

CITY OF WILMINGTON, NC

RE-BID INVITATION

BIDS ARE DUE: NOVEMBER 18, 2025, at 3:00 PM

PRE-BID MEETING: OCTOBER 21, 2025, at 3:00 PM

PROJECT NAME: FRONT STREET BRIDGE
REHABILITATION

PROJECT NUMBER: 2TRBR2310

CONTRACT NUMBER: BR-AEC-0425

PROJECT DIRECTOR: MIKE NAKLICKI – 910-341-5897

PROJECT MANAGER: KYLE BURDEN – 910-341-7808

PROJECT ENGINEER: AECOM (GREG COLS) – 919-854-6200

SUBMIT BIDS TO: PURCHASING MANAGER
P. O. BOX 1810
929 N. FRONT ST., 10th FLOOR
WILMINGTON, N. C. 28402-1810
(910) 341-7830

BIDDERS NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

**FRONT STREET BRIDGE REHABILITATION
BR-AEC-0425**

TABLE OF CONTENTS

ADVERTISEMENT	
BIDDER'S CHECKLIST	
SPECIAL NOTICE TO ALL BIDDERS	
AFFIDAVIT AND CERTIFICATION OF NON-COLLUSION	
AFFIDAVIT OF COMPLIANCE WITH NC E-VERIFY STATUTES	
MBE/DBE POLICY STATEMENT	
SPECIAL PROVISIONS MBE/DBE PROGRAM	
AFFIDAVIT A	
AFFIDAVIT C	
AFFIDAVIT D	
POTENTIAL SUBCONTRACTING OPPORTUNITIES	
REPORT OF PARTICIPATING SUBCONTRACTORS AND SUPPLIERS	
REPORT OF NON-CERTIFIED SUBCONTRACTORS	
LISTING OF FIRMS CONTACTED TO PERFORM SUBCONTRACTING WORK	

GENERAL PROVISIONS	PAGE G-1 – G-23
CONTRACT	PAGE C-1 - C-15
PROPOSAL	PAGE P-1 - P-8

Technical Specifications – City of Wilmington

SECTION 15 – SPECIAL CONDITIONS	TS-15-1 THRU TS-15-20
--	------------------------------

Project Special Provisions - Structure

INTERMEDIATE CONTRACT TIMES (SPECIAL)	ST-2
POST BID QUALIFICATION (SPECIAL)	ST-6
FALSEWORK AND FORMWORK (11-30-23)	ST-9
SUBMITTAL OF WORKING DRAWINGS (SPECIAL)	ST-16
CRANE SAFETY (06-20-19)	ST-18
GROUT FOR STRUCTURES (12-01-17)	ST-19
MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE AT STATION 12+50.55 -EL- (08-13-04)	ST-20
ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES (11-30-23)	ST-21
PAINTING EXISTING STRUCTURE (11-30-23)	ST-24

CLEANING AND PAINTING EXISTING BEARING PLATES (02-11-19)	ST-39
BRIDGE JACKING (SPECIAL)	ST-40
TEMPORARY UTILITY SUPPORT (SPECIAL)	ST-43
UTILITY SUPPORT SYSTEM (SPECIAL)	ST-45
EPOXY COATING AND DEBRIS REMOVAL (SPECIAL)	ST-47
STEEL REPAIRS (SPECIAL)	ST-49
PARTIAL REMOVAL OF EXISTING STRUCTURE (SPECIAL)	ST-53
SURVEY EXISTING STRUCTURE (SPECIAL)	ST-55
MISCELLANEOUS STRUCTURE DETAILS (SPECIAL)	ST-56
STUB COLUMN (SPECIAL)	ST-57
IMPACT ATTENUATOR UNITS, TYPE TL-2 (8-20-24)	ST-59
PURCHASE PORTABLE CONCRETE BARRIER (ANCHORED) AND ATTENUATOR (SPC.)	ST-60

Appendix

CAPE FEAR COMMUNITY COLLEGE RIGHT OF ENTRY AGREEMENT

ADVERTISEMENT FOR RE-BID
CITY OF WILMINGTON, NC
FRONT STREET BRIDGE REHABILITATION
CONTRACT NUMBER: BR-AEC-0425

Pursuant to North Carolina General Statute 143-129, sealed proposals addressed to the Purchasing Manager, P. O. Box 1810, 929 N. Front Street, 10TH Floor Wilmington, NC 28402, and marked "FRONT STREET BRIDGE REHABILITATION" will be received until 3:00 p.m., Tuesday, November 18, 2025, at which time they will be publicly opened and read at the Purchasing Division, 929 N. Front Street, 10th Floor Room 1069, Wilmington, NC. The City will receive SINGLE PRIME BIDS ONLY for this project.

Project Description: The Front Street Bridge Rehabilitation project is located on Front Street in downtown Wilmington between Hanover Street and Red Cross Street. The scope of this project includes but is not limited to a full deck replacement, cleaning, painting, and repair of the steel members, and repairs to existing bent pedestals.

All firms submitting bids for the proposed work must be properly licensed under Chapter 87, N. C. General Statutes. The bidder's license number must appear on the outside of the envelope.

In accordance with the City of Wilmington's Minority/Disadvantaged Business Policy, the bidder shall make good faith efforts, as defined by the Bid Specifications, to subcontract 14% of the dollar value of the prime contract to businesses which are at least 51% owned and controlled by minority, socially, and/or economically disadvantaged individuals (MBE/DBE's). A complete copy of the City of Wilmington's MBE/WBE policy is available for inspection at the Purchasing Manager's Office.

Potential Subcontract opportunities which may exist on this project include, but may not be limited to Concrete, Hauling, Signage, Traffic Control, Asphalt Paving, Pavement Markings, Grading, Utilities, Suppliers, and other items not specifically referenced herein.

If the bidder fails to achieve the contract goal stated herein, it is required to provide documentation demonstrating that it made a good faith effort in attempting to meet the established goals. A bid which fails to meet these requirements will be considered non-responsive and will be rejected.

A Pre-Bid Conference will be held at 3:00 p.m., Tuesday, October 21, 2025, at 929 N. Front Street, 10th Floor Room 1069, Wilmington, NC. All parties interested in the project are invited to attend.

Plans, Specifications and Bid Documents can be obtained by clicking on the Link. For assistance, please contact Christine Karem at christine.karem@wilmingtonnc.gov.

Potential subcontractors may secure a list of potential prime contractors from the City's website, www.wilmingtonnc.gov.

The City of Wilmington does not discriminate on the basis of race, sex, color, age, national origin, religion or disability in its employment opportunities, programs, services, or activities.

Bids for this project shall be guaranteed by all bidders for a period of 90 calendar days following the bid opening. **The City of Wilmington Reserves the Right to Reject any and all Bids.**

Daryle L. Parker
Purchasing Manager
October 8, 2025

BIDDER'S CHECKLIST

1. READ AND UNDERSTAND ALL SPECIAL NOTICES.
2. SIGN AFFIDAVIT OF NON-COLLUSION A-1 AND A-2.
HAVE THIRD PARTY NOTARIZE PAGE A-3
3. SIGN AFFIDAVIT OF COMPLIANCE WITH NC E-VERIFY STATUTES
4. READ AND UNDERSTAND MBE/DBE PROVISIONS MBE-1 TO MBE-4.
5. COMPLETE, SIGN AND SUBMIT WITH THE BID, AFFIDAVIT A "AFFIDAVIT OF GOOD FAITH COMPLIANCE" LISTING OF THE GOOD FAITH EFFORT INDICATING ALL ACTIONS UNDERTAKEN, AS DESCRIBED IN THE FORM, TO RECRUIT MINORITY PARTICIPATION ON THIS PROJECT. (AFFIDAVIT A)
6. SUBMIT A LISTING OF PARTICIPATING SUBCONTRACTORS AND SUPPLIERS.
7. PORTION OF WORK TO BE PERFORMED BY M/WBE FIRMS (AFFIDAVIT C)
8. BIDDERS GOOD FAITH EFFORTS (AFFIDAVIT D)
9. LIST ALL FIRMS CONTACTED TO PERFORM SUBCONTRACT WORK IN ACCORDANCE WITH THE SPECIAL NOTICE. (Subcontractor Contact Schedule)
10. COMPLETE THE PROPOSAL SECTION AND SIGN.
11. ALL ADDENDA ISSUED FOR THIS PROJECT HAVE BEEN SIGNED OR ACKNOWLEDGED ON THE PROPOSAL PAGE.
12. THE BID SURETY IS ENCLOSED AND PROPERLY EXECUTED.
REFERENCE PARAGRAPH G-1.04.2, PAGE G-2.
13. BID ENVELOPE SEALED AND MARKED WITH THE BIDDERS NAME, LICENSE NUMBER, PROJECT NAME AND NUMBER. NOTE: MULTIPLRIME AND SINGLE PRIME BIDS FROM THE SAME BIDDER MUST BE IN SEPARATE CLEARLY MARKED ENVELOPES.
14. ENVELOPE ADDRESSED AND MARKED:
PURCHASING MANAGER
CITY OF WILMINGTON
PO BOX 1810
929 N. FRONT STREET, 10th FLOOR
WILMINGTON, NC 28402
BID NAME: **FRONT STREET BRIDGE REHABILITATION**
15. THE BID MUST BE MAILED OR DELIVERED TO THE ABOVE ADDRESS SO THAT RECEIPT IS PRIOR TO THE TIME AND DATE OF THE BID OPENING. BIDS RECEIVED AFTER THE SPECIFIED TIME WILL NOT BE CONSIDERED. THE CITY OF WILMINGTON ASSUMES NO RESPONSIBILITY FOR MAIL DELIVERY.

SPECIAL NOTICE TO ALL BIDDERS

MARCH 23, 1990 REV: 3-2020

1. Bid Rigging Affidavit

In accordance with the City of Wilmington's Bid Rigging and Conflict of Interest Ordinances, an Affidavit and Certificate of Non-Collusion and Non-Suspension is enclosed, Pages A-1, A-2 and A-3. The affidavit must be properly filled out, sealed and attested in order for your bid to be considered.

2. Subletting

Paragraph G-1.15, SUBLETTING OR ASSIGNMENT OF CONTRACT, of the City's General Specifications. All bidders must submit with their bid a listing of subcontractors contacted to submit proposals for this project. The listing must indicate the subcontractors to be used, the dollar amount of the proposed subcontract work, and type of work to be performed. If no subcontractors are to be utilized, this must be specified. This must be submitted at the time of the bid opening in order for the bid to be considered.

If subcontract firms are contacted but their proposals rejected for any reason the bidder must complete the justification form included in the bid document.

3. The City reserves the right to waive any immaterial defects in the bid documents.

4. Minority Business Policy

The MBE/WBE/HUB/DBE statement, MBE-4, must be properly filled out in order for your bid to be considered.

5. Federal Funding

This project may be funded in whole or in part with Federal funds and all bidders are advised to pay strict attention to the Federal requirements which may be attached. Bid packages which include Affirmative Action under Section 3 require that each bidder submit with his bid an Affirmative Action Plan. The City will not require bidders to submit their plan with the bid. However, it will be required and must be submitted by the lowest responsible bidder and approved by the City prior to beginning work.

Paragraph 5 applies only if Federal Regulations are included in the Bid Documents.

If you have any questions concerning these requirements, please contact my office.

Daryle L. Parker
Purchasing Manager

STATE OF NORTH CAROLINA

COUNTY OF NEW HANOVER

AFFIDAVIT AND CERTIFICATE OF
NON-COLLUSION, NON-SUSPENSION AND NON-CONVICTION

The undersigned, being first duly sworn, deposes and says:

1. I understand that for the purposes of this affidavit, the term "bidder" shall include the person(s), firm(s), or corporation(s) signing this affidavit, the undersigned's subcontractor(s), subsidiary(ies) and affiliate(s) and any officer, director, employee or agent of the bidder; and the term "conviction" shall include guilty pleas, pleadings of nolo contendere and similar pleas.

2. This Affidavit and Certificate is made in accordance with Article 3 of Chapter 133 of the North Carolina General Statutes; I certify that this proposal is made without prior understanding, agreement, or connection with any person(s), firm(s), or corporation(s) making bids or proposals; I further certify that the bidder has not entered into any agreement with any other bidder or prospective bidder or with any other person(s), firm(s) or corporation(s) relating to the price named in said proposal, nor any agreement or arrangement under which any person(s), firm(s) or corporation(s) is to refrain from bidding, nor any agreement or arrangement for any act or omission in restraint of free competition among bidders; I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards; and I further certify that the bidder will abide by all terms of this bid or proposal.

3. The bidder is not suspended or debarred from bidding by any federal or state governmental agency that is providing funds for this contract.

4. The bidder is not presently charged in an indictment or information with engaging in any conspiracy, combination, or other unlawful act in restraint of trade or any similar charges in any federal court or a court of this or any other state.

5. The bidder, within one year immediately preceding the date of this affidavit, has not been convicted of charges or engaging in any conspiracy, combination, or other unlawful act in restraint of trade or similar charges in any federal court or a court of this or any other state.

6. If, during the time of this proposal, from the date advertised to the date bids are opened, the bidder is indicted or convicted of bid-rigging, I understand this proposal shall be rejected and not considered for award.

7. I hereby affirm that all information contained in this affidavit is true, correct, accurate and complete, and any untrue, incorrect, inaccurate or incomplete statements will result in the disqualification and rejection of this proposal. I certify that I am authorized to sign this bid and to make the representations set forth herein on behalf of myself and the bidder.

This the _____ day of _____, 2025.

COMPANY NAME _____

BY: _____
(Owner, Partner, or Corporate President, Vice
President or Assistant Vice President only)

ATTEST:

(Secretary, Assistant Secretary,
Cashier or Assistant Cashier only)

(CORPORATE SEAL)

(TO BE EXECUTED ON BEHALF OF THE CONTRACTOR)

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public, certify that
(Name)

_____ personally came
(Name of Secretary, Assist. Sec., Cashier, Assist. Cashier)

before me this day and acknowledged that he (she) is _____
(Secretary, Assist. Sec.,

_____ of _____, a
Cashier, Assist. Cashier) (Name of Corporation)

corporation, and that by authority duly given and as the act of the corporation, the foregoing Affidavit

was signed in its name by its _____,
(President, Vice President, Assist. Vice President)

sealed with its corporate seal, and attest by himself (or herself) as its

_____.
(Secretary, Assist. Sec., Cashier, Assist. Cashier)

WITNESS my hand and official seal, this the _____ day of _____, 2025.

Notary Public

My Commission Expires: _____

(NOTARY SEAL)

STATE OF NORTH CAROLINA

COUNTY OF NEW HANOVER

AFFIDAVIT of COMPLIANCE
with N.C. E-VERIFY STATUTES

I, _____ (hereinafter the "Affiant"), duly authorized by
and on behalf of _____ (hereinafter the "Employer") after
being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer
and possess the full authority to speak for and on behalf of the Employer identified above.
2. Employer understands that "E-Verify" means the federal E-Verify program operated by the
United States Dept. of Homeland Security and other federal agencies, or any successor or
equivalent program used to verify the work authorization of newly hired employees pursuant
to federal law.
3. _____ Employer employs 25 or more employees in the State of North Carolina, and is in
compliance with the provisions of N.C. Gen. Stat. §64-26. Employer has verified the
work authorization of its employees through E-Verify and shall retain the records of
verification for a period of at least one year.

_____ Employer employs fewer than 25 Employees and is therefore not subject to the
provisions of
N.C. Gen. Stat. §64-26.
4. All subcontractors engaged by or to be engaged by Employer have or will have likewise
complied with the provisions of N.C. Gen. Stat. §64-26.
5. Employer shall keep the City of Wilmington informed of any change in its status pursuant to
Article 2 of Chapter 64 of the North Carolina General Statutes.

Further this affiant sayeth not.

This the _____ day of _____, 20____.

Affiant

STATE OF NORTH CAROLINA

COUNTY OF _____

Sworn to and subscribed before me, this the _____ day of _____, 20____.

Notary Public

[NOTARY SEAL]

My commission expires: _____

CITY OF WILMINGTON
MBE/WBE/HUB/DBE POLICY STATEMENT

SPECIAL NOTICE

1. ALL FIRMS SUBMITTING BIDS FOR THIS PROJECT MUST MAKE A GOOD FAITH EFFORT, AS DEFINED ON PAGES MBE-1 TO MBE-3, TO SUBCONTRACT 14% OF THE WORK TO CERTIFIED MBE/WBE/HUB/DBE FIRMS. THIS REQUIREMENT APPLIES EVEN THOUGH THE BIDDER HAS THE CAPABILITY OF PERFORMING ALL WORK WITH HIS OWN FORCES OR IF THE BIDDER IS A CERTIFIED MBE/WBE CONTRACTOR.

2. AS PART OF THE SUBMITTED BID DOCUMENT BIDDERS MUST SUBMIT A LISTING OF ALL SUBCONTRACTORS CONTACTED OR ATTEMPTED TO CONTACT FOR WORK ON THIS CONTRACT. THE LIST MUST INCLUDE THE FIRM NAME, CONTACT PERSON, PHONE NUMBER, TYPE OF SUBCONTRACT WORK, INDICATION AS TO MBE/WBE/HUB/DBE FIRM OR NON-MBE/WBE/HUB/DBE FIRM, AND DOLLAR AMOUNT OF THE WORK. THE LISTING MUST INDICATE THE FIRM TO BE UTILIZED FOR THE SUBCONTRACT WORK. A FORM IS INCLUDED HEREIN FOR THIS LISTING.

A FORM IS INCLUDED HEREIN FOR THIS PURPOSE HOWEVER, BIDDERS MAY SUBMIT THE DATA ON THEIR OWN FORM.

3. **AS PART OF THE SUBMITTED BID DOCUMENTS, ALL BIDDERS MUST SUBMIT, THE ENCLOSED "AFFIDAVIT OF GOOD FAITH COMPLIANCE". THE AFFIDAVIT MUST INCLUDE EVIDENCE OF THE GOOD FAITH EFFORTS MADE BY THE BIDDER TO CONTRACT WITH AND HIRE MBE/WBE/HUB/DBE FIRMS AS SUBCONTRACTORS FOR THIS PROJECT.**

A LISTING OF GOOD FAITH EFFORTS THAT THE CITY WILL REVIEW AND CONSIDER IS CONTAINED IN THE BID DOCUMENT.

"The bidder/proposer shall make good faith efforts, as defined in the bid specifications, to subcontract **14%** percent of the dollar value of the prime contract to business owned and/or controlled by minority, socially, and or economically disadvantaged individuals (MBE/WBE/HUB/DBE's).

Bidders are required to submit information concerning MBE/WBE/HUB/DBE's which will participate in the contract. The information will include (1) name and address of each MBE/WBE/HUB/DBE; (2) a description of the work to be performed by named firm; and (3) the dollar value of the work of the contract. If the bidder fails to achieve the contract goal stated herein, it is required to provide documentation demonstrating that it made good faith efforts in attempting to meet established goals. A bid that fails to meet these requirements will be considered non-responsive."

SPECIAL PROVISION
MINORITY/DISADVANTAGED BUSINESS ENTERPRISE PROGRAM
CITY OF WILMINGTON, NC
POLICY:

It is the policy of the City of Wilmington that MBE/WBE/HUB/DBE enterprises as defined in NCGS 143-128(g)(1)(2) and (3) shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part by City funds under this agreement. Consequently, the MBE/WBE/HUB/DBE requirements of NCGS 143-128 apply to this bid and any subsequent contract.

MBE/WBE/HUB/DBE OBLIGATION:

The City and its contractor agree to ensure that MBE/WBE/HUB/DBE's have the maximum opportunity to participate in the performance of contract and subcontracts financed in whole or in part with City of Wilmington funds provided under this agreement. In this regard, bidders and contractors shall take all necessary and reasonable steps in accordance with NCGS 143-128 to ensure that MBE/WBE/HUB/DBE firms have the maximum opportunity to compete and perform under this bid, any change orders and any subsequent contract. The City of Wilmington and its contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and/or performance of this contract.

NOTICE:

All bidders, potential contractors, or subcontractors for this contract are hereby notified that failure to carry out the City of Wilmington policy and MBE/WBE/HUB/DBE obligation, as set forth herein, shall constitute a breach of contract which may result in the termination of the contract, or other such remedy as deemed appropriate by the City.

SUBCONTRACT CLAUSES:

All bidders and potential contractors hereby assure the City that they will include the above clauses in all subcontracts which offer further subcontracting opportunities. The terms, conditions and requirements of each contract between the contractor and each subcontractor performing work under a subdivision of branch of work listed in the bid documents shall incorporated by reference the terms, conditions and requirements of this contract between the CITY and the CONTRACTOR.

CONTRACT AWARD:

Bidders are hereby advised that meeting the MBE/WBE/HUB/DBE subcontract goals or making a "GOOD FAITH EFFORT" as defined below to meet such goals are conditions for being awarded this contract. The City proposes to award the contract to the lowest responsible bidder submitting a reasonable bid, provided s/he has made a "GOOD FAITH EFFORT" as defined below to meet the established MBE/WBE/HUB/DBE participation goals.

Bidders are advised that the City has the sole authority to determine if the bidder has made a "GOOD FAITH EFFORT" toward meeting the MBE/WBE/HUB/DBE goals to qualify for contract award. The City reserves the right to reject any and all bids submitted.

SUBSTITUTION OF MBE/WBE/HUB/DBE SUBCONTRACTORS

MBE/WBE/HUB/DBE firms identified in the bid document may not be substituted or replaced without just cause and only with the written approval of the CITY. If a substitution is agreed to by the CITY, the CONTRACTOR must make a good faith effort to replace the MBE/WBE/HUB/DBE with another MBE/WBE/HUB/DBE firm.

MBE/WBE/HUB/DBE SUBCONTRACT GOALS:

The attainment of goals established for this contract are to be measured as a percentage of the total dollar value of the contract. The goals established for this contract are as follows: 14%* MBE/WBE/HUB/DBE *

***MBE/WBE/HUB/DBE GOALS ARE ACCOMPLISHED VIA SUBCONTRACTS PERFORMED BY CERTIFIED BUSINESSES. SUBCONTRACTS MAY INCLUDE SUPPLYING OF MATERIALS.**

AVAILABLE MBEWBE/HUB/DBE's

MBE/WBE/HUB/DBE firms may be utilized by the bidder provided they meet the minimum requirements as established by NCGS 143-128 and are certified seven (7) days prior to award in accordance with the MBE/WBE/HUB/DBE program.

Bidders may access the N. C. Dept. of Administration, NCDOT web site for certified firms. Failure to achieve the goal and failure to contact known MBE/WBE/HUB/DBE firms on all lists referenced herein may not qualify as a good faith effort to identify and hire MBE/WBE/HUB/DBE firms.

MBE/WBE/HUB/DBE firms certified by the Department of Transportation or Department of Administration may be counted toward to established goal.

Firms listed by the bidder as certified which are not on the Department of Transportation or Department of Administration's list of certified firms must provide evidence of certification.

CONTRACTORS REQUIRED SUBMISSIONS:

If the bidder fails to meet the contract goals established herein, s/he must submit information, which will assist the City in determining whether or not the bidder made acceptable "GOOD FAITH EFFORTS" to meet the contract goals. **Failure to meet the goals by lack of "GOOD FAITH EFFORTS" will disqualify the bidder's proposal.**

The bidder shall complete all forms included herein which pertain the verification of MBE/WBE/HUB/DBE participation and/or good faith efforts made as part of the bid.

DEFINITION

"GOOD FAITH EFFORT"

In accordance with the North Carolina Administrative Code 01-NCAC 301.0101 and the North Carolina General Statutes, the bidder must earn a minimum of 50 points from the good faith efforts listed below in order to be deemed to have made a good faith effort. If the bidder meets the 14% goal, the bidder shall be deemed to have met the good faith effort.

The following is a list of items which the contractor and the city may use in making a determination as to the acceptability of contractors "GOOD FAITH EFFORT" in meeting the goals established herein.

(1) Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed. **10 POINTS**

(2) Making the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due. **10 POINTS**

(3) Breaking down or combining elements of work into economically feasible units to facilitate minority participation. **15 POINTS**

(4) Working with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses. **10 POINTS**

(5) Attending any prebid meetings scheduled by the public owner. **10 POINTS**

(6) Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors. **20 POINTS**

(7) Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing. **15 POINTS**

(8) Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit. **25 POINTS**

(9) Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible. **20 POINTS**

(10) Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands. **20 POINTS**

PAY REQUESTS AND MAINTENANCE OF RECORDS:

The contractor shall maintain adequate records of the MBE/WBE/HUB/DBE's performance and payments and shall submit regular reports to the City. These reports shall be sent with the contractors monthly "REQUEST FOR CONTRACT PAYMENT". The request shall include a breakdown of the amount of the payment to be made by the City which will be paid to the MBE/WBE/HUB/DBE's identified in the bid documents.

PROHIBITED AGREEMENTS:

Agreements between the bidder/proposer and a MBE/WBE/HUB/DBE in which the MBE/WBE/HUB/DBE promises not to provide subcontracting quotations to other bidders/proposers are prohibited.

ATTACH THIS PAGE TO THE BID

City of Wilmington - AFFIDAVIT A – “AFFIDAVIT OF GOOD FAITH COMPLIANCE”

Listing of the Good Faith Effort

Affidavit of _____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

The bidder must earn a minimum of 50 points from the good faith efforts listed below in order to be deemed to have made a good faith effort.

- ☐ **1** - Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed. **10 points**
- ☐ **2** - Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due. **10 points**
- ☐ **3** - Broken down or combined elements of work into economically feasible units to facilitate minority participation. **15 points**
- ☐ **4** - Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses. **10 points**
- ☐ **5** - Attended prebid meetings scheduled by the public owner. **10 points**
- ☐ **6** - Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors. **20 points**
- ☐ **7** - Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing. **15 points**
- ☐ **8** - Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit. **25 points**
- ☐ **9** - Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible. **20 points**
- ☐ **10** - Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands. **20 points**

Total Points _____

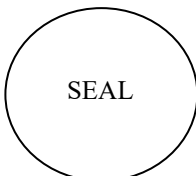
In accordance with GS143-128.2(d) the undersigned will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon execution of a contract with the Owner. Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 2025

Notary Public _____

My commission expires. _____

City of Wilmington - AFFIDAVIT C - Portion of the Work to be Performed by Minority Firms

*******(NOTE: THIS FORM IS NOT TO BE SUBMITTED WITH THE BID PROPOSAL)*******

If the portion of the work to be executed by minority businesses as defined in GS143-128.2(g) is equal to or greater than 14% of the bidders total contract price, then the bidder must complete this affidavit.
This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

(Project Name)

Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____ % of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

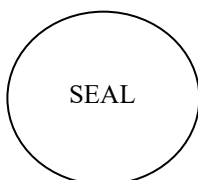
Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 2025

Notary Public _____

My commission expires _____

City of Wilmington

AFFIDAVIT D – Good Faith Efforts

*******(NOTE: THIS FORM IS NOT TO BE SUBMITTED WITH THE BID PROPOSAL)*******

If the goal of 14% participation by minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of: _____
(Name of Bidder)

Project Name: _____

I do certify the attached documentation as true and accurate representation of my good faith efforts.

(Attach additional sheets if required)

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions. Examples of documentation include, but are not limited to, the following evidence:

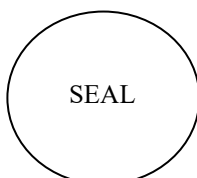
- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 2025

Notary Public _____

My commission expires _____

POTENTIAL SUBCONTRACTING OPPORTUNITIES

CONTRACT NAME: FRONT STREET BRIDGE REHABILITATION

CONTRACT NUMBER: BR-AEC-0425

WORK ITEM DESCRIPTION: Concrete, Hauling, Traffic Control, Signage, Grading, Asphalt Paving, Pavement Markings, Utilities, Suppliers, and other items not specifically referenced herein.

THE ABOVE LISTED AREAS OF SUBCONTRACT OPPORTUNITIES ARE THE AREAS THAT HAVE BEEN IDENTIFIED BY THE CITY STAFF AND/OR THE CITY CONSULTANTS FOR THE ABOVE REFERENCED PROJECT.

THE LIST IS BY NO MEANS EXHAUSTIVE AND BIDDERS ARE ENCOURAGED TO SEARCH FOR OTHER AREAS OF POTENTIAL SUBCONTRACTING OPPORTUNITIES. THE BIDDERS EFFORTS IN THIS REGARD WILL ALSO BE A CONSIDERATION IN THE CITY'S REVIEW OF THE GOOD FAITH EFFORT.

IF THERE ARE NO IDENTIFIED AREAS OF POTENTIAL SUBCONTRACT OPPORTUNITIES FOR A PARTICULAR CONTRACT THEN THE BIDDER MUST MAKE A GOOD FAITH EFFORT TO IDENTIFY OTHER AREAS OF POTENTIAL SUBCONTRACT WORK.

THE REQUIREMENT TO MAKE A "GOOD FAITH EFFORT" APPLIES TO ALL CONTRACTS ESTIMATED BY THE CITY TO BE IN EXCESS OF \$100,000. THE POLICY DOES NOT APPLY TO CONTRACTS BELOW \$100,000.

THE CONTRACT GOAL FOR MBE/WBE/HUB/DBE PARTICIPATION IS 14%.

MBE/WBE/HUB/DBE Web Sites

North Carolina Department of Administration
www.doa.state.nc.us/hub

North Carolina Department of Transportation
www.ncdot.org

Bidders should furnish evidence as part of the post bid submittal that the above referenced web sites were used in attempting to contact MBE/WBE/HUB/DBE firms and as part of their good faith efforts.

REPORT OF PARTICIPATING SUBCONTRACTORS AND SUPPLIERS

Please supply data for all subcontractors and suppliers, whose services will be utilized on the project being bid upon by your firm. This document must be completed and submitted along with the bid proposal.

BIDDER'S NAME _____ PROJECT: _____

BID IS FOR: GENERAL CONSTRUCTION (); ELECTRICAL (); HVAC (); PLUMBING ()

AMOUNT OF BID \$ _____ VALUE OF SUBCONTRACTS \$ _____

PERCENTAGE OF **CERTIFIED** MBE/WBE/HUB/DBE PARTICIPATION
_____ %

CERTIFIED MBE/WBE/HUB/DBE SUBCONTRACTORS AND SUPPLIERS:

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

NAME OF FIRM: _____ PHONE: _____

ADDRESS: _____ OWNER'S NAME: _____

_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____

AMOUNT TO BE PAID \$ _____ % OF TOTAL _____

PLEASE LIST BELOW ALL OTHER SUBCONTRACTORS AND SUPPLIERS AND NON-CERTIFIED MBE/WBE/HUB/DBE's.

PERCENTAGE OF OTHER SUBCONTRACTORS, SUPPLIERS AND NON-CERTIFIED MBE/WBE/HUB/DBE's _____%

OTHER SUBCONTRACTORS & SUPPLIERS AND NON-CERTIFIED MBE/WBE/HUB/DBE's:

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

NAME OF FIRM: _____ PHONE: _____
ADDRESS: _____ OWNER'S NAME: _____
_____ () SUBCONTRACTOR () SUPPLIER

WORK/SERVICE TO BE PERFORMED: _____
AMOUNT TO BE PAID \$ _____ % OF TOTAL _____
=====

COMPLETE AND SUBMIT ALONG WITH AFFIDAVIT C OR AFFIDAVIT D

In order for the City to determine the Good Faith Effort performed by the bidder, the bidder must list ALL firms contacted to perform subcontract work for the project.

SUBCONTRACT CONTACT SCHEDULE

PRIME CONTRACTOR: _____
PROJECT NAME: _____
DATE: _____

DATE CONTACTED	NAME & ADDRESS OF PERSON/BUSINESS CONTACTED	PHONE NUMBER	SERVICE PROVIDED	PERSON MAKING CONTACT	CERTIFIED MBE/WBE/HUB/DBE/WBE? YES/NO	RESPONSE	PRICE QUOTED

I HEREBY CERTIFY THAT THE SUBCONTRACTORS LISTED ABOVE WERE CONTACTED BY MY FIRM, AND REQUESTED TO SUBMIT QUOTES ON THE ABOVE REFERENCED PROJECT. ALL INTERESTED SUBCONTRACTORS WERE NEGOTIATED WITH IN GOOD FAITH.

I hereby certify that the above referenced information is true and accurate.
Inaccurate information provided in the bid document will be reported to the North Carolina Attorney Generals office and result in investigations and/or legal action against the bidder.

SIGNED: _____ TITLE: _____ COMPANY: _____

GENERAL PROVISIONS

Section G

INSTRUCTION TO BIDDERS

SPECIAL NOTICE

- G-1.01 The name of a certain brand, make, manufacturer, or definite specification is to denote the quality standard of the article desired, but does not restrict bidders to the specific brand, make, manufacturer, or specification named; it is to set forth and convey to the prospective bidders the general style, type, character, and quality of the article desired.
- G-1.02 The award of each contract will be made to the lowest responsible bidder as soon as practicable; provided, that in the selection of equipment or materials a contract may be awarded to a responsible bidder other than the lowest in the interest of standardization, or if ultimate economy is clearly evident.

If the project is being bid under the single and multiprime bidding methods, the CITY reserves the right to award the contract in whichever manner is in the best interest of the CITY taking into consideration the total cost of the project, including but not limited to contract administration and preparation costs.

The award of the contract represents a preliminary determination as to the qualifications of the bidder, the availability of funds for the project, and other matters precedent to the City's execution of the contract. No legally-binding acceptance of the offer set forth in the Contractor's bid occurs until the City executes the contract.

- G-1.03 If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications, or other proposed contract documents, he may submit to the Engineer a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. An interpretation of the proposed documents will be made only by addendum duly issued, and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The City of Wilmington will not be responsible for any other explanations or interpretations of the proposed documents.

GENERAL SPECIFICATIONS

- G-1.04 **SEALED PROPOSALS REQUIRED: INSTRUCTIONS:** In accordance with the attached copy of advertisement and the following specifications, proposals will be received by the City Council of the City of Wilmington, North Carolina, at 929 N. Front Street 10th Floor, Purchasing Manager's Office, on the date and time designated in the Advertisement, when they will publicly open and read the proposals properly submitted for Municipal Improvements in the City of Wilmington, North Carolina. Firms submitting single and multiprime bids must enclose these in separate sealed, clearly marked envelopes.

If bids are requested for single and multiprime contracts, bids will be received, but not opened, for the separate prime contracts one (1) hours prior to the deadline for submission of single prime bids. All bids will be opened at the time for receipt of the single prime bids.

G-1.04.1 Proposals must be placed in a sealed envelope and addressed to The Purchasing Manager, City of Wilmington, North Carolina. The envelope shall show the name and address of the bidder and be plainly marked to show the project name and number and section (if applicable), as given in the Advertisement. The envelope must also be marked on the face to show the Contractor's North Carolina Contractor's License Number. Bid forms are contained in this bound copy of the Contract Documents, copies of the proposal pages may be submitted. All

information entered on proposal forms must be original and in ink. Submission of the entire document is not required. However, bidders are cautioned to submit all required forms, as referenced in the bound document, properly signed with the sealed bid. Bid forms will be filled in and completed in all respects as required herein.

Firms submitting bids for Single and Multi-Prime bids on the same project must submit each bid to the Purchasing Manager in a separate, properly identified sealed envelope.

Failure by the bidder to properly complete the Bid Proposal, Affidavit of Non-Collusion, MBE/WBE/HUB/DBE forms or other documents will be cause for declaring the bid non-responsive and cause for rejection.

G-1.04.2 Each proposal shall be accompanied by a cash deposit or certified check, said check to be payable to the City of Wilmington, and to be drawn on some bank or trust company insured by the Federal Deposit Insurance Corporation, in an amount equal to not less than five percent (5%) of the proposal. In lieu of making a cash or certified check deposit, as above provided, a bidder may file a bid bond executed by a corporate surety, licensed under the laws of the State of North Carolina to execute such bonds, said bid bond to be in an amount equal to not less than five percent (5%) of the amount of the bid, and said bid bond to be conditioned so that the surety will, upon demand, forthwith make payment to the City of Wilmington upon said bond if the bidder fails to execute the contract as provided below, and upon failure to forthwith make payment, the surety shall pay to the City an amount equal to the amount of said bid bond. Said deposit of cash, certified check, or bid bond to be forfeited to the City of Wilmington in the event of the bidder's failure to execute the contract within ten (10) days after award, as required by Section 143-129 of the General Statutes of North Carolina, Volume 3, as amended.

Deposits will be retained by the City, as property of the several bidders until the award of the contract is made, or all bids are rejected, after which the deposits will be returned.

G-1.04.3 No bid may be withdrawn for a period of ninety (90) days after being filed.

G-1.04.4 The work contemplated in these specifications, and the prices named in the proposals will be considered to include all cost of supplying, delivering, and all labor necessary for the incorporation of all materials into the work, and the use of all tools, machinery and equipment of every name and description that is used in carrying out the plans and specifications under this contract.

G-1.04.5 Bidders are cautioned to carefully examine the proposed location of work, as well as the plans and specifications, and to go over the whole project thoroughly with the Engineer before submitting their bids. It is understood and agreed that the quantities in the specifications, or as shown on the plans are approximate only, and no claim will be made against the City Council for any excess or deficiency, and no allowance will be made for the failure of the bidder to estimate correctly the difficulties attending the execution of the work.

G-1.04.6 Bidders are cautioned to adhere strictly to the spirit of the specifications in submitting their tenders, and it will be considered bad form to submit a proposal, expecting concessions after being awarded the contract by proposing the use of inferior materials and methods of construction for cheapening the work. The Engineer, Owner, or City desires to aid the Contractor in every legitimate way to carry on the work economically and expeditiously as set out in these specifications, and no alternate bids will be allowed unless requested in the proposal.

G-1.04.7 Where bids are received on Unit Prices, the City Council reserves the right, to authorize an increase of fifty percent (50%) of the amount of work set out in the proposal, or to decrease it to an extent equal to fifty percent (50%) of actual cost of the original work predicted on the unit prices given in the proposal. Such increase or decrease shall not vitiate or annul the

contract agreement hereinafter entered into. In the event of a discrepancy in the unit prices and the extended prices the unit prices shall prevail.

G-1.04.8 The bidder shall be required to produce substantial evidence that he is properly qualified to carry on the work as set out in the specifications. The qualifications required of all bidders are as follows: Thorough knowledge and experience in work of this character; labor and equipment in such quantities and quality as to enable the Contractor to carry on the work economically and expeditiously; financial condition must be such as not to require aid from the City Council, other than the regular monthly estimates.

G-1.04.9 The City Council will not consider any bid or award of contract to any person, firm, or corporation, who has defaulted in any obligation to the City of Wilmington, or who, in the opinion of the Council, failed to perform his work satisfactorily as to character or time.

G-1.04.10 The City reserves the right to reject any and all bids, or to accept the bid, or bids on the entire project, or any section of the project, as given in the Proposal, which, in its opinion, is to the best interest of the City.

G-1.04.11 The Contractor's attention is especially called to the fact that he will be requested by the Council, and will be expected to push this work with all speed possible.

G-1.05 CONTRACT SURETY OF PERFORMANCE BOND: Contractor shall furnish and deliver to the City a Payment Bond and a Performance Bond covering the faithful performance and completion of the work included in this Agreement and payment for all materials and labor furnished or supplied in connection with the work included in this Agreement. Said bonds shall be issued and furnished to the City prior to, and as a condition precedent to, commencement of the work of this Agreement. Each of the Payment Bond and Performance Bond shall be furnished on behalf of the Contractor, shall name the City of Wilmington obligee, and shall be in the amount of one hundred percent (100%) of the contract price. Such bond(s) shall be solely for the protection of the City. The Payment Bond and the Performance Bond shall be issued by a surety of financial standing having a rating from A.M. Best Company equal to or better than A and must be included on the approved list of sureties issued by the United States Department of Treasury. The surety bond must be in the form set forth in NCGS 44A-33, without any variations there from. The Contractor shall provide surety bond wherein Surety waives notice of any and all modifications, omissions, additions, changes and advance payments or deferred payments in or about the Contract, and agrees that the obligations undertaken by the Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, and advance payments or deferred payments. The surety bond must set forth no requirement that suit be initiated prior to the time stipulated in applicable North Carolina Statutes of Limitation.

G-1.06 INSURANCE REQUIREMENTS: Before commencing any work, the Contractor shall procure insurance in the contractor's name and maintain all insurance policies for the duration of the contract of the types and in the amounts listed in Section G-1.06. The insurance shall provide coverage against claims for injuries to persons or damages to property which may arise from operations or in connection with the performance of the work hereunder by the contractor, his agents, representatives, employees, or subcontractors, whether such operations by himself/herself or anyone directly or indirectly employed by him/her.

G-1.06.1 COMMERCIAL GENERAL LIABILITY: Contractor shall maintain Commercial General Liability (CGL) and if necessary, Commercial Umbrella Liability insurance with a total limit of not less than \$5,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/location or the general aggregate shall be twice the required limit. CGL insurance shall be written on Insurance Services Office (ISO) "occurrence" form CG 00 01 covering Commercial General Liability or its equivalent and shall cover the liability arising from premises, operations,

independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

The City of Wilmington, its officers, officials, agents, and employees are to be covered as additional insureds under the CGL by endorsement CG 20 10 or CG 20 33 **AND** CG 20 37 or an endorsement providing equivalent coverage as respects to liability arising out of activities performed by or on behalf of the contractor; products and completed operations of the contractor; premises owned, leased or used by the contractor; and under the commercial umbrella, if any. The coverage shall contain no special limitations on the scope of protection afforded to the City of Wilmington, its officers, officials, agents, and employees.

There shall be no endorsement or modification of the CGL or Umbrella Liability limiting the scope of coverage for liability arising from explosion, collapse, underground property damage, or damage to the named insured's work, when those exposures exist.

The insurer shall agree to waive all rights of subrogation against the City of Wilmington, its officers, officials, agents and employees for losses arising from work performed by the contractor for the City of Wilmington.

G-1.06.2 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY: Contractor shall maintain Workers' Compensation as required by the general statutes of the State of North Carolina and Employer's Liability Insurance. The Employer's Liability, and if necessary, Commercial Umbrella Liability insurance shall not be less than \$5,000,000 each accident for bodily injury by accident, \$5,000,000 each employee for bodily injury by disease, and \$5,000,000 policy limit.

The insurer shall agree to waive all rights of subrogation against the City of Wilmington, its officers, officials, agents and employees for losses arising from work performed by the contractor for the City of Wilmington.

The U.S. Longshore and Harborworkers Compensation Act endorsement shall be attached to the policy when the services will be on or in close proximity to navigable waterways. The Maritime Coverage endorsement (WC 00 02 01) shall be attached to the policy when the contracted services involve the use of watercraft.

G-1.06.3 BUSINESS AUTO LIABILITY: Contractor shall maintain Business Auto Liability and, if necessary, Commercial Umbrella Liability insurance with a limit of not less than \$5,000,000 each accident. Such insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos. Business Auto coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in ISO form CA 00 01.

Pollution liability coverage equivalent to that provided under the ISO pollution liability-broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached when those exposures exist.

Contractor waives all rights against the City of Wilmington, its officers, officials, agents and employees for recovery of damages to the extent these damages are covered by the business auto liability or commercial umbrella liability insurance obtained by Contractor pursuant to G-1.06.03 of this agreement.

The contractor's Business Auto Liability insurance shall be primary as respects the City of Wilmington, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by the City of Wilmington, its officers, officials, and employees shall be excess of and not contribute with the contractor's insurance.

G-1.06.4 OWNERS AND CONTRACTORS' PROTECTIVE LIABILITY INSURANCE:
Contractor shall maintain Owners and Contractors Protective Liability (OCP) insurance on behalf of the City of Wilmington, as named insured, with each occurrence limit of \$5,000,000.

G-1.06.5 BUILDERS RISK INSURANCE: DELETED

G1-1.06.6 INSTALLATION FLOATER:

1. Contractor shall purchase and maintain in force Installation Floater insurance for the installation of material. Such insurance shall be written in an amount equal to the replacement cost of the material. The insurance shall apply on a replacement cost basis.
2. Insured property shall include portions of the work located away from the site but intended for use at the site and shall also cover portions of the work in transit.
3. Installation Floater insurance shall name City of Wilmington as loss payee.
4. Installation Floater insurance shall, at a minimum, cover the perils insured under the ISO special causes of loss for (CP10 30).
5. Installation Floater insurance shall include coverage for flood. (Required is there is a flood exposure.)
6. Any deductible applicable to the Installation Floater shall be paid by the Contractor.
7. If the City of Wilmington is damaged by the failure of the Contractor to maintain Installation Floater insurance, then the Contractor shall bear all reasonable costs properly attributable to that failure.

G1-1.06.7 PROFESSIONAL LIABILITY INSURANCE: DELETED

G1-1.06.8 ENVIRONMENTAL PROFESSIONAL LIABILITY INSURANCE: DELETED

G1-1.06.9 BAILEE COVERAGE (INCLUDING TRANSIT): DELETED

G1-1.06.10 CONTRACTORS POLLUTION LIABILITY INSURANCE: DELETED

G1-1.06.11 PROTECTION & INDEMNITY: DELETED

G1-1.06.12 ABUSE/MOLESTATION COVERAGE: DELETED

G1-1.06.13 ACCIDENT INSURANCE: DELETED

G1-1.06.14 ELECTRONIC DATA LIABILITY INSURANCE: DELETED

G1-1.06.15 FIDELITY COVERAGE: DELETED

G1-1.06.16 GARAGE LIABILITY AND/OR COMMERCIAL GENERAL LIABILITY:
DELETED

G1-1.06.17 GARAGEKEEPER'S LEGAL LIABILITY: DELETED

G1-1.06.18 ON-HOOK CARGO: DELETED

G1-1.06.19 NETWORK SECURITY AND PRIVACY LIABILITY: DELETED

G1-1.06.20 TECHNOLOGY ERRORS & OMISSIONS: DELETED

G1-1.06.21 RAILROAD PROTECTIVE LIABILITY INSURANCE: DELETED

G1-1.06.6 DEDUCTIBLES AND SELF-INSURED RETENTIONS: The contractor shall be solely responsible for the payment of all deductibles to which such policies are subject, whether or not the City is an insured under the policy.

G1-1.06.7 MISCELLANEOUS INSURANCE PROVISIONS: The policies are to contain, or be endorsed to contain, the following provisions:

1. Each insurance policy required by this contract shall be endorsed to state that coverage shall not canceled by either party except after 30 days prior written notice has been given to the City of Wilmington, PO Box 1810, Wilmington, NC 28402-1810.
2. If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

G1-1.06.8 ACCEPTABILITY OF INSURERS: Insurance is to be placed with insurers licensed to do business in the State of North Carolina with an A.M. Best's rating of no less than A VII unless specific approval has been granted by the City.

G1-1.06.9 EVIDENCE OF INSURANCE: The Contractor shall furnish the City with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements prior to commencing the work, and thereafter upon renewal or replacement of each certified coverage until all operations under this contract are deemed complete. Evidence of additional insured status shall be noted on the certificate of insurance as per requirements in Section G1-1.06. This Certificate shall be in six (6) counterparts and, when the contract is signed by the Contractor, a copy thereof shall be inserted in each copy of the contract documents and upon insertion shall become a part of such documents.

With respect to insurance maintained after final payment in compliance with requirements, an additional certificate(s) evidencing such coverage shall be provided to the City with final application for payment and thereafter upon renewal or replacement of such insurance until the expiration of the period for which such insurance must be maintained.

G1-1.06.10 SUBCONTRACTORS: Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein. Commercial General Liability coverage shall include independent contractors' coverage, and the contractor shall be responsible for assuring that all subcontractors are properly insured.

G1-1.06.11 CONDITIONS:

1. The insurance required for this contract must be on forms acceptable to the City.
2. The contractor shall provide that the insurance contributing to satisfaction of insurance requirements in G1-1.06 shall not be canceled, terminated or modified by the contractor without prior written approval of the City.
3. The contractor shall promptly notify the Safety & Risk Manager at (910) 341-5864 of any accidents arising in the course of operations under the contract causing bodily injury or property damage.
4. The City reserves the right to obtain complete, certified copies of all required insurance policies, at any time.
5. Failure of the City to demand a certificate of insurance or other evidence of full compliance with these insurance requirements or failure of the City to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
6. By requiring insurance herein, the City does not represent that coverage and limits will necessarily be adequate to protect the Contractor and such coverage and limits shall not be

deemed as a limitation of Contractor's liability under the indemnities granted to the City of Wilmington in this contract.

7. The City shall have the right, but not the obligation of prohibiting Contractor or any subcontractor from entering the project site or withhold payment until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by the City.

G-1.07 DELETED

G-1.08 DELETED

G-1.09 DELETED

G-1.10 DELETED

G-1.11 PAYMENT OF EMPLOYEES: The Contractor, and each of his Sub-contractors, shall pay each of his employees, engaged in work on this project, in full (less deductions made mandatory by law) not less often than on the Contractor's regular pay days, which shall be normally each week.

G-1.12 PAYMENT: Payment by the City to the Contractor will be made under either one of the following procedures:

G1.12.1 Public Construction Contracts equal to or greater than one hundred thousand dollars (\$100,000)

A. The City shall retain five percent (5%) of any periodic payment due a Contractor.

B. When the project is fifty percent (50%) complete, the City, with written consent of the surety, shall not retain any further retainage from periodic payments due the Contractor if the Contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time by the Architect, Engineer, or City has been corrected by the Contractor and accepted by the City Engineer, Architect, Engineer, or Project Manager. If the City determines the Contractor's performance is unsatisfactory, the City may reinstate retainage for each subsequent periodic payment application up to the maximum amount of five percent (5%). The project shall be deemed fifty percent (50%) complete when the Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the contract, except the value of materials stored on-site shall not exceed twenty percent (20%) of the contractor's gross project invoices for the purpose of determining whether the project is fifty percent (50%) complete.

C. 50% complete means:

- Gross project invoices, excluding material stored off site, of the value of the contract
- The value of materials stored on-site shall not exceed 20% of the gross project invoices

G-1.12.2 PAYMENT ON UNIT PRICE CONTRACTS: Not later than 30 work days after receipt of a City approved invoice the City will make partial payment to the Contractor, on the basis of a duly certified approved estimate by the City Engineer, Project Architect or City Project Manager of the work performed during the preceding calendar month by the Contractor, in accordance with item 12.1.1 above.

G-1.12.3 PAYMENT ON LUMP SUM CONTRACTS, THIRTY DAYS OR MORE IN DURATION: Not later than 30 work days after receipt of a City approved invoice and acceptance of work performed during that period, the City will make partial payment to the Contractor on the basis of a duly certified approved estimate by the City Engineer, Architect, Designer or Project Manager of the work performed during the preceding calendar month by the Contractor, and the value of the materials on the job, but not installed. The City will retain five percent (5%) of the amount of each such estimates in accordance with item 12.1.1 above. For purposes of preparing these monthly estimates, after the execution of the Contract, the Contractor will be required to submit to the City Engineer, Architect, Designer or Project Manager a breakdown of his lump sum bid in sufficient detail to permit an accurate determination of the progress of the work.

G-1.12.4 UNSATISFACTORY PERFORMANCE AND RETAINAGE: Retainage of the maximum of 5% may be reinstated if performance of the Contractor is unsatisfactory as determined by the City.

G-12.5 Within 60 days after the submission of a pay request and one of the following occurs, as specified in the contract documents, the owner with written consent of the surety shall release to the contractor all retainage on payments held by the owner: (i) the City receives a certificate of substantial completion from the Project Manager, Architect, Engineer, or Designer in charge of the project; or (ii) the owner receives beneficial occupancy or use of the project. However, the City may retain sufficient funds to secure completion of the project or corrections on any work. If the City retains funds, the amount retained shall not exceed two and one-half (2 ½) times the estimated value of the work to be completed or corrected. Any reduction in the amount of the retainage on payments shall be with the consent of the contractor's surety.

G1.12.6 Release of Retainage shall be in accordance with G.S. 143-134.1.

G1.12.7 There will be no retainage on periodic or final payments made by the City or prime contractor on public construction contracts in which the total project costs are less than one hundred thousand dollars (\$100,000).

G-1.12.8 PAYMENT ON LUMP SUM CONTRACTS, THIRTY DAYS OR LESS IN DURATION: Where the time for completion of work, as stated in the proposal, is thirty (30) calendar days, or less, the City will make one payment in full upon completion of work and acceptance by the City Council. No partial or interim payments will be made.

G-12.9 The Prime contractor and all Subcontractors working on the project shall comply with G.S. 143-134.1 in regards to payments to all subcontractors

G-12.9 Nothing in this section shall prevent the City from withholding payment to the contractor in addition to the amounts authorized under G.S. 143-134.1 for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

G1-12.10 Payment to Subcontractors by Prime Contractor or General Contractor

In accordance with N.C. Gen. Stat. § 22C, within seven days of receipt by the prime contractor of each periodic or final payment, the prime contractor shall pay the subcontractor based on work satisfactorily completed or service satisfactorily provided under the subcontract. Additionally, the Contractor shall pay the undisputed portions of subcontractors' invoices within one hundred five (105) calendar days of the date of subcontractor's invoice, independent of any payment by the

City to the Contractor. If the Contractor withholds any retainage pending final completion of any subcontractor's Work, the Contractor is required to pay the retainage so withheld within seven (7) calendar days after such subcontractor completes his Work satisfactorily, regardless of any payment of retainage by the City to the Contractor. The Contractor's failure to pay subcontractors as provided herein shall be a material breach for which the City may cancel the Contract.

If any periodic or final payment to the subcontractor is delayed by more than seven days after receipt of periodic or final payment by the prime contractor, the prime contractor shall pay the subcontractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on unpaid balance as may be due.

A subcontract on a contract governed by this section may include a provision for the retainage on periodic payments made by the prime contractor to the subcontractor. However, the percentage of the payment retained: (i) shall be paid to the subcontractor under the same terms and conditions as provided to the Prime Contractor and shall not exceed the percentage of retainage on payments made by the owner to the prime contractor. Subject to section G-1.12.4, any percentage of retainage on payments made by the prime contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the prime contractor shall be subject to interest to be paid by the prime contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof.

Nothing in this section shall prevent the prime contractor at the time of application and certification to the City from withholding application and certification to the City for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment, and materials; damage to prime contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by the owner.

The Prime contractor shall comply in all respects with G.S. 143-134.1 in all manners in payments to any and all subcontractors.

Neither the City's nor contractor's release of retainage on payments as part of a payment in full on a line-item of work shall affect any applicable warranties on work done by the contractor or subcontractor, and the warranties shall not begin to run any earlier than either the owner's receipt of a certificate of substantial completion from the architect, engineer, or designer in charge of the project or the owner receives beneficial occupancy.

G-1.13 COMMENCEMENT AND COMPLETION OF WORK: The Contractor for the construction of improvements under this contract shall commence work under his contract within ten days after written notice by the City PURCHASING MANAGER, and shall fully complete all work thereunder within the time stated in the proposal form.

G-1.14 EXISTING CONDITIONS: The Contractor, in signing this contract, acknowledges that he has read these Specifications and is familiar with their terms; that he has studied the plans and drawings, which are entirely clear to him; that he has been over the ground where the work is to be done, and has fully acquainted himself with the existing conditions; that he is fully prepared to sustain all losses or damages incurred by the action of the elements, or from any unforeseen obstructions, or encumbrances that may be encountered in the prosecution of the work; is prepared to provide the necessary tools, appliances and machinery, skilled and unskilled labor and materials of all kind as specified, and to guarantee that on completion, all work will be in strict compliance with the plans and specifications.

G-1.15 SUBLETTING OR ASSIGNMENT OF CONTRACT: The Contractor shall keep the work under his own control, and shall not assign, by power of attorney, or otherwise, nor sublet the work or any part thereof, without the written consent of the City. The Contractor shall perform on the site and with his own organization work equivalent to at least thirty percent (30%) of the work to be performed under this Contract. If, during the progress of the work hereunder, the Contractor requests a reduction of such percentage, and the City Manager determines that it would be to the City's advantage, the percentage of the work required to be performed by the Contractor's own organization may be reduced; provided prior written approval of such reduction is obtained by the Contractor from the City Manager. The Contractor shall submit in writing the name of such Sub-contractor as he intends employing, the portion of the work which he is to do, the dollar amount of the work, indication as the MBE/WBE/HUB/DBE status of the subcontractor, his place of business, and such other information as the City may require, in order to know whether said Sub-contractor is reputable, reliable and able to properly perform the work he proposes to do and to determine the effort made by the bidder in securing MBE/WBE/HUB/DBE subcontractors. Also, with respect to each Sub-contractor, the Contractor shall either submit certification by his insurance carrier that such Sub-contractor is covered under the provisions of his policy, or submit a certificate from the Sub-contractor's insurer that the Sub-contractor is covered, in accordance with Paragraphs G-1.05 through G-1.10, inclusive.

The Contractor shall not, either legally or equitably, assign any of the monies payable under this Contract, or his claim thereto, except by consent of the City.

Written consent by the City to sublet or assign any portion of the contract shall not be construed to relieve the Contractor, or surety, of any responsibility for the fulfillment of the Contract.

INTENT OF SPECIFICATIONS

G-1.16 INTENT: The intent of these specifications is to provide for the work herein enumerated to be constructed of the best materials of their respective kinds, and perfectly suited to the work contemplated. The work to be fully completed in every detail for the purpose designed, and it is hereby understood that the Contractor, in accepting this contract, agrees to furnish skilled labor, and everything necessary to complete the work in a workmanlike and satisfactory manner.

G-1.17 CONTRACT: In order that the contractor may understand the scope of the work to be performed and the details of its construction, several documents have been prepared, and it is understood and agreed by and between the contracting parties that the following documents form, and are essential parts of the complete contract: Advertisement, Information for Bidders, General and Technical Specifications, Proposal, Specific Contract, Contractor's Bond, Drawings, Plans, Maps, MBE/WBE/HUB/DBE policy and Profiles, attached or herein described, and others that may be prepared from time to time governing and illustrating the work to be done under the terms of the contract, and all of which shall have the same weight as if embodied herein.

G-1.18 SPECIFICATIONS: The General Provisions of the Specifications give in detail the duties and obligations of the two parties to the contract, the procedure of the work, and manner in which payments are to be made under the contract. The Technical Specifications, following, give in more detail the characteristics and requirements of the several classes of materials and special instructions governing the methods of construction. Where there is conflict, the Technical Specifications shall always take precedence over the General Specifications.

DEFINITIONS

G-1.19 DEFINITIONS: Wherever in the Specifications, Proposal, Contract, or Bond the following terms, pronouns, or abbreviations used in their stead, occur, the intent and meaning shall be interpreted as follows:

A. N. S. I.

American National Standards Institute

A. S. T. M.

American Society for Testing and Materials

A. W. S.

American Welding Society

A. W. W. A.

American Water Works Association

A. A. S. H. T. O.

American Association of State Highway and Transportation Officials

Bid Bond

BID BOND: The security to be furnished by the bidder as guaranty of good faith to enter into a contract with the City for the proposed work, if such work is awarded to him.

Bidder

The person, or persons, partnership, firm or corporation submitting a proposal for the work contemplated.

Change Order

A written order from the Engineer signed by the Contractor and the City of Wilmington authorizing addition, deletion or revision in the work or an adjustment in the price or time for completion. All change orders must be approved by the City Manager and all change orders exceeding \$5,000.00 must be approved by the Wilmington City Council.

City

The word City in these specifications refers to the City of Wilmington, North Carolina, the party of the second part to the contract, also referred to herein as the "Owner".

City Council or Council

The word Council, or City Council, refers to the City Council, the governing body of the City of Wilmington.

Contractor

The person, or persons, partnership, firm or corporation who enters into the contract awarded him by the City.

Drawings

All drawings, or reproductions thereof, pertaining to the construction of the work, which are approved by the Engineer for such purpose.

Engineer

The word Engineer, as used in these specifications, refers to the consulting engineer whose name appears on the drawings and/or to the City Engineer, and to his or their properly authorized assistants, limited to the duties entrusted to them.

Extra Work

A written order to the Contractor, signed by the Engineer, ordering a change in, or an addition to the work done, from that originally shown by the drawings and specifications.

An authorized Change order shall be issued for this work.

F. S.

Federal Specifications

General Specifications

All requirements and provisions contained in this document.

Performance Bond

The approved form of security executed by the Contractor and his surety, guaranteeing complete execution of the contract.

Bond Proposal

Written offer submitted by the bidder in the required manner to perform the work contemplated.

N. C. S. H. C. or N. C. H. C. Specifications

North Carolina State Highway Commission, Raleigh, North Carolina, and to their "Standard Specifications of Roads and Structures," latest edition.

Request for Contract Payment

The form supplied by the City and completed by the Contractor to request periodic payments on the contract. This form also includes a MBE/WBE/HUB/DBE payment form.

Special Provisions

Statements modifying or changing the requirements or provisions of the General Specifications, or adding new requirements or provisions thereto.

Specifications

The General Specifications, Special Provisions, and all written or printed agreements and instructions pertaining to the performance of the work, and to the quantity and quality of the materials to be furnished under the contract.

Standard Details

The Standard Detail drawings, or reproductions thereof, which pertain to the standard method of construction of the work, and which are approved by the Engineer.

Surety

The corporate body which is bound with and for the contractor, that is primarily liable with the contractor, for the acceptable performance of the contract and for the completion of the work.

Phrases

Wherever, in the specifications, or upon the drawings, the words "As required", "As permitted", or words of like import are used, it shall be understood that the direction, requirements, or permission of the Engineer is intended; and similarly the words "approved", "acceptable" and "satisfactory", or words of like import shall mean approved, acceptable, or satisfactory to the Engineer.

MBE/WBE/HUB/DBE POLICY

The policy adopted by City Council. A copy of the entire policy is available for inspection at the office of the Purchasing Manager.

THE DUTIES AND AUTHORITY OF THE ENGINEER DEFINED

G-1.20 INTERPRETATIONS AND CORRECTIONS: It is agreed by and between the contracting parties that the Engineer shall make all necessary explanations as to the meaning and intent of these specifications, and correct any errors, discrepancies or omissions that occur in the plans and specifications; it is further agreed that the Engineer shall, in all cases, determine the amount, quality, acceptability, and fitness of the several classes of work which are to be paid for under the contract; and it is also agreed that the Engineer shall act as referee upon all questions arising between the parties of this contract; and in all differences that occur between contractors working on adjoining sections concerning the work to be done under the terms of the contract, and the Engineer's decision shall be final and binding.

G-1.20.1 INTERPRETATIONS OF PLANS AND/OR SPECIFICATIONS PRIOR TO RECEIPT OF BIDS: If any prospective bidder feels that there are items within the plans or specifications, in the work proposed, or upon the site contemplated, which need clarification or interpretation, he shall, prior to the date and time for the receipt of bids, address a written statement to the Engineer, covering the points which he feels need clarification. It shall be the responsibility of the person addressing the inquiry to see that such a request is in the hands of the Engineer in sufficient time for proper consideration and answer. Upon receipt of such a written request, the Engineer will make a determination and if, in his opinion, interpretation, clarification and/or change should be made in the plans and/or specifications, he will inform each holder of the plans and specifications in writing of his decision or findings in the matter in question. No other procedure will be followed in interpretation or addendum to these specifications, and the City of Wilmington will not be responsible for any change unless made in accordance with this procedure.

Questions related to the proposed project, including questions concerning the plans and specifications will be addressed by the City or Engineer up to Seven (7) calendar days prior to the bid opening. No addenda will be issued after this time.

G-1.21 FIELD WORK: The Engineer shall give all necessary base lines and bench marks and information of like character for the guidance of the contractor, and all the work shall accurately conform thereto. Any work done without established lines, grades, may be ordered removed and replaced, without additional expense to the City.

G-1.22 INSPECTION: All materials and workmanship will be inspected by the Engineer, and the Contractor will be held to the spirit of the specifications at all times, the intent of such inspection being simply to obtain work of a high character, and one in which both parties to the contract can take pride.

G-1.23 ALTERATIONS: It is agreed by the contracting parties that the Engineer may at all times, before or after the commencement of the work, make alterations, or changes in the location, alignment, grades, materials and methods of construction that is desired, regardless of whether the location of such work be as shown on the plans upon which bids have been invited, and such change shall not vitiate or annul this contract, but the Engineer will determine the value of said work, and should such change diminish the amount of work to be done, no claim shall be made by the Contractor for damages on the grounds of anticipated profits from the part disposed with, but should the plan of a particular piece of work be altered or changed after commencement of said work and result in extra cost to the Contractor, the Engineer shall determine and certify a fair equitable value therefor, and his decision shall be final and binding.

G-1.24 INSPECTORS: Should it be found necessary, in the opinion of the Engineer, to appoint inspectors to pass upon the quality, amount, and general character of the work and the materials incorporated therein, such person, or persons, who, in the opinion of the Engineer, are deemed competent, may be appointed. The duties of this office are purely supervisory, and their decisions are subject to review by the Engineer.

EXTRA WORK

G-1.25 EXTRA WORK: The Contractor shall do any work not otherwise herein provided for when, and as ordered by the Engineer in writing by himself or specially authorized assistants. In the event that a mutually agreed price is not arrived at prior to the accomplishment of this extra work, the Contractor shall keep a strict account of the labor, equipment, and material used on said extra work, and shall give the Engineer an itemized statement each day of the amount. He shall further furnish the Engineer with bills, accounts and vouchers relating to the cost and access to all accounts concerning this work.

G-1.25.1 Request for reimbursement for Extra Work must be submitted by the Contractor within ten (10) days of the date upon which such extra work is accomplished, and subject request for reimbursement must bear on its face the authorizing number of the written order issued by the Engineer.

G-1.25.2 No request for reimbursement on account of additional work will be honored by the Engineer unless previously authorized by him in the manner stated.

G-1.26 PROTECTION: When such work is being carried on under the written instructions of the Engineer, and the work is damaged from whatever cause due to the carelessness or neglect of properly protecting it, or the use of improper materials, or inferior workmanship, such part thereof as the Engineer directs shall be removed and replaced by the Contractor at his own expense.

G-1.27 PAYMENT: For all such extra work, as authorized under the terms of Paragraph G-1.25, where it is possible for the Contractor and the Engineer to arrive at a mutually agreeable price (either lump sum or unit price) for this extra work in advance of the actual accomplishment of said work, this price may be used. In the event that this is not possible or practicable, the Contractor shall receive the reasonable cost of said work, plus ten percent (10%) of such cost. The decision of the Engineer shall be final upon all questions of the amount and value of extra work. The Engineer will include in such valuation the cost to the Contractor of all materials used, all labor, Social Security and insurance on labor only, common and skilled, labor foremen, and the fair rental of all machinery used for the period of such use. The Engineer will not include in this valuation any cost or rental of small tools, buildings, any portion of the time of the Contractor or superintendent, clerical help, overhead expenses or any allowance for the use of capital, these items being considered as covered by the ten percent (10%) added to the reasonable cost.

G-1.28 TIMEKEEPER: The Engineer shall have the right to appoint a timekeeper to represent the City on extra work, and the Contractor shall furnish him all necessary facilities for obtaining a correct record of the time and the materials incorporated in the work. The Engineer shall have the right to designate what force shall be employed, the compensation therefor and the foreman shall be approved by the Engineer.

GENERAL INSTRUCTIONS

G-1.29 OBSERVANCE OF THE LAW: In all operations connected with the work, the Contractor shall observe and obey all the precepts of the law, the ordinances and regulations of the Federal, City, County and State. The Contractor shall provide and maintain such barriers, signals, red lights, and watchmen to effectually prevent any accident in consequence of the work, and the Contractor shall be responsible and liable for all damage to life or property occasioned in any way by his acts or that of his agents.

G-1.30 DISPOSITION OF CLAIMS: In the event of injuries or damages to persons or property of any kind legally existing along, or adjacent to the work, the Contractor agrees to make repairs or payment for damages or injuries as may be necessary, and should the Contractor fail to promptly

repair or satisfy any legal complication that arises, after being notified in writing by the Engineer, the right is conferred upon the CITY to deduct the cost thereof from any money due, or to become due, the Contractor under the terms of the contract. All claims arising under this contract shall be settled to the satisfaction of the Engineer within sixty (60) days after notification to the Contractor of such claims, unless proceedings are entered into in a court of law.

- G-1.31 PATENTS: Should the Contractor use any patented invention, article or contrivance in the construction or maintenance of the work, or any part thereof embraced in these specifications, the fee or royalty for the use of such patented article as aforesaid shall be included in the Contractor's proposal; and the Contractor agrees to hold the City harmless against any and all demands for such fees or royalties; and before final payment to the Contractor he shall furnish satisfactory evidence that all such claims have been settled.
- G-1.32 PRIVATE PROPERTY: The Contractor shall not enter, or occupy with men, tools, machinery and materials, any property except that under the control of the City without the consent of the Engineer, and then only with written consent of the property owner. A copy of this written consent shall be given, or mailed to the Engineer.
- G-1.33 LAYING OUT THE WORK: The Engineer will provide a base line for alignment purposes and a benchmark for vertical control. All construction offset stakes, forms, and batterboards shall be set by the contractor and are subject to review and approval by the Engineer, however, such approval of these items shall not relieve the Contractor of his responsibility to construct the work to the line and grade shown on the plans.
- G-1.34 UNAUTHORIZED WORK: Any work done without lines, levels and instructions having been given by the Engineer, or without the supervision of an Inspector, will not be estimated or paid for, except when such work is authorized by the Engineer. Work so done, without the authority of the Engineer, may be ordered removed and replaced at the Contractor's cost.
- G-1.35 RESPECT FOR FIELD RECORDS: The Contractor shall carefully preserve and maintain the proper position of all lines, stakes and grade boards until authorized to remove them. Any work that shows lack of alignment or grade where the Engineer's control stakes are missing, or the position of the points, stakes, or grades indicate that they have been carelessly maintained, such work shall be removed and replaced at the Contractor's expense. If, in the opinion of the Engineer, the Contractor does not utilize reasonable care in preserving control stakes, he shall be required to pay for all expenses involved in the replacement of these stakes.
- G-1.36 INSPECTION OF MATERIALS: The Contractor shall furnish and deliver on the ground where it is to be used all materials suitable for the purpose intended. All materials and workmanship shall be subject to the Engineer's inspection, approval, or rejection at all times, and this inspection and approval during the progress of the work does not relieve the Contractor of repairs or renewal where the work has been damaged, proven defective, or overlooked, and on demand of the Engineer any work found not in conformity with the specifications shall be removed at once and replaced in accordance with the specifications.
- G-1.37 WORKERS: Only competent and skilled workers of each class shall be employed on the work, and if the Engineer notifies the Contractor that any common or skilled workers, including those superintending the work, are unfaithful, disobedient, disorderly, or unsatisfactory, such worker, or workers shall be taken off of this project not again employed upon the work without the consent of the Engineer.
- G-1.38 PROSECUTION OF WORK: The Contractor shall begin the work provided for under the terms of the contract within ten (10) days after written notice by the Purchasing Manager, and shall diligently prosecute and fully complete same within the time stated in his proposal. The Contractor shall prosecute the work in such manner, time and place as directed by the Engineer,

and he shall carry out without delay all orders and instructions given by the Engineer. During the absence of the Contractor, a qualified representative shall have authority to direct the work and to receive orders and instructions from the Engineer; but this direction by the Engineer for prosecuting the work shall not relieve the Contractor of any of the obligations or liabilities assumed under the contract.

G-1.39 **SANITATION:** Necessary sanitation conveniences for the use of workers employed upon the work shall be constructed and maintained by the Contractor, in strict accordance with the provisions of the City-County, and State Health Departments. The Contractor shall obey and enforce the aforesaid rules and regulations, including preventative measures where the workers have been exposed to infections and communicable diseases.

G-1.40 **PUBLIC TRAFFIC:** The Contractor shall maintain, in a safe and practical way, the roadways that are now used by the public or individuals that neither may be unnecessarily delayed nor inconvenienced on account of the work being carried on by the Contractor. The Contractor will be responsible for all injuries, damages to persons or property incurred by such person, or persons, firm or corporation on account of the acts or claims of negligence by the Contractor to the aforesaid while passing over the public or private roadways. The Contractor will be required to repair, or make reparation for any damages that he may have caused to the roadways, public or private, immediately after discontinuing traffic along such route, or when authorized to do so by the Engineer.

G-1.41 **BARRICADES AND LIGHTS:**

G-1.41.1 Travel upon streets or any intersecting alley, street, or private driveway shall not be inconvenienced needlessly, nor shall any street or alley be wholly obstructed for more than two blocks at any one time, except in special cases where a greater distance may be allowed by the Engineer.

G-1.41.2 Whenever a street is closed, the Contractor shall cause plainly worded signs, announcing such fact, to be placed with proper barricades at the nearest cross street upon each side of such obstruction, and upon intersecting streets.

G-1.41.3 The Contractor shall also maintain sufficient warning lights during the hours of darkness in and about the work which is under way, and it is his full responsibility to see that such lights are lit and kept lit from sunset to sunrise.

G-1.41.4 The Contractor shall also provide and maintain suitable detour signs so as to warn the public of work under way, and to guide them around the work in progress where it would be dangerous for them to proceed through the working area.

G-1.41.5 If required by the Engineer, the Contractor shall also provide watchmen, or signalmen for protection and guidance of the public.

G-1.41.6 All barricades, lights, signage, flagging, and signalmen shall be established and operate in accordance with City requirements and North Carolina Department of Transportation.

G-1.42 **DRAINAGE:** The Contractor shall maintain an unobstructed flow of the natural and artificial drains at all times, and in the event it is necessary during the prosecution of work to obstruct the free flow of either, the Contractor shall provide for flow of water in such manner that no damage shall result, or a nuisance be created.

G-1.43 **CLEANING UP:** On the completion of any part of the work, the Contractor shall remove all surplus earth, materials of construction, debris, and refuse from the work as directed by the

Engineer. On the final completion of the work, all debris over the entire contract, which is a result of work by the Contractor, shall be moved or destroyed as directed by the Engineer.

G-1.44 INCIDENTAL WORK: The duties of the Contractor have been set out in these specifications in a broad manner, with the intent of bringing to the attention of the Contractor his responsibilities under the contract, and any details of the work not specifically mentioned, but obviously necessary for carrying on, and the completion of the work shall be considered incidental thereto, and as being a part of, and included with the work for which prices have been named in the proposal, and the Contractor will not be entitled to any additional compensation therefor.

G-1.45 CONTRACTOR'S CLAIM FOR DAMAGES: In the event the Contractor is of the opinion that he should be compensated for damages sustained by reason of some act of the City, its agents or employees, the amount of such claims shall be itemized and a detailed report shall be furnished the Engineer by the Contractor within ten (10) days after the date it is claimed such damages were sustained. If the Contractor fails to file his claim in the manner and within the time named, but presents such claim at a later date when it would be impossible to make a thorough investigation, such claims will be forfeited and invalidated, and payment of the alleged damages will be disallowed.

G-1.46 EXTENSION OF TIME: No extension of time will be made the Contractor for completing the work on account of ordinary and usual delays, such as the condition of the weather, and lack of material, accidents, and the occurrence of such will not relieve the Contractor from the necessity of maintaining the rate of progress agreed upon. The City will have the right, upon the recommendation of the Engineer after investigation, to extend the time for completion when extraordinary delays or accidents of unusual nature are incurred over which the Contractor has no possible control; but such action on the part of the City shall not operate or be construed to waive any of the rights of the City under this Contract and the Performance Bond. In the event the Contractor fails to complete the work in the specified time named in the proposal, and is permitted to continue and complete the work as if such time had not lapsed, such permission shall not be deemed a waiver in any respect by the City of any liability for extra expense thereby incurred arising from the noncompletion of said work, within the specified time, but such liability shall remain in full force against the Contractor.

G-1.47 TIME FOR COMPLETION AND LIQUIDATED DAMAGES: It is hereby understood and mutually agreed, by and between the Contractor and the City, that the date of beginning and the time for completion as specified in the contract of work to be done hereunder are ESSENTIAL CONDITIONS of this contract.

The beginning date of the construction period shall be ten (10) days following the date on the NOTICE TO PROCEED letter duly mailed by the Purchasing Manager to the contractors address indicated in the bid documents.

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the City, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the City the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the City because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain, and said amount is agreed to be the amount of damages which the City would sustain and said amount shall be retained from time to time by the City from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and of the specification wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be to the essence of this contract.

Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the City determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the City; Provided further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to any preference, priority or allocation order duly issued by the City.

G-1.48 SALVAGED MATERIALS: Any used materials removed from the site of the construction, such as granite curb, manhole and catch basin castings, pipe, fill materials, which materials will not be re-used under this contract, are the property of the City of Wilmington. Pipe, curb, castings, etc., shall be carefully removed by the Contractor and delivered to the City Lot at Tenth and Fanning Streets, where a receipt will be given. Excess fill material will be dumped on disposal areas indicated by the Engineer. The Contractor will be charged with any salvaged materials which he cannot account for as having delivered, as specified.

G-1.49 FINAL ESTIMATE: The Engineer shall certify to the City in writing when, in his opinion, the Contractor has performed all that is set out in the contract and the specifications relative to the construction, and the Engineer shall show in such certificate the amount of work done from actual measurement, and the value of such work under and according to the prices named in the proposal. The City, on acceptance of said certificate, shall pay unto the Contractor within thirty (30) days thereafter the amount remaining due, and that part of the estimate remaining unpaid and including all moneys retained in the monthly estimates and for other causes under the contract.

The acceptance by the Contractor of the final payment shall release the City of any and all claims, liabilities and obligations to the Contractor for any and all work done and materials furnished, or for any act of the City or its agents or employees affecting the same. Before final payment is made, the Contractor shall submit an affidavit to the Engineer, stating that he has fully paid all bills for equipment, materials, or labor used on this project.

G-1.50 INSPECTION AND TESTING MATERIALS: Whenever in these contract documents, inspection and testing of materials is called for, the selection of bureaus, laboratories and/or agencies for such inspection and testing is subject to the approval of the Engineer.

G-1.50.1 Documentary evidence satisfactory to the Engineer that the materials have passed the required inspection and testing must be furnished to the City by the Contractor prior to the incorporation of such materials in the work, when required by the Engineer, and rejected materials must be promptly removed from the premises.

G-1.50.2 Wherever an outside testing laboratory is employed for testing of materials to be incorporated in this contract, the City of Wilmington shall employ and pay said laboratory for services rendered.

G-1.51 CONTRACTOR'S USE OF PUBLIC WATER: The Contractor shall comply with all requirements of the Cape Fear Public Utility Authority for use of public water.

G-1.52 PRECAUTIONS PRIOR TO AND DURING EXCAVATION OF ANY STREETS: No excavation, tree removal or clearing shall be begun by the Contractor upon any street within the City, or any area upon which work is to be done under this contract until he has notified and arranged for an authorized representative of the utility companies and departments which maintain underground systems within the City of Wilmington (water, sewer, electric, telephone and gas) to go over all areas to be graded, excavated or cleared, and designate the location of all hidden or underground facilities, lines, cables, pipes, or other structures and adequately mark these for proper protection during the progress of the proposed construction. The City will use its best offices to require that the owners of utilities which are in physical interference with the work relocate their utilities with utmost speed when these obstructions are encountered. In case any obstruction so located or placed as to interfere with the work, is unexpectedly encountered, the Contractor shall at once notify the Engineer of the locality and circumstances, and the place shall be passed over until satisfactory arrangements can be made. The Contractor shall make no claim against the City for damages arising out of such a delay.

G-1.52.1 Any utility which requires relocation due to physical interference with the proposed construction will be required to be relocated by the owners by the City under its franchise agreement with the operators of said utility.

G-1.52.2 Any utility line which, in the opinion of the Engineer, does not require relocation due to physical interference with the proposed project shall be the responsibility of the Contractor to protect during the progress of the work. In the event of damage to any such line upon which a repair cost is claimed, this claim shall be paid by the Contractor. Where the utility owner has given incorrect or insufficient information to the Contractor as to the location of its underground lines, then the Contractor shall be relieved of the costs of repair, which shall then be borne by the utility company or operating department.

G-1.52.3 Under no circumstances, however, shall machine excavation, grading or cut of any nature be made in a street, or areas where high voltage underground cable or gas distribution lines, services, or mains are situated without the continuous presence of an authorized representative of the owning utility who is capable of "shutting down", "cutting off", discontinuing, or taking such other action as may be necessary to prevent a dangerous condition or occurrence of said utility lines, cables or facilities are damaged during such operations.

G-1.52.4 Should the location or position of any underground or surface obstruction be such that in the opinion of the Engineer its removal, replacement, realignment, or change is required for the prosecution of the work, and it shall be deemed desirable or expedient by the Engineer, the Contractor shall perform such work as may be required as Extra Work under this Contract. (See G-1.25, G-1.26, G-1.27, and G1.28).

G-1.53 RIGHTS-OF-WAY: The City shall furnish all needed rights-of-way for the project, but in the event that any certain rights-of-way and grounds necessary for the purpose of this Contract be not acquired by the City until after the beginning of the work, the Contractor shall so arrange the procedure of work as to allow time for the acquisition of such rights-of-way, and the City will not reimburse, or be liable to the Contractor for any losses resulting from, or incident to, such delay. As soon as the rights-of-way in question have been acquired, the Contractor shall at once proceed with the work thereon with such forces as will insure its prompt completion, but if there is such delay in procuring the right-of-way in question that there will not remain a reasonable length of time before the date set for the completion of this particular work, this fact shall operate so as to extend the time for completion of the particular work affected and to compensate for the actual time lost.

G-1.54 USE OF A PORTION OF THE WORK: Whenever, in the opinion of the Engineer, any portion of the work is completed, or is in an acceptable condition for use, it shall be used for the purpose intended. Such use shall not be held in any way as an acceptance of that portion of the work

used, or as a waiver of any of the provisions of these specifications. Necessary repairs or renewals in any section of the work due to defective materials, defective workmanship, or natural causes, under the instructions of the Engineer shall be performed by the Contractor at no additional cost to the City.

G-1.55 EXCISE TAX ON MATERIALS OR FEDERAL TRANSPORTATION TAX, EXEMPTION THEREON: Wherever existing Federal Laws concerning Federal Excise Taxes and Federal Transportation Tax provide that the City of Wilmington is exempt from payment of such tax on items purchased by it, and these laws and regulations permit the extension of this exemption to the Contractors performing work for the City, the City will supply affidavits as to the existence and nature of the Contract, as requested by the Contractor for his use in filing with his vendors and transportation agencies to make his purchases for work under this Contract exempt from such taxes; providing (1) that the Contractor shall have filed an affidavit with the City that his bid on this contract does not include any costs of said taxes, and (2) that the materials for which he will request exemption from tax will be only those materials, which upon completion of the Contract will have actually been incorporated into the work under this Contract, and upon receipt of final payment by the Contractor will become the property of the City of Wilmington.

G-1.56 REQUIRED RECORDS ON SALES AND USE TAX: In order that the City may substantiate a refund claim for sales and use taxes, the Contractor shall furnish the City certified statements in triplicate, setting forth the cost of building materials, supplies and fixtures, and equipment which become a part of, or are annexed to any building or structure being erected, altered, or repaired under contract with the City and the amount of sales and/or use taxes paid thereon.

In the event the Contractor makes several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices and the sales and use taxes paid thereon. Such statement must also include the cost of any tangible personal property withdrawn from the Contractor's warehouse stock which is incorporated in the work, and the amount of sales and use tax paid thereon by the Contractor. The Contractor shall also obtain similar certified statements by his Sub-contractors and submit them to the City.

Bidders are reminded that an additional Two percent (2%) North Carolina Sales Tax is now collected on all sales made within certain counties. Purchases within these counties will require separate certified statements for this 2% tax. This statement shall give the vendors name, invoice number, total amount of invoice, date of invoice, the amount of the special 2% tax paid and the County in which the purchase was made. In the event that the Contractor wishes to file a combined certified statement showing the 4% tax and the 2% tax separately, this will be acceptable provided he gives the counties in which the 2% tax was paid.

This certified statement must be submitted to the City Engineer monthly, and all certified statements shall be submitted before final payment is made for work performed under this contract.

G-1.57 SURFACE AND SUB-SURFACE STRUCTURES: The Contractor shall be held responsible for the proper replacement of all bridges, crossings, or like structures.

In case any pipe or other obstruction, located or placed so as to interfere with the work is unexpectedly encountered, the Contractor shall at once notify the Engineer of the locality and circumstances, and the place shall be passed over until satisfactory arrangement can be made, without any claim for damages arising from such delay.

Should the location or position of any underground or surface obstruction be such that, in the opinion of the Engineer it must be relocated, and he deems it desirable or expedient that the Contractor undertake the necessary work, the Contractor will undertake to accomplish such work

as directed by the Engineer, as provided under the sections of these Specifications dealing with Extra Work.

The Contractor is to take all risks and shall be responsible for all expenses and damage attending the presence or proximity of any gas or water pipe, or public or private sewers or drains, conduits, or other structures located in such a manner as shall not, in the opinion of the Engineer, require shifting, accommodating, or removing.

- G-1.58 SETTLEMENT OVER EXCAVATION: The Contractor shall be entirely responsible for all settlement over any and all trenches and excavations which may have been cut along the line of his work at any time prior to the completion of his contract, and for a period of twelve (12) months after completion of his contract.
- G-1.59 TEMPORARY SUSPENSION OF WORK: The Engineer shall have the authority to suspend the work, wholly or in part, for such period or periods as may be deemed necessary due to unsuitable weather, or other such conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given, or perform any or all provisions of the Contract. If it should be necessary to stop work for an indefinite period, the Contractor shall store all materials necessary in such a manner that they will not deteriorate or become damaged in any way, and he shall take every precaution necessary to prevent damage or deterioration of the work performed, provide suitable drainage by opening ditches, shoulder drains, etc., and erect structures where necessary. The Contractor shall not suspend the work without authority from the Engineer. Neither the failure of the Engineer to notify the Contractor to suspend the work on account of bad weather, nor permission from the Engineer to continue work during bad weather shall be cause for the acceptance of any work which does not comply in every respect with the Contract and Specifications.
- G-1.60 EQUAL OPPORTUNITY REQUIREMENTS: The Contractor agrees that it will in carrying out the terms of this agreement, comply with the provisions of Executive Order 11246 entitled "Equal Employment Opportunity".
- In complying with the provisions of Executive Order 11246, the Contractor agrees as follows:
- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex 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 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.
 - (b) 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 or national origin.
 - (c) 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 worker 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.

(d) 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.

(e) 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 Department of Housing and Urban Development and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

(f) 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 federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 or September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (g) 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.

(h) EXEMPTIONS TO EQUAL OPPORTUNITY CLAUSE: (1) Contracts and sub-contracts not exceeding \$10,000.00 (other than Government bills of lading) are exempt. The amount of the contract, rather than the amount of the Federal Financial Assistance shall govern in determining the applicability of this exemption. (2) Except in the case of sub-contractors for the performance of construction work at the site of construction, the clause shall not be required to be inserted in sub-contracts below the second tier. (3) Contracts and sub-contracts not exceeding \$100,000.00 for standard commercial supplies or raw materials are exempt.

G-1.61 SAFETY: The contractor and each of his subcontractors shall comply at all times with all regulations of the Occupational Safety and Health Administration and all labor laws and regulations of the State of North Carolina applicable to safety. Such standards include 29 CFR Part 1926 and applicable standards from 29 CFR Part 1910 of the Code of Federal Regulations.

The contractor and each of his subcontractors shall maintain adequate protection against damage to life and property during the work and shall provide and maintain all necessary protective devices until completion and acceptance of the work by the City.

In any emergency threatening life or property not considered by the contractor as coming under the provisions provided in this Section G-1.61 the contractor may act at his own discretion to prevent or alleviate the threatening situation without authorization by the City.

G-1.62 Contractor shall obtain building, electrical, mechanical and plumbing permits for all work under the Contract. There will be no fee for obtaining these permits.

G-1.63 GENERAL CONTRACTOR: In the event the bid and subsequent contract require separate prime contractors for the various phases of the work, the Contractor receiving the GENERAL CONSTRUCTION contract shall act as the General Contractor for the project in regards to scheduling of the work and other duties generally carried out by the General Contractor.

G-1.64 PLANS AND SPECIFICATIONS: All firms receiving award on a section of the contract shall receive free of charge from the City of Wilmington two (2) complete sets of plans and

specifications for the project. For Single prime contracts involving multiple subcontractors, the primary subcontractors (HVAC, Plumbing, and Electrical or specialty item specifically bid as a separate item) shall receive up to two (2) complete sets of plans and specifications. Any further sets required by the contractor shall be charged to the contractor at the cost of reproduction.

G-1.65 DISPUTES: Any disputes in excess of \$15,000 shall be processed in accordance with Section 13 of the contract.

Rev. 2/02

NEW HANOVER COUNTY

CONTRACT FOR CONSTRUCTION SERVICES

THIS CONTRACT, made and entered into on the date executed by all parties, by and between the CITY OF WILMINGTON, NORTH CAROLINA, a Municipal Corporation located in New Hanover County (hereinafter called "CITY"); and 1. a corporation organized under the laws of the State of _____; 2. a non-profit corporation organized under the laws of the State of _____; 3. an unincorporated association having its principal place of business in _____; 4. a resident of _____; or 5. owner of a partnership organized under the laws of the State of _____, with its principal offices in _____ (hereinafter called "CONTRACTOR").

W I T N E S S E T H:1. Purpose

The CITY hereby employs the CONTRACTOR to furnish all labor, materials and equipment to perform all work in manner and form as specified by the attached plans, specifications and documents consisting of, but not limited to: Advertisement, Instructions to Bidders, General Conditions, Technical Specifications, Proposal and Affidavit, Contract and Performance and Payment Bonds, which are incorporated as if fully set out, for the following:

FRONT STREET BRIDGE REHABILITATION as specified herein and, on the plans, specifications, contract documents, drawings, addenda and change orders (if any).

2. Term of Contract/Liquidated Damages

The CONTRACTOR shall commence the work to be performed under this contract within ten (10) days of receipt of a written order from the Purchasing Manager and shall complete all work hereunder within 365 calendar days of the date of beginning. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of \$530.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph G-1.47 of the General Conditions.

3. Extra Work

In the event extra work is necessary, not set forth or contemplated in this contract, the CONTRACTOR agrees to faithfully perform all such work under a written change order from the CITY, setting forth and describing fully the work to be done. The CITY hereby agrees to pay to the CONTRACTOR, for any such extra work, upon presentation of properly prepared, itemized statements of cost computed as follows:

(a) The CONTRACTOR shall be allowed to charge for labor used at the actual payroll charges during the time actually spent on extra work, (b) He shall be allowed to add on labor charges the percentage shown in Paragraph 8 of the Proposal for Workmen's Compensation Insurance, Social Security and other payroll charges, (c) The rate for such equipment, this hourly rate to be for operating hours only, (d) The CONTRACTOR shall be allowed to charge for material purchased by him and used on extra work orders the amount charged to him by the vendor upon presentation of paid invoices, (e) The CONTRACTOR shall be allowed to add to the costs of said work arrived at enumerated above ten (10%) percent of materials, cost of equipment and actual payroll cost for overhead and profit.

4. Payment

- 4.1 The CITY agrees to pay to the CONTRACTOR for the faithful performance of this contract, subject to any additions or deductions as provided for in the Specifications or Proposal, and in accordance with the prices as set forth, subject to any additions which may be due under Paragraph 3 of this Agreement, Unit Prices and/or lump sum price, as set forth in the Proposal, the estimated total cost of _____
(\$ _____)
- 4.2 Not later than 30 work days after receipt of a City approved invoice the City will make partial payment to the Contractor on the basis of a duly certified approved estimate by the City Engineer of the work performed during the preceding calendar month by the Contractor, and the value of the materials on the job, but not installed, less ten (5%) percent of the amount of such estimate, which is to be retained by the CITY until all work has been performed strictly in accordance with this contract and until such work is accepted by the CITY.
- 4.3 Invoices, or estimates or the cost of work performed, through June 30th, must be received by the 10th calendar day of July.
- 4.4 Upon submission by the CONTRACTOR of evidence satisfactory to the CITY that all payrolls, materials, bills and any other liabilities or costs incurred by the CONTRACTOR in connection with the construction of this work has been paid in full, final payment on account of this contract shall be made within thirty (30) days after completion by the CONTRACTOR of all work covered by this agreement and the acceptance of such work by the CITY.

5. Performance Bond

It is agreed that if, at any time after the execution of this contract and the surety bond attached for its faithful performance, the CITY shall deem the surety or sureties upon such bond to be unsatisfactory, or if for any reason such bond ceases to be adequate to cover the performance of the work, the CONTRACTOR shall, at his expense, within five days after receipt of notice from the CITY to do so, furnish an additional bond or bonds in such form and amount, and with such surety, or sureties, as shall be satisfactory to the CITY.

6. Insurance; Proof of Coverage

The CONTRACTOR shall take out and maintain, during the life of this contract, all insurance required under Paragraph G-1.06 of the General Provisions, and shall, at execution of this contract, attach to each of the counterparts thereof documentary proof of compliance in the form of a Certificate from his insurer, stating the amount, policy numbers, and kinds of insurance carried. This certificate shall also contain a statement by the insurer that he will notify the City of

Wilmington by Registered Mail twenty (20) days prior to any cancellation or lapse of the insurance shown on this certificate. It is further agreed that the CONTRACTOR shall furnish the CITY with one memorandum copy of the policy, or policies, shown on this certificate at the time of the signing of this contract.

7. Guarantee

The CONTRACTOR hereby agrees to guarantee, for a period of one year after date of final payment, the work accomplished under this Contract. The CONTRACTOR agrees to repair at no cost to the CITY any defects due to faulty workmanship or materials which may appear in his work during this period.

8. Release and Indemnity

To the fullest extent permitted by law, the CONTRACTOR shall release, indemnify, keep and save harmless the CITY, its agents, officials and employees, from any and all responsibility or liability for any and all damage or injury of any kind or nature whatever (including death resulting therefrom) to all persons, whether agents, officials or employees of the CITY or third persons, and to all property proximately caused by, incident to, resulting from, arising out of, or occurring in connection with, directly or indirectly, the performance or nonperformance by CONTRACTOR (or by any person acting for the CONTRACTOR or for whom the CONTRACTOR is or is alleged to be in any way responsible), whether such claim may be based in whole or in part upon contract, tort (including alleged active or passive negligence or participation in the wrong), or upon any alleged breach of any duty or obligation on the part of the CONTRACTOR, its agents, officials and employees or otherwise. The provisions of this Section shall include any claims for equitable relief or for damages (compensatory or punitive) against the CITY, its agents, officials, and employees including alleged injury to the business of any claimant and shall include any and all losses, damages, injuries, settlements, judgments, decrees, awards, fines, penalties, claims, costs and expenses. Expenses as used herein shall include without limitation the costs incurred by the CITY, its agents, officials and employees, in connection with investigating any claim or defending any action, and shall also include reasonable attorneys' fees by reason of the assertion of any such claim against the CITY, its agents, officials or employees. The CONTRACTOR expressly understands and agrees that any performance bond or insurance protection required by this agreement, or otherwise provided by the CONTRACTOR, shall in no way limit the CONTRACTOR'S responsibility to release, indemnify, keep and save harmless and defend the CITY as herein provided. The intention of the parties is to apply and construe broadly in favor of the CITY the foregoing provisions subject to the limitations, if any, set forth in N.C.G.S. 22B-1.

9. Personnel

It is mutually agreed that CONTRACTOR is an independent contractor and not an agent of the CITY, and as such the CONTRACTOR shall not be entitled to any CITY employment benefits, such as, but not limited to, vacation, sick leave, insurance, workmen's compensation, or pension and retirement benefits.

10. Conflict of Interest

No paid employee of the CITY shall have a personal or financial interest, direct or indirect, as a contracting party or otherwise, in the performance of this agreement.

11. Non-Waiver of Rights

It is agreed that the CITY'S failure to insist upon the strict performance of any provision of this agreement, or to exercise any right based upon a breach thereof, or the acceptance of any performance during such breach, shall not constitute a waiver of any rights under this agreement.

12. Suspension or Termination of Agreement

- 12.1 In the event that review of Contractor's performance shows non-conformance to the attached scope of service or other terms or conditions contained herein as a result of the Contractor's errors, omissions or negligent acts, the contractor shall be in breach of this Agreement and the City may take corrective action as it deems necessary including, but not limited to, withholding or reduction of payment.
- 12.2 The City shall also have the right to suspend this Agreement upon written notice to the Contractor. Such suspension may be made for any of the following reasons: (a) violations or non-compliance with the contract terms, (b) violations of OSHA laws or regulations, (c) violations of Federal or State environmental and health laws or regulations, (d) operating City valves without permission, (e) moving City supplied water meters without permission, (f) failure to adequately plan for the protection of underground utilities during construction, (g) violation of any City ordinances or regulations or (h) verbal abuse of any City employees or others. In addition, any such violations may result in the Contractor being disqualified from bidding on future City projects. The written notice of suspension shall state the reasons for suspension and allow for a review period of ten (10) days during which the Contractor shall be provided with an opportunity to respond with an explanation or a justification, and/or shall undertake any reasonable remedial action required by the City. If, in the opinion of the City, the Contractor has not addressed the reasons for suspension at the completion of the ten (10) day suspension period, the City shall have a right to terminate this Agreement whereupon all obligations of the City to the Contractor shall cease.
- 12.3 The City may, at any time, terminate this contract for the City's convenience and without cause. Upon receipt of written notice from the City of such termination for the City's convenience, the Contractor shall (a) cease operations as directed by the City in the notice; (b) take actions necessary, or that the City may direct, for the protection and preservation of the work; and (c) except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing sub- contracts and purchase orders and enter into no further sub-contracts and purchase orders. In the event that this project is terminated for the convenience of the City, the Contractor shall be paid for services performed to the date of termination and costs incurred by reason of such termination, but such costs shall not include anticipated profit on unperformed work. (In no event will the amount due contractor in the event of termination for convenience exceed that amount set forth in Paragraph 4.1 of this Agreement. Contractor shall be paid for all reimbursables, as defined herein, which are due him.)
- 12.4 If after notice of termination of this contract under the provisions of Paragraph 12.2, it is determined for any reason that the Contractor was not in default under the provisions of such paragraph, or that the default was excusable under the provisions of this contract, the rights and obligations of the parties shall be the same as if the notice of termination had been issued by the City for convenience as set forth in Paragraph 12.3.
- 12.5 Nothing contained herein shall prevent the City from pursuing any other remedy which it may have against the Contractor including claims for damages.

13. Contract Disputes

In accordance with G.S. 143-128.1(8) the parties agree to mediate contract disputes in excess of \$15,000.00. Within ten (10) days of such contract disputes, the parties shall select a mediator

that is certified pursuant to all of the parties involved in the dispute. If the parties cannot agree on a mediator or do not timely select a mediator, the City shall select the mediator. The parties and the mediator shall agree upon the mediator's rate of compensation. The parties to the dispute shall share in the payment of the mediator's compensation with the City paying a minimum of one-third of the compensation if the City is a party to the dispute.

14. Assignment of Agreement

It is mutually agreed by the parties hereto that this agreement is not transferable by either party to this agreement without the consent of the other party to this agreement.

15. Subcontracts

The CONTRACTOR shall utilize no subcontracts for carrying out the services to be performed under this agreement without the written approval of the CITY.

16. Entire Agreement

The agreement constitutes the entire understanding of the parties.

17. Binding Effect

The agreement shall be binding upon the heirs, successors, assigns, agents, officials, employees, independent contractors, and subcontractors of the parties.

18. Continuing Obligation

The parties will make and execute all further instruments and documents required to carry out the purposes and intent of the agreement.

19. Reference

Use of the masculine includes feminine and neuter, singular includes plural; and captions and headings are inserted for convenience of reference and do not define, describe, extend or limit the scope of intent of the agreement.

20. Interpretation

All of the terms and conditions contained herein shall be interpreted in accordance with the laws of the State of North Carolina. In the event of a conflict between the various terms and conditions contained herein or between these terms and other applicable provisions, then the more particular shall prevail over the general and the more stringent or higher standard shall prevail over the less stringent or lower standard.

21. Saving Clause

If any section, subsection, paragraph, sentence, clause, phrase or portion of this contract is for any reason held invalid, unlawful, or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.

22. Other Laws and Regulations

CONTRACTOR will comply with any and all applicable federal, state and local standards, regulations, laws, statutes and ordinances including those regarding toxic, hazardous and solid wastes and any pollutants; public and private nuisances; health or safety; and zoning, subdivision

or other land use controls. CONTRACTOR will take all reasonably necessary, proper or required safety, preventative and remedial measures in accordance with any and all relations and directives from the North Carolina Department of Human Resources, the United States Environmental Protection Agency, the North Carolina Department of Environmental Quality, Health Departments, and any other federal, state or local agency having jurisdiction, to insure the prompt prevention or cessation (now or in the future) of violations of either the applicable provisions of such standards, regulations, laws, statutes, and ordinances or any permits or conditions issued thereunder. CONTRACTOR specifically acknowledges and agrees that CONTRACTOR, and any subcontractors it uses, has complied with and shall continue to comply with the provisions of the federal E-Verify program in compliance with Article 2 of Chapter 64 of the North Carolina General Statutes. CONTRACTOR shall maintain adequate safeguards with respect to sensitive customer information in conformance with and pursuant to 16 C.F.R. §681.1 and in accordance with N.C. Gen. Stat. §132-1.10 and §75-65.

23. Amendments

This agreement shall not be modified or otherwise amended except in writing signed by the parties.

24. Non-Discrimination

CONTRACTOR will take affirmative action not to discriminate against any employee or applicant for employment or otherwise illegally deny any person participation in or the benefits of the program which is the subject of this agreement because of race, creed, color, sex, age, disability or national origin. To the extent applicable, CONTRACTOR will comply with all provisions of Executive Order No. 11246, the Civil Rights Act of 1964, (P.L. 88-352) and 1968 (P.L. 90-284), and all applicable federal, state and local laws, ordinances, rules, regulations, orders, instructions, designations and other directives promulgated to prohibit discrimination. Violation of this provision, after notice, shall be a material breach of this agreement and may result, at CITY'S option, in a termination or suspension of this agreement in whole or in part.

25. Authority to Act

Each of the persons executing this Agreement on behalf of CONTRACTOR does hereby covenant, warrant and represent that the CONTRACTOR is a duly organized and validly existing legal entity authorized to transact business within the State of North Carolina, that the CONTRACTOR has full right and authority to enter into this Agreement, and that each and all persons signing on behalf of the CONTRACTOR were authorized to do so.

26. Counterparts.

This Agreement may be executed in several counterparts, including separate counterparts. Each shall be an original, but all of them together constitute the same instrument.

27. No Publicity.

No advertising, sales promotion or other materials of the CONTRACTOR or its agents or representations may identify or reference this Contract or the CITY in any manner absent the written consent of the CITY. Notwithstanding the foregoing, the parties agree that the CONTRACTOR may list the CITY as a reference in responses to requests for proposals and may identify the CITY as a customer in presentations to potential customers.

28. Immunity Not Waived

This Agreement is governmental in nature, for the benefit of the public. CONTRACTOR acknowledges that City reserves all immunities, defenses, rights or actions arising out of City's sovereign status under applicable law. No waiver of any such immunities, defenses, rights or actions shall be implied or otherwise deemed to exist by reason of City's entry into this Agreement.

29. CITY Not Liable For Special or Consequential Damages.

The CITY shall not be liable to the CONTRACTOR, its agents or representatives or any subcontractor for or on account of any stoppages or delay in the performance of any obligations of the CITY, or any other consequential, indirect or special damages or lost profits related to this Contract.

30. Public Records.

CONTRACTOR acknowledges that the CITY is a public entity, subject to North Carolina's public records laws (N.C.G.S. § 132) and that any documents related to this Agreement may be subject to disclosure pursuant to state law in response to a public records request or to subpoena or other judicial process.

If CONTRACTOR believes documents related to the Agreement contain trade secrets or other proprietary data, CONTRACTOR must notify the CITY and include with the notification a statement that explains and supports CONTRACTOR'S claim. CONTRACTOR also must specifically identify the trade secrets or other proprietary data that CONTRACTOR believes should remain confidential.

In the event the CITY determines it is legally required to disclose pursuant to law any documents or information CONTRACTOR deems confidential trade secrets or proprietary data, the CITY, to the extent possible, will provide CONTRACTOR with prompt written notice by certified mail, fax, email, or other method that tracks delivery status of the requirement to disclose the information so CONTRACTOR may seek a protective order from a court having jurisdiction over the matter or obtain other appropriate remedies. The notice will include a time period for CONTRACTOR to seek court ordered protection or other legal remedies as deemed appropriate by CONTRACTOR. If CONTRACTOR does not obtain such court ordered protection by the expiration of said time period, the CITY may release the information without further notice to CONTRACTOR.

31. Minority Business Enterprise (MBE)

The CITY desires that minority business enterprises have the maximum opportunity to participate in the performance of this contract and will:

31.1 Promote affirmatively (where feasible) in accordance with North Carolina General Statute 143-129, together with all other applicable laws, statutes and constitutional provisions, the procurement of goods, services in connection with construction projects for minority owned business enterprises.

31.2 Ensure that competitive and equitable bidding opportunities are followed to afford minority business enterprises participation. Strive to obtain contract and subcontract awards to minority business enterprises.

31.3 Identify and communicate to the minority business enterprises community procedures and contract requirements necessary for procurement of goods and services for construction projects and subcontracts.

31.4 Provide technical assistance as needed.

31.5 Promulgate and enforce contractual requirements that the general CONTRACTOR or all construction projects shall exercise all necessary and reasonable steps to insure that minority business enterprises participate in the work required in such construction contracts.

The CONTRACTOR shall ensure that minority business enterprises have the maximum opportunity to compete for and perform portions of the work included in this contract and shall not discriminate on the basis of race, color, national origin or sex. The CONTRACTOR shall include this special provision, Minority Business Enterprise (MBE), in all subcontracts for this contract. Failure on the part of the CONTRACTOR to carry out the requirements set forth in this special provision may constitute a breach of contract and after proper notification may result in termination of the contract or other appropriate remedy.

A minority business enterprise is defined as a business, with at least fifty-one (51%) percent owned and controlled by minority group members. The minority ownership must exercise actual day-to-day management. Minority group members may consist of Black Americans (an individual of the Black race of African origin), Hispanic Americans (an individual of a Spanish speaking culture and origin at parentage), Asian Americans (an individual of a culture, origin or parentage traceable to the areas of the Far East, Southeast Asia, the Indian subcontinent and the Pacific Islands), Indian Americans (an individual who is an enrolled member of a Federally recognized Indian tribe, or recognized by the tribe as being an Indian, as evidenced by a certification of a tribal leader), American Aleuts or any recognized minority group approved by the CITY.

A Woman Business Enterprise is a business with at least fifty-one (51%) percent owned and controlled by women who exercise actual day-to-day management.

The CONTRACTOR shall exercise all necessary and reasonable steps to ensure that Minority Business Enterprises and Woman Business Enterprises participate in the work required in this contract. The CONTRACTOR agrees by executing this contract that he will exercise all necessary and reasonable steps to ensure that this special provision contained herein on Minority Business Enterprise is complied with.

IN WITNESS WHEREOF, the CITY has caused this agreement to be duly executed in its name and behalf and the CONTRACTOR has caused this agreement to be duly executed in its name and behalf and its corporate seal to be hereunto affixed and attested to.

CITY OF WILMINGTON, NORTH CAROLINA

BY: _____
Becky Hawke, City Manager

Date: _____

WITNESS:

Daryle L. Parker, Purchasing Manager

APPROVED AS TO FORM:

Ginna Essey, Assistant City Attorney

FINANCE OFFICER'S CERTIFICATION STATEMENT

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act this the _____ day of _____, 2025.

Martha Wayne, Director of Finance

Project String: _____

Org./Obj. _____

Amount of Contract \$ _____

Req.No.: _____

Federal ID Number: 56-6000239

BY: _____

ATTEST:

Secretary, Assistant Secretary,
Trust Officer

(CORPORATE SEAL)

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public, certify that
(Name)

_____ personally came before me this day and
(Name of Sec., Assist. Sec., Cashier, Assist. Cashier)

acknowledged that he (she) is _____ of
(Secretary, Assist. Sec., Cashier, Assist. Cashier)

_____, a corporation, and that by authority duly given and
(Name of Corporation)

as the act of the corporation, the foregoing Contract: Page C-10, Performance Bond: Page C-11, and
Payment Bond: Page C-12 were signed in its name by its

_____, sealed with
(President or Vice President)

its corporate seal, and attested by himself (or herself) as its

_____.
(Sec., Assist. Sec., Cashier, Assist. Cashier)

WITNESS my hand and official seal, this the _____ day of _____, 2025.

Notary Public

My Commission expires: _____

(NOTARY SEAL)

PERFORMANCE BOND

CITY OF WILMINGTON, NORTH CAROLINA

PRINCIPAL: _____

SURETY: _____

BOND AMOUNT: _____

_____ DOLLARS (\$ _____)

BOND DATE: _____

CONTRACT NUMBER: _____

"KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the CITY OF WILMINGTON, NORTH CAROLINA, hereinafter called the CITY, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

"THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal entered into a certain contract with the CITY, numbered as shown above and hereto attached:

"NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the CITY, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void, otherwise to remain in full force and virtue.

"IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body."

(CORPORATE SEAL)

ATTEST:

Secretary

PRINCIPAL: _____

By: _____

Title: _____

SURETY: _____

WITNESS:

By: _____

Title: _____

PAYMENT BOND

CITY OF WILMINGTON, NORTH CAROLINA

PRINCIPAL: _____

SURETY: _____

BOND AMOUNT: _____
_____ DOLLARS (\$ _____)

BOND DATE: _____

CONTRACT NUMBER: _____

"KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the CITY OF WILMINGTON, NORTH CAROLINA, hereinafter called the CITY, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

"THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal entered into a certain contract with the CITY, numbered as shown above and hereto attached:

"NOW, THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

"IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body."

(CORPORATE SEAL)

ATTEST:

Secretary

PRINCIPAL: _____

By: _____

Title: _____

SURETY: _____

WITNESS:

By: _____

Title: _____

(TO BE EXECUTED ON BEHALF OF SURETY AGENT)

STATE OF _____

COUNTY OF _____

On this the _____ day of _____, 2025 before me the subscriber, Notary Public of the State of _____, in and for the County of _____, duly commissioned and qualified came _____, to me personally known, and to me personally known to be the individual who executed the foregoing Payment Bond and Performance Bond: Pages C-9 and C-10, and he acknowledges the execution of the same, and being by me duly sworn deposes and says that he has Power-of-Attorney from _____, with their principal offices at _____, to execute the preceding instruments in the amount specified in the Payment Bond and Performance Bond on their behalf, that his signature was duly affixed and he subscribed to the said Payment Bond and Performance Bond by authority and direction of said corporation.

IN WITNESS, I have hereunto set my hand and affixed my official seal at the City of _____, the day and year first above written.

My Commission expires:

Notary Public

(SEAL)

POWER OF ATTORNEY

DOCUMENTS

(Attached hereto original or validated documents which give to individual who signed Contract Bond Power of Attorney for Surety)

INSURANCE CERTIFICATES

(Staple Insurance Certificates as required
under Paragraph G-1.06 to this sheet)

CITY OF WILMINGTON

NORTH CAROLINA

**RE-BID PROPOSAL
FOR
FRONT STREET BRIDGE REHABILITATION
PROJECT NO. 2TRBR2310
CONTRACT NO. BR-AEC-0425**

1. The undersigned, having carefully examined the site of the proposed work, the entire Bidding Document, including but not limited to the Advertisement, Special Notice, General Provisions, Technical Specifications, MBE/WBE/HUB/DBE documents and requirements, Federal Requirements (if any), Contract and Plans and/or Standard Details attached hereto, all of which are fully understood and hereby agreed to, proposes to furnish all materials, labor, equipment and plant necessary to complete in-place the specified improvements, in strict accordance with the above mentioned bidding documents.
2. Where an interpretation as to specifications is necessary, or as to the character of the work performed, or as to further instructions relating to the work, before or during construction, the undersigned bidder hereby agrees that (hereinafter called "ENGINEER") shall be the authority and his word shall be final.
3. The prices, as stated, are for the work completed and also to include all charges and expenses for furnishing all labor, materials, equipment and plant for completing the specified work in the manner specified in the specifications, and according to the instructions of the ENGINEER, unless otherwise shown in the Proposal.
4. If awarded this contract, the undersigned agrees to begin construction on the date to be specified in the written order by the Purchasing Manager, and to complete all work within 365 calendar days of the date of beginning. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of \$530.00 for each consecutive calendar day thereafter as hereinafter provided in paragraph G-1.47 of the General Conditions.
5. The undersigned hereby certifies that this Proposal is made without connection with any person or persons making bids or proposals for the above work, and that the bid is in all respects fair and without collusion or fraud.
6. The undersigned further agrees that in case of failure on his part to execute the said contract and bond within ten (10) consecutive calendar days after written notice of award of the contract by the Purchasing Manager, the check or bid bond, or both, accompanying this bid and the monies payable thereon shall be paid into the funds of the City of Wilmington, North Carolina, as liquidated damages for such failure; otherwise the check and/or bid bond accompanying this Proposal shall be returned to the undersigned.

7. The undersigned understands and agrees that if awarded this contract he will execute the contract and post a Performance Bond and Payment Bond to the extent of one hundred percent (100%) of the amount of this contract.
8. The undersigned understands and agrees that all extra work shall be done and paid for as provided under the applicable sections of the specifications. In the event that extra work is necessary, the percentage to be added to the actual payroll cost to cover Social Security, small hand tools, office overhead on labor management only, Workmen's Compensation Insurance and other insurance for labor costs shall be 5% percent.

All extra work shall be done using actual payroll and material costs, and a profit of ten percent (10%) of the total cost shall be added thereto. All items of materials shall be billed to the CITY on the extra work invoice, and a delivery slip from the vendor shall be submitted therewith to verify actual cost. No additional profit will be allowed on materials other than the normal overall ten percent (10%) above stated. Items not provided for above shall be agreed upon between the CONTRACTOR and the ENGINEER prior to invoicing.

9. The undersigned understands that, if awarded this contract, he must guarantee, for a period of one year after date of final payment, all work accomplished under this contract to the extent that he will repair any defects due to faulty workmanship, or materials which may appear in his work during this period.
10. The undersigned supplies the information recorded below for use in the preparation of the contract documents, in event of contract award:

10.1 Please indicate type of business organization:

- (a) Proprietorship _____
- (b) Partnership _____
- (c) Corporation _____
- (d) Limited Liability Co. _____

10.2 If business is a Corporation, please answer the following questions:

Name and title of officers, authorized by Corporate Resolution, who will execute the contract on behalf of corporation (generally President and Secretary).

Firm is incorporated in what state?

If firm is a foreign corporation, does firm have a certificate of authority from the North Carolina Secretary of State? _____

10.3 If business is a Partnership, please answer the following:

Name in full or all general partners and addresses:

_____ Is this
a limited or general partnership? _____

If a limited partnership, what is state of registration? _____

If business is a foreign limited partnership, does business have a certificate of authority from the North Carolina Secretary of State? _____

10.4 If business is a Proprietorship, please answer the following:

Name of owner: _____

10.5 If business is a limited liability company, please answer the following:

List the names and title of managers or member-managers who will execute the contract on behalf of the company? _____

What is state of organization? _____

If business is a foreign limited liability company, does business have a certificate of authority from the North Carolina Secretary of State? _____

10.6 For all bidders:

If the business operates under an assumed name, what is the assumed name?

Has a certificate of assumed name been filed in the New Hanover County Registry?

If so, please provide the recording information. Deed Book _____ at Page

_____.

11. Bid Surety Information - Please fill in the applicable paragraph.

11.1 Attached hereto is a cash deposit in the amount of _____
_____ Dollars (\$ _____), this amount being not less

than five percent (5%) of the total bid.

OR

11.2 Attached hereto is a certified check on the _____ Bank
of _____ in the amount of _____

_____ Dollars (\$ _____), made payable to the
City of Wilmington, North Carolina. The bank on which the certified check is submitted
is warranted to be a member of the Federal Deposit Insurance Corporation, and the
amount of the check is not less than five percent (5%) of the total bid.

OR

11.3 Attached hereto is a bid bond in the amount of five percent (5%) of the total bid, said bid
bond being indemnified by the _____

(Insert Name of Bonding Company)

whose address is _____. This bond is

executed by a corporate surety licensed to issue such bonds in the State of North Carolina
and is made payable to the City of Wilmington. This bid bond is conditioned so that the
surety will upon demand make payment to the City of Wilmington upon said bond if the

bidder fails to execute the contract the surety shall pay to the CITY an amount equal to the amount of said bid bond in an amount not less than five percent (5%) of the total bid.

12. Additional Information - Please respond to each:

12.1 North Carolina Tax Payer Identification Number:

12.2 Does your company have an Affirmative Action Plan
Yes _____ No _____

13. The undersigned proposes to accomplish the work as described in the following at the unit prices and/or lump sum price shown. In the event of a discrepancy in the unit prices and the extended prices, the unit prices shall prevail.

RE-Bid Tab Form - Front Street Bridge Rehabilitation

Line Item	NCDOT Sec No. *	Description	Quantity	Unit	Unit Price	Total Price
1	800	MOBILIZATION	1	LS		
2	801	CONSTRUCTION SURVEYING	1	LS		
3	225	UNCLASSIFIED EXCAVATION	150	CY		
4	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	90	SY		
5	500	FINE GRADING	90	SY		
6	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	10	TON		
7	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	60	TON		
8	620	ASPHALT BINDER FOR PLANT MIX	1	TON		
9	848	4" CONCRETE SIDEWALK	12	SY		

		<u>SIGNING</u>				
10	907	DISPOSAL OF SIGN SYSTEM, U-Channel	2	EA		
11	907	STOCKPILE SIGN SYSTEM	2	EA		
		<u>TRAFFIC CONTROL</u>				
12	1110	WORK ZONE SIGNS (STATIONARY)	201.5	SF		
13	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	275	SF		
14	1145	BARRICADES (TYPE III)	232	LF		
15	1135	CONES	16	EA		
16	1170	PORTABLE CONCRETE OR WATER FILLED BARRIER	620	LF		
17	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	100	LF		
18	SP	IMPACT ATTENUATOR UNITS, TYPE TL-2	1	EA		
19	SP	PURCHASE PORTABLE CONCRETE BARRIER (ANCHORED)	100	LF		
20	SP	PURCHASE IMPACT ATTENUATOR UNITS, TYPE TL-2	1	EA		
		<u>THERMO & PAVEMENT MARKINGS</u>				
21	1205	THERMOPLASTIC PAVEMENT MARKING LINES, (6", 90 MILS)	731.000	LF		
22	1205	THERMOPLASTIC PAVEMENT MARKING LINES, (12", 90 MILS)	97.000	LF		
23	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	4.000	EA		
24	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	3.000	EA		
		<u>STRUCTURES</u>				
25	SP	ASBESTOS ASSESSMENT	1	LS		
26	420	REINFORCED CONCRETE DECK SLAB	9,740	SF		
27	420	GROOVING BRIDGE FLOOR	7,011	SF		
28	442	POLLUTION CONTROL	1	LS		

29	460	THREE BAR METAL RAIL	322	LF		
30	430	ELASTOMERIC BEARINGS	1	LS		
31	SP	EPOXY COATING AND DEBRIS REMOVAL	1	LS		
32	SP	PARTIAL REMOVAL OF EXISTING STRUCTURE	1	LS		
33	SP	CLEAN AND PAINT STRUCTURAL STEEL	1	LS		
34	SP	PAINTING CONTAINMENT	1	LS		
35	SP	STUB COLUMN	1	LS		
36	SP	TEMPORARY UTILITY SUPPORT SYSTEM	1	LS		
37	SP	UTILITY SUPPORT SYSTEM	1	LS		
38	SP	BRIDGE JACKING (TYPE II)	1	EA		
39	SP	TYPE I REPAIR	8	EA		
40	SP	TYPE II REPAIR	2	EA		
41	SP	CLEANING AND PAINTING EXISTING BEARING PLATES	40	EA		
42	SP	WEB GAP RETROFIT	56	EA		

BID TOTAL: _____

TOTAL IN WORDS: _____

* All references to Section numbers are to NCDOT 2024 Standard Specifications for Roads and Structures and Master Pay Item List Spec Year 2024

14. The undersigned understands that the award under this Proposal will be made to the lowest responsible bidder as described in Section G-1.02 of the General Provisions, on the proposal page or in Section 15 Special Conditions.
15. The undersigned acknowledges receipt of any issued Addendums to this Project by recording the Addendum number and date acknowledged below:

Addendum #1:	_____	Dated:	_____
Addendum #2:	_____	Dated:	_____
Addendum #3:	_____	Dated:	_____

If awarded the work, I/we agree to begin work as soon as given the notice to proceed and complete the work ready for occupancy within the time limits specified.

This Proposal is submitted by:

Company Name

Signed by:

Authorized Person's Signature

Type or Print Name of Person Signing Above

Title:

Address:

Zip

Phone:

Date:

North Carolina Contractor's License Number: _____

Rev.

SECTION TS-15: SPECIAL CONDITIONS

GENERAL

This section of specifications describes provisions unique to this project. The specifications, the plans, the special and general provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. In case of discrepancy or conflict, annotated dimensions shall govern over scaled dimensions; plans shall govern over technical specifications except for Section 15 of the Technical Specifications (Special Conditions) and the Project Special Provisions. Section 15 of the Technical Specifications (Special Conditions) and the Project Special Provisions always take precedence over plans and all other technical specifications. Technical specifications take precedence over general provisions.

In strict accordance with and as shown in the specifications, schedules, drawings and other documents set forth herein or incorporated by reference as follows:

NCDOT Standards and Specifications for Roads and Structures (2024 Edition), NCDOT Roadway Standard Drawings (2024 Edition), City of Wilmington Technical Standards, and City of Wilmington Standard Details.

NCDOT Standards and Specification and NCDOT Standard Drawings may be purchased from the North Carolina Department of Transportation (or viewed online) and are not provided by the City of Wilmington or the Engineer. City of Wilmington specifications, schedules, drawings and other documents are on file at the City of Wilmington. The Contractor shall further perform in accordance with the directions (not inconsistent therewith) given from time to time during the construction by the City of Wilmington or such other official, employee, or other agent of the City as the City may designate.

TS-15.01 PROJECT DESCRIPTION:

The Front Street Bridge Rehabilitation Project is located on Front Street in downtown Wilmington between Hanover Street and Red Cross Street. The scope of this project includes a full deck replacement as well as the cleaning, painting, and repair of the existing steel members and bent pedestals. An NCDOT standard three bar metal rail will also be installed on the new deck. An existing ten inch waterline that runs underneath the east overhang and will need to remain active throughout the project lifecycle. This waterline is owned and operated by CFPUA (Cape Fear Public Utility Authority). The bridge crosses over property owned and maintained by CFCC (Cape Fear Community College). Communication and coordination with CFPUA and CFCC will be necessary throughout the project lifecycle.

TS-15.02 TECHNICAL SPECIFICATIONS:

All work within the scope of this project shall be performed according to the most recent version of the North Carolina Department of Transportation Standard Specifications for Roads and Structures with the following exceptions:

A. Any special instructions shall be spelled out in Section 15 of the Technical Specifications (Special Conditions) and the Project Special Provisions and shall override any provisions otherwise specified.

TS-15.03 DRAWINGS AND INSTRUCTIONS:

The owner shall provide the Contractor with a PDF of the plans and contract documents after the execution of the contract. The Contractor will be responsible for any hard copies of plans, drawings, and specifications. The Engineer shall provide the Contractor with such revised plans, drawings and specifications as may be required to show any authorized changes or extra work. These plans, drawings, and specifications are the property of the City of Wilmington, North Carolina, and are furnished to the Contractor for the construction of the project under this contract only.

TS-15.04 PROJECT TIMEFRAME:

All work included under this contract is to be completed within the time limit as set forth in the proposal. The expected time to complete construction is **12 months**; therefore, the project has been given a timeframe of **365 days** from the beginning date of the construction period as per G-1.47 General Provisions.

Extensions to the contract may change for various reasons, such as changes in scope, unknowns or inclement weather (see “Weather Delays”) and can be brought forward by either the Project Manager or the Contractor. The Contractor shall have 30 days from the time of occurrence to submit written requests for consideration of time extensions. The guidelines are defined in the Project Proposal and General Provisions, most specifically in Sections G-1.46 and G-1.47.

TS-15.05 PROJECT TIME DEFINED:

Project time shall consist of all calendar days, including weekends and holidays, from the contract notice to proceed date through the specified number of days allowed for the completion of the project in the contract document.

TS-15.06 WEATHER DELAYS:

The determination of weather delays shall be as follows: Using NOAA historical climate data for Wilmington, NC, the contractor shall be awarded a weather day for each day with rainfall > 0.10” exceeding the historical number of days with rainfall > 0.10”. Additionally, for days with rainfall > 1.0”, one additional day shall be granted to allow the water to disperse / site cleanup.

Also, when determining the number of weather days with >0.10” of rainfall to be added to the contract time, this value is rounded up or down. For example, if the data shows that the difference between the “OBSERVED VALUE” and the “NORMAL VALUE” for the number of days with rainfall >0.10” in a given month results in a “DEPART FROM NORMAL” value of 1.5, the contractor would be awarded 2 days.

The NOAA Month Weather Summary (Climatological Report) can be found at <https://w2.weather.gov/climate/index.php?wfo=ilm>

TS-15.07 PROJECT WORK TIMES:

Refer to Special Provisions for Intermediate Contract Times.

The contractor is responsible for all local traffic control required for lane closures and shall coordinate the closures with the City of Wilmington.

Further restrictions may apply due to traffic conditions; however, Contractor may submit written request regarding work hours and traffic control plan to the Project Manager for consideration by the City.

No lane closures or impediment to traffic shall be allowed on weekends without prior written approval from City Engineering. No lane closures shall be allowed on City Holidays and local events.

The Contractor shall not work on Holidays or weekends without prior notification and approval of the City Quality Control Technician/ Construction Inspector.

TS-15.08 PRE-CONSTRUCTION MEETING, PROGRESS SCHEDULE, PROGRESS MEETINGS AND REPORTS:

The Contractor shall submit to the Project Engineer a graphic progress schedule of the proposed construction operations at least two (2) days prior to the scheduled preconstruction conference. The progress schedule shall indicate the sequence of the work including the time of starting and the completion of each major task. The schedule should conform to the traffic control plan and address any priorities (if needed) of the City.

Monthly progress meetings are expected throughout the duration of the project and shall include:

- A. Contractor's Project Manager
- B. Contractor's Project Superintendent
- C. City's designated Representative(s)
- D. Engineer's designated Representative(s)
- E. Corresponding Subcontractors
- F. CFPUA designated Representative(s)
- G. CFCC designated Representative(s)

The Engineer shall schedule monthly meetings at a minimum, for the most convenient time frame. The Engineer shall take meeting minutes, review previous minutes with participants at the meeting, and submit copies of meeting minutes to participants within 7 days. The Engineer shall have available at each meeting full chronological file of all previous meeting minutes.

The contractor shall provide and present monthly progress reports. Each progress report shall include:

- A. Narrative that is sufficient to describe current and anticipated delaying factors, their effect on the progress schedule, and proposed corrective actions.
- B. A copy of the accepted graphic schedule marked to indicate actual progress.

Any work reported complete, but which is not readily apparent to the Engineer, must be substantiated with satisfactory evidence. The Contractor may be requested to provide and present construction plan mark-ups for discussion. If the work falls behind schedule, the Contractor shall submit additional progress reports at such intervals as the Engineer may request.

TS-15.09 SHOP DRAWINGS

TS-15.09.1 GENERAL:

Engineering data covering all fabricated material that will become a permanent part of the work under this Contract shall be submitted to the Engineer for review. The data shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; performance characteristics; and dimensions needed for installation and correlation with other materials.

All submittals, regardless of origin, shall be stamped with the approval of the Contractor and identified with the name and number of this contract, Contractor's name, and references to applicable specification paragraphs and Contract Drawings. Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified and inapplicable data crossed out. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

Contractor's stamp of approval is a representation to the City and Engineer that Contractor accepts full responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and that he has reviewed and coordinated each submittal with the requirements of the work and the contract documents.

Contractor shall accept full responsibility for the completeness of each submission. When an item consists of components from several sources, Contractor shall submit a complete initial submittal including all components.

All deviations from the Contract Documents shall be identified on each submittal and shall be tabulated in Contractor's letter of transmittal. Such submittals shall, as pertinent to the deviation, indicate essential details of all changes proposed by the Contractor (including modifications to other facilities that may be a result of the deviation).

Electronic, portable document format (PDF), submittals of the shop drawings and engineering data shall be submitted to Engineer for review and distribution. Engineer will not accept submittals from anyone but the Contractor. Submittals shall be consecutively numbered in direct sequence of submittal and without division by subcontracts or trades.

TS-15.09.2 ENGINEER'S REVIEW OF DRAWINGS AND DATA:

Engineer's review of drawings and data submitted by the Contractor will cover only general conformity to the Drawings and Specifications, external connections, and dimensions, which affect the layout. Engineer's review does not indicate a thorough review of all dimensions, quantities, and details of the material, equipment, device, or item shown. Engineer's review of submittals shall not relieve the Contractor from responsibility for errors, omissions, or deviations, nor responsibility for compliance with the Contract Documents.

Engineer's submittal review period shall be 21 consecutive calendar days in length and shall commence on the first calendar day immediately following the date of arrival of the submittal or re-submittal in the Engineer's office. The time required to transmit the submittal or re-submittal back to the Contractor shall not be considered a part of the submittal review period.

When the drawings and data are returned marked "REJECTED" or "REVISE AND RESUBMIT", the corrections shall be made as noted thereon and as instructed by the Engineer and a revised PDF resubmitted.

When the drawings and data are returned marked "NO EXCEPTIONS TAKEN EXCEPT AS NOTED" or "NO EXCEPTIONS TAKEN", no additional copies need be furnished unless requested by the Engineer at time of review.

TS-15.09.3 RE-SUBMITTAL OF DRAWINGS AND DATA:

The Contractor shall accept full responsibility for the completeness of each re-submittal. The Contractor shall verify that all corrected data and additional information previously requested by the Engineer are provided on the re-submittal.

When corrected copies are re-submitted, the Contractor shall in writing direct specific attention to all revisions and shall list separately any revisions made other than those called for by the Engineer on previous submissions.

Requirements specified for initial submittals shall also apply to re-submittals. Re-submittals shall bear the number of the first submittal followed by a letter (A, B, etc.) to indicate the sequence of the re-submittal.

Re-submittals shall be made within 30 days of the date of the letter returning the material to be modified or corrected, unless within 14 days the Contractor submits an acceptable request for an extension of the stipulated time period, listing the reasons the re-submittal cannot be complete within that time.

Any need for more than one re-submission, or any other delay in obtaining the Engineer's review of submittals, will not entitle the Contractor or an extension of the Contract Times unless delay of the work is directly caused by a change in the work authorized by a change order or by failure of the Engineer to review any submittal within the submittal review period specified herein and to return the submittal to the Contractor.

TS-15.10 CONSTRUCTION VIDEO:

The Contractor shall video the project site in its entirety prior to construction, with emphasis on the adjoining properties, drives, trees, drainage, ditches, driveway pipes, cross pipes, shoulders, condition of roadway, and other distinguishing features. Appropriate narration will include location and description of property and physical features.

The Contractor shall provide one (1) copy of the project video to the City at the preconstruction conference on a flash drive or other approved method. No separate payment will be made for this work, and all associated cost will be considered incidental to other items in the contract.

TS-15.11 CONSTRUCTION ADMINISTRATION AND INSPECTIONS:

The Engineer shall provide construction administration services for the duration of the project. Inspection services will be provided by the City Quality Control Technician, City Construction Inspector or assigned representative in conjunction with the Engineer. Contractor shall coordinate through Project Engineer and Inspector as required to facilitate the project. Contractor shall not interfere, hinder or misrepresent construction details or events.

The key functions to be provided by the City Construction Inspector and/or Engineer include, but are not limited to, the following:

- A. Conduct weekly site inspections
- B. Conduct monthly progress meetings
- C. Direct communications with Contractor(s)
- D. Provide lead role in communications between all parties
- E. Review and approve shop drawings
- F. Administer and develop change orders
- G. Review and certify pay applications
- H. Conduct substantial and final inspection walk-throughs and develop and track punch list items
- I. Assist and certify construction as-builts.

TS-15.12 MONTHLY QUANTITIES AND PAY REQUESTS:

No pay request (progress payments including mobilization) shall be processed by the City for payment to the Contractor until a corresponding progress meeting has occurred and sufficient documentation has been provided for the schedule and quantities of work completed for the preceding month and is reviewed by the Inspector(s), Engineer, and approved by the City.

The following items are required for monthly payment requests on contracts:

- **One (1) Original of Estimate/Invoice**
- **One (1) copy of Sales Tax Report**
- **One (1) copy of Material Inventory Statement, when applicable**
- **One (1) copy of Paid Invoices for all materials for which payment is being requested**
- **One (1) Original Certified Payrolls (when federal monies are involved); one for each company on site**
- **Two (2) copies of MBE/DBE Certification for each MBE/DBE Subcontractor on project; Final payment to the prime contractor requires payment in full to the MBE/DBE firms and suppliers.**
- **One copy of the City DBE-IS form.**
- **One (1) Original copy of Truck tickets (when federal monies are involved)**
- **A valid Insurance / Builders Risk Certificate on file for the duration of the project**
- **One (1) copy of Consent of Surety to Reduction in or Partial Release of Retainage**
- **Two (2) copies of the State DBE-IS form (when state or federal monies are involved);**

The following items are required prior to a project close out and requirements of NCGS.*

- **One (1) copy of Contractor's Affidavit of Payment of Debts and Claims and release or Waiver of liens form**
- **One (1) copy of Subcontractors' Release or Waiver of Liens form**
- **One copy of Contractor's Assignment of all Warranties and Guarantees form**
- **One (1) copy of Consent of Surety Company to Final Payment form**
- **As-Built Plans / Record Drawings**

*** The Project Director, Project Engineer, and Consultant may require additional items to be submitted and finalized prior to release of final payment.**

No separate measurement or payment will be made for this item.

TS-15.13 MEASUREMENT OF QUANTITIES:

The quantities of work will be computed by the Contractor and supplied to the City or Authorized Representative. The quantities of work performed, supplied by the Contractor, will be verified by the City or Authorized Representative on the basis of measurements taken by him or his assistants, and these measurements shall be final and binding. The specifications shall designate the manner in which the measurements of the various types of work shall be measured.

The quantities of work performed shall be recorded each day and provided to the City or Authorized Representative upon request. Contractor shall maintain detailed reports throughout the project and be able to supply the reports, upon request by the City or the City's representatives.

TS-15.14 MATERIALS TESTING AND QUALITY CONTROL:

The City reserves the right to require certification or test any materials used, installed or stored on the project. The contractor is required to utilize approved materials and suppliers and shall facilitate the testing needs of the project through communication, coordination, and control of sub-contractors, during installation or delivery. Such efforts to provide assistance shall be deemed incidental to the project at no cost to the City.

Materials Testing, Inspection, and Quality Control protocol for the project will conform to the applicable NCDOT standards and guidelines. This plan shall be made available to personnel, sub-contractors, inspectors and technicians prior to construction.

As needed, the City will engage the necessary resources to conduct on-site observation, record keeping, testing, sampling and laboratory analysis of construction methods and materials. The City will pay for quality control and materials testing services. However, the cost of any retests required because of failing tests will be the responsibility of the Contractor.

Sampling and Testing:

Materials testing will be conducted in accordance with the latest applicable methods and procedures such as ASTM, ACI, NCDOT, etc. **The Contractor shall provide at least 24 hours' notice to the City Quality Control Technician/Construction Inspector prior to the commencement of any concrete pouring or removal.** Typical material testing procedures expected in this project testing plan are:

Asphalt – cores for thickness, asphalt content and density (compaction), QC reports.

Concrete – cylinder molds with compressive strength breaks in 7 days, 14, or 28 days.

Soil – observation, proof roll, proctor tests and density tests for undercut, sub-base, trench, embankment, etc.

Stone – gradation, thickness, density testing for base.

Contractor is responsible to provide a “hot box” for on-site curing of concrete cylinders in a suitable and safe location.

Any materials or installations found out of compliance with the project specifications will require immediate suspension of construction and require contractor to submit and/or perform corrective action through repair, rework, or pay reduction factors using industry standards City specifications and NCDOT guidelines.

Concrete Testing:

A certified ACI Concrete Field-Testing Technician, Grade I, shall perform all concrete testing for this project. The City will provide quality control testing of the concrete for this project. The Contractor or his designee may provide comparison concrete testing at no cost to the City. The costs of any re-tests required because of failing tests will be the responsibility of the Contractor.

Compaction and Testing:

The subgrade for curb, gutter, sidewalks and driveways shall be graded and prepared as set forth in Section T-1.04–GRADING AND PREPARATION OF SUBGRADES within City right-of-way and by the latest NCDOT Standards and Specifications within NCDOT right-of-way.

The City shall perform all compaction testing as needed. After testing is completed and reports are provided, all subgrade below the concrete placement will be examined by the City’s Quality Control Technician/ Construction Inspector before any concrete placement is authorized.

Materials Certification and Delivery:

Upon request of the Engineer the contractor shall make available to the City all documentation pertaining to the origin, manufacturing, job mix formula or delivery of materials to the job-site. All necessary documentation, whether original or signed must be provided in a legible and thorough manner to complete quantity verification and may include but not limited to shipping receipts, trucking delivery tickets, plant or quarry tickets, manufacturers certification, Buy America, shop drawings, etc. This may pertain to deliveries of asphalt (surface, intermediate, base, binder), cement, stone (ABC, #57, riprap), soils, mulch, castings (steel), pipe (RCP, PVC, ductile), fixtures, landscaping, seed, etc.

TS-15.15 ENCROACHMENTS:

Where existing fences, posts, walls, etc., are encroached on the City right-of-way and are to be removed, the contractor shall be required to coordinate the removal of said encroachments with the City and the affected property owners. The contractor shall remove the encroachments and place them on the property of the affected owner if the owner desires. If the owner has no preference, the contractor shall remove and dispose of such item. The cost of relocating or removing encroachment items will be considered incidental to the project and no additional payment will be allowed.

TS-15.16 DRAWINGS SHOWING CHANGES DURING CONSTRUCTION:

The Contractor shall maintain a set of plans and specifications marked “Construction Record Drawings”. The Contractor shall keep a complete and up-to-date record in red pencil of any and all changes made during construction. This set of contract documents shall be submitted to the Engineer and approved by him prior to the Engineer recommending final payment.

TS-15.17 REGULATIONS:

The Contractor will comply with all City, State and Federal regulations per the General Provisions. **A City Ordinance requires construction workers in the public right of way to wear approved safety vests.**

TS-15.18 SAFETY:

The Contractor shall comply with all City, State and Federal Regulations as per the General Provisions. The Contractor and sub-contractors shall comply at all times with the latest revisions of all OSHA regulations and all applicable labor laws and regulations of the state of North Carolina from 29 Code of Federal Regulations (CFR) Part 1910.

The Contractor and subcontractor shall submit if required, the following documents to the City (at the Pre-construction meeting) prior to commencement of work:

1. OSHA – 200 LOG
2. Training records (Excavations, Trenching, and Shoring, etc)
3. Certification (Flagger certifications, competent employee, equipment, etc.)

TS-15.19 SANITARY FACILITIES:

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall

be conveniently placed as required by the sanitary codes of the State and City of Wilmington. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

TS-15.20 PUBLIC TRAFFIC:

Contractor shall notify property owners 72 hours in advance of the need to close a driveway during construction. Access to all properties shall be maintained throughout the project.

TS-15.21 NOTIFYING UTILITY COMPANIES:

The contractor's attention is hereby called to the General Provisions of these specifications **and North Carolina's Underground Utility Damage Prevention Act 87-100** and the **City of Wilmington Municipal Code, Chapter 11, Article V**. Notification of the utility companies and departments shall be made prior to any excavation under this project. The Contractor is reminded that utility companies usually require a 72-hour notice. All services need to be located.

The following numbers are an aid to the contractor:

NC ONE CALL CENTER 1-800-632-4949 (requires 72 hour notice).

****See Project Contacts in Plans****

TS-15.22 PROTECTION OF EXISTING UTILITIES:

The Contractor shall use the necessary precautions to protect existing water, sewer, gas, telephone, and storm drainage lines, etc. and service lateral during the course of construction. The cost of protecting such lines and services shall be considered incidental to the project and no additional payment will be allowed.

TS-15.23 NON-CITY UTILITIES:

The removal, repair or relocation of electric, cable TV, telephone, communications, and gas utilities will be performed by others. However, the Contractor is responsible for coordination of such relocation or removal, schedule his work to coincide with such, and pay any associated cost. No extra payment will be made to the Contractor for this work.

NOTE: Utilities as shown on the plans are based on best available information and exact locations shall be the responsibility of the Contractor.

TS-15.24 CLEAN-UP AND RESTORATION:

The safety and preservation of adequate access for residents is a critical aspect of this project. The Contractor, during the course of this work shall maintain and clean up the streets, side yards, walks, pavements, drainage structures, etc and shall schedule at the end of each day of work the removal of debris, grading of all disturbed areas and restoration to a usable state all driveways and other means of access for the public and private property owners. Grassing and stabilization of yards shall be required on a weekly basis as the work progresses.

TS-15.25 USE OF A PORTION OF THE WORK:

Whenever, in the opinion of the Engineer, any portion of the work is completed, or is in an acceptable condition for use, it shall be used for the purpose intended. Such use shall not be held in any way as an acceptance of that portion of the work used, or as a waiver of any of the provisions of these specifications. Necessary repairs or renewals in any section of the work due to defective materials, defective workmanship, or natural causes, under the instructions of the Engineer shall be performed by the Contractor at no additional cost to the City.

TS-15.26 COMPLAINTS:

The City has a system of recording complaints that may be received from residents. The Engineer's representative and representative of the Contractor will meet with the person registering a complaint within one day after complaints are logged in. During this meeting, a reasonable course of action will be arrived at between the property owner and the City. It is not the intent of the City to require the Contractor accomplish unreasonable tasks. However, if the Contractor has not satisfactorily acted on resolving complaints by the end of the month, that month's payment request will not be processed. The payment request will be processed as soon as corrective action is taken. The City of Wilmington also reserves the right to issue stop work order as stated in the General Provisions if the Contractor's actions or non-action so dictates.

TS-15.27 INCIDENTAL RESTORATION:

The Contractor shall visit the project to familiarize himself with site and account for any incidental restoration items.

Any mailboxes that must be disturbed to allow proper completion of the contract work shall be carefully removed and reset within the same day. The Contractor shall coordinate with the U.S. Postal Service and residents to ensure that mail service is

not interrupted. This work is considered incidental to construction and no separate payment will be allowed.

At locations shown on the plans or designated by the Engineer, the Contractor shall remove and reset existing signs, fencing, mailboxes, outside lighting, hedges or shrubbery, masonry or wooden flower boxes, and all miscellaneous yard/driveway ornamentation, etc., in accordance with the following provisions.

- A. The existing items will be removed and replaced at the locations indicated on the plans or designated by the Engineer;
- B. After resetting, all items shall be in a condition equal to or better than existed before being removed. The Contractor will be required to replace any components that have been unnecessarily damaged by him.

The quantity of items reset to be paid for shall not be measured separately. All items shall be included in the unit price for items in the proposal. No separate payment will be made unless a specific pay item was created.

TS-15.28 NOTIFICATION OF PROPERTY OWNERS:

The Contractor shall be required to submit a plan for systematic notification of affected property owners. Such notices shall include, but not be limited to, the following items: schedule of work; access to streets during construction; removal of vegetation and above ground items; replacements of streets and driveways; parking; location of services. At least 15 days notice is required prior to beginning work unless the project has been publicly announced or the property owners consent to waive the notice period. At least 48 hours notice is required to affected residents if water shut-off is necessary. Plan shall be approved by the Engineer and the City. Upon approval, the Contractor shall be required to provide all labor, materials, and other support in order to implement the plan.

TS-15.29 DUST CONTROL:

The Contractor shall, as directed by the City Engineer provide adequate equipment and use other available means to control the dust during the term of this contract. Failure on the part of the Contractor to correct dust control problems as directed will result in the City Engineer notifying the Contractor to comply with the contract provisions. In the event that the Contractor fails to begin such remedial action within 24 hours after receipt of such notice, the City Engineer may proceed to have the work performed with other forces. The actual cost of the work so performed along with a 20% administrative fee will be deducted from monies due to the Contractor on his contract. Under adverse conditions, the City Engineer may choose to suspend the Contractor's operations on the project until all dust control problems have been completed to his satisfaction. Such suspension will not justify an extension of contract time.

T-15.30 MOBILIZATION:

The Contractor shall be paid a mobilization cost as bid in the proposal. The mobilization item shall include, but not be limited to, the Contractor's startup expenses, cost of insurance, permits, bonds, etc. and will be paid per the lump sum bid price. Partial payment for the item of "Mobilization" will be made in the first and second partial pay estimates paid on the contract, and will be made at the rate of 50 percent of the lump sum price for mobilization on each of these partial pay estimates, less the retainage provided for in the General Provisions, provided the amount bid for mobilization does not exceed 5 percent of the total amount bid for the contract.

When the amount bid for mobilization exceeds 5 percent of the total amount of the contract, 2 1/2 percent of the total amount bid will be paid on each of the first two partial payment estimates and that portion exceeding 5 percent will be paid on the final pay estimate.

When there is more than one section with payment for mobilization, the term payment for mobilization shall be figured based on each individual section rather than the total contract amount.

TS-15.31 DISPOSAL OF GOOD EXCAVATED SOIL MATERIAL:

Any excess good soil material excavated shall be the property of the Contractor. The contractor is cautioned that good excavated material needed as borrow (backfill and/or fill) shall remain the property of the City and that the contractor shall schedule his work such that excess good material is available at the project until all underground work and grading is complete. No additional payment will be allowed for haul or disposal of good material.

TS-15.32 DISPOSAL OF OBJECTIONABLE MATERIAL:

The Contractor is hereby notified that the disposal of objectionable common excavation material such as existing concrete curbing, asphalt, timber, concrete, tree limbs, brush, roots, stumps, and muck, etc. shall be the responsibility of the Contractor. The Contractor will be required to obtain his own (State approved) disposal site for this material. No extra payment for this disposal will be allowed. The Contractor should include all costs incurred for this item in the unit price bid for each item in the proposal.

TS-15.33 SAWING EXISTING SIDEWALKS, CURBS, AND DRIVEWAYS:

Where it is necessary to remove existing sidewalks, curbs, or driveways the Contractor will be required to furnish a neat, straight, uniform edge along the adjacent pavement retained by sawing a neat, straight, uniform line with a concrete saw, before breaking the adjacent surface away. The Contractor shall be responsible for ensuring

that the saw cut is of enough depth to prevent damage beyond the limits of the saw cut.

No direct payment will be made for the sawing as such work will be considered incidental to other work being paid for by the various items in the contract.

TS-15.34 EXPANSION JOINT FILLER (FOR CONCRETE CONSTRUCTION):

Expansion joint filler for concrete construction shall be bituminous, non-extruding joint filler, as specified in AASHTO M-33-48 T-1-7

Expansion joint filler for concrete curb construction shall be bituminous, pre-formed non-extruding joint filler, as specified in AASHTO M-33-48 T-1-7

Expansion joint filler shall separate all 4" and 6" concrete except in curb ramps and installed between all rehabilitated concrete and walls, back of curbs, houses, house foundations, brick pavers, trees/ tree roots, etc. The Contractor at no additional cost to the City shall supply all expansion material for the project as such material will be considered incidental to other work being paid for by the various items in the contract.

TS-15.35 NOISE CONTROL:

The Contractor shall conduct all his work and use appropriate construction methods and equipment to prevent exceeding legal noise levels. The Contractor shall comply with Section 13.09, 13.09.1 and Section 6-9, "Noises" of the Wilmington City Code. In addition, the Contractor shall provide baffles and/or enclosures on any dewatering pumps, by-pass pumps, or generators that must be operated after normal working hours. The Contractor should also consider noise reduction when placing such equipment in the project work areas.

TS-15.36 EMERGENCY SERVICES NOTIFICATION:

Prior to any street being closed to traffic, the Contractor shall notify the Emergency Services Dispatchers. The Contractor may call the 911 system at (910) 341-4247 and request that the Police and EMT personnel be notified, or the Contractor may call each service individually **24 Hours** in advance.

The Contractor will make provisions for access to all parts of the work for emergency vehicles (police, rescue, fire) and will assist in providing personnel to deliver sanitary pickup cans and other materials as required to a point where the City crew or City's Contractor can load their carrier. The Contractor should include all cost incurred for this item in the unit price bid for each item in the proposal.

TS-15.37 SUPERINTENDENT AND EMERGENCY CONTACTS:

The Contractor shall have a Superintendent present on the job site at all times. Upon start of construction, the Contractor shall provide the Engineer with names, e-mail addresses, and telephone numbers of Superintendent(s) and two other representatives to be contacted after hours in case of emergency.

TS-15.38 PROJECT SIGNAGE INSTALLATIONS:

Signage notifying affected property owners, residents, business owners, pedestrians, and motorists of the impacts of the project may be deemed necessary by the City. Such signage may provide those affected with the project name, information for alternate routes, confirm adjacent businesses are open, etc. The City will provide the signage materials for installation by the Contractor in locations near the project site, as determined by the City. The cost of these sign installations shall be considered incidental to the project and no additional payment will be allowed.

TS-15.39 CHANGES IN WORK:

The City, without invalidating the contract, may delete items from the contract, order extra work, or make changes by altering, adding or deducting from the work, with the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract by a change order. In the event of a proposed change in the contract or any extra work, the Contractor shall notify the City Engineer in writing within 10 days from the occurrence stating what effect, if any, such change is claimed to have on the official project schedule. Any claims for extension of time caused by the changes shall be addressed and adjusted at the time ordering such changes.

The value of any such extra work or change shall be determined in one or more of the following ways:

- (a) By estimate and acceptance of a lump sum.
- (b) By unit prices named in the contract or subsequently agreed upon.
- (c) By cost and percentage or by cost and a fixed fee.

All change orders must be submitted by the Contractor to the City using the latest EJCDC Change Order form or City approved alternative.

TS-15.40 CONFORMITY WITH PLANS AND SPECIFICATIONS:

All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the City Engineer finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the City Engineer agrees that the work is to be accepted, he will have the authority to make such adjustment in contract price as he deems warranted based upon sound engineering judgment and the final estimate will be paid accordingly.

In the event the City Engineer finds the materials or the finished product in which the materials are used or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the Contractor at no cost to the City.

TS-15.41 USE OF PREMISES:

- a. The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the Drawings or if no contract limits are shown, to the right-of-way shown and as prescribed by ordinances or permits or as may be directed by the City of Wilmington and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b. The Contractor shall comply with all reasonable instructions of the City of Wilmington and the ordinances and codes of the City of Wilmington, regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

TS-15.42 LANDS FOR WORK:

The City shall provide the lands upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.

If the City has not secured right-of-way entry for one of the properties at the time of construction, the City may eliminate applicable work from contract until the right-of-way has been obtained. This will not affect the date of availability, nor will an increase or decrease in the quantity of any item or elimination of any item will not be regarded as sufficient ground for an increase or decrease in any unit prices, nor in the time allowed for completion of the work, except as provided for in the contract.

TS-15.43 SEPARATE CONTRACTS:

The City reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction

and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with others.

TS-15.44 STATUS OF CITY ENGINEER:

The City Engineer shall have general supervision and direction of the work. He has authority to stop the work wherever such stoppage may be necessary to insure proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract, to direct the application of force to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.

TS-15.45 CITY ENGINEER'S DECISION:

The City Engineer shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. All such decisions of the City Engineer shall be final.

TS-15.46 FINAL CLEANUP:

The Contractor shall clear all streets, curbs, gutters, pipes, drainage structures, driveways and other contract items of all dirt and debris before final inspection will be made. The City will not inspect the improved areas until they are cleaned. Failure by the City to perform final inspection if the areas are not cleaned shall not relieve the Contractor of any liquidated damages. No extra payment will be allowed for this cleaning. The cost of the cleaning shall be included in each item bid in the proposal.

TS-15.47 CITY'S RIGHT TO DO WORK:

If the Contractor should neglect to prosecute the work promptly or fail to perform any provisions of the contract, the City, after 24 hours written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

TS-15.48 CORRECTION OF WORK BEFORE FINAL PAYMENT:

Before issuing final payment, the Contractor shall promptly remove from the premises all materials condemned by the City Engineer as failing to conform with the contract, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the City and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

TS-15.49 FINAL INSPECTION, CLEAN UP AND PROJECT FINAL ACCEPTANCE:**Final Inspection**

- a. When the improvements contained in this contract are substantially completed, the Contractor shall notify the City Engineer in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice shall be given at least ten (10) days prior to the date stated for final inspection and bear the signed concurrence of the representative of the City Engineer having charge of the inspection. If the City Engineer determines that the status of the improvements are accurately represented, the City Engineer will make the arrangements necessary to have the final inspection on the date stated in the notice, or soon thereafter as is practicable. The Final Inspection Team will include the City Engineer's representatives and the Contractor. The Final Inspection Team may also include representatives of each department of the City of Wilmington as well as a representative of the North Carolina Department of Transportation.
- b. The Final Inspection Team, upon request for final acceptance by the Contractor, shall make a thorough visual inspection to insure that the project is satisfactorily completed according to the plans and specifications of the contract and that all clean-up work is complete.
- c. The Final Inspection Team, following the final inspection, shall prepare a written list of the deficient items and clean-up work that needs to be corrected before the issuance of the Final Acceptance Document. The list shall include a reasonable period of time, agreed upon with the Contractor, allowing for the completion of the deficient items and clean-up work. A copy of the list shall be mailed to the Contractor.

Clean-up Work

Clean up work shall include clean-up of trash in the medians and rights-of-way. It shall also include a final mowing of the grass in medians and rights-of-way. Grass in the median and on the rights-of-way shall not exceed 8 inches in height at the time of final acceptance. Clean-up and mowing along slopes may be required as directed by the City Engineer.

Project Final Acceptance

The Contractor, after finishing all clean-up work and correction of all deficient items, shall notify the appropriate party to make a final inspection of the project. If the Final Inspection Team, during its inspection finds that the deficient items and clean-up work have been satisfactorily completed according to the terms of this Article and the contract specifications, then the Final Inspection Team recommends to the City to issue the Final Acceptance Document.

TS-15.50 VALUE ENGINEERING:

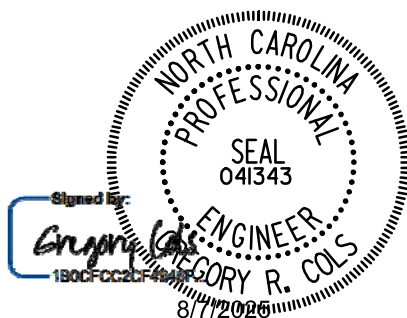
Value engineering is a concept that encourages the Contractor to look for ways to save money on the project without sacrificing quality and / or long-term cost. With Value Engineering, if the Contractor provides the City with a means to save construction cost without hindering the quality of the final product, and the City accepts the idea on this project, the City will share 50% of the cost savings with the Contractor. The value of any cost savings and its acceptability shall be determined by the City.

TS-15.51 SPECIAL AREAS:

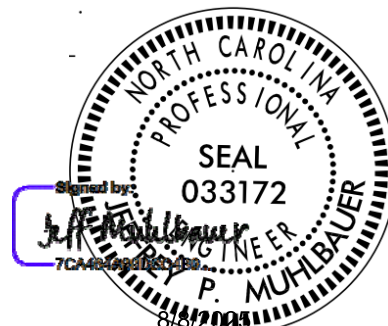
Special areas to construction other than existing easements or rights-of-ways shall be the responsibility of the Contractor and he shall be liable for all special agreements. The Contractor shall provide the City with copies of all special agreements. The agreements shall state that the City is held harmless from such agreements and must be signed by all parties and must be notarized.

Project Special Provisions - Structure

<u>Table of Contents</u>	<u>Page</u>
INTERMEDIATE CONTRACT TIMES (SPECIAL)	ST-2
POST BID QUALIFICATION (SPECIAL)	ST-6
FALSEWORK AND FORMWORK (11-30-23)	ST-9
SUBMITTAL OF WORKING DRAWINGS (SPECIAL)	ST-16
CRANE SAFETY (06-20-19)	ST-18
GROUT FOR STRUCTURES (12-01-17)	ST-19
MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE AT STATION 12+50.55 -EL- (08-13-04)	ST-20
ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES (11-30-23)	ST-21
PAINTING EXISTING STRUCTURE (11-30-23)	ST-24
CLEANING AND PAINTING EXISTING BEARING PLATES (02-11-19)	ST-39
BRIDGE JACKING (SPECIAL)	ST-40
TEMPORARY UTILITY SUPPORT (SPECIAL)	ST-43
UTILITY SUPPORT SYSTEM (SPECIAL)	ST-45
EPOXY COATING AND DEBRIS REMOVAL (SPECIAL)	ST-47
STEEL REPAIRS (SPECIAL)	ST-49
PARTIAL REMOVAL OF EXISTING STRUCTURE (SPECIAL)	ST-53
SURVEY EXISTING STRUCTURE (SPECIAL)	ST-55
MISCELLANEOUS STRUCTURE DETAILS (SPECIAL)	ST-56
STUB COLUMN (SPECIAL)	ST-57
IMPACT ATTENUATOR UNITS, TYPE TL-2 (8-20-24)	ST-59
PURCHASE PORTABLE CONCRETE BARRIER (ANCHORED) AND ATTENUATOR (SPC.)	ST-60



SEAL APPLIES TO
ST-2 THRU ST-58



SEAL APPLIES TO
ST-59 THRU ST-61

INTERMEDIATE CONTRACT TIMES**(SPECIAL)**

The Contractor shall complete all required work within the following time and duration limitations.

1. Submittal of Working Drawings

The Contractor shall submit all required working drawings within 60 calendar days of Notice-to-Proceed from the City. Resubmittals of working drawings shall be provided within 14 calendar days of receipt of comments from the City. For additional provisions, refer to the “Submittal of Working Drawings” special provision.

2. Installation and removal of traffic control and pedestrian protection devices under Front St Bridge, any work from below bridge that impacts vehicular and pedestrian traffic on the CFCC Parking Garage Access and Pedestrian Walkway, requiring short-term full closure of CFCC Parking Garage Access and/or Pedestrian Walkway under bridge, with approval and concurrence from CFCC as outlined below

The Contractor shall install (at the beginning of the project) and remove (at the end of the project) all protective devices and traffic control devices during a temporary full closure of the CFCC Parking Garage Access and Pedestrian Walkway below the bridge. Installation of these measures shall be completed under a full closure of these access routes in accordance with the provisions below.

Installation of long-term protective devices and traffic control devices shall occur no more than 2 weeks prior to commencement of construction activities on the bridge and at least 3 days prior to commencement of construction activities. Removal of these devices shall be completed within 1 week of acceptance of bridge construction activities. **All property below the bridge shall be restored to its original condition at no additional cost to the City or CFCC.**

At the contractor’s discretion, work completed from below the bridge that cannot be safely completed from within the designated work area as shown on the contract plans shall be completed under a full closure of the CFCC Parking Garage Access and/or Pedestrian Walkway.

DAY AND TIME RESTRICTIONS

Closures may only occur during the hours of 11pm and 6am on any day of the week, anytime during days when Cape Fear Community College (CFCC) is closed for business in accordance with CFCC’s academic calendar (<http://https://cfcc.edu/academic-resources/academic-calender/>), and on weekends only when expressly permitted by CFCC. The City makes no guarantee that any weekends will be permitted.

The Contractor shall request any closure of CFCC’s parking garage and pedestrian accesses a minimum of 7 days in advance of the closure and must receive written approval from CFCC prior to implementation of the closure. Closures must be removed and access restored in accordance with the times above.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all vehicular and pedestrian traffic control devices for full closures of the respective location according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all temporary traffic control devices for full vehicular and/or pedestrian access closures according to the time restrictions stated above and place vehicular and pedestrian traffic in the existing or long-term on-site detour traffic pattern as shown in the plans.

3. Preparation and closeout work for the rehabilitation, requiring short-term single lane closure of Front Street.

Any work that requires a short-term single lane closure of Front St shall conform to the following:

The Contractor shall request the single lane closure a minimum of 7 calendar days in advance and receive approval from the City prior to implementing the closure.

Front St, between Hanover St and Red Cross St, is the only street allowed to be closed, fully or partially, under this contract. No other street closure will be permitted.

The Contractor shall complete the required work of preparing for the rehabilitation and/or closeout work and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **Front St** during the following time restrictions:

DAY AND TIME RESTRICTIONS

No closure shall occur between Friday, 3:00pm through Monday, 7:00am

In addition, the Contractor shall not close or narrow a lane of traffic on **Front St**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

No narrowing or single lane closure shall occur:

1. For **unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.
2. For **New Year's Day**, between the hours of **3:00pm** December 31st and **7:00am** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **7:00am** the following Tuesday.
3. For **Easter**, between the hours of **3:00pm** Thursday and **7:00am** Monday.
4. For **Memorial Day**, between the hours of **3:00pm** Friday and **7:00am** Tuesday.

5. For **Independence Day**, between the hours of **3:00pm** the day before Independence Day and **7:00am** the day after Independence Day. If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **3:00pm** the Thursday before Independence Day and **7:00am** the Tuesday after Independence Day.
6. For **Labor Day**, between the hours of **3:00pm** Friday and **7:00am** Tuesday.
7. For **Thanksgiving Day**, between the hours of **3:00pm** Tuesday and **7:00am** Monday.
8. For **Christmas**, between the hours of **3:00pm** the Friday before the week of Christmas Day and **7:00am** the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures will not be required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closure according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated above and place traffic in the existing traffic pattern.

4. Rehabilitation work, requiring long-term closure of Front Street.

The Contractor shall implement the full closure of Front St (in accordance with the conditions below) commence the rehabilitation work within 50 calendar days of approval of all working drawings.

The Contractor shall complete rehabilitation work of the bridge under a continuous, full, long-term closure of Front Street as shown in the contract plans. After implementation of the closure, the contractor shall complete all necessary rehabilitation work to re-open Front Street to vehicular traffic in a two-lane, two-way pattern within 180 calendar days of implementing the full closure or within 340 calendar days of notice-to-proceed, whichever comes first.

There are no day, time, or holiday restrictions for this closure. Only 1 long-term closure will be permitted under this contract. The Contractor shall notify the City and CFCC 45 calendar days prior to the planned start of the long-term closure.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for full closure according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for the full closure according to the time restrictions stated above and place traffic in the existing or other temporary two-lane, two-way traffic pattern.

5. Close-out work

Upon acceptance of the bridge rehabilitation work, and subsequently re-opening Front St, the Contractor shall complete all close-out work, demobilize, properly remove all equipment, stockpiled material, debris, and restore all adjacent features (including, but not limited to, roadways, sidewalks, streetscapes, signage, and access routes and empty space under the bridge) to their original condition at no additional cost to the City. **All close-out work shall be completed within 30 calendar days of opening Front St to traffic.**

No additional payment will be made to complete the items listed in this provision, unless specially noted elsewhere in the Contract.

POST BID QUALIFICATION**(SPECIAL)****1. GENERAL**

In accordance with General Provisions, Section G – 1.04.8, all prospective bidders are advised of the requirements in this provision of the Apparent Low Bidder, or any subsequent bidder the City considers for award. Contractors are not required to provide any of the indicated documentation with the Bid Response package and will be instructed to provide this, at the City's discretion, at the appropriate time following the bid opening.

This project shall be completed in accordance with the NCDOT *Standard Specifications for Roads and Structures*, 2024. All references to NCDOT, Department, or equivalent shall refer to the City unless noted otherwise.

2. NCDOT PREQUALIFICATION**a. REQUIRED CODES**

In accordance with *Standard Specifications* Section 102-2, bidders shall maintain prequalification with the Department. For the subject project, bidders shall maintain contractor prequalification with NCDOT for the following codes:

1. 0422 Concrete Structures (Bridge)
2. 0442 Painting Steel Structures (Bridge)
3. 1072 Welding

b. PREFERRED CODES

For the following codes, if the bidder is not prequalified with NCDOT, the City reserves the right to request documentation from the apparent low bidder or subsequent bidder after the bid opening in lieu of NCDOT prequalification:

1. 0423 Grooving Bridge Floors.
2. 0425 Reinforcing Steel (Placing and Tying)
3. 0801 Construction Surveying
4. 1110 Work Zone Signs
5. 1207 Pavement Marking - Thermoplastic

Where subcontractors are used to meet a prequalification requirement (whether by NCDOT prequalification or documentation provided to the City), that work shall be clearly noted in the required bid form listing subcontractors and required documentation shall be for that subcontractor.

Documentation required is listed in subsequent sections below.

3. PROVISION-SPECIFIC QUALIFICATIONS

In accordance with the Contract documents, the following requirements must be met by the contractor. The City reserves the right to request documentation, after the bid opening, of the Apparent Low Bidder or subsequent bidders, to demonstrate the contractor's ability to comply with the provisions:

1. The contract special provision *Painting Existing Structure* requires that the contractor be currently certified for Society of Protective Coatings (SSPC) Quality Program (QP) 2, Category A, and have successfully completed lead paint removal and field painting on similar structures 18 months prior to this bid. Lead abatement work completed within the 18 month period shall have been completed in accordance with contract specifications, free of citation from safety or environmental agencies. The contract requires the Apparent Low Bidder to submit a list of projects on which QP2 work was performed within the last 18 months including Lead Abatement Affidavit. **Documentation required: List of prior projects in accordance with the above requirements and Lead Abatement Affidavit.**
2. The contract special provision *Asbestos Assessment* requires that the contractor complete the asbestos inspection using a firm prequalified by NCDOT to perform asbestos surveys, by a N.C. accredited asbestos inspector with experience inspecting bridges or other industrial structures. **Documentation required: Name and address of prequalified firm and individual accredited with N.C. to complete the asbestos assessment.** Note: The contractor shall use the listed inspector, unless agreed to in writing by the City upon request of the contractor after contract award. The contractor shall submit any substitute inspectors to the City in writing 45 days prior to the start of any work.
3. The contract special provisions *Steel Repairs*, *Stub Column*, and *Miscellaneous Structure Details* require that the contractor complete the work using qualified personnel, and shall submit the names of individuals to perform the work. Each qualified individual shall have performed work of a similar manner within the past 5 years. Shop welding shall be performed in an AISC certified shop and by welders qualified by the Bridge Welding Code or other applicable AWS Welding Code, and field welders shall hold qualification from NCDOT to perform field welding. **Documentation required: Name and address of fabrication and welding shop(s) and individuals to perform the work, a minimum of 3 similar projects completed in the past 5 years. Include contact information for each listed project.**

4. DOCUMENTATION

The Apparent Low Bidder will be asked to demonstrate their qualifications to successfully complete the project. The information to be submitted, upon request of the City, after the bid opening, shall include:

1. Official Name of Contractor
2. North Carolina License Number, classification, and license limitation
3. Address, telephone number, email address and contact person for the main place of business.
4. Total available bonding capacity with surety information.
5. Name and resume of designated project manager and/or project field superintendent.
6. Description of at least one bridge rehabilitation and/or construction projects the contractor has completed within the last seven years that involved, at minimum, the following:
 - Jacking of beams to replace bearings
 - Partial or full cleaning and painting of structural steel

- Forming, placement of reinforcement, pouring, screeding, and curing of a reinforced concrete deck slab on spread beams or girders.

Provide owner contact information for any projects listed. Where subcontractors are used to demonstrate experience, the subcontractor must be listed in the bid form to complete the associated type of work on the subject contracted project. **The Prime Contractor must subcontract the work in accordance with the bid form where the qualification (via NCDOT prequalification or specific documentation) for that specific work type is not held or demonstrated by the prime contractor.**

7. All NCDOT approved contractor work codes. The contractor shall be required to hold prequalification as outlined in Section 2(a) above, NCDOT Prequalification, Required Codes, above, at the time of bid.
8. In accordance with Section 2(b) above, NCDOT Prequalification, Preferred Codes, for each NCDOT work code listed in Section 2(b) not held by the contractor at the time of bid, a list of 2 projects, completed within the past 5 years by the contractor, containing that type of work. Provide owner contact information for any projects listed.
9. In accordance with Section 3 above, Provision-Specific Qualifications, the documentation listed as required under each sub-item of Section 3.
10. Statement that the contractor is capable of completing the project within the stated contract time and intermediate contract times.

The bidder shall have 14 calendar days to submit this information upon request of the City. No payment will be made for furnishing any information required under this provision.

FALSEWORK AND FORMWORK**(11-30-23)****GENERAL**

Use this Special Provision as a guide to develop temporary works submittals required by the *Standard Specifications* or other provisions; no additional submittals are required herein. Such temporary works include, but are not limited to, falsework and formwork.

Falsework is any temporary construction used to support the permanent structure until it becomes self-supporting. Formwork is the temporary structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Access scaffolding is a temporary structure that functions as a work platform that supports construction personnel, materials, and tools, but is not intended to support the structure. Scaffolding systems that are used to temporarily support permanent structures (as opposed to functioning as work platforms) are considered to be falsework under the definitions given. Shoring is a component of falsework such as horizontal, vertical, or inclined support members. Where the term “temporary works” is used, it includes all of the temporary facilities used in bridge construction that do not become part of the permanent structure.

Design and construct safe and adequate temporary works that will support all loads imposed and provide the necessary rigidity to achieve the lines and grades shown on the plans in the final structure.

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

MATERIALS

Select materials suitable for temporary works; however, select materials that also ensure the safety and quality required by the design assumptions. The Engineer has authority to reject material on the basis of its condition, inappropriate use, safety, or nonconformance with the plans. Clearly identify allowable loads or stresses for all materials or manufactured devices on the plans. Revise the plan and notify the Engineer if any change to materials or material strengths is required.

DESIGN REQUIREMENTS**(A) Working Drawings**

Provide working drawings for items as specified in the contract, or as required by the Engineer, with design calculations and supporting data in sufficient detail to permit a structural and safety review of the proposed design of the temporary work.

On the drawings, show all information necessary to allow the design of any component to be checked independently as determined by the Engineer.

When concrete placement is involved, include data such as the drawings of proposed sequence, rate of placement, direction of placement, and location of all construction joints.

When required, have the drawings and calculations prepared under the guidance of, and sealed by, a North Carolina Registered Professional Engineer who is knowledgeable in temporary works design.

If requested by the Engineer, submit with the working drawings manufacturer's catalog data listing the weight of all construction equipment that will be supported on the temporary work. Show anticipated total settlements and/or deflections of falsework and forms on the working drawings. Include falsework footing settlements, joint take-up, and deflection of beams or girders.

As an option for the Contractor, overhang falsework hangers may be uniformly spaced, at a maximum of 36 inches, provided the following conditions are met:

Member Type (PCG)	Member Depth, (inches)	Max. Overhang Width, (inches)	Max. Slab Edge Thickness, (inches)	Max. Screed Wheel Weight, (lbs.)	Bracket Min. Vertical Leg Extension, (inches)
II	36	39	14	2000	26
III	45	42	14	2000	35
IV	54	45	14	2000	44
MBT	63	51	12	2000	50
MBT	72	55	12	1700	48

Overhang width is measured from the centerline of the girder to the edge of the deck slab. For Type II, III & IV prestressed concrete girders (PCG), 45-degree cast-in-place half hangers and rods must have a minimum safe working load of 6,000 lbs.

For MBT prestressed concrete girders, 45-degree angle holes for falsework hanger rods shall be cast through the girder top flange and located, measuring along the top of the member, 1'-2 ½" from the edge of the top flange. Hanger hardware and rods must have a minimum safe working load of 6,000 lbs.

For link slabs, the top of girders directly beneath the link slab shall be free of overhang falsework attachments or other hardware. Submit calculations and working drawings for overhang falsework in the link slab region.

The overhang bracket provided for the diagonal leg shall have a minimum safe working load of 3,750 lbs. The vertical leg of the bracket shall extend to the point that the heel bears on the girder bottom flange, no closer than 4 inches from the bottom of the member. However, for 72-inch members, the heel of the bracket shall bear on the web, near the bottom flange transition.

Provide adequate overhang falsework and determine the appropriate adjustments for deck geometry, equipment, casting procedures and casting conditions.

If the optional overhang falsework spacing is used, indicate this on the falsework submittal and advise the girder producer of the proposed details. Failure to notify the Engineer of

hanger type and hanger spacing on prestressed concrete girder casting drawings may delay the approval of those drawings.

Falsework hangers that support concentrated loads and are installed at the edge of thin top flange concrete girders (such as bulb tee girders) shall be spaced so as not to exceed 75% of the manufacturer's stated safe working load. Use of dual leg hangers (such as Meadow Burke HF-42 and HF-43) are not allowed on concrete girders with thin top flanges. Design the falsework and forms supporting deck slabs and overhangs on girder bridges so that there will be no differential settlement between the girders and the deck forms during placement of deck concrete.

When staged construction of the bridge deck is required, detail falsework and forms for screed and fluid concrete loads to be independent of any previous deck pour components when the mid-span girder deflection due to deck weight is greater than $\frac{3}{4}$ ".

Note on the working drawings any anchorages, connectors, inserts, steel sleeves or other such devices used as part of the falsework or formwork that remains in the permanent structure. If the plan notes indicate that the structure contains the necessary corrosion protection required for a Corrosive Site, epoxy coat, galvanize or metalize these devices. Electroplating will not be allowed. Any coating required by the Engineer will be considered incidental to the various pay items requiring temporary works.

Design falsework and formwork requiring submittals in accordance with the current edition of AASHTO *Guide Design Specifications for Bridge Temporary Works* except as noted herein.

(1) Wind Loads

Table 2.2 of Article 2.2.5.1 is modified to include wind velocities up to 110 mph. In addition, Table 2.2A is included to provide the maximum wind speeds by county in North Carolina.

Table 2.2 - Wind Pressure Values

Height Zone feet above ground	Pressure, lb/ft ² for Indicated Wind Velocity, mph				
	70	80	90	100	110
0 to 30	15	20	25	30	35
30 to 50	20	25	30	35	40
50 to 100	25	30	35	40	45
over 100	30	35	40	45	50

(2) Time of Removal

The following requirements replace those of Article 3.4.8.2.

Do not remove forms until the concrete has attained strengths required in Article 420-16 of the *Standard Specifications* and these Special Provisions.

Do not remove forms until the concrete has sufficient strength to prevent surface damage.

Table 2.2A - Steady State Maximum Wind Speeds by Counties in North Carolina

COUNTY	25 YR (mph)	COUNTY	25 YR (mph)	COUNTY	25 YR (mph)
Alamance	70	Franklin	70	Pamlico	100
Alexander	70	Gaston	70	Pasquotank	100
Alleghany	70	Gates	90	Pender	100
Anson	70	Graham	80	Perquimans	100
Ashe	70	Granville	70	Person	70
Avery	70	Greene	80	Pitt	90
Beaufort	100	Guilford	70	Polk	80
Bertie	90	Halifax	80	Randolph	70
Bladen	90	Harnett	70	Richmond	70
Brunswick	100	Haywood	80	Robeson	80
Buncombe	80	Henderson	80	Rockingham	70
Burke	70	Hertford	90	Rowan	70
Cabarrus	70	Hoke	70	Rutherford	70
Caldwell	70	Hyde	110	Sampson	90
Camden	100	Iredell	70	Scotland	70
Carteret	110	Jackson	80	Stanley	70
Caswell	70	Johnston	80	Stokes	70
Catawba	70	Jones	100	Surry	70
Cherokee	80	Lee	70	Swain	80
Chatham	70	Lenoir	90	Transylvania	80
Chowan	90	Lincoln	70	Tyrell	100
Clay	80	Macon	80	Union	70
Cleveland	70	Madison	80	Vance	70
Columbus	90	Martin	90	Wake	70
Craven	100	McDowell	70	Warren	70
Cumberland	80	Mecklenburg	70	Washington	100
Currituck	100	Mitchell	70	Watauga	70
Dare	110	Montgomery	70	Wayne	80
Davidson	70	Moore	70	Wilkes	70
Davie	70	Nash	80	Wilson	80
Duplin	90	New Hanover	100	Yadkin	70
Durham	70	Northampton	80	Yancey	70
Edgecombe	80	Onslow	100		
Forsyth	70	Orange	70		

(B) Review and Approval

The Engineer is responsible for the review and approval of temporary works' drawings.

Submit the working drawings sufficiently in advance of proposed use to allow for their review, revision (if needed), and approval without delay to the work.

The time period for review of the working drawings does not begin until complete drawings and design calculations, when required, are received by the Engineer.

Do not start construction of any temporary work for which working drawings are required until the drawings have been approved. Such approval does not relieve the Contractor of the responsibility for the accuracy and adequacy of the working drawings.

CONSTRUCTION REQUIREMENTS

All requirements of Section 420 of the *Standard Specifications* apply.

Construct temporary works in conformance with the approved working drawings. Ensure that the quality of materials and workmanship employed is consistent with that assumed in the design of the temporary works. Do not weld falsework members to any portion of the permanent structure unless approved. Show any welding to the permanent structure on the approved construction drawings.

Provide tell-tales attached to the forms and extending to the ground, or other means, for accurate measurement of falsework settlement. Make sure that the anticipated compressive settlement and/or deflection of falsework does not exceed 1 inch. For cast-in-place concrete structures, make sure that the calculated deflection of falsework flexural members does not exceed 1/240 of their span regardless of whether or not the deflection is compensated by camber strips.

(A) Maintenance and Inspection

Inspect and maintain the temporary work in an acceptable condition throughout the period of its use. Certify that the manufactured devices have been maintained in a condition to allow them to safely carry their rated loads. Clearly mark each piece so that its capacity can be readily determined at the job site.

Perform an in-depth inspection of an applicable portion(s) of the temporary works, in the presence of the Engineer, not more than 24 hours prior to the beginning of each concrete placement. Inspect other temporary works at least once a month to ensure that they are functioning properly. Have a North Carolina Registered Professional Engineer inspect the cofferdams, shoring, sheathing, support of excavation structures, and support systems for load tests prior to loading.

(B) Foundations

Determine the safe bearing capacity of the foundation material on which the supports for temporary works rest. If required by the Engineer, conduct load tests to verify proposed bearing capacity values that are marginal or in other high-risk situations.

The use of the foundation support values shown on the contract plans of the permanent structure is permitted if the foundations are on the same level and on the same soil as those of the permanent structure.

Allow for adequate site drainage or soil protection to prevent soil saturation and washout of the soil supporting the temporary works supports.

If piles are used, the estimation of capacities and later confirmation during construction using standard procedures based on the driving characteristics of the pile is permitted. If preferred, use load tests to confirm the estimated capacities; or, if required by the Engineer conduct load tests to verify bearing capacity values that are marginal or in other high risk situations.

The Engineer reviews and approves the proposed pile and soil bearing capacities.

REMOVAL

Unless otherwise permitted, remove and keep all temporary works upon completion of the work. Do not disturb or otherwise damage the finished work.

Remove temporary works in conformance with the contract documents. Remove them in such a manner as to permit the structure to uniformly and gradually take the stresses due to its own weight.

MEASUREMENT AND PAYMENT

Unless otherwise specified, *Falsework and Formwork* will not be directly measured.

Payment at the contract unit prices for the various pay items requiring temporary works will be full compensation for the above falsework and formwork.

SUBMITTAL OF WORKING DRAWINGS**SPECIAL****GENERAL**

Submit working drawings in accordance with Article 105-2 of the *Standard Specifications* and this Special Provision.

Submittals are only necessary for those items as required by the contract. The City will provide written responses to working drawing submittals by the close of business on the 14th calendar days after receipt of the submittal except as noted below.

Where submittals require reviews by a third party (Cape Fear Public Utility Authority, for example), the City will make a good faith effort to facilitate a 14 day review period by the third party, but does not guarantee that third parties will respond within the 14 day timeframe. The Contractor will not be held liable for project delays directly attributable to reviews that require longer than 14 days for the initial and 1st resubmittal of a working drawing.

The Contractor shall not be entitled to any claim against the City, AECOM, or third-party associated with review periods that extend beyond 14 days.

All resubmittals of Working Drawing by the contractor shall be made within 14 calendar days of receipt of comments from the City or AECOM. Resubmittals do not give the Contractor any claim whatsoever to extend the contract time.

If a submittal contains variations from plan details or specifications or significantly affects project cost, field construction or operations, discuss the submittal with and submit all copies to the Engineer. State the reason for the proposed variation in the submittal. To minimize review time, make sure all submittals are complete when initially submitted. Provide a contact name and information with each submittal. Direct any questions regarding submittal requirements to the Engineer.

To facilitate approval of working drawings, provide the name, address and telephone number of the facility where fabrication will actually be done if different than shown on the title block of the submitted working drawings. This includes, but is not limited to, precast concrete items, prestressed concrete items and fabricated steel or aluminum items.

The Contractor shall include on all working drawing submittals and re-submittals a statement of quality control, signed by the contractor. The statement of quality control shall contain the following language:

“By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data, and I have checked and coordinated each item with other approved shop drawings and all contract documents and requirements to the best of my knowledge. Where working drawings are required to be sealed by a Professional Engineer licensed in the State of North Carolina, this has been completed”.

SUBMITTAL COPIES

Furnish one complete copy of each submittal, including all attachments, to the City and to AECOM via email. Only digital submittals will be accepted. The City will provide the Contractor the submittal contact information at the City and AECOM at the time of notice-to-proceed. The City reserves the right to update the submittal contact information at any time throughout the project at no additional cost to the City.

The Contractor shall include the City and AECOM on all working drawing (re)submittals and associated correspondence.s

CRANE SAFETY**(6-20-19)****GENERAL**

Comply with the manufacturer specifications and limitations applicable to the operation of any and all cranes and derricks. Prime contractors, sub-contractors, and fully operated rental companies shall comply with the current Occupational Safety and Health Administration (OSHA) regulations.

Submit all items listed below to the Engineer prior to beginning crane operations. Changes in personnel or equipment must be reported to the Engineer and all applicable items listed below must be updated and submitted prior to continuing with crane operations.

CRANE SAFETY SUBMITTAL LIST

- (A) Competent Person:** Provide the name and qualifications of the “Competent Person” responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.
- (B) Riggers:** Provide the qualifications and experience of the persons responsible for rigging operations. Qualifications and experience should include, but not be limited to, weight calculations, center of gravity determinations, selection and inspection of sling and rigging equipment, and safe rigging practices.
- (C) Crane Inspections:** Inspection records for all cranes shall be current and readily accessible for review upon request.
- (D) Certifications:** Crane operators shall be certified by the National Commission for the Certification of Crane Operators (NCCCO) or the National Center for Construction Education and Research (NCCER). Other approved nationally accredited programs will be considered upon request. In addition, crane operators shall have a current CDL medical card. Submit a list of crane operator(s) and include current certification for each type of crane operated (small hydraulic, large hydraulic, small lattice, large lattice) and medical evaluations for each operator.

MEASUREMENT AND PAYMENT

No direct payment will be made for *Crane Safety*. All costs shall be considered incidental to items for which direct payment is made.

GROUT FOR STRUCTURES**(12-1-17)****GENERAL**

This Special Provision addresses grout for use in pile blockouts, grout pockets, shear keys, dowel holes and recesses for structures. This Special Provision does not apply to grout placed in post-tensioning ducts for bridge beams, girders, decks, end bent caps, or bent caps. Mix and place grout in accordance with the manufacturer's recommendations, the applicable sections of the *Standard Specifications* and this Special Provision.

MATERIAL REQUIREMENT

Unless otherwise noted on the plans, use a Type 3 Grout in accordance with Section 1003 of the *Standard Specifications*.

Initial setting time shall not be less than 10 minutes when tested in accordance with ASTM C266.

Construction loading and traffic loading shall not be allowed until the 3-day compressive strength is achieved.

SAMPLING AND PLACEMENT

Place and maintain components in final position until grout placement is complete and accepted. Concrete surfaces to receive grout shall be free of defective concrete, laitance, oil, grease, and other foreign matter. Saturate concrete surfaces with clean water and remove excess water prior to placing grout.

MEASUREMENT AND PAYMENT

No separate payment will be made for *Grout for Structures*. The cost of the material, equipment, labor, placement, and any incidentals necessary to complete the work shall be considered incidental to the structure item requiring grout.

MAINTENANCE AND PROTECTION OF TRAFFIC
BENEATH PROPOSED STRUCTURE AT STATION 12+50.55 -EL-**(08-13-04)****GENERAL**

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

Maintain traffic on the Cape Fear Community College garage and pedestrian walkway as shown on the plans and as directed by the Engineer.

Provide minimum temporary vertical clearances as shown on the plans at all times during construction.

Submit plans and calculations for review and approval for protecting traffic and bracing girders, as described herein, at the above station before beginning work at this location. Have the drawings and design calculations prepared, signed, and sealed by a North Carolina Registered Professional Engineer. The approval of the Engineer will not relieve the Contractor of the responsibility for the safety of the method or equipment.

PROTECTION OF TRAFFIC

Protect traffic from any operation that affords the opportunity for construction materials, equipment, tools, etc. to be dropped into the path of traffic beneath the structure. Based on Contractor means and methods determine and clearly define all dead and live loads for this system, which, at a minimum, shall be installed between beams or girders over any travelway or shoulder area where traffic is maintained. Install the protective system before beginning any construction operations over traffic. In addition, for these same areas, keep the overhang falsework in place until after the rails have been installed.

BRACING GIRDERS

Brace girders to resist wind forces, weight of forms and other temporary loads, especially those eccentric to the vertical axis of the member during all stages of erection and construction.

MEASUREMENT AND PAYMENT

Payment at the contract unit prices for the various pay items will be full compensation for the above work.

ASBESTOS ASSESSMENT**(11-30-23)****INSPECTION FOR ASBESTOS CONTAINING MATERIAL**

Prior to conducting bridge demolition or renovation activities, the Contractor shall thoroughly inspect the bridge or affected components for the presence of asbestos containing material (ACM) using a firm prequalified by NCDOT to perform asbestos surveys. The inspection must be performed by a N.C. accredited asbestos inspector with experience inspecting bridges or other industrial structures. The N.C. accredited asbestos inspector must conduct a thorough inspection, identifying all asbestos-containing material as required by the Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants (NESHAP) Code of Federal Regulations (CFR) 40 CFR, Part 61, Subpart M.

The Contractor shall submit an inspection report to the Engineer, which at a minimum must include information required in 40 CFR 763.85 (a)(4) vi)(A)-(E), as well as a project location map, photos of existing structure, the date of inspection and the name, N.C. accreditation number, and signature of the N.C. accredited asbestos inspector who performed the inspection and completed the report. The cover sheet of the report shall include project identification information. Place the following notes on the cover sheet of the report and check the appropriate box:

☐ ACM was found
☐ ACM was not found

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL

If ACM is found, notify the Engineer. Compensation for removal and disposal of ACM is considered extra work in accordance with Article 104-7 of the *Standard Specifications*.

An Asbestos Removal Permit must be obtained from the Health Hazards Control Unit (HHCU) of the N.C. Department of Health & Human Services, Division of Public Health, if more than 35 cubic feet, 160 square feet, or 260 linear feet of regulated ACM (RACM) is to be removed from a structure and this work must be completed by a contractor prequalified by NCDOT to perform asbestos abatement. RACM is defined in 40 CFR, Part 61, Subpart M. Note: 40 CFR 763.85 (a)(4) vi)(D) defines ACM as surfacing, TSI and Miscellaneous which does not meet the NESHAP RACM.

DEMOLITION NOTIFICATION

Even if no ACM is found (or if quantities are less than those required for a permit), a Demolition Notification (DHHS-3768) must be submitted to the HHCU. Notifications and Asbestos Permit applications require an original signature and must be submitted to the HHCU 10 working days prior to beginning demolition activities. The 10 working day period starts based on the post-

marked date or date of hand delivery. Demolition that does not begin as originally notified requires submission of a separate revision form HHCUC 3768-R to HHCUC. Reference the North Carolina Administrative Code, Chapter 10A, Subchapter 41C, Article .0605 for directives on revision submissions.

Contact Information

Health Hazards Control Unit (HHCUC)
N.C. Department of Health and Human Services
1912 Mail Service Center
Raleigh, NC 27699-1912
Telephone: (919) 707-5950
Fax: (919) 870-4808

SPECIAL CONSIDERATIONS

Buncombe, Forsyth, and Mecklenburg counties also have asbestos permitting and NESHAP requirements must be followed. For projects involving permitted RACM removals, both the applicable county and the state (HHCUC) must be notified.

For demolitions with no RACM, only the local environmental agencies must be notified. Contact information is as follows:

Buncombe County

WNC Regional Air Pollution Control Agency
49 Mt. Carmel Road
Asheville, NC 28806
(828) 250-6777

Forsyth County

Environmental Affairs Department
537 N. Spruce Street
Winston-Salem, NC 27101
(336) 703-2440

Mecklenburg County

Land Use and Environmental Services Agency
Mecklenburg Air Quality
700 N. Tryon Street
Charlotte, NC 28202
(704) 336-5430

ADDITIONAL INFORMATION

Additional information may be found on N.C. asbestos rules, regulations, procedures, and N.C. accredited inspectors, as well as associated forms for demolition notifications and asbestos permit applications at the N.C. Asbestos Hazard Management Program website:

<https://epi.dph.ncdhhs.gov/asbestos/ahmp.html>

MEASUREMENT AND PAYMENT

Asbestos Assessment Payment will be paid at the lump sum contract unit price and will be full compensation for all asbestos inspections, reports, permitting and notifications.

Payment will be made under:

Pay Item	Pay Unit
Asbestos Assessment	Lump Sum

PAINTING EXISTING STRUCTURE**(11-30-23)****GENERAL**

This work shall consist of furnishing all labor, equipment, and materials necessary to clean and paint the structural steel of the existing bridge, including girders or beams, diaphragms, all bearing plates, anchor bolts, nuts, and washers of the existing structure. Work includes: removal, containment and disposal of the existing paint system; preparation of the surface to be painted and applying the new paint system; a containment enclosure; and any incidentals necessary to complete the project as specified and shown on the plans.

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

SCOPE OF WORK

Bridge #036: This bridge was built in 1965 and carries Front Street over a parking garage access road and pedestrian walkway. The superstructure consists of two simple spans and one continuous span with a cantilever overhang. There are eight lines of steel beams ranging from W24x76 to W36x135 in size and a typical beam spacing of 6'-11" except for the center two beams which are spaced at 4'-3". The bridge has an overall length of 171'-4" with a concrete deck and a 56'-3" existing total deck width. The existing paint system is unknown. The estimated area to be cleaned and painted is 13000 sq. ft.

TWELVE-MONTH OBSERVATION PERIOD

The Contractor maintains responsibility for the coating system for a 12-month observation period beginning upon the satisfactory completion of all the work required in the plans or as directed by the Engineer. The Contractor shall guarantee the coating system under the payment and performance bond (refer to Article 103-7 of the *Standard Specifications*). To successfully complete the observation period, the coating system shall meet the following requirements after 12 months service:

- (A) No visible rust, contamination or application defect is observed in any coated area.
- (B) Painted surfaces have a uniform color and gloss.
- (C) Painted surfaces have an adhesion that meets an ASTM D3359, 3A rating.

Final acceptance is made only after the paint system meets the above requirements.

SUBMITTALS

Submit all of the following to the Engineer for review and approval before scheduling the pre-construction meeting. Allow at least two (2) weeks for the review process.

- (A) The existing paint systems include toxic substances such as red lead oxide, which are considered hazardous if improperly removed. The contractor shall be currently certified for

Society for Protective Coatings (SSPC) Quality Program (QP) 2, Category A, and have successfully completed lead paint removal and field painting on similar structures within 18 months prior to this bid. Lead abatement work completed within the 18 month period shall have been completed in accordance with contract specifications, free of citation from safety or environmental agencies. Lead abatement work shall include, but not be limited to: abrasive blasting; waste handling, storage and disposal; worker safety during lead abatement activities (fall protection, personal protective equipment (PPE), etc.); and containment. This requirement is in addition to the contractor pre-qualification requirements covered by Article 102-2 of the *Standard Specifications*.

The apparent low bidder shall submit a list of projects for which QP 2 work was performed within the last 18 months including owner contact information and submit to the Engineer a "Lead Abatement Affidavit". See link for form:

<https://www.ncdot.gov/initiatives-policies/Transportation/bridges/Documents/leadabatementaffidavit.pdf>.

- (B) Work schedule which shall be kept up to date, with a copy of the revised schedule being provided to the Engineer in a timely manner.
- (C) Containment system plans and design calculations in accordance with SSPC Guide 6, Class 2A and other project requirements, signed and sealed by a Professional Engineer licensed by the State of North Carolina.
- (D) Bridge wash water sampling and disposal plan.
- (E) Subcontractor identification.
- (F) Lighting plan for night work in accordance with Section 1413 of the *Standard Specifications*.
- (G) Traffic control plan with NCDOT certified supervisors, flaggers and traffic control devices.
- (H) Health and safety plan addressing at least the required topics as specified by the SSPC QP 1 and QP 2 program and including hazard communication, respiratory health, emergency procedures, and local hospital and treatment facilities with directions and phone numbers, disciplinary criteria for workers who violate the plan and accident investigation. The plan shall address the following: hazardous materials, personal protective equipment, general health and safety, occupational health and environmental controls, fire protection and prevention, signs signals, and barricades, materials handling, storage, use, and disposal, hand and power tools, welding and cutting, electrical, scaffolds, fall protection, cranes, derricks, hoists, elevators, and conveyors, ladders, toxic and hazardous substances, airless injection and high pressure water jet (HPWJ).
- (I) Provide the Engineer a letter of certification that all employees performing work on the project have blood lead levels that are below the Occupational Safety and Health Administration (OSHA) action level.
- (J) Provide the Engineer with Competent Person qualifications and summary of work experience.
- (K) Environmental Compliance Plan.
- (L) Quality Control Plan (Project Specific) with quality control qualifications and summary of work experience.

(M) Bridge and Public Protection Plan (Overspray, Utilities, etc. - Project/Task Specific).

(N) Abrasive Blast Media:

(1) Product Data Sheet.

(2) Blast Media Test Reports in accordance with Article 442-4 of the *Standard Specification*.

(O) Coating Material:

(1) NCDOT HICAMS Test Reports

(2) Product Data Sheets.

(3) Material Safety Data Sheets.

(4) Product Specific Repair Procedures.

(5) Acceptance letters from paint manufacturers for work practices that conflict with Special Provisions and/or paint manufactures product data sheets.

PRE-CONSTRUCTION MEETING

Submittals shall be reviewed and approved by the Engineer prior to scheduling the pre-construction meeting. Allow no less than two (2) weeks for a review process. When requesting a pre-construction meeting, contact the Engineer at least seven (7) working days in advance of the desired pre-construction date. The contractor's project supervisor, Competent Person, quality control personnel and certified traffic control supervisor shall attend the pre-construction meeting in order for the Contractor and team to establish responsibilities for various personnel during project duration and to establish realistic timeframes for problem escalation.

CONTAINMENT SYSTEM

Prior to performing any construction or painting operations on the structure, the Contractor shall furnish the Engineer with plans and design calculations for a sufficiently designed containment system, which will provide access for any repairs on structural steel members, cleaning and surface preparations for structural steel members, and coating operations for structural steel members of the bridge. The containment system shall not be installed, and no work shall begin, until the Engineer has reviewed and approved, in writing, the submitted containment system plans and design calculations. Containment system plans and design calculations shall be prepared, sealed, and signed by a Professional Engineer licensed by the State of North Carolina. Allow a minimum of two (2) weeks for review of the containment plans and calculations.

The containment system shall meet or exceed the requirements of Class 2A containment in accordance with SSPC Guide 6. The Contractor shall determine the required capacity of the containment system, which, at a minimum, shall include loads due to wind, repair materials and repair operations, equipment, and tools; however, the capacity shall not be less than that required by Federal or State regulations. Design steel members to meet the requirements of the *American Institute of Steel Construction Manual*. Design timber members in accordance with the *National Design Specification for Stress-Grade Lumber and Its Fastenings* of the National Forest Products Association. The containment system shall be constructed of materials capable of withstanding

damage from any of the work required on this project and shall provide a two (2) hour resistance to fire.

In the containment system plans, describe how debris is contained and collected. Describe the type of tarpaulin, bracing materials, and the maximum designed wind load. Design wind loads shall be in accordance with the Falsework and Formwork Special Provision. Describe the dust collection system and how a negative pressure of 0.03 inches of water column is maintained inside the enclosure, while blasting operations are being conducted. Describe how the airflow inside the containment structure is designed to meet all applicable OSHA Standards. Describe how water run-off from rain will be routed by or through the enclosure. Describe how wash water will be contained and paint chips separated. Describe what physical containment will be provided during painting application to protect the public and areas not to be painted.

Drilling holes in the superstructure for the purpose of attaching the containment system is prohibited.

The Contractor will be responsible for certifying the containment system has been constructed in accordance with the approved plans.

The containment system shall be cleaned after each workday.

Upon completion of work, remove all anchorages in the substructure and repair the substructure at no additional cost to the Department.

Protect non-metallic parts of bearings from blasting and painting (i.e.: Pot Bearings, Elastomeric Pads, and Disc Bearings).

WASH WATER SAMPLING AND DISPOSAL PLAN

All wash water shall be collected and sampled prior to disposal. Representative sampling and testing methodology shall conform to North Carolina Administrative Code 15A NCAC 02B.0103, "Analytical Procedures". Wash water shall be tested for pollutants listed in 15A NCAC 02B.0211(3), 15A NCAC 02T.0505(b)(1) and 15A NCAC 2T.0905(h). Depending on the test results, wash water disposal methods shall be described in the disposal plan. Wash water shall be disposed of in accordance with all current Federal and State regulations. See link for NCDOT Guidelines for Managing Bridge Wash Water:

<https://www.ncdot.gov/initiatives-policies/Transportation/bridges/Documents/WashWater.pdf>

WASTE HANDLING OF PAINT AND ABRASIVES

Comply with all Federal, State, and local regulations. Failure to comply with the regulations could result in fines and loss of qualified status with NCDOT.

Comply with the Resource Conservation and Recovery Act (RCRA - 40 CFR 261 - 265) and the Occupational Safety and Health Act (OSHA - 29 CFR 1910 - 1926) regulations for employee training, and for the handling, storage, labeling, recordkeeping, reporting, inspections and disposal of all hazardous waste generated during paint removal.

A summary of Generator Requirements is available at the following NCDOT web link, which cites the specific regulations for each Generator category:

<https://www.deq.nc.gov/waste-management/dwm/hw/guidance-document-table-documents/summary-generator-requirements-0/download?attachment>

No work shall begin until the Contractor furnishes the Engineer with a written waste disposal plan. Any alternative method for handling waste shall be pre-approved by the Engineer. Example guidance on Contractor's waste disposal plan content can be found in the information below:

<https://www.deq.nc.gov/waste-management/dwm/hw/guidance-document-table-documents/generator-category-guidance/download?attachment>

- (A) Guidance for Small Quantity Generator (SQG) can be found at the following weblink:

<https://www.deq.nc.gov/waste-management/dwm/hw/guidance-document-table-documents/small-quantity-generator-checklist-0/download?attachment>

- (B) Guidance for Large Quantity Generator (LQG) can be found at the following weblink:

<https://www.deq.nc.gov/environmental-management-commission/water-quality-committee-meetings/2018/large-quantity-generator-checklist/download>

The North Carolina Department of Environmental Quality (NCDEQ) adopted the federal provisions of RCRA in the North Carolina Hazardous Waste Management Rules (15A NCAC 13A) and is responsible for the administration and enforcement of these rules. The *Hazardous Waste Generator Compliance Manual* created by the NCDEQ, Division of Waste Management, Hazardous Waste Section, Compliance Branch can be found at:

<https://www.deq.nc.gov/waste-management/dwm/hw/guidance-document-table-documents/hazardous-waste-generator-compliance-manual/download?attachment>

Immediately after awarding the contract, arrange for waste containers, sampling, testing, transportation, and disposal of all waste. Use an approved hazardous waste management company from the following link:

<https://www.ebs.nc.gov/VendorDirectory/results.html?sap-params=cD0xJTIwJmNlcnJlbnRfc2VhcmNoX3BhZ2U9d2Mmc2VsZWNOaW9uX2Zpcm1fbmFtZT0mc2VsZWNOaW9uX2NlcnQ9JnNlbGVjdGlubl9maXJtdHlwZT0meXNjX2Zpcm10eXBIPSZzZWx1Y3Rpb25fd29ya2xvY2F0aW9uPSZ5c2Nfd29ya2xvY2F0aW9uPSZzZWx1Y3Rpb25fYWwRkcnN0YXRIPSZ5c2NfYWwRkcnN0YXRIPSZzZWx1Y3Rpb25fYWwRkcmNvdW50eT0meXNjX2FkZHZHjb3VudHk9JnNlbGVjdGlubl93a2NvZGU9MDAzMDQwJnlzY193a2NvZGU9MDAzMDQwJTIwQ09OVEFNSU5BVEVEJTIwTUFURVJJQUxTJTIwUkVN T1ZBTCZzZWx1Y3Rpb25fZGlzYz0meXNjX2Rpc2M9JnNlbGVjdGlubl9uYWljcz0meXNjX25haWNzPSZzZWx1Y3Rpb25fY3R5cGU9MA%3d%3d>

All removed paint and spent abrasive media shall be tested for lead following the SW-846 Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 Extraction, as incorporated by reference in 40 CFR 260.11, to determine whether it shall be disposed of as hazardous waste. Furnish the Engineer with certified test reports showing TCLP results of the paint waste accumulated on site, in accordance with "Lead-Based Paint Waste Guidance" at:

<https://www.deq.nc.gov/water-quality/planning/tmdl/303d/2020/lead-based-paint-waste-guidance/download>

(C) Toxicity characteristic 40 CFR 261.24

<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-261/subpart-C/section-261.24>

(D) Analytical Methods for Characteristic Hazardous Waste Determination

<https://www.deq.nc.gov/waste-determination-test-method/download?attachment>

All sampling shall be performed in the presence of the Engineer's representative.

The Competent Person shall obtain composite samples from each barrel of the wash water and waste generated by collecting two or more portions taken at regularly spaced intervals during accumulation. Composite the portions into one sample for testing purposes. Acquire samples after 10% or before 90% of the barrel has accumulated. The intent is to provide samples that are representative of widely separated portions, but not the beginning and end of wash water or waste accumulation.

Perform sampling by passing a receptacle completely through the discharge stream or by completely diverting the discharge into a sample container. If discharge of the wash water or waste is too rapid to divert the complete discharge stream, discharge into a container or transportation unit sufficiently large to accommodate the flow and then accomplish the sampling in the same manner as described above.

Comply with the NCDEQ Hazardous Waste Compliance Manual. Record quantities of waste by weight and dates of waste generation. Waste accumulated at the project site shall be properly labeled. Until test results are received, accumulate all waste, and label as "NCDOT Bridge Paint Removal Waste – Hazardous Waste Pending Analysis" and include the date generated and contact information for the Engineer. Accumulate waste containers in an enclosed, sealed, and secured storage container protected from traffic from all directions. Obtain approval for the protection plan for these containers from the Engineer. If adequate protection cannot be obtained by use of existing guardrail, provide the necessary supplies and equipment to maintain adequate protection. The NCDEQ Hazardous Waste Compliance Manual can be found at:

<https://www.deq.nc.gov/waste-management/dwm/hw/guidance-document-table-documents/hazardous-waste-generator-compliance-manual/download?attachment>

Once test results are received and waste is characterized, label waste as either "Hazardous Waste - Pending Disposal" (for hazardous waste) or "Paint Waste - Pending Disposal" (for non-hazardous waste). All waste, hazardous or non-hazardous, requires numbered shipping manifests and/or equivalent material accountability.

Once the waste has been collected, and the quantities determined, prepare the appropriate shipping documents and manifests, and present them to the Engineer.

As of October 1, 2019, "Provisional ID Numbers" (starting with the prefix "NCP") are no longer issued by the North Carolina Hazardous Waste Section. EPA Identification (ID) Numbers are now issued for sites operating as "Short Term Generators."

(E) Short Term Generator Guidance:

<https://files.nc.gov/ncdeq/Waste%20Management/DWM/HW/8700-guidelines/Short-Term-Generators.pdf>

For questions about Short Term Generator Notification:

Andrew Minter: Administration Specialist
Hazardous Waste Section
Phone: 919-707-8265
Email: Andrew.Minter@deq.nc.gov

Laura Alexander: Business Officer
Hazardous Waste Section
Phone: 919-707-8214
Email: Laura.Alexander@deq.nc.gov

The Engineer will verify the type and quantity of hazardous waste and obtain an EPA ID number (for new sites) or update an existing EPA ID number electronically using the EPA's RCRAInfo database:

<https://rcrainfo.epa.gov/rcrainfoprod/action/secured/login>

(F) Link to Quick Reference Guide for RCRAInfo Registration and Notification Submittal

<https://www.deq.nc.gov/waste-management/dwm/hw/8700-guidelines/quick-reference-guide-rcrainfo-registration-and-notification/download?attachment>

(G) Link to the more comprehensive RCRAInfo Registration and Notification Tutorial

<https://www.deq.nc.gov/waste-management/dwm/hw/hw-guidelines/rcrainfo-registration-and-electronic-notification-tutorial/download?attachment>

The hazardous waste fee will be assessed at the time the short-term EPA ID number is requested and must be paid prior to the EPA ID number being issued. When completing the RCRAInfo notification, the Hazardous Waste Section requires a valid email address for the site contact since this is the person who will be contacted to pay the fee. NOTE: The cost for waste disposal (including lab and Short-Term Generator EPA ID number) shall be included in the bid price for this contract. At the time of shipping, the Engineer will ensure the proper EPA ID number has been entered in Box 1 of the manifest as well as sign and date the manifest. The maximum on-site accumulation time shall be **90 calendar days**. **All waste, whether hazardous or non-hazardous will require numbered shipping manifests.** The cost for waste disposal (including lab and Short-Term Generator EPA ID number) shall be included in the bid price for this contract.

If you have site specific questions, please contact your local Hazardous Waste Section Inspector. Inspector contact information and regions are on the map at this link:

<https://www.deq.nc.gov/compliance-map-inspector/download?attachment?attachment>

Testing labs shall be certified in accordance with the National Lead Laboratory Accreditation Program (NLLAP) and/or the National Environmental Laboratory Accreditation Program (NELAP).

(H) A list of NLLAP certified laboratories may be obtained at:

<https://www.epa.gov/system/files/documents/2023-05/nllap.pdf>

(I) A list of NELAP certified laboratories may be obtained at:

<https://lams.nelac-institute.org/Search>

All test results shall be documented on the lab analysis as follows:

(J) For leachable lead:

(1) Soils/Solid/Liquid- EPA 1311/200.7/6010

Area sampling will be performed for the first two (2) days at each bridge location. The area sample will be located within five (5) feet of the containment and where the highest probability of leakage will occur (access door, etc.). Results from the area sampling will be given to the Engineer within 72 hours of sampling (excluding weekends). If the results of the samples exceed $20 \mu\text{g}/\text{m}^3$ corrective measures shall be taken and monitoring shall be continued until two (2) consecutive sample results are less than $20 \mu\text{g}/\text{m}^3$.

Time Weighted Average (TWA) may suspend the work if there are visible emissions outside the containment enclosure or pump monitoring results exceeding the level of $30 \mu\text{g}/\text{m}^3$.

Where schools, housing and/or buildings are within 500 feet of the containment, the Contractor shall perform initial Total Suspended Monitoring (TSP) Lead monitoring for the first ten (10) days of the project during abrasive blasting, vacuuming and containment removal. Additional monitoring will be required during abrasive blasting two (2) days per month thereafter. Results of the TSP monitoring at any location shall not exceed $1.5 \mu\text{g}/\text{m}^3$.

QUALITY CONTROL INSPECTOR

Provide a quality control (QC) inspector in accordance with the SSPC QP guidelines to ensure that all processes, preparation, blasting and coating application are in accordance with the requirements of the contract. The inspector shall have written authority to perform QC duties to include continuous improvement of all QC internal procedures. The presence of the engineer or inspector at the work site shall in no way lessen the contractor's responsibility for conformity with the contract.

QUALITY ASSURANCE INSPECTOR

The quality assurance inspector which may be a City employee or a designated representative of the City shall observe, document, assess, and report that the Contractor is complying with all of the requirements of the contract. Inspectors employed by the City are authorized to inspect all work performed and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector is not authorized to alter or waive the requirements of the contract. Each stage in preparing the structure to be coated which includes but not limited to washing, blasting, coating testing and inspection shall be inspected and approved by the Engineer or an authorized representative.

SUBLETTING OF CONTRACT

Only contractors certified to meet SSPC QP 2, Category A, and have successfully completed lead paint removal and field painting on all similar structures within 18 months prior to this bid are qualified for this work. Work is only sublet by approval of the Engineer.

PREPARATION OF SURFACES

Before any other surface preparation is conducted, all surfaces shall be power washed to remove dust, salts, dirt, and other contaminants. All wash water shall be contained, collected, and tested in accordance with the requirements of NCDOT Guidelines for Managing Bridge Wash Water. Obtain approval of the Engineer and allow all cleaned surfaces to dry to the touch and without standing water before beginning surface preparation or painting activities.

Surface preparation is done with materials meeting Article 1080-12 of the *Standard Specifications*. No silica sand or other silica materials are permitted for use. The profile shall be between 1.0 and 3.0 mils when measured on a smooth steel surface. Conduct and document at least two (2) tests per beam/girder and two (2) tests per span of diaphragms/cross bracing.

Spread tarpaulins over all pavements and surfaces underneath equipment used for abrasive blasting as well as equipment and containers used to collect abrasive media. This requirement will be enforced during activity and inactivity of equipment.

Before the Contractor departs from the work site at the end of the workday, collect all debris generated during surface preparation and all dust collector hoses, tarps or other appurtenances containing blasting residue in approved containers.

Clean a 3" x 3" area at each structure to demonstrate the specified finish, and the inspector will preserve this area by covering it with tape, plastic or some other suitable means so that it can be retained as the Dry Film Thickness (DFT) gauge adjustment standard. An acceptable alternative is for the Contractor to provide a steel plate with similar properties and geometry as the substrate to be measured.

The contractor and/or quality assurance representative shall notify the Engineer of any area of corroded steel that has lost more than 50% of its original thickness.

All parts of the bridges not to be painted and the travelling public shall be protected from overspray. Submit a plan to protect all parts of bridge that are not required to be painted and a plan to protect the traveling public and surrounding environment while applying all coats of paint to a structure.

Ensure that chloride levels on the surfaces are $7 \mu\text{g}/\text{cm}^2$ or lower using an acceptable sample method in accordance with SSPC Guide 15. The frequency of testing shall be two (2) tests per span after all surface preparation has been completed and immediately prior to painting. Select test areas representing the greatest amount of corrosion in the span as determined by the Engineers' representative. Additional testing may be required if significant amounts of chloride are detected.

All weld splatter, slag or other surface defects resulting in a raised surface above the final paint layer shall be removed prior to application of primer coat.

PAINTING OF STEEL

Paint System 1, as specified in these Special Provisions and Article 442-8 of the *Standard Specifications*, is to be used for this work. System 1 is an inorganic zinc primer, two coats acrylic

paint, and one stripe coat of acrylic paint over blast-cleaned surfaces in accordance with SSPC-SP-10 (Near White Blast). Perform all mixing operations over an impervious surface with provisions to prevent runoff to grade of any spilled material. The contractor is responsible for reporting quantities of thinner purchased as well the amounts used. No container with thinner shall be left uncovered, when not in use.

Apply 2" stripe coat, by brush or roller only, to all exposed edges of steel including fasteners before applying the finish coat. Locate the edge or corner in the approximate center of the paint stripe.

Any area where newly applied paint fails to meet the specifications shall be repaired or replaced by the Contractor, at no additional cost to the Department. All repair processes must be approved by the Engineer before the repair may be made. Repaired areas shall meet the *Standard Specifications*. The Contractor shall apply an additional finish coat of paint to areas where the tape adhesion test is conducted.

MATERIALS

Only paint suppliers that have a NCDOT qualified inorganic zinc primer may furnish paints for this project. All paints applied to a structure shall be from the same supplier. Before any paints are applied the Contractor shall provide the Engineer a manufacturer's certification that each batch of paint meets the requirements of the applicable Section 1080 of the *Standard Specifications*.

The inspector randomly collects a one-pint sample of each paint product used on the project. Additional samples may be collected as needed to verify compliance to the specifications.

Do not expose paint materials to rain, excessive condensation, long periods of direct sunlight, or temperatures above 110°F or below 40°F. In addition, the Contractor shall place a device that records the high, low, and current temperatures inside the storage location. Follow the manufacturer's storage requirements if more restrictive than the above requirements.

INSPECTION

Surface Preparation for System 1 shall be in accordance with SSPC SP-10. Any area(s) not meeting the requirements of SSPC SP-10 shall be remediated prior to application of coating. Surface inspection is considered ready for inspection when all blast abrasive, residue and dust is removed from surfaces to be coated.

(A) Quality Assurance Inspection

The Contractor furnishes all necessary OSHA approved apparatus such as ladders, scaffolds and platforms as required for the inspector to have reasonable and safe access to all parts of the work. The contractor illuminates the surfaces to be inspected to a minimum of 50-foot candles of light. All access points shall be illuminated to a minimum of 20-foot candles of light.

The City reserves the right for ongoing Quality Assurance (QA) inspection to include but not limited to surface contamination testing, adhesion pull testing, and DFT readings as necessary to assure quality.

Inform the Engineer and the Division Safety Engineer of all scheduled and unannounced inspections from SSPC, OSHA, EPA and/or others that come on site. Furnish the Engineer a copy of all inspection reports except for reports performed by a third party and or consultant on behalf of the Contractor.

(B) Inspection Instruments

At a minimum, furnish the following calibrated instruments and conduct the following quality control tests:

- (1) Sling Psychrometer - ASTM E337 - bulb type
- (2) Surface Temperature Thermometer
- (3) Wind Speed Indicator
- (4) Tape Profile Tester - ASTM D4417 Method C
- (5) Surface Condition Standards - SSPC VIS-1 and VIS-3
- (6) Wet Film Thickness Gage - ASTM D4414
- (7) Dry Film Thickness Gage - SSPC-PA2 Modified
- (8) Solvent Rub Test Kit - ASTM D4752
- (9) Adhesion Test Kit - ASTM D3359 Method A (Tape Test)
- (10) Adhesion Pull test - ASTM D4541
- (11) Surface Contamination Analysis Kit or (Chloride Level Test Kit) SSPC Technology Guide 15

(C) Quality Control

Maintain a daily quality control record in accordance with Subarticle 442-12(D) of the *Standard Specifications* and make such records available at the job site for review by the inspector and submit to the Engineer as directed. In addition to the information required on [Form M&T-610](#), submit all Dry Film Thickness (DFT) readings on a form equivalent to [Form M&T-611](#). These forms can be found at:

<https://connect.ncdot.gov/resources/Materials/Pages/Materials-Manual-by-Material.aspx?Method=MM-05-02>

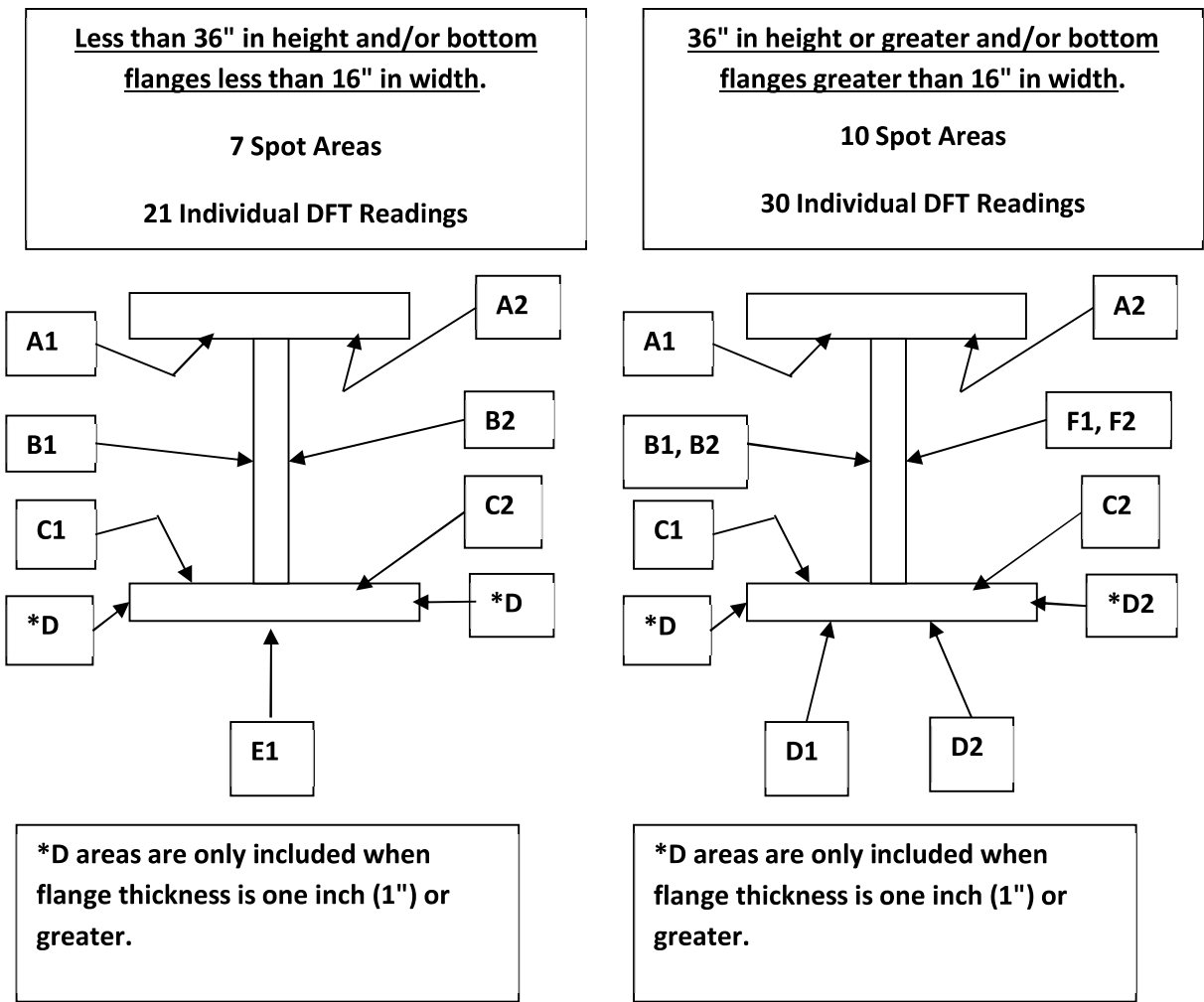
- (1) Measure DFT at each spot on the attached diagram and at the required number of locations as specified below:

- (a) For span members less than 45 feet; three (3) random locations along each girder in each span.
- (b) For span members greater than 45 feet; add one additional location for each additional ten (10) feet in span length.

DFT measurements for the prime coat shall not be taken for record until the zinc primer has cured in accordance with ASTM D4752 (MEK Rub Test) with no less than a four (4) resistance rating.

Stiffeners and other attachments to beams and or plate girders shall be measured at no less than five (5) random spots per span. Also, dry film thickness is measured at no less than six (6) random spots per span on diaphragms/cross frames.

Each spot is an average of three (3) to five (5) individual gage readings as defined in SSPC PA-2. No spot average shall be less than 80% of minimum DFT for each layer applied; this does not apply to stripe coat application. Spot readings that are non-conforming shall be re-assessed by performing additional spot measurements not to exceed one-foot intervals on both sides of the low areas until acceptable spot averages are obtained. These non-conforming areas shall be corrected by the Contractor prior to applying successive coats.



a four (4) resistance rating and will be touched up by the Contractor. The required minimum average adhesion is 400 psi.

- (3) Cure of the intermediate and stripe coats shall be accessed by using the thumb test in accordance with ASTM D1640 (Curing Formation Test) prior to the application of any successive layers of paint.
- (4) One random Cut Tape adhesion test per span is conducted in accordance with ASTM D3359 (X-Cut Tape Test) on interior surface after the finish coat is cured. Repair areas shall be properly tapered and touched up by the Contractor.

SAFETY AND ENVIRONMENTAL COMPLIANCE PLANS

Personnel access boundaries are delineated for each work site using signs, tape, cones, or other approved means. Submit copies of safety and environmental compliance plans that comply with SSPC QP 2 Certification requirements.

HEALTH AND SAFETY RESPONSIBILITIES

This project may involve toxic metals such as arsenic, lead, cadmium and hexavalent chromium. It is the contractor's responsibility to test for toxic metals and if found, comply with the OSHA regulations, which may include medical testing.

Ensure a "Competent Person" as defined in OSHA 29 CFR 1926.62; one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them; is on site during all surface preparation activities and monitors the effectiveness of containment, dust collection systems and waste sampling. Before any work begins, provide a written summary of the Competent Person's safety training.

Comply with Subarticle 442-14(B) of the *Standard Specifications*.

Comply with Subarticle 442-14(D) of the *Standard Specifications*. Ensure employee blood sampling test results are less than 50 micrograms per deciliter. Remove employees with a blood sampling test of 50 or more micrograms per deciliter from work activities involving any lead exposure.

An employee who has been removed with a blood level of 50 micrograms per deciliter or more shall have two (2) consecutive blood sampling tests spaced one week apart indicating that the employee's blood lead level is at or below 40 micrograms per deciliter before returning to work activities involving any lead exposure.

All OSHA recordable accidents that occur during the project duration are to be reported to the Engineer within twenty-four (24) hours of occurrence. In addition, for accidents that involve civilians or property damage that occurs within the work zone the Division Safety Engineer shall be notified immediately.

Prior to blasting operations, the Contractor shall have an operational OSHA approved hand wash station at each bridge location and a decontamination trailer at each bridge or between bridges unless the work is on the roadway, or the Contractor shall show reason why it is not feasible to do so and provide an alternative site as approved by the Engineer. The Contractor shall assure that all employees whose airborne exposure to lead is above the Permissible Exposure Limit (PEL) shall shower at the end of their work shift.

STORAGE OF PAINT AND EQUIPMENT

Provide a location for materials, equipment, and waste storage. Spread tarpaulins over all pavements and surfaces underneath equipment used for abrasive recycling and other waste handling equipment or containers. All land and or lease agreements that involve private property shall disclose to the property owner that heavy metals may be present on the Contractor's equipment. Prior to storing the Contractor's equipment on private property, provide a notarized written consent signed by the landowner received by the Engineer at least forty-eight (48) hours before using property. All storage of paint, solvents, and other materials applied to structures shall be stored in accordance with Subarticle 442-9(C) of the *Standard Specifications* or the manufacturers' requirements. The more restrictive requirements will apply.

UTILITIES

Protect all utility lines or mains that may be supported on, under, or adjacent to bridge work sites from damage and paint overspray.

MEASUREMENT AND PAYMENT

The cost of inspection, surface preparation, and repainting the existing structure is included in the lump sum price bid for *Clean and Paint Structural Steel*. This price is full compensation for furnishing all inspection equipment, all paint, cleaning abrasives, cleaning solvents and all other materials; preparing and cleaning surfaces to be painted; applying paint in the field; protecting work area, traffic and property; and furnishing blast cleaning equipment, paint spraying equipment, brushes, rollers, any other hand or power tools and any other equipment.

Pollution Control will be paid at the contract lump sum price which will be full compensation for all collection, handling, storage, air monitoring, and disposal of debris and wash water, all personal protective equipment, and all personal hygiene requirements, and all equipment, material and labor necessary for the daily collection of the blast debris into specified containers; and any measures necessary to ensure conformance to all safety and environmental regulations as directed by the Engineer.

Painting Containment will be paid at the lump sum contract price and will be full compensation for the design, materials, installation, maintenance, and removal of the containment system.

Front St Bridge Rehabilitation

ST-38

City of Wilmington

Payment will be made under:

Pay Item

Clean and Paint Structural Steel
Pollution Control
Painting Containment

Pay Unit

Lump Sum
Lump Sum
Lump Sum

CLEANING AND PAINTING EXISTING BEARING PLATES**(02-11-19)****GENERAL**

Thoroughly clean the exposed surfaces of all bearing plates, anchor bolts, nuts and washers on the existing structure in accordance with Subarticle 442-7(B) of the *Standard Specifications*. The Engineer shall approve the cleaning of each unit before painting.

After cleaning, apply a touch up coat of organic zinc repair paint to the steel followed by a complete coat of the same paint. Coating material used shall be in accordance with Article 1080-7 of the *Standard Specifications*. The color of the paint shall match Subarticle 1080-9(B)(3) of the *Standard Specifications*.

MEASUREMENT AND PAYMENT

Cleaning and Painting Existing Bearing Plates will be measured and paid for each bearing location. The price per each bearing will be full compensation for all labor, materials and equipment necessary to complete the work. All work shall be done in a manner satisfactory to the Engineer.

Payment will be made under:

Pay Item**Pay Unit**

Cleaning and Painting Existing Bearing Plates

Each

BRIDGE JACKING**(SPECIAL)****DESCRIPTION**

Bridge jacking at bent 1 is to replace existing Span 1 bearings, as described on the plans. This work shall consist of furnishing all engineering, labor, equipment, and materials necessary for construction and subsequent removal of jacking support system, including jacks, jack supports, shims and all necessary blocking. Included under this item shall be all work to raise, support the existing structure, and lower the structure once work requiring jacking has completed, as specified on the plans and as noted herein.

Bridge jacking and associated bearing replacements shall be conducted after the removal of the existing deck and prior to construction of the replacement deck and overhang.

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

UTILITY COORDINATION

Utility owners with active utilities on the bridge shall be notified by the contractor of the jacking operation at least 30 days before the operation begins.

SCOPE OF WORK

Work for bridge jacking includes calculating existing bridge loads, designing proper strength jacking scheme, evaluating stresses imposed on the bridge members, any strengthening measures required to support the bridge on the jacks, setting blocking and jacks, jacking bridge girders, mechanically locking jacks, and lowering bridge spans onto new bearing assemblies. Any bearing reactions or forces provided on the plans are provided for the convenience of the contractor and shall not relieve the contractor of the responsibility to determine jacking loads. The contractor shall have no claim whatsoever against the City of Wilmington or AECOM regarding the loads, reactions, and/or beam deflection forces listed on the plans.

Submit calculations, working drawings, and jacking procedure to the Engineer for review and approval prior to the start of work. Calculations and jacking procedure shall account for all loads expected while bridge is jacked or temporarily supported, including construction loads. Calculations and working drawings shall specify imposed loads due to various heights of jacking. Working drawings and all calculations (for determination of all applied loads, for design of the jacking system, to evaluate stresses imposed on the bridge members, any strengthening elements required, and any other necessary calculations) for the required jacking system shall be sealed by an engineer licensed in the State of North Carolina. Included in the submittal, the Contractor shall submit all relevant information about the jacking system to be used.

Prior to bridge jacking, complete any strengthening measures required to support the bridge on the jacks. While in the raised condition, follow bridge plans for bearing replacement and any other work that may be required. After all repairs requiring bridge jacking are completed, lower the bridge onto the bearing assemblies. Complete repair work, as needed.

Bridge jacking will be designated as one of two jacking arrangements, as follows:

Type I

Type I Bridge Jacking shall be applicable for jacking at individual beam or bearing locations. On a particular bridge bent or end bent, there might be more than one Type I Bridge Jacking.

When jacking individual beam or bearing locations, all adjacent bearings of beams not being jacked may be loosened to decrease the resistance of the deck slab during jacking. The maximum differential between adjacent beams that are being jacked is 1/8". Should the jacking of an individual beam require the jacking of adjacent beams to reduce stresses or damage in the bridge, the jacking of the individual beam and adjacent beams shall be considered one Type I Bridge Jacking. All bearings loosened shall be tightened back after repair operations are completed and the jacks and blocking have been removed.

Type II

Type II Bridge Jacking shall be applicable for jacking an entire span end (i.e., all beams at one time) on a bent or end bent. At a bent or end bent, all beams shall be jacked a uniform amount. Between adjacent beams in a bearing line, the maximum difference in jacking height shall not exceed 1/8". At bents with no expansion joint (continuous units), all beams at the substructure shall be jacked together. Between all bearings in a line, the maximum difference in jacking height shall not exceed 3/8". Electronic monitoring shall be employed to measure the jacking heights.

Type I Bridge Jacking will be permitted if the contractor can demonstrate constructability without damaging existing beams or waterline. In this event, no additional payment or measurement will be made.

BRIDGE JACKING REQUIREMENTS

All jacking operations shall be Type II except as noted above. Jacking heights shall be kept to a minimum.

Jacking heights shall not exceed 2in without approval by the Engineer. Jacking operations, including jacking height, shall be within the range detailed in the working drawings and calculations. Deviances from the calculations, including, but not limited to, range of jacking, load patterns, jacking support locations, and other aspects as determined by the engineer, shall not be permitted without specific approval by the Engineer and may require re-submittal of working drawings and calculations.

Design rigid jacking falsework to prevent deflections during jacking operations.

Shim or block the superstructure to prevent superstructure displacement in the event of a jacking system failure.

Use displacement control during lifting and lowering operations. Measure movements to the nearest 1/32 of an inch. Ensure all jacks reach their target lift height at the same time.

Maintain an electronic history of the jacking operation that includes load, displacement, and hydraulic pressure as a function of time for each jack. Submit the history to the Engineer following the completion of the bearing replacement at each bent.

Use jacks that are rated at 1.5 times the calculated service lifting load.

Care shall be taken to prevent damage to the existing structure during jacking operations. The jacking falsework shall be designed to prevent damage to the cap. Any damage caused to the existing structure shall be repaired to the satisfaction of the Engineer.

Maintain the waterline in its original position (vertical and horizontal) during jacking operations.

BASIS OF PAYMENT

Bridge Jacking (Type II) payment will be made at the price bid for each set-up to complete bridge jacking as shown in the contract plans. The price per each jacking set-up required will be full compensation for designing proper strength jacking scheme (calculations, working drawings, and jacking procedure), all materials, equipment, tools, labor, and incidentals necessary to complete the work of this scope, including any jacking frames, and jacking plates.

Pay Item	Pay Unit
Type II Bridge Jacking	Each

TEMPORARY UTILITY SUPPORT**(SPECIAL)****GENERAL**

This work shall consist of furnishing all labor, equipment, and materials necessary to design and install a temporary utility support system. The temporary utility support system shall support the existing 10 inch diameter (approximate) waterline suspended from the left overhang adjacent to Beam 1. Formwork may also be supported by the temporary utility support if considered during the design and approved by the Engineer / City and utility owner

The temporary support shall retain the waterline in its existing position (prior to construction) and shall accommodate incremental adjustment during jacking operations (if attached to beams) to maintain the position of the waterline.

The schematic shown in the plans is not a working drawing. Other means of supporting the waterline may be proposed by the Contractor and are subject to CFPUA approval. Ground-mounted temporary supports are permitted, provided that they do not impede with construction operations, provide the required clearances for pedestrian and vehicle access under span 3. A combination of beam and ground-mounted support is permissible.

The contractor shall submit signed and sealed working drawings and calculations of the temporary utility support by a licensed Professional Engineer in the state of North Carolina to the Engineer and Cape Fear Public Utility Authority (CFPUA) for review and approval. Allow a minimum of six (6) weeks for review. The Contractor shall conduct a pre-construction meeting with a representative of CFPUA and the inspector prior to installation of the approved temporary support system.

Working drawings shall include, at a minimum, plan and elevation of the waterline and its support system along the entire length of the bridge, connection details, means for accommodating vertical and horizontal adjustment of the waterline after erection of the system and while the temporary system is in use, positive vertical and lateral restraint of the waterline to satisfy applicable codes and standards as referenced in the "Utility Support System" special provision, and all other details, materials, and methods required to construct, maintain, and remove the temporary support system.

Provide for a means to shim or adjust the waterline. The waterline should not settle when its weight is transferred from the existing bridge deck support hangers to the temporary support system.

The waterline shall be supported, at a minimum, to provide equal support as is provided in its existing condition. The Contractor's engineer of record for the temporary support is responsible for determining adequate support of the waterline.

The contractor is responsible to repair any damage to the waterline during construction at no additional cost.

If at any time during construction, the waterline becomes compromised, notify the Engineer and CFPUA immediately. After constructing the temporary support system, obtain approval from CFPUA prior to removing the existing hangers and transferring the waterline's weight to the temporary system.

Do not remove the temporary system until the permanent utility support system is constructed and approved by CFPUA.

Temporary works shall conform to *AASHTO Guide Design Specifications for Bridge Temporary Works*, latest edition and the project special provision for falsework and formwork. Consider wind loading due to hurricanes when designing the temporary support system.

BASIS OF PAYMENT

The cost of the *Temporary Utility Support System* will be paid at the lump sum contract price and will be full compensation for the design, materials, and installation and removal of the temporary utility support system.

Pay Item	Pay Unit
Temporary Utility Support System	Lump Sum

UTILITY SUPPORT SYSTEM**(SPECIAL)****GENERAL**

This work shall consist of furnishing all labor, equipment, and materials necessary to design and install the permanent utility support system. The utility support system shall support the existing 10 inch diameter (approximate) waterline suspended from the left overhang adjacent to Beam 1 both vertically and laterally. The contractor shall verify the utility size, location, and location of pipe segment joints (bells) before designing, purchasing or fabricating any utility support system components.

The contractor shall take care not to disturb the utility during installation; the utility is to remain operational throughout the project duration.

All design and construction of utility supports shall comply with the Cape Fear Public Utility Authority (CFPUA) Standard Technical Specifications, Materials Specifications Manual, Standard Construction Details, and Development Process and Procedures Manual, and any applicable codes, laws, and ordinances of the jurisdiction, recognized industry standards, and sound engineering and construction practice.

SUBMITTALS

Submit all of the following to the Engineer and CFPUA for review and approval before purchasing or fabricating any utility support system components. Allow at least six (6) weeks for the review process.

(A) Design Calculations and Working Drawings: Provide design calculations and working drawings for the support system signed and sealed by an Engineer licensed in the state of North Carolina. Design the lateral support system to minimize bending in the web. Welding to existing beams is not permitted. Do not install lateral bracing in conflict with intermediate or end diaphragms. The designer of the working drawings shall serve as the Engineer of Record for the support system.

(B) Material Specifications: Provide technical data sheets and material properties for each assembly component.

MATERIALS

All hanger assembly components shall be hot dipped galvanized in accordance with Section 1076 of the *Standard Specification*.

WORK

Vertical supports shall be attached to anchors in the proposed bridge deck overhang that are cast-in to the deck. Drilled-in anchors will not be allowed. The anchors shall be specified in the working drawing design.

Lateral supports shall be attached to the existing beam. Specify in the working drawings the member and connection sizes and details. Field drill holes as required through the existing beam web prior to painting the beams. Do not drill more than 2 holes at each location. Holes shall be drilled in approximately the middle 1/3 of the beam web depth. Do not damage intermediate or end diaphragms. Do not locate holes within 18” of the end of a beam.

MEASUREMENT AND PAYMENT

The cost of the utility support system will be paid at the lump sum contract price and will be full compensation for the design, materials, and installation of the permanent utility support system.

Pay Item	Pay Unit
Utility Support System	Lump Sum

EPOXY COATING AND DEBRIS REMOVAL**(SPECIAL)****GENERAL**

This work applies to the top surface of End Bent 1 cap (cleaning and epoxy coating) and all intermediate bent caps (cleaning only). Pressure wash and clean the top of all interior bents and End Bent 1 cap. Epoxy coat the top of the End Bent 1 cap after bearing cleaning and painting work is completed.

Debris removal from the top of bent caps shall be incidental to epoxy coating the top of bent caps.

Use a Type 4A flexible and moisture insensitive epoxy coating in accordance with Section 1081. Provide a Type 3 material certification in accordance with Article 106-3 showing the proposed epoxy meets Type 4A requirements.

Apply the epoxy protective coating to the top surface area, including chamfer area of the End Bent 1 cap, excluding areas under bearings and the curtain wall.

SURFACE PREPARATION

Thoroughly clean all dust, dirt, grease, oil, laitance and other objectionable material from the concrete surfaces to be coated. Air blast all surfaces immediately before applying the protective coating. Dispose all waste properly off-site.

Use only cleaning agents preapproved by the Engineer.

APPLICATION AND SURFACE FINISH

Apply epoxy protective coating only when the air temperature is at least 40°F and rising, but less than 95°F and the surface temperature of the area to be coated is at least 40°F. Remove any excess or free standing water from the surfaces before applying the coating. Apply one coat of epoxy protective coating at a rate such that it covers between 100 and 200 sf/gal.

Under certain combinations of circumstances, the cured epoxy protective coating may develop an oily condition on the surface due to amine blush. This condition is not detrimental to the applied system.

Apply the coating so the entire designated surface of the concrete is covered and all pores are filled. To provide a uniform appearance, use the exact same material on all visible surfaces.

MEASUREMENT AND PAYMENT

Epoxy Coating and Debris Removal will be paid for lump sum and shall be full compensation for furnishing all material, labor, tools and equipment necessary for cleaning and coating the tops of the End Bent 1 cap. Cleaning and debris removal and disposal from the top of caps shall be incidental to epoxy coating.

Front St Bridge Rehabilitation

ST-48

City of Wilmington

Pay Item

Epoxy Coating and Debris Removal

Pay Unit

Lump Sum

STEEL REPAIRS**(SPECIAL)****1.0 DESCRIPTION**

This provision addresses certain repairs made to structural steel throughout the existing steel superstructure. Work includes installing web repair plates at beam ends, installing transverse stiffeners at beam ends, and installing a web gap retrofit at the end diaphragm-girder connection. The various specific repair/retrofit items and processes are described below with the respective pay items.

Steel Repairs noted are based on the 2024 Routine Inspection Report; actual conditions may vary. The Engineer shall inspect the structure as necessary to confirm the locations of Type I and Type II repairs. Locations indicated in the plans are provided for the convenience of the Contractor. The Contractor shall have no claim whatsoever against the City or AECOM for differences in location and description of the repair areas shown in the Contract documents.

Waste material shall be properly disposed of off-site.

2.0 MATERIALS

Steel bolts, nuts, washers, and plates shall meet the specifications shown on the plans. The epoxy mastic used for Type I and Type II repairs shall be compatible with the paint system used for the painting of existing steel and shall be listed on the NCDOT Approved Products list or be approved by the Engineer.

Steel angles used for the web gap retrofit shall be ASTM A36.

3.0 EQUIPMENT

Provide equipment necessary to complete the work. This includes grinders, saws, wirewheel brushes, drills, and other tools. For certain repairs, the Contractor shall assist the Engineer in cleaning and inspecting the area before and/or after the repair is complete.

Flame-torch cutting, plasma cutting, or similar means of cutting steel will not be permitted.

Punching holes through existing steel will not be permitted.

All tools shall be secured during repairs as required to prevent accidental damage to the existing structure, in addition to all applicable safety laws and requirements of the Contract.

All grinding shall be performed in a manner that prevents accidental gouging of the steel beyond the desired depth. All grinders shall be equipped with guards or similar device to prevent accidental over-grinding.

All drills, bits, hole-saws, and metal saws shall be capable of making the required cuts as indicated in the plans or directed by the Engineer under the applicable pay item, completely

though the material in one pass. Equipment shall be secured to prevent accidental damage to surrounding materials. Equipment shall have guards to prevent over-cutting. All drilled holes and cuts shall proceed slowly to prevent over-heating of steel. Pilot holes may be drilled as needed with the approval of the Engineer.

Air blasting shall be permitted for cleaning existing steel at repair locations. Air blasting shall include non-corrosive blasting media. Such media shall be contained.

The Contractor shall submit to the Engineer a list of all equipment used in the repair/retrofit. Any equipment that contacts the steel shall be submitted specifically for this review. The Contractor shall indicate which repairs the equipment will be used for and shall demonstrate prior experience with each tool, in conjunction with the requirements below for qualified personnel.

4.0 QUALIFIED PERSONNEL AND WORKMANSHIP

Only qualified personnel shall perform the work. A person who performs the work uses the tools and techniques as shown on the Contract plans and at the direction of the Engineer to make the repairs. Supporting individuals, who may be involved in the process but are not directly performing the work, are not required to be submitted as part of this review but are still subject to all other requirements of the contract and all applicable laws. The Contractor shall submit to the Engineer for review the names of the individuals to perform the steel repairs. Each qualified individual shall have performed work of a similar manner within the past 5 years. The Engineer shall review all submitted names. For each name submitted, the Contractor shall indicate which repair(s) the individual is designated to perform. The same person may be submitted to perform multiple repairs, and more than one person may be submitted for an individual repair. A maximum of sixteen names may be submitted for review. Substitutions may not be made without the permission of the Engineer. Names shall be submitted a minimum of 6 weeks prior to the scheduled work beginning.

All steel repair work shall be performed in a workmanlike manner. The individual(s) performing the work shall possess the experience and skill required to complete the repairs. The Contractor shall comply completely with all directions of the Engineer and shall ensure that the Engineer is present at all times during the set-up, performance of the repair, and break-down procedures.

All repair work shall be contained and no material, including removed steel, rust, paint, or blasted material shall be allowed to fall below the bridge.

If, at any time during a repair, the stability of the structure appears to be compromised, work shall immediately stop and the Engineer notified.

5.0 PLAN OF WORK

For each Repair, the Contractor shall submit to the Engineer for review a repair work plan. This plan shall indicate, at a minimum, the approved names of the individuals performing the repair work, the schedule for when the work is proposed to take place, a description of all access equipment and falsework required, the approved specific equipment to be used,

any containment systems necessary, repair process(es), and any other aspect or procedure of the repair as deemed necessary by the Engineer. Limitations of the repair equipment and processes shall be provided, including weather, temperature, and other factors which may impact the progress of the repair work. The Plan of Work shall be submitted at a minimum of 2 weeks prior to the scheduled repair work beginning. The work plan must describe each pay item distinctly, but items that pertain to each in the same way may be combined in the work plan.

6.0 TYPE I REPAIR

Type I Repair consists of bolting a repair plate to the web at beam end locations shown on the plans and at locations directed by the Engineer. The repair shall be performed at the direction of the Engineer, and, unless directed otherwise, shall follow the repair process shown on the Contract plans.

Prior to beginning work, the Contractor shall photograph the repair area.

After completion of the work, the Engineer shall inspect the repair area and the Contractor shall make any incidental repairs or finishing tasks as necessary to the satisfaction of the Engineer. The final repaired area shall be photographed. All photographs shall be submitted to the Engineer.

7.0 TYPE II REPAIR

Type II Repair consists of bolting transverse stiffeners to the beam web at locations shown on the plans and as directed by the Engineer. The repair shall be performed at the direction of the Engineer, and, unless directed otherwise, shall follow the repair process shown on the Contract plans.

Prior to beginning work, the Contractor shall photograph the repair area.

After completion of the work, the Engineer shall inspect the repair area and the Contractor shall make any incidental repairs or finishing tasks as necessary to the satisfaction of the Engineer. The final repaired area shall be photographed. All photographs shall be submitted to the Engineer.

8.0 WEB GAP RETROFIT

Web Gap Retrofit consists of adding a bolted angle connection between the existing end diaphragm connection plate and the girder top flange. Do not perform this repair at intermediate diaphragm locations away from the intermediate bents. The repair shall be performed at the direction of the Engineer, and, unless directed otherwise, shall follow the repair process shown on the Contract plans.

Prior to beginning work, the Contractor shall photograph the repair area.

After completion of the work, the Engineer shall inspect the repair area and the Contractor shall make any incidental repairs or finishing tasks as necessary to the satisfaction of the

Engineer. The final repaired area shall be photographed. All photographs shall be submitted to the Engineer.

9.0 MEASUREMENT AND PAYMENT

All steel repairs shall be measured and paid for as follows. For each repair, payment shall be full compensation for all the work of the repair, including labor, tools, equipment, materials, and incidentals necessary to complete the repair work, and all access equipment, access measures, and preparatory work.

For *Type I Repair*, *Type II Repair*, and *Web Gap Retrofit*, measurement shall be for each repair/retrofit as described in the plans, including all incidental work at that repair/retrofit location. Work shall be paid for at the Contract Unit Price per each repair for “Type I Repair”, “Type II Repair”, and “Web Gap Retrofit”, completed by the Contractor and accepted by the Engineer.

Additional locations of *Type I Repairs* to be completed as directed by the Engineer shall be paid for at the Contract Unit Price bid for the “Type I Repair” pay item.

Pay Item	Pay Unit
Type I Repair	Each
Type II Repair	Each
Web Gap Retrofit	Each

PARTIAL REMOVAL OF EXISTING STRUCTURE**(SPECIAL)****GENERAL**

Remove the existing deck, overhang sidewalk, and barrier rail from the structure. Saw-cut the existing end posts and curtain walls at the bottom of deck elevation as shown on the plans. Remove end posts above the saw-cut line and retain the existing curtain walls and end posts below the saw-cut line. Do not remove any structural steel members. Remove substructure concrete only at Bent 1 bearing pedestals as shown on the plans. Remove only existing bearing devices at the Bent 1 end of Span 1 beams as shown on the plans.

The Contractor shall take great care to avoid damaging the top flange and shear studs of existing girders during partial structure removal. Any damage to the retained elements of the structure shall be repaired to the satisfaction of the Engineer at no additional cost to the City.

Contact the utility owner prior to commencing any demolition work impacting the utility. **The existing utility in the west overhang shall not be removed or disturbed during partial structure removal activities.** The Contractor shall temporarily support the utility as shown on the plans and described in the special provisions. Contact the utility owner immediately should any damage to the utility occur. All damage to the utility caused by removal of the existing structure shall be repaired to the satisfaction of the utility owner and the Engineer at no additional cost to the contract.

The Contractor shall protect pedestrian and vehicular traffic below the structure at all times as shown on the plans and described in the special provisions.

The Contractor is responsible for following all federal and state safety requirements and obtaining any permits required by the local jurisdiction.

Dispose all material properly off-site. Do not stockpile debris in areas accessible to the public.

The Contractor shall coordinate with Cape Fear Community College (CFCC) prior to commencement of any work as described on the plans and in accordance with the Right of Entry agreement between the City of Wilmington and CFCC.

SUBMITTALS

Prior to removal, prepare and submit to the Engineer for review and acceptance a demolition plan indicating the methods and sequence of demolition. The Contractor shall be responsible for the methods and sequence of demolition, including effects of the overall stability of each element being removed. At a minimum, the partial demolition plan shall include:

- a) The name of the Contractor's on-site employee designated in responsible charge of all removal operations

- b) The removal method and sequence of removal for each individual element, including staging of materials
- c) Equipment type and locations of equipment on the structure or adjacent roadways during the removal operations
- d) Temporary bracing or supports to be used
- e) Details and locations of protective covers and other measures to ensure that people and property will not be endangered or damaged as a result of the removal operations.
- f) Proposed methods of removal or containment of loose debris from structures with pedestrian and vehicular traffic below.

Have the drawings and design calculations prepared, signed, and sealed by a North Carolina Registered Professional Engineer. The approval of the Engineer will not relieve the Contractor of the responsibility and liability to safely and satisfactorily remove the appropriate elements of the structure.

MEASUREMENT AND PAYMENT

Payment will be full compensation for the demolition plans and all items required to remove the existing structure as described in this special provision and shown on the plans.

Payment will be made under:

Pay Item	Pay Unit
Partial Removal of Existing Structure	Lump Sum

SURVEY EXISTING STRUCTURE**(SPECIAL)****GENERAL**

The Contractor shall survey the existing structure to ensure the top of the replacement deck maintains the same vertical profile as the existing deck. The surveyor shall be a licensed Professional Land Surveyor in the State of North Carolina.

All elevations shown on the plans are for the Contractor's convenience only and are approximate. The elevations shown on the plans shall not relieve the Contractor from the responsibility to provide elevations at locations described in the plans and this Special Provision.

The Contractor shall obtain elevations at the following locations prior to removal of the deck and/or sidewalk:

- a) Top of deck along the gutterline and centerline of the beams at beginning of bridge, end of bridge, intersection with intermediate bent centerlines, and at intermediate stations at 10ft intervals (e.g. Sta. 12+10.00, Sta. 12+20.00, etc.)

The Contractor shall obtain elevations at the following locations after the removal of the deck:

- a) Top of top beam flange at beam ends and midspan

Use the top of top flange beam elevations in conjunction with the anticipated dead load deflections provided on the plans to set formwork so that the final top of deck elevations will match the existing deck elevations.

Provide all elevations to a minimum of two decimal places.

MEASUREMENT AND PAYMENT

Payment for surveying the structure as described on the plans and in this Special Provision shall be included in the "Reinforced Concrete Deck Slab" pay item. No additional payment will be made.

MISCELLANEOUS STRUCTURE DETAILS**(SPECIAL)****GENERAL**

The Contractor shall submit concrete mix design to the Engineer at least 35 days prior to proposed use. Mix proportions shall meet the design requirements of Section 1000 of the *Standard Specifications*.

Perform welding in accordance with Section 1072-18 of the *Standard Specifications*.

Shop welding shall be performed in an AISC certified shop by welders qualified by the Bridge Welding Code or other applicable AWS Welding Code as determined by the Engineer.

Field welders shall hold qualification from NCDOT to perform field welding.

Submit all welder and shop qualifications to the Engineer at least 14 days prior to performing any welding.

STUB COLUMN**(SPECIAL)****GENERAL**

The Contractor shall fabricate and install stub columns as shown in the contract plans.

At each location requiring a stub column, the Contractor shall field measure the total height required to keep the existing beams' bottom flange elevation the same before and after construction. The Contractor shall submit a shop drawing for each location. Differences in height from that shown on the plans shall be reported to the Engineer.

Perform welding in accordance with Section 1072-18 of the *Standard Specifications*. The top plate, pipe, and bottom plate of the Stub columns shall be shop welded. Field welding of the stub column shall not be permitted.

Shop welding shall be performed in an AISC-certified shop by welders qualified by the Bridge Welding Code or other applicable AWS Welding Code as determined by the Engineer.

Submit all welder and shop qualifications to the Engineer at least 14 days prior to performing any welding.

MATERIALS

The 10" diameter pipe shall be Extra Strong ASTM Specification A53 Grade B or A501, or approved equal, as determined by the Engineer.

All structural steel plates shall be conform to AASHTO M270 Grade 50 or approved equal, as determined by the Engineer.

All steel shall be galvanized in accordance with Section 1076 of the *Standard Specifications*. Any surface damaged during delivery, storage, or installation shall be prepared and painted with two coats of organic zinc repair paint, to the satisfaction of the Engineer and at no additional cost to the City.

Stub Columns shall be protected during storage from damage to the protective coating.

INSTALLATION

Prior to installing anchor bolts, align stub columns in the proper location as shown on the plans or as required to maintain the existing centerline of bearing under the beam. If the location deviates from that shown on the plans, report the difference to the Engineer before proceeding. Slots in the lower plate allow for field adjustment of anchor bolts to avoid conflict with existing cap reinforcing. Ensure that the anchor bolts are located within the exterior main longitudinal

reinforcing of the cap and are not installed into side-face cover concrete. Locate and field-mark location of adhesive anchors.

Determine if the cap surface must be prepared prior to installing adhesive anchors. If grout is required to provide a level and smooth surface, perform any surface preparation (scarification) prior to installing anchors. Install anchors prior to placing grout.

Prepare the cap surface to support the stub column. Remove any unsound concrete within the lower plate area extending 3" beyond the limits of the plate. If removing unsound concrete, saw cut neat lines that are oriented with the cap or beam. Saw cut a minimum of $\frac{3}{4}$ " to avoid feathering the grout.

The bearing surface beneath the lower plate shall be smooth and level. Use an approved grout as necessary to provide a smooth, level surface. Roughen the top surface of the cap if applying grout. Grout shall be considered an incidental cost to the pay item.

Install adhesive anchors in accordance with the manufacturer's recommendations.

Cure the grout before proceeding with Stub Column installation and before transferring beam weight onto the bent cap. If grout is to be used, protect the threads of the adhesive anchors. Do not damage the adhesive anchors during grout placement.

The Contractor shall permit the Engineer to inspect the prepared surface of the cap prior to setting beams. The Contractor shall make any repairs or adjustments to the Engineer's satisfaction to create a level, smooth beam seat that does not permit the stub column to bear unevenly across its surface. A $\frac{1}{8}$ " neoprene preformed bearing pad shall be placed beneath the stub column.

MEASUREMENT AND PAYMENT

Payment for *Stub Column* will be made on a lump sum basis and shall include all costs for measuring the required heights, shop drawings, fabrication, delivery, storage, and installation, including cap preparation, adhesive anchor bolts, and preformed bearing pad. Any damage to the existing bridge shall be repaired at no additional cost to the City.

IMPACT ATTENUATOR UNITS, TYPE TL-2 :

(4-20-04)(Rev. 8-20-24)

SP8 R75

Description

Furnish and install impact attenuator units and any components necessary to connect the impact attenuator units in accordance with the manufacturer's requirement, the details in the plans and at locations shown in the plans.

Materials

Furnish attenuator units listed on the NCDOT APL. Units shall not be modified by the manufacturer and installer once approved and on the NCDOT APL. Products shall be new or in like-new condition. Damaged attenuators shall not be installed.

Prior to installation the Contractor shall submit to the Engineer certified working drawings and assembling instructions from the manufacturer for each impact attenuator unit in accordance with Article 105-2 of the *Standard Specifications*.

Construction Methods

Perform installation in accordance with the plans and details and assembling instructions furnished by the manufacturer.

Measurement and Payment

Impact Attenuator Unit, Type TL-2 will be measured and paid at the contract unit price per each. Such prices and payment will be full compensation for all work covered by this provision including, but not limited to, furnishing, installing and all incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Impact Attenuator Units, Type TL-2__

Pay Unit

Each

PURCHASE PORTABLE CONCRETE BARRIER (ANCHORED) AND ATTENUATOR
(SPECIAL)

GENERAL

After completion of the project, the City may, at its sole discretion, elect to purchase the installed portable concrete barrier and/or attached attenuator, after they have been accepted as-installed by the City.

Install the Portable Concrete Barrier (Anchored) (herein after referred to as “PCB-A”) and purchase Impact Attenuator Unit, Type TL-2 (herein referred to as “attenuator”) in accordance with the plans, standard drawings, and *Standard Specifications*.

If the City elects to purchase the PCB-A and attenuator in its installed state at the completion of the project, the Contractor is relieved of his responsibility to remove the PCB-A that would have been required under the Standard Specifications, and the contractor will not be required to issue any credit to the City.

The Contractor shall provide a 45 calendar day minimum advance written notice to the City prior to the scheduled removal. The City shall provide a written response selecting whether to purchase the PCB-A and/or attenuator as installed within 14 calendar days of the notice. All written notices shall include a description of the barrier to be transferred through the sale, including lengths, and stations ranges, and condition of the barrier and attenuator.

If the City elects to purchase the PCB-A and attenuator, the Contractor shall leave the PCB-A as-installed at the final acceptance and completion of the project. At that time, the barrier, anchors, pins, attenuators and all attachments shall become the full property of the City and the Contractor shall have no further claim to the materials.

If the City does not elect to purchase the PCB-A and/or attenuator, the Contractor shall remove the PCB-A and/or attenuator at the completion of the project at no additional cost to the City. The Contractor shall have no claim to additional compensation for any pay item if the City does not elect to purchase the PCB-A and/or attenuator.

MEASUREMENT AND PAYMENT

Payment for the furnishing and installing the Portable Concrete Barrier (Anchored) and attenuator shall be in accordance with the pay items and associated specifications.

Payment for *Purchase Portable Concrete Barrier (Anchored)* shall be measured per linear foot of installed barrier and required anchors, pins, and attachments (excluding the attenuator) in accordance with the various applicable specifications and plans that will become the City’s property.

Payment for *Purchase Impact Attenuator Units, Type TL-2* shall be measured for each properly-installed unit that will become the City’s property.

The Contractor may invoice the City separately for the purchase of the PCB-A and/or attenuator upon receipt of written notice that the City will purchase. These pay items may be removed from the contract at the City’s discretion with no right to claim additional compensation or renegotiation of any pay items.

<u>Pay Item</u>	<u>Pay Unit</u>
Purchase Portable Concrete Barrier (Anchored)	Linear Foot
Purchase Impact Attenuator Units, Type TL-2	Each

STATE OF NORTH CAROLINA

RIGHT OF ENTRY

NEW HANOVER COUNTY

TO: City of Wilmington, North Carolina

**RE: 504 Nutt Street and 502 N. Front Street
Wilmington, NC 28401
R04716-006-004-000 and R04716-007-003-000**

The Trustees of Cape Fear Community College, a North Carolina body politic (hereinafter referred to as the "Property Owner") as the record owner of the real property legally described in Deed Book 4659, Page 713, New Hanover County Registry, which is incorporated herein by reference as if fully restated, grants permission and the right to enter and re-enter the above-referenced property to the City of Wilmington, North Carolina, its employees, authorized agents, contractors, subcontractors, and assigns (hereafter referred to as the "City") for the purpose of: accessing the area under the N. Front Street bridge for a bridge rehabilitation project.

In consideration of granting this Right of Entry is the avoidance of unnecessary delay to the Property Owner, protection of the Property Owner's property, and other good and valuable consideration the receipt of which is hereby acknowledged. This Right of Entry expires eighteen (18) months after the date of execution.

Any and all construction, repair, and/or maintenance activities undertaken on the premises conducted by the City shall be conducted in a manner so as not to unreasonably impede the ongoing business activities being conducted on the premises by the Property Owners and its successors or assigns.

By executing this Right of Entry, the Property Owner agrees as follows:

1. The City may enter and traverse the above-described properties to gain access to the area underneath the N. Front Street bridge that is located between the two properties.
2. The Property Owner hereby releases and forever discharges the City from any and all liability for any loss, claim, interest, or demand which the Property Owner may now have or might otherwise hereinafter have against the City on account of, connected to, or arising out of the actions set forth in this Right of Entry, including any and all rights related to trees or other obstructions reasonably determined.
3. The Property Owner agrees and understands that nothing herein is intended nor should be construed to create any type of employer/employee nor principal/agent relationship between the City and the Property Owner.

4. Prior to any closure of either property, a minimum of seven (7) day notice must be provided to the Property Owner and positive confirmation from Property Owner must be received.
5. Parking deck access can be closed any day between the hours of 11:00 p.m. and 6:00 a.m., most weekends, and any days that the college is closed per its academic calendar which can be found at: <https://cfcc.edu/academic-resources/academic-calendar/>.
6. Valley access from Nutt Street can be closed for longer durations with advanced arrangements with Property Owner to avoid coinciding with various college or community events that requires vehicle access under the bridge.
7. A flagging operation to maintain parking deck access and valley access during construction is permitted by the Property Owner. There will be no time restrictions if a flagging operation is utilized.

This the 15 day of January, 2025.

Property Owner:

Trustees of Cape Fear Community College

By: [Signature] (Seal)

Printed Name: Larry Wilson

Title: Chair, CFCC Board of Trustees

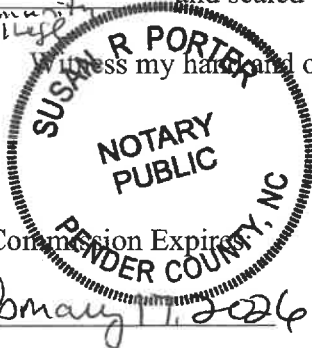
STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

I, Susan R. Porter, a Notary Public for New Hanover County, North Carolina, certify that Larry Wilson, personally appeared before me this day and acknowledged that he or she is Chair, Board of Trustees of Cape Fear Community College, a North Carolina body politic, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by him/her as its Board Chair, Trustees of Cape Fear Community College and sealed with its corporate seal.

Witness my hand and official seal, this the 15 day of January, 2025.

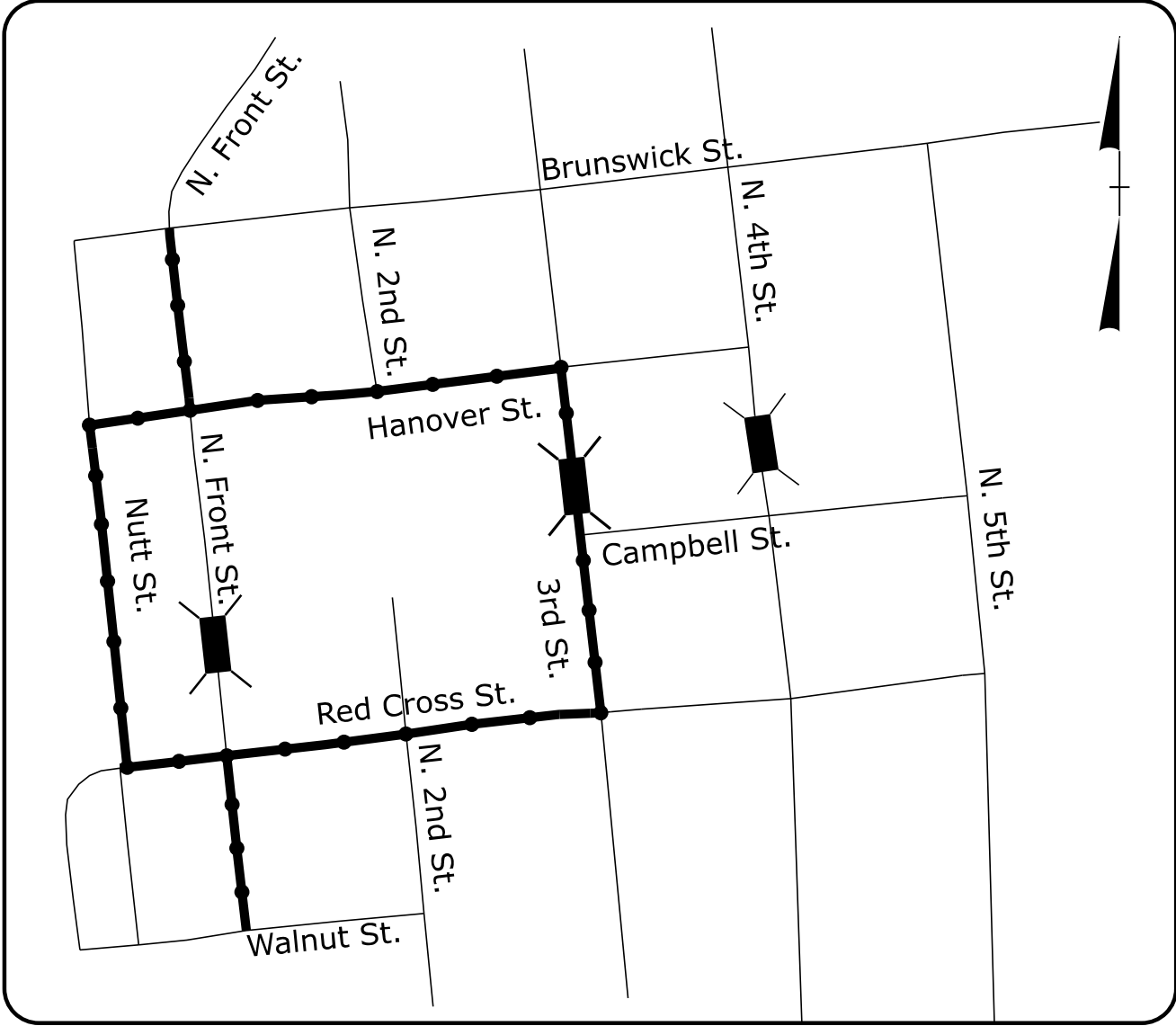
My Commission Expires

February 11, 2026



Susan R Porter
Notary Public

PROJECT: FRONT ST



VICINITY MAP

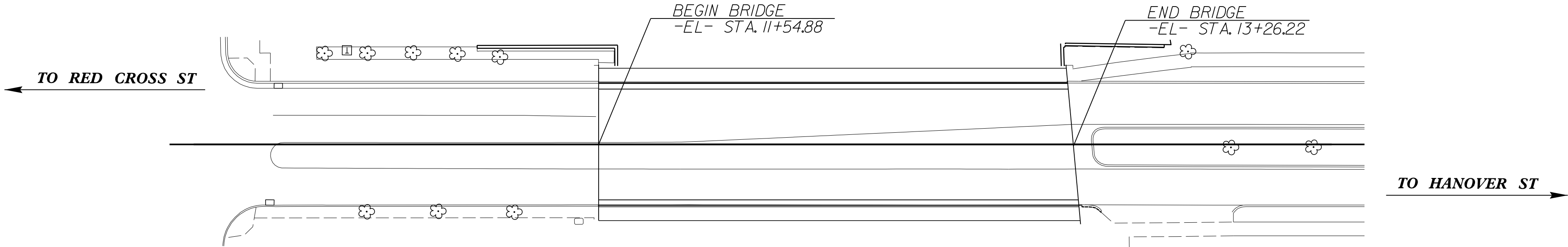
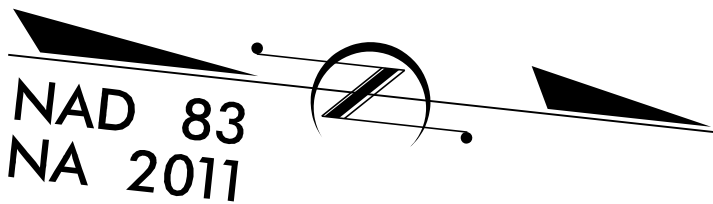
DETOUR ROUTE NOT TO SCALE

CITY OF WILMINGTON

LOCATION: BRIDGE ON FRONT ST OVER
CAPE FEAR COMMUNITY COLLEGE WALKWAY
AND GARAGE ACCESS

TYPE OF WORK: BRIDGE REHABILITATION,
WORK ZONE TRAFFIC CONTROL,
& PAVEMENT REPAIRS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	FRONT ST	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



INDEX OF SHEETS:

DISCIPLINE

SHEET NO.

TRANSPORTATION MANAGEMENT PLAN TMP-01 THRU TMP-05

PAVEMENT MARKING & SIGNING PMP-01

ROADWAY R01

STRUCTURES S-01 THRU S-27

THIS PROJECT SHALL ADHERE TO THE 2024 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, HEREFTER REFERRED TO AS THE STANDARD SPECIFICATIONS. ANY REFERENCE IN THE STANDARD SPECIFICATIONS TO NCDOT, ENGINEER, OR OWNER SHALL REFER TO THE CITY OF WILMINGTON.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

PROJECT LENGTH

STRUCTURE LENGTH = 0.032 MI

Prepared in the Office of :

AECOM

NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd., Suite 200
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

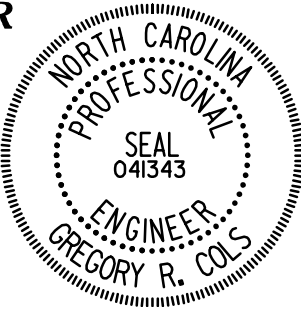
2024 STANDARD SPECIFICATIONS

LETTING DATE:
FEBRUARY 2025

GREGORY COLS, P.E.
PROJECT ENGINEER

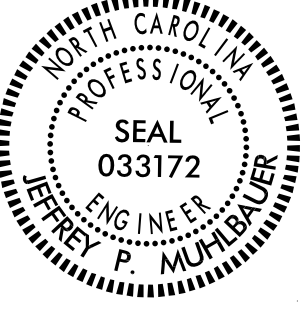
STRUCTURES ENGINEER

Signed by: Gregory Cols 7/25/2025 P.E.
SIGNATURE:



ROADWAY DESIGN ENGINEER

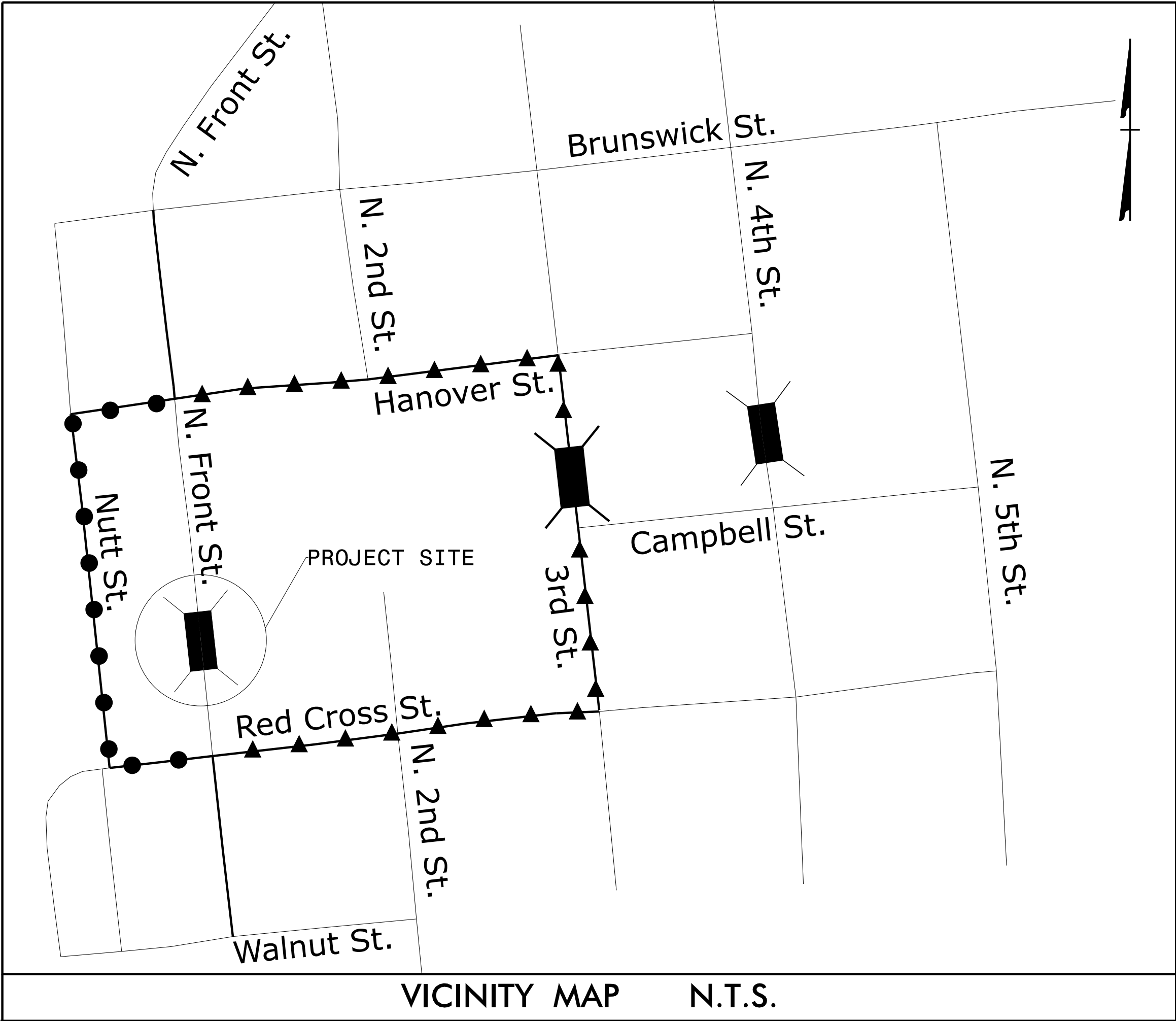
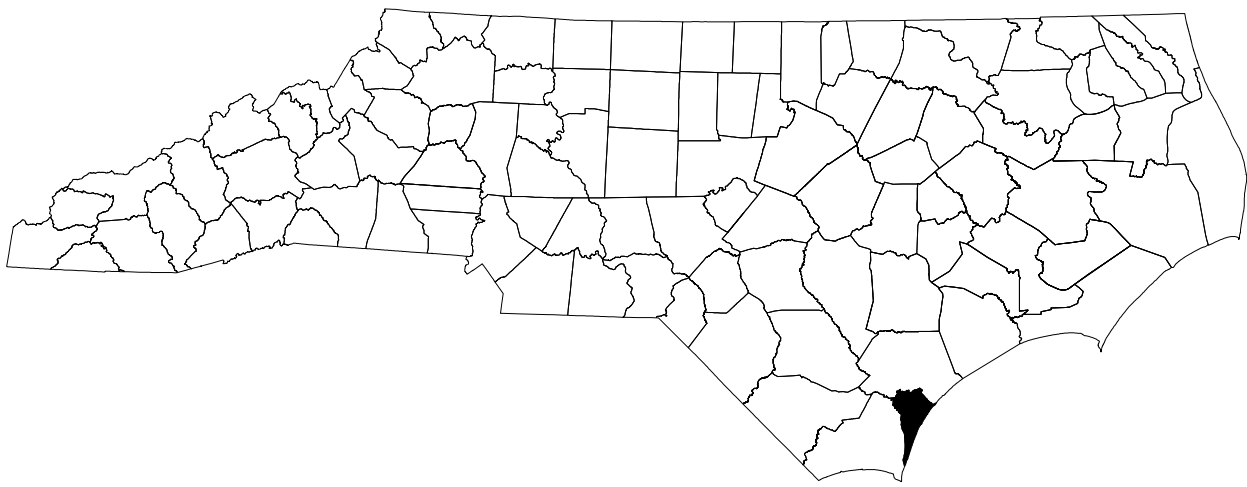
Signed by: Jeff Mulhaver 7/25/2025 P.E.
SIGNATURE:



CITY OF WILMINGTON

TRANSPORTATION MANAGEMENT PLAN

NEW HANOVER COUNTY



VICINITY MAP N.T.S.

LOCATION: FRONT STREET BETWEEN RED CROSS ST. & HANOVER ST.

PLANS PREPARED BY:

GREGORY R. COLS, PE

PROJECT ENGINEER

JEFF MUHLBAUER, PE

PROJECT DESIGNER

CITY OF WILMINGTON CONTACTS:

KYLE BURDEN

PROJECT MANAGER

DENYS VIELKANOWITZ, PE

CITY TRAFFIC ENGINEER

INDEX OF SHEETS

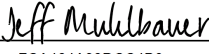
SHEET NO.	TITLE
TMP-01	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-01A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-01B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-02	TEMPORARY DETOUR
TMP-02A	TEMPORARY DETOUR SIGNS
TMP-03	PEDESTRIAN WALKWAY UNDER BRIDGE
TMP-04	TEMPORARY PORTABLE CONCRETE BARRIER
TMP-05	SHORT TERM SIDEWALK CLOSURE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

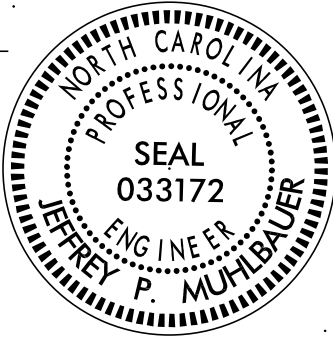
AECOM

Prepared in the Office of:

NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd., Suite 200
Raleigh, NC 27607
(919) 854-6200 • (919) 854-6259 (FAX)

APPROVED: 
DATE: 7/25/2025

SEAL



SHEET NO.
TMP-01

FRONT STREET

TIP PROJECT:








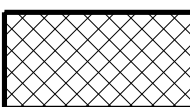
ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:







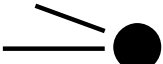




STD. NO.	TITLE
654.01	PAVEMENT REPAIRS
846.01	CONCRETE CURB, GUTTER AND CURB AND GUTTER
848.01	CONCRETE SIDEWALK
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS

LEGEND




GENERAL

-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  TEMP. SHORING (LOCATION PURPOSES ONLY)
-  WORK AREA
-  REMOVAL

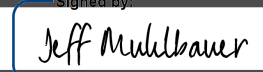
TRAFFIC CONTROL DEVICES

-  BARRICADE (TYPE III)
-  CONE
-  DRUM
-  SKINNY DRUM
-  TUBULAR MARKER
-  TEMPORARY CRASH CUSHION
-  FLASHING ARROW BOARD
-  FLAGGER
-  LAW ENFORCEMENT
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  CHANGEABLE MESSAGE SIGN

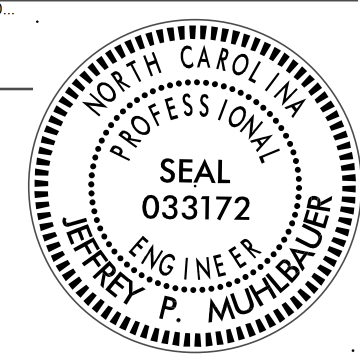
TEMPORARY SIGNING

-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN


\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAM\$\$\$\$\$


APPROVED: 
852EDFDDAE4E470

DATE: 12/4/2024

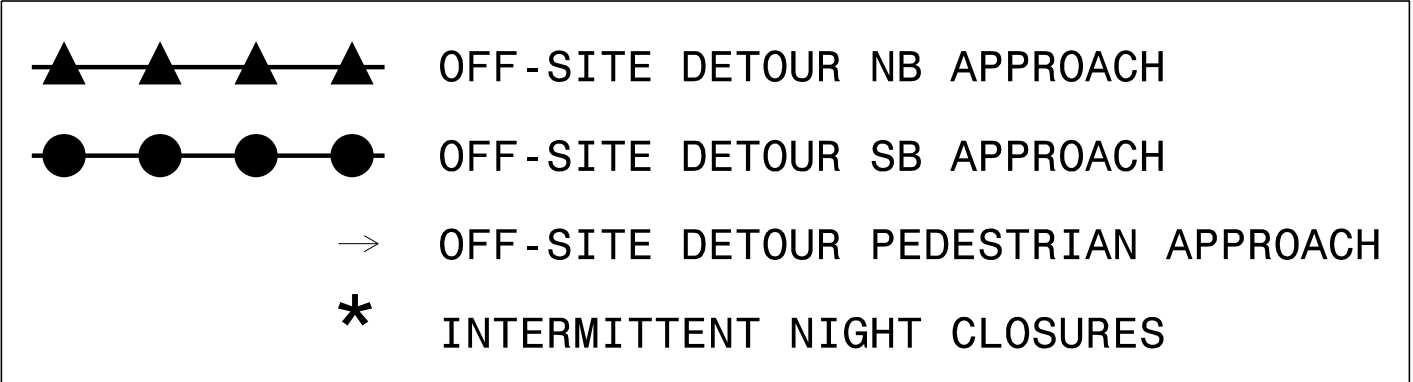
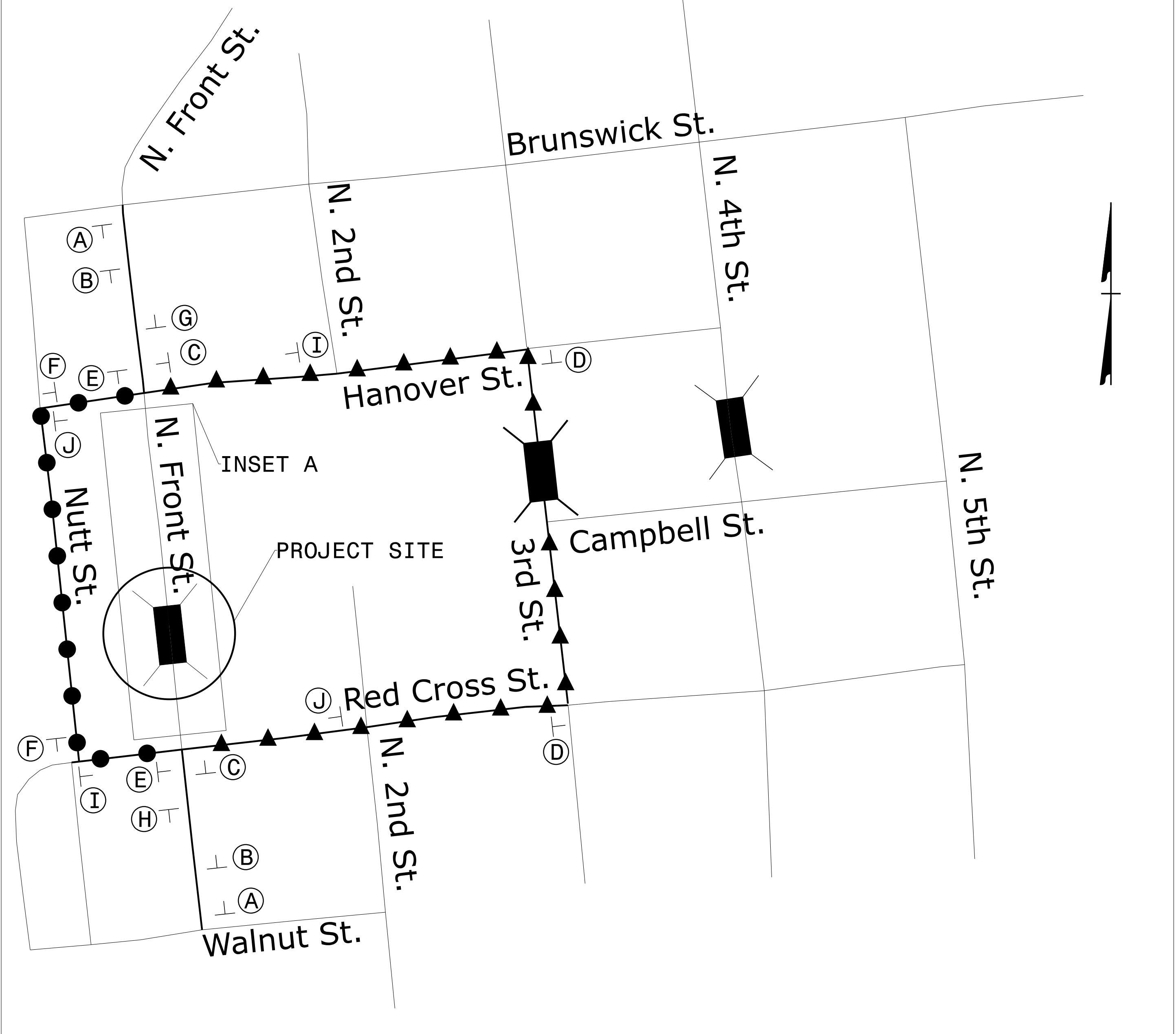
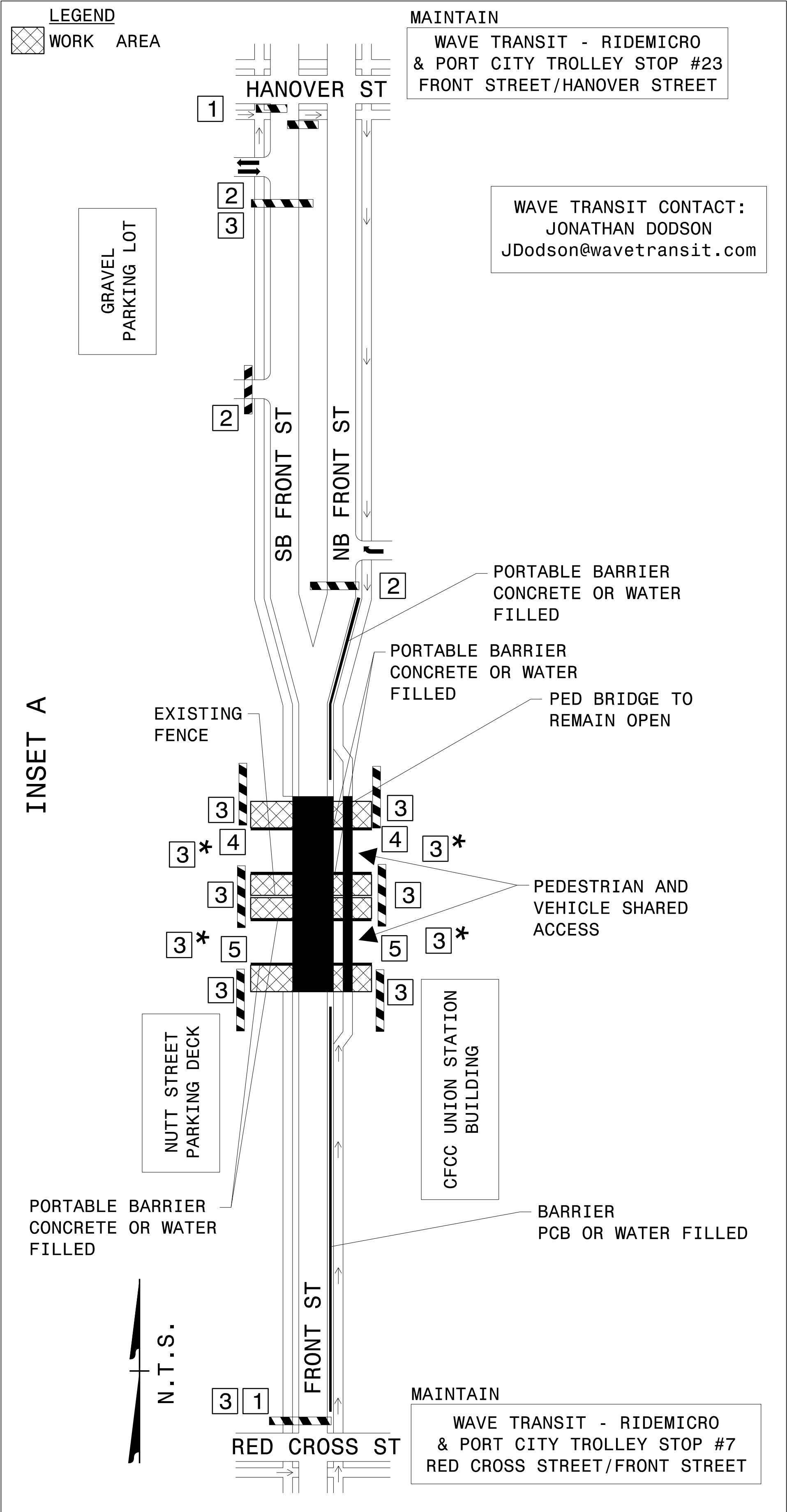


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED




NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd., Ste 200
Raleigh, NC 27607
(919) 854-6200

ROADWAY STANDARD
DRAWINGS & LEGEND



REFER TO ROADWAY STANDARD
DRAWING 1101.11, SHEET 4 OF 4
FOR APPLICABLE NOTES.

APPROVED: *Jeff Mullbauer*

DATE: 12/4/2024

SEAL 033172

JEFFREY P. MULLBAUER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

WORK ZONE TRAFFIC CONTROL

AECOM

NC FIRM LICENSE No: F-0342

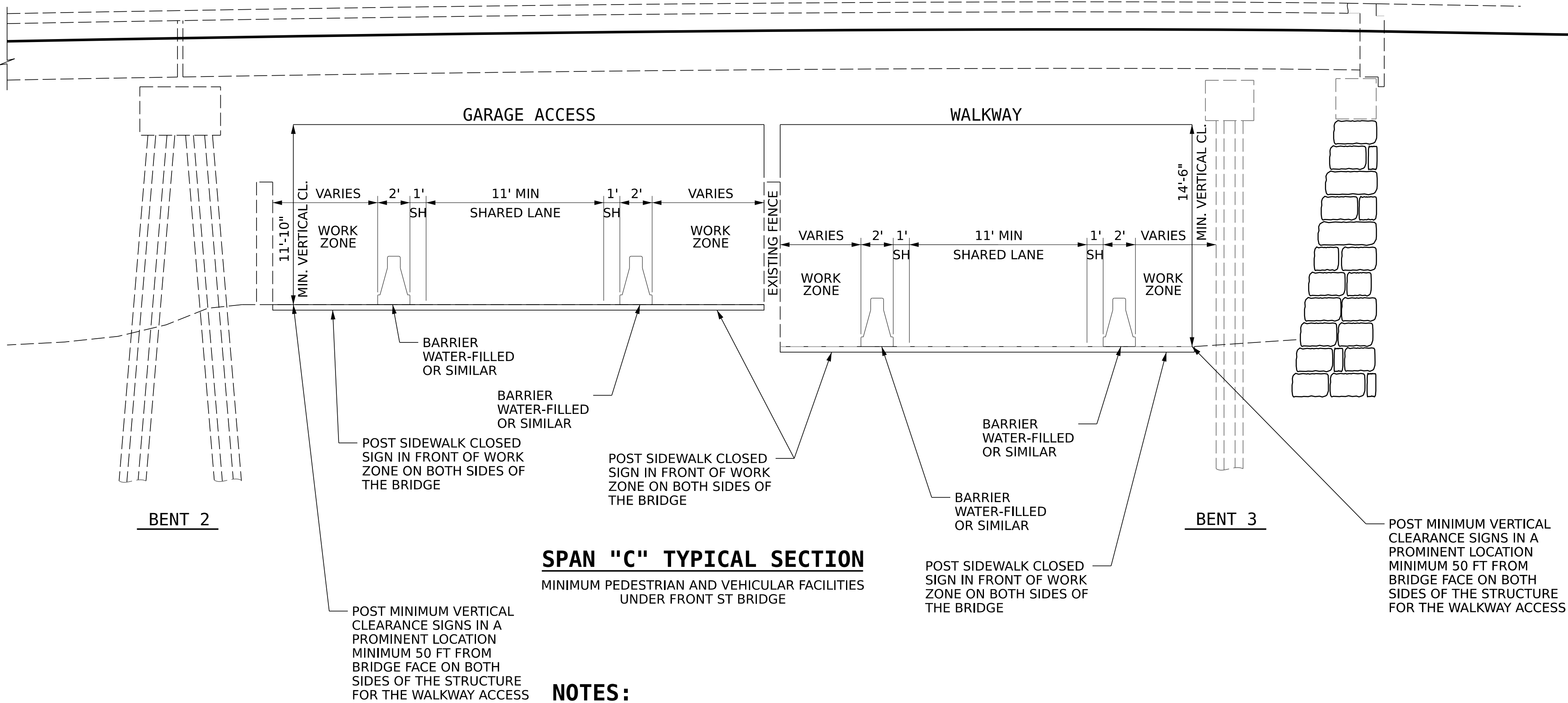
5438 Wade Park Blvd., Ste 200

Raleigh, NC 27607

(919) 854-6200

FRONT STREET
OFF-SITE
DETOUR ROUTES




OFF-SITE DETOUR AND REGULATORY SIGNS



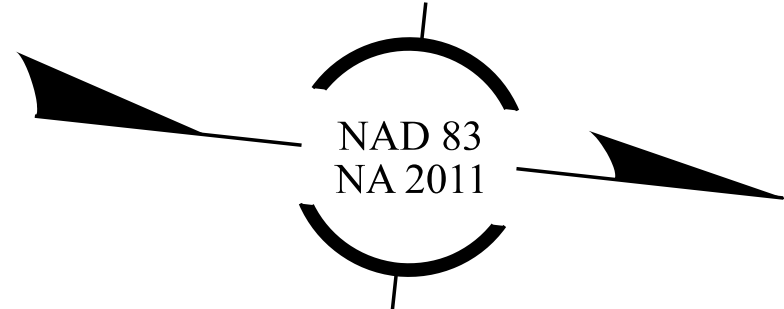
SPAN "C" TYPICAL SECTION
MINIMUM PEDESTRIAN AND VEHICULAR FACILITIES
UNDER FRONT ST BRIDGE

NOTES:

- THIS DRAWING IS A SCHEMATIC ONLY AND IS NOT A WORKING DRAWING.
- THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS OF TRAFFIC AND PEDESTRIAN PROTECTION SEALED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA FOR APPROVAL BY THE ENGINEER, THE CITY OF WILMINGTON, CAPE FEAR COMMUNITY COLLEGE, AND CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA).
- PEDESTRIAN AND VEHICULAR TRAFFIC MUST BE MAINTAINED. WORKING DRAWINGS PRODUCED BY THE CONTRACTOR SHALL INCLUDE DETAILS OF VEHICULAR AND PEDESTRIAN PROTECTION.
- THE CONTRACTOR SHALL COORDINATE WITH CFCC PRIOR TO COMMENCING ANY WORK REQUIRING CLOSURE.
- CFCC CONTACT:
Shawn Breedlove
Executive Director of Safety and Auxiliary Services
sbreedlove@cfcc.edu
Office 910.362.7279
Mobile 910.777.4587
- SHARED LANE TO SERVICE MAINTAINENCE VEHICLES AND PEDESTRIAN TRAFFIC.
- CONTRACTOR SHALL PROVIDE POSITIVE PROTECTION TO PREVENT MATERIALS FALLING INTO PUBLIC SPACES. SEE STRUCTURE SPECIAL PROVISIONS.
- BARRIER PROTECTION SHALL EXTEND BEYOND LIMITS OF BRIDGE ON WALKWAY BELOW A MINIMUM 50 FT.


<p>APPROVED: </p> <p>DATE: 12/4/2024</p> <p></p> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	<p></p> <p>AECOM NC FIRM LICENSE No: F-0342 5438 Wade Park Blvd., Ste 200 Raleigh, NC 27607 (919) 854-6200</p>	<p>TEMPORARY TYPICAL SECTION SPAN "C" UNDER FRONT ST BRIDGE</p>
--	--	--

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAM\$\$\$\$\$



APPROVED: Jeff Mullbauer
0626 OF 0046 AE470

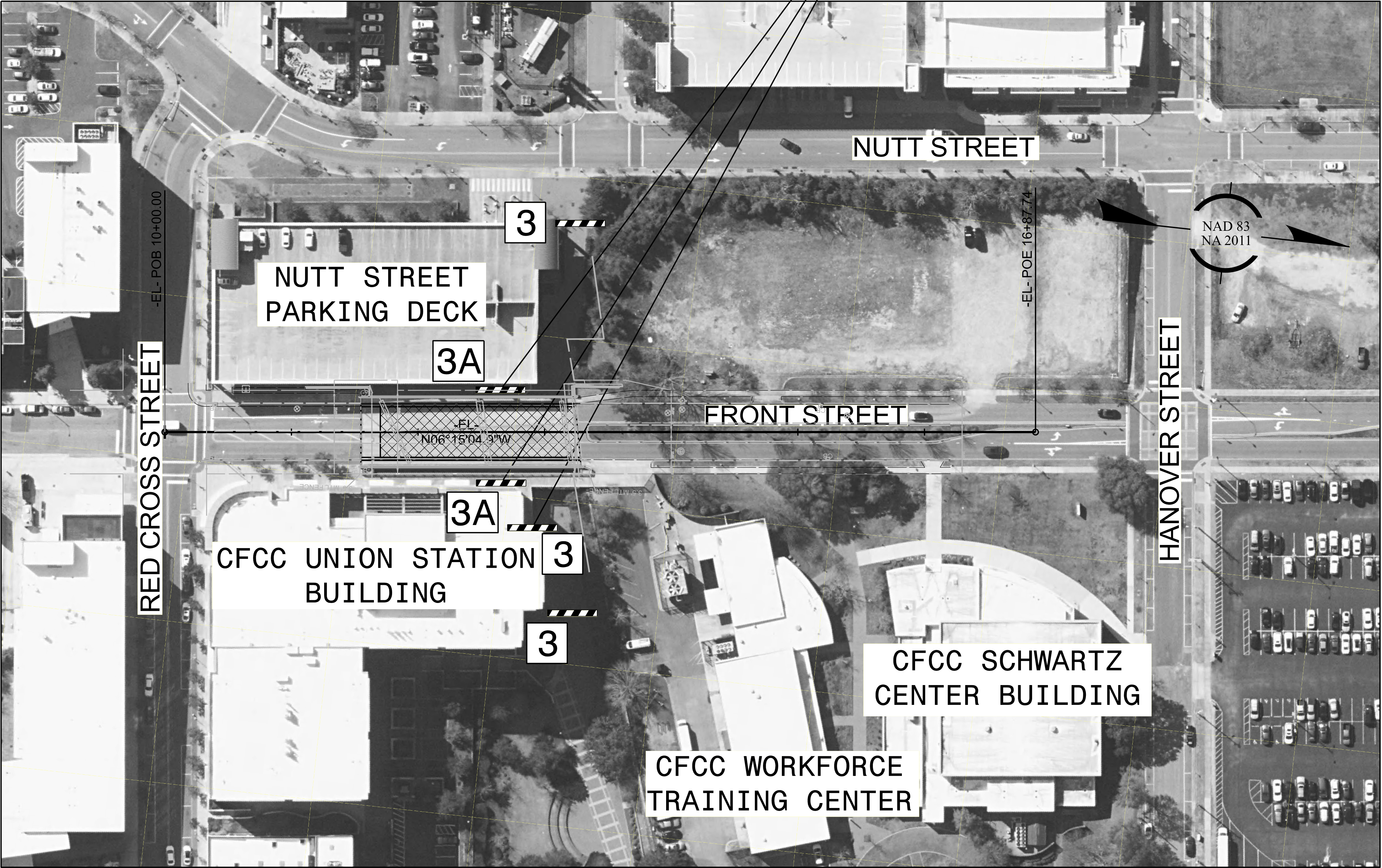
DATE: 12/4/2024



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

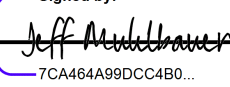


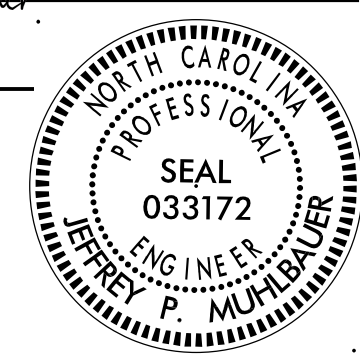
FOR SHORT TERM CLOSURES, CLOSE ENTRANCE/EXIT AT THE BACK OF THE NUTT STREET PARKING DECK AND CFCC UNION STATION BUILDING. RESTRICT ACCESS FROM THE STEPS ON THE WEST SIDE OF CFCC UNION STATION BUILDING THAT EXITS DIRECTLY TO THE WORK AREA. COORDINATE CLOSURE WITH CFCC CONTACT LISTED ON SHEET TMP-01B.




LEGEND


 WORK AREA

APPROVED: 
DATE: 7/25/2025



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED


DIVISION OF HIGHWAY CONSTRUCTION
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL


AECOM
NC FIRM LICENSE No: F-0342
5438 Wade Park Blvd., Ste 200
Raleigh, NC 27607
(919) 854-6200

SHORT TERM
SIDEWALK
CLOSURE

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

LEGEND

THERMOPLASTIC LINES

T20	WHITE EDGE LINE (6" 90 MIL)
T23	3FT. - 9FT./SP WHITE MINI-SKIP (6", 90 MIL)
T33	YELLOW DOUBLE CENTER (6", 90 MIL)
T52	YELLOW DIAGONAL (8", 90 MIL)

THERMOPLASTIC SYMBOLS

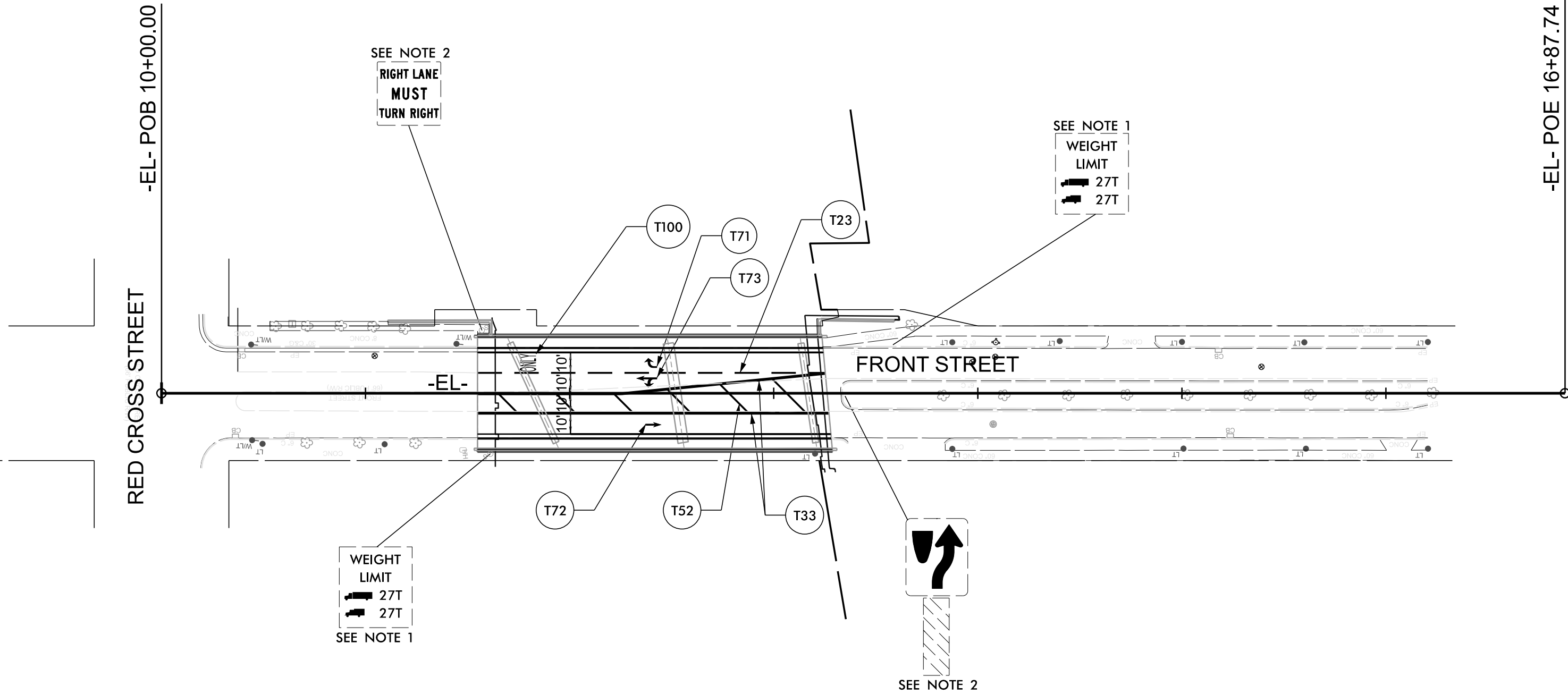
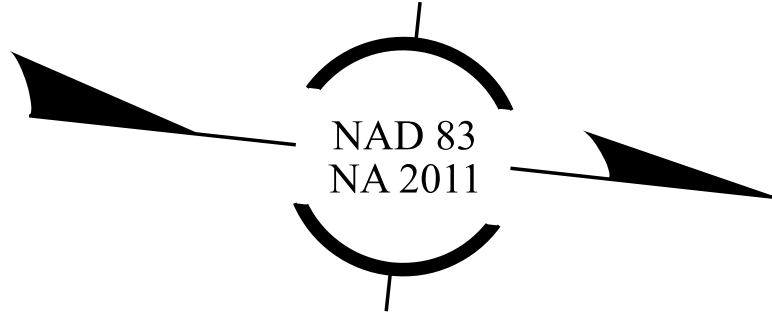
T71	RIGHT TURN ARROW (90 MIL)
T72	STRAIGHT ARROW (90 MIL)
T73	COMBO. LEFT/STRAIGHT ARROW (90 MIL)
T100	ALPHANUMERIC CHARACTER (90 MIL)


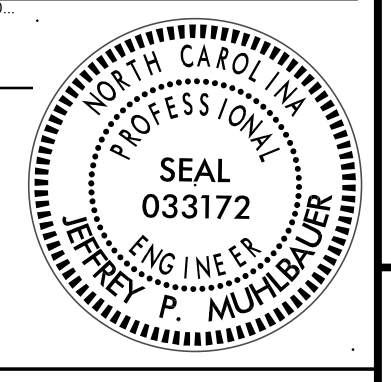

PROJECT NOTES

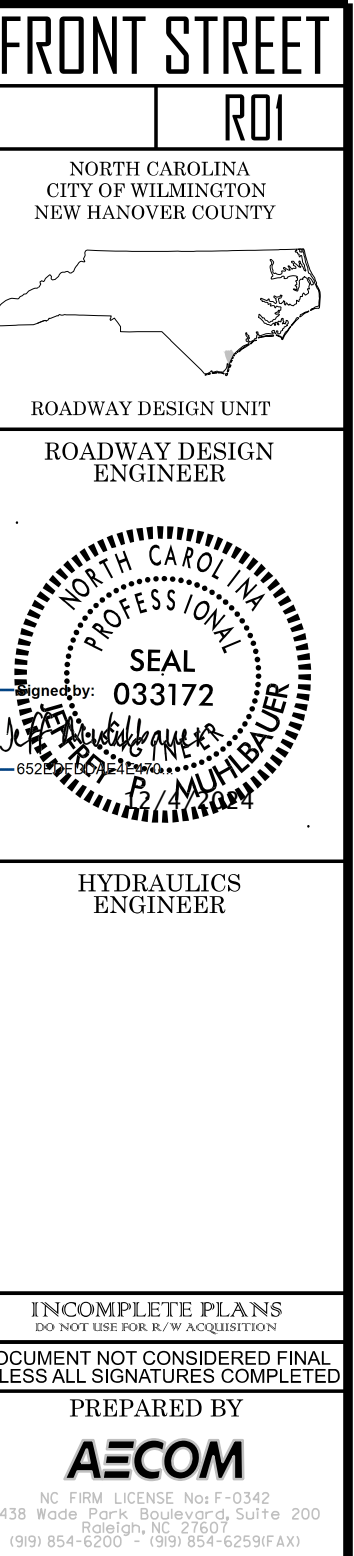
- DISPOSAL OF SIGN SYSTEM
- RETAIN SIGN SYSTEM - STOCKPILE AND PUT BACK IN KIND AT END OF CONSTRUCTION

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAM\$\$\$\$\$

PROJ. REFERENCE NO.	SHEET NO.
FRONT STREET	PMP - 1



<div>APPROVED:  DATE: 12/4/2024</div> <div></div> <div>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</div>	<div> AECOM NC FIRM LICENSE No:F-0342 5438 Wade Park Blvd., Ste 200 Raleigh, NC 27607 (919) 854-6200</div>	<div>PAVEMENT MARKING & SIGNING PLANS</div>
--	--	---



NOTES :

THIS PROJECT SHALL ADHERE TO THE 2024 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. ANY REFERENCE MADE TO "NCDOT" OR "OWNER" SHALL REFER TO THE CITY OF WILMINGTON.

NO HYDRAULIC ANALYSIS OF THE PROPOSED DECK REPLACEMENT HAS BEEN PERFORMED.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR. NO FIELD SURVEY HAS BEEN PERFORMED. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS OR CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE CITY OR AECOM FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

ALL UTILITIES SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PARTIAL REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING THE EXISTING STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

FOR TYPE I REPAIR, TYPE II REPAIR, AND WEB GAP RETROFIT, SEE THE STEEL REPAIRS SPECIAL PROVISION.

FOR OFF-SITE DETOUR AND MAINTENANCE OF TRAFFIC BENEATH THE STRUCTURE, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONCTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGE, ROADWAY, UTILITIES, AND THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

THE CONTRACTOR SHALL COORDINATE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO COMMENCING ANY WORK IMPACTING THE UTILITY IN THE WEST OVERHANG.

BRIDGE NO. 640036

NEW HANOVER COUNTY

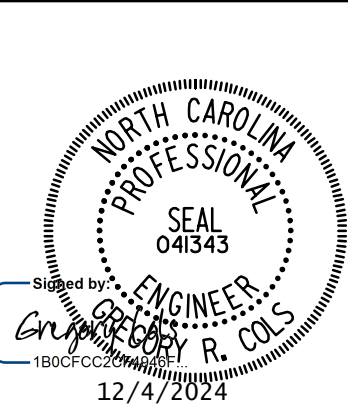
STATION: 12+50.55 -EL-

SHEET 2 OF 2

GENERAL SCOPE OF WORK

- DECK REPLACEMENT
- PEDESTAL RETROFIT AT BENT 1
- BEARING REPLACEMENT AT SPAN 1 BENT 1 BEAM ENDS
- CLEANING AND PAINTING STRUCTURAL STEEL
- STRUCTURAL STEEL REPAIRS
- TEMPORARY UTILITY SUPPORT DURING CONSTRUCTION
- PERMANENT UTILITY SUPPORT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

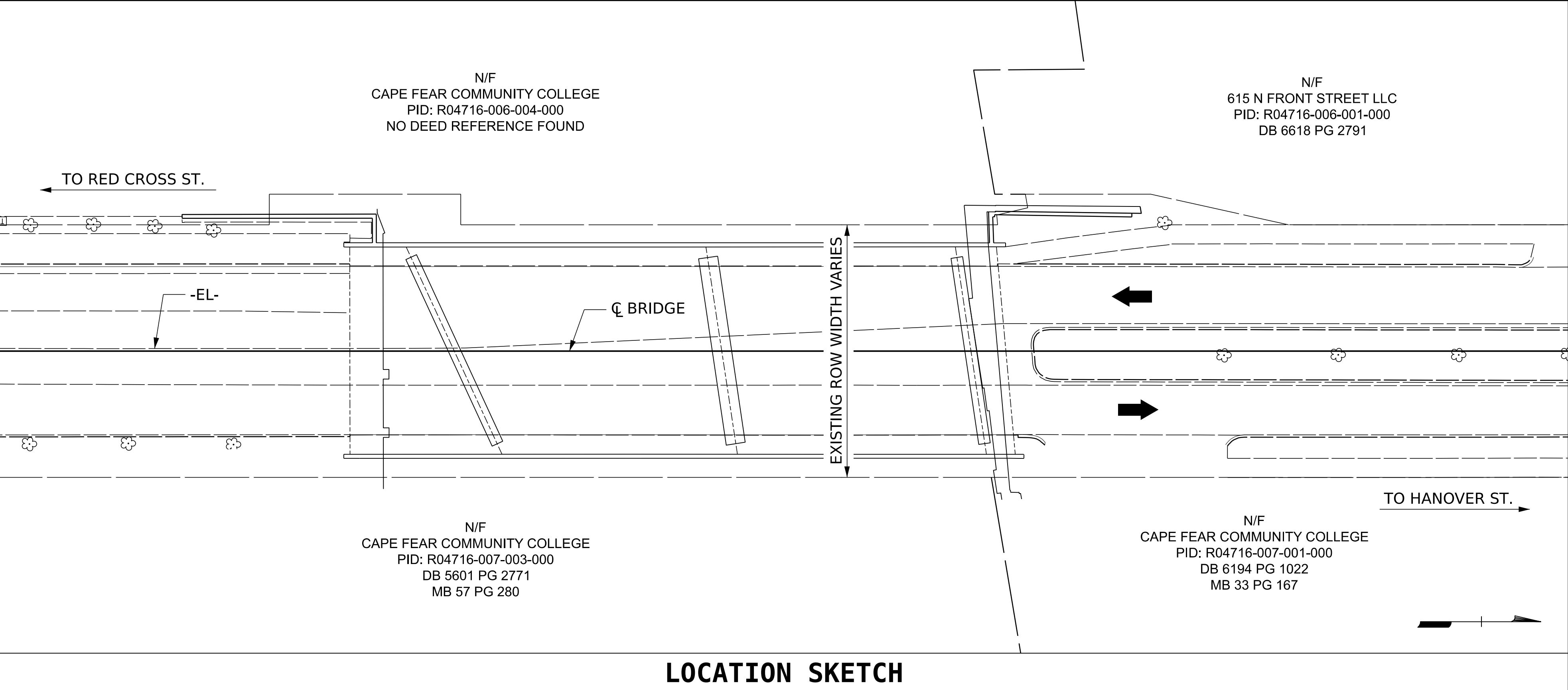


STATE OF NORTH CAROLINA
CITY OF WILMINGTON

GENERAL DRAWING

FOR BRIDGE ON FRONT ST
OVER CAPE FEAR
COMMUNITY COLLEGE
WALKWAY AND GARAGE ACCESS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-02
1			3			TOTAL SHEETS
2			4			27



LOCATION SKETCH

TOTAL BILL OF MATERIAL

	ASBESTOS ASSESSMENT	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOOR	POLLUTION CONTROL	THREE BAR METAL RAIL	ELASTOMERIC BEARINGS	EPOXY COATING AND DEBRIS REMOVAL	PARTIAL REMOVAL OF EXISTING STRUCTURE
	LUMP SUM	SQ. FT.	SQ. FT.	LUMP SUM	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM
TOTAL	1	9,740	7,011	1	322	1	1	1

TOTAL BILL OF MATERIAL

	CLEAN AND PAINT STRUCTURAL STEEL	PAINTING CONTAINMENT	STUB COLUMN	TEMPORARY UTILITY SUPPORT SYSTEM	UTILITY SUPPORT SYSTEM	BRIDGE JACKING (TYPE II)	TYPE I REPAIR	TYPE II REPAIR	CLEANING AND PAINTING EXISTING BEARING PLATES	WEB GAP RETROFIT
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	EACH	EACH	EACH	EACH	EACH
TOTAL	1	1	1	1	1	1	8	2	40	56

DRAWN BY :	T. NEAL	DATE :	06/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

NOTES:

THE BRIDGE REHABILITATION PROJECT IS NOT INTENDED TO BRING THE BRIDGE UP TO CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE REPLACEMENT OF THE DECK IS CONSIDERED AN IN-KIND REPLACEMENT. THE SUPERSTRUCTURE HAS BEEN LOAD RATED IN ACCORDANCE WITH THE AASHTO MANUAL FOR BRIDGE EVALUATION, 3RD EDITION USING LOAD FACTOR RATING (LFR) METHODOLOGY.

LOAD FACTOR RATING (LFR) SUMMARY FOR STEEL GIRDERS																	
		WEIGHT (W) (TONS)	CONTROLLING RATING FACTOR (RF)	MINIMUM RATING FACTOR (RF)	TONS = W X RF	STRENGTH LEVEL								SERVICE LEVEL			
						MOMENT				SHEAR				MOMENT			
						RATING FACTOR	SPAN	BEAM NUMBER	DISTANCE FROM LEFT END OF SPAN (FT)	RATING FACTOR	SPAN	BEAM NUMBER	DISTANCE FROM LEFT END OF SPAN (FT)	RATING FACTOR	SPAN	BEAM NUMBER	DISTANCE FROM LEFT END OF SPAN (FT)
HS20	HS (INVENTORY)	N/A	1	1.03		1.03	C	1	64.5	1.68	A	3	0.0	1.04	A	7	16.5
	HS (OPERATING)	N/A		1.72		1.72	C	1	64.5	2.80	A	3	0.0	1.73	A	7	16.5
SINGLE VEHICLE (SV)	SNSH	13.5		2.87	39	3.18	A	5	13.3	6.67	A	3	0.0	2.87	A	5	13.3
	SNGARBS2	20		2.57	51	2.87	A	5	13.3	4.75	A	3	0.0	2.57	A	7	16.5
	SNAGRIS2	22		2.56	56	2.72	C	1	64.5	4.41	A	3	0.0	2.56	A	7	16.5
	SNCOTTS3	27.25		1.48	40	1.64	A	5	13.3	3.37	A	3	0.0	1.48	A	5	13.3
	SNAGGRS4	34.925		1.42	49	1.60	A	7	16.5	2.80	A	3	0.0	1.42	A	7	16.5
	SNS5A	35.55		1.39	49	1.54	A	5	13.3	2.73	A	3	0.0	1.39	A	5	13.3
	SNS6A	39.95		1.30	52	1.44	A	5	13.3	2.48	A	3	0.0	1.30	A	5	13.3
	SNS7B	42	2	1.26	53	1.42	A	5	13.3	2.40	A	3	0.0	1.26	A	7	16.5
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33		1.67	55	1.87	C	1	64.5	3.05	A	3	0.0	1.67	A	7
TNT4A		33.075		1.59	53	1.77	A	5	13.3	2.99	A	3	0.0	1.59	A	5	13.3
TNT6A		41.6		1.43	59	1.61	A	7	16.5	2.56	A	3	0.0	1.43	A	7	16.5
TNT7A		42		1.47	62	1.56	C	1	64.5	2.47	A	3	0.0	1.47	A	7	16.5
TNT7B		42		1.39	58	1.50	C	1	64.5	2.46	A	3	0.0	1.39	A	5	13.3
TNAGRIT4		43		1.44	62	1.45	C	1	64.5	2.38	A	3	0.0	1.44	A	7	16.5
TNAGT5A		45		1.39	62	1.44	C	1	64.5	2.36	A	3	0.0	1.39	A	7	16.5
TNAGT5B		45	3	1.32	59	1.38	C	1	64.5	2.26	A	3	0.0	1.32	A	7	16.5
(EV)	EV2	28.75		1.82	52	2.02	A	5	13.3	3.33	A	3	0.0	1.82	A	5	13.3
	EV3	43	4	1.17	50	1.30	A	5	13.3	2.26	A	3	0.0	1.17	A	5	13.3

CONTROLLING LOAD RATING

1

DESIGN LOAD RATING (HL-20)

2

LEGAL LOAD RATING (SV)**

3

LEGAL LOAD RATING (TTST)**

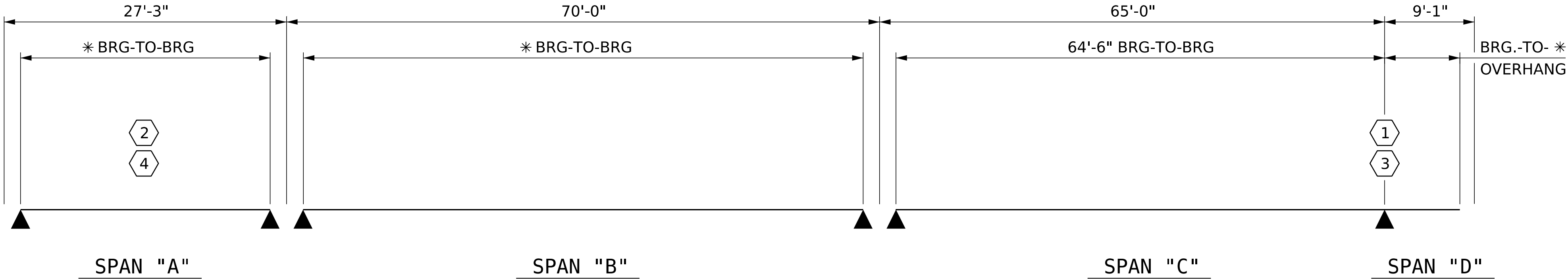
4

EMERGENCY VEHICLE LOAD RATING

** SEE CHART FOR VEHICLE TYPE

BEAM LOCATION

BEAM LOCATION IS PROVIDED USING BEAM NUMBER, WHERE BEAM 1 IS THE LEFT EXTERIOR BEAM LOOKING UPSTATION.



BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

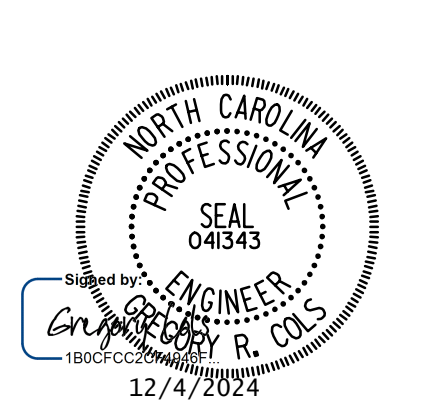
LFR SUMMARY

SPAN LENGTHS SHOWN ARE FROM W.P. TO W.P.

* BRG-TO-BRG AND BRG-TO-OVERHANG VALUES VARY BY GIRDER AND SPAN. SEE TABLE ON "DEAD LOAD DEFLECTIONS" SHEET FOR VALUES.

DRAWN BY :	D. DRUM	DATE :	07/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

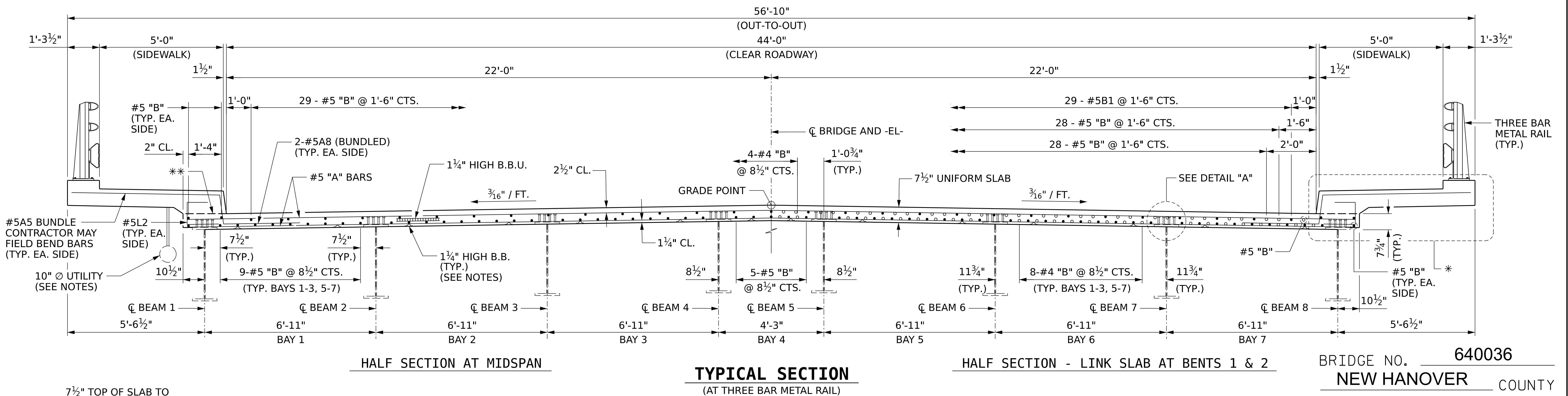
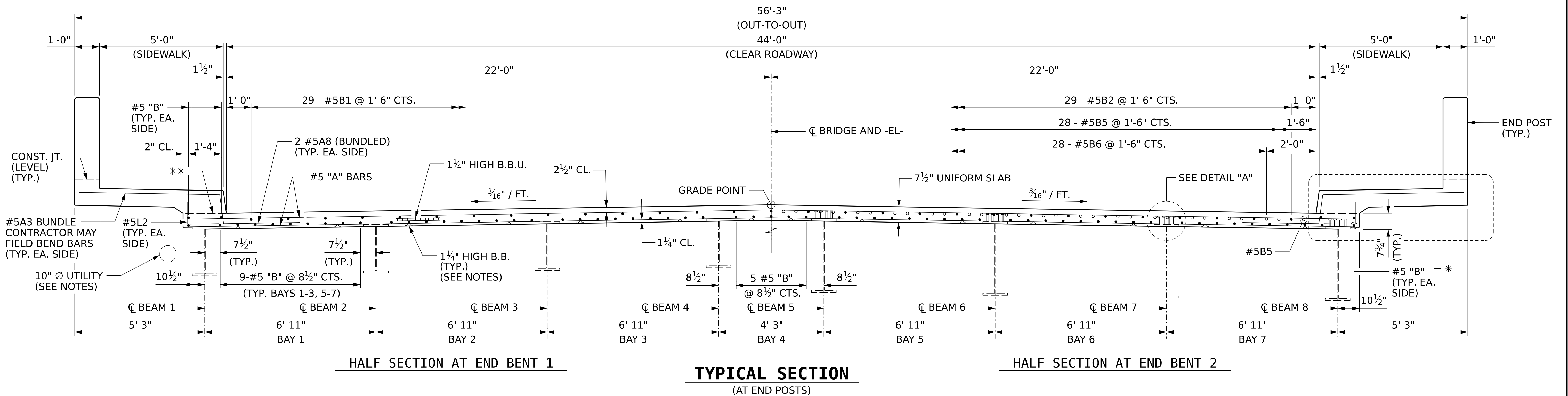


STATE OF NORTH CAROLINA
CITY OF WILMINGTON

LOAD RATING
SUMMARY

(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-03
2			4			TOTAL SHEETS 27



NOTES:

PROVIDE 1 1/4" HIGH BEAM BOLSTERS AT 4'-0" CTS. TO SUPPORT THE BOTTOM MAT OF "A" BARS.

PREVIOUSLY CAST CONCRETE IN A CONTINUOUS UNIT SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

CONCRETE PARAPET, BARRIER RAIL, AND SIDEWALK IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THE UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE NOTED.

FOR END POST REINFORCING DETAILS, SEE "RAIL POST SPACING AND END POST DETAILS" SHEET.

DO NOT DISTURB THE 10" (APPROX.) DIA. UTILITY. SEE "UTILITY TEMPORARY SUPPORT" SHEET.

* FOR OVERHANG DETAILS,
SEE "TYPICAL SECTION AND
DETAILS" SHEET 4 OF 4.

** CONST. JT. (LEVEL)
 SEE DETAIL "D" ON "TYPICAL
 SECTION AND DETAILS"
 SHEET 4 OF 4.

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

BRIDGE NO. 640036
NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 1 OF 4

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-8200 www.aecom.com
AECOM License No. F-0342

Professional Engineer Seal for North Carolina, No. 041343. The seal is circular with "NORTH CAROLINA" at the top and "PROFESSIONAL ENGINEER" at the bottom. The center contains "SEAL" and "041343". A signature "Gregory R. Cols" is written across the seal. Below the seal, the text "1806CC20" is visible.

STATE OF NORTH CAROLINA
CITY OF WILMINGTON

SUPERSTRUCTURE

TYPICAL SECTION AND DETAILS

REVISIONS						SHEET NO. S-05
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 27
2			4			

DRAWN BY :	D. DRUM	DATE :	05/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

12/4/2024
c:\pwworking\usnc\dms18955\401_009_FrontSt_TS1-S-05_640036.dgn
daniel.drum

NOTES:

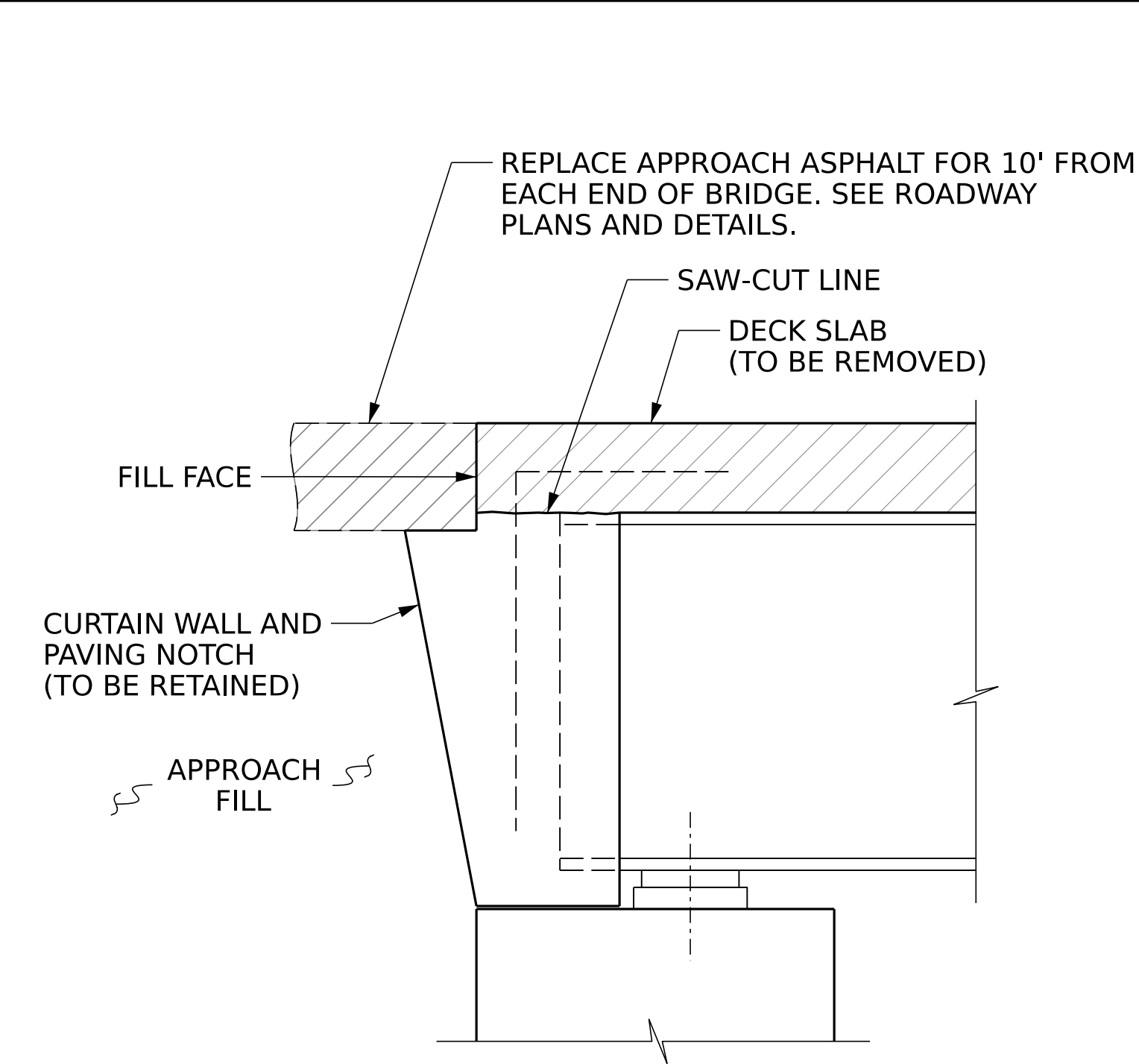
EXISTING DECK SLAB REMOVAL SHALL BE PAID FOR UNDER THE "PARTIAL REMOVAL OF EXISTING STRUCTURE" PAY ITEM.

SEE ROADWAY PLAN FOR APPROACH ROADWAY DETAILS.

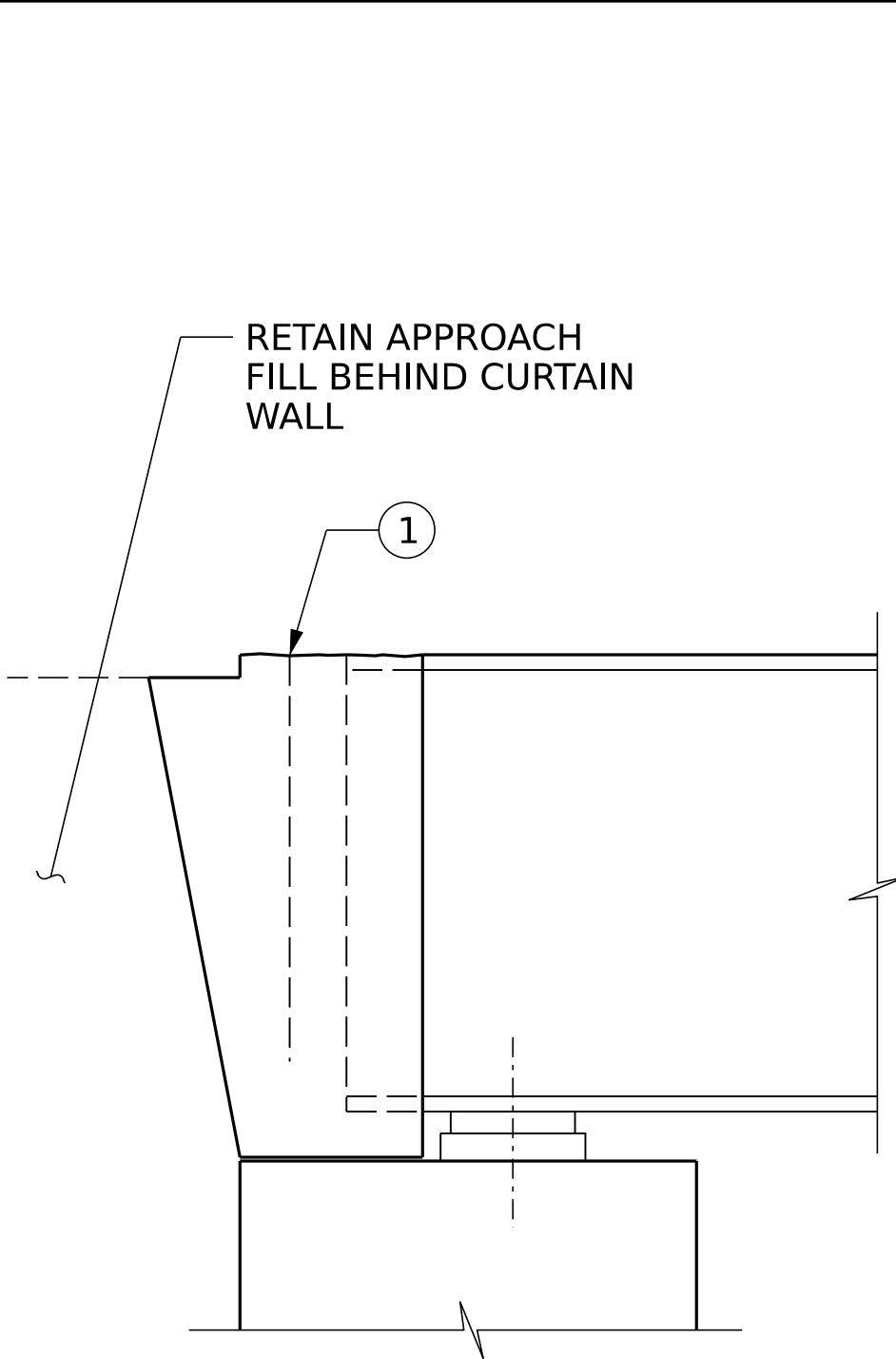
FOR LOCATIONS OF SECTIONS A-A AND B-B, SEE "PLAN OF SPANS" SHEETS.

- ① EXISTING REINFORCEMENT EXTENDING VERTICALLY FROM THE CURTAIN WALL SHALL BE SAW-CUT AND ENDS SHALL BE EPOXY COATED.

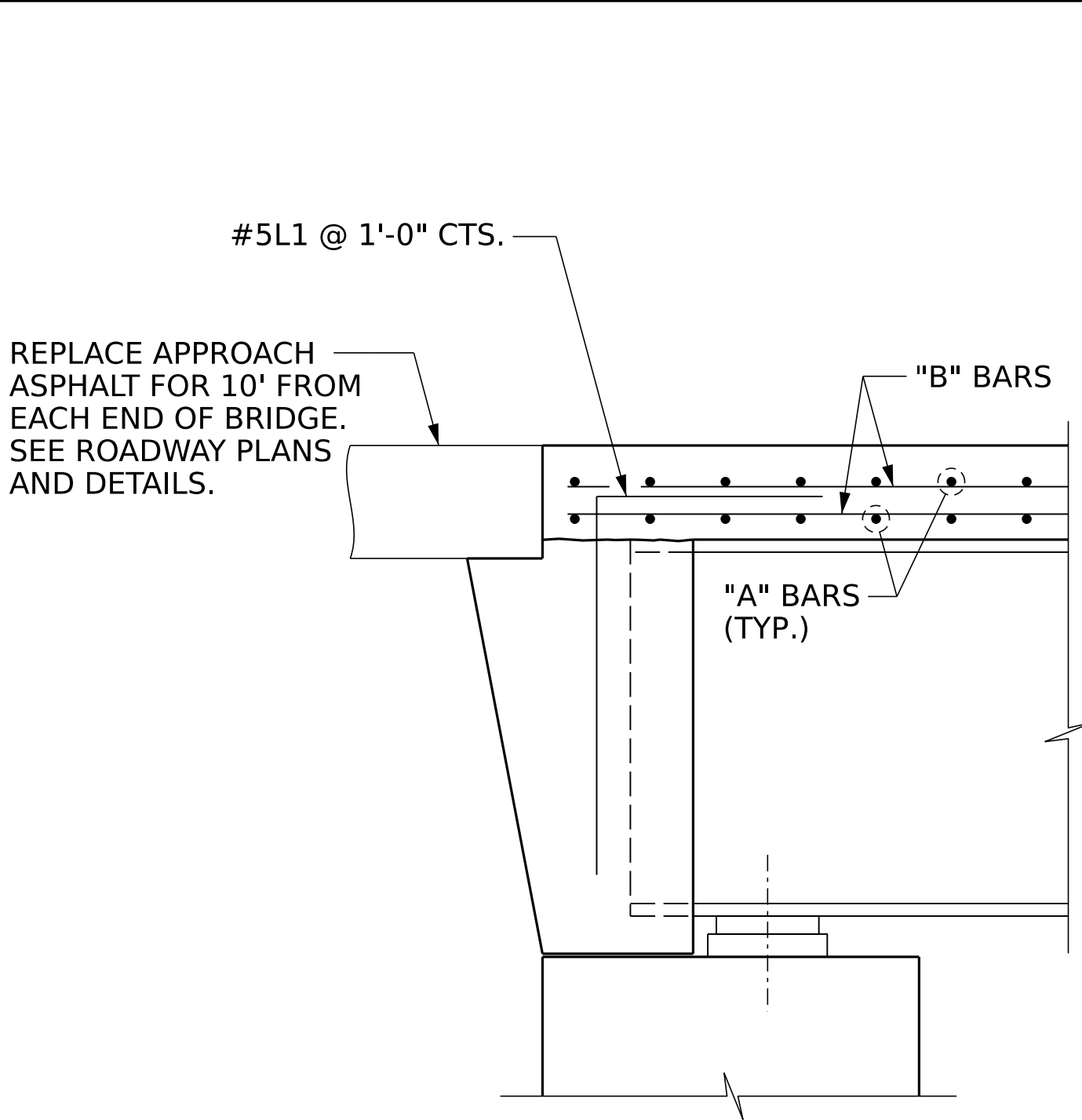
THE CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGING THE STEEL GIRDERS, STUDS, AND OTHER MEMBERS DURING DEMOLITION. DAMAGED MEMBERS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE CITY.



EXISTING

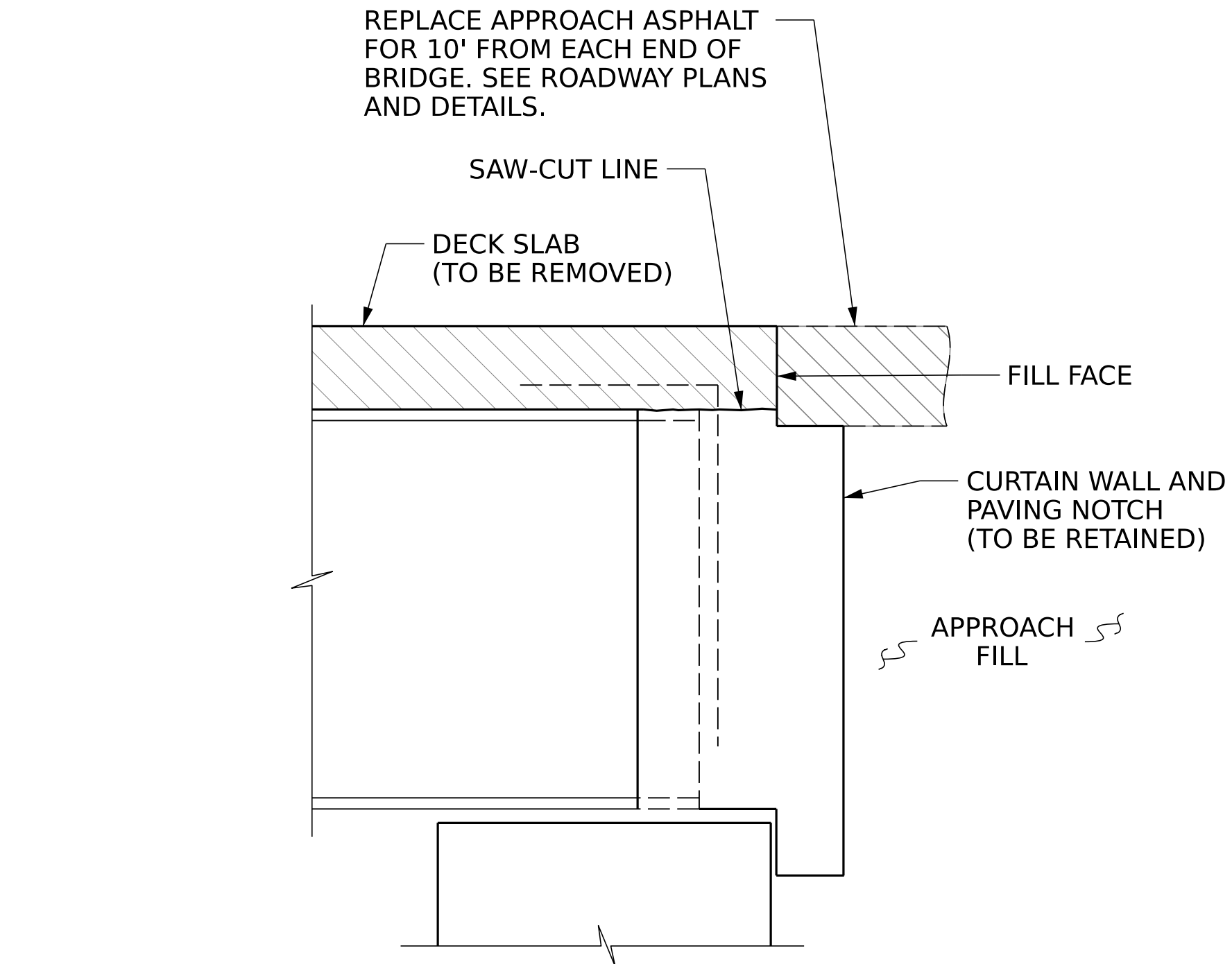


DEMOLITION

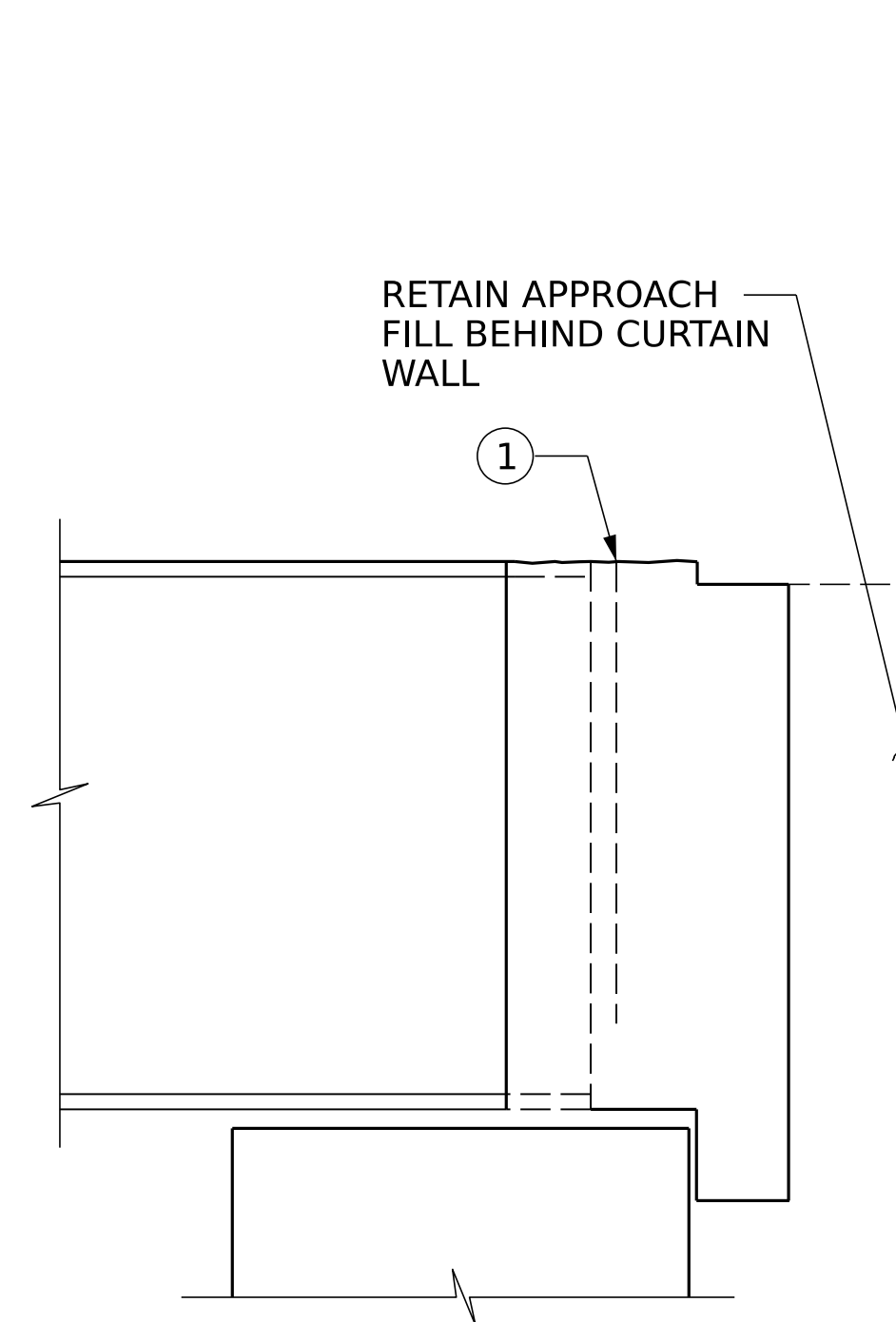


PROPOSED

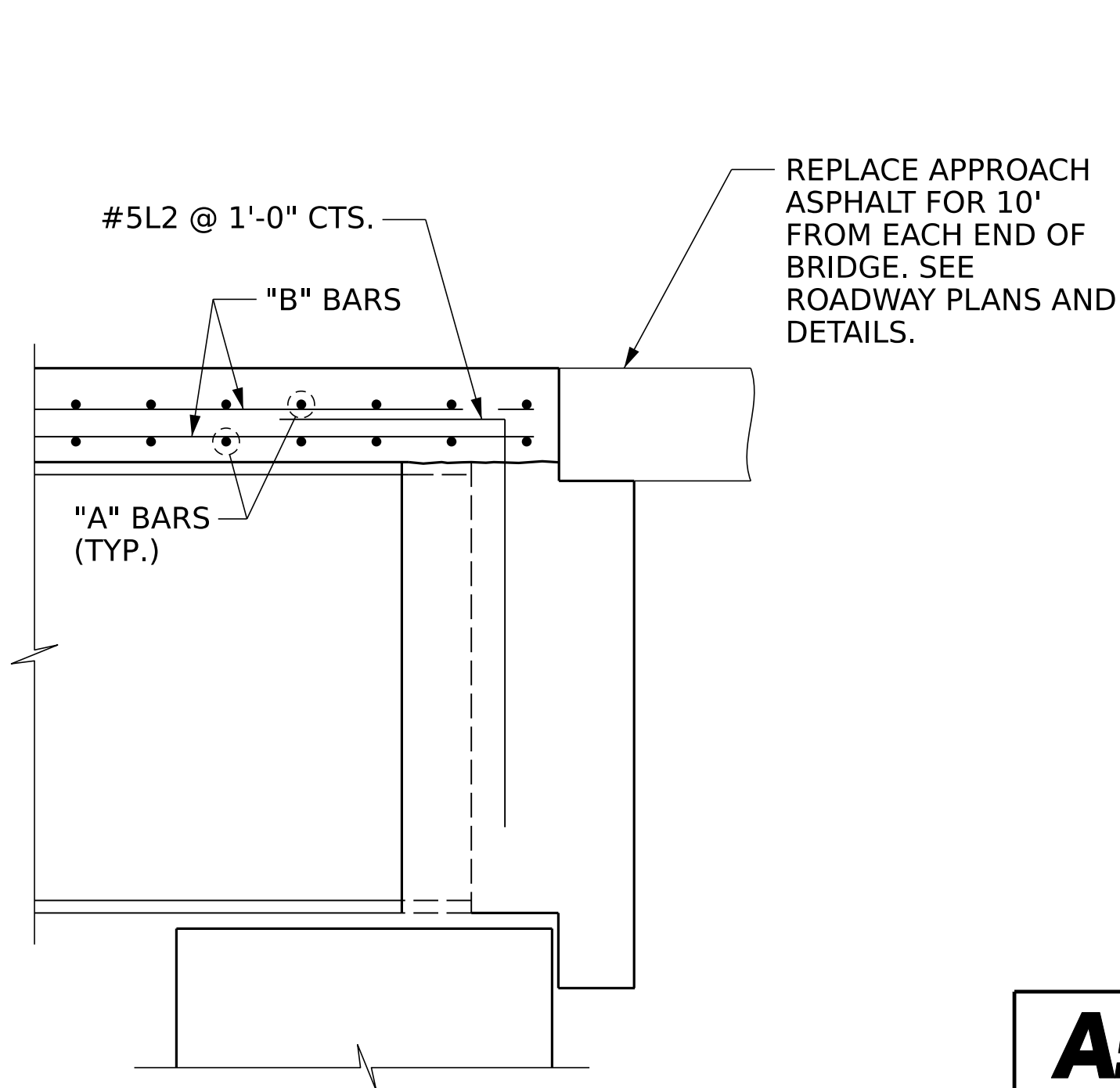
SECTION A-A @ END BENT 1



EXISTING



DEMOLITION



PROPOSED

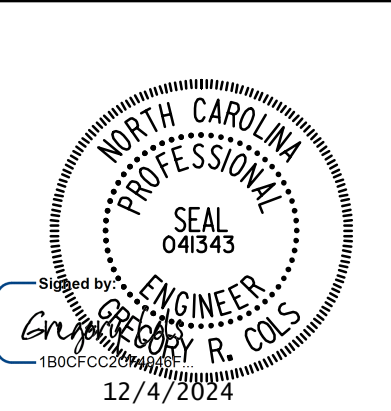
SECTION B-B @ END BENT 2

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 2 OF 4



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

SUPERSTRUCTURE

TYPICAL SECTION
AND DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-06
1			3			TOTAL SHEETS
2			4			27

DRAWN BY :	D. DRUM	DATE :	05/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES:

FOR NOTES, SEE SHEET 1 OF 4.

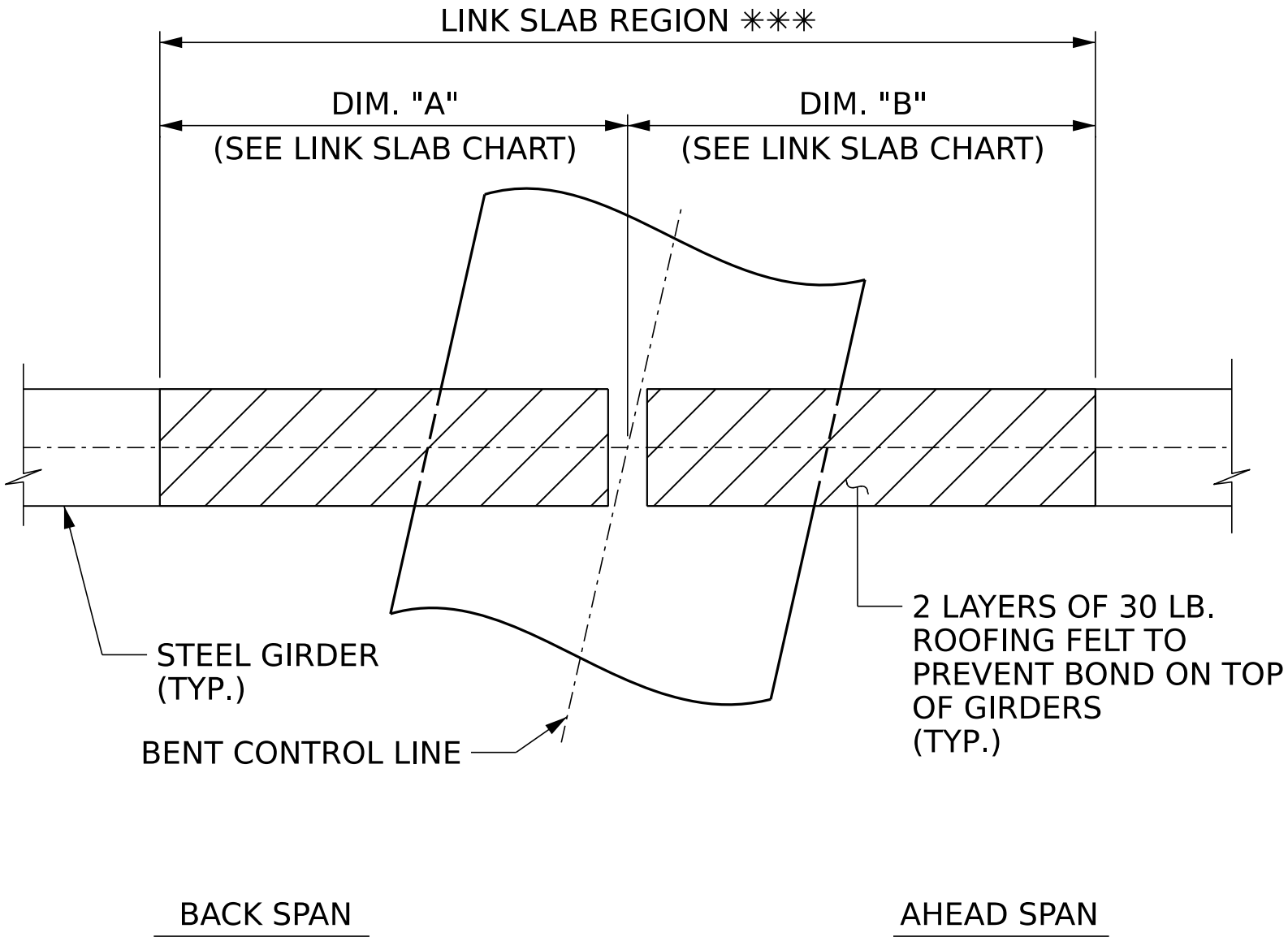
FOR LOCATION OF SECTIONS C-C AND D-D, SEE "PLAN OF SPANS" SHEETS.

THE TOP OF GIRDER AT LOCATIONS WHERE THE SHEAR STUDS HAVE BEEN REMOVED SHALL BE SMOOTH AND FREE FROM ANY PENETRATIONS.

REMOVAL OF SHEAR STUDS IN LINK SLAB AREAS SHALL BE INCLUDED IN THE "PARTIAL REMOVAL OF EXISTING STRUCTURE" PAY ITEM.

THE CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGING THE STEEL GIRDERS, STUDS, AND OTHER MEMBERS DURING DEMOLITION. DAMAGED MEMBERS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE CITY.

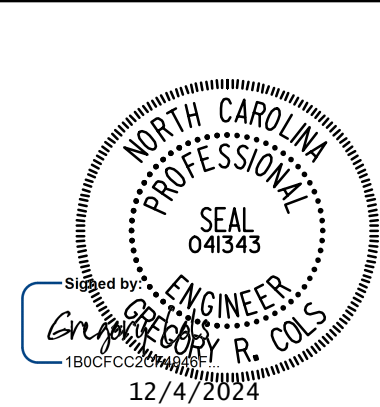
LINK SLAB CHART		
BENT NO.	DIM. "A"	DIM. "B"
1	4'-6"	5'-9"
2	5'-9"	4'-6"



LINK SLAB PLAN @ BENT

BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

SHEET 3 OF 4



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

SUPERSTRUCTURE

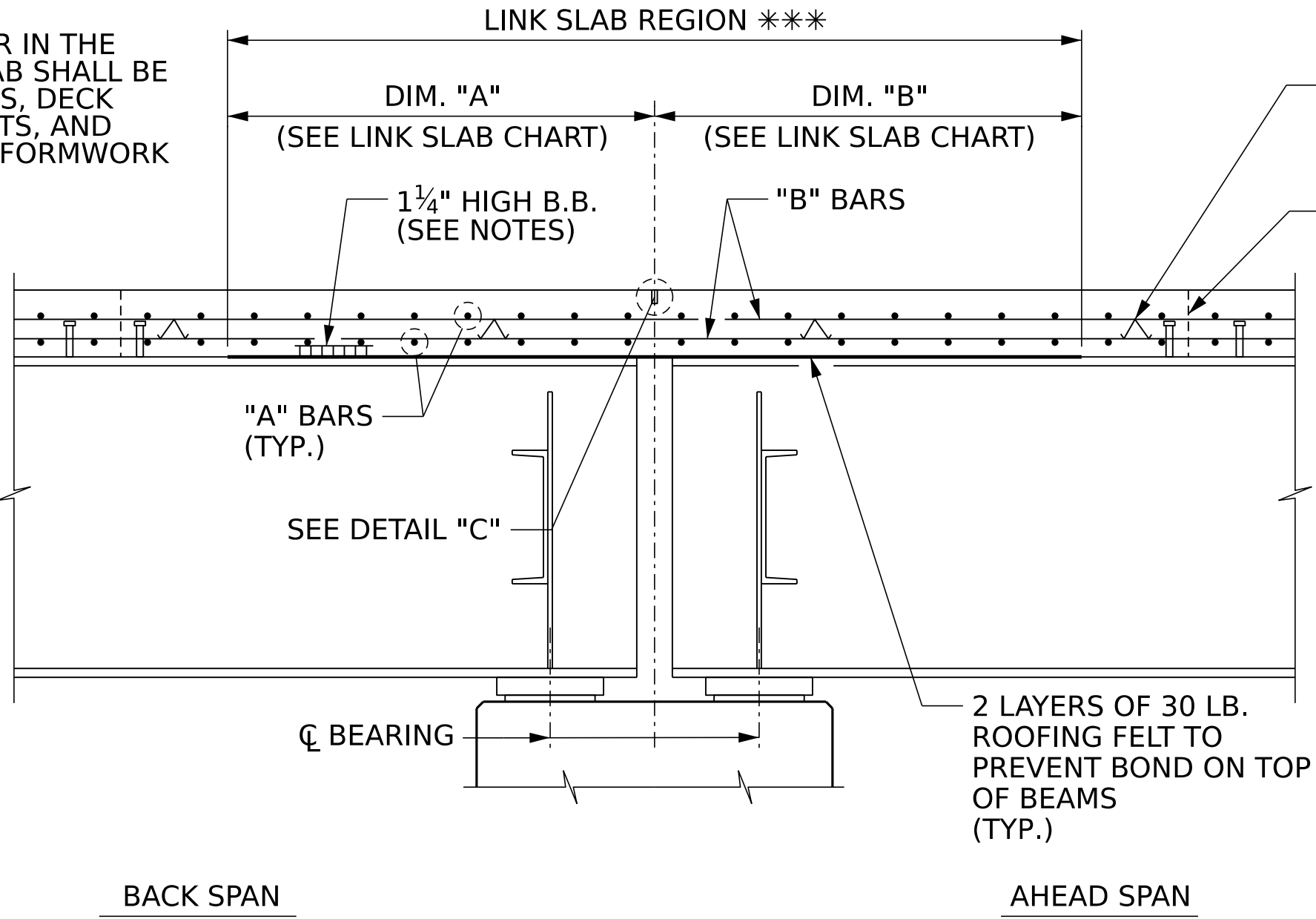
TYPICAL SECTION AND DETAILS

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S-07
TOTAL SHEETS
27

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

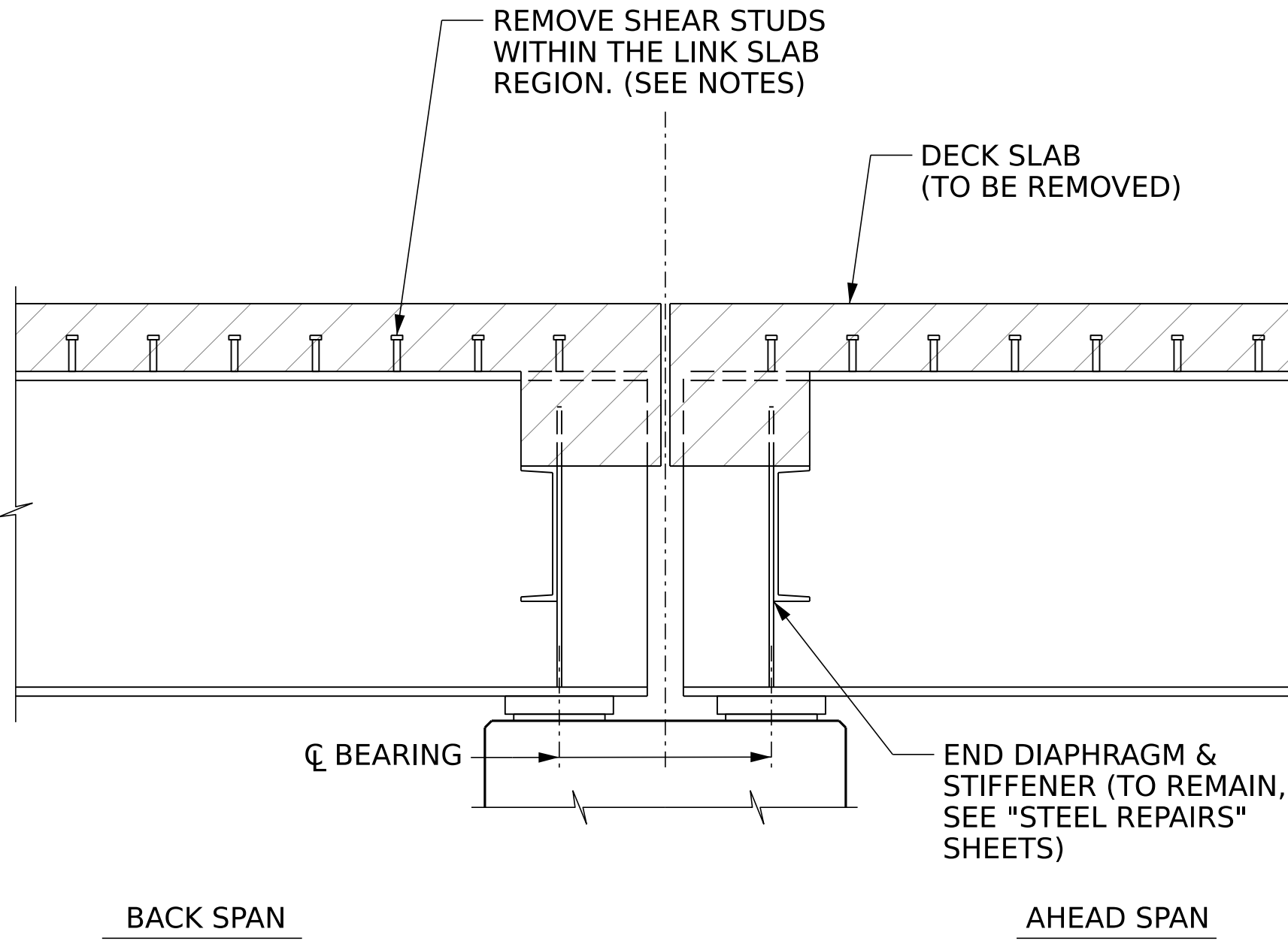
*** THE TOP OF GIRDER IN THE REGION OF THE LINK SLAB SHALL BE FREE FROM SHEAR STUDS, DECK FORMWORK ATTACHMENTS, AND OVERHANG FALSEWORK/FORMWORK ATTACHMENTS.



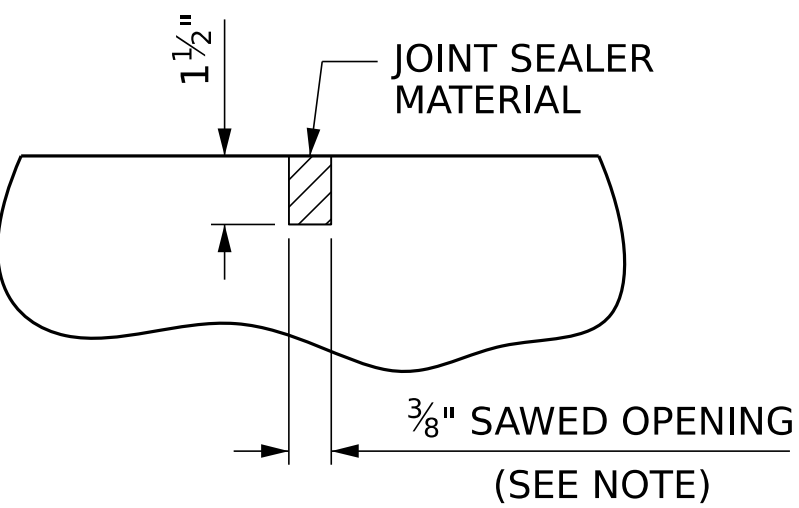
PROPOSED

SECTION C-C @ LINK SLAB

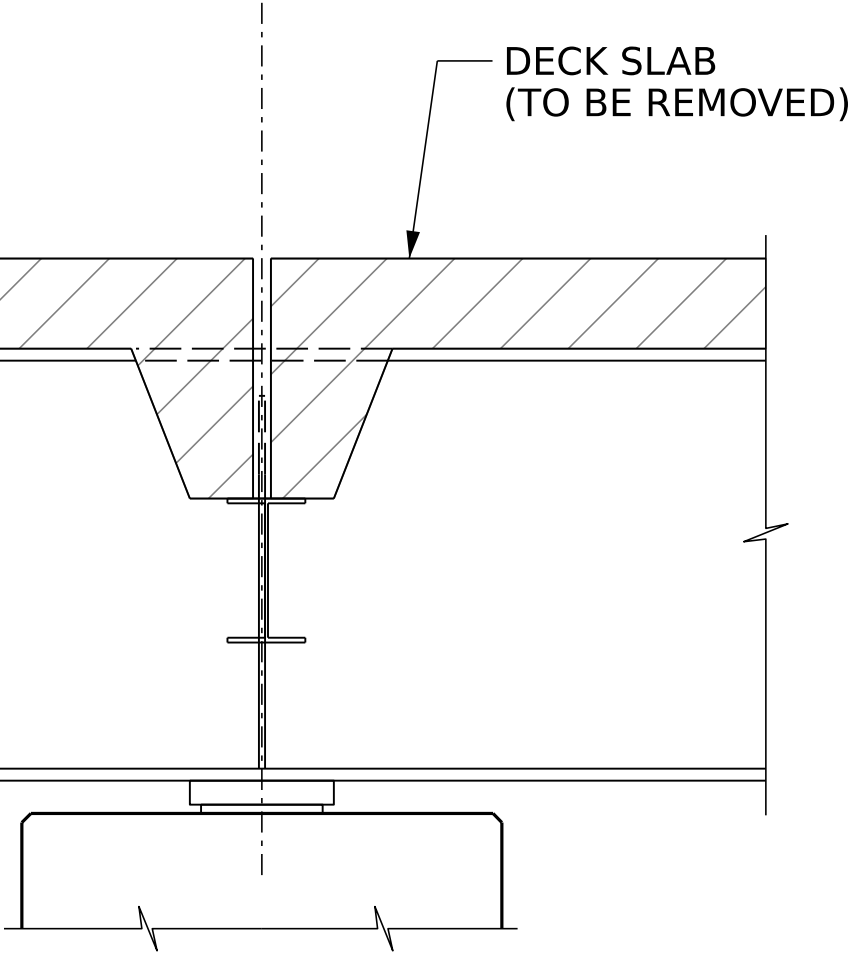
(BENTS 1 AND 2)



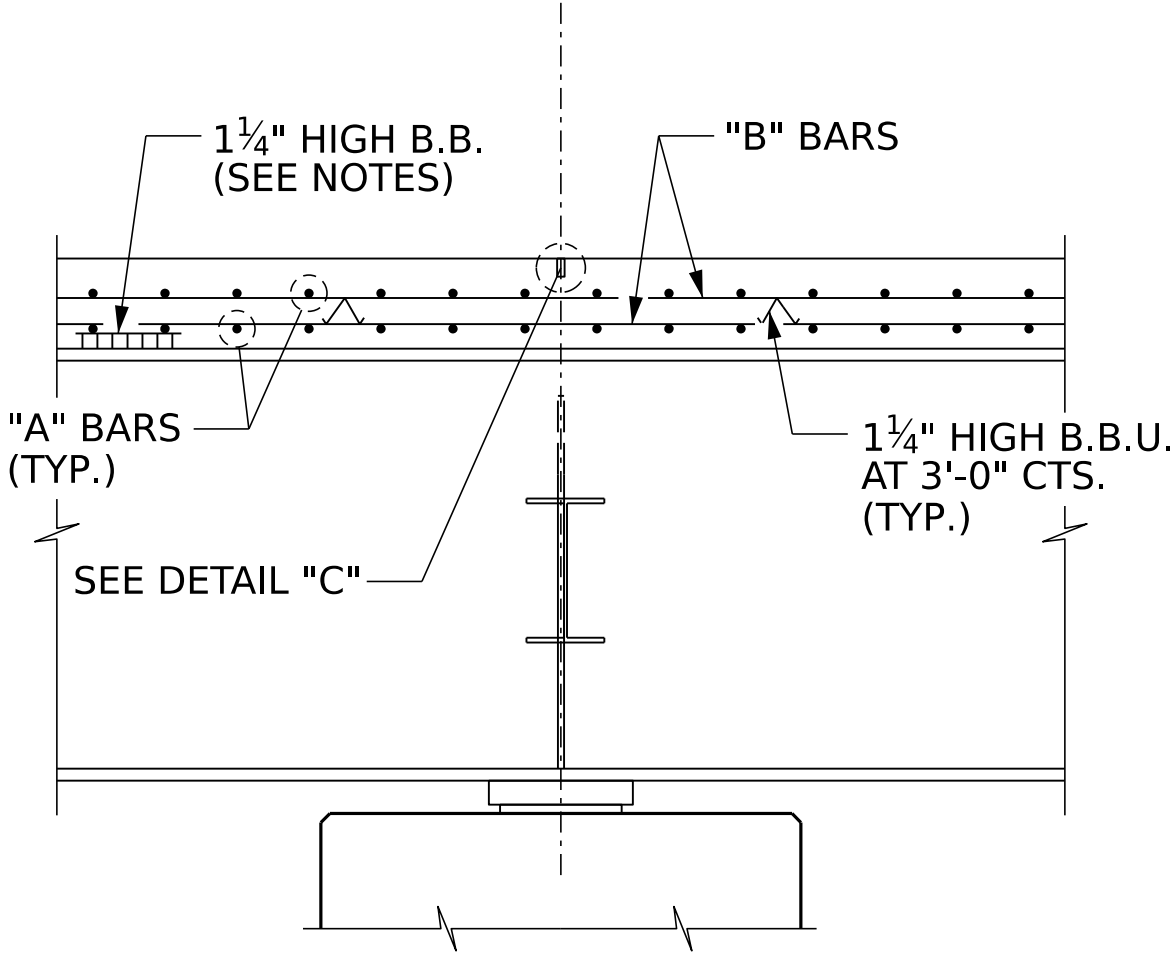
EXISTING



A 1 1/2" DEEP, 3/8" WIDE CONTRACTION JOINT AT BENT CONTROL LINE SHALL BE SAWN WITHIN 24 HOURS OF POURING THE DECK AND WITHIN 24 HOURS OF POURING THE OVERHANG SIDEWALK. THE JOINT SHALL BE FILLED WITH JOINT SEALER MATERIAL. THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1028-3 OF THE STANDARD SPECIFICATIONS.



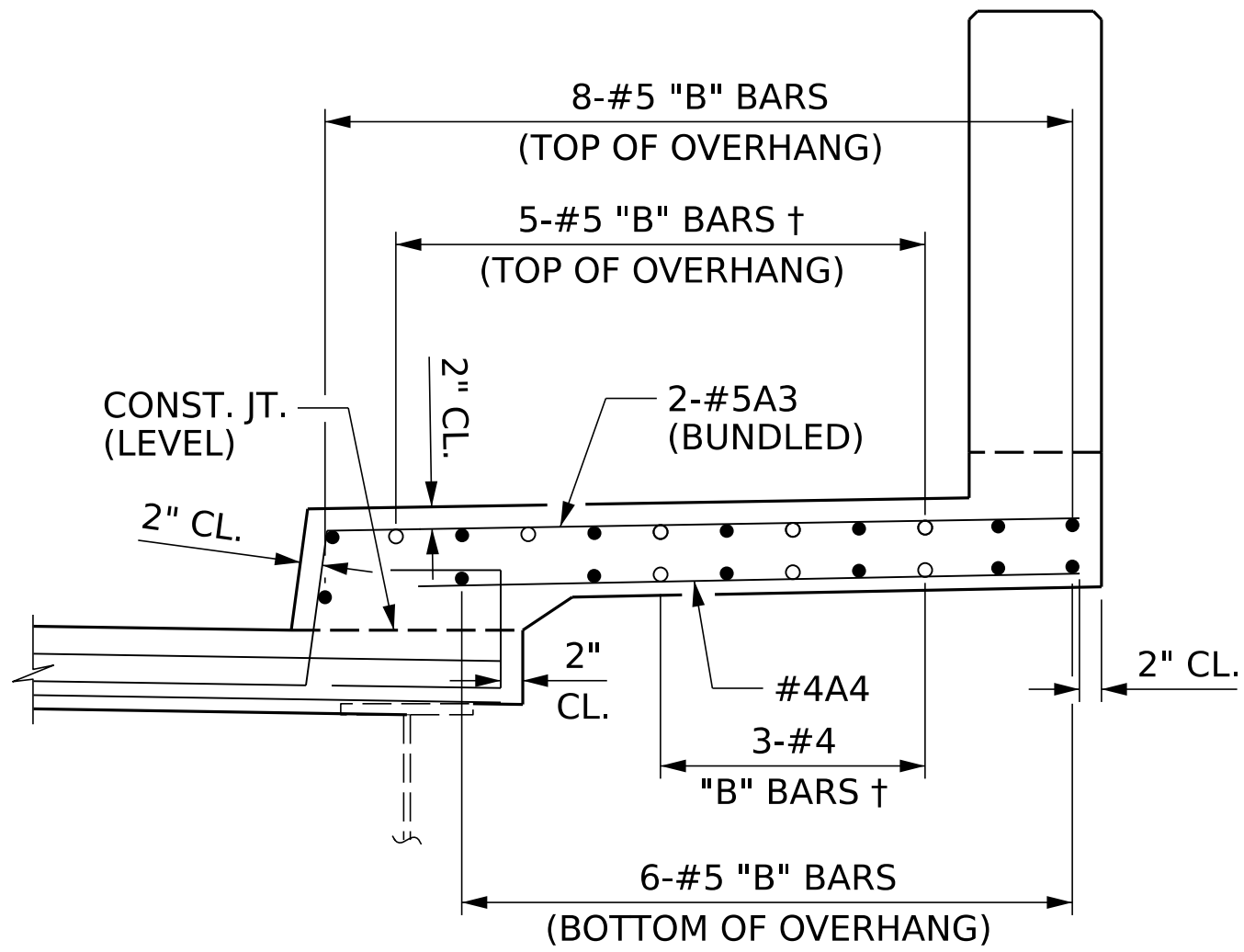
EXISTING



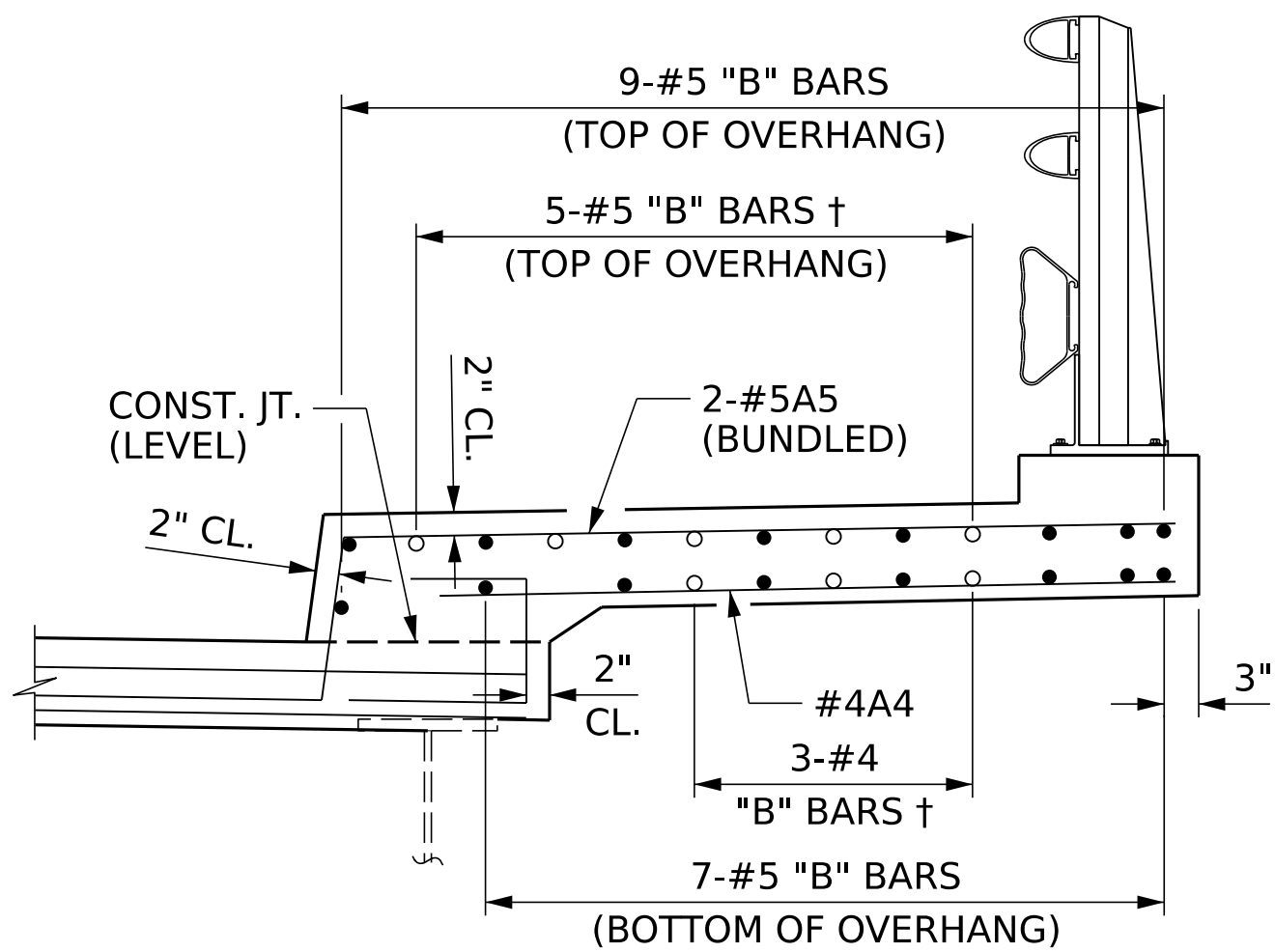
PROPOSED

SECTION D-D @ BENT 3

DRAWN BY :	D. DRUM	DATE :	05/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024



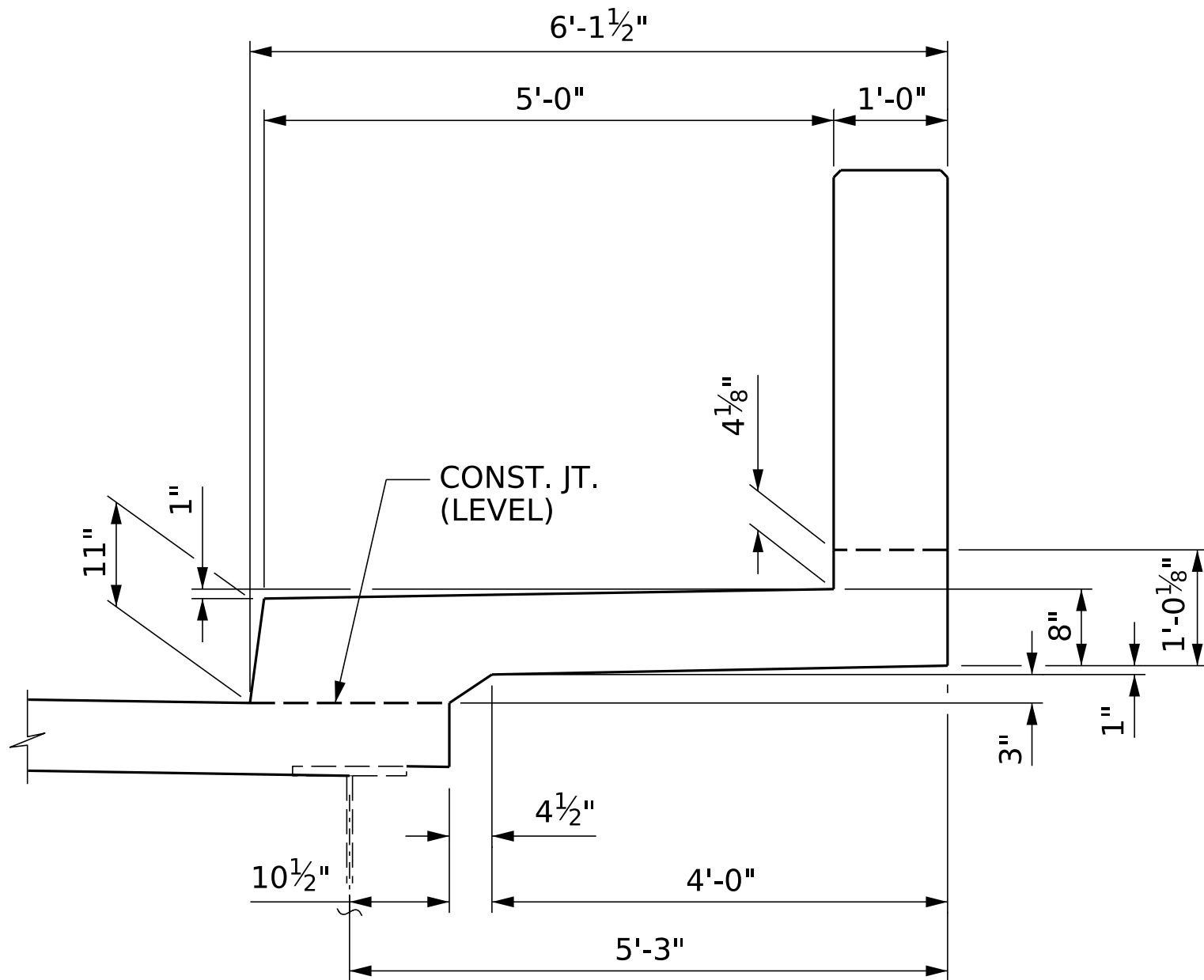
AT END POST OVERHANG



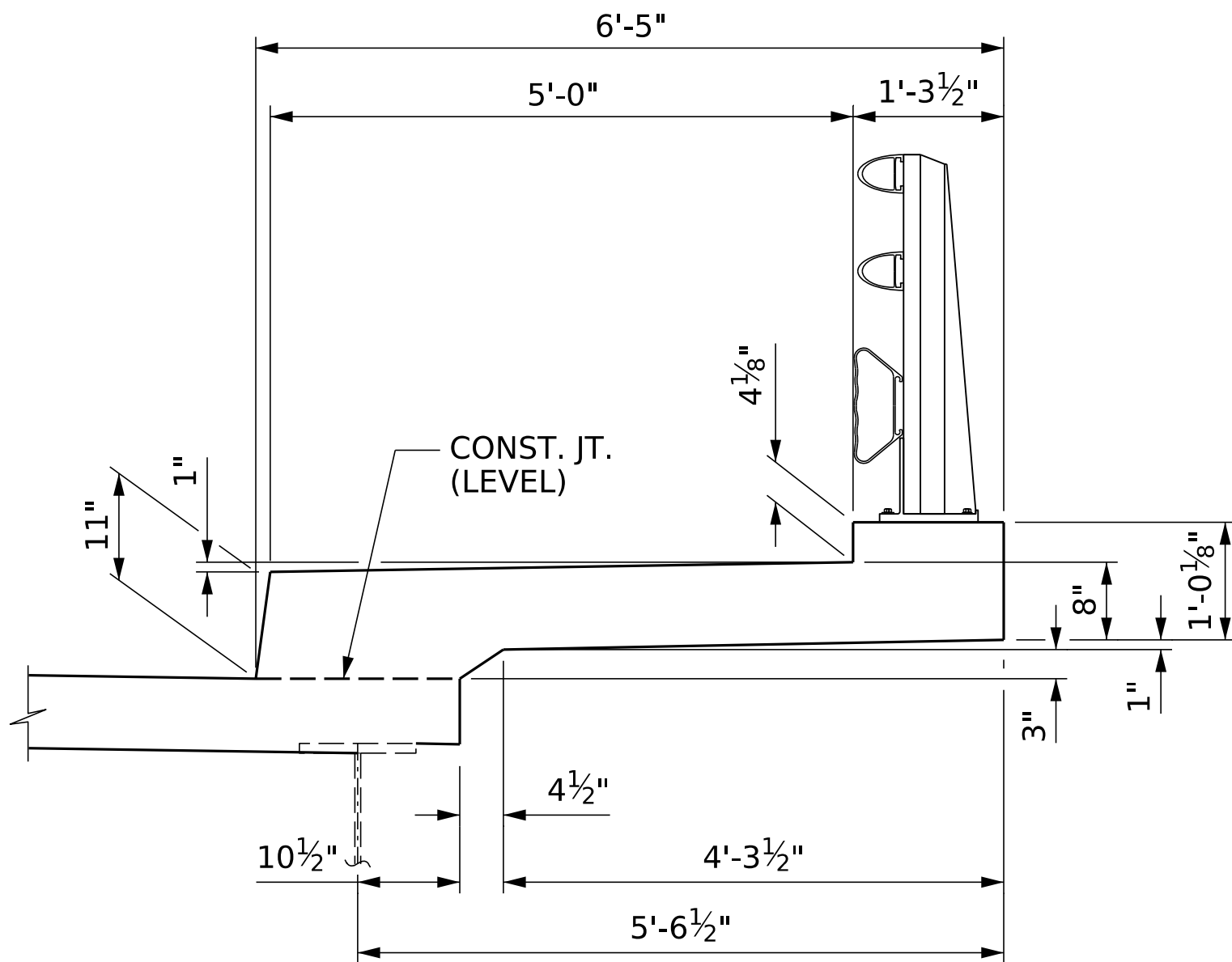
AT THREE BAR METAL RAIL OVERHANG

OVERHANG REINFORCEMENT DETAILS

† = IN LINK SLAB AREAS ONLY
"B" BARS BELOW PERMITTED JOINT NOT SHOWN

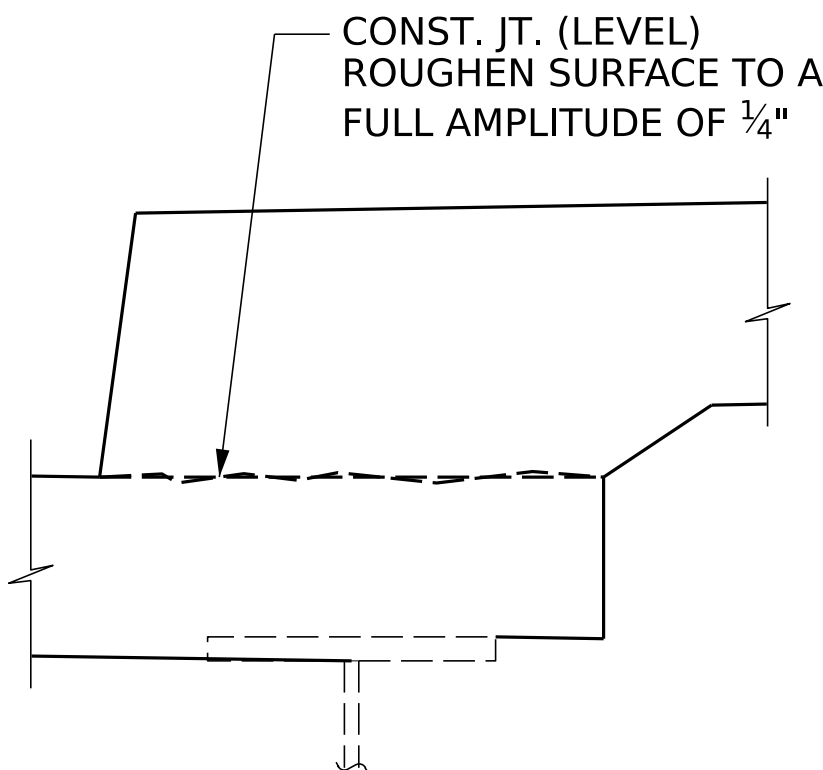


AT END POST OVERHANG

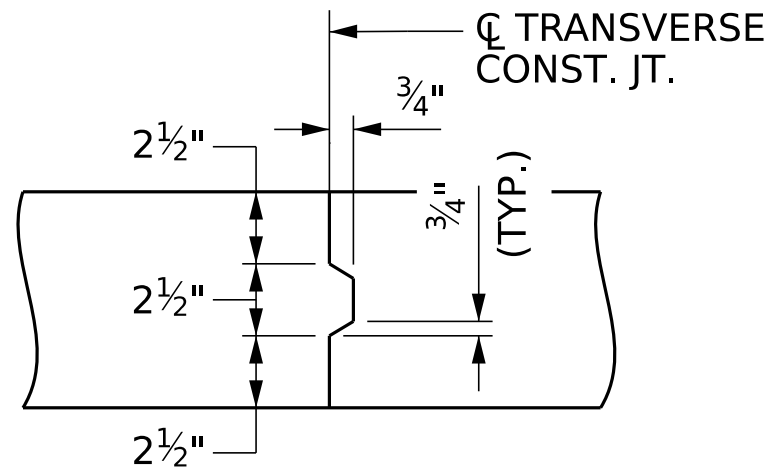


AT THREE BAR METAL RAIL OVERHANG

OVERHANG DIMENSIONS



DETAIL "D"



TRANSVERSE CONSTRUCTION JOINT IN DECK SLAB

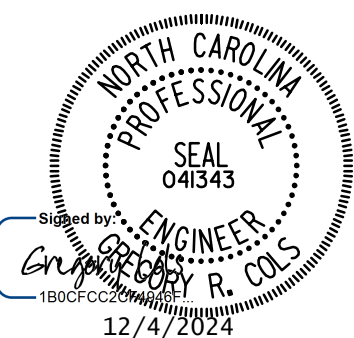
NOTE: REINFORCING STEEL IN SLAB NOT SHOWN.
REINFORCING STEEL SHALL BE CONTINUOUS THRU JOINT.

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 4 OF 4



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

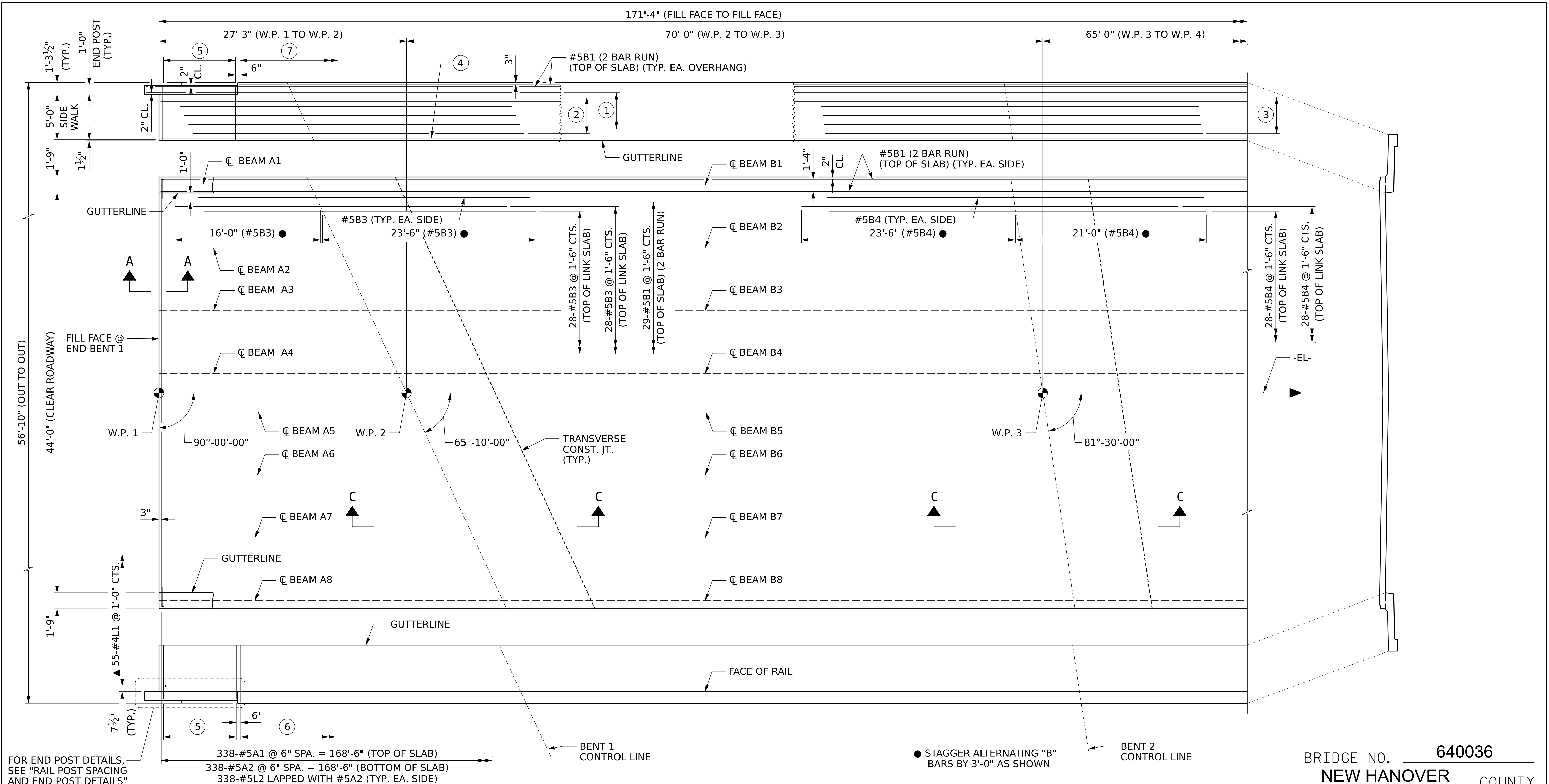
SUPERSTRUCTURE

TYPICAL SECTION AND DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-08
2			4			TOTAL SHEETS 27

DRAWN BY :	D. DRUM	DATE :	05/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



FOR END POST DETAILS, SEE "RAIL POST SPACING AND END POST DETAILS" SHEET

SPAN "A"

- 1 5-#5B1 @ 1'-0" CTS. (TOP OF SLAB) (2 BAR RUN) (TYP. EA. OVERHANG)
- 2 5-#5B3 @ 1'-0" CTS. (TOP OF SLAB) (TYP. EA. OVERHANG)
- 3 5-#5B4 @ 1'-0" CTS. (TOP OF SLAB) (TYP. EA. OVERHANG)
- 4 2-#5B1 (TOP OF SLAB) (2 BAR RUN) (TYP. EA. OVERHANG)
- 5 17-#5A3 2 BAR BUNDLES @ 6" CTS. (TOP OF SLAB) 17-#4A4 @ 6" CTS. (BOTTOM OF SLAB)
- 6 327-#5A5 2 BAR BUNDLES @ 6" CTS. (TOP OF SLAB) 327-#4A4 @ 6" CTS. (BOTTOM OF SLAB)
- 7 317-#5A5 2 BAR BUNDLES @ 6" CTS. (TOP OF SLAB) 317-#4A4 @ 6" CTS. (BOTTOM OF SLAB)

DRAWN BY :	D. DRUM	DATE :	06/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

SPAN "B"

NOTES:

- FOR REINFORCING STEEL IN END POSTS, SEE "RAIL POST SPACING AND END POST DETAILS" SHEET.
- FOR SECTION VIEWS, SEE "TYPICAL SECTION AND DETAILS" SHEET.
- FOR SECTIONS A-A AND C-C, AND TRANSVERSE CONSTRUCTION JOINT, SEE "TYPICAL SECTION AND DETAILS" SHEETS.
- FOR LOCATION OF TRANSVERSE CONSTRUCTION JOINTS, SEE POURING SEQUENCE ON "SUPERSTRUCTURE BILL OF MATERIAL" SHEET.
- FOR INTERNAL SPLICE LENGTHS, SEE "SUPERSTRUCTURE BILL OF MATERIAL" SHEET.
- LINK SLAB SAW CUT CONTRACTION JOINTS EXTEND TO THE EDGE OF DECK ON BOTH SIDES.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

SHEET 1 OF 3

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. FC6362

12/4/2024

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-09
2			4			TOTAL SHEETS 27



SPAN "C"

NEW HANOVER COUNTY

SHEET 3 OF 3

FOR NOTES AND DIMENSIONS, SEE SHEET 1 OF 3.

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. F-0342

SUPERSTRUCTURE

BOTTOM OF SLAB "B" BARS

SHEET NO.

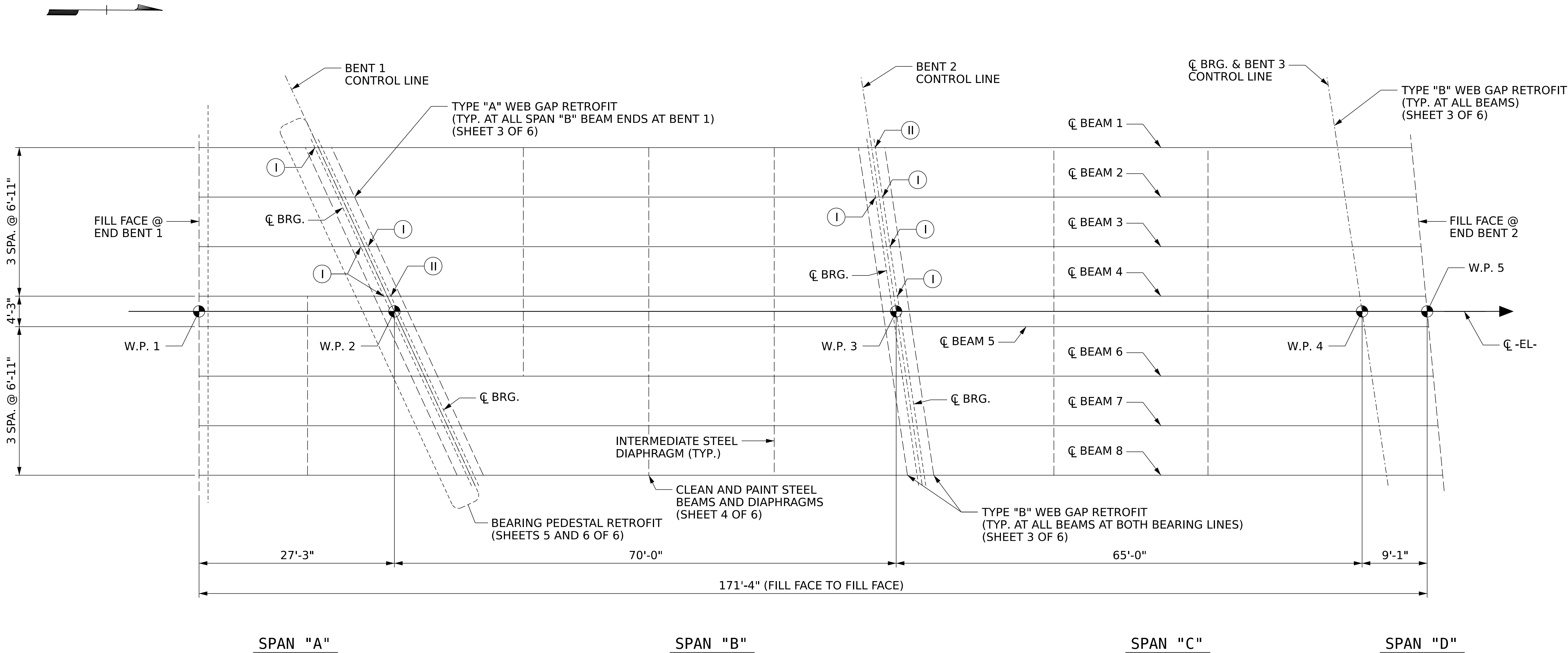
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

7/23/2024
c:\pwworking\usnc\dms18955\401_021_FrontSt+_S3_S-11_640036.dgn
daniel.drum

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES:

FOR CONCRETE DIAPHRAGM AND SHEAR STUD REMOVAL, SEE "TYPICAL SECTION AND DETAILS" SHEETS 2 AND 3.



LOCATION OF STEEL REPAIRS

BEAM END REPAIRS (SHEET 2 OF 6)

- ① TYPE I REPAIR
- ② TYPE II REPAIR

BRIDGE NO. 640036

NEW HANOVER COUNTY

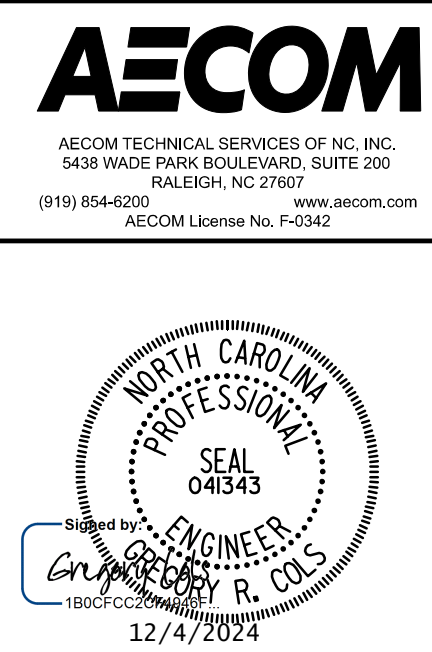
STATION: 12+50.55 -EL-

SHEET 1 OF 6

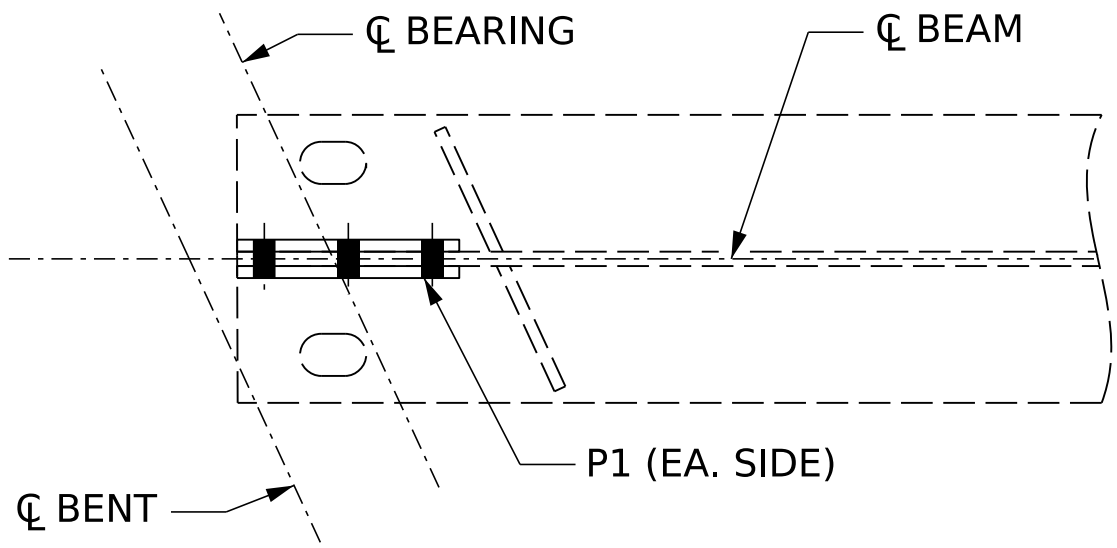
REPAIR QUANTITY TABLE	
CLEAN AND PAINT STRUCTURAL STEEL	LUMP SUM
PAINTING CONTAINMENT	LUMP SUM
POLLUTION CONTROL	LUMP SUM
STUB COLUMN	LUMP SUM
WEB GAP RETROFIT	56 EACH
TYPE I REPAIR	8 EACH
TYPE II REPAIR	2 EACH
CLEANING AND PAINTING EXISTING BEARING PLATES	40 EACH

DRAWN BY : M. CATER DATE : 06/2024
CHECKED BY : G. COLS DATE : 07/2024
DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

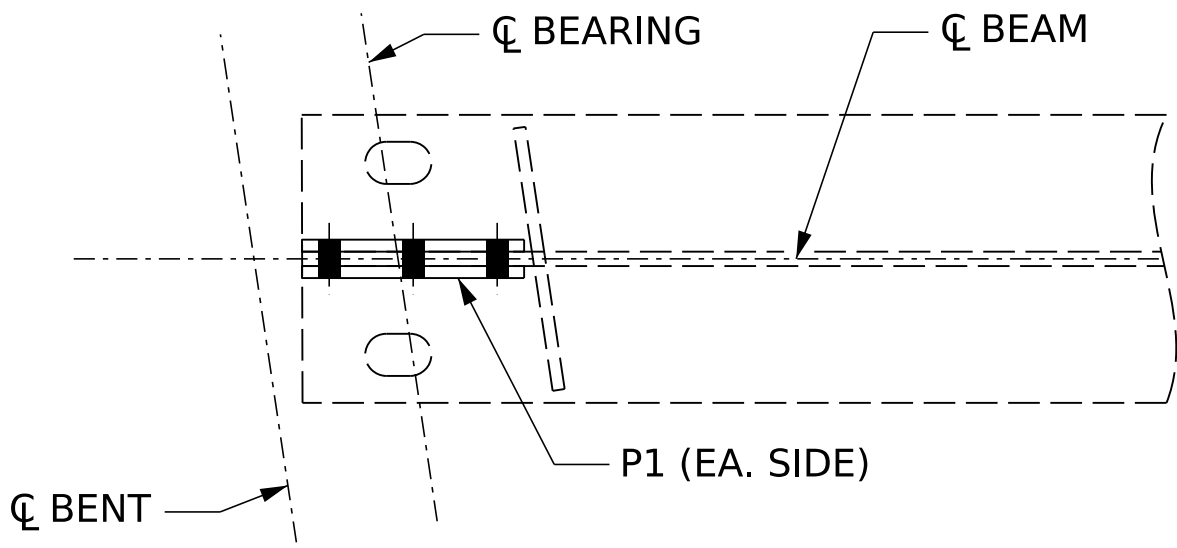
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



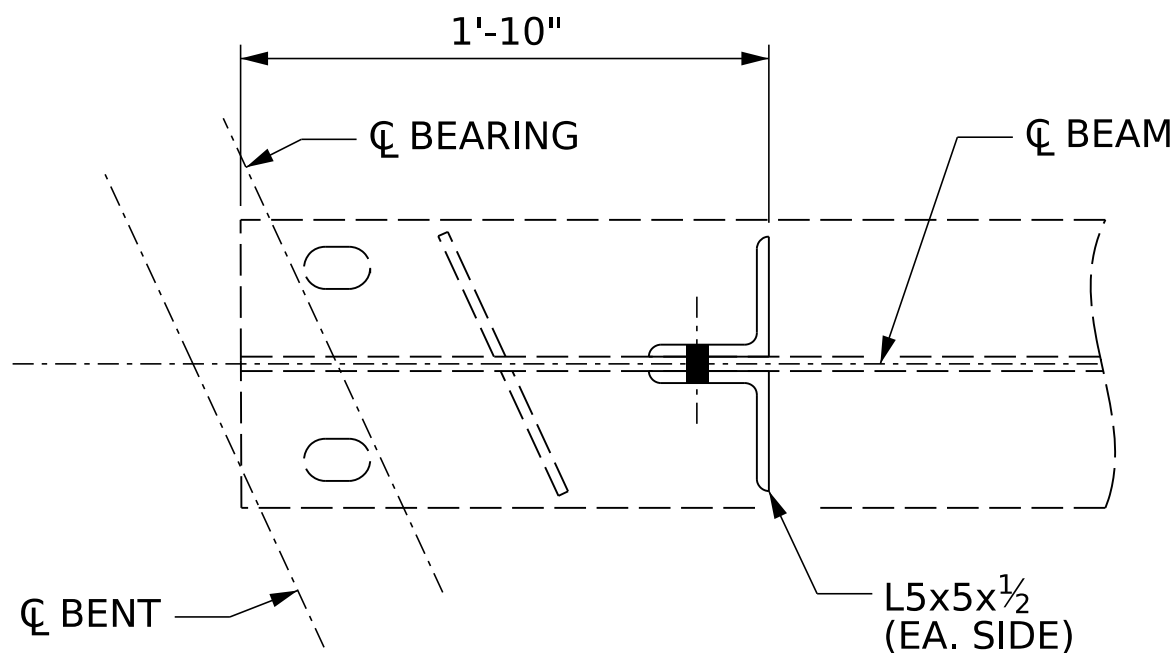
STATE OF NORTH CAROLINA CITY OF WILMINGTON					
STEEL REPAIRS					
LOCATIONS OF REPAIRS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-13
TOTAL SHEETS					27



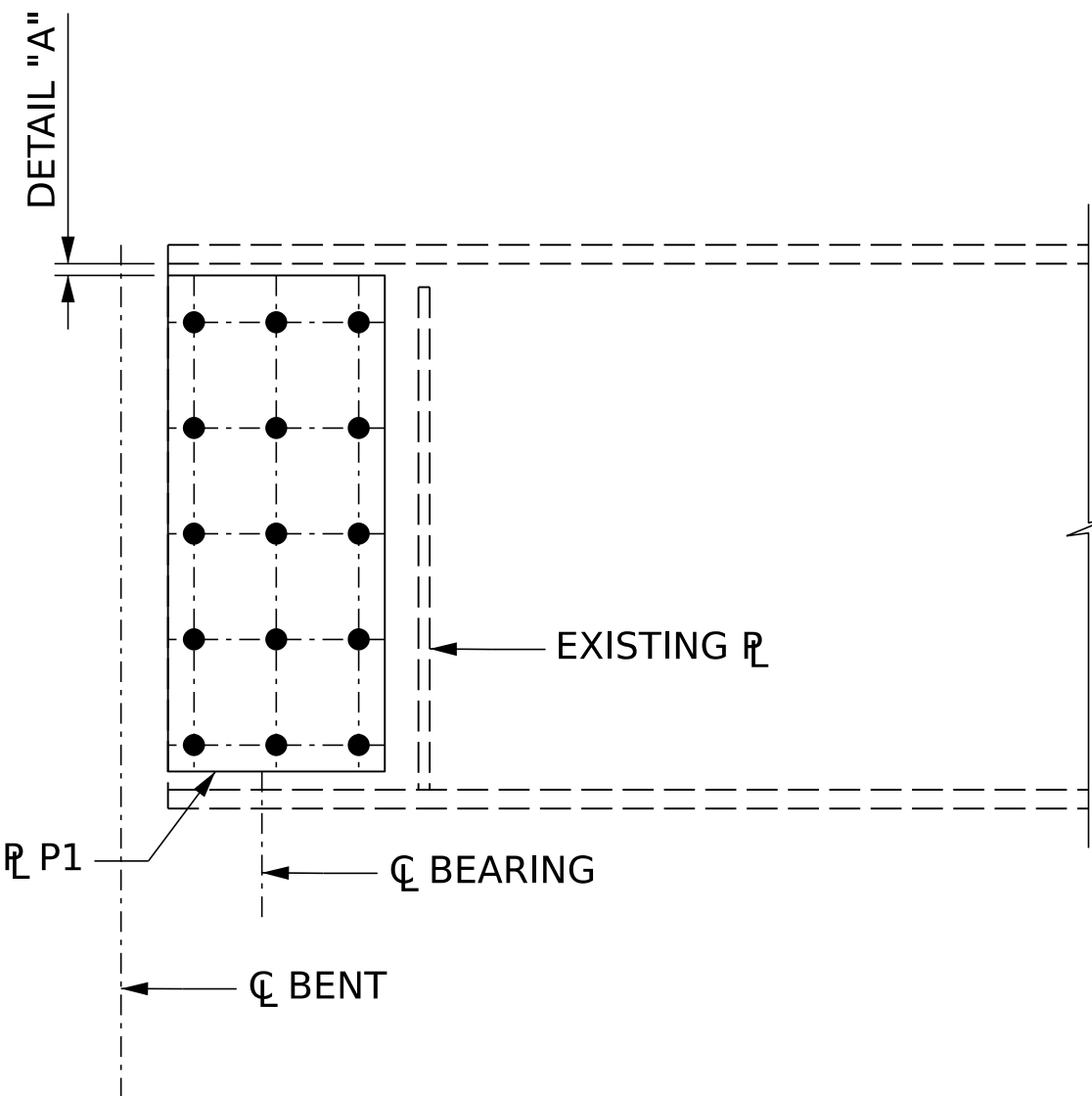
PLAN
(AT BENT 1)



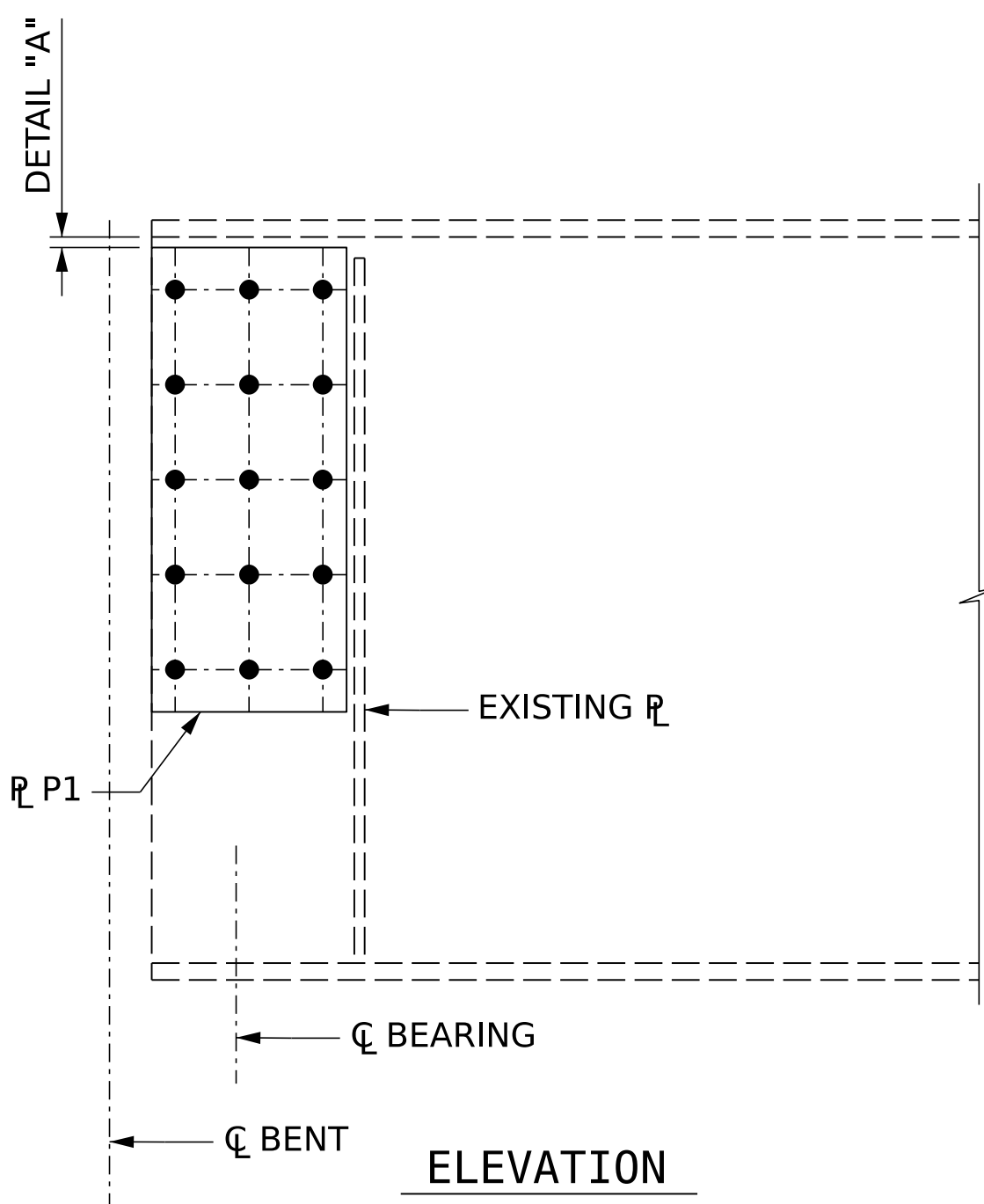
PLAN
(AT BENT 2)



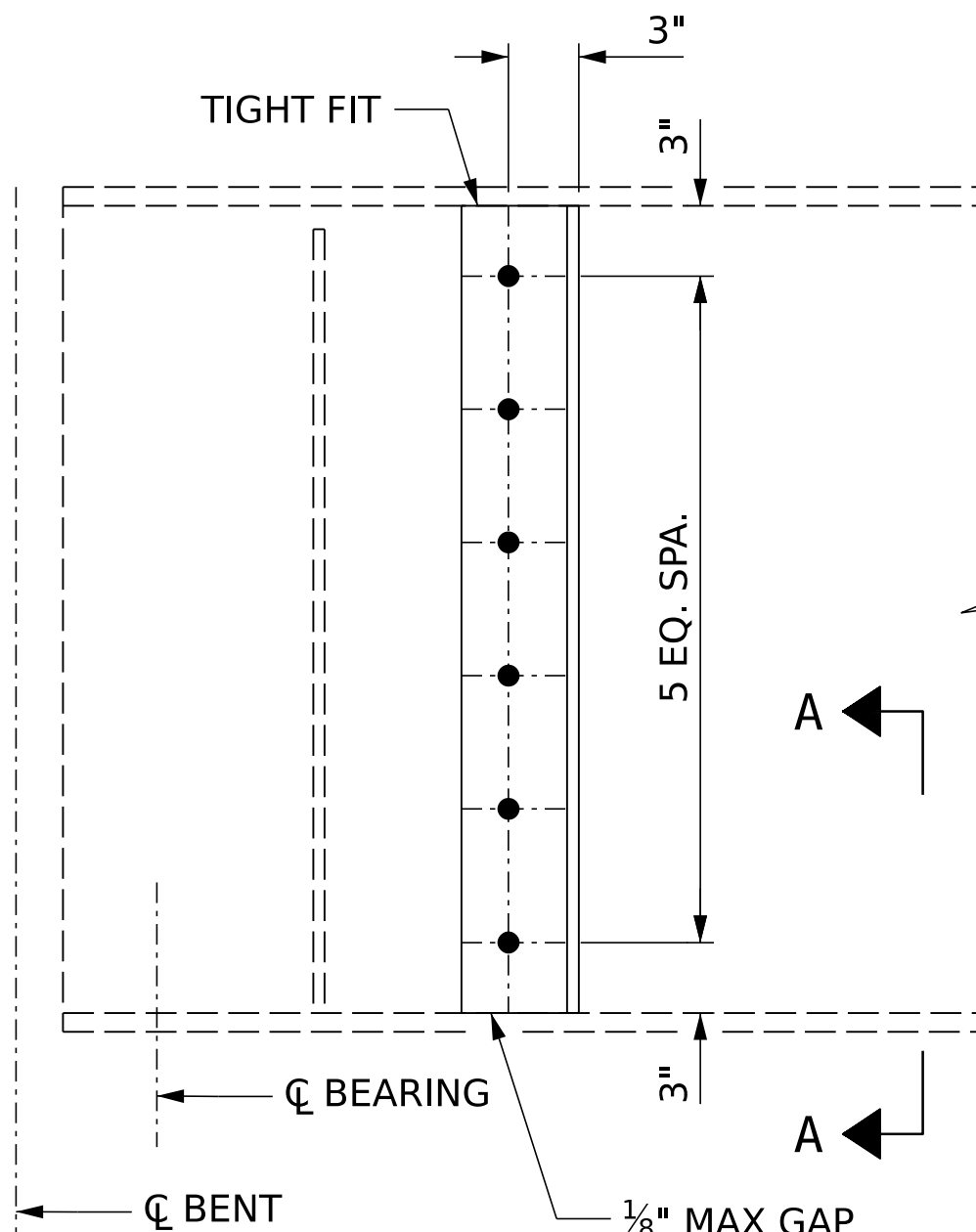
PLAN



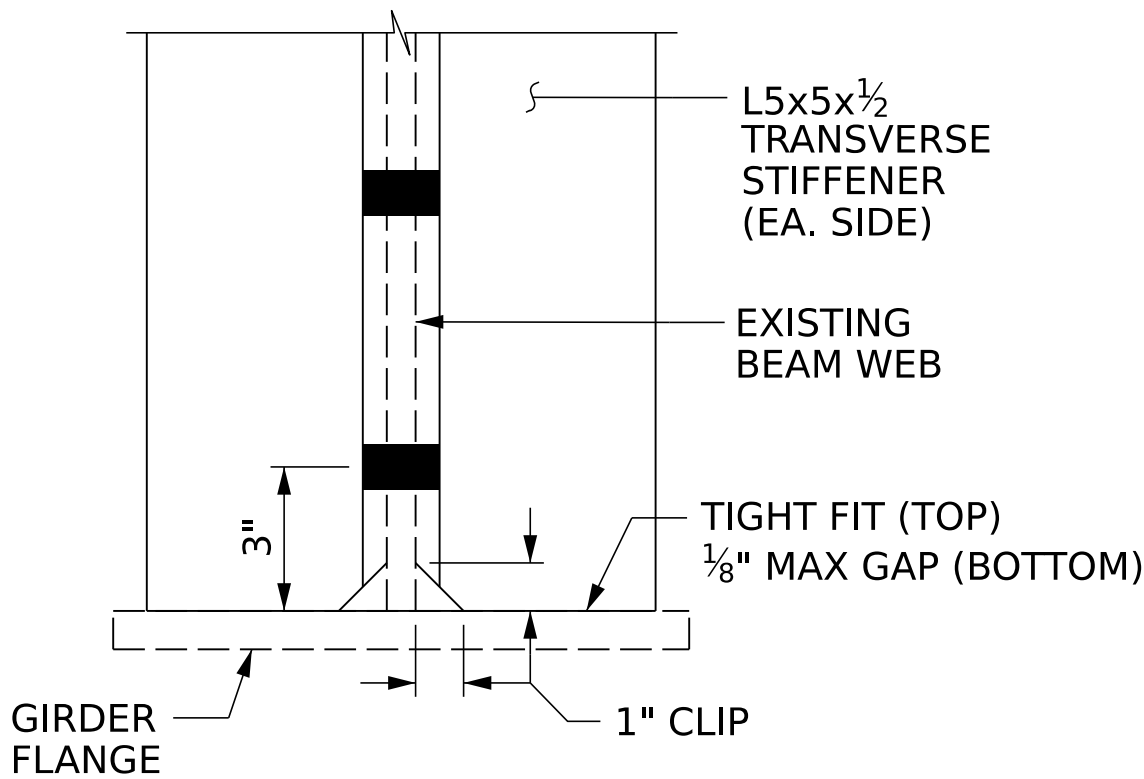
ELEVATION
(SPAN 1 BEAMS)



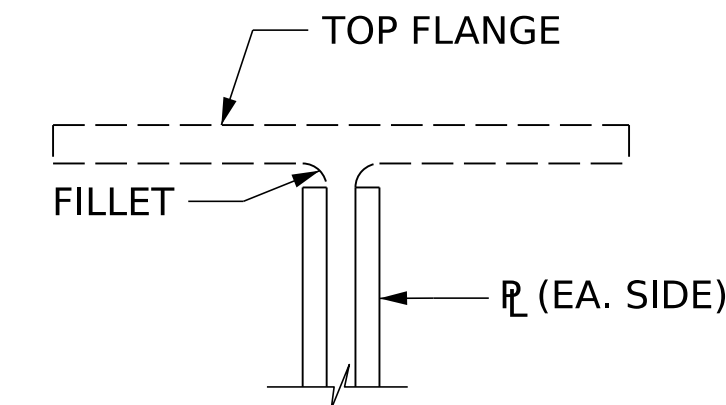
ELEVATION
(SPAN 2 OR 3 BEAMS)



ELEVATION



SECTION A-A
(TYP. TOP AND BOTTOM FLANGE)



DETAIL "A"

PLACE PLATES AT THE BOTTOM OF THE CIRCULAR FILLET CONNECTING THE TOP FLANGE AND WEB.

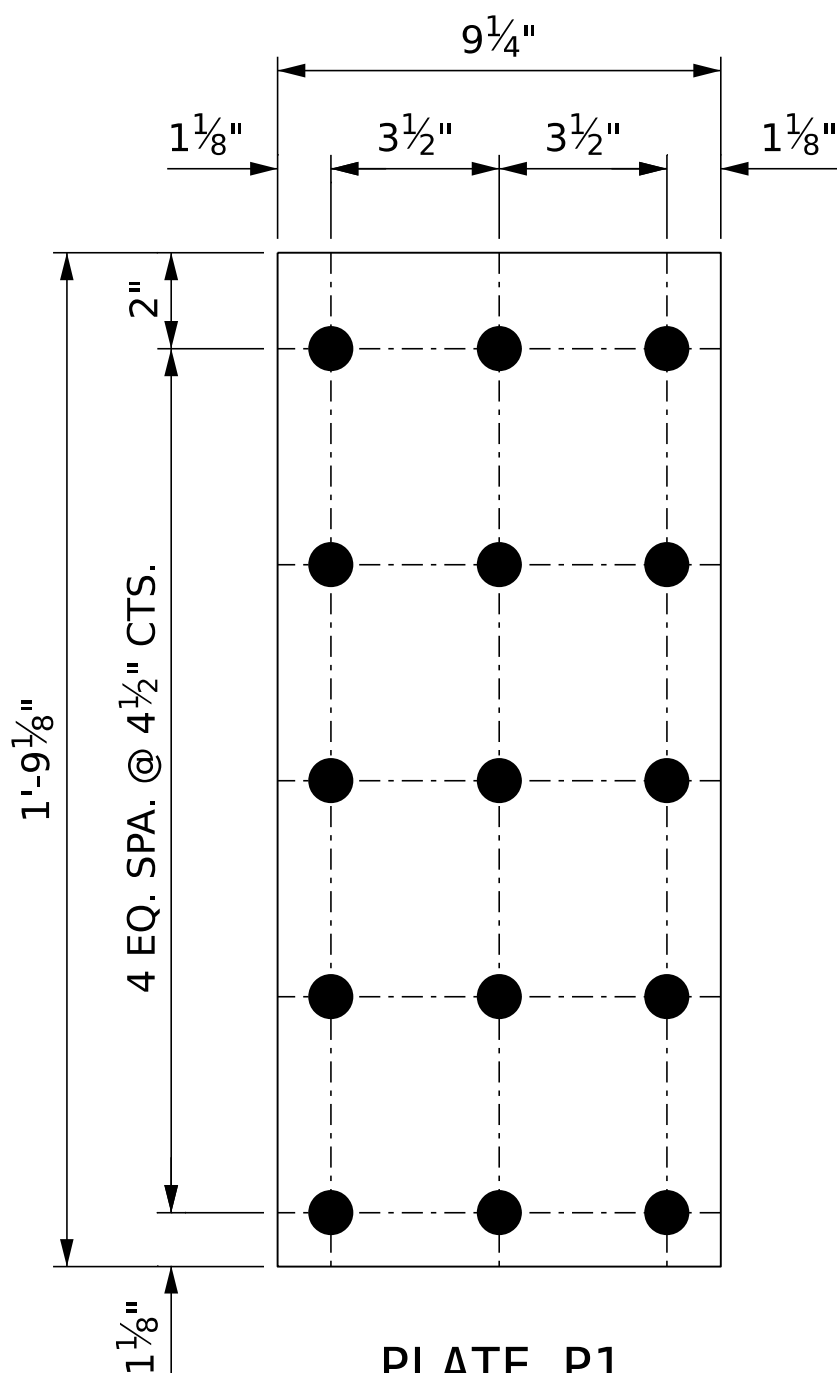


PLATE P1
(16 REQ'D)

DRAWN BY : D. DRUM DATE : 07/2024
CHECKED BY : G. COLS DATE : 07/2024
DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

7/23/2024
c:\pwworking\usnc\dms18955\401.027.FrontStt..01.S-14.640036.dgn
daniel.drums

REPAIR SEQUENCE:

VERIFY FIELD CONDITIONS AND DIMENSIONS. SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL. FABRICATE STEEL PLATES AND ANGLES.

REMOVE EXISTING DECK AND CONCRETE DIAPHRAGMS.

MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT FROM ALL STEEL MEMBERS.

PRIME ENTIRE REPAIR AREA AND REPAIR PLATES WITH AN APPROVED ORGANIC ZINC PRIMER PRIOR TO BOLTING NEW PLATES AND ANGLES.

PRIOR TO PLACEMENT OF THE PLATES, APPLY WET EPOXY MASTIC AROUND THE TOP AND SIDE PERIMETERS ON THE PLATE FACE THAT IS TO BE IN CONTACT WITH THE BEAM. AMOUNT OF EPOXY MASTIC SHALL BE SUFFICIENT TO SEAL THE INTERFACE OF THE PLATE AND THE BEAM AFTER BOLTS ARE TIGHTENED. NO EPOXY MASTIC SHALL BE PLACED ALONG THE BOTTOM PERIMETER ON THE PLATE. WHILE THE MASTIC IS STILL WET, PLATES SHALL BE PUT IN PLACE AND BOLTS PROPERLY TIGHTENED. WIPE AWAY EXCESS EPOXY MASTIC WHILE IT IS STILL WET TO LEAVE CLEAN SURFACES AROUND REPAIR PLATES.

ONE PLATE SHALL BE PLACED ON EACH SIDE OF THE BEAM ENDS.

TENSION ON THE BOLTS SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS (DTI) IN ACCORDANCE WITH ARTICLE 440-8 OF THE NCDOT STANDARD SPECIFICATIONS. DTIs SHALL MEET ASTM F959.

APPLY NEW PROTECTIVE PAINT, SEE SHEET 4 OF 6 FOR PAINTING DETAILS.

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES:

ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OR INSTALLATION OF ANY COMPONENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER AT LEAST 2 WEEKS PRIOR TO FABRICATION FOR APPROVAL.

THE NUMBER AND LOCATION OF TYPE I AND TYPE II REPAIRS ARE BASED ON THE 2024 ROUTINE INSPECTION REPORT. TYPE I AND II REPAIRS SHALL BE PERFORMED AT BEAM ENDS WITH CORROSION AND SECTION LOSS IN THE WEB WHERE LESS THAN 1/2" WEB THICKNESS IS REMAINING.

ADDITIONAL LOCATIONS QUALIFYING FOR TYPE I REPAIRS MAY BE LOCATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. ADDITIONAL LOCATIONS WILL BE PAID FOR AT THE UNIT RATE FOR TYPE I REPAIRS.

BOLTS, WASHERS, PLATES, AND ANGLES ARE INCLUDED IN THE RESPECTIVE TYPE I OR II REPAIR PAY ITEM. NO SEPARATE PAYMENT WILL BE MADE.

BOLT SPACINGS MAY BE ADJUSTED SLIGHTLY, AS NECESSARY, TO ACCOUNT FOR FIELD CONDITIONS. MINIMUM BOLT SPACING IS 2 1/4". MAXIMUM BOLT SPACING IS 6". THE MINIMUM DISTANCE FROM THE CENTERLINE OF THE BOLT TO THE NEAREST EDGE IS 1 1/8".

ALL BOLTS SHALL BE GALVANIZED ASTM F3125 3/4" Ø.
ALL BOLT HOLES SHALL BE 1 3/16" Ø.

ALL NUTS SHALL MEET ASTM A194.

ALL WASHERS SHALL MEET ASTM F436.

ALL PLATES SHALL MEET ASTM A36.

THE EPOXY MASTIC USED FOR THIS WORK SHALL BE COMPATIBLE WITH THE PAINT SYSTEM USED FOR THE PAINTING OF EXISTING STEEL AND SHALL BE LISTED ON NCDOT APPROVED PRODUCTS LIST OR APPROVED BY THE ENGINEER. THE EPOXY MASTIC WILL BE ACCEPTED ON THE BASIS OF THE MANUFACTURER'S WRITTEN CERTIFICATION THAT THE BATCH PRODUCED MEETS THEIR PRODUCT SPECIFICATION.

HOLES THRU EXISTING STEEL SHALL BE DRILLED. PUNCHING SHALL NOT BE ALLOWED.

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 2 OF 6

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200
www.aecom.com
AECOM License No. F02492

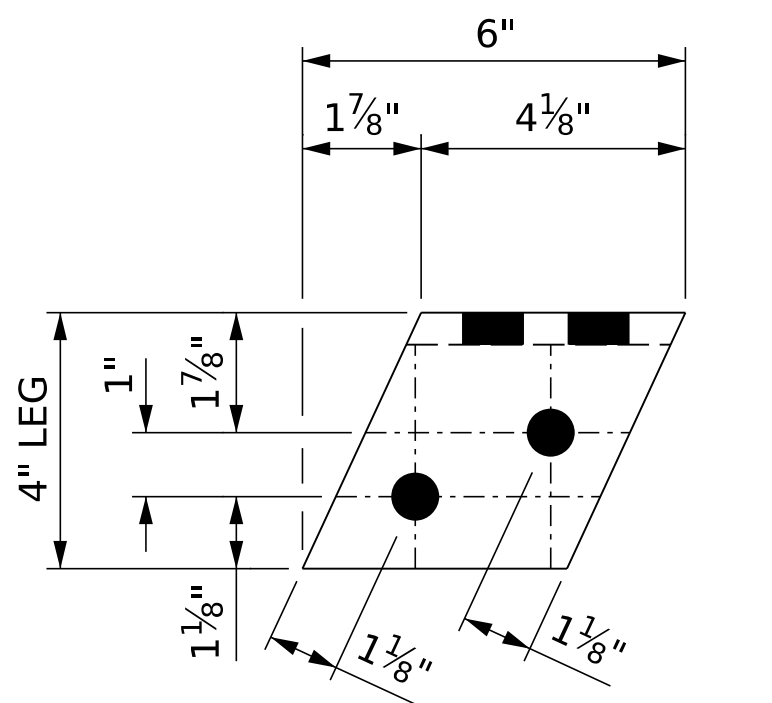
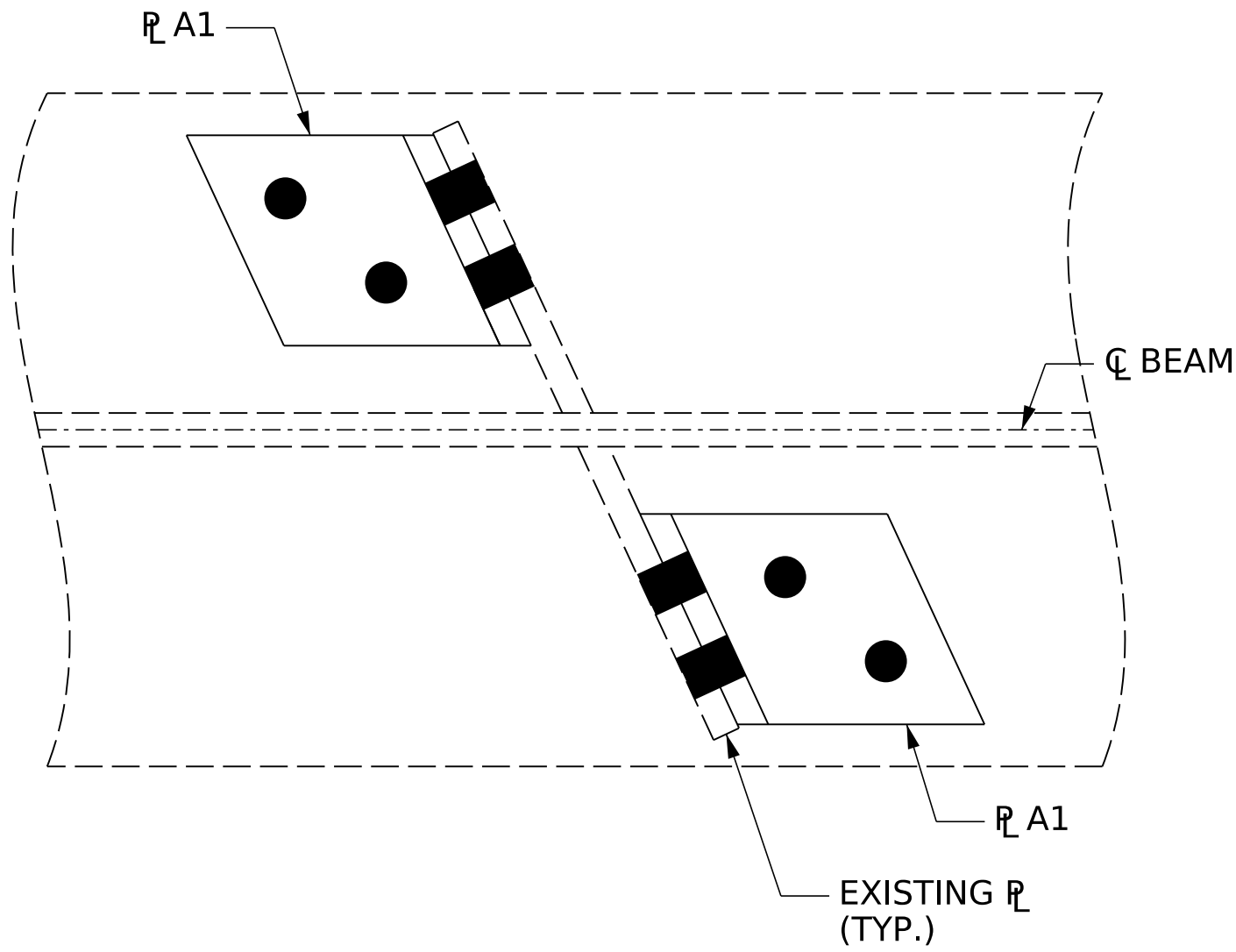
Seal of the State of North Carolina
Professional Engineer
R. COLS
12/4/2024

STATE OF NORTH CAROLINA
CITY OF WILMINGTON

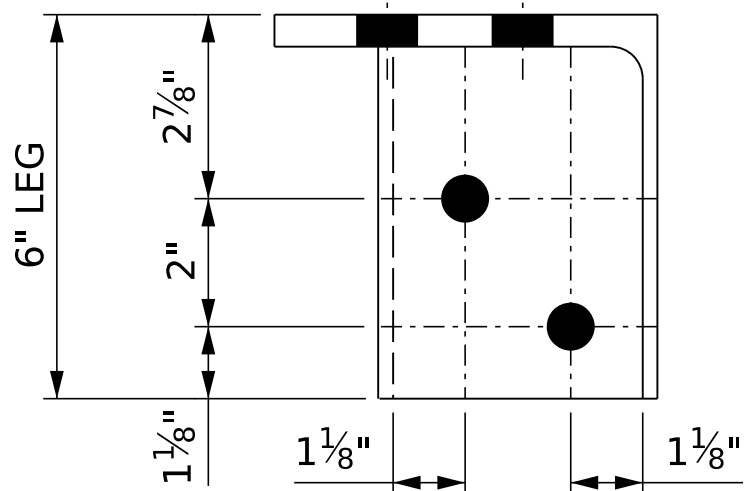
STEEL REPAIRS

BEAM END REPAIRS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			27



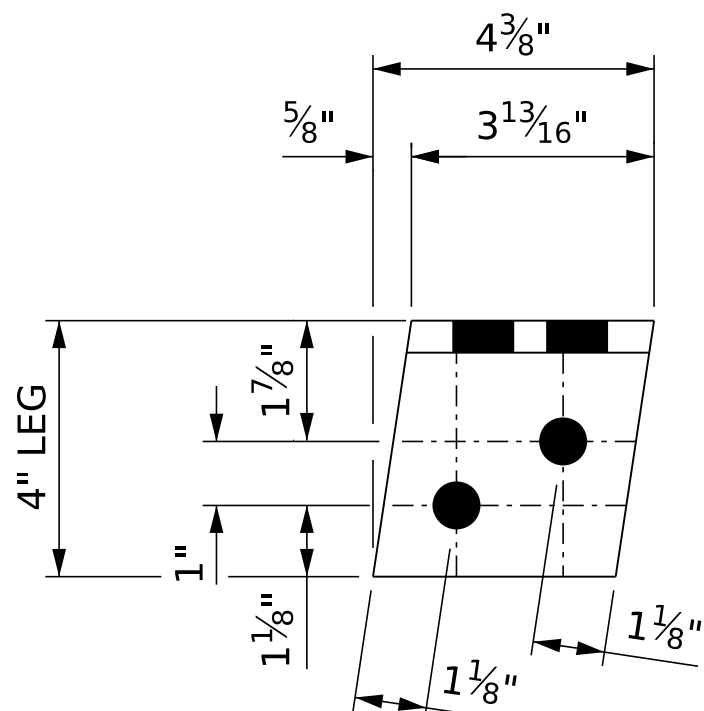
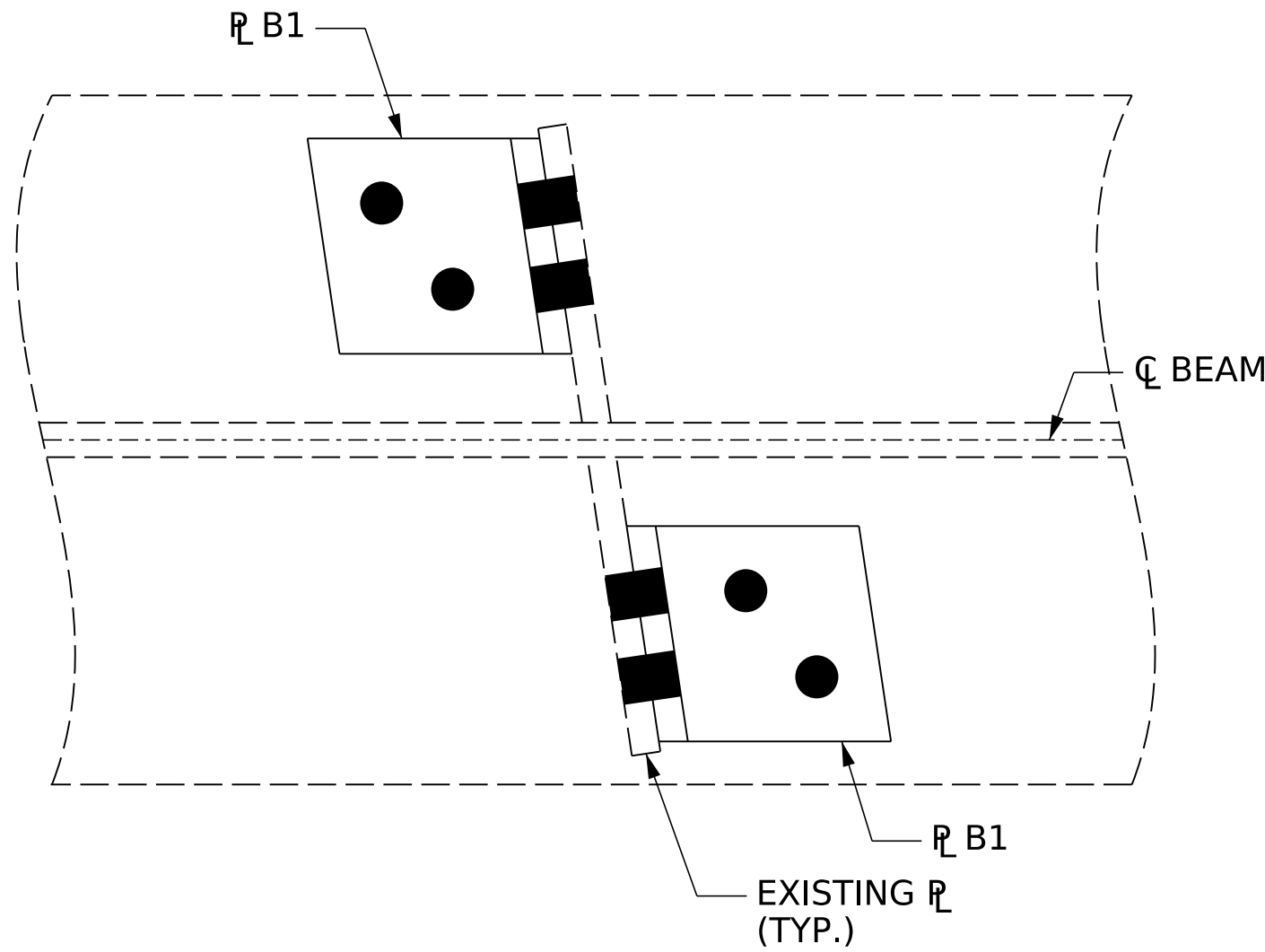
PLAN



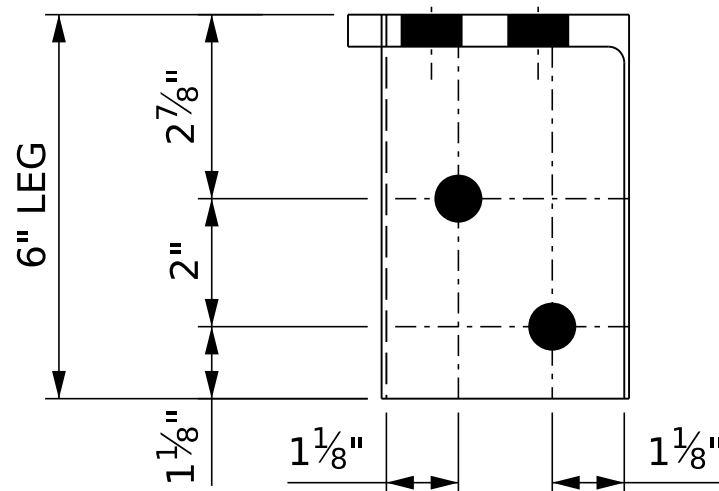
ELEVATION

PLATE A1
(14 REQ'D)

BENT 1 TYPE "A" WEB GAP REPAIR
L6x4x1/2 CONNECTING PLATE TO TOP FLANGE



PLAN



ELEVATION

PLATE B1
(42 REQ'D)

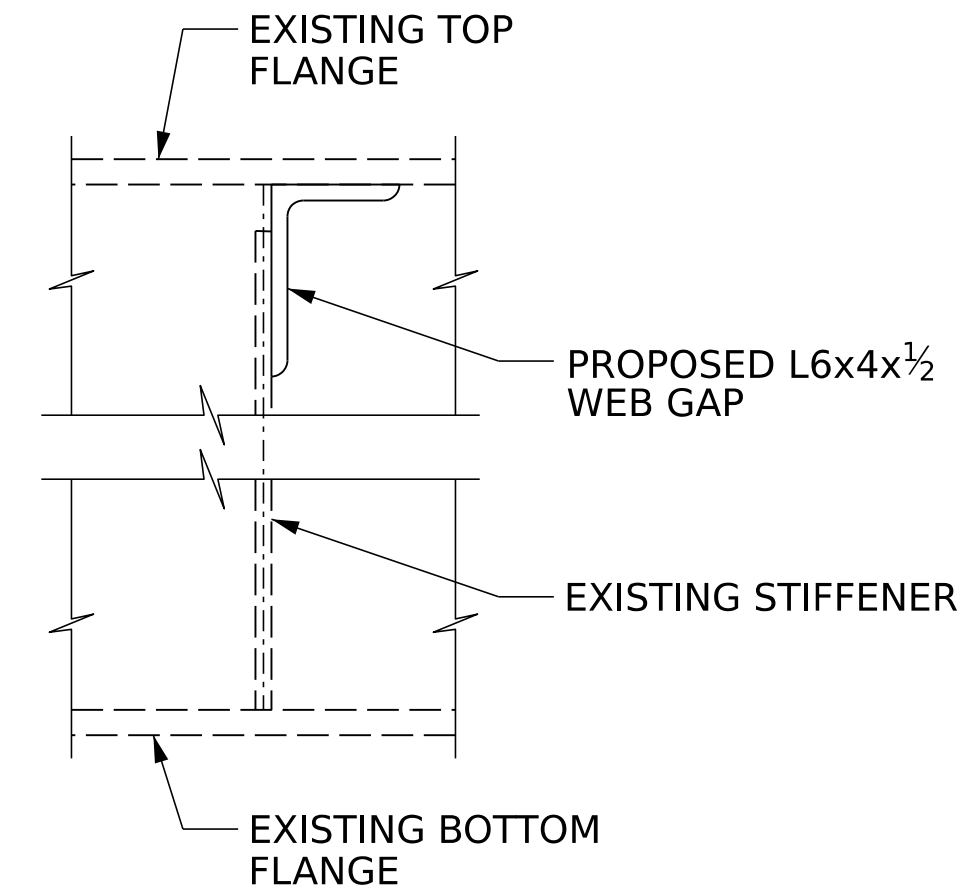
BENTS 2 AND 3 TYPE "B" WEB GAP REPAIR
L6x4x1/2 CONNECTING PLATE TO TOP FLANGE

NOTES:

THE WEB GAP DETAIL IS A BOLTED ANGLE CONNECTION BETWEEN THE EXISTING DIAPHRAGM STIFFENER AND THE GIRDER TOP FLANGE. THIS DETAIL SHALL CONNECT EXISTING PLATES AT END DIAPHRAGM LOCATIONS TO THE FLANGE.

WEB GAP REPAIRS ARE REQUIRED ON ONLY THE INTERIOR SIDE OF EXTERIOR BEAMS (1 & 8). WEB GAP REPAIRS ARE REQUIRED ON BOTH SIDES OF INTERIOR BEAMS (2-7).

FOR ADDITIONAL NOTES, SEE SHEET 2 OF 6.



SECTION THRU L6x4x1/2
BOLTS NOT SHOWN

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 3 OF 6

</

DRAWN BY :	D. DRUM	DATE :	07/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

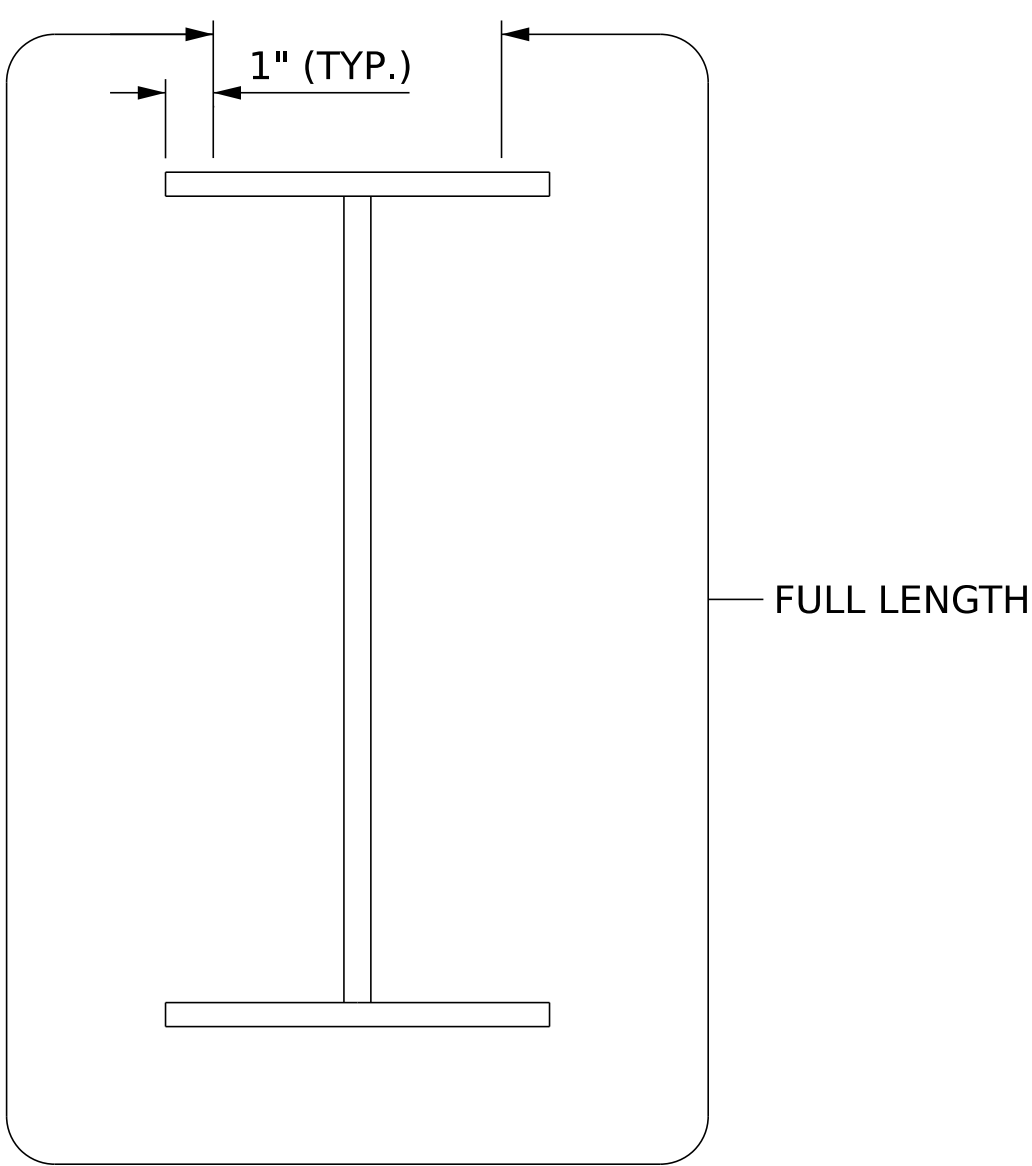
NOTES:

FOR CLEANING AND PAINTING EXISTING STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

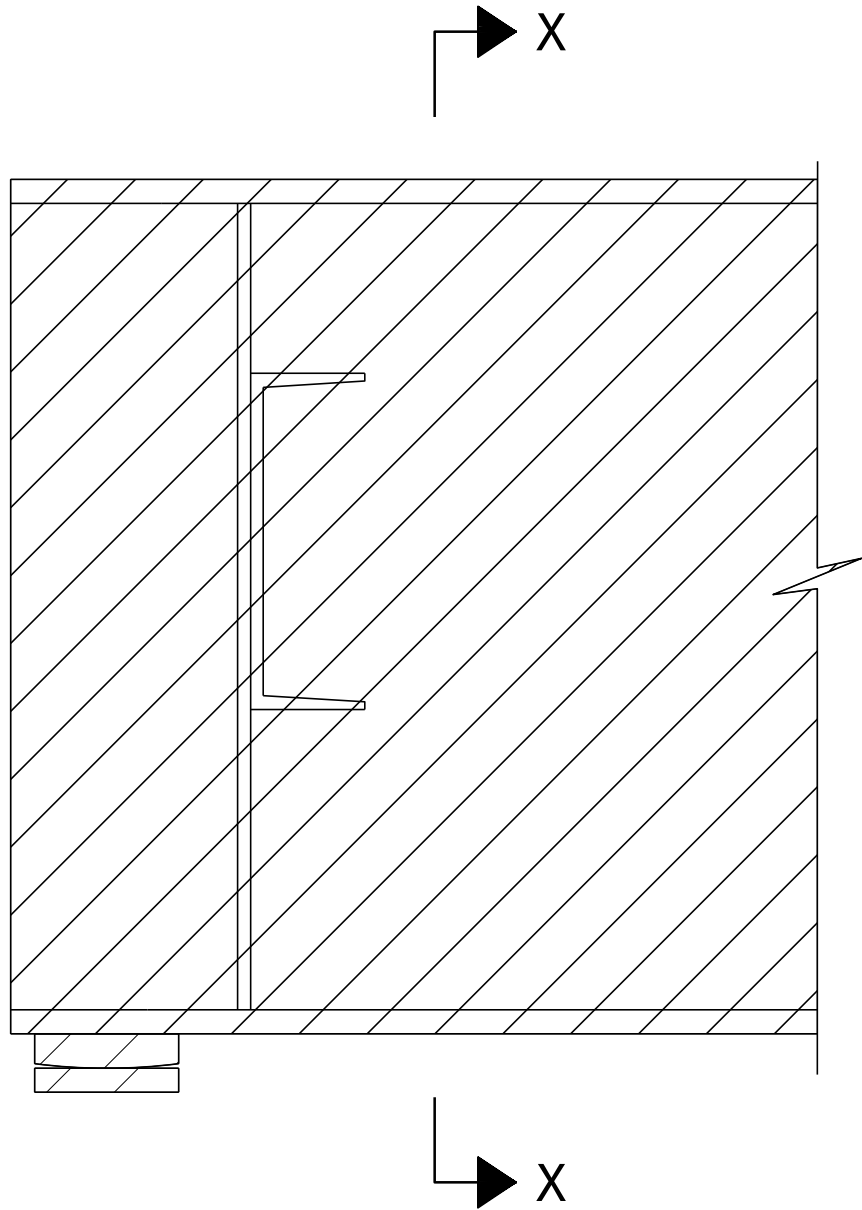
THE CONTRACTOR SHALL CLEAN AND PAINT STEEL SURFACES AFTER THE EXISTING DECK AND OVERHANGS HAVE BEEN REMOVED AND PRIOR TO POURING THE NEW DECK AND OVERHANGS.

THE PORTION OF BEARING EMBEDDED IN THE CURTAIN WALL AT END BENT 1 NEED NOT BE CLEANED OR PAINTED.

FOR CLEANING AND PAINTING EXISTING BEARING PLATES, SEE SPECIAL PROVISIONS.



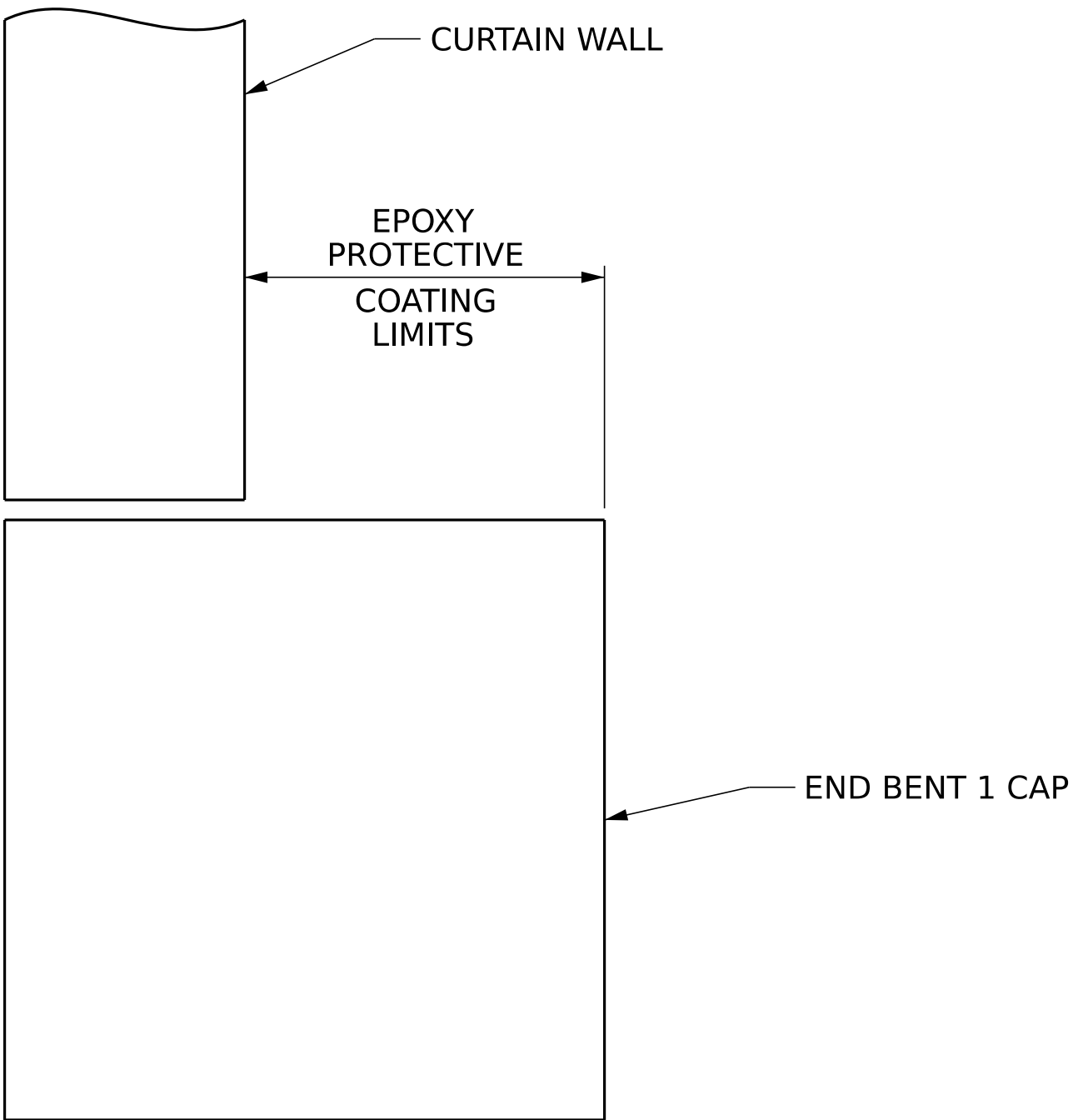
SECTION X-X



TYPICAL ELEVATION

CLEANING AND PAINTING LIMITS

TYPICAL ALL BEAMS, DIAPHRAGMS, BEARINGS, AND STIFFENERS.
ALL FACES



EPOXY COATING AT END BENT 1 CAP

EPOXY COAT THE TOP OF THE END BENT 1 CAP AFTER THE BEAMS AND BEARINGS HAVE BEEN CLEANED BUT PRIOR TO APPLICATION OF PAINT SYSTEM. DO NOT EPOXY COAT THE CAP BENEATH THE BEARINGS.

REPAIR QUANTITY TABLE

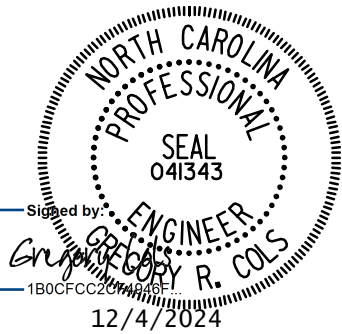
EPOXY COATING AND DEBRIS REMOVAL LUMP SUM

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 4 OF 6



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

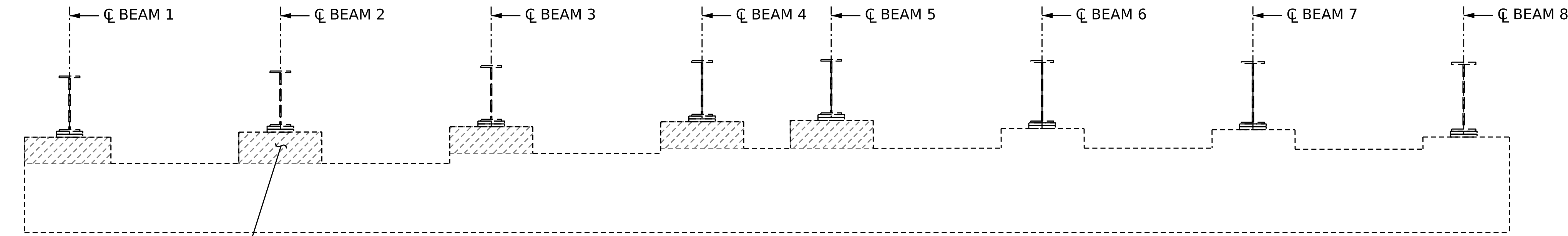
STEEL REPAIRS

CLEANING AND PAINTING

DRAWN BY : M. CATER DATE : 06/2024
CHECKED BY : G. COLS DATE : 07/2024
DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-16
2			4			TOTAL SHEETS 27

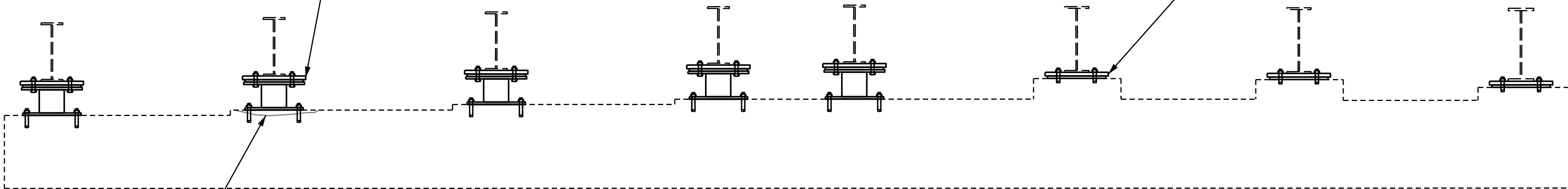


PEDESTAL (TO BE REMOVED)
(TYP. AT BEAMS 1-5)

REMOVE EXISTING CONCRETE
PEDESTAL & BEARINGS AND
INSTALL STEEL STUB COLUMN
& BEARINGS.
PLACE A 1/8" PREFORMED
NEOPRENE BEARING PAD
BENEATH THE STUB COLUMN,
TRIMMED TO FIT THE LIMITS
OF THE BOTTOM PLATE (TYP.
BEAMS 1-5)

EXISTING

REMOVE EXISTING BEARING &
PEDESTAL AND INSTALL NEW
BEARINGS (TYP. BEAMS 6-8)



BEARING SURFACE SHALL BE
SMOOTH AND LEVEL. USE AN
APPROVED GROUT IF NEEDED.
THE CONTRACTOR SHALL
PERMIT THE ENGINEER TO
INSPECT THE SURFACE
BEFORE SETTING THE STUB
COLUMN. (TYP. BEAMS 1-5)

ROUGHEN TOP OF CAP SURFACE PRIOR TO
APPLICATION OF GROUT.

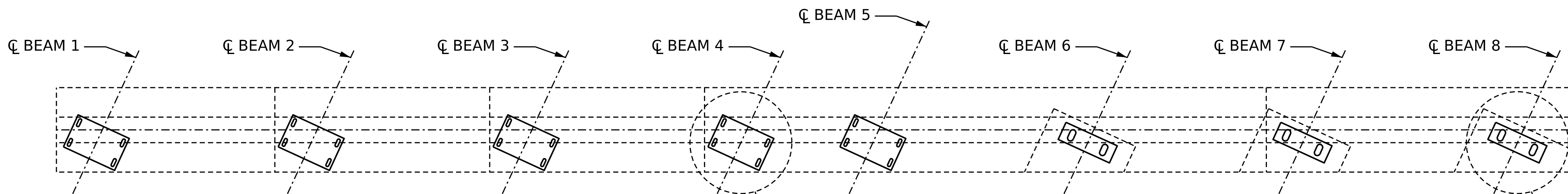
SQUARE OFF CORNERS AT ANY AREA RECEIVING
GROUT.

EMBED ADHESIVE ANCHORS PRIOR TO PLACING
GROUT. SHIELD THREADS WHILE GROUT IS BEING
PLACED.

PROPOSED

BENT 1 ELEVATION VIEW

LOOKING AHEAD STATION

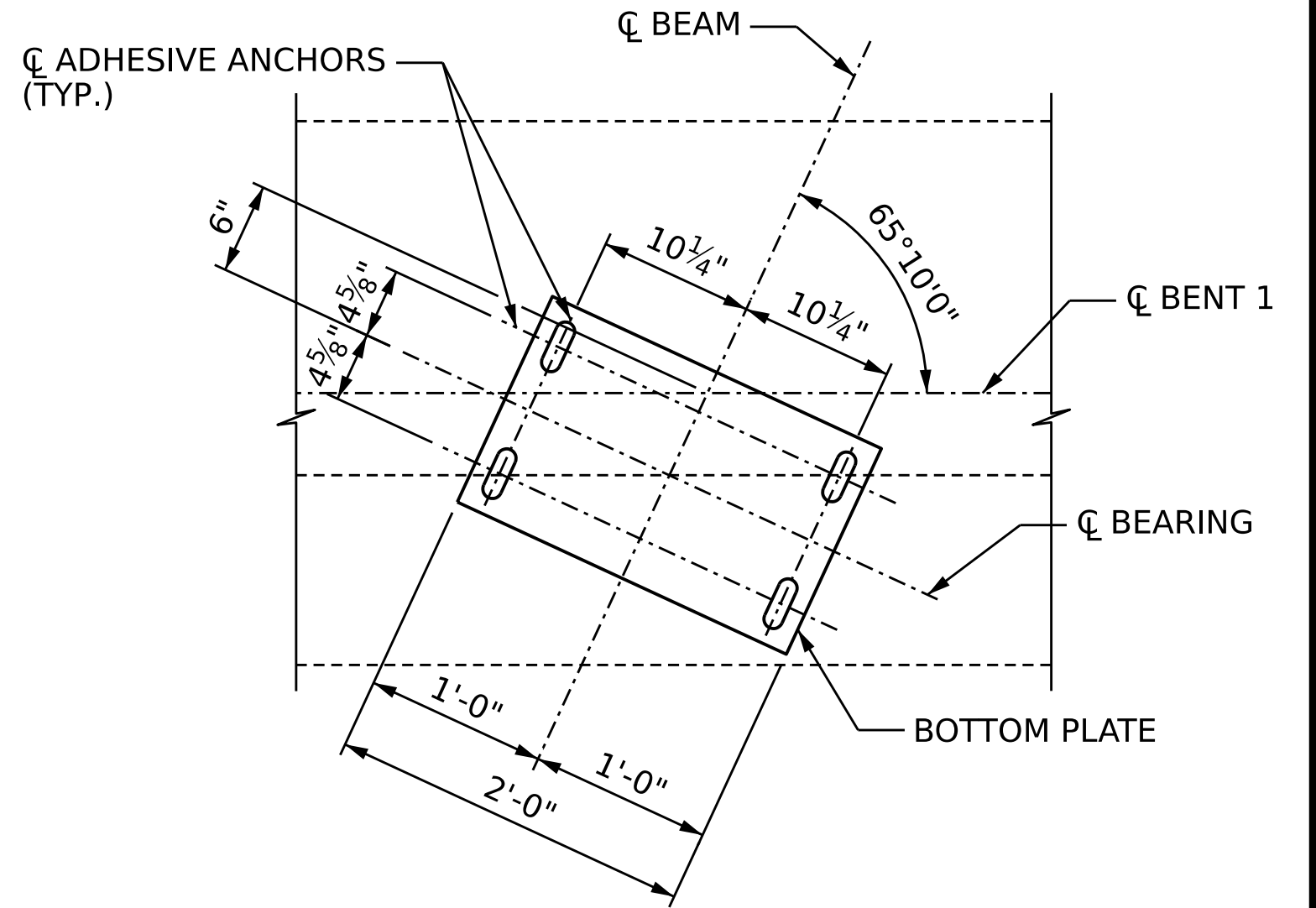


DETAIL "B"
(TYP. BEAMS 1-5)

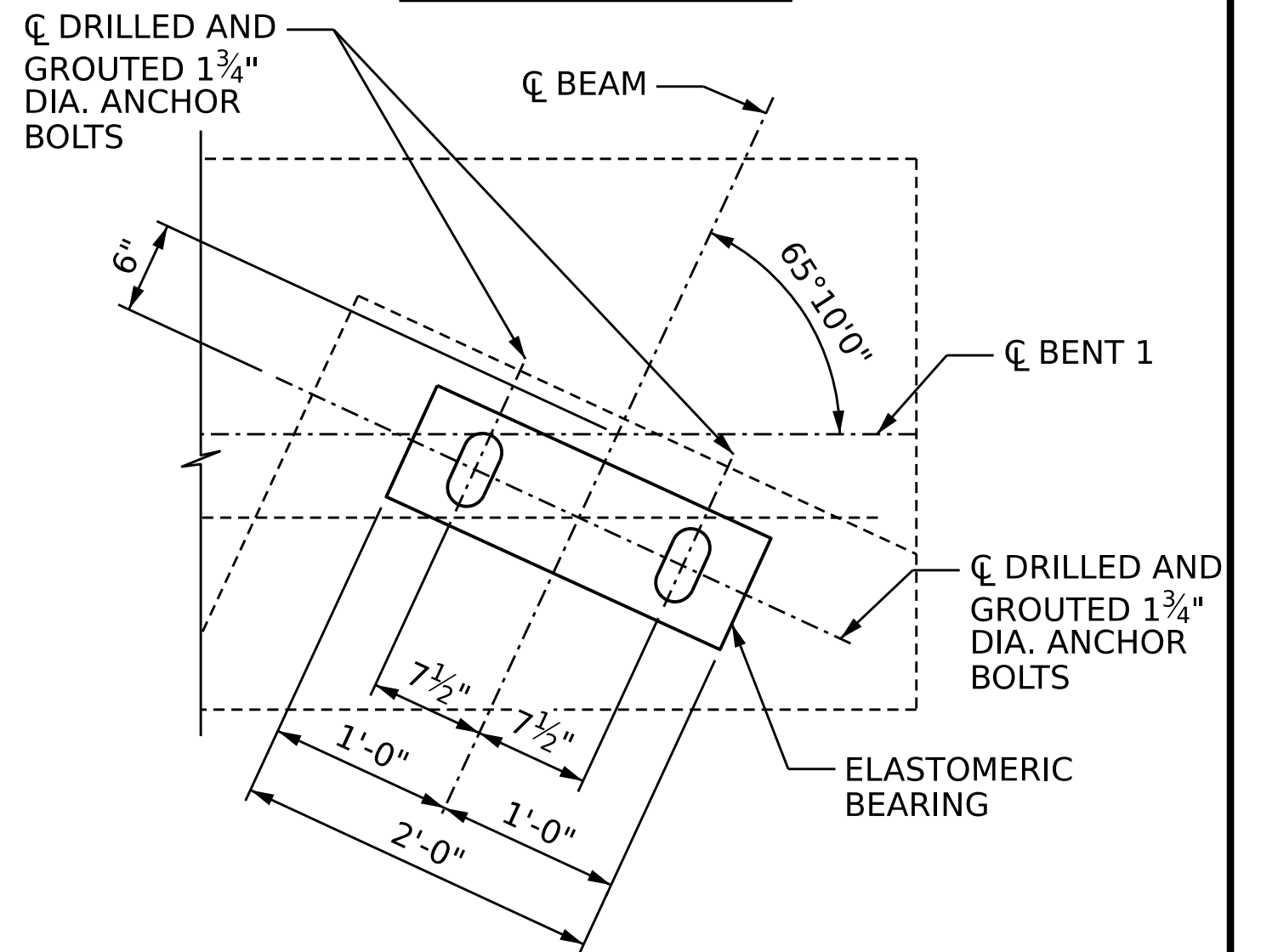
PROPOSED

BENT 1 PLAN VIEW

LOOKING AHEAD STATION
SPAN 2 BEARINGS NOT SHOWN



DETAIL "A"



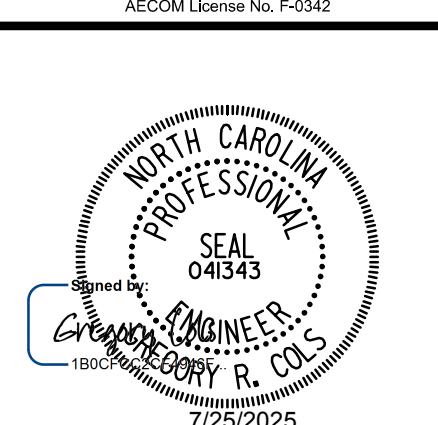
DETAIL "B"

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 5 OF 6



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

STEEL REPAIRS

BENT 1 STUB COLUMN

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1	GRC	6/25	3			S-17
2			4			TOTAL SHEETS 27

DRAWN BY :	M. CATER	DATE :	06/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

NOTES:

FOR BEARING AND SOLE PLATE DETAILS, SEE "ELASTOMERIC
BEARING DETAILS" SHEET.

REMOVE PEDESTALS AT BEAMS 1-5 USING A SAW CUT ONLY. THE
USE OF IMPACT TOOLS OR CHIPPING IS PROHIBITED.

EXISTING REINFORCING STEEL EXTENDING FROM THE CAP INTO
THE PEDESTAL THAT IS CUT DURING REMOVAL OF THE
PEDESTALS SHALL BE DRILLED OUT A MINIMUM OF 2" BELOW
THE NEW TOP OF CAP ELEVATION. FILL IN THE CORED HOLE WITH
AN APPROVED EPOXY.

PAYMENT FOR REMOVAL OF PEDESTALS AND EXISTING BEARING
ASSEMBLIES SHALL BE MADE UNDER THE "PARTIAL REMOVAL OF
EXISTING STRUCTURE" PAY ITEM.

FOR STUB COLUMN, SEE SPECIAL PROVISIONS.

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

6/12/2025
c:\pwworking\usnc\dms\8955\401_035_FrontSt_G5_S-18_640036.dgn
gregory.cols

NOTES:

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS (BEAMS 6-8) OR ANCHOR BOLTS (BEAMS 1-5) ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF ½ TURN, THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

THE 2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

THE PAYMENT FOR THE PIPE SLEEVES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF ELASTOMERIC BEARINGS.

SOLE PLATES, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

REMOVE GALVANIZING OR ANY OTHER COATING AT THE LOCATION OF FIELD WELDS AND PREPARE THE WELD AREAS AS PER ARTICLE 440-7 OF THE STANDARD SPECIFICATION.

AFTER COMPLETION OF FIELD WELDING, THE WELDS AND AREAS WHERE GALVANIZING HAS BEEN REMOVED OR DAMAGED SHALL BE REPAIRED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

FOR HIGH STRENGTH BOLTS, SEE STANDARD SPECIFICATIONS.

SOLE PLATE THICKNESS SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR MAY ADJUST SOLE PLATE THICKNESSES AS REQUIRED TO MAINTAIN THE EXISTING GIRDER ELEVATIONS. REPORT ANY DEVIATIONS TO THE ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION.

DRILL & GROUT THE ANCHOR BOLTS FOR BEAMS 6-8 USING AN APPROVED GROUT. SUBMIT THE GROUT AND INSTALLATION METHOD TO THE ENGINEER FOR APPROVAL IN ACCORDANCE WITH THE WORKING DRAWINGS SPECIAL PROVISION.

THE CONTRACTOR SHALL AVOID DAMAGING EXISTING REINFORCEMENT IN THE CAP AND SHALL LOCATE ANCHOR BOLTS WITHIN THE PROVIDED SLOTS TO AVOID CONFLICT.

SOLE PLATE "P", BOLTS, NUTS, WASHERS, AND PIPE SLEEVE SHALL BE INCLUDED IN THE PAY ITEM FOR ELASTOMERIC BEARINGS.

ALL SOLE PLATES SHALL BE AASHTO M270 GRADE 36.

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS

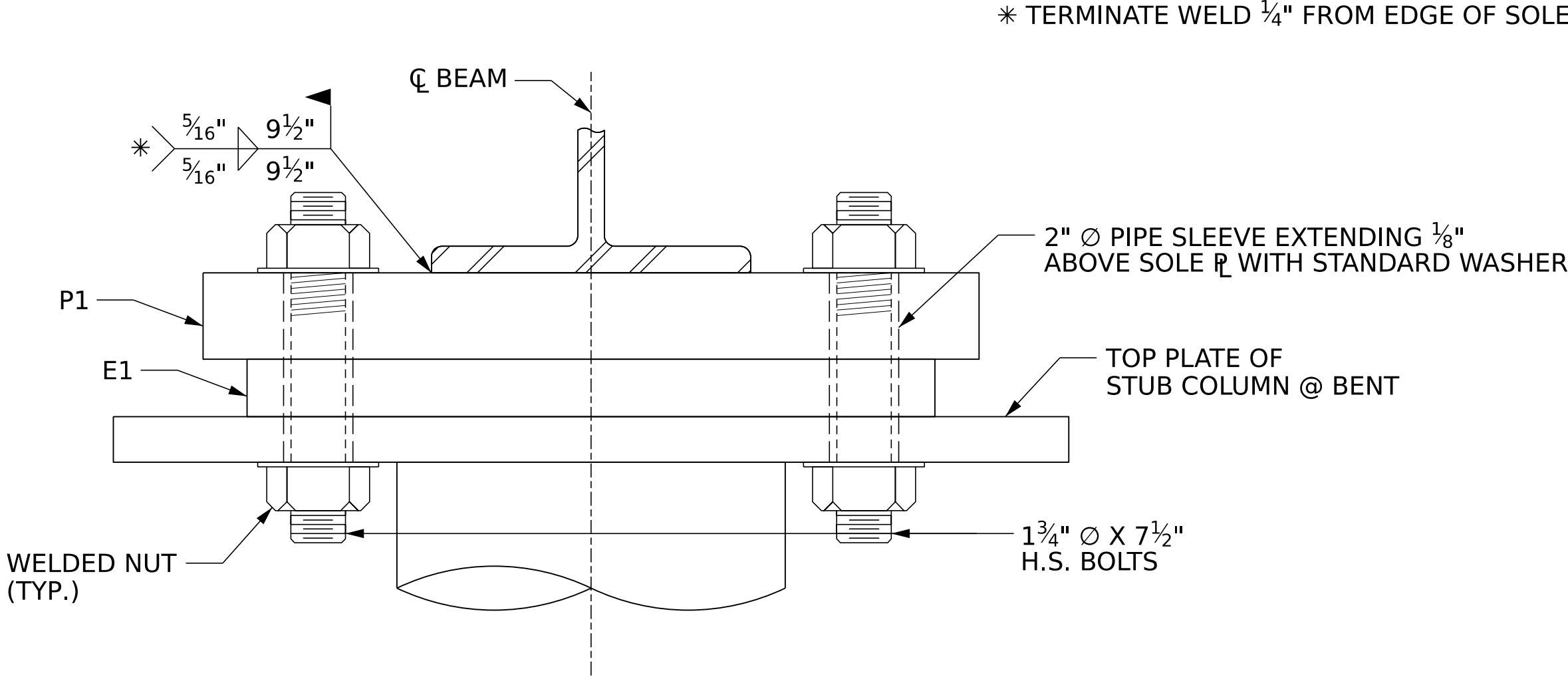
BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-



STATE OF NORTH CAROLINA CITY OF WILMINGTON SUPERSTRUCTURE					
ELASTOMERIC BEARING DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					TOTAL SHEETS
S-19					27

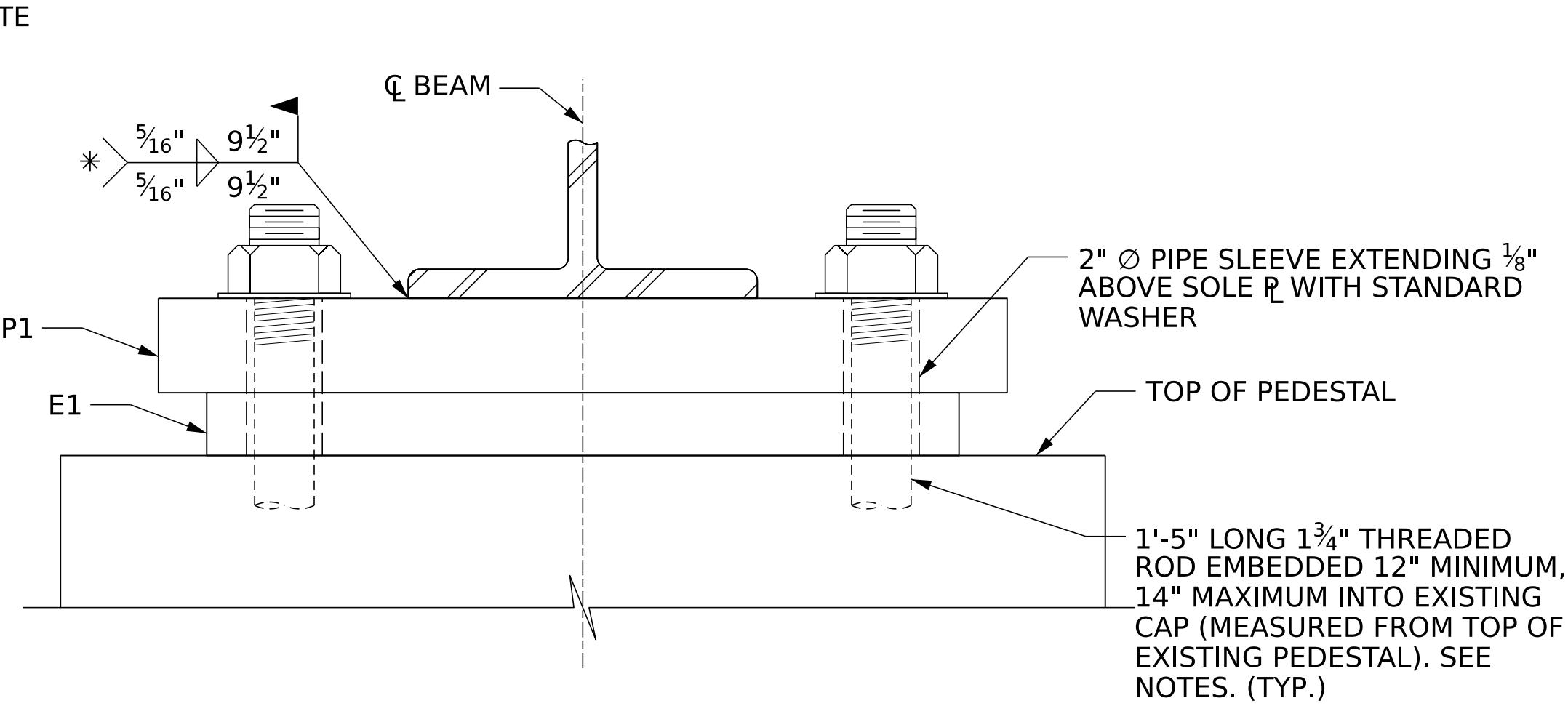
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

* TERMINATE WELD ¼" FROM EDGE OF SOLE PLATE



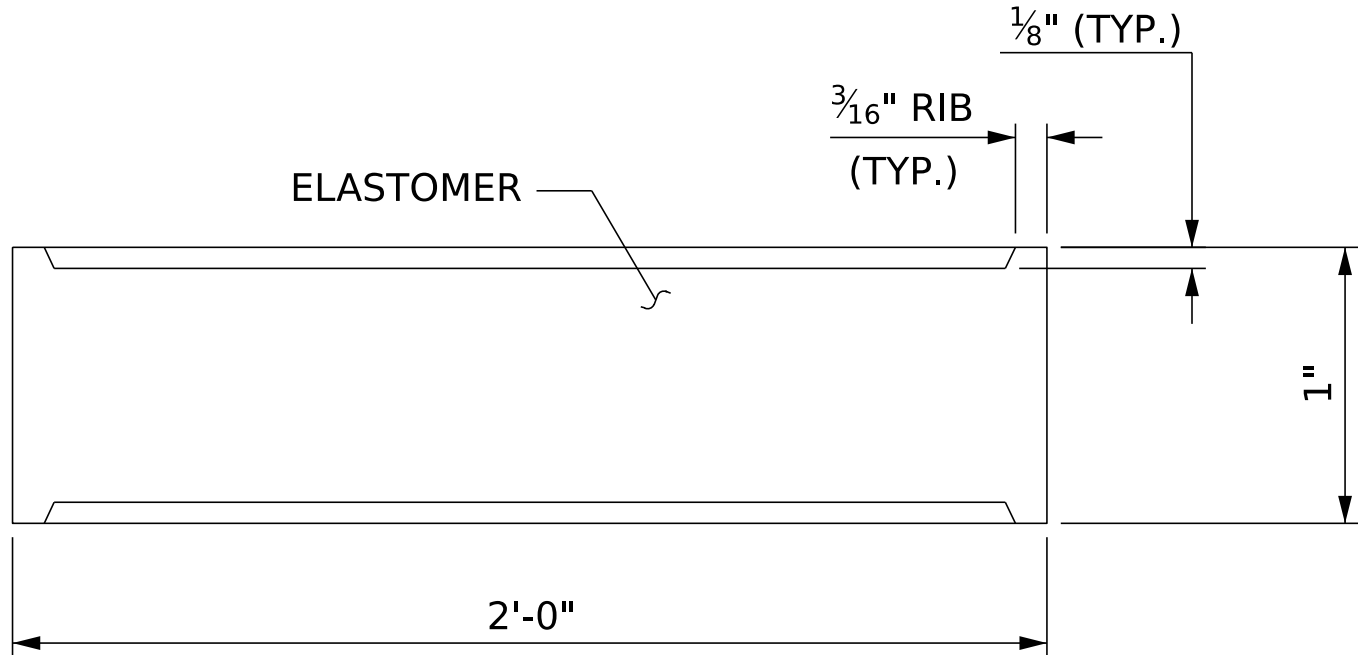
EXPANSION

END VIEW @ BENT 1, SPAN 1 BEAMS 1-5

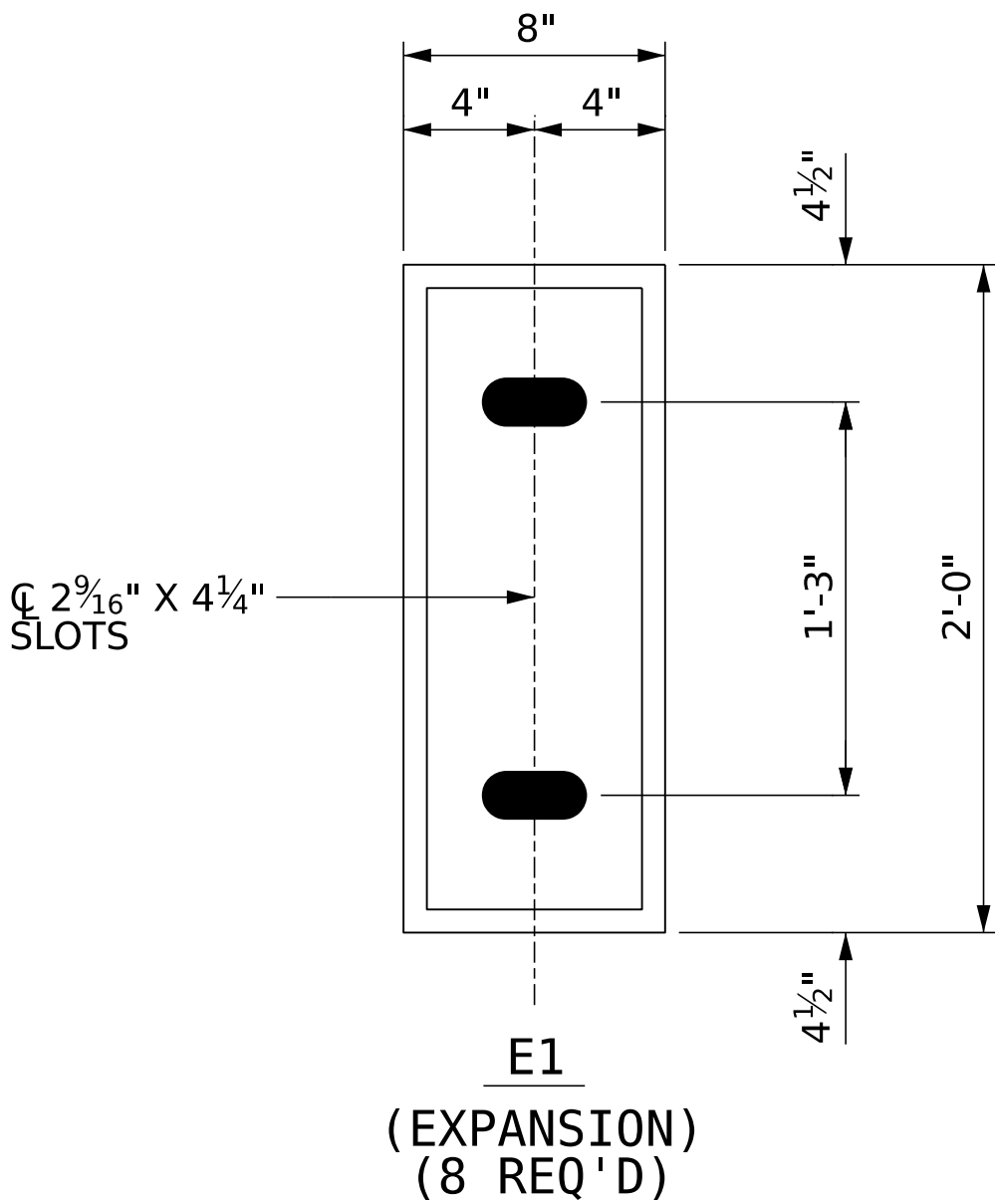


EXPANSION

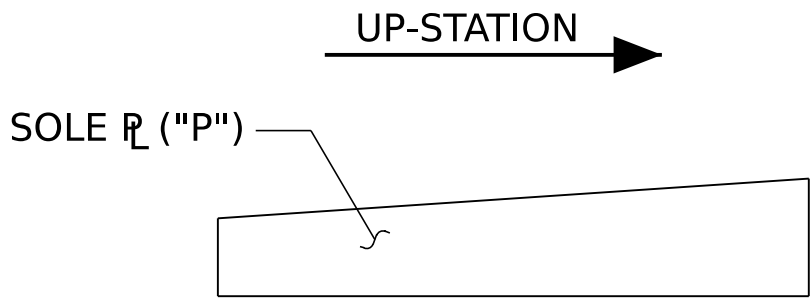
END VIEW @ BENT 1, SPAN 1 BEAMS 6-8



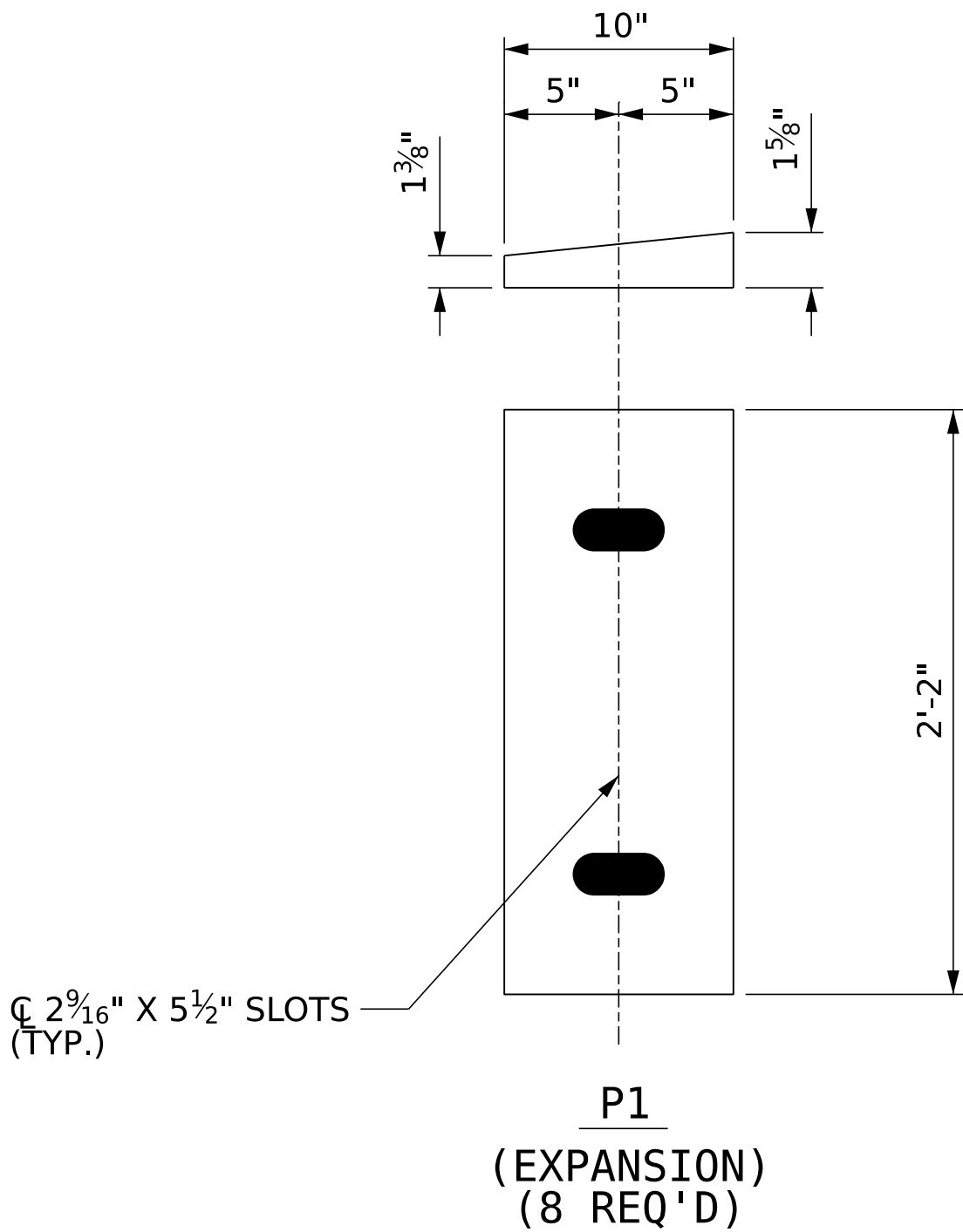
TYPICAL SECTION OF ELASTOMERIC BEARING



PLAN VIEW OF ELASTOMERIC BEARING - TYPE I

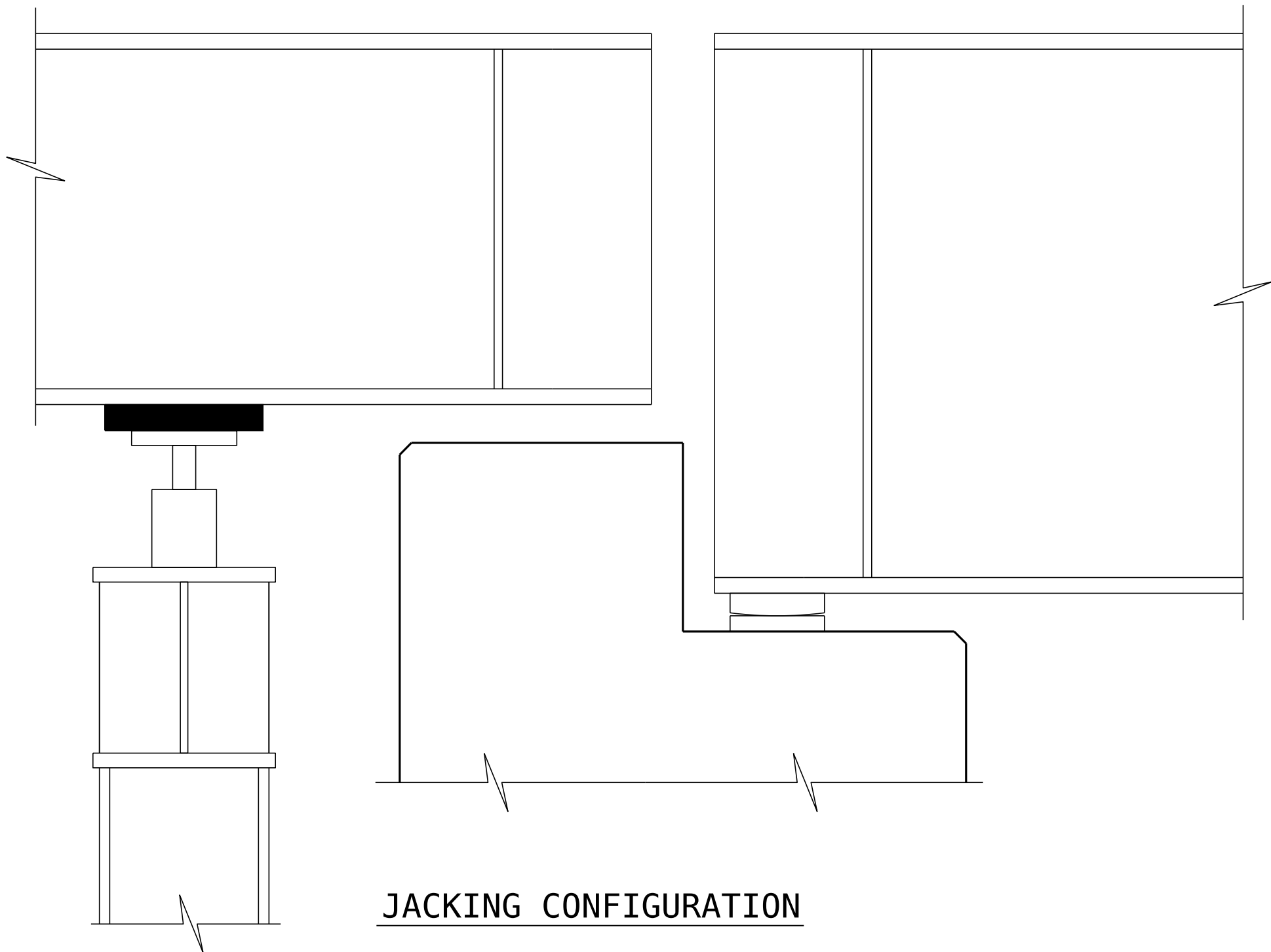


SOLE PLACEMENT DETAIL



SOLE PLATE DETAILS ("P")

DRAWN BY :	M. CATER	DATE :	06/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024



JACKING CONFIGURATION

DRAWN BY : M. CATER DATE : 06/2024
 CHECKED BY : G. COLS DATE : 07/2024
 DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

JACKING PROCEDURE:

5. LOWER BEAMS TO THEIR ORIGINAL POSITION, WELD BEAM TO SOLE PLATE, AND INSTALL ANCHOR BOLT NUTS.

SELF-WEIGHT OF BEAMS, DIAPHRAGMS, UTILITIES, AND ATTACHMENTS ONLY,
DECK AND RAIL ARE TO BE REMOVED PRIOR TO JACKING.
DL FACTOR = 1.25

BRIDGE JACKING (TYPE II) 1 EA.

FOR BRIDGE JACKING DETAILS, SEE SPECIAL PROVISIONS

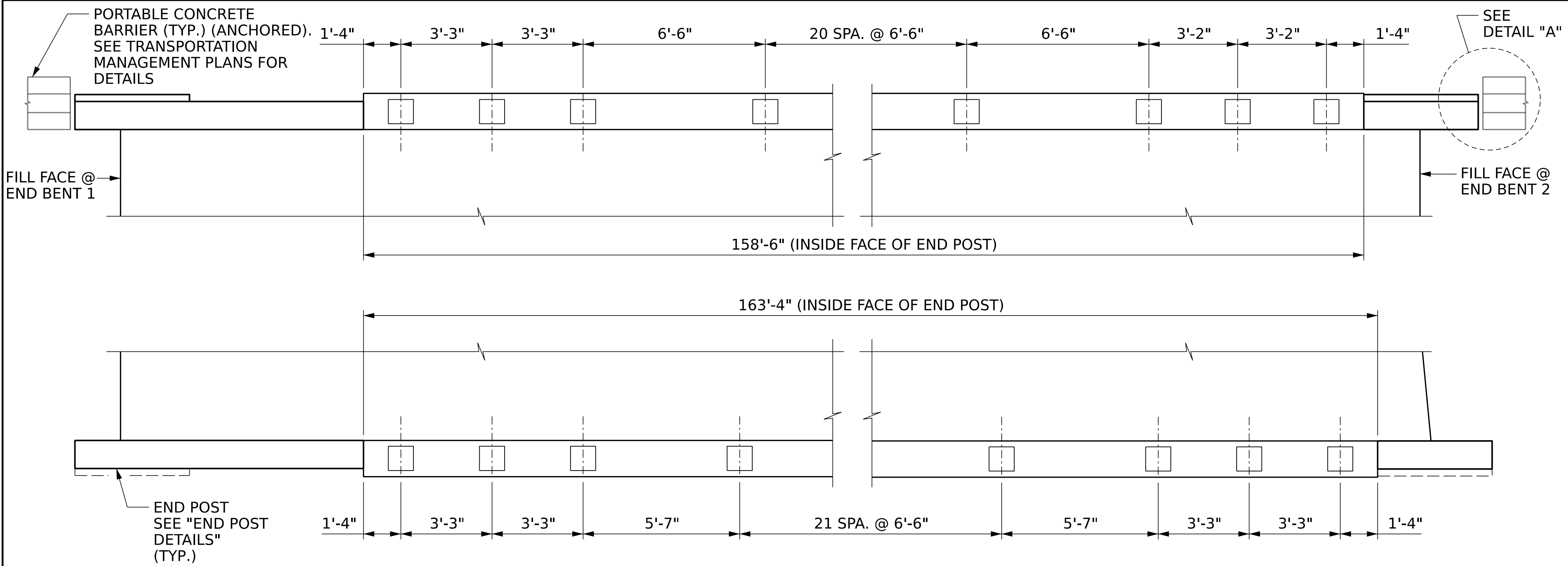
BRIDGE NO. 640036
NEW HANOVER COUNTY
 STATION: 12+50.55 -EL-

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "REGISTERED PROFESSIONAL ENGINEER" around the bottom. In the center, it says "SEAL" above the number "041343". A signature, "Gregory R. Cols", is written across the seal. Below the seal, the date "12/4/2024" is stamped. To the left of the seal, there is a blue horizontal line and the text "Signed by:" followed by the name "Gregory R. Cols" in black ink. Below the signature, the text "180CFCC-2019-0001" is printed.

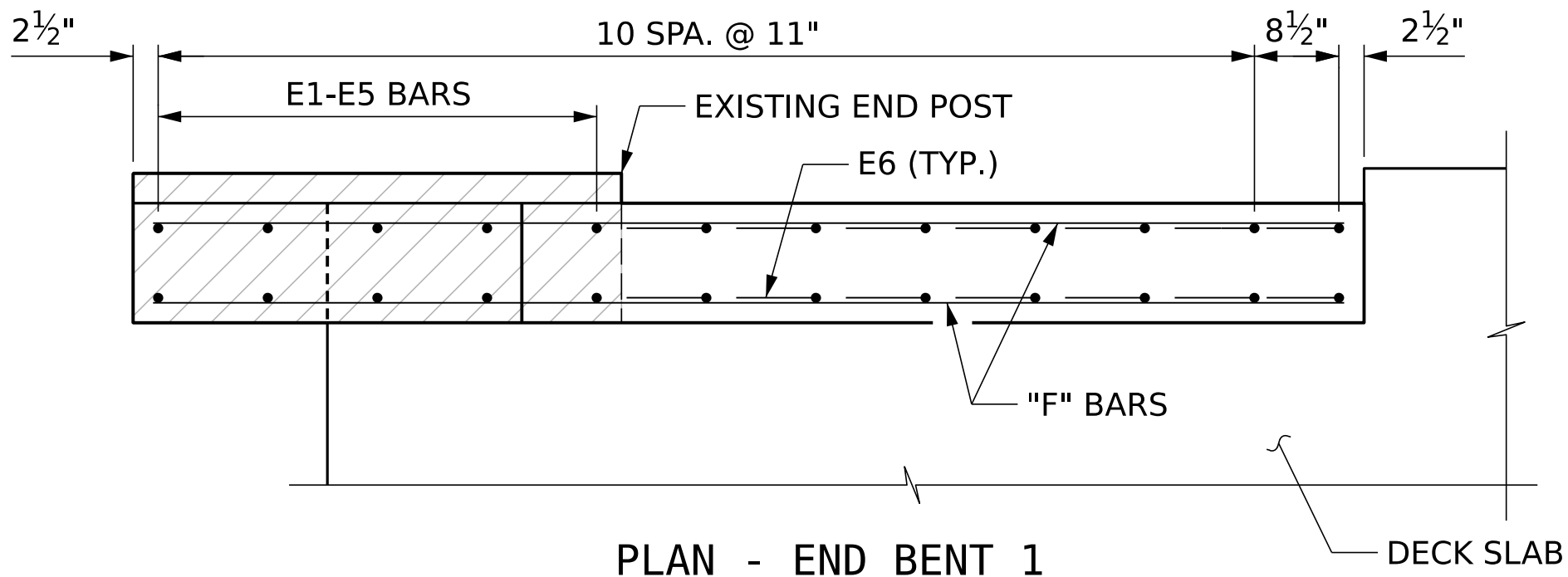
BRIDGE JACKING SCHEMATIC

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20 TOTAL SHEETS 27
1			3			
2			4			

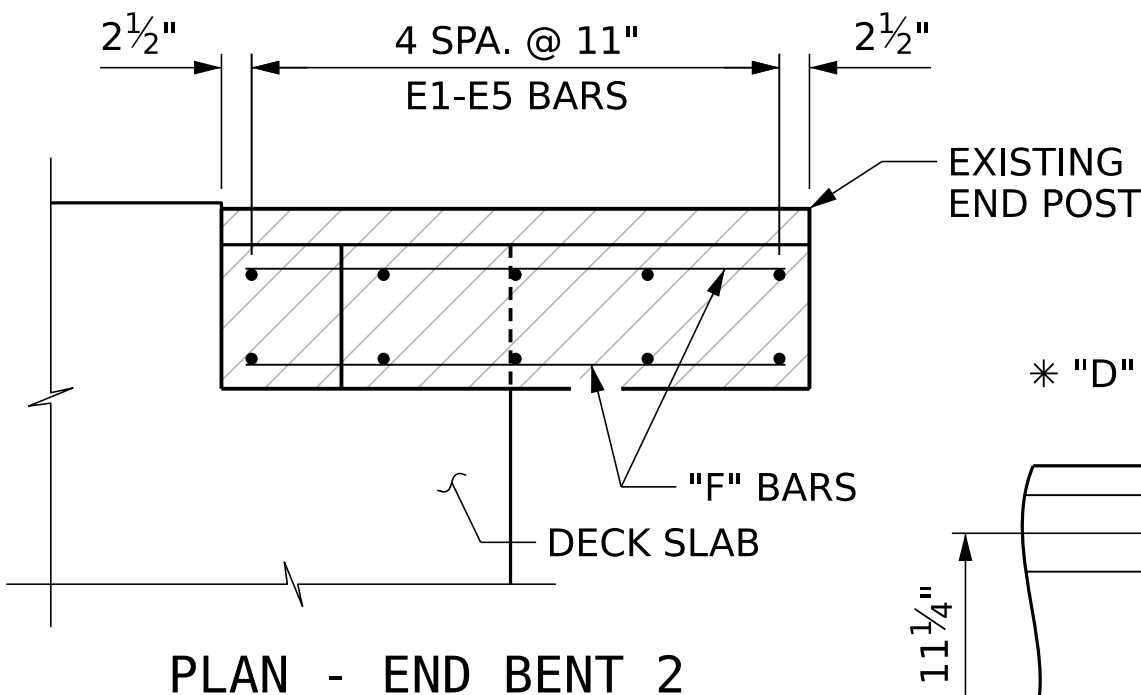
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



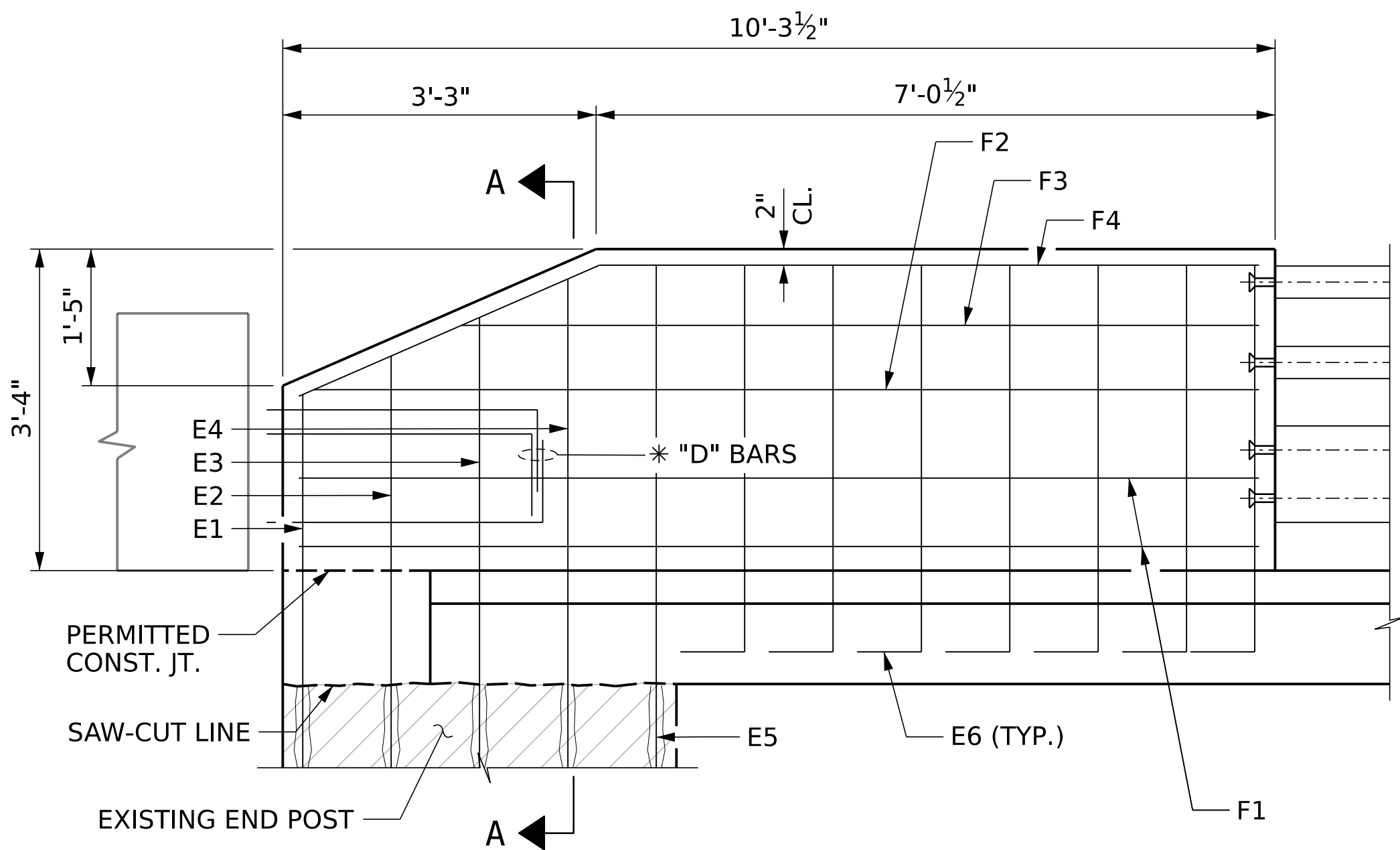
PLAN OF RAIL POST SPACING



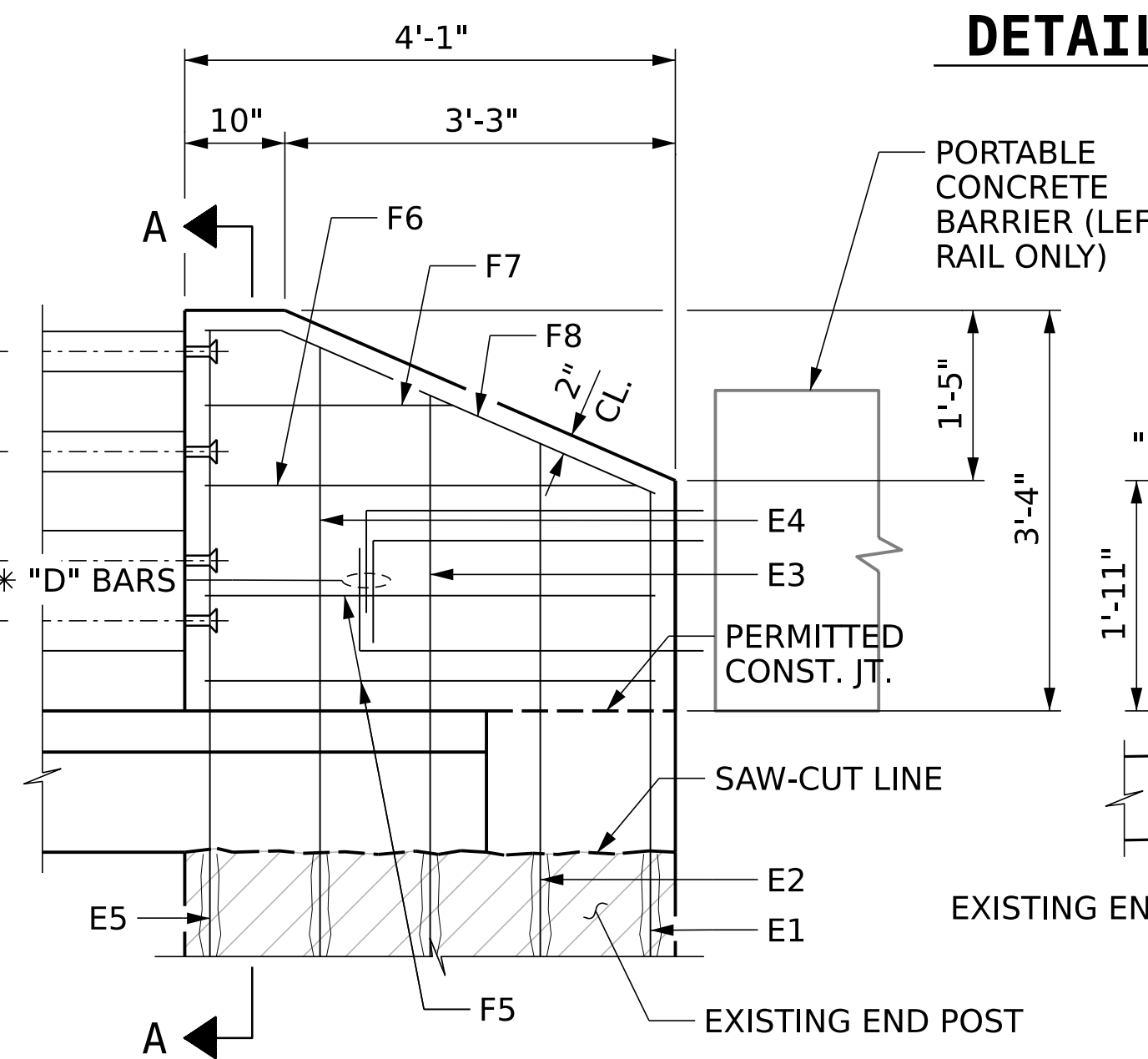
PLAN - END BENT 1



PLAN - END BENT 2



ELEVATION - END BENT 1



ELEVATION - END BENT 2

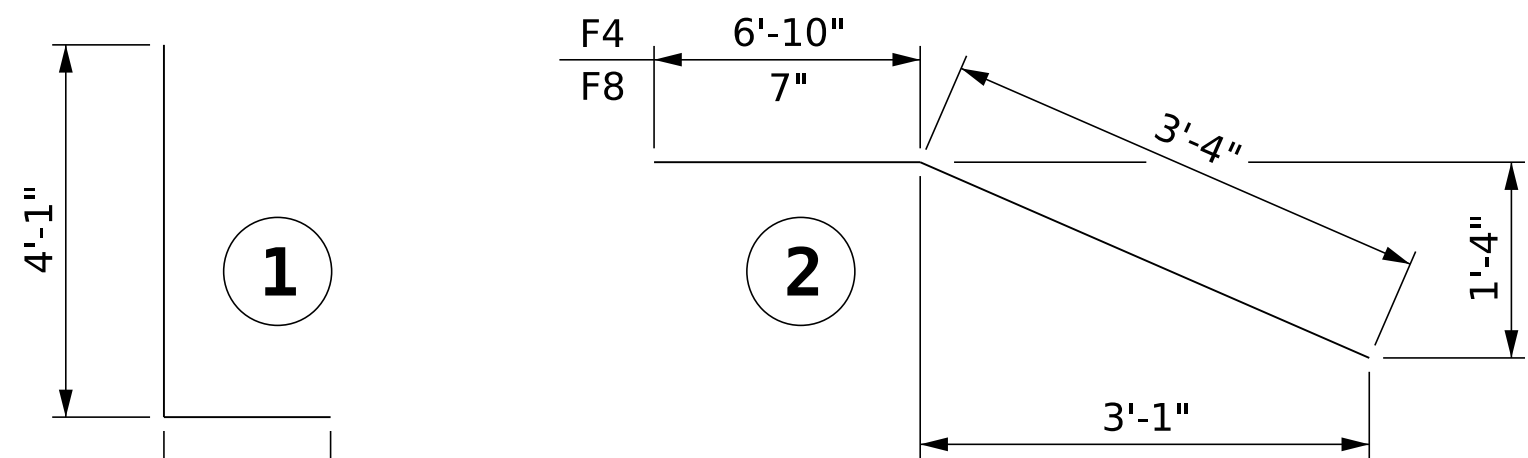
END POST DETAILS
ALL BARS TYPICAL EACH FACE

DRAWN BY :	D. DRUM	DATE :	07/2024
CHECKED BY :	G. COLS	DATE :	07/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

10/4/2024
C:\pwworking\usnc\dms18955\401.041.FrontSt.-BR.S-21.640036.dgn
daniel.drums

BILL OF MATERIAL FOR ONE END POST											
@ END BENT 1 (2 REQ'D)						@ END BENT 2 (2 REQ'D)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*E1	2	7	STR	4'-0"	16	*E1	2	7	STR	4'-0"	16
*E2	2	7	STR	4'-8"	19	*E2	2	7	STR	4'-8"	19
*E3	2	7	STR	5'-1"	21	*E3	2	7	STR	5'-1"	21
*E4	2	7	STR	5'-6"	22	*E4	2	7	STR	5'-6"	22
*E5	2	7	STR	5'-8"	23	*E5	2	7	STR	5'-8"	23
*E6	2	7	1	5'-1"	21						
*F1	4	6	STR	9'-11"	60	*F5	4	6	STR	3'-9"	23
*F2	2	6	STR	9'-9"	29	*F6	2	6	STR	3'-7"	11
*F3	2	6	STR	8'-3"	25	*F7	2	6	STR	2'-0"	6
*F4	2	6	2	10'-2"	31	*F8	2	6	2	3'-11"	12
* EPOXY COATED REINFORCING STEEL					267 LBS.	* EPOXY COATED REINFORCING STEEL					153 LBS.
CLASS AA CONCRETE					1.2 C.Y.	CLASS AA CONCRETE					0.4 C.Y.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

NOTES:

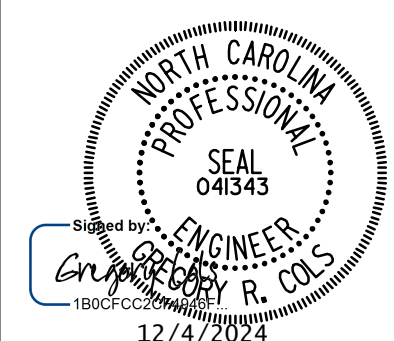
FOR DETAILS OF CONCRETE INSERTS, SEE "3 BAR METAL RAIL" SHEETS.

NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE CONCRETE END POST AS THIS IS CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE 3 BAR METAL RAIL.

CORE DRILL INTO THE EXISTING END POST AND EMBED BARS E1 THRU E5 1'-6" MIN. FILL IN THE REMAINDER OF THE CORED HOLE WITH AN APPROVED GROUT.

* SEE NCDOT ROADWAY STANDARD DWG 1070.1 FOR BAR DETAILS. PAYMENT FOR "D" BARS SHALL BE CONSIDERED INCIDENTAL TO THE PORTABLE CONCRETE BARRIER ROADWAY PAY ITEM.

BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-



RAIL POST SPACING
AND
END OF RAIL DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL
2			4			27

SECTION A-A

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



(55 ASSEMBLIES REQUIRED)



ELEVATION

(6 REQUIRED PER POST)



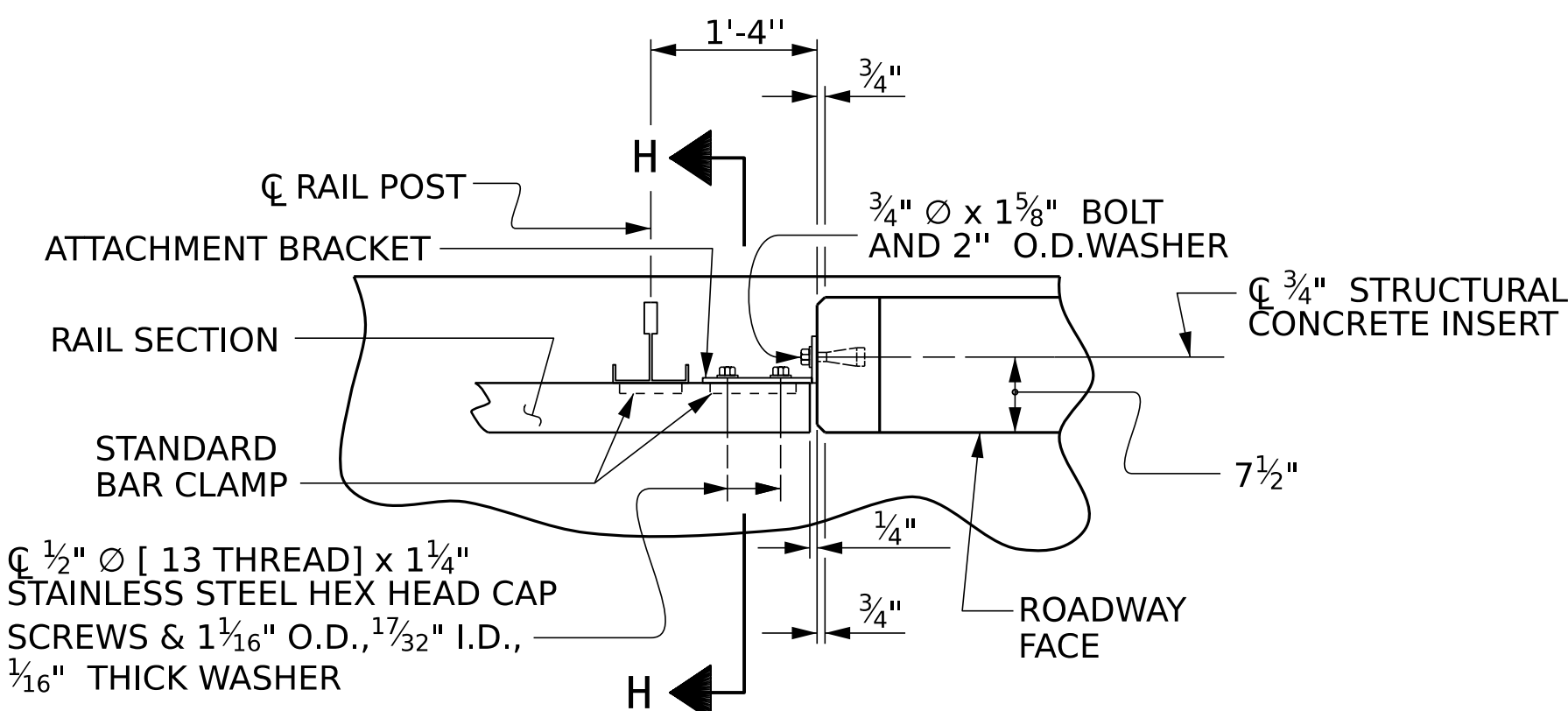
AECOM

AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. F-0342

Sealed by
Gregory R. Coles
1800-Civil-Engineer
12/4/2024

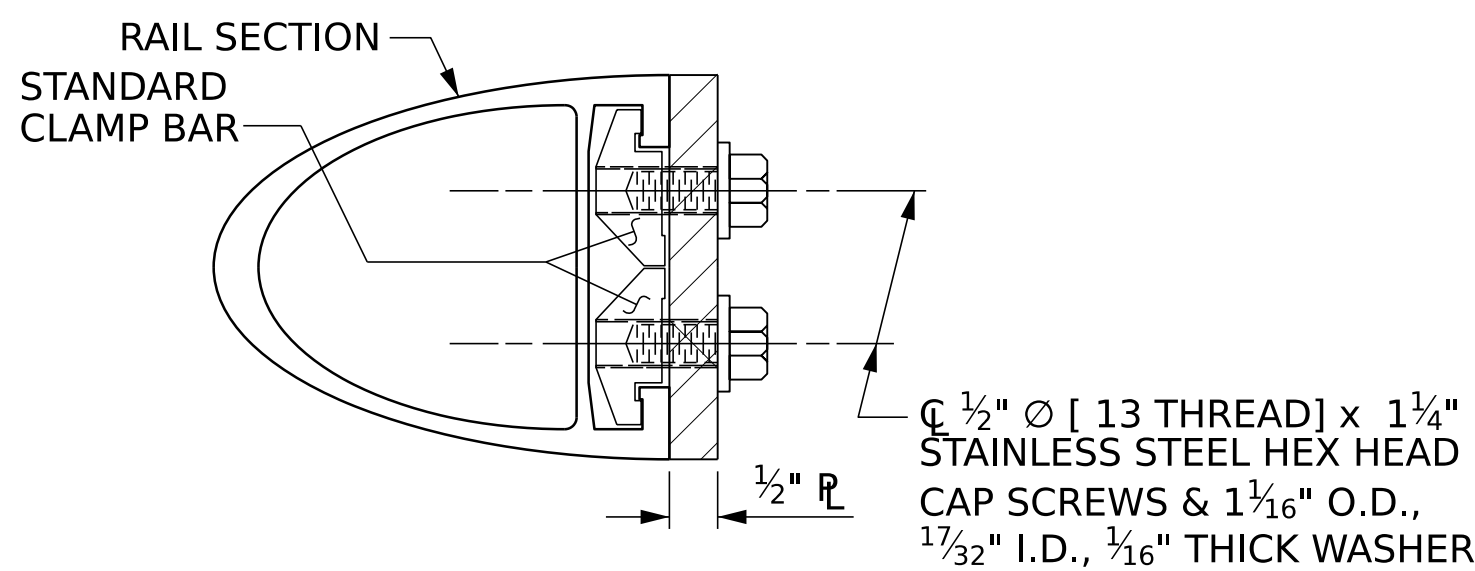
STATE OF NORTH CAROLINA CITY OF WILMINGTON STANDARD 3 BAR METAL RAIL						
REVISIONS						SHEET NO. S-23
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS 27
1			3			
2			4			

STD . NO . BMR6



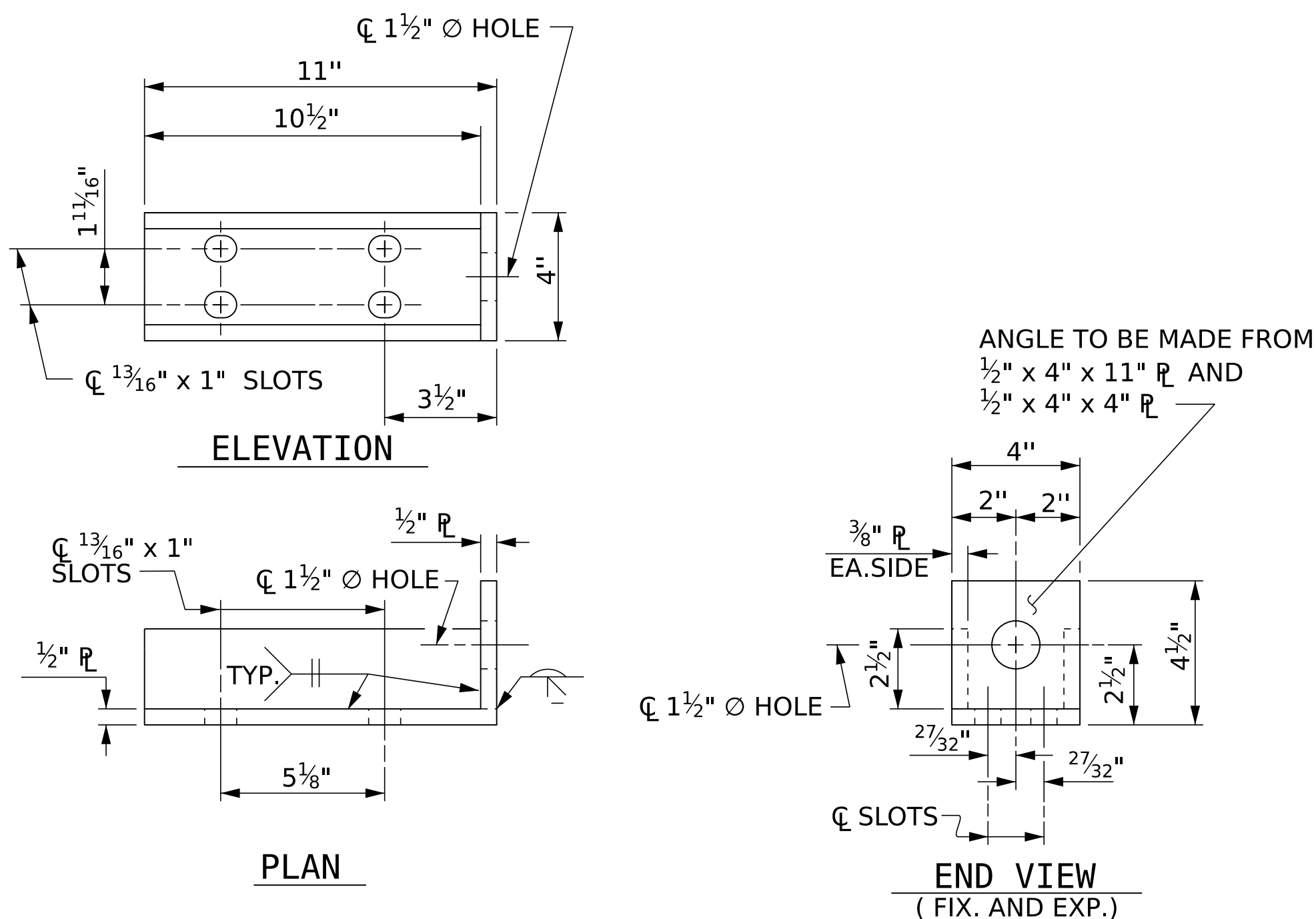
PLAN OF RAIL AND END POST

(STIFFENER ON 1/2" PL NOT SHOWN FOR CLARITY)



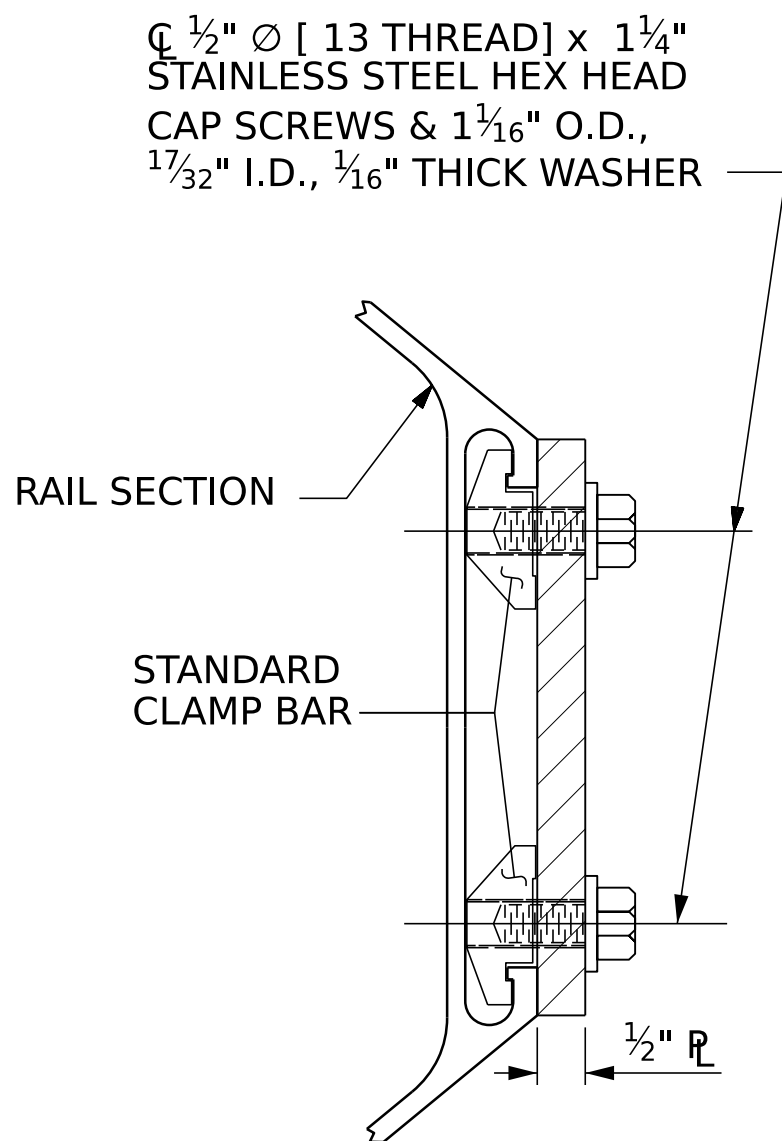
SECTION H-H

(FOR TOP & MIDDLE RAIL)



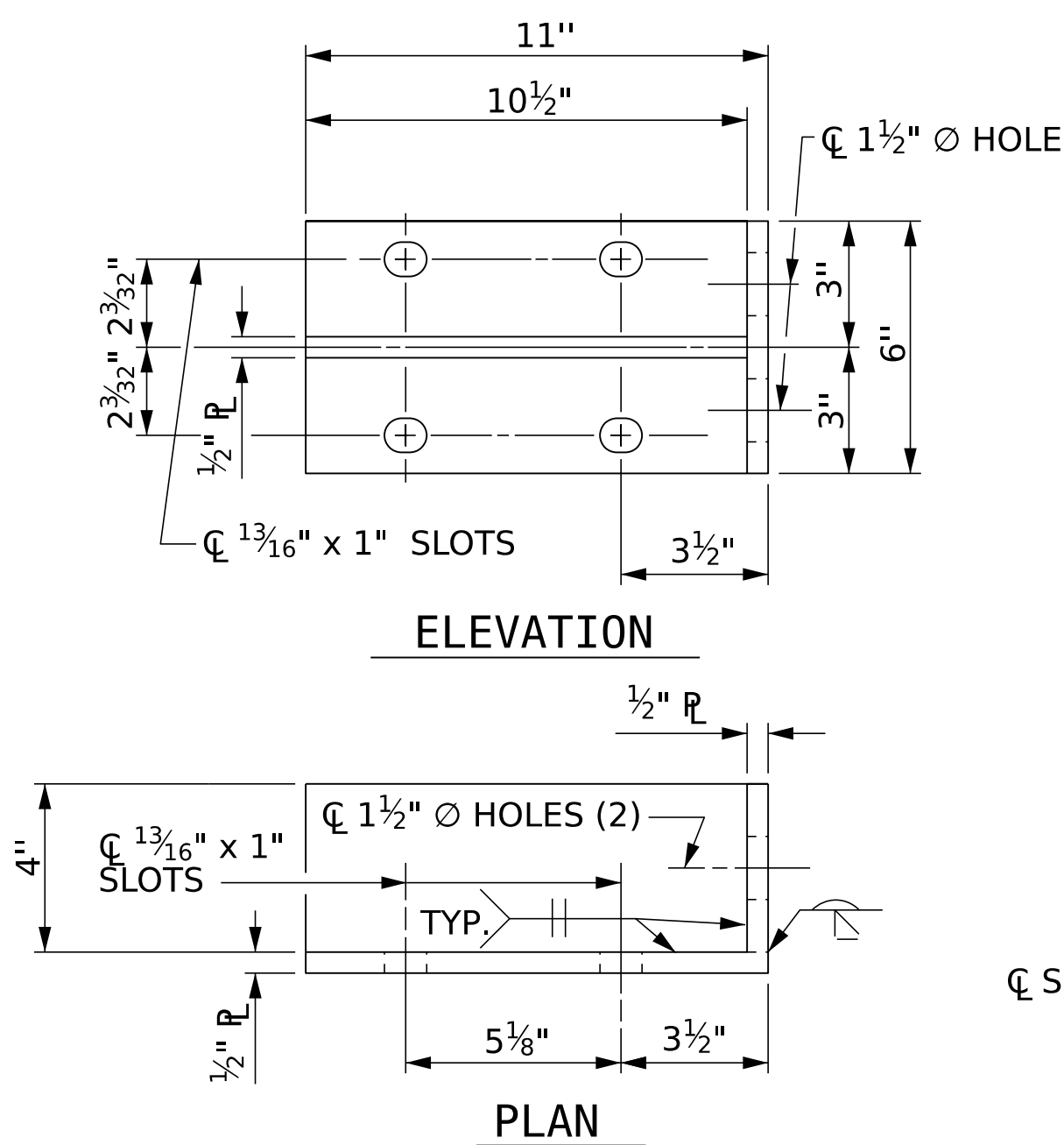
DETAILS FOR ATTACHMENT BRACKET

(TOP & MIDDLE RAIL ONLY)



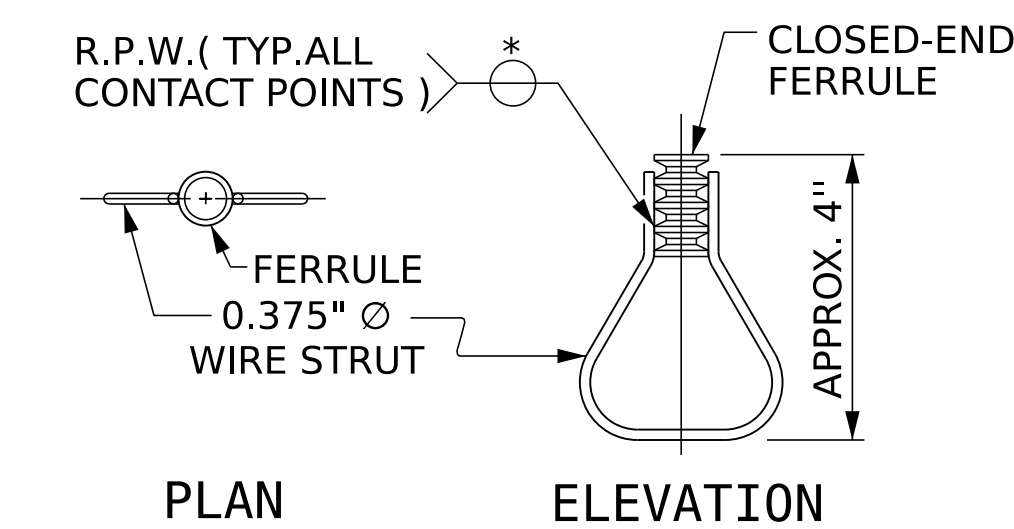
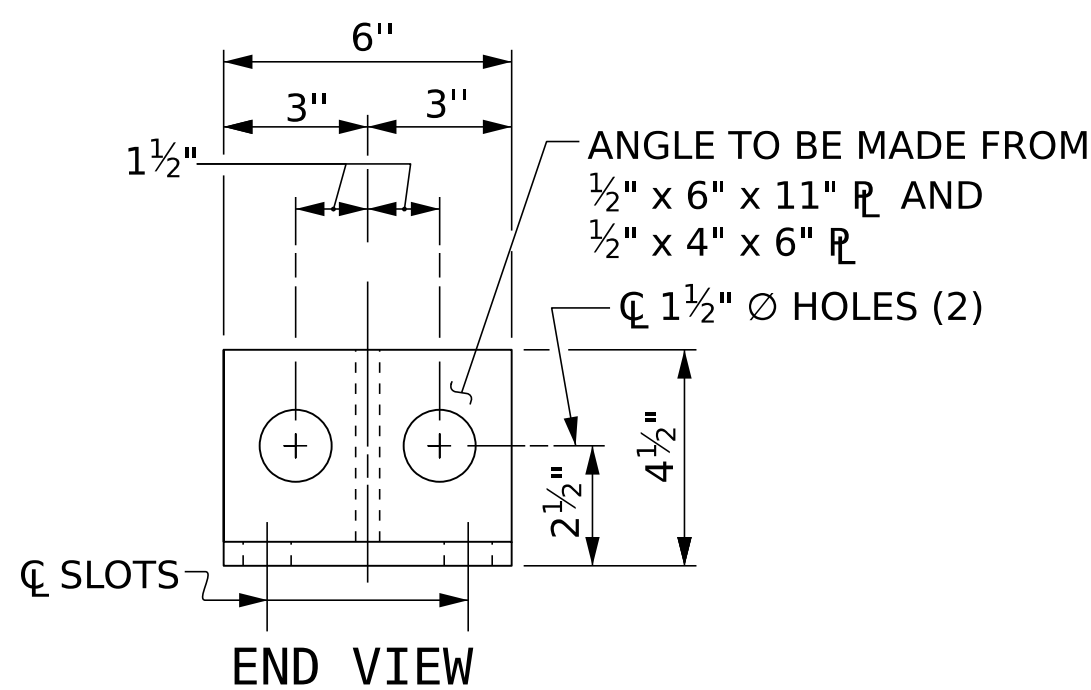
SECTION H-H

(FOR BOTTOM RAIL)



DETAILS FOR ATTACHMENT BRACKET

(BOTTOM RAIL ONLY)



STRUCTURAL CONCRETE INSERT

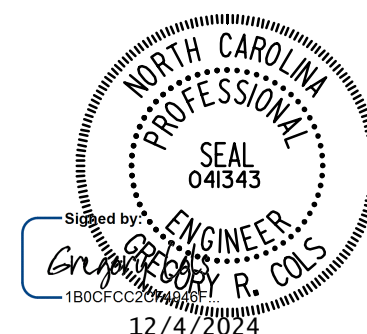
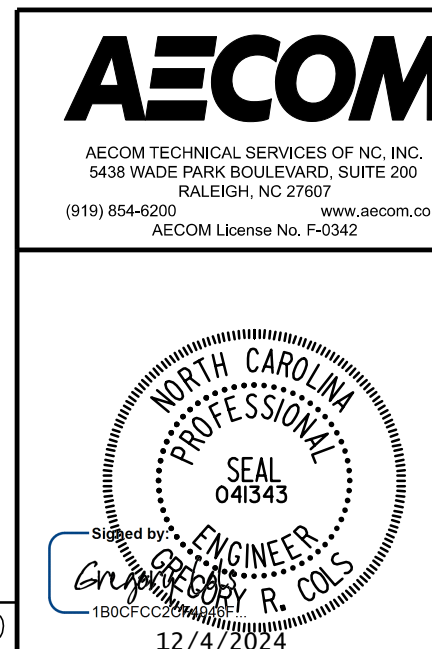
* EACH WELDED ATTACHMENT OF WIRE TO FERRULE SHALL DEVELOP THE TENSILE STRENGTH OF THE WIRE.

BRIDGE NO. 640036

NEW HANOVER COUNTY

STATION: 12+50.55 -EL-

SHEET 3 OF 3



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

STANDARD

STANDARD

3 BAR METAL RAIL

REVISIONS						SHEET NO. 5-24
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 27
2			4			

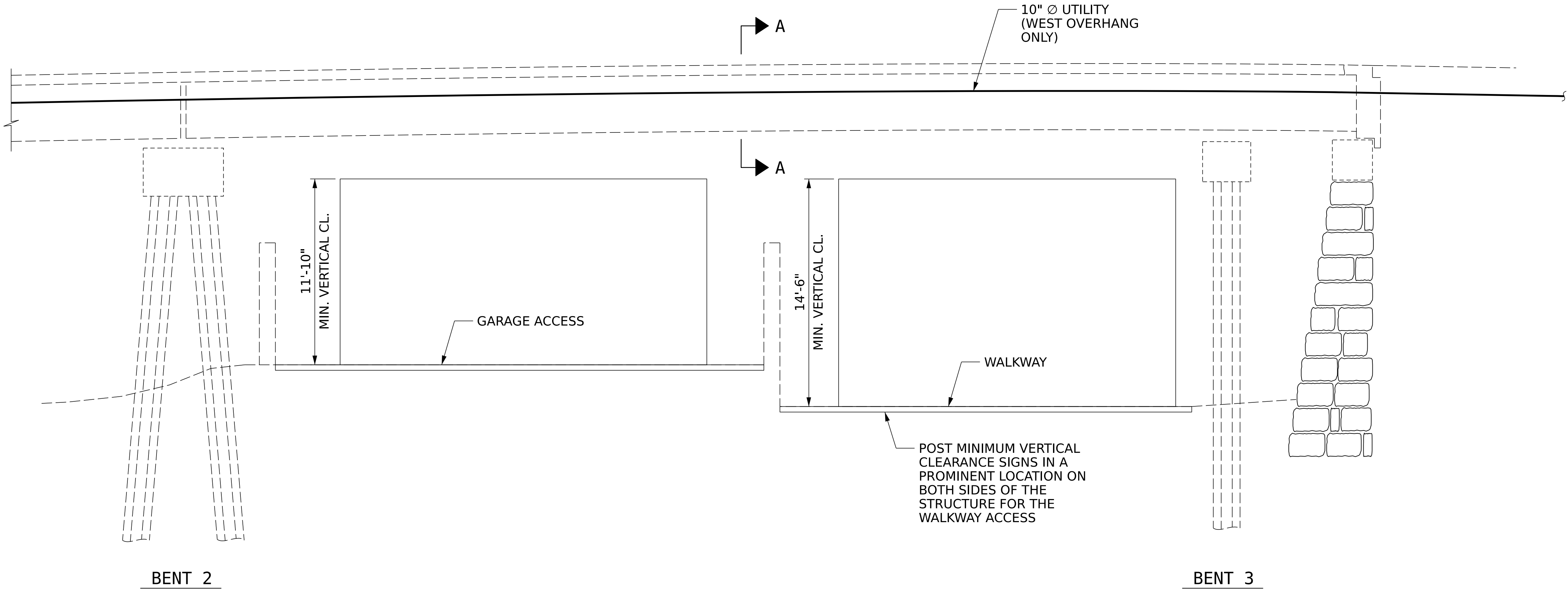
SHEET NO.

S-24

TOTAL
SHEETS

27

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



SPAN "C" ELEVATION
TEMPORARY UTILITY SUPPORT NOT SHOWN

NOTES:

THIS DRAWING IS A SCHEMATIC ONLY AND IS NOT A WORKING DRAWING.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS SEALED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA FOR APPROVAL BY THE ENGINEER, THE CITY OF WILMINGTON, CAPE FEAR COMMUNITY COLLEGE, AND CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA).

PEDESTRIAN AND VEHICULAR TRAFFIC BELOW THE UTILITY AND THE BRIDGE MUST BE MAINTAINED. WORKING DRAWINGS SHALL INCLUDE DETAILS OF VEHICULAR AND PEDESTRIAN PROTECTION.

DRILLING INTO EXISTING STEEL GIRDERS IS NOT PERMITTED.

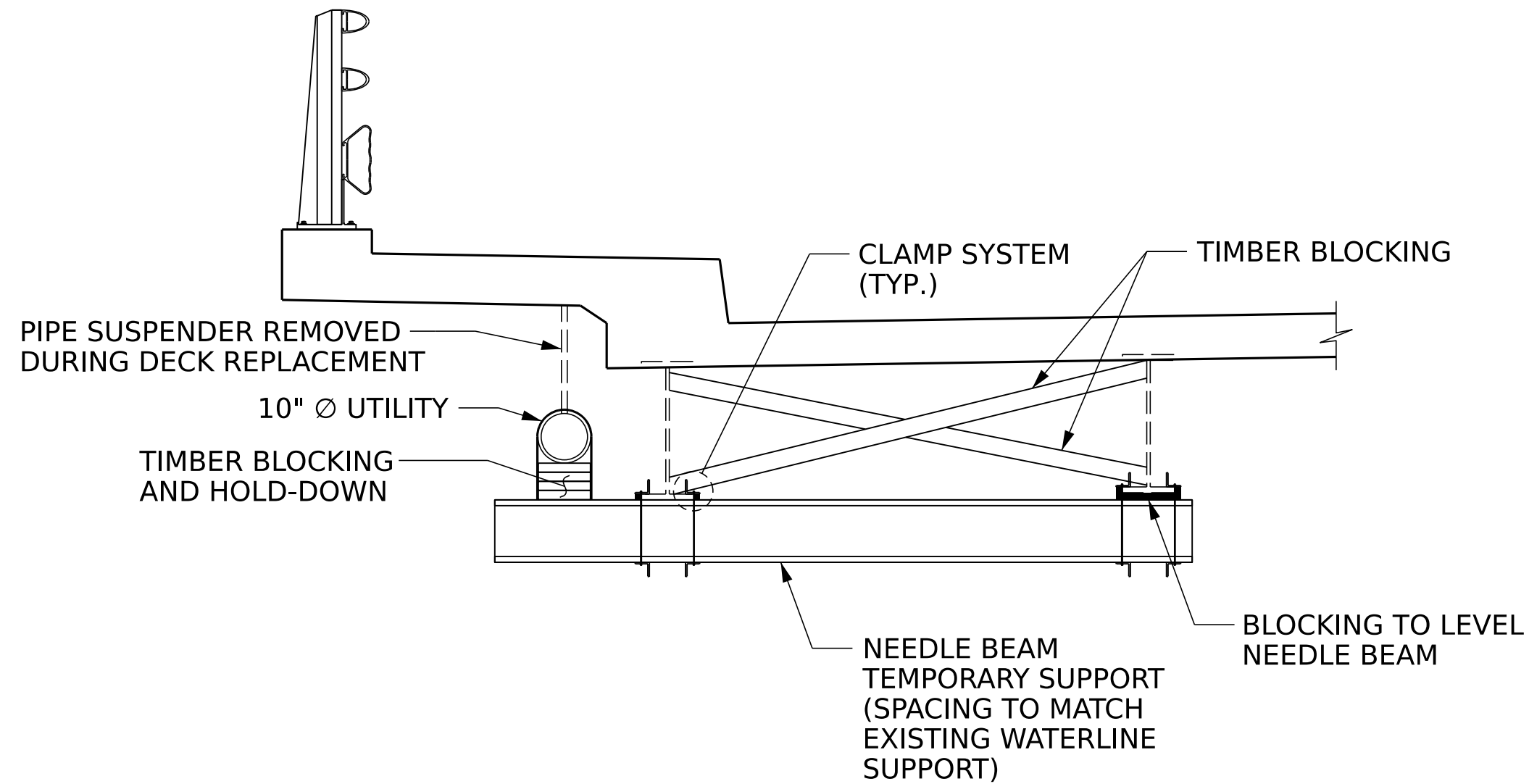
FOR DETAILS OF OVERHANG SUPPORT, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL COORDINATE WITH CFPUA PRIOR TO COMMENCING ANY WORK IMPACTING THE UTILITY.

TEMPORARY WORKS SHALL BE IN ACCORDANCE WITH AASHTO GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS, LATEST EDITION.

MAINTAIN MINIMUM VERTICAL CLEARANCES IN SPAN "C" AS SHOWN ON THE PLANS.

PAYMENT FOR TEMPORARY WATERLINE SUPPORT SHALL BE MADE UNDER THE "TEMPORARY UTILITY SUPPORT SYSTEM" PAY ITEM.



PARTIAL SECTION A-A

FORMWORK FOR OVERHANG NOT SHOWN. FORMWORK MAY BE SUPPORTED BY NEEDLE BEAM IF APPROVED AND CONSIDERED IN FALSEWORK DESIGN.

BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

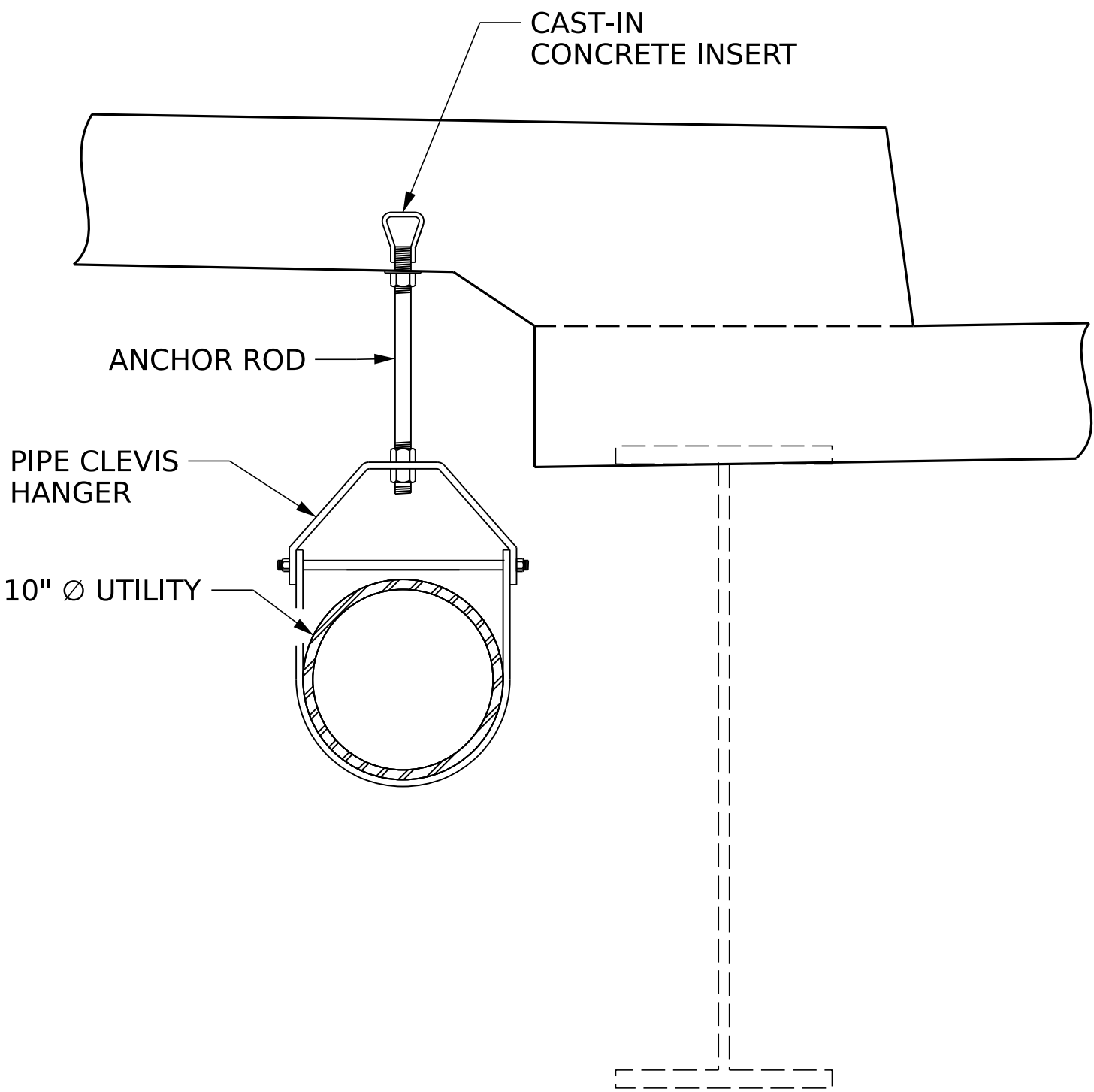
DRAWN BY :	D. DRUM	DATE :	06/2024
CHECKED BY :	G. COLS	DATE :	06/2024
DESIGN ENGINEER OF RECORD:	G. COLS	DATE :	07/2024

7/24/2024
c:\pwworking\usnc\dms18955\401.049.FrontSt-UT1.S-25.640036.dgn
daniel.drums

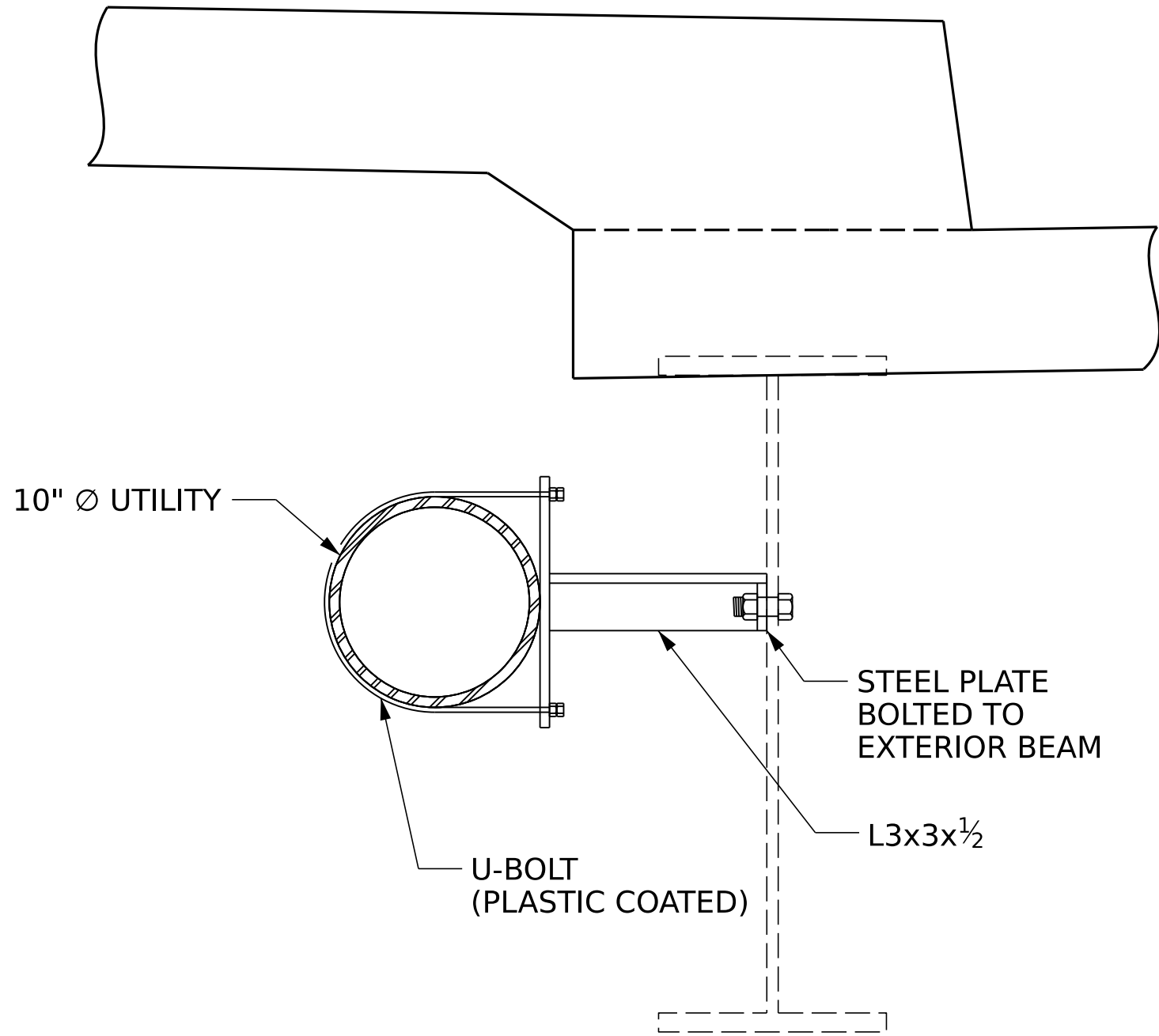
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200
www.aecom.com
AECOM License No. PG2492

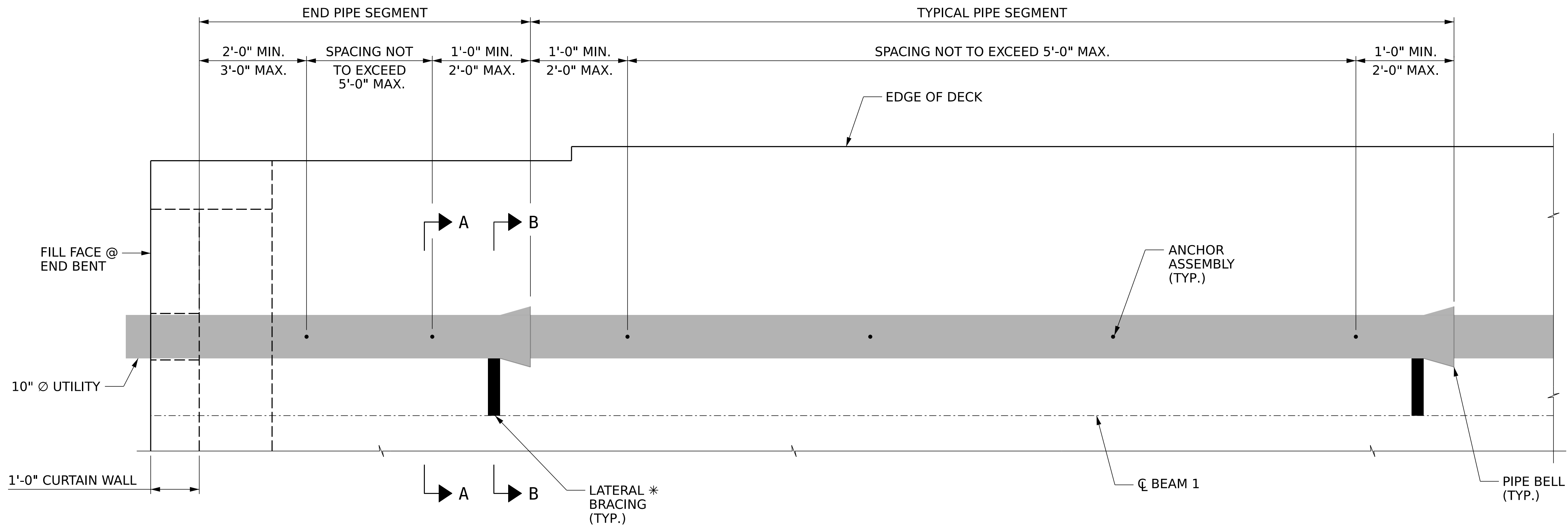
STATE OF NORTH CAROLINA CITY OF WILMINGTON					
UTILITY TEMPORARY SUPPORT					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-25
TOTAL SHEETS					27



SECTION A-A
PIPE HANGER ASSEMBLY



SECTION B-B
LATERAL BRACING ASSEMBLY



PLAN OF HANGER ASSEMBLY SPACINGS

NOTES:

THIS DRAWING IS A SCHEMATIC ONLY AND IS NOT A WORKING DRAWING.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS FOR THE PROPOSED UTILITY SUPPORT SYSTEM. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA FOR APPROVAL BY THE ENGINEER AND CAPE FEAR PUBLIC UTILITY AUTHORITY.

THE CONTRACTOR SHALL VERIFY EXISTING UTILITY SIZE AND PIPE SEGMENT JOINTS (BELLS) LOCATIONS PRIOR TO ORDERING OR FABRICATING ANY MATERIAL.

THE EXISTING UTILITY SHALL REMAIN IN PLACE AND OPERATIONAL THROUGHOUT THE DURATION OF THE PROJECT.

ALL HANGER ASSEMBLY COMPONENTS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.

PROVIDE HANGER ASSEMBLIES WITHIN THE MAXIMUM AND MINIMUM SPACINGS AS SHOWN ON THE PLAN.

* PROVIDE LATERAL BRACING AT EXISTING LATERAL BRACING LOCATIONS AND ADDITIONAL LOCATIONS AS REQUIRED BY DESIGN. LATERAL BRACING SPACING SHALL NOT EXCEED 18 FEET.

THE HANGER ASSEMBLY SHALL HAVE A CAPACITY OF NO LESS THAN 2000 LBS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR CONCRETE INSERT EMBEDMENT LENGTH.

AFTER THE UTILITY IS SUPPORTED INDEPENDENTLY OF THE DECK, REMOVE AND PROPERLY DISPOSE THE EXISTING HANGERS AND LATERAL TIES. DO NOT DAMAGE THE EXISTING BEAMS WHILE REMOVING THE LATERAL TIES.

LOCATE AND DRILL HOLES FOR NEW UTILITY LATERAL BRACING PRIOR TO CLEANING AND PAINTING THE EXISTING BEAMS.

THE CONTRACTOR SHALL NOT LOCATE THE LATERAL BRACING TO CONFLICT WITH EXISTING INTERMEDIATE OR END DIAPHRAGMS.

HOLE IN EXISTING BEAM FOR LATERAL BRACING SHALL BE DRILLED, PUNCHING WILL NOT BE ALLOWED.

PAINT THE HOLE UTILIZING THE SAME SYSTEM AS THE REST OF THE BEAM PAINTING PRIOR TO INSTALLING THE LATERAL BRACING.

PAYMENT FOR UTILITY SUPPORT SYSTEM SHALL BE MADE UNDER THE "UTILITY SUPPORT SYSTEM" PAY ITEM.

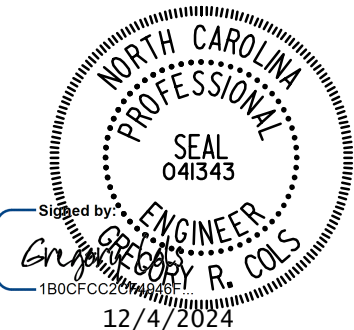
BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

DRAWN BY : D. DRUM DATE : 07/2024
CHECKED BY : G. COLS DATE : 07/2024
DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

9/30/2024
c:\pwworking\usnc\dms18955\401_051.FrontSt-UT2-S-26-640036.dgn
caterm

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

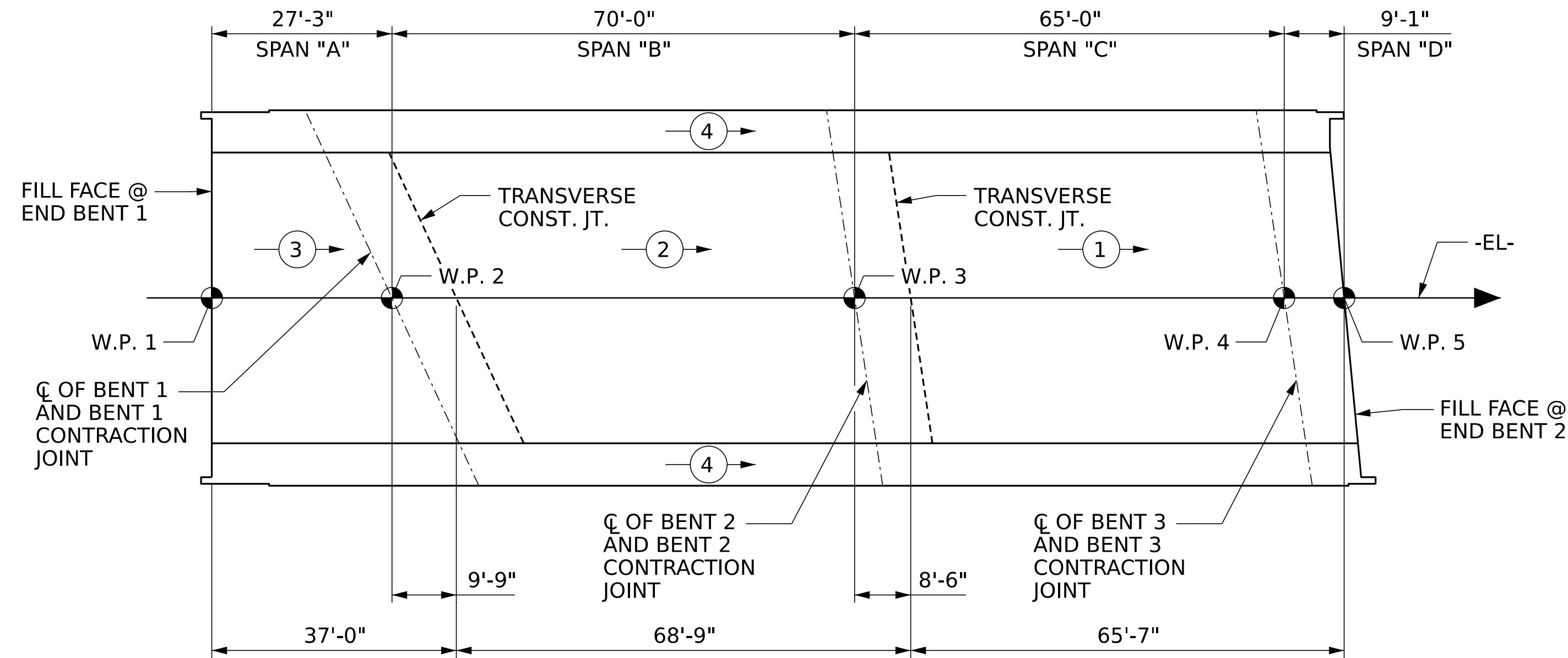
AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200
www.aecom.com
AECOM License No. F02492



STATE OF NORTH CAROLINA
CITY OF WILMINGTON

**UTILITY SUPPORT
SCHEMATIC**

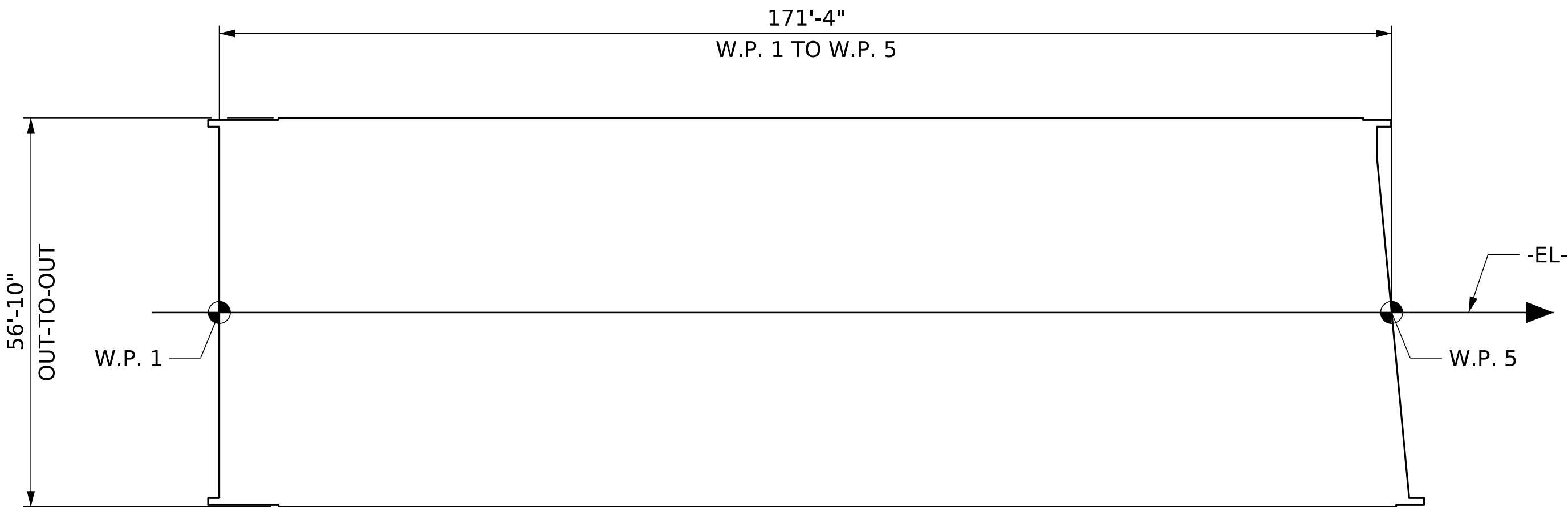
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-26
2			4			TOTAL SHEETS 27



POURING SEQUENCE

⊕ # → INDICATES POUR NUMBER AND POUR DIRECTION

FOR SAW CUTTING OF BENT CONTRACTION JOINTS, SEE DETAIL "C" ON "TYPICAL SECTION AND DETAILS" SHEET 3 OF 4.

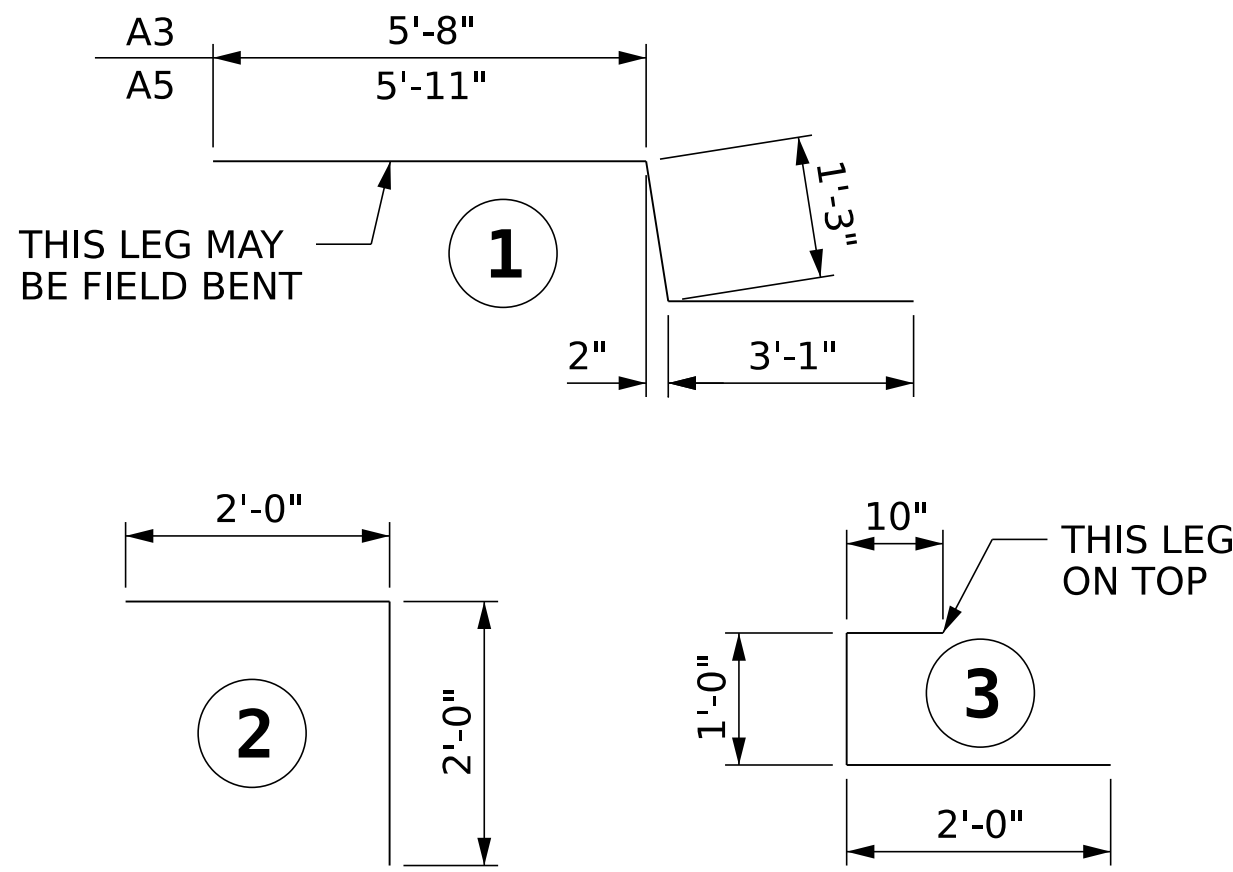


LAYOUT FOR COMPUTING
REINFORCED CONCRETE DECK SLAB
(SQ. FT. = 9,740)

DRAWN BY : D. DRUM DATE : 07/2024
CHECKED BY : G. COLS DATE : 07/2024
DESIGN ENGINEER OF RECORD: G. COLS DATE : 07/2024

12/4/2024
C:\pwworking\usnc\dms18955\401.053.FrontSt..B0M1.S-27.640036.dgn
daniel.drums

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

REINFORCING BAR SCHEDULE

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	338	5	STR	47'-2"	16628
A2	338	5	STR	47'-2"	16628
* A3	82	5	1	10'-0"	855
A4	685	4	STR	5'-0"	2288
* A5	1288	5	1	10'-3"	13770
* A6	1	5	STR	47'-4"	49
A7	1	5	STR	47'-4"	49
* A101	1	5	STR	43'-10"	46
* A102	1	5	STR	38'-6"	40
* A103	1	5	STR	33'-3"	35
* A104	1	5	STR	27'-11"	29
* A105	1	5	STR	22'-8"	24
* A106	1	5	STR	17'-4"	18
* A107	1	5	STR	12'-1"	13
A108	1	5	STR	6'-9"	7
A201	1	5	STR	43'-10"	46
A202	1	5	STR	38'-6"	40
A203	1	5	STR	33'-3"	35
A204	1	5	STR	27'-11"	29
A205	1	5	STR	22'-8"	24
A206	1	5	STR	17'-4"	18
A207	1	5	STR	12'-1"	13
A208	1	5	STR	6'-9"	7
* B1	102	5	STR	60'-0"	6383
* B2	102	5	STR	32'-4"	3440
* B3	68	5	STR	36'-6"	2589
* B4	68	5	STR	41'-6"	2943
* B5	40	5	STR	20'-10"	869
* B6	28	5	STR	23'-10"	696
B7	146	5	STR	60'-0"	9137
B8	146	5	STR	31'-9"	4835
B9	58	4	STR	33'-6"	1298
B10	58	4	STR	38'-6"	1492
L1	110	4	2	4'-0"	294
L2	684	5	3	3'-10"	2735
TOTAL REINFORCING STEEL				LBS.	38,968
* TOTAL EPOXY COATED REINFORCING STEEL				LBS.	48,434

NO DECK POUR SHALL BE PLACED WHERE A POUR IN AN ADJACENT SPAN HAS NOT OBTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

BRIDGE NO. 640036
NEW HANOVER COUNTY
STATION: 12+50.55 -EL-

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	1'-11"	1'-7"	1'-11"	1'-7"	2'-6"
#5	2'-5"	2'-0"	2'-5"	2'-0"	3'-1"
#6	2'-10"	2'-5"	3'-7"	2'-5"	3'-8"
#7	4'-2"	2'-9"			
#8	4'-9"	3'-2"			

GROOVING BRIDGE FLOORS

BRIDGE DECK	7,011 SQ. FT.
TOTAL	7,011 SQ. FT.

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

AECOM
AECOM TECHNICAL SERVICES OF NC, INC.
5438 WADE PARK BOULEVARD, SUITE 200
RALEIGH, NC 27607
(919) 854-6200
www.aecom.com
AECOM License No. F02492

Seal of the State of North Carolina
Professional Engineer
G. COLS
12/4/2024

STATE OF NORTH CAROLINA
CITY OF WILMINGTON

SUPERSTRUCTURE

BILL OF MATERIAL

REVISIONS						SHEET NO. S-27
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 27
2			4			

STANDARD NOTES

(APPLIES TO RECONSTRUCTED DECK ONLY)

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE AASHTO
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE ORIGINAL PROFILE GRADE.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY ⅛" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

