

July 26, 2019
PREPARED BY: Richard D Uptegraff, PE



SPECIFICATIONS PACKAGE

Contract Number: _____
FINANCIAL PROJECT ID(S): 443413-1-54-01

DISTRICT ONE SARASOTA COUNTY

The July 2019 Edition of the Florida Department of Transportation Standard Specifications is revised as follows:

I hereby certify that this specifications package has been properly prepared by me, or under my responsible charge, in accordance with procedures adopted by the Florida Department of Transportation.

This item has been digitally signed and sealed by Richard D Uptegraff, PE on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Date: July 26, 2019
State of Florida, _____
Professional Engineer, License No.: 58789
Firm Name: Atkins North America
Firm Address: 100 Paramount Drive, Suite 207
City, State, Zip Code: Sarasota, FL 34232
Certificate of Authorization Number: 24
Page(s): 00700-1 to 00700-45

STANDARD SPECIFICATIONS

The Standard Specifications are comprised of Divisions I, II and II as noted below:

- (1) Division I General Provisions of the Construction Contract, Articles GP1 - GP9 as included herein.
- (2) Division II-Construction Details and Division III-Materials shall refer to the **JULY 2019** edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, available at the following link and amended herein:

<https://www.fdot.gov/programmanagement/Implemented/SpecBooks/default.shtm>

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**DIVISION I
GENERAL PROVISIONS
OF THE CONSTRUCTION CONTRACT**

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GENERAL PROVISIONS

ARTICLE GP 1 - DEFINITION OF TERMS

When used in these specifications, contract, or any documents or instruments pertaining to construction governed by these specifications, the intent and meaning shall be interpreted as:

GP 1.1 AASHTO: American Association of State Highway and Transportation Officials.

GP 1.2 Addendum: A modification of plans or other contract documents issued by the City Engineer and distributed to prospective bidders prior to the opening of bids.

GP 1.3 Additional Instructions to Bidders: Outlines requirements, bonding, describes awarding of the contract, and other information of value to prospective bidders.

GP 1.4 ASTM: American Society for Testing and Materials.

GP 1.5 Bid: The written offer of a bidder submitted on the bid form to perform the work according to the requirements of the contract documents and stating the consideration that the bidder will require for so doing.

GP 1.6 Bid Bond: A bond executed by a bidder and the bidder's surety guaranteeing that the bidder awarded the contract will execute the same and furnish the required Performance and Payment Bond.

GP 1.7 Bidder: Any individual, partnership, or corporation submitting a bid on the attached bid form for the work contemplated.

GP 1.8 Bid Form: The attached form on which it is required that bids be submitted.

GP 1.9 Board: The Venice City Council, City of Venice, Florida, (see also "City" and "Owner").

GP 1.10 Call for Bids: See Invitation for Bids.

GP 1.11 Change Order: A written order issued by the City Engineer to the Contractor directing changes, additions, or reductions in the work or in the materials or methods to be used.

GP 1.12 Contract: Written agreement between City and Contractor for performance of work according to requirements of contract documents and for payment of agreed consideration therefor.

GP 1.13 Contract Documents: The Plans, documents of the bid, Invitation for Bids, Instructions to Bidders, Bid Form, Construction Contract, Performance and Payment Bond, General Provisions, Special Provisions, Supplemental Provisions, the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction (Standard Specifications), edition dated as per Plans, FDOT's Design Standards, edition dated as per Plans, Technical Provisions, appendixes, addenda, supplemental agreements, field engineer change orders, purchase orders, and purchase order change orders concerning the project.

GP 1.14 Contractor: The individual, partnership, or corporation, constituting the party of the second part to the contract.

GP 1.15 City: City of Venice Municipal Government, Sarasota County, Florida. In these specifications, "City" is synonymous with "Owner" as defined below and refers to the authorized representative of the Venice City Council, Sarasota County, Florida.

GP 1.16 Daily Time Charge: For each calendar day any work remains uncompleted after the contract time specified, the sum of money per calendar day specified as liquidated damages in the contract, and General Provisions, paragraph GP 7.11, will be deducted from any money due the Contractor providing due account of contract time adjustments granted under the provisions of General Provisions paragraph GP 7.10 are taken.

GP 1.17 Engineer: Where "Engineer" or "Project Engineer" appears in these specifications, it refers to the City Engineer, City of Venice, Florida, or the authorized representative.

GP 1.18 Equipment: All machinery with necessary supplies for upkeep and maintenance, and all tools and apparatus necessary for the proper construction and acceptance of the work.

GP 1.19 Force Account Work: Work performed by the Contractor when directed by the Engineer for which any payment authorized is based upon the actual costs of labor, materials, and equipment used to complete said work.

GP 1.20 Inspector: Authorized representative of the City Engineer assigned to make any or all necessary inspections of the work performed and materials furnished by the Contractor.

GP 1.21 Invitation for Bids: The public notice requesting the submission of bids for work.

GP 1.22 NOT USED

GP 1.23 Notice: A notice is defined to be information rendered by either party to the other upon a condition becoming known pursuant to the following requirements. All claims, requests, substitutions, changes, Notices, delays, and any and all other forms of

Notices or claims by the Contractor to the City must be in writing and promptly presented. If none is so made, it is presumed not to have been given by the Contractor to the City.

GP 1.24 Notice to Proceed: The City's written notice to the Contractor fixing the date when Contract time commences.

GP 1.25 Notification of Intent: Notification by the City to the apparent successful bidder stating that upon compliance by the bidder with precedent conditions within the specified time, the City intends to enter into contractual agreement for the work.

GP 1.26 Owner: The project is owned by the City of Venice, Florida, with whom the contract will be made. Where "Owner" appears in these specifications, it refers to the authorized representative of the City of Venice. All communications for the Owner from the Contractor shall be delivered to the City of Venice, 401 W. Venice Ave. Venice, FL 34285.

GP 1.27 Performance and Payment Bond: A bond executed by the Contractor and the Contractor's surety guaranteeing the Contractor will, in good faith, perform the work in conformity with the terms of the contract documents, and promptly pay all persons supplying labor or materials for the work.

GP 1.28 Plans: The drawings, or reproductions thereof, prepared by the Engineer showing locations, character, dimensions and details of the work to be done. All working drawings submitted by the Contractor and approved by the Engineer become part of the plans.

GP 1.29 Project Engineer: Is a direct representative of the Engineer and has immediate charge of the engineering details of each construction project. The Project Engineer is responsible for the administration and satisfactory completion of the project.

GP 1.29a Project: The entire construction or installation to be performed as set forth in the contract.

GP 1.30 Procurement/Purchasing: Official procurement entity of the City.

GP 1.31 Specifications: The term for all directions, provisions, and requirements contained herein including referenced specifications and standard details, General Provisions, Special Provisions, Technical Provisions, Supplemental Provisions, plan notes, appendixes, addenda, supplemental agreements, and change orders that may be issued for this contract, all describing the manner of performing the work, including detailed technical requirements as to labor, material, equipment, and methods by which such work is to be performed, and defining the relations between the City, the Engineer, and the Contractor.

GP 1.32 Standard Specifications: Standard Specifications shall be FDOT's Standard Specifications for Road and Bridge Construction, edition dated as per Special

Provisions, as amended by the Special Provisions and Technical Provisions attached hereto.

GP 1.33 Subcontracting: The Contractor may subcontract portions of the work specialized in character and which, under contracting practices, are performed by specialty subcontractors. The Contractor shall obtain written approval from the City for all subcontractors and subcontracted work. The Contractor shall be fully responsible to the City for the acts and omissions of the subcontractors and there shall be no contractual relation between any subcontractor and the City. The prime contractor must perform work of not less than 50% of the total contract cost with the Contractor's own organization.

GP 1.34 Subcontractor: Any individual, partnership, or corporation supplying labor and/or materials for work under subcontract to the Contractor on the site of the project.

GP 1.35 Substantial Completion: The date of substantial completion of a project or specified part of a project is the date when the construction is sufficiently completed, in accordance with the contract documents, so that the project or specified part of the project can be utilized for the purpose for which it was intended.

GP 1.36 Superintendent: An agent of the Contractor which shall be on the project site at all times, capable of reading and thoroughly understanding the plans and specifications, and thoroughly experienced in the type of work being performed.

GP 1.37 Supplemental Amendment: A written proposal and acceptance executed by the City and the Contractor, with the consent of the Contractor's surety, covering the performance of work not in the original contract but necessary to complete the project, or changes, additions, or reductions in the work, materials, or methods to be used of a magnitude greater than may properly be covered by a change order.

GP 1.38 Surety: Bonding company furnishing guarantees required of bidder and Contractor.

GP 1.39 Waste Disposal: All materials removed from the project site for disposal as called for in the plans and specifications shall be done in a legal manner in conformance with all local, state, and federal guidelines.

GP 1.40 Work: The entire completed construction or various separately identifiable parts thereof required to be furnished under the contract documents. Work is the result of performing service, furnishing labor, furnishing and incorporating materials, and equipment into the construction as required by the contract documents.

ARTICLE GP 2 - PROPOSALS

GP 2.1. Proposal Forms: Complete sets of the bidding documents may be obtained by qualified bidders from the City or other designated entity as stipulated in the

advertisement, "Invitation for Bids". The bidding documents designate the location and description of the construction, appropriate estimate of the various quantities and kinds of work to be performed or materials to be furnished, and a schedule of items for which unit bid prices are invited. The bidding documents state the time in which the work must be completed and the amount of the proposal guarantee. The date, time, and place of the opening of proposals shall be as stated in the Invitation for Bids. The proposal includes special provisions and requirements that may vary from or are not contained in the standard specifications. All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications, and other documents pertaining to the contract designated in the proposal, will be considered a part of the proposal whether attached or not.

GP 2.2. Combination or Conditional Proposals: If the City elects, proposals may be issued for projects in combination and/or separately so that bids may be submitted either on the combination or on separate units of the combination. The Board reserves the right to make awards on combination or separate bids to the best advantage of the City. No combination bids will be considered unless specified in the bidding documents as furnished by the Engineer (or other issuing office designated in the advertisement, Call for Bids, or Invitation for Bids). Separate contracts will be written for each project included in the combination.

GP 2.3. Public Opening of Proposals: Proposals will be opened at the time and place designated in the Invitation for Bids, unless bidders are otherwise directed by addendum or other confirmed communication. Bidders, their authorized agents, and other interested parties are invited to be present.

ARTICLE GP 3 - SCOPE OF WORK

GP 3.1. Intent of Contract: The contract's intent is to provide for construction and completion of the work described. The Contractor will furnish labor, materials, equipment, tools, transportation, and supplies to complete the work according to the plans, specifications, and contract terms.

GP 3.2. Alteration of Plans or Character of Work: The City reserves the right to make, at any time during the progress of the work, such increases or decreases in quantities and such alterations in the grade or alignment of the project, as may be found to be necessary or desirable. Such increases, decreases, or alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered, the same as if it had been a part of the original contract. Under no circumstances shall alterations of plans or nature of work involve work beyond the termini of the proposed construction, except as may be necessary to satisfactorily complete the project. Unless such alterations, increases, or decreases materially change the character of the work to be performed or the cost thereof, the altered work shall be paid for at the same unit prices as other parts of the work. If, however, the character of the work or the unit costs thereof is materially changed, an allowance shall be made, either for or against the Contractor, in

such amount as the Engineer may determine to be fair and equitable. No claim shall be made by the Contractor for any loss of anticipated profits because of any such alteration, or by reason of any variation between the approximate quantities and the quantities of work as done. If the altered or added work is of sufficient magnitude as to require additional time in which to complete the project, such time adjustments may be made in accordance with the provisions of subarticle GP 7.10. Should the Contractor or the City discover subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or encounter other physical conditions at the site of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract, the Engineer shall be promptly notified in writing of such conditions before they are disturbed. The Engineer will promptly investigate the conditions and if found so materially differ and cause an increase or decrease in the cost of or the time required for performance of the contract, an equitable adjustment will be made and the contract amended in writing accordingly. Any adjustment in contract time because of such change(s) will be made in accordance with the provisions of subarticle GP 7.10

GP 3.3. Changes in Work: By written order and without notice to the sureties, the City may change the drawings and specifications of the contract and the general scope thereof. If the change will result in an increase in the total contract price, it will be incorporated as an amendment to the contract or as required by Article X of the contract. When making any change, prior to the issuance of the order for the changed work, the City shall determine the method of charge or credit to be applied for the change from one of the following methods:

GP 3.3.1 Method 1: A change order shall be issued by the City to fix the total lump sum value of the change, and shall establish the amount to be added to or deducted from the contract price. On all changes involving extras that will be added to the contract price, the price of the extras shall include the Contractor's overhead and profit, which shall be computed as described in Method 4 below. On all changes that involve a net credit to the City, no allowance for overhead and profit shall be figured.

GP 3.3.2 Method 2: If the change involves construction items for which unit bid prices are shown in the proposal, the amount to be added or deducted from the contract price shall be determined by multiplying the unit quantities of the items to be added or omitted by the corresponding unit bid prices for the items involved.

GP 3.3.3 Method 3: If the work is performed on a unit price basis and the change adds construction items for which no unit prices are shown in the proposal, the unit prices for the items involved shall be negotiated between the Contractor and the City, for which a change order shall be issued and the unit price applied to the number of items involved.

GP 3.3.4 Method 4: By ordering the Contractor to proceed with the Force Account Work and to keep and present, in such form as the City may direct, a correct accounting of the total cost of the change, together with all vouchers therefor. The total cost shall be as follows:

GP 3.3.4.1 Compute the net cost of the change, which shall include: direct labor and supervision and items incidental to labor, such as public liability insurance, workmen's compensation insurance and social security; materials and sales taxes on materials, the

actual use of power tools and equipment having a value in excess of \$50.00 at standard AED 'Green Book' rental rates; and power.

GP 3.3.4.2 Compute an allowance for overhead and profit not to exceed the following percentages of the net cost of the change, as determined in Articles GP 3.2, 3.3.4, 3.3.4.1, 4.3, 4.15, 4.16.2, 6.13, and 8.6:

- (1) for all work performed directly by the Contractor without subcontracting, 15% overhead and 10% profit for the Contractor;
- (2) for all work performed directly by a subcontractor for the Contractor, 15% overhead and 10% profit for the subcontractor, and 10% handling charge for the Contractor;
- (3) for all work performed by sub-subcontractor for the subcontractor, 15% overhead and 10% profit for the sub-subcontractor, 10% handling charge for the subcontractor, and 10% handling charge for the Contractor.

The 15% overhead and the 10% profit will not be applied to work with these allowances previously added, nor shall the 10% handling charge be applied to work not subcontracted. The 10% handling charge may be applied to the net cost of the change plus its allowable overhead and profit. Items considered as overhead are bond or bonds, supervision, timekeepers, clerks, watchmen, small tools valued less than \$50.00, incidental job burdens, and general office expense.

GP 3.3.4.3 The total cost of the change order shall be the sum of the amounts computed in accordance with Articles GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6.

GP 3.3.4.4 Where required by the City, the Contractor shall furnish the City an itemized breakdown of the quantities and prices used in computing the value of any change that may be ordered.

GP 3.3.5 Method 5: If work is to be performed for which no unit price is established in the bid form, the prices for the item involved shall be negotiated between the Contractor and the City, and a work assignment shall be issued with the unit prices applied to the items involved and those unit prices shall become a part of the contract.

GP 3.4 Maintenance of Traffic: Unless otherwise provided, all roads within the limits of the contract shall be kept open to all traffic by the Contractor. Where so provided on the plans or approved by the Engineer, the Contractor may bypass traffic over an approved detour route. The Contractor shall keep the portion of the project used by through or local public traffic in such condition that traffic will be adequately accommodated. The Contractor shall furnish, erect, and maintain barricades, warning signs, delineators, flagman, and pilot cars in accordance with FDOT's Manual of Traffic Control and Safe Practices for Street and Highway Construction. The Contractor shall provide and maintain in a safe condition temporary approaches, crossings, and intersections with trails, roads, streets, businesses, parking lots, residences, garages, and farms. The Contractor shall bear all expenses of maintaining the traffic over the section of road undergoing improvement and of constructing and maintaining such approaches, crossings,

intersections, and other features as may be necessary, without direct compensation, except as provided below:

GP 3.4.1 Special Detours: When the proposal contains an item for maintenance of detours or removing existing structures and maintaining traffic, the payment for such item shall cover all cost of constructing and maintaining such detour(s), including construction of all temporary bridges and accessory features, the removal of same, and obliteration of the detour road. Right-of-way for temporary highways or bridges called for under this paragraph will be furnished by the City.

GP 3.4.2 Maintenance of Traffic During Suspension of Work: During any suspension, the Contractor shall make passable and open to traffic such portions of the project and temporary roadways or portions thereof as may be agreed upon between the Contractor and the Engineer for the temporary accommodation of necessary traffic. Thereafter and until an issuance of an order for the resumption of construction operations, the maintenance of the temporary route or line of travel agreed upon will be by and at the expense of the City. When work is resumed, the Contractor shall replace or renew any work or materials lost or damaged because of such temporary use of the project, shall remove, as directed by the Engineer, any work or materials used in the temporary maintenance thereof by the City, and shall complete the project as though its prosecution had been continuous and without interference. Additional work caused by such suspension, for reasons beyond the control of the Contractor, will be paid for by the City at contract prices, or by extra work.

GP 3.4.3 Maintenance Directed by the Engineer: If the Engineer directs special maintenance for the traveling public, then the Contractor will be paid on the basis of unit prices or under subarticle GP 3.3., Changes in Work. The Engineer will be the sole judge of work to be classed as special maintenance.

GP 3.5 Rights in and Use of Materials Found on the Work: With the Engineer's approval, the Contractor may use such stone, gravel, sand, or other material as may be found in the excavation, and will be paid both for the excavation of such materials at the corresponding contract unit price and for the pay item for which the excavated material is used. The Contractor shall replace at the Contractor's own expense with other acceptable material, all of that portion of the excavated material so removed and used which was needed for use in the embankments, backfills, approaches, or otherwise. No charge for the materials so used will be made against the Contractor. The Contractor shall not excavate or remove any material from within the highway location that is not within the grading limits, as indicated by the slope and grade lines, without written authorization from the Engineer.

GP 3.6 Final Clean-Up: Before final acceptance, borrowed and local material sources and areas occupied by the Contractor shall be cleaned of all rubbish, excess materials, temporary structures, and equipment. All parts of the work shall be left in acceptable condition.

ARTICLE GP 4 - CONTROL OF WORK

GP 4.1. Authority of the City Engineer: The Engineer will decide all questions as to the quality and acceptability of materials furnished, work performed and rate of progress of the work, the interpretation of the plans and specifications, and the acceptable fulfillment of the contract on the part of the Contractor. The Engineer will have the authority to suspend the work, wholly or in part, due to the failure of the Contractor to correct conditions unsafe for the workers or the general public, for failure to carry out provisions of the contract, for failure to carry out orders, for such periods as deemed necessary due to unsuitable weather, for conditions considered unsuitable for the prosecution of the work, or for any condition or reason in the public interest.

GP 4.2. Plans and Working Drawings: Plans will show details of all structures, lines, grades, typical roadway cross-sections, location and design of all structures, and a summary of items on the proposal. The Contractor shall keep one set of plans available on the work site at all times. The plans will be supplemented by such working drawings as necessary to adequately control the work. Working drawings for structures shall be furnished by the Contractor and shall consist of such detailed plans as required to adequately control the work and are not included in the plans furnished by the City. All working drawings must be approved by the Engineer and such approval shall not operate to relieve the Contractor of responsibility under the contract for the successful completion of the work. The contract price will include the cost of furnishing all working drawings.

GP 4.3. Conformity with the Plans and Specifications: All work performed and materials furnished shall be in close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans or indicated in the specifications. If the Engineer finds the materials furnished, work performed, or the finished product not within close conformity with the plans and specifications but reasonably acceptable, the Engineer shall make a determination if the work shall be accepted and remain in place. In that event, the Engineer will document the basis of acceptance that will provide for an appropriate adjustment in the contract price for such work or materials deemed necessary to conform to the determination based on engineering judgment. In the event the Engineer finds the materials furnished, work performed, or the finished product are not in 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 and at the expense of the Contractor.

GP 4.4. Coordination of Project Special Provisions, Special Provisions, Plans, Design Standards, Technical Provisions, and FDOT Specifications: The Project Special Provisions, Special Provisions, plans, Design Standards, Technical Provisions, FDOT Specifications, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complimentary and describe and provide for complete work. In case of discrepancy, the governing order of the

documents is as follows:

- (1) Project Special Provisions;
- (2) Special Provisions;
- (3) Plans;
- (4) Road Design, Structures, and Traffic Operations Standards (Design Standards);
- (5) Technical Provisions; City of Venice Standard Details; Supplemental Specifications;
- (6) FDOT Special Provisions and Supplemental Specifications;
- (7) FDOT Standard Specifications;
- (8) Computed dimensions govern over scaled dimensions.

The Contractor shall not take advantage of any apparent error or omission in the plans or specifications, and shall immediately notify the Engineer of such. The Engineer will make corrections and interpretations as deemed necessary to fulfill the intent of the plans and specifications.

GP 4.5. Cooperation by Contractor: The Contractor will be supplied with three sets of approved plans and contract documents minimum including special provisions, one set of which the Contractor shall keep available on the site at all times. The Contractor shall give the work the constant attention necessary to facilitate the progress thereof, and shall cooperate with the Engineer, the inspectors, and other Contractors in every way possible.

GP 4.6. Emergency Supervision: The Contractor shall have a person responsible for the project available on a 24-hour basis seven days a week to be contacted in emergencies and when immediate action must be taken to maintain traffic or overcome other problems that may arise. Furnishing a telephone number where this designated person can be reached outside of normal working hours will constitute compliance with this provision, provided the phone number of a second equally qualified person is furnished as an alternate, in case the regularly designated person cannot be reached.

GP 4.7. Cooperation with Utilities: The City will notify all utility companies, pipe line owners, or other Parties affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction made as soon as practicable. Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction to be relocated or adjusted will be moved by the owners at their expense, unless otherwise provided in the contract. It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utility appurtenances in their present or relocated positions as shown on the plans and no additional compensation will be allowed for any delays, inconvenience, or damage sustained due to any interference from said utility appurtenances or the operation of moving them.

GP 4.8. Cooperation between Contractors: The City reserves the right to contract for and perform other or additional work on or near the work covered by the contract. When separate contracts are let within the limits of any one project, each Contractor shall conduct work so as not to interfere with or hinder the process or completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed. Each Contractor involved shall assume all liability, financial or otherwise, in connection with their contract and shall protect and hold harmless the City, its Council, officers, officials, employees, agents, and volunteers from and against any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project. The Contractor shall arrange the work and place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the same project. The Contractor shall join work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

GP 4.9. Authority and Duties of the Project Engineer: A direct representative of the Engineer, the Project Engineer has immediate charge of the engineering details of each construction project and is responsible for the administration and satisfactory completion of the project. The Project Engineer has the authority to reject defective material and suspend any work improperly performed.

GP 4.10. Duties of the Inspector: City inspectors will be authorized to inspect all work done and materials furnished. Such inspection may extend to all or part of the work, and to the preparation or fabrication of the materials to be used. The inspector is not authorized to issue instructions contrary to the plans and specifications, or act as superintendent for the Contractor; however, the inspector shall have the authority to reject work or materials until any questions at issue can be referred to and decided by the Engineer.

GP 4.11. Inspection of Work: All materials and work are subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and furnished with information and assistance by the Contractor to make a complete and detailed inspection. At the Engineer's request, the Contractor, any time before acceptance of the work, shall remove or uncover portions of the finished work as directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, removing, and replacing of the covering or making good of the parts removed will be paid for as extra work; should the work so exposed or examined prove unacceptable, the uncovering, removing, and replacing of the covering or making good of the parts removed will be at the Contractor's expense. Any materials used or work performed without qualified supervision by the Contractor, or inspection by any authorized City representative may be ordered removed and replaced at the Contractor's expense, unless the City representative failed to inspect after having been provided notice that the work was to be performed.

GP 4.12. Removal of Unacceptable and Unauthorized Work: All work not conforming to the contract requirements will be considered unacceptable, unless otherwise determined acceptable under the provisions in subarticles GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6. Unacceptable work, resulting from poor workmanship, use of defective material, damage through carelessness, or any other cause, found prior to the final acceptance of the work shall be removed immediately and replaced in an acceptable manner. Work done contrary to the instructions of the Engineer, done beyond the lines shown on the plans or except as herein specified, or any extra work done without authority will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense. Upon failure by the Contractor to comply with any order of the Engineer made under the provisions of this article, the Engineer will have authority to cause unacceptable or unauthorized work to be remedied or removed and replaced, and to deduct the costs from any monies due or to become due the Contractor. After the unacceptable work has been corrected to the standard required by the contract specifications, the work will be re-inspected by the Engineer. If the re-inspected work is still unacceptable to the Engineer, the cost of all subsequent re-inspections may be deducted from any monies due or to become due to the Contractor.

GP 4.13. Load Restrictions: The Contractor will comply with legal load restrictions when hauling materials on public roads beyond the project limits. Special permits do not relieve the Contractor of liability for damages resulting from moving materials or equipment. The operation of equipment of such weight or so loaded as to cause damage to structures of the roadway or to any other type of construction is not permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. In no case shall legal load limits be exceeded unless permitted in writing. The Contractor shall be responsible for all damage done by hauling equipment.

GP 4.14. Maintenance During Construction: The Contractor shall maintain the work during construction until project acceptance. Maintenance constitutes continuous and effective work prosecuted day by day with adequate equipment and forces so that the road or structures are kept in satisfactory condition. In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations. All cost of maintenance work during construction and before the project is accepted is included in the unit prices for various pay items; the Contractor will not be paid an additional amount for such work.

GP 4.15. Failure to Maintain Roadway or Structure: If the Contractor fails to comply with subarticles GP 3.2, 3.3, 4.3, 4.16, 6.13, and 8.6, the Engineer will immediately notify the Contractor of the non-compliance. If the Contractor fails to remedy the unsatisfactory maintenance within 24 hours after receipt of Notice, the Engineer will immediately proceed to maintain the project, and the entire cost of maintenance will be deducted from monies due or to become due the Contractor on the contract.

GP 4.16. Acceptance:

GP 4.16.1 Partial Acceptance: If, during the prosecution of the project, the Contractor substantially completes a unit or portion of the project, i.e., structure, interchange, or section of road or pavement, the Contractor may request the Engineer to make an inspection of that unit. If the Engineer finds the unit satisfactorily completed in compliance with the contract, the Engineer may accept that unit as complete. Such partial acceptance in no way voids or alters the terms of the contract nor the warranty provisions of Section GP 9.

GP 4.16.2 Final Acceptance: Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection. If all construction provided for and contemplated by the contract is found completed satisfactorily, the Engineer will execute a Certificate of Completion. If the inspection discloses any work in whole or in part as unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with and execute such instructions. After the acceptable work has been corrected to the standard required by the contract specifications, the work will be re-inspected by the Engineer. If the re-inspected work is still unacceptable to the Engineer, the cost of all subsequent re-inspections may be deducted from any monies due or to become due to the Contractor.

GP 4.17. Claims for Adjustment and Disputes: If, in any case, the Contractor deems that additional compensation is due for work or material not clearly covered in the contract nor ordered by the Engineer as extra work as defined herein, the Contractor shall notify the Engineer in writing of intentions to make claim for such additional compensation before beginning the work on which the claims are based. If such notification is not given and the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual costs as required, the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving or substantiating the validity of the claim. If the claim, after consideration by the Engineer, is found to be just, it will be paid as extra work as provided herein for Force Account Work pursuant to GP 3.3.4. Nothing in this subarticle shall be construed as establishing any claim contrary to the terms of subarticles GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6.

GP 4.18. Automatically-controlled Equipment: Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period of 48 hours following the breakdown or malfunction, provided this method of operation will produce results otherwise meeting specifications.

GP 4.19. Superintendence: The Contractor shall designate in writing before starting work, and have on site, irrespective of the amount of work sublet, at all times, a

competent Superintendent who shall have the authority to represent and act for the Contractor, and have full authority to execute Engineer's orders or directions without delay, and promptly supply required materials, equipment, tools, labor, and incidentals. The Superintendent shall be capable of reading and thoroughly understanding the plans and specifications, and thoroughly experienced in the type of work being performed. The Superintendent shall be an employee of the Contractor's organization. The Contractor will not be allowed to designate a Subcontractor as the Superintendent.

Failure of the Superintendent to be present at the job site at all times when work is in progress on the contract will be considered as failure on the part of Contractor to perform a provision of the contract, and as such, the City Engineer's Representative may suspend all work until such time satisfactory arrangements have been made to have the Superintendent on the job site at all times when work is in progress. No additional compensation or additional contract time will be allowed by reason of the suspension.

ARTICLE GP 5 - CONTROL OF MATERIAL

GP 5.1. Source of Supply and Quality Requirements: The materials used on the work shall meet all quality requirements of the contract. To expedite the inspection and testing of materials, the Contractor shall notify the Engineer of proposed sources of materials prior to delivery. At the option of the Engineer, materials may be approved at the source of supply before delivery is started. If it is found, after trial, that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources after approval by the Engineer.

GP 5.2. NOT USED

GP 5.3. Samples, Tests, Cited Specifications: The Contractor shall have all materials inspected, except as allowed in subarticles GP 5.4 and GP 5.5, and tested by a certified testing laboratory. Results shall be submitted in writing to the Engineer for approval before the materials are incorporated in the work except as stated in GP 5.4 and GP 5.5. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Unless otherwise designated, all tests shall be in accordance with the most recent cited standard methods of AASHTO or ASTM that are current on the date of advertisement for Bids.

GP 5.4. Certification of Compliance: The Engineer may permit use, prior to sampling and testing, of certain materials or assemblies accompanied by certificates of compliance that state such materials or assemblies fully comply with contract requirements. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a Certificate of Compliance with the lot clearly identified. Materials or assemblies used on the basis of

certificates of compliance may be sampled and tested at any time and, if found nonconforming with the contract requirements, will be subject to rejection whether in place or not. The form and distribution of the Certificates of Compliance shall be as approved by the Engineer. The Engineer reserves the right to refuse use of materials or assemblies on the basis of the Certificates of Compliance.

GP 5.5. Plant Inspection: The Engineer may inspect materials at the source. Manufacturing plants may be inspected periodically for compliance with specified manufacturing methods. Material samples will be obtained for laboratory testing for compliance with quality requirements. This may be the basis for acceptance of manufactured lots as to quality. The City reserves the right to retest all materials prior to incorporation into the work which have been tested and approved at the source of supply, after the same has been delivered, and to reject all retested materials which do not meet the requirements of these specifications or those established for the specific project.

GP 5.6. Storage of Materials: Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even if approved before storage, may be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. Approved portions of the right-of-way may be used for materials and equipment storage but additional space required will be provided at the Contractor's expense. Private property will not be used for storage without written permission of the property owner or lessee, with copies furnished the Engineer if requested. Storage sites shall be restored to their original condition at the Contractor's expense. This shall not apply to the stripping and storing of topsoil or other salvaged materials.

GP 5.7. Handling Materials: Materials shall be handled in such manner as to preserve their quality and fitness for the work. Aggregates shall be transported from the storage site of the work in vehicles so constructed as to prevent loss or segregation of materials after loading and measuring in order that there may be no inconsistencies in the quantities of materials intended for incorporation in the work as loaded, and the quantities as actually received at the place of operations.

GP 5.8. Unacceptable Materials: Material not conforming to the requirements of the specifications shall be considered unacceptable, and will be rejected and removed immediately from the site of the work unless otherwise instructed by the Engineer. No rejected material, the defects of which have been corrected, shall be used until approval has been given.

ARTICLE GP 6 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

GP 6.1. Laws to be Observed: The Contractor shall keep fully informed of all federal, state, and local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work or in any way affect the conduct of the work. The Contractor, Contractor's officers, employees, agents, volunteers, and subcontractors shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees, and shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree whether by the Contractor or the Contractor's employees, officers, or agents.

GP 6.2. Permits, Licenses, and Taxes: The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all Notices necessary and incidental to the due and lawful prosecution of the work.

GP 6.3. Patented Devices, Materials, and Processes: If employing any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the City, any affected third party or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material, process, trademark, or copyright, and shall indemnify the City for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.

GP 6.4. Restoration of Surfaces Opened by Permit: The right to construct or reconstruct any utility service in the highway or street or to grant permits for same, at any time, is hereby expressly reserved by the City for the proper authorities of the municipality in which the work is done and the Contractor shall not be entitled to any damages whether for the digging up of the street or for any delay occasioned thereby. When an individual, firm, or corporation is authorized through a duly executed permit from the City, the Contractor shall allow parties bearing such permits to make openings in the highway. When ordered by the Engineer, the Contractor shall make all necessary work in an acceptable manner, or as provided in these specifications, and will be subject to the same conditions as original work performed.

GP 6.5. Sanitary, Health, and Safety Provisions: The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for employees as necessary to comply with all federal, state, and local laws, or ordinances and applicable rules with state and local Board of Health requirements or of other bodies or tribunals having jurisdiction. Attention is directed to federal, state and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not

require any work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to health or safety.

GP 6.6. Public Convenience and Safety: The Contractor shall conduct work so as to assure the least possible obstruction to traffic. The safety and convenience of the general public and residents along the highway and the protection of persons and property shall be provided for by the Contractor as specified under subarticle GP 3.4.

GP 6.7. Barricades and Warning Signs: The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices and take all precautions for the protection of the work and safety of the public. Highways closed to traffic shall be protected by effective barricades and obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic. The Contractor shall erect warning signs in advance of any place on the project where operations may interfere with the use of the road by traffic, and at all intermediate points where the new work crosses or coincides with the existing road. Such warning signs shall be placed and maintained in accordance with the plans furnished. No signs, barricades, lights, or other protective devices shall be dismantled or removed without permission of the Engineer. All barricades, warning signs, lights, temporary signals, and other protective devices shall conform to FDOT's Manual on *Traffic Control and Safe Practices for Street and Highway Construction*.

GP 6.8. Protection and Restoration of Property and Landscape: The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all survey monuments and property markers until their locations are witnessed or otherwise referenced by a Florida-licensed professional land surveyor. The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials. Said responsibility will not be released until the project has been completed and accepted. When and where any direct or indirect damage or injury is done to public or private property, by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at the Contractor's own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or shall make good such damage or injury in an acceptable manner.

GP 6.9. Contractor's Responsibility for Work: Until final written acceptance of the project by the Engineer, the Contractor shall have the charge and care and shall take precaution against injury or damage to any part thereof by the action of the elements or from any other cause whether from the execution or from the non-execution of the work. The Contractor will rebuild, repair, restore, and make good all injuries or damages to any portion of the work by any of the above causes before final acceptance, and bear the expense thereof except damage to the work due to unforeseeable causes

beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomenon of nature, or acts of the public enemy or of governmental authorities. In case of suspension of work from any cause, the Contractor is responsible for the project, will take precautions necessary to prevent damage to the project, provide for normal drainage, and will erect necessary temporary structures, signs or other facilities at the Contractor's expense. During such suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seeding, and sodding furnished under this contract, and shall take adequate provisions to protect new tree growth and other important vegetative growth against injury.

GP 6.10. Contractor's Responsibility for Utility Property and Services: At points where the Contractor's operations are adjacent to properties of railway, telegraph, telephone, and power companies, or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made. The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of the rearrangement work may be reduced to a minimum, and that services rendered by those Parties will not be unnecessarily interrupted. In the event of interruption to utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority and cooperate with the said authority in the restoration of service. If utility service is interrupted, continuous cooperation will be required until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

GP 6.11. Furnishing of Right-of-way: The City will be responsible for securing all necessary right-of-way in advance of construction. Any exception will be indicated in the contract.

GP 6.12. Personal Liability of Public Officials: In carrying out the provisions of these specifications or exercising any power or authority granted to them by the scope of the contract, there is no liability upon the Engineer or the authorized representatives, personally or as officials of the City. It is understood that in all such matters they act solely as agents and representatives of the City.

GP 6.13. No Waiver of Legal Rights: Upon completion of the work, the City will expeditiously make final inspection and notify the Contractor of acceptance. Final acceptance shall not preclude or stop the City from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the City be precluded or stopped from recovering from the Contractor and/or the Contractor's surety such overpayment as it may sustain, or by failure on the part of the Contractor to fulfill obligations under the contract. A waiver on the part of the City of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach. The

Contractor, without prejudice to the terms of the contract, shall be liable to the City for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the City's rights under any warranty or guaranty.

GP 6.14. Environmental Protection: The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and prevent atmospheric pollution from particulate and gaseous matter.

GP 6.15. Insurance: Before performing any work on this project, the Contractor shall furnish certificates of insurance to City of Venice Risk Management as specified in the proposed contract. The appropriate insurance shall continue in force throughout the duration of any and all work performed on this project and shall include a 30-calendar day notice of cancellation or non-renewal.

ARTICLE GP 7 - PROSECUTION AND PROGRESS

GP 7.1 Subletting of Contract: The Contractor will not sublet, sell, transfer, assign or otherwise dispose of the contract or any portion of it, or of rights, title, or interest therein, without written consent of the City. With the City Engineer's Representative written consent, the Contractor may sublet a portion of the work, but shall perform with his own organization work amounting to not less than 50% of the total contract amount less the total amount for those contract items designated as 'specialty work'. Specialty work shall be as defined in Section 8-1.2 of FDOT's Standard Specifications, edition dated as per the Special Provisions.

Include in the total contract amount the cost of materials and manufactured component products, and their transportation to the project site. For the purpose of meeting this requirement the City will not consider off-site commercial production of materials and manufactured component products that the Contractor purchases, or their transportation to the project, as subcontracted work.

If the Contractor sublets a part of a contract item, the City will use only the sublet proportional cost in determining the percentage of subcontracted normal work. Execute all agreements to sublet work in writing and include all pertinent provisions and requirements of the contract. Upon request, furnish the City with a copy of the subcontract. The subletting of work does not relieve the Contractor or the surety of their respective liabilities under the contract.

The City recognizes a subcontractor only in the capacity of an employee or agent of the Contractor, and the City Engineer's Representative may require the Contractor to remove the subcontractor as in the case of an employee.

GP 7.2 Commencement of Contract Time: Contract time shall start and the Contractor shall assume obligations under the contract documents upon the date listed on the Notice to Proceed. The Contractor shall not commence with construction activities prior to the City issuing the Notice to Proceed.

GP 7.3 Preconstruction Conference: As soon as possible after the contract has been officially awarded, the Project Engineer shall arrange a mandatory preconstruction conference with the Contractor and interested parties for the purpose of reviewing construction details, proposed schedules, etc. Participants shall come prepared to make worthwhile contributions to the conference and improvement of general relations.

GP 7.3.1 Mandatory Attendance: Attendees to the preconstruction conference are the Project Engineer and inspector assigned to the project, the Contractor and principal personnel, representatives of involved utilities, and any other interested parties involved.

GP 7.3.2 Conference Moderator and Report: The Project Engineer is responsible for the conference agenda, conducting the discussions, and making a written record of the conference discussions with copies to all participants and the project file.

GP 7.3.3 Agenda: Among the subjects to be discussed as applicable on the project are: Schedules - Contractor's proposed operating schedules, computation of work day charges, time schedules, completion date requirements; Subcontracts - work to be sublet, stipulations to be included in the subcontract agreements, Engineer/Contractor relations, and responsibility towards subcontractors, authorized representatives, etc.; Legal Relations and Responsibilities - cooperation with utility owners, the public, and other Contractors; license and permits in connection with execution of the work, local ordinances, etc.; Special Requirements and Unusual Conditions - discussion of anticipated conflicts and problems, clarification of construction details and specification requirements, etc.; Inspection Procedures and Required Tests - notification to the Engineer of material orders, furnishing samples, and the time and place of testing and accepting materials, storage and use of materials, etc.; Maintenance of Traffic and Haul Road Requirements - location and scheduling of by-pass construction, crossroads closures and access facilities; general responsibilities with regard to traffic and public convenience, etc.; Emergencies, Safety, and Sanitary - employee and public safety, sanitary provisions, etc.; Key Personnel - delegation of authority by the Contractor and the Engineer, lines of communication, equipment and personnel, etc.; Materials Suppliers - list of suppliers should be furnished the Engineer indicating where the Contractor proposes to obtain all materials for the project.

GP 7.4 Progress Schedule and Prosecution: The Contractor, when required, shall furnish a progress schedule using Primavera software to the Engineer for approval. The progress schedule may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the contract. If the Contractor falls significantly behind the submitted schedule, the Contractor shall submit a revised schedule for completion of the work within the contract time, and modify operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should

the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations. The Contractor shall also provide labor and equipment rates for computation of costs in accordance with GP 3.3.4.1. These rates shall be reviewed and approved by the Engineer prior to day one of the contract.

GP 7.4.1 A mandatory progress meeting may be held at the point 50% of the contract time is used. At 30 calendar days prior to reaching that point, the Contractor shall provide notice to the City. A mandatory progress meeting may be held as soon as mutually agreeable thereafter, unless determined to be unnecessary by the City.

GP 7.4.2 At the conclusion of the project, but prior to final payment, a mandatory after action meeting may be held to review performance and schedule issues, document lessons learned, and indicate any constructive changes that may be made to processes used during the project. The City will coordinate with the Contractor on a mutually agreeable place and time to conduct this meeting if required.

GP 7.5 Limitation of Operations: The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with traffic. The Contractor shall have due regard to the location of detours and to the provisions for handling traffic. The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections if the opening of such section is essential to public convenience.

GP 7.6 Working Hours: All work must be done during normal working hours (7AM to 7 PM) Monday through Friday. Work shall be permitted on weekends, holidays and at night with prior approval from the City Engineer.

GP 7.7 Character of Workers: At all times, the Contractor shall employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these specifications. All workers shall have sufficient skill and experience to properly perform the work assigned to them. Workers engaged in special or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily. Any person employed by the Contractor or subcontractor who, in the opinion of the Engineer, does not perform work in proper and skillful manner or is intemperate or disorderly, at the written request of the Engineer, shall be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer. If the Contractor fails to remove such person as required above or fails to furnish suitable and sufficient personnel for proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders. The Contractor will not be entitled to any additional time or costs associated with such work suspension.

GP 7.8 Contractor's Compliance: After written notice is provided to the Contractor and a reasonable opportunity to cure, and after consultation with the Engineer, the City shall have the right to refuse to make payment, in whole or part, and if necessary, may demand the return of a portion or all of the amount previously paid to the Contractor due to:

- (1) The quality of a portion, or all, of the Contractor's work not performed in accordance with the requirements of this contract;
- (2) The quantity of the Contractor's work not delivered or performed as represented in the Contractor's payment request, or otherwise;
- (3) The Contractor's rate of progress, not progressing such that, in the City's opinion, substantial or final completion, or both, may be inexcusably delayed;
- (4) The Contractor's failure to use the contract funds, previously paid the Contractor by the City, to pay Contractor's project-related obligations including, but not limited to, subcontractors, laborers and material and equipment suppliers;
- (5) Claims made, or likely to be made, against the City, or its property;
- (6) Loss caused by the Contractor;
- (7) The Contractor's failure or refusal to perform any of its obligations to the City after written notice and a reasonable opportunity to cure as set forth above.

In the event the City makes written demand upon the Contractor for amounts previously paid by the City as contemplated in this subsection, the Contractor shall promptly comply with such demand. The City's rights hereunder survive the term of this contract are not waived by final payment or acceptance and are in addition to the Contractor's obligation stated in Section 8 herein.

GP 7.9 Methods and Equipment: All equipment used on the work will be of sufficient size and mechanical condition to meet requirements of the work and produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other highways will result from its use. When methods and equipment are not prescribed in the contract, the Contractor is free to use any methods or equipment to accomplish the work according to the contract requirements. Specified methods and equipment will be used unless authorized by the Engineer. Requests to use methods and equipment other than that specified shall be in writing with a full description of the methods and equipment proposed and the reasons for making the change. Approval will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If trial use of the substituted methods or equipment does not meet contract requirements, the Contractor shall discontinue the use of the substituted methods and equipment. The Contractor shall remove the deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved, or in contract time, as a result of authorizing a change in methods or equipment under these provisions.

GP 7.10 Determination and Extension of Contract Time: The number of calendar days allowed for completion of the work is the contract time. Contract time begins upon award of the contract by the City Council and includes all Sundays, holidays and non-work days. Days of suspended work, as ordered by the Engineer, until resumption of work for suspensions not the fault of the Contractor, shall be excluded. The contract time allowed in the contract as awarded is based on the original quantities as defined in the Instructions Terms and Conditions. If the contract requires work in greater

quantities than shown in the proposal, the contract time shall be increased based on the amount and difficulty of the added work. If it is found impossible for reasons beyond the Contractor's control to complete the work within the contract time or as extended in accordance with the provisions of this article, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth therein the reasons which will justify the granting of the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer determines work was delayed because of conditions beyond the control and not the fault of the Contractor, the Engineer may extend the time for completion as the conditions justify. The extended time for completion shall then be in full force and effect the same as though it were the original time for completion. When final acceptance has been duly made by the Engineer as prescribed in Article GP 4 the daily time charge will cease.

GP 7.10.1 The date of substantial completion of a project or specified part of a project is the date when the construction is sufficiently completed, in accordance with the contract documents, so that the project or specified part of the project can be utilized for the purpose for which it was intended.

GP 7.11 Failure to Complete on Time: For each calendar day any work remains uncompleted after the contract time specified, the sum of money per calendar day specified as liquidated damages in the contract and written in the contract will be deducted from any money due the Contractor. The Contractor will not pay liquidated damages for days in which an extension of time was granted pursuant to GP 7.10. Allowing the Contractor to finish any work after the contract time or the contract time extension does not waive the City's rights under the contract. The City may waive such portions of the liquidated damages as may accrue after the work is in condition for safe and convenient use by the public.

GP 7.12 Default and Termination of Contract: The Contractor is considered in default and the City shall give written notice to the Contractor and their surety of such default if the Contractor:

- (1) Fails to perform the work with sufficient workers, equipment, or materials to assure the prompt completion of work;
- (2) Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable;
- (3) Discontinues the prosecution of the work;
- (4) Fails to resume discontinued work within a reasonable time after notice to do so;
- (5) Becomes insolvent, is declared bankrupt, or commits any act of bankruptcy or insolvency;
- (6) Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 calendar days;
- (7) Makes an assignment for the benefit of creditors;
- (8) Fails to carry on the work in an acceptable manner;
- (9) Fails to correct safety concerns within 48 hours after discovery or City notification to the Contractor;

The City will give notice in writing to the Contractor and their surety, if applicable, of such delay, neglect, or default. Within 10 calendar days after such notice, if the Contractor or surety does not proceed in accordance therewith, the City has full power and authority without violating the contract to take the prosecution of the work away from the Contractor. The City may appropriate or use any materials and equipment as may be suitable and acceptable, and enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods the City requires for the acceptable completion of said contract. All costs and charges incurred by the City to complete the work of the contract will be deducted from monies due or which become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, the Contractor and the surety are liable and will pay the City the amount of such excess.

GP 7.13 Risk of Loss: Prior to the completion of the project by the Contractor and the acceptance thereof by the City, risk of loss for the work shall remain at the risk of the Contractor and said Contractor shall be required to repair, replace, renew, and make good at the Contractor's own expense all damages caused by force or violence of the elements or any cause whatsoever, provided however, that in such cases the Contractor shall be entitled to a reasonable extension of time within which to complete said work. If the delay is due to the negligence, fault, or omission of the Contractor, the Contractor shall not be entitled to the extension of time mentioned in the said subarticle.

GP 7.14 Delays Due to Weather Conditions: The City will handle time extensions for delays caused by the effects of inclement weather differently from those resulting from other types of delays. The City will consider these time extensions only when rains, or other inclement weather conditions or related adverse soil conditions prevent the Contractor from productively performing controlling items of work resulting in:

- (1) The Contractor being unable to work at least 50% of the normal workday on predetermined controlling work items due to adverse weather conditions, or
- (2) The Contractor must make major repairs to work damaged by weather, provided that the damage is not attributable to the Contractor's failure to perform or neglect: and provided that the Contractor was unable to work at least 50% of the normal work day on pre-determined controlling work items.

No additional compensation will be made for delays caused by the effect of inclement weather.

GP 7.15 Unauthorized Aliens: Employment of unauthorized aliens by a contractor may constitute a violation of Section 274A (e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens or knowingly hires subcontractors who employ unauthorized aliens, such violation shall be cause for the City's unilateral cancellation of the contract.

ARTICLE GP 8 - MEASUREMENT AND PAYMENT

GP 8.1 Measurement of Quantities: All work completed under the contract will be measured by the Engineer according to United States standard measure. A station when used as a definition or term of measurement will be 100 linear feet. The method of measurement and computations to determine quantities of material furnished and work performed will be methods recognized as conforming to good engineering practices. The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials measured or proportioned by weight shall be weighed on accurate approved scales by competent, qualified personnel at locations designated by the Engineer. If material is shipped by rail, the car weight may be accepted provided only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily as the Engineer directs, and each truck shall bear plainly legible identification marks. Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to their water level capacity and all loads leveled when the vehicles arrive at the point of delivery. When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement is used. The term "lump sum" when used as an item of payment will mean complete payment for all of the work described under that item. When lump sum work is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories. When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of work, final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

GP 8.2 Budget Sufficiency: City of Venice performance and obligation to pay under this contract is contingent upon an annual appropriation by the City Council.

GP 8.3 Scope of Payment: The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing materials, performing work under the contract in a complete and acceptable manner, and all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of subarticle GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6. If the basis of payment clause in the Technical Provision or specification relating to any unit price in the bid schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not be measured or paid for under any other pay item in the specifications.

GP 8.4 Method of Payment: The City shall pay the Contractor through payment issued by the Clerk of Courts in accordance with the Florida Prompt Payment Act of the Florida Statutes, Chapter 218.70, upon receipt of the Contractor's invoice and written approval of same by the City's Administrative Agent indicating that services have been rendered in conformity with this agreement. The Contractor shall submit an invoice for payment to the City on a monthly basis for those specific services as described in the bid form that were completed during that invoicing period.

The invoices shall be in a form satisfactory to the Clerk of Court who initiates disbursements. Contractors must update their new pay requests with any changes made on the last submittal.

For those specific services that were partially completed, progress payments shall be paid monthly in proportion to the percentage of completed work on those specific services approved in writing by the City's Administrative Agent based on the percentage of the amount for those specific services.

GP 8.5 Compensation for Altered Quantities: When the accepted quantities of work vary from the quantities in the bid schedule, the Contractor shall accept payment at the original contract unit prices for the accepted quantities of work done as payment in full. No allowance except as provided in subarticle GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor as a result of alterations, unbalanced allocation of overhead expense and subsequent loss of expected reimbursement, or from any other cause.

GP 8.6 Eliminated Items: Should any items contained in the proposal be found unnecessary for the proper completion of the work, the Engineer may eliminate such items in writing without invalidating the contract. When a Contractor is notified of the elimination of items, the Contractor will be reimbursed for actual work done and all costs incurred including mobilization of material prior to said notification.

GP 8.7 Partial Payments: Partial payments requests in amounts not less than \$200.00 may be submitted once each month, no later than the 20th of the month or the last working day prior to the 20th of the month, as the work progresses. Said payments will be based upon Contractor estimates of the value of the work performed and materials delivered in accordance with subarticle GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6, and will be submitted to the Engineer. From the total of the amounts ascertained as payable, an amount as indicated in the GP 8.7.1 Retainage Table, shown below. Retainage will be deducted and retained by the City until completion of the entire contract in an acceptable manner. The balance less all previous payments shall be certified for payment. Retainage may be reduced upon issuance of the Certificate of Substantial Completion by the City if, in the sole opinion of the City, sufficient progress on the schedule has been accomplished, all notices of lien have been resolved and the City has retained adequate coverage for the project through the achievement of final completion. The City shall inform the Contractor's

Surety of any reduction in retainage. All retainage will be released upon satisfactory completion of the contract. If Article VII of the Construction Contract contains the provision that payment in a given fiscal year will not exceed a specified amount, then the partial payments described above will be subject to that limitation.

GP 8.7.1 Retainage Table:

Retainage Table Guidelines						
Value of Contract	% of Contract Amt Earned	% of Time Used				Total Retainage
		0 to <25 % Retained	25 to < 50 % Retained	50 to < 75 % Retained	75 to 100** %Retained	At Substantial Completion*
Less than \$1M	=/> % Time	10%	10%	10%	10%	10.00%
	< 15% behind	10%	10%	10%	10%	
	15% or > behind	10%	10%	10%	10%	
>\$1M to <\$5M	=/> % Time	5%	5%	5%	5%	5.00%
	< 15% behind	7%	7%	7%	7%	
	15% or > behind	10%	10%	10%	10%	
>\$5M	=/> % Time	5%	5%	0%	0%	2.50%
	< 15% behind	5%	5%	5%	5%	
	15% or > behind	10%	10%	10%	10%	
* Assuming everything is on schedule						
** Additional retainage may be withheld if there are problems observed with the work or schedule. The cost for deficient work that is not corrected and remaining work items may be estimated and an amount of two times that value may be withheld in addition to the retainage amounts shown here.						

GP 8.8 Payment for Material on Hand: Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided the materials meet the requirements of the plans and specifications when delivered in the vicinity of the project or stored in acceptable storage places. Partial payments for material on hand shall not exceed the bid price and shall not be made without an invoice acceptable to the Engineer. No partial payment will be made on living or perishable plant materials until planted.

GP 8.9 Acceptance and Final Payment: Prior partial estimates and payments are subject to correction in the final estimate and payment. When the project has been initially accepted as provided in subarticle GP 3.2, 3.3, 4.3, 4.15, 4.16, 6.13, and 8.6 herein, the Contractor will prepare the final estimate of the quantities of the various classes of work performed and submit the final estimate to the Engineer. With approval of such final estimate, the Contractor will be paid the entire sum due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.

ARTICLE GP 9 - WARRANTY AND GUARANTY PROVISIONS

All materials and equipment furnished by the Contractor and all construction work and workmanship involved in this contract shall, and the same is hereby guaranteed and warranted by the Contractor for a period of two years from written final acceptance by the City as defined herein, be free from defects due either to faulty materials, equipment and work furnished, installed, and performed by the Contractor, is warranted and guaranteed by the Contractor to the City to be such as to meet the required standards and to accomplish the purposes and functions of the project as defined, detailed, and specified in these contract documents. The City shall, following discovery thereof, promptly give written Notice to the Contractor of faulty materials, equipment, or workmanship within the period of the guaranty. Any part of the equipment, materials, or work which does not comply with the warranty and guaranty shall be promptly replaced at the Contractor's own expense and without cost to the City. These warranty and guaranty provisions create no limitations on the City as to any claims or actions for breach of guaranty or breach of warranty that the City might have against Parties other than the Contractor, and do not constitute exclusive remedies of the City against the Contractor and are not intended to and shall not limit any other rights, remedies, or causes of action, which the City might exercise against the Contractor, and shall not alter nor modify the application of the statute of limitations as established by the Statutes of the State of Florida.

END OF SECTION

DEVELOPMENTAL SPECIFICATIONS

PORTLAND CEMENT CONCRETE - FLORIDA SLAB BEAM SUPERSTRUCTURE SYSTEM.

(REV 1-28-16)

SUBARTICLE 346-2.1 is deleted and the following substituted:

346-2 Materials.

346-2.1 General: Meet the following requirements:

Coarse Aggregate.....	Section 901
Fine Aggregate*.....	Section 902
Portland Cement.....	Section 921
Water.....	Section 923
Admixtures**.....	Section 924
Pozzolans and Slag	Section 929

*Use only silica sand except as provided in 902-5.2.3.

**Except for shrinkage reducing admixtures (SRA), use products listed on the Department's Approved Product List (APL).

Do not use materials containing hard lumps, crusts or frozen matter, or that is contaminated with dissimilar material in excess of that specified in the above listed Sections.

SUBARTICLE 346-2.5 is expanded by the following new Subarticle:

346-2.5.6 SRA: Use SRA in accordance with Section 924.

SUBARTICLE 346-3.1 is deleted and the following substituted:

346-3.1 General: The separate classifications of concrete covered by this Section are designated as Class I, Class II, Class III, Class IV, Class V and Class VI. Strength and slump are specified in Table 2. The air content range for all classes of concrete is 1.0 to 6.0%, except for Class IV (Drilled Shaft) which is 0.0 to 6.0%.

Substitution of a higher class concrete in lieu of a lower class concrete may be allowed when the substituted concrete mixes are included as part of the QC Plan, or for precast concrete, the Precast Concrete Producer QC Plan. The substituted higher class concrete must meet or exceed the requirements of the lower class concrete and both classes must contain the same types of mix ingredients. When the compressive strength acceptance data is less than the minimum compressive strength of the higher design mix, notify the Engineer. Acceptance is based on the requirements in Table 2 for the lower class concrete.

TABLE 2		
Class of Concrete	Specified Minimum Strength (28-day) (psi)	Target Slump Value (inches) (c)
STRUCTURAL CONCRETE		
I (a)	3,000	3 (b)

I (Pavement)	3,000	2
II (a)	3,400	3 (b)
II (Bridge Deck) (g)	4,500	3 (b)
III (e)	5,000	3 (b)
III (Seal)	3,000	8
IV (d)(f)(g)	5,500	3 (b)
IV (Drilled Shaft)	4,000	8.5
V (Special) (d)(f)	6,000	3 (b)
V (d)(f)	6,500	3 (b)
VI (d)(f)	8,500	3 (b)

(a) For precast three-sided culverts, box culverts, endwalls, inlets, manholes and junction boxes, the target slump value and air content will not apply. The maximum allowable slump is 6 inches, except as noted in (b). The Contractor is permitted to use concrete meeting the requirements of ASTM C 478 4,000 psi in lieu of Class I or Class II concrete for precast endwalls, inlets, manholes and junction boxes.

(b) The Engineer may allow a higher target slump when a Type F, G, I or II admixture is used, except when flowing concrete is used. The maximum target slump shall be 7 inches.

(c) For a reduction in the target slump for slip-form operations, submit a revision to the mix design to the Engineer.

(d) When the use of silica fume, ultrafine fly ash, or metakaolin is required as a pozzolan in Class IV, Class V, Class V (Special) or Class VI concrete, ensure that the concrete meets or exceeds a resistivity of 29 KOhm-cm at 28 days, when tested in accordance with FM 5-578. Submit three 4 x 8 inch cylindrical test specimens to the Engineer for resistivity testing before mix design approval. Take the resistivity test specimens from the concrete of the laboratory trial batch or from the field trial batch of at least 3 cubic yards. Verify the mix proportioning of the design mix and take representative samples of trial batch concrete for the required plastic and hardened property tests. Cure the field trial batch specimens similar to the standard laboratory curing methods. Submit the resistivity test specimens at least 7 calendar days prior to the scheduled 28 day test. The average resistivity of the three cylinders, eight readings per cylinder, is an indicator of the permeability of the concrete mix.

(e) When precast three-sided culverts, box culverts, endwalls, inlets, manholes or junction boxes require a Class III concrete, the minimum cementitious materials is 470 pounds per cubic yard. Do not apply the air content range and the maximum target slump shall be 6 inches, except as allowed in (b).

(f) Highly reactive pozzolans may be used outside the lower specified ranges to enhance strength and workability. Testing in accordance with FM 5-578 is not required.

(g) When the plans call for the use of an SRA, request a list of approved shrinkage reducing admixtures from the Engineer.

SUBARTICLE 346-4.1 is deleted and the following substituted:

346-4.1 Master Proportion Table: Proportion the materials used to produce the various classes of concrete in accordance with Table 3:

TABLE 3		
Class of Concrete	Minimum Total Cementitious Materials Content pounds per cubic yard	Maximum Water to Cementitious Materials Ratio pounds per pounds (a)
I	470	0.53
I (Pavement)	470	0.50
II	470	0.53
II (Bridge Deck)	611	0.44 (c)
III	611	0.44
III (Seal)	611	0.53
IV	658	0.41 (b)(c)

TABLE 3		
Class of Concrete	Minimum Total Cementitious Materials Content pounds per cubic yard	Maximum Water to Cementitious Materials Ratio pounds per pounds (a)
IV (Drilled Shaft)	658	0.41
V (Special)	752	0.37 (b)
V	752	0.37 (b)
VI	752	0.37 (b)
(a) The calculation of the water to cementitious materials ratio (w/cm) is based on the total cementitious material including cement and any supplemental cementitious materials that are used in the mix. (b) When the use of silica fume or metakaolin is required, the maximum water to cementitious material ratio will be 0.35. When the use of ultrafine fly ash is required, the maximum water to cementitious material ratio will be 0.30. (c) When using SRA, modify the water content in accordance with the manufacturer's recommendations.		

**PRECAST PRESTRESSED CONCRETE CONSTRUCTION - FLORIDA SLAB BEAM
SUPERSTRUCTURE SYSTEM.
(REV 1-28-16)**

SUBARTICLE 450-6.1 is deleted and the following substituted:

450-6.1 General: Use metal side and bottom forms, unless otherwise specified in the Contract Documents. For members with special shapes such as corner sheet piles, wood forms are permitted. Slab beams, slab units and sheet piles may be cast on concrete surfaces meeting the profile dimensional tolerances of 450-6.3. Apply release agents in accordance with the manufacturer's recommendations. Liquid membrane curing compounds may be used to prevent bonding of slab products and sheet piles to the existing concrete surface, when applied in two or more coating. Ensure the last application of liquid membrane is applied immediately before placement of the slab or sheet pile.

For all beam members, use side forms designed to be removed without damaging the top flange of the beam. Remove the forms horizontally away from the beam by a method that prevents any contact of the form with the top flange after release of the form. Do not subject the top flange to any vertical force at any time. Include the form details and method of removal in the Producer QC Plan.

For all Florida-I Beams, use forms that do not have more than two horizontal joints.

Use void forms of a type for which service adequacy has been demonstrated, having sufficient strength to provide stability during handling and placing and to withstand hydrostatic pressures and other forces imposed upon them during concrete placement. Use form material that is neutral with respect to the generation of products harmful to the physical and structural properties of the concrete. Ensure that the presence of the form materials does not cause any detrimental effect to the concrete or other materials within the member. Positively vent all voids to the outside of the member. For end headers (except end headers used with CFRP strands) and inside forms, other materials capable of resisting the pressure from concrete are permitted. End headers used with CFRP strands must be either timber headers or steel headers with rubber grommets to protect the CFRP strands from damage.

Use end headers so designed that they can be placed and maintained in correct position between the side forms. Hold the headers in place with devices capable of being removed or loosened after the concrete has attained its initial set allowing free form expansion during curing methods that involve heat. Use end headers with openings conforming to the prestressing strand pattern to permit passage of the prestressing strand. Locate the openings accurately within 1/8 inch of planned location of prestressing strand elements.

Construct circular openings for strands a maximum of 1/4 inch larger than the nominal strand diameter. Construct square or rectangular openings a maximum of 1/4 inch larger, horizontally and vertically, than the nominal strand diameter. Ensure that all headers are mortar tight.

SUBARTICLE 450-10.3.2.1 is deleted and the following substituted:

450-10.3.2.1 AASHTO Type II, Florida-I Beam 36 and Double-T Beams, Piling, Slab Beams, and Precast Slab Units (Except Voided Piling and Slabs): Place concrete in one or more layers or lifts. If more than one layer is used for Double-T Beams, end the first layer such that the top of the concrete is slightly below the bottom of the flange.

SUBARTICLE 450-10.5.4 is deleted and the following substituted:

450-10.5.4 Slabs and Double-T Beams: When the Plans show the top surface of prestressed slab units, slab beams, or Double-T Beams to be the riding surface, apply a Class 4 floor finish in accordance with Section 400. When the Plans show the surface to be overlaid with asphalt or concrete, rough float the top surface and then scrub it transversely with a coarse brush to remove all laitance and to produce a roughened surface for bonding. For the other external surfaces of slabs and double-T beams, unless otherwise specified, apply a General Surface Finish in accordance with 400-15.1.

SUBARTICLE 450-12.5.3.6 is deleted and the following substituted:

450-12.5.3.6 Simple Span Prestressed Slab Beams and Slab Units:

End Zones (within a distance of twice the depth of the product from the end): One horizontal crack at either or both ends in the top half of the product, which is not in the plane of nor intersecting any row of prestressing strands, and extending from the end of the product for a length not to exceed half the product's depth.

Any Location (after detensioning): Vertical cracks in the top half of the product's depth.

SUBARTICLES 450-16.2 and 450-16.3 are deleted and the following substituted:

450-16.2 Storage: Store precast prestressed beams, Double-T Beams and slab units on only two points of support located within 18 inches of the end of the product or as calculated. Support skewed beams, Double-T Beams or slab units within 18 inches of the end of the full product section or as calculated. Do not support slab beams on the outer 6 inches of the product width. Support other products on an adequate number of supports so as to keep stresses in the products within the allowable stresses at release listed in the Department's Structures Design Guidelines. Locate multiple supports (more than two) within 1/2 inch of a horizontal plane through the top surface of the supports. Adequately brace beams as necessary to maintain stability.

All supports must be level and on adequate foundation material that will prevent shifting or differential settlement which may cause twisting or rotation of products. Immediately pick up products in storage that have rotated or twisted and adjust the supports to provide level and uniform support for the product.

Support prestressed products that are stacked by dunnage placed across the full width of each bearing point and aligned vertically over lower supports. Do not use stored products as a storage area for either shorter or longer products or heavy equipment.

Where feasible, base the selection of storage sites, storage conditions and orientation upon consideration of minimizing the thermal and time-dependent creep and shrinkage effects on the camber and/or sweep of the precast pretensioned products.

Continuous application of water during the initial 72 hour moist curing period may be interrupted for a maximum of one hour to allow relocation of precast prestressed concrete elements within the manufacturing facility. Keep the moist burlap in place during relocation of the element.

Measure and record the sweep and camber of beams monthly. Keep the measurement records on file for review at any time by the Engineer, and upon request, submit these measurements to the Engineer. If the camber exceeds by 1 inch the design camber shown in the Plans, take appropriate actions in accordance with 400-7.13.1 to accommodate the product in the structure.

If the sweep exceeds the tolerance specified, take immediate measures to bring the sweep of the product back to within tolerance.

Notify the Engineer immediately when the sweep or camber exceeds the specified tolerances. Special storage conditions for the purpose of removing excessive sweep will not be restricted by requirements of this Subarticle nor contained in 450-2.1. If the sweep of the product exceeds the tolerance specified and cannot be removed, the disposition of the product will be in accordance with 450-12.1 and 450-14.

450-16.3 Shipping: Do not ship precast prestressed concrete products to the project site prior to the completion of the 72 hour curing period and attainment of the required 28-day strength. The contractor is permitted to verify the shipping strength test, before 28 days, by testing compressive strength cylinders that are cured under the conditions similar to the product or by testing temperature match cured cylinders. The use of maturity method, ASTM C1074, pulse velocity method in accordance with ASTM C597, or any other nondestructive test method acceptable to Engineer, is permitted to estimate the strength before its verification by test cylinders. The shipping strength test is the average compressive strength of two test cylinders. Do not ship products until accepted and stamped by the QC Manager or the inspectors under the direct observation of the QC Manager. At the beginning of each project, provide a notarized statement to the Engineer from a responsible company representative certifying that the plant will manufacture the products in accordance with the requirements set forth in the Contract Documents and Producer QC Plan. The QC Manager's stamp on each product indicates certification that the product was fabricated in conformance with the Producer QC Plan, the Contract, and this Section. Ensure that each shipment of prestressed concrete products to the project site is accompanied with a signed or stamped delivery ticket providing the description and the list of the products.

Evaluate the temporary stresses and stability of all products during shipping and locate supports, generally within 18 inches from the beam end, in such a manner as to maintain stresses within acceptable levels. Include impact loadings in the evaluation. Do not support slab beams on the outer 6 inches of the product width.

SUBARTICLE 450-18 is deleted and the following substituted:

450-18 Basis of Payment.

Price and payment will be full compensation for all work and materials specified in this Section, including reinforcement, pretensioning strand, embedded ducts, hardware, inserts and

other materials as required, to fabricate, transport and place the product into its permanent position in the structure.

Payment for the items will be made under the following:

- | | |
|-------------------|---|
| Item No. 450- 1- | Prestressed Beams - per foot. |
| Item No. 450- 2 | Prestressed Beams: Florida-I Beams – per foot. |
| Item No. 450- 3- | Prestressed Slab Units - per foot. |
| Item No. 450- 4- | Prestressed Beam U-beams - per foot. |
| Item No. 450- 8- | Prestressed Beams: Florida Slab Beam – per foot. |
| Item No. 450- 88- | Prestressed Slab Units Transversely Post-Tensioned - square foot. |

**ADMIXTURES FOR CONCRETE CONSTRUCTION - FLORIDA SLAB BEAM
SUPERSTRUCTURE SYSTEM.
(REV 2-1-16)**

ARTICLE 924-1 is deleted and the following substituted:

924-1 General.

This Section covers materials for use as admixtures for concrete. The use of admixtures is restricted to those admixtures as may be allowed or required elsewhere in the specifications for specific concrete applications. Except for shrinkage reducing admixtures (SRA), admixtures shall comply with applicable AASHTO and ASTM specifications as modified in 924-2.3 through 924-2.7. Admixtures other than SRA that have been previously qualified for Department use are listed on the Department's Approved Product List (APL).

The title of ARTICLE 924-2 is deleted and the following substituted:

924-2 Acceptance of Admixtures other than Shrinkage Reducing.

ARTICLE 924-4 is deleted and the following substituted:

924-4 SRA.

924-4.1 Certification: Manufacturers of SRAs shall submit a certification stating that the SRA meets the requirements of this Section to the Engineer for approval.

924-4.2 Handling: The SRA must not come in contact with any other admixture before or during the batching process prior to mixing, even if diluted in water.

924-4.3 Performance Requirements: Liquid SRAs must reduce drying shrinkage a minimum of 80% during the first 28 days and 50% thereafter. The SRA is to be free of chlorides and must not initiate or contribute to the corrosion of steel reinforcement. The SRA must be compatible with the batch sequencing and other admixtures contained within the mix design.

The proportions of any air-entraining admixtures and water must be adjusted in accordance with the SRA manufacturer's recommendations. Use the dosage rate of SRA recommended by the manufacturer to optimize the effect of the SRA. At seven days, the compressive strength of concrete mixture containing SRA and adjustments to other admixtures and water shall be at least 90% of the seven day strength of the same concrete without the SRA and adjustments to other admixtures and water.

924-4.4 Performance Testing: Test concrete containing SRA in accordance with ASTM C157 before use and as conditions and materials change in order to optimize dosage rates and batch sequence to assure concrete performance. The Engineer may call for a performance test (either prior to or at any time during construction) for determining the effect of the SRA on the performance of the concrete. In general, this check-test will be required only when there is indication that such admixture is giving erratic results or is unduly reducing the strength of the concrete. Testing shall be in accordance in accordance with Section 346.

The following new ARTICLE is added after Article 924-4:

924-5 Retesting.

924-5.1 General: The approved admixtures are required to be tested for their uniformity and equivalence whenever there is an indication of erratic results. The tests shall be performed in accordance with the following procedure. The admixture shall be checked for comparison between infrared spectrophotometry, pH value, specific gravity, and solids content.

924-5.2 Admixtures other than Shrinkage Reducing: Any marked variation from the original curve, pH value, specific gravity, or solids content will be considered sufficient evidence that the chemistry of the original material has been changed and, therefore, the use of this material will be rejected and the material will be removed from the APL.

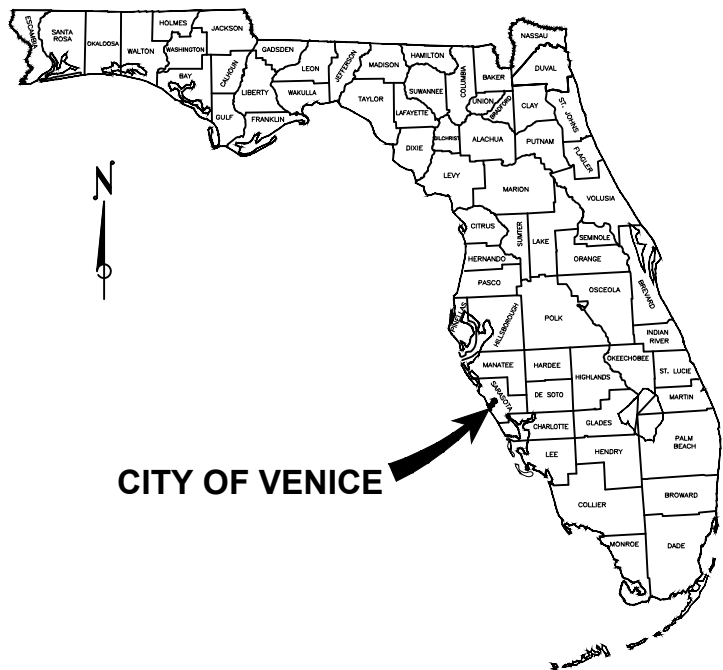
924-5.3 SRA: Any marked variation from the original curve, pH value, specific gravity, or solids content will be considered sufficient evidence that the chemistry of the original material has been changed and, therefore, the use of this material will be rejected.

**THIS COMPLETES
THIS
SPECIFICATIONS
PACKAGE**

CONTRACT PLANS FOR

CITY OF VENICE
CAPRI ISLES
BRIDGE REPLACEMENT

CONTRACT PLANS COMPONENTS
UTILITY PLANS



CITY PROJECT #: GO17R4
FDOT FPN #: 443413-1-54-01

CITY of VENICE
ENGINEERING DEPARTMENT
401 WEST VENICE AVENUE
Venice, Florida 34285
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MAYOR AND CITY COUNCIL

JOHN HOLIC MAYOR
RICHARD CAUTERO VICE MAYOR
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MITZIE FIEDLER COUNCIL MEMBER
JEANETTE GATES COUNCIL MEMBER
CHUCK NEWSOM COUNCIL MEMBER
HELEN MOORE COUNCIL MEMBER

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B1-1 - B1-24	STRUCTURES PLANS
TP-1	TOPOGRAPHIC SURVEY

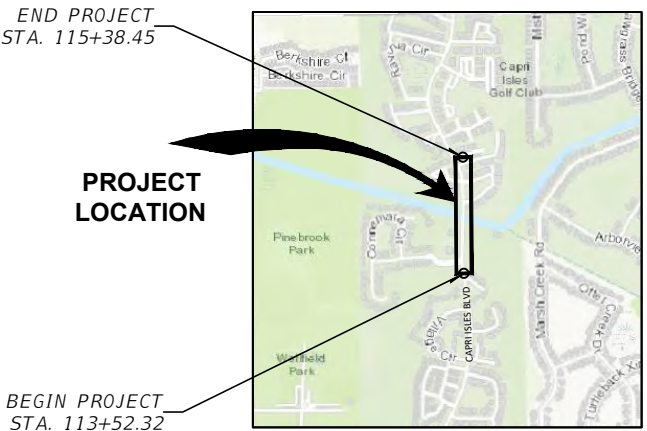
FINAL PLANS
SEPTEMBER 2019

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2019-20 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).
Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2019 Standard Specifications for Road and Bridge Construction at the following website:
<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>



LOCATION MAP

PREPARED BY:

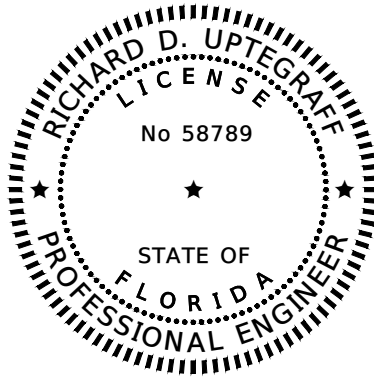
ATKINS
PRINCIPAL ADDRESS:
4030 W. BOY SCOUT BLVD.
SUITE 700
TAMPA, FL. 33607-1712
FBPR CERT. OF AUTH. No. 24



PROFESSIONAL ENGINEER
RICHARD UPTGRAFF
LICENSE # 58789
PHONE: 813-282-7275

DATE

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:



ON THE DATE ADJACENT TO THE SEAL.

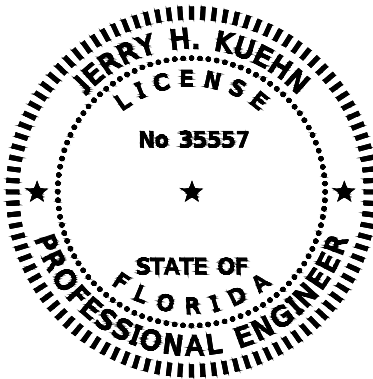
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ATKINS NORTH AMERICA, INC.
4030 WEST BOY SCOUT BLVD. STE. 700
TAMPA, FLORIDA 33607
CERTIFICATE OF AUTHORIZATION: 24
RICHARD D. UPTEGRAFF, P.E. NO. 58789

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE
FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
1	KEY SHEET
2	SIGNATURE SHEET
3-5	TYPICAL SECTIONS
6	GENERAL NOTES
7	PLAN PROFILE
8	CROSS SECTIONS
9-10	STORMWATER POLLUTION PREVENTION PLAN
11-13	TRAFFIC CONTROL PLAN
B1-4	BRIDGE HYDRAULIC RECOMMENDATION SHEET

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:



ON THE DATE ADJACENT TO THE SEAL.

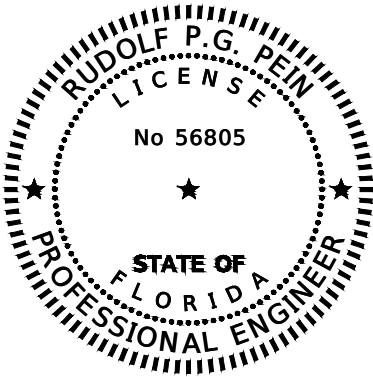
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ARDAMAN & ASSOCIATES, INC.
78 SARASOTA CENTER BOULEVARD
SARASOTA, FL 34240
CERTIFICATE OF AUTHORIZATION: 5950
JERRY H. KUEHN, P.E. NO. 35557

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE
FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
B1-5	SOIL BORING LOGS

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:



ON THE DATE ADJACENT TO THE SEAL.

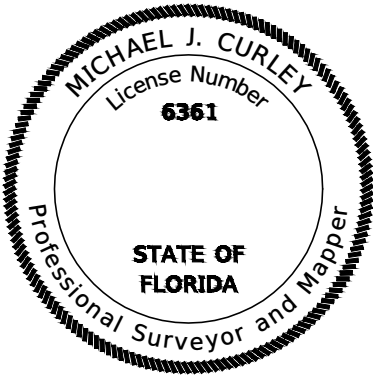
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AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

ATKINS NORTH AMERICA, INC.
4030 WEST BOY SCOUT BLVD. STE. 700
TAMPA, FLORIDA 33607
CERTIFICATE OF AUTHORIZATION: 24
RUDOLF P.G. PEIN, P.E. NO. 56805

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE
FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
B1-1 - B1-3	STRUCTURES PLANS
B1-6 - B1-24	STRUCTURES PLANS

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:



ON THE DATE ADJACENT TO THE SEAL.

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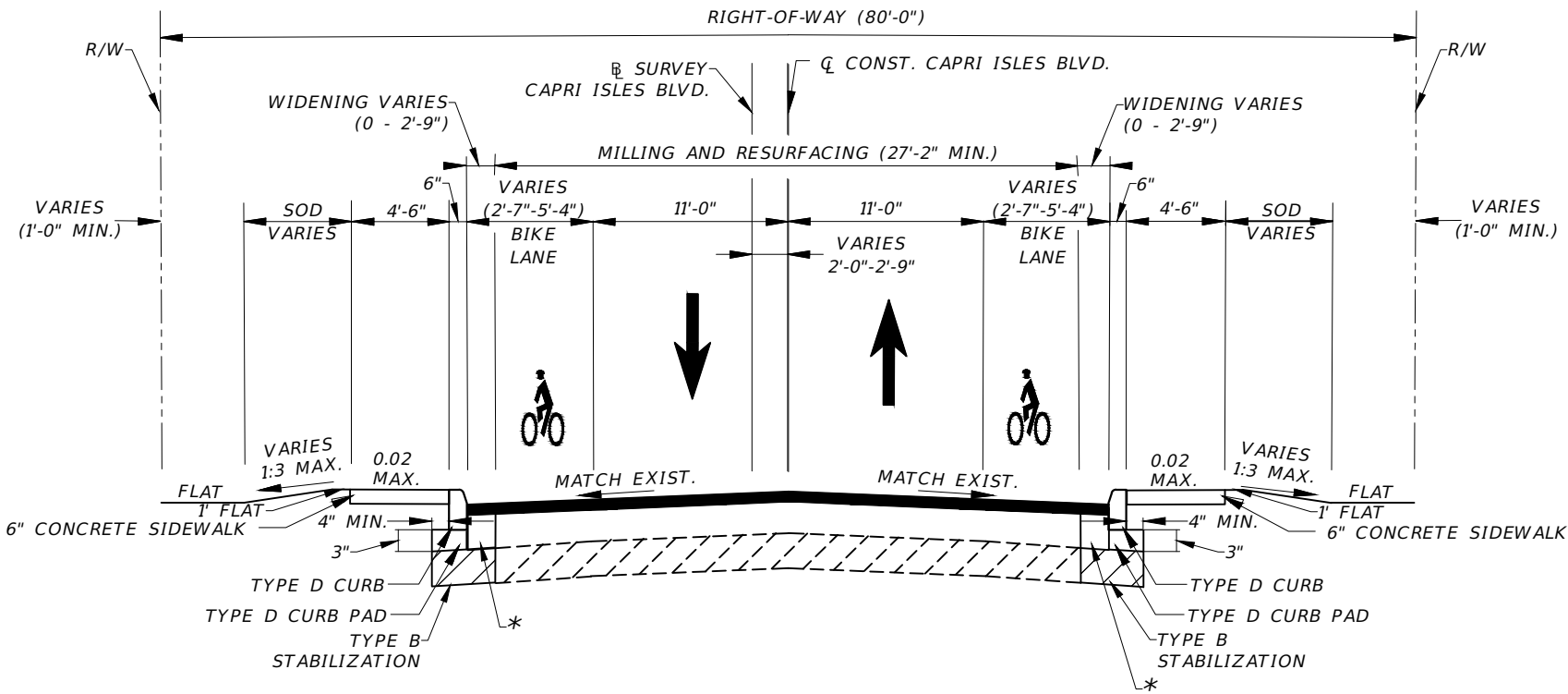
GEORGE F. YOUNG, INC.
299 DR. MARTIN LUTHER KING JR. ST. N.
ST. PETERSBURG, FLORIDA 33701
CERTIFICATE OF AUTHORIZATION: LB21
MICHAEL J. CURLEY, PSM 6361

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE
FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
TP-1	TOPOGRAPHIC SURVEY

				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: SIGNATURE SHEET	APPROVED BY:  _____ DATE _____ RICHARD UPTEGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/12/2019 PROJECT NO.: G017R4 SHEET: 2
REV. NO.	DATE	DESCRIPTION		CHECKED _____						

C:\pw\work\atknaf\01\m\k6278\dms52017\02-04 Typical Sections.dwg, Jul 25, 2019 - 8:22pm



TYPICAL SECTION (N.T.S)
CAPRI ISLES BOULEVARD
(STA. 113+52.32 TO STA. 113+82.67)

DESIGN SPEED = 20 MPH
POSTED SPEED = 20 MPH

EXISTING TRAVEL LANES
MILL EXISTING ASPHALT PAVEMENT (3" DEPTH)
TYPE SP STRUCTURAL COURSE SP - 12.5 (2") AND
FRICTION COURSE FC - 9.5 (1")

SIGNING AND PAVEMENT MARKING NOTES:

1. SIGNING AND PAVEMENT MARKINGS ARE TO BE REPLACED IN KIND TO MATCH EXISTING.

NOTE:

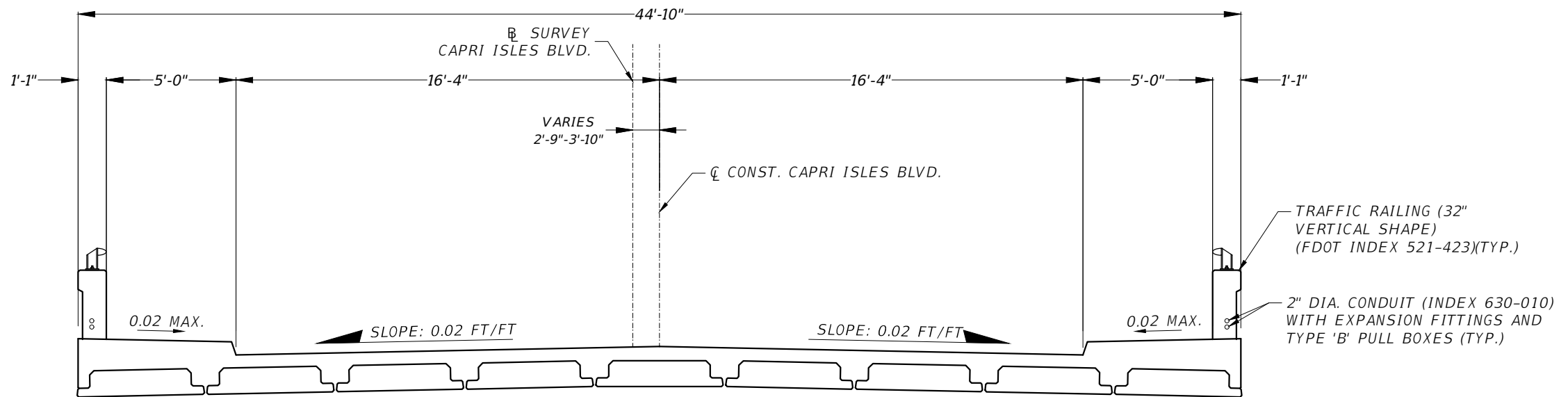
* CONTRACTOR TO USE ASPHALT BASE COURSE AT OWN COST.

WIDENING
CRUSHED CONCRETE AGGREGATE (10")
TYPE SP STRUCTURAL COURSE SP - 12.5 (2.5")
FRICTION COURSE FC - 9.5 (1")

DESIGNED	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
DRAWN			FPID 443413-1-54-01	TYPICAL ROADWAY SECTION		7/25/2019
CHECKED			CITY OF VENICE		FLA. REG. NO 58789	PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION			ATKINS NORTH AMERICA (FBPR CA No.24)	SHEET: 3
					4030 WEST BOY SCOUT BOULEVARD, SUITE 700	
					TAMPA, FL 33607-1712	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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TYPICAL BRIDGE SECTION (N.T.S)
CAPRI ISLES BOULEVARD
(STA. 113+82.67 TO STA. 115+08.33)

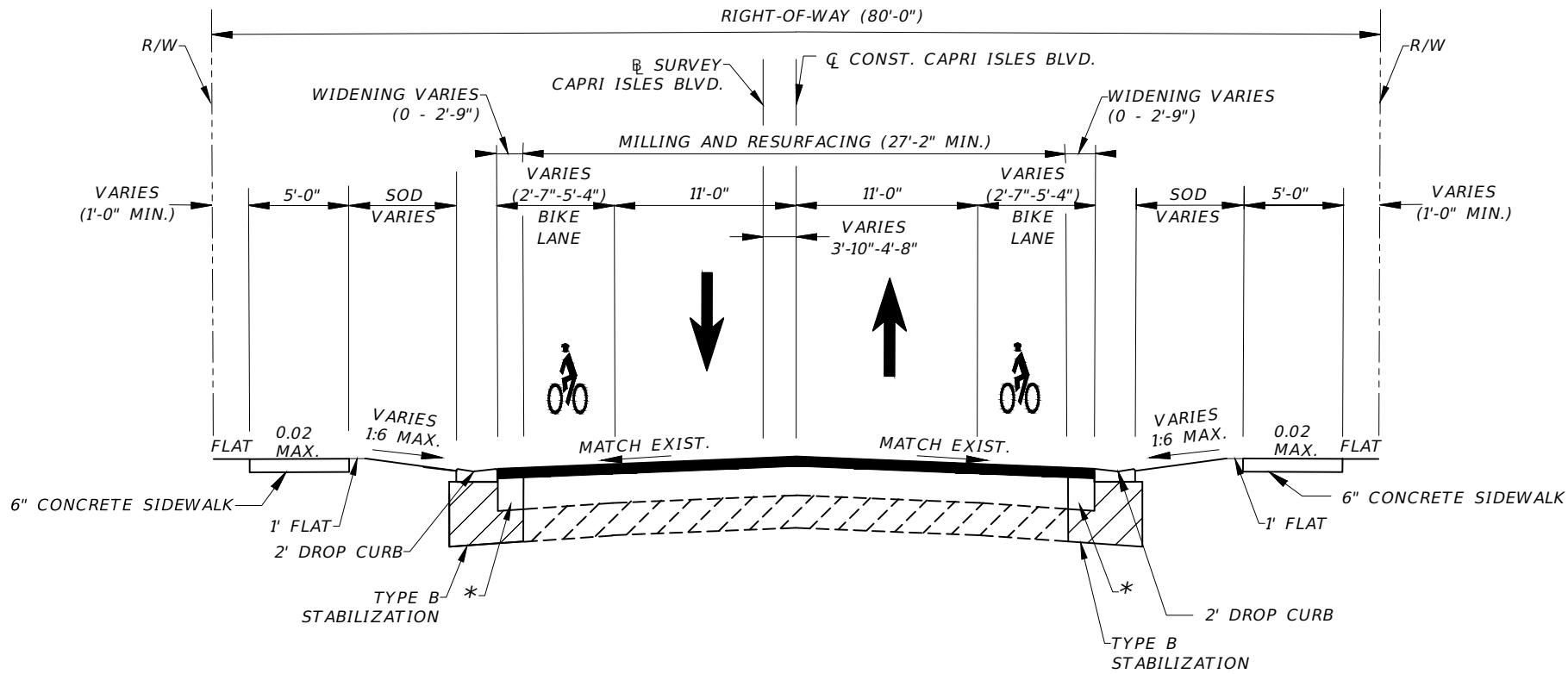
DESIGN SPEED = 20 MPH
POSTED SPEED = 20 MPH

SIGNING AND PAVEMENT MARKING NOTES:

1. SIGNING AND PAVEMENT MARKINGS ARE TO BE REPLACED IN KIND TO MATCH EXISTING.

				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: TYPICAL BRIDGE SECTION	APPROVED BY: _____ RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE 7/25/2019
REV. NO.	DATE	DESCRIPTION		DRAWN _____						PROJECT NO.: G017R4
				CHECKED _____						SHEET: 4

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TYPICAL SECTION (N.T.S)
CAPRI ISLES BOULEVARD
(STA. 115+08.33 TO STA. 115+38.45)

DESIGN SPEED = 20 MPH
POSTED SPEED = 20 MPH

SIGNING AND PAVEMENT MARKING NOTES:

1. SIGNING AND PAVEMENT MARKINGS ARE TO BE REPLACED IN KIND TO MATCH EXISTING.

NOTE:

* CONTRACTOR TO USE ASPHALT BASE COURSE AT OWN COST.

EXISTING TRAVEL LANES
MILL EXISTING ASPHALT PAVEMENT (3" DEPTH)
TYPE SP STRUCTURAL COURSE SP - 12.5 (2") AND
FRICTION COURSE FC - 9.5 (1")

WIDENING
CRUSHED CONCRETE AGGREGATE (10")
TYPE SP STRUCTURAL COURSE SP - 12.5 (2.5")
FRICTION COURSE FC - 9.5 (1")

				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: TYPICAL ROADWAY SECTION	APPROVED BY: RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE 7/25/2019
REV. NO.	DATE	DESCRIPTION		DRAWN _____						PROJECT NO.: G017R4
				CHECKED _____						SHEET: 5

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

C:\pwwork\atknaf\01\mik\6278\dms52017\05 General Notes.dwg, Jul 25, 2019 - 10:51am

1. GOVERNING SPECIFICATIONS AND STANDARDS:

i. CONTRACT DOCUMENTS AND TECHNICAL SPECIAL PROVISIONS PREPARED SPECIFICALLY FOR THIS PROJECT.

ii. FLORIDA DEPARTMENT OF TRANSPORTATION “STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION” DATED JULY 2019 AND SUPPLEMENTS THERETO.

iii. FLORIDA DEPARTMENT OF TRANSPORTATION “STANDARD PLANS eBook FY 2019-20”

iv. CITY OF VENICE STANDARD DETAILS C.S.D.D15
2. ALL STATIONS AND OFFSETS REFER TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED. ALL ROADWAY DIMENSIONS ARE MEASURED FROM EDGE OF PAVEMENT.
3. PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO MEET THE REQUIREMENTS OF THE "TRENCH SAFETY ACT" (FLA. STATUTES, CH. 553, PART IV) AND TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. THE COST FOR ALL SHEETING, SHORING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICES FOR APPLICABLE PAY ITEMS IN THE CONTRACT.
4. THE CONSTRUCTION LIMITS INDICATED IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
5. ALL AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE SODDED WITHIN THREE DAYS AFTER FINAL GRADING.
6. NO ASPHALT SURFACING SHALL BE APPLIED TO ANY MANHOLE COVERS, FRAMES, VALVE BOXES, GAS DROPS, ETC. ALL EXISTING AND PROPOSED UTILITY AND STORM SEWER STRUCTURES WITH TOPS THAT WOULD BE EXPOSED WITHIN ANY PAVED AREA SHALL BE ADJUSTED SO THAT THE TOP SURFACE OF COVERS OR FRAMES SHALL BE FLUSH WITH THE PAVEMENT SURFACE.
7. EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE NOTED ON THE PLANS.
8. PERFORM THE COMPLETE SURVEY STAKEOUT OF THE PROJECT (I.E. LINE, GRADE, SLOPE STAKE, UTILITY RELOCATIONS OR ANY OTHER STAKEOUT REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS). ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS. NO SEPARATE STAND-ALONE PAY ITEM IS INCLUDED FOR THIS WORK.
9. A LIMITED GEOTECHNICAL INVESTIGATION WAS PERFORMED. REFER TO REPORT DATED 3/04/19 BY ARDAMAN & ASSOCIATES, INC. FOR PAVEMENT CORES, SUBSURFACE SOIL CONDITIONS ALONG THE ROADWAYS.
10. ANY EXISTING PAVEMENT THAT IS TO BE REMOVED MUST BE SAW-CUT PRIOR TO REMOVAL. WHERE CONNECTIONS TO EXISTING WALKS AND DRIVES ARE NOT INDICATED ON THE PLANS, PROPER CONNECTIONS SHALL BE MADE AT THE DIRECTION OF THE ENGINEER.
11. THE TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THE PLANS WAS PERFORMED BY MICHAEL J. CURLEY, PSM #6361 IN SURVEY DATED 1/14/19 FOR THE CITY OF VENICE. GEORGE F. YOUNG, INC. TELEPHONE (727) 822-4317.
12. THE ELEVATIONS SHOWN ON THESE PLANS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
13. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE APPROXIMATE AND ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME THESE DRAWINGS WERE PREPARED, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE UNDERGROUND UTILITIES HAVE NOT BEEN POSITIVELY LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT SIZE, LOCATION, DEPTH, HEIGHT, ELEVATION, DIMENSION, AND EXTENT OF ALL UNDERGROUND AND OVERHEAD FACILITIES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO PROCEEDING WITH ANY CONSTRUCTION ACTIVITY THAT MAY AFFECT SUCH FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS.

14. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN THE CONTRACTOR AND ALL UTILITY AGENCIES.

a. NOTE: THIS INCLUDES MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTOR’S CONSTRUCTION SCHEDULE.

b. WEEKLY COORDINATION IS REQUIRED BETWEEN CONTRACTOR AND UTILITY AGENCIES.
15. EXCEPT WHERE THE PLANS AND SPECIFICATIONS PROVIDE THAT SUCH WORK SHALL BE PERFORMED UNDER THE CONTRACT FOR THIS PROJECT, ALL UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE REMOVED, RELOCATED OR ADJUSTED BY THEIR OWNERS, AT THEIR EXPENSE. THE CONTRACTOR SHALL ARRANGE HIS SCHEDULE TO ALLOW UTILITY OWNERS TIME FOR THE NECESSARY RELOCATION AND ADJUSTMENT OF UTILITIES AND RELATED STRUCTURES. THE FOLLOWING UTILITIES MAY HAVE LINES AND FACILITIES WITHIN THE PROJECT AREA.

a. FRONTIER COMMUNICATIONS

Denise Hutton

941-906-6722 c

b. COMCAST CABLE COMMUNICATIONS

Steve Hoffman

941-809-6637 c

c. FPL DISTRIBUTION

Greg Coker

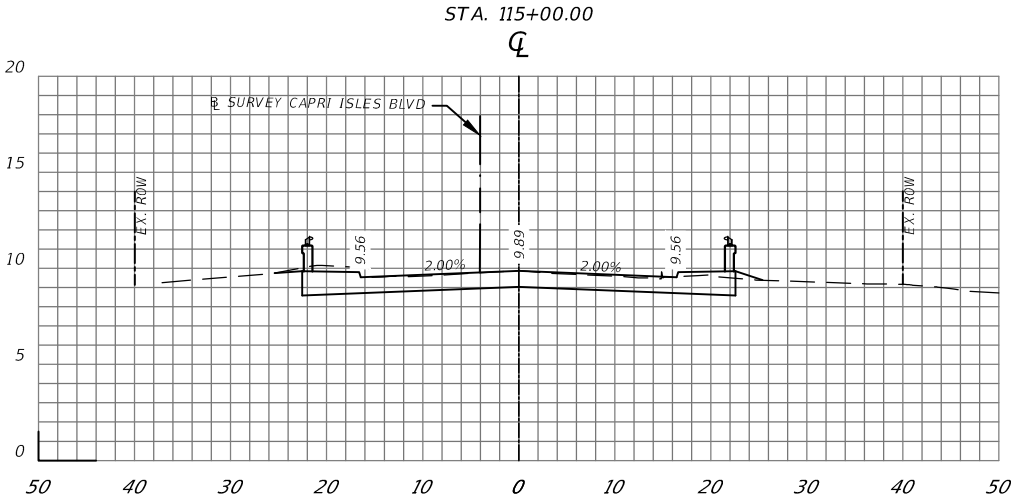
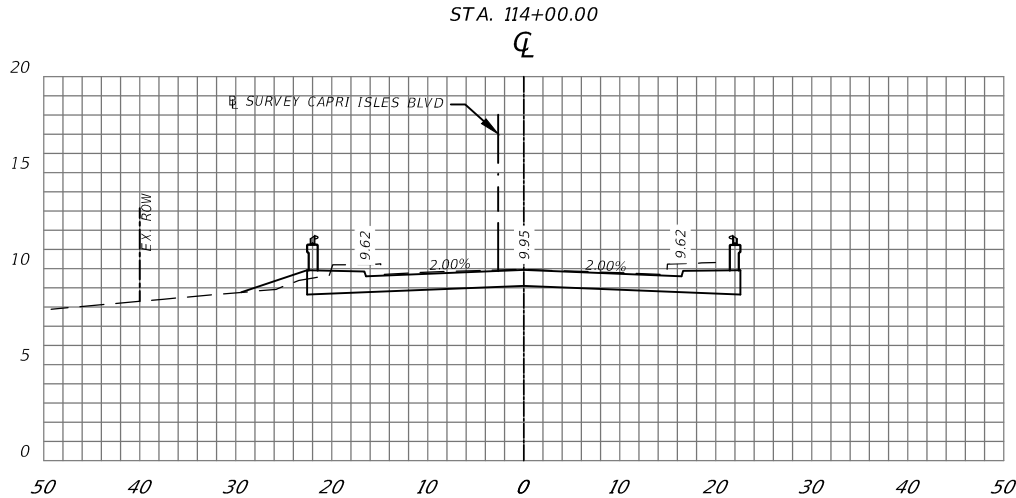
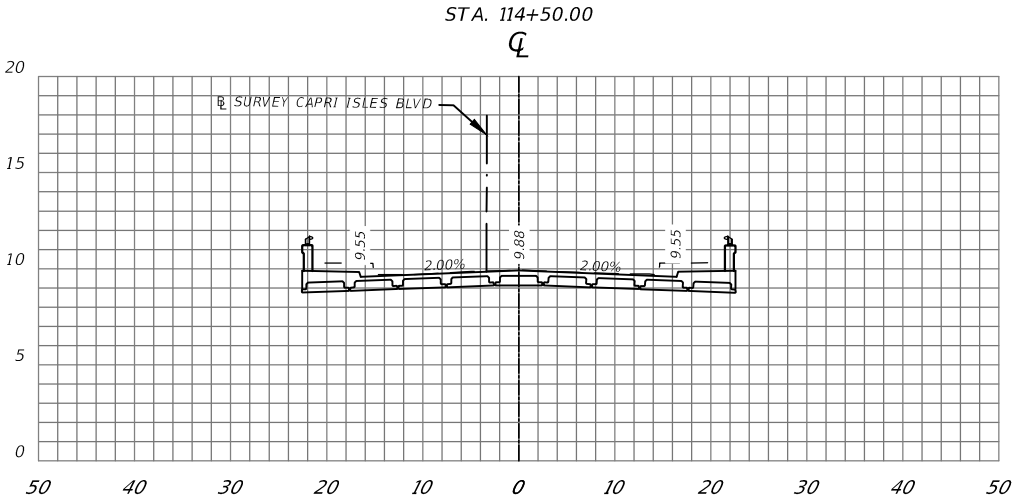
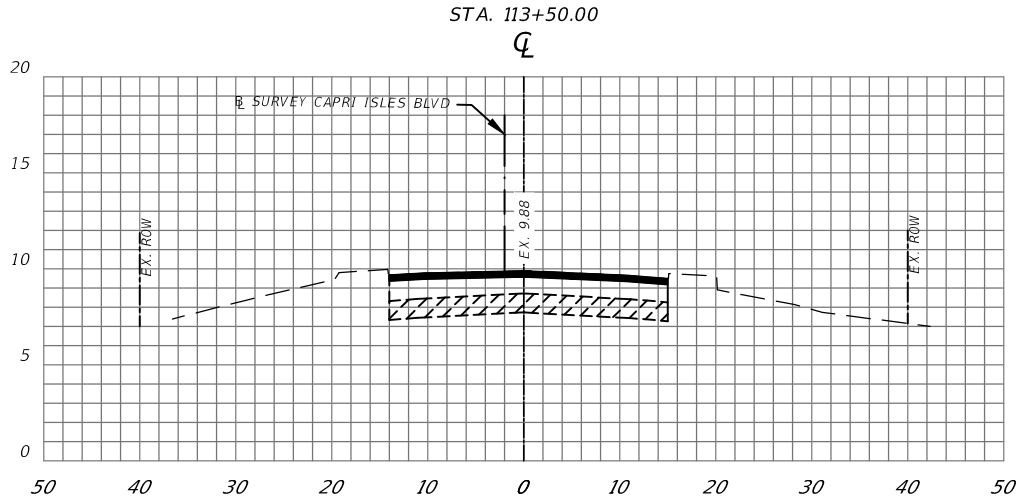
941-704-9087 c
16. CALL SUNSHINE 811 AT (800) 432-4770 OR 811 2 FULL BUSINESS DAYS IN ADVANCE FOR NORMAL UTILITY LOCATES AND 10 FULL BUSINESS DAYS FOR UNDERWATER TICKETS. ALL UTILITY OWNERS MAY NOT BE A MEMBER AND MAY REQUIRE DIRECT CONTACT. THE CONTRACTOR IS RESPONSIBLE TO FURTHER COORDINATE WITH THE UTILITY OWNERS TO RESOLVE CONFLICTS THAT MAY ARISE IN THE FIELD DURING CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO CALL “SUNSHINE 811” AND THE UTILITY OWNERS AND TO PRESERVE/PROTECT USING STANDARD CARE MEASURES.
17. CONTAMINATION NOTE – COORDINATE ALL DEWATERING ACTIVITIES THROUGH THE CITY OF VENICE. THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) MUST REVIEW ANY DEWATERING PLANS AND MAY REQUIRE ADDITIONAL PERMITTING AND THE IMPLEMENTATION OF EFFLUENT TREATMENT ACTIVITIES DUE TO THREE (3) PETROLEUM-CONTAMINATED FACILITIES LOCATED WITHIN FIVE-HUNDRED FEET (500') OF THE EASTERN PROJECT LIMITS. THE COORDINATION AND PREPARATION OF DEWATERING PLANS IS INCLUDED WORK UNDER THIS CONTRACT. PAYMENT WOULD BE INCLUDED UNDER THE VARIOUS ITEMS PAY ITEMS IN THE CONTRACT. THERE IS NO SEPARATE STAND-ALONE PAY ITEM FOR THIS WORK.
18. FOR STORM PIPES, UTILIZE CLASS III FOR ROUND CONCRETE PIPES AND CLASS HE-III FOR ELLIPTICAL CONCRETE PIPES.

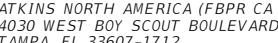
				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: GENERAL NOTES	APPROVED BY:  DATE _____	DATE: 7/25/2019 PROJECT NO.: G017R4 SHEET: 6
REV. NO.	DATE	DESCRIPTION		DRAWN _____						
				CHECKED _____						

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NOTE: BRIDGE CROSS SECTION AT STA. 114+50.00
IS FOR INFORMATIONAL PURPOSES ONLY.

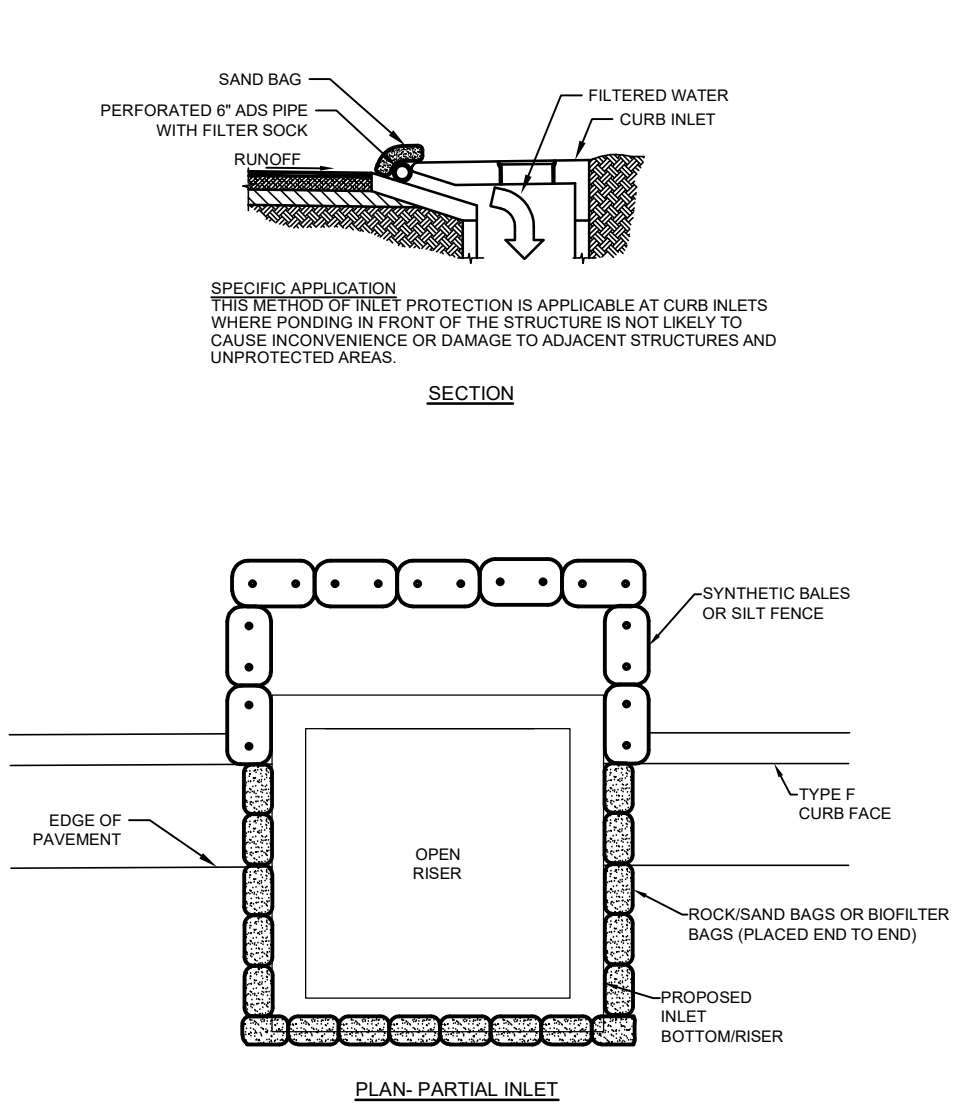


				DESIGNED	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
				DRAWN			FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	CROSS SECTIONS		7/27/2019
				CHECKED						PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION								SHEET: 8

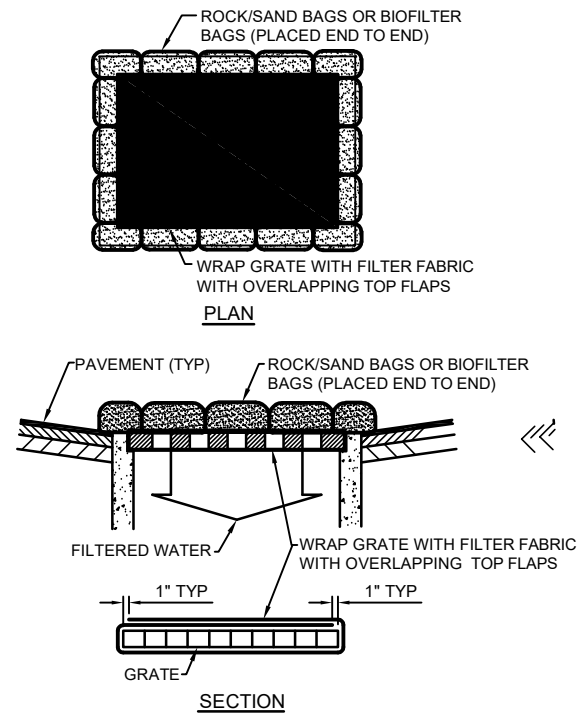
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

DESIGNED _____	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
DRAWN _____			FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	RICHARD UPTGRAFF, P.E. _____ DATE _____	PROJECT _____
CHECKED _____					FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	SHEET _____

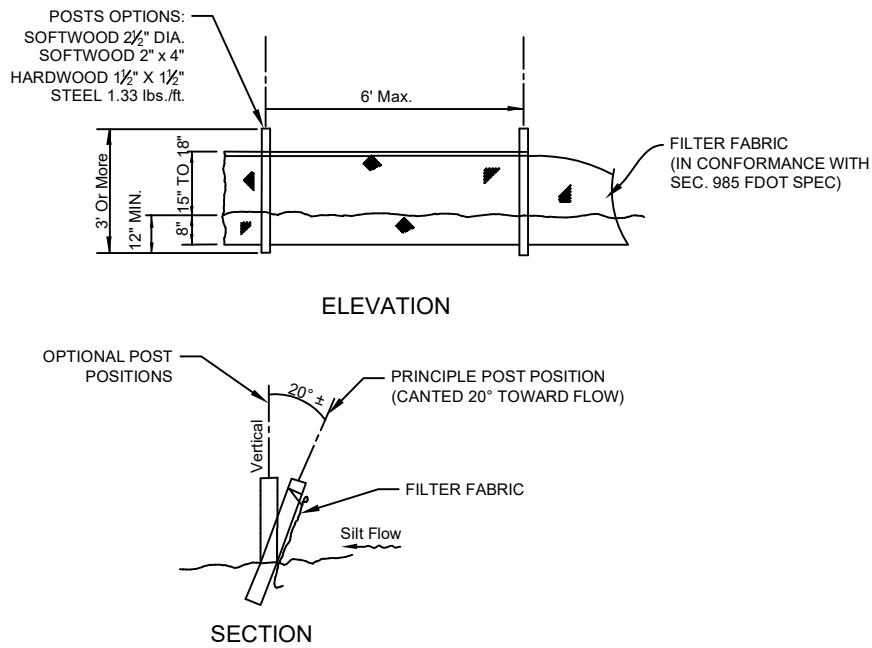
C:\pw_work\aknaf\01\mik\6278\dm51919\Erosion and Sediment Control.dwg, Jul 25, 2019 - 8:28pm



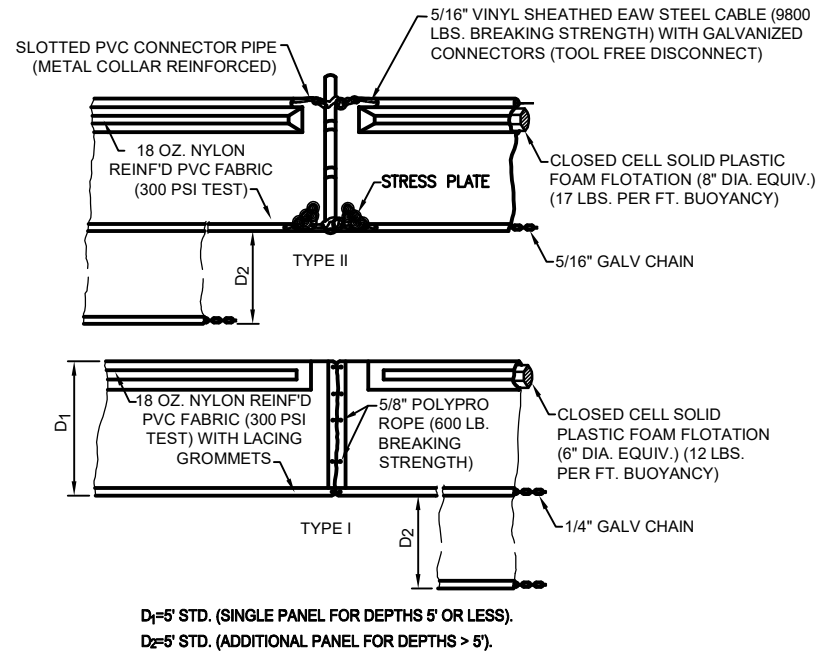
CURB INLET FILTER DETAIL
SCALE: NTS



INLET SEDIMENT FILTER DETAIL
SCALE: NTS



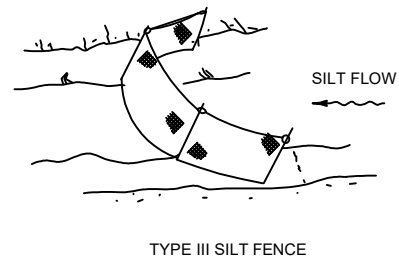
SILT FENCE TYPE III
SCALE: NTS



CURTAIN TO REACH BOTTOM UP TO DEPTHS OF TEN FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN TEN FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIER
SCALE: NTS



DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

SILT FENCE APPLICATIONS
SCALE: NTS

				DESIGNED	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
				DRAWN	Venice, FL	ATKINS	FPID 443413-1-54-01	STORMWATER POLLUTION	RICHARD UPTGRAFF, P.E.	7/25/2019
				CHECKED	City on the Gulf		CITY OF VENICE	PREVENTION PLAN (SWPPP)	FLA. REG. NO 58789	PROJECT NO.:
REV. NO.	DATE	DESCRIPTION					CAPRI ISLES BRIDGE		ATKINS NORTH AMERICA (FBPR CA No.24)	G017R4
							REPLACEMENT		4030 WEST BOY SCOUT BOULEVARD, SUITE 700	SHEET:
									TAMPA, FL 33607-1712	10

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1.

MAINTAIN TRAFFIC IN COMPLIANCE WITH THE FOLLOWING DOCUMENTS:

a.

FHWA 2009 EDITION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)

b.

FLORIDA DEPARTMENT OF TRANSPORTATION "FY 2019-20 DESIGN STANDARD PLANS" (FDOT STANDARD INDEXES) FOR CONSTRUCTION AND MAINTENANCE OPERATIONS ON THE STATE HIGHWAY SYSTEM

c.

SECTION 102 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, JULY 2019 EDITION
2.

MAINTAIN SAFE PEDESTRIAN ACCESS TO EXISTING SIDEWALKS UTILIZING FDOT STANDARD PLANS 102-660. SIDEWALK ACCESS IS TO BE MAINTAINED ALONG ONE SIDE (MINIMUM) OF EACH STREET THROUGHOUT CONSTRUCTION UNLESS A PEDESTRIAN DETOUR IS PROVIDED.
3.

USE FDOT DESIGN STANDARD PLANS 102-600, 102-603, AND THE MUTCD FOR TRAVEL LANE CONSTRUCTION.
4.

EXISTING REGULATORY AND WARNING SIGNS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5.

THE EXISTING REGULATORY SPEEDS SHALL BE MAINTAINED FOR THE WORK ZONE SPEEDS.
6.

THE MINIMUM LANE WIDTH FOR TEMPORARY LANES DURING CONSTRUCTION IS 10 FEET UNLESS OTHERWISE SHOWN ON THE PLANS.
7.

PROVIDE TWO-WAY ACCESS (INGRESS/EGRESS) TO ALL EXISTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION. STAGE CONSTRUCTION MAY BE REQUIRED.
8.

MAINTAIN ALL DRIVEWAY AND PARKING LOT ACCESS AT ALL TIMES. IF A DRIVEWAY CLOSURE CANNOT BE ACCOMPLISHED WITH OWNER APPROVAL, AN ALTERNATIVE ACCESS MUST BE PROVIDED AND MAINTAINED AT ALL TIMES. SIDE ROAD ACCESS SHALL BE COORDINATED WITH SIDE ROAD CONSTRUCTION.
9.

RESTORE SAFE ROADSIDE CONDITIONS AT THE END OF EACH WORK PERIOD IN ACCORDANCE WITH FDOT STANDARD PLANS 102-600 (ALL DROP-OFF CONDITIONS SHALL BE ADDRESSED).
10.

ONLY UTILIZE PROPOSED TEMPORARY BARRIER WALL THAT ARE LISTED ON THE CURRENT FDOT APPROVED PRODUCTS LIST (APL). THIS LIST CAN BE FOUND AT <https://fdotwp1.dot.state.fl.us/ApprovedProductList/ProductTypes/Index/100>. CONTRACTOR SHALL COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS SHOWN ON THE FDOT APPROVED DRAWINGS.
11.

ANY CONFLICTING EXISTING PAVEMENT MARKINGS AND SIGNS OUTSIDE THE CONSTRUCTION AREA SHALL BE REMOVED. THE COST FOR REMOVING, RESTORING OR REPLACING THESE MARKINGS AND SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1 MAINTENANCE OF TRAFFIC (LS).
12.

ALL TRAFFIC CONTROL DEVICES NECESSARY FOR ANY ACTIVITY SHALL BE PLACED BEFORE REDIRECTING TRAFFIC.
13.

TO MINIMIZE DISRUPTIONS TO LOCAL RESIDENTS, WORK SHALL BE PERFORMED FROM 8:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY TRAFFIC CONTROL PHASING NOTES

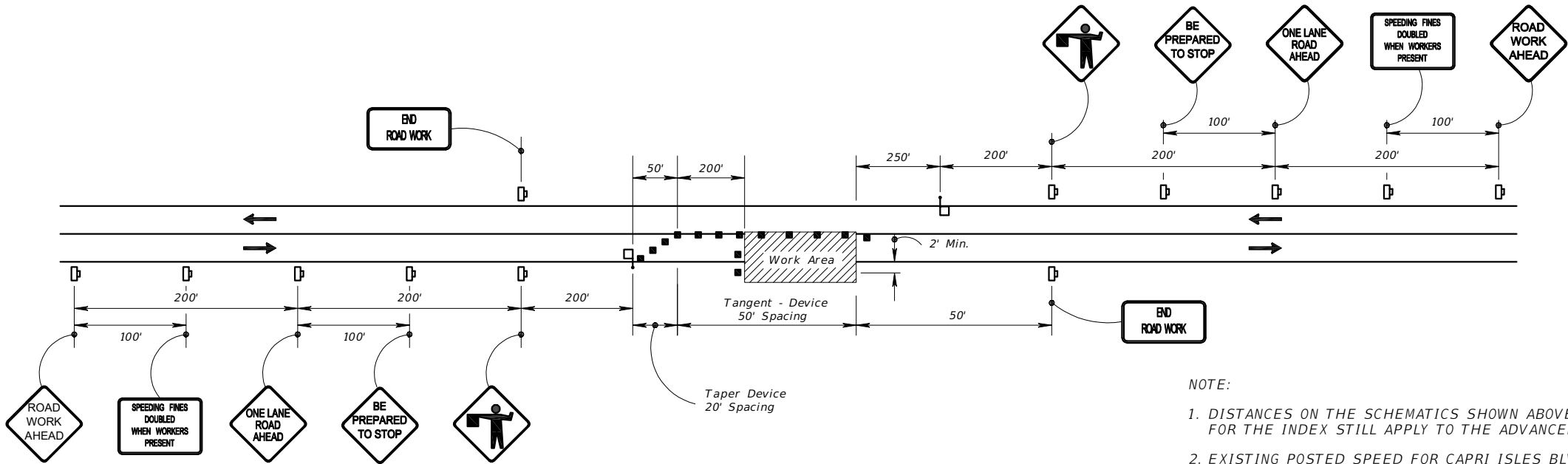
1.

CLOSE THE ROADWAY AND SIDEWALKS AS SHOWN ON THE DETOUR SHEETS.
2.

CONSTRUCT THE PROPOSED BRIDGE AND ROADWAY PAVEMENT AS SHOWN IN THE PLANS, SO THAT THE ROADWAY CAN BE REOPENED.
3.

UTILIZE SINGLE LANE CLOSURES TO COMPLETE ANY REMAINING CONSTRUCTION ACTIVITIES AND REOPEN SIDEWALKS TO PEDESTRIANS.

ADVANCED WARNING SCHEMATIC FOR FDOT DESIGN STANDARD PLANS 102-603
(WITH DISTANCES PER PROJECT POSTED SPEEDS)



- NOTE:
1.

DISTANCES ON THE SCHEMATICS SHOWN ABOVE ARE MINIMUMS, AND CONDITIONAL NOTES FOR THE INDEX STILL APPLY TO THE ADVANCED SIGNING.
2.

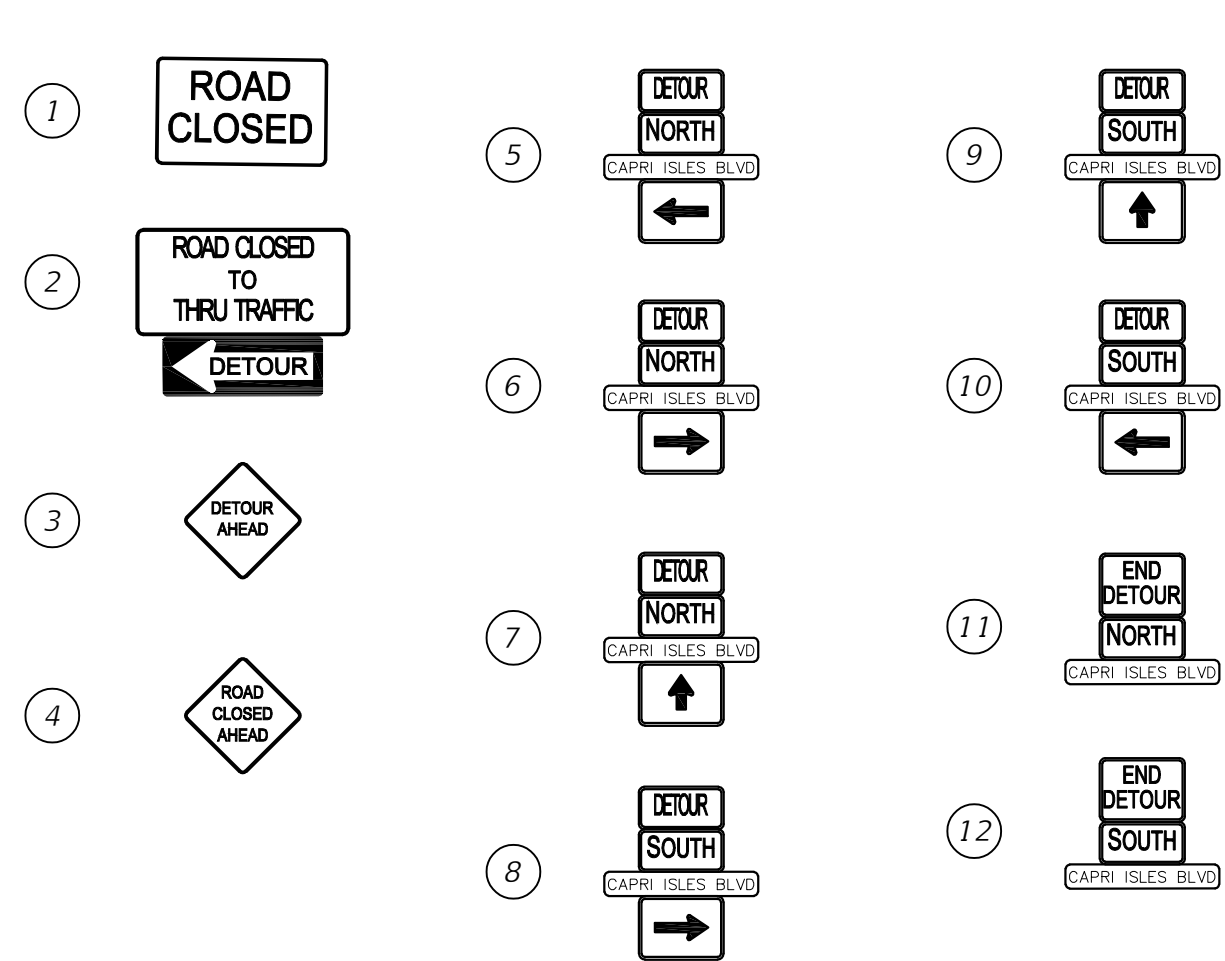
EXISTING POSTED SPEED FOR CAPRI ISLES BLVD IS 30 MPH APPROACHING THE BRIDGE AND 20 MPH OVER THE BRIDGE. VALUES SHOWN ABOVE ARE BASED ON 30 MPH.

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				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: TRAFFIC CONTROL PLAN	APPROVED BY: RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 7/25/2019
REV. NO.	DATE	DESCRIPTION		DRAWN _____						PROJECT NO.: G017R4
				CHECKED _____						SHEET: 11

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

CAPRI ISLES BLVD. DETOUR



PCMS MESSAGES

14 DAYS PRIOR TO DETOUR;

A MESSAGE 1:
BRIDGE
CLOSED
(DATE)

B MESSAGE 1:
CPRI ISL
CLOSED
(DATE)

DURING DETOUR;

C MESSAGE 1:
BRIDGE
CLOSED

MESSAGE 2:
DETOUR
(NORTH/SOUTH)

D MESSAGE 1:
CPRI ISL
BRIDGE
CLOSED

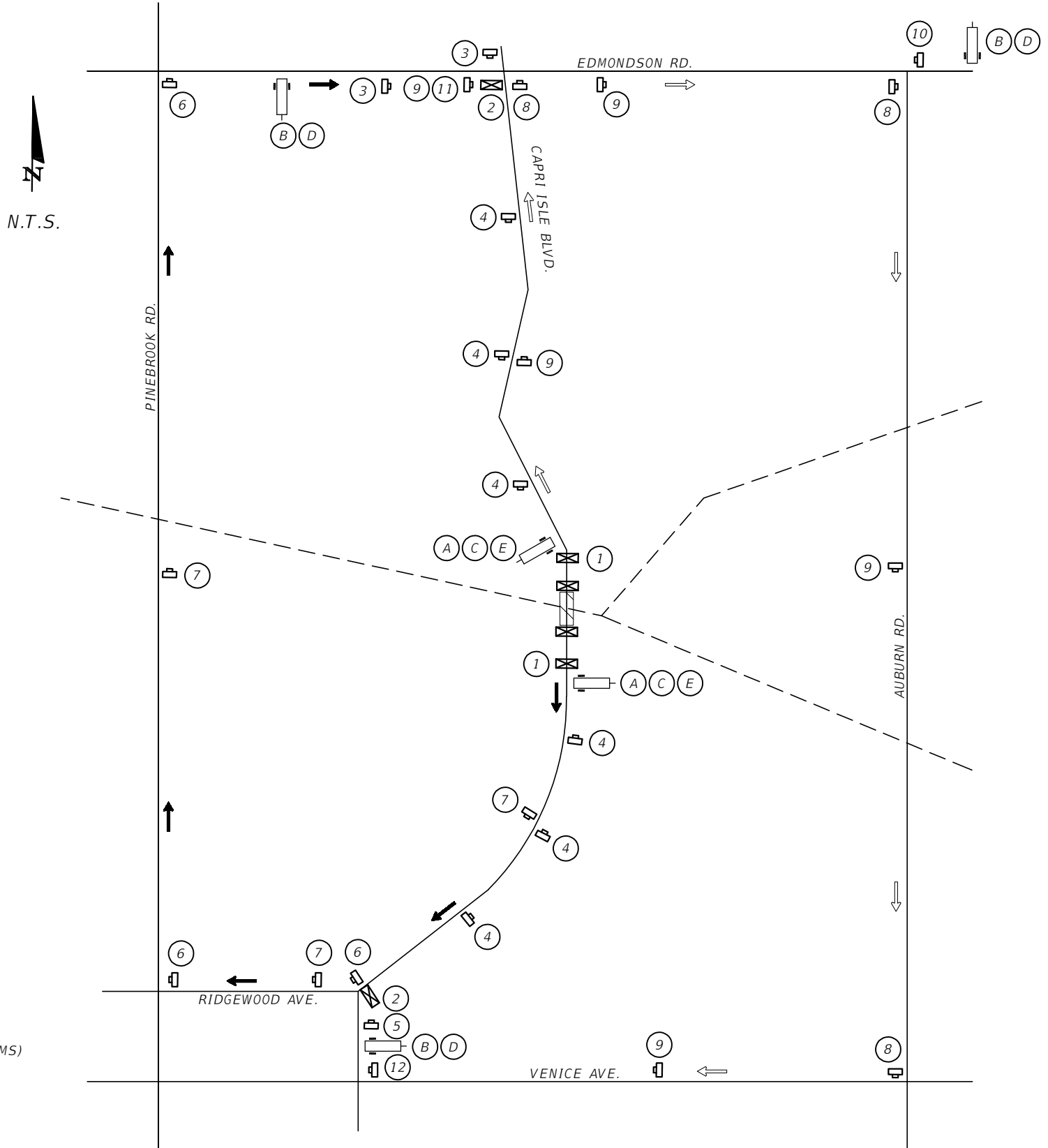
MESSAGE 2:
DETOUR
(NORTH/SOUTH)

14 DAYS PRIOR TO CONSTRUCTION (IF DIFFERENT THAN
DETOUR DATE);

E MESSAGE 1:
CONST
BEGINS
(DATE)

LEGEND

- WORK ZONE SIGN
- TYPE III BARRICADE
- SOUTH DETOUR TRAFFIC DIRECTION
- NORTH DETOUR TRAFFIC DIRECTION
- ACTIVE WORK ZONE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)



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				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: TRAFFIC CONTROL PLAN	APPROVED BY: RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 7/25/2019
				DRAWN _____						PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION		CHECKED _____						SHEET: 12

CAPRI ISLES BLVD. PEDESTRIAN DETOUR

- 1

SIDEWALK
CLOSED
- 2

DETOUR
←
- 3

DETOUR
→
- 4

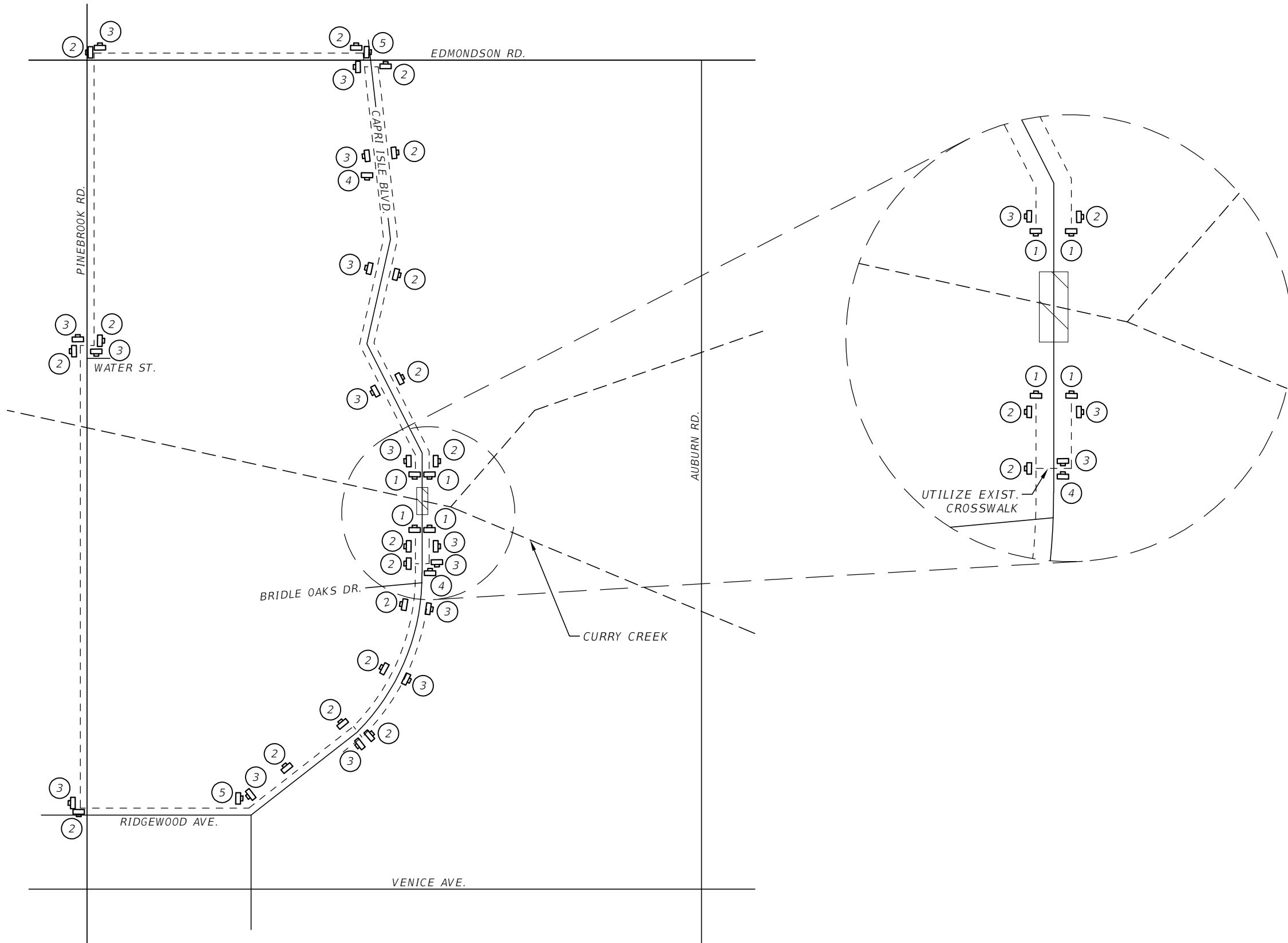
SIDEWALK CLOSED
AHEAD
←
CROSS HERE
- 5

END
DETOUR



LEGEND

- WORK ZONE SIGN
- ACTIVE WORK ZONE



NOTE: SIGNS MAY BE MOUNTED ON A PEDESTRIAN LINEAR CHANNELIZING DEVICE (LCD OR TYPE II BARRICADES). AT SIGN '1' LOCATIONS, THE LCD IS TO BE PLACED ACROSS THE SIDEWALK TO BLOCK ACCESS.

				DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: TRAFFIC CONTROL PLAN	APPROVED BY: _____ RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/4/2019
				DRAWN _____						PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION		CHECKED _____						SHEET: 13

T:\100060911 - Capri Isles\CADD\PW\B1General\Notes01.dwg, Sep 06, 2019 - 11:47am

CONSTRUCTION SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JULY 2019 EDITION) WITH SUPPLEMENTS THERETO.

DESIGN SPECIFICATIONS:
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION) FDOT STRUCTURES MANUAL (JANUARY 2019).

DESIGN LOADING:
DEAD LOADS:
UNIT WEIGHT OF REINFORCED CONCRETE (INCLUDING REINFORCEMENT)150 PCF
FUTURE WEARING SURFACE ALLOWANCE15 PSF
TRAFFIC RAILING (32" VERTICAL FACE)385 PLF
ALUMINUM PEDESTRIAN / BICYCLE BULLET RAILING10 PLF

LIVE LOADS:
HL-93 LOADING.

WIND LOADS:
WIND LOADS ARE IN ACCORDANCE WITH AASHTO, SECTION 3.8.1, AND WITH STRUCTURES DESIGN GUIDELINES SECTION 2.4.

SEISMIC LOADS:
THE MINIMUM BEARING SUPPORT LENGTH IS DETERMINED IN ACCORDANCE WITH AASHTO SECTION 4.7.4.4 REQUIREMENTS. NO SEISMIC FORCES ARE CONSIDERED FOR THIS BRIDGE, IN ACCORDANCE WITH SECTION 2.3 OF THE STRUCTURES DESIGN GUIDELINES.

TEMPERATURE EFFECTS:

STRUCTURAL MATERIAL	TEMPERATURE (° F)			
	MEAN	RISE FROM MEAN	FALL FROM MEAN	RANGE
CONCRETE	70	35	35	70

COEFFICIENT OF THERMAL EXPANSION: 0.000006 PER °F (LRFD 5.4.2.2)

DESIGN METHOD:
LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD) FOR ALL ELEMENTS, UNLESS OTHERWISE NOTED.

VERTICAL DATUM:
VERTICAL DATUM USED IS NAVD 88.

ENVIRONMENT:
SUPERSTRUCTURE: EXTREMELY AGGRESSIVE
SUBSTRUCTURE: EXTREMELY AGGRESSIVE

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (PSI)	LOCATION OF CONCRETE IN STRUCTURE
IV *	5500	TRAFFIC RAILINGS AND SIDEWALK
II (BRIDGE DECK)	4500	APPROACH SLABS
IV (BRIDGE DECK - C.I.P. TOPPING WITH SHRINKAGE REDUCING ADMIXTURE) *	5500	CAST-IN-PLACE CONCRETE TOPPING AND CONCRETE AT ENDS OF PRESTRESSED SLAB UNITS
IV *	5500	CAST-IN-PLACE SUBSTRUCTURE
VI *	8500	FLORIDA SLAB BEAMS
V (SPECIAL) *	6000	PRESTRESSED PILES

* WITH SILICA FUME, METAKAOLIN OR ULTRA FINE FLYASH

CONCRETE COVER:
CONCRETE COVER SHOWN IN PLANS DOES NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER." SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE TOLERANCES.

JOINTS IN CONCRETE:
CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT LOCATIONS INDICATED ON THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

CHAMFERS:
PROVIDE ¾" CHAMFER ON ALL EXPOSED EDGES, EXCEPT AS OTHERWISE NOTED.

CAST-IN-PLACE CONCRETE TOPPING:
THOROUGHLY SATURATE THE TOP SURFACE OF THE FLORIDA SLAB BEAMS WITH WATER IN ACCORDANCE WITH SPECIFICATION 400 FOR 12 HOURS IMMEDIATELY PRIOR TO PLACING THE CAST-IN-PLACE (C.I.P.) CONCRETE TOPPING. REMOVE STANDING WATER PRIOR TO PLACING THE C.I.P. CONCRETE TOPPING. CURE THE C.I.P. CONCRETE TOPPING IN ACCORDANCE WITH THE SPECIFICATION 400 REQUIREMENTS FOR BRIDE DECKS.

SCREEDING DECK SLABS:
SCREED THE RIDING SURFACE OF THE BRIDGE DECK AND APPROACH SLABS TO ACHIEVE THE FINISH GRADE ELEVATIONS SHOWN IN THE PLANS. ACCOUNT FOR THEORETICAL DEFLECTIONS DUE TO DECK SELF WEIGHT, DECK CASTING SEQUENCE, DECK FORMING SYSTEMS, CONSTRUCTIONS LOADS, AND TEMPORARY SHORING AS REQUIRED.

BRIDGE FLOOR GROOVING:
BRIDGE FLOOR AND APPROACH SLAB CONCRETE SURFACES SHALL BE GROOVED IN ACCORDANCE WITH SECTION 400-15.2.5 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

REINFORCING STEEL:
REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. ALL DIMENSIONS PERTAINING TO LOCATIONS OF REINFORCING ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE. REINFORCEMENT IN PILES SHALL BE CFRP PER SPECIFICATIONS SECTION 933.

PRESTRESSING STRANDS:
STRANDS FOR PRESTRESSED PILES SHALL MEET THE REQUIREMENTS DETAILED IN INDEX NOS. 455-101 AND 455-124. STRANDS FOR PRESTRESSED SLAB UNITS SHALL BE AS DETAILED IN PLANS.

TRAFFIC CONTROL:
FOR TRAFFIC CONTROL, SEE ROADWAY PLANS.

UTILITIES:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNCOVER AND VERIFY THE LOCATION OF THE EXISTING UTILITIES IN THE VICINITY OF PILE DRIVING AND OTHER CONSTRUCTION OPERATIONS. EXISTING UTILITIES SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION.

SCOUR:
SCOUR ANALYSIS WAS CONSIDERED FOR THE PILE FOUNDATION DESIGN FOR THE INTERMEDIATE BENT.

BRIDGE NAME AND NUMBER:
PLACE THE FOLLOWING BRIDGE NAME AND NUMBER ON THE TRAFFIC RAILINGS IN ACCORDANCE WITH THE TRAFFIC RAILING STANDARD PLANS: CAPRI ISLES OVER CURRY CREEK, BRIDGE NO. 176005.

PAY ITEM NOTES:
1. FOR SUMMARY OF STRUCTURES PAY ITEMS, SEE SUMMARY OF QUANTITIES SHEET.
2. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR BID ITEMS.
3. FOR TRAFFIC CONTROL BID ITEMS, SEE ROADWAY PLANS.

4. PAY ITEM NUMBER 110-3, REMOVAL OF EXISTING STRUCTURES, INCLUDES REMOVAL OF EXISTING STRUCTURE CAPRI ISLE BLVD. OVER CURRY CREEK. THE APPROXIMATE PLAN AREA OF THE BRIDGE TO BE REMOVED IS 3129 SQUARE FEET. ALL DEMOLITION ACTIVITIES FOR THE BRIDGE AND APPROACH SLABS, INCLUDING METHODS, MATERIALS, LABOR, WORK-ZONE PROTECTION, EQUIPMENT AND DISPOSAL SHALL BE INCLUDED IN THE ROADWAY QUANTITIES.
5. CONTRACTOR TO COORDINATE REMOVAL/STORAGE OF AUTOMATED RAINFALL MONITORING SYSTEM AND ANCILLARY EQUIPMENT WITH:

JEFF BANNER
RL ANDERSON BLDG., ROOM 122
4000 S. TAMIAMI TRAIL
VENICE, FL. 34239
(941) 650-1113
6. COST OF FURNISHING AND INSTALLING ALL MISCELLANEOUS HARDWARE AND ANCHOR BOLTS FOR AUTOMATED RAINFALL MONITORING SYSTEM AND ANCILLARY EQUIPMENT TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 460- 2-1 STRUCT STEEL, CARBON.

- EXISTING STRUCTURES:
1. REMOVAL OF EXISTING STRUCTURES SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 110, UNLESS OTHERWISE NOTED.
2. DISPOSAL OF EXISTING STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
B1-1	INDEX OF SHEETS AND GENERAL NOTES
B1-2	SUMMARY OF STRUCTURES QUANTITIES
B1-3	PLAN AND ELEVATION
B1-4	BRIDGE HYDRAULIC RECOMMENDATIONS
B1-5	SOIL BORING LOGS
B1-6	SLOPE PROTECTION DETAILS
B1-7	FOUNDATION LAYOUT
B1-8	END BENT 1
B1-9	END BENT 3
B1-10	END BENT DETAILS
B1-11	INTERMEDIATE BENT 2
B1-12	PRESTRESSED SLAB BEAM LAYOUT
B1-13	PRESTRESSED SLAB BEAM - TABLE OF VARIABLES AND DATA
B1-14	SUPERSTRUCTURE PLAN
B1-15	SUPERSTRUCTURE SECTION
B1-16	SUPERSTRUCTURE DETAILS (1 OF 3)
B1-17	SUPERSTRUCTURE DETAILS (2 OF 3)
B1-18	SUPERSTRUCTURE DETAILS (3 OF 3)
B1-19	FINISH GRADE ELEVATIONS
B1-20	APPROACH SLABS
B1-21	REINFORCING BAR LIST (1 OF 2)
B1-22	REINFORCING BAR LIST (2 OF 2)
B1-23	LOAD RATING SUMMARY CHARTS
B1-24	AUTOMATED RAINFALL MONITORING SYSTEM SUPPORT DETAILS

FDOT STANDARD PLANS FOR BRIDGE CONSTRUCTION:
415-001 BAR BENDING DETAILS (STEEL)
455-003 SQUARE PRESTRESSED CONCRETE PILES - EDC INSTRUMENTATION
455-101 SQUARE CFRP AND SS PRESTRESSED CONCRETE PILES - TYPICAL DETAILS AND NOTES

455-102 SQUARE CFRP AND SS PRESTRESSED CONCRETE PILE SPLICES
455-124 24" SQUARE CFRP AND SS PRESTRESSED CONCRETE PILE
458-110 EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD
515-021 PEDESTRIAN / BICYCLE BULLET RAILING FOR TRAFFIC RAILING
521-423 TRAFFIC RAILING - (32" VERTICAL SHAPE)
630-010 CONDUIT DETAILS - EMBEDDED

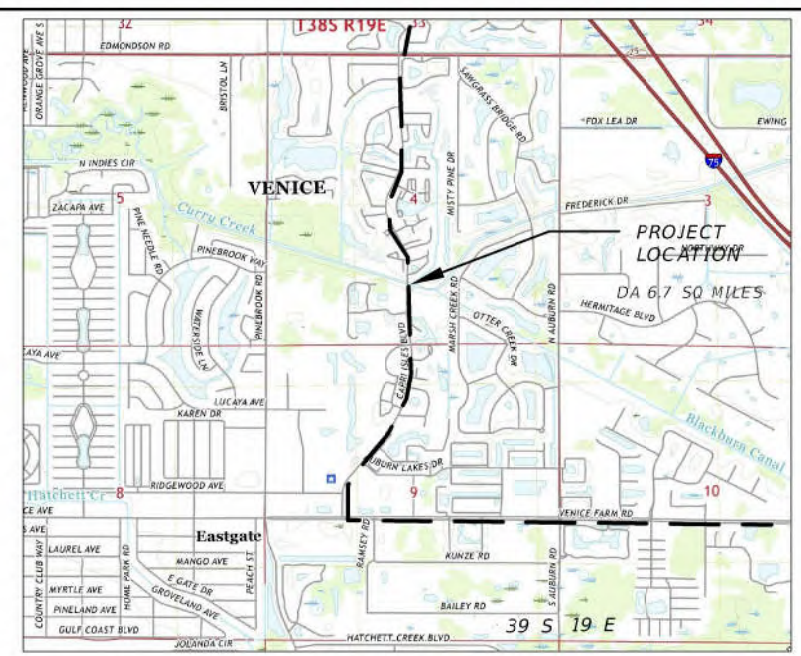
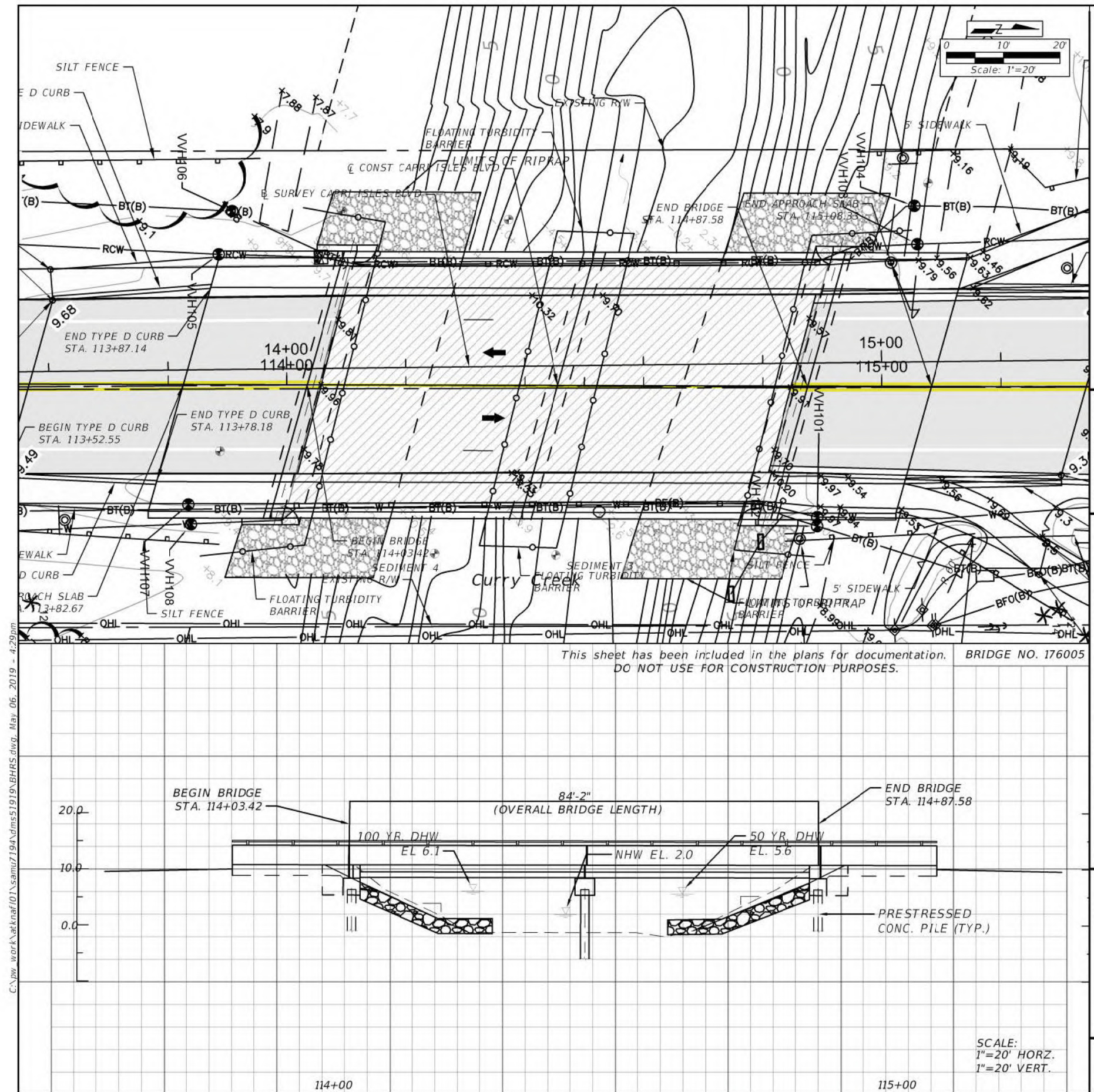
FDOT DEVELOPMENTAL STANDARD PLANS FOR BRIDGE CONSTRUCTION:
D20450 TYPICAL FLORIDA SLAB BEAM DETAILS AND NOTES
D20451 12" FLORIDA SLAB BEAM
D20920 APPROACH SLABS (20 FT) (FLEXIBLE PAVEMENT APPROACHES)

										BRIDGE NO. 176005	
				DESIGNED _____			PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: INDEX OF SHEETS AND GENERAL NOTES	APPROVED BY: RUDOLF P.G. PEIN, P.E. DATE FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/6/2019	
				DRAWN _____						PROJECT NO.: G017R4	
				CHECKED _____						SHEET: B1-1	
REV. NO.	DATE	DESCRIPTION									

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SUMMARY OF STRUCTURES QUANTITIES										
SECTION	PAY ITEM NO.	DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
	110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES		LS	1		1			
FOUNDATIONS	455-34-25	PRESTRESSED CONCRETE PILING, 24" SQ W/FRP OR STAINLESS STEEL STRAND & REINFORCING		LF	535		535			
	455-143-125	TEST PILES - PRESTRESSED CONCRETE, 24" SQ		LF	152		152			
SUBSTRUCTURE	400-4-5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	END BENT 1	CY	22.2		62.8			
			INT. BENT 2		18.4					
			END BENT 3		22.2					
	415-1-5	REINFORCING STEEL - BRIDGE SUBSTRUCTURE	END BENT 1	LB	2345		6797			
			INT. BENT 2		2107					
			END BENT 3		2345					
SLOPE PROTECTION	530-1	RIPRAP, SAND-CEMENT	END BENT 1	CY	10		20			
			END BENT 3		10					
	530-3-3	RIPRAP-RUBBLE, BANK & SHORE	END BENT 1	TN	237		474			
			END BENT 3		237					
	530-74	BEDDING STONE	END BENT 1	TN	85		170			
			END BENT 3		85					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, (APPROACH SLABS)	APPROACH SLAB 1	CY	36.3		83.8			
			APPROACH SLAB 2		36.3					
			SIDEWALK AS 1		5.6					
			SIDEWALK AS 2		5.6					
	415-1-9	REINFORCING STEEL - APPROACH SLABS	DECK	LB	14319		14913			
			SIDEWALK		594					
SUPERSTRUCTURE	400-4-4	CONCRETE CLASS IV, SUPERSTRUCTURE	SIDEWALK	CY	22.9		22.9			
	400-4-47	CONCRETE CLASS IV, CAST IN PLACE TOPPING WITH SHRINKAGE REDUCING ADMIXTURE	DECK	CY	94.3		94.3			
	400-7	BRIDGE DECK GROOVING		SY	320		320			
	400-148	PLAIN NEOPRENE BEARING PADS		CF	7.8		7.8			
	415-1-4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	DECK	LB	24320		25532			
			SIDEWALK		1212					
	450-8-14	PRESTRESSED BEAM: FLORIDA SLAB BEAM, BEAM DEPTH 12", WIDTH 58"-60"		LF	735		735			
	458-1-11	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I POURED JOINT WITH BACKER ROD		LF	136		136			
	460-2-1	STRUCT STEEL, CARBON		LB	80		80			
	630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED		LF	503		503			
	635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED		EA	5		5			
RAILING/BARRIERS	515-4-1	BULLET RAIL, SINGLE RAIL	APPROACH SLAB 1	LF	42		253			
			2 SPAN SUPERSTRUCTURE		169					
			APPROACH SLAB 2		42					
	521-5-4	CONCRETE TRAFFIC RAILING - BRIDGE, 32" VERTICAL FACE	APPROACH SLAB 1	LF	42		253			
			2 SPAN SUPERSTRUCTURE		169					
			APPROACH SLAB 2		42					

										BRIDGE NO. 176005	
					DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: SUMMARY OF STRUCTURES QUANTITIES	APPROVED BY: RUDOLF P.G. PEIN, P.E. _____ DATE _____ FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/6/2019 PROJECT NO.: G017R4 SHEET: B1-2
REV. NO.	DATE	DESCRIPTION			CHECKED _____						



(REFERENCE)	EXISTING STRUCTURES				PROPOSED STRUCTURE
	(1)	(2)	(3)	(4)	
FOUNDATION	12" SQ PILES				24" SQ PILES
OVERALL LENGTH	79.4 FT				84.2 FT
SPAN LENGTH	3-26.45 FT				2-42.1 FT
TYPE CONSTRUCTION	FLAT SLAB				FLAT SLAB
AREA OF OPENING@D.F.	341 SQ FT				349 SQ FT
BRIDGE WIDTH	39.4 FT				44.8 FT
ELEV. LOW MEMBER	8.0				8.0

NOTE:
This hydraulic data is a summary of design calculations and is provided for informational purposes only. The user is cautioned against the assumption of precision for the discharge rates, units are in cubic feet per second and the design stages, feet-NAVD 1988.

TERMS:
Design Flood: Utilized to assure a desired level of hydraulic performance.
Base Flood: Has a 1% chance of being exceeded in any given year (100 year frequency)
Overtopping Flood: Causes flow over the highway, over a watershed divide, or thru emergency relief structures.
Greatest Flood: The most severe that can be predicted where overtopping is not practicable.

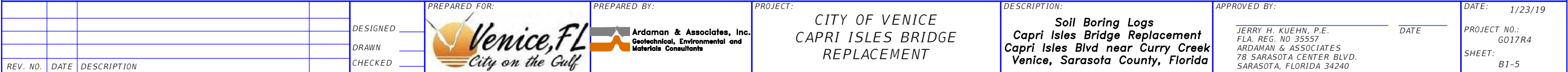
WATER SURFACE ELEVATIONS:		N.H.W. (Non-Tidal)	2.0	M.H.W. (Tidal)	N/A
CONTROL (Non-Tidal)		N/A		M.L.W. (Tidal)	N/A
FLOOD DATA:		MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	
STAGE ELEV. NAVD (ft)			5.6	6.1	
DISCHARGE (cfs)			811	972	
AVERAGE VELOCITY (f/s)			2.3	2.6	
EXCEEDANCE PROB. (%)			2.0	1.0	
FREQUENCY (yr.)			50	100	

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:		TOTAL SCOUR ELEVATION		
NUMBERS	PIER INFORMATION	LONG TERM SCOUR ELEV.	WORST CASE < 100 yr. FREQ. (yr.)	WORST CASE < 500 yr. FREQ. (yr.)
1	SIZE AND TYPE 24" SQ PRESTRESSED CONC.	0.0'	-7.13	

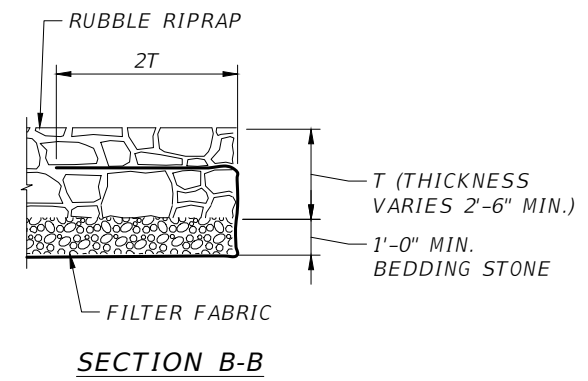
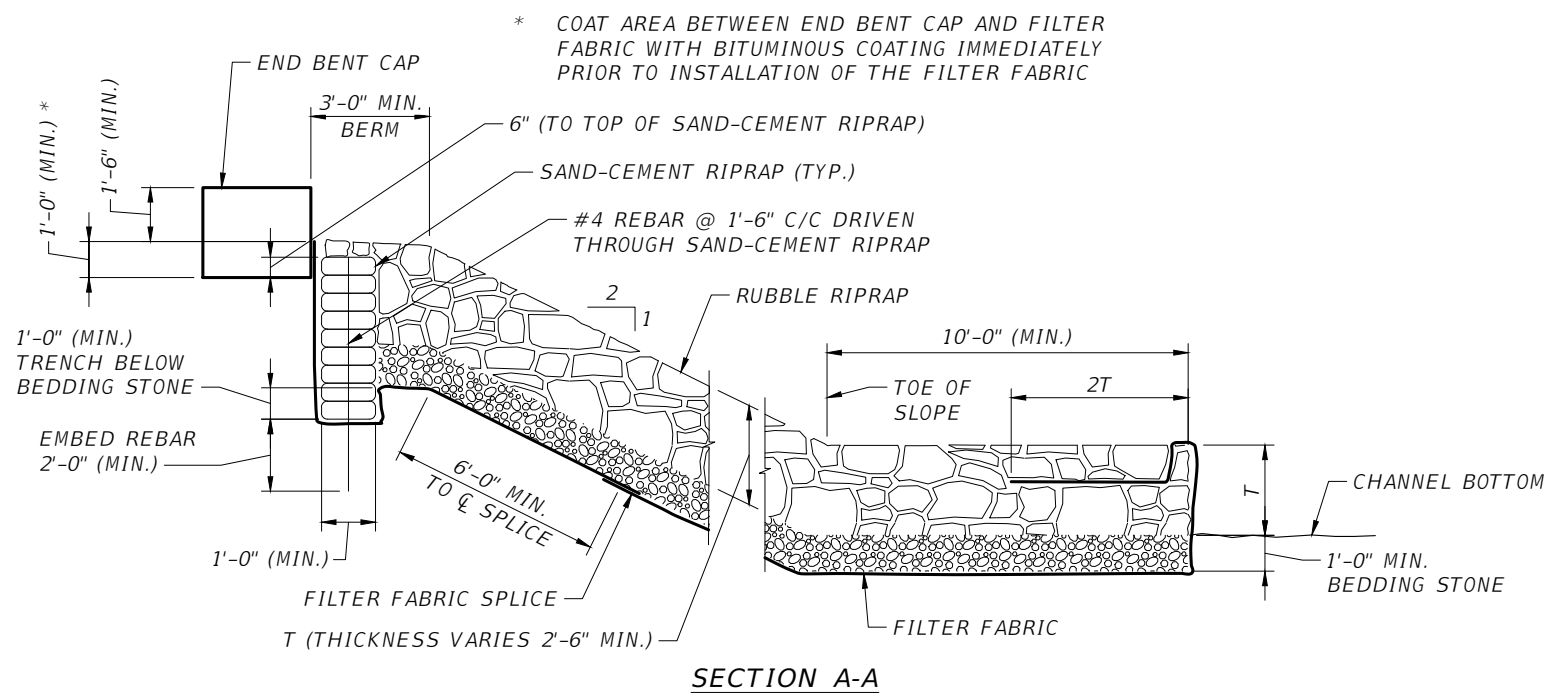
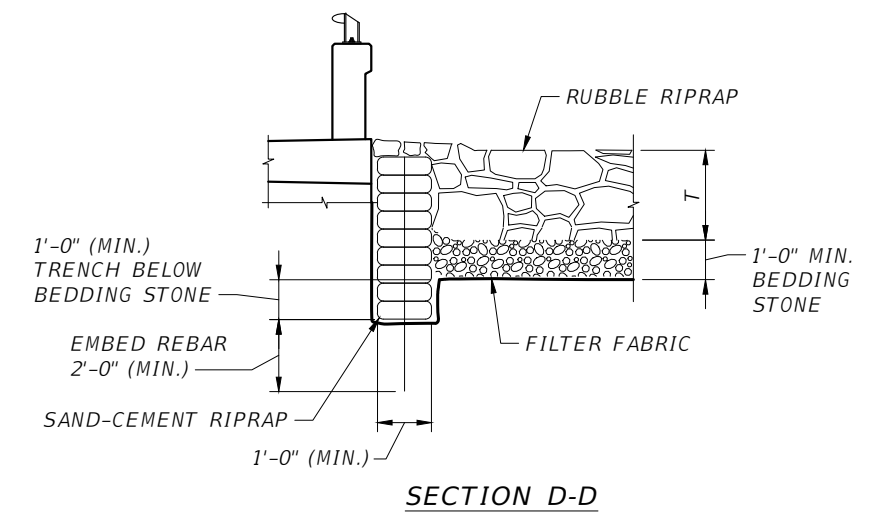
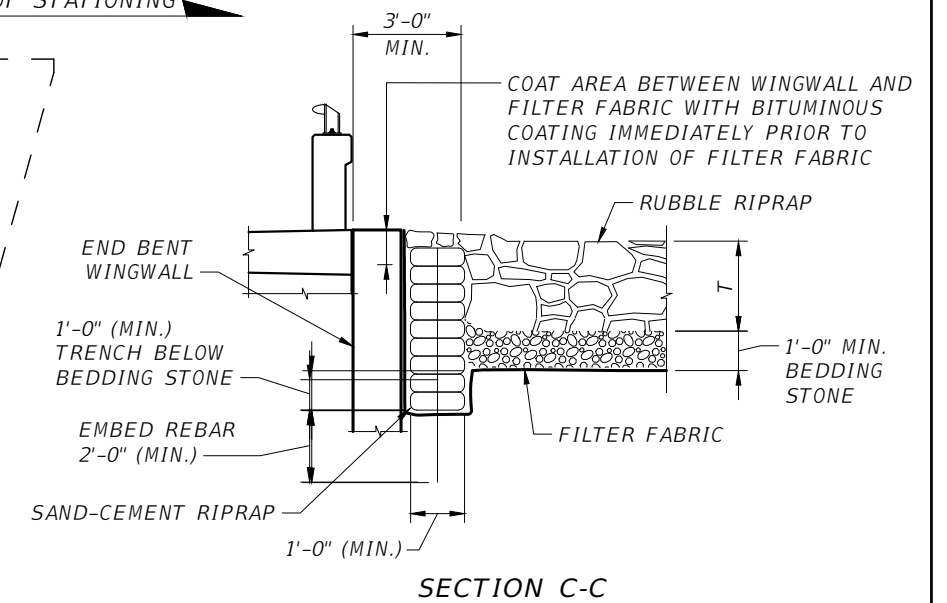
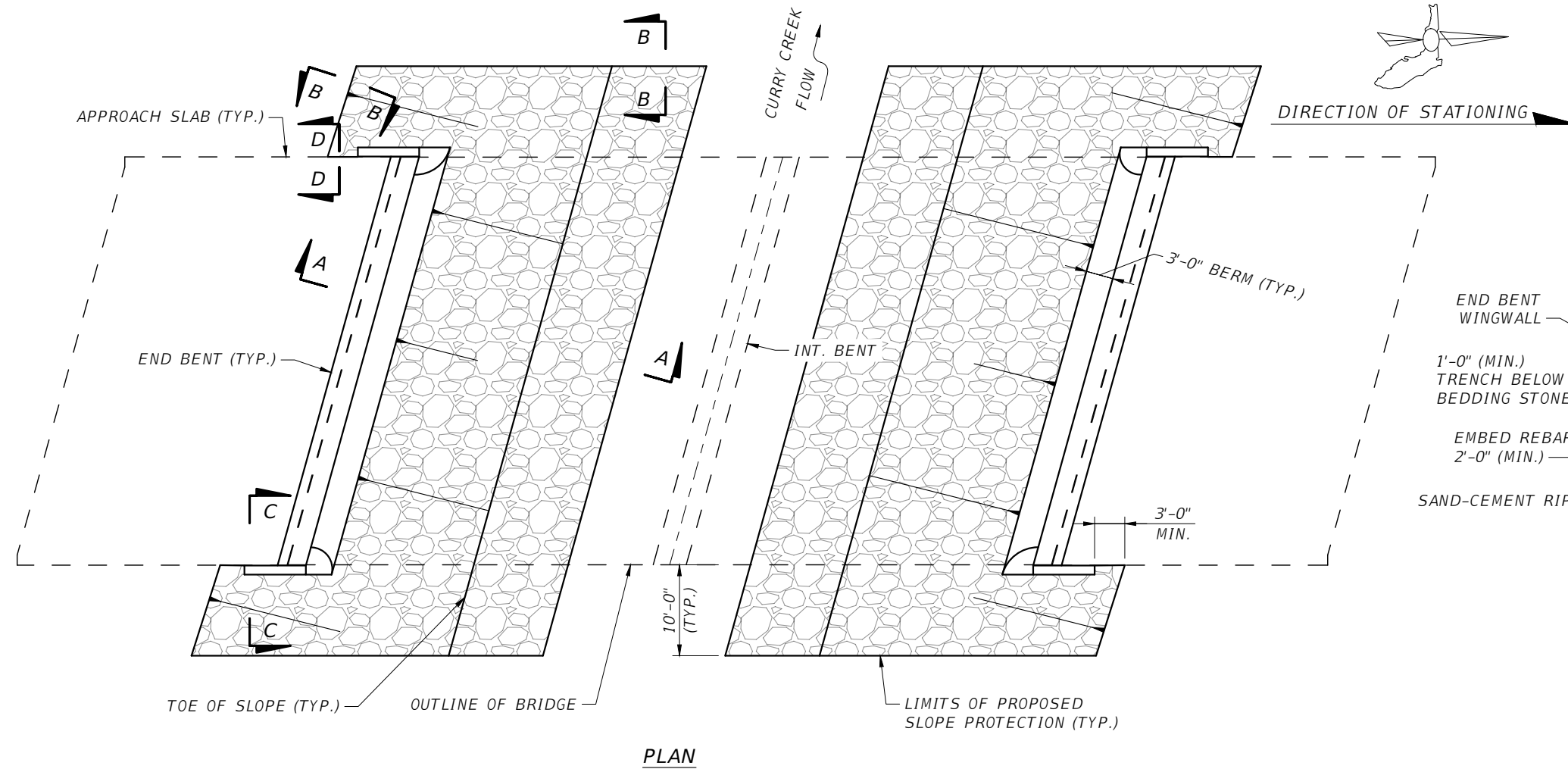
HYDRAULIC RECOMMENDATIONS													
1. BEGIN BRIDGE STATION		114+03.42		END BRIDGE STATION		114+87.58		SKEW ANGLE					
2. CLEARANCE PROVIDED:		NAV: HORIZ. 32'		VERT. 6.0'		ABOVE EL. 2.0		DRIFT: HORIZ. 32'		VERT. 2.4'		ABOVE EL. 5.6	
3. MINIMUM CLEARANCE:		NAV: HORIZ. N/A		VERT. 6.0'		ABOVE EL. 2.0		DRIFT: HORIZ. N/A		VERT. 2.0'		ABOVE EL. 5.6	
4. ABUTMENTS:													
				BEGIN BRIDGE				END BRIDGE					
RUBBLE GRADE:				BANK AND SHORE				BANK AND SHORE					
				1:2				1:2					
SLOPE:													
BURIED OR NON-BURIED HORIZ. TOE:				NON-BURIED				NON-BURIED					
TOE HORIZ. DISTANCE:				10 FT				10 FT					
LIMIT OF PROTECTION:				10 FT				10 FT					
5. DECK DRAINAGE: SCUPPERS													

REMARKS: THE BRIDGE IS DRAINED BY SCUPPERS.

DESIGNED _____		DRAWN _____		CHECKED _____	
PREPARED FOR:		PREPARED BY:		PROJECT:	
Venice, FL City on the Gulf		ATKINS		FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	
DESCRIPTION:		APPROVED BY:		DATE:	
BRIDGE HYDRAULICS RECOMMENDATION SHEET		RICHARD UPTGRAFF, P.E. FLA. REG. NO 58789 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712		5/6/2019	
REV. NO. DATE DESCRIPTION		PROJECT NO.:		SHEET:	
		G017R4		B1 - 4	



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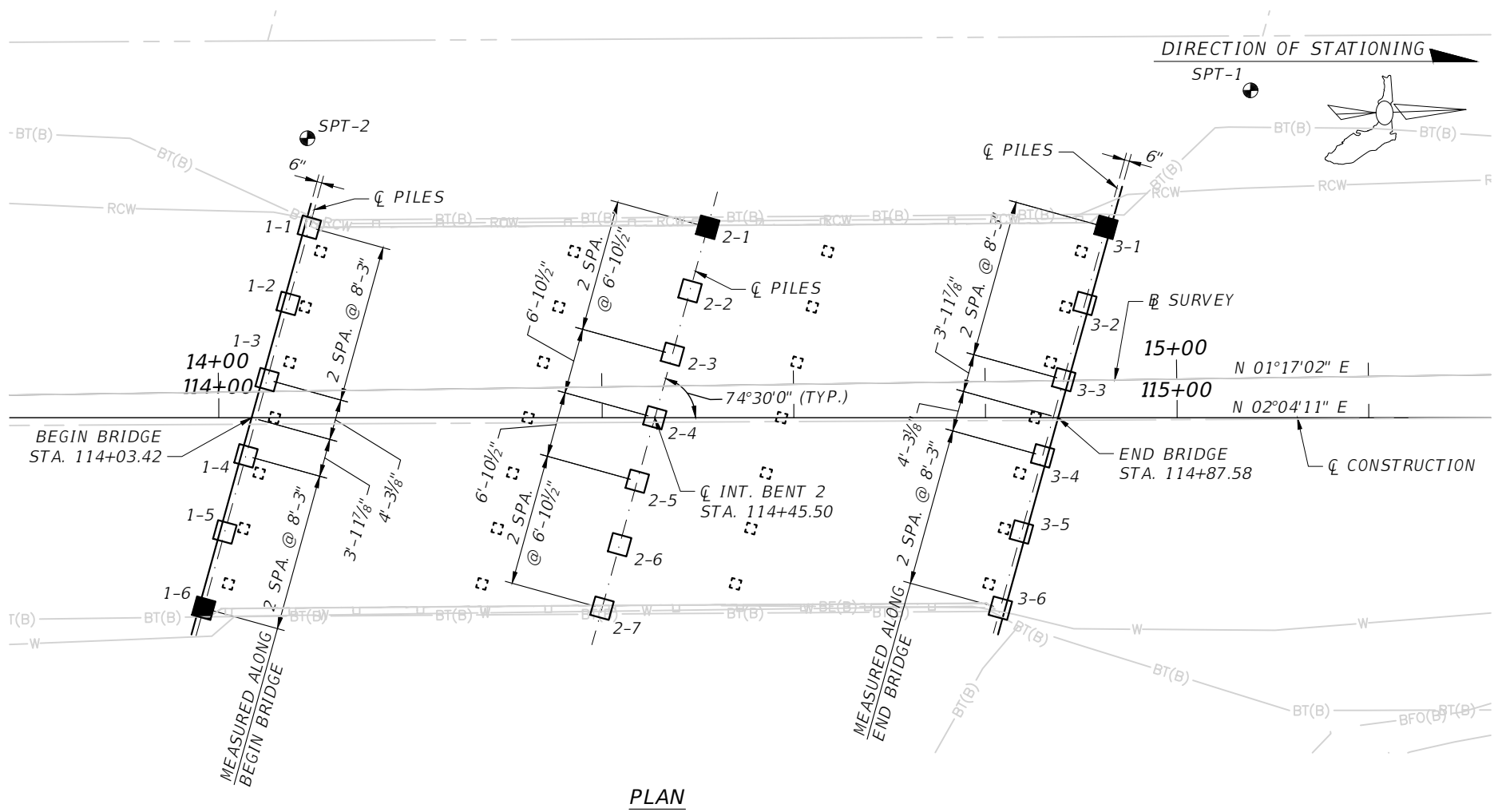


NOTE:
1. FILTER FABRIC SHALL BE TYPE D-2, IN ACCORDANCE WITH SPECIFICATIONS SECTION 985. SPLICE LENGTH SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SECTION 514.

				BRIDGE NO. 176005	
				DESIGNED	DATE: 9/6/2019
				DRAWN	PROJECT NO.: G017R4
				CHECKED	SHEET: B1-6
REV. NO.	DATE	DESCRIPTION	PREPARED FOR:	PREPARED BY:	PROJECT:
			Venice, FL City on the Gulf	ATKINS	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT
				DESCRIPTION:	
				SLOPE PROTECTION DETAILS	
				APPROVED BY:	DATE:
				RUDOLF P.G. PEIN, P.E. FLA. REG. NO. 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	

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$$\frac{\text{FACTORED DESIGN LOAD} + \text{NET SCOUR RESISTANCE} + \text{DOWN DRAG}}{\phi} \leq \text{NOMINAL BEARING RESISTANCE}$$

UPLIFT RESISTANCE - THE ULTIMATE SIDE FRICTION CAPACITY THAT MUST BE OBTAINED BELOW THE 100 YEAR SCOUR ELEVATION TO RESIST PULLOUT OF THE PILE (SPECIFY ONLY WHEN DESIGN REQUIRES UPLIFT CAPACITY).

TOTAL SCOUR RESISTANCE - AN ESTIMATE OF THE ULTIMATE STATIC SIDE FRICTION RESISTANCE PROVIDED BY THE SCOURABLE SOIL.

NET SCOUR RESISTANCE - AN ESTIMATE OF THE ULTIMATE STATIC SIDE FRICTION RESISTANCE PROVIDED BY THE SOIL FROM THE REQUIRED PERFORMED OR JETTING ELEVATION TO THE SCOUR ELEVATION.

100-YEAR SCOUR ELEVATION - ESTIMATED ELEVATION OF SCOUR DUE TO THE 100 YEAR STORM EVENT.

PILE INSTALLATION NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES PRIOR TO ANY PILE INSTALLATION ACTIVITIES.
2. MINIMUM TIP ELEVATION IS REQUIRED FOR LATERAL STABILITY.
3. IF PREFORMING ELEVATIONS DIFFER FROM THOSE SHOWN ON THE TABLE, THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINATION OF THE REQUIRED DRIVING RESISTANCE.
4. REMOVE EXISTING PILES THAT APPEAR TO BE WITHIN ONE PILE DIAMETER OF PROPOSED PILES.
5. NO JETTING WILL BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER.
6. PRE-DRILL TO THE REQUIRED PREFORM ELEVATION AT EACH PILE LOCATION PRIOR TO DRIVING THE PILES.
7. CONSTRUCTION OCCURS IN CLOSE PROXIMITY TO EXISTING STRUCTURES AND THE CONTRACTOR IS TO TAKE ALL REASONABLE PRECAUTIONS TO PREVENT DAMAGE TO SUCH STRUCTURES IN ACCORDANCE WITH THE PROVISIONS OF SECTION 455 OF THE STANDARD SPECIFICATIONS.
8. A DYNAMIC LOAD TEST SHALL BE PERFORMED ON PILES PER SECTION 455-5.13 OF THE SPECIFICATIONS AND IN ACCORDANCE WITH STRUCTURES DESIGN GUIDELINE TABLE 3.5.6-1.
9. PILES SHALL BE DRIVEN UNTIL THE NOMINAL BEARING RESISTANCE (NBR) HAS BEEN ACHIEVED AS SHOWN IN THE PILE DATA TABLE AND SECTION 455-5.10 OF THE SPECIFICATIONS HAVE BEEN MET.
10. THE HAMMER/DRIVING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 455-5.2 OF THE SPECIFICATIONS.

LEGEND:

- PROPOSED 24" SQUARE PRESTRESSED CONCRETE PILE
- PROPOSED 24" SQUARE PRESTRESSED CONCRETE TEST PILE
- ⊞ EXISTING 12" SQUARE PRESTRESSED CONCRETE PILE
- APPROXIMATE LOCATION OF SPT BORING
- N-N DENOTES BENT NUMBER - PILE NUMBER

PILE DATA TABLE																
INSTALLATION CRITERIA								DESIGN CRITERIA							PILE CUT-OFF ELEVATIONS	
BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT	
EB 1	24	139	N/A	-25	50	N/A	-5	90	N/A	N/A	N/A	N/A	N/A	0.65	N/A	5.803
IB 2	24	156	N/A	-32	52	N/A	-7	102	N/A	N/A	0.0	0.0	-7.13	0.65	N/A	5.795
EB 3	24	139	N/A	-25	50	N/A	-5	90	N/A	N/A	N/A	N/A	N/A	0.65	N/A	5.783

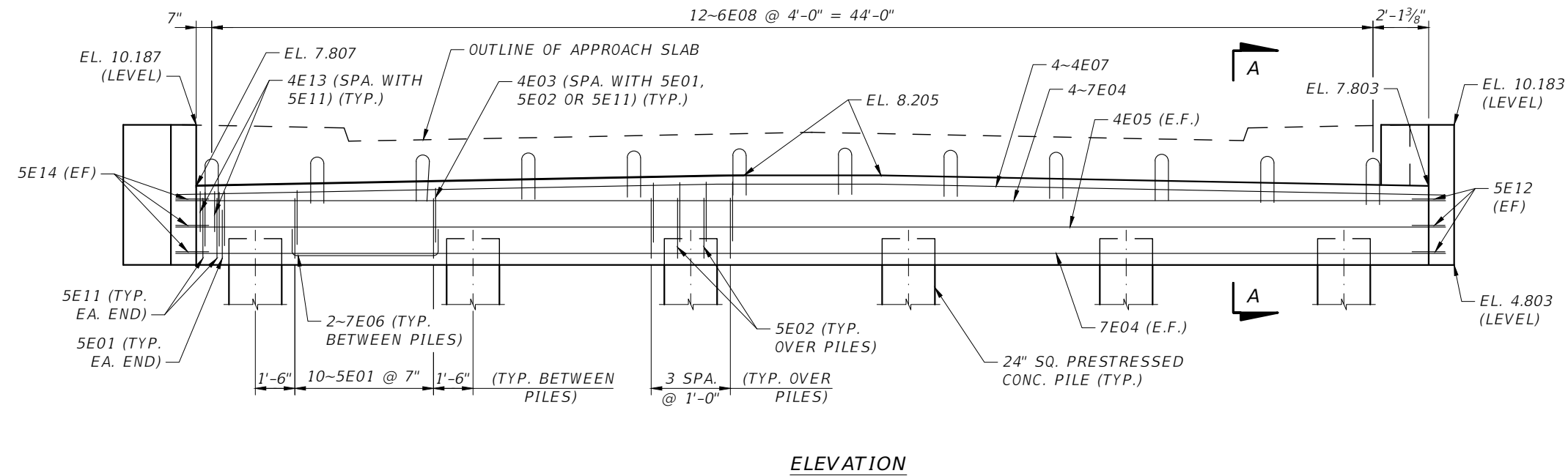
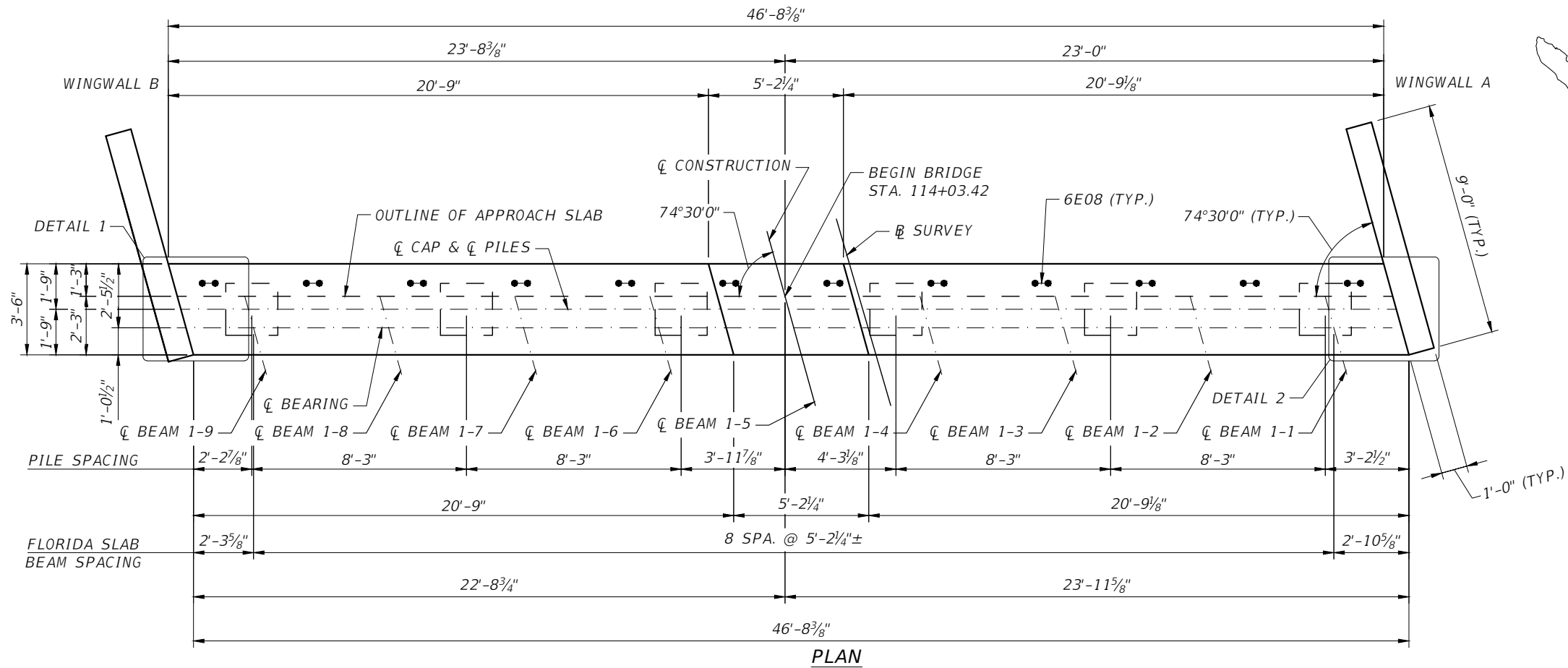
NOTE:
FOR BORING DATA, SEE REPORT OF CORE BORINGS SHEETS.

BRIDGE NO. 176005

			DESIGNED _____		PREPARED FOR: 		PREPARED BY: 		PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT		DESCRIPTION: FOUNDATION LAYOUT		APPROVED BY: RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712		DATE: 9/6/2019	
			DRAWN _____												PROJECT NO.: G017R4	
REV. NO. DATE DESCRIPTION			CHECKED _____												SHEET: B1-7	

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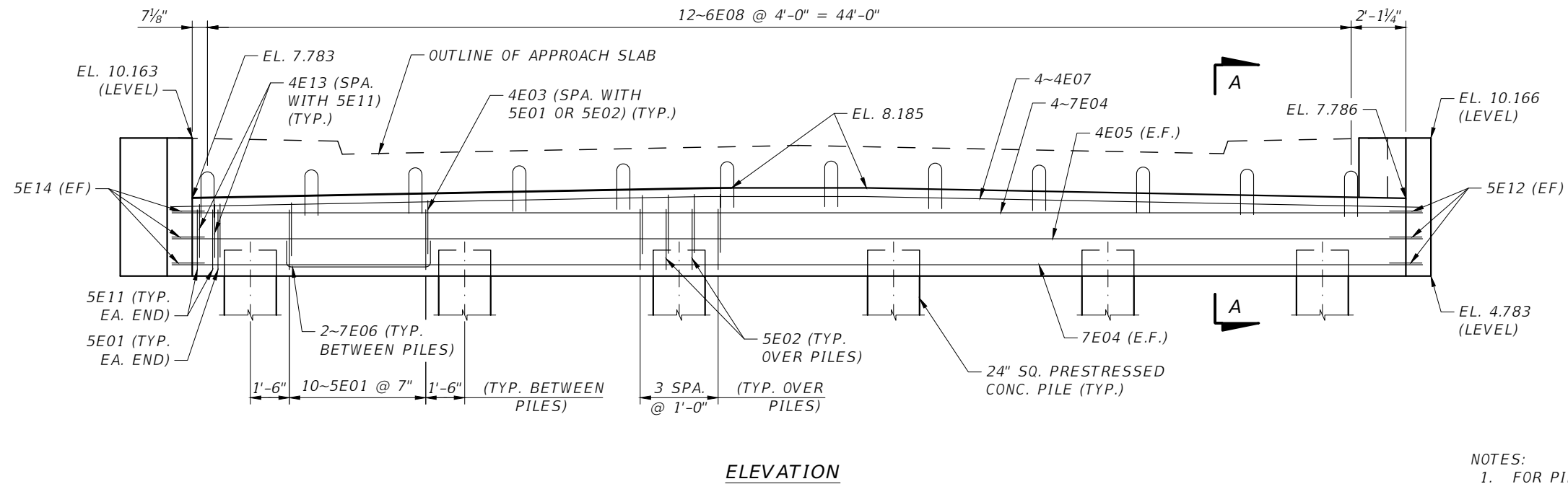
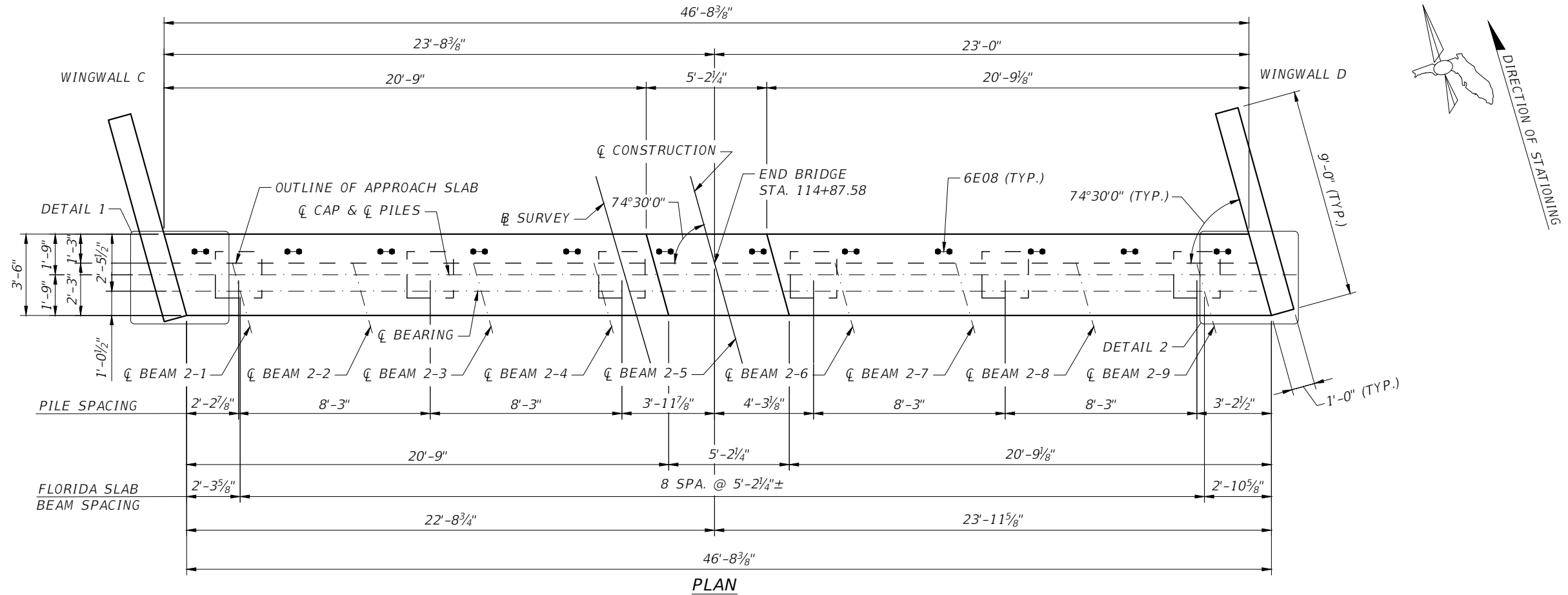
- NOTES:
1. FOR PILE CUT-OFF ELEVATIONS, SEE FOUNDATION LAYOUT SHEET.
 2. FOR SECTION A-A AND END BENT DETAILS, SEE END BENT DETAILS SHEET.
 3. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.

BRIDGE NO. 176005

				DESIGNED _____			PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: END BENT 1	APPROVED BY: RUDOLF P.G. PEIN, P.E. _____ DATE _____ FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/6/2019 PROJECT NO.: G017R4 SHEET: B1-8
				DRAWN _____						
				CHECKED _____						
REV. NO.	DATE	DESCRIPTION								

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- NOTES:
1. FOR PILE CUT-OFF ELEVATIONS, SEE FOUNDATION LAYOUT SHEET.
 2. FOR SECTION A-A AND END BENT DETAILS, SEE END BENT DETAILS SHEET.
 3. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.

REV. NO.	DATE	DESCRIPTION

DESIGNED
DRAWN
CHECKED



PROJECT: FPID 443413-1-54-01
CITY OF VENICE
CAPRI ISLES BRIDGE
REPLACEMENT

DESCRIPTION: END BENT 3

APPROVED BY: RUDOLF P.G. PEIN, P.E.
FLA. REG. NO 56805
ATKINS NORTH AMERICA (FBPR CA No.24)
4030 WEST BOY SCOUT BOULEVARD, SUITE 700
TAMPA, FL 33607-1712

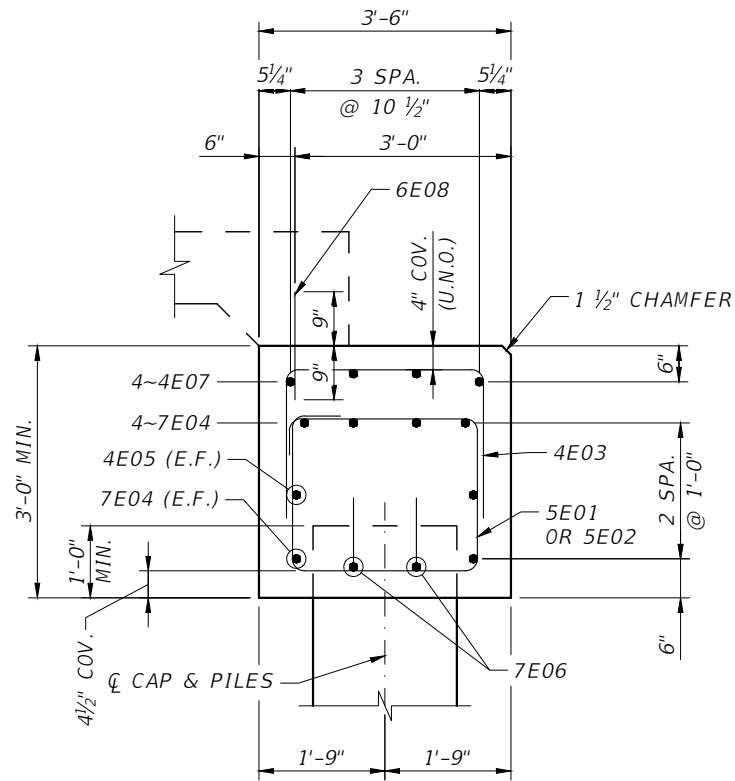
DATE: 9/6/2019

PROJECT NO.: G017R4
SHEET: B1-9

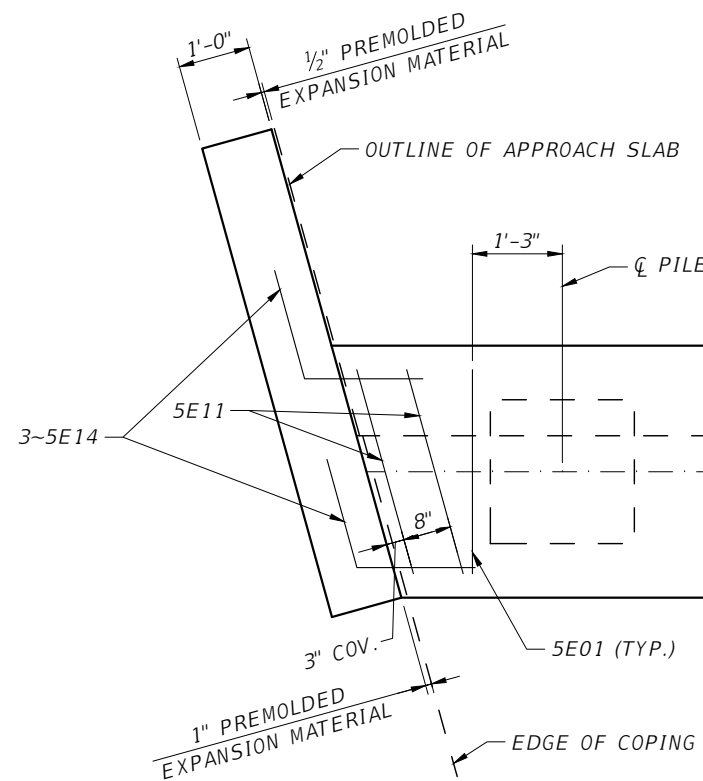
BRIDGE NO. 176005

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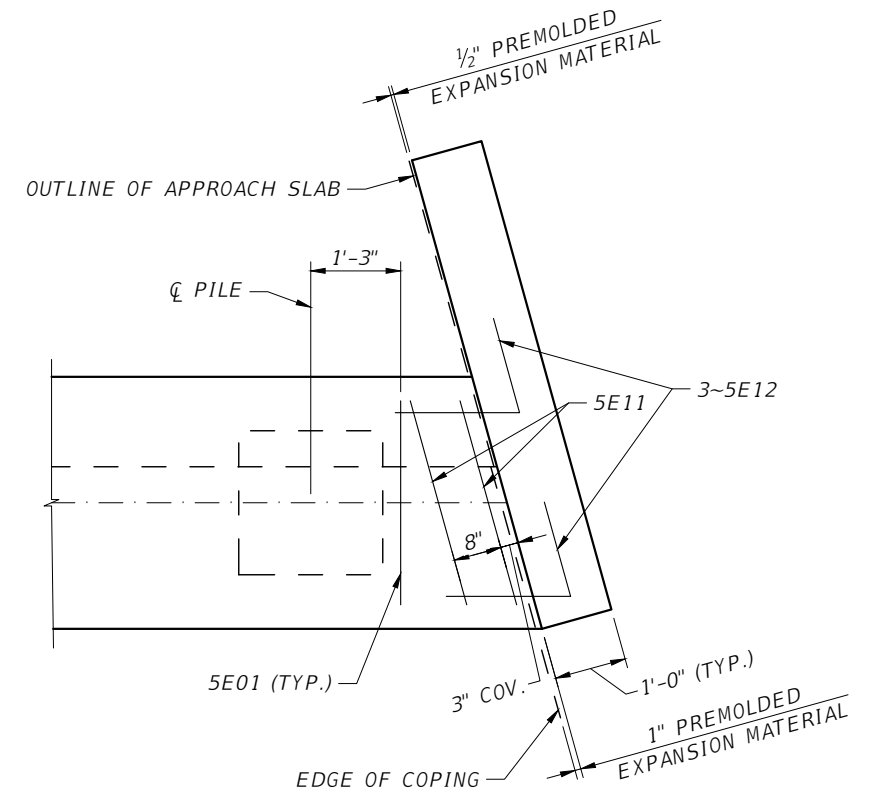
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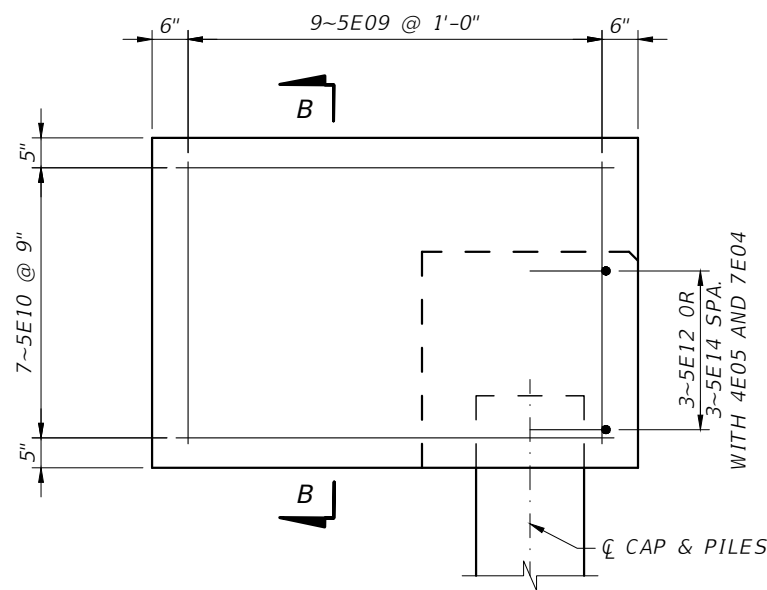
SECTION A-A



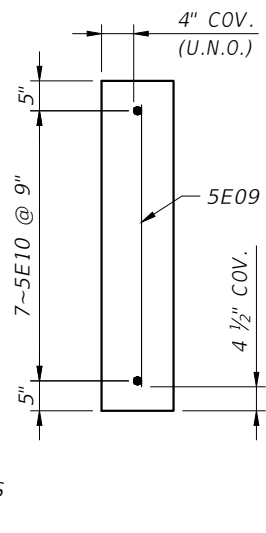
DETAIL 1



DETAIL 2



WINGWALL ELEVATION



SECTION B-B

BRIDGE NO. 176005

REV. NO.	DATE	DESCRIPTION

DESIGNED	
DRAWN	
CHECKED	



PROJECT: FPID 443413-1-54-01
CITY OF VENICE
CAPRI ISLES BRIDGE
REPLACEMENT

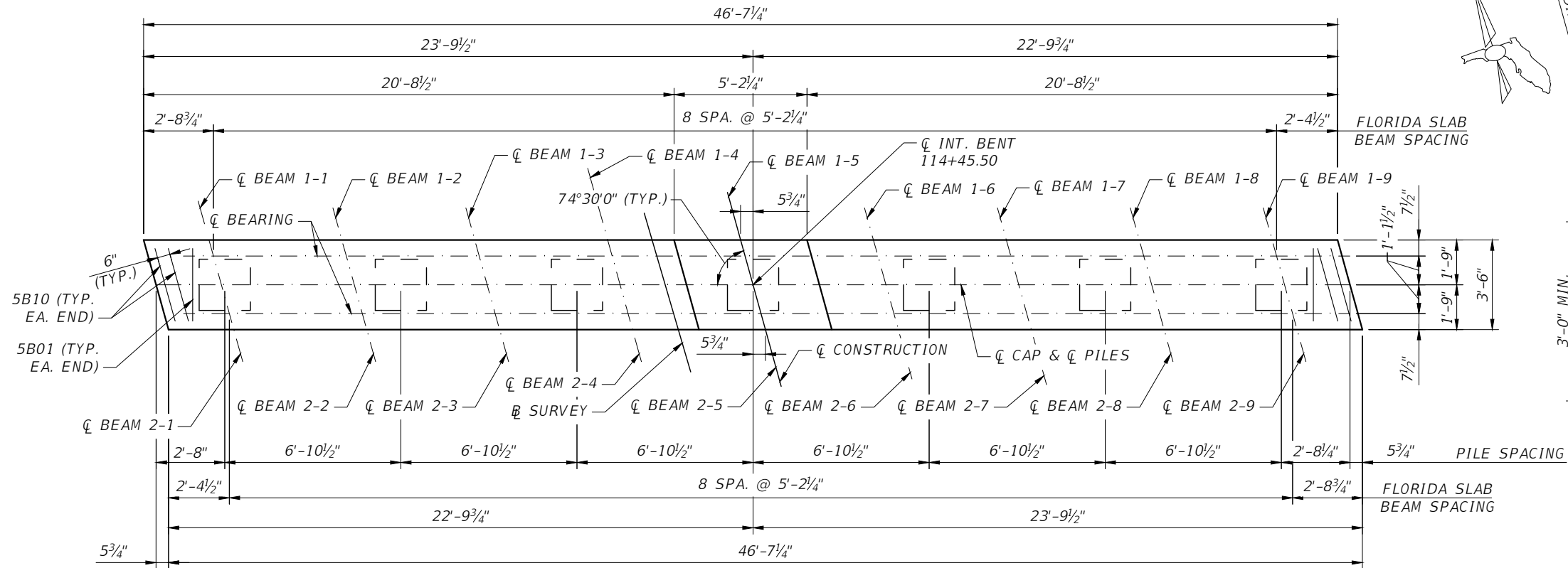
DESCRIPTION: END BENT DETAILS

APPROVED BY: RUDOLF P.G. PEIN, P.E.
FLA. REG. NO 56805
ATKINS NORTH AMERICA (FBPR CA No.24)
4030 WEST BOY SCOUT BOULEVARD, SUITE 700
TAMPA, FL 33607-1712
DATE:

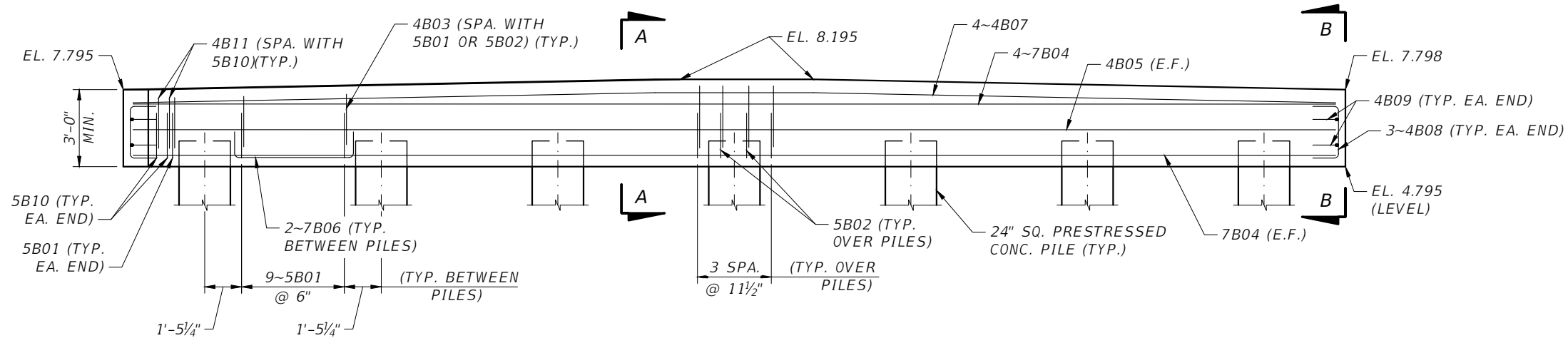
DATE: 9/6/2019
PROJECT NO.: G017R4
SHEET: B1-10

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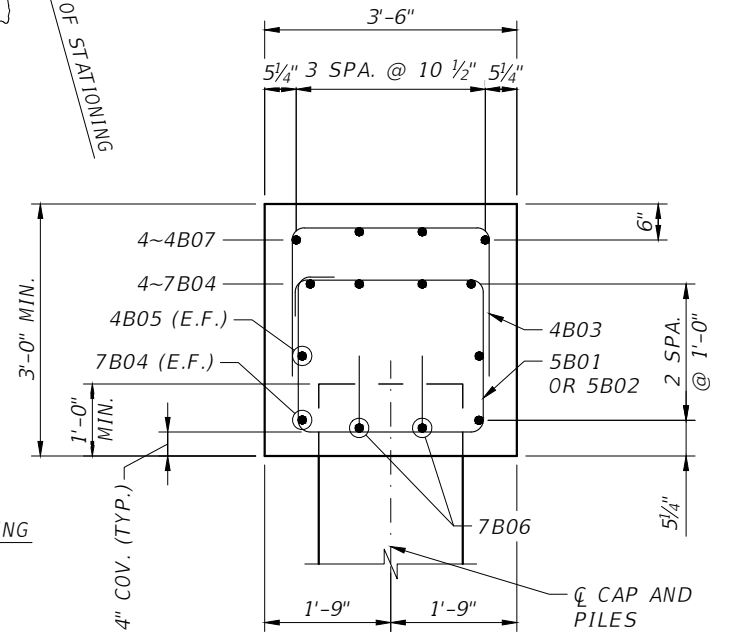
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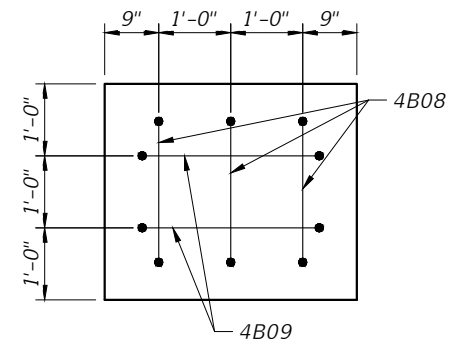
PLAN



ELEVATION



SECTION A-A



VIEW B-B

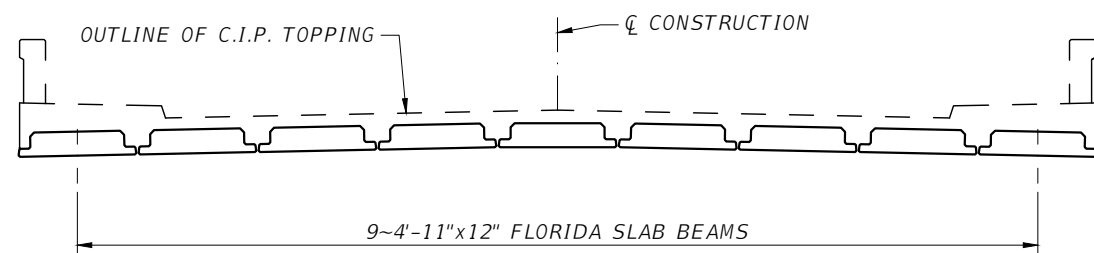
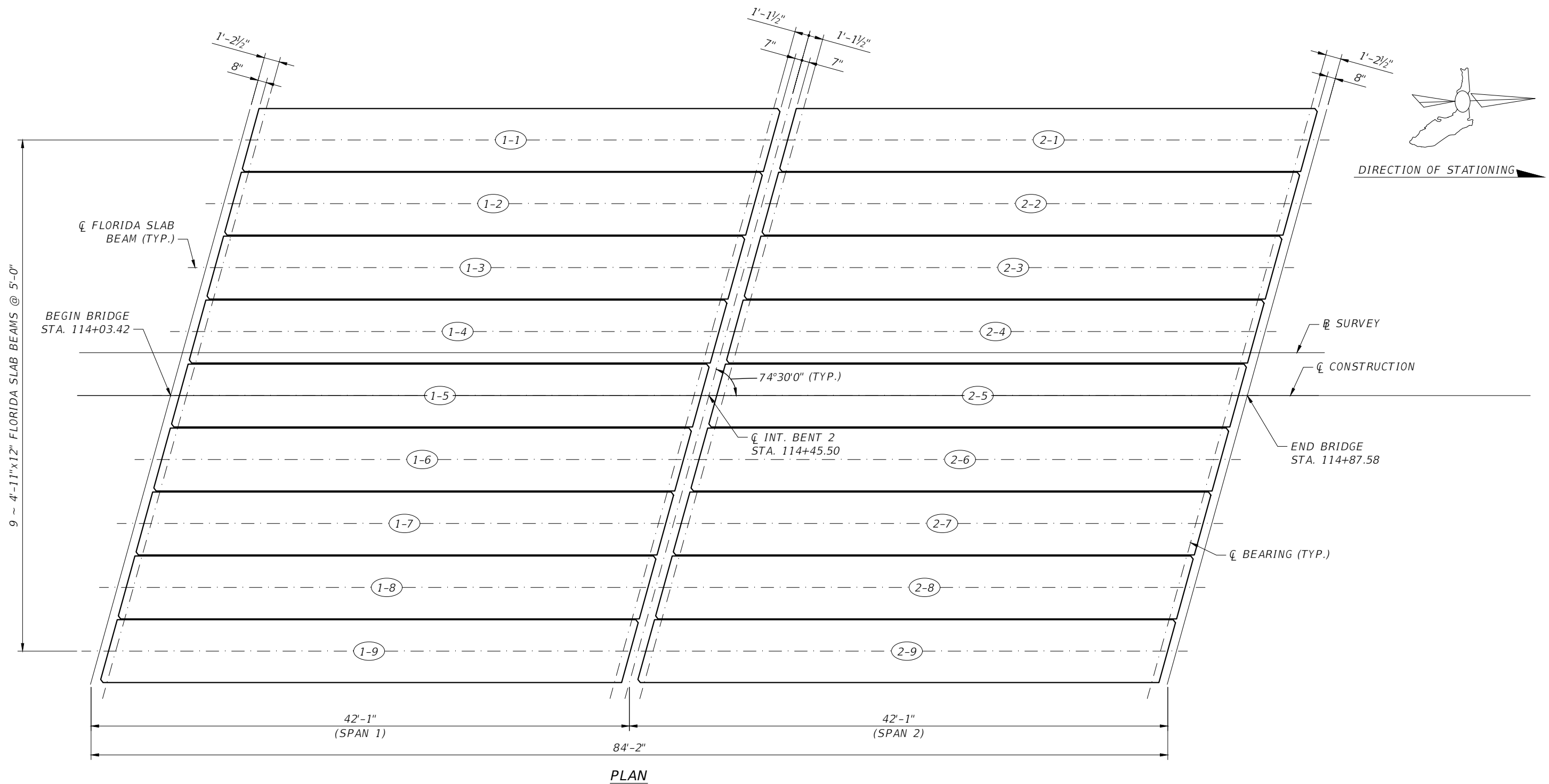
- NOTES:
1. FOR PILE CUT-OFF ELEVATIONS, SEE FOUNDATION LAYOUT SHEET.
 2. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.

BRIDGE NO. 176005

DESIGNED	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
DRAWN	Venice, FL City on the Gulf	ATKINS	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	INTERMEDIATE BENT 2	RUDOLF P.G. PEIN, P.E. FLA. REG. NO. 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	9/6/2019
CHECKED						PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION				SHEET: B1-11

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LEGEND:

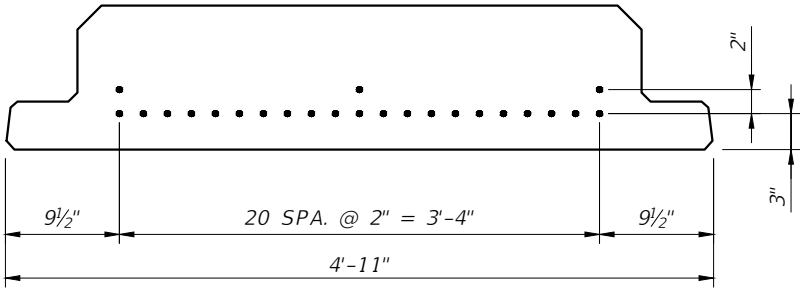
(N-N) - INDICATES PRESTRESSED SLAB BEAM MARK

					DESIGNED		PREPARED BY:		PROJECT:	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION:	PRESTRESSED SLAB BEAM LAYOUT	APPROVED BY:	 DATE	DATE:	9/6/2019	
					DRAWN											PROJECT NO.:	G017R4
					CHECKED											SHEET:	B1-12
REV. NO.	DATE	DESCRIPTION															

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FLORIDA SLAB BEAM - TABLE OF VARIABLES																														Table Date 01-01-16			
LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN.	PLAN VIEW CASE		ANGLE Ø		BEAM DIMENSIONS*			REINFORCING STEEL																			
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)			TYPE	END 1	END 2	END 1	END 2	DIM W	DIM L	DIM R	3C		4D1	4D2	4D3		5E1		5E2		6Y1	6Y2	4K	NO. OF BAR SPACES		BAR SPACING*			
				28 Day	Release										NO.	DIM C	DIM D	DIM D	NO.	DIM E	NO.	DIM E	DIM Y	DIM Y	NO.	S1	S2	V1	V2				
1,2	1,9	FSB 12x59	VI	8500	6000	1	3	3	75°	75°	4'-11"	40'-9¾"	¼"	43	4'-6½"	2'-6½"	2'-6½"	36	2'-5½"	---	---	83	4'-7½"	3'-8"	3'-8"	172	8	10	6"	1'-6"			
1,2	2-8	FSB 12x59	VI	8500	6000	1	3	3	75°	75°	4'-11"	40'-9¾"	¼"	43	4'-6½"	2'-6½"	2'-6½"	36	2'-5½"	83	4'-9"	---	---	3'-8"	3'-8"	172	8	10	6"	1'-6"			



TYPE 1 24 STRANDS

STRAND DEBONDING LEGEND

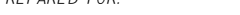
• - FULLY BONDED STRANDS.

DIMENSION NOTE:
* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE TOP OF BEAM AT THE CENTERLINE. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

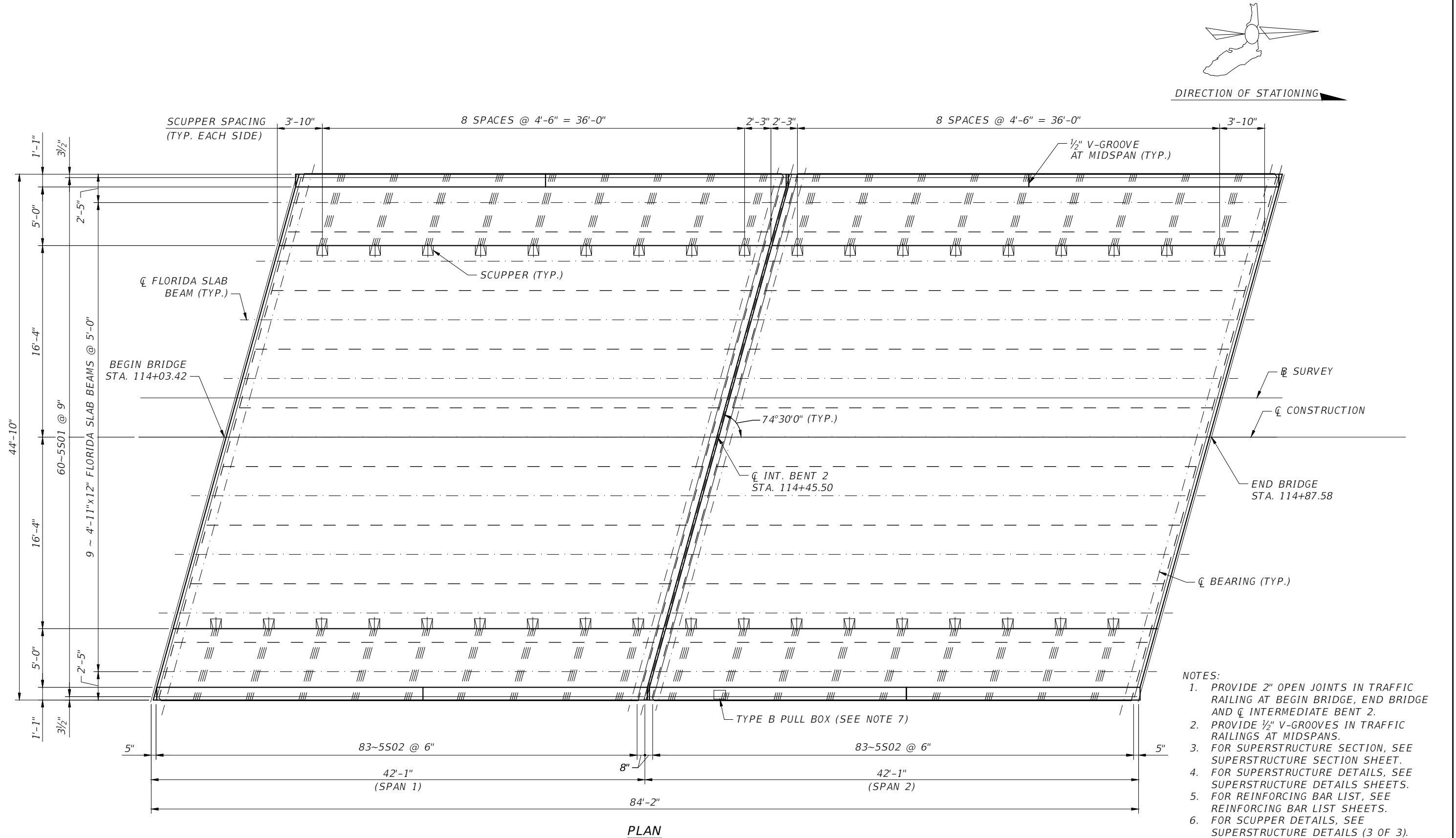
STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270, LOW RELAXATION CARBON STEEL STRANDS STRESSED AT 44 KIPS EACH. AREA PER STRAND EQUALS 0.22 SQ. IN.

STRAND PATTERN

NOTE: WORK THIS SHEET WITH DEVELOPMENTAL DESIGN STANDARD INDEXES D20450 AND D20451.

					DESIGNED _____		PREPARED FOR:		PREPARED BY:		PROJECT:	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION:	PRESTRESSED SLAB BEAM - TABLE OF VARIABLES AND DATA	APPROVED BY:	RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE:	9/6/2019
					DRAWN _____												PROJECT NO.:	G017R4
					CHECKED _____												SHEET:	B1-13
REV. NO.	DATE	DESCRIPTION																

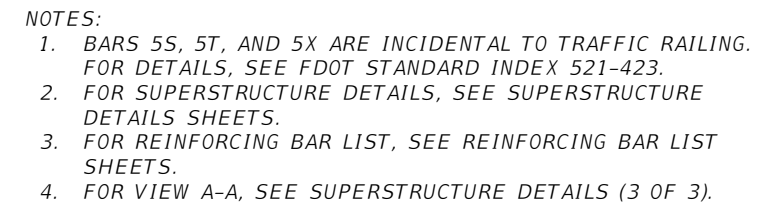
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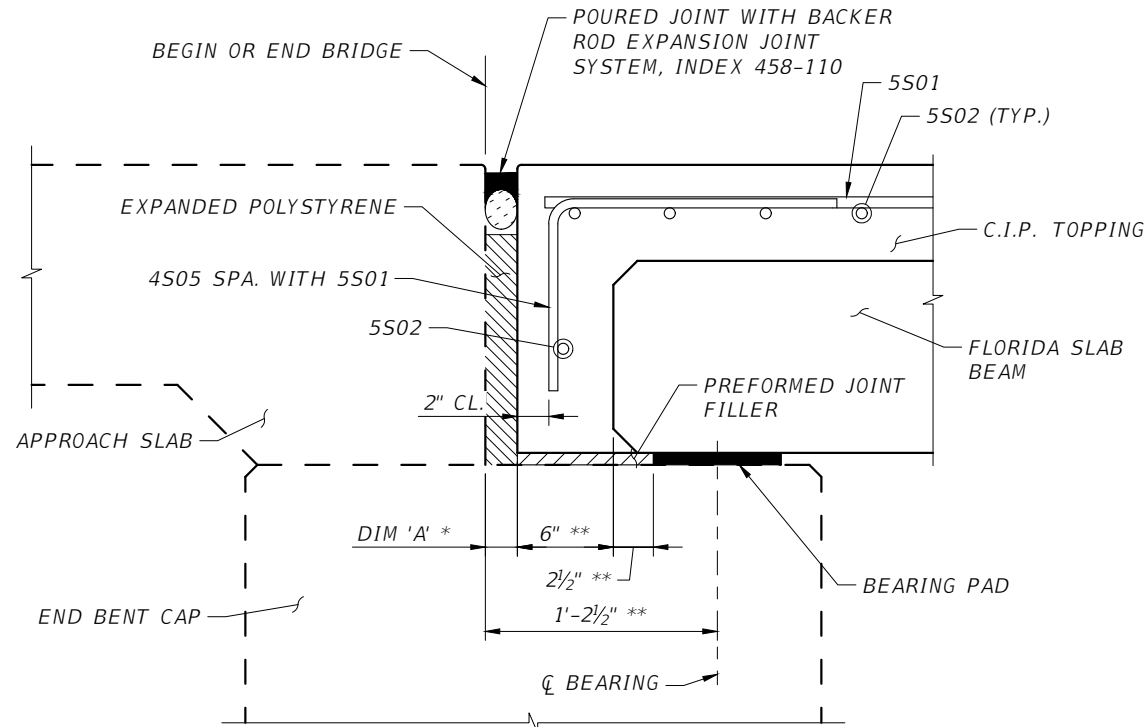
- NOTES:
1. PROVIDE 2" OPEN JOINTS IN TRAFFIC RAILING AT BEGIN BRIDGE, END BRIDGE AND ∇ INTERMEDIATE BENT 2.
 2. PROVIDE $\frac{1}{2}$ " V-GROOVES IN TRAFFIC RAILINGS AT MIDSPANS.
 3. FOR SUPERSTRUCTURE SECTION, SEE SUPERSTRUCTURE SECTION SHEET.
 4. FOR SUPERSTRUCTURE DETAILS, SEE SUPERSTRUCTURE DETAILS SHEETS.
 5. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.
 6. FOR SCUPPER DETAILS, SEE SUPERSTRUCTURE DETAILS (3 OF 3).
 7. FOR PULL BOX NOTES, SEE AUTOMATED RAINFALL MONITORING SYSTEM SUPPORT DETAILS SHEET.

					DESIGNED _____			PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: SUPERSTRUCTURE PLAN	APPROVED BY: RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712 DATE _____	DATE: 9/6/2019
					DRAWN _____						PROJECT NO.: G017R4
REV. NO.	DATE	DESCRIPTION			CHECKED _____						SHEET: B1-14

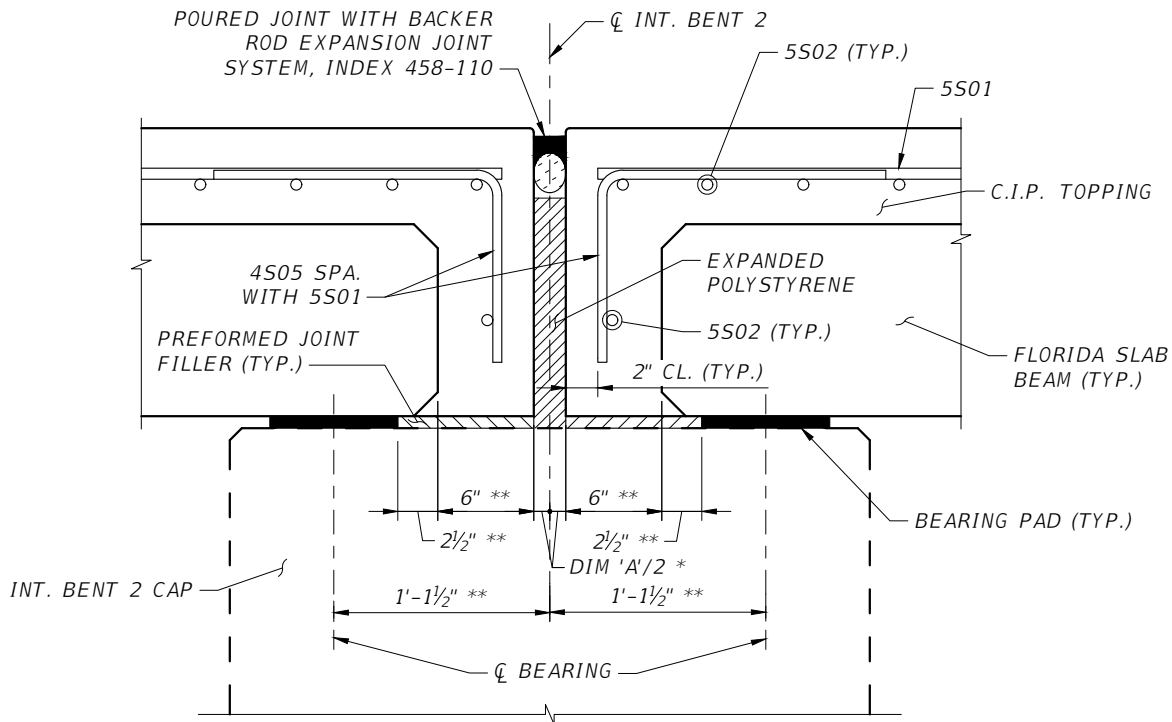
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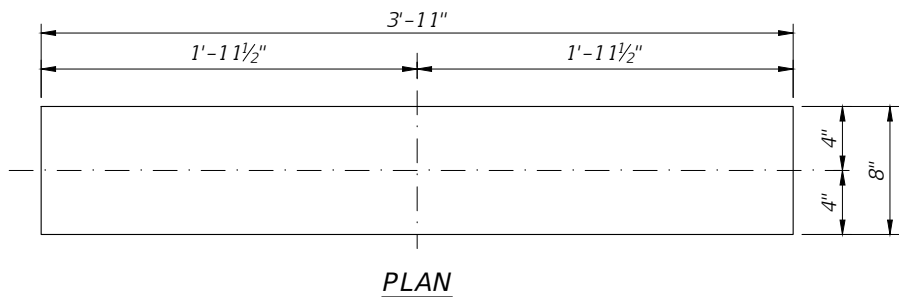


DETAIL AT BEGIN / END BRIDGE ALONG CL BEAM
(REINFORCING WITHIN FLORIDA SLAB BEAM NOT SHOWN FOR CLARITY)

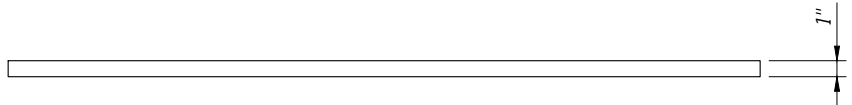


DETAIL AT INTERMEDIATE BENT 2 ALONG CL BEAM
(REINFORCING WITHIN FLORIDA SLAB BEAM NOT SHOWN FOR CLARITY)

- * SEE POURED EXPANSION JOINT DATA TABLE, INDEX NO. 458-110.
** MEASURED PERPENDICULAR TO BEAM END.



PLAN



ELEVATION

BEARING PAD DETAIL

NOTE:
PROVIDE PLAIN ELASTOMERIC BEARING PADS WITH A SHEAR MODULUS $G = 110$ PSI AND IN ACCORDANCE WITH SPECIFICATION 932.

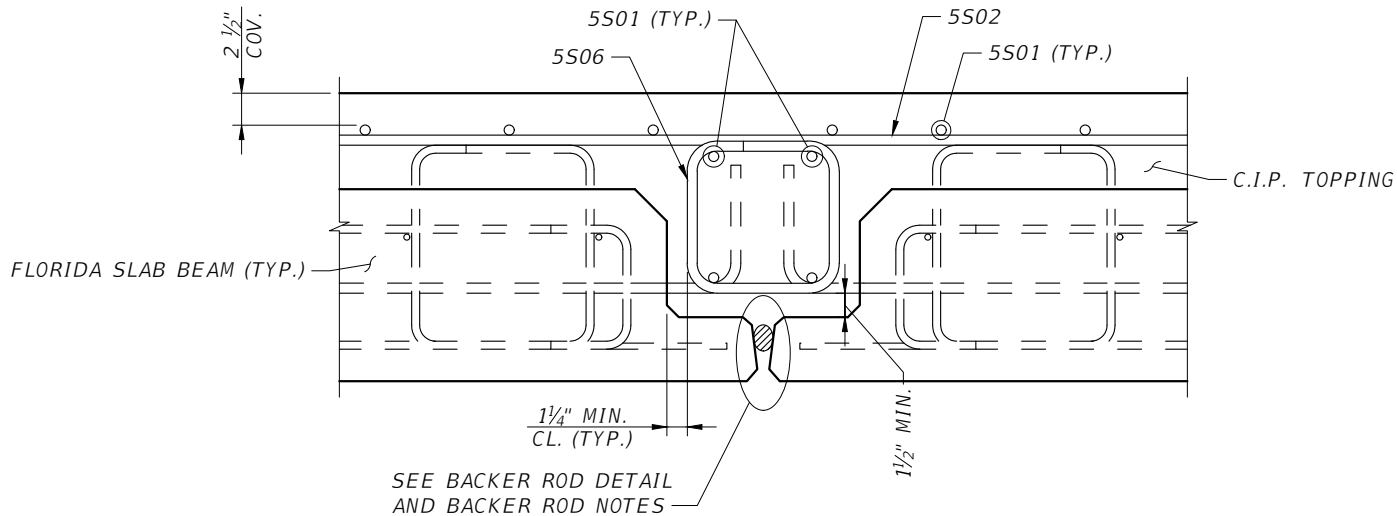
POURED EXPANSION JOINT DATA TABLE INDEX NO. 458-110			
LOCATION	DIM 'A' @ 70°	TOTAL DESIGN MOVEMENT	DIM 'A' ADJUSTMENT PER 10° F
END BENT 1	2"	0.133	0.015
INT. BENT 2	2"	0.267	0.029
END BENT 3	2"	0.133	0.015
NOTE: DIM. "A" ADJUSTMENT PER 10° IS MEASURED PERPENDICULAR TO CL EXPANSION JOINT. WORK THIS TABLE WITH STANDARD PLANS INDEX 458-110.			

- NOTE:
1. SIDEWALK COVER PLATES ARE REQUIRED AT ALL EXPANSION JOINT LOCATIONS THAT INTERSECT WITH SIDEWALKS.

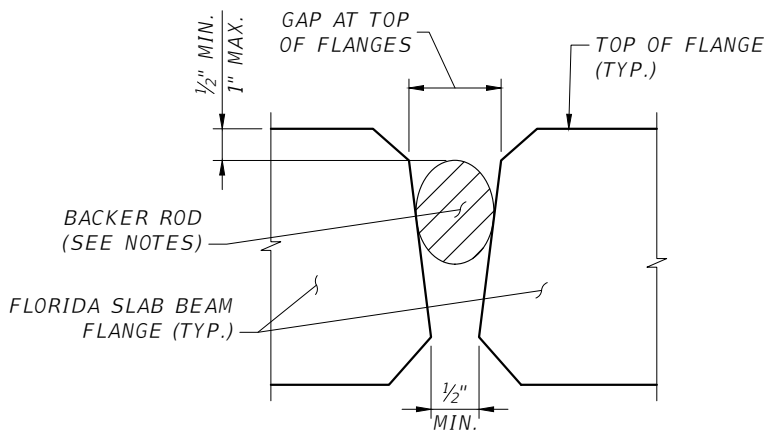
				BRIDGE NO. 176005	
DESIGNED		PREPARED FOR:			PREPARED BY:
DRAWN					PROJECT:
CHECKED			FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT		DESCRIPTION:
REV. NO.	DATE	DESCRIPTION	SUPERSTRUCTURE DETAILS (1 OF 3)		APPROVED BY:
				RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE
				9/6/2019	PROJECT NO.:
				G017R4	SHEET:
				B1-16	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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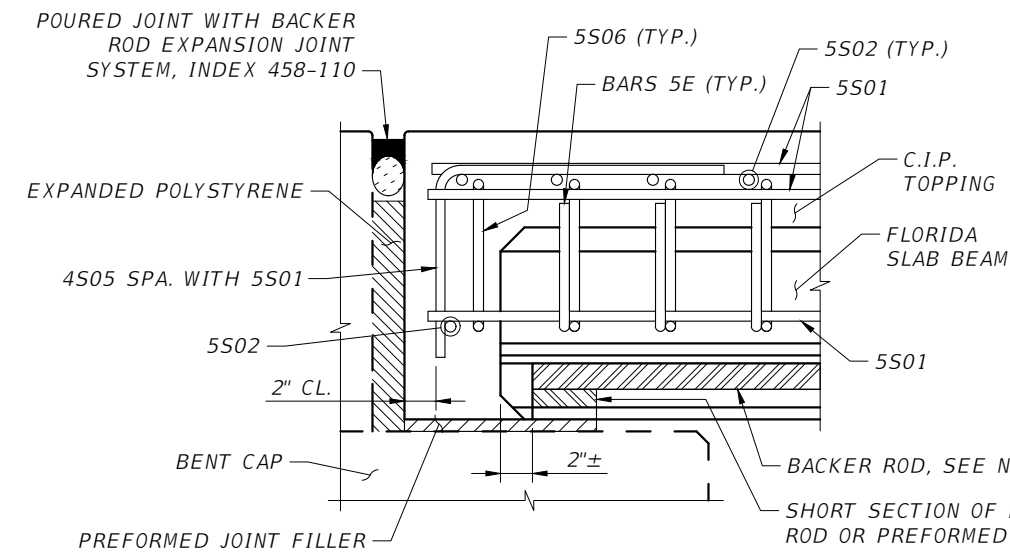
DETAIL AT POCKETS



BACKER ROD DETAIL

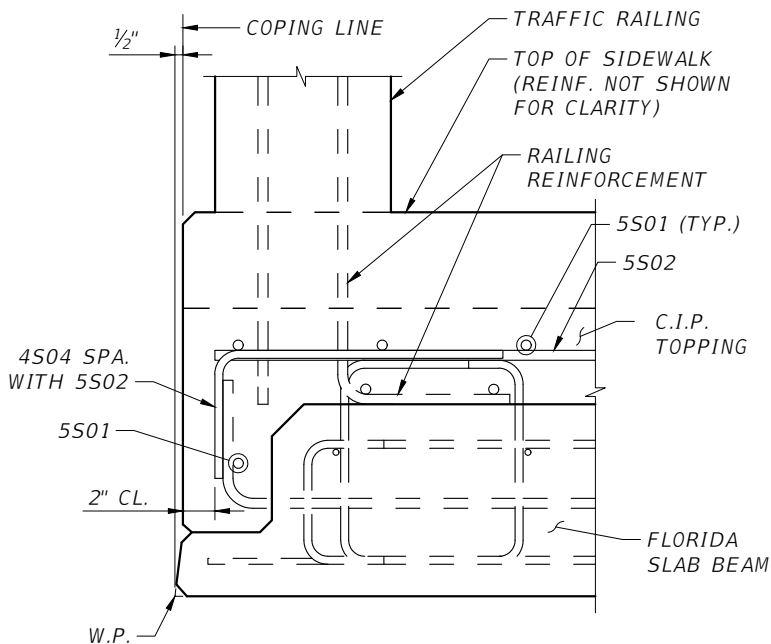
BACKER ROD NOTES:

1. USE A BACKER ROD TO FORM THE BOTTOM OF THE CAST IN PLACE TOPPING AT THE GAP BETWEEN ADJACENT FLORIDA SLAB BEAMS. USE A BACKER ROD MEETING THE REQUIREMENTS OF ASTM C1330 OR ASTM D5249, TYPES 1 OR 3, WITH A MINIMUM UNCOMPRESSED DIAMETER 50% LARGER THAN THE FIELD VERIFIED MAXIMUM WIDTH OF THE GAP BETWEEN ADJACENT FLORIDA SLAB BEAMS. MEASURE GAP AT THE TOP OF THE FLANGES AS SHOWN IN THE BACKER ROD DETAIL.
2. INSTALL THE BACKER ROD FROM THE TOP DOWN TO THE POSITION SHOWN IN THE BACKER ROD DETAIL.
3. SECURE THE BACKER ROD TO PREVENT DISPLACEMENT DURING TOPPING CONCRETE PLACEMENT AND TO BE MORTAR TIGHT USING A COMPATIBLE CONSTRUCTION ADHESIVE.
4. THE BACKER ROD MAY REMAIN IN PLACE AFTER TOPPING CONCRETE PLACEMENT.



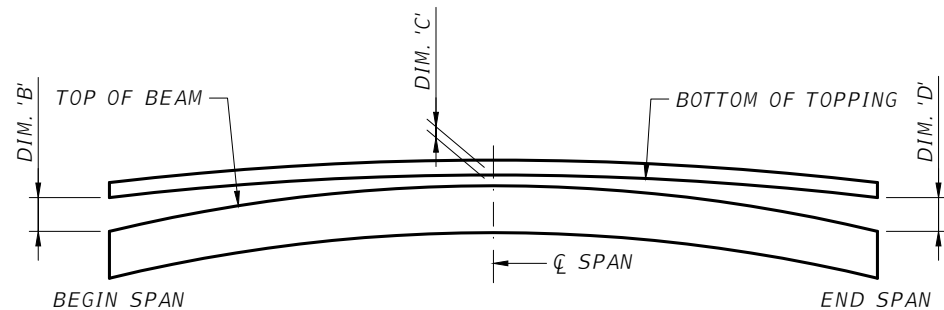
SECTION ALONG Q POCKET AT SPAN ENDS

(SECTION AT BEGIN/END BRIDGE SHOWN; SECTION AT INTERMEDIATE BENTS OR PIERS SIMILAR)

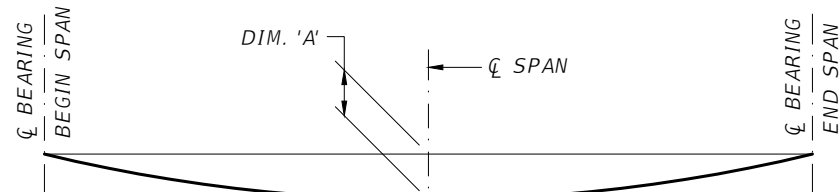


DETAIL AT COPINGS

CAMBER AND DEFLECTION DATA TABLE FOR FLORIDA SLAB BEAMS						
LOCATION		REQUIRED THEORETICAL BUILD-UP OVER Q BEAM			NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS	DEAD LOAD DEFLECTION DUE TO TOPPING CASTING @ 120 DAYS DIM. 'A'
SPAN NO.	BEAM NO.	AT BEGIN SPAN DIM. 'B'	AT Q SPAN DIM. 'C'	AT END SPAN DIM. 'D'		
1	1-1 THRU 1-4	5/8"	0	5/8"	1 3/8"	3/4"
1	1-5	1 1/4"	5/8"	1 1/4"	1 3/8"	3/4"
1	1-6 THRU 1-9	5/8"	0	5/8"	1 3/8"	3/4"
2	2-1 THRU 2-4	5/8"	0	5/8"	1 3/8"	3/4"
2	2-5	1 1/4"	5/8"	1 1/4"	1 3/8"	3/4"
2	2-6 THRU 2-9	5/8"	0	5/8"	1 3/8"	3/4"



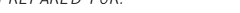
BUILD-UP DIAGRAM - CONTROL AT MIDSPAN (ALONG Q BEAM)



DEAD LOAD DEFLECTION DIAGRAM

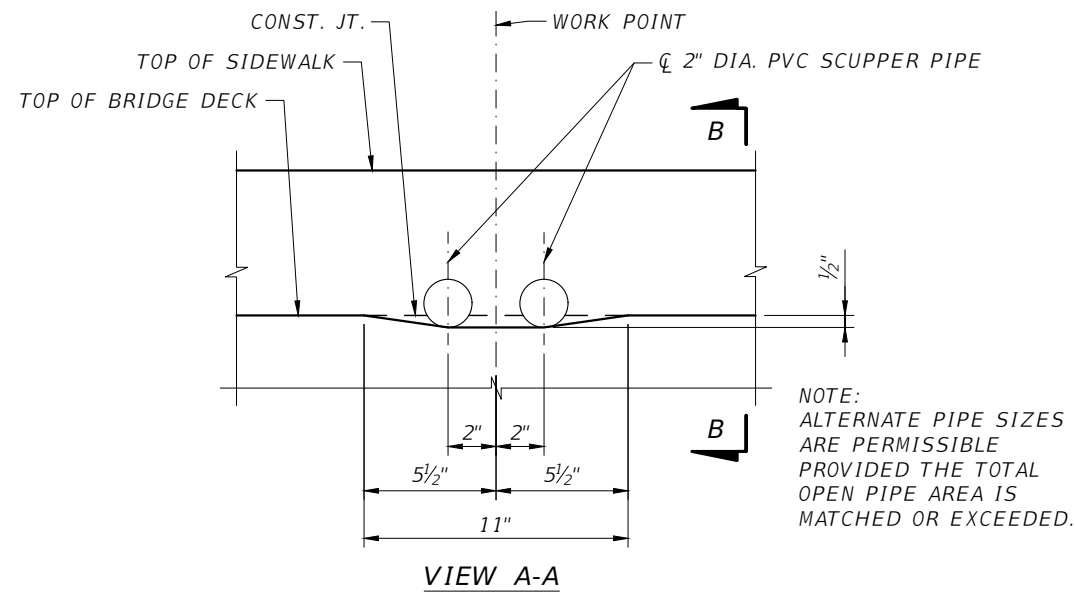
CAMBER NOTE:

THE VALUES GIVEN IN THE TABLE ARE BASED ON THEORETICAL BEAM CAMBERS. THE CONTRACTOR SHALL MONITOR BEAM CAMBERS FOR THE PURPOSE OF PREDICTING CAMBER VALUES AT THE TIME OF THE TOPPING CASTING. IF THE PREDICTED CAMBERS BASED ON FIELD MEASUREMENTS DIFFER MORE THAN $\pm 1/2$ " FROM THE THEORETICAL "NET BEAM CAMBER @ 120 DAYS" SHOWN IN THE TABLE, PROPOSE MODIFIED DIMENSIONS AS REQUIRED AND SUBMIT TO THE ENGINEER FOR APPROVAL A MINIMUM OF 21 DAYS PRIOR TO CASTING TOPPING CONCRETE.

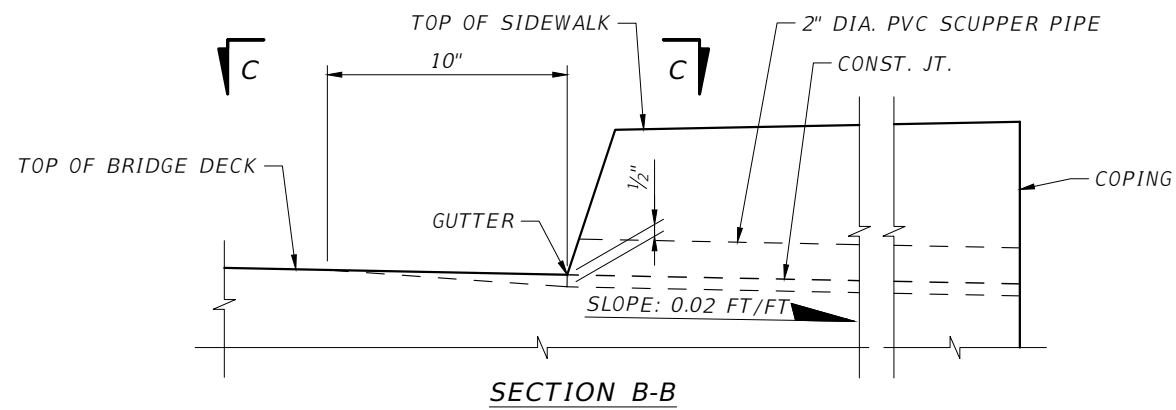
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				DRAWN _____			FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	SUPERSTRUCTURE DETAILS (2 OF 3)	RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	9/6/2019
				CHECKED _____						
REV. NO.	DATE	DESCRIPTION								

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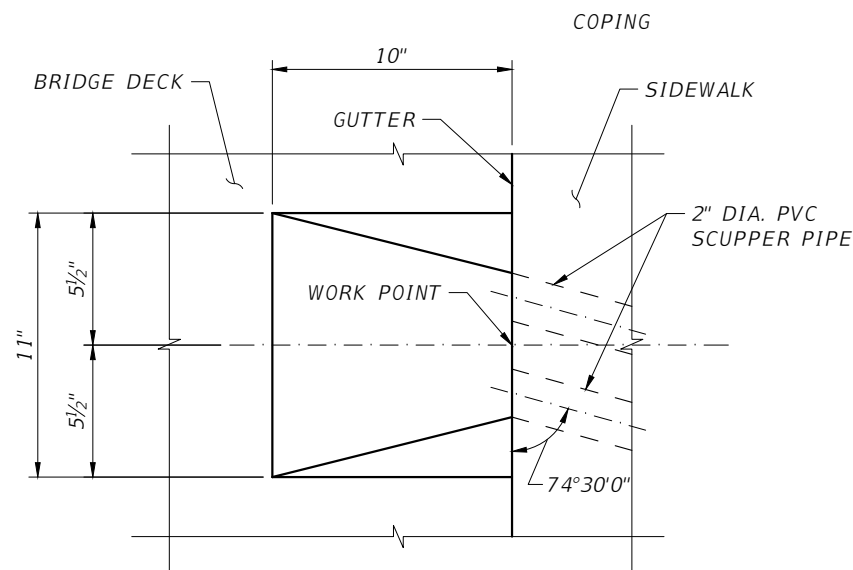
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VIEW A-A

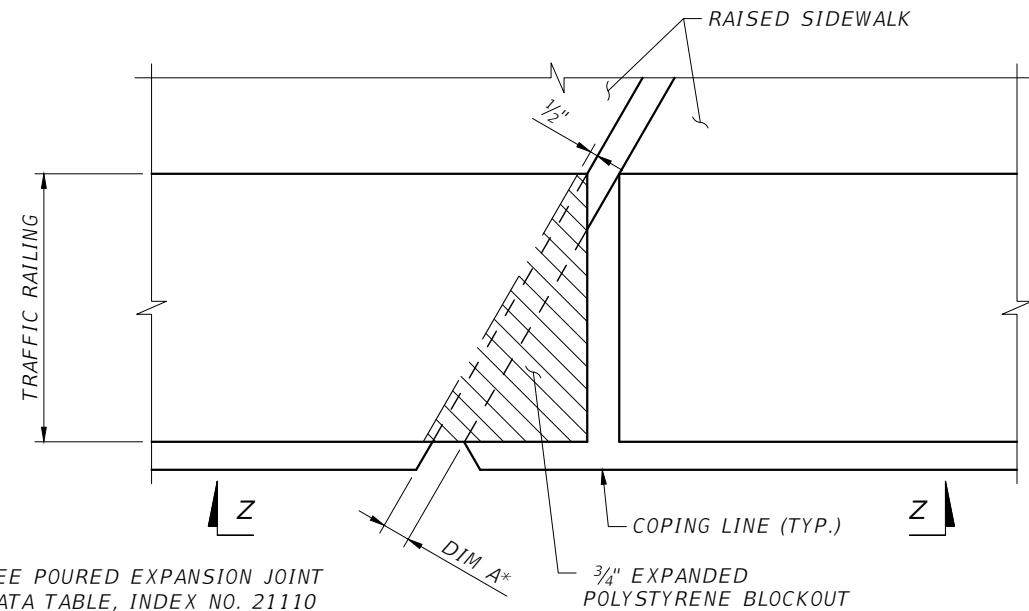


SECTION B-B

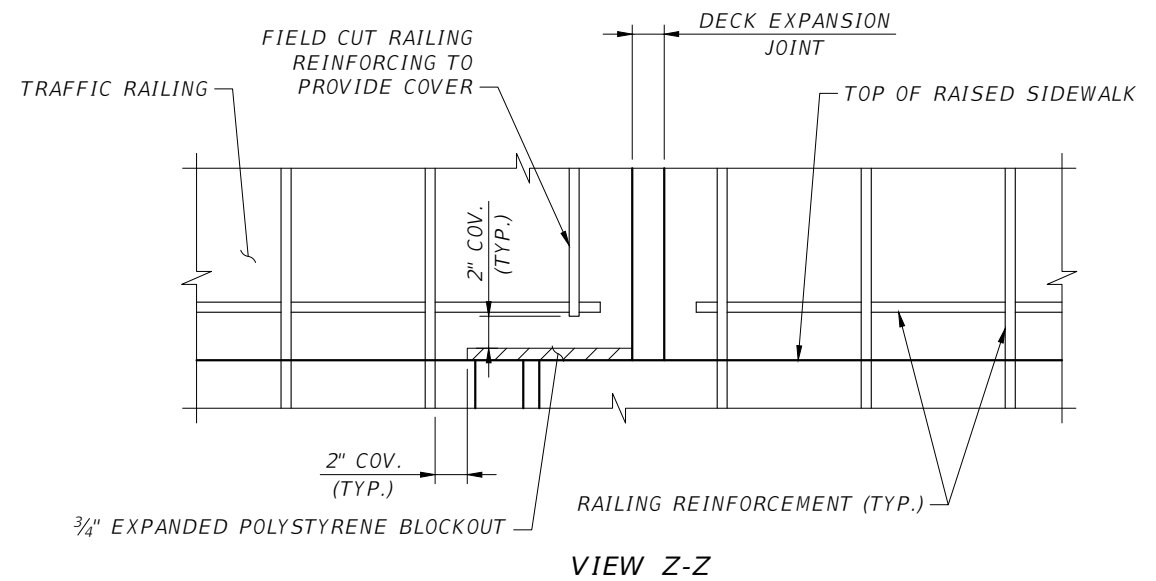


VIEW C-C

SCUPPER DETAILS



RAILING DETAIL AT SKEWED EXPANSION JOINTS
(POURED JOINT WITH BACKER ROD AND REINFORCING NOT SHOWN FOR CLARITY)



VIEW Z-Z

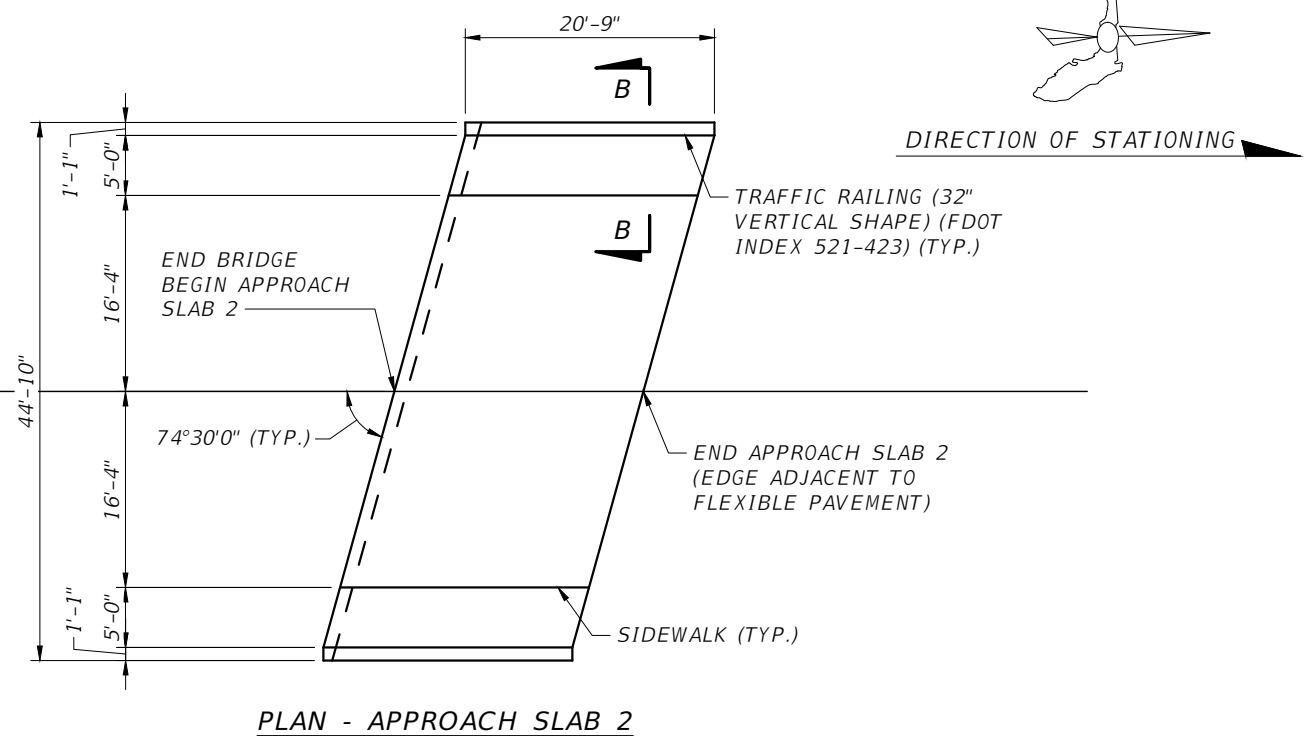
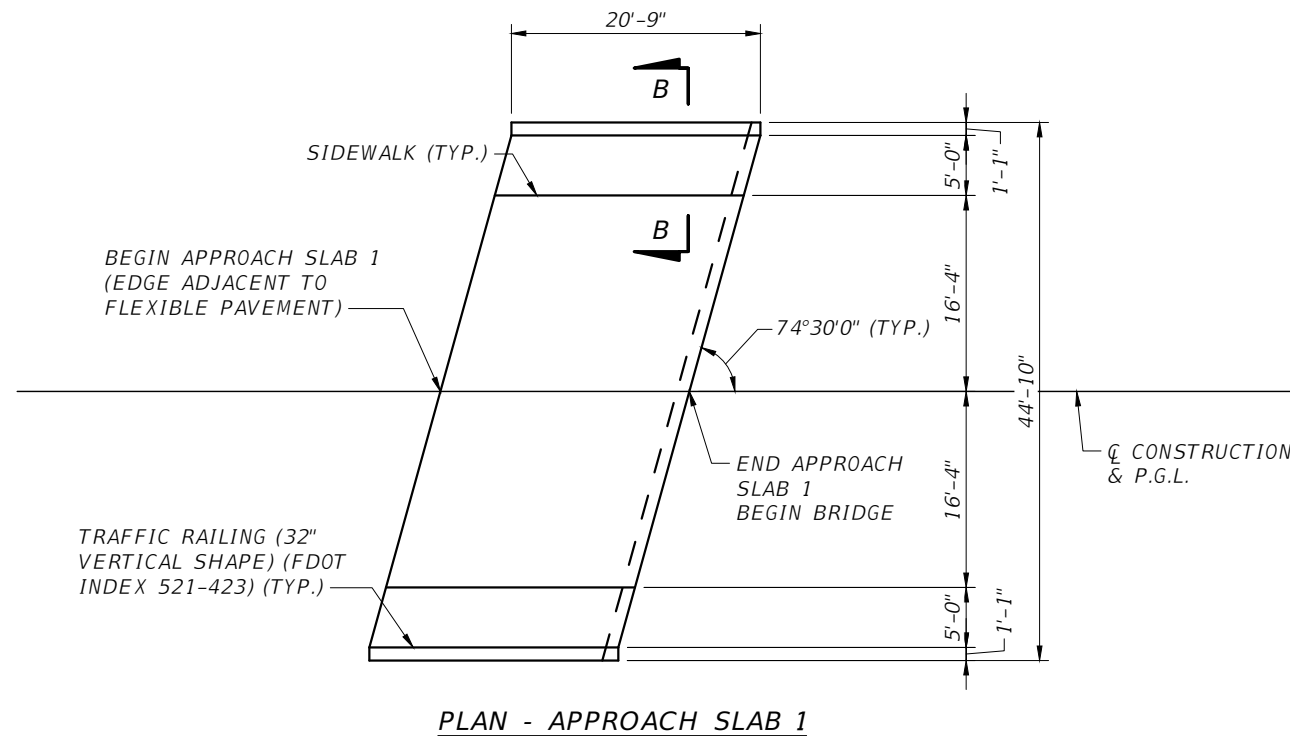
NOTE:
FOR POURED EXPANSION JOINT DATA TABLE, SEE
SUPERSTRUCTURE DETAILS (1 OF 3) SHEET.

BRIDGE NO. 176005

DESIGNED	PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
DRAWN	VENICE, FL	ATKINS	FPID 443413-1-54-01	SUPERSTRUCTURE DETAILS	RUDOLF P.G. PEIN, P.E.	9/6/2019
CHECKED	CITY OF VENICE		CAPRI ISLES BRIDGE	(3 OF 3)	FLA. REG. NO. 56805	PROJECT NO.:
			REPLACEMENT		ATKINS NORTH AMERICA (FBPR CA No.24)	G017R4
REV. NO.	DATE	DESCRIPTION			4030 WEST BOY SCOUT BOULEVARD, SUITE 700	SHEET:
					TAMPA, FL 33607-1712	B1-18

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

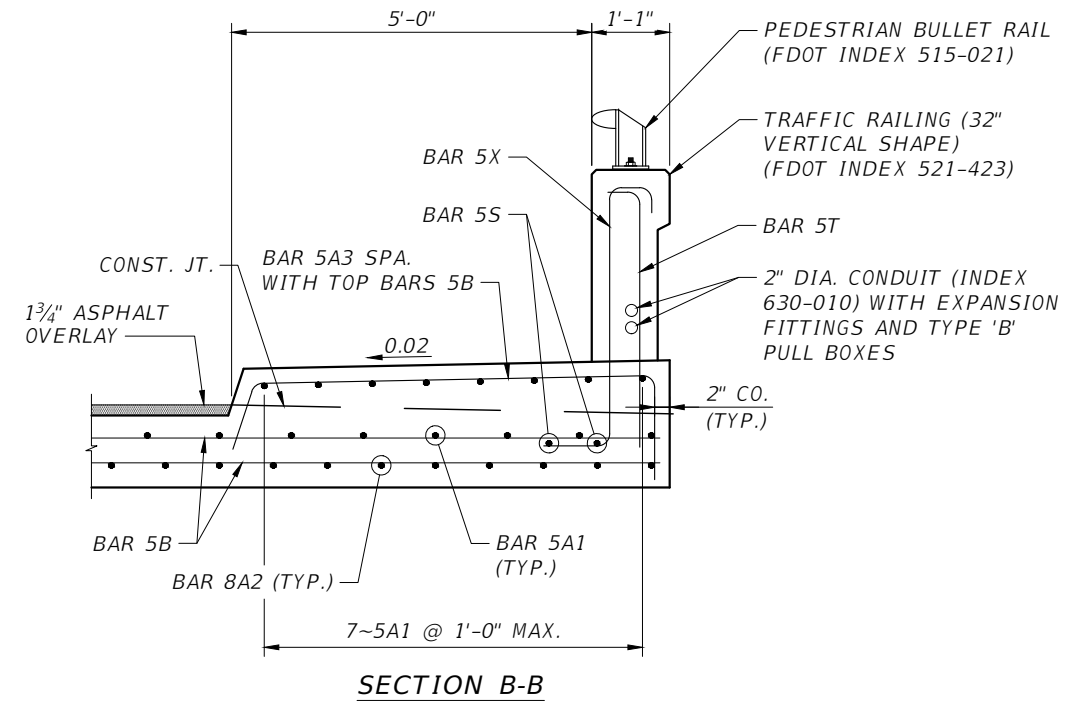
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APPROACH SLAB INDEX NO. D20920 TABLE OF DIMENSIONS						
LOCATION	DIMENSIONS					ANGLE ∅
	L1	L2	M1	M2	N	
BEGIN BRIDGE	20'-9"	20'-9"	1'-1"	1'-1"	42'-8"	15°30'00"
END BRIDGE	20'-9"	20'-9"	1'-1"	1'-1"	42'-8"	15°30'00"

DIMENSION NOTES:

- DIMENSIONS L1 & L2 ARE MEASURED ALONG GUTTER LINE, INSIDE FACE OF PARAPET OR INSIDE FACE OF RAILING ON RAISED SIDEWALKS.
- DIMENSIONS L1 & L2 ARE ARC DIMENSIONS WITHIN CURVED ALIGNMENTS.



NOTE:

- WORK THIS SHEET WITH FDOT INDEX D20920.

				BRIDGE NO. 176005			
DESIGNED		PREPARED FOR:		PREPARED BY:		PROJECT:	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT
DRAWN		DESCRIPTION:	APPROACH SLABS				APPROVED BY:
CHECKED		DATE:	9/6/2019				PROJECT NO.:
REV. NO.	DATE	DESCRIPTION	SHEET: B1-20				
				RUDOLF P.G. PEIN, P.E. FLA. REG. NO. 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712			

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REV. NO.	DATE	DESCRIPTION	

NOTE:
REFER TO INDEX 415-001 FOR
DETAILS.

DATE: 9/6/2019
PROJECT NO.: G017R4
SHEET: B1-21

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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MARK		LENGTH		NO.	TYP	STY	B			C			D			E			F			H			J			K			N	Φ
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG		
LOCATION: SLAB TOPPING SPAN 1 AND 2																NO. REQUIRED = 1																
5	S01	41 - 6		220	1			41 - 6			-			-			-			-			-			-						
5	S02	46 - 2		170	12			23 - 1			23 - 1			-			-			-			-			-					2.2	
5	S03	8 - 0		168	15			5 - 9			1 - 6			0 - 9			-			-			-			-			71	88		
4	S04	2 - 2		322	10			0 - 8			1 - 6			-			-			-			-			-						
4	S05	2 - 6		240	10			1 - 0			1 - 6			-			-			-			-			-						
5	S06	4 - 0		1328	4	4	4	0 - 9			0 - 9			-			-			-			-			-						
LOCATION: APPROACH SLAB 1 AND 2																NO. REQUIRED = 2																
5	A1	20 - 5		60	1			20 - 5			-			-			-			-			-			-						
8	A2	20 - 5		61	1			20 - 5			-			-			-			-			-			-						
5	A3	8 - 0		40	15			5 - 9			1 - 6			0 - 9			-			-			-			-			71	88		
5	B	46 - 2		48	1			46 - 2			-			-			-			-			-			-						
5	C	5 - 0		40	1			5 - 0			-			-			-			-			-			-						

NOTE:
REFER TO INDEX 415-001 FOR DETAILS.

					DESIGNED _____	PREPARED FOR: 	PREPARED BY: 	PROJECT: FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: REINFORCING BAR LIST (2 OF 2)	APPROVED BY: _____ RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE: 9/6/2019 PROJECT NO.: G017R4 SHEET: B1-22
REV. NO.	DATE	DESCRIPTION			CHECKED _____						

BRIDGE NO. 176005

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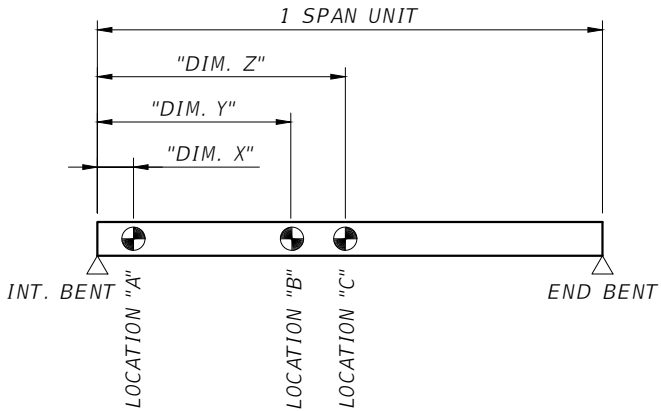
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LOAD RATING SUMMARY DETAILS FOR PRESTRESSED CONCRETE BRIDGES (FLAT SLAB AND DECK/GIRDER)																	TABLE DATE 07-01-15
TABLE 2 - LRFR																	
LEVEL	LIMIT STATE	VEHICLE	WEIGHT (TONS)	LOAD FACTORS			MOMENT (STRENGTH) OR STRESS (SERVICE)					SHEAR (STRENGTH)					COMMENTS: INTERIOR/EXTERIOR BEAM DF METHOD IF OTHER THAN LRFD. OTHER APPROPRIATE COMMENTS
				LL	DC	DW	DISTRIBUTION FACTOR (DF)	RATING FACTOR	TONS	LOCATION	DIMENSION	DISTRIBUTION FACTOR (DF)	RATING FACTOR	TONS	LOCATION	DIMENSION	
DESIGN LOAD RATING	STRENGTH I (INV)	HL-93	N/A	1.75	1.25	1.50	0.40	1.60	N/A	C	20.23	0.79	3.93	N/A	A	4.36	EXTERIOR BEAM
	STRENGTH I (OP)	HL-93	N/A	1.35	1.25	1.50	0.40	2.07	N/A	C	20.23	0.79	5.10	N/A	A	4.36	EXTERIOR BEAM
	SERVICE III (INV)	HL-93	N/A	0.80	1.00	1.00	0.40	1.38	N/A	C	20.23	N/A	N/A	N/A	N/A	N/A	EXTERIOR BEAM
	SERVICE III (OP)	HL-93	N/A	0.80	1.00	1.00	0.40	1.85	N/A	C	20.23	N/A	N/A	N/A	N/A	N/A	EXTERIOR BEAM
PERMIT LOAD RATING	STRENGTH II	FL120	60.0	1.35	1.25	1.50	0.40	1.53	91.56	B	21.42	0.79	3.53	211.58	A	4.36	EXTERIOR BEAM

ABBREVIATIONS:

INV - INVENTORY

OP - OPERATING



RATING LOCATIONS

CONTROLLING LOAD RATING			
LIMIT STATE	VEHICLE	WEIGHT (TONS)	RATING FACTOR
SERVICE III (INV)	HL-93	N/A	1.38

GENERAL NOTES:

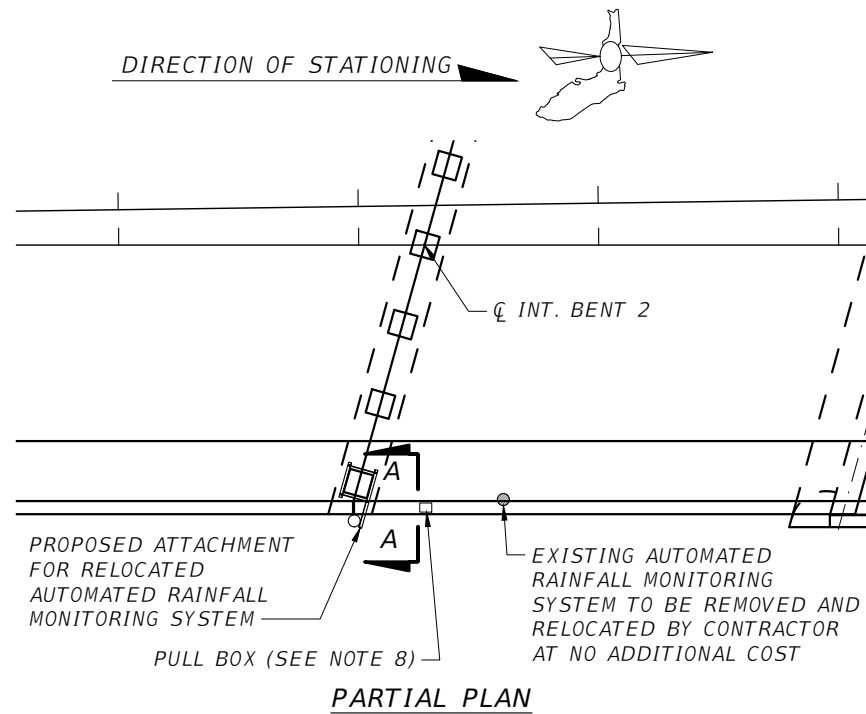
- THIS TABLE IS BASED ON THE REQUIREMENTS ESTABLISHED IN THE JANUARY 2019 "STRUCTURES MANUAL".

TABLE 2 NOTES:

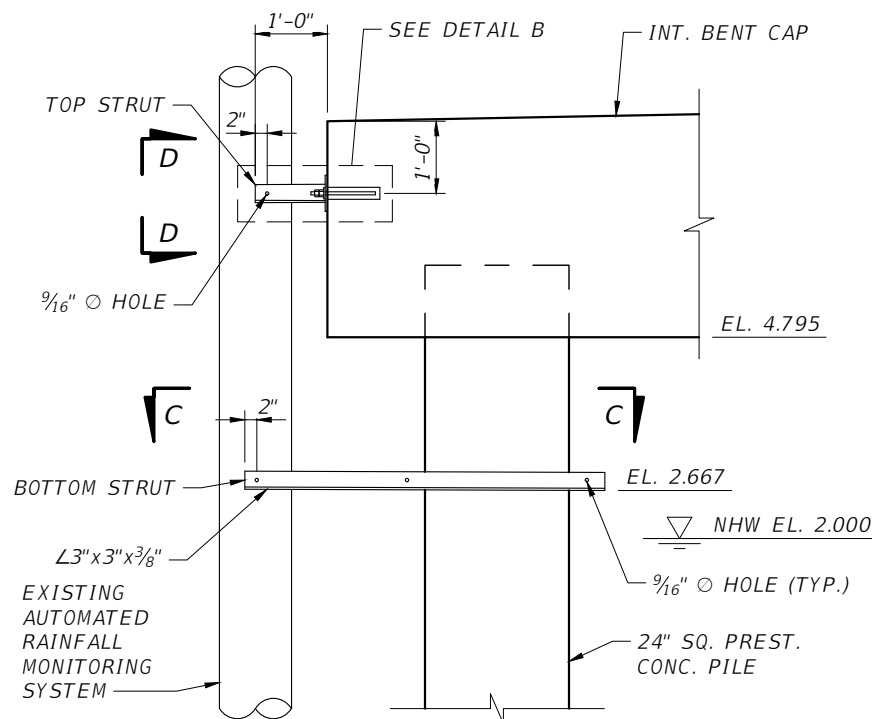
- PERMIT CAPACITY IS DETERMINED BY USING THE PERMIT VEHICLE IN ALL LANES.
- SERVICE III DESIGN INVENTORY TENSILE STRESS LIMITS = $3\sqrt{f'_c}$.
- HAS THE AASHTO LRFD SPECIFICATIONS ARTICAL 5.8.3.5 LONGITUDINAL REINFORCEMENT BEEN SATISFIED? ☒ YES ☐ NO

				BRIDGE NO. 176005			
DESIGNED		PREPARED FOR:		PREPARED BY:		PROJECT:	FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT
DRAWN						DESCRIPTION:	LOAD RATING CHARTS
CHECKED						APPROVED BY:	RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712
REV. NO.	DATE	DESCRIPTION				DATE:	9/6/2019
						PROJECT NO.:	G017R4
						SHEET:	B1-23

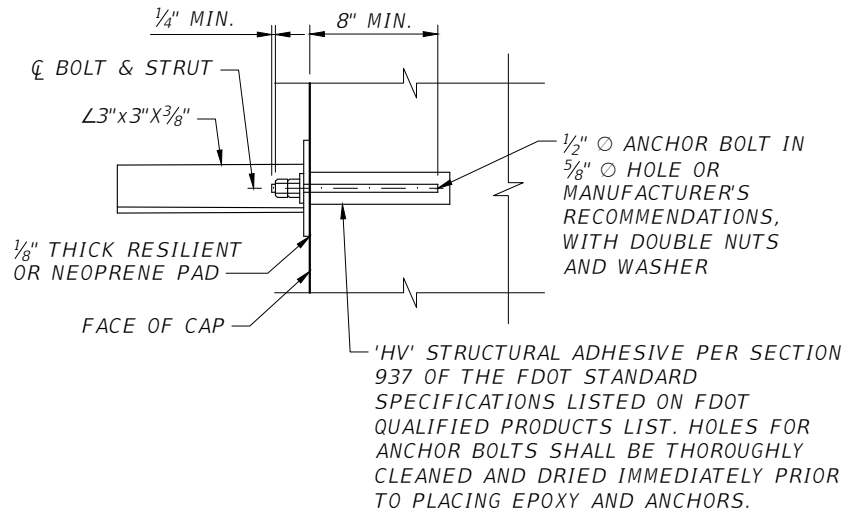
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PARTIAL PLAN



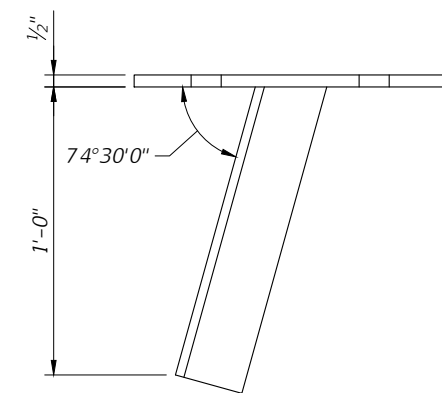
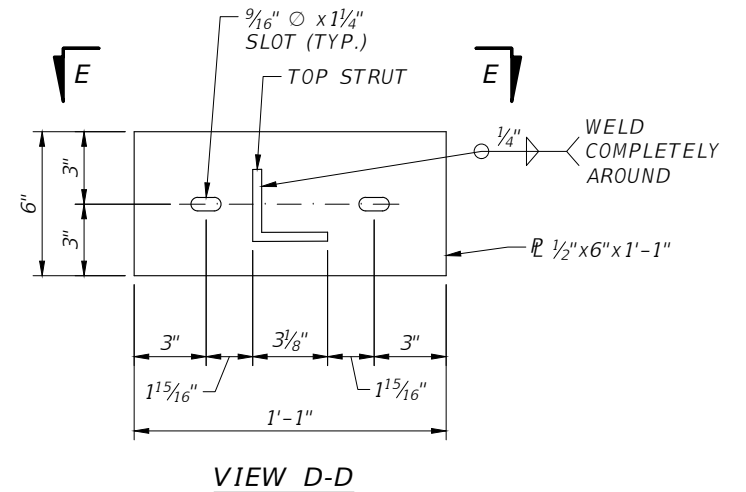
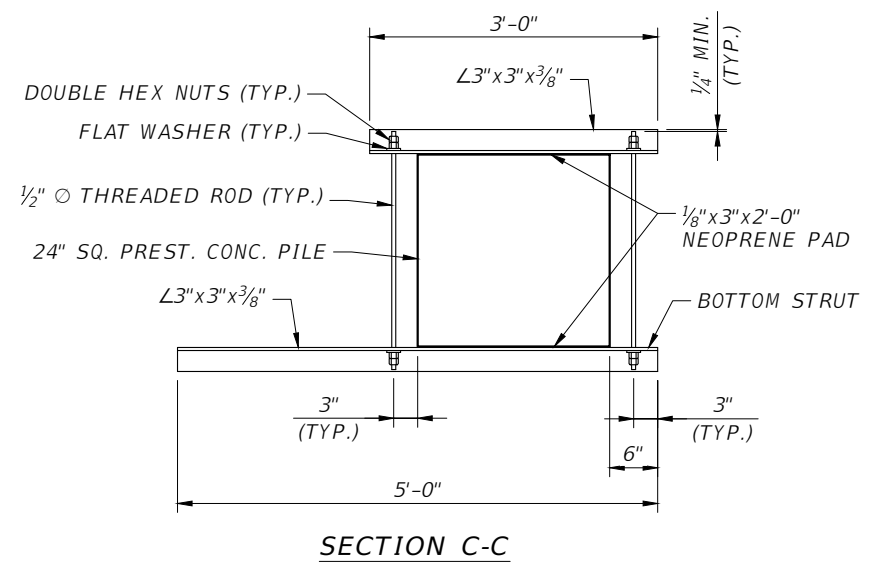
VIEW A-A



DETAIL B

NOTES:

- THE CONTRACTOR SHALL CONTACT JEFF BANNER WITH SARASOTA COUNTY (PHONE: 941-650-1113; EMAIL: JBANNER@SCGOV.NET) 60 DAYS PRIOR TO THE DEMOLITION OF THE EXISTING BRIDGE TO COORDINATE THE REMOVAL, STORAGE AND RELOCATION/REPLACEMENT OF THE EXISTING AUTOMATED RAINFALL MONITORING SYSTEM. ANY DAMAGE TO THE MONITORING SYSTEM AS A RESULT OF ANY CONSTRUCTION ACTIVITY SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- MATERIALS:
 - STEEL SHAPES & PLATES: ASTM A709, GRADE 36
 - WELD METAL: E70XX
 - ANCHOR BOLTS AND TREADED RODS: ASTM F1554, GRADE 36 WITH ASTM A563 GRADE A HEAVY-HEX DOUBLE NUTS & WASHER. ADHESIVE FOR ANCHOR BOLTS SHALL BE A QPL APPROVED 'HV' TYPE EPOXY, SUITABLE FOR DYNAMIC LOADING (VIBRATION DUE TO TRAFFIC).
 - INSTALL ALL NUTS PER MANUFACTURER'S INSTRUCTIONS.
 - BOLT HOLE DIAMETERS EQUAL TO THE BOLT DIAMETER PLUS 1/16".
- GALVANIZATION:
 - NUTS, BOLTS, THREADED RODS AND WASHERS: ASTM F2329.
 - STEEL SHAPES & PLATES: ASTM A123.
- ADJUST ANGLE LENGTH TO ACCOUNT FOR AS-BUILT PILE LOCATION. THE TOP AND BOTTOM STRUTS SHALL BE LOCATED SUCH THAT THE ATTACHMENT HOLES SHALL BE VERTICALLY AND HORIZONTALLY ALIGNED.
- SHOP DRAWINGS ARE REQUIRED FOR THE AUTOMATED RAINFALL MONITORING SYSTEM ATTACHMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO DEVELOPING AND SUBMITTING SHOP DRAWINGS.
- SHOP FABRICATION, ASSEMBLY, HANDLING AND SHIPPING:
 - DO NOT BEGIN FABRICATION BEFORE RECEIVING SHOP DRAWING APPROVAL.
 - WELDING: CONFORM TO AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (STEEL) ANSI/AWS D1.1 (CURRENT EDITION).
- THE PAYMENT FOR FABRICATION AND MATERIALS (INCLUDING NUTS, BOLTS, WASHERS, THREADED ROD, ETC.) SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR ITEM NO. 0460-2-1 (STRUCT STEEL, CARBON).
- PROVIDE PULL BOX IN TRAFFIC RAILING IN ACCORDANCE WITH INDEX 630-010. THE PAYMENT FOR PULL BOX SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR ITEM NO. 635-3-13 (JUNCTION BOX, FURNISH & INSTALL, EMBEDDED).
- ADDITIONAL HARDWARE AND FASTENERS REQUIRED TO ATTACH ARMS TO ANGLES ARE TO BE PROVIDED BY SARASOTA COUNTY.

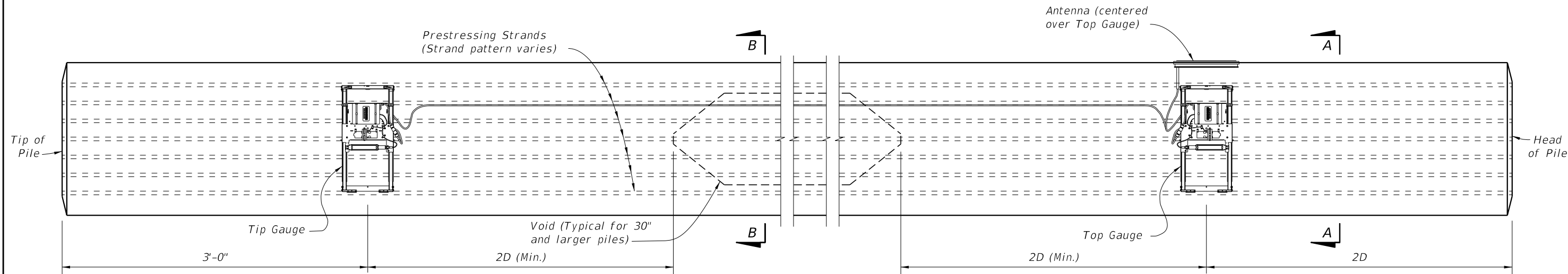


VIEW E-E

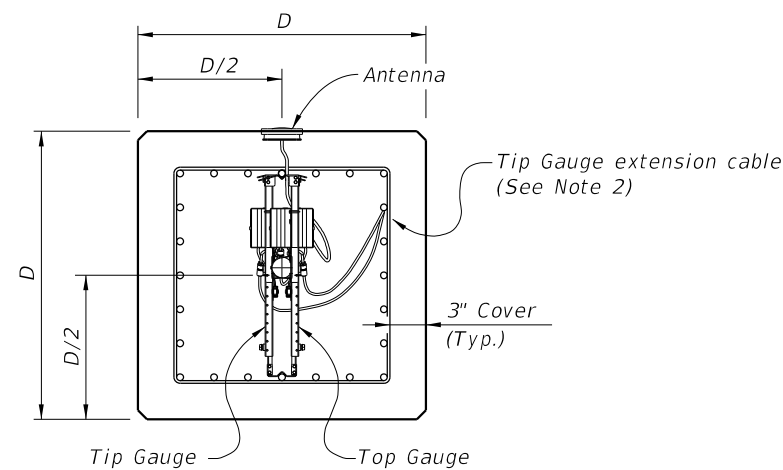
				BRIDGE NO. 176005	
				DESIGNED	
				DRAWN	
				CHECKED	
REV. NO.	DATE	DESCRIPTION			

PREPARED FOR:	PREPARED BY:	PROJECT:	DESCRIPTION:	APPROVED BY:	DATE:
		FPID 443413-1-54-01 CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	AUTOMATED RAINFALL MONITORING SYSTEM SUPPORT DETAILS	RUDOLF P.G. PEIN, P.E. FLA. REG. NO 56805 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	9/6/2019
				DATE	PROJECT NO.:
					G017R4
					SHEET:
					B1-24

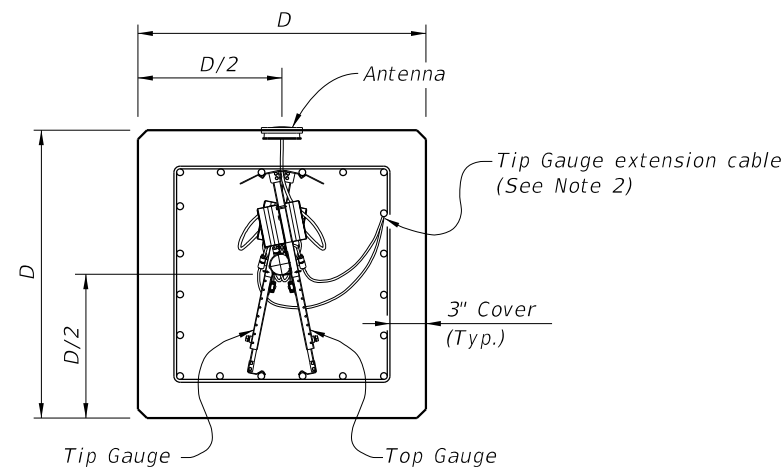
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



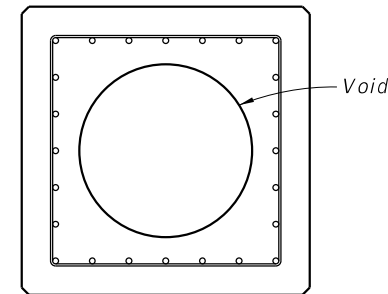
ELEVATION



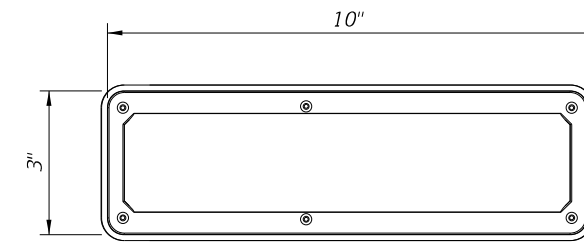
SECTION A-A
(Strand Pattern with odd number of strands per face)



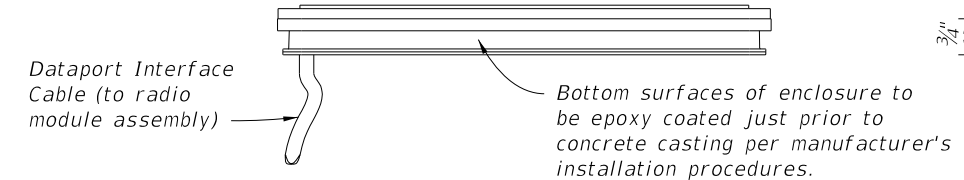
SECTION A-A
(Strand Pattern with even number of strands per face)



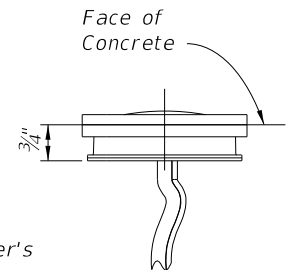
SECTION B-B
(Showing Voided Pile,
Solid Pile Similar)



ANTENNA TOP VIEW



ANTENNA SIDE VIEW



ANTENNA END VIEW

- NOTES:
1. For piles 18" and larger installed for bridge foundations, provide EDC Instrumentation in accordance with Specification Section 455.
 2. Attach Tip Gauge extension cable to the underside of the strand shown in Section A-A. Secure cable to strand with nylon wire ties spaced a maximum of 6ft. along cable.

10/23/2018 12:36:59 PM

LAST REVISION 07/01/15	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	SQUARE PRESTRESSED CONCRETE PILES - EDC INSTRUMENTATION	INDEX 455-003	SHEET 1 of 1
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PRESTRESSED CONCRETE PILE NOTES:

1. Work this Index with the Square Prestressed Concrete Pile Splices (Index 455-102), the Prestressed Concrete Pile Standards (Index 455-112, 455-114, 455-118, 455-124, 455-130, and the Pile Data Table in the Structures Plans.
2. Concrete:

A. Piles: Class V (Special)

B. Silica Fume: See "GENERAL NOTES" in the Structures Plans for locations where the use of silica fume, metakaolin or ultra-fine flyash is required for options using stainless steel strand and reinforcing.
3. Concrete strength at time of prestress transfer:

A. Piles: 4,000 psi minimum.
4. Reinforcing:

A. Bars:

a. Stainless Steel: Meet the requirements of Specification Section 931 for Type 304, Grade 75.

b. Carbon FRP: Meet the requirements of Specification Section 932.

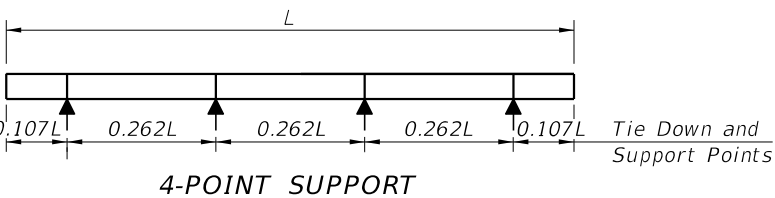
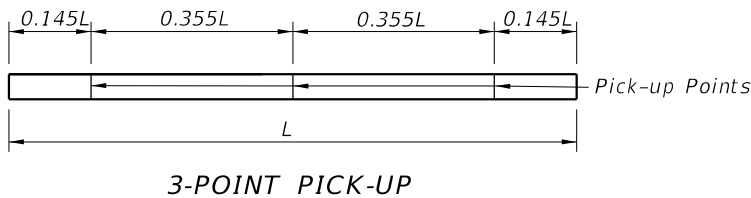
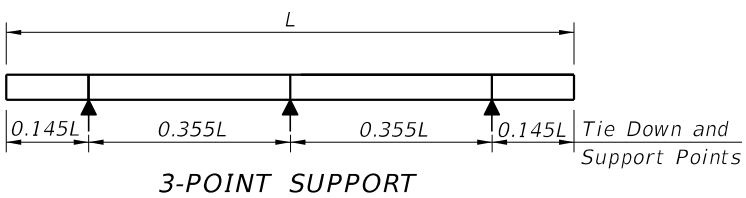
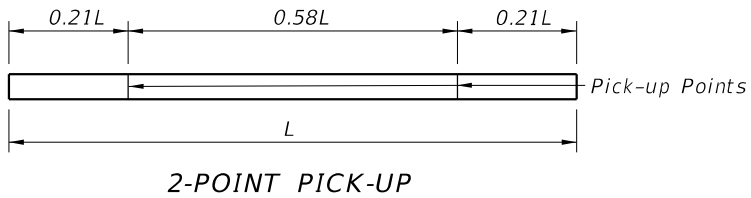
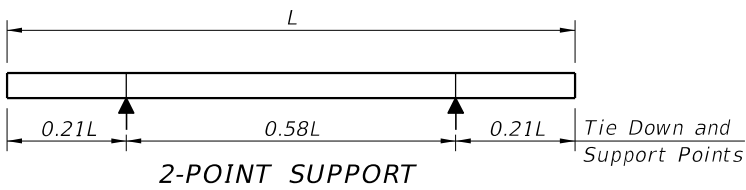
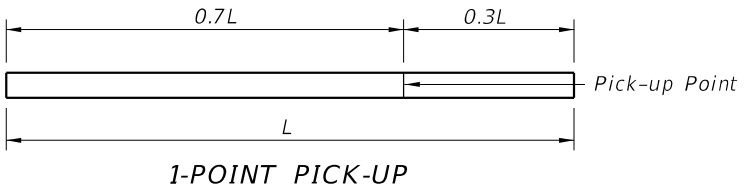
B. Prestressing Strands:

a. Stainless Steel: Seven-wire HSSS, UNS S32205 (Type 2205) or UNS S31803 strand, meeting the requirements of Specification Section 933.

b. Carbon FRP: Meet the requirements of Specification Section 933.
5. Spiral Ties:

A. Tie each wrap of the spiral strand to a minimum of two corner strands.

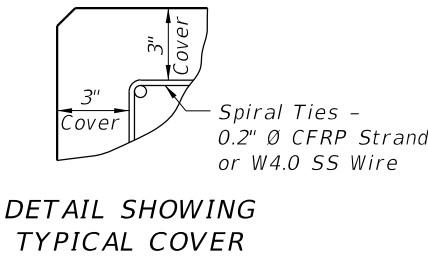
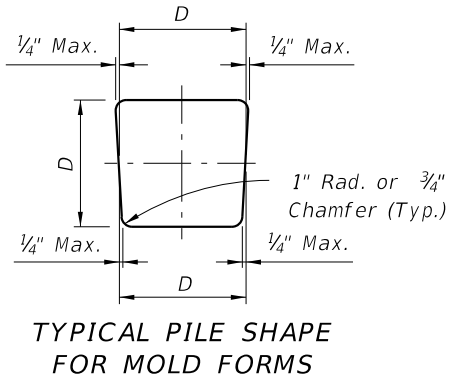
B. One full turn required for spiral splices.
6. Pile Splices: Fill dowel holes and form the joint between pile sections with a Type AB Epoxy Compound in accordance with Specification Section 926. Use an Epoxy Bonding Compound or an Epoxy Mortar as recommended by the Manufacturer.



PILE PICK-UP DETAILS

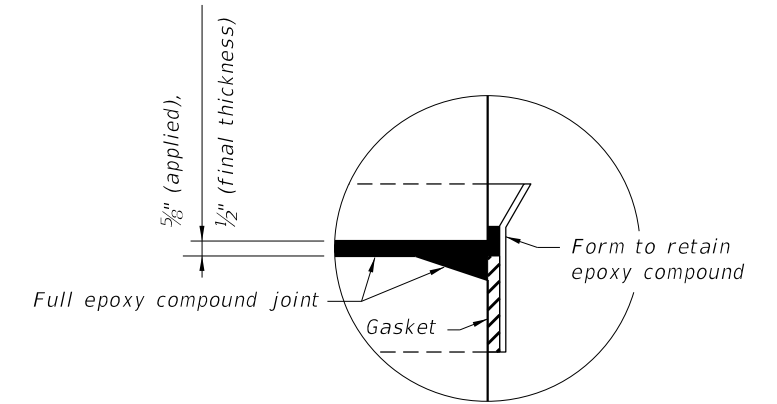
STORAGE AND TRANSPORTATION SUPPORT DETAILS

TABLE OF MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS							
	D = Square Pile Size (inches)					Required Storage and Transportation Detail	Pick-Up Detail
	12	14	18	24	30		
Maximum Pile Length (Feet)	48	52	59	68	87	2, 3, or 4 point	1 Point
	69	75	85	98	124	2, 3, or 4 point	2 Point
	99	107	121	140	178	3 or 4 point	3 Point

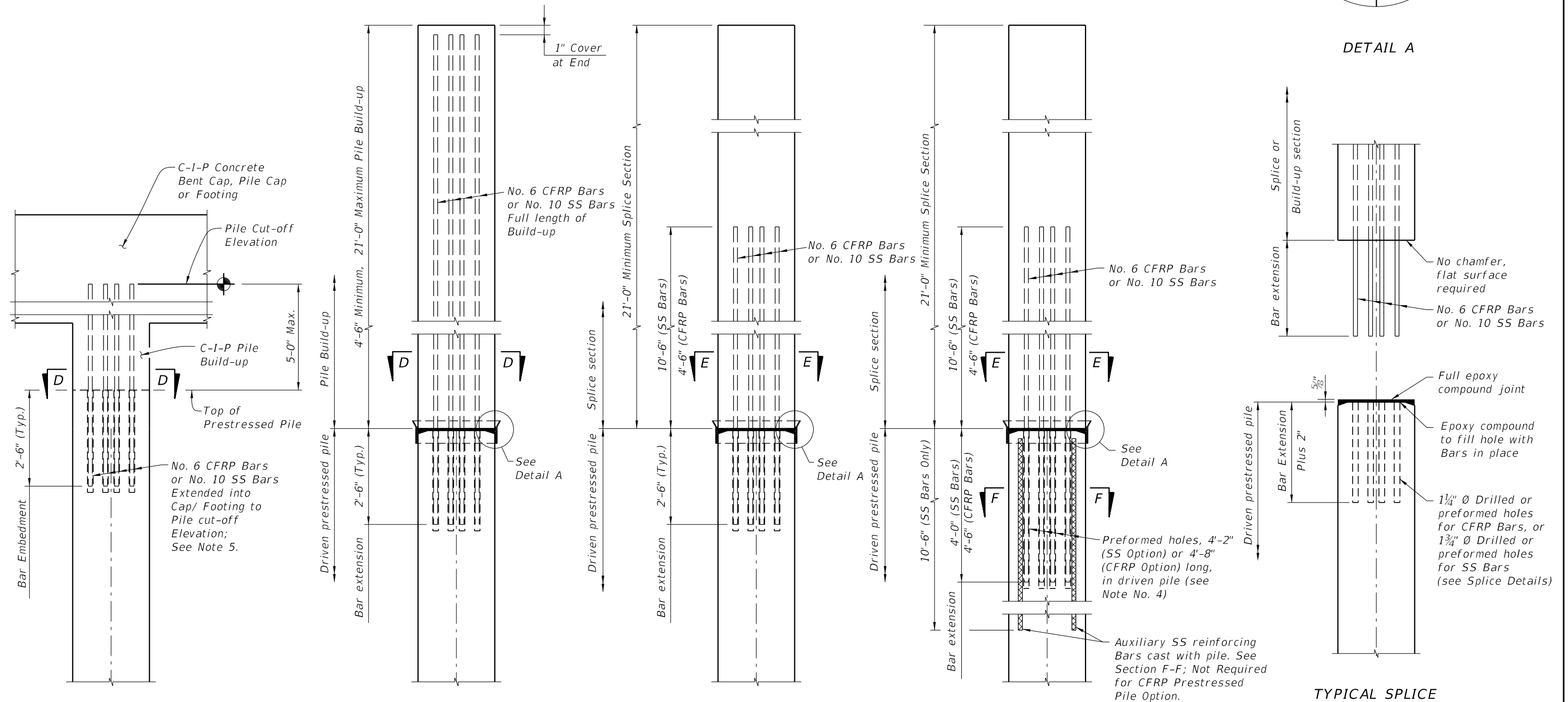


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5. For tension piles where top of Prestressed Pile is less than 3 feet below Pile Cut-off Elevation, extend No. 6 CFRP Bars or No. 10 SS into cap beyond Pile Cut-off Elevation to achieve development as approved by the Engineer.



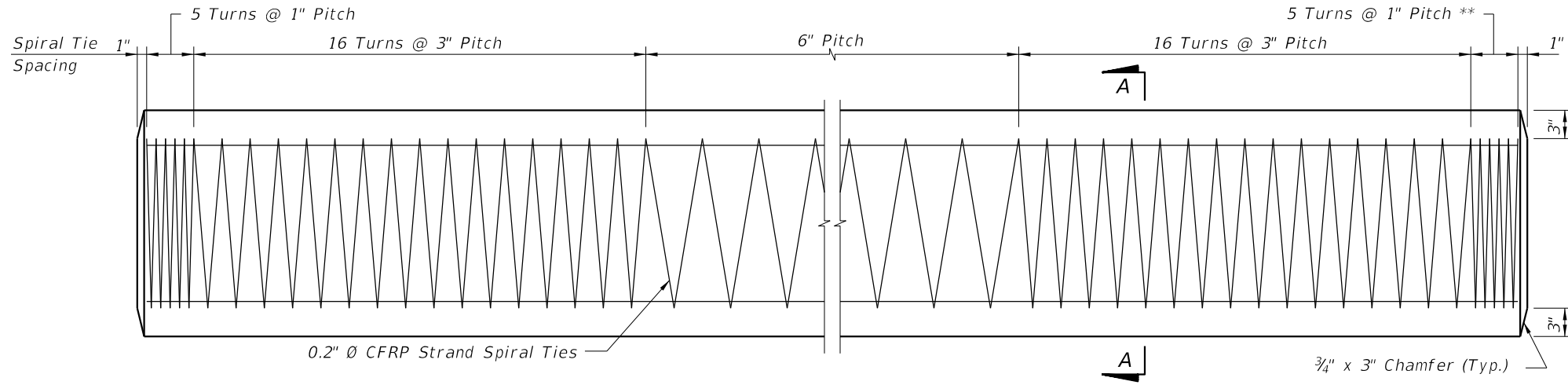
DETAIL A



TYPICAL SPLICE
BEFORE BONDING

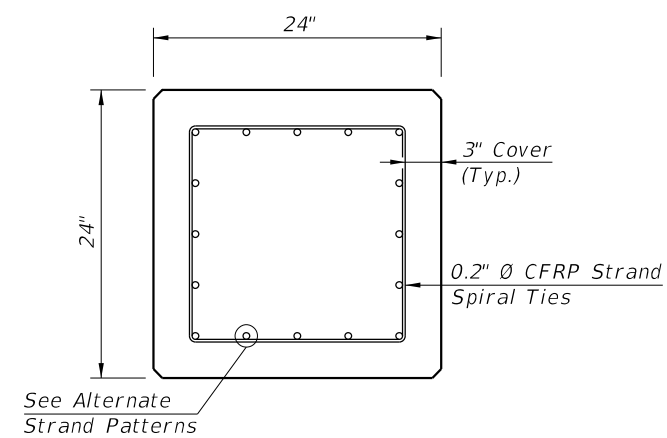
LAST REVISION 01/01/16	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	SQUARE CFRP & SS PRESTRESSED CONCRETE PILE SPLICES	INDEX 455-102	SHEET 1 of 1
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SPIRAL TIE ELEVATION

** See Note 4 on Index 455-102

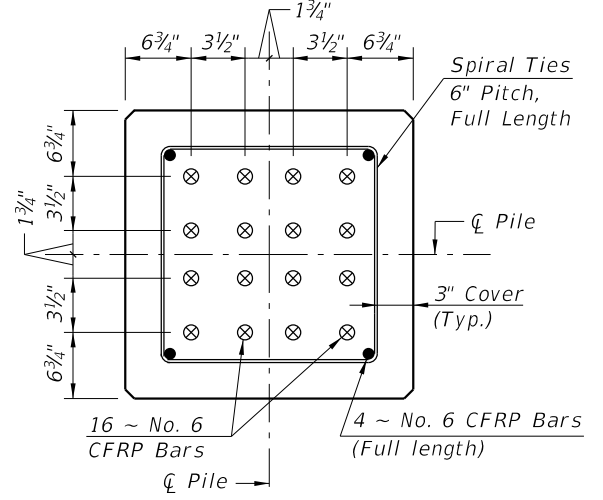


SECTION A-A

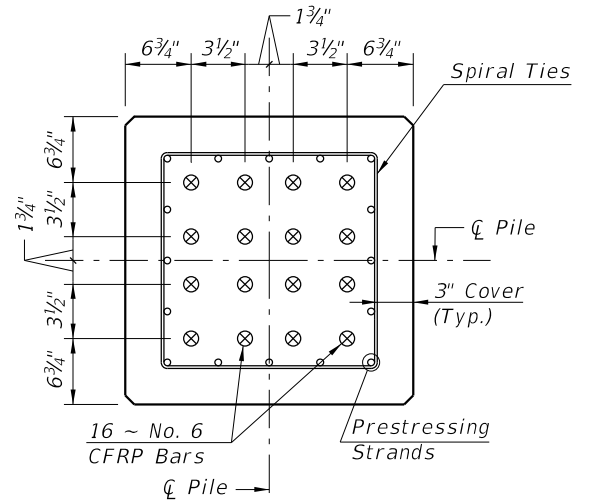
ALTERNATE STRAND PATTERNS

- 16 ~ 0.6" Ø, CFRP 7-Strand, at 42 kips
- 16 ~ 1/2" Ø, CFRP Single-Strand, at 41 kips

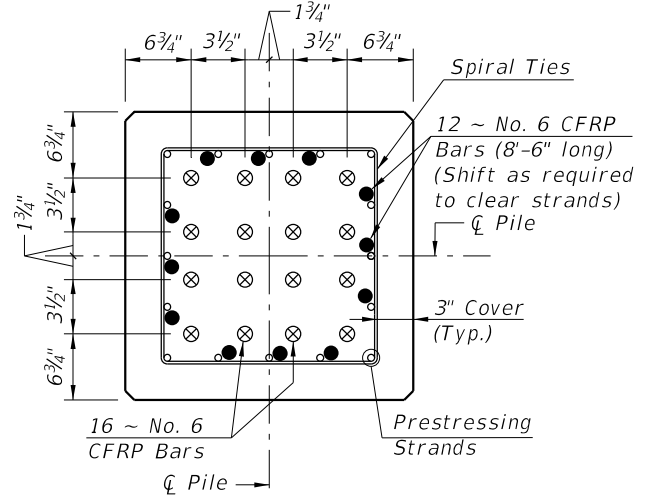
- NOTES:
- Work this Index with Index 455-101 - Typical Details and Notes for Square CFRP & SS Prestressed Concrete Piles and Index 455-102 - Square CFRP & SS Prestressed Concrete Pile Splices.
 - Any of the given Strand Patterns may be utilized.
The strands shall be located as follows:
Place one strand at each corner and place the remaining strands equally spaced between the corner strands.
The total strand pattern shall be concentric with the nominal concrete section of the pile.



SECTION D-D
(See Non-Drivable Unforeseen Reinforced Precast Pile Build-Up Detail)



SECTION E-E
(See Drivable Prestressed Precast Pile Splice Detail)



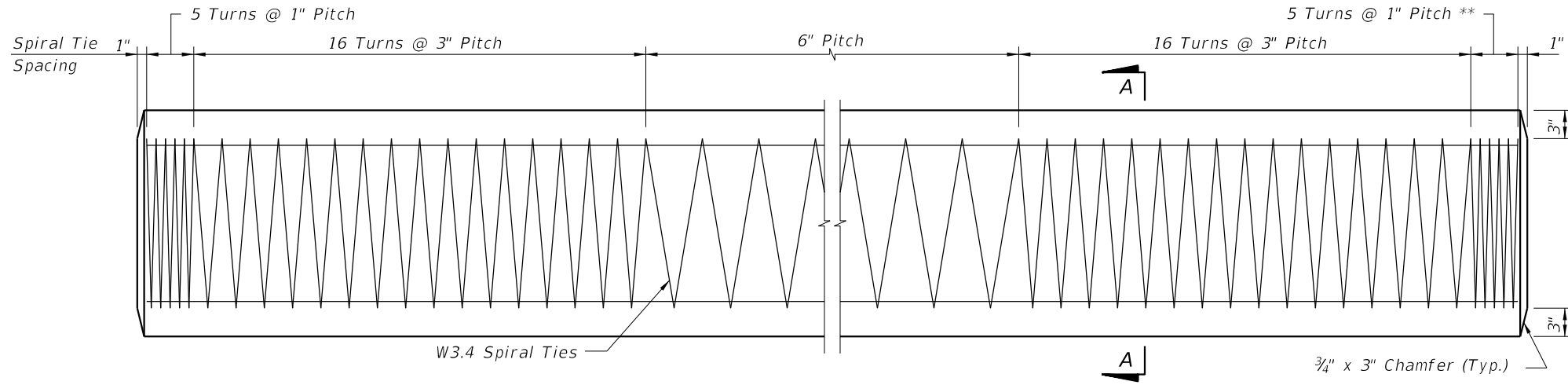
SECTION F-F
(See Drivable Preplanned Prestressed Precast Pile Splice Detail)

CFRP PILE SPLICE REINFORCEMENT DETAILS

CFRP PRESTRESSED PILE DETAILS

LAST REVISION	DESCRIPTION:	FY 2019-20 STANDARD PLANS	24" SQUARE CFRP & SS PRESTRESSED CONCRETE PILE	INDEX	SHEET
11/01/16				455-124	1 of 2

10/24/2018 11:42:04 AM

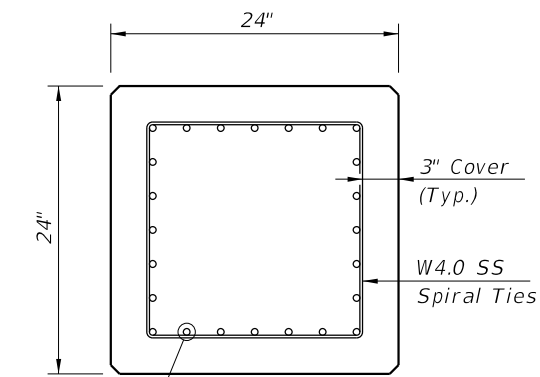


ELEVATION

** See Note 4 on Index 455-102

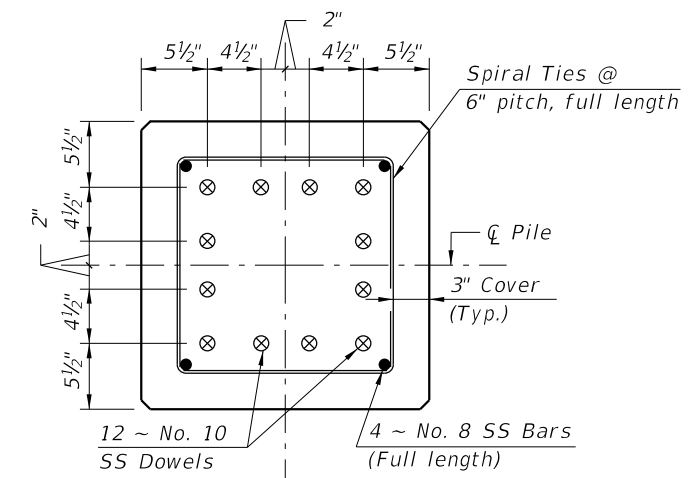
STRAND PATTERN

28 ~ 1/2" Ø, HSSS at 26 kips

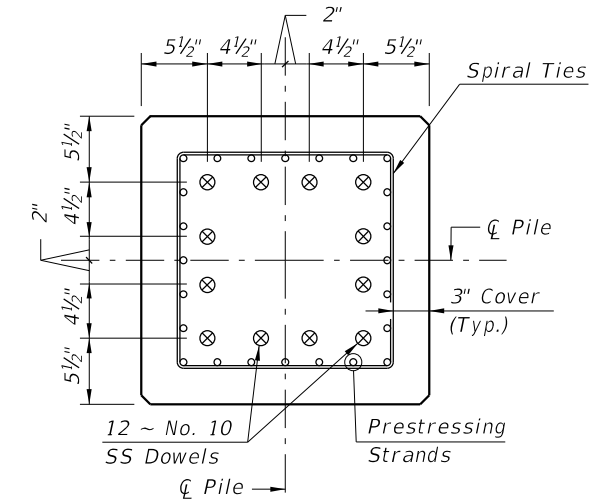


SECTION A-A

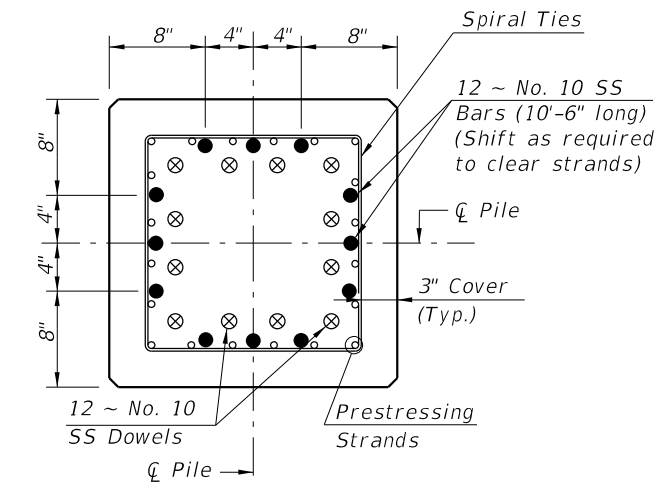
- NOTES:
1. Work this Index with Index 455-101 - Typical Details and Notes for Square CFRP & SS Prestressed Concrete Piles and Index 455-102 - Square CFRP & SS Prestressed Concrete Pile Splices.
 2. Any of the given Strand Patterns may be utilized.
The strands shall be located as follows:
Place one strand at each corner and place the remaining strands equally spaced between the corner strands.
The total strand pattern shall be concentric with the nominal concrete section of the pile.



SECTION D-D
(See Non-Drivable Unforeseen Reinforced Precast Pile Build-Up Detail)



SECTION E-E
(See Drivable Prestressed Precast Pile Splice Detail)

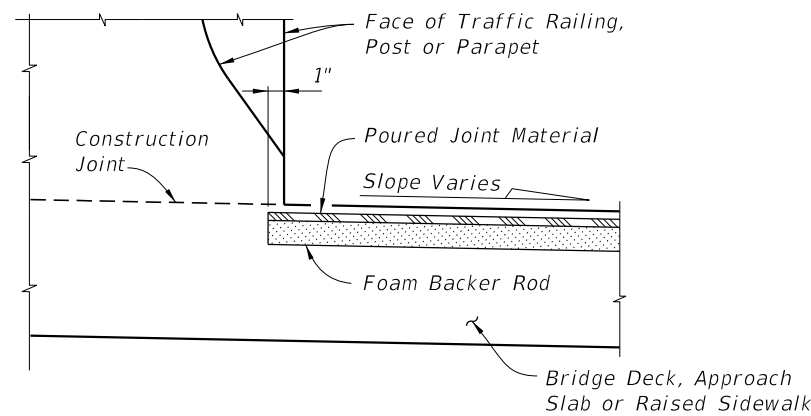


SECTION F-F
(See Drivable Preplanned Pile Splice Detail)

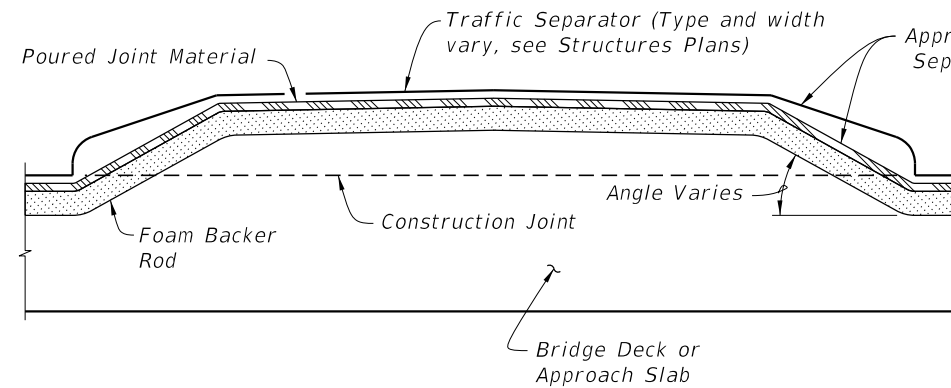
SS PILE SPLICE REINFORCEMENT DETAILS

SS PRESTRESSED PILE DETAILS

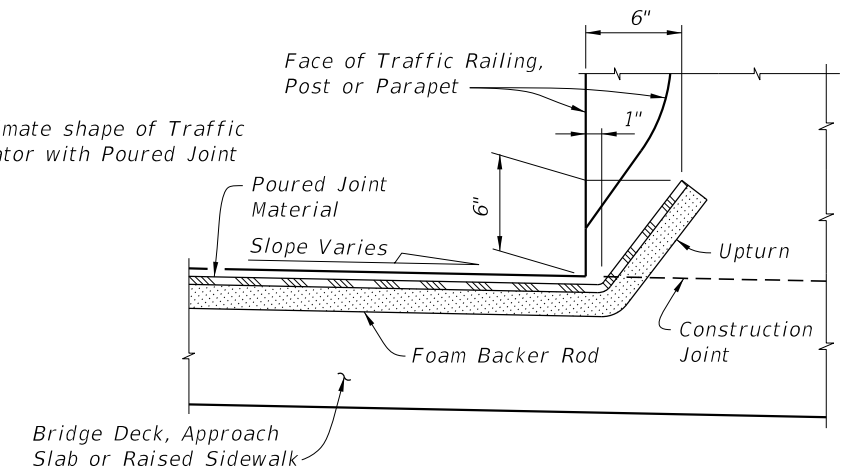
LAST REVISION	DESCRIPTION:	FY 2019-20 STANDARD PLANS	24" SQUARE CFRP & SS PRESTRESSED CONCRETE PILE	INDEX	SHEET
01/01/16				455-124	2 of 2



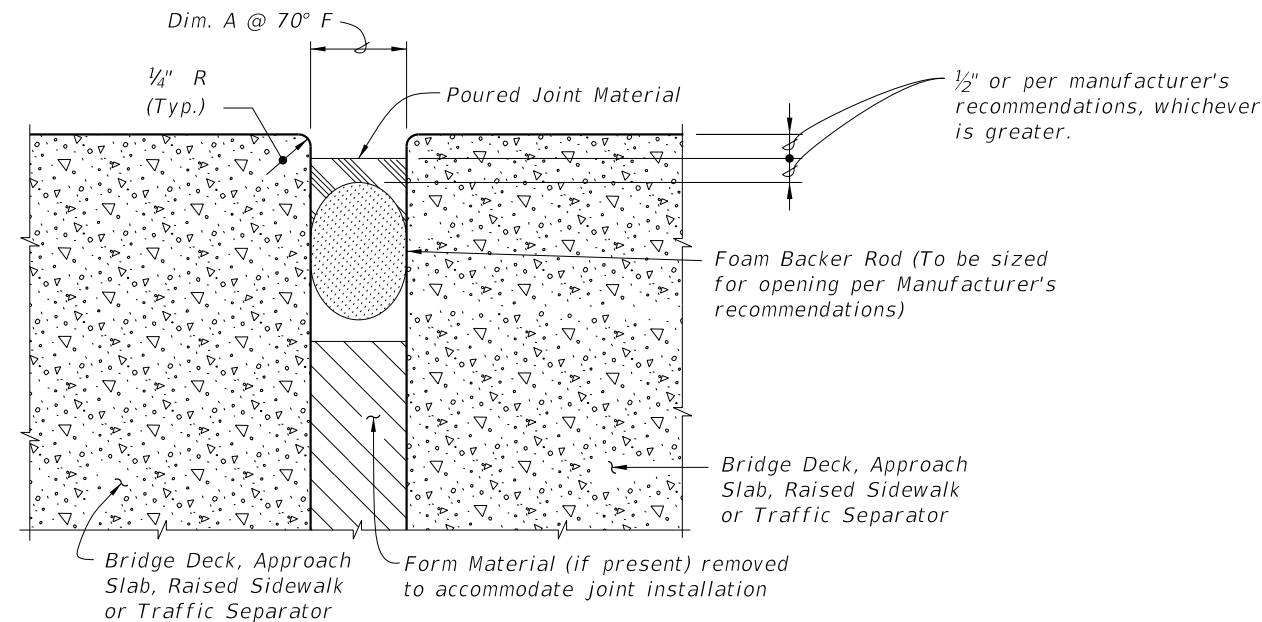
PARTIAL SECTION ALONG Q JOINT
JOINT TREATMENT AT HIGH SIDE OF
DECK WITH SLOPES 1% OR GREATER



PARTIAL SECTION ALONG Q JOINT,
JOINT TREATMENT AT TRAFFIC SEPARATOR



PARTIAL SECTION ALONG Q JOINT
JOINT TREATMENT AT LOW SIDE OF DECK OR
HIGH SIDE OF DECK WITH SLOPES < 1%



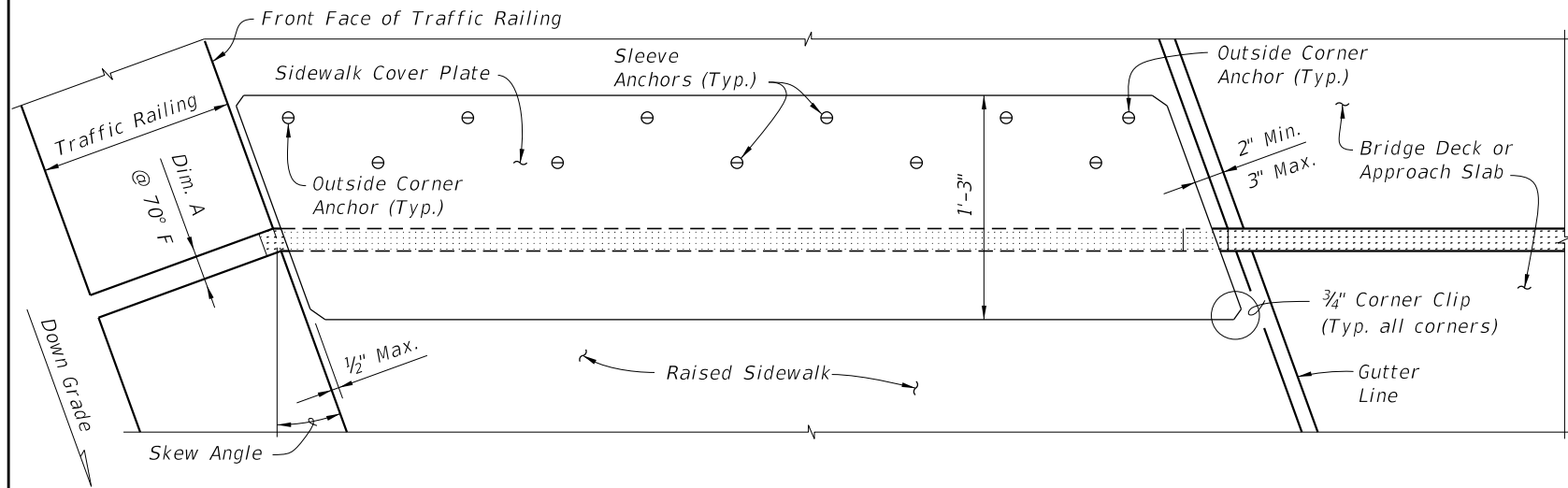
TYPICAL SECTION THRU JOINT

GENERAL NOTES:

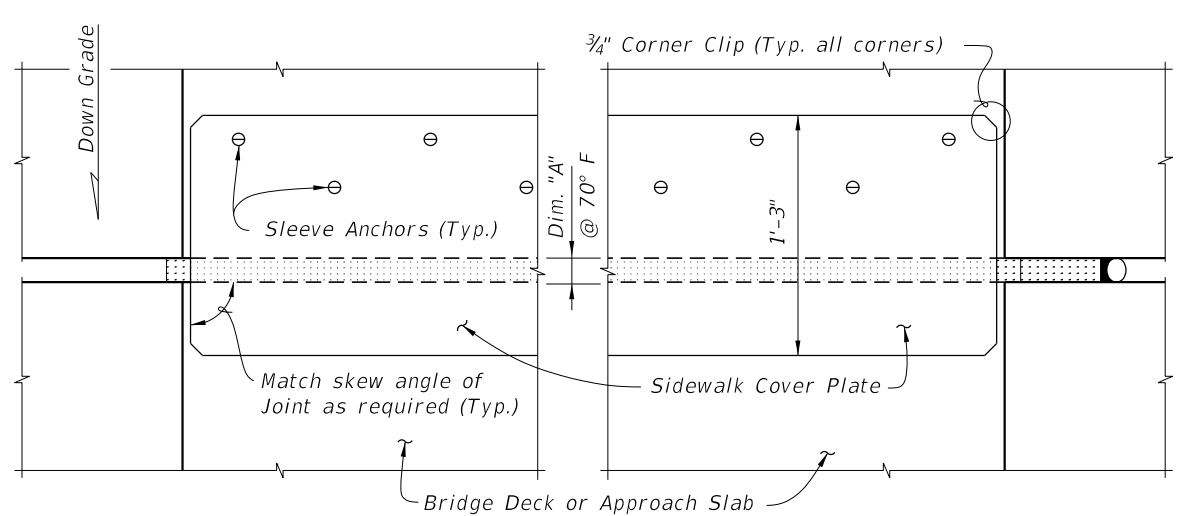
1. Furnish and install Poured Joint With Backer Rod Expansion Joint Systems in accordance with Specification Sections 458 and 932 using Type D silicone sealant material.
2. Refer to the Structures Plans, Poured Expansion Joint Data Table for Dim. A @ 70° F.

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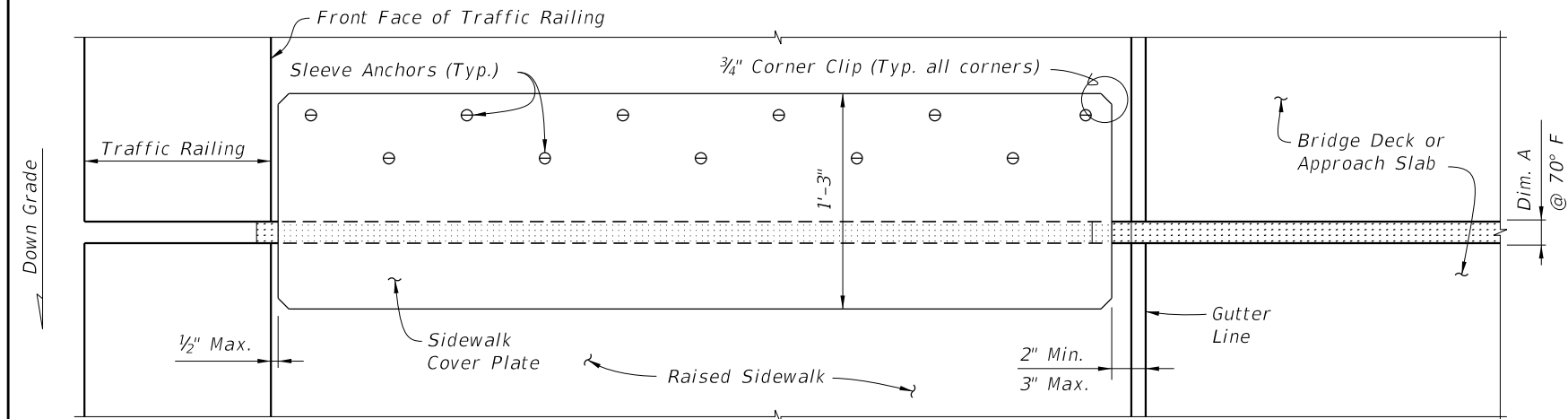
LAST REVISION 07/01/14	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	INDEX 458-110	SHEET 1 of 2
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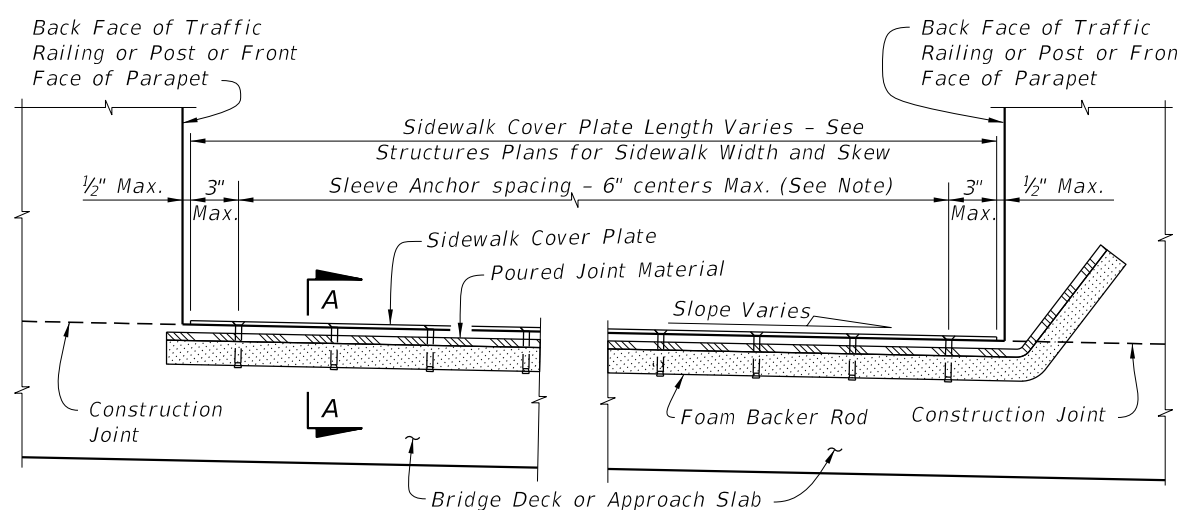
PARTIAL PLAN VIEW OF SKEWED JOINTS



PARTIAL PLAN VIEW

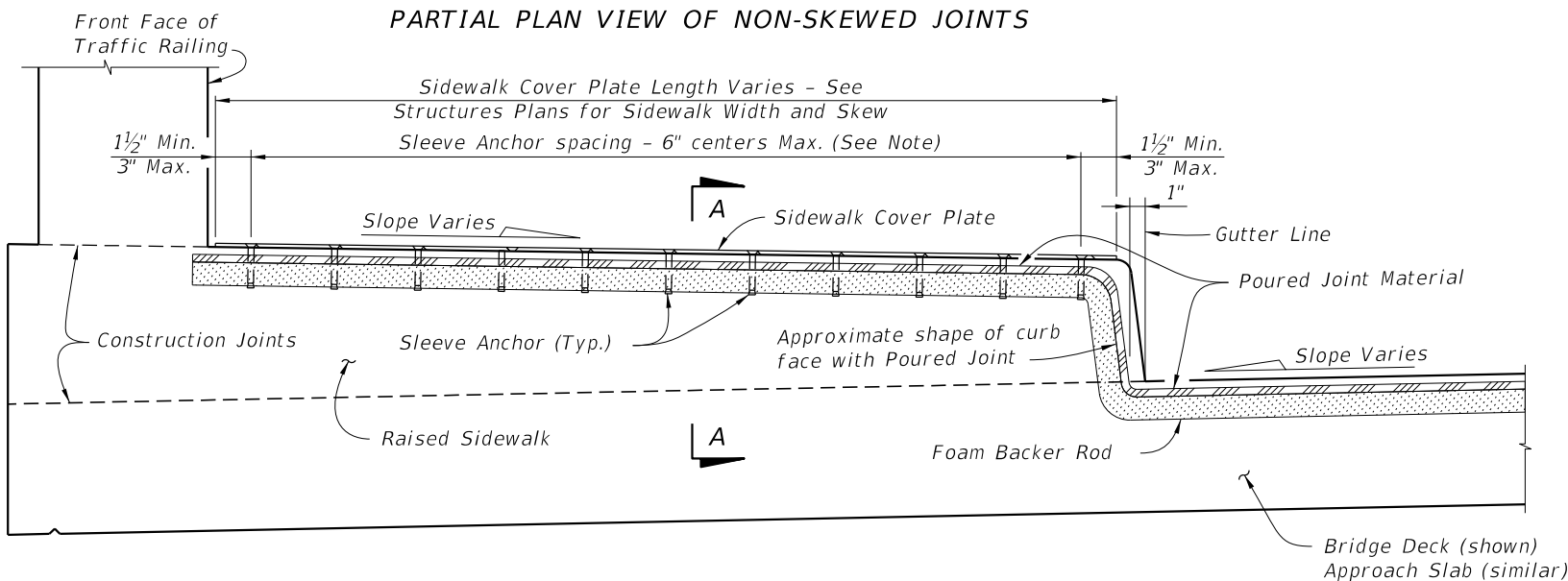


PARTIAL PLAN VIEW OF NON-SKEWED JOINTS



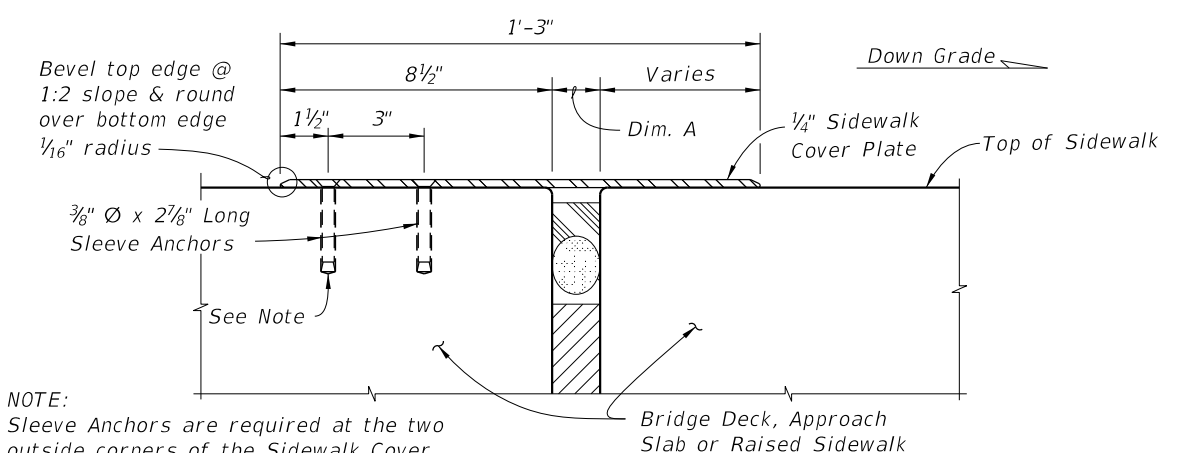
PARTIAL SECTION ALONG Q JOINT

FLUSH SIDEWALK DETAIL



PARTIAL SECTION ALONG Q JOINT

RAISED SIDEWALK DETAIL

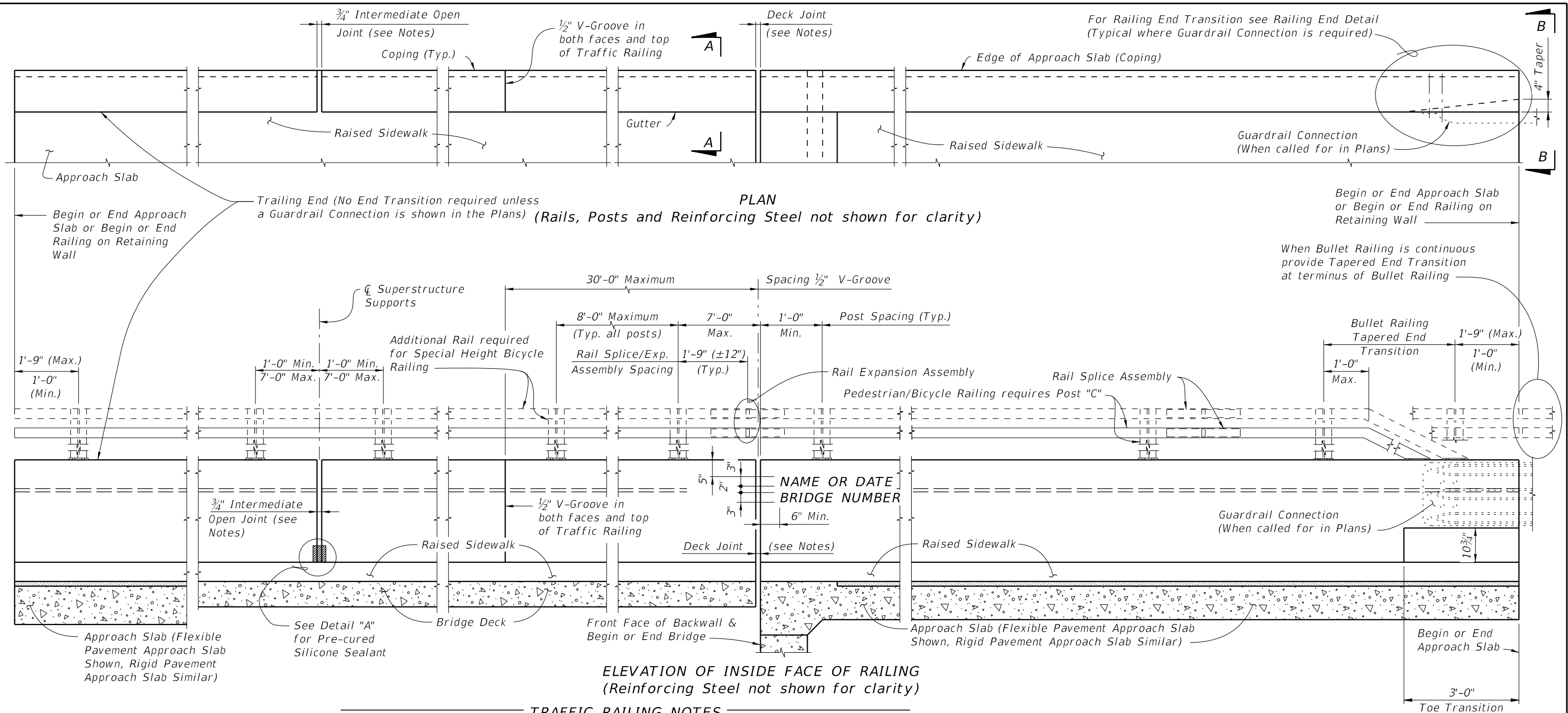


NOTE:
Sleeve Anchors are required at the two outside corners of the Sidewalk Cover Plate. Space Sleeve Anchors uniformly between the corner anchors.

SECTION A-A

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LAST REVISION 07/01/13	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	INDEX 458-110	SHEET 2 of 2
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This railing has been structurally evaluated to be equivalent or greater in strength to other safety shape railings which have been crash tested to NCHRP Report 350 TL-4 and MASH TL-4 Criteria.

CONCRETE AND REINFORCING STEEL : See Structures Plans, General Notes.

GUARDRAIL : For Guardrail Connection details, see Index 536-001.

PEDESTRIAN/BICYCLE RAILING AND SPECIAL HEIGHT BICYCLE RAILING DETAILS : See Index 515-022 for Post, Rail and Rail Splice/Expansion Assembly fabrication and installation Details and Notes.

V-GROOVES : Construct 1/2" V-Grooves plumb. Space V-Grooves equally between 3/4" Open Joints and/or Deck Joints and at V-Groove locations on Retaining Wall footings.

BARRIER DELINEATORS: Install Barrier Delineators on top of the Traffic Railing 2" from the face on the traffic side in accordance with Specification Section 705. Match the Barrier Delineator to the color (white or yellow) of the near edgeline.

END TRANSITION: When guardrail approaches are shown in the plans, provide Railing End Transition.

RAILINGS ON RETAINING WALLS : If the Traffic Railing is to be provided on a retaining wall, the railing section will be the same as shown on Sheet 2. All other details such as the End Transition, Guardrail Connection, the maximum spacing of the 3/4" open joints and 1/2" V-Groove shall apply.

NAME, DATE, AND BRIDGE NUMBER : The Name and Bridge Number shall be placed on the Traffic Railing so as to be seen on the driver's right side when approaching the bridge. The Date shall be placed on the driver's left side when approaching the bridge. The Name shall be as shown in the General Notes of the Structures Plans. The Date shall be the year the bridge is completed. For a widening when the existing railing is removed, use both the existing date and the year of the widening. Black plastic letters and figures 3" in height may be used, as approved by the Engineer, in lieu of the letters and figures formed by 3/8" V-Grooves. V-Grooves shall be formed by preformed letters and figures.

OPEN JOINTS : See Structures Plans, Superstructure, Approach Slab Sheets and Retaining Walls for actual dimensions and joint orientation. Provide open Traffic Railing Joints at Deck Expansion Joint locations matching the dimensions of the Deck Joint. For treatment of Railings on skewed bridges see Index 521-427.

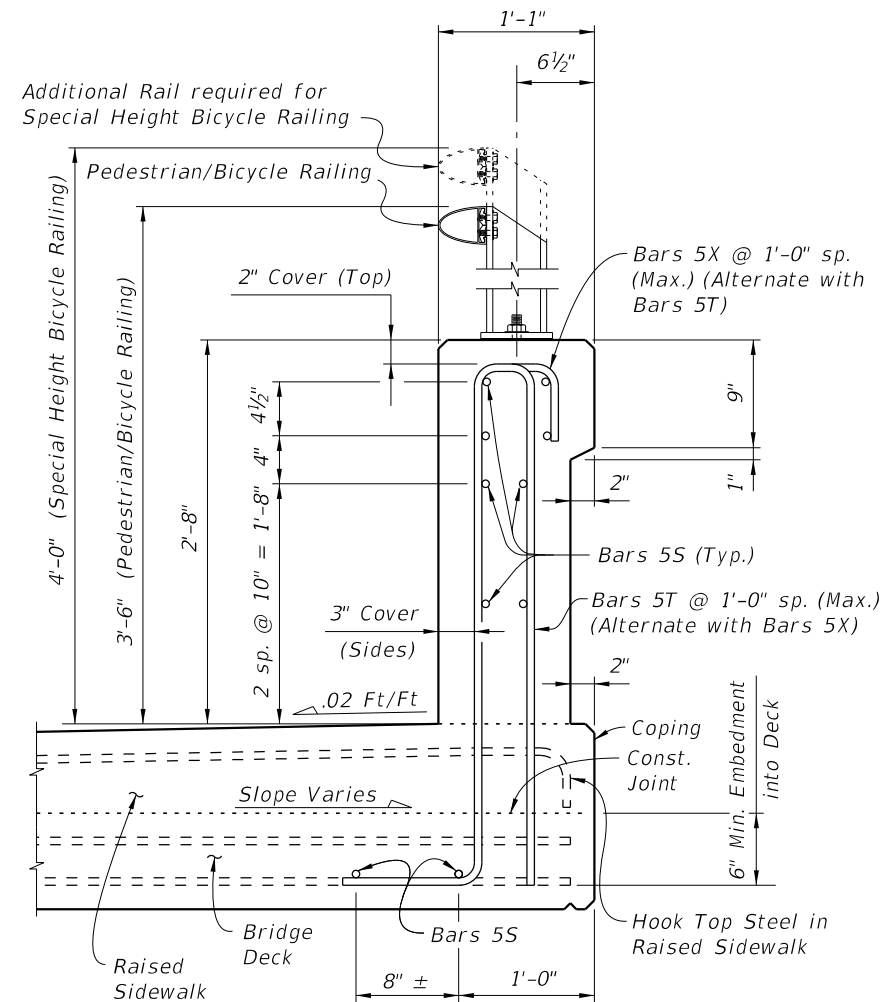
Provide 3/4" Intermediate Open Joints at :

- (1) - Superstructure supports where slab is continuous.
- (2) - Ends of approach slabs when adjacent to retaining walls and at expansion joints on retaining wall junction slabs.

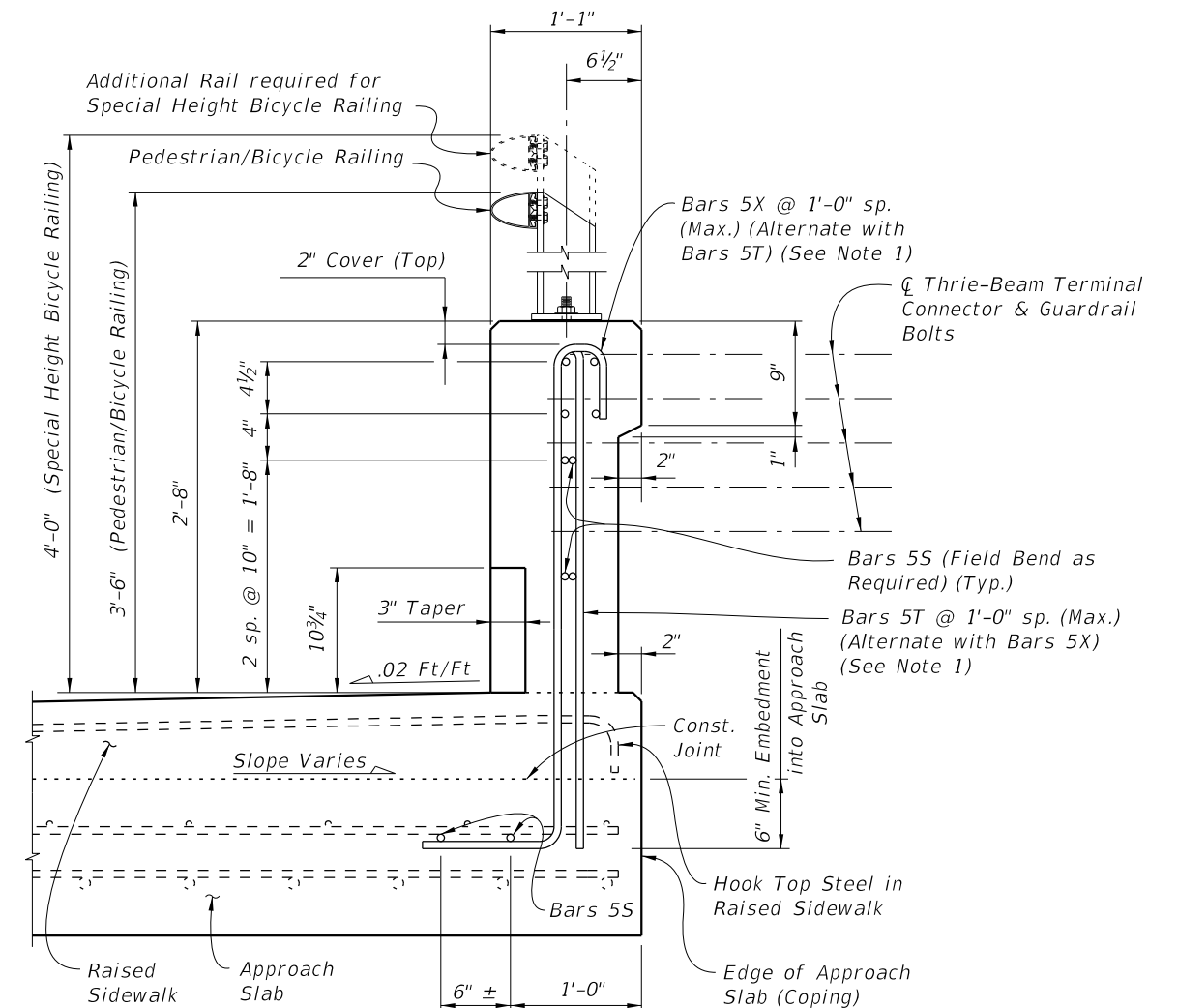
CROSS REFERENCE:
For Section A-A and
View B-B, see Sheet 2.
For Detail "A" see Sheet 3.

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LAST REVISION	DESCRIPTION:	FY 2019-20 STANDARD PLANS	TRAFFIC RAILING - (32" VERTICAL SHAPE)	INDEX	SHEET
11/01/18				521-423	1 of 3



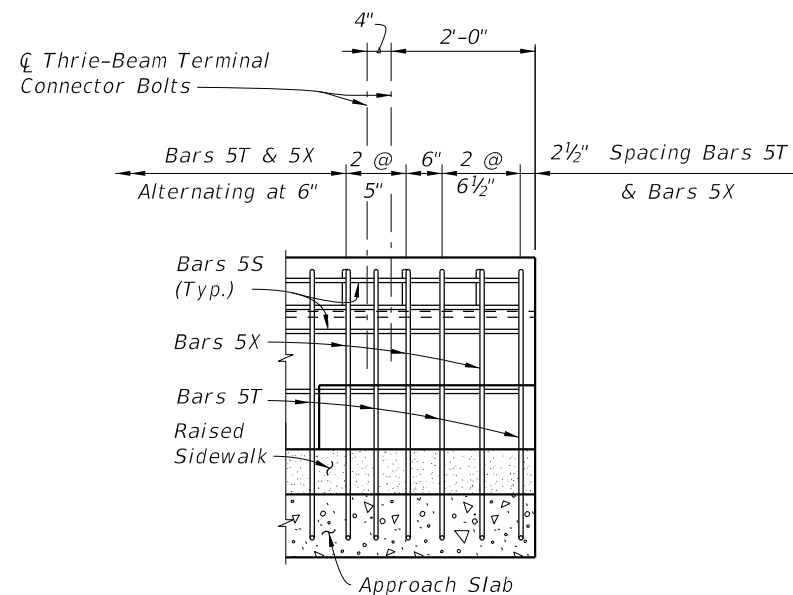
SECTION A-A
TYPICAL SECTION THRU TRAFFIC RAILING
(Section Thru Bridge Deck shown)



VIEW B-B
APPROACH SLAB END VIEW
OF TRAFFIC RAILING

CROSS REFERENCE:
For location of Section A-A and View B-B
see Sheet 1.

NOTE: For Bullet Railing Details,
see Index 515-022.



RAILING END DETAIL
(Guardrail Not Shown For Clarity)

NOTES:

1. Begin placing Railing Bars 5T and 5X on Approach Slab at the railing end and proceed toward Begin or End Bridge to avoid conflict with guardrail bolt holes. If required, adjustments to the bar spacing for Bars 5T and 5X shall be made immediately adjacent to Begin or End Bridge. Cut, shift and rotate Bars 5T and 5X as required to maintain cover in Railing End Transition.
2. Omit Railing End Transition and Guardrail if Concrete Traffic Railing is used beyond the Approach Slab or Retaining Wall. See Structures Plans, Plan and Elevation Sheet and Roadway Plans. If Taper and Railing End Transition is omitted, extend Typical Section to end of the Approach Slab or limiting station on Retaining Wall, and space Bars 5T and 5X at 1'-0" (Typ.)

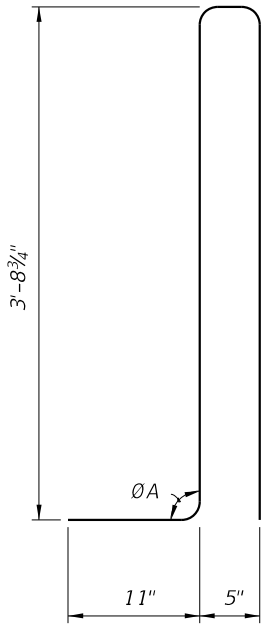
10/23/2018 11:49:16 AM

LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	TRAFFIC RAILING - (32" VERTICAL SHAPE)	INDEX 521-423	SHEET 2 of 3
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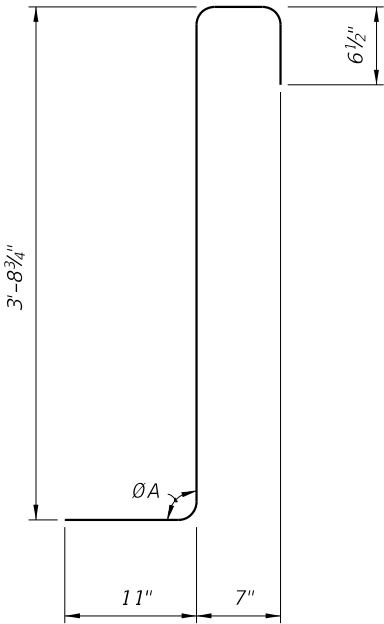
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
S	5	As Req'd.
T	5	9'-0"
X	5	5'-10"

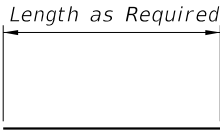
ROADWAY CROSS-SLOPE	ØA	
	LOW GUTTER	HIGH GUTTER
0% to 2%	90°	90°
2% to 6%	87°	93°
6% to 10%	84°	96°



STIRRUP BAR 5T



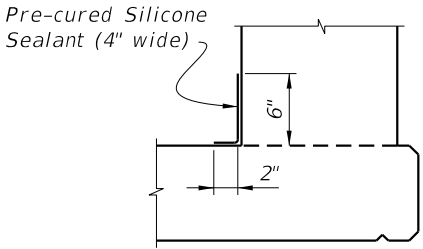
STIRRUP BAR 5X



BAR 5S

REINFORCING STEEL NOTES:

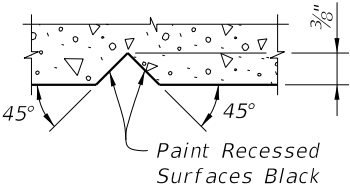
1. All bar dimensions in the bending diagrams are out to out.
2. The 3'-8¾" vertical dimensions shown for Bars 5T and 5X are based on a bridge deck with a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and a counter 2% raised sidewalk cross slope. If the raised sidewalk thickness, width or cross slopes vary from the above amounts, adjust these vertical dimensions accordingly to achieve a 6" minimum embedment into the bridge deck.
3. The reinforcement for the railing on a Retaining Wall shall be the same as detailed with ØA = 90°.
4. All reinforcing steel at the open joints shall have a 2" minimum cover.
5. Bars 5S may be continuous or spliced at the construction joints. Bar splices for Bars 5S shall be a minimum of 2'-2".
6. The Contractor may utilize Welded Wire Reinforcement (WWR) when approved by the Engineer. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.



DETAIL "A" - SECTION
AT INTERMEDIATE OPEN JOINT

INTERMEDIATE JOINT SEAL NOTES:

1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Specification Section 932.
2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
3. The cost of the Pre-cured Silicone Sealant shall be included in the Contract Unit Price for the Traffic Railing.



SECTION THRU RECESSED "V" GROOVE
TO FORM INSCRIBED LETTERS AND FIGURES

ESTIMATED TRAFFIC RAILING QUANTITIES		
ITEM	UNIT	QUANTITY
Concrete	CY/LF	0.095
Reinforcing Steel	LB/LF	25.90

(The above quantities are based on a 6" thick x 6' wide raised sidewalk at low side of deck, 2% deck cross slope and counter 2% sidewalk cross slope.)

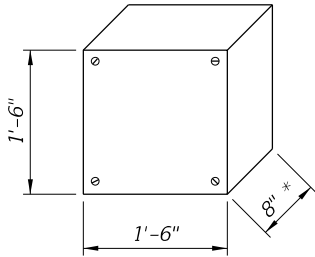
10/23/2018 11:49:16 AM

LAST REVISION 07/01/13	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	TRAFFIC RAILING - (32" VERTICAL SHAPE)	INDEX 521-423	SHEET 3 of 3
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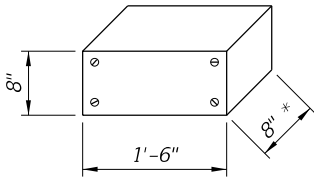
CONDUIT GENERAL NOTES:

1. Furnish and install approved Conduits, Fittings and Embedded Junction Boxes (EJB's) in accordance with Specification Sections 630 and 635, this Standard, the National Electric Code (NEC) and as directed by the Engineer.
2. Furnish and install Embedded Junction Boxes (EJB) with weatherproof covers sized in accordance with NEC requirements and the maximum size limits shown. Install EJB adjacent to the Begin and End of Bridges, Begin and End of Retaining Walls, (except omit EJB adjacent to the Bridge unless a precast Traffic Railing with junction slab is used), and at other locations as necessary to maintain 300 foot maximum spacing. See Plans for additional locations and details.
3. For Conduit not designated for future use, see Plans for details. For Conduit designated for future use, stub out and cap the Conduit. Drive a 3'-0"± long ¾" (min.) diameter Steel Pipe flush with the ground line adjacent to the end of the Conduit as shown on Sheets 2, 3 or 4. Provide the location of the stub out with Steel Pipe to the Engineer for inclusion on the As-Built Plans.
4. Shift vertical Railing reinforcement symmetrically to provide 2" clearance to EJB. Space shifted vertical reinforcement at minimum 3" centers. Cut horizontal Railing reinforcement to provide 2" clearance to EJB and provide supplemental reinforcement as shown. To facilitate placement of Conduit, Expansion Fittings, and Expansion/Deflection Fittings, shift reinforcing a maximum of 1" but do not cut railing reinforcing to facilitate Conduit or Fittings. Do not bundle Conduits, or Conduit and horizontal reinforcement.

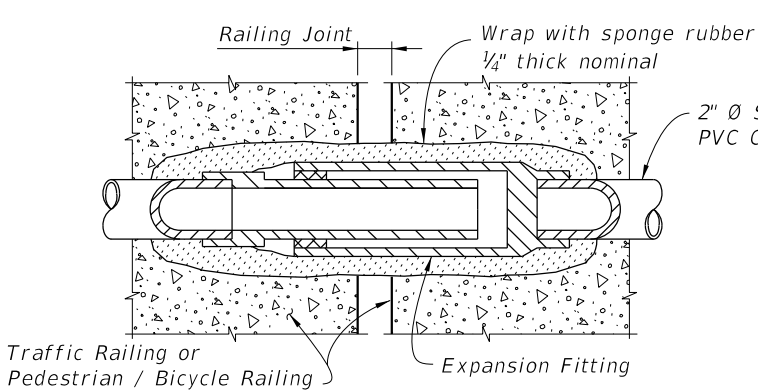
* Reduce to 6" maximum when installed in Pedestrian/ Bicycle Railings.



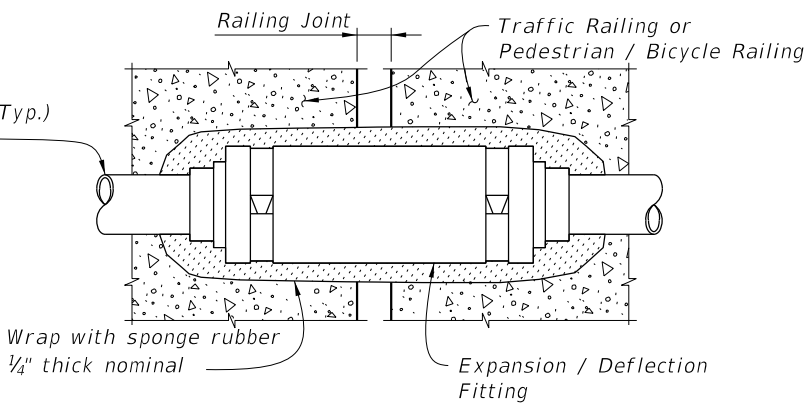
EJB "A"
Double or Triple Conduit
(Maximum Dimensions)



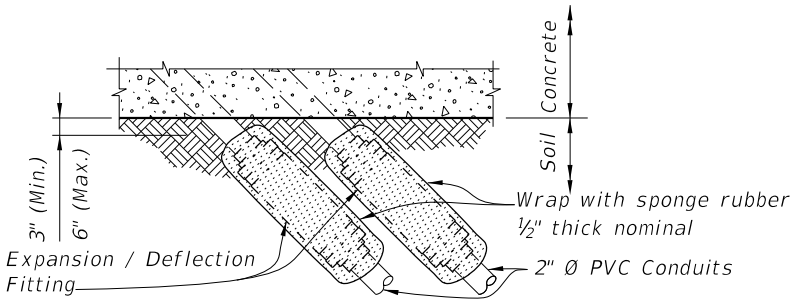
EJB "B"
Single Conduit
(Maximum Dimensions)



DETAIL "A"
EXPANSION FITTING DETAIL



DETAIL "B" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / CONCRETE)

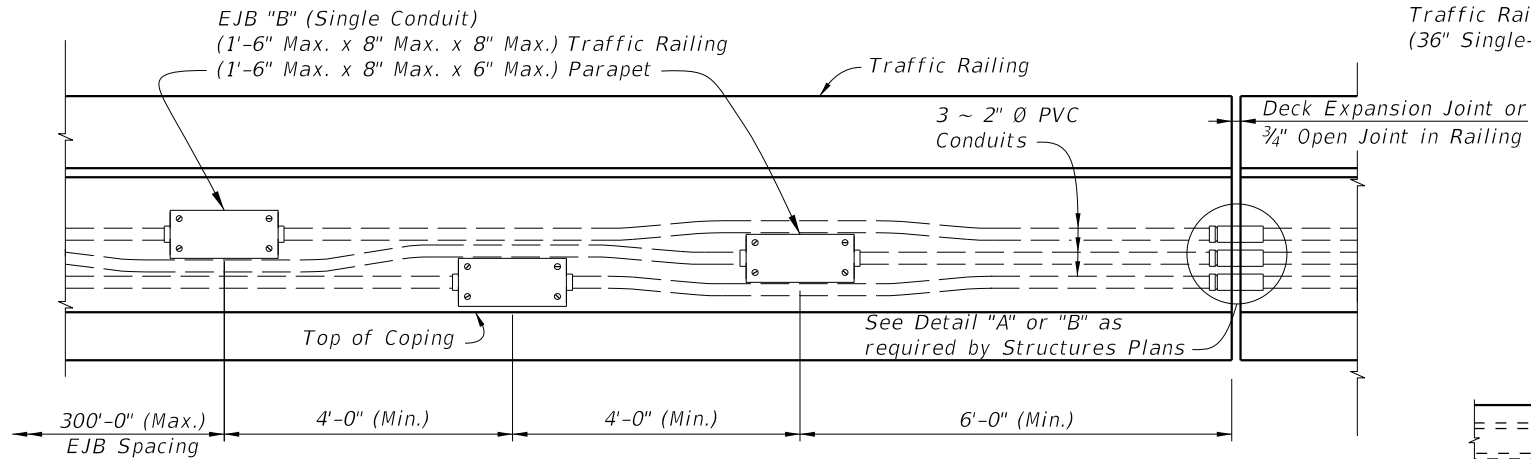


DETAIL "C" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / SOIL)

GENERAL

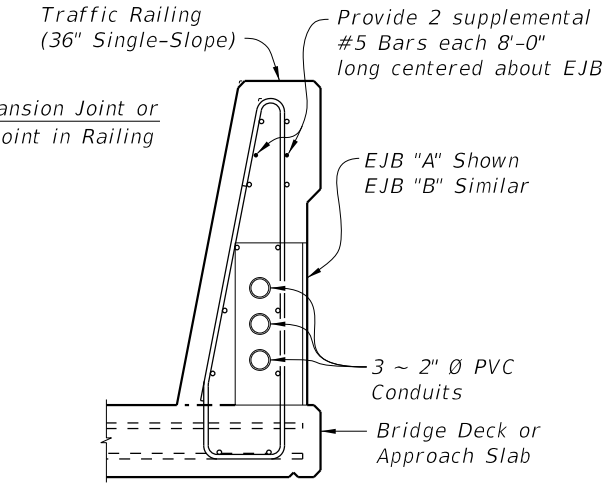
LAST REVISION 11/01/18	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX 630-010	SHEET 1 of 4
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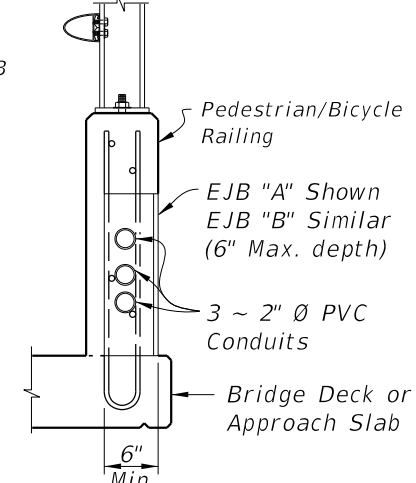


EJB "B" DETAIL

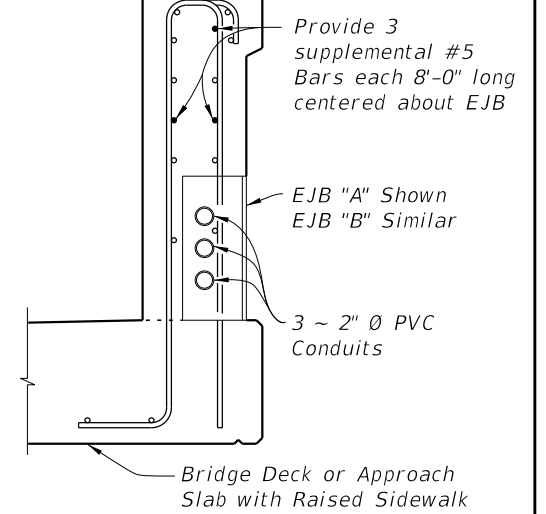
* 36" Single-Slope Traffic Railing shown, other Traffic Railings and Pedestrian/Bicycle Railings similar.
** EJB "A" shown, EJB "B" similar. See EJB "B" Detail.



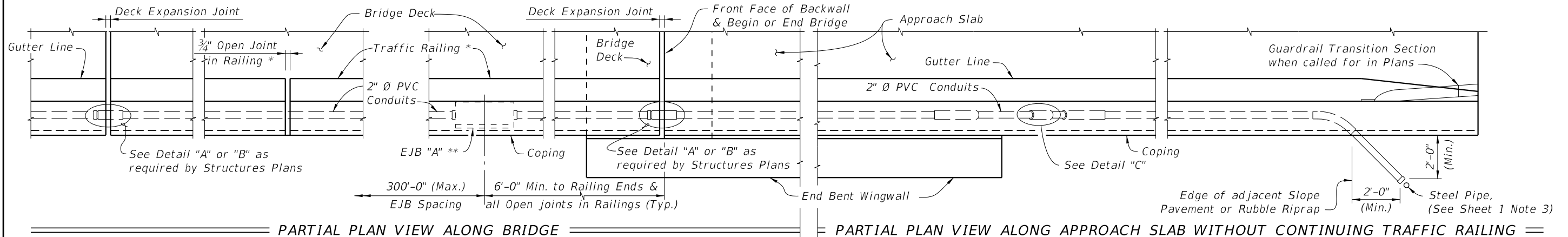
SECTION THRU TRAFFIC RAILING AT EJB (36" SINGLE-SLOPE SHOWN, 42" SINGLE-SLOPE SIMILAR)



SECTION THRU PEDESTRIAN / BICYCLE RAILING AT EJB

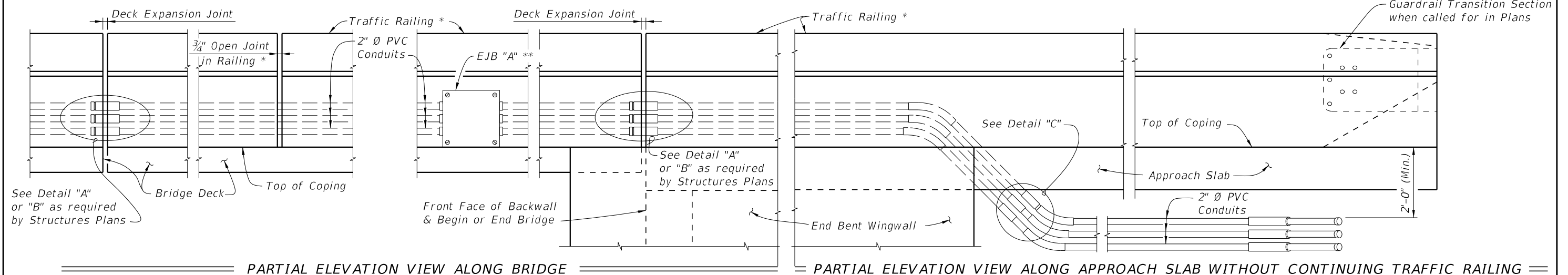


SECTION THRU TRAFFIC RAILING AT EJB (42" VERTICAL SHAPE SHOWN, 32" VERTICAL SHAPE SIMILAR)



PARTIAL PLAN VIEW ALONG BRIDGE

PARTIAL PLAN VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING

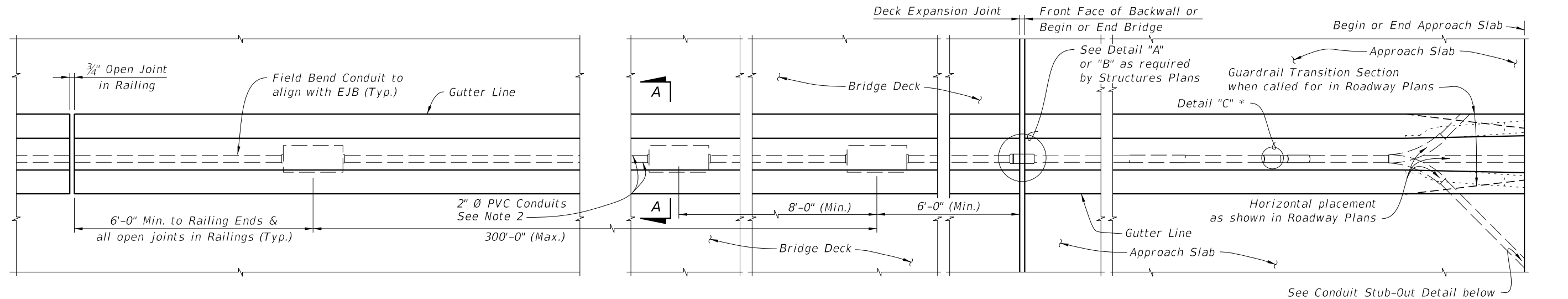


PARTIAL ELEVATION VIEW ALONG BRIDGE

PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING

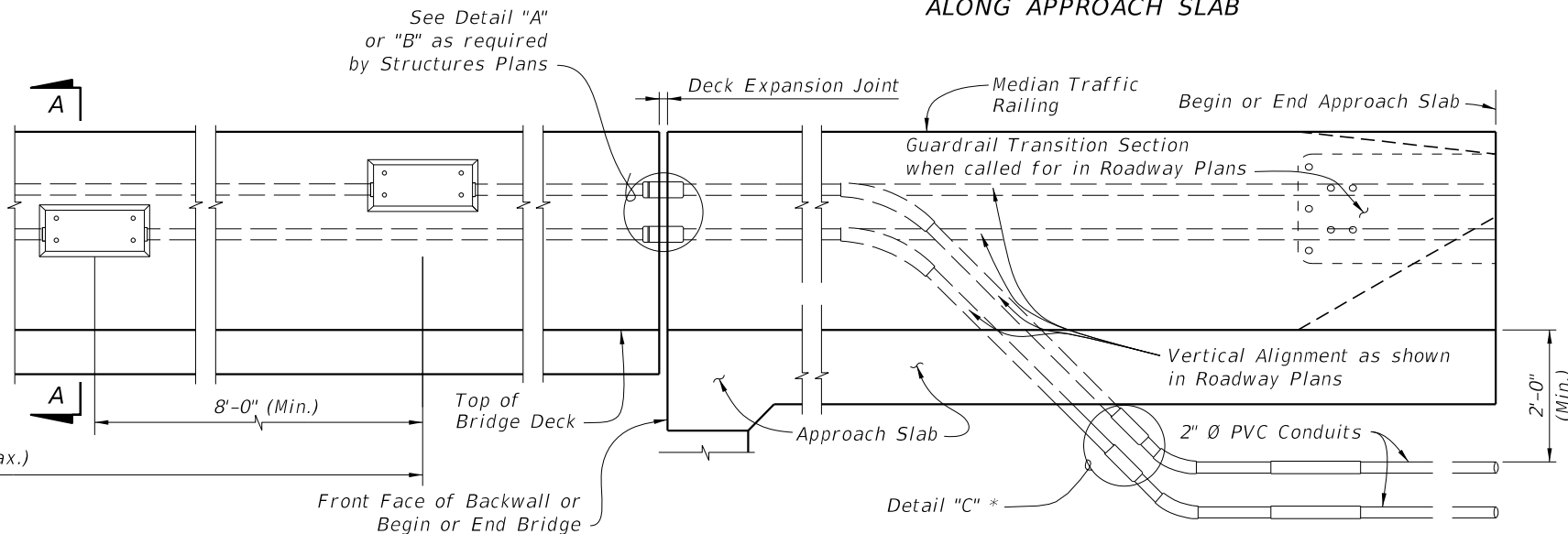
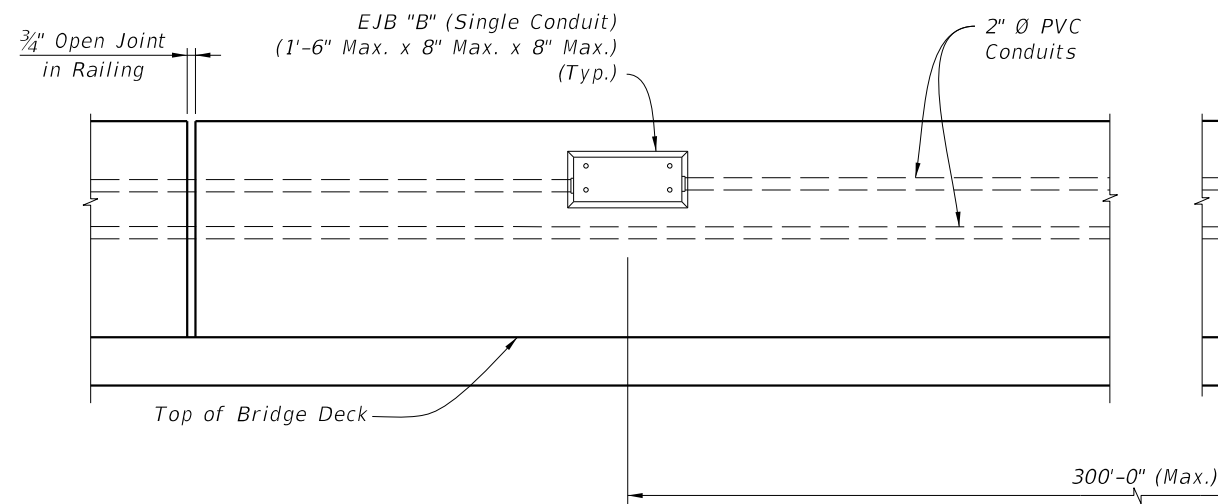
BRIDGE AND APPROACH SLAB WITH EDGE RAILING

LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX 630-010	SHEET 2 of 4
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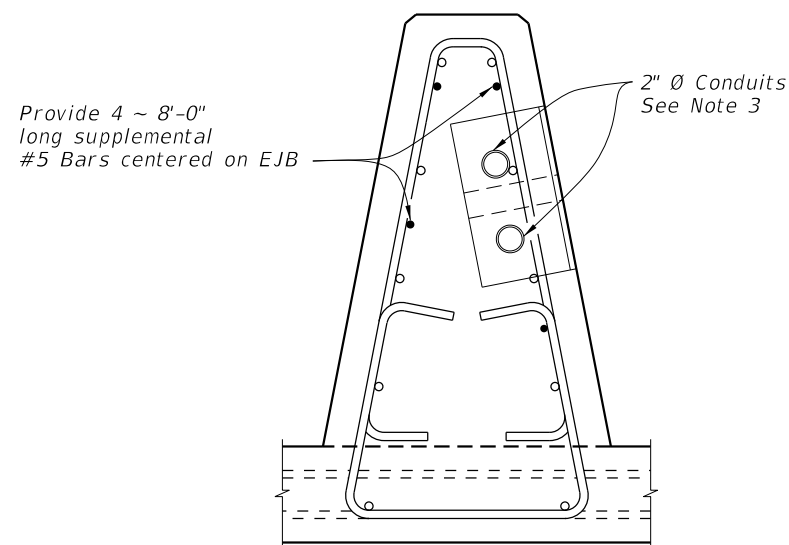
PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING ALONG BRIDGE

PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING ALONG APPROACH SLAB



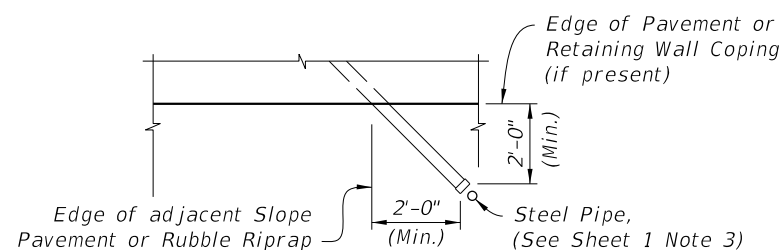
PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING ALONG BRIDGE

PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING ALONG APPROACH SLAB



**SECTION A-A
Median Traffic Railing (See Note 4)**

* For non-continuing Traffic Railing only.



CONDUIT STUB-OUT DETAIL

NOTES:

1. Work this sheet with Index 521-426.
2. Adjust Conduit horizontally and vertically as necessary to align with EJB "B".
3. When installed in traffic face of a railing, use EJB "B" with a minimum $\frac{3}{8}$ " thick galvanized steel cover.
4. Position EJB such that, with gasket and cover plate secured and in place, cover plate is flush with the railing face. Flush is $+\frac{1}{8}$ " to $-\frac{1}{4}$ " measured with a horizontal straightedge.

BRIDGE AND APPROACH SLAB WITH MEDIAN TRAFFIC RAILING



**FY 2019-20
STANDARD PLANS**

CONDUIT DETAILS - EMBEDDED

**INDEX
630-010**

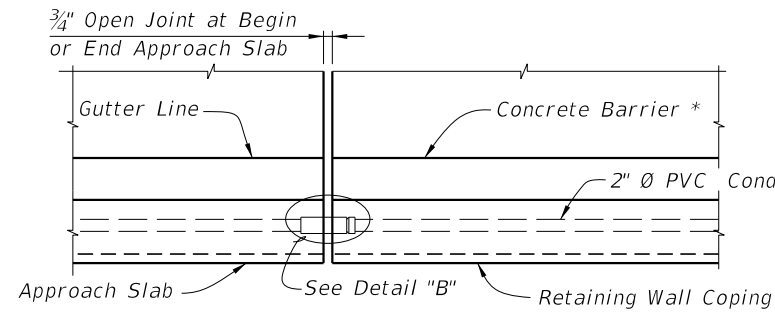
**SHEET
3 of 4**

**LAST
REVISION
11/01/17**

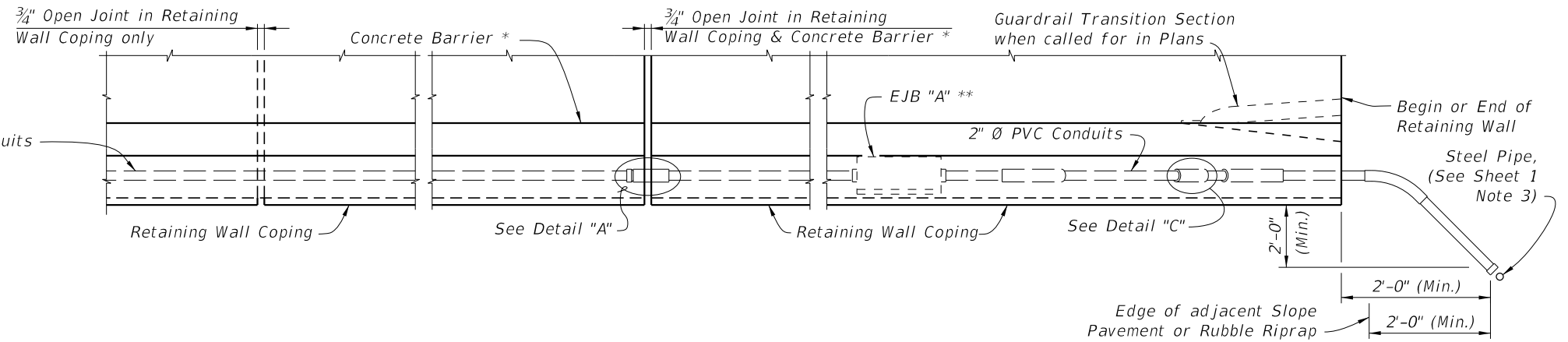
REVISION

DESCRIPTION:

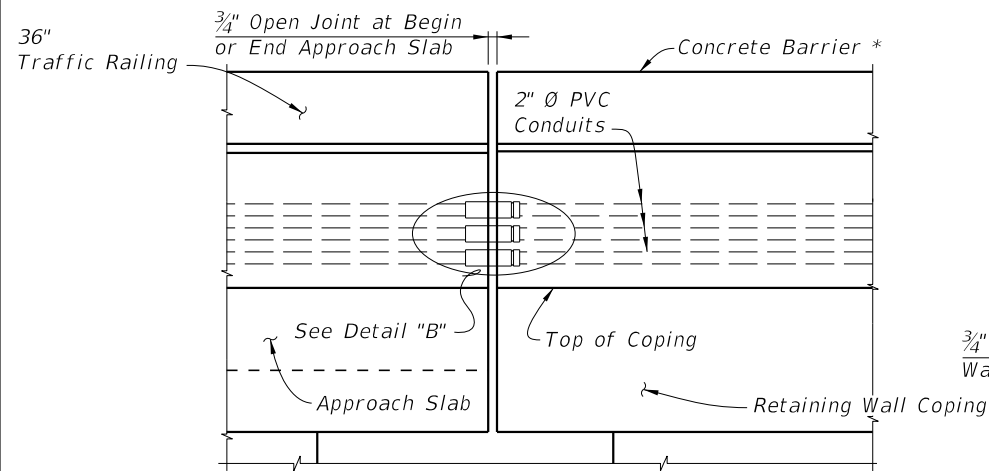
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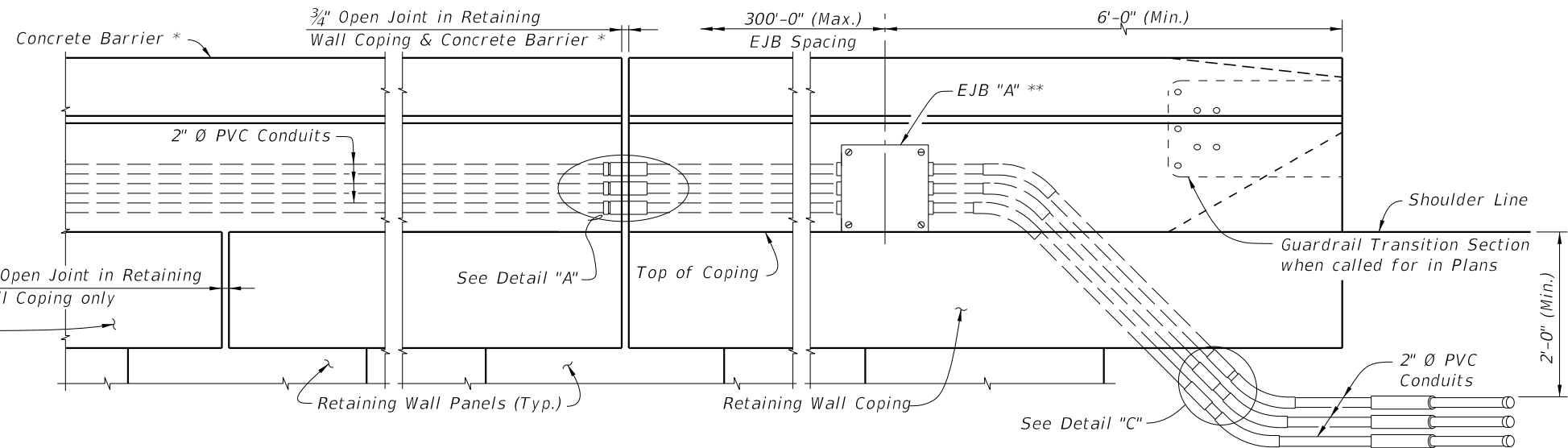
PARTIAL PLAN VIEW ALONG APPROACH SLAB
WITH CONTINUING CONCRETE BARRIER



PARTIAL PLAN VIEW ALONG RETAINING WALL



PARTIAL ELEVATION VIEW ALONG APPROACH
SLAB WITH CONTINUING Concrete Barrier
(Retaining Wall Mounted Concrete Barrier shown,
Traffic Railing similar)



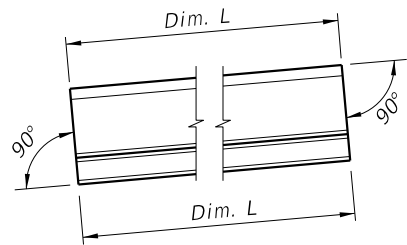
PARTIAL ELEVATION VIEW ALONG RETAINING WALL

* Index 521-610 Concrete Barrier/Junction Slab shown, other railings and parapets similar.
** EJB "A" shown EJB "B" similar. See EJB "B" Detail on Sheet 2.

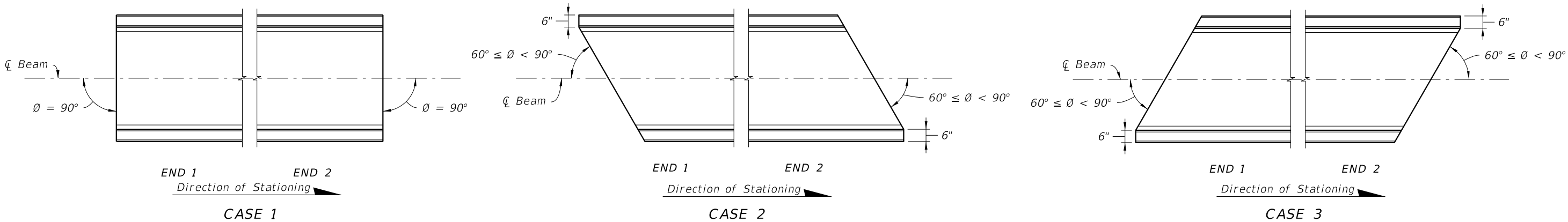
APPROACH SLAB AND RETAINING WALL WITH CONCRETE BARRIER

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX 630-010	SHEET 4 of 4
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- FABRICATION NOTES
- 1. The abbreviated FSB designation for depth and width is FSB "depth" x "width", e.g. FSB 12 x 48.
 - 2. All bar dimensions are out-to-out.
 - 3. Strands N shall be ASTM A416, Grade 250 or 270, $\frac{3}{8}$ " $\varnothing$ or larger strands, stressed to 10,000 lbs. each.
 - 4. Unless otherwise noted, the minimum concrete cover for reinforcing steel shall be 2".
 - 5. For referenced Dimensions, Angles and Case Numbers, see Florida Slab Beam – Table of Variables in Structures Plans.
 - 6. Bars 4D1 & 6Y1 correspond to END 1, and 4D2 & 6Y2 correspond to END 2.
 - 7. Bars 5E1 correspond to interior FSBs, and 5E2 correspond to exterior FSBs.
 - 8. Rake the top surface of the Slab Beams transversely to provide a roughened surface with $\frac{1}{4}$ " amplitude.



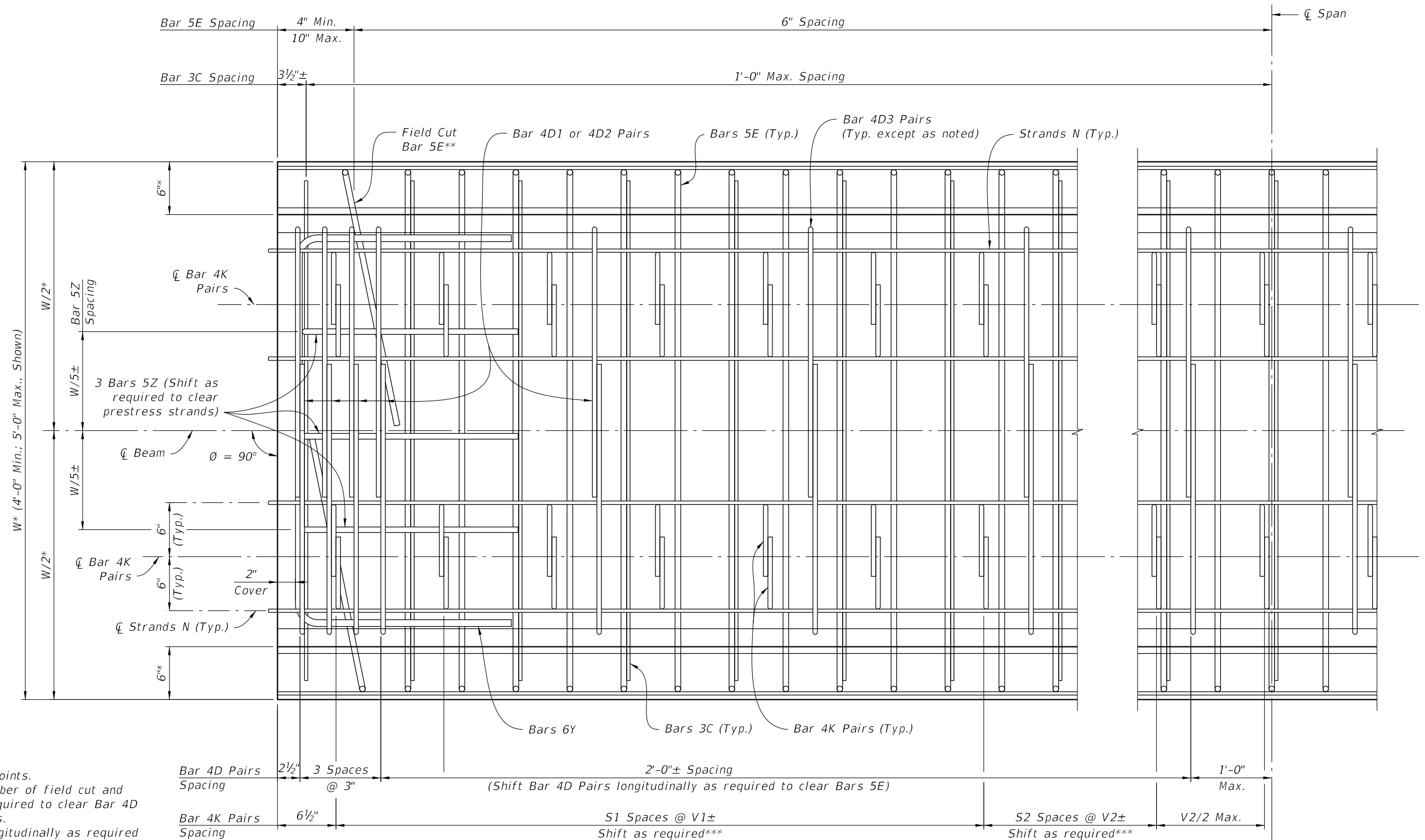
SCHEMATIC SIDE ELEVATION OF BEAM
(Beam on a Positive Grade shown; Beam on a Negative Grade or Horizontal Grade similar.)



SCHEMATIC PLAN VIEWS AT BEAM ENDS

1/29/2016 2:50:56 PM

LAST REVISION 01/01/16	REVISION DESCRIPTION:	 DEVELOPMENTAL DESIGN STANDARDS	TYPICAL FLORIDA SLAB BEAM DETAILS AND NOTES	INDEX NO. D20450	SHEET NO. 1 of 3
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* Measured to Working Points.

** At Beam ends, use number of field cut and rotated Bars 5E as required to clear Bar 4D Pairs and Bar 4K Pairs.

*** Shift Bar 4K Pairs longitudinally as required to clear Bar 4D Pairs and Bars 3C and 5E.

CROSS REFERENCE:

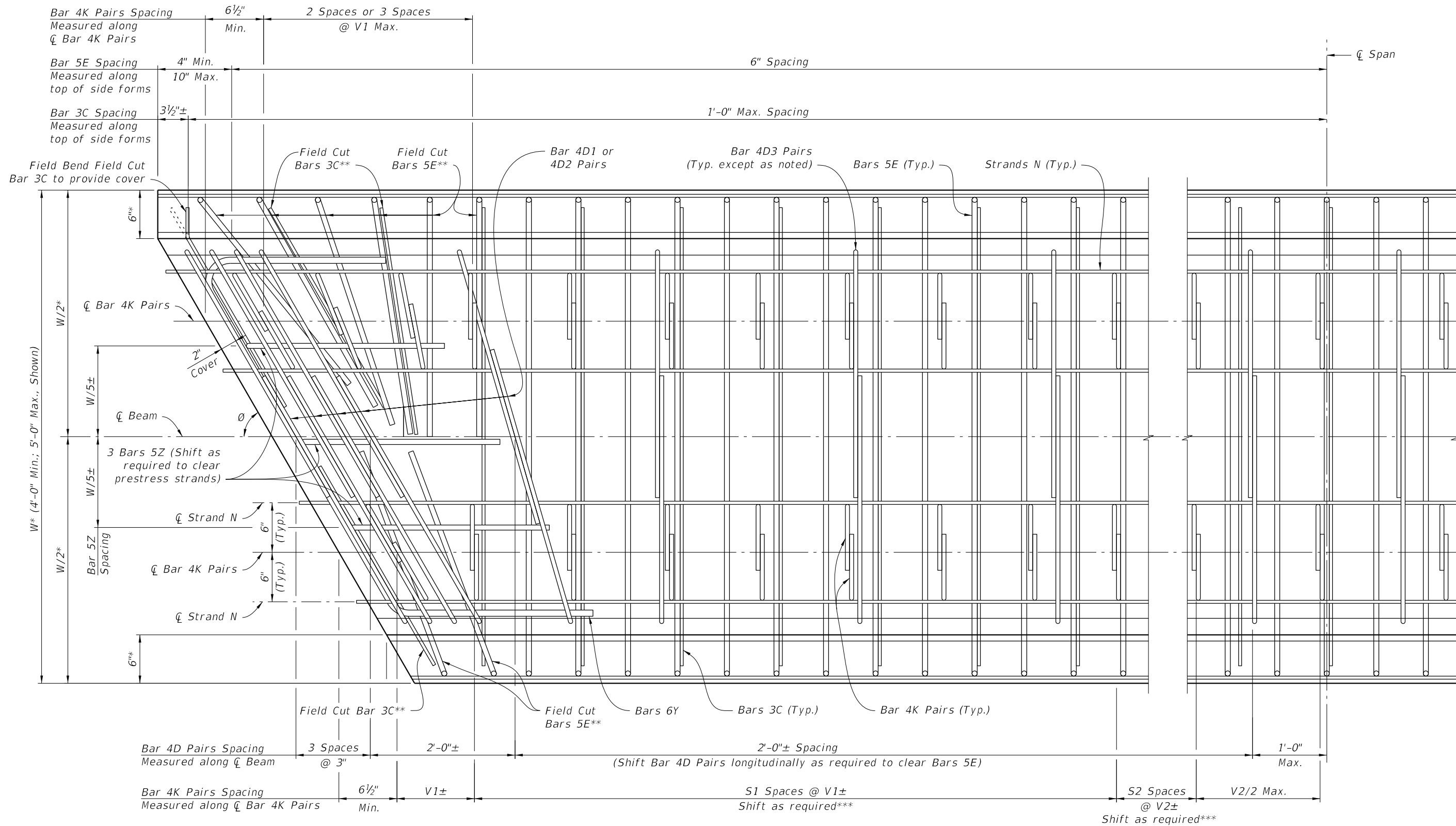
For Dimensions V1, V2 & W and number of spaces S1 & S2, see Florida Slab Beam - Table of Variables in Structures Plans.

See Indexes D20451, D20452 and D20453 for Bars 5E Details.

PARTIAL PLAN VIEW $\theta = 90^\circ$
(END 1 SHOWN, END 2 SIMILAR)
(INTERIOR BEAM SHOWN, EXTERIOR BEAM SIMILAR, SEE BARS 5E DETAILS)

1/29/2016 2:50:58 PM

LAST REVISION	DESCRIPTION:	FDOT DEVELOPMENTAL DESIGN STANDARDS	TYPICAL FLORIDA SLAB BEAM DETAILS AND NOTES	INDEX NO. D20450	SHEET NO. 2 of 3
01/01/16					



PARTIAL PLAN VIEW $60^\circ \leq \theta < 90^\circ$
 (END 1 SHOWN, END 2 SIMILAR)
 (INTERIOR BEAM SHOWN, EXTERIOR BEAM SIMILAR, SEE BARS 5E DETAILS)

CROSS REFERENCE:
 For Dimensions V1, V2 & W, Angle θ and number of spaces S1 & S2,
 see Florida Slab Beam - Table of Variables in Structures Plans.

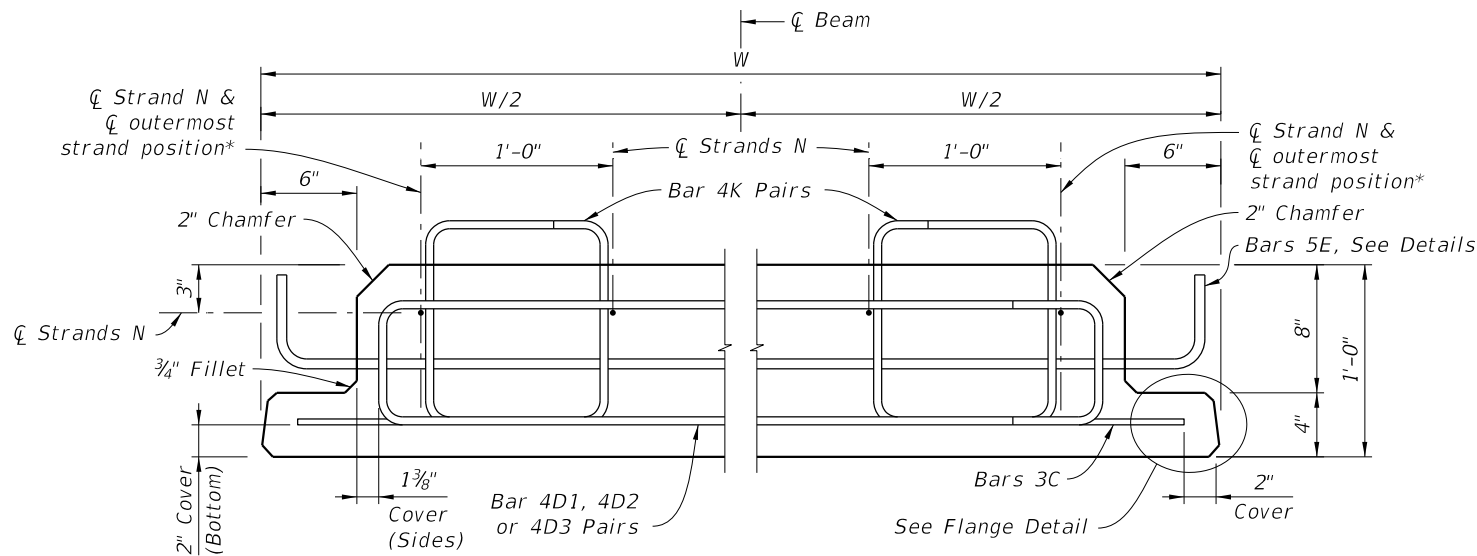
See Indexes D20451, D20452 and D20453 for Bars 5E Details.

- * Measured to Working Points.
- ** At Beam ends, use number of field cut and rotated Bars 3C and 5E as required to clear Bar 4D Pairs and Bar 4K Pairs.
- *** Shift Bar 4K Pairs longitudinally as required to clear Bar 4D Pairs and Bars 3C and 5E.

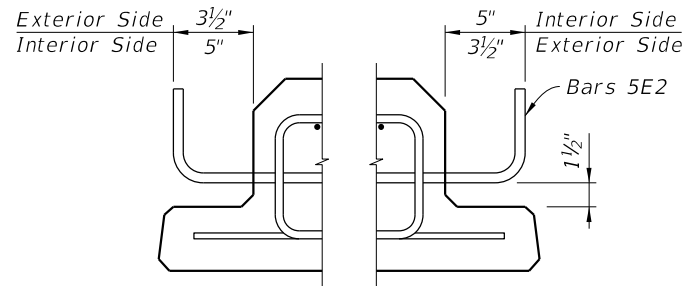
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LAST REVISION	DESCRIPTION:	FDOT DEVELOPMENTAL DESIGN STANDARDS	TYPICAL FLORIDA SLAB BEAM DETAILS AND NOTES	INDEX NO. D20450	SHEET NO. 3 of 3
01/01/16					

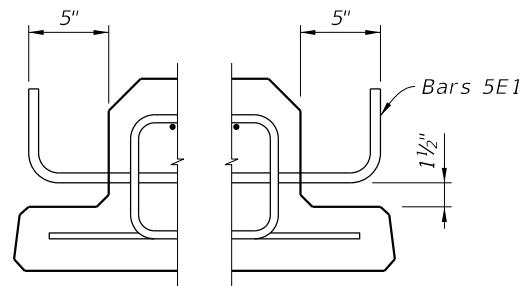
10/21/2016 1:10:50 PM



TYPICAL SECTION
(INTERIOR BEAM SHOWN; EXTERIOR BEAM SIMILAR, SEE BARS 5E DETAILS)



EXTERIOR BEAMS**



INTERIOR BEAMS

BARS 5E DETAILS

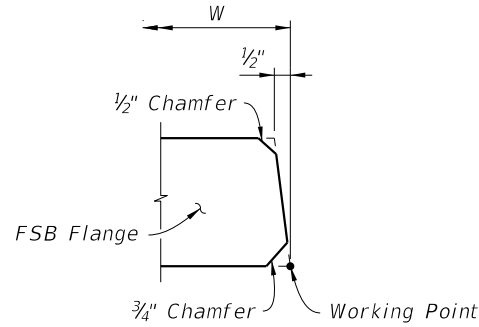
NOTES:
Work this Index with Index D20450 and Florida Slab Beams - Table of Variables in Structures Plans.

For Dimensions C, D, E, L, R, W & Y and Angle θ , see Florida Slab Beam - Table of Variables in Structures Plans.

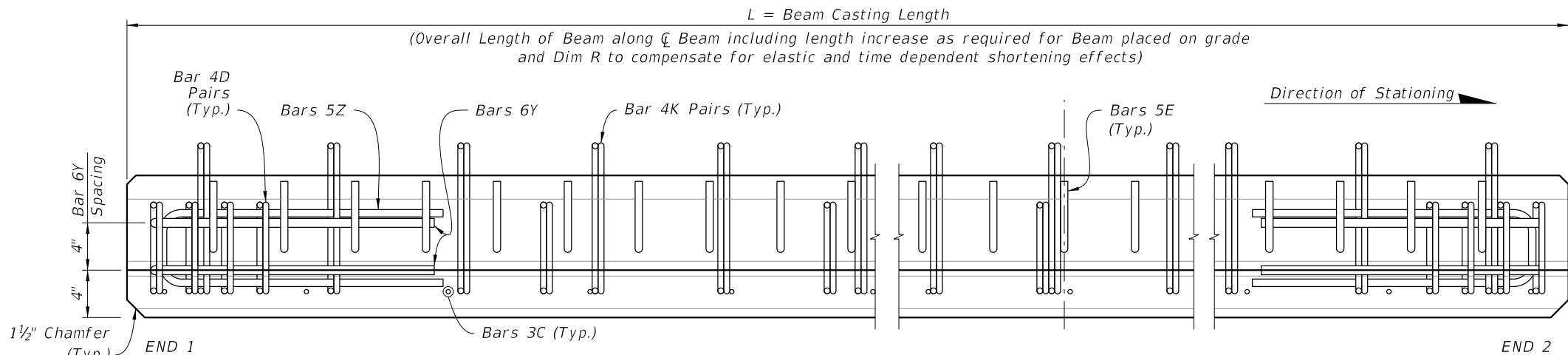
For referenced notes, see Index D20450, Sheet 1.

* For ϕ of outermost strand positions, see corresponding Strand Pattern on Florida Slab Beams - Table of Variables in Structures Plans.

** At the Contractor's option, the Detail as shown for Interior Beams may be used for Exterior Beams and the Bars 5E field bent on the exterior side of the Beam to provide the specified cover to the coping line.



FLANGE DETAIL
(TYPICAL BOTH SIDES OF FSB)



ELEVATION

BILL OF REINFORCING STEEL FOR ONE BEAM ONLY

MARK	SIZE	NOTE NUMBERS	NUMBER REQUIRED	LENGTH (NOTE 1)
C	3		See Table	Varies
D1	4	6	10 (End 1)	Varies
D2	4	6	10 (End 2)	Varies
D3	4		See Table	Varies
E1	5	7	See Table	Varies
E2	5	7	See Table	Varies
K	4		See Table	2'-5"
N	See Note 3	3	4	Varies
Y1	6	6	2 (End 1)	Varies
Y2	6	6	2 (End 2)	Varies
Z	5		6	4'-6 1/2"

BENDING DIAGRAMS (See Note 1)

$C = W - 4\frac{1}{2}"$

BARS 3C

$D = (W/2) / \sin \theta$
 $D = W/2$

STIRRUP BARS 4D1, 4D2 & 4D3

2'-0"

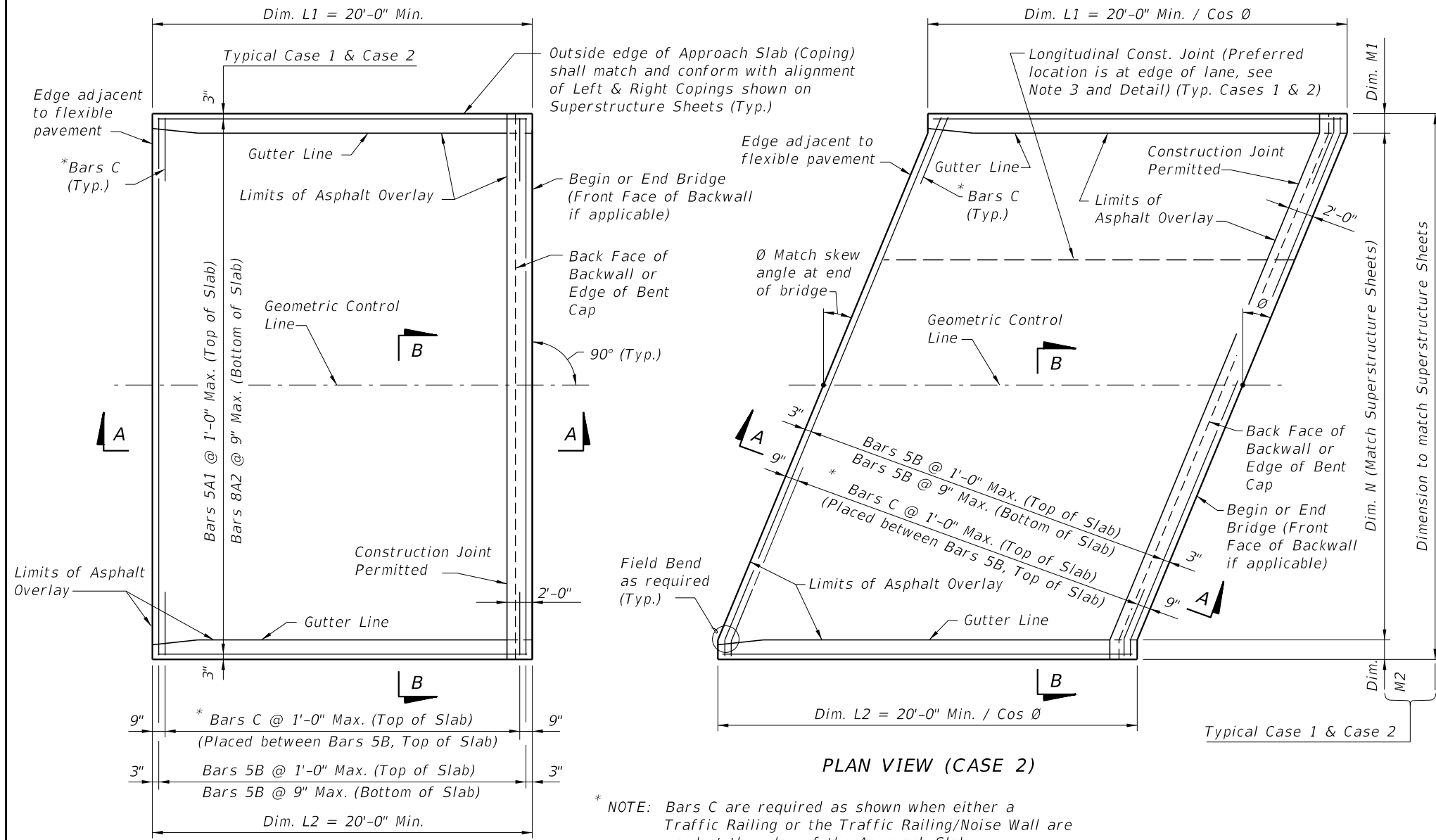
STIRRUP BARS 4K

$Y = (W - 1'-4\frac{1}{2}") / \sin \theta$

BARS 6Y1 & 6Y2

$E = W - 2"$
 $E = W - 3\frac{1}{2}"$

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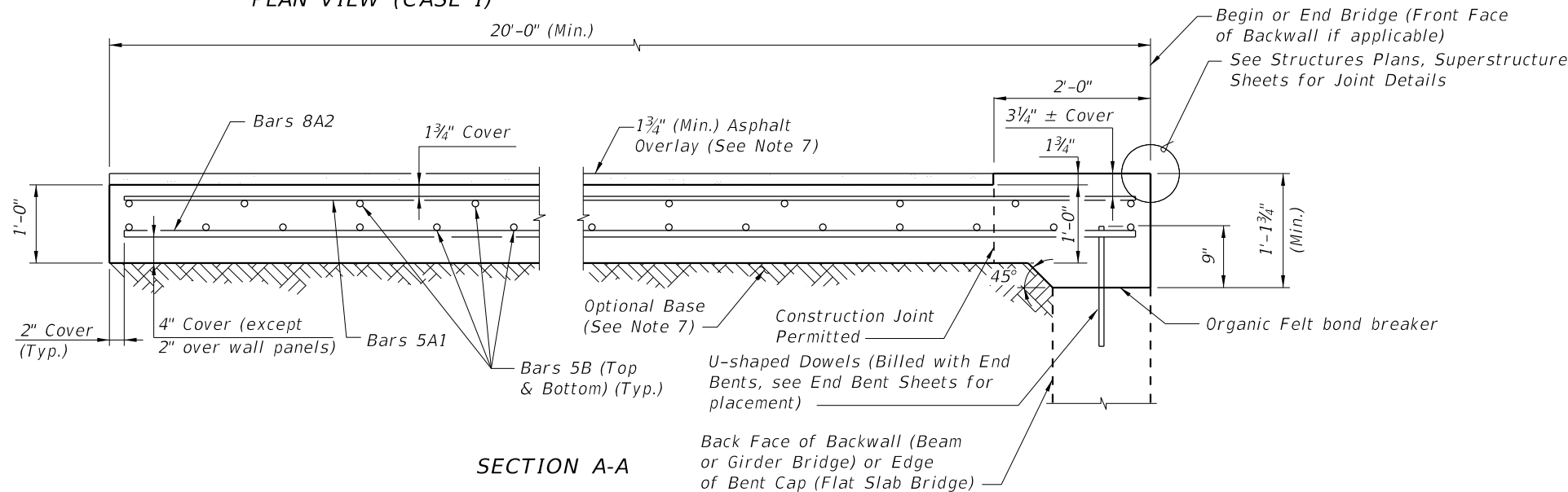


GENERAL NOTES

1. **SURFACE TREATMENT:** As an option to Class 4 Floor Finish (Bridge Floor Grooving) per Section 400 a hand tined or heavy broomed finish may be permitted on the concrete portion of the riding surface. Sidewalk areas shall receive a broomed finish. The top surface of the concrete beneath the asphalt overlay shall be raked.
2. **CONDUIT:** If required, see Structure Plans for Conduit Details.
3. When a longitudinal construction joint is necessary or allowed by the Engineer, the transverse steel shall be extended as shown in the Longitudinal Construction Joint Detail.
4. The plan view for CASE 1 applies when the skew angle (θ) = 0°.
5. The plan view for CASE 2 applies where the skew angle (θ) is > 0°. The slab shown represents a skew to the right for an approach slab at begin bridge; approach slab at the end of bridge or a left skew shall be treated similarly.
6. Welded Wire Reinforcement (WWR) for the edge of Approach Slabs on retaining walls is not included in the estimated quantity for reinforcing steel and is considered incidental to the work. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.
7. Continue the asphalt pavement over the approach slab and match the friction course type used on the roadway. See the Roadway Plans for asphalt overlay and optional base details.
8. Approach slabs shown in Plan View Cases 1 and 2 represent a typical approach slab with edge barriers and no sidewalks. Provide railings, parapets and raised sidewalks as detailed in the Contract Plans.

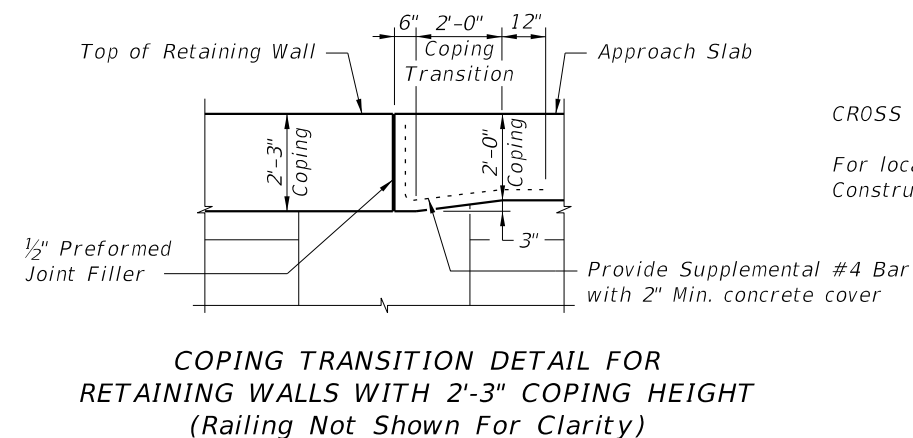
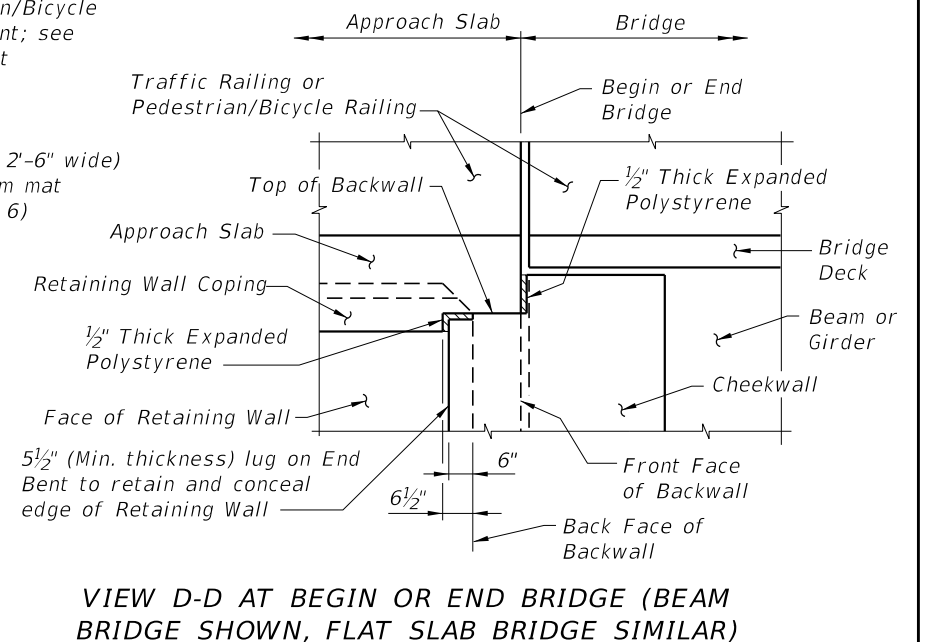
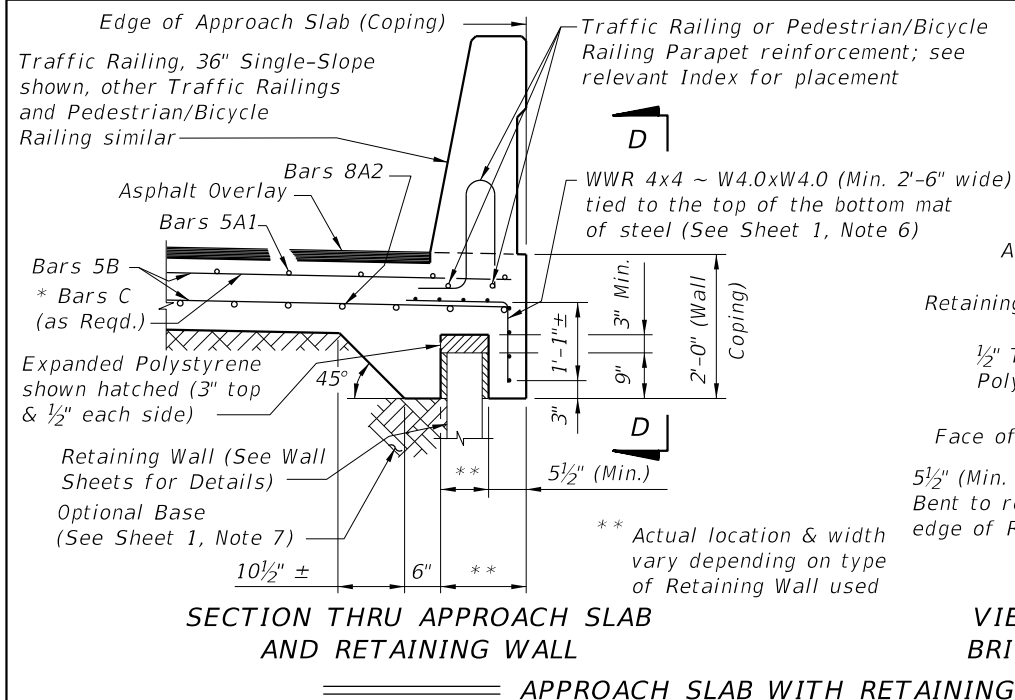
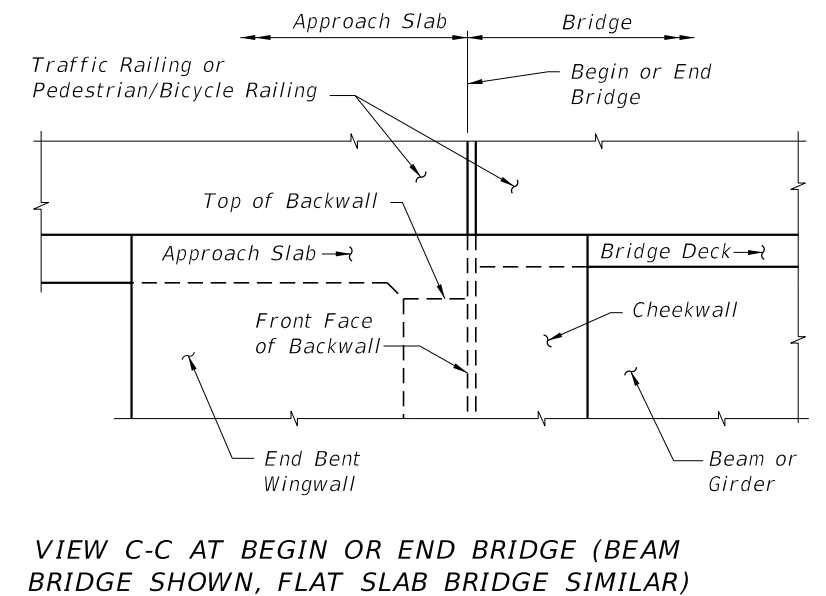
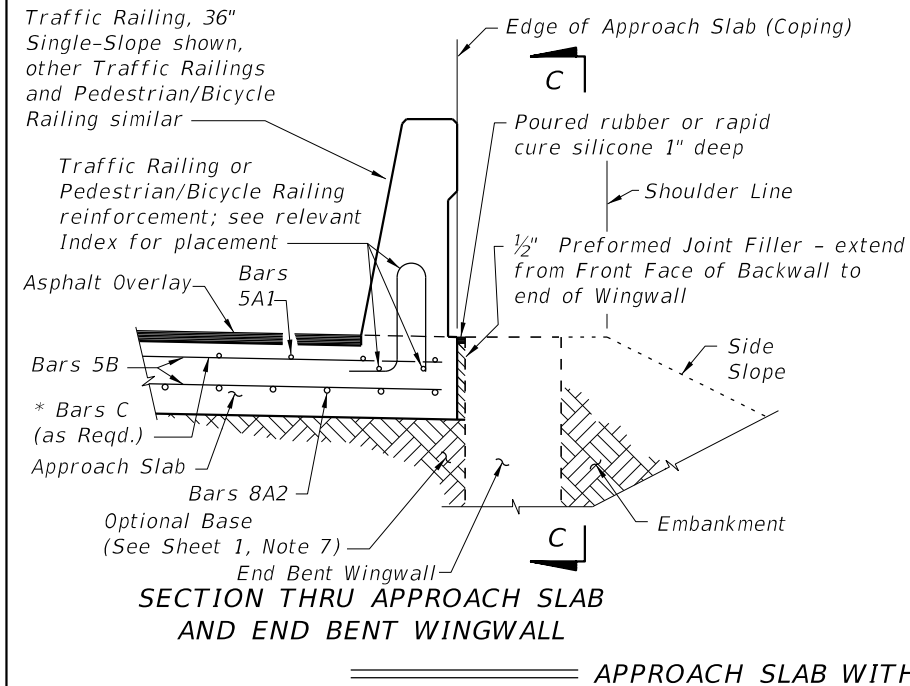
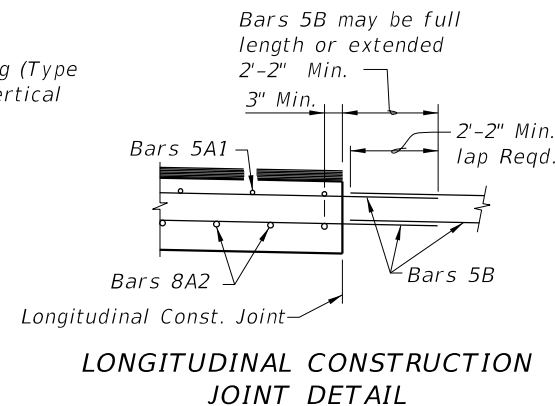
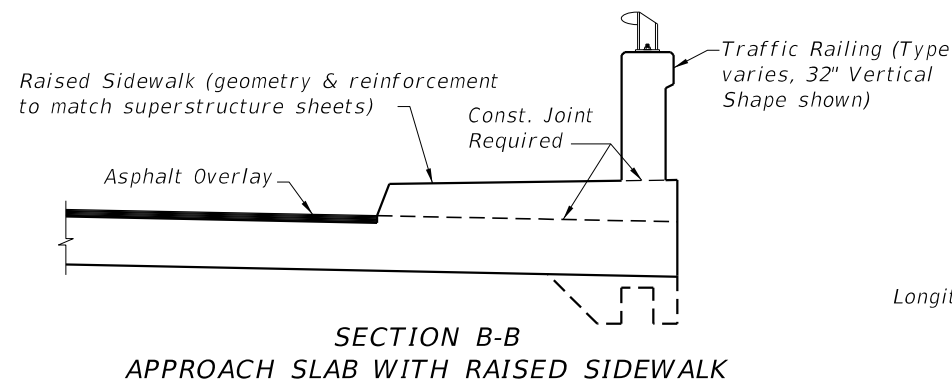
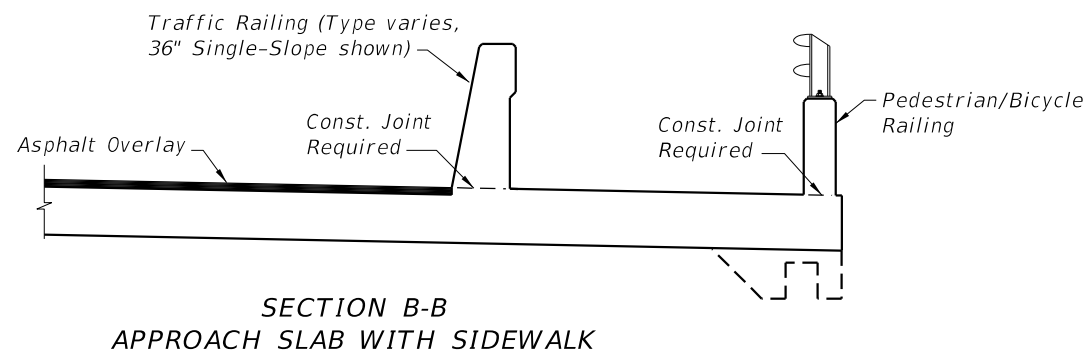
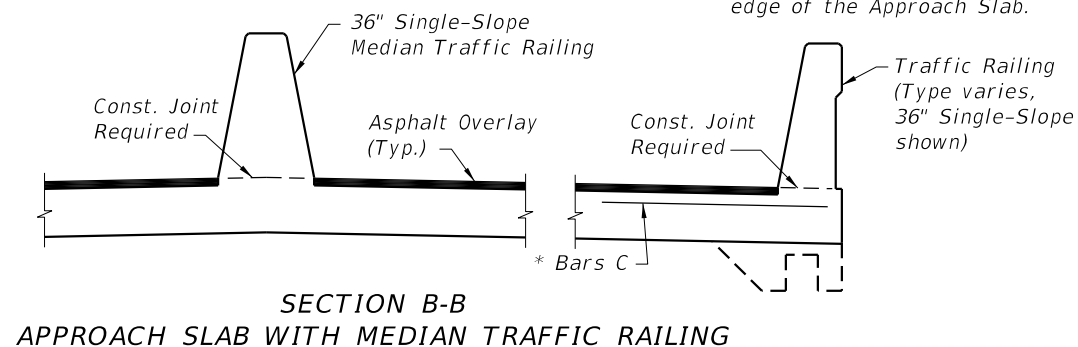
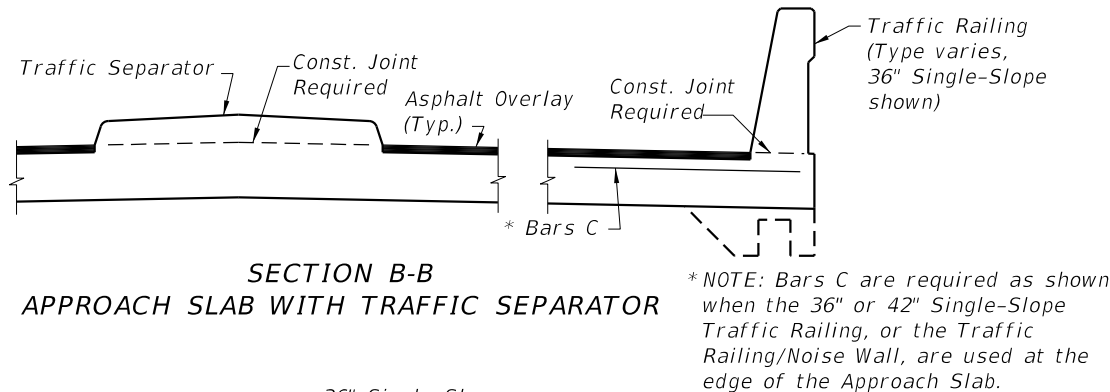
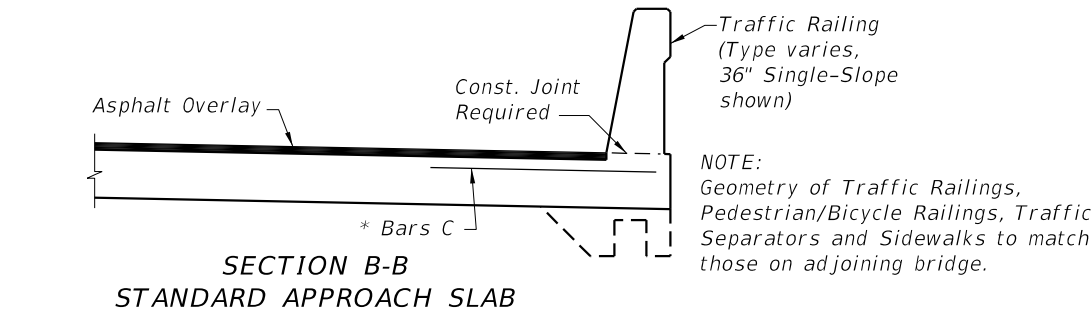
CROSS REFERENCES:

For Section B-B, Longitudinal Construction Joint Detail and Approach Slab Details see Sheet 2.



LAST REVISION	DESCRIPTION:	FDOT DEVELOPMENTAL DESIGN STANDARDS	APPROACH SLABS (20 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX NO. D20920	SHEET NO. 1 of 2
10/01/16					

SDATES \$TIMES



CROSS REFERENCES:

For location of Section B-B and Longitudinal Construction Joint see Sheet 1.

LAST REVISION 10/01/16	DESCRIPTION:	 DEVELOPMENTAL DESIGN STANDARDS	APPROACH SLABS (20 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX NO. D20920	SHEET NO. 2 of 2
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- SURVEY NOTES:**
1. Topographic Survey and Record Survey along Capri Isles Boulevard from 350' south of Capri Isles Bridge, to 350' north of Capri Isles Bridge, lying in Section 4, Township 39 South, Range 19 East, Sarasota County, Florida.
 2. Topographic Survey includes any hardscape elements and above ground utilities, including but not limited to all retaining walls, fences, culverts, drainage structures, drainage pipes with interior dimensions, paved ditches, water meters, valves, junction boxes, manholes, driveways, parking lots, utility/light poles, overhead utility lines, treelines, and any other significant feature within the survey areas identified above. Visible above ground utilities are shown herein, however, additional utilities may exist. The location of footers, foundations and structures beneath the ground surface has not been determined.
 3. Record Survey includes the location of subsurface utilities.
 4. NOT A BOUNDARY SURVEY: Apparent right-of-way shown is based upon plats, last deeds of record, a title search performed by American Government Services, and a limited number of found property corners.
 5. Survey Dates: January 2 - February 18, 2019.
 6. Coordinates of control points were established by Real-Time Kinematic GPS methodology, utilizing the Florida Permanent Reference Network (FPRN) for corrections, and are relative to the North American Datum of 1983 (NAD83), State Plane Coordinate System, West Zone, U.S. Survey Feet, based on NGS Monument *I75 83 43 R2 M* (PID=AG8206, Northing=1,019,318.11, Easting=522,591.83).
 7. Elevations of control points were established by digital benchrun beginning on NGS Benchmark *H799(PID=DL2708, Elevation=13.81 feet)* and ending on NGS Benchmark *H 723 (PID=DM5018, elevation=14.81 feet)*, and are relative to the North American Vertical Datum of 1988 (NAVD88).
 8. Station and Offset listed herein is relative to the Survey Reference Line established for this project along Capri Isles Boulevard. Said alignment does not represent any legal or historical land line or alignment, and is for reference purposes only.
 9. This report contains subsurface utilities physically exposed by vacuum excavation (VVH). Electronically designated lines as shown in this map of survey may deviate from the actual utility location and should be considered approximate.
 10. Surface elevations and measure downs (depth of cover) are valid at the date of this survey only as surface grade conditions may change over time.
 11. Subsurface Utilities were located by utilizing the Vacmaster System for vacuum excavation with the benefit of electronic designation and Ground Penetrating Radar (GPR).
 12. Utilization of the above equipment and methods is the industry recognized procedure for finding and locating underground utilities. Although effective and reliable, there is the possibility that all utilities may not be detected due to environmental conditions, soil conditions, water table, excessive depth, and/or feature makeup.
 13. Utility size and material composition were collected by field observation under adverse conditions and should be considered approximate.
 14. Utility size reflects the approximate outside diameter unless otherwise specified.
 15. Utility owner's names used in this report reflect information obtained from field observations, field meetings, and utility research and may not reflect actual ownership.
 16. This survey is intended to be displayed at a scale of 1"=20' or 1:240.
 17. Additions or deletions to survey maps or reports by other than the signing party or parties are prohibited without the written consent of the signing party or parties.
 18. This survey map and report (if applicable) or the copies thereof are not valid without the original signature and seal of a Florida licensed surveyor and mapper.

CONTROL POINT TABLE				
POINT NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
102	SET IRON ROD & CAP	1009082.69	522980.28	10.50'
103	SET RIVET & DISC	1009952.48	522962.55	10.14'
104	SET IRON ROD & CAP	1010333.29	523005.99	9.57'
105	SET IRON ROD & CAP	1010679.60	522819.73	10.64'
106	SET IRON ROD & CAP	1009980.63	522866.97	8.87'
107	SET IRON ROD & CAP	1009907.51	523097.79	8.28'
113	SET RIVET AND DISK	1009434.28	522991.76	9.50'
201	SET MAG NAIL & DISK	1010296.39	522986.99	N/A
202	SET MAG NAIL & DISK	1009450.48	522968.03	N/A

REVISED	NO.	BY	DATE	DESCRIPTION
	1	DE	2/25/19	Added Apparent R/W and Canal Maintenance Easement
	2			
	3			
	4			
	5			

	NO.	BY	DATE	DESCRIPTION
REVISED	6			
	7			
	8			
	9			
	10			

	INITIALS	DATE
CREW CHIEF	MJ	2/18/19
DRAWN	NB	2/26/19
CHECKED	MJC	2/26/19
FIELD BOOK	536	
FIELD DATE	2/18/19	

PREPARED FOR: **Atkins**
4030 West Boy Scout Blvd
Tampa, FL 33607
941-926-6598



George F. Young, Inc.
299 DR. MARTIN LUTHER KING JR. STREET, N. ST. PETERSBURG, FLORIDA 33701
PHONE (727) 822-4317 FAX (727) 822-2919
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CIVIL & TRANSPORTATION ENGINEERING ECOLOGY GIS LANDSCAPE ARCHITECTURE
PLANNING SURVEYING SUBSURFACE UTILITY ENGINEERING
GAINESVILLE • LAKEWOOD RANCH • ORLANDO • ST. PETERSBURG • TAMPA

Michael J. Curley PSM LS 6361

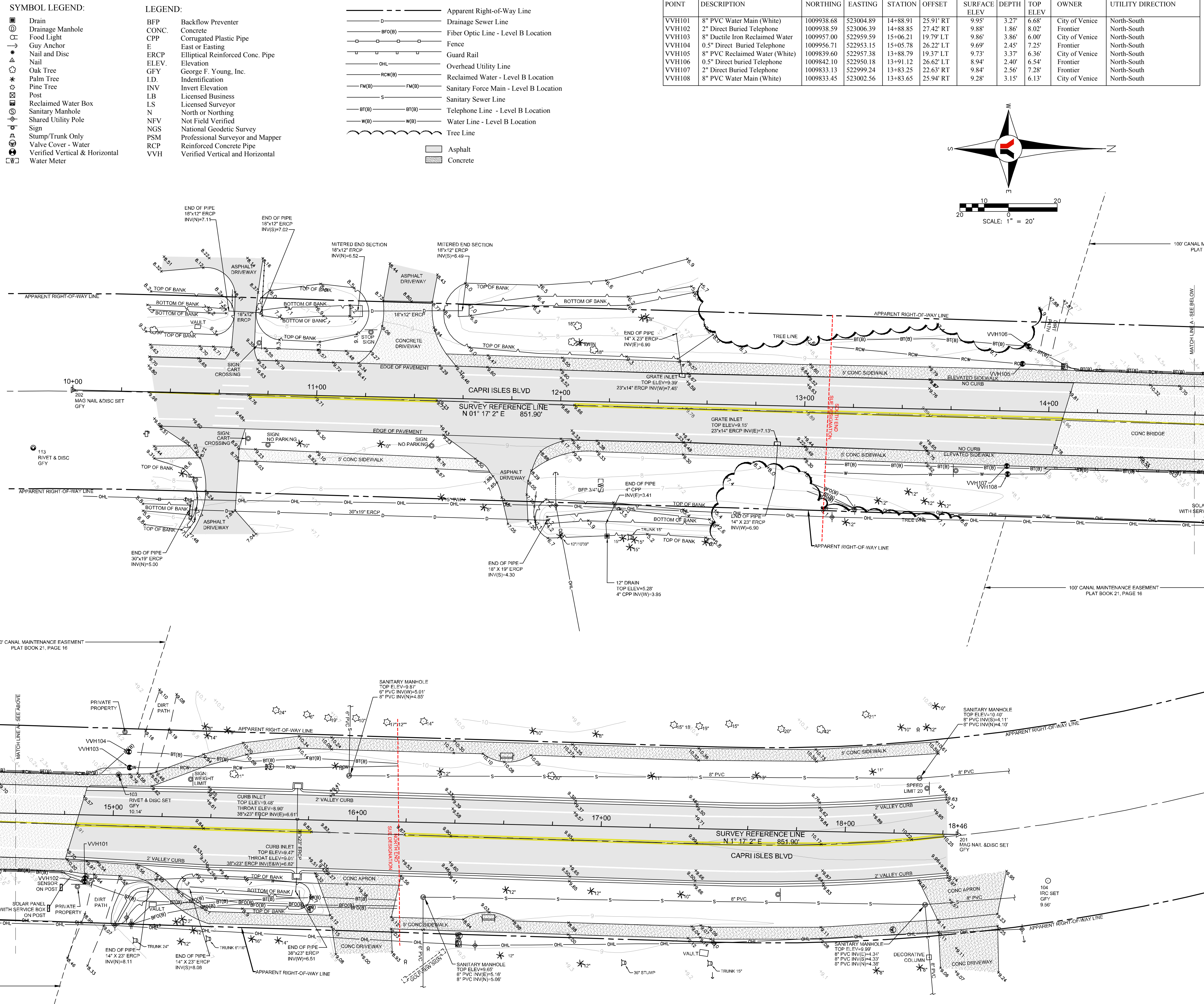
DATE

FPID 443413-1-54-01
Capri Isles Bridge Topographic &
Record Survey

SECTION 4, TOWNSHIP 39 SOUTH, RANGE 19 EAST

JOB NO.
18020900SU

SHFFT NO.
TP-1



L:\CITY OF VENICE\CAPRI ISLES\utility Plans.dwg, Jul 26, 2019 - 9:33am

GENERAL NOTES:

1. IMMEDIATELY NOTIFY THE ENGINEER REGARDING ANY CONFLICTS OR DISCREPANCIES ARISING DURING CONSTRUCTION.
2. ALL ADDITIONAL EXCAVATION SHALL BE PERFORMED AND DEMOLITION MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY OF VENICE.
3. BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA, EFFECTIVE OCTOBER 1, 1990, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE, ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
4. THE CITY RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING ON ALL MATERIALS DELIVERED TO THE PROJECT.
5. ALL FITTINGS USED ON THIS PROJECT SHALL BE DUCTILE IRON UNLESS OTHERWISE SHOWN. ALL MECHANICAL JOINT FITTINGS AND VALVES ARE TO BE RESTRAINED USING THE "MEGA-LUG" SYSTEM OR APPROVED ALTERNATE.
6. WORK SHALL BE SCHEDULED BETWEEN 7:30 A.M. AND 4:00 P.M. WITH A MAXIMUM OF 8 HOURS PER DAY MONDAY THRU FRIDAY. SHOULD THE CONTRACTOR REQUIRE MORE WORK HOURS TO MAINTAIN THE CONTRACT SCHEDULE, A REQUEST SHALL BE SUBMITTED IN WRITING TO THE OWNER'S PROJECT MANAGER STATING THE REASONS WHY AND HOW MANY ADDITIONAL HOURS ARE NEEDED. ALSO, REQUEST IN WRITING TO THE OWNER'S PROJECT MANAGER WITH A MINIMUM OF SEVENTY-TWO (72) HOURS ADVANCE NOTICE, OF ANY PLANS FOR WORKING AFTER OR BEFORE THE HOURS MENTIONED ABOVE, ON ANY WEEKEND DAYS OR OBSERVED CITY HOLIDAYS. SHOULD THE OWNER'S PROJECT MANAGER APPROVE THE REQUEST FOR ADDITIONAL HOURS, REIMBURSE THE OWNER FOR ACTUAL COSTS FOR RESIDENT INSPECTION INCURRED DURING THE ADDITIONAL HOURS APPROVED. THE HOURLY RATE FOR THESE ADDITIONAL HOURS WILL BE IN ACCORDANCE WITH CITY POLICY.
7. DO NOT BEGIN ANY EXCAVATIONS AFTER 3:30 PM.
8. EXISTING WATER MAIN AND SANITARY SEWER SHALL REMAIN IN SERVICE DURING CONSTRUCTION. ALL WATER AND SEWER TO BE PLACED OUT OF SERVICE, SHALL ONLY BE DONE AFTER ALL PROPOSED UTILITIES ARE IN PLACE, PASSED ALL TESTING AND INSPECTION, BEEN APPROVED BY THE CITY OF VENICE AND THE ENGINEER, AND IS IN SERVICE.
9. NOTIFY THE OWNER'S PROJECT MANAGER FIVE (5) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPEN-CUTTING ANY ROADWAY.
10. ALL FIELD DEFLECTIONS FOR THE PIPELINES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. OTHERWISE APPROPRIATE FITTINGS SHALL AT NO ADDITIONAL COST, BE USED, DETERMINE AND PROVIDE FITTINGS AS REQUIRED FOR DEFLECTIONS BASED UPON FIELD CONDITIONS WHERE SPECIFIC FITTING REQUIREMENTS ARE NOT IDENTIFIED.
11. THE CONSTRUCTION AND MATERIALS SHALL STRICTLY ADHERE TO CONDITIONS OF PERMIT AND CONTRACT DOCUMENTS.
12. EXCAVATE TOPSOIL AND STOCKPILE ADJACENT TO TRENCH. EXCAVATE REMAINING SOIL AFTER PIPE IS INSTALLED AND BURIED, RESTORE TOPSOIL TO PRE-CONSTRUCTION GRADES.
13. ALL BURIED PIPE WITHIN PUBLIC R.O.W. SHALL HAVE A MINIMUM OF 3- FEET COVER UNLESS OTHERWISE NOTED IN THE PLANS OR AUTHORIZED IN WRITING BY THE CITY OF VENICE.
14. OBTAIN PERMISSION IN WRITING FROM ANY PROPERTY OWNER TO LOCATE ANY EQUIPMENT AND/OR MATERIALS ON ANY PROPERTY. THE CITY SHALL REQUIRE THE CONTRACTOR TO PROVIDE SIGN A "HOLD HARMLESS AGREEMENT" IN ADVANCE OF THE START OF CONSTRUCTION.
15. EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WATER MAINS, WASTEWATER FORCE MAINS AND GRAVITY MAINS AND RECLAIMED WATER MAINS. MAIN LOCATIONS SHOWN ON PLANS ARE NOT EXACT OR GUARANTEED. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING UTILITY LOCATIONS.
16. CITY OF VENICE UTILITIES SHALL BE NOTIFIED BY THE CONTRACTOR FOR PIPE EMERGENCIES.
17. NEW WATER MAIN SHALL BE FLUSHED WITH METERED POTABLE WATER UTILIZING A "JUMPER" ASSEMBLY WITH A CROSS CONNECTION CONTROL ASSEMBLY AND CITY OF VENICE UTILITIES WATER METER.
18. ALL EXISTING WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS AND RECLAIMED WATER MAINS, STORMWATER PIPES, AND OTHER FACILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE SUPPORTED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
19. ALL EXISTING AND NEW VALVES, VALVE BOXES, AIR/S, FIRE HYDRANTS AND MANHOLES SHALL BE PROTECTED UNTIL ADJUSTED TO FINISHED GRADE AS SHOWN ON THE DRAWINGS. ALL EXISTING ABOVE GROUND VALVES SHALL BE RELOCATED AS REQUIRED.
20. CITY OF VENICE UTILITIES SHALL BE NOTIFIED AT LEAST FIVE (5) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY WITHIN PROXIMITY OF ITS FACILITIES.
21. IMMEDIATELY CONTACT CITY OF VENICE UTILITIES AND BE RESPONSIBLE FOR THE REPAIR OF DAMAGES TO CITY OF VENICE UTILITIES MAINS AND FACILITIES AT THE CONTRACTOR'S EXPENSE. IF THE REPAIR IS NOT MADE IN A TIMELY MANNER, AS DETERMINED BY CITY OF VENICE UTILITIES, CITY OF VENICE UTILITIES MAY PERFORM REQUIRED REPAIRS AND CLEANUP. THE CONTRACTOR WILL BE CHARGED FOR ALL EXPENSES ASSOCIATED WITH REPAIRS.
22. ONLY CITY OF VENICE UTILITIES SHALL OPERATE CITY OWNED WATER, WASTEWATER AND RECLAIMED WATER VALVES. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH CITY OF VENICE UTILITIES.
23. THE UTILITY IMPROVEMENTS AND ADJUSTMENTS SHOWN ON THESE PLANS ARE INTENDED TO MAINTAIN THE INTEGRITY OF CITY OF VENICE UTILITIES WATER, WASTEWATER AND RECLAIMED WATER SYSTEMS. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF VENICE UTILITIES STANDARDS. THE PLANS DO NOT INCLUDE WORK PERFORMED ON OR FOR UTILITY SYSTEMS OWNED BY OTHERS, UNLESS STATED OTHERWISE ON THE PLANS.
24. ALL EXISTING AND PROPOSED VALVES THAT DIRECTLY CONNECT ANY PROPOSED WATER MAINS TO ANY EXISTING MAINS SHALL REMAIN CLOSED UNTIL CLEARED BY BOTH FDEP/FDOH AND CITY OF VENICE UTILITIES.
25. DURABLE CURB MARKERS, AS SPECIFIED BY CITY OF VENICE UTILITIES, SHALL BE SECURELY ATTACHED 6 INCHES FROM THE EDGE OF PAVEMENT WHERE CURBING IS NOT PRESENT, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SO THAT ALL SERVICES AND VALVES ARE ACCURATELY LOCATED.
26. ALL ABANDONED MAINS SHALL BE REMOVED UNLESS NOTED OTHERWISE ON THE DRAWINGS.
27. NOTIFY THE FOLLOWING SARASOTA COUNTY & CITY OF VENICE AGENCIES A MINIMUM OF 2 WEEKS IN ADVANCE IN WRITING OF ANY ROAD CLOSURES, DETOURS, AND CONSTRUCTION ACTIVITIES PRIOR TO CONSTRUCTION. THE NOTICE SHALL BE ACCOMPANIED WITH A SCHEDULE OF ROAD CLOSURES AND ANTICIPATED INTERRUPTIONS IN TRAFFIC.

SCHOOL BOARD OF SARASOTA COUNTY
ATTN: MICKI RYAN, PLANNING ANALYST
LONG RANGE PLANNING DEPT.
BLUE AWNING BUILDING - ROOM 106
1960 LANDING BLVD.
SARASOTA, FLORIDA 34231
PHONE: 941-927-9000
E-MAIL: MICKI_RYAN@SARASOTA.K12.FL.US

UNITED STATES POST OFFICE CITY OF VENICE
ATTN: PHILIP FLEENER
DELIVERY SUPERVISOR
350 W. VENICE AVE.
VENICE, FLORIDA 34285-0001
PHONE: 941-483-4195
E-MAIL: PHILIP.E.FLEENER@USPS.GOV

CITY OF VENICE PUBLIC INFORMATION OFFICER
ATTN: LORRAINE ANDERSON
VENICE CITY HALL
401 W. VENICE AVE.
VENICE, FLORIDA 34285
PHONE: 941-486-2626 EXT. 24005
E-MAIL: LJOHNSON@VENICEGOV.COM

CITY OF VENICE FIRE DEPT.
ATTN: SHAWN CARVEY
BATTALION CHIEF
200 GROVE STREET NORTH
VENICE, FLORIDA 34285
PHONE: 941-480-3030
E-MAIL: JSILV@CI.VENICE.FL.US

CITY OF VENICE SOLID WASTE
ATTN: BOB MORONI
ACTING SOLID WASTE SUPERINTENDENT
221 SEABOARD AVE.
VENICE, FLORIDA 34285
PHONE: 941-486-2422
E-MAIL: BORONI@VENICEGOV.COM

EXISTING UTILITIES:

1. COORDINATE WITH POWER COMPANY AND OTHER AERIAL UTILITY OWNERS TO PROTECT OVERHEAD UTILITIES DURING CONSTRUCTION, AND TO SUPPLY TEMPORARY ELECTRIC NEEDED BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLE SUPPORT PERFORMED BY AFFECTED UTILITIES.
2. NOTIFY PROPERTY OWNER AND OWNER'S PROJECT MANAGER FIVE (5) BUSINESS DAYS IN ADVANCE OF ALL PLANNED UTILITY INTERRUPTION OR DRIVEWAY CUTS.
3. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM THE BEST AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION PRIOR TO CONSTRUCTION. USE METAL DETECTOR, PROBE, GROUND PENETRATING RADAR AND OTHER NON-DESTRUCTIVE METHODS TO LOCATE ALL EXISTING LINES PRIOR AND DURING EXCAVATION. NOTIFY THE UTILITY COMPANIES IN THE AREA BEFORE BEGINNING CONSTRUCTION, AT LEAST TWO BUSINESS DAYS IN ADVANCE. CALL THE FLORIDA SUNSHINE STATE ONE CALL CENTER ☎ 811.
4. CONNECTIONS TO EXISTING FACILITIES SHALL BE MADE IN THE PRESENCE OF THE CITY OF VENICE STAFF AND THE ENGINEER. THE CONTRACTOR SHALL GIVE AT LEAST FIVE(5) BUSINESS DAYS NOTICE TO ALL PARTIES CONCERNED PRIOR TO BEGINNING WORK.
5. BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES, STRUCTURES, OR UTILITIES CAUSED BY CONSTRUCTION OPERATIONS WHICH HAVE BEEN PREVIOUSLY LOCATED BY THEIR RESPECTIVE OWNERS.
6. LOCATION, ELEVATION AND DIMENSIONS AT EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT MAY NOT REPRESENT THE ACTUAL. THE EXACT LOCATIONS ARE TO BE DETERMINED BY THE CONTRACTOR WHERE NECESSARY DURING CONSTRUCTION. THE COST FOR DETERMINING THE EXACT LOCATIONS WILL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS. NO PAYMENT SHALL BE MADE FOR THIS WORK.
7. BE RESPONSIBLE FOR THE COORDINATING AND SCHEDULING OF THE WORK WITH THAT OF ALL UTILITY AGENCIES. THIS INCLUDES MEETING WITH THE AGENCIES PRIOR TO THE PRE-CONSTRUCTION MEETING.
8. PRIOR TO BEGINNING WORK, SUBMIT TO THE ENGINEER FIVE (5) COPIES OF A WORK SCHEDULE OUTLINING THE MANNER IN WHICH THE CONTRACTOR PROPOSES TO INSTALL THE UTILITIES. NO WORK SHALL BE PERFORMED UNTIL THE WORK SCHEDULE IS APPROVED BY THE ENGINEER.
9. BE RESPONSIBLE AT YOUR COST TO COORDINATE THE SUPPORT AND HOLDING OF ALL UTILITY POLES, SIGNS AND OTHER EXISTING UTILITIES.

DEWATERING:

1. PORTABLE GENERATORS UTILIZED FOR DEWATERING OR OTHER CONSTRUCTION ACTIVITIES SHALL BE SPECIFICALLY DESIGNED TO PROVIDE QUIET OPERATIONS WITH ENCAPSULATED NOISE ABATEMENT PANELS AND MUFFLERS THAT HOSPITAL GRADE SOUND ATTENUATION FOR NOISE SUPPRESSION.
2. PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY AND SHALL PROVIDE ALL NECESSARY SHEETING, SHORING, AND BRACING NECESSARY TO PROTECT ADJACENT STRUCTURES, UTILITIES, AND PAVEMENT, OR TO MINIMIZE TRENCH WIDTH, ALL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

RESTORATION:

1. OVERALL CLEAN UP SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY STANDARDS AND AS DIRECTED BY THE OWNER'S PROJECT MANAGER. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.
2. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE OWNER'S PROJECT MANAGER AT THE EXPENSE OF THE CONTRACTOR.
3. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.
4. RESTORATION SHALL INCLUDE, AT A MINIMUM, SOLID SODDING MATCHING EXISTING GRASS FOR ALL UNPAVED AREAS DISTURBED BY THE CONTRACTOR'S OPERATION; REPLACEMENT OF CONCRETE DRIVEWAYS, SIDEWALKS,AND PATIOS; REPLACEMENT OF FENCES; REPLACEMENT OF LANDSCAPING; ETC.
5. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM ROAD PAVEMENTS, DRIVEWAYS, SIDEWALKS AND DRAINAGE SWALES AND EXISTING DRAINAGE PATTERNS RESTORED AT THE COMPLETION OF WORK EACH DAY.
6. ALL DRIVEWAYS, SIDEWALKS, AND OTHER RIGHT-OF-WAY OR EASEMENT ENCROACHMENTS SHALL BE RESTORED EQUAL TO OR BETTER THAN EXISTING CONDITIONS. COMMERCIAL DRIVEWAYS SHALL REMAIN OPERATIVE DURING NORMAL BUSINESS HOURS, UNLESS A DETOUR IS PROVIDED AND APPROVED BY THE OWNER'S PROJECT MANAGER.
7. ALL DRIVEWAYS REMOVED, ALTERED OR DAMAGED SHALL BE RESTORED WITHIN 72 HOURS TO MAINTAIN ACCESS TO THE PROPERTY.
8. ALL CONCRETE PATIOS, PORCHES, WALKING PATHS, OR OTHER APPURTENANCES REMOVED DURING CONSTRUCTION OF WATER AND/OR SANITARY SERVICES SHALL BE RESTORED TO ITS ORIGINAL CONDITION WITHIN 72 HOURS OF INSTALLATION OF THE NEW SERVICE LINE TO AVOID UNSIGHTLY PATCHES AND CRACKING. CONCRETE SHOULD BE REMOVED TO THE NEAREST JOINT OR A NEW JOINT SHOULD BE CREATED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS. ALL SURFACE MATERIAL AND CONCRETE FINISHES SHOULD BE REPLACED IN KIND.
9. PROPER NOTICE SHALL BE GIVEN IN WRITING TO RESIDENTS AND OWNERS OF PROPERTIES AND DRIVEWAYS IMPACTED BY CONSTRUCTION FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION.
10. TO LIMIT INCONVENIENCE THE COMMUNITY, ALL WORK WHICH IMPACTS TRAFFIC SHALL BE COMPLETED AS QUICKLY AS PRACTICAL. PRIOR TO MAKING ANY ROADWAY CUTS, PROVIDE A SEQUENCING PLAN FOR WORK WITHIN THE ROW TO THE CITY OF VENICE FOR APPROVAL. ALL WORK IN THE SEQUENCING PLAN SHALL BE BROKEN DOWN INTO INDIVIDUAL ROADWAYS OR CLEARLY DEFINED PHASES WITHIN THE PROJECT AREA. THIS PLAN SHALL CONSIST OF A SYSTEMATIC APPROACH FOR HOW THE INFRASTRUCTURE FOR EACH ROADWAY OR PHASE SHALL BE STARTED AND COMPLETED. NO WORK FOR SUBSEQUENT ROADWAYS OR PHASES SHALL BEGIN UNTIL ALL ROADWAY RESTORATION, INCLUDING PLACEMENT OF TEMPORARY ASPHALT, IS COMPLETED ON THE PRECEDING ROADWAY OR PHASE AND APPROVED BY THE CITY OF VENICE.
11. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OFF SITE OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
12. REMOVE AND PROTECT EXISTING LANDSCAPE PLANTS AS NECESSARY. AFTER EXCAVATION WORK HAS BEEN COMPLETED, CONTRACTOR SHALL REPLANT/REPLACE ANY DISTURBED LANDSCAPE PLANTS TO MATCH AND BLEND WITH THE REMAINING LANDSCAPE PLANTS. FINAL LANDSCAPING SHALL MATCH AS CLOSE AS POSSIBLE THE PRECONSTRUCTION LANDSCAPE LAYOUT, PLANT SIZES AND CONDITIONS.
13. RESTORE EXISTING IRRIGATION EQUIPMENT (PIPES, SPRINKLER HEADS, VALVES, AND WIRING) DISTURBED DURING CONSTRUCTION TO PRECONSTRUCTION CONDITIONS IMMEDIATELY.

PROTECTION OF EXISTING TREES AND VEGETATION:

1. PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE, AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING AND BRUISING BARK, SMOTHERING OF TREES BY STOCK PILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINES, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE.
2. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT EXISTING.
3. WATER TREES AND OTHER VEGETATION TO REMAIN WITHIN THE LIMITS OF THE CONTRACT WORK AS REQUIRED TO MAINTAIN THEIR HEALTH DURING THE COURSE OF CONSTRUCTION OPERATIONS.
4. PROVIDE PROTECTION FOR ROOTS OVER 2-INCH DIAMETER CUT DURING CONSTRUCTION OPERATIONS. COAT THE CUT FACES WITH AN EMULSIFIED ASPHALT, OR OTHER ACCEPTABLE COATING, FORMULATED FOR USE ON DAMAGED PLANT TISSUES. TEMPORARILY COVER EXPOSED ROOTS WITH WET BURLAP TO PREVENT ROOTS FROM DRYING OUT; COVER WITH EARTH AS SOON AS POSSIBLE.
5. IF ROOT STRUCTURE IS PRESENT UPON REMOVAL OF IMPERVIOUS SURFACES THEN PRUNING SHALL BE REQUIRED AND PERFORMED BY CONTRACTOR. ALL ROOT REMOVAL SHALL BE LIMITED TO THE LEAST EXTENT POSSIBLE OR AS DIRECTED ON SITE BY THE CITY.
6. ALL ROOT PRUNING SHALL BE DONE BY CONTRACTOR IMMEDIATELY UPON EXPOSURE OF THE TREE ROOTS WITH CLEAN CUT HAND PRUNING OF ALL ROOTS GREATER THAN ¾ INCH DIAMETER.
7. IF OVERHEAD TREE LIMBS ARE INTRUDING INTO THE PROPOSED WORK AREA WHICH MAY BE INJURED BY MACHINERY OR TRUCKING MANEUVERS, A CERTIFIED ARBORIST SHALL BE PROVIDED BY THE CONTRACTOR AND BE REQUIRED TO BE ON THE SITE FOR PROPER REMOVAL OF SAID TREE LIMBS.

PERMITTING:

1. BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES.
2. ADHERE TO ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS WHICH HAVE BEEN OBTAINED.
3. BE REQUIRED TO OBTAIN ALL APPLICABLE PERMITS. NOT ALREADY OBTAINED BY THE CITY.
4. REMOVE ALL EXOTIC PLANTS WITHIN CONSTRUCTION ZONE AND DISPOSE OF OFFSITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

STORMWATER BEST MANAGEMENT PLANS:

1. EXERCISE CARE TO MINIMIZE THE DEGRADATION OF STORM WATER QUALITY AT THE SITE. ALL NECESSARY PROVISIONS SHALL BE TAKEN TO INSURE COMPLIANCE WITH THE WATER QUALITY STANDARDS OF THE STATE OF FLORIDA. MEASURES TO BE IMPLEMENTED DURING CONSTRUCTION TO AVOID ADVERSE QUALITY AND QUANTITY IMPACTS OFF SITE SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
 - A.) RUNOFF WITH FUELS, OILS, BITUMENS, OR OTHER MATERIALS.
 - B.) THROUGH COMPLETION OF SEED AND MULCHING, SODDING AND OTHER PERMANENT EROSION CONTROL MEASURES CONCURRENTLY WITH OTHER WORK.
2. PROVIDE ARTIFICIAL HAY BALES AND/OR SILT FENCES AROUND THE CONSTRUCTION ACTIVITY, AS NECESSARY, TO PREVENT THE TRANSPORTATION OF SEDIMENTS DOWNSTREAM INTO STREETS, STORM SEWERS, OPEN DITCHES, LAKES, RETENTION PONDS, PRIVATE PROPERTY, ETC., AND SHALL PERFORM ALL NECESSARY INSPECTIONS AND MAINTENANCE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL GOVERNING AGENCY REQUIREMENTS AND THE SPECIFICATIONS- PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION.
3. BE RESPONSIBLE FOR PROVIDING TO THE OWNER'S PROJECT MANAGER A SILTATION/ EROSION PLAN MEETING ALL REQUIREMENTS OF FDOT FOR APPROVAL AND INSTALLATION PRIOR TO ANY CONSTRUCTION.
4. INSTALL SILT BARRIERS AS LISTED ON PLAN SHEETS AND AS REQUIRED.
5. NO IMPOUNDMENT OF SURFACE WATERS SHALL BE ALLOWED TO OCCUR DUE TO THE CONSTRUCTION ACTIVITY.

MAINTENANCE OF TRAFFIC:

1. PROVIDE ADVANCE NOTICE OF FIVE (5) BUSINESS DAYS TO THE APPLICABLE AUTHORITIES REGARDING ANY DETOURS OR CLOSURES.
2. COMPLY WITH THE FOLLOWING: "STATE OF FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS", "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CITY OF SARASOTA STANDARDS, APPLICABLE FDOT 600 SERIES STANDARD INDEXES FOR TRAFFIC CONTROL THROUGH WORK ZONES, AND "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
3. PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN (TCP). THE TCP SHALL BE PREPARED IN CONFORMANCE WITH AND IN THE FORM OUTLINED IN THE CURRENT VERSION OF THE FDOT FLORIDA DESIGN MANUAL. THE PLAN SHALL INDICATE A TCP FOR EACH PHASE OF THE CONTRACTOR'S ACTIVITY.
4. FULLY IMPLEMENT THE TCP PRIOR TO COMMENCEMENT OF ANY POTENTIAL TRAFFIC DISTURBING ACTIVITIES. IN NO CASE SHALL THE CONTRACTOR BEGIN WORK USING THE TCP UNTIL SUCH PLAN HAS BEEN APPROVED IN WRITING BY THE OWNER'S PROJECT MANAGER AND THE PROJECT ENGINEER. EXCEPT IN AN EMERGENCY, NO CHANGES TO THE APPROVED PLAN WILL BE ALLOWED UNTIL WRITTEN APPROVAL TO CHANGE SUCH PLAN HAS BEEN RECEIVED. THE TCP SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
5. PROVIDE PROPER WARNING SIGNS, BARRICADES, TEMPORARY FENCING AND OTHER APPROPRIATE SAFETY DEVICES DURING THE EXECUTION OF THE WORK TO PROVIDE PUBLIC PROTECTION AND SAFETY.
6. MAINTENANCE OF TRAFFIC SIGNS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED BY THE CONTRACTOR DURING THE DURATION OF THE PROJECT AS REQUIRED.
7. COORDINATE CONSTRUCTION ACTIVITIES WITH THE OWNER'S OPERATIONS STAFF ON A DAILY BASIS TO MINIMIZE INTERFERENCE WITH OPERATIONS ACTIVITIES. THE CONTRACTOR SHALL MAINTAIN ROAD ACCESS AT ALL TIMES FOR CITY VEHICLES AND OTHER CONTRACTORS.
8. MAINTAIN AT LEAST ONE WAY TRAFFIC. PROVIDE ACCESS TO STRUCTURES, RESIDENTS AND BUSINESSES ADJACENT TO THE WORK AS NEEDED.

UTILITY CONTACT NUMBERS

- 1 COMCAST CABLEVISION
(941) 809-6637 (8 A.M. - 5 P.M.)
(888) 316-1619 (24 HRS)
- 2 FLORIDA POWER & LIGHT
(941) 704-9087
- 3 FRONTIER COMMUNICATIONS
(941) 504-9652
- 4 CITY OF VENICE UTILITIES (EMERGENCY)
(941) 882-7297

DRAWING INDEX

U-1 UTILITY GENERAL NOTES

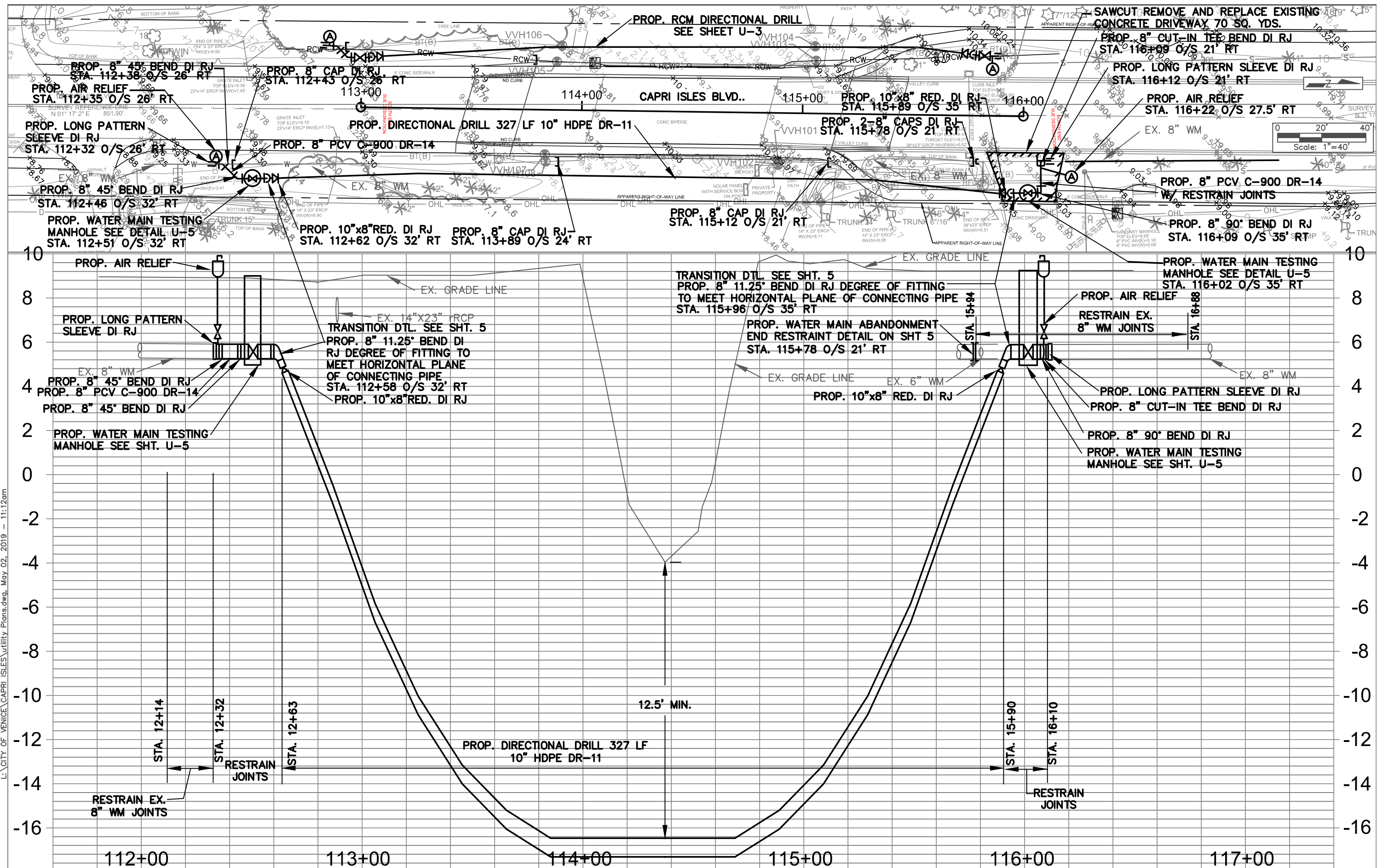
U-2 CAPRI ISLES BLVD. UTILITY RELOCATION WATERMAIN PLAN AND PROFILE

U-3 CAPRI ISLES BLVD. UTILITY RELOCATION RECLAIM WATER MAIN PLAN AND PROFILE

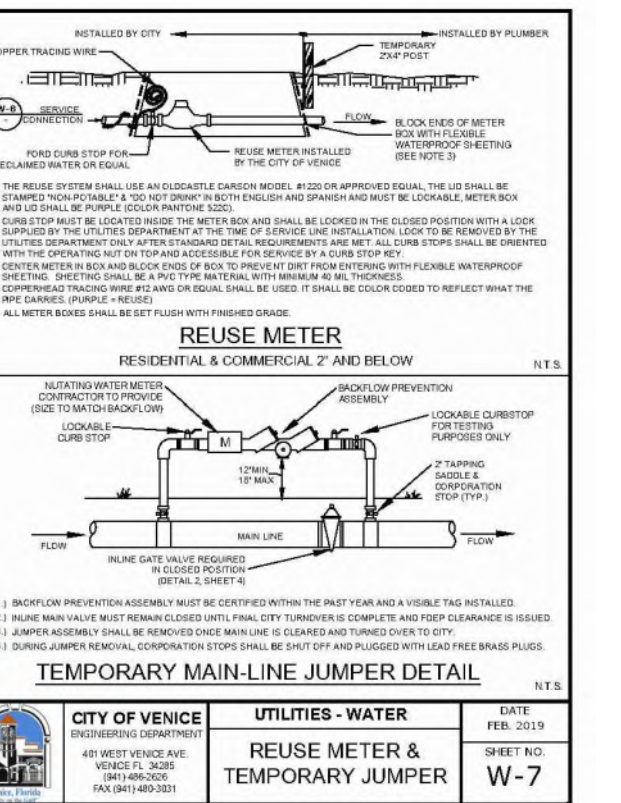
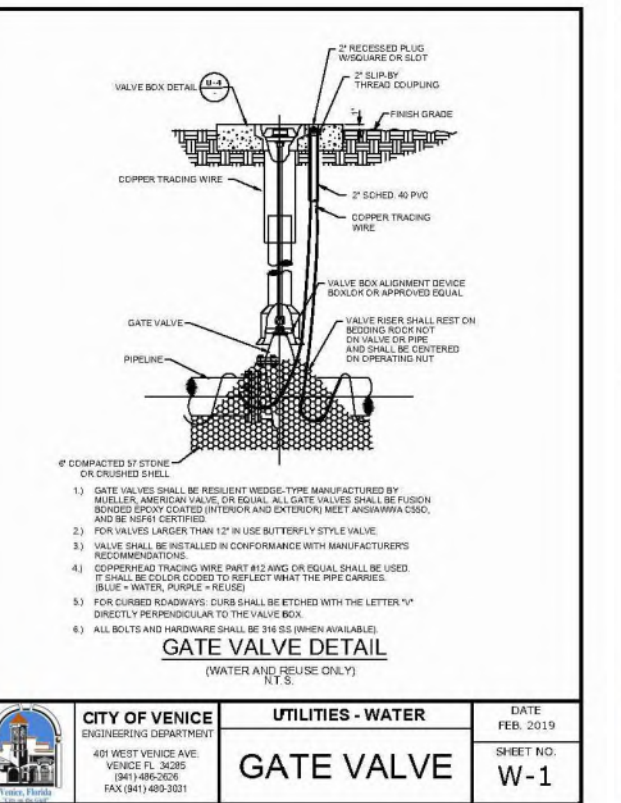
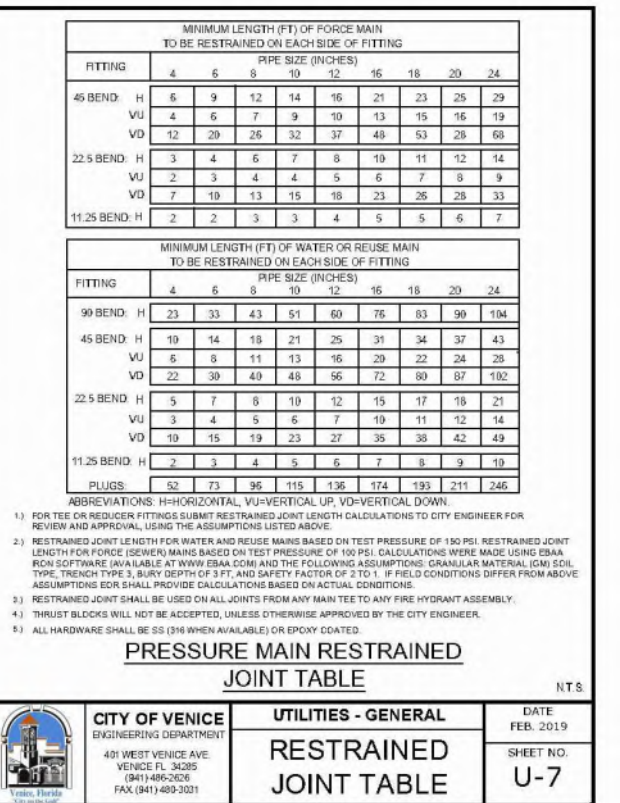
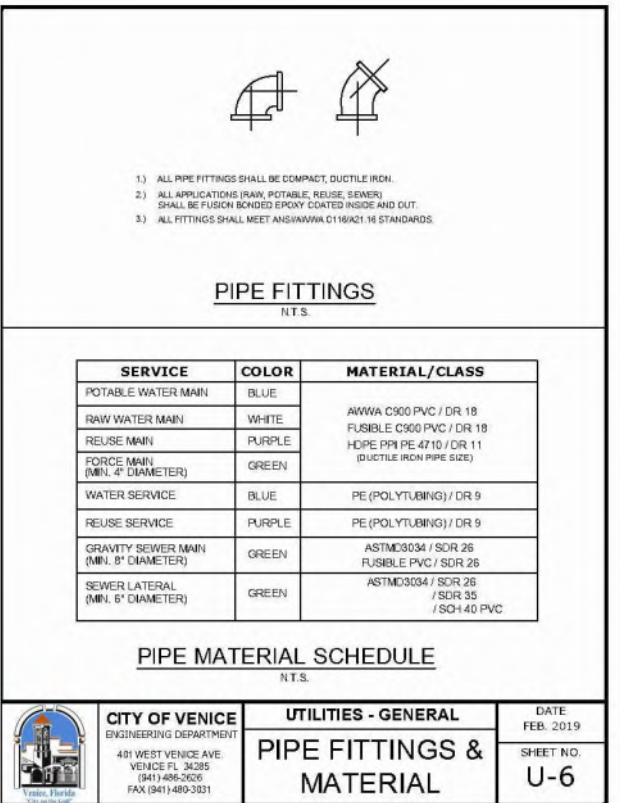
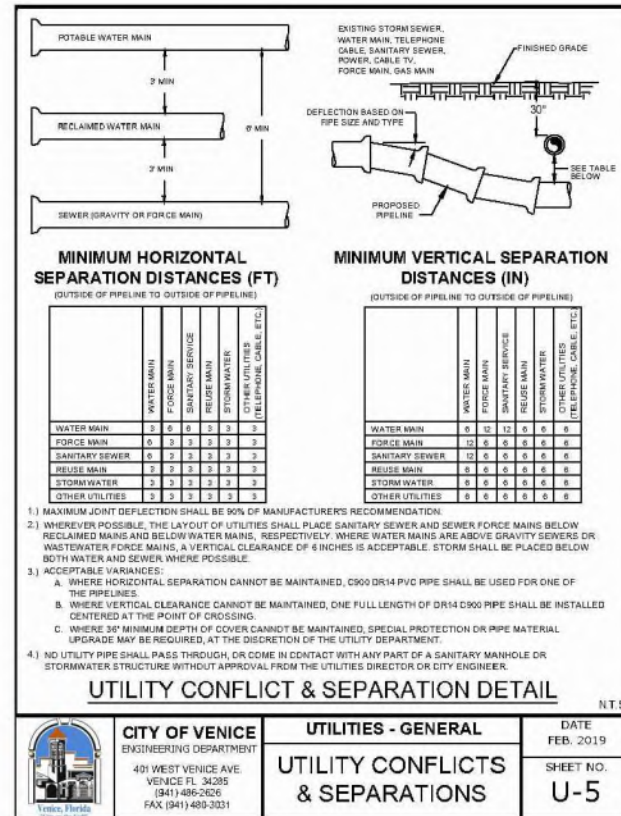
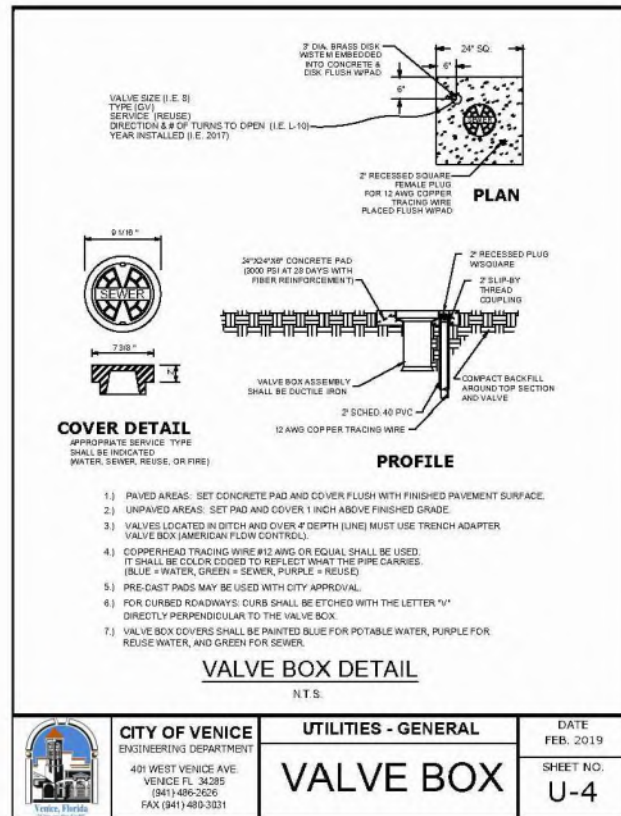
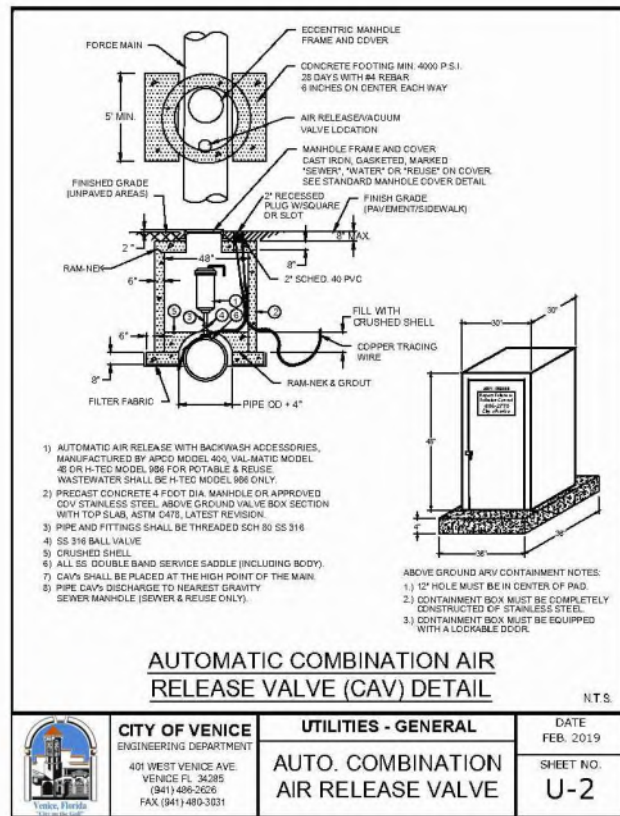
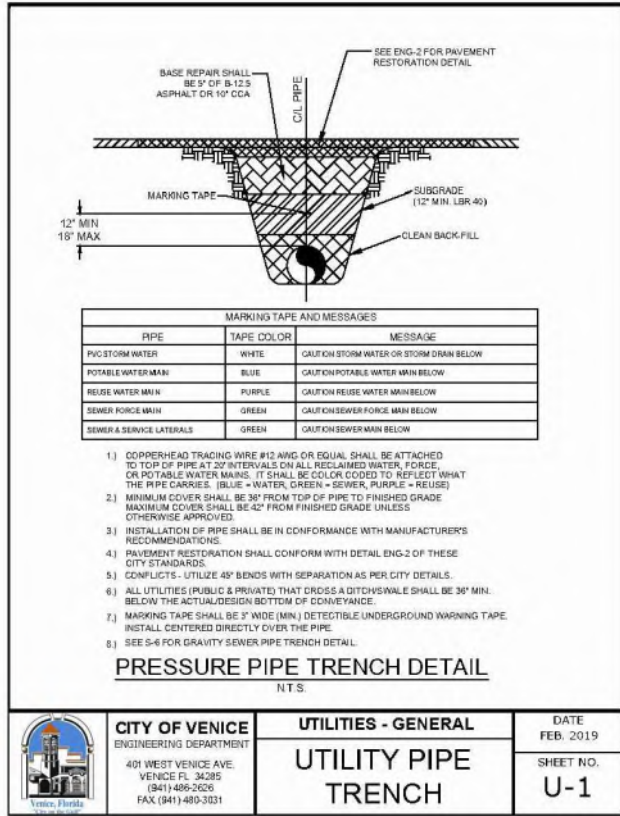
U-4 UTILITY DETAILS

U-5 UTILITY DETAILS

					DESIGNED <u>MV</u>	PREPARED FOR: 	PREPARED BY: 	PROJECT: CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION: UTILITY GENERAL NOTES	APPROVED BY: JOHN M. EASH, P.E. FLA. REG. NO 46235 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712 DATE	DATE: PROJECT NO.: G017R4 SHEET: U-1
REV. NO.	DATE	DESCRIPTION			DRAWN <u>MV</u>						
					CHECKED <u>JE</u>						



			DESIGNED	MV		PREPARED FOR:		PREPARED BY:	CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	PROJECT:	CITY OF VENICE CAPRI ISLES BRIDGE REPLACEMENT	DESCRIPTION:	CAPRI ISLES BLVD UTILITY RELOCATION WATER MAIN PLAN AND PROFILE	APPROVED BY:	JOHN M. EASH, P.E. _____ DATE _____ FLA. REG. NO 46235 ATKINS NORTH AMERICA (FBPR CA No.24) 4030 WEST BOY SCOUT BOULEVARD, SUITE 700 TAMPA, FL 33607-1712	DATE:	PROJECT NO.: GO17R4 SHEET: U-2
			DRAWN	MV													
REV. NO.	DATE	DESCRIPTION	CHECKED	JE													



W-7 CONTRACTOR TO PROVIDE ON EACH MAIN

DESIGNED	MV	PREPARED FOR:	CITY OF VENICE	PROJECT:	CITY OF VENICE	DESCRIPTION:	UTILITY DETAILS	APPROVED BY:	JOHN M. EASH, P.E.	DATE	PROJECT NO.:	FLA. REG. NO 46235	DATE	PROJECT NO.:	G017R4
DRAWN	MV	PREPARED BY:	ATKINS						ATKINS NORTH AMERICA (FBPR CA No.24)		SHEET:				
CHECKED	JE								4030 WEST BOY SCOUT BOULEVARD, SUITE 700						
REV. NO.	DATE	DESCRIPTION							TAMPA, FL 33607-1712						

A DRILLING BORE LOG SHALL BE SUBMITTED WITHIN SEVEN (7) DAYS OF PERFORMING THE BORE. DEPTHS SHALL BE RECORDED AT A MAXIMUM OF EVERY TEN (10) FEET. RECORD DRAWINGS SHALL INDICATE ELEVATIONS.

ALL DBs SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) WITH DR-11 MINIMUM OR EQUAL.

PIPE SHALL BE COLOR-CODED BY THE PIPE MANUFACTURED DURING FABRICATION INDICATING APPROPRIATE SERVICE.

AIR RELEASE VALVES SHALL BE INSTALLED ON THE UPSTREAM SIDE OF THE BORE.

WELDED MJ ADAPTERS ARE REQUIRED AT BOTH ENDS OF THE BORE. ONLY STAINLESS STEEL INSERT STIFFENERS WILL BE ACCEPTABLE.

TRACE WIRES REQUIRED. SECURE TO PIPE PRIOR TO PULLING.

ISOLATION VALVE SHALL BE INSTALLED ON BOTH SIDES OF DIRECTIONAL BORE.

DIRECTIONAL BORING MUST BE COMPLETED BETWEEN THE HOURS OF 8:00 A.M. AND 3:00 P.M.

ALL D.B.'S CROSSING A DITCH/SWALE MUST BE AT LEAST 36" BELOW ACTUAL/DESIGN BOTTOM OF CONVEYANCE.

STORMWATER DRAINAGE FACILITIES ARE NOT CONSIDERED UNDERGROUND FACILITIES BY FLORIDA STATUTE AND THEREFORE WILL NOT BE LOCATED AND MARKED BY THE FLORIDA STATE ONE CALL SYSTEM. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND AVOID ALL STORMWATER DRAINAGE FACILITIES AND THE CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM THE DIRECTIONAL BORE WORK.

DIRECTIONAL BORING (DB)

Drilling Fluid Management and Emergency Spill Plan

Introduction:

Bentonite drilling mud will be used during the drilling process. Even with proper engineering planning and design, the possibility exists of an inadvertent release of drilling mud. In some cases, fractures of the underlying sediments can occur because of the high hydraulic pressures placed on the drilling fluids in the process.

The key to controlling fractures (a.k.a. breakouts or frac-outs) is early detection. Drilling personnel shall observe the amount of drilling fluid returns and report any observed reductions immediately.

Site Preparation:

The plans identify proposed locations for directional drilling. Initial site preparation shall include the installation of hay bale and silt fence screening around the perimeter of the planned work areas as shown on the drawings. This initial screening will provide containment from work areas where runoff may occur.

Additional hay bales, silt fence, and/or containment booms shall be maintained onsite for emergency use.

If Loss of Circulation:

In the event a complete loss of circulation occurs, the following procedure shall be followed:

- Cease pumping immediately;
- Contain any drilling fluid which has surfaced,
- Notify the Owner and Engineer; and
- Evaluate the data and circumstances leading to the loss of circulation to determine the best method to seal the fracture. Most fractures can be sealed, if detected early, by pumping special materials to prevent loss of circulation down hole.

If Reduction in Circulation:

If a reduction of drilling fluid circulation is detected without total loss of circulation, the procedure is to reduce drilling fluid volumes and subsequent pressures and to increase the yield point of the drilling fluid. Then, depending upon the progress of the drilling, the drill pipe may be tripped out until return flow is restored.

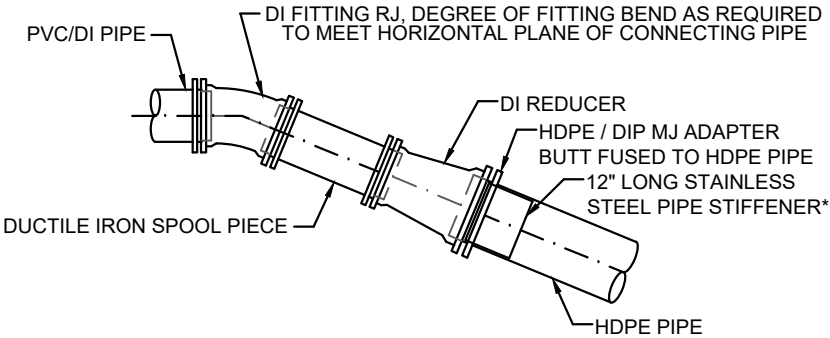
Containment of Frac-Outs:

Should an inadvertent release of drilling fluid (bentonite) occur, containment and subsequent clean-up shall begin immediately upon detection. Field measures to contain inadvertent releases of drilling fluid will differ in wetlands versus upland areas. In wetlands a perimeter coffer constructed of hay bales and silt fences shall be utilized for containment of surface releases of drilling fluid. Alternate mitigating methods within wetlands would include, but would not be limited to:

- Damming of dry drainage swales using sandbags or plastic water structures.
- Isolation of skirted containment booms in inundated or aquatic environments.
- Isolation in shallow stream sections utilizing sandbags and plastic water structures.

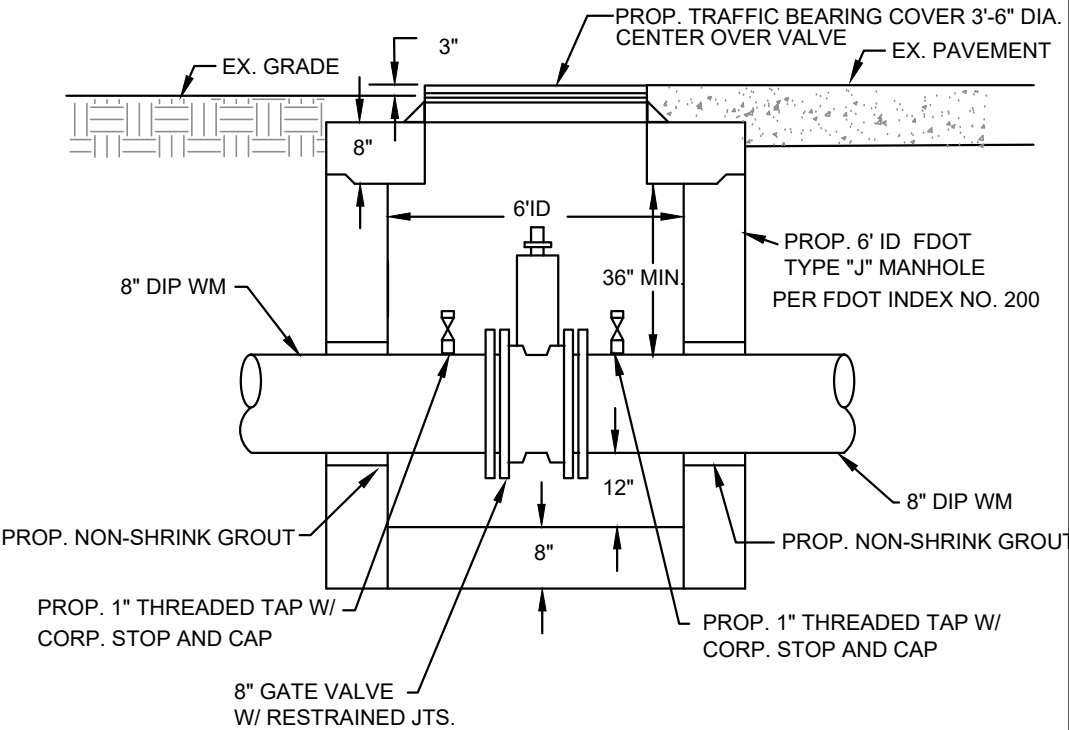
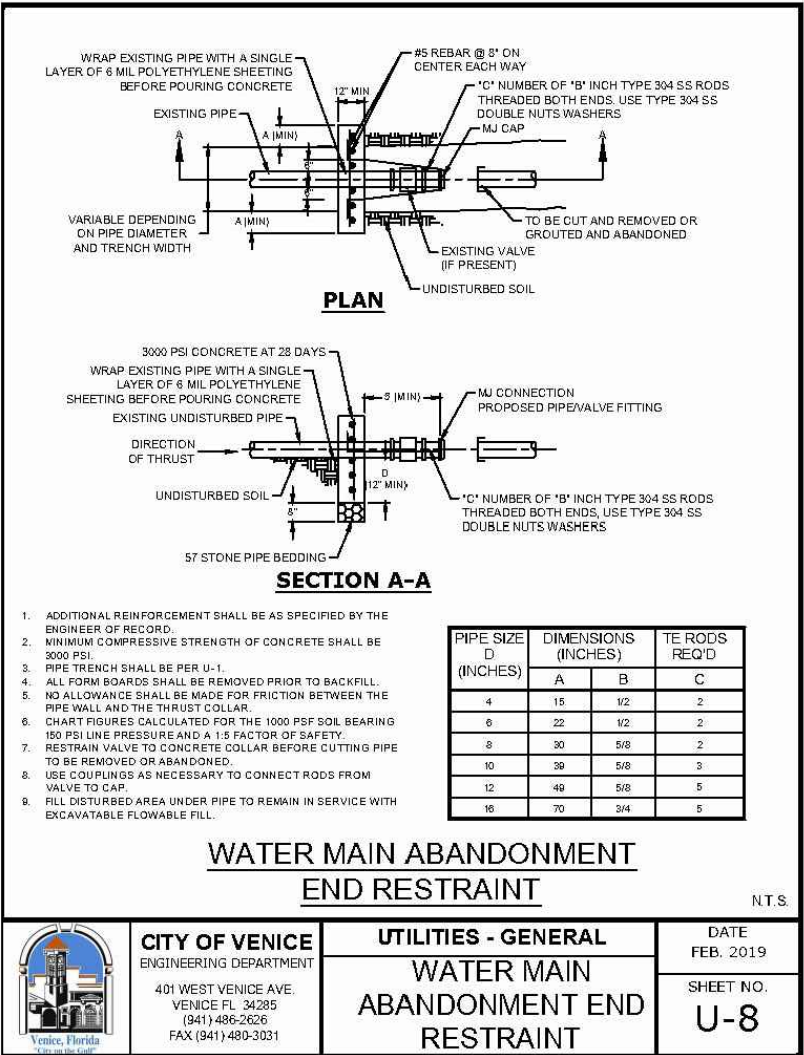
In upland areas, containment of surface releases of bentonite would incorporate a perimeter earthen berm.

All measures shall be taken to minimize impact to the environment from the drilling fluids and maintain compliance with all permit requirements.



HDPE-TO-PVC/DI TRANSITION DETAIL

SCALE: NTS
ALL JOINTS TO BE RESTRAINED



PROP. UNDERWATER WATER MAIN
TESTING MANHOLE DETAIL