifications of material.

202.03.04 Excavating Regulated Material

3. Temporarily Storing.

THE FIRST PARAGRAPH IS CHANGED TO:

Temporarily store regulated or hazardous material in stockpiles within the Project Limits and as shown on the Plans. Construct stockpiles on polyethylene sheeting. Contain stockpiles with haybales or silt fence placed continuously at the perimeter of the stockpiles. For hazardous material, if a stockpile area is not available within the Project Limits, sample and analyze materials in-situ for disposal. Excavate and place the hazardous regulated material directly into trucks, and haul it directly to the approved disposal facility.

202.03.07 Reuse or Disposal of Excess Material

A. Reuse.

THE THIRD PARAGRAPH IS CHANGED TO:

Upon RE’s approval, reuse excavated soil to widen or flatten slopes of embankment, to fade embankments into cuts, or as approved at other locations. Ensure that the excess material is not reused within a wetland, a transition area, a riparian zone, a flood hazard area or other regulated area without obtaining an appropriate NJDEP permit.

B. Disposal.

PARTS 1 AND 2 UNDER THE FIRST PARAGRAPH ARE CHANGED AND PART 3 IS ADDED:

1. At least 10 days before disposing, submit the disposal procedure and location to the RE for approval. Do not dispose of excavation on property proposed to be or used for parks, playgrounds, and other recreational purposes; residential facilities; educational facilities; environmentally sensitive areas such as wetlands; historic sites; or within sight of a State highway during all seasons.
2. Obtain the potential owner's notarized authorization of the acceptance of the excess material. If the potential owner requires environmental material sampling, obtain RE’s approval at least 7 days before sampling for oversight only. Approval of the sampling does not imply agreement with the sampling results and the Department reserves the right to sample the material for classification. Provide the RE all testing results and documentation associated with the sampling.
3. Load and transport excess material that the RE determines to be excess, unusable or unsuitable for the project according to Federal, State, and local law, rules and regulations.

SECTION 203 – EMBANKMENT

203.02.01 Materials

THIS SUBPART IS CHANGED TO:

Provide materials as specified:

Soil Aggregate (I-7, I-9, I-10, I-11, I-13, and I-14)..... 901.11

203.03.01 Constructing Embankment

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

The ME will determine the classification of the subgrade material specified in [Table 203.03.02-1](#). Compact the subgrade using the directed method as specified in [203.03.02.C](#) for the classification of the subgrade material.

THE FOURTH PARAGRAPH IS CHANGED TO:

Before placing embankment or any other unbound aggregate material, such as subbase or dense graded aggregate, on existing pavement, break the pavement into pieces that are a maximum of 12 inches in all dimensions.

DIVISION 300 – SUBBASE AND BASE COURSES

SECTION 303 – ASPHALT-STABILIZED DRAINAGE COURSE

303.03.01 Asphalt-Stabilized Drainage Course

D. Spreading and Grading

THE SECOND SENTENCE IS CHANGED TO:

Place asphalt-stabilized drainage course at a laydown temperature between 210 °F and 275 °F.

DIVISION 400 – PAVEMENTS

SECTION 401 – HOT MIX ASPHALT (HMA) COURSES

401.02.01 Materials

EMULSIFIED ASPHALT UNDER TACK COAT IS REVISED TO:

Emulsified Asphalt, Grade RS-1, CRS-1, SS-1, SS-1h, Grade CSS-1 or CSS-1h 902.01.03

THE FOLLOWING IS ADDED TO THE MATERIALS LIST

Polymer Modified Tack Coat 902.01.04

401.02.02 Equipment

THE LAST PARAGRAPH IS CHANGED TO:

When an MTV is used, install a paver hopper insert with a minimum capacity of 14 tons in the hopper of the HMA paver.

401.03.01 Preparing Existing Pavement

A. Milling of HMA.

Stage	Max. time interval allowed
3	48 hours

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

Sawcut at the limit of paving in driveways and at other limits requiring a neat edge between new and existing HMA.

D. Repairing HMA Pavement.

THE ENTIRE TEXT IS CHANGED TO:

If potholes are discovered, notify the RE immediately. The RE may immediately direct repairs of small areas. The RE may require further evaluation of a large area to determine the need for additional milling and paving.

Sawcut existing HMA pavement to a maximum depth of 10 inches, or to the full depth of bound layers, whichever is less. Sawcut lines parallel and perpendicular to the roadway baseline and 3 inches away, at the closest point, from the damaged area to be repaired.

Remove damaged and loose material to a depth of at least 3 and no more than 10 inches below the level of milling within the boundary of the sawcuts to form rectangular openings with vertical sides. Shape and compact the underlying surface to produce a firm, level base. Ensure that the remaining pavement is not damaged.

Apply polymerized joint adhesive or tack coat to the vertical surfaces of the openings. Spread and grade HMA in the opening as directed by the RE. Ensure that the temperature of the HMA when placed is at least 250 °F, and compact as specified in 401.03.03.F. Compact areas not accessible to rollers with a flat face compactor. Compact until the top of the patch is flush with the adjacent pavement surface.

Reuse removed material as specified in 202.03.07.A.

401.03.02 Tack Coat and Prime Coat

THE ENTIRE TEXT IS CHANGED TO:

Clean the surface where the HMA is to be placed of foreign and loose material. Immediately before beginning paving operations, ensure that the surface is dry. Do not place tack coat or prime coat unless the weather restrictions, as specified in 401.03.03.B, are met.

Do not apply tack coat or prime coat to asphalt-stabilized drainage course.

For curbs, gutters, manholes, and other similar structures, do not apply tack coat or prime coat. Clean the exposed surfaces of these structures and apply a uniform coating of polymerized joint adhesive to contact surfaces before paving.

In areas inaccessible to distributor spray bars, use hand spraying equipment for tack and prime coat. Do not allow traffic on tack coated or prime coated surfaces. Treat surfaces as follows:

1. **Tack Coat.** Uniformly spray tack coat when placing HMA on paved surfaces. Apply tack coat only to areas to be paved in the same day. Apply tack coat as specified in Table 401.03.02-1:

Table 401.03.02-1 Tack Coat Application			
Material	Spraying Temp, °F	Gallons per Square Yard	Season
Cut-Back Asphalt:			
RC-70	120 to 190	0.05 to 0.15	Oct 15 to Apr 15
Emulsified Asphalt:			
RS-1	70 to 140	0.05 to 0.15	All year
CRS-1	125 to 185	0.05 to 0.15	All year
SS-1, SS-1h	70 to 140	0.05 to 0.15	All year
CSS-1, CSS-1h	70 to 140	0.05 to 0.15	All year

Correct uncoated or lightly coated areas. Blot areas showing an excess of tack coat with sand or other similar material. Remove blotting material before paving. Ensure that the material is not streaked or ribboned.

Before paving, allow tack coat to cure to a condition that is tacky to the touch.

2. **Tack Coat 64-22.** When precipitation has occurred within 24 hours before application, the RE will determine whether to allow the work to proceed, or to wait until the surface is completely dry. Only apply tack coat that can be paved over in the same day. Apply tack coat 64-22 at a rate of 0.06 to 0.14 gallons per square yard and at a spraying temperature of 325 °F. Adjust the spraying temperature and application rate to produce a uniform coating, with no excess material.

Correct uncoated or lightly coated areas and remove excess tack coat from affected areas. Ensure that the material is not streaked or ribboned.

3. **Polymer Modified Tack Coat.** Apply polymer modified tack coat with an ultra-thin paver at a temperature of 140 to 175 °F. Continuously monitor rate of spray, ensuring a uniform application rate over entire width to be overlaid. Apply at the rate of 0.20 ± 0.05 gallons per square yard. Do not allow traffic, equipment, tools, or any other disturbance to the polymer modified tack coat before placing the ultra-thin friction course.
4. **Prime Coat.** Apply prime coat of cut-back asphalt on unpaved surfaces as follows:

Table 401.03.02-2 Prime Coat Application			
Cut-Back Asphalt	Spraying Temp, °F	Gallons per Square Yard	Season
MC-30	85 to 150	0.1 to 0.5	Oct 15 to Apr 15
MC-70	120 to 190	0.1 to 0.5	Oct 15 to Apr 15
Emulsified Asphalt:			
CSS-1	70 to 140	0.1 to 0.50	All year

Apply prime coat at least 12 hours before placement of the HMA and when the base courses are not saturated or frozen. Unless the prime coat is under asphalt-stabilized drainage course, the RE may waive the application of prime coat if more than 5 inches of HMA is placed on the unbound aggregate course before the roadway is opened to traffic. Take measures to prevent prime coat from entering into the drainage system or extending beyond the area to be paved.

401.03.03 HMA Courses

A. Paving Plan.

THE FOLLOWING IS ADDED AT THE END OF THE FIRST PARAGRAPH:

15. If applicable, the warm mix asphalt additive or process being used.

C. Test Strip.

THE FOLLOWING IS ADDED AT THE END OF THE FIRST PARAGRAPH:

- 7. **Warm Mix Asphalt.** Note the warm mix asphalt additive or process, if used.

D. Transportation and Delivery of HMA.

THE FIRST PARAGRAPH IS CHANGED TO:

Deliver HMA using HMA trucks in sufficient quantities and at such intervals to allow continuous placement of the material. Do not allow trucks to leave the plant within 1 hour of sunset unless nighttime lighting is provided as specified in 108.06. The RE will reject HMA if the HMA trucks do not meet the requirements specified in 1009.02. The RE will suspend construction operations if the Contractor fails to maintain a continuous paving operation. Before the truck leaves the plant, obtain a weigh ticket from a fully automatic scale. Before unloading, submit for each truckload a legible weigh ticket that includes the following:

- 1. Name and location of the HMA plant.
- 2. Project title.
- 3. Load time and date.
- 4. Truck number.
- 5. Mix designation.
- 6. Plant lot number.
- 7. Tare, gross, and net weight.

E. Spreading and Grading.

THE THIRD PARAGRAPH IS CHANGED TO:

The use of an MTV is optional for the construction of intermediate and surface course in the traveled way. If an MTV is used, ensure that the MTV independently delivers HMA from the HMA trucks to the HMA paver. Operate the MTV to ensure that the axle loading does not damage structures, roadway, or other infrastructure.

G. Opening to Traffic.

THE ENTIRE TEXT IS CHANGED TO:

Remove loose material from the traveled way, shoulder, and auxiliary lanes before opening to traffic. Open HMA courses to traffic or construction equipment, including paving equipment, only after the surface temperatures meet the following requirements:

- 1. When using PG 64-22, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 140 °F.
- 2. When using PG 64E-22, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 170 °F.
- 3. When using Warm Mix Asphalt, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 120 °F.

H. Air Void Requirements.

THIS SUBSECTION IS REPLACED BY THE FOLLOWING:

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 Regional District Local Aid Office may waive the air voids requirements.

The RE 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 (www.amrl.net). The Laboratory’s accreditation must include AASHTO T 166 and AASHTO T 209.

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.

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.

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.

The RE will assess a reduction in lot due to nonconformance to air voids according to the Table 401.03.03-3.

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

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.

I. Thickness Requirements.

THIS SUBSECTION IS REPLACED BY THE FOLLOWING:

Thickness requirements will apply when full-depth, uniform-thickness HMA pavement construction is shown.

Pavement lots are defined as approximately 15,000 square yards of pavement area. The Engineer will not include areas consisting of different HMA mixtures or thicknesses in the same lot. If thickness lot area is less than 5000 square yards, the Regional District Local Aid Office may waive the thickness requirements.

The RE 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 (www.amrl.net). The Laboratory’s accreditation must include AASHTO T 166 and AASHTO T 209.

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.

The Laboratory will test for thickness using the full-depth cores taken for surface course air voids, evaluated according to NJDOT B-4. The Laboratory will base acceptance on total thickness and thickness of the surface course.

1. **Total Thickness.** The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the design thickness. The Department will base total thickness acceptance on the percentage of the lot estimated to fall below the specified thickness as follows:

- a. **Sample Mean (X) and Standard Deviation (S) of the N Test Results (X₁, X₂,..., X_N).**

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_N - \bar{X})^2}{N - 1}}$$

b. Quality Index (QI).

$Q_L = (\bar{X} - T_{des})/S$, and T_{des} is the design thickness.

c. Percent Defective (PD). Using NJDOT ST - Statistical Tables (NJDOT Standard Specs for Roads and Bridges 2007-NJDOT TEST METHODS) for the appropriate sample size, determine the percentage of material (PD) falling below the design thickness associated with Q_L (lower limit).

d. Reduction in Payment. The Department will determine the reduction in payment based on the quantity of the surface course multiplied by the percent reduction in payment from Table 401.03.03-5.

Table 401.03.03-5 Reduction in Payment for Nonconformance to Requirements for Total Thickness

Percent Defective	Percent Reduction
0 to 25.0	0
25.1 to 30.0	2
30.1 to 35.0	5
35.1 to 40.0	10
40.1 to 45.0	20
Over 45.0	Remove and Replace

e. Removal and Replacement. If the lot $PD \geq 45$, remove and replace, or mill and overlay, the lot. The replacement work is subject to the same requirements as the initial work.

2. Surface Course Thickness. The Laboratory will evaluate the surface course solely to determine whether a remove-and-replace or an overlay condition exists, not for pay adjustment. The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the allowable thickness for the nominal maximum aggregate used in the surface course. The Laboratory will accept pavement lots with $PD \leq 25$ and will reject pavement lots with $PD > 25$.

The Laboratory will base surface thickness acceptance on the percentage of the lot estimated to fall below the allowable thickness as follows:

a. Sample Mean (X) and Standard Deviation (S) of the N Test Results (X₁, X₂,..., X_N).
Calculate using the formula as specified in 401.03.03.I.1.

b. Quality Index (Q).

$Q_L = (X - T_{all})/S$, where T_{all} is the minimum allowable thickness from Table 401.03.03-6.

Table 401.03.03-6 Surface Course Thickness Requirements

HMA Mix Design Size Designation	Minimum Allowable Compacted Lift Thickness (T _{all})
4.75 MM	0.75 inch
9.5 MM	1.00 inch
12.5 MM	1.25 inch
19 MM	2.00 inch

- c. **Percent Defective.** Using NJDOT ST - Statistical Tables (NJDOT Standard Specs for Roads and Bridges 2007-NJDOT TEST METHODS) for the appropriate sample size, determine the percentage of material (PD) falling below the allowable thickness associated with Q_L (lower limit).
- d. **Removal and Replacement.** If the surface course fails to meet the acceptance requirement with a $PD \leq 25$, the Department will require removal and replacement of the lot. The replacement work is subject to the same requirements as the initial work.

J. Ride Quality Requirements.

THIS SUBSECTION IS REPLACED BY THE FOLLOWING:

The Department may evaluate the HMA surface course placed in travel lanes using the International Roughness Index (IRI) according to ASTM E 1926. Other areas will be tested with a ten foot straight edge. The Department will use the measured IRI and straight edge to compute pay adjustment (PA). The PA will be negative for defective work.

The RE will designate an independent testing agency to perform the ride quality testing and analysis. The testing agency is required to comply with certification requirements according to NJDOT R-1.

The Department will calculate the Pay Adjustment (PA) as specified in Table 401.03.03-7 and will base PA on lots of 0.01mile length for each travel lane.

1. Smoothness Measurement.

The testing agency will test the longitudinal profile of the HMA surface course for ride quality with a Class 1 Inertial Profiling System according to AASHTO MP 11 approved according to AASHTO PP 49.

The testing agency will test the full extent of the pavement in the direction of travel in each wheel path. The single IRI value reported for each 0.01-mile lot of pavement is the average of 3 runs.

2. Other Areas.

In addition to the above, a 10-foot straightedge shall be used for the following areas: transverse profile of the finished riding surface, longitudinal and transverse profile of shoulders and ramps, utility hardware, drainage inlets and manholes, and any other areas so designated in the Special Provisions. Any areas that have more than a 1/4-inch deviation between any two contact points of the straightedge shall be corrected by the Contractor using infrared heating to rework the material in a manner approved by the Engineer. Following correction, the area will be retested to verify compliance, each individual non-complying location will be assessed \$250 negative PA.

3. Control Testing.

Perform control testing during HMA placement to ensure compliance with the ride quality requirements specified in Table 401.03.03-7.

4. Preparation for IRI Testing.

Provide the necessary traffic control when the testing agency performs IRI testing. Perform required mechanical sweeping of the surface course before IRI testing. To facilitate auto triggering on laser profilers, place a single line of preformed traffic marking tape perpendicular to the roadway baseline 300 feet before the beginning of each lane to be tested.

5. Acceptance.

The Engineer will determine acceptance and make payment adjustments based on the following:

- i. Pay Adjustment.

The pay equations in Table 401.03.03-7 express the pay adjustment in dollars per lot of 0.01 mile. For lots of any other length, the Engineer will scale the pay adjustment up or down in proportion to the actual length of the lot. IRI numbers are in inches per mile.

Table 401.03.03-7 Pay Equations for IRI Ride Quality for 0.01 Mile		
Local Roadways with Posted Speed ≥ 45 MPH	IRI ≤ 100	PA = \$0
	100 < IRI ≤ 170	PA = (IRI - 100) × (- \$1.43)
	IRI > 170	Remove & Replace
Local Roadways with Posted Speed < 45 MPH	IRI ≤ 120	PA = \$0
	120 < IRI ≤ 220	PA = (IRI - 120) × (- \$1.00)
	IRI > 220	Remove & Replace

ii. Retest provision.

After testing, if the IRI exceeds the Remove and Replace value (RRV) in Table 401.03.03-7, the testing agency will retest the lot. The testing agency will average the IRI values from the initial test and the retest to determine the final result.

iii. Removal and Replacement.

If the average IRI is greater than the RRV after a retest is performed, remove and replace the lot. Any replacement work is subject to the same requirements as the initial work. If only a small percentage (less than 8 percent) of paving lots falls under the RRV, the RE may allow the Contractor to submit a plan for corrective action. If the Contractor’s plan for corrective action is not approved, the RE may require removal and replacement, or may allow the lot to remain in place and the lot will be subject to the pay adjustment as computed in Table 401.03.03-7. If the Contractor’s plan for corrective action is approved and the lot is reworked, the testing agency will test and evaluate it as a new lot that must meet the same requirements as the initial work.

401.03.04 Sawcutting and Sealing of Joints in HMA Overlays

THE TEXT OF THIS SUBPART IS DELETED.

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401.03.05 Core Samples

THE FIRST PARAGRAPH IS CHANGED TO:

Upon completion of an HMA lot, drill cores at random locations determined by the RE at least 12 hours after paving. Take cores in the presence of the RE. Do not drill additional core samples unless directed by the RE.

THE LAST SENTENCE OF THE 2ND PARAGRAPH IS CHANGED TO THE FOLLOWING:

Apply an even coating of tack coat to sides of the hole. Place HMA in maximum lifts of 4 inches in the hole and compact each lift. Ensure that the final surface is 1/4 inch above the surrounding pavement surface.

THE FIFTH AND SIXTH PARAGRAPHS ARE CHANGED TO:

At least 24 hours prior to coring, provide a tamper proof core sample box for the RE’s inspection and approval. Ensure that the core sample box can be locked and sealed and is tamper proof in such a manner that it cannot be opened without removing the seals. Ensure that the core sample box provides protection for the cores from being disturbed or damaged during transit. Mark the Department assigned core number on the side of the sample. Place core samples and

corresponding forms in the core sample box. Before sealing the core sample box, ensure that the RE has recorded the seal number on the laboratory form. Transport the sealed core sample boxes to the Department Laboratory. The RE at his discretion may decide to deliver the core samples as indicated above.

The Department will not accept damaged core samples for testing. If the core sample box exhibits indications of tampering, the core samples will be rejected. If the Department rejects any core samples, drill a replacement core at the same offset and within 5 feet of the original station and deliver to the laboratory as specified above within 48 hours.

401.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
SAWING AND SEALING JOINTS IN HOT MIX ASPHALT OVERLAY	LINEAR FOOT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
POLYMER MODIFIED TACK COAT	GALLON

THE FOURTH PARAGRAPH IS CHANGED TO:

The Department will measure TACK COAT, TACK COAT 64-22, PRIME COAT and POLYMER MODIFIED TACK COAT by the volume delivered, converted to the number of gallons at 60 °F as calculated by the temperature-volume correction factors specified in 902.01.

THE FOLLOWING IS ADDED:

The Department will make a payment adjustment for HMA air void quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Air Void Lot Quantity

PPA= air void PPA as specified in 401.03.03H.

The Department will make a payment adjustment for HMA thickness quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Thickness Lot Quantity

PPA= thickness PPA as specified in 401.03.03I

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.03J.

SECTION 405 – CONCRETE SURFACE COURSE

405.03.02 Concrete Surface Course

I. Thickness Requirements.

THIS PART IS CHANGED TO:

- I. Thickness Requirements.** The ME will divide the concrete pavement into lots of approximately 5000 square yards. The ME will divide each lot into 5 equal sections. The RE will direct the Contractor to drill 1 core, as specified in 405.03.03, from a randomly selected location within each section. The ME will test these cores for thickness as specified in ASTM C 174.

The Department will determine conformance with thickness requirements as follows and will either assess the greater of the pay reduction for average core thickness or individual core thickness, or the Department will direct the Contractor to remove and replace the lot:

- 1. Average Core Thickness.** If the average core thickness is greater than or equal to the specified core thickness, the Department will not apply a payment reduction. If the average thickness is less than the specified thickness, but is greater than or equal to the specified thickness minus 1/2 inch, the Department will determine payment reduction by the following formula:

$$\text{Payment Reduction} = Q \times \text{BP} \times \text{PPR}$$

Where:

Q = Thickness Lot Quantity

BP = Bid Price

T_S = Specified Thickness.

T_A = Average Thickness

$$\text{PPR} = \text{Percent Payment Reduction} = \frac{T_S - T_A}{T_S}$$

- 2. Individual Core Thickness.** When more than 2 individual cores in the lot are less than the specified thickness minus 1/4 inch, the Department will determine the payment reduction using for the above noted formula and using a PPR = 2 percent.
- 3. Remove and Replace.** If the average thickness is less than the specified thickness minus 1/2 inch, the RE will require that the lot be removed and replaced.

405.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will make a payment adjustment for Concrete Surface thickness quality, as specified in 405.03.02.

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.03J

THE FOLLOWING SECTION IS ADDED TO DIVISION 400:

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

SECTION 601 – PIPE

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will make payment for restoring the pavement structure for trenches in the traveled way and shoulder under various Items of the Contract.

SECTION 606 – SIDEWALKS, DRIVEWAYS, AND ISLANDS

606.03.02 Concrete Sidewalks, Driveways, and Islands

F. Placing Concrete.

THE ENTIRE PART F. IS CHANGED TO:

Obtain RE approval of forms and joint placement before placing concrete. Place concrete according to the limitations specified in 504.03.02.C. To place concrete between November 1 and March 15, submit to RE for approval a plan detailing the method of protecting the concrete from salt for at least 30 days after placing. Do not begin placing concrete until this plan is approved. Place concrete across the formed area to minimize rehandling. Ensure that concrete is not discharged into windrows or piles. Continuously place concrete between transverse joints without the use of intermediate bulkheads. To prevent bowing or misalignment of the transverse joints, place concrete simultaneously on both sides of transverse joints without disturbing the joints. Consolidate the concrete by hand spading or using internal mechanical vibrators. If a slab is not completed from transverse joint to transverse joint, remove the incomplete slab and replace. Terminate each day's placement at a transverse joint. If concrete becomes segregated during placement, cease operations and correct handling operations. Protect concrete as specified in 504.03.02.I.

H. Protection and Curing.

THE LAST SENTENCE IS CHANGED TO:

Ensure vehicles and other loads are not placed on sidewalks, islands, and driveways until the concrete has attained compressive strength of 3000 pounds per square inch, as determined from 2 concrete cylinders field cured according to AASHTO T 23.

SECTION 607 – CURB

607.03.01 Concrete Barrier Curb

D. Placing Concrete.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

To place concrete between November 1 to March 15, submit to RE for approval a plan detailing the method of protecting the concrete from salt for at least 30 days after placing.

607.03.02 Concrete Vertical Curb and Concrete Sloping Curb

D. Placing Concrete.

THE ENTIRE TEXT IS CHANGED TO:

Place concrete for vertical curb and sloping curb as specified in 607.03.01.D, except that consolidation may be achieved by hand spading or internal mechanical vibrators.

607.03.04 Concrete Vertical Curb and Concrete Sloping Curb, Dowelled

D. Placing Concrete.

THE ENTIRE TEXT IS CHANGED TO:

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS
CITY OF PLAINFIELD, COUNTY OF UNION
FEDERAL PROJECT NO. HSIP 0601(301)

Place concrete for vertical and sloping curb as specified in 607.03.02.D.

SECTION 608 – NON-VEGETATIVE SURFACES

THE ENTIRE SECTION IS CHANGED TO:

608.01 DESCRIPTION

This Section describes the requirements for constructing non-vegetative surfaces of HMA; color-coated HMA; porous HMA; broken stone, and polyester matting.

608.02 MATERIALS

608.02.01 Materials

Provide materials as specified:

Broken Stone, Coarse Aggregate No. 3.....	901.03
HMA (9.5M64).....	902.02
Asphalt-Stabilized Drainage Course.....	902.06
Non-Vegetative Surface Coating.....	912.02.04
Herbicide.....	917.11.03
Polyester Matting.....	919.15

Provide Non-Vegetative Surface, Porous HMA conforming to the requirements of Asphalt-Stabilized Drainage Course.

608.02.02 Equipment

Provide equipment as specified:

HMA Compactor.....	1003.05
Vibratory Drum Compactor.....	1003.06
HMA Plant.....	1009.01
HMA Trucks.....	1009.02

608.03 CONSTRUCTION

608.03.01 Non-Vegetative Surface, HMA

Excavate as specified in 202.03.03. Shape and compact the underlying material to produce a firm, even surface. Obtain RE approval before finishing excavation. If the RE determines that the bottom of the excavation is unstable, undercut, backfill, and compact as directed by the RE.

Construct the non-vegetative surface, HMA before installing guide rail. Obtain RE approval for alternate methods of construction.

Deliver HMA as specified in 401.03.03.D. Construct non-vegetative surfaces 4 inches thick. Place and compact the material to produce a surface free of roller marks and ridges. Spread and grade the HMA as specified in 401.03.03.E. Ensure that the finished surface is smooth, even, and graded to drain away from the guide rail. Compact HMA as specified in 401.03.03.F. Spread, rake, and lute areas not accessible to pavers and rollers with hand tools and compact with dynamic compactors.

Repair non-vegetative surface damaged by guide rail installation with HMA. Use hand tampers around posts and other obstacles where mechanical compactors are not accessible.

608.03.02 Color-Coated Non-Vegetative Surface, HMA

Construct color-coated non-vegetative surfaces as specified in 608.03.01.

Uniformly apply the final color at the rate of 0.3 to 0.5 gallons per square yard by spraying, brushing, or squeegeeing over the HMA surface course. Ensure that the surface is clean and dry at the time of application. Reapply the coating to any missed spots or areas to obtain a uniform coating.

Avoid spilling the color coating on adjacent surfaces. If the color coating spills, immediately clean it with water before the coating dries. If the coating dries, repair as directed by the RE.

The RE will not allow traffic on the color-coated surface until it is dry.

608.03.03 Non-Vegetative Surface, Broken Stone

Ensure that areas to receive non-vegetative surface, Broken Stone, are free from vegetation. Vegetation removal may require manual removal, herbicide treatment as specified in 608.03.06 or both.

Apply a pre-emergent herbicide to the area before placement of broken stone. Spread broken stone, aggregate size No. 3, in a uniform layer, to prescribed thickness.

608.03.04 Non-Vegetative Surface, Porous HMA

Ensure that areas to receive non-vegetative surface, Porous HMA, are free from vegetation. Vegetation removal may require manual removal, herbicide treatment as specified in 608.03.06 or both. Excavate as specified in 202.03.03. Shape and compact the underlying material to produce a firm, even surface. Obtain RE approval before finishing excavation. If the RE determines that the bottom of the excavation is unstable, undercut, backfill, and compact as directed by the RE.

Construct the non-vegetative surface, porous HMA before installing guide rail. Obtain RE approval for alternate methods of construction.

Construct porous HMA surface course to prescribed thickness according to the requirements of Section 303 except for the application of prime coat. Repair non-vegetative surface damaged by guide rail installation with porous HMA. Use hand tampers around posts and other obstacles where mechanical compactors are not accessible.

608.03.05 Non-Vegetative Surface, Polyester Matting

Install polyester matting according to the manufacturer's requirements by manufacturer certified workers.

Ten days before installation, submit to the RE a list of manufacturer certified workers and one copy of the "engineering package" including demonstration compact discs and samples of product components; such as foot prints, finished seams, etc. The manufacturer may elect to train the workers and Department inspectors on a test section on the worksite.

Ensure that the surface areas to receive the matting are smooth, firm, stable and free of rocks, clods, foliage, roots or other material which might prevent the matting from lying in direct contact with the ground surface, free of wrinkles or bulges. Existing non-vegetative surface or HMA that is in the same location as proposed polyester matting may be left in place as long as its surface area is properly prepared as previously stated. Mow grass as low as possible prior to installation of matting. Install the matting immediately following installation of guide rail posts and prior to installation of the guide rail hardware by lifting the matting above the posts and allowing it to drop to the ground with the posts passing through prefabricated openings.

Stake the matting along its edges in accordance with the manufacturer's recommendations.

Seal matting openings with a separate prefabricated piece of matting that will provide a snug fit around the post and completely cover the opening. Ensure that seams are sealed.

Ensure that the matting surface is vegetation-free from installation until final acceptance. Vegetation removal may require herbicide treatment, mechanical removal, or both, as specified in 608.03.06.

608.03.06 Post-Emergent Weed Control of Non-Vegetative Surfaces

Manually remove or spray vegetation growing on the non-vegetative surface with a post-emergent non-selective herbicide treatment for total control of vegetation on the non-vegetative surface area, as directed by the RE. Select post-emergent herbicides for control of targeted vegetation based on the manufacturer's recommendations and product label. Begin the work associated with vegetation removal as early as the conditions permit. Herbicides must be applied by, or

under the direct supervision of, a Certified Commercial Pesticide Applicator, according to the manufacturer's recommendations. Restore areas where herbicide has been applied and not intended to its prior existing condition at no cost to the State. Do not apply herbicide in the rain or when wet weather is expected within 24 hours. Do not apply herbicide after rain until approved by the RE.

The RE will notify the ME after Acceptance for inclusion of the non-vegetative surface in its herbicide spraying program including the date that the herbicide was last applied on the project section.

608.04 MEASUREMENT AND PAYMENT

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	SQUARE YARD
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	SQUARE YARD
NON-VEGETATIVE SURFACE, BROKEN STONE, ___ THICK	SQUARE YARD
NON-VEGETATIVE SURFACE, POROUS HOT MIX ASPHALT, ___ THICK	SQUARE YARD
NON-VEGETATIVE SURFACE, POLYESTER MATTING	SQUARE YARD

When the RE directs undercutting of unstable material in the excavation area, the Department will make payment, as specified in 104.03.03, for the additional excavation. The Department will also make payment, as specified in 104.03.03, for the additional bedding if there is not an excess of excavated material available for use as bedding.

SECTION 610 – TRAFFIC STRIPES, TRAFFIC MARKINGS, AND RUMBLE STRIPS

610.02.01 Materials

THE FOLLOWING MATERIALS ARE RENAMED TO:

Traffic Stripes.....	912.03.01
Traffic Markings.....	912.03.02

610.03.01 Long-Life Traffic Stripes

THE SUBPART HEADING AND THE ENTIRE TEXT IS CHANGED TO:

610.03.01 Traffic Stripes

- A. Striping Plan.** At least 20 days before beginning the work, submit to the RE for approval a striping plan that includes:
 - 1. Schedule of operations for applying traffic stripes.
 - 2. Number and type of equipment.
 - 3. Manufacturer's recommendations for use of the materials, including, but not limited to, mixing ratios and application temperatures.
 - 4. Details on the means and methods for surface preparation
 - 5. Details on the means and methods for premarking
 - 6. Details on the proposed test strip such as location, length etc
- B. Surface Preparation.** Immediately before striping the pavement surface, clean the surface of dirt, oil, grease, and foreign material, including curing compound on new concrete. Clean the surface 2 inches beyond the perimeter of the stripes to be placed.
- C. Striping Test Strip.** Before beginning striping operations, construct 1 or more striping test strips to demonstrate the Contractor's ability to meet the requirements specified in 610.03.01.D. For each striping test strip, apply striping to approximately 500 linear feet of pavement with the same striping procedure that will be used for the Project. Construct a test strip for each applicator unit and epoxy resin material used. Provide the RE with 50 test cards made of heavy stock paper measuring 8 inches by 2 inches, and two wet film thickness gauges. Construct additional test strips when major equipment repairs or adjustments are made or when the traffic stripes are determined to be defective. Construct additional test strips when traffic striping operations are performed on multiple, non-continuous occasions. Perform additional test strips as requested by the RE. When the test strip is in

compliance, as determined by the RE, proceed with striping operations. Each test strip may remain in place and become part of the finished stripes subject to the requirements of 610.03.01.E.

- D. Applying Striping.** Mix epoxy resin with an automatic proportioning and mixing machine, and hot-spray the compound at a temperature of between 100 and 130 °F onto dry surfaces. Apply the compound with a wet film thickness of 20 ± 1 mil. Apply the material during dry weather conditions when the ambient temperature is a minimum of 45 °F and the surface temperature is a minimum of 50 °F. Adjust operations as required for the prevailing ambient and surface conditions to achieve a no-track drying time of 30 minutes or less.

Immediately after, or in conjunction with, the compound application, uniformly apply 12 pounds of large glass beads per gallon of epoxy resin to the compound. After applying the large glass beads, uniformly apply 12 pounds of small glass beads per gallon of epoxy resin to the compound.

Remove all compound that has been tracked or spilled outside of the intended placement areas.

- E. Performance.** Ensure that the traffic stripes, show no fading, lifting, cracking, chipping for any reason including but not limited to traffic wear, maintenance activities including snow plowing, until Acceptance. Ensure that 60 days after application, traffic stripes have a minimum retroreflectance value of:

375 millicandelas per square meter per lux for white traffic stripe

250 millicandelas per square meter per lux for yellow traffic stripe

- F. Defective work.**

THE FIRST SENTENCE IN THE FOURTH PARAGRAPH IS CHANGED TO:

Replace traffic stripes that are determined by the RE before Acceptance to be defective or that are damaged during construction. Remove defective stripes as specified in 610.03.08.

Replace an entire 10-foot skip line if the RE determines the stripe to have a deficiency.

If the RE determines, based upon calculated and measured yields, that the striping has a wet film thickness of less than 19 mils, restripe the entire length with 20 mils of new compound.

Provide the RE with a Reflectometer that meets a 30 meter geometry as specified in ASTM E 1710, capable of measuring wet and dry conditions as specified in ASTM E 2176 and ASTM E 2177, and that has been certified by the manufacturer as being calibrated within the last two years. The RE will test the retroreflectance of traffic stripes. Replace traffic stripes that do not meet the retroreflectance values indicated in 610.03.01.E. Replace the entire length of striping where improper curing or discoloration has occurred. Discoloration is localized areas or patches of brown or grayish colored compound. Where improper curing or discoloration occurs intermittently in intervals of 100 feet or less throughout the striping length, replace the entire length of striping from the beginning of the first occurrence until the end of the last occurrence, plus 5 feet on each end.

Replace the entire length of striping that has failed to bond to the pavement, or has chipped or cracked. Where more than 25 spots of chipping, cracking, or poor bonding have occurred within 1000 linear feet of striping, replace the entire 1000 foot length of striping as indicated in 610.03.01.E.

- G. Opening to Traffic.** Complete each application of all types of traffic stripes and allow to thoroughly dry before opening to traffic. At a minimum, delineate center lines on undivided roadways and broken lines between lanes before the traveled way is opened. The RE will determine when the traveled way can be opened to traffic.

610.03.02 Thermoplastic Traffic Markings

THE SUBPART HEADING AND THE ENTIRE TEXT IS CHANGED TO:

610.03.02 Traffic Markings Lines, Traffic Markings Symbols and Traffic Markings Route Symbols

- A. Marking Plan.** At least 20 days before beginning the work, submit to the RE for approval a marking plan that includes:

1. Schedule of operations for applying traffic markings,
2. Number and type of equipment,
3. Manufacturer's recommendations for use of the materials, including mixing ratios and application temperatures.

4. Details on the means and methods for surface preparation
5. Details on the means and methods for premarking

B. Surface Preparation. Immediately before marking the pavement surface, clean the surface of dirt, oil, grease, and foreign material, including curing compound on new concrete. Clean the surface 2 inches beyond the perimeter of the marking to be placed.

C. Applying Traffic Markings. Place preformed thermoplastic or hot extruded thermoplastic traffic markings on thoroughly dry surfaces and during dry weather conditions. Apply using equipment and procedures that produce markings of the specified color, width, and thickness with well-defined edges, uniform retroreflectivity, and proper bonding to the pavement. Apply the thermoplastic material as follows:

1. **Preformed Thermoplastic.** Melt the preformed thermoplastic tape to bond the traffic markings permanently in position according to the manufacturer's recommendations.

Meet the minimum initial retroreflectance value, as specified in 610.03.01.D for thermoplastic tape, by applying additional glass beads to the hot-wet material in a uniform pattern as necessary.

2. **Extruded Thermoplastic.** Uniformly heat the thermoplastic material. When the ambient and surface temperatures are at least 50 °F, apply the melted material at a temperature of between 400 and 425 °F. Extrude the thermoplastic traffic markings on the HMA or concrete pavement ensuring a thickness of 90 ± 1 mils.

Immediately after, or in conjunction with the thermoplastic extrusion, uniformly apply glass beads to the wet material at a minimum rate of 10 pounds per 100 square feet of markings. Apply glass beads by mechanical means only.

D. Performance. Ensure that the traffic markings show no fading, lifting, cracking, chipping for any reason including but not limited to traffic wear, maintenance activities including snow plowing, until Acceptance. Ensure that 60 days after application, traffic markings have a minimum retroreflectance value of:

375 millicandelas per square meter per lux for white traffic markings

250 millicandelas per square meter per lux for yellow traffic markings

E. Defective work.

THE FIRST SENTENCE IN THE FOURTH PARAGRAPH IS CHANGED TO:

Replace thermoplastic traffic markings that are determined by the RE before Acceptance to be defective or that are damaged during construction. Remove defective markings as specified in 610.03.08.

Replace the entire area of thermoplastic traffic markings determined to be less than the required thickness, to have incorrect color or width, to have failed to bond to the pavement, or to have chipped or cracked. The minimum replacement area is an individual word or symbol, or for longitudinal lines the entire length from where the deficiency first occurs to where it no longer exists.

The RE will determine initial retroreflectance as follows:

Provide the RE with a Reflectometer that meets a 30 meter geometry as specified in ASTM E 1710, capable of measuring wet and dry conditions as specified in ASTM E 2176 and ASTM E 2177, and that has been certified by the manufacturer as being calibrated within the last two years. The RE will test the retroreflectance of traffic markings. Replace traffic markings that do not meet the retroreflectance values indicated in 610.03.02.D.

F. Opening to Traffic. Complete each application of thermoplastic traffic markings and allow to thoroughly dry before opening to traffic. The RE will determine when the traveled way can be opened to traffic.

610.03.04 Removal of RPMs

THE ENTIRE TEXT IS CHANGED TO:

Remove RPMs as directed by the RE. Dispose of RPMs as specified in 201.03.09. If directed by the RE, fill the hole with HMA patch as specified in 159.03.07 except sawcutting is not required.

610.03.06 Ground Mounted Flexible Delineators

THE FIRST PARAGRAPH IS CHANGED TO:

Use white retroreflective sheeting for delineators located on the right side when facing in the direction of traffic. Use yellow retroreflective sheeting for delineators located on the left side when facing in the direction of traffic.

610.03.07 Rumble Strip

THE ENTIRE SUBPART IS CHANGED TO:

At least 20 days before constructing rumble strips, submit a plan for cutting rumble strips and debris collection/removal to the RE for approval.

Construct rumble strips on newly constructed pavement after it has cooled sufficiently to allow the cutting to be done cleanly without causing damage to the adjacent pavement.

Clean the area where rumble strips are to be constructed. Construct rumble strips by cutting indentations into the pavement perpendicular to the traveled way without disturbing the surrounding pavement. Collect cuttings and reuse or dispose of as specified in 202.03.07.

Ensure that the centerline rumble strips are constructed before placing TRAFFIC STRIPES. After cutting centerline rumble strips and collecting the debris, apply Fog Seal over the centerline rumble strip as specified in 422.03.02.

Do not construct rumble strips 200 feet linear feet before and after the approximate midpoint of Weigh-in-Motion (WIM) systems in the roadway as listed in the Special Provisions.

610.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE DELETED:

<i>Item</i>	<i>Pay Unit</i>
RPM, BI-DIRECTIONAL, WHITE LENS	UNIT
TRAFFIC STRIPES, LONG-LIFE, EPOXY RESIN ___"	LINEAR FOOT
TRAFFIC MARKINGS, THERMOPLASTIC	SQUARE FOOT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
TRAFFIC STRIPES, ___"	LINEAR FOOT
TRAFFIC MARKINGS LINES, ___"	LINEAR FOOT
TRAFFIC MARKINGS SYMBOLS	SQUARE FOOT
TRAFFIC MARKINGS ROUTE SYMBOLS	SQUARE FOOT

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will measure TRAFFIC STRIPES and TRAFFIC MARKINGS LINES by the linear foot for each specified width of stripe. The Department will not measure gaps in striping.

THE FOLLOWING IS ADDED AT THE END OF THE SUBSECTION:

The Department will measure rumble strip by the linear foot measured in the longitudinal direction of the rumble strip without deducting the interval spacing between rumble strips and the gaps for RPM placement and make payment under the Item RUMBLE STRIP.

The Department will not include payment for traffic stripes in RUMBLE STRIP. The Department will make payment for traffic stripes placed in conjunction with constructing a centerline rumble strip under TRAFFIC STRIPES as specified in 610.04.

The Department will not include payment for fog seal in RUMBLE STRIP. The Department will measure and make payment for FOG SEAL STRIP as specified in 422.04.

The Department will not measure the gaps such as WIM locations in the Rumble Strip.

SECTION 612 – SIGNS

612.02 MATERIALS

THE FOLLOWING IS DELETED FROM THE MATERIALS LIST.

Non-Breakaway Sign Supports 911.02.03

THE SECOND PARAGRAPH IS DELETED.

612.03.02 Type GA Breakaway and Non-Breakaway Support Guide Signs

THE SUBPART HEADING IS CHANGED TO:

612.03.02 Type GA Breakaway Support Guide Signs

612.03.02 Type GA Breakaway Support Guide Signs

C. Constructing Pedestals

THE SUBPART IS CHANGED TO:

Place reinforcement steel as specified in 504.03.01 before placing the concrete. Ensure that concrete placement complies with the limitations as specified in 504.03.02.C. Place concrete as specified in 504.03.02.D. Cure concrete as specified in 504.03.02.F.

D. Erecting Posts

THE SUBPART IS CHANGED TO:

Erect posts as specified in 512.03.01.G.

THE FOLLOWING IS ADDED:

F. Constructing Anchor, Hinge, Bracket and Coupling Assemblies..At least 10 days before beginning the work, submit the manufacturer’s installation guide and installer’s certification to the RE.

Ensure that the installer is certified by the manufacturer.

Ensure that the manufacturer’s representative is present during the foundation pour and the installation of the first sign. Install anchor, hinge, bracket and coupling assemblies according to the manufacturer’s recommendations. The RE may require the system manufacturer’s representative to be present at all times during the installation to provide on-site technical support.

THE FOLLOWING IS ADDED:

612.03.04 Mast Arm Signs

Mast arm signs shown on the plans shall include furnishing and installing the sign, hardware to mount the sign on the traffic signal arm, and miscellaneous hardware and fittings. If the adjoining mast arm is powder-coated, the mast arm sign hardware shall be powder coated to match. Prior to installation, the Resident Engineer shall inspect the sign faces and hardware to ensure conformance with the plans and specifications.

Overhead street name signs shall be installed only after the end and mid-mount traffic signals are installed to ensure proper clearance, spacing, and visibility of both the traffic signals and overhead signs. Lateral spacing between the near edge of signs and traffic signals mounted on the mast arm shall be a minimum of 6 inches to avoid entangling the sign and signal.

612.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
GUIDE SIGN, TYPE GA, NON-BREAKAWAY SUPPORTS	SQUARE FOOT

DIVISION 700 – ELECTRICAL

SECTION 701 – GENERAL ITEMS

701.03.01 Existing Systems

THE FIFTH PARAGRAPH IS CHANGED TO:

If removal of existing above ground electrical material is required, deliver salvaged materials to the nearest Department electrical maintenance yard and unload the salvaged materials as directed. Dispose of salvaged materials rejected by the Department from the Project Limits as specified in 201.03.09.

THE FOLLOWING IS ADDED:

If new cable or wire is designated to be installed into existing conduit systems, clean and swab the conduit system prior to installing the cable or wire. After cleaning, test each conduit by pulling through a metal ball with a diameter at least 85 percent of the nominal inside diameter of the conduit to ensure the conduit is free of any obstruction or foreign material. If the ball fails to pass through the conduit, repair or replace the defective conduit as directed by the RE. Restore disturbed areas to original condition.

701.03.02 Rigid Metallic Conduit (Earth)

B. Installation.

THE FOLLOWING IS ADDED:

In rigid metallic conduit used exclusively for fiber optic cable, install a tracer wire continuously for the entire run of conduit, including through the junction boxes, mounting it on the wall. Splice the tracer wire only in the junction box. Seal the ends of rigid metallic conduit carrying the tracer wire. If wire or cable is not scheduled to be installed within 6 months of conduit installation, cap and seal the other conduits leaving the true tape inside. Install warning tape in the trench above the conduit.

701.03.03 Rigid Metallic Conduit (Roadway)

THE FOLLOWING IS ADDED:

Ensure that jacking or drilling and receiving pits are not within 2 feet from the edge of the pavement.

In rigid metallic conduit used exclusively for fiber optic cable, install a tracer wire continuously for the entire run of conduit, including through the junction boxes, mounting it on the wall. Splice the tracer wire only in the junction box. Seal the ends of rigid metallic conduit carrying the tracer wire. If wire or cable is not scheduled to be installed within 6 months of conduit installation, cap and seal the other conduits leaving the true tape inside. Install warning tape in the trench above the conduit.

701.03.05 Rigid Nonmetallic Conduit

B. Installation.

THE LAST PARAGRAPH IS CHANGED TO:

Install true tape marked in 1-foot increments for the length of the rigid non-metallic conduit. Install a tracer wire continuously for the entire run of conduit, including through the junction boxes, mounting it on the wall. Splice the tracer wire only in the junction box. Seal the ends of rigid nonmetallic conduit carrying the tracer wire. If wire or cable is not scheduled to be installed within 6 months of conduit installation, cap and seal the other conduits leaving the true tape inside. Install warning tape in the trench above the conduit.

701.03.06 Flexible Metallic Conduit

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Install liquidtight flexible metallic conduit according to NEC requirements. Cut liquidtight flexible metallic conduit according to manufacturer's recommendations. Ensure that conduit used for fiber optic cables meets the minimum bend and radius requirements as specified in the Contract and according to the fiber optic cable manufacturer. Utilize NEMA-4X weather-tight hubs for conduit connections to ITS and electrical enclosures.

701.03.07 Flexible Nonmetallic Conduit

B. Installation.

THE SECOND PARAGRAPH IS DELETED.

THE THIRD PARAGRAPH IS CHANGED TO:

Construct flexible nonmetallic conduit runs so that there are no joints or splices in the conduit between adjacent junction boxes. Ensure flexible nonmetallic conduit runs are terminated in the junction boxes according to manufacturer’s recommendations.

THE LAST PARAGRAPH IS CHANGED TO:

Install true tape marked in 1-foot increments for the length of the flexible non-metallic conduit. Install a tracer wire continuously for the entire run of conduit, including through the junction boxes, mounting it on the wall. Splice the tracer wire only in the junction box. Seal the ends of flexible nonmetallic conduit carrying the tracer wire. If wire or cable is not scheduled to be installed within 6 months of conduit installation, cap and seal the other conduits leaving the true tape inside. Install warning tape in the trench above the conduit.

701.03.08 Junction Box

THE FOLLOWING IS ADDED:

Junction box covers shall be stamped with the logo "Traffic Signal", and shall be green if installed in grassy areas, gray if installed in concrete areas, or as directed by the Resident Engineer. Stamping and colors shall be supplied by the manufacturer only. Stamping and spraying of covers on-site or in the Contractor's yard is not acceptable. At the request of the Resident Engineer, the Contractor shall supply all necessary invoices as proof the covers were prepared by the manufacturer.

All conduits terminating at splice boxes shall be sealed to prevent water from entering the boxes or vice versa. Duct Seal or other suitable material for this purpose shall be used. Material must be UL listed and meet the requirements of the National Electric Code.

701.03.15 Cable and Wire

A. Installing.

THE FOLLOWING IS ADDED

Test the existing tracer wire in the conduit for continuity. If there is no existing tracer wire in any of the conduits in the same trench, then install a continuous tracer wire between the adjacent junction boxes without any splice when installing the cable and wire as directed by the RE.

C. Connection and Coordination with Utility Services.

The following Electrical Service Inquiry (ESI) information has been obtained for this project:

Electrical Service Inquiries

Location	Equipment Receiving Service	Proposed Service Pole Number	Utility Authority / Company	ESI Number
West Seventh Street (CR 601) & Grant Avenue	Traffic Signal	62042	PSE&G	DWMS# 500687152
West Seventh Street (CR 601) & Plainfield Avenue (CR 603)	Traffic Signal	65113	PSE&G	DWMS# 500687155
West Seventh Street (CR 601) & Central Avenue	Traffic Signal	1776	PSE&G	DWMS# 500687156

If an ESI job number has expired, coordinate with the utility authority or company to re-establish and revise the service requests and obtain updated ESI job numbers.

701.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not include payment for restoring disturbed areas in the various Items of this Section. The Department will pay for restoring disturbed areas (pavement, curb, sidewalk, driveway or island) as specified in [104.03.03](#).

The Department will not include payment when the RE directs the installation of a new conduit or a repair to the defective conduit in the various Items of this Section. The Department will pay for the installation, when directed by the RE, of a new conduit or a repair to the defective conduit as specified in [104.03.03](#)

The Department will not include payment when the RE directs the installation of a tracer wire in existing conduit in the various Items of this Section. The Department will pay for the installation, when directed by the RE, of a tracer wire in existing conduit as specified in [104.03.03](#).

SECTION 702 – TRAFFIC SIGNALS

702.02.01 Materials

THE FOLLOWING IS ADDED TO THE END OF THE LIST OF MATERIALS:

Push Button Assemblies, Type APS	918.15
APS Control Unit	918.16

THE FOLLOWING IS ADDED TO THE END OF THE SECTION:

Materials indicated on the plans to be powder coated shall adhere to the following:

- Materials shall be cleaned prior to powder coating.
- Powder coating shall be performed by immersion process using both alkaline and acid bath before any fabrication welding. To facilitate adhesion of the powder, the poles shall have a minimum 80 grit rotary sanded satin brush finish.
- The applied finish shall be a thermosetting powder coat.
- The powder resin shall be a type TGIC polyester.
- The color to be achieved shall be Black.
- If necessary prior to the coating process, the parts shall be preheated to sufficient temperature to ensure all water vapor is removed and to aid fusing of the powder to the metal.
- The powder shall be applied by electrostatic spraying. After spraying, the parts shall be oven cured for a cycle of 5 to 15 minutes at a temperature of 375° F to 400° F. The final coating film thickness shall be in a range of 3 to 5 mils.
- Before shipment, the manufacturer shall perform a thorough visual inspection to ensure there are no finish flaws, and shall touch-up or recoat such flaws.
- A spray can of matching touch-up paint shall be supplied for every unit furnished and installed. Touch-up paint shall be delivered to the Resident Engineer at the same time the materials delivered.
- Care shall be taken during material installation at the job site so that the coating is not damaged. Any such damage shall be touched-up, recoated, or otherwise corrected to the satisfaction of the Resident Engineer.

The work for powder coating materials shall be included as part of the applicable material pay items.

702.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

After placing a new, temporary or interim traffic signal system into operation, inspect the traffic signal system every 2 months. Fill out a Contractor Maintenance Traffic Signal Inspection Report (Form EL-16C) when the traffic signal system becomes operational, when the traffic signal system is modified, and at every 2-month inspection.

Maintain as-built drawings of each signal modification. Place copies of the as-built drawings for each traffic signal system modification, Forms EL-16C, and Forms EL-11C in a plastic pocket mounted inside the cabinet door of each controller cabinet. Also provide a copy of all forms and as-built drawings to the RE.

If a new, temporary or interim traffic signal system fails or becomes damaged, repair and restore the traffic signal system to normal operation. Begin repair of the traffic signal system within 2 hours of receiving notice of damage or malfunction from the Department, State police, or local authorities. Ensure that workers assigned to such repair work continuously until the traffic signal resumes normal signal operation.

For each response to a system failure or damage, fill out a Contractor Maintenance Emergency Call Record (Form EL-11C) and place it in a plastic pocket mounted inside the cabinet door of each controller cabinet.

702.03.01 Controller

THE FOLLOWING IS ADDED:

The controller cabinet shall be equipped with an environmentally-hardened Uninterruptible Power Source (UPS) unit. The UPS shall be capable of running the traffic signal equipment at full operation for 6 to 8 hours at 600 watts, and shall be compatible with the traffic signal equipment. The UPS unit shall be self-mounted and the battery pack shall be self-mounted on the sidewall of the controller cabinet skirt.

The controller cabinet shall also include an environmentally-hardened GPS-based time clock, which can supply a momentary relay closure to the controller. The time switch shall have the capability of automatically setting the day-of-week and time-of-day using GPS technology. The time switch shall reset to GPS day and time at least once per day.

Submit the following concurrently for review before final approved is given to proceed:

- Catalog cuts of controller cabinet components, or intent to furnish pre-qualified components.
- Wiring diagram for each controller cabinet.
- Cabinet layout diagram for each controller cabinet.

702.03.05 Traffic Signal Head

THE FOLLOWING IS ADDED:

Traffic signal heads shall be fabricated from polycarbonate material. Lenses shall be provided for all signal faces. Full tunnel visors are to be provided for all signal faces, and their color shall match the rest of the traffic signal head. Traffic signal indications shall be illuminated by LED.

702.03.11 Temporary and Interim Traffic Signal Systems

THE FIRST THROUGH FIFTH PARAGRAPHS ARE DELETED:

THE FOLLOWING IS ADDED:

702.03.12 Push Button Assemblies, Type APS

Accessible Pedestrian Signal (APS) type push button assemblies shall consist of furnishing and installing the push button, housing, cable from the push button to the base of the standard, and the associated cable connections. The work shall also include the programming of push button assemblies. All push buttons shall operate on logic ground.

Push Button Assemblies, Type APS shall be compatible with the project's APS Control Units. Submittals for Push Button Assemblies, Type APS and APS Control Units shall be submitted concurrently for approval.

All mounting fittings shall be specifically designed to function with the traffic control device installed and shall provide the proper clearance to aid and adjust the device. Fittings and mounting hardware not shown in the plan shall conform to the recommendations of the manufacturer.

The push button assembly and associated push button signage shall conform to the current edition of the MUTCD. Encode signage text into Braille and imprint on the pushbutton assembly or associated sign.

702.03.13 APS Control Unit

The APS Control Unit shall consist of furnishing and installing a complete and functional APS system at the locations designated on the plans. The APS Control Unit is composed of the control unit in the enclosures designated on the plans, required patch cables, and required programming. The work shall also include installing an interface panel in the enclosures, and modifying controller parameters as required. If extraneous devices are required by the APS Control Unit for full access to programmable features, two of such devices shall be provided.

APS Control Units shall be compatible with the project's Push Button Assemblies, Type APS. Submittals for APS Control Units and Push Button Assemblies, Type APS shall be submitted concurrently for approval.

702.03.14 Single Member Arm & Shaft Assembly

The contract specifies Single Member Arm and Shaft Assemblies specific to Union County. Single member arm and shaft assemblies consist of an aluminum arm (size as indicated on the plans), shaft, transformer base (size and type as indicated on the plan detail sheets), required mounting hardware, safety chains and other miscellaneous hardware. They are mounted on foundations, type SFT and SFT-H.

Assemblies designated TBn-2 indicate there are two free swinging end signals; a TBn-1 designation indicates there is one free-swinging end signal, and a TBn-3 indicates there are three free swinging end signals, where "n" represents the size of the transformer base for the pole. Single member arm and shaft assemblies shall be stamped to ensure proper mating. Ensure that the correct arm assembly is mated to the shaft.

702.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
PUSH BUTTON ASSEMBLIES, TYPE APS	UNIT
APS CONTROL UNIT	UNIT
UNINTERRUPTIBLE POWER SUPPLY	UNIT
SINGLE MEMBER ARM & SHAFT ASSEMBLY, _____	UNIT

DIVISION 900 – MATERIALS

SECTION 901 – AGGREGATES

THE ENTIRE SUBSECTION IS CHANGED TO:

901.07 GRIT

901.07.01 Grit for Epoxy Waterproofing. Use grit for spreading over the epoxy waterproofing that is a subangular, natural, 98 percent silica sand. Ensure that 90 percent of the total sample by weight falls between the No. 4 and No. 30 sieves, with 0 percent passing the No. 30 sieve.

901.07.02 Fine Aggregate for Fog Seal. Use fine aggregate for spreading over fog seal that conforms to 901.05.02 and the gradation requirements in Table 901.07.02-1:

Sieve Size	Percent Passing
No. 8	100
No. 16	90 - 100
No. 50	70- 100
No. 200	0 - 2

901.11 SOIL AGGREGATE

1. Composition of Soil Aggregate.

THE FOLLOWING IS ADDED TO THE LAST PARAGRAPH:

For Designation I-14, the Contractor may use up to 30 percent steel slag by weight of the coarse aggregate portion of the soil aggregate. Obtain steel slag from a source listed on the QPL as specified in 901.01. Use steel slag that was produced as a co-product of the steel making process. Ensure that the steel slag consists of tough, durable pieces that are uniform in density and quality. Stockpile steel slag as specified in 901.02. Ensure steel slag for blending with I-14 Soil Aggregate does not exceed 0.50 percent expansion from hydration when tested according to ASTM D 4792.

SECTION 902 – ASPHALT

902.01.01 Asphalt Binder

THE SECOND PARAGRAPH IS CHANGED TO:

When specified, use PG 64E-22 asphalt binder that is a storage-stable and conforms to AASHTO MP 19 (AASHTO M 332), including compliance with the elastic response requirement in Appendix 1.

THE FOLLOWING SUBPART IS ADDED:

902.01.05 Warm Mix Asphalt (WMA) Additives and Processes

Use a WMA additive or process that is listed on the Northeast Asphalt User/Producer Group (NEAUPG) Qualified WMA Technologies List which can be found at the following website: <http://www.neaupg.uconn.edu/>

If an approved HMA mix design is used, a separate mix design with WMA additives or processes is not required.

Submit information on the WMA additive or process with the Paving Plan required in 401.03.03.A. For controlled foaming systems, also submit the operating parameters of the system including accuracy of the meter, operating range, and temperature of the binder. Provide the target and operating tolerances for the percent water injection and temperatures for the binder. Provide a method for validating this with changing production rates.

Ensure that a technical representative of the manufacturer is on-site or available for consultation for the first day or night of production.

902.02.01 Mix Designations

THE ENTIRE SUBPART IS CHANGED TO:

The requirements for specific HMA mixtures are identified by the abbreviated fields in the Item description as defined as follows:

HOT MIX ASPHALT 12.5ME SURFACE COURSE

1. **“HOT MIX ASPHALT”** “Hot Mix Asphalt” is located in the first field in the Item description for the purpose of identifying the mixture requirements.
2. **“12.5”** The second field in the Item description designates the nominal maximum size aggregate (in millimeters) for the job mix formula (sizes are 4.75, 9.5, 12.5, 19, 25, and 37.5 mm).
3. **“M”** The third field in the Item description designates the design compaction level for the job mix formula based on traffic forecasts as listed in Table 902.02.03-2 (levels are L=low and M=medium).
4. **“E”** The fourth field in the Item description designates the high temperature designation of the performance-graded binder. Options are “64” for PG 64-22 and “E” for PG 64E-22.
5. **“SURFACE COURSE”** The last field in the Item description designates the intended use and location within the pavement structure (options are surface, intermediate, or base course).

902.02.02 Composition of Mixtures

THE ENTIRE SUBPART IS CHANGED TO:

Provide materials as specified:

Aggregates for Hot Mix Asphalt	901.05
Asphalt Binder.....	902.01.01
Warm Mix Additives and Processes (optional)	902.01.05

If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed.

Mix HMA in a plant that is listed on the QPL and conforms to the requirements for HMA Plants as specified in 1009.01.

Composition of the mixture for HMA surface course is coarse aggregate, fine aggregate, and asphalt binder, and may also include mineral filler, WMA additive, and up to 15 percent Reclaimed Asphalt Pavement (RAP). For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive. Ensure that the finished mix does not contain more than a total of 1 percent by weight contamination from Crushed Recycled Container Glass (CRCG).

The composition of the mixture for HMA base or intermediate course is coarse aggregate, fine aggregate, and asphalt binder, and may also include mineral filler, WMA additive and up to 35 percent of recycled materials. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive. The 35 percent of recycled materials may consist of a combination of RAP, CRCG, Ground Bituminous Shingle Material (GBSM), and RPCSA, with the following individual limits:

Table 902.02.02-1 Use of Recycled Materials in HMA Base or Intermediate Course

Recycled Material	Maximum Percentage
RAP	25
CRCG	10
GBSM	5
RPCSA	20

Combine the aggregates to ensure that the resulting mixture meets the grading requirements specified in Table 902.02.03-1. In determining the percentage of aggregates of the various sizes necessary to meet gradation requirements, exclude the asphalt binder.

Ensure that the combined coarse aggregate, when tested according to ASTM D 4791, has less than 10 percent flat and elongated pieces retained on the No. 4 sieve and larger. Measure aggregate using the ratio of 5:1, comparing the length (longest dimension) to the thickness (smallest dimension) of the aggregate particles.

Ensure that the combined fine aggregate in the mixture conforms to the requirements specified in Table 902.02.02-2. Ensure that the material passing the No. 40 sieve is non-plastic when tested according to AASHTO T 90.

Table 902.02.02-2 Additional Fine Aggregate Requirements for HMA

Tests	Test Method	Minimum Percent
Uncompacted Void Content of Fine Aggregate	AASHTO T 304, Method A	45
Sand Equivalent	AASHTO T 176	45

902.02.03 Mix Design

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

UNLESS OTHERWISE APPROVED BY THE ENGINEER, ONLY ONE SOURCE OF SUPPLY FOR HOT MIX ASPHALT SURFACE COURSE MAY BE USED ON THE PROJECT.

TABLES 902.02.03-2, AND 902.02.03-3 ARE CHANGED TO:

Table 902.02.03-2 Gyrotory Compaction Effort for HMA Mixtures

Compaction Level	ESALs ¹ (millions)	N _{des}	N _{max}
L	< 0.3	50	75
M	≥ 0.3	75	115

- Design ESALs (Equivalent (80kN) Single-Axle Loads) refer to the anticipated traffic level expected on the design lane over a 20-year period.

Table 902.02.03-3 HMA Requirements for Design

Compaction Levels	Required Density (% of Theoretical Max. Specific Gravity)		Voids in Mineral Aggregate (VMA), % (minimum)						Voids Filled With Asphalt (VFA)1 %	Dust-to-Binder Ratio
	@N _{des} ²	@N _{max}	Nominal Max. Aggregate Size, mm							
			37.5	25.0	19.0	12.5	9.5	4.75		
L	96.0	≤ 98.0	11.0	12.0	13.0	14.0	15.0	16.0	70 - 80	0.6 - 1.2
M	96.0	≤ 98.0	11.0	12.0	13.0	14.0	15.0	16.0	65 - 78	0.6 - 1.2

- For 37.5-mm nominal maximum size mixtures, the specified lower limit of the VFA is 64 percent for all design traffic levels.
- As determined from the values for the maximum specific gravity of the mix and the bulk specific gravity of the compacted mixture. Maximum specific gravity of the mix is determined according to AASHTO T 209. Bulk specific gravity of the compacted mixture is determined according to AASHTO T 166. For verification, specimens must be between 95.0 and 97.0 percent of maximum specific gravity at N_{des}.

THE FOURTH PARAGRAPH IS CHANGED TO:

At the ME's request, test the mix design to ensure that it meets a minimum tensile strength ratio of 80 percent, when tested according to AASHTO T 283. The ME will require tensile strength ratio testing for new aggregate sources and for aggregates or mixes suspected of stripping susceptibility.

902.03.01 Composition of Mixtures

THE ENTIRE TEXT IS CHANGED TO:

Mix OGFC and MOGFC in a plant that is listed on the QPL and conforms to the requirements for HMA plants as specified in 1009.01.

Composition of mixture for OGFC and MOGFC is coarse aggregate, fine aggregate and asphalt binder and may include a WMA additive. Ensure that the mixture conforms to the following requirements:

1. Use aggregate for OGFC and MOGFC that conforms to 901.05, except, for coarse aggregate, use broken stone of gneiss, granite, quartzite, or trap rock. Do not use RAP, CRCG, GBSM, or RPCSA.
2. Use asphalt binder for OGFC and MOGFC that is PG 64E-22 as specified in 902.01.01.
3. If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer's recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.
4. For MOGFC, add a stabilizing additive consisting of mineral fiber or cellulose fiber to the mix. Use a stabilizing additive that conforms to the requirements for stabilizing additives in AASHTO M 325. Use only 1 type per mix design. If using mineral fibers, use a dosage rate of 0.4 percent by weight of total mix. If using cellulose fibers, use a dosage rate of 0.3 percent by weight of total mix. The dosage rate may be increased, as necessary, to prevent draindown as measured by the visual draindown determination of asphalt content in NJDOT B-8. Accurately control proportioning the fibers into the mixture within ± 10 percent of the required weight, and use equipment that ensures uniform dispersion of the fibers. Store fibers in a dry location with a storage temperature not to exceed 120 °F. The supplier of the cellulose or mineral fibers shall provide a certification of compliance, as specified in 106.07, that the material supplied conforms to AASHTO M 325. Ensure that a technical representative from the additive supplier is at the work site for the first full day of construction for technical assistance.

902.03.02 Mix Design

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will test 2 specimens to verify that the final JMF produces a mixture that has a minimum void content as specified in Table 902.03.03-1. The ME will determine percent air voids according to AASHTO T 209, and either NJDOT B-6 or AASHTO T 331.

902.03.03 Sampling and Testing

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

THE SECOND PARAGRAPH IS CHANGED TO:

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct air voids and draindown tests as directed by the ME.

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308 or NJDOT B-5. Perform testing for air voids according to AASHTO T 209 and either NJDOT B-6 or AASHTO T 331. Perform testing for draindown according to NJDOT B-7 or NJDOT B-8.

902.04.01 Composition of Mixture

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Mix ultra-thin HMA in a plant listed on the QPL conforming to the requirements for HMA plants specified in 1009.01.

Use ultra-thin HMA that consists of coarse aggregate, fine aggregate, and polymer modified asphalt binder and that may contain mineral filler and a WMA additive. Do not add RAP, CRCG, GBSM, or RPCSA. Combine the material in such proportions that the total aggregate and asphalt binder conform to the composition percentages specified in Table 902.04.02-1.

To produce the ultra-thin HMA, use aggregates and asphalt binder that conforms to the following:

1. For asphalt binder, use PG 64E-22 conforming to the requirements of 902.01.01.
2. If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.
3. For fine aggregate, use 100 percent stone sand conforming to 901.05.02. Ensure that the combined gradation with coarse aggregate conforms to Table 902.04.02-1.
4. Use coarse aggregate that conforms to 901.05.01 and Table 902.04.01-1. Permissible geologic classifications for coarse aggregate are argillite, gneiss, granite, quartzite, or trap rock. Ensure that the combined gradation with fine aggregate conforms to Table 902.04.02-1.

Table 902.04.01-1 Coarse Aggregate Properties			
Tests	Test Method	Minimum Percent	Maximum Percent
Percentage of wear, Los Angeles Abrasion Test	AASHTO T 96	-	25
Flakiness Index	BS ¹ 812, part 105.1	-	20
Clay Lumps and Friable Particles	ASTM C 142	-	2
Asphalt Affinity*	ASTM D 3625	95	-

¹ British Standard Test Method

5. Use mineral filler, if necessary, that conforms to 901.05.03.

902.04.02 Mix Design

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

For the mix design of the ultra-thin HMA, submit lab qualifications and references to the ME for approval prior to beginning work. Ensure that a technical representative from the lab which will perform the mix design is present during production to make adjustments as needed for mix compliance.

At least 30 days before the initial production date, submit the mix design to the ME for approval on forms supplied by the Department, including JMF for the ultra-thin HMA performed by an AASHTO accredited lab with at least five successfully completed ultra-thin HMA friction course projects greater than 5,000 tons each. Include a statement naming the source of each component and a report with the results for the criteria specified in Table 902.04.01-1 and 902.04.02-1.

If the source of any component material changes, submit a new JMF and obtain ME approval before using the new material. When unsatisfactory results or other conditions make it necessary, the ME may require a new JMF.

Design the ultra-thin HMA so that it has a draindown of less than 0.1 percent when tested according to AASHTO T 305.

When tested for moisture sensitivity according to AASHTO T 283, ensure that the ultra-thin HMA has a tensile strength ratio of at least 80 percent. Prepare specimens according to AASHTO T 312, and test according to T 283 except for the following:

1. Before compaction, condition the mixture for 2 hours according to AASHTO R 30, Section 7.1.

2. Compact specimens with 75 gyrations.
3. Extrude specimens as soon as possible without damaging.
4. Use AASHTO T 269 to determine void content.
5. Record the void content of the specimens.
6. If less than 55 percent saturation is achieved, repeat the procedure, unless the difference in tensile strength between duplicate specimens is greater than 25 pounds per square inch.
7. If visual stripping is detected, modify or readjust the mix.

Size, uniformly grade, and combine aggregate fractions in proportions so that the grading of total aggregate and asphalt binder in the JMF conform to the composition by mass percentages specified in Table 902.04.02-1.

Table 902.04.02-1 JMF Requirements for Ultra-Thin Friction Course		
Sieve Size	Total % Passing By Mass	Production Control Tolerances from JMF
1/2"	100	±6.0
3/8"	75-100	±5.5
¼"	30-45	±5.5
No. 4	24-37	±5.5
No. 8	21-26	±4.5
No. 16	15-23	±4.0
No. 30	11-16	±4.0
No. 50	8-14	±4.0
No. 100	5-10	±3.0
No. 200	5.0-7.0	±2.0
Asphalt %	4.9-6.0	Ignition Oven ±0.40

During the construction of the test strip, take samples to confirm that the plant mixed material meets the requirements of the mix design. The ME will not grant final approval of the mix design until a successful verification of the plant produced mix and construction test strip.

902.04.03 Sampling and Testing

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material. Maintain the temperature of the mix between 300 °F and 330 °F. Perform and meet requirements for quality control testing as specified in 902.02.04.C.

Ensure that a technical representative from the lab which designed the mix is present during production to make adjustments as needed for mix compliance. During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

If the composition testing results are outside of the production control tolerances specified in Table 902.04.02-1 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances in Table 902.04.02-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after the corrective action to ensure that the mix is within the production control tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.04.02-1, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project Limits before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308. Perform testing for draindown according to NJDOT B-7 or NJDOT B-8.

902.05.01 Composition of Mixture

THE ENTIRE TEXT IS CHANGED TO:

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS
 CITY OF PLAINFIELD, COUNTY OF UNION
 FEDERAL PROJECT NO. HSIP 0601(301)

Mix SMA in a plant that is listed on the QPL and conforms to the requirements for HMA plants as specified in 1009.01.

The composition of the SMA mixture is coarse aggregate, fine aggregate, mineral filler, mineral fibers or cellulose fibers, and polymer modified asphalt binder and may include a WMA additive.

Use asphalt binder for SMA that is PG 64E-22 as specified in 902.01.01.

For coarse aggregate in SMA, use crushed stone conforming to 901.05.01 and Table 902.05.01-1. Use at least 2 stockpiles of crushed stone with differing gradations to allow adjustments to meet the JMF.

Table 902.05.01-1 Coarse Aggregate Properties for SMA

Tests	Test Method	Maximum Percent
Percentage of wear, Los Angeles Abrasion Test	AASHTO T 96	30
Flat and Elongated, 5 to 1 (Material Retained on the No. 4 Sieve)	ASTM D 4791	5
Flat and Elongated, 3 to 1 (Material Retained on the No. 4 Sieve)	ASTM D 4791	20

For fine aggregate, use 100 percent stone sand conforming to 901.05.02. Ensure that the combined fine aggregate in the mixture conforms to the requirements in Table 902.02.02-2.

For mineral filler, use rock dust or crushed limestone conforming to AASHTO M 17. Ensure that the mineral filler has a plasticity index of less than 4 percent when tested according to AASHTO T 90.

Do not add RAP, CRCG, GBSM, or RPCSA to the mixture.

Add stabilizing fibers consisting of mineral fiber or cellulose fiber conforming to AASHTO M 325. Use only one type per mix design. If using mineral fibers, use between 0.4 and 0.6 percent by weight of total mix. If using cellulose fibers, use between 0.3 and 0.4 percent by weight of total mix. Provide control to accurately proportion the fibers into the mixture within ± 10 percent of the required weight, and use equipment that ensures uniform dispersion of the fibers. If using pre-packaged bags of fibers added to the pugmill during the dry mix cycle, follow the manufacturer's recommendations for the dry and wet mixing time. Store fibers in a dry location with a storage temperature not to exceed 120 °F. The supplier of the cellulose or mineral fibers shall provide a certification of compliance, as specified in 106.07, for the fibers. Ensure that a technical representative from the fiber supplier is at the HMA plant for the first full day of production for technical assistance.

If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer's recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.

902.05.02 Mix Design

THE ENTIRE TEXT IS CHANGED TO:

Design the SMA to meet the requirements in Table 902.05.02-1 and Table 902.05.02-2. Prepare the JMF according to AASHTO R 46. Determine the JMF at 4 percent air voids and 75 gyrations of the Superpave gyratory compactor.

Table 902.05.02-1 SMA Specification Band (% passing) nominal-maximum aggregate size

Production Control Tolerances ¹	Sieve Size	19 mm % Passing	12.5 mm % Passing	9.5 mm % Passing
0%	1"	100	100	100
$\pm 5\%$	3/4"	90-100	100	100
$\pm 5\%$	1/2"	50-88	90-100	100
$\pm 5\%$	3/8"	25-60	50-80	70-95
$\pm 4\%$	No. 4	20-28	20-35	30-50
$\pm 4\%$	No. 8	16-24	16-24	20-30
$\pm 4\%$	No. 16	-	-	0-21

±3%	No. 30	–	–	0-18
±3%	No. 50	–	–	0-15
±2%	No. 200	8.0-11.0	8.0-11.0	8.0-12.0
	Coarse Aggregate Fraction	Portion Retained on No. 4 Sieve	Portion retained on No. 4 Sieve	Portion retained on No. 8 Sieve
	Minimum Lift Thickness	2 inches	1-1/2 inch	1 inch

1. Production tolerances may fall outside of the wide band gradation limits.

Table 902.05.02-2 SMA Mixtures Volumetrics For Design and Plant Production

Property	Production Control Tolerances	Requirement
Air Voids	±1%	4.0%
Voids in Mineral Aggregate (VMA)	–	17.0% minimum
VCA _{mix}	–	Less than VCA _{dry}
Draindown @ production temperature	–	0.30% maximum
Asphalt Binder Content (AASHTO T 308)	±0.40%	6% minimum
Tensile Strength Ratio (AASHTO T 283)	–	80% minimum

902.05.03 Sampling and Testing

THE ENTIRE TEXT IS CHANGED TO:

Perform quality control testing as specified in 902.02.04.C. Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

During production at the plant, the ME will take a sample from each 700 tons of production to verify composition and air voids. Conduct draindown, VCA_{mix}, VCA_{dry}, and VMA testing as directed by the ME. Perform tests according to AASHTO R 46.

If the testing results are outside of the production control tolerances specified in Table 902.05.02-1 and Table 902.05.02-2 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances in Table 902.05.02-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after completing the corrective action to ensure that the mix is within tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.05.02-1 and Table 902.05.02-2, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project Limits before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308. The ME will determine bulk specific gravity of the compacted sample according to AASHTO T 166 or AASHTO T 331. The ME will use the most current QC maximum specific gravity test result, obtained according to AASHTO T 209, in calculating the volumetric properties of the SMA. Perform testing for draindown according to AASHTO T 305.

902.06.01 Composition

THE ENTIRE TEXT IS CHANGED TO:

Mix ASDC in a plant that is listed on the QPL and conforms to the requirements specified in 1009.01.

The mixture shall consist of asphalt binder and aggregate and may contain a WMA additive. Use asphalt binder that is PG 64-22 as specified in 902.01.01. Use aggregate that conforms to 901.05.01 or 901.05.02 and the gradation requirements specified in Table 902.06.01-1.

If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively

impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.

Table 902.06.01-1 Gradation Requirements and Tolerances for ASDC

Production Tolerance (Variation From JMF)	Sieve Size	JMF (Percent Passing)
±0.0	1"	100
±6.0	3/4"	95 - 100
±5.5	1/2"	85 - 100
±5.5	3/8"	60 - 90
±5.5	No. 4	15 - 25
±4.5	No. 8	2 - 10
±2.0	No. 200	2 - 5

Design the mixture to have an asphalt binder content of $3 \pm 1/2$ percent by weight of dry aggregate.

902.06.03 Sampling and Testing

THE ENTIRE TEXT IS CHANGED TO:

Perform quality control testing as specified in 902.02.04.C. Ensure that the mix meets the requirements as specified in 902.02.04.A, except that the temperature of the mix at discharge is required to be between 230 °F and 275 °F, otherwise the RE or ME will reject the material. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer’s recommended laydown temperature.

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

If the composition testing results are outside of the production control tolerances specified in Table 902.06.01-1 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances specified in Table 902.06.01-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after the corrective action to ensure that the mix is within tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.06.01-1, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D-3665 and will perform testing for composition according to AASHTO T 308. If directed by the ME, perform testing for draindown according to AASHTO T 305.

THE FOLLOWING SUBSECTIONS ARE ADDED

902.07 ASPHALT-RUBBER OPEN-GRADED FRICTION COURSE (AR-OGFC)

902.07.01 Composition of Mixture

Mix AR-OGFC in a plant listed on the QPL and conforming to the requirements for HMA plants specified in 1009.01. Ensure the HMA plant is equipped with asphalt-rubber binder blending equipment as specified in 1009.03.

Composition of mixture for AR-OGFC is coarse aggregate, fine aggregate and asphalt-rubber binder. Ensure that the mixture conforms to the following requirements:

1. Use aggregates that conform to 901.05. Use fine aggregate that is 100 percent stone sand and conforms to Table 902.02.02-2.
2. Do not use RAP, CRCG, GBSM, or RPCSA.
3. Use asphalt-rubber binder that conforms to 902.07.02.

902.07.02 Asphalt-Rubber Binder

A. Materials. Use the following materials:

1. **Ground Crumb Rubber.** Ensure that the ground crumb rubber has a specific gravity of 1.15 ± 0.05 , is free of wire or other contaminating materials, and contains not more than 0.5 percent fabric. Use crumb rubber that is ambient ground and conforms to the gradation requirements specified in Table 902.07.02-1. Ensure that the moisture content is less than 0.75 percent. The Contractor may add up to four percent calcium carbonate by weight of the granulated rubber, to prevent the particles from sticking together.

Sieve Size	Percent Passing ^{1,2}
No. 8	100
No. 16	65 – 100
No. 30	20 – 100
No. 50	0 – 45
No. 200	0 – 5

1. Perform gradation according to AASHTO T 27 using a minimum 50 gram sample.
2. Ensure that the gradation is performed as specified in NJDOT B-11.

Submit to the ME a certification of compliance, as specified in 106.07, for the ground crumb rubber. In addition, ensure that the certificates confirm that the rubber is a crumb rubber, derived from processing whole scrap tires or shredded tire materials; and the tires from which the crumb rubber is produced are taken from automobiles, trucks, or other equipment owned and operated in the United States. Include with the certifications verifications that the processing did not produce, as a waste product, casings, or other round tire material that can hold water when stored or disposed of above ground.

2. Asphalt Binder.

- a. Use asphalt binder that conforms to AASHTO M 320, Table 1; PG 64-22, PG 58-28 or an approved blend of both grades. The asphalt binder producer is required to provide the asphalt binder quality control plan annually to the ME for approval. Ensure that the quality control plan conforms to AASHTO R 26. Submit to the ME a certification of compliance, as specified in 106.07, for the asphalt binder. The ME will perform quality assurance sampling and testing of each asphalt binder lot as defined in the approved quality control plan.
- b. Use one or more of the following types of warm mix asphalt (WMA) additives or processes:
 1. Organic additives such as a paraffin wax or a low molecular weight esterified wax.
 2. Chemical additive that acts as a surfactant or dispersing agent.

Do not use controlled asphalt foaming systems or any other steam injection processes or steam introducing additives. WMA is a method of producing asphalt pavement at a mixing and compaction temperatures at least 30 °F lower than Hot Mix Asphalt (HMA) by using one or more of the types of WMA additives listed above. Submit information on the WMA additive or process with the Paving Plan required in 402.03.02.A. Include in the submission, the name and description of the additive or process, the manufacturer’s recommendations for usage of the additive or process, recommendations for mixing and compaction temperatures, and details on at least one project on which the additive was successfully used in the United States on a crumb rubber modified asphalt mixture. In the details of a project, include tonnage, type of mix, dosage, mixing and compaction temperatures, available test results, and contact information for project. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. The ME will evaluate the impacts to performance grade of the asphalt binder based upon certification from manufacturer in conjunction with laboratory data indicating the effects of the additive on the asphalt binder properties. Follow the manufacturer’s recommendations for the dosage of WMA additive needed and approved blending method(s).

Ensure that a technical representative of the WMA additive manufacturer is on-site or available for consultation during the production and placement of the AR-OGFC with the warm mix additive.

- B. Mixing.** Using the asphalt-rubber binder blending equipment in 1009.03, produce the asphalt-rubber binder to contain at least 17 percent ground rubber by the weight of total asphalt binder (asphalt + crumb rubber). Ensure that the temperature of the asphalt cement is between 350 and 400 °F at the time of addition of the ground rubber. Ensure that there are no agglomerations of rubber particles in excess of two inches in the least dimension in the mixing chamber.

Document that the proportions are accurate and that the rubber has been uniformly incorporated into the mixture. Report as directed by the ME. Ensure that the crumb rubber and asphalt-cement are thoroughly mixed before beginning the one-hour reaction period. Rubber floating on the surface or agglomerations of rubber particles is evidence of insufficient mixing. Maintain the temperature of the asphalt-rubber binder immediately after mixing between 325 and 375 °F. Maintain the temperature of the asphalt-rubber binder for at least one hour before using.

- C. Properties.** Prepare asphalt-rubber binder using the “wet process.” Physical properties are required to comply with the requirements of ASTM D 6114, Type II, except for the properties specified in Table 902.07.02-2.

Table 902.07.02-2 Asphalt-Rubber Binder Properties		
Property	Test Procedure	Requirement
Resilience: 77 °F; %, minimum	ASTM D 5329	25
Rotational Viscosity ¹ 350 °F; cP	NJDOT B-12	2000 – 4000

1. The viscotester used must be correlated to a Rion (formerly Haake) Model VT-04 viscotester using the No. 1 Rotor. The Rion viscotester rotor, while in the off position, is required to be completely immersed in the binder at a temperature from 350 ± 3 °F for a minimum heat equilibrium period of 60 seconds, and the average viscosity determined from three separate constant readings (± 500 cP) taken within a 30 second time frame with the viscotester level during testing and turned off between readings. Continuous rotation of the rotor may cause thinning of the material immediately in contact with the rotor, resulting in erroneous results.

- D. Handling and Testing.** Once the asphalt-rubber binder has been mixed, thoroughly agitate during periods of use to prevent settling of the rubber particles. During production, maintain asphalt-rubber binder between 325 and 375 °F. Ensure that asphalt-rubber binder is not held at 325 °F or higher for more than 16 hours. Allow asphalt-rubber binder held for more than 16 hours to cool. To reuse, gradually reheat to between 325 and 375 °F. Do not cool and reheat more than one time. Do not store asphalt-rubber binder above 250 °F for more than four days.

For each load or batch of asphalt-rubber binder, provide the RE with the following:

1. The source, grade, amount, and temperature of the asphalt cement before the addition of rubber.
2. The source and amount of rubber and the rubber content expressed as percent by the weight of the asphalt cement.
3. Times and dates of the rubber additions and resultant viscosity test.
4. A record of the temperature, with time and date reference for each load or batch. The record begins at the time of the addition of rubber and continue until the load or batch is completely used. Take readings and record every temperature change in excess of 20 °F, and as needed to document other events that are significant to batch use and quality.

902.07.03 Mix Design

Submit binder and mix designs including JMF for each mixture performed by an AASHTO accredited lab with at least five successfully completed asphalt-rubber open-graded friction course projects greater than 5,000 tons each. Include a statement naming the source of each component and a report with the results for the criteria specified in Table 902.07.03-1. Include a report detailing the rotational viscosity of the asphalt-rubber binder at 60, 90, 135, 240, and 1440 minutes. Submit lab qualifications and references to the ME for approval prior to beginning work.

Design the mix to meet the criteria in Table 902.07.03-1.

Table 902.07.03-1 JMF Master Ranges and Mixture Requirements AR-OGFC

Sieve Sizes	Mixture Designations (% Passing ¹)
	AR-OGFC
1/2"	100
3/8"	90 – 100
No. 4	20 – 40
No. 8	5 – 10
No. 200	0 – 3.0
Minimum asphalt-rubber binder, % ²	8.4
Minimum % Air Voids, design	15

1. Aggregate percent passing to be determined based on dry aggregate weight.
 2. Asphalt-rubber binder content to be determined based on total weight of mix.

Determine and verify the JMF according to NJDOT B-8. Ensure that the JMF is within the master range specified in Table 902.07.03-1.

Prepare compacted test specimens for submittal to the ME at least 30 days before the initial production date. Prepare these specimens from material mixed according to the final JMF, using 50 gyrations of the Superpave gyratory compactor according to AASHTO T 312.

The ME will test 2 specimens to verify stone-on-stone contact according to NJDOT B-8 and that the final JMF produces a mixture that has a minimum void content as specified in Table 902.07.03-1. The ME will determine percent air voids according to AASHTO T 209 and AASHTO T 331.

The ME will test 2 test specimens for abrasion and impact resistance using a modified L.A. Abrasion Test according to NJDOT B-8. The maximum allowable loss as calculated by this method is 30 percent.

Do not modify, which includes changing the asphalt cement supplier, the JMF unless the ME approves the modification.

902.07.04 Sampling and Testing

A. General Acceptance Requirements. General Acceptance Requirements. The RE or ME may reject and require disposal of any batch or shipment that is rendered unfit for its intended use due to contamination, segregation, improper temperature, lumps of cold material, or incomplete coating of the aggregate. For other than improper temperature, visual inspection of the material by the RE or ME is considered sufficient grounds for such rejection.

For AR-OGFC with WMA additive, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins meets the WMA additive manufacturer’s recommendations. Do not allow the mixture temperature to exceed 300 °F at discharge from the plant. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer’s recommended laydown temperature.

Combine and mix the aggregates and asphalt-rubber binder to ensure that at least 95 percent of the coarse aggregate particles are entirely coated with asphalt-rubber binder as determined according to AASHTO T 195. If the ME determines that there is an on-going problem with coating, the ME may obtain random samples from 5 trucks and will determine the adequacy of the mixing on the average of particle counts made on these 5 test portions. If the requirement for 95 percent coating is not met on each sample, modify plant operations, as necessary, to obtain the required degree of coating.

B. Quality Control Testing. The HMA producer is required to provide a quality control (QC) technician who is certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Technologist, Level 2. The QC technician may substitute equivalent technician certification by the Mid-Atlantic Region Technician Certification Program (MARTCP). Ensure that the QC technician is present during periods of mix production for the sole purpose of quality control testing and to assist the ME. The ME will not perform the quality control testing or other routine test functions in the absence of, or instead of, the QC technician.

The QC technician is required to perform sampling and testing according to the approved quality control plan, to keep the mix within the limits specified for the mix being produced. The QC technician may use acceptance test results or perform additional testing as necessary to control the mix.

For each acceptance test, perform maximum specific gravity testing according to AASHTO T 209 on a test portion of the sample taken by the ME. Sample and test coarse aggregate, fine aggregate and mineral filler according to the approved quality control plan for the plant.

- C. **Acceptance Testing.** During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308. Perform testing for air voids according to T 209 and either B-6 or T 331. Perform testing for draindown according to NJDOT B-8.

Conduct air voids and draindown tests as directed by the ME.

If the composition testing results are outside of the production control tolerances specified in Table 902.07.04-1 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances in Table 902.07.04-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after the corrective action to ensure that the mix is within the production control tolerances. If two consecutive acceptance samples are outside the tolerances specified in Table 902.07.04-1, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project Limits before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

Table 902.07.04-1 Production Control Tolerances for AR-OGFC Mixtures

Sieve Sizes	Production Control Tolerances from JMF ¹
1/2"	±6.0
3/8"	±5.5
No. 4	±5.5
No. 8	±4.5
No. 200	±2.0
Asphalt-rubber binder, % (AASHTO T 308)	±0.40
Minimum % Air Voids	1.0% less than design requirement
1. Production tolerances may fall outside of the wide band gradation limits in Table 902.07.03-1.	

902.08 HIGH PERFORMANCE THIN OVERLAY (HPTO)

902.08.01 Composition of Mixture

Mix HPTO in a plant that is listed on the QPL and conforms to the requirements for HMA Plants as specified in 1009.01. The composition of the mixture for HPTO is coarse aggregate, fine aggregate, and asphalt binder, and may also include mineral filler and a WMA additive. Do not use Reclaimed Asphalt Pavement (RAP), Ground Bituminous Shingle Material, Remediated Petroleum Contaminated Soil Aggregate, or Crushed Recycled Container Glass (CRCG). Use asphalt binder and aggregates that meet the following requirements:

1. For the asphalt binder, use PG 64E-22 as specified in 902.01.01.
2. If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.
3. Use coarse aggregate that is argillite, gneiss, granite, quartzite, or trap rock and conforms to [901.05.01](#).

4. For fine aggregate, use 100 percent stone sand conforming to [901.05.02](#) and having an uncompacted void content of at least 45 percent when tested according to AASHTO T 304, Method A. In addition, the minimum sand equivalent is 45 percent when tested according to AASHTO T 176.
5. If necessary, use mineral filler as specified in [901.05.03](#).

902.08.02 Mix Design

At least 45 days before initial production, submit a job mix formula for the HPTO on forms supplied by the Department. Include a statement naming the source of each component and a report showing the results meet the criteria specified in Tables 902.08.03-1 and 902.08.03-2.

For the job mix formula for the HPTO mixture, establish the percentage of dry weight of aggregate passing each required sieve size and an optimum percentage of asphalt binder based upon the weight of the total mix. Determine the optimum percentage of asphalt binder according to AASHTO R 35 and M 323 with an Ndes of 50 gyrations. Before maximum specific gravity testing or compaction of specimens, condition the mix for 2 hours according to the requirements for conditioning for volumetric mix design in AASHTO R 30, Section 7.1. If the absorption of the combined aggregate is more than 1.5 percent according to AASHTO T 84 and T 85, condition the mix for 4 hours according to AASHTO R 30, Section 7.2 prior to compaction of specimens (AASHTO T 312) and determination of maximum specific gravity (AASHTO T 209). Ensure that the job mix formula is within the master range specified in, Table 902.08.03-1.

Ensure that the job mix formula provides a mixture that meets a minimum tensile strength ratio (TSR) of 85 percent when prepared according to AASTHO T 312 and tested according to AASHTO T 283 with the following exceptions:

1. Before compaction, condition the mixture for 2 hours according to AASHTO R 30 Section 7.1.
2. Compact specimens with 40 gyrations.
3. Extrude specimens as soon as possible without damaging.
4. Use AASHTO T 269 to determine void content.
5. Record the void content of the specimens.
6. If less than 55 percent saturation is achieved, the procedure does not need to be repeated, unless the difference in tensile strength between duplicate specimens is greater than 25 pounds per square inch.
7. If visual stripping is detected, modify or readjust the mix.

For each mix design, submit three gyratory specimens and one loose sample corresponding to the composition of the job mix formula, including the design asphalt content. The ME will use these samples for verification of the properties of the job mix formula. Compact the specimens to the design number of gyrations (Ndes). To be acceptable all three gyratory specimens must comply with the gradation and asphalt content requirements in Table 902.08.03-1 and with the control requirements in Table 902.08.03-2. The ME reserves the right to be present at the time of molding the gyratory specimens.

In addition, submit 6 gyratory specimens and a 5 gallon bucket of loose mix to the ME. Compact the additional gyratory specimens according to AASHTO T 312. Ensure that the 6 gyratory specimens are 77 millimeters high and have an air void content of 5.0 ± 0.5 percent. The ME will use the additional samples for performance testing of the HPTO mix. The ME will test the specimens using an Asphalt Pavement Analyzer according to AASHTO T 340 at 64 °C, 100 pounds per square inch hose pressure, and 100 pound wheel load. The ME will approve the job mix formula if the average rut depth for the 6 specimens in the asphalt pavement analyzer testing is not more than 4 millimeters in 8,000 loading cycles. If the job mix formula does not meet the APA criteria, redesign the HPTO mix.

If unsatisfactory results for any specified characteristic of the work make it necessary, establish a new job mix formula for approval. In such instances, if corrective action is not taken, the ME may require an appropriate adjustment.

If a change in sources is made or a change in the properties of materials occurs, the ME will require that a new job mix formula be established and approved before production can continue.

902.08.03 Sampling and Testing

- A. General Acceptance Requirements.** The RE or ME may reject and require disposal of any batch or shipment that is rendered unfit for its intended use due to contamination, segregation, improper temperature, lumps of cold material, or incomplete coating of the aggregate. For other than improper temperature, visual inspection of the material by the RE or ME is considered sufficient grounds for such rejection.

Ensure that the temperature of the HPTO at discharge from the plant or surge and storage bins is maintained between 300 and 330 °F. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer's recommended laydown temperature.

Combine and mix the aggregates and asphalt binder to ensure that at least 95 percent of the coarse aggregate particles are entirely coated with asphalt binder as determined according to AASHTO T 195. If the ME determines that there is an on-going problem with coating, the ME may obtain random samples from 5 trucks and will determine the adequacy of the mixing on the average of particle counts made on these 5 test portions. If the requirement for 95 percent coating is not met on each sample, modify plant operations, as necessary, to obtain the required degree of coating.

- B. Sampling.** The ME will take a sample of HPTO for volumetric acceptance testing from each 700 tons of a mix. The ME will perform sampling according to AASHTO T 168, NJDOT B-2, or ASTM D 3665.
- C. Quality Control Testing.** The HMA producer is required to provide a quality control (QC) technician who is certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Technologist, Level 2. The QC technician may substitute equivalent technician certification by the Mid-Atlantic Region Technician Certification Program (MARTCP). Ensure that the QC technician is present during periods of mix production for the sole purpose of quality control testing and to assist the ME. The ME will not perform the quality control testing or other routine test functions in the absence of, or instead of, the QC technician.

The QC technician is required to perform sampling and testing according to the approved quality control plan, to keep the mix within the limits specified for the HPTO mix being produced. The QC technician may use acceptance test results or perform additional testing as necessary to control the mix.

To determine the composition, perform ignition oven testing according to AASHTO T 308. For each acceptance test, perform maximum specific gravity testing according to AASHTO T 209 on a test portion of the sample taken by the ME. Sample and test coarse aggregate, fine aggregate, mineral filler, and RAP according to the approved quality control plan for the plant.

- D. Acceptance Testing and Requirements.** The ME will determine volumetric properties at Ndes for acceptance from samples taken, compacted, and tested at the HMA plant. The ME will compact HPTO to 50 gyrations, using equipment according to AASHTO T 312. The ME will determine bulk specific gravity of the compacted sample according to AASHTO T 166. The ME will use the most current QC maximum specific gravity test result in calculating the volumetric properties of the HPTO.

The ME will determine the dust-to-binder ratio from the composition results as tested by the QC technician.

Ensure that the HMA mixture conforms to the requirements specified in Table 902.08.03-2, and to the gradation requirements in Table 902.08.03-1. If 2 samples in 5 consecutive samples fail to conform to the gradation or volumetric requirements, immediately initiate corrective action.

The ME will test a minimum of 1 sample per 3500 tons for moisture, basing moisture determinations on the weight loss of an approximately 1600-gram sample of mixture heated for 1 hour in an oven at 280 ± 5 °F. Ensure that the moisture content of the mixture at discharge from the plant does not exceed 1.0 percent.

- E. Performance Testing.** Provide 6 gyratory specimens and a 5 gallon bucket of loose mix to the ME. Compact the additional gyratory specimens according to AASHTO T 312. Ensure that the 6 gyratory specimens are 77 millimeters high and have an air void content of 5.0 ± 0.5 percent. The first sample is required to be taken in the first 1500 tons of production. Thereafter, random samples every 10,000 tons is required to be sampled. The ME will use the samples for performance testing of the HPTO mix. The ME will test the specimens using an Asphalt Pavement Analyzer according to AASHTO T 340 at 64 °C, 100 pounds per square inch hose pressure, and 100 pounds wheel load. If the HPTO mix exceeds the APA criteria of 5 mm in 8000 loading cycles, the ME may stop

production until corrective action is taken. If the HPTO mix exceeds the APA criteria of 12 mm in 8000 loading cycles, the RE may require removal and replacement of the HPTO.

Sieve Size	Percent Passing by Mass
3/8"	100
#4	65-85
#8	33-55
#16	20-35
#30	15-30
#50	10-20
#100	5-15
#200	5.0-8.0
Minimum Percent Asphalt by Mass of Total Mix	7

	Required Density (% of Max. Sp. Gr.)		Voids in Mineral Aggregate (VMA)	Dust to Binder Ratio	Draindown AASHTO T 305
	Ndes (50 gyrations)	Nmax (100 gyrations)			
Design Requirements	96.5	≤ 99.0	≥ 18.0 %	0.6 - 1.2	≤ 0.1 %
Control Requirements	95.5 - 97.5	≤ 99.0	≥ 18.0 %	0.6 – 1.3	≤ 0.1 %

THE FOLLOWING SUBSECTIONS ARE ADDED

902.09 MICRO SURFACING

902.09.01 Composition of the Mixture

Ensure that the micro surfacing mixture components conform to the following:

1. **Micro Surfacing Emulsion.** Use polymer modified emulsified asphalt. Ensure that the emulsified asphalt and emulsified asphalt residue is a quick set polymer modified asphalt emulsion conforming to the requirements of AASHTO M 208 for a QQS-1h emulsion and the following:
 - a. Use a minimum of 3 percent polymer material, by weight of asphalt.
 - b. Ensure that the polymer material is milled or blended into the asphalt prior to the emulsification process by an emulsion manufacturer approved by the ME.
 - c. Ensure that the polymer modifier and any additives enable the micro surfacing material to receive normal traffic within one hour without causing damage to the surface. The cement mixing test is waived for this emulsion. .
 - d. Ensure that the emulsified asphalt and the emulsified asphalt residue meet all of the quality test criteria in section 4.1.2 of the International Slurry Surfacing Association (ISSA) “Recommended Performance Guideline for Micro Surfacing”; A 143
2. **Aggregate.** Use only manufactured stone sand and crushed stone that conform to 901.05. Ensure that the fine aggregate has a Sand Equivalent value of 65 percent minimum when tested according to AASHTO T 176.

3. **Mineral Filler.** Use mineral filler that conforms to ASTM D 242 and is free of lumps.
4. **Water.** Use water that conforms to 919.08.
5. **Other Additives.** The Contractor may use other additives to provide control of the break/set time in the field. Ensure that the type of additive is specified in the mix design.

902.09.02 Mix Design of Micro Surfacing Mixture

A. Mix Design Requirements. Ensure that an AASHTO accredited lab, with at least five successfully completed micro surfacing projects greater than 5,000 square yards each, performs the mix design. Submit the mix design and certified test results of the micro surfacing mixture for approval in accordance with the provisions of ASTM D 6372, Standard Practice for Design, Testing, and Construction of Micro Surfacing and the following:

1. Ensure that the aggregate used in the job mix formula is from the same source and representative of the material proposed for use on the project.
2. Ensure that the compatibility of the aggregate, micro surfacing emulsion, water, mineral filler, and other additives is evaluated in the mix design. Perform the mix design using materials consistent with those supplied by the contractor for the project. Ensure the micro surfacing mix conforms to the requirements as specified in Table 902.09.02-1.

902.09.02-1 Micro Surfacing Mixture Requirements		
Tests	ISSA Test Method	Specification
Mix Time @ 77 °F Mix Time @ 100 °F	TB 113	Controllable to 120 seconds minimum Controllable to 35 seconds minimum
Wet Cohesion @ 30 minutes minimum (set) @ 60 minutes minimum (traffic)	TB 139	12 kg-cm minimum 20 kg-cm or near spin minimum
Wet Stripping	TB 114	90 % minimum
Wet-Track Abrasion Loss One-hour soak Six-day soak	TB 100	50 g/ft ² (538 g/m ²) maximum 75 g/ft ² (807 g/m ²) maximum
Lateral Displacement	TB 147	5% maximum
Specific Gravity after 1,000 cycles of 125 pounds (56.71 kg)	TB 147	2.10 maximum
Excess Asphalt by LWT Sand Adhesion	TB 109	50 g/ft ² (538 g/m ²) maximum
Classification Compatibility	TB 144	11 grade points minimum (AAA, BAA)

3. Ensure proportioning of the mix design is within the limits in Table 902.09.02-2:

Table 902.09.02-2 Mix Design Proportion Requirements	
Component Materials	Limits
Residual asphalt	5.5 to 11.5% by dry weight of aggregates
Mineral filler	0.0 to 3% by dry weight of aggregates
Polymer-based modifier	min. of 3% polymer solids based on bitumen weight content
Additives	as needed
Water	as required to ensure proper mix consistency

4. Ensure that the proportions of aggregate and mineral filler are provided and within the limits of Table 902.09.03-1.

B. Mix Design Report. Submit the final mix design in the following format:

1. Source of each individual material.
2. Aggregate:
 - a. Gradation
 - b. Sand Equivalent
 - c. Abrasion Resistance
 - d. Soundness

3. Field Simulation Tests:
 - a. Wet Stripping Test
 - b. Wet Track Abrasion Loss
 - c. Classification Compatibility
 - d. Trial Mix Time @ 77 °F and 100 °F
4. Interpretation of Results and the Determination of a Job Mix Formula (JMF):
 - a. Percentage of Mineral Filler (minimum and maximum)
 - b. Percentage of Water, including aggregate moisture (minimum and maximum)
 - c. Percentage of Mix Set Additive (if required)
 - d. Percentage of Modified Emulsion
 - e. Residual Content of Modified Emulsion
 - f. Percentage of Residual Asphalt
 - g. Combined Aggregate Gradation (JMF)
5. Signature and date

902.09.03 Sampling and Testing

The ME will perform sampling and testing of the aggregate at least 10 days prior to the start of work. The ME will sample aggregate from stockpiles designated and constructed for each mixture type on the project. The ME will sample the aggregate according to AASHTO T 2 and test according to AASHTO T 11 and T 27 using the following sampling frequency:

1. When the project quantity for the specified mixture type is less than 500 tons, designate the entire quantity as one lot and divide into three equal sublots for sampling. Obtain one sample from each subplot and submit to the ME for testing. The ME will randomly select only one of the three samples and test for compliance with Table 902.09.03-1. If the sample tested meets the specification, the entire lot is acceptable for use on the project. If the sample fails, the ME will test the remaining two samples. If the two samples both meet specification, the entire lot is acceptable for use on the project. If either of the two additional samples fails to meet the specification, the entire lot is rejected.
2. When the project quantity for the specified mixture type is 500 tons or greater, divide the aggregate into equal lots at the discretion of the ME, but in no case is the lot size to exceed 1,000 tons. Divide each lot into three equal sublots and obtain one sample for each subplot. The ME will randomly select only one of the three samples and test for compliance with Table 902.09.03-1. If the sample tested meets the specification, the entire lot is acceptable for use on the project. If the sample fails, the ME will test the remaining two samples. If the two samples both meet specification, the entire lot is acceptable for use on the project. If either of the two additional samples fails to meet the specification, the entire lot is rejected.

Take precautions to ensure that approved stockpiles of aggregate do not become contaminated at the jobsite. Screen oversize aggregate or foreign materials from the aggregate prior to delivery to the mixer.

During the micro surfacing application, in the presence of the inspector, sample the mixture twice daily or as directed from the pug mill discharge chute. Use a rectangular non-absorptive container, such as a loaf pan, of sufficient size to obtain a sample from the entire cross section of the mixture being discharged. Ensure that an AASHTO accredited lab, with at least five successfully completed micro surfacing projects greater than 5,000 square yards each, analyzes the mix for binder content and compliance with specifications. Submit certified results to the ME. The ME may perform independent testing.

Ensure that the asphalt content is within ± 0.40 of the JMF. If the asphalt content is outside of the allowable tolerance, recalibrate or adjust the mixing machine. The RE may stop the micro surfacing operation if two or more samples fail to conform to the tolerance. Take corrective action or re-design the micro surfacing mixture. Resume operations only after RE has approved the corrective action.

Use aggregate, including mineral filler, which conforms to the gradation in Table 902.09.03-1.

Table 902.09.03-1 Gradation Requirements for Aggregate and Mineral Filler			
Sieve Size	Type II Percent Passing	Type III Percent Passing	Stockpile Tolerances from JMF

3/8"	100	100	-
No. 4	90-100	70-90	±5%
No. 8	65-90	45-70	±5%
No. 16	45-70	28-50	±5%
No. 30	30-50	19-34	±5%
No. 50	18-30	12-25	±4%
No. 100	10-21	7-18	±3%
No. 200	5-15	5-15	±2%

902.10 SLURRY SEAL

902.10.01 Composition of the Mixture

Ensure that the slurry seal mixture components conform to the following:

1. **Slurry Seal Emulsion.** Use polymer modified emulsified asphalt. Ensure that the emulsified asphalt and emulsified asphalt residue is a quick set polymer modified asphalt emulsion conforming to the requirements of AASHTO M 208 for a CQS-1h emulsion and the following:
 - a. Use a minimum of 3 percent polymer material, by weight of asphalt.
 - b. Ensure that the polymer material is milled or blended into the asphalt prior to the emulsification process by an emulsion manufacturer approved by the ME.
 - c. Ensure that the polymer modifier and any additives enable the slurry seal material to receive normal traffic within one hour without causing damage to the surface.
 - d. Ensure that the emulsified asphalt and the emulsified asphalt residue material conform to the requirements in table 902.10.01-1.

902.10.01-1 Emulsified Asphalt and Residue Requirements		
Tests	Test Method	Specification
Tests on Emulsified Asphalt		
Storage Stability, 24 hours, percent	AASHTO T 59	1 % maximum
Residue by Distillation ¹ , percent	AASHTO T 59	62 % minimum
Tests on Asphalt Residue		
Softening Point by Ring and Ball	AASHTO T 53	135 °F minimum

1. Test temperature held at 350 °F for 20 minutes.

2. **Aggregate.** Use only manufactured stone sand and crushed stone that conform to 901.05. Ensure that the fine aggregate has a Sand Equivalent value of 45 percent minimum when tested according to AASHTO T 176.
3. **Mineral Filler.** Use mineral filler that conforms to ASTM D 242 and is free of lumps.
4. **Water.** Use water that conforms to 919.08.
5. **Other Additives.** The Contractor may use other additives to provide control of the break/set time in the field. Ensure that the type of additive is specified in the mix design.

902.10.02 Mix Design of Slurry Seal Mixture

A Mix Design Requirements. Ensure that an AASHTO accredited lab, with at least five successfully completed slurry seal projects greater than 5,000 square yards each, performs the mix design. Submit the mix design and certified test results of the slurry seal mixture for approval in accordance with the provisions of ASTM D 3910, Standard Practice for Design, Testing, and Construction of Slurry Seal and the following:

1. Ensure that the aggregate used in the job mix formula is from the same source and representative of the material proposed for use on the project.
2. Ensure that the compatibility of the aggregate, slurry seal emulsion, water, mineral filler, and other additives is evaluated in the mix design. Perform the mix design using materials consistent with those supplied by the contractor for the project. Ensure the slurry seal mix conforms to the requirements as specified in Table 902.10.02-1.

902.10.02-1 Slurry Seal Mixture Requirements		
Tests	ISSA Test Method	Specification
Mix Time @ 77 °F	TB 113	Controllable to 120 seconds minimum
Mix Time @ 100 °F		Controllable to 35 seconds minimum
Slurry Seal Consistency	TB 106	0.79 to 1.18 inches
Wet Cohesion @ 30 minutes minimum (set) @ 60 minutes minimum (traffic)	TB 139	12 kg-cm minimum
		20 kg-cm or near spin minimum
Wet Stripping	TB 114	90 % minimum
Wet-Track Abrasion Loss One-hour soak Six-day soak	TB 100	50 g/ft ² (538 g/m ²) maximum
		75 g/ft ² (807 g/m ²) maximum
Lateral Displacement	TB 147	5% maximum
Specific Gravity after 1,000 cycles of 125 pounds (56.71 kg)	TB 147	2.10 maximum
Excess Asphalt by LWT Sand Adhesion	TB 109	50 g/ft ² (538 g/m ²) maximum
Classification Compatibility	TB 144	11 grade points minimum (AAA, BAA)

3. Ensure proportioning of the mix design is within the limits in Table 902.10.02-2:

Table 902.10.02-2 Mix Design Proportion Requirements	
Component Materials	Limits
Residual asphalt	7.5 to 13.5% by dry weight of aggregates
Mineral filler	0.0 to 3% by dry weight of aggregates
Polymer-based modifier	min. of 3% polymer solids based on bitumen weight content
Additives	as needed
Water	as required to ensure proper mix consistency

4. Ensure that the proportions of aggregate and mineral filler are provided and within the limits of Table 902.10.03-1.

B Mix Design Report. Submit the final mix design in the following format:

1. Source of each individual material.
2. Aggregate:
 - a. Gradation
 - b. Sand Equivalent
 - c. Abrasion Resistance
 - d. Soundness
3. Field Simulation Tests:
 - a. Wet Stripping Test
 - b. Wet Track Abrasion Loss
 - c. Classification Compatibility
 - d. Trial Mix Time @ 77 °F and 100 °F
4. Interpretation of Results and the Determination of a Job Mix Formula (JMF):
 - a. Percentage of Mineral Filler (minimum and maximum)
 - b. Percentage of Water, including aggregate moisture (minimum and maximum)
 - c. Percentage of Mix Set Additive (if required)
 - d. Percentage of Modified Emulsion
 - e. Residual Content of Modified Emulsion
 - f. Percentage of Residual Asphalt
 - g. Combined Aggregate Gradation (JMF)
5. Signature and date

902.10.03 Sampling and Testing

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The ME will perform sampling and testing of the aggregate at least 10 days prior to the start of work. The ME will sample aggregate from stockpiles designated and constructed for each mixture type on the project. The ME will sample the aggregate according to AASHTO T 2 and test according to AASHTO T 11 and T 27 using the following sampling frequency:

1. When the project quantity for the specified mixture type is less than 500 tons, designate the entire quantity as one lot and divide into three equal sublots for sampling. Obtain one sample from each subplot and submit to the ME for testing. The ME will randomly select only one of the three samples and test for compliance with Table 902.10.03-1. If the sample tested meets the specification, the entire lot is acceptable for use on the project. If the sample fails, the ME will test the remaining two samples. If the two samples both meet specification, the entire lot is acceptable for use on the project. If either of the two additional samples fails to meet the specification, the entire lot is rejected.
2. When the project quantity for the specified mixture type is 500 tons or greater, divide the aggregate into equal lots at the discretion of the ME, but in no case is the lot size to exceed 1,000 tons. Divide each lot into three equal sublots and obtain one sample for each subplot. The ME will randomly select only one of the three samples and test for compliance with Table 902.10.03-1. If the sample tested meets the specification, the entire lot is acceptable for use on the project. If the sample fails, the ME will test the remaining two samples. If the two samples both meet specification, the entire lot is acceptable for use on the project. If either of the two additional samples fails to meet the specification, the entire lot is rejected.

Take precautions to ensure that approved stockpiles of aggregate do not become contaminated at the jobsite. Screen oversize aggregate or foreign materials from the aggregate prior to delivery to the mixer.

During the slurry seal application, in the presence of the inspector, sample the mixture twice daily or as directed from the pug mill discharge chute. Use a rectangular non-absorptive container, such as a loaf pan, of sufficient size to obtain a sample from the entire cross section of the mixture being discharged. Ensure that an AASHTO accredited lab, with at least five successfully completed slurry seal projects greater than 5,000 square yards each, analyzes the mix for binder content and compliance with specifications. Submit certified results to the ME. To ensure mix compliance, the ME may perform independent testing.

Ensure that the asphalt content is within $\pm 0.40\%$ of the JMF. If the asphalt content is outside of the allowable tolerance, recalibrate or adjust the mixing machine. The RE may stop the slurry seal operation if two or more samples fail to conform to the tolerance. Take corrective action or re-design the slurry seal mixture. Resume operations only after RE has approved the corrective action.

Use aggregate, including mineral filler, which conforms to the gradation in Table 902.10.03-1.

Table 902.10.03-1 Gradation Requirements for Aggregate and Mineral Filler				
Sieve Size	Type I Percent Passing	Type II Percent Passing	Type III Percent Passing	Stockpile Tolerances from JMF
3/8"	100	100	100	-
No. 4	100	90-100	70-90	$\pm 5\%$
No. 8	90-100	65-90	45-70	$\pm 5\%$
No. 16	65-90	45-70	28-50	$\pm 5\%$
No. 30	40-65	30-50	19-34	$\pm 5\%$
No. 50	25-42	18-30	12-25	$\pm 4\%$
No. 100	15-30	10-21	7-18	$\pm 3\%$
No. 200	10-20	5-15	5-15	$\pm 2\%$

SECTION 903 – CONCRETE

903.02.04 Viscosity Modifying Admixture

THE FIRST SENTENCE IS CHANGED TO:

Use a viscosity modifying admixture that is listed on the QPL and that, when evaluated according to the test methods and mix design proportions in AASHTO M 194, conforms to the following physical requirements:

903.03.05 Control and Acceptance Testing Requirements

E. Acceptance Testing for Strength for Pay-Adjustment Items.

Concrete Items which are subject to pay adjustment and the base prices are as follows:

ITEMS	DESCRIPTION	UNIT	BASE PRICE
507021P	CONCRETE BRIDGE DECK	CY	\$500.00
507036P	CONCRETE BRIDGE PARAPET	LF	\$305.00
505039P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SII-36), 36" X 15"	LF	\$125.00
505042P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIII-36), 36" X 18"	LF	\$130.00
505015P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BI-36), 36" X 27"	LF	\$170.00
505045P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIV-36), 36" X 21"	LF	\$160.00
505018P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BII-36), 36" X 33"	LF	\$170.00
505021P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIII-36), 36" X 39"	LF	\$175.00
505024P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIV-36), 36" X 42"	LF	\$185.00
505003P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 45"	LF	\$155.00
505006P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 54"	LF	\$155.00
505048P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SII-48), 48" X 15"	LF	\$160.00
505051P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIII-48), 48" X 18"	LF	\$135.00
505009P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 63"	LF	\$185.00
505027P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BI-48), 48" X 27"	LF	\$215.00
505054P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIV-48), 48" X 21"	LF	\$215.00
505030P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BII-48), 48" X 33"	LF	\$185.00
505033P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIII-48), 48" X 39"	LF	\$220.00
505036P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIV-48), 48" X 42"	LF	\$230.00
505012P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 72"	LF	\$200.00
502045M	CAST-IN-PLACE CONCRETE PILE, DRIVEN, 12" DIAMETER	LF	\$50.00
502090M	PRECAST CONCRETE PILE, DRIVEN, 12" X 12"	LF	\$90.00
502132M	PRESTRESSED CONCRETE PILE, DRIVEN, 12" X 12"	LF	\$50.00
502135M	PRESTRESSED CONCRETE PILE, DRIVEN, 14" X 14"	LF	\$50.00
502138M	PRESTRESSED CONCRETE PILE, DRIVEN, 16" X 16"	LF	\$50.00
502141M	PRESTRESSED CONCRETE PILE, DRIVEN, 18" X 18"	LF	\$50.00
502144M	PRESTRESSED CONCRETE PILE, DRIVEN, 20" X 20"	LF	\$75.00
502147M	PRESTRESSED CONCRETE PILE, DRIVEN, 22" X 22"	LF	\$75.00
502150M	PRESTRESSED CONCRETE PILE, DRIVEN, 24" X 24"	LF	\$75.00
502151M	PRESTRESSED CONCRETE PILE, DRIVEN, 30" X 30"	LF	\$75.00
502156M	PRESTRESSED CONCRETE PILE, DRIVEN, 54" DIAMETER	LF	\$200.00

4. Compute Percent Pay Adjustment (PPA).

THE FIFTH PARAGRAPH IS CHANGED TO:

If the Department elects not to core, the Contractor may accept the PPA calculated by Equation 1 or 2, as appropriate, or, when approved by the Department, the Contractor may take cores as specified in Table 903.03.06-4. Take the cores within 90 days from the date of concrete placement. The Department will not award a positive pay adjustment based on core samples taken more than 90 days from the date of concrete placement. If electing to core, perform the coring as directed by the ME, and provide the cores to the ME for testing.

F. Acceptance Testing for Strength for Non-Pay-Adjustment Items.

THE FIFTH PARAGRAPH IS CHANGED TO:

If cores are taken, the Department will use the core results to determine the final disposition of the lot. If, based on the core results, the lot is determined to be at a quality level of $PD < 75$, the Department will compute the pay-adjustment as specified in 903.03.05.E. The Department will not award positive pay adjustment for non-pay-adjustment Items. If the lot is confirmed to be at a quality level of $PD \geq 75$, the ME will reject the lot and the RE may do one of the following:

1. Require the Contractor to remove and replace the defective lot
2. Allow the Contractor to leave the defective lot in place and receive a PPA computed by Equation 2.
3. Allow the Contractor to submit a plan, for approval, for corrective action.

903.03.06 Tables

Table 903.03.06-2 Requirements for Structural Concrete Items

THE SEVENTH LINE UNDER CAST-IN-PLACE ITEMS IS CHANGED TO:

903.05.04 Control and Acceptance Testing Requirements

THE SUPERScript REFERENCE NO. 4 UNDER TABLE 903.05.04-1 IS CHANGED TO:

4. For chloride permeability testing, the ME will mold 4 additional cylinders, taking 2 cylinders each from 2 randomly selected delivery trucks for testing at 56-days.

THE FOURTH PARAGRAPH IS CHANGED TO:

If, upon testing at 56 days, 1 or more individual test results exceed 2000 coulombs, the RE may:

1. Require that the Contractor remove and replace the defective lot, or
2. Allow the Contractor to submit a corrective action plan for approval.

903.06.02 SCC For Precast Concrete

THE ENTIRE PART B. IS CHANGED TO:

- B. Mix Design and Verification.** Design the mix, as specified in 903.03.02 or 903.05.02, to conform to the strength, water-cement ratio, and air content requirements for the specified class of concrete for the item that is being cast. In addition, ensure that the SCC conforms to the requirements specified in Table 903.06.02-1.

Table 903.06.02-1 Requirements for SCC for Precast Concrete		
Property	Test Method	Requirement
Slump Flow	NJDOT C-4	16 to 24 inches
Visual Stability Index		
Plastic Concrete	NJDOT C-4	1 maximum
Hardened Concrete	NJDOT C-5	1 maximum

Perform mix design verification as specified in 903.03.02 or 903.05.02. For the verification batch, ensure that the air content is in the top half of the allowable range and the slump flow is between 22 and 24 inches. Perform air content, slump flow, and visual stability index (plastic concrete) testing on the verification batch. Make concrete cylinders for compression testing as specified in 903.03.02 or 903.05.02 and make 2 additional 4 × 8 inch cylinders for visual stability index on the hardened concrete. Saw the additional cylinders length-wise according to NJDOT C-5. The ME will perform the compressive strength testing and the visual evaluation to assign a visual stability index in order to approve the mix.

SECTION 904 – PRECAST AND PRESTRESSED CONCRETE

904.01.01 Component Materials

THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.01.02 Fabrication

THE ENTIRE SUBPART IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

1. **Placing Reinforcement Steel.** Before placing the concrete, place reinforcement steel in position as shown on the approved working drawings and as specified in 504.03.01. Firmly tie the reinforcement to prevent displacement during placing of the concrete.
2. **Placing Concrete.** Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E. Before placing concrete, ensure that reinforcement steel and any other embedded materials are free of loose rust, frost, dirt, oil, or contaminants that may prevent a bond with the concrete. Consolidate concrete with internal vibrators. The fabricator may use external vibration to supplement internal vibration. If using SCC, minimize or eliminate the use of vibrators to prevent segregation.

904.01.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

904.02.01 Component Materials

THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.02.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.C, 504.03.02.D, and 504.03.02.E.

THE SECOND SENTENCES IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

904.02.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

STEP 2 IN THE THIRD PARAGRAPH IS CHANGED TO:

2. Dimensions not conforming to the tolerances specified in Table 904.02.02-1.

904.03.01 Component Materials

THE FOLLOWING IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.03.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

2. **Placing Concrete.**

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

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Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.03.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

If the ME does not inspect the precast concrete item, submit certifications of compliance as specified in 106.07.

904.04.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate prestressed concrete at a plant as specified in 1011.02 and listed on the QPL.

3. Placing Concrete.

THE SECOND SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.04.06 Quality Control, Quality Assurance, and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

If the ME does not inspect the precast concrete item, submit certifications of compliance as specified in 106.07.

SECTION 905 – REINFORCEMENT METALS

905.01 REINFORCEMENT STEEL

THE ENTIRE SUBPART IS CHANGED TO:

Provide reinforcement steel manufactured at an AASHTO NTPEP (National Transportation Product Evaluation Program) certified mill. For a list of NTPEP certified mills, see the following webpage: <http://data.ntpep.org/Module/REBAR/Overview.aspx>.

For reinforcement steel, submit a certification of compliance as specified in 106.07. Attach copies of the mill certifications for each heat of reinforcement steel. The ME will randomly sample and test heats of reinforcement steel for quality assurance. The ME will randomly inspect and sample galvanized and epoxy coated reinforcement steel for quality assurance.

905.01.03 Welded Wire Reinforcement

THE FIRST PARAGRAPH IS CHANGED TO:

Use plain or deformed steel welded wire reinforcement according to ASTM A1064. When used for concrete pavement, use welded wire reinforcement mats at least 5 feet in width.

THE SECOND PARAGRAPH IS CHANGED TO:

When approved as an alternate to galvanized reinforcement bars, use galvanized welded wire reinforcement that meets the requirements of ASTM A 641, Table 1, Class 1.

905.01.05 Dowels

THE ENTIRE SUBPART IS CHANGED TO:

Use plain reinforcement bars according to ASTM A 615, Grade 60. Galvanize according to ASTM A 123.

905.03.03 Dowel Bars

THE FIRST PARAGRAPH IS CHANGED TO:

For dowel bars in transverse joints, use epoxy-coated, Grade 60, plain reinforcement steel according to ASTM A 615. If shown on the Plans, use dowel bars fitted with end caps. Ensure that the end caps are non-metallic and designed to prevent the entrance of grout or mortar into the expansion void.

SECTION 908 – BOLTS AND BOLTING MATERIAL

908.03 DIRECT TENSION INDICATORS (DTI)

THE ENTIRE SUBSECTION IS CHANGED TO:

Use direct tension indicators conforming to ASTM F 959. If galvanizing of the bolt assembly is required, mechanically galvanize DTIs according to ASTM B 695, Class 50. Test DTIs according to ASTM F 959 and verify according to NJDOT S-3.

Provide manufacturer’s certification and attach test results.

SECTION 909 – DRAINAGE

909.02.01 Reinforced Concrete Pipe

THE FOLLOWING IS ADDED BEFORE THE FIRST SENTENCE:

Manufacture reinforced concrete pipe at a plant listed on the QPL.

THE LAST PARAGRAPH IS CHANGED TO:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

For concrete pipe that is less than 60 inches in diameter, submit a certification of compliance as specified in 106.07. The ME will randomly inspect and test small-diameter concrete pipe for quality assurance.

For concrete pipe that is 60 inches or more in diameter, notify the ME at least 2 weeks before shipping pipe to the Project. The ME will inspect and approve large-diameter pipe in the supplier’s yard after manufacture. Perform 3-point loading in the supplier’s yard as directed by the ME. If the ME does not inspect the concrete pipe, submit certifications of compliance as specified in 106.07.

909.02.02 HDPE Pipe

THE SECOND PARAGRAPH IS CHANGED TO:

Use HDPE pipe from a manufacturer who is an AASHTO NTPEP (National Transportation Product Evaluation Program) certified manufacturer. For a list of NTPEP certified manufacturer, see the following webpage: <http://data.ntpep.org/Module/PIPE/Overview.aspx> .

THE FOLLOWING SUBPART IS ADDED:

909.02.09 Fiberglass Pipe for Bridge Storm Drainage

Fabricate fiberglass pipe conforming to ASTM D2996, RTRP-12EA1-2122 and fiberglass pipe fittings conforming to ASTM D3840.

Ensure that all fiberglass pipe, fittings and adhesives use pigmented resin throughout the wall and the color is concrete gray or designated color with UV stabilized resin. Painted gel-coat or exterior coating is not acceptable.

Ensure that adhesives are in accordance with the pipe manufacturer and adhesive manufacturer’s recommendations.

SECTION 911 – SIGNS, SIGN SUPPORTS, AND DELINEATORS

911.02.02 Breakaway Sign Supports for Ground Mounted Signs

THE ENTIRE SUBPART IS CHANGED TO:

Fabricate and construct breakaway sign supports for ground mounted signs using materials conforming to the requirements in Table 911.02.02-1.

Table 911.02.02-1 Materials for Breakaway Sign Supports			
Item	Test Method	Type or Grade	Galvanizing
Aluminum Materials (other than bracket)	911.01.01		
Bracket	B308	6061-T6	
Structural steel shapes	ASTM A709	Grade 36	ASTM A123
Steel Sheet	ASTM A1011	Grade 36	ASTM A 653
Bolts (except special bolt for coupling)	ASTM A325		ASTM A153
Special bolt for coupling	ASTM A449		ASTM A153
Cap Screw	ASTM A307		ASTM A153
Lock Washer	ANSI B18-21-1		ASTM A153
Nut	ASTM A563	Grade DH	ASTM A153
Coupling	AMS 6378 F		ASTM A153
Steel Hinge Plate	AISI 4130		ASTM 123
Anchor Rod	AISI 1045		
Anchor Coil	AISI 1008		
Anchor Washer	908.04		
Anchor Ferrule	908.04		

Submit mill certificates for the component materials.

911.02.03 Non-Breakaway Sign Supports for Ground Mounted Signs

THE TEXT OF THIS SUBPART IS DELETED.

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911.03 FLEXIBLE DELINEATORS

1. Delineator Dimensions.

b. Guide Rail Mounted.

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the unit for beam guide rail mounted flexible delineators has a minimum width of 3 inches and a minimum thickness of 0.100 inch. Use units of a height that will ensure that the top of the reflective area is 5 ± 2 inches above the top of post.

Design the base of the unit to mount over the I-beam blockout or to the top of a wood or synthetic blockout, of the beam guide rail.

c. Barrier Curb Mounted.

THE ENTIRE TEXT IS CHANGED TO:

For barrier curb mounted flexible delineators, use a delineator that is $3\text{-}1/2 \times 3\text{-}1/2$ inches, with a minimum thickness of 0.100 inch, and that has a base that forms a “T” shape with the panel for mounting on the side of the barrier curb, and is flexible or hinged so as to return to its original position after being struck.

THE FOLLOWING IS ADDED:

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- d. **Construction Barrier Curb Mounted.** For construction barrier curb top mounted flexible delineators, use a delineator that is 6 x 12 inches with a minimum thickness of 0.100 inch. For construction barrier curb side mounted flexible delineators, use a delineator that is 3-1/2 x 3-1/2 inches with a minimum thickness of 0.100 inch, and that has a base that forms a “T” shape with the panel for mounting on the barrier curb and is flexible or hinged so as to return to its original position after being struck.

4. Retroreflective Sheeting.

- b. **Guide Rail Mounted.**

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the sheeting is a minimum of 3 inches square and is mounted on the upper portion of the delineator.

THE FOLLOWING IS ADDED:

- d. **Construction Barrier Curb Mounted.** Ensure that the sheeting for top mounted flexible delineators is 6 x 12 inches and the sheeting for side mounted flexible delineators is 3-1/2 x 3-1/2 inches.

Submit a certification of compliance, as specified in 106.07, for delineators.

SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES, AND TRAFFIC MARKINGS

912.03.01 Epoxy Traffic Stripes

THE SUBPART HEADING IS CHANGED TO:

912.03.01 Traffic Stripes

- A. **Epoxy Resin.**

THE FIRST SENTENCE IS CHANGED TO:

For pavement striping, use an epoxy resin that is a 2 component, 100 percent solids formulation conforming to the following requirements:

- B. **Glass Beads.**

THE FIRST PARAGRAPH IS CHANGED TO:

Submit certifications of compliance as specified in 106.07 for each lot of glass beads used on the Contract. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

912.03.02 Thermoplastic Traffic Markings

THE SUBPART HEADING IS CHANGED TO:

912.03.02 Traffic Markings

THE ENTIRE SUBPART TEXT IS CHANGED TO:

For traffic markings, use either preformed or hot extruded thermoplastic conforming to AASHTO M 249, except that for preformed thermoplastic, the minimum thickness requirement is 90 mils. Use beads conforming to AASHTO M 247, Type 1, with a moisture resistant coating. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

Submit certifications of compliance, as specified in 106.07, for each batch of materials used on the Contract. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C.

912.04.01 Latex Paint

THE ENTIRE SUBPART TEXT IS CHANGED TO:

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For temporary traffic stripes, use latex traffic paint that is a fast-drying white, or non-lead yellow, ready-mixed pigmented binder emulsified in water and capable of anchoring reflective glass beads that are separately applied. Ensure that the color matches FED-STD-595B color chip No. 33538 for yellow and No. 37886 for white. Ensure that the paint has a maximum no-track time of 120 seconds when applied in a wet film. In addition, ensure that the finished product meets the following:

1. Volume of solids is a minimum 61 percent.
2. Total solids are a minimum of 77.5 percent total non-volatiles by weight, when tested according to ASTM D 2369.
3. Weight per gallon is a minimum 14 ± 0.2 pounds per gallon for each color.
4. Hegman Grind is a minimum of 2 Hegman when tested according to ASTM D 1210.
5. Viscosity is between 70 and 95 Krebs Units at 77 °F, when tested according to ASTM D 562.

Use glass beads conforming to AASHTO M247, Type 1, with a moisture resistance coating. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

Submit a certification of compliance, as specified in 106.07, for latex and glass beads. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C.

SECTION 918 – ELECTRICAL MATERIALS

918.01 CONDUIT AND FITTINGS

4. Flexible Nonmetallic Conduit.

THIS PART IS CHANGED TO:

Use coil able HDPE conduit made from virgin HDPE resin as per the minimum standard of PE345440E according to ASTM D3350. Ensure conduit is circular and of uniform cross sectional area and dimensions in accordance with ASTM F2160. Ensure conduit is of continuous length containing no welds or joints coiled on a reel. Additionally, conduit's inner and outer walls are to be smooth and the inner wall is to be lubricated with manufacturer's recommended lubricant. Conduit colors are to be integrally extruded throughout the conduit in the manufacturing process. Ensure conduit is permanently marked with a laser ink imprinter or heat embossed white lettering showing the diameter, size, sequential length marks, owners name, ASTM, SDR, and/or Schedule rating. Additional markings of date-of-manufacture, time, and batch-of-resin are to be identified and referenced to certifications and quality control test results. Ensure manufacturer provides certification of the properties specified and mark/label the reels with purchase order, project name and/or other information for tracking and receiving. Applicable material standards are required based on the following applications:

- a. **Direct Burial.** Use conduit material with a rating of Schedule 80 conforming to ASTM F2160, NEMA TC-7 EPEC-80 and certified for its intended use.
- b. **Innerduct.** Use conduit material with a rating of Schedule 40 conforming to ASTM F2160, NEMA TC-7 EPEC-40.

ITS conduits used for the installation of Fiber Optic Cable including tracer wire, are to be extruded integrally colored orange to indicate its use for Communications.

ITS conduits designated for electrical use are to be extruded integrally colored red to indicate its use for Electrical wiring.

Submit a certificate of compliance, as specified in [106.07](#), for all materials, components, and assemblies.

918.12 PEDESTALS, POLES, TRANSFORMER BASES, AND MAST BRACKET ARMS

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate pedestals, poles, transformer bases, and mast bracket arms for traffic signal, highway lighting, and camera standards with materials according to the appropriate ASTM standard and the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

THE FOLLOWING IS ADDED:

918.15 PUSH BUTTON ASSEMBLIES, TYPE APS

Push Button Assemblies, Type APS, at a minimum, shall comply with the following:

A. Hardware

Push button assemblies shall be of the direct push button contact type and shall not have any levers, handles, or toggle switches externally or internally. The button shall be rated for over 100 million operations with greater than 2 pounds actuation force. The push button shall operate with the APS Control Unit. The contacts shall be entirely insulated from the housing and operating button. The contacts shall be normally open and shall be closed with a minimum of pressure on the button, restoring immediately to the normally open position when the pressure is released.

The cast aluminum housing shall have a curved back which will readily enable it to be mounted on a traffic signal pole or push button standard. The housing shall have a minimum ½ inch access hole in the rear for wiring. The front cover plate shall be secured with stainless steel vandal resistant screws. Any other threaded conduit bosses shall be provided with threaded plugs so that access is only possible from the rear of the housing. The plugs shall not be removable with ordinary tools. The housing shall be painted highway yellow baked enamel matching to Federal Standard 595A color #13538.

The push button shall provide an 8Ω, 15W, weatherproof speaker, and operate in a temperature range of -40°F to 165°F (-40°C to 60°C) with 0% to 100% humidity non-condensing. The push button shall contain an LED that lights when the button is pushed and remains lit until the next walk phase. The LED luminous intensity shall be greater than 1200 mcd, sunlight visible, ultra bright red, with a viewing angle of at least 160°. The face plate shall be aluminum. The push button shall be ADA compliant, cast aluminum, nickel plated, powder coated. The push button shall be provided with outputs optically isolated 36V AC/DC Peak, .3A solid state fused contact closure. The fault output shall be normally shall provide a constant pedestrian call to the controller. The power output shall not exceed nominal 22 Volts DC, short circuit protected, auto-recovering.

B. Operation

The push button shall be programmable to provide a tone or speech Walk indication for pedestrians. Text and name of street for speech Walk indication shall be programmed for the information provided in the contract plans. The push button shall provide a built-in Walk/Don't Walk conflict detection system.

The push button shall utilize a two-wire standard pushbutton cable. All push button sounds shall be synchronized at an intersection. It shall provide independent minimum and maximum volume settings for Locate Sounds, Clearance & Walk Sounds, and Extended button push and volume overrides that provide pushbutton information message and provides a louder Walk indication.

The system shall provide global configuration changes (setup one and save changes to all vs. setup per individual push button station). The system shall provide an optional clearance sounds or audible countdown of remaining seconds during clearance available; complements or replaces visible countdown displays. The system shall provide a secure configuration prevents unauthorized tampering and a self-test and fault report to a remote site for real-time monitoring and system maintenance.

The system shall provide user selectable multiple language support option available so that it can be programmed with up to three pedestrian selectable languages. The buttons for this project will be programmed in English. The maximum volume dynamic range shall be 60 dB. An adjustable extended push time from 1 to 6 seconds in .5-second increments can be set by installer. The push button provides valuable information and cues via both a vibrating arrow button and audible sounds making the intersection accessible for all pedestrians. All sounds shall emanate from the back of the unit. The weather-proof speaker shall be protected by a vandal resistant screen.

A sunlight visible red LED latches "ON" to confirm the button has been pushed. The arrow of the push button shall be oriented in the direction of the crosswalk and provide a clear indication to the pedestrian the direction of travel.

The push button assembly shall provide as a minimum the following messages & sound:

1. Custom Locate Sound - Plays a sound at a selectable interval to assist a blind pedestrian in locating the push button station.

2. Custom Location Message(s) - Typically states street being crossed and cross street names. Direction of travel can be added.

918.16 APS CONTROL UNIT

APS Control Units, at a minimum, shall comply with the following:

A. Hardware

One APS Control Unit shall have the ability to control up to 12 push button assemblies. The APS Control Unit shall have the ability to control up to four pedestrian phases, receiving its timing from the Walk and Don't Walk signals.

The APS Control Unit shall be installed inside the traffic signal controller cabinet and powered by the AC supply mains (115 VAC). The APS Control Unit is the power supply and signaling interface between the existing intersection traffic signal controller and the Push Button Assemblies, Type APS, which are located in the field. All inputs and outputs shall have full optical isolation and include transient voltage protection. The pedestrian Walk/Don't Walk inputs shall be optically isolated 80-150 Volts AC/DC 5mA Maximum. The general purpose outputs and pedestrian outputs shall be optically isolated 36 Volts AC/DC Peak with .3A solid state fused contact closure.

The fault output shall be normally open and closed relay contacts at 125 Volts AC/DC 1A maximum. A, B, C, and D power outputs shall be nominal 22 Volts DC, short circuit protected, auto-recovering. The general purpose inputs shall be 10 - 36 Volts AC/DC Peak 10mA Maximum, optically isolated.

The APS Control Unit shall have an operating temperature range of -30°F (-34°C) to 165°F (74°C), with 0% to 100% humidity (non-condensing). The unit shall include all interface cables and wiring for a completely operational system.

The system shall provide an announcement of direction of travel (Ex: "traveling west") that can be added to a location message. The system shall have an extended push priority (mutes entire intersection except selected crosswalk to minimize confusion caused by other sounds). The system shall synchronize sounds throughout intersection, reducing noise clutter. All inputs and outputs of the APS Control Unit shall be optically isolated, and shall eliminate the need for push button isolators. The system shall have the capability to provide special messages throughout intersection such as "Emergency vehicle approaching, please clear intersection immediately", or a similar warning message regarding an approaching emergency vehicle if desired.

B. Instructions and Guarantee

The system shall have the three-year manufacturer's guarantee from the date of acceptance against all imperfections in workmanship and materials.

The manufacturer shall provide field assistance for the operation and maintenance of the system for one year following the acceptance of the system.

Five schematic wiring diagrams and maintenance manuals, including theory of operation, shall be provided with each intersection where the APS system is provided.

SECTION 919 – MISCELLANEOUS

THE FOLLOWING IS ADDED:

919.15 POLYESTER MATTING

Provide polyester matting of commercial quality that is a composite of polyester base fiber and vinyl chloride resin and is permeable to air and water, but shall prevent sunlight from reaching the soil. Ensure that the matting resists ultraviolet light, mildew and algae. Ensure that the matting is self-extinguishing when removed from flame. Ensure that the matting has a minimum thickness of 1/4 inch.

DIVISION 1000 – EQUIPMENT

SECTION 1009 – HMA PLANT EQUIPMENT

1009.01 HMA PLANT

A. Requirements for HMA Mixing Plants.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

The HMA producer is required to have a quality control (QC) program plan approved annually by the ME as per Materials Approval Procedure MAP-102. The HMA producer is required to ensure that the QC plan conforms to the requirements outlined in the report entitled “Hot Mix Asphalt Quality Control Program Plan” prepared by the Department of Transportation and New Jersey Asphalt Paving Association. Failure to follow these requirements will result in rejection of HMA materials supplied by the HMA producer and removal of the HMA supplier from the QPL.

THE FOLLOWING SUBSECTION IS ADDED AFTER 1009.02:

1009.03 ASPHALT-RUBBER BINDER BLENDING EQUIPMENT

Provide equipment for preparation of Asphalt-Rubber Binder. Ensure that the unit is equipped with a crumb rubber feed system capable of continuously supplying the asphalt cement feed system, and is capable of fully blending the individual crumb rubber particles with the asphalt cement. Use an asphalt-rubber binder storage tank that is equipped with a heating system capable of maintaining the temperature of the binder between 325 and 375 °F during the reaction. Ensure the asphalt-rubber binder storage tank is also equipped with an internal auger mixing device, oriented horizontally in the tank, capable of maintaining a uniform mixture of the asphalt-rubber binder.

Ensure that the tanks for storage of asphalt-rubber binder are equipped to uniformly heat the material to the required temperature under effective and positive control at all times. Ensure that heating is accomplished so that no flame comes in contact with the heating tank.

Provide a circulating system of sufficient capacity for the binder to ensure continuous circulation between the storage tank and proportioning units during the entire operating period. Ensure that the discharge end of the binder circulating pipe is maintained below the surface of the binder in the storage tank to prevent discharge of hot binder into the open air.

Ensure that pipe lines and fittings are steam or oil jacketed, electrically or otherwise heated, and insulated to prevent heat loss.

Provide valves according to AASHTO T 40, except ensure that a sampling valve is also located in the lowest third of each storage tank.

If the plant has been equipped with a water injection type asphalt foaming system, ensure that the system will allow the proper amount of asphalt rubber binder to be supplied continuously or provide a by-pass to ensure that the proper amount of asphalt rubber binder is supplied to the mix.

SECTION 1011 – PRECAST AND PRESTRESSED CONCRETE PLANT EQUIPMENT

1011.03 ME’S OFFICE

THE SECOND PARAGRAPH SUBPART 2 & 3 ARE CHANGED TO:

2. One high-speed broad band connection with a minimum speed of 3 megabits per second (mbps) with dynamic IP address (DSL, Cable, etc.).
3. Two desks and 2 chairs.

THE FOLLOWING SECTION IS ADDED:

SECTION 1012 – PAVEMENT PRESERVATION EQUIPMENT

1012.01 Micro Surfacing and Slurry Seal Paver

Provide fully automated self-propelled continuous flow type equipment that is specifically designed, equipped, calibrated, and operated for mixing and spreading slurry seal and micro surfacing conforming to the approved mix design and application rate. Immediately correct defects that adversely affect the functioning of the equipment or quality of the mixture. Perform calibration in the presence of the ME. Ensure that the documentation includes an individual calibration of each material at various settings that can be related to the machine metering devices. Any component replacement affecting material proportioning requires that the machine be recalibrated. Do not use a machine on the project until the calibration has been completed and accepted. Ensure the paver is equipped with the following:

- 1. Mixing Equipment.** Ensure that the machine is specifically designed and manufactured to mix micro surfacing and slurry seal materials. Mix the material in an automatic-sequenced, self-propelled, micro surfacing and slurry seal mixing machine. Ensure that it is a continuous-flow mixing unit that accurately proportions and delivers the mix components, within 2 % of the required amount as per the mix design, into a revolving multi-blade double-shafted mixer. Sufficient storage capacity for all mix components is required to maintain an adequate supply to the proportioning controls.

Ensure that the machine is capable of loading materials while continuing to apply micro surfacing and slurry seal. Ensure that the continuous-run machine is equipped to provide the operator with full control of the forward and reverse speeds during application and is equipped with opposite-side driver stations to assist in alignment. Ensure that the self-loading device, opposite-side driver stations, and forward and reverse speed controls are of original-equipment-manufacturer design.

Provide material control devices, readily accessible and so placed that the inspector may determine the amount of each material used at any time.

Provide machine with a water pressure system and nozzle type spray bar to provide a water spray ahead of and outside the spreader box.

Locate mineral filler feed so the proper amount of mineral filler is dropped on the aggregate before discharge into mixer.

- 2. Spreading Equipment.** Provide spreading equipment that agitates and spreads the mixture uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. Ensure that a front seal is provided such that there is no loss of the mixture at the road contact point. Ensure that there is an adjustable rear seal which will act as a final strike-off. Ensure that the spreader box and rear strike-off is designed and operated so that a uniform consistency is achieved and a free flow of material is provided to the rear strike-off. Ensure that the spreader box has suitable means provided to side shift the box to compensate for variations in the pavement geometry.

Ensure that a secondary strike-off is provided to improve surface texture. Ensure that the secondary strike-off is adjustable to match the width of the spreader box and allows for varying pressures to control the surface texture.

- 3. Electronic Mix Control and Diagnostic (EMCAD) System.** Ensure the paver is equipped with a computer mix control and diagnostic system that records, displays, and prints the following:

- 1.** Individual sensor counts for emulsion, aggregate, mineral filler, water, and additive.
- 2.** Aggregate, emulsion and mineral filler output in pounds per minute.
- 3.** Spread rate in pounds per square yard.
- 4.** Percentages of emulsion, mineral filler, water, and additive.
- 5.** Cumulative total quantities of aggregate, emulsion, mineral filler, water, and additive.
- 6.** Scale factor for all materials.

Ensure the computer system is functional and capable of printing reports.

- 4. Rut, Longitudinal Joint and Rumble Strip Filling Equipment.** Provide rut filling equipment with a steel V-configuration screed rut box commercially designed and manufactured to fill ruts as required. Ensure that the rut box can be adjusted to provide a mixture spread width of between 2 feet to 6 feet and have a moveable steel strike-off to control crown.

1012.02 Mechanical Fine Aggregate Spreader

Provide fully automated self-propelled fine aggregate spreading equipment with positive controls that is specifically designed, equipped, calibrated, and operated for spreading fine aggregate uniformly at the required width and application rate. Immediately correct defects that adversely affect the functioning of the equipment or quality of the fine aggregate application. Perform calibration in the presence of the ME. Ensure that the calibration documentation includes the fine aggregate at various application rate settings that can be related to the machine metering devices. Any component replacement affecting application rate requires that the machine be recalibrated. Do not use a machine on the project until the calibration has been completed and accepted.

NJDOT TEST METHODS

NJDOT B-3 – SELECTING CORES FOR MAXIMUM SPECIFIC GRAVITY TESTING IN AIR VOIDS DETERMINATION

B. Procedure.

THE FOLLOWING NOTE IS ADDED AFTER STEP 3:

NOTE: For Recore Lots and Statistical Outlier Lots, do not randomly select a core for maximum specific gravity testing. The entire core lot must be tested for maximum specific gravity.

THE FOLLOWING STEP IS ADDED AFTER STEP 9:

10. If the lot has an outlier or is a recore lot, the entire lot must be tested for maximum specific gravity. Calculate air voids using each individual core maximum specific and bulk specific gravity.

NJDOT B-8 – DETERMINING JOB MIX FORMULA FOR MODIFIED OPEN-GRADED FRICTION COURSE MIXES

C. Procedure.

3. Relative VMA Asphalt Content.

THE FOURTH SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Determine the bulk specific gravity, G_{mb} from each specimen according to NJDOT B-6 or AASHTO T 331.

THE FOOTNOTE FOR G_{mb} IN THE SECOND EQUATION IS CHANGED TO:

G_{mb} = the bulk specific gravity of the specimen as determined by NJDOT B-6 or AASHTO T 331.

THE FOLLOWING TEST METHODS ARE ADDED:

NJDOT B-10 – OVERLAY TEST FOR DETERMINING CRACK RESISTANCE OF HMA

A. Scope. This test method is used to determine the susceptibility of HMA specimens to fatigue or reflective cracking. This test method measures the number of cycles to failure.

B. Apparatus. Use the following apparatus:

1. Overlay Tester. An electro-hydraulic system that applies repeated direct tension loads to specimens. The machine features two blocks, one is fixed and the other slides horizontally. The device automatically measures and records a time history of load versus displacement every 0.1 sec at a selected test temperature.

The sliding block applies tension in a cyclic triangular waveform to a constant maximum displacement of 0.06 cm (0.025 in.). This sliding block reaches the maximum displacement and then returns to its initial position in 10 sec. (one cycle).
2. Temperature Control System. The temperature chamber must be capable of controlling the test temperature with a range of 32 to 95 °F (0 to 35 °C).
3. Measurement System. Fully automated data acquisition and test control system. Load, displacement, and temperature are simultaneously recorded every 0.1 sec.
4. Linear Variable Differential Transducer (LVDT). Used to measure the horizontal displacement of the specimen (+/- 0.25 in.). Refer to manufacturer for equipment accuracy for LVDT.
5. Electronic Load Cell. Used to measure the load resulting from the displacement (5000 lb capacity). Refer to manufacturer for equipment accuracy for load cell.

6. Specimen Mounting System. Used two stainless steel base plates to restrict shifting of the specimen during testing. The mounting jig holds the two stainless steel base plates for specimen preparation.
7. Cutting Template.
8. Two Part Epoxy. Two part epoxy with a minimum 24 hour tensile strength of 600 psi (4.1 MPa) and 24 hour shear strength of 2,000 psi (13.8 MPa).
9. 10 lb weight (4.5 kg). Used to place on top of specimens while being glued to specimen platens.
10. ¼ inch Width Adhesive Tape. Placed over gap in plates to prevent the epoxy from bonding the plates together.
11. Paint or Permanent Marker. Used to outline specimens on platens for placement of epoxy.
12. 3/8-in. Socket Drive Handle with a 3-in. (7.6 cm) extension.

C. Procedure. Perform the following steps:

1. Sample Preparation.

- a. **Laboratory Molded Specimens** - Use cylindrical specimens that have been compacted using the gyratory compactor (AASHTO T 312). Specimen diameter must be 6 inches (150 mm) and a specimen height must be 4.5 inches +/- 0.2 inches (115 +/- 5 mm).

Note 1 - Experience has shown that molded laboratory specimens of a known density usually result in a greater density (or lower air voids) after being trimmed. Therefore, it is recommended that the laboratory technician produce molded specimens with an air void level slightly higher than the targeted trimmed specimen. Determine the density of the final trimmed specimen in accordance with AASHTO T 166.

- b. **Core Specimens** – Specimen diameter must be 6 inches +/- 0.1 inch (150 mm +/- 2 mm). Determine the density of the final trimmed specimen in accordance with AASHTO T166.

2. Trimming of Cylindrical Specimen. Before starting, refer to the sawing device manufacturer’s instructions for cutting specimens.

- a. Place the cutting template on the top surface of the laboratory molded specimen or roadway core. Trace the location of the first two cuts by drawing lines using paint or a permanent maker along the sides of the cutting template.
- b. Trim the specimen ends by cutting the specimen perpendicular to the top surface following the traced lines. Discard specimen ends.
- c. Trim off the top and bottom of the specimen to produce a sample with a height of (1.5 inches +/- 0.02 inches (38 mm +/- 0.5 mm)).
- d. Measure the density of the trimmed specimen in accordance with AASHTO T 166. If the specimen does not meet the density requirement as specified for performance testing for the mix being tested, then discard it and prepare a new specimen.
- e. Air dry the trimmed specimen to constant mass, where constant mass is defined as the weight of the trimmed specimen not changing by more than 0.05% in a 2 hour interval.

3. Mounting Trimmed Specimen to Base Plates (Platens).

- a. Mount and secure the base plates (platens) to the mounting jig. Cut a piece of adhesive tape approximately 4.0 inches (102 mm) in length. Center and place the piece of tape over the gap between the base plates.
- b. Prepare the epoxy following manufacturer’s instructions.
- c. Cover a majority of the base plates (platens) with epoxy, including the tape. Glue the trimmed specimen to the base plates.
- d. Place a 10 lb (4.5 kg) weight on top of the glued specimen to ensure full contact of the trimmed specimen to the base plates. Allow the epoxy to cure for the time recommended by the manufacturer. Remove the weight from the specimen after the epoxy has cured.

- e. Turn over the glued specimen so the bottom of the base plates faces upward. Using a hacksaw, cut a notch through the epoxy which can be seen through the gap in the base plates. The notch should be cut as evenly as possible and should just begin to reach the specimen underneath the epoxy. Great care should be taken not to cut more than 1/16 inch (1.58 mm) into the specimen.
- f. Place the test sample assembly in the Overlay Tester's environmental chamber for a minimum of 1 hour before testing.

4. Start Testing Device. Please refer to manufacturer's equipment manual prior to operating equipment.

- a. Turn on the Overlay Tester. Turn on the computer and wait to ensure communication between the computer and the Overlay Tester occurs.
- b. Turn on the hydraulic pump using the Overlay Tester's software. Allow the pump to warm up for a minimum of 20 minutes.
- c. Turn the machine to load control mode to mount the sample assembly.

5. Mounting Specimen Assembly to Testing Device. Enter the required test information into the Overlay Tester software for the specimen to be tested.

- a. Mount the specimen assembly onto the machine according to the manufacturer's instructions and the following procedural steps.
 - 1. Clean the bottom of the base plates and the top of the testing machine blocks before placing the specimen assembly into the blocks. If all four surfaces are not clean, damage may occur to the machine, the specimen, or the base plates when tightening the base plates.
 - 2. Apply 15 lb-in of torque for each screw when fastening the base plates to the machine.

6. Testing Specimen.

- a. Perform testing at a constant temperature recommended by the New Jersey Department of Transportation for the mixture in question. This is typically either 59 °F (15 °C) or 77 °F (25 °C).
Note 3 – Ensure the trimmed specimen has also reached the constant temperature required.
- b. Start the test by enabling the start button on the computer control program. Perform testing until a 93% reduction or more of the maximum load measured from the first opening cycle occurs. If 93% is not reached, run the test until a minimum of 1,200 cycles.
- c. After the test is complete, remove the specimen assembly from the Overlay Tester machine blocks.

D. Report. Include the following items in the report:

- 1. Date and time molded or cored.
- 2. NJDOT mixture identification.
- 3. Trimmed specimen density.
- 4. Starting Load.
- 5. Final Load.
- 6. Percent decline (or reduction) in Load.
- 7. Number of cycles until failure.
- 8. Test Temperature

NJDOT B-11- DETERMINING GRADATION OF CRUMB RUBBER FOR ASPHALT MODIFICATION

A. Scope. This method is used to determine the gradation of the crumb rubber for asphalt-rubber binder

B. Apparatus. Use the following apparatus:

- 1. Oven capable of maintaining a temperatures of 140 ± 10 °F for drying sample to a constant weight.
- 2. Rubber balls having a weight of 8.5 ± 0.5 grams, a diameter of 24.5 ± 0.5 mm, and a Shore Durometer "A" hardness of 50 ± 5 per ASTM Designation D 224

3. No. 8, 16, 30, 50, 100, and 200 sieves conforming to AASHTO M 92.
4. Mechanical sieve shaker conforming to AASHTO T 27.
5. Balance conforming to AASHTO M 231 and having a minimum capacity of 100 grams with a precision of 0.1 gram.

C. Procedure. The crumb rubber for asphalt rubber binder is required to conform to the gradations specified below when tested in accordance with ASTM Designation C 136 except as follows:

1. Obtain 100 ± 5 grams from the crumb rubber sample and dry to a constant weight at a temperature of not less than 135 °F nor more than 145 °F and record the dry sample weight.
2. Place the crumb rubber sample and 5.0 grams of talc in a one pint jar, then shake it by hand for a minimum of one minute to mix the crumb rubber and the talc. Continue shaking or open the jar and stir until the particle agglomerates and clumps are broken and the talc is uniformly mixed.
3. Place one rubber ball on each sieve. After sieving the combined material for 10 ± 1 minutes, disassemble the sieves. Brush remaining material adhering to the bottom of a sieve into the next finer sieve. Weigh and record the weight of the material retained on the No. 8 sieve and leave this material (do not discard) on the scale or balance. Ensure that observed fabric balls remain on the scale or balance and are placed together on the side of the scale or balance to prevent the fabric balls from being covered or disturbed when placing the material from finer sieves on to the scale or balance. Add the material retained on the next finer sieve (No. 16 sieve) to the scale or balance. Weigh and record that weight as the accumulative weight retained on that sieve (No. 16 sieve). Continue weighing and recording the accumulated weights retained on the remaining sieves until the accumulated weight retained in the pan has been determined. Before discarding the crumb rubber sample, separately weigh and record the total weight of the fabric balls in the sample.
4. Determine the weight of material passing the No. 200 sieve (or weight retained in the pan) by subtracting the accumulated weight retained on the No. 200 sieve from the accumulated retained weight in the pan. If the material passing the No. 200 sieve (or weight retained in the pan) has a weight of 5 grams or less, cross out the recorded number for the accumulated weight retained in the pan and copy the number recorded for the accumulated weight retained on the No. 200 sieve and record that number (next to the crossed out number) as the accumulated weight retained in the pan. If the material passing the No. 200 sieve (or weight retained in the pan) has a weight greater than 5 grams, cross out the recorded number for the accumulated weight retained in the pan, subtract 5 grams from that number and record the difference next to the crossed out number. The adjustment to the accumulated weight retained in the pan is made to account for the 5 grams of the talc added to the sample. For calculation purposes, the adjusted accumulated weight is the same as the adjusted accumulated weight retained in the pan. Determine the percent passing based on the adjusted total sample weight and recorded to the nearest 0.1 percent.

D. Report. Report all test results on ME provided forms.

NJDOT B-12 – DETERMINING ROTATIONAL VISCOSITY OF ASPHALT RUBBER BINDER

A. Scope. This method presents procedures for sampling and testing of asphalt-rubber binder in the field using a hand held portable rotational analog or digital viscometer.

B. Apparatus. Use the following apparatus:

1. **Viscometer.** A hand held high range rotational viscometer. Analog models with indicator needles and scaled dial displays or digital read out viscometers may be used. Analog models that have been found acceptable include Rion Model VT-04E and Haake Model, VT-02. Digital models that have been found acceptable include Haake VT 2 Plus.
2. **Rotor.** A cylinder with a diameter of 24 ± 1.1 millimeters, height of 53 ± 0.1 millimeters, and a vent hole attached to a spindle or shaft with length of 87 ± 2 millimeters that is compatible with the selected viscometer. Acceptable rotors include Rion No. 1, Haake No 1, or an equivalent.
3. **Thermometer.** Digital with metal jacket probe accurate to 1 °F.
4. **Sample Containers.** Clean 1 gallon metal cans with lids and wire bale.
5. **Viscosity Standard Oils.** Fluids calibrated in absolute viscosity centipoise (cP).

6. **Viscometer Holder.** Clean metal container or stand for safely storing the viscometer between tests.
7. **Level Surface.** Level surface not directly on the ground.
8. **Heat Source.** A controllable heat source (i.e. a hot plate, gas stove, or burner) to maintain the temperature of the asphalt-rubber sample at 350 ± 3 °F while measuring viscosity.
9. **Personal Equipment.** Eye protection and heat resistant gloves.

C. Procedure. Perform the following steps:

1. **Calibration of Equipment.** Calibrate the equipment as follows:
 - a. Verify the accuracy of the viscometer by comparing the viscosity results obtained with the hand held viscometer to 3 separate calibration fluids of known viscosities ranging from 1000 cP to 5000 cP. The known viscosity value are based on the fluid manufacturer's standard test temperature or based on the test temperature versus viscosity correlation table provided by the fluid manufacturer.
 - b. The viscometer is considered accurate if the values obtained are within 300 cP of the known viscosity.
 - c. Verify the calibration of the rotational viscometer using viscosity standards before use at each site.
2. **Sampling Asphalt-Rubber Binder.** Provide new sample containers and ensure that they are clean before using. Before sampling, draw at least 1 gallon from an appropriate sample valve on the interaction tank and discard. Then reopen the sample valve and draw at least 3/4 of a gallon for testing.
3. **Preparing Asphalt-Rubber Binder Samples for Testing.** Prepare the asphalt-rubber binder as follows:
 - a. Immediately transport the sample to the testing area. Ensure that the testing area is close to the sampling location to reduce the potential for temperature loss.
 - b. Set the open asphalt-rubber binder sample container on the level surface on or over the heat source.
 - c. To prevent scorching or burning, manually stir the asphalt-rubber binder sample using a metal stir rod or the temperature probe.
 - d. Continue stirring until a consistent asphalt-rubber binder temperature of 350 ± 3 °F is achieved. Record the actual test temperature with the corresponding viscosity measurement.
 - e. Insert the viscometer spindle and rotor into the hot asphalt-rubber binder sample near the edge of the can. Ensure that the spindle and rotor are not inserted deeper than the immersion depth mark on the shaft and are not plugging the vent hole. During insertion, the spindle and rotor may be tilted slightly to keep the vent hole clear.
 - f. Allow the rotor to acclimate to the temperature of the asphalt-rubber binder for approximately 1 minute. During acclimation, stir the sample thoroughly and measure the temperature.
 - g. Orient the sample and the rotor so that the rotor is near the center of the sample, align the depth mark on the shaft with the asphalt-rubber binder surface, and level the viscometer in order to measure viscosity.
4. **Testing.** Analog viscometers include a level bubble to help orient the device to ensure that the rotor and shaft remain vertical. Digital viscometers may not include a level bubble. If a level bubble is not included, attach a small adhesive bubble to the viscometer or use a framework with a level bubble.

Test the asphalt-rubber binder as follows:

- a. As soon as the viscometer is leveled and the depth mark is even with the asphalt-rubber binder surface, begin rotor rotation. When using a digital viscometer, activate the continuous digital display according to the manufacturer's recommendations. Read and record the peak viscosity value (The peak measurement typically represents the viscosity of the asphalt-rubber binder; report and log that value. As the rotor continues to turn, it "drills" into the sample and spins rubber particles out of its measurement area. This may cause thinning of the material in contact with the rotor erroneously indicating a drop in the apparent viscosity of the asphalt-rubber binder) from the graduated scale labeled with the corresponding rotor number or from the digital display.
- b. After completing the first measurement, move the viscometer rotor away from the center of the sample can without removing it from the asphalt-rubber binder sample. Turn off the rotor rotation.

- c. Stir the asphalt-rubber binder sample thoroughly.
 - d. Repeat Steps 1, 2, and 3. Take 3 measurements and average the results to determine the viscosity.
 - e. Return the viscometer to its holder with the rotor suspended in a suitable solvent. Before using the rotor again, wipe off the solvent and dry the rotor to avoid solvent contamination of the next sample.
- D. Calculations.** Some meters read in units of mPa·s (0.001 Pascal·seconds) or dPa·s (0.1 Pa·s), while others may read in centipoise (cPs) units. The conversion is 1 Pa·s = 1000 cPs.
- E. Report.** Include the following items in the report:
- 1. Date and time sampled.
 - 2. Location of asphalt-rubber binding blending plant.
 - 3. Test temperature and viscosity.
 - 4. Rotor designation.
 - 5. Viscometer model and serial n

NJDOT C-2 – QUICK-SETTING PATCH MATERIALS

C. Procedure.

- 2. Tests.** Test materials according to the following:

THE B. IS CHANGED TO:

- b. Strength Development.** For Type 1 and 2, test 2 cubes per test according to AASHTO T 106. For Type 1A and 1B, make two 4 × 8-inch cylinders per test according to AASHTO R 39. Cure specimens covered with a plastic cover over the cylinder for 3 hours and then cure without the plastic cover at 70.4 to 76.4 °F and 50 percent relative humidity until testing. Test according to AASHTO T 22

NJDOT R-1 – OPERATING INERTIAL PROFILER SYSTEMS FOR EVALUATING PAVEMENT PROFILES

THIS ENTIRE TEST METHOD IS CHANGED TO:

- A. Scope.** This test method describes the procedure for operating, verifying the calibration of an ASTM E 950 Class 1 Inertial Profiler System (IPS) and testing riding surface for pavement profiles evaluation.
- B. Apparatus.** Use an IPS that meets the requirements of AASHTO M 328 and ASTM E 950, Class 1 and the following:
 - 1. Certify the IPS according to AASHTO R 56 at least every 2 years. If a system component is replaced, re-certify the system. Perform the certification at a site approved by the Department.
 - 2. The data system provides the raw profile data in an ASCII format acceptable to the Department.
 - 3. The computer program uses a high-pass filter set at 300 feet and reads an ASCII or text file for computing the International Roughness Index (IRI) in inches per mile.
 - 4. The current version of *ROADRUF*, *ProVal*, or other Department approved pavement profile analysis software is used to compute the IRI.
- C. Procedure.** Perform the following steps:
 - 1. Operate the IPS according to AASHTO R 57 and ASTM E 950.
 - 2. On a daily basis before data collection, check the equipment and operating system for operational stability and calibration. Perform necessary calibration procedures according to equipment manufacturer's procedures and applicable standards. Operators shall maintain a log documenting the calibration history.
 - 3. Ensure that the operators of the IPS have completed a profile training course, such as NHI Course 131100, have been trained specifically on the IPS they will be operating, and are proficient in the operation of the IPS.
 - 4. Make provisions to automatically start and stop the IPS recording at the beginning and end of testing.

- 5 Ensure retroreflective traffic striping tape or other approved mechanism is placed at the beginning and end of each direction of travel for automatically triggering the start and stop of profile measurements.
6. Collect at least 0.05-mile of data before the area to be tested to allow the system to stabilize before profile measurements are obtained. Collect data in a continuous run through the length to be tested. If the run is interrupted, discard the results and re-run the length.
- 7 Test the full extent of each wheel path of each lane in the longitudinal direction of travel. The wheel path is defined as being located approximately 3 feet on each side of the centerline of the lane and extending for the full length of the lane. Lanes are defined by striping.
- 8 Run three tests each wheel path and report average of three runs each wheel path.
9. Exclude locations where the traffic striping includes turn lanes that cause the through traffic lane to cross over a longitudinally paved joint, ramps, and lanes such as acceleration and deceleration lanes of less than 1,000 feet of continuous through treatment.
- 10 Report single IRI value average of 3 runs unless otherwise directed. The single IRI value shall be each 0.01 mile length for each lane, ramp, and shoulder and 0.005 mile for each overlaid bridge structure.

FEDERAL AID PROJECT ATTACHMENT 1

DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION

- A. Utilization of Disadvantaged Business Enterprises as Subcontractors, Transaction Expeditors, Regular Dealers, Manufacturers and Truckers.** The Department advises the Contractor and subcontractors that failure to carry out the requirements in this attachment constitutes a material breach of Contract and, after the notification of the applicable Federal agency, may result in termination of the agreement or Contract by the Department or such remedy as the Department deems appropriate. Requirements set forth in this section shall also be physically included in all subcontracts in accordance with USDOT requirements.
- B. Policy.** It is the policy of the Department that Disadvantaged Business Enterprises, as defined in 49 CFR, Part 26; Titles I & V of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); MAP-21, Moving Ahead for Progress in the 21st Century Act (P.L. 112-141); FAST-ACT, Fixing America's Surface Transportation Act (P.L. 114-94, December 4, 2015); and Section III below, shall have an equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. The Disadvantaged Business Enterprise requirements of 49 CFR, Part 26 et seq. apply to this agreement.
- C. Definitions**
- 1. Disadvantaged Business Enterprise (DBE).** A for-profit small business concern:
 - a. That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and
 - b. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it, and who do not exceed the personal net worth criteria established in 49 CFR Part 26.
 - 2. Socially and economically disadvantaged individual.** Any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of groups and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control.
 - a. Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis. An individual must demonstrate that he or she has held himself or herself out, as a member of a designated group;
 - b. Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (1) Black Americans," which includes persons having origins in any of the Black racial groups of Africa
 - (2) Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race
 - (3) Native Americans," which includes persons who are enrolled members of a Federally or State recognized Indian tribe, Alaska Natives, or Native Hawaiians
 - (4) Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong
 - (5) Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka
 - (6) Women

- (7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.
 - (8) Being born in a particular country does not, standing alone, mean that a person is necessarily a member of one of the groups listed in this definition.
3. **Commercially Useful Function (CUF).** A DBE performs a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibility by actually performing, managing and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for preparing the estimate, negotiating price, determining quality and quantity, ordering the material, arranging delivery, installing (where applicable), and paying for the material and supplies itself for the project.
 4. **Transaction expeditor (broker).** A DBE who arranges or expedites transactions and who arranges for material drop shipments.
 5. **DBE regular dealers.** A firm that must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. In addition, a regular dealer must own, operate or maintain a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under this Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
 6. **DBE manufacturer.** A firm that operates or maintains a factory or establishment that produces on the premises, the materials, supplies, articles, or equipment required for the Contract.
 7. **Good faith effort (GFE).** Efforts to achieve a DBE goal or other requirement of 49 CFR Part 26, which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement. Efforts to include firms not certified as DBEs in the state where the contract is being let are consequently not good faith efforts to meet a DBE contract goal.
 8. **Affirmative Action Plan.** An outline of the steps a contractor or subcontractor will implement to achieve equal employment opportunity and affirmative action and/or to correct its equal employment and affirmative action program deficiencies.
- D. Compliance.** The Contractor is responsible for compliance as specified in Section 105.
- E. Contractor's DBE Obligations.** Ensure that DBEs have an equal opportunity to receive and participate in contracts and subcontracts financed in whole or in part with Federal funds in performing work with the Department. Take all necessary and reasonable steps in accordance with 49 CFR, Part 26 and the Contract to ensure that DBEs are given equal opportunity to compete for and to perform on the Department's Federal aid projects. Do not discriminate in the award and performance of any Contract obligation including, but not limited to, performance of obligations on USDOT assisted contracts, as specified in Section 107.
1. Post Award Obligations
 - a. Give DBEs equal consideration with non-minority firms in negotiation for any subcontracts, purchase orders or leases.
 - b. Attempt to obtain qualified DBEs to perform the work. A directory of certified Disadvantaged Small Businesses Enterprise firms can be found in the New Jersey Unified Certification Program Vendor Certification database, online at: <https://njucp.dbesystem.com/>.
 2. Affirmative Action After Award of the Contract
 - a. **Subletting.** If at any time following the award of the Contract, the Contractor intends to sublet any portion(s) of the work under said Contract, or intends to purchase material or lease equipment not contemplated during preparation of bids, take affirmative action:
 - (1) Notify the RE, in writing, of the type and approximate value of the work which the Contractor intends to accomplish by such subcontract, purchase order or lease.
 - (2) Submit the Post-Award Minority Certification (Part IV of the DC-18A Request for Approval to Sublet on Projects Utilizing the 2007 Specifications Form) to the Regional Supervising Engineer with the application to sublet, or prior to purchasing material or leasing equipment. Obtain Post Award Minority Certifications from the RE.
 - (3) Efforts made to identify and retain a DBE as a replacement subcontractor, lower tier subcontractor, transaction expeditor, regular dealer, supplier, manufacturer or trucker when the arrangements with

the original DBE prove unsuccessful, shall be as specified in Section 108. Work in the category concerned shall not begin until such approval is granted in writing by the Department.

- (4) Notification of a DBE firm's termination will be as specified in Section 108. Send notice in writing to the Department through the RE. Said termination notice will include the firm's ethnic classification, whether the firm is a DBE and the detailed reason(s) for termination.
- b. Selection and Retention of Subcontractors.** Do not discriminate in the selection and retention of subcontractors, including procurement of materials and leases of equipment as specified in 108.01. Provide the RE with a listing of firms, organizations or enterprises solicited and those utilized as subcontractors on the proposed project. Such listing shall clearly delineate which firms are classified as DBEs. Provide the RE with subcontract agreements for all subcontractors performing work on the Contract as specified in Section 108.
 - (1) Efforts made to identify and retain a DBE as a replacement subcontractor, lower tier subcontractor, transaction expeditor, regular dealer, supplier, manufacturer or trucker when the arrangements with the original DBE prove unsuccessful, shall be submitted as specified in Section 108. Work in the category concerned shall not begin until such approval is granted in writing by the Department.
 - (2) Notification of a DBE firm's termination will be as specified in Subsection 108.01. Send notice in writing to the Department through the RE. Said termination notice will include the firm's ethnic classification, whether the subcontractor is a DBE and the detailed reason(s) for termination.
 - c. Meeting Contract DBE Goal.** Demonstrate attainment toward meeting the Contract DBE goal by reporting monthly, all DBE participation, to the Department's RE and DCR/AA Contract Compliance Unit using the CR-267 – Monthly DBE Utilization Form. The form is due by the 5th of the month, and must list all DBEs used on the Contract, the specific Contract work items each DBE is performing, whether the DBE is performing full or partial work on the items, and the amount paid to each DBE each month. Failure to report the information, and accurately report it may result in payment being delayed or withheld as specified in Section 105, assessing sanctions, or termination of the Contract as specified in Section 108.
 - d. Termination, Substitution or Replacement of DBEs.** Make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on the Contract with another certified DBE, to the extent needed to meet the Contract DBE goal. Notify the DCR/AA immediately of the DBE's inability or unwillingness to perform and provide reasonable documentation. Prior to termination, substitution or replacement of a DBE subcontractor, lower tier subcontractor, transaction expeditor, regular dealer, supplier, manufacturer or trucker, submit a Revised Form CR-266 to the Department naming the replacement DBE firm(s), type of work performed, specific Contract work items, whether the DBE is performing full or partial work on the items, dollar value and percent of total Contract for each DBE firm. Submit detailed written explanation of why each change is being made, including documented evidence of good faith effort(s) with the submission of the revised Form CR-266. Submit along with the revised CR-266: 1) a completed Confirmation of DBE Firm (Form CR-273) to demonstrate direct written confirmation from each DBE firm participating on the Contract, confirming the kind and amount of work that was provided on the Contractor's CR-266, and if applicable; 2) a completed DBE Regular Dealer/Supplier Verification (Form CR-272) for all DBE Regular Dealers/Suppliers listed on the revised CR-266; and if applicable, 3) a completed DBE Trucking Verification (Form CR-274) for all DBE truckers listed on the revised CR-266. Termination, substitution or replacement of DBEs shall be made as specified in Section 108. Termination or replacement of DBEs cannot be made without prior written approval of the Department as per 108.01.
 - e. Submission of Good Faith Effort Documentation.** If the Contractor is unable to meet the Contract goal for DBE participation, submit to the DCR/AA for review and approval, documented evidence of good faith efforts along with the monthly CR-267 form. This submission must include written details addressing each of the good faith efforts outlined in the Contract. Submittal of such information does not imply DCR/AA approval. The Department's DCR/AA has sole authority to determine whether the Contractor is meeting the Contract DBE goal or made adequate good faith efforts to do so.
- F. DBE Goals for the Contract.** This Contract includes a goal of awarding **Nine (9%) percentage** of the Total Contract Price to subcontractors, transaction expeditors, regular dealers, manufacturers and truckers qualifying as DBEs.

The Department's DCR/AA has sole authority to determine whether the Contractor met the goal or made adequate good faith efforts to do so. If the DCR/AA determines that the Contractor has failed to meet the Contract DBE goal or made adequate good faith efforts to do so, the Department will follow Section 105.

G. Counting DBE Participation.

1. Each DBE is subject to a certification procedure to ensure its DBE eligibility status prior to the award of the Contract. All DBEs working on the Contract must be certified DBEs. To receive DBE credit toward meeting a contract goal in the context of the contract award process, a DBE firm must be certified before the due date for bids or offers on the Contract, as stated in 49 CFR Part 26.81(c). There may be situations after the award of the Contract, however, in which it is appropriate to count DBE credit for the use of a DBE subcontractor certified after the contract is executed. To be eligible to obtain DBE credit, a DBE subcontractor must be certified before the subcontract on which it is working is executed.
2. The Department determines the percentage of DBE participation that will be counted toward the Contract DBE goal in accordance with 49 C.F.R. Part 26.55 et seq.
3. The Contractor will count DBE participation toward the Contract DBE goal only the value of the work actually performed by a certified DBE and only if the DBE performs a commercially useful function in the work of a contract as per 49 CFR, Subpart C, Part 26.55(c) and the Contract.
4. The Department will count DBE participation for DBE trucking firms in accordance with 49 C.F.R. Part 26.55 et seq. The DBE can count the entire value of services performed by DBE trucks. The DBE can count the value of non-DBE trucking services up to the value of services performed by DBE trucks used on the Contract. DBE participation can be counted for the value of services of non-DBE trucks that exceed the value of the services performed by DBE trucks only in the amount of the fee or commission a DBE receives as a result of the lease arrangement.
5. The Department will count DBE participation for DBE regular dealers, manufacturers and transaction expeditors in accordance with 49 C.F.R Part 26.55 et seq. Transaction expeditors/brokers will not receive DBE credit for any portion of the cost of the materials and supplies themselves toward the Contract DBE goal. For brokers, only the DBE's fee or commission, and no part of the cost of the goods, count towards DBE goals. The Department will determine if the fees are reasonable and not excessive as compared with fees customarily allowed for similar services. If a certified firm acts as a "regular dealer" in a given transaction, it is awarded DBE credit equivalent to 60 percent of the value of the items it supplies on that contract. This credit is awarded in recognition of the value the DBE adds to transaction and the risks that it takes.
6. If the Contractor is a certified DBE, payments made to the Contractor for work performed by the Contractor will be applied toward the Contract DBE goal. Payments made to the Contractor for work performed by non-DBEs will not be applied toward the Contract DBE goal.
7. When a DBE subcontractor sublets part of the work of its contract to another firm, the value of the subcontract work may be counted towards the Contract DBE goal only if the subcontractor itself is a certified DBE. Work that a DBE subcontractor subcontracts to a non-DBE firm, cannot be counted towards the Contract DBE goal.

H. Commercially Useful Function

1. **Performance of Work.** The DBE must perform the work with their own permanent employees, or employees recruited through traditional recruitment and/or employment centers. DBEs must employ and control their own workforce, and cannot share employees with the Contractor, other subcontractors on the present project, or the renter-lessor of equipment being used on the present project. The DBE firm must be responsible for all payroll and labor compliance requirements for all of their employees performing work on the Contract. Direct or indirect payments by any other contractor are not allowed.
2. **Managing Work.** The DBE must manage the work themselves including the scheduling of work operations, ordering of equipment and materials, hiring/firing of employees, including supervisory employees, and preparing and submitting certified payrolls. The DBE must supervise their portion of daily work operations of the project. With respect to materials and supplies used on the Contract, the DBE must be responsible for preparing the estimate, negotiating price, determining quantity and quality, ordering the material, arranging delivery; installing, (where applicable), and paying for the material and supplies itself, for the project.
3. **Responsibility of Work.** A DBE must perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own workforce. The DBE must not subcontract a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved.
4. **Equipment of DBE.** The DBE must perform the work stated in the subcontract with their own equipment, whether owned or leased and operated on a long term agreement, not an ad hoc or contract by contract

agreement. The equipment must be owned by the DBE firm, or leased/rented from traditional equipment lease/rental sources. The equipment will not belong to the Contractor, any other subcontractor or lower tier subcontractors on the current project, or supplier of materials being installed by the DBE firm.

5. **Lease of Equipment.** A DBE firm may lease specialized equipment from a contractor, but not from the Contractor, if it is consistent with normal industry practices and at rates competitive for the area. Rental agreements must be for short periods of time, specify the terms of the agreement and involve specialty equipment to be used at the job site. The lease may allow the operator to remain on the lessor's payroll, if it is the generally accepted industry practice but the operation of the equipment must be subject to full control by the DBE. The DBE is expected to provide the operator for non-specialized equipment, and is responsible for all payroll and labor compliance requirements. A separate lease agreement is required.
6. **DBE Trucking.** DBE trucking companies must perform a commercially useful function in accordance with 49 CFR Part 26.55 et seq. Contrived arrangements for the purpose of meeting DBE goals will not be allowed. The DBE must be responsible for the management and supervision of the entire trucking operation on a contract-by-contract basis, and must own and operate at least one fully, licensed, insured and operational truck used on the Contract.

The DBE trucking firm is not permitted to obtain trucks from the Contractor to perform work on the project. The DBE may lease trucks from a subcontractor working on the project, provided the trucks are obtained from the subcontractor prior to the project letting. The DBE may lease trucks from another DBE, including an owner-operator that is certified as a DBE. The DBE may also lease trucks from non-DBEs and owner-operators. Bona fide lease agreements must be for the length of time needed by the DBE on the Contract and signed by both the DBE and the firm(s), either certified DBE or non-DBE, from which the trucks will be leased. Leases must indicate that the DBE has exclusive use and control over the truck. As per 49 CFR Part 26.55(d)(7), all leased trucks, including non-DBE trucks, must display the name and USDOT identification number issued for interstate commerce, of the DBE firm on the outside of the truck. DBE firms are expected to use the same trucks for DBE credit on all projects so use of leased vehicles on a project-by-project basis is not permitted.

The Contractor shall have signed Hiring Agreements. Submit copies of these signed Hiring Agreements, and copies of all signed lease agreements to the RE prior to the trucking firm's commencing work on the project. Prior to the DBE trucking firm beginning work on the Contract, DBE Trucking firms will be required to complete the DBE Trucking Verification (Form CR-274). The DBE and Contractor must sign the form and the Contractor submit the original CR-274 form directly to the Department's RE, with a copy submitted to the DCR/AA. The Contractor must prepare, sign and submit with the CR-267, a Monthly Trucking Verification form (CR-271), identifying each truck owner, DBE Certification number, company name and address, truck number, and commission or amount paid for all DBE and non-DBE truckers performing work on the project. Also, submit the form to the Department as per Section E of this Special Provision for DCR/AA review, approval and determination of credit toward the Contract goal. Failure to submit the forms may result in denial or limit of credit toward the Contract DBE goal, payment being delayed or withheld as specified in Section 105, assessing sanctions or termination of the Contract as specified in Section 108.

7. **DBE Regular Dealers.** DBE regular dealers must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. In addition, a regular dealer must own, operate or maintain a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under this Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

When the Contractor seeks credit toward the Contract DBE goal using DBE regular dealers, the DBE Regular Dealer/Supplier Verification (Form CR-272) must be completed and signed by the DBE regular dealer and then signed by the Contractor. Submit the form to the Department as per Section E of this Special Provision for the DCR/AA's review, approval and determination of credit toward the Contract DBE goal.

8. **DBE Manufacturers.** DBE manufacturers must be a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required for this Contract.

9. The Contractor shall not use a DBE solely for the purpose of acting as an extra participant in a transaction, a contract or the Contract through which funds are passed in order to obtain the appearance of DBE participation.

I. Good Faith Effort. To demonstrate good faith efforts to meet the Contract DBE goal, a Contractor shall, on an ongoing basis, document the steps it takes to obtain DBE participation in accordance with 49 CFR Part 26.53 and Appendix A, including but not limited to the following:

1. Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the Contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

Should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. Determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

2. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
3. Providing interested DBEs with detailed information about the plans, specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract. Attempt to contact all potential subcontractors on the same day and use similar methods to contact them;
4. Negotiating in good faith with interested DBEs. Make a portion of the work available to DBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.

Consider a number of factors in negotiating with subcontractors, including DBE subcontractors. Take a firm's price and capabilities as well as Contract goals into consideration. The fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for failure to meet the contract DBE goal, as long as such costs are reasonable. The ability or desire of a Contractor to perform the work of a Contract with its own organization does not relieve the responsibility to make good faith efforts. Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

5. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the Contract DBE goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the Contractor to accept unreasonable quotes in order to satisfy the Contract DBE goal.

Inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the Contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the Contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

Attempt, wherever possible, to negotiate prices with potential subcontractors which submitted higher than acceptable price quotes.

Keep a record of efforts, including the names of businesses contacted and the means and results of such contacts.

6. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
7. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
8. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

If the Contractor fails to meet the Contract DBE goal, they must submit documented evidence of good faith effort(s) with the CR-268 final DBE Report to the DCR/AA for review and approval. Submittal of such information does not imply DCR/AA approval. The Department's DCR/AA has sole authority to determine whether the Contractor met the Contract DBE goal or made adequate good faith efforts to do so. If the DCR/AA determines that the Contractor has failed to meet the Contract DBE goal or made adequate good faith effort to do so, the Department will follow Section 105.

J. Submission of Affirmative Action Program

Contractors, subcontractors and professional service firms performing work for the Department are required to submit their company's Affirmative Action Program annually to the DCR/AA. Contractors must have an **approved** Affirmative Action Program on file in the DCR/AA no later than seven (7) State business days after the date of bid opening. No recommendations to award will be made without an approved Affirmative Action Program on file in the DCR/AA.

The Annual Affirmative Action Program will include, but is not limited to the following:

1. Copy of company's comprehensive EEO/Affirmative Action Plan.
2. Copy of document designating the company's corporate EEO Officer, including the name, address and contact telephone number for the officer.
3. Copy of the company's EEO Policy Statement.
4. Copy of the company's Sexual Harassment Policy.
5. The name of the company's DBE Liaison Officer to administer the firm's Disadvantaged Business Program.
6. DBE Affirmative Action Plan which is an explanation of affirmative action methods intended to be used to seek out and consider DBEs as subcontractors, material suppliers or equipment lessors. This refers to the Contractor's ongoing responsibility, i.e., Disadvantaged Business Enterprise/Affirmative Action activities after the award of the Contract and for the duration of the Contract.

K. DBE Liaison Officer. Designate a DBE Liaison Officer who shall be responsible for the administration of your DBE program in accordance with the Contract, and ensuring that the Contractor complies with all provisions of 49 CFR Part 26.

L. Consent by Department to Subletting. The Department will not approve any subcontract proposed by the Contractor unless and until said Contractor has complied with the terms of the Contract.

M. Conciliation. Allegations of breach of any obligation contained in these DBE provisions and guidelines, will be investigated by the DCR/AA, the Federal Highway Administration and/or the USDOT.

N. Documentation

1. **Requiring of Information.** The Department or the Federal funding agencies may at any time require information as specified in Section 107 and deemed necessary in the judgment of the Department to ascertain the compliance of any Bidder, Contractor or subcontractor with the terms of the Contract.
2. **Records and Reports.** The Contractor, subcontractors and other sub-recipients will keep such records as are necessary to determine compliance with its Disadvantaged Business Enterprise Utilization obligations. These records kept will be designed to indicate:
 - a. The names of DBE contractors, subcontractors, transaction expeditors and material suppliers contacted for work on the Contract, including when and how contacted, and the specific Contract work items and other information provided to each.

- b. Work, services and materials which are not performed or supplied by the Contractor.
 - c. The actual dollar value of work subcontracted and awarded to DBEs, including specific Contract work items and cost of each work item.
 - d. The progress being made and efforts taken in seeking out and utilizing DBEs to include: solicitations, specific Contract work items and the quotes and bids regarding those specific Contract work items, supplies, leases, or other contract items, etc.
 - e. Detailed written documentation of all correspondence, contacts, telephone calls, etc., including names and dates/times, to obtain the services of DBEs on the Contract.
 - f. Records of all DBEs and non-DBEs who have submitted quotes/bids to the Contractor on the Contract.
 - g. Monthly reports required for submission to the Department, hiring agreements, subcontracts, lease agreements, supply tickets and other records documenting DBE utilization on the Contract.
 - h. Documentation outlining EEO workforce information for the Contract.
 - i. Documentation outlining EEO and Affirmative Action efforts made in the administration and performance of the Contract.
- 3. Submission of Reports, Forms and Documentation.** Submit reports, forms and documentation, as required by the Department, on those contracts and other business transactions executed with DBEs in such form and manner as may be prescribed by the Department. Failure to submit the required forms, reports or other documentation as required may result in payment being delayed or withheld as specified in Section 105, assessing sanctions, or termination of the contract as specified in Section 108. Submission of falsified forms, reports or other required documentation may result in termination of the Contract as specified in Section 108, investigation by the Department's Inspector General, and prosecution by the State Attorney General's Office.
- 4. Maintaining Records.** All records must be maintained for a period of three (3) years following acceptance of final payment and will be available for inspection by the Department, or the Federal funding agencies.
- O. Prompt Payment to Subcontractors.** On Federal aid projects, payment to subcontractors, equipment lessors, suppliers and manufacturers is made in accordance with Section 109.
- P. Non-Compliance.** Failure by the Contractor to comply with the DBE program, rules and regulations of 49 CFR Part 26 in the administration of the Contract may result in denial or limit of credit toward the Contract DBE goal, payment being delayed or withheld as specified in Section 105, assessing sanctions, liquidated damages as specified in Section 108, default as specified in Section 108, debarment, or termination of the Contract as specified in Section 108. The Contractor may further be declared ineligible for future Department contracts.

FEDERAL AID PROJECT ATTACHMENT 2

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES ON NJDOT FEDERAL AID PROJECTS

(23 CFR, PART 230, SUBPART A, APPENDIX A TO SUBPART A - SPECIAL PROVISIONS)

The Contractor is obligated to comply with the policies, procedures and guidelines relative to the implementation of an Equal Employment Opportunity Program on Federal and Federal Aid Highway construction contracts, except for those contracts awarded under 23 U.S.C. 117, and to the preparation and submission of reports pursuant thereto as per 23 CFR, Part 230, Subpart A, Appendix A to Subpart A - Special Provisions.

A. General

1. **Equal Employment Opportunity Requirements.** Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract, Provisions (Form FHWA-1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to 23 USC 140, as established by Section 22 of the Federal Aid Highway Act of 1968. The requirements set forth in the Contract constitute the specific affirmative action requirements for project activities under this Contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
2. The Contractor will work with the State agencies and the Federal Government in carrying out Equal Employment Opportunity obligations and in their review of activities under the contract.
3. The Contractor, and all subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of Equal Employment Opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers, as well as contractors and subcontractors.) The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

- B. Equal Employment Opportunity Policy.** The Contractor will accept as its operating policy the following statement which is designed to further the provisions of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

“It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training.”

- C. Equal Employment Opportunity Officer.** The Contractor will designate and make known to the Department contracting officers an Equal Employment Opportunity Officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active EEO contractor program and who must be assigned adequate authority and responsibility to do so.

D. Dissemination of Policy

1. **Implementation.** All members of the Contractor’s staff who are authorized to hire, supervise, promote, and discharge employees, or who recommended such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor’s equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure compliance with the above agreement, the following actions will be taken as a minimum:
 - a. **Initial Project Site Meeting.** Conduct an initial project site meeting with key supervisory and office personnel before or at the start of work, and then not less than once every 6 months, at which time the

Contractor's Equal Employment Opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

- b. **EEO Obligations.** All new supervisory and office personnel will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within 30 days following their reporting for duty with the Contractor.
 - c. All personnel engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority and female employees.
2. Take the following actions to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc.:
 - a. Place notices and posters setting forth the Contractor's equal employment opportunity policy in areas readily accessible to employees, applicants for employment and potential employees.
 - b. Bring the Contractor's equal employment opportunity policy and the procedures to implement such policy to the attention of employees by means of meetings, employee handbooks, and/or other appropriate means.

E. Recruitment

1. When advertising for employees, include in all advertisements for employees the notation: "An Equal Opportunity Employer". Publish all such advertisements in newspapers or other publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
2. Unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority-group organizations. To meet this requirement, the Contractor will, through their EEO Officer, identify sources of potential minority and female group employees, and establish procedures with such identified sources whereby minority and female group applicants may be referred to the Contractor for employment consideration.
3. In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with the equal employment opportunity contract provisions. (The US Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended).
4. Encourage present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures pertaining to the referral of applicants will be discussed with employees.

F. Personnel Actions. Wages, working conditions and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

1. Conduct a project site inspection at the start of work, and periodically thereafter, to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
2. Periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
3. Periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
4. Promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this Contract, and will resolve or attempt to resolve such complaints, within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant,

corrective action shall include such other persons. Upon completion of each investigation, inform complainants of all their avenues of appeal.

G. Training and Promotion

1. Assist in locating, qualifying, and increasing the skills of minority and women who are applicants for employment or current employees.
2. Advise employees and applicants for employment of available training programs and entrance requirements for each.
3. Periodically review the training and promotion potential of minority and female employees and encourage eligible employees to apply for such training and promotion.

H. On-the-Job Training. The Contractor, as part of their equal employment opportunity affirmative action program, shall provide on-the-job training aimed at developing full journey people in the type of craft or job classification involved on the project.

1. Apprenticeship and Training Programs

The minimum length and type of training for each position will be established in the training program selected by the Contractor and approved by the Department and the Federal Highway Administration. The Department will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average apprentice or trainee for journeyman status in the craft concerned by the end of the training period.

Apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training, (BAT) or with a State apprenticeship agency recognized by USDOL BAT and training programs approved but not necessarily sponsored by the US Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided such programs are being administered in a manner consistent with the equal employment obligations of Federal-aid highway contracts. Approval or acceptance of a training program shall be obtained from the DCR/AA prior to commencing work in the classifications covered by the Contractor's training program. The Division will review guidelines developed by the Contractor for approval or disapproval in accordance with the Training Guideline Approval Process described in the "Revised Standard Training Guidelines". The Division will also review existing guidelines for revision based on the same process.

It is the intention of these provisions that training be provided in construction crafts rather than clerk-typist or secretarial-type positions. Training is permitted in lower level management positions (e.g., timekeepers), where the training is oriented toward project site applications. Training in semi-skilled laborer positions is permitted provided that significant and meaningful training is available on the project site and approved by DCR/AA. Some offsite, classroom training (e.g., safety, first aid instruction) may be permitted as long as such training is an integral part of an approved training program and does not comprise a significant part of the overall training.

2. Contractor Submission and Department Approval of the Initial Training Program

At or after the preconstruction conference, and prior to the start of Work, submit a Training Program to the RE for review and comments prior to DCR/AA review and approval. The Contractor's training program shall include:

- a. Number of trainees or apprentices to be trained in all selected Training Positions,
- b. Standard Program Hours for all positions,
- c. Estimate of the Minimum Available Hours actually feasible on the project toward completion of the Standard Program Hours per position,
- d. Training schedule of Estimated Start Dates for the apprentices or trainees, developed and coordinated with the project's work progress schedule,
- e. Training Guidelines for all positions, and
- f. Training that will be provided by the Contractor and provided by Subcontractors.

The number of apprentices and trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journey people in the various crafts within a reasonable area of recruitment. Submit timely, revised Training Programs, as required throughout the project to ensure that

feasible and Maximum Available Training is provided. Maximum Available Training is defined as bringing each apprentice or trainee onto the project when work first becomes available in his/her craft and providing all available training until hours are no longer available.

3. Assignment of Training to Subcontractors

In the event that portions of the Contract work are subcontracted, determine how many, if any, of the apprentices or trainees are to be trained by subcontractors, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by these Training Special Provisions. Ensure that these Training Special Provisions are made applicable to such subcontracts.

4. Reimbursement of the Contractor for Providing Training

The Contractor will be credited for each apprentice or trainee employed on the construction site who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such apprentices or trainees as provided hereinafter. Payment will be made under the pay item Trainees at the bid price in the Proposal per person-hour of training given an employee on this contract in accordance with an approved training program. If approved, payment will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not specifically prohibit the Contractor from receiving other reimbursement. Offsite, classroom training reimbursement may only be made to the Contractor when the company does one or more of the following and the apprentices or trainees are concurrently employed on a Federal-aid project: contributes to the cost of the training and/or provides instruction to apprentices or trainees or pays their wages during the offsite, classroom training (e.g., safety, first aid instruction) period.

Pay apprentices and trainees according to the project-specific New Jersey Department of Labor Prevailing Wage Rate Determination for the project. Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the Contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

I. Apprentice/Trainee Requirements of the Contract

The number of training positions will be 0, where feasible, consisting of at least 0 APPRENTICES and 0 TRAINEES. TRAINEE HOURS = 0.

Apprentices are defined as registered members of an approved apprenticeship program recognized by the United States Department of Labor (USDOL) Bureau of Apprenticeship and Training (BAT) or a New Jersey State apprenticeship agency recognized by USDOL BAT (e.g., New Jersey Department of Education). Graduates of the Pre-Apprenticeship Training Cooperative Program shall be classified as apprentices. Trainees are defined as skilled, semi-skilled or lower level management individuals receiving training per one of the approved NJDOT "Revised Standard Training Guidelines" (available from the DCR/AA).

Where feasible, assign at least 50% of the training positions to Skilled Crafts which include but are not limited to Carpenters, Dockbuilders, Electricians, Ironworkers and Operating Engineers.

1. Requirements for Recruitment, Selection and Approval of Apprentices and Trainees

Apprentices or trainees should be in their first year of apprenticeship or training. Interview and screen trainee candidates to determine if their actual work experience is equivalent to or exceeds that offered by the training program prior to submitting candidates on the Apprentice/Trainee Approval Memorandum (Form CR-1), via the RE, to the Division for review and approval or disapproval.

Training and upgrading of minorities (e.g., Blacks, Asians or Pacific Islanders, Native Americans or Alaskan Natives, Hispanics) and women toward journeyman status is a primary objective of these Training Special Provisions. Accordingly, the Contractor shall make every effort to enroll minorities and women, by conducting systematic and direct recruitment through public and private sources likely to yield minority and female apprentices or trainees, to the extent that such persons are available within a reasonable area of

recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as an apprentice or trainee in any position in which he or she has successfully completed a training course leading to journeyperson status or in which he or she has been employed as a journeyperson. The Contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means and by submitting an accurate and complete "Apprentice/Trainee Approval Memorandum" (Form CR-1) prior to the apprentice or trainee starting work on the project. Regardless of the methods used, the Contractor's records should document the findings in each case.

Skilled craft trainees may complete up to 3,000 total training hours on Department projects, with an extension of an additional 1,000 hours permitted on a case-by-case basis. Semi-skilled and lower-level management trainees attain journeyperson status upon completion of a training guideline and may complete up to three (3) different positions.

2. Documentation Required to be Signed by Apprentices or Trainees, and provided to the Department

Prior to the apprentice/trainee starting work on the project, submit an accurate, complete and signed Apprentice/Trainee Approval Memorandum for each apprentice/trainee to the RE for review, and final approval by DCR/AA. Once the notice that said apprentice/trainee has been approved to work on the Contract, said apprentice/trainee may start work on the Contract. No credit will be given for apprentices/trainees prior to said apprentice/trainee being approved by DCR/AA.

At the start of training, provide the RE and each apprentice or trainee with an applicable "Training Guideline" and, at the conclusion of training, an accurate and complete "Training Certificate for Reporting Hours to NJDOT" (Form CR-3), showing hours of training satisfactorily completed.

Maintain and submit an accurate and complete "NJDOT Contractor's 1409 Quarterly Training Report" (Form-CR-1409) to the RE within ten (10) days of the end of each training quarter (e.g., January 10, April 10, July 10, October 10); also provide a copy to each apprentice or trainee.

Maintain and submit accurate and complete "Biweekly Training Reports" (Form CR-2) to the RE, and each apprentice or trainee, as periodic reports documenting their performance under the Contract.

3. Determining Good Faith Compliance of Contract Apprentice/Trainee Program

Per the approved program or guideline, provide Maximum Available Training to apprentices and trainees by beginning their training as soon as feasible with the start of craft work utilizing the skill involved on the project construction site and by retaining them as long as training opportunities exist in their crafts or until their training program positions are completed.

Recall apprentices or trainees released due to reductions in force when the work scope permits and they are available to return. When they are unavailable to resume training on the project site, submit written proof of recall efforts and replacement candidates and/or positions in a timely manner. Do not terminate apprentices or trainees prior to completion of their training program positions without Department consultation and authorization. Apprentices or trainees are not required to be on board for the entire length of the Contract.

The Contractor shall have fulfilled the contractual responsibilities under these Training Special Provisions as specified in 23 CFR 230, Appendix B to Subpart A of Part 230 if the company has provided Acceptable Training to the number of apprentices or trainees specified in this contract and/or by providing the remaining hours required to complete training positions begun by apprentices or trainees on other projects. The number trained shall be determined on the basis of the total number enrolled on the Contract for a significant period.

Demonstrate all steps that have been taken in pursuance of enrolling minorities and women in the training program positions, prior to a determination as to whether the Contractor is in compliance with the Training Special Provisions of the Contract.

Submit to the RE written training program summaries at the 50% time and/or cost stage of the contract and also prior to project completion, describing all good faith efforts and particularly addressing Maximum Available Training for incomplete training positions, per the procedure found in the revised "Instructions for Implementing the Training Special Provisions".

4. Enforcement Measures and Contractor's Rating

Payment will not be made if either the failure to provide the required training or the failure to hire the apprentice or trainee as a journey person is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of the Contract.

Per established procedures and scheduled Contract Compliance Reviews, the Contractor's performance will be rated and reviewed periodically by the Department.

Failure of a Contractor to comply with the Training Special Provisions of the Contract, and as specified in 23 CFR Part 230, Appendix B to Subpart A of Part 230, may result in the actions as set forth as specified in Section 105.

J. Unions. If the Contractor relies in whole or in part upon unions as a source of employees, use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women within the unions, and to effect such union referrals to the construction project. Actions by the Contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

1. Use maximum effort to develop, in cooperation with the unions, joint training programs aimed at qualifying more minorities and women for union membership and increasing their skills in order for them to qualify for higher paying employment.
2. Use maximum effort to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.
3. Obtain information concerning the referral practices and policies of the labor unions except that to the extent such information is within the exclusive possession of the labor unions and such labor unions refuse to furnish this information to the Contractor, certify to the Department and set forth what efforts have been made to obtain this information.
4. In the event the unions are unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability, making full efforts to obtain qualified and/or qualifiable minorities and women. (The US Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the Department.

K. Subcontracting

1. Use maximum effort to solicit bids from and to utilize minority subcontractors or subcontractors with meaningful minority and female representation among their employees. The Contractor may use lists of minority-owned construction firms as issued by the Department.
2. Ensure subcontractor compliance with the Contract Equal Employment Opportunity obligations.

L. Records and Reports

1. Maintain records necessary to determine compliance with the Contractor's equal employment opportunity requirements. Documents will include the following:
 - a. Number of minorities, non-minorities, and women employed in each work classification on the Contract.
 - b. Progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).
 - c. Progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - d. Progress and efforts being made in securing the services of minority and female subcontractors or subcontractors with meaningful minority and female representation among their employees.

2. All such documents must be retained for a period of 3 years following completion of the Contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal funding agencies.

FEDERAL AID PROJECT ATTACHMENT 3

REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY ON NJDOT FEDERAL AID PROJECTS

(MINORITY AND WOMEN WORK EMPLOYMENT GOAL OBLIGATIONS)

A. Employment Goals.

The goals for minority and female participation, in the covered area, expressed in percentage terms for the Contractor's aggregate work force in each trade, on all construction work are:

Minority And Women Employment Goal Obligations For Construction Contractors and Subcontractors on Federal Aid Projects		
County	Minority Participation Percent	Women Participation Percent
Atlantic	18.2	6.9
Bergen	15	6.9
Burlington	17.3	6.9
Camden	17.3	6.9
Cape May	14.5	6.9
Cumberland	16	6.9
Essex	17.3	6.9
Gloucester	17.3	6.9
Hudson	12.8	6.9
Hunterdon	17	6.9
Mercer	16.4	6.9
Middlesex	15	6.9
Monmouth	9.5	6.9
Morris	17.3	6.9
Ocean	17	6.9
Passaic	12.9	6.9
Salem	12.3	6.9
Somerset	17.3	6.9
Sussex	17	6.9
Union	17.3	6.9
Warren	1.6	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its Federally involved and non-Federally involved construction.

The Contractor's compliance with the Executive Order 11246 and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4(3)a, and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade. Make a good faith effort to employ minorities and women evenly on each project. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for sole purpose of meeting the Contractor's goals is a violation of the Contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

If a project is located in more than one county, the minority work hour goal, only, will be determined by the county which serves as the primary source of hiring or, if workers are obtained almost equally from one or more counties, the single minority goal will be the average of the affected county goals.

B. Reporting Requirements.

1. Provide the Department with written notification in triplicate within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification will list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
2. Directly provide the Department with employment workforce data of the number and work hours of minority and non-minority group members and women employed in each work classification for the Contract. The Contractor, subcontractors, professional service firms and others working on the project must submit this information via a web-based application through the New Jersey portal, Vendor Workforce Reporting Manager. Instructions on how to complete Form CC-257R are provided within the web application. Instructions for registering and receiving the authentication code to access the web based application can be found at the Contractor Manpower Project Reporting CC-257R website at: <http://www.state.nj.us/transportation/business/civilrights/pdf/cc257.pdf>.
 - a. On a monthly basis, submit Form CC-257R through the web based application within 10 days following the end of each reporting month.
 - b. In addition to the above, submit a hard copy of the electronic Form CC-257R to the RE within 10 days following the end of each reporting month
 - c. Submit a copy of the confirmation e-mail of the successful submission of Monthly Employment Utilization Report to the RE within 10 days following the end of each reporting month.
3. All employment data must be accurate and consistent with the certified payroll records. The Contractor is responsible for ensuring compliance with these reporting requirements. Failure of the Contractor, subcontractors, professional service firms and others working on the Contract, to report monthly employment data may result in payments being delayed or withheld as per 105.01, or impact the Contractor's prequalification rating with the Department.

FEDERAL AID PROJECT ATTACHMENT 4

FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONTRACT SPECIFICATIONS FOR NJDOT FEDERAL AID PROJECTS

(AS REQUIRED PER EXECUTIVE ORDER 11246 AS AMENDED BY EXECUTIVE ORDER 11375 AND IMPLEMENTING REGULATIONS AT 41 C.F.R. PART 60)

- A. As used in these Specifications:
1. Covered area means the County or Counties in which the Project is located.
 2. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor or any person to whom the Director delegates authority.
 3. Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, US Treasury Department Form 941.
 4. Minority includes:
 - a. Black (a person having origins in any of the black African racial groups not of Hispanic origin);
 - b. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
 - c. Asian and Pacific Islander (a person having originals in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - d. American Indian or Alaskan Native (a person having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participating or community identification).
- B. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- C. Implement the specific affirmative action standards provided in paragraphs F1 through 16 of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or Federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
- D. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women excuses the Contractor's obligations under these Specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- E. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the US Department of Labor.
- F. Take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. Document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. Where possible, assign two or more women to each construction project. Specifically ensure that all foreman, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.
2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred back to the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the source compiled under F2 above.
6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc. by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
9. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 13. Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 14. Ensure that all facilities and company activities are provided in a manner such that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin cannot result. Do not require such segregated use by written or oral policies, nor tolerate such use by employee custom. Provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.
 15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- G. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (F1 through 16). The efforts of a Contractor association, joint contractor union, Contractor-Community, or other similar group of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under F1 through 16 of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- H. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women both minority and nonminority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- I. Do not use the goals and timetables or affirmative action standards to discriminate against any person because of race, creed, color, national origin, age, ancestry, nationality, gender, disability, sex, affectional or sexual orientation, gender identity or expression, religion, and liability for military service.
- J. Do not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- K. Carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246 as amended.
- L. Implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph F of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- M. Designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (such as mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked

per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

- N. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (such as those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
- O. Failure of the Contractor or subcontractors to comply with the nondiscrimination provisions of the Contract may result in payment being delayed or withheld as specified in 105.01; default as specified in 108.14, liquidated damages as specified in 108.20, or termination of the Contract as specified in 108.15.02 pending corrective and appropriate measures taken by the Contractor to the satisfaction of the Department.

FEDERAL AID PROJECT ATTACHMENT 5

STATE OF NEW JERSEY MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE ON NJDOT FEDERAL AID PROJECTS

(N.J.S.A. 10:5-31 ET SEQ. (P.L.1975, C.127) N.J.A.C. 17:27-1.1 ET SEQ.)

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 Department 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 sub-contractor 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 sub-contractor 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;
 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 non-discrimination 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:
 - a. The Contractor or subcontractor shall interview the referred minority or women worker.
 - b. 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.
 - c. 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.
 - d. 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 apprentice-ship 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 Department and the Department of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the Department by the Department of LWD, Construction EEO Monitoring Program, through its web-site, 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 Department.

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 re-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.

It is the policy of the NJDOT that its contracts should create a work-force that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by the NJDOT to perform under a construction contract shall put forth a good faith effort to engage in recruitment and employment practices that further the goal of fostering equal opportunities to minorities and women.

The Contractor must demonstrate to the NJDOT satisfaction that a good faith effort was made to ensure that minorities and women have been afforded equal opportunity to gain employment under the NJDOT contract with the Contractor. Payment may be withheld from a Contractor’s contract for failure to comply with these provisions.

Evidence of a “good faith effort” includes, but is not limited to:

1. The Contractor shall recruit prospective employees through the New Jersey Career Connections website, managed by the Department of Labor and Workforce Development, available online at: http://careerconnections.nj.gov/careerconnections/for_businesses.shtml
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women;
3. The Contractor shall actively solicit and shall provide the NJDOT with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media; and
4. The Contractor shall provide evidence of efforts described at 2 above to the NJDOT no less frequently than once every 12 months.
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27-1.1 et seq.

FEDERAL AID PROJECT ATTACHMENT 6

INVESTIGATING, REPORTING AND RESOLVING EMPLOYMENT DISCRIMINATION AND SEXUAL HARASSMENT COMPLAINTS ON NJDOT FEDERAL AID PROJECTS

The Contractor and subcontractors agrees to the following requirements in order to implement fully the nondiscrimination provisions of the Contract.

The Contractor agrees that in instances when it receives from any person working on the project site a verbal or written complaint of employment discrimination, prohibited under N.J.S.A. 10:5-1 et seq., 10:2-1 et seq., 42 U.S.C. 2000(d) et seq., 42 U.S.C. 2000 (e) et seq. and Executive Order 11246, it shall take the following actions:

- A. Within one (1) working day commence an investigation of the complaint which shall include but not be limited to interviewing the complainant, the respondent, and all possible witnesses to the alleged act or acts of discrimination or sexual harassment.
- B. Prepare and keep for its use and file a detailed written investigative report which includes the following information:
 - 1. Investigatory activities and findings.
 - 2. Dates and parties involved and activities involved in resolving the complaint.
 - 3. Resolution and corrective action taken if discrimination or sexual harassment is found to have taken place.
 - 4. A signed copy of resolution of complaint by complainant and Contractor.

In addition to keeping in its files the above-noted detailed written investigative report, the Contractor shall keep for possible future review by the Department all other records, including but not limited to, interview memos and statements.

- C. Upon the request of the Department, provides to the Department within ten (10) calendar days a copy of its detailed written investigative report and all other records on the complaint investigation and resolution.
- D. Take appropriate disciplinary action against any Contractor employee, official or agent who has committed acts of discrimination or sexual harassment against any contractor employee or person working on the project. If the person committing the discrimination is a subcontractor employee, then the Contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the Contract.
- E. Take appropriate disciplinary action against any Contractor employee, official or agent who retaliates, coerces or intimidates any complainant and/or person who provides information or assistance to any investigation of complaints of discrimination or sexual harassment. If the person retaliating, coercing or intimidating a complainant or other person assisting an investigation is a subcontractor's employee, then the Contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the Contract.
- F. Ensure to the maximum extent possible that the privacy interests of all persons who give confidential information in aid of the Contractor's employment discrimination investigation are protected.

In conjunction with the above requirements, the Contractor shall develop and post a written sexual harassment policy for its work force.

Failure by the Contractor and subcontractors to comply with the above requirements may be cause for the Department to institute against the Contractor any and all enforcement proceedings and/or sanctions authorized by the Contract or by State and/or Federal law.

FEDERAL AID PROJECT ATTACHMENT 7

PAYROLL REQUIREMENTS FOR NJDOT FEDERAL AID PROJECTS

- A. Payroll Reports.** Each Contractor and subcontractor shall furnish the RE with payroll reports for each week of contract work. Such reports shall be submitted within 10 days of the date of payment covered thereby and shall contain the following information:
1. Each employee's full name and an individually identifying number, (e.g. the last four digits of the employee's social security number) of each such employee.
 2. The ethnicity and gender of each employee.
 3. Each employee's specific work classification (s).
 4. Entries indicating each employee's basis hourly wage rate(s) and, where applicable, the overtime hourly wage rate(s). Any fringe benefits paid to approved plans, funds or programs on behalf of the employee must be indicated. Any fringe benefits paid to the employee in cash must be indicated.
 5. Each employee's daily and weekly hours worked in each classification, including actual overtime hours worked (not adjusted).
 6. Each employee's gross wage.
 7. The itemized deductions made.
 8. The net wages paid.
- B. Statement of Wages.** Each Contractor or subcontractor shall furnish a statement each week to the RE with respect to the wages paid each of its employees engaged in contract work covered by the Copeland Act, as amended during the preceding weekly payroll period. The statement shall be executed by the Contractor or subcontractor or by an authorized officer or employee of the Contractor or subcontractors who supervises the payment of wages. Contractors and subcontractors must use the certification set forth on the Department's CR-347, or any form with identical wording. Each payroll submitted must be accompanied by a signed "Statement of Compliance".
- C. Maintaining Records.** Contractor and subcontractor shall maintain complete social security numbers and home address for employees. Government agencies are entitled to request or review all relevant payroll information, including social security numbers and addresses of employees. Contractors and subcontractors are required to provide such information upon request.
- D. Lack of Compliance.** Failure of the Contractor or subcontractor to comply with the payroll requirements may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108 or termination of the Contract as specified in Section 108.

FEDERAL AID PROJECT ATTACHMENT 8

FHWA-1273

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements

and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of

1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment

vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualified minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less

than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount

designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the

Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship

program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The

straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees

may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into

pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered

Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from

participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

FEDERAL AID PROJECT ATTACHMENT 9

STATE MANDATORY ADDENDUM TO FHWA-1273 REQUIRED CONTRACT PROVISIONS, FEDERAL AID CONSTRUCTION CONTRACTS AS AMENDED OR SUPPLEMENTED

ALL CONTRACTORS MUST PROVIDE THIS LANGUAGE IN ANY CONTRACT WITH THEIR SUBCONTRACTORS AS REQUIRED BY 2 CFR PART 200 AND 2 CFR PART 200 APPENDIX II AND IS CURRENTLY NOT INCLUDED IN FHWA-1273, BUT IS REFLECTED IN PROPOSED AMENDMENTS NOT YET FINALIZED.

FHWA-1273 shall be read to include:

1. All references to “race, religion, sex, color, national origin, age or disability” shall be read to include “sexual orientation and gender identity”.
2. SECTION IV. DAVIS-BACON ACT AND RELATED ACT PROVISIONS shall apply if the project is defined to be on a Federal Aid highway, regardless of the location of the project in compliance with 23 USC 133(i).
3. SECTION IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT shall require in conformance with 2 CFR Part 200 and 2 CFR Part 200 Appendix II that contractors on all Federal Aid construction contracts in excess of \$150,000 and all related subcontracts, supply contracts and vendor contracts “comply with all related standards, orders or regulations issued pursuant to the Clean Air Act (42 USC 7401-7671q) and the Federal Water Pollution Control Act as amended (33 USC 1251-1387) as required by 2 CFR 200.326.
4. SECTION X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION shall be read to comply with 2 CFR Part 200 and 2 CFR Part 200 Appendix II to replace the Excluded Parties List System with the System For Award Management (SAM) as required by 2 CFR Part 180.
5. If the work requires that cargo be shipped by oceanic transport or across the Great Lakes, in compliance with Section 3511 of the Duncan Hunter National Defense Authorization Act of 2009 amending the Cargo Preference Act, each contract shall require that cargoes financed “in any way with Federal funds for the account of any persons unless otherwise exempted” requires the use of US-flag vessels to transport the materials or equipment acquired for a specific Federal Aid construction project.

FEDERAL AID PROJECT ATTACHMENT 10

FEDERAL MANDATORY EQUAL OPPORTUNITY LANGUAGE ON FEDERAL AID PROJECTS

(AUTHORITY SUBJECT TO 41 CFR 60-1.4 IN COMPLIANCE WITH 2 CFR PART 200 AND 2 CFR PART 200 APPENDIX II)

All Contractors regardless of the value of the contract shall have this mandatory clause with their subcontractors:

The Contractor/Subcontractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action 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 setting forth the provisions of this nondiscrimination clause.

(2) The contractor 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 race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may

be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

FEDERAL AID PROJECT ATTACHMENT 11

BYRD ANTI-LOBBYING CERTIFICATION

Pursuant to 31 USC 1352 and 49 CFR part 21, Contractor and all subcontractors are required to comply with this Attachment. Contractor and all subcontractors shall be responsible to fill out Disclosure of Lobbying Activities Standard Form – LLL (as contained in this Attachment) and report it to the NJDOT Contract Compliance Unit for appropriate disclosure to the Federal Government.

All Contracts and subcontracts over \$100,000 shall require the following mandatory language in every contract:

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriate funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, or any employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Disclosure of Lobbying Activities Standard Form – LLL (Federal Aid Attachment Form 11) in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when the transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not that \$10,000 and not more than \$100,000 for each such failure.

APPENDIX B TO PART 21—DISCLOSURE FORM TO REPORT LOBBYING

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance		2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award		3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter ____ date of last report _____	
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: Congressional District, if known: _____			5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known: _____		
6. Federal Department/Agency: _____			7. Federal Program Name/Description: CFDA Number, if applicable: _____		
8. Federal Action Number, if known: _____			9. Award Amount, if known: \$ _____		
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI): _____ (attach Continuation Sheet(s) SF-LLL-A, if necessary)			b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): _____		
11. Amount of Payment (check all that apply): \$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned		13. Type of Payment (check all that apply): <input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other; specify: _____			
12. Form of Payment (check all that apply): <input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____		14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11: _____ (attach Continuation Sheet(s) SF-LLL-A, if necessary)			
15. Continuation Sheet(s) SF-LLL-A attached: <input type="checkbox"/> Yes <input type="checkbox"/> No					
16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.			Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____		
Federal Use Only:				Authorized for Local Reproduction Standard Form - LLL	

Office of the Secretary of the Treasury

Pt. 21, App. B

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

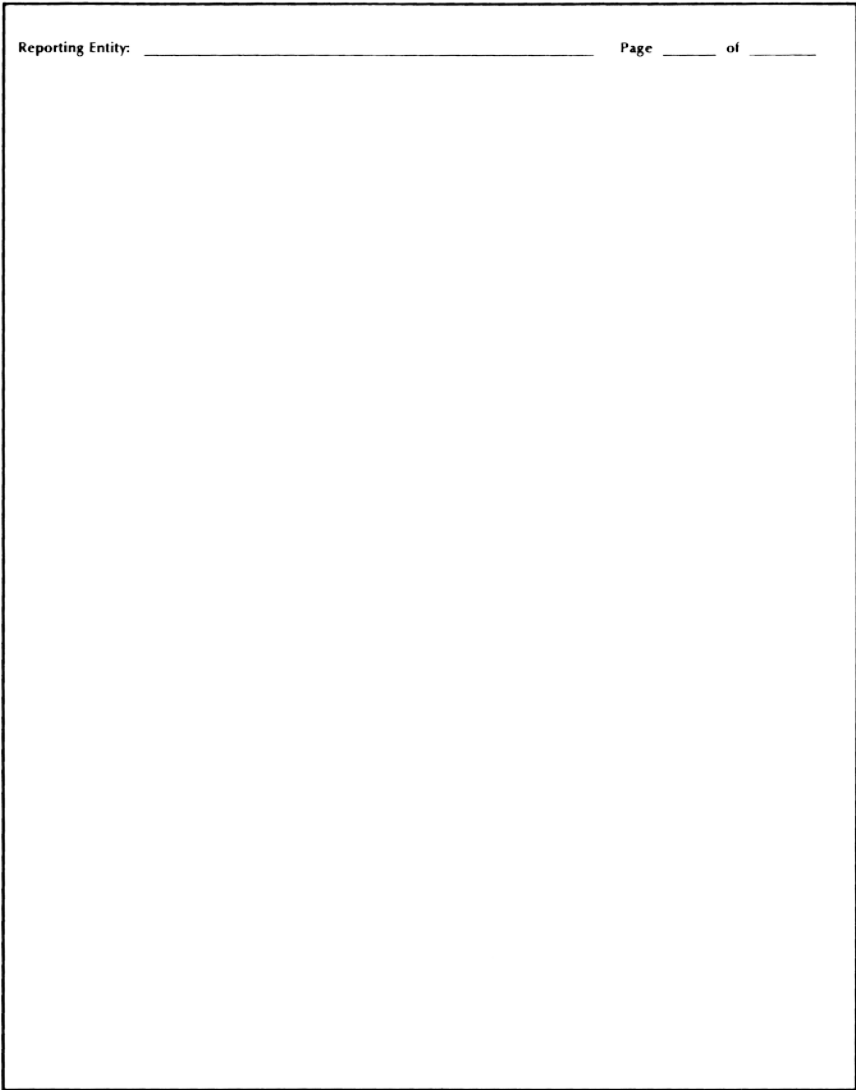
1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503

**DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET**

Approved by OMB
0148-0046

Reporting Entity: _____ Page _____ of _____



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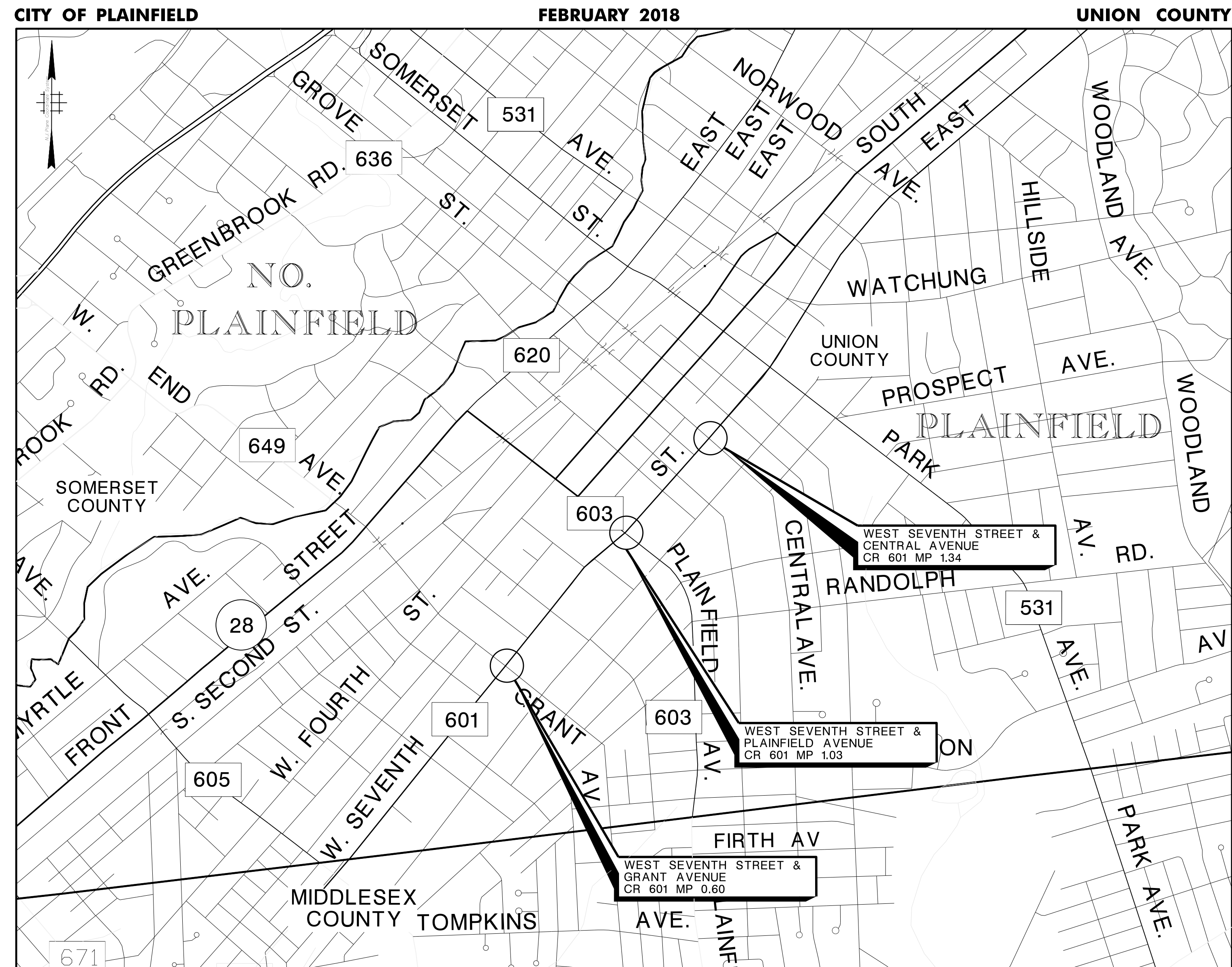
COUNTY OF UNION BOARD OF CHOSEN FREEHOLDERS

INTERSECTION IMPROVEMENTS CITY OF PLAINFIELD WEST SEVENTH STREET (CR 601)

COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT No. HSIP 0601 (301)

UTILITIES	
NEW JERSEY AMERICAN WATER (WATER)	
ELIZABETHTOWN GAS COMPANY (GAS)	
PUBLIC SERVICE ELECTRIC & GAS CO (ELECTRIC)	
VERIZON COMMUNICATIONS - NJ (TELEPHONE)	
VERIZON - NEW JERSEY, INC. (TELEPHONE)	
PLAINFIELD AREA REGIONAL SEWERAGE AUTHORITY (SEWER)	
COMCAST CABLEVISION OF NEW JERSEY (CABLE TV)	

DESIGN TRAFFIC DATA WEST SEVENTH STREET (CR 601) (VICINITY OF FRANKLIN PLACE)		
A.A.D.T. (2011) 2 WAY	=	11,801 VPD
V	=	35 MPH



KEY MAP



INDEX OF SHEETS	
SHEET	DESCRIPTION
1	KEY
2	ESTIMATE - DISTRIBUTION OF QUANTITIES
3	TYPICAL SECTIONS
4-7	CONSTRUCTION PLANS
8-9	TIES
10-12	LAYOUT PLANS
13-20	CURB RAMP LAYOUT DETAIL
21	TRAFFIC CONTROL AND STAGING PLANS
22-27	ELECTRICAL PLANS
28-30	TRAFFIC SIGNAL, SIGNING AND STRIPING PLANS
31-44	CONSTRUCTION DETAILS
45-58	ELECTRICAL DETAILS

STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS BOOKLET, DECEMBER 2007, AND STANDARD ELECTRICAL DETAILS BOOKLET, SEPTEMBER 2011, ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

RECOMMENDED BY: _____ Date _____

CITY OF PLAINFIELD ENGINEER, UNION COUNTY

APPROVED BY: _____ Date _____

ADRIAN O. MAPP
CITY OF PLAINFIELD MAYOR, UNION COUNTY

RECOMMENDED BY: _____ Date _____

THOMAS O. MINEO, P.E.
COUNTY ENGINEER, UNION COUNTY

APPROVED BY: _____ Date _____

ALFRED J. FAELLA
COUNTY MANAGER, UNION COUNTY

"CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE PLANS FILED AT THE DEPARTMENT WITH THOSE FILED AT THE OFFICE OF THE CONSULTANT."

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY P.E. LICENSE NO. 24GE04927300

**NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007
AND CURRENT SUPPLEMENTARY SPECIFICATIONS THERETO TO GOVERN**

SEQUENCE NO.	ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	PLAN SHEET TOTALS	IF AND WHERE DIRECTED	AS-BUILT QUANTITY	STATE QUANTITY	DISTRIBUTION: PLAN SHEET QUANTITY												STATE	FEDERAL PROJECT NO.
1	151006M	PERFORMANCE BOND AND PAYMENT BOND	LS	LS	LS																	
2	152004P	OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE	LS	LS	LS																	
3	152015P	POLLUTION LIABILITY INSURANCE	LS	LS	LS																	
4	153003P	PROGRESS SCHEDULE	LS	LS	LS																	
5	153005M	PROGRESS SCHEDULE UPDATE	U	5	5	5																
6	154003P	MOBILIZATION	LS	LS	LS																	
7	157004M	CONSTRUCTION LAYOUT	LS	LS	LS																	
8	158030M	INLET FILTER TYPE 2, 2' X 4'	U	16	16				C-2	6	C-3	6	C-4	4								
9	158063P	CONCRETE WASHOUT SYSTEM	LS	LS	LS																	
10	158069M	OIL-WATER SEPARATOR	U	1	1	1																
11	158072M	OIL ONLY EMERGENCY SPILL KIT, TYPE 1	U	1	1	1																
12	158084M	EROSION CONTROL SEDIMENT REMOVAL	CY	17	17																	
13	159003M	BREAKAWAY BARRICADE	U	26	26																	
14	159006M	DRUM	U	59	59																	
15	159009M	TRAFFIC CONE	U	59	59																	
16	159012M	CONSTRUCTION SIGNS	SF	770	770																	
17	159029M	PORTABLE VARIABLE MESSAGE SIGN W/REMOTE COMMUNICATION	U	2	2																	
18	159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	U	2	2																	
19	159126M	TEMPORARY TRAFFIC STRIPES, 4"	LF	1,500	1,500																	
20	159135M	TEMPORARY PAVEMENT MARKERS	U	72	72																	
21	159138M	HMA PATCH	T	28	28																	
22	159141M	TRAFFIC DIRECTOR, FLAGGER	HOUR	60	60																	
23	160004M	FUEL PRICE ADJUSTMENT	LS	LS	LS	1																
24	161003P	FINAL CLEANUP	LS	LS	LS																	
25	201003P	CLEARING SITE	LS	LS	LS																	
26	202006M	EXCAVATION, TEST PIT	CY	20	20	20																
27	202009P	EXCAVATION, UNCLASSIFIED	CY	157	157				C-2	35	C-3	90	C-4	32								
28	202021P	REMOVAL OF PAVEMENT	SY	537	537				C-2	108	C-3	319	C-4	110								
29	203021P	I-14 SOIL AGGREGATE	CY	68	61	7			C-3	61												
30	302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	SY	494	449	45			C-2	122	C-3	215	C-4	112								
31	401009P	HMA MILLING, 3" OR LESS	SY	2,651	2,410	241			C-2	682	C-3	1,027	C-4	701								
32	401027M	POLYMERIZED JOINT ADHESIVE	LF	1,100	1,100																	
33	401030M	TACK COAT	GAL	300	300																	
34	401061M	HOT MIX ASPHALT 12.5 M E SURFACE COURSE	T	359	326	33			C-2	89	C-3	144	C-4	93								
35	401084M	HOT MIX ASPHALT 19 M 64 INTERMEDIATE COURSE	T	53	48	5			C-2	13	C-3	24	C-4	11								
36	401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	T	202	183	19			C-2	45	C-3	92	C-4	46								
37	405015P	CONCRETE SURFACE COURSE, 12" THICK	SY	14	12	2			C-2	12												
38	601120P	12" REINFORCED CONCRETE PIPE	LF	8	7	1			C-3	7												
39	602012M	INLET, TYPE B	U	6	5	1			C-3	5												
40	602024M	INLET, TYPE B-1	U	2	1	1			C-3	1												
41	602096M	INLET CONVERTED TO MANHOLE	U	2	1	1			C-3	1												
42	602105M	SET INLET TYPE B, CASTING	U	10	10				C-2	6	C-4	4										
43	606012P	CONCRETE SIDEWALK, 4" THICK	SY	477	433	44			C-2	119	C-3	188	C-4	122	E-1	2	E-2	2				
44	606039P	HOT MIX ASPHALT DRIVEWAY, 6" THICK	SY	9	8	1			C-3	8												
45	606051P	CONCRETE DRIVEWAY, 6" THICK	SY	18	16	2			C-3	16												
46	606084P	DETECTABLE WARNING SURFACE	SY	24	24				C-2	8	C-3	8	C-4	8								
47	607021P	9" X 18" CONCRETE VERTICAL CURB	LF	985	898	87			C-2	242	C-3	356	C-4	300								
48	610003M	TRAFFIC STRIPES, 4"	LF	1,426	1,426				TSP-1	460	TSP-2	506	TSP-3	460								
49	610008M	TRAFFIC MARKINGS, SYMBOLS	SF	2,151	2,151				TSP-1	633	TSP-2	702	TSP-3	817								
50	610014M	TRAFFIC MARKING LINES, 8"	LF	1,219	1,219				TSP-1	345	TSP-2	414	TSP-3	460								
51	610036M	REMOVAL OF TRAFFIC STRIPES	LF	345	345				TSP-1	115	TSP-2	115	TSP-3	115								
52	612003P	REGULATORY AND WARNING SIGN	SF	337	337				TSP-1	95	TSP-2	200	TSP-3	42								
53	651255M	RESET WATER VALVE BOX	U	10	7	3			C-2	4	C-3	1	C-4	2								
54	652432M	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	U	11	10	1			C-2	4	C-3	2	C-4	4								
55	653084M	RESET GAS VALVE BOX	U	4	1	3			C-3	1												
56	701015P	2" RIGID METALLIC CONDUIT	LF	188	188				E-1	64	E-2	32	E-3	92								
57	701027P	2" RIGID NONMETALLIC CONDUIT	LF	60	60				E-1	20	E-2	20	E-3	20								
58	701033P	4" RIGID NONMETALLIC CONDUIT	LF	1,038	1,038				E-1	276	E-2	350	E-3	412								
59	701099M	17" X 30" JUNCTION BOX	U	13	13				E-1	7	E-2	5	E-3	1								
60	701123M	FOUNDATION, TYPE SFT	U	4	4				E-1	2	E-2	1	E-3	1								
61	701132M	FOUNDATION, TYPE P-MC	U	3	3				E-1	1	E-2	1	E-3	1								
62	701135M	FOUNDATION, TYPE SPF	U	9	9				E-1	4	E-2	3	E-3	2								
63	701192P	GROUND WIRE, NO. 8 AWG	LF	1,017	1,017				E-1	302	E-2	341	E-3	374								
64	701213P	SERVICE WIRE, NO. 6 AWG	LF	816	816				E-1	276	E-2	180	E-3	360								
65	702009M	CONTROLLER, 8 PHASE	U	3	3				E-1	1	E-2	1	E-3	1								
66	702018M	PEDESTRIAN SIGNAL STANDARD	U	9	9				E-1	4	E-2	3	E-3	2								
67	702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	LF	1,937	1,937				E-1	588	E-2	604	E-3	745								
68	702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	LF	3,899	3,899				E-1	1,190	E-2	1,261	E-3	1,448								
69	702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	LF	3,766	3,766				E-1	1,116	E-2	1,246	E-3	1,404								
70	702036M	TRAFFIC SIGNAL HEAD	U	36	36				E-1	12	E-2	12	E-3	12								
71	702039M	PEDESTRIAN SIGNAL HEAD	U	24	24				E-1	8	E-2	8	E-3	8								
72	702041M	PUSH BUTTON ASSEMBLIES, TYPE APS	U	12	12				E-1	4	E-2	4	E-3	4								
73	702045M	IMAGE DETECTOR	U	6	6				E-1	2	E-2	2	E-3	2								
74	702060M	CONTROLLER TURN-ON	U	3	3				E-1	1	E-2	1	E-3	1								
75	702062M	APS CONTROL UNIT	U	3	3				E-1	1	E-2	1	E-3	1								
76	702101M	UNINTERRUPTIBLE POWER SUPPLY	U	3	3				E-1	1	E-2	1	E-3	1								
77	804006P	TOPSOILING, 4" THICK	SY	302	274	28			C-2	77	C-3	145	C-4	52								
78	806003P	FERTILIZING AND SEEDING, TYPE A	SY	302	274	28			C-2	77	C-3	145	C-4	52								
79	809003M	STRAW MULCHING	SY	302	274	28			C-2	77	C-3	145	C-4	52								
80	N99991M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA15	U	1	1				E-1	1	E-2	0	E-3	0								
81	N99992M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA20	U	3	3				E-1	1	E-2	1	E-3	1								
82	N99993M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA25	U	4	4				E-1	2	E-2	1	E-3	1								
83	N99994M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA30	U	4	4				E-1	0	E-2	2	E-3	2								
84	N99995M	FOUNDATION, TYPE SFT-H	U	8	8				E-1	2	E-2	3	E-3	3								

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New Jersey Department Of Transportation
ESTIMATE-DISTRIBUTION OF QUANTITIES

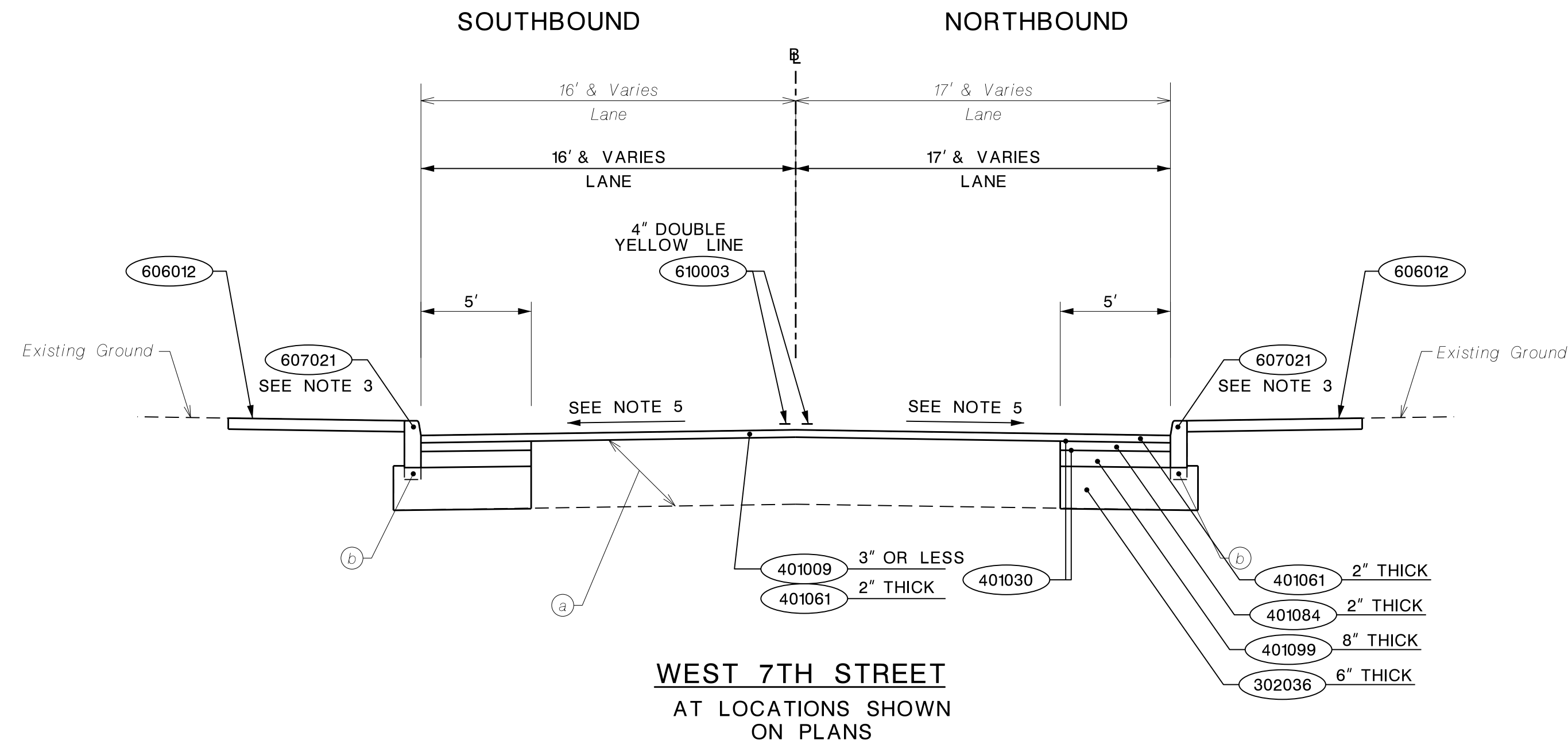
PROJECT: WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700
BRAD J. MILLER
NEW JERSEY PROFESSIONAL LICENSE NO. 24GE04927300

E-DOQ-1
E-DOQ-1
2
58

NOTES:

1. CONTRACTOR TO PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN ROADWAY PONDING AT ANY LOCATION. CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTING ANY ROADWAY PONDING CREATED BY CONTRACTOR'S WORK AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE RESIDENT ENGINEER.
2. CURB REPAIR STRIP LOCATIONS ARE INDICATED ON THE CONSTRUCTION PLANS.
3. PERFORM TURF REPAIR STRIP OR TOPSOILING / FERTILIZING & SEEDING / STRAW MULCHING AT LOCATIONS DETERMINED BY THE RESIDENT ENGINEER.
4. MAINTAIN EXISTING CROSS SLOPES WITHIN INTERSECTION AREAS, LANES AND AUXILIARY LANES.
5. RAMPS AND SIDE STREETS SHALL BE TREATED AS INDICATED ON THE CONSTRUCTION PLANS.
6. TYPICAL SECTIONS BASED ON AVAILABLE AS-BUILT PLANS, FIELD MEASUREMENTS AND PAVEMENT INVESTIGATION.



PROPOSED MATERIAL	
ITEM NO.	DESCRIPTION
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK
401009M	HMA MILLING, 3" OR LESS
401030M	TACK COAT
401061M	HOT MIX ASPHALT 12.5 M E SURFACE COURSE
401084M	HOT MIX ASPHALT 19 M 64 INTERMEDIATE COURSE
401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE
606012P	CONCRETE SIDEWALK, 4" THICK
607021P	9" x 18" CONCRETE VERTICAL CURB
610003M	TRAFFIC STRIPES, 4"

Existing Material	
Symbol	Description
a	Asphalt Surface Course, Unknown Thickness
b	Concrete Vertical Curb

TS-01
TS-01

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

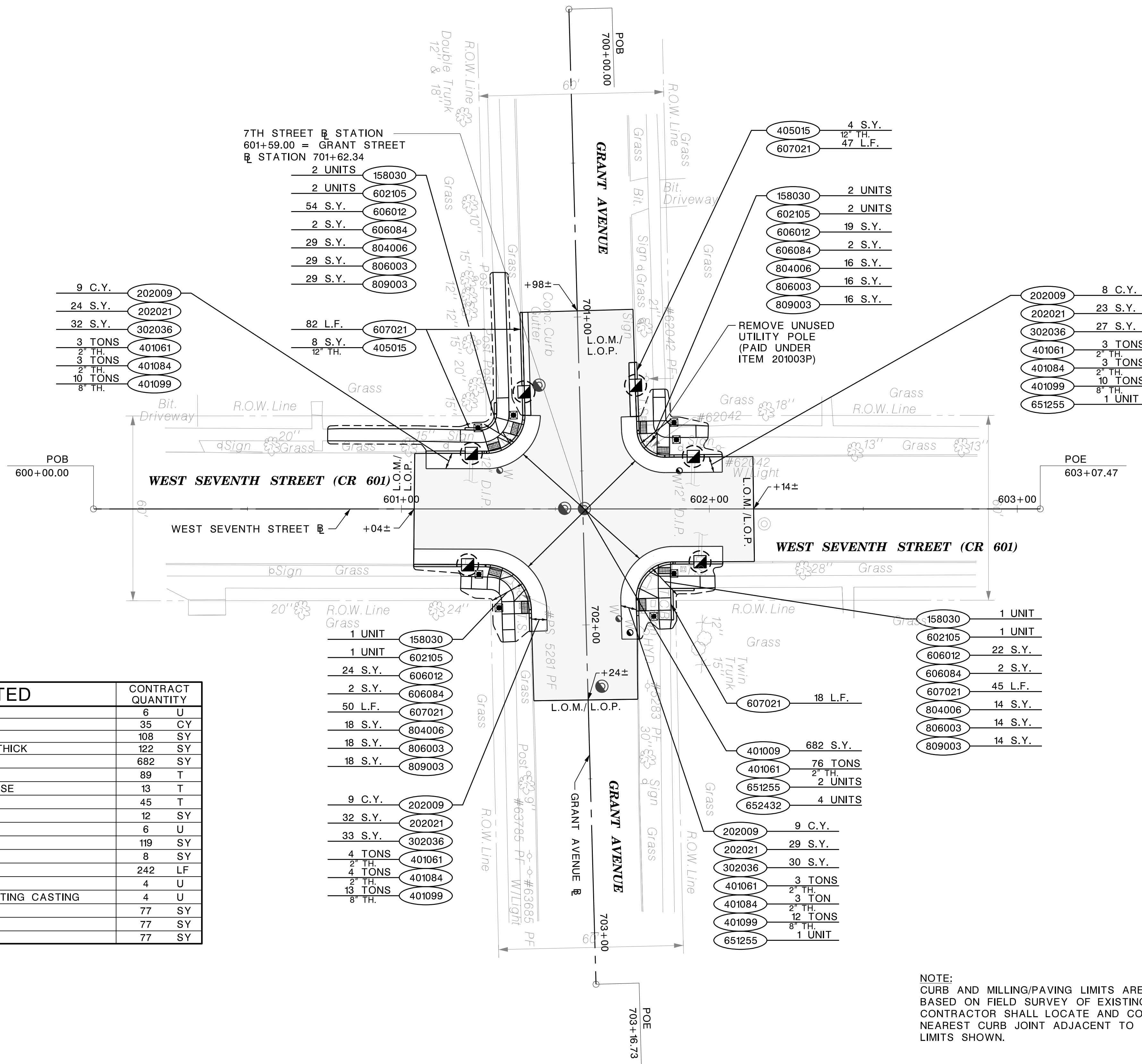
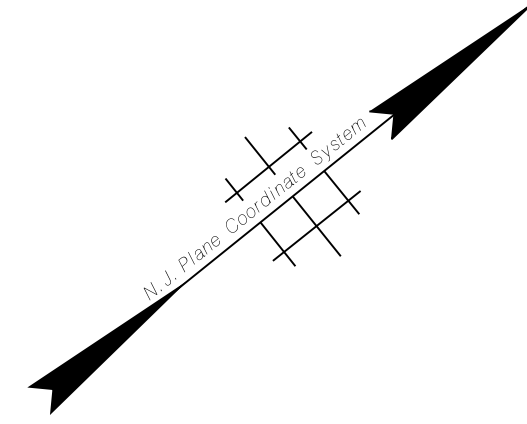
TYPICAL SECTIONS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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NOTE:
CURB AND MILLING/PAVING LIMITS ARE APPROXIMATE
BASED ON FIELD SURVEY OF EXISTING JOINT LOCATIONS.
CONTRACTOR SHALL LOCATE AND CONSTRUCT TO THE
NEAREST CURB JOINT ADJACENT TO THE APPROXIMATE
LIMITS SHOWN.

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION PLANS

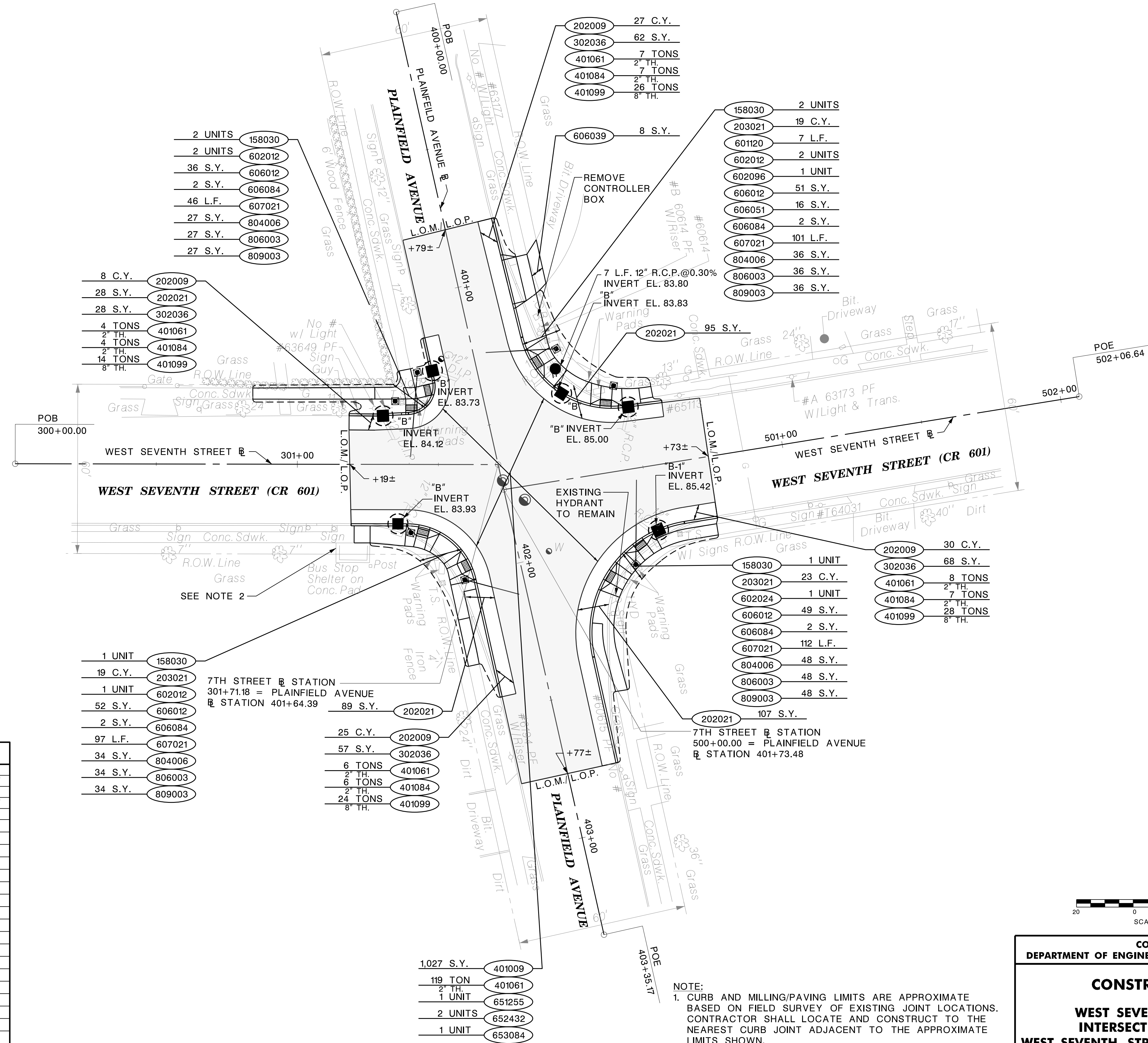
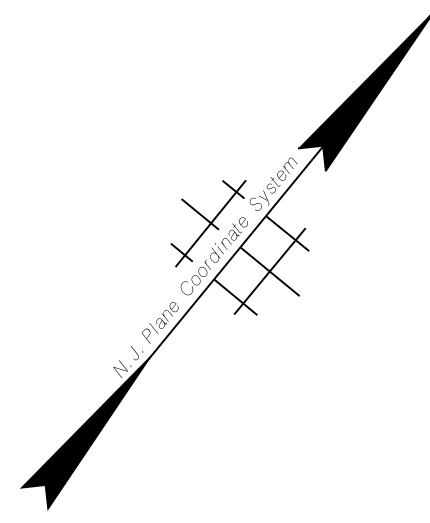
**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND GRANT AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

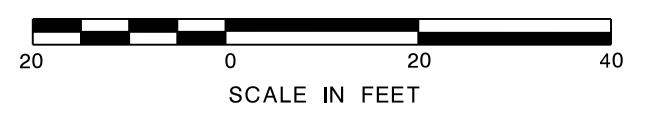
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

C-2
C-4

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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
158030M	INLET FILTER TYPE 2, 2' X 4'	6 U
202009P	EXCAVATION, UNCLASSIFIED	90 CY
202021P	REMOVAL OF PAVEMENT	319 SY
203021P	I-14 SOIL AGGREGATE	61 CY
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	215 SY
401009P	HMA MILLING, 3" OR LESS	1,027 SY
401061M	HOT MIX ASPHALT 12.5 M E SURFACE COURSE	144 T
401084M	HOT MIX ASPHALT 19 M 64 INTERMEDIATE COURSE	24 T
401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	92 T
601120P	12" REINFORCED CONCRETE PIPE	7 LF
602012M	INLET, TYPE B	5 U
602024M	INLET, TYPE B-1	1 U
602096M	INLET CONVERTED TO MANHOLE	1 U
606012P	CONCRETE SIDEWALK, 4" THICK	188 SY
606039P	HOT MIX ASPHALT DRIVEWAY, 6" THICK	8 SY
606051P	CONCRETE DRIVEWAY, 6" THICK	16 SY
606084P	DETECTABLE WARNING SURFACE	8 SY
607021P	9" X 18" CONCRETE VERTICAL CURB	356 LF
651255M	RESET WATER VALVE BOX	1 U
652432M	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	2 U
653084M	RESET GAS VALVE BOX	1 U
804006P	TOPSOILING, 4" THICK	145 SY
806003P	FERTILIZING AND SEEDING, TYPE A	145 SY
809003M	STRAW MULCHING	145 SY



C-3
C-4

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION PLANS

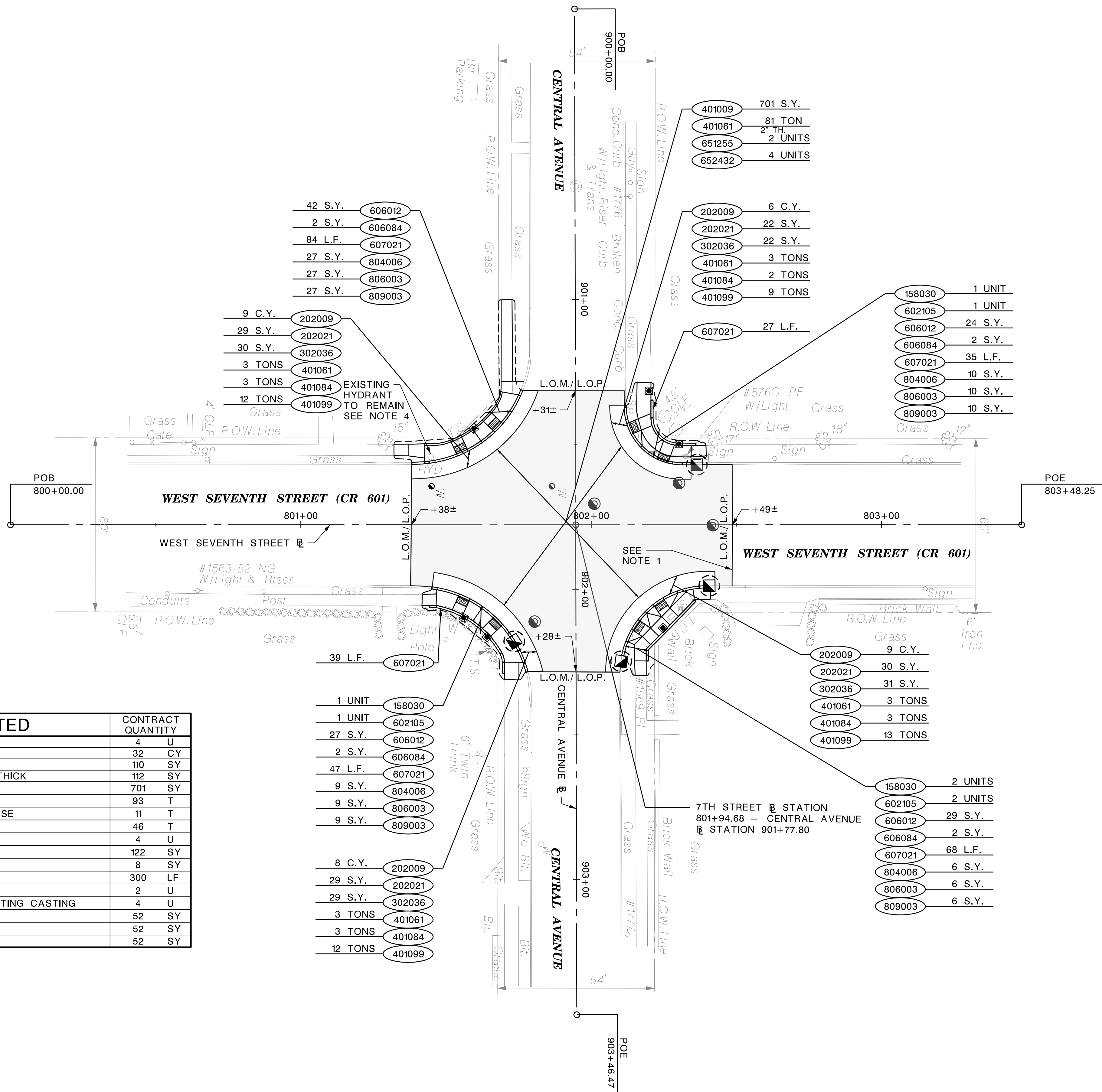
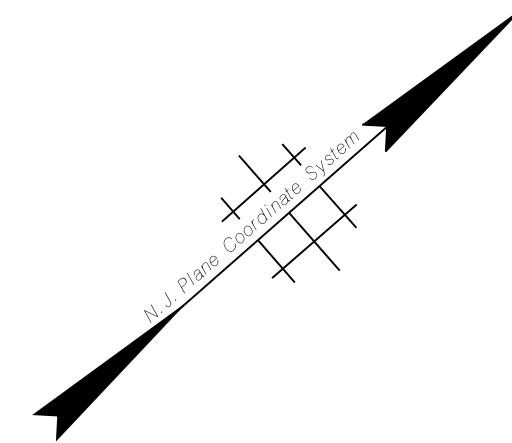
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND PLAINFIELD AVENUE

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

NOTE:
1. CURB AND MILLING/PAVING LIMITS ARE APPROXIMATE BASED ON FIELD SURVEY OF EXISTING JOINT LOCATIONS. CONTRACTOR SHALL LOCATE AND CONSTRUCT TO THE NEAREST CURB JOINT ADJACENT TO THE APPROXIMATE LIMITS SHOWN.
2. MAINTAIN ACCESS TO BUS STOP AT ALL TIMES.

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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
158030M	INLET FILTER TYPE 2, 2' X 4'	4 U
202009P	EXCAVATION, UNCLASSIFIED	32 CY
202021P	REMOVAL OF PAVEMENT	110 SY
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	112 SY
401009P	HMA MILLING, 3" OR LESS	701 SY
401061M	HOT MIX ASPHALT 12.5 M E SURFACE COURSE	93 T
401084M	HOT MIX ASPHALT 19 M 64 INTERMEDIATE COURSE	11 T
401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	46 T
602105M	SET INLET TYPE B, CASTING	4 U
606012P	CONCRETE SIDEWALK, 4" THICK	122 SY
606084P	DETECTABLE WARNING SURFACE	8 SY
607021P	9' X 18" CONCRETE VERTICAL CURB	300 LF
651255M	RESET WATER VALVE BOX	2 U
652432M	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	4 U
804006P	TOPSOILING, 4" THICK	52 SY
806003P	FERTILIZING AND SEEDING, TYPE A	52 SY
809003M	STRAW MULCHING	52 SY

- 42 S.Y. 606012
- 2 S.Y. 606084
- 84 L.F. 607021
- 27 S.Y. 804006
- 27 S.Y. 806003
- 27 S.Y. 809003
- 9 C.Y. 202009
- 29 S.Y. 202021
- 30 S.Y. 302036
- 3 TONS 401061
- 3 TONS 401084
- 12 TONS 401099
- EXISTING HYDRANT TO REMAIN SEE NOTE 4
- 701 S.Y. 401009
- 81 TON 401061
- 2 UNITS 651255
- 4 UNITS 652432
- 6 C.Y. 202009
- 22 S.Y. 202021
- 22 S.Y. 302036
- 3 TONS 401061
- 2 TONS 401084
- 9 TONS 401099
- 27 L.F. 607021
- 1 UNIT 158030
- 1 UNIT 602105
- 24 S.Y. 606012
- 2 S.Y. 606084
- 35 L.F. 607021
- 10 S.Y. 804006
- 10 S.Y. 806003
- 10 S.Y. 809003
- 39 L.F. 607021
- 1 UNIT 158030
- 1 UNIT 602105
- 27 S.Y. 606012
- 2 S.Y. 606084
- 47 L.F. 607021
- 9 S.Y. 804006
- 9 S.Y. 806003
- 9 S.Y. 809003
- 8 C.Y. 202009
- 29 S.Y. 202021
- 29 S.Y. 302036
- 3 TONS 401061
- 3 TONS 401084
- 12 TONS 401099
- 9 C.Y. 202009
- 30 S.Y. 202021
- 31 S.Y. 302036
- 3 TONS 401061
- 3 TONS 401084
- 13 TONS 401099
- 2 UNITS 158030
- 2 UNITS 602105
- 29 S.Y. 606012
- 2 S.Y. 606084
- 68 L.F. 607021
- 6 S.Y. 804006
- 6 S.Y. 806003
- 6 S.Y. 809003

- NOTE:
- CURB AND MILLING/PAVING LIMITS ARE APPROXIMATE BASED ON FIELD SURVEY OF EXISTING JOINT LOCATIONS. CONTRACTOR SHALL LOCATE AND CONSTRUCT TO THE NEAREST CURB JOINT ADJACENT TO THE APPROXIMATE LIMITS SHOWN.
 - CONTRACTOR SHALL PROTECT EXISTING WALL AND FOUNDATION. ANY DAMAGE THERETO SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT CONTRACTOR'S EXPENSE.
 - MAINTAIN ACCESS TO BUS STOP AT ALL TIMES.
 - CONTRACTOR SHALL CONSTRUCT THE RAMP AS SHOWN AND ENSURE THAT A 3' MINIMUM CLEAR WIDTH BETWEEN PROPOSED CONCRETE HEADER CURB AND EXISTING FIRE HYDRANT IS MAINTAINED.



COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION PLANS

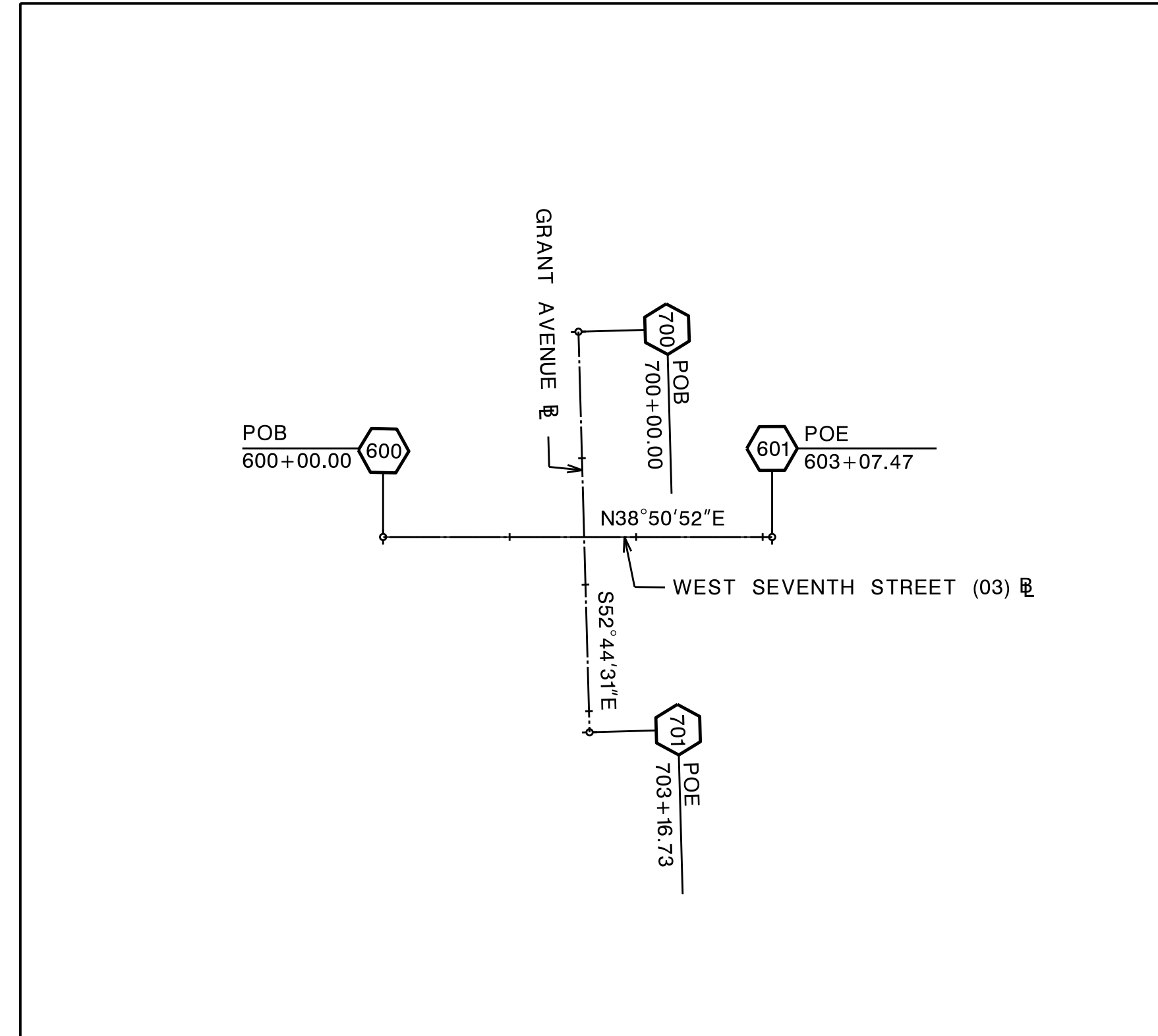
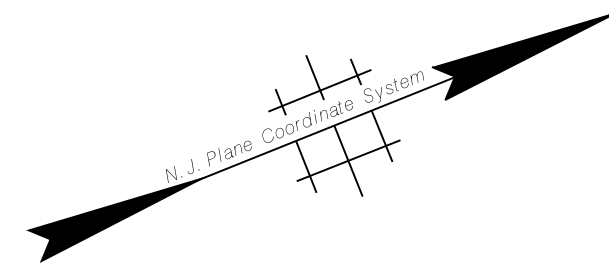
**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND CENTRAL AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

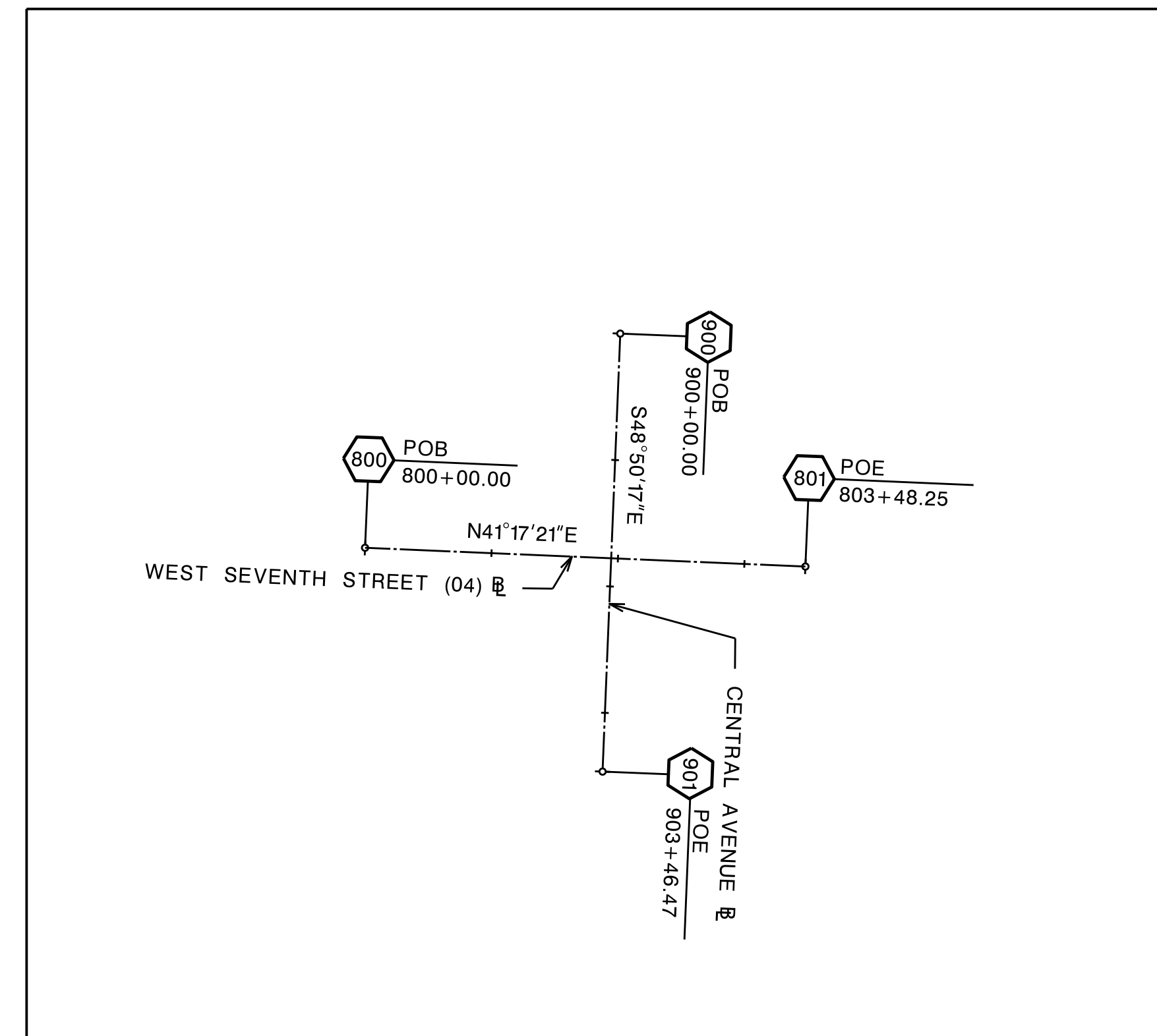
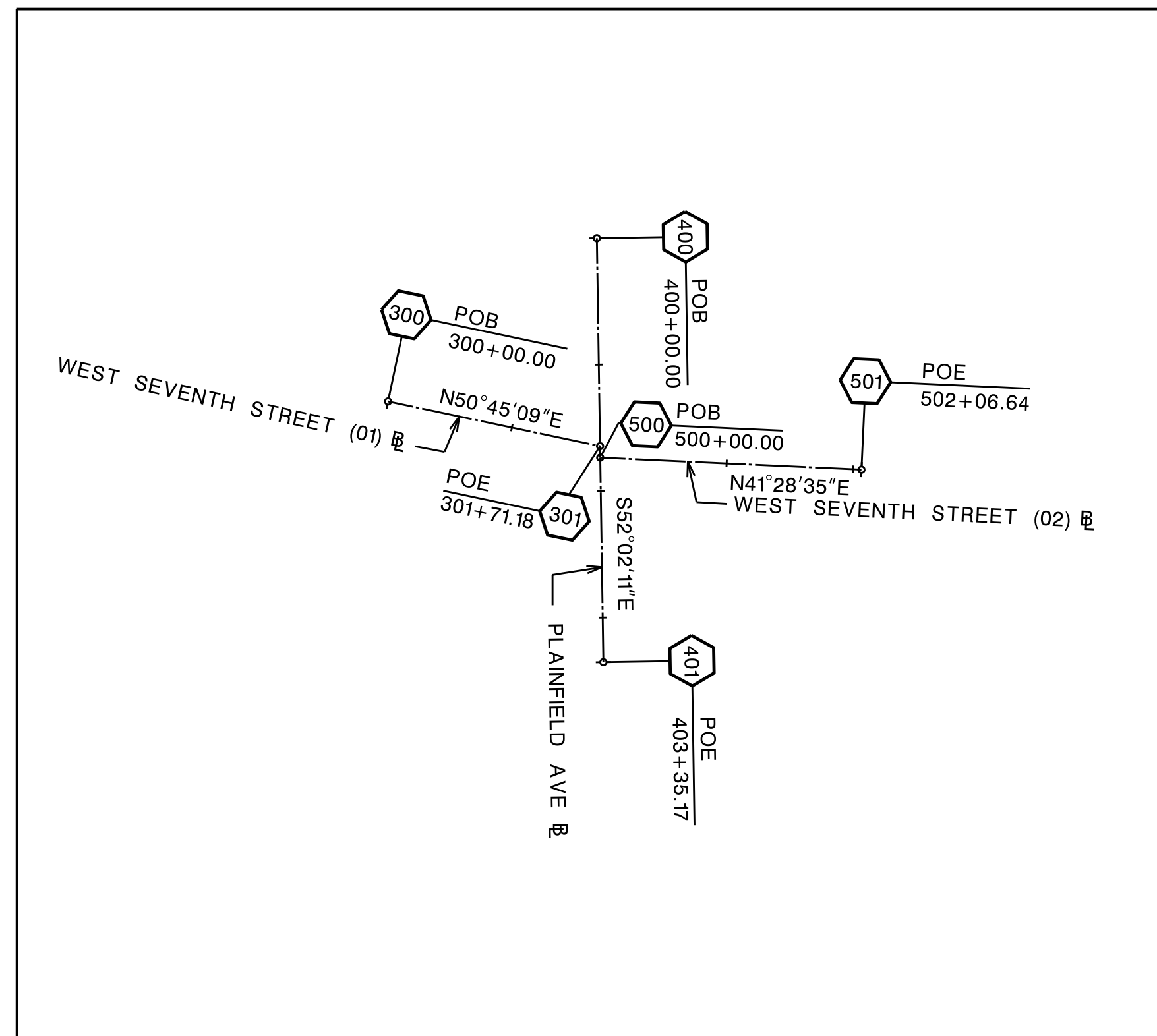
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

C-4
C-4

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TIES & ALIGNMENT DATA						
NO.	STATION	OFFSET	BASELINE	North COORD.	East COORD.	REMARKS
300	300+00.00	0'	WEST SEVENTH STREET (01)	646763.9876	513117.4149	POB
301	301+71.18	0'	"	646872.2888	513249.9806	POE
400	400+00.00	0'	PLAINFIELD AVE	646973.4164	513120.3730	POB
401	403+35.17	0'	"	646767.2304	513384.6258	POE
500	500+00.00	0'	WEST SEVENTH STREET (02)	646866.7005	513257.1427	POB
501	502+06.64	0'	"	647021.5194	513394.0013	POE
600	600+00.00	0'	WEST SEVENTH STREET (03)	645047.5232	511619.5425	POB
601	603+07.47	0'	"	645286.9886	511812.4066	POE
700	700+00.00	0'	GRANT AVENUE	645269.5629	511590.0164	POB
701	703+16.73	0'	"	645077.8152	511842.1033	POE
800	800+00.00	0'	WEST SEVENTH STREET (04)	647944.3001	514204.3071	POB
801	803+48.25	0'	"	648205.9743	514434.1054	POE
900	900+00.00	0'	CENTRAL AVENUE	648207.5291	514198.9631	POB
901	903+46.47	0'	"	647979.4839	514459.8078	POE



Baker PW Path Location: p:\proj\2015\Local\Pre-Engineering-Assistance\C:\CADD\PlanTies1.dgn

T-1
T-2

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

TIES

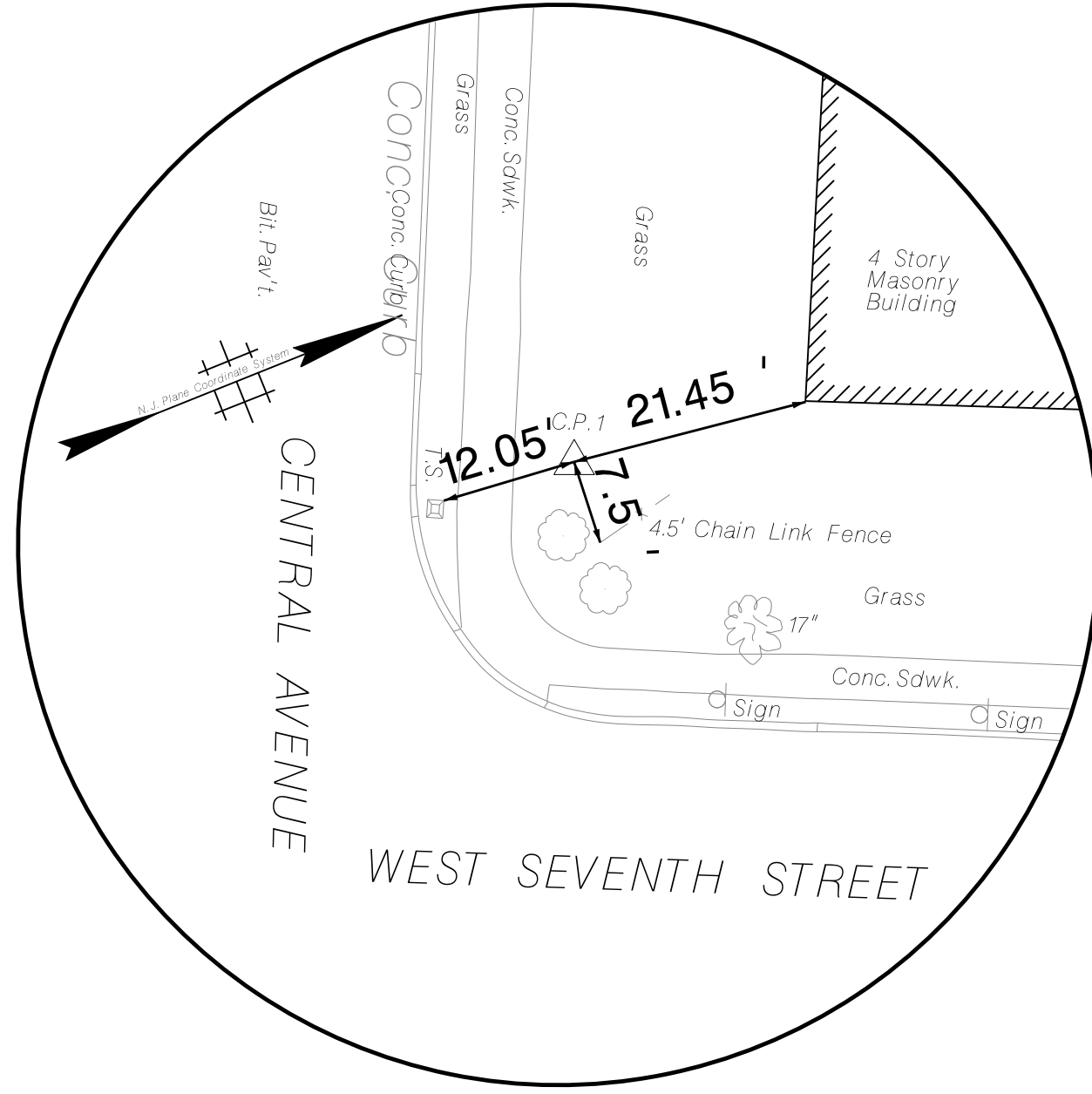
**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

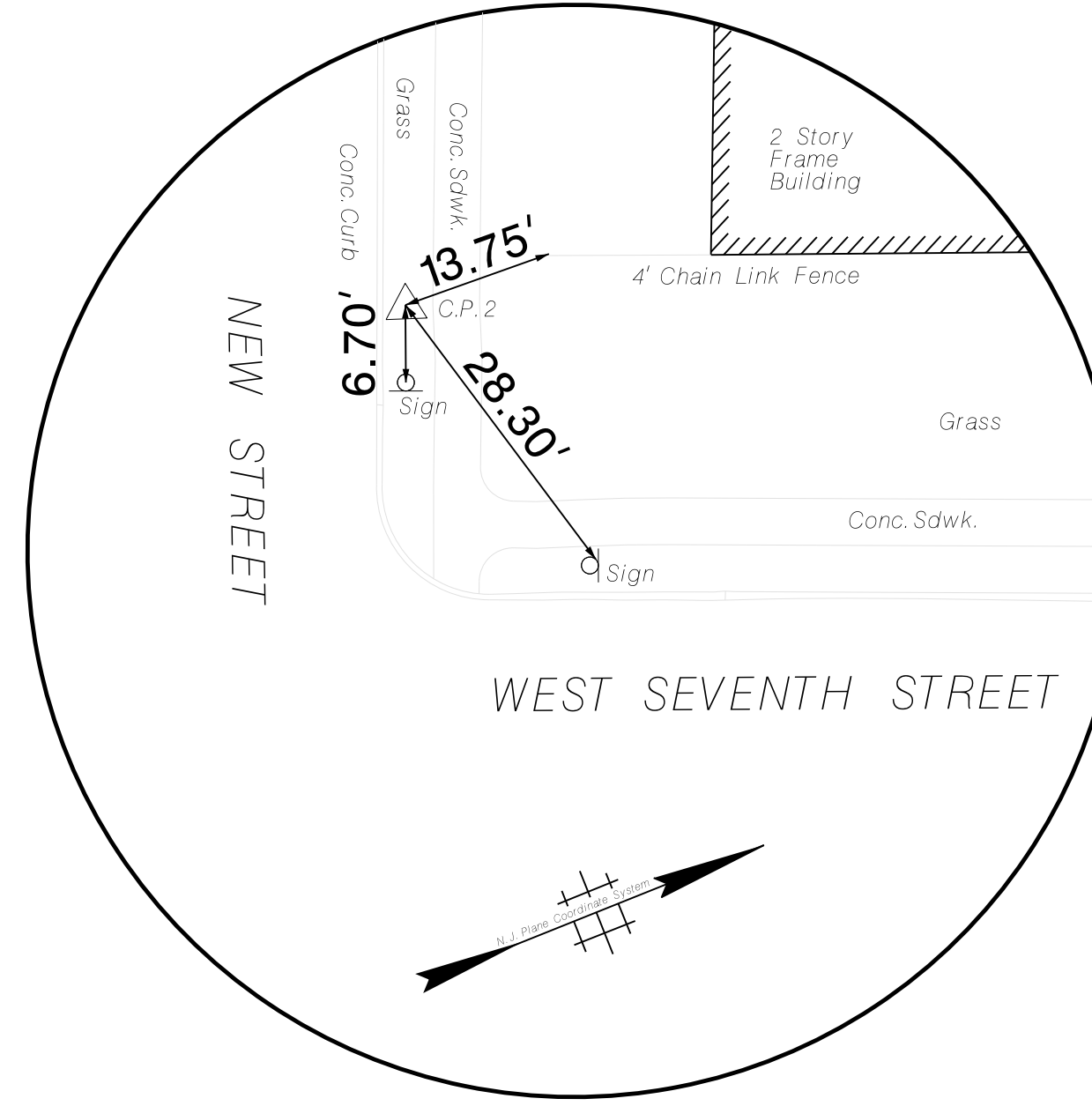
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

CITY OF PLAINFIELD

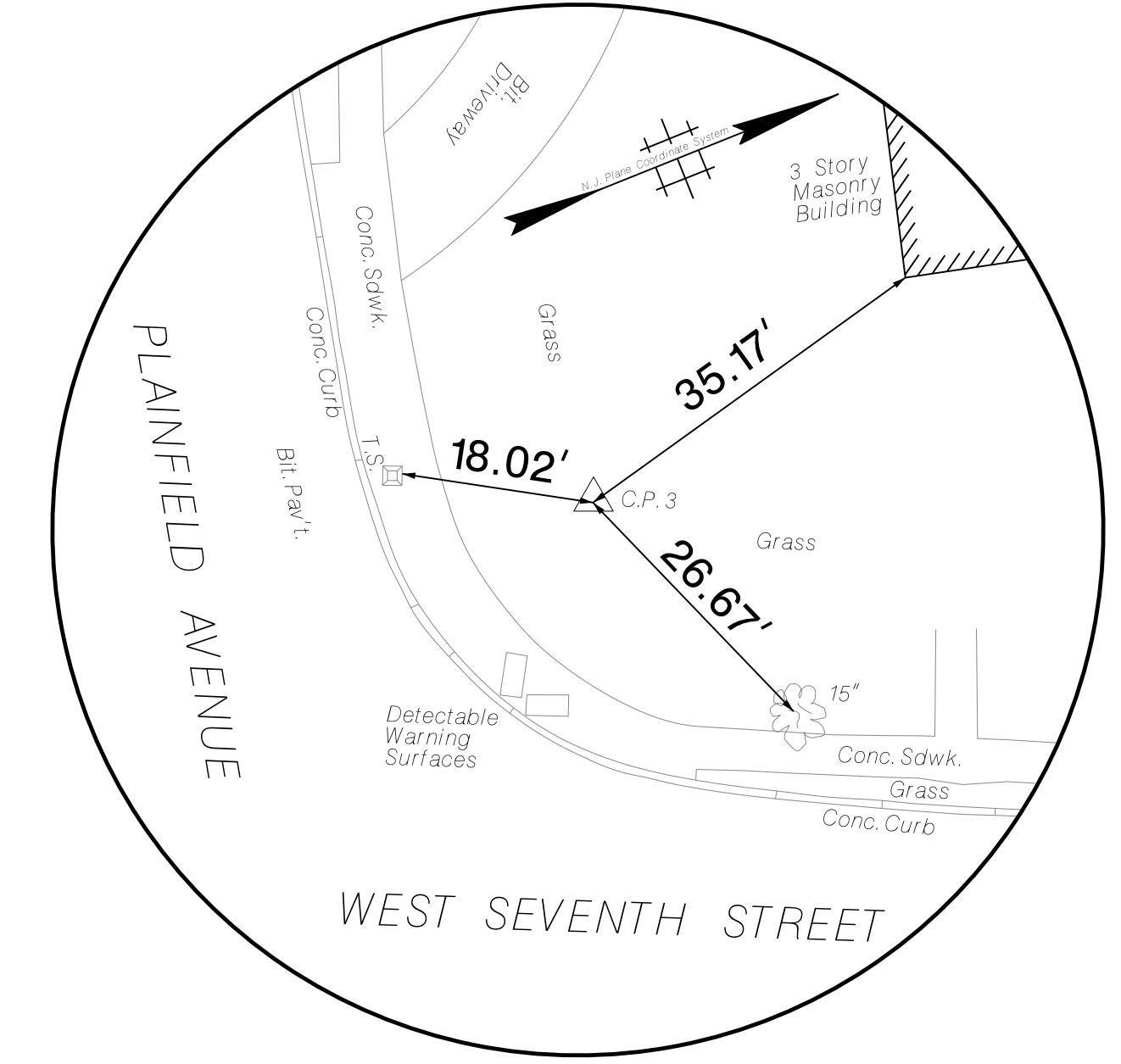
UNION COUNTY



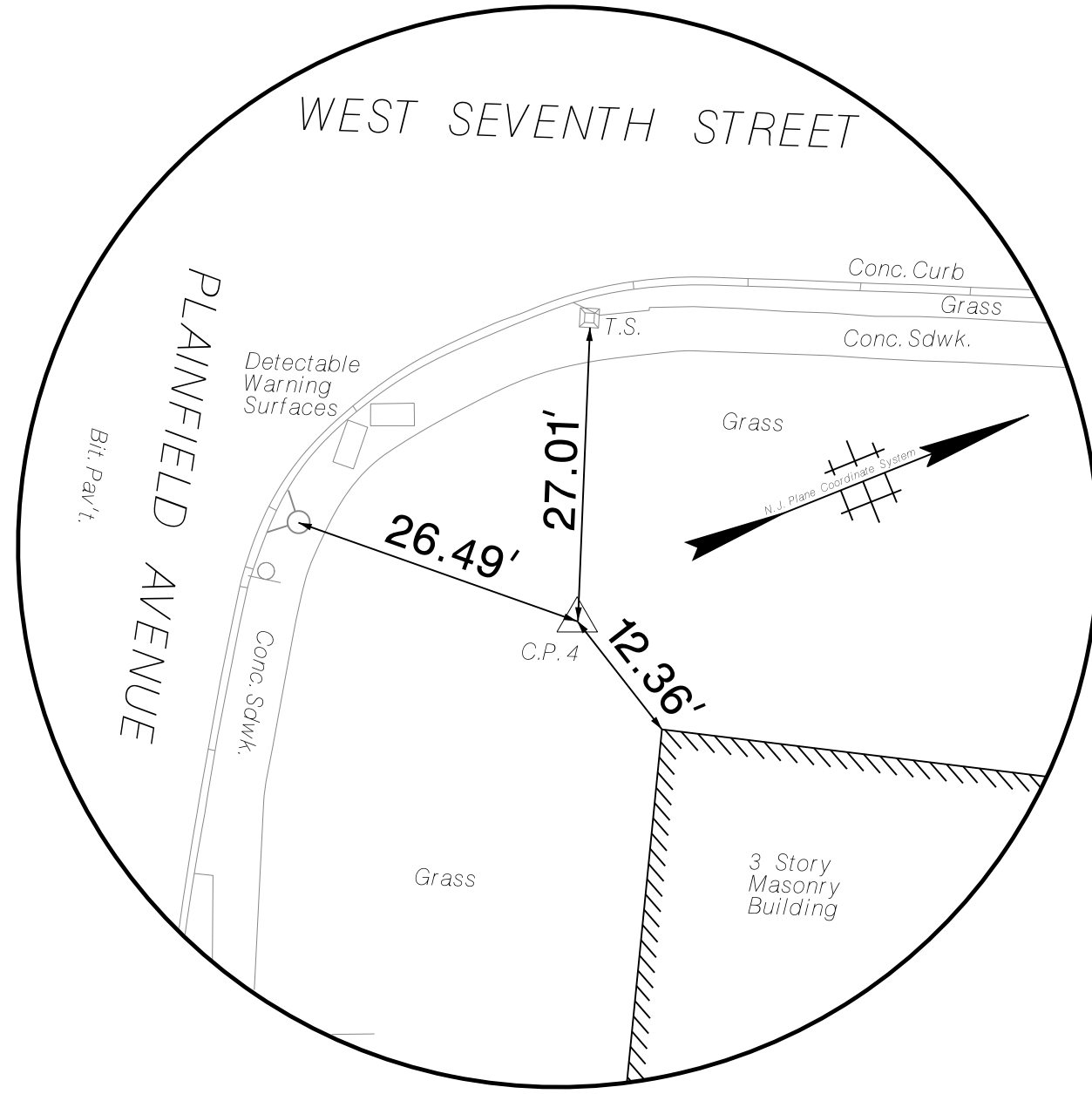
CONTROL POINT 1 (C.P. 1)
CAPPED IRON PIN
 STA. 802+25.91, 44.05' L
 N=648143.1125
 E=514320.2715
 ELEV.=94.35
 N.T.S.



CONTROL POINT 2 (C.P. 2)
DSPK
 STA. -800+76.36, 47.56' L
 N=647918.3087
 E=514118.1971
 ELEV.=91.70
 N.T.S.



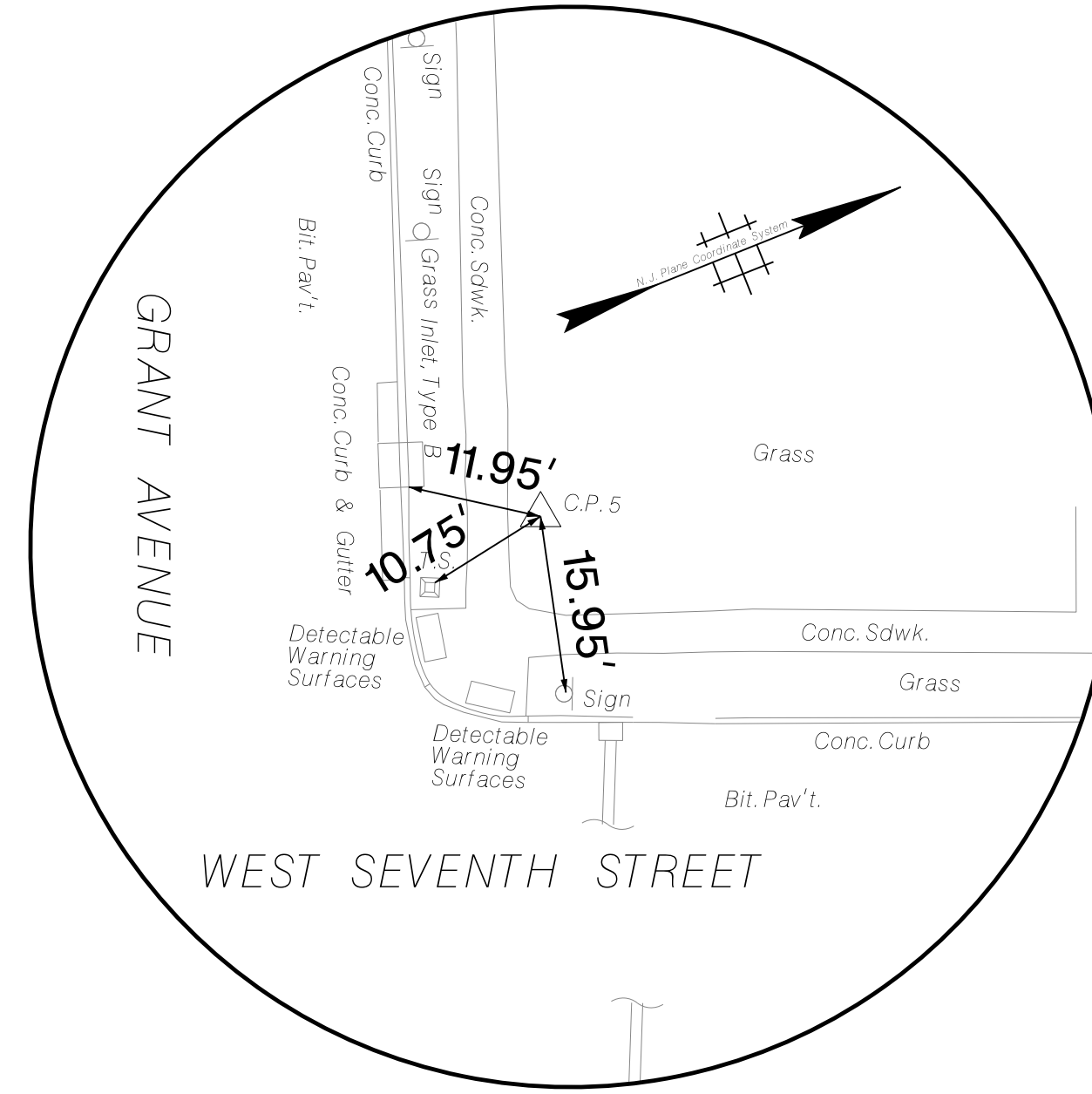
CONTROL POINT 3 (C.P. 3)
CAPPED IRON PIN
 STA. 500+42.29, 48.15' L
 N=646930.2763
 E=513249.0707
 ELEV.=90.03
 N.T.S.



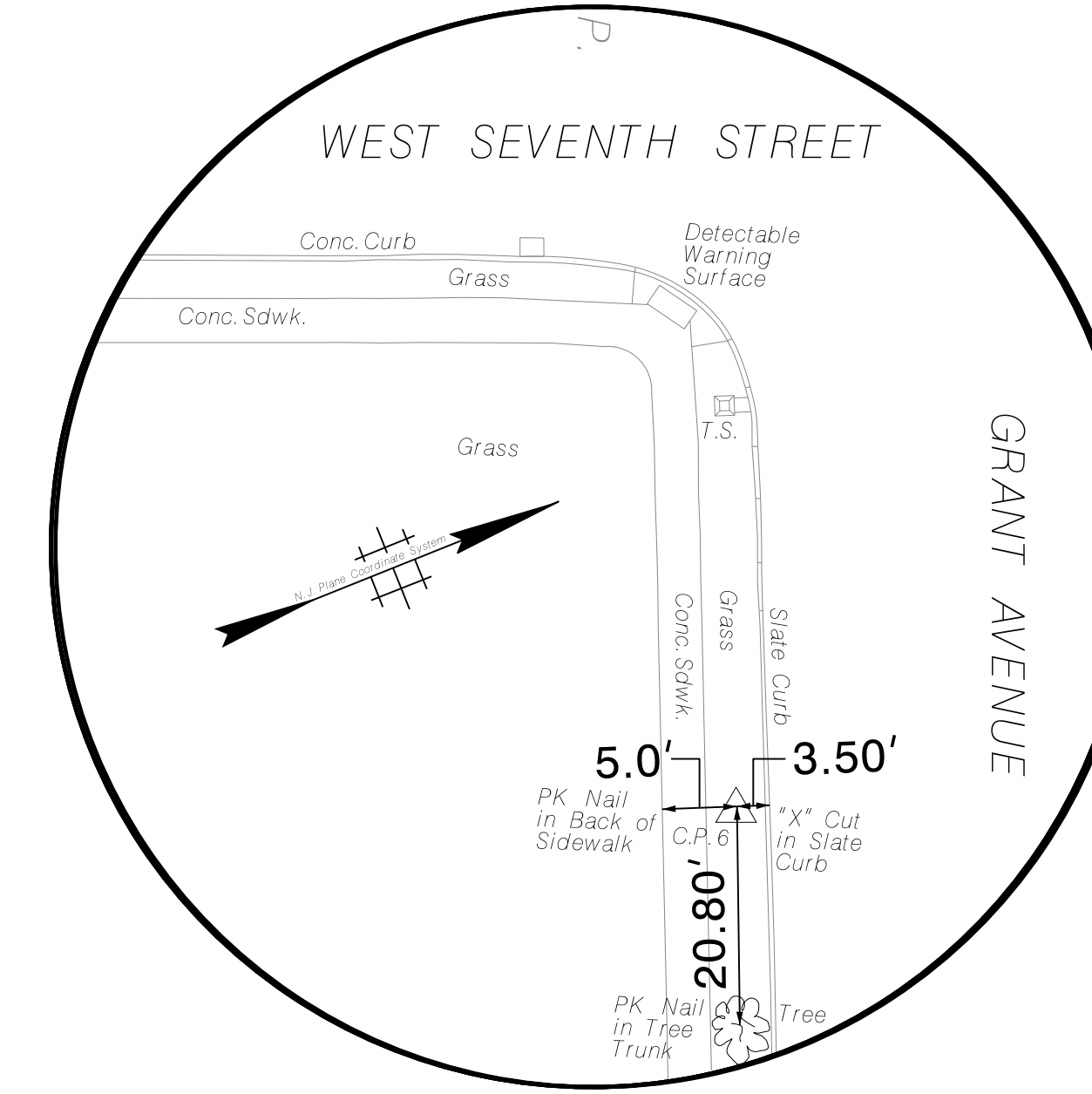
CONTROL POINT 4 (C.P. 4)
CAPPED IRON PIN
 STA. 500+40.13, 46.20' R
 N=646866.3962
 E=513318.5309
 ELEV.=88.93
 N.T.S.

HORIZONTAL DATUM:
 NEW JERSEY STATE PLANE
 COORDINATE SYSTEM 1983 (NAD83)

VERTICAL DATUM:
 NORTH AMERICAN DATUM OF 1988
 (NAVD 88)



CONTROL POINT 5 (C.P. 5)
CAPPED IRON PIN
 STA. 601+88.63, 35.62' L
 N=645216.7709
 E=511710.1167
 ELEV.=84.55
 N.T.S.

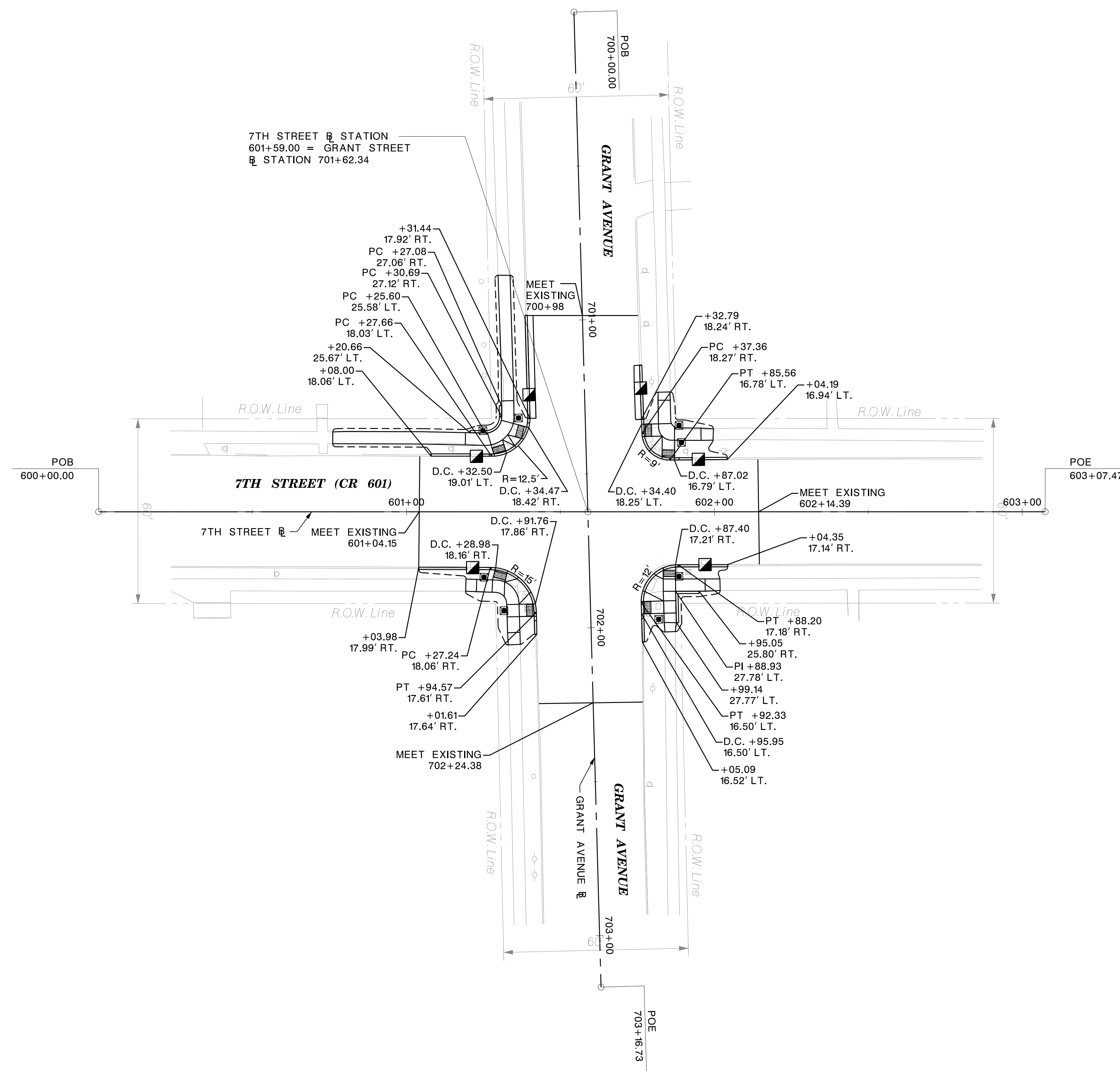
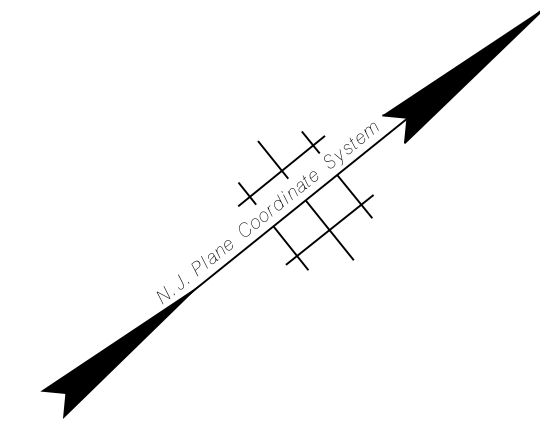


CONTROL POINT 6 (C.P. 6)
CAPPED IRON PIN
 STA. 702+29.59, 20.56' R
 N=645114.1986
 E=511760.3023
 ELEV.=83.47
 N.T.S.

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T-2
T-2

COUNTY OF UNION DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES	
TIES WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS	
MICHAEL BAKER INTERNATIONAL, INC. CERTIFICATION OF AUTHORIZATION NO. 24GA27954700	
BRAD J. MILLER NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300	



NOTE:

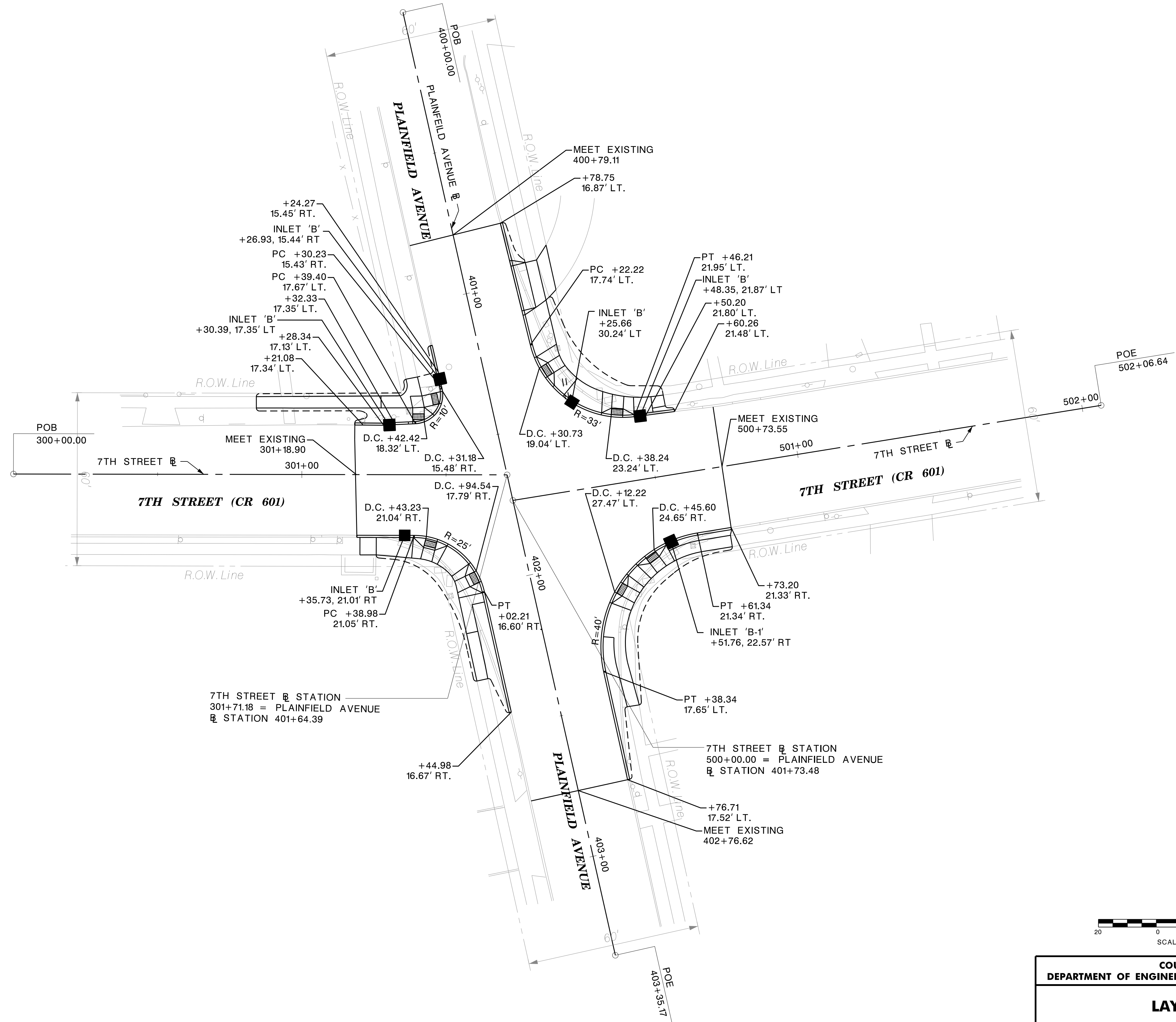
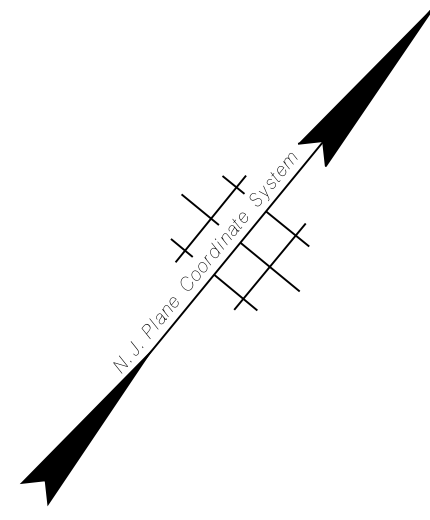
STATION AND OFFSETS SHOWN FOR DROP CURB INDICATE THE LOCATION OF A SINGLE EDGE OF THE CURB RAMP. REFER TO THE CURB RAMP LAYOUT DETAIL SHEETS FOR THE FULL WIDTH OF CURB RAMP DROP CURBS, RAMP DIMENSIONS AND OTHER DETAILS NECESSARY TO CONSTRUCT THE CURB RAMPS



L-1
L-3

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
LAYOUT PLAN
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700
 BRAD J. MILLER
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300



L-2
L-3

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

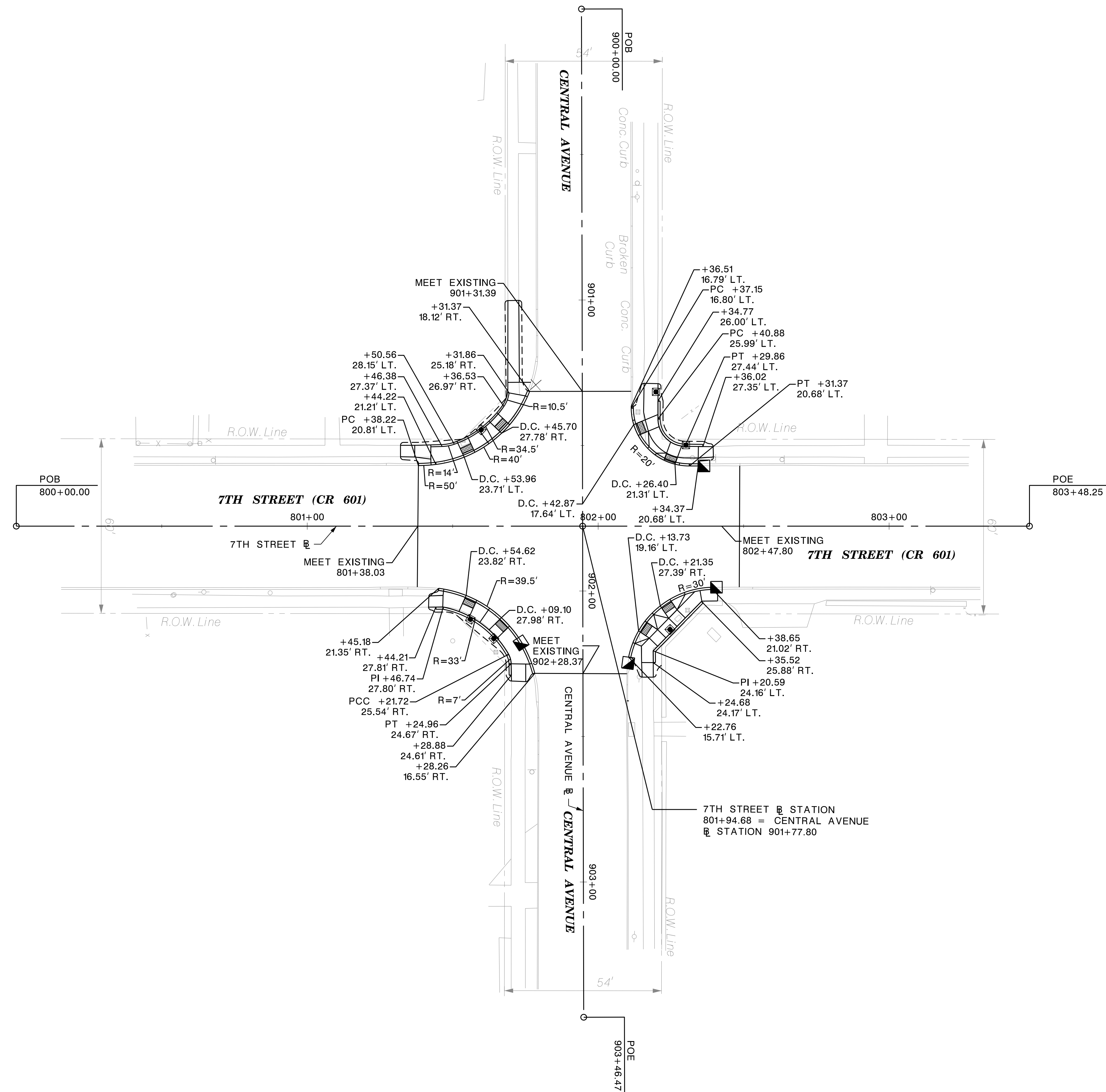
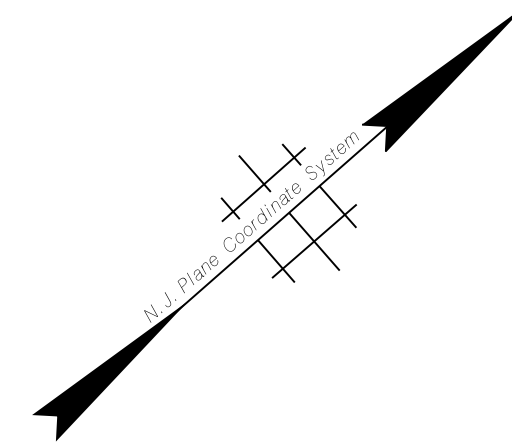
LAYOUT PLAN

WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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L-3
L-3

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

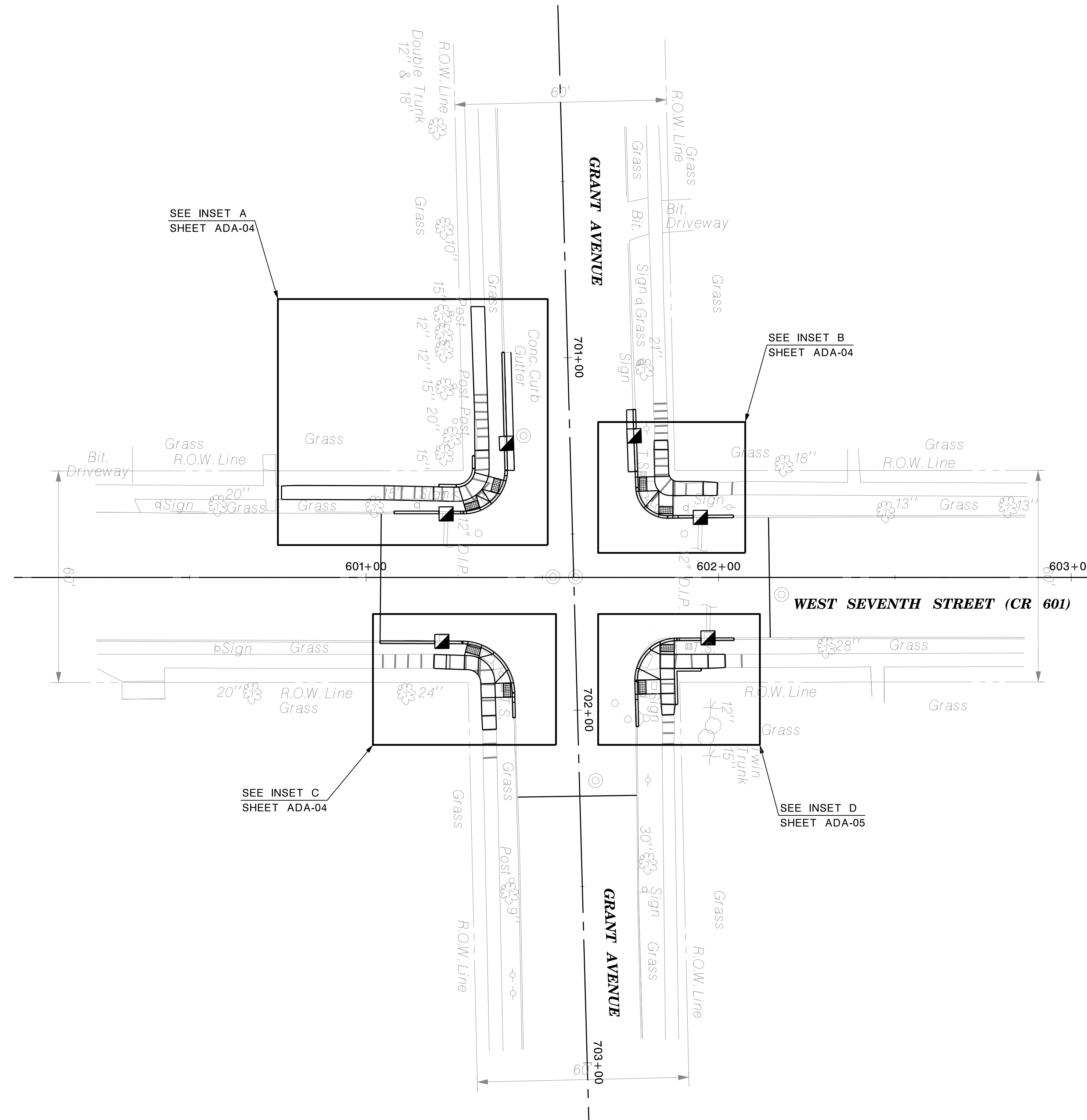
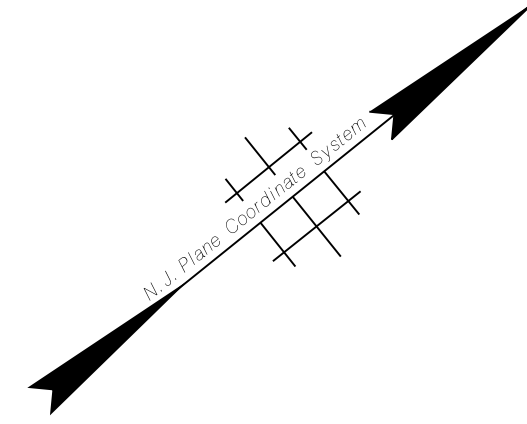
LAYOUT PLAN

WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

 MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

 BRAD J. MILLER
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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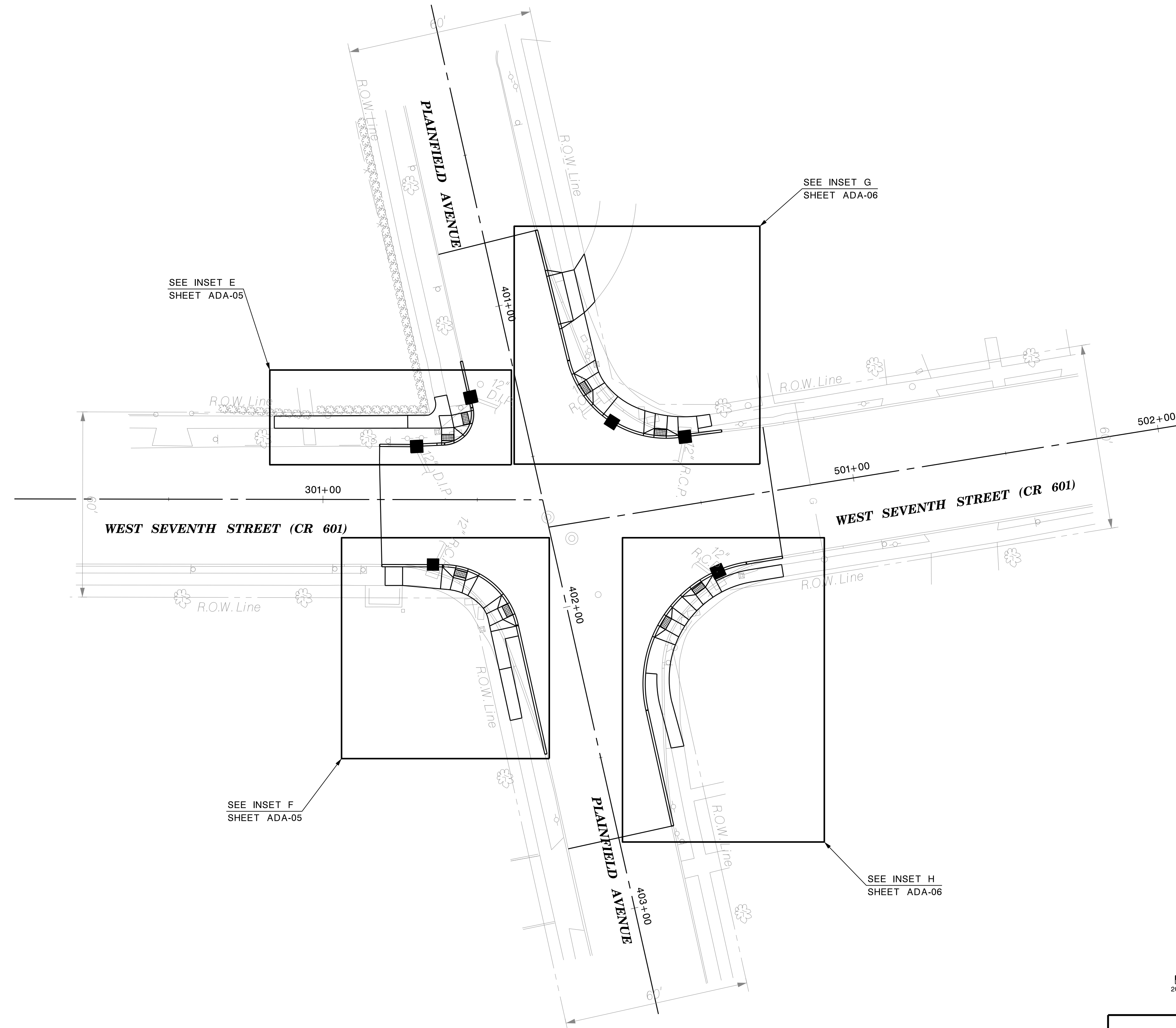
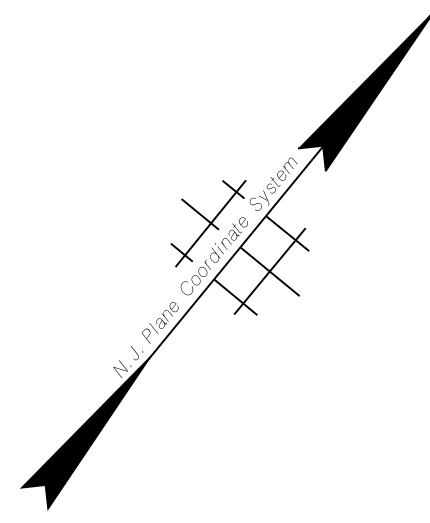


ADA-01
ADA-08

COUNTY OF UNION
 DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
CURB RAMP LAYOUT DETAILS
PLAN SHEET INDEX
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND GRANT AVENUE
 MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700
 BRAD J. MILLER
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

13
58

Baker PW Path: Localfor: pww\DCPWA\PP\hbr.mbakercorp.com\pww\ed\Documents\Projects\Hamilton\Office\489788_NJTPA-FY2015-LocalPre-Engineering-Assistance\C:\CADD\Plan\Detail\ADA-01.dgn



ADA-02
ADA-08

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

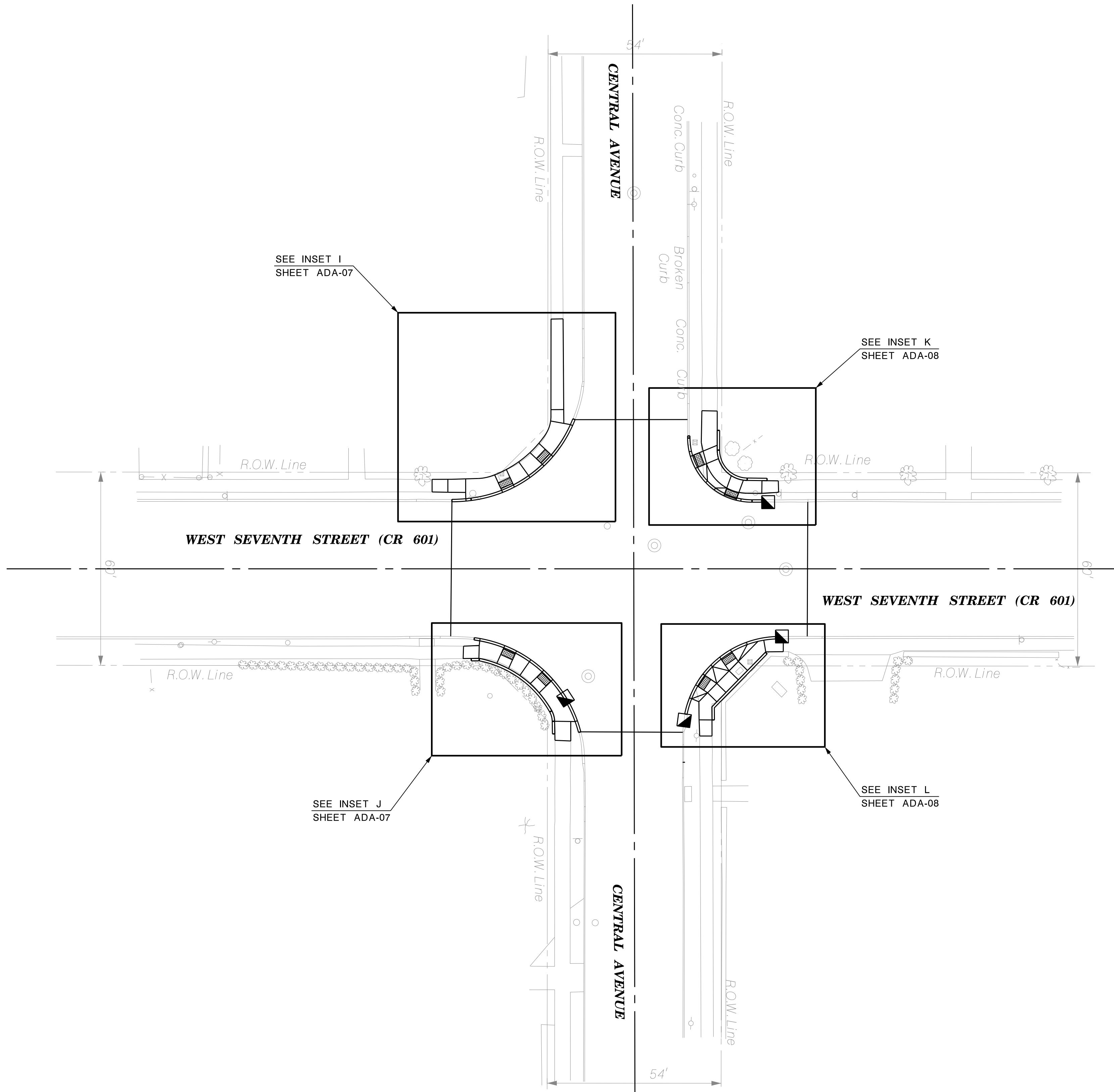
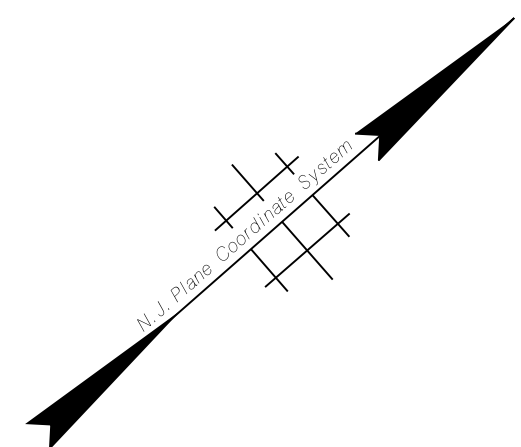
**CURB RAMP LAYOUT DETAILS
PLAN SHEET INDEX**

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND PLAINFIELD AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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ADA-03
ADA-08

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

**CURB RAMP LAYOUT DETAILS
PLAN SHEET INDEX**

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND CENTRAL AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

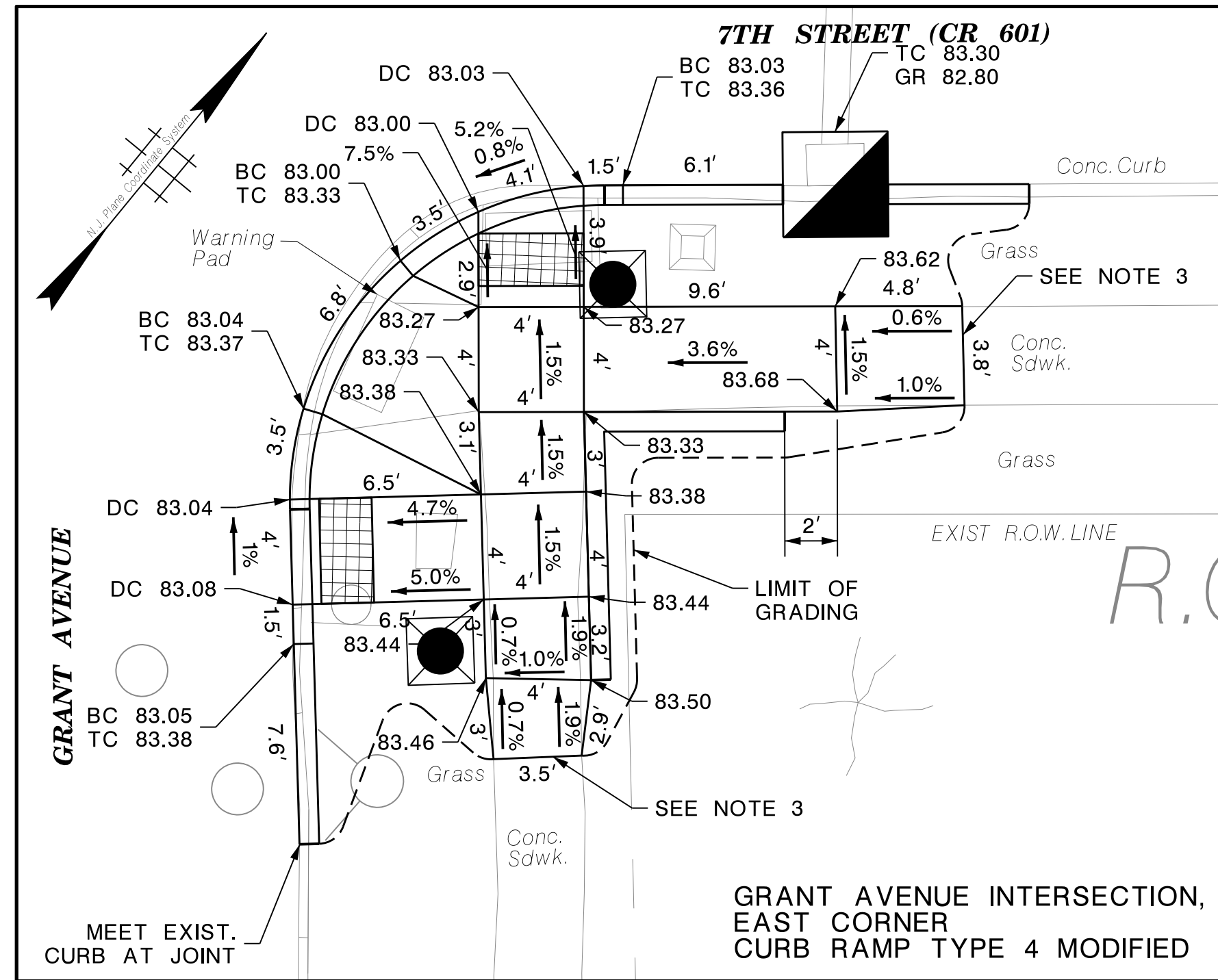
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

15
58

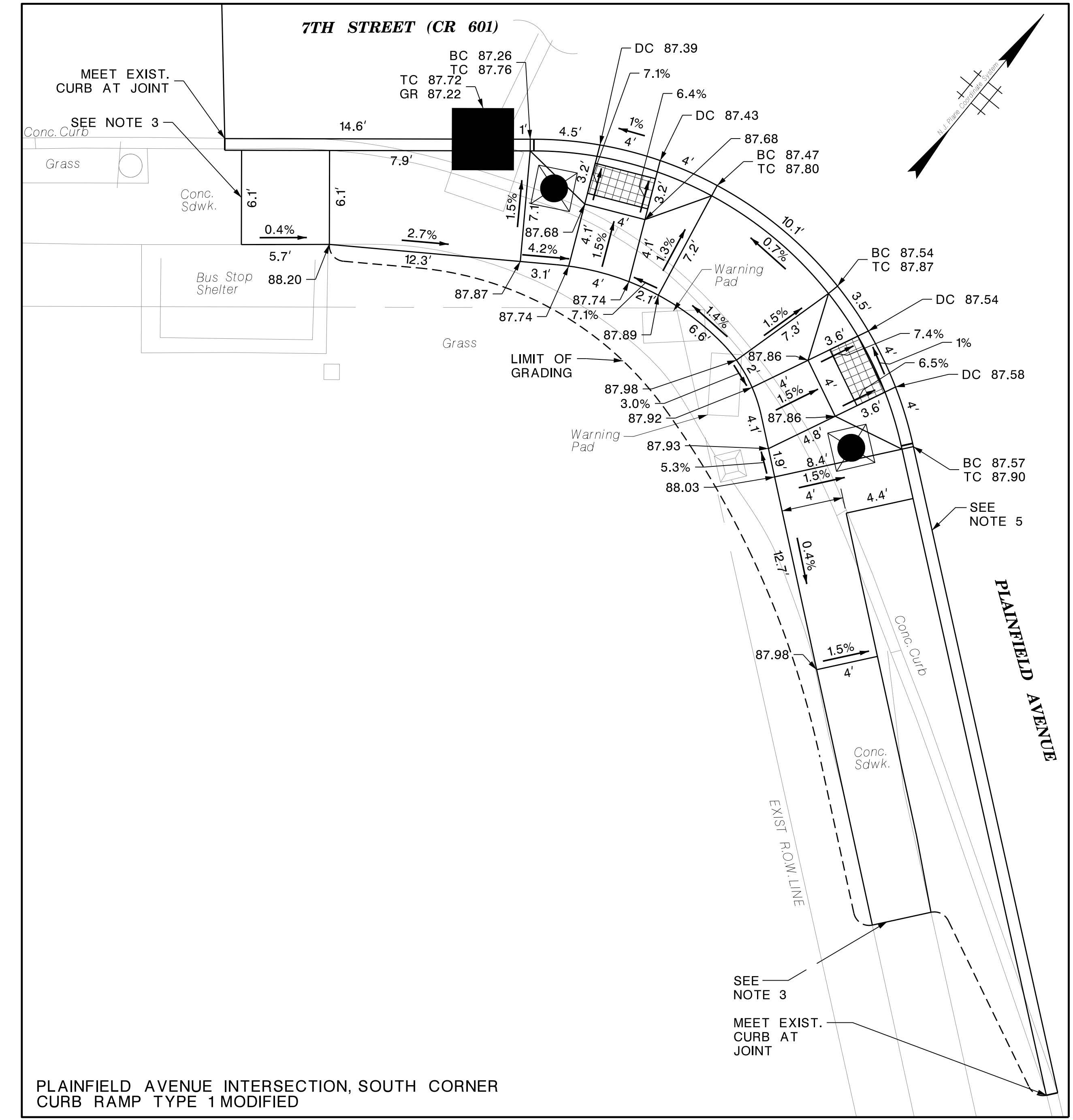
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CITY OF PLAINFIELD

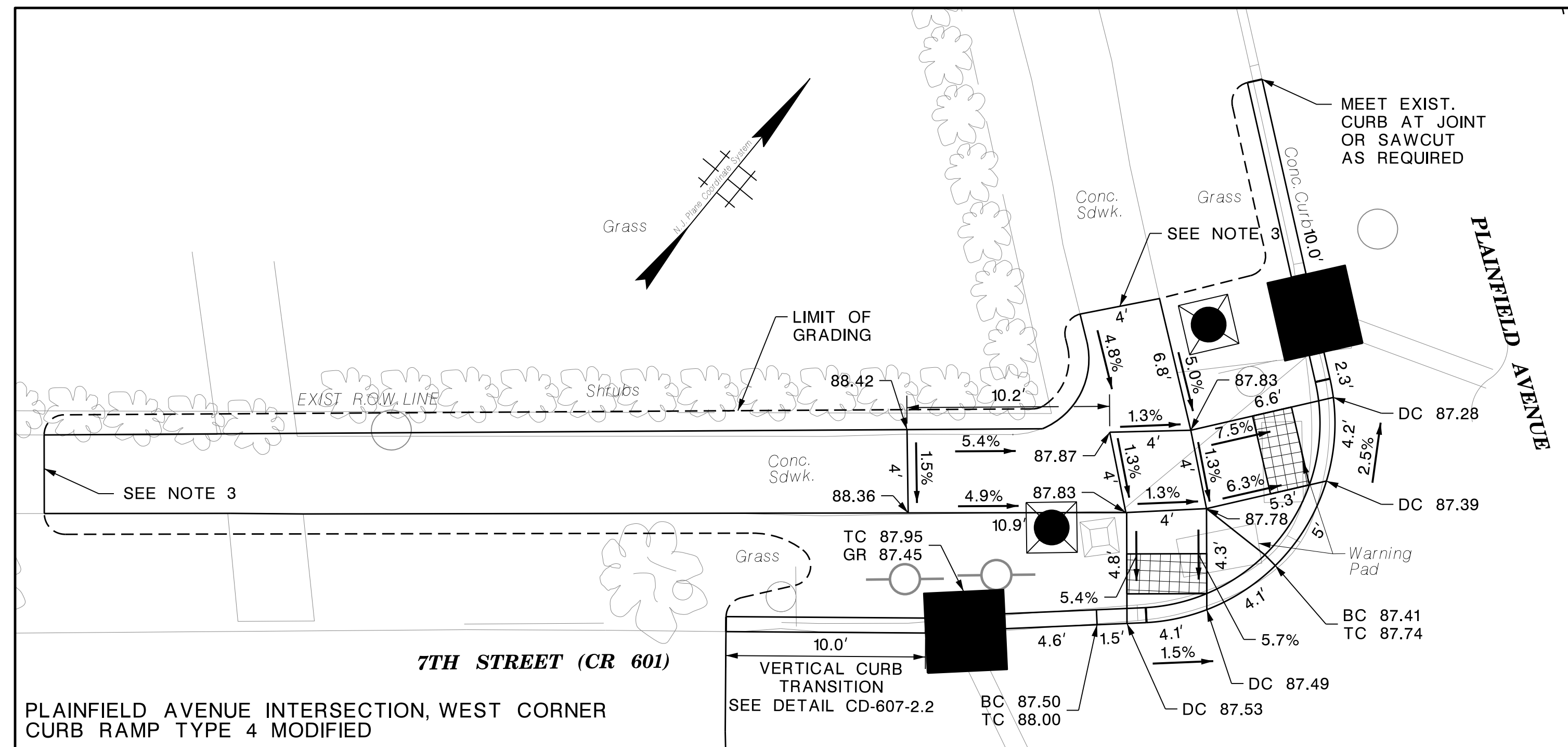
UNION COUNTY



INSET D
SCALE: 1" = 5'



INSET F
SCALE: 1" = 5'



INSET E
SCALE: 1" = 5'

- NOTES:**
- FOR GENERAL NOTES SEE SHEET C-01.
 - DISTANCES SHOWN ARE FROM JOINT TO JOINT AND FROM BACK OF CURB TO THE NEXT JOINT UNLESS OTHERWISE DIMENSIONED.
 - MEET EXISTING SIDEWALK ELEVATION AND CROSS SLOPE.
 - CONTRACTOR TO PROTECT EXISTING LANDSCAPING. ANY DISTURBANCE OR DAMAGE OUTSIDE OF THE LIMIT OF GRADING SHOWN SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST.
 - VERTICAL CONTROL AND FINISH TOP OF CURB ELEVATIONS ARE TO BE ESTABLISHED BY LAYING OUT AND CONSTRUCTING CURB SO THAT ITS FINAL GRADE IS 6" FROM FINISHED PAVEMENT IN ALL AREAS WHERE CURB GRADES ARE NOT SHOWN.

ADA-05
ADA-08

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CURB RAMP LAYOUT DETAILS

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

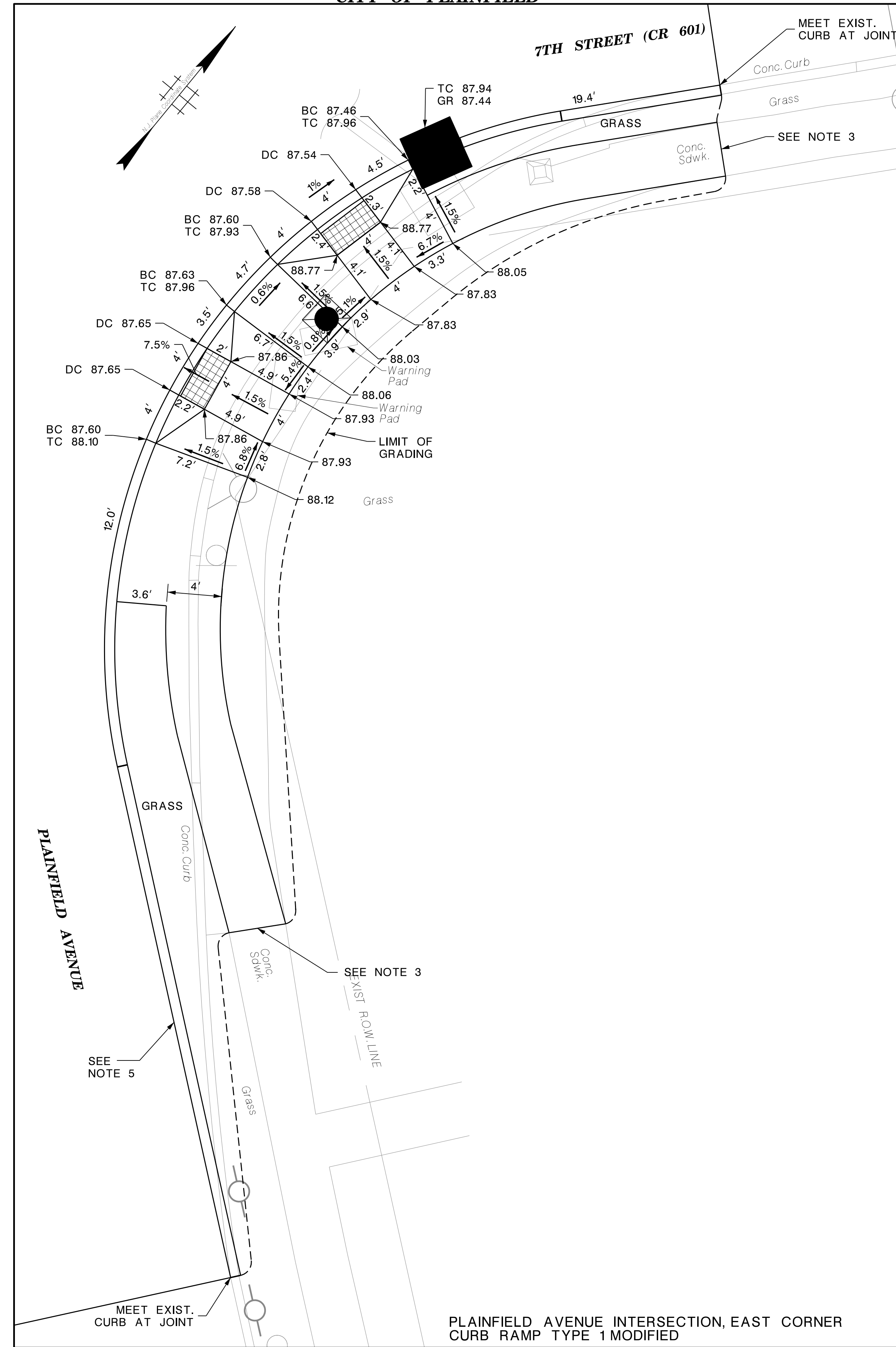
MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

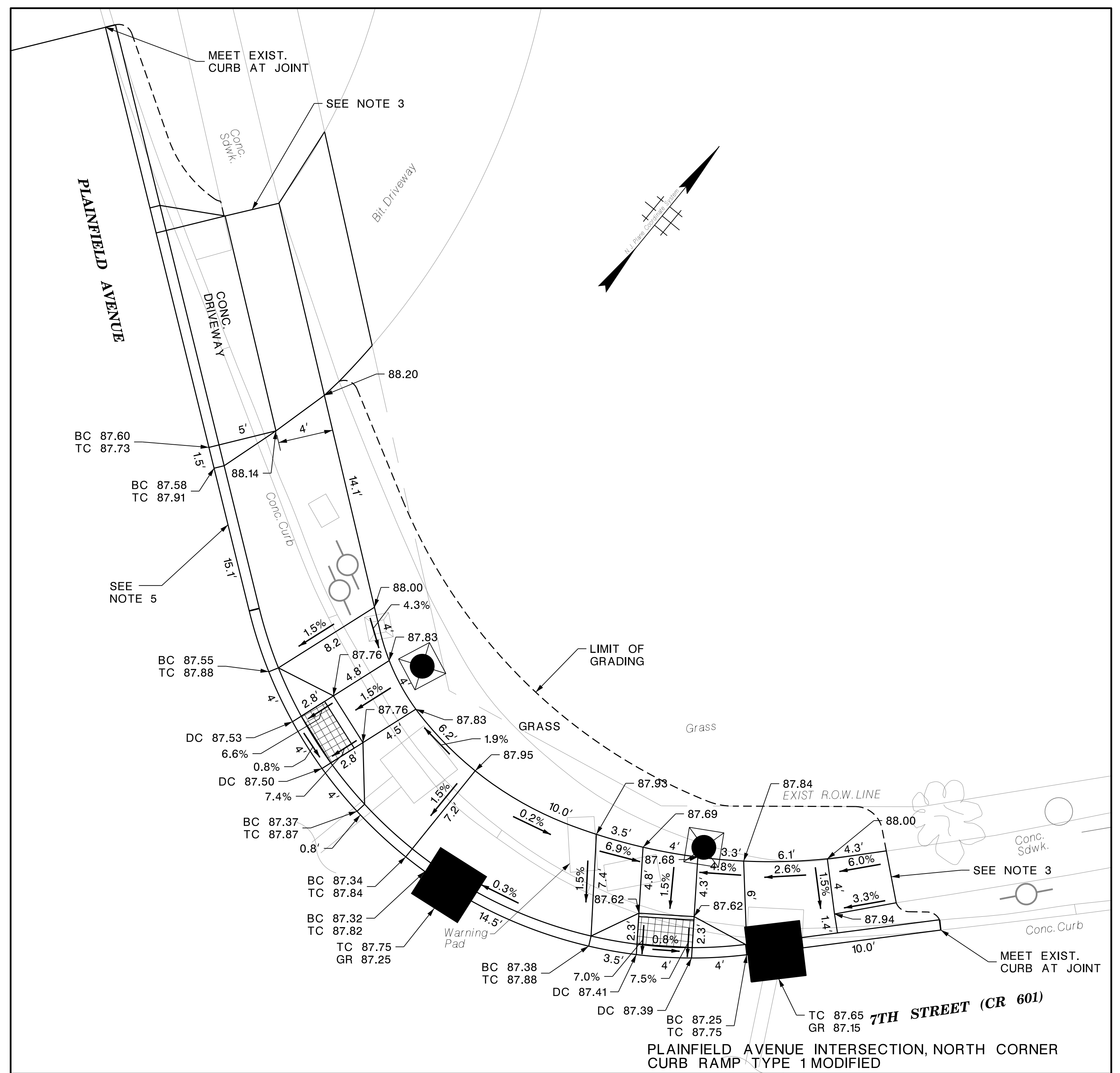
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CITY OF PLAINFIELD

UNION COUNTY



INSET H
SCALE: 1" = 5'



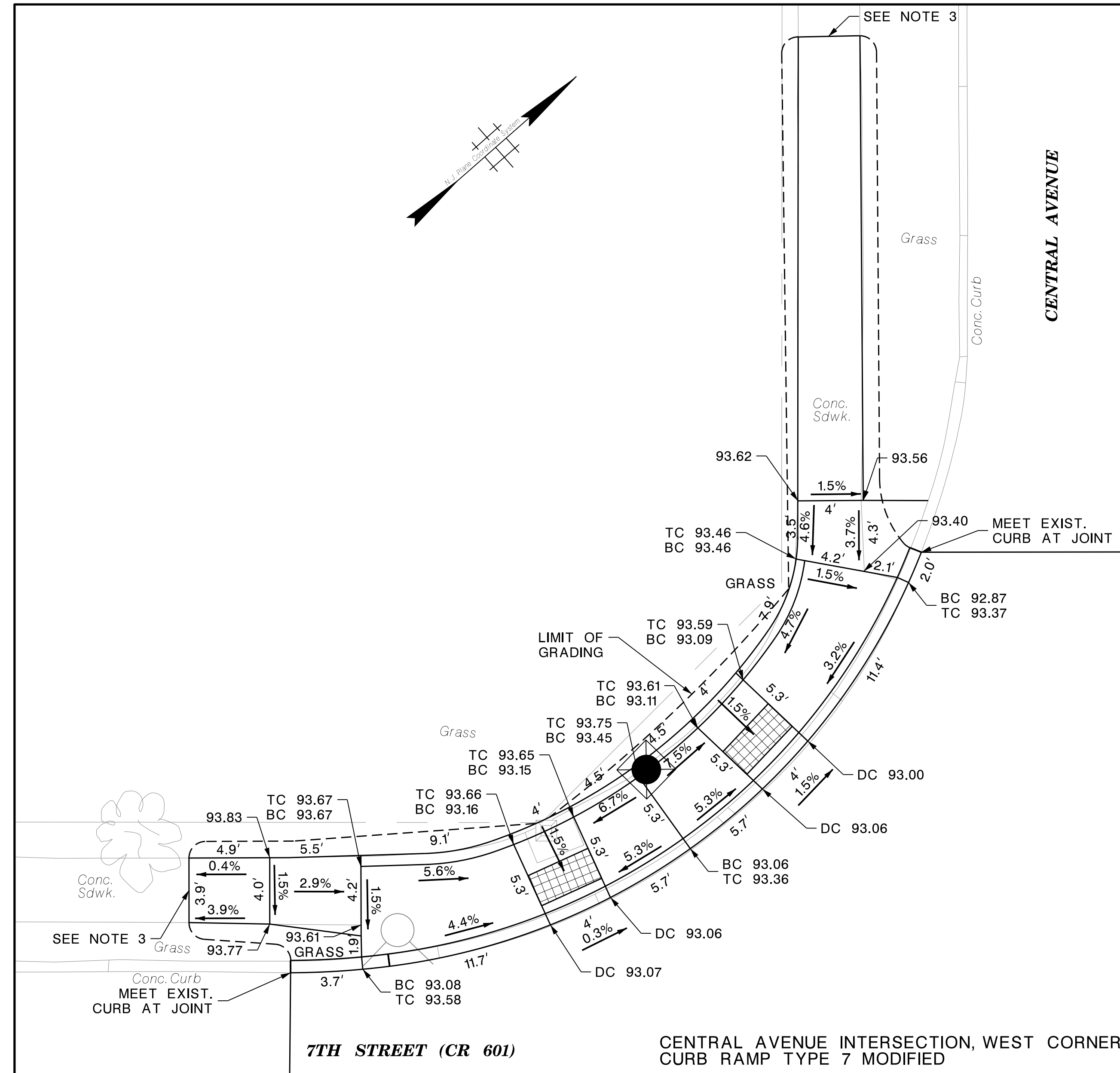
INSET G
SCALE: 1" = 5'

- NOTES:**
- FOR GENERAL NOTES SEE SHEET C-01.
 - DISTANCES SHOWN ARE FROM JOINT TO JOINT AND FROM BACK OF CURB TO THE NEXT JOINT UNLESS OTHERWISE DIMENSIONED.
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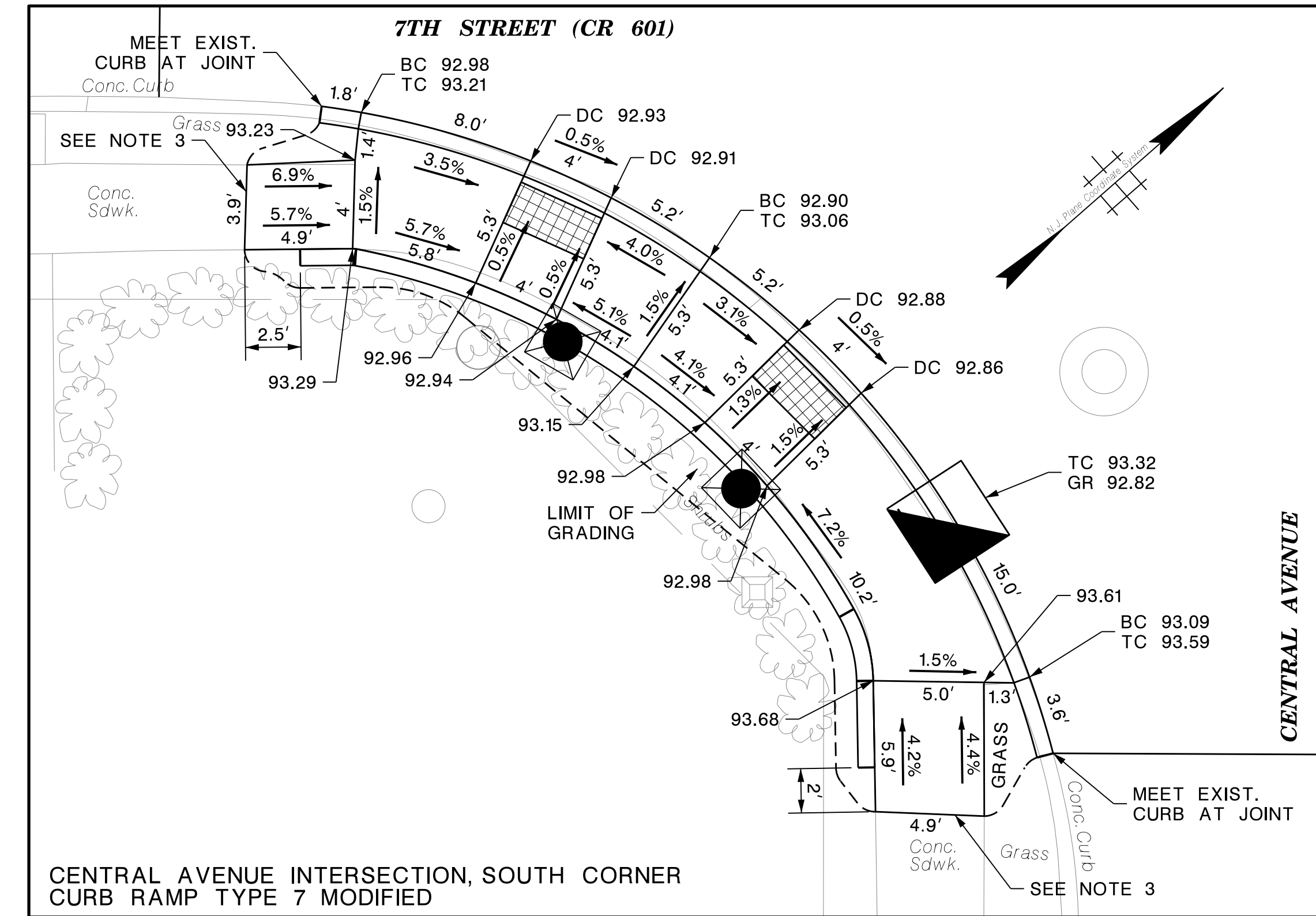
COUNTY OF UNION DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES	
CURB RAMP LAYOUT DETAILS	
WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS	
<small>MICHAEL BAKER INTERNATIONAL, INC.</small> <small>CERTIFICATION OF AUTHORIZATION NO. 24GA27954700</small>	
<small>BRAD J. MILLER</small> <small>NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300</small>	

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ADA-06
ADA-08



INSET I
SCALE: 1" = 5'



INSET J
SCALE: 1" = 5'

NOTES:

- FOR GENERAL NOTES SEE SHEET C-01.
- DISTANCES SHOWN ARE FROM JOINT TO JOINT AND FROM BACK OF CURB TO THE NEXT JOINT UNLESS OTHERWISE DIMENSIONED.
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ADA-07
ADA-08

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

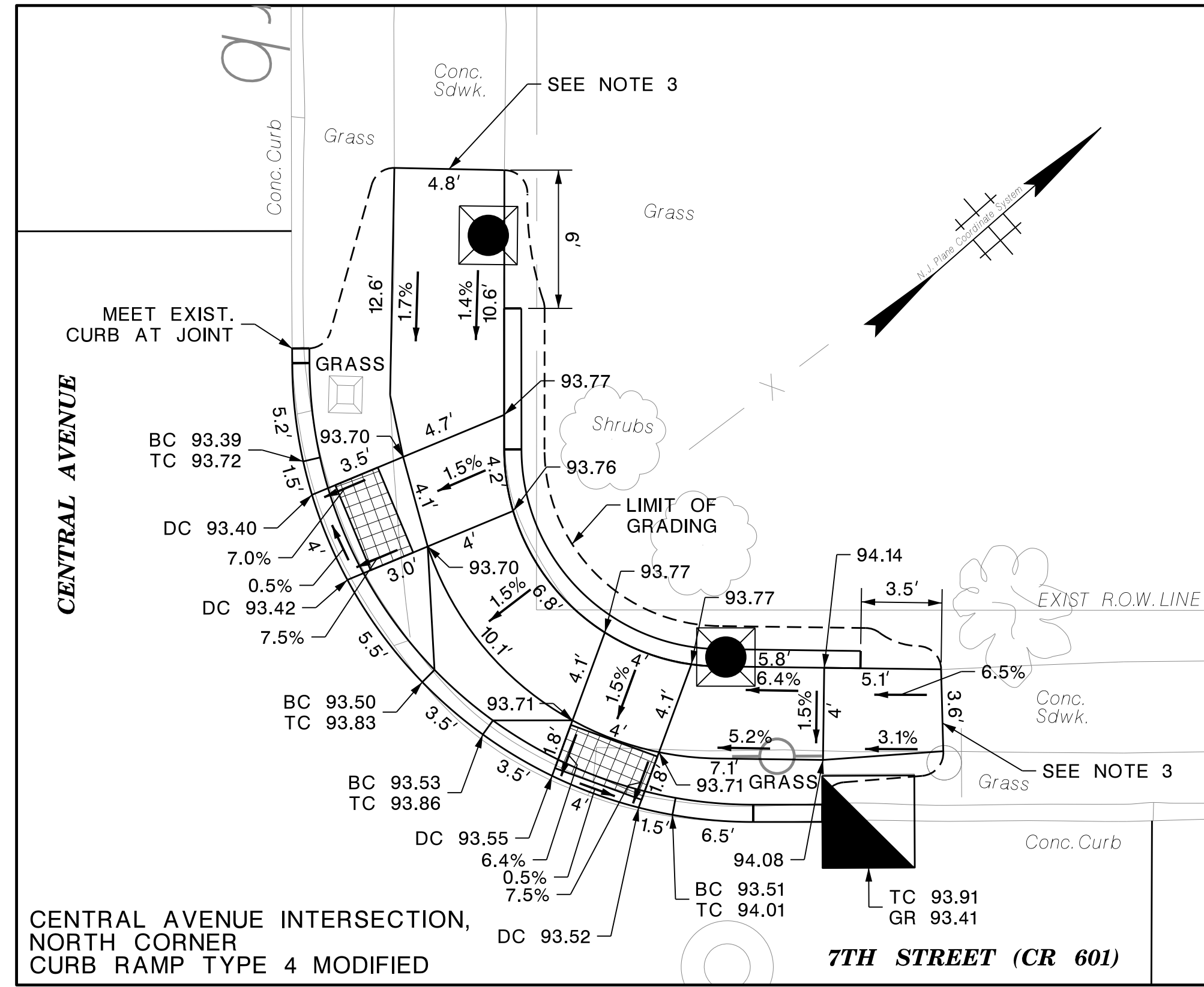
CURB RAMP LAYOUT DETAILS

WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

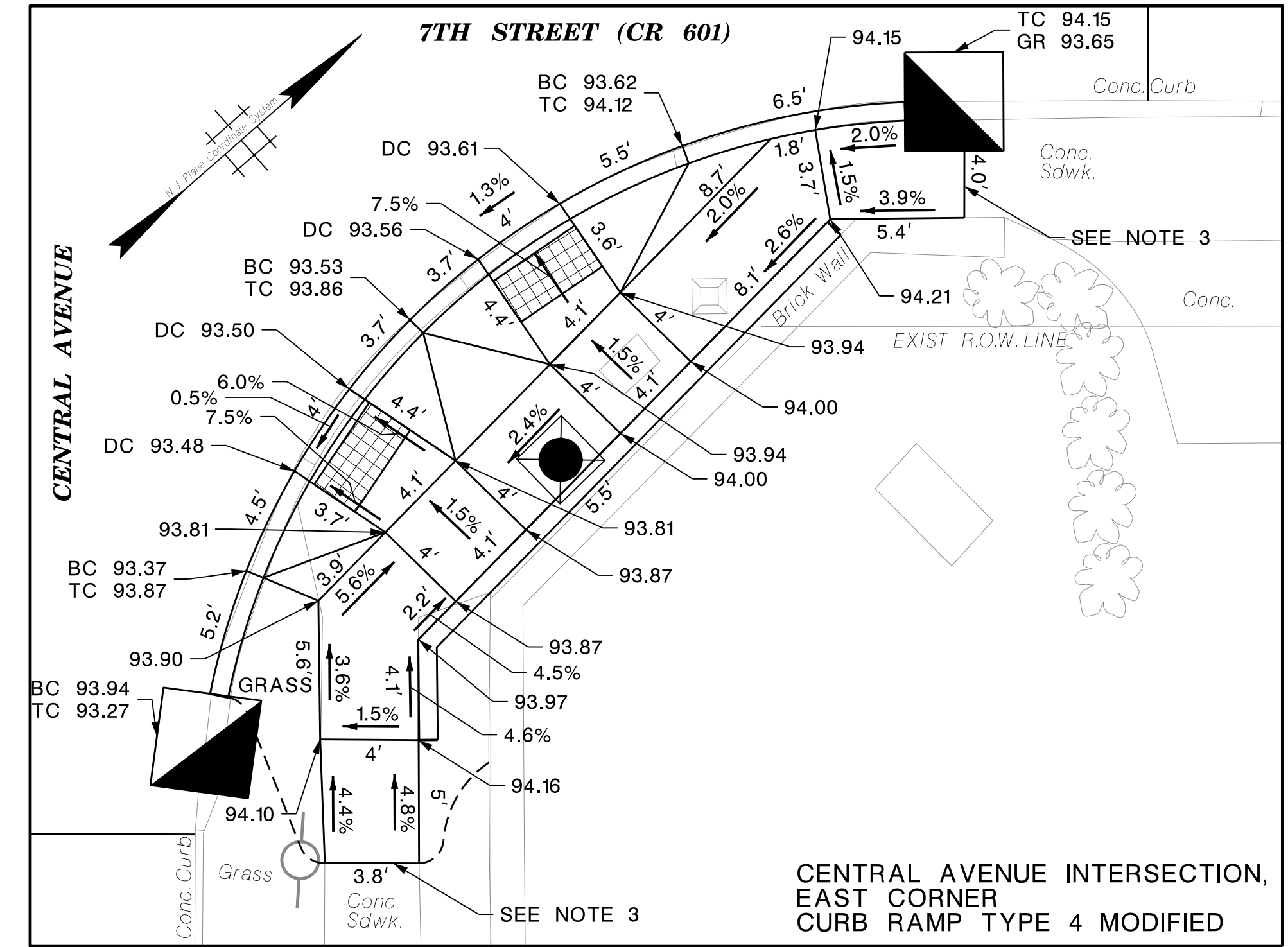
MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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INSET K
SCALE: 1" = 5'



INSET L
SCALE: 1" = 5'

NOTES:

- FOR GENERAL NOTES SEE SHEET C-01.
- DISTANCES SHOWN ARE FROM JOINT TO JOINT AND FROM BACK OF CURB TO THE NEXT JOINT UNLESS OTHERWISE DIMENSIONED.
- MEET EXISTING SIDEWALK ELEVATION AND CROSS SLOPE.
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ADA-08
ADA-08

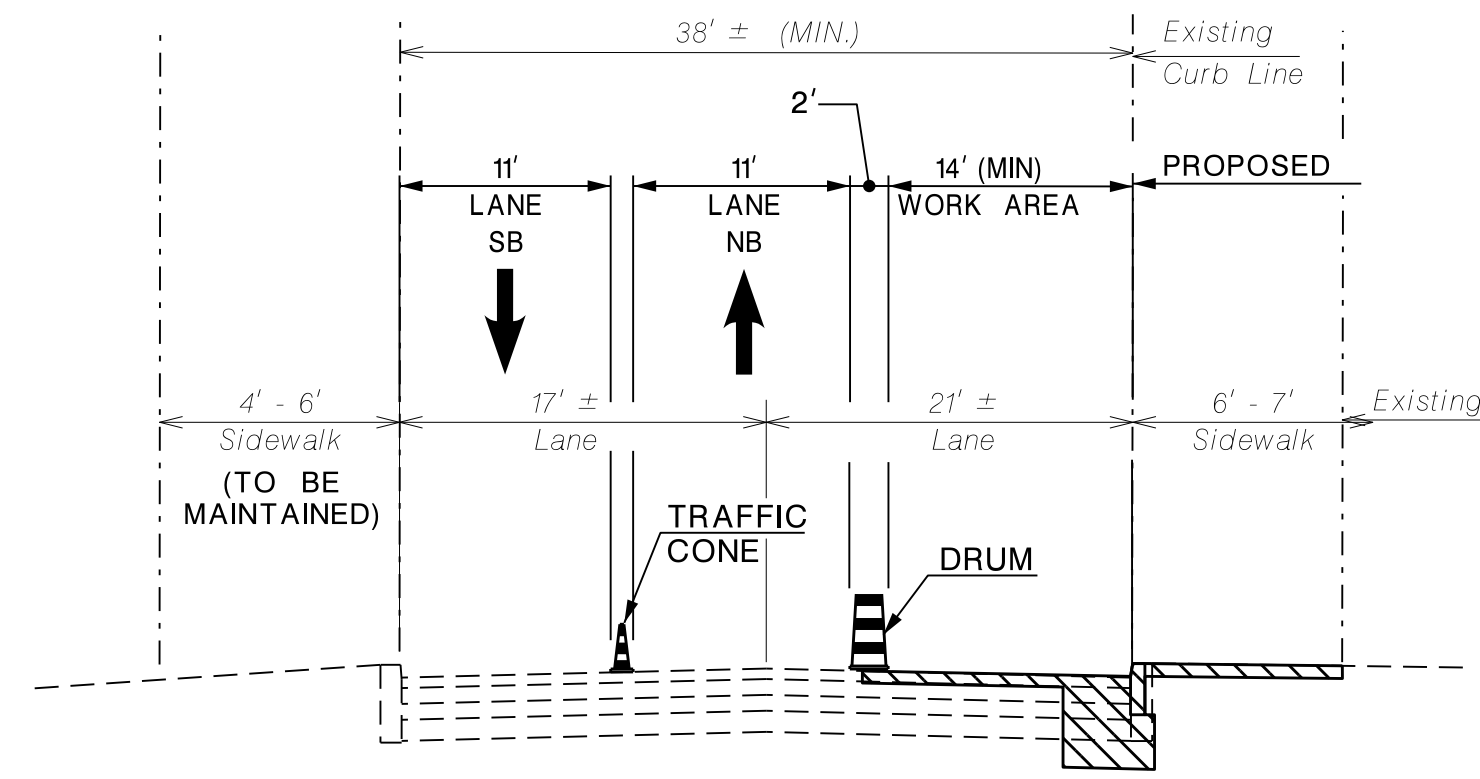
COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CURB RAMP LAYOUT DETAILS

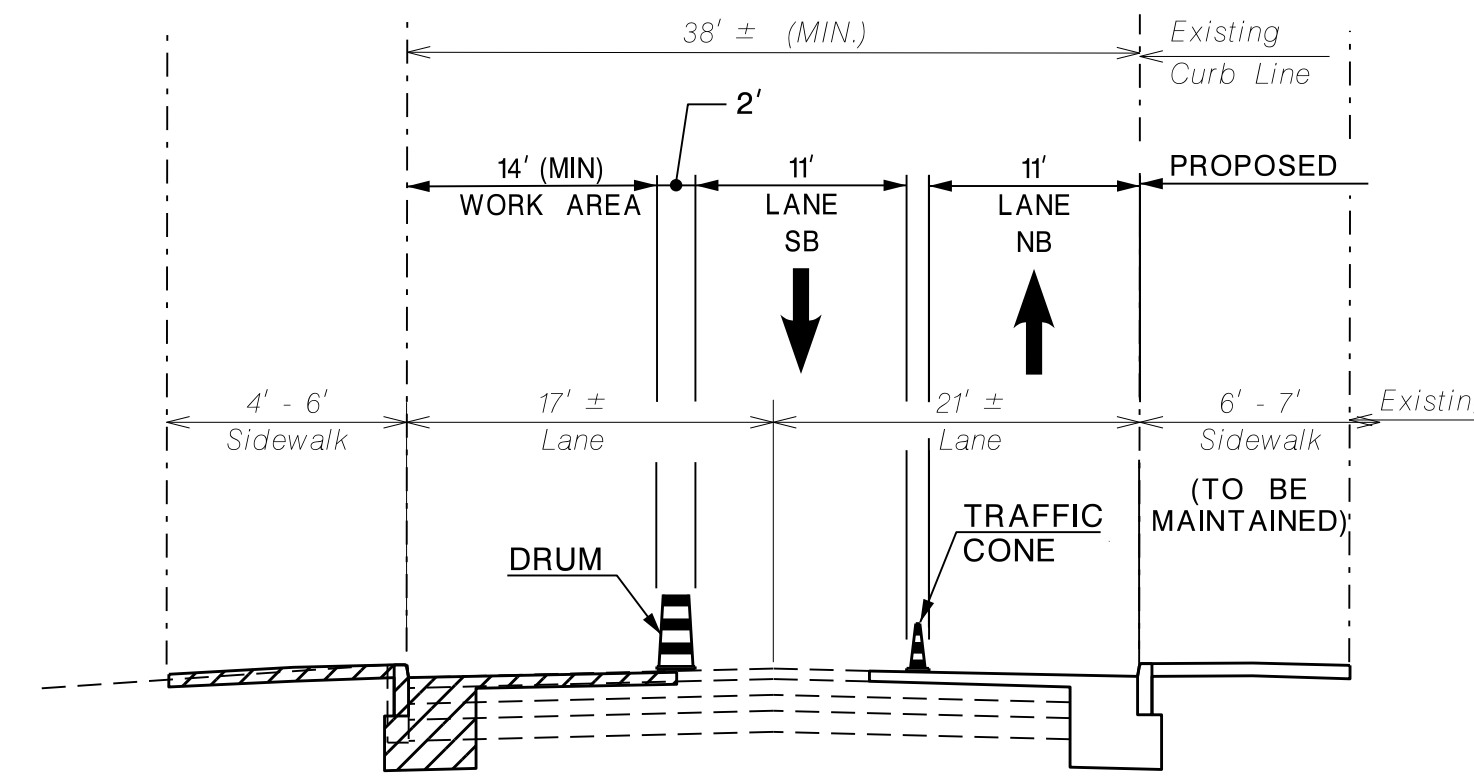
**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300



STAGE 1



STAGE 2

**SEQUENCE OF CONSTRUCTION
(WEST 7TH STREET AND GRANT AVENUE, PLAINFIELD AVENUE AND CENTRAL AVENUE INTERSECTIONS):**

STAGE 1

- ON-STREET PARKING, WHERE EXISTING, TO BE TEMPORARILY SUSPENDED DURING WORKING HOURS AND AS OTHERWISE NECESSARY TO EFFECTUATE AND COMPLETE CONSTRUCTION.
- CONSTRUCTION SHALL ONLY OCCUR ON ONE SIDE OF THE ROADWAY AT ANY PARTICULAR TIME. SHIFT TRAFFIC TO SOUTHBOUND SIDE OF WEST SEVENTH STREET TO PERFORM WORK ON THE EASTERLY SIDE OF ROADWAY. THE GENERAL SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:
 - DRAINAGE STRUCTURES AND PIPES
 - UNDERGROUND SIGNAL WORK
 - CURB AND ASSOCIATED FULL DEPTH PAVEMENT REPAIR AND RESETTING OF EXISTING DRAINAGE STRUCTURE CASTINGS
 - SIDEWALK AND CURB RAMPS
 - REMAINING SIGNAL WORK NOT PREVIOUSLY COMPLETED (E.G. SIGNAL STANDARDS, MAST ARMS, SIGNS, SIGNAL HEADS, PUSH BUTTONS, PEDESTRIAN HEADS, ETC.)
 - MILLING, SURFACE COURSE PAVING, RESETTING MANHOLE CASTINGS, VALVE BOXES AND ALL ANCLLARY FINAL PAVING WORK, SIGNING AND STRIPING
- TWO-WAY TWO-LANE TRAFFIC LANES SHALL BE SEPARATED WITH TRAFFIC CONES DURING WORKING HOURS
- CONSTRUCTION OF THE CORNER CURB RAMPS AND OTHER IMPROVEMENTS TO THE INTERSECTION SHALL BE PERFORMED UTILIZING THE NJDOT STANDARD TRAFFIC CONTROL DETAILS, PARTICULARLY TCD-5, TCD-6, AND TCD-7.
- NO EXCAVATIONS ARE TO REMAIN OPEN DURING NON-WORKING HOURS AND SHALL BE BACKFILLED AND RAMPED IN CONFORMANCE WITH THE NJDOT ESCAPE RAMP DETAIL TCD-2. AT THE CONCLUSION OF WORKING HOURS, TRAFFIC PATTERNS SHALL BE RESTORED TO THE EXISTING LANE CONFIGURATIONS.

STAGE 2

- ON-STREET PARKING, WHERE EXISTING, TO BE TEMPORARILY SUSPENDED DURING WORKING HOURS AND AS OTHERWISE NECESSARY TO EFFECTUATE AND COMPLETE CONSTRUCTION.
- CONSTRUCTION SHALL ONLY OCCUR ON ONE SIDE OF THE ROADWAY AT ANY PARTICULAR TIME. SHIFT TRAFFIC TO NORTHBOUND SIDE OF WEST SEVENTH STREET TO PERFORM WORK ON THE WESTERLY SIDE OF ROADWAY. THE GENERAL SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:
 - DRAINAGE STRUCTURES AND PIPES
 - UNDERGROUND SIGNAL WORK
 - CURB AND ASSOCIATED FULL DEPTH PAVEMENT REPAIR AND RESETTING OF EXISTING DRAINAGE STRUCTURE CASTINGS
 - SIDEWALK AND CURB RAMPS
 - REMAINING SIGNAL WORK NOT PREVIOUSLY COMPLETED (E.G. SIGNAL STANDARDS, MAST ARMS, SIGNS, SIGNAL HEADS, PUSH BUTTONS, PEDESTRIAN HEADS, ETC.)
 - MILLING, SURFACE COURSE PAVING, RESETTING MANHOLE CASTINGS, VALVE BOXES AND ALL ANCLLARY FINAL PAVING WORK, SIGNING AND STRIPING
- TWO-WAY TWO-LANE TRAFFIC LANES SHALL BE SEPARATED WITH TRAFFIC CONES DURING WORKING HOURS
- CONSTRUCTION OF THE CORNER CURB RAMPS AND OTHER IMPROVEMENTS TO THE INTERSECTION SHALL BE PERFORMED UTILIZING THE NJDOT STANDARD TRAFFIC CONTROL DETAILS, PARTICULARLY TCD-5, TCD-6, AND TCD-7.
- NO EXCAVATIONS ARE TO REMAIN OPEN DURING NON-WORKING HOURS AND SHALL BE BACKFILLED AND RAMPED IN CONFORMANCE WITH THE NJDOT ESCAPE RAMP DETAIL TCD-2. AT THE CONCLUSION OF WORKING HOURS, TRAFFIC PATTERNS SHALL BE RESTORED TO THE EXISTING LANE CONFIGURATIONS.

STAGE 3 (NOT ILLUSTRATED)

- MILLING AND FINAL PAVEMENT RESURFACING TO THE LIMITS SHOWN ON THE PLANS THIS STAGE.

NOTES:

- ALL SECTIONS SHOWN ARE LOOKING UP STATION.
- WORK IMMEDIATELY ADJACENT TO THE TRAVEL LANE WILL REQUIRE THE ADJACENT LANE TO BE CLOSED DURING PERMISSABLE LANE CLOSURE HOURS AS PER NOTE 14 ON SHEET TC-01 AT THE END OF THE WORK SHIFT.
- PRIOR TO SHIFTING TRAFFIC FROM STAGE 1 TO STAGE 2 DURING PERMISSIBLE HOURS PROVIDE ESCAPE RAMP AS PER TCD-2 WITH TEMPORARY PAVEMENT WHERE EXISTING PAVEMENT IS MORE THAN 2" HIGHER/LOWER THAN PROPOSED INTERMEDIATE COURSE.
- STAGE 1 SHALL UTILIZE NJDOT TRAFFIC CONTROL DETAILS TCD-3 TO CLOSE THE RIGHT SHOULDER AND SHIFT LANES.
- STAGE 2 SHALL UTILIZE NJDOT TRAFFIC CONTROL DETAILS TCD-3 TO CLOSE THE RIGHT SHOULDER AND SHIFT LANES.
- PEDESTRIAN DETOUR SHALL UTILIZE MANUAL OF TRAFFIC CONTROL DEVICES (MUTCD) 2009 FIGURE 6H-29.

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TC-01
TC-01

N.T.S.

**COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES**

TRAFFIC CONTROL AND STAGING PLANS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

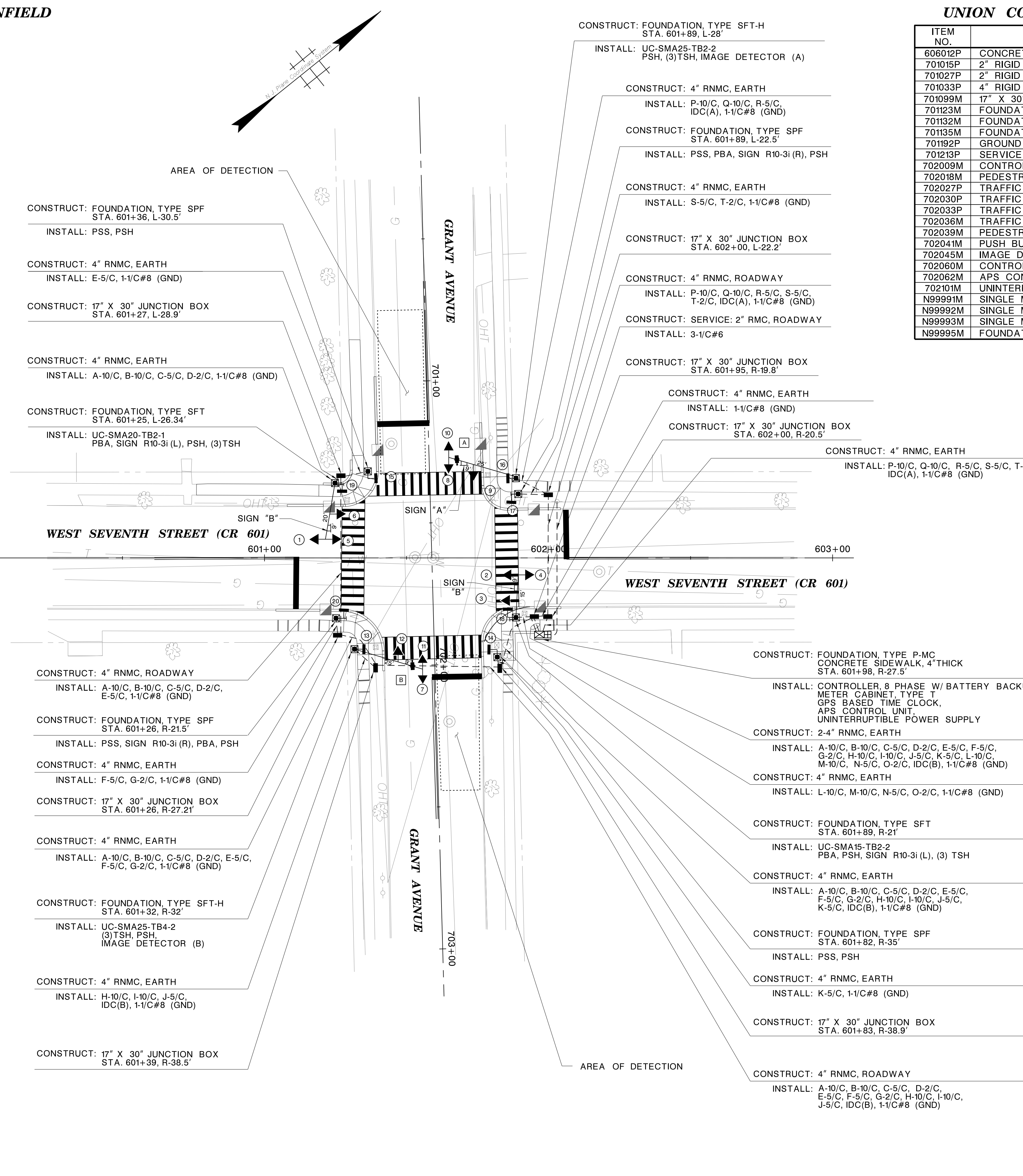
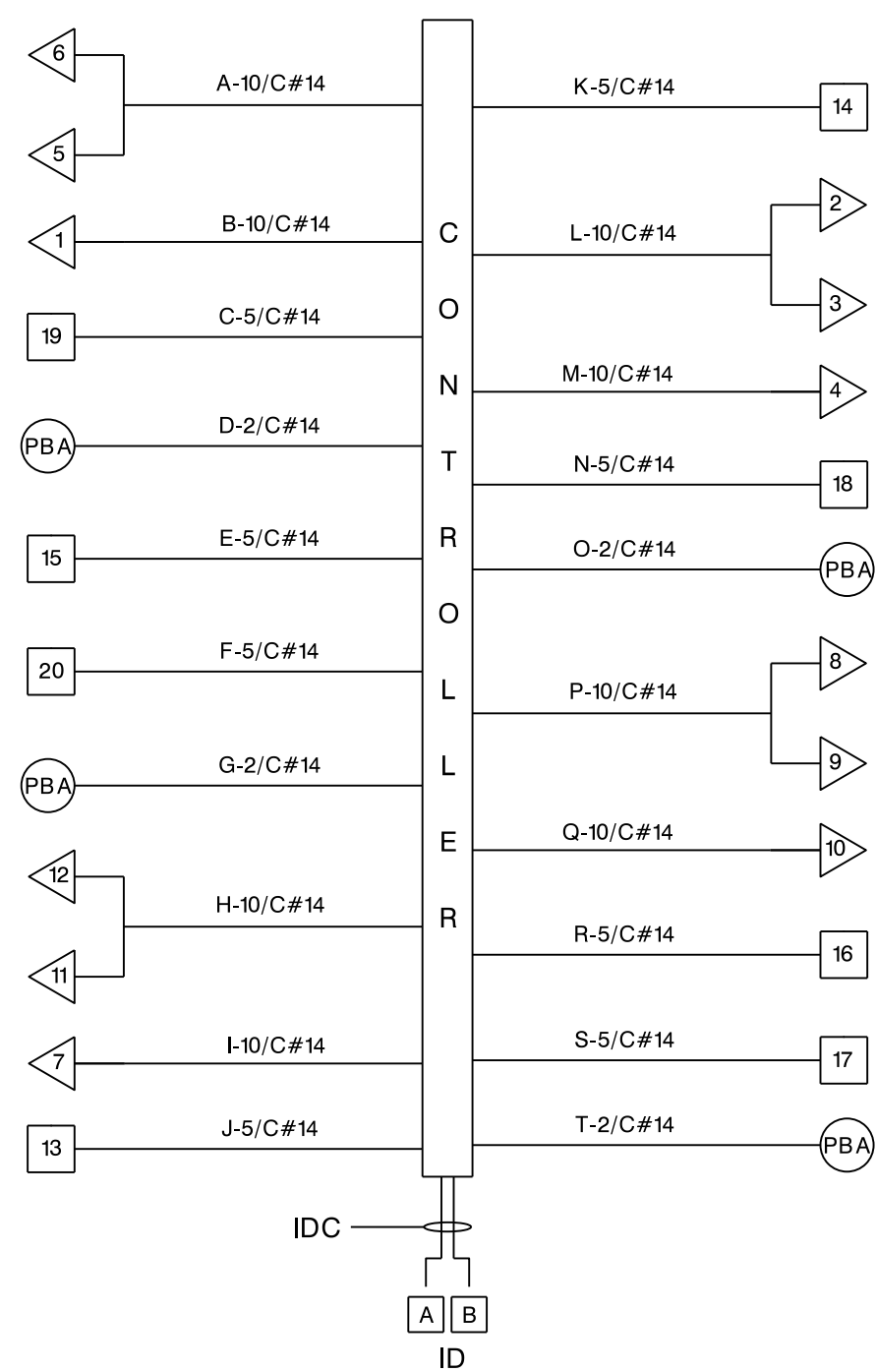
MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

NOTES:

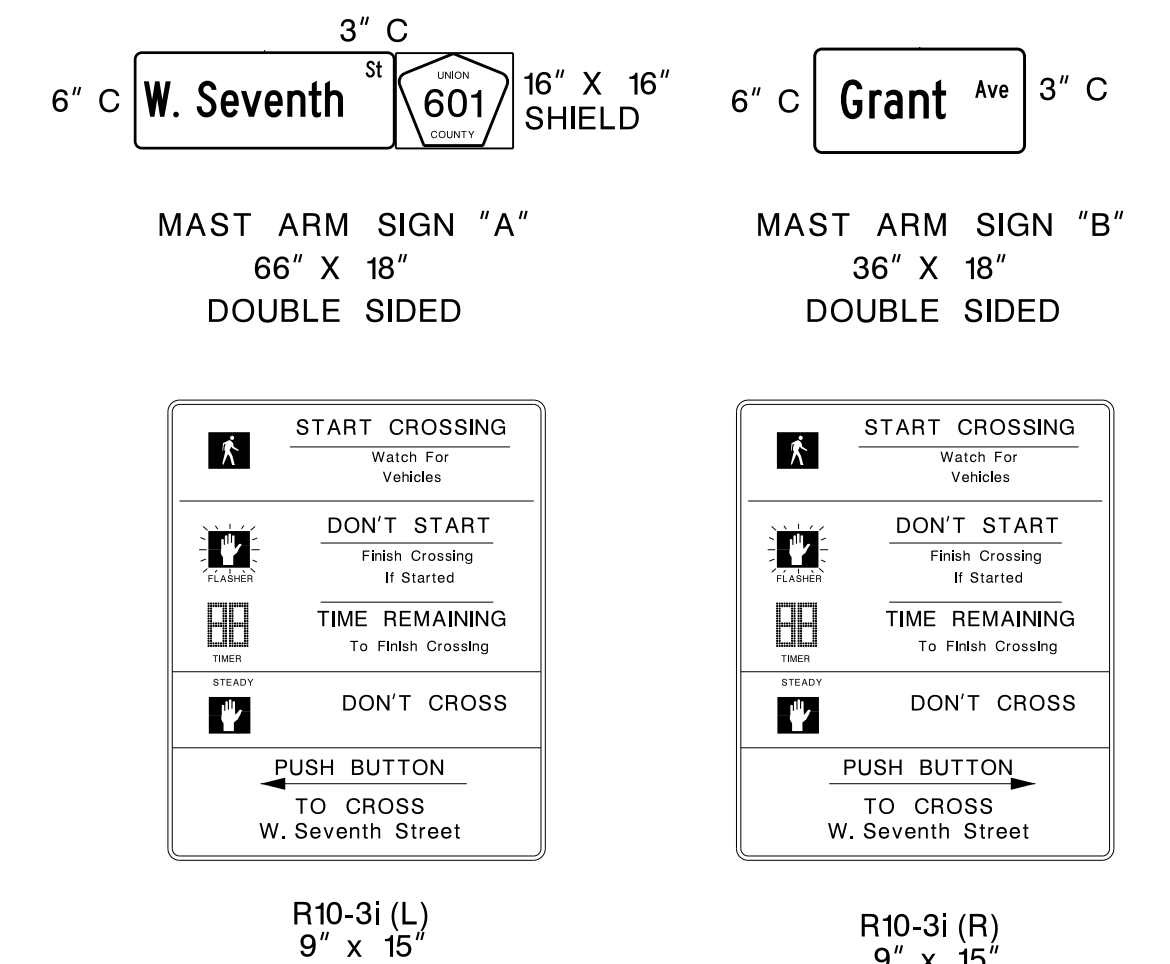
- EXISTING ROW LINES ARE BASED ON TAX MAP INFORMATION.
- UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. PRIOR TO CONSTRUCTION, UTILIZE "NJ ONE CALL" TO OBTAIN A FIELD MARKOUT OF SUBSURFACE UTILITIES FROM THE RESPECTIVE UTILITY COMPANIES AND AUTHORITIES.
- EXISTING TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL UNTIL NEW TRAFFIC SIGNALS ARE INSTALLED AND FULLY OPERATIONAL. EXISTING TRAFFIC SIGNAL EQUIPMENT AND INFRASTRUCTURE, INCLUDING STANDARDS, MAST ARMS, FOUNDATIONS, JUNCTION BOXES, AND CONTROLLER CABINET SHALL THEN BE REMOVED.
- PRIOR TO THE START OF CONSTRUCTION, COORDINATE WITH OVERHEAD UTILITY OWNERS (COMMUNICATION AND POWER) SO THAT THE CONTRACT WORK, INCLUDING TRAFFIC SIGNAL EQUIPMENT TO BE CONSTRUCTED, COMPLIES WITH REQUIRED SAFETY AND CLEARANCE PROTOCOLS.
- THE SERVICE ENTRANCE CONDUIT SHALL BE RIGID NONMETALLIC CONDUIT OF THE DIAMETER SHOWN ON THE PLANS, FROM A POINT 10 FEET ABOVE THE GROUND SURFACE AND EXTENDING FROM THERE TO THE VICINITY OF THE SECONDARY POWER LINES ON THE UTILITY POLE. RIGID NONMETALLIC SERVICE CONDUIT SHALL BE TERMINATED WITH A GOOSENECK-TYPE WEATHER TIGHT CABLE ENTRANCE AT ITS UPPER END. THE REMAINDER OF THE SERVICE ENTRANCE CONDUIT BETWEEN THE END OF RIGID NONMETALLIC CONDUIT AND THE METER CABINET SHALL BE RIGID METALLIC CONDUIT OF THE DIAMETER SHOWN ON THE PLAN.
- RIGID NONMETALLIC CONDUIT TO BE INSTALLED SHALL BE SCHEDULE 80.
- FOUNDATION AND JUNCTION BOXES SHOWN TO BE CONSTRUCTED IN AREAS WITHOUT EXISTING OR PROPOSED SIDEWALK SHALL BE CONSTRUCTED SO THAT THE TOPS OF THE FOUNDATIONS WILL BE AT GRADE AND THAT WILL LEAVE THEM 1 INCH ABOVE AND THE TOPS OF THE JUNCTION BOXES FLUSH WITH ANY FUTURE SIDEWALK CONSTRUCTED ACCORDING TO NJDOT AND COUNTY STANDARDS. THE AREAS SURROUNDING SUCH FOUNDATIONS SHALL BE GRADED TO A MAXIMUM SLOPE OF 1 TO 4, LEAVING A 1-INCH REVEAL ABOVE FINISHED GRADE. IN NO CASE SHALL A FOUNDATION OR JUNCTION BOX BE CONSTRUCTED SO THAT IT WILL BE INUNDATED BY STORM WATER RUNOFF.
- GROUND WIRE SHALL BE INSULATED (COLOR GREEN) AND OF THE GAUGE SHOWN ON THE PLAN, AND SHALL BE INSTALLED CONTINUOUSLY THROUGHOUT THE TRAFFIC SIGNAL SYSTEM. SECURE GROUND WIRE TO ALL GROUND RODS, CABINETS, TRAFFIC SIGNAL BASES, AND LIGHTING BASES.
- AREA OF IMAGE DETECTION SHALL EXTEND FROM 10' IN FRONT OF STOP BAR TO 40' BEHIND STOP BAR, AND SHALL BE OFFSET 1' FROM CURBS AND LANE LINES, UNLESS OTHERWISE NOTED.
- TRAFFIC SIGNALS MOUNTED ON MAST ARMS ALONG WEST SEVENTH STREET SHALL BE EQUIPPED WITH BACK PLATES.
- TRAFFIC SIGNAL CONTROLLER CABINET SHALL INCLUDE AUXILIARY GENERATOR HOOKUP AND TRANSFER SWITCH.
- WITH THE EXCEPTION OF PUSH BUTTON ASSEMBLIES, EXTERIOR ABOVE-GROUND TRAFFIC SIGNAL EQUIPMENT AND MOUNTING HARDWARE, INCLUDING THE CONTROLLER CABINET, METER CABINET, POLES, MAST ARMS, MAST ARM SIGN BRACKETS, SIGNAL HEADS, AND IMAGE DETECTORS SHALL BE POWDERED-COATED BLACK.
- PEDESTRIAN PUSH BUTTONS SHALL BE COMPLIANT WITH THE AMERICANS WITH DISABILITIES ACT, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE FOLLOWING SHALL BE INCLUDED AS PART OF THE PUSH BUTTON ITEM:
 A. A VIBRO-TACTILE BUTTON WITH RAISED ARROW
 B. EXTENSION BRACKET TO ACCOMMODATE AN UNOBSTRUCTED HORIZONTAL REACH OF 10 INCHES OR LESS
- THE PUSH BUTTON SIGNS SHALL HAVE BRAILLE FEATURES.
- VEHICULAR AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED WITH AN INCANDESCENT LOOK

BLOCK WIRING DIAGRAM

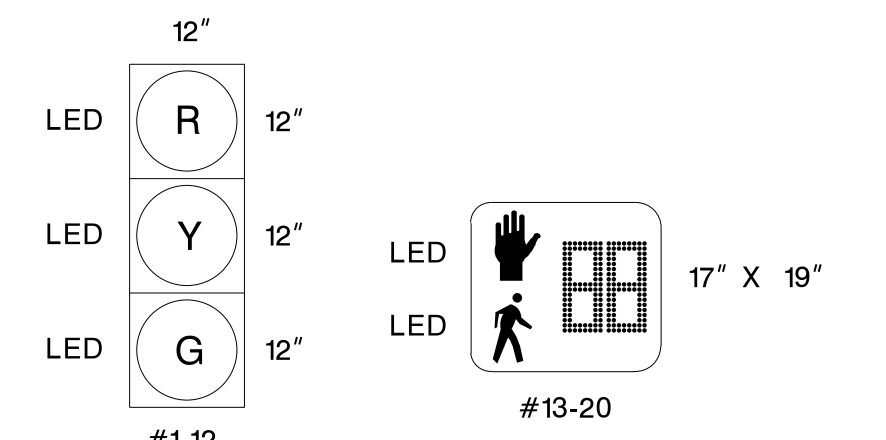


ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
606012P	CONCRETE SIDEWALK, 4" THICK	2 SY
701015P	2" RIGID METALLIC CONDUIT	64 LF
701027P	2" RIGID NONMETALLIC CONDUIT	20 LF
701033P	4" RIGID NONMETALLIC CONDUIT	276 LF
701099M	17" X 30" JUNCTION BOX	7 U
701123M	FOUNDATION, TYPE SFT	2 U
701132M	FOUNDATION, TYPE P-MC	1 U
701135M	FOUNDATION, TYPE SPF	4 U
701192P	GROUND WIRE, NO. 8 AWG	302 LF
701213P	SERVICE WIRE, NO. 6 AWG	276 LF
702009M	CONTROLLER, 8 PHASE	1 U
702018M	PEDESTRIAN SIGNAL STANDARD	4 U
702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	588 LF
702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	1190 LF
702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	1116 LF
702036M	TRAFFIC SIGNAL HEAD	12 U
702039M	PEDESTRIAN SIGNAL HEAD	8 U
702041M	PUSH BUTTON ASSEMBLIES, TYPE APS	4 U
702045M	IMAGE DETECTOR	2 U
702060M	CONTROLLER TURN-ON	1 U
702062M	APS CONTROL UNIT	1 U
702101M	UNINTERRUPTIBLE POWER SUPPLY	1 U
N99991M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA15	1 U
N99992M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA20	1 U
N99993M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA25	2 U
N99995M	FOUNDATION, TYPE SFT-H	2 U

SIGN LEGEND



SIGNAL LEGEND



COUNTY OF UNION
 DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

ELECTRICAL PLANS

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

WEST SEVENTH STREET AND GRANT AVENUE

MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

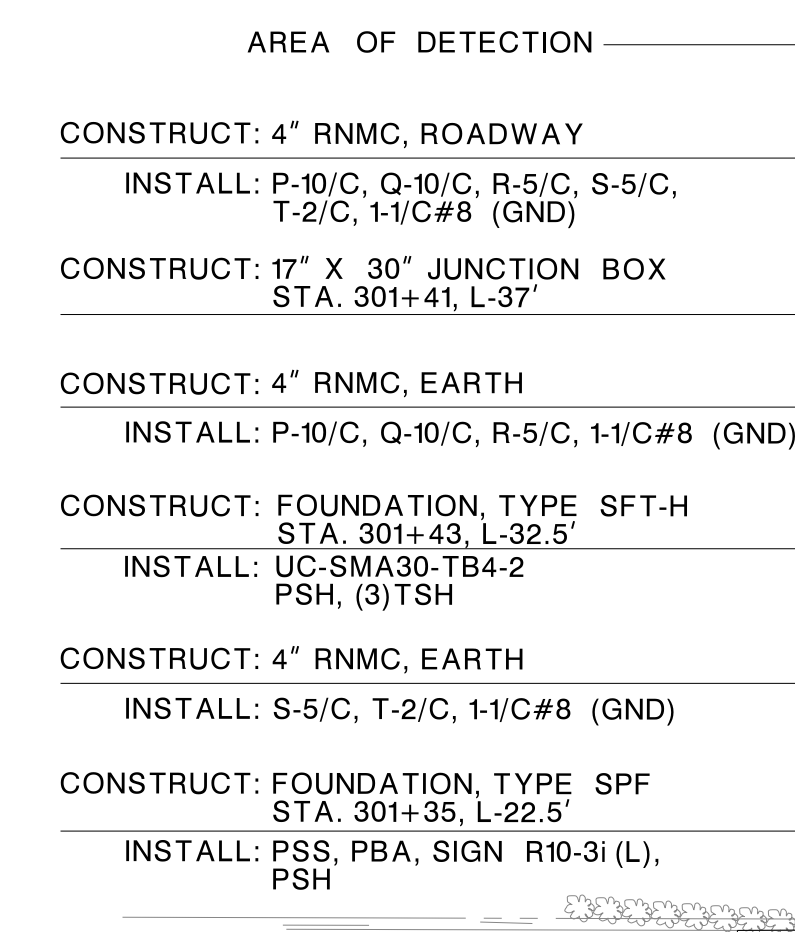
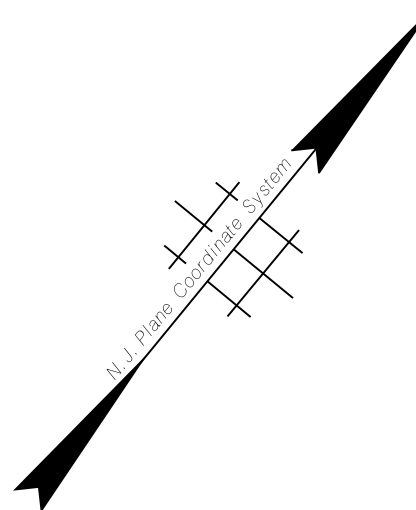
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 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

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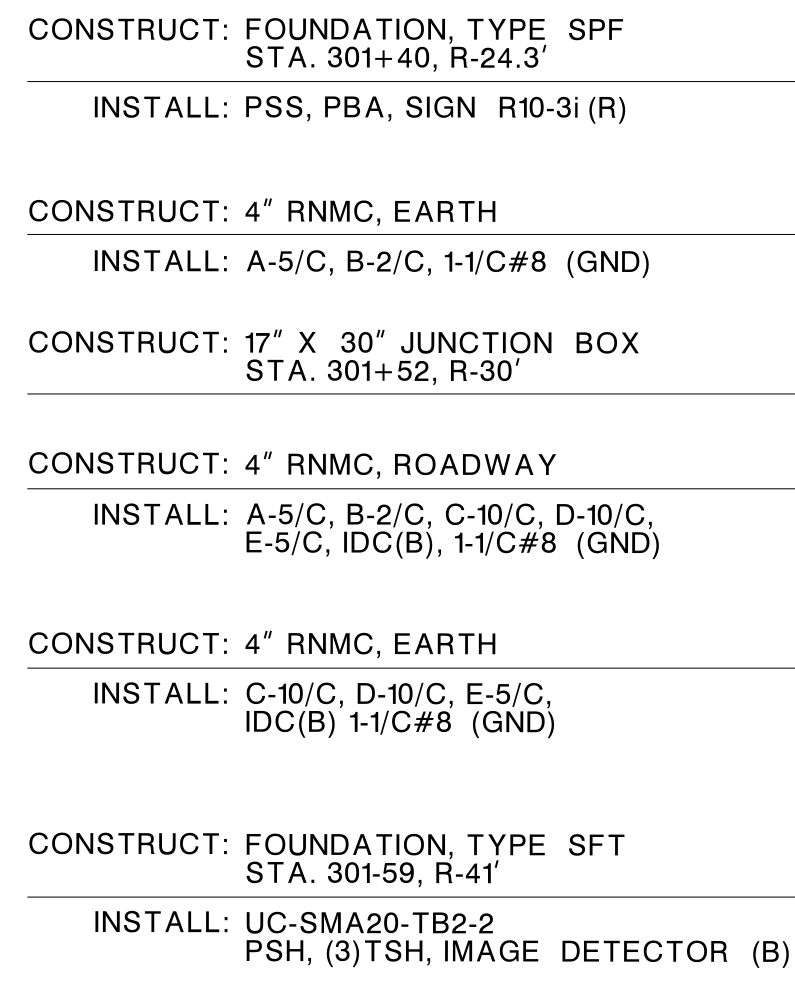
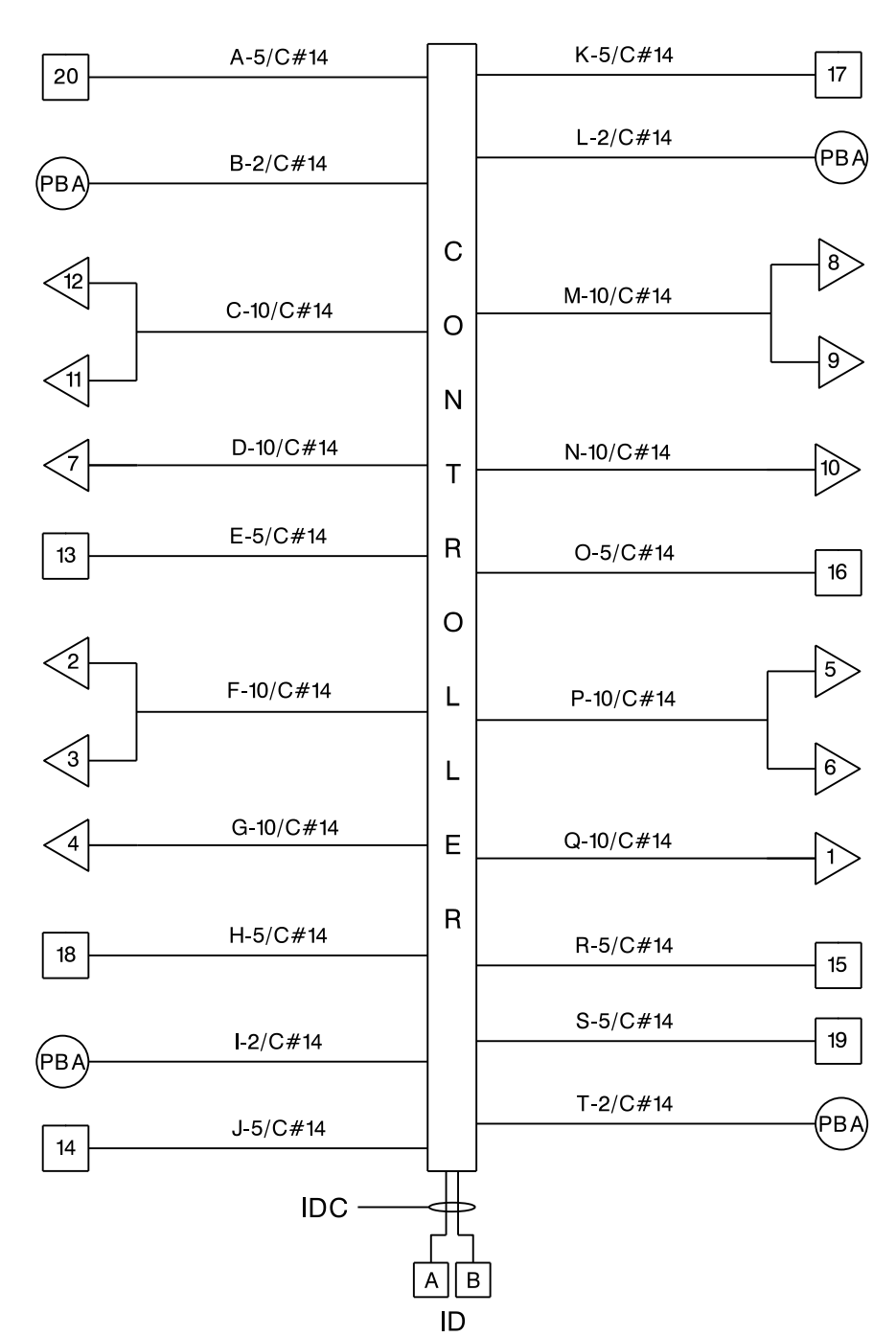
CITY OF PLAINFIELD

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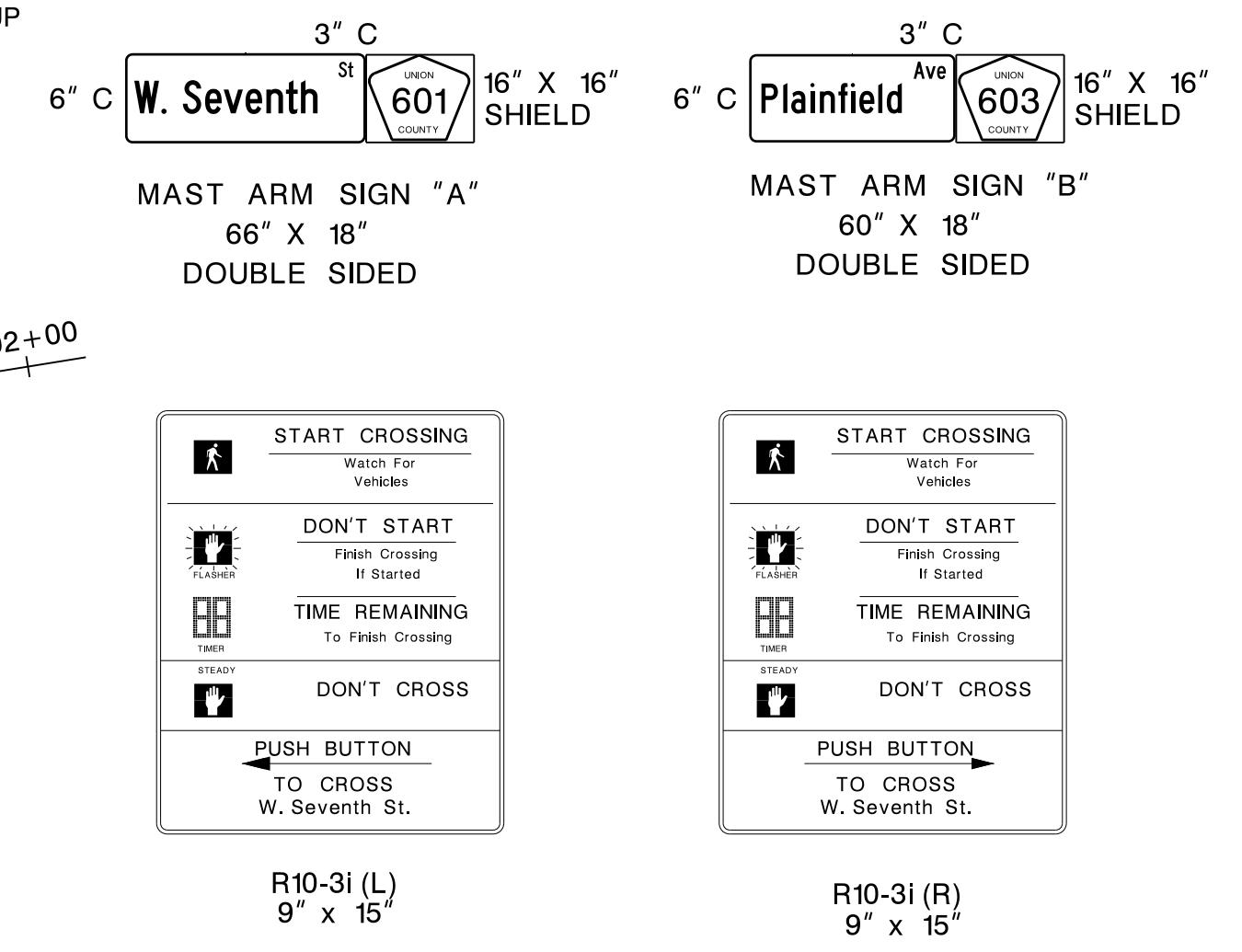
BLOCK WIRING DIAGRAM



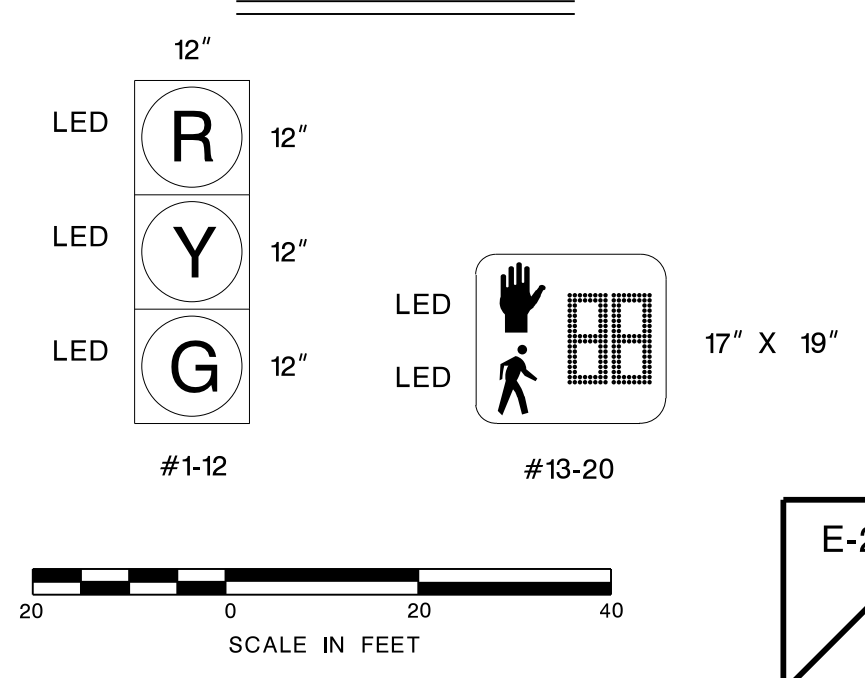
UNION COUNTY

TO BE CONSTRUCTED		CONTRACT QUANTITY
606012P	CONCRETE SIDEWALK, 4" THICK	2 SY
701015P	2" RIGID METALLIC CONDUIT	32 LF
701027P	2" RIGID NONMETALLIC CONDUIT	20 LF
701033P	4" RIGID NONMETALLIC CONDUIT	350 LF
701099M	17" X 30" JUNCTION BOX	5 U
701123M	FOUNDATION, TYPE SFT	1 U
701132M	FOUNDATION, TYPE P-MC	1 U
701135M	FOUNDATION, TYPE SPF	3 U
701192P	GROUND WIRE, NO. 8 AWG	341 LF
701213P	SERVICE WIRE, NO. 6 AWG	180 LF
702009M	CONTROLLER, 8 PHASE	1 U
702018M	PEDESTRIAN SIGNAL STANDARD	3 U
702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	604 LF
702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	1261 LF
702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	1246 LF
702036M	TRAFFIC SIGNAL HEAD	12 U
702039M	PEDESTRIAN SIGNAL HEAD	8 U
702041M	PUSH BUTTON ASSEMBLIES, TYPE APS	4 U
702045M	IMAGE DETECTOR	2 U
702060M	CONTROLLER TURN-ON	1 U
702062M	APS CONTROL UNIT	1 U
702101M	UNINTERRUPTIBLE POWER SUPPLY	1 U
N99992M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA20	1 U
N99993M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA25	1 U
N99994M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA30	2 U
N99995M	FOUNDATION, TYPE SFT-H	3 U

SIGN LEGEND



SIGNAL LEGEND



COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

ELECTRICAL PLANS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND PLAINFIELD AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

E-2

E-6

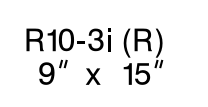
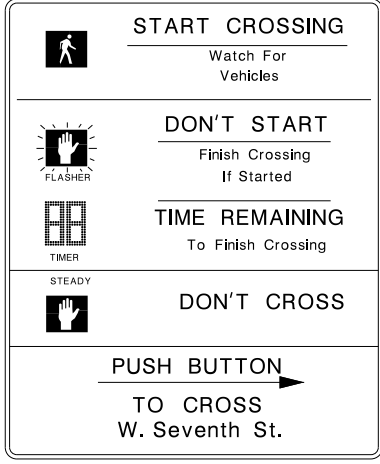
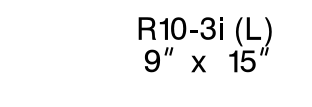
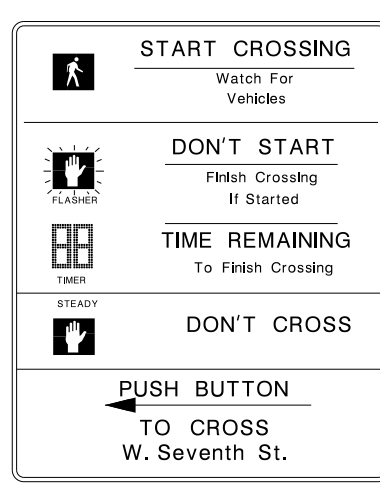
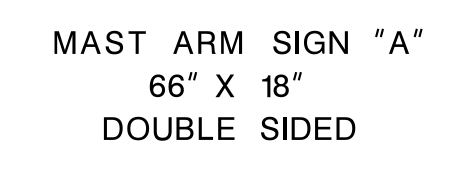
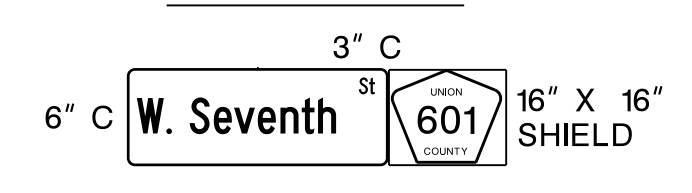
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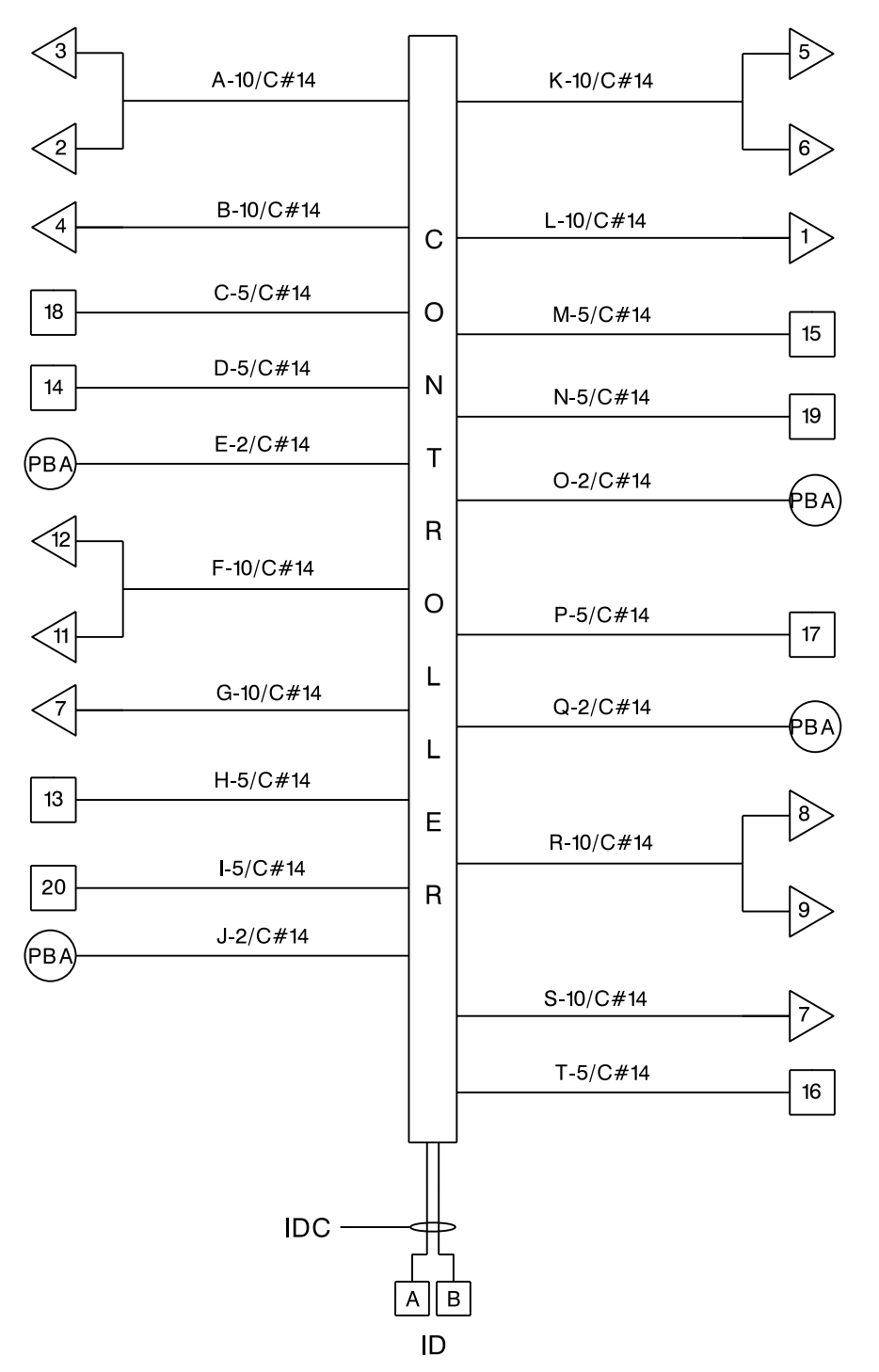
CITY OF PLAINFIELD

UNION COUNTY

SIGN LEGEND



BLOCK WIRING DIAGRAM



- CONSTRUCT: SERVICE: 2" RMC, ROADWAY
INSTALL: 3-1/C#6
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 801+78, L-76'
- CONSTRUCT: 3-4" RNM, EARTH
INSTALL: A-10/C, B-10/C, C-5/C, D-5/C, E-2/C, F-10/C, G-10/C, H-5/C, I-5/C, J-2/C, K-10/C, L-10/C, M-5/C, N-5/C, O-2/C, P-5/C, Q-2/C, R-10/C, S-10/C, T-5/C, 1-1/C#8 (GND), IDC(A), IDC(B)
- CONSTRUCT: FOUNDATION, TYPE P-MC
STA. 801+75, L-74.1'
- INSTALL: CONTROLLER, 8 PHASE W/ BATTERY BACKUP
METER CABINET, TYPE T
GPS BASED TIME CLOCK,
APS CONTROL UNIT,
UNINTERRUPTIBLE POWER SUPPLY
- CONSTRUCT: 2-4" RNM, EARTH
INSTALL: A-10/C, B-10/C, C-5/C, D-5/C, E-2/C, F-10/C, G-10/C, H-5/C, I-5/C, J-2/C, K-10/C, L-10/C, M-5/C, N-5/C, O-2/C, P-5/C, Q-2/C, R-10/C, S-10/C, T-5/C, 1-1/C#8 (GND), IDC(A), IDC(B)
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 801+75, L-46.5'
- CONSTRUCT: 4" RNM, EARTH
INSTALL: K-10/C, L-10/C, M-5/C, N-5/C, O-2/C, 1-1/C#8 (GND)
- CONSTRUCT: FOUNDATION, TYPE SFT-H
STA. 801+60, L-33'
- INSTALL: UC-SMA30-TB4-2
(2) PSH, PBA, SIGN R10-3i (R), (3) TSH

- CONSTRUCT: 2-4" RNM, ROADWAY
INSTALL: A-10/C, B-10/C, C-5/C, D-5/C, E-2/C, F-10/C, G-10/C, H-5/C, I-5/C, J-2/C, IDC(B), 2-1/C#8 (GND)
- CONSTRUCT: FOUNDATION, TYPE SPF
STA. 801+56, R-32'
- INSTALL: PSS, PBA, (2) PSH, SIGN R10-3i (L)
- CONSTRUCT: 4" RNM, EARTH
H-5/C, I-5/C, J-2/C, 1-1/C#8 (GND)
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 801+64, R-32.2'
- CONSTRUCT: 4" RNM, EARTH
F-10/C, G-10/C, 1-1/C#8 (GND), IDC(B)
- CONSTRUCT: FOUNDATION, TYPE SFT-H
STA. 801+65, R-38.5'
- INSTALL: UC-SMA25-TB4-2
(3) TSH
IMAGE DETECTOR (B)
- CONSTRUCT: 4" RNM, ROADWAY
A-10/C, B-10/C, C-5/C, D-5/C, E-2/C, 1-1/C#8 (GND)

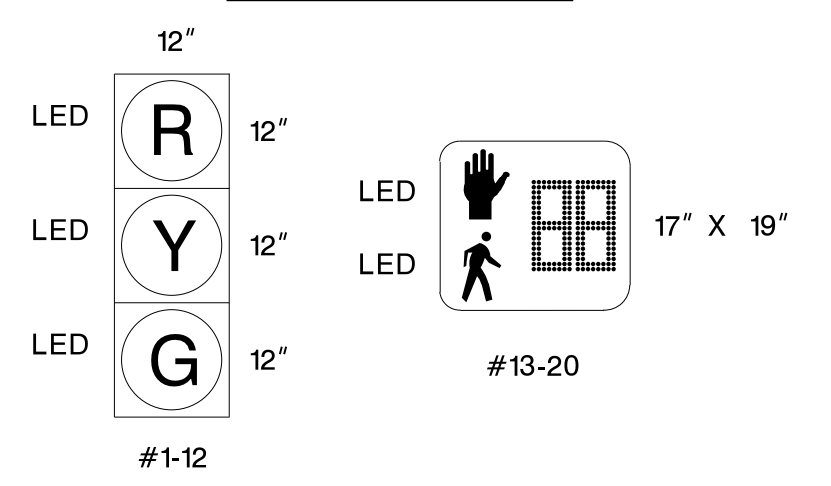
- CONSTRUCT: 4" RNM, ROADWAY
INSTALL: P-5/C, Q-2/C, R-10/C, S-10/C, T-5/C, 1-1/C#8 (GND), IDC(A)
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 802+15, L-46.76'
- CONSTRUCT: 4" RNM, EARTH
INSTALL: R-10/C, S-10/C, T-5/C, 1-1/C#8 (GND), IDC(A)
- CONSTRUCT: FOUNDATION, TYPE SFT
STA. 802+20, L-46'
- INSTALL: UC-SMA20-TB2-2
PBA, PSH, (3) TSH, IMAGE DETECTOR (A)
- CONSTRUCT: 4" RNM, EARTH
INSTALL: P-5/C, Q-2/C, 1-1/C#8 (GND)
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 802+21, R-28.4'
- CONSTRUCT: 4" RNM, EARTH
INSTALL: P-5/C, Q-2/C, 1-1/C#8 (GND)
- CONSTRUCT: FOUNDATION, TYPE SPF
STA. 802+31, L-27.5'
- INSTALL: PSS, PBA, PSH, SIGN R10-3i (R)
- CONSTRUCT: FOUNDATION, TYPE SFT-H
STA. 802+25, R-35'
- INSTALL: UC-SMA30-TB4-2
PBA, (2) PSH, SIGN R10-3i (L), (3) TSH
- CONSTRUCT: 4" RNM, EARTH
INSTALL: A-10/C, B-10/C, C-5/C, D-5/C, E-2/C, 1-1/C#8 (GND)
- CONSTRUCT: 17" X 30" JUNCTION BOX
STA. 802+14, R-43.15'

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	92 LF
701027P	2" RIGID NONMETALLIC CONDUIT	20 LF
701033P	4" RIGID NONMETALLIC CONDUIT	412 LF
701099M	17" X 30" JUNCTION BOX	6 U
701123M	FOUNDATION, TYPE SFT	1 U
701132M	FOUNDATION, TYPE P-MC	1 U
701135M	FOUNDATION, TYPE SPF	2 U
701192P	GROUND WIRE, NO. 8 AWG	374 LF
701213P	SERVICE WIRE, NO. 6 AWG	360 LF
702009M	CONTROLLER, 8 PHASE	1 U
702018M	PEDESTRIAN SIGNAL STANDARD	2 U
702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	745 LF
702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	1448 LF
702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	1404 LF
702036M	TRAFFIC SIGNAL HEAD	12 U
702039M	PEDESTRIAN SIGNAL HEAD	8 U
702041M	PUSH BUTTON ASSEMBLIES, TYPE APS	4 U
702045M	IMAGE DETECTOR	2 U
702060M	CONTROLLER TURN-ON	1 U
702062M	APS CONTROL UNIT	1 U
702101M	UNINTERRUPTIBLE POWER SUPPLY	1 U
N99992M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA20	1 U
N99993M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA25	1 U
N99994M	SINGLE MEMBER ARM & SHAFT ASSEMBLY, UC-SMA30	2 U
N99995M	FOUNDATION, TYPE SFT-H	3 U

NOTES:

- EXISTING ROW LINES ARE BASED ON TAX MAP INFORMATION.
- UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. PRIOR TO CONSTRUCTION UTILIZE "NJ ONE CALL" TO OBTAIN A FIELD MARKOUT OF SUBSURFACE UTILITIES FROM THE RESPECTIVE UTILITY COMPANIES AND AUTHORITIES.
- EXISTING TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL UNTIL NEW TRAFFIC SIGNALS ARE INSTALLED AND FULLY OPERATIONAL. EXISTING TRAFFIC SIGNAL EQUIPMENT AND INFRASTRUCTURE, INCLUDING STANDARDS, MAST ARMS, FOUNDATIONS, JUNCTION BOXES, AND CONTROLLER CABINET SHALL THEN BE REMOVED.
- PRIOR TO THE START OF CONSTRUCTION, COORDINATE WITH OVERHEAD UTILITY OWNERS (COMMUNICATION AND POWER) SO THAT THE CONTRACT WORK, INCLUDING TRAFFIC SIGNAL EQUIPMENT TO BE CONSTRUCTED, COMPLIES WITH REQUIRED SAFETY AND CLEARANCE PROTOCOLS.
- THE SERVICE ENTRANCE CONDUIT SHALL BE RIGID NONMETALLIC CONDUIT OF THE DIAMETER SHOWN ON THE PLANS FROM A POINT 10 FEET ABOVE THE GROUND SURFACE AND EXTENDING FROM THERE TO THE VICINITY OF THE SECONDARY POWER LINES ON THE UTILITY POLE. RIGID NONMETALLIC SERVICE CONDUIT SHALL BE TERMINATED WITH A GOOSENECK-TYPE WEATHER TIGHT CABLE ENTRANCE AT ITS UPPER END. THE REMAINDER OF THE SERVICE ENTRANCE CONDUIT BETWEEN THE END OF RIGID NONMETALLIC CONDUIT AND THE METER CABINET SHALL BE RIGID METALLIC CONDUIT OF THE DIAMETER SHOWN ON THE PLAN.
- RIGID NONMETALLIC CONDUIT TO BE INSTALLED SHALL BE SCHEDULE 80.
- FOUNDATION AND JUNCTION BOXES SHOWN TO BE CONSTRUCTED IN AREAS WITHOUT EXISTING OR PROPOSED SIDEWALK SHALL BE CONSTRUCTED SO THAT THE TOPS OF THE FOUNDATIONS WILL BE AT GRADE AND THAT WILL LEAVE THEM 1 INCH ABOVE, AND THE TOPS OF THE JUNCTION BOXES FLUSH WITH ANY FUTURE SIDEWALK CONSTRUCTED ACCORDING TO NJDOT AND COUNTY STANDARDS. THE AREAS SURROUNDING SUCH FOUNDATIONS SHALL BE GRADED TO A MAXIMUM SLOPE OF 1 TO 4, LEAVING A 1-INCH REVEAL ABOVE FINISHED GRADE. IN NO CASE SHALL A FOUNDATION OR JUNCTION BOX BE CONSTRUCTED SO THAT IT WILL BE INUNDATED BY STORM WATER RUNOFF.
- GROUND WIRE SHALL BE INSULATED (COLOR GREEN) AND OF THE GAUGE SHOWN ON THE PLAN, AND SHALL BE INSTALLED CONTINUOUSLY THROUGHOUT THE TRAFFIC SIGNAL SYSTEM. SECURE GROUND WIRE TO ALL GROUND RODS, CABINETS, TRAFFIC SIGNAL BASES, AND LIGHTING BASES.
- AREA OF IMAGE DETECTION SHALL EXTEND FROM 10' IN FRONT OF STOP BAR TO 40' BEHIND STOP BAR, AND SHALL BE OFFSET 1' FROM CURBS AND LANE LINES, UNLESS OTHERWISE NOTED.
- TRAFFIC SIGNALS MOUNTED ON MAST ARMS ALONG WEST SEVENTH STREET SHALL BE EQUIPPED WITH BACK PLATES.
- TRAFFIC SIGNAL CONTROLLER CABINET SHALL INCLUDE AUXILIARY GENERATOR HOOKUP AND TRANSFER SWITCH.
- WITH THE EXCEPTION OF PUSH BUTTON ASSEMBLIES, EXTERIOR ABOVE-GROUND TRAFFIC SIGNAL EQUIPMENT AND MOUNTING HARDWARE, INCLUDING THE CONTROLLER CABINET, METER CABINET, POLES, MAST ARMS, MAST ARM SIGN BRACKETS, SIGNAL HEADS, AND IMAGE DETECTORS SHALL BE POWDERED-COATED BLACK.
- PEDESTRIAN PUSH BUTTONS SHALL BE COMPLIANT WITH THE AMERICANS WITH DISABILITIES ACT, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE FOLLOWING SHALL BE INCLUDED AS PART OF THE PUSH BUTTON ITEM:
A. A VIBRO-TACTILE BUTTON WITH RAISED ARROW
B. EXTENSION BRACKET TO ACCOMMODATE AN UNOBSTRUCTED HORIZONTAL REACH OF 10 INCHES OR LESS
- THE PUSH BUTTON SIGNS SHALL HAVE BRAILLE FEATURES.
- VEHICULAR AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED WITH AN INCANDESCENT.

SIGNAL LEGEND



COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL PLANS
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND CENTRAL AVENUE
 MICHAEL BAKER INTERNATIONAL, INC.
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

 BRAD J. MILLER
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

Baker PW Path Location: p:\proj\DCPW\PPP\hr.mbakercorp.com\proj\out\Documents\Project\Hamilton\Office\489708_NJ\TPA\FY2015-LocalPre-Engineering-Assistance\C\TCADD\Plan\Electrical\E-3

WEST SEVENTH STREET (CR 601) AND GRANT AVENUE

60-SECOND CYCLE

SIGNAL INDICATIONS

NORMAL OPERATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	30-18
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	11
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. GRANT AVENUE ROW	R	R	G	G	DW	DW	7-19
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3

WITH PEDESTRIAN ACTUATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	19-18
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	11
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. GRANT AVENUE ROW	R	R	G	G	DW	W	7
PEDESTRIAN CLEARANCE	R	R	G	G	DW	FDW	0-1
VEHICLE EXTENSION	R	R	G	G	DW	DW	11
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3
EMERGENCY FLASH	Y	Y	R	R	DARK	DARK	-

NOTES:

1. Phase B shall be skipped if unactuated.
2. The vehicle extension shall be set to 2 seconds.
3. The memory circuit is to be off.

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E-6

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

ELECTRICAL PLANS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND GRANT AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

WEST SEVENTH STREET (CR 601) AND PLAINFIELD AVENUE

80-SECOND CYCLE

SIGNAL INDICATIONS

NORMAL OPERATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	47-32
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	14
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. PLAINFIELD AVENUE ROW	R	R	G	G	DW	DW	7-22
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3

WITH PEDESTRIAN ACTUATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	33-32
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	14
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. PLAINFIELD AVENUE ROW	R	R	G	G	DW	W	7
PEDESTRIAN CLEARANCE	R	R	G	G	DW	FDW	14
VEHICLE EXTENSION	R	R	G	G	DW	DW	0-1
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3
EMERGENCY FLASH	Y	Y	R	R	DARK	DARK	-

NOTES:

1. Phase B shall be skipped if unactuated.
2. The vehicle extension shall be set to 2 seconds.
3. The memory circuit is to be off.

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E-5
E-6

COUNTY OF UNION	
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES	
ELECTRICAL PLANS	
WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS	
WEST SEVENTH STREET AND PLAINFIELD AVENUE	
MICHAEL BAKER INTERNATIONAL, INC.	
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700	
BRAD J. MILLER	
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300	

WEST SEVENTH STREET (CR 601) AND CENTRAL AVENUE

80-SECOND CYCLE

SIGNAL INDICATIONS

NORMAL OPERATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	46-31
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	15
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. CENTRAL AVENUE	R	R	G	G	DW	DW	7-22
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3

WITH PEDESTRIAN ACTUATION

PHASE	1,2,3	4,5,6	7,8,9	10,11,12	13,14	17,18	TIME (SECONDS)
					15,16	19,20	
A. WEST SEVENTH STREET ROW	G	G	R	R	W	DW	31
PEDESTRIAN CLEARANCE	G	G	R	R	FDW	DW	15
CHANGE	Y	Y	R	R	DW	DW	4
CLEARANCE	R	R	R	R	DW	DW	2
B. CENTRAL AVENUE	R	R	G	G	DW	W	7
PEDESTRIAN CLEARANCE	R	R	G	G	DW	FDW	15
CHANGE	R	R	Y	Y	DW	DW	3
CLEARANCE	R	R	R	R	DW	DW	3
EMERGENCY FLASH	Y	Y	R	R	DARK	DARK	-

NOTES:

1. Phase B shall be skipped if unactuated.
2. The vehicle extension shall be set to 2 seconds.
3. The memory circuit is to be off.

Baker PW Path Location: p:\w\DCPW\PP\Baker\miller\Documents\Projects\Hamilton\Office\49728_NJTPA-FY-2015-Local-Pre-Engineering-Assistance\C:\CADD\Plan\Electrical\E-6

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COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

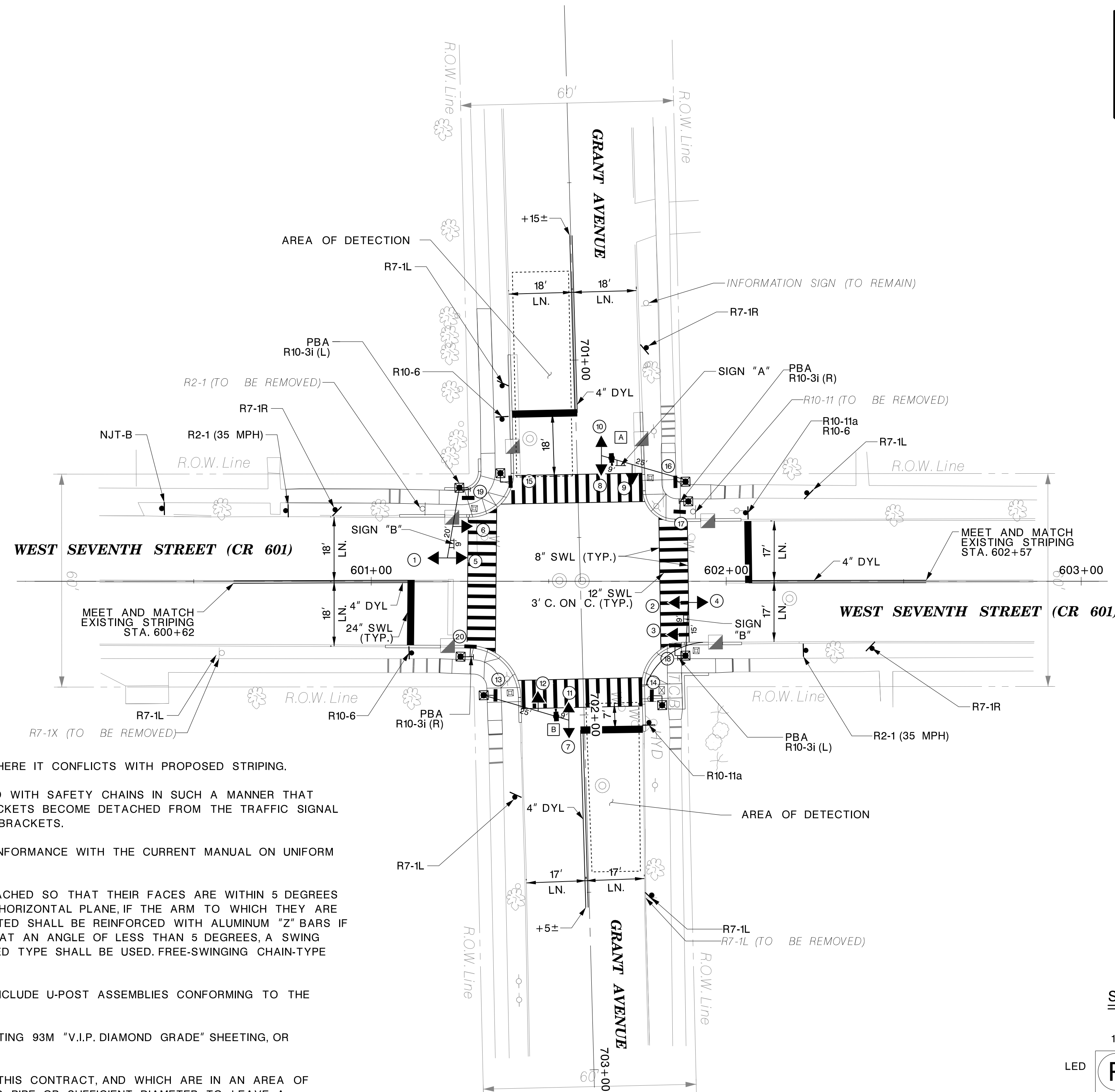
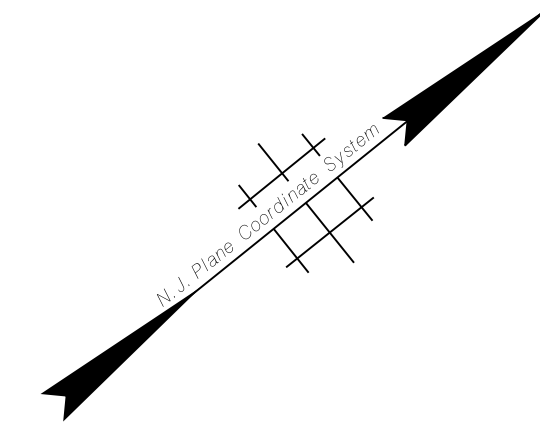
ELECTRICAL PLANS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND CENTRAL AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

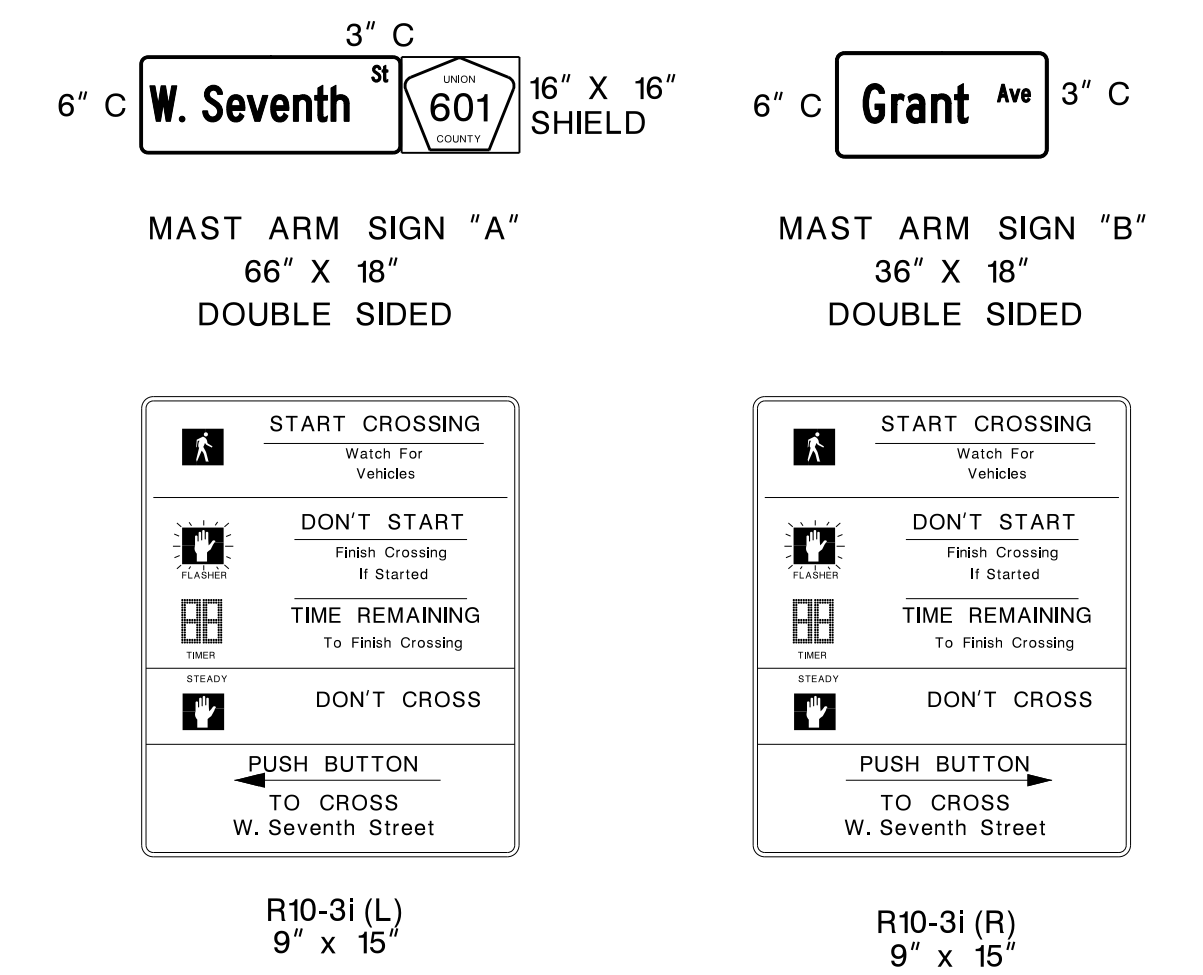
ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
610003M	TRAFFIC STRIPES, 4"	460 LF
610008M	TRAFFIC MARKINGS, SYMBOLS	633 SF
610014M	TRAFFIC MARKING LINES, 8"	345 LF
610036M	REMOVAL OF TRAFFIC STRIPES	115 LF
606012P	CONCRETE SIDEWALK, 4" THICK	2 SY
612003P	REGULATORY AND WARNING SIGN	95 SF



NOTES:

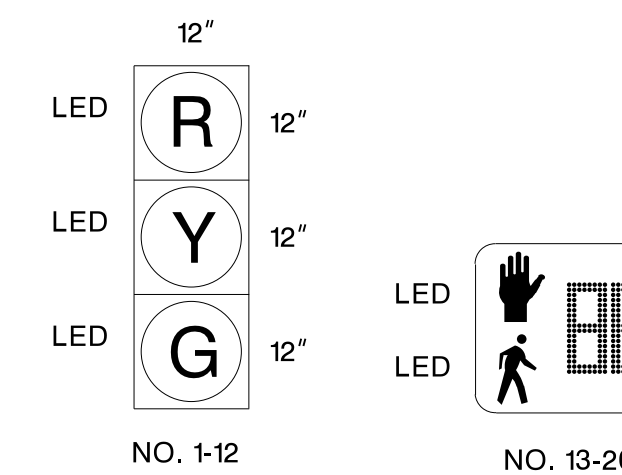
- EXISTING STRIPING SHALL BE REMOVED AS SHOWN ON THE PLANS OR WHERE IT CONFLICTS WITH PROPOSED STRIPING.
- ALL SIGNS MOUNTED ON TRAFFIC SIGNAL MAST ARMS SHALL BE EQUIPPED WITH SAFETY CHAINS IN SUCH A MANNER THAT THEY WILL BE PREVENTED FROM FALLING TO THE GROUND IF THEIR BRACKETS BECOME DETACHED FROM THE TRAFFIC SIGNAL MAST ARM OR IF THE SIGNS BECOME DETACHED FROM THEIR MOUNTING BRACKETS.
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- PROPOSED SIGNS NOT MOUNTED ON TRAFFIC SIGNAL HARDWARE SHALL INCLUDE U-POST ASSEMBLIES CONFORMING TO THE ELECTRICAL DETAILS OF THE CONTRACT DRAWING SET.
- ALL SIGNS SHALL BE FABRICATED FROM NJDOT TYPE VIREFLECTIVE SHEETING 93M "V.I.P. DIAMOND GRADE" SHEETING, OR APPROVED EQUAL.
- EXISTING SIGNS WHICH ARE NOT TO BE REMOVED OR REPLACED UNDER THIS CONTRACT, AND WHICH ARE IN AN AREA OF RECONSTRUCTED SIDEWALK SHALL HAVE THEIR POSTS SLEEVED WITH PVC PIPE OR SUFFICIENT DIAMETER TO LEAVE A CLEARANCE OF 1' BETWEEN THE POST AND THE INSIDE WALL OF THE PIPE. THE TOP OF THE PVC PIPE SHALL BE INSTALLED FLUSH WITH THE FINISHED GRADE OF THE SIDEWALK AND GROUTED WITH MORTAR OF A SIMILAR APPEARANCE TO THE SIDEWALK MATERIAL. SIDEWALKS SHALL NOT BE POURED UNTIL SUCH SIGNS HAVE TIER POSTS MADE PLUMB. THIS WORK SHALL BE INCIDENTAL TO SIDEWALK PAY ITEMS.
- COORDINATE WITH NEW JERSEY TRANSIT (NJ TRANSIT) FOR THE SCHEDULING AND STAGING OF THE NJ TRANSIT BUS STOP SIGN AND POST. NJT-B. NEW BUS STOP SIGNS AND POSTS WILL BE FURNISHED AND INSTALLED BY NJ TRANSIT.
- TRANSVERSE DIMENSIONS INVOLVING PAINTED LINES ARE FROM EDGE OF PAVEMENT/FACE OF CURB TO THE CENTER OF THE PAINTED WHITE LINE OR CENTER OF 6-INCH SPACE BETWEEN THE 4-INCH YELLOW LINES.
- CROSSWALK LINES SHALL BE A MINIMUM OF 4' FROM THE STOPLINES.
- PROPOSED STRIPING SHALL MATCH EXISTING CENTER LINES WITHIN THE LIMITS OF THE DRAWING.

SIGN LEGEND



R2-1	SPEED LIMIT (XX)	24" X 30"
R7-1L	NO PARKING ANY TIME	12" X 18"
R7-1R	NO PARKING ANY TIME	12" X 18"
R10-3i	PUSH BUTTON INFORMATION	9" X 15"
R10-6	STOP HERE ON RED	24" X 36"
R10-11a	NO TURN ON RED	30" X 36"

SIGNAL LEGEND



STRIPING LEGEND

DYL	DOUBLE YELLOW LINE
SWL	SOLID WHITE LINE



COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

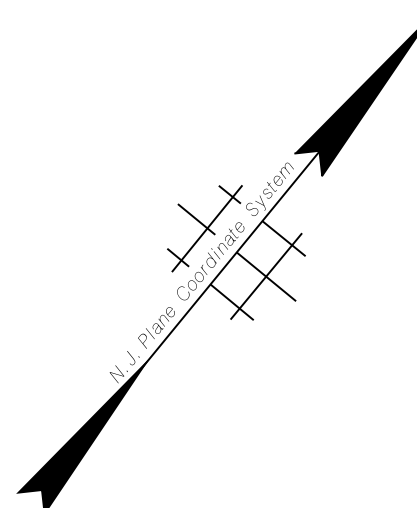
**TRAFFIC SIGNAL,
SIGNING AND STRIPING PLANS
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS
WEST SEVENTH STREET AND GRANT AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

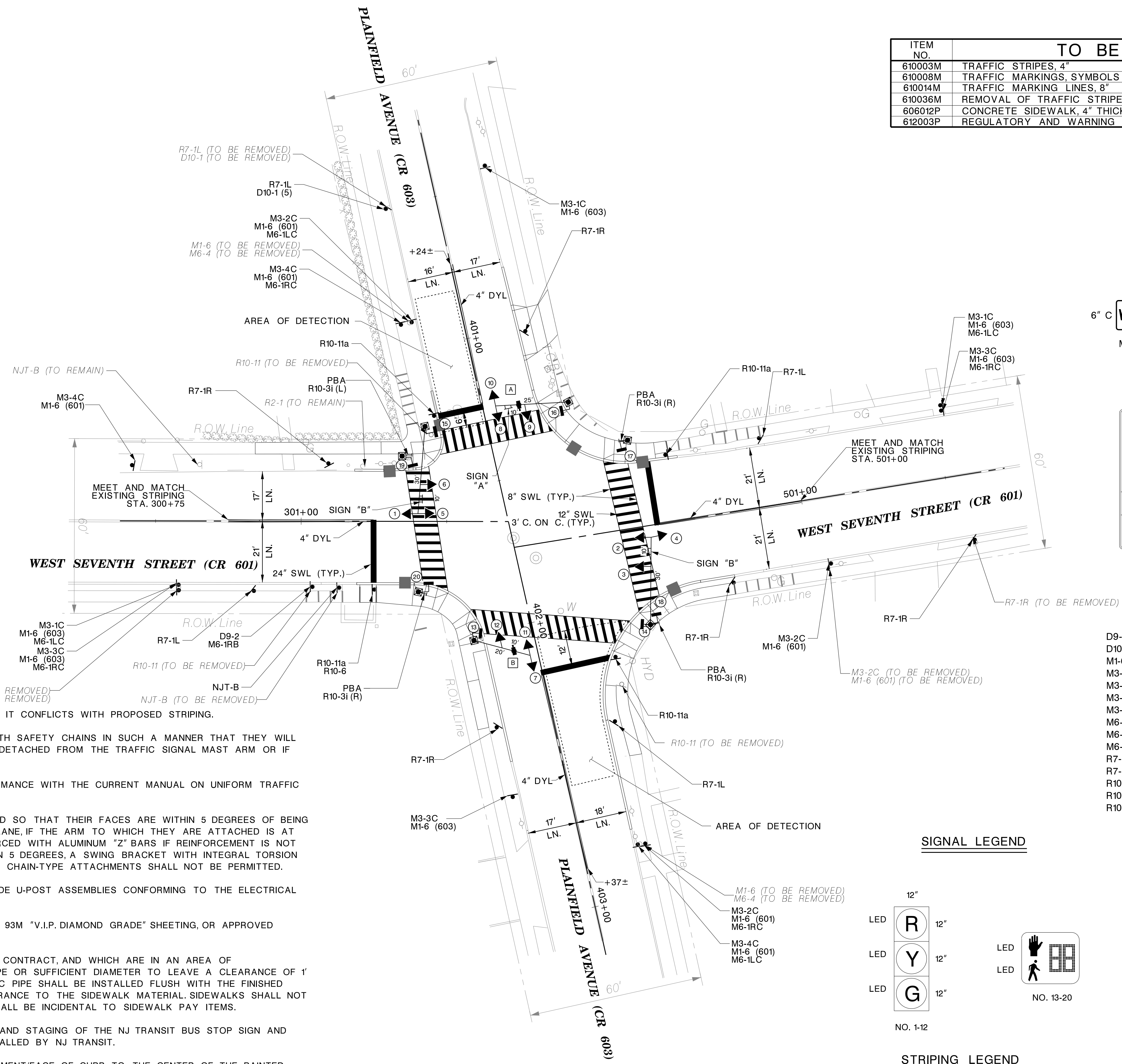
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

TSP-1

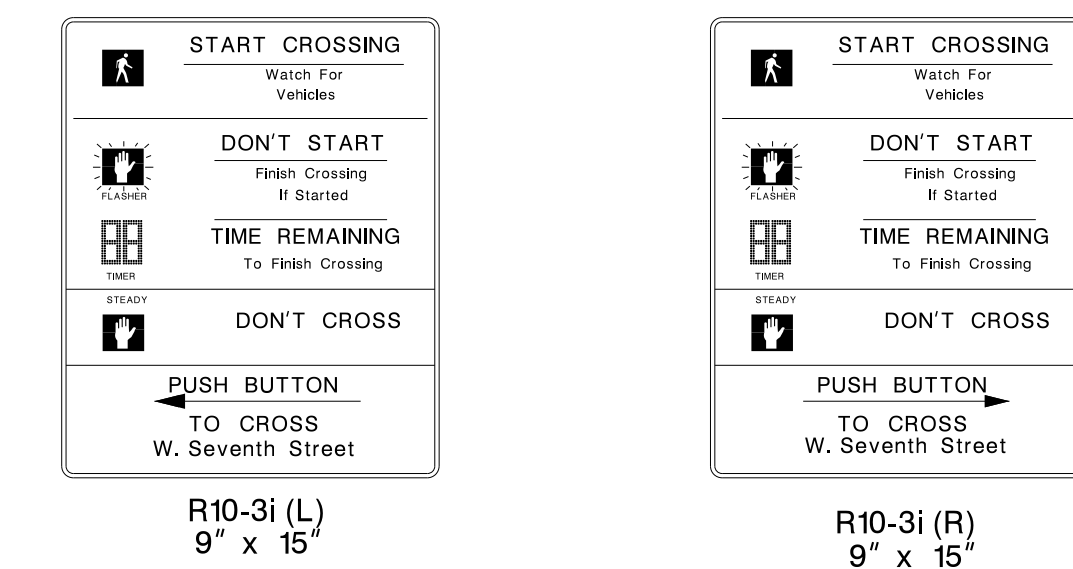
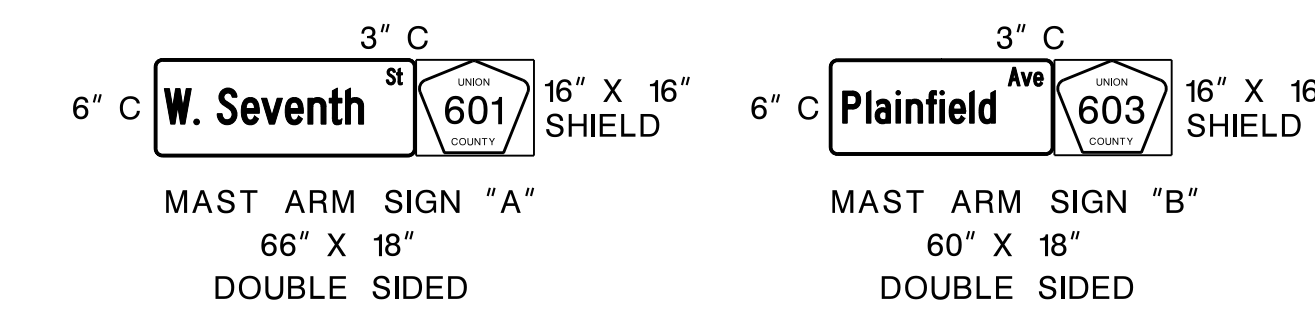
TSP-3



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
61003M	TRAFFIC STRIPES, 4"	506 LF
61008M	TRAFFIC MARKINGS, SYMBOLS	702 SF
61004M	TRAFFIC MARKING LINES, 8"	414 LF
610036M	REMOVAL OF TRAFFIC STRIPES	115 LF
606012P	CONCRETE SIDEWALK, 4" THICK	2 SY
612003P	REGULATORY AND WARNING SIGN	200 SF

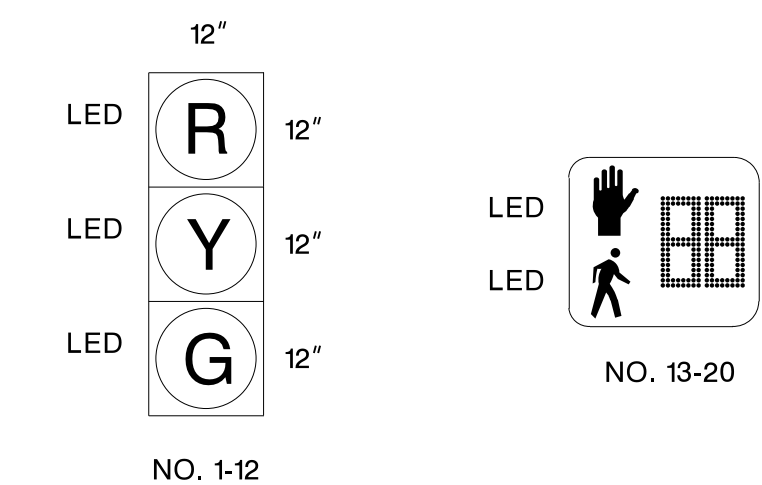


SIGN LEGEND

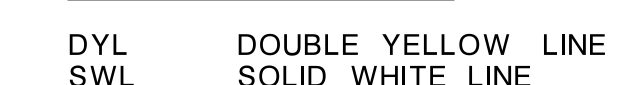


D9-2	HOSPITAL	24" X 24"
D10-1	MILE (X)	10" X 18"
M1-6	COUNTY ROUTE (XXX)	30" X 24"
M3-1C	NORTH	24" X 12"
M3-2C	EAST	24" X 12"
M3-3C	SOUTH	24" X 12"
M3-4C	WEST	24" X 12"
M6-1LC	ARROW	21" X 15"
M6-1RB	ARROW	21" X 15"
M6-1RC	ARROW	21" X 15"
R7-1L	NO PARKING ANY TIME (LEFT ARROW)	12" X 18"
R7-1R	NO PARKING ANY TIME (RIGHT ARROW)	12" X 18"
R10-3i	PUSH BUTTON INFORMATION	9" X 15"
R10-6	STOP HERE ON RED	24" X 36"
R10-11a	NO TURN ON RED	30" X 36"

SIGNAL LEGEND



STRIPING LEGEND



NOTES:

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COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

**TRAFFIC SIGNAL,
SIGNING AND STRIPING PLANS**

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

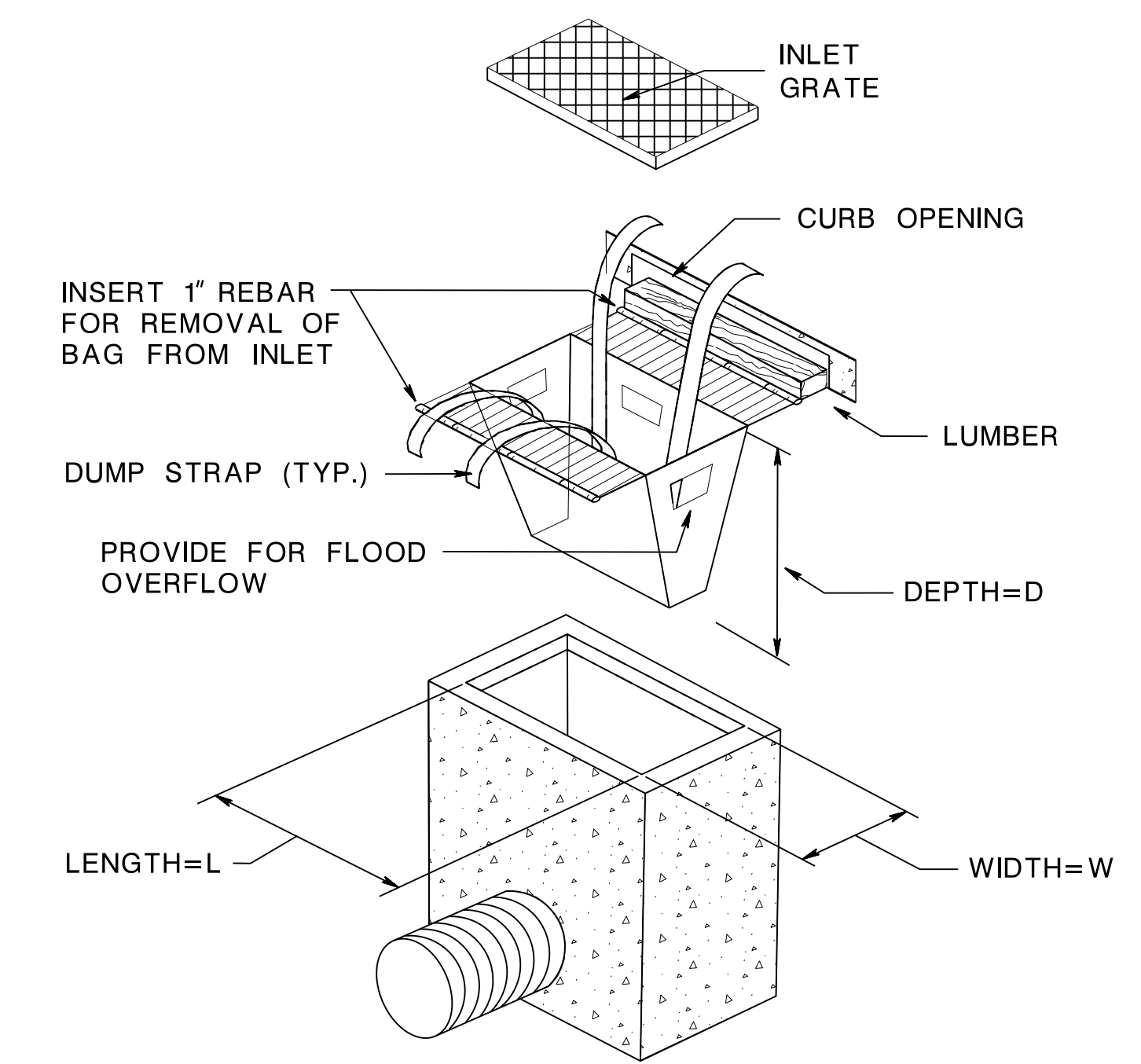
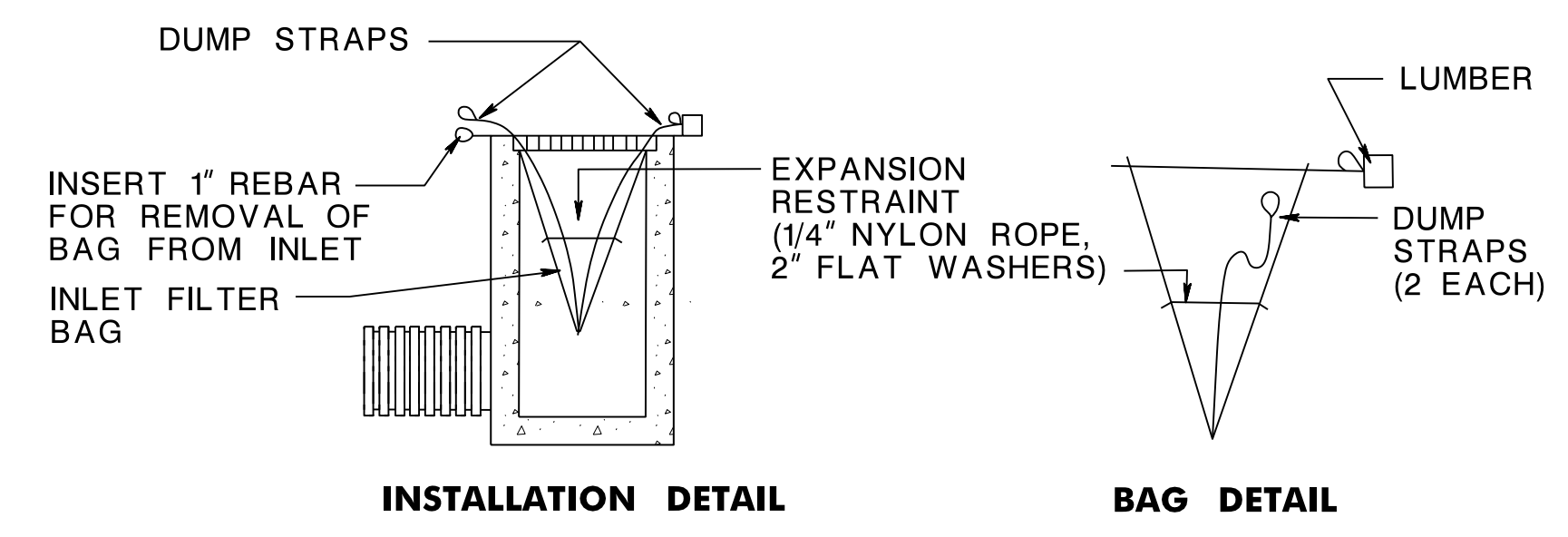
WEST SEVENTH STREET AND PLAINFIELD AVENUE

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

TSP-2
TSP-3

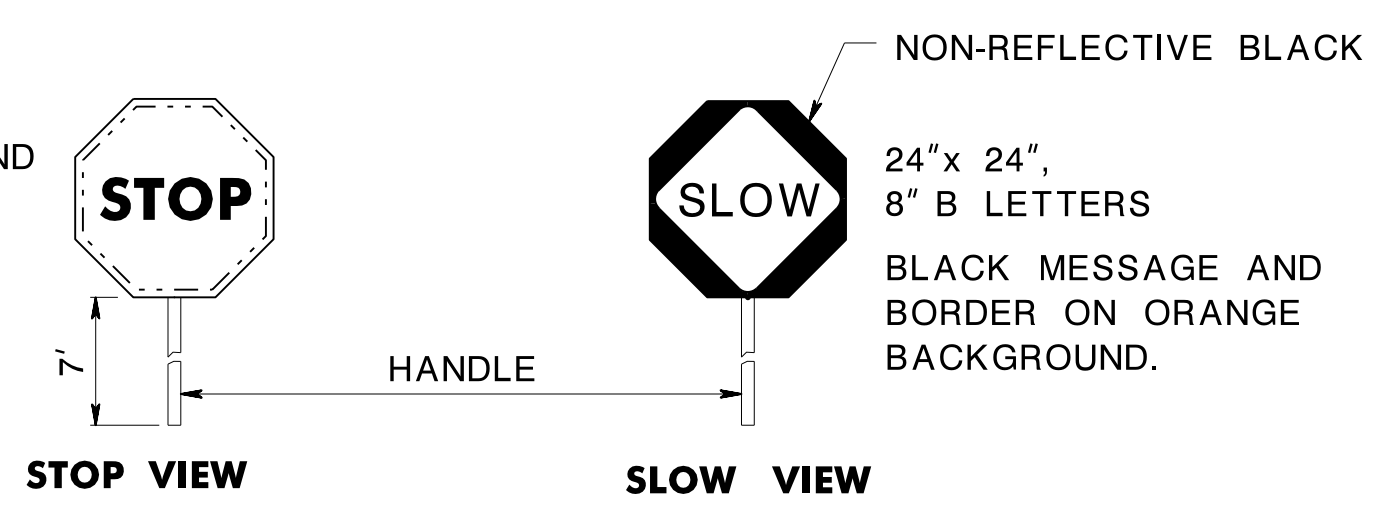
Baker PW Path Location: p:\w\DCPW\APP\htr.mbakier\corp.com\pwr\out\Documents\Projects\Hamilton\Office\48798_NJT\PA\FY2015-Local\Pre-Engineering-Assistance\C:\CADD\Plan\Signal\TSP-2.dgn



SOIL EROSION AND SEDIMENT CONTROL MEASURES

N.T.S.

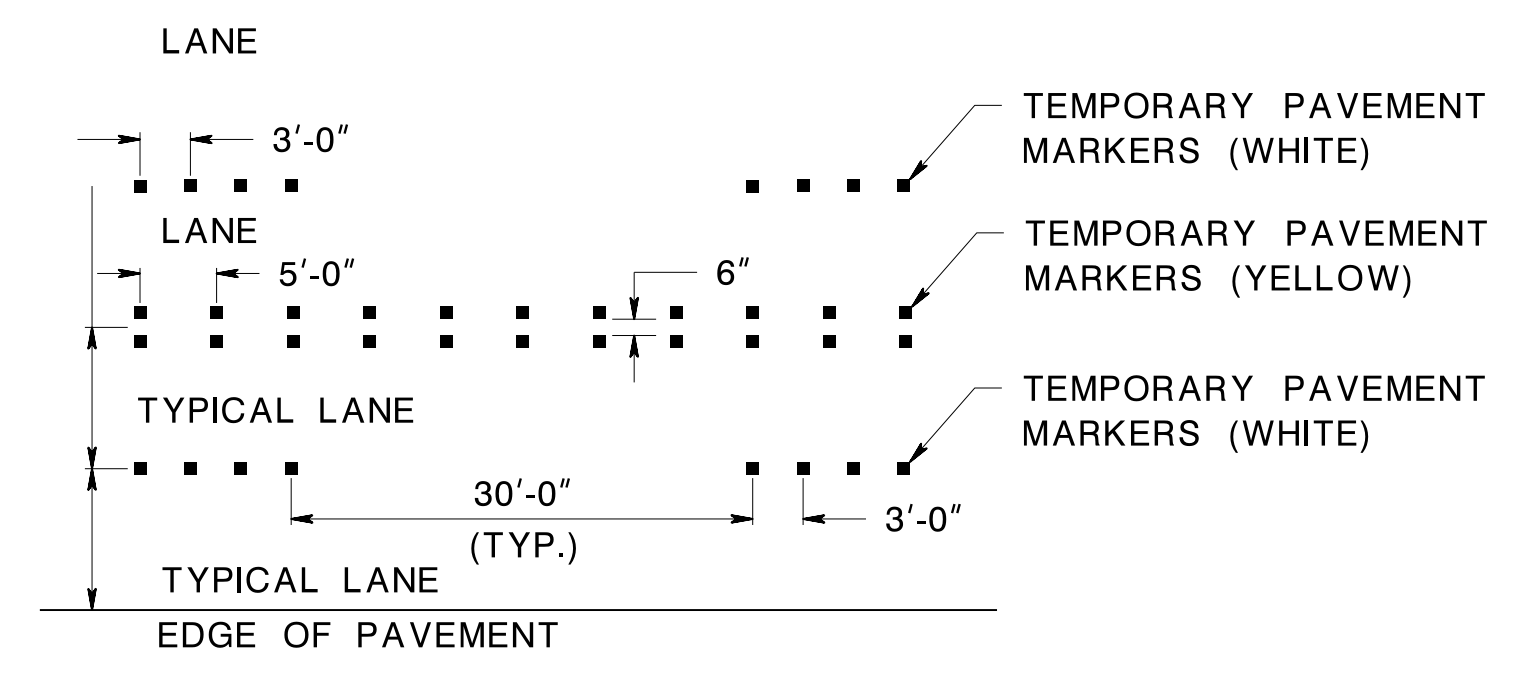
R 1 - 1
24" x 24",
8" C LETTERS
WHITE MESSAGE AND
BORDER ON RED
BACKGROUND.



NOTE:
SIGN FACES SHALL BE
RETROREFLECTIVE
SHEETING, ASTM D 4956 TYPE III.

STOP / SLOW PADDLE

CD-159-2.3

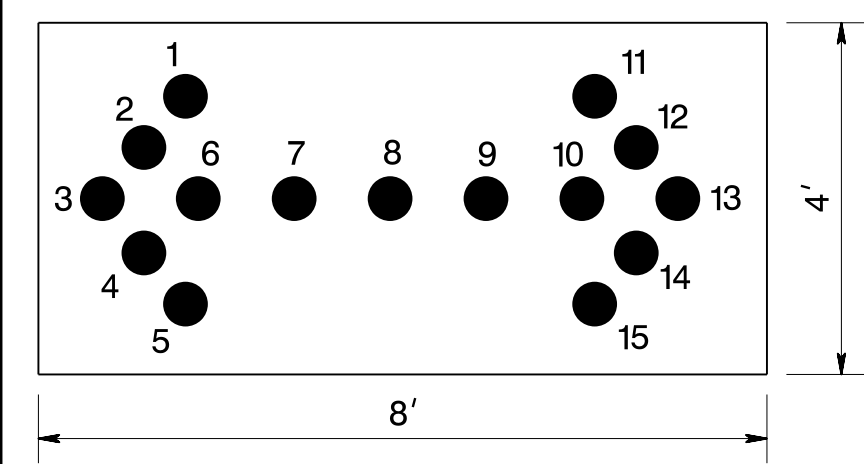


NOTES:

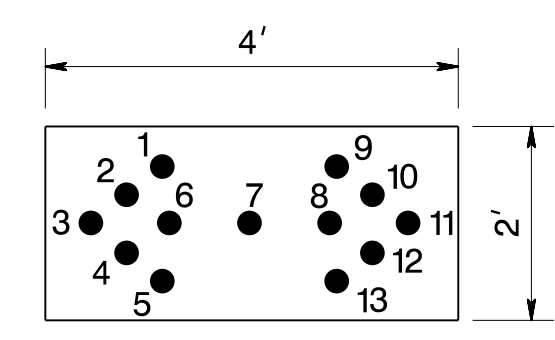
1. WHEN TEMPORARY PAVEMENT MARKERS ARE TO SIMULATE LANE LINES ON SHARP CURVES OR IN TRANSITIONS TO EITHER REDUCE THE NUMBER OF LANES OR TO SHIFT TRAFFIC LATERALLY, THE TEMPORARY PAVEMENT MARKERS SHALL BE SPACED 5 FEET APART CONTINUOUSLY THROUGH THE CURVE OR TRANSITION AREA.
2. TEMPORARY PAVEMENT MARKERS SHOULD NOT BE USED TO DELINEATE RIGHT EDGE LINES.

TEMPORARY PAVEMENT MARKERS

CD-159-2.5



FLASHING MESSAGES TO LIGHT AS FOLLOWS
RIGHT ARROW 3, 6, 7, 8, 9, 11, 12, 13, 14 & 15
LEFT ARROW 1, 2, 3, 4, 5, 7, 8, 9, 10 & 13
DOUBLE ARROW 1, 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 14 & 15
CAUTION MODE 1, 5, 11 & 15



RIGHT ARROW 3, 6, 7, 9, 10, 11, 12 & 13
LEFT ARROW 1, 2, 3, 4, 5, 7, 8 & 11
DOUBLE ARROW 1, 2, 3, 4, 5, 7, 9, 10, 11, 12 & 13
CAUTION MODE 1, 5, 9 & 13

ILLUMINATED FLASHING ARROWS,

X

CD-159-2.1

UNLESS OTHERWISE SHOWN ON THE PLANS, TEMPORARY TRAFFIC STRIPES AND MARKINGS SHALL BE APPLIED AT THE LOCATIONS OF THE FINAL STRIPING AS PER THE FOLLOWING:

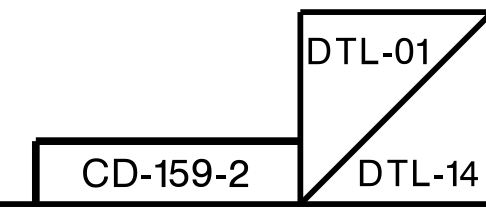
- * **DURATION** - TEMPORARY PAVEMENT MARKINGS SHALL NOT REMAIN IN PLACE FOR MORE THAN 14 DAYS AFTER THE CONSTRUCTION OF THE FINAL PAVEMENT SURFACE ON NEW ROADWAYS OR OVER EXISTING PAVEMENTS. ANY EXTENSION OF THE DURATION FOR TEMPORARY STRIPES BEYOND 14 DAYS SHALL BE APPROVED BY THE REGIONAL TRAFFIC ENGINEER- WORK ZONE.
- * **WIDTH** - ALL LONGITUDINAL LINES (CENTER LINES, SHOULDER LINES, AND SKIPS) SHALL BE 4 OR 6 INCHES IN WIDTH TO FOLLOW THE EXISTING PRE-CONSTRUCTION MARKING.
- * **SKIP LINES** - SKIP LINES SHALL BE PLACED USING THE SAME CYCLE LENGTH AS PERMANENT MARKINGS (DISTANCE FROM START OF SKIP TO START OF SKIP, TYPICALLY 40 FOOT), AND MAY HAVE SKIPS HAVING 2 FOOT LENGTHS.
- * **STOP LINES** - STOP LINES SHALL BE PLACED OR RESTORED
- * **GORE AREAS** - GORE AREAS SHALL HAVE EDGE LINES, BUT DO NOT REQUIRE CROSS HATCHING
- * **TURN ARROWS** - WHEN TEMPORARY MARKINGS WILL BE IN PLACE MORE THAN 7 DAYS, AT LEAST ONE INDICATION OF TURN ARROWS SHALL BE PLACED
- * **CROSSWALKS** * CROSSWALKS SHALL BE PLACED AT SIGNALIZED INTERSECTIONS, ONLY IF THEY PRE-EXISTED THE CONSTRUCTION.

TEMPORARY TRAFFIC STRIPES AND MARKINGS

CD-159-2.6

TRAFFIC CONTROL DEVICES

N.T.S.



COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION DETAILS
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

BDC2D-0-MISC CHANGES TO 2.4 & 2.5
 BDC07D-0-ORIGINAL SHEET
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CD-158-1

GENERAL NOTES:

- DIMENSIONS, COLORS AND DETAILS OF VARIOUS SIZE SIGNS, AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- (S) REPRESENTS A SPECIAL SIZE SIGN.
- LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER FOR THE DISTANCE TO BE USED ON THE ADVANCE WARNING SIGNS, AND FOR THE SPEED LIMIT TO BE USED ON THE R2-1 SIGN.
- DISTANCE LEGEND: SIGN NUMBER FOLLOWED BY A LETTER & DISTANCE, ARE THE SIGN PLACEMENTS FOR USE WITH TCD-3 THROUGH TCD-21 AND PROJECT SPECIFIC PLANS. ALL DISTANCES ARE FROM THE TRANSITION OR POINT OF RESTRICTION.

LETTER	DISTANCE
A	1500'
B	1000'
C	500'
D	___ MILE
E	___ MILES AHEAD
F	AHEAD

BACKING MATERIAL

- ALUMINUM SHALL BE FLAT SHEET OF ALLOY AND TEMPER 5052-H38 OR 6061-T6 :
 - 0.10" THICK FOR ALL CONSTRUCTION SIGNS EXCEPT SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.
 - 0.024" THICK FOR ALL CONSTRUCTION SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.

TEMPORARY SIGN SUPPORTS

- SIGN SUPPORTS SHALL BE OF WELL SEASONED LUMBER, S4S, FREE OF SPLITS, KNOTS AND WARPS, OR OF STEEL COMPONENTS.
- WOOD POSTS SHALL HAVE A UNIFORM CROSS-SECTION AND SHALL NOT EXCEED THE FOLLOWING DIMENSIONS FOR:
 - SINGLE POST = 4" x 6"
 - TWO POSTS = 3" x 6" OR 4" x 5"
 - THREE POSTS = 3" x 5" OR 4" x 4"
 4" X 6" WOOD POSTS SHALL BE MODIFIED BY DRILLING 1/2 INCH DIAMETER HOLES 4 INCHES AND 18 INCHES ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.
- NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS SHALL BE 7 FOOT MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST SHALL NOT EXCEED 3.5 FEET.
- STEEL POSTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN SUPPORT.
- TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA SHALL BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.
- WOOD POST TO BE USED ONLY ON TEMPORARY SIGN SUPPORT.

SIGN FACES

- SIGN FACES SHALL BE ASTM D 4956 TYPE VII OR VIII FLUORESCENT ORANGE SHEETING.

FASTENING

- ALL SIGNS SHALL BE SECURELY FASTENED TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH THE SPECIFICATIONS.

CONSTRUCTION SIGNS

N.T.S.

CD-159-6

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION DETAILS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

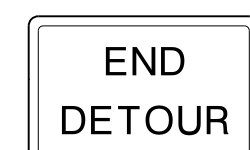
BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

DTL-02
DTL-14

CD-159-6.1

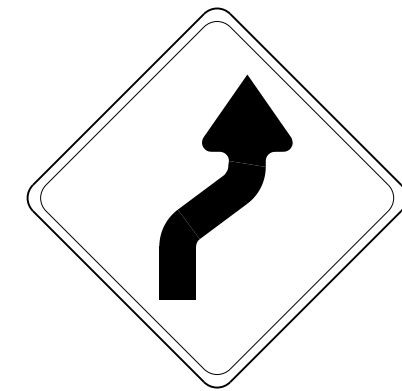


G20 - 1 [60" x 24"]
(10 S.F.)



M4 - 8a [24" x 18"]
(3 S.F.)

M4 - 11 (S) [48" x 36"]
(12 S.F.)



(L OR R)

W1 - 4a [48" x 48"]
(16 S.F.)

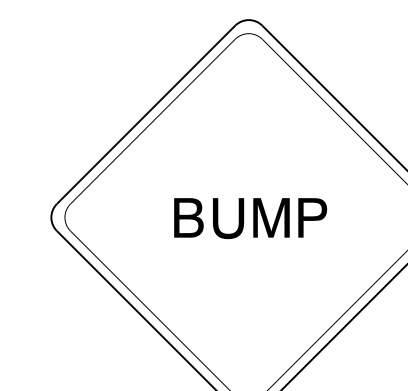


W13 - 1 [18" x 18"]
(2.3 S.F.)

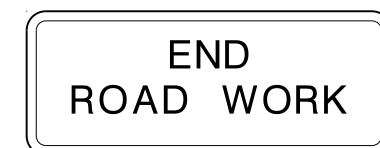
W13 - 1 (S) [24" x 24"]
(4 S.F.)



W20 - 7a [48" x 48"]
(16 S.F.)



W8 - 1 (S) [48" x 48"]
(16 S.F.)

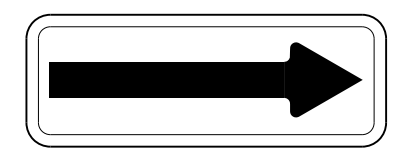


G20 - 2A [48" x 24"]
(8 S.F.)



R2 - 1 [36" x 48"]
(12 S.F.)

R2 - 1 (S) [48" x 60"]
(20 S.F.)



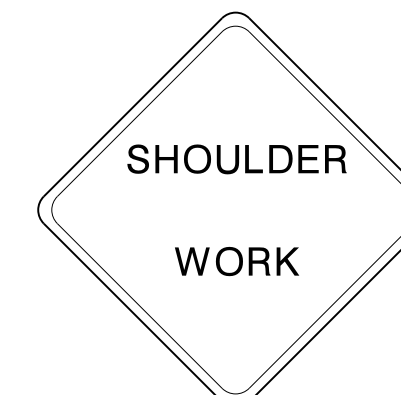
(L OR R)

W1 - 6 [48" x 24"]
(8 S.F.)

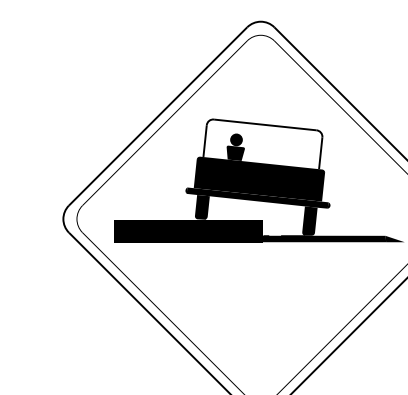
W1 - 6 (S) [60" x 30"]
(12.5 S.F.)



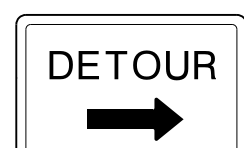
W20 - 1A [48" x 48"]
(16 S.F.)



W21 - 5 (S) [48" x 48"]
(16 S.F.)



W8 - 11a [48" x 48"]
(16 S.F.)

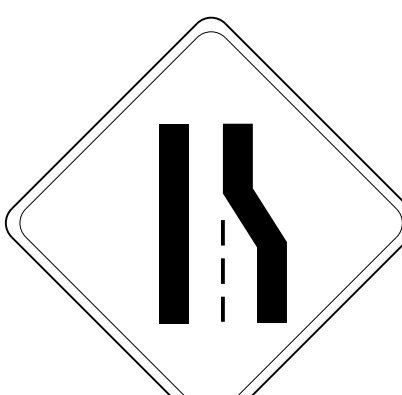


M4 - 9L (LEFT) [30" x 24"]
M4 - 9R (RIGHT) [30" x 24"]
(5 S.F.)

M4 - 9 (L or R) (S) [48" x 36"]
(12 S.F.)

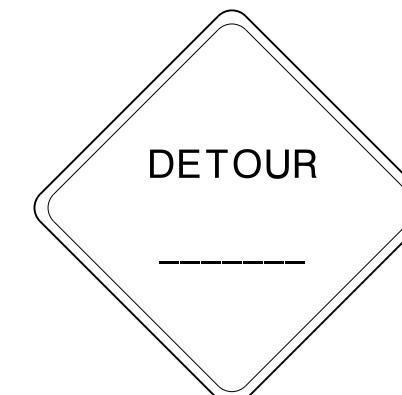


R4 - 1 [24" x 30"]
(5 S.F.)

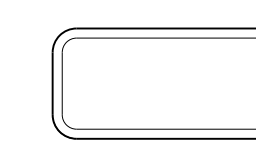


(L OR R)

W4 - 2 [48" x 48"]
(16 S.F.)



W20 - 2 [48" x 48"]
(16 S.F.)



M4 - 9N [30" x 12" MIN.]
(2.5 S.F.)

(SIZE WILL VARY WITH LENGTH OF STREET NAME)
STREET NAME SIGN TO BE USED IN CONJUNCTION WITH M4 - 9 SIGNS BLACK ON ORANGE



W8 - 15F [48" x 48"]
(16 S.F.)

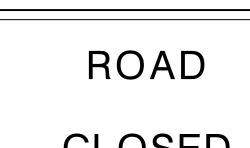


W8 - 15P [36" x 30"]
(7.5 S.F.)



M4 - 9LX (LEFT) [30" x 24"]
M4 - 9RX (RIGHT) [30" x 24"]
(5 S.F.)

M4 - 9 (L or R) XS [48" x 36"]
(12 S.F.)



R11 - 2 [48" x 30"]
(10 S.F.)



W5 - 1 (S) [48" x 48"]
(16 S.F.)

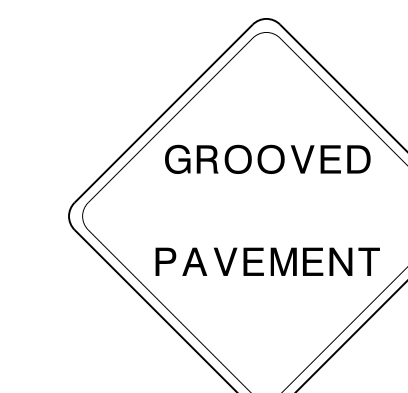


W20 - 3 [48" x 48"]
(16 S.F.)

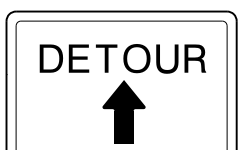


[24" x 24"]
(4 S.F.)

[30" x 30"] (S)
(6.3 S.F.)



W8 - 15 [48" x 48"]
(16 S.F.)

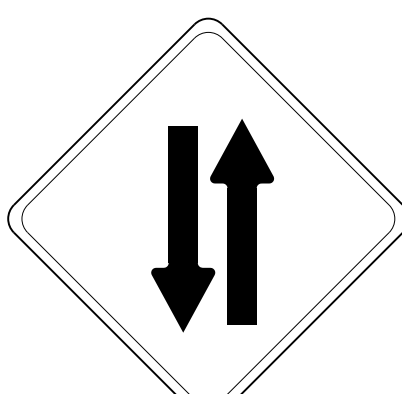


M4 - 9X [30" x 24"]
(5 S.F.)

M4 - 9X (S) [48" x 36"]
(12 S.F.)



R11 - 3 [60" x 30"]
(12.5 S.F.)



W6 - 3 [48" x 48"]
(16 S.F.)



W20 - 4 [48" x 48"]
(16 S.F.)

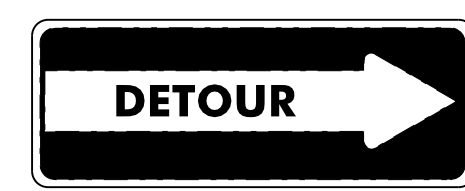


[24" x 24"]
(4 S.F.)

[30" x 30"] (S)
(6.3 S.F.)



W99 - 2 [48" x 48"]
(16 S.F.)



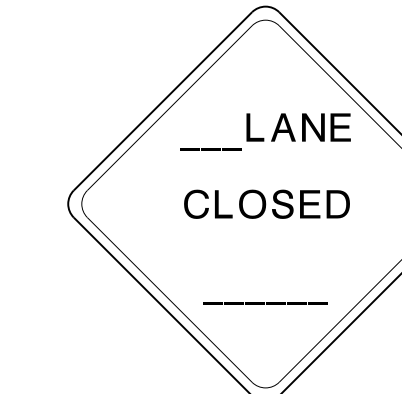
M4 - 10L (LEFT) [48" x 18"]
M4 - 10R (RIGHT) [48" x 18"]
(6 S.F.)



R11 - 4 [60" x 30"]
(12.5 S.F.)



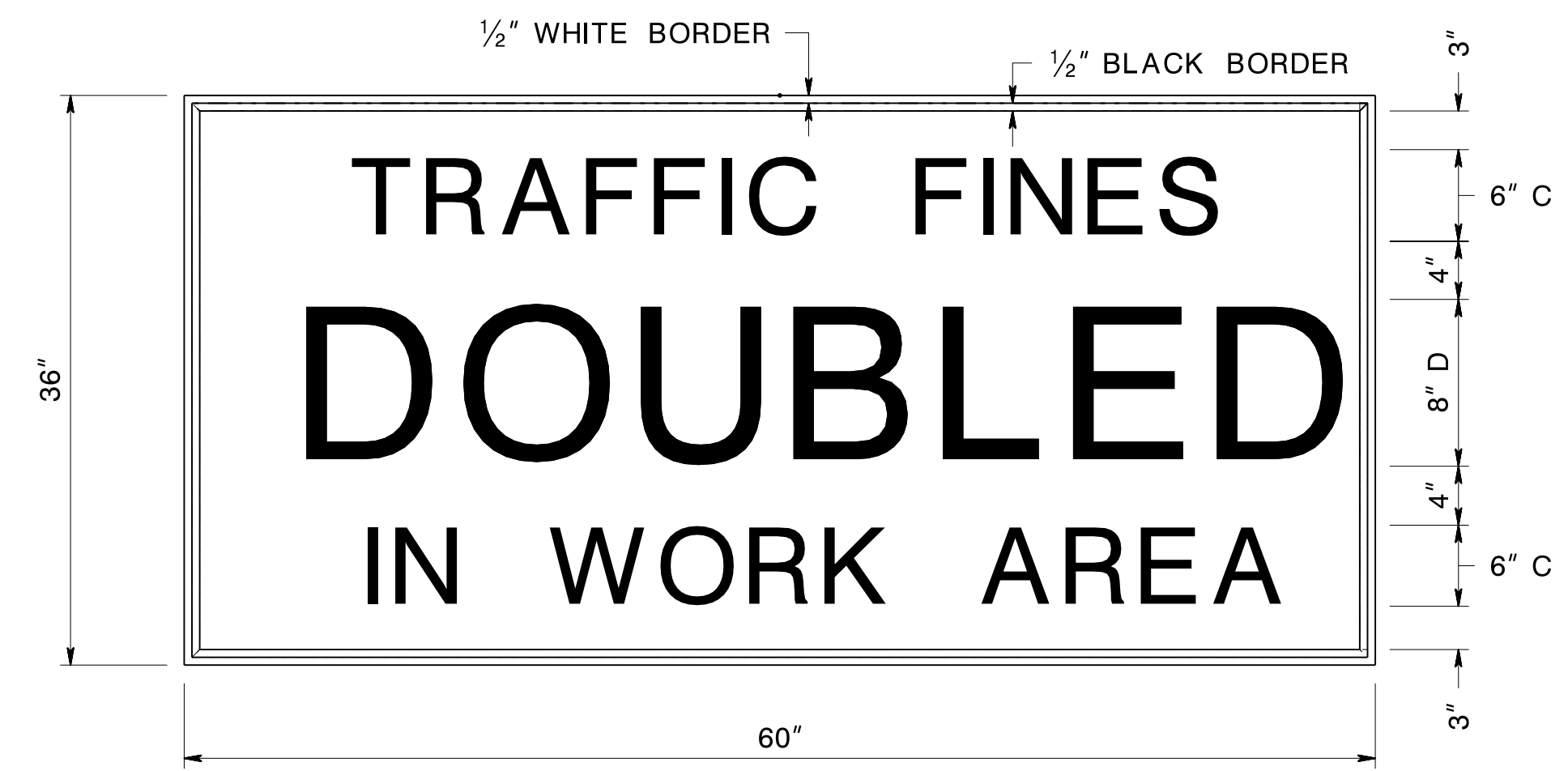
W20 - 7b [48" x 48"]
(16 S.F.)



(L OR R) (CENTER)
W20 - 5 [48" x 48"]
(16 S.F.)

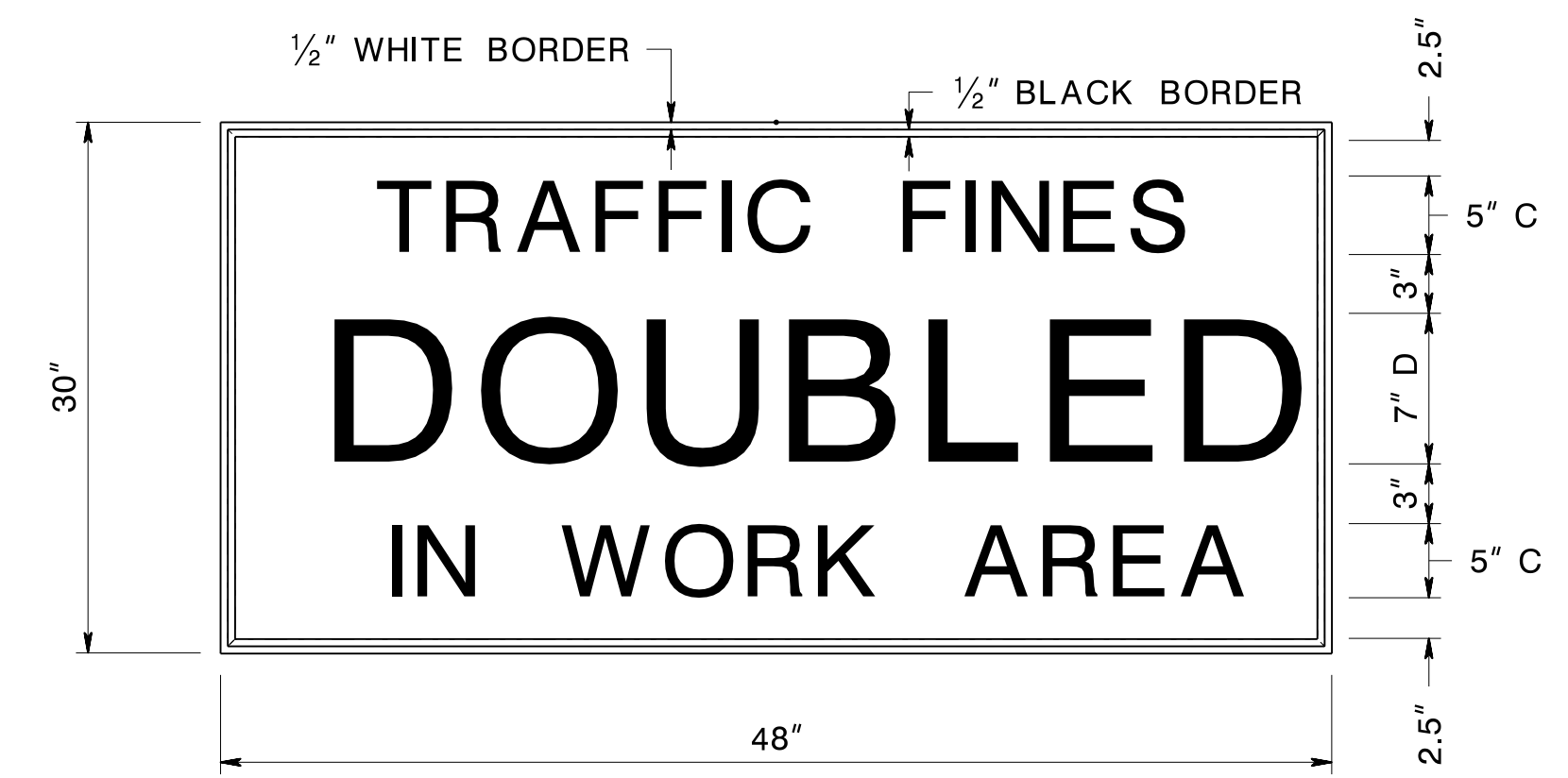
NOTE:

THE BORDER, THE WORDS "GIVE US A", "SLOW DOWN!", AND THE BRAKE PEDAL ARE BLACK; LEAVING THE WORD "BRAKE" ORANGE.



NOTE:
MESSAGE TO BE BLACK LETTERS
ON WHITE REFLECTIVE BACKGROUND.

R(NJ)5-17 60" x 36"
(15 S.F.)



NOTE:
MESSAGE TO BE BLACK LETTERS
ON WHITE REFLECTIVE BACKGROUND.

R(NJ)5-17 48" x 30"
(10 S.F.)

GENERAL NOTES:

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- LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER FOR THE DISTANCE TO BE USED ON THE ADVANCE WARNING SIGNS, AND FOR THE SPEED LIMIT TO BE USED ON THE R2-1 SIGN.
- DISTANCE LEGEND: SIGN NUMBER FOLLOWED BY A LETTER & DISTANCE, ARE THE SIGN PLACEMENTS FOR USE WITH TCD-3 THROUGH TCD-21 AND PROJECT SPECIFIC PLANS. ALL DISTANCES ARE FROM THE TRANSITION OR POINT OF RESTRICTION.

LETTER	DISTANCE
A	1500'
B	1000'
C	500'
D	MILE
E	___ MILES AHEAD
F	AHEAD

BACKING MATERIAL

- ALUMINUM SHALL BE FLAT SHEET OF ALLOY AND TEMPER 5052-H38 OR 6061-T6 :
 - 0.10" THICK FOR ALL CONSTRUCTION SIGNS EXCEPT SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.
 - 0.024" THICK FOR ALL CONSTRUCTION SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.

TEMPORARY SIGN SUPPORTS

- SIGN SUPPORTS SHALL BE OF WELL SEASONED LUMBER, S4S, FREE OF SPLITS, KNOTS AND WARPS, OR OF STEEL COMPONENTS.
- WOOD POSTS SHALL HAVE A UNIFORM CROSS-SECTION AND SHALL NOT EXCEED THE FOLLOWING DIMENSIONS FOR:
 - SINGLE POST = 4" x 6"
 - TWO POSTS = 3" x 6" OR 4" x 5"
 - THREE POSTS = 3" x 5" OR 4" x 4"

4" X 6" WOOD POSTS SHALL BE MODIFIED BY DRILLING 1 1/2 INCH DIAMETER HOLES 4 INCHES AND 18 INCHES ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.
- NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS SHALL BE 7 FOOT MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST SHALL NOT EXCEED 3.5 FEET.
- STEEL POSTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN SUPPORT.
- TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA SHALL BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.
- WOOD POST TO BE USED ONLY ON TEMPORARY SIGN SUPPORT.

SIGN FACES

- SIGN FACES SHALL BE ASTM D 4956 TYPE VII OR VIII FLUORESCENT ORANGE SHEETING.

FASTENING

- ALL SIGNS SHALL BE SECURELY FASTENED TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH THE SPECIFICATIONS.

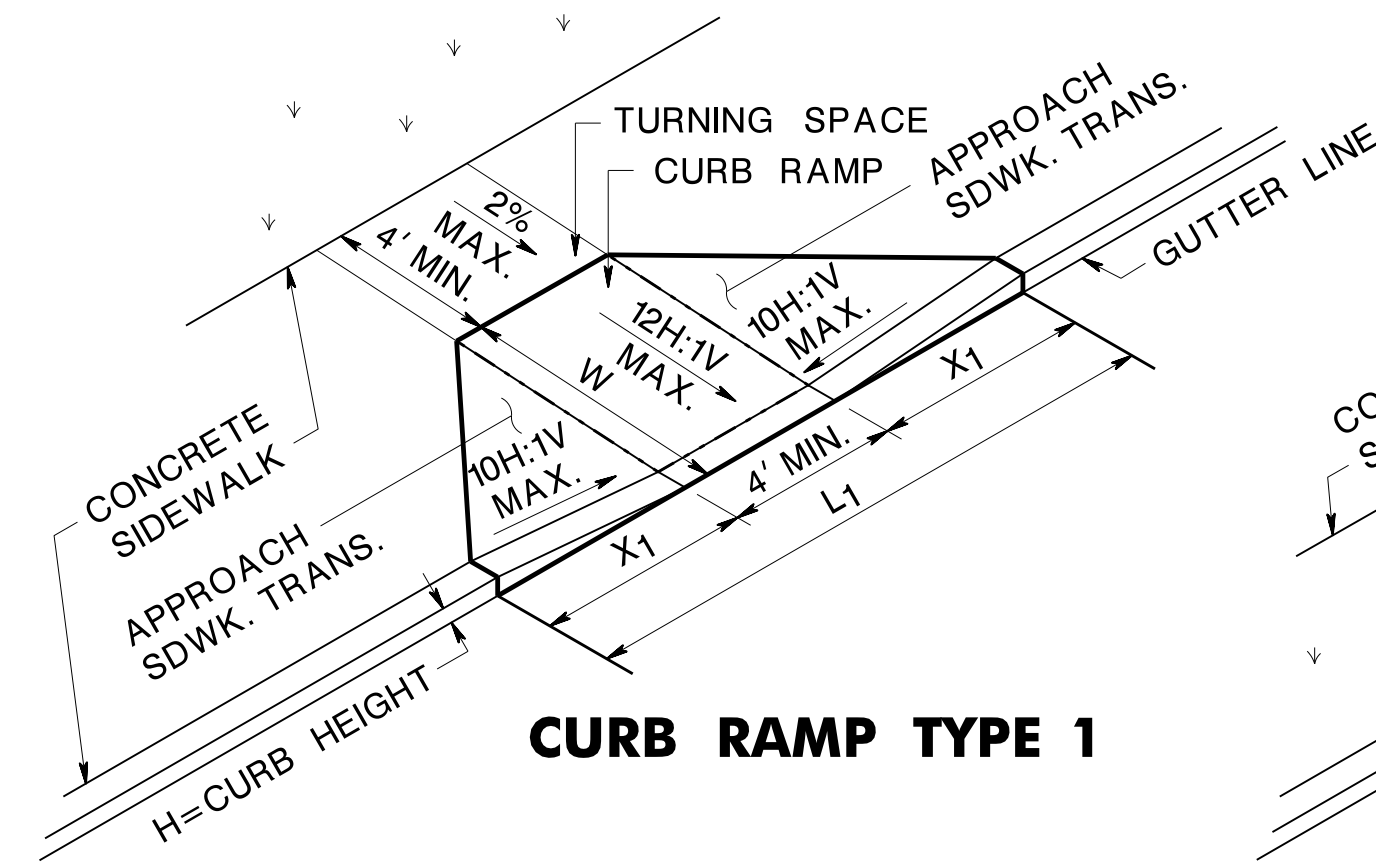
CONSTRUCTION SIGNS
N.T.S.

DTL-03
DTL-14

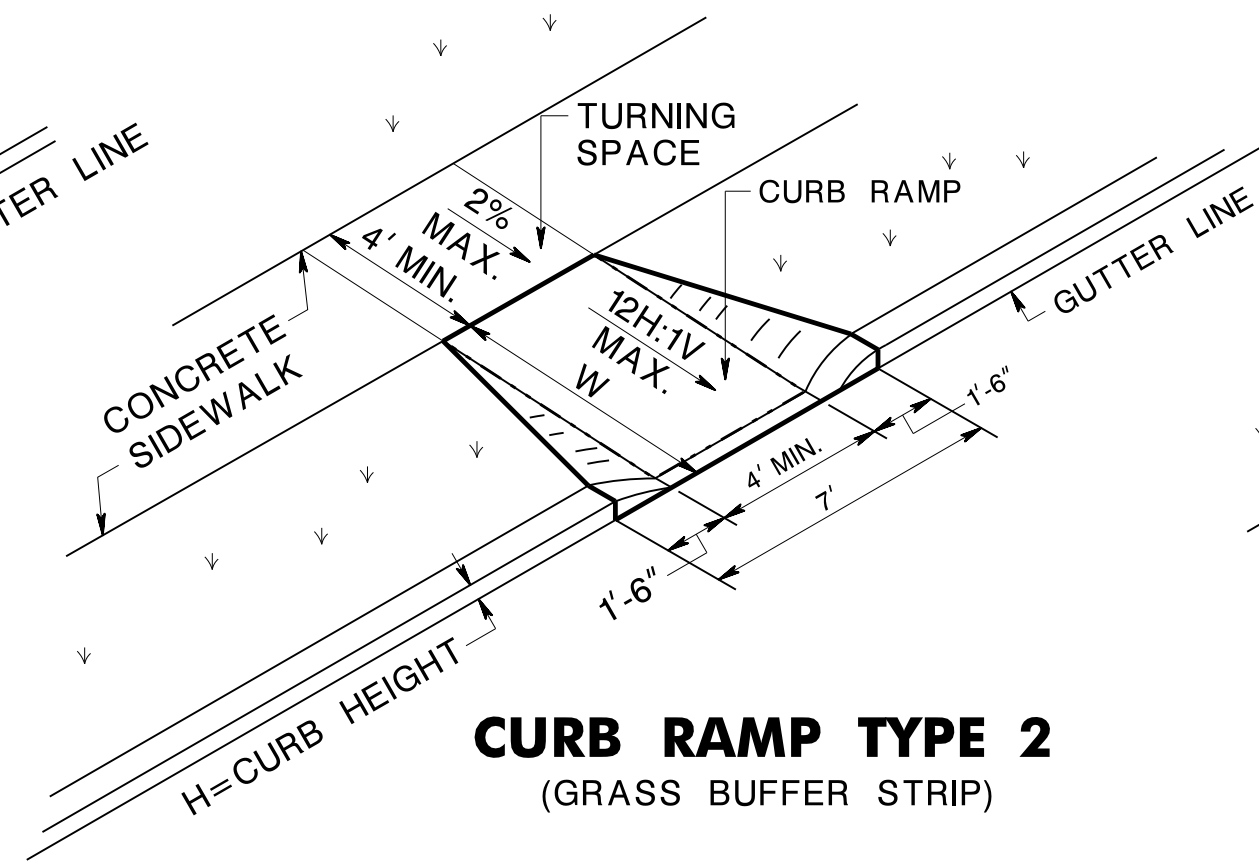
COUNTY OF UNION DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES	
CONSTRUCTION DETAILS	
WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS	
MICHAEL BAKER INTERNATIONAL, INC. CERTIFICATION OF AUTHORIZATION NO. 24GA27954700	
BRAD J. MILLER NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300	

CD-159-7.1

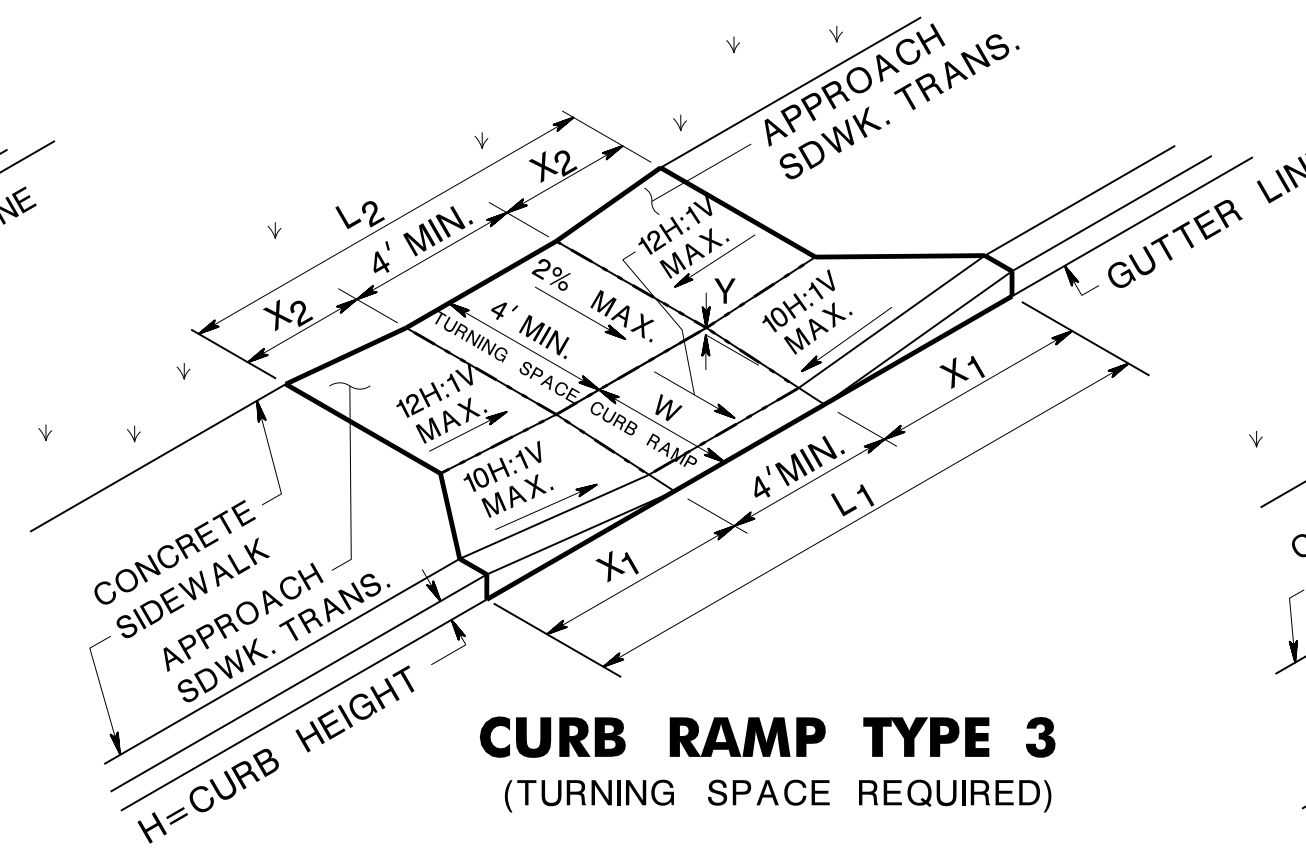
BDC02D-04-REVISIONS TO SIGN W9-3, ADD SIGNS
 BDC00D-08-REVISIONS TO NOTES-BACKING MAT.
 BDC07D-01-ORIGINAL SHEET
 Baker PW Path Location: p:\w\DCPW\PP\h\m\maker\corp.com\p\proj\cd\documents\project\h\hamilton\office\489728_NJTPA-FY-2015-Local-Pre-Engineering-Assistance\C:\CADD\Plan\Detail\DTL-03.dgn



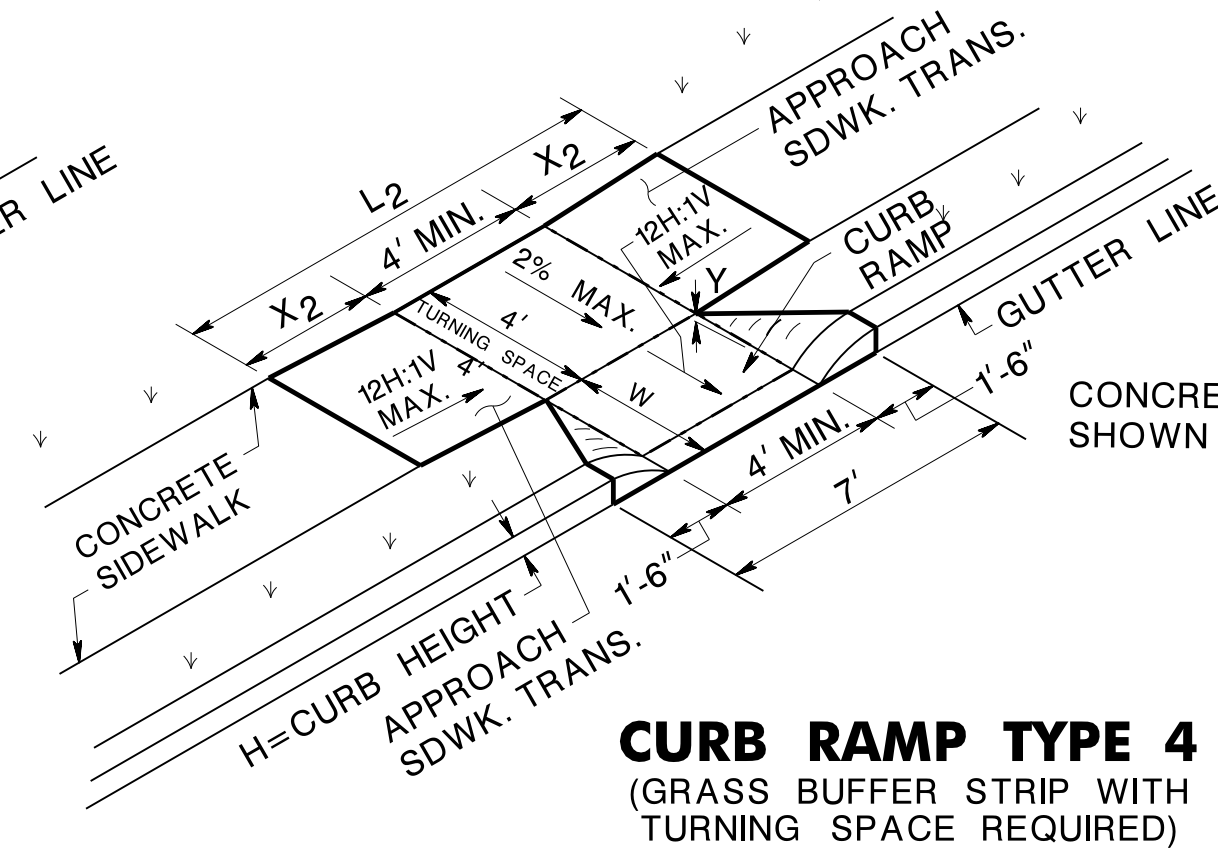
CURB RAMP TYPE 1



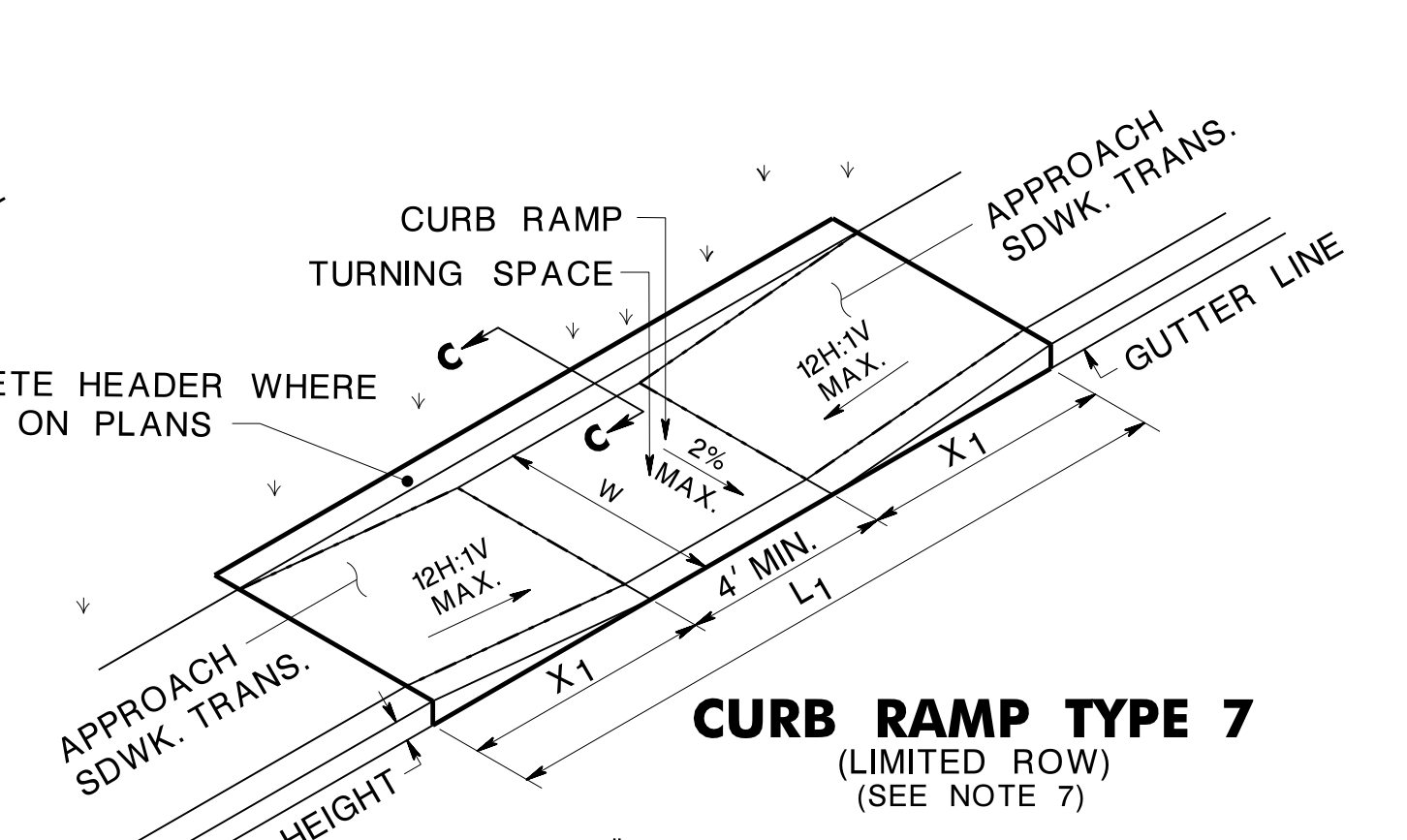
CURB RAMP TYPE 2
(GRASS BUFFER STRIP)



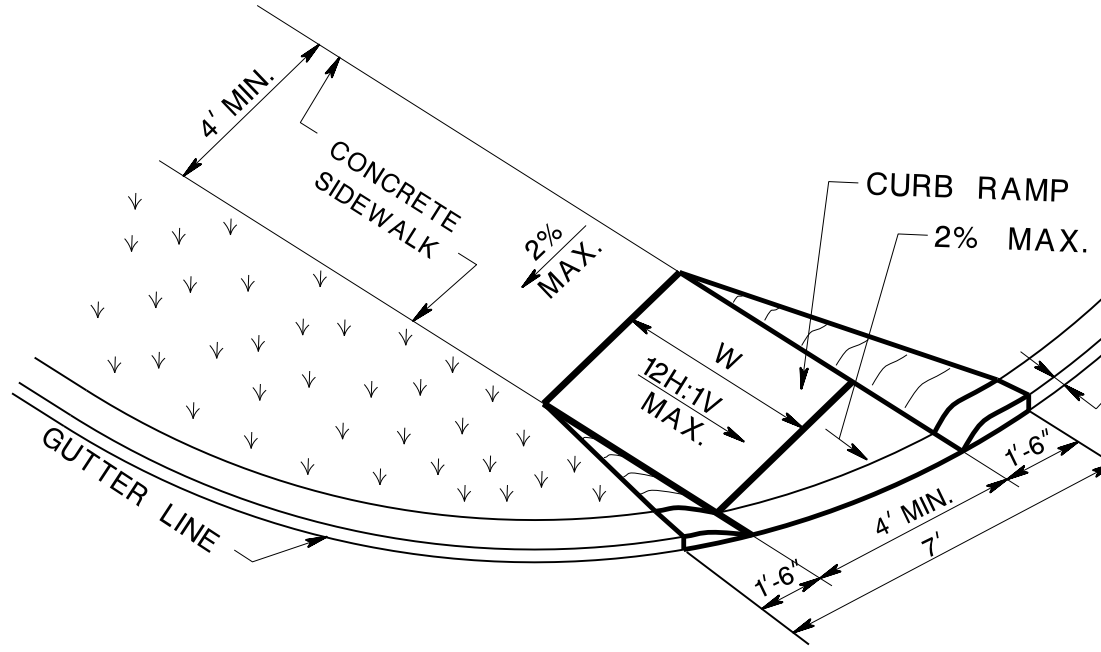
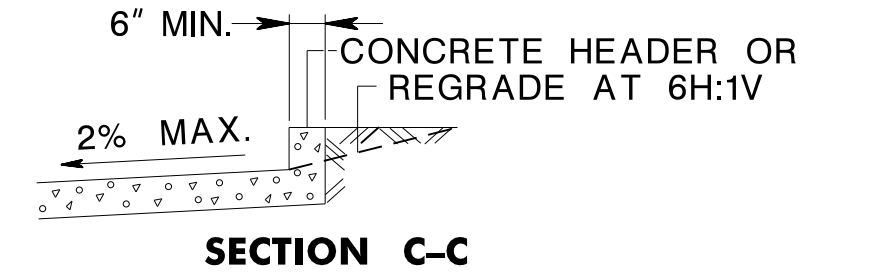
CURB RAMP TYPE 3
(TURNING SPACE REQUIRED)



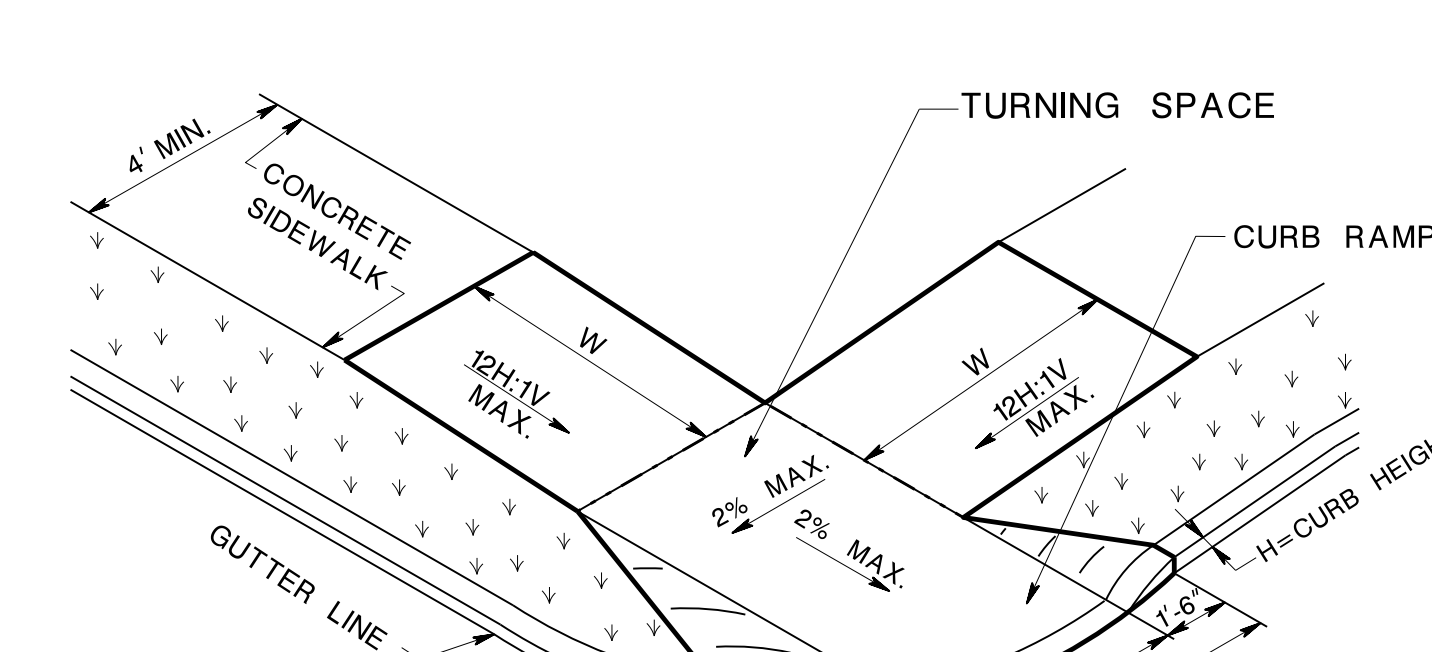
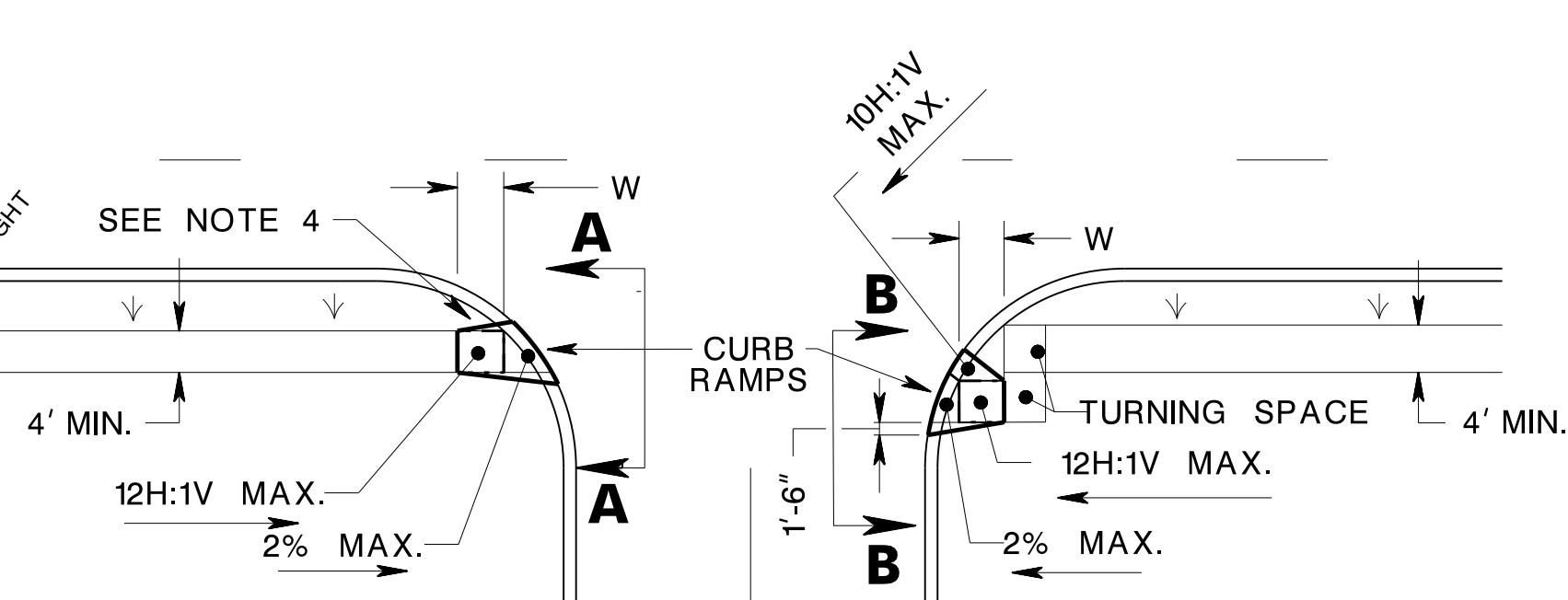
CURB RAMP TYPE 4
(GRASS BUFFER STRIP WITH TURNING SPACE REQUIRED)



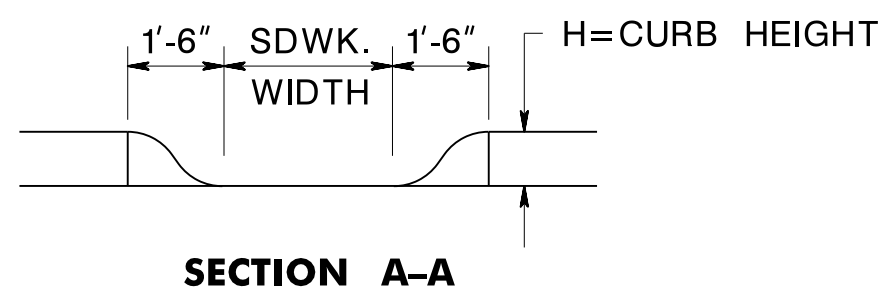
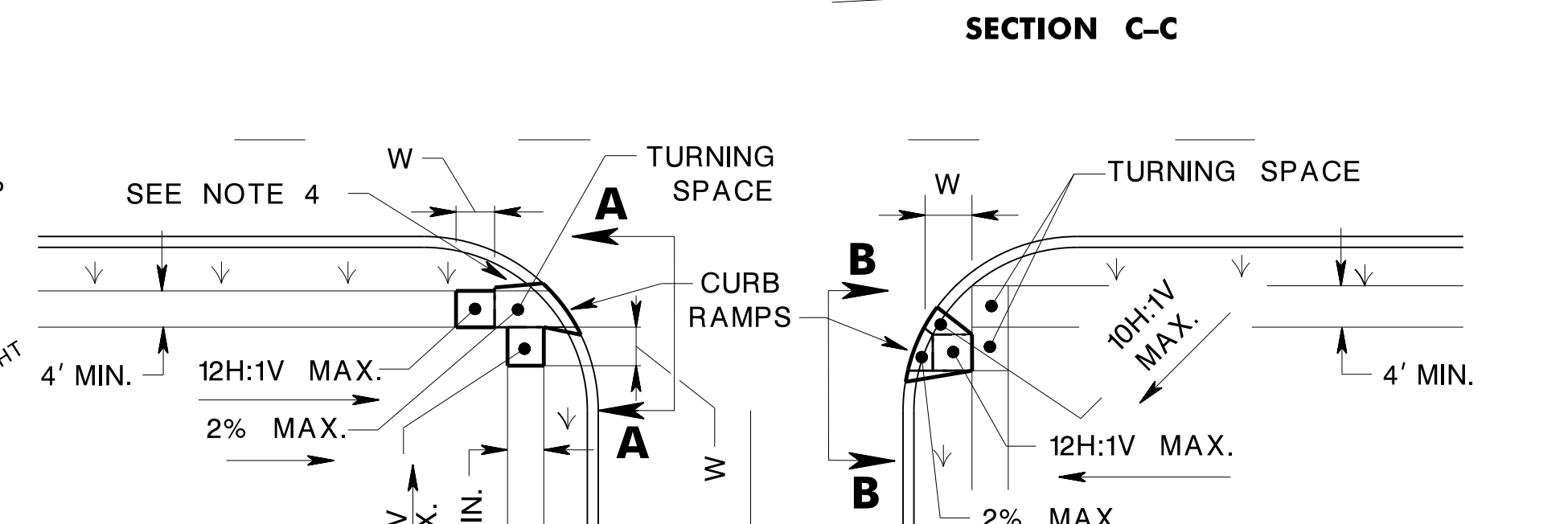
CURB RAMP TYPE 7
(LIMITED ROW)
(SEE NOTE 7)



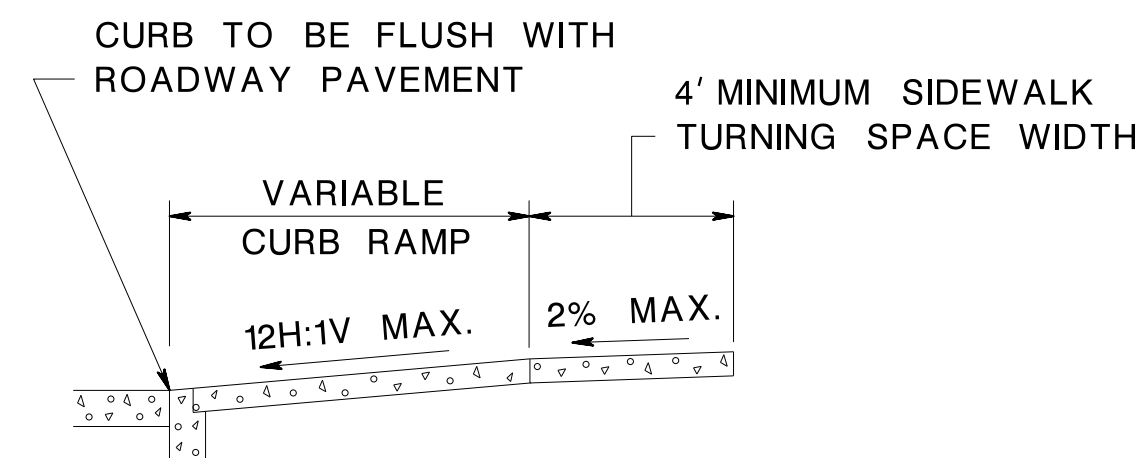
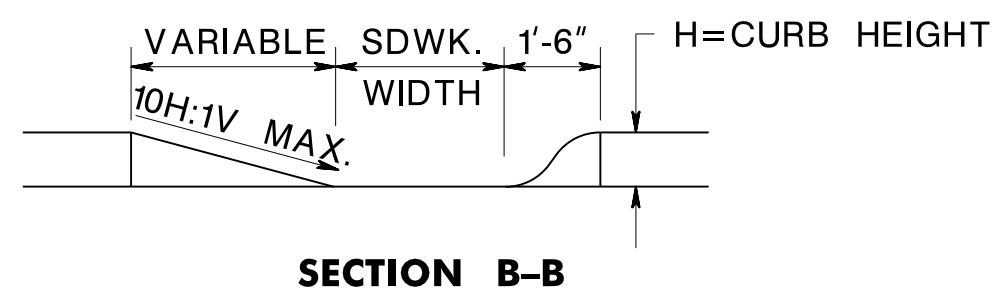
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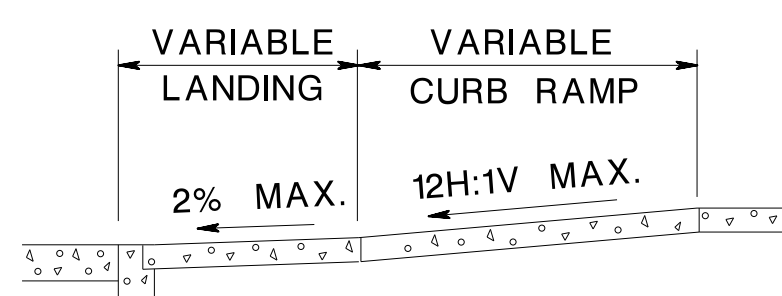
CURB RAMP TYPE 6



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



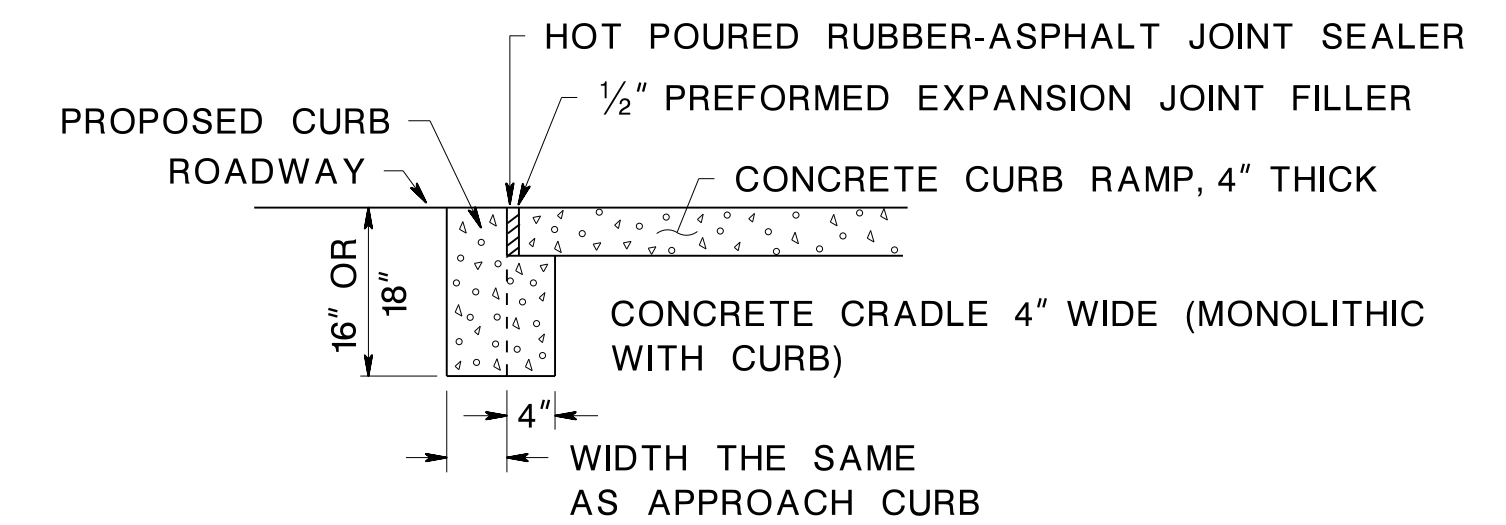
SECTION THROUGH CURB RAMPS 1 THROUGH 4



SECTION THROUGH CURB RAMPS 5 AND 6

NOTES:

- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
- FOR DIMENSIONS SEE CD-606-1B AND CD-606-1C.
- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
- FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
- SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
- CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
- WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
- DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
- THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.



DROPPED CURB AND CRADLE

CONCRETE SIDEWALK
(PUBLIC SIDEWALK CURB RAMP)

N.T.S.

CD-606-1

DTL-04

DTL-14

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

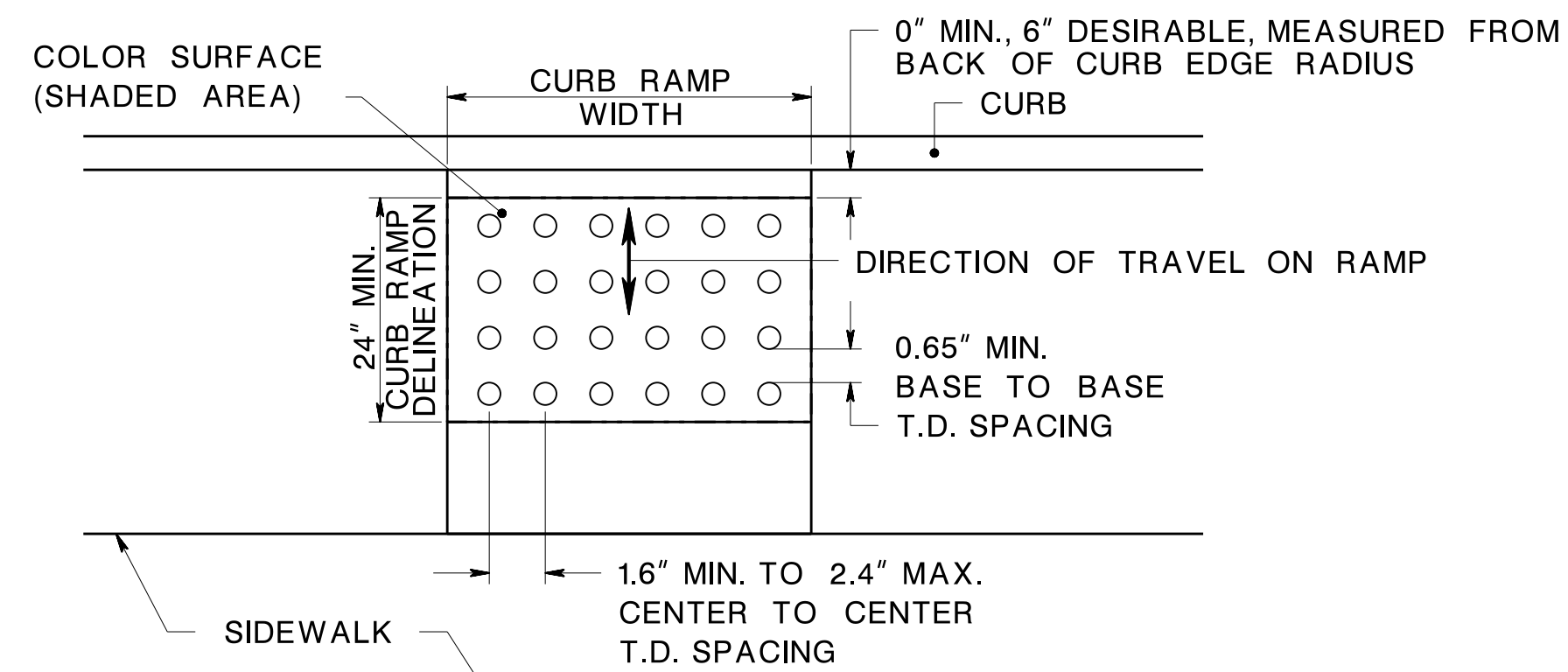
CONSTRUCTION DETAILS

**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**

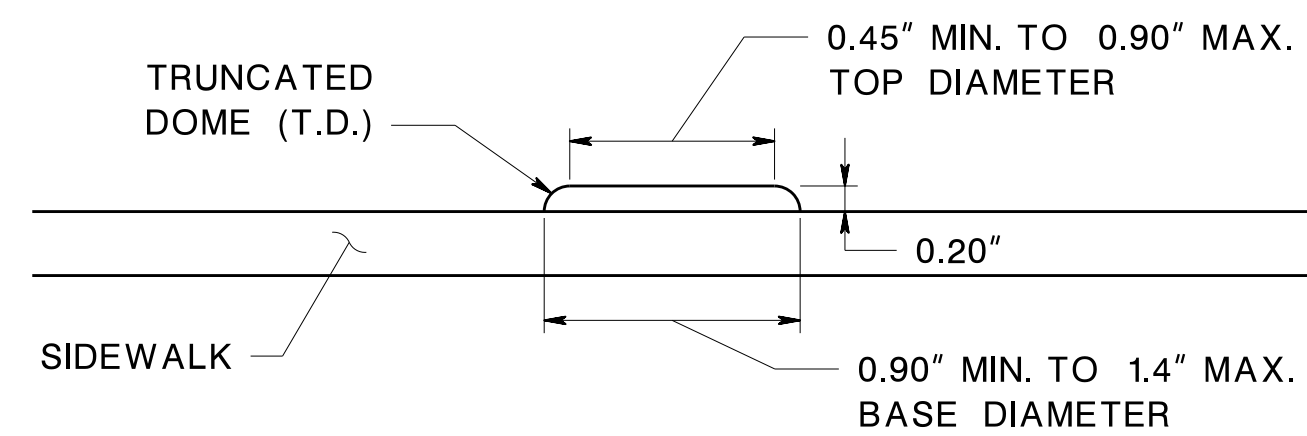
MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

CD-606-1.1

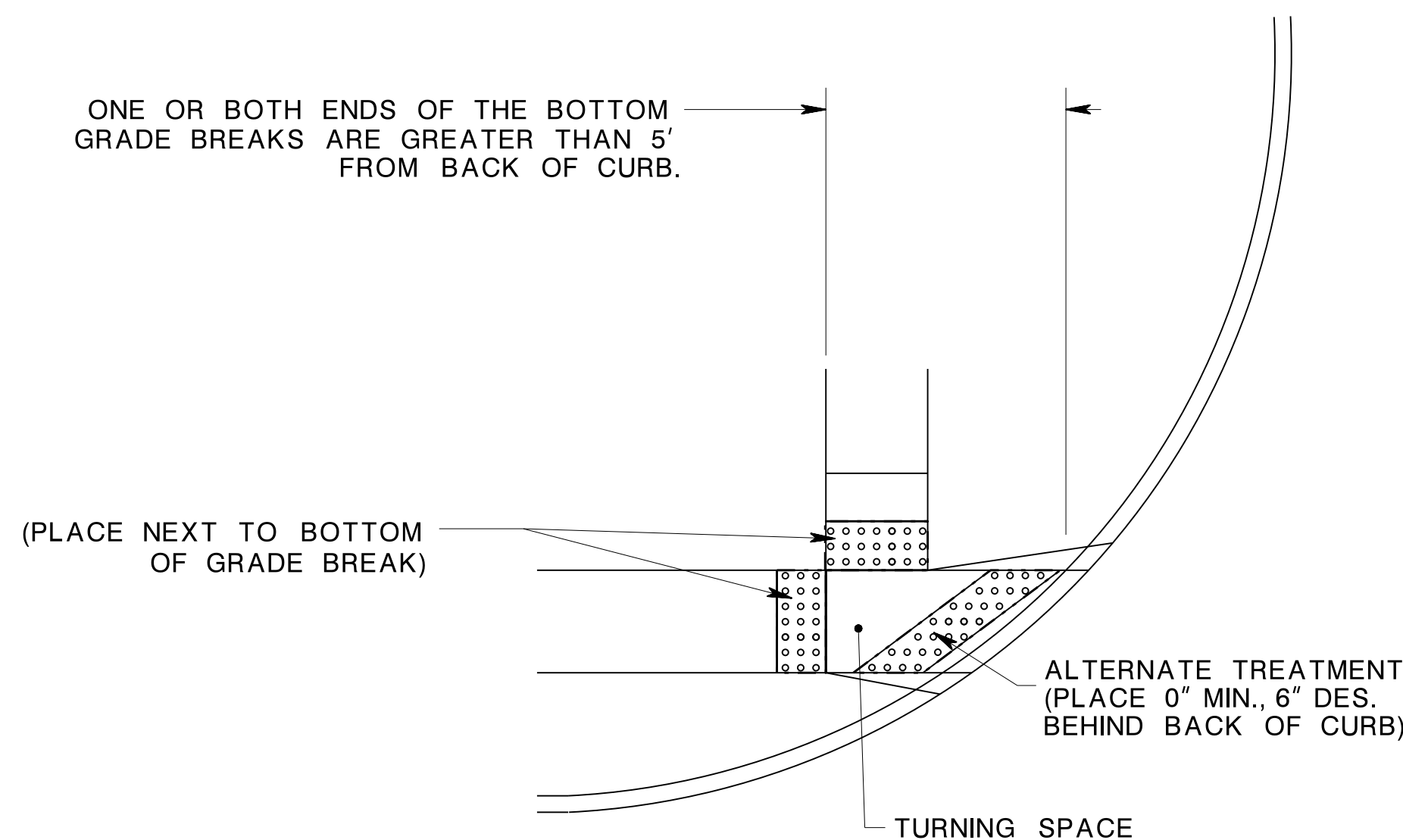
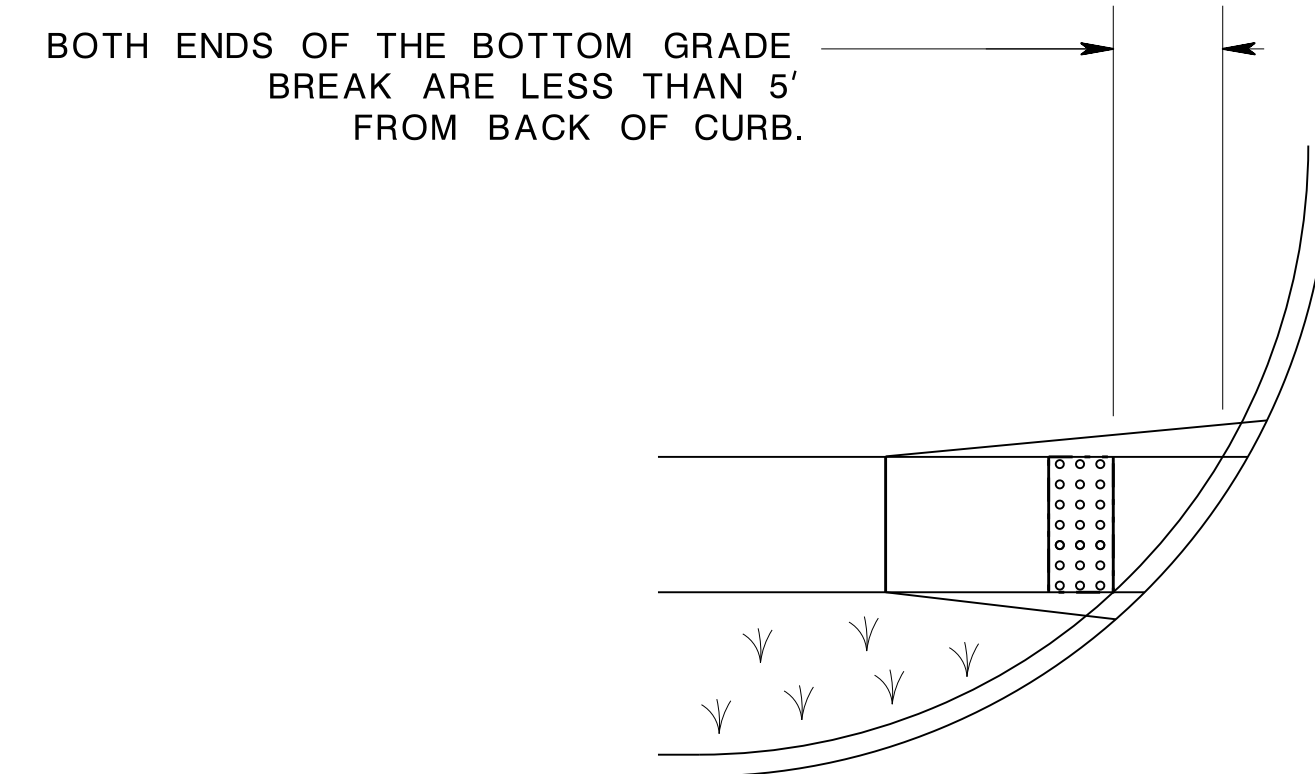


PLAN VIEW

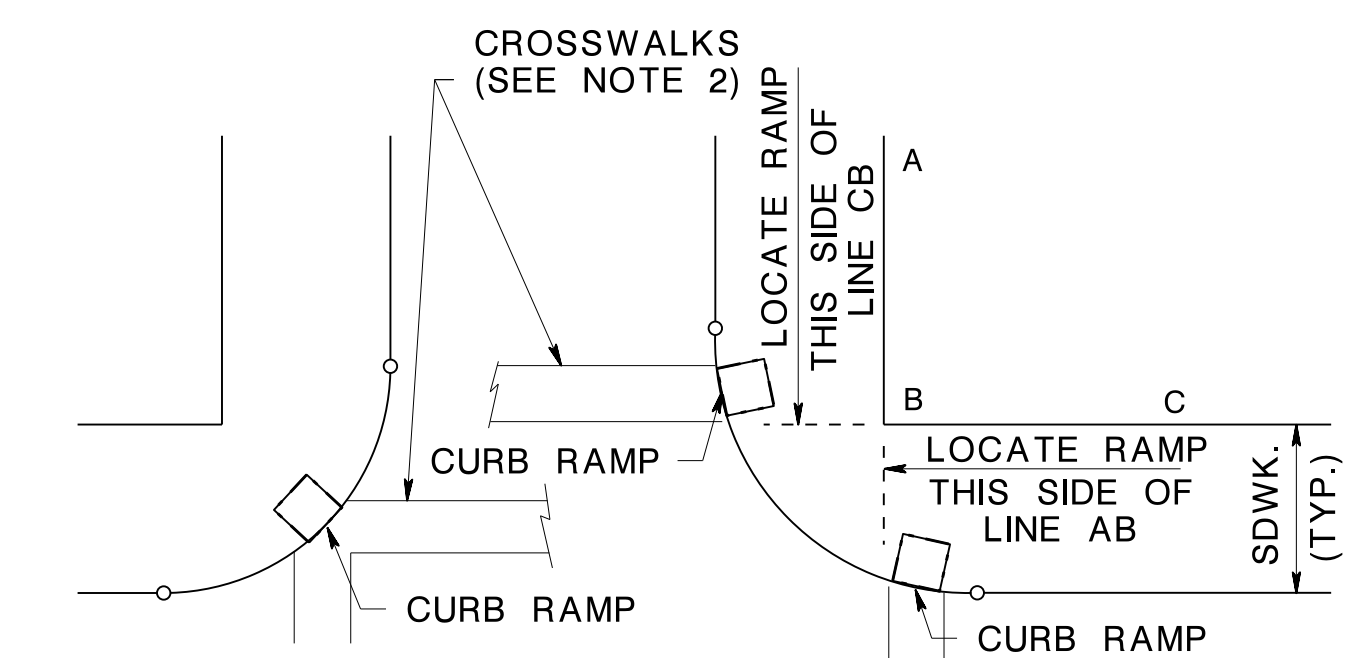


ELEVATION

DETECTABLE WARNING SURFACE



PLACEMENT OF DETECTABLE WARNING SURFACE FOR CURB RAMP TYPE 5 AND 6



ALTERNATE TREATMENT
(SEE NOTE 5)

PREFERRED TREATMENT
(SEE NOTE 5)

LOCATION OF CURB RAMP TYPES 1, 2, 3, 4 & 7 FOR CROSSING PARALLEL AND PERPENDICULAR TO HIGHWAY

NOTES:

1. KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
2. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
3. FOR NARROW ISLAND WIDTH, SEE PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS DETAIL.
4. FOR MEDIUM AND LARGE ISLAND WIDTH, SEE CURB RAMP TYPE 1 ON CD-606-1.
5. CONSTRUCT CURB RAMP TYPES 1, 2, 3, 4 & 7 PERPENDICULAR TO CURBLINE, AS SHOWN.
6. IF A CURB RAMP IS REQUIRED, THE LOCATION OF THE DETECTABLE WARNING SURFACE MUST BE AT THE BOTTOM OF THE RAMP AND WITHIN THE REQUIRED DISTANCE FROM THE RAIL.

DETECTABLE WARNING SURFACE

N.T.S.

DTL-05
CD-606-1A
DTL-14

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION DETAILS

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

35
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CD-606-1.1A

BDC2D-05-ORIGINAL SHEET

Baker PW Path Location: p:\proj\DCR\WAPP\hkr.mbakercorp.com\proj\cd\Documents\Project\hamilton\Office\489798_NJTPA-FY-2015-Local-Pre-Engineering-Assistance\C:\TCAD\Plan\Detail\DTL-05.dgn

CURB RAMP TYPE 1

0.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	2.50	2.50	9.00
4	4	3.33	3.33	10.67
5	5	4.17	4.17	12.33
6	6	5.00	5.00	14.00
7	7	5.83	5.83	15.67
8	8	6.67	6.67	17.33
9	9	7.50	7.50	19.00

1.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	2.78	2.27	9.05
4	4	3.70	3.03	10.73
5	5	4.63	3.79	12.42
6	6	5.56	4.55	14.10
7	7	6.48	5.30	15.78
8	8	7.41	6.06	17.47
9	9	8.33	6.82	19.15

2.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.13	2.08	9.21
4	4	4.17	2.78	10.94
5	5	5.21	3.47	12.68
6	6	6.25	4.17	14.42
7	7	7.29	4.86	16.15
8	8	8.33	5.56	17.89
9	9	9.38	6.25	19.63

3.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.57	1.92	9.49
4	4	4.76	2.56	11.33
5	5	5.95	3.21	13.16
6	6	7.14	3.85	14.99
7	7	8.33	4.49	16.82
8	8	9.52	5.13	18.65
9	9	10.71	5.77	20.48

4.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	4.17	1.79	9.95
4	4	5.56	2.38	11.94
5	5	6.94	2.98	13.92
6	6	8.33	3.57	15.90
7	7	9.72	4.17	17.89
8	8	11.11	4.76	19.87
9	9	12.50	5.36	21.86

5.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	5.00	1.67	10.67
4	4	6.67	2.22	12.89
5	5	8.33	2.78	15.11
6	6	10.00	3.33	17.33
7	7	11.67	3.89	19.56
8	8	13.33	4.44	21.78
9	9	15.00	5.00	24.00

6.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	6.25	1.56	11.81
4	4	8.33	2.08	14.42
5	5	10.42	2.60	17.02
6	6	12.50	3.13	19.63
7	7	14.58	3.65	22.23
8	8	15.00	4.17	23.17
9	9	15.00	4.69	23.69

7.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	8.33	1.47	13.80
4	4	11.11	1.96	17.07
5	5	13.89	2.45	20.34
6	6	15.00	2.94	21.94
7	7	15.00	3.43	22.43
8	8	15.00	3.92	22.92
9	9	15.00	4.41	23.41

CURB RAMP TYPE 3

0.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	2.50	2.50	9.00		1.10	1.10	6.20
4	4	3.33	3.33	10.67		2.10	2.10	8.20
5	5	4.17	4.17	12.33		3.10	3.10	10.20
6	6	5.00	5.00	14.00	2.5	4.10	4.10	12.21
7	7	5.83	5.83	15.67		5.10	5.10	14.21
8	8	6.67	6.67	17.33		6.10	6.10	16.21
9	9	7.50	7.50	19.00		7.10	7.10	18.21

1.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	2.78	2.27	9.05		1.25	0.98	6.24
4	4	3.70	3.03	10.73		2.39	1.88	8.27
5	5	4.63	3.79	12.42		3.53	2.77	10.30
6	6	5.56	4.55	14.10	2.5	4.66	3.66	12.33
7	7	6.48	5.30	15.78		5.80	4.56	14.36
8	8	7.41	6.06	17.47		6.94	5.45	16.39
9	9	8.33	6.82	19.15		8.07	6.34	18.42

2.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	3.13	2.08	9.21		1.45	0.89	6.34
4	4	4.17	2.78	10.94		2.77	1.69	8.46
5	5	5.21	3.47	12.68		4.08	2.50	10.58
6	6	6.25	4.17	14.42	2.5	5.40	3.31	12.71
7	7	7.29	4.86	16.15		6.72	4.12	14.83
8	8	8.33	5.56	17.89		8.03	4.92	16.95
9	9	9.38	6.25	19.63		9.35	5.73	19.08

3.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	3.57	1.92	9.49		1.72	0.81	6.53
4	4	4.76	2.56	11.33		2.72	1.52	8.44
5	5	5.95	3.21	13.16		3.72	2.22	10.45
6	6	7.14	3.85	14.99	3.0	4.72	3.02	12.46
7	7	8.33	4.49	16.82		5.72	3.72	14.47
8	8	9.52	5.13	18.65		6.72	4.42	16.48
9	9	10.71	5.77	20.48		7.72	5.12	18.49

4.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	4.17	1.79	9.95		1.96	0.71	6.72
4	4	5.56	2.38	11.94		2.96	1.41	8.73
5	5	6.94	2.98	13.92		3.96	2.11	10.74
6	6	8.33	3.57	15.90	3.5	4.96	2.81	12.75
7	7	9.72	4.17	17.89		5.96	3.51	14.76
8	8	11.11	4.76	19.87		6.96	4.21	16.77
9	9	12.50	5.36	21.86		7.96	4.91	18.78

5.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	5.00	1.67	10.67		2.23	0.61	7.98
4	4	6.67	2.22	12.89		3.23	1.31	10.01
5	5	8.33	2.78	15.11		4.23	2.01	12.04
6	6	10.00	3.33	17.33	4.0	5.23	2.71	14.07
7	7	11.67	3.89	19.56		6.23	3.41	16.10
8	8	13.33	4.44	21.78		7.23	4.11	18.13
9	9	15.00	5.00	24.00		8.23	4.81	20.16

6.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	6.25	1.56	11.81		2.41	0.51	8.26
4	4	8.33	2.08	14.42		3.41	1.21	10.29
5	5	10.42	2.60	17.02		4.41	1.91	12.32
6	6	12.50	3.13	19.63	3.5	5.41	2.61	14.35
7	7	14.58	3.65	22.23		6.41	3.31	16.38
8	8	15.00	4.17	23.17		7.41	4.01	18.41
9	9	15.00	4.69	23.69		8.41	4.71	20.44

CURB RAMP TYPE 2				
0-8 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	1.50	1.50	7.00
4	4	1.50	1.50	7.00
5	5	1.50	1.50	7.00
6	6	1.50	1.50	7.00
7	7	1.50	1.50	7.00
8	8	1.50	1.50	7.00
9	9	1.50	1.50	7.00

1.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	2.78	2.27	9.05		0.82	0.64	5.46
4	4	3.70	3.03	10.73		1.96	1.54	7.49
5	5	4.63	3.79	12.42		3.09	2.43	9.52
6	6	5.56	4.55	14.10	3.0	4.23	3.32	11.55
7	7	6.48	5.30	15.78		5.37	4.22	13.58
8	8	7.41	6.06	17.47		6.50	5.11	15.61
9	9	8.33	6.82	19.15		7.64	6.00	17.64

2.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	3.13	2.08	9.21		0.39	0.30	4.69
4	4	4.17	2.78	10.94		1.53	1.20	6.72
5	5	5.21	3.47	12.68		2.66	2.09	8.75
6	6	6.25	4.17	14.42	3.0	3.80	2.98	10.78
7	7	7.29	4.86	16.15		4.94	3.88	12.81
8	8	8.33	5.56	17.89		6.07	4.77	14.84
9	9	9.38	6.25	19.63		7.21	5.66	16.87

3.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	3.57	1.92	9.49		1.09	0.86	5.95
4	4	4.76	2.56	11.33		2.23	1.75	7.98
5	5	5.95	3.21	13.16		3.37	2.65	10.01
6	6	7.14	3.85	14.99	4.0	4.50	3.54	12.04
7	7	8.33	4.49	16.82		5.64	4.43	14.07
8	8	9.52	5.13	18.65		6.78	5.32	16.10
9	9	10.71	5.77	20.48				

4.0 % GUTTER LINE PROFILE								
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	3	4.17	1.79	9.95		1.80	0.45	6.26
4	4	5.56	2.38	11.94		4.31	1.08	9.38
5	5	6.94	2.98	13.92		6.81	1.70	12.50
6	6	8.33	3.57	15.90	3.0	9.31		

CURB RAMP TYPE 4

0.0 % GUTTER LINE PROFILE							
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET		
3	2.5	2.5	1.10	1.10	6.20		
4			2.39	2.10	8.20		
5			3.10	3.10	10.20		
6			4.10	4.10	12.20		
7			5.10	5.10	14.21		
8			6.10	6.10	16.21		
9			7.10	7.10	18.21		
3			**	**	**	**	**
4			1.72	1.72	7.44		
5	2.72	2.72	9.44				
6	3.72	3.72	11.45				
7	4.72	4.72	13.45				
8	5.72	5.72	15.45				
9	6.72	6.72	17.45				
3	**	**	**	**	**		
4	1.34	1.34	6.68				
5	2.34	2.34	8.68				
6	3.34	3.34	10.69				
7	4.34	4.34	12.69				
8	5.34	5.34	14.69				
9	6.34	6.34	16.69				
3	**	**	**	**	**		
4	1.96	1.96	7.92				
5	2.96	2.96	9.93				
6	3.96	3.96	11.93				
7	4.96	4.96	13.93				
8	5.96	5.96	15.93				

1.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	1.25	0.98	6.24
4			2.39	1.88	8.27
5			3.53	2.77	10.30
6			4.66	3.66	12.33
7			5.80	4.56	14.36
8			6.94	5.45	16.39
9			8.07	6.34	18.42
3			0.82	0.64	5.46
4			1.96	1.54	7.49
5	3.09	2.43	9.52		
6	4.23	3.32	11.55		
7	5.37	4.22	13.58		
8	6.50	5.11	15.61		
9	7.64	6.00	17.64		
3	0.39	0.30	4.69		
4	1.53	1.20	6.72		
5	2.66	2.09	8.75		
6	3.80	2.98	10.78		
7	4.94	3.88	12.81		
8	6.07	4.77	14.84		
9	7.21	5.66	16.87		
3	**	**	**	**	**
4	1.09	0.86	5.95		
5	2.23	1.75	7.98		
6	3.37	2.65	10.01		
7	4.50	3.54	12.04		
8	5.64	4.43	14.07		
9	6.78	5.32	16.10		

2.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	1.45	0.89	6.34
4			2.77	1.69	8.46
5			4.08	2.50	10.58
6			5.40	3.31	12.71
7			6.72	4.12	14.83
8			8.03	4.92	16.95
9			9.35	5.73	19.08
3			0.95	0.58	5.53
4			2.27	1.39	7.65
5	3.58	2.20	9.78		
6	4.90	3.00	11.90		
7	6.22	3.81	14.02		
8	7.53	4.62	16.15		
9	8.85	5.42	18.27		
3	0.45	0.28	4.72		
4	1.77	1.08	6.85		
5	3.08	1.89	8.97		
6	4.40	2.70	11.09		
7	5.72	3.50	13.22		
8	7.03	4.31	15.34		
9	8.35	5.12	17.46		
3	**	**	**	**	**
4	1.27	0.78	6.04		
5	2.58	1.58	8.16		
6	3.90	2.39	10.29		
7	5.22	3.20	12.41		
8	6.53	4.00	14.53		
9	7.85	4.81	16.66		

3.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	1.72	0.81	6.53
4			3.28	1.55	8.83
5			4.85	2.28	11.13
6			6.41	3.02	13.43
7			7.98	3.75	15.73
8			9.54	4.49	18.03
9			11.10	5.22	20.33
3			1.13	0.53	5.66
4			2.69	1.27	7.96
5	4.25	2.00	10.26		
6	5.82	2.74	12.55		
7	7.38	3.47	14.85		
8	8.94	4.21	17.15		
9	10.51	4.94	19.45		
3	0.53	0.25	4.78		
4	2.10	0.99	7.08		
5	3.66	1.72	9.38		
6	5.22	2.46	11.68		
7	6.79	3.19	13.98		
8	8.35	3.93	16.28		
9	9.91	4.66	18.58		
3	**	**	**	**	**
4	1.50	0.71	6.21		
5	3.07	1.44	8.51		
6	4.63	2.18	10.81		
7	6.19	2.91	13.11		
8	7.76	3.65	15.41		
9	9.32	4.38	17.71		

CURB RAMP TYPE 7

0.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.00	3.00	10.00
4	4	4.00	4.00	12.00
5	5	5.00	5.00	14.00
6	6	6.00	6.00	16.00
7	7	7.00	7.00	18.01
8	8	8.00	8.00	20.01
9	9	9.00	9.00	22.01

4.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	5.77	2.03	11.80
4	4	7.70	2.70	14.40
5	5	9.62	3.38	17.00
6	6	11.55	4.06	19.60
7	7	13.47	4.73	22.20
8	8	15.40	5.41	24.80
9	9	17.32	6.08	27.40

1.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.41	2.68	10.09
4	4	4.55	3.57	12.12
5	5	5.68	4.47	14.15
6	6	6.82	5.36	16.18
7	7	7.96	6.25	18.21
8	8	9.10	7.15	20.24
9	9	10.23	8.04	22.27

5.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	7.51	1.88	13.38
4	4	10.01	2.50	16.51
5	5	12.51	3.13	19.64
6	6	15.00	3.75	22.75
7	7	15.00	4.38	23.38
8	8	15.00	5.00	24.00
9	9	15.00	5.63	24.63

2.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.95	2.42	10.37
4	4	5.27	3.23	12.49
5	5	6.58	4.03	14.62
6	6	7.90	4.84	16.74
7	7	9.22	5.65	18.86
8	8	10.53	6.45	20.99
9	9	11.85	7.26	23.11

6.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	10.73	1.74	16.47
4	4	14.31	2.33	20.63
5	5	15.00	2.91	21.91
6	6	15.00	3.49	22.49
7	7	15.00	4.07	23.07
8	8	15.00	4.65	23.65
9	9	15.00	5.23	24.23

3.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	4.69	2.21	10.90
4	4	6.25	2.94	13.20
5	5	7.82	3.68	15.49
6	6	9.38	4.41	17.79
7	7	10.94	5.15	20.09
8	8	12.51	5.88	22.39
9	9	14.07	6.62	24.69

7.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	15.00	1.63	20.63
4	4	15.00	2.17	21.17
5	5	15.00	2.72	21.72
6	6	15.00	3.26	22.26
7	7	15.00	3.81	22.81
8	8	15.00	4.35	23.35
9	9	15.00	4.89	23.89

4.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	2.12	0.74	6.86
4			4.04	1.42	9.46
5			5.97	2.10	12.06
6			7.89	2.77	14.66
7			9.82	3.45	17.26
8			11.74	4.12	19.87
9			13.67	4.80	22.47
3			1.39	0.49	5.88
4			3.31	1.16	8.48
5	5.24	1.84	11.08		
6	7.16	2.52	13.68		
7	9.09	3.19	16.28		
8	11.01	3.87	18.88		
9	12.94	4.54	21.48		
3	0.66	0.23	4.89		
4	2.58	0.91	7.49		
5	4.51	1.58	10.09		
6	6.43	2.26	12.69		
7	8.36	2.93	15.29		
8	10.28	3.61	17.89		
9	12.20	4.29	20.49		
3	**	**	**	**	**
4	1.85	0.65	6.50		
5	3.78	1.33	9.10		
6	5.70	2.00	11.70		
7	7.62	2.68	14.30		
8	9.55	3.35	16.90		
9	11.47	4.03	19.50		

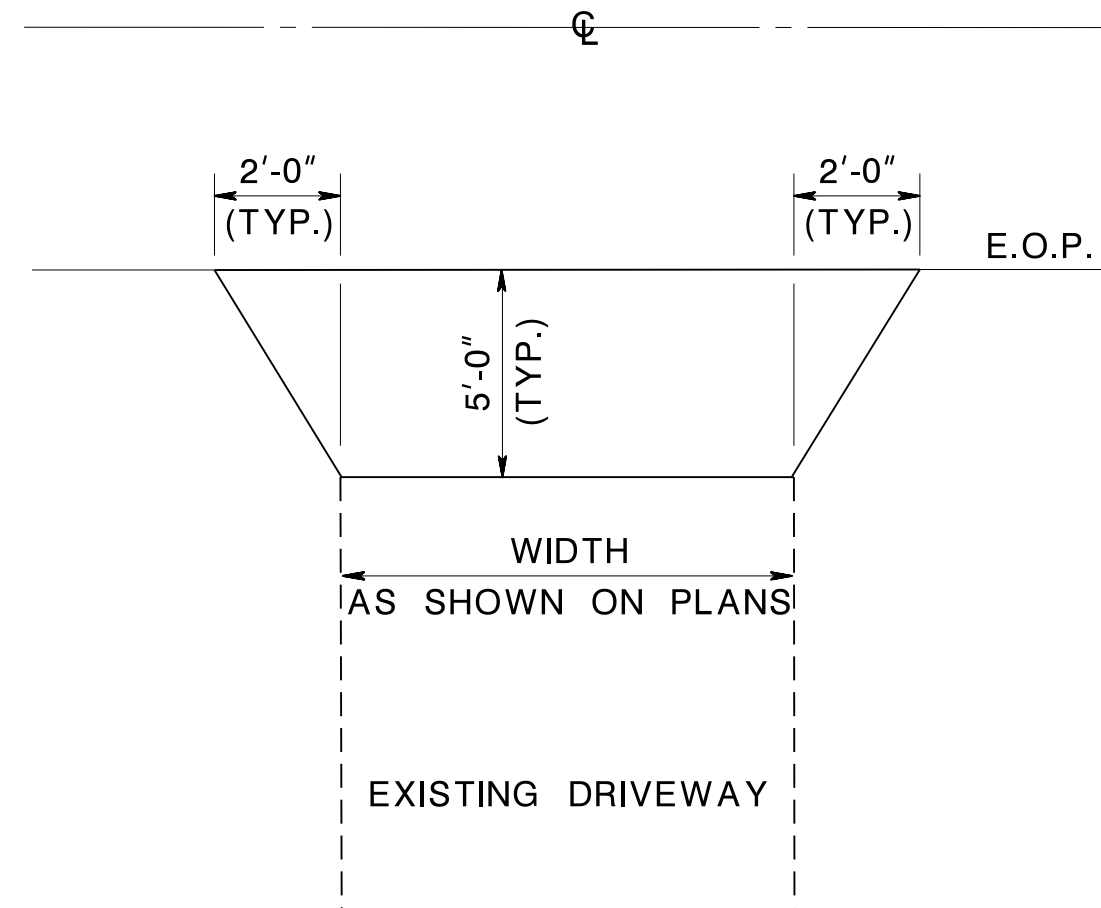
5.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	2.76	0.69	7.44
4			5.26	1.31	10.57
5			7.76	1.94	13.70
6			10.26	2.56	16.83
7			12.77	3.19	19.95
8			15.00	3.81	22.81
9			15.00	4.44	23.44
3			1.80	0.45	6.26
4			4.31	1.08	9.38
5	6.81	1.70	12.51		
6	9.31	2.33	15.64		
7	11.81	2.95	18.77		
8	14.32	3.58	21.89		
9	15.00	4.20	23.20		
3	0.85	0.21	5.07		
4	3.36	0.84	8.20		
5	5.86	1.46	11.32		
6	8.36	2.09	14.45		
7	10.86	2.71	17.58		
8	13.37	3.34	20.71		
9	15.00	3.96	22.96		
3	**	**	**	**	**
4	2.41	0.60	7.01		
5	4.91	1.23	10.14		
6	7.41	1.85	13.26		
7	9.91	2.48	16.39		
8	12.42	3.10	19.52		
9	14.92	3.73	22.65		

6.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.5	2.5	3.94	0.64	8.58
4			7.51	1.22	12.74
5			11.09	1.80	16.89
6			14.67	2.38	21.05
7			15.00	2.97	21.97
8			15.00	3.55	22.55
9			15.00	4.13	23.13
3			2.58	0.42	7.00
4			6.16	1.00	11.16
5	9.73	1.58	15.31		
6	13.31	2.16	19.47		
7	15.00	2.75	21.75		
8	15.00	3.33	22.33		
9	15.00	3.91	22.91		
3	1.22	0			

GENERAL 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. USE HMA SURFACE COURSE FOR HMA DRIVEWAY
3. CONSTRUCT 5 FEET LONG DRIVEWAY UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED.
4. MAINTAIN EXISTING DIRECTION OF FLOW ON DRIVEWAY.
5. USE DENSE GRADED AGGREGATE BASE COURSE TO PROVIDE TEMPORARY ACCESS DURING DRIVEWAY CONSTRUCTION.
6. WHERE SIDEWALK CROSSES DRIVEWAY PROVIDE A 2% MAXIMUM SIDEWALK CROSS SLOPE WITHIN DRIVEWAY AREA.

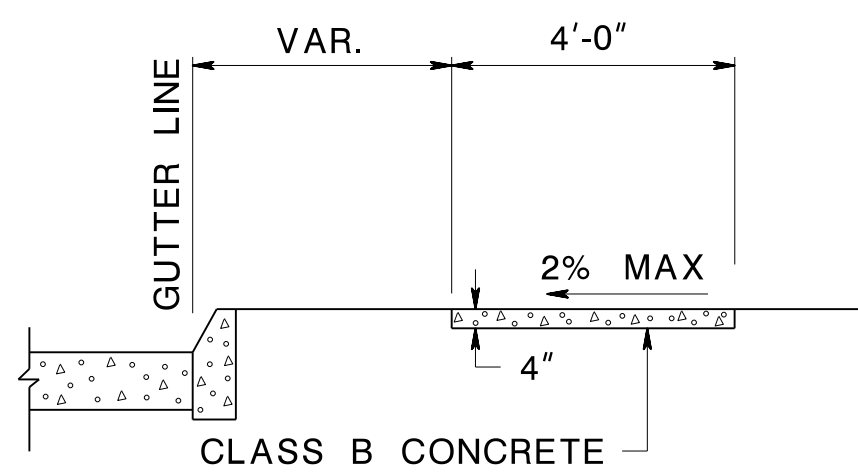
CD-606-2.7



TYPICAL DRIVEWAY TREATMENT

PLAN VIEW

CD-606-2.8



CONCRETE SIDEWALK, 4" THICK

CD-606-2.9

CONCRETE AND HMA DRIVEWAY AND SIDEWALK

N.T.S.

CD-606-2

GENERAL NOTES APPLYING TO ALL TYPES OF DOWELLED CURBS

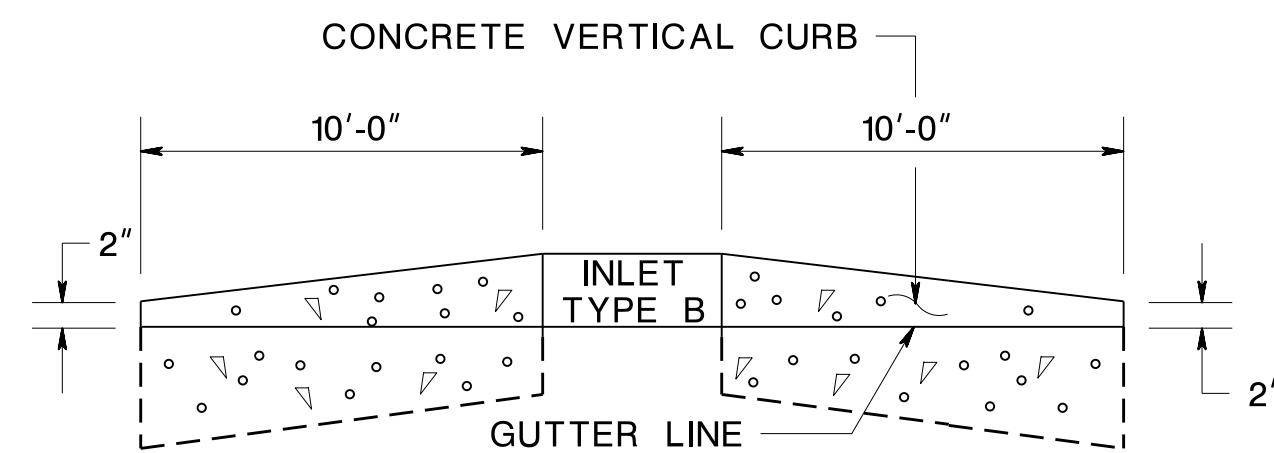
THE TRANSVERSE JOINTS SHALL BE CONSTRUCTED AS SPECIFIED FOR THE CURB, EXCEPT THAT THE THICKNESS OF THE JOINT FILLER IN THE CURB SHALL BE AS FOLLOWS:

- 1/2 INCH FOR INTERMEDIATE JOINTS AND JOINTS OVER DEFINITE CRACKS.
- 1/2 INCH OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS 50 FEET OR LESS.
- 1 INCH OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS MORE THAN 50 FEET VARIABLE IN MULTIPLES OF 1/2 INCH BUT NOT LESS THAN THE EXISTING WIDTH OF THE TRANSVERSE JOINTS IN BRIDGES AND THE JOINTS BETWEEN THE APPROACH SLABS AND BRIDGES.

FOR THICKNESS OF 1 INCH OR MORE, LAYERS OF 1/2 INCH MATERIAL MAY BE GLUED OR OTHERWISE FASTENED TOGETHER BY A MEANS SATISFACTORY TO THE R.E.. WHERE THE REQUIRED JOINT OPENING EXCEEDS 1 INCH, THE CONTRACTOR MAY CONSTRUCT OPEN JOINTS, IF DESIRED.

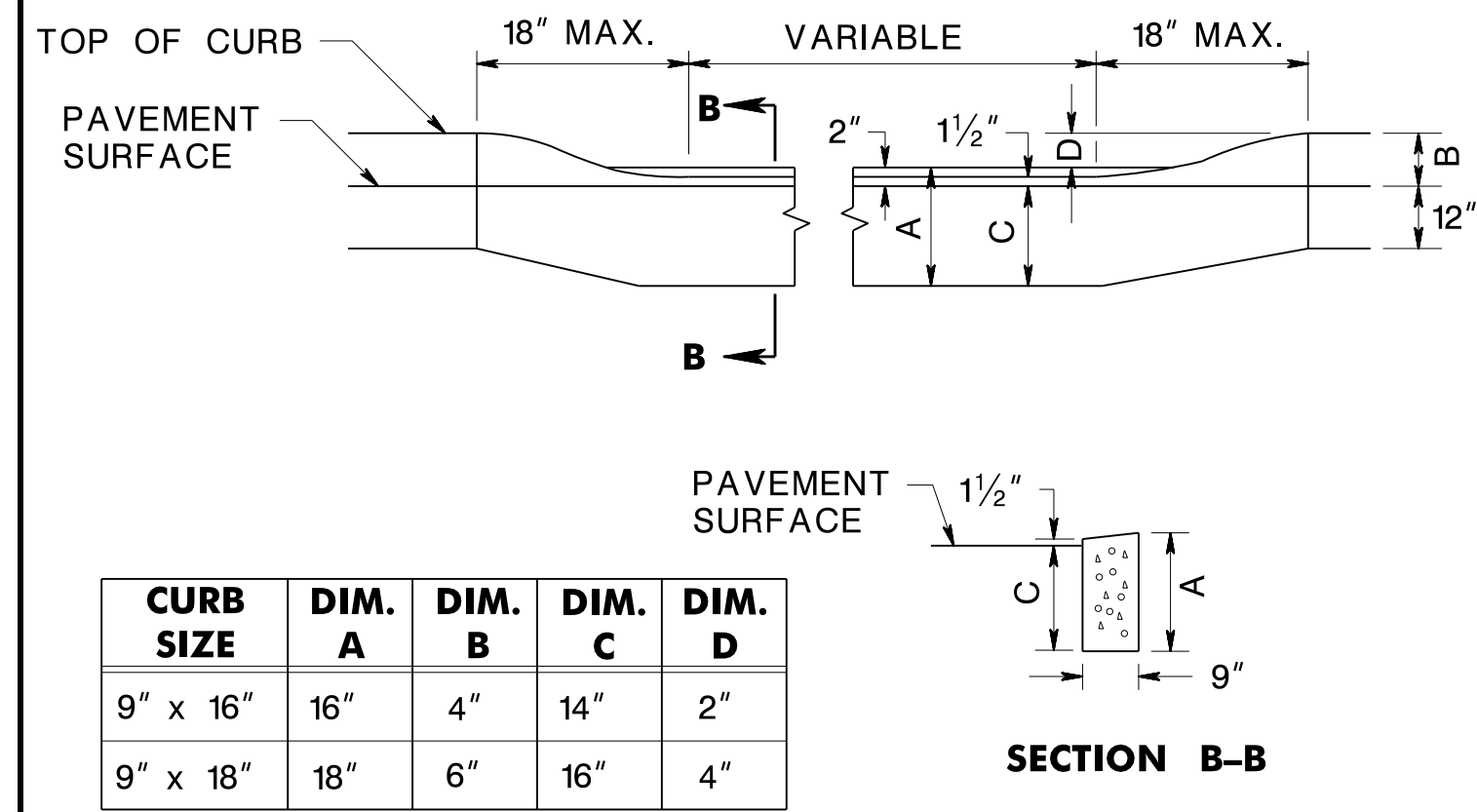
WHERE DOWELLED CURB IS TO BE CONSTRUCTED ACROSS A LONGITUDINAL JOINT IN THE EXISTING PAVEMENT, THE DOWELS IN THE SHORTER PORTION OF THE CURB PANEL SHALL BE OMITTED AND THE CURB IN THE PORTION OF THE PANEL SHALL BE CONSTRUCTED WITH 45# SMOOTH ROLL ROOFING BETWEEN IT AND THE EXISTING PAVEMENT.

CD-607-1.1



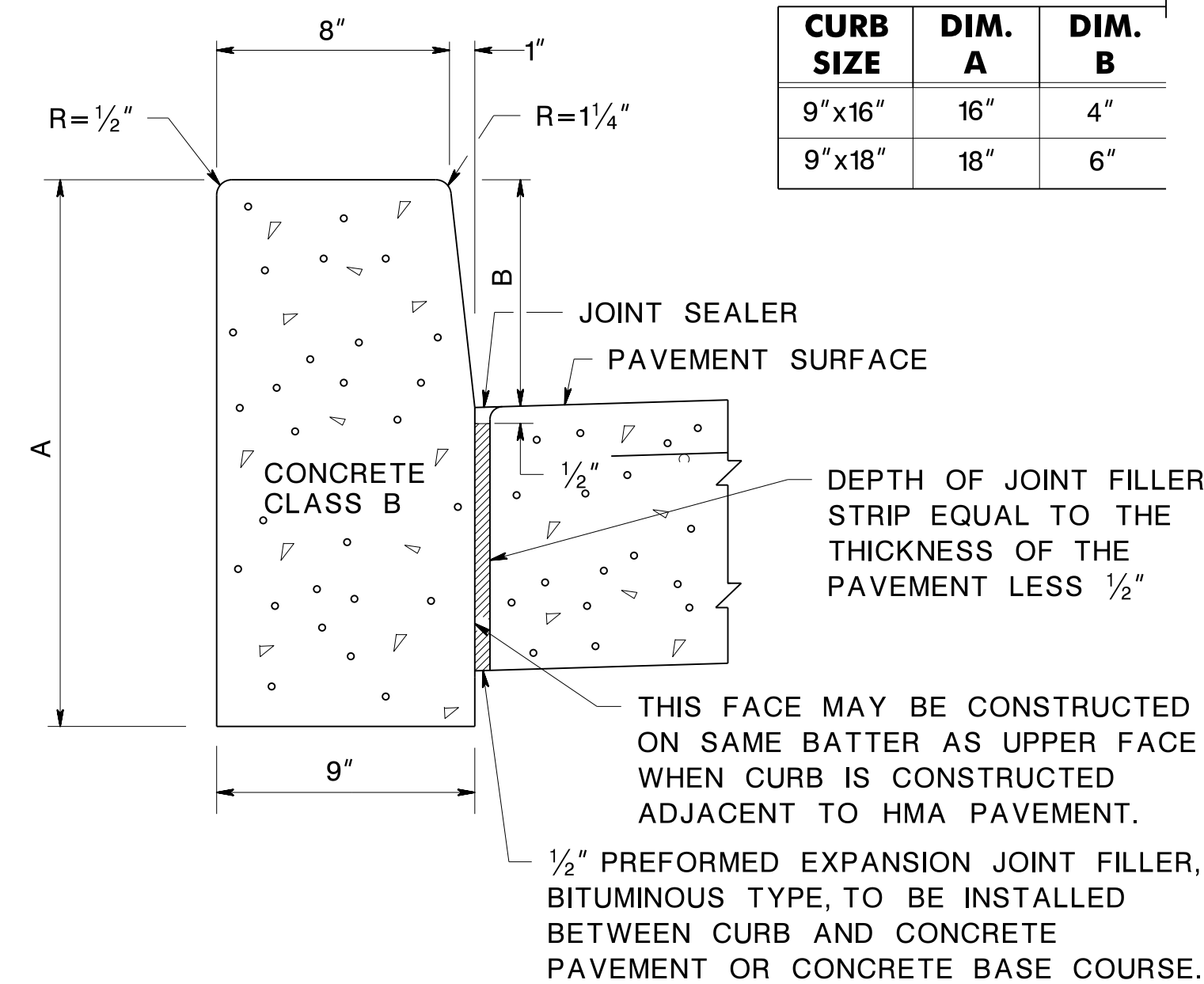
CURB TREATMENT AT BERM SECTION AND ALL CURB ENDS

CD-607-2.2



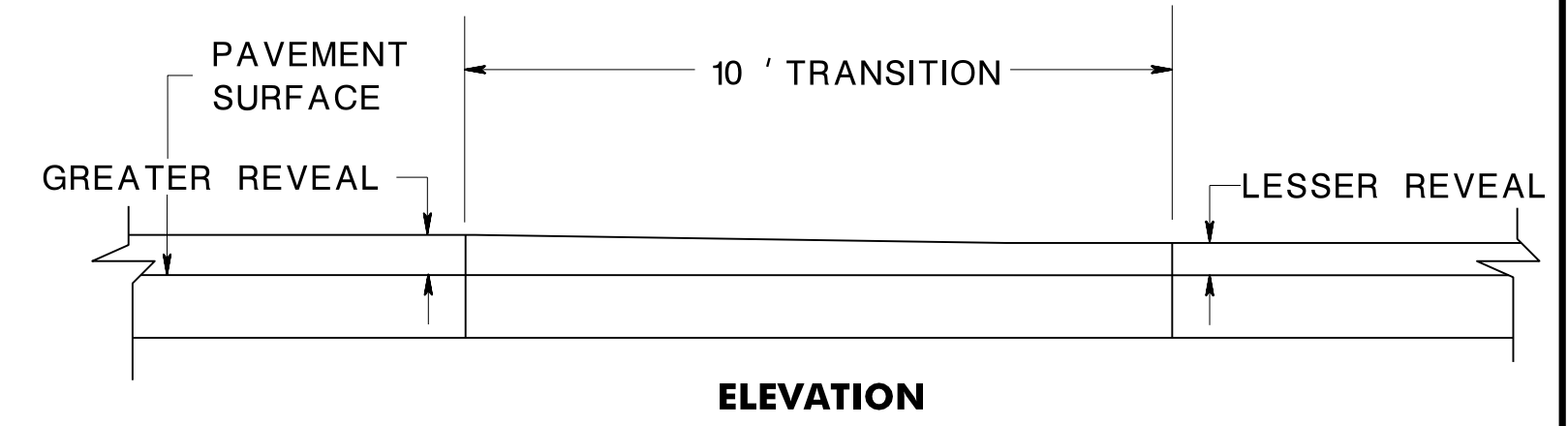
METHOD OF DEPRESSING CURB AT DRIVEWAYS

CD-607-2.4



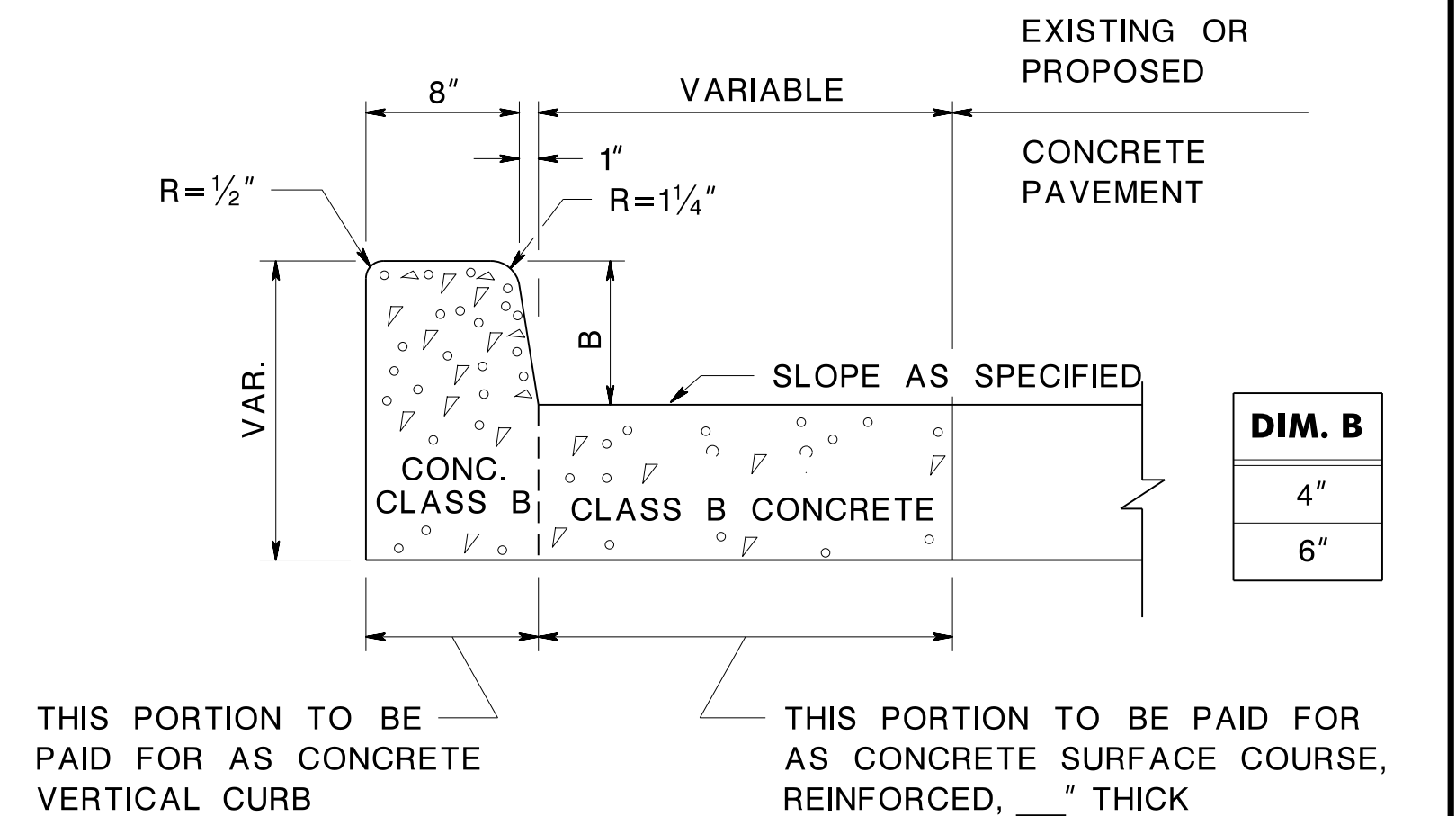
CONCRETE VERTICAL CURB

CD-607-1.6



LINEAR CURB TRANSITION

CD-607-2.5



THIS PORTION TO BE PAID FOR AS CONCRETE VERTICAL CURB

THIS PORTION TO BE PAID FOR AS CONCRETE SURFACE COURSE, REINFORCED, ____ THICK

NOTES:
EXPANSION JOINTS 1/2 INCH WIDE IN THE CURB, AND EXPANSION JOINT ASSEMBLY IN THE MONOLITHIC PAVEMENT STRIP SHALL BE DIRECTLY OPPOSITE EVERY TRANSVERSE JOINT IN THE CENTRAL PAVEMENT STRIPS. JOINT MATERIAL IN THE CURB SHALL BE AS SPECIFIED FOR CONCRETE VERTICAL CURB. THE TRANSVERSE EXPANSION JOINT MATERIAL SHALL NOT EXTEND THRU THE CURB.

CONCRETE VERTICAL CURB MONOLITHIC WITH CONCRETE PAVEMENT

CD-607-1.7

CONCRETE AND GRANITE CURB

N.T.S.

DTL-08

CD-607-1

DTL-14

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION DETAILS

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

NOTES:

REINFORCEMENT STEEL IS IN METRIC UNITS.
HMA = HOT MIX ASPHALT

LEGEND

	BREAKAWAY BARRICADES
	BREAKAWAY BARRICADES WITH SIGN
	CONSTRUCTION SIGNS
	DRUMS
	CONE
	CONSTRUCTION BARRIER CURB (TYPE SPECIFIED)
	DIRECTION OF TRAFFIC FLOW
	TRAFFIC DIRECTOR, FLAGGER
	TRAILER MOUNTED MOUNTED ARROW BOARD SHOWING CAUTION MODE
	ILLUMINATED FLASHING ARROW MOUNTED ON TOWING VEHICLE SHOWING ARROW PATTERN (LEFT, RIGHT, BOTH)
	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING CAUTION MODE
	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING ARROW PATTERN (LEFT, RIGHT, BOTH)
	TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM
	TEMPORARY CRASH CUSHION, (ALL OTHER APPROVED)
	BUFFER ZONE
	WORK AREA
	PAINT STRIPING TRUCK OR OTHER OPERATING VEHICLE

GENERAL NOTES:

1. ADVANCE WARNING SIGNS DISTANCES AND TAPER LENGTHS MAY BE EXTENDED, AT DIRECTION OF THE ENGINEER, TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.
2. THE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS SHOWN ON THE TCD SHEETS MAY BE MODIFIED AS APPROVED BY ENGINEER TO ADJUST FOR VISIBILITY DUE TO HORIZONTAL OR VERTICAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSINGS AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES ARE TO BE IN PLACE.
4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN ARE TO BE PROVIDED WITH AT LEAST ONE W20-IF SIGN (ROAD WORK AHEAD) AS A MINIMUM.
5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS, AND / OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN ARE TO BE COVERED, REMOVED, OR RELOCATED AS DIRECTED BY THE ENGINEER.
6. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY, OR PROPOSED TRAFFIC SIGNAL SYSTEMS ARE TO BE BAGGED OR COVERED.
7. MAINTENANCE AND PROTECTION OF TRAFFIC TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART VI STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS, UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.
8. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) TO BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
9. A W-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WIDTH TO BE LOCATED 100 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.
10. CONSTRUCTION SIGNS W8-9A (SYMBOL FOR UNEVEN PAVEMENT) AND W8-14A (GROOVED PAVEMENT) TO BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST. THE PLACEMENT OF THESE SIGNS TO BE AS DIRECTED BY THE ENGINEER.
11. MOVING WORK AREAS IN A LANE CLOSURE REQUIRE A TRAILER MOUNTED ILLUMINATED FLASHING ARROW TO REMAIN AT THE END OF THE TAPER, THE TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION THAT IS TO MOVE WITH THE WORK AREAS TO KEEP A 70 FEET MIN. AND 150 FEET MAX. BUFFER IN ADVANCE OF EACH WORK AREA.
12. THE CONTRACTOR TO SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. THE PLAN TO BE SUBMITTED TO THE ENGINEER AS SPECIFIED IN THE SPECIFICATIONS.
13. BACKFILL ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY AND PLACE ON AT LEAST 6H:1V SLOPE BEFORE THE END OF EACH WORK DAY. OTHER EXCAVATED AREA WITHIN THE CLEAR ZONE ARE TO BE BACKFILLED.
14. WHERE REQUIRED, THE CONTRACTOR IS TO MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE ENGINEER. A MINIMUM OF TWO ADJACENT PEDESTRIAN CROSSINGS MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
15. BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES TO BE TRANSITIONED ON A MINIMUM 20H:1V SLOPE TO MEET THE ADJACENT EXISTING GRADE AT THE LONGITUDINAL AND TRANSVERSE LIMITS OF THE STAGE CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.
16. TRAFFIC FINES DOUBLED IN WORK AREA R(NJ)5-17(S) , 4 FEET BY 2.5 FEET SIGN TO BE LOCATED 500 FEET AFTER THE FIRST ADVANCE WARNING SIGN, (W20 SERIES) AT EACH WORK AREA LOCATED WITHIN URBAN AREAS. THIS SIGN TO ALSO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN IS TO BE MOUNTED ON A SLOW MOVING CONSTRUCTION VEHICLE.
17. DO NOT CONSTRUCT THE FINAL HMA SURFACE PAVEMENT UNTIL THE FINAL STAGE OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED ON THE PLANS. SET MANHOLES AND INLETS TO FINISHED GRADE AND CONSTRUCT TEMPORARY PAVEMENT RAMPS AROUND THEM WITH A MINIMUM 20H:1V SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT. THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.
18. PLACE TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. AS SHOWN ON PLANS. NO SIGNS ARE TO BE PLACED WITHOUT ACTUAL LANE CLOSURES AND REMOVE IMMEDIATELY UPON REMOVAL OF THE CLOSURES.
19. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE ENGINEER.

20. TRAFFIC IMPACT NOTICES AND CHANGES

A. TERMS:
WHEN THE FOLLOWING TERMS ARE USED, THE INTENT AND MEANING IS AS FOLLOWS:

- i. IMPACTS TO NORMAL TRAFFIC FLOW - WORK THAT REQUIRES A PORTION OF THE PAVED ROADWAY BEING BLOCKED OR CLOSED WITH SAFETY DEVICES OR VEHICLES INCLUDING, BUT NOT LIMITED TO, FULL OR PARTIAL LANE CLOSURES, FULL OR PARTIAL RAMP CLOSURES, SHOULDER CLOSURES, MOVING OPERATIONS SUCH AS TRAFFIC STRIPING OR SWEEPING, LANE SHIFTS, OR ALTERNATING TRAFFIC. THIS APPLIES EVEN WHEN DETOURS ARE PROVIDED.
- ii. TEMPORARY LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH IS ROUTINELY SET UP AND REMOVED ON A DAILY BASIS.
- iii. PERMANENT LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH REMAINS IN PLACE CONTINUOUSLY FOR 24 HOURS OR MORE.

STAGING AND TRAFFIC CONTROL NOTES

1. PRIOR TO THE START OF ANY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL SUBMIT DETAILED STAGING AND MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLANS FOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL NOT BEGIN ANY CONSTRUCTION ACTIVITIES UNTIL WRITTEN APPROVAL OF THE STAGING AND MPT PLANS ARE OBTAINED. THE MPT PLANS SHALL INCLUDE PEDESTRIAN DETOURS IN ACCORDANCE WITH THE MUTCD 2009 FIGURE 6H-29.
2. DEVIATIONS FROM THE APPROVED STAGING AND MPT SHALL NOT BE INITIATED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE CONTRACTOR SHALL SUBMIT PROPOSED MODIFICATIONS TO THE ENGINEER AT LEAST 2 WEEKS PRIOR TO COMMENCEMENT OF PROPOSED MODIFICATIONS.
3. PRIOR TO THE START OF CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE ENGINEER, UNION COUNTY, CITY OF PLAINFIELD, NJ TRANSIT, ALL UTILITY COMPANIES, AND THE CITY OF PLAINFIELD POLICE DEPARTMENT TRAFFIC DIVISION TO REVIEW THE PROPOSED CONSTRUCTION STAGING AND MPT.
4. FOR THE DURATION OF THE CONSTRUCTION, THE CONTRACTOR SHALL NOT RESTRICT ACCESS TO ANY RESIDENTIAL OR COMMERCIAL BUILDINGS OR DRIVEWAYS WITHIN THE PROJECT LIMITS.
5. THE CONTRACTOR IS DIRECTED TO NOTIFY RESIDENTS/PROPERTY OWNERS 48 HOURS PRIOR TO ANY CONSTRUCTION WORK IN THEIR DRIVEWAY/SIDEWALK OR ON THEIR PROPERTY. THE CONTRACTOR IS TO PROVIDE EMERGENCY ACCESS TO ALL SITES DURING ALL PHASES OF CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE ALL "NO PARKING" SIGNS AS PER THE CITY OF PLAINFIELD POLICE REQUIREMENTS FOR ANY TEMPORARY ON-STREET PARKING RESTRICTIONS. NO ADDITIONAL MEASUREMENT OR PAYMENT WILL BE PROVIDED FOR THESE SIGNS. COSTS WILL BE INCLUDED UNDER PAY ITEM CONSTRUCTION SIGNS.
7. SIGN W99-2 "GIVE US A BRAKE - SLOW DOWN" SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER.
8. ANY DAMAGE OCCURRING TO EXISTING PAVEMENT, SHOULDER, CURBING, TRAFFIC SIGNALS, EXISTING RETAINING WALLS, STRUCTURES, ETC. SHALL BE CORRECTED IN A SATISFACTORY MANNER BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL MAINTAIN THE EXISTING TRAFIC SIGNALS THROUGH CONSTRUCTION UNTIL THE NEW TRAFFIC SIGNALS HAS BEEN FULLY TESTED AND ACCEPTED BY THE OWNER AND UNION COUNTY.
9. THE CONTRACTOR SHALL COORDINATE ALL BUS STOP RELOCATIONS WITH NJ TRANSIT BUS OPERATIONS. NJ TRANSIT SHALL BE NOTIFIED AT LEAST 2 WEEKS PRIOR TO ANY CONSTRUCTION OPERATIONS WHICH MAY AFFECT NJ TRANSIT BUS OPERATIONS SO THAT THEY MAY PROPERLY NOTIFY ALL PATRONS AND BUS OPERATORS.
10. TWO LANES, ONE IN EACH DIRECTION, SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. AT ANY TIME DURING CONSTRUCTION TEMPORARY LANE REDUCTION OR ONE LANE, TWO-WAY TRAFFIC OPERATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
11. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER ANY RESTRICTED WORKING PERIODS DURING THE CONSTRUCTION AND ADJUST THE SCHEDULE AND WORK ACTIVITIES ACCORDINGLY.
12. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO PROVIDE FOR THE MAINTENANCE AND PROTECTION OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC (ALONG SIDEWALKS AND CROSSINGS) DURING THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR MUST MAINTAIN SAFE ACCESS TO ALL RESIDENCES AND BUSINESSES. CURB RAMP CONSTRUCTION SHALL BE STAGED IN A MANNER THAT PROVIDES PEDESTRIAN ACCESS THROUGH EACH INTERSECTION AT ALL TIMES.

DTL-09

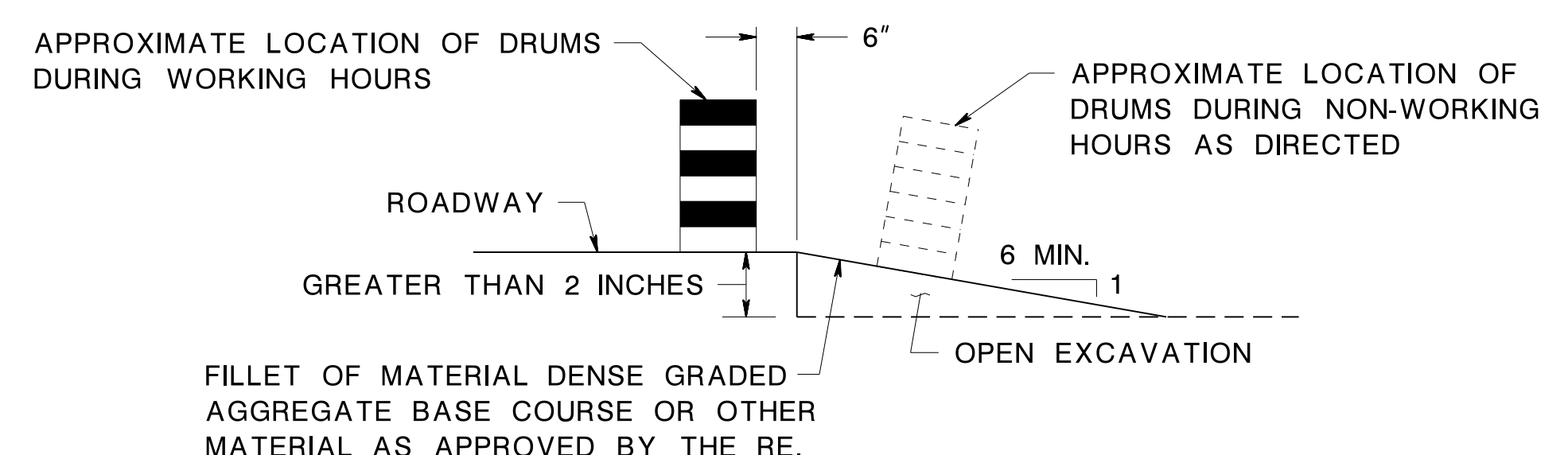
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DTL-14

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

CONSTRUCTION DETAILS
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

39
58



FILLET OF MATERIAL DENSE GRADED AGGREGATE BASE COURSE OR OTHER MATERIAL AS APPROVED BY THE RE.

NOTE:
ESCAPE RAMPS MUST BE CONSTRUCTED AND MAINTAINED DURING NON-WORKING HOURS WHERE A VERTICAL DROP GREATER THAN 2 INCHES EXISTS ADJACENT TO TRAVELED LANE.

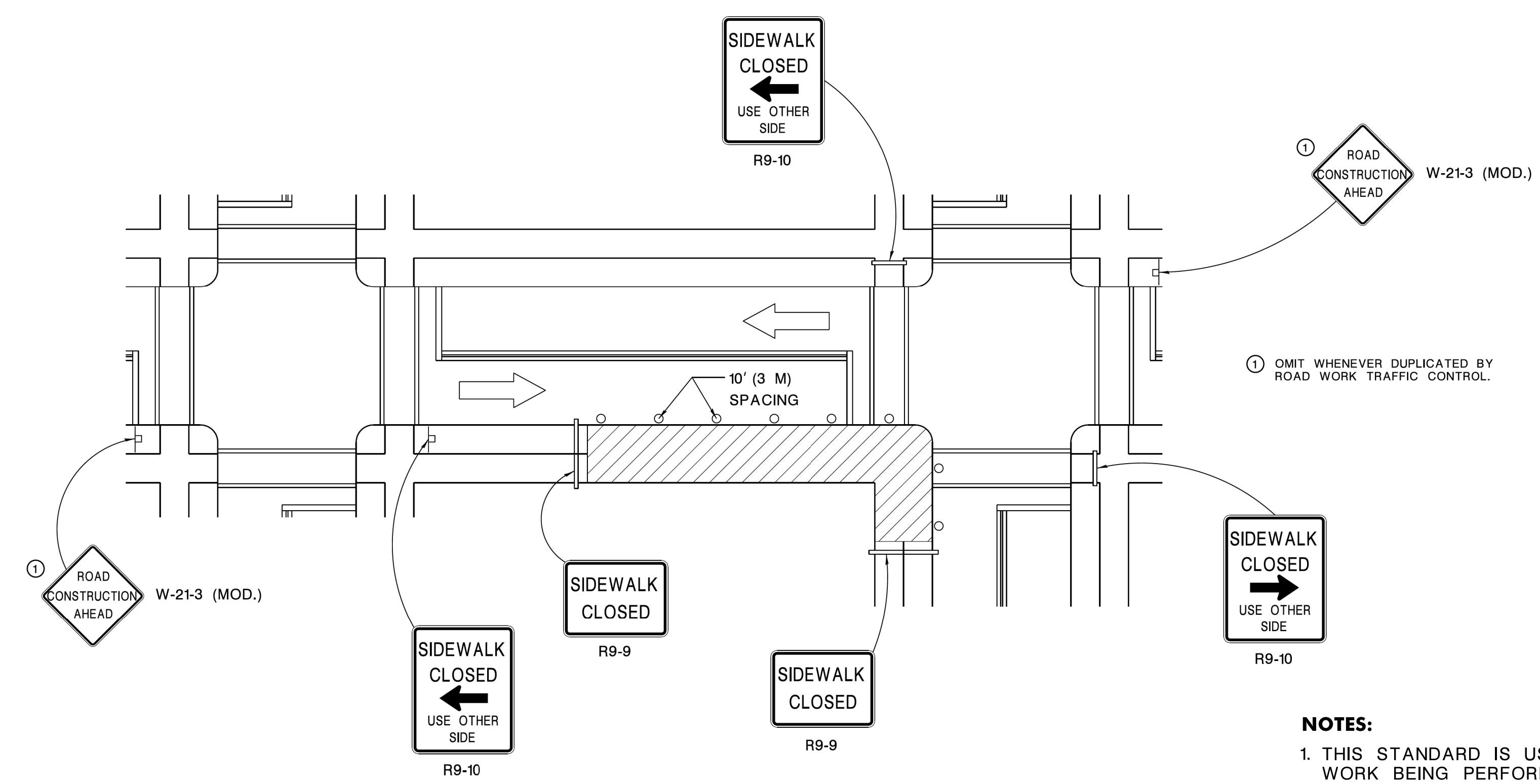
ESCAPE RAMP DETAIL

REGULATORY APPROACH SPEED OF TRAFFIC MILES/HOUR	RECOMMENDED SIGHT DISTANCE TO BEGINNING OF CHANNELIZING TAPERS		
	DESIRABLE		MINIMUM
	RURAL FEET	URBAN FEET	RURAL AND URBAN FEET
25	375	525	150
30	450	625	200
35	525	725	250

- NOTES:**
- AVOIDANCE MANEUVER IS FOR A SPEED, PATH, AND / OR DIRECTION CHANGE PRIOR TO THE BEGINNING OF CHANNELIZING TAPERS.
 - RECOMMENDED DISTANCES BETWEEN TWO SEPARATE LANE CLOSURES ARE DOUBLE THE VALUES SHOWN ABOVE.
 - RURAL AND URBAN ROAD DESIGNATIONS ARE AS DEFINED IN THE NJDOT STATE HIGHWAY STRAIGHT LINE DIAGRAMS.
 - PROVIDE DESIRABLE VALUES WHEREVER POSSIBLE. IF IT IS NOT FEASIBLE OR PRACTICAL TO PROVIDE DESIRABLE VALUES BECAUSE OF HORIZONTAL OR VERTICAL CURVATURE OR IF RELOCATION OF THE TAPER IS NOT POSSIBLE, THEN MINIMUM VALUES CAN BE APPLIED. WHEN MINIMUM VALUES ARE USED, PAY SPECIAL ATTENTION TO THE USE OF SUITABLE TRAFFIC CONTROL DEVICES WHEN PROVIDING ADVANCED WARNING OF THE CONDITIONS THAT ARE LIKELY TO BE ENCOUNTERED.
 - LOCATE TAPERS TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.

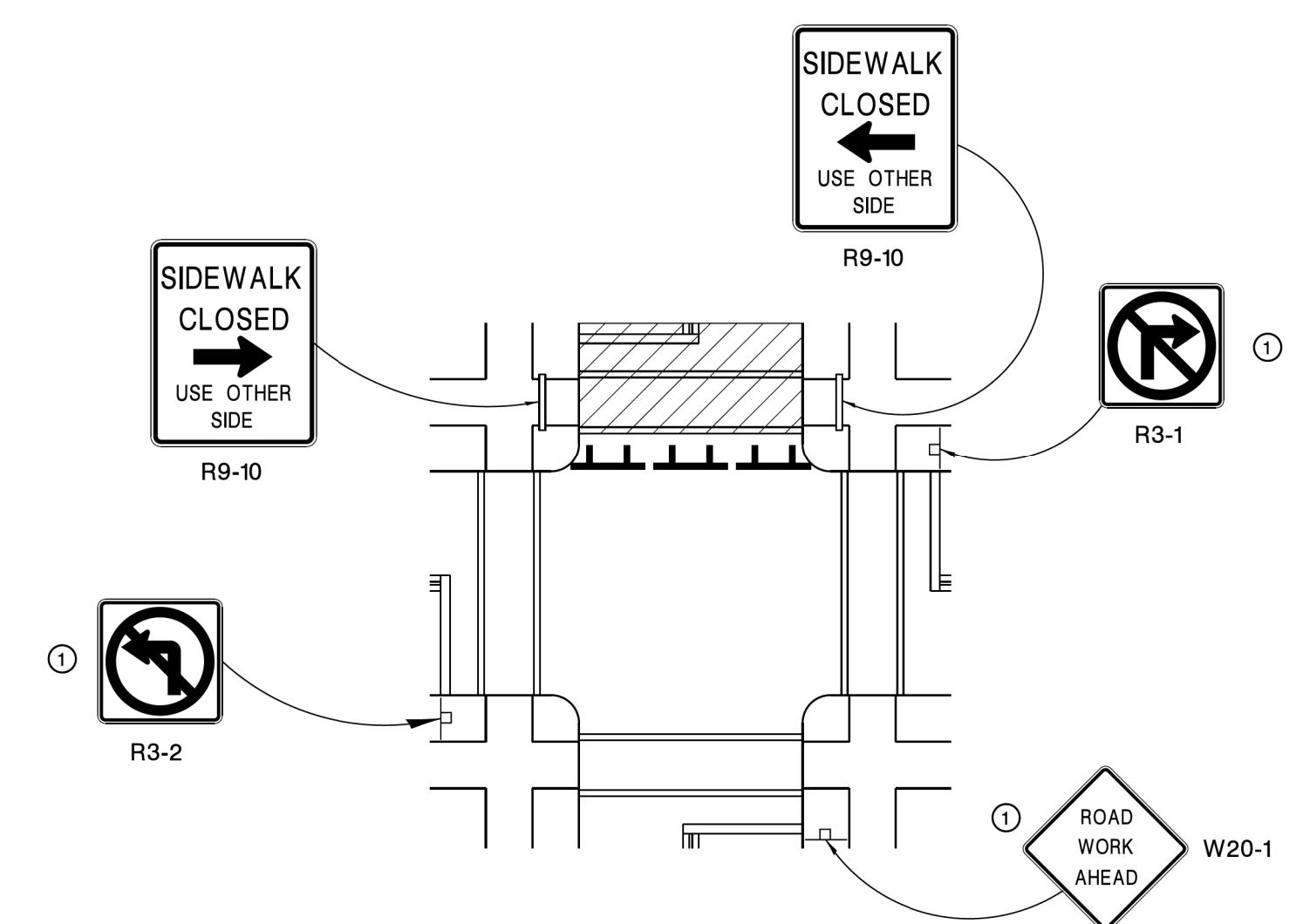
REGULATORY APPROACH SPEED OF TRAFFIC MILES / HOUR	MINIMUM TAPER RATIO IN LENGTH PER FOOT OF WIDTH	RECOMMENDED TAPER LENGTH AND SPACING FOR CHANNELIZING TAPERS			RECOMMENDED SPACING ALONG TANGENTS
		MINIMUM TAPER LENGTH L - FOR LANE WIDTHS			
		10'	11'	12'	
25	10.5:1	105	115	125	25
30	15:1	150	165	180	30
35	20.5:1	205	225	245	35

- NOTE:**
- THE MAXIMUM DEVICE SPACING ALONG CURVES IS DEFINED FOR TAPERS (B) IN THE ABOVE TABLE.



CORNER CLOSURE PEDESTRIAN DETOUR

- NOTES:**
- THIS STANDARD IS USED WHERE, AT ANY TIME, PEDESTRIAN TRAFFIC MUST BE REROUTED DUE TO WORK BEING PERFORMED.
 - THIS STANDARD MUST BE USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL & PROTECTION STANDARDS WHEN ROADWAY TRAFFIC IS AFFECTED.
 - TEMPORARY FACILITIES SHALL BE DETECTABLE AND ACCESSIBLE.
 - THE TEMPORARY PEDESTRIAN FACILITIES SHALL BE PROVIDED ON THE SAME SIDE OF THE CLOSED FACILITIES WHENEVER POSSIBLE.
 - THE SIDEWALK CLOSED / USE OTHER SIDE SIGN SHALL BE PLACED AT THE NEAREST CROSSWALK OR INTERSECTION TO EACH END OF THE CLOSURE. WHERE THE CLOSURE OCCURS AT A CORNER, THE SIGNS SHALL BE ERECTED ON THE CORNERS ACROSS THE STREET FROM THE CLOSURE. THE SIDEWALK CLOSED SIGNS SHALL BE USED AT THE ENDS OF THE ACTUAL CLOSURES.



CROSSWALK CLOSURE PEDESTRIAN DETOUR

GENERAL LEGEND

	WORK AREA
	SIGN ON PORTABLE OR PERMANENT SUPPORT
	BARRICADE OR DRUM
	CONE, DRUM OR BARRICADE
	TYPE III BARRICADE
	DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

N.T.S.

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

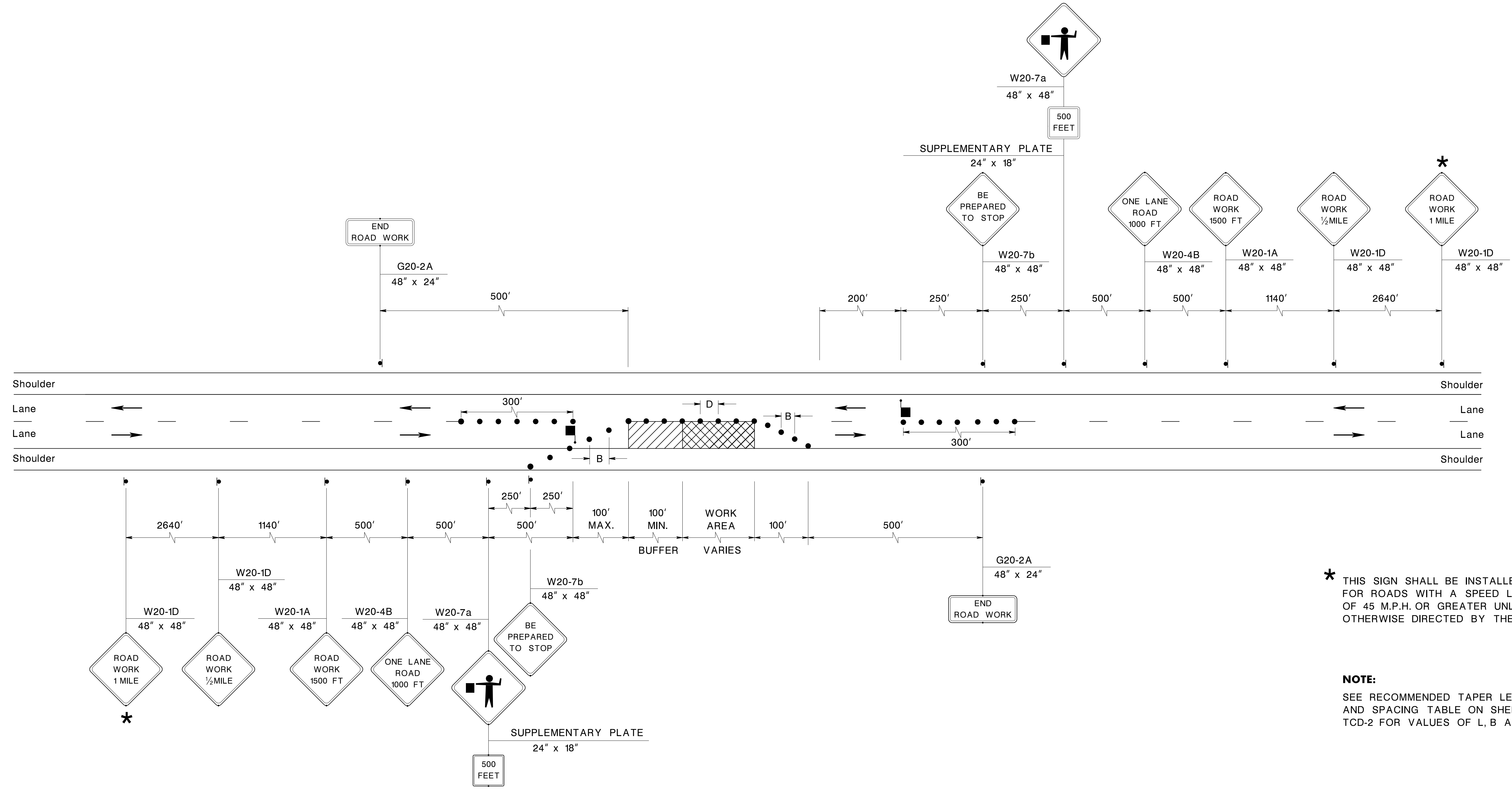
TOD-2

DTL-10

DTL-14

CONSTRUCTION DETAILS
WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

BDC12D-04-NEW CD-159-2.6
 BDC10D-03-REVISION TO CD-159-2.2
 BDC07D-01-ORIGINAL SHEET
 Project: Hamilton Office\149728_NJTPA-FY2015-Local-Pre-Engineering-Assistance\CADD\Plan\Detail\DTL-10.dgn



* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE.

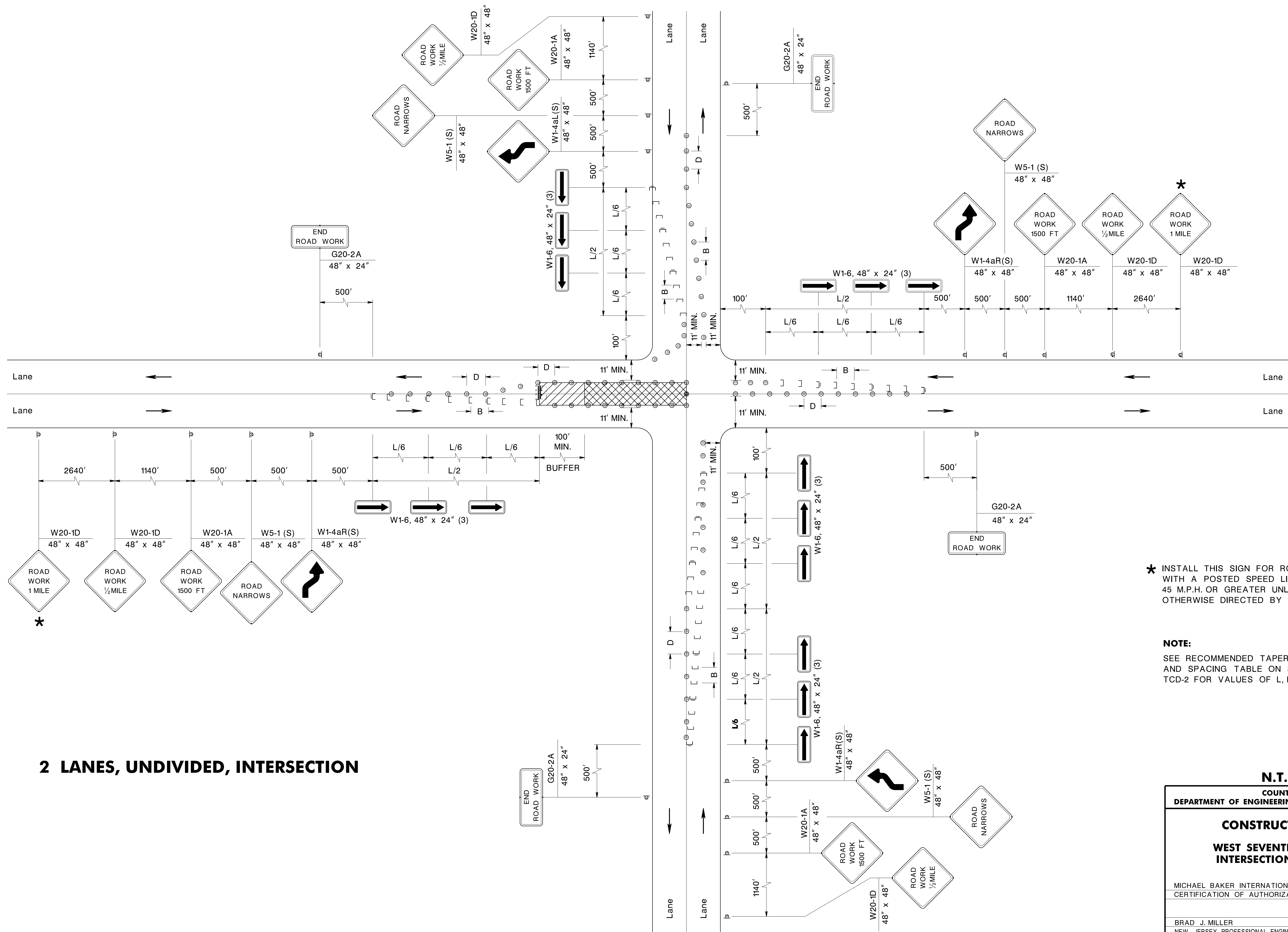
NOTE:
SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE ON SHEET TCD-2 FOR VALUES OF L, B AND D.

2 LANES, UNDIVIDED, LANE & SHOULDER CLOSING W/FLAGGING

DTL-11
TCD-4
DTL-14
COUNTY OF UNION DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES CONSTRUCTION DETAILS WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS <small>MICHAEL BAKER INTERNATIONAL, INC.</small> <small>CERTIFICATION OF AUTHORIZATION NO. 24GA27954700</small> <small>BRAD J. MILLER</small> <small>NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300</small>

BD007D-01- ORIGINAL SHEET

Baker PW Path Location: P:\DW\Projects\Hamilton\Office\48798_NJ\PA\FY2015\Local\Pre-Engineering-Assistance\C:\CADD\Plan\Detail\DTL-11.dgn



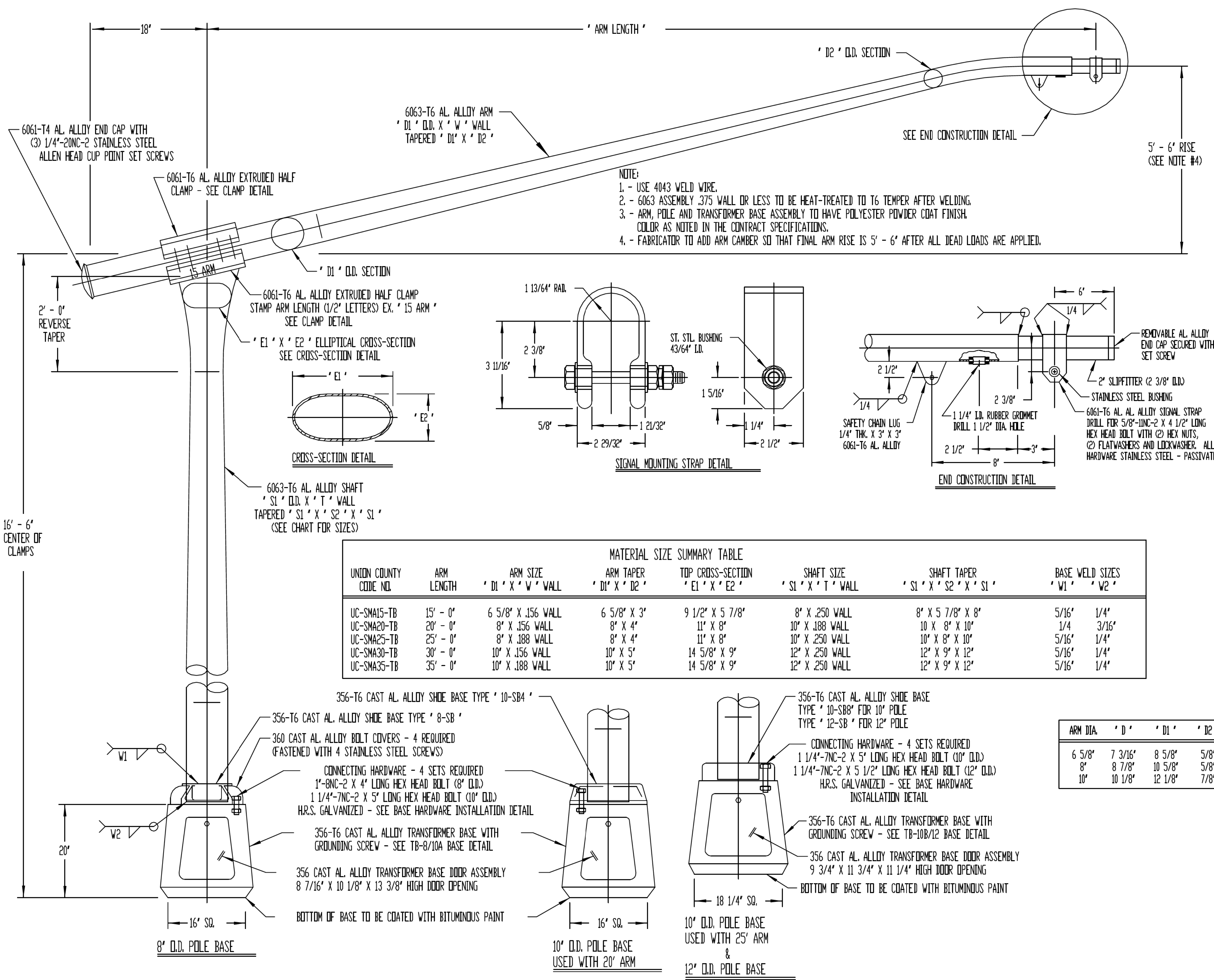
2 LANES, UNDIVIDED, INTERSECTION

★ INSTALL THIS SIGN FOR ROADS WITH A POSTED SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE.

NOTE:
SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE ON SHEET TCD-2 FOR VALUES OF L, B, AND D.

N.T.S.	
TCD-6	DTL-13 DTL-14
COUNTY OF UNION DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES	
CONSTRUCTION DETAILS	
WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS	
MICHAEL BAKER INTERNATIONAL, INC. CERTIFICATION OF AUTHORIZATION NO. 24GA27954700	
BRAD J. MILLER NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300	

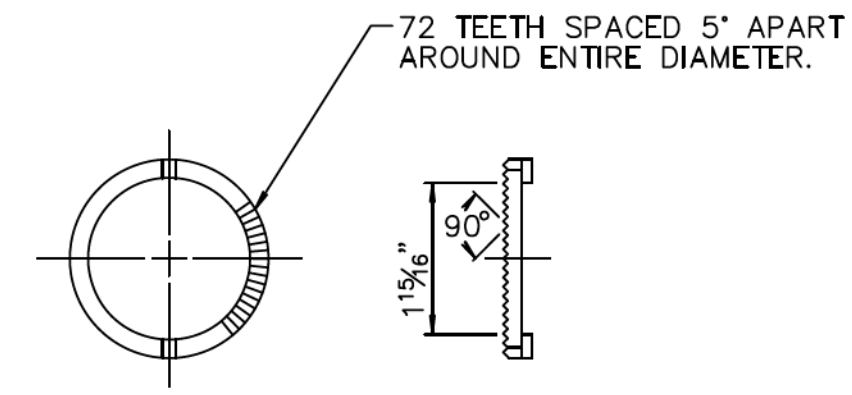
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 BDC10D-03-REVISION TO CD-159-2.2
 BDC07D-01-ORIGINAL SHEET
 Project Path: \\pwr\local\pwr\60944\pwr\miller\miller\Documents\Project\Hamilton\Office\49728_NJTPA-FY2015-Local\Pre-Engineering-Assistance\C:\CADD\Plan\Detail\DTL-13.dgn



Baker PW Path Location: p:\work\DCPWA\PP\h\m\maker\corp.com\proj\out\Documents\Projects\Hamilton\Office\489798_NU\TPA\FY2015-Local\Pre-Engineering-Assistance\C:\TCADD\Plan\Electrical\ED-1

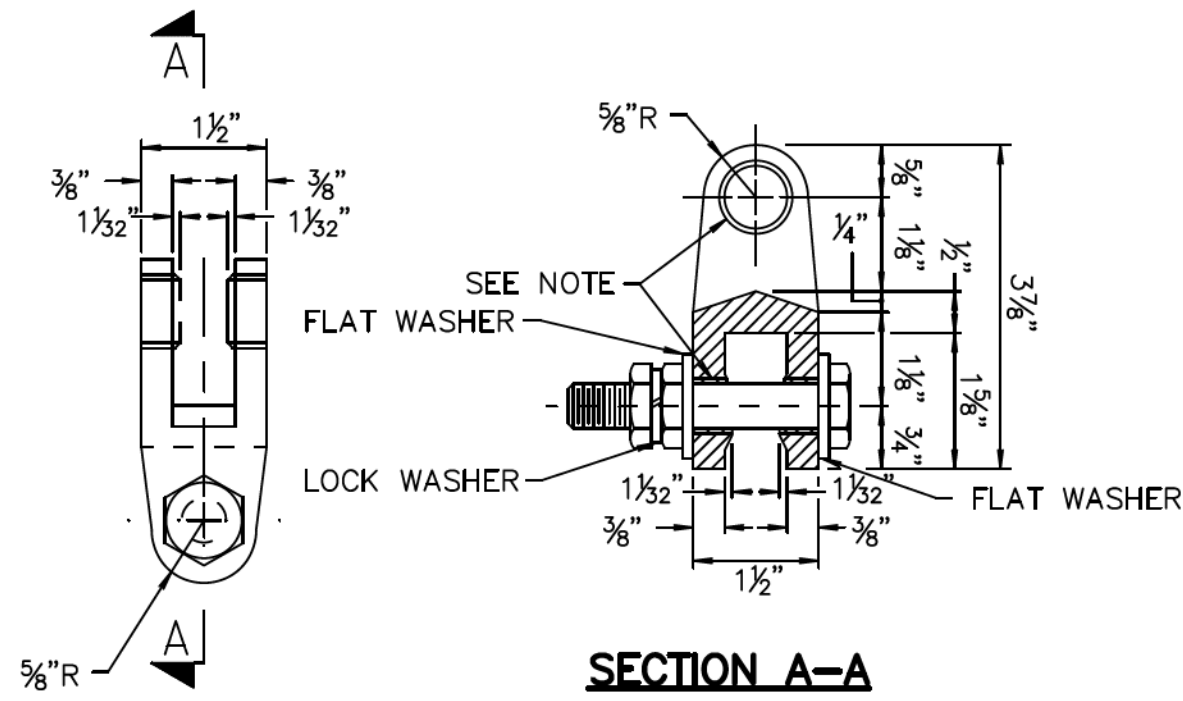
ED-1
ED-14

COUNTY OF UNION
 DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS



NOTE:
SERRATED POSITIONING RING TO BE PROVIDED WHEN TRAFFIC SIGNAL IS DIRECTLY ATTACHED TO WIRE OUTLET FITTING.

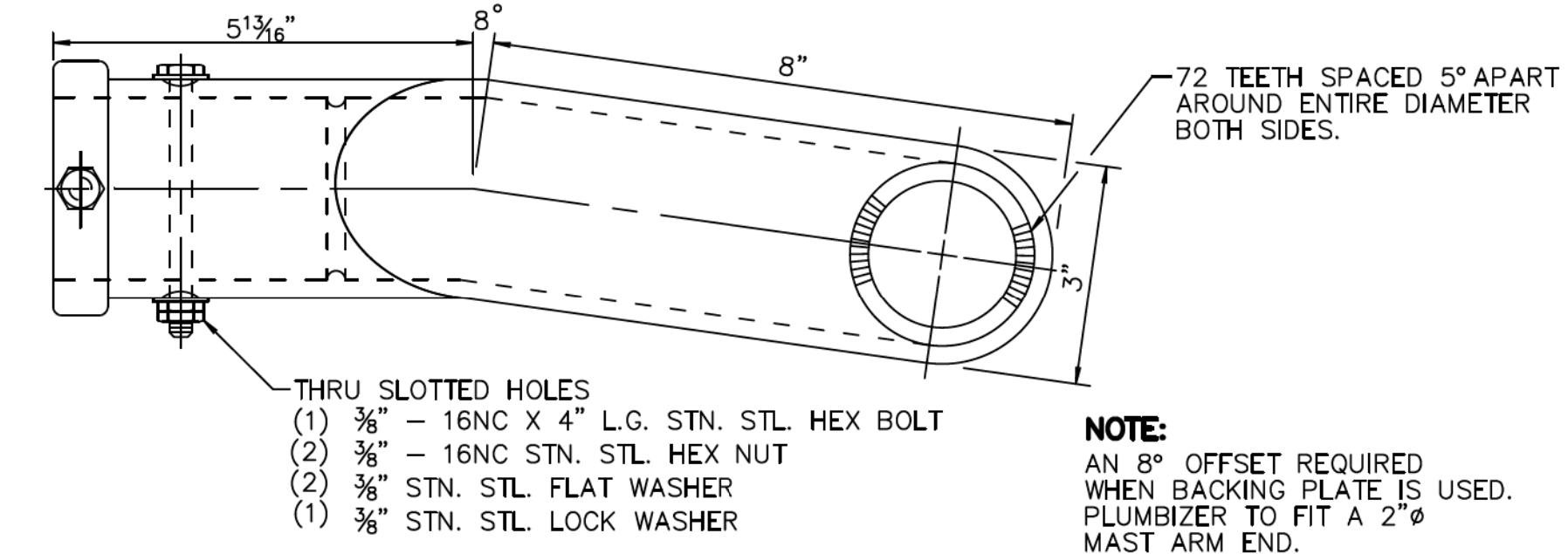
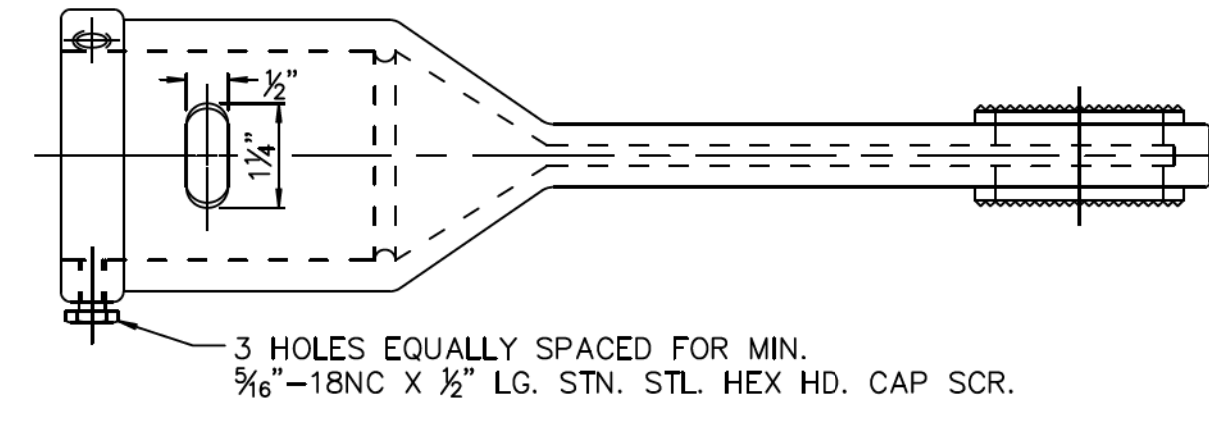
DETAIL OF HEAD POSITIONING RING
MATERIAL: DELRIN



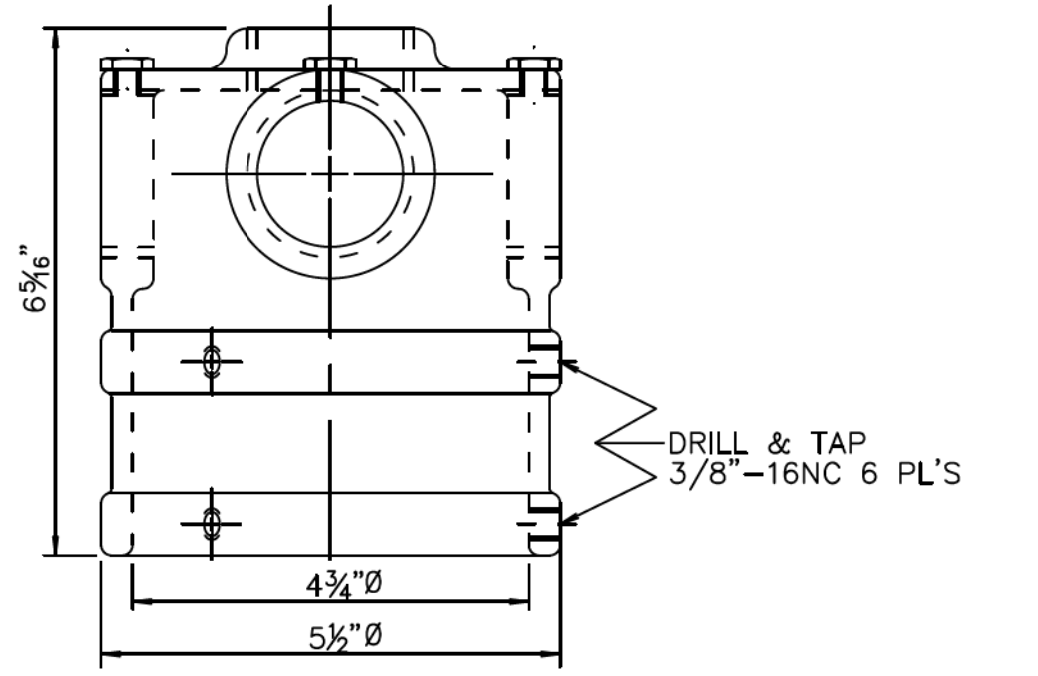
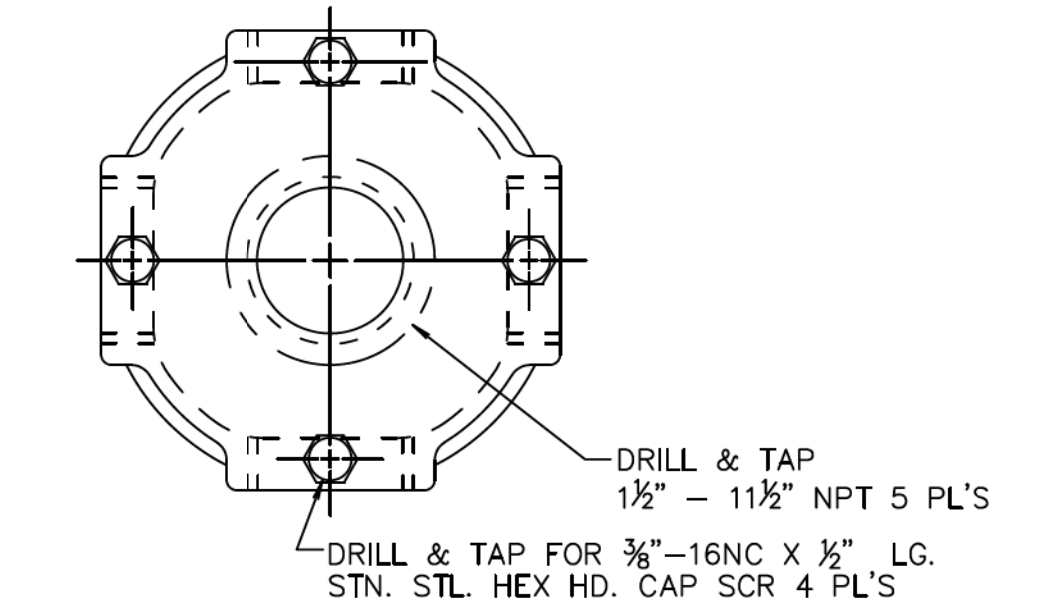
SECTION A-A

UNIVERSAL JOINT
MATERIAL - BRONZE, 85-5-5

NOTE:
DRILL CASTING FOR C304 STN. STL. $\frac{1}{16}$ " THK. WALL BUSHINGS, FURNISH & PRESS FIT INTO CASTING.
FURNISH WITH EACH UNIVERSAL JOINT:
(1) $\frac{3}{8}$ " - 11 NC X 3" L.G. STN. STL. HEX BOLT
(2) $\frac{3}{8}$ " - 11 NC STN. STL. HEX NUTS
(2) $\frac{3}{8}$ " ϕ STN. STL. FLAT WASHER
(1) $\frac{3}{8}$ " ϕ STN. STL. LOCK WASHER

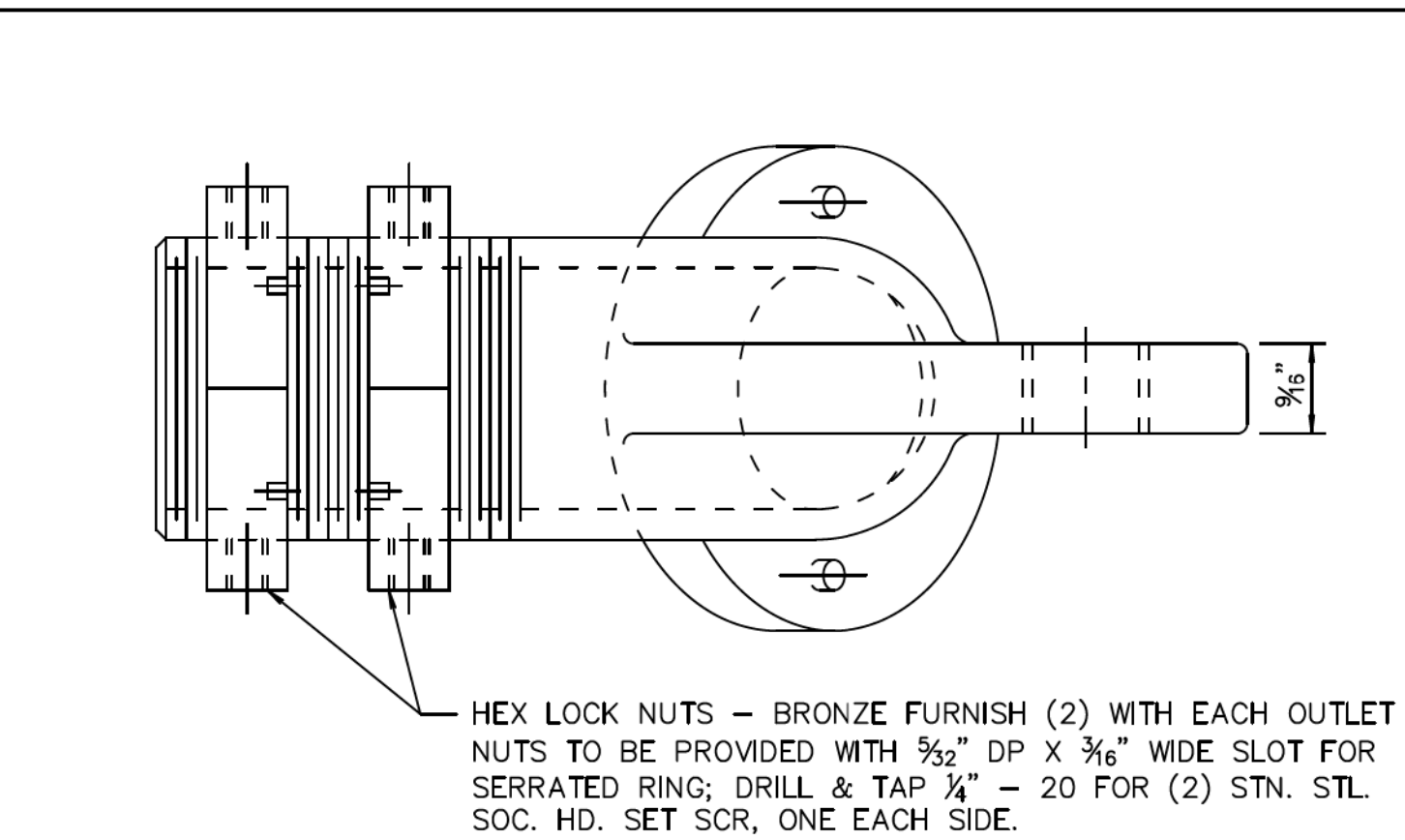


ELEVATOR PLUMBIZER
MATERIAL - ALUMINUM ALLOY 356

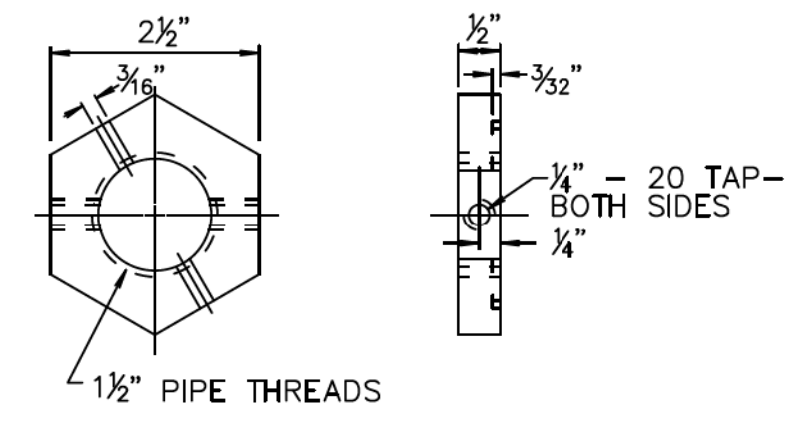


POST TOP ADAPTER
MATERIAL - ALUMINUM ALLOY 356
(FOR OPTICALLY PROGRAMMED INDICATIONS ONLY)

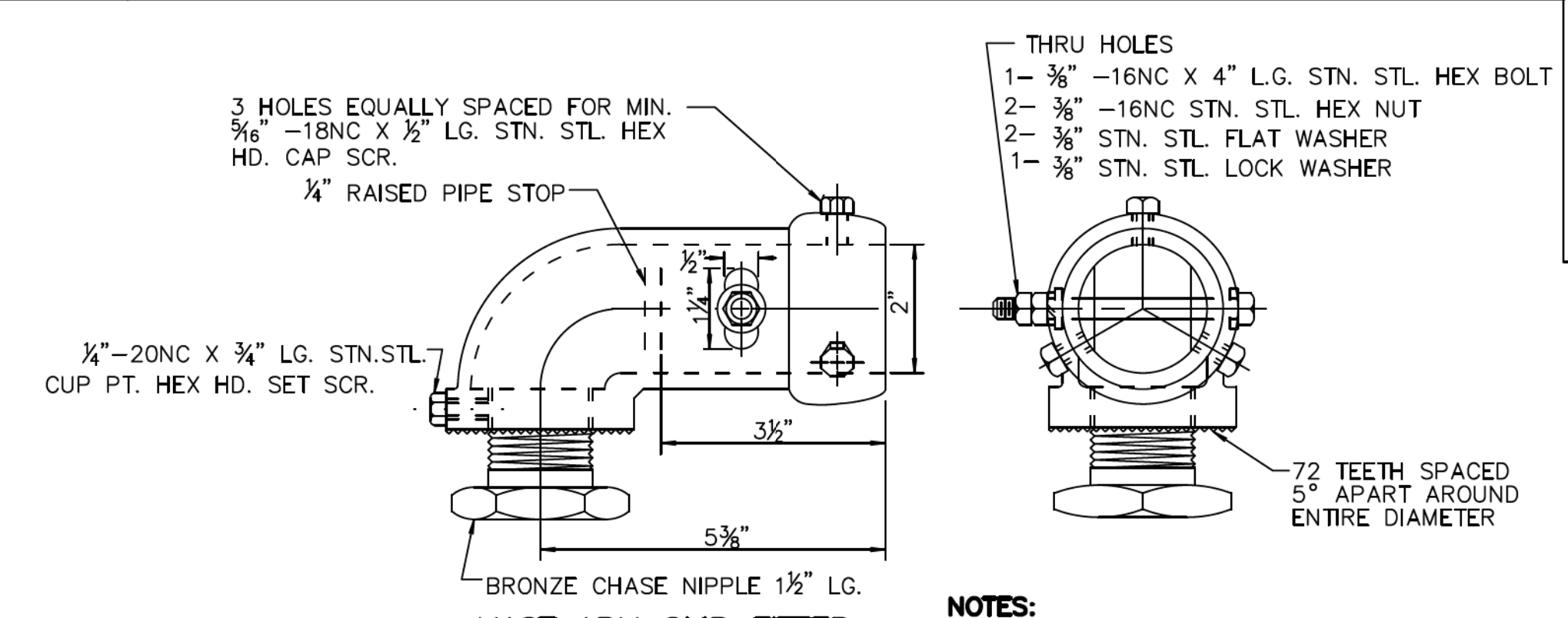
NOTES:
1. ALL TOLERANCES OF CASTINGS SHALL BE $\pm \frac{1}{32}$ "
2. ALL STAINLESS STEEL BOLTS ON THIS SHEET PER ASTM A193, GRADE B8.



HEX LOCK NUTS - BRONZE FURNISH (2) WITH EACH OUTLET NUTS TO BE PROVIDED WITH $\frac{3}{32}$ " DP X $\frac{3}{16}$ " WIDE SLOT FOR SERRATED RING; DRILL & TAP $\frac{1}{4}$ " - 20 FOR (2) STN. STL. SOC. HD. SET SCR, ONE EACH SIDE.

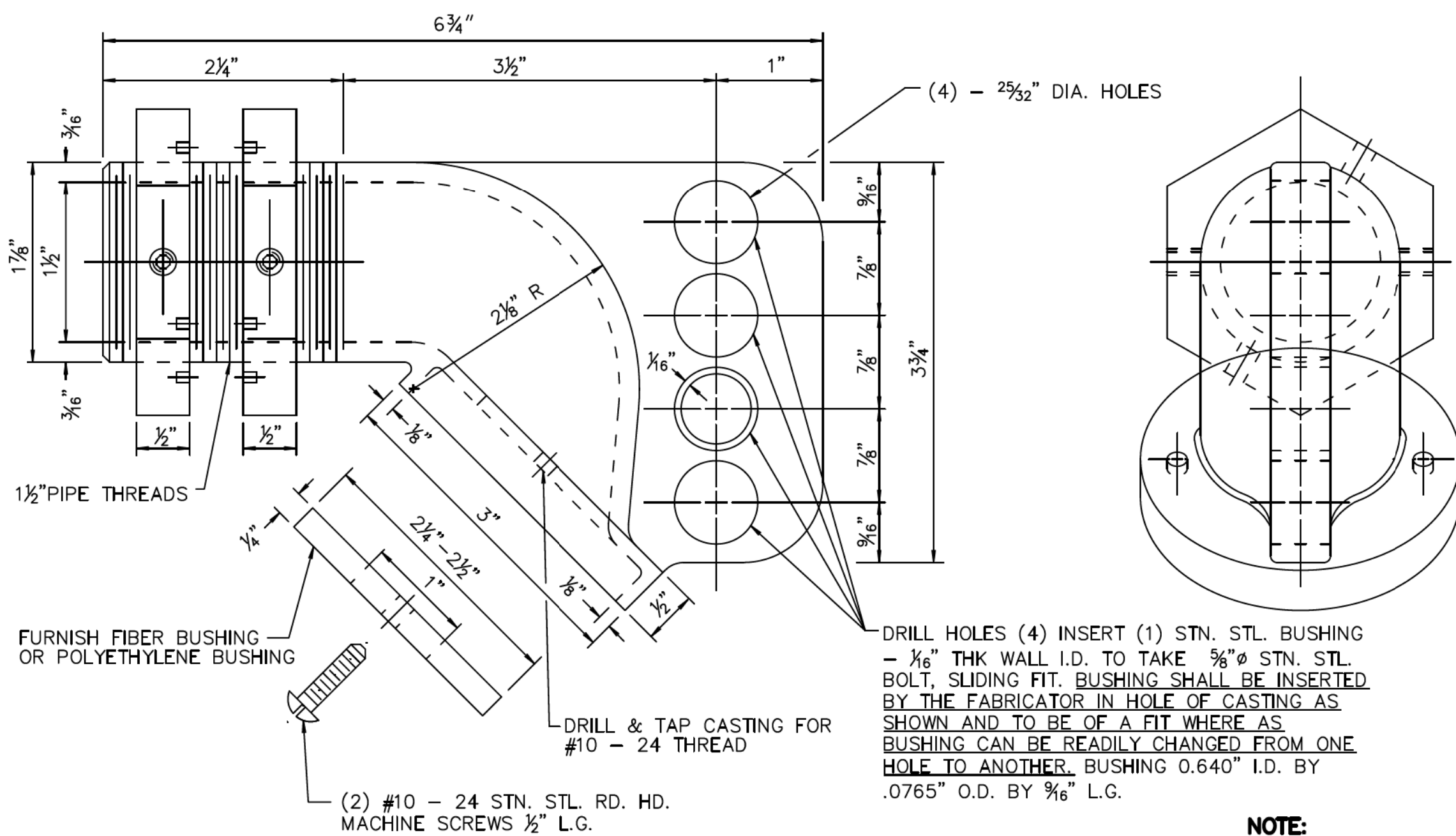


HEX LOCK NUT
MATERIAL: BRONZE, 85-5-5



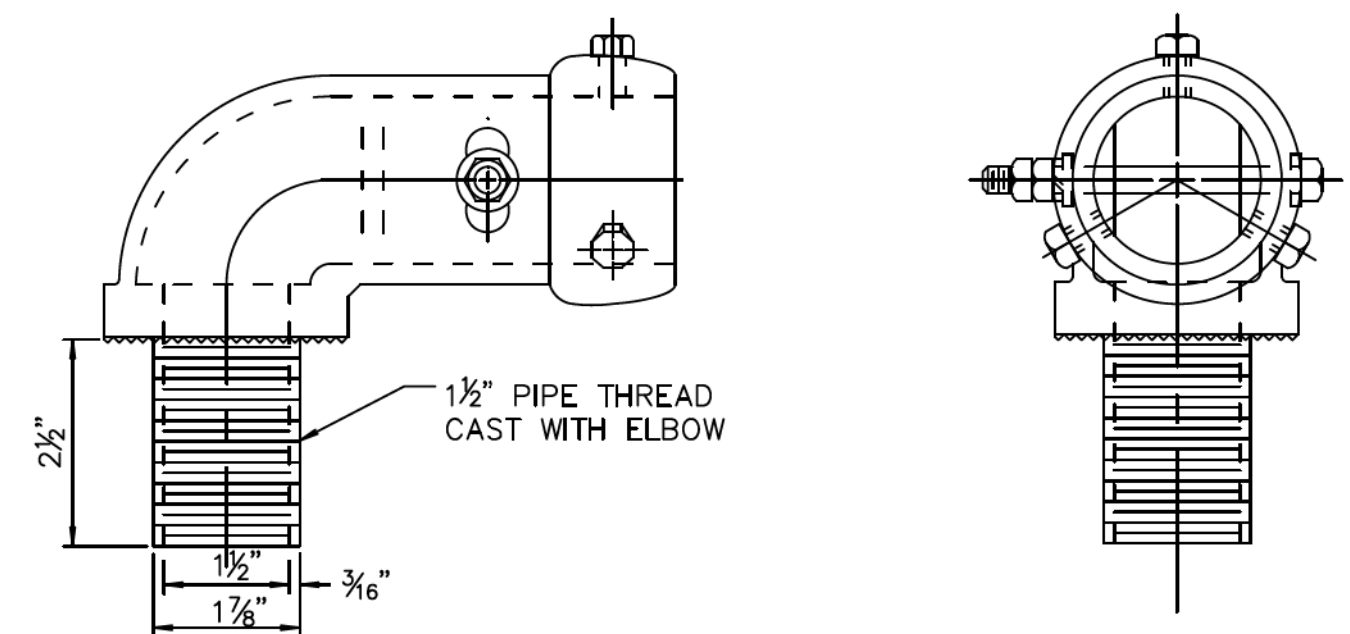
MAST ARM SLIP FITTER
MATERIAL - BRONZE, 85-5-5

NOTES:
1. THE SLIP FITTER SHALL BE UTILIZED IN MOUNTING OPTICALLY PROGRAMMED TRAFFIC SIGNALS
2. WHEN USED FOR MOUNTING SIGNALS BACK TO BACK DRILL THRU NIPPLE AND USE A 1" LG. CAP SCREW.
3. SLIP FITTER TO FIT A 2" ϕ MAST ARM END.



WIRE OUTLET
MATERIAL: BRONZE, 85-5-5

NOTE:
ON INSTALLATION THE CONTRACTOR SHALL PLACE THE BUSHING IN THE APPROPRIATE MOUNTING HOLE AS REQUIRED TO OBTAIN VERTICAL POSITIONING AND MAXIMUM VISIBILITY OF THE SIGNAL ASSEMBLY TO THE APPROACH ROADWAY AND AS DIRECTED BY THE ENGINEER.

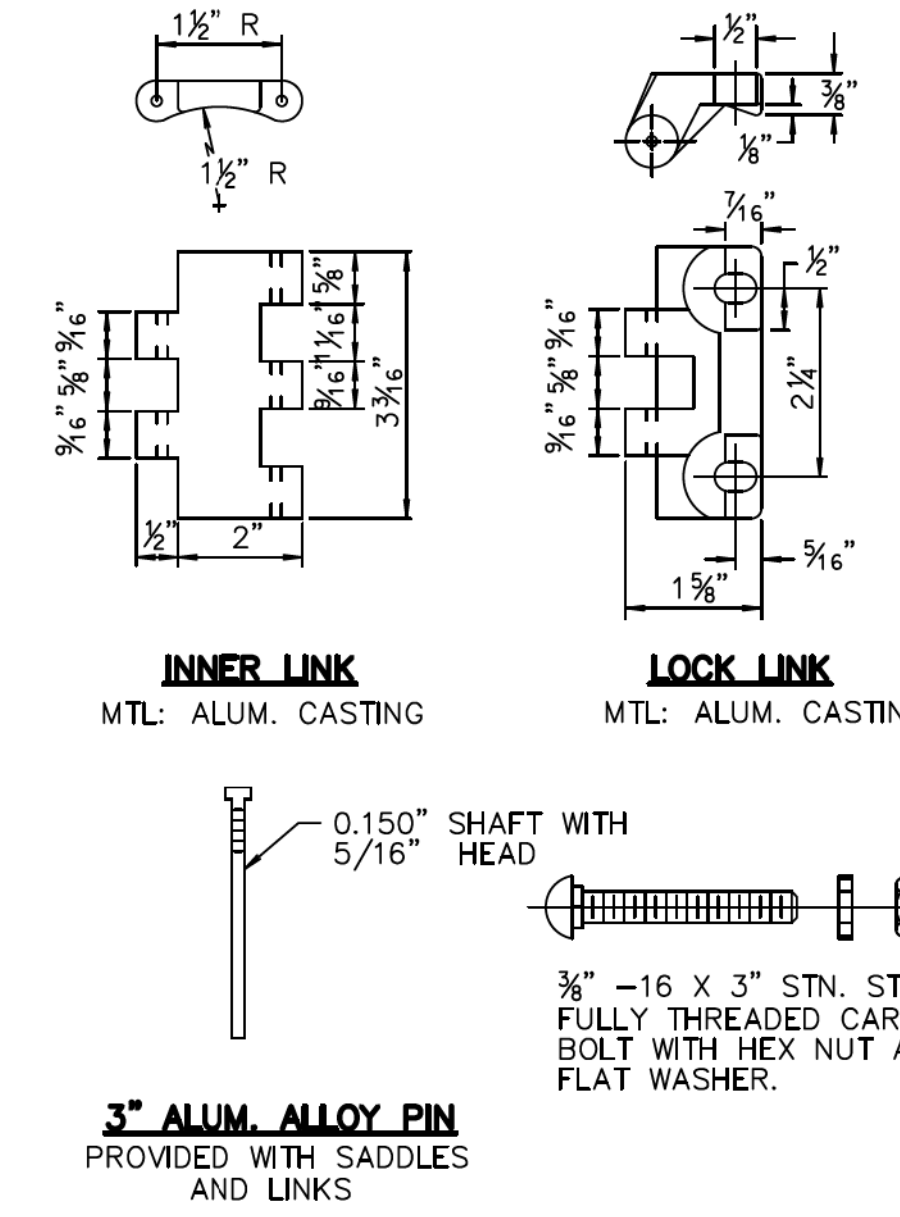
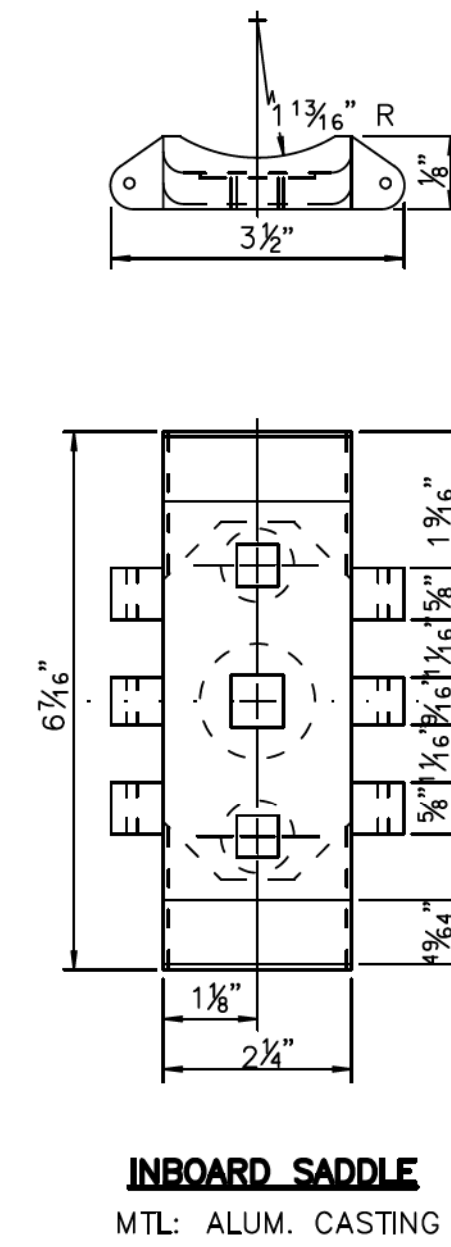
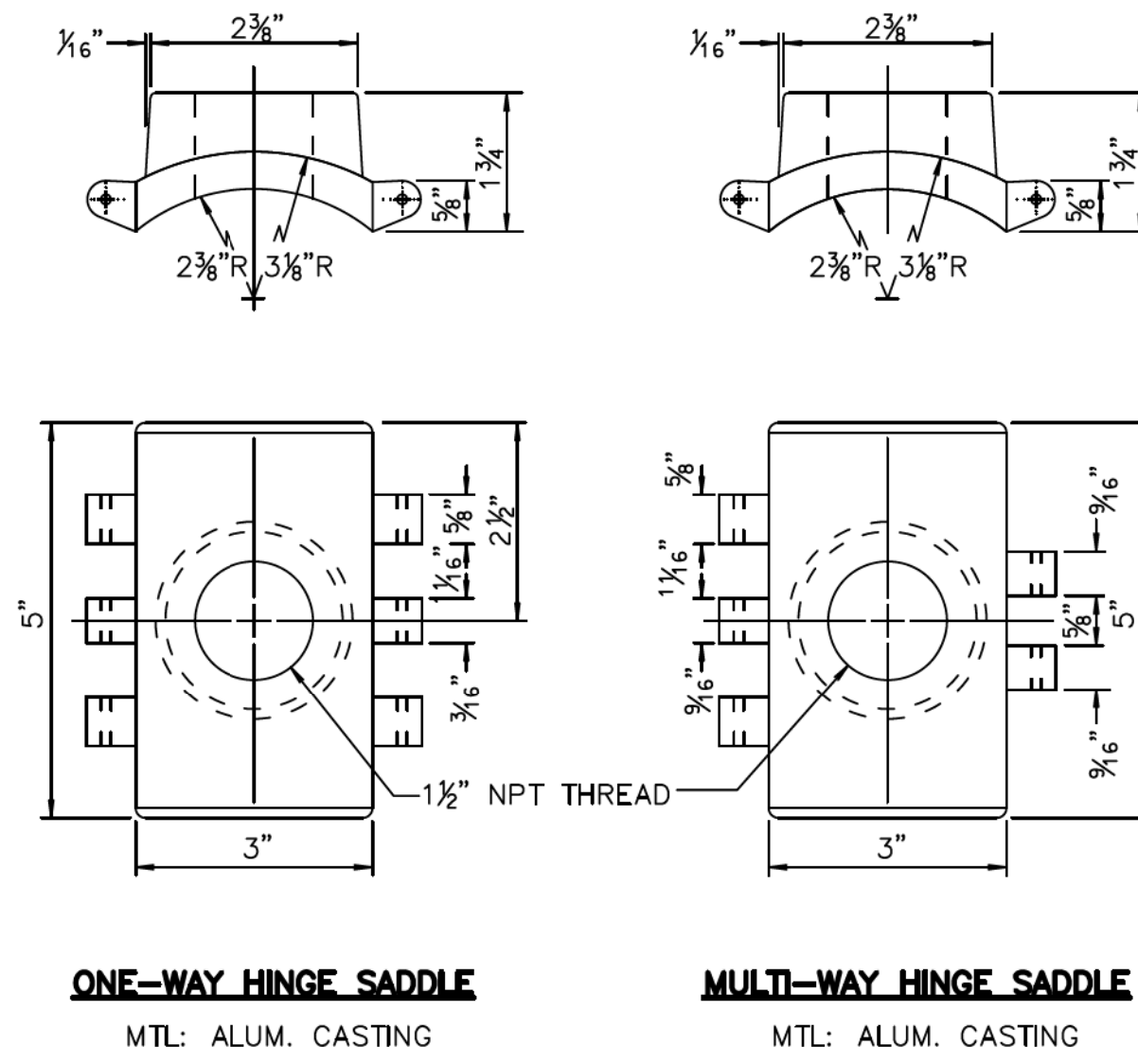
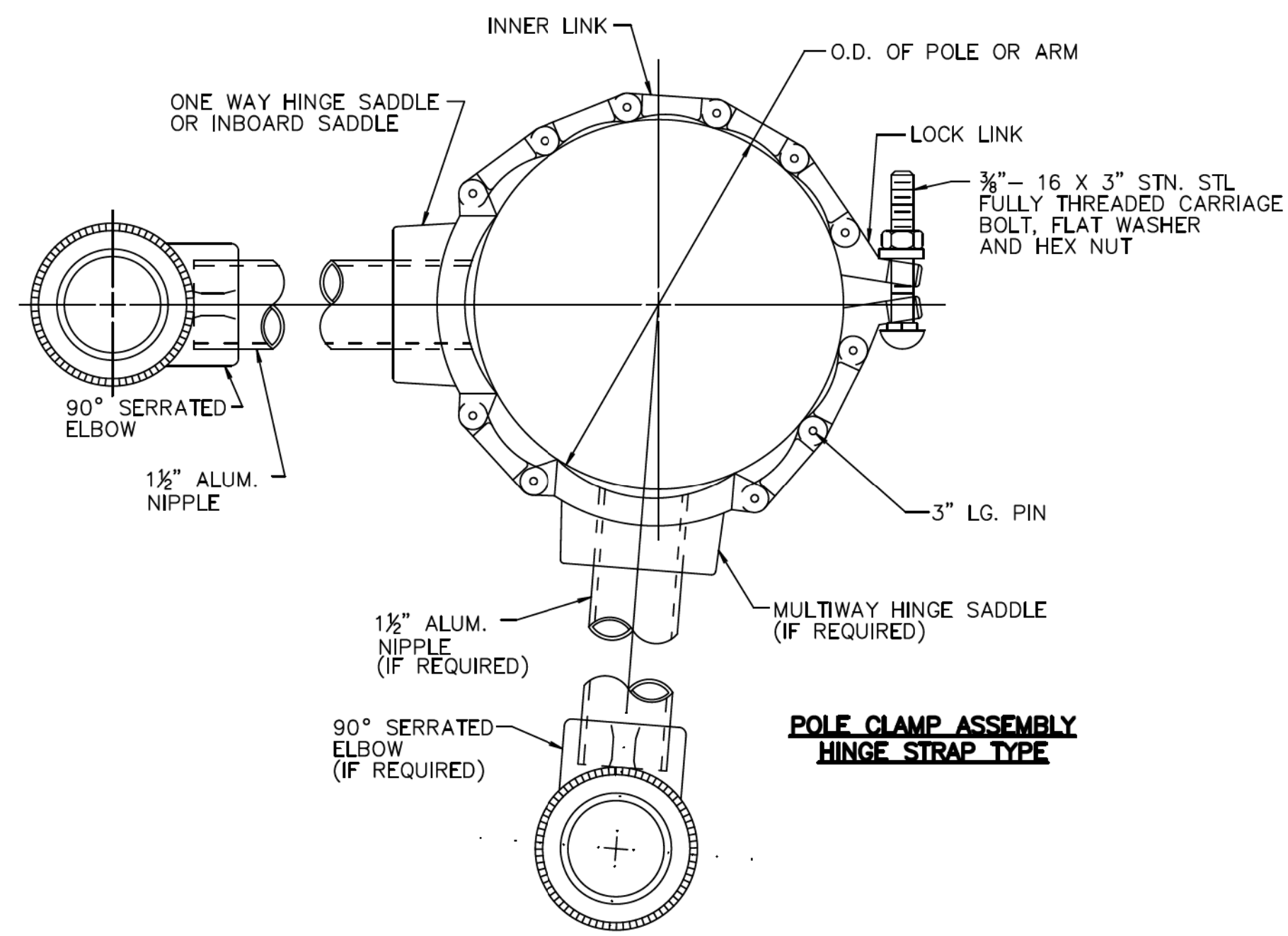


ALTERNATE MAST ARM SLIP FITTER
SAME AS ABOVE EXCEPT WHERE NOTED

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

ED-2
ED-14

Baker PW Path Location: P:\DW\APP\B\m\maker\corp.com\proj\out\Documents\Projects\Hamilton\Office\48978_NUTPA-FY-2015-LocalPre-Engineering-Assistance\City\CAD\Plan\Electrical\ED2



3\"/>

HINGE STRAP LIST OF MATERIALS

DESCRIPTION	MATERIAL	NO. REQ'D
HINGE SADDLE	B26-82 CAST ALUM.	2
INNER LINK	B26-82 CAST ALUM.	23*(32)
LOCK LINK	B26-82 CAST ALUM.	4
STD. 1 1/2\"/>		

*() NUMBER REQUIRED WHEN INSTALLED ON "K" POLE

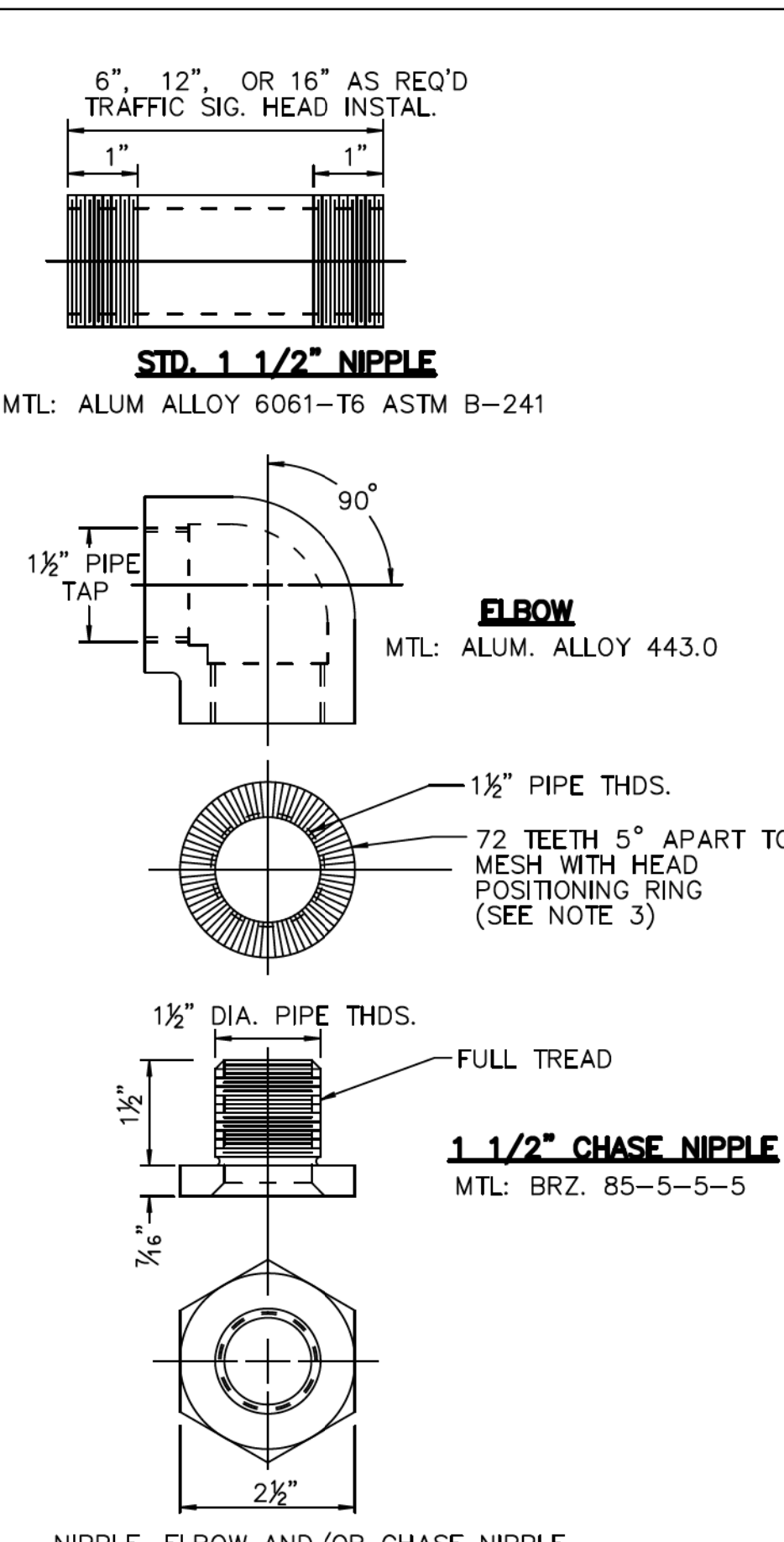
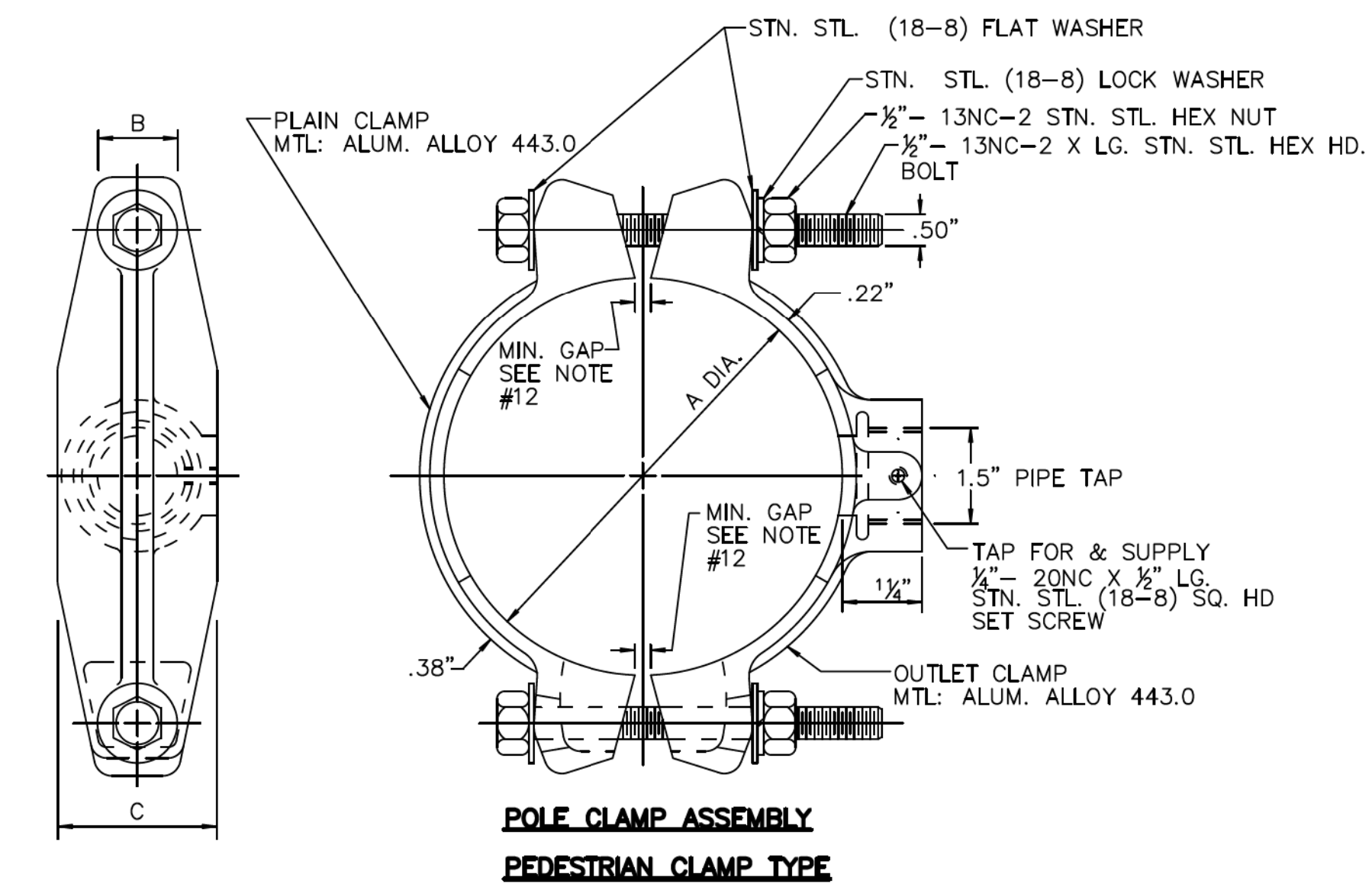
PEDESTRIAN CLAMP LIST OF MATERIALS

DESCRIPTION	MATERIAL	NO. REQ'D
PLAIN CLAMP	ALUM. ALLOY 443.0	2
OUTLET CLAMP	ALUM. ALLOY 443.0	2
BOLT, HEX HD. 1/2\"/>		

NOTE:
HARDWARE SHALL BE TIGHTENED AS PER TORQUE RATING AS RECOMMENDED BY THE MANUFACTURER.

PEDESTRIAN CLAMP DIMENSIONS

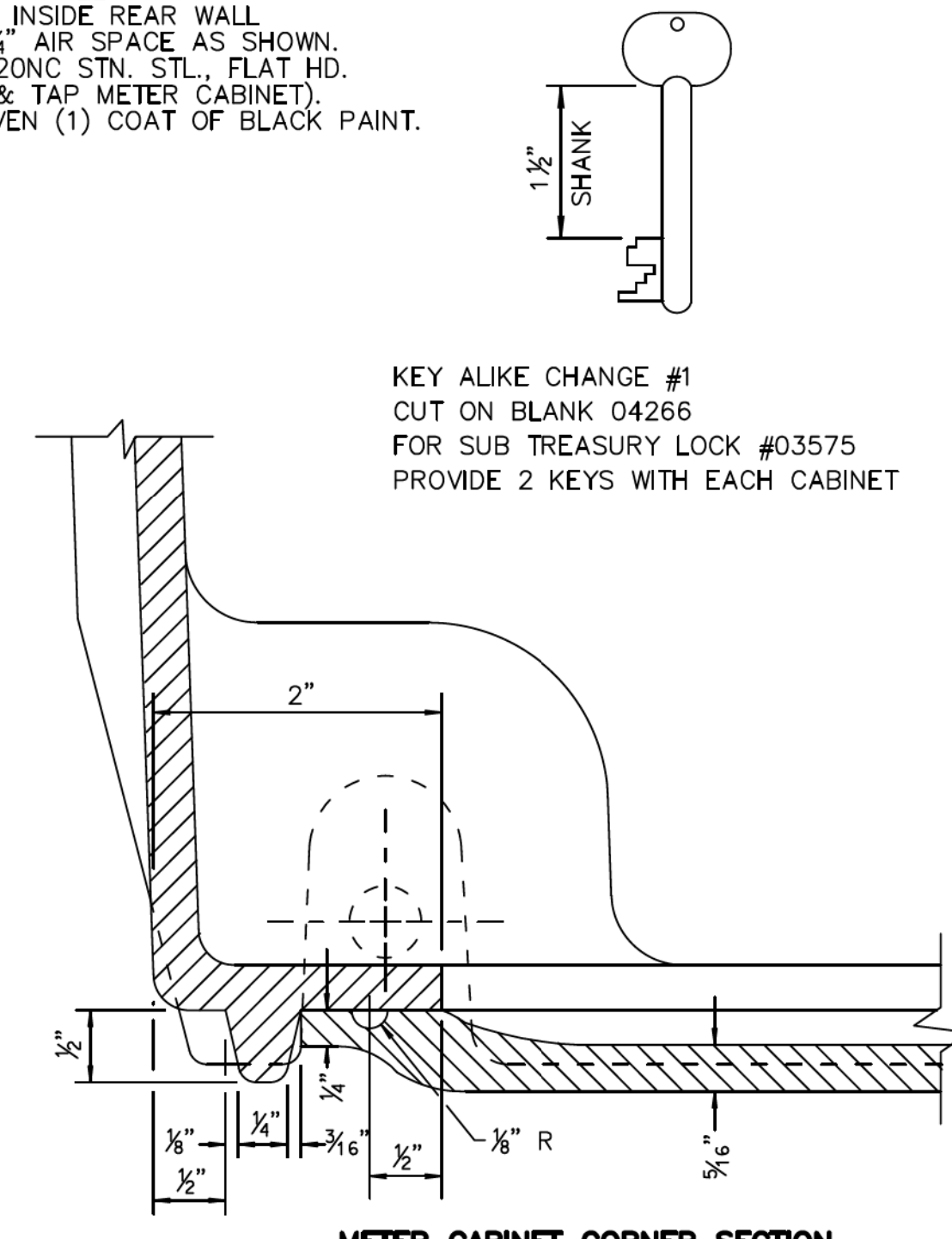
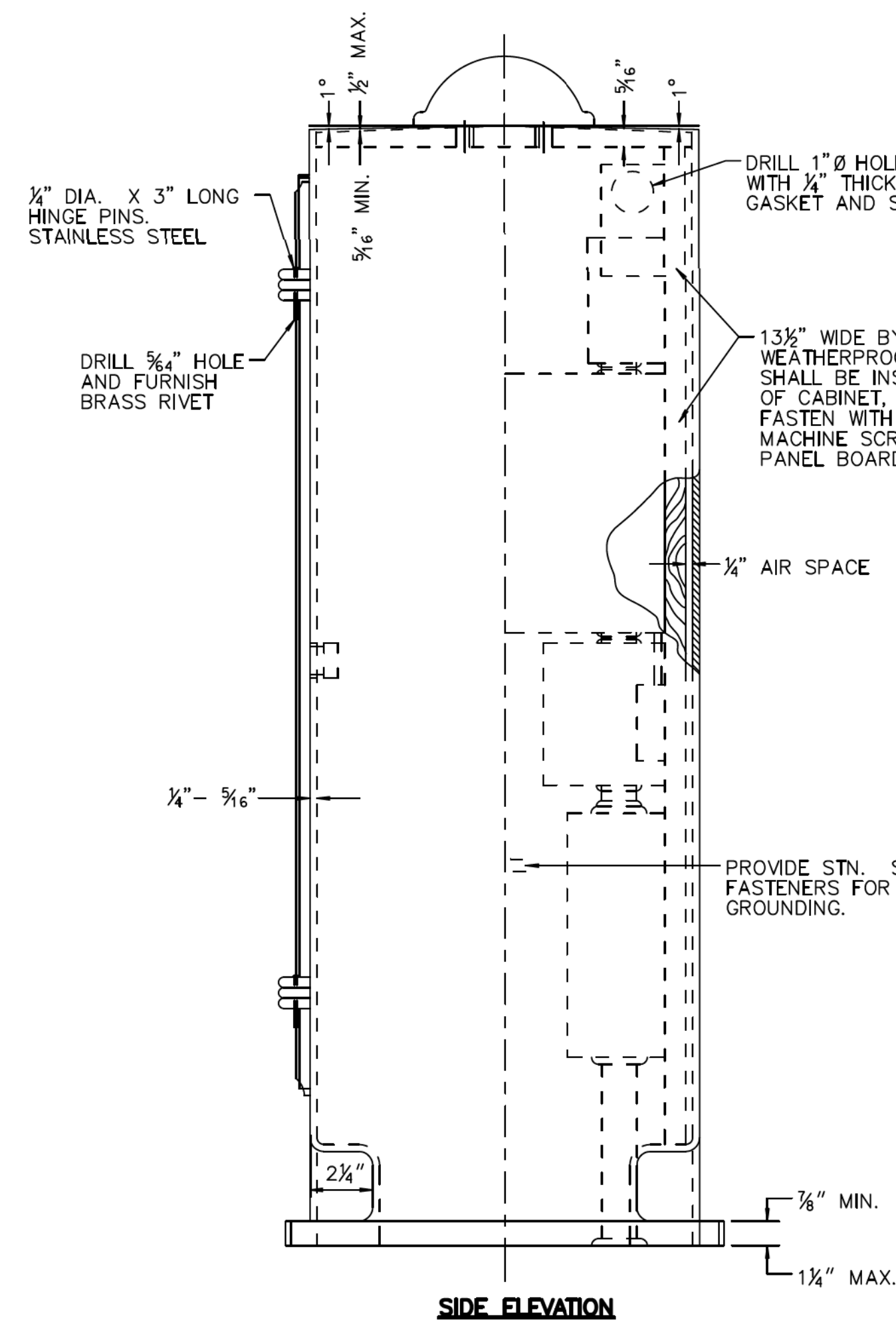
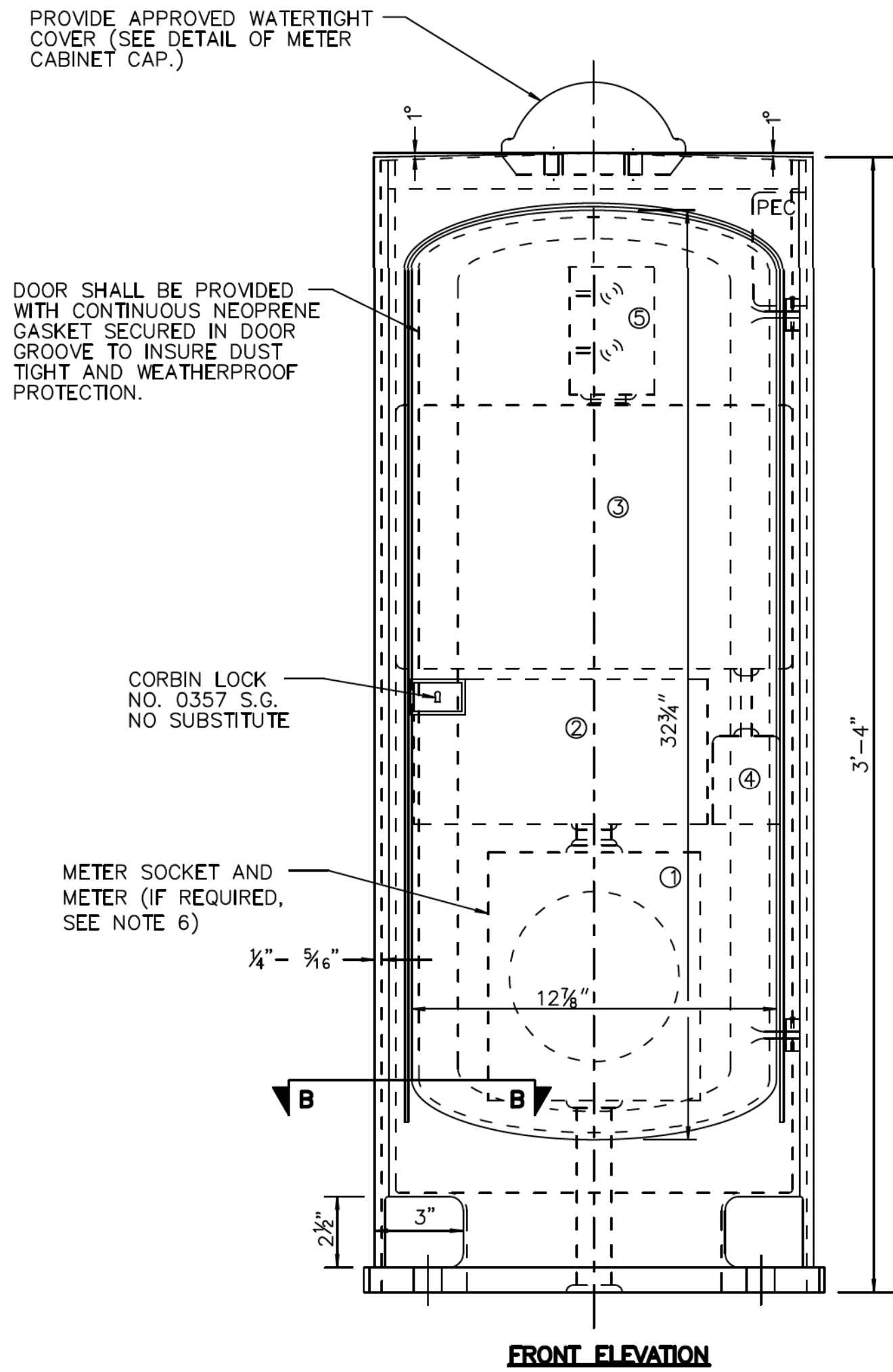
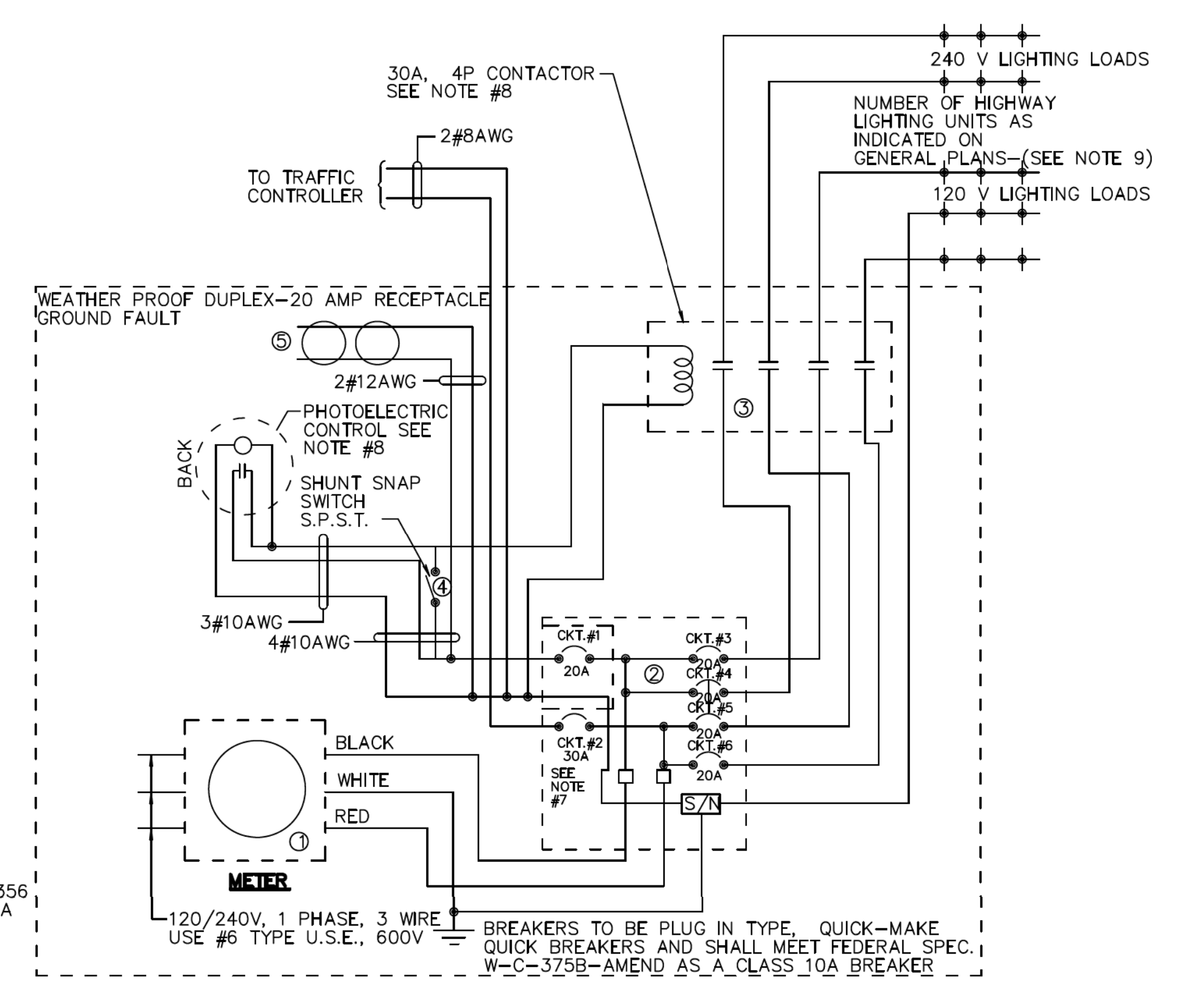
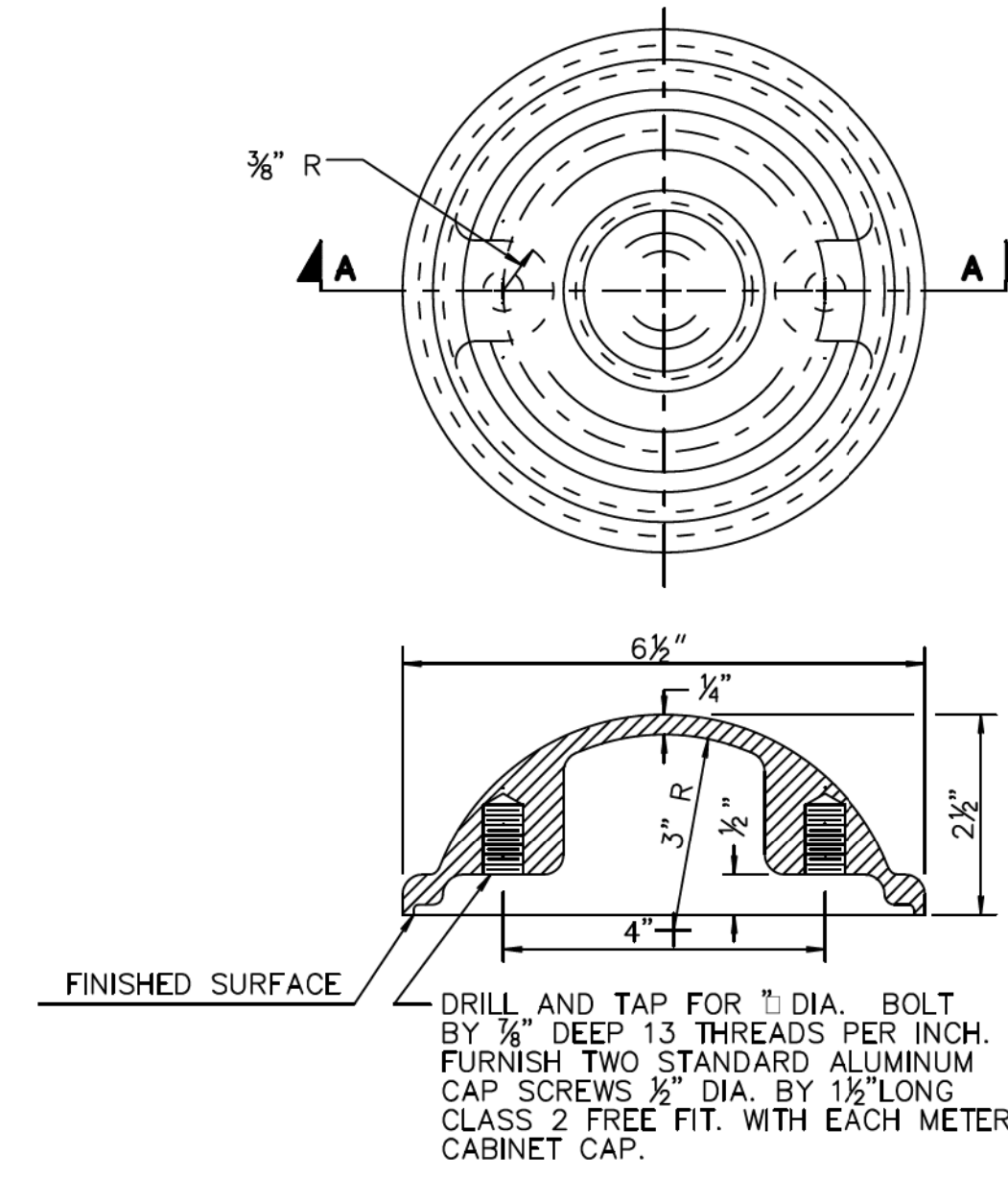
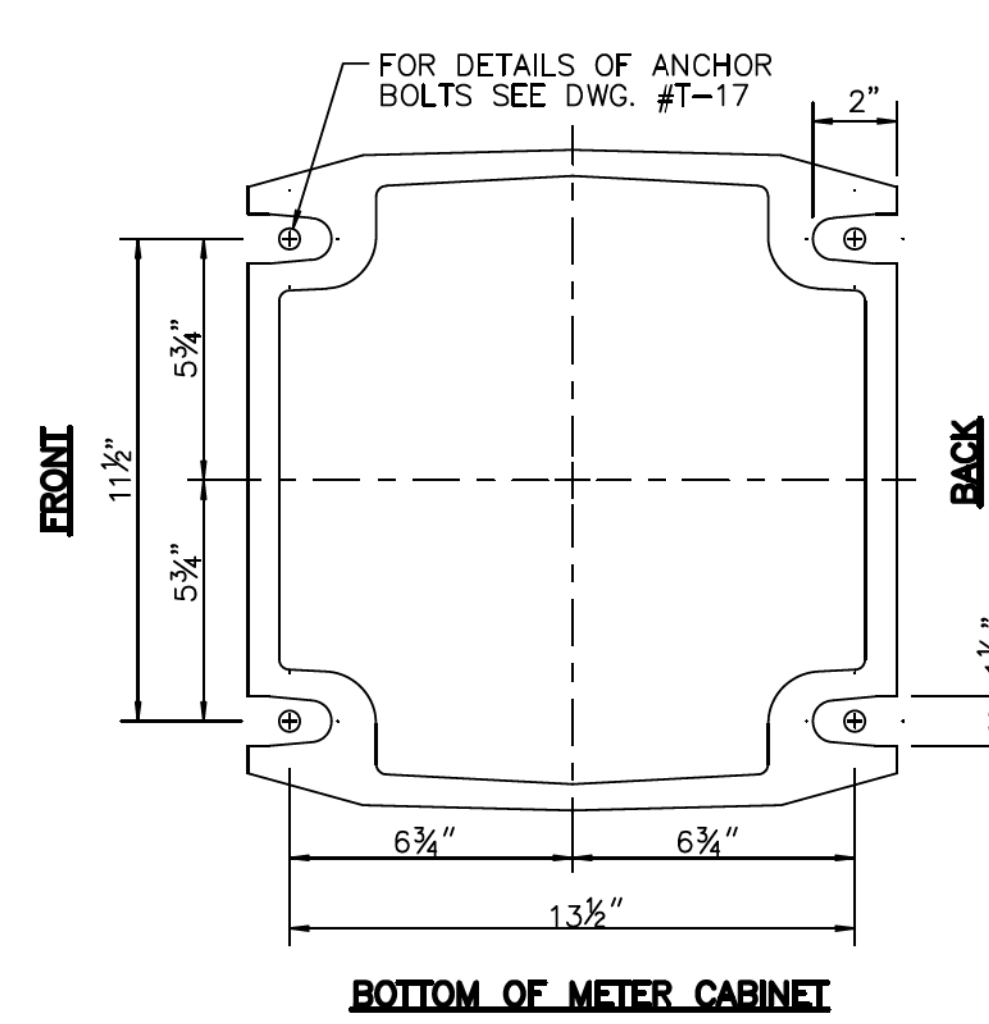
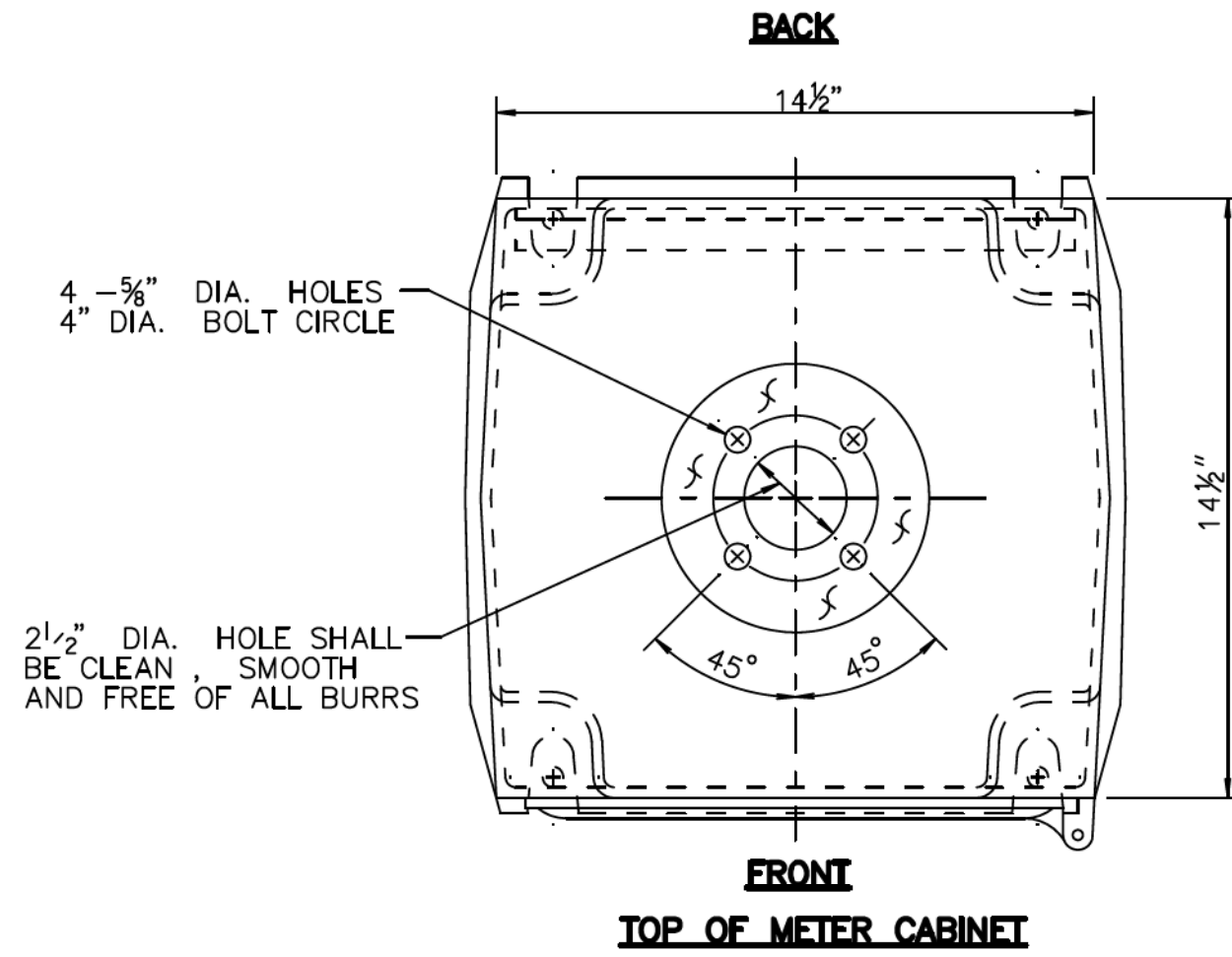
A	B	C	BOLT LGTH.
6"-8"	1.25"	2.5"	6.0"
8"-10"	1.25"	2.5"	7.5"
10"-12"	1.50"	2.875"	9.0"



- NOTES:**
- PEDESTRIAN CLAMP TYPE CAST ALUMINUM, CLAMP SHOWN MUST MEET THE FOLLOWING TESTS: 6" DIA. CLAMP TEST.
COMPLETE CLAMP SHALL BE SET ON 6" DIA. POLE.
COMPLETE CLAMP WITH 6.5" DIA. SET SHALL BE SET ON 8" DIA. POLE.
COMPLETE CLAMP AFTER BEING SET FROM 8" DIA. POLE SHALL BE RESET ON 6" DIA. POLE.
CLAMPS SHALL NOT SHOW ANY FRACTURES AFTER THE SETTING AND RESETTING PROCEDURE.
THIS TEST TO BE CONDUCTED IN THE PRESENCE OF A REPRESENTATIVE OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION.
MANUFACTURER SHALL ALSO SUBMIT DRAWING OF CLAMP TO BE FURNISHED FOR APPROVAL OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION.
 - CAST ALUM. CLAMPS OF LARGER DIA. WILL BE TESTED IN A SIMILAR MANNER.
 - PROVIDE SLOTS OR SERRATIONS IN FACE OF ELBOW OR SLOTS & SERRATED POSITIONING RING SLOTS TO BE 1/2" DP X 1/6" W. SERRATIONS TO MATCH HOUSING AND ALLOW 5" ADJUSTMENT.
 - UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
 - INSTALL 1 1/4" I.D. RUBBER GROMMET IN TRAFFIC SIGNAL STANDARD.
 - ALL STN. STL. BOLTS PER ASTM A193 GRADE B8 OR ASTM F593 ALLOY 304.
 - ALL ALUM. SAND CASTINGS SHALL BE ASTM B26 ALLOY.
 - ALL ALUM. NIPPLES SHALL BE 6061-T6, ASTM B-241 ALLOY; MIL. SPEC. QQA 200/80F.
 - HINGE STRAP IS ADAPTABLE TO ANY POLE DIA. BY ADDING OR REMOVING INNER LINKS.
 - HINGE STRAP CAN BE INSTALLED ON ROUND, SQUARE, OCTAGONAL OR ANY SHAPE POLE DESIRED.
 - ALL TOLERANCES OF CASTINGS SHALL BE ± 1/32"
 - WHEN PEDESTRIAN CLAMP IS INSTALLED ON A 6" DIA. POLE, CLAMP SHALL BE DESIGNED TO PROVIDE A MINIMUM GAP OF 1/4"

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COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL DETAIL
**WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS**



METER CABINET DETAIL
- ALUMINUM ALLOY, COMMERCIAL DESIGNATION 356
A.S.T.M. DESIGNATION B26-56T, ALLOY SG 70A.
- THE CABINET SHALL BE FREE OF BURRS, SHARP EDGES,
DENTS, PINHOLES, AND PARTING LINES AND SHALL HAVE
A UNIFORM #30 GRIT FINISH.
- FOR ALTERNATE FABRICATED METER CABINET SEE DWG. T-35

METER CABINET TYPE "T"
METER CABINET TYPE "TL" - SEE NOTE #8

NOTE:
ALL WIRE TO BE #6-AWG-600 VOLT
OR AS OTHERWISE SHOWN.

SCHEMATIC WIRING DIAGRAM: 120/240 VOLT

LEGEND

- ① METER SOCKET-INSTALLED BY CONTRACTOR-PROVIDED BY UTILITY COMPANY ON REQUEST. (IN JCP&L CO. AREA METER SOCKET IS TO BE INSTALLED AND FURNISHED BY CONTRACTOR)
- ② 4/8 CIRCUIT LOAD CENTER WITH ENCLOSURE COMPLETE WITH 1-30A & 5-20A CIRCUIT BREAKERS.
- ③ MAGNETIC CONTACTOR, 30 AMP, 120 VOLT COIL NEMA 1 ENCLOSURE.
- ④ PHOTOELECTRIC CONTROL UNIT 15 AMP. SHUNT SWITCH IN 2" X 4" HANDY BOX OR EQUIVALENT.
- ⑤ WEATHERPROOF, 20A DUPLEX RECEPTICAL GROUND FAULT.
- ⑥ IF METER IS NOT REQUIRED, INSTALL 1" I.D. SEALTITE FLEX CONDUIT AND 1" I.D. NIPPLE FROM REDUCER COUPLING TO MAIN BREAKER PANEL.
- ⑦ A 40 AMP BREAKER SHALL BE INSTALLED WITH EIGHT PHASE CONTROLLER ASSEMBLIES.
- ⑧ FOR METER CABINET TYPE "TL", PHOTOELECTRIC CONTROL AND MAGNETIC CONTACTOR SHALL BE FURNISHED AND INSTALLED.
- ⑨ THE TOTAL NUMBER OF CIRCUIT BREAKERS SHALL NOT EXCEED SIX.

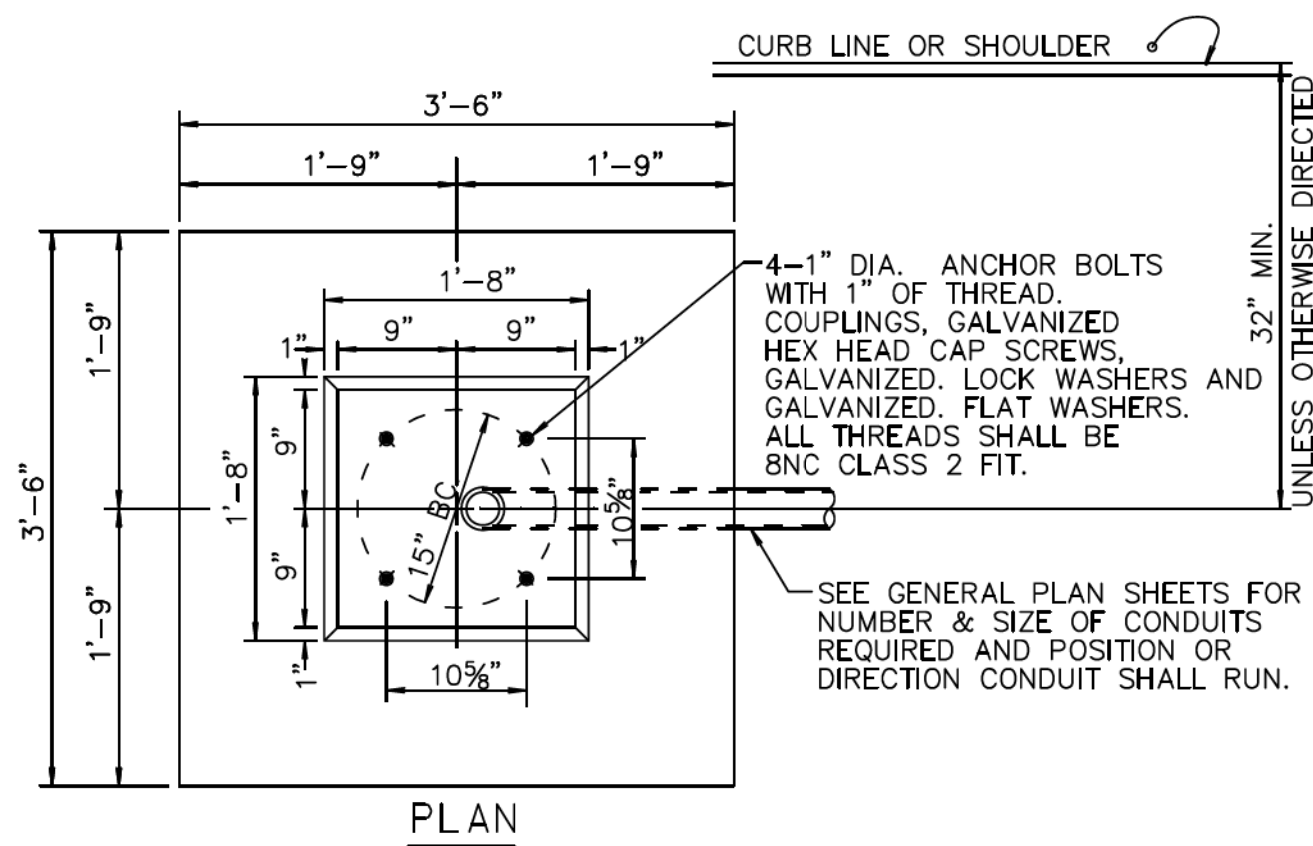
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ED-5
ED-14

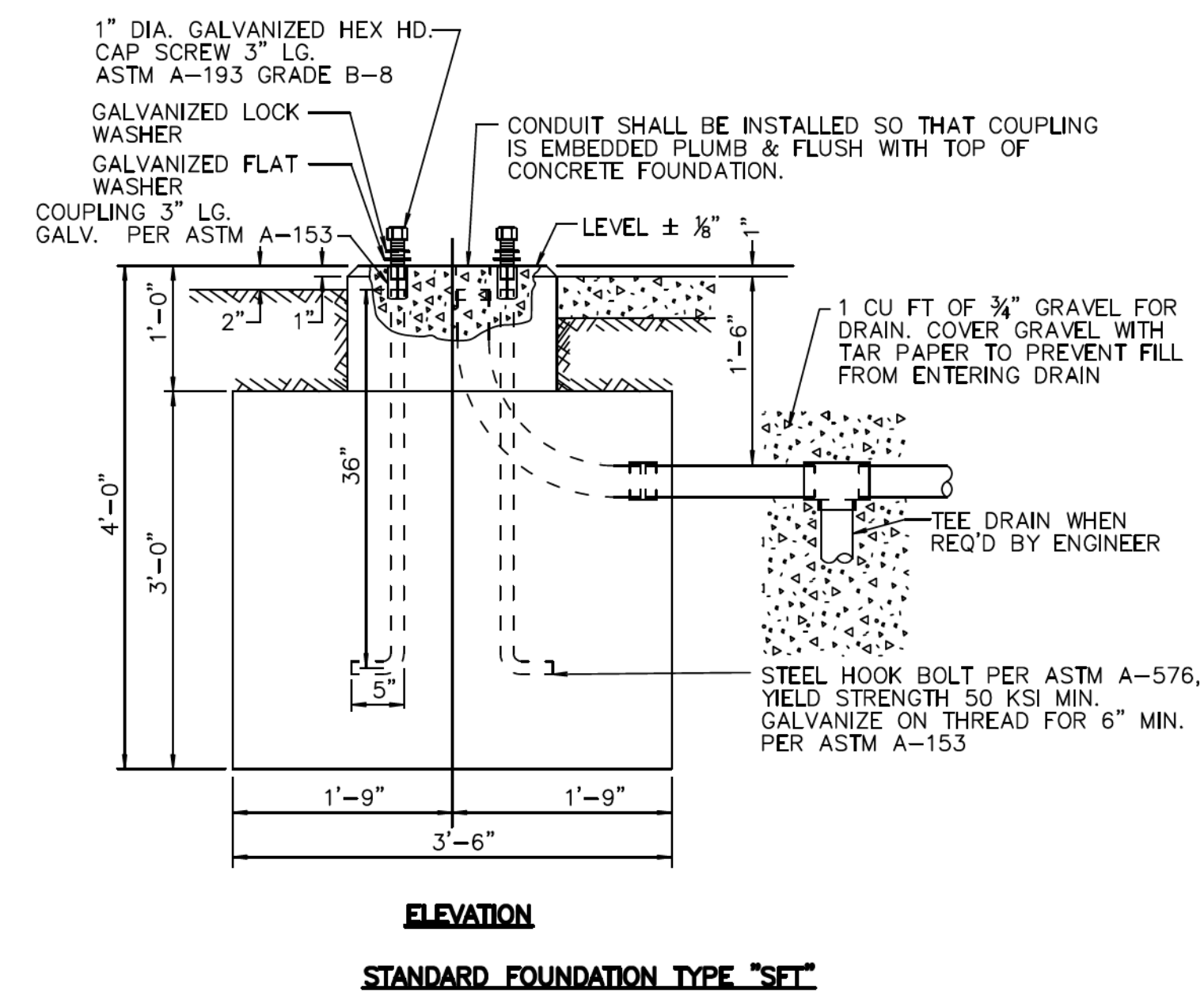
COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

CITY OF PLAINFIELD

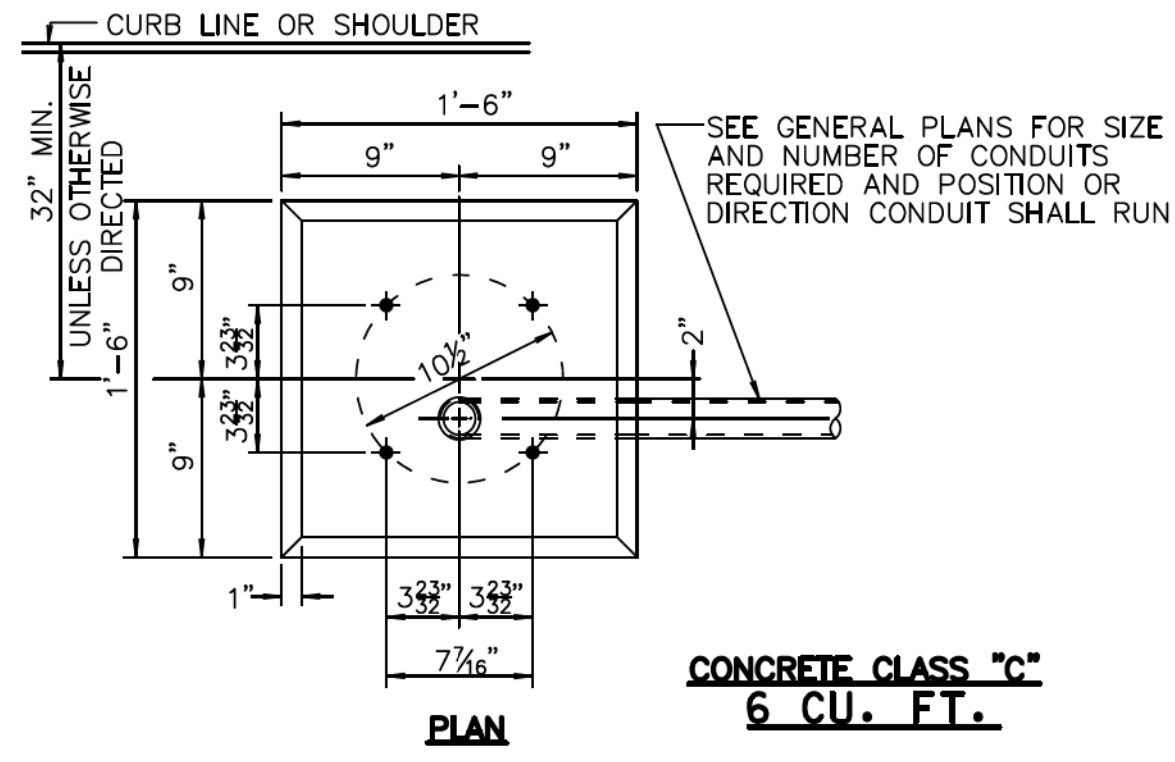
UNION COUNTY



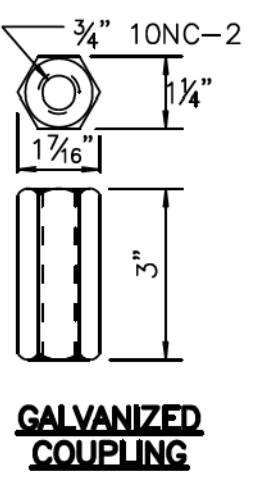
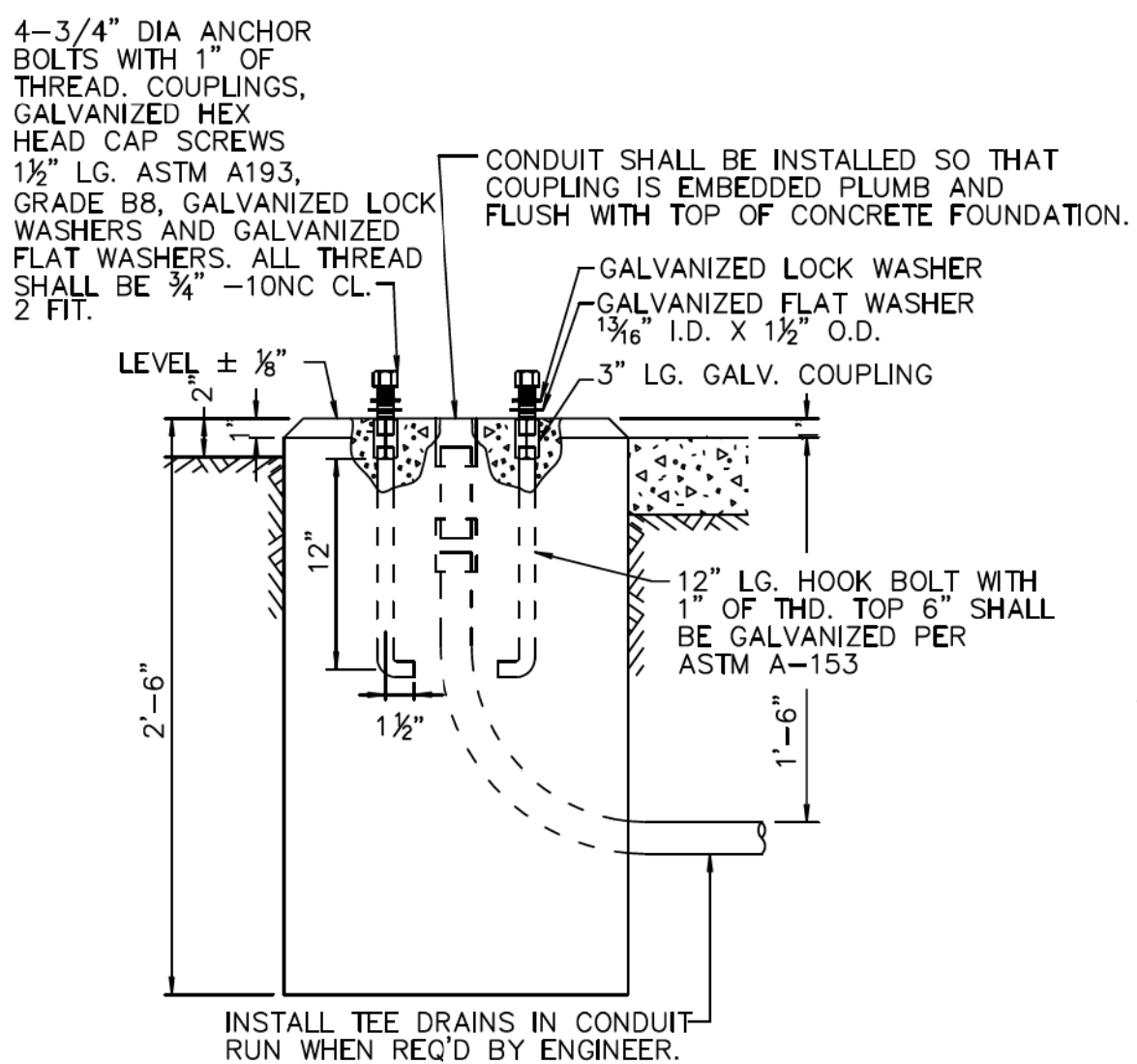
CONCRETE CLASS "C"
1.5 CU. YDS.
FOUNDATION SHALL BE POURED MONOLITHIC



ELEVATION
STANDARD FOUNDATION TYPE "SFT"



CONCRETE CLASS "C"
6 CU. FT.

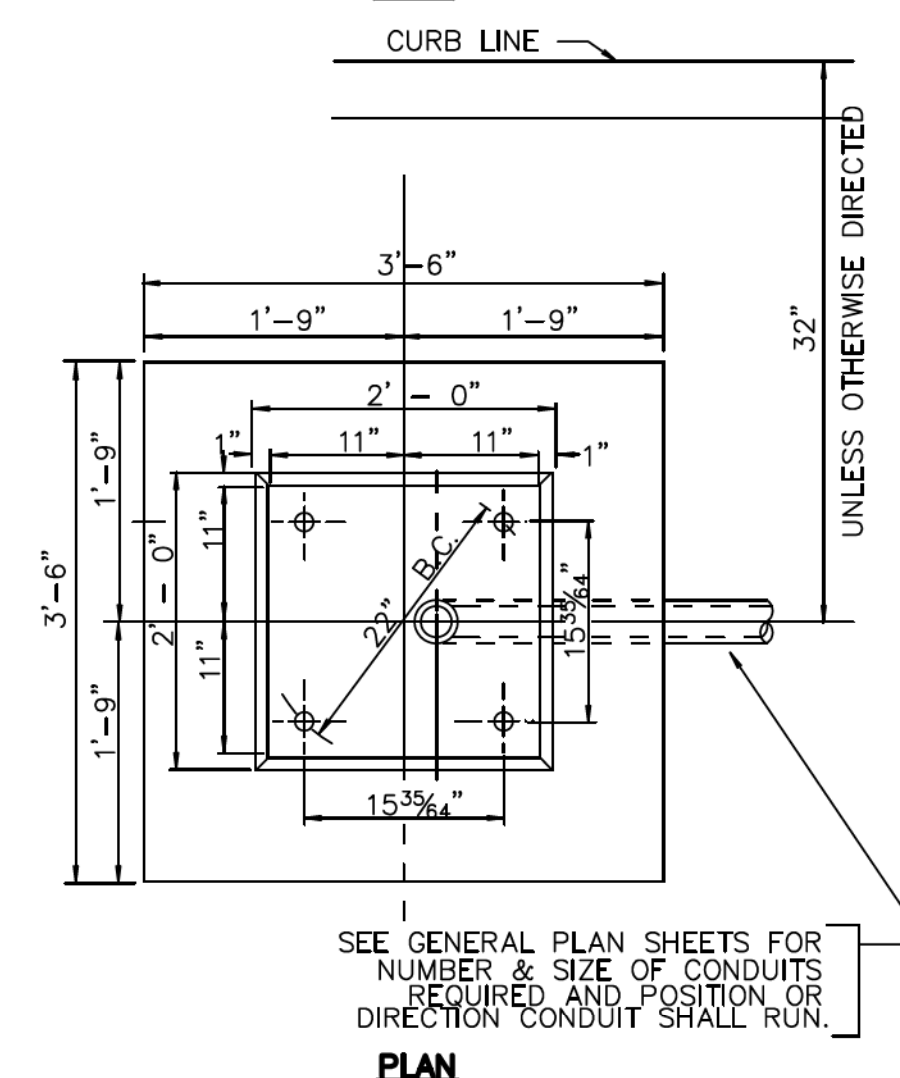


GALVANIZED COUPLING

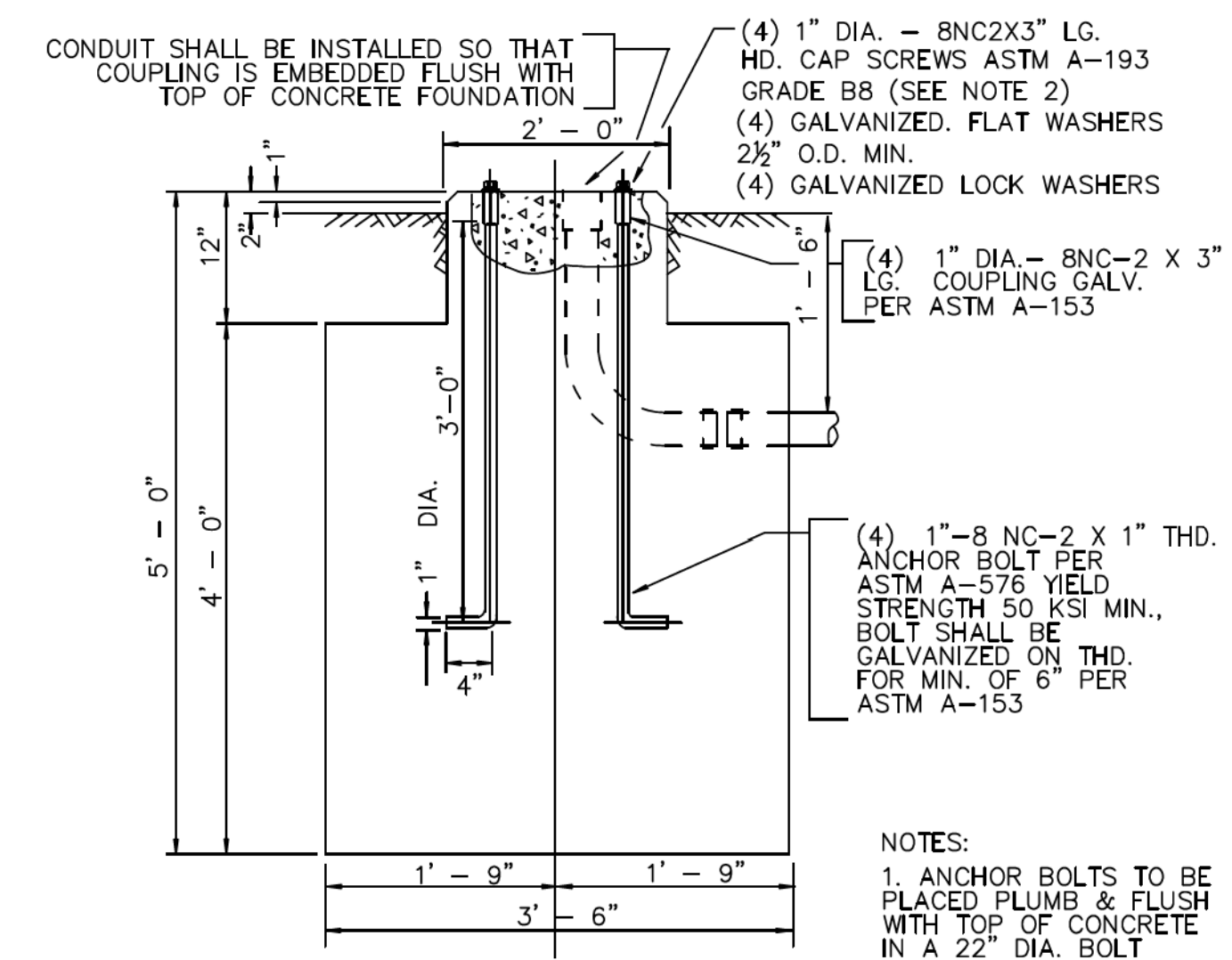
GALV. PER ASTM A-153 CONTINUOUS THREADS

ELEVATION

PEDESTAL FOUNDATION TYPE "SPF"



PLAN



ELEVATION
FOUNDATION TYPE "SEK"

CONCRETE CLASS "C"
2 CU. YDS.
FOUNDATION SHALL BE POURED MONOLITHIC

- NOTES:
- ANCHOR BOLTS TO BE PLACED PLUMB & FLUSH WITH TOP OF CONCRETE IN A 22" DIA. BOLT CIRCLE ± 1/2".
 - CAP SCREW SHALL PROVIDE A MINIMUM OF ONE INCH OF THREAD IN THE COUPLING WITHOUT BUTTING THE ANCHOR BOLT.
 - ALL HEX HEAD CAP SCREWS, LOCK WASHERS AND FLAT WASHERS SHALL BE GALVANIZED PER ASTM A-153.

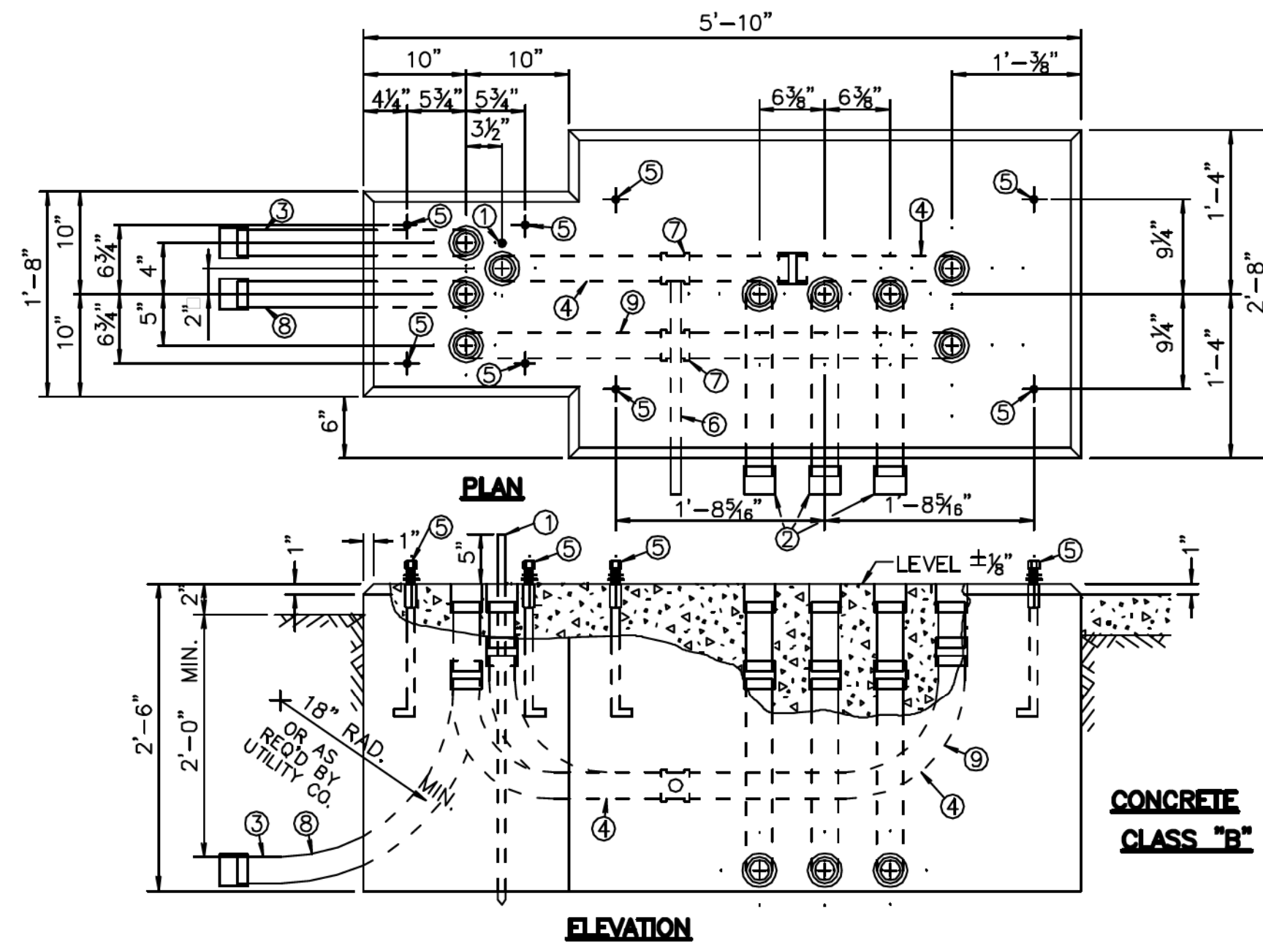
- NOTES:
- ALL CONDUIT SHALL BE INSTALLED SO THAT COUPLINGS ARE EMBEDDED PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.
 - J-BOLT MUST BE INSERTED 1 1/2" ± 1/8" INTO 3" COUPLING.

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ED-6
ED-14

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

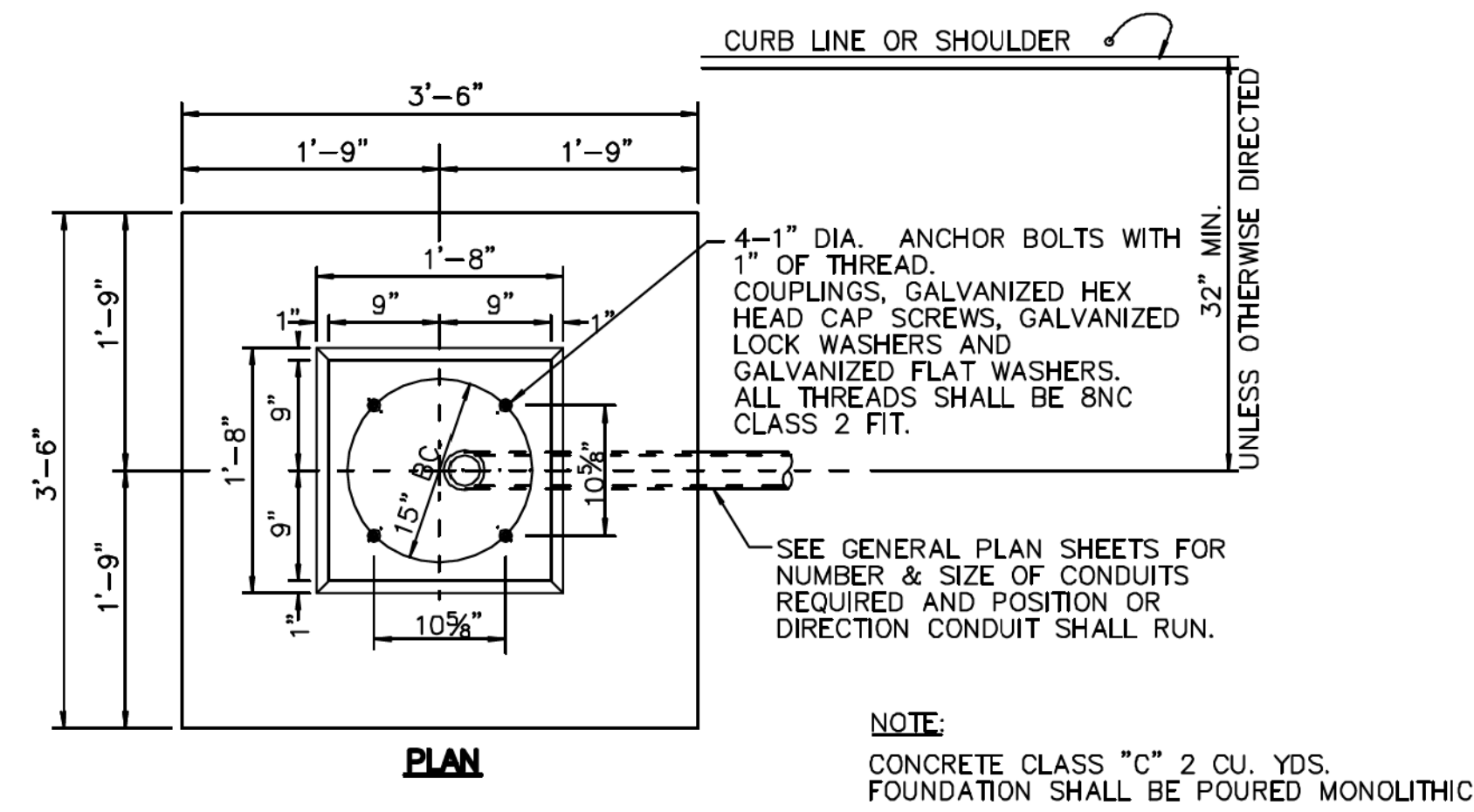
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS



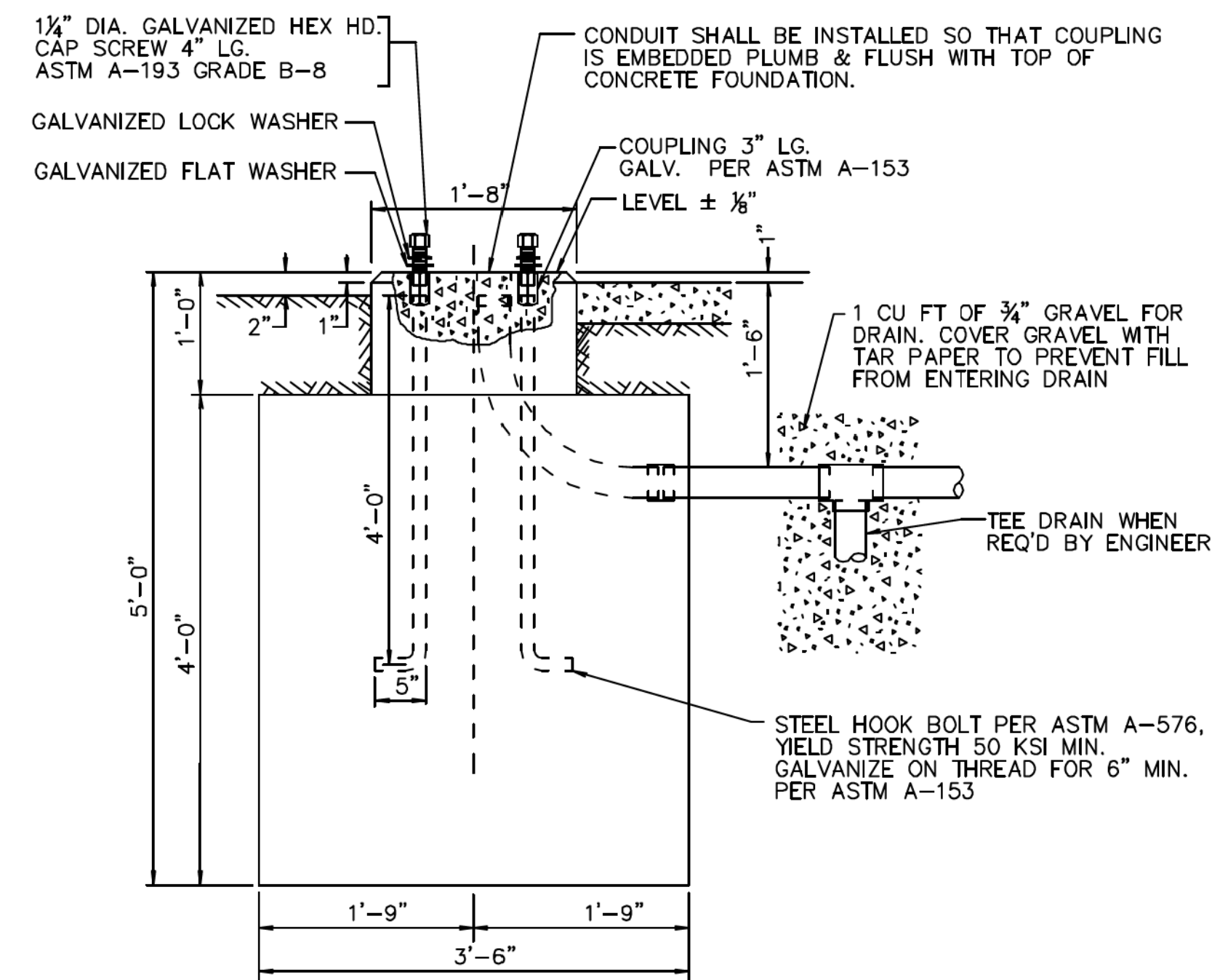
FOUNDATION TYPE "P-MC"

- ITEM:**
- ① 3/8" X 12' LG. GROUND ROD.
 - ② 3" DIA. RIGID METALLIC CONDUIT. (ALL SHALL EXTEND TO JUNCTION BOX)
 - ③ RIGID METALLIC CONDUIT (SERVICE CONDUIT). SEE GENERAL PLAN FOR DIRECTION AND SIZE
 - ④ 2" DIA. RIGID METALLIC CONDUIT (SERVICE CONDUIT)
 - ⑤ 3/4" DIA. ANCHOR BOLTS (SEE "SPF" FOUNDATION FOR DETAILS).
 - ⑥ DRAIN 1" DIA. RIGID METALLIC CONDUIT (PITCH TO JUNCTION BOX).
 - ⑦ 2" X 2" X 1" GALV. TEE FITTING.
 - ⑧ RIGID METALLIC CONDUIT (INTERCONNECT CONDUIT). SEE GENERAL PLAN FOR DIRECTION AND SIZE IF NOT SPECIFIED 2" DIA. RMC SHALL BE INSTALLED.
 - ⑨ 2" DIA. RIGID METALLIC CONDUIT (INTERCONNECT CONDUIT)

- NOTES:**
1. ALL CONDUIT SHALL BE INSTALLED SO THAT COUPLINGS ARE EMBEDDED PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.
 2. J-BOLT MUST BE INSERTED 1 1/2" ± 1/8" INTO 3" COUPLING
 3. ALL FOUNDATIONS SHALL BE POURED MONOLITHIC



NOTE:
CONCRETE CLASS "C" 2 CU. YDS.
FOUNDATION SHALL BE POURED MONOLITHIC



STANDARD FOUNDATION TYPE SET-H

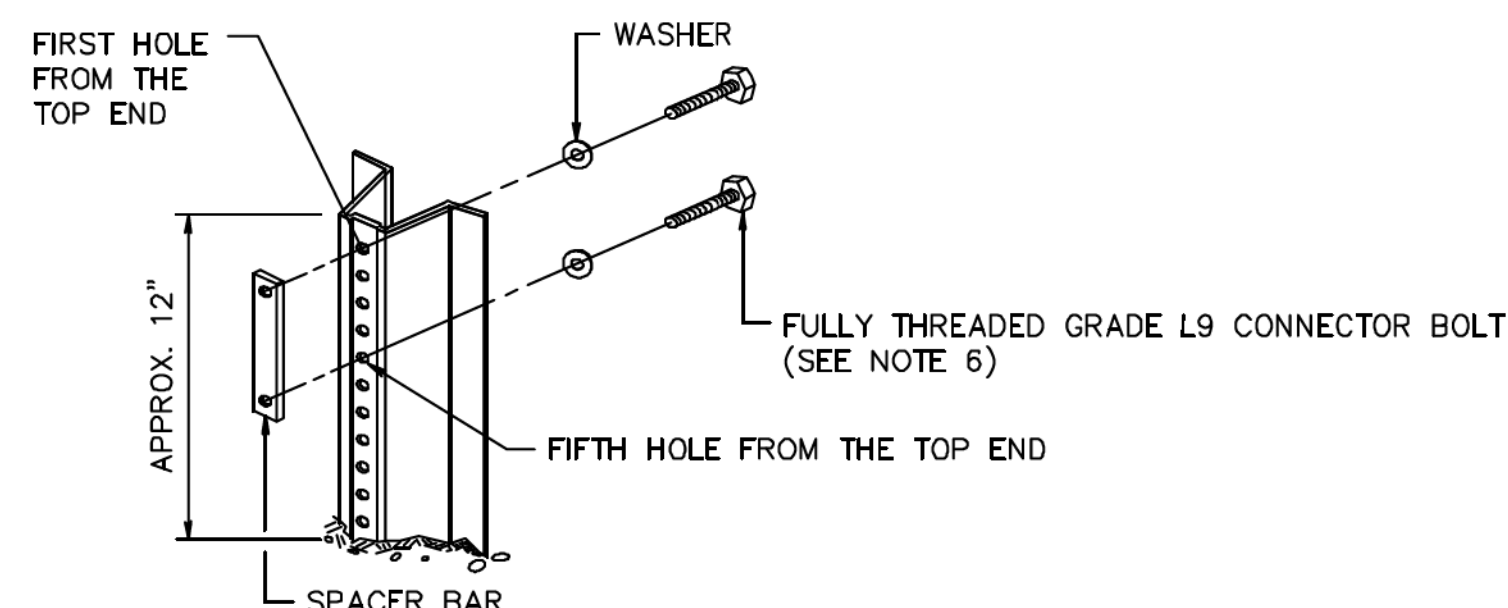
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COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

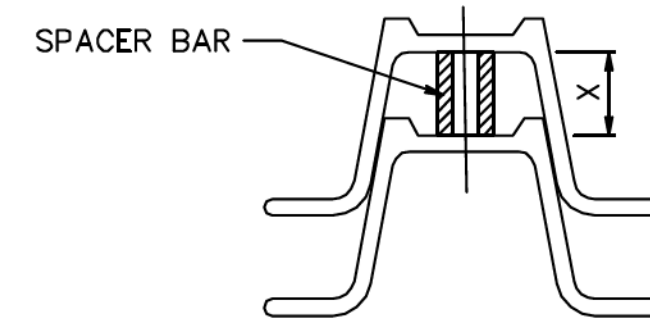
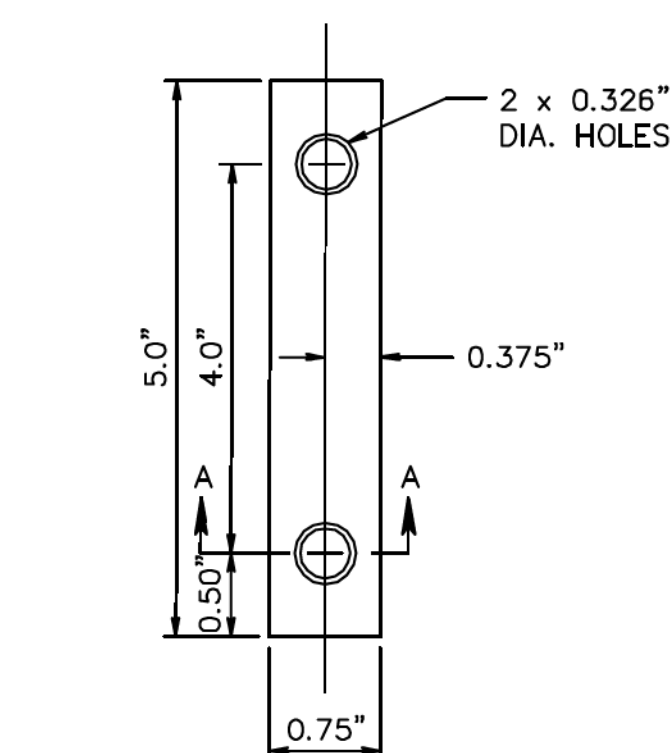
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS



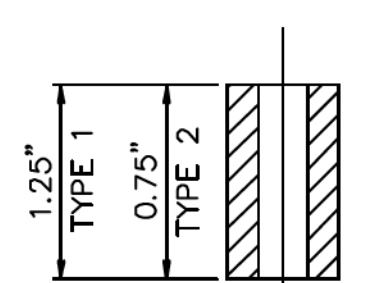
NOTES:

1. DRIVE ANCHOR POST ASSEMBLY TO WITHIN APPROXIMATELY 12 INCHES ABOVE GROUND LEVEL. PLACE BOLT AND WASHER IN FIRST AND FIFTH HOLES FROM THE TOP END, AND SECURE BOLTS ONTO SPACER.
2. DRIVE ANCHOR POST ASSEMBLY TO WITHIN A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL.
3. DIG OUT AROUND BACK OF ANCHOR POST ASSEMBLY TO ALLOW ROOM FOR TOP POST TO BE ATTACHED.
4. NEST TOP POST ASSEMBLY ONTO PROTRUDING ANCHOR POST ASSEMBLY BOLTS, THROUGH THE FIRST AND FIFTH HOLES FROM THE BOTTOM OF THE TOP POST.
5. PLACE AND TIGHTEN A SELF-LOCKING FLANGE NUT ON EACH BOLT. WHEN INSTALLATION IS COMPLETE, TOP OF GROUND POST SHALL NOT EXCEED 4 INCHES ABOVE GROUND LEVEL.
6. SIZE OF CONNECTOR BOLT FOR TYPE 1, 5/16" x 1 1/2" SIZE OF CONNECTOR BOLT FOR TYPE 2, 3/8" x 2"
7. THE CONNECTOR BOLTS SHALL BE FULLY THREADED. EACH CONNECTOR BOLT AND NUT SHALL BE CLEARLY STAMPED WITH MANUFACTURER'S IDENTIFYING MARK.

ANCHOR POST ASSEMBLY
SIGN SUPPORTS



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

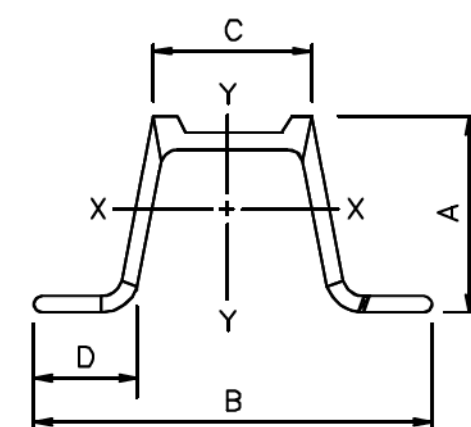


SECTION A-A

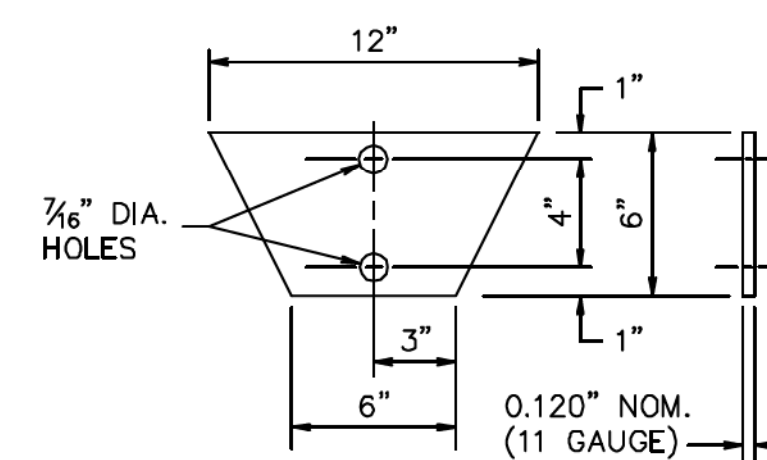
SPACER BAR

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

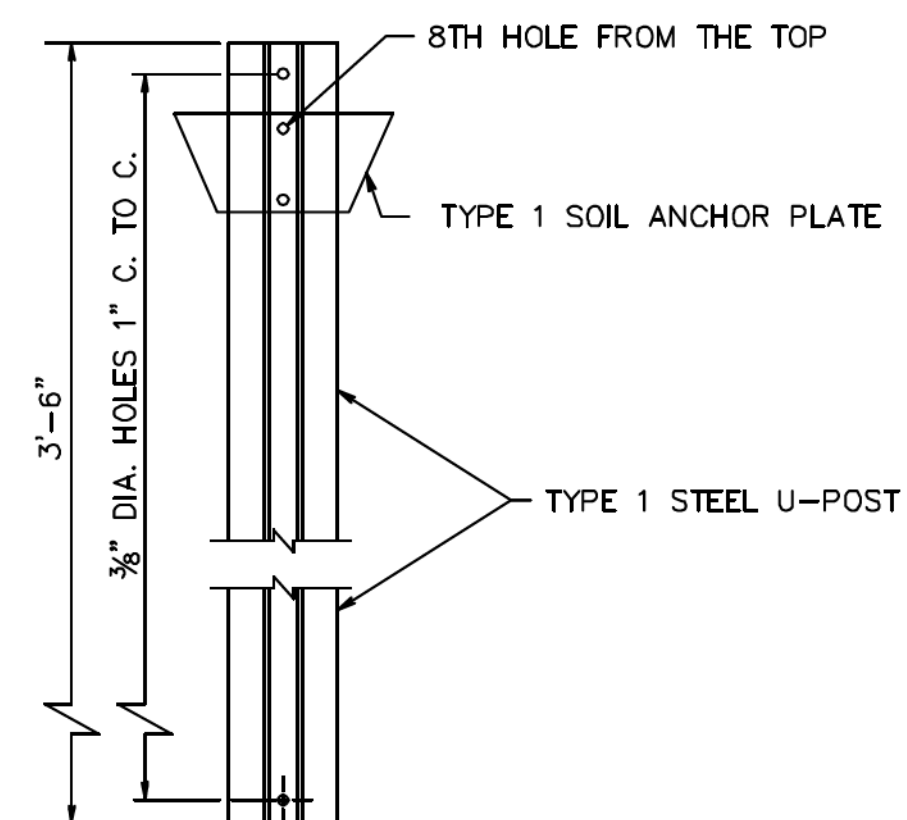
* ± 5%
** GOVERNING SECTION
TYPE 1 STEEL U-POST PROPERTIES



TYPE 1 STEEL
U-POST



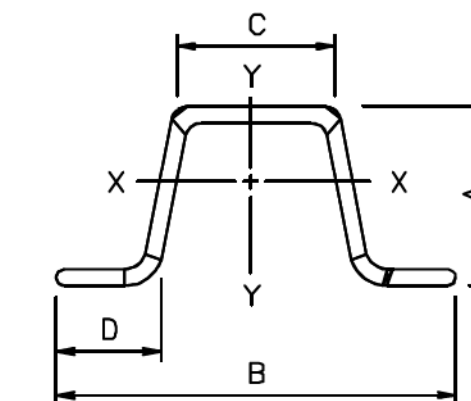
TYPE 1
SOIL ANCHOR PLATE



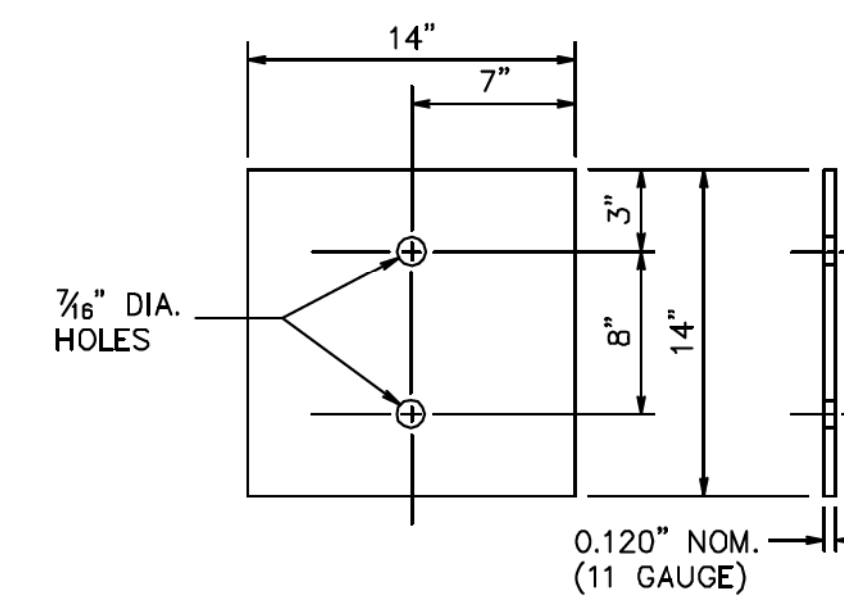
TYPE 1
ANCHOR POST
ASSEMBLY

WEIGHT * LBS. / FT.	DIMENSIONS (IN)				AREA IN. ²	X-X AXIS **		Y-Y AXIS	
	"A"	"B"	"C"	"D"		I(IN. 4)	S(IN. 3)	I(IN. 4)	S(IN. 3)
2.50	1.549	3.125	1.250	0.625	0.748	0.233	0.289	0.551	0.353
4.00	1.845	3.500	1.625	0.718	1.190	0.500	0.560	1.190	0.690

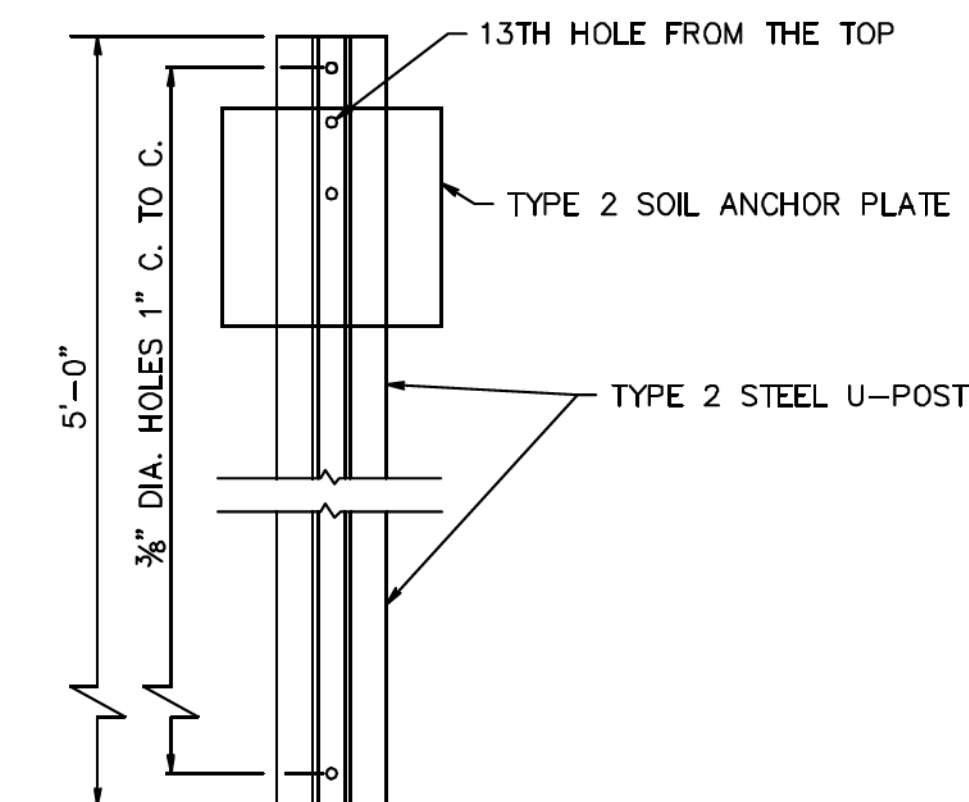
* ± 5%
** GOVERNING SECTION
TYPE 2 STEEL U-POST PROPERTIES



TYPE 2 STEEL
U-POST



TYPE 2
SOIL ANCHOR PLATE

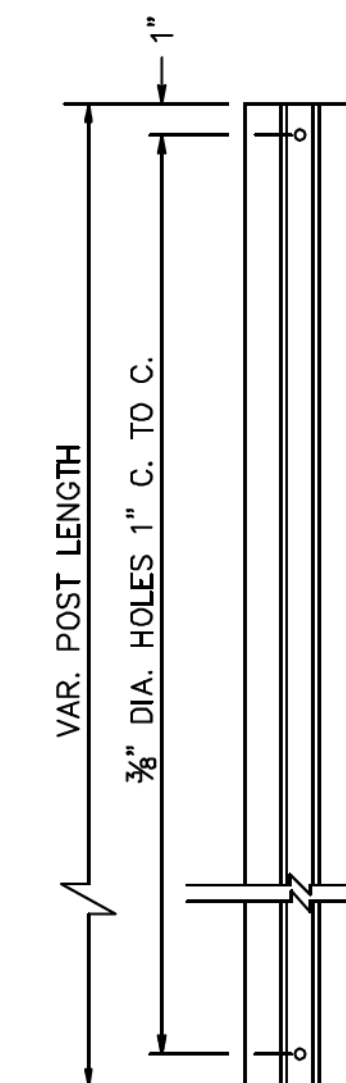


TYPE 2
ANCHOR POST
ASSEMBLY

STEEL POSTS, POST CLIPS, SPACING,
ETC.
AND TWO PIECE STEEL U-POSTS.

NOTES:

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



TOP POST
U-POST

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

ELECTRICAL DETAIL

WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

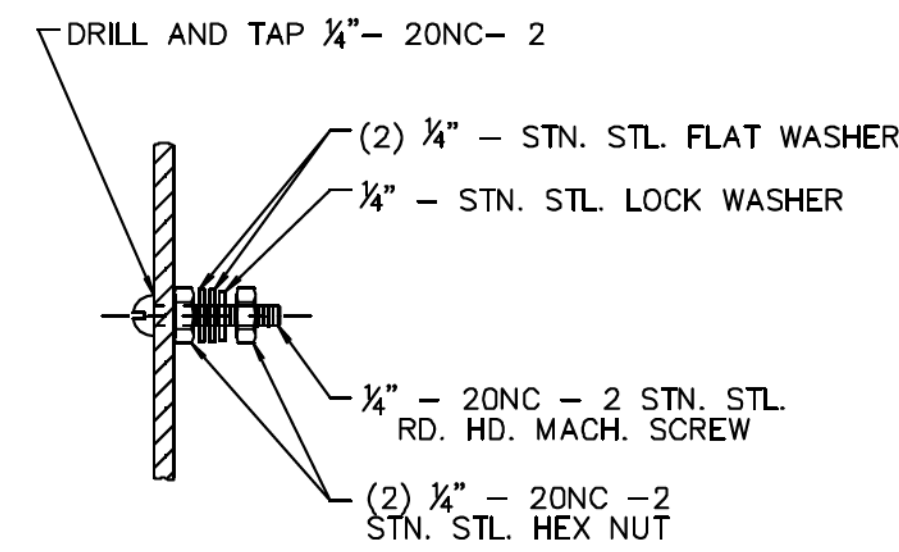
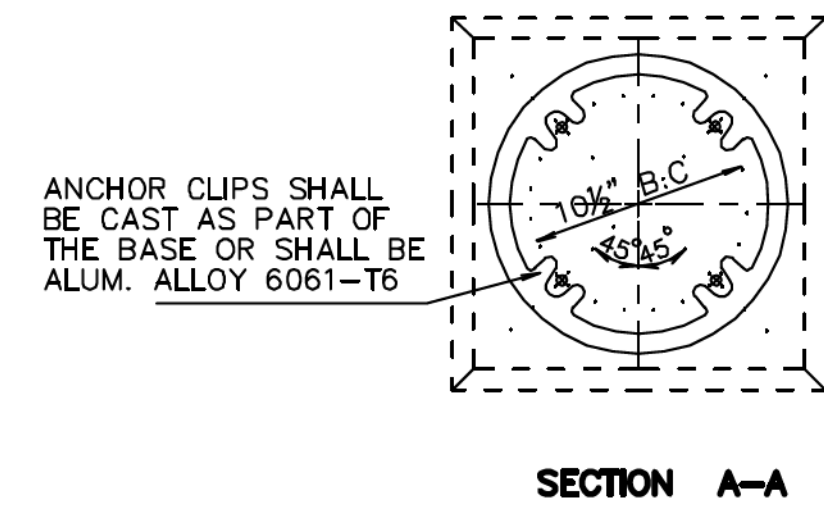
ED-8

ED-14

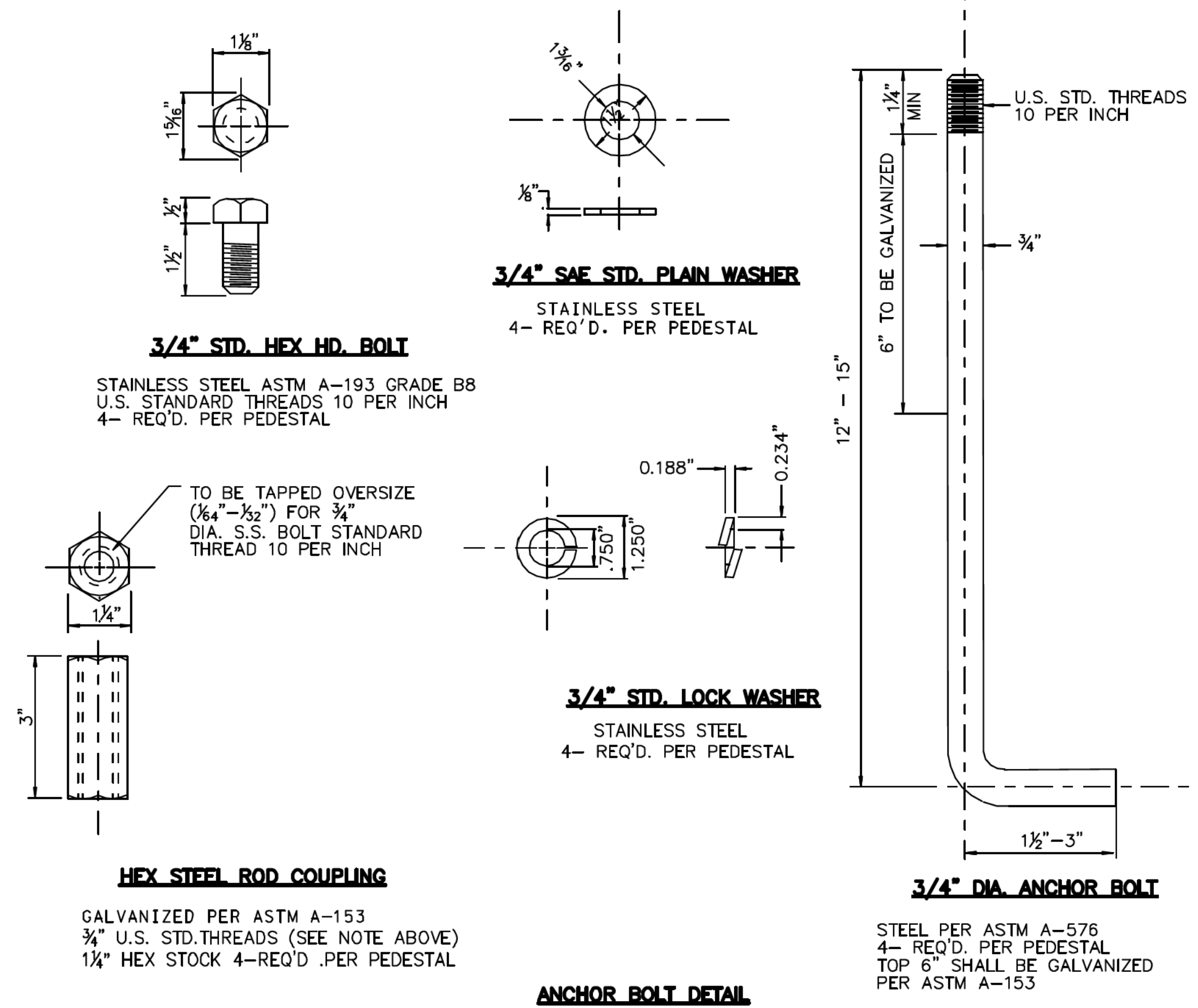
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58

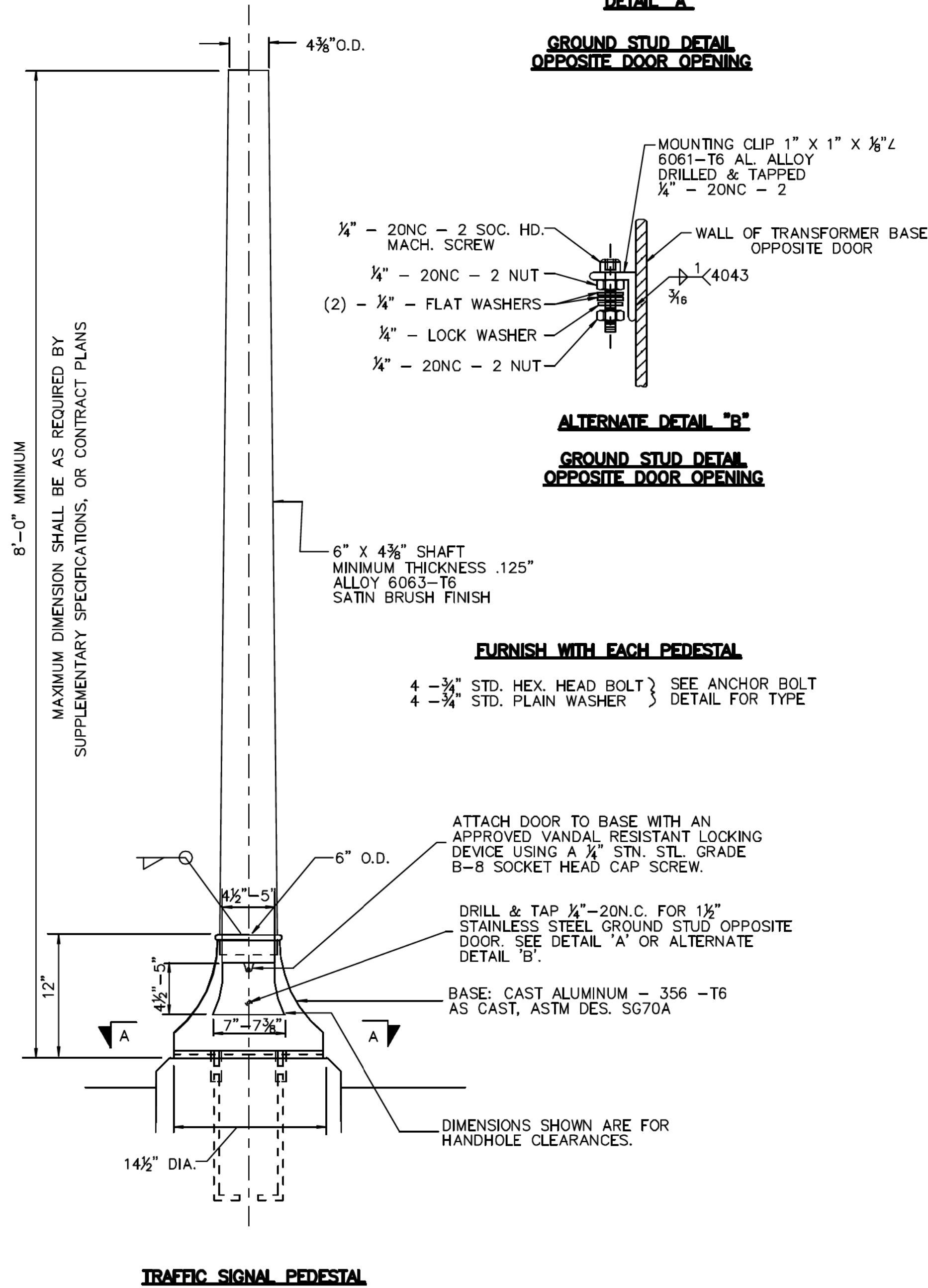
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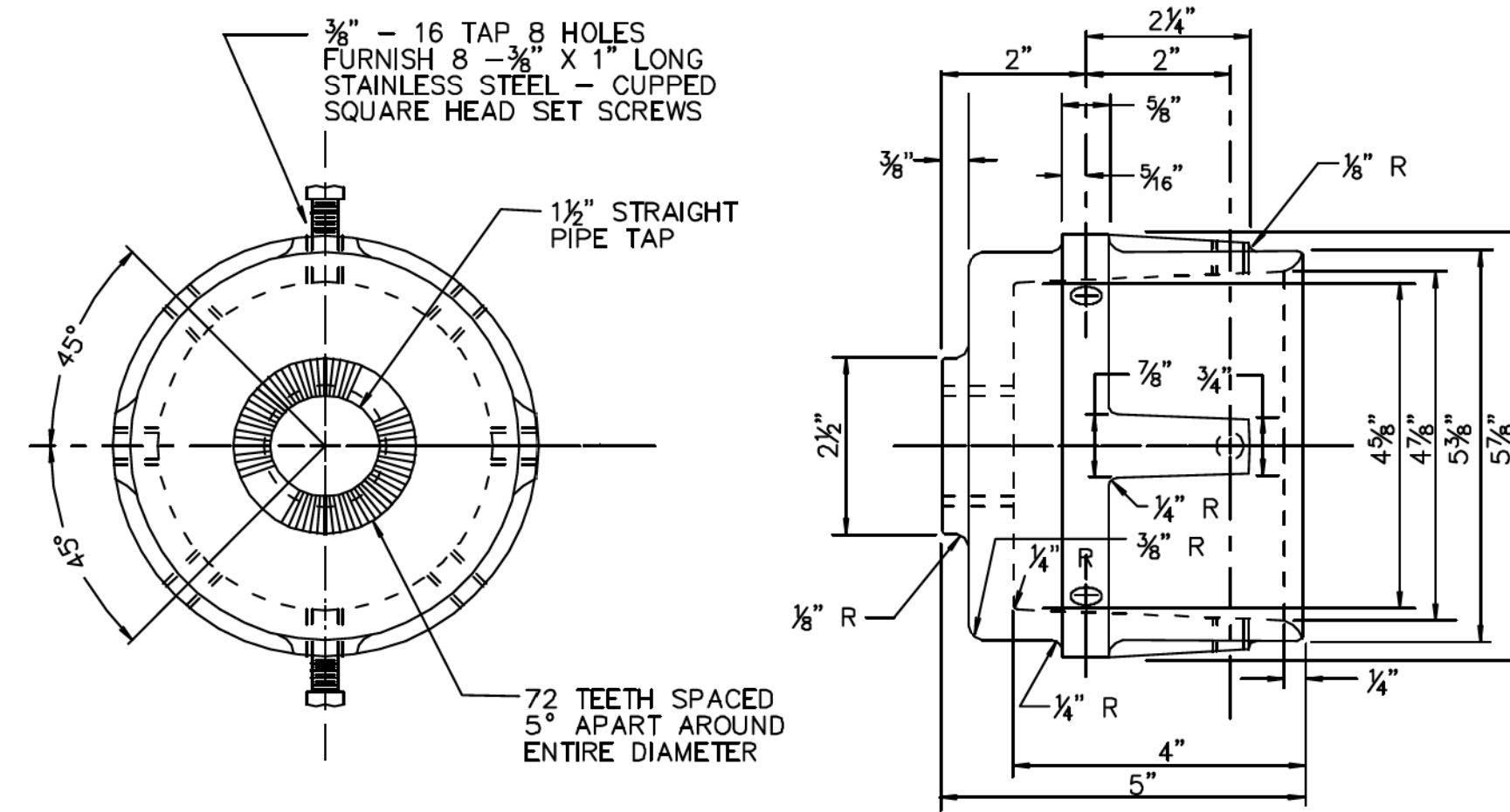
DETAIL "A"
GROUND STUD DETAIL
OPPOSITE DOOR OPENING



ANCHOR BOLT DETAIL

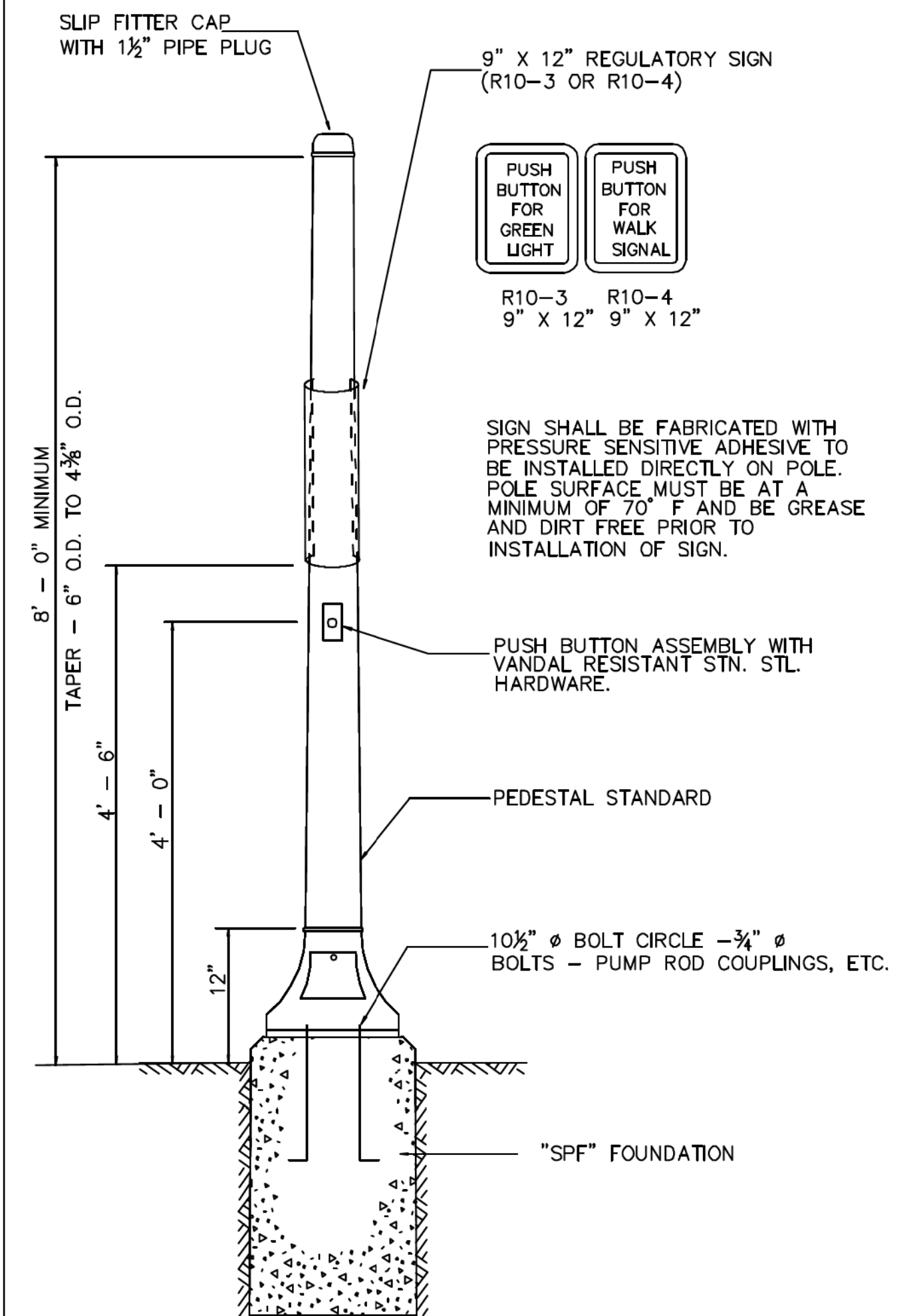


TRAFFIC SIGNAL PEDESTAL



SLIP FITTER DETAIL

MATERIAL: ALUMINUM ALLOY 356



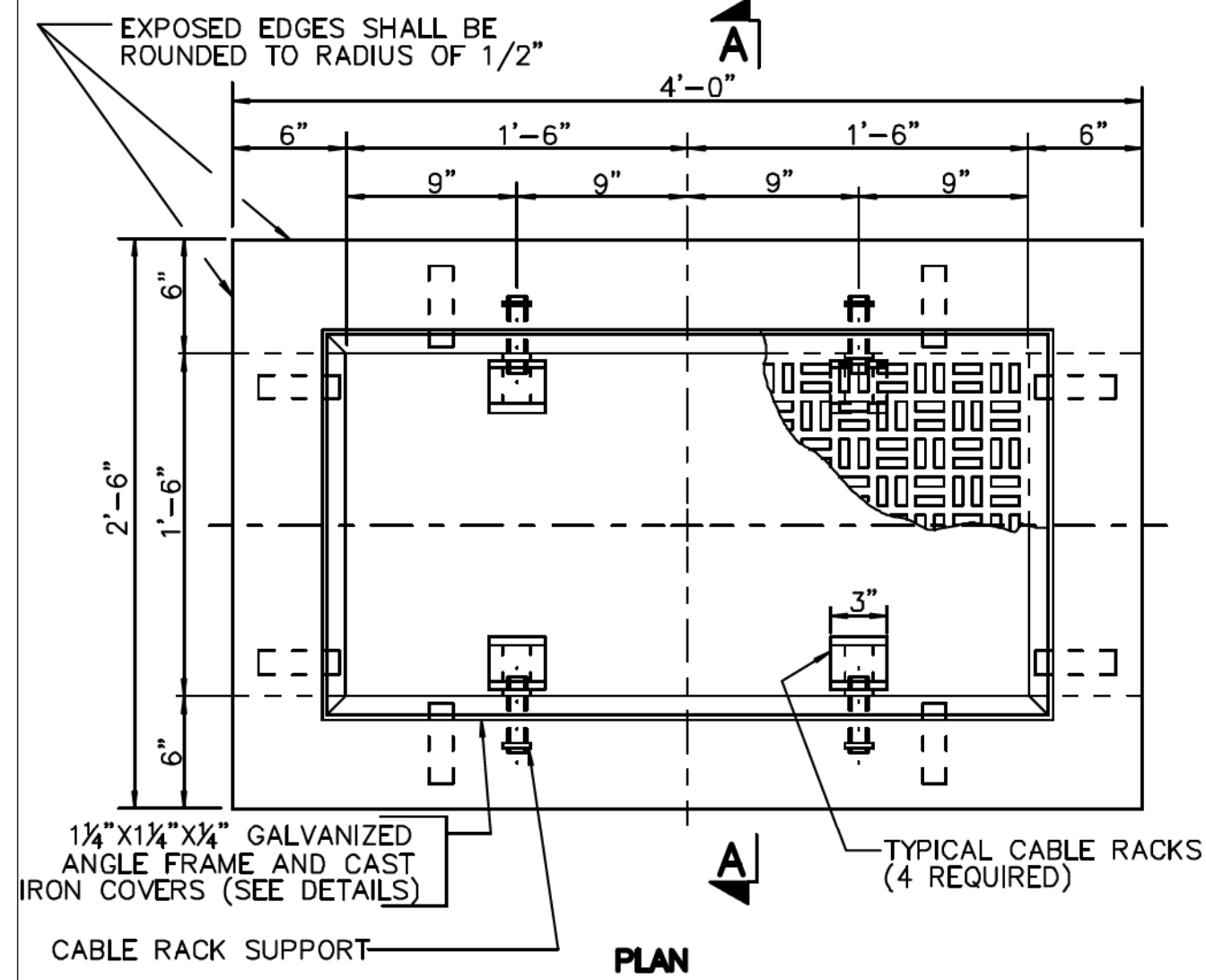
**TYPICAL PUSH BUTTON STANDARD
PUSH BUTTON ASSEMBLY INSTALLED**

NOTES:

1. PEDESTAL STANDARDS SHALL BE MANUFACTURED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
2. ALL TOLERANCES OF CASTINGS SHALL BE ± 1/32".

CITY OF PLAINFIELD

UNION COUNTY

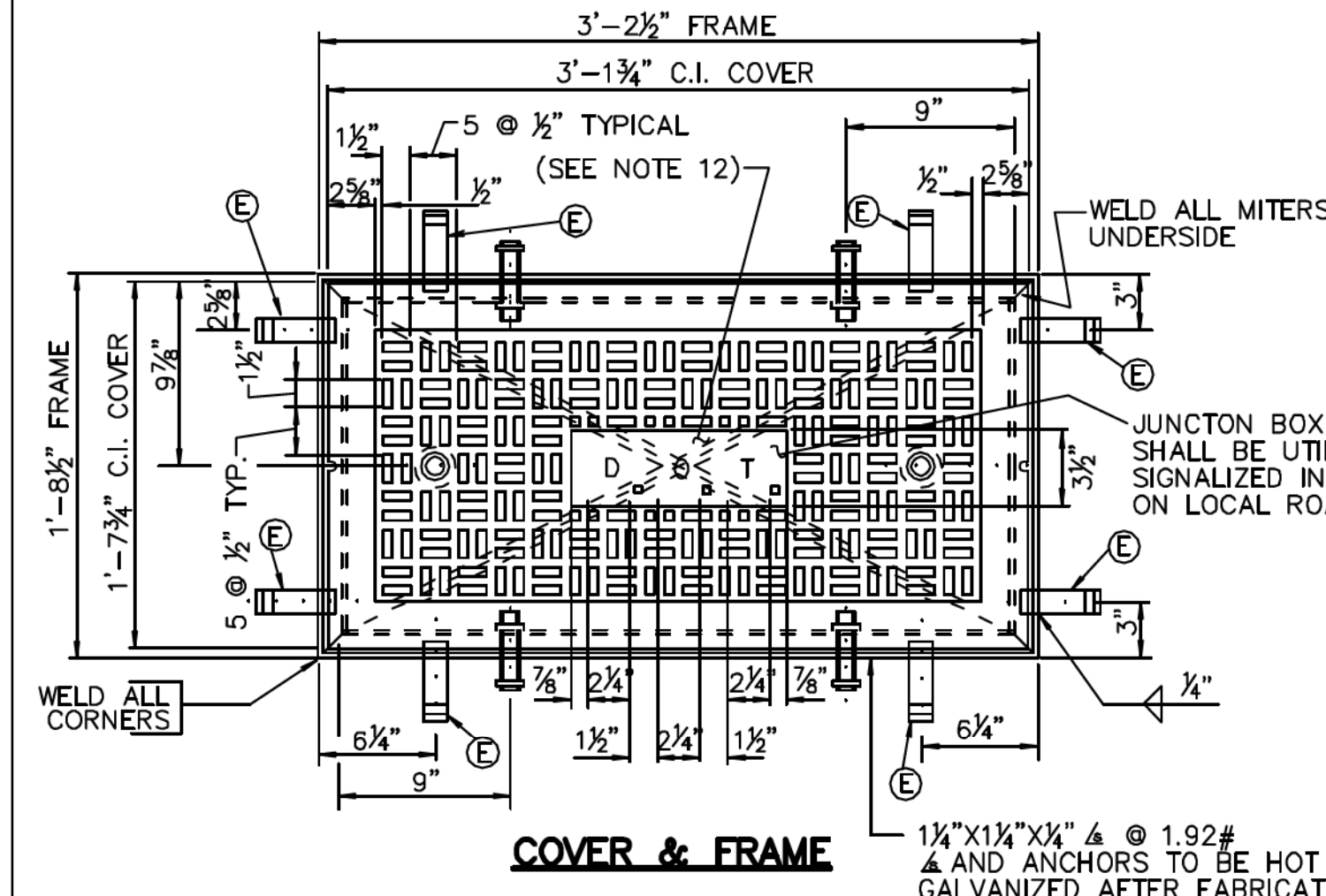


18" X 36" JUNCTION BOX - CLASS "JB"

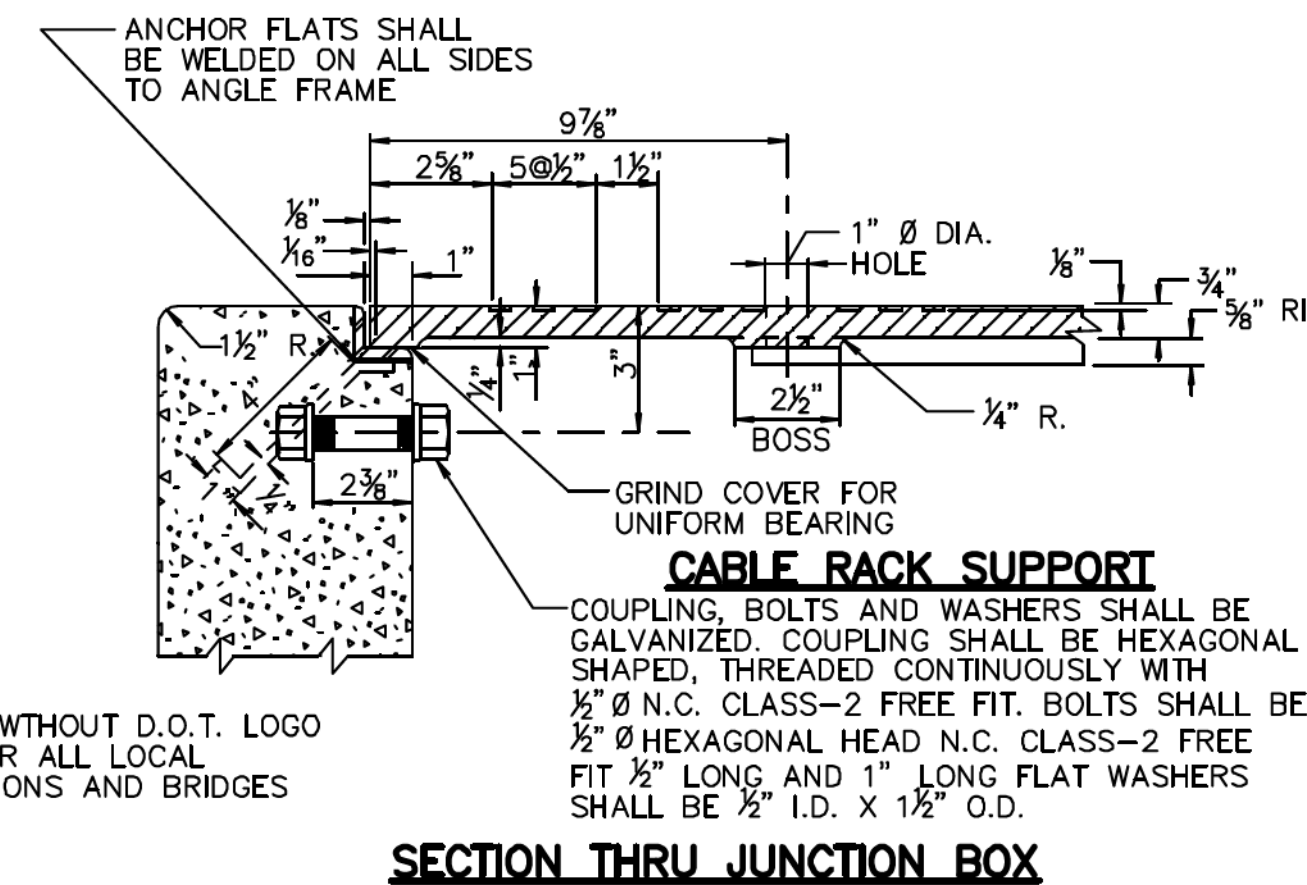
CONCRETE CLASS "C" USING APPROVED 3/8" AGGREGATE 0.8 CU. YD.

NOTES

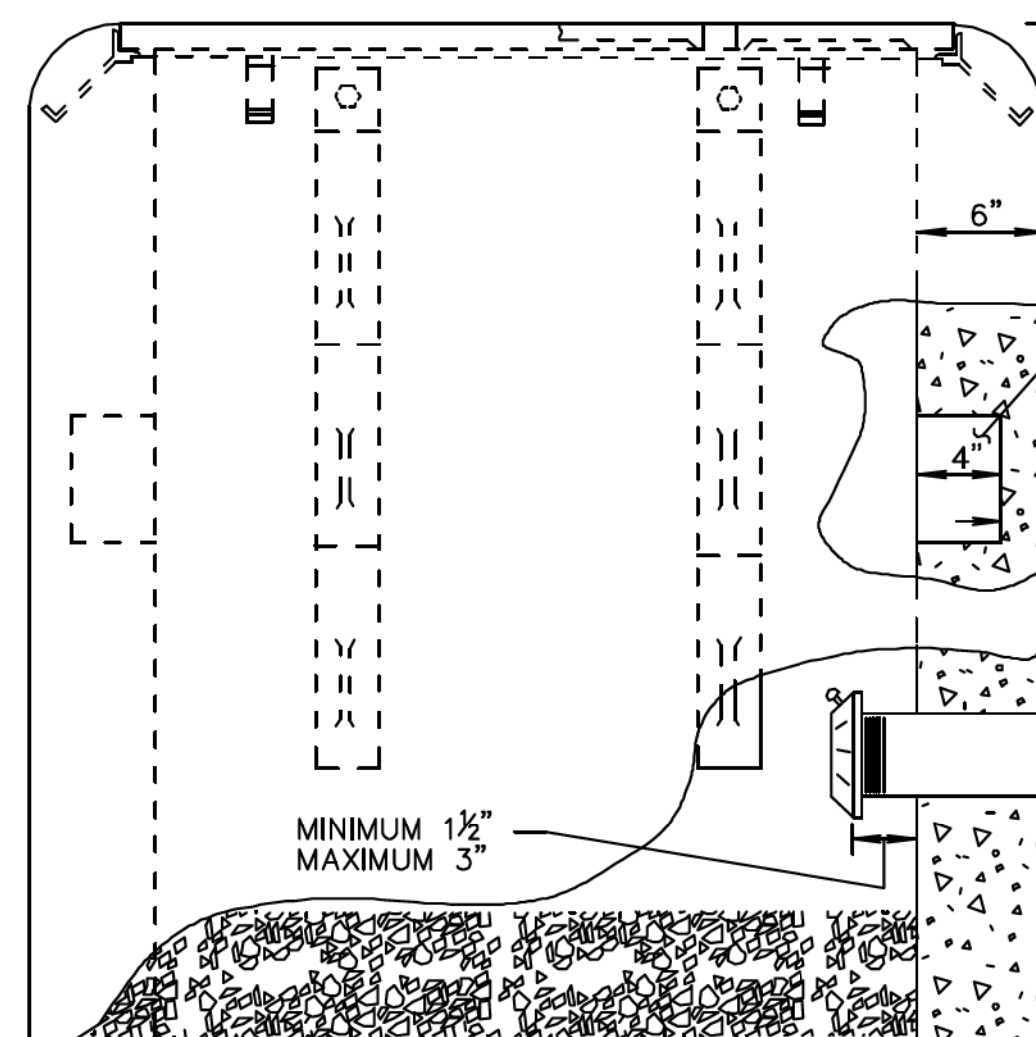
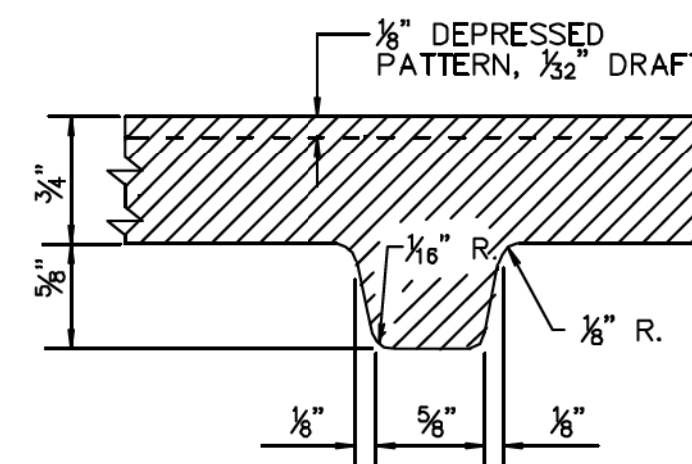
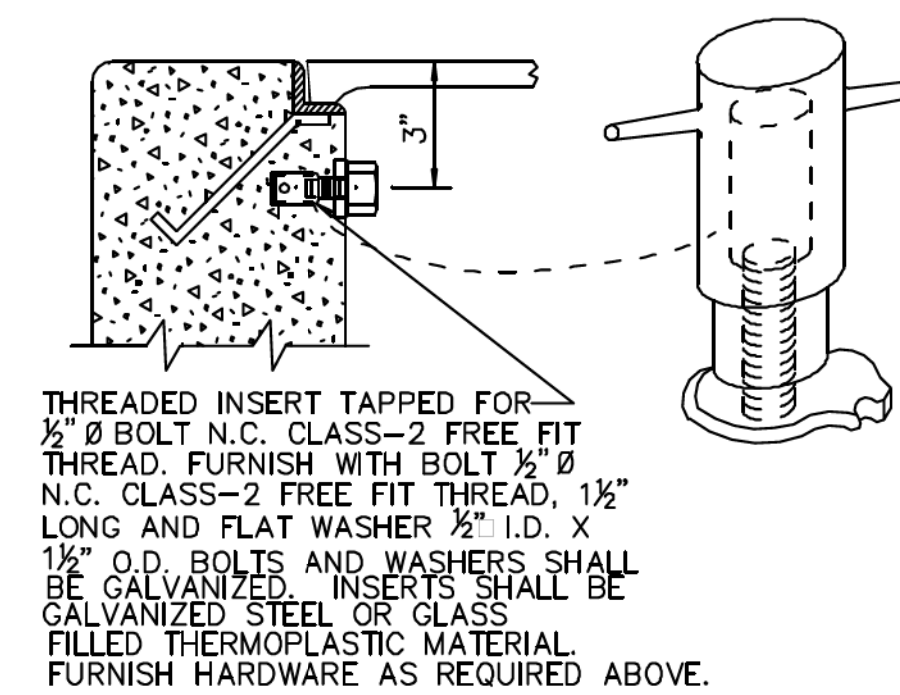
MINIMUM WEIGHT OF FRAME = 16 LBS.
MINIMUM WEIGHT OF C.I. COVER = 150 LBS.
FRAME AND ANCHORS OF STRUCTURAL STEEL
ⓐ - DENOTES 1" X 3/4" X 6" STL. ANCHORS (8 REQUIRED)



COVER & FRAME

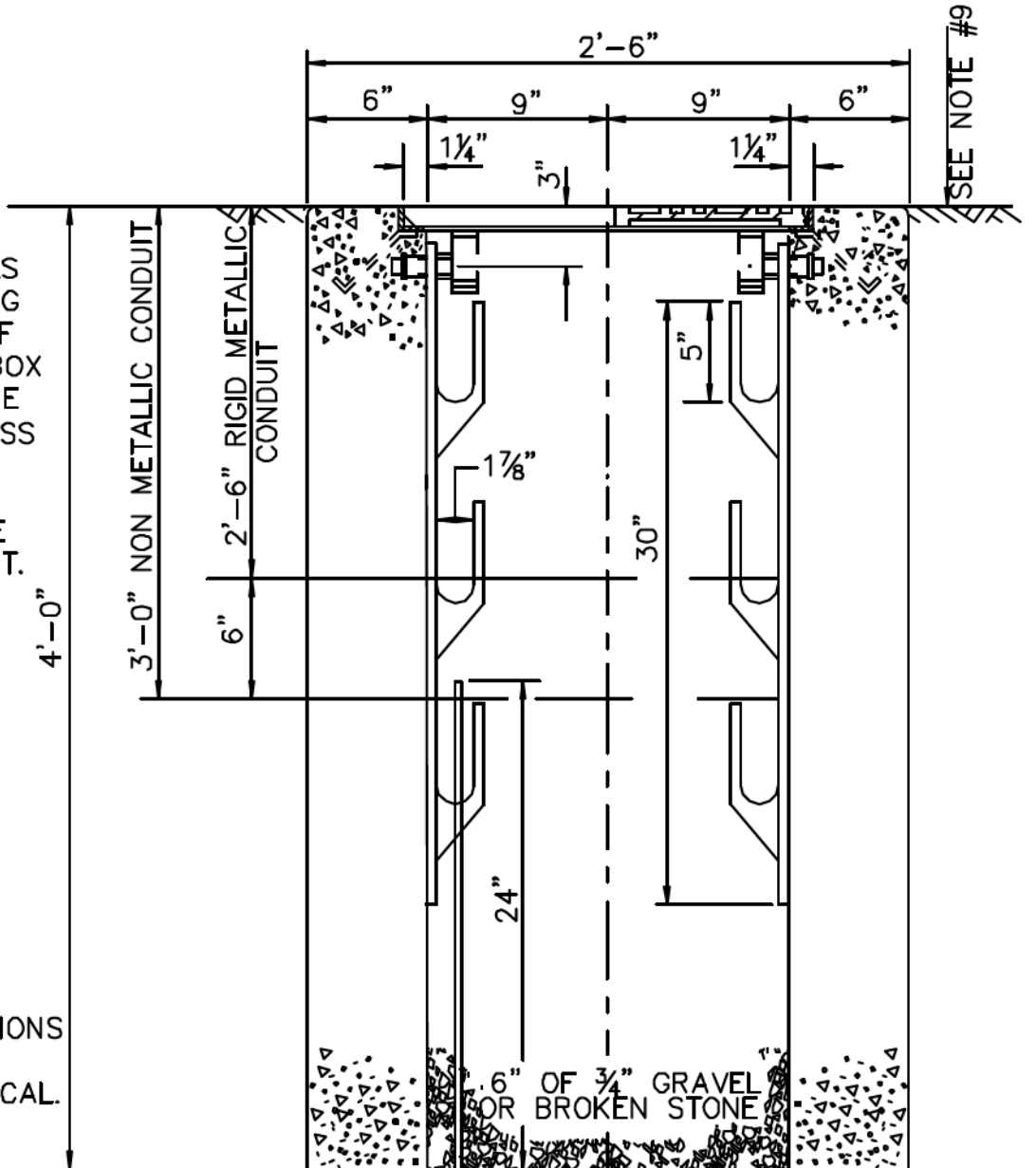


ALTERNATE CABLE RACK SUPPORT

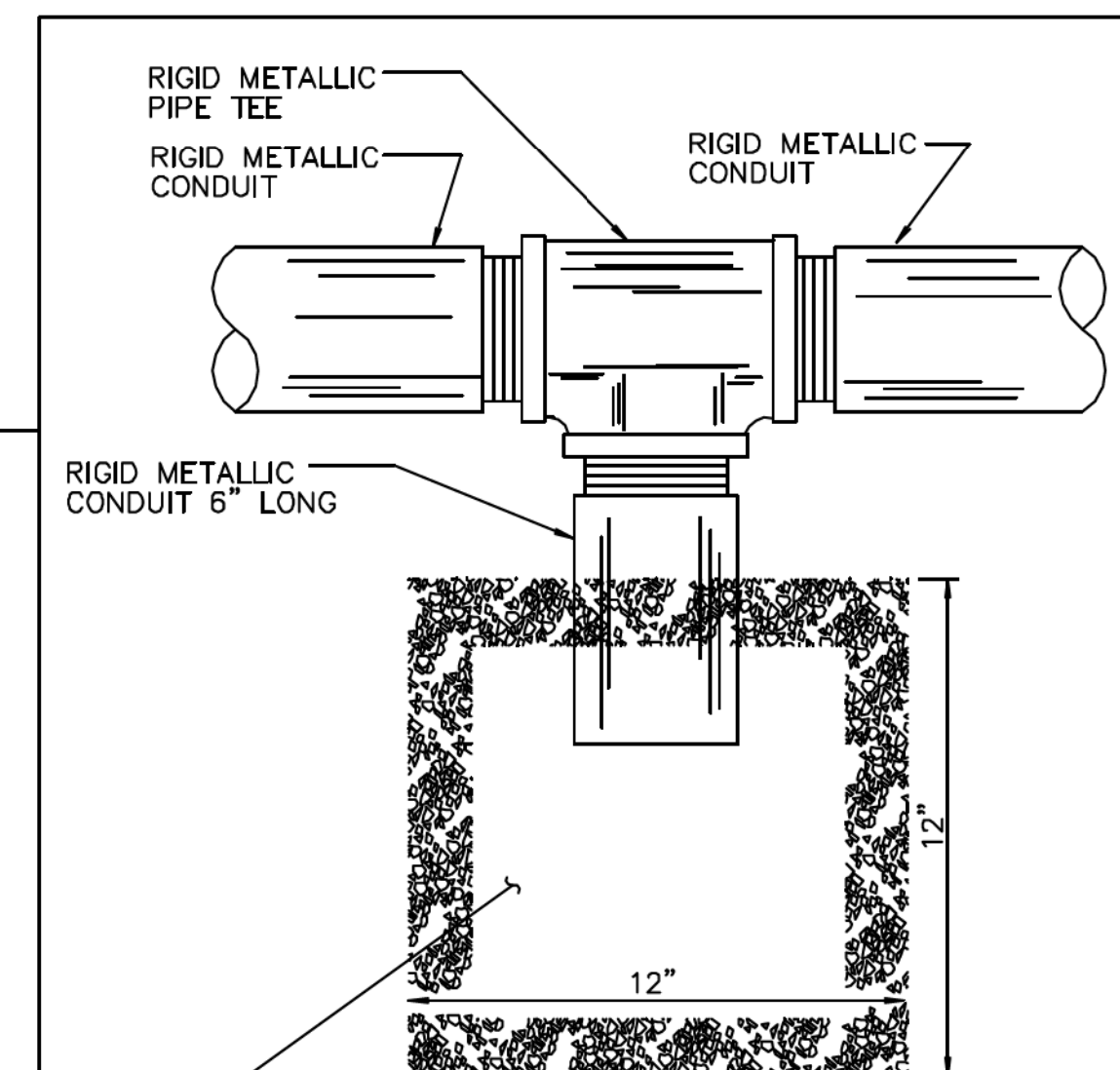


ELEVATION

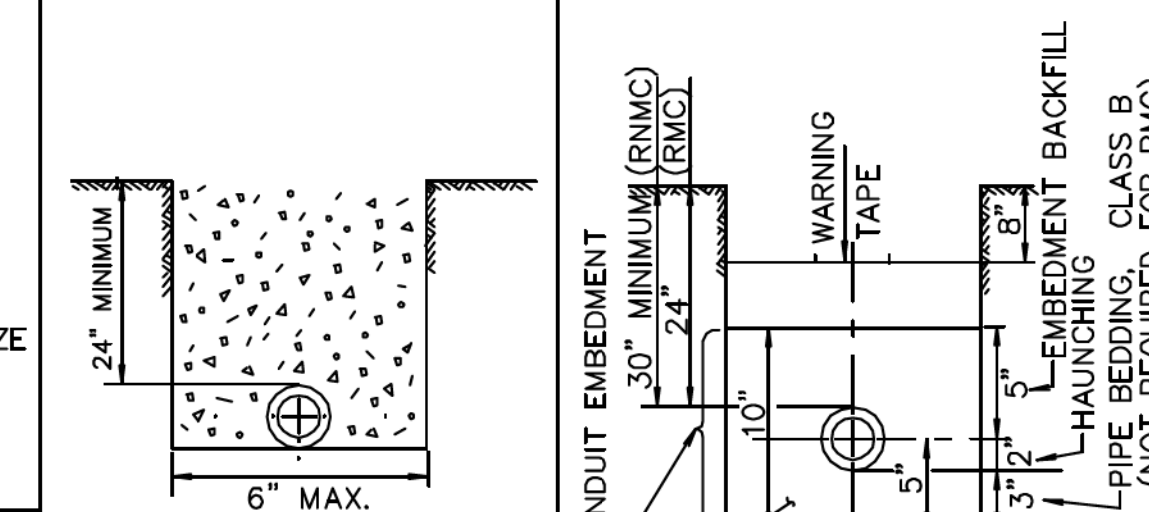
ADDITIONAL OPENINGS SHALL BE PROVIDED AT APPROVED ELEVATIONS FOR UNDER ROADWAY CONDUITS ENTERING JUNCTION BOX - TYPICAL.



SECTION A-A



TYPICAL TEE DRAIN



TYPICAL CONDUIT INSTALLATION

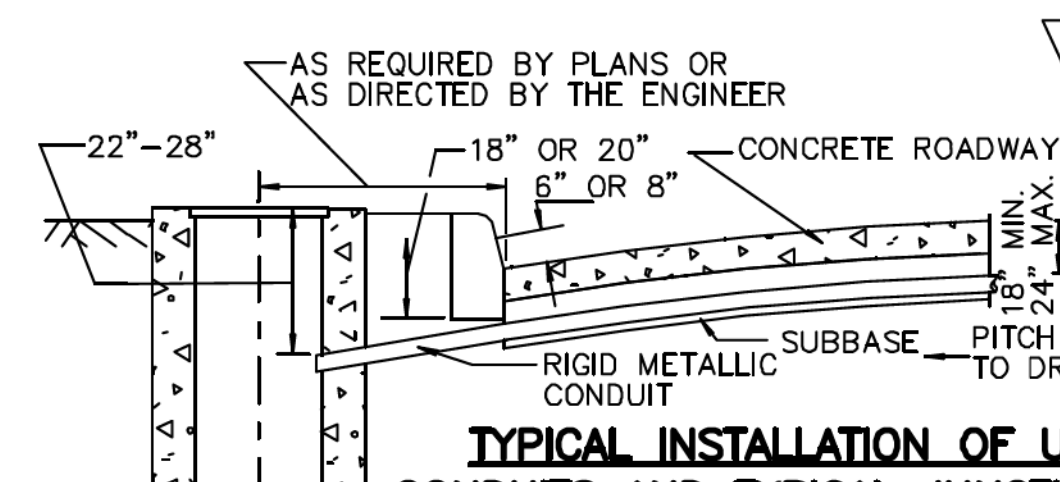
WARNING TAPE
CAUTION CAUTION CAUTION
ELECTRIC LINE BURIED BELOW

6" TYP. BLACK LETTERS ON RED BACKGROUND

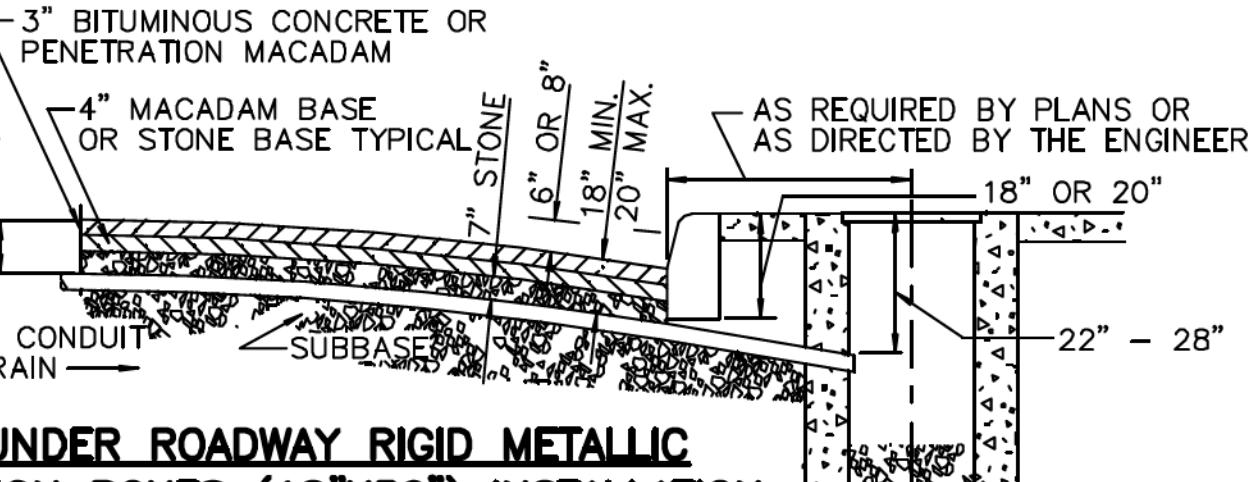
NOTES:

- JUNCTION BOX FOUNDATION SHALL BE SET PARALLEL TO THE CURB AND TOP OF JUNCTION BOX SHALL BE SET AT GRADE IN SIDEWALK, PAVED AREA, IN GRASS OR DIRT AREAS.
- CABLE RACKS FURNISHED AND INSTALLED AS INDICATED.
- BONDING AND GROUNDING INSULATED BUSHINGS SHALL BE INSTALLED ON METALLIC CONDUITS TERMINATING IN JUNCTION BOXES AND/OR FOUNDATIONS AND SHALL HAVE A FITTING TO PREVENT ENTRY OF FOREIGN MATTER PRIOR TO INSTALLATION OF WRING.
- A NYLON CORD, 125 POUND MINIMUM TEST STRENGTH, SHALL BE FURNISHED AND INSTALLED IN ALL CONDUITS. SEE SPECIFICATIONS.
- CONDUITS SHALL ENTER JUNCTION BOX PERPENDICULAR TO WALLS OR AS APPROVED BY THE ENGINEER. A 2" SEPARATION SHALL BE MAINTAINED BETWEEN ADJACENT WALLS, CONDUITS, AND CABLE RACK LOCATIONS.
- TERMINAL ENDS OF ALL METALLIC CONDUIT SHALL BE THREADED.
- ALL NON-METALLIC CONDUITS SHALL TERMINATE WITH BELL END CONSTRUCTION IN JUNCTION BOX.
- ALL UNUSED CONDUITS SHALL BE PLUGGED OR CAPPED.
- ENGINEER MAY REQUIRE TOP OF JUNCTION BOX TO BE INCLINED IN ORDER TO CONFORM WITH FIELD CONDITIONS. JUNCTION BOX SHALL BE SET TO GRADE IN SIDEWALK AREA AND IN ALL OTHER AREAS.
- WARNING TAPE SHALL BE A RED 4 MIL FLEXIBLE POLYETHYLENE FILM WHICH IS RESISTANT TO ACIDS, BASES, HYDROCARBONS AND WATER.
- IN INCLINE AREA, NO PART OF THE JUNCTION BOX SHALL EXTEND MORE THAN 4" ABOVE THE FINISH GRADE.
- JUNCTION BOX COVER WITHOUT D.O.T. LOGO SHALL BE UTILIZED FOR ALL LOCAL SIGNALIZED INTERSECTIONS AND BRIDGES ON LOCAL ROADS.

RIGID METALLIC CONDUIT INSTALLED IN SUBBASE OF CONCRETE ROAD



RIGID METALLIC CONDUIT INSTALLED IN SUBBASE OF BITUMINOUS SURFACE ROAD



TYPICAL INSTALLATION OF UNDER ROADWAY RIGID METALLIC CONDUITS AND TYPICAL JUNCTION BOXES (18"X36") INSTALLATION

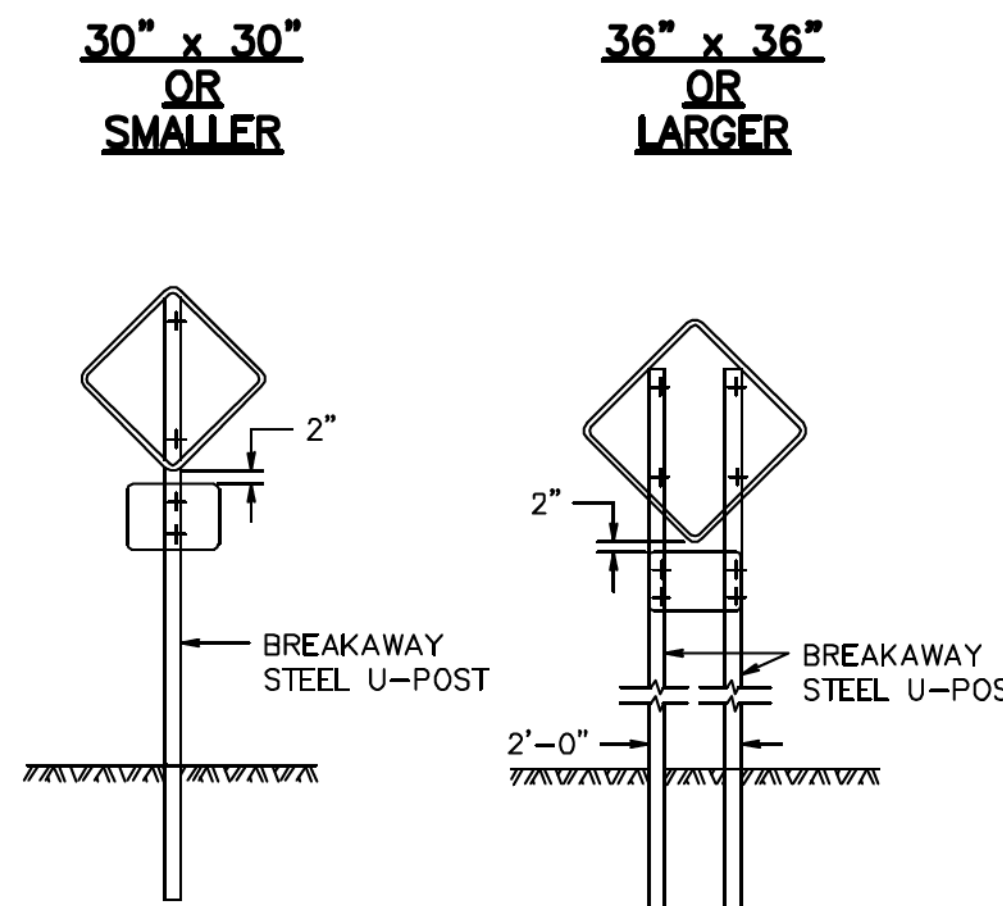
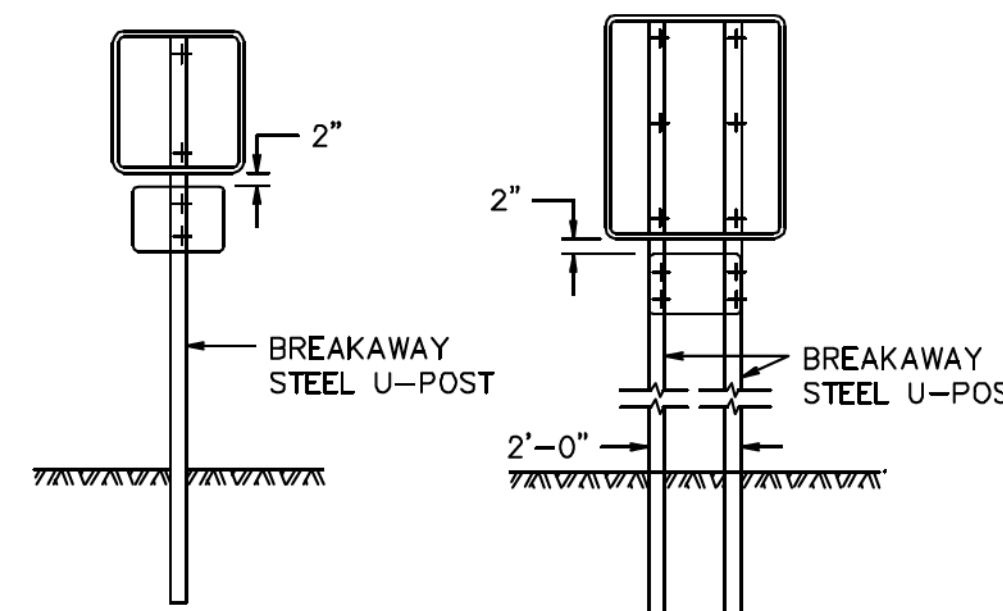
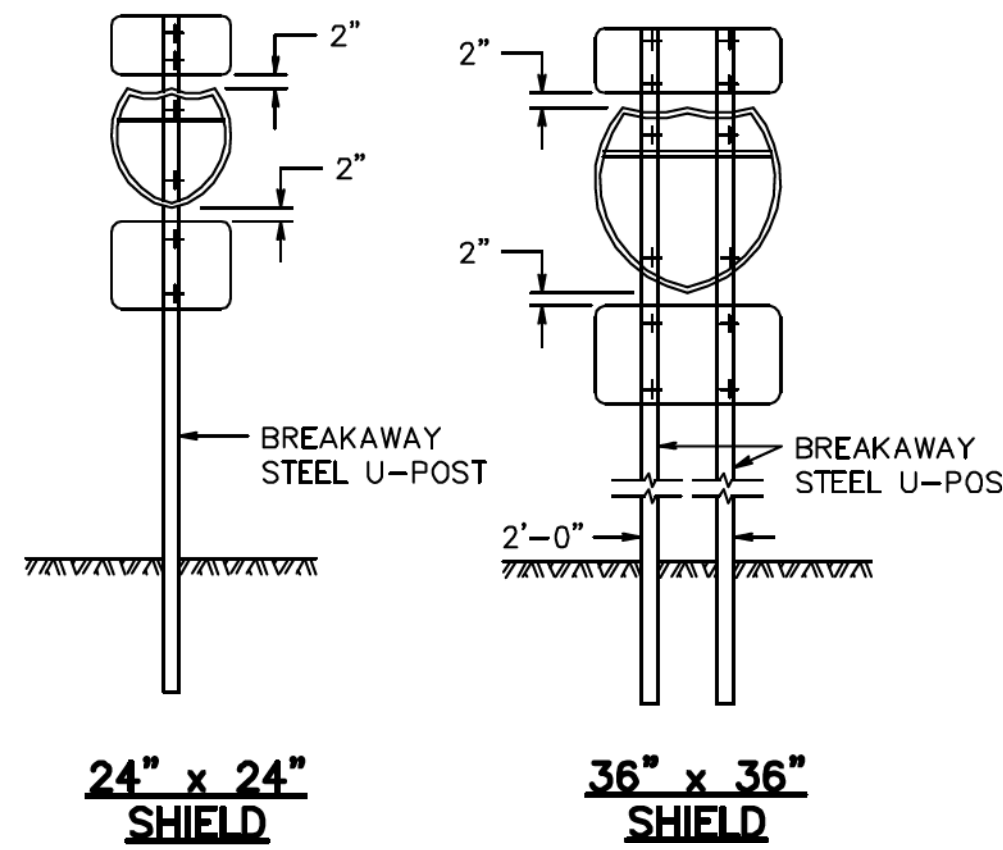
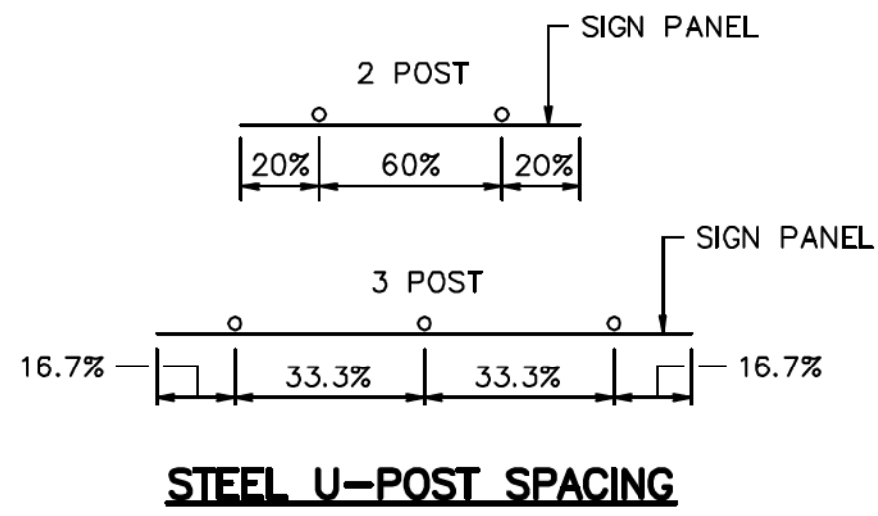
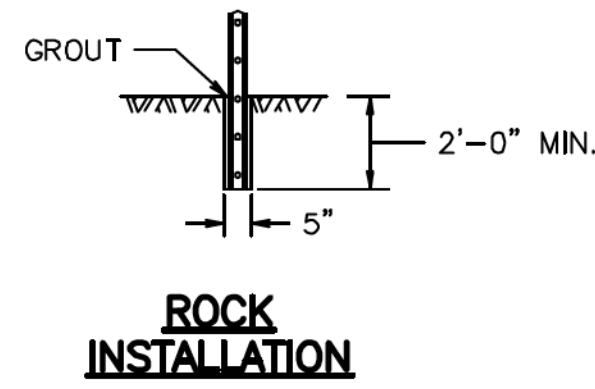
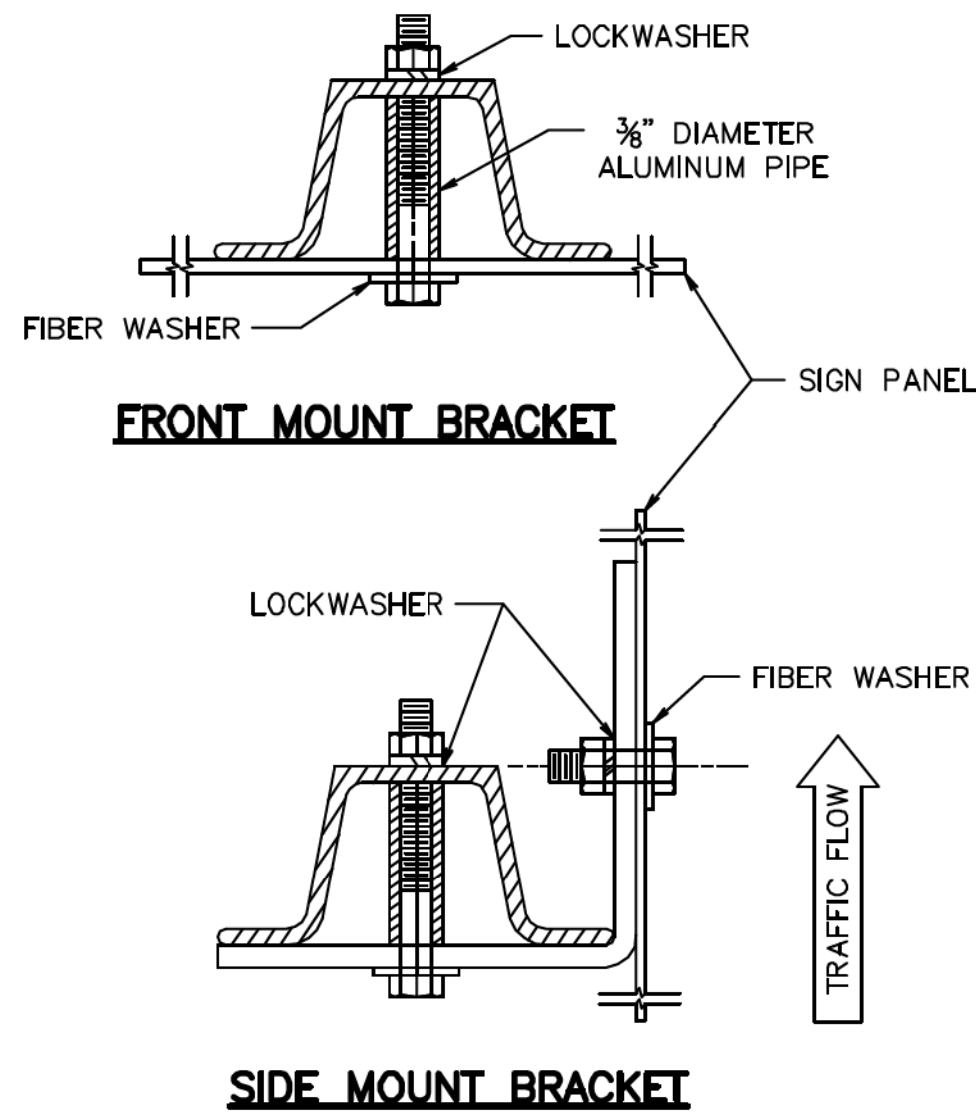
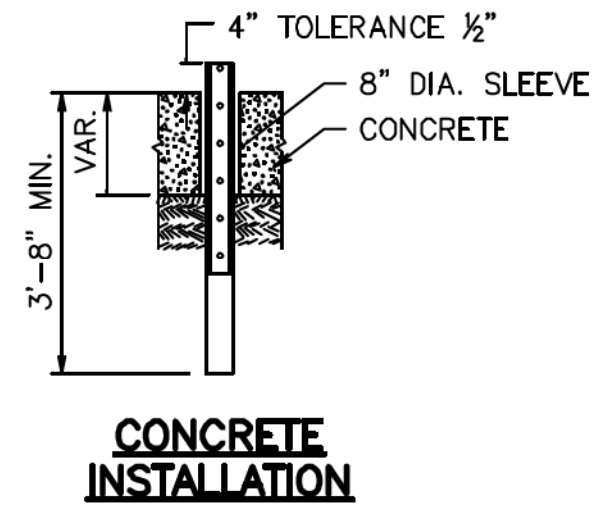
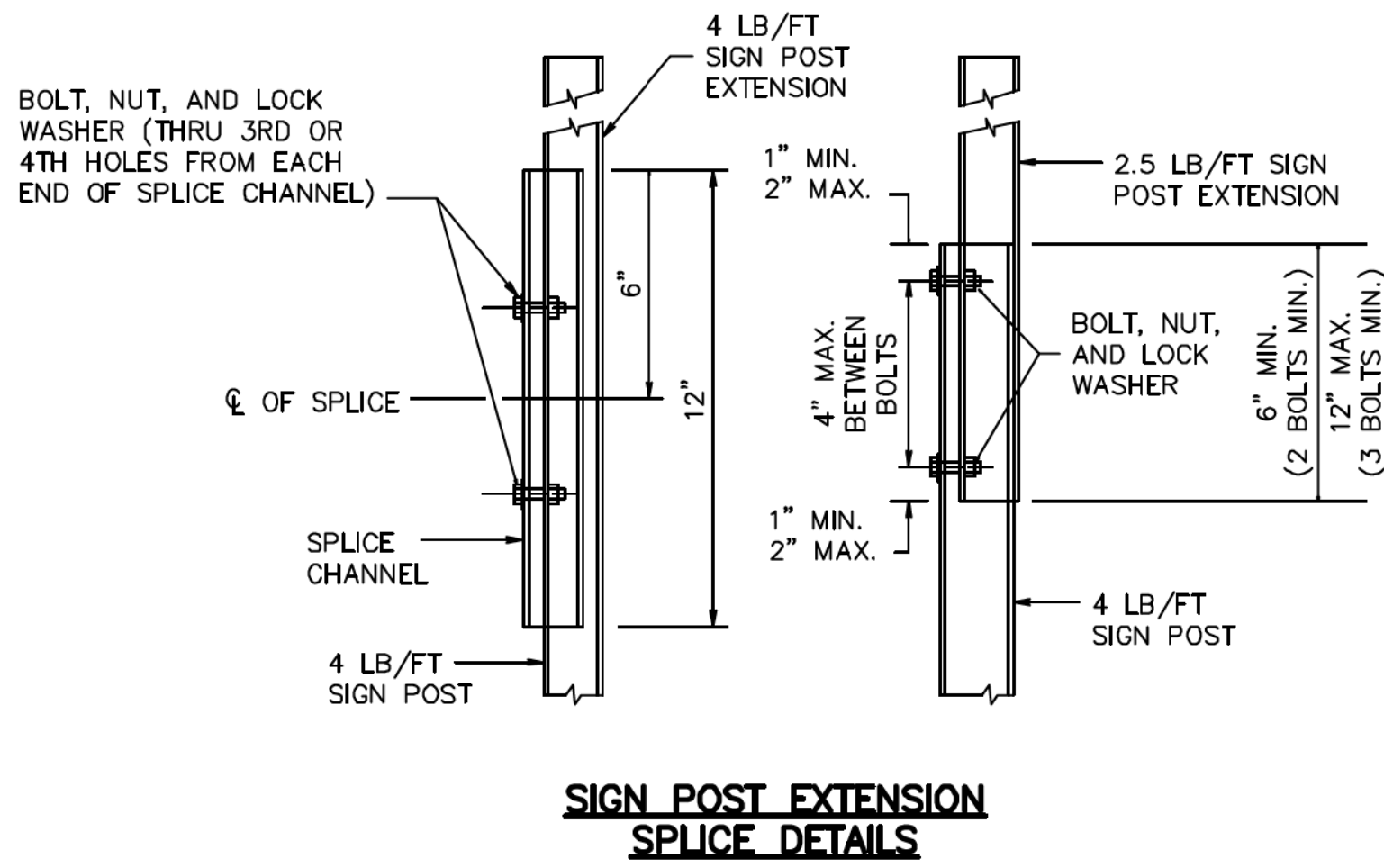
SUBJECT TO APPROVAL OF THE ENGINEER

COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

ELECTRICAL DETAIL

WEST SEVENTH STREET (CR 601) INTERSECTION IMPROVEMENTS

ED-10
ED-14



GENERAL NOTES:

1. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
2. ALL SMALL SIGN SUPPORTS SHALL BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
3. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A123.
4. ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW. A MOUNTING BRACKET SHOULD BE USED ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
5. SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
6. BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT SHALL ENGAGE ALL THREADS IN THE NUT.
7. WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:

FOR SINGLE POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.

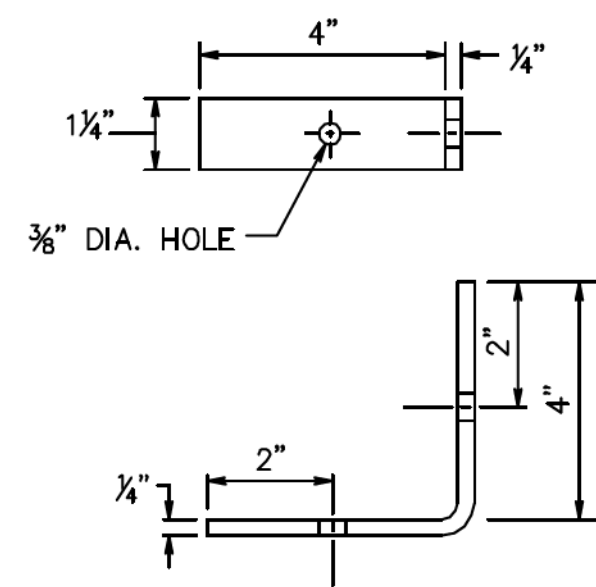
FOR MULTI-POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAJOR SIGN PANEL MUST BE 7 FEET.

SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.

SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) - THE BOTTOM OF THE MAJOR SIGN SHALL BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.

WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.

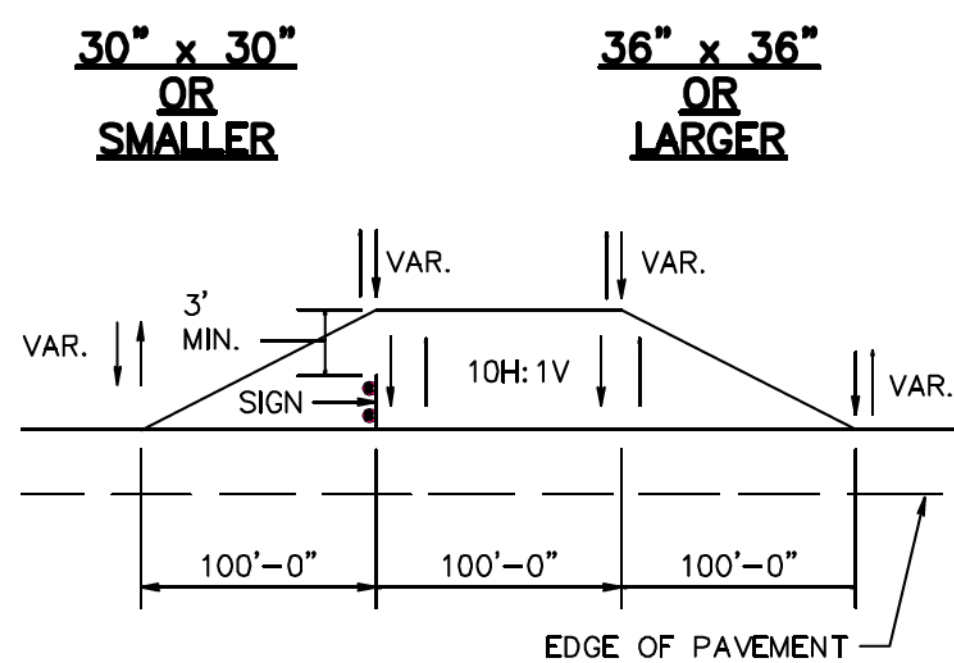
8. PERMANENT SIGN SUPPORTS SHOULD NOT BE INSTALLED ON SLOPES GREATER THAN 10H:1V EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE SHALL EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
9. EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
10. STEEL U-POST SIGN SUPPORTS SHALL NOT BE PLACED IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
11. TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.



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

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/ FT)
36" x 36"	2	2.5
36" x 48"	2	2.5
45" x 36"	2	2.5
48" x 24"	2	2.5
48" x 36"	2	2.5
48" x 48"	2	4.0
48" x 64" x 64"	2	2.5
60" x 36"	2	4.0
48" x 60"	2	4.0
60" x 30"	2	4.0

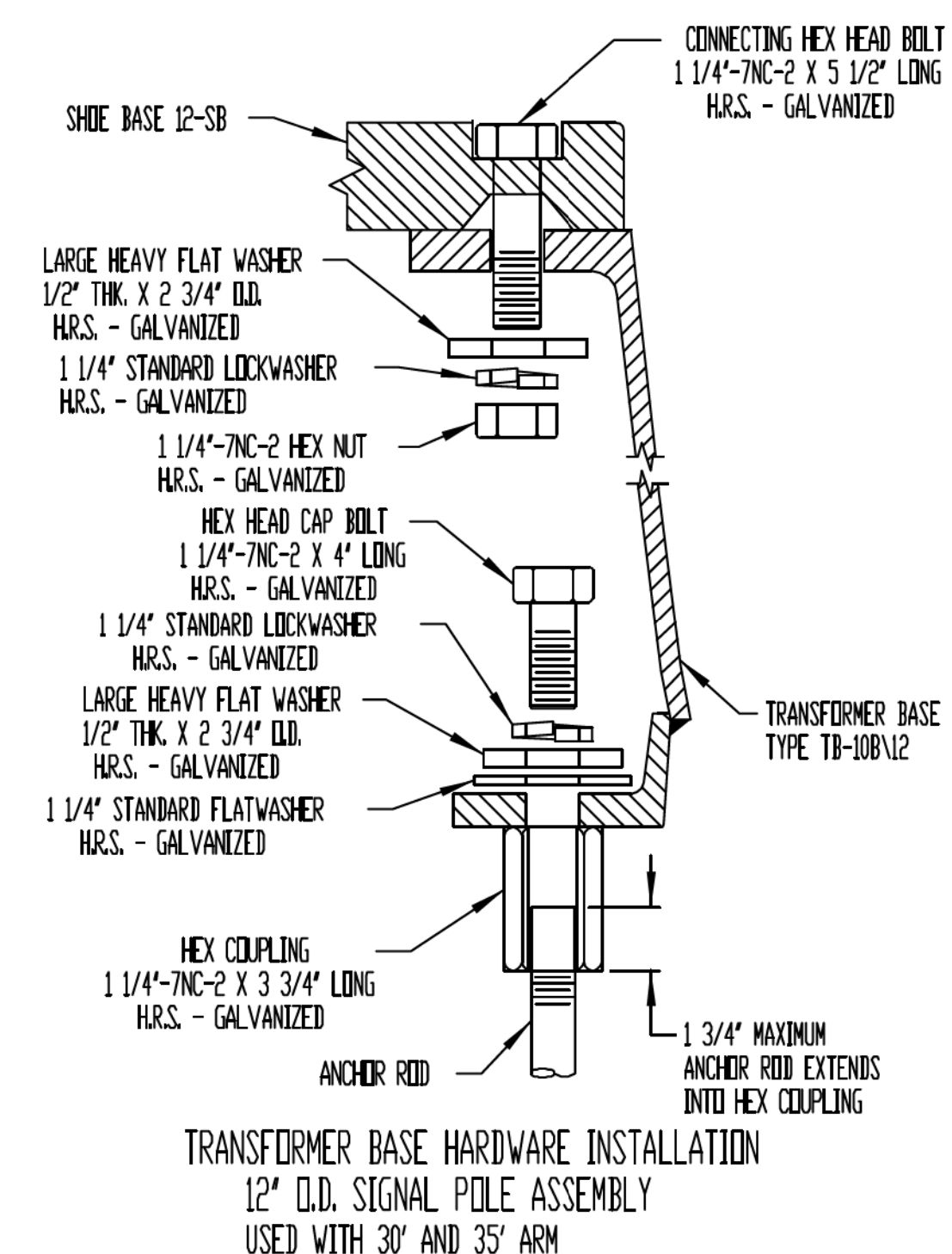
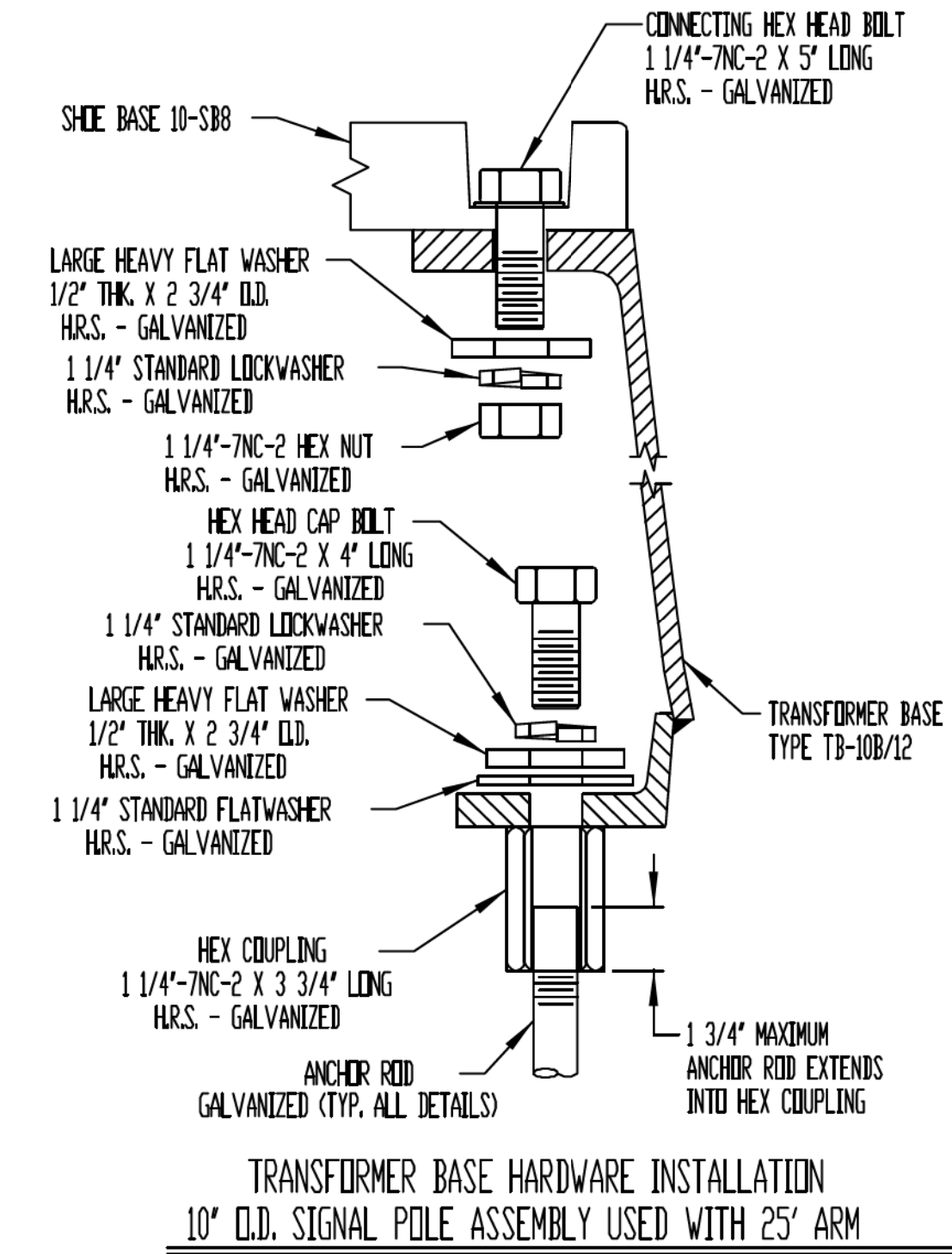
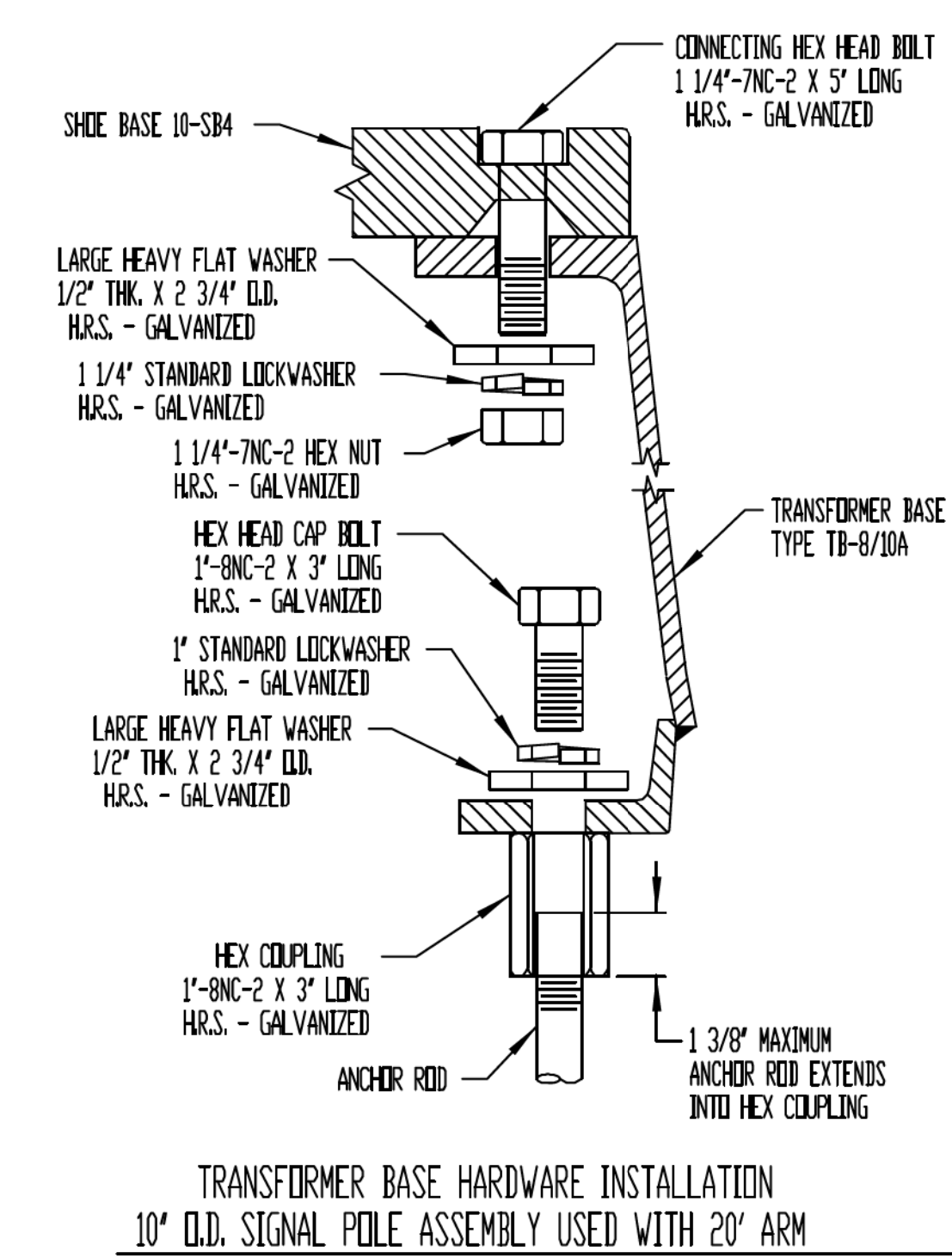
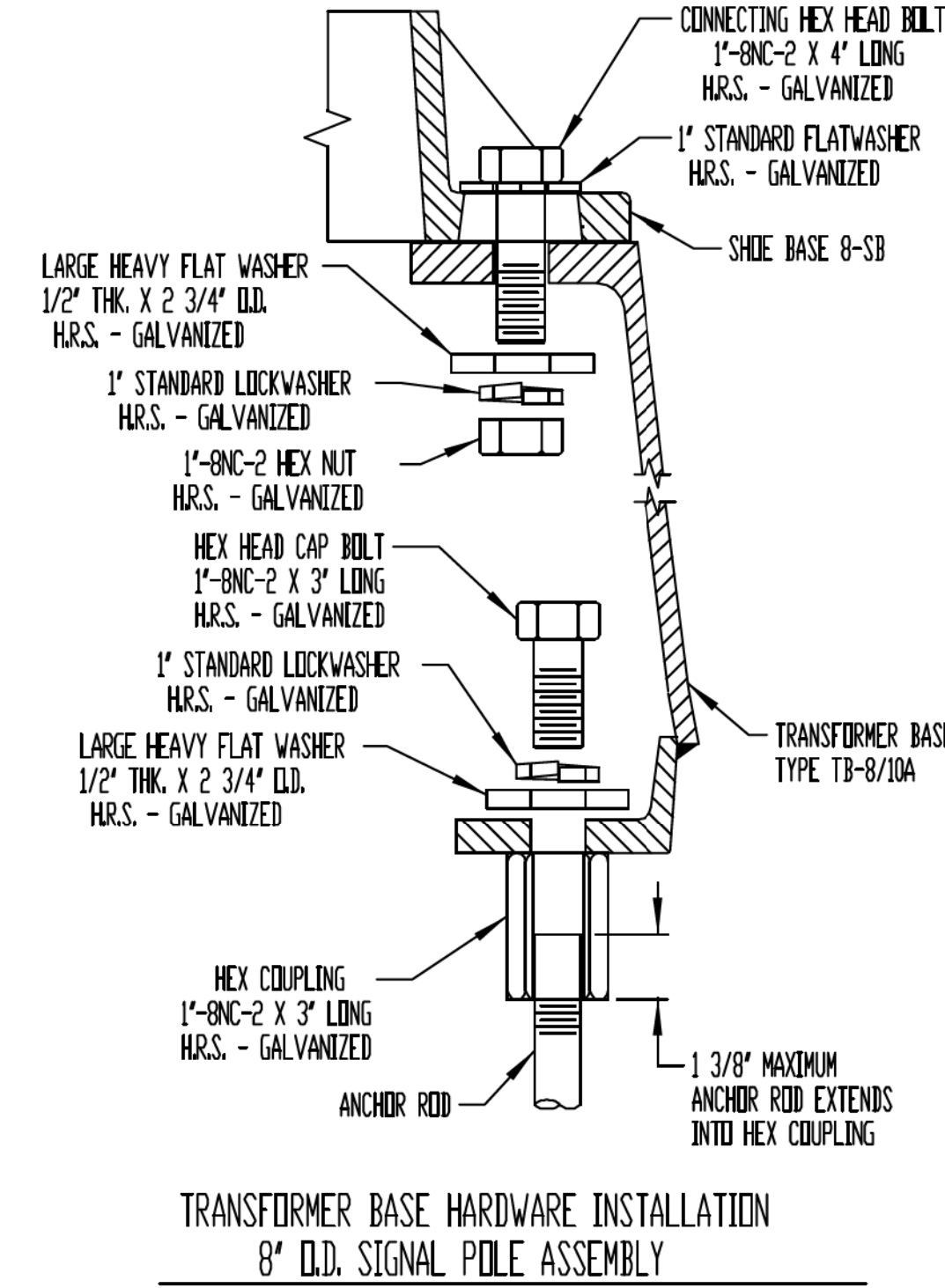
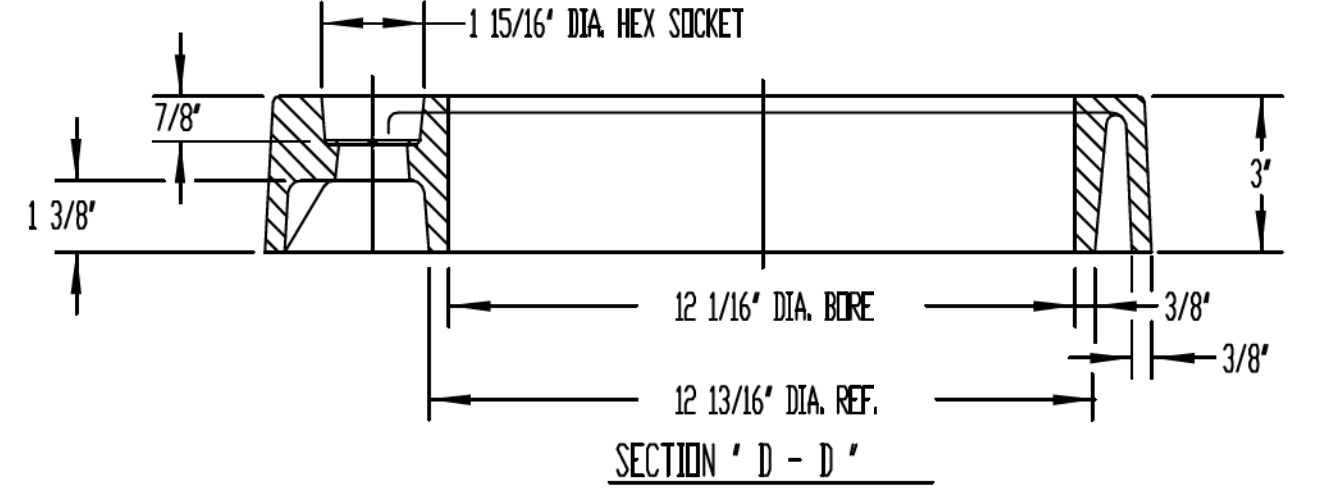
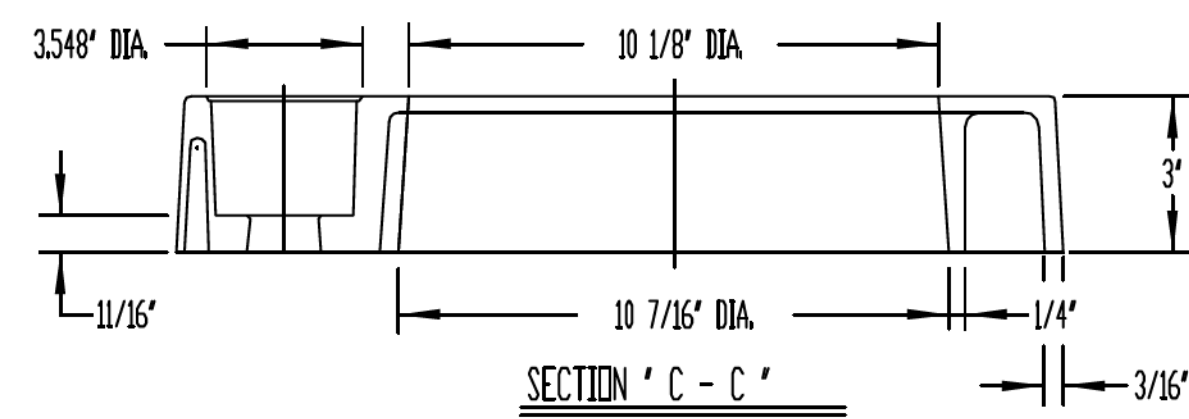
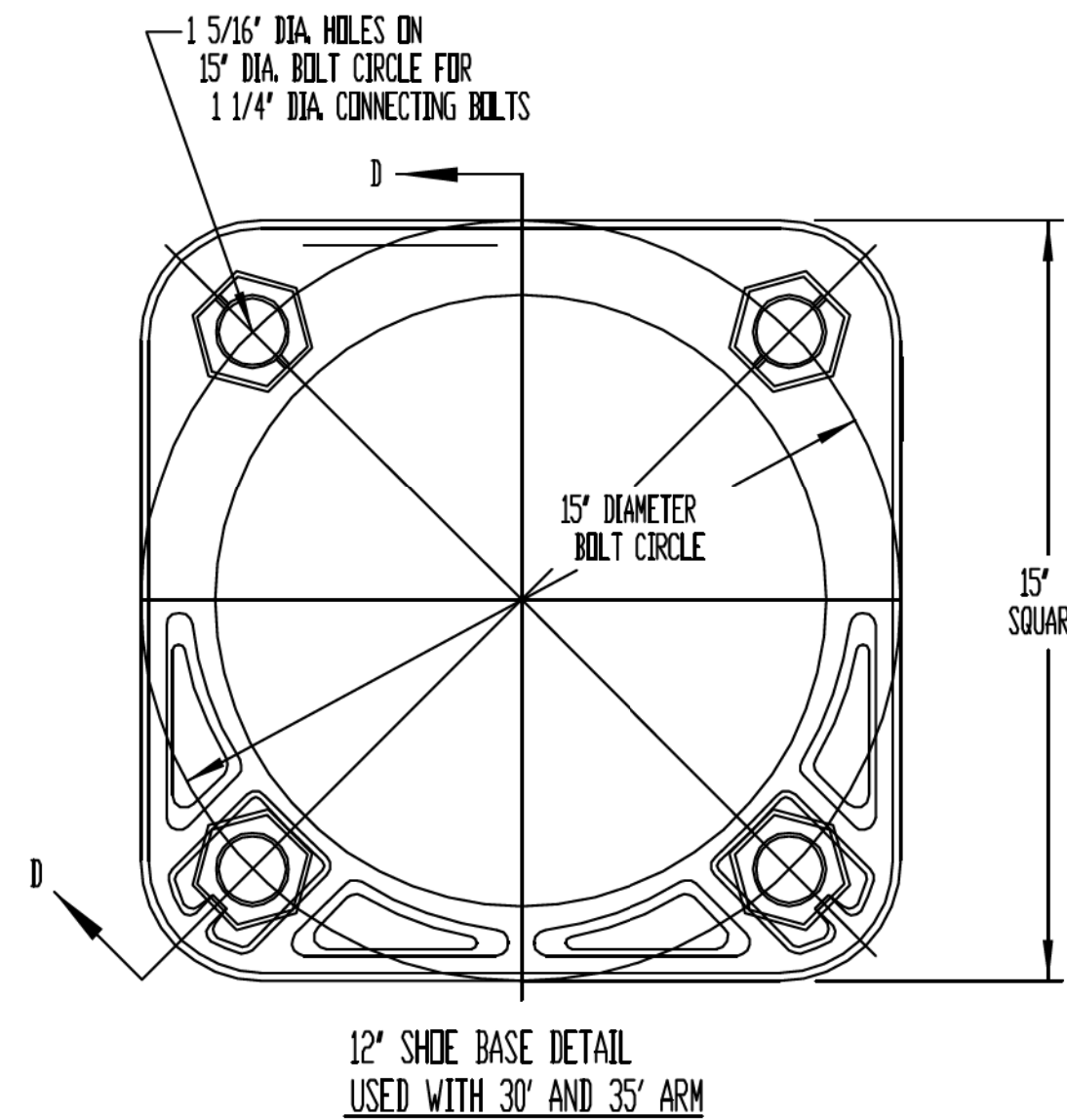
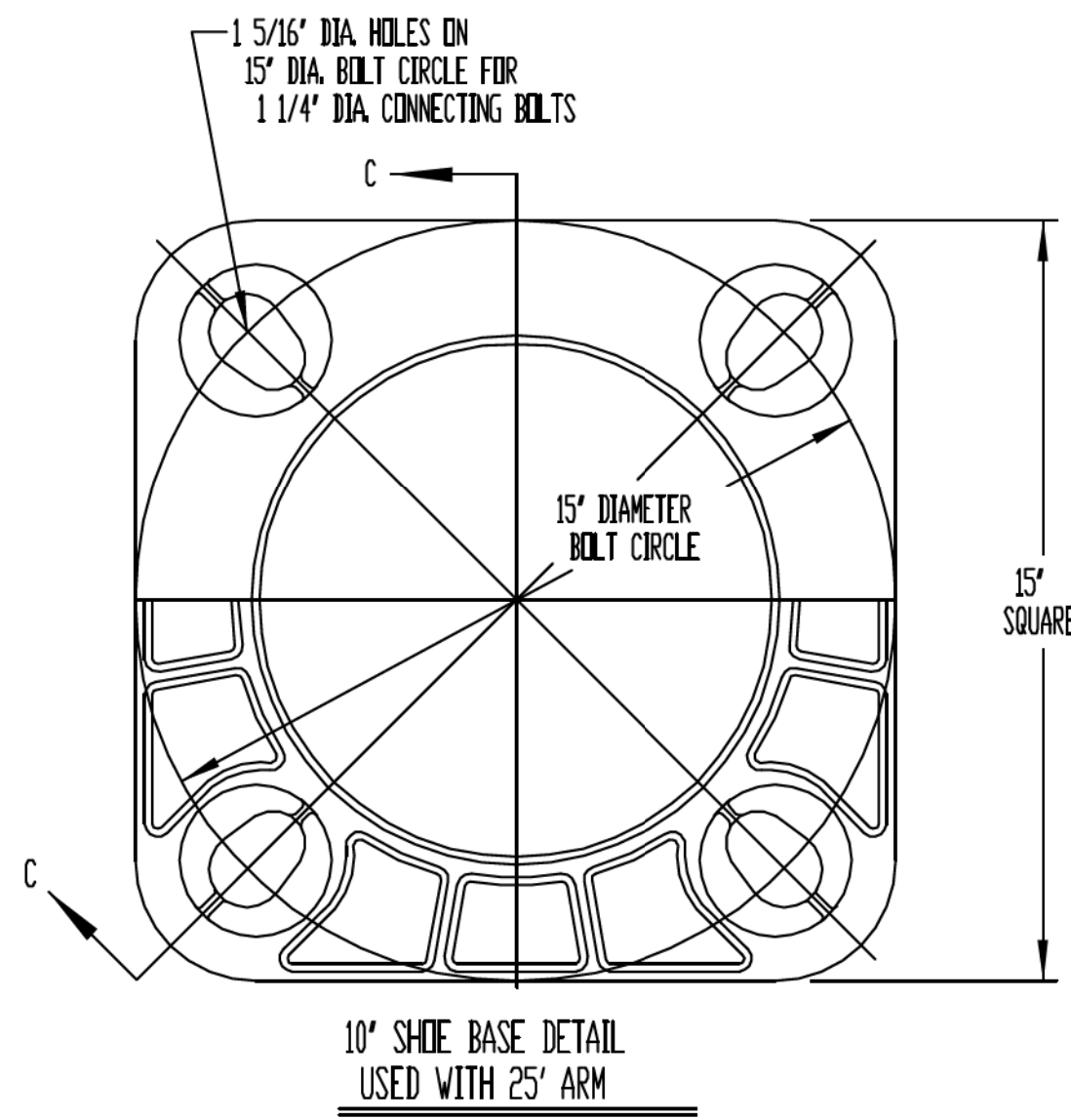
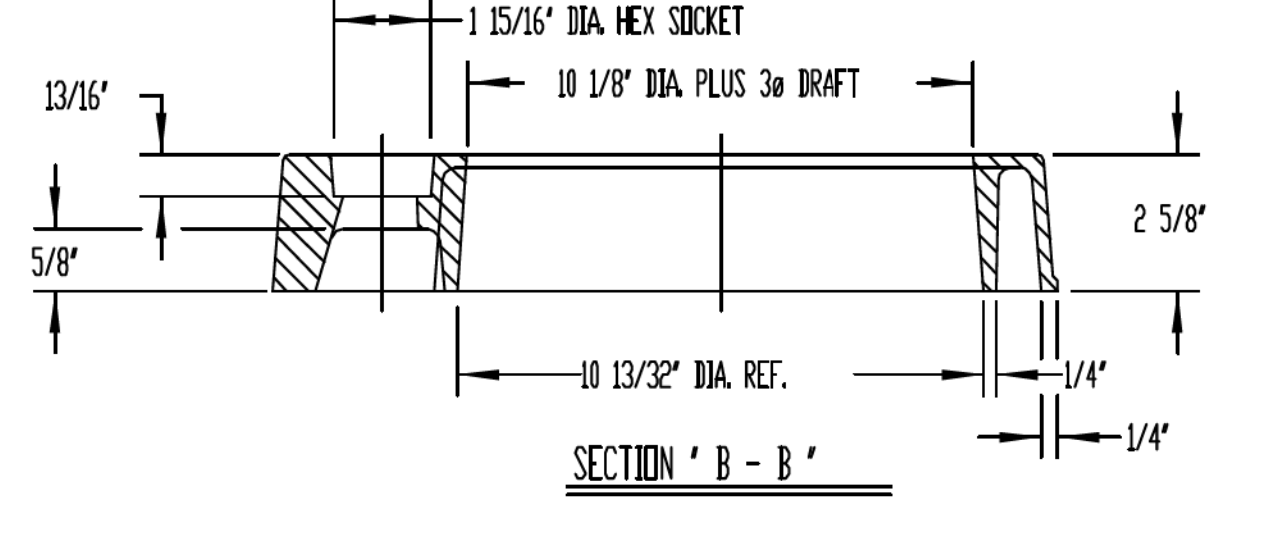
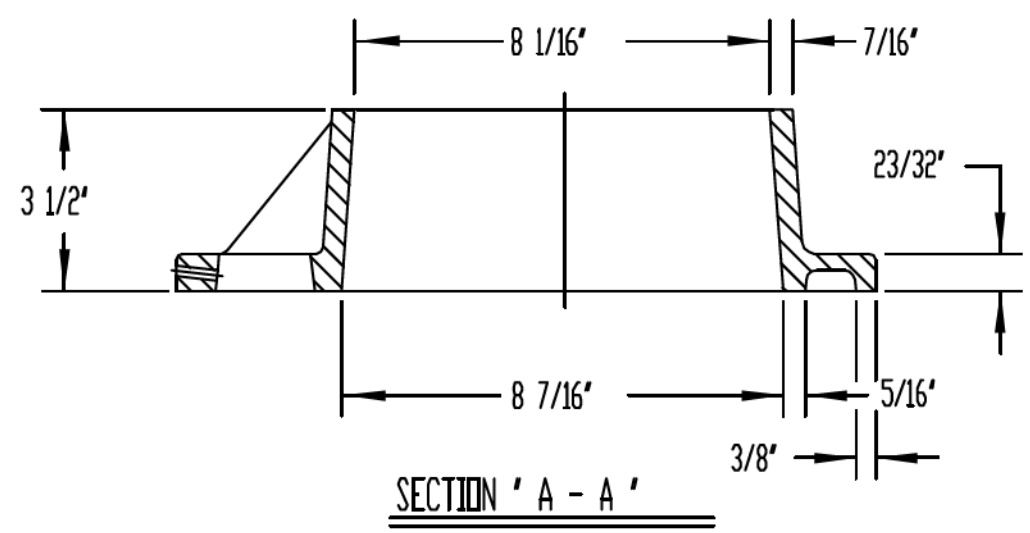
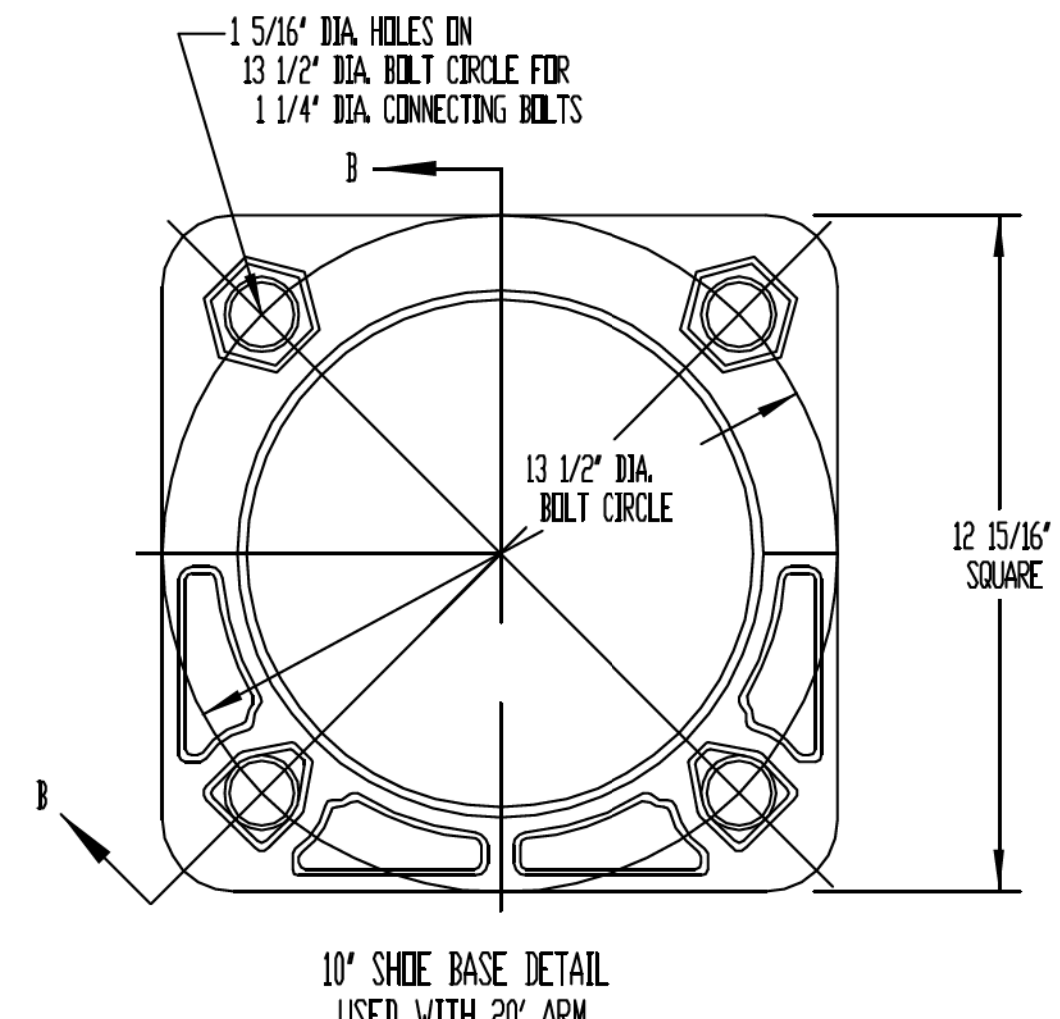
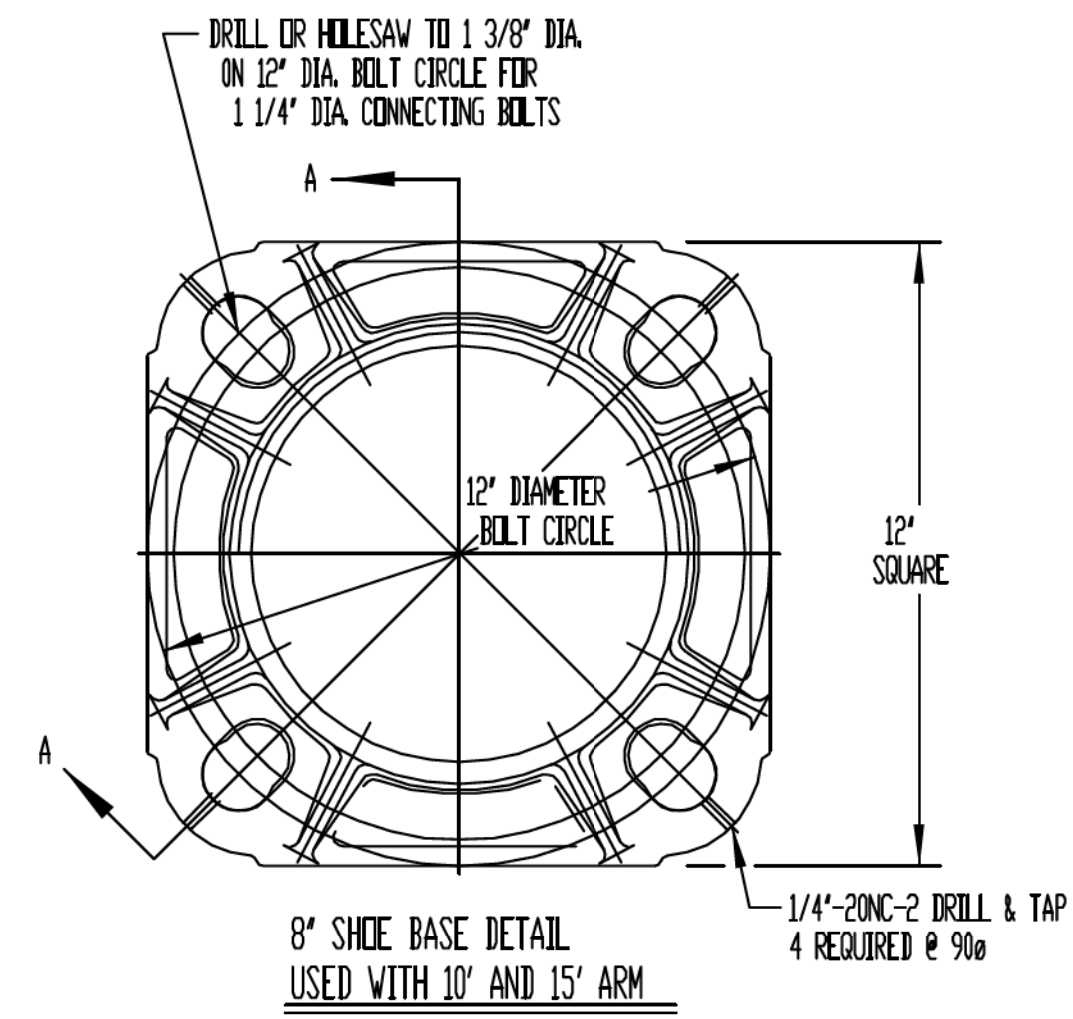
**U-POST SELECTION TABLE
BREAKAWAY SIGN SUPPORT**



STEEL U-POST GRADING DETAIL

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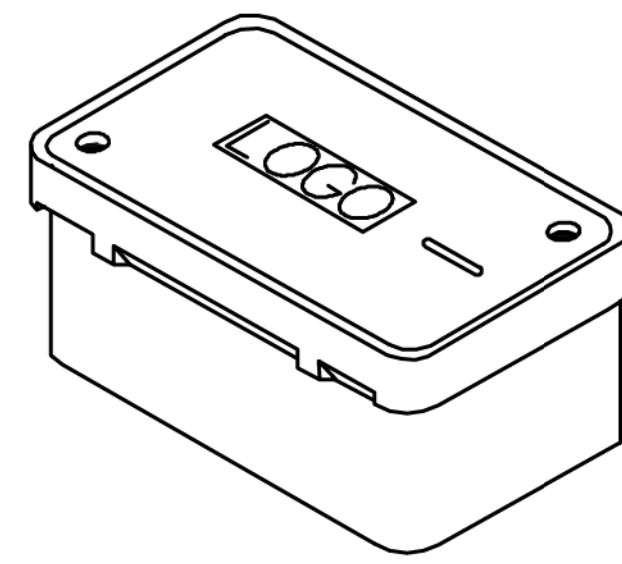
ED-11
ED-14



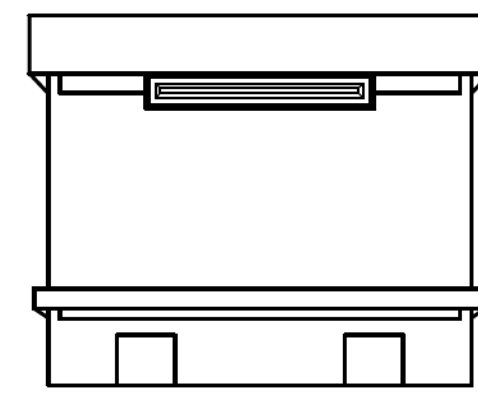
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ED-12
ED-14

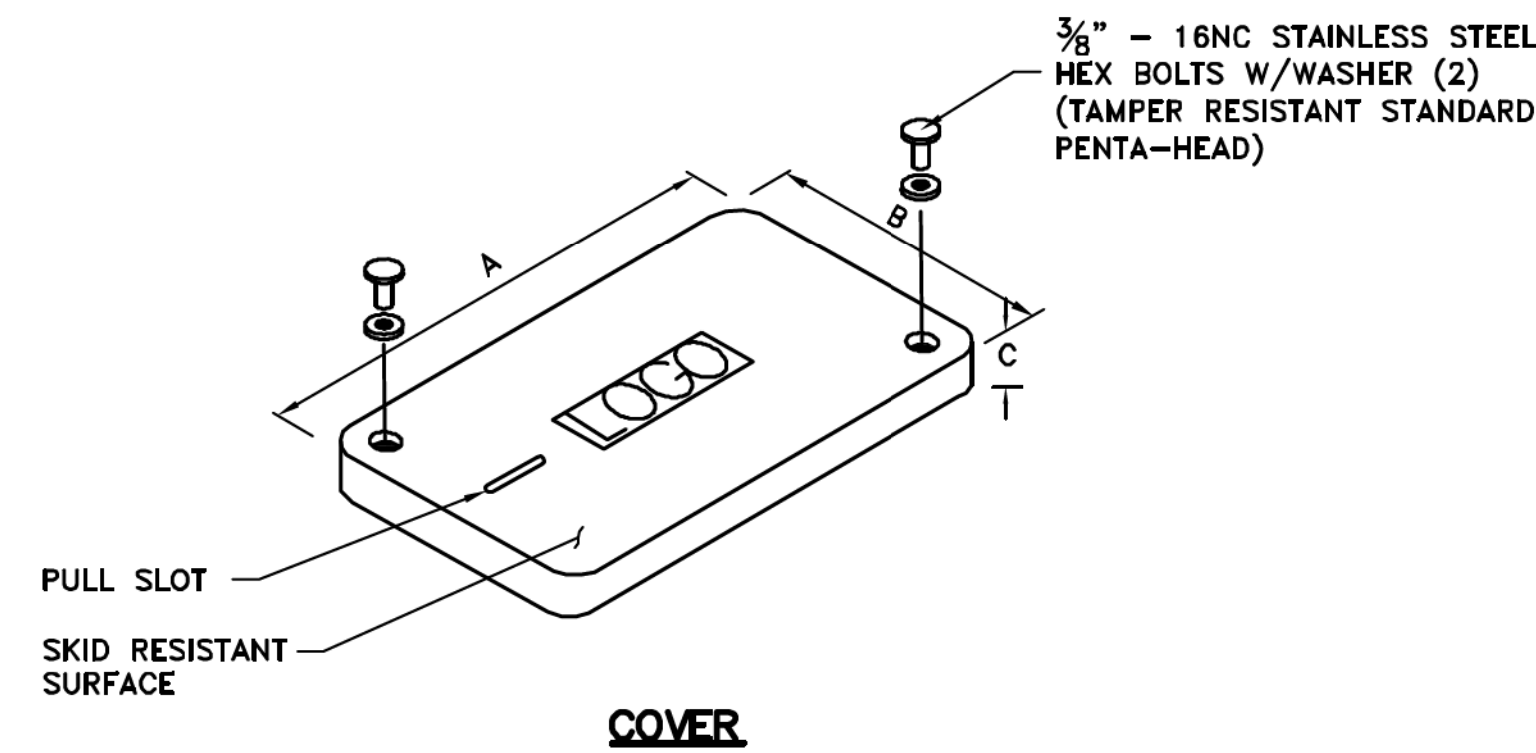
COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS



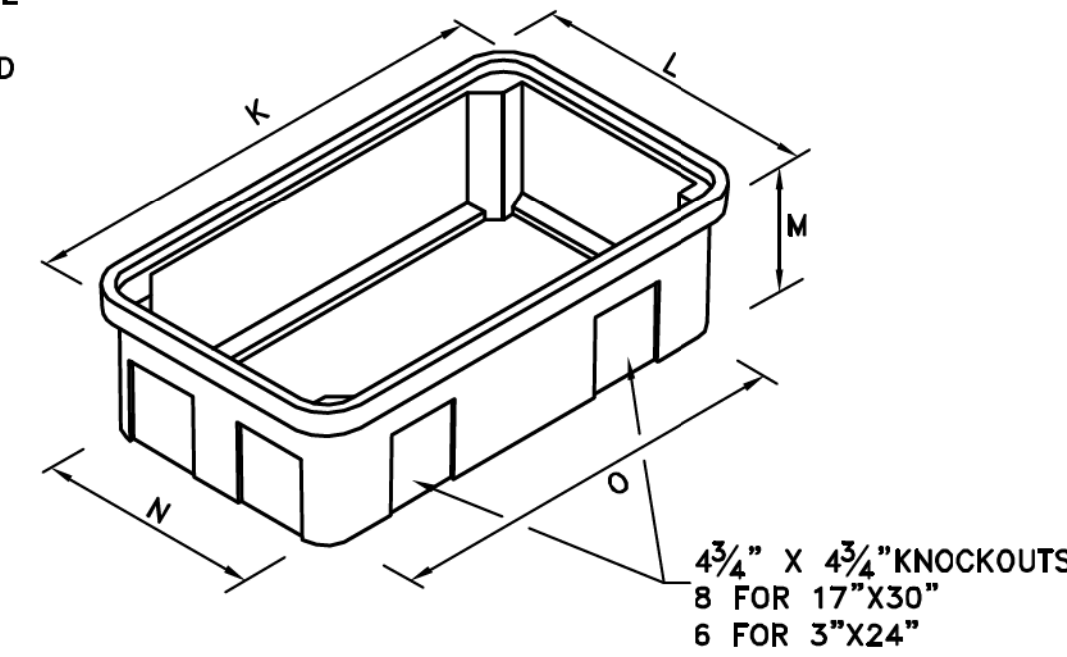
PG STYLE SPLICE BOX
(NO BASE)



L BOX & EXTENSION SIDE VIEW
(NO BASE)

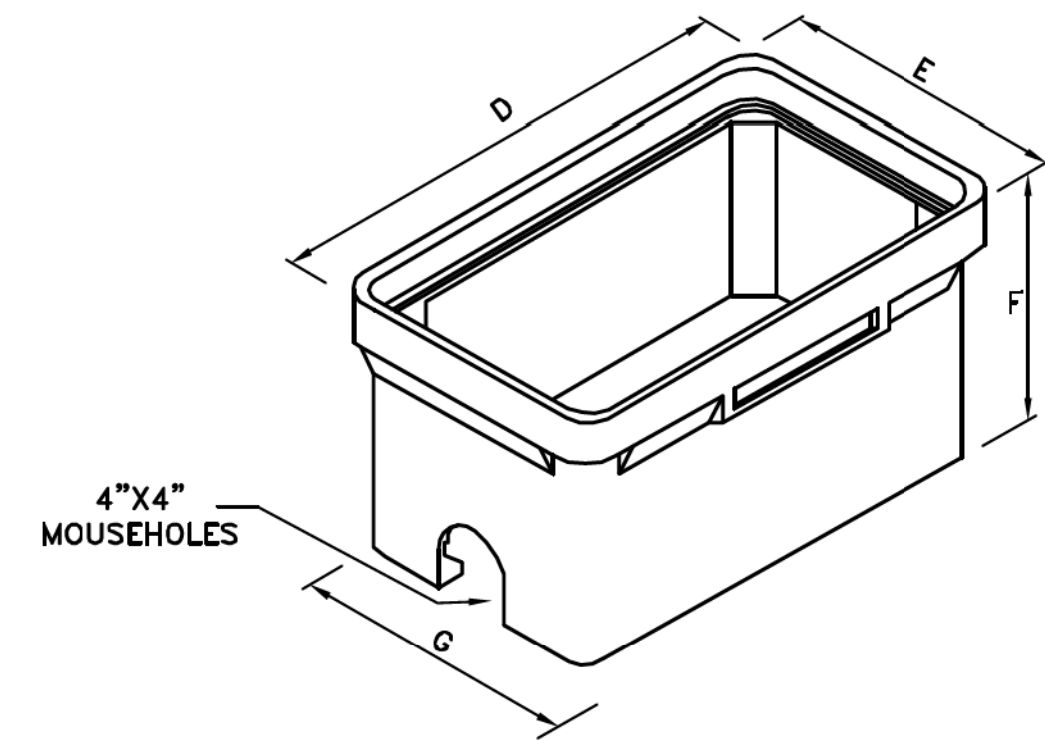


COVER



EXTENSION

NOTE: EXTENSION FOR USE UNDER BOX ONLY.



SPLICE BOX DIMENSIONS

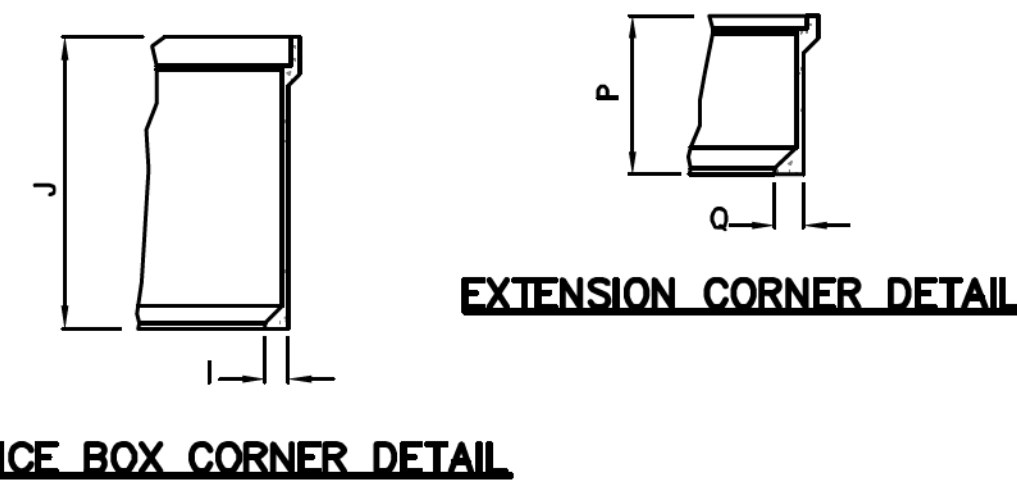
LOGO FOR COVER SHALL BE "TRAFFIC SIGNAL"
REFER TO THE PLANS AND SPECIFICATIONS
FOR REQUIRED COVER COLORS.

BOXES (STACKABLE)

SIZE	DIMENSION (IN INCHES)										
	A	B	C	D	E	F	G	H	I	J	
13"X24"	23 1/4"	13 3/4"	2	25	15 1/2"	18	11 3/4"	21 1/4"	1 1/2"	16	
17"X30"	30 1/2"	17 1/2"	2	32 1/2"	19 1/4"	24	15 1/2"	28 1/2"	1 1/4"	22	
24"X36"	35 3/8"	24	3	37 3/8"	26	24	22 1/4"	33 7/8"	2	21	

EXTENSIONS

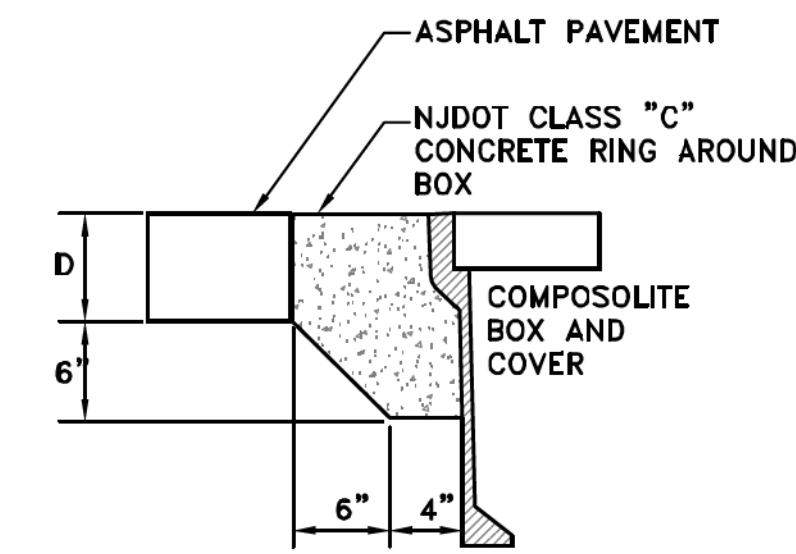
SIZE	DIMENSION (IN INCHES)							
	K	L	M	N	O	P	Q	
13"X24"	23 3/4"	14 1/4"	8 3/4"	11 3/4"	21 1/4"	8	1	
17"X30"	30 7/8"	17 7/8"	8 3/4"	15 3/8"	28 3/8"	8	1	
24"X36"	37 1/8"	25 1/2"	8 3/4"	21 3/4"	33 1/2"	8	1	



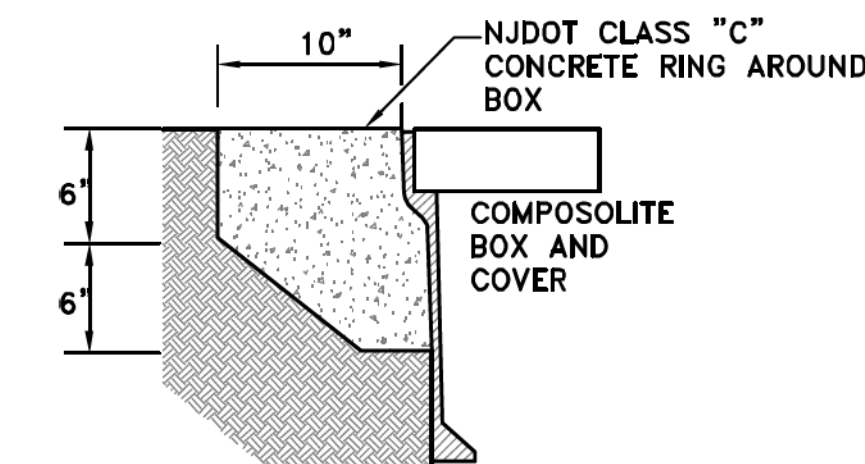
SPLICE BOX CORNER DETAIL

EXTENSION CORNER DETAIL

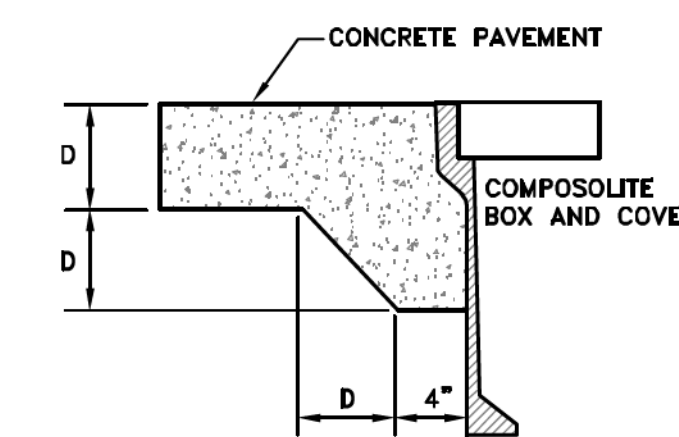
**PANEL VAULT & BOX
INSTALLATION PROCEDURE**



IN ASPHALT PAVEMENTS



IN COMPACTED EARTH



IN CONCRETE PAVEMENTS

ALL BOXES SHALL BE SET FLUSH WITH
SIDEWALK OR GRASS

NOTES:

- CONCRETE ENCASEMENT TO BE NJDOT CLASS "C" OR BETTER.
- CONCRETE ENCASEMENT RING DIMENSION, D, TO BE EQUAL TO DESIGN PAVEMENT DEPTH.
- PAVEMENT AND SUBGRADE TO BE AS SHOWN ON THE ENGINEERING PLANS.
- QUAZNE DOES NOT RECOMMEND THE USE OF CONCRETE OR POLYMER CONCRETE BOXES IN HIGH VOLUME TRAFFIC APPLICATIONS.
- 3/4" GRAVEL OR OTHER SUITABLE MATERIAL TO BE PLACED AT THE BOTTOM OF BOX.
- ALL COVERS SHALL BE HEAVY DUTY (15 KIPS OVER A 10 IN. SQ. MIN. TEST LOAD).
- HOLES MADE IN THE SPLICE BOX OR EXTENSION WALLS TO ACCOMMODATE THE VARIOUS SIZE CONDUITS SHALL BE MADE USING A 68 KNOCKOUT PUNCH DRIVER OR MASONRY HOLE SAW.
- CABLE RACKS AND HOOKS SHALL BE PROVIDED FOR 17"X30" AND 24"X36" SPLICE BOXES (4 REQUIRED).

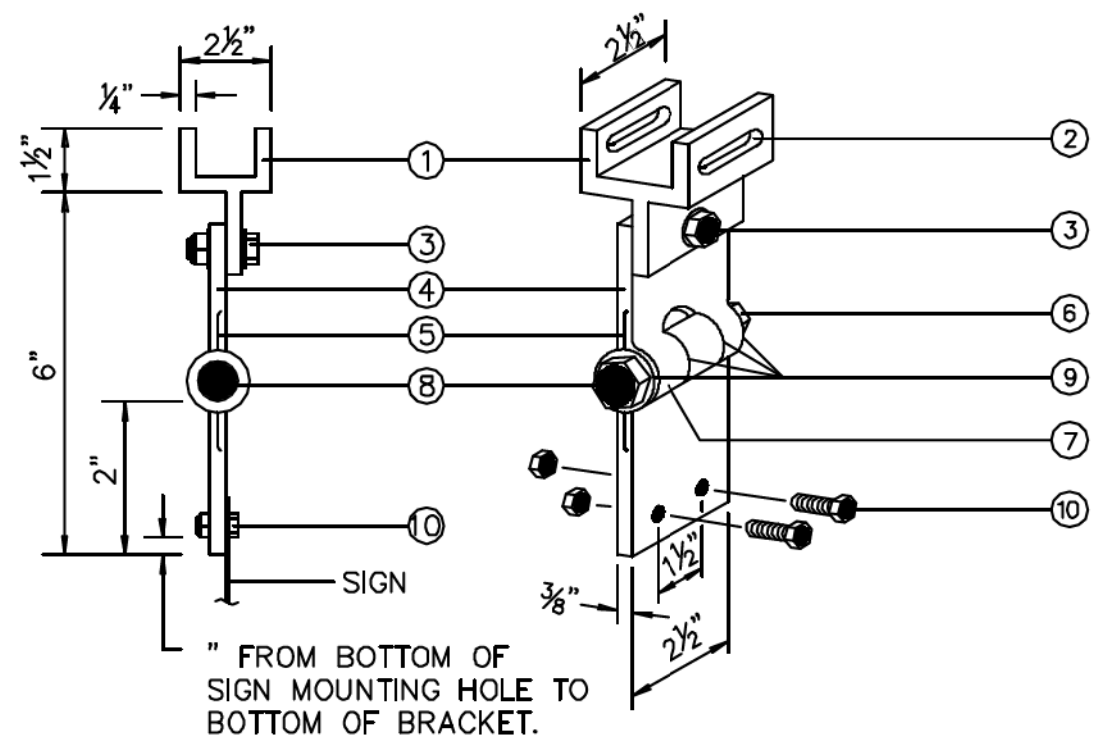
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ED-13
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COUNTY OF UNION
DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES

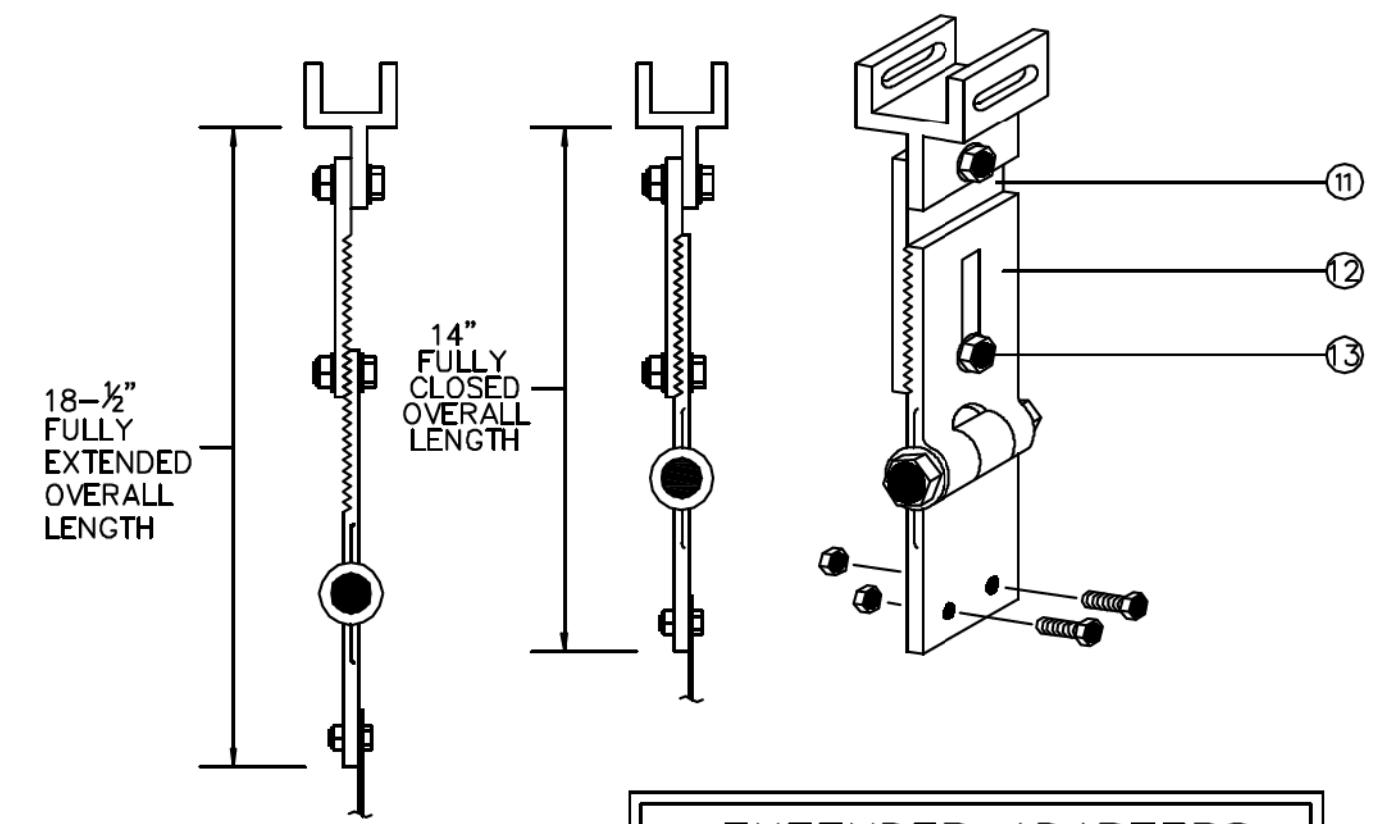
ELECTRICAL DETAIL
WEST SEVENTH STREET (CR 601)
INTERSECTION IMPROVEMENTS

FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET



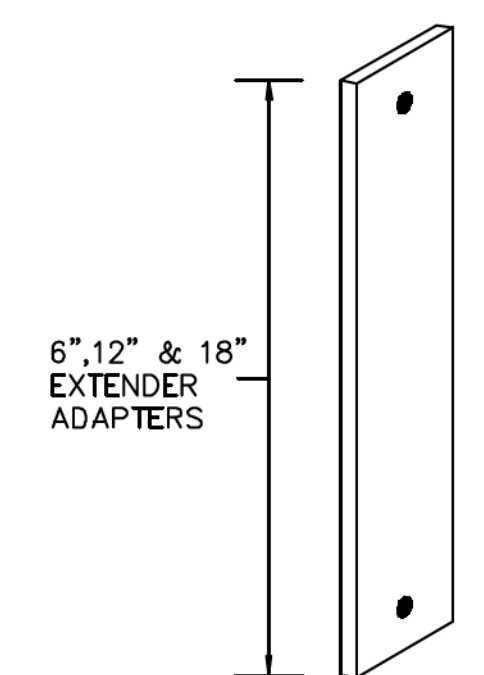
- ① PIVOTAL UPPER BRACKET.
- ② 1 3/8" x 1/4" SLOT FOR DOUBLE STRAPPING TO MAST ARM. (M2G-34S(HD) .030 x 3/4" HEAVY DUTY STAINLESS STEEL STRAP WITH M2G-34B(HD) BUCKLE RECOMMENDED.)
- ③ 1/2"-13 x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND STAINLESS STEEL WASHER (BOTH SIDES). ALLOWS UPPER BRACKET TO PIVOT AND ALIGN WITH MAST ARM.
- ④ 6" OVERALL DROP WITH FIXED LENGTH SIGN BRACKET.
- ⑤ STAINLESS STEEL DAMPENER SPRING (REMOVABLE).
- ⑥ STAINLESS STEEL HEX LOCK NUT WITH 3/8" STAINLESS STEEL WASHER.
- ⑦ 1" O.D. AXLE HOUSING.
- ⑧ 1/2"-13 x 4" STAINLESS STEEL HEX HEAD BOLT WITH 3/8" STAINLESS WASHER.
- ⑨ OILITE BUSHING.
- ⑩ SIGN MOUNTING SETS, CONSISTING OF TWO EACH 5/16"-18 x 1" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT. TWO HOLES ON 1 1/2" CENTERS PROVIDE POSITIVE LOCK SIGN MOUNTING TO BRACKET.

ADJUSTABLE LENGTH SWING SIGN BRACKET

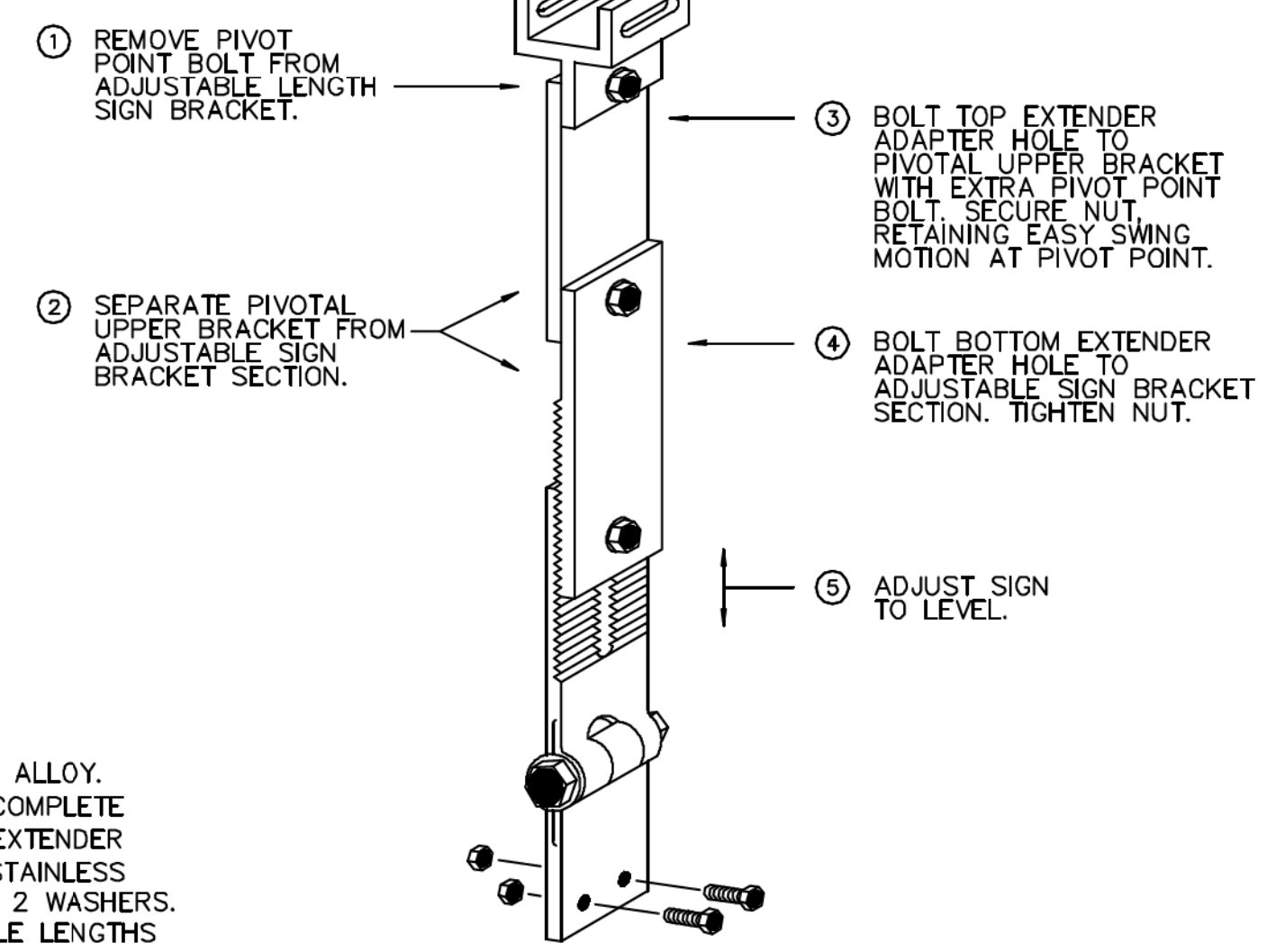


- ⑪ 8 1/4" OVERALL LENGTH UPPER ADJUSTABLE SIGN BRACKET SECTION.
- ⑫ 9" OVERALL LENGTH LOWER ADJUSTABLE SIGN BRACKET SECTION, INCLUDING AXLE HOUSING (8" OVERALL LENGTH TO TOP OF AXLE HOUSING).
- ⑬ 1/2"-13 x 1 1/2" STAINLESS STEEL HEX BOLT WITH STAINLESS STEEL HEX LOCK NUT AND STEEL WASHERS (BOTH SIDES). LOOSEN LOCK NUT, ADJUST BRACKET TEETH TO LEVEL SIGN.

EXTENDER ADAPTERS FOR ADJUSTABLE LENGTH SWING SIGN BRACKET. EXTENDS BRACKET TO LEVEL SIGN. FITS ANY DEGREE OF MAST ARM RISE.

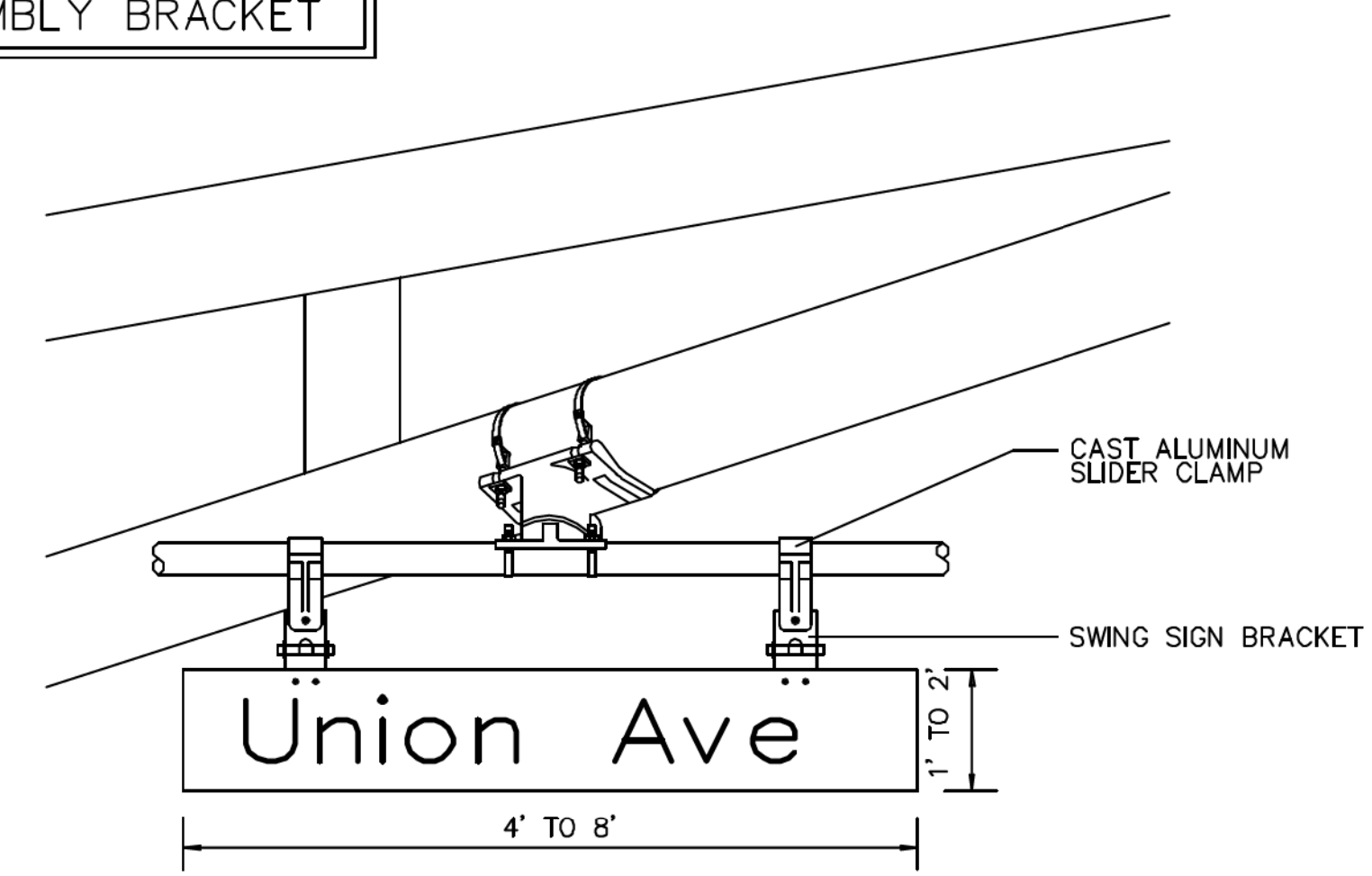
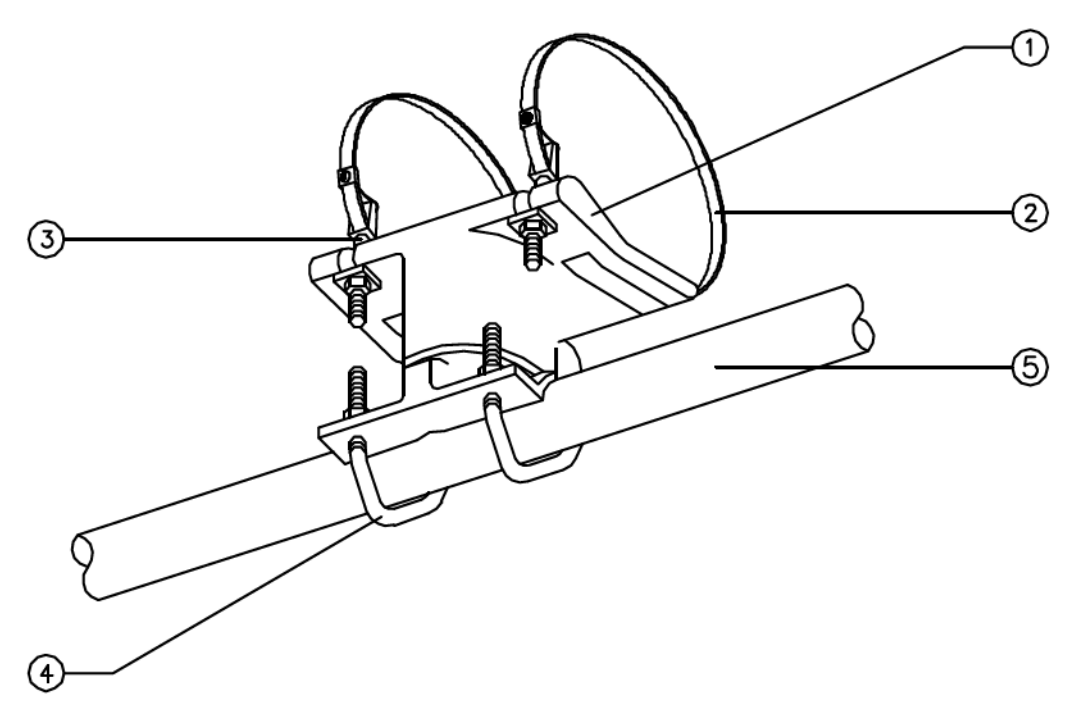


EXTENDER ADAPTERS ARE ALL ALUMINUM 6061T6 ALLOY. 3/8" THICK x 2 1/2" WIDE BAR x VARIABLE LENGTH COMPLETE WITH ONE HOLE EACH END FOR 1/2" BOLT. EACH EXTENDER BAR INCLUDES ONE PIVOT POINT 1/2"-13 x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH HEX LOCK NUT AND 2 WASHERS. (EXTENDER ADAPTERS ARE AVAILABLE IN VARIABLE LENGTHS ON REQUEST.)

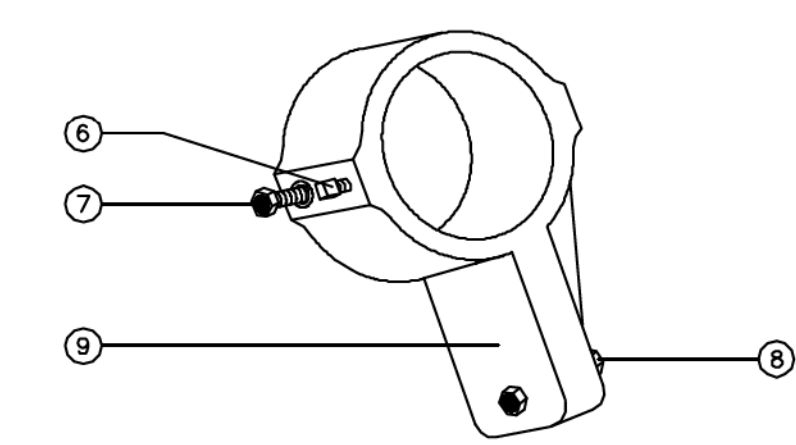


- ① REMOVE PIVOT POINT BOLT FROM ADJUSTABLE LENGTH SIGN BRACKET.
- ② SEPARATE PIVOTAL UPPER BRACKET FROM ADJUSTABLE SIGN BRACKET SECTION.
- ③ BOLT TOP EXTENDER ADAPTER HOLE TO PIVOTAL UPPER BRACKET WITH EXTRA PIVOT POINT BOLT. SECURE NUT, RETAINING EASY SWING MOTION AT PIVOT POINT.
- ④ BOLT BOTTOM EXTENDER ADAPTER HOLE TO ADJUSTABLE SIGN BRACKET SECTION. TIGHTEN NUT.
- ⑤ ADJUST SIGN TO LEVEL.

MAST ARM ASSEMBLY BRACKET



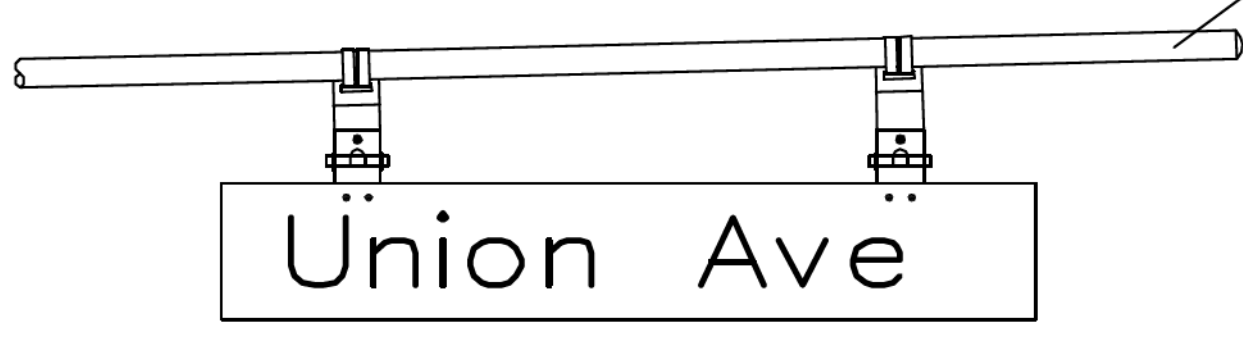
SLIDER CLAMP



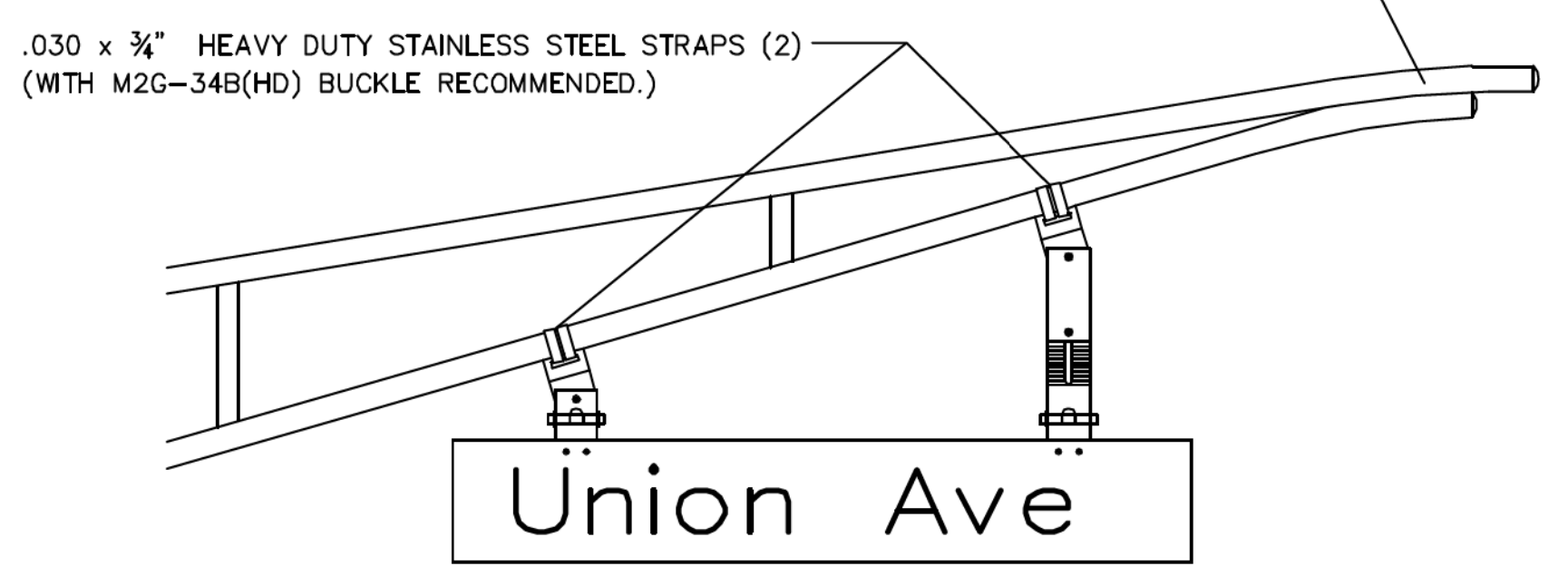
- ① CLAMP SHALL BE ALUMINUM ALLOY (356-T6)
- ② 3/8" STAINLESS STEEL STRAP (2) WITH 3/8" BANDCLAMP.
- ③ STAINLESS STEEL CLAMP SCREW WITH BEARING WASHER, 7/16" FLATWASHER & 7/16"-14 HEX NUT. CLAMP SCREW SHALL BE INSTALLED WITH MAINTAINING A MINIMUM OF 1/4" CLEARANCE TO THE MAST ARM CLAMP.
- ④ 3/16" - 18 x 1 3/4" x 2 3/8" x 7/8" U-BOLT WITH 5/16" SPLIT LOCKWASHER & 3/8"-18 HEX NUT.
- ⑤ 1 1/2" ALUMINUM TUBE
- ⑥ 3/8" SQUARE HEAD SET SCREW
- ⑦ 3/8" x 1 1/2" HEX BOLT WITH LOCKWASHER
- ⑧ 3/8" x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 3/8" STAINLESS STEEL WASHER (BOTH SIDES). A BRONZE REDUCER BUSHING (1/2" TO 3/8") SHALL BE USED INSIDE THE SLIDER CLAMP.
- ⑨ CAST ALUMINUM SLIDER CLAMP

NOTE:
INSTALLATION OF SLIDER:
DRILL 3/8" HOLE THRU ONE WALL OF PIPE.
TIGHTEN 3/8" x 1 1/2" HEX BOLT WITH LOCKWASHER INTO SLIDER THRU HOLE IN PIPE. ATTACH 3/8" SQUARE HEAD SET SCREW.

TYPICAL STEEL TRAFFIC SIGNAL ARM



TYPICAL TRAFFIC SIGNAL MAST ARM FOR TYPE "T", "C", & "K" POLES



.030 x 3/4" HEAVY DUTY STAINLESS STEEL STRAPS (2) (WITH M2G-34B(HD) BUCKLE RECOMMENDED.)

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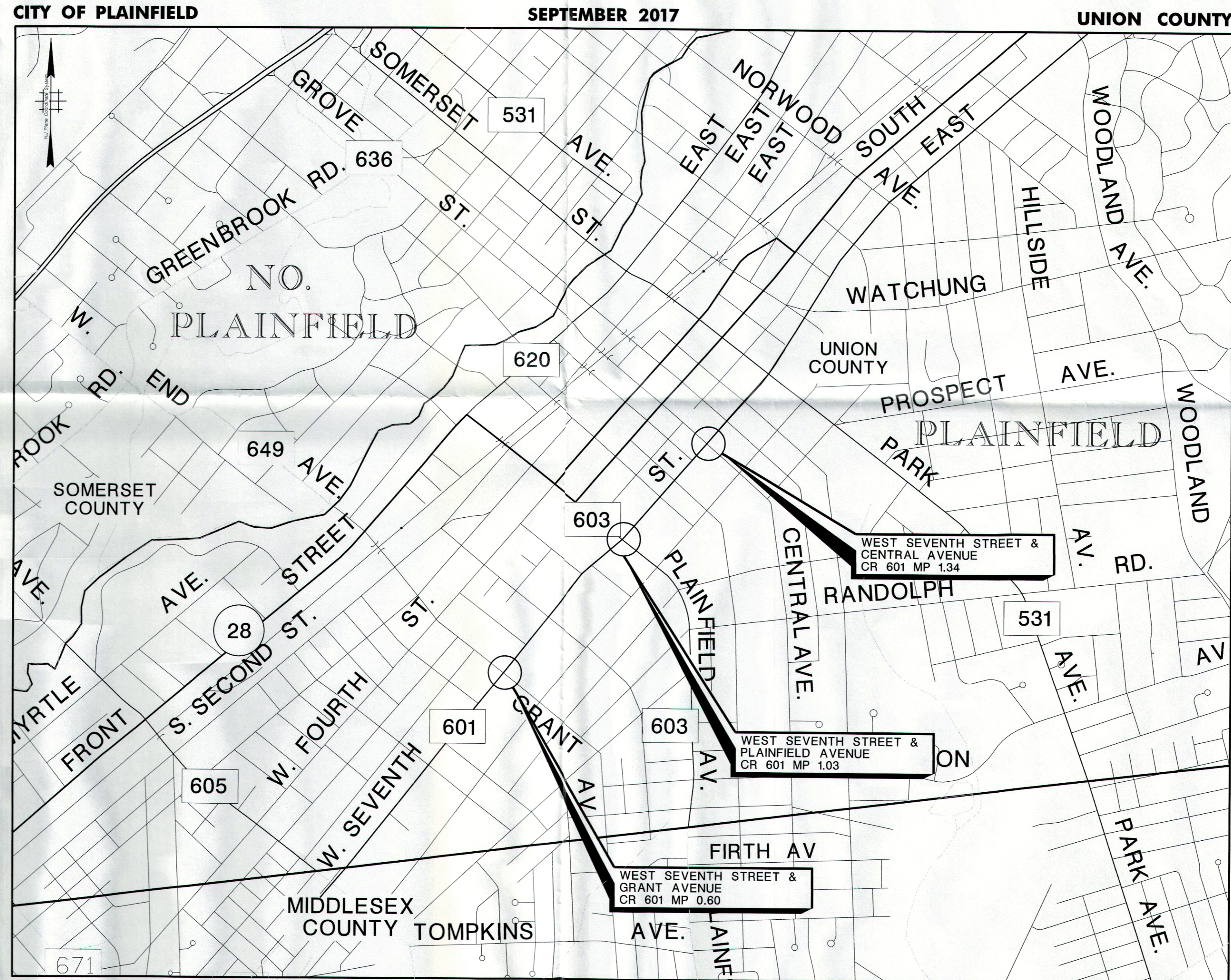
COUNTY OF UNION BOARD OF CHOSEN FREEHOLDERS

INTERSECTION IMPROVEMENTS CITY OF PLAINFIELD WEST SEVENTH STREET (CR 601)

COUNTY OF UNION, NEW JERSEY
FEDERAL PROJECT No. HSIP 0601 (301)

UTILITIES	
NEW JERSEY AMERICAN WATER (WATER)	
ELIZABETHTOWN GAS COMPANY (GAS)	
PUBLIC SERVICE ELECTRIC & GAS CO (ELECTRIC)	
VERIZON COMMUNICATIONS - NJ (TELEPHONE)	
VERIZON - NEW JERSEY, INC. (TELEPHONE)	
PLAINFIELD AREA REGIONAL SEWERAGE AUTHORITY (SEWER)	
COMCAST CABLEVISION OF NEW JERSEY (CABLE TV)	

DESIGN TRAFFIC DATA WEST SEVENTH STREET (CR 601) (VICINITY OF FRANKLIN PLACE)	
A.A.D.T. (2011) 2 WAY	= 11,801 VPD
V	= 35 MPH



INDEX OF SHEETS	
SHEET	DESCRIPTION
1	KEY
2	ESTIMATE - DISTRIBUTION OF QUANTITIES
3	TYPICAL SECTIONS
4-7	CONSTRUCTION PLANS
8-9	TIES
10-12	LAYOUT PLANS
13-20	CURB RAMP LAYOUT DETAIL
21	TRAFFIC CONTROL AND STAGING PLANS
22-27	ELECTRICAL PLANS
28-30	TRAFFIC SIGNAL, SIGNING AND STRIPING PLANS
31-44	CONSTRUCTION DETAILS
45-58	ELECTRICAL DETAILS

STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/ BRIDGE CONSTRUCTION DETAILS BOOKLET, DECEMBER 2007, AND STANDARD ELECTRICAL DETAILS BOOKLET, SEPTEMBER 2011, ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

RECOMMENDED BY: *[Signature]* _____ 9/27/17
Date

CITY OF PLAINFIELD ENGINEER, UNION COUNTY

APPROVED BY: *[Signature]* _____ 10/5/2017
Date

ADRIAN O. MAPP
CITY OF PLAINFIELD MAYOR, UNION COUNTY

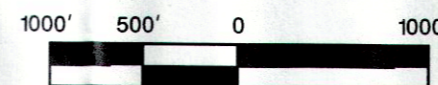
RECOMMENDED BY: *[Signature]* _____ 10/11/17
Date

THOMAS O. MINEO, P.E.
COUNTY ENGINEER, UNION COUNTY

APPROVED BY: *[Signature]* _____ 10/11/17
Date

ALFRED J. FAELLA
COUNTY MANAGER, UNION COUNTY

KEY MAP



"CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE PLANS FILED AT THE DEPARTMENT WITH THOSE FILED AT THE OFFICE OF THE CONSULTANT."

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

[Signature]
BRAD J. MILLER
NEW JERSEY P.E. LICENSE NO. 24GE04927300

NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007
AND CURRENT SUPPLEMENTARY SPECIFICATIONS THERETO TO GOVERN