



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

NOTICE TO BIDDERS

ST. TAMMANY PARISH

Sealed bids will be received by the Department of Procurement, until **2:00 p.m., Wednesday, December 18, 2024**, and then opened and read publicly at that time by the Procurement Staff for the following project:

Bid # 24-67-2 – Mandeville Bypass LA 1088 to US 190

Each paper bid must be submitted in a sealed envelope. The outside of the envelope shall show the Name and Address of the Bidder, the State Contractor's License Number of the Bidder (if the work is estimated at \$50k or more), the Bid Name and the Bid Number.

The project classification is:

Highway, Street and Bridge Construction

and/or

Heavy Construction

This bid package is available online at www.bidexpress.com or LaPAC <https://wwwcfprd.doa.louisiana.gov/osp/lapac/pubmain.cfm>. It is the Vendor's responsibility to check Bid Express, or LaPAC frequently for any possible addenda that may be issued. The Parish is not responsible for a Vendor's failure to download any addenda documents required to complete a submission.

Bids will be received at 21454 Koop Dr., Suite 2F, Mandeville, LA 70471 from each bidder or his agent and given a written receipt, by certified mail with return receipt requested, or electronically at www.bidexpress.com.

A Mandatory pre-bid meeting will be held at 21490 Koop Drive, Mandeville, LA 70471, St. Tammany Parish Building A, Council Chambers on Thursday, December 5, 2024 at 2:00 PM.

Procurement Department

BID PROPOSAL

ST. TAMMANY PARISH
GOVERNMENT



BID PACKAGE FOR

MANDEVILLE BYPASS LA 1088 TO US 190

BID NO.: 24-67-2

October 10, 2024

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Instructions to Bidders

Bidders are urged to promptly review the requirements of this specification and submit questions for resolution as early as possible during the bid period. Questions or concerns must be submitted in writing to the Procurement Department no later than 2:00 CST seven (7) working days prior to the bid opening date. Otherwise, this will be construed as acceptance by the bidders that the intent of the specifications is clear and that competitive bids may be obtained as specified herein. Protests with regard to the specification documents will not be considered after bids are opened.

1. Bid security is required. Be sure that your bid includes such security as is necessary to meet Parish requirements and is properly signed. The bid must be fully completed. All applicable Louisiana license numbers must be affixed.
2. The Owner is the St. Tammany Parish Government (the "Parish").
3. The terms "he/his" and "it/its" may be used interchangeably.
4. The terms "Owner," the "Parish," and "St. Tammany Parish" may be used interchangeably.
5. The successful Bidder understands the limited contract time in the contract is **seven hundred and twenty (720) calendar days** and shall submit any request for an extension of time in accordance with the General and Supplementary Conditions. Said request will reflect the days requested and the reason for same. No extension request is guaranteed or absolute.
6. Bidder specifically understands that acknowledgment of the General Conditions is required. Bidder specifically understands that signature of receipt of the General Conditions is mandated. **The Bidder's signature on the "Louisiana Uniform Public Work Bid Form" will serve as acknowledgment of the Bidder's receipt and understanding of the General Conditions as well as any Supplementary Conditions.**
7. ***If any additional work is performed by the contractor without written approval by owner, the cost of the work will be borne by the contractor and will not be reimbursed by the Parish.***
8. **Only** the Louisiana Uniform Public Bid Form, the Unit Price Form (if necessary), the bid security, and written evidence of authority of person signing the bid shall be submitted on or before the bid opening time and date provided for in the Bid Documents. Necessary copies of the Louisiana Uniform Public Work Forms and Unit Price Forms (if necessary) will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder's information and should not be used in submitting Bids.
9. All other documents and information required are to be submitted by the low Bidder within ten (10) days after the opening of the bids, and at the same time of day and location as given for the opening of the bids in the Bid Documents.
10. Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor's License Number of the Bidder (if work requires contractor's license), and the Project name and the Bid number. In the case of an electronic bid proposal, a contractor may submit an authentic digital signature on the electronic bid proposal accompanied by the contractor's license number, Project name and the Bid number.
11. The price quoted for the Work shall be stated in words and figures on the Bid Form, and in figures only on the Unit Price Form. The price in the Bid shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.

12. The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).
13. Only a Contractor licensed by the State to do the type of Work as indicated on the Notice to Bidders can submit a Bid. The Bidder's signature on the Bid Form certifies that he holds an active license under the provisions of Chapter 24 of Louisiana Revised Statutes Title 37. Failure to be properly licensed constitutes authority for the Owner to reject the Bid.
14. Bidders shall not attach any conditions or provisions to the Bid. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid.
15. A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.
16. Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the execution of the Contract.
17. A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened. A bid withdrawn under the provisions of LSA-R.S. 38:2214(C) cannot be resubmitted.
18. Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
19. No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. Inquiries received within seven (7) days prior to the day fixed for opening of the Bids may not be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of the Owner to send or failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid as submitted without Modification. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O).
20. The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal, illegible, or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly

or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.

21. Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.
22. Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.
23. It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.
24. Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.
25. Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and minimal delays of performance, shall at its sole expense and in the following order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not

furnished by Contractor; or, iii) use of the product, material or service in other than the specified operating conditions and environment.

26. Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
27. Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this Contract. Bidder shall also thoroughly examine and be familiar with drawings, Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form, instrument, Drawing or document or to visit the site and acquaint itself with existing conditions shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.
28. The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
29. When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or in conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
30. Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
31. In accordance with Louisiana Law, all Corporations (See LA R.S. 12:26.1) and Limited Liability Companies (See LA R.S. 12:1308.2) must be registered and in good standing with the Louisiana Secretary of State in order to hold a contract.
32. Sealed Bids shall be delivered to St. Tammany Parish Government at the office of **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and a receipt given, until the time and date denoted in Notice to Bidders, at which time and place the Bids shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38:2212(H), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Bids may also be mailed by certified mail to **St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471**, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders. It is the responsibility of the Bidders to ensure that bids are delivered in a timely fashion. **Late bids, regardless of reason, will not be considered, and will be returned to bidder.**
33. Paper bids shall be placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these Instructions, and addressed:

**St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471**

34. See Notice to Bidders for availability of Drawings, Specifications and Contract Documents via electronic methods.

35. The successful Bidder shall be required to post in each direction a public information sign, 4' x 4' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.
36. The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility and qualifications of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. If the Contract is awarded, the Owner shall give the successful Bidder written notice of the award within forty-five (45) calendar days after the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.
37. At least three days prior to the execution of the Contract, the Contractor shall deliver to the Owner the required Bonds.
38. Failure of the successful Bidder to execute the Contract and deliver the required Bonds within ten (10) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited. Award may then be made to the next lowest responsible bidder.
39. In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and hold harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a Performance and Payment Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
40. No surety Company will be accepted as a bondsman which has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Service of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
41. In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):

Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.

42. Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent,

bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time Contractor learns or has reason to know that the original surety is no longer financially viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due, or to become due to Contractor.

43. The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
44. The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans, specifications, and other Contract Documents. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney's fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
45. The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of the Contract.
46. The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of the Work/Project by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
47. Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law. Contractor agrees to execute an excerpt or extract of this agreement for recordation purposes. If Contractor fails to execute such an excerpt, then the Parish shall file and record the entire Contract and all attachments at the expense of Contractor and Parish is hereby authorized to deduct all related costs from any proceeds due to the Contractor.
48. Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
49. The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
50. Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
51. Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.

52. Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
53. Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance. *Policy endorsements required for all coverages.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

54. The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract shall be designated by a separate document issued by the Office of Risk Management.
55. It is the intent of these instructions that they are in conformance with State Bid Laws. Should there be any discrepancy or ambiguity in these provisions, the applicable State Bid Law shall apply.
56. The letting of any public contract in connection with funds that are granted or advanced by the United States of America shall be subject to the effect, if any, of related laws of said United States and valid rules and regulations of federal agencies in charge, or governing use and payment of such federal funds.
57. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE these times. Any other protest shall be filed no later than ten (10) calendar days after: the opening of the bid; the basis of the protest is known; or the basis of the protest should have been known (whichever is earlier).
58. It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be

concise and logically presented to facilitate review by the Parish. The written protest shall include:

The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;

A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;

Copies of relevant documents;

All information establishing that the protester is an interested party and that the protest is timely; and

A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to St. Tammany Parish Government Department of Procurement, P.O. Box 628, Covington, LA 70434

The protest review shall be conducted by the Parish Legal Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals, must be filed with and received by the Department of Procurement BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

59. The last day to submit questions and/or verification on comparable products will be no later than 2:00 pm CST, seven (7) working days prior to the opening date of the bid/proposal due date. Further, any questions or inquires must be submitted via fax to 985-898-5227, or via email to Procurement@stpgov.org. Any questions or inquiries received after the required deadline to submit questions or inquiries will not be answered.

Schedule of Events

	<u>Date</u>	<u>Time (CT)</u>
Bid Due Date	December 18, 2024	2:00 PM
Mandatory Pre-Bid Meeting	December 5, 2024	2:00 PM
Inquiry Deadline	December 9, 2024	2:00 PM
Addendum Deadline	December 13, 2024	2:00 PM

NOTE: The Parish reserves the right to revise this schedule. Any such revision will be formalized by the issuance of an addendum to the Bid Request.

60. St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany Parish Government. At any time, St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.
61. Any action by the Parish to disqualify any Bidder on the grounds that they are not a responsible Bidder shall be conducted in accordance with LSA-R.S. 38:2212(X).
62. Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish

reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.

63. If any part of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

Section 03

Summary of Work

I. Work to Include:

Work will include construction of a bypass with a bridge from US 190 to LA 1088, as well as construction of roundabouts at LA 1088 and US 190 intersections when permits are acquired from DOTD.

II. Location of Work:

The project is located in St Tammany Parish. The bypass runs from US 190 to LA 1088 adjacent to Pelican Park on the east side. There are roundabouts on each end of the bypass at US 190 and LA 1088.

III. Documents: Bid Documents dated October 10, 2024, and entitled:

Mandeville Bypass LA 1088 To US 190

Bid No.: 24-67-2

IV. OTHER REQUIREMENTS (as applicable)

When not otherwise specified herein, all work and materials shall conform to the requirements of the Louisiana Department of Transportation and Development hereafter called LDOTD (2016 Edition of Louisiana Standard Specifications for Roads and Bridges).

Table 3.1

Liquidated Damages	
Original Contract Amount	Daily Charge
Dollars	Dollars
0 - 250,000	500
250,000 – 1 Million	1,000
> 1 Million – 5 Million	1,500
> 5 Million – 10 Million	2,000
> 10 Million	3,000

- Parish reserves the right to increase the Daily charge rate due to additional provisions required in order to complete the project as described in the specifications

Section 04

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. Tammany Parish Government
21454 Koop Dr., Suite 2F
Mandeville, La 70471

(Owner to provide name and address of owner)

BID FOR: Mandeville Bypass LA 1088 to US 190

Bid No. 24-67-2

(Owner to provide name of project and other identifying information.)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by:

Burk-Kleinpeter, Inc and dated: October 10, 2024

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging)

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

Dollars (\$)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars (\$)

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars (\$)

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars (\$)

NAME OF BIDDER:

ADDRESS OF BIDDER:

LOUISIANA CONTRACTOR'S LICENSE NUMBER:

NAME OF AUTHORIZED SIGNATORY OF BIDDER:

TITLE OF AUTHORIZED SIGNATORY OF BIDDER:

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **:

DATE:

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM UNIT PRICE FORM

TO:

St. Tammany Parish Government

21454 Koop Drive, Suite 2F

Mandeville, LA. 70471

(OWNER TO PROVIDE NAME AND ADDRESS OF OWNER)

BID FOR:

Mandeville Bypass LA 1088 To US 190

Project No. 2014EN0001

Bid No. 24-67-2

(OWNER TO PROVIDE PROJECT NAME & OTHER IDENTIFYING INFO)

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CLEARING AND GRUBBING				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
201-01-00100	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REMOVAL OF STRUCTURES AND OBSTRUCTIONS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
202-01-00100	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REMOVAL OF ASPHALT DRIVES				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
202-02-02000	66	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REMOVAL OF PAVEMENT STRUCTURE				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
202-02-03030	5461.3	SQUARE YARD		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF CONCRETE BOX HEADWALL (48" x 24" x 8")	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-06040	2	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF PIPE (CROSS DRAIN) (18" CPVC)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-32100	86	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF PIPE (CROSS DRAIN) (24" RCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-32100	67	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF PIPE (SIDE DRAIN) (18" RCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-32120	20	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF PIPE (SIDE DRAIN) (24" RCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-32120	110	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF PIPE (SIDE DRAIN) (24" CMP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
202-02-32120	20	LINEAR FOOT			

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REMOVAL OF PIPE HEADWALLS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
202-02-32180	4	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REMOVAL OF SIGNS AND SUPPORTS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
202-02-38240	18	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GENERAL EXCAVATION				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
203-01-00100	242594	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # DRAINAGE EXCAVATION				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
203-02-00100	70013	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # EMBANKMENT				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
203-03-00100	58954	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # NONPLASTIC EMBANKMENT (SAND)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
203-04-00200	33746	CUBIC YARD		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GEOTEXTILE FABRIC				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
203-08-00100	121486	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY HAY BALES				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
204-02-00100	133	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY SEDIMENT CHECK DAMS (HAY)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
204-05-00100	186	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY SEDIMENT CHECK DAMS (STONE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
204-05-00200	41	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY SILT FENCING				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
204-06-00100	42718	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY STONE CONSTRUCTION ENTRANCE				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
204-07-00100	2	EACH		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PORTLAND CEMENT CONCRETE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
302-01-00700	38570.8	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # BASE DRAIN OUTLET				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
302-03-00100	131	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # LIME				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
304-01-00100	75.57	TON		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # LIME TREATMENT (TYPE E)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
304-05-00100	5331	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # AGGREGATE SURFACE COURSE (ADJUSTED VEHICULAR MEASUREMENT)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
401-02-00100	20	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # ASPHALT CONCRETE				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
502-01-00100	56269.6	TON		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		ASPHALT CONCRETE, DRIVES, TURNOUTS AND MISCELLANEOUS		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
502-01-00200	213.1	TON		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		MILLING ASPHALT PAVEMENT		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
509-01-00100	2252	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		CONTRACTOR RETAINED RECLAIMED ASPHALT PAVEMENT		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
509-02-00100	187	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		PAVEMENT PATCHING (12.5 MINIMUM THICKNESS)		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
510-01-00001	124	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (9" THICK) (BRICK RED COLOR - BROOM FINISH)		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
601-01-10000	1316.0	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT #		PORTLAND CEMENT CONCRETE PAVEMENT CORING		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
601-04-00100	5	EACH		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE (24" RCP/RPVCP)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-01-01004	537	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE (36" RCP/RPVCP)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-01-01043	531	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE (42" RCP/RPVCP)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-01-01063	792	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE ARCH (36" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-02-01040	103	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE ARCH (42" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-02-01060	368	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN PIPE ARCH (48" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-02-01080	459	LINEAR FOOT		

Version 2017 Q2

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	CROSS DRAIN PIPE ARCH (60" EQUIV. RCPA)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-02-01120	531	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	STORM DRAIN PIPE (15" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-03-01002	915	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	STORM DRAIN PIPE (36" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-03-01082	177	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	STORM DRAIN PIPE ARCH (15" EQUIV. RCPA)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-04-01000	370	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	STORM DRAIN PIPE ARCH (36" EQUIV. RCPA)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-04-01080	132	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (15" RCP/RPVCP/CPEPDW/CPPPDW)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-01025	82	LINEAR FOOT			

Version 2017 Q2

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (24" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-01069	249	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (30" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-01087	146	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (36" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-01106	57	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (42" RCP/RPVCP)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-01127	270	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (EROSION) (24" RPVCP/CPEPDW/CPPPDW)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-02067	598	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SIDE DRAIN PIPE (EROSION) (42" RPVCP/CPEPDW/CPPPDW/CPPPTW)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
701-05-02126	182	LINEAR FOOT			

Version 2017 Q2

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN PIPE ARCH (18" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-06-00020	127	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN PIPE ARCH (42" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-06-00100	30	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN PIPE ARCH (48" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-06-00120	117	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN PIPE ARCH (60" EQUIV. RCPA)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-06-00160	255	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE COLLAR				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
701-15-00100	8	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CATCH BASINS (CB-07)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-03-00600	16	EACH		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CATCH BASINS (CB-08)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-03-00700	1	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN SAFETY END (TYPE 1)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-07-00100	12	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CROSS DRAIN SAFETY END (TYPE 2)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-07-00200	8	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN SAFETY END (TYPE 1)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-08-00100	5	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN SAFETY END (TYPE 2)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-08-00200	1	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIDE DRAIN SAFETY END (TYPE 3)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
702-08-00300	1	EACH		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # BLOCKED OUT GUARD RAIL - 31", (6'-3" POST SPACING)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
704-03-00200	125.0	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # BLOCKED OUT GUARD RAIL - 31", (DOUBLE FACED, 6'-3" POST SPACING)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
704-04-00200	25.0	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GUARD RAIL TRANSITIONS (DOUBLE THRIE BEAM)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
704-07-00200	150.0	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GUARD RAIL END TREATMENT, MASH, (TL-3 BI-DIRECTIONAL)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
704-10-00305	6	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GUARD RAIL END TREATMENT, NCHRP 350 - 31" (TL-3 FLARED)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
704-10-00310	2	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE WALK (4" THICK)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
706-01-00100	15386.9	SQUARE YARD		

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	INCIDENTAL CONCRETE PAVING (COLORED) (6" THICK) (BRICK RED COLOR - BROOM FINISH)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
706-03-10000	1517.9	SQUARE YARD			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	CURB RAMPS (TYPE 3)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
706-04-00110	484.9	SQUARE YARD			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	CONCRETE CURB	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
707-01-00100	3362.6	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	COMBINATION CONCRETE CURB AND GUTTER	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
707-03-00100	60191.3	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	RIGHT-OF-WAY MONUMENT	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
708-01-00100	108	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	RIGHT-OF-WAY MONUMENT WITNESS POST	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
708-02-00100	108	EACH			

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # RIPRAP (55 LB)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
711-03-00400	3000.0	TON		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # GEOTEXTILE FABRIC				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
711-04-00100	3098	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE CAST-IN-PLACE REVETMENT (4" THICK)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
712-01-00100	618	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY SIGNS AND BARRICADES				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
713-01-00100	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY PAVEMENT MARKINGS (8" WIDTH)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
713-02-00300	1942	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY PAVEMENT MARKINGS (24" WIDTH)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
713-02-00500	1003	LINEAR FOOT		

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT MARKINGS (BROKEN LINE) (4" WIDTH) (4" LENGTH)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-03-01000	0.240	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT MARKINGS (SOLID LINE) (4" WIDTH)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-04-01000	6.860	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - STRAIGHT)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-05-00190	6	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - LEFT TURN)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-05-00220	6	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - RIGHT TURN)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-05-00230	2	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - MERGE)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
713-05-00240	4	EACH			

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY REFLECTORIZED RAISED PAVEMENT MARKERS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
713-06-00100	32	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # MULCH (VEGETATIVE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
716-01-00100	235.6	TON		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SEEDING				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
717-01-00100	5794	POUND		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # FERTILIZER				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
718-01-00100	117780	POUND		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # EROSION CONTROL SYSTEM (SLOPE PROTECTION) (TYPE A)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
720-01-01000	1816	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PROJECT SITE LABORATORY (EQUIPPED)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
722-02-00100	1	EACH		

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TEMPORARY DETOUR ROADS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
725-01-00100	4883.9	SQUARE YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # BEDDING MATERIAL				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
726-01-00100	2353.7	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # MOBILIZATION				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
727-01-00100	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIGN (TYPE A)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-01-00100	844.1	SQUARE FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIGN (TYPE B)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-02-00100	105.4	SQUARE FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SIGN (TYPE D)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-04-00100	52.4	SQUARE FOOT		

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # MOUNTING (2 1/2" SIZE POST)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-08-00100	13	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # MOUNTING (3 1/2" SIZE POST)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-08-00200	14	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # MOUNTING (W6 X 12 SIZE POST)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-08-00600	8	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # OBJECT MARKER ASSEMBLY (TYPE 2)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-16-00200	56	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # OBJECT MARKER ASSEMBLY (TYPE 3)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-16-00300	4	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # DEAD END ROAD INSTALLATIONS (TYPE A)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
729-19-00100	1	EACH		

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SQUARE TUBING POST WITH 2-1/4" OMNI-DIRECTIONAL ANCHOR	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
729-22-00200	32	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REFLECTORIZED RAISED PAVEMENT MARKERS	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
731-02-00100	303	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(24" W)(2' L)(THERMO 125 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-01-05400	439	LINEAR FOOT			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-02-02000	15.672	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (THERMOPLASTIC 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-02-02040	0.511	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (24" WIDTH) (THERMOPLASTIC 125 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-01-02080	1783	LINEAR FOOT			

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(4" W)(2' L)(THERMO 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-03-02010	0.020	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(4" W)(3' L)(THERMO 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-03-02012	0.300	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(8" W)(2' L)(THERMO 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-03-02030	0.012	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(8" W)(3' L)(THERMO 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-03-02040	0.266	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT STRIPING (BROKEN LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-03-02000	0.170	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - STRAIGHT)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01020	8	EACH			

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - LEFT TURN)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01080	10	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - RIGHT TURN)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01100	6	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - MERGE)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01120	4	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLSTCPVMTLGND&SYM(DIRARRRNDDBT-FSHK)(TYPE LTC)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01131	4	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDDBT - FSHK) (TYPE LC)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01133	3	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDDBT - FSHK) (TYPE T)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01134	3	EACH			

Version 2017 Q2

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Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDBT - FSHK) (TYPE TR)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01136	2	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDBT - FSHK) (TYPE TUC)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-04-01138	2	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	REMOVAL OF EXISTING MARKINGS	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
732-05-00100	0.668	MILE			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	MAILBOXES	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
735-01-00100	3	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	MAILBOX SUPPORTS (SINGLE)	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
735-02-00100	3	EACH			
Description:	<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	CONSTRUCTION LAYOUT	
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)	
740-01-00100	1	LUMP SUM			

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PRECAST CONCRETE PILES (24")				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
804-01-00600	4548	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PRECAST CONCRETE TEST PILES (24")				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
804-05-00600	2	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # STATIC LOAD TEST (PRECAST CONCRETE PILES (24"))				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
804-09-00600	2	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CLASS A1 CONCRETE (SLAB SPAN)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
805-01-00100	339.78	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CLASS A1 CONCRETE (BENT CAP)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
805-01-00300	145.34	CUBIC YARD		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # DYNAMIC MONITORING ASSISTANCE				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
804-14-00100	6	EACH		

Version 2017 Q2

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Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # DYNAMIC MONITORING INSTRUMENTATION				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
804-15-00100	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # REINFORCED CONCRETE BOX CULVERTS (EXTENSION)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
805-16-02700	29	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE FINISH (CLASS 2 RUBBED FINISH)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
805-18-00100	3763	SQUARE FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE FINISH (CLASS 3 SPECIAL FINISH)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
805-18-00200	8574	SQUARE FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # DEFORMED REINFORCING STEEL				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
806-01-00100	89194	POUND		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE BRIDGE RAILING (36 INCH HEIGHT)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
810-01-00120	560	LINEAR FOOT		

Version 2017 Q2

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UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # CONCRETE APPROACH SLABS (CAST-IN-PLACE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
813-01-00100	4040	SQUARE FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # ELASTOMERIC BEARING PADS (NON-REINFORCED)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
814-01-00100	252	SQUARE FOOT-INCH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # JOINT SEAL (POURED)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
815-03-00300	384	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PEDESTRIAN BRIDGE				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
TS-807-00001	1	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SAWING AND SEALING TRANSVERSE JOINTS IN ASPHALT CONCRETE OVERLAY				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-500-00240	288	LINEAR FOOT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SAWCUTS IN ASPHALT CONCRETE LIFTS				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-500-00260	480	LINEAR FOOT		

Version 2017 Q2

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SAW CUTTING ASPHALT CONCRETE PAVEMENT				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-500-00340	352	INCH-LIN FT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # SAW CUTTING ASPHALT CONCRETE PAVEMENT OVER PORTLAND CEMENT CONCRETE COMPOSITE PAVEMENT				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-500-00360	35184	INCH-LIN FT		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PAVED GUTTER DRAIN (SINGLE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-702-00101	14	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # PAVED GUTTER DRAIN (DOUBLE)				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-702-00102	27	EACH		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # TREE TRIMMING				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-719-00002	1	LUMP SUM		
Description: <input checked="" type="checkbox"/> BASE BID OR <input type="checkbox"/> ALT # BREAKAWAY SQUARE TUBING SIGN SUPPORT W/ MOWING PAD				
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)
NS-729-00029	19	EACH		

Version 2017 Q2

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)			
NS-729-00031	47	EACH					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	TRIAXIAL GEOGRID		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)			
TS-300-00060	76810	SQUARE YARD					
Description:		<input checked="" type="checkbox"/> BASE BID	OR	<input type="checkbox"/> ALT #	SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED		
REF NO.:	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times unit price)			
TS-736-00017	4	EACH					

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

Section 05

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2224 and 38:2227
FOR BIDDERS FOR PUBLIC WORKS CONTRACTS**

STATE OF LOUISIANA

PARISH/COUNTY OF ST. TAMMANY

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, who is seeking a public contract with St. Tammany Parish Government.
2. That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and
3. That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.
4. If affiant is a sole proprietor, that after July 2, 2010, he/she has not been convicted of, or has not entered a plea of guilty or *nolo contendere* to any of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).
5. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent ownership in the bidding entity, has been convicted of, or has entered a plea of guilty or *nolo contendere* to any

of the crimes or equivalent federal crimes listed in LSA-R.S. 38:2227(B).

- 6. If affiant is a sole proprietor, that neither affiant, nor his/her immediate family is a public servant of St. Tammany Parish Government or the Contract is not under the supervision or jurisdiction of the public servant's agency.

- 7. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no public servant of St. Tammany Parish Government, or his/her immediate family, either individually or collectively, has more than a 25% ownership interest in the entity seeking the Contract with St. Tammany Parish Government if the Contract will be under the supervision or jurisdiction of the public servant's agency.

Printed Name: _____
Title: _____
Entity name: _____

THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.

Notary Public
Print Name: _____
Notary I.D./Bar No.: _____
My commission expires: _____

**AFFIDAVIT PURSUANT TO LSA-R.S. 38:2212.10 CONFIRMING
REGISTRATION AND PARTICIPATION IN A STATUS VERIFICATION
SYSTEM**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, a private employer seeking a bid or a contract with St. Tammany Parish Government for the physical performance of services within the State of Louisiana.
2. That affiant is registered and participates in a status verification system to verify that all employees in the state of Louisiana are legal citizens of the United States or are legal aliens; and
3. That affiant shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
4. That affiant shall require all subcontractors to submit to the affiant a sworn affidavit verifying compliance with this law.

Printed Name: _____

Title: _____

Name of Entity: _____

**THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.**

Notary Public
Print Name: _____
Notary I.D./Bar No.: _____
My commission expires: _____



Section 06

INSURANCE REQUIREMENTS*

Construction Project: Mandeville Bypass LA 1088 to US 190

Project/Quote/Bid#: 24-67-2

*****IMPORTANT – PLEASE READ*****

Prior to submitting your quote or bid, it is recommended that you review these insurance requirements with your insurance broker/agent.

These requirements modify portions of the insurance language found in the General Conditions and/or Supplementary General Conditions; however, there is no intention to remove all sections pertaining to insurance requirements and limits set forth in the General Conditions and/or Supplementary General Conditions, only to amend and specify those items particular for this Project.

- A. The Provider shall secure and maintain at its expense such insurance that will protect it and St. Tammany Parish Government (the "Parish") from claims for bodily injury, death or property damage as well as from claims under the Workers' Compensation Acts that may arise from the performance of services under this agreement. All certificates of insurance shall be furnished to the Parish and provide thirty (30) days prior notice of cancellation to the Parish, in writing, on all of the required coverage.
- B. All policies shall provide for and certificates of insurance shall indicate the following:
1. Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance.
 2. Additional Insured: St. Tammany Parish Government shall be named as Additional Insured with respect to general liability, automobile liability and excess liability coverages, as well as marine liability and pollution/environmental liability, when those coverages are required or necessary.
 3. Payment of Premiums: The insurance companies issuing the policy or policies will have no recourse against St. Tammany Parish Government for payment of any premiums or for assessments under any form of policy.
 4. Project Reference: The project(s) and location(s) shall be referenced in the Comment or Description of Operations section of the Certificate of Insurance (Project ##-###, or Bid # if applicable, Type of Work, Location).
- C. Coverage must be issued by insurance companies authorized to do business in the State of Louisiana. Companies must have an A.M. Best rating of no less than A-, Category VII. St. Tammany Parish Risk Management Department may waive this requirement only for Workers Compensation coverage at their discretion.

Provider shall secure and present proof of insurance on forms acceptable to St. Tammany Parish Government, Office of Risk Management no later than the time of submission of the Contract to the Parish. However, should any work performed under this Contract by or on behalf of Provider include exposures that are not covered by those insurance coverages, Provider is not relieved of its obligation to maintain appropriate levels and types of insurance necessary to protect itself, its agents and employees, its subcontractors, St. Tammany Parish Government (Owner), and all other interested third parties, from any and all claims for damage or injury in connection with the services performed or provided throughout the duration of this Project, as well as for any subsequent periods required under this Contract.

The insurance coverages checked (✓) below are those required for this Contract.

- 1. **Commercial General Liability*** insurance – **Occurrence Form** - with a Combined Single Limit for bodily injury and property damage of at least \$2,000,000 per Occurrence / \$4,000,000 General Aggregate and \$4,000,000 Products-Completed Operations. Contracts over \$1,000,000 may require higher limits. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal/Advertising Injury;
 - e) Broad form property damage (for Projects involving work on Parish property);
 - f) Explosion, Collapse and Damage to underground property.
 - g) Additional Insured forms CG 2010 and CG 2037 in most current edition are required.

- 2. **Business Automobile Liability*** insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any auto;
 - or**
 - b) Owned autos; **and**
 - c) Hired autos; **and**
 - d) Non-owned autos.

- 3. **Workers' Compensation/Employers Liability insurance*** - Workers' Compensation coverage as required by State law. Employers' liability limits shall be a minimum of \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate. When water activities are expected to be performed in connection with this project, coverage under the USL&H Act, Jones Act and/or Maritime Employers Liability (MEL) must be included. **Coverage for owners, officers and/or partners in any way engaged in the Project shall be included in the policy.** The names of any excluded individual must be shown in the Description of Operations/Comments section of the Certificate.

- 4. **Pollution Liability and Environmental Liability*** insurance in the minimum amount of \$1,000,000 per occurrence / \$2,000,000 aggregate including full contractual liability and third party claims for bodily injury and/or property damage, for all such hazardous waste, pollutants and/or environmental exposures that may be affected by this project stemming from pollution/environmental incidents as a result of Contractor's operations.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.

5. **Contractor's Professional Liability/Errors and Omissions*** insurance in the sum of at least \$1,000,000 per claim / \$2,000,000 aggregate is required when work performed by Contractor or on behalf of Contractor includes professional or technical services including, but not limited to, construction administration and/or management, engineering services such as design, surveying, and/or inspection, technical services such as testing and laboratory analysis, and/or environmental assessments. An occurrence basis policy is preferred.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.

6. **Marine Liability/Protection and Indemnity*** insurance is required for any and all vessel and/or marine operations in the minimum limits of \$1,000,000 per occurrence / \$2,000,000 per project general aggregate. The coverage shall include, but is not limited to, the basic coverages found in the Commercial General Liability insurance and coverage for third party liability

***Excess/Umbrella Liability** insurance may be provided to meet the limit requirements for any Liability coverage. For example: if the General Liability requirement is \$3,000,000 per occurrence, but the policy is only \$1,000,000 per occurrence, then the excess policy should be at least \$2,000,000 per occurrence thereby providing a combined per occurrence limit of \$3,000,000.)

7. **Owners Protective Liability (OPL)** shall be furnished by the Contractor and shall provide coverage in the minimum amount of \$3,000,000 CSL each occurrence / \$3,000,000 aggregate. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the policy.**

8. **Builder's Risk Insurance** written as an "all-risk" policy providing coverage in an amount at or greater than one hundred percent (100%) of the completed value of the contracted project. Any contract modifications increasing the contract cost will require an increase in the limit of the Builder's Risk policy. Deductibles should not exceed \$5,000 and Contractor shall be responsible for all policy deductibles. This insurance shall cover materials at the site, stored off the site, and in transit. The Builder's Risk Insurance shall include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**

9. **Installation Floater Insurance**, on an "all-risk" form, shall be furnished by Contractor and carried for the full value of the materials, machinery, equipment and labor for each location. The Contractor shall be responsible for all policy deductibles. The Installation Floater Insurance shall provide coverage for property owned by others and include the interests of the Owner, Contractor and Subcontractors and shall terminate only when the Project is accepted in writing. **St. Tammany Parish Government, ATTN: Risk Management Department, P. O. Box 628, Covington, LA 70434 shall be named as a Loss Payee on the policy.**

- D. All policies of insurance shall meet the requirements of the Parish prior to the commencing of any work. The Parish has the right, but not the duty, to approve all insurance coverages prior to commencement of work. If any of the required policies are or become unsatisfactory to the Parish as to form or substance; or if a company issuing any policy is or becomes unsatisfactory to the Parish, the Provider shall promptly obtain a new policy, timely submit same to the Parish for approval, and submit a certificate thereof as provided above. The Parish agrees not to unreasonably withhold approval of any insurance carrier selected by Provider. In the event that Parish cannot agree or otherwise authorize a carrier, Provider shall have the option of selecting and submitting a new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Provider and thereafter deduct from Provider's fee the cost of such insurance.
- E. Upon failure of Provider to furnish, deliver and/or maintain such insurance as above provided, this contract, at the election of the Parish, may be declared suspended, discontinued or terminated. Failure of the Provider to maintain insurance shall not relieve the Provider from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Provider concerning indemnification.
- F. Provider shall maintain a current copy of all annual insurance policies and agrees to provide a certificate of insurance to the Parish on an annual basis or as may be reasonably requested for the term of the contract or any required Extended Reporting Period. Provider further shall ensure that all insurance policies are maintained in full force and effect throughout the duration of the Project and shall provide the Parish with annual renewal certificates of insurance evidencing continued coverage, without any prompting by the Parish.
- G. It shall be the responsibility of Provider to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Provider. Provider shall further ensure the Parish is named as an additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project.
- H. Certificates of Insurance shall be issued as follows:

**St. Tammany Parish Government
Attn: Risk Management
P O Box 628
Covington, LA 70434**

To avoid contract processing delays, be certain the project name/number is included on all correspondence including Certificates of Insurance.

***NOTICE: St. Tammany Parish Government reserves the rights to remove, replace, make additions to and/or modify any and all of the insurance requirements at any time.**

Any inquiry regarding these insurance requirements should be addressed to:

**St. Tammany Parish Government
Office of Risk Management
P O Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

Section 07

Project Signs

1. General

- a. Work to include providing and installing project sign(s) at the beginning of the project. Some projects may require multiple signs. Should more than one sign be required, it will be reflected in the bidding documents.

2. Materials

- a. The printed project sign(s) shall be 3/8" primed Medium Density Overlay (MDO) **OR** 3-millimeter corrugated plastic secured to exterior plywood (4' x 4').
- b. Contractor shall not use previously provided templates and/or fonts.

3. Execution

- a. The sign(s) shall be printed on a project-by-project basis in black and white, using the template and font provided to the Contractor by the St. Tammany Parish Government Project Manager.
- b. All signage proofed and approved by State Tammany Parish Government before project sign(s) are to be produced by the Contractor.
- c. Exact placement of the project sign(s) must be coordinated with, and approved by, the St. Tammany Parish Government Project Manager prior to sign installation.
- d. The sign(s) is to be installed such that the bottom of the sign is a minimum of 5' above the existing ground elevation.
- e. Sign(s) is to be maintained throughout the period of construction. If sign(s) is damaged or destroyed, repair and/or replacement of sign(s) will be at Contractor's expense.
- f. Contractor is responsible for the removal of all project signs upon issuance of final acceptance by the St. Tammany Parish Government Project Manager at no direct pay.
- g. Cost to be included in "Temporary Signs and Barricades

Blank Template of Parish Project Sign:

PROGRESS



MICHAEL B. COOPER
Parish President

Councilmember Name
Council District X

\$XXX,XXX.XX

Total Dollar \$
amount specified here

Project Name


Description of
Project Work

Name of Street, Bridge,
Subdivision, etc. stated here

Short Description of Project stated here
(if deemed applicable by the Parish)

Example of a Completed Parish Project Sign:

PROGRESS



MICHAEL B. COOPER
Parish President

RYKERT O. TOLEDANO, JR
Council District 5

\$514,444.40

**Dove Park
Subdivision Drainage**
Drainage Improvements along
Swallow St., Sparrow St.,
Partridge St. and Egret St.

Section 08

General Conditions for St. Tammany Parish Government

This index is for illustrative purposes only and is not intended to be complete nor exhaustive.

All bidders/contractors are presumed to have read and understood the entire document. Some information contained in these conditions may not be applicable to all projects.

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01.00 DEFINITIONS OF TERMS

Whenever used in these General Conditions or in other Contract Documents, the following terms shall have the meanings indicated, and these shall be applicable to both the singular and plural thereof.

- 01.01 A.A.S.H.T.O American Association of State Highway and Transportation Officials. When A.A.S.H.T.O. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this association and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.02 A.C.I American Concrete Institute. When A.C.I. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this institute and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.03 Addenda Written or graphic instruments issued prior to the opening of bids which clarify, correct, modify or change the bidding or Contract Documents.
- 01.04 Advertisement The written instrument issued by the Owner at the request of the Owner used to notify the prospective bidder of the nature of the Work. It becomes part of the Contract Documents.
- 01.05 Agreement The written agreement or contract between the Owner and the Contractor covering the Work to be performed and the price that the Owner will pay. Other documents, including the Proposal, Addenda, Specifications, plans, surety, insurance, etc., are made a part thereof.
- 01.06 Application for Payment The form furnished by the Owner which is to be used by the Contractor in requesting incremental (progress) payments and which is to include information required by Section 28.01 and an affidavit of the Contractor. The affidavit shall stipulate that progress payments theretofore received from the Owner on account of the Work have been applied by Contractor to discharge in full of all Contractor's obligations reflected in prior applications for payment.
- 01.07 A.S.T.M. American Society of Testing Materials. When A.S.T.M. is referred to in these Specifications it takes the meaning of the specification for materials and methods of testing specified by this society and the specification stated is considered to be a part of the Specifications as if written herein in full.
- 01.08 Bid The offer or Proposal of the Bidder submitted on the prescribed form setting forth all the prices for the Work to be performed.
- 01.09 Bidder Any person, partnership, firm or corporation submitting a Bid for the Work.
- 01.10 Bonds Bid, performance and payment bonds and other instruments of security, furnished by the Contractor and its surety in accordance with the Contract Documents and Louisiana law.
- 01.11 Change Order A written order to the Contractor signed by the Owner authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time after execution of the Agreement.
- 01.12 Contract Documents The Agreement, Addenda, Contractor's Bid and any documentation accompanying or post-bid documentation when attached as an exhibit, the Bonds, these General Conditions, the Advertisement for Bid, Notice to Contractor, all supplementary conditions, the Specifications, the Drawings, together with all Modifications issued after the execution of the Agreement.
- 01.13 Contract Price The total monies payable to the Contractor under the Contract Documents.

- 01.14 Contract Time The number of consecutive calendar days stated in the Agreement for the completion of the Work.
- 01.15 Contractor The person, firm, corporation or Contractor with whom the Owner has executed the Agreement.
- 01.16 Defective Work When work which is unsatisfactory, faulty or deficient for any reason whatsoever, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Owner's recommendation or acceptance.
- 01.17 Drawings The Drawings and plans which show the character and scope of the Work to be performed and which have been prepared or approved by the Owner and are referred to in the Contract Documents.
- 01.18 Field Order A written order issued by the Owner or his agent which clarifies or interprets the Contract Documents.
- 01.19 Modification (a) A written amendment of the Contract Documents signed by both parties, (b) A Change Order, (c) A written clarification or interpretation issued by the Owner or his agent. Modification may only be issued after execution of the Agreement.
- 01.20 Notice of Award The written notice by Owner to the lowest responsible Bidder stating that upon compliance of the conditions enumerated in the Notice of Award, or enumerated in the Bid documents, the Owner will deliver the Contract Documents for signature. The time for the delivery of the Contract Documents can be extended in conformance with Louisiana Law.
- 01.21 Notice to Contractor Instructions, written or oral given by Owner to Contractor and deemed served if given to the Contractor's superintendent, foreman or mailed to Contractor at his last known place of business.
- 01.22 Notice to Proceed A written notice given by the Owner fixing the date on which the Contract Time will commence, and on which date the Contractor shall start to perform his obligation under the Contract Documents. Upon mutual consent by both parties, the Notice to Proceed may be extended.
- 01.23 Owner St. Tammany Parish Government, acting herein through its duly constituted and authorized representative, including but not limited to the Office of the Parish President or its designee, its Chief Administrative Officer, and/or Legal Counsel. St. Tammany Parish Government (hereinafter, the "Parish") and Owner may be used interchangeably.
- 01.24 Project The entire construction to be performed as provided in the Contract Documents.
- 01.25 Project Representative The authorized representative of the Owner who is assigned to the Project or any parts thereof.
- 01.26 Proposal The Bid submitted by the Bidder to the Owner on the Proposal form setting forth the Work to be done and the price for which the Bidder agrees to perform the Work.
- 01.27 Shop Drawings All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, Subcontractor, Manufacturer, Supplier or Distributor and which illustrate the equipment, material or some portion of the Work.
- 01.28 Specifications The Instructions to Bidders, these General Conditions, the Special Conditions and the Technical Provisions. All of the documents listed in the "Table of Contents."
- 01.29 Subcontractor An individual, firm or corporation having a direct Contract with the Contractor or with any other Subcontractor for the performance of a part of the Project Work.
- 01.30 Substantial Completion The date as certified by the Owner or its agent when the construction of the Project or a specified part thereof is sufficiently complete in accordance with the Contract Documents so that the Project or specified part can be utilized for the

purposes for which it was intended; or if there is no such certification, the date when final payment is due in accordance with Section 28.

01.31 Superintendent Contractor's site representative. The person on the site who is in full and complete charge of the Work.

01.32 Time Unless specifically stated otherwise, all time delays shall be calculated in calendar days.

01.33 Work Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by the Contractor under the Contract Documents, usually including the furnishing of all labor, materials, equipment and other incidentals.

01.34 The terms "he/himself" may be used interchangeably with "it/itself."

02.00 PROPOSAL

02.01 All papers bound with or attached to the Proposal Form are a necessary part thereof and must not be detached.

02.02 For submitting Bids, the only forms allowed shall be the "Louisiana Uniform Public Work Bid Form", "Louisiana Uniform Public Works Bid Form Unit Price Form" (if necessary), the Bid Bond, and written evidence of authority of person signing the bid. Necessary copies of the Louisiana Uniform Public Work Forms will be furnished for Bidding. Bound sets of the Contract Documents are for Bidder's information and should not be used in submitting Bids.

02.03 Proposal forms must be printed in ink or typed, unless submitted electronically. Illegibility or ambiguity therein may constitute justification for rejection of the Bid.

02.04 Each Bid must be submitted in a sealed envelope, unless submitted electronically. The outside of the envelope shall show the name and address of the Bidder, the State Contractor's License Number of the Bidder (if work requires contractor's license), and the Project name and number for which the Bid is submitted, along with the Bid number.

02.05 The price quoted for the Work shall be stated in words and figures on the Bid Form, and in numbers only on the Unit Price Form. The price in the Proposal shall include all costs necessary for the complete performance of the Work in full conformity with the conditions of the Contract Documents, and shall include all applicable Federal, State, Parish, Municipal or other taxes. The price bid for the items listed on the Unit Price Form will include the cost of all related items not listed, but which are normally required to do the type of Work bid.

02.06 The Bid shall be signed by the Bidder. The information required on the Louisiana Uniform Public Work Bid Form must be provided. Evidence of agency, corporate, or partnership authority is required and shall be provided in conformance with LSA-R.S. 38:2212(B).

02.07 Only the Contractors licensed by the State to do the type of Work involved can submit a Proposal for the Work. The envelope containing the Proposal shall have the Contractor's license number on it. Failure to be properly licensed constitutes authority by the Owner for rejection of Bid.

02.08 Bidders shall not attach any conditions or provisions to the Proposal. Any conditions or provisions so attached may, at the sole option of the Owner, cause rejection of the Bid or Proposal.

02.09 A Bid Guarantee of five percent (5%) of the amount of the total Bid, including Alternates, must accompany the Proposal and, at the option of the Bidder, may be a cashier's check, certified check or a satisfactory Bid Bond. The Bid Guarantee must be attached to the Louisiana Uniform Public Work Bid Form. No Bid will be considered unless it is so guaranteed. Cashier's check or certified check must be made payable to the order of the Owner. Cash deposits will not be accepted. The Owner reserves the right to cash or deposit the cashier's check or certified check. Such guarantees shall be made payable to the Parish

of St. Tammany. In accordance with LSA-R.S. 38:2218(C), if a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide, or by an insurance company in good standing licensed to write bid bonds which is either domiciled in Louisiana or owned by Louisiana residents. It is **not** required to be on any AIA form.

- 02.10 Bid securities of the three (3) lowest Bidders will be retained by the Owner until the Contract is executed or until final disposition is made of the Bids submitted. Bid securities of all other Bidders will be returned promptly after the canvas of Bids. Bids shall remain binding for forty-five (45) days after the date set for Bid Opening. The Parish shall act within the forty-five (45) days to award the contract to the lowest responsible bidder or reject all bids as permitted by Public Bid Law. However, the Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days. In the event the Owner issued the Letter of Award during this period, or any extension thereof, the Bid accepted shall continue to remain binding until the Execution of the Contract.
- 02.11 A Proposal may be withdrawn at any time prior to the scheduled closing time for receipt of Bids, provided the request is in writing, executed by the Bidder or its duly authorized representative and is filed with the Owner prior to that time. When such a request is received, the Proposal will be returned to the Bidder unopened.
- 02.12 Written communications, over the signature of the Bidder, to modify Proposals will be accepted and the Proposal corrected in accordance therewith if received by the Owner prior to the scheduled closing time for receipt of Bids. Oral, telephonic or telegraphic Modifications will not be considered.
- 02.13 No oral interpretation obligating the Owner will be made to any Bidder as to the meaning of the Drawings, Specifications and Contract Documents. Every request for such an interpretation shall be made in writing and addressed and forwarded to the Owner. No inquiry received within seven (7) days prior to the day fixed for opening of the Bids shall be given consideration. Every interpretation made to the Bidder shall be in the form of an addendum to the Specifications. All such Addenda shall become part of the Contract Documents. Failure of Bidder to receive any such interpretation shall not relieve any Bidder from any obligation under this Bid. All Addenda shall be issued in accordance with the Public Bid Law, LSA-R.S. 38:2212(O)(2)(a) and (b).
- 02.14 The Owner reserves the right to reject any or all Bids for just cause in accordance with the Public Bid Law, LSA-R.S. 38:2214(B). Incomplete, informal or unbalanced Bids may be rejected. Reasonable grounds for belief that any one Bidder is concerned directly or indirectly with more than one Bid will cause rejection of all Bids wherein such Bidder is concerned. If required, a Bidder shall furnish satisfactory evidence of its competence and ability to perform the Work stipulated in its Proposal. Incompetence will constitute cause for rejection. If the Parish determines that the bidder is not responsive or responsible for any reason whatsoever, the bid may be rejected in accordance with State law.
- 02.15 The Contractor shall indemnify and hold harmless the Owner from any and all suits, costs, penalties or claims for infringement by reason of use or installation of any patented design, device, material or process, or any trademark and copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify and hold harmless the Owner for any costs, expenses and damages which it may be obliged to pay by reason of any such infringement at any time during the prosecution or after completion of the Work.
- 02.16 Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project, which may directly or indirectly affect the Work or its prosecution. These laws and/or ordinances will be deemed to be included in the Contract, as though herein written in full.
- 02.17 Each Bidder shall visit the site of the proposed Work and fully acquaint itself with all surface and subsurface conditions as they may exist so that it may fully understand this

Contract. Bidder shall also thoroughly examine and be familiar with drawings, Specifications and Contract Documents. The failure or omission of any Bidder to receive or examine any form instrument, Drawing or document or to visit the site and acquaint itself with existing conditions, shall in no way relieve any Bidder from any obligation with respect to its Bid and the responsibility in the premises.

- 02.18 The standard contract form enclosed with the Proposal documents is a prototype. It is enclosed with the Contract Documents for the guidance of the Owner and the Contractor. It has important legal consequences in all respects and consultation with an attorney is encouraged. Contractor shall be presumed to have consulted with its own independent legal counsel.
- 02.19 When one set of Contract plans show the Work to be performed by two or more prime Contractors, it is the responsibility of each Bidder to become knowledgeable of the Work to be performed by the other where the Work upon which this bid is submitted is shown to come into close proximity or into conflict with the Work of the other. In avoiding conflicts, pressure pipe lines must be installed to avoid conflict with gravity pipe lines and the Bidder of the smaller gravity pipe line in conflict with the larger gravity pipe line must include in his Bid the cost of a conflict box at these locations. The location of and a solution to the conflicts do not have to be specifically noted as such on the plans.
- 02.20 Bidder shall execute affidavit(s) attesting compliance with LSA-R.S. 38:2212.10, 38:2224, 38:2227, each as amended, and other affidavits as required by law, prior to execution of the contract.
- 02.21 Sealed Proposals (Bid) shall be received by St. Tammany Parish Government at the office of St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, until the time and date denoted in Notice to Bidders, at which time and place the Proposals (Bids), shall be publicly opened and read aloud to those present. In accordance with LSA-R.S. 38-2212(A)(3)(c)(i), the designer's final estimated cost of construction shall be read aloud upon opening bids. Sealed Proposals (Bids) may also be mailed by certified mail to St. Tammany Parish Government, Department of Procurement, 21454 Koop Drive, Suite 2-F, Mandeville, LA 70471, and must be received before the bid opening. Bids may also be submitted electronically. Information concerning links for electronic bidding is contained in the Notice to Bidders.
- 02.22 Proposals (Bids) shall be executed on Forms furnished and placed in a sealed envelope, marked plainly and prominently as indicated in the Notice to Bidders, and these General Conditions, and addressed:

St. Tammany Parish Government
Department of Procurement
21454 Koop Drive, Suite 2-F
Mandeville, LA 70471

- 02.23 See Notice to Bidders for availability of Drawings, Specifications and Contract Documents via electronic methods.
- 02.24 The successful Bidder shall be required to post in each direction a public information sign, 4' x 4' in size, at the location of the project containing information required by the Owner. The Owner shall supply this information.

03.00 AWARD, EXECUTION OF DOCUMENTS, BONDS, ETC.

- 03.01 The award of the Contract, if it is awarded, will be to the lowest responsible Bidder, in accordance with State Law. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility, qualifications and financial ability and stability of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed as established by the Department based upon the amount of work to be performed and the conditions of same. The written contract and bond shall be issued in conformance with LSA-R.S. 38:2216. The Owner reserves the right to reject the Bid of any Bidder in accordance with the Public Bid Law, LSA-R.S. 38:2214. If the Contract is awarded, the Owner shall give the successful Bidder written notice of the award within forty-five (45) calendar days after

the opening of the Bids in conformance with LSA-R.S. 38:2215(A), or any extension as authorized thereunder.

- 03.02 At least three counterparts of the Agreement and of such other Contract Documents as practicable shall be signed by the Owner and the Contractor. The Owner shall identify those portions of the Contract Documents not so signed and such identification shall be binding on both parties. The Owner and the Contractor shall each receive an executed counterpart of the Contract Documents.
- 03.03 Prior to the execution of the Agreement, the Contractor shall deliver to the Owner the required Bonds.
- 03.04 Failure of the successful Bidder to execute the Agreement and deliver the required Bonds within twenty (20) days of the Notice of the Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited.
- 03.05 In order to ensure the faithful performance of each and every condition, stipulation and requirement of the Contract and to indemnify and save harmless the Owner from any and all damages, either directly or indirectly arising out of any failure to perform same, the successful Bidder to whom the Contract is awarded shall furnish a surety Bond in an amount of at least equal to one hundred percent (100%) of the Contract Price. The Contract shall not be in force or binding upon the Owner until such satisfactory Bond has been provided to and approved by the Parish. The cost of the Bond shall be paid for by the Contractor unless otherwise stipulated in the Special Provisions.
- 03.06 No surety Company will be accepted as a bondsman who has no permanent agent or representative in the State upon whom notices referred to in the General Conditions of these Specifications may be served. Services of said notice on said agent or representative in the State shall be equal to service of notice on the President of the Surety Company, or such other officer as may be concerned.
- 03.07 In conformance with LSA-R.S. 38:2219(A)(1)(a), (b), and (c):

Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the Federal Register, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide, to write individual bonds up to ten percent of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the state of Louisiana. All contractors must comply with any other applicable provisions of LSA-R.S. 38:2219.

- 03.08 Should the Contractor's Surety, even though approved and accepted by the Owner, subsequently remove its agency or representative from the State or become insolvent, bankrupt, or otherwise fail, the Contractor shall immediately furnish a new Bond in another company approved by the Owner, at no cost to the Owner. The new Bond shall be executed under the same terms and conditions as the original Bond. The new bond shall be submitted within thirty (30) days of such time as the Owner notifies Contractor or from the time Contractor learns or has reason to know that the original surety is no longer financially viable or acceptable to the Parish, whichever occurs first. In the event that Contractor fails

or refuses to timely secure additional surety, then the Owner may secure such surety and thereafter deduct such cost or expense from any sum due or to become due Contractor.

- 03.09 The Contractor's bondsman shall obligate itself to all the terms and covenants of these Specifications and of contracts covering the Work executed hereunder. The Owner reserves the right to do Extra Work or make changes by altering, adding to deducting from the Work under the conditions and in the manner herein before described without notice to the Contractor's surety and without in any manner affecting the liability of bondsman or releasing it from any of its obligations hereunder.
- 03.10 The Bond shall also secure for the Owner the faithful performance of the Contract in strict accordance with plans and Specifications. It shall protect the Owner against all lien laws of the State and shall provide for payment of reasonable attorney fees for enforcement of Contract and institution or concursus proceedings, if such proceedings become necessary. Likewise, it shall provide for all additional expenses of the Owner occurring through failure of the Contractor to perform.
- 03.11 The surety of the Contractor shall be and does hereby declare and acknowledge itself by acceptance to be bound to the Owner as a guarantor, jointly and in solido, with the Contractor, for fulfillment of terms of Section 03.00.
- 03.12 The performance Bond and Labor and Material Bond forming part of this Contract shall be continued by Contractor and its Surety for a period of one (1) year from date of acceptance of this Contract by Owner to assure prompt removal and replacement of all defective material, equipment, components thereof, workmanship, etc., and to assure payment of any damage to property of Owner or others as a result of such defective materials, equipment, workmanship, etc.
- 03.13 Contractor shall pay for the cost of recording the Contract and Bond and the cost of canceling same. Contractor shall also secure and pay for all Clear Lien and Privilege Certificates (together with any updates) which will be required before any final payment is made, and that may be required before any payment, at the request of the Owner, its representative, agent, architect, engineer and the like. All recordation and Clear Lien and Privilege Certificate requirements shall be in accordance with those requirements noted herein before in contract Specifications.

04.00 SUBCONTRACTS

- 04.01 Contractor shall be fully responsible for all acts and omissions of its Subcontractors and of persons and organizations for whose acts any of them may be liable to the same extent that it is responsible for the acts and omissions of persons directly employed by it. Nothing in the Contract Documents shall create any contractual relationship between Owner and any Subcontractor or other person or organization having a direct Contract with Contractor, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any monies due any Subcontractor.
- 04.02 Nothing in the Contract Documents shall be construed to control the Contractor in dividing the Work among approved Subcontractors or delineating the Work to be performed by any trade.
- 04.03 The Contractor agrees to specifically bind every Subcontractor to all of the applicable terms and conditions of the Contract Documents prior to commencing Work. Every Subcontractor, by undertaking to perform any of the Work, shall thereby automatically be deemed bound by such terms and conditions.
- 04.04 The Contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses including Attorney's fees arising out of or resulting from the Contractor's failure to bind every Subcontractor and Contractor's surety to all of the applicable terms and conditions of the Contract Documents.

05.00 ASSIGNMENT

05.01 Neither party to this Contract shall assign or sublet its interest in this Contract without prior written consent of the other, nor shall the Contractor assign any monies due or to become due to it under this Contract without previous written consent of the Owner, nor without the consent of the surety unless the surety has waived its right to notice of assignment.

06.00 CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS.

06.01 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between Owner and Contractor. Alterations, modifications and amendments shall only be in writing between these parties.

06.02 The Contract Documents are intended to be complimentary and to be read *in pari materii*, and what is called for by one is as binding as if called for by all. If Contractor finds a conflict, error or discrepancy in the Contract Documents, it shall call it to the Owner's attention, in writing, at once and before proceeding with the Work affected thereby; however, it shall be liable to Owner for its failure to discover any conflict, error or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, General Conditions, Construction Specifications and Drawings. The general notes on the plans shall be considered special provisions. Figure dimensions on Drawings shall govern over scale dimensions and detail Drawings shall govern over general Drawings. Where sewer connections are shown to fall on a lot line between two lots, the Contractor shall determine this location by measurement not by scale. Any Work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described herein which so applied to this Project are covered by a well-known technical meaning or specification shall be deemed to be governed by such recognized standards unless specifically excluded.

06.03 Unless otherwise provided in the Contract Documents, the Owner will furnish to the Contractor (free of charge not to exceed ten (10) copies) Drawings and Specifications for the execution of Work. The Drawings and Specifications are the property of the Owner and are to be returned to it when the purpose for which they are intended have been served. The Contractor shall keep one copy of all Drawings and Specifications, including revisions, Addenda, details, Shop Drawings, etc. on the Work in good order and available to the Owner or the regulatory agency of the governmental body having jurisdiction in the area of the Work.

07.00 SHOP DRAWINGS, BROCHURES AND SAMPLES

07.01 After checking and verifying all field measurements, Contractor shall submit to Owner for approval, five copies (or at Owner's option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of Contractor and identified as Owner may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable Owner to review the information as required.

07.02 Contractor shall also submit to Owner, for review with such promptness as to cause no delay in Work, all samples as required by the Contract Documents. All samples will have been checked by and stamped with the approval of Contractor identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended. At the time of each submission, Contractor shall in writing call Owner's attention to any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.

07.03 Owner will review with reasonable promptness Shop Drawings and samples, but its review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Owner and shall return the required number of

corrected copies of Shop Drawings and resubmit new samples for review. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Owner on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner that Contractor has determined and verified all quantities, dimensions, field construction criteria, materials catalog numbers and similar data and thereafter assumes full responsibility for doing so, and that it has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

07.04 Where a Shop Drawing or sample submission is required by the Specifications, no related Work shall be commenced until the submission has been reviewed by Owner. A copy of each reviewed shop Drawing and each inspected sample shall be kept in good order by Contractor at the site and shall be available to Owner.

07.05 Owner's review of Shop Drawings or samples shall not relieve Contractor from its responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called Owner's attention to such deviation at the time of submission and Owner has given written approval to the specific deviation, nor shall any review by Owner relieve Contractor from responsibility for errors or omissions in the Shop Drawings. The mere submittal of shop drawings which contain deviations from the requirements of plans, specifications and/or previous submittals in itself does not satisfy this requirement.

08.00 RECORD DRAWINGS

08.01 The Contractor shall keep an accurate record in a manner approved by the Owner of all changes in the Contract Documents during construction. In Work concerning underground utilities, the Contractor shall keep an accurate record in a manner approved by the Owner of all valves, fittings, etc. Before the Work is accepted by the Owner, and said acceptance is recorded, the Contractor shall furnish the Owner a copy of this record.

08.02 Contractor shall keep an accurate drawing measured in the field to the nearest 0.1' of the location of all sewer house connections. The location shown shall be the end of the connection at the property line measured along the main line of pipe from a manhole.

08.03 Contractor shall keep an accurate drawing of the storm water drainage collection system. Inverts to the nearest 0.01' and top of castings shall be shown as well as location of all structures to the nearest 0.1'. Upon completion of the Work, the plan will be given to the Owner.

09.00 PROGRESS OF WORK

09.01 Contractor shall conduct the Work in such a professional manner and with sufficient materials, equipment and labor as is considered necessary to ensure its completion within the time limit specified.

09.02 The Owner shall issue a Notice to Proceed to the Contractor within twenty (20) calendar days from the date of execution of the Contract. Upon mutual consent by both parties, the Notice to Proceed may be extended. The Contractor is to commence Work under the Contract within ten (10) calendar days from the date the Notice to Proceed is issued by the Owner.

09.03 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's approval an estimated progress schedule for the work to be performed, as well as a construction signing layout for all roads within the project area. The Contractor shall not start work or request partial payment until the work schedule has been submitted to the Owner for approval.

09.04 Revisions to the original schedule will be made based on extension of days granted for inclement weather or change orders issued under the contract. No other revision shall be made which affects the original completion or updated completion date, whichever is applicable.

09.05 Failure of the Contractor to submit an estimated progress schedule or to complete timely and on schedule the Work shown on the progress schedule negates any and all causes or claims by the Contractor for accelerated completion damages. These accelerated damage claims shall be deemed forfeited.

09.06 Meetings will be held as often as necessary to expedite the progress of the job. Meetings will be held during normal working hours at the jobsite and shall be mandatory for the Contractor and all Sub-Contractors working on the project. Meetings may be requested by the Owner at any time and at the discretion of the Owner.

10.00 OWNER'S RIGHT TO PROCEED WITH PORTIONS OF THE WORK

10.01 Upon failure of the Contractor to comply with any notice given in accordance with the provisions hereof, the Owner shall have the alternative right, instead of assuming charge of the entire Work, to place additional forces, tools, equipment and materials on parts of the Work. The cost incurred by the Owner in carrying on such parts of the Work shall be payable by the Contractor. Such Work shall be deemed to be carried on by the Owner on account of the Contractor. The Owner may retain all amounts of the cost of such Work from any sum due Contractor or those funds that may become due to Contractor under this Agreement.

10.02 Owner may perform additional Work related to the Project by itself or it may let any other direct contract which may contain similar General Conditions. Contractor shall afford the other contractors who are parties to such different contracts (or Owner, if it is performing the additional Work itself) reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work, and shall properly connect and coordinate its Work with the subsequent work.

10.03 If any part of Contractor's Work depends upon proper execution or results upon the Work of any such other contractor (or Owner), Contractor shall inspect and promptly report to Owner in writing any defects or deficiencies in such Work that render it unsuitable for such proper execution and results. Failure to so report shall constitute an acceptance of the other Work as fit and proper for the relationship of its Work except as to defects and deficiencies which may appear in the other Work after the execution of its Work.

10.04 Whatever Work is being done by the Owner, other Contractors or by this Contractor, the parties shall respect the various interests of the other parties at all times. The Owner may, at its sole discretion, establish additional rules and regulations concerning such orderly respect of the rights of various interests.

10.05 Contractor shall do all cutting, fitting and patching of its Work that may be required to integrate its several parts properly and fit to receive or be received by such other Work. Contractor shall not endanger any Work of others by cutting, excavating or otherwise altering Work and will only alter Work with the written consent of Owner and of the other contractors whose Work will be affected.

10.06 If the performance of additional Work by other contractors or Owner is not noted in the Contract Documents, written notice thereof shall be given to Contractor prior to starting any such additional Work. If Contractor believes that the performance of such additional Work by Owner or others may cause additional expense or entitles an extension of the Contract Time, the Contractor may make a claim therefor. The claim must be in writing to the Owner within thirty (30) calendar days of receipt of notice from the Owner of the planned additional Work by others.

11.00 TIME OF COMPLETION

11.01 The Notice to Proceed will stipulate the date on which the Contractor shall begin work. That date shall be the beginning of the Contract Time charges.

11.02 Contractor shall notify the Owner through its duly authorized representative, in advance, of where Contractor's work shall commence each day. A daily log shall be maintained by Contractor to establish dates, times, persons contacted, and location of work. Specific notice shall be made to the Owner if the Contractor plans to work on Saturday, Sunday, or

a Parish approved holiday. If notice is not received, no consideration will be given for inclement weather and same shall be considered a valid work day.

11.03 The Work covered by the Plans, Specifications and Contract Documents must be completed sufficiently for acceptance within the number of calendar days specified in the Proposal and/or the Contract, commencing from the date specified in the Notice to Proceed. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the time of completion is an essential condition of this Contract, and it is further mutually understood and agreed that if the Contractor shall neglect, fail or refuse to complete the Work within the time specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as partial consideration for the awarding of this Contract, to pay the Owner based on **Table 3.1** as specified in the Contract, not as a penalty, but as liquidated damages for such breach of contract for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work. It is specifically understood that the Owner shall also be entitled to receive a reasonable attorney fee and all costs in the event that Contractor fails to adhere to this agreement and this contract is referred to counsel for any reason whatsoever. Reasonable attorney fees shall be the prevailing hourly rate of the private sector, and in no event shall the hourly rate be less than \$175.00 per hour. All attorney fees shall be paid to the operating budget of the Office of the Parish President.

11.04 Prior to final payment, the Contractor may, in writing to the Owner, certify that the entire Project is substantially complete and request that the Owner or its agent issue a certificate of Substantial Completion. See Section 29.00.

11.05 The Owner may grant an extension(s) of time to the Contractor for unusual circumstances which are beyond the control of the Contractor and could not reasonably be foreseen by the Contractor prior to Bidding. Any such request must be made in writing to the Owner within seven (7) calendar days following the event occasioning the delay. The Owner shall have the exclusive and unilateral authority to determine, grant, and/or deny the validity of any such claim.

11.06 Extensions of time for inclement weather shall be processed as follows:

Commencing on the start date of each job, the Parish Inspector assigned to same shall keep a weekly log, indicating on each day whether inclement weather has prohibited the Contractor from working on any project within the specific job, based upon the following:

1. Should the Contractor prepare to begin work on any day in which inclement weather, or the conditions resulting from the weather, prevent work from beginning at the usual starting time, and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for work.
2. If weather conditions on the previous day prevent Contractor from performing work scheduled, provided that no other work can be performed on any project within the package. The Parish Inspector shall determine if it is financially reasonable to require the Contractor to deviate from the schedule and relocate to another location.
3. If the Contractor is unable to work at least 60% of the normal work day due to inclement weather, provided that a normal working force is engaged on the job.

Any dispute of weather conditions as related to a specific job shall be settled by records of the National Weather Service.

11.07 Extensions of time for change orders

When a change order is issued, the Owner and Contractor will agree on a reasonable time extension, if any, to implement such change. Consideration shall be given for, but not limited to, the following:

1. If material has to be ordered;
2. Remobilization and or relocation of equipment to perform task; and
3. Reasonable time frame to complete additional work.

Time extensions for change orders shall be reflected on the official document signed by the Owner and Contractor.

- 11.08 At the end of each month, the Owner or its agent will furnish to the Contractor a monthly statement which reflects the number of approved days added to the contract. The Contractor will be allowed fourteen (14) calendar days in which to file a written protest setting forth in what respect the monthly statement is incorrect; otherwise, the statement shall be considered accepted by the Contractor as correct.
- 11.09 Apart from extension of time for unavoidable delays, no payment or allowance of any kind shall be made to the Contractor as compensation for damages because of hindrance or delay for any cause in the progress of the Work, whether such delay be avoidable or unavoidable.

12.00 LIQUIDATED DAMAGES

- 12.01 In case the Work is not completed in every respect within the time that may be extended, it is understood and agreed that per diem deductions per **Table 3.1** for liquidated damages, as stipulated in the Proposal and/or Contract, shall be made from the total Contract Price for each and every calendar day after and exclusive of the day on which completion was required, and up to the completion of the Work and acceptance thereof by the Owner. It is understood and agreed that time is of the essence to this Contract, and the above sum being specifically herein agreed upon in advance as the measure of damages to the Owner on account of such delay in the completion of the Work. It is further agreed that the expiration of the term herein assigned or as may be extended for performing the Work shall, *ipso facto*, constitute a putting in default, the Contractor hereby waiving any and all notice of default. The Contractor agrees and consents that the Contract Price, reduced by the aggregate of the entire damages so deducted, shall be accepted in full satisfaction of all Work executed under this Contract. It is further understood and agreed that Contractor shall be liable for a reasonable attorney fee and all costs associated with any breach of this agreement, including but not limited to this subsection. In the event that any dispute or breach herein causes referrals to counsel, then Contractor agrees to pay a reasonable attorney fee at the prevailing hourly rate of the private sector. In no event shall the hourly rate be less than \$175.00 per hour.

13.00 LABOR, MATERIALS, EQUIPMENT, SUPERVISION, PERMITS AND TAXES

- 13.01 The Contractor shall provide and pay for all labor, materials, equipment, supervision, subcontracting, transportation, tools, fuel, power, water, sanitary facilities and all incidentals necessary for the completion of the Work in substantial conformance with the Contract Documents.
- 13.02 The Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. It shall at all times maintain good discipline and order at the site.
- 13.03 Unless otherwise specifically provided for in the Specifications, all workmanship, equipment, materials, and articles incorporated in the Work covered by this Contract are to be new and of the best grade of their respective kinds for the purpose intended. Samples of materials furnished under this Contract shall be submitted for approval to the Owner when and as directed.
- 13.04 Whenever a material or article required is specified or shown on the plans by using the name of a proprietary product or of a particular manufacturer or Contractor, any material or article which shall perform adequately the duties imposed by the general design will be considered equal, and satisfactory, providing the material or article so proposed is of equal substance and function and that all technical data concerning the proposed substitution be approved by the Owner prior to the Bidding. The Owner shall have the exclusive and unilateral discretion to determine quality and suitability in accordance with LSA-R.S. 38:2212(T)(2).

- 13.05 Materials shall be properly and securely stored so as to ensure the preservation of quality and fitness for the Work, and in a manner that leaves the material accessible to inspection. Materials or equipment may not be stored on the site in a manner such that it will interfere with the continued operation of streets and driveways or other contractors working on the site.
- 13.06 The Contractor, by entering into the Contract for this Work, sets itself forth as an expert in the field of construction and it shall supervise and direct the Work efficiently and with its best skill and attention. It shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.
- 13.07 Contractor shall keep on the Work, at all times during its progress, a competent resident Superintendent, who shall not be replaced without written Notice to Owner except under extraordinary circumstances. The Superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor. Owner specifically reserves the right to approve and/or disapprove the retention of a new superintendent, all to not be unreasonably withheld.
- 13.08 Any foreman or workman employed on this Project who disregards orders or instructions, does not perform his Work in a proper and skillful manner, or is otherwise objectionable, shall, at the written request of the Owner, be removed from the Work and shall be replaced by a suitable foreman or workman.
- 13.09 The Contractor and/or its assigned representative shall personally ensure that all subcontracts and divisions of the Work are executed in a proper and workmanlike manner, on scheduled time, and with due and proper cooperation.
- 13.10 Failure of the Contractor to keep the necessary qualified personnel on the Work shall be considered cause for termination of the Contract by the Owner.
- 13.11 Only equipment in good working order and suitable for the type of Work involved shall be brought onto the job and used by the Contractor. The Contractor is solely responsible for the proper maintenance and use of its equipment and shall hold the Owner harmless from any damages or suits for damages arising out of the improper selection or use of equipment. No piece of equipment necessary for the completion of the Work shall be removed from the job site without approval of the Owner.
- 13.12 All Federal, State and local taxes due or payable during the time of Contract on materials, equipment, labor or transportation, in connection with this Work, must be included in the amount bid by the Contractor and shall be paid to proper authorities before acceptance. The Contractor shall furnish all necessary permits and certificates and comply with all laws and ordinances applicable to the locality of the Work. The cost of all inspection fees levied by any governmental entity whatsoever shall be paid for by the Contractor.
- 13.13 In accordance with St. Tammany Police Jury Resolution 86-2672, as amended, the Contractor must provide in a form suitable to the Owner an affidavit stating that all applicable sales taxes for materials used on this project have been paid.
- 13.14 During the period that this Contract is in force, neither party to the Contract shall solicit for employment or employ an employee of the other.
- 13.15 All materials or equipment shown on the Drawings or included in these specifications shall be furnished unless written approval of a substitute is obtained from the Designer, or Owner if no separate designer.
- 13.16 If a potential supplier wishes to submit for prior approval a particular product other than a product specified in the contract documents, he shall do so no later than seven working days prior to the opening of bids. Within three days, exclusive of holidays and weekends, after such submission, the prime design professional shall furnish to both the public entity and the potential supplier written approval or denial of the product submitted. The burden of proof of the equality of the proposed substitute is upon the proposer and only that information formally submitted shall be used by the Designer in making its decision.

13.17 The decision of the Designer/Owner shall be given in good faith and shall be final.

14.00 QUANTITIES OF ESTIMATE, CHANGES IN QUANTITIES, EXTRA WORK

14.01 Whenever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents, including the Proposal, such are given for use in comparing Bids and the right is especially reserved, except as herein otherwise specifically limited, to increase or diminish same not to exceed twenty-five percent (25%) by the Owner to complete the Work contemplated by this Contract. Such increase or diminution shall in no way vitiate this Contract, nor shall such increase or diminution give cause for claims or liability for damages.

14.02 The Owner shall have the right to make alterations in the line, grade, plans, form or dimensions of the Work herein contemplated, provided such alterations do not change the total cost of the Project, based on the originally estimated quantities, and the unit prices bid by more than twenty-five percent (25%) and provided further that such alterations do not change the total cost of any major item, based on the originally estimated quantities and the unit price bid by more than twenty-five (25%). (A major item shall be construed to be any item, the total cost of which is equal to or greater than ten percent (10%) of the total Contract Price, computed on the basis of the Proposal quantity and the Contract unit price). Should it become necessary, for the best interest of the Owner, to make changes in excess of that herein specified, the same shall be covered by supplemental agreement either before or after the commencement of the Work and without notice to the sureties. If such alterations diminish the quantity of Work to be done, such shall not constitute a claim for damages for anticipated profits for the Work dispensed with, but when the reduction in amount is a material part of the Work contemplated, the Contractor shall be entitled to only reasonable compensation as determined by the Owner for overhead and equipment charges which it may have incurred in expectation of the quantity of Work originally estimated, unless specifically otherwise provided herein; if the alterations increase the amount of Work, the increase shall be paid according to the quantity of Work actually done and at the price established for such Work under this Contract except where, in the opinion of the Owner, the Contractor is clearly entitled to extra compensation.

14.03 Without invalidating the Contract, the Owner may order Extra Work or make changes by altering, adding to, or deducting from the Work, the Contract sum being adjusted accordingly. The consent of the surety must first be obtained when necessary or desirable, all at the exclusive discretion of the Owner. All the Work of the kind bid upon shall be paid for at the price stipulated in the Proposal, and no claims for any Extra Work or material shall be allowed unless the Work is ordered in writing by the Owner.

14.04 Extra Work for which there is no price or quantity included in the Contract shall be paid for at a unit price or lump sum to be agreed upon in advance in writing by the Owner and Contractor. Where such price and sum cannot be agreed upon by both parties, or where this method of payment is impracticable, the Owner may, at its exclusive and unilateral discretion, order the Contractor to do such Work on a Force Account Basis.

14.05 In computing the price of Extra Work on a Force Account Basis, the Contractor shall be paid for all foremen and labor actually engaged on the specific Work at the current local rate of wage for each and every hour that said foremen and labor are engaged in such Work, plus ten percent (10%) of the total for superintendence, use of tools, overhead, direct & indirect costs/expenses, pro-rata applicable payroll taxes, pro-rata applicable workman compensation benefits, pro-rata insurance premiums and pro-rata reasonable profit. The Contractor shall furnish satisfactory evidence of the rate or rates of such insurance and tax. The Contractor will not be able to collect any contribution to any retirement plans or programs.

14.06 For all material used, the Contractor shall receive the actual cost of such material delivered at the site of the Work, as shown by original receipted bill, to which shall be added five percent (5%). There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.

14.07 For any equipment used that is owned by the Contractor, the Contractor shall be allowed a rental based upon the latest prevailing rental price, but not to exceed a rental price as determined by the Associated Equipment Distributors (A.E.D. Green Book).

- 14.08 The Contractor shall also be paid the actual costs of transportation for any equipment which it owns and which it has to transport to the Project for the Extra Work. There will be absolutely no additional surcharges or additional fees attached hereto with respect to this subsection.
- 14.09 If the Contractor is required to rent equipment for Extra Work, but not required for Contract items, it will be paid the actual cost of rental and transportation of such equipment to which no percent shall be added. The basis upon which rental cost are to be charged shall be agreed upon in writing before the Work is started. Actual rental and transportation costs shall be obtained from receipted invoices and freight bills.
- 14.10 No compensation for expenses, fees or costs incurred in executing Extra Work, other than herein specifically mentioned herein above, will be allowed.
- 14.11 A record of Extra Work on Force Account basis shall be submitted to the Owner on the day following the execution of the Work, and no less than three copies of such record shall be made on suitable forms and signed by both the Owner or his representative on the Project and the Contractor. All bids for materials used on extra Work shall be submitted to the Owner by the Contractor upon certified statements to which will be attached original bills covering the costs of such materials.
- 14.12 Payment for Extra Work of any kind will not be allowed unless the same has been ordered in writing by the Owner.

15.00 STATUS OF THE ENGINEER (NOT APPLICABLE)

16.00 INJURIES TO PERSONS AND PROPERTY

- 16.01 The Contractor shall be held solely and exclusively responsible for all injuries to persons and for all damages to the property of the Owner or others caused by or resulting from the negligence of itself, its employees or its agents, during the progress of or in connection with the Work, whether within the limits of the Work or elsewhere under the Contract proper or as Extra Work. This requirement will apply continuously and not be limited to normal working hours or days. The Owner's construction review is for the purpose of checking the Work product produced and does not include review of the methods employed by the Contractor or to the Contractor's compliance with safety measures of any nature whatsoever. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.
- 16.02 The Contractor must protect and support all utility infrastructures or other properties which are liable to be damaged during the execution of its Work. It shall take all reasonable and proper precautions to protect persons, animals and vehicles or the public from the injury, and wherever necessary, shall erect and maintain a fence or railing around any excavation, and place a sufficient number of lights about the Work and keep same burning from twilight until sunrise, and shall employ one or more watchmen as an additional security whenever needed. The Contractor understands and agrees that the Owner may request that security be placed on the premises to ensure and secure same. The Owner shall have exclusive authority to request placement of such security. Contractor agrees to retain and place security as requested, all at the sole expense of Contractor. Additional security shall not be considered a change order or reason for additional payment by the Owner. The Contractor must, as far as practicable and consistent with good construction, permit access to private and public property and leave fire hydrants, catch basins, streets, etc., free from encumbrances. The Contractor must restore at its own expense all injured or damaged property caused by any negligent act of omission or commission on its part or on the part of its employees or subcontractors, including, but not limited to, sidewalks, curbing, sodding, pipes conduits, sewers, buildings, fences, bridges, retaining walls, tanks, power lines, levees or any other building or property whatsoever to a like condition as existed prior to such damage or injury.

- 16.03 In case of failure on the part of the Contractor to restore such property or make good such damage, the Owner may upon forty-eight (48) hours' notice proceed to repair or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due or which may become due under its Contract.
- 16.04 Contractor agrees to protect, defend, indemnify, save, and hold harmless St. Tammany Parish Government, its elected and appointed officials, departments, agencies, boards and commissions, their officers, agents servants, employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property to the extent caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors, or any and all costs, expense and/or attorney fees incurred by St. Tammany Parish Government as a result of any claim, demands, and/or causes of action that results from the negligent performance or non-performance by Contractor, its agents, servants, employees, and subcontractors of this contract. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto caused by any negligent act or omission or willful misconduct of Contractor, its agents, servants, employees, and subcontractors.
- 16.05 As to any and all claims against Owner, its agents, assigns, representatives or employees by any employee of Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts as may be liable, the indemnification obligation under Paragraph 16.04 shall not be limited in any way or by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 16.06 No road shall be closed by the Contractor to the public except by written permission of the Owner. If so closed, the Contractor shall maintain traffic over, through and around the Work included in his Contract, with the maximum practical convenience, for the full twenty-four hours of each day of the Contract, whether or not Work has ceased temporarily. The Contractor shall notify the Owner at the earliest possible date after the Contract has been executed and, in any case, before commencement of any construction that might in any way inconvenience or endanger traffic, in order that necessary and suitable arrangements may be determined. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.07 The convenience of the general public and residents along the Works shall be provided for in a reasonable, adequate and satisfactory manner. Where existing roads are not available as detours, and unless otherwise provided, all traffic shall be permitted to pass through the Work. In all such cases, the public shall have precedence over Contractor's vehicles insofar as the traveling public's vehicles shall not be unduly delayed for the convenience of the Contractor. In order that all unnecessary delay to the traveling public may be avoided, the Contractor shall provide and station competent flagmen whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the Work. Any and all security, maintenance, labor or costs associated with traffic control herein shall be at the sole expense of Contractor. This expense shall be paid directly by the Contractor. This expense shall not be considered as a change order nor shall it allow the Contractor any additional cost reimbursement whatsoever. All traffic deviations herein shall be coordinated with the appropriate law enforcement officials of this Parish.
- 16.08 The Contractor shall arrange its Work so that no undue or prolonged blocking of business establishments will occur.
- 16.09 Material and equipment stored on the right of way or work site shall be so placed and the Work at times shall be so conducted as to ensure minimum danger and obstruction to the traveling public.
- 16.10 During grading operations when traffic is being permitted to pass through construction, the Contractor shall provide a smooth, even surface that will provide a satisfactory passageway

for use of traffic. The road bed shall be sprinkled with water if necessary to prevent a dust nuisance, provided the dust nuisance is a result of the Work.

- 16.11 Fire hydrants shall be accessible at all times to the Fire Department. No material or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules or regulations or within fifteen (15) feet of a fire hydrant, in the absence of such ordinance, rules or regulations.
- 16.12 The Contractor shall not, without the written permission of the Owner, do Work for a resident or property owner abutting the Work at the time that this Work is in progress.
- 16.13 No Work of any character shall be commenced on railroad right-of-way until the Railroad Company has issued a permit to the Owner and has been duly notified by the Contractor in writing (with a copy forwarded to the Owner) of the date it proposes to begin Work, and until an authorized representative of the Railroad Company is present, unless the Railroad Company waives such requirements. All Work performed by the Contractor within the right-of-way limits of the railroad shall be subject to the inspection and approval of the chief engineer of the Railroad Company or its authorized representative. Any precautions considered necessary by said chief engineer to safeguard the property, equipment, employees and passengers of the Railroad Company shall be taken by the Contractor without extra compensation. The Contractor shall, without extra compensation, take such precautions and erect and maintain such tell-tale or warning devices as the Railroad Company considers necessary to safeguard the operation of its trains. The temporary vertical and horizontal clearance specified by the chief engineer of the Railroad Company in approving these shall be maintained at all times. No steel, brick, pipe or any loose material shall be left on the ground in the immediate vicinity of the railway track. Before any Work is done within Railroad right of way, the Contractor shall provide and pay all costs of any special insurance requirements of the Railroad.
- 16.14 The Contractor, shall, without extra compensation, provide, erect, paint and maintain all necessary barricades. Also, without extra compensation, the Contractor shall provide suitable and sufficient lights, torches, reflectors or other warning or danger signals and signs, provide a sufficient number of watchmen and flagmen and take all the necessary precautions for the protection of the Work and safety of the Public.
- 16.15 The Contractor shall erect warning signs beyond the limits of the Project, in advance of any place on the Project where operations interfere with the use of the road by traffic, including all intermediate points where the new Work crosses or coincides with the existing road. All barricades and obstructions shall be kept well painted and suitable warning signs shall be placed thereon. All barricades and obstructions shall be illuminated at night and all lights or devices for this purpose shall be kept burning from sunset to sunrise.
- 16.16 Whenever traffic is maintained through or over any part of the Project, the Contractor shall clearly mark all traffic hazards. No direct payment will be made for barricades, signs and illumination therefore or for watchmen or flagmen.
- 16.17 The Contractor will be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. The duty of the Owner to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, or near the construction site.

17.00 SANITARY PROVISIONS

- 17.01 The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the rules and regulations of the State Health Agency or of the other authorities having jurisdiction and shall permit no public nuisance.

18.00 RIGHTS OF WAY

18.01 The Owner will furnish the Contractor with all necessary rights-of-way for the prosecution of the Work. The rights of way herein referred to shall be taken to mean only permission to use or pass through the locations or space in any street, highway, public or private property in which the Contractor is to prosecute the Work.

18.02 It is possible that all lands and rights of way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin its Work upon such land and rights of way as the Owner may have previously acquired. Any delay in furnishing these lands by the Owner can be deemed proper cause for adjustment in the Contract amount and/or in the time of completion.

19.00 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

19.01 The Contractor shall not enter upon private property for any purpose without first obtaining permission from the Owner, as well as the private property owner and/or and private property Lessees. The Contractor shall use every precaution necessary for the preservation of all public and private property, monuments, highway signs, telephone lines, other utilities, etc., along and adjacent to the Work; the Contractor shall use every precaution necessary to prevent damage to pipes, conduits, and other underground structures; and shall protect carefully from disturbance or damage all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed. The street and highway signs and markers that are to be affected by the Work shall be carefully removed when the Work begins and stored in a manner to keep them clean and dry. The Contractor must obtain all necessary information in regard to existing utilities and shall give notice in writing to the owners or the proper authorities in charge of streets, gas, water, pipes, electric, sewers and other underground structures, including conduits, railways, poles and pole lines, manholes, catch basins, fixtures, appurtenances, and all other property that may be affected by the Contractor's operations, at least forty-eight (48) hours before its operations will affect such property. The Contractor shall not hinder or interfere with any person in the protection of such Work or with the operation of utilities at any time. When property, the operation of railways, or other public utilities are endangered, the Contractor shall at its own expense, maintain flagmen or watchmen and any other necessary precautions to avoid interruption of service or damage to life or property, and it shall promptly repair, restore, or make good any injury or damage caused by its negligent operations in an acceptable manner. The Contractor must also obtain all necessary information in regard to the installation of new cables, conduits, and transformers, and make proper provisions and give proper notifications, in order that same can be installed at the proper time without delay to the Contractor or unnecessary inconvenience to the Owner.

19.02 The Contractor shall not remove, cut or destroy trees, shrubs, plants, or grass that are to remain in the streets or those which are privately owned, without the proper authority. Unless otherwise provided in the Special Provisions or the Proposal, the Contractor shall replace and replant all plants, shrubs, grass and restore the grounds back to its original good condition to the satisfaction of the Owner and/or the property owner. The Contractor shall assume the responsibility of replanting and guarantees that plants, shrubs, grass will be watered, fertilized and cultivated until they are in a growing condition. No direct payment will be made for removing and replanting of trees, shrubs, plants or grass unless such items are set forth in the Proposal.

19.03 When or where direct damage or injury is done to public or private property by or on account of any negligent act, omission, neglect or otherwise of the Contractor, it shall make good such damage or injury in an acceptable manner.

20.00 CONTRACTORS RESPONSIBILITY FOR WORK

20.01 Until final acceptance of the Work by the Owner as evidence by approval of the final estimate, the Work shall be in the custody and under the charge and care of the Contractor and it shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from the non-execution of the Work; unless otherwise provided for elsewhere in the Specifications or Contract. The Contractor shall rebuild, repair, restore and make good, without extra compensation, all injuries or damages to any portion of the Work occasioned by any of the above causes before its completion and

acceptance, and shall bear the expenses thereof. In case of suspension of the Work from any cause whatever, the Contractor shall be responsible for all materials and shall properly and securely store same, and if necessary, shall provide suitable shelter from damage and shall erect temporary structures where necessary. If in the exclusive discretion of the Owner, any Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of its Subcontractors to so protect the Work, such materials shall be removed and replaced at the sole expense of the Contractor. Such amount shall be deducted from any sum due or to be due Contractor.

20.02 The Contractor shall give all notice and comply with all Federal, State, and local laws, ordinances, and regulations in any manner affecting the conduct of the Work, and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over the Work, and shall indemnify and hold harmless the Owner against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order or decree, whether by itself, its employees or Subcontractors.

21.00 TESTS AND INSPECTIONS CORRECTION & REMOVAL OF DEFECTIVE WORK

21.01 Contractor warrants and guarantees to Owner that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents. All unsatisfactory Work, all faulty or Defective Work and all Work not conforming to the requirements of the Contract Documents at the time of acceptance shall be considered Defective. Prompt and reasonable notice of all defects shall be given to the Contractor.

21.02 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested or approved by some public body, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish Owner the required certificates of inspection, testing or approval. All other inspections, tests and approval required by the Contract Documents shall be performed by organizations acceptable to Owner and Contractor and the costs thereof shall be borne by the Contractor unless otherwise specified.

21.03 Contractor shall give Owner timely notice of readiness of the Work for all inspections, tests or approvals. If any such Work required to be inspected, tested or approved is covered without written approval of Owner, it must, if requested by Owner, be uncovered for observation, and such uncovering shall be at Contractor's expense unless Contractor has given Owner timely notice of its intention to cover such Work and Owner has not acted with reasonable promptness in response to such notice.

21.04 Neither observations by Owner nor inspections, tests or approvals shall relieve Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Document.

21.05 Owner and its representatives will at reasonable times have access to the Work. Contractor shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.

21.06 If any Work is covered contrary to the written request of Owner, it must, be uncovered for Owner's observation and replaced at Contractor's expense. If any Work has been covered which Owner has not specifically requested to observe prior to its being covered, or if Owner considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at Owner's request, shall uncover, expose or otherwise make available for observations, inspections or testing as Owner may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

- 21.07 If the Work is Defective, or Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments to Subcontractors or for labor, materials or equipment, Owner may order Contractor to stop the Work, or any portion thereof, until the cause of such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.
- 21.08 Prior to approval of final payment, Contractor shall promptly, without cost to Owner and as specified by Owner, either correct any Defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not correct such Defective Work or remove and replace such rejected Work within a reasonable time, all as specified in a written notice from Owner, Owner may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement including compensation for additional professional services shall be paid by Contractor, and an appropriate deductive Change Order shall be issued. Contractor shall also bear the expense of making good all Work of others destroyed or damaged by its correction, removal or replacement of its Defective Work.
- 21.09 If, after the approval of final payment and prior to the expiration of one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be Defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such Defective Work or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, Owner may have the Defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by Contractor. The Contractor agrees to pay a reasonable attorney fee and other reasonable attendant costs of the Owner in the event it becomes necessary for the Owner to employ an attorney to enforce this section or to protect itself against suit over the Contractor's responsibilities. Attorney fees shall be at the prevailing hourly rate of the private sector. The attorney fee hourly rate shall not be less than \$175.00 per hour. All attorney fees collected shall be paid to the operating budget of the Office of the Parish President.
- 21.10 If, instead of requiring correction or removal and replacement of Defective Work, Owner (and prior to approval of final payment) prefers to accept it, the Owner may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price, or, if the acceptance occurs after approval of final payment, an appropriate amount shall be paid by Contractor to Owner.
- 21.11 If Contractor should fail to progress the Work in accordance with the Contract Documents, including any requirements of the Progress Schedule, Owner, after seven (7) days written Notice to Contractor, may, without prejudice to any other remedy Owner may have, make good such deficiencies and the cost thereof including compensation for additional professional services shall be charged against Contractor. In such cases, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to Owner.
- 21.12 The Owner may appoint representatives to make periodic visits to the site and observe the progress and quality of the executed Work. These representatives shall be governed by the same restrictions placed on the Owner by these Specifications. The governing body of the Federal, State or local government exercising authority in the area of the Work may appoint representatives to observe the progress and quality of the Work. Contractor shall cooperate with and assist these representatives in the performance of their duties.
- 21.13 The Contractor shall be responsible for the faithful execution of its Contract and the presence or absence of the Owner's or Government's Representative is in no way or manner to be presumed or assumed to relieve in any degree the responsibility or obligation of the Contractor.

- 21.14 The Contractor shall notify the Owner and the Governmental Agency having jurisdiction as to the exact time at which it is proposed to begin Work so the Owner may provide for inspection of all materials, foundations, excavations, equipment, etc., and all or any part of the Work and to the preparation or manufacture of materials to be used whether within the limits of the Work or at any other place.
- 21.15 The Owner or its representatives shall have free access to all parts of the Work and to all places where any part of the materials to be used are procured, manufactured or prepared. The Contractor shall furnish the Owner all information relating to the Work and the material therefor, which may be deemed necessary or pertinent, and with such samples of materials as may be required. The Contractor, at its own expense, shall supply such labor and assistance as may be necessary in the handling of materials for proper inspection or for inspection of any Work done by it.
- 21.16 No verbal instructions given to the Contractor by the Owner, Project Representative or any of their agents shall change or modify the written Contract. Contractors shall make no claims for additional payments or time based upon verbal instructions.

22.00 SUBSURFACE CONDITIONS

- 22.01 It is understood and agreed that the Contractor is familiar with the subsurface conditions that will be encountered and its price bid for the Work includes all of the costs involved for Work in these conditions and it is furthermore agreed that it has taken into consideration, prior to its Bid and acceptance by Owner, all of the subsurface conditions normal or unusual that might be encountered in the location of the Work.
- 22.02 Should the Contractor encounter during the progress of the Work subsurface conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, the attention of the Owner shall be directed to such conditions before the conditions are disturbed. If the Owner finds that the conditions materially differ from those shown on the Drawings or indicated in the Specifications, it shall at once make such changes in the Drawings or Specifications as it may find necessary, and any increase or decrease in cost or extension of time resulting from such changes shall be adjusted in the same manner as provided for changes for Extra Work. The Contractor shall submit breakdowns of all costs in a manner as instructed and approved by the Owner.

23.00 REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS

- 23.01 Bidder shall thoroughly examine the site of the Work and shall include in its Bid the cost of removing all structures and obstructions in the way of the Work.
- 23.02 The Contractor shall remove any existing structures or part of structures, fence, building or other encumbrances or obstructions that interfere in any way with the Work. Compensations for the removal of any structure shall be made only if the item(s) to be removed was/were listed as pay item(s) on the Proposal.
- 23.03 If called for in the Special Conditions, all privately and publicly owned materials and structures removed shall be salvaged without damage and shall be piled neatly and in an acceptable manner upon the premises if it belongs to an abutting property owner, otherwise at accessible points along the improvements. Materials in structures which is the property of the Owner or property of any public body, private body or individual which is fit for use elsewhere, shall remain property of the original Owner. It shall be carefully removed without damage, in sections which may be readily transported; same shall be stored on or beyond the right of way. The Contractor will be held responsible for the care and preservation for a period of ten (10) days following the day the last or final portion of the materials stored at a particular location are placed thereon. When privately owned materials are stored beyond the right of way, the Contractor will be held responsible for such care and preservation for a period of ten (10) days responsibility period for care and preservation of the materials begins. The Contractor must furnish the Owner with evidence satisfactory that the proper owner of the materials has been duly notified by the Contractor that the said owner must assume responsibility for its materials on the date following the Contractor's ten (10) day responsibility.

24.00 INSURANCE

- 24.01 Contractor shall secure and maintain at its expense such insurance that will protect it and the Parish from claims for injuries to persons or damages to property which may arise from or in connection with the performance of Services or Work hereunder by the Contractor, his agents, representatives, employees, and/or subcontractors. The cost of such insurance shall be included in Contractor's bid.
- 24.02 The Contractor shall not commence work until it has obtained all insurance as required for the Parish Project. If the Contractor fails to furnish the Parish with the insurance protection required and begins work without first furnishing Parish with a currently dated certificate of insurance, the Parish has the right to obtain the insurance protection required and deduct the cost of insurance from the first payment due the Contractor. Further deductions are permitted from future payments as are needed to protect the interests of the Parish including, but not limited to, renewals of all policies.
- 24.03 Payment of Premiums: The insurance companies issuing the policy or policies shall have no recourse against the Parish of St. Tammany for payment of any premiums or for assessments under any form of policy.
- 24.04 Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.
- 24.05 Authorization of Insurance Company(ies) and Rating: All insurance companies must be authorized to do business in the State of Louisiana and shall have an A.M. Best rating of no less than A-, Category VII.
- 24.06 Policy coverages and limits must be evidenced by Certificates of Insurance issued by Contractor's carrier to the Parish and shall reflect:

Date of Issue: Certificate must have current date.

Named Insured: The legal name of Contractor under contract with the Parish and its principal place of business shall be shown as the named insured on all Certificates of Liability Insurance.

Name of Certificate Holder: St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434

Project Description: A brief project description, including Project Name, Project Number and/or Contract Number, and Location.

Endorsements and Certificate Reference: All policies must be endorsed to provide, and certificates of insurance must evidence the following:

Waiver of Subrogation: The Contractor's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance. *Policy endorsements required for all coverages.*

Additional Insured: The Parish of St. Tammany shall be named as additional named insured with respect to general liability, marine liability, pollution/environmental liability, automobile liability and excess liability coverages. *Policy endorsements required.*

Hold Harmless: Contractor's liability insurers shall evidence their cognizance of the Hold Harmless and Indemnification in favor of St. Tammany Parish Government by referencing same on the face of the Certificate(s) of Insurance.

Cancellation Notice: Producer shall provide thirty (30) days prior written notice to the Parish of policy cancellation or substantive policy change.

24.07 The types of insurance coverage the Contractor is required to obtain and maintain throughout the duration of the Contract, include, but is not limited to:

1. Commercial General Liability insurance with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence/\$2,000,000 General Aggregate/Products-Completed Operations Per Project. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal Injury;
 - e) Broad form property damage;
 - f) Explosion and collapse.
2. Marine Liability/Protection and Indemnity insurance is required for any and all vessel and/or marine operations in the minimum limits of \$1,000,000 per occurrence/\$2,000,000 per project general aggregate. The coverage shall include, but is not limited to, the basic coverages found in the Commercial General Liability insurance and coverage for third party liability.
3. Contractors' Pollution Liability and Environmental Liability insurance in the minimum amount of \$1,000,000 per occurrence, \$2,000,000 general aggregate and include coverage for full contractual liability and for all such environmental and/or hazardous waste exposures affected by this project.
4. Business Automobile Liability insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any automobiles;
 - b) Owned automobiles;
 - c) Hired automobiles;
 - d) Non-owned automobiles;
 - e) Uninsured motorist.
5. Workers' Compensation/Employers Liability insurance: worker's compensation insurance coverage and limits as statutorily required; Employers' Liability Coverage shall be not less than \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate, except when projects include exposures covered under the United States Longshoremen and Harbor Workers Act, Maritime and/or Jones Act and/or Maritime Employers Liability (MEL) limits shall be not less than \$1,000,000/\$1,000,000/\$1,000,000. *Coverage for owners, officers and/or partners shall be included in the policy and a statement of such shall be made by the insuring producer on the face of the certificate.*
6. Owners Protective Liability (OPL) (formerly Owners and Contractors Protective Liability (OCP) Insurance) shall be furnished by the Contractor naming St. Tammany Parish Government as the Named Insured and shall provide coverage in the minimum amount of \$1,000,000 combined single limit (CSL) each occurrence, \$2,000,000 aggregate. Any project valued in excess of \$3,000,000 shall be set by the Office of Risk Management. The policy and all endorsements shall be addressed to St. Tammany Parish Government, Office of Risk Management, P. O. Box 628, Covington, LA 70434.
7. Builder's Risk Insurance shall be required on buildings, sewage treatment plants and drainage pumping stations, and shall be written on an "all-risk" or equivalent policy form in the amount of the full value of the initial Contract sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising 100% total value for the entire project including foundations. Deductibles should not exceed \$5,000 and Contractor shall be responsible for any and all policy deductibles. This insurance shall cover portions of the work stored off the site, and also portions of the work in transit. In addition, Installation Floater

Insurance, on an “all-risk” form, will be carried on all pumps, motors, machinery and equipment on the site or installed. Both the Builder’s Risk Insurance and the Installation Floater Insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors and shall terminate only when the Project has been accepted. St. Tammany Parish Government, P. O. Box 628, Covington, LA 70434 shall be the first named insured on the Builder’s Risk and Installation Floater Insurance.

8. Professional Liability (errors and omissions) insurance in the sum of at least One Million Dollars (\$1,000,000) per claim with Two Million Dollars (\$2,000,000) annual aggregate.
 9. An umbrella policy or excess policy may be required and/or allowed to meet minimum coverage limits, subject to the review and approval by St. Tammany Parish Government, Office of Risk Management.
- 24.08 All policies of insurance shall meet the requirements of the Parish of St. Tammany prior to the commencing of any work. The Parish of St. Tammany has the right, but not the duty, to approve all insurance policies prior to commencing of any work. If at any time, it becomes known that any of the said policies shall be or becomes unsatisfactory to the Parish of St. Tammany as to form or substance; or if a company issuing any such policy shall be or become unsatisfactory to the Parish of St. Tammany, the Contractor shall promptly obtain a new policy, timely submit same to the Parish of St. Tammany for approval and submit a certificate thereof as provided above. The Parish agrees to not unreasonably withhold approval of any insurance carrier selected by Contractor. In the event that Parish cannot agree or otherwise authorize said carrier, Contractor shall have the option of selecting and submitting new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Contractor and thereafter deduct from Contractor's fee the cost of such insurance.
- 24.09 Upon failure of Contractor to furnish, deliver and/or maintain such insurance as above provided, the contract, at the election of the Parish of St. Tammany, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor to maintain insurance shall not relieve the Contractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligation of the Contractor concerning indemnification.
- 24.10 Contractor shall maintain a current copy of all annual insurance policies and provide same to the Parish of St. Tammany as may be reasonably requested.
- 24.11 It shall be the responsibility of Contractor to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Contractor. Contractor shall further ensure the Parish is named as additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project, and that renewal certificates for any policies expiring prior to the Parish’s final acceptance of the project shall be furnished to St. Tammany Parish Government, Department of Legal, Office of Risk Management, without prompting.

NOTICE:

These are only an indication of the coverages that are generally required. Additional coverages and/or limits may be required for projects identified as having additional risks or exposures. Please note that some requirements listed may not necessarily apply to your specific services. St. Tammany Parish Government reserves the right to remove, replace, make additions to and/or modify any and all of the insurance requirement language upon review of the final scope of services presented to Office of Risk Management prior to execution of a contract for services.

For inquiries regarding insurance requirements, please contact:

**St. Tammany Parish Government
Office of Risk Management
P. O. Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

24.12 Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's Responsibility for payment of damages resulting from its operations under this Contract.

25.00 OWNER'S RIGHT TO OCCUPANCY

25.01 The Owner shall have the right to use, at any time, any and all portions of the Work that have reached such a stage of completion as to permit such occupancy, provided such occupancy does not hamper the Contractor or prevent its efficient completion of the Contract or be construed as constituting an acceptance of any part of the Work.

25.02 The Owner shall have the right to start the construction of houses, structures or any other building concurrent with the Contractor's Work.

26.00 SURVEY HORIZONTAL AND VERTICAL CONTROL

26.01 The Owner shall provide surveys for construction to establish reference points which in its judgment are necessary to enable Contractor to layout and proceed with its Work. Contractor shall be responsible for surveying and laying out the Work and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of the Owner. Contractor shall report to Owner whenever any reference point is lost or destroyed and the Owner shall decide if the reference point shall be replaced by its or the Contractor's forces.

26.02 The Contractor shall establish lines and grades with its own forces in sufficient number and location for the proper execution of the Work.

26.03 If the Contractor, during the construction, damages the established property corners and/or other markers and thereafter requests the Owner to re-stake same in order to complete the project, this expense will be borne solely by the Contractor.

27.00 TERMINATION OF THE CONTRACT, OWNER'S AND CONTRACTORS RIGHT TO STOP WORK.

27.01 If the Contractor should be adjudged bankrupt (voluntarily or involuntarily) or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should persistently or repeatedly refuse or should fail (except in cases for which extension of time is provided) to supply enough properly skilled workmen or proper materials, or if it should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the Contract, then the Owner, upon the certificate of the Owner that, in its unilateral

discretion and judgment, believes sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor ten (10) calendar days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the Work by whatever method the Owner may deem expedient.

- 27.02 Failure of the Contractor to start the Work within the time limit specified herein or substantial evidence that the progress being made by the Contractor is sufficient to complete the Work within the specified time shall be grounds for termination of the Contract by the Owner.
- 27.03 Before the Contract is terminated, the Contractor and its surety will first be notified in writing by the Owner of the conditions which make termination of the Contract imminent. When after ten (10) calendar days' notice is given and if satisfactory effort has not been made by the Contractor or its surety to correct the conditions, the Owner may declare, in its exclusive discretion, that the Contract is terminated and so notify the Contractor and its surety accordingly.
- 27.04 Upon receipt of notice from the Owner that the Contract has been terminated, the Contractor shall immediately discontinue all operations. The Owner may then proceed with the Work in any lawful manner that it may elect until Work is finally completed.
- 27.05 The exclusive right is reserved to the Owner to take possession of any machinery, implements, tools or materials of any description that shall be found upon the Work, to account for said equipment and materials, and to use same to complete the Project. When the Work is finally completed, the total cost of same will be computed. If the total cost is less than the Contract Price, the difference will not be paid to the Contractor or its surety.
- 27.06 In case of termination, all expenses incident to ascertaining and collecting losses under the Bond, including legal services, shall be assessed against the Bond.
- 27.07 If the Work should be stopped under any order of any court or public authority for period of sixty (60) calendar days, through no act or fault of the Contractor or anyone employed by it, or if the Owner shall fail to pay the Contractor within a reasonable time any sum certified by the Owner, then the Contractor may, upon ten (10) calendar days written notice to the Owner, stop Work or terminate this Contract and recover from the Owner payment for all Work properly and professionally executed in a workmanlike manner. This loss specifically includes actual cost of materials and equipment, together with all wages inclusive of all federal, state, and local tax obligations. This loss specifically includes reimbursement of all insurances on a pro-rata basis from the date of termination to date of policy period. This loss excludes and specifically does not include recovery by the Contractor for lost profit, indirect & direct expenses, overhead, and the like.

28.00 PAYMENTS TO THE CONTRACTOR

- 28.01 Monthly certificates for partial payment, in a form approved by the Owner, shall be transmitted to the Owner upon receipt from the Contractor and acceptance by the Owner. In accordance with LSA-R.S. 38:2248(A), when the Contract Price is less than five hundred thousand dollars, these certificates shall be equal to ninety percent (90%) of both the Work performed and materials stored at the site; and when the Contract Price is five hundred thousand dollars or more, these certificates shall be equal to ninety-five percent (95%) of both the Work performed and materials stored at the site. Partial payment certificates shall include only Work, materials and equipment that are included in official Work Order and which meet the requirements of plans, Specifications and Contract Documents. These monthly estimates shall show the amount of the original estimate for each item, the amount due on each item, the gross total, the retained percentage, the amount previously paid and the net amount of payment due.
- 28.02 After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is less than five hundred thousand dollars, the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety percent (90%) of the Contract Price. After final completion and acceptance by the Owner of the entire Work, and when the Contract Price is five hundred thousand dollars or more,

the Owner shall issue to the Contractor Certificate of Payment in sum sufficient to increase total payments to ninety-five percent (95%) of the Contract Price.

- 28.03 When the Contract Price is less than five hundred thousand dollars, the final payment certificate of the remaining ten percent (10%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. When the Contract Price is five hundred thousand dollars or more, the final payment certificate of the remaining five percent (5%) of the Contract Price, minus any deduction for deficient or Defective Work or other applicable deductions, will be issued by the Owner forty-five (45) days after filing acceptance in the Mortgage Office of the Parish and a Clear Liens and Privilege Certificate has been secured. Before issuance of the final payment certificate, the Contractor shall deposit with the Owner a certificate from the Clerk of Court and Ex-Officio Recorder of Mortgages from the Parish in which the Work is performed to the effect that no liens have been registered against Contract Work.
- 28.04 When, in the opinion of the Contractor, the Work provided for and contemplated by the Contract Documents has been substantially completed, the Contractor shall notify the Owner in writing that the Work is substantially complete and request a final inspection. The Owner shall proceed to perform such final inspection accompanied by the Contractor. Any and all Work found by this inspection to be Defective or otherwise not in accordance with the plans and Specifications shall be corrected to the entire satisfaction of the Owner and at the sole expense of the Contractor. If the Contract is found to be incomplete in any of its details, the Contractor shall at once remedy such defects, and payments shall be withheld and formal acceptance delayed until such Work has been satisfactorily completed.
- 28.05 If payment is requested on the basis of materials and equipment not incorporated in the Work, but delivered and suitably stored and protected from damage and theft at the site, the Request for Payment shall also be accompanied by such data, satisfactory to the Owner, as will establish Owner's title to the material and equipment and protect its interest therein, including applicable insurance.
- 28.06 Each subsequent Request for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of Contractor's obligations reflected in prior Request for Payment.
- 28.07 Each subsequent request for payment shall include an affidavit by Contractor that Contractor, all subcontractors, agents, material suppliers and all other persons supplying material to the project upon which State of Louisiana and/or St. Tammany sales taxes are lawfully due have paid these taxes and that all supplies and materials purchased for this project and for which Contractor has been paid have had all lawfully due State and/or St. Tammany sales taxes paid.
- 28.08 The Bid Proposal, unless otherwise modified in writing, and the Contract constitute the complete Project. The Contract Prices constitute the total compensation payable to Contractor and the cost of all of the Work and materials, taxes, permits and incidentals must be included into the Bid submitted by the Contractor and included into those items listed on the Proposal.
- 28.09 Any additional supporting data required by the Owner in order to substantiate Contractor's request for payment shall be furnished by Contractor at no cost to the Owner.
- 28.10 Owner may withhold from payment to Contractor as may be necessary to protect itself from loss on account of:
- (1) Defective and/or inferior work;
 - (2) Damage to the property of Owner or others caused by Contractor;
 - (3) Failure by Contractor to make payments properly to sub-contractors or to pay for labor, materials or equipment used on this project;
 - (4) Failure by Contractor to pay taxes due on materials used on this project;
 - (5) Damage by Contractor to another Contractor;
 - (6) Insolvency;
 - (7) Bankruptcy, voluntary or involuntary;
 - (8) Revocation of corporate status;

- (9) Failure to follow corporate formalities;
- (10) Unprofessional activities;
- (11) Unworkmanlike performance;
- (12) Fraud and/or misrepresentation of any kind.

29.00 ACCEPTANCE AND FINAL PAYMENT(S)

- 29.01 Upon receipt of written notice from Contractor that the work is substantially complete and usable by Owner or the Public in suitable manner, the Owner and the Contractor shall jointly inspect the work.
- 29.02 If the Owner by inspection determines that the work is not substantially complete in a suitable manner for use by the Owner or the Public, then the Owner shall so notify the Contractor in writing stating such reason. All reasons need not be disclosed unless actually known. The Owner is afforded an opportunity to amend said notices as are reasonably possible.
- 29.03 If the Owner by its inspection determines that the work is substantially complete, it shall prepare a list of all items not satisfactorily completed and shall notify the Contractor and Owner in writing that the work is substantially complete and subject to satisfactory resolution of those items on the list (punch list). Punch lists may be amended from time to time by Owner in the event that additional deficiencies are discovered. In accordance with LSA-R.S. 38:2248(B), any punch list generated during a construction project shall include the cost estimates for the particular items of work the design professional has developed based on the mobilization, labor, material, and equipment costs of correcting each punch list item. The design professional shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The contract agency shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon the expiration of the forty-five (45) day lien period. The provisions of this Section shall not be subject to waiver.
- 29.04 Upon determination of substantial completeness with the punch list, the Contract Time is interrupted and the Contractor is given a reasonable time not to exceed thirty (30) consecutive calendar days to effect final completion by correcting or completing all of those items listed on the punch list. If the items on the punch list are not completed in a satisfactory manner within the thirty day period, then the Contract Time will begin to run again and will include for purposes of determining liquidated damages the thirty day period the grace period being withdrawn.
- 29.05 Upon receipt by Owner of written determination that all work embraced by the contract has been completed in a satisfactory manner, the Owner shall provide a written acceptance to Contractor who shall record Owner's written acceptance with the recorder of Mortgages, St. Tammany Parish. The Contractor shall properly prepare, submit and pay for all costs associated with said Acceptance. The Contractor is also responsible for preparation, re-submission and payment of any and all updated certificates.
- 29.06 Retainage monies, minus those funds deducted in accordance to the requirements of this agreement including but not limited to Paragraph 28.10, shall be due Contractor not earlier than forty-six (46) calendar days after recordation of certificate of Owner's acceptance provided the following:
- (1) Contractor shall prepare, secure, pay for and submit clear lien and privilege certificate, signed and sealed by Clerk of Court or Recorder of Mortgages, Parish of St. Tammany and dated at least forty-six (46) days after recordation of certificate of acceptance;
 - (2) Ensure that the official representative of the Owner has accepted as per LSA-R.S. 38:2241.1, *et seq.* and that all following sub-sections have been properly satisfied as per law;
 - (3) Ensure that all signatures are affixed and that there exists the requisite authority for all signatures;
 - (4) Ensure accurate and proper legal descriptions;

- (5) Properly identify all parties and/or signatories;
- (6) Properly identify all mailing addresses;
- (7) Correctly set for the amount of the contract, together with all change orders;
- (8) Set out a brief description of the work performed;
- (9) Reference to any previously recorded contract, lien or judgment inscription that may affect the property;
- (10) Certification that substantial completion has occurred, together with any applicable date(s);
- (11) Certification that no party is in default and/or that the project has been abandoned.

29.07 After securing the clear lien and privilege certificate the Contractor shall prepare its final application for payment and submit to Owner. The Owner shall approve application for payment, or state its objections in writing and forward to Contractor for resolution.

30.00 NOTICE AND SERVICE THEREOF

30.01 Any Notice to Contractor from the Owner relative to any part of this Contract shall be in writing and shall be considered delivered and the service thereof completed when said notice is posted; by certified mail, return receipt requested to the said Contractor at its last given address, or delivered in person to said Contractor or its authorized representative on the Work.

31.00 INTENTION OF THESE GENERAL CONDITIONS

31.01 These General Conditions shall be applicable to all contracts entered into by and between the Owner and Contractors, except as may be altered or amended with the consent of the Owner, and/or provided for in the Special Conditions of each contract. Contractor shall be presumed to have full knowledge of these General Conditions which shall be applicable to all contracts containing these General Conditions, whether Contractor has obtained a copy thereof or not.

32.00 SEVERABILITY

32.01 If any one or more or part of any of the provisions contained herein and/or in the Specifications and Contract for the Work shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement or attachment, but it shall be construed as if such invalid, illegal, or unenforceable provision or part of a provision had never been contained herein.

32.02 **CHANGING THESE CONDITIONS:** Owner reserves the right to change or modify these General Conditions as it deems best, or as required by law. The General Conditions may also be modified for a particular project by the use of Special Conditions prior to the issuance of the Advertisement for Bid. However, once an advertisement for bid is made for any specific project, any changes to the General Conditions as they affect that specific project must be made in writing and issued via an addendum in accordance with State Law.

33.00 LAW OF THE STATE OF LOUISIANA

33.01 The Contract Documents shall be governed by the Law of the State of Louisiana.

33.02 The Contractor agrees to pay reasonable attorney's fees and other reasonable attendant costs, in the event that it becomes necessary for the Owner to employ an attorney in order to enforce compliance with or any remedy relating to any covenants, obligations, or

conditions imposed upon the Contractor by this Agreement. Attorney fees shall be based upon the prevailing hourly rate of attorney rates in the private sector. In no case shall the hourly rate be less than \$175.00 per hour. All attorney fees collected shall be paid the operating budget of the Office of the Parish President.

- 33.03 The jurisdiction and venue provisions shall apply to all contractors, sureties, and subcontractors. The 22nd Judicial District for the Parish of St. Tammany shall be the court of exclusive jurisdiction and venue for any dispute arising from these General Conditions and/or any contract executed in conjunction with these General Conditions. All parties specifically waive any rights they have or may have for removal of any disputes to Federal Court, or transfers to different State District Court.
- 33.04 Contractor warrants that it has and/or had received a copy of these General Conditions at all times material hereto; Contractor further agrees that it has read and fully and completely understands each and every condition herein.
- 33.05 The property description will be more fully set out by an attached exhibit.
- 33.06 The Contractor warrants that it has the requisite authority to sign and enter this agreement.
- 33.07 It is specifically understood and agreed that in the event Contractor seeks contribution from the Parish or pursues its legal remedies for any alleged breach of this agreement by the Parish, then the following list of damages SHALL NOT BE RECOVERABLE BY CONTRACTOR. This list includes, but is not limited to:

1. indirect costs and/or expenses;
2. direct costs and/or expenses;
3. time-related costs and/or expenses;
4. award of extra days;
5. costs of salaries or other compensation of Contractor's personnel at Contractor's principal office and branch offices;
6. expenses of Contractor's principal, branch and/or field offices;
7. any part of Contractor's capital expenses, including any interest on Contractor's capital employed for the work;
8. any other charges related to change orders;
9. overhead and general expenses of any kind or the cost of any item not specifically and expressly included in Cost of Work.

33.08 DEFAULT AND WAIVERS

It is understood that time is of the essence. It is specifically understood between the parties that Contractor waives any and all notice to be placed in default by the Owner. This subsection shall supersede and prime any other subsection herein above that is in conflict. The Owner specifically reserves its right and specifically does not waive the requirement to be placed in default by the Contractor as per law.

- 33.09 St. Tammany Parish Government contracts to be awarded are dependent on the available funding and/or approval by members designated and/or acknowledged by St. Tammany Parish Government. At any time St. Tammany Parish Government reserves the right to cancel the award of a contract if either or both of these factors is deficient.
- 33.10 It is the Parish's policy to provide a method to protest exclusion from a competition or from the award of a contract, or to challenge an alleged solicitation irregularity. It is always better to seek a resolution within the Parish system before resorting to outside agencies and/or litigation to resolve differences. All protests must be made in writing, and shall be concise and logically presented to facilitate review by the Parish. The written protest shall include:
1. The protester's name, address, and fax and telephone numbers and the solicitation, bid, or contract number;
 2. A detailed statement of its legal and factual grounds, including a description of the resulting prejudice to the protester;
 3. Copies of relevant documents;

4. All information establishing that the protester is an interested party and that the protest is timely; and
5. A request for a ruling by the agency; and a statement of the form of relief requested.

The protest shall be addressed to Director of Procurement, St. Tammany Parish Government, P.O. Box 628, Covington, LA 70434.

The protest review shall be conducted by the Parish Procurement Department.

Only protests from interested parties will be allowed. Protests based on alleged solicitation improprieties that are apparent before bid opening, or the time set for receipt of initial proposals must be filed with and received by the Procurement Department BEFORE those deadlines.

Any other protest shall be filed no later than ten (10) calendar days after the basis of the protest is known, or should have been known (whichever is earlier).

The Parish will use its best efforts to resolve the protest within thirty (30) days of the date that it is received by the Parish. The written response will be sent to the protestor via mail and, fax, if a fax number has been provided by the protestor. The protester can request additional methods of notification.

Last day to submit questions and/or verification on comparable products will be no later than 2:00 pm CST, seven (7) working days prior to the opening date of the bid/proposal due date. Further any questions or inquires must be submitted via fax to 985-898-5227, or via email to Procurement@stpgov.org. Any questions or inquires received after the required deadline to submit questions or inquires will not be answered.

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____ INCORPORATED, DULY NOTICED AND HELD ON _____, A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

RESOLVED THAT _____, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE PARISH OF ST. TAMMANY OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BEEN REVOKED OR RESCINDED.

SECRETARY-TREASURER

DATE

Certificate of Insurance Instructions

The below information is intended to guide Contractors on what information is needed to be listed on the Certificate of Insurance. All Insurance limit requirements can be found in Section 06.

- **Certificate Holder** – STPG must be listed as the certificate holder, and it must include our address of: P.O. Box 628, Covington, LA 70434
 - Reason: the certificate holder is where cancellations of coverage, or updated certificates are mailed. If a vendor terminates a policy, we will be notified.
- **Additional Insured** – We must be named as an additional insured so that if there is a lawsuit against the vendor for a project, their coverage will cover STPG as well if we are named in the lawsuit.
 - We must be named in the Description of Operations box – reason: there could be other additional insureds, and we want to have no doubt that we are one of the additional insureds.
 - We must be named as additional insured on the following coverages: General liability, Auto Liability, Umbrella/Excess Liability, Environmental/Pollution Liability.
 - Professional Liability policies do not allow for an additional insured by most carriers.
- **Project Name & Contract #** - We need this listed in the Description of Operations, again so that if there is a lawsuit, we have proof that coverage was active for that project.
- **Waiver of Subrogation** – This can either be listed in the Description of Operations or checked off in the appropriate columns.

From the Insurance Requirement form:

Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance.

- **Owners Protective Liability (OPL) or (OCP)** – Certificate of Insurance for OCP names St. Tammany Parish Government as the Insured and the Certificate Holder.
- Sample of Certificate of Insurance (COI) can be found on page 2.
- Please refer to this section in the package labeled “Insurance Requirements” for limits required for this project

Any questions regarding insurance requirements please contact the Risk Department at 985-898-5226 or email riskman@stpgov.org



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:		
	PHONE (A/C, No. Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED	INSURER A :		
	INSURER B :		
	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY						EACH OCCURRENCE \$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	<input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR						MED EXP (Any one person) \$
							PERSONAL & ADV INJURY \$
							GENERAL AGGREGATE \$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG \$
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						\$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS	<input type="checkbox"/>	<input type="checkbox"/>				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS	<input type="checkbox"/>	<input type="checkbox"/>				PROPERTY DAMAGE (Per accident) \$
		<input type="checkbox"/>	<input type="checkbox"/>				\$
	UMBRELLA LIAB						EACH OCCURRENCE \$
	<input type="checkbox"/> EXCESS LIAB						AGGREGATE \$
	<input type="checkbox"/> OCCUR						\$
	<input type="checkbox"/> CLAIMS-MADE						
	DED						
	RETENTION \$						
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						OTHER
	If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y / <input type="checkbox"/> N	<input type="checkbox"/> N / <input type="checkbox"/> A				E.L. EACH ACCIDENT \$
							E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Project Name:
Contract #:

(Name St. Tammany Parish Government as an additional insured).

CERTIFICATE HOLDER**CANCELLATION**St. Tammany Parish Government
P.O. Box 628
Covington, LA 70434

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Bond No.: _____

**CONTRACT AGREEMENT
BETWEEN PARISH AND CONTRACTOR**

BY: ST. TAMMANY PARISH GOVERNMENT

**UNITED STATES OF
AMERICA**

WITH:

**STATE OF LOUISIANA
ST. TAMMANY PARISH**

This agreement is entered into this _____ day of _____, 20____, by and between: «txtREQCompanyName», hereinafter called the "Contractor", whose business address is «txtREQAddress», «txtREQCity», «txtREQState» «txtREQZip» and the St. Tammany Parish Government, hereinafter called the "Parish", whose business address is P.O. Box 628, Covington, LA 70434 (collectively, the "Parties") for «txtPROJECTNAME» project. Witnessed that the Contractor and the Parish, in consideration of premises and the mutual covenants, consideration and agreement herein contained, agree as follows:

1. SCOPE OF SERVICES

The Contractor shall furnish all labor and materials and perform all of the work required to build, construct and/or complete in a thorough and workmanlike manner:

«txtScopeSummary»

2. CONSTRUCTION DOCUMENTS

It is recognized by the Parties herein that said Construction Documents, including by way of example and not of limitation, the plans and Specifications, General Conditions, Supplementary General Conditions, any addenda thereto, the drawings (if any), and the bid, quote or other procurement documents impose duties and obligations upon the Parties herein, and said Parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Construction Documents are incorporated herein by reference with the same force and effect as though said Construction Documents were herein set out in full. Copies of the aforementioned Construction Documents are in the possession of both the Contractor and the Parish for reference.

3. TIME FOR COMPLETION

The work shall be commenced on a date to be specified in a written order of the Parish and shall be completed within «intCompletionTime» calendar days from and after said date.

4. COMPENSATION TO BE PAID TO THE CONTRACTOR

The Parish will pay and the Contractor will accept in full consideration for the performance of the Contract the sum of «curREQGrandTotal» dollars.

5. PERFORMANCE AND PAYMENT BOND

To these presents personally came and intervened _____,
(Name of Attorney in Fact)
herein acting for _____, a corporation organized
(Surety)
and existing under the laws of the State of _____, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this Contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his company, as surety for the said Contractor, unto the said Parish, up to the sum of «curREQGrandTotal». The condition of this performance and payment bond

shall be that should the Contractor herein not perform the Contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Parish from all costs and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have fulfilled obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example, workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said surety agrees and is bound to so perform the Contract and make said payment(s).

Contractor and Parish specifically agree to and recognize (1) the statutory employer relationship existing between the Parish and any employees performing work under this Contract as employees of the Contractor or employees of the "Sub-Contractor", and (2) that the work performed by the employees of the Contractor and the employees of the "Sub-Contractor" is part of the Parish's business, occupation or trade and is essential to the ability of the Parish to generate their products or services, all of which is in accordance with LSA-R.S. 23:1061, and as may be amended.

6. LIABILITY AND INDEMNIFICATION

A. Duty to Defend

Upon notice of any claim, demand, suit, or cause of action against the Parish, alleged to arise out of or be related to this Contract, Contractor shall investigate, handle, respond to, provide defense for, and defend at its sole expense, even if the claim, demand, suit, or cause of action is groundless, false, or fraudulent. The Parish may, but is not required to, consult with or assist the Contractor, but this assistance shall not affect the Contractor's obligations, duties, and responsibilities under this section. Contractor shall obtain the Parish's written consent before entering into any settlement or dismissal.

B. Contractor Liability

Contractor shall be liable without limitation to the Parish for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its owners, agents, employees, partners or subcontractors.

C. Force Majeure

It is understood and agreed that neither party can foresee the exigencies beyond the control of each party which arise by reason of an Act of God or force majeure; therefore, neither party shall be liable for any delay or failure in performance beyond its control resulting from an Act of God or force majeure. The Parish shall determine whether a delay or failure results from an Act of God or force majeure based on its review of all facts and circumstances. The parties shall use reasonable efforts, including but not limited to, use of continuation of operations plans (COOP), business continuity plans, and disaster recovery plans, to eliminate or minimize the effect of such events upon the performance of their respective duties under this Contract.

D. Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, for any and all injury, death, damage, loss, destruction, damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities of every name and description, which may occur or in any way arise out of any act or omission of Contractor, its

owners, agents, employees, partners or subcontractors. The Contractor shall not indemnify for the portion of any loss or damage arising from the Parish's act or failure to act.

E. Intellectual Property Indemnification

Contractor shall fully indemnify and hold harmless the Parish, without limitation, from and against damages, costs, fines, penalties, judgments, forfeitures, assessments, expenses (including attorney fees), obligations, and other liabilities in any action for infringement of any intellectual property right, including but not limited to, trademark, trade-secret, copyright, and patent rights.

When a dispute or claim arises relative to a real or anticipated infringement, the Contractor, at its sole expense, shall submit information and documentation, including formal patent attorney opinions, as required by the Parish.

If the use of the product, material, service, or any component thereof is enjoined for any reason or if the Contractor believes that it may be enjoined, Contractor, while ensuring appropriate migration and implementation, data integrity, and

minimal delays of performance, shall at its sole expense and in the following order of precedence: (i) obtain for the Parish the right to continue using such product, material, service, or component thereof; (ii) modify the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; (iii) replace the product, material, service, or component thereof so that it becomes a non-infringing product, material, or service of at least equal quality and performance; or, (iv) provide the Parish monetary compensation for all payments made under the Contract related to the infringing product, material, service, or component, plus for all costs incurred to procure and implement a non-infringing product, material, or service of at least equal quality and performance. Until this obligation has been satisfied, the Contractor remains in default.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon the Parish's unauthorized: i) modification or alteration of the product, material or service; ii) use of the product, material or service in combination with other products not furnished by Contractor; or, iii) use of the

product, material or service in other than the specified operating conditions and environment.

7. MODIFICATION OF CONTRACT TERMS

Provided that any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Parish of any extensions of time for the performance of the Contract, or any other forbearance on the part of either the Parish or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

8. TERMINATION, CANCELLATION, AND SUSPENSION

A. Termination

The term of this Contract shall be binding upon the Parties hereto until the work has been completed by the Provider and accepted by the Parish, and all payments required to be made to the Provider have been made. But, this Contract may be terminated upon thirty (30) days written notice under any or all of the following conditions:

- 1) By mutual agreement and consent of the Parties hereto;
- 2) By the Parish as a consequence of the failure of the Provider to comply with the terms, progress, or quality of the work in a satisfactory manner, proper allowances being made for circumstances beyond the control of the Provider;
- 3) By either party upon failure of the other party to fulfill its obligations as set forth in this Contract;
- 4) By the Parish with less than thirty (30) days' notice due to budgetary reductions and changes in funding priorities by the Parish;
- 5) In the event of the abandonment of the project by the Parish.

Upon termination, the Provider shall be paid for actual work performed prior to the Notice of Termination, either based upon the established hourly rate for services actually performed, or on a pro-rata share of the basic fee based upon the phase or percentage of work actually completed, depending on the type of compensation previously established under this Contract.

Upon Termination, the Provider shall deliver to the Parish all original documents, notes, drawings, tracings, computer files, and other files pertaining to this Contract or the Work performed, except for the Provider's personal and administrative files.

B. Cancellation

The continuation of this Contract is contingent upon the appropriation of funds to fulfill the requirements of the Contract by the Parish. If the Parish fails to appropriate sufficient monies to provide for the continuation of this or any other Contract, or if such appropriation is reduced by the veto of Parish President by any means provided in the appropriations Ordinance to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the Contract, the Contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated. It is understood and agreed that paragraph (9)(C) below may preempt this paragraph, all at the exclusive and unilateral option of the Parish.

C. Suspension

Should the Parish desire to suspend the work, but not definitely terminate the Contract, the Parish shall supply the Provider with thirty (30) days' notice. The Parish will also

supply Provider thirty (30) days' notice that the work is to be reinstated and resumed in full force. Provider shall receive no additional compensation during the suspension period. The Parties may revisit the terms of this Contract during the suspension period. The suspension shall not exceed six (6) months, unless mutually agreed upon between the Parties.

- D.** Failure to complete or deliver within the time specified or to provide the services as specified in the bid or response will constitute a default and may cause cancellation of the contract. Where the Parish has determined the contractor to be in default. The Parish reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with the cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid or response from the defaulting contractor will be considered.
- E.** In the event of a default and/or breach of this agreement and this matter is forwarded to legal counsel, then the prevailing party may be entitled to collect a reasonable attorney fees and all costs associated therewith whether or not litigation is initiated. Attorney fees shall be based upon the current, reasonable prevailing rate for counsel in the private

sector. The Parties agree to be responsible for such attorney fees, together for all with legal interest from date of agreement breach, plus all costs of collection.

- F.** Termination or cancellation of this agreement will not affect any rights or duties arising under any term or condition herein.
- G.** As to the filing of voluntary or involuntary bankruptcy by Provider, Provider agrees that if any execution or legal process is levied upon its interest in this Contract, or if any liens or privileges are filed against its interest, or if a petition in bankruptcy is filed against it, or if it is adjudicated bankrupt in involuntary proceedings, or if it should breach this Contract in any material respect, the Parish shall have the right, at its unilateral option, to immediately cancel and terminate this Contract. In the event that Provider is placed in any chapter of bankruptcy, voluntarily or involuntarily, or otherwise triggers any provision of the preceding sentence herein, it is understood and agreed that all materials, goods and/or services provided shall be and remain the property of the Parish. All rights of Provider as to goods, wares, products, services, materials and the like supplied to Parish shall be deemed forfeited.

9. RECORDATION OF CONTRACT

Contractor authorizes Parish to deduct from any payment due herein costs and service fees for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law.

10. AUTHORITY TO ENTER CONTRACT

The undersigned representative of Contractor warrants and personally guarantees that he/she has the requisite and necessary authority to enter and sign this Contract on behalf of the corporate entity, partnership, etc. The undersigned Parties warrant and represent that they each have the respective authority and permission to enter this Contract. In the event that Contractor is a member of a corporation, partnership, L.L.C., L.L.P., or any other juridical entity, the Parish requires, as an additional provision, that Contractor supply a certified copy of a corporate resolution authorizing the undersigned to enter and sign this Contract. Another option to fulfill this additional provision he/she can supply Louisiana Secretary of State Business filings confirming that he/she is a managing member of a

Bond No.: _____

corporation, partnership, L.L.C., L.L.P., or any other juridical entity which authorizes the undersigned to enter and sign this Contract.

In Witness thereof, the Parties hereto on the day and year first above written have executed this Contract in **One (1)** counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

WITNESSES:

CONTRACTOR:

Signature

Signature

Print Name

Print Name

Signature

Title

Print Name

Date

Bond No.: _____

WITNESSES:

**ST. TAMMANY PARISH
GOVERNMENT:**

Signature

Michael B. Cooper
Parish President

Print Name

Date

Signature

Print Name

APPROVED BY:

Assistant District Attorney- Civil (Surety)
Division

Signature

Date

Print Name

Section 12

TECHNICAL SPECIFICATIONS

Part I and Part II

TECHNICAL SPECIFICATIONS - PART I

Louisiana Standard Specifications for Roads and Bridges* (2016 Edition) handbook are hereby incorporated as the Technical Specifications - Part I of the Standard Specifications for this project.

Copies of the Louisiana Standard Specifications for Road and Bridges (2016 Edition) may be obtained by mail from the following address:

Louisiana Department of Transportation & Development
General Files Unit
Post Office Box 94245
Baton Rouge, Louisiana 70804-9245

TECHNICAL SPECIFICATIONS - PART II

Relation of Louisiana Standard Specifications for Roads and Bridges to Mandeville Bypass: LA 1088
To US 190.

(1) Substitution of Names:

The words "St. Tammany Parish Government, Parish Engineer, or Owner," shall be substituted wherever reference (direct or indirect) is made to the "Louisiana Department of Transportation and Development or its agents."

SPECIAL PROVISIONS

SPECIAL PROVISIONS

- 1.0 These Special Provisions amend or supplement the Louisiana Standard Specifications for Roads and Bridges, State of Louisiana Department of Transportation and Development, 2016 Edition. All provisions which are not so amended or supplemented remain in full force and effect.

- 2.0 In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall bid the most stringent requirements.

No provisions under this section shall be construed as relieving the CONTRACTOR from his contractual obligations in the performance and satisfactory completion of all Work as specified and contracted for in said contract documents, except as may be duly authorized in writing by the OWNER.

- 3.0 Any wording in the above noted Louisiana Standard Specifications for Roads and Bridges, 2016 Edition (LSSRB) as may refer to the Governor, State, State Highway Department, Department, Director, Owner, or similar references to other personnel or to sections, departments, and agencies included thereof shall be deemed to read “St. Tammany Parish Government” and its authorized personnel, agents, departments and sections.

- 4.0 Bidders must satisfy themselves of the accuracy of the estimated quantities in the bid schedule by examination of the site and review of the drawings and specifications including addenda.

- 5.0 The Bidder is required to examine carefully the site of the proposed work, Proposal, and Contract Documents. He shall satisfy himself as to the character, quality and quantities of Work to be performed, materials to be furnished, and as to the requirements of these specifications. The submissions of a Total Base Bid shall be evidence that the Bidder has made such examinations.

TECHNICAL SPECIAL PROVISIONS

ST. TAMMANY PARISH DEPARTMENT OF PUBLIC WORKS

PLANS OF PROPOSED PARISH PROJECT

PARISH PROJECT NO. 2014EN0001

MANDEVILLE BYPASS: LA 1088 TO US 190

The following technical special provisions have been prepared by or under the direct supervision of the licensed Professional Engineer whose seal/stamp appears below.

Item TS-807-00001 – PEDESTRIAN BRIDGE

René A. Chopin, III, P.E., LA Lic. No. 25174

Name: 
Discipline: Civil Engineer

Date: 10-10-24



ST. TAMMANY PARISH DEPARTMENT OF PUBLIC WORKS

PLANS OF PROPOSED PARISH PROJECT

PARISH PROJECT NO. 2014EN0001

MANDEVILLE BYPASS: LA 1088 TO US 190

The following technical special provisions have been prepared by or under the direct supervision of the licensed Professional Engineer whose seal/stamp appears below.

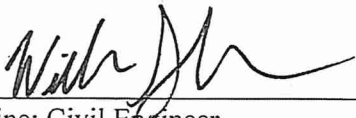
Item TS-300-00060 – TRIAXIAL GEOGRID

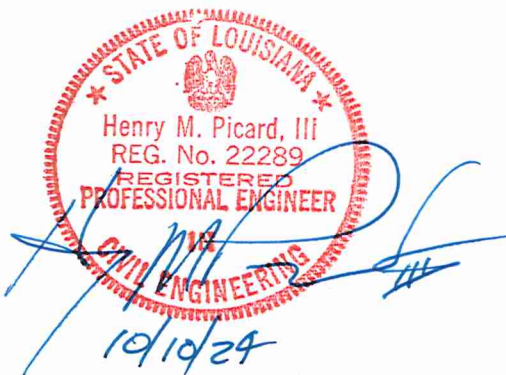
Item TS-736-00017 – SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED

Henry M. Picard, P.E., LA Lic. No. 22289

Name:  Date: 10-10-24
Discipline: Civil Engineer

William C. Shuckrow, P.E., LA Lic. No. 42746

Name:  Date: 10-10-24
Discipline: Civil Engineer



TS-807-00001 PEDESTRIAN BRIDGE

1.0 GENERAL

1.1 Scope

These specifications are for fully engineered half through truss (no overhead bracing) bridge of steel construction and shall be regarded as minimum standards for design and fabrication. The work included under this item shall consist of design, fabricating, finishing and transporting the steel truss bridge superstructure including bearings. These specifications are based on products designed and manufactured by Contech Engineered Solutions LLC.

1.2 Definitions

- *Owner*: Entity who ultimately will own the bridge.
- *Engineer*: Engineering Entity or Firm who will be representing the Owner.
- *Contractor*: Entity who will be installing, and/or purchasing, the bridge.
- *Foundation Engineer*: Engineering Entity or Firm who will be designing and detailing the foundation system.
- *Geotechnical Engineer*: Engineering Entity or Firm who will be responsible for providing the Geotechnical information necessary to design the foundation system.
- *Bridge Manufacturer*: Firm who will be designing and supplying the bridge in accordance with these Special Provisions.

1.3 Qualified Bridge Manufacturer

Each Contractor is required to identify their intended supplier as part of the bid submittal. Qualified Bridge Manufacturers must have at least 5 years of experience fabricating these types of structures and shall have an up to date quality certification by AISC per Section 14.1 of these specifications. All suppliers shall fabricate their product utilizing a modern fabrication facility owned and operated by the Bridge Manufacturer that includes the use of CNC beam drilling machines, no brokers are allowed.

Pre-Approved Bridge Manufacturer:

Contech Engineered Solutions LLC
1-800-338-1122
E-mail: info@conteches.com

Bridge Manufacturers, other than those listed above, may be used provided the Engineer receives a written request at least 10 days prior to the bid. The written request shall accompany the following information:

- Bridge Manufacturer's Product Literature,
- Name and resume of Bridge Manufacturer's design professional who will be signing and sealing the engineering submittals,
- Copy of current AISC certification,
- Representative copies of detailed drawings, field procedures, calculations, quality control manual, welder's certifications, proof of in-house C.W.I.,
- Listing of projects including owner, location, size, year of fabrication, contact person,

- Certification by the Bridge Manufacturer's Design Professional that the bridge proposed will be in accordance with all project development done up to the date of these specifications.

The above will be evaluated by the Engineer for accuracy and ability to provide the bridge in accordance with these specifications. Bridge Manufacturers other than those listed above may only be used if the Engineer provides written approval via addendum 5 days prior to the bid. The Engineer's ruling shall be final.

1.4 Bridge Manufacturer's Design Professional and Submittals

The Bridge Manufacturer shall have as a direct employee, an engineer who is experienced in bridge design to be in responsible charge of all engineering related task and design. The engineer shall have a minimum of 10 years of experience in bridge design and be a currently licensed civil or structural engineer in the State of Louisiana and shall be the engineer who will seal and sign the plans.

Engineering drawings, 11x17 format, shall be prepared and submitted to the Contractor or Owner for their review after receipt of the order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the bridge being fabricated. All relative design information such as member size, ASTM/AASHTO material specification, dimensions necessary to fabricate and required welding shall be clearly shown on the drawings. Drawings shall have referenced details and sheet numbers. All drawings shall be stamped, signed and dated by the Bridge Manufacturer's Design Professional.

Structural calculations for the design of the bridge superstructure shall be prepared by the Bridge Manufacturer and submitted for review after receipt of the order. Calculations shall include complete design, analysis and code checks for the controlling members, connectivity and support conditions, truss stability checks, deck design, deflection checks, bearings and all splices.

2.0 APPLICABLE CODES AND STANDARDS

2.1 Governing Specifications

Bridge shall be designed in compliance with the AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2009 (*AASHTO Ped*). Calculations shall be in accordance with this document, and formulas shall reference the appropriate sections.

2.2 Other Reference Codes, Specifications and Standards

- AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020 (*AASHTO LRFD*)
- AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition, 2005 (*AASHTO Signs*)
- AISC Steel Construction Manual, 15th Edition, 2017 (*AISC*)
- ANSI/AISC 360-16 Specification for Structural Steel Buildings, 2016 (*AISC 360*)
- American Welding Society, Structural Welding Code, D1.1, 2015 (*AWS D1.1*)
- ASCE/SEI 7-10 Minimum Design Loads for Buildings and Other Structures, 2010 (*ASCE 7*)
- Setra Technical Guide for Footbridges, 2006 (*Setra*)
- ANSI/AWC NDC-2015 National Design Specification for Wood Construction, 2015 (*NDS*)
- Tropical Timbers of the World, US Forest Products Laboratory

The AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges shall control if any conflicting requirements occur with the Other Reference Documents and/or other local Codes.

3.0 BRIDGE SYSTEM TYPE

3.1 Truss Style

The truss style shall be a Connector[®]. The vertical trusses shall be designed such that the top and bottom chord members are parallel for the entire length of bridge. The interior verticals of the trusses shall be perpendicular to the top face of the bottom chord and the end verticals of the trusses shall be plumb. Trusses shall be laid out such that diagonals shall be at an angle of 30-degrees or more with respect to the bottom chord.

3.2 Diagonal Style

The vertical truss shall use a single-diagonal, Pratt configuration, where all the diagonals are in tension for gravity loads.

3.3 Floor Beam Location

The bridge shall utilize an H-Section configuration where the ends of the floor beams are welded only to the interior face of the verticals. The distance from the top of deck to the bottom of the bottom chord shall be determined by the Bridge Manufacturer during final design.

4.0 BRIDGE GEOMETRY

4.1 Span Length

The bridge span length shall be 140'-0" (horizontal straight line dimension) and measured from end to end of the bridge truss, not including the end dam, any deck extension or bearing that extends beyond the end of the truss.

4.2 Width

The bridge width shall provide a minimum clearance of 10'-0" between all interior railing elements.

4.3 Top of Truss Height Above Deck

The top of the top chord shall not be less than 48" above the deck (measured from the high point of the deck). Note that this dimension may be exceeded due to truss height requirements for structural, deflection and vibration requirements.

4.4 Lower Steel Clearance

The Bridge Manufacturer shall determine the distance from the top of the deck (measured from the highest point of the deck) to the bottom of any steel member.

4.5 Truss Bay Spacing

The number of bays and the dimension of the panel points shall be determined by the Bridge Manufacturer.

4.6 Camber

A single simple-span bridge shall have a vertical camber dimension at the mid-span equal to 1% of the bridge span length plus 100% of the anticipated full dead load deflection.

4.7 Elevation Difference

The top of the decks shall be at the same elevation at each end of the bridge.

5.0 STRUCTURAL DESIGN LOADS

5.1 Dead Load

The bridge structure shall be designed for the total bridge weight including the final deck system.

5.2 Pedestrian Loading (PL)

The bridge structure shall be designed for a uniform pedestrian loading of 90 psf. This loading shall be patterned to produce the maximum load effects. Consideration of dynamic load allowance is not required with this loading.

5.3 Vehicle Load (VL)

When vehicular access is not prevented by permanent physical methods, the superstructure and deck system shall be designed for each of the following concentrated/vehicular loads:

- A concentrated load of 1,000 pounds placed on any area 2.5' by 2.5' square.
- A single truck shall be placed to produce the maximum load effects and shall not be placed in combination with the pedestrian load. The dynamic load allowance need not be considered for this loading. The truck shall be the following:
 - 5,000 pound vehicle equally distributed to four wheels.

5.4 Wind Load (WS)

Pedestrian bridges shall be designed for wind loads as specified in *AASHTO Signs*, Articles 3.8 and 3.9. The loading shall be applied over the exposed area in front elevations of both trusses including all enclosures.

In addition to the wind load specified above, a vertical uplift line load as specified in *AASHTO LRFD* Article 3.8.2 and determined as the force caused by a pressure of 20 psf over the full deck width, shall be applied concurrently. This loading shall be applied at the windward quarter point of the deck width.

5.5 Seismic (EQ)

The bridge structure shall be designed for seismic loading as specified in Section 3.10 of *AASHTO LRFD*. The transverse loads shall be calculated considering the transverse period of the bridge and longitudinal loads shall be calculated using a period of zero. A response modification factor of 0.8 shall be used for the calculation of forces applied to the bridge anchorage. A response modification factor of 1.0 shall be used for the calculation of bearing reactions. The transverse seismic load shall be applied to all the bearings and the longitudinal seismic load shall be applied to the fixed bearings only. The vertical bearing reactions shall be calculated using an overturning force on the bridge

based on the center of gravity of the bridge times the transverse seismic load.

5.6 Fatigue Load (FL)

The fatigue loading shall be as specified in Section 11 of *AASHTO Signs*. The Natural Wind Gust specified in Article 11.7.1.2 and the Truck-Induced Gust specified in Article 11.7.1.3 of *AASHTO Signs* only need only be considered, as appropriate.

5.7 Combination of Loads

The load combinations and load factors to be used shall be as specified in *AASHTO LRFD* Table 3.4.1-1, with the following exceptions:

- Load combinations Strength II, Strength IV, and Strength V need not be considered.
- The load factor for Fatigue I load combination shall be taken as 1.0, and Fatigue II load combination need not be considered.

6.0 STRUCTURAL DESIGN CRITERIA

6.1 Modeling

The bridge shall be modeled and analyzed utilizing a three-dimensional computer software which shall account for moments induced in members due to joint fixity where applicable. Moments due to both truss deflection and joint eccentricity must be considered. All loads listed in Section 5 of these specifications shall be applied to the model and analyzed appropriately.

6.2 Lateral Frame and Member Design

The bridge shall be designed and proportioned such that appropriate lateral stiffness is provided locally and globally, to ensure that the structure is stable.

For bridges without any overhead members (Half-Through Trusses), the vertical truss members, the floor beams and their connections shall be proportioned to resist a lateral force applied at the top of the truss verticals at the center of the top chord. This lateral force shall be applied as an additional load to the top of the vertical at the center of the top chord, creating a cantilever moment, which is then added to the forces obtained from the three-dimensional model. The magnitude of this lateral force shall not be less than 0.01/K times the average factored design compressive force in the two adjacent top chord members increased by a factor of safety of 1.33.

The top chord shall be analyzed as a column with elastic lateral supports at the panel points, considering all moments due to in-plane and out-of-plane bending, along with moments due to eccentricities of the members.

The U-Frame Stiffness of the verticals and floor beams shall be as specified in *AASHTO Ped* Article 7.1.2, assuming that the vertical and floor beam connection is rigid. This means that the following must be met:

- On H-Section floor beam connections, the floor beam width shall be at least 80% of the vertical face width in order to prevent any deformation due to tube wall plastification of the vertical member faces under service loads. The connection design will be checked at Strength I & Strength III load combinations.
- On Underhung floor beam connections, the vertical width shall match the bottom chord width in order to transfer vertical moments through the walls of the bottom

chord to the verticals with no deformation of the chord side walls due to sidewall yielding or crippling under service loads. The connection design will be checked at Strength I & Strength III load combinations.

- The vertical and floor beam members shall not be connected to faces of the bottom chord at a 90-degree to one another.
- All fixed end moments in the floor beams and verticals due to floor beam rotations, in addition to the loads derived from a U-Frame analysis have been accounted for in the strength design of the connections.

The vertical and floor beam members shall be proportioned such that the effective length factor, K , used in the design of the top chord shall not be greater than 2.0.

The end verticals shall be designed as a simple cantilever to carry the loads obtained from the three-dimensional model, plus the cantilever moment due to a lateral load of 0.01 times the axial force in the end vertical, applied laterally at the top end of the end vertical at the center of the top chord.

The floor beams shall be sized for the forces obtained from a simple span, pinned end analysis, or from the forces obtained from the three-dimensional model, whichever controls.

The diagonals and brace diagonals shall be analyzed as pinned-end connection members.

Interior verticals shall be analyzed as pinned-end connections unless longitudinal forces are applied to the verticals such as when the brace diagonals are connected to floor beams on an H-Section floor beam configuration. When longitudinal forces are applied to the verticals they shall be analyzed as fixed-end connections.

All other members shall be analyzed as fixed-end connections.

HSS member connections shall be evaluated per the requirements of *AISC 360* Chapters J & K.

6.3 Deflections

The vertical deflection of the bridge due to the unfactored pedestrian live loading shall not exceed $1/360$ of the span length.

The horizontal deflection of the bridge under unfactored wind loading shall not exceed $1/360$ of the span length.

6.4 Fracture

The fracture toughness requirements and designation of Fracture Critical Member and Main Member designation are hereby waived for these structures.

6.5 Vibrations

Vibration of the structure shall not cause discomfort or concern to the users of the bridges. To assure this, the fundamental frequency (f) of the pedestrian bridge in the vertical direction, without live load, shall be greater than 3.0 hertz (Hz) to avoid the first harmonic. The fundamental frequency of the pedestrian bridge in the lateral direction, shall be greater than 1.3 Hz. If the fundamental frequency cannot satisfy these limitations, then the bridge should be proportioned such that either of the following criteria are satisfied:

$$f \geq 2.86 * \ln(180/W)$$

or

$$W \geq 180 * e^{(-0.35 * f)}$$

Where W is the weight of the bridge in kips and f is the fundamental frequency in the vertical direction in Hz.

For bridges longer than 85 ft and shorter than 125 ft the vertical and horizontal vibration must also meet the requirements for Bridge Class III with a Mean comfort level in accordance with *Setra*.

7.0 DECK SYSTEM

7.1 Deck System

Deck to be comprised of Reinforced Concrete designed to span from floor beam to floor beam.

Reinforced concrete shall be normal weight concrete (145 pounds per cubic foot maximum) and shall have a minimum compressive strength of 4,500 psi at 28 days, with an air content of 6% +/- 1.5%.

Concrete mix design, materials, quality, mixing, placement, finishing and testing shall be in accordance with the requirements of Section 552 of Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14). FP-14 can be viewed or downloaded at:
<http://flh.fhwa.dot.gov/resources/specs>

The surface of deck concrete shall be finished with a sidewalk finish per Section 552.14(c) of FP-14.

Stay-in-place galvanized (G90 coating) metal form deck shall be used and shall be designed to support the weight of the wet concrete plus a 20 pounds per square foot construction load. Form deck shall be shop attached to floor beams via self-drilling fasteners, welding or power actuated fasteners. Welding shall not be used on painted or galvanized bridges. The longitudinal sheet laps shall be attached with self-drilling self-tapping fasteners at 36-inch maximum spacing. The attachment of the form deck to the floor beams is only necessary to keep the form deck in place during transportation and during the concrete placement. The form deck is not to be used for diaphragm action or composite action and provides no structural benefit to the truss or the deck after the concrete is set. Metal form deck panels shall be of a length to span a minimum of two bays of the truss supports. The top of deck to bottom of form deck shall be as required to support the anticipated loads but shall not be less than 5".

The concrete deck shall be designed to span longitudinally from floor beam to floor beam and to support the loads specified in Section 5.0 of these specifications.

A distribution width of deck is allowed, to support the anticipated vehicle wheel loads. This distribution width (E in feet) shall be the narrower of the following:

- $E = 4 + .06S$
 - Where S is the floor beam spacing minus one-half of the floor beam width.

- One-half of the total driving width of the bridge deck.
- 0.75 times the lateral wheel spacing of the vehicle.
- $0.6S + \text{Wheel Width}$
 - Where S is the floor beam spacing minus one-half of the floor beam width.
 - The Wheel Width (in inches) is $2.5 * \sqrt{\left(\frac{0.01 * P}{2.5}\right)}$, where P is the wheel load in pounds

Reinforcing steel shall be ASTM A615 Grade 60 epoxy coated bars. All bar bends, anchorage and splices shall be in accordance with AASHTO Specifications. Top reinforcing shall have a minimum clearance of 2" to the top of deck.

Bridge Manufacturer shall designate the estimated slab thickness and reinforcing requirements at time of quotation. These estimates are to be used for quoting purposes only. Actual quantities may vary during the final design process, with costs variances due to any changes to the quantities being the sole responsibility of the contractor. Contractor shall supply all concrete and reinforcing materials.

8.0 MATERIALS OF CONSTRUCTION

8.1 Structural Steel

All members of the truss and deck support system shall be fabricated from square or rectangular hollow structural shapes (HSS), with the exception that floor beams may be wide flange shapes. All open ends of end posts and floor support beams shall be capped. Drain holes shall be provided for all sections at the low point of the member that may become filled with water.

All bridges shall be fabricated using A847 for HSS sections and A588 for structural shapes and plates.

Minimum nominal thickness of primary hollow structural shapes shall be 1/4". Rolled shapes shall have a minimum thickness of 1/4".

8.2 Fasteners

Structural bolts used to field splice or connect all main members shall be ASTM F3125 Grade A325. The nuts for these structural bolts shall be ASTM A563. The Bridge Manufacturer shall determine the finish of the structural bolts. They will be either Type 3 (Weathering) or Type 1 (Hot-Dipped or Mechanically Galvanized) as specified by the Bridge Manufacturer.

Bolts used for the connection of a wood rub rail shall be 18-8 or 316 Stainless Steel, 1/4" diameter carriage bolts.

Screws for the attachment of wood deck shall be steel, 5/16" diameter, six lobe drive, self-tapping screws. The screws shall have flat heads for the screws in the wood and round heads for the screws on the edge cover. The screws shall have a protective coating that will prevent corrosion due to contact with treated wood and environmental exposure.

Self-drilling fasteners for attachment of the form decking shall be #14 x 1" zinc plated hex washer head Tek screws.

Power Actuated fasteners shall be Hilti sheet metal nail X-ENP-19 fastener.

Other miscellaneous fasteners shall be ASTM A307 zinc plated or galvanized, as determined by the Bridge Manufacturer.

9.0 FINISH

For corrosion resistant high-strength low-alloy (weathering) steel no surface finish treatment is necessary. The steel will be allowed to form a protective weathering patina over time.

10.0 ATTACHMENTS

10.1 Safety Rails

Safety rail system shall be placed on the inside of the structure, spaced so as to prevent a 4" sphere from passing through the side truss for the full height of the side truss, or 48" , whichever is less. The top of the top chord may be considered the top of the rail system.

Rails system shall consist of horizontal rails. Rails shall be L 1 ¼ x 1 ¼ x 1/8 placed at a 45-degree orientation with both legs welded to truss verticals and with a maximum unsupported length of 6'-0" if placed on the inside of the structure and 7'-0" if placed on the outside of the structure. If the truss vertical spacing is greater than the maximum unsupported length, mid-bay supports will be required. When safety rails are placed on the inside of the structure and not covered by the end vertical, the ends of rail near the end of the bridge shall be mitered at a 45-degree angle, capped and ground smooth. No solid plate covering all rails as a unit will be allowed.

Each element of the pedestrian rail system shall be designed to support a uniformly applied load of 50 pounds per lineal foot, both transversely and vertically, acting simultaneously. In addition, each longitudinal element shall be designed to support a concentrated load of 200 pounds, which will act simultaneously with the above uniform loads at any point and in any direction at the top of the longitudinal element.

The posts of the pedestrian rail system shall be designed for a concentrated load applied at either the center of gravity of the upper longitudinal element or 60" above the top of the walkway, whichever is less. This concentrated load shall be equal to 200 pounds plus 0.05 times the post spacing in feet.

10.2 Toe Plate

Toe Plates shall be steel channel shape section, 4" high by 1" wide minimum with the end of the channel legs welded directly to the inside face of the truss verticals. The maximum unsupported length shall be 7'-0". If the vertical spacing is greater than the maximum unsupported length, mid-bay supports will be required. When the ends of the toe plates near the end of the bridge are not covered by the end verticals, they shall be capped and ground smooth. The bottom of the toe plate shall be placed 2" above the finished height of the deck. All seams of the toe plates shall be fully welded to give the appearance of a continuous member (welding should be located at a support member). If toe plates are incorporated into a safety rail system, they may be modified as needed but shall be a minimum of 4" high.

10.3 Rub Rail

Rub Rails shall be provided at a height of 3'-6" from top of the deck to the top of rub rail. Rub Rails shall be nominal 5/4x6 lpe hardwood. If the vertical spacing exceeds 7'-0" then mid-bay supports will be required. Rub rails shall be supplied S4S, E4E. All exposed

surfaces shall be smooth with no exposed sharp edges. Rub rails shall be attached using two ¼" diameter carriage bolts with lock nuts at each attachment. Attachment shall be to a structural angle welded directly to the side of the vertical. Where a seam occurs between two adjacent pieces of rub rail, two structural angles shall be used, one on each side of the truss vertical.

10.4 Expansion Joint

The gap between the end of the bridge deck and the back wall of the foundation system be sized to accommodate bridge movements due to thermal expansion of the bridge over the design temperature range. The gaps shall be covered with a steel cover which attaches to the bridge and extends over the gap and onto the top of the foundation system back wall. The steel cover shall have its edges rounded or beveled at a 45-degree angle. A compression seal sized for movement and rated for pedestrian traffic may be used in place of the steel cover.

11.0 BEARINGS

11.1 Bearing Type

The fixed and expansion bearings shall use Grade 4, 60-Durometer Neoprene or natural rubber plain or layered elastomeric pad underneath a steel bearing plate. The pad shall be designed to transfer all loads from the bridge to the foundation using AASHTO Method A Design. Size shall be per loads and anticipated movements determined by the Bridge Manufacturer. Both expansion and fixed bearings shall have slotted holes for ease of installation. Bottom nut on the anchor bolt shall be finger tight and top nut tight at expansion bearings and both nuts on anchor bolt tight at fixed bearings.

11.2 Design Temperature Range

The Design Temperature Range will be site specific and will be determined per *AASHTO LRFD* Article 3.12.2.

11.3 Non-Shrink Grouting

The bridge will be supplied with a lower setting plate. This setting plate shall be leveled and shimmed to the proper elevation. The space between the lower surface of the setting plate and the foundation surface shall be filled with a non-shrink grout capable of achieving a minimum compressive strength equal to or greater than the strength of the foundation concrete. The cost of the leveling, shimming, and non-shrink grout shall be the responsibility of the Contractor.

12.0 FOUNDATIONS

12.1 Foundation System

Foundation system shall utilize abutments designed by the Foundation Engineer in conjunction with the bridge bearing requirements and dimensions provided by the Bridge Manufacturer and the site-specific geotechnical information provided by the Geotechnical Engineer. All abutment dimensions and materials shall be shown on the final contract plans.

12.2 Anchor Bolts

Bridge Manufacturer shall design the diameter and grade of anchor bolts, based on the

shear and tensile strength of the anchor bolt material only. All design considerations regarding concrete breakout strength in shear and tension, pullout strength, concrete side-face blowout strength, concrete pry out strength, embedment depth, type of anchorage or any other concrete failure modes are the responsibility of the Foundation Engineer and shall be shown on the final contract plans. All anchor bolts shall be galvanized. The Foundation Engineer shall determine if the anchor bolts shall be cast-in-place, drilled/epoxy, or expansion anchors. Anchor bolts shall be provided and installed by the Contractor.

13.0 FABRICATION

13.1 Welding

Welding procedures and weld qualification test procedures shall conform to the provisions of *AWS D1.1*. Filler metal shall be in accordance with the applicable AWS Filler Metal Specification and shall match the corrosion properties of the base metal.

13.2 Welders

Welders shall be qualified for each process and position used while fabricating the bridge. Qualification tests shall be in accordance with AWS D1.1. All weld qualifications and records shall be kept in accordance with the Fabricator's Quality Assurance Manual which has been approved and audited by AISC as the basis for certification.

13.3 Shop Splices

Shop splices for main truss members shall be full penetration welds all around the perimeter of the member. These shop splices shall be performed using a full perimeter backing plate. After welding of the shop splices, the weld shall be ground smooth to match the perimeter of the member. Grinding these welds smooth is required and will be grounds for rejection of the bridge upon delivery if not completed.

Shop splices for all horizontal rail components to be located at the centerline of the truss verticals, each end welded to the truss vertical and seal welded together. Exposed surface of the seal welds as seen from the deck shall be ground smooth.

Shop spliced for all horizontal stringers to be located at the centerline of the floor beams, each end welded to the floor beam and seal welded together.

13.4 Bolted Splices

For shipping purposes, the bridge may be fabricated in sections. Sections shall be field assembled using bolted connections. No field welding of members shall be allowed.

The chord members of the bridge shall be bolted such that at least two faces of the member are bolted. This is to provide reasonable force distribution around the perimeter of the member. Bolted splices shall be designed and fabricated such that the head of the bolt and washer are the only item exposed. No through-bolting of the member is allowed. The nuts of the fastener cannot be welded to the internal splice plate and shall be held in plate with a nut capture system per Patent US 10,267,345 B2 or equal.

The diagonals and brace diagonals shall be bolted utilizing a through-bolt system with plates on the exterior faces of the members. An internal stiffening plate is required to keep the member from crushing during the bolt tightening process.

All bolted connections are considered to be pretensioned or slip-critical connections. All bolts are to be pretensioned per the requirements of section 8.2 of the Specification for Structural Joints Using High-Strength Bolts. Recommended tightening method of all structural bolts shall be Turn-of-the-Nut Pretensioning.

14.0 QUALITY CONTROL

14.1 AISC Certification

The bridge shall be fabricated in a shop owned by the Bridge Manufacturer. This facility shall have up to date quality certification by AISC as Certified Bridge Fabricator - Advanced (Major) with Fracture Critical Endorsement and Sophisticated Paint Endorsement.

14.2 Certified Weld Inspector

The Bridge Manufacturer shall employ a Certified Weld Inspector (CWI), with endorsement by AWS QC1. This CWI shall be present during the complete fabrication of the bridge. The CWI shall provide written documentation that the bridge has been fabricated in accordance with these specifications and the approved design drawings.

14.3 Documentation

Material Certifications shall be available for review for all materials within the bridge. Traceability of heat numbers is required for all structural steel.

Documentation showing the performance of all critical quality checks shall also be made available for review by the Engineer or Owner.

14.4 Non-Destructive Testing

All welds within the structure, shall be visually inspected for conformance to size, under cut, profile and finish.

All shop splices of main truss members shall be magnetic particle tested.

15.0 DELIVERY AND ERECTION

15.1 Delivery

Delivery shall be made via truck to a location nearest the site which is accessible to normal over-the-road equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival. If the erection Contractor needs special delivery or delivery is restricted, they shall notify the Bridge Manufacturer prior to bid date. This includes site issues which may prevent over-the-road equipment from accessing the site. Steerable dollies are not used in the cost provided by the Bridge Manufacturer. Determining the length of bridge section which can be delivered is the responsibility of the Contractor and shall be communicated to the Bridge Manufacturer prior to the bid date.

15.2 Installation & Lifting Procedures.

The Bridge Manufacturer will provide standard typical written procedures for lifting and splicing the bridge. All actual means, methods, equipment and sequence of erection used are the responsibility of the Contractor.

16.0 WARRANTY

The Bridge Manufacturer shall warrant, at the time of delivery, that it has conveyed good title to its steel structure, free of liens and encumbrances created by the Bridge Manufacturer, and that its steel structure is free of defects in design, material and workmanship. This warranty shall be valid for a period of one (1) year from the earlier date of delivery or 60 days after final fabrication is complete. Durable tropical hardwood decking and hardwood attachments shall carry a one (1) year warranty against rot, termite damage, or fungal decay. This warranty shall specifically exclude all softwood and decking material such as Treated Southern Yellow Pine, Douglas Fir and Wood thermoplastic composite lumber (e.g. Trex). Paint, galvanizing and other special coatings, if warranted, shall be warranted by the coating manufacturer in accordance with their warranty provisions and are not covered under the Bridge Manufacturer's warranty.

This warranty shall not cover defects in the steel structure caused by abuse, misuse, overloading, accident, improper installation, maintenance, alteration, or any other cause not expressly warranted. This warranty shall not cover damage resulting from or relating to the use of any kind of de-icing material. This warranty shall be void unless the owner's records are supplied that show compliance with the minimum guidelines specified in the Bridge Manufacturer's inspection and maintenance procedures.

Repair, replacement, or adjustment, in Bridge Manufacturer's sole discretion, shall be the exclusive remedy for any defects under this warranty. This warranty shall exclude liability for any indirect, consequential, or incidental damages.

17.0 MEASUREMENT & PAYMENT

Measurement shall be made under the bid item "Pedestrian Bridge" per each. Measurement of the work shall include all labor, materials, and equipment to furnish and completely install the entire pedestrian bridge superstructure per the manufacturer's requirements, including deck systems, structural steel, fasteners, attachments, bearings, and anchor bolts.

Payment will be made at the contract unit price per each. Payment includes all labor, materials, hardware, and equipment necessary to complete the work as described under measurement.

Payment will be made under:

Item No.	Pay Item	Pay Unit
TS-807-00001	Pedestrian Bridge	Each

TS TRIAXIAL GEOGRID:

1. DESCRIPTION.

This item consists of furnishing and placing geogrid reinforcement in the areas shown on the plans, as directed by the project engineer, prior to placing bedding material.

2. MATERIALS.

1. General Requirements: The geogrid will be a triaxial polymer grid structure composed of polypropylene or high-density polyethylene with apertures designed to interlock with the surrounding fill material. Weld or interweave the joints at the crossover points so that the elements will not separate under handling and construction activities or under dynamic loads anticipated over the structure's life. The geogrid will be resistant to damage during construction, including ultraviolet light degradation, and have long-term resistance to chemical and biological degradation caused by the fill materials being reinforced.
2. Detailed Requirements: the geogrid should consist of a foundation triaxial grid such as a TriAx® TX140, or approved equivalent.
3. Submit a Certificate of Compliance and product data sheet that the geogrid meets the above physical properties. The owner reserves the right to sample and test geogrid material randomly.

3. CONSTRUCTION.

Place the geogrid in continuous sheets parallel to the centerline. Overlap adjacent sheets of geogrid a minimum of eighteen (18) inches. Ensure that geogrid sections do not separate during construction. Cut the geogrid to conform to curved sections to maintain placement parallel to the centerline. Ensure that excessive buckling of the grid material does not occur. Excessive material quantity, if any, required for making curves shall be at no direct pay. Tracked equipment will not be allowed to operate directly on the geogrid. Remove and replace the damaged geogrid with a new geogrid or cover with a second layer extending three (3) feet (1 m) in each direction from the damaged area. Label or tag each geogrid roll to provide product identification sufficient for field inventory and quality control purposes. Store rolls in a manner that protects them from the elements. If stored outdoors, elevate and protect from ultraviolet light.

4. MEASUREMENT.

Geogrid reinforcement will be measured by the square yard of the covered area.

5. PAYMENT.

Geogrid reinforcement will be paid for by the square yard of the covered area at the contract unit price:

Payment will be made under:

Item No.	Pay Item	Pay Unit
TS-300-00060	TRIAXIAL GEOGRID	Square Yard

TS-736-00017 – SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED

TS-736-00017.01 DESCRIPTION. The purpose of this specification is to describe the minimum acceptable requirements for a solar/battery-powered School Zone Warning flasher assembly. The assembly shall be complete and include all components shown below for installation including designated MUTCD sign shown in the plans, pole, base, foundation, and anchor bolts. The beacons shall be 12 inch Yellow LED's. The assembly shall include all hardware to mount onto the 4½ inch outside diameter (O.D.) pole.

The following sections of the 2016 Louisiana Standard Specifications for Roads and Bridges are referenced in this specification:

Pedestal Pole System	736, 1020
Warranty	104.05

TS-736-00017.02 EQUIPMENT.

TS-736-0 0017.02.1 Solar Generator: The solar modules shall be industrial grade, polycrystalline type. Modules deemed to be of consumer grade will not be acceptable. Solar modules must have a power output rating of +/- 5 percent or better. Electrical termination will take place in a single, conduit capable, junction box. Solar modules shall be an 80 to 100 watt module. Each solar module, regardless of wattage size, shall share common mounting holes for mounting such that a single mounting structure will accommodate the entire module line. Each solar module will incorporate 6 inch square polycrystalline cells and have at least two (2) bypass diodes installed at the factory. Module construction will utilize low iron tempered glass surface with an industrial grade anodized aluminum frame that completely surrounds and seals the module laminate. Construction should be consistent with the demands of installation near humid salt air environments. The mounting bracket shall have no less than four (4) 0.375 inch stainless steel bolts, lock washers, and hex head nuts to secure the solar module to the frame. An ultra violet (UV) resistant, weatherproof junction box providing wire termination for up to #8 AWG wiring shall be provided with the solar module.

The solar module mounting assembly shall be constructed of galvanized steel (ASTM A-153 Class A) or aluminum, of adequate design and strength to provide a means of securely attaching the solar module frame to a pole at a permanent angle of 45 degrees. The pole mounting hardware shall accommodate a 4½ inch O.D. pole. The bracket shall be capable of 360 degree horizontal orientation with a means of locking the bracket at an inscribed angular position about the pole.

The solar module harness shall not exceed one percent (1%) total voltage drop between the solar module and the charge control circuit.

TS-736-00017.02.2 Control Cabinet: NEMA 3R type aluminum enclosure with a minimum thickness of 0.125 inches, or cast aluminum alloy. The cabinet shall be sized to provide adequate space for the control electronics and battery/batteries. The cabinets shall have louvers for ventilation and to prevent the accumulation of gases. Provide aluminum screening, with

perforations that shall not exceed 0.125 inches in diameter, to prevent insects and other foreign matter from entering. There shall also be rubber mats installed on the bottom of the cabinet and two (2) 1/8 inch drain holes located in the bottom at opposite corners.

The door and its opening shall encompass and constitute the entire area of the face of the cabinet. It shall be hinged via a continuous hinge which shall be riveted to the door and to the cabinet. The door shall be tightly secured via a latching device which pulls the door snugly against a neoprene gasket affixed to the cabinet body forming a weather-tight seal. The latching device shall be equipped with a standard police door locking device.

The cabinet shall be equipped with the necessary hardware and pole clamps to provide rigid top and bottom mountings to a 4½ inch O.D. pole.

TS-736-00017.02.3 Control Components: The back panel shall be mounted to the inside of the cabinet. All electronic components within the cabinet shall be mounted to the back panel. The electronic components shall be easily installed or removed with simple hand tools. Located on the back panel shall be an eight (8) position 8-32 x 5/16 inch binder head screw design terminal strip, with shorting bars. The terminal strip shall have the following functions available:

1. Solar Panel +
2. Solar Panel - / Battery -
3. Battery +
4. Switch Common
5. 4G Cellular Programmable Timer
6. Intelligent Warning System Controller
7. Output Circuit 1
8. Output Circuit 2
9. Output Common

The controller shall have an on-board, solid state, charge control circuit to insure proper charging on the system battery bank. The charging circuit shall incorporate a blocking diode for reverse current protection. The charge control circuit shall incorporate thermal compensation to adjust the battery charge rate to variances in temperature with an adjustable voltage swing above and below the ambient set point as defined by the battery manufacturer. The battery float voltage calibration shall be at a voltage defined by the battery manufacturer at 25 degrees Celsius ambient temperatures. An LED/LCD shall be provided to indicate solar panel charging.

The solar charge controller will have the capability of displaying load amps, solar amps, and battery volts.

The controller shall contain a low voltage disconnect (LVD) circuit. This circuit shall disconnect the battery bank when the battery voltage reaches a voltage that is deemed critical by the manufacturer of the battery. An LED shall be provided and illuminated when the LVD circuit is active.

The controller shall have night dimming capabilities. The night dim level shall be calibrated to reduce the power of the LED module by a maximum of seventy-five percent (75%) where ambient light levels are 5 foot-candles or less. The controller shall not allow dimming from dawn to dusk (daylight hours).

The unit shall be supplied with a color-coded harness and a complete wiring diagram. Wires shall be a minimum 16 gauge stranded. Termination of the harness wiring to components mounted to pedestal poles, solar modules, and signal beacons shall be accomplished via connectors. Female connectors shall be terminated for ease of installation and male connectors are to be supplied with each harness. Battery terminals shall be 3/8 inch diameter round crimp terminals. Flasher termination shall be spade terminals. Regulator/charger terminations shall be spade terminals. The harness shall be installed in the controller cabinet using chassis tie downs and riveted to the harness bracket. The harness shall have spiral tubing to protect wires from the control cabinet to the door. The total voltage drop of any branch of the harness shall be no greater than one percent (1%).

The flashing operation of the unit shall be initiated and terminated by remote programmable timer settings to activate the flashing beacons in accordance with the times for beginning of school and end of school. The programmable timer shall have the capability of either local input via laptop and serial input or remote input using manufacturer's controller software by cellular connection. The unit shall have 16 programable active time periods per day for up to 2 years.

The flasher shall be:

1. 12 volts DC.
2. Solid-state with no relays or electro-mechanical devices.
3. 2-circuit with fifty percent (50%) duty cycle (per circuit) and shall provide fifty-five (55) flashes per minute (+/- 5 flashes per minute) to each circuit in accordance with MUTCD standards.
4. Constructed so that each component may be readily replaced if needed.

TS-736-00017.02.4 Signal Beacons: The School Zone Warning flasher assembly shall operate with two (2) Yellow 12" LED signal beacons. The LED's shall be manufactured with a lens that gives an "incandescent look". The signal beacons (signal housings and Yellow LED modules) and mounting hardware shall be supplied. The housings of the signal beacons may be aluminum or polycarbonate. Aluminum signal housings, with the exception of gaskets, terminal blocks, and wiring, shall be finished both inside and out with a thick black powder coating or with two (2) coats of high grade black enamel. Each coat shall be independently baked to resist peeling and chipping. Polycarbonate signal heads shall be constructed from one (1) piece of injection molded polycarbonate resin in black.

The solid state Yellow 12" LED signal modules shall be universal and easily retrofitted into standard signal housing using the existing lens gasket. The supplied LED module shall incorporate the use of AllnGaP technology LED's. The power rating of any module shall be 6 to 9 watts. The LED control circuit must not be in the LED Module and installed within the control cabinet. The module shall be either a clear or tinted UV stabilized acrylic which shall be easily removed and replaced. The module shall have a TOP mount position which is clearly identified. The module shall be self-regulating with input voltages of 10.5 to 35 VDC. The modules shall have a 24"

minimum DC color coded wiring harness (Red for positive and Black for negative). The wiring harness shall have strain relief at the module housing.

TS-736-00017.02.5 Battery: The battery/batteries shall be group 27 AGM-electrolyte 100 Amp Hour batteries as required by the manufacturer. The valve regulated, AGM-electrolyte battery/batteries must be rated for a minimum of 2000 cycles with ten percent (10%) capacity withdraw. The battery/batteries shall be 12-volt D.C. nominal. The plate alloy shall consist of lead calcium. The element post shall be a T881 type terminal designed for 1/4" bolt termination. The container/cover shall be polypropylene. The AGM-electrolyte shall contain sulfuric acid, fumed silica, pure demineralized and deionized water, and a phosphoric acid additive. The AGM-electrolyte battery/batteries shall be spill proof and should have the ability to be installed in any position.

TS-736-00017.02.6 Signage: The sign shall BE A 24" X 48" S5-1 sign compliant with current MUTCD standards. Sheeting shall be 3M diamond grade high visibility prismatic protective sheeting. Mounting system shall be as provided by the manufacturer and suitable for attaching sign to the pole.

TS-736-00017.02.7 Pedestal Pole System: Pedestal pole assembly, LADOTD Standard Specifications 736.10 & 1020.01.5 and LADOTD Traffic Signal Details.

TS-736-00017.02.8 Manual: A manufacturer's equipment and operations manual shall be submitted to the engineer.

TS-736-00017.03 CONSTRUCTION REQUIREMENTS: Furnish and install a pedestal pole assembly according to plans and specifications.

Furnish and install the solar powered flashing beacon assembly as described in these specifications, as per the manufacturer's recommendations and as shown in the plans. Connect all components. Sign shall have a minimum seven (7) foot clearance. Top beacon shall be mounted one (1) foot above sign to the bottom of the beacon housing. Bottom beacon shall be mounted at 7' above the sidewalk. All other components shall be installed above the bottom beacon as detailed in the plans. The control cabinet shall be mounted behind sign.

TS-736-00017.03.1 Maintenance and Support: The equipment manufacturer shall maintain an adequate inventory of parts to support maintenance and repair of the solar powered flashing beacon assembly. These parts shall be available for delivery within 48 hours of placement of an order. The equipment manufacturer shall maintain an ongoing program of technical support for the solar powered flashing beacon assembly.

TS-736-00017.03.2 Warranty: Shall meet Section 104.05.

TS-736-00017.04 MEASUREMENT: The solar powered flashing beacon, pedestal mounted, will be measured per each and includes solar panel, two 12" LED's, control cabinet, controller, battery, pole, pole base, concrete foundation, anchor bolts, all required mounting hardware, wiring inside pole, labor and incidentals for a fully operational system.

TS-736-00017.05 **PAYMENT:** Payment for the solar powered flashing beacon, pedestal mounted, will be paid at the contract price per each. Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
TS-736-00017	Solar Powered Flashing Beacon, Pedestal Mounted	Each

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52-55	REFERENCE POINTS AND BENCHMARK ELEVATIONS
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83-106	STRIPING DETAILS
107-131	SEQUENCE OF CONSTRUCTION
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149-165	RIGHT OF WAY MAP
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201-241 BRIDGE PLANS

STANDARD PLANS	REV. DATE
301-302	BM-01 10/26/2023
303	CB-07 11/02/2000
304	CB-08 10/07/2010
305	CC-30-20 01/05/1978
306	CM-49 10/01/2008
307	COLLAR-01 05/06/2022
308-310	CP-01 10/13/2021
311-313	DW-01 08/04/2022
314-315	EC-01 10/01/2008
316-326	GR-MASH-ON 04/13/2023
327	GR-MASH-OFF 01/03/2019
328-335	GR-201 06/13/2017
336	HS-03 04/07/2014
337-338	MB-01 04/04/2022
339-344	MC-01 05/25/2018
345	PC-01 10/02/2023
346-350	PED-01 07/21/2022
351	PG-DRAIN (DOUBLE) 09/22/2020
352	PG-DRAIN (SINGLE) 09/22/2020
353	PG-DRAIN WITH SIDEWALK (DOUBLE) 09/22/2020
354	PG-DRAIN WITH SIDEWALK (SINGLE) 09/22/2020
355	PM-01 02/28/2019
356	PM-02 02/28/2019
357	PM-04 02/28/2019
358	PM-05 02/28/2019
359	PM-06 02/28/2019
360	PM-08 02/28/2019
361	PM-09 02/28/2019
362	PRCB-01 07/20/2022
363	RCB-EXTENSION 04/08/2009
364	RM-01 02/01/2021
365-381	RS-01 07/01/2022
382	SW-01 10/25/2022
383	SWBS-100 03/06/2013
384-387	TTC-00 (A-D) 07/02/2018
388-391	TTC-01-TTC-04 07/02/2018
392	TTC-18 07/02/2018
393	WP-01 02/01/2021

400-462 CROSS SECTIONS

TOTAL SHEETS = 387

DATE	REVISION	DATE	RECOMMENDED	DATE	APPROVED

SCHEDULE OF REVISIONS

Section 13
ST. TAMMANY PARISH DEPARTMENT OF PUBLIC WORKS

PLANS OF PROPOSED
MANDEVILLE BY PASS
LA 1088 TO US 190

PARISH PROJECT NO. 2014EN0001

ST. TAMMANY PARISH PRESIDENT

MICHAEL B. COOPER

COUNCIL:

RICK SMITH
LARRY ROLLING
MARTHA J. CAZAUBON
KATHY SEIDEN
PAT PHILLIPS
CHERYL TANNER
JOE IMPASTATO

DISTRICT 1
DISTRICT 2
DISTRICT 3
DISTRICT 4
DISTRICT 5
DISTRICT 6
DISTRICT 7

PAT BURKE
DAVID COUGLE
MAUREEN O'BRIEN
ARTHUR LAUGHLIN
JERRY BINDER
JEFF CORBIN
JIMMY STRICKLAND

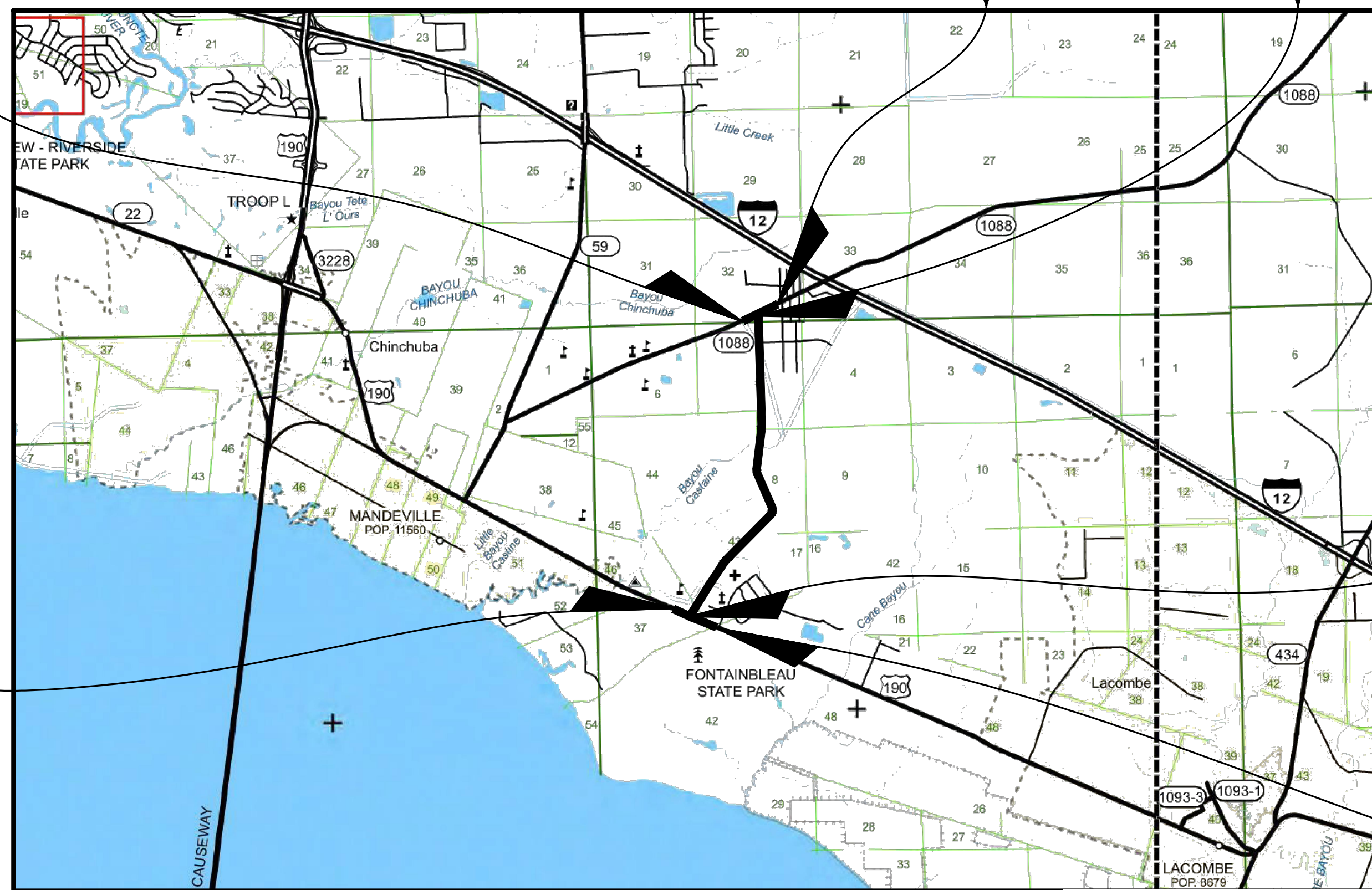
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DISTRICT 9
DISTRICT 10
DISTRICT 11
DISTRICT 12
DISTRICT 13
DISTRICT 14

PARISH ENGINEER: DANIEL P. HILL

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STA. 133+49.58

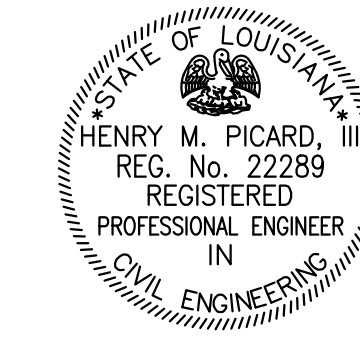
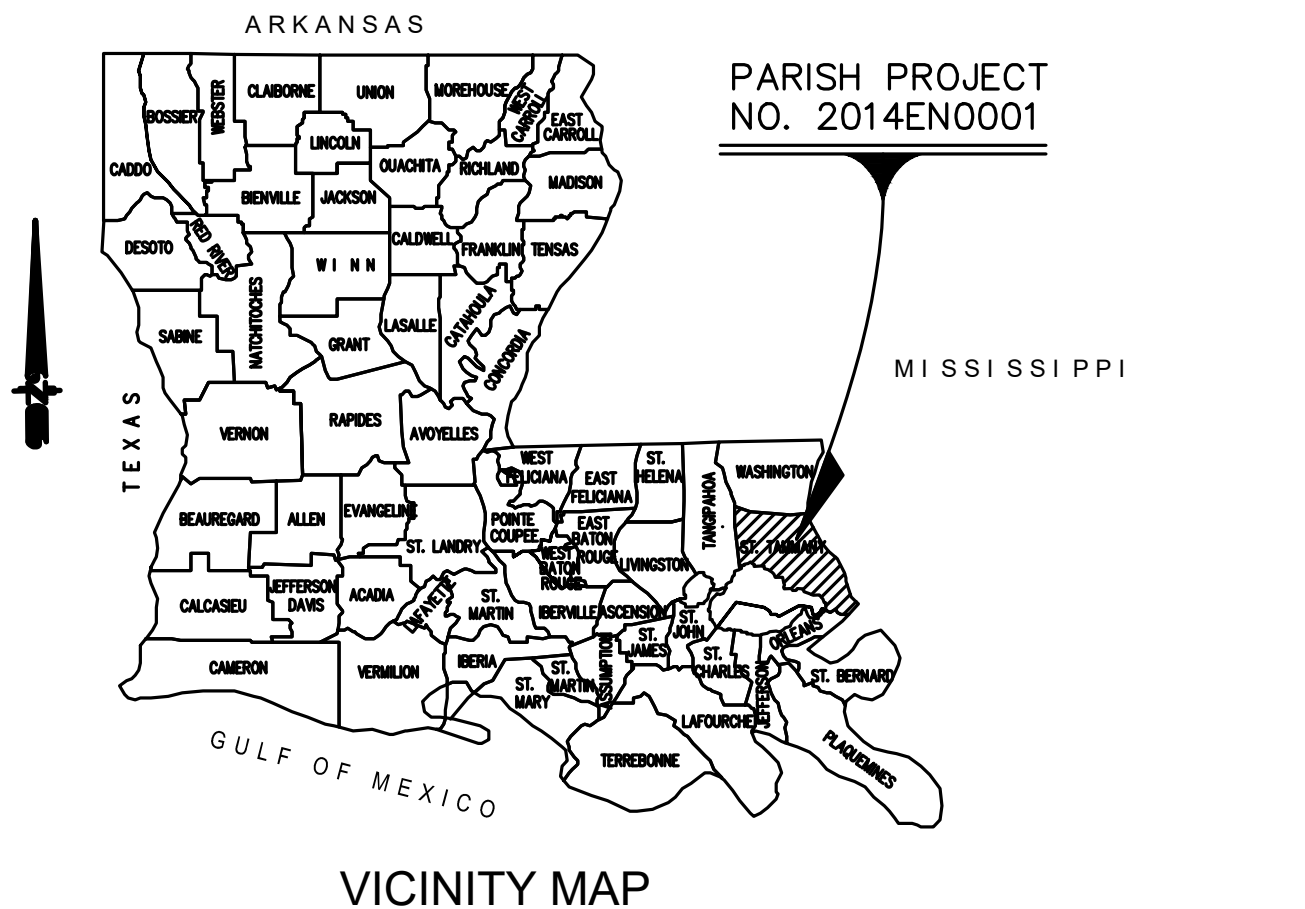
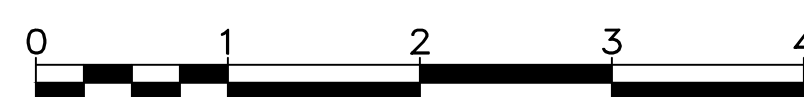
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LA 1088
C.S. 852-11
LOG MILE 2.815
STA. 158+72.70

END PROJECT
MANDEVILLE BYPASS
C.S. 000-52
STA. 266+02.24



LOCATION MAP

SCALE: 1 INCH = 1 MILE



PLANS PREPARED BY AND
RECOMMENDED FOR APPROVAL :

[Signature]
BURK-KLEINPETER, INC.
DATE : 10/09/24

DANIEL P. HILL, ST. TAMMANY PARISH
PARISH ENGINEER

TRAFFIC DATA

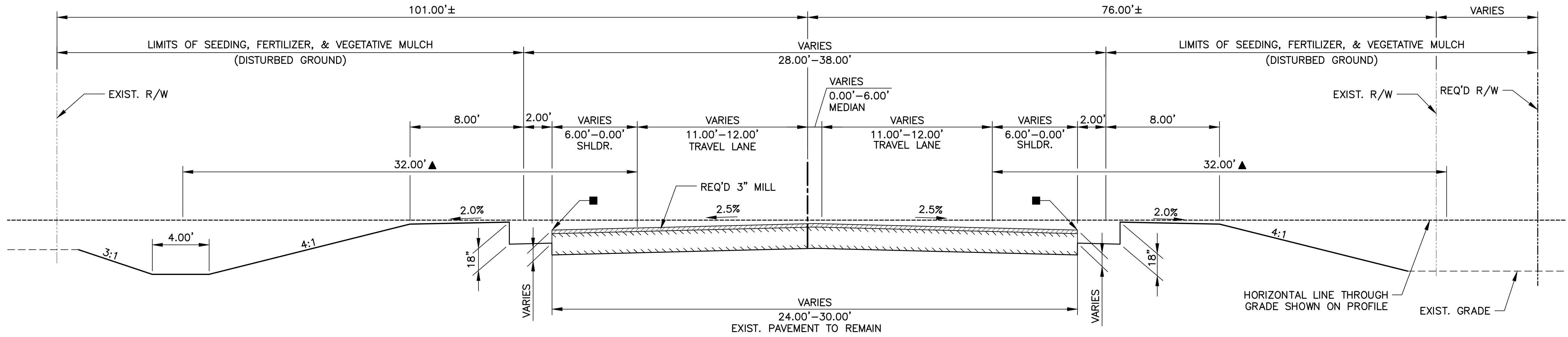
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2025 A.D.T. =	10900	11500
2045 A.D.T. =	16700	19500
D =	51.0%	51.0%
K =	9.0%	12.0%
T =	12.0%	11.0%

LENGTH AND LOCATION OF WORK

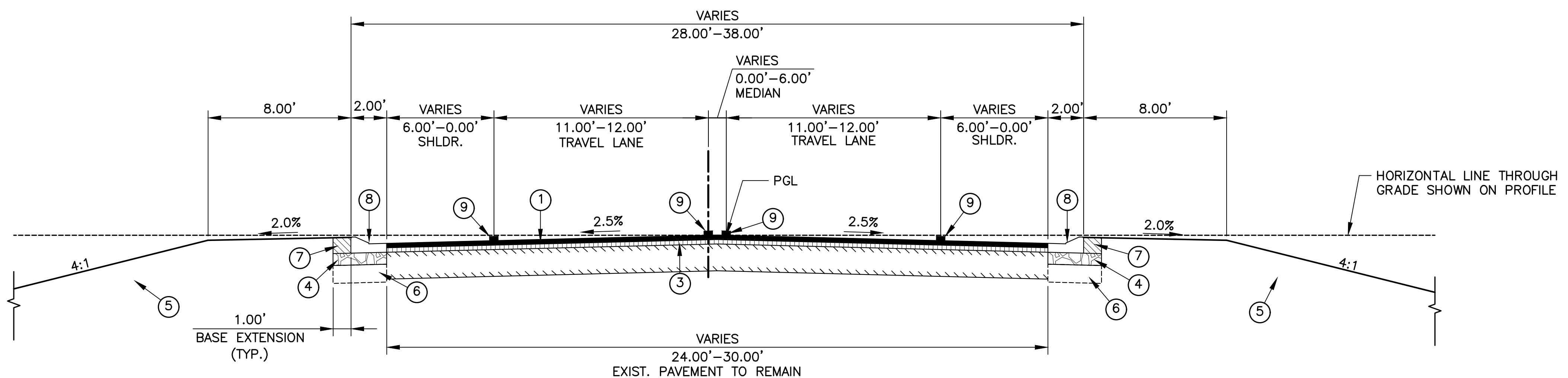
SITE	CONTROL SECTION	STATION		LOGMILE		ALGEBRAIC SUM OF ALL EQUATIONS FEET	GROSS LENGTH FEET	EXCEPTION FEET	BRIDGE LENGTH		ROADWAY LENGTH	
		BEGIN	END	BEGIN	END				FEET	MILES	FEET	MILES
US 190	013-12	294+45.00	320+60.00	5.106	5.601		2615	-	-	2615	0.495	
MBP	000-52	100+00.73	266+02.24				16601.61	140	0.026	16461.61	3.118	
LA 1088	852-11	133+49.58	158+72.70	2.335	2.815		2523.12	-	-	2523.12	0.477	
TOTAL LENGTH OF BRIDGES									140	0.026		
TOTAL LENGTH OF ROADWAY											21599.73	4.09
TOTAL MILES											4.116	

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\2_Typical Section_01.dwg



TYPICAL GRADING SECTION
 STA. 300+09.00 TO STA. 301+95.00
 N.T.S.



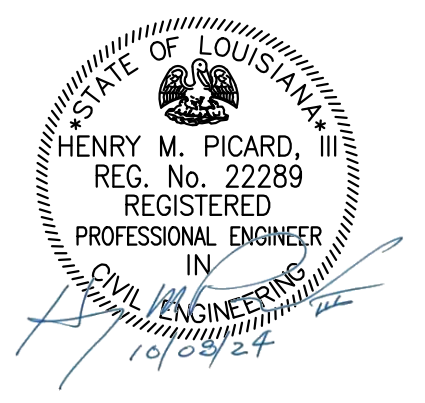
TYPICAL FINISHED SECTION
 STA. 300+09.00 TO STA. 301+95.00
 N.T.S.

NOTE:
 SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

- ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
- ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE)
- ⑤ EMBANKMENT MATERIAL
- ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER)
- ⑦ EMBANKMENT

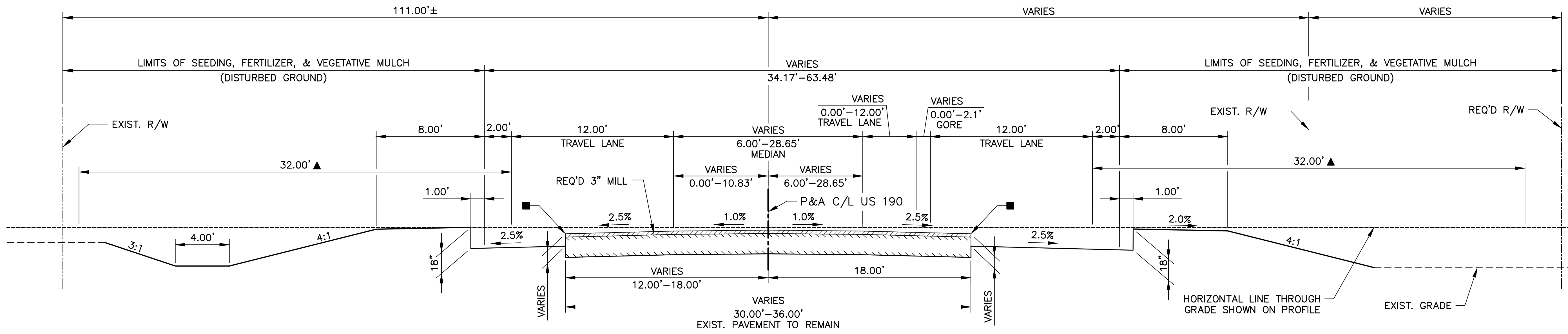
- ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE)
- ⑨ PAVEMENT MARKINGS
- ⑩ CONCRETE CURB (3" MOUNTABLE)
- ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑫ CONCRETE CURB (6" BARRIER)
- ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE)
- ⑮ CONCRETE WALK (4" THICK)
- ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- REQ'D FULL DEPTH SAWCUT AT LIMITS OF EXISTING PAVEMENT REMOVAL



SHEET NUMBER	2
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS TYPICAL SECTION US 190	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	NO. OF
REVISION	DESCRIPTION
BY	DATE

DATE: 10/7/24

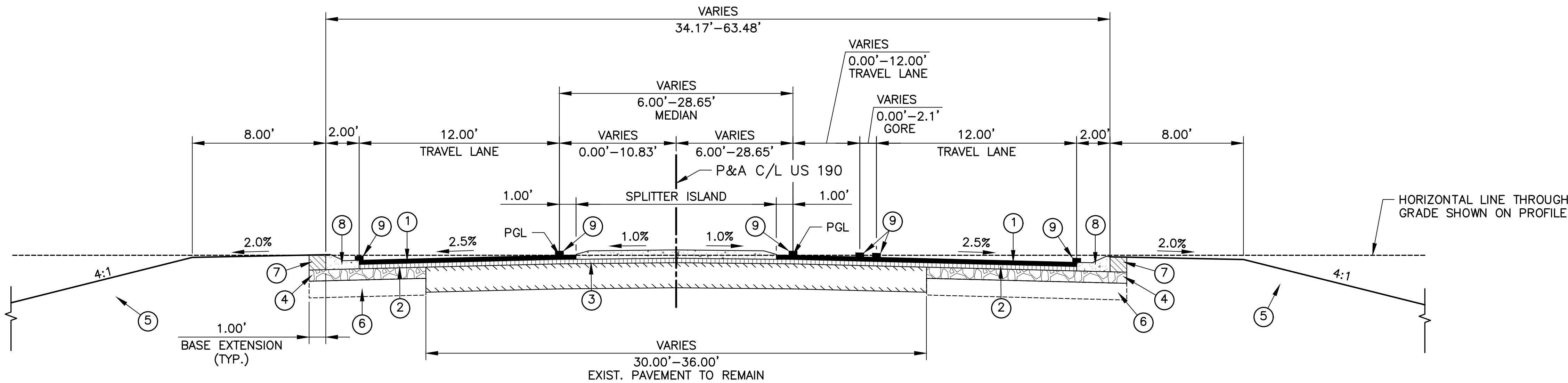
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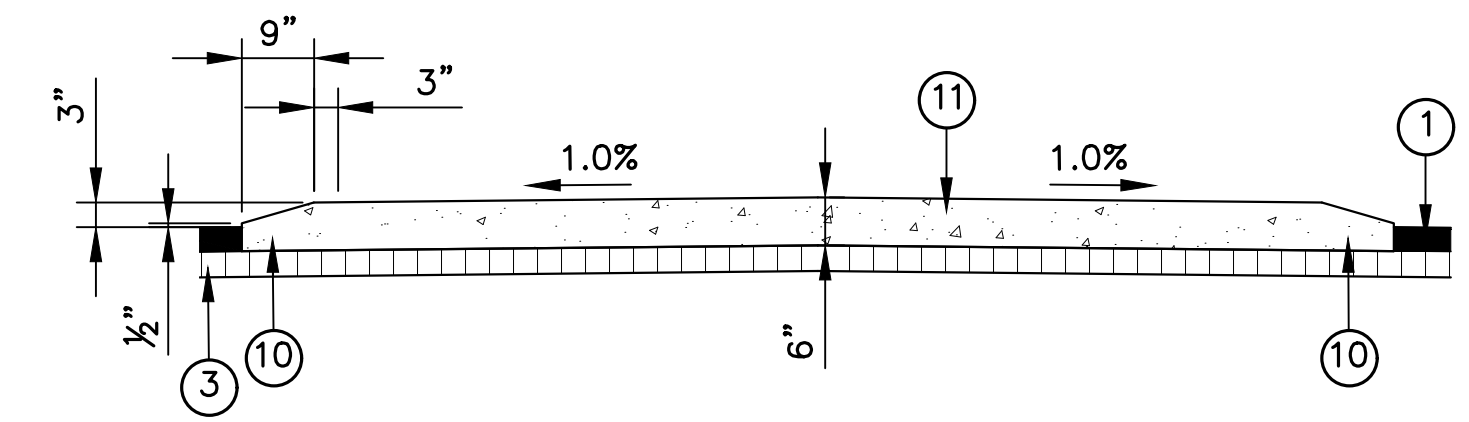
HALF SECTION IN CUT
TYPICAL DITCH DETAIL

TYPICAL GRADING SECTION
STA. 301+95.00 TO STA. 306+90.00
N.T.S.

HALF SECTION IN FILL



TYPICAL FINISHED SECTION
STA. 301+95.00 TO STA. 306+90.00
N.T.S.



MONOLITHIC SPLITTER ISLAND DETAIL
N.T.S.

NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

- ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
- ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE)
- ⑤ EMBANKMENT MATERIAL
- ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER)
- ⑦ EMBANKMENT
- ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE)
- ⑨ PAVEMENT MARKINGS
- ⑩ CONCRETE CURB (3" MOUNTABLE)
- ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑫ CONCRETE CURB (6" BARRIER)
- ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE)
- ⑮ CONCRETE WALK (4" THICK)
- ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- REQ'D FULL DEPTH SAWCUT AT LIMITS OF EXISTING PAVEMENT REMOVAL



SHEET NUMBER	2a
ST. TAMMANY	NO.15.012
PARISH PROJECT	2014EN0001
B.K.I. PROJECT	
ROADWAY PLANS	TYPICAL SECTION US 190
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	Oct. 2024
BY	
REVISION DESCRIPTION	
NO.	
DATE	

DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\2b_Typical Section_03.dwg

SHEET NUMBER 2b

ST. TAMMANY
2014EN0001
NO.15.012

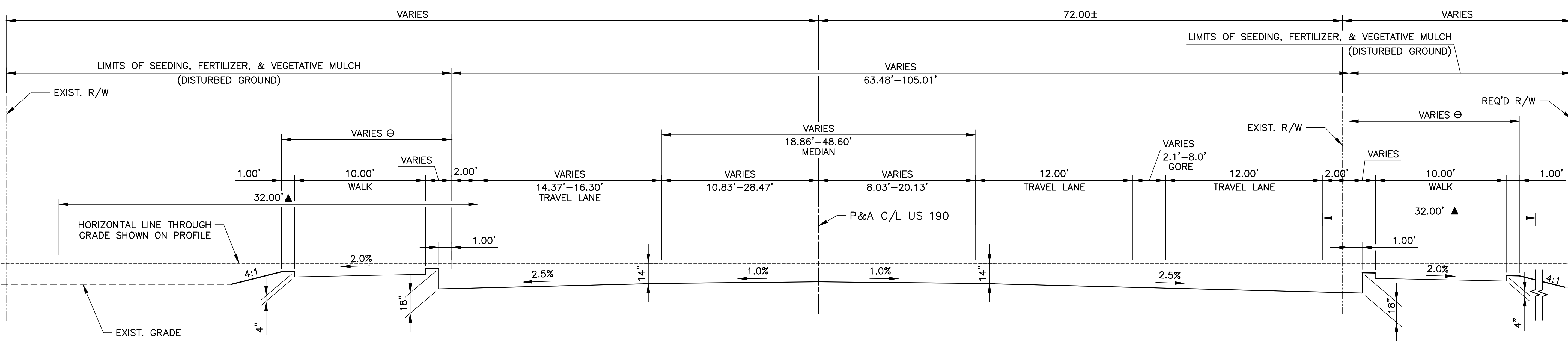


MANDEVILLE BYPASS
LA 1088 TO US 190
TYPICAL SECTION US 190



T.J.K. D.E.B.
G.A.D. T.J.K.
Oct. 2024
DESIGNED CHECKED
DATE SHEET

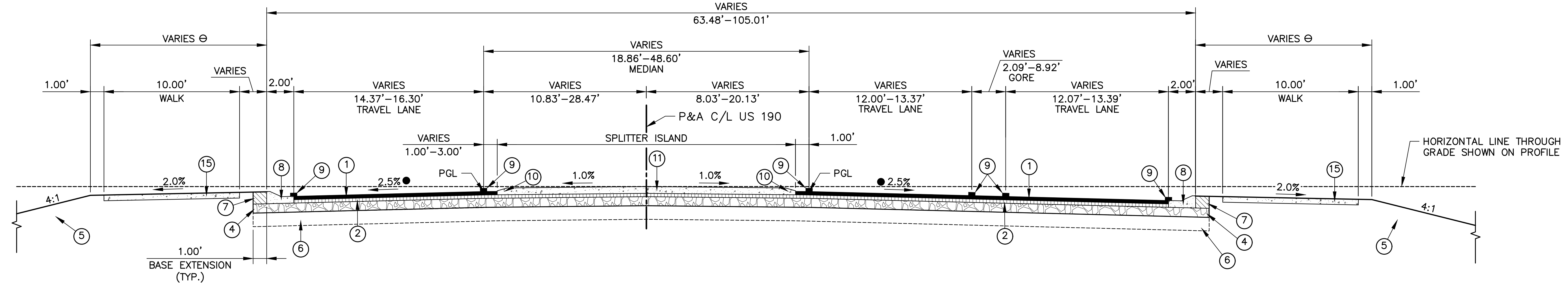
NO.	DATE	REVISION DESCRIPTION



HALF SECTION IN CUT
TYPICAL DITCH DETAIL

TYPICAL GRADING SECTION
STA. 306+90.00 TO STA. 307+46.62
N.T.S.

HALF SECTION IN FILL



TYPICAL FINISHED SECTION
STA. 306+90.00 TO STA. 307+46.62
N.T.S.

NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

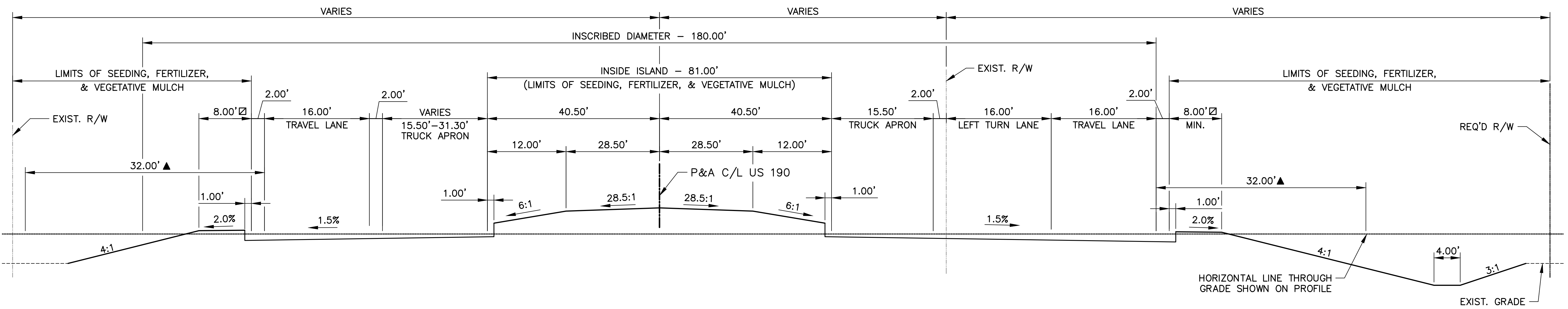
LEGEND

- | | |
|--|--|
| ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F) | ⑩ CONCRETE CURB (3" MOUNTABLE) |
| ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑫ CONCRETE CURB (6" BARRIER) |
| ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE) | ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ⑤ EMBANKMENT MATERIAL | ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE) |
| ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER) | ⑮ CONCRETE WALK (4" THICK) |
| ⑦ EMBANKMENT | ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS |
| ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE) | ⊖ SEE PLAN AND PROFILE AND GEOMETRIC SHEETS FOR GEOMETRIC AND LOCATION INFORMATION OF SIDE WALK. |
| ⑨ PAVEMENT MARKINGS | ● CROSS SLOPE TRANSITION FROM STA. 307+06.62 TO STA. 307+46.62 |



DATE: 10/7/24

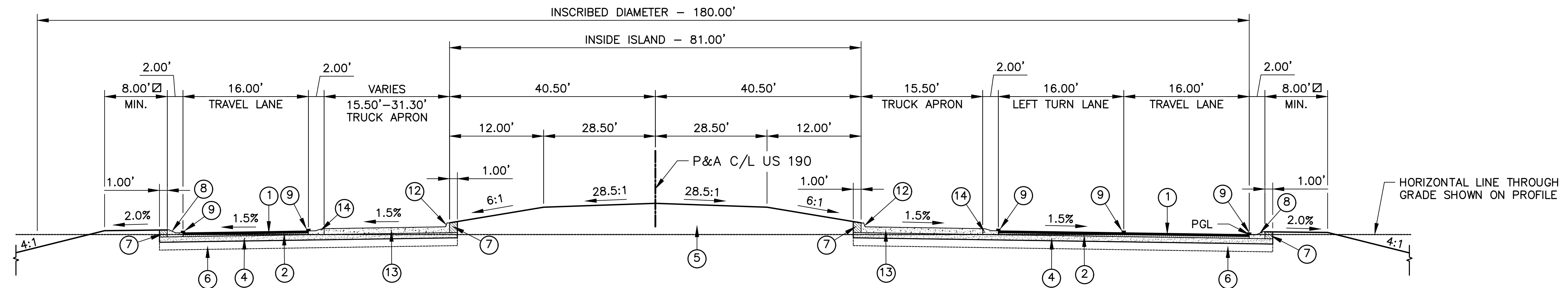
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HALF SECTION IN FILL

TYPICAL GRADING SECTION
STA. 307+46.62 TO STA. 309+26.62
N.T.S.

HALF SECTION IN CUT
TYPICAL DITCH DETAIL

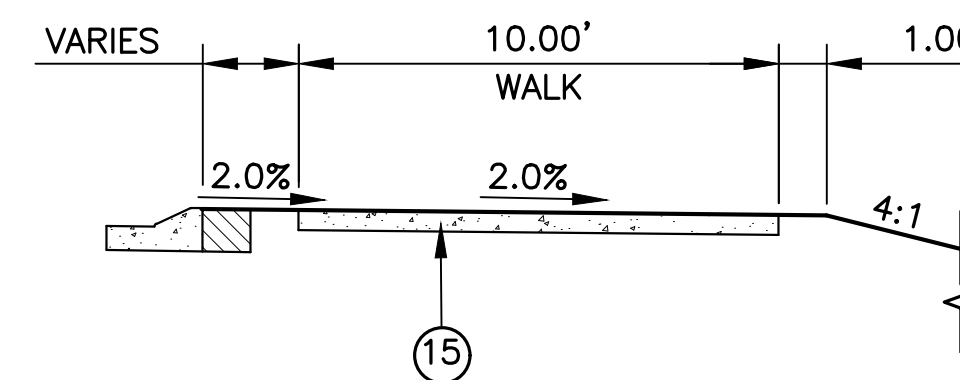


TYPICAL FINISHED SECTION
STA. 307+46.62 TO STA. 309+26.62
N.T.S.

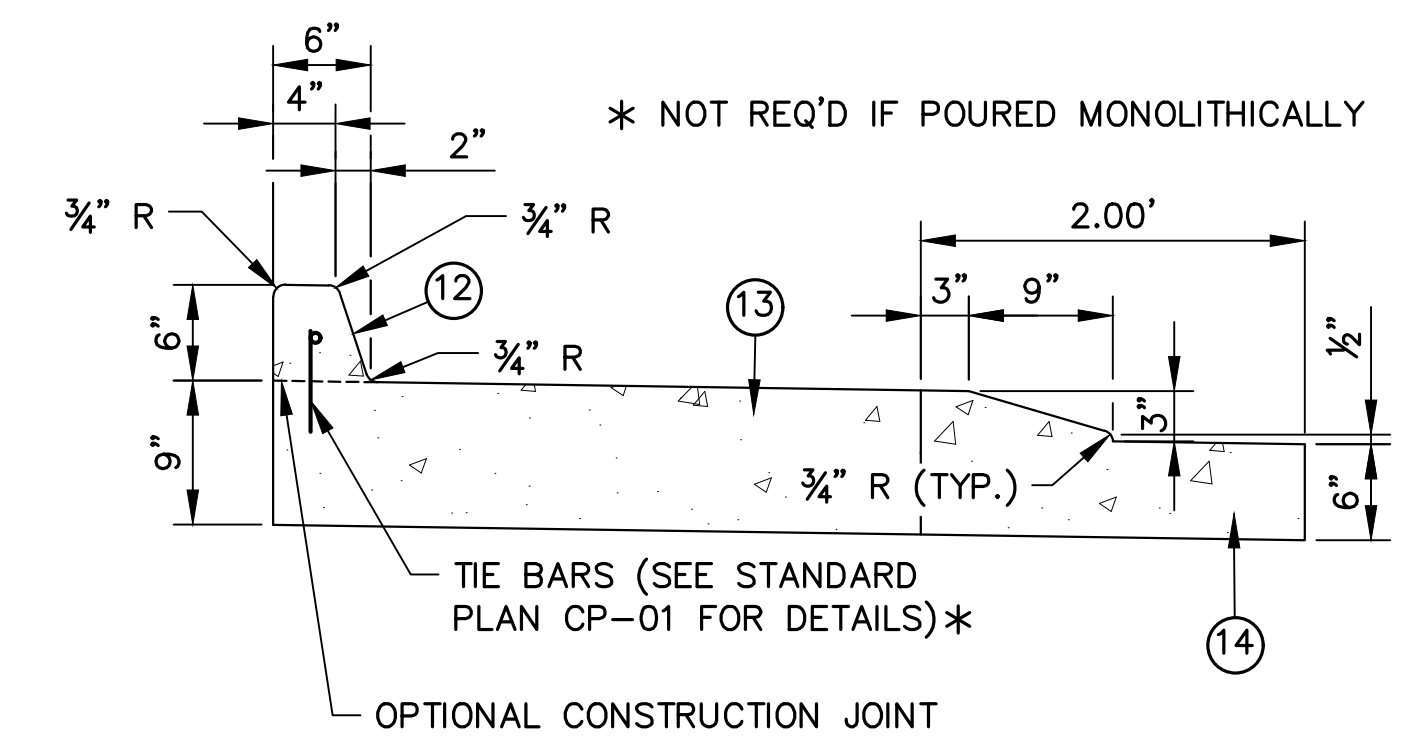
NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

- | | |
|--|---|
| ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F) | ⑩ CONCRETE CURB (3" MOUNTABLE) |
| ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑫ CONCRETE CURB (6" BARRIER) |
| ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE) | ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ⑤ EMBANKMENT MATERIAL | ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE) |
| ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER) | ⑮ CONCRETE WALK (4" THICK) |
| ⑦ EMBANKMENT | ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS |
| ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE) | ☒ SEE SIDEWALK BERM SECTION (THIS SHEET) |
| ⑨ PAVEMENT MARKINGS | |



SIDEWALK BERM SECTION
N.T.S.
SEE PLAN AND PROFILE AND GEOMETRIC LAYOUT SHEETS FOR SIDEWALK LOCATION.



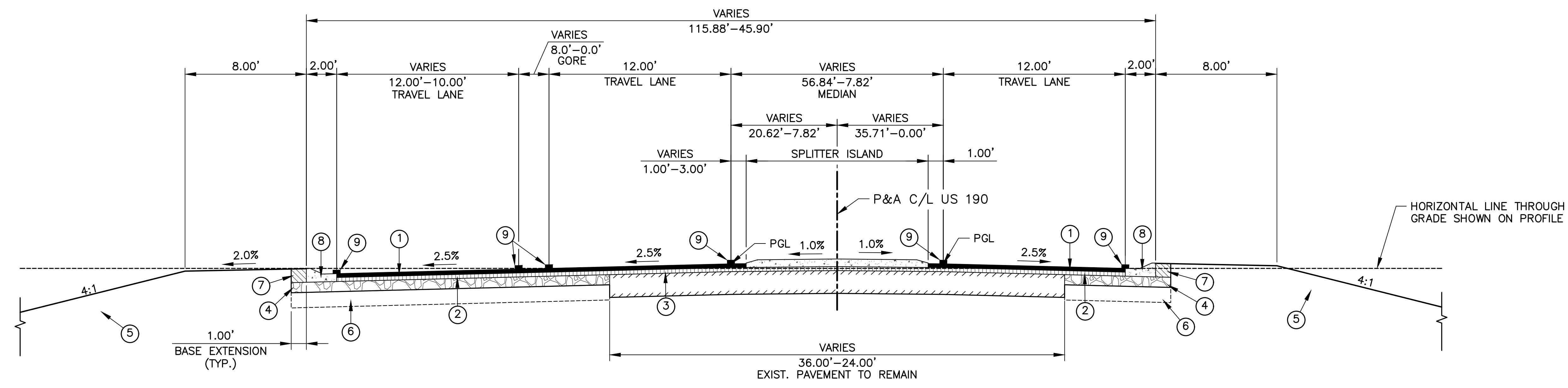
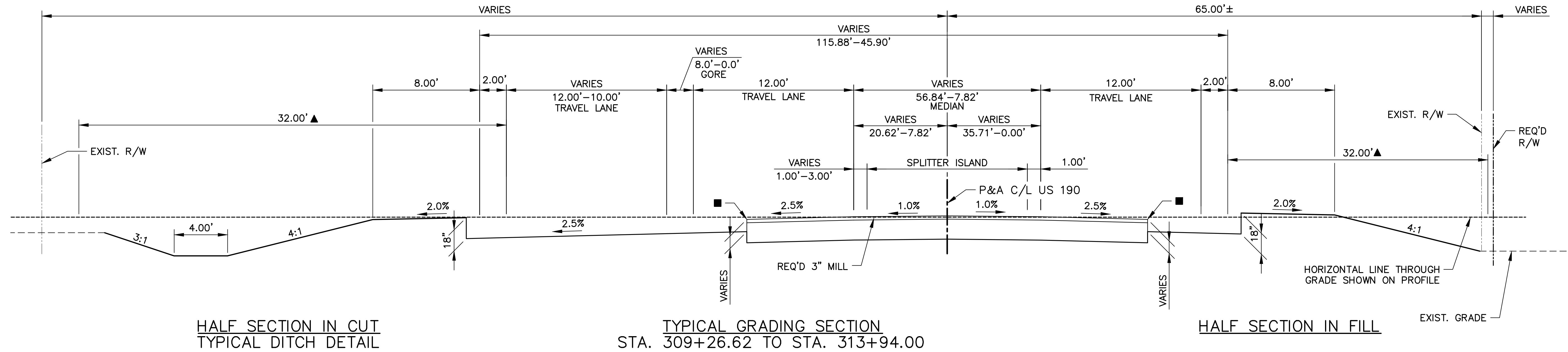
MONOLITHIC CONCRETE
TRUCK APRON DETAIL
N.T.S.



SHEET NUMBER	2c
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	TYPICAL SECTION US 190
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	Oct. 2024
REVISION	DESCRIPTION
NO.	DATE

DATE: 10/7/24

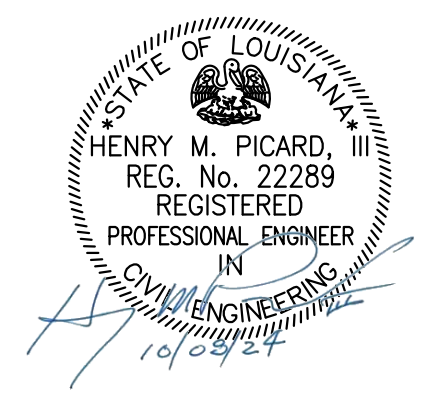
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NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

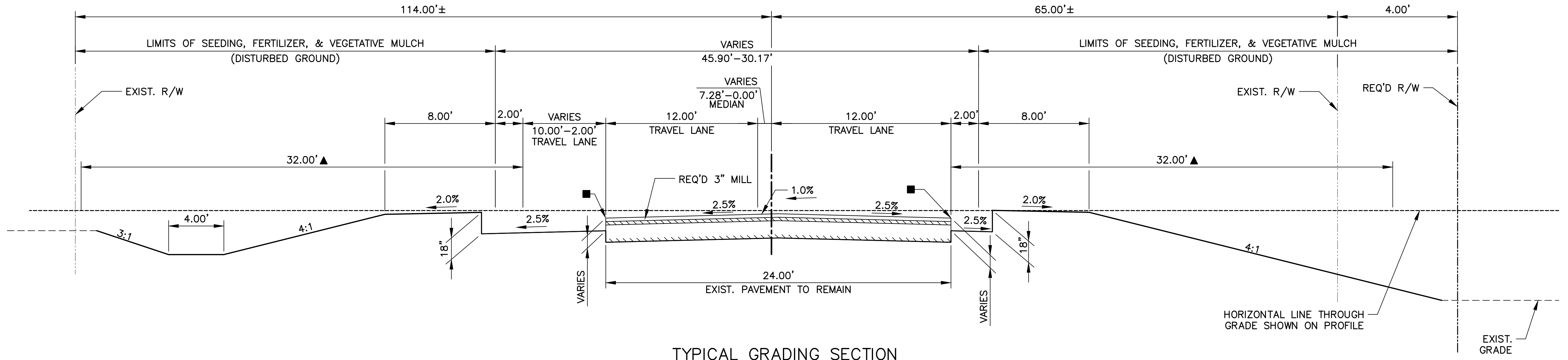
- ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
- ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE)
- ⑤ EMBANKMENT MATERIAL
- ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER)
- ⑦ EMBANKMENT
- ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE)
- ⑨ PAVEMENT MARKINGS
- ⑩ CONCRETE CURB (3" MOUNTABLE)
- ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑫ CONCRETE CURB (6" BARRIER)
- ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE)
- ⑮ CONCRETE WALK (4" THICK)
- ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- REQ'D FULL DEPTH SAWCUT AT LIMITS OF EXISTING PAVEMENT REMOVAL



SHEET NUMBER	2d
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BYPASS LA 1088 TO US 190	
TYPICAL SECTION US 190	
T.J.K. D.E.B.	G.A.D.
CHECKED	CHECKED
DATE	OCT. 2024
SHEET	OF
NO.	DATE
NO.	DATE

DATE: 10/7/24

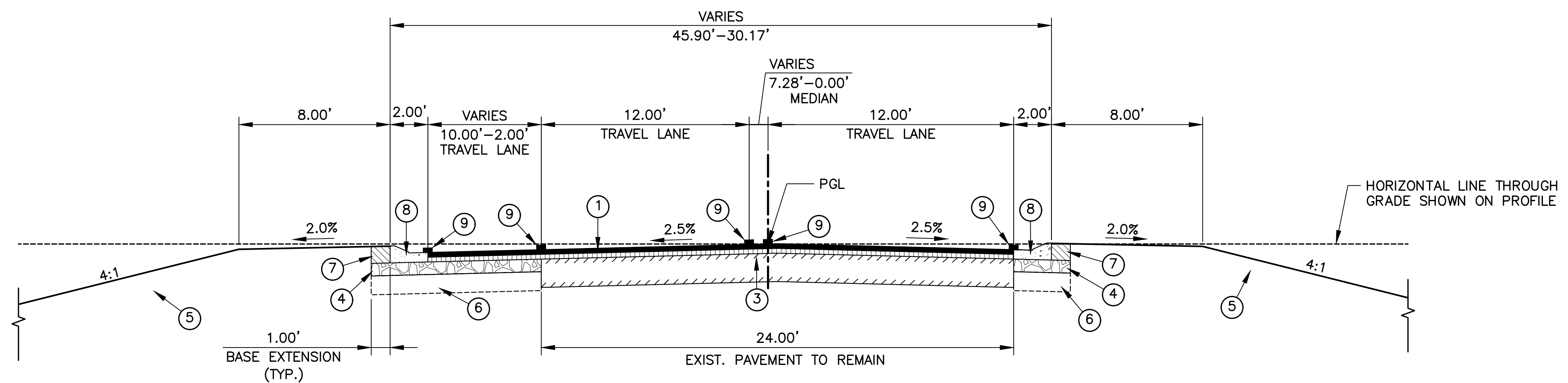
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HALF SECTION IN CUT
TYPICAL DITCH DETAIL

TYPICAL GRADING SECTION
STA. 313+94.00 TO STA. 315+40.00
N.T.S.

HALF SECTION IN FILL



TYPICAL FINISHED SECTION
STA. 313+94.00 TO STA. 315+40.00
N.T.S.

NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

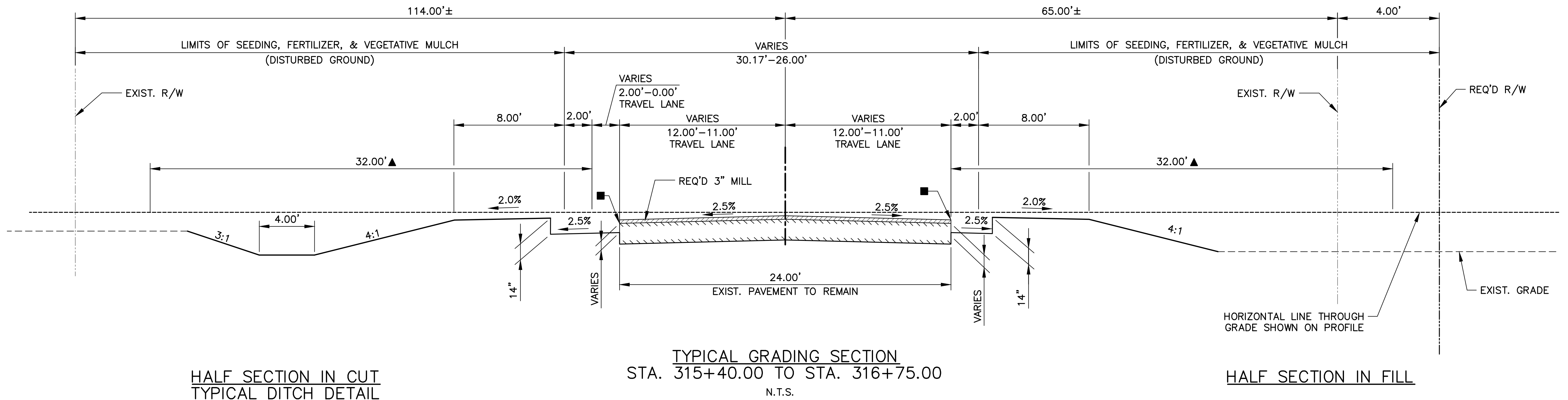
- ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
- ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE)
- ⑤ EMBANKMENT MATERIAL
- ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER)
- ⑦ EMBANKMENT
- ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE)
- ⑨ PAVEMENT MARKINGS
- ⑩ CONCRETE CURB (3" MOUNTABLE)
- ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑫ CONCRETE CURB (6" BARRIER)
- ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE)
- ⑮ CONCRETE WALK (4" THICK)
- ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- REQ'D FULL DEPTH SAWCUT AT LIMITS OF EXISTING PAVEMENT REMOVAL



SHEET NUMBER	2e
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	TYPICAL SECTION US 190
LOUISIANA	BK
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	NO.
DESCRIPTION	BY
REVISION	DATE

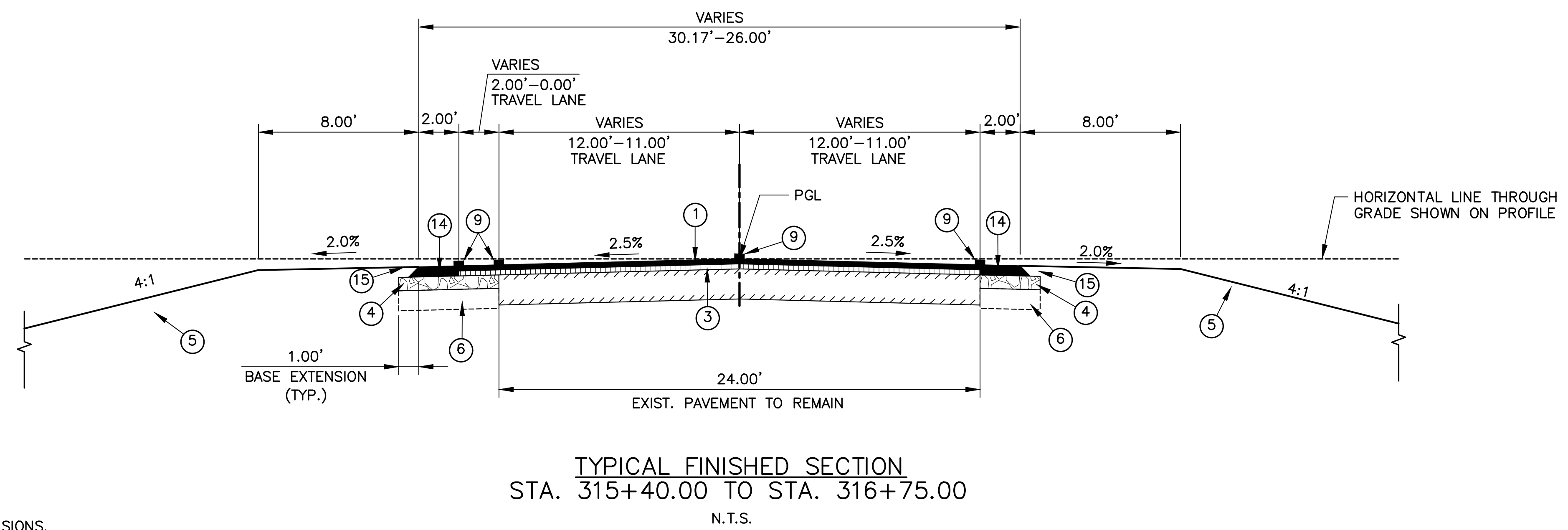
DATE: 10/7/24

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HALF SECTION IN CUT
 TYPICAL DITCH DETAIL

HALF SECTION IN FILL



NOTE:
 SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

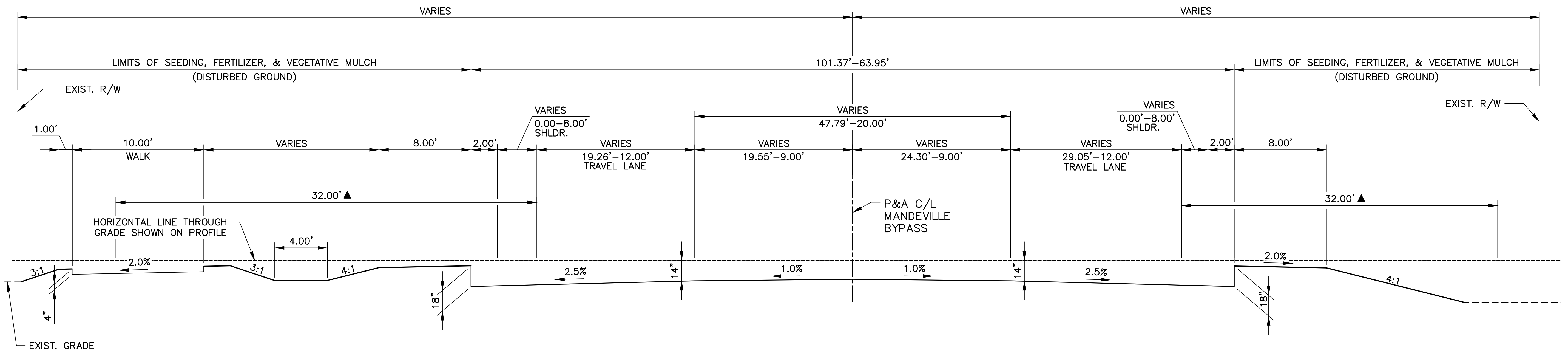
- ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
- ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
- ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE)
- ⑤ EMBANKMENT MATERIAL
- ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER)
- ⑦ EMBANKMENT
- ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE)
- ⑨ PAVEMENT MARKINGS
- ⑩ CONCRETE CURB (3" MOUNTABLE)
- ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑫ CONCRETE CURB (6" BARRIER)
- ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH)
- ⑭ 6" ASPHALT CONCRETE
- ⑮ SHOULDER WEDGE
- ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- REQ'D FULL DEPTH SAWCUT AT LIMITS OF EXISTING PAVEMENT REMOVAL



SHEET NUMBER	2f
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS TYPICAL SECTION US 190	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	NO. OF
BY	NO.
REVISION	DESCRIPTION
NO.	DATE

DATE: 10/7/24

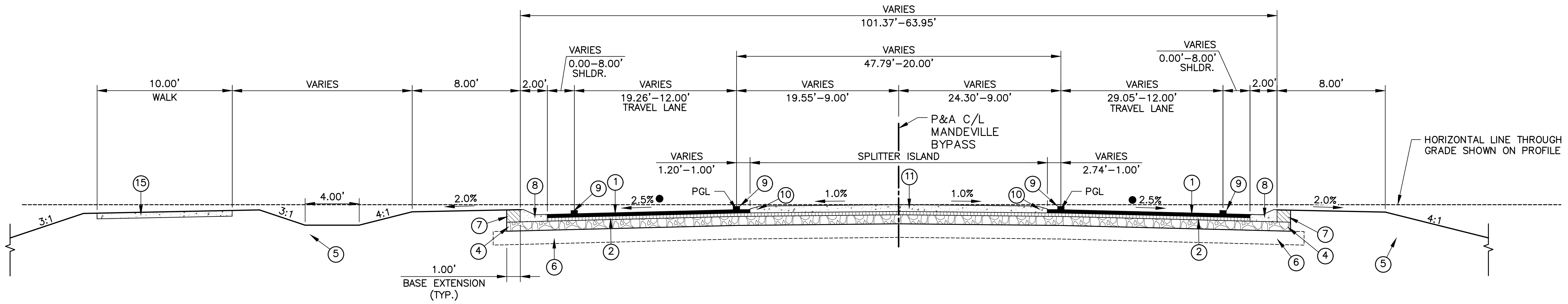
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HALF SECTION IN CUT
TYPICAL DITCH DETAIL

TYPICAL GRADING SECTION
STA. 100+90.73 TO STA. 103+30.00
N.T.S.

HALF SECTION IN FILL



TYPICAL FINISHED SECTION
STA. 100+90.73 TO STA. 103+30.00
N.T.S.

NOTE:
SEE GEOMETRIC LAYOUT SHEETS FOR DETAILS ON VARYING DIMENSIONS.

LEGEND

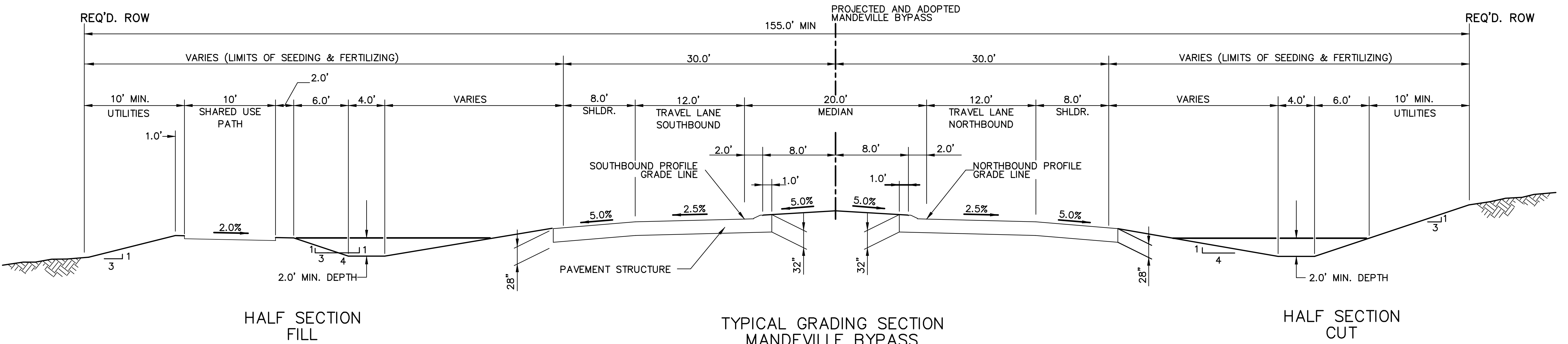
- | | |
|--|--|
| ① 3.0" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F) | ⑩ CONCRETE CURB (3" MOUNTABLE) |
| ② 3.0" ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑪ 6.0" INCIDENTAL CONCRETE (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ③ VARIABLE THICKNESS ASPHALT CONCRETE BINDER COURSE (LEVEL 2) | ⑫ CONCRETE CURB (6" BARRIER) |
| ④ CLASS II BASE COURSE (8" THICK) (CRUSHED STONE, RECYCLED PCCP, OR BLENDED CALCIUM SULFATE) | ⑬ 9.0" PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (BRICK RED COLOR - BROOM FINISH) |
| ⑤ EMBANKMENT MATERIAL | ⑭ COMBINATION CONCRETE CURB AND GUTTER (3" MOUNTABLE) |
| ⑥ TYPE E LIME TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY PROJECT ENGINEER) | ⑮ CONCRETE WALK (4" THICK) |
| ⑦ EMBANKMENT | ▲ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS |
| ⑧ COMBINATION CONCRETE CURB AND GUTTER (4" MOUNTABLE) | ⊙ SEE PLAN AND PROFILE AND GEOMETRIC SHEETS FOR GEOMETRIC AND LOCATION INFORMATION OF SIDE WALK. |
| ⑨ PAVEMENT MARKINGS | ● CROSS SLOPE TRANSITION FROM STA. 307+06.62 TO STA. 307+46.62 |



SHEET NUMBER	2g
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BLK.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS TYPICAL SECTION US 190	
T.J.K. D.E.B.	Oct. 2024
G.A.D. T.J.K.	of
DESIGNED	DATE
CHECKED	SHEET
DETAILED	
CHECKED	
REVISION DESCRIPTION	
NO.	DATE

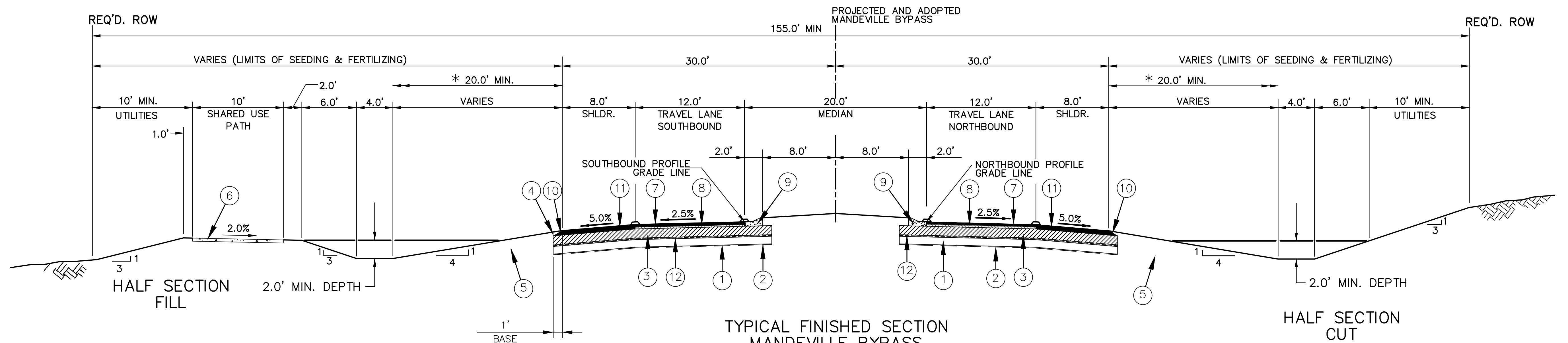
DATE: 10/7/24

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TYPICAL GRADING SECTION
 MANDEVILLE BYPASS
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 103+30.00 TO STA. 126+13.82
 STA. 129+74.25 TO STA. 168+52.24
 STA. 171+94.34 TO STA. 180+00.00

NOTE:
 STATIONING SHOWN IS ON PROJECTED
 AND ADOPTED CENTERLINE MANDEVILLE BYPASS.
 * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS



TYPICAL FINISHED SECTION
 MANDEVILLE BYPASS
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 103+30.00 TO STA. 126+13.82
 STA. 129+74.25 TO STA. 168+52.24
 STA. 171+94.34 TO STA. 180+00.00

LEGEND

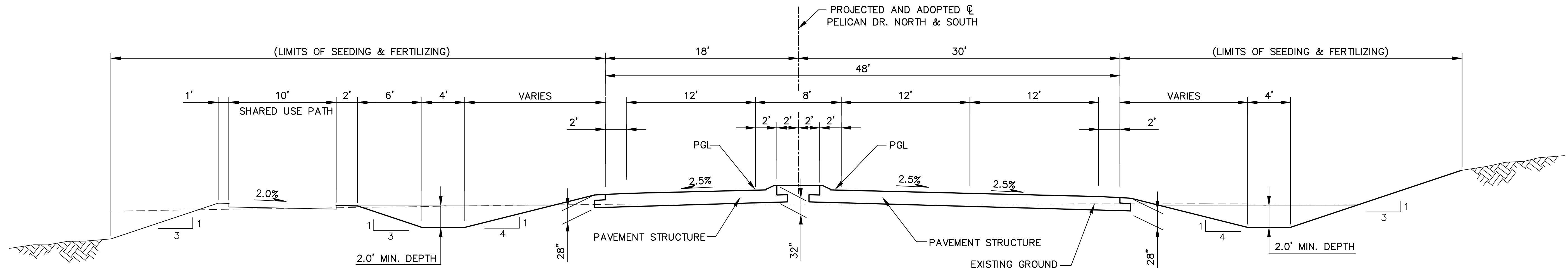
ITEM NO.	DESCRIPTION
①	NONPLASTIC EMBANKMENT (SAND) 10" THICK
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 10" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	4" CONCRETE SHARED USE PATH
⑦	2" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑧	6" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑨	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑩	SHOULDER WEDGE
⑪	8" ASPHALT CONCRETE
⑫	GEOGRID
⊖	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.



SHEET NUMBER	2h
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
PARISH PROJECT	
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS TYPICAL SECTION MBP	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	NO. OF
BY	DESCRIPTION
NO.	DATE

DATE: 10/7/24

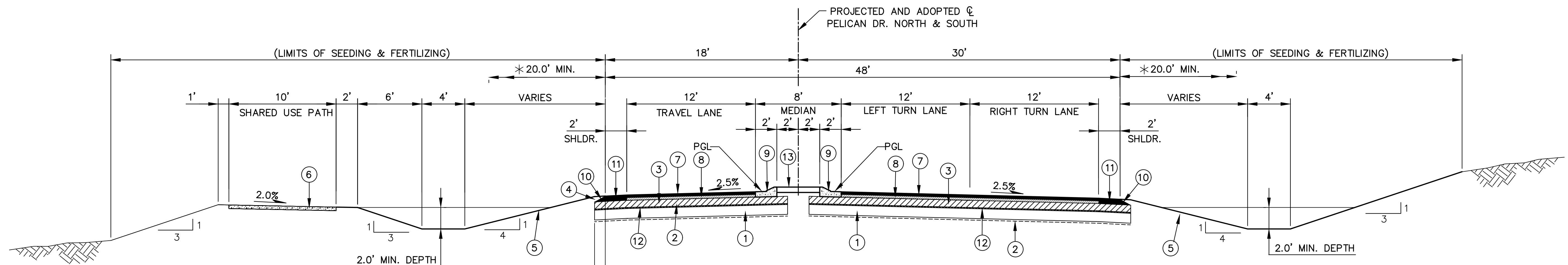
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HALF SECTION FILL

TYPICAL GRADING SECTION
 PELICAN DR. NORTH & SOUTH
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 40+00 TO 47+21.20

HALF SECTION CUT



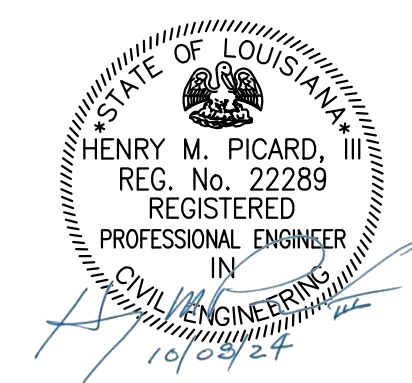
HALF SECTION FILL

TYPICAL FINISHED SECTION
 PELICAN DR. NORTH & SOUTH
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 30+00 TO 32+01.04
 STA. 40+00 TO 47+21.20

HALF SECTION CUT

LEGEND

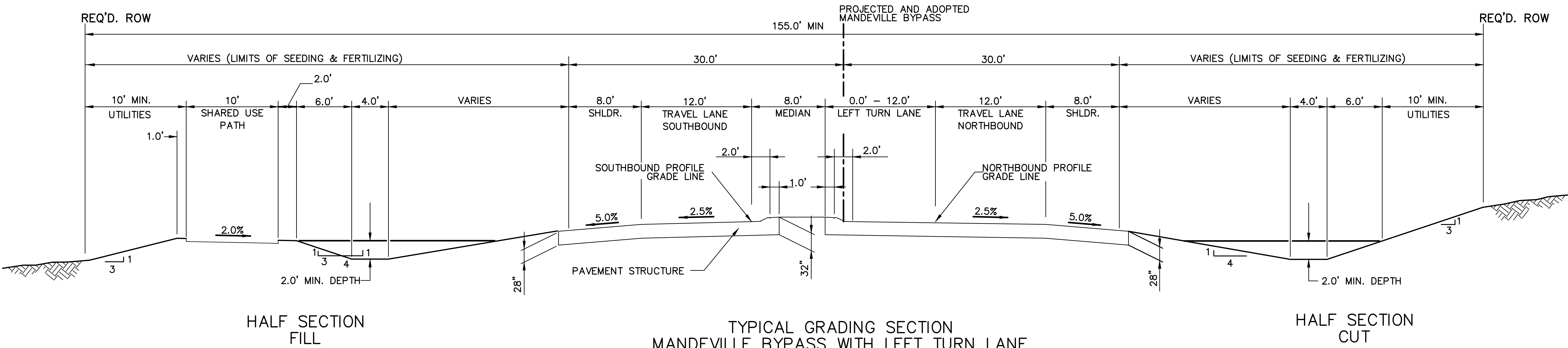
ITEM NO.	DESCRIPTION
①	NONPLASTIC EMBANKMENT (SAND) 10" THICK
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 10" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	4" CONCRETE SHARED USE PATH
⑦	2" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑧	6" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑨	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑩	SHOULDER WEDGE
⑪	8" ASPHALT CONCRETE
⑫	GEOGRID
⑬	6" INCIDENTAL CONCRETE PAVEMENT
Ⓧ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.
*	TO BE CONSTRUCTED FREE OF OBSTRUCTIONS



SHEET NUMBER	21
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BLK.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
TYPICAL SECTION PELICAN DR. N & S	
ROADWAY PLANS	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	Oct. 2024
DESIGNED	G.A.D.
CHECKED	T.J.K.
DATE	
NO.	
DATE	
BY	
REVISION	DESCRIPTION

DATE: 10/7/24

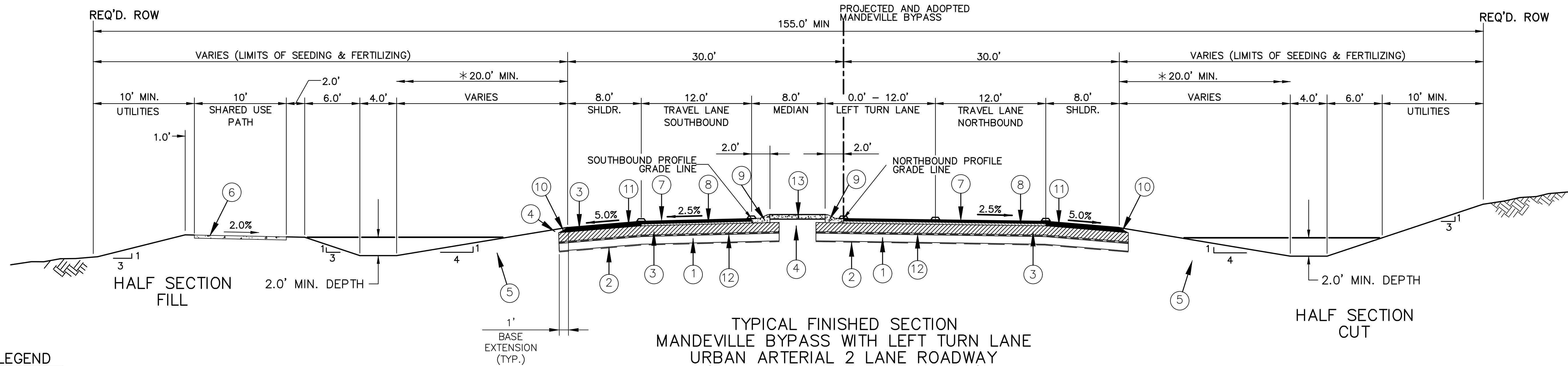
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TYPICAL GRADING SECTION
 MANDEVILLE BYPASS WITH LEFT TURN LANE
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 126+13.82 TO STA. 128+31.75
 STA. 168+52.24 TO STA. 170+41.70

NOTE:
 STATIONING SHOWN IS ON PROJECTED
 AND ADOPTED CENTERLINE MANDEVILLE BYPASS.

* TO BE CONSTRUCTED FREE OF OBSTRUCTIONS



TYPICAL FINISHED SECTION
 MANDEVILLE BYPASS WITH LEFT TURN LANE
 URBAN ARTERIAL 2 LANE ROADWAY
 (OPEN DITCH - RAISED MEDIAN)
 (UA-2, 45 MPH DESIGN SPEED)
 STA. 126+13.82 TO STA. 128+31.75
 STA. 168+52.24 TO STA. 170+41.70

LEGEND

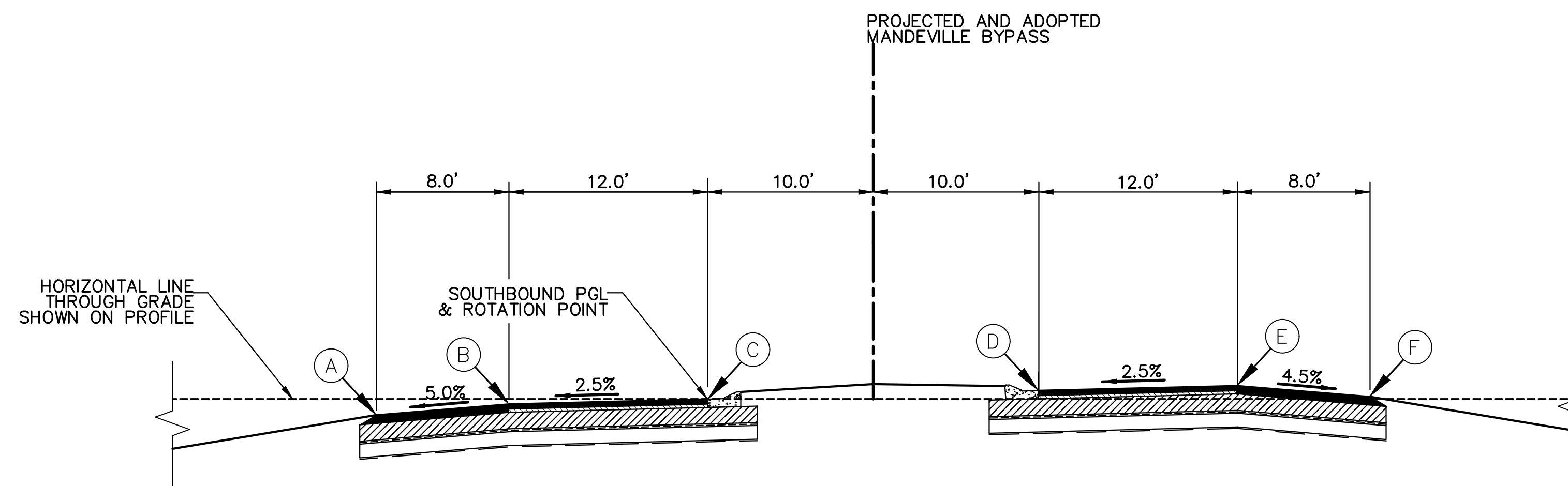
ITEM NO.	DESCRIPTION
①	NONPLASTIC EMBANKMENT (SAND) 10" THICK
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 10" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	4" CONCRETE SHARED USE PATH
⑦	2" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑧	6" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑨	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑩	SHOULDER WEDGE
⑪	8" ASPHALT CONCRETE
⑫	GEOGRID
⑬	6" INCIDENTAL CONCRETE PAVEMENT
⊖	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.



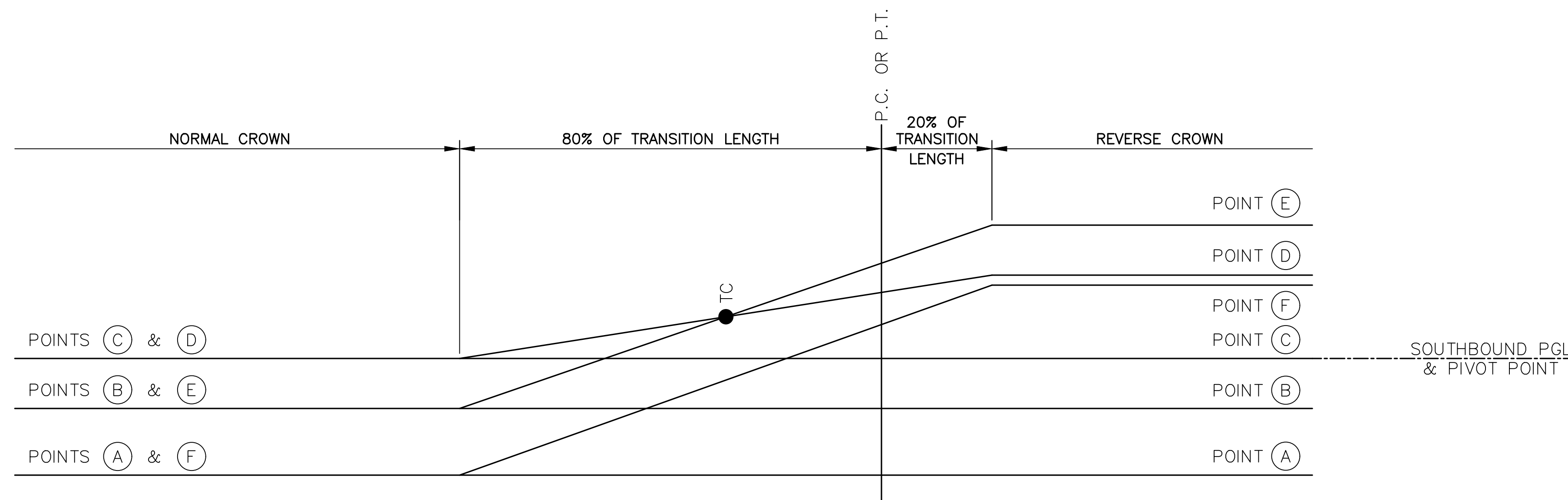
SHEET NUMBER	2k
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
TYPICAL SECTION MBP W/TURN LANE	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	OF
NO.	DATE
NO.	REVISION DESCRIPTION

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\21 Typ_mbp.dwg



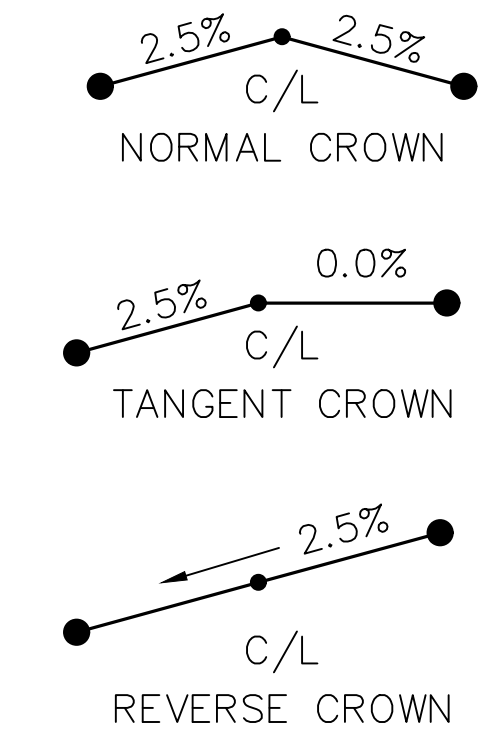
TYPICAL SUPERELEVATED FINISHED SECTION
MANDEVILLE BYPASS
STA. 160+70.48 TO STA. 173+57.09



TYPICAL SUPERELEVATION DIAGRAM

NOTE:
100 FT. VERTICAL CURVE REQUIRED AT ALL ANGULAR BREAKS IN GRADE

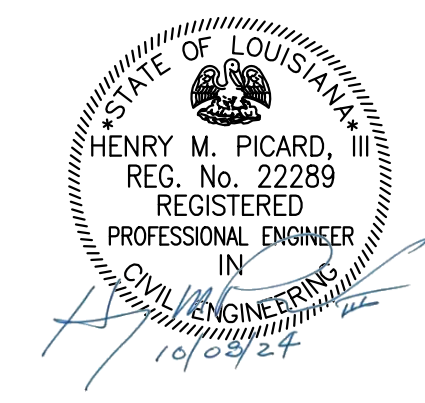
NOTE:
NC = NORMAL CROWN
TC = TANGENT CROWN
RC = REVERSE CROWN



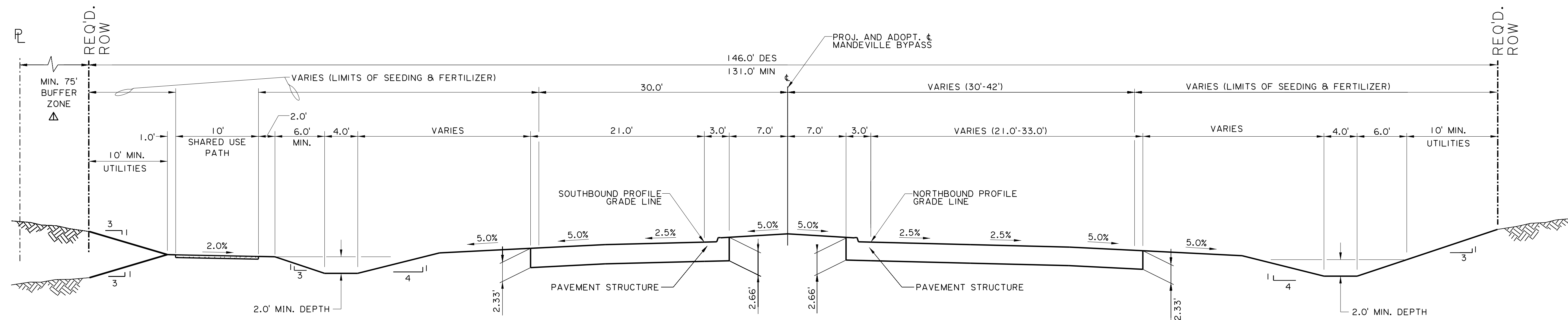
SUPERELEVATION DETAILS (IN FEET) WITH REFERENCE TO HORIZONTAL LINE THROUGH GRADE SHOWN ON PROFILE

STATION RANGE	RADIUS	RATE	A	B	C	D	E	F	TRANS. LENGTH	LEFT SHOULDER RATE	RIGHT SHOULDER RATE
-	-	N.C.	-0.70	-0.30	0.00	0.00	-0.30	-0.70	-	-	-
163+00.48 - 171+27.09	750'	R.C.	-0.70	-0.30	0.00	0.50	0.80	0.44	230'	5.0%	-4.5%

NEGATIVE RATE DENOTES DOWN FROM LEFT TO RIGHT

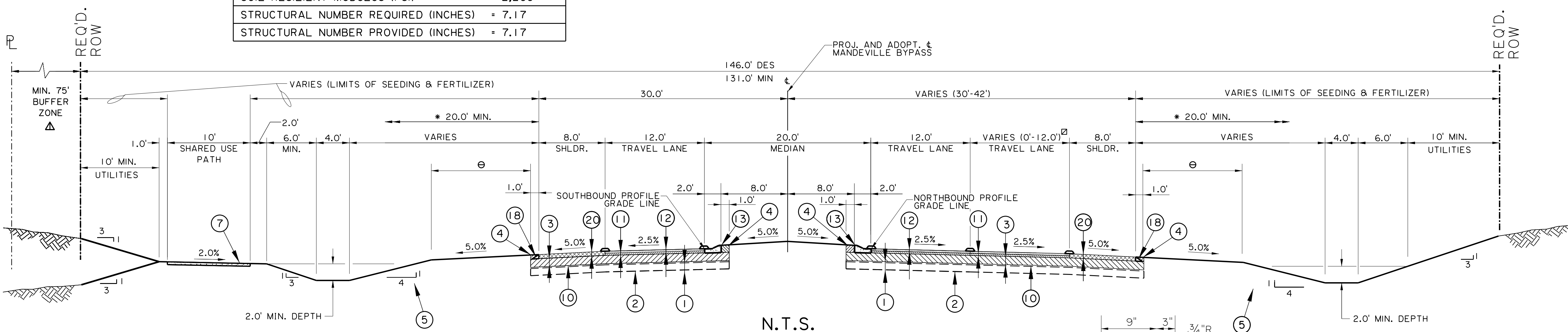


SHEET NUMBER	21
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
PARISH PROJECT	
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS TYPICAL SECTION MBP SUPERELEVATED	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	CHECKED
DATE	SHEET
Oct. 2024	of
NO.	DATE
REVISION	DESCRIPTION

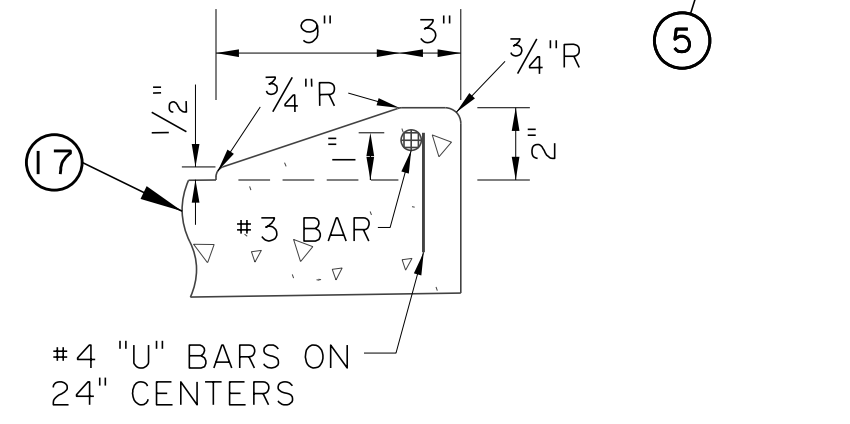


FLEXIBLE STRUCTURAL DESIGN	
CURRENT ADT	= 1,409
DESIGN ADT	= 2,600
PERFORMANCE PERIOD (YEARS)	= 20
18-KIP ESALS	= 8,802,294
SOIL RESILIENT MODULUS (PSI)	= 2,200
STRUCTURAL NUMBER REQUIRED (INCHES)	= 7.17
STRUCTURAL NUMBER PROVIDED (INCHES)	= 7.17

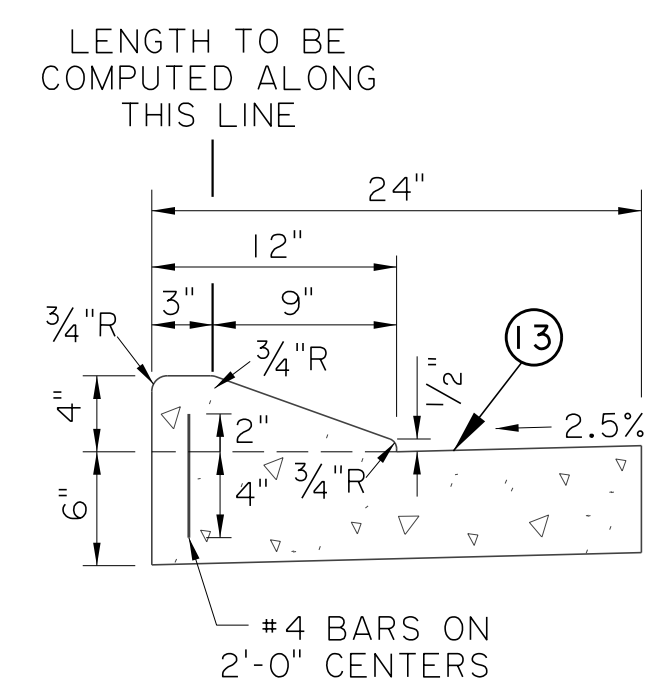
N.T.S.
TYPICAL GRADING SECTION
MANDEVILLE BYPASS
STA. 180+00.00 TO STA. 200+57.50
STA. 202+77.50 TO STA. 262+08.42



N.T.S.
TYPICAL FINISHED SECTION
MANDEVILLE BYPASS
STA. 180+00.00 TO STA. 200+57.50
STA. 202+77.50 TO STA. 262+08.42



2" COMB. CURB AND GUTTER (MODIFIED BARRIER)
(N.T.S.)

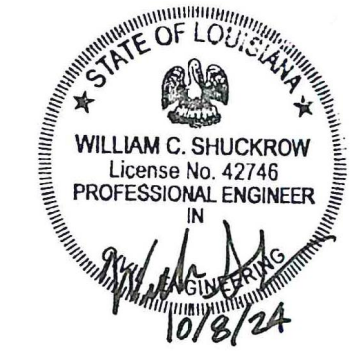


4" COMB. CURB AND GUTTER
(MOUNTABLE) (N.T.S.)

LEGEND

ITEM NO.	DESCRIPTION
①	NONPLASTIC EMBANKMENT (SAND) (10" THICK)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 10" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	6" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	2" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
Ⓧ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

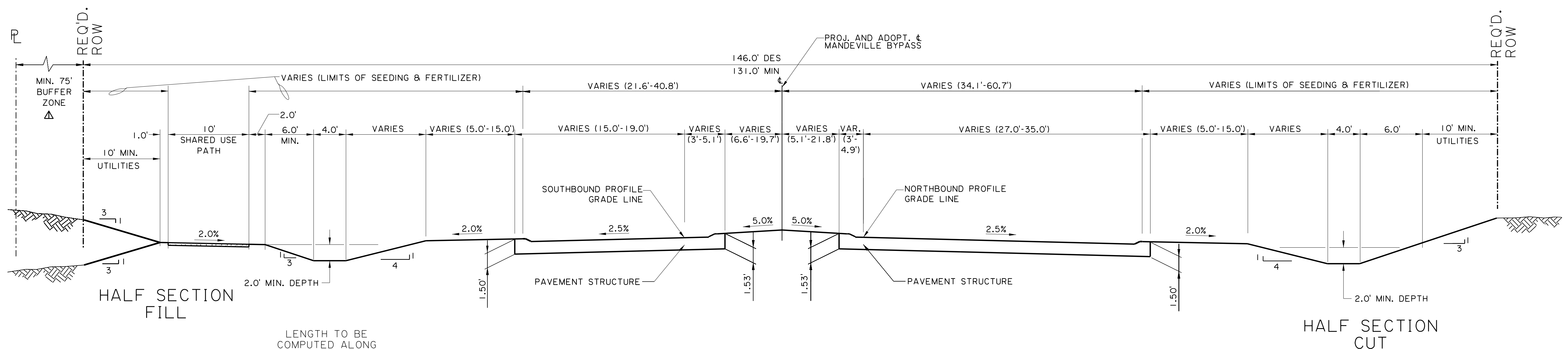
- NOTE:
STATIONING SHOWN IS ON PROJ. AND ADOPT. & MANDEVILLE BYPASS.
- DENOTES ITEM(S) NOT USED ON THIS SHEET
 - * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
 - △ BUFFER ZONE REQUIRED ALONG ABUTTING PROPERTY LINE OF PELICAN PARK AND FOREST BROOK SUBDIVISION. BUFFER ZONE NOT REQUIRED AT OTHER LIMITS OF PROJECT.
 - ☐ 0' FROM STA. 180+00.00 TO STA. 257+87.71
VARIES 0'-12' FROM STA. 257+87.71 TO STA. 259+67.71
12' FROM STA. 259+67.71 TO STA. 262+08.42
 - 0' FROM STA. 180+00.00 TO STA. 221+80.74
VARIES 0'-12' FROM STA. 221+80.74 TO STA. 227+20.74
12' FROM STA. 227+20.74 TO STA. 262+08.42



XREF:

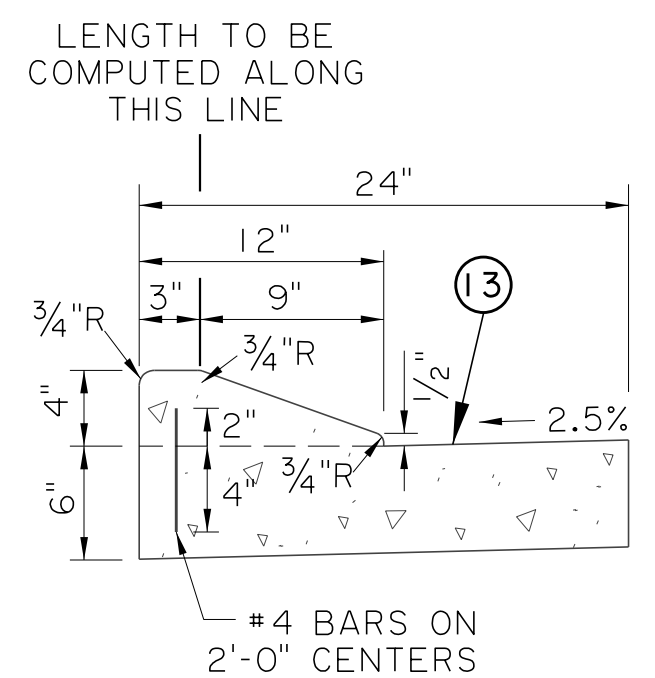
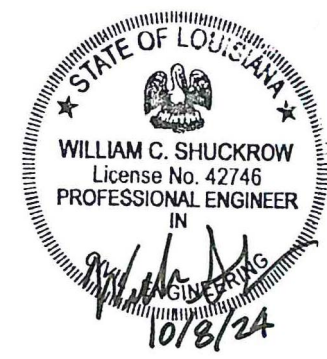
10/9/2024

TYP_SEC_12629_SHT-2(mbypass).dgn

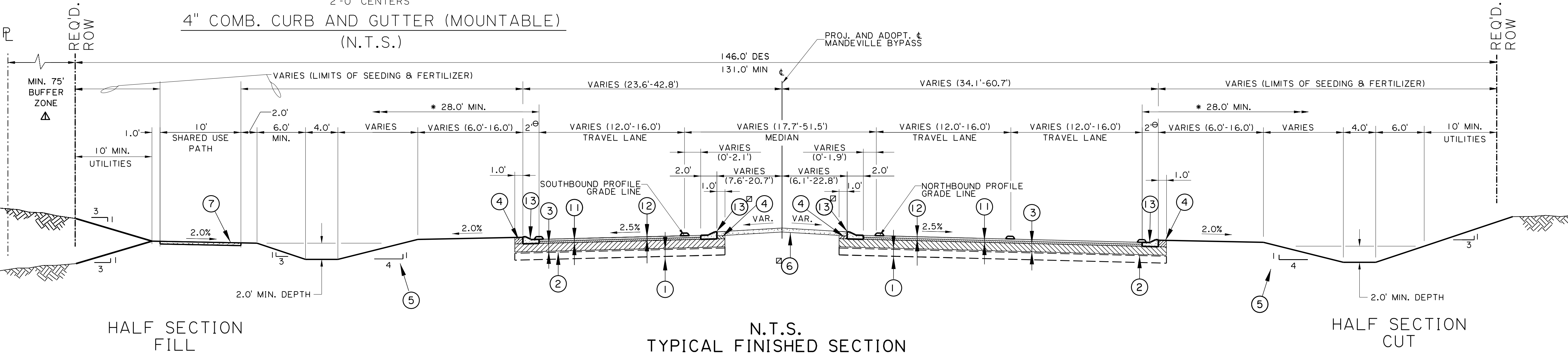


N.T.S.
TYPICAL GRADING SECTION
MANDEVILLE BYPASS
STA. 262+08.42 TO STA. 265+11.19

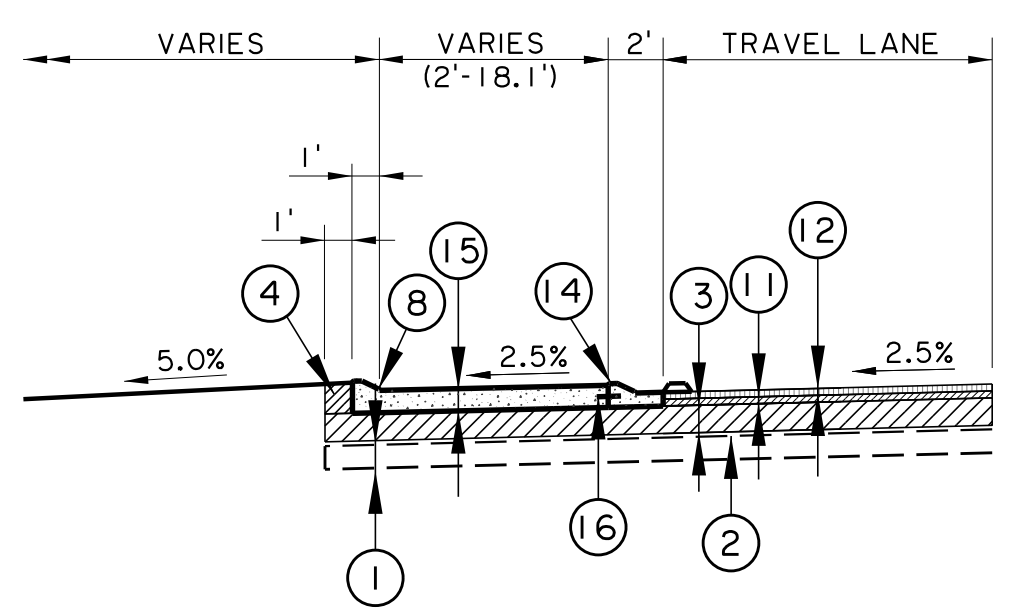
FLEXIBLE STRUCTURAL DESIGN	
CURRENT ADT	= 1,409
DESIGN ADT	= 2,600
PERFORMANCE PERIOD (YEARS)	= 20
18-KIP ESALS	=
SOIL RESILIENT MODULUS (PSI)	=
STRUCTURAL NUMBER REQUIRED (INCHES)	=
STRUCTURAL NUMBER PROVIDED (INCHES)	=



4" COMB. CURB AND GUTTER (MOUNTABLE)
(N.T.S.)



N.T.S.
TYPICAL FINISHED SECTION
MANDEVILLE BYPASS
STA. 262+08.42 TO STA. 265+11.19



TYPICAL FINISHED SECTION
OUTSIDE TRUCK APRON
MANDEVILLE BYPASS
STA. 264+46.67 TO STA. 265+11.19 (LT.)

LEGEND

ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY THE PROJECT ENGINEER)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 8" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	3" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	3" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
Ⓧ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

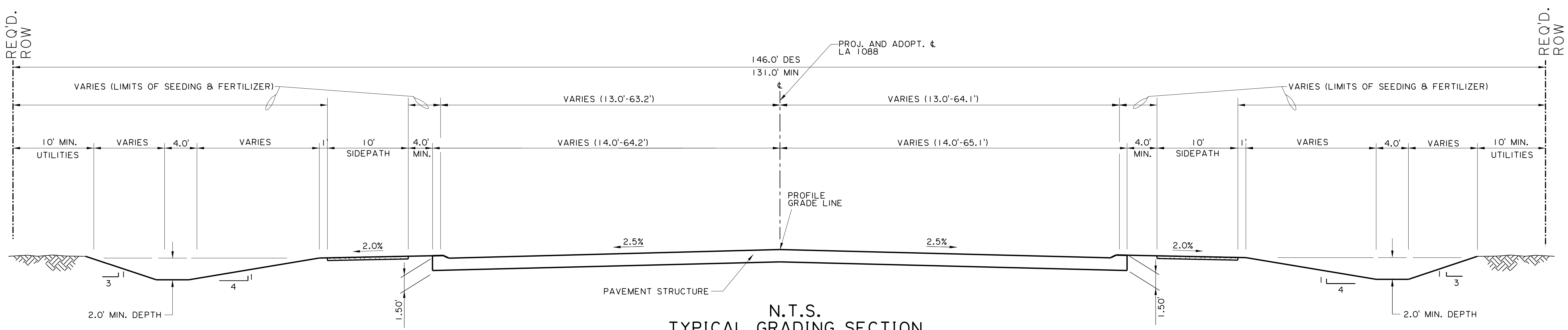
NOTE:
STATIONING SHOWN IS ON PROJ. AND ADOPT. & MANDEVILLE BYPASS.

- DENOTES ITEM(S) NOT USED ON THIS SHEET
- * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- △ BUFFER ZONE REQUIRED ALONG ABUTTING PROPERTY LINE OF PELICAN PARK AND FOREST BROOK SUBDIVISION. BUFFER ZONE NOT REQUIRED AT OTHER LIMITS OF PROJECT.
- ⊠ FOR SPLITTER ISLAND AND 3" CURB AND GUTTER LOCATIONS SEE GEOMETRIC LAYOUT SHEETS
- VARIES 8'-2' FROM STA. 262+08.42 - STA. 262+98.42

XREF:

10/9/2024

TYP_SEC_12629_SHT-2a(mbyypass).dgn

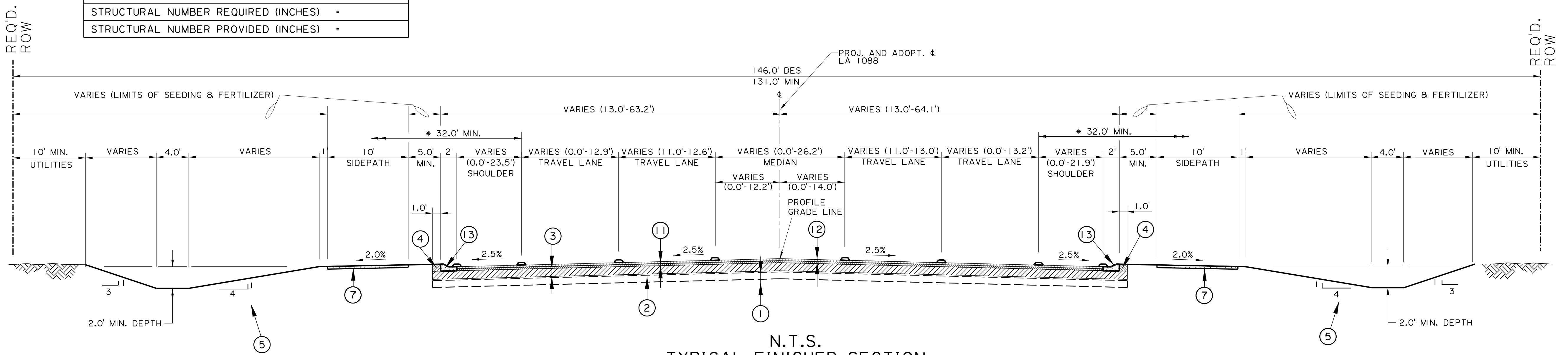


N.T.S.
TYPICAL GRADING SECTION
LA 1088
STA. 138+15.94 TO STA. 143+44.01
STA. 148+09.93 TO STA. 152+67.15

NOTE:
STATIONING SHOWN IS ON PROJ.
AND ADOPT. & LA 1088.
● DENOTES ITEM(S) NOT USED ON THIS SHEET
* TO BE CONSTRUCTED FREE OF OBSTRUCTIONS



FLEXIBLE STRUCTURAL DESIGN	
CURRENT ADT	= 11,500
DESIGN ADT	= 19,500
PERFORMANCE PERIOD (YEARS)	= 20
18-KIP ESALS	=
SOIL RESILIENT MODULUS (PSI)	=
STRUCTURAL NUMBER REQUIRED (INCHES)	=
STRUCTURAL NUMBER PROVIDED (INCHES)	=

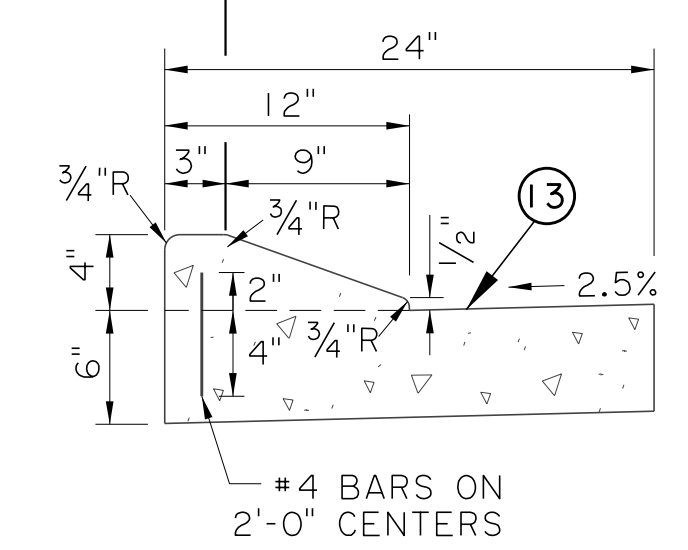


N.T.S.
TYPICAL FINISHED SECTION
LA 1088
STA. 138+15.94 TO STA. 143+44.01
STA. 148+09.93 TO STA. 152+67.15

LEGEND

ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY THE PROJECT ENGINEER)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 8" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	3" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	3" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
Ⓢ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

LENGTH TO BE COMPUTED ALONG THIS LINE

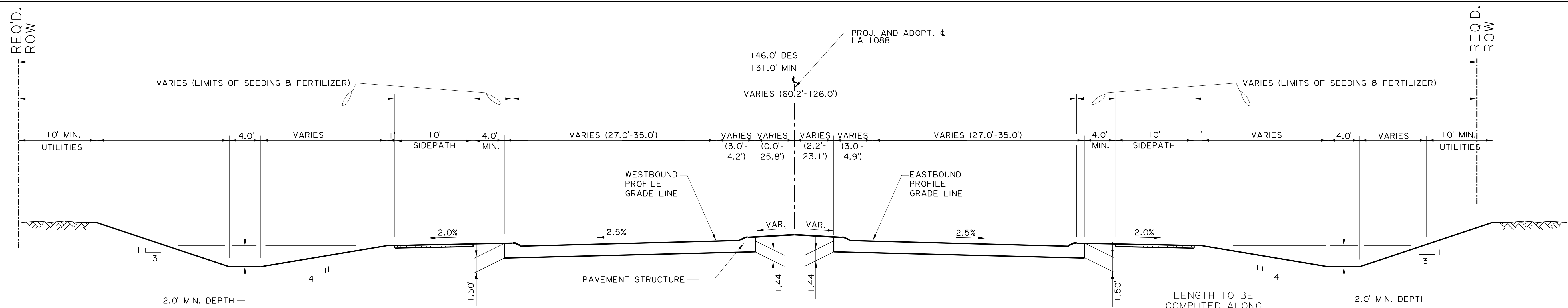
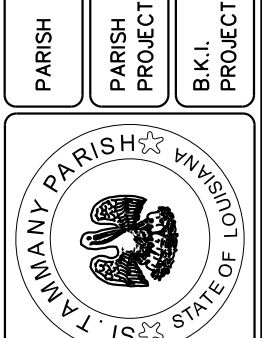


4" COMB. CURB AND GUTTER (MOUNTABLE)
(N.T.S.)

XREF:

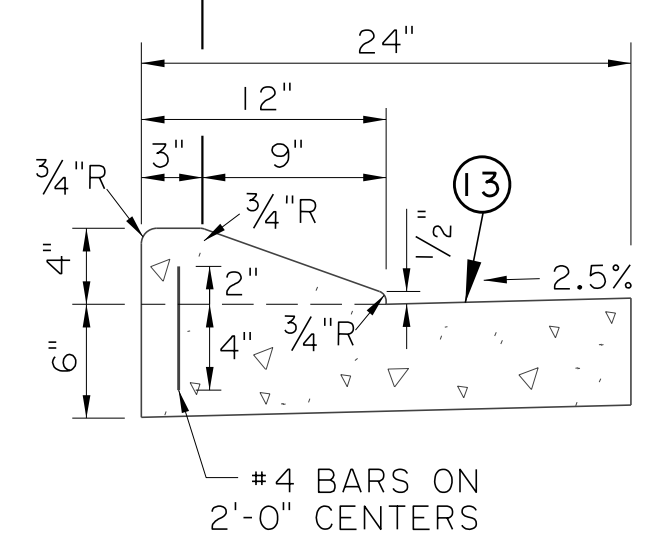
10/9/2024

TYP_SEC_12629_SHT-2b(La 1088).dgn

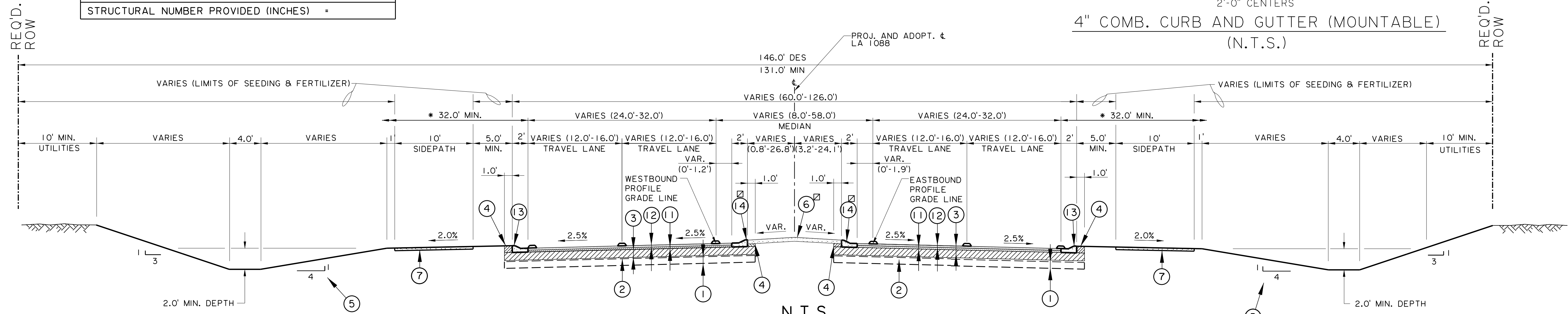


N.T.S.
TYPICAL GRADING SECTION
LA 1088
STA. 143+44.01 TO STA. 145+00.95
STA. 146+48.65 TO STA. 148+09.83

FLEXIBLE STRUCTURAL DESIGN	
CURRENT ADT	= 11,500
DESIGN ADT	= 19,500
PERFORMANCE PERIOD (YEARS)	= 20
18-KIP ESALS	=
SOIL RESILIENT MODULUS (PSI)	=
STRUCTURAL NUMBER REQUIRED (INCHES)	=
STRUCTURAL NUMBER PROVIDED (INCHES)	=



4" COMB. CURB AND GUTTER (MOUNTABLE)
(N.T.S.)



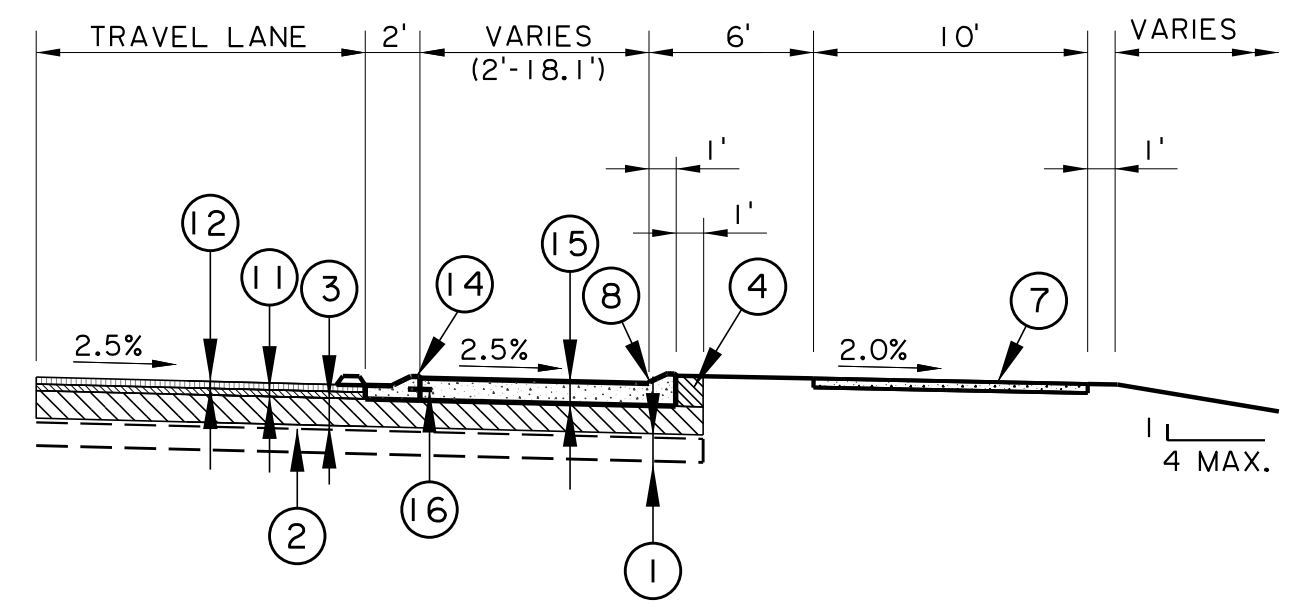
N.T.S.
TYPICAL FINISHED SECTION
LA 1088
STA. 143+44.01 TO STA. 145+00.95
STA. 146+48.65 TO STA. 148+08.93

LEGEND

ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY THE PROJECT ENGINEER)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 8" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	3" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	3" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
⊕	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

NOTE:
STATIONING SHOWN IS ON PROJ. AND ADOPT. & LA 1088

- DENOTES ITEM(S) NOT USED ON THIS SHEET
- * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- ⊕ FOR SPLITTER ISLAND AND 3" CURB AND GUTTER LOCATIONS SEE GEOMETRIC LAYOUT SHEETS

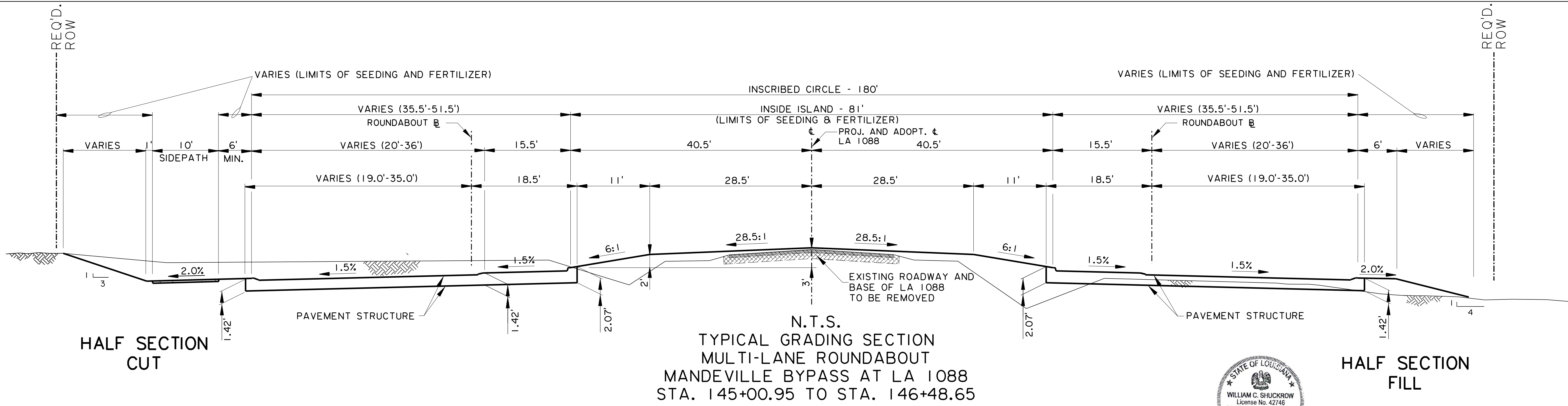


TYPICAL FINISHED SECTION
OUTSIDE TRUCK APRON
LA 1088
STA. 144+31.91 TO STA. 145+00.95 (RT.)

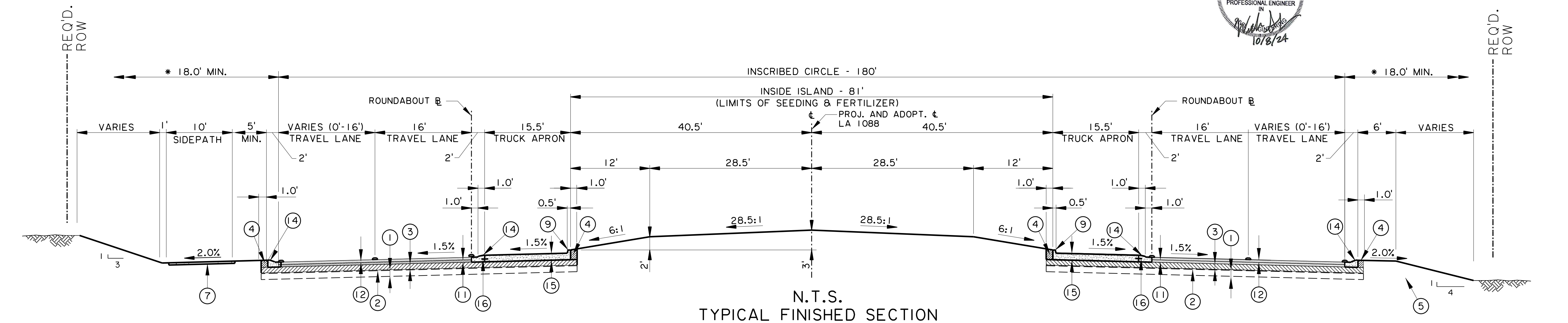
XREF:

10/9/2024

TYP_SEC_12629_SHT-2c(La 1088).dgn



N.T.S.
TYPICAL GRADING SECTION
MULTI-LANE ROUNDABOUT
MANDEVILLE BYPASS AT LA 1088
STA. 145+00.95 TO STA. 146+48.65



N.T.S.
TYPICAL FINISHED SECTION
MULTI-LANE ROUNDABOUT
MANDEVILLE BYPASS AT LA 1088
STA. 145+00.95 TO STA. 146+48.65

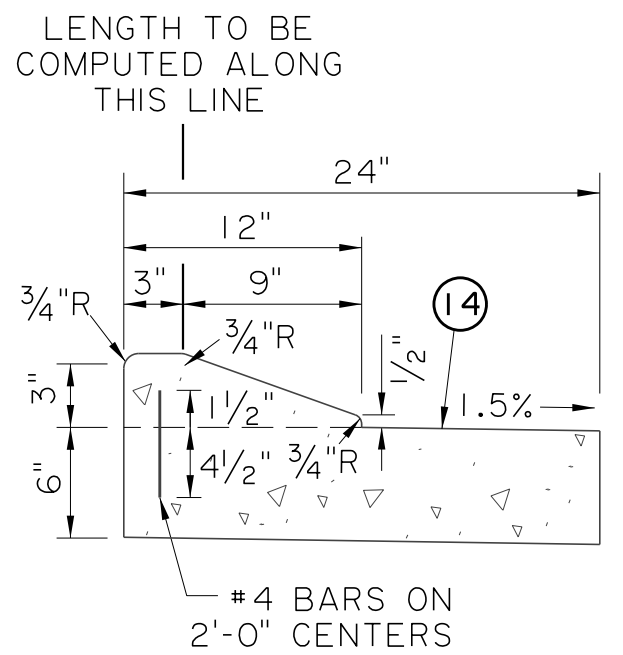
FLEXIBLE STRUCTURAL DESIGN	
CURRENT ADT	= 11,500
DESIGN ADT	= 19,500
PERFORMANCE PERIOD (YEARS)	= 20
18-KIP ESALS	=
SOIL RESILIENT MODULUS (PSI)	=
STRUCTURAL NUMBER REQUIRED (INCHES)	=
STRUCTURAL NUMBER PROVIDED (INCHES)	=

LEGEND

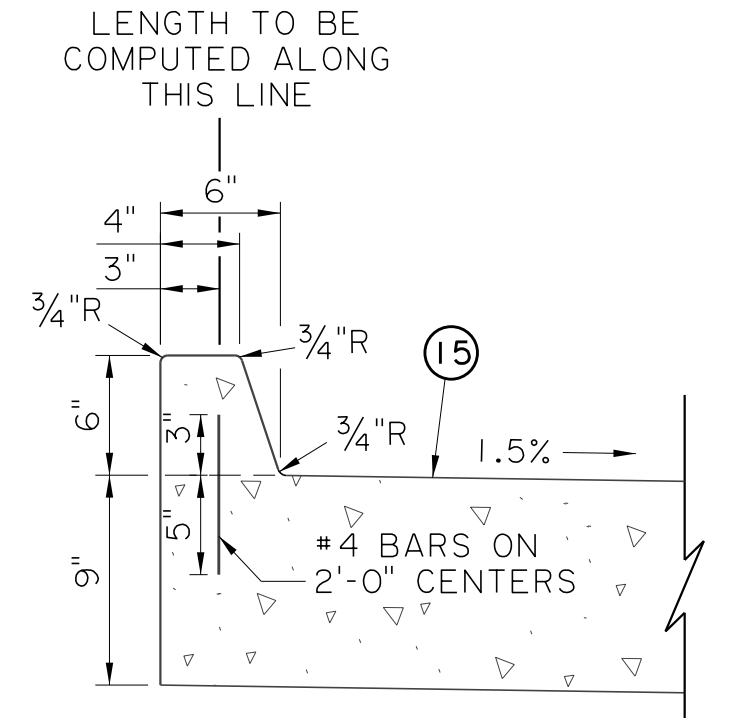
ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY THE PROJECT ENGINEER)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 8" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	3" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	3" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
⊖	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

NOTE:
STATIONING SHOWN IS ON PROJ. AND ADOPT. LA 1088

- DENOTES ITEM(S) NOT USED ON THIS SHEET
- * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- ⊖ FOR SPLITTER ISLAND AND 3" CURB AND GUTTER LOCATIONS SEE GEOMETRIC LAYOUT SHEETS



3" COMB. CURB AND GUTTER (MOUNTABLE)
(N.T.S.)



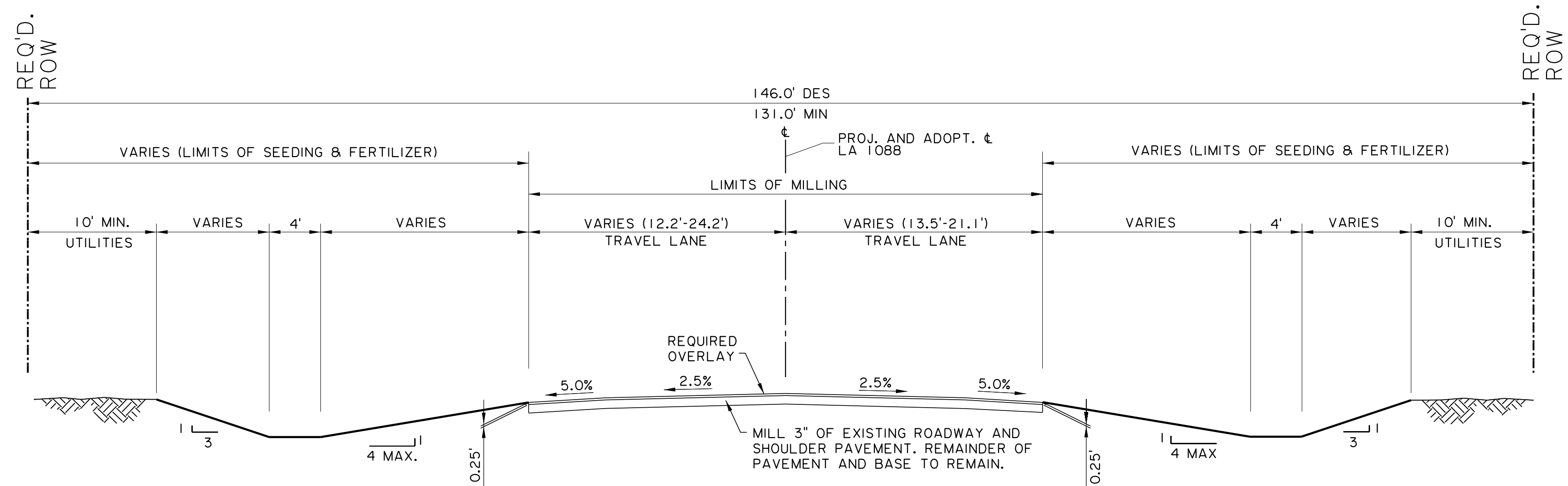
6" CONCRETE CURB (BARRIER)
(N.T.S.)

XREF: 10/9/2024 TYP_SEC_12629_SHT-2c(RAB La 1088).dgn

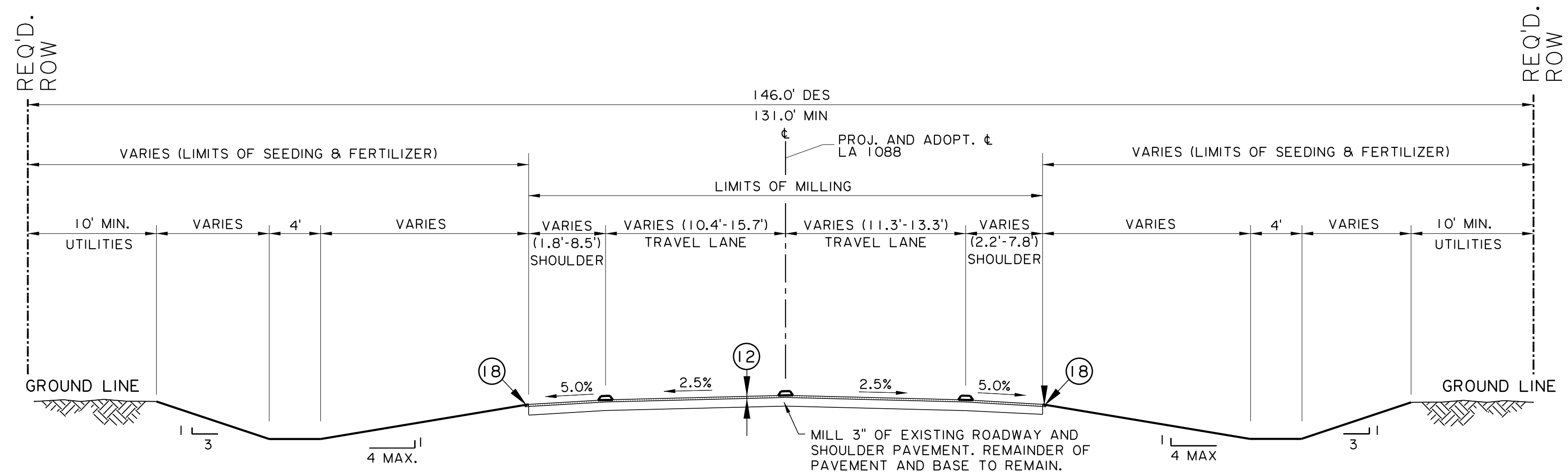
XREF:

10/9/2024

TYP_SEC_12629_SHT-2e(La 1088) Overlay.dgn



N.T.S
 TYPICAL GRADING SECTION
 LA 1088
 STA. 137+15.94 TO STA. 138+15.94
 STA. 152+67.15 TO STA. 153+67.15



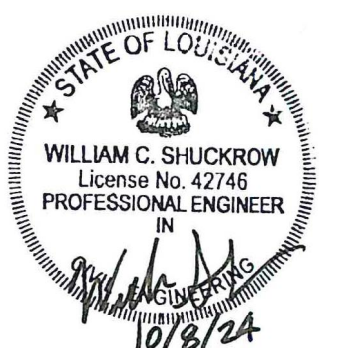
N.T.S
 TYPICAL FINISHED SECTION
 LA 1088
 STA. 137+15.94 TO STA. 138+15.94
 STA. 152+67.15 TO STA. 153+67.15

LEGEND

ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT (12" THICK) (9% BY VOLUME) (AS DIRECTED BY THE PROJECT ENGINEER)
②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE 8" THICK (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
⑦	4" CONCRETE SIDEWALK/BIKE PATH
⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID
⑪	3" ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	3" ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
⑯	LONGITUDINAL JOINT
⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	8" ASPHALT CONCRETE
Ⓢ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

NOTES:
 STATIONING SHOWN IS ON PROJ.
 AND ADOPT. Ⓢ LA 1088

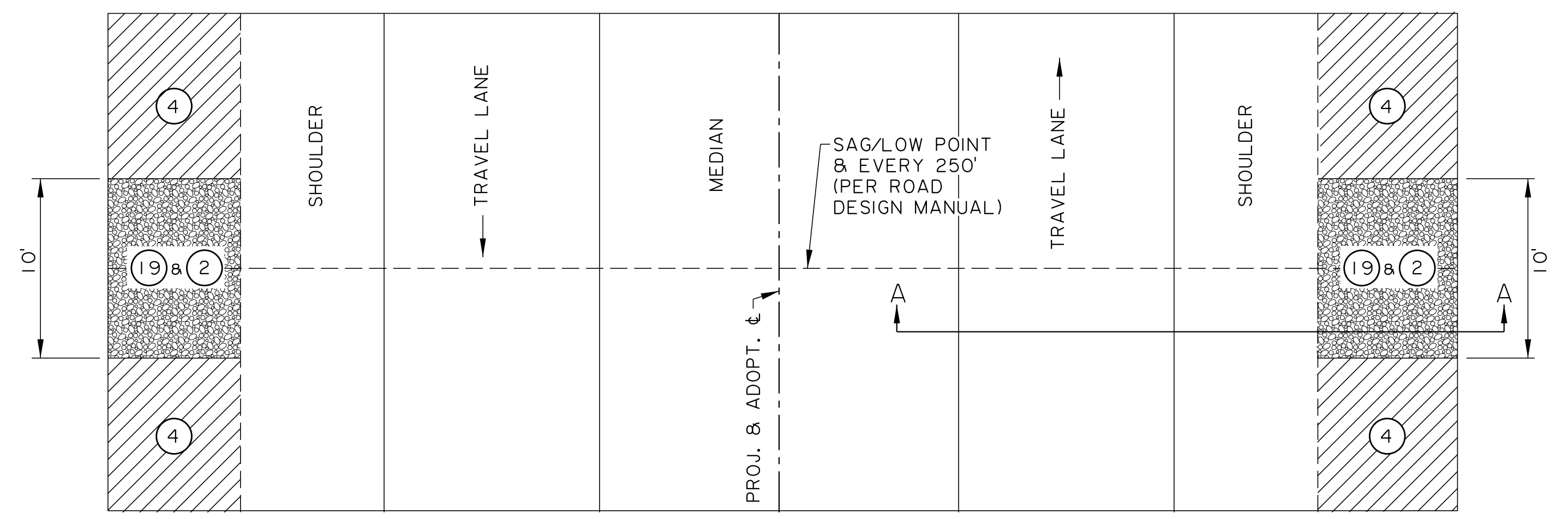
- DENOTES ITEM(S) NOT USED ON THIS SHEET
 - * TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
 - FOR SPLITTER ISLAND AND 3" CURB AND GUTTER LOCATIONS SEE GEOMETRIC LAYOUT SHEETS
- ADDITIONAL ASPHALT REQUIRED FOR LEVELING FROM STA. 137+92.86 TO STA. 138+15.94 AND STA. 152+67.15 TO STA. 153+18.05. SEE CROSS SECTIONS FOR F.G. ELEVATIONS.



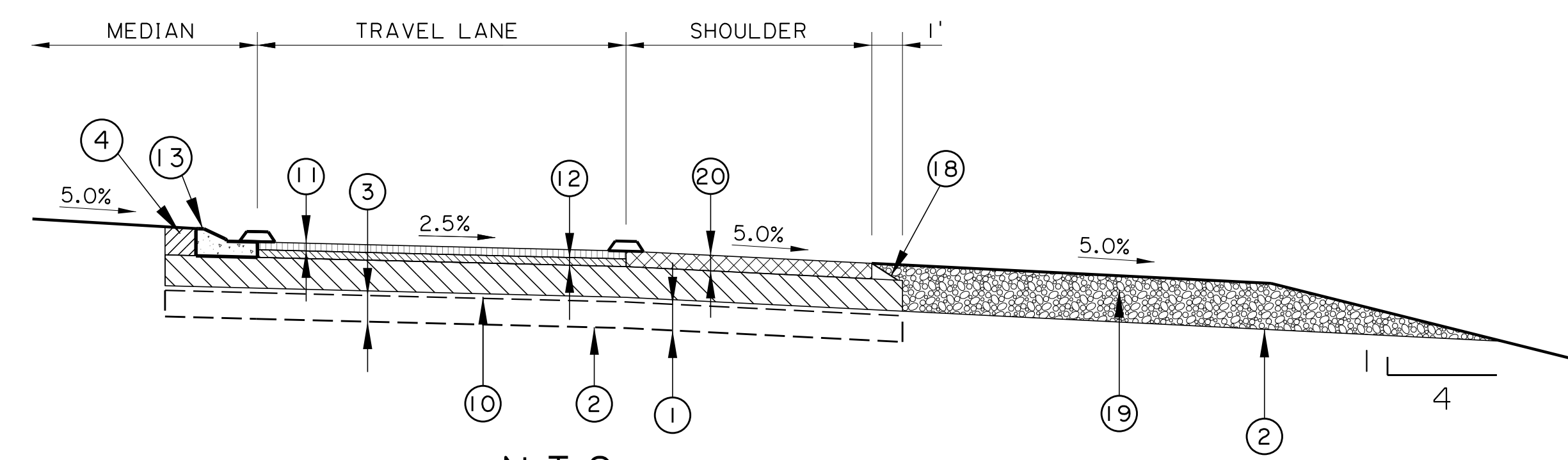
SHEET NUMBER	2r	ST. TAMMANY	2014EN0001	NO. 15.012
PARISH PROJECT	BK/L PROJECT	 STATE OF LOUISIANA TAMMANY PARISH		
MANDEVILLE BY PASS LA 1088 TO US 190	TYPICAL SECTIONS AND DETAILS			
DESIGNED WCS	CHECKED DSY	DATE 10/9/2024	SHEET 19 OF 20	
DETAILED JAT	CHECKED DSY	BY		
REVISION DESCRIPTION		NO.	DATE	



NO.	DATE	REVISION DESCRIPTION	BY



PLAN VIEW



N.T.S.
 DAYLIGHTING BASE COURSE SECTION A-A
 MANDEVILLE BYPASS
 STA. 100+90.73 TO STA. 200+57.50
 STA. 202+77.50 TO STA. 262+08.42
 SEE TABLE BELOW FOR LA 1088 & US 190 STATIONING

US 190 STATIONS	LA 1088 STATIONS
300+35.00	138+20.00
302+85.00	140+70.00
305+35.00	142+20.00
306+57.47	143+67.97
310+50.00	147+56.05
313+00.00	149+00.00
315+40.00	150+56.16
	152+60.00

LEGEND

ITEM NO.	DESCRIPTION
①	TYPE E SUBGRADE TREATMENT/ NONPLASTIC EMBANKMENT (SAND) (SEE TYPICAL SECTIONS)
⊖②	GEOTEXTILE FABRIC
③	CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PCCP)
④	EMBANKMENT (SEE SPECIAL DETAIL FOR DAYLIGHTING)
●⑤	EMBANKMENT MATERIAL (APPLIES TO FILL SECTIONS)
●⑥	6" INCIDENTAL CONCRETE PAVEMENT (COLORED)
●⑦	4" CONCRETE SIDEWALK/BIKE PATH
●⑧	INTEGRAL CONCRETE CURB (4" MOUNTABLE)
●⑨	INTEGRAL CONCRETE CURB (6" BARRIER)
⑩	GEOGRID

⑪	ASPHALT CONCRETE BINDER COURSE (LEVEL 2)
⑫	ASPHALT CONCRETE WEARING COURSE (LEVEL 2F)
⑬	COMBINATION CURB AND GUTTER (4" MOUNTABLE)
●⑭	COMBINATION CURB AND GUTTER (3" MOUNTABLE)
●⑮	PORTLAND CEMENT CONCRETE PAVEMENT (9" THICK) (COLORED)
●⑯	LONGITUDINAL JOINT
●⑰	COMBINATION CURB AND GUTTER (2" MODIFIED BARRIER)
⑱	SHOULDER WEDGE (SEE DOTD STD. PLAN SW-01 FOR DETAILS)
⊖⑲	NONPLASTIC EMBANKMENT (STONE), THICKNESS VARIES
⑳	ASPHALT CONCRETE
Ⓢ	INDICATES RAISED PAVEMENT MARKERS AND/OR PLASTIC PAVEMENT STRIPING. SEE STANDARD PLAN PM-01.

NOTE:
 ● DENOTES ITEM(S) NOT USED ON THIS SHEET
 ⊖ EXTEND TO FORESLOPE AT SAG LOCATIONS AND EVERY 250' ALONG STATIONS SHOWN



XREF:

10/9/2024

TYP_SEC_12629_SHT-2(LA 1088) Base Detail.dgn

SUMMARY OF ESTIMATED QUANTITIES						
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY			
			US 190	MBP	LA 1088	TOTAL
201-01-00100	CLEARING AND GRUBBING	ACRE**	5.33	120.06	6.96	132.35
202-01-00100	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	0.33	0.33	0.33	1
202-02-02000	REMOVAL OF ASPHALT DRIVES	SQYD	--	--	66	66
202-02-03030	REMOVAL OF PAVEMENT STRUCTURE	SQYD	953.3	--	4508.0	5461.3
202-02-06040	REMOVAL OF CONCRETE BOX HEADWALL (48" x 24" x 8")	EACH	2	--	--	2
202-02-32100	REMOVAL OF PIPE (CROSS DRAIN) (18" CPVC)	LNFT	86	--	--	86
202-02-32100	REMOVAL OF PIPE (CROSS DRAIN) (24" RCP)	LNFT	67	--	--	67
202-02-32120	REMOVAL OF PIPE (SIDE DRAIN) (18" RCP)	LNFT	--	--	20	20
202-02-32120	REMOVAL OF PIPE (SIDE DRAIN) (24" RCP)	LNFT	--	--	110	110
202-02-32120	REMOVAL OF PIPE (SIDE DRAIN) (24" CMP)	LNFT	20	--	--	20
202-02-32180	REMOVAL OF PIPE HEADWALLS	EACH	4	--	--	4
202-02-38240	REMOVAL OF SIGNS AND SUPPORTS	EACH	10	--	8	18
203-01-00100	GENERAL EXCAVATION	CUYD	7473	230557	4564	242594
203-02-00100	DRAINAGE EXCAVATION	CUYD	--	70013	--	70013
203-03-00100	EMBANKMENT	CUYD	2567	40844	15543	58954
203-04-00200	NONPLASTIC EMBANKMENT (SAND)	CUYD	--	33746	--	33746
203-08-00100	GEOTEXTILE FABRIC	SQYD	--	121486	--	121486
204-02-00100	TEMPORARY HAY BALES	EACH	35	70	28	133
204-05-00100	TEMPORARY SEDIMENT CHECK DAMS (HAY)	EACH	12	164	10	186
204-05-00200	TEMPORARY SEDIMENT CHECK DAMS (STONE)	EACH	--	41	--	41
204-06-00100	TEMPORARY SILT FENCING	LNFT	5082	32841	4795	42718
204-07-00100	TEMPORARY STONE CONSTRUCTION ENTRANCE	EACH	1	--	1	2
302-01-00700	CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PORTLAND CEMENT CONCRETE)	CUYD	1377.3	34213.0	2980.5	38570.8
302-03-00100	BASE DRAIN OUTLET	EACH	14	101	16	131
304-01-00100	LIME	TON	21.96	6.07	47.54	75.57
304-05-00100	LIME TREATMENT (TYPE E)	SQYD	1549	428	3354	5331
401-02-00100	AGGREGATE SURFACE COURSE (ADJUSTED VEHICULAR MEASUREMENT)	CUYD	--	20	--	20
502-01-00100	ASPHALT CONCRETE	TON	3083.7	49515.1	3670.8	56269.6
502-01-00200	ASPHALT CONCRETE, DRIVES, TURNOUTS AND MISCELLANEOUS	TON	--	158.0	55.1	213.1
509-01-00100	MILLING ASPHALT PAVEMENT	SQYD	1493	--	759	2252
509-02-00100	CONTRACTOR RETAINED RECLAIMED ASPHALT PAVEMENT	CUYD	124	--	63	187
510-01-00001	PAVEMENT PATCHING (12.5 MINIMUM THICKNESS)	SQYD	--	124	--	124
601-01-10000	PORTLAND CEMENT CONCRETE PAVEMENT (COLORED) (9" THICK) (BRICK RED COLOR - BROOM FINISH)	SQYD	673.6	120.3	522.1	1316.0
601-04-00100	PORTLAND CEMENT CONCRETE PAVEMENT CORING	EACH	--	--	5	5
701-01-01004	CROSS DRAIN PIPE (24" RCP/RPVCP)	LNFT	--	537	--	537
701-01-01043	CROSS DRAIN PIPE (36" RCP/RPVCP)	LNFT	--	77	454	531
701-01-01063	CROSS DRAIN PIPE (42" RCP/RPVCP)	LNFT	--	792	--	792
701-02-01040	CROSS DRAIN PIPE ARCH (36" EQUIV. RCPA)	LNFT	--	103	--	103
701-02-01060	CROSS DRAIN PIPE ARCH (42" EQUIV. RCPA)	LNFT	--	--	368	368
701-02-01080	CROSS DRAIN PIPE ARCH (48" EQUIV. RCPA)	LNFT	--	459	--	459
701-02-01120	CROSS DRAIN PIPE ARCH (60" EQUIV. RCPA)	LNFT	--	531	--	531
701-03-01002	STORM DRAIN PIPE (15" RCP/RPVCP)	LNFT	152	455	308	915
701-03-01082	STORM DRAIN PIPE (36" RCP/RPVCP)	LNFT	177	--	--	177
701-04-01000	STORM DRAIN PIPE ARCH (15" EQUIV. RCPA)	LNFT	--	370	--	370
701-04-01080	STORM DRAIN PIPE ARCH (36" EQUIV. RCPA)	LNFT	132	--	--	132
701-05-01025	SIDE DRAIN PIPE (15" RCP/RPVCP/CPEPDW/CPPPDW)	LNFT	--	82	--	82
701-05-01069	SIDE DRAIN PIPE (24" RCP/RPVCP)	LNFT	--	249	--	249
701-05-01087	SIDE DRAIN PIPE (30" RCP/RPVCP)	LNFT	146	--	--	146
701-05-01106	SIDE DRAIN PIPE (36" RCP/RPVCP)	LNFT	--	35	22	57
701-05-01127	SIDE DRAIN PIPE (42" RCP/RPVCP)	LNFT	--	270	--	270
701-05-02067	SIDE DRAIN PIPE (EROSION) (24" RPVCP/CPEPDW/CPPPDW)	LNFT	--	598	--	598
701-05-02126	SIDE DRAIN PIPE (EROSION) (42" RPVCP/CPEPDW/CPPPDW/CPPPTW)	LNFT	--	182	--	182
701-06-00020	SIDE DRAIN PIPE ARCH (18" EQUIV. RCPA)	LNFT	--	127	--	127
701-06-00100	SIDE DRAIN PIPE ARCH (42" EQUIV. RCPA)	LNFT	--	30	--	30
701-06-00120	SIDE DRAIN PIPE ARCH (48" EQUIV. RCPA)	LNFT	--	117	--	117
701-06-00160	SIDE DRAIN PIPE ARCH (60" EQUIV. RCPA)	LNFT	--	255	--	255
701-15-00100	CONCRETE COLLAR	EACH	--	--	8	8
702-03-00600	CATCH BASINS (CB-07)	EACH	5	7	4	16
702-03-00700	CATCH BASINS (CB-08)	EACH	--	1	--	1
702-07-00100	CROSS DRAIN SAFETY END (TYPE 1)	EACH	--	12	--	12
702-07-00200	CROSS DRAIN SAFETY END (TYPE 2)	EACH	2	6	--	8
702-08-00100	SIDE DRAIN SAFETY END (TYPE 1)	EACH	--	5	--	5
702-08-00200	SIDE DRAIN SAFETY END (TYPE 2)	EACH	1	--	--	1
702-08-00300	SIDE DRAIN SAFETY END (TYPE 3)	EACH	--	1	--	1
704-03-00200	BLOCKED OUT GUARD RAIL - 31", (6'-3" POST SPACING)	LNFT	--	125.0	--	125.0
704-04-00200	BLOCKED OUT GUARD RAIL - 31", (DOUBLE FACED, 6'-3" POST SPACING)	LNFT	--	25.0	--	25.0
704-07-00200	GUARD RAIL TRANSITIONS (DOUBLE THRIE BEAM)	LNFT	--	150.0	--	150.0
704-10-00305	GUARD RAIL END TREATMENT, MASH, (TL-3 BI-DIRECTIONAL)	EACH	--	6	--	6
704-10-00310	GUARD RAIL END TREATMENT, NCHRP 350 - 31" (TL-3 FLARED)	EACH	--	2	--	2
706-01-00100	CONCRETE WALK (4" THICK)	SQYD	90.6	12370.6	2925.7	15386.9
706-03-10000	INCIDENTAL CONCRETE PAVING (COLORED) (6" THICK) (BRICK RED COLOR - BROOM FINISH)	SQYD	627.8	449.7	440.4	1517.9
706-04-00110	CURB RAMPS (TYPE 3)	SQYD	53.4	185.6	245.9	484.9
707-01-00100	CONCRETE CURB	LNFT	2417.0	632.7	312.9	3362.6
707-03-00100	COMBINATION CONCRETE CURB AND GUTTER	LNFT	3415.6	52780.5	3995.2	60191.3
708-01-00100	RIGHT-OF-WAY MONUMENT	EACH	8	75	25	108
708-02-00100	RIGHT-OF-WAY MONUMENT WITNESS POST	EACH	8	75	25	108
711-03-00400	RIPRAP (55 LB)	TON	--	3000.0	--	3000.0
711-04-00100	GEOTEXTILE FABRIC	SQYD	--	3098	--	3098
712-01-00100	CONCRETE CAST-IN-PLACE REVETMENT (4" THICK)	SQYD	--	618	--	618
713-01-00100	TEMPORARY SIGNS AND BARRICADES	LUMP	0.33	0.33	0.33	1
713-02-00300	TEMPORARY PAVEMENT MARKINGS (8" WIDTH)	LNFT	1123	--	819	1942
713-02-00500	TEMPORARY PAVEMENT MARKINGS (24" WIDTH)	LNFT	148	--	855	1003
713-03-01000	TEMPORARY PAVEMENT MARKINGS (BROKEN LINE) (4" WIDTH) (4" LENGTH)	MILE	0.080	--	0.160	0.240
713-04-01000	TEMPORARY PAVEMENT MARKINGS (SOLID LINE) (4" WIDTH)	MILE	3.850	--	3.010	6.860
713-05-00190	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - STRAIGHT)	EACH	2	--	4	6

** HYBRID ITEM, BID AS LUMP SUM



SUMMARY OF ESTIMATED QUANTITIES						
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY			
			US 190	MBP	LA 1088	TOTAL
713-05-00220	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - LEFT TURN)	EACH	4	--	2	6
713-05-00230	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - RIGHT TURN)	EACH	2	--	--	2
713-05-00240	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (ARROW - MERGE)	EACH	--	--	4	4
713-06-00100	TEMPORARY REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	15	--	17	32
716-01-00100	MULCH (VEGETATIVE)	TON	10.7	214.2	10.7	235.6
717-01-00100	SEEDING	LB	320	5314	160	5794
718-01-00100	FERTILIZER	LB	5330	107120	5330	117780
720-01-01000	EROSION CONTROL SYSTEM (SLOPE PROTECTION) (TYPE A)	SQYD	576	1240	--	1816
722-02-00100	PROJECT SITE LABORATORY (EQUIPPED)	EACH	--	1	--	1
725-01-00100	TEMPORARY DETOUR ROADS	SQYD	3805.7	--	1078.2	4883.9
726-01-00100	BEDDING MATERIAL	CUYD	225.8	1635.1	492.8	2353.7
727-01-00100	MOBILIZATION	LUMP	0.33	0.33	0.33	1
729-01-00100	SIGN (TYPE A)	SQFT	226.9	293.3	323.9	844.1
729-02-00100	SIGN (TYPE B)	SQFT	34.8	35.8	34.8	105.4
729-04-00100	SIGN (TYPE D)	SQFT	--	45.7	6.7	52.4
729-08-00100	MOUNTING (2 1/2" SIZE POST)	EACH	--	1	12	13
729-08-00200	MOUNTING (3 1/2" SIZE POST)	EACH	2	2	10	14
729-08-00600	MOUNTING (W6 X 12 SIZE POST)	EACH	--	8	--	8
729-16-00200	OBJECT MARKER ASSEMBLY (TYPE 2)	EACH	4	48	4	56
729-16-00300	OBJECT MARKER ASSEMBLY (TYPE 3)	EACH	--	4	--	4
729-19-00100	DEAD END ROAD INSTALLATIONS (TYPE A)	EACH	--	1	--	1
729-22-00200	SQUARE TUBING POST WITH 2-1/4" OMNI-DIRECTIONAL ANCHOR	EACH	3	29	--	32
731-02-00100	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	61	31	211	303
732-01-05400	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(24" W)(2' L)(THERMO 125 MIL)	LNFT	241	--	199	439
732-02-02000	PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	1.330	13.135	1.207	15.672
732-02-02040	PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	0.253	0.075	0.183	0.511
732-01-02080	PLASTIC PAVEMENT STRIPING (24" WIDTH) (THERMOPLASTIC 125 MIL)	LNFT	282	362	1140	1783
732-03-02010	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(4" W)(2' L)(THERMO 90 MIL)	MILE	0.012	--	0.008	0.020
732-03-02012	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(4" W)(3' L)(THERMO 90 MIL)	MILE	--	--	0.300	0.300
732-03-02030	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(8" W)(2' L)(THERMO 90 MIL)	MILE	--	0.012	--	0.012
732-03-02040	PLASTIC PAVEMENT STRIPING (DOTTED LINE)(8" W)(3' L)(THERMO 90 MIL)	MILE	0.150	0.116	--	0.266
732-03-02000	PLASTIC PAVEMENT STRIPING (BROKEN LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	0.053	--	0.117	0.170
732-04-01020	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - STRAIGHT)	EACH	4	--	4	8
732-04-01080	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - LEFT TURN)	EACH	4	4	2	10
732-04-01100	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - RIGHT TURN)	EACH	2	4	--	6
732-04-01120	PLASTIC PAVEMENT LEGENDS AND SYMBOLS (ARROW - MERGE)	EACH	--	--	4	4
732-04-01131	PLSTCPVMT LGNDS&SYM(DIRARRRNDT - FSHK)(TYPE LTC)	EACH	2	--	2	4
732-04-01133	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDT - FSHK) (TYPE LC)	EACH	1	2	--	3
732-04-01134	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDT - FSHK) (TYPE T)	EACH	1	--	2	3
732-04-01136	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDT - FSHK) (TYPE TR)	EACH	--	--	2	2
732-04-01138	PLSTC PVMT LGNDS AND SYMB (DIR ARR RNDT - FSHK) (TYPE TUC)	EACH	--	--	2	2
732-05-00100	REMOVAL OF EXISTING MARKINGS	MILE	0.355	--	0.313	0.668
735-01-00100	MAILBOXES	EACH	--	--	3	3
735-02-00100	MAILBOX SUPPORTS (SINGLE)	EACH	--	--	3	3
740-01-00100	CONSTRUCTION LAYOUT	LUMP	0.33	0.33	0.33	1
804-01-00600	PRECAST CONCRETE PILES (24")	LNFT	--	4548	--	4548
804-05-00600	PRECAST CONCRETE TEST PILES (24")	EACH	--	2	--	2
804-09-00600	STATIC LOAD TEST (PRECAST CONCRETE PILES (24"))	EACH	--	2	--	2
805-01-00100	CLASS A1 CONCRETE (SLAB SPAN)	CUYD	--	339.78	--	339.78
805-01-00300	CLASS A1 CONCRETE (BENT CAP)	CUYD	--	145.34	--	145.34
804-14-00100	DYNAMIC MONITORING ASSISTANCE	EACH	--	6	--	6
804-15-00100	DYNAMIC MONITORING INSTRUMENTATION	LUMP	--	1	--	1
805-16-02700	REINFORCED CONCRETE BOX CULVERTS (EXTENSION)	LNFT	29	--	--	29
805-18-00100	CONCRETE FINISH (CLASS 2 RUBBED FINISH)	SQFT	--	3763	--	3763
805-18-00200	CONCRETE FINISH (CLASS 3 SPECIAL FINISH)	SQFT	--	8574	--	8574
806-01-00100	DEFORMED REINFORCING STEEL	LB	--	89194	--	89194
810-01-00120	CONCRETE BRIDGE RAILING (36 INCH HEIGHT)	LNFT	--	560	--	560
813-01-00100	CONCRETE APPROACH SLABS (CAST-IN-PLACE)	SQFT	--	4040	--	4040
814-01-00100	ELASTOMERIC BEARING PADS (NON-REINFORCED)	SFIN	--	252	--	252
815-03-00300	JOINT SEAL (POURED)	LF	--	384	--	384
TS-807-00001	PEDESTRIAN BRIDGE	EACH	--	1	--	1
NS-500-00240	SAWING AND SEALING TRANSVERSE JOINTS IN ASPHALT CONCRETE OVERLAY	LNFT	--	288	--	288
NS-500-00260	SAWCUTS IN ASPHALT CONCRETE LIFTS	LNFT	--	480	--	480
NS-500-00340	SAW CUTTING ASPHALT CONCRETE PAVEMENT	INFT	--	--	352	352
NS-500-00360	SAW CUTTING ASPHALT CONCRETE PAVEMENT OVER PORTLAND CEMENT CONCRETE COMPOSITE PAVEMENT	INLF	35184	--	--	35184
NS-702-00101	PAVED GUTTER DRAIN (SINGLE)	EACH	1	--	13	14
NS-702-00102	PAVED GUTTER DRAIN (DOUBLE)	EACH	18	--	9	27
NS-719-00002	TREE TRIMMING	LUMP	0.33	0.33	0.33	1
NS-729-00029	BREAKAWAY SQUARE TUBING SIGN SUPPORT W/ MOWING PAD	EACH	8	10	1	19
NS-729-00031	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)	EACH	15	11	21	47
TS-300-00060	TRIAxIAL GEOGRID	SQYD	--	76810	--	76810
TS-736-00017	SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED	EACH	3	1	--	4



DATE: 10/7/24

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SURVEY LEGEND

NOTE: NOT ALL SYMBOLS/LINES IN LEGEND MAY BE PRESENT IN THIS SURVEY

- EXISTING RIGHT OF WAY
SERVITUDE
EDGE OF WATER BODY
EDGE OF SWAMP
EDGE OF MARSH
CATCH BASIN ON VERTICAL CURB
CATCH BASIN ON MOUNTABLE CURB
CULVERT
DROP INLET, DRAIN LINE
DRAIN MANHOLE, DRAIN LINE
DITCH WITH CENTERLINE
LEVEE TOP AND TOE
EDGE OF WOODS (THICK COVERAGE)
TREE ROW
TREE (WITH DRIP LINE), TREE STAND, BUSH
HEDGE ROW
SHRUBBERY BED OR BOX
BUILDING, WITH PORCH AND STAIRS
FENCE WITH GATE
PROPERTY CORNER FOUND
PROPERTY CORNER SET
UNLESS NOTED, 5/8" IRON ROD
TEMPORARY BENCHMARK (TBM)
TV PEDESTAL, TV MANHOLE/VAULT
TV UTILITY MARKER, BORE HOLE
POWER LINE, UNDERGROUND ABOVEGROUND
POWER POLE, DEADMAN
COMBINATION POLE, GUY POLE
POWER JUNCTION, VAULT
POWER DROP, TRANSFORMER
POWER UTILITY MARKER, BORE HOLE
GAS LINE, UNDERGROUND ABOVEGROUND
GAS LINE CASING, UNDERGROUND ABOVEGROUND
GAS RISER, REGULATOR, VENT
GAS SERVICE WITH METER, WITHOUT METER
GAS VALVE, UTILITY MARKER, BORE HOLE
RAILROAD MILE POST, SWITCH
RAILROAD SIGNAL, CONTROL BOX
SEWER MANHOLE, LINE
SEWER BLOWOUT, FORCE MAIN LINE
SEWER CLEANOUT, PUMP
SEWER UTILITY MARKER, BORE HOLE
SEWER LIFT STATION, TREATMENT STATION
TRAFFIC SIGNAL POWER, UNDERGROUND ABOVEGROUND
TRAFFIC INTERCONNECT, LOOP DETECTOR
TRAFFIC SIGNAL, SUSPENDED, CANTILEVERED
TRAFFIC DEADMAN, MISC. POLE
TRAFFIC POWER VAULT, CONTROL BOX
TRAFFIC SIGN, FEDERAL AID MARKER
PARKING METER, LIGHT STANDARD, VAULT
TRAFFIC CAMERA POLE, CONTROL BOX, PULL BOX
TELEPHONE LINE, UNDERGROUND
TELEPHONE FIBER OPTIC LINE, UNDERGROUND
TELEPHONE BOOTH, CROSS CONNECT
TELEPHONE PEDESTAL, MANHOLE
TELEPHONE UTILITY MARKER, BORE HOLE
WATER LINE, UNDERGROUND ABOVEGROUND
WATER LINE CASING, UNDERGROUND ABOVEGROUND
FIRE HYDRANT, WATER VALVE VAULT
WATER METER, CLEANOUT, WELL
WATER UTILITY MARKER, BORE HOLE
BILLBOARD SUPPORT, SIGN POLE
MAILBOX, STORAGE TANK VENT
FLAGPOLE, MONITORING WELL
MECHANICAL POINT
E.G. A/C, COMPRESSOR, PUMP, ETC.
TOP OF SILT ELEVATION

- LEGEND
TO BE REMOVED
REQ'D FULL DEPTH ASPHALT CONCRETE
REQ'D CONCRETE
REQ'D TRUCK APRON
REQ'D SPLITTER ISLAND
REQ'D MILL/OVERLAY
EXIST. TO REMAIN

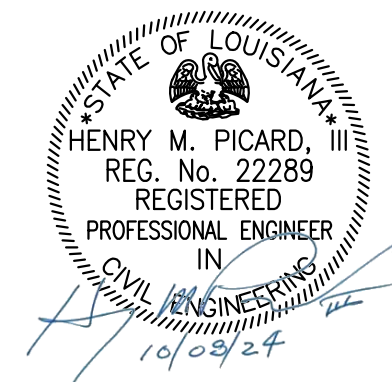
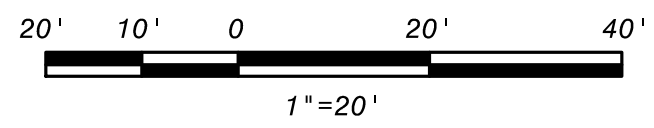
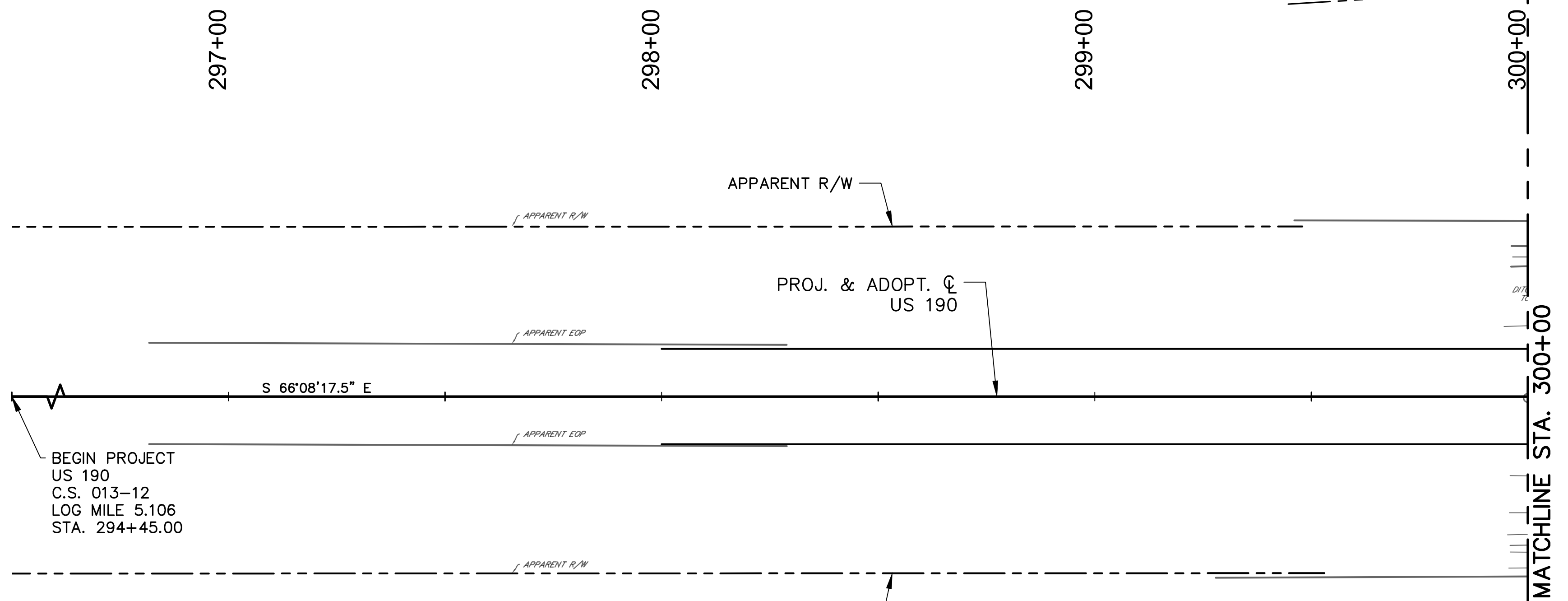
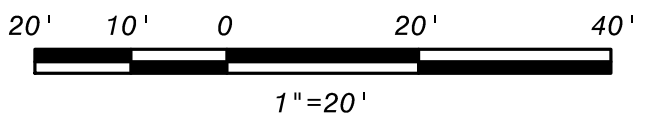
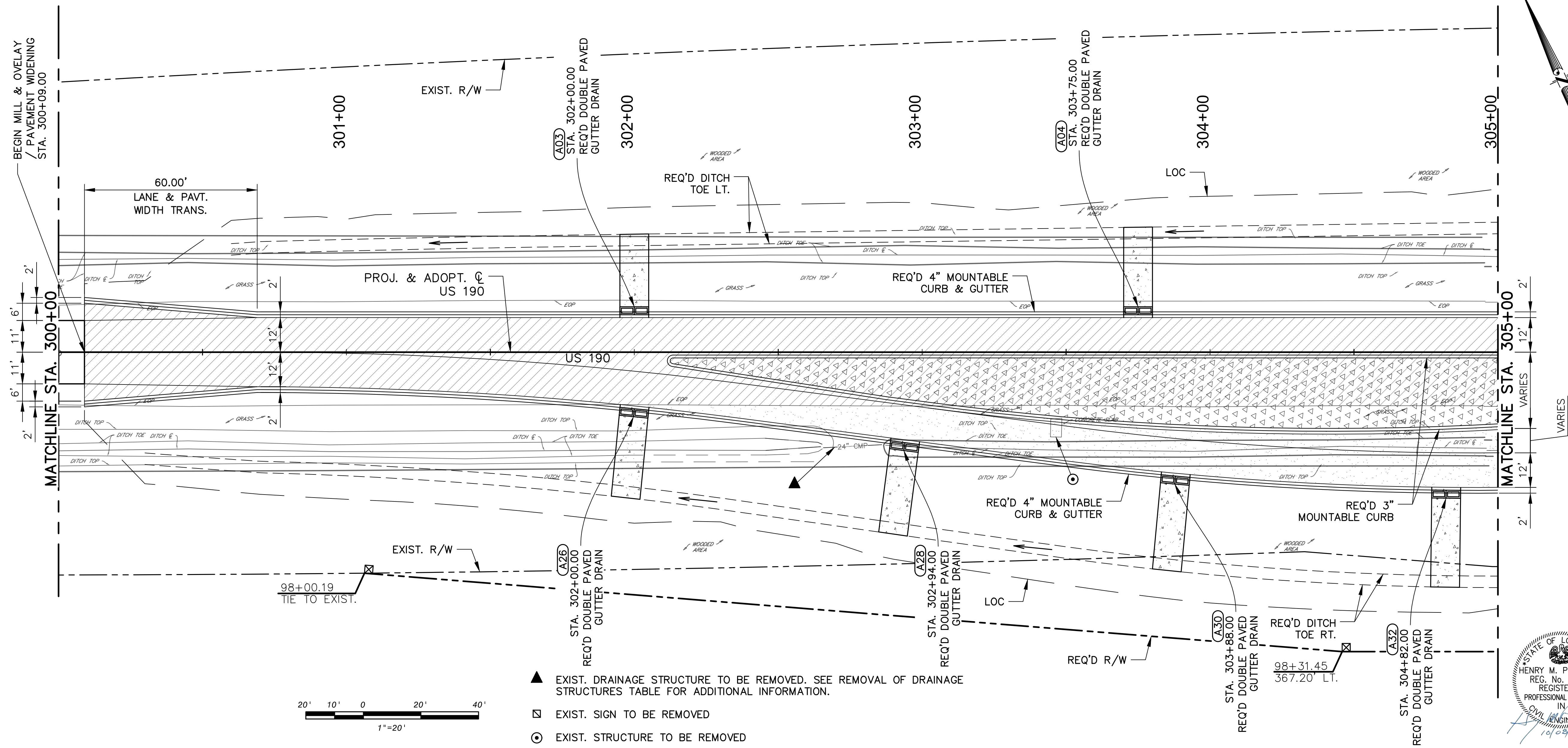


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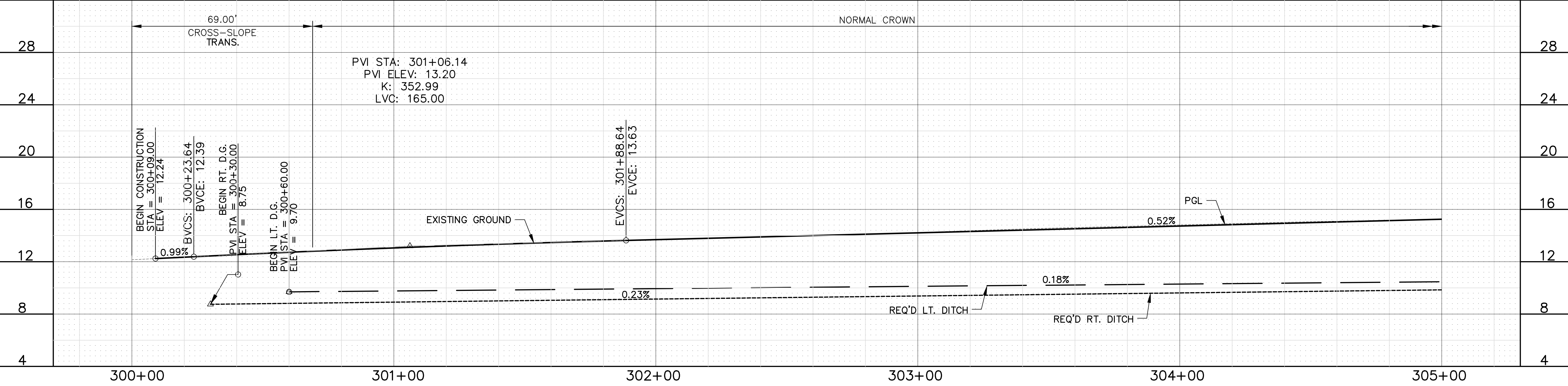
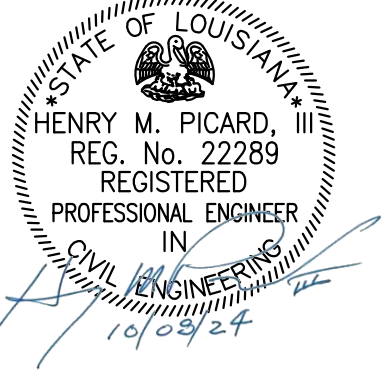
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DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\5_Plan and Profile.dwg



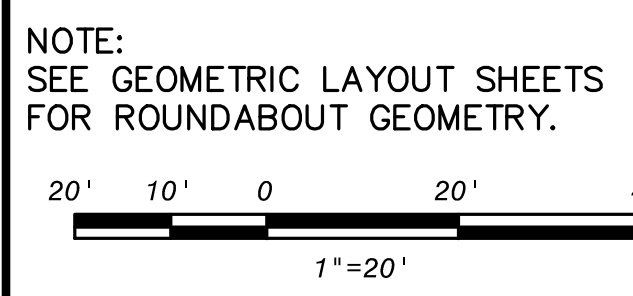
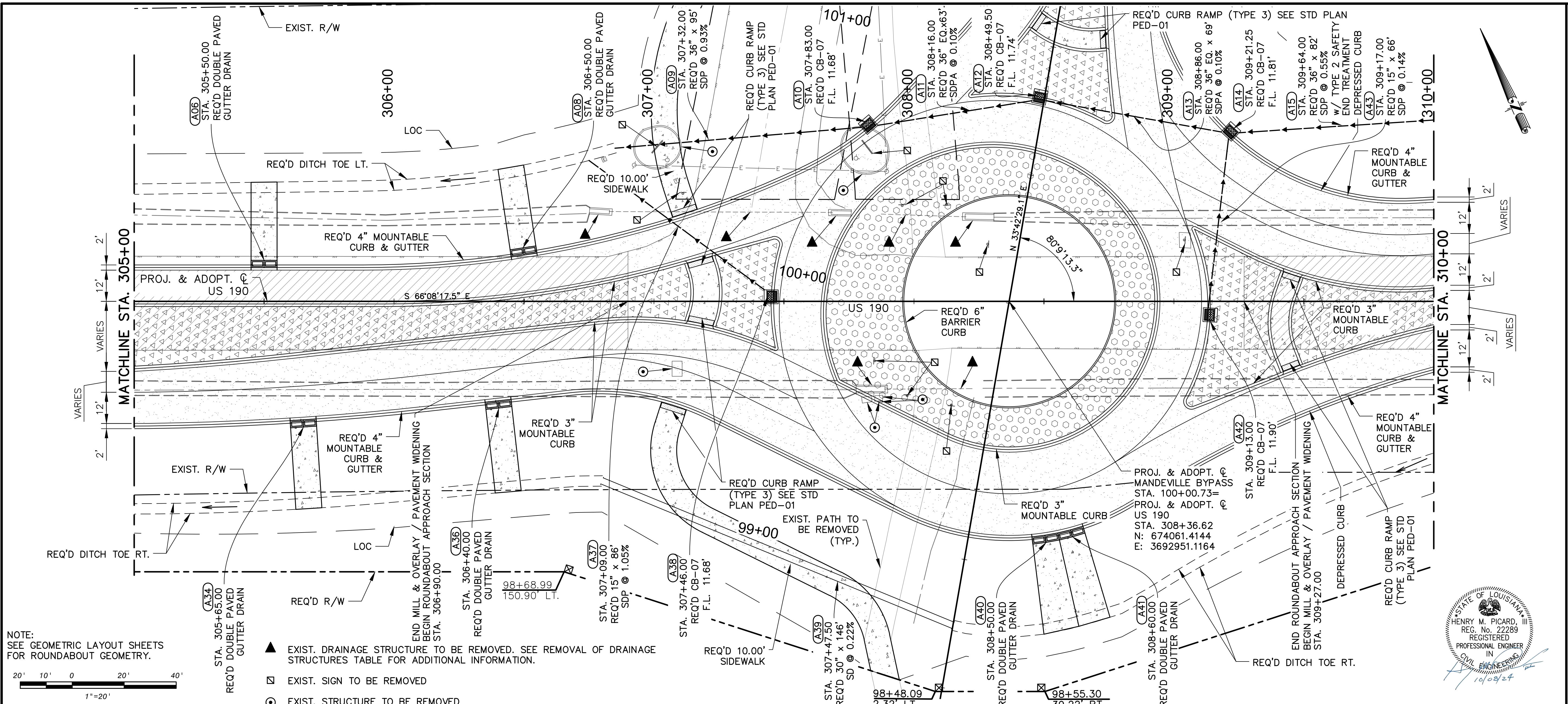
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- ◻ EXIST. SIGN TO BE REMOVED
- ⊙ EXIST. STRUCTURE TO BE REMOVED



SHEET NUMBER	5
ST. TAMMANY PARISH	PROJECT NO. 2014EN0001
MANDEVILLE BYPASS LA 1088 TO US 190	B.K.I. PROJECT NO. 15.012
STATE OF LOUISIANA	ROADWAY PLANS
PLAN/PROFILE US 190	
DESIGNED	BY
CHECKED	DATE
REVISION DESCRIPTION	
NO.	DATE

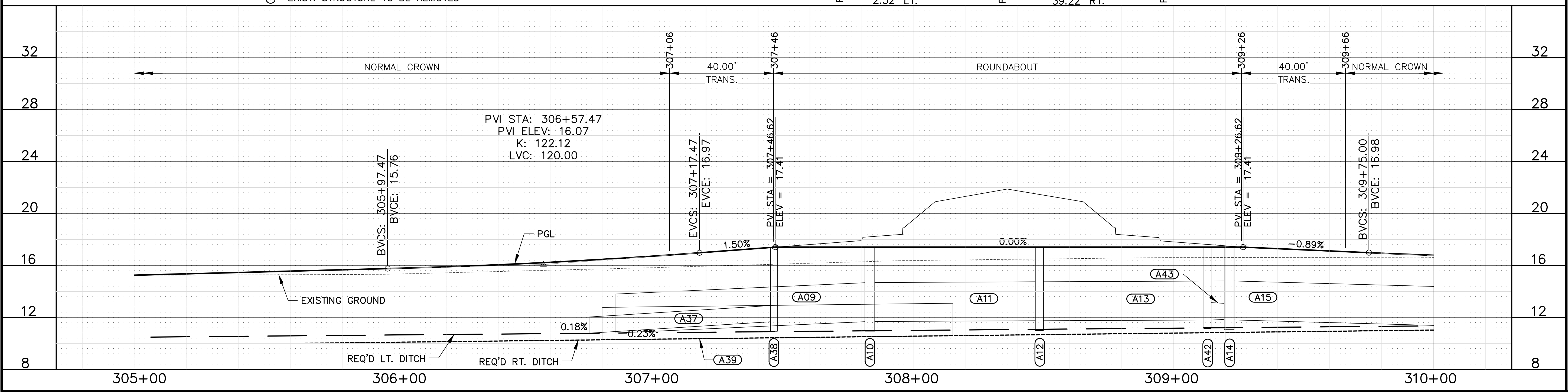
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NOTE:
SEE GEOMETRIC LAYOUT SHEETS
FOR ROUNDABOUT GEOMETRY.

- ▲ EXIST. DRAINAGE STRUCTURE TO BE REMOVED. SEE REMOVAL OF DRAINAGE STRUCTURES TABLE FOR ADDITIONAL INFORMATION.
- ☒ EXIST. SIGN TO BE REMOVED
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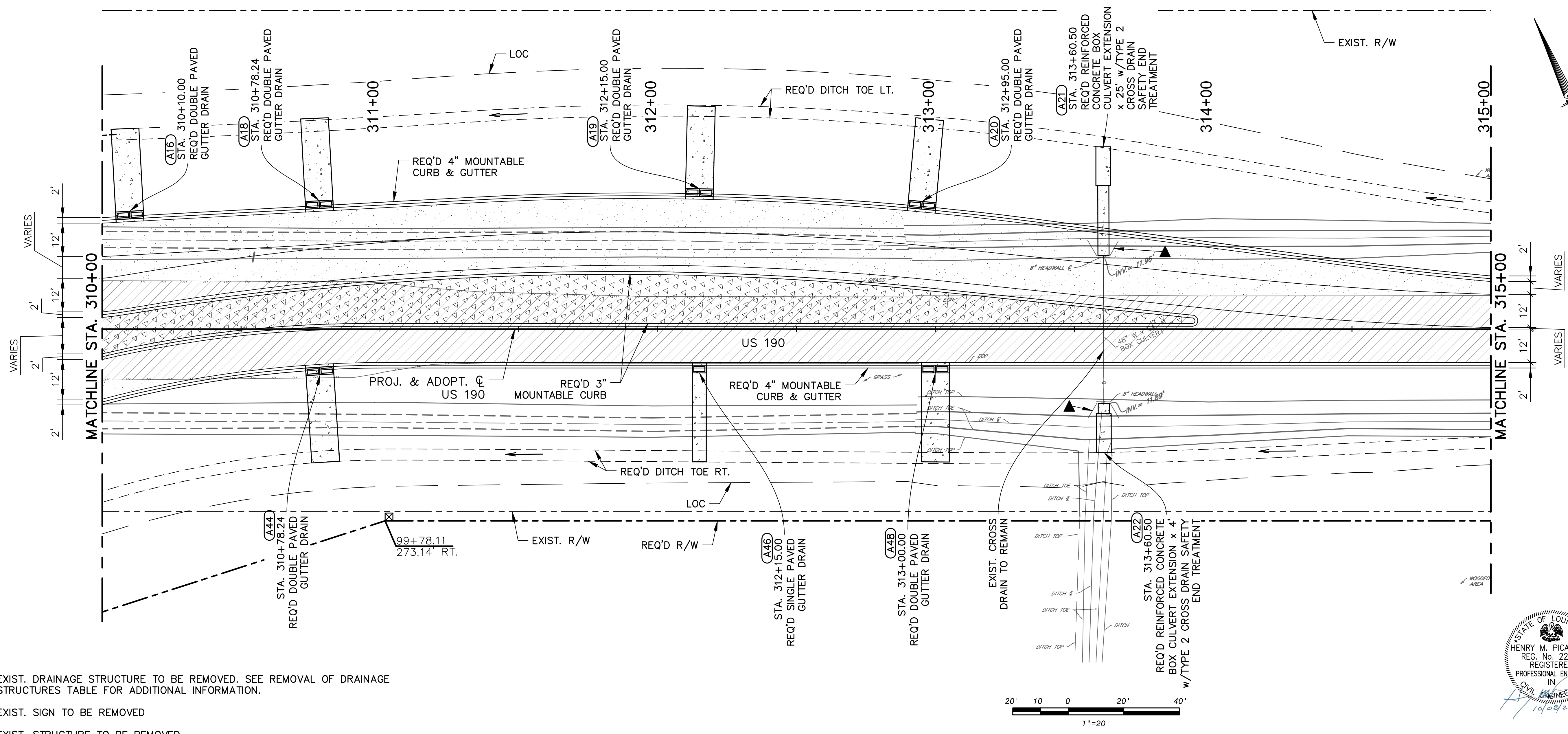


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PROJECT	MANDEVILLE BYPASS LA 1088 TO US 190	B.K.L. PROJECT	NO.15.012	ROADWAY PLANS	PLAN/PROFILE US 190
DESIGNED	AJ	RCIII	SG	DATE	October, 2024
CHECKED			AJ	SHEET	OF
REVISION	DESCRIPTION	NO.	DATE	BY	

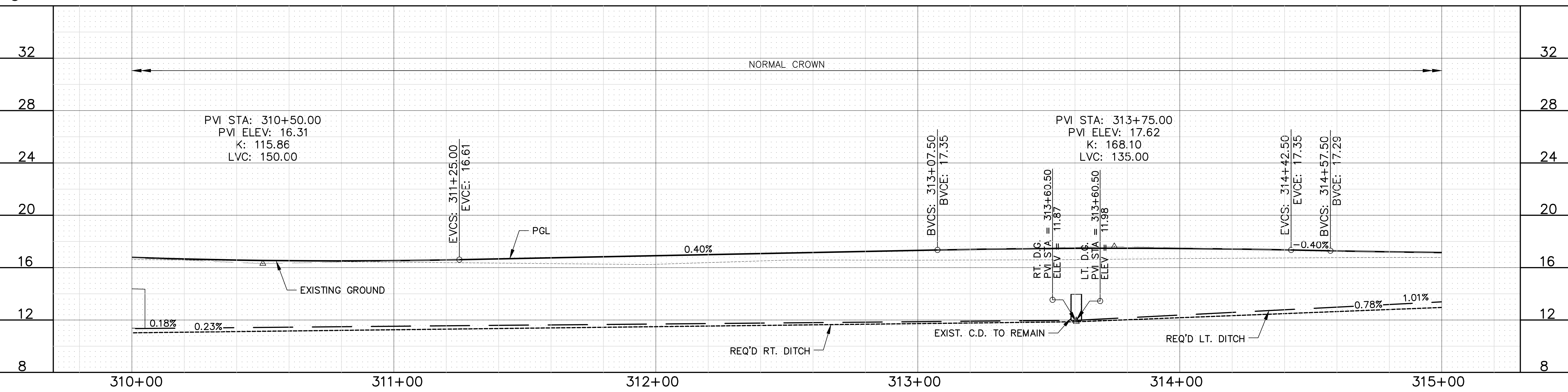


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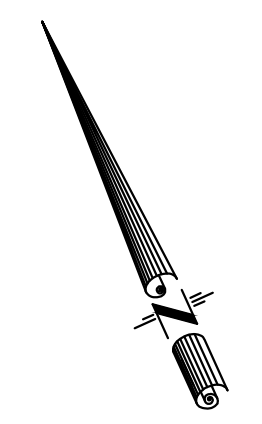
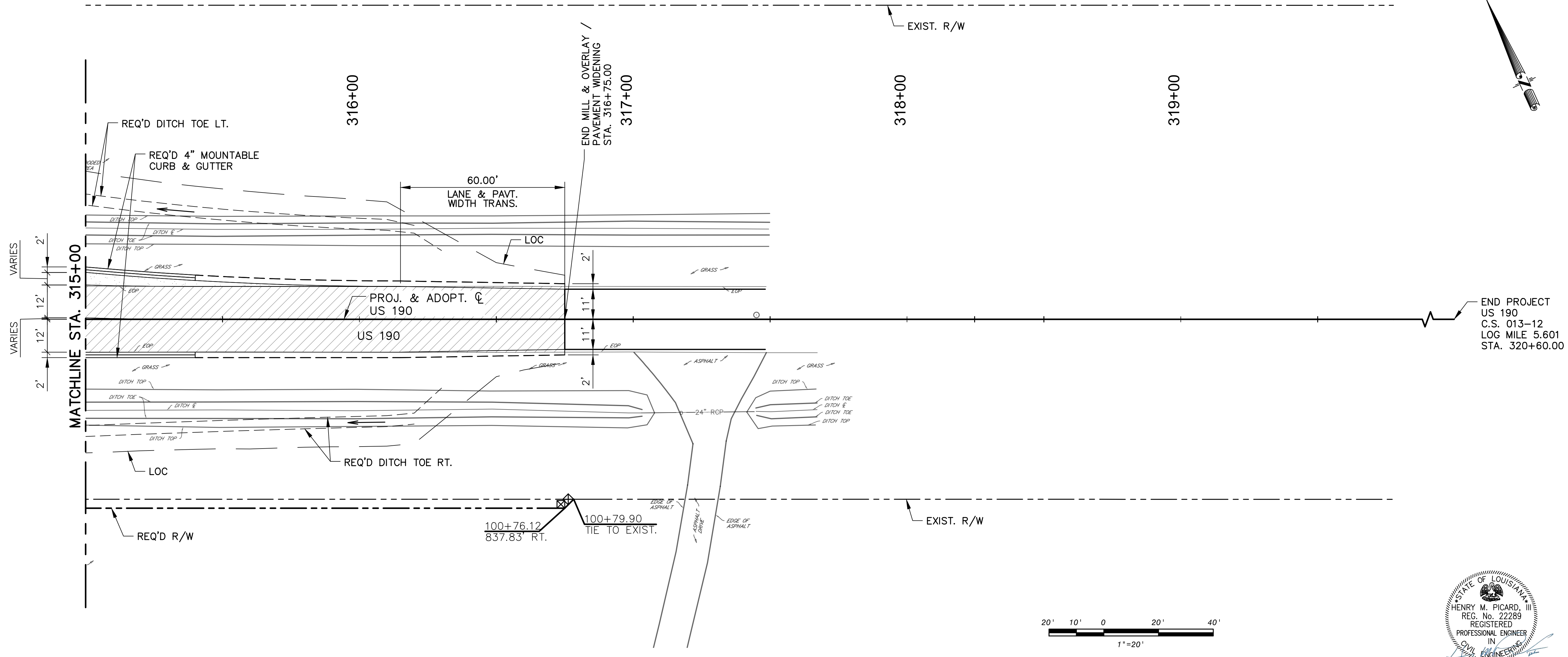
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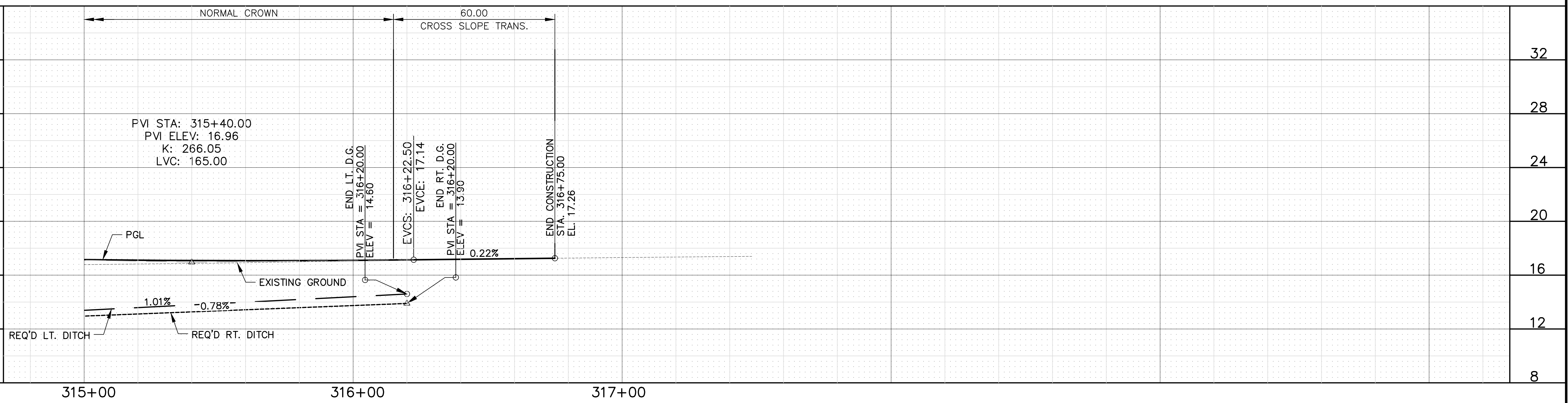
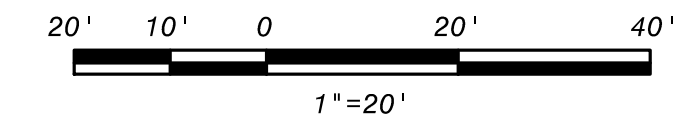
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PROJECT	MANDEVILLE BYPASS LA 1088 TO US 190	B.C.I.	PROJECT	NO.15.012	
DESIGNED	AJ	RCIII	SG	DATE	October, 2024
CHECKED				SHEET	OF
REVISION	NO.	DATE	DESCRIPTION	BY	

DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\8_Plan and Profile.dwg



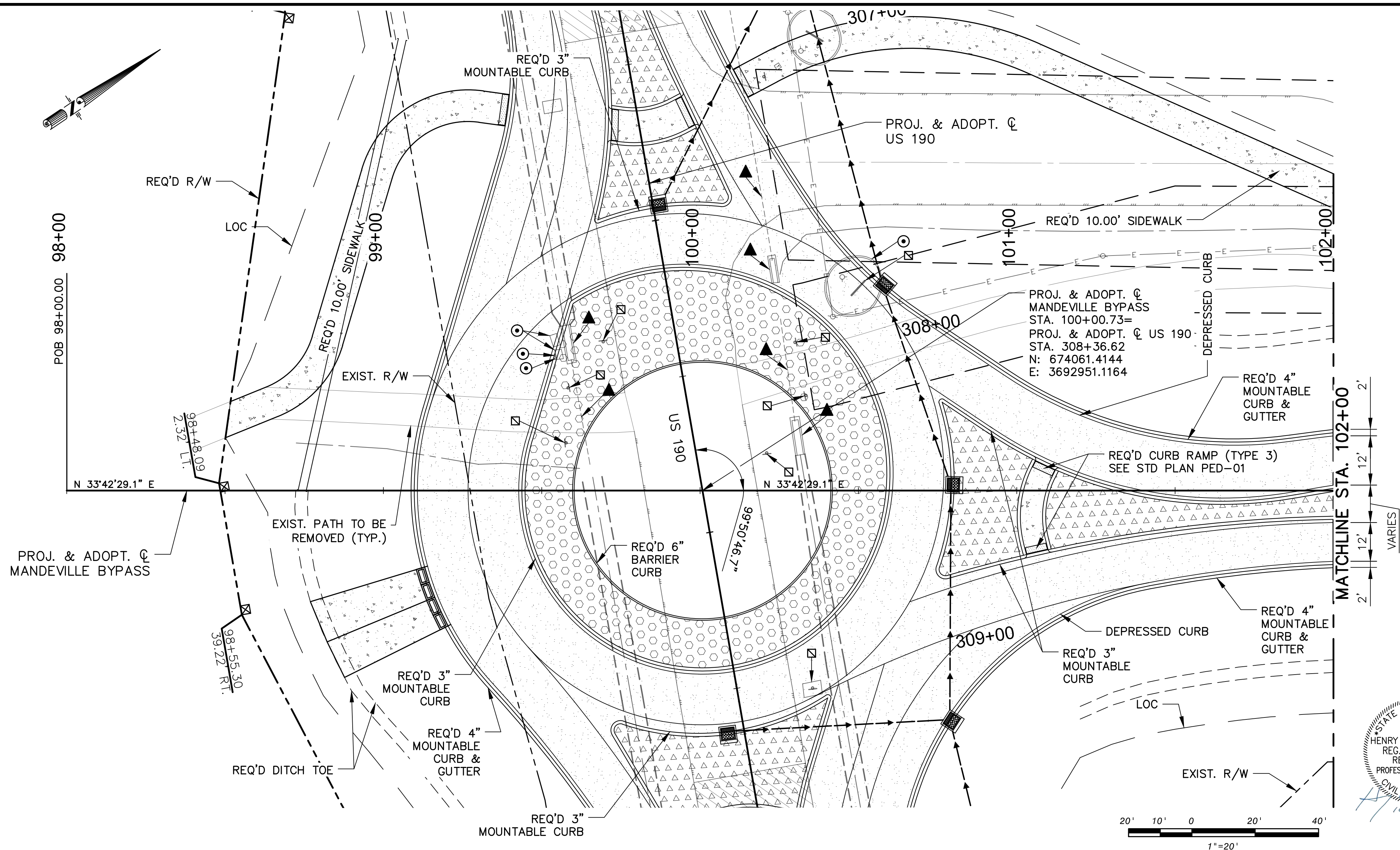
END PROJECT
US 190
C.S. 013-12
LOG MILE 5.601
STA. 320+60.00



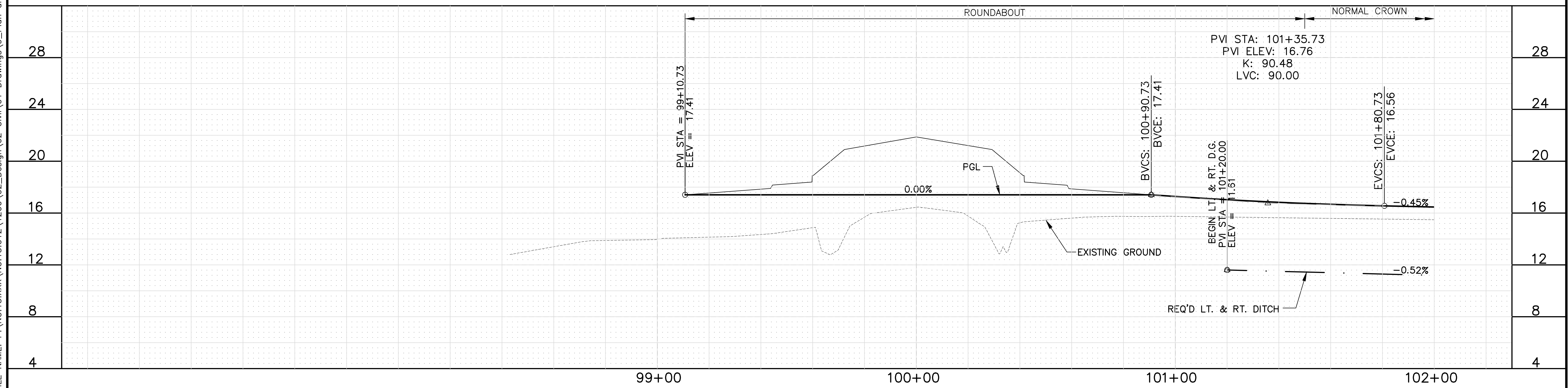
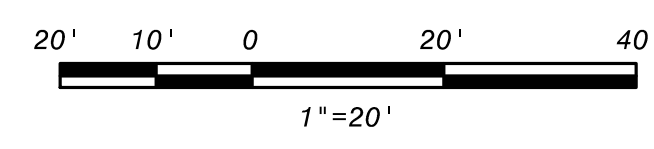
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ST. TAMMANY PARISH	2014EN0001
PARISH PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	PLAN/PROFILE US 190
LOUISIANA STATE ENGINEERS	
BK	
DESIGNED CHECKED RCIII	SG
DATE	October, 2024
REVISION DESCRIPTION	
NO.	DATE
BY	

DATE: 10/7/24

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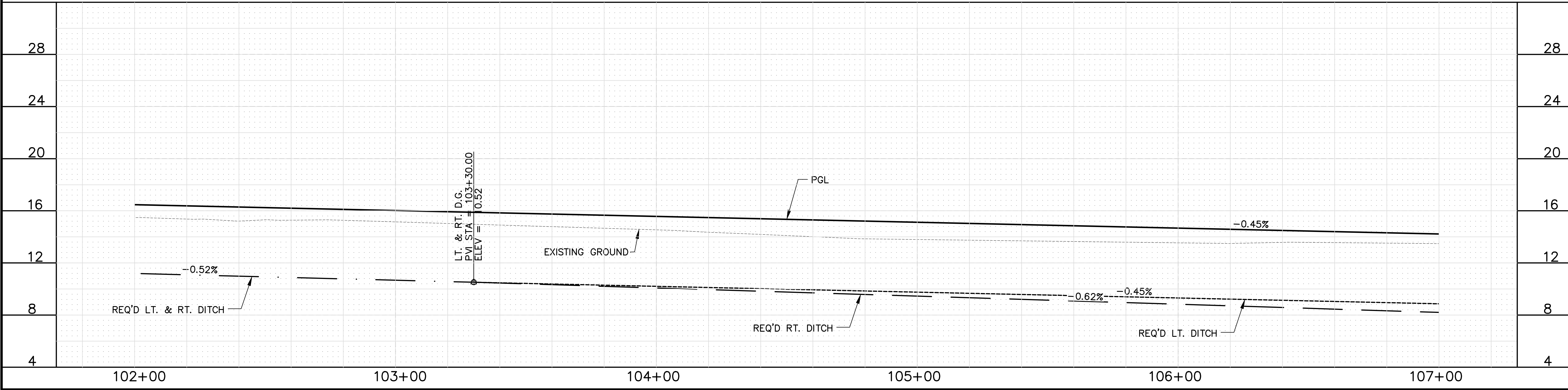
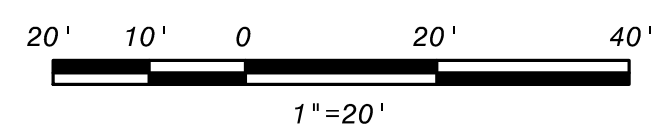
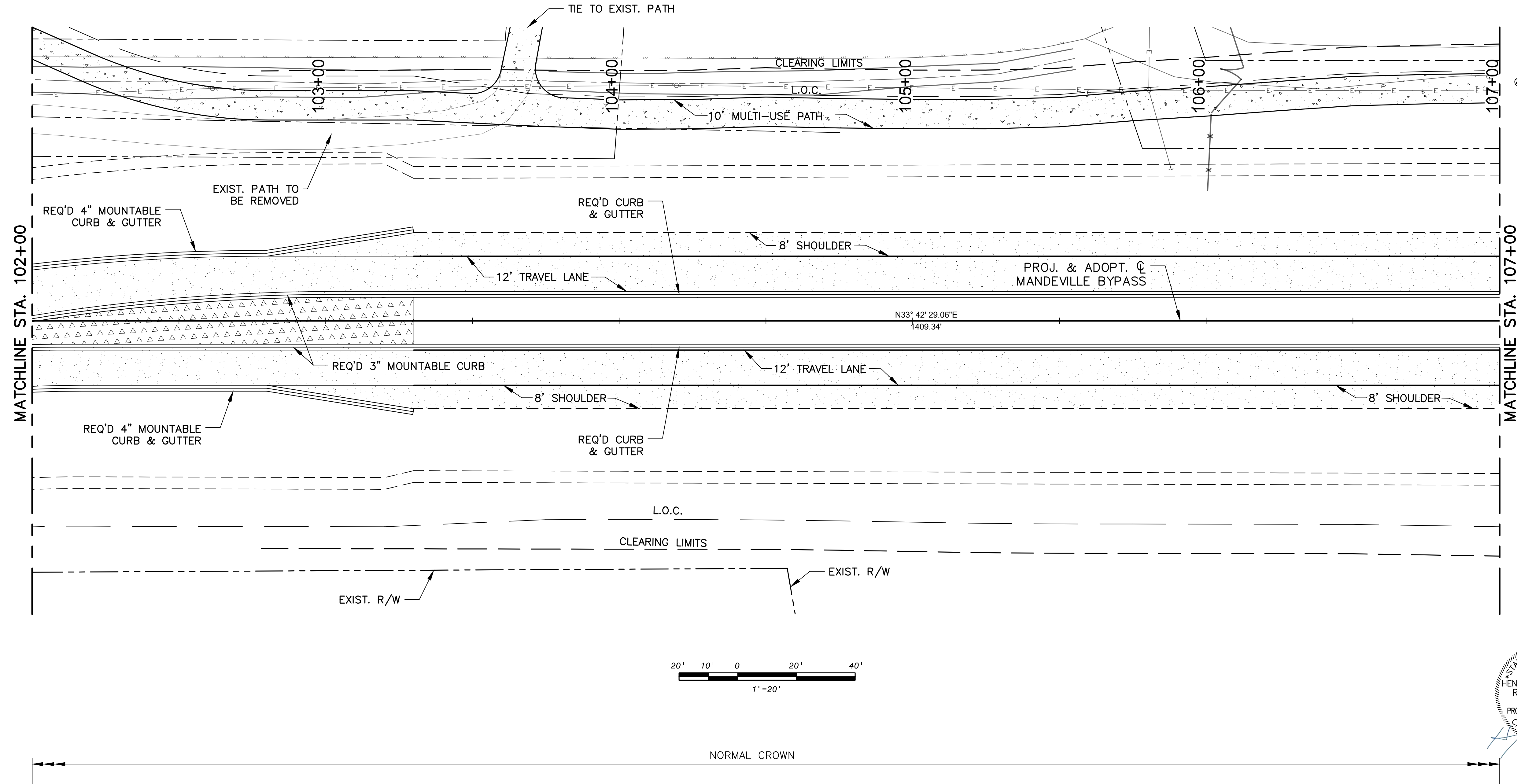
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 - ▣ EXIST. SIGN TO BE REMOVED.
 - ⊙ EXIST. STRUCTURE TO BE REMOVED.
- NOTE: SEE GEOMETRIC LAYOUT SHEETS FOR ROUNDABOUT GEOMETRY






SHEET NUMBER	9	ST. TAMMANY PARISH	PROJECT	NO.15.012
PARISH PROJECT	2014EN0001	STATE OF LOUISIANA	PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190				
ROADWAY PLANS PLAN/PROFILE MBP				
T.J.K. DESIGNED	G.A.D. CHECKED	T.J.K. DETAILED	T.J.K. CHECKED	DATE
October, 2024	October, 2024	October, 2024	October, 2024	BY
NO.	DATE	REVISION	DESCRIPTION	BY

DATE: 10/7/24

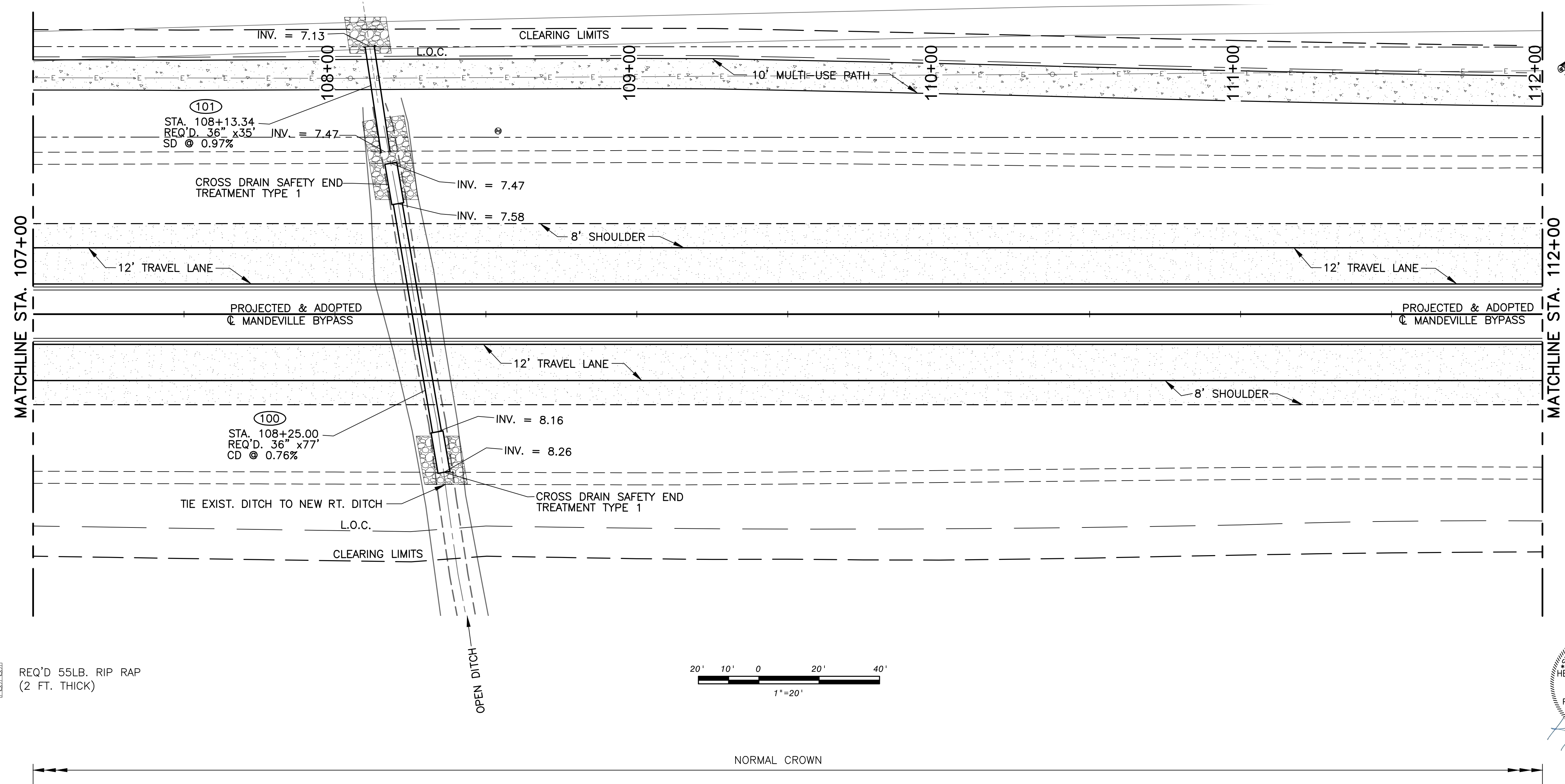
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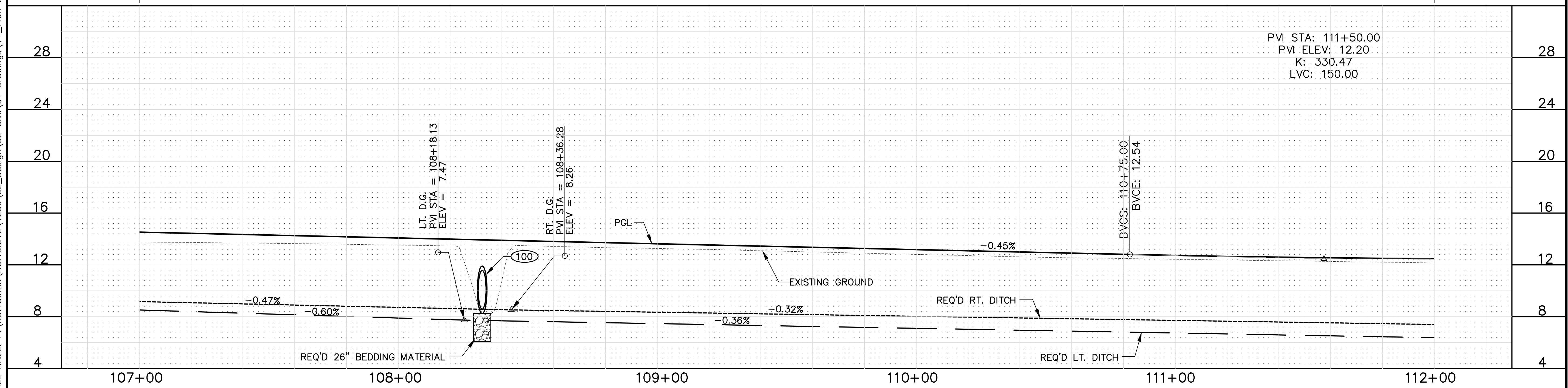
SHEET NUMBER	10
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.C.I. PROJECT	NO.15.012
	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
	
	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	CHECKED
DATE	SHEET
October, 2024	of
NO.	DATE
REVISION	DESCRIPTION
BY	

DATE: 10/8/24

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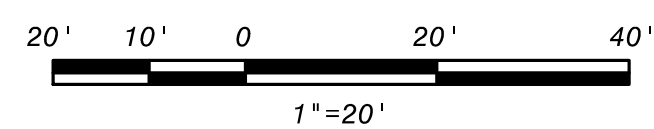
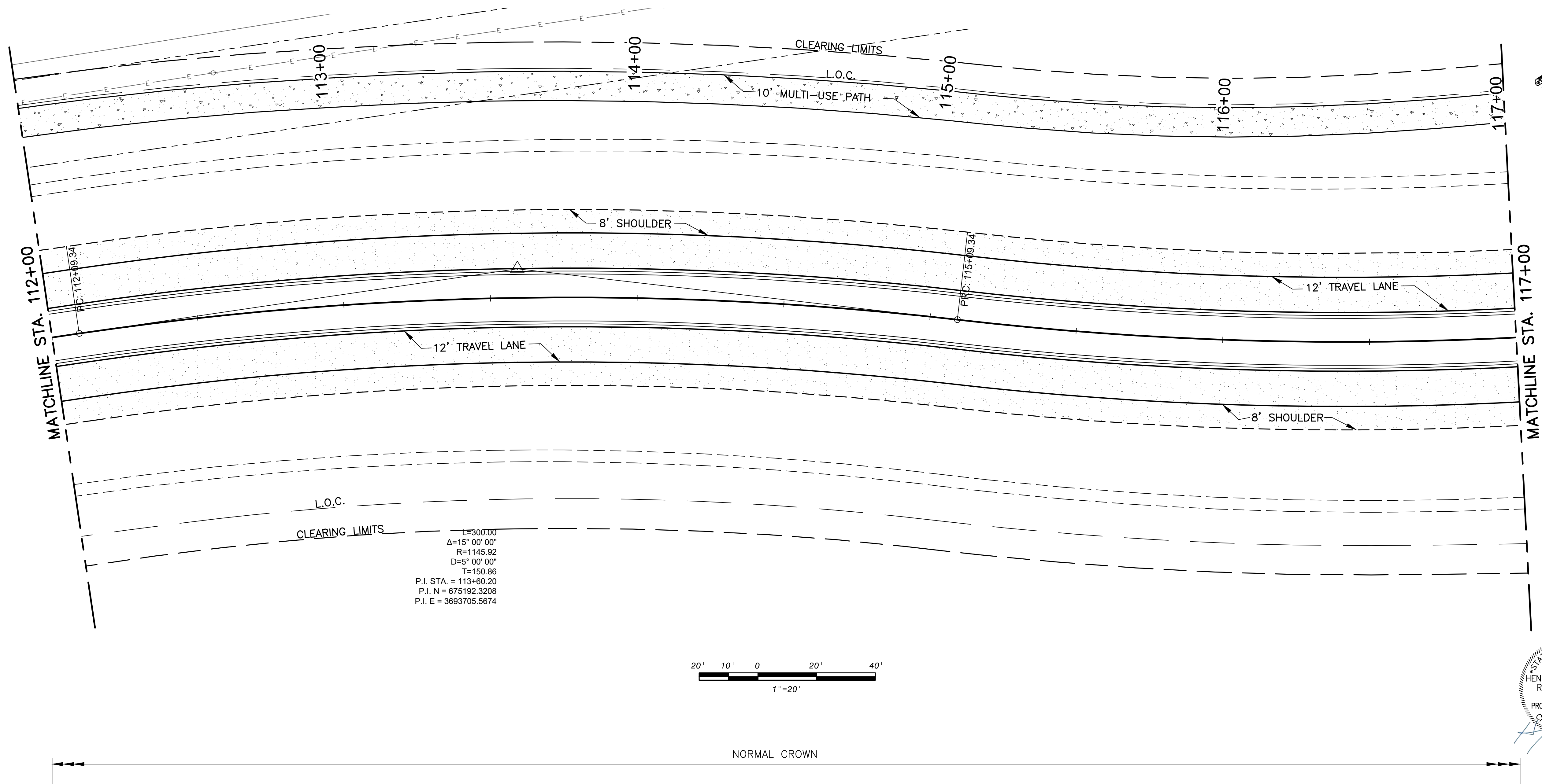


SHEET NUMBER	11
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	October, 2024
BY	T.J.K.
REVISION	DESCRIPTION
NO.	DATE

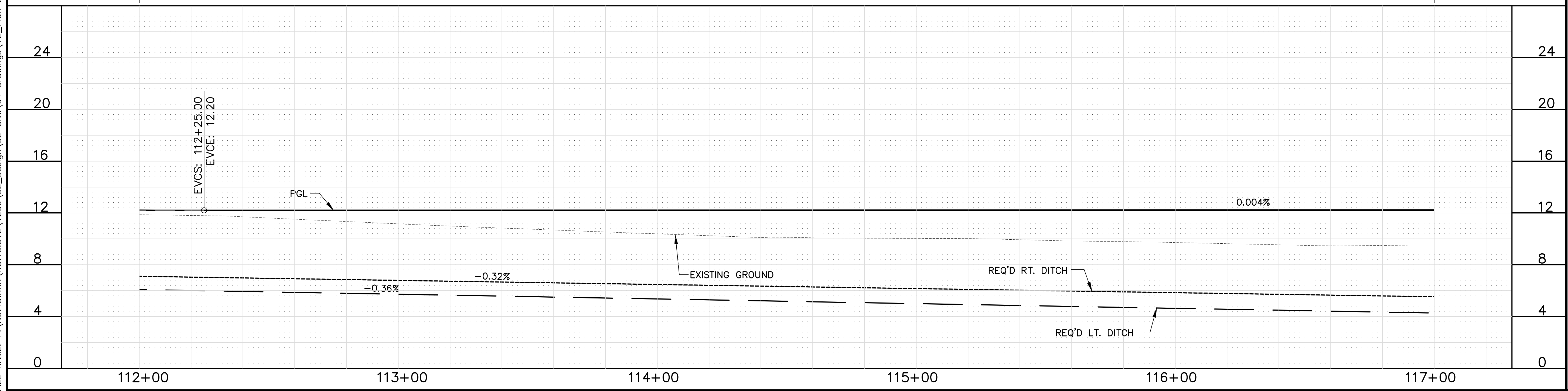


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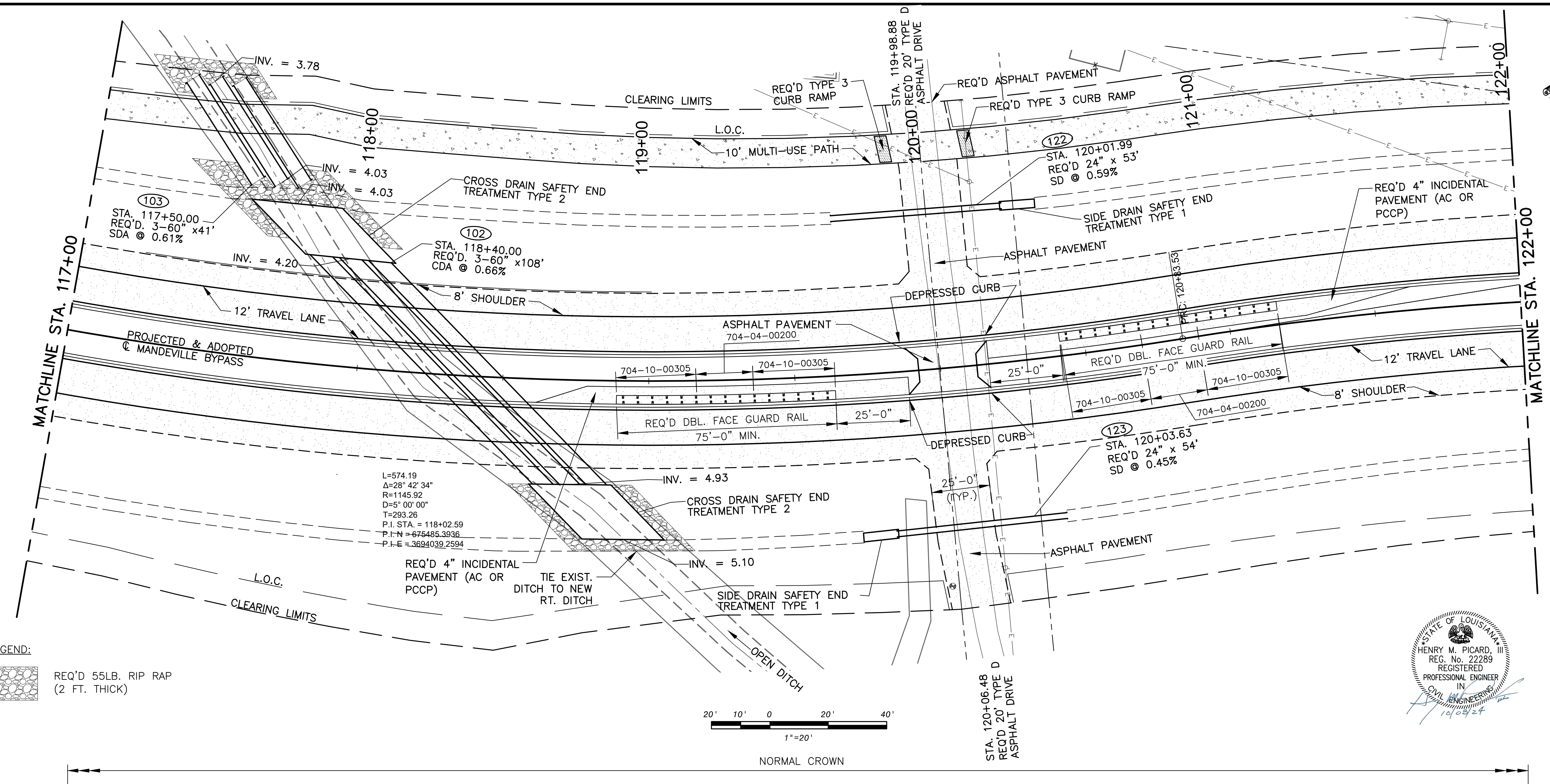


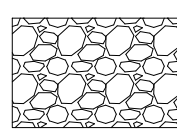
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PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
BK	
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	CHECKED
DATE	SHEET
October, 2024	of
NO.	DATE
BY	REVISION DESCRIPTION

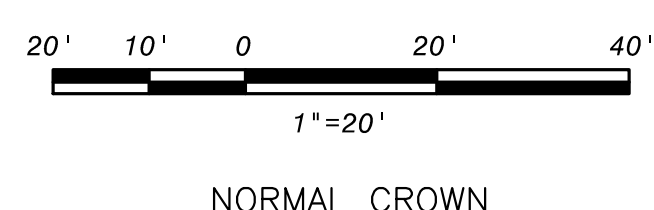
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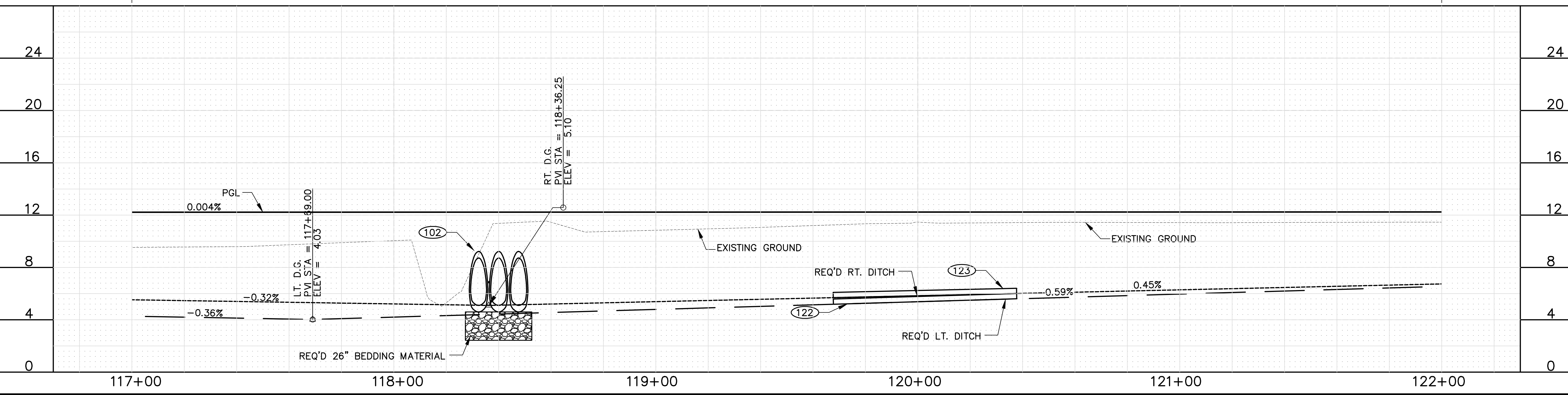
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PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.C.I. PROJECT	NO.15.012
	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
	
T.J.K. D.E.B.	October, 2024
G.A.D. T.J.K.	BY
DESIGNED	DATE
CHECKED	SHEET
DETAILED	REVISION DESCRIPTION
CHECKED	NO.
DATE	BY



LEGEND:
 REQ'D 55LB. RIP RAP (2 FT. THICK)

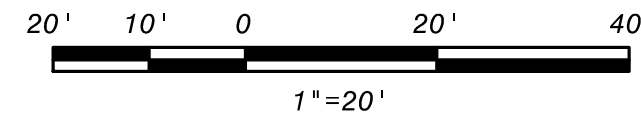
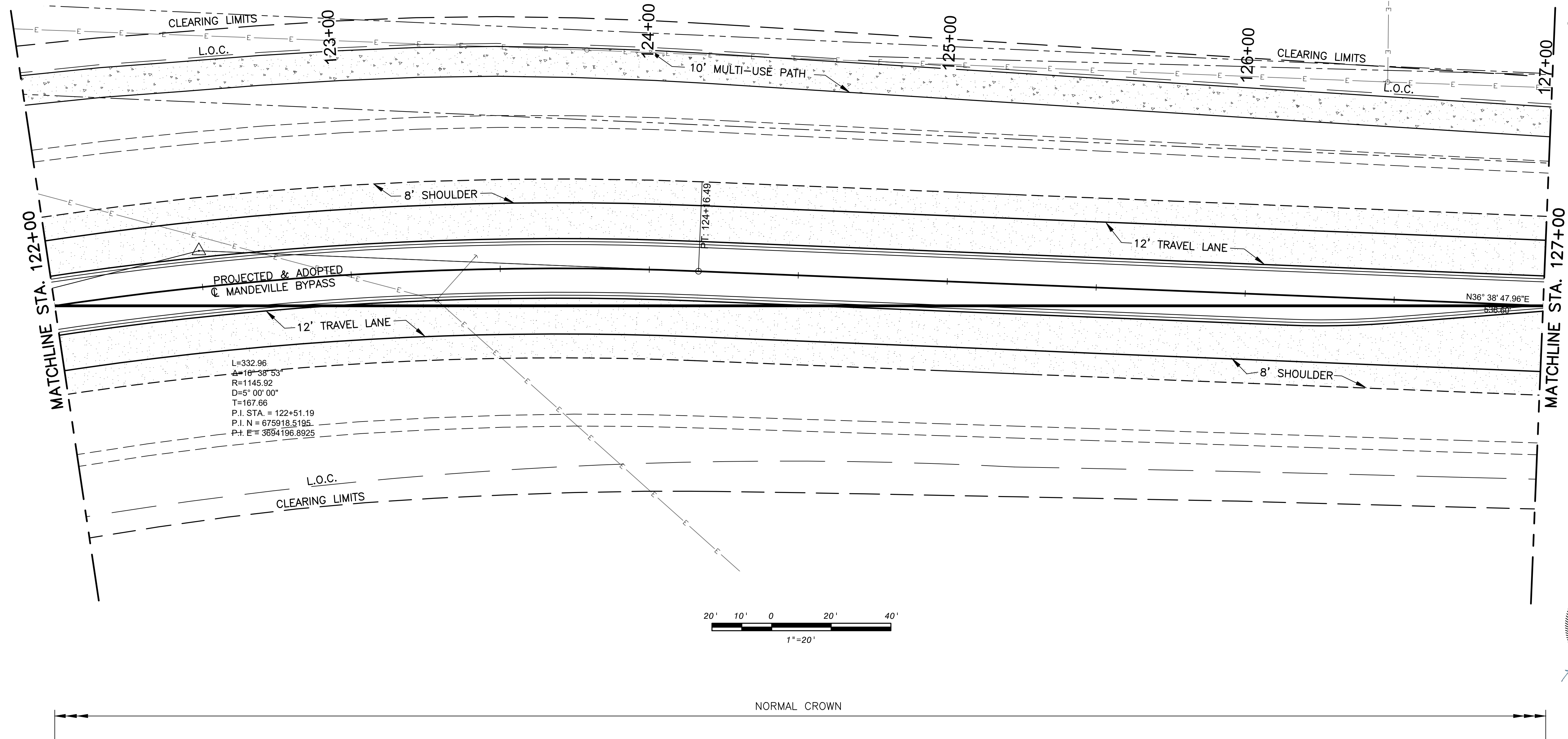


STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/24



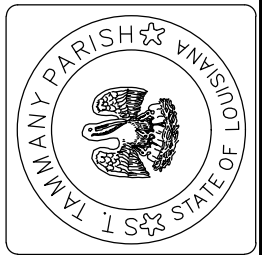
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SHEET NUMBER 14

PARISH ST. TAMMANY PARISH
 PROJECT 2014EN0001
 B.C.L. PROJECT NO.15.012

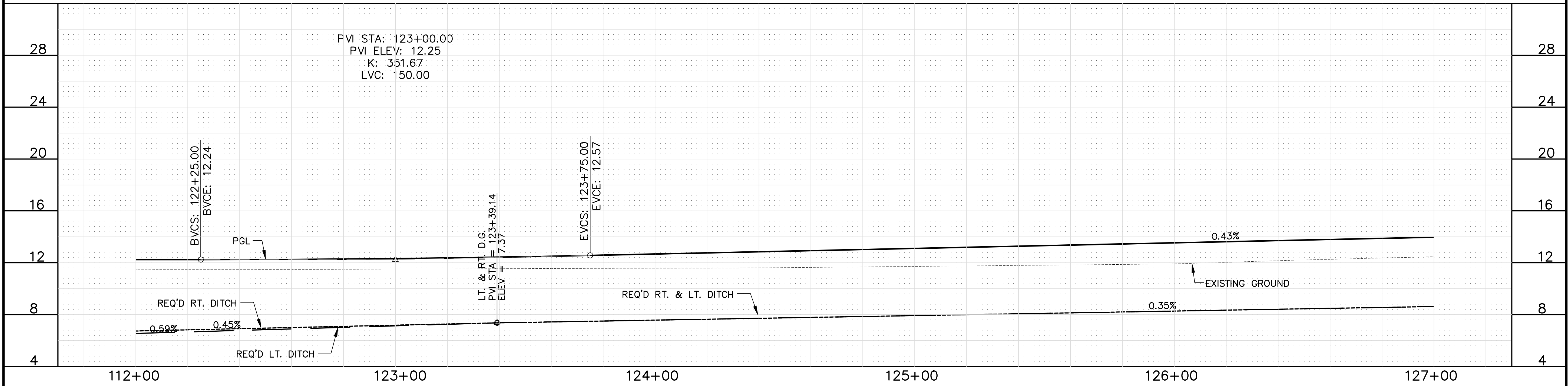


MANDEVILLE BYPASS
 LA 1088 TO US 190
 PLAN/PROFILE MBP



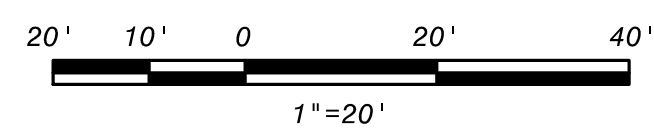
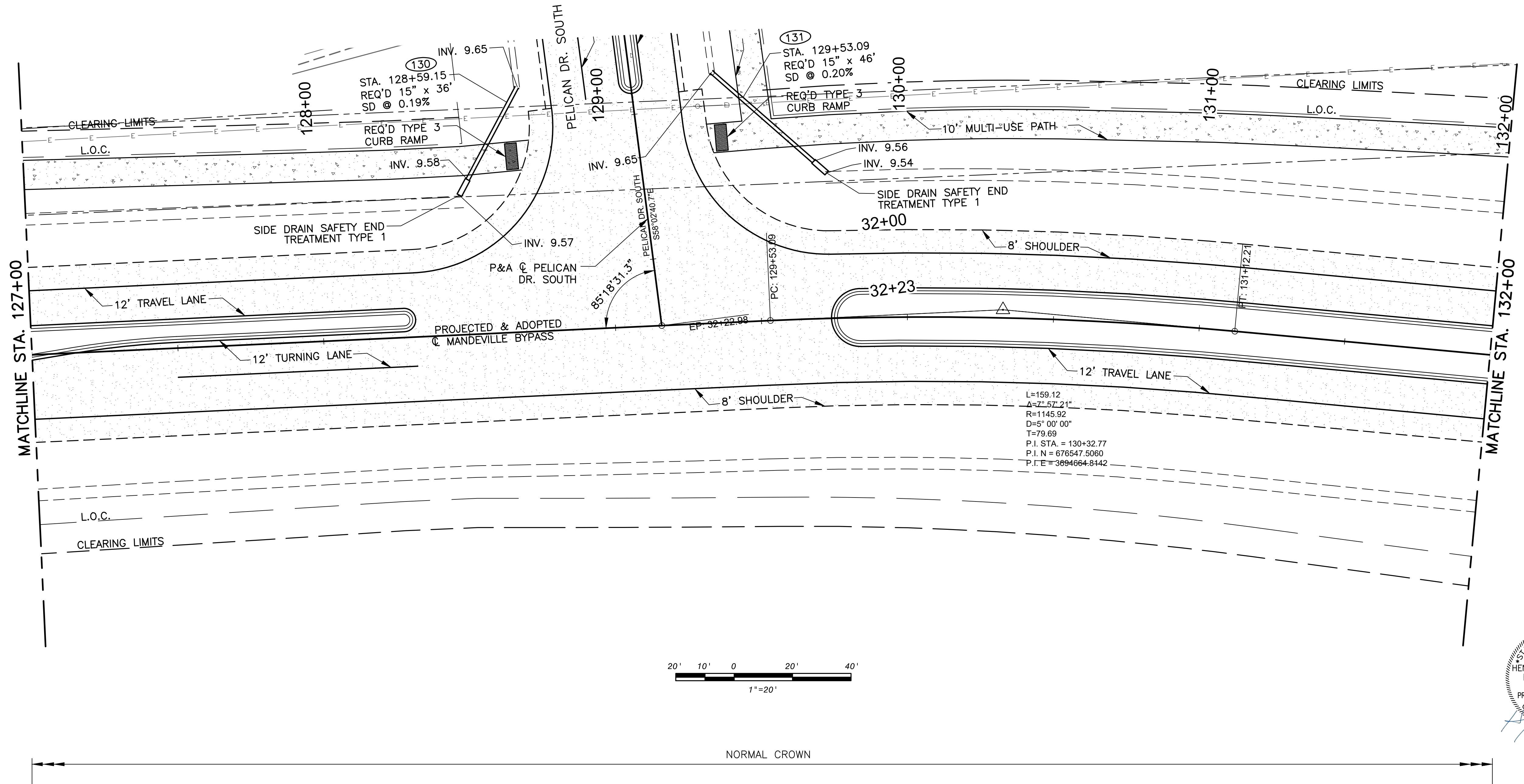
T.J.K.
 D.E.B.
 G.A.D.
 T.J.K.
 October, 2024

DESIGNED	CHECKED	DATE	BY
REVISION	DESCRIPTION	DATE	BY

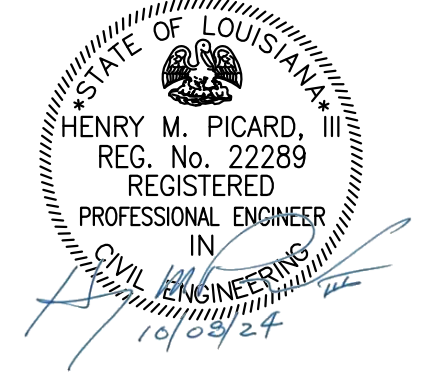
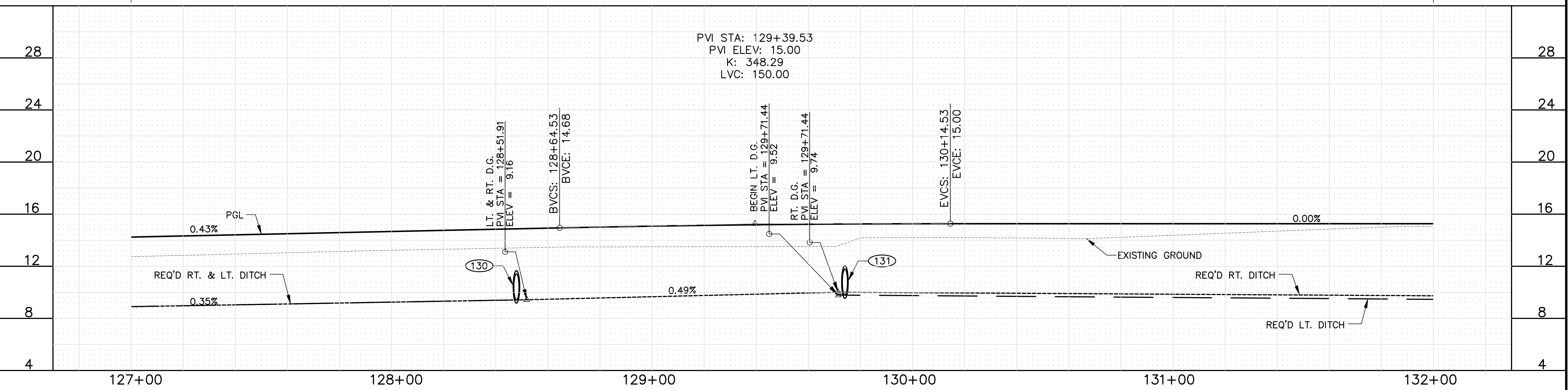


DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\15_Plan and Profile.dwg



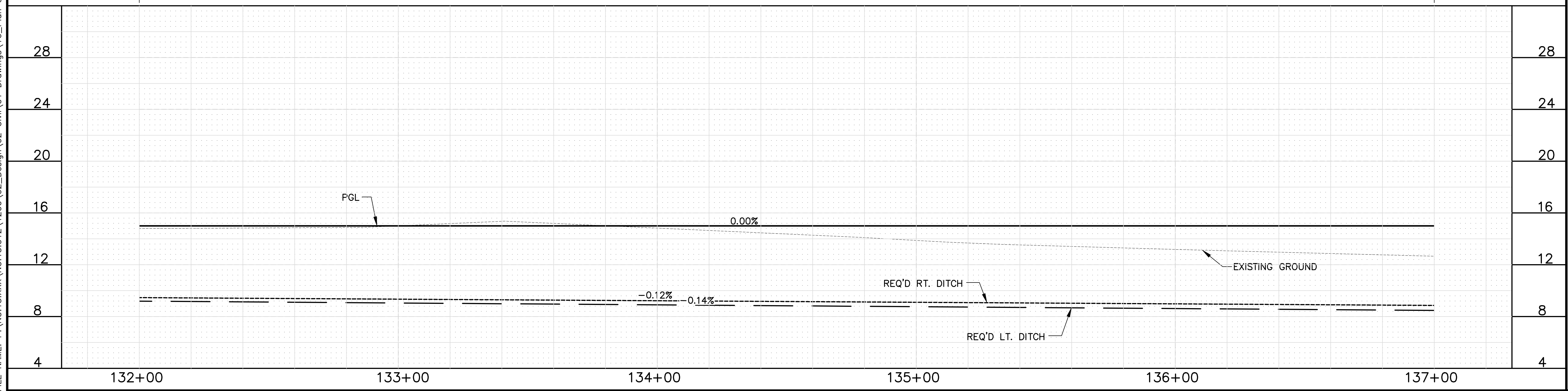
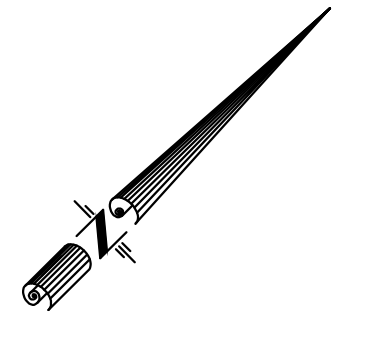
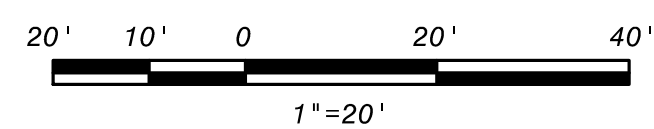
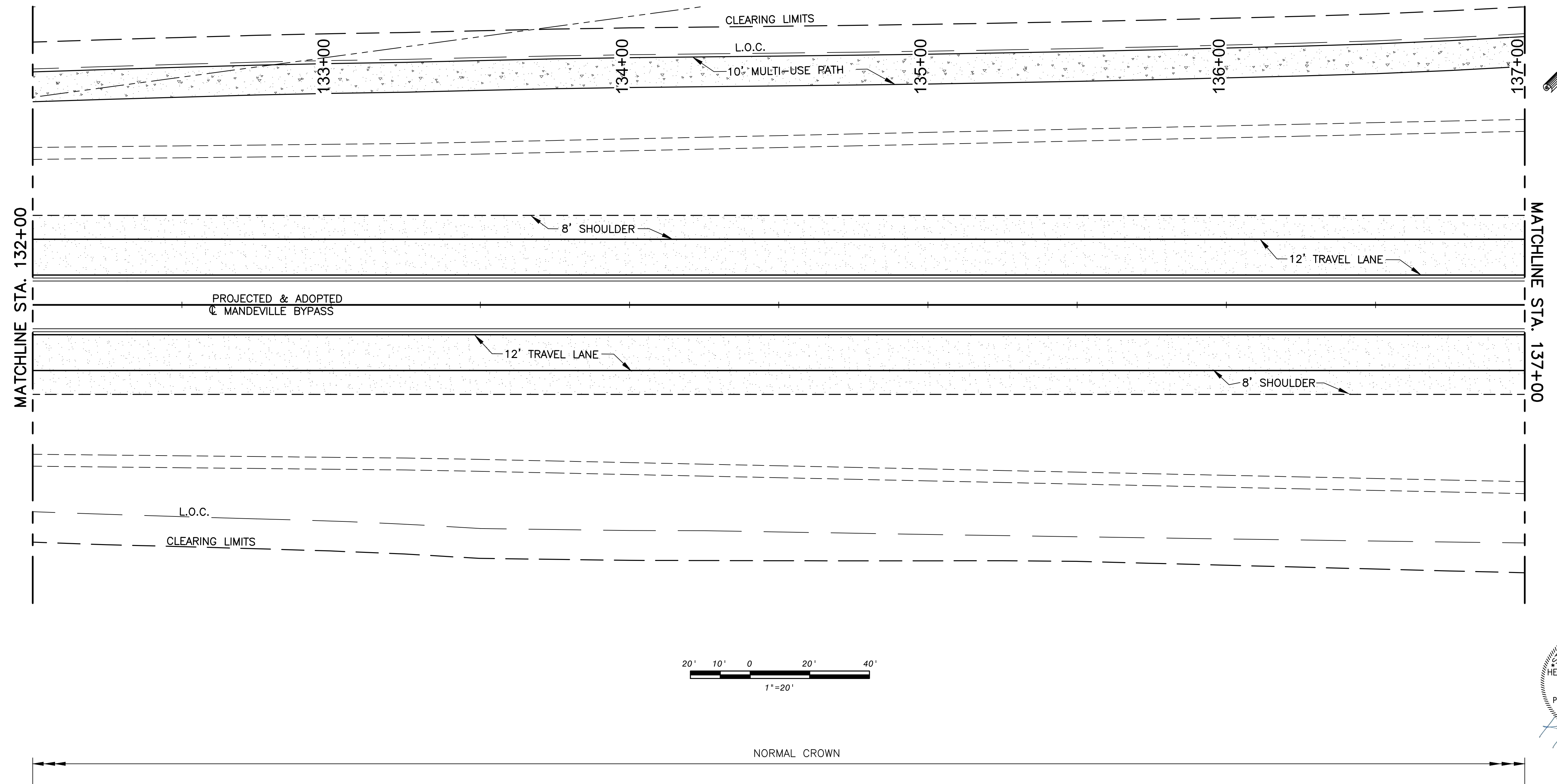
NORMAL CROWN





SHEET NUMBER	15
ST. TAMMANY PARISH	MANDEVILLE BYPASS
2014EN0001	LA 1088 TO US 190
NO.15.012	PLAN/PROFILE MBP
PARISH PROJECT	ROADWAY PLANS
B.K.L. PROJECT	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	October, 2024
REVISION DESCRIPTION	
BY	
NO.	
DATE	

DATE: 10/7/24

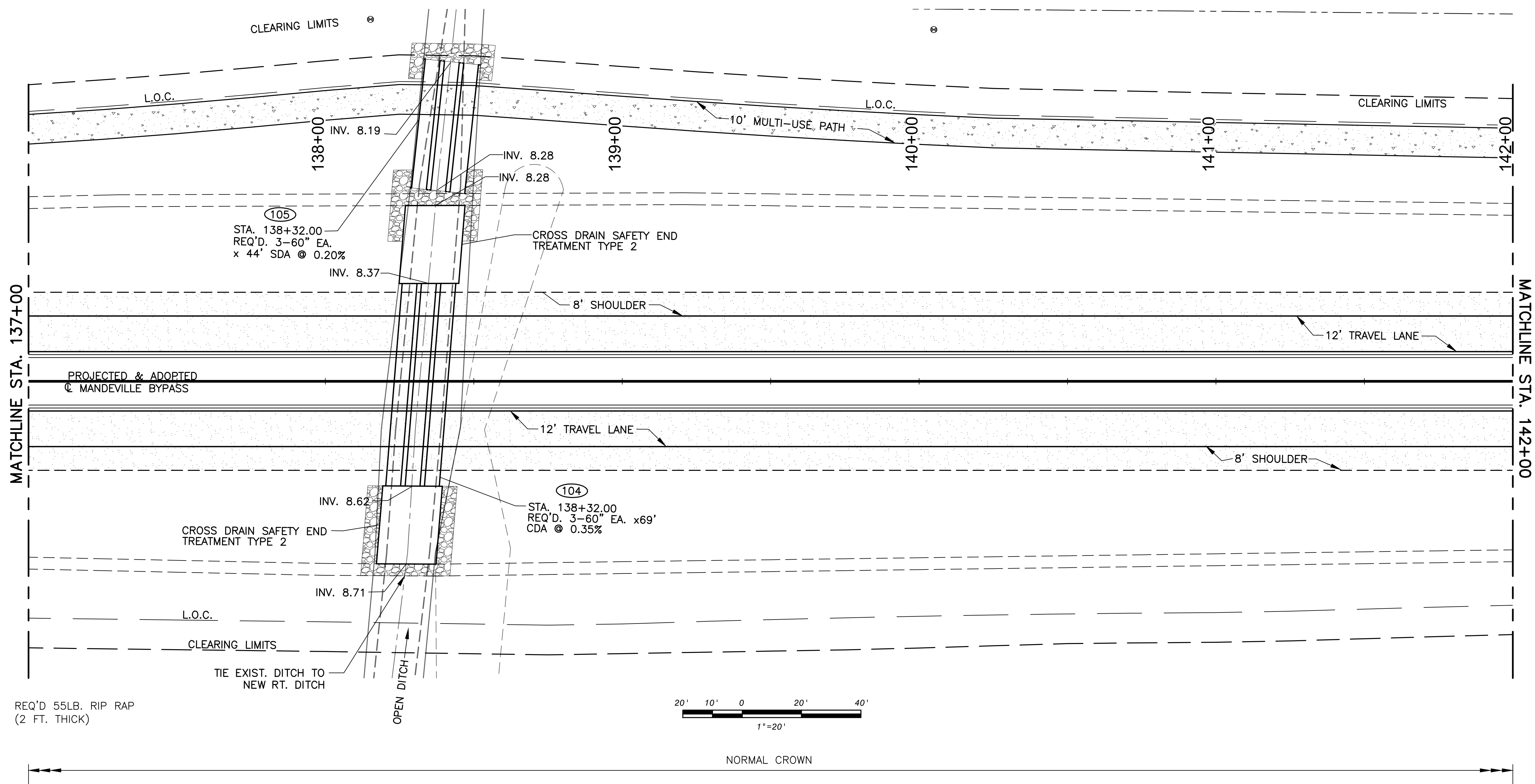
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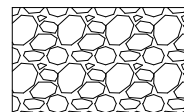
SHEET NUMBER		16	
PARISH	PROJECT	DATE	BY
ST. TAMMANY PARISH	2014EN0001		
ROADWAY PLANS	PLAN/PROFILE MBP	NO. 15.012	
			
MANDEVILLE BYPASS LA 1088 TO US 190			
			
DESIGNED	CHECKED	DATE	SHEET
T.J.K.	G.A.D.	October, 2024	of
D.E.B.	T.J.K.		
REVISION DESCRIPTION			
NO.	DATE		

DATE: 10/8/24

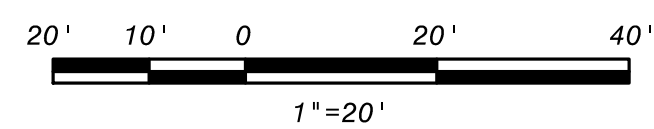
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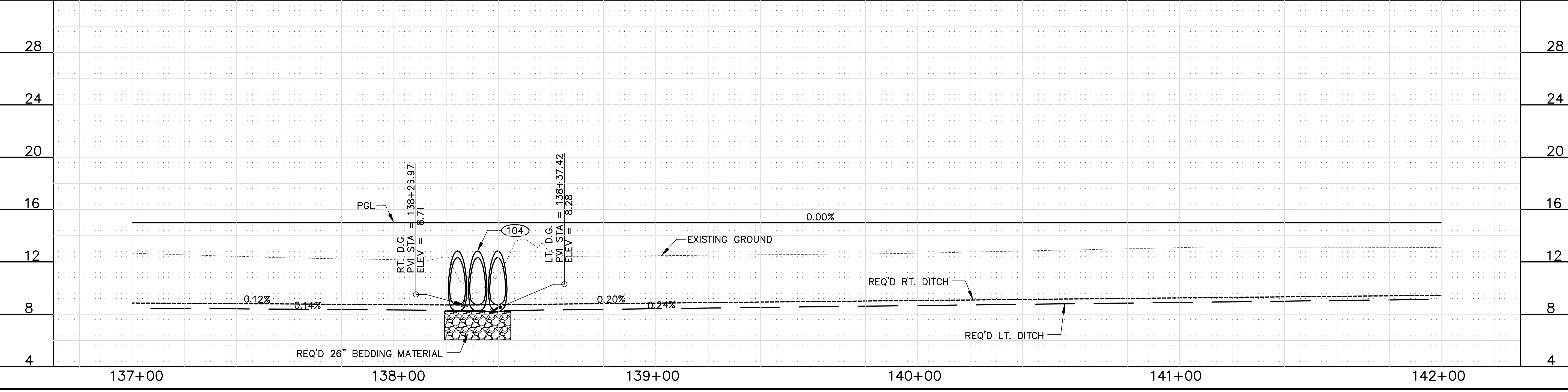
LEGEND:

 REQ'D 55LB. RIP RAP (2 FT. THICK)

TIE EXIST. DITCH TO NEW RT. DITCH

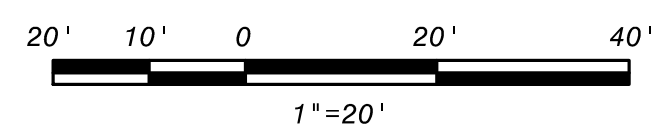
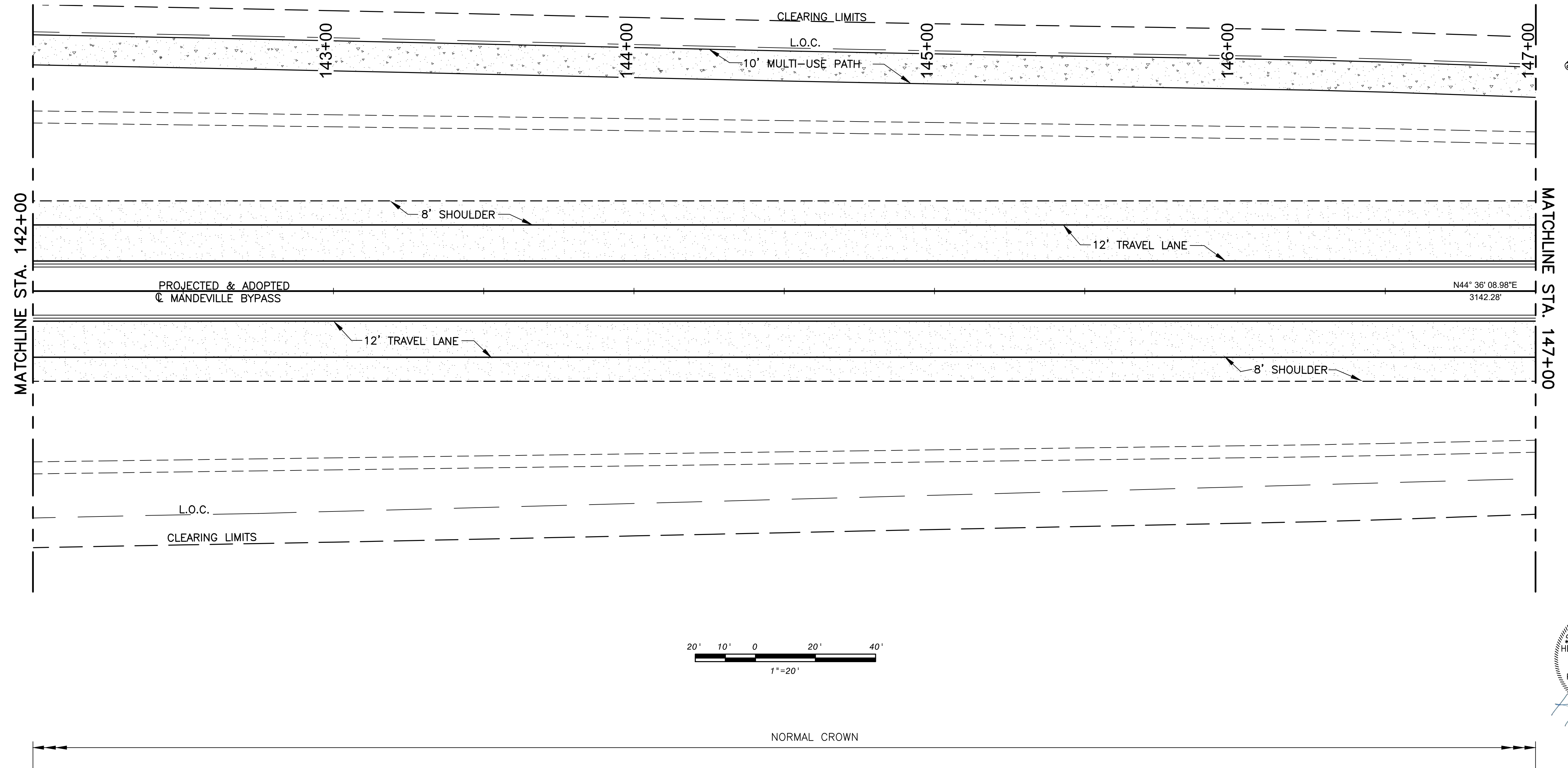


SHEET NUMBER	17
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
PROJECT	NO.15.012
	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
	
	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DETAILED	G.A.D.
CHECKED	T.J.K.
DATE	October, 2024
SHEET	OF
NO.	DATE
BY	REVISION DESCRIPTION



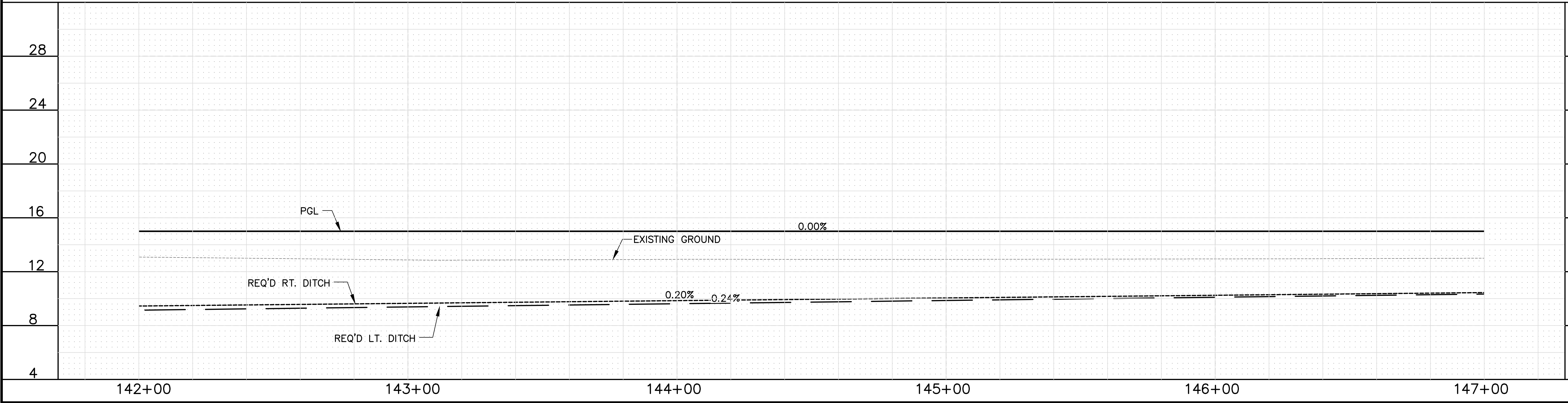
DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\18_Plan and Profile.dwg



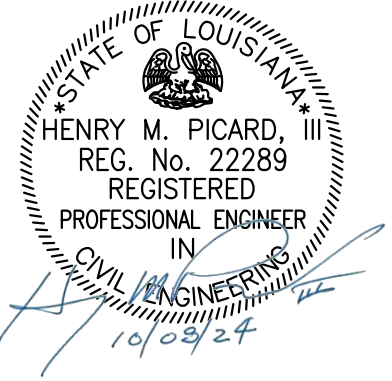
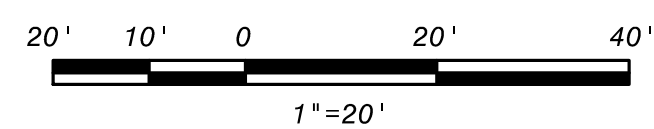
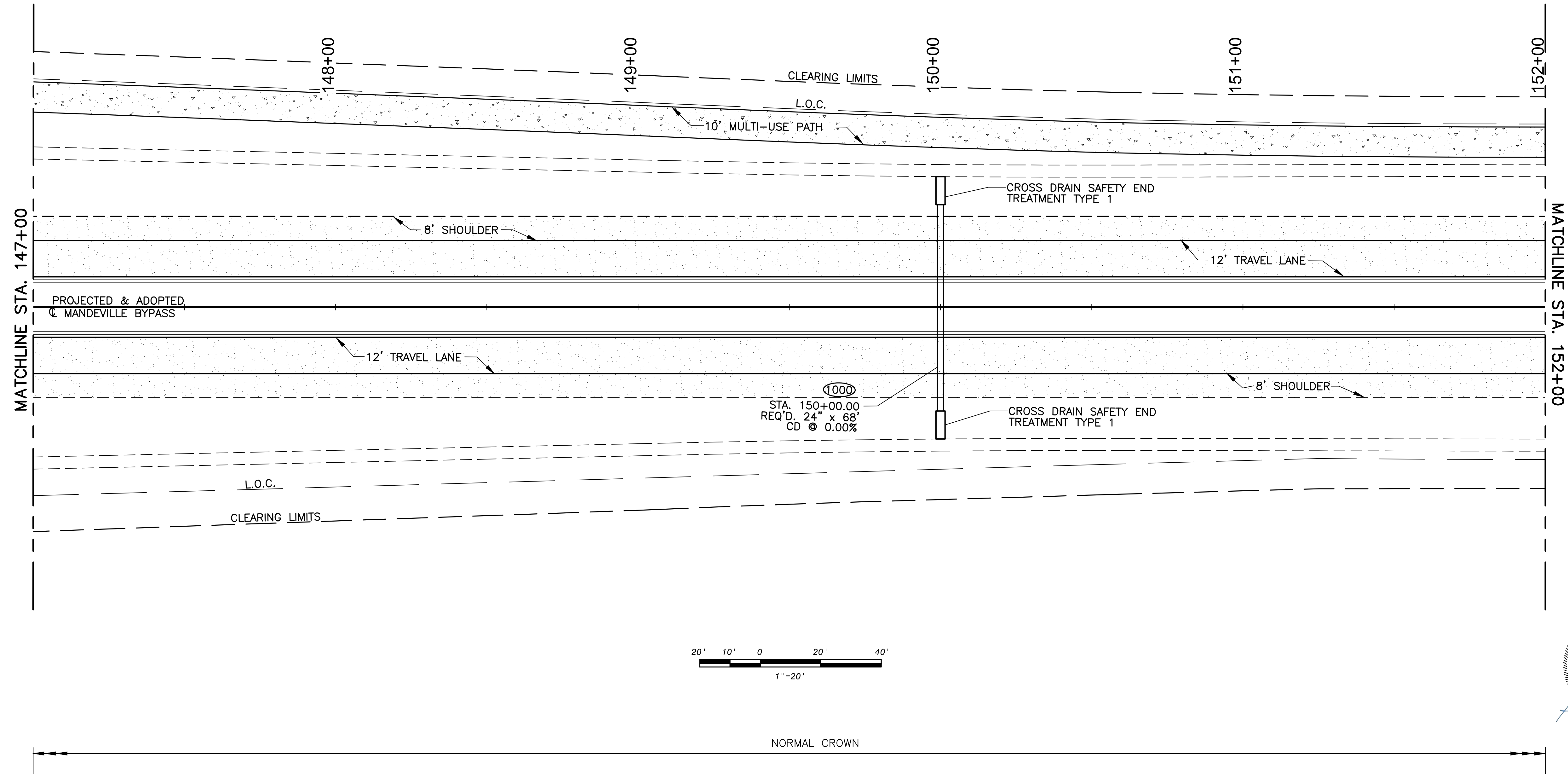
STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/24

SHEET NUMBER	18
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.C.I. PROJECT	NO.15.012
ROADWAY PLANS	PLAN/PROFILE MBP
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	October, 2024
DESIGNED	G.A.D.
CHECKED	T.J.K.
DATE	October, 2024
NO.	
DATE	
BY	
REVISION DESCRIPTION	



DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\19_Plan and Profile.dwg



SHEET NUMBER 19

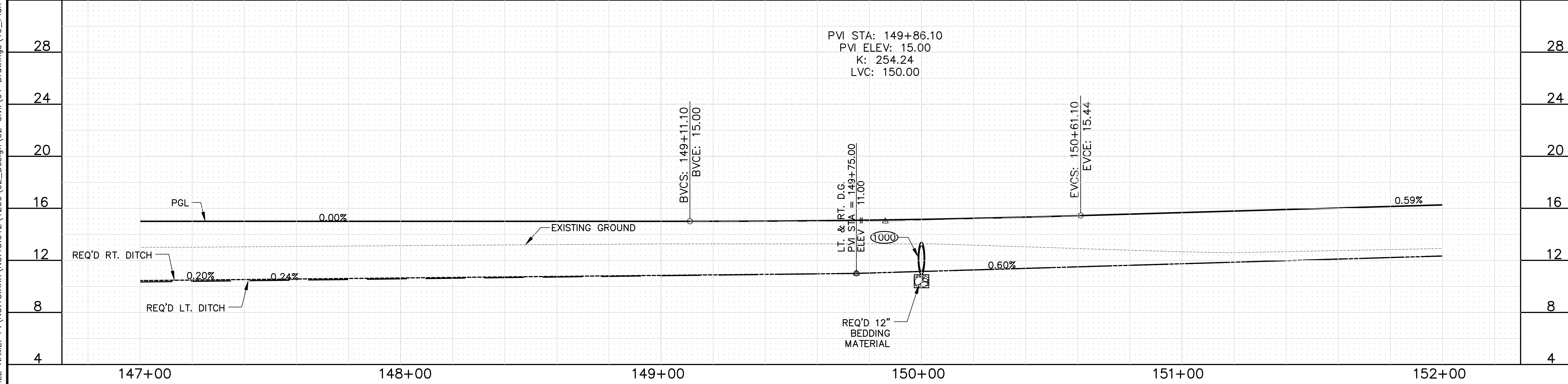
ST. TAMMANY PARISH
 2014EN0001
 NO.15.012



MANDEVILLE BYPASS
 LA 1088 TO US 190
 PLAN/PROFILE MBP



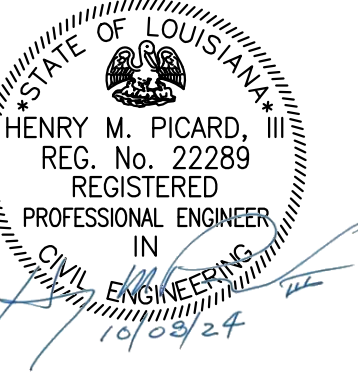
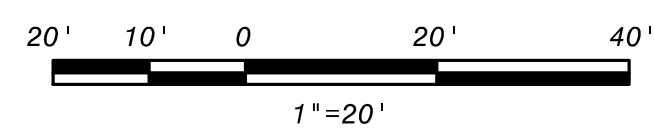
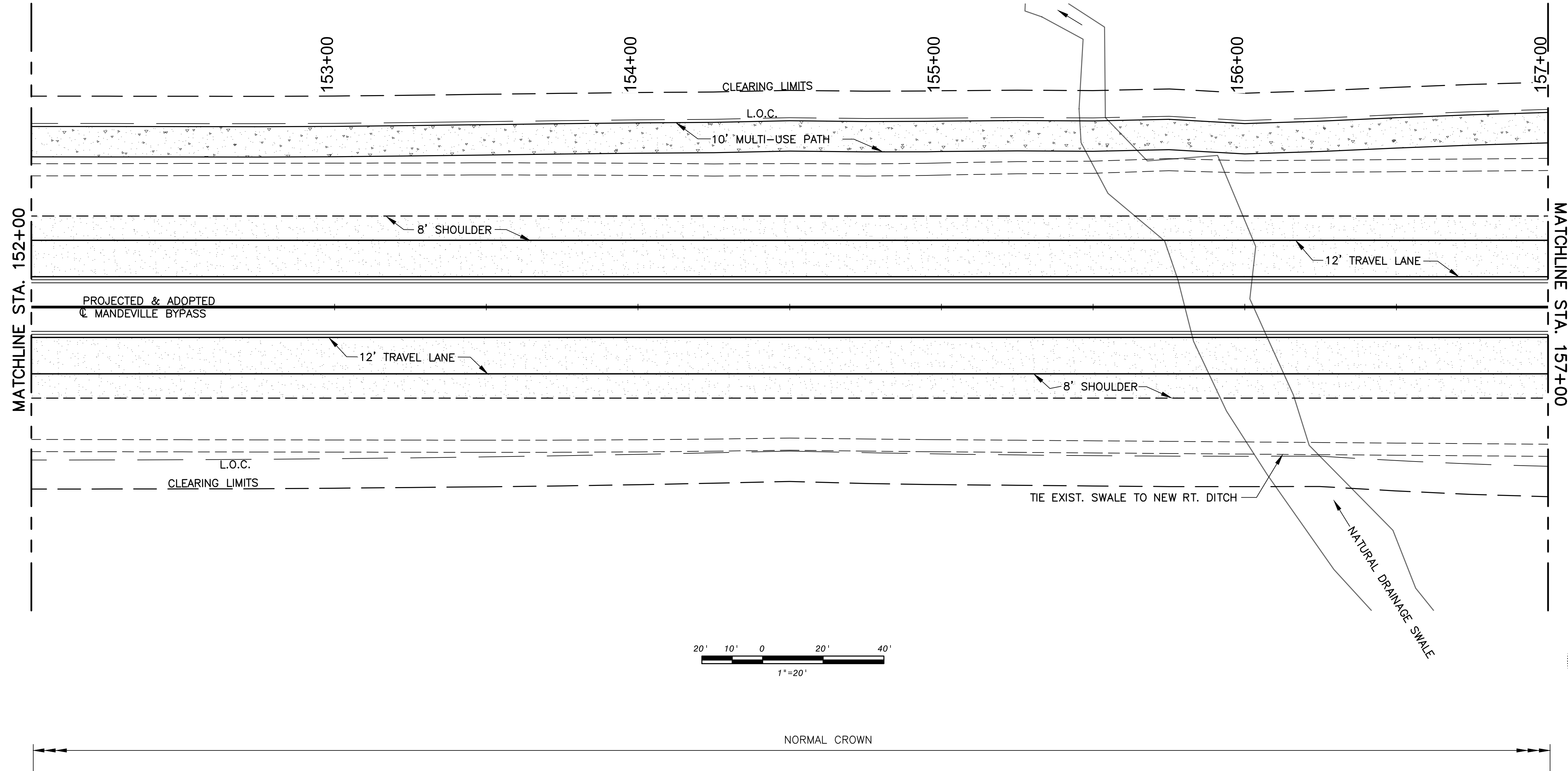
T.J.K. D.E.B.
 G.A.D. T.J.K.
 October, 2024



DESIGNED	CHECKED	DATE	BY
REVISION	DESCRIPTION	DATE	BY

DATE: 10/7/24

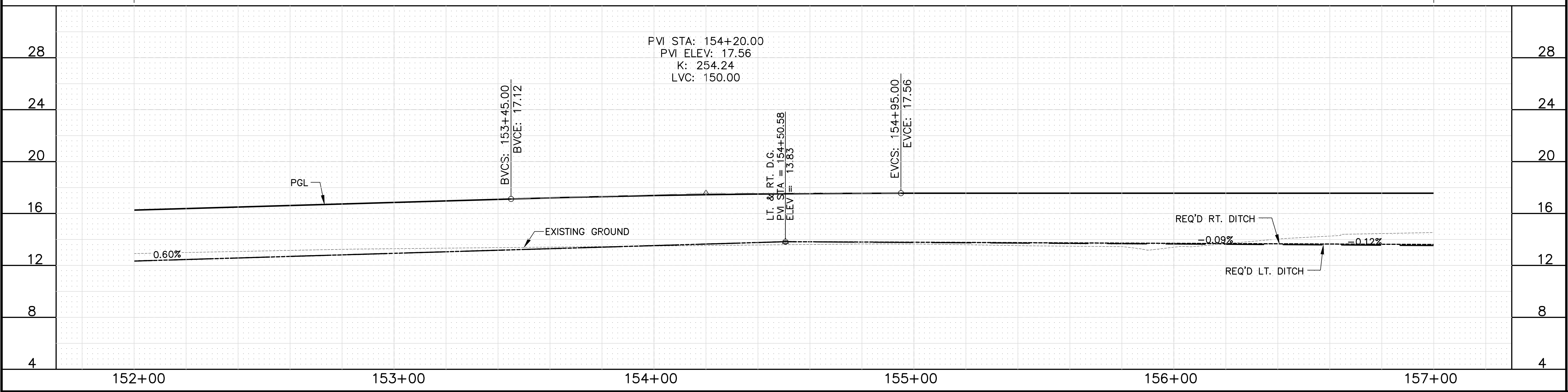
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T.J.K. D.E.B. G.A.D. T.J.K.
 October, 2024 of

DESIGNED CHECKED
 DETAILED CHECKED
 DATE SHEET

NO.	DATE	REVISION DESCRIPTION	BY



SHEET NUMBER 20

ST. TAMMANY PARISH
 2014EN0001
 NO.15.012



MANDEVILLE BYPASS
 LA 1088 TO US 190
 PLAN/PROFILE MBP



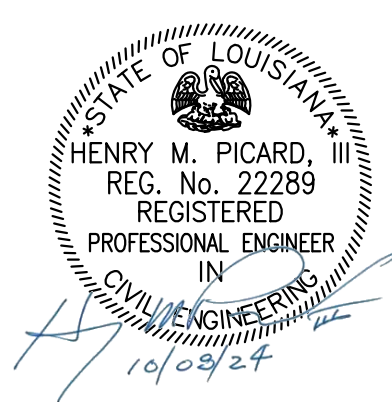
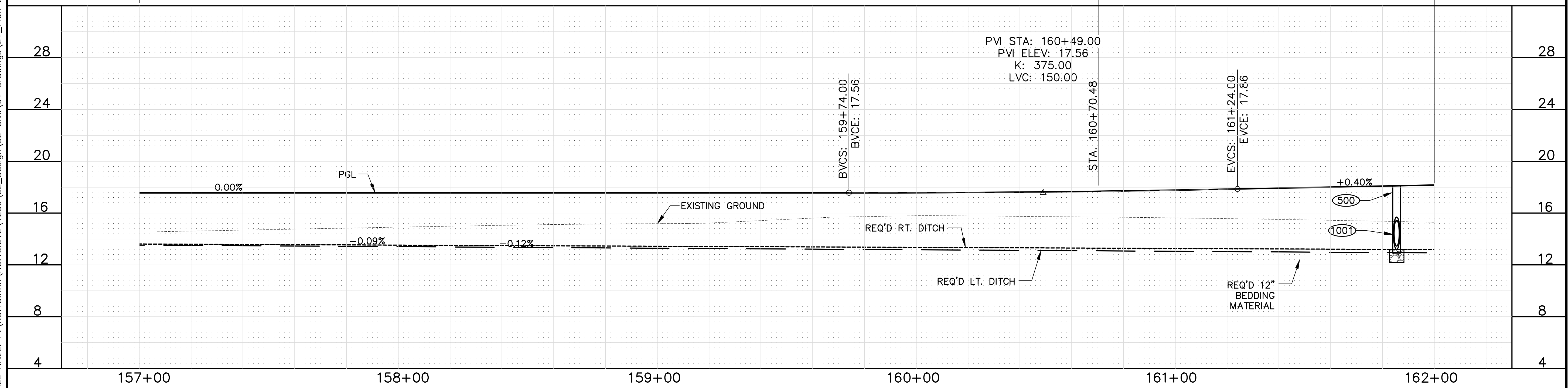
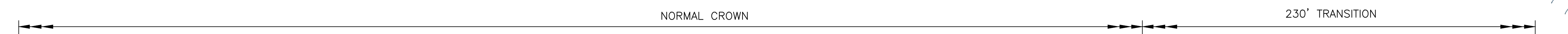
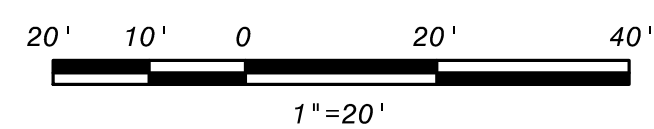
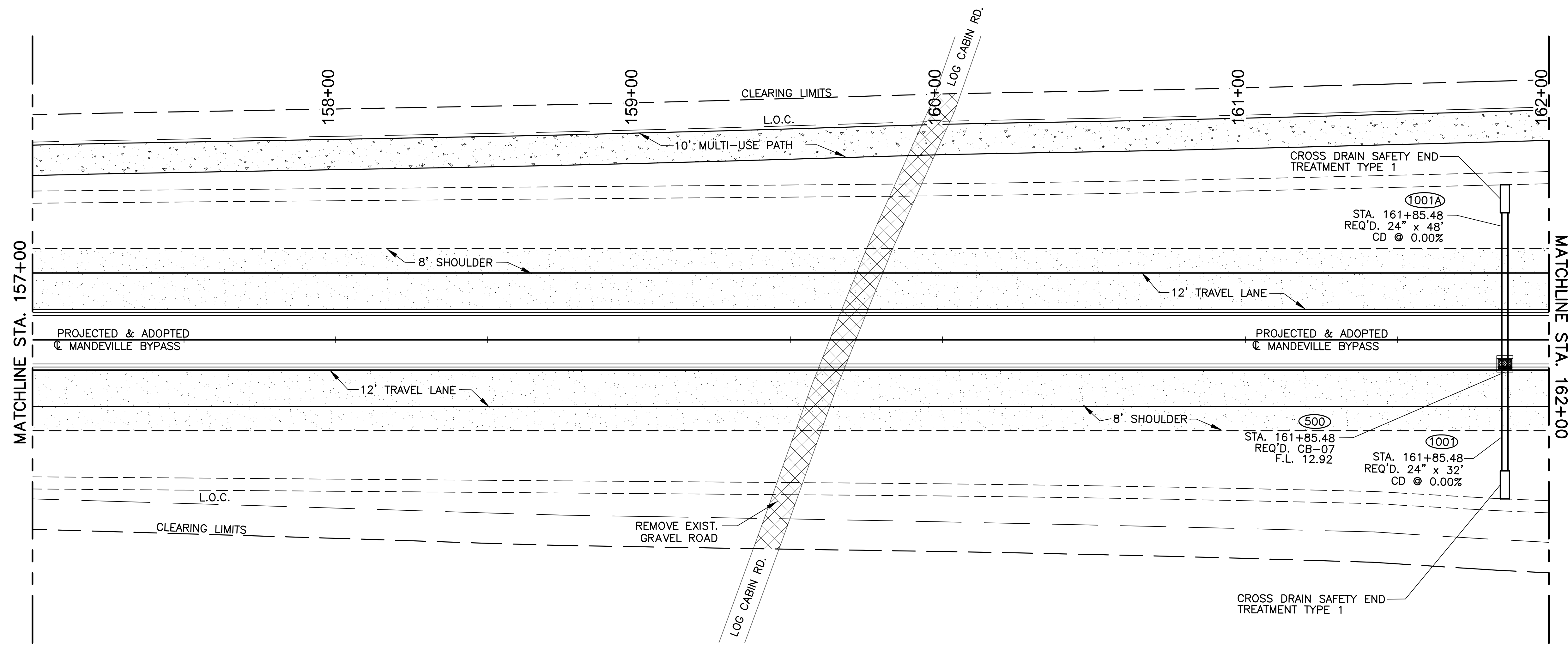
October, 2024 of

DESIGNED CHECKED
 DETAILED CHECKED
 DATE SHEET

NO.	DATE	REVISION DESCRIPTION	BY

DATE: 10/7/24

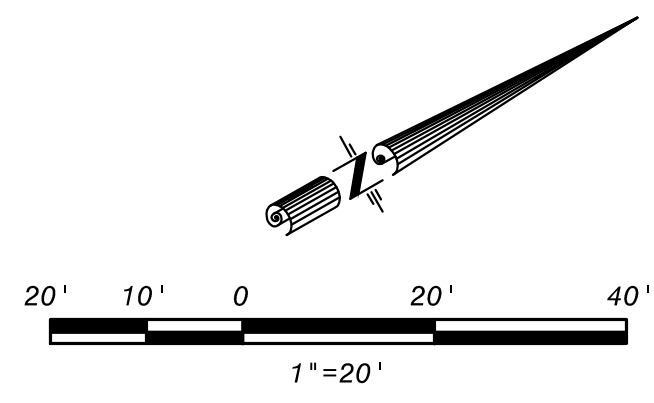
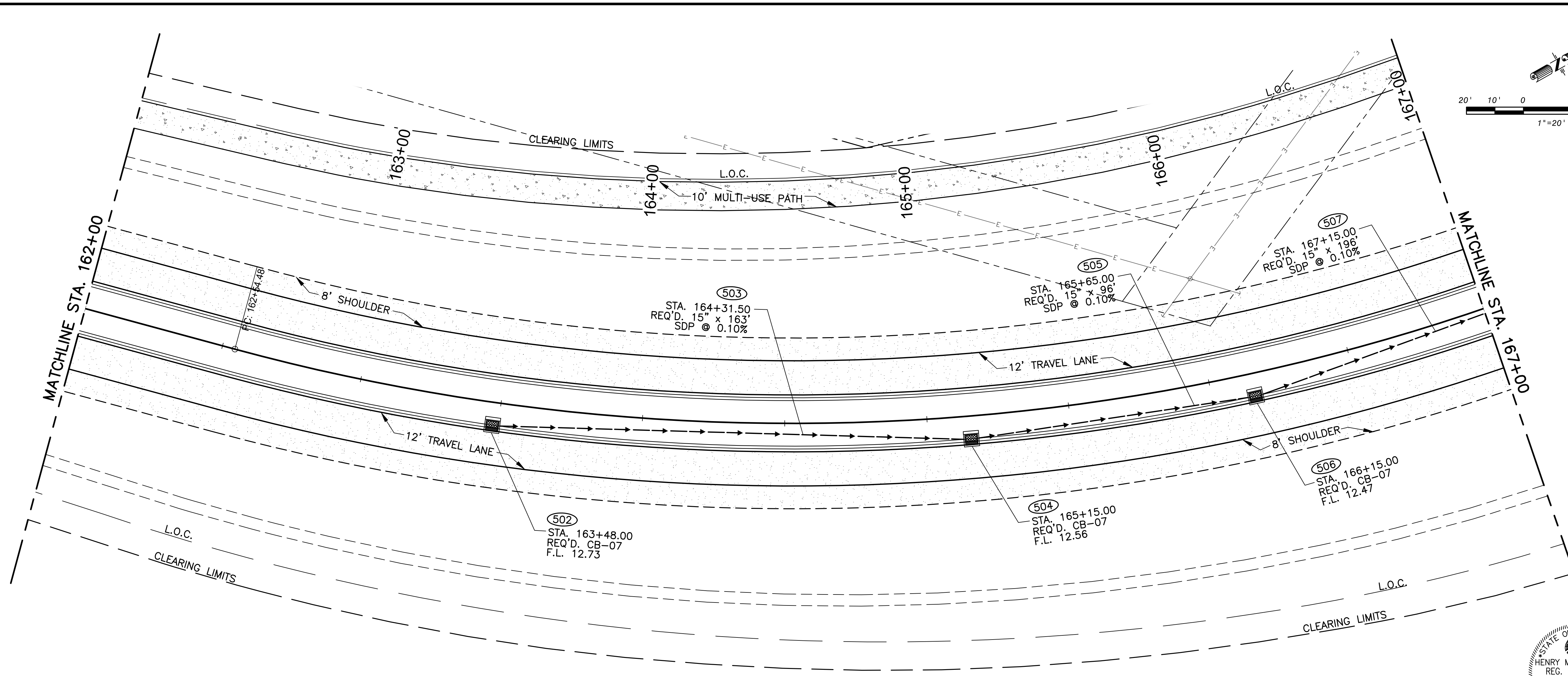
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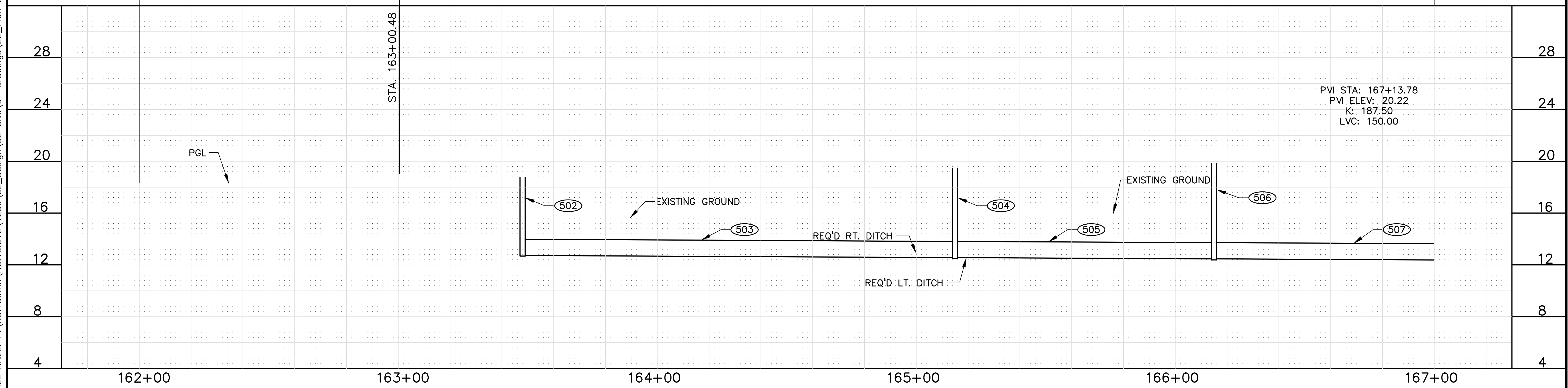
SHEET NUMBER	21
ST. TAMMANY PARISH	PROJECT
2014EN0001	NO.15.012
PARISH PROJECT	B.K.I. PRODUCT
ST. TAMMANY PARISH	STATE OF LOUISIANA
MANDEVILLE BYPASS	LA 1088 TO US 190
ROADWAY PLANS	PLAN/PROFILE MBP
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	CHECKED
DATE	SHEET
October, 2024	of
NO.	DATE
	BY
	REVISION DESCRIPTION

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\22_Plan and Profile.dwg



230' TRANSITION REVERSE CROWN e=+2.5%

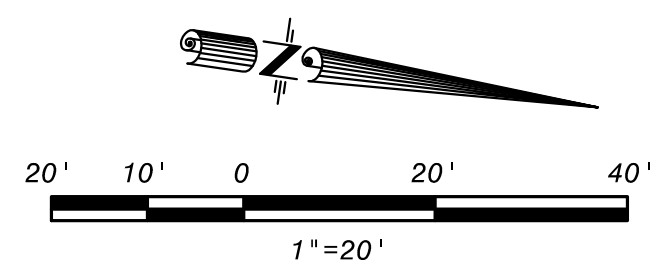
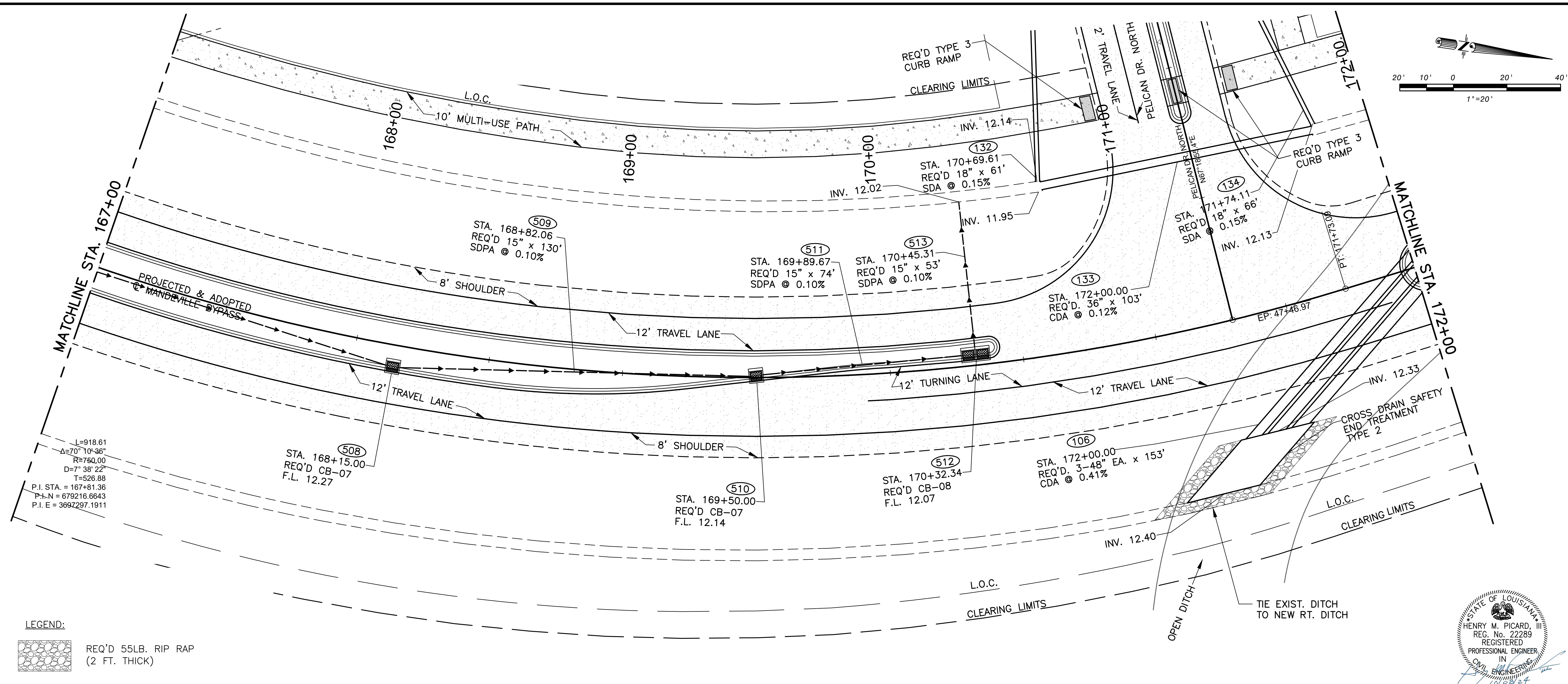


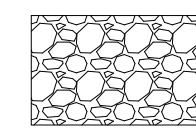
STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/24

SHEET NUMBER	22
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PRODUCT	NO.15.012
ROADWAY PLANS	PLAN/PROFILE MBP
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	October, 2024
REVISION	DESCRIPTION
NO.	DATE
BY	

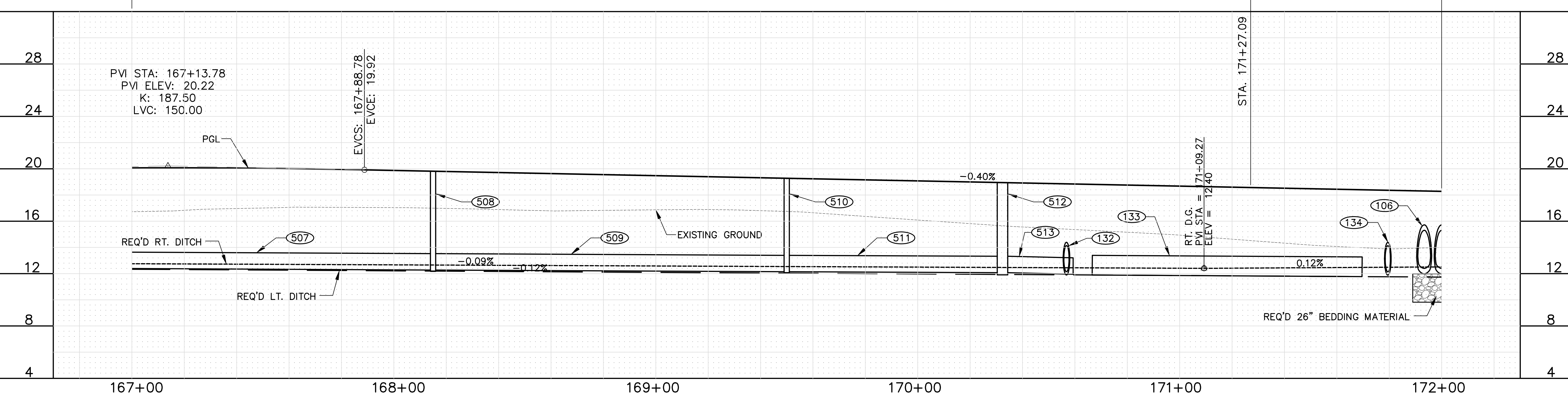
DATE: 10/8/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\23_Plan and Profile.dwg



LEGEND:
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REVERSE CROWN $e=+2.5\%$ 230' TRANSITION

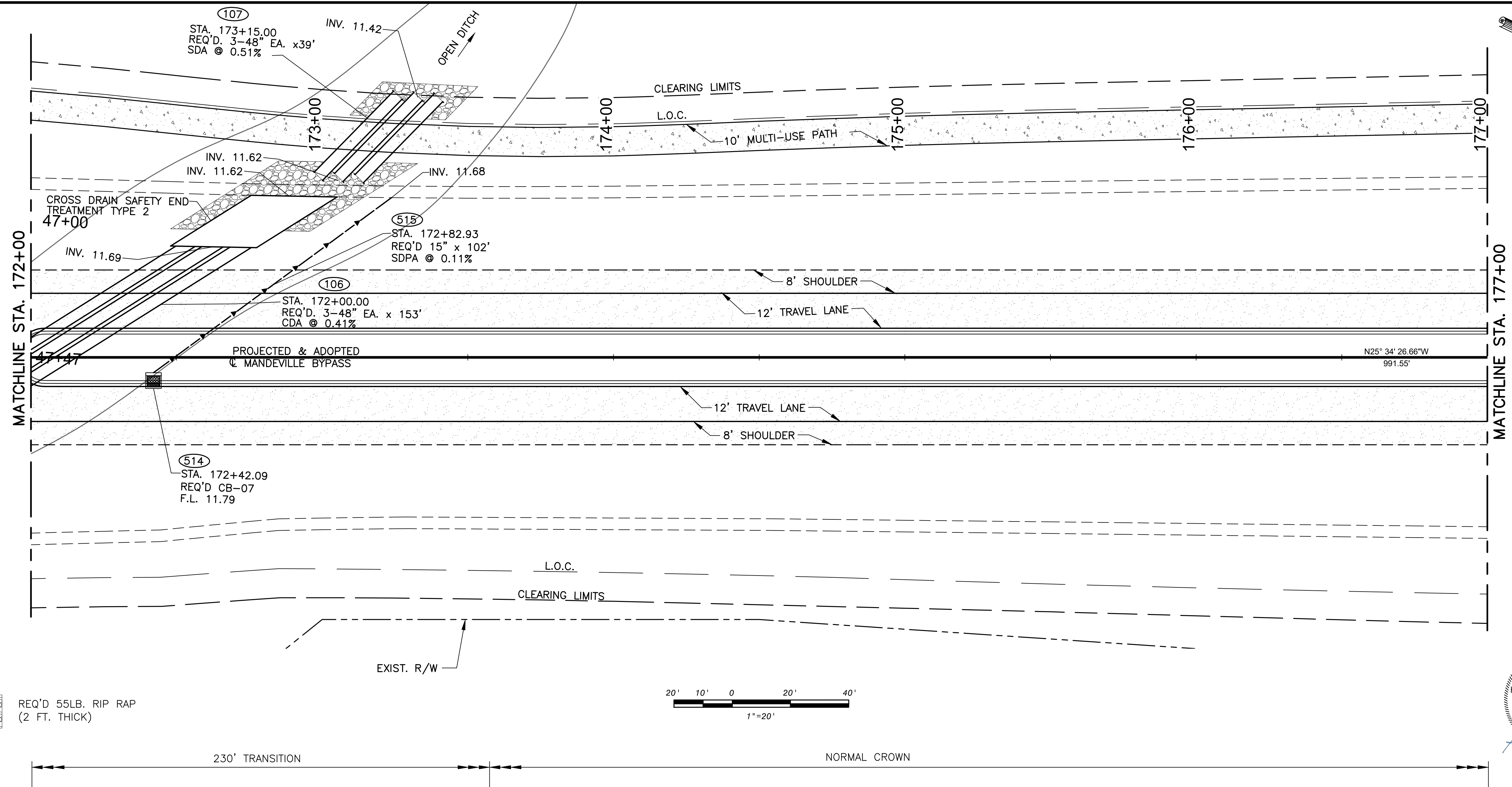


STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 10/08/24

SHEET NUMBER	23
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
BLK.I.	NO.15.012
ROADWAY PLANS	PLAN/PROFILE MBP
DESIGNED	T.J.K.
CHECKED	D.E.B.
DETAILED	G.A.D.
CHECKED	T.J.K.
DATE	October, 2024
SHEET	OF
NO.	DATE
REVISION	DESCRIPTION
BY	

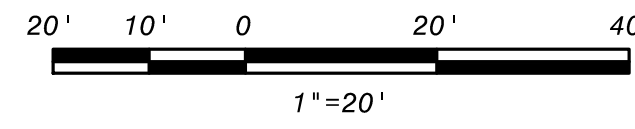
DATE: 10/7/24

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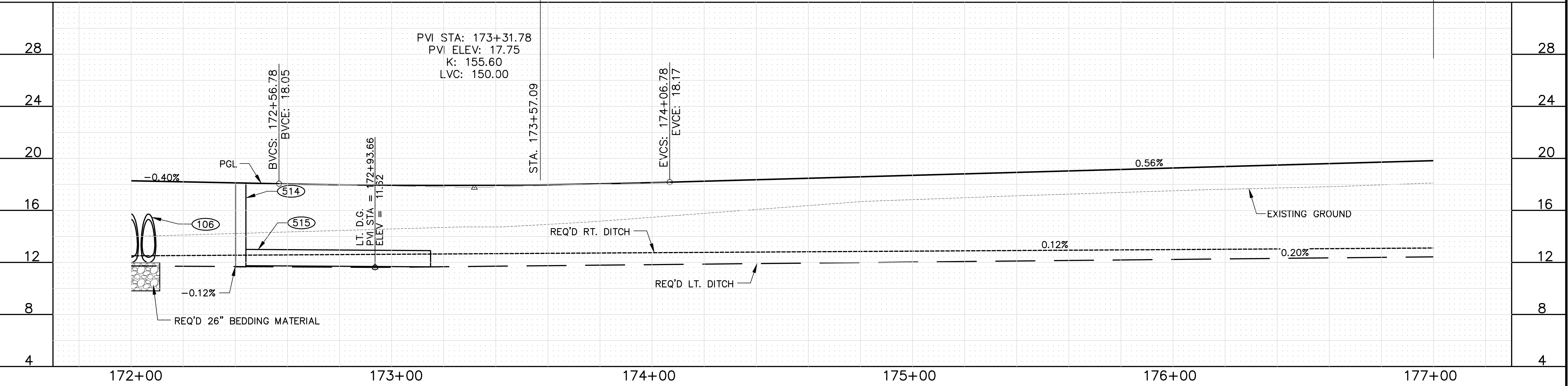


LEGEND:



REQ'D 55LB. RIP RAP
(2 FT. THICK)



230' TRANSITION NORMAL CROWN

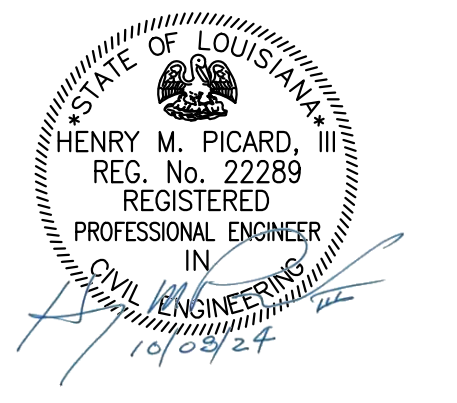
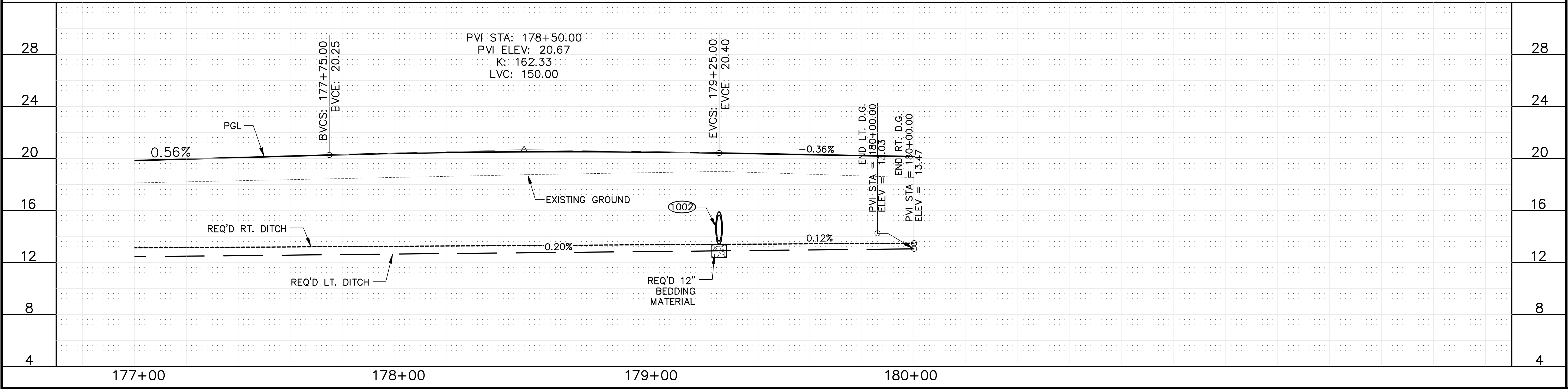
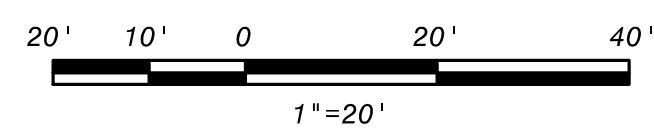
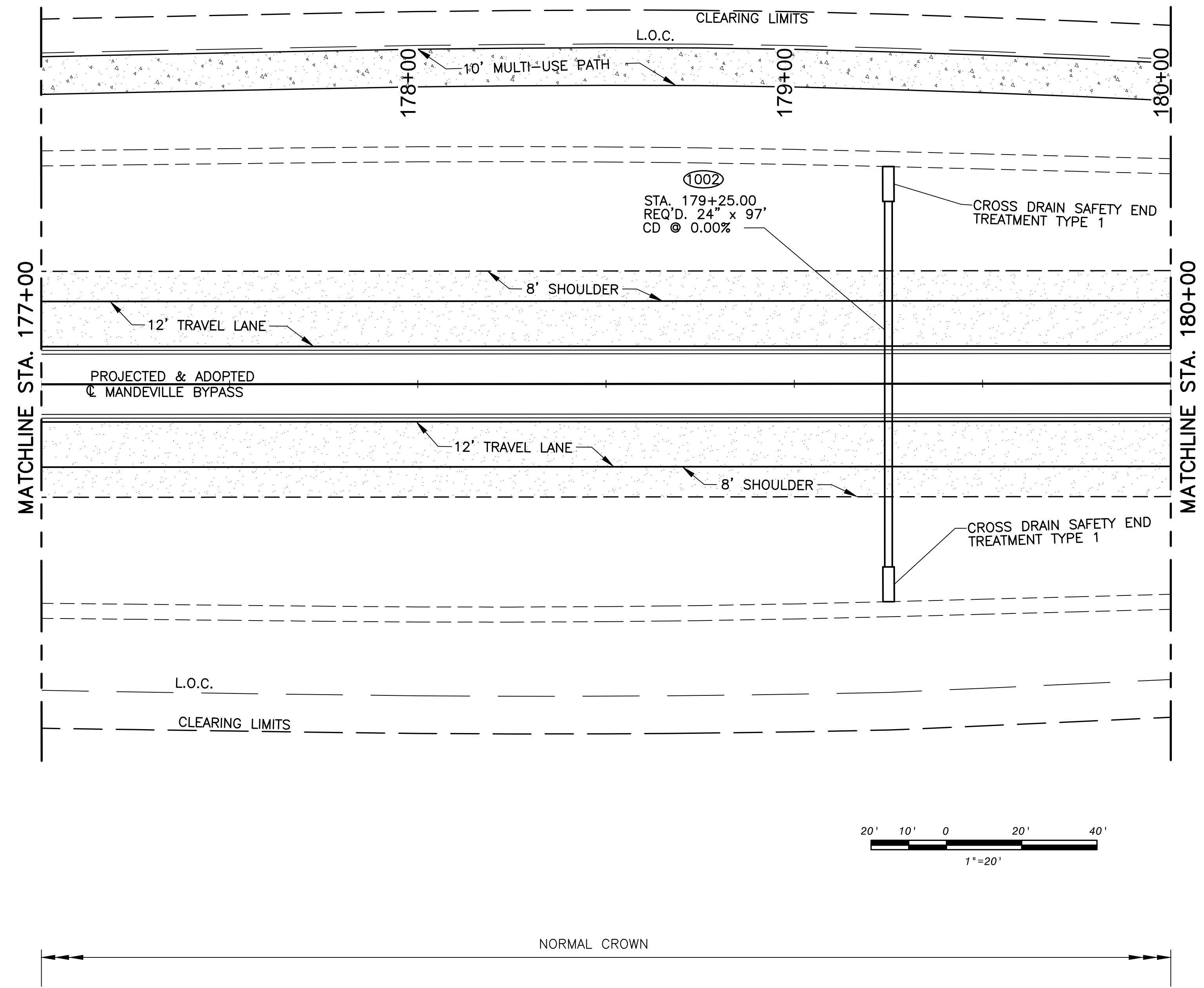


STATE OF LOUISIANA
HENRY M. PICARD, III
REG. No. 22289
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/03/24

SHEET NUMBER	24
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
PROJECT	NO.15.012
 MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
 BK	
T.J.K. D.E.B.	October, 2024
G.A.D. T.J.K.	OF
DESIGNED	BY
CHECKED	DATE
DETAILED	REVISION
CHECKED	DESCRIPTION
DATE	SHEET
NO.	INC.

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\25_Plan and Profile.dwg

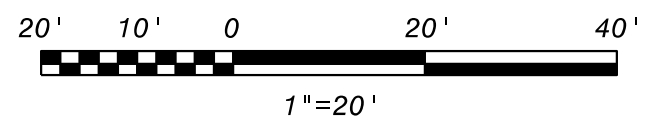
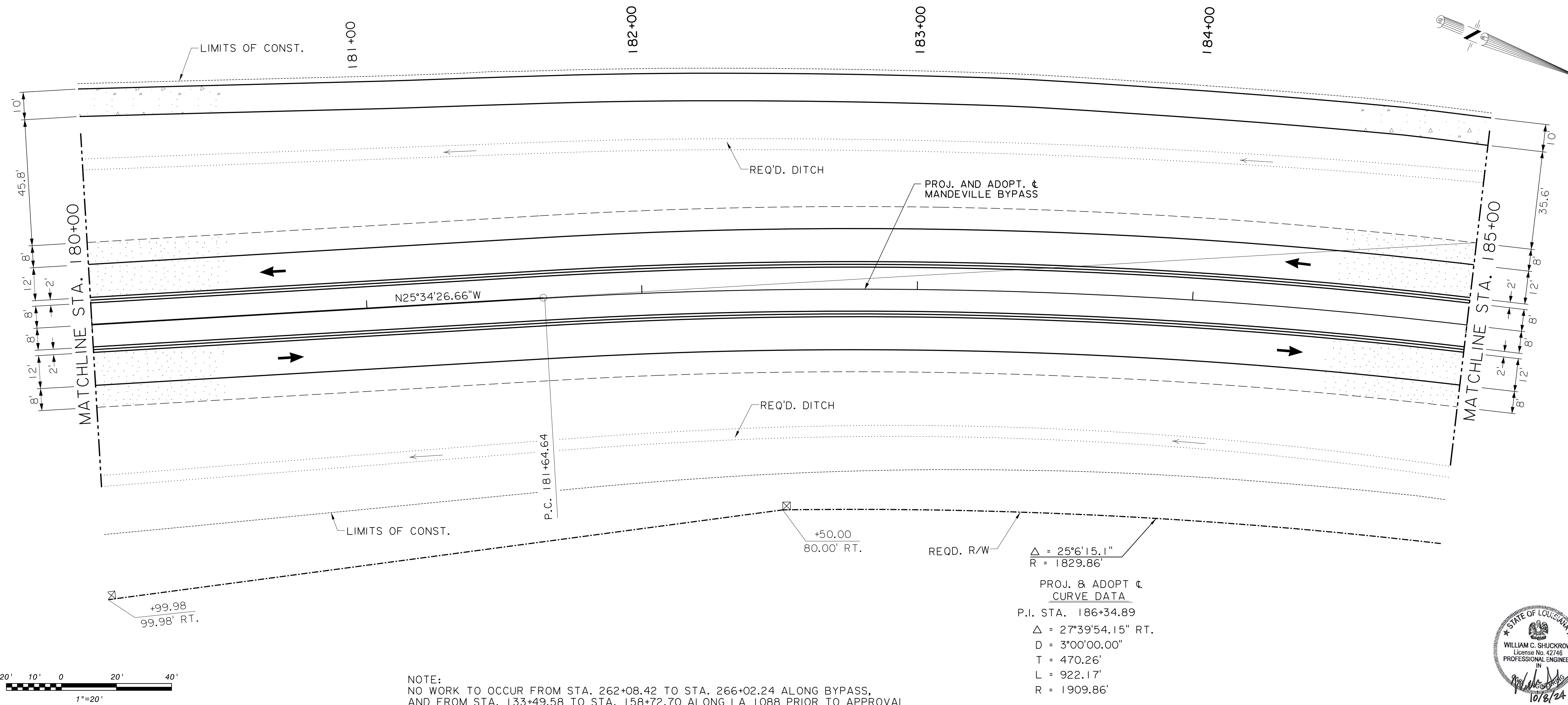


SHEET NUMBER	25
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE MBP	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	October, 2024
REVISION DESCRIPTION	BY
NO.	DATE

XREF:

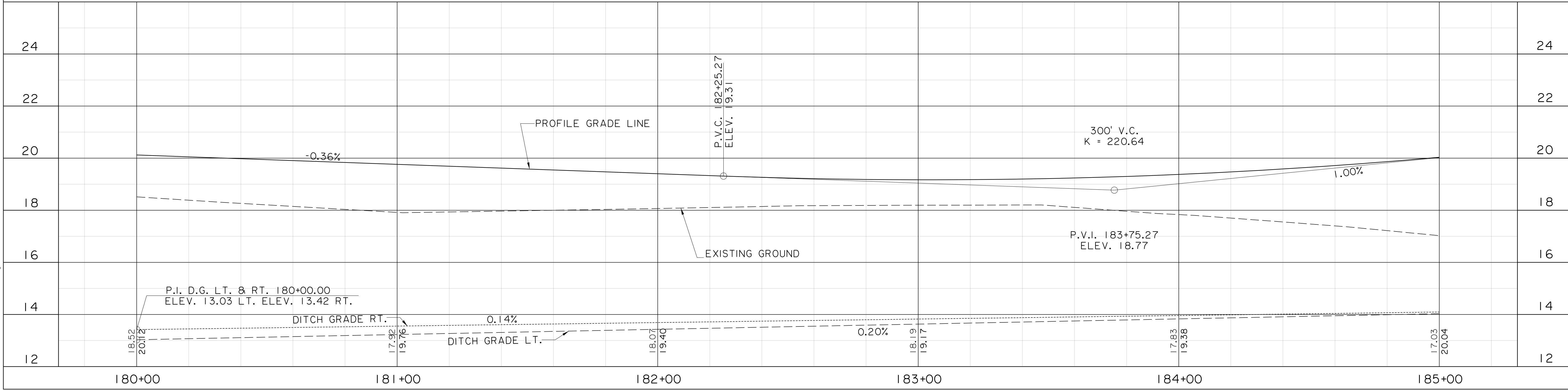
10/9/2024

PP_BYPASS_17_12629.dgn



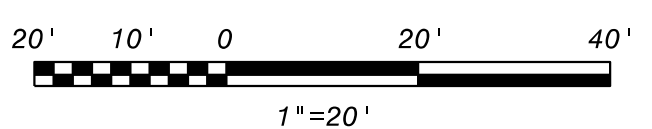
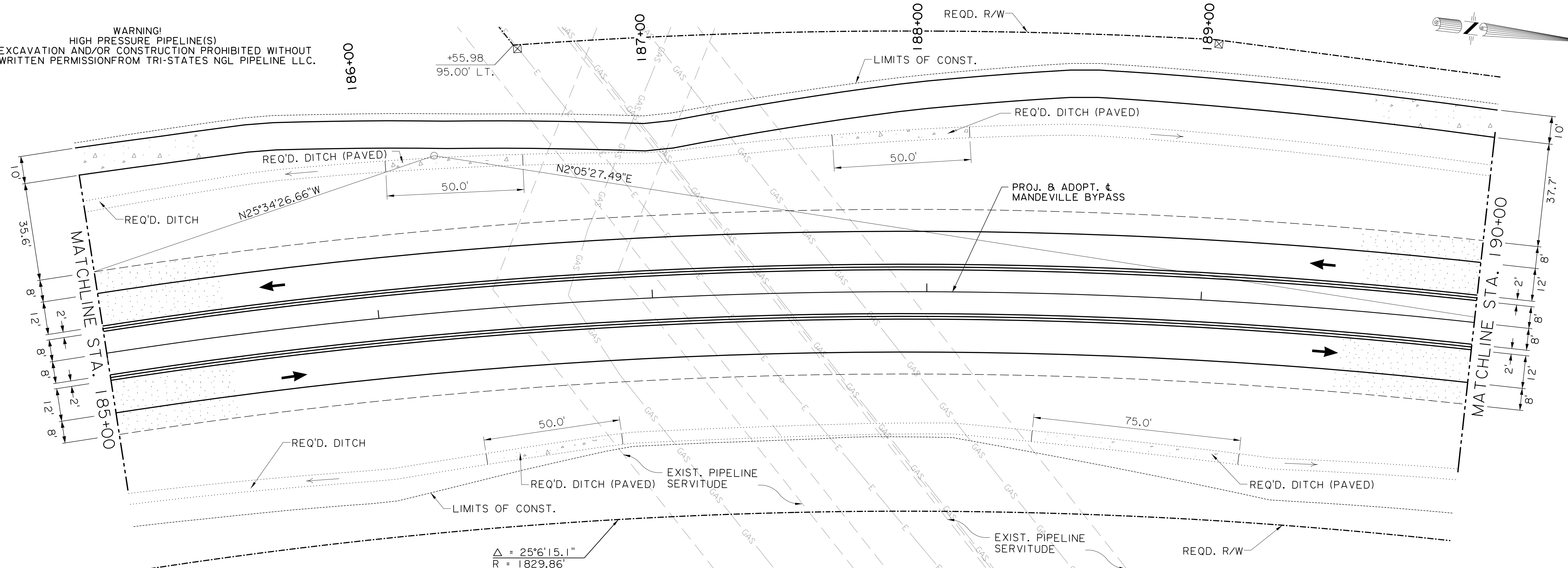
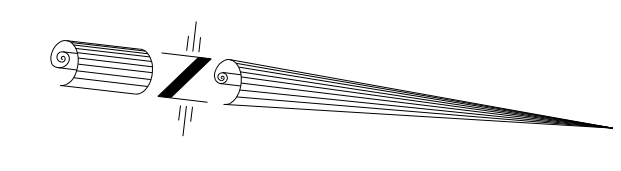
NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

PROJ. & ADOPT. Δ CURVE DATA
 P.I. STA. 186+34.89
 $\Delta = 27^{\circ}39'54.15''$ RT.
 $D = 3^{\circ}00'00.00''$
 $T = 470.26'$
 $L = 922.17'$
 $R = 1909.86'$



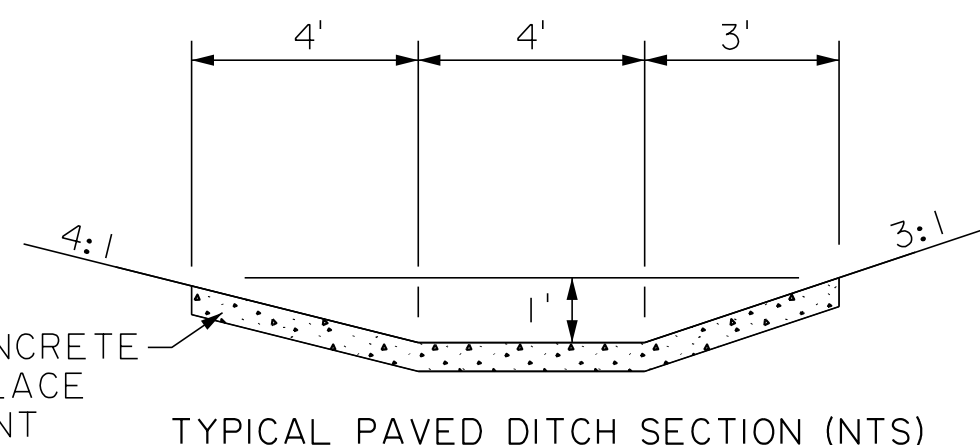
SHEET NUMBER	26
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
ROADWAY PLANS	PLAN/PROFILE MANDEVILLE BYPASS
STATE OF LOUISIANA	
WCS	
CHECKED	
DESIGNED	
DSY	
JAT	
CHECKED	
DATE	10/9/2024
SHEET	23 OF 48
NO.	
DATE	
REVISION DESCRIPTION	
BY	

WARNING!
HIGH PRESSURE PIPELINE(S)
EXCAVATION AND/OR CONSTRUCTION PROHIBITED WITHOUT
WRITTEN PERMISSION FROM TRI-STATES NGL PIPELINE LLC.



PROJ. & ADOPT ϵ
CURVE DATA
P.I. STA. 186+34.89
 $\Delta = 27^{\circ}39'54.15''$ RT.
D = $3^{\circ}00'00.00''$
T = 470.26'
L = 922.17'
R = 1909.86'

NOTES: PIPELINE DEPTHS BASED ON SURVEY DATA OBTAINED BY RANDALL W. BROWN & ASSOCIATES, INC., ON 06/28/19. PROBING DATA WAS ACQUIRED BY SITE VISIT ON 06/27/19.
PRIOR TO WORKING IN VICINITY OF 16" PARKWAY PIPELINE, CONTACT JODY LAMBRIGHT AT 409-839-3518 (OFFICE), 409-673-7612 (CELL)
PRIOR TO WORKING IN VICINITY OF 30" GULFSOUTH PIPELINE, CONTACT LAMAR GARLOTTE AT 228-596-5788.
PRIOR TO WORKING IN VICINITY OF 12" ENTERPRISE PIPELINE (TRI-STATES NGL PIPELINE LLC), CONTACT ENTERPRISE LAND ENCROACHMENT GROUP AT 866-901-8170.

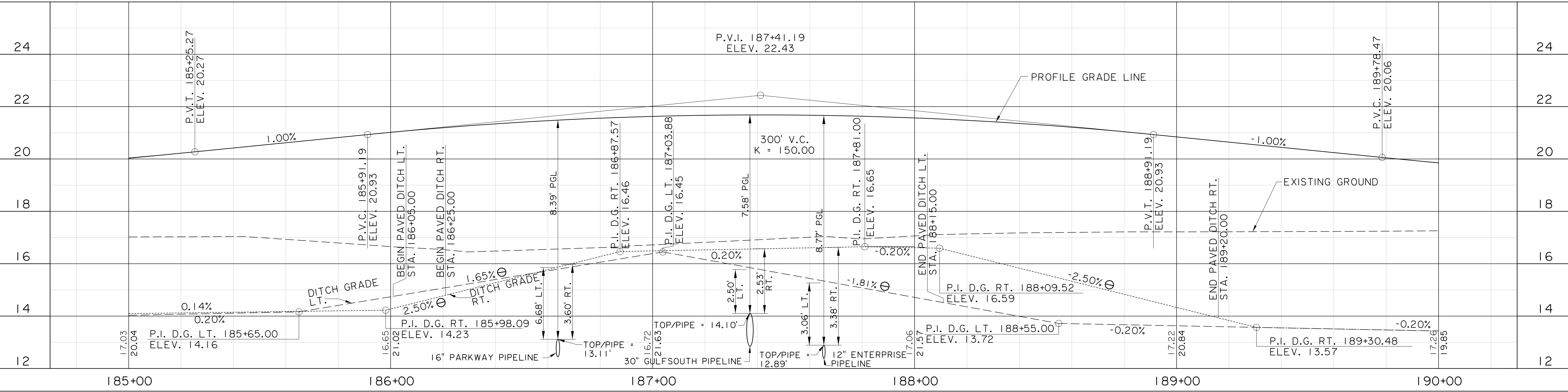


*SEE DOTD SPECIAL DETAIL PD-01 FOR MORE DETAILS



XREF: 10/9/2024

PP_BYPASS_18_12629.dgn

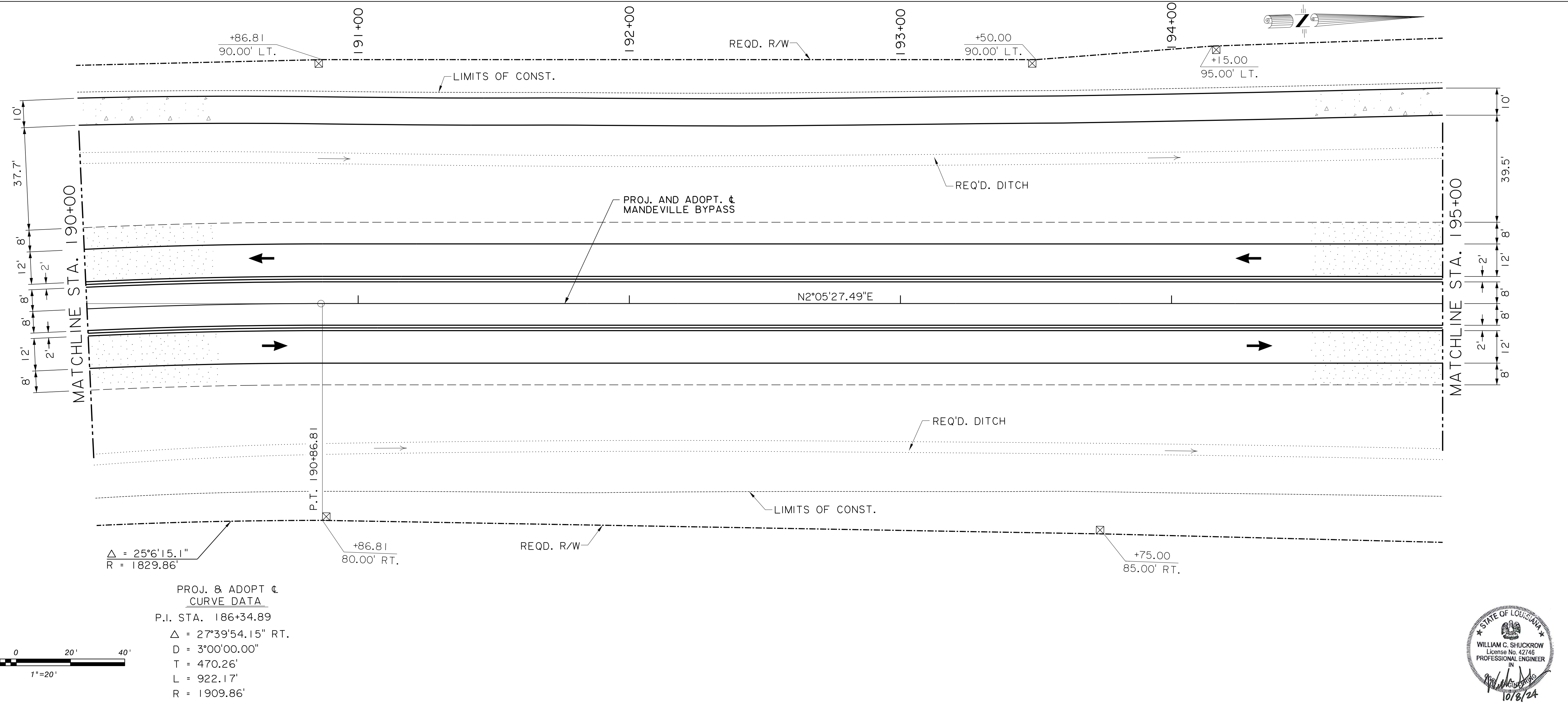


SHEET NUMBER	27
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
BKI	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
DATE	24 OF 48
NO.	DATE
	REVISION DESCRIPTION

XREF:

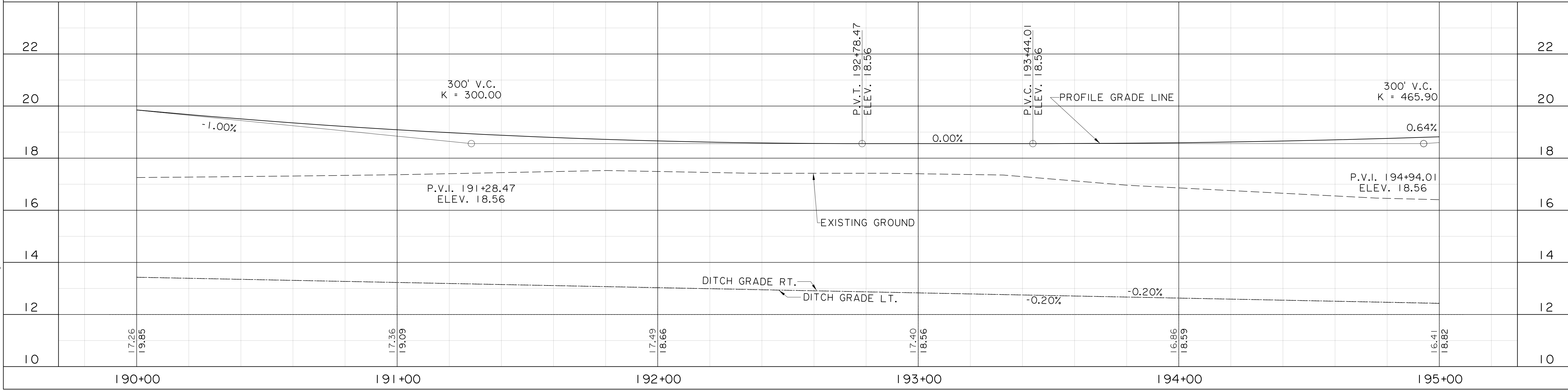
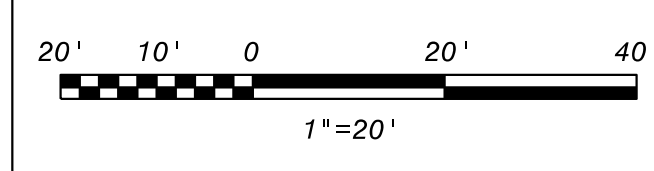
10/9/2024

PP_BYPASS_19_12629.dgn



$\Delta = 25^{\circ}6'15.1''$
 $R = 1829.86'$
 P.T. 190+86.81
 $+86.81$
 $80.00'$ RT.

PROJ. & ADOPT. ϕ
 CURVE DATA
 P.I. STA. 186+34.89
 $\Delta = 27^{\circ}39'54.15''$ RT.
 $D = 3^{\circ}00'00.00''$
 $T = 470.26'$
 $L = 922.17'$
 $R = 1909.86'$

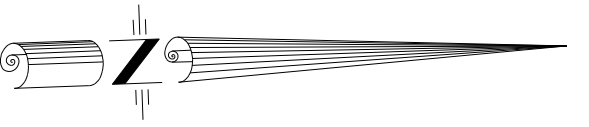
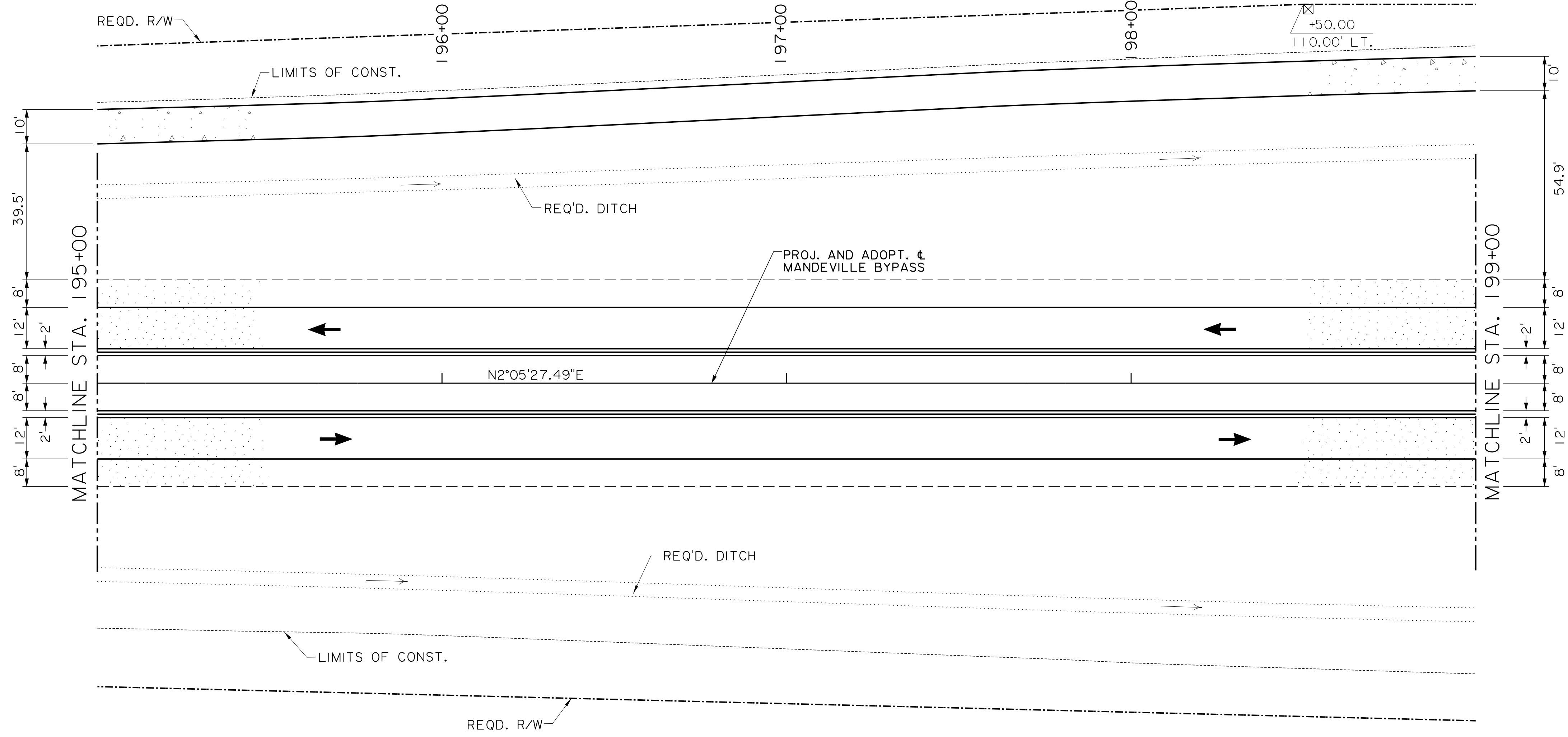
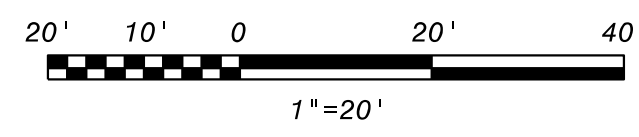


SHEET NUMBER	28
ST. TAMMANY	
PARISH PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
BKI	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
DATE	25 OF 48
NO.	DATE
	REVISION DESCRIPTION

XREF:

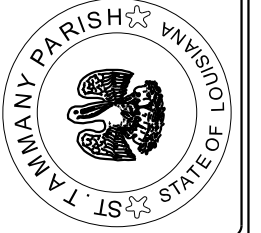
10/9/2024

PP_BYPASS_20_12629.dgn

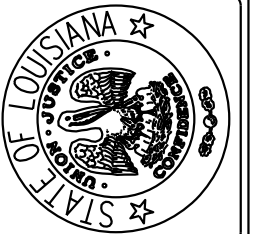


SHEET NUMBER 29

ST. TAMMANY
 PARISH PROJECT 2014EN0001
 B.K.I. PROJECT NO. 15.012

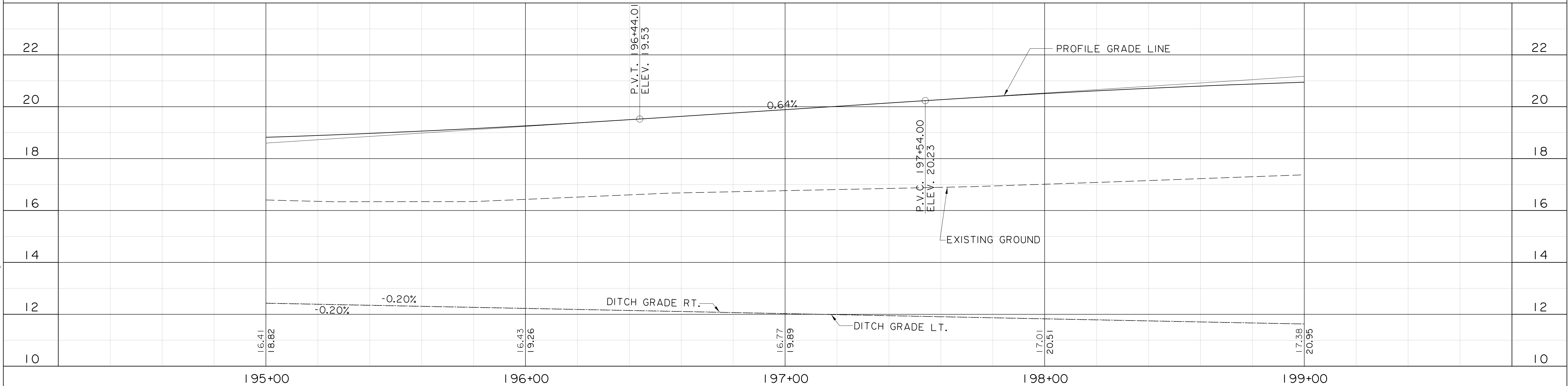


MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS PLAN/PROFILE MANDEVILLE BYPASS

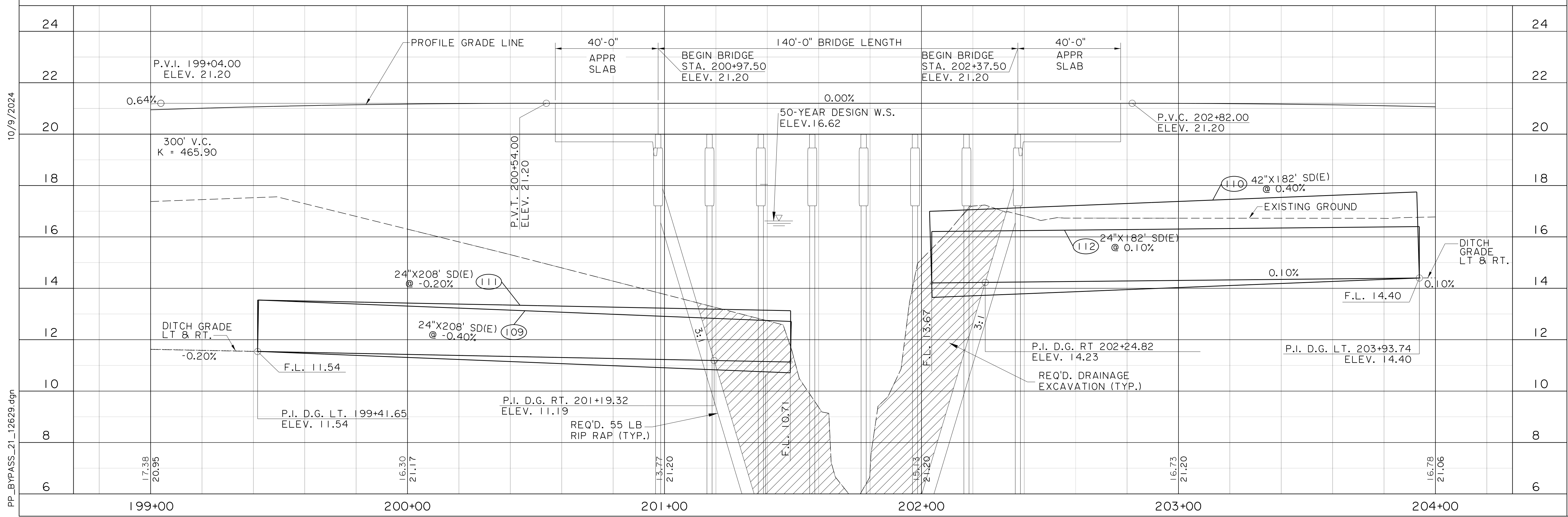
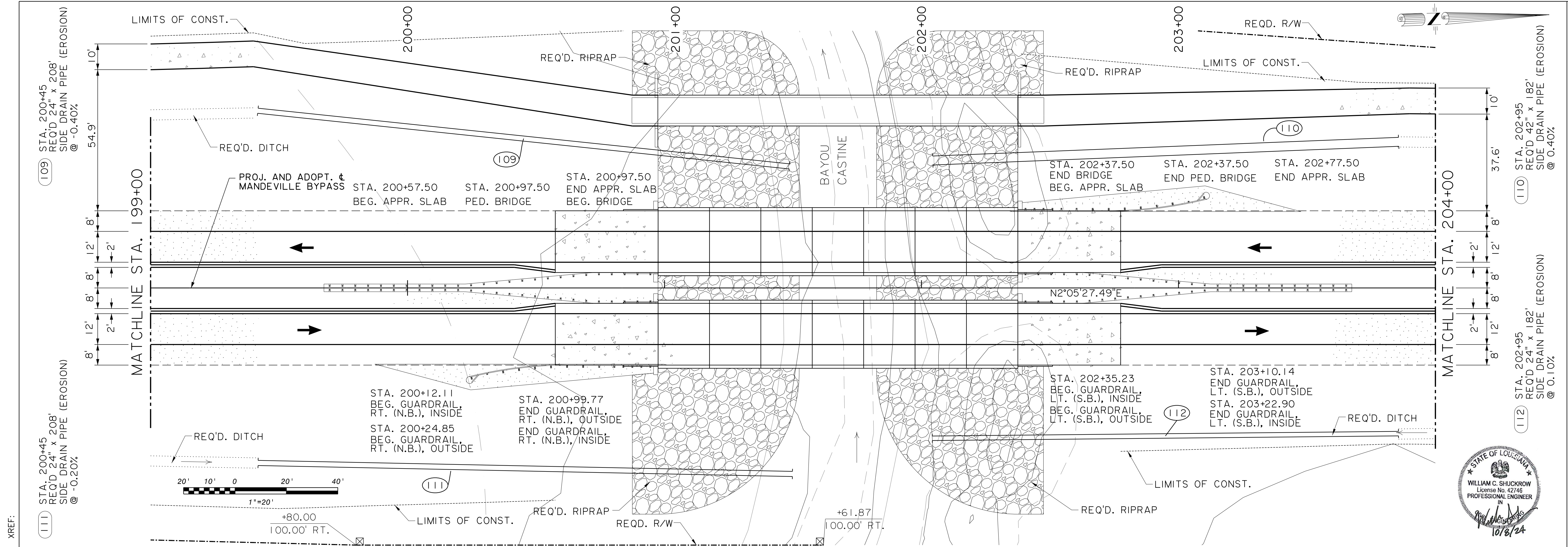


BKI

DESIGNED BY WCS
 CHECKED BY DSY
 DETAILED BY JAT
 CHECKED BY DSY
 DATE 10/9/2024
 SHEET 26 OF 48



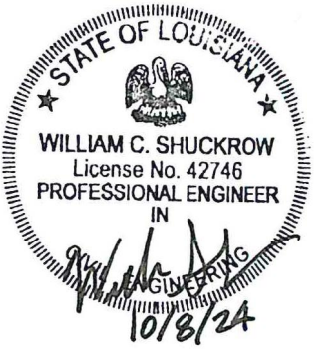
NO.	DATE	REVISION DESCRIPTION	BY



XREF:

10/9/2024

PP_BYPASS_21_12629.dgn

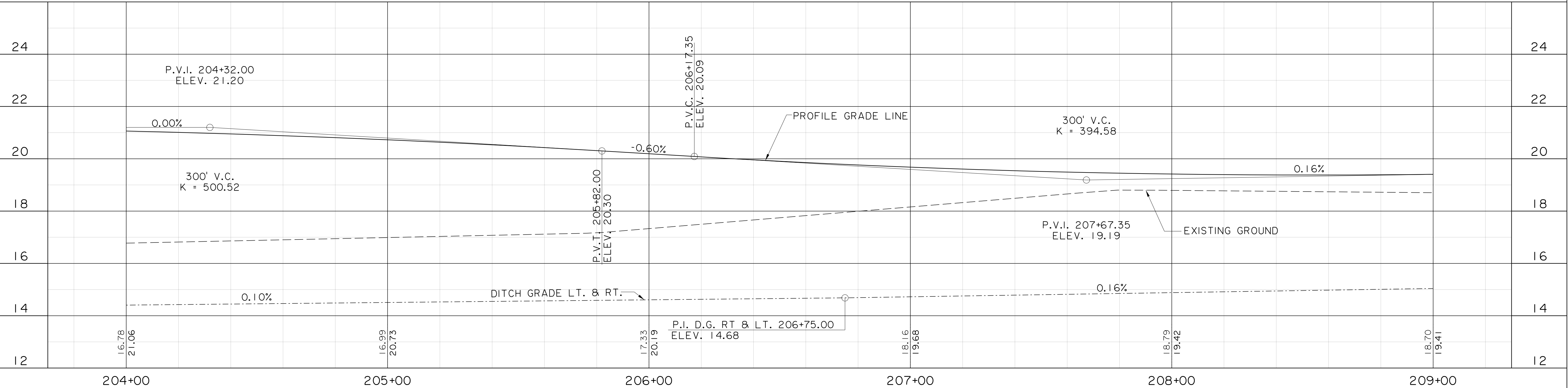
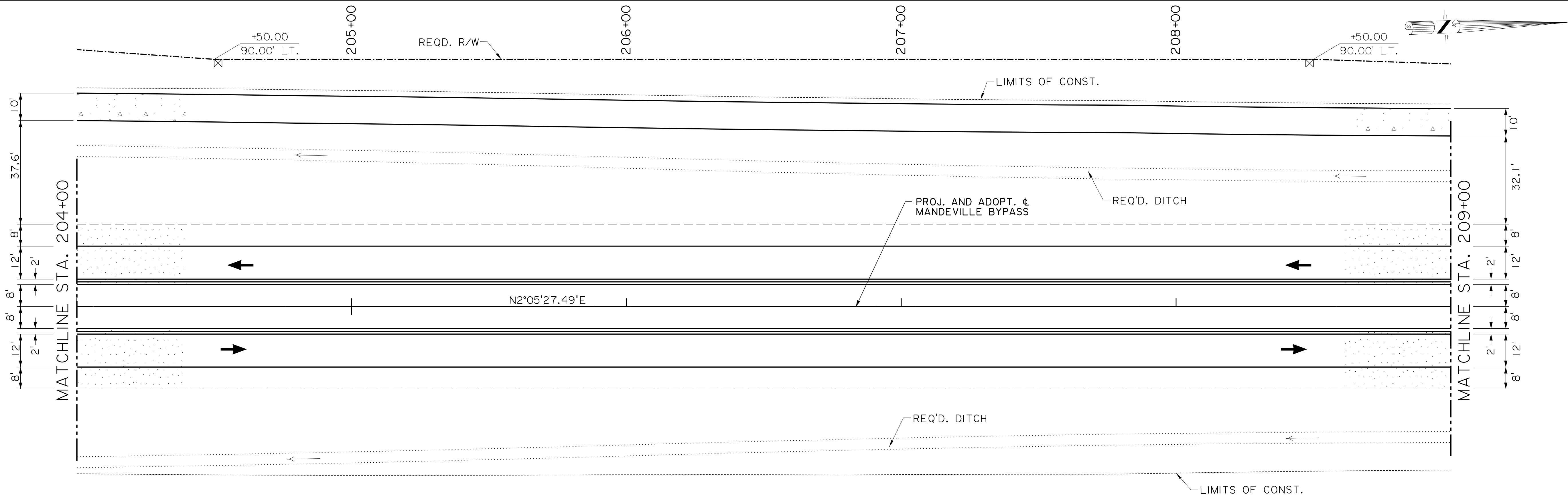
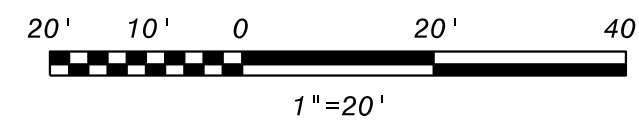


SHEET NUMBER	30
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
ROADWAY PLANS	PLAN/PROFILE MANDEVILLE BYPASS
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	27 OF 48
BY	
NO.	
DATE	
REVISION DESCRIPTION	

XREF:

10/9/2024

PP_BYPASS_22_12629.dgn

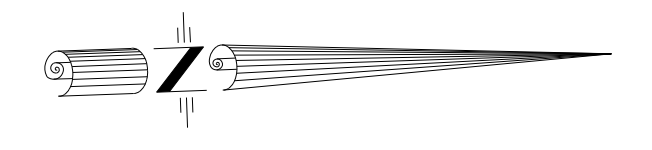
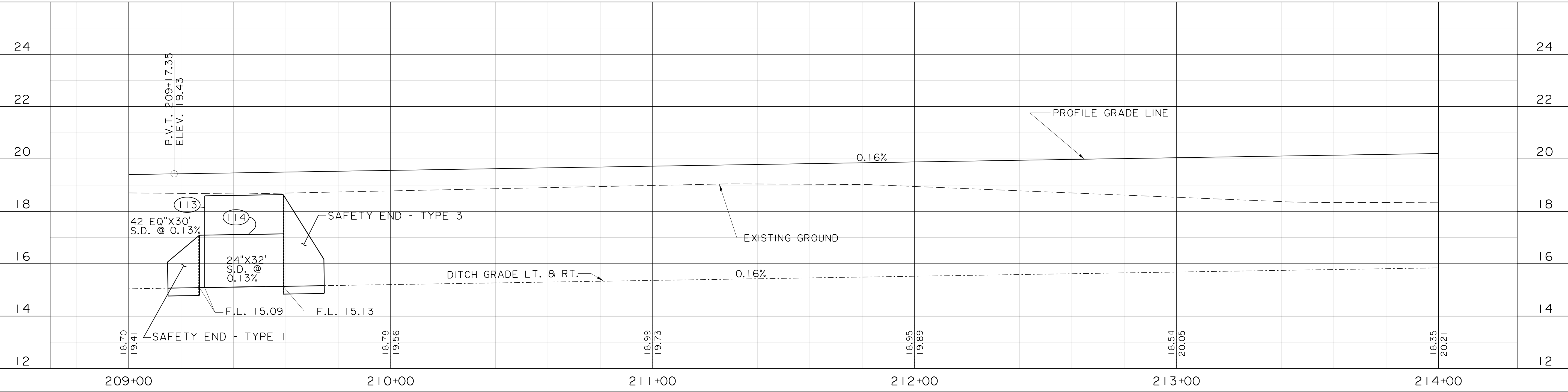
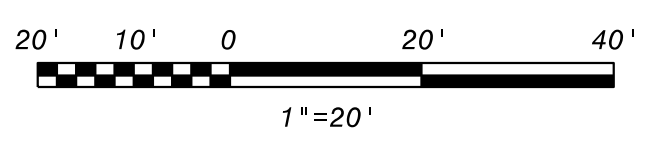
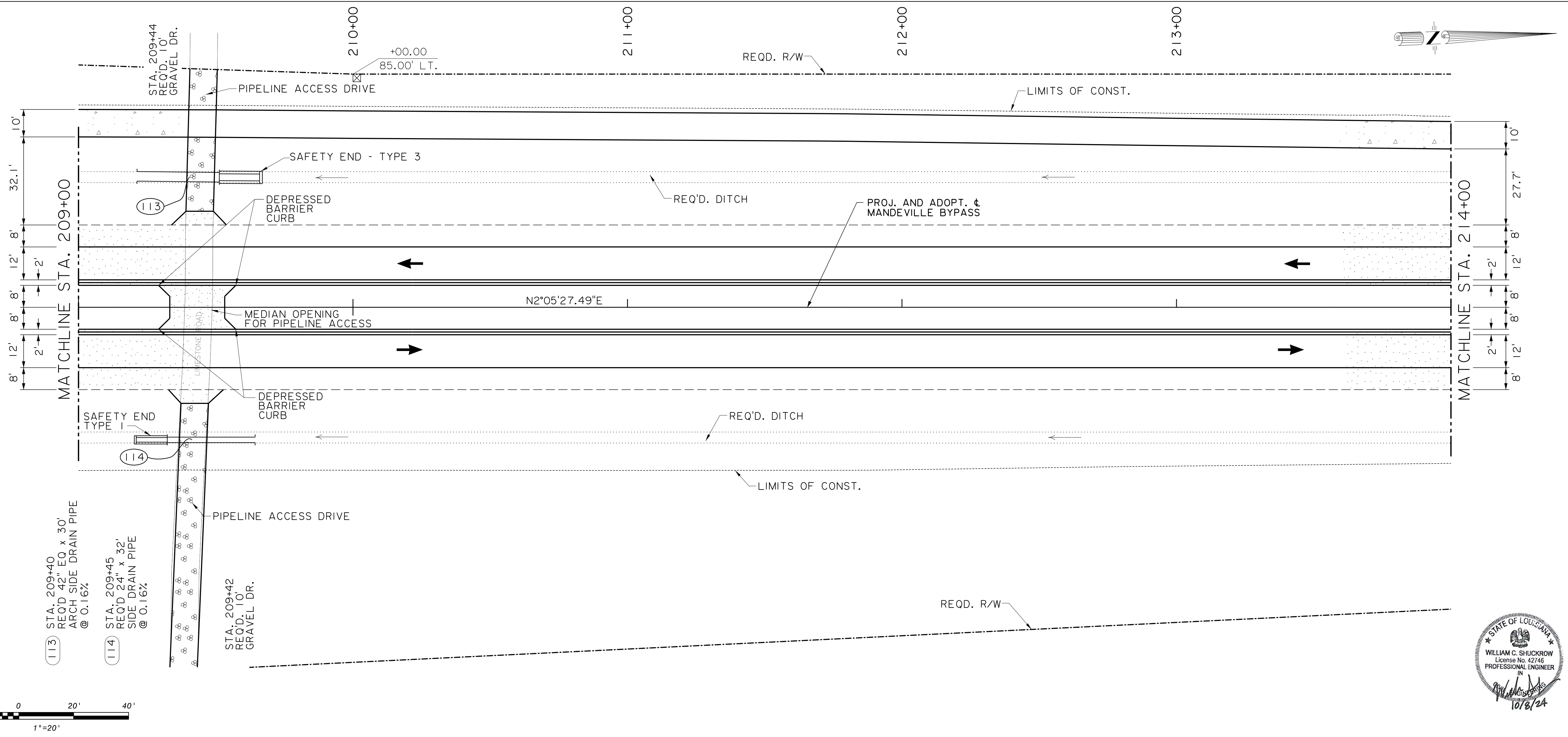


SHEET NUMBER		31	
PARISH	ST. TAMMANY	PROJECT	2014EN0001
NO.	15.012	DATE	10/9/2024
BY		DATE	10/8/24
DESIGNED	WCS	CHECKED	JAT
Detailed	JAT	Checked	DSY
DATE	10/9/2024	SHEET	28 OF 48
REVISION DESCRIPTION			
NO.	DATE	BY	

XREF:

10/9/2024

PP_BYPASS_23_12629.dgn



DESIGNED	WCS	10/9/2024	NO.	DATE	BY
CHECKED	DSY		NO.	DATE	BY
DESIGNED	JAT	10/9/2024	NO.	DATE	BY
CHECKED	DSY	29 OF 48	NO.	DATE	BY
REVISION DESCRIPTION					

SHEET NUMBER	32
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012



MANDEVILLE BY PASS
LA 1088 TO US 190
PLAN/PROFILE MANDEVILLE BYPASS

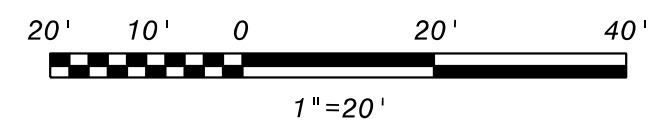
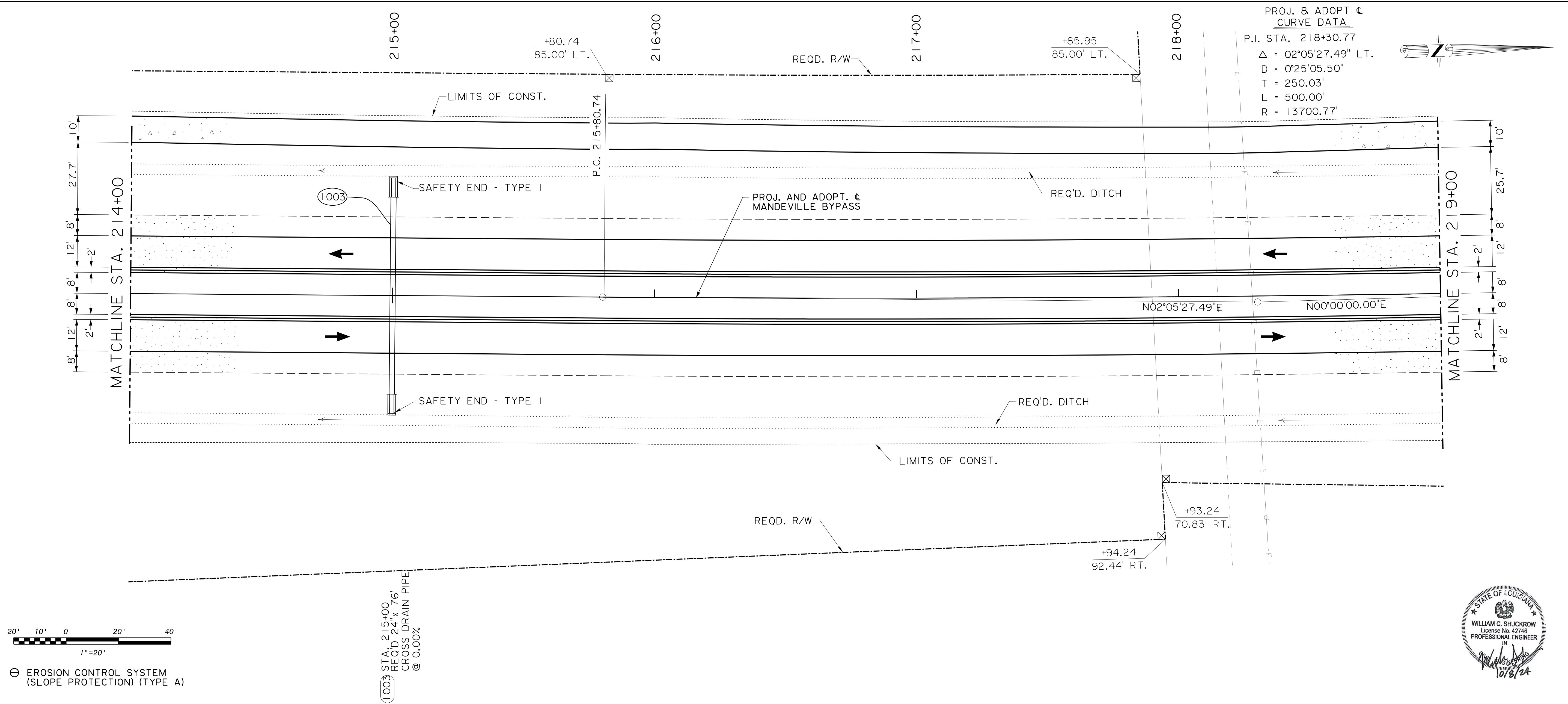


STATE OF LOUISIANA
WILLIAM C. SHUCKROW
License No. 42746
PROFESSIONAL ENGINEER
IN
10/8/24

XREF:

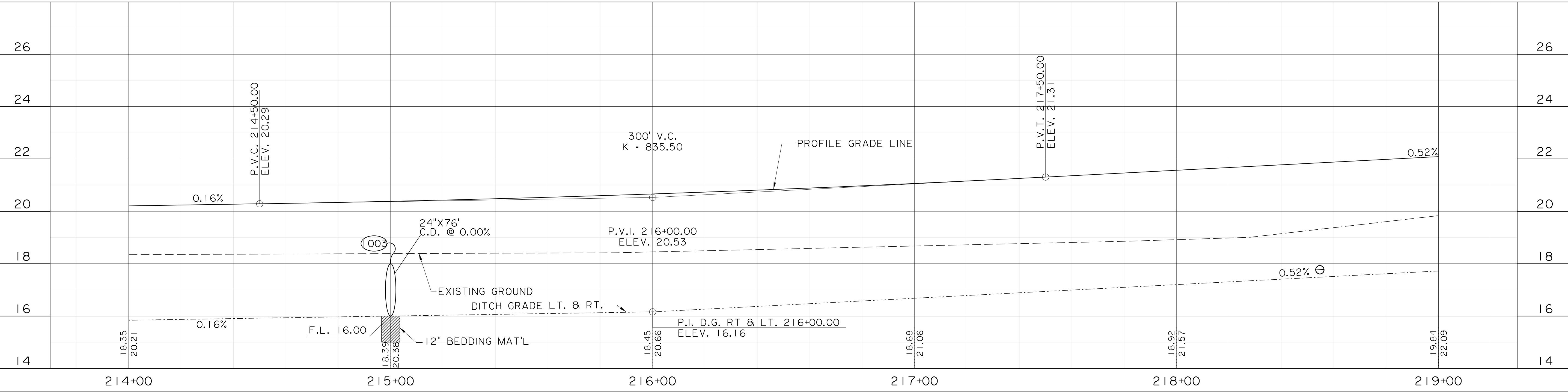
10/9/2024

PP_BYPASS_24_12629.dgn



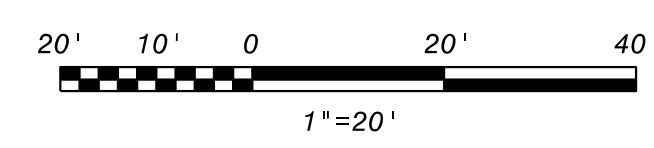
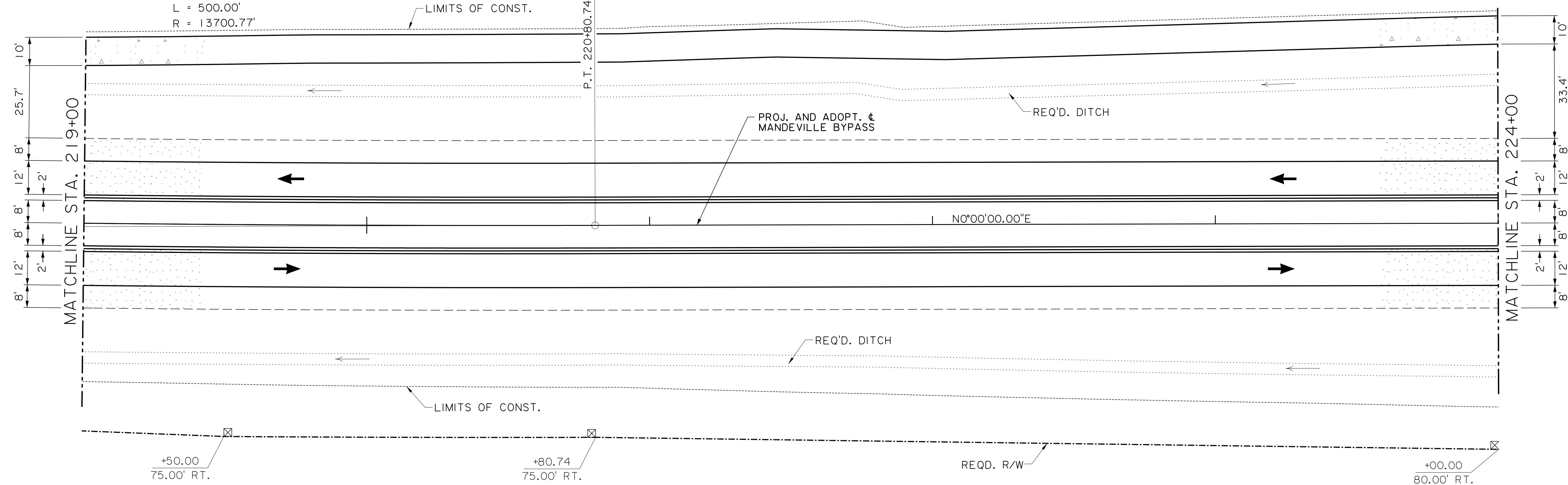
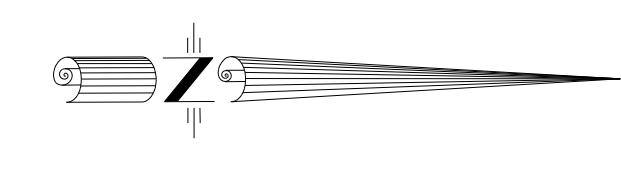
⊖ EROSION CONTROL SYSTEM (SLOPE PROTECTION) (TYPE A)

1003 STA. 215+00
REQD 24"X76"
CROSS DRAIN PIPE
@ 0.00%



SHEET NUMBER	33
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
DATE	10/9/2024
NO.	30 OF 48
BY	
NO.	
DATE	
REVISION DESCRIPTION	

PROJ. & ADOPT. \pm
 CURVE DATA
 P.I. STA. 218+30.77
 $\Delta = 02^{\circ}05'27.49''$ LT.
 $D = 0^{\circ}25'05.50''$
 $T = 250.03'$
 $L = 500.00'$
 $R = 13700.77'$



\ominus EROSION CONTROL SYSTEM
 (SLOPE PROTECTION) (TYPE A)



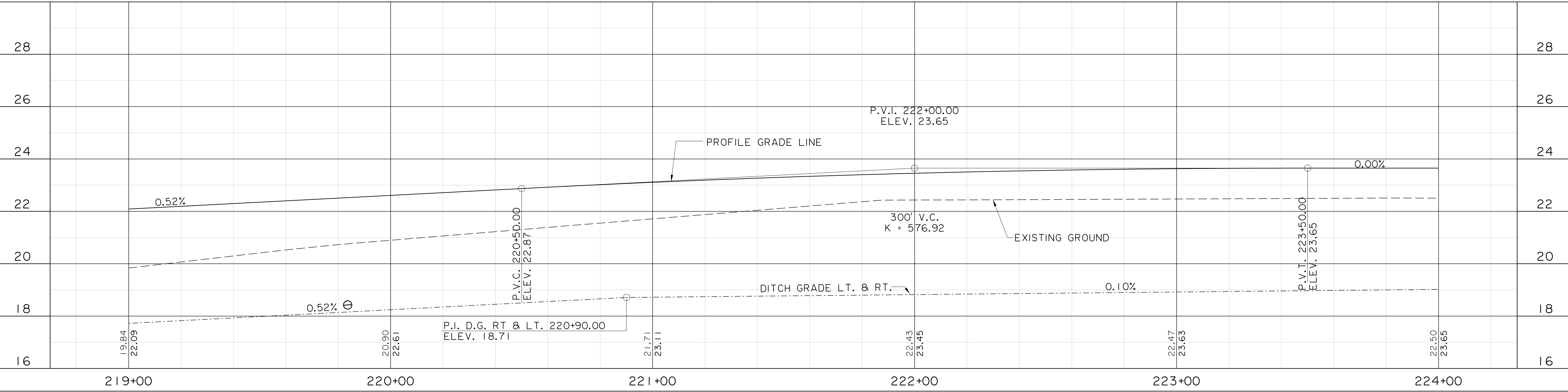
SHEET NUMBER	34
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	



DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	31 OF 48

XREF: 10/9/2024

PP_BYPASS_25_12629.dgn

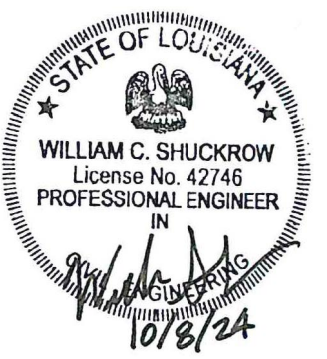
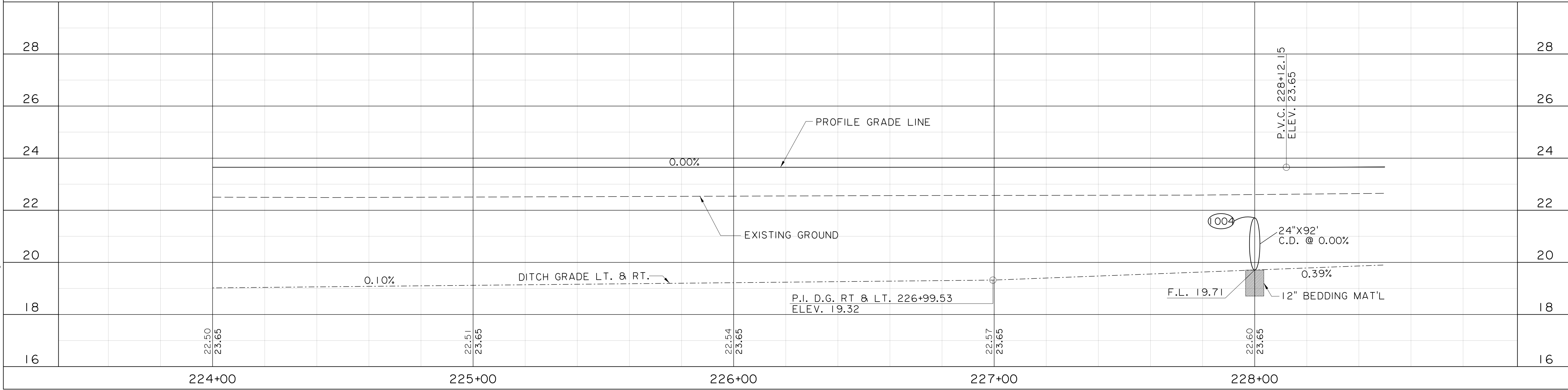
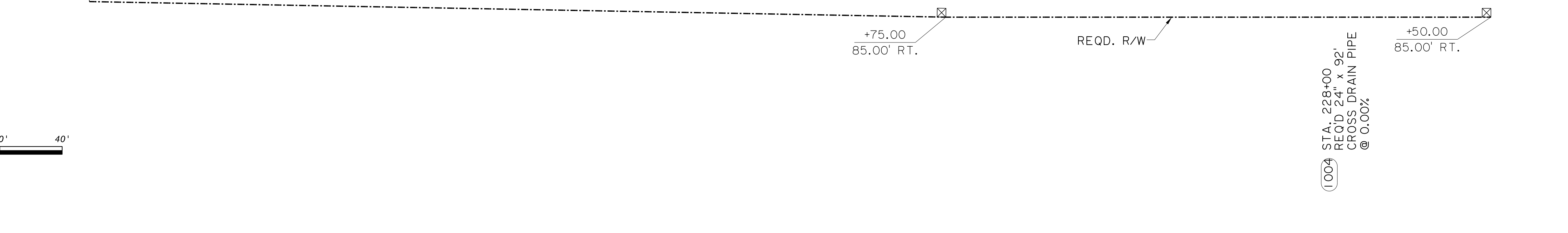
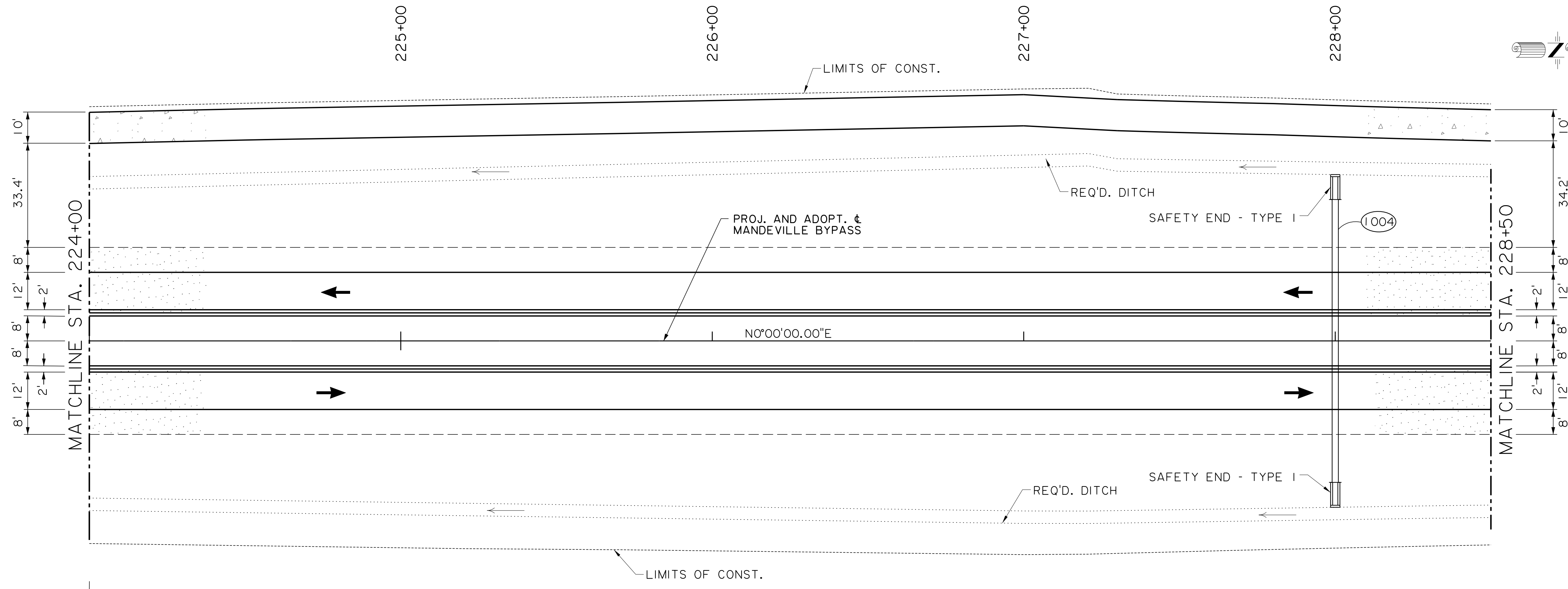
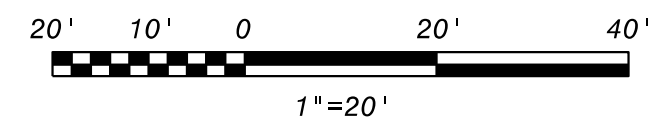


NO.	DATE	BY	REVISION DESCRIPTION

XREF:

10/9/2024

PP_BYPASS_26_12629.dgn



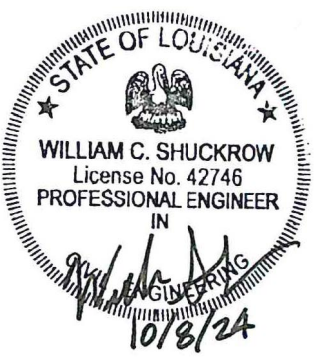
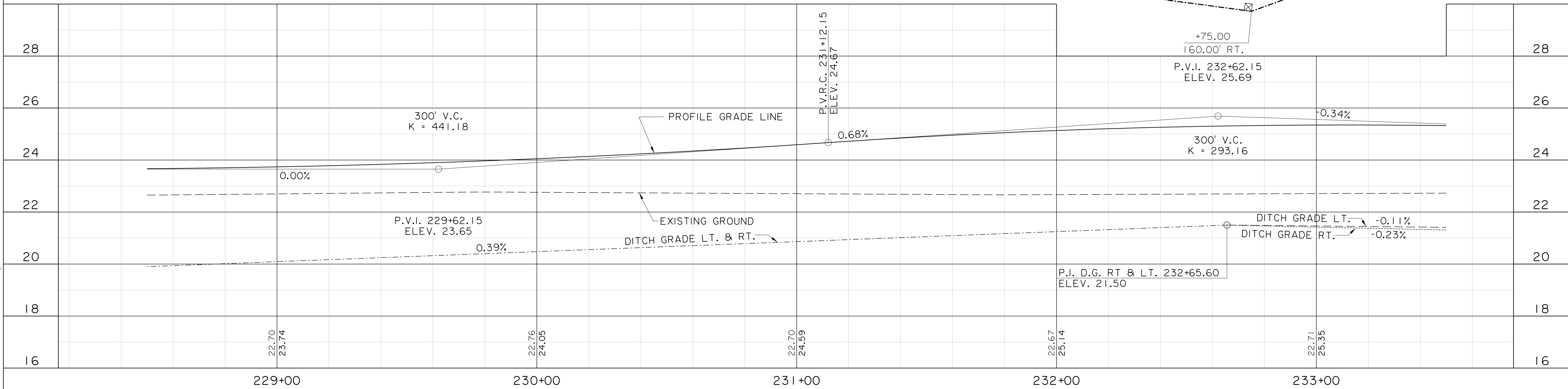
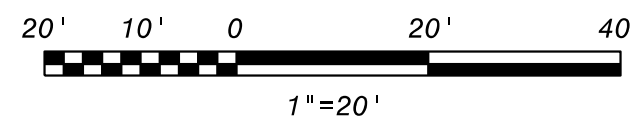
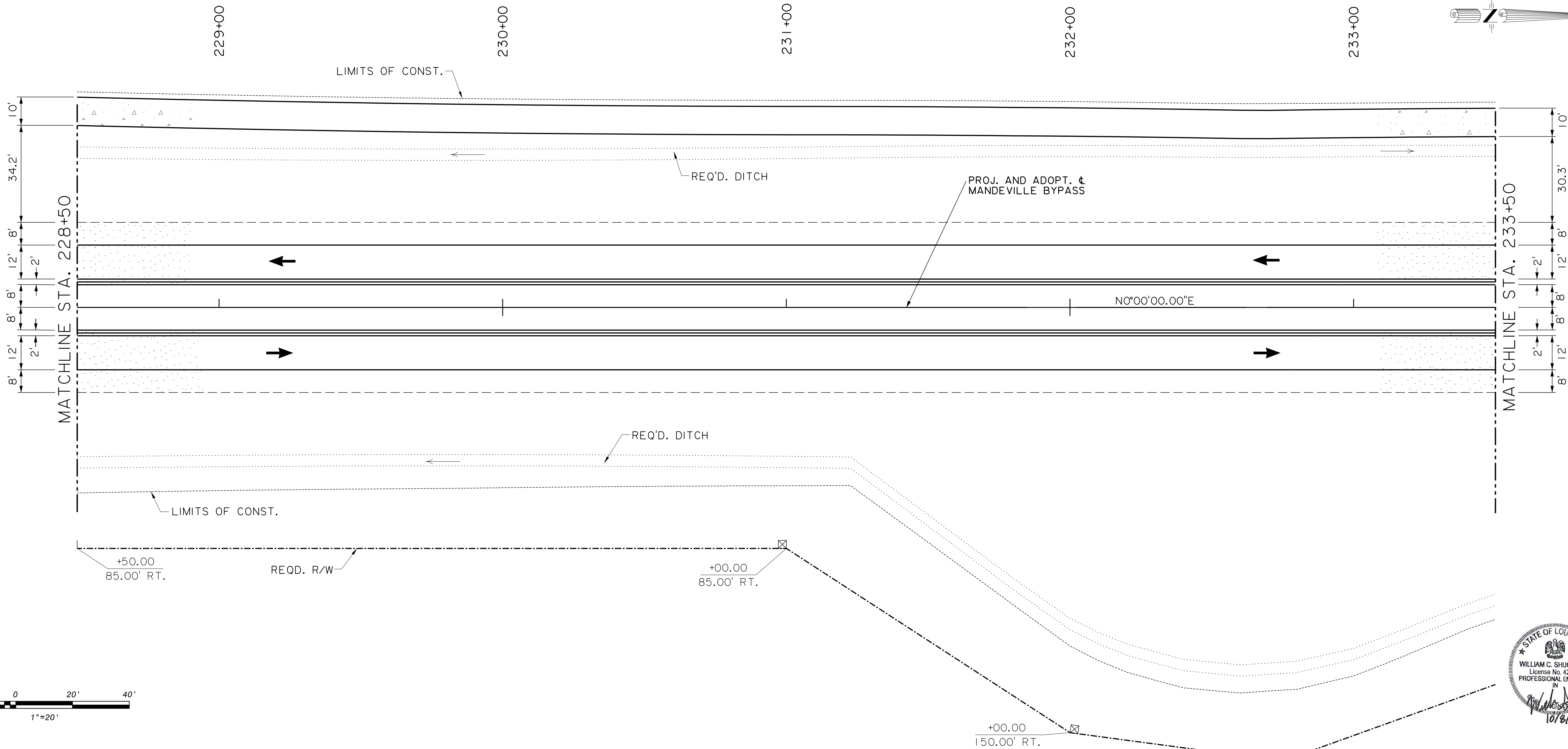
SHEET NUMBER	35
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BKLI PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	32 OF 48
NO.	DATE
BY	REVISION DESCRIPTION



XREF:

10/9/2024

PP_BYPASS_27_12629.dgn

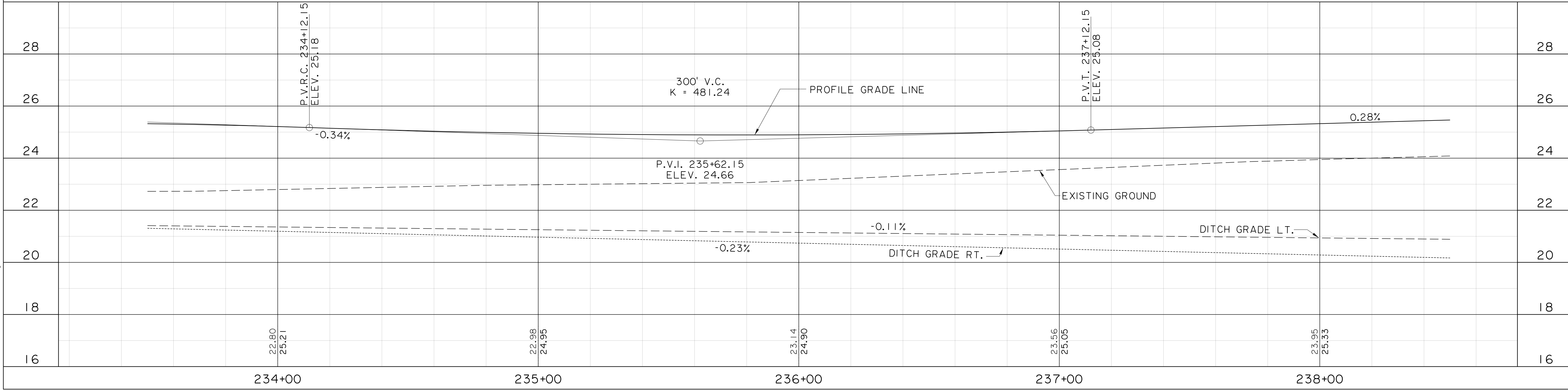
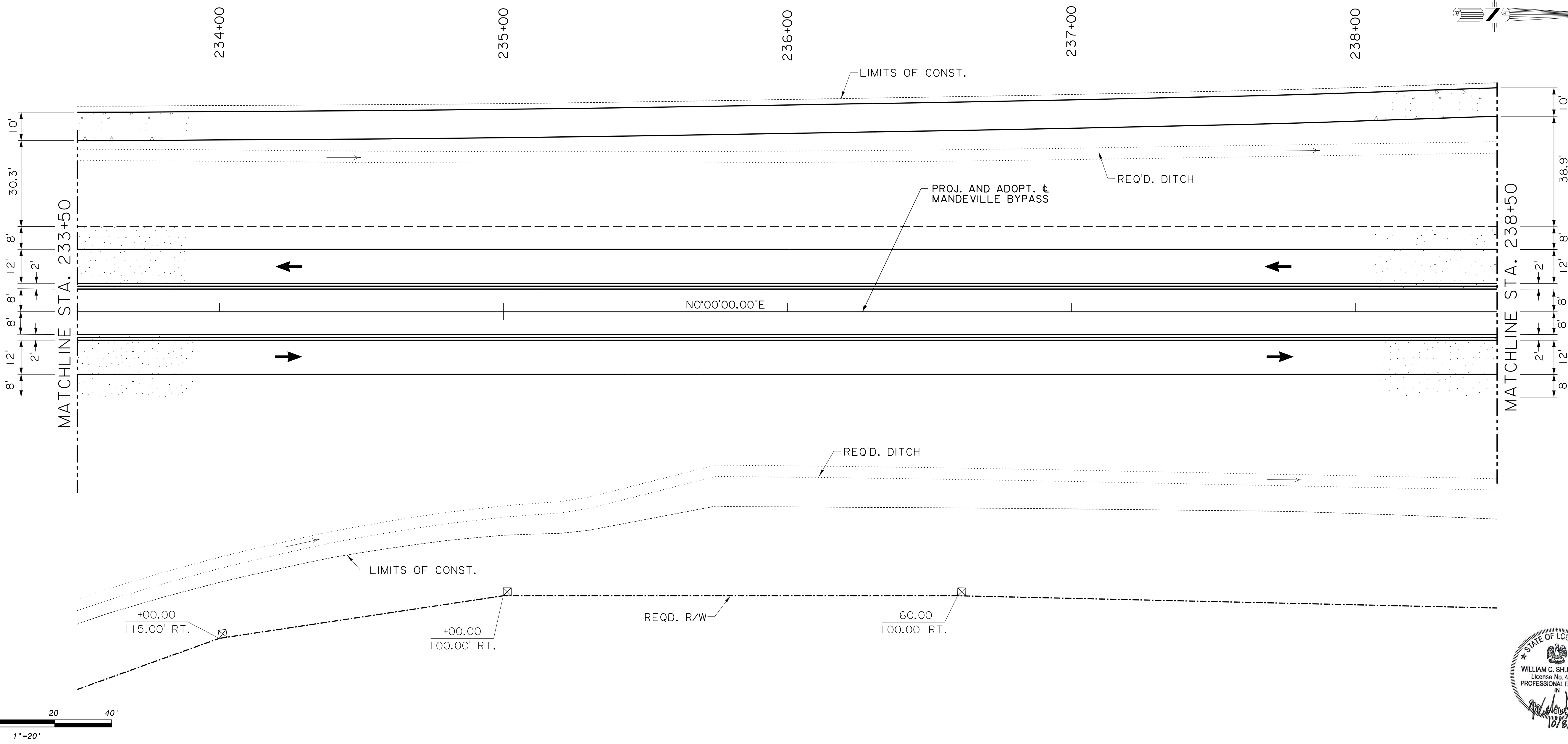


DESIGNED	WCS	10/9/2024	BY
CHECKED	DSY	33 OF 48	
DATE			
DESIGNED	JAT		
CHECKED	DSY		
DATE			
REVISION DESCRIPTION			
NO.	DATE		
ROADWAY PLANS			
PLAN/PROFILE MANDEVILLE BYPASS			
MANDEVILLE BY PASS			
LA 1088 TO US 190			
ST. TAMMANY PARISH			
PROJECT 2014EN0001			
B.K.I. PROJECT NO. 15.012			
SHEET NUMBER 36			

XREF:

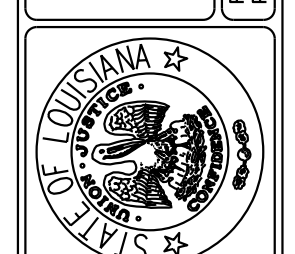
10/9/2024

PP_BYPASS_28_12629.dgn



DESIGNED	WCS	10/9/2024	BY
CHECKED	DSY	34 OF 48	
DATE	JAT		
CHECKED	DSY		
NO.	DATE	REVISION DESCRIPTION	

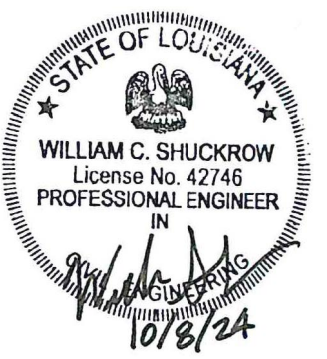
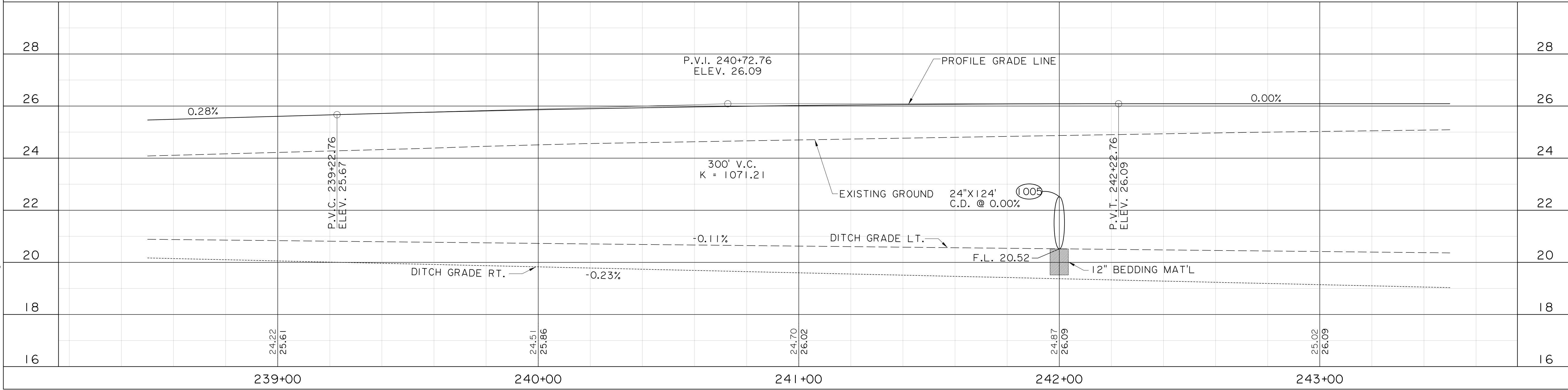
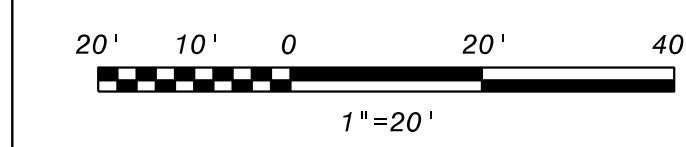
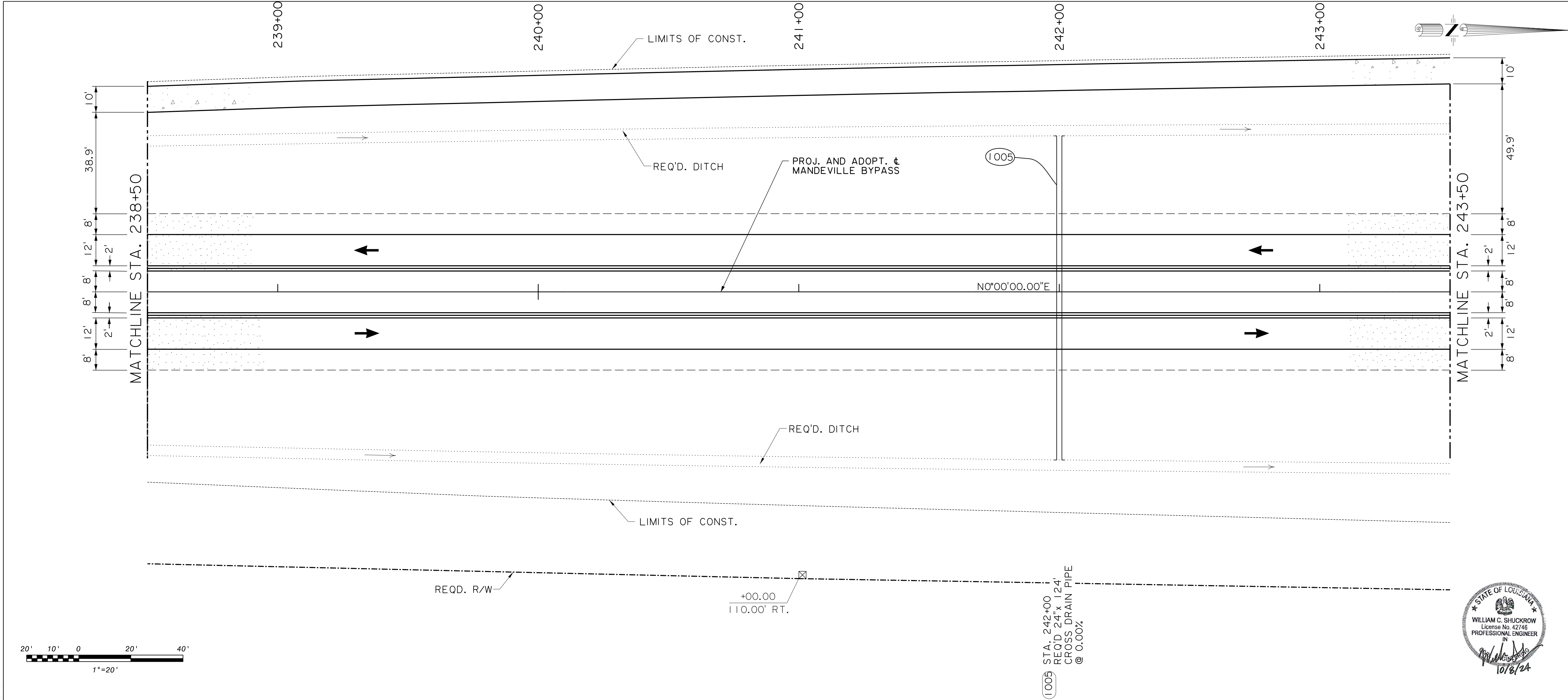
ROADWAY PLANS	MANDEVILLE BY PASS LA 1088 TO US 190
PARISH PROJECT	ST. TAMMANY 2014EN0001
BK/L PROJECT	NO. 15.012
SHEET NUMBER	37



XREF:

10/9/2024

PP_BYPASS_29_12629.dgn



NO.	DATE	BY	REVISION DESCRIPTION

DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	35 OF 48

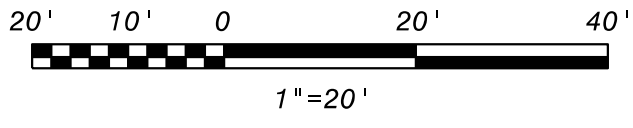
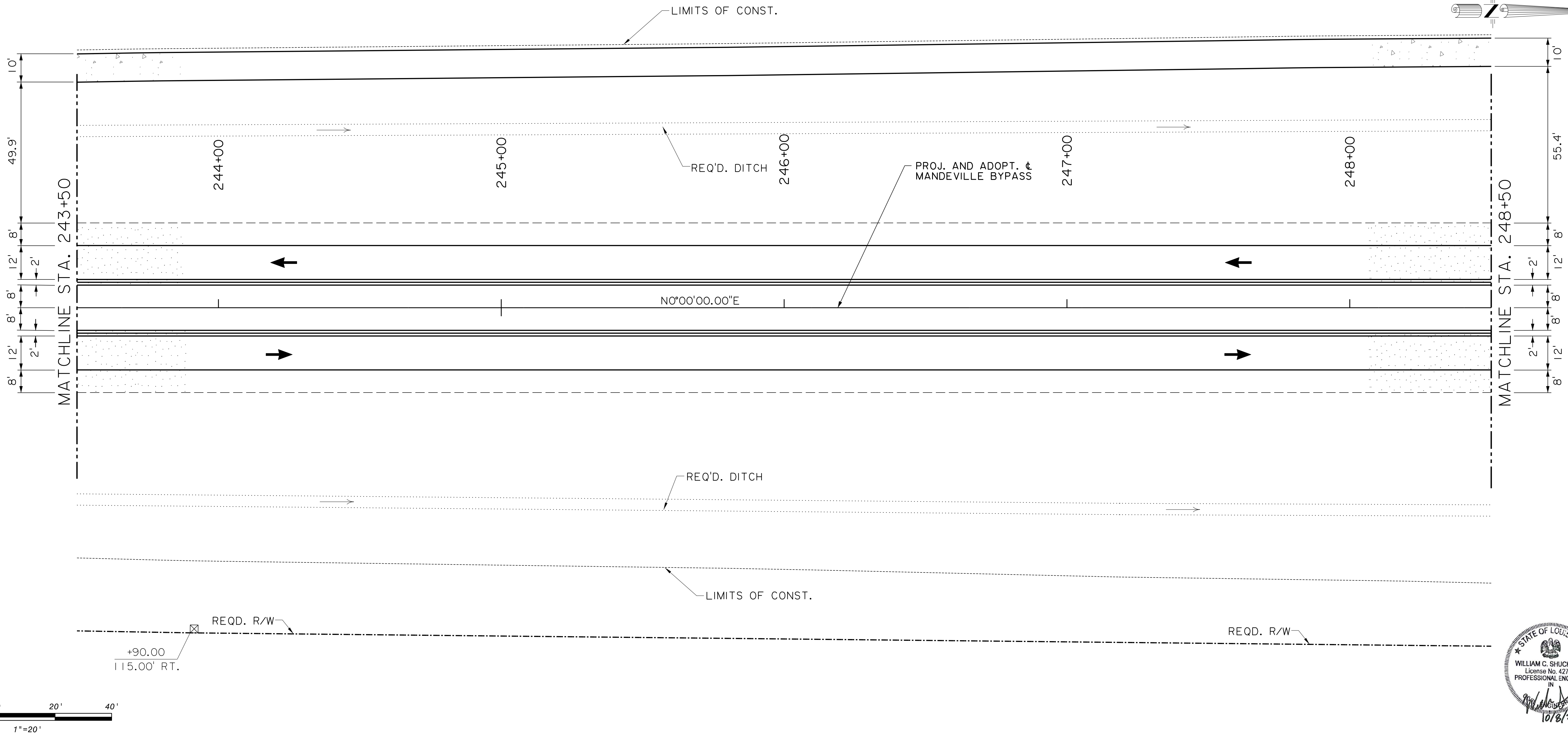
ROADWAY PLANS	PLAN/PROFILE MANDEVILLE BYPASS
PARISH PROJECT	MANDEVILLE BY PASS LA 1088 TO US 190
PARISH PROJECT	ST. TAMMANY 2014EN0001
BKLI PROJECT	NO. 15.012
ST. TAMMANY PARISH UNIVERSITY	

SHEET NUMBER	38
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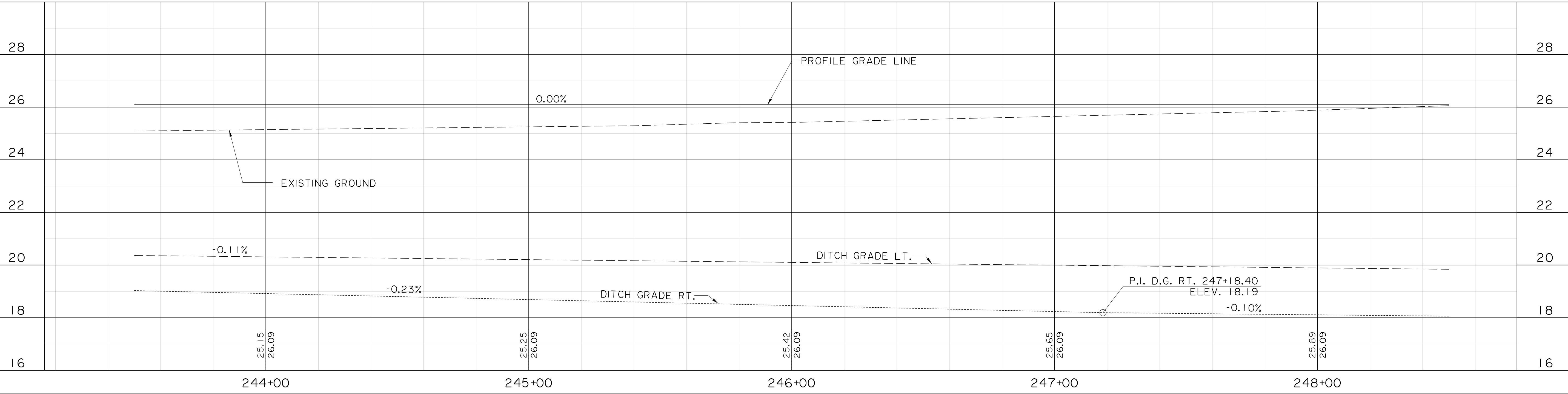
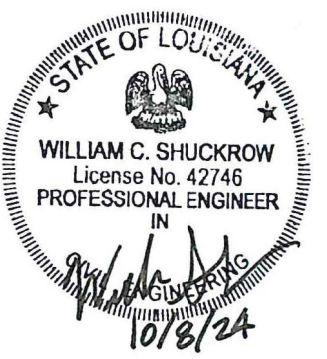
XREF:

10/9/2024

PP_BYPASS_30_12629.dgn



+90.00
115.00' RT.

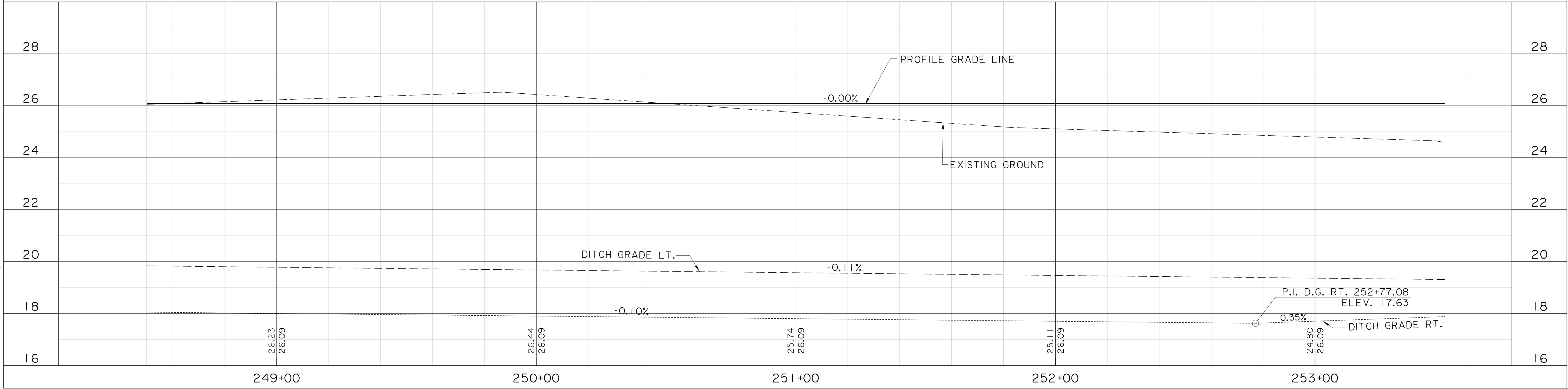
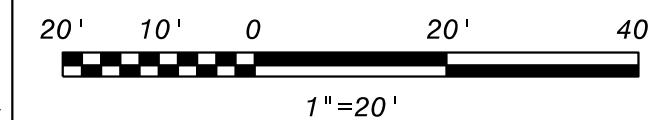
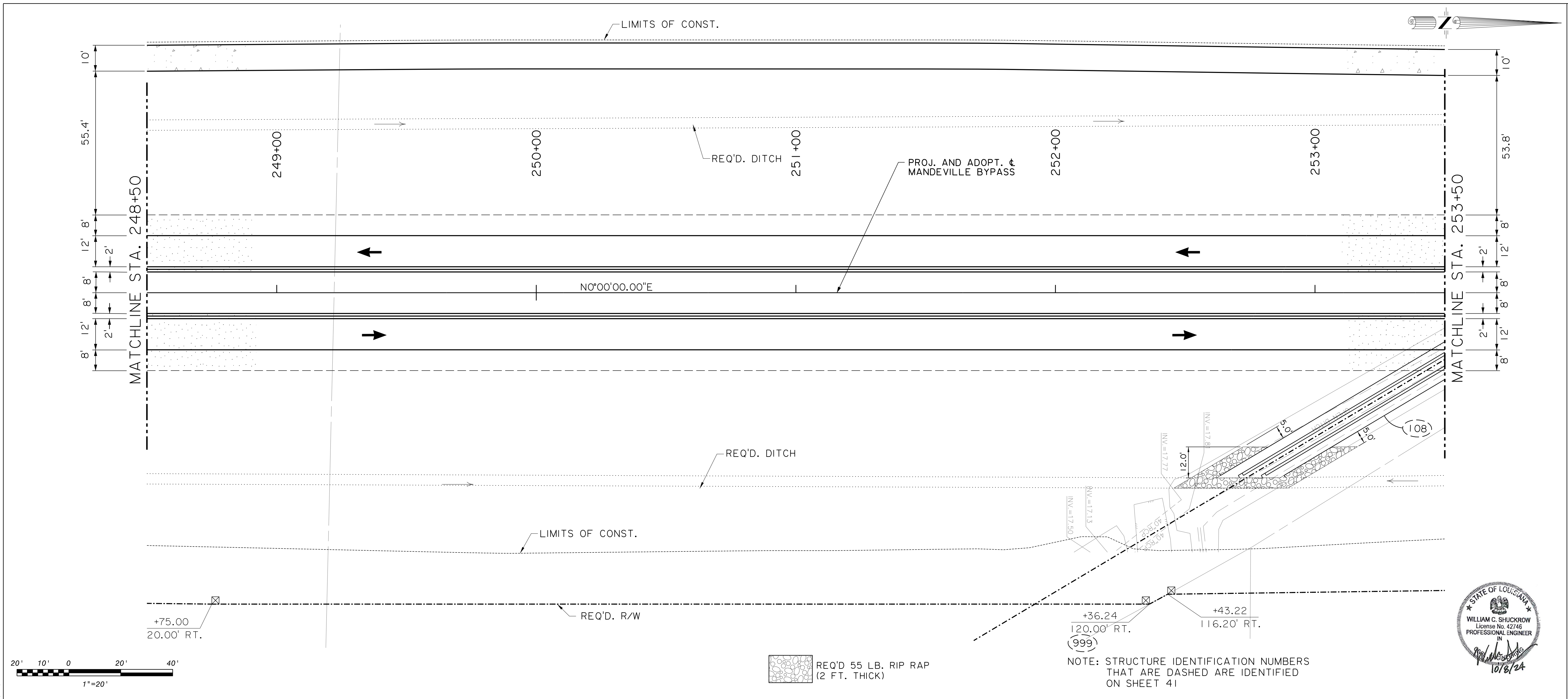


SHEET NUMBER		39	
PARISH		ST. TAMMANY	
PROJECT		2014EN0001	
B.K.L. PROJECT		NO. 15.012	
 STATE OF LOUISIANA UNIVERSITY OF THE SOUTH			
MANDEVILLE BY PASS LA 1088 TO US 190 PLAN/PROFILE MANDEVILLE BYPASS			
 STATE OF LOUISIANA WILLIAM C. SHUCKROW License No. 42746 PROFESSIONAL ENGINEER IN CIVIL ENGINEERING 10/8/24			
DESIGNED	WCS	DATE	10/9/2024
CHECKED	DSY	CHECKED	DSY
DATE	10/9/2024	DATE	10/9/2024
BY	JAT	BY	DSY
NO.	36 OF 48	NO.	36 OF 48
REVISION DESCRIPTION			

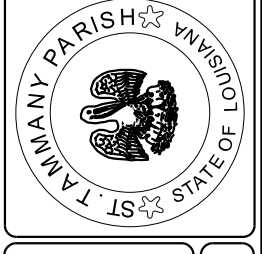
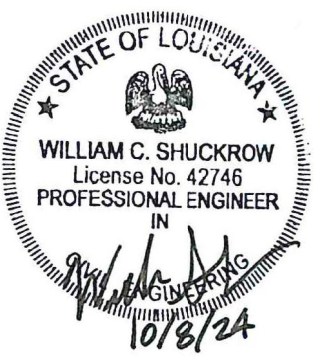
XREF:

10/9/2024

PP_BYPASS_31_12629.dgn

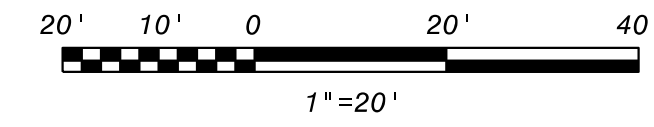
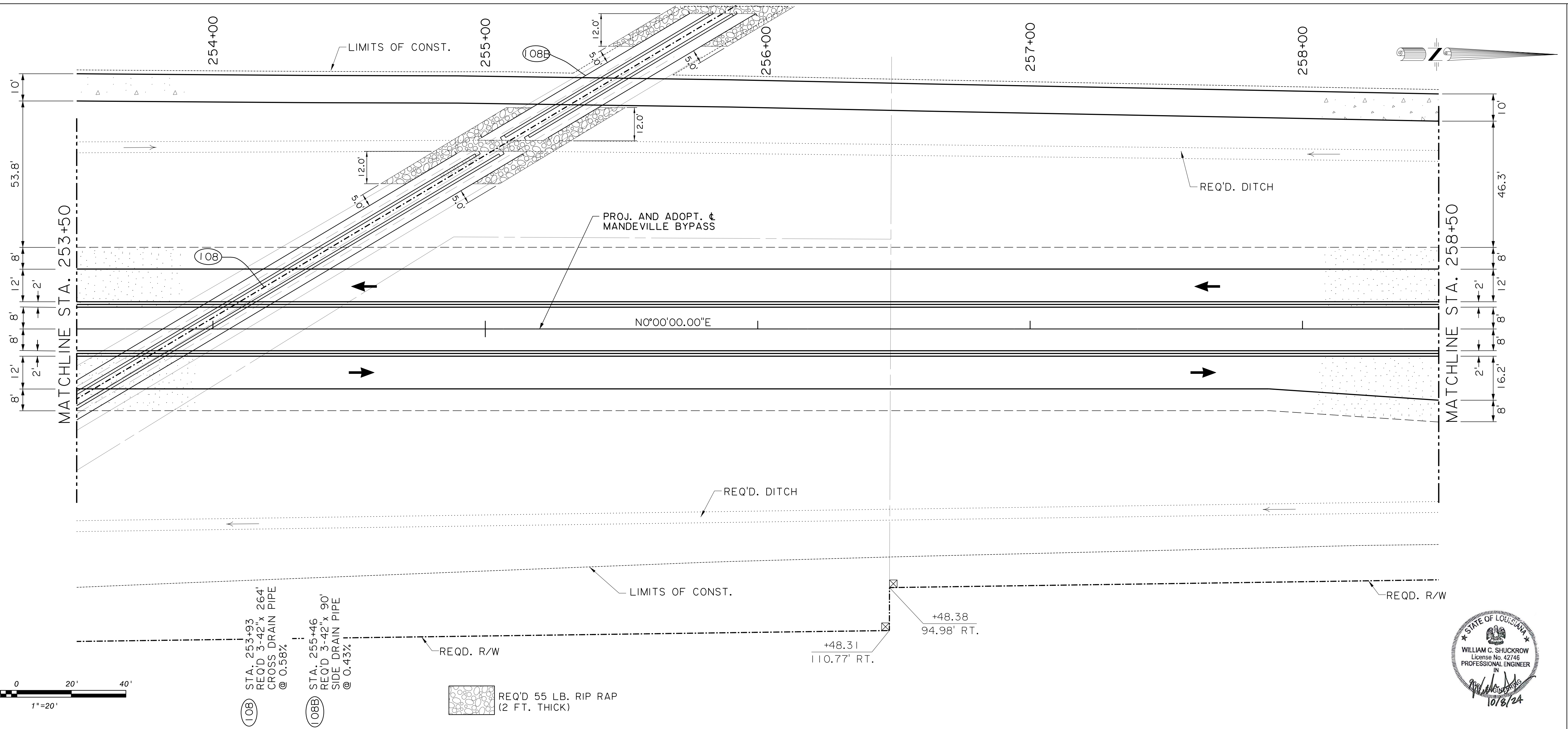


SHEET NUMBER	40
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO. 15.012
ROADWAY PLANS	MANDEVILLE BY PASS LA 1088 TO US 190
PLANS	PLAN/PROFILE MANDEVILLE BYPASS
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	37 OF 48
BY	
NO.	
DATE	
REVISION DESCRIPTION	



10/9/2024 XREF:

PP_BYPASS_32_12629.dgn



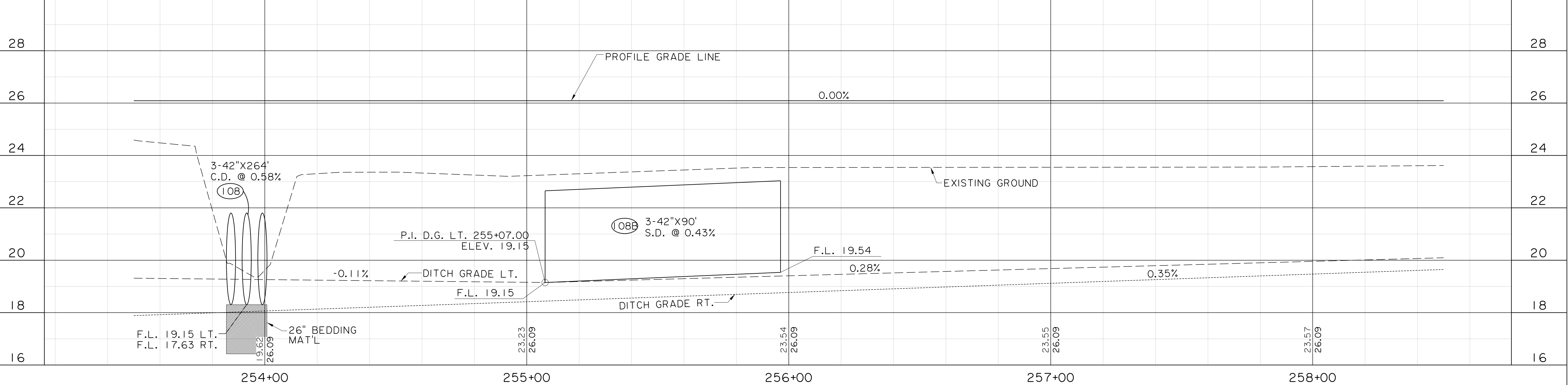
108 STA. 253+93
REQ'D 3-42" x 264"
CROSS DRAIN PIPE
@ 0.58%

108B STA. 255+46
REQ'D 3-42" x 90"
SIDE DRAIN PIPE
@ 0.43%

108B REQ'D 55 LB. RIP RAP
(2 FT. THICK)

+48.31
110.77' RT.

+48.38
94.98' RT.

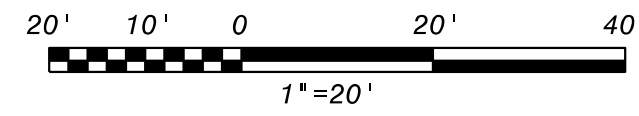
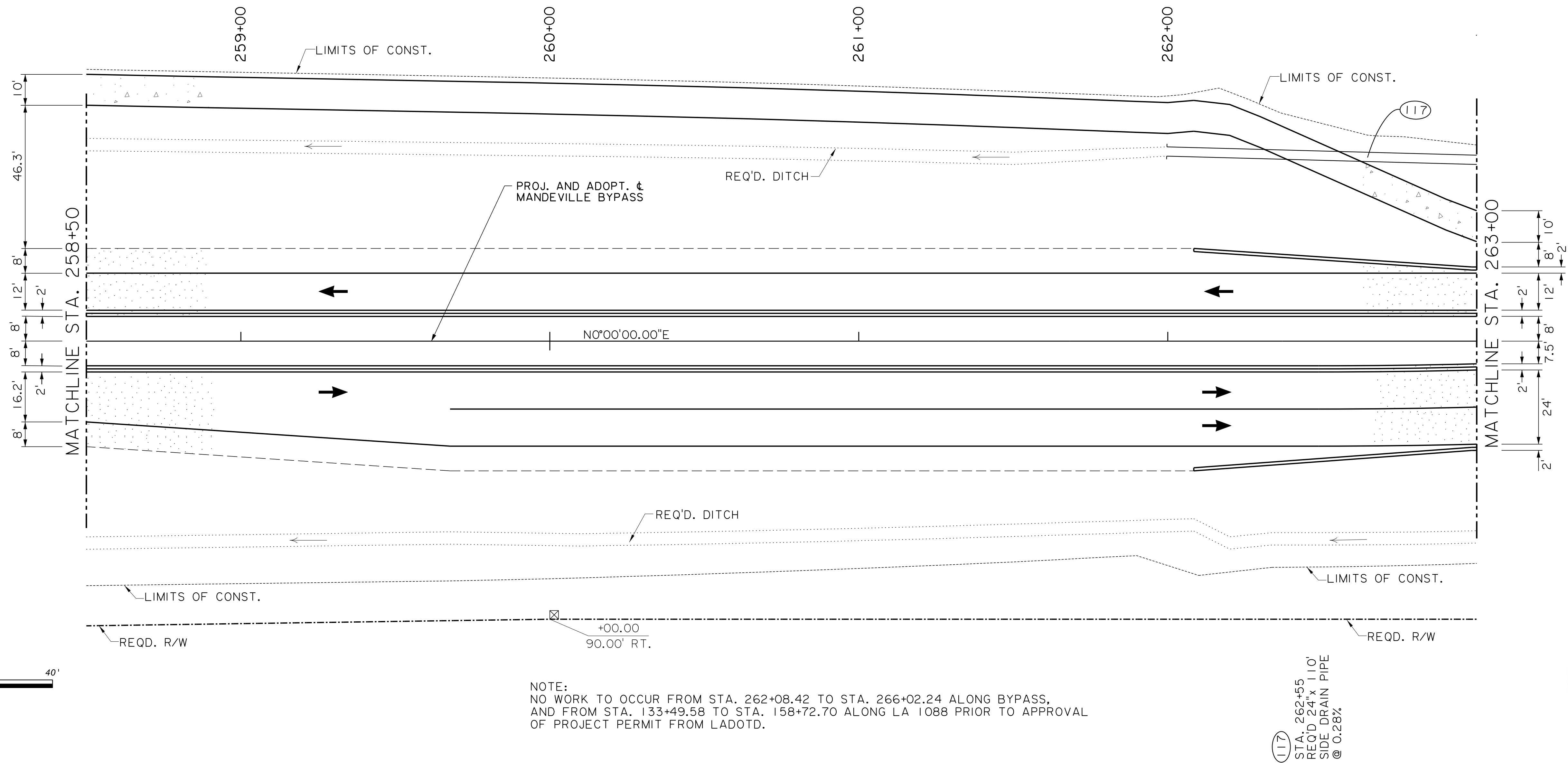


SHEET NUMBER	41
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.L. PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
BKI	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	38 OF 48
BY	
NO.	DATE

XREF:

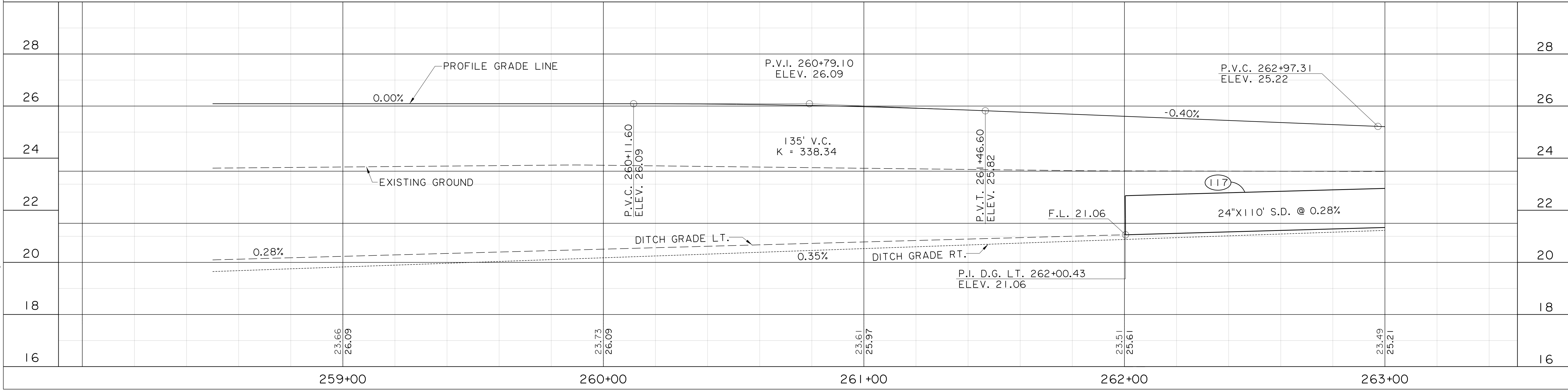
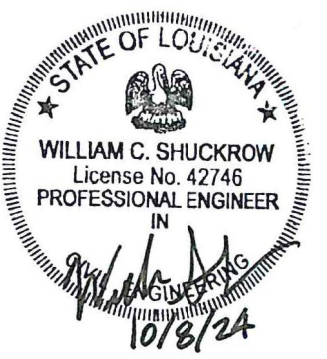
10/9/2024

PP_BYPASS_33_12629.dgn



NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

(117)
 STA. 262+55
 REQ'D 24" X 110'
 SIDE DRAIN PIPE
 @ 0.28%



SHEET NUMBER	42
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	39 OF 48
NO.	DATE
BY	DESCRIPTION

PROJ. & ADOPT C
 CURVE DATA
 P.I. STA. 263+58.89
 $\Delta = 06^{\circ}23'44.13''$ LT.
 $D = 07^{\circ}35'31.63''$
 $T = 42.16'$
 $L = 84.24'$
 $R = 754.67'$

MATCHLINE STA. 263+00
 2'
 8' 10"
 12'
 2'
 7.5' 8"
 2'
 24'
 2'

PROJ. AND ADOPT. C
 MANDEVILLE BYPASS
 $N0^{\circ}00'00.00''E$
 $N6^{\circ}23'44.13''W$

LIMITS OF CONST.
 REQ'D. DITCH

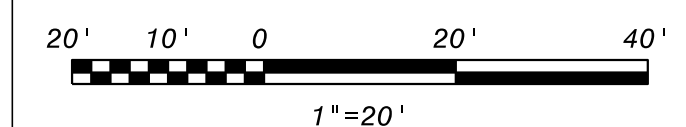
P.C. 263+16.72
 P.R.C. 264+00.96
 264+00

LIMITS OF CONST.
 REQ'D. R/W
 +16.72
 90.00' RT.
 $\Delta = 6^{\circ}23'44.1''$
 $R = 844.67'$
 +00.96
 90.00' RT.
 +36.34
 90.00' RT.
 PROJ. & ADOPT C
 CURVE DATA
 P.I. STA. 264+66.55
 $\Delta = 11^{\circ}29'37.82''$ RT
 $D = 08^{\circ}47'27.41''$
 $T = 65.59'$
 $L = 130.75'$
 $R = 651.76'$

(804) STA. 263+35
 REQ'D. DOUBLE PAVED
 GUTTER DRAIN
 (801) STA. 263+35
 REQ'D. DOUBLE PAVED
 GUTTER DRAIN
 W/ SIDE WALK

(118) STA. 264+96
 2-36"X210'
 GROSS DRAIN PIPE
 @ 0.10%

+65.92
 120.00' RT.
 P.T. 265+31.71

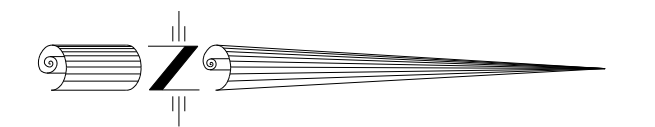


⊕ EROSION CONTROL SYSTEM
 (SLOPE PROTECTION) (TYPE A)

XREF: 10/9/2024

PP_BYPASS_34_12629.dgn

+38.58
 165.00' LT.



END PROJECT
 MANDEVILLE BYPASS
 STA. 266+02.24
 C.S. 000-52
 N=6888993.44
 E=3696556.09

+04.52
 165.00' LT.
 REQ'D. R/W

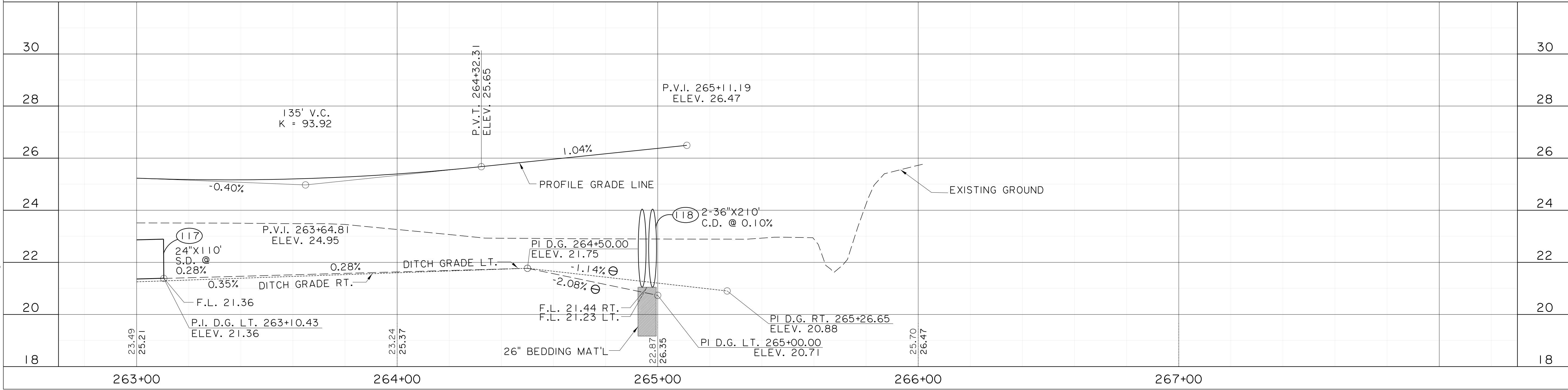
NOTE:
 NO WORK TO OCCUR FROM
 STA. 262+08.42 TO STA. 266+02.24
 ALONG BYPASS, AND FROM
 STA. 133+49.58 TO STA. 158+72.70
 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

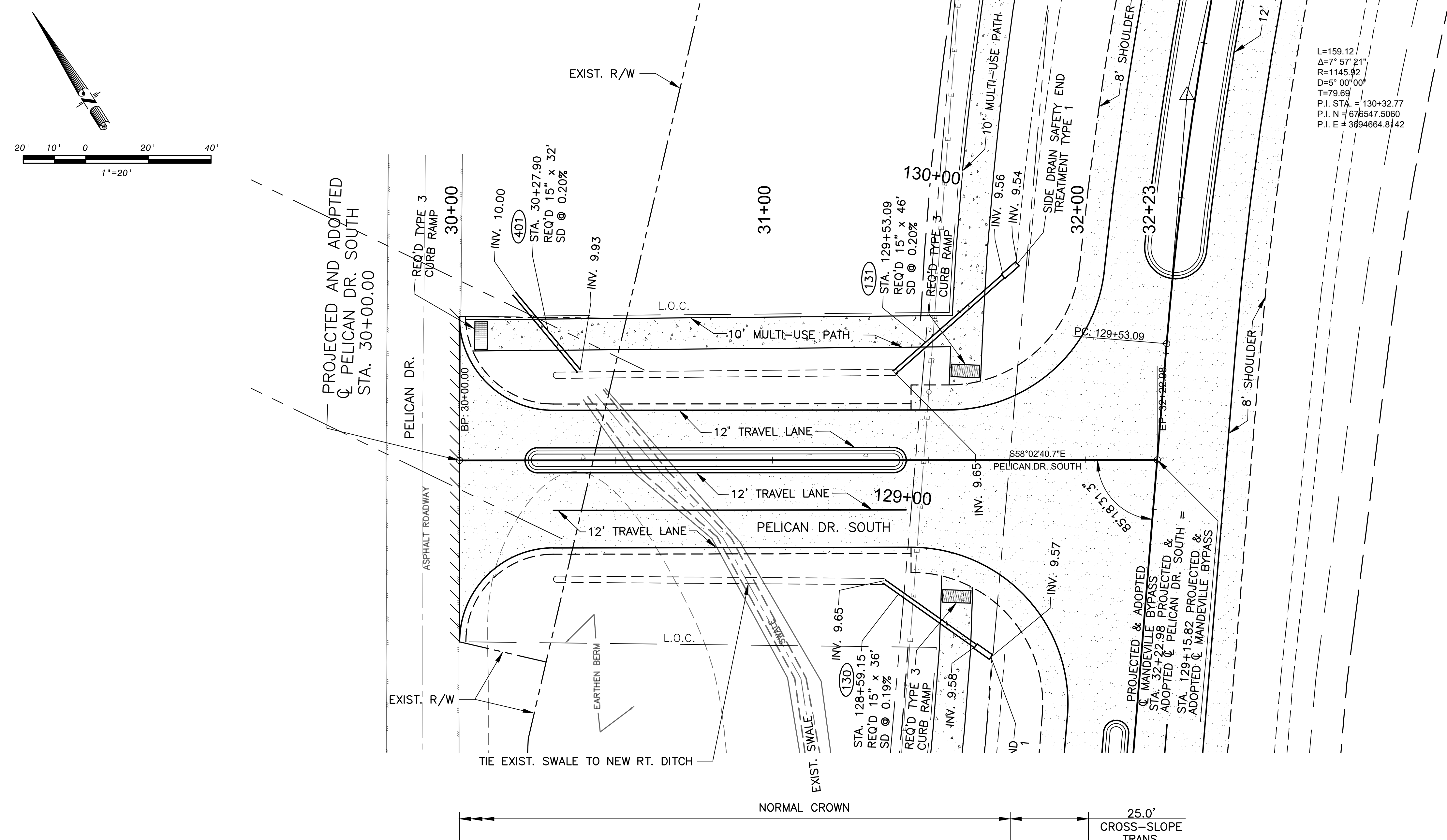
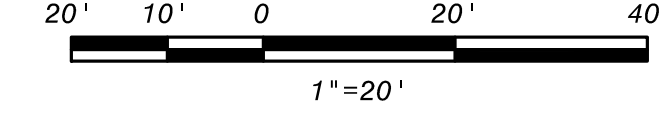
PROJ. AND ADOPT. C
 LA 1088

FUTURE CONDUITS FOR
 LIGHTING AND IRRIGATION

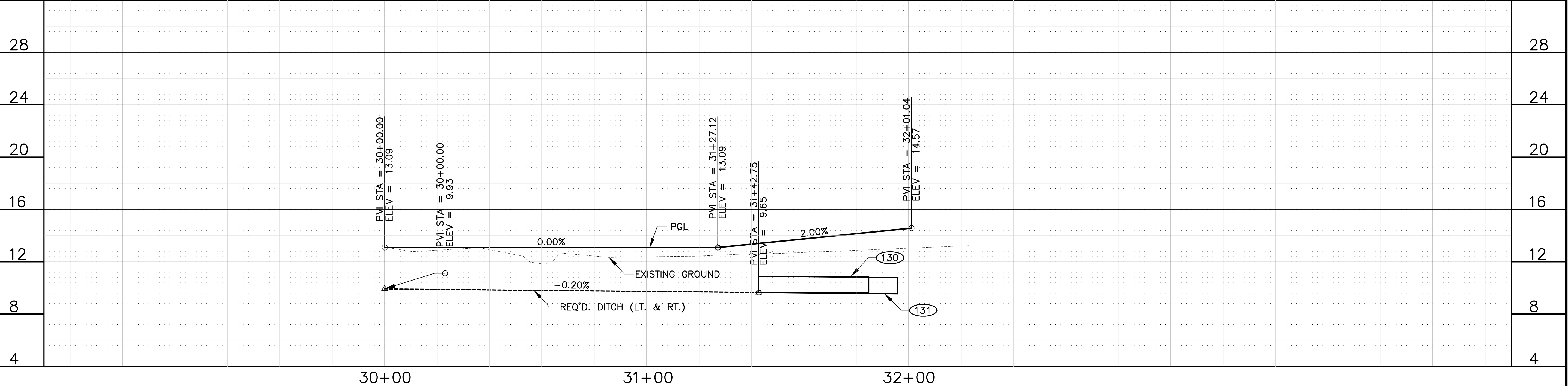
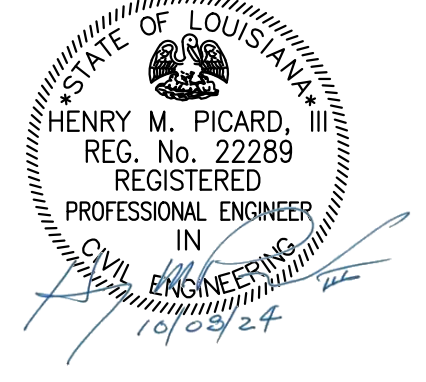
(999)
 NOTE: STRUCTURE IDENTIFICATION NUMBERS
 THAT ARE DASHED ARE IDENTIFIED
 ON SHEETS 42 & 49

SHEET NUMBER	43
ST. TAMMANY	NO. 15.012
PARISH PROJECT	2014EN0001
BKLI PROJECT	
MANDEVILLE BY PASS LA 1088 TO US 190	
PLAN/PROFILE MANDEVILLE BYPASS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	40 OF 48
BY	
NO.	
DATE	
REVISION DESCRIPTION	





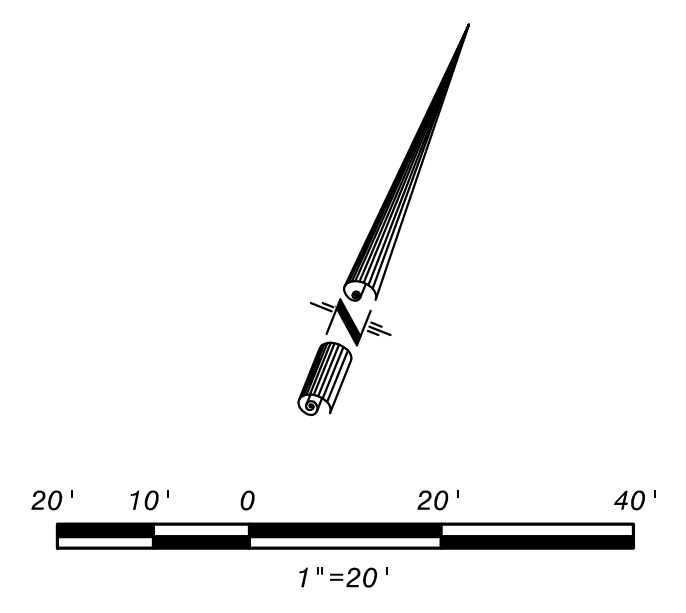
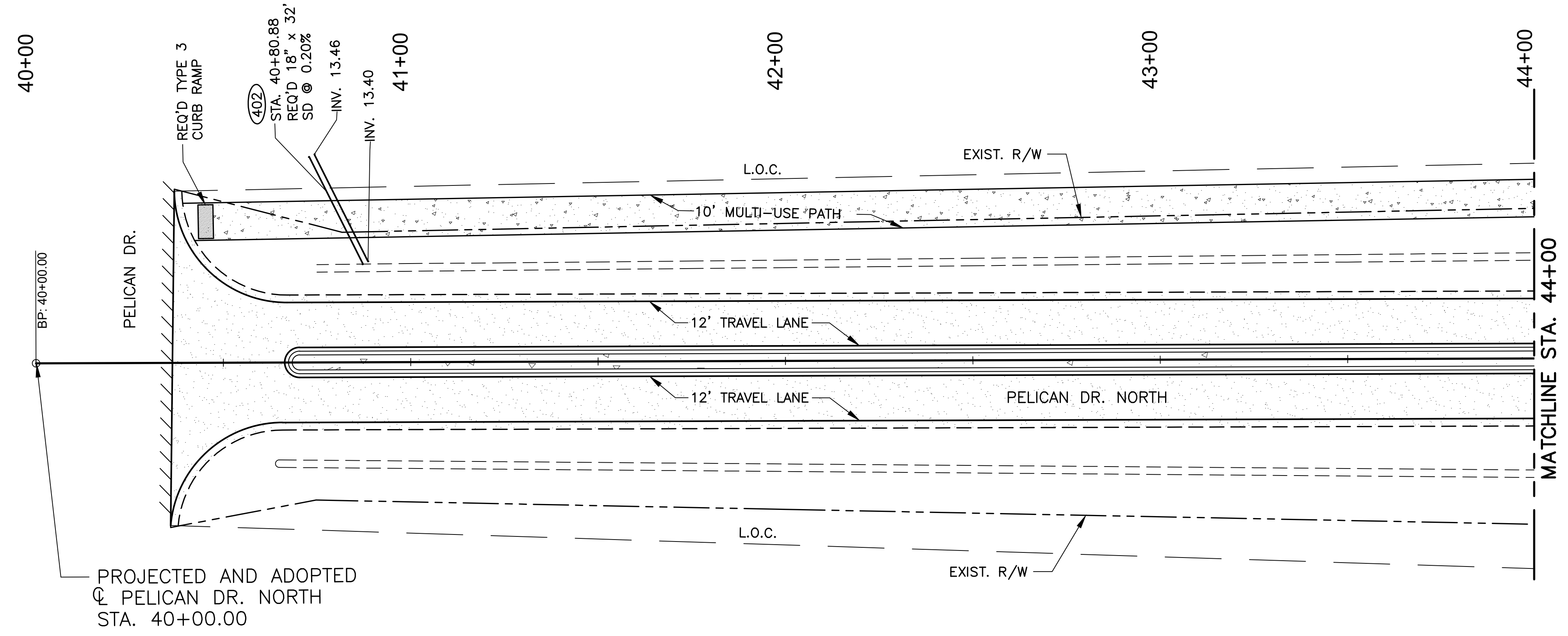
L=159.12
 Δ=7° 57' 21"
 R=1145.82
 D=5° 00' 00"
 T=79.69
 P.I. STA. = 130+32.77
 P.I. N = 678547.5060
 P.I. E = 3694664.8142



DESIGNED	T.J.K.	October, 2024	NO.	DATE	BY
CHECKED	H.M.P.		NO.	DATE	BY
DETAILED	G.A.D.		NO.	DATE	BY
CHECKED	T.J.K.		NO.	DATE	BY
DATE			NO.	DATE	BY
SHEET			NO.	DATE	BY
OF			NO.	DATE	BY
REVISION			NO.	DATE	BY
DESCRIPTION			NO.	DATE	BY
ROADWAY PLANS			NO.	DATE	BY
PLAN/PROFILE PDS			NO.	DATE	BY
MANDEVILLE BYPASS LA 1088 TO US 190			NO.	DATE	BY
ST. TAMMANY PARISH			NO.	DATE	BY
2014EN0001			NO.	DATE	BY
NO.15.012			NO.	DATE	BY
SHEET NUMBER			NO.	DATE	BY
44			NO.	DATE	BY

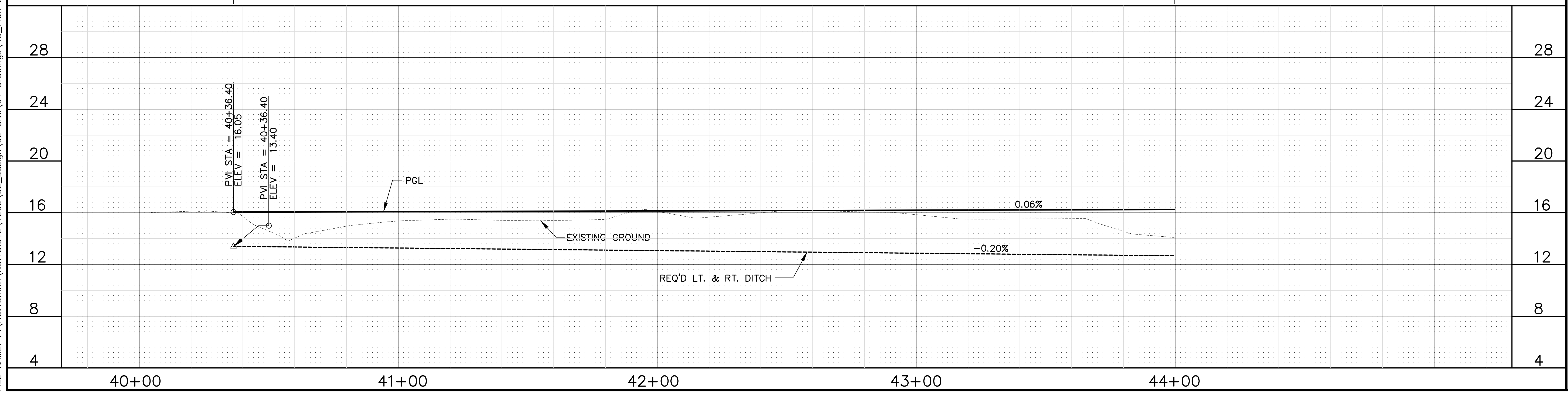
DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\45_Plan and Profile.dwg

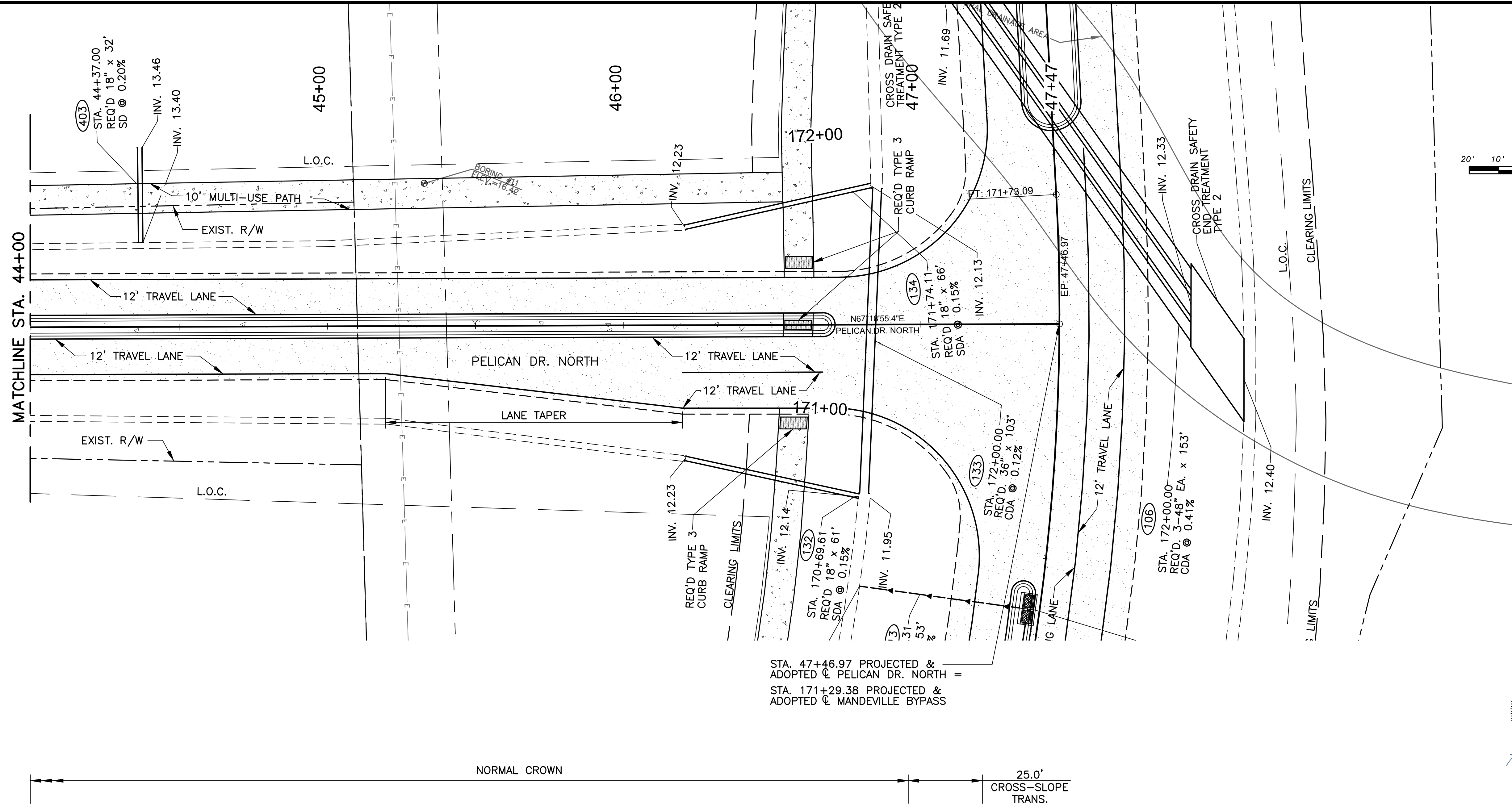


PROJECTED AND ADOPTED
 CL PELICAN DR. NORTH
 STA. 40+00.00

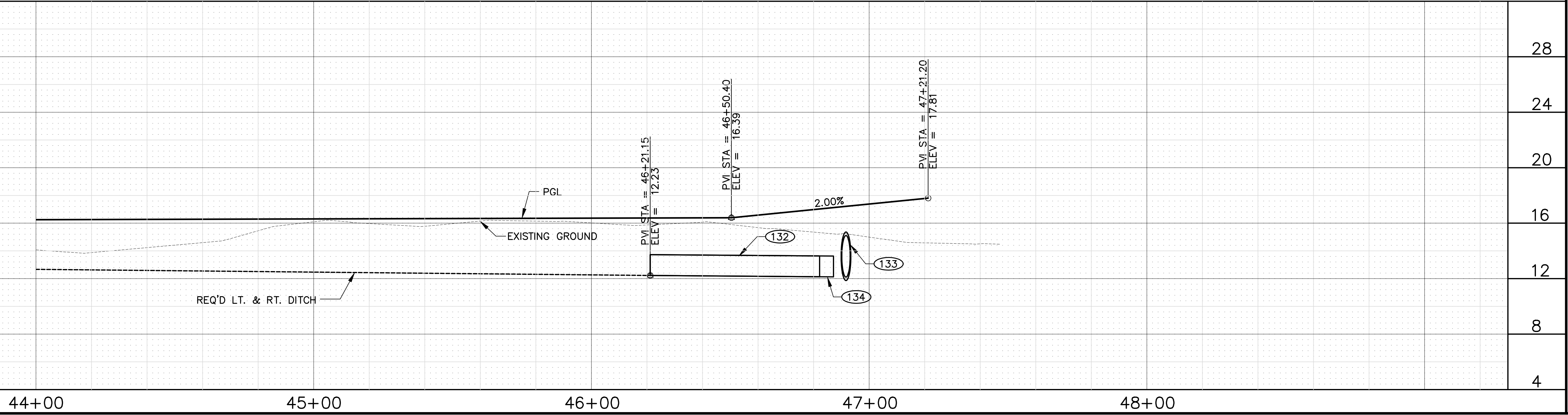
NORMAL CROWN



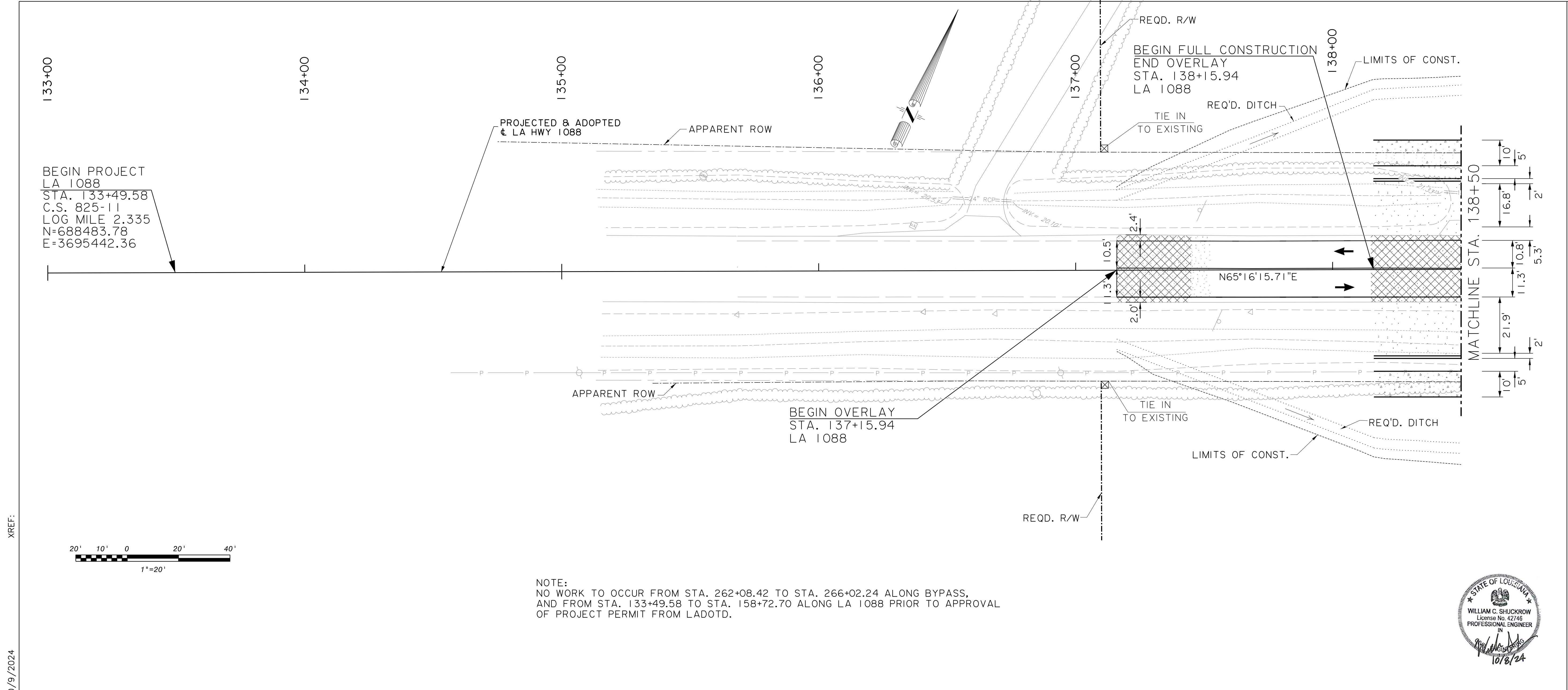
SHEET NUMBER	45
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS PLAN/PROFILE PDN	
DESIGNED	T.J.K.
CHECKED	H.M.P.
DATE	October, 2024
DESIGNED	G.A.D.
CHECKED	T.J.K.
DATE	October, 2024
BY	
NO.	
DATE	
REVISION	DESCRIPTION



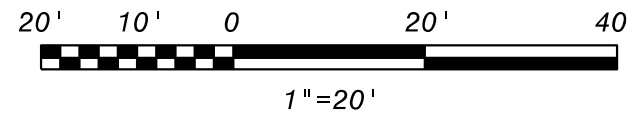
STA. 47+46.97 PROJECTED &
ADOPTED C PELICAN DR. NORTH =
STA. 171+29.38 PROJECTED &
ADOPTED C MANDEVILLE BYPASS



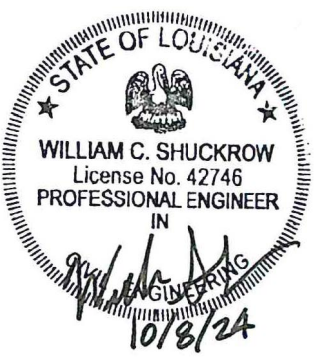
SHEET NUMBER	46
PARISH	ST. TAMMANY PARISH
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
ROADWAY PLANS	MANDEVILLE BYPASS LA 1088 TO US 190
PLANS	PLAN/PROFILE PDN
DESIGNED	T.J.K.
CHECKED	H.M.P.
DATE	October, 2024
DESIGNED	G.A.D.
CHECKED	T.J.K.
DATE	October, 2024
NO.	
DATE	
BY	
REVISION	DESCRIPTION



BEGIN PROJECT
LA 1088
STA. 133+49.58
C.S. 825-11
LOG MILE 2.335
N=688483.78
E=3695442.36



NOTE:
NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
OF PROJECT PERMIT FROM LADOTD.

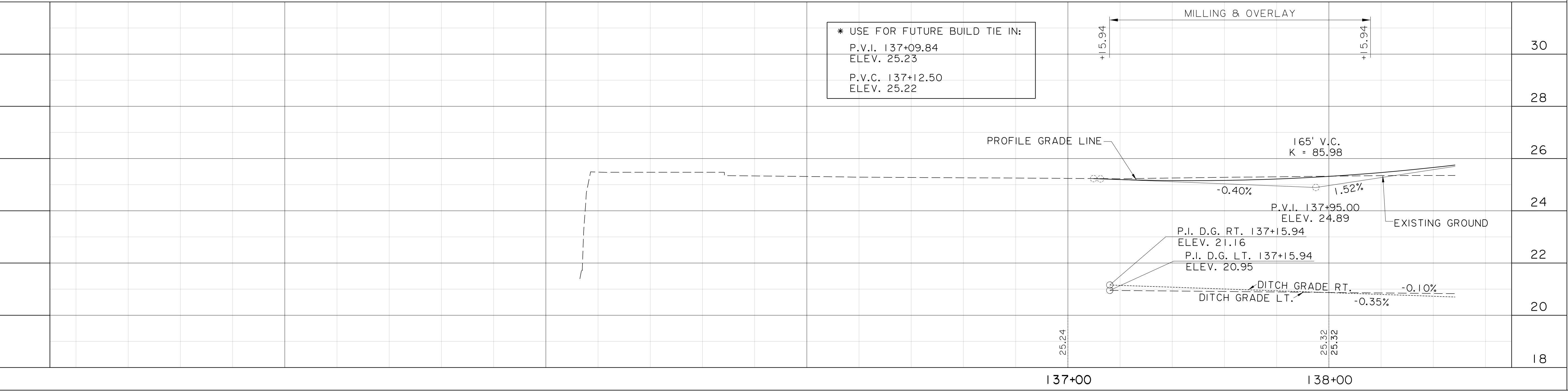


XREF:

10/9/2024

PP_BYPASS_42_12629.dgn

* USE FOR FUTURE BUILD TIE IN:
P.V.I. 137+09.84
ELEV. 25.23
P.V.C. 137+12.50
ELEV. 25.22

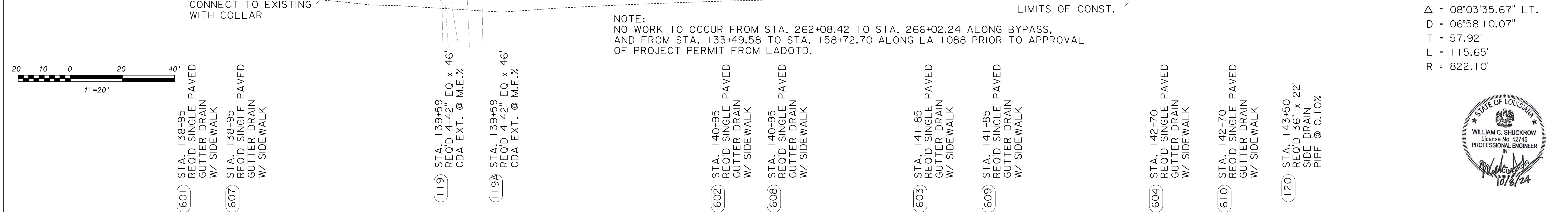
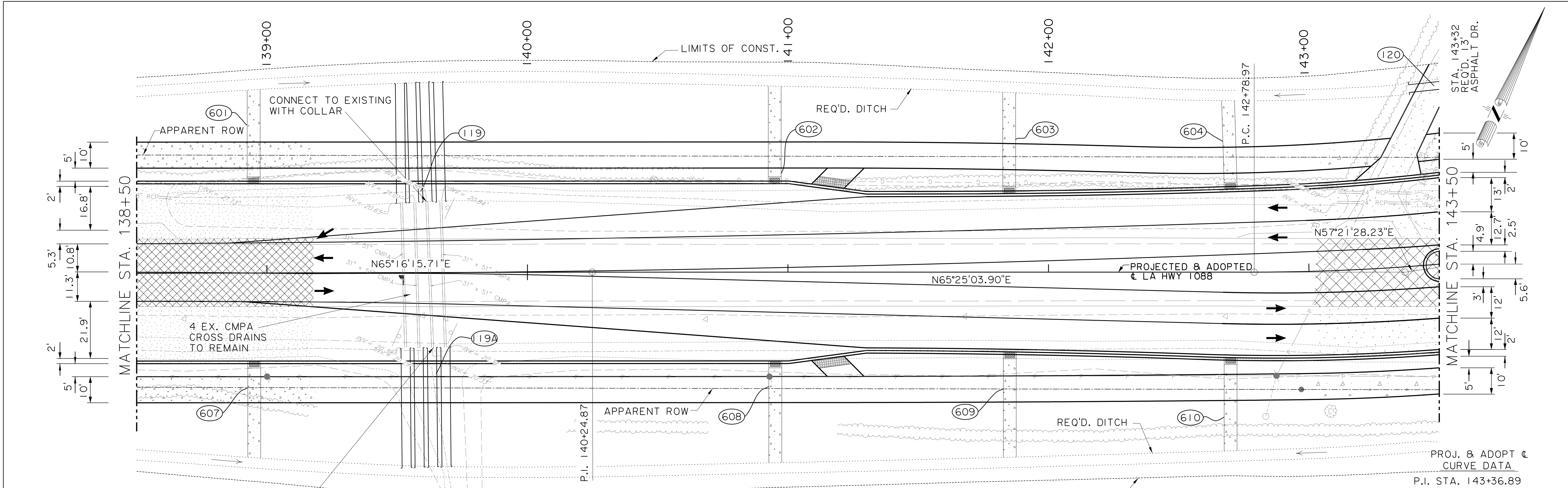


SHEET NUMBER	47
ST. TAMMANY	
PARISH PROJECT	2014EN0001
B.K.I. PROJECT	NO. 15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	PLAN/PROFILE LA 1088
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
REVISION DESCRIPTION	
NO.	DATE

XREF:

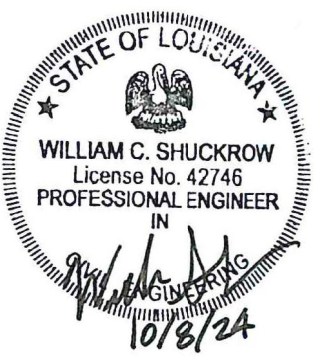
10/9/2024

PP_BYPASS_43_12629.dgn



NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

PROJ. & ADOPT C
 CURVE DATA
 P.I. STA. 143+36.89
 $\Delta = 08^{\circ}03'35.67''$ LT.
 $D = 06^{\circ}58'10.07''$
 $T = 57.92'$
 $L = 115.65'$
 $R = 822.10'$



SHEET NUMBER	48
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B/L PROJECT	NO. 15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
ROADWAY PLANS	PLAN/PROFILE LA 1088
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
REVISION DESCRIPTION	
NO.	DATE

10/9/2024

PP_BYPASS_44_12629.dgn

XREF:

PROJ. & ADOPT CURVE DATA
 P.I. STA. 143+36.89
 $\Delta = 08^{\circ}03'35.67''$ LT.
 $D = 06^{\circ}58'10.07''$
 $T = 57.92'$
 $L = 115.65'$
 $R = 822.10'$

NOTE: STRUCTURE IDENTIFICATION NUMBERS (999) THAT ARE DASHED ARE IDENTIFIED ON SHEETS 43

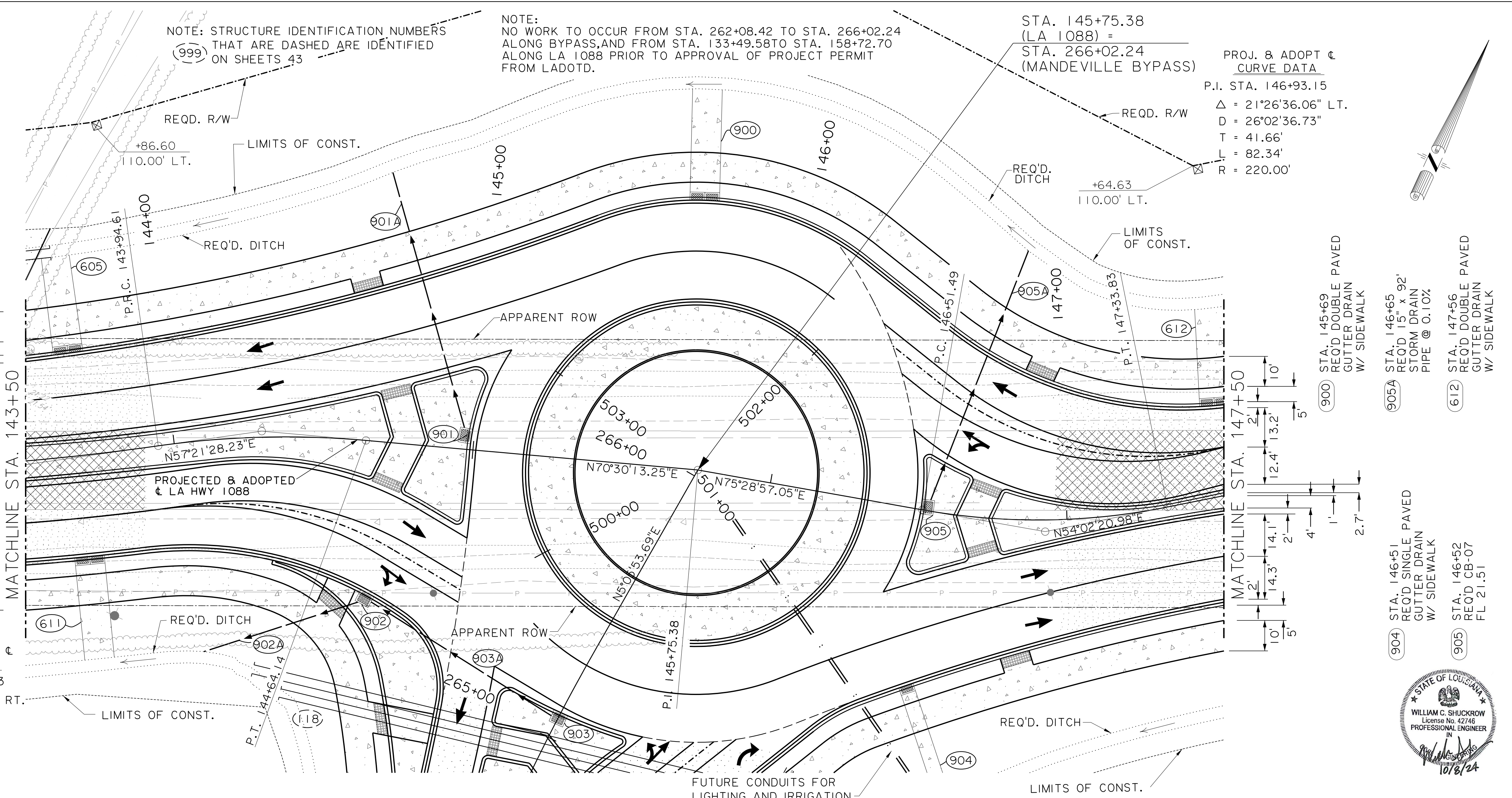
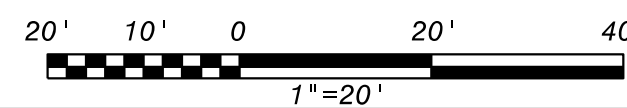
NOTE: NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS, AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.

STA. 145+75.38 (LA 1088) = STA. 266+02.24 (MANDEVILLE BYPASS)

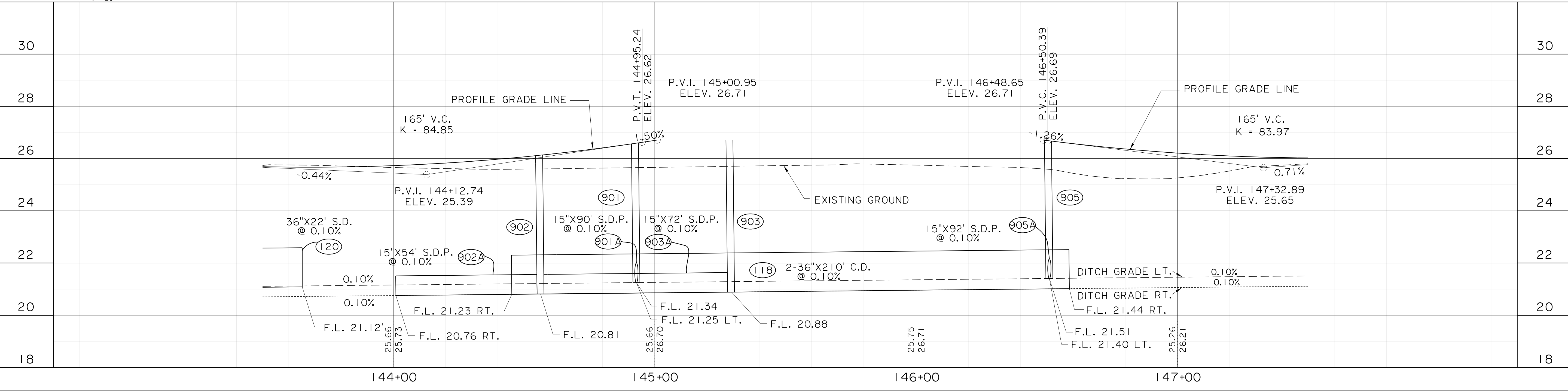
PROJ. & ADOPT CURVE DATA
 P.I. STA. 146+93.15
 $\Delta = 21^{\circ}26'36.06''$ LT.
 $D = 26^{\circ}02'36.73''$
 $T = 41.66'$
 $L = 82.34'$
 $R = 220.00'$

- (611) STA. 143+68 REQ'D DOUBLE PAVED GUTTER DRAIN W/ SIDEWALK
- (902) STA. 144+69 REQ'D CB-07 FL 20.81
- (902A) STA. 144+35 REQ'D 15" x 54" STORM DRAIN PIPE @ 0.10%
- (903) STA. 145+37 REQ'D CB-07 FL 20.88
- (903A) STA. 145+03 REQ'D 15" x 72" STORM DRAIN PIPE @ 0.10%
- (605) STA. 143+68 REQ'D DOUBLE PAVED GUTTER DRAIN W/ SIDEWALK
- (901A) STA. 144+81 REQ'D 15" x 90" STORM DRAIN PIPE @ 0.10%
- (901) STA. 144+98 REQ'D CB-07 FL 21.34

PROJ. & ADOPT CURVE DATA
 P.I. STA. 144+29.53
 $\Delta = 13^{\circ}08'45.02''$ RT.
 $D = 18^{\circ}54'24.90''$
 $T = 34.92'$
 $L = 69.53'$
 $R = 303.04'$



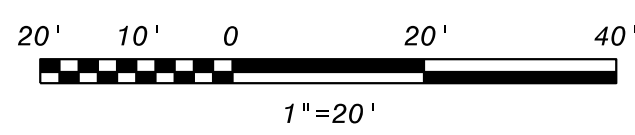
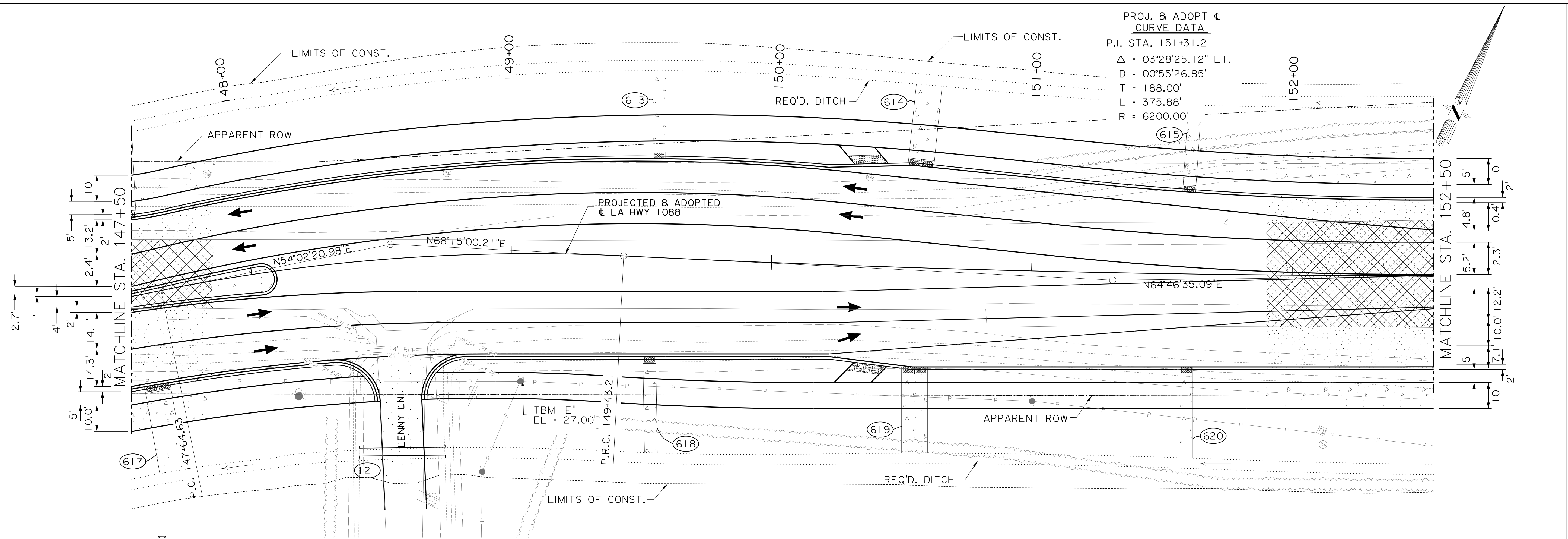
SHEET NUMBER	49
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK1 PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLAN/PROFILE LA 1088	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	46 OF 48
BY	



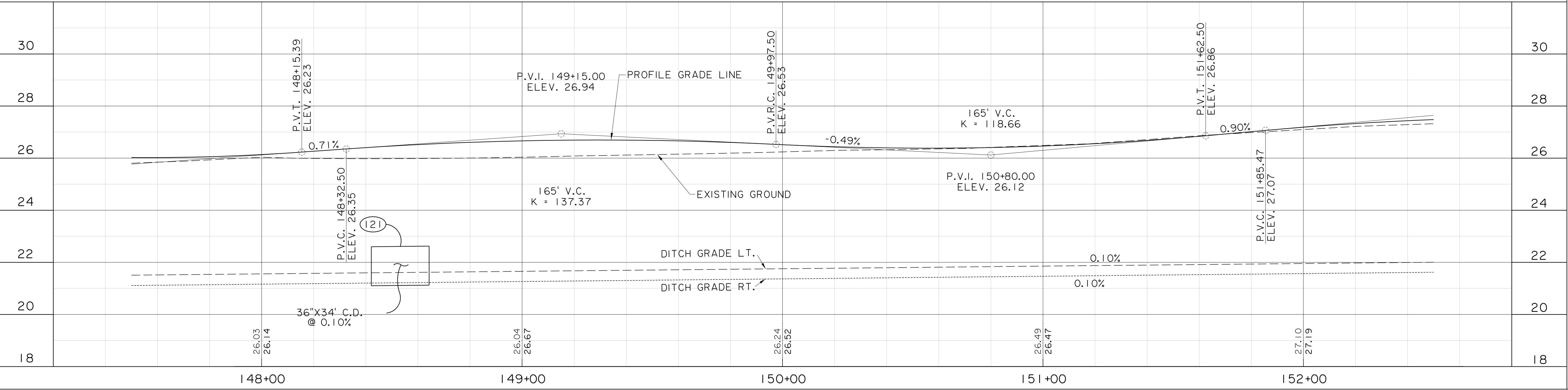
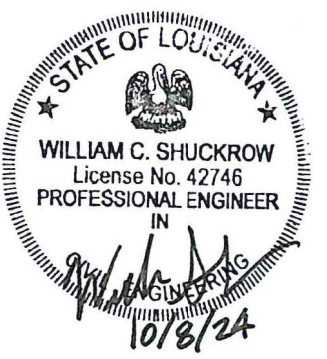
XREF:

10/9/2024

PP_BYPASS_45_12629.dgn



- (617) STA. 147+56
REQ'D DOUBLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- (121) STA. 148+55
REQ'D 36" x 34"
CD @ 0.10%
- STA. 148+54
REQ'D 16"
ASPHALT DR.
- PROJ. & ADOPT ϵ CURVE DATA
P.I. STA. 148+54.38
 $\Delta = 14^{\circ}12'39.23"$ RT.
 $D = 07^{\circ}57'27.89"$
 $T = 89.75'$
 $L = 178.58'$
 $R = 720.00'$
- (613) STA. 149+55
REQ'D SINGLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- (618) STA. 149+55
REQ'D SINGLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- (614) STA. 150+56
REQ'D DOUBLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- (619) STA. 150+56
REQ'D DOUBLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- NOTE:
NO WORK TO OCCUR FROM
STA. 262+08.42 TO STA. 266+02.24
ALONG BYPASS, AND FROM
STA. 133+49.58 TO STA. 158+72.70
ALONG LA 1088 PRIOR TO APPROVAL
OF PROJECT PERMIT FROM LADOTD.
- (615) STA. 151+60
REQ'D SINGLE PAVED
GUTTER DRAIN
W/ SIDEWALK
- (620) STA. 151+60
REQ'D SINGLE PAVED
GUTTER DRAIN
W/ SIDEWALK

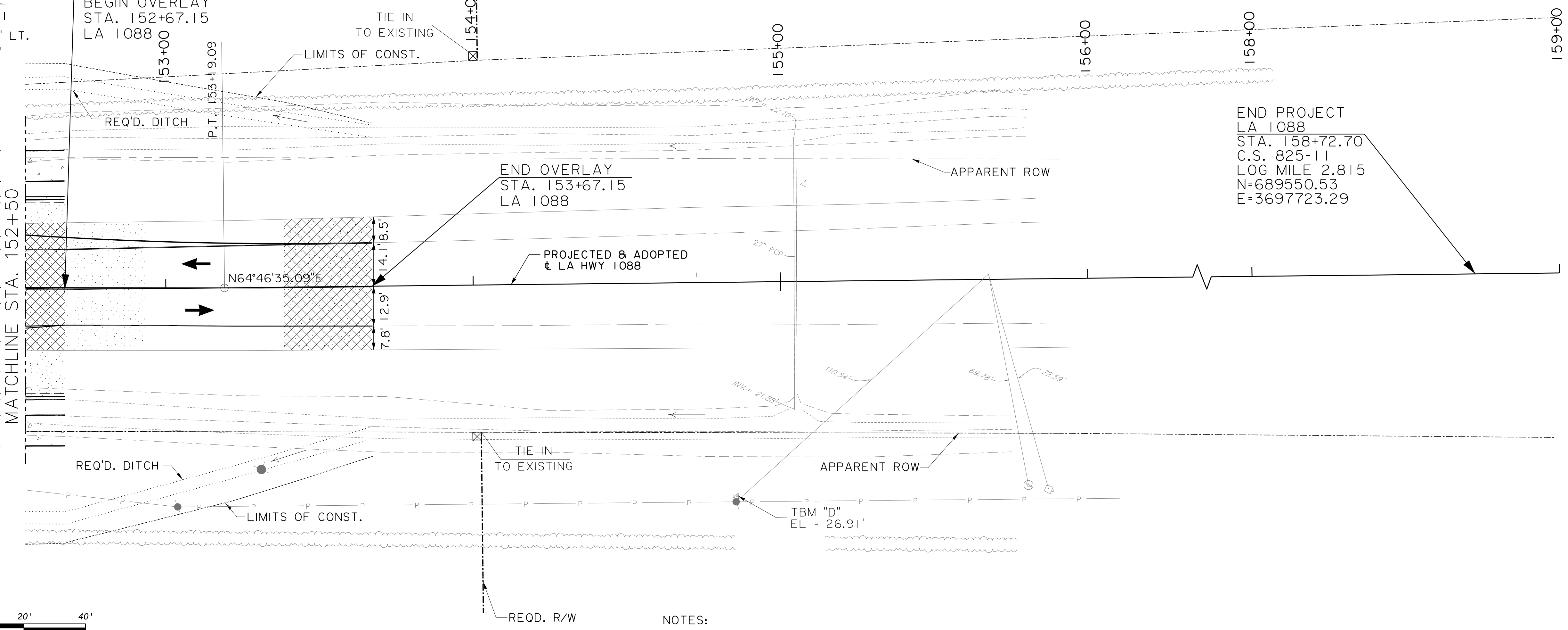
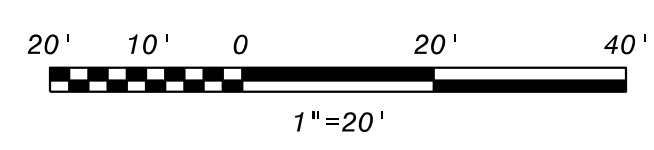
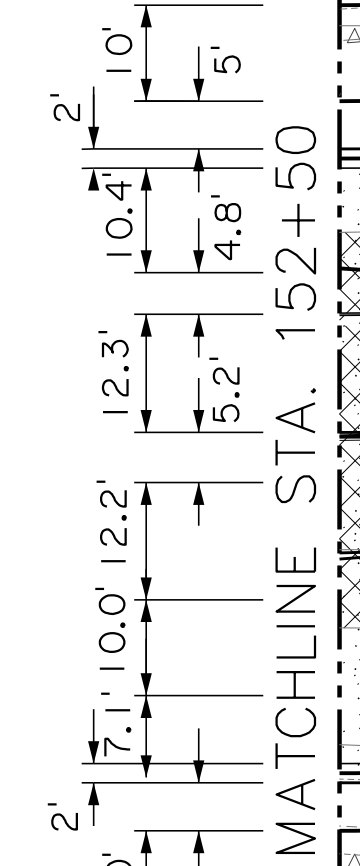


SHEET NUMBER	50
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
ROADWAY PLANS	PLAN/PROFILE LA 1088
MANDEVILLE BY PASS LA 1088 TO US 190	
STATE OF LOUISIANA	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
REVISION DESCRIPTION	
NO.	DATE
47	OF 48

PROJ. & ADOPT ϵ
 CURVE DATA
 P.I. STA. 151+31.21
 $\Delta = 03^{\circ}28'25.12''$ LT.
 $D = 00^{\circ}55'26.85''$
 $T = 188.00'$
 $L = 375.88'$
 $R = 6200.00'$

END FULL CONSTRUCTION
 BEGIN OVERLAY
 STA. 152+67.15
 LA 1088

END PROJECT
 LA 1088
 STA. 158+72.70
 C.S. 825-11
 LOG MILE 2.815
 N=689550.53
 E=3697723.29



NOTES:
 SEE SEQUENCE OF CONSTRUCTION SHEETS
 FOR WORK OCCURRING BETWEEN STA. 153+67.15
 AND STA. 158+72.70.
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

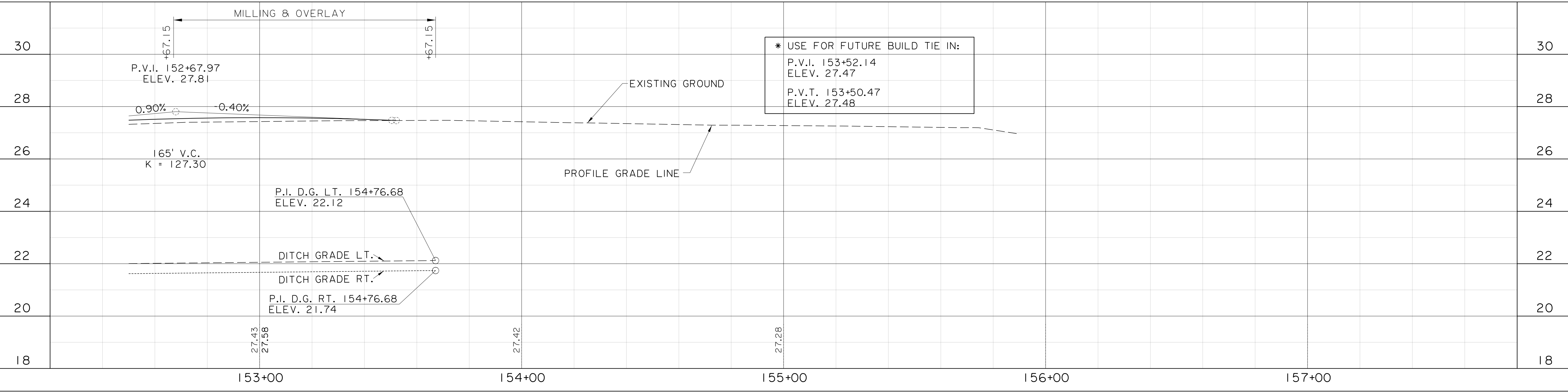


SHEET NUMBER	51
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
BKLI PROJECT	
MANDEVILLE BY PASS LA 1088 TO US 190 PLAN/PROFILE LA 1088	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
BY	JAT
NO.	48 OF 48
DATE	10/8/24
REVISION DESCRIPTION	

XREF:

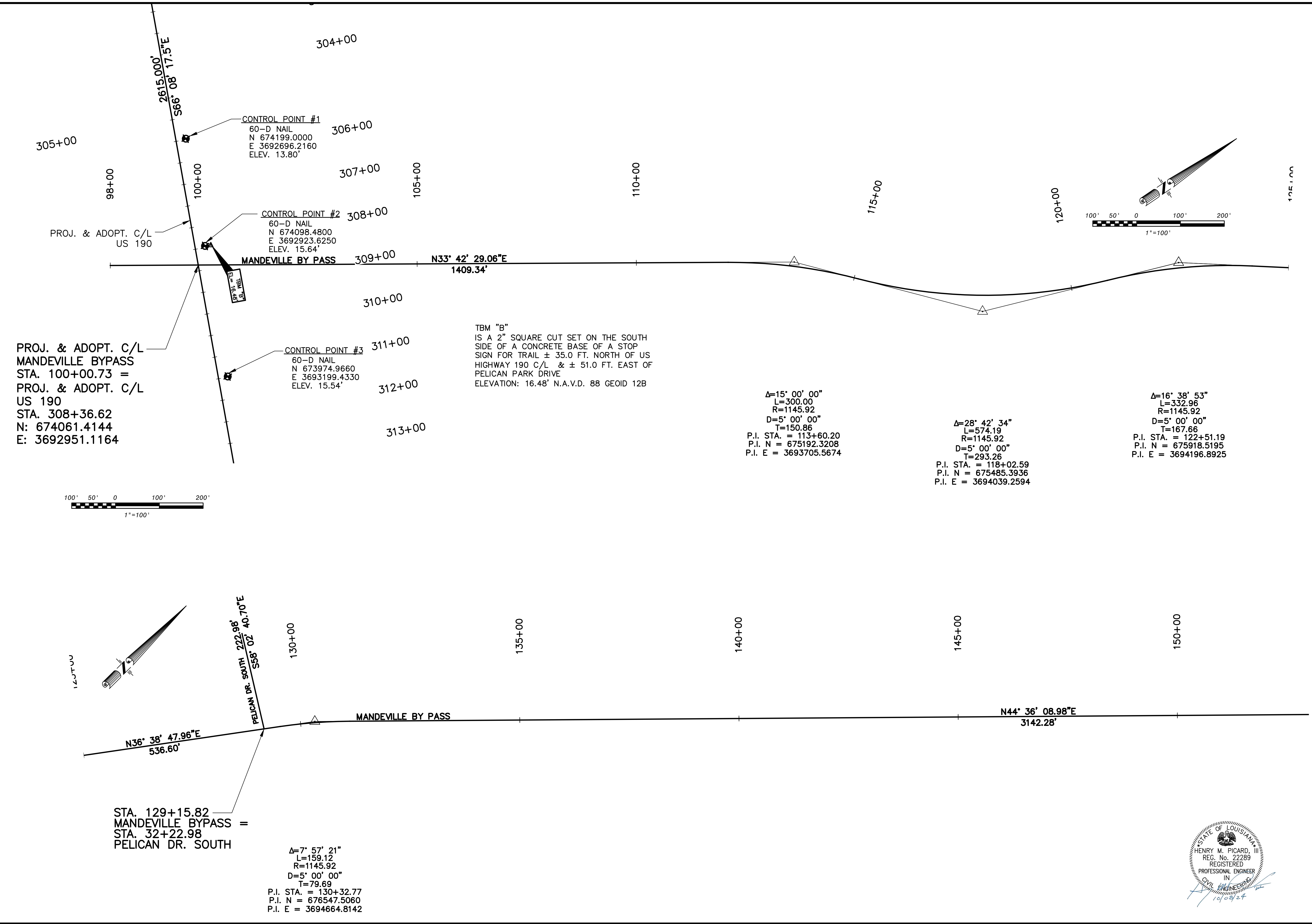
10/9/2024

PP_BYPASS_46_12629.dgn



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\52_tbm_refpoints.dwg



305+00

98+00
100+00

CONTROL POINT #1
60-D NAIL
N 674199.0000
E 3692696.2160
ELEV. 13.80'

306+00

307+00

308+00

CONTROL POINT #2
60-D NAIL
N 674098.4800
E 3692923.6250
ELEV. 15.64'

MANDEVILLE BYPASS
309+00
N33° 42' 29.06"E
1409.34'

310+00

311+00

CONTROL POINT #3
60-D NAIL
N 673974.9660
E 3693199.4330
ELEV. 15.54'

312+00

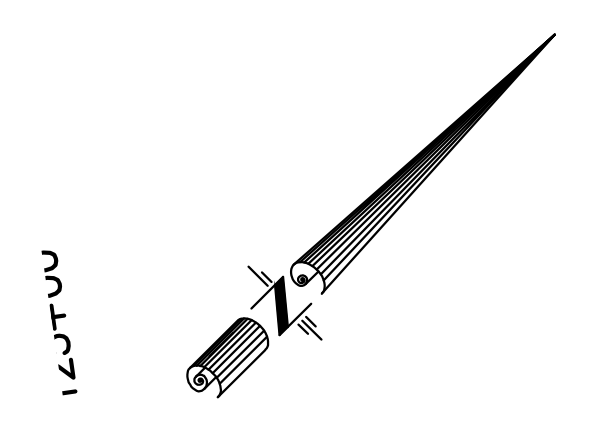
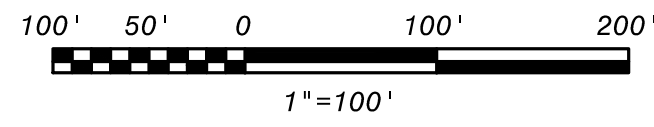
313+00

TBM "B"
IS A 2" SQUARE CUT SET ON THE SOUTH
SIDE OF A CONCRETE BASE OF A STOP
SIGN FOR TRAIL ± 35.0 FT. NORTH OF US
HIGHWAY 190 C/L & ± 51.0 FT. EAST OF
PELICAN PARK DRIVE
ELEVATION: 16.48' N.A.V.D. 88 GEOID 12B

Δ=15° 00' 00"
L=300.00
R=1145.92
D=5° 00' 00"
T=150.86
P.I. STA. = 113+60.20
P.I. N = 675192.3208
P.I. E = 3693705.5674

Δ=28° 42' 34"
L=574.19
R=1145.92
D=5° 00' 00"
T=293.26
P.I. STA. = 118+02.59
P.I. N = 675485.3936
P.I. E = 3694039.2594

Δ=16° 38' 53"
L=332.96
R=1145.92
D=5° 00' 00"
T=167.66
P.I. STA. = 122+51.19
P.I. N = 675918.5195
P.I. E = 3694196.8925



N36° 38' 47.96"E
536.60'

PELICAN DR. SOUTH
222.98'
S88° 02' 40.70"E

130+00

MANDEVILLE BYPASS

135+00

140+00

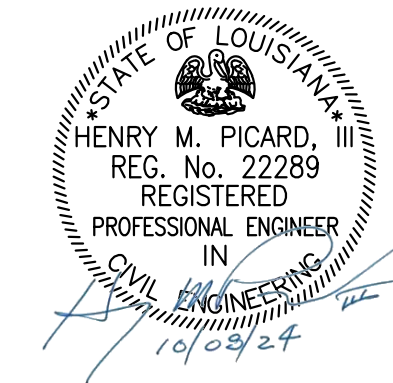
145+00

N44° 36' 08.98"E
3142.28'

150+00

STA. 129+15.82
MANDEVILLE BYPASS =
STA. 32+22.98
PELICAN DR. SOUTH

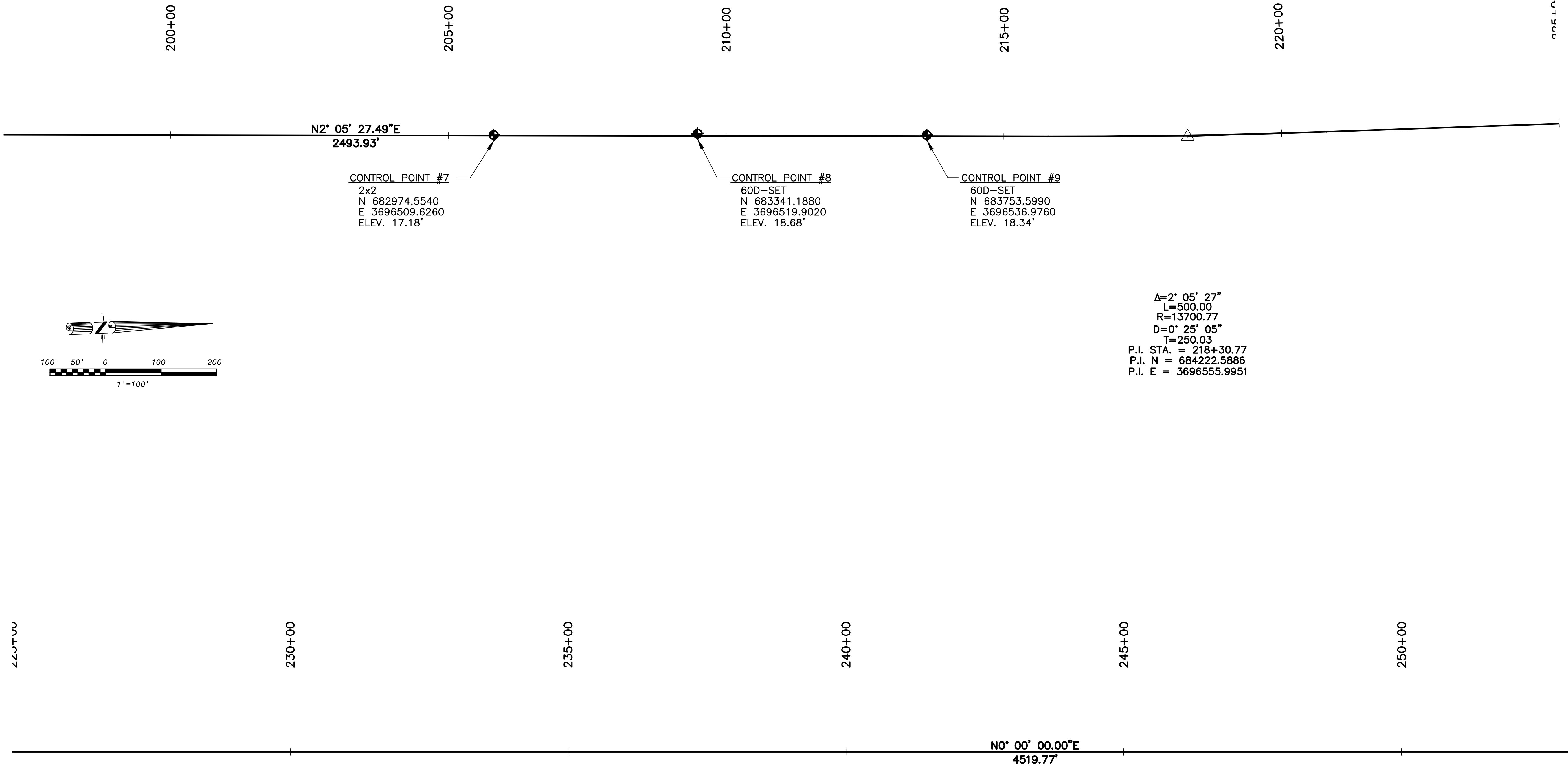
Δ=7° 57' 21"
L=159.12
R=1145.92
D=5° 00' 00"
T=79.69
P.I. STA. = 130+32.77
P.I. N = 676547.5060
P.I. E = 3694664.8142



SHEET NUMBER	52
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BLK.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS	TBM & REFERENCE POINTS
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	Oct. 2024
REVISION DESCRIPTION	BY
NO.	DATE

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\54_tbm_refpoints.dwg



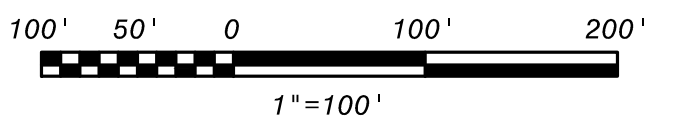
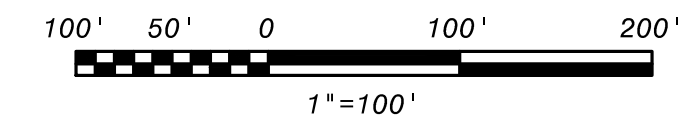
N2° 05' 27.49"E
2493.93'




CONTROL POINT #7
2x2
N 682974.5540
E 3696509.6260
ELEV. 17.18'

CONTROL POINT #8
60D-SET
N 683341.1880
E 3696519.9020
ELEV. 18.68'

CONTROL POINT #9
60D-SET
N 683753.5990
E 3696536.9760
ELEV. 18.34'

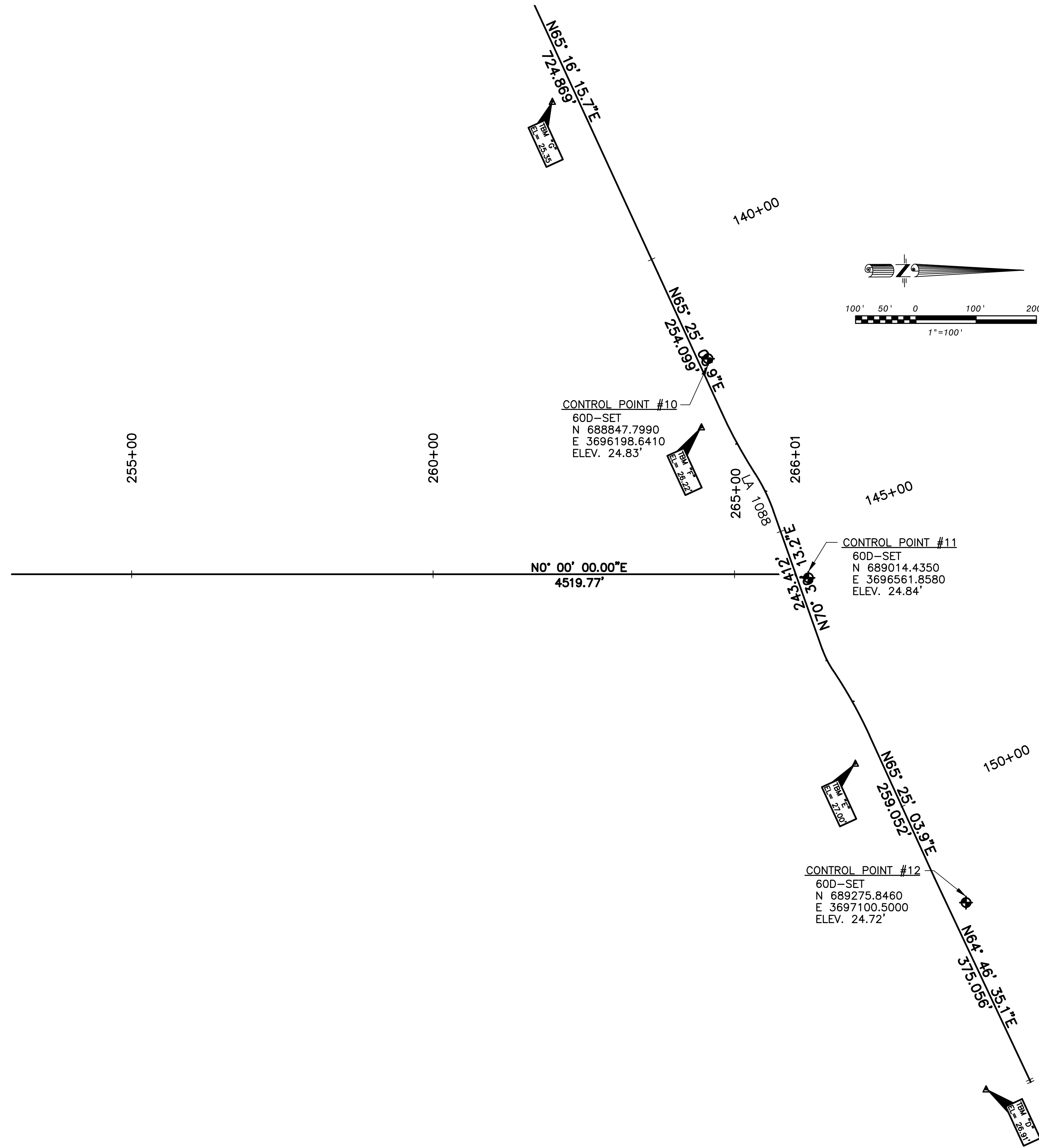
$\Delta=2^\circ 05' 27''$
 $L=500.00$
 $R=13700.77$
 $D=0^\circ 25' 05''$
 $T=250.03$
P.I. STA. = 218+30.77
P.I. N = 684222.5886
P.I. E = 3696555.9951



SHEET NUMBER	54
PARISH	ST. TAMMANY
PARISH PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS	
TBM & REFERENCE POINTS	
	
	
DESIGNED	T.J.K.
CHECKED	D.E.B.
DATE	Oct. 2024
REVISION DESCRIPTION	BY
NO.	DATE

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\55_tbm_refpoints.dwg



TBM "G"
IS A YELLOW BENCH SPIKE SET IN THE WEST FACE OF A WOODEN POWER POLE LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ± 12.3 FT. NORTHEAST FROM A FIRE HYDRANT LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 AND ± 80.3 FT. SOUTHWEST FROM A MAILBOX LOCATED IN THE GRASS ON THE NORTH SIDE OF LA HIGHWAY 1088 ELEVATION: 25.35' N.A.V.D. 88 GEOID 12B

TBM "F"
IS A YELLOW BENCH SPIKE SET IN THE NORTHWEST FACE OF A WOODEN POWER POLE LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ± 15.3 FT. NORTHEAST FROM A GUY POLE LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 AND ± 93.2 FT. NORTHWEST FROM A FIRE HYDRANT LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ELEVATION: 26.22' N.A.V.D. 88 GEOID 12B

TBM "E"
IS A YELLOW BENCH SPIKE SET IN THE NORTHWEST FACE OF A WOODEN POWER POLE LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ± 94.9 FT. SOUTHWEST FROM A TELEPHONE UTILITY MARKER LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 AND ± 101.4 FT. SOUTHWEST FROM A TELEPHONE PEDESTAL LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ELEVATION: 27.00' N.A.V.D. 88 GEOID 12B

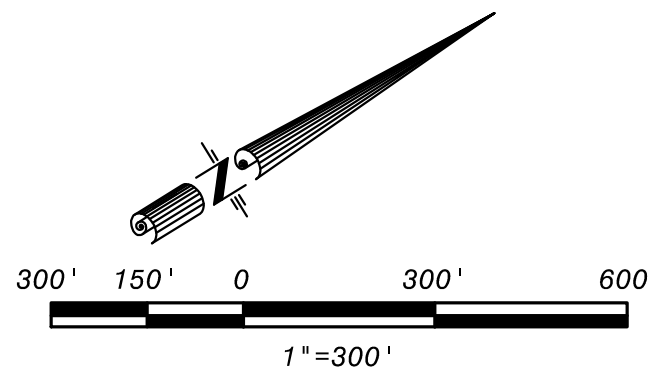
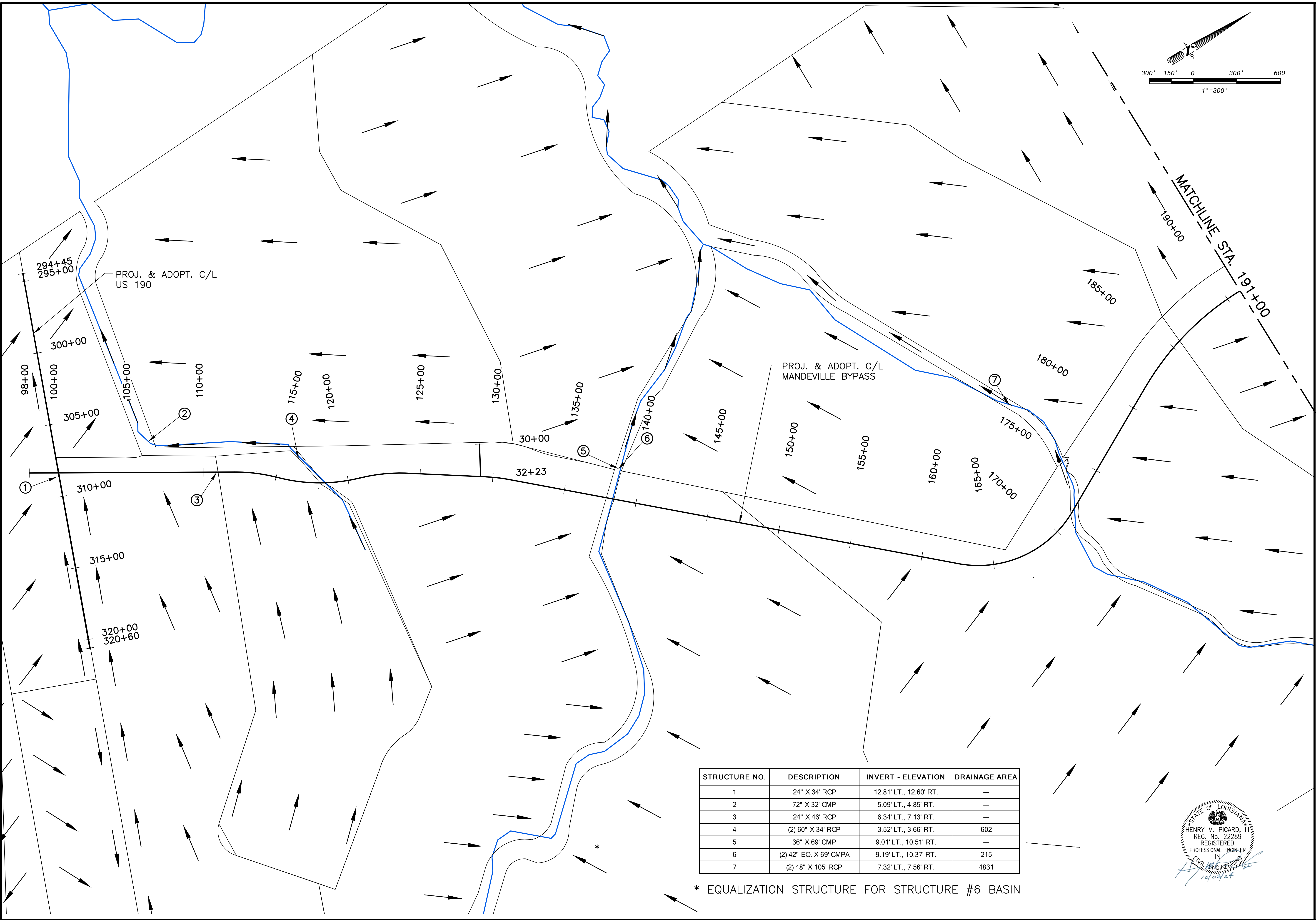
TBM "D"
IS A YELLOW BENCH SPIKE SET IN THE NORTHWEST FACE OF A WOODEN POWER POLE LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ± 94.9 FT. SOUTHWEST FROM A TELEPHONE UTILITY MARKER LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 AND ± 101.4 FT. SOUTHWEST FROM A TELEPHONE PEDESTAL LOCATED IN THE GRASS ON THE SOUTH SIDE OF LA HIGHWAY 1088 ELEVATION: 26.91' N.A.V.D. 88 GEOID 12B



SHEET NUMBER	55
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	TBM & REFERENCE POINTS
LOUISIANA STATE ENGINEERS	ROADWAY PLANS
T.J.K. D.E.B.	G.A.D. T.J.K.
DESIGNED	DATE
CHECKED	SHEET
DATE	BY
REVISION	DESCRIPTION
NO.	DATE

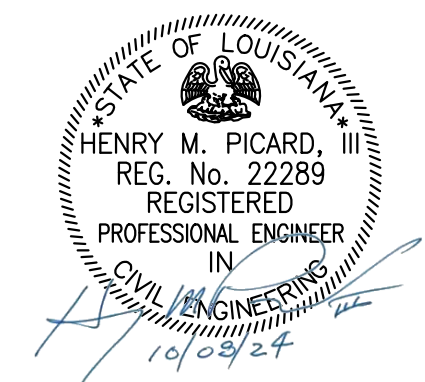
DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\56_Existing Drainage Maps.dwg



STRUCTURE NO.	DESCRIPTION	INVERT - ELEVATION	DRAINAGE AREA
1	24" X 34' RCP	12.81' LT., 12.60' RT.	—
2	72" X 32' CMP	5.09' LT., 4.85' RT.	—
3	24" X 46' RCP	6.34' LT., 7.13' RT.	—
4	(2) 60" X 34' RCP	3.52' LT., 3.66' RT.	602
5	36" X 69' CMP	9.01' LT., 10.51' RT.	—
6	(2) 42" EQ. X 69' CMPA	9.19' LT., 10.37' RT.	215
7	(2) 48" X 105' RCP	7.32' LT., 7.56' RT.	4831

* EQUALIZATION STRUCTURE FOR STRUCTURE #6 BASIN

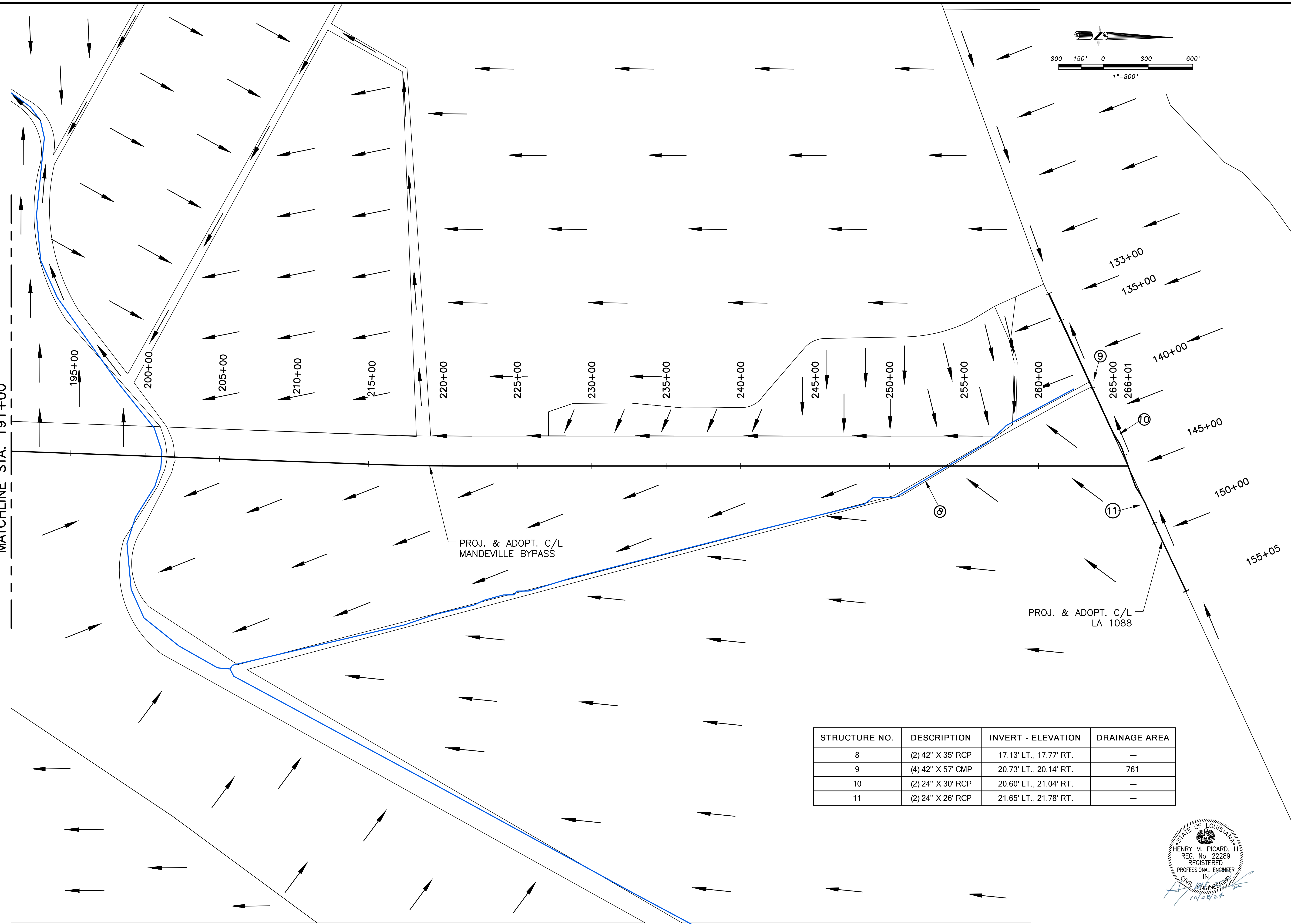
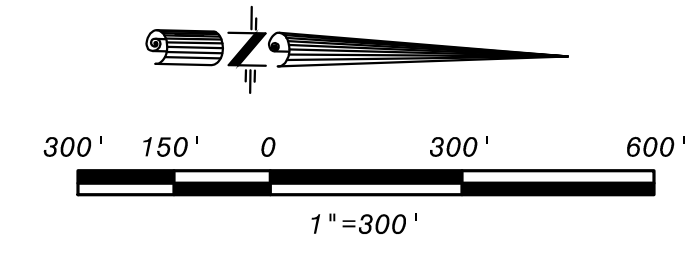


SHEET NUMBER	56
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	EXISTING DRAINAGE MAP
ROADWAY PLANS	
R.A.C. IV H.M.P.	G.A.D. R.A.C. IV
DESIGNED	DATE
CHECKED	SHEET
DATE	NO.
DESCRIPTION	BY
REVISION	DATE

DATE: 10/7/24

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MATCHLINE STA. 191+00



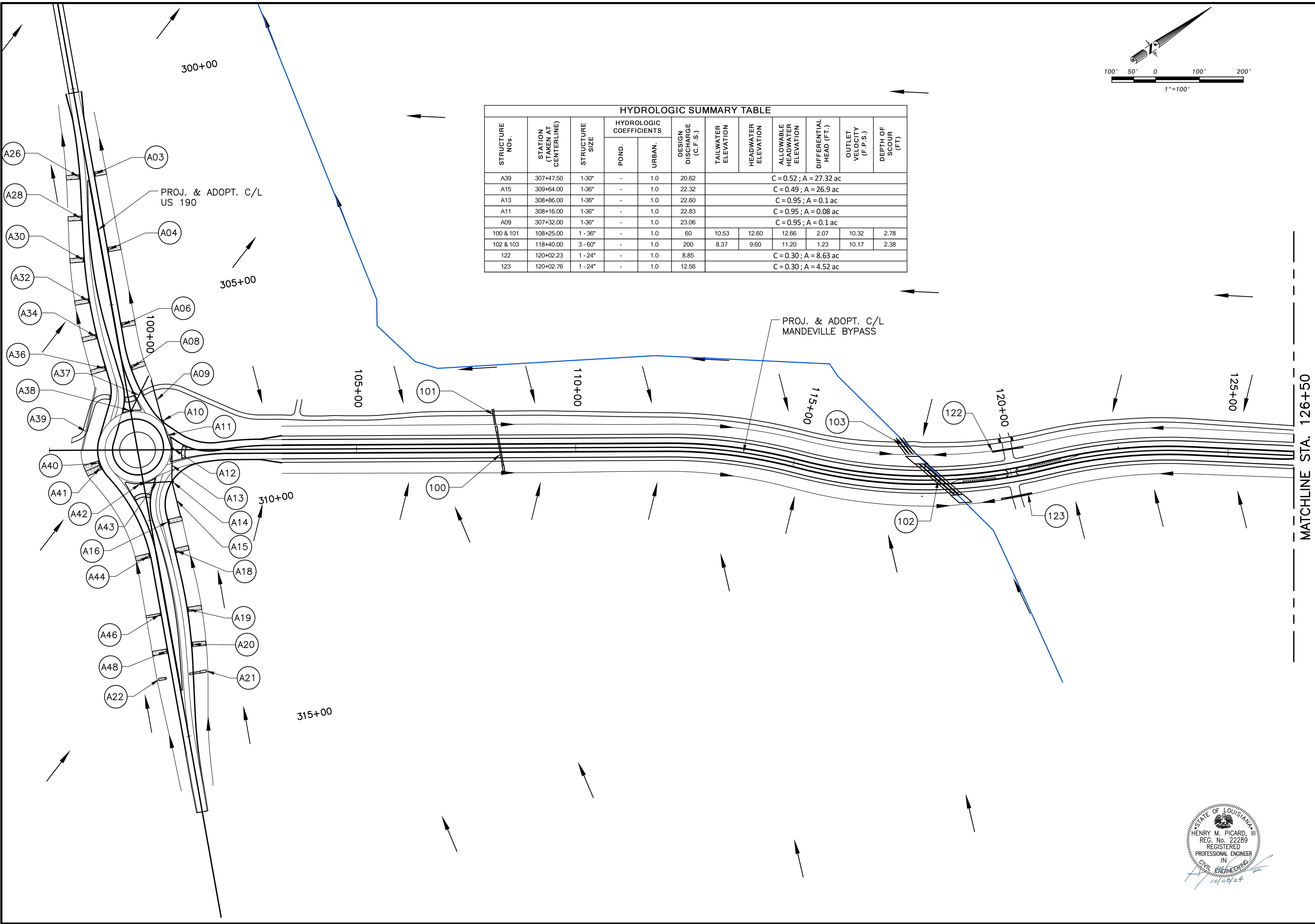
STRUCTURE NO.	DESCRIPTION	INVERT - ELEVATION	DRAINAGE AREA
8	(2) 42" X 35' RCP	17.13' LT., 17.77' RT.	—
9	(4) 42" X 57' CMP	20.73' LT., 20.14' RT.	761
10	(2) 24" X 30' RCP	20.60' LT., 21.04' RT.	—
11	(2) 24" X 26' RCP	21.65' LT., 21.78' RT.	—

STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/03/24

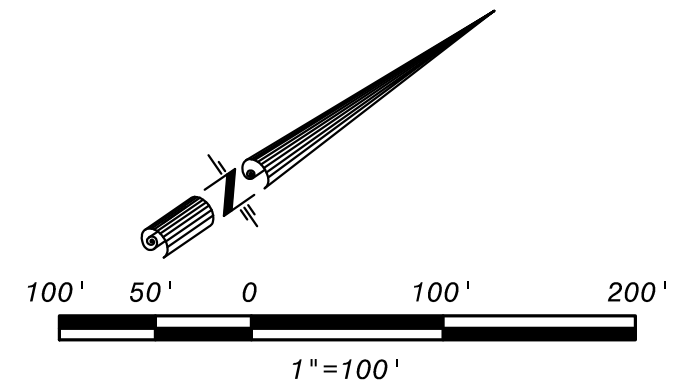
SHEET NUMBER	57
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
EXISTING DRAINAGE MAP	
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DATE	Oct. 2024
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DATE	Oct. 2024
NO.	BY
NO.	DATE
NO.	REVISION DESCRIPTION

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\58_Design Drainage Maps.dwg

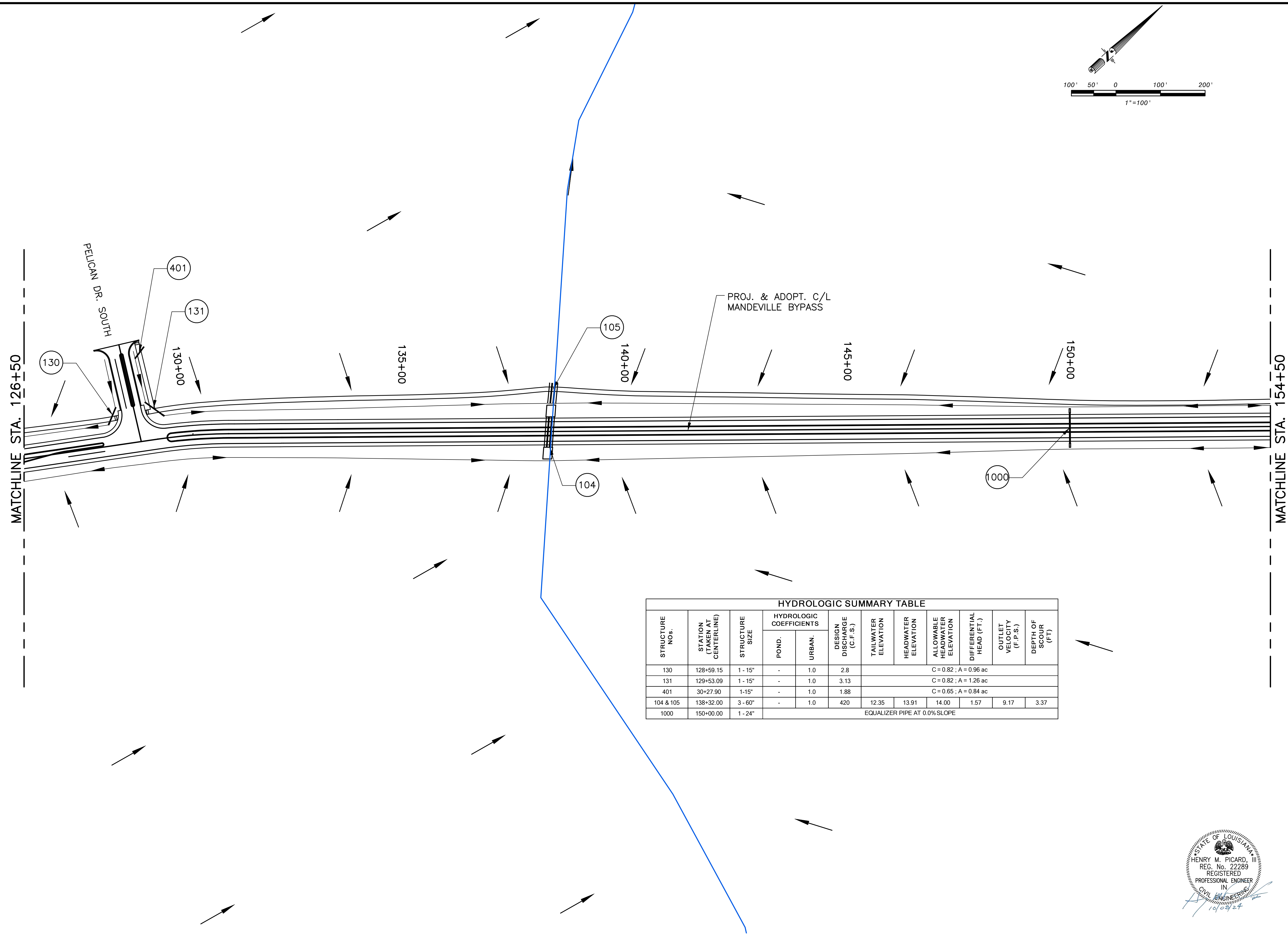


STRUCTURE NOS.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)
			POND.	URBAN.							
			A39	307+47.50							
A15	309+64.00	1-36"	-	1.0	22.32						C = 0.49; A = 26.9 ac
A13	308+86.00	1-36"	-	1.0	22.60						C = 0.95; A = 0.1 ac
A11	308+16.00	1-36"	-	1.0	22.83						C = 0.95; A = 0.08 ac
A09	307+32.00	1-36"	-	1.0	23.06						C = 0.95; A = 0.1 ac
100 & 101	108+25.00	1-36"	-	1.0	60	10.53	12.60	12.66	2.07	10.32	2.78
102 & 103	118+40.00	3-60"	-	1.0	200	8.37	9.60	11.20	1.23	10.17	2.38
122	120+02.23	1-24"	-	1.0	8.85						C = 0.30; A = 8.63 ac
123	120+02.76	1-24"	-	1.0	12.56						C = 0.30; A = 4.52 ac



SHEET NUMBER		58	
ST. TAMMANY		2014EN0001	
PARISH PROJECT		NO.15.012	
STATE OF LOUISIANA		DESIGN DRAINAGE MAP	
MANDEVILLE BYPASS		LA 1088 TO US 190	
ROADWAY PLANS		NO. 10/09/24	
R.A.C. IV		G.A.D. R.A.C. IV	
H.M.P.		O.C.T. 2024	
DESIGNED		DATE	
CHECKED		SHEET	
DETAILED		OF	
CHECKED		BY	
NO.		REVISION DESCRIPTION	
DATE		BY	

STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/24



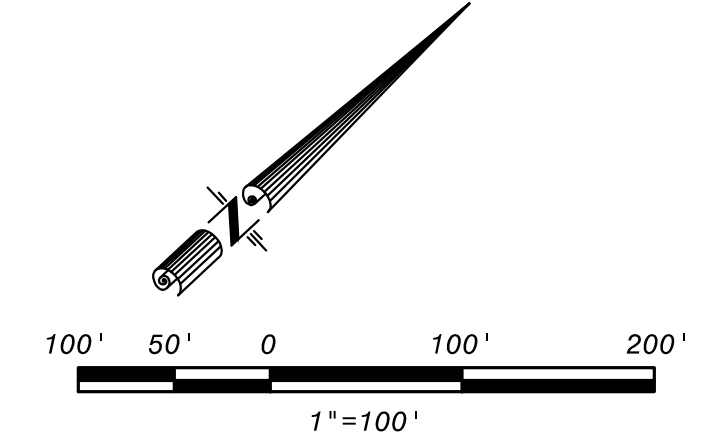
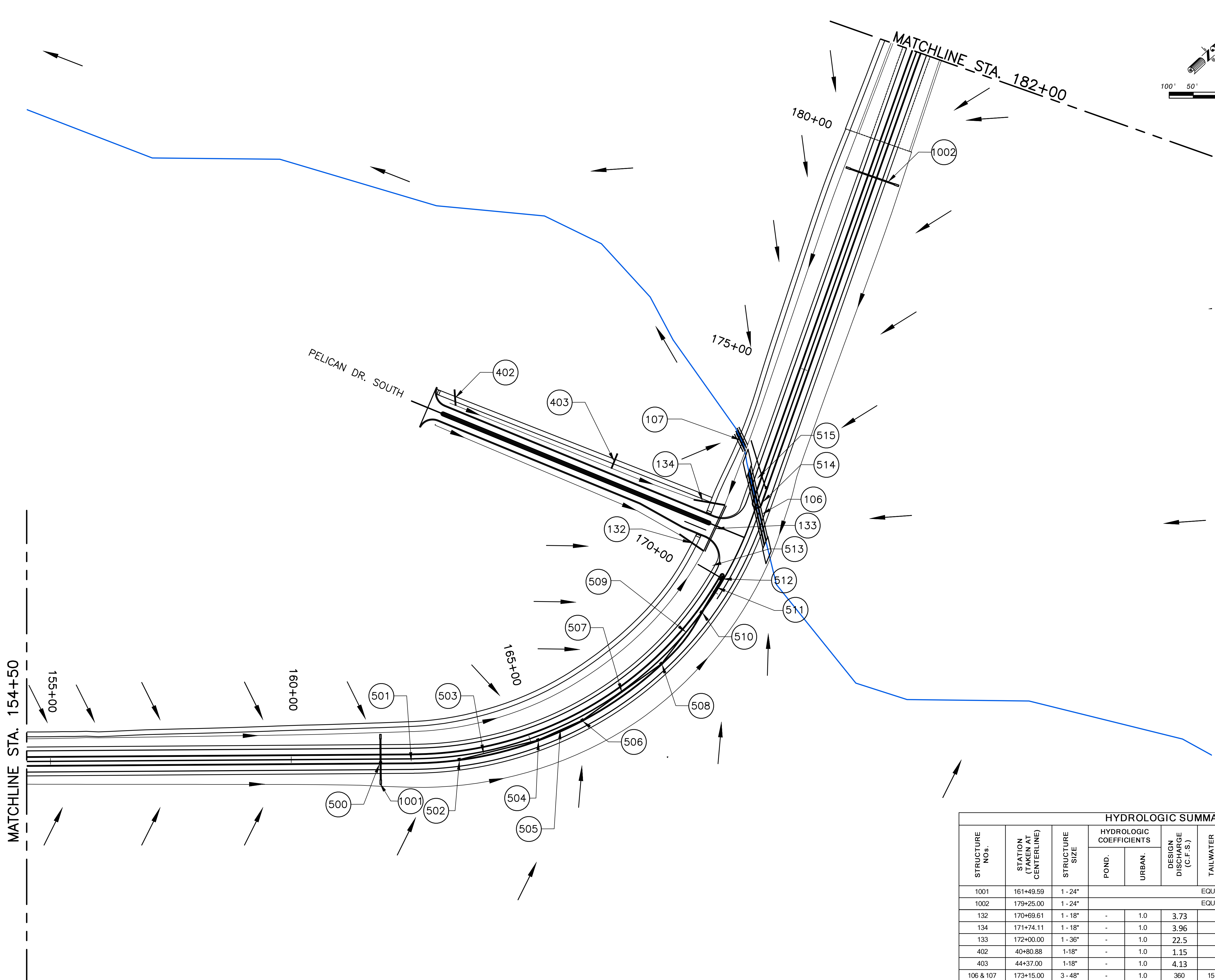
HYDROLOGIC SUMMARY TABLE											
STRUCTURE NOS.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT.)
			POND.	URBAN.							
130	128+59.15	1 - 15"	-	1.0	2.8			C = 0.82 ; A = 0.96 ac			
131	129+53.09	1 - 15"	-	1.0	3.13			C = 0.82 ; A = 1.26 ac			
401	30+27.90	1-15"	-	1.0	1.88			C = 0.65 ; A = 0.84 ac			
104 & 105	138+32.00	3 - 60"	-	1.0	420	12.35	13.91	14.00	1.57	9.17	3.37
1000	150+00.00	1 - 24"	EQUALIZER PIPE AT 0.0% SLOPE								

STATE OF LOUISIANA
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 IN
 CIVIL ENGINEERING
 10/09/24

SHEET NUMBER	59
PARISH	ST. TAMMANY
PROJECT	2014EN0001
PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
DESIGN DRAINAGE MAP	
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DETAILED	G.A.D.
CHECKED	R.A.C. IV
DATE	Oct. 2024
SHEET	of
NO.	DATE
REVISION	DESCRIPTION
BY	

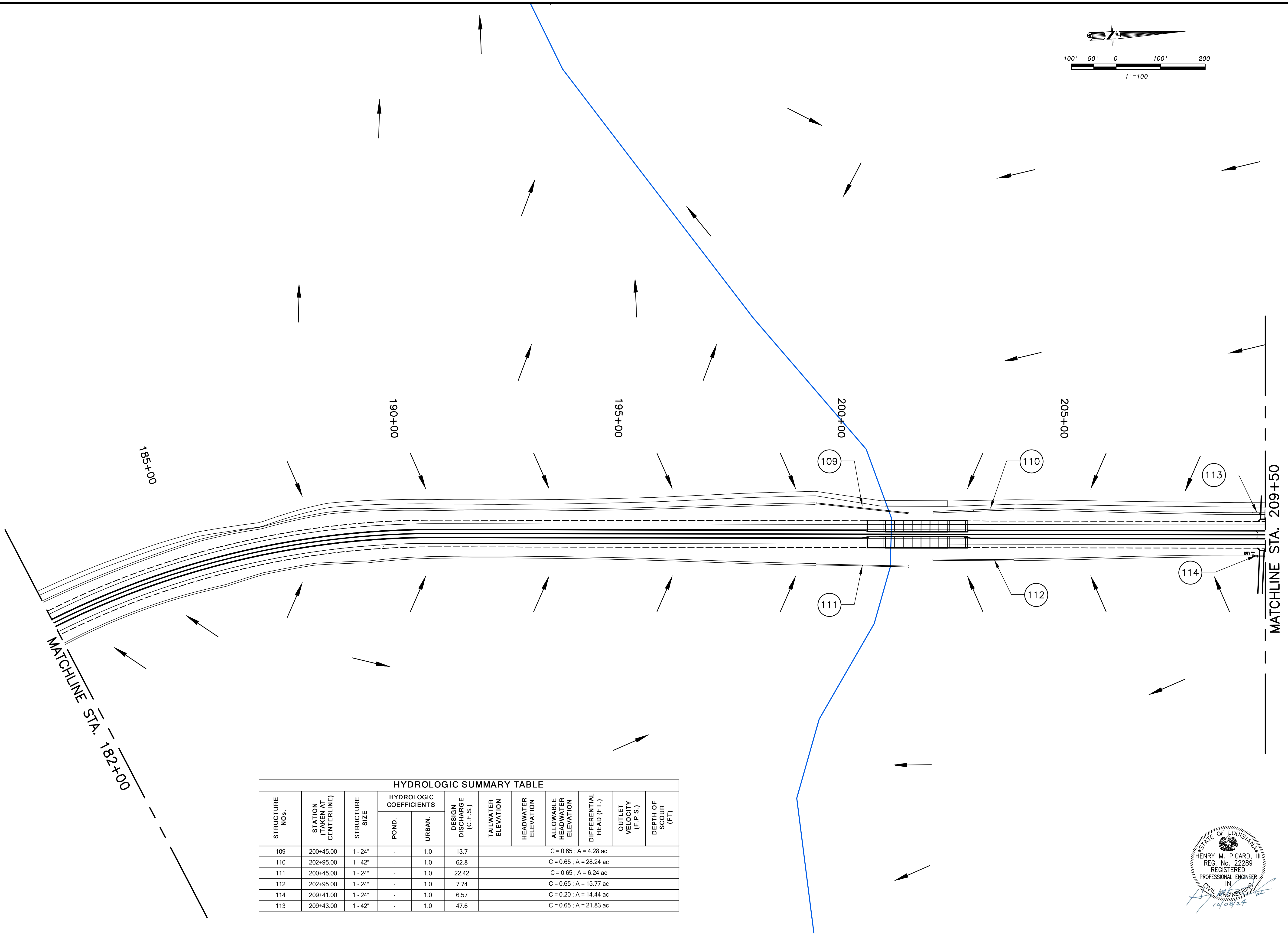
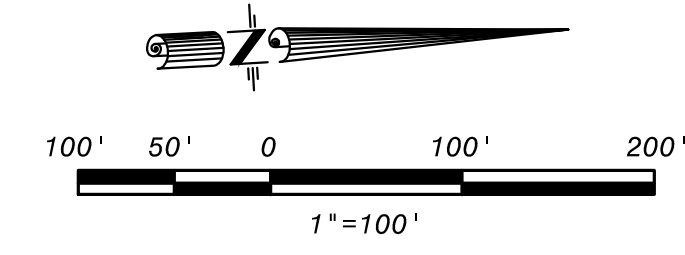
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HYDROLOGIC SUMMARY TABLE											
STRUCTURE Nos.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)
			POND.	URBAN.							
1001	161+49.59	1 - 24"	EQUALIZER PIPE AT 0.0% SLOPE								
1002	179+25.00	1 - 24"	EQUALIZER PIPE AT 0.0% SLOPE								
132	170+69.61	1 - 18"	-	1.0	3.73			C = 0.82 ; A = 1.38 ac			
134	171+74.11	1 - 18"	-	1.0	3.96			C = 0.65 ; A = 1.74 ac			
133	172+00.00	1 - 36"	-	1.0	22.5			C = 0.65 ; A = 6.73 ac			
402	40+80.88	1-18"	-	1.0	1.15			C = 0.82 ; A = 0.36 ac			
403	44+37.00	1-18"	-	1.0	4.13			C = 0.82 ; A = 1.29 ac			
106 & 107	173+15.00	3 - 48"	-	1.0	360	15.14	18.04	16.82	2.90	10.76	3.61

SHEET NUMBER	60
ST. TAMMANY	MANDEVILLE BYPASS
2014EN0001	LA 1088 TO US 190
NO.15.012	DESIGN DRAINAGE MAP
PARISH PROJECT	ROADWAY PLANS
B.K.I. PROJECT	
R.A.C. IV H.M.P.	BY
G.A.D. R.A.C. IV	NO.
Oct. 2024	DATE
	REVISION DESCRIPTION



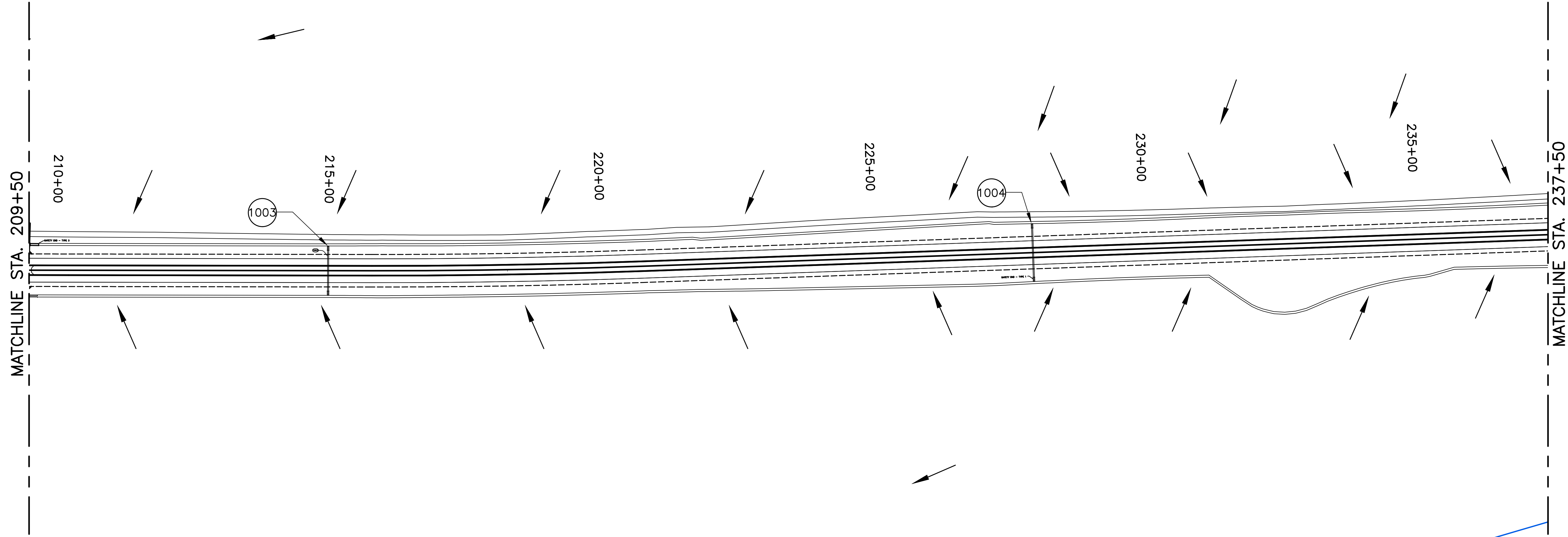
STRUCTURE Nos.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)
			POND.	URBAN.							
109	200+45.00	1-24"	-	1.0	13.7						C = 0.65 ; A = 4.28 ac
110	202+95.00	1-42"	-	1.0	62.8						C = 0.65 ; A = 28.24 ac
111	200+45.00	1-24"	-	1.0	22.42						C = 0.65 ; A = 6.24 ac
112	202+95.00	1-24"	-	1.0	7.74						C = 0.65 ; A = 15.77 ac
114	209+41.00	1-24"	-	1.0	6.57						C = 0.20 ; A = 14.44 ac
113	209+43.00	1-42"	-	1.0	47.6						C = 0.65 ; A = 21.83 ac



SHEET NUMBER	61
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
DESIGN DRAINAGE MAP	
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DETAILED	G.A.D.
CHECKED	R.A.C. IV
DATE	Oct. 2024
SHEET	OF
NO.	DATE
REVISION	DESCRIPTION
BY	

DATE: 10/7/24

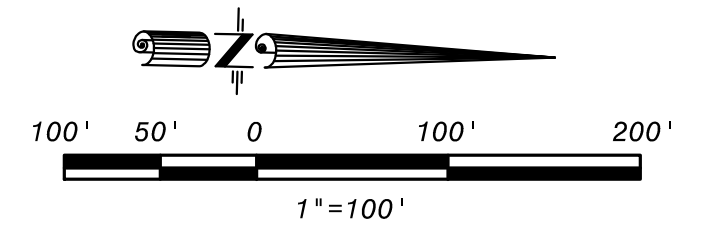
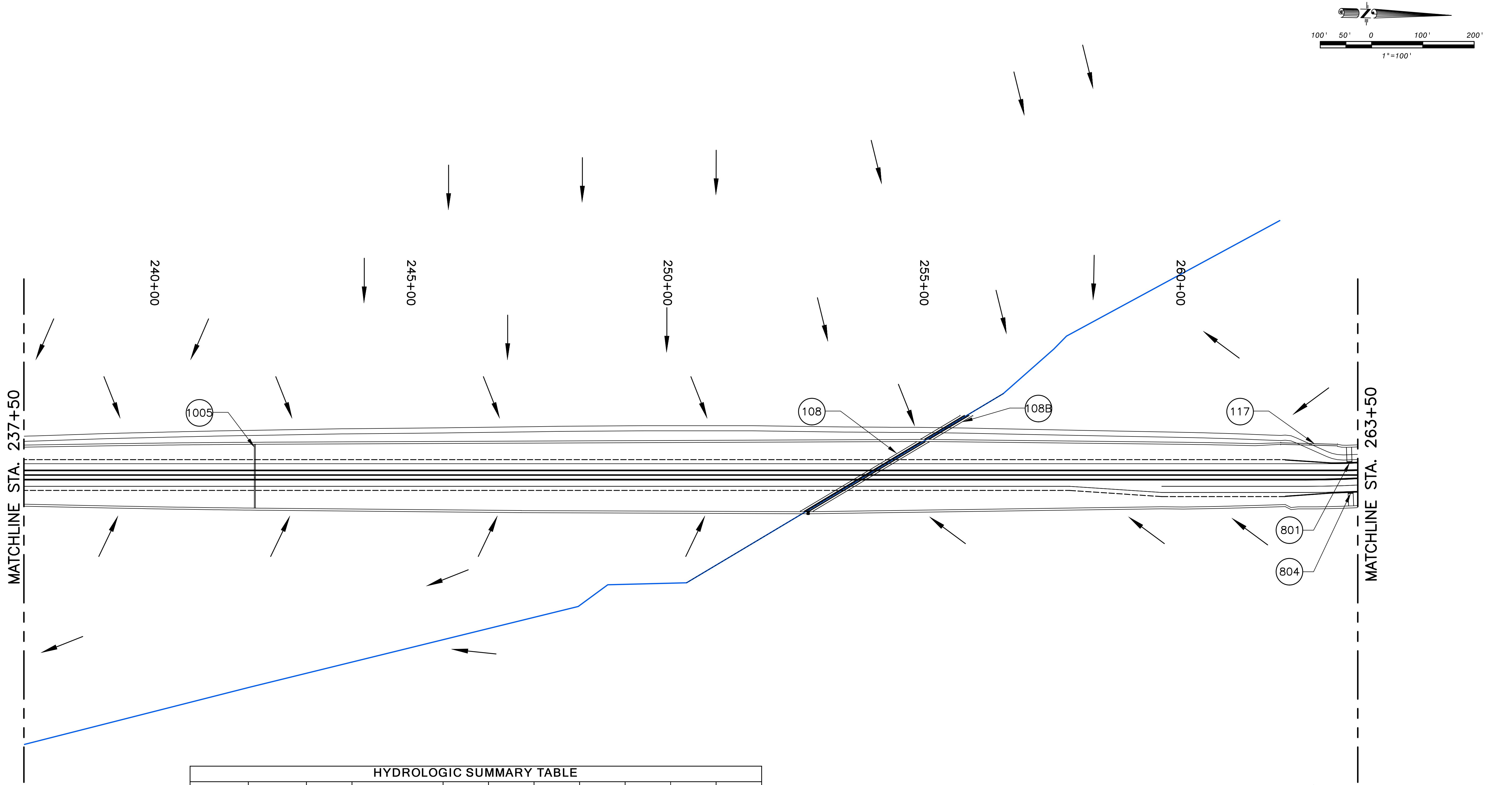
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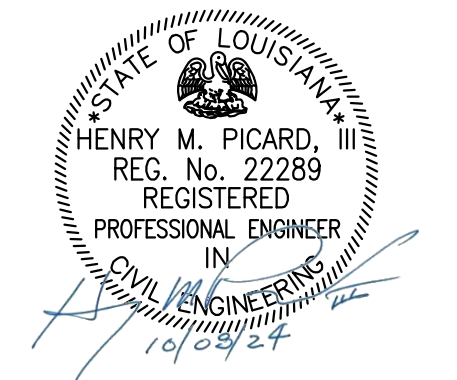
HYDROLOGIC SUMMARY TABLE											
STRUCTURE NO.s	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)
			POND.	URBAN.							
1003	215+00.00	1 - 24"				EQUALIZER PIPE AT 0.0% SLOPE					
1004	228+00.00	1 - 24"				EQUALIZER PIPE AT 0.0% SLOPE					

STATE OF LOUISIANA
 HENRY M. PICARD, III
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 IN
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 10/09/24

SHEET NUMBER	62
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.L. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS	DESIGN DRAINAGE MAP
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DATE	Oct. 2024
BY	OF
REVISION DESCRIPTION	
NO.	DATE



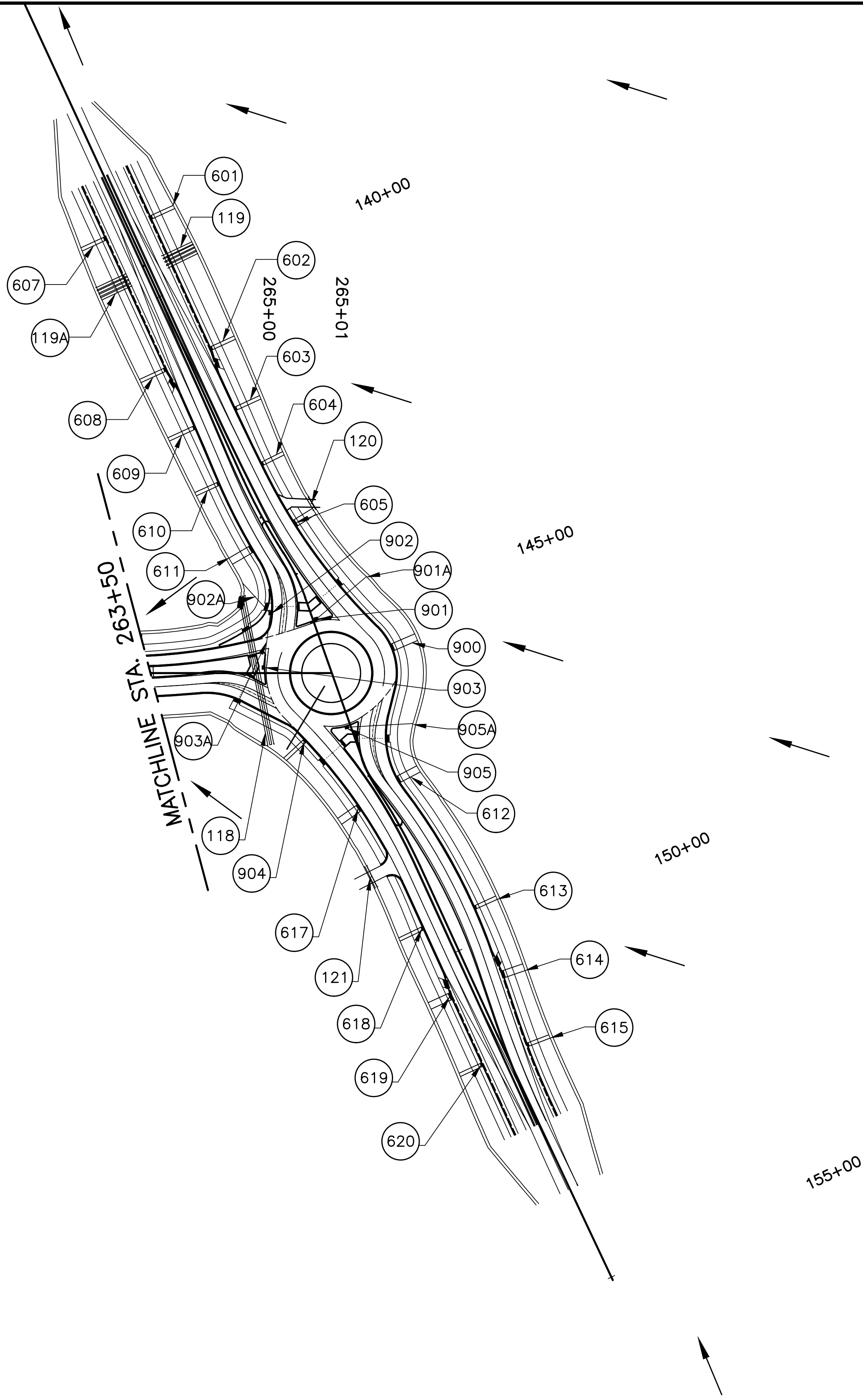
HYDROLOGIC SUMMARY TABLE												
STRUCTURE NOs.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)	
			POND.	URBAN.								
1005	242+00.00	1 - 24"	EQUALIZER PIPE AT 0.0% SLOPE									
108 & 108B	253+93.00	3 - 42"	-	1.0	280	22.26	23.01	25.09	0.75	10.79	3.36	
117	262+55.00	1 - 24"	-	1.0	8.0	C = 0.65 ; A = 2.35 ac						



SHEET NUMBER	63
PARISH	ST. TAMMANY
PARISH PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS DESIGN DRAINAGE MAP	
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DETAILED	G.A.D.
CHECKED	R.A.C. IV
DATE	Oct. 2024
SHEET	of
NO.	DATE
REVISION	DESCRIPTION
BY	

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\64_Design Drainage Maps.dwg



STRUCTURE NOs.	STATION (TAKEN AT CENTERLINE)	STRUCTURE SIZE	HYDROLOGIC COEFFICIENTS		DESIGN DISCHARGE (C.F.S.)	TAILWATER ELEVATION	HEADWATER ELEVATION	ALLOWABLE HEADWATER ELEVATION	DIFFERENTIAL HEAD (FT.)	OUTLET VELOCITY (F.P.S.)	DEPTH OF SCOUR (FT)
			POND.	URBAN.							
			EXISTING PIPE EXTENTION, M.E. SLOPE %								
119 & 119A	139+59.00	2 - 42"									
120	143+50.00	1 - 36"	-	1.0	20.85			C = 0.65 ; A = 8.02 ac			
121	148+55.00	1 - 36"	-	1.0	20.75			C = 0.65 ; A = 7.98 ac			
118	264+96.00	2 - 36"	-	1.0	38.46			C = 0.65 ; A = 14.02 ac			



SHEET NUMBER	64
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
STATE OF LOUISIANA ENGINEER'S SEAL	
MANDEVILLE BYPASS LA 1088 TO US 190	
DESIGN DRAINAGE MAP	
ROADWAY PLANS	
STATE OF LOUISIANA ENGINEER'S SEAL	
BK	
DESIGNED	R.A.C. IV
CHECKED	H.M.P.
DATE	Oct. 2024
SHEET	of
NO.	BY
NO.	DATE
REVISION DESCRIPTION	

DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02 Civil\01 Drawings\67_Summary of Drainage_03.dwg

SUMMARY OF DRAINAGE STRUCTURES																																										
STRUCTURE NUMBER	STATION	SIDE OF C/L	DESCRIPTION	PLAN	TYPE	REINFORCED CONCRETE BOX CULVERT EXTENSION 4'x2' LIN. FT.	PG DRAIN				CROSS DRAIN PIPE			CROSS DRAIN PIPE ARCH				SIDE DRAIN PIPE				SIDE DRAIN PIPE ARCH		SIDE DRAIN PIPE (EROSION)		STORM DRAIN PIPE		STORM DRAIN PIPE ARCH		CATCH BASIN		CONCRETE COLLAR	CROSS DRAIN SAFETY END		SIDE DRAIN SAFETY END			BEDDING MATERIAL				
							DOUBLE	SINGLE	SINGLE W/ SIDEWALK	DOUBLE W/ SIDEWALK	24"	36"	42"	36" EQUIV.	42" EQUIV.	48" EQUIV.	60" EQUIV.	15"	24"	30"	36"	42"	18" EQUIV.	42" EQUIV.	48" EQUIV.	60" EQUIV.	24"	42"	15"	36"	15" EQUIV.		36" EQUIV.	CB-07	CB-08	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE 3	12" THICK	26" THICK
							EACH				LIN. FT.	LIN. FT.				LIN. FT.				LIN. FT.				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH		EACH	EACH		EACH			CU. YDS.						
108B	255+46.00	LT	SIDE DRAIN PIPE, 3-42" x 90'		SD											270																										
117	262+55.00	LT	SIDE DRAIN PIPE, 24" x 110'		SD											110																										
100	108+25.00	LT & RT	CROSS DRAIN PIPE, 36" x 77'		CD																																					
102	118+40.00	LT & RT	CROSS DRAIN PIPE ARCH, 3-60" EQ. x 108'		CDA																																					
123	120+03.63	RT	SIDE DRAIN PIPE, 24" x 54'		SD											54																										
104	138+32.00	LT & RT	CROSS DRAIN PIPE ARCH, 3-60" EQ. x 69'		CDA																																					
502	163+48.00	RT	CB-07		CB-07	CB																																			2.5	
504	165+15.00	RT	CB-07		CB-07	CB																																		2.5		
506	166+15.00	RT	CB-07		CB-07	CB																																		2.5		
508	168+15.00	RT	CB-07		CB-07	CB																																		2.5		
510	169+50.00	LT & RT	CB-07		CB-07	CB																																		2.5		
512	170+32.34	LT	CB-08		CB-08	CB																																		3.5		
106	172+00.00	LT & RT	CROSS DRAIN PIPE ARCH, 3-48" EQ. x 153'		CDA																																				330.4	
514	172+42.09	RT	CB-07		CB-07	CB																																			2.5	
114	209+45.00	RT	SIDE DRAIN PIPE, 24" x 32'		SD																																			1		
C.S. 000-52 (MANDEVILLE BYPASS) TOTALS						0	0	0	0	0	537	77	792	103	0	459	531	82	249	0	35	270	127	30	117	255	598	182	455	0	370	0	7	1	0	12	6	5	0	1	282.1	1353.0



MANDEVILLE BYPASS
LA 1088 TO US 190
SUMMARY OF DRAINAGE STRUCTURES



T.J.K. D.E.B.
G.A.D. T.J.K.
Oct. 2024

DESIGNED CHECKED
DATE SHEET

BY

REVISION DESCRIPTION

NO. DATE



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\68_Summary of Drainage_04.dwg

SUMMARY OF DRAINAGE STRUCTURES

Table with columns: STRUCTURE NUMBER, STATION, SIDE OF C/L, DESCRIPTION, PLAN, TYPE, REINFORCED CONCRETE BOX CULVERT EXTENSION, PG DRAIN, CROSS DRAIN PIPE, CROSS DRAIN PIPE ARCH, SIDE DRAIN PIPE, SIDE DRAIN PIPE ARCH, SIDE DRAIN PIPE (EROSION), STORM DRAIN PIPE, STORM DRAIN PIPE ARCH, CATCH BASIN, CONCRETE COLLAR, CROSS DRAIN SAFETY END, SIDE DRAIN SAFETY END, BEDDING MATERIAL. Includes a subtotal row at the bottom.

SHEET NUMBER 68

ST. TAMMANY 2014EN0001 NO.15.012

PARISH PROJECT B.C.I. PROJECT



MANDEVILLE BYPASS LA 1088 TO US 190

SUMMARY OF DRAINAGE STRUCTURES



T.J.K. D.E.B. G.A.D. T.J.K. Oct. 2024 of

DESIGNED CHECKED DETAILED CHECKED DATE SHEET

Table with columns: NO., REVISION, DESCRIPTION, DATE



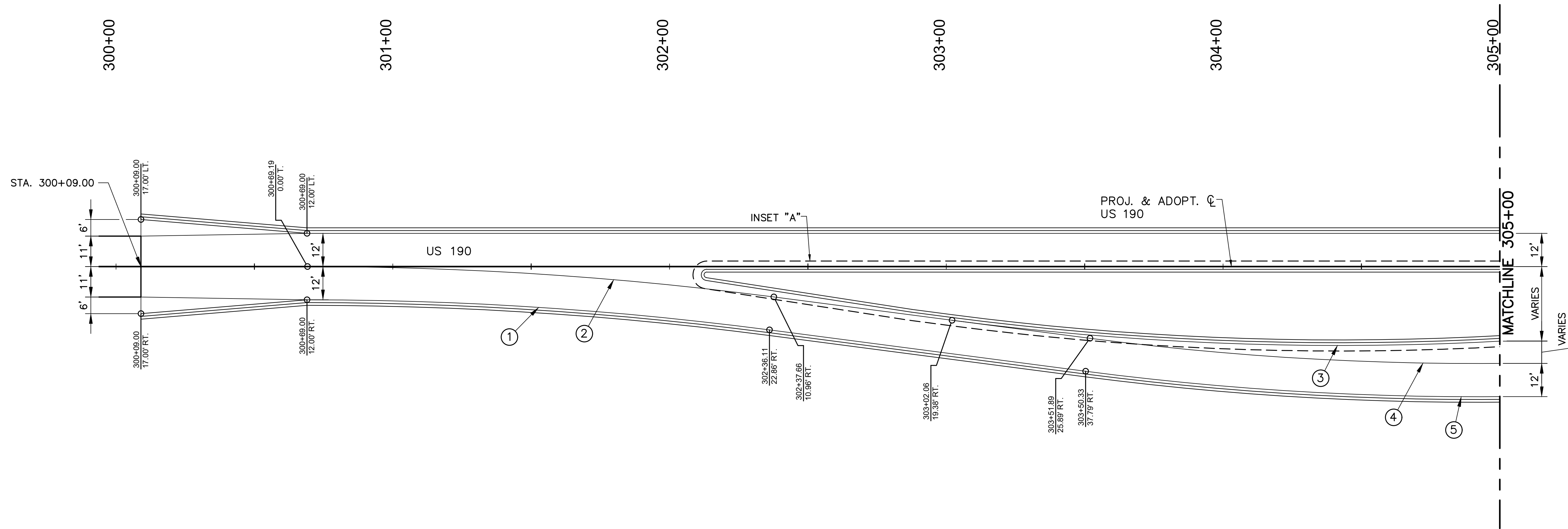
DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\69_Summary of Drainage_05.dwg

SUMMARY OF DRAINAGE STRUCTURES																																																	
STRUCTURE NUMBER	STATION	SIDE OF C/L	DESCRIPTION	PLAN	TYPE	REINFORCED CONCRETE BOX CULVERT EXTENSION 4'x2' LIN. FT.	PG DRAIN					CROSS DRAIN PIPE			CROSS DRAIN PIPE ARCH				SIDE DRAIN PIPE					SIDE DRAIN PIPE ARCH				SIDE DRAIN PIPE (EROSION)		STORM DRAIN PIPE		STORM DRAIN PIPE ARCH		CATCH BASIN		CONCRETE COLLAR	CROSS DRAIN SAFETY END			SIDE DRAIN SAFETY END			BEDDING MATERIAL						
							DOUBLE	SINGLE	SINGLE W/ SIDEWALK	DOUBLE W/ SIDEWALK	24"	36"	42"	36" EQUIV.	42" EQUIV.	48" EQUIV.	60" EQUIV.	15"	24"	30"	36"	42"	18" EQUIV.	42" EQUIV.	48" EQUIV.	60" EQUIV.	24"	42"	15"	36"	15" EQUIV.	36" EQUIV.	CB-07	CB-08	TYPE 1		TYPE 2	TYPE 1	TYPE 2	TYPE 3	12" THICK	26" THICK							
							EACH					LIN. FT.	LIN. FT.				LIN. FT.					LIN. FT.				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH		CU. YDS.												
611	143+68.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (DOUBLE)		PGD					1																																							
902	144+69.00	RT	CB-07	CB-07	CB																																					2.5							
902A	144+35.00	RT	STORM DRAIN PIPE, 15" x 54'		SDP																																						9.5						
903	145+37.00	RT	CB-07	CB-07	CB																																						2.5						
903A	145+03.00	RT	STORM DRAIN PIPE, 15" x 72'		SDP																																							12.7					
904	146+51.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (SINGLE)		PGD					1																																							
617	147+56.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (DOUBLE)		PGD						1																																						
121	148+55.00	RT	CROSS DRAIN PIPE, 36" x 34'		CD																																								18.8				
618	149+55.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (SINGLE)		PGD					1																																							
619	150+56.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (DOUBLE)		PGD						1																																						
620	151+60.00	RT	PAVED GUTTER DRAIN W/ SIDEWALK (SINGLE)		PGD					1																																							
801	263+35.00	LT	PAVED GUTTER DRAIN W/ SIDEWALK (DOUBLE)		PGD						1																																						
804	263+35.00	RT	PAVED GUTTER DRAIN (DOUBLE)		PGD					1																																							
118	264+96.00	LT & RT	CROSS DRAIN PIPE, 2-36" x 210'		CD																																									232.4			
C.S. 852-11 (LA 1088) TOTALS						0	1	0	13	8	0	454	0	0	368	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64.2	428.6
PROJECT TOTALS						29	19	1	13	8	537	531	792	103	368	459	531	82	249	146	57	270	127	30	117	255	598	182	915	177	370	132	16	1	8	12	8	5	1	1					394.1	1959.6			



ST. TAMMANY PARISH PROJECT	NO. 15.012	SHEET NUMBER	69
		PROJECT	2014EN0001
		PROJECT	NO. 15.012
MANDEVILLE BYPASS LA 1088 TO US 190 SUMMARY OF DRAINAGE STRUCTURES			
T.J.K. D.E.B.		G.A.D. T.J.K.	
DESIGNED		CHECKED	
DETAILED		CHECKED	
DATE		SHEET	
O.C.T. 2024		OF	
NO.	DATE	REVISION DESCRIPTION	BY



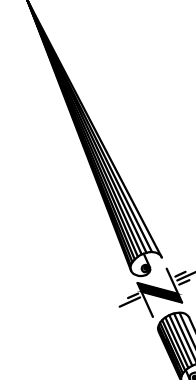
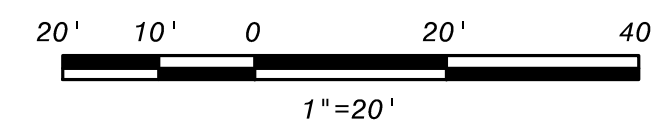
LEGEND:

(X) CURVE NUMBER

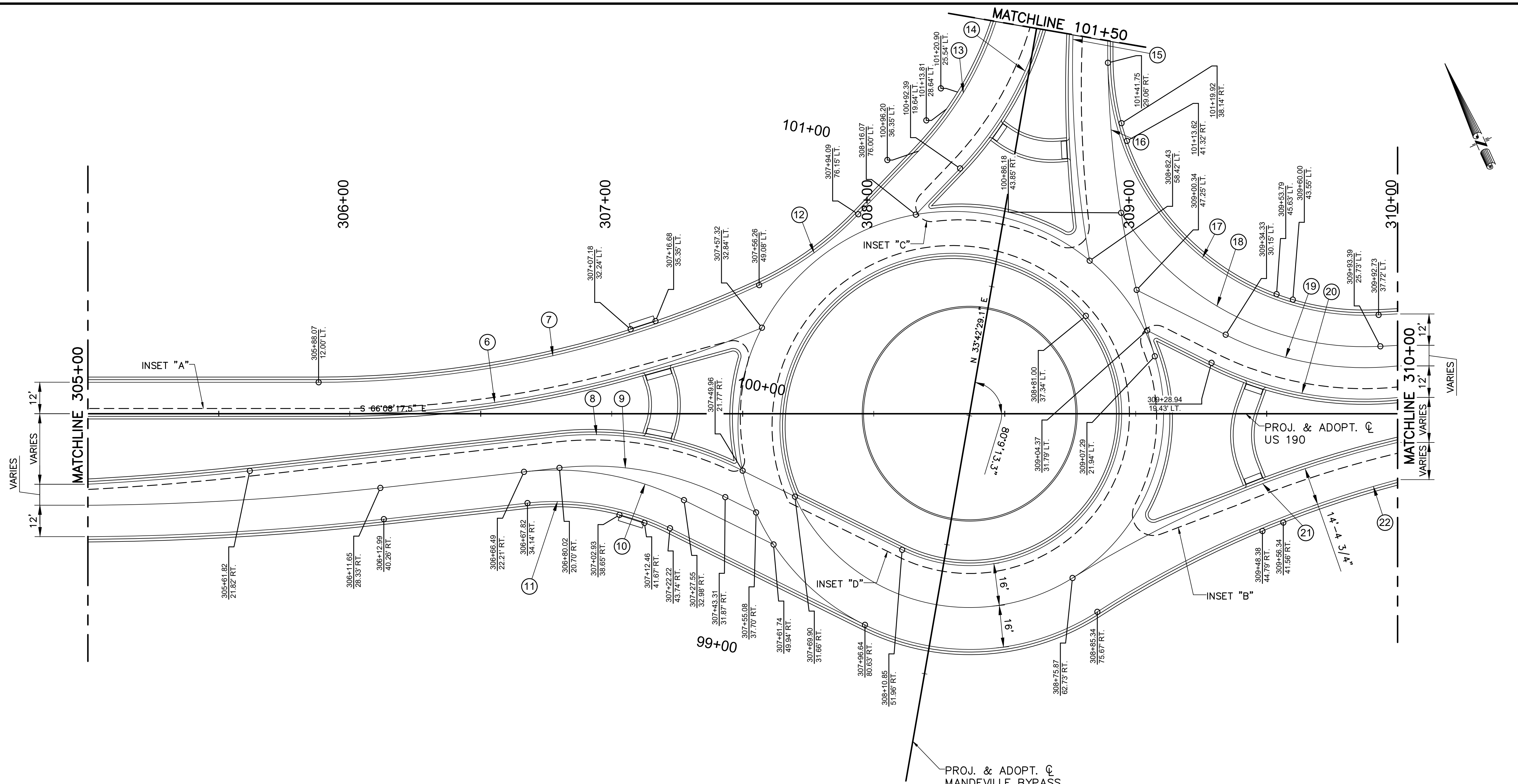
NOTES:

- ALL CALLOUTS ARE GIVEN AT THE LANE EDGE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE NUMBER	RADIUS	Δ
1	1300'	7°26'47"
2	1300'	7°26'47"
3	1080'	13°48'55"
4	1080'	13°48'55"
5	1092'	13°48'55"



SHEET NUMBER	70	PARISH	ST. TAMMANY	PROJECT	2014EN0001
ROADWAY PLANS	GEOMETRIC LAYOUT	B.K.I. PROJECT	NO.15.012		
MANDEVILLE BYPASS LA 1088 TO US 190					
DESIGNED	AJ	RC/III	SG	O.C.T. 2024	OF
CHECKED	AJ	AJ	AJ	O.C.T. 2024	OF
DATE	SHEET	REVISION	DESCRIPTION	DATE	BY

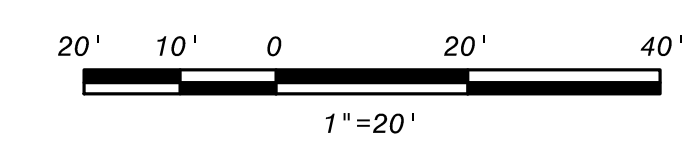


LEGEND:

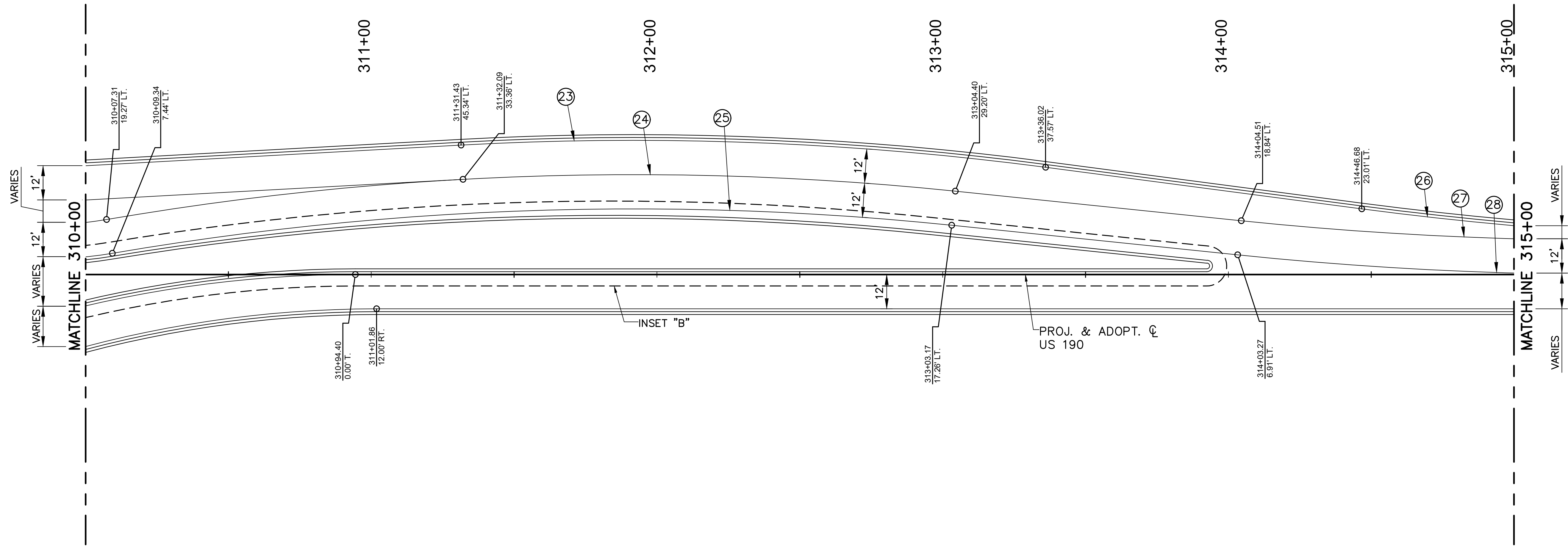
(X) CURVE NUMBER

NOTES:
 1. ALL CALLOUTS ARE GIVEN AT THE LANE EDGE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE NUMBER	RADIUS	Δ
6	412'	23°01'53"
7	400'	24°51'51"
8	126'	32°44'33"
9	114'	32°44'33"
10	110'	32°44'33"
11	98'	32°44'33"
12	125'	21°27'01"
13	130'	41°45'09"
14	130'	44°26'35"
15	416'	20°01'30"
16	400'	27°05'23"
17	98'	92°12'28"
18	110'	60°47'05"
19	118'	36°26'12"
20	130'	36°26'12"
21	412'	32°02'01"
22	400'	32°



SHEET NUMBER	71
ST. TAMMANY	PROJECT NO. 15.012
MANDEVILLE BYPASS LA 1088 TO US 190	GEOMETRIC LAYOUT
ROADWAY PLANS	
DESIGNED	AJ
CHECKED	RCIII
DATE	Oct. 2024
REVISION DESCRIPTION	BY
NO.	DATE

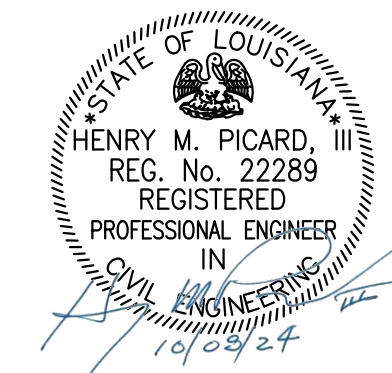
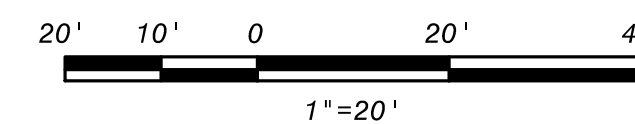


LEGEND:

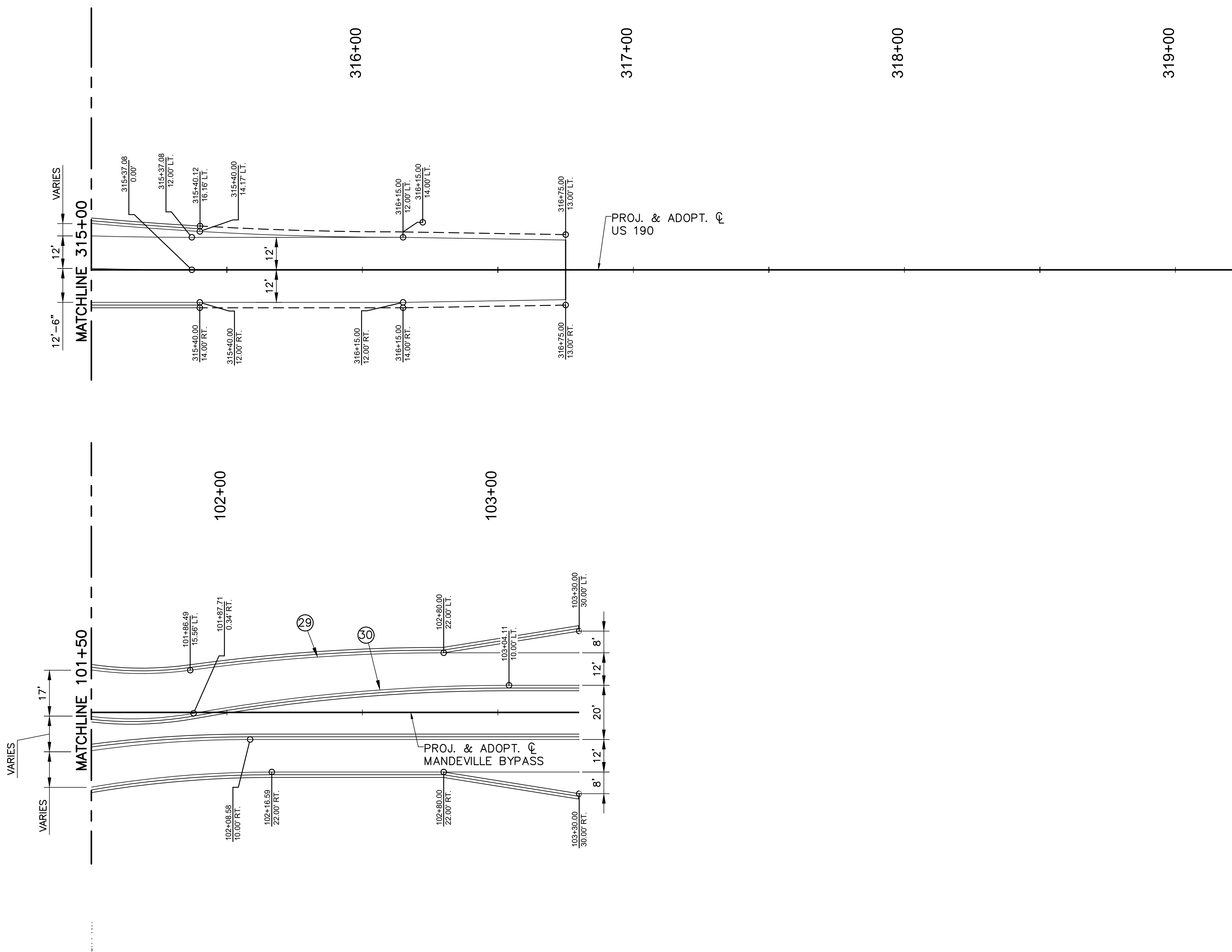
(X) CURVE NUMBER

CURVE NUMBER	RADIUS	Δ
23	1104'	10°38'27"
24	1092'	15°38'43"
25	1080'	15°38'43"
26	1288'	07°30'33"
27	1288'	05°54'29"
28	1300'	05°54'29"

NOTES:
 1. ALL CALLOUTS ARE GIVEN AT THE LANE EDGE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



SHEET NUMBER	72	PARISH	ST. TAMMANY	PROJECT	2014EN0001
ROADWAY PLANS	GEOMETRIC LAYOUT	B.K.I. PROJECT	NO.15.012		
MANDEVILLE BYPASS LA 1088 TO US 190					
DESIGNED	AJ	RC/III	SG	DATE	Oct. 2024
CHECKED			AJ	SHEET	of
REVISION DESCRIPTION	NO.	DATE	BY		



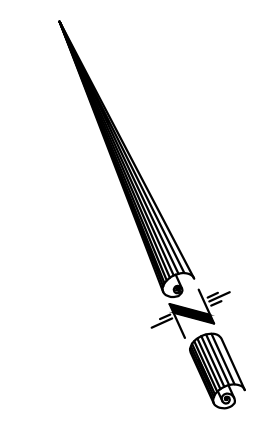
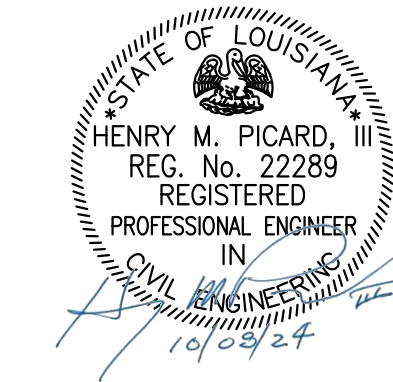
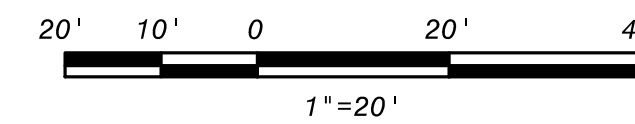
LEGEND:

(X) CURVE NUMBER

CURVE NUMBER	RADIUS	Δ
29	676'	07°54'48"
30	660'	10°09'28"

NOTES:

- ALL CALLOUTS ARE GIVEN AT THE LANE EDGE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

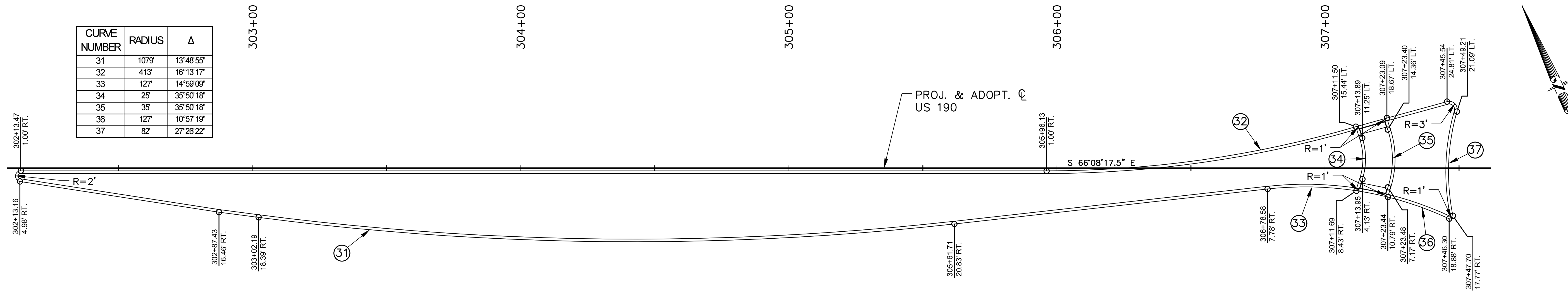


SHEET NUMBER	73	ST. TAMMANY	2014EN0001	NO.15.012
PARISH PROJECT	B.C.I. PROJECT			
MANDEVILLE BYPASS LA 1088 TO US 190				
ROADWAY PLANS				
GEOMETRIC LAYOUT				
DESIGNED	AJ	CHECKED	RCIII	DATE
DETAILED	SG	CHECKED	AJ	SHEET
				O.c.t. 2024
				OF
NO.	DATE	REVISION	DESCRIPTION	BY

DATE: 10/7/24

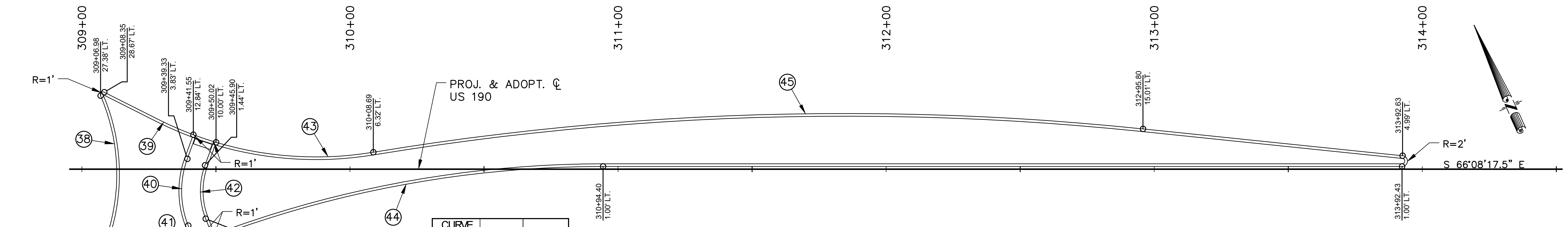
FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\74_Geometric Layout_05.dwg

CURVE NUMBER	RADIUS	Δ
31	1079'	13°48'55"
32	413'	16°13'17"
33	127'	14°59'09"
34	25'	35°50'18"
35	35'	35°50'18"
36	127'	10°57'19"
37	82'	27°26'22"



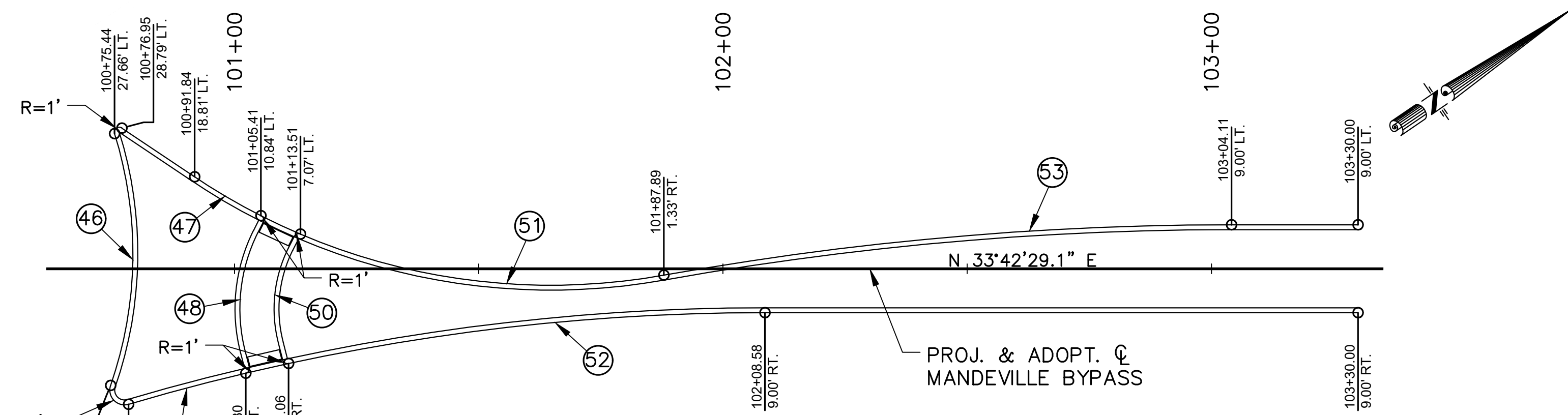
NOTES:
1. ALL CALLOUTS ARE GIVEN AT THE FACE OF CURB UNLESS OTHERWISE NOTED.

INSET "A"



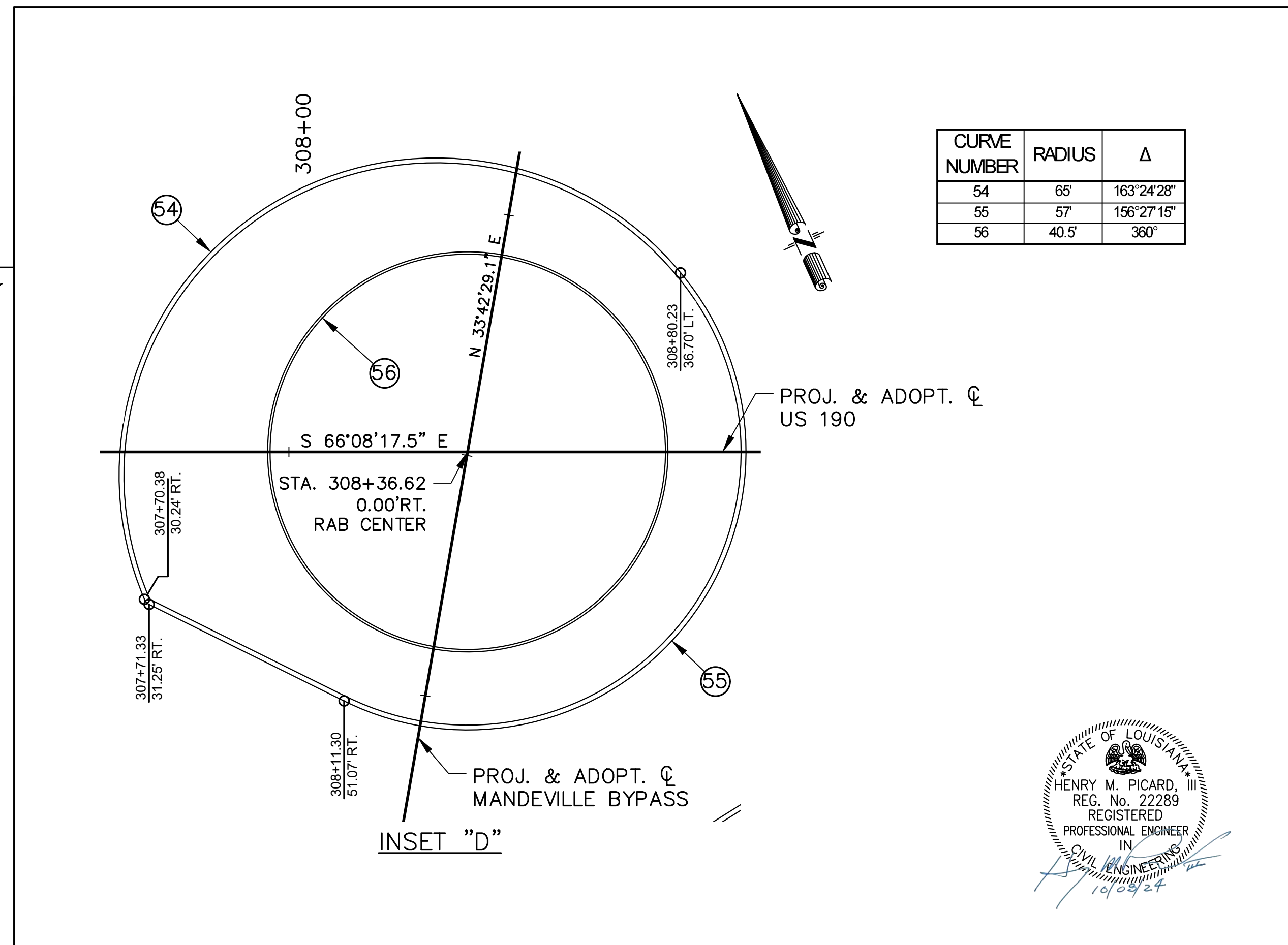
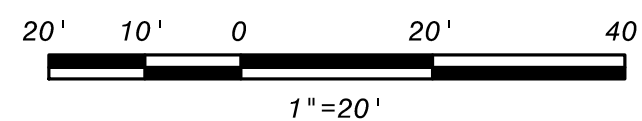
CURVE NUMBER	RADIUS	Δ
38	74'	51°40'43"
39	131'	06°14'05"
40	35'	41°37'24"
41	413'	00°46'18"
42	28'	41°37'24"
43	131'	25°55'55"
44	413'	20°29'07"
45	1080'	15°17'01"

INSET "B"



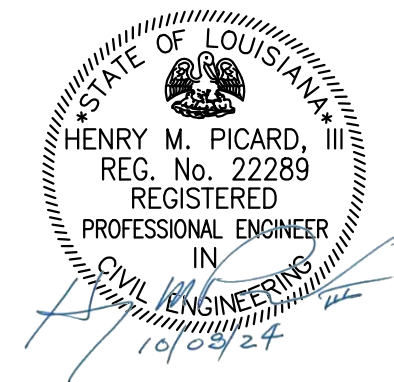
CURVE NUMBER	RADIUS	Δ
46	82'	36°39'00"
47	131'	7°20'05"
48	35'	41°05'41"
49	461.58'	03°04'53"
50	28'	41°05'41"
51	131'	33°11'58"
52	461.58'	12°11'48"
53	658'	10°09'28"

INSET "C"



CURVE NUMBER	RADIUS	Δ
54	65'	163°24'28"
55	57'	156°27'15"
56	40.5'	360°

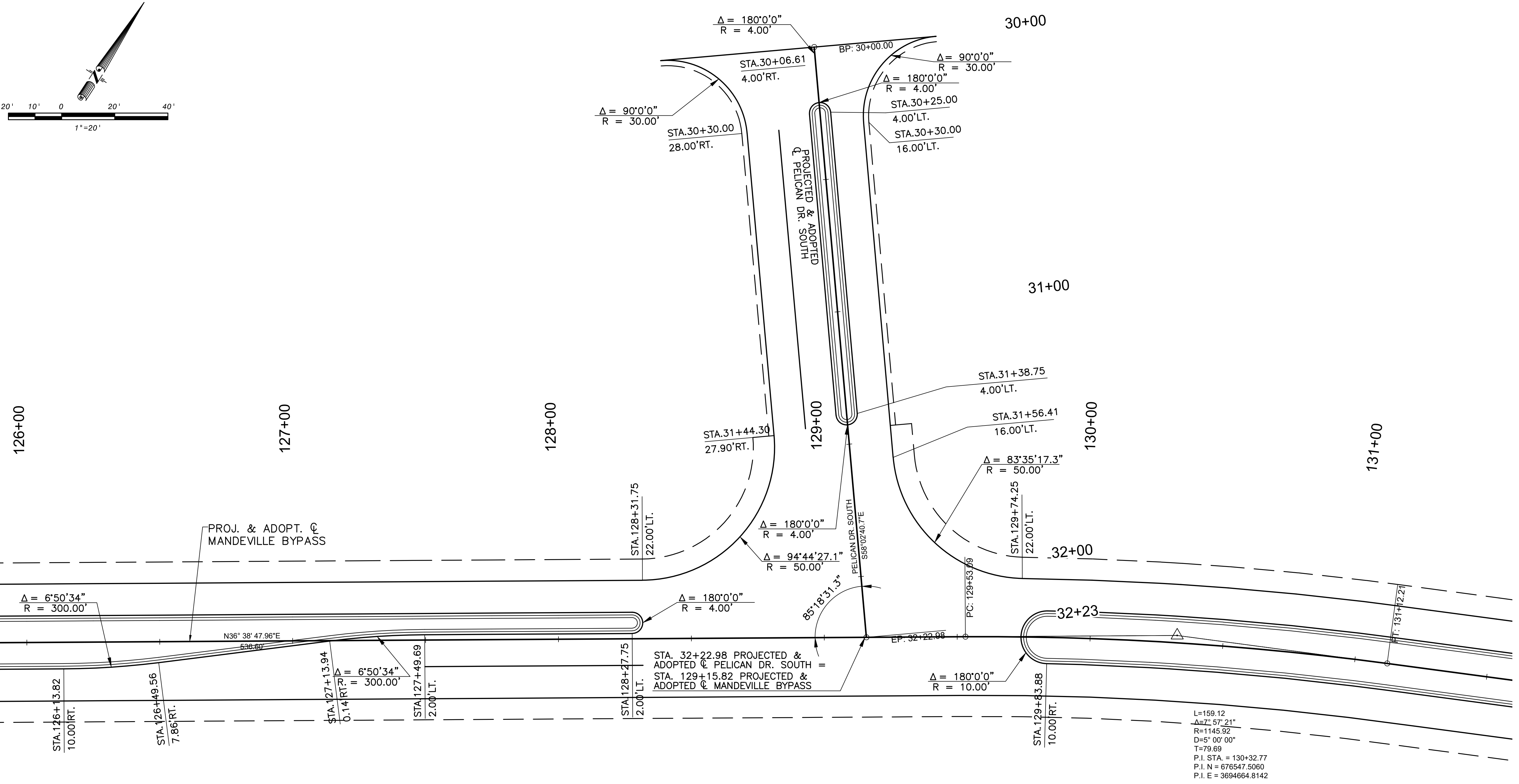
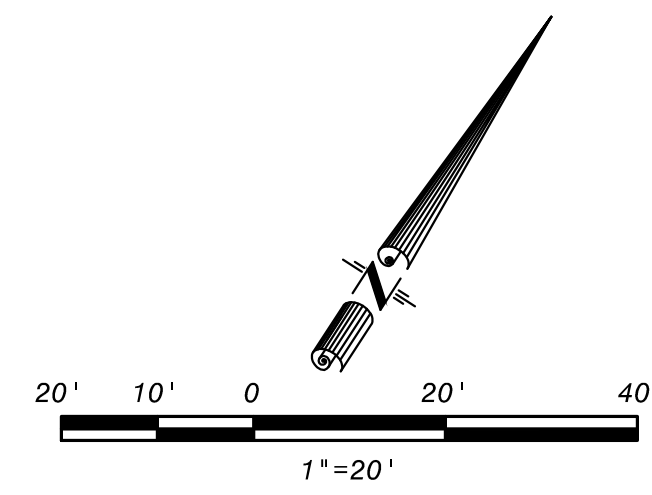
INSET "D"



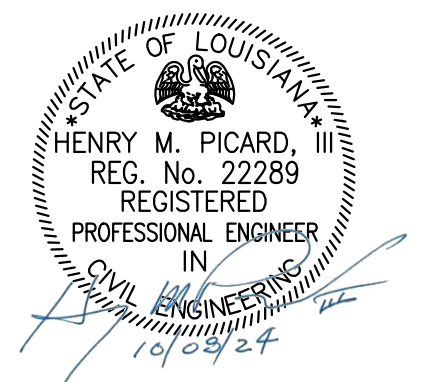
SHEET NUMBER	74
ST. TAMMANY PARISH PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS GEOMETRIC LAYOUT	
DESIGNED	AJ
CHECKED	RCIII
DATE	Oct. 2024
REVISION DESCRIPTION	BY
NO.	DATE

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\75_Geometric Layout_06.dwg.dwg



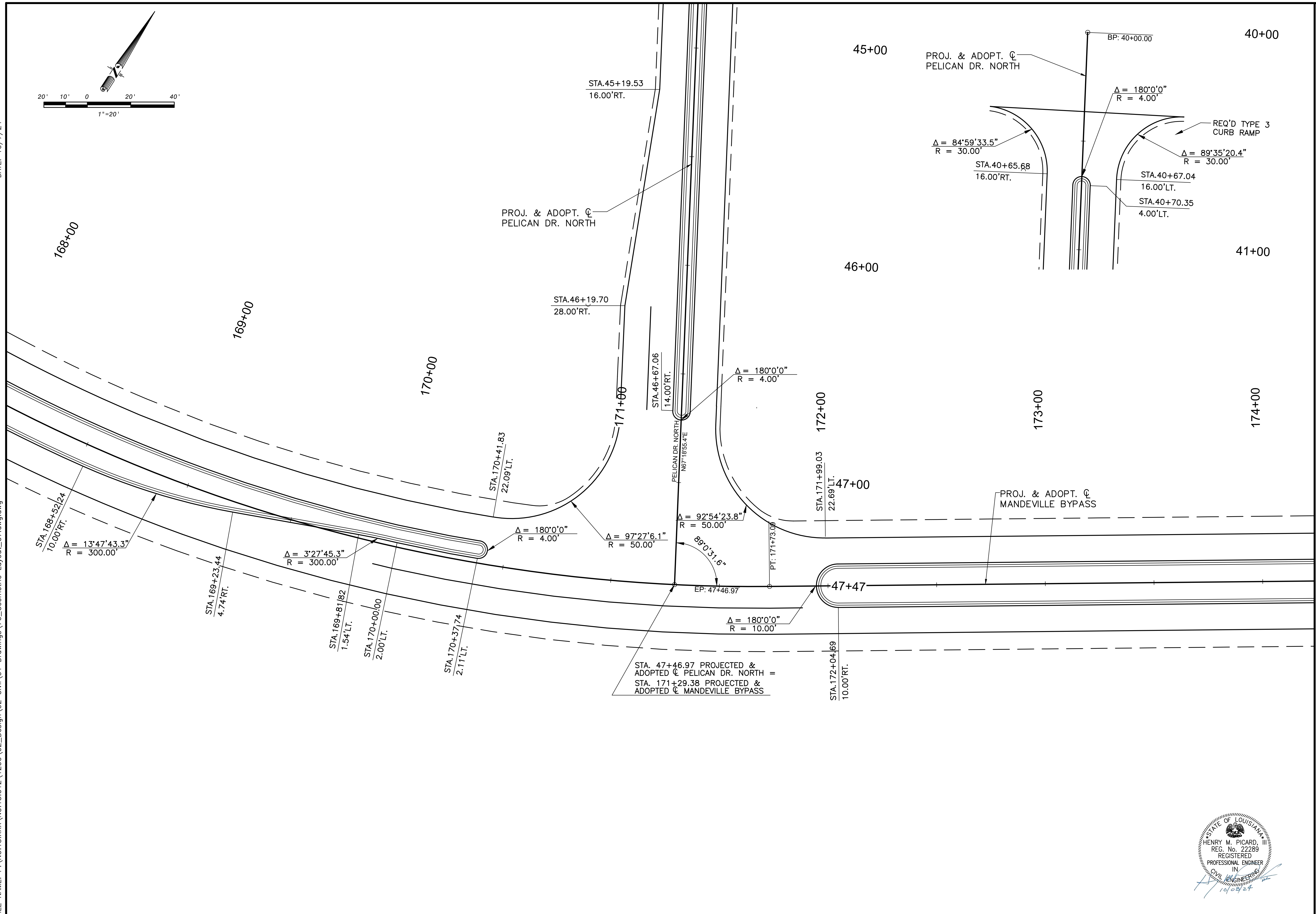
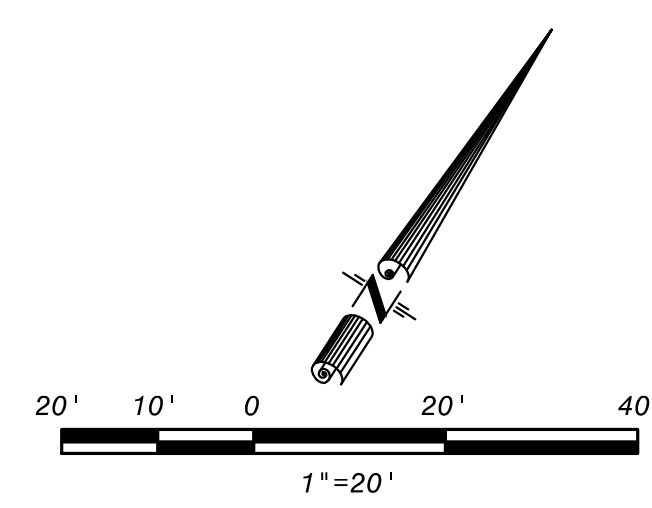
L=159.12
 $\Delta=7^{\circ} 57' 21''$
 R=1145.92
 D=5° 00' 00"
 T=79.69
 P.I. STA. = 130+32.77
 P.I. N = 676547.5060
 P.I. E = 3694664.8142



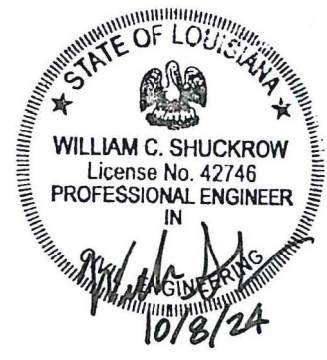
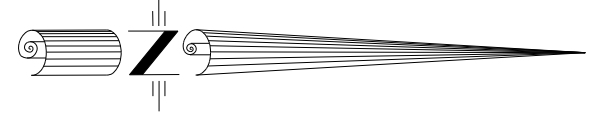
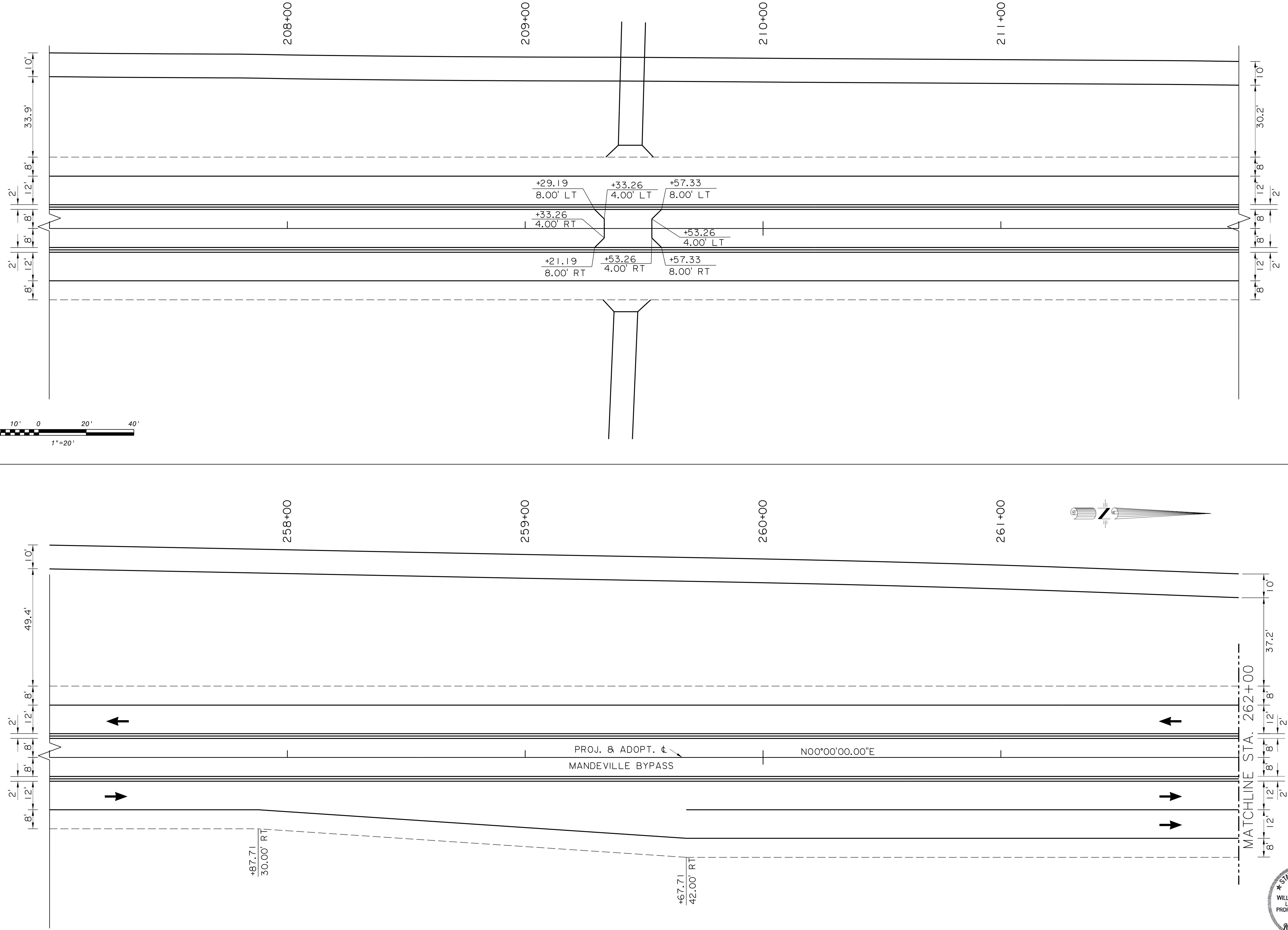
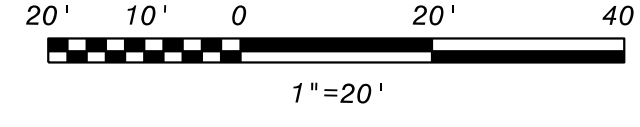
SHEET NUMBER	75
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	GEOMETRIC LAYOUT
ROADWAY PLANS	
DESIGNED	A.R.J.
CHECKED	H.M.P.
DETAILED	G.A.D.
CHECKED	T.J.K.
DATE	Oct. 2024
SHEET	OF
NO.	DATE
	REVISION DESCRIPTION
	BY

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\76_Geometric Layout_07.dwg

DATE: 10/7/24



SHEET NUMBER	76
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS GEOMETRIC LAYOUT	
DESIGNED	AR.J.
CHECKED	H.M.P.
DETAILED	G.A.D.
CHECKED	T.J.K.
DATE	Oct. 2024
SHEET	OF
NO.	DATE
REVISION	DESCRIPTION
BY	



NO.	DATE	REVISION DESCRIPTION	BY

DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	8 OF 12

ROADWAY PLANS	GEOMETRIC LAYOUT
MANDEVILLE BY PASS LA 1088 TO US 190	
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012

SHEET NUMBER	77
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XREF:

10/9/2024

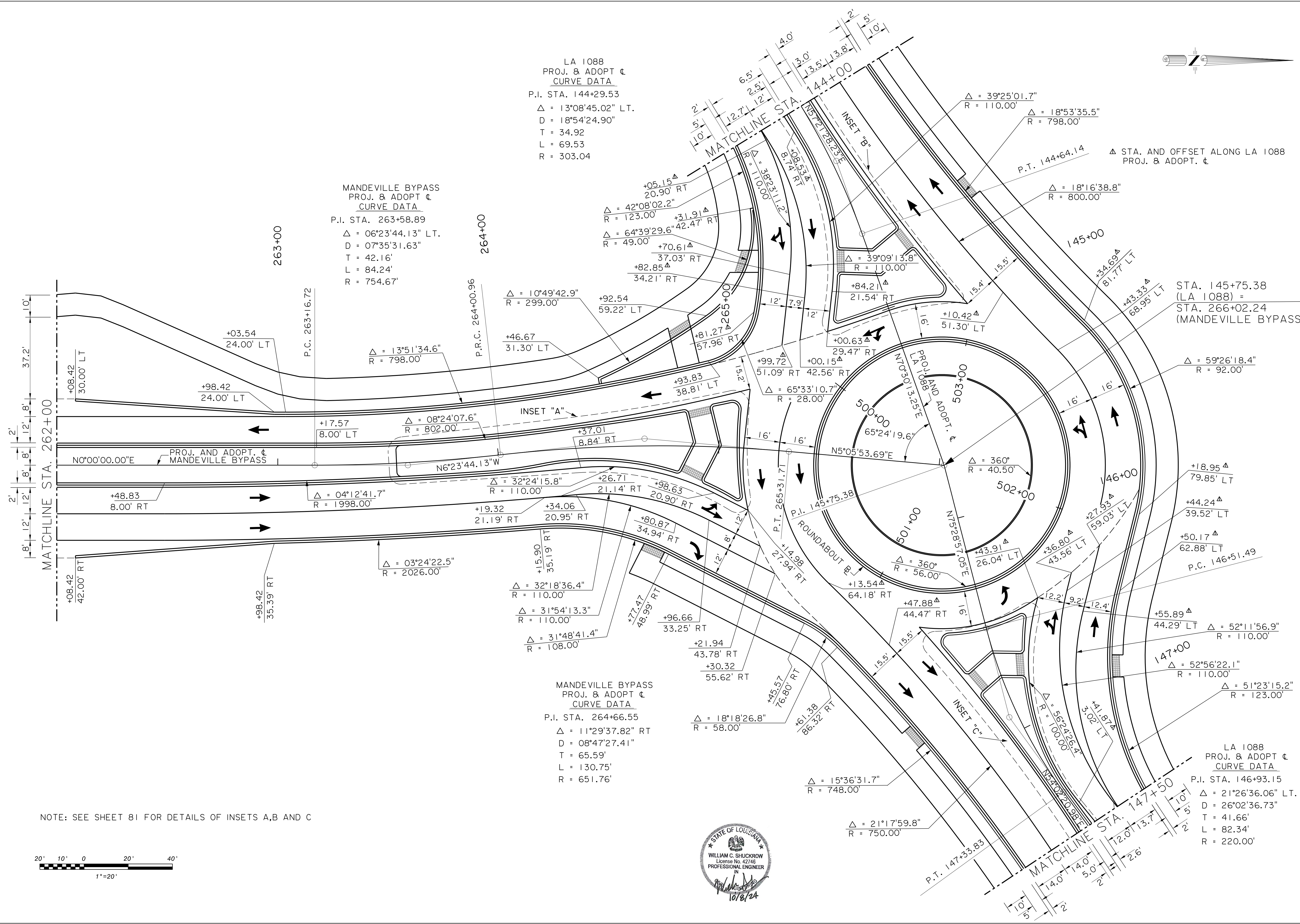
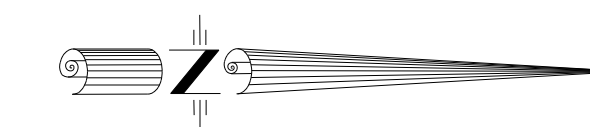
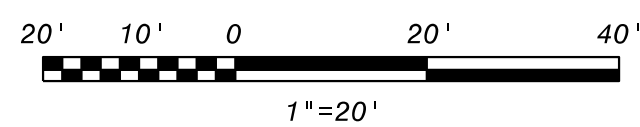
GEO_LAY_12629_NSI_2.dgn

LA 1088
 PROJ. & ADOPT. ϵ
 CURVE DATA
 P.I. STA. 144+29.53
 $\Delta = 13^{\circ}08'45.02''$ LT.
 $D = 18^{\circ}54'24.90''$
 $T = 34.92$
 $L = 69.53$
 $R = 303.04$

MANDEVILLE BYPASS
 PROJ. & ADOPT. ϵ
 CURVE DATA
 P.I. STA. 263+58.89
 $\Delta = 06^{\circ}23'44.13''$ LT.
 $D = 07^{\circ}35'31.63''$
 $T = 42.16'$
 $L = 84.24'$
 $R = 754.67'$

MANDEVILLE BYPASS
 PROJ. & ADOPT. ϵ
 CURVE DATA
 P.I. STA. 264+66.55
 $\Delta = 11^{\circ}29'37.82''$ RT
 $D = 08^{\circ}47'27.41''$
 $T = 65.59'$
 $L = 130.75'$
 $R = 651.76'$

NOTE: SEE SHEET 81 FOR DETAILS OF INSETS A,B AND C

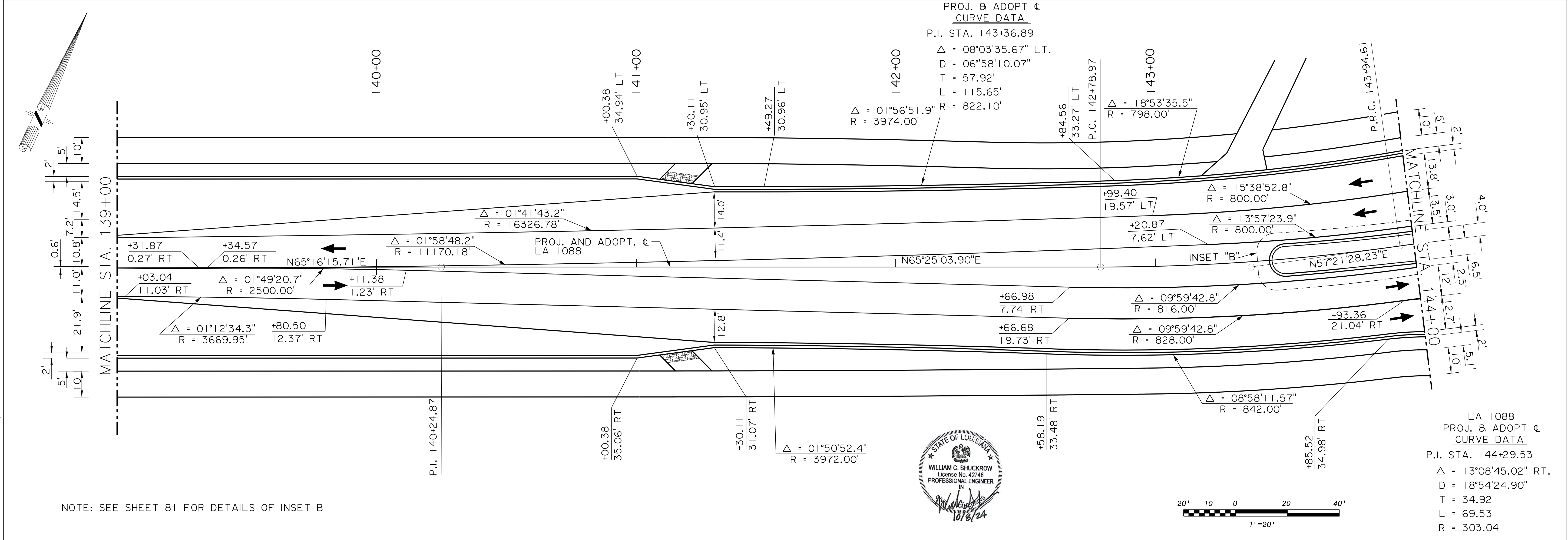
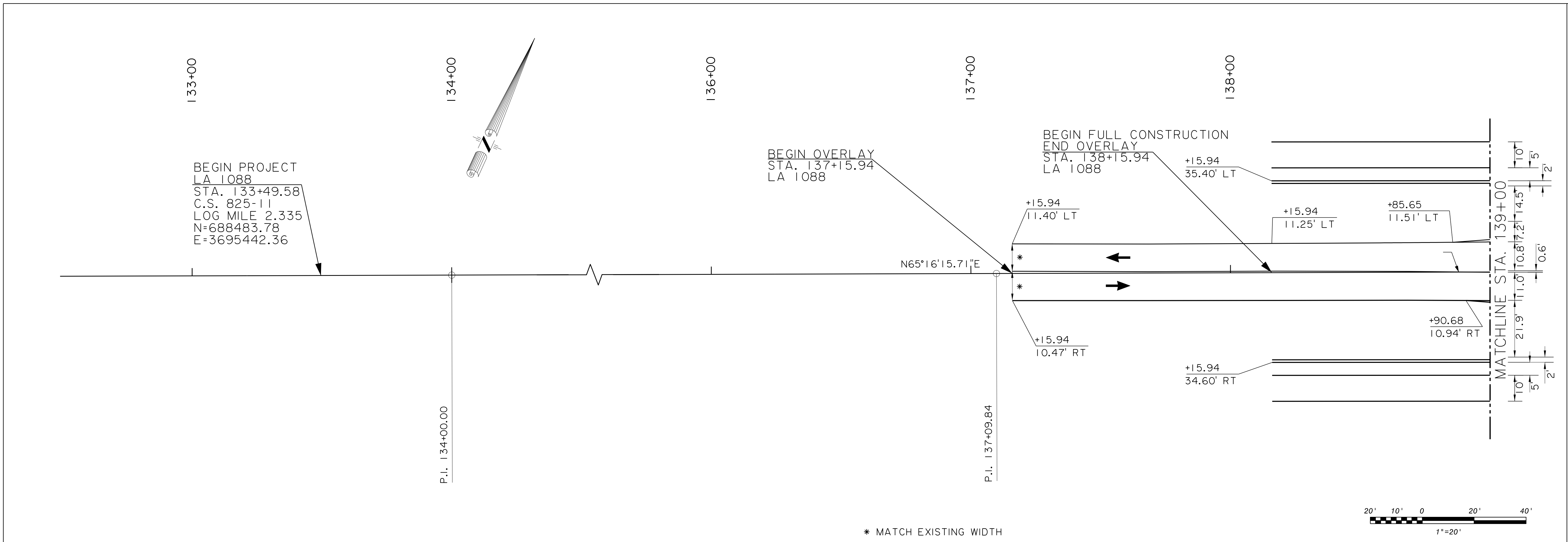


SHEET NUMBER	78
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
ROADWAY PLANS	GEOMETRIC LAYOUT
DESIGNED WCS	
CHECKED DSY	
DATE	10/9/2024
BY	
REVISION DESCRIPTION	
NO.	DATE

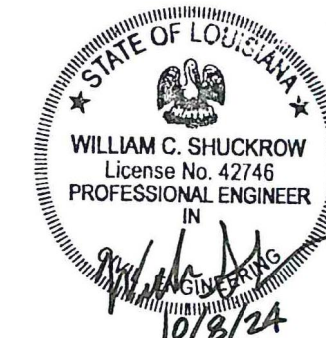
XREF:

10/9/2024

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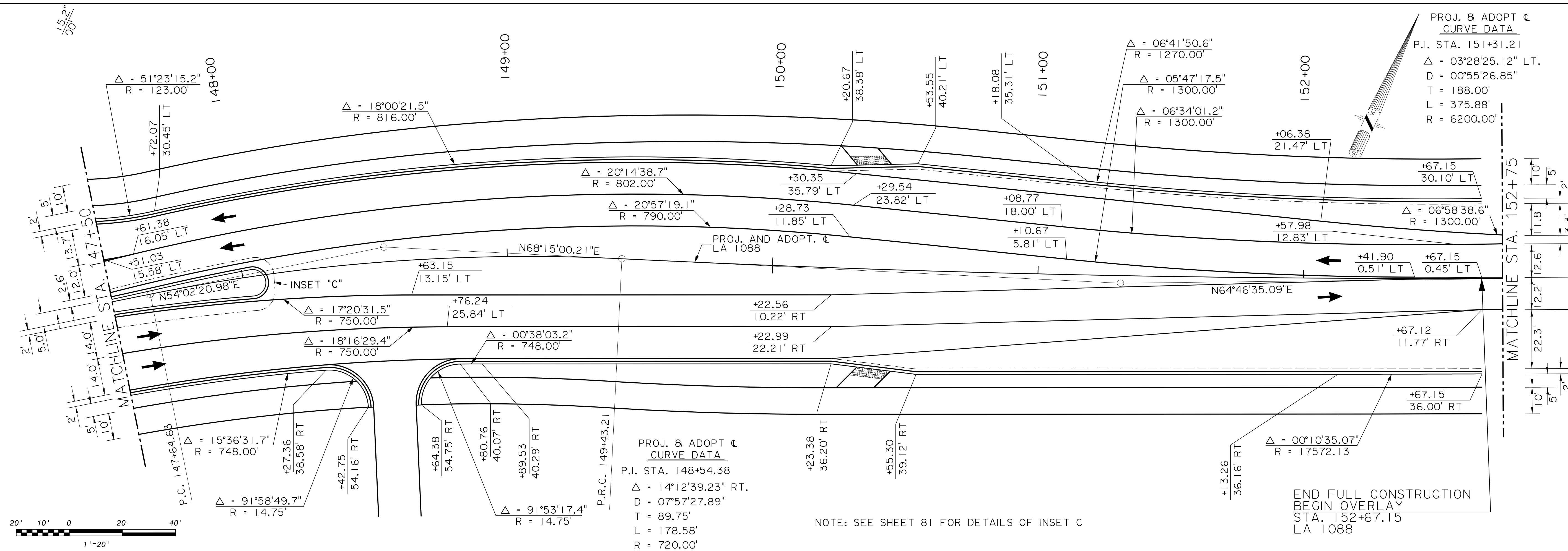


NOTE: SEE SHEET 81 FOR DETAILS OF INSET B



LA 1088
 PROJ. & ADOPT ϵ
 CURVE DATA
 P.I. STA. 144+29.53
 $\Delta = 13^{\circ}08'45.02''$ RT.
 D = 18'54'24.90"
 T = 34.92
 L = 69.53
 R = 303.04

SHEET NUMBER	79
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	GEOMETRIC LAYOUT
LA 1088 TO US 190	
ROADWAY PLANS	
DESIGNED WCS	
CHECKED DSY	
DATE	10/9/2024
BY	
REVISION DESCRIPTION	
NO.	DATE



* MATCH EXISTING WIDTH

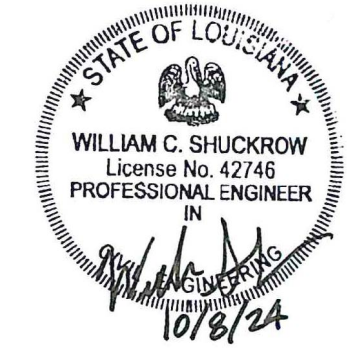
PROJ. & ADOPT. CURVE DATA
 P.I. STA. 151+31.21
 $\Delta = 03^{\circ}28'25.12''$ LT.
 $D = 00^{\circ}55'26.85''$
 $T = 188.00'$
 $L = 375.88'$
 $R = 6200.00'$

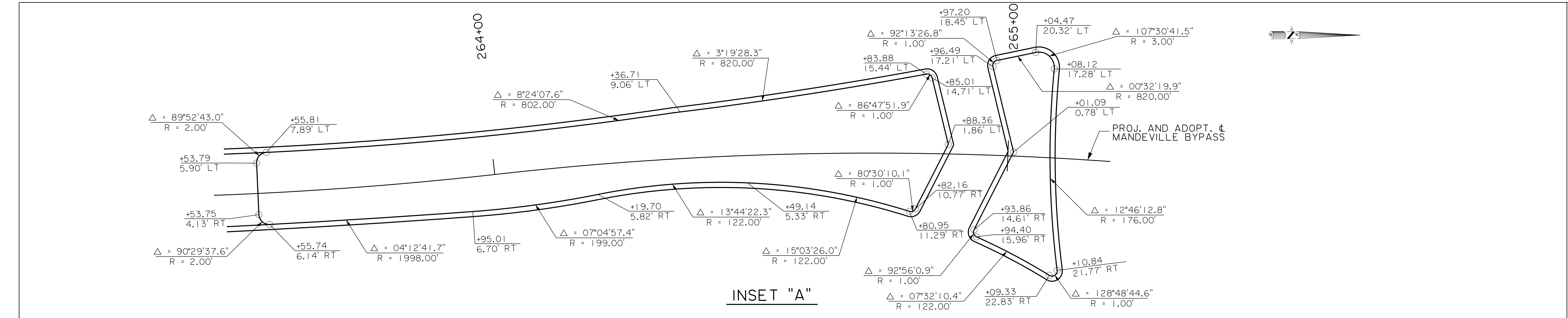
PROJ. & ADOPT. CURVE DATA
 P.I. STA. 148+54.38
 $\Delta = 14^{\circ}12'39.23''$ RT.
 $D = 07^{\circ}57'27.89''$
 $T = 89.75'$
 $L = 178.58'$
 $R = 720.00'$

END FULL CONSTRUCTION
 BEGIN OVERLAY
 STA. 152+67.15
 LA 1088

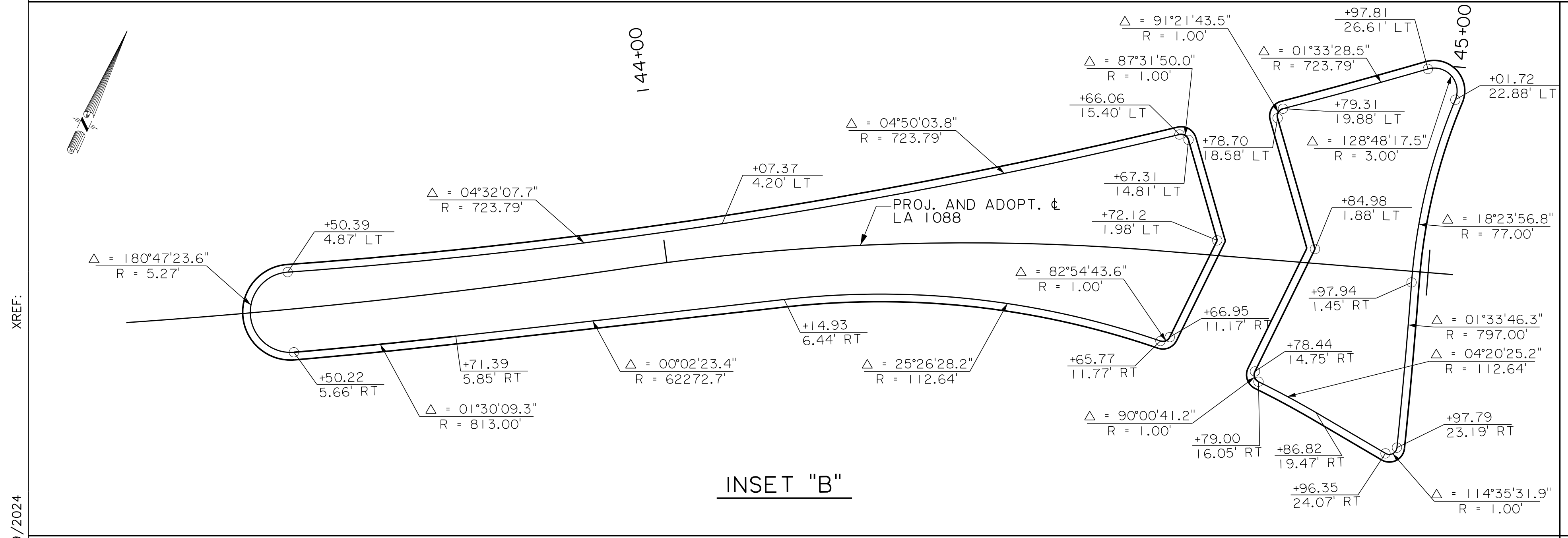
NOTE: SEE SHEET 81 FOR DETAILS OF INSET C

SHEET NUMBER	80
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK1 PROJECT	NO.15.012
STATE OF LOUISIANA	
ROADWAY PLANS	GEOMETRIC LAYOUT
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	11 OF 12
NO.	
DATE	
BY	
REVISION DESCRIPTION	

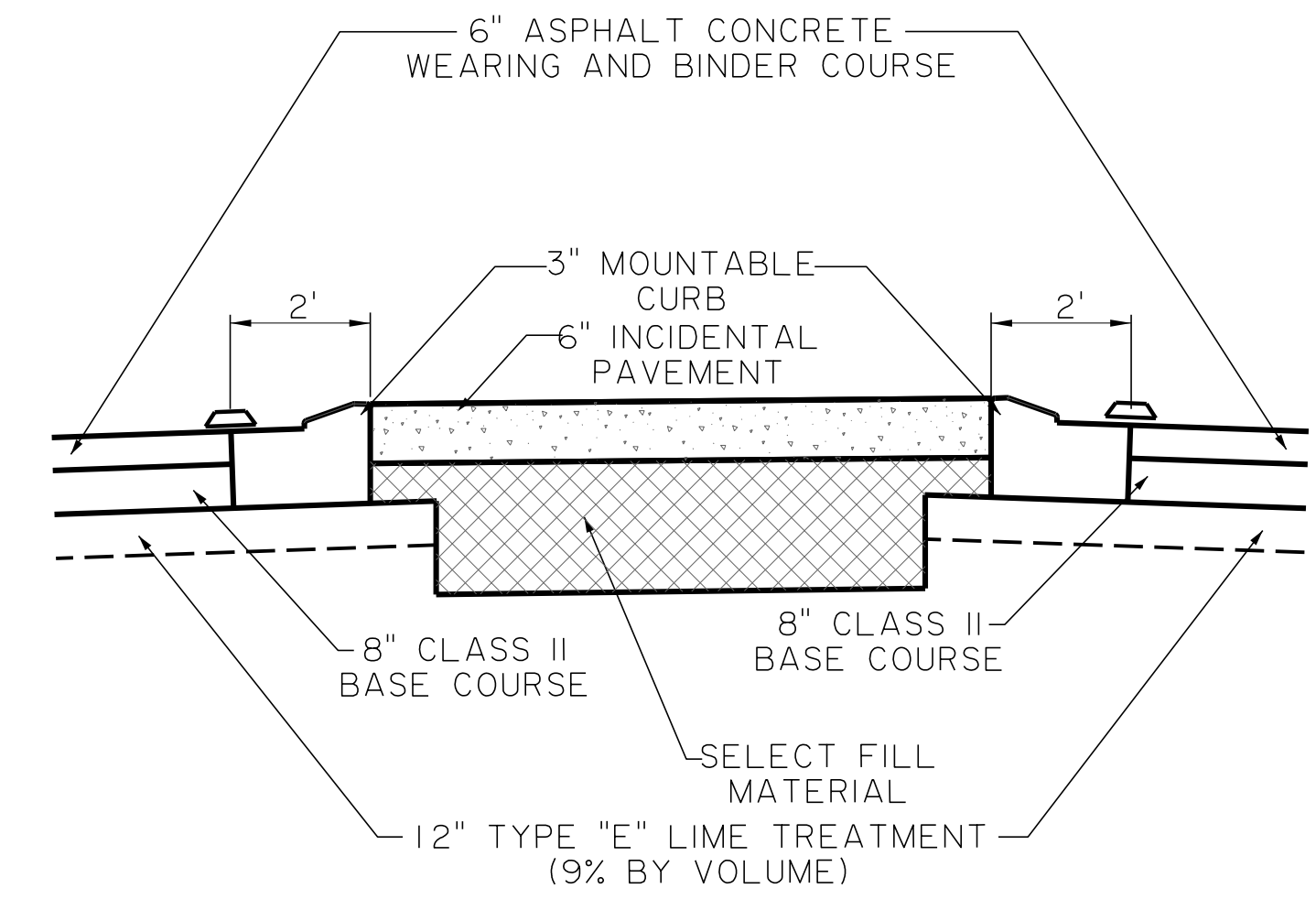




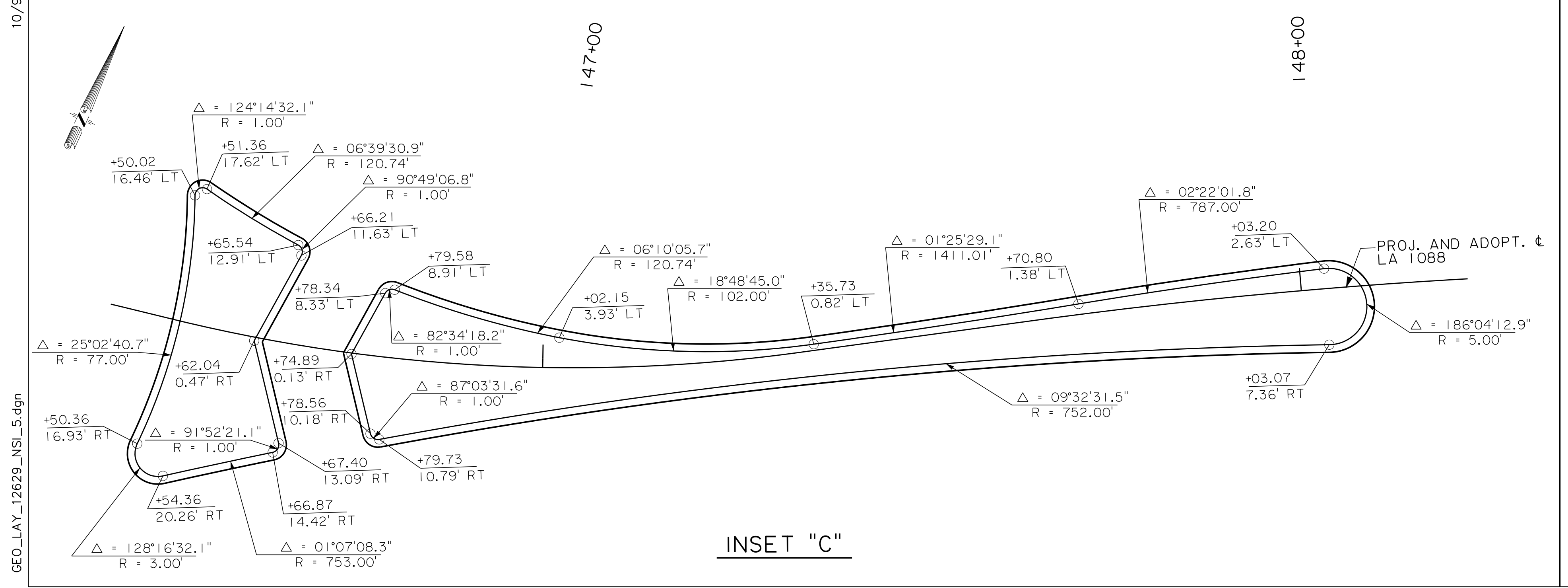
INSET "A"



INSET "B"

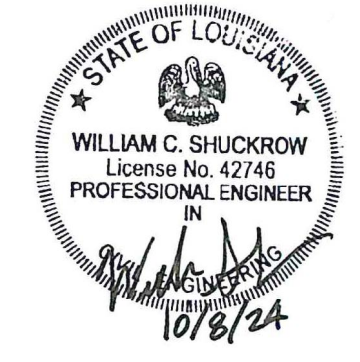
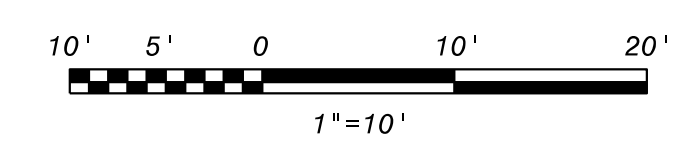


SPLITTER ISLAND DETAIL
N.T.S.



INSET "C"

GENERAL NOTES:
 INSET "A" ALL DIMENSIONS TAKEN FROM BACK OF CURB. STATIONS & OFFSETS REFERENCE PROJ. AND ADOPT. CL OF MANDEVILLE BYPASS.
 INSET "B" ALL DIMENSIONS TAKEN FROM BACK OF CURB. STATIONS & OFFSETS REFERENCE PROJ. AND ADOPT. CL OF LA 1088.
 INSET "C" ALL DIMENSIONS TAKEN FROM BACK OF CURB. STATIONS & OFFSETS REFERENCE PROJ. AND ADOPT. CL OF LA 1088.



SHEET NUMBER	81
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
BK.I. PROJECT	
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS GEOMETRIC LAYOUT	
BKI	
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	12 OF 12
NO.	
DATE	
BY	
REVISION DESCRIPTION	

GEO_LAY_12629_NSI_5.dgn
 10/9/2024
 XREF:

294+00

298+00

299+00

300+00

301+00

302+00

BEGIN PROJECT
 US 190
 STA. 294+45.00
 C.S. 013-12
 LOG MILE 5.106
 N=674625.51
 E=3691679.46

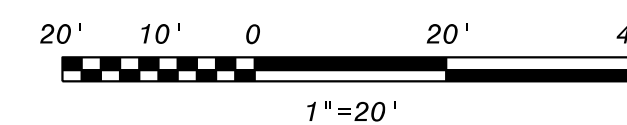
BEGIN OVERLAY
 STA. 300+09.00
 US 190

PROJ. AND ADOPT. \pm
 US 190

MATCHLINE STA. 303+00

LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |



304+00

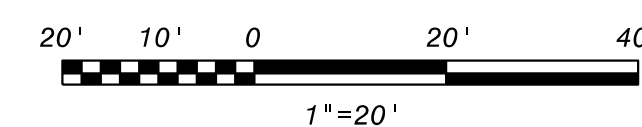
305+00

306+00

MATCHLINE STA. 303+00

MATCHLINE STA. 307+00

PROJ. AND ADOPT. \pm
 US 190



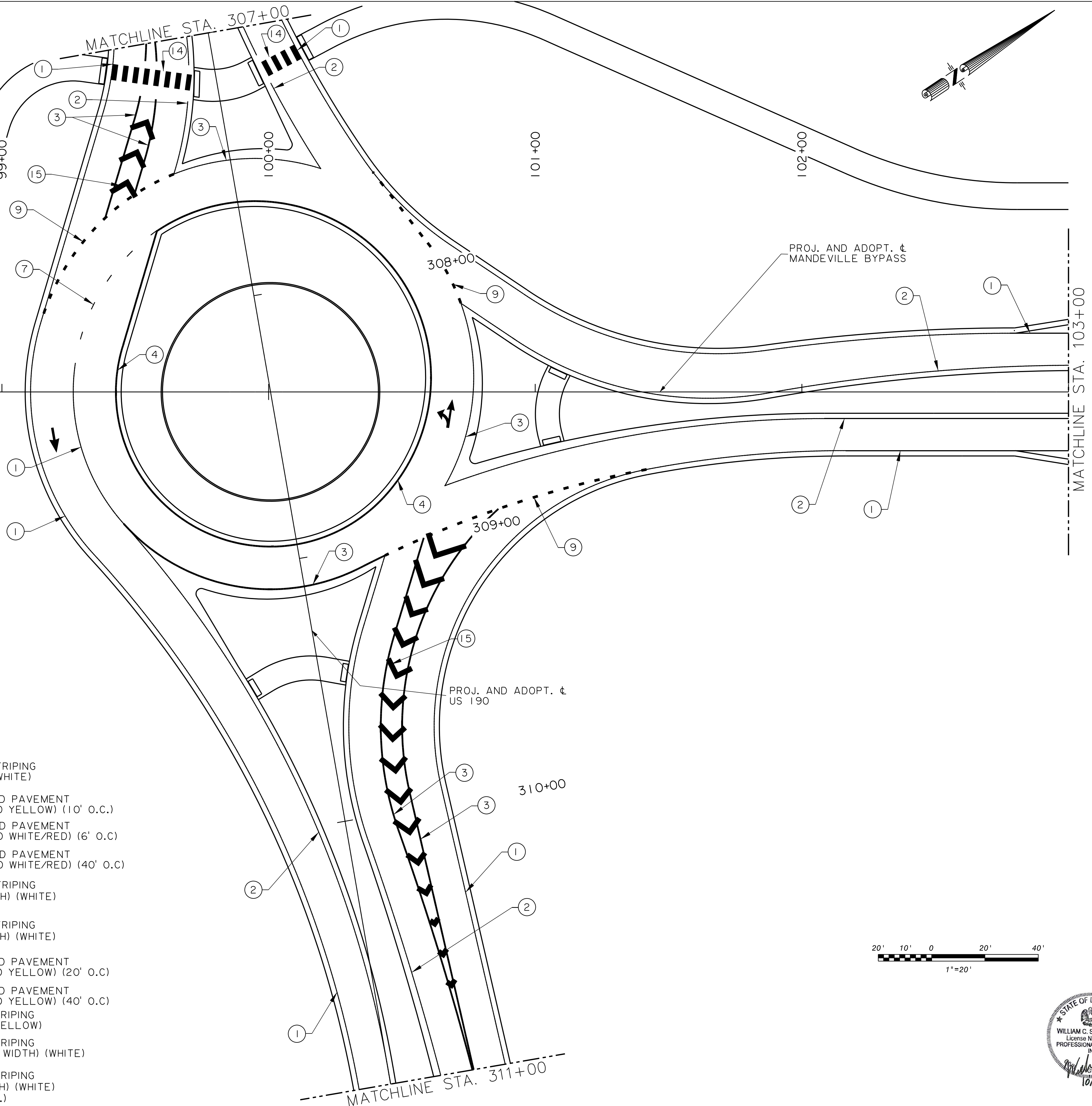
SHEET NUMBER	83
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
 STATE OF LOUISIANA	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	STRIPING DETAILS
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	1 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

10/9/2024

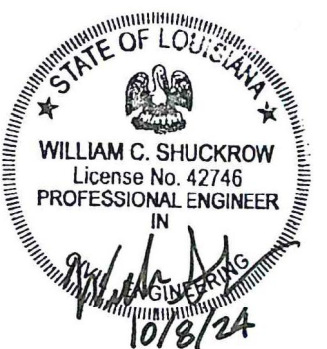
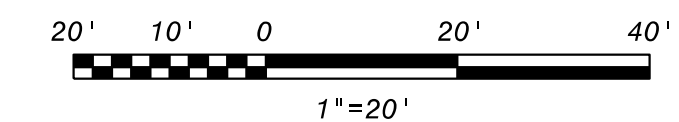
STRIPING_12629_2.dgn



BEGIN PROJECT
 MANDEVILLE BYPASS
 C.S. 000-32
 STA. 98+00.00
 N=673894.43
 E=3692839.72



LEGEND

- | | |
|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) |
| ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) |
| ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

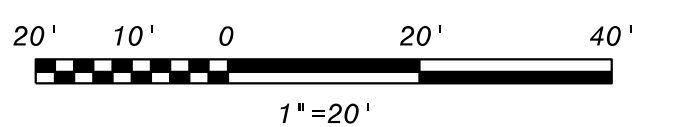
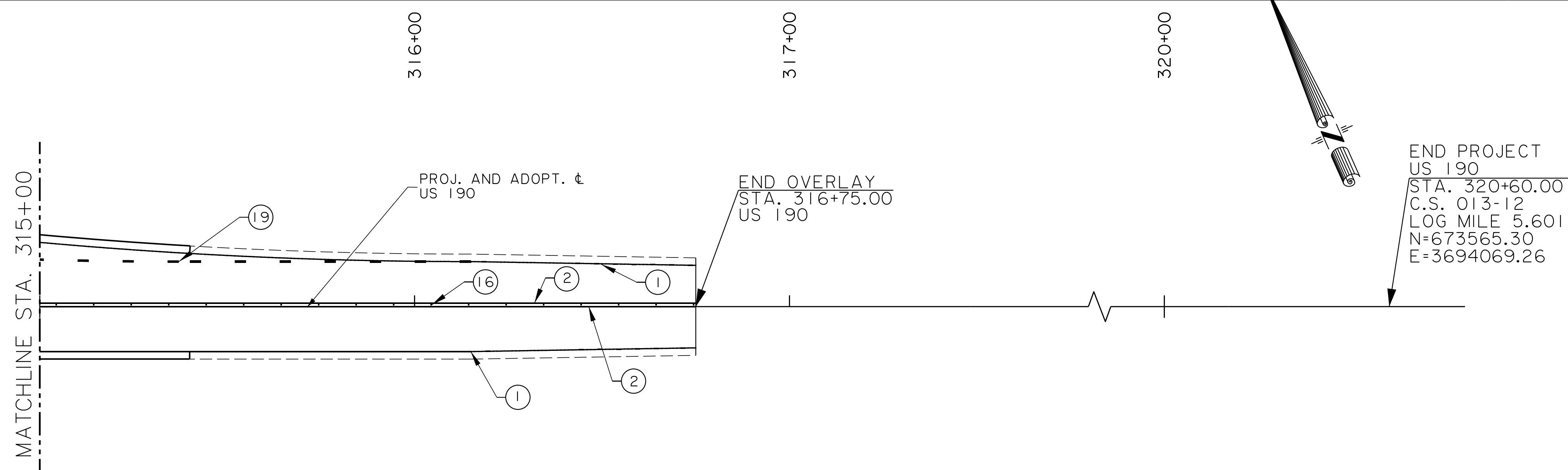
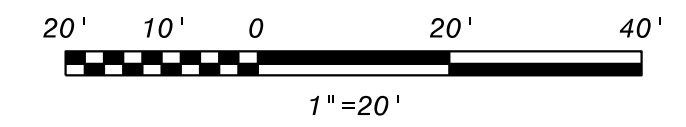
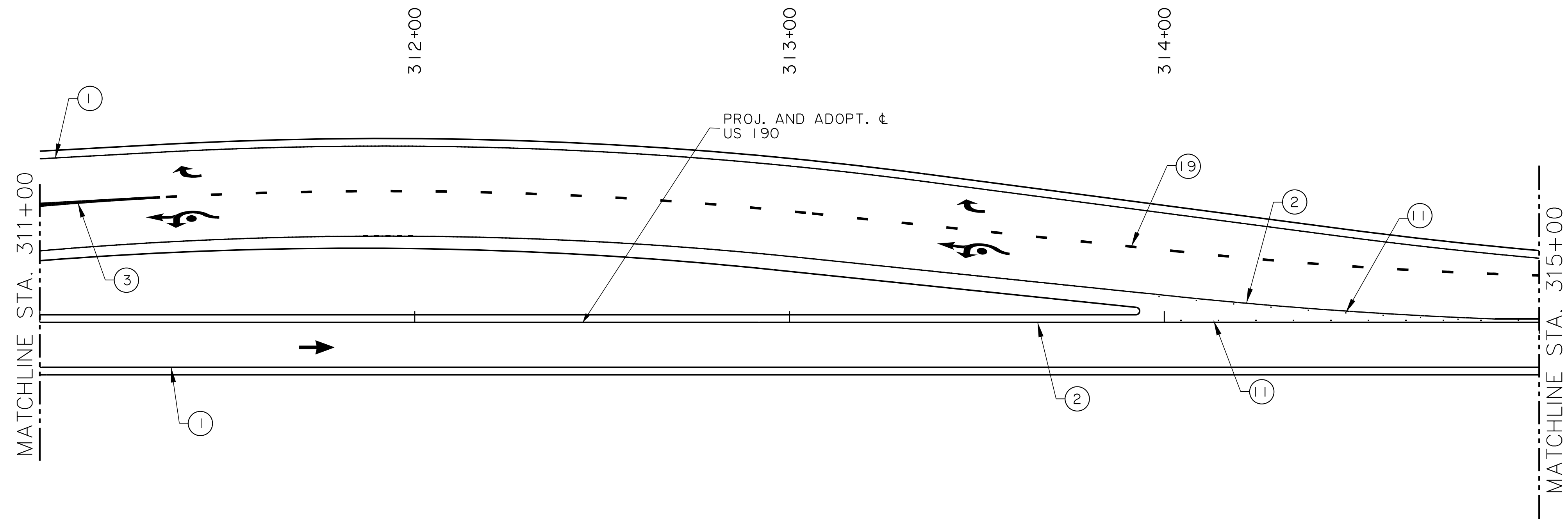


SHEET NUMBER	84
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.L. PROJECT	NO.15.012
	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	STRIPING DETAILS
	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	2 OF 24
BY	
NO.	
DATE	
REVISION DESCRIPTION	

XREF:

10/9/2024

STRIPING_12629_3.dgn

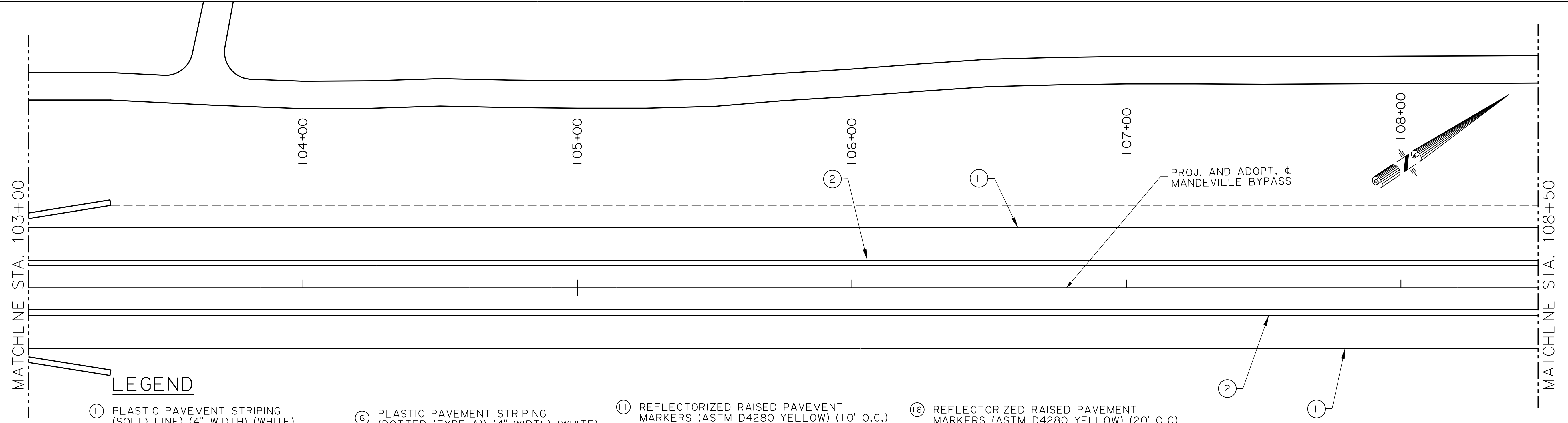
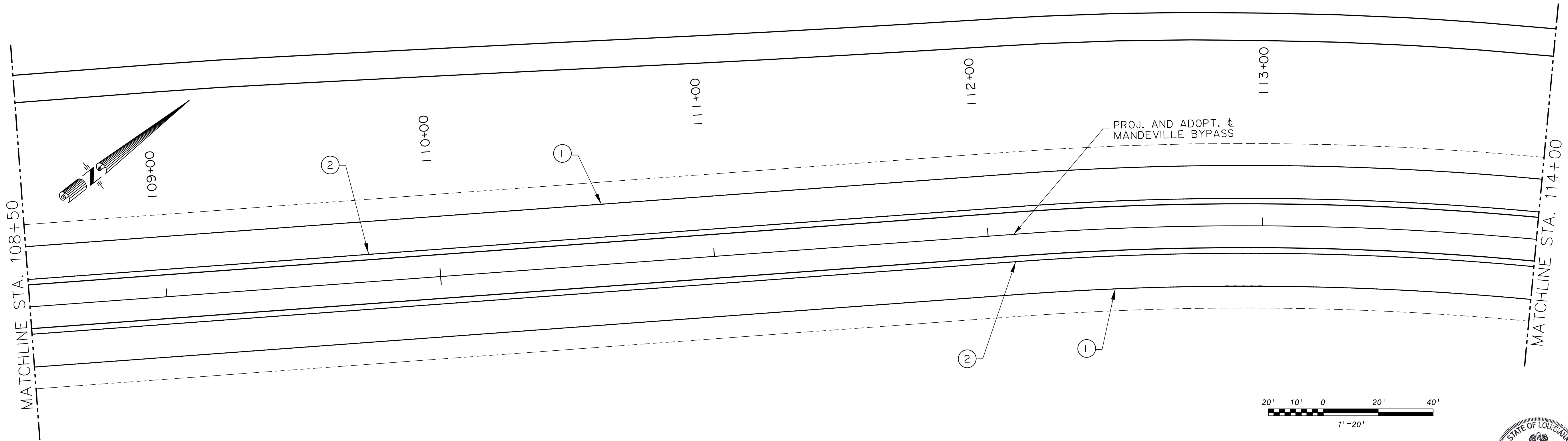


LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12" SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18" SPACING) (125 MIL.) |

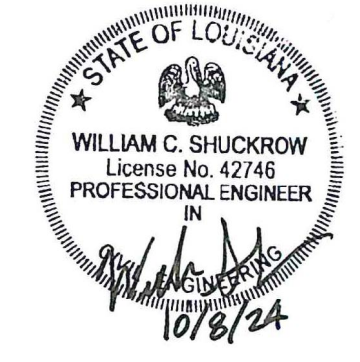


SHEET NUMBER	85	PARISH	ST. TAMMANY	PROJECT	2014EN0001
ROADWAY PLANS	STRIPING DETAILS	NO.	DATE	BY	REVISION DESCRIPTION
DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	SHEET	3 OF 24



LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

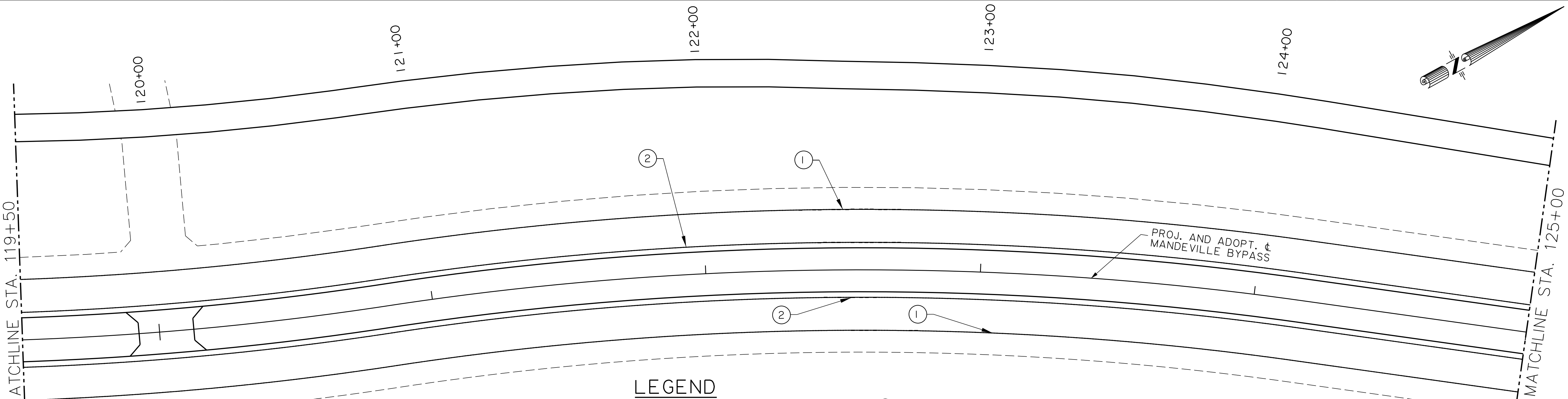
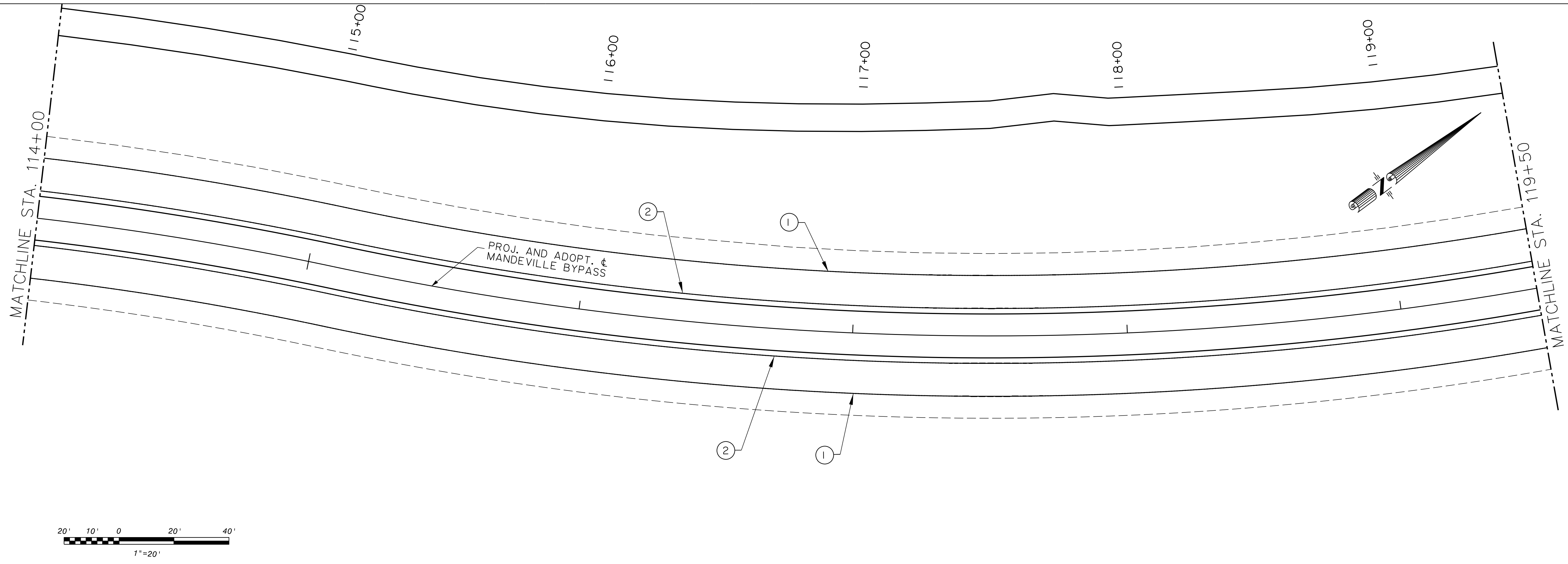


NO.	DATE	REVISION DESCRIPTION	BY
DESIGNED	WCS		
CHECKED	DSY		
DETAILED	JAT		
CHECKED	DSY		
DATE	10/9/2024		
SHEET	4 OF 24		
BKI			
STATE OF LOUISIANA			
MANDEVILLE BY PASS LA 1088 TO US 190			
ROADWAY PLANS			
STRIPING DETAILS			
PARISH	ST. TAMMANY	PROJECT	2014EN0001
BK/L PROJECT	NO.15.012		
SHEET NUMBER	86		

XREF:

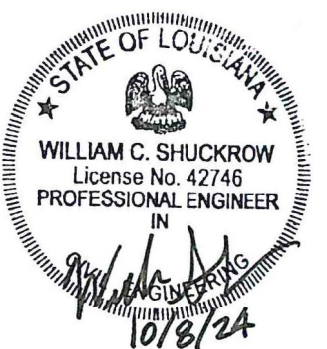
10/9/2024

STRIPING_12629_5.dgn



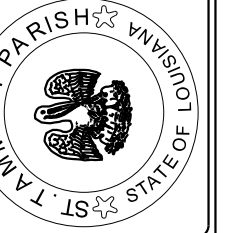
LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑱ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑲ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑳ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

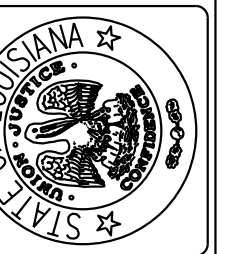


SHEET NUMBER 87

PARISH ST. TAMMANY
 PARISH PROJECT 2014EN0001
 B.K.L. PROJECT NO. 15.012



MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS STRIPING DETAILS



BKI

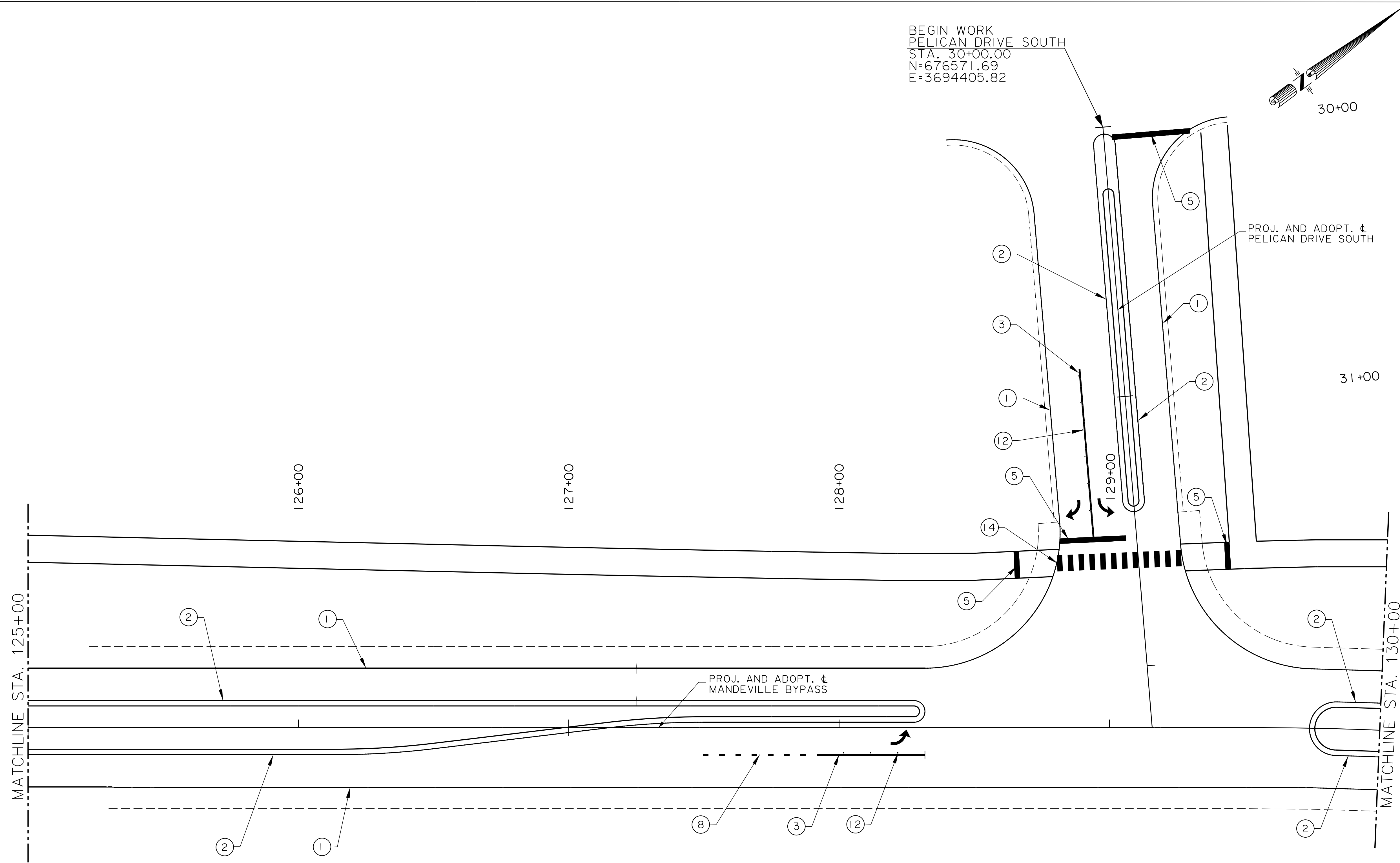
DESIGNED WCS
 CHECKED DSY
 DETAILED JAT
 CHECKED DSY
 DATE 10/9/2024
 SHEET 5 OF 24

NO.	DATE	REVISION DESCRIPTION	BY

XREF:

10/9/2024

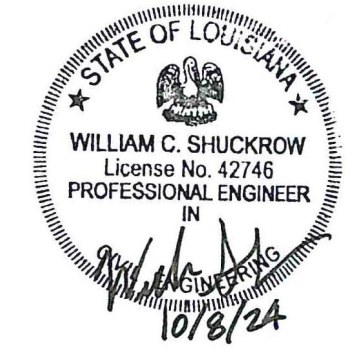
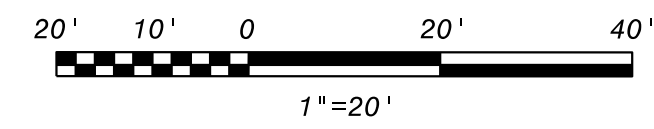
STRIPING_12629_6.dgn



BEGIN WORK
 PELICAN DRIVE SOUTH
 STA. 30+00.00
 N=676571.69
 E=3694405.82

LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

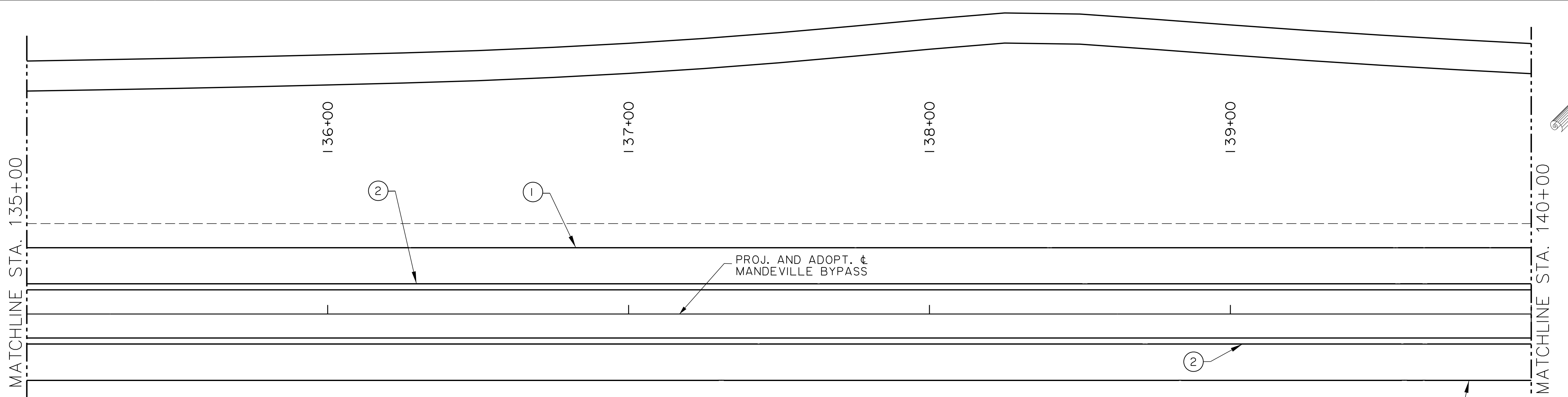
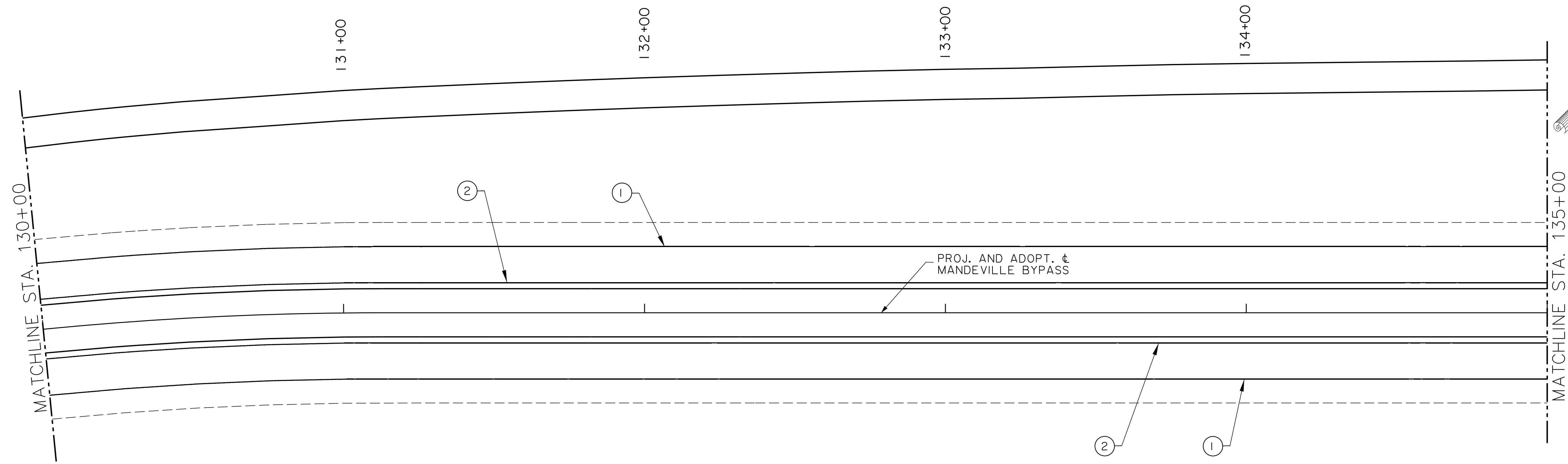


SHEET NUMBER	88
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY	STRIPING DETAILS
LEANS	
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	6 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

10/9/2024

STRIPING_12629_7.dgn

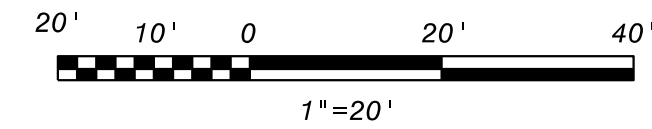
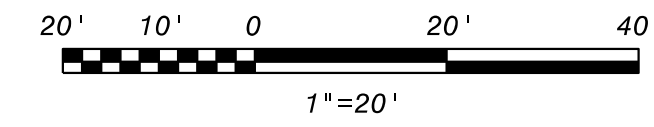


LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

PROJ. AND ADOPT. & MANDEVILLE BYPASS

PROJ. AND ADOPT. & MANDEVILLE BYPASS



SHEET NUMBER 89

ST. TAMMANY
 PARISH PROJECT 2014EN0001
 BK/L PROJECT NO.15.012

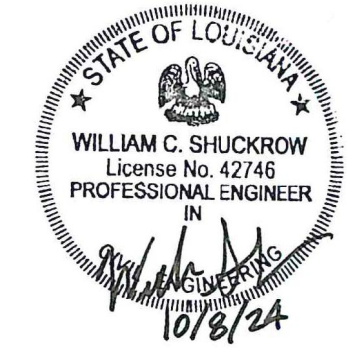


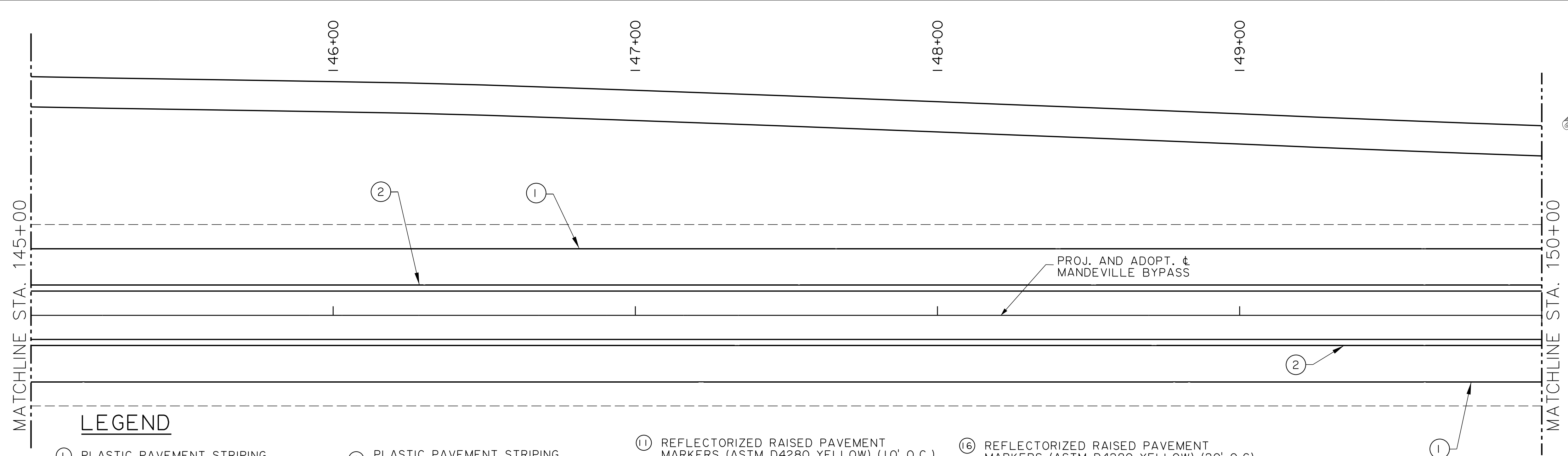
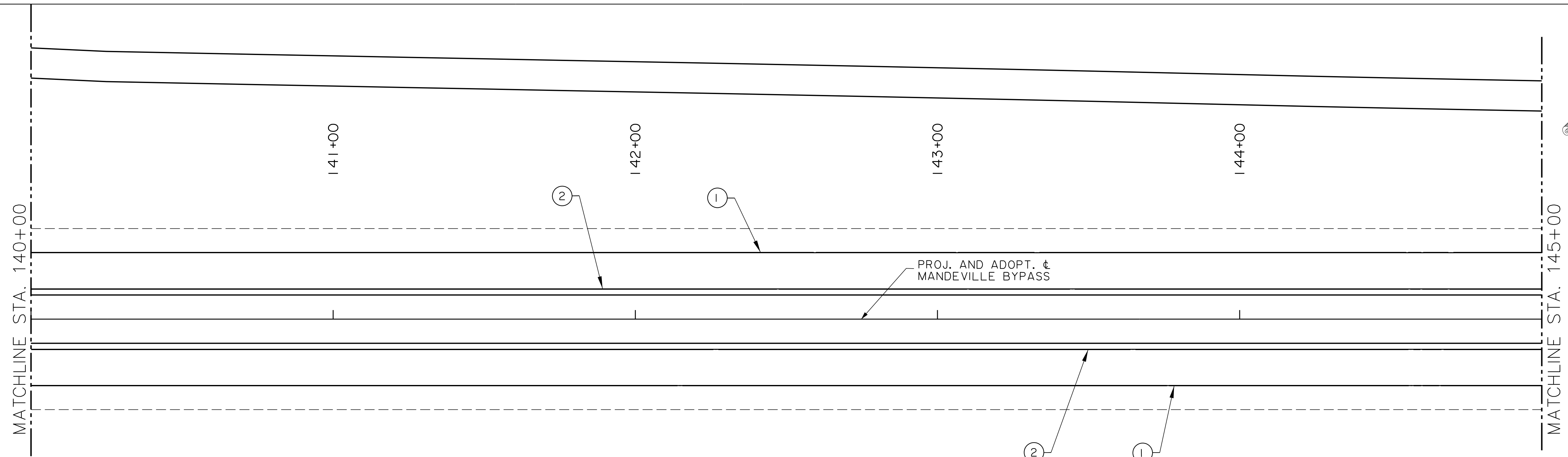
MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS STRIPING DETAILS



DESIGNED WCS
 CHECKED DSY
 DETAILED JAT
 CHECKED DSY
 DATE 10/9/2024
 SHEET 7 OF 24

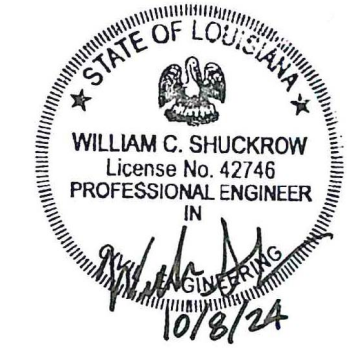
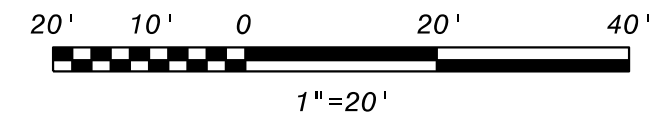
NO.	DATE	REVISION DESCRIPTION	BY







LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

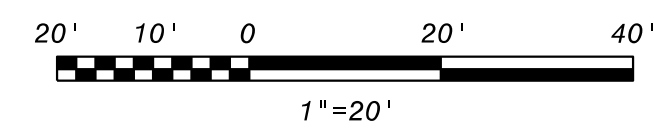
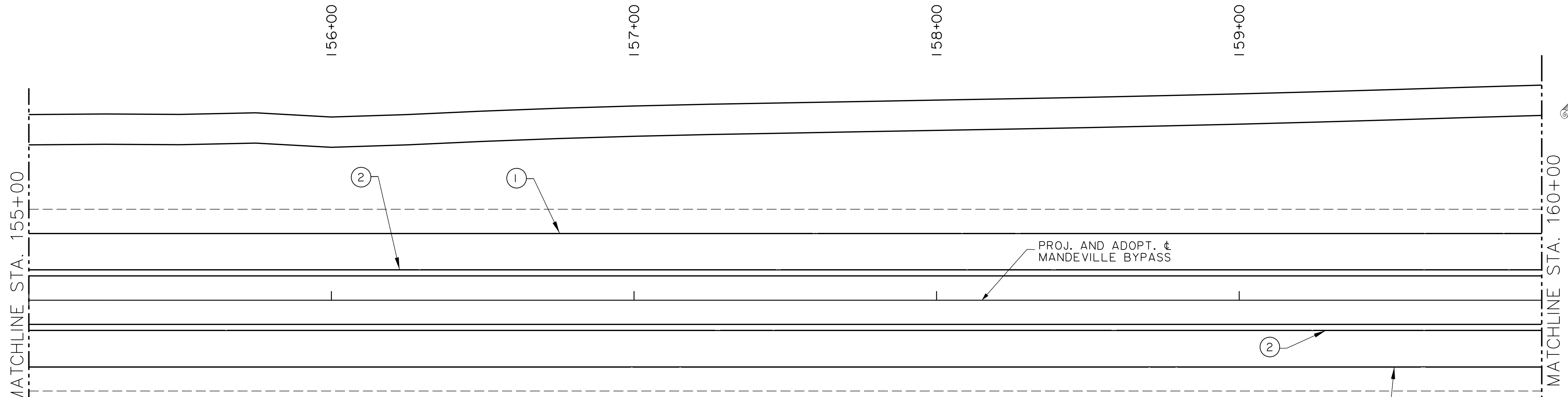
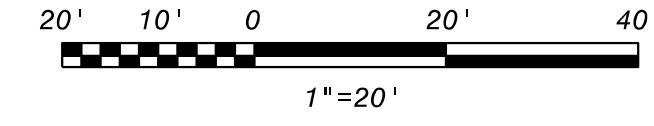
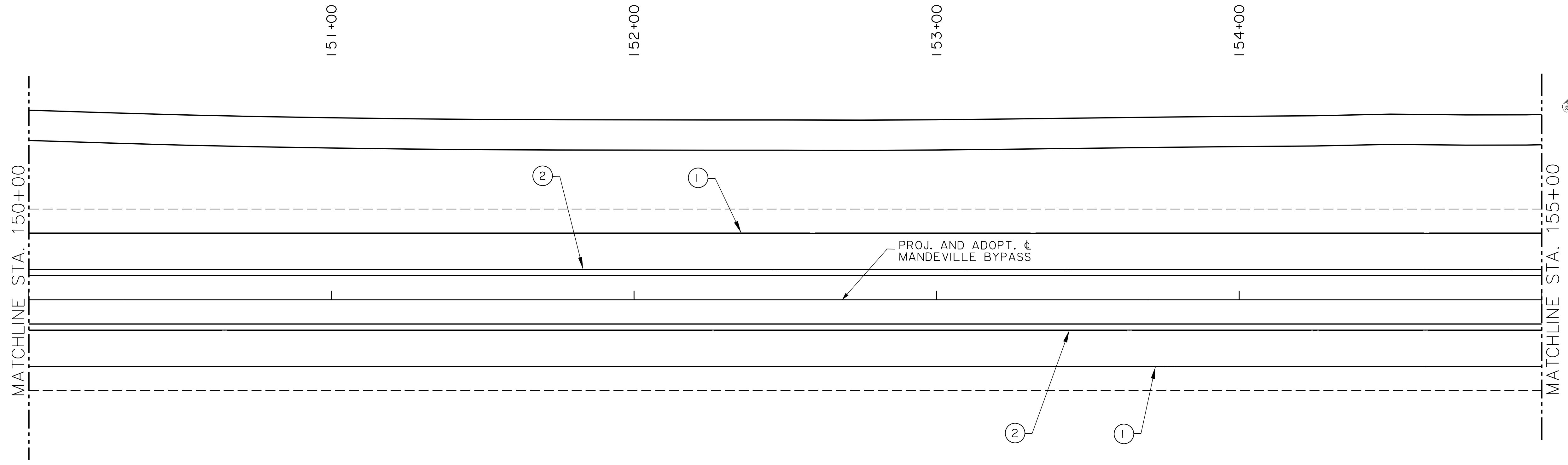


SHEET NUMBER	90
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS STRIPING DETAILS	
	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	8 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

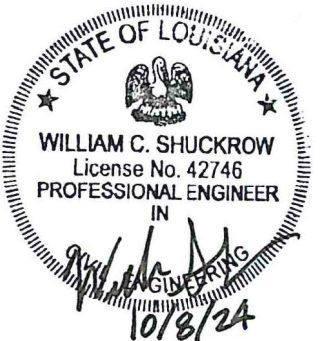
10/9/2024

STRIPING_12629_9.dgn

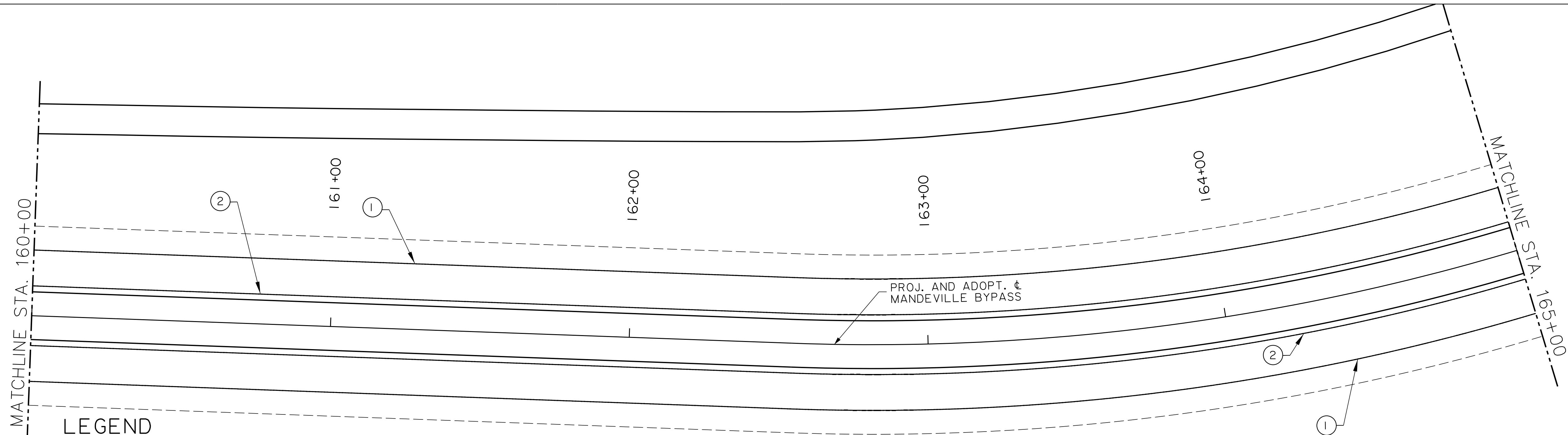


LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑭ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑯ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

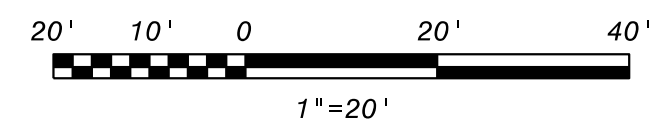
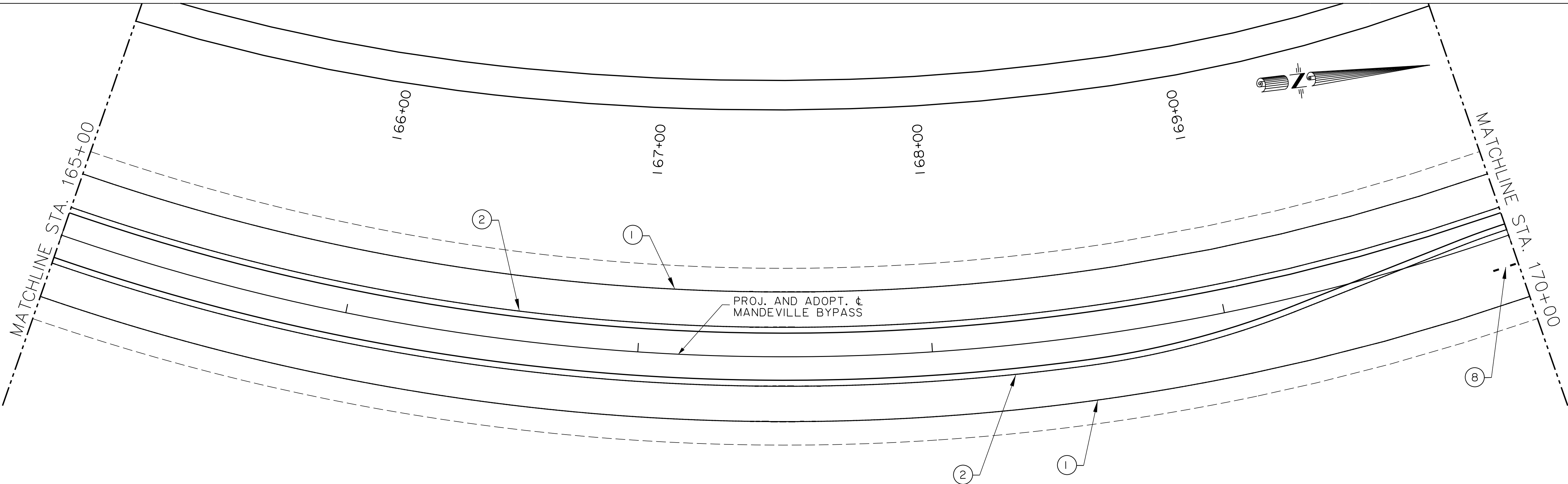
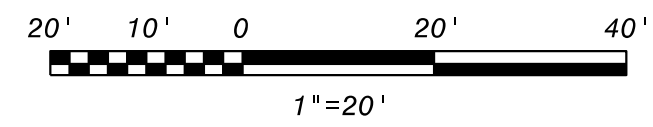


DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	SHEET	9 OF 24
ROADWAY PLANS STRIPING DETAILS MANDEVILLE BY PASS LA 1088 TO US 190 ST. TAMMANY PARISH PROJECT 2014EN0001 BK/L PROJECT NO.15.012 SHEET NUMBER 91					
STATE OF LOUISIANA PROFESSIONAL ENGINEER WILLIAM C. SHUCKROW License No. 42746 10/8/24					
NO.	DATE	BY	REVISION DESCRIPTION		



LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑯ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12" SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

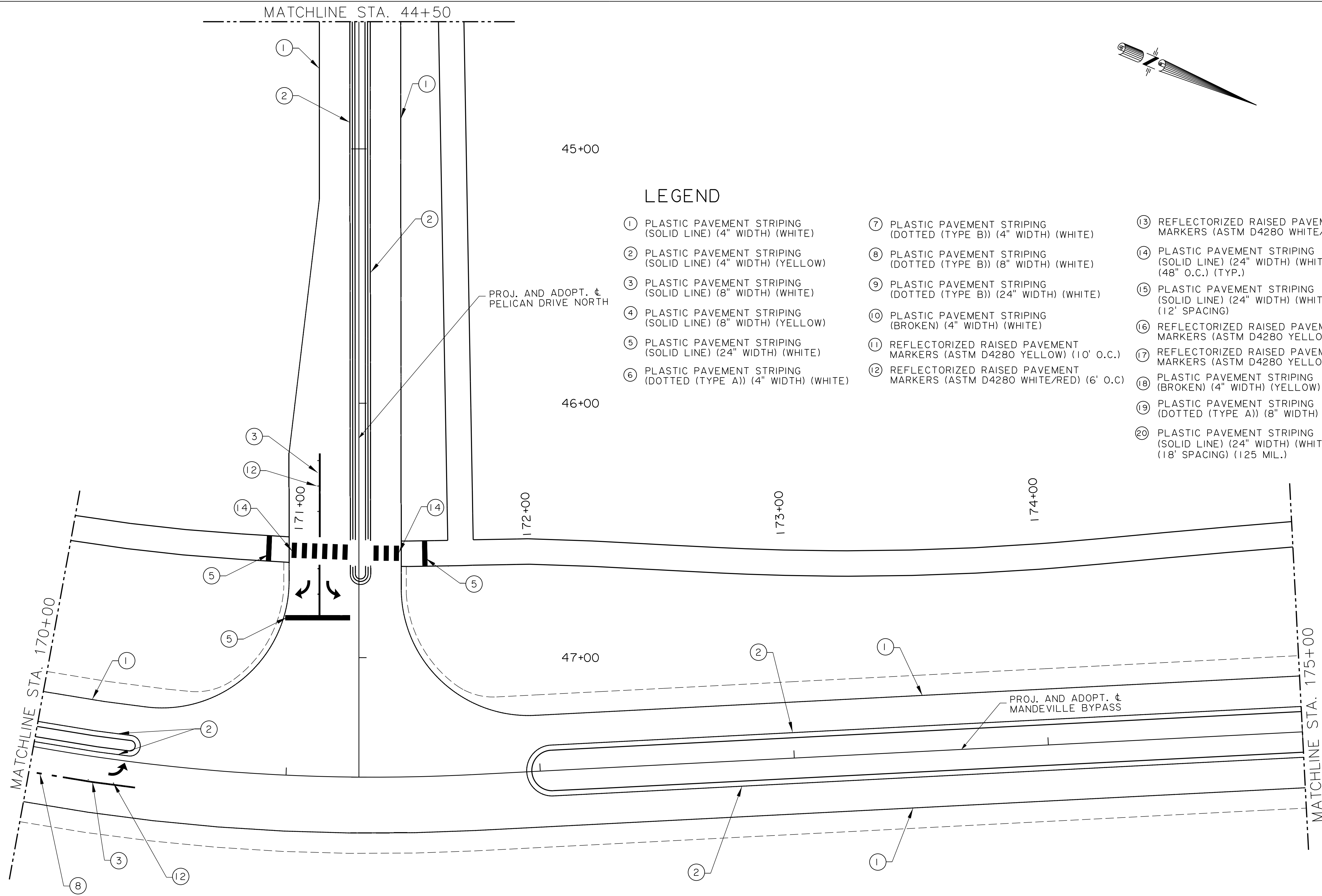


SHEET NUMBER	92
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	STRIPING DETAILS
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	10 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

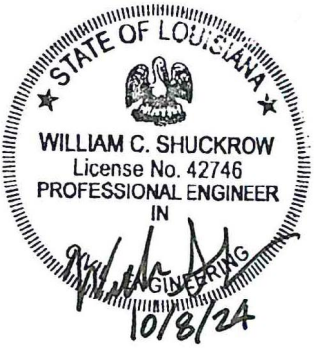
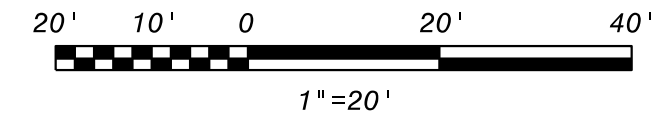
10/9/2024

STRIPING_12629_11.dgn



LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)



SHEET NUMBER	93	ST. TAMMANY	2014EN0001	NO.15.012
PARISH	PROJECT	PROJECT		
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS STRIPING DETAILS				
DESIGNED	WCS	CHECKED	DSY	DATE
10/9/2024		10/9/2024		11 OF 24
REVISION DESCRIPTION NO. DATE BY				

XREF:

10/9/2024

STRIPING_12629_12.dgn

BEGIN WORK
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E=3696398.24

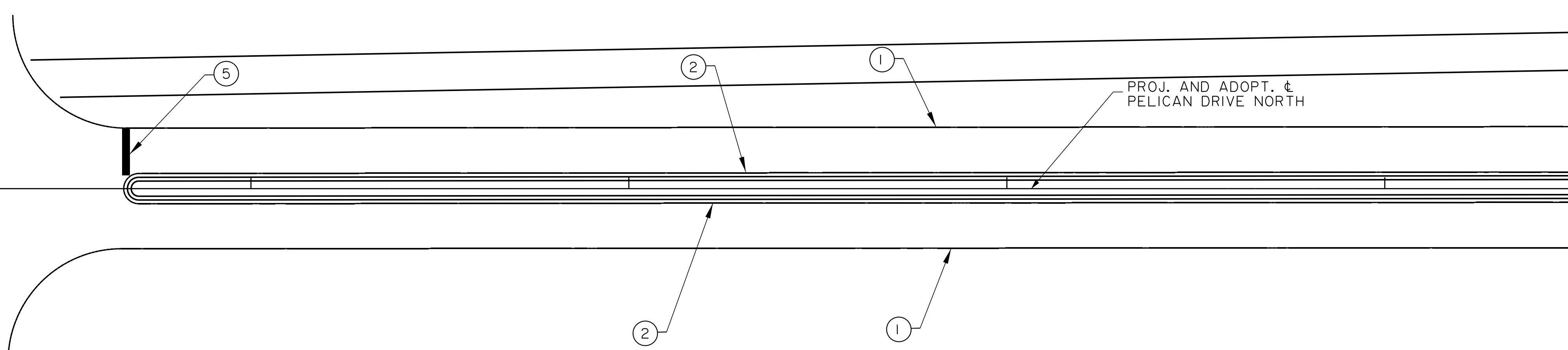
40+00

41+00

42+00

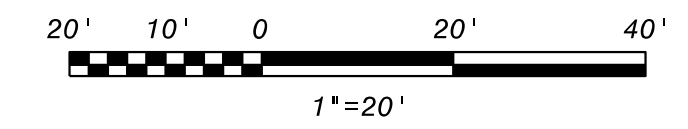
43+00

44+00



PROJ. AND ADOPT. CL
PELICAN DRIVE NORTH

MATCHLINE STA. 44+50



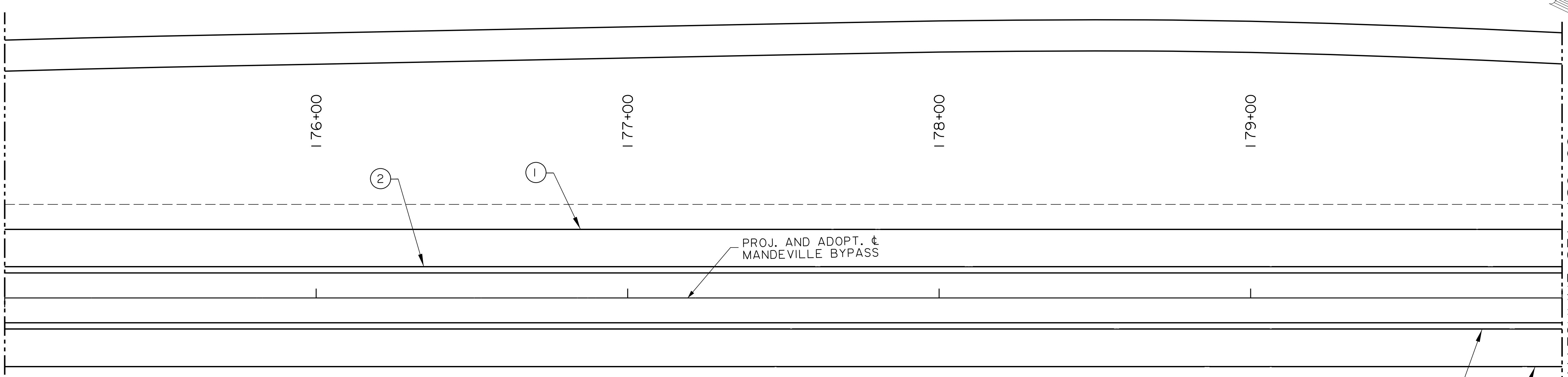
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176+00

177+00

178+00

179+00

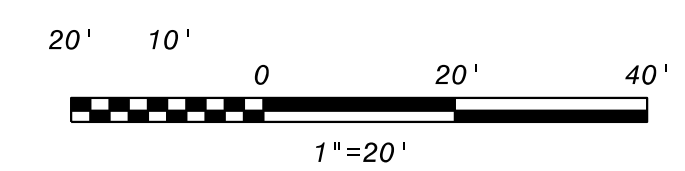


PROJ. AND ADOPT. CL
MANDEVILLE BYPASS

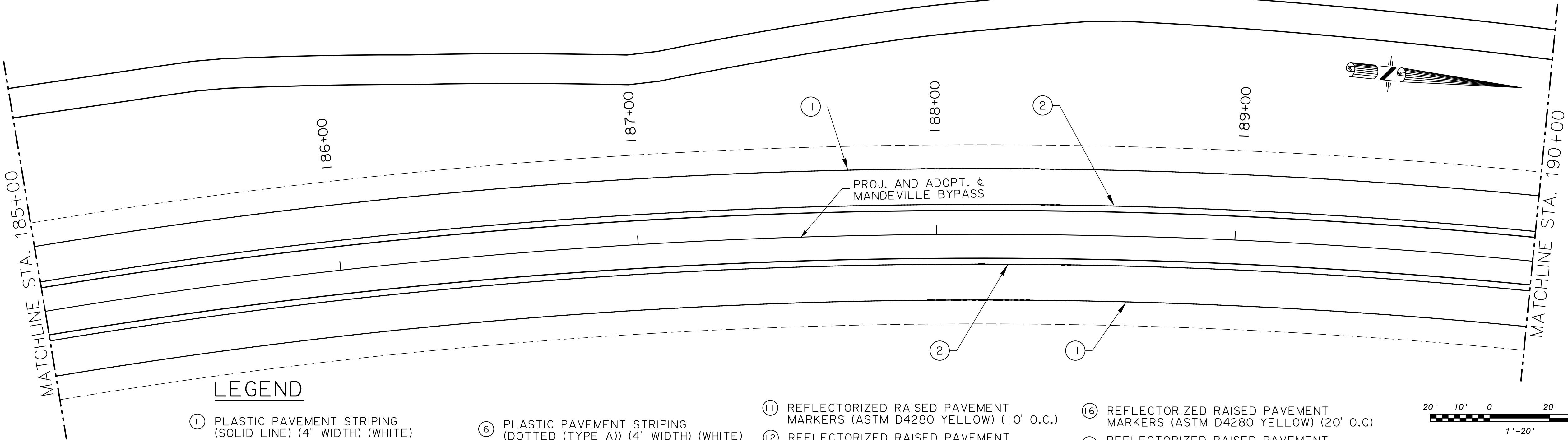
MATCHLINE STA. 180+00

LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18" SPACING) (125 MIL.)

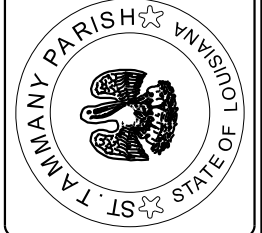
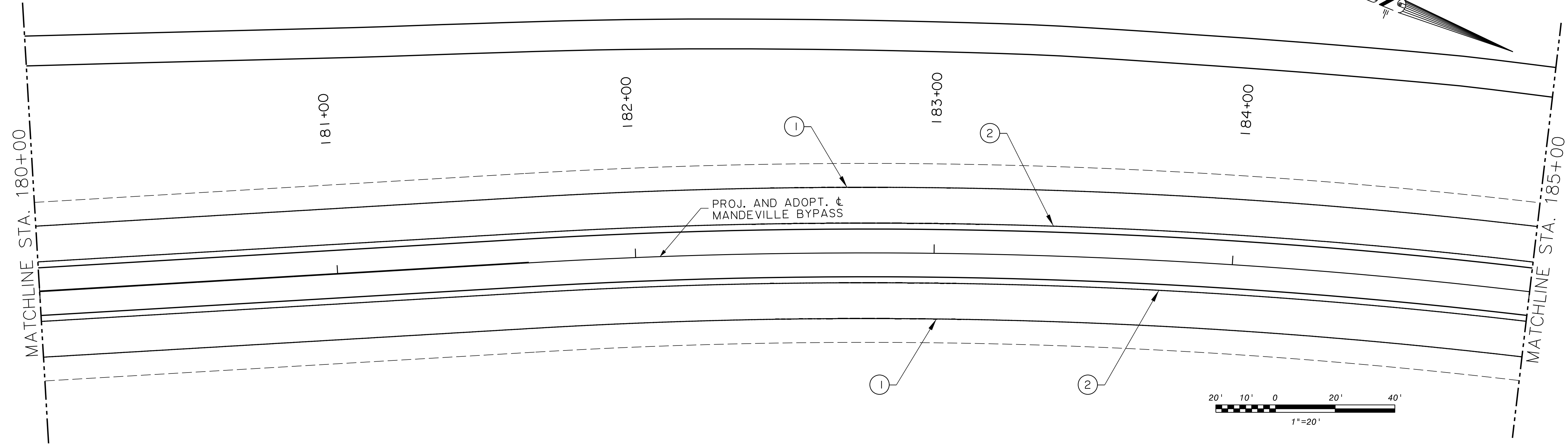
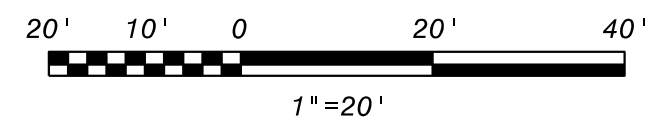


SHEET NUMBER	94
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	STRIPING DETAILS
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	12 OF 24
NO.	DATE
BY	REVISION DESCRIPTION



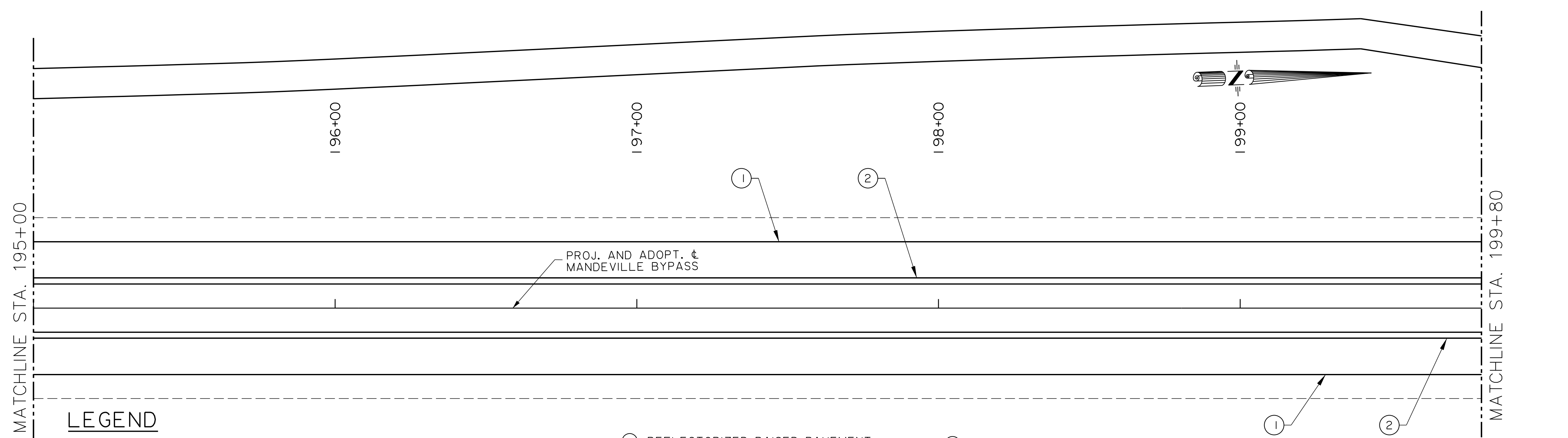
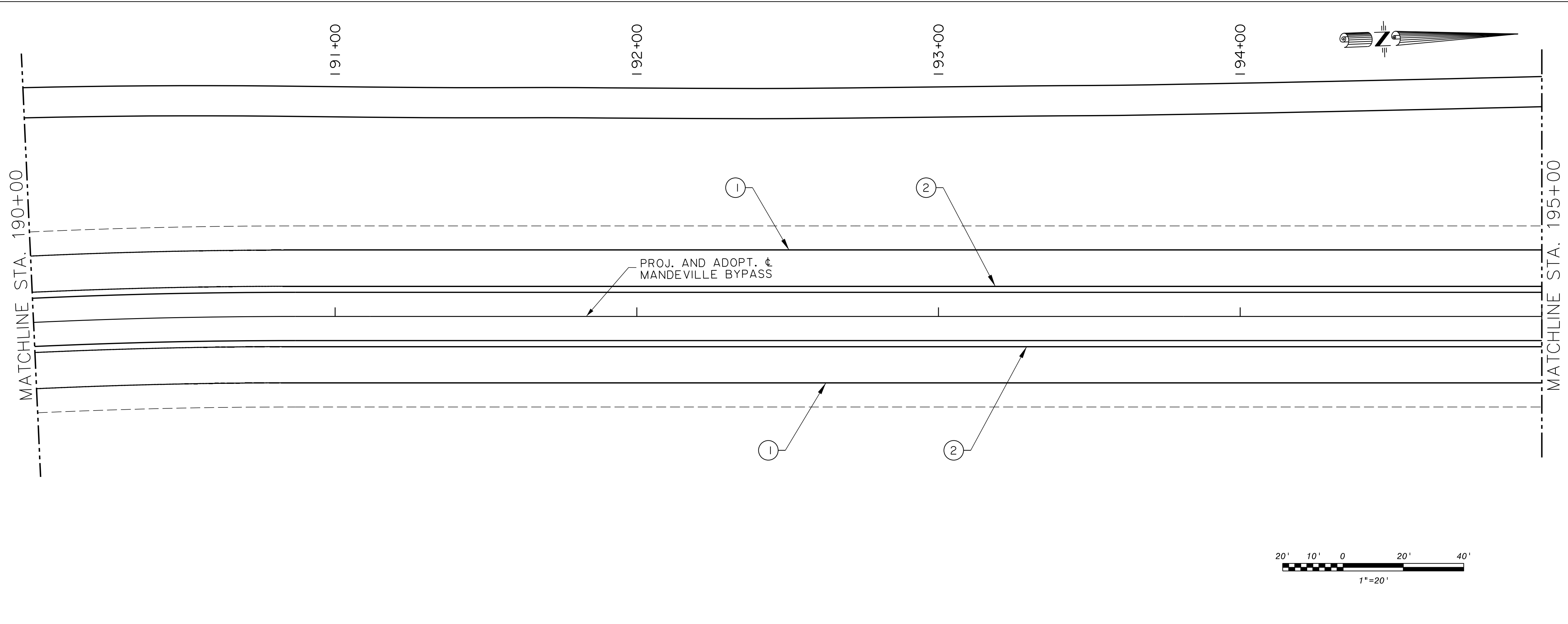
LEGEND

- | | | | | |
|--|---|--|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑮ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑯ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) | | ⑲ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |



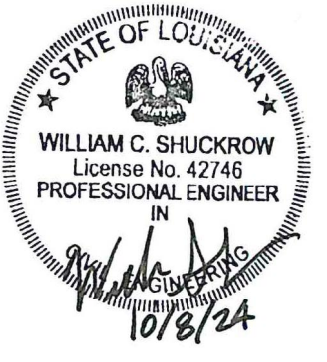
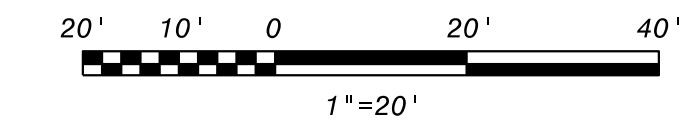
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	13 OF 24

NO.	DATE	REVISION DESCRIPTION	BY

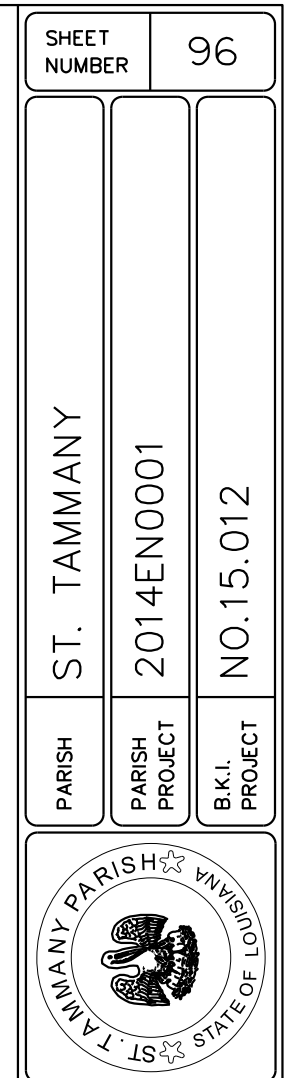


LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)



SHEET NUMBER	96	PARISH	ST. TAMMANY	PROJECT	2014EN0001
ROADWAY PLANS	STRIPING DETAILS	DESIGNED	WCS	CHECKED	DSY
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		BY			
		REVISION DESCRIPTION			

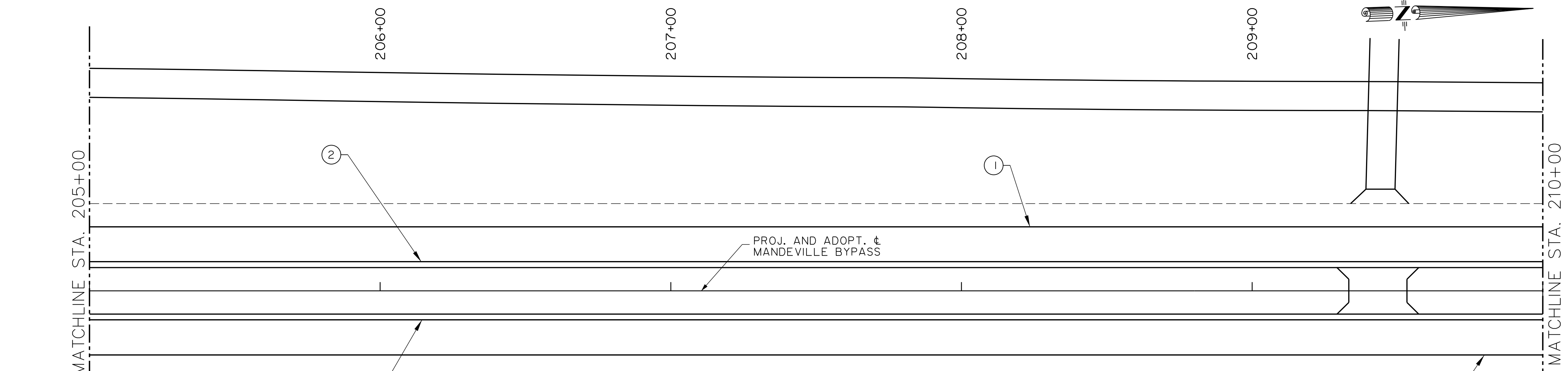


MANDEVILLE BY PASS
LA 1088 TO US 190

XREF:

10/9/2024

STRIPING_12629_15.dgn



LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑰ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

SHEET NUMBER 97

ST. TAMMANY
 PARISH PROJECT NO. 2014EN0001
 B.K.L. PROJECT NO. 15.012



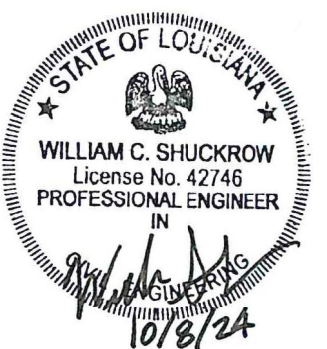
MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS STRIPING DETAILS



BKI

DESIGNED WCS
 CHECKED DSY
 DETAILED JAT
 CHECKED DSY
 DATE 10/9/2024
 SHEET 15 OF 24

NO.	DATE	REVISION DESCRIPTION	BY



MATCHLINE STA. 210+00

MATCHLINE STA. 215+00

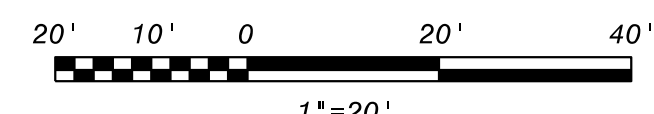
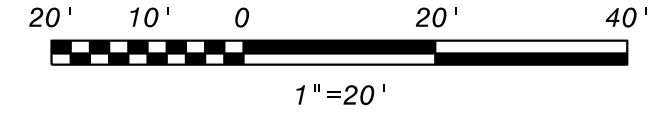
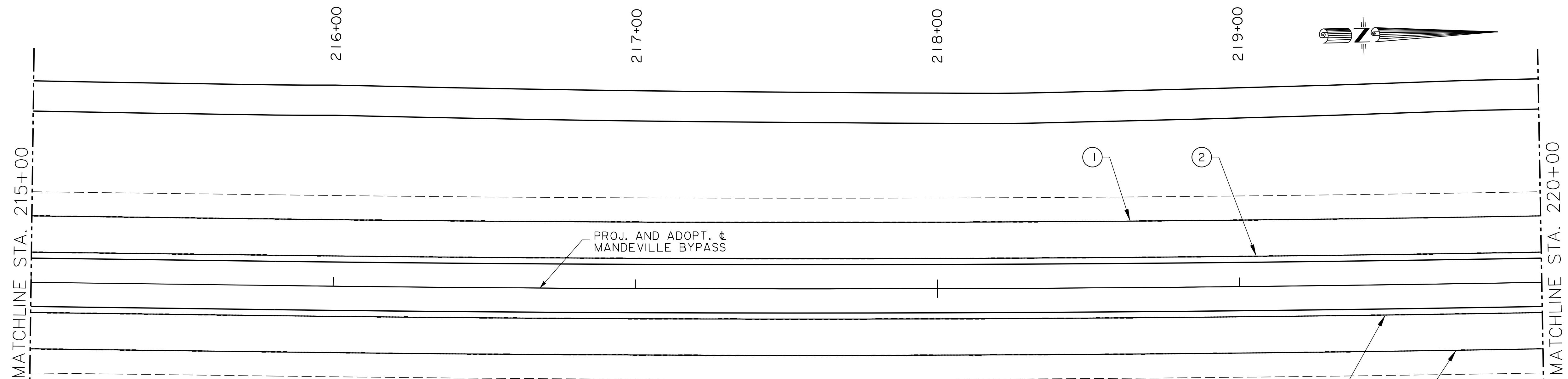
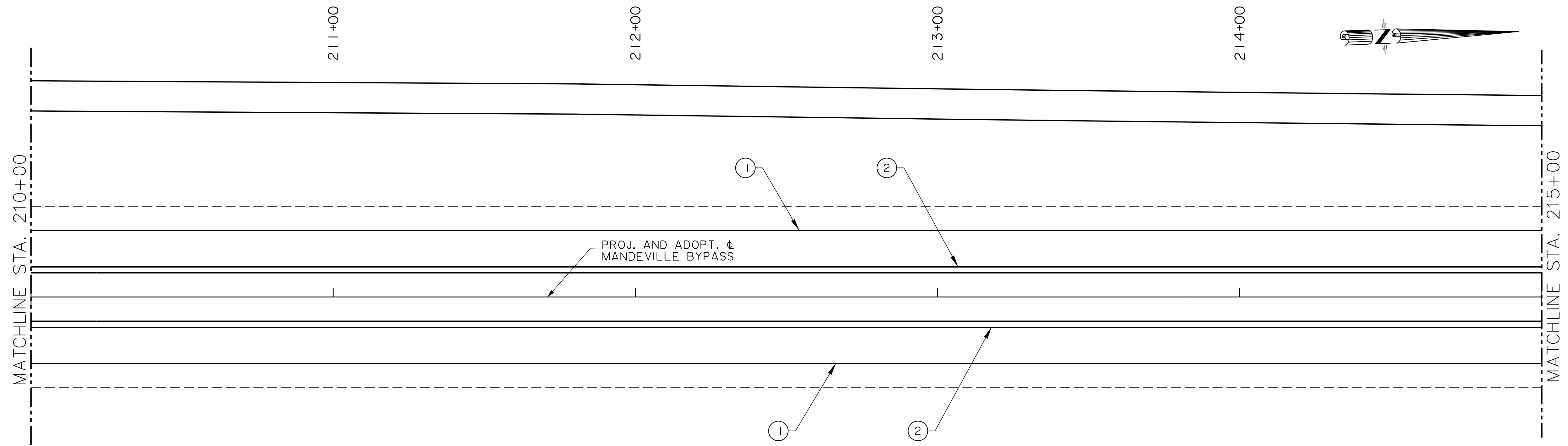
LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)

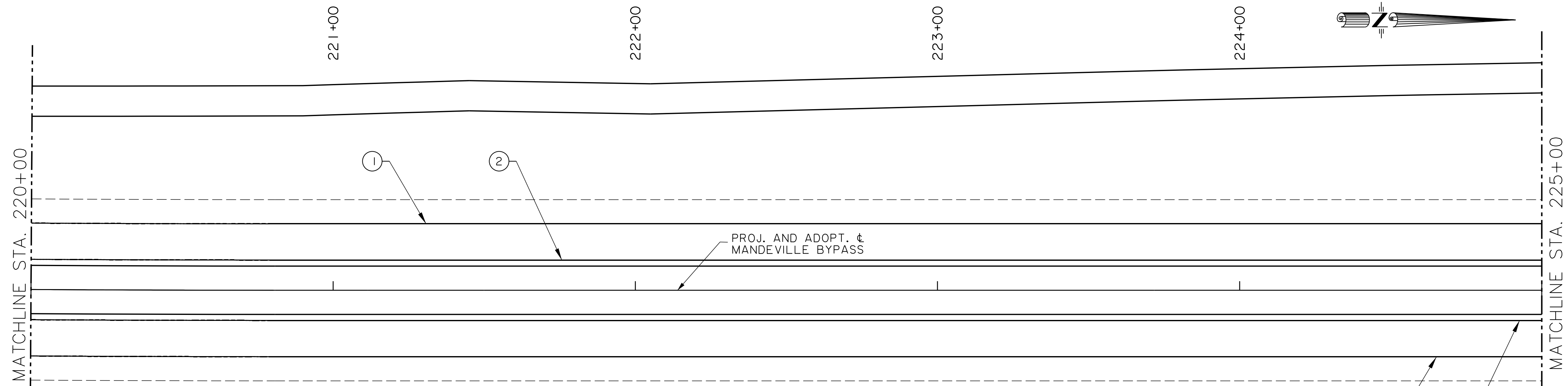
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)

- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.)

- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)

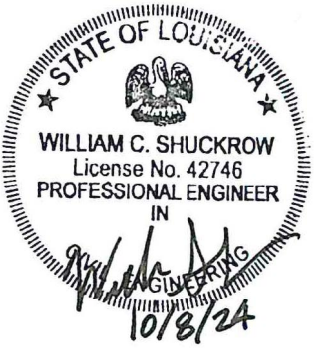
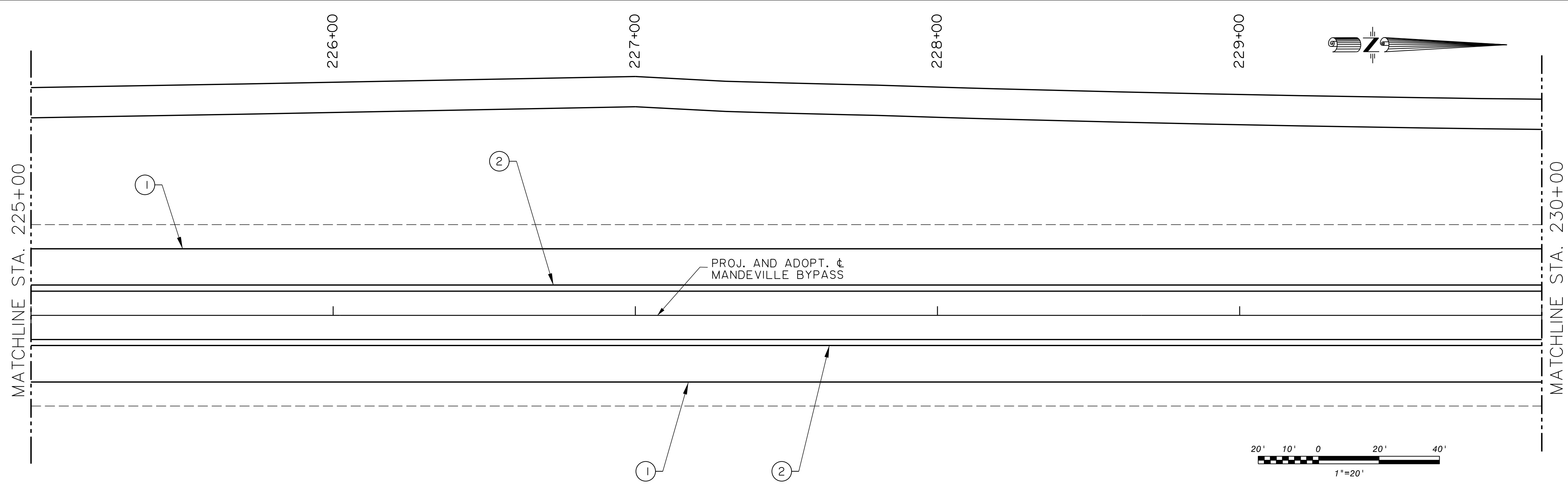


DESIGNED	WCS	CHECKED	DSY
DATE	10/9/2024	SHEET	16 OF 24
MANDEVILLE BY PASS LA 1088 TO US 190		ST. TAMMANY 2014EN0001 NO.15.012	
ROADWAY PLANS		STRIPING DETAILS	
NO.	DATE	BY	REVISION DESCRIPTION



LEGEND

① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)	⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)	⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)	⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)	⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)	⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)	⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)	⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)	⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)	⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)	⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)	⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)	⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)	⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)	⑯ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12" SPACING) (125 MIL.)	⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18" SPACING) (125 MIL.)

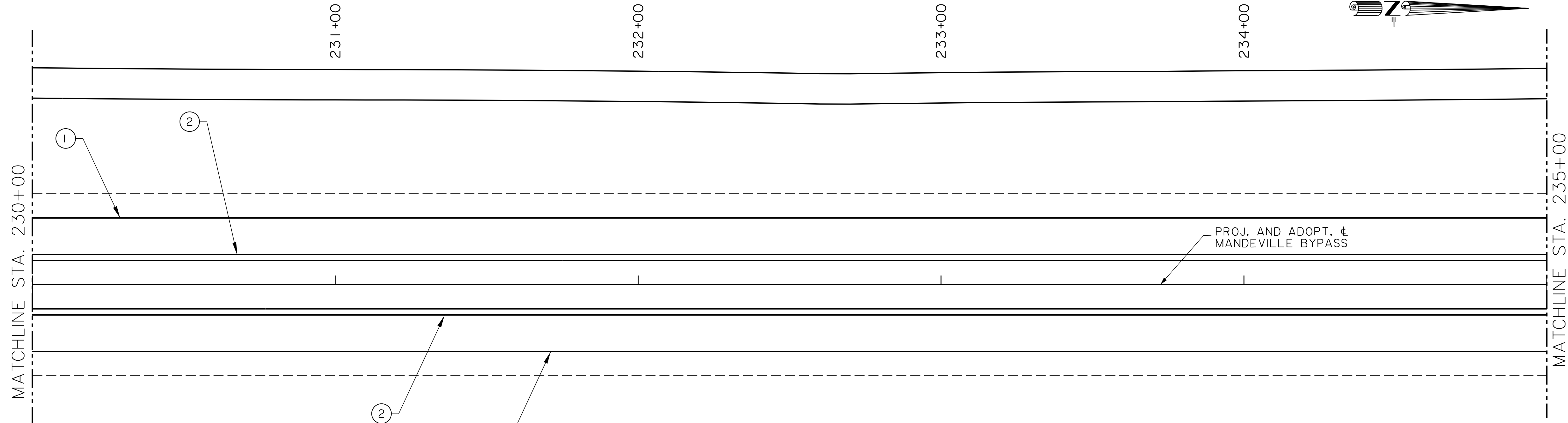


SHEET NUMBER	99	ST. TAMMANY	NO. 15.012
PARISH	PROJECT	2014EN0001	
		MANDEVILLE BY PASS LA 1088 TO US 190	
		ROADWAY PLANS STRIPING DETAILS	
DESIGNED	WCS	CHECKED	DSY
DATE	10/9/2024	CHECKED	DSY
SHEET	17 OF 24		
NO.	DATE	REVISION DESCRIPTION	BY

XREF:

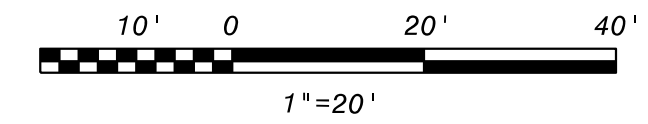
10/9/2024

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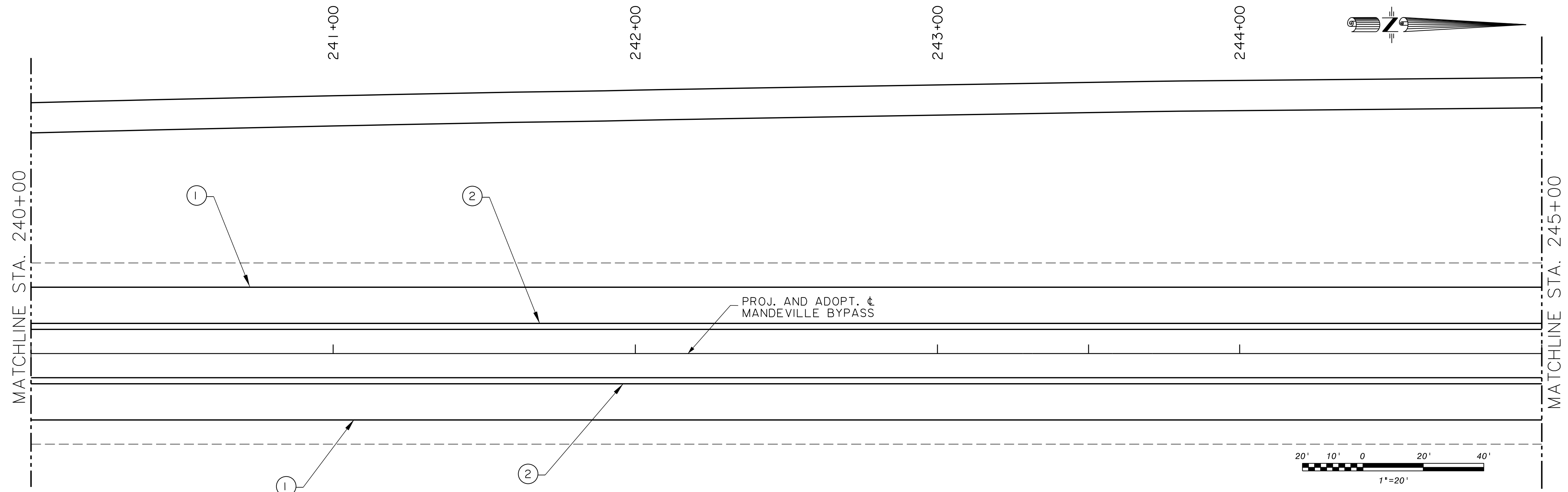
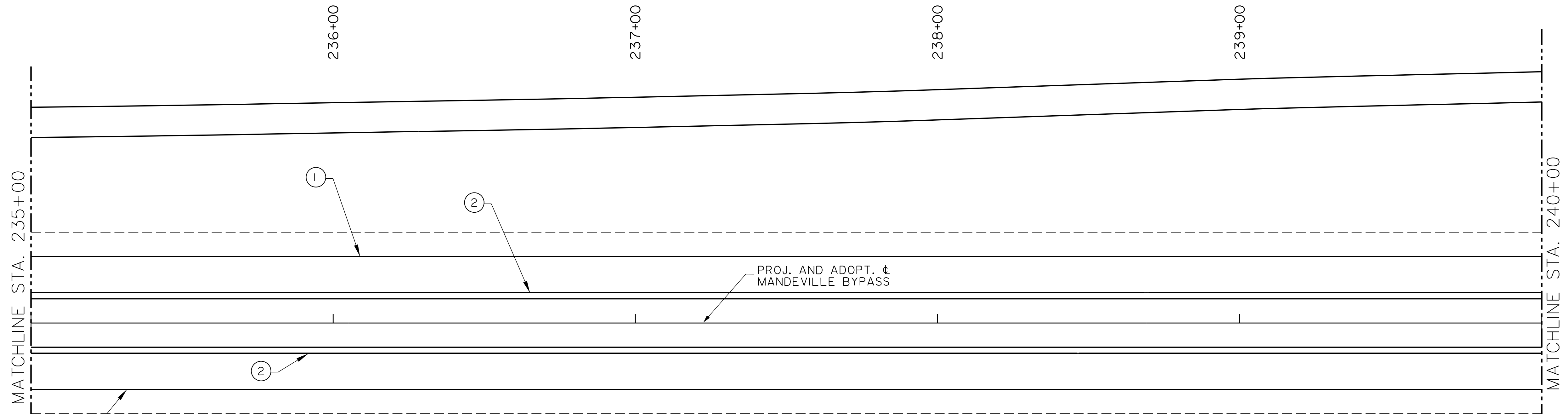
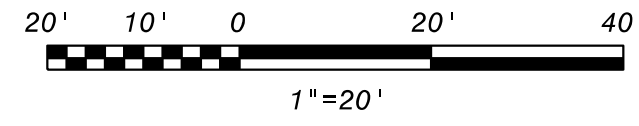


LEGEND

- | | | | |
|--|---|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑯ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12" SPACING) (125 MIL.) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18" SPACING) (125 MIL.) |

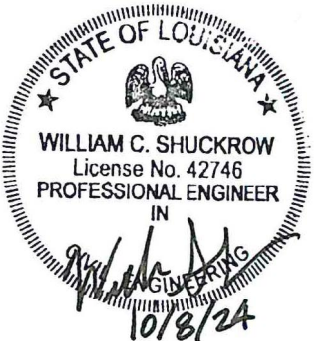
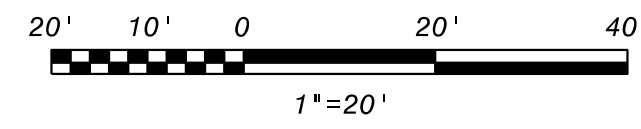


DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024	SHEET	18 OF 24	
DETAILED	JAT	CHECKED	DSY					
REVISION DESCRIPTION							NO.	DATE
BY								
ROADWAY PLANS							STRIPING DETAILS	
MANDEVILLE BY PASS LA 1088 TO US 190								
ST. TAMMANY							PROJECT	NO. 15.012
PARISH PROJECT							NO.	2014EN0001
STATE OF LOUISIANA								
SHEET NUMBER								100

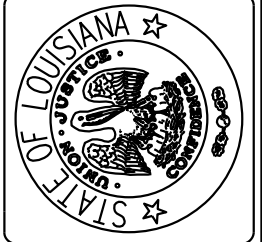


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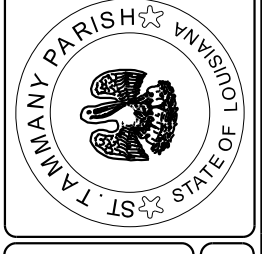
- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)



DESIGNED	WCS	DATE	10/9/2024
CHECKED	DSY	CHECKED	DSY
DATE	10/9/2024	SHEET	19 OF 24
NO.	DATE	BY	REVISION DESCRIPTION



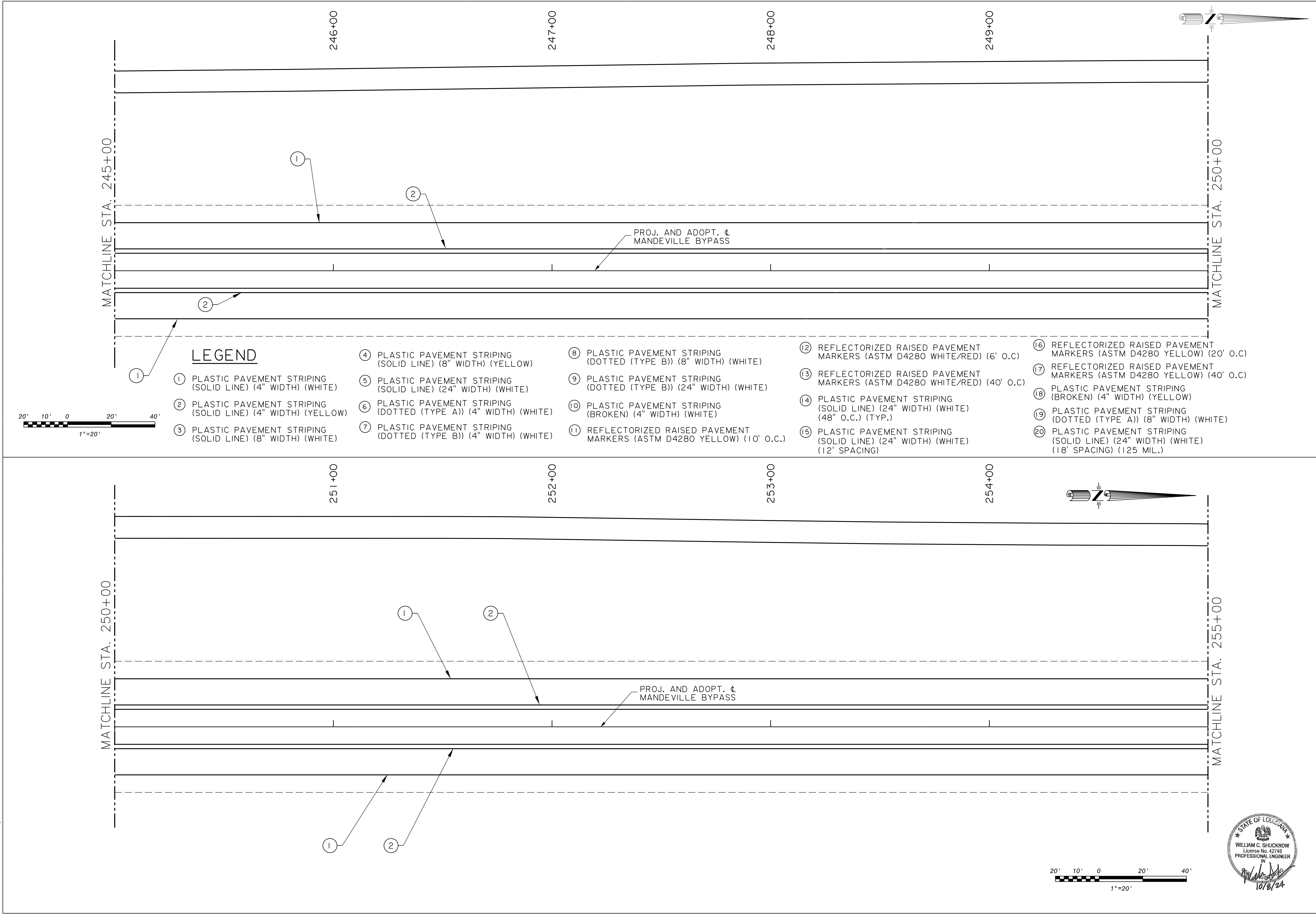
MANDEVILLE BY PASS
LA 1088 TO US 190



PARISH ST. TAMMANY
PROJECT 2014EN0001
B.K.L. PROJECT NO. 15.012

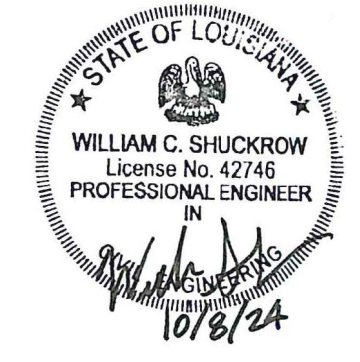
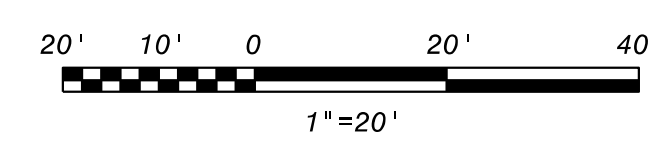
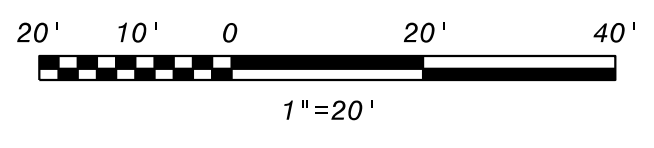
SHEET NUMBER 101

ROADWAY PLANS STRIPING DETAILS

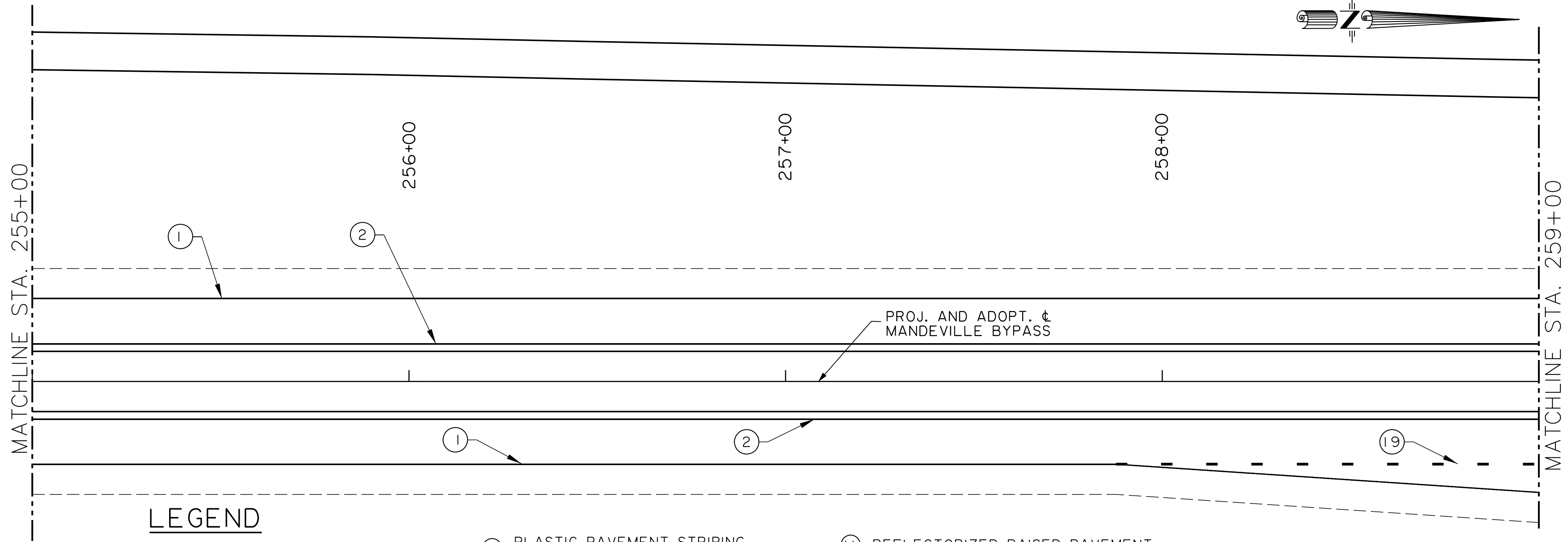
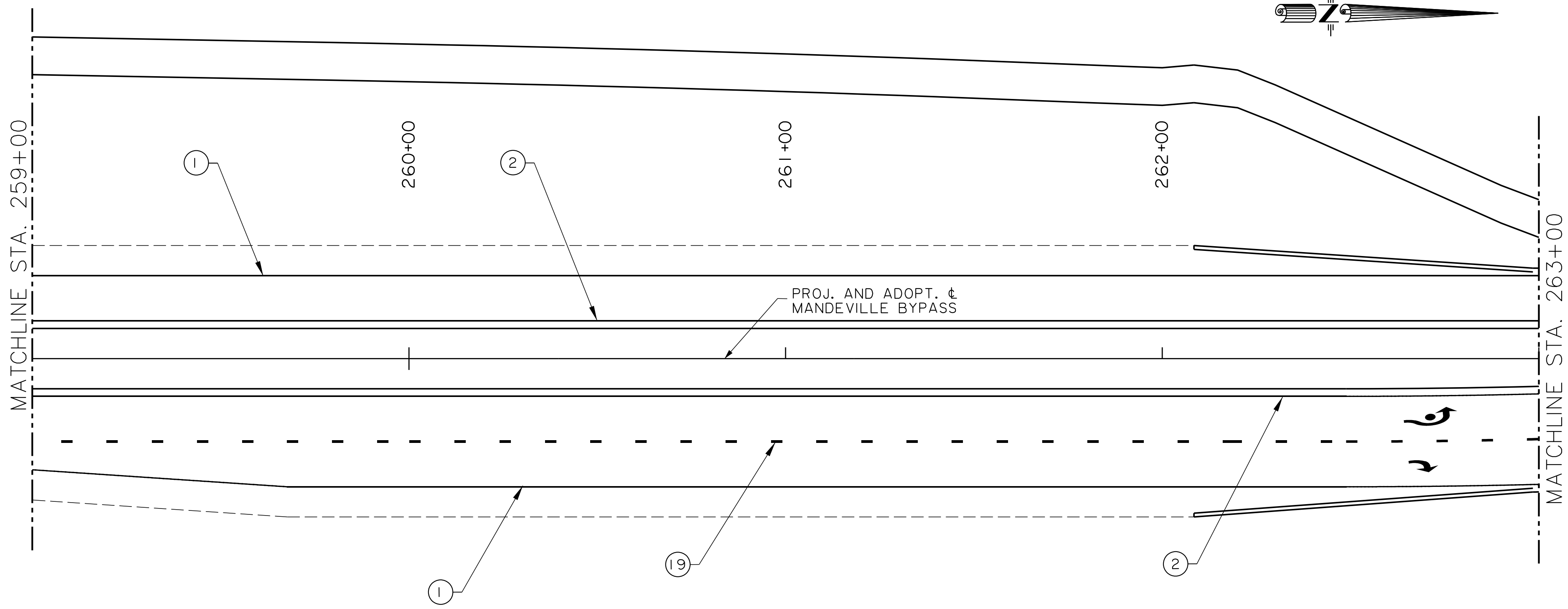


LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)

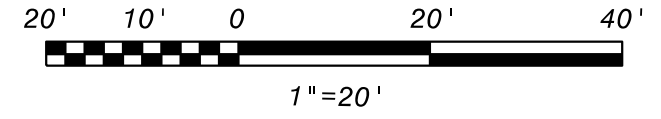
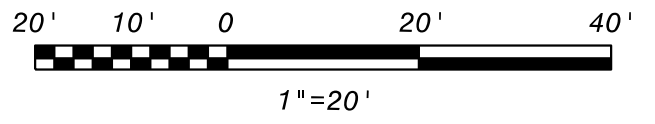


SHEET NUMBER	102				
PARISH	ST. TAMMANY	PROJECT	2014EN0001	B.K.L. PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190					
ROADWAY PLANS					
STRIPING DETAILS					
DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DESIGNED	JAT	CHECKED	DSY	DATE	10/9/2024
					20 OF 24
NO.	DATE	BY	REVISION DESCRIPTION		

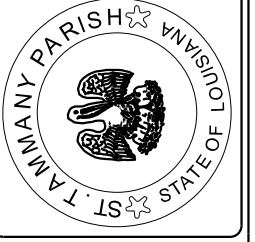


LEGEND

- | | | | |
|--|---|--|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |



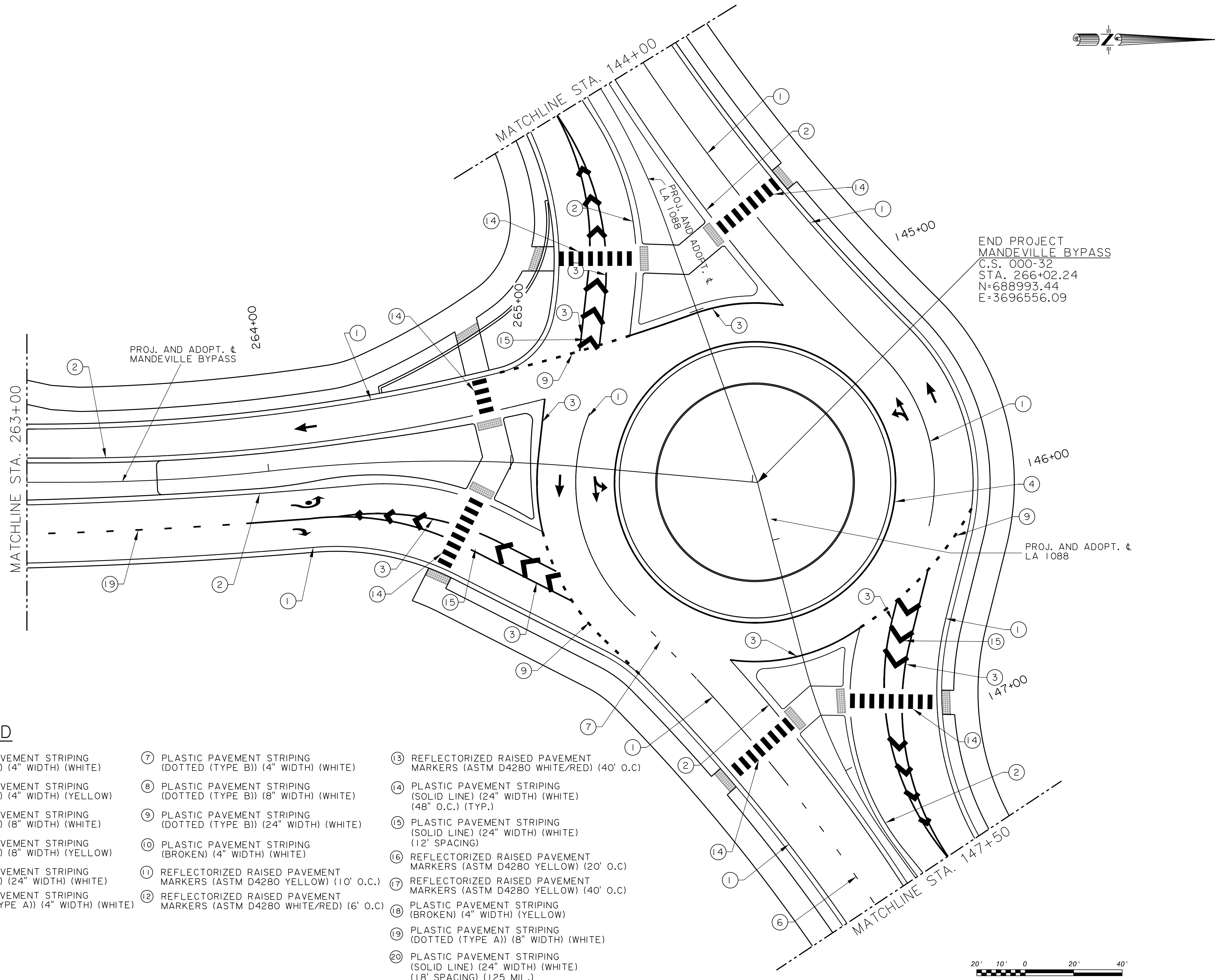
DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	SHEET	21 OF 24
ST. TAMMANY			PARISH PROJECT	2014EN0001	
MANDEVILLE BY PASS			BK/L PROJECT	NO.15.012	
LA 1088 TO US 190			STRIPING DETAILS		
NO.	DATE	REVISION DESCRIPTION			



XREF:

10/9/2024

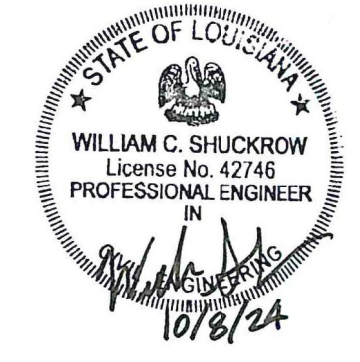
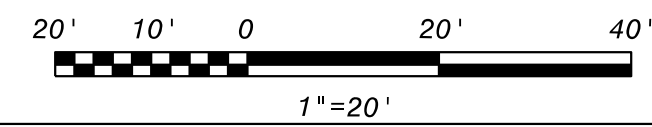
STRIPING_12629_22.dgn



END PROJECT
 MANDEVILLE BYPASS
 C.S. 000-32
 STA. 266+02.24
 N=688993.44
 E=3696556.09

LEGEND

- | | | |
|--|---|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C) |
| ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| | | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| | | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

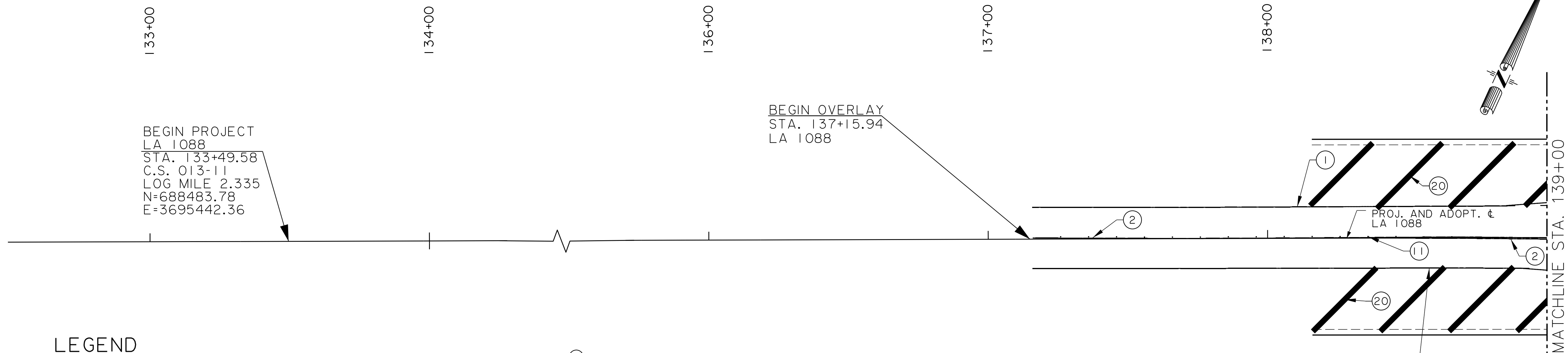


SHEET NUMBER	104
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS STRIPING DETAILS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
DESIGNED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	22 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

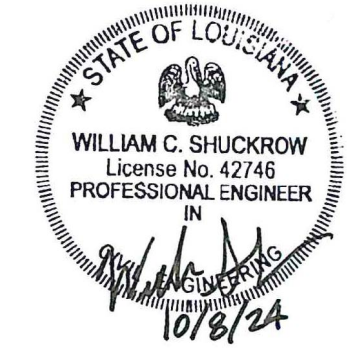
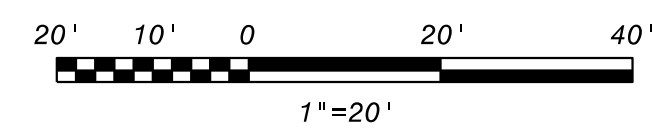
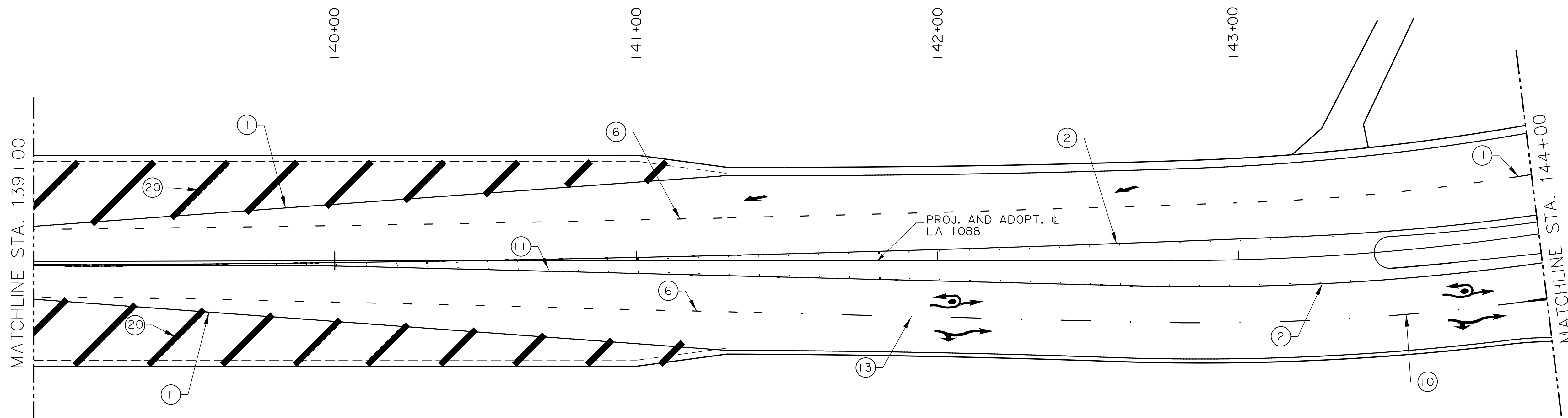
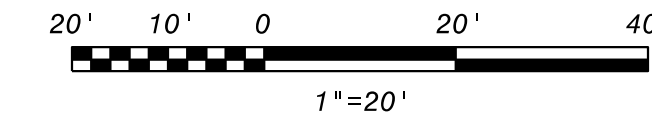
10/9/2024


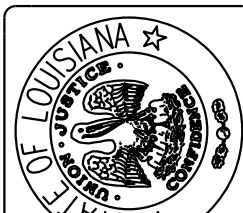
STRIPING_12629_23.dgn



LEGEND

- | | | | |
|--|---|--|---|
| ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE) | ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE) | ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.) | ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) |
| ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW) | ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE) | ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.) | ⑯ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE) | ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE) | ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.) | ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.) |
| ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW) | ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE) | ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.) | ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW) |
| ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) | ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE) | | ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE) |
| | | | ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.) |

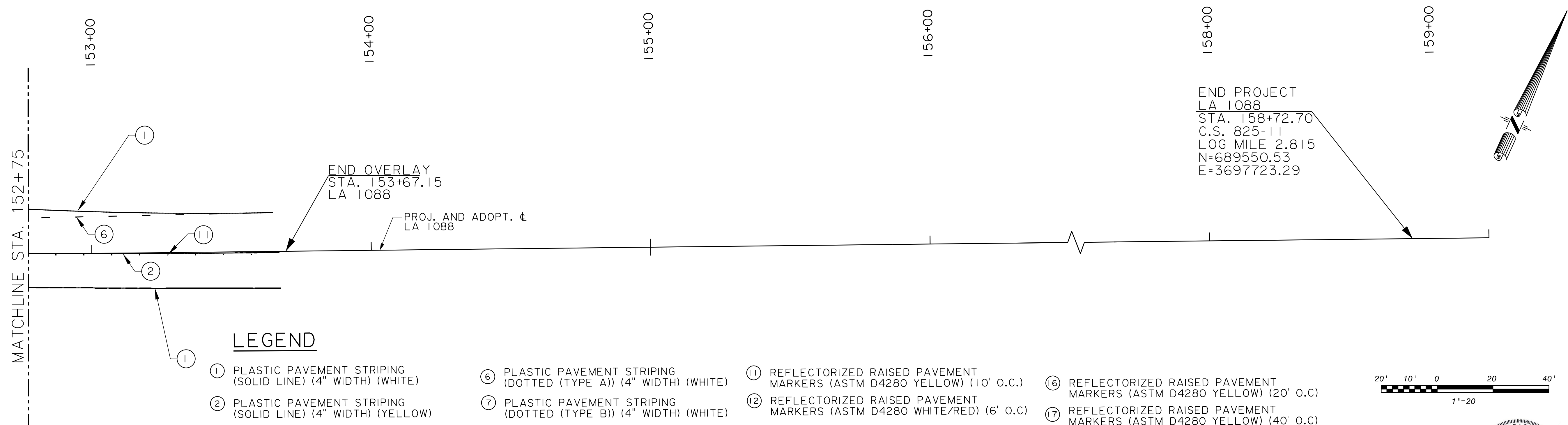
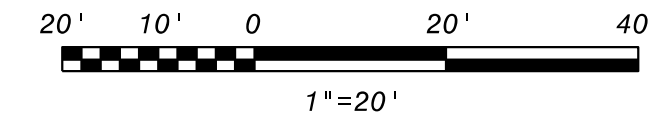
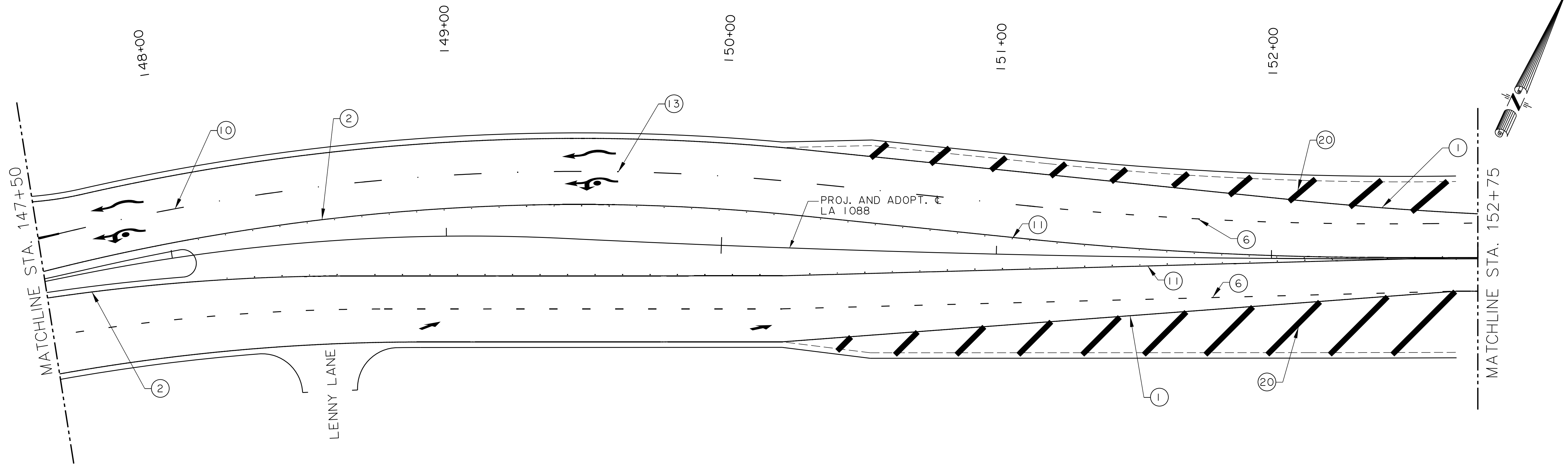


SHEET NUMBER	105
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS STRIPING DETAILS	
	
	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	23 OF 24
NO.	DATE
BY	REVISION DESCRIPTION

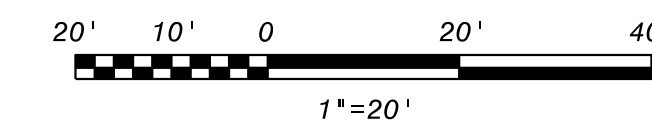
XREF:

10/9/2024

STRIPING_12629_24.dgn

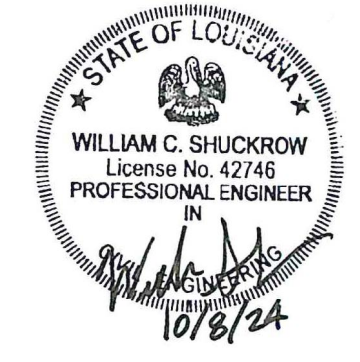


END PROJECT
 LA 1088
 STA. 158+72.70
 C.S. 825-11
 LOG MILE 2.815
 N=689550.53
 E=3697723.29



LEGEND

- ① PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (WHITE)
- ② PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (YELLOW)
- ③ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (WHITE)
- ④ PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (YELLOW)
- ⑤ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE)
- ⑥ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (4" WIDTH) (WHITE)
- ⑦ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (4" WIDTH) (WHITE)
- ⑧ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (8" WIDTH) (WHITE)
- ⑨ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE B)) (24" WIDTH) (WHITE)
- ⑩ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (WHITE)
- ⑪ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (10' O.C.)
- ⑫ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (6' O.C.)
- ⑬ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 WHITE/RED) (40' O.C.)
- ⑭ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (48" O.C.) (TYP.)
- ⑮ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (12' SPACING) (125 MIL.)
- ⑯ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (20' O.C.)
- ⑰ REFLECTORIZED RAISED PAVEMENT MARKERS (ASTM D4280 YELLOW) (40' O.C.)
- ⑱ PLASTIC PAVEMENT STRIPING (BROKEN) (4" WIDTH) (YELLOW)
- ⑲ PLASTIC PAVEMENT STRIPING (DOTTED (TYPE A)) (8" WIDTH) (WHITE)
- ⑳ PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (WHITE) (18' SPACING) (125 MIL.)

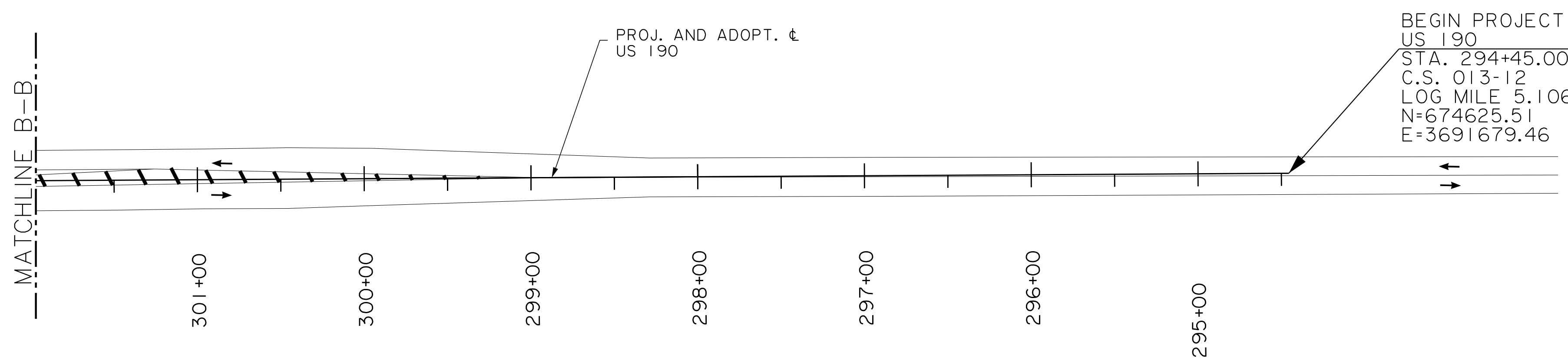


SHEET NUMBER	106	PARISH	ST. TAMMANY	PROJECT	2014EN0001
ROADWAY PLANS	STRIPING DETAILS	NO.	DATE	BY	REVISION DESCRIPTION
DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	SHEET	24 OF 24

XREF:

10/9/2024

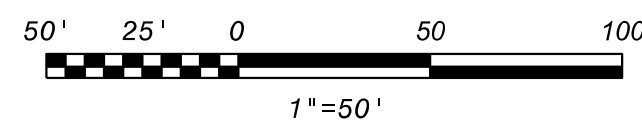
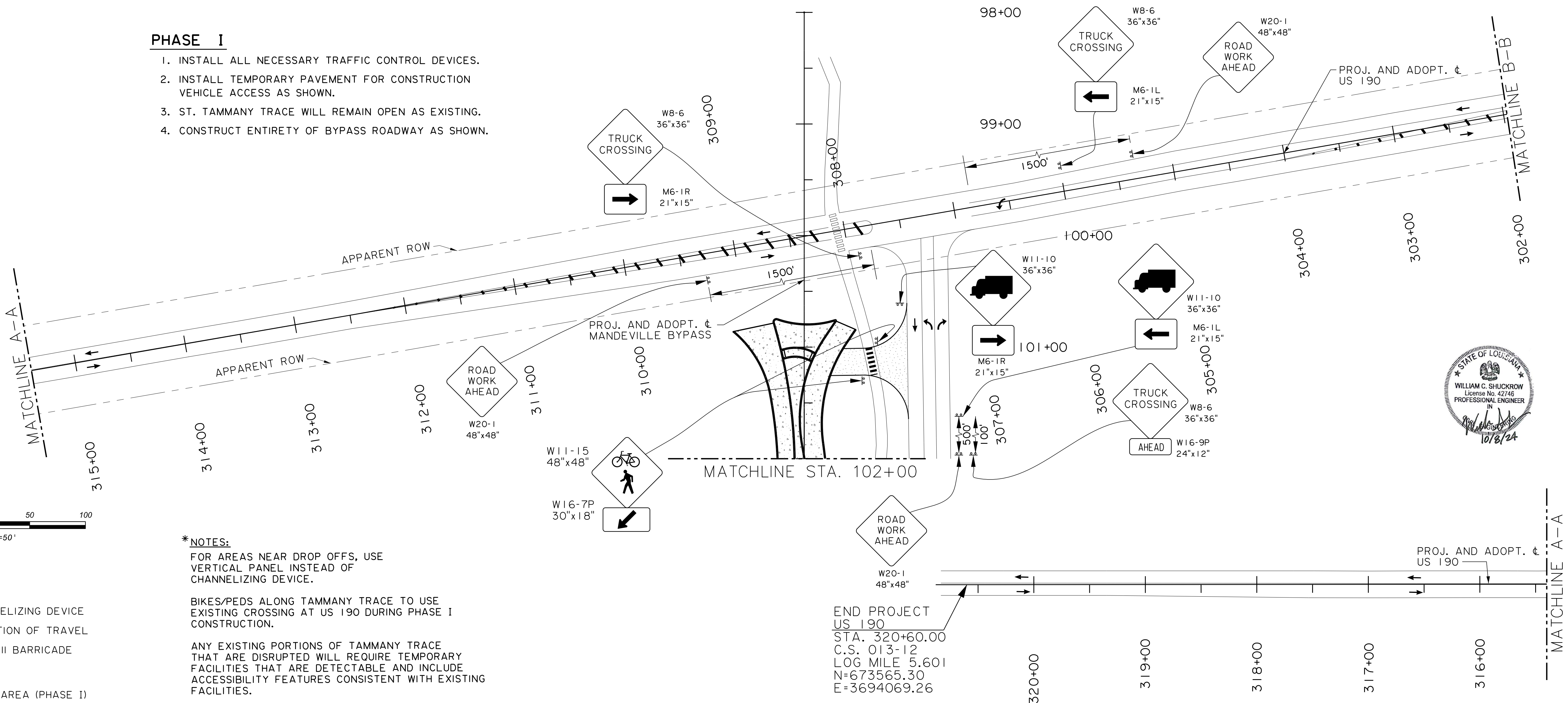
SOC_BYPASS_PHASE1_LAYOUT_1.dgn



NOTE:
NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS,
AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL
OF PROJECT PERMIT FROM LADOTD.

PHASE I

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE
- SIGNS
- WORK AREA (PHASE I)
- TEMPORARY PAVEMENT WIDENING

***NOTES:**

FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

BIKES/PEDS ALONG TAMMANY TRACE TO USE EXISTING CROSSING AT US 190 DURING PHASE I CONSTRUCTION.

ANY EXISTING PORTIONS OF TAMMANY TRACE THAT ARE DISRUPTED WILL REQUIRE TEMPORARY FACILITIES THAT ARE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING FACILITIES.

TEMPORARY CONSTRUCTION VEHICLE ACCESS ROAD WILL BE CLOSED WITH TYPE III BARRICADES WHEN NOT IN USE.

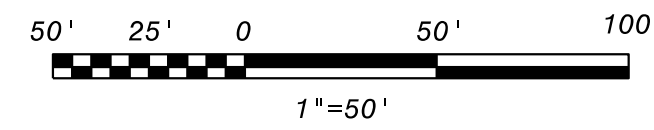


SHEET NUMBER	107
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	SEQUENCE OF CONSTRUCTION
LA 1088 TO US 190	
ROADWAY PLANS	
DESIGNED WCS	
CHECKED DSY	
DATE 10/9/2024	
SHEET 1 OF 25	
BY	
NO.	
DATE	
REVISION DESCRIPTION	

XREF:

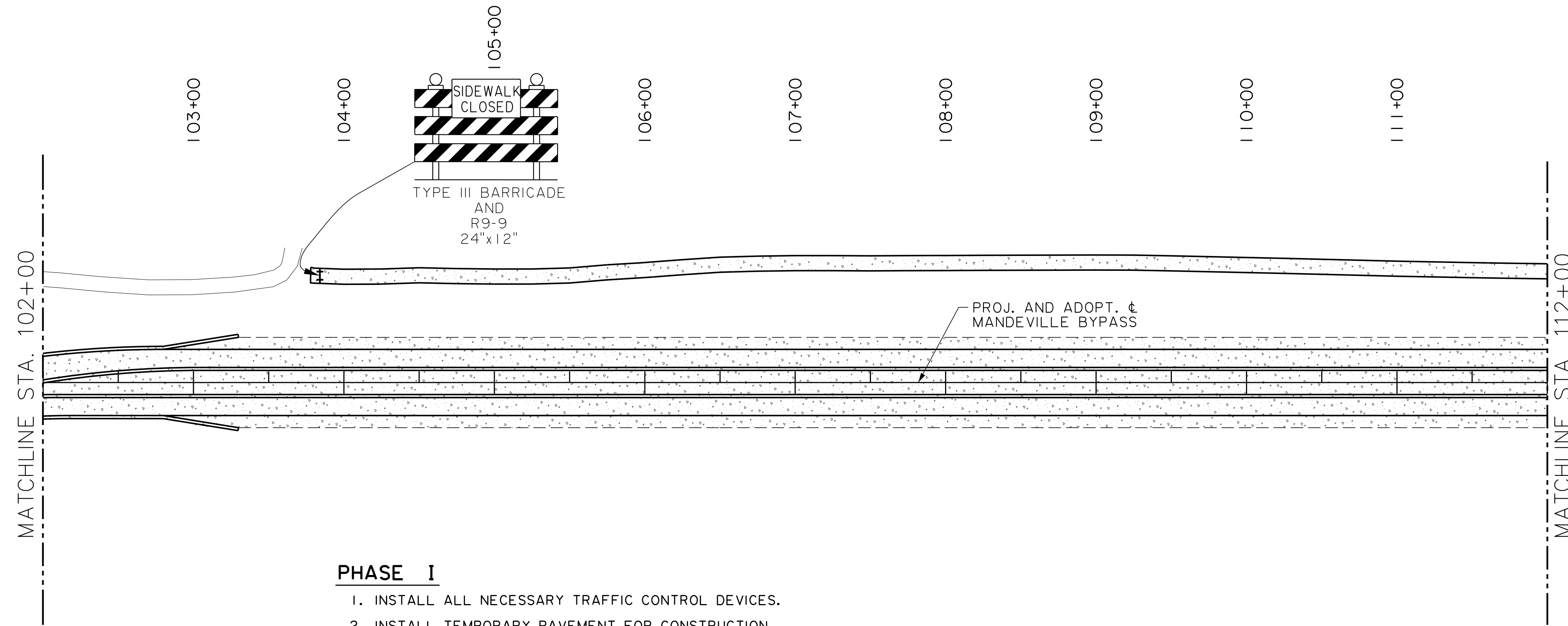
10/9/2024

SOC_BYPASS_PHASE1_LAYOUT_2.dgn



LEGEND

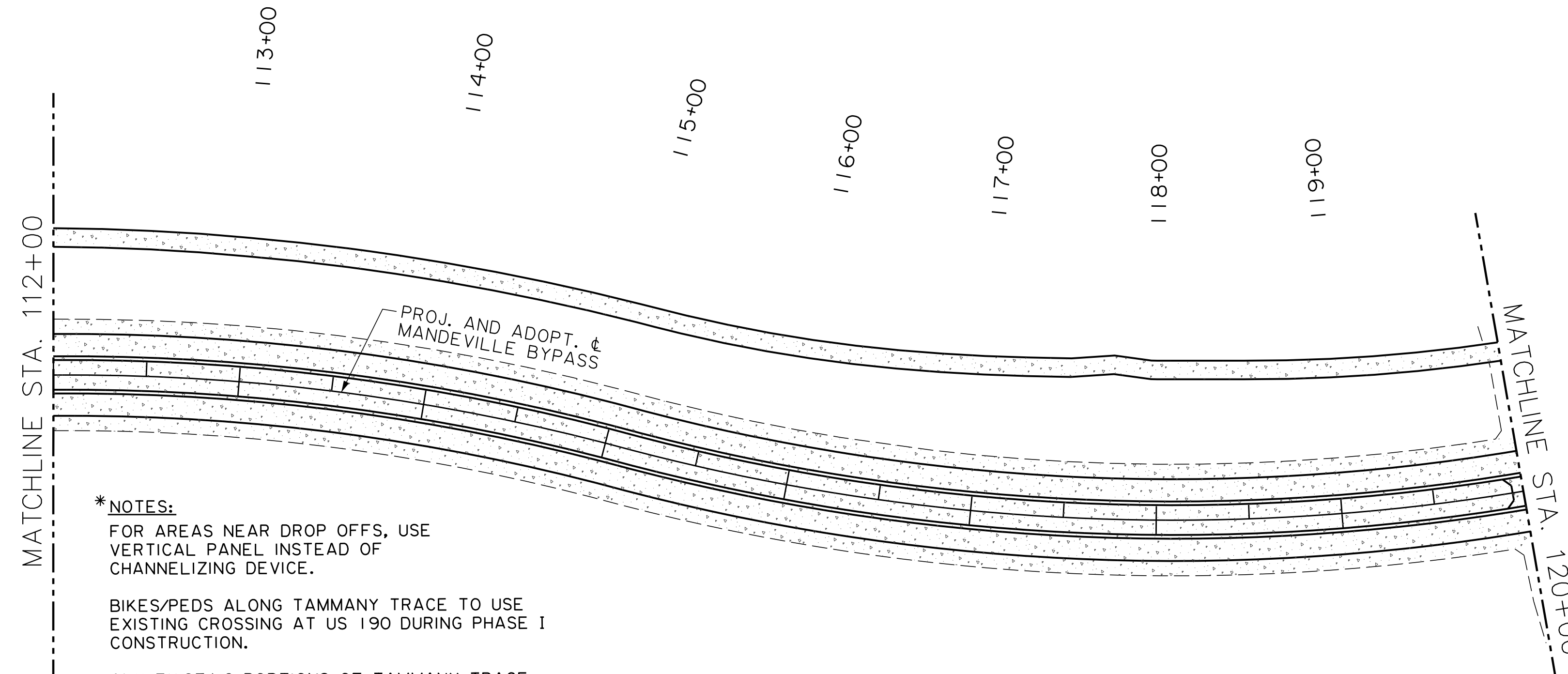
- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊡ TYPE III BARRICADE
- ⊣ SIGNS
- WORK AREA (PHASE I)
- TEMPORARY PAVEMENT WIDENING



PHASE I

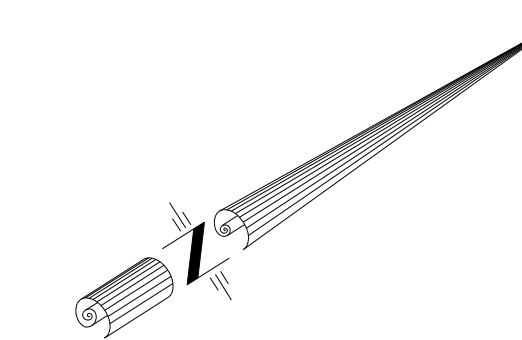
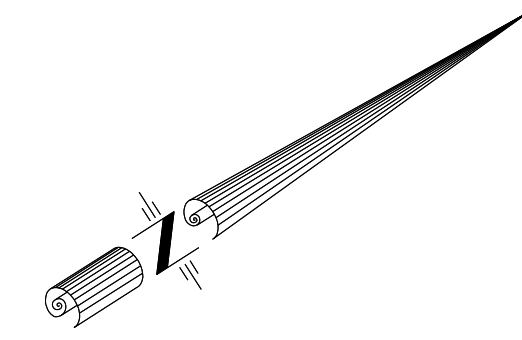
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.

NOTE:
 NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00
 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00
 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT
 FROM LADOTD.



***NOTES:**

- FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.
- BIKES/PEDS ALONG TAMMANY TRACE TO USE EXISTING CROSSING AT US 190 DURING PHASE I CONSTRUCTION.
- ANY EXISTING PORTIONS OF TAMMANY TRACE THAT ARE DISRUPTED WILL REQUIRE TEMPORARY FACILITIES THAT ARE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING FACILITIES.
- TEMPORARY CONSTRUCTION VEHICLE ACCESS ROAD WILL BE CLOSED WITH TYPE III BARRICADES WHEN NOT IN USE.

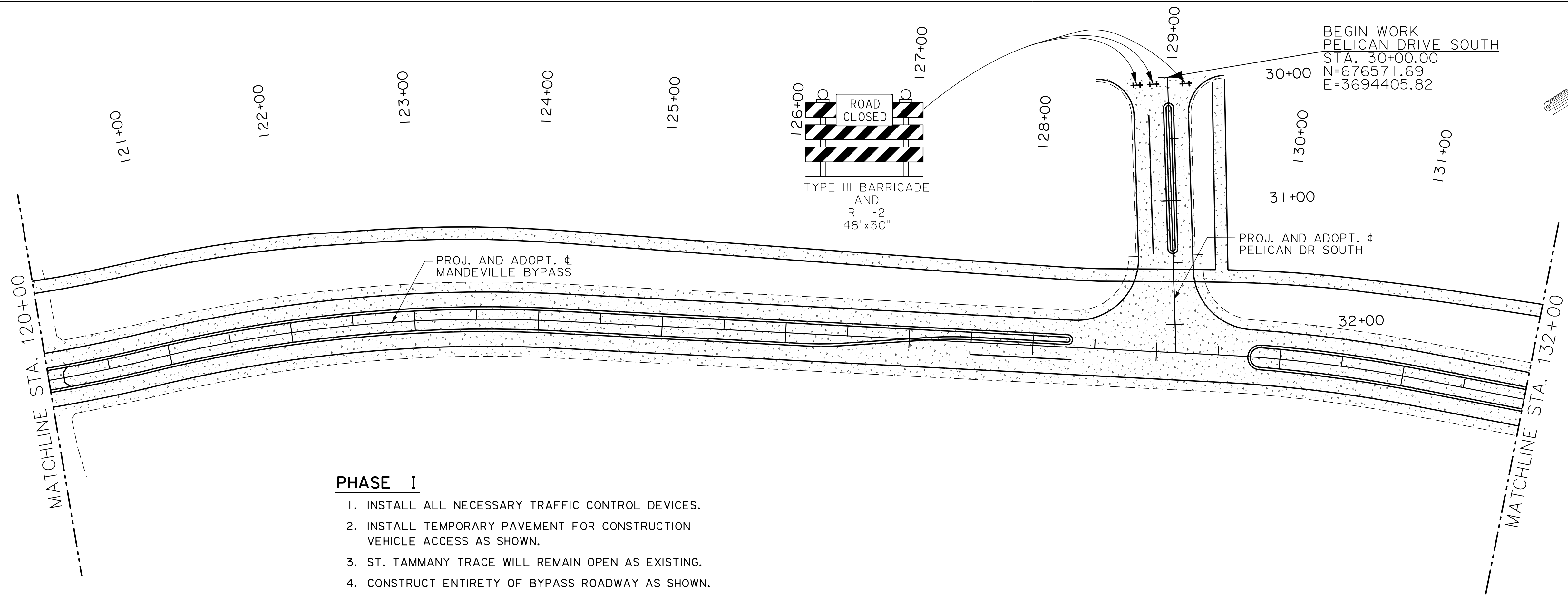
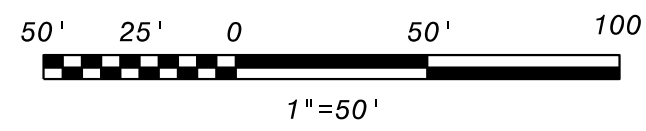


SHEET NUMBER	108
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
DESIGNED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	2 OF 25
BY	
NO.	
DATE	
REVISION DESCRIPTION	

XREF:

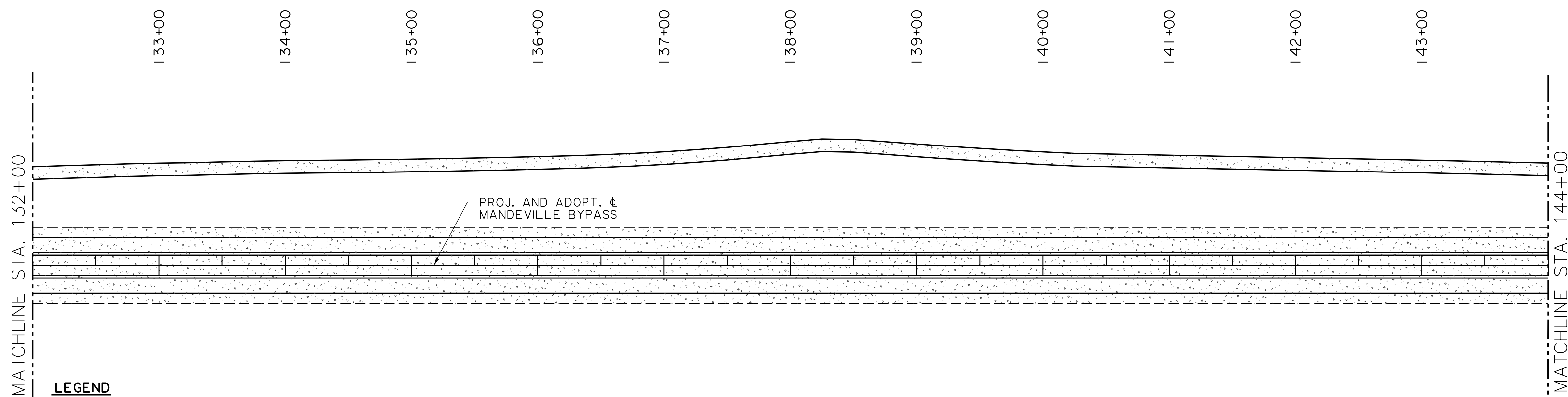
10/9/2024

SOC_BYPASS_PHASE1_LAYOUT_3.dgn



PHASE I

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



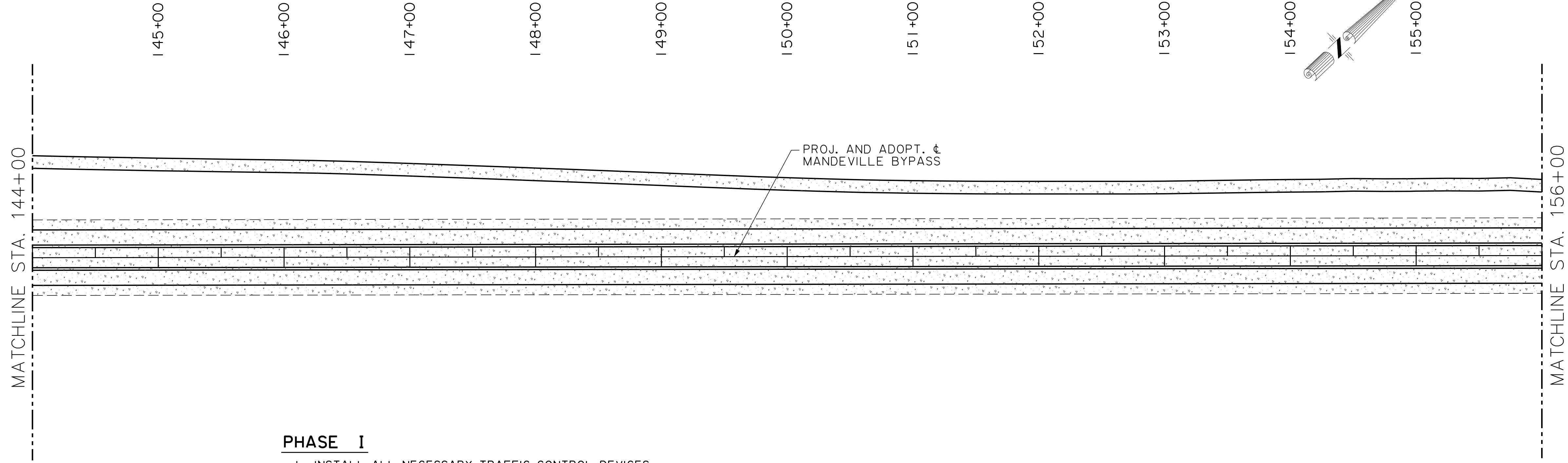
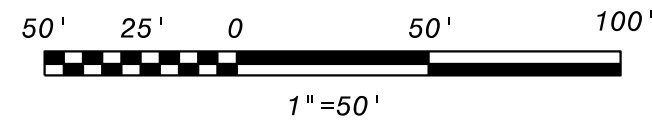
LEGEND

- CHANNELIZING DEVICE
- ↶ ↷ ↴ ↵ DIRECTION OF TRAVEL
- ⊕ TYPE III BARRICADE
- ⊞ SIGNS
- [Stippled Area] WORK AREA (PHASE I)
- [Dotted Area] TEMPORARY PAVEMENT WIDENING

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

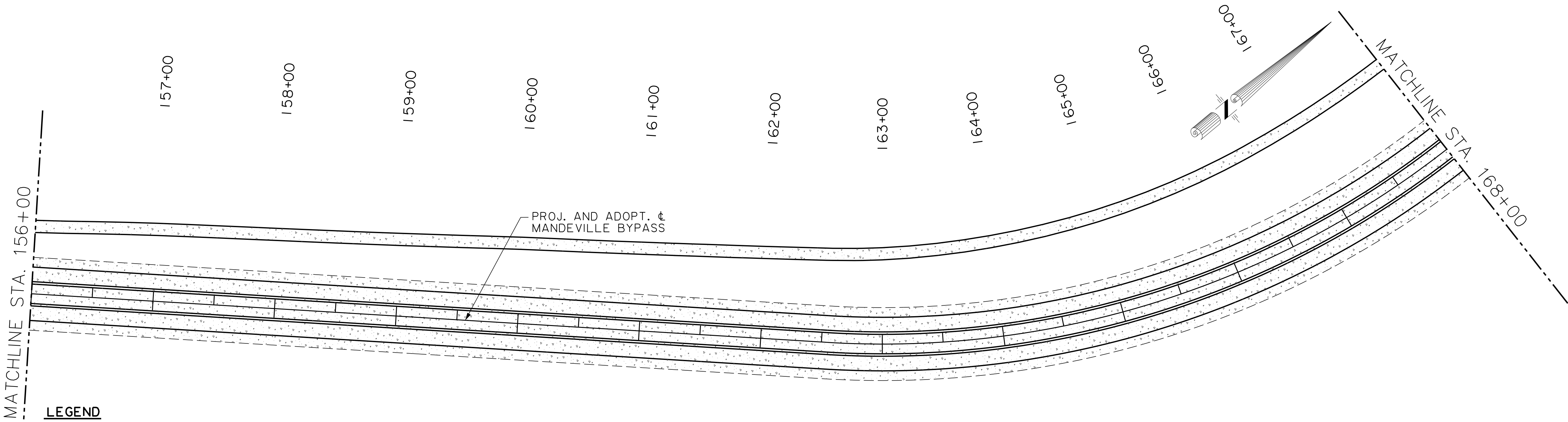


SHEET NUMBER	109
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDVILLE BY PASS	
LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION	
ROADWAY PLANS	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	3 OF 25
NO.	DATE
BY	REVISION DESCRIPTION



PHASE I

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- ▨ WORK AREA (PHASE I)
- ▨ TEMPORARY PAVEMENT WIDENING

***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

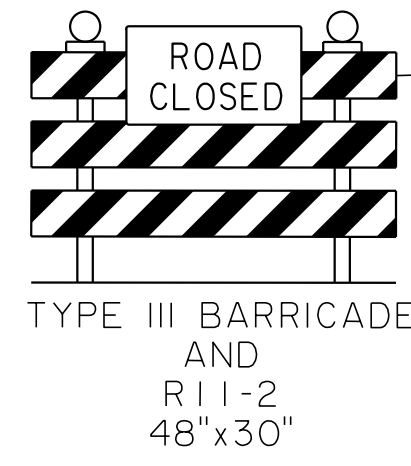


DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
Detailed	JAT	CHECKED	DSY	SHEET	4 OF 25
NO. DATE BY					
REVISION DESCRIPTION					
ROADWAY PLANS					
SEQUENCE OF CONSTRUCTION					
MANDEVILLE BY PASS LA 1088 TO US 190					
ST. TAMMANY PARISH LA 1088 TO US 190					
ST. TAMMANY 2014EN0001 NO. 15.012					
SHEET NUMBER 110					

XREF:

10/9/2024

SOC_BYPASS_PHASE1_LAYOUT_5.dgn



40+00
 BEGIN WORK
 PELICAN DRIVE NORTH
 STA. 40+00.00
 N=679363.96
 E=3696398.24

41+00

PROJ. AND ADOPT. CL
 PELICAN DR NORTH

42+00

43+00

44+00

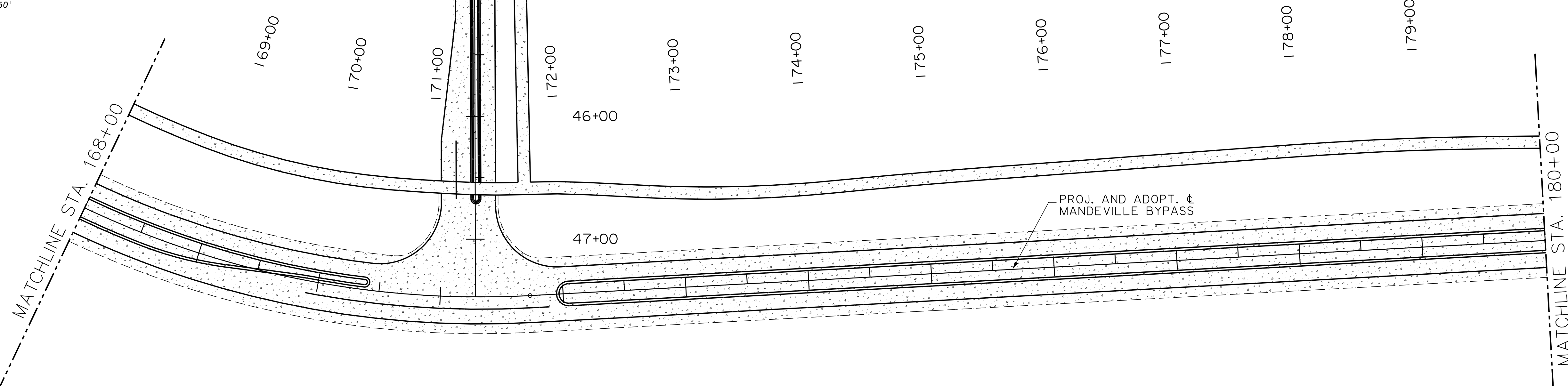
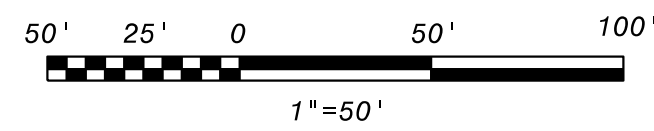
45+00

46+00

47+00

PHASE I

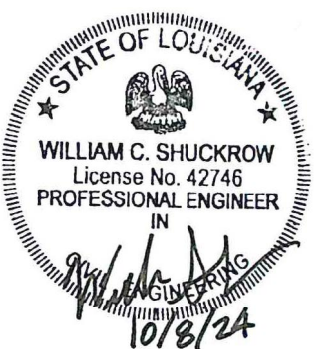
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊞ SIGNS
- [Stippled Area] WORK AREA (PHASE I)
- [Dotted Area] TEMPORARY PAVEMENT WIDENING

***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

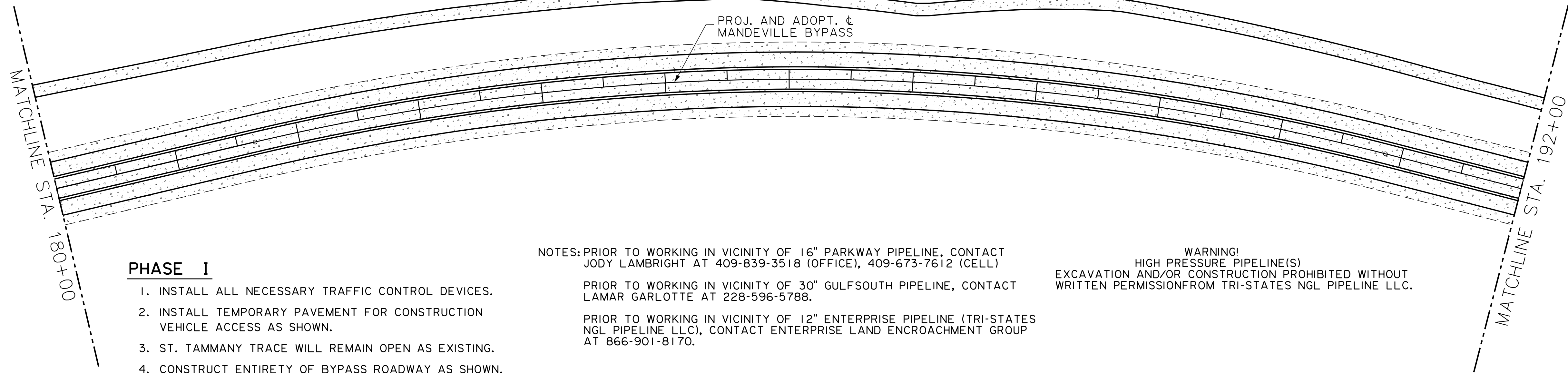
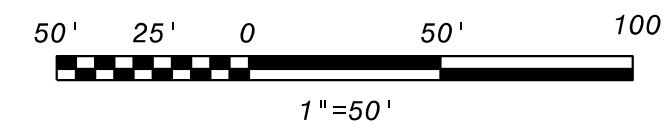


SHEET NUMBER	111
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	5 OF 25
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

10/9/2024

SOC_BYPASS_PHASE1_LAYOUT_6.dgn



PHASE I

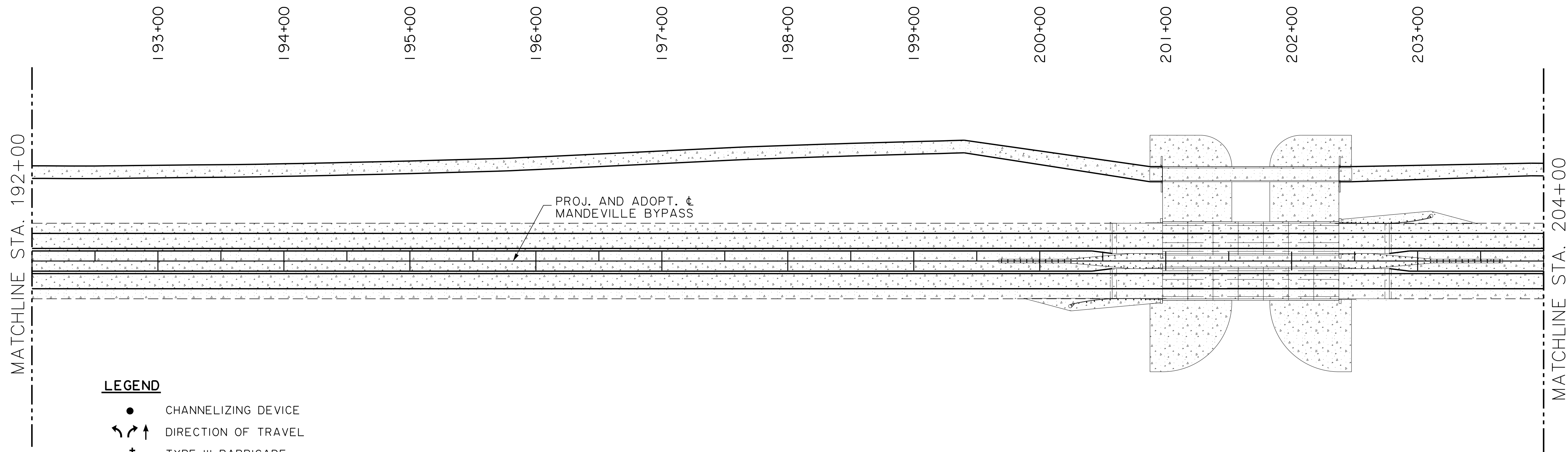
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.

NOTES: PRIOR TO WORKING IN VICINITY OF 16" PARKWAY PIPELINE, CONTACT JODY LAMBRIGHT AT 409-839-3518 (OFFICE), 409-673-7612 (CELL)

PRIOR TO WORKING IN VICINITY OF 30" GULFSOUTH PIPELINE, CONTACT LAMAR GARLOTTE AT 228-596-5788.

PRIOR TO WORKING IN VICINITY OF 12" ENTERPRISE PIPELINE (TRI-STATES NGL PIPELINE LLC), CONTACT ENTERPRISE LAND ENCROACHMENT GROUP AT 866-901-8170.

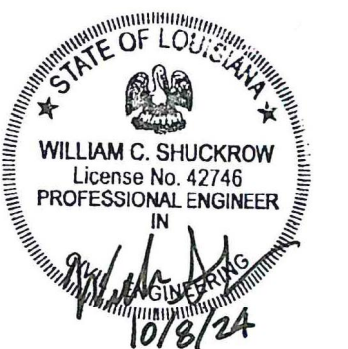
WARNING! HIGH PRESSURE PIPELINE(S) EXCAVATION AND/OR CONSTRUCTION PROHIBITED WITHOUT WRITTEN PERMISSION FROM TRI-STATES NGL PIPELINE LLC.



LEGEND

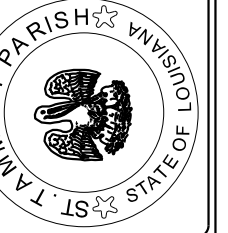
- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- ▨ WORK AREA (PHASE I)
- ▨ TEMPORARY PAVEMENT WIDENING

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.



SHEET NUMBER 112

ST. TAMMANY
2014EN0001
NO. 15.012



MANDEVILLE BY PASS
LA 1088 TO US 190
SEQUENCE OF CONSTRUCTION



BKI

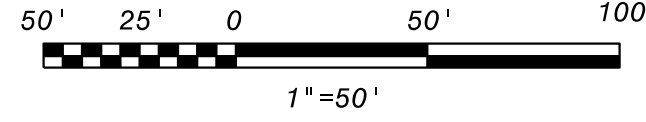
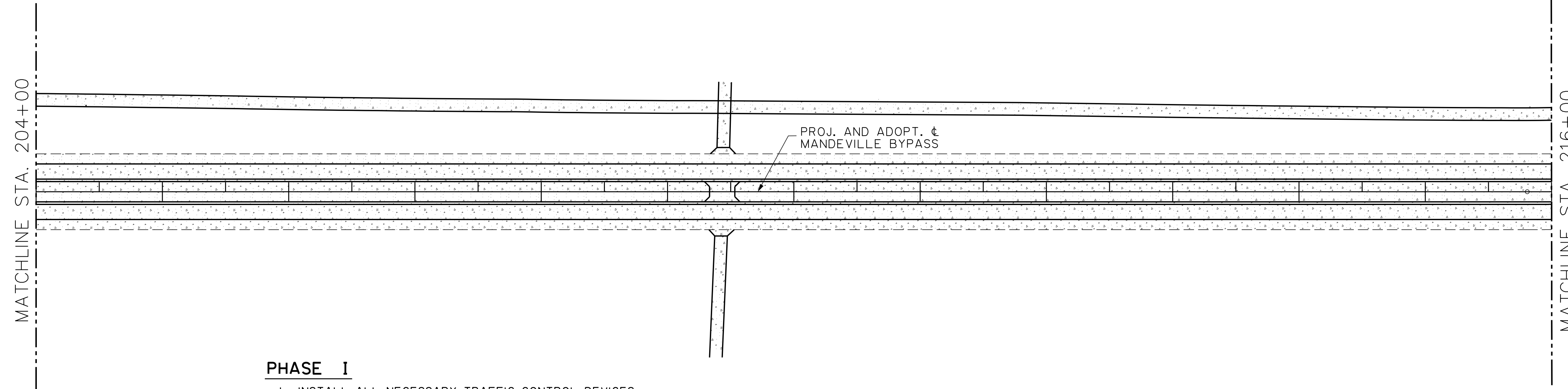
DESIGNED WCS
CHECKED DSY
DATE 10/9/2024
SHEET 6 OF 25

NO.	DATE	REVISION DESCRIPTION	BY

SOC_BYPASS_PHASE1_LAYOUT_7.dgn

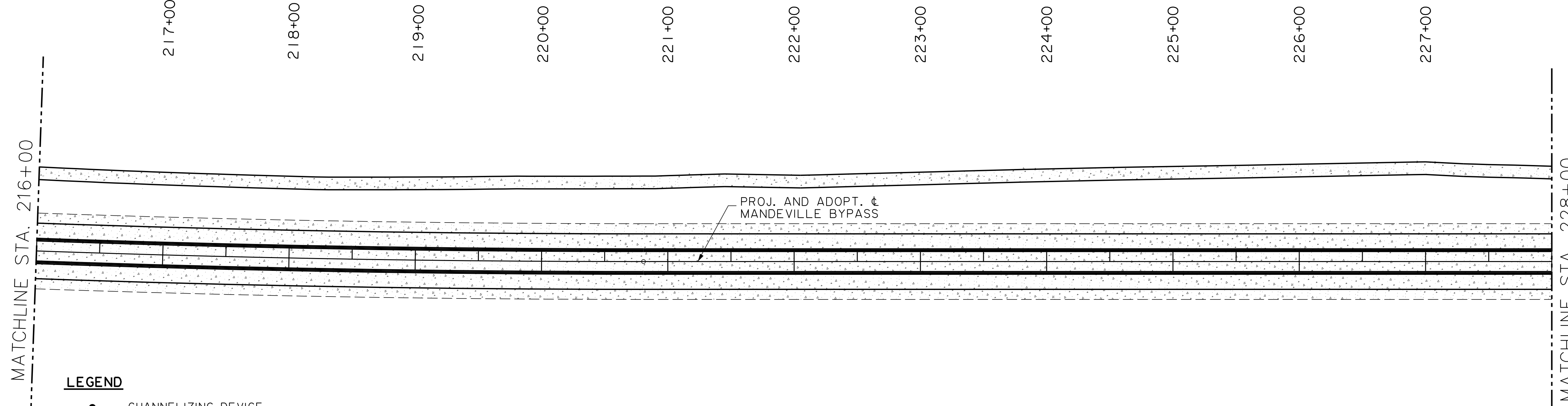
10/9/2024

XREF:



PHASE I

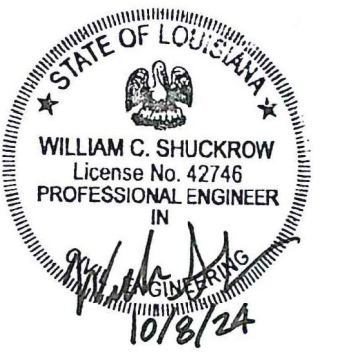
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



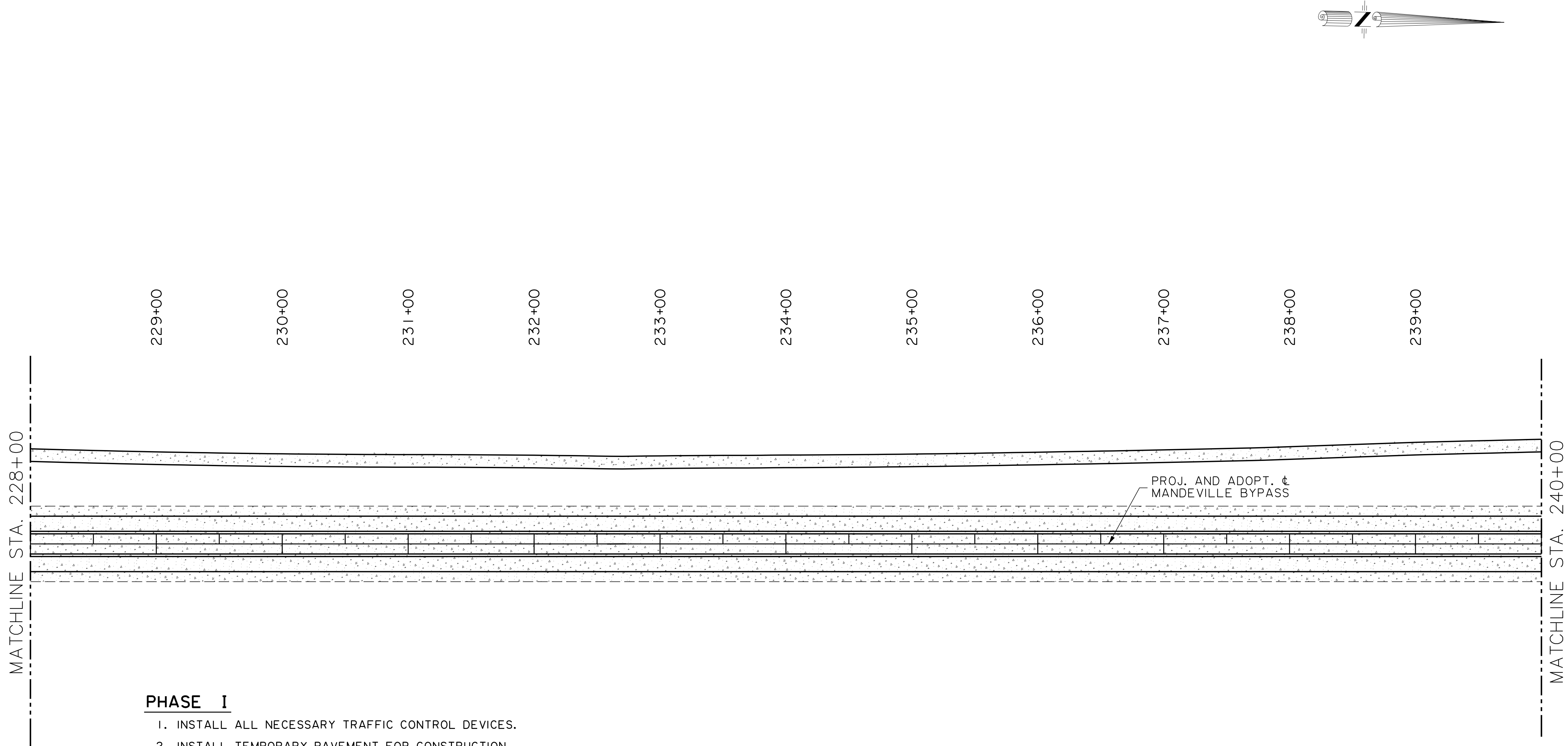
LEGEND

- CHANNELIZING DEVICE
- ↖ ↗ ↘ ↙ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- WORK AREA (PHASE I)
- TEMPORARY PAVEMENT WIDENING

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.



SHEET NUMBER		113
PARISH		ST. TAMMANY
PROJECT		2014EN0001
B.K.L. PROJECT		NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190		SEQUENCE OF CONSTRUCTION
DESIGNED	WCS	
CHECKED	DSY	
DETAILED	JAT	
CHECKED	DSY	
DATE	10/9/2024	
SHEET	7	OF 25
NO.	DATE	BY



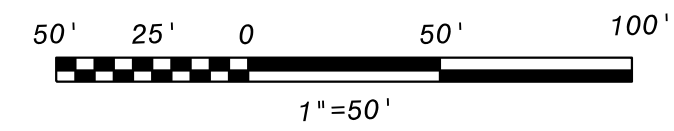
PHASE I

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.

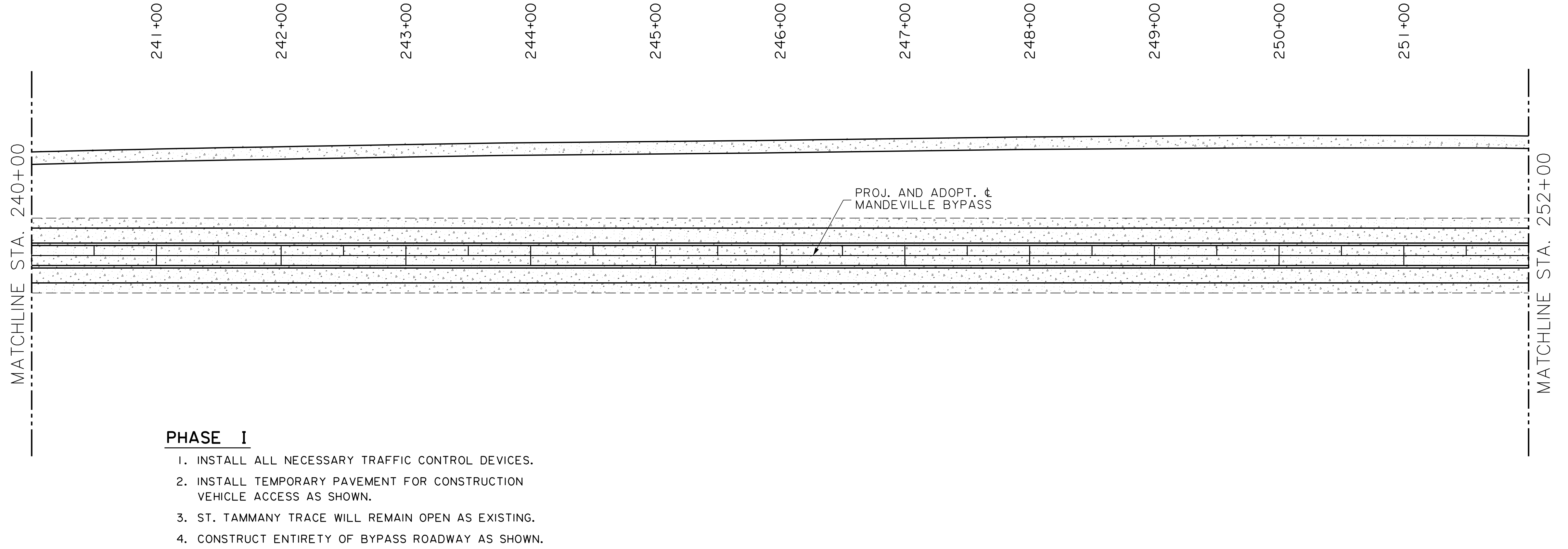
LEGEND

- CHANNELIZING DEVICE
- ↶ ↷ ↑ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊞ SIGNS
- [Pattern] WORK AREA (PHASE I)
- [Pattern] TEMPORARY PAVEMENT WIDENING

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

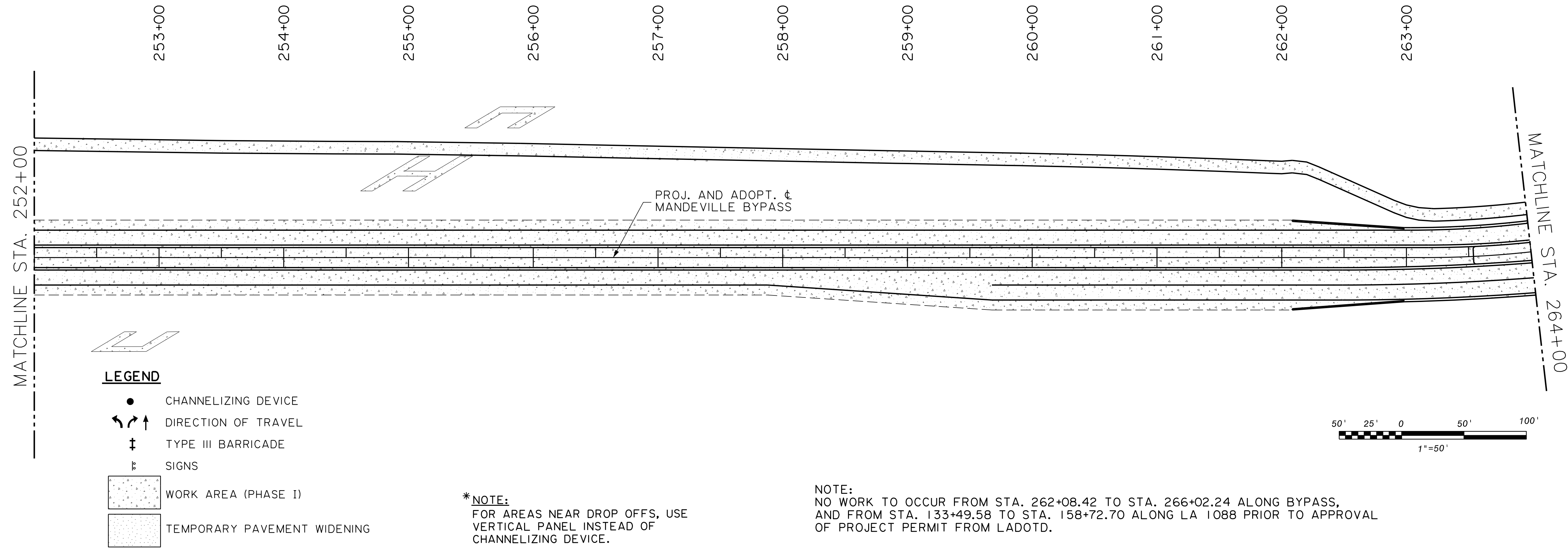


NO.	DATE	REVISION DESCRIPTION	BY	DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024	SHEET	8 OF 25
				DETAILED	JAT	CHECKED	DSY	ROADWAY PLANS	SEQUENCE OF CONSTRUCTION		
				MANDEVILLE BY PASS		LA 1088 TO US 190				ST. TAMMANY	
				PARISH PROJECT		2014EN0001				NO. 15.012	
				STATE OF LOUISIANA		BKI				SHEET NUMBER	
				STATE OF LOUISIANA		UNIVERSITY OF				4	



PHASE I

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.

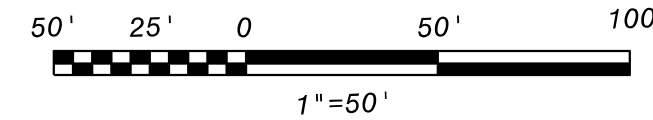


LEGEND

- CHANNELIZING DEVICE
- ↖ ↗ ↑ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ☒ SIGNS
- [Stippled Area] WORK AREA (PHASE I)
- [Dotted Area] TEMPORARY PAVEMENT WIDENING

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

NOTE:
NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
OF PROJECT PERMIT FROM LADOTD.



DESIGNED	WCS	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	DATE	10/9/2024
				SHEET	9 OF 25
REVISION DESCRIPTION					
NO.	DATE	BY			
ROADWAY PLANS					
SECURE THESE DRAWINGS INSTRUCTIONS					
MANDEVILLE BY PASS LA 1088 TO US 190					
ST. TAMMANY PARISH LA 1088 TO US 190					
PARISH PROJECT	ST. TAMMANY	PROJECT NO.	2014EN0001		
BKLI PROJECT		PROJECT NO.	NO.15.012		
SHEET NUMBER 115					

XREF:

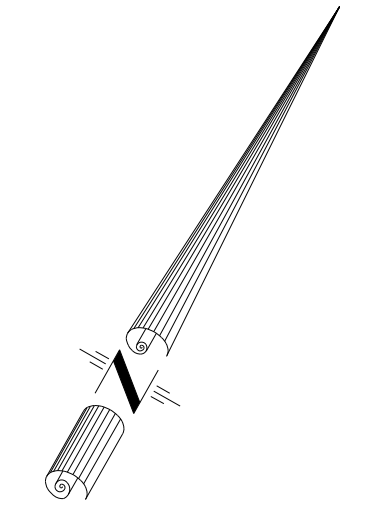
10/9/2024

SOC_BYPASS_PHASE1_LAYOUT_10.dgn

BEGIN PROJECT
LA 1088
STA. 133+49.58
C.S. 852-11
LOG MILE 2.335
N=688483.78
E=3695442.36

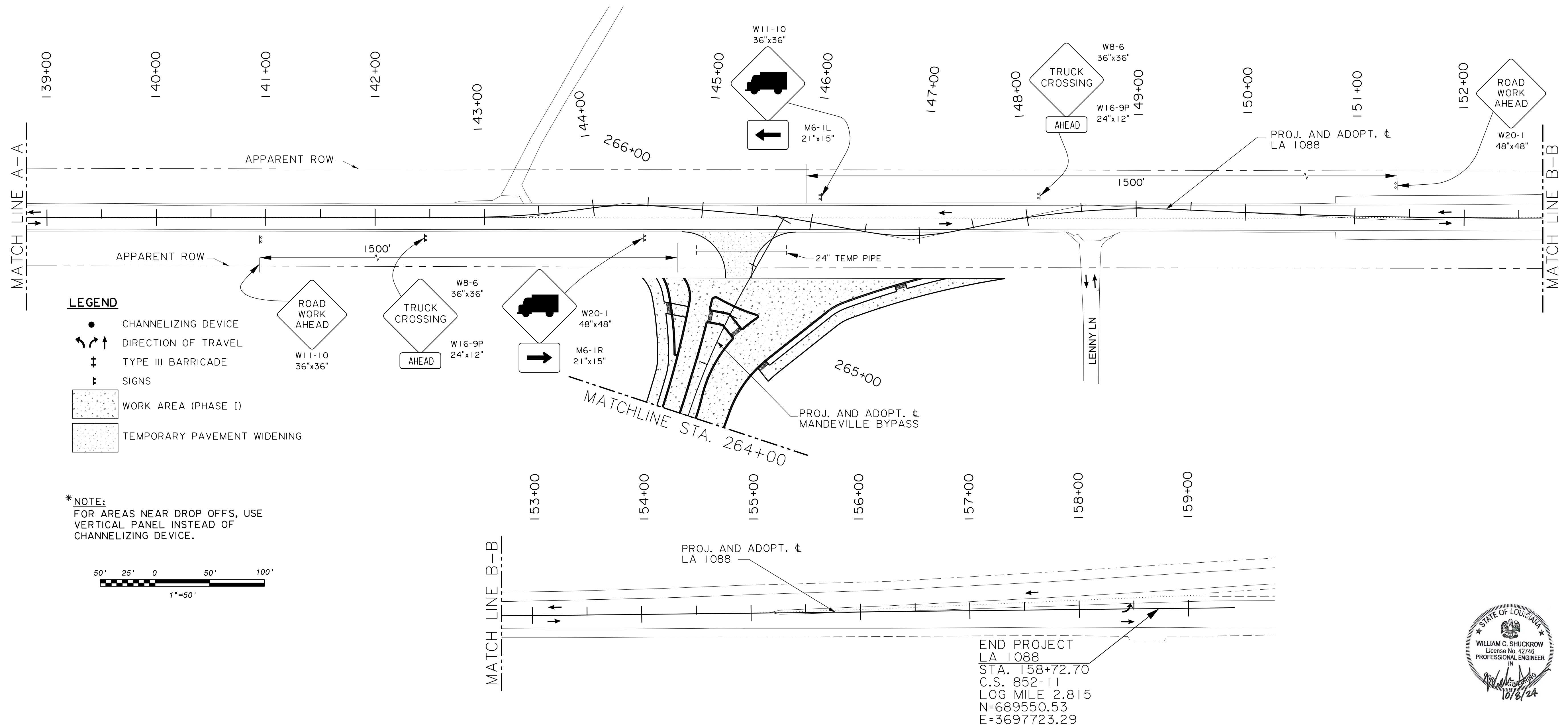
PROJ. AND ADOPT. \pm
LA 1088

NOTE:
NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
OF PROJECT PERMIT FROM LADOTD.



PHASE I

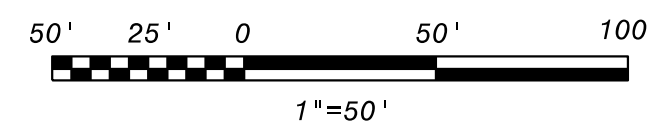
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY PAVEMENT FOR CONSTRUCTION VEHICLE ACCESS AS SHOWN.
3. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
4. CONSTRUCT ENTIRETY OF BYPASS ROADWAY AS SHOWN.



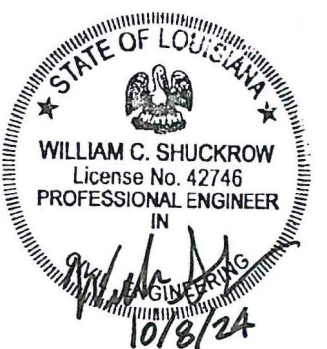
LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE
- SIGNS
- WORK AREA (PHASE I)
- TEMPORARY PAVEMENT WIDENING

*NOTE:
FOR AREAS NEAR DROP OFFS, USE
VERTICAL PANEL INSTEAD OF
CHANNELIZING DEVICE.



SHEET NUMBER		116
PARISH	ST. TAMMANY	
PROJECT	2014EN0001	
BK/L PROJECT	NO.15.012	
MANDEVILLE BY PASS LA 1088 TO US 190		
SEQUENCE OF CONSTRUCTION		
DESIGNED	WCS	
CHECKED	DSY	
DATE	10/9/2024	
SHEET	10 OF 25	
NO.		
DATE		
REVISION DESCRIPTION		
BY		

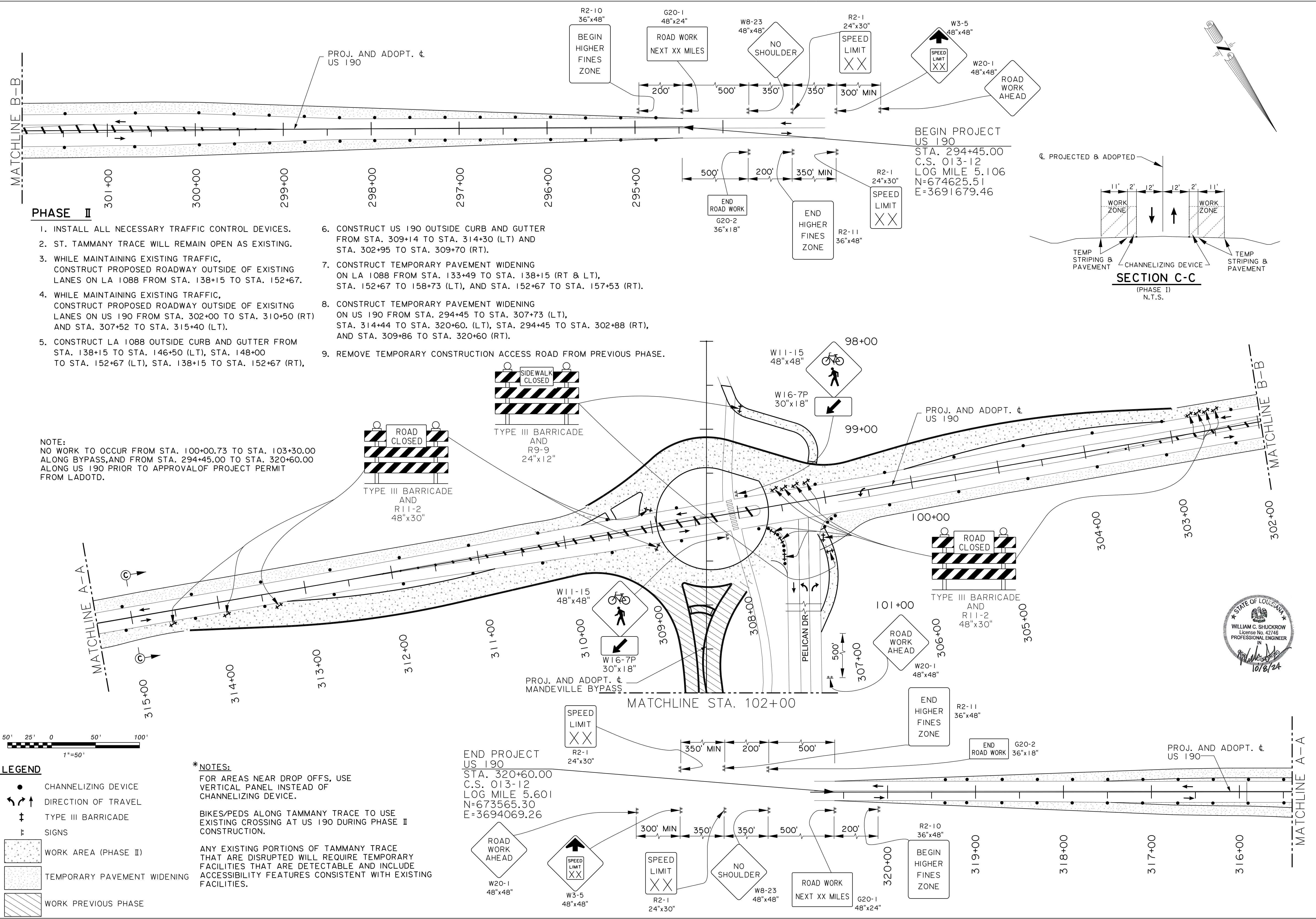


END PROJECT
LA 1088
STA. 158+72.70
C.S. 852-11
LOG MILE 2.815
N=689550.53
E=3697723.29

XREF:

10/9/2024

SOC_PHASE1_LAYOUT_1.dgn



PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

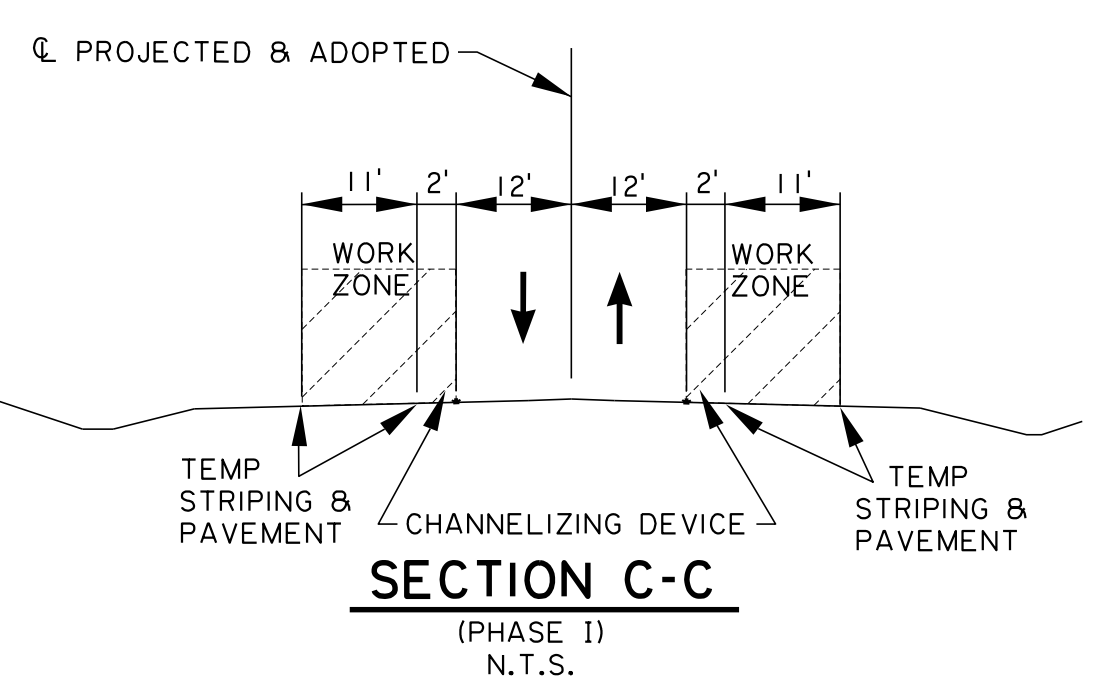
NOTE:
NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.

LEGEND

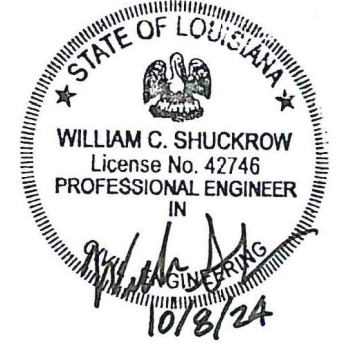
- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊞ SIGNS
- ▨ WORK AREA (PHASE II)
- ▩ TEMPORARY PAVEMENT WIDENING
- ▧ WORK PREVIOUS PHASE

***NOTES:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.
BIKES/PEDS ALONG TAMMANY TRACE TO USE EXISTING CROSSING AT US 190 DURING PHASE II CONSTRUCTION.
ANY EXISTING PORTIONS OF TAMMANY TRACE THAT ARE DISRUPTED WILL REQUIRE TEMPORARY FACILITIES THAT ARE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING FACILITIES.

END PROJECT US 190
STA. 320+60.00
C.S. 013-12
LOG MILE 5.601
N=673565.30
E=3694069.26



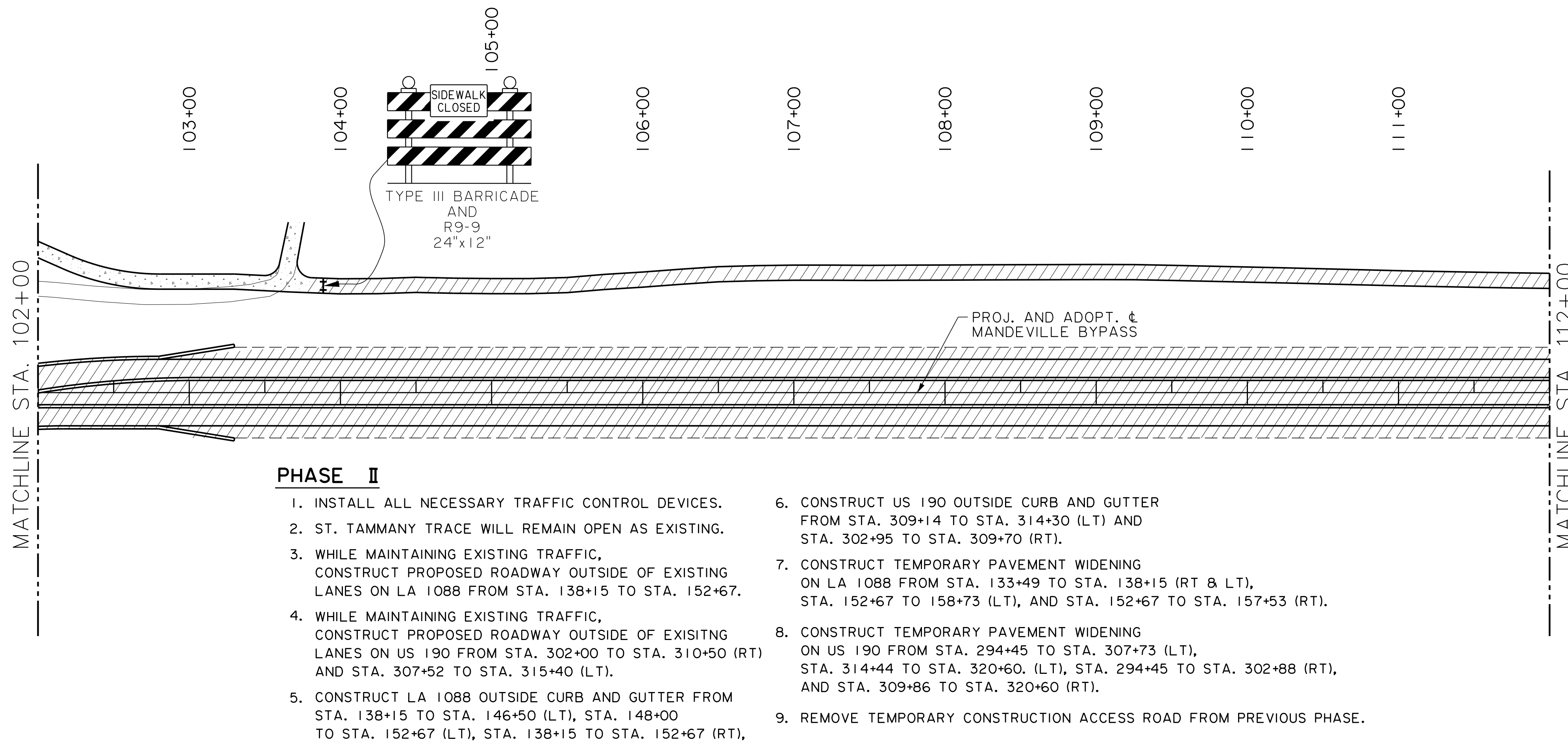
SHEET NUMBER	117
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BK1 PROJECT	
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS SEQUENCE OF CONSTRUCTION	
BK1	
DESIGNED WCS	
CHECKED DSY	
DETAILED JAT	
CHECKED DSY	
DATE	10/9/2024
SHEET	11 OF 25
NO.	
DATE	
REVISION DESCRIPTION	
BY	



XREF:

10/9/2024

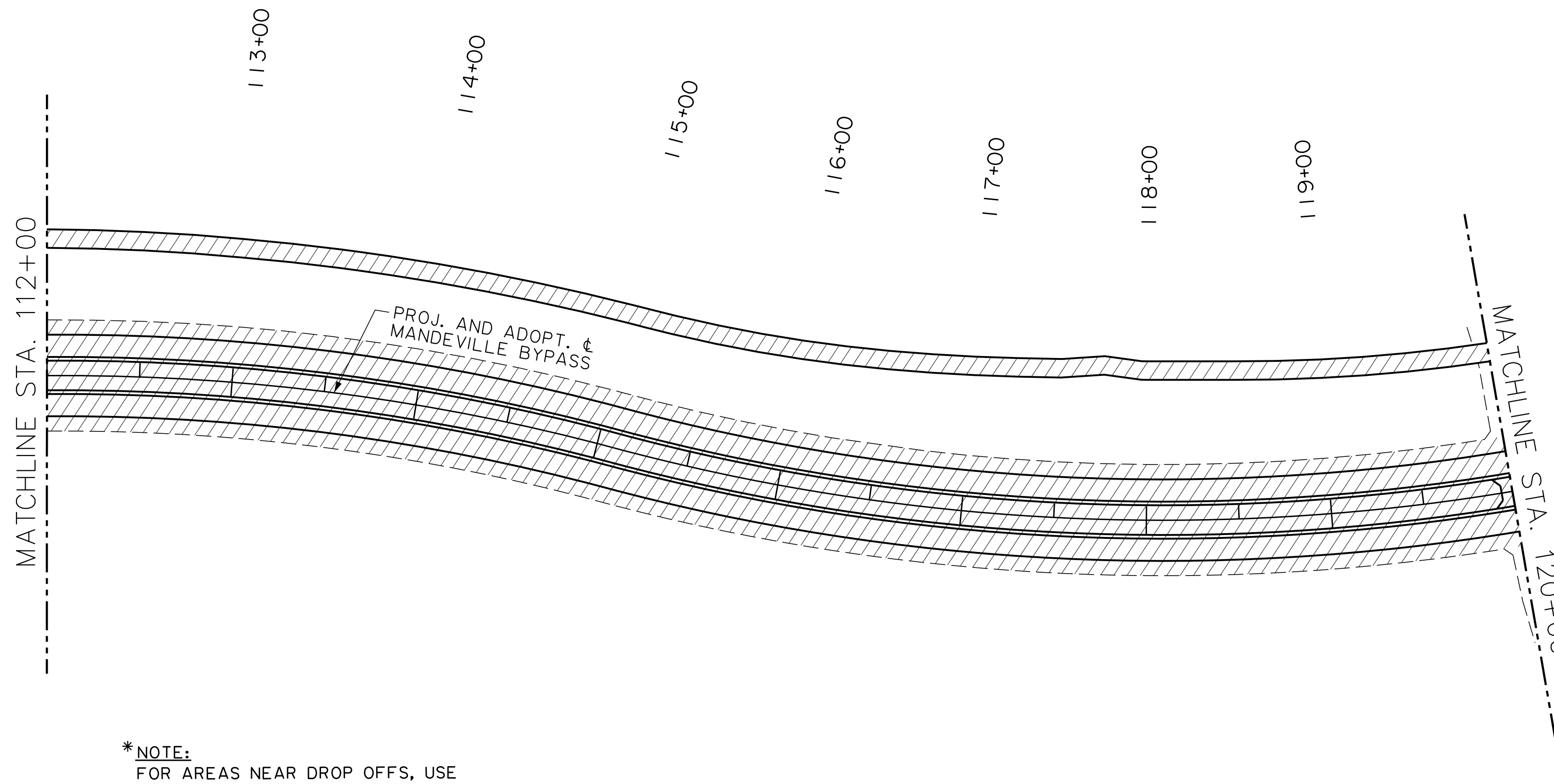
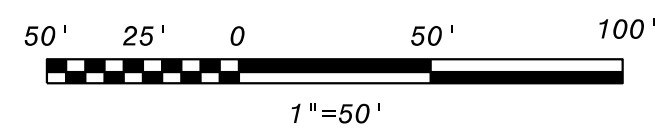
SOC_PHASE1_LAYOUT_2.dgn



PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

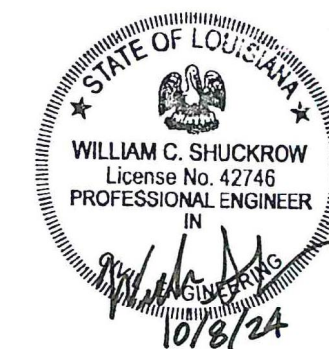
NOTE:
 NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.



LEGEND

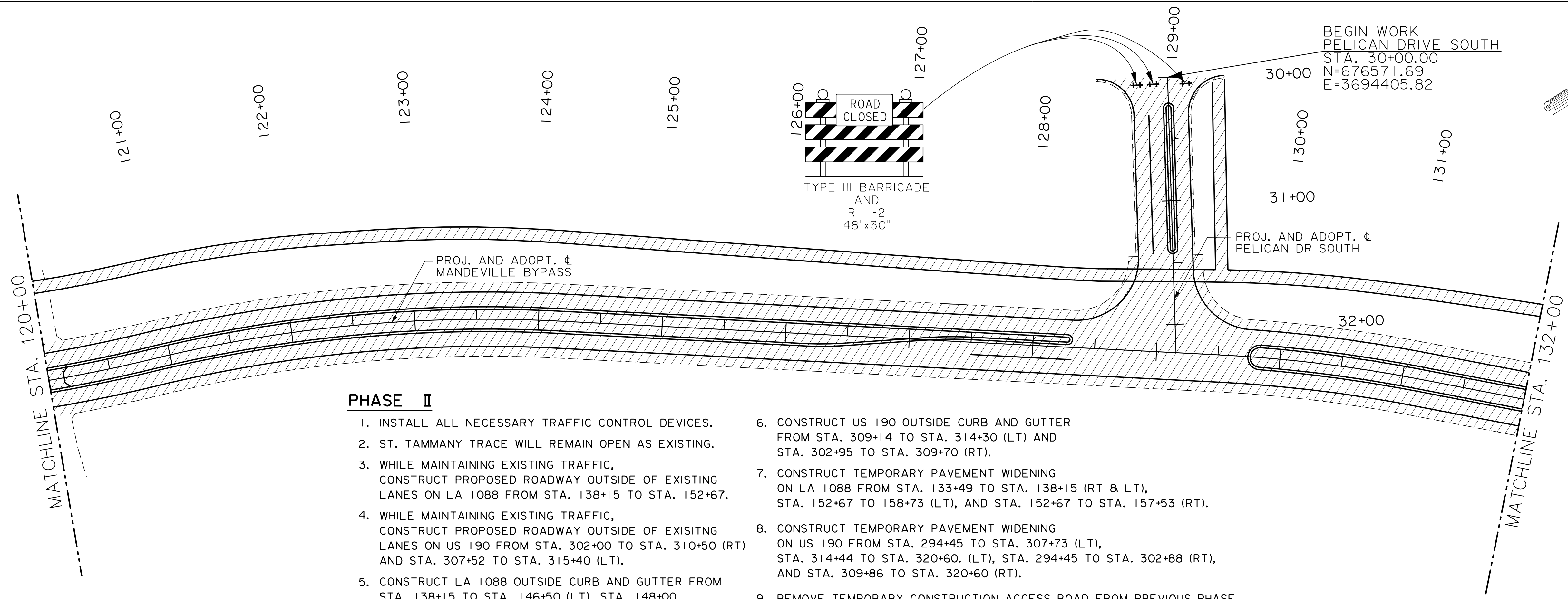
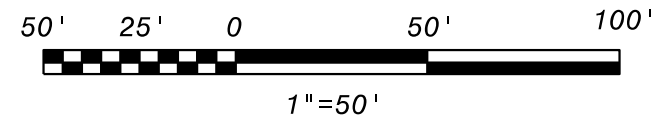
- CHANNELIZING DEVICE
- ↶ ↷ ↴ ↵ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊠ SIGNS
- [Dotted Pattern] WORK AREA (PHASE II)
- [Horizontal Line Pattern] TEMPORARY PAVEMENT WIDENING
- [Diagonal Line Pattern] WORK PREVIOUS PHASE

*NOTE:
 FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.



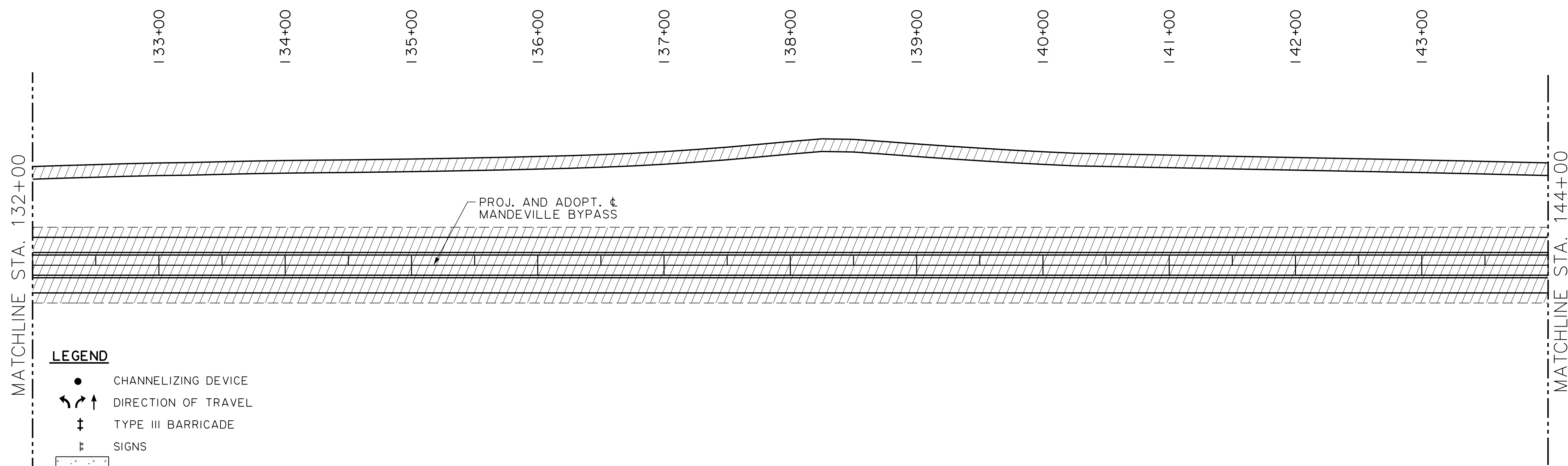
SHEET NUMBER	118
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS	SEQUENCE OF CONSTRUCTION
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	12 OF 25
NO.	DATE
BY	REVISION DESCRIPTION





PHASE II

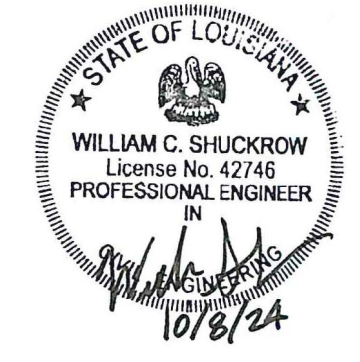
1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.



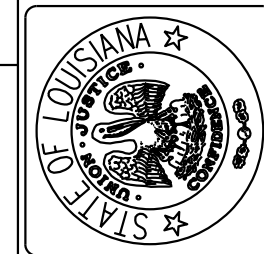
LEGEND

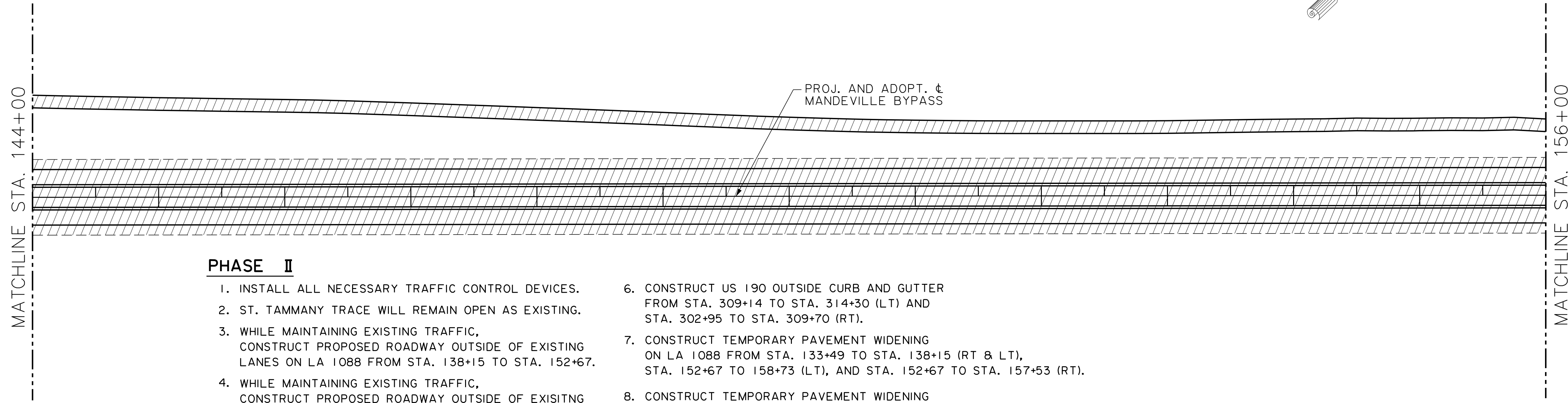
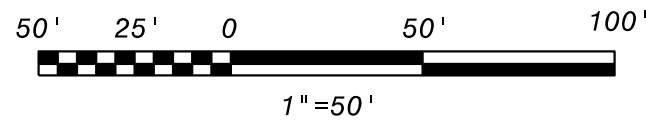
- CHANNELIZING DEVICE
- ↶ ↷ ↴ ↵ DIRECTION OF TRAVEL
- ⊕ TYPE III BARRICADE
- ⊞ SIGNS
- WORK AREA (PHASE II)
- TEMPORARY PAVEMENT WIDENING
- WORK PREVIOUS PHASE

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.



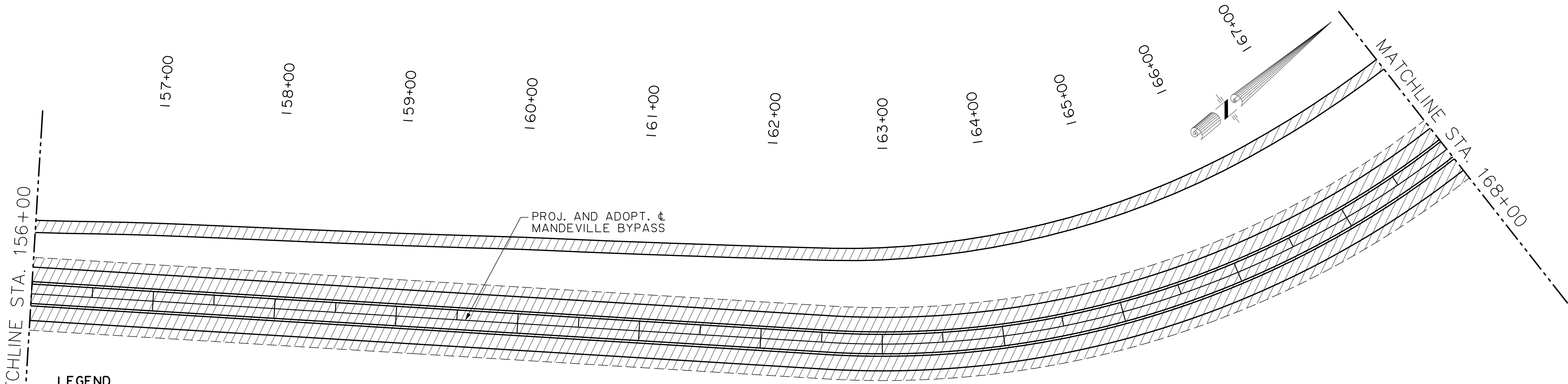
SHEET NUMBER	119
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	13 OF 25
NO.	DATE
BY	DATE





PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.



LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊢ TYPE III BARRICADE
- ⊢ SIGNS
- [Stippled Box] WORK AREA (PHASE II)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

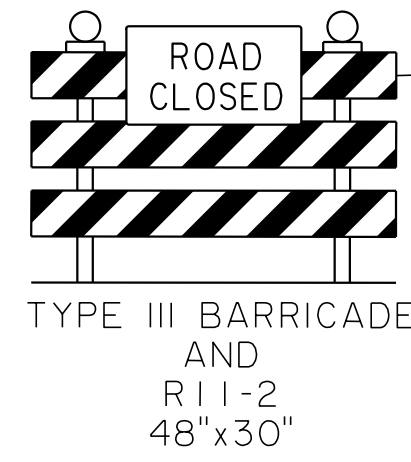


	SHEET NUMBER	120	ST. TAMMANY	
	PARISH PROJECT	2014EN0001		
	BK1 PROJECT	NO.15.012		
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SEQUENCE OF CONSTRUCTION				
DESIGNED	WCS			
CHECKED	DSY			
DATE	10/9/2024			
SHEET	14 OF 25			
NO.	DATE	BY	REVISION DESCRIPTION	

XREF:

10/9/2024

SOC_PHASE1_LAYOUT_5.dgn



40+00
 BEGIN WORK
 PELICAN DRIVE NORTH
 STA. 40+00.00
 N=679363.96
 E=3696398.24

41+00

PROJ. AND ADOPT. CL
 PELICAN DR NORTH

42+00

PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

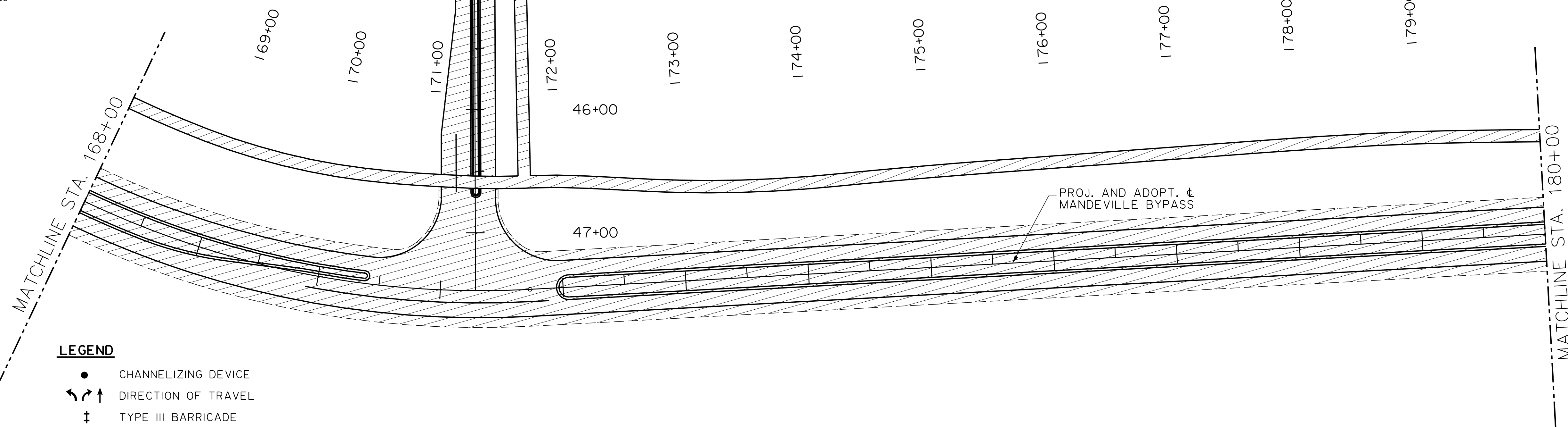
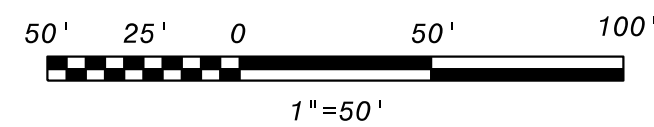
43+00

44+00

45+00

46+00

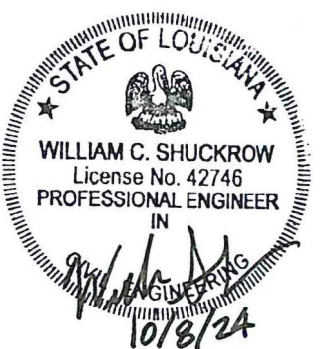
47+00



LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- [Pattern] WORK AREA (PHASE II)
- [Pattern] TEMPORARY PAVEMENT WIDENING
- [Pattern] WORK PREVIOUS PHASE

***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

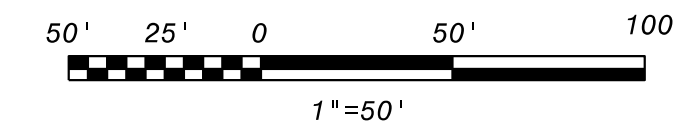


SHEET NUMBER	121
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
ROADWAY PLANS SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	15 OF 25
NO.	DATE
BY	REVISION DESCRIPTION

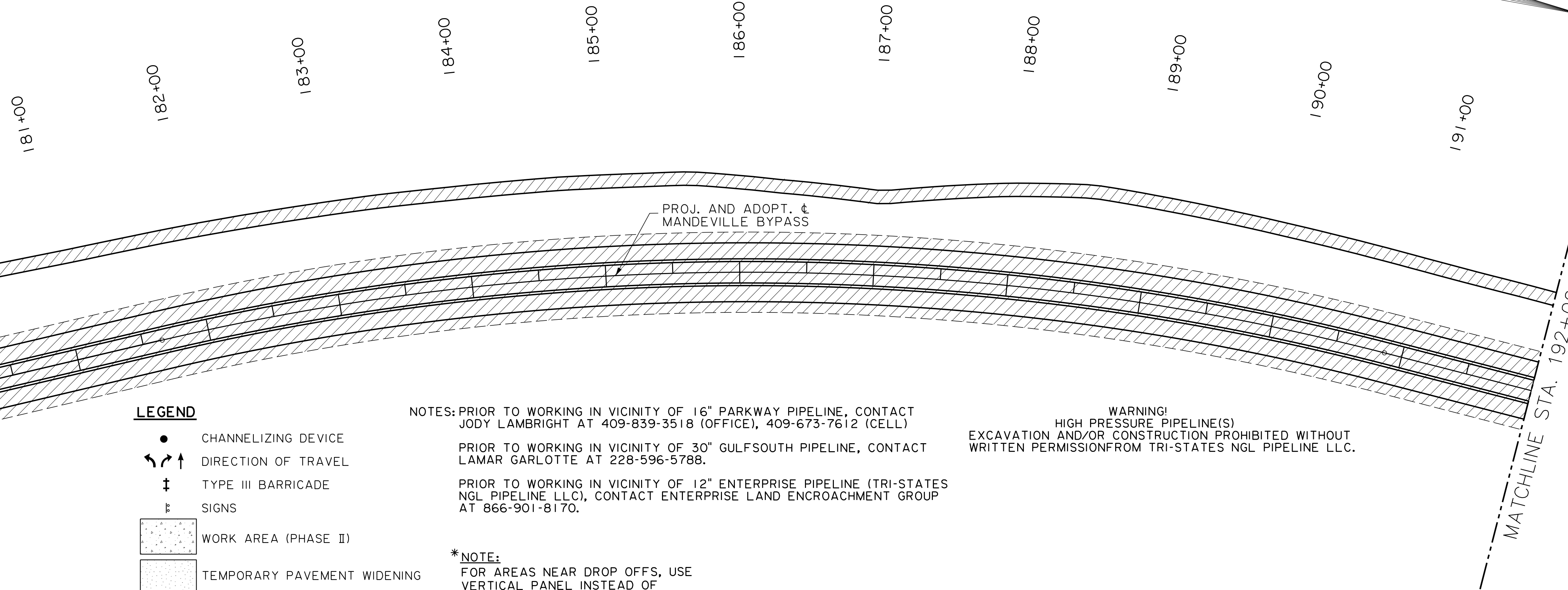
XREF:

10/9/2024

SOC_PHASE1_LAYOUT_6.dgn



MATCHLINE STA. 180+00



LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- [Stippled Box] WORK AREA (PHASE II)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE

NOTES: PRIOR TO WORKING IN VICINITY OF 16" PARKWAY PIPELINE, CONTACT JODY LAMBRIGHT AT 409-839-3518 (OFFICE), 409-673-7612 (CELL)

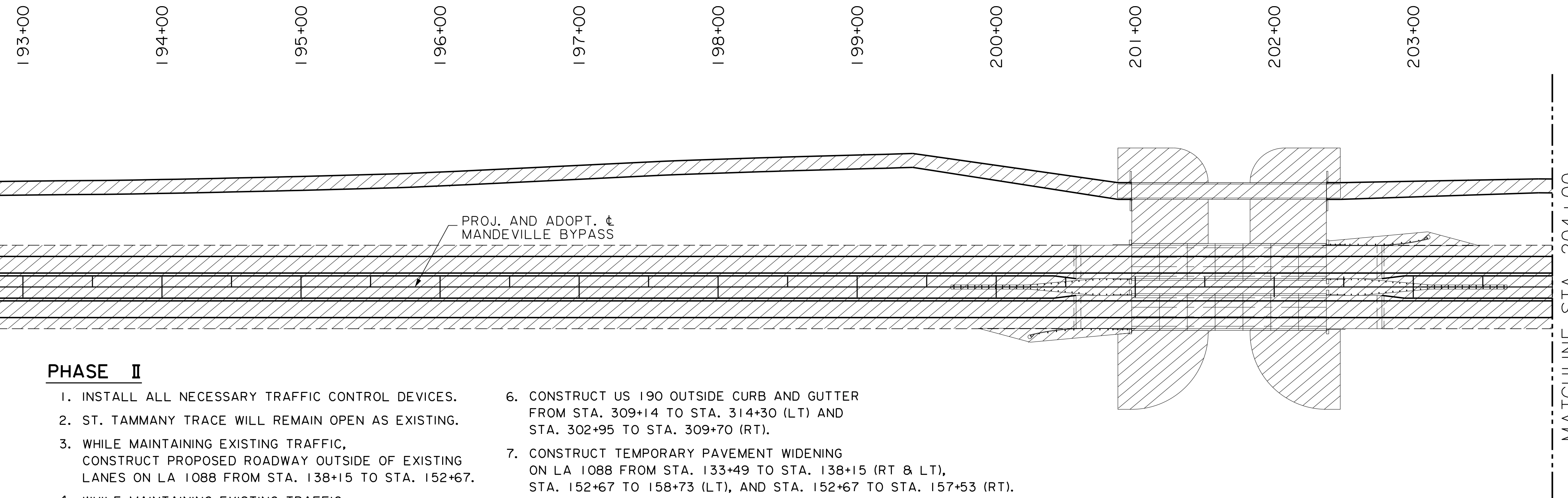
PRIOR TO WORKING IN VICINITY OF 30" GULFSOUTH PIPELINE, CONTACT LAMAR GARLOTTE AT 228-596-5788.

PRIOR TO WORKING IN VICINITY OF 12" ENTERPRISE PIPELINE (TRI-STATES NGL PIPELINE LLC), CONTACT ENTERPRISE LAND ENCROACHMENT GROUP AT 866-901-8170.

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

WARNING!
HIGH PRESSURE PIPELINE(S)
EXCAVATION AND/OR CONSTRUCTION PROHIBITED WITHOUT WRITTEN PERMISSION FROM TRI-STATES NGL PIPELINE LLC.

MATCHLINE STA. 192+00



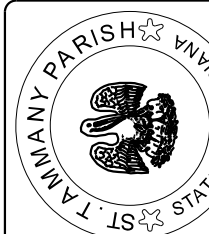
PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

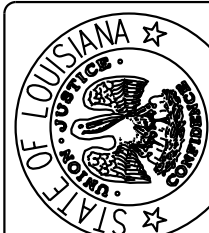


SHEET NUMBER 122

ST. TAMMANY
2014EN0001
NO.15.012



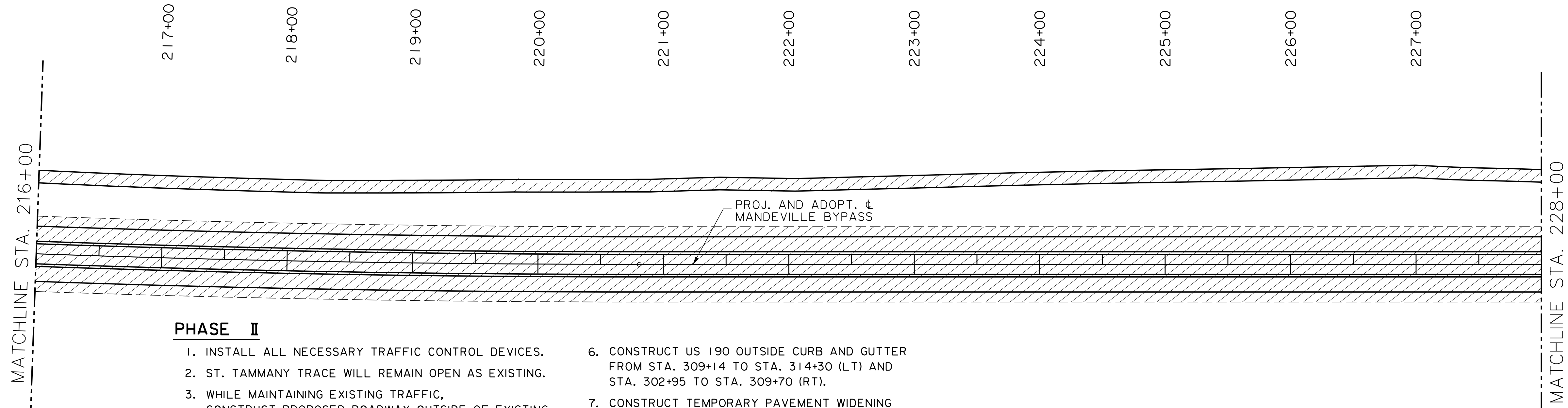
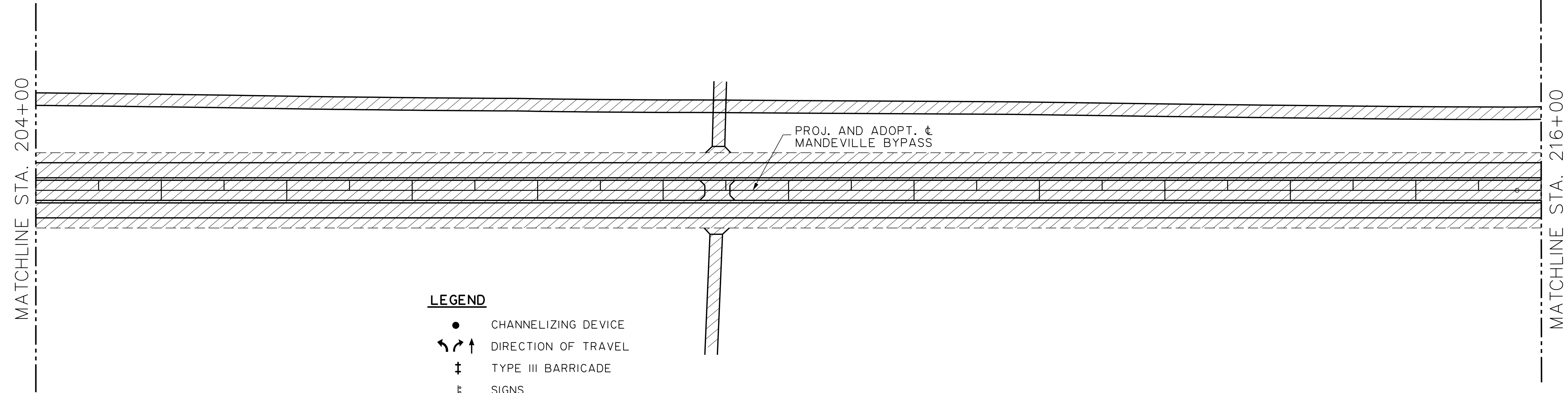
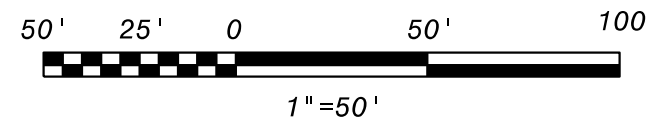
MANDEVILLE BY PASS
LA 1088 TO US 190
SEQUENCE OF CONSTRUCTION



BKI

DESIGNED WCS
CHECKED DSY
DATE 10/9/2024
SHEET 16 OF 25

NO.	DATE	REVISION DESCRIPTION	BY



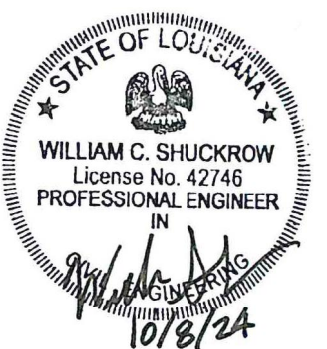
LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊞ SIGNS
- [Stippled Box] WORK AREA (PHASE II)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE

***NOTE:**
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.

PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

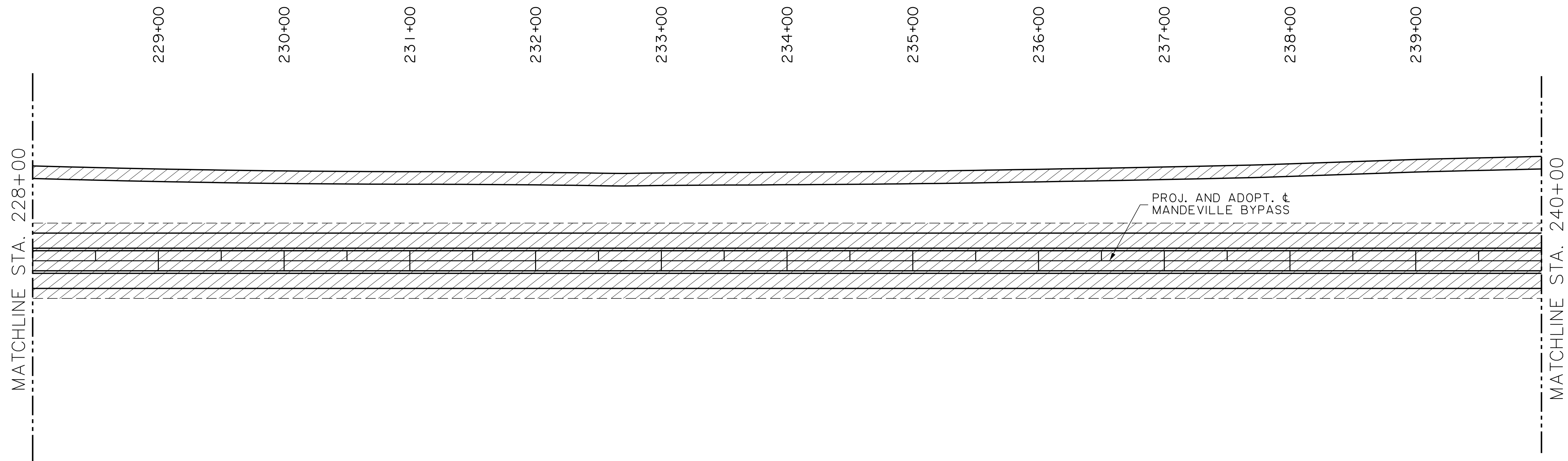


SHEET NUMBER	123		PARISH	ST. TAMMANY
PROJECT	2014EN0001		PARISH PROJECT	2014EN0001
BK/L PROJECT	NO.15.012		BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS			LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION			SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS	DATE	10/9/2024	
CHECKED	DSY	SHEET	17 OF 25	
DETAILED	JAT			
CHECKED	DSY			
NO.	DATE	REVISION DESCRIPTION	BY	DATE

XREF:

10/9/2024

SOC_PHASE1_LAYOUT_8.dgn



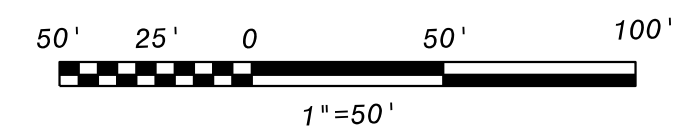
LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ‡ TYPE III BARRICADE
- ⊞ SIGNS
- [Stippled Box] WORK AREA (PHASE II)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE

***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

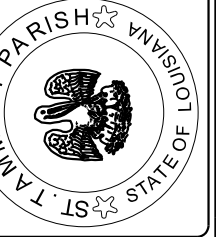
PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

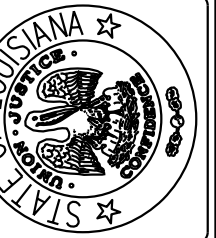


SHEET NUMBER 124

ST. TAMMANY
 PARISH PROJECT 2014EN0001
 B.K.I. PROJECT NO. 15.012

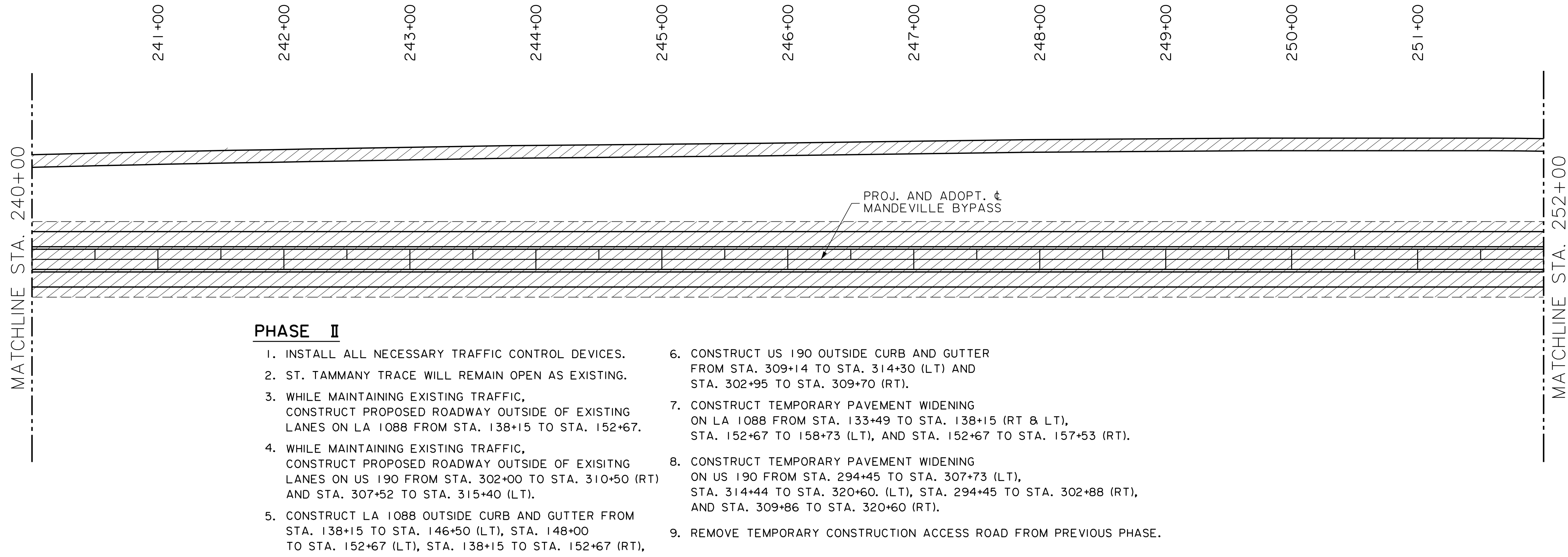


MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS SEQUENCE OF CONSTRUCTION



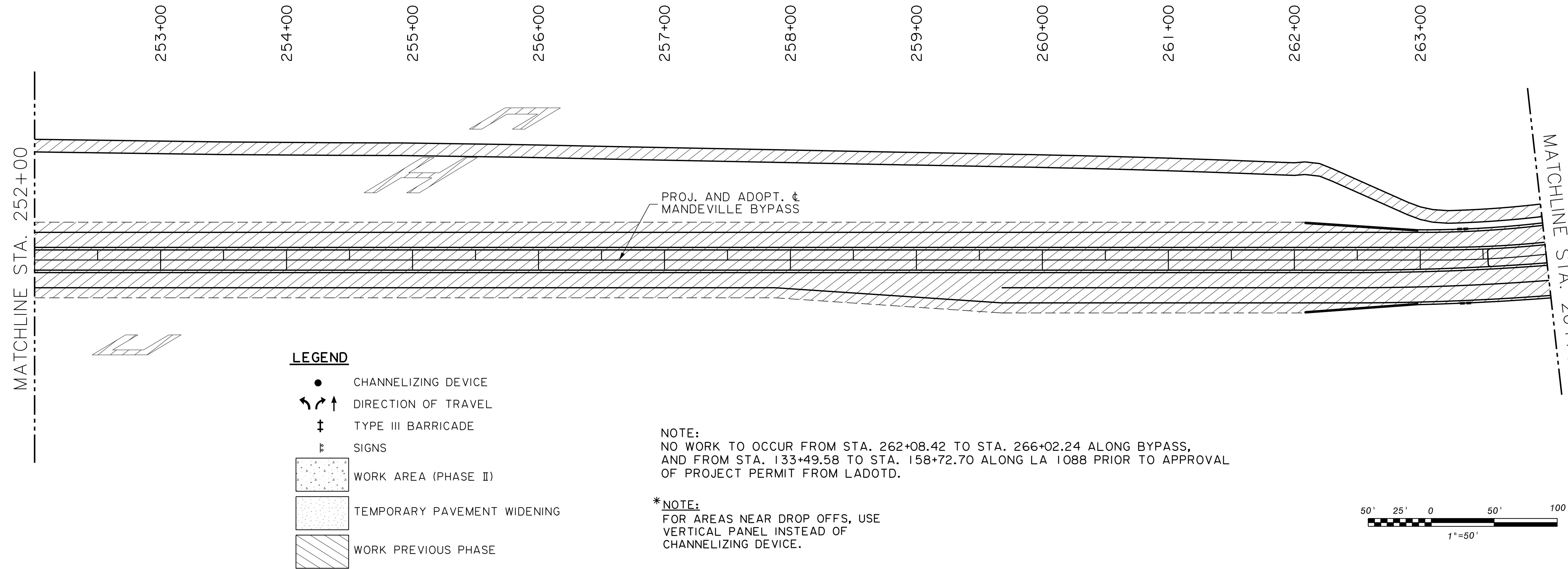
DESIGNED WCS
 CHECKED DSY
 DETAILED JAT
 CHECKED DSY
 DATE 10/9/2024
 SHEET 18 OF 25

NO.	DATE	REVISION DESCRIPTION	BY



PHASE II

1. INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. ST. TAMMANY TRACE WILL REMAIN OPEN AS EXISTING.
3. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON LA 1088 FROM STA. 138+15 TO STA. 152+67.
4. WHILE MAINTAINING EXISTING TRAFFIC, CONSTRUCT PROPOSED ROADWAY OUTSIDE OF EXISTING LANES ON US 190 FROM STA. 302+00 TO STA. 310+50 (RT) AND STA. 307+52 TO STA. 315+40 (LT).
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 138+15 TO STA. 146+50 (LT), STA. 148+00 TO STA. 152+67 (LT), STA. 138+15 TO STA. 152+67 (RT),
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 309+14 TO STA. 314+30 (LT) AND STA. 302+95 TO STA. 309+70 (RT).
7. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON LA 1088 FROM STA. 133+49 TO STA. 138+15 (RT & LT), STA. 152+67 TO 158+73 (LT), AND STA. 152+67 TO STA. 157+53 (RT).
8. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON US 190 FROM STA. 294+45 TO STA. 307+73 (LT), STA. 314+44 TO STA. 320+60. (LT), STA. 294+45 TO STA. 302+88 (RT), AND STA. 309+86 TO STA. 320+60 (RT).
9. REMOVE TEMPORARY CONSTRUCTION ACCESS ROAD FROM PREVIOUS PHASE.

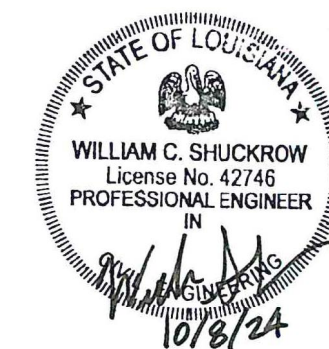
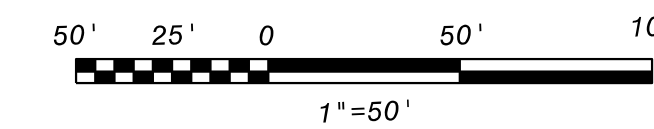


LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- † TYPE III BARRICADE
- ⊞ SIGNS
- [Stippled Box] WORK AREA (PHASE II)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE

NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

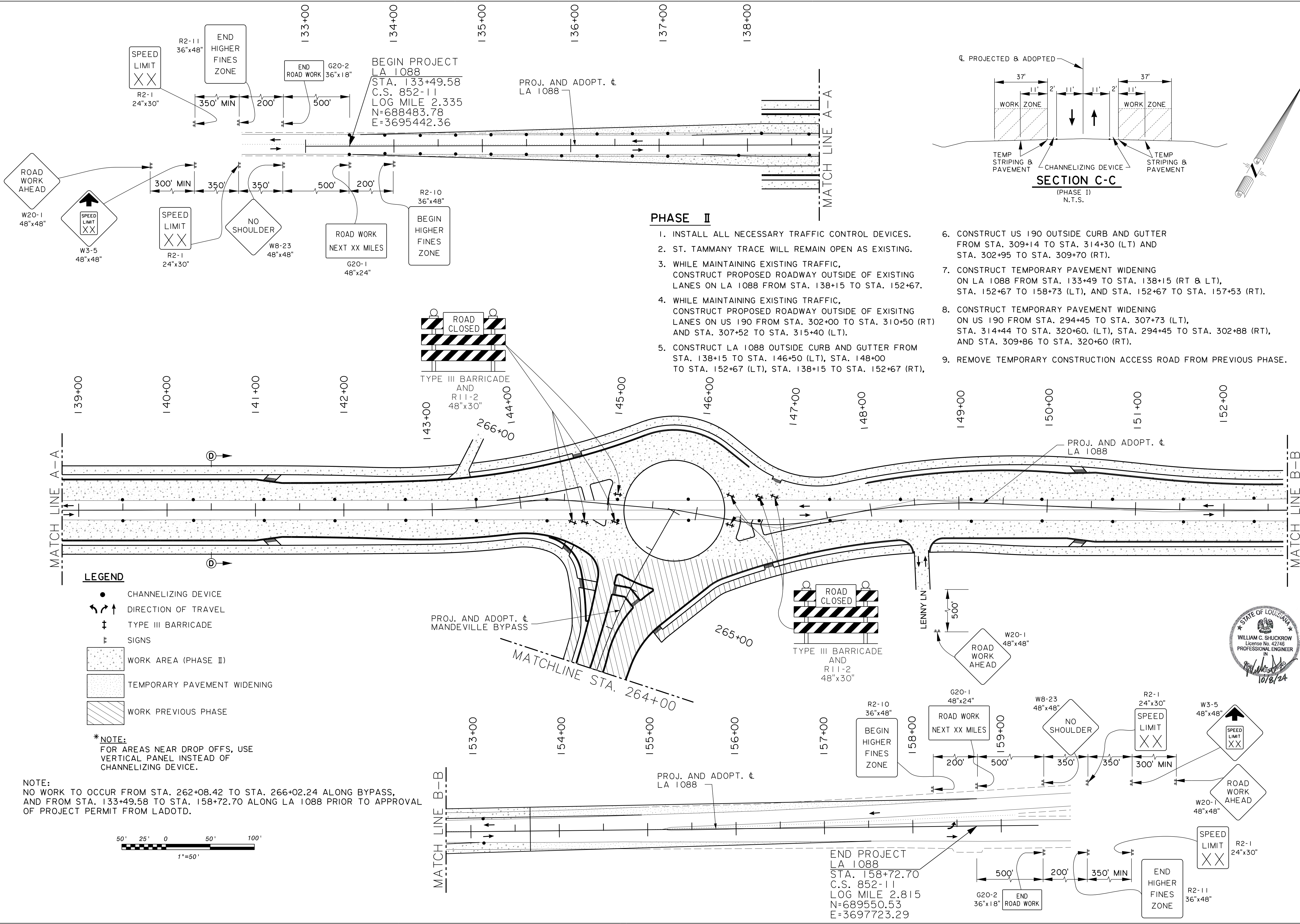


SHEET NUMBER	125
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
BK1 PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
ROADWAY PLANS	SECTION 15.012 - TRANSPORTATION
DESIGNED	WCS
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	19 OF 25
NO.	DATE
	BY
	REVISION DESCRIPTION

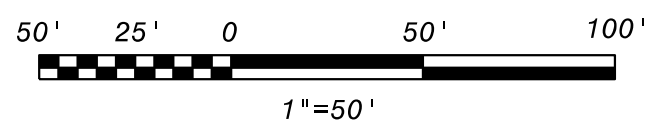
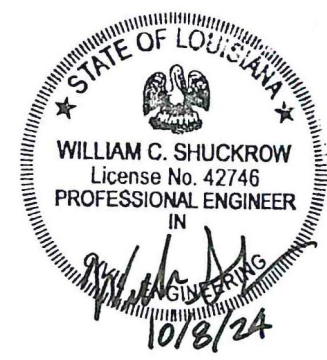
XREF:

10/9/2024

SOC_PHASE1_LAYOUT_10.dgn



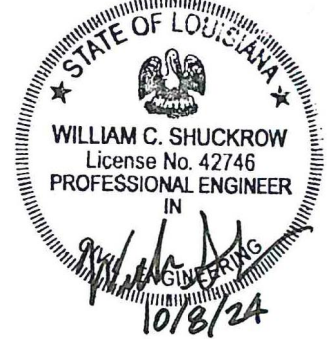
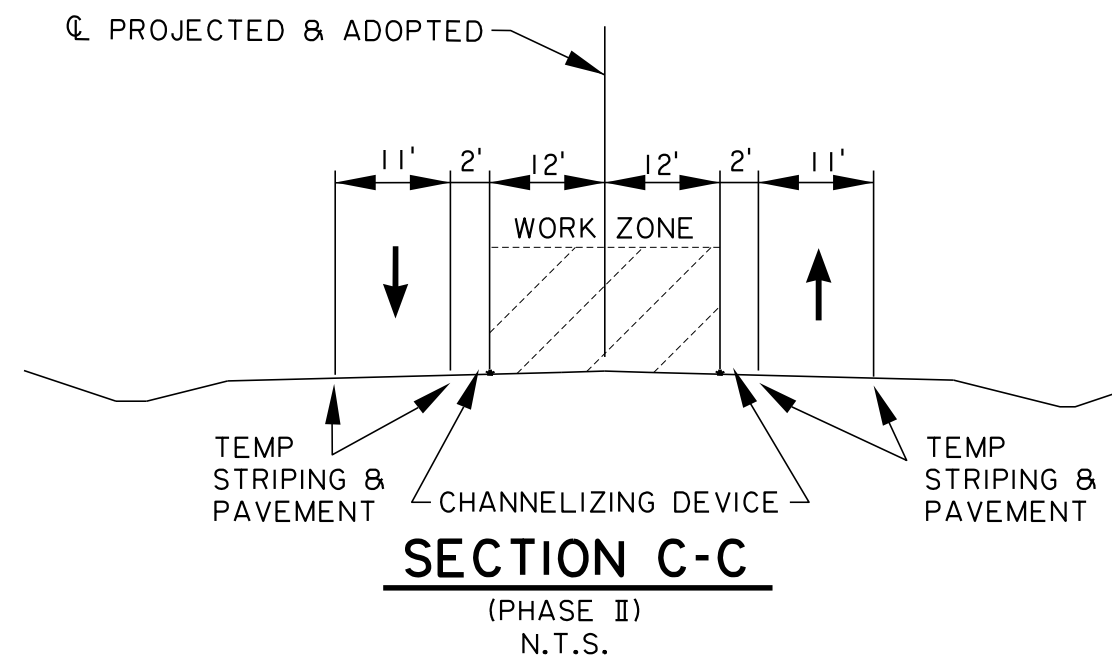
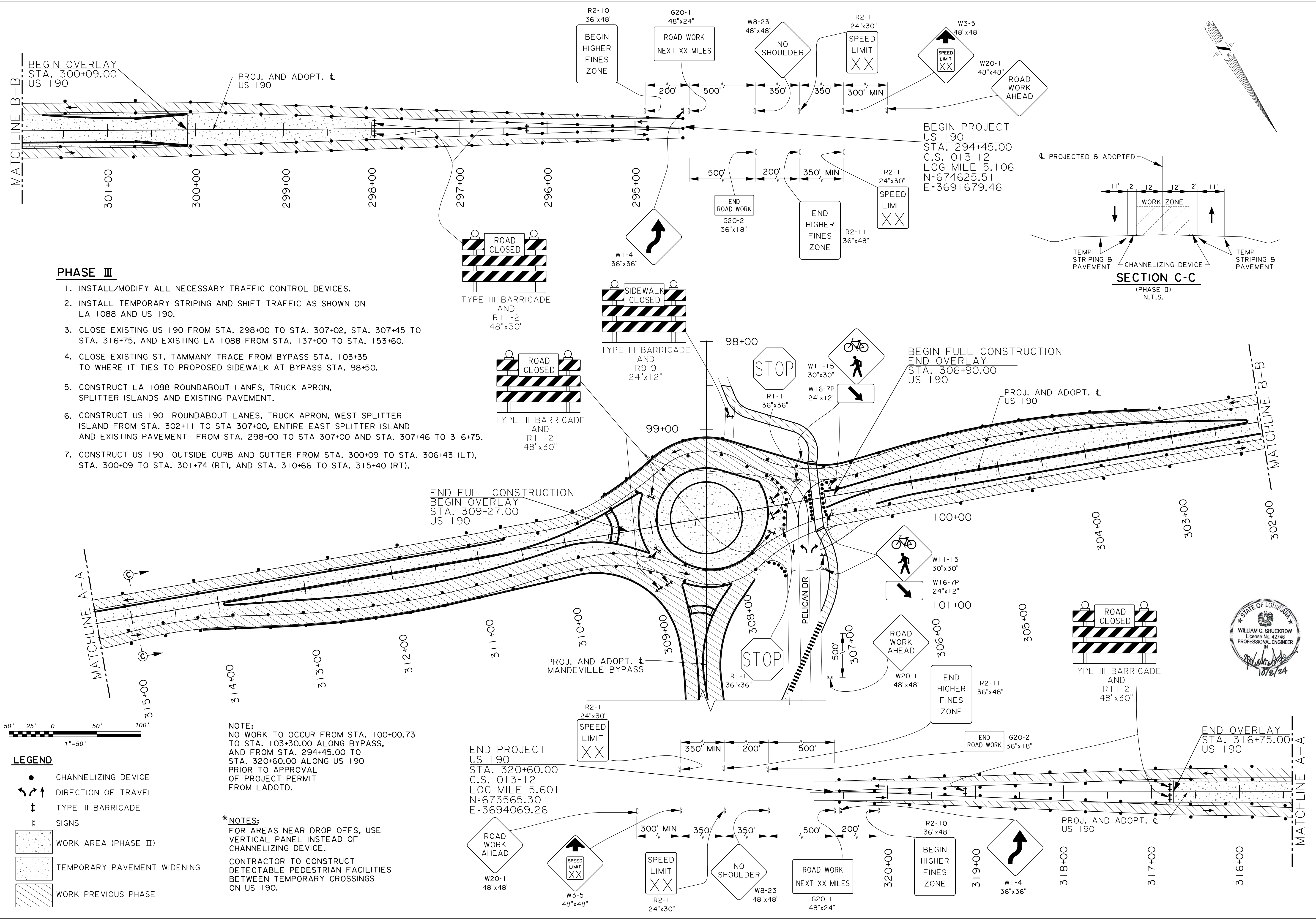
SHEET NUMBER	126
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BK1 PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION	
ROADWAY PLANS	
DESIGNED WCS	
CHECKED DSY	
DATE 10/9/2024	
BY	
REVISION DESCRIPTION	
NO.	DATE



XREF:

10/9/2024

SOC_PHASE2_LAYOUT_1_v2.dgn

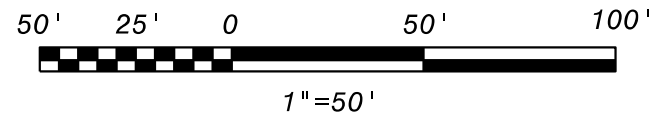


PHASE III

1. INSTALL/MODIFY ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY STRIPING AND SHIFT TRAFFIC AS SHOWN ON LA 1088 AND US 190.
3. CLOSE EXISTING US 190 FROM STA. 298+00 TO STA. 307+02, STA. 307+45 TO STA. 316+75, AND EXISTING LA 1088 FROM STA. 137+00 TO STA. 153+60.
4. CLOSE EXISTING ST. TAMMANY TRACE FROM BYPASS STA. 103+35 TO WHERE IT TIES TO PROPOSED SIDEWALK AT BYPASS STA. 98+50.
5. CONSTRUCT LA 1088 ROUNDABOUT LANES, TRUCK APRON, SPLITTER ISLANDS AND EXISTING PAVEMENT.
6. CONSTRUCT US 190 ROUNDABOUT LANES, TRUCK APRON, WEST SPLITTER ISLAND FROM STA. 302+11 TO STA 307+00, ENTIRE EAST SPLITTER ISLAND AND EXISTING PAVEMENT FROM STA. 298+00 TO STA 307+00 AND STA. 307+46 TO 316+75.
7. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 300+09 TO STA. 306+43 (LT), STA. 300+09 TO STA. 301+74 (RT), AND STA. 310+66 TO STA. 315+40 (RT).

NOTE:
NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.

*NOTES:
FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.
CONTRACTOR TO CONSTRUCT DETECTABLE PEDESTRIAN FACILITIES BETWEEN TEMPORARY CROSSINGS ON US 190.



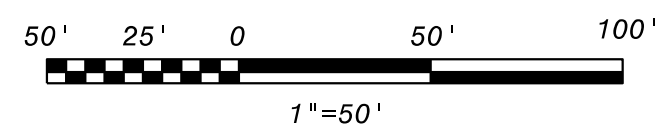
- LEGEND**
- CHANNELIZING DEVICE
 - ↔ DIRECTION OF TRAVEL
 - ⚡ TYPE III BARRICADE
 - ♠ SIGNS
 - ▨ WORK AREA (PHASE III)
 - ▩ TEMPORARY PAVEMENT WIDENING
 - ▧ WORK PREVIOUS PHASE

SHEET NUMBER	127
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BK1 PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION	
ROADWAY PLANS	
DESIGNED WCS	
CHECKED DSY	
DATE	10/9/2024
SHEET	21 OF 25
BY	
NO.	
DATE	
REVISION DESCRIPTION	





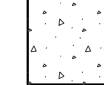


XREF:

10/9/2024

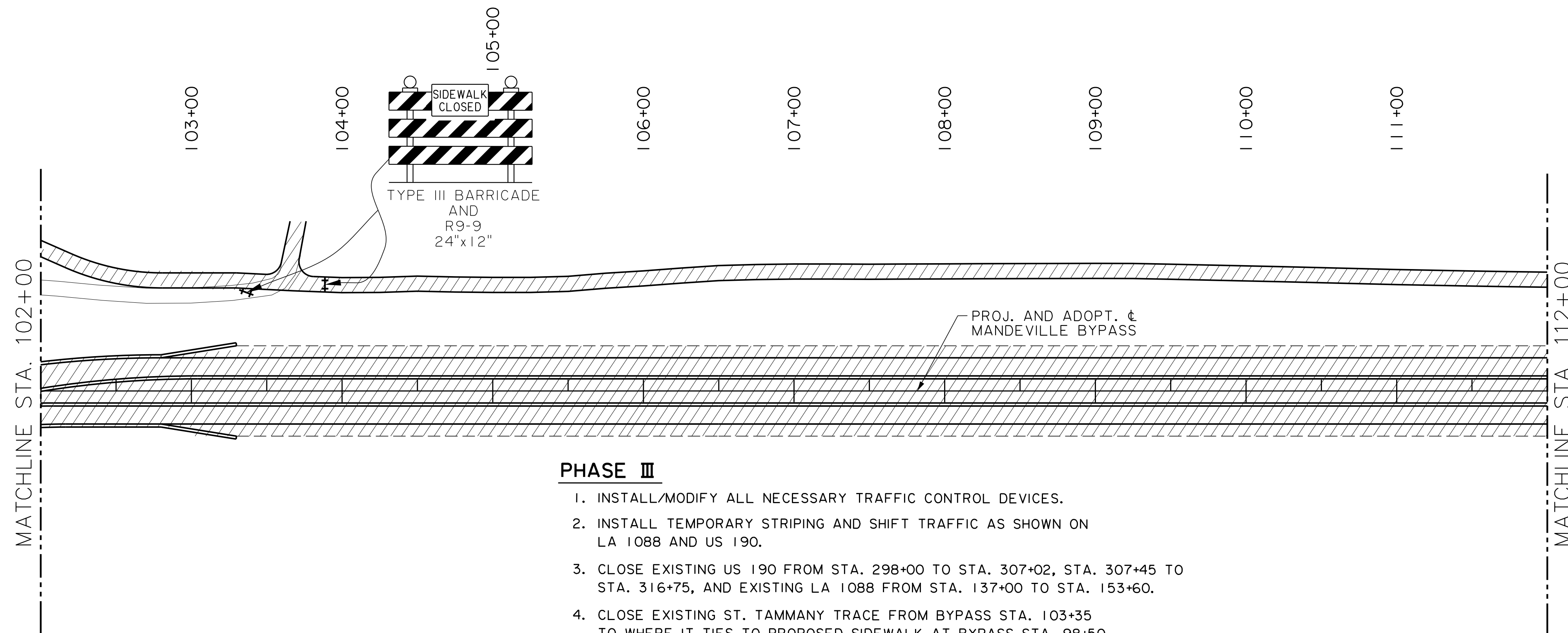
SOC_PHASE2_LAYOUT_2.dgn



LEGEND

-  CHANNELIZING DEVICE
-  DIRECTION OF TRAVEL
-  TYPE III BARRICADE
-  SIGNS
-  WORK AREA (PHASE II)
-  TEMPORARY PAVEMENT WIDENING
-  WORK PREVIOUS PHASE

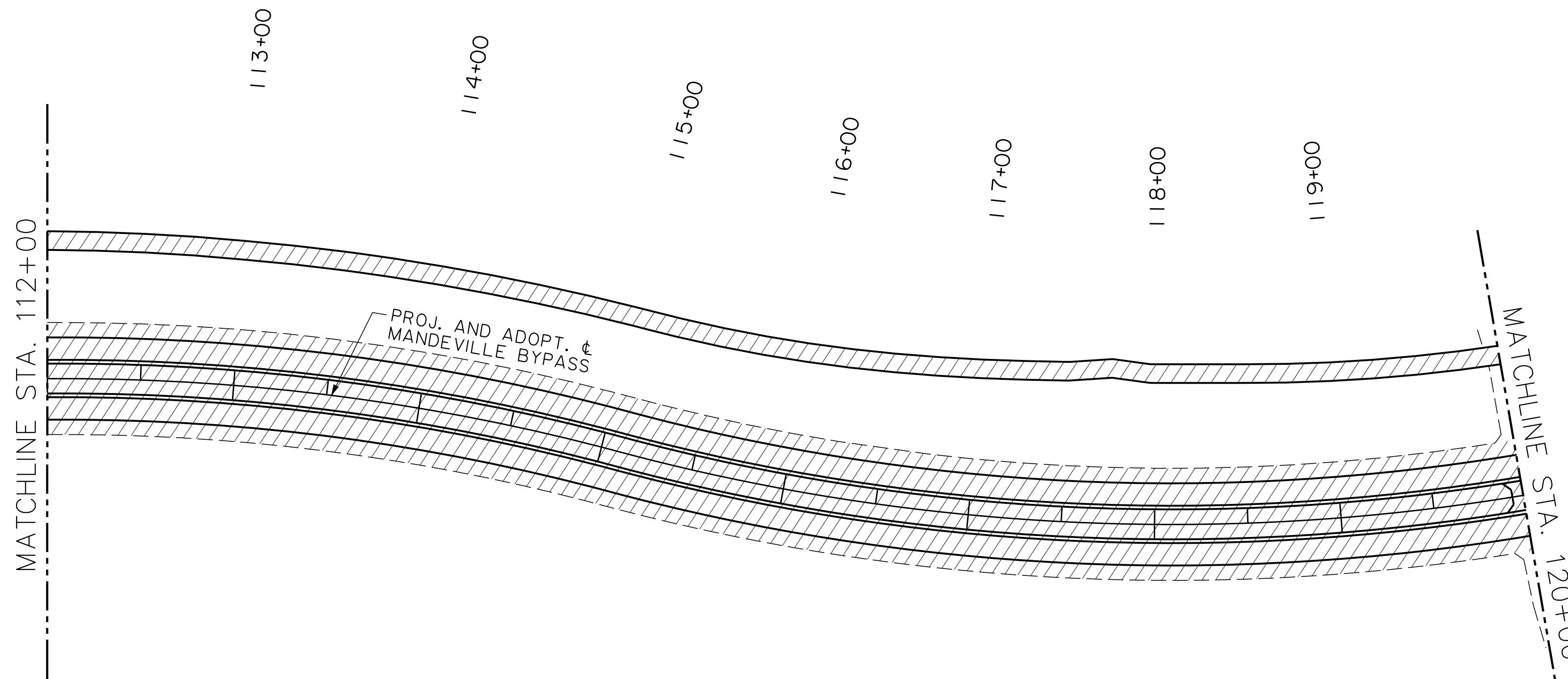
***NOTE:**
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.




PHASE III

1. INSTALL/MODIFY ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY STRIPING AND SHIFT TRAFFIC AS SHOWN ON LA 1088 AND US 190.
3. CLOSE EXISTING US 190 FROM STA. 298+00 TO STA. 307+02, STA. 307+45 TO STA. 316+75, AND EXISTING LA 1088 FROM STA. 137+00 TO STA. 153+60.
4. CLOSE EXISTING ST. TAMMANY TRACE FROM BYPASS STA. 103+35 TO WHERE IT TIES TO PROPOSED SIDEWALK AT BYPASS STA. 98+50.
5. CONSTRUCT LA 1088 ROUNDABOUT LANES, TRUCK APRON, SPLITTER ISLANDS AND EXISTING PAVEMENT.
6. CONSTRUCT US 190 ROUNDABOUT LANES, TRUCK APRON, WEST SPLITTER ISLAND FROM STA. 302+11 TO STA 307+00, ENTIRE EAST SPLITTER ISLAND AND EXISTING PAVEMENT FROM STA. 298+00 TO STA 307+00 AND STA. 307+46 TO 316+75.
7. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 300+09 TO STA. 306+43 (LT), STA. 300+09 TO STA. 301+74 (RT), AND STA. 310+66 TO STA. 315+40 (RT).

NOTE:
 NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.

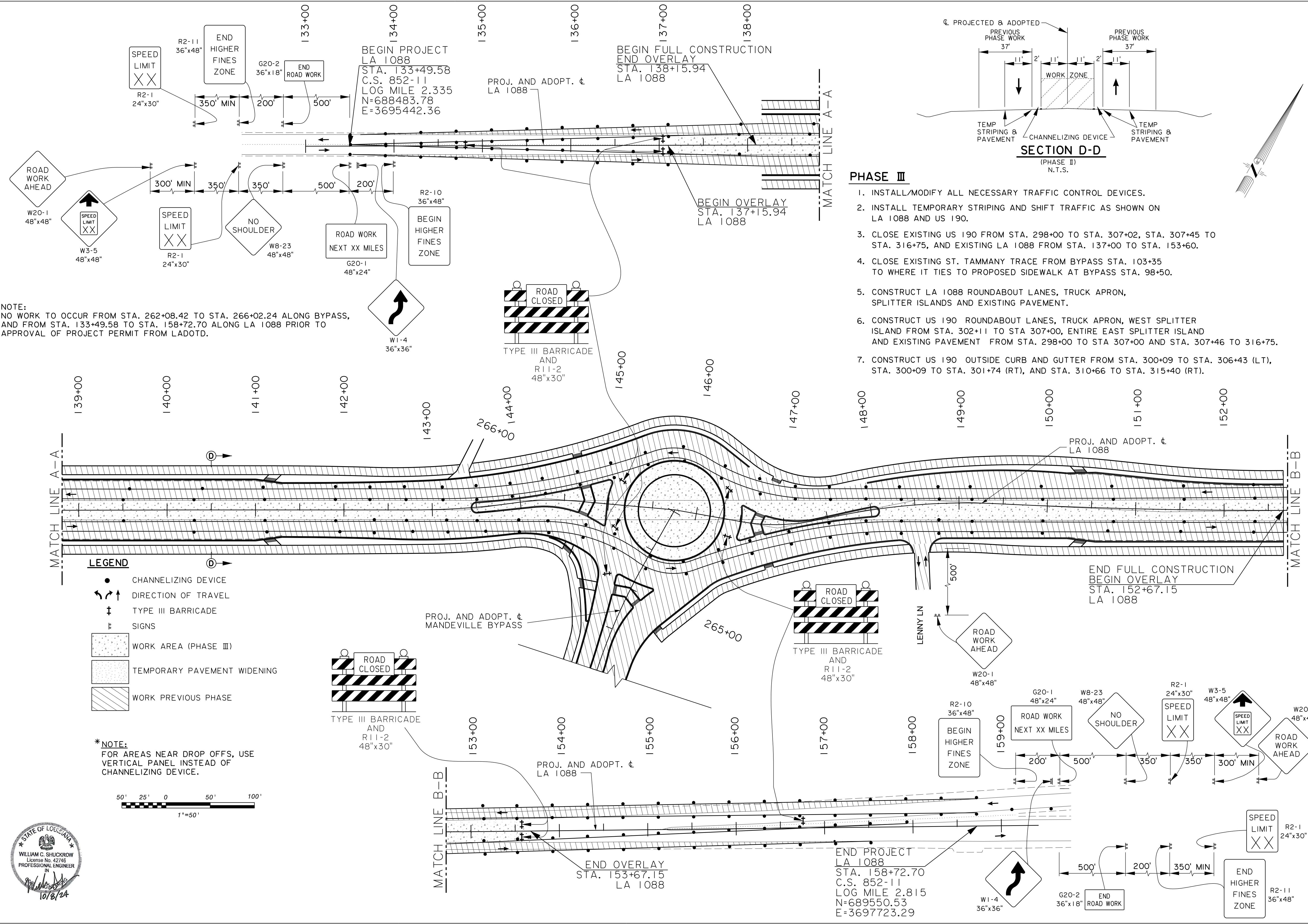


SHEET NUMBER	128	ST. TAMMANY	2014EN0001	NO. 15.012
PARISH PROJECT	BK/L PROJECT	 STATE OF LOUISIANA		
MANDEVILLE BY PASS LA 1088 TO US 190	SEQUENCE OF CONSTRUCTION			
DESIGNED	WCS	REVISION	DESCRIPTION	DATE
CHECKED	DSY	NO.		
DATE	10/9/2024	BY		
SHEET	22 OF 25			

XREF:

10/9/2024

SOC_PHASE2_LAYOUT_10_v2.dgn



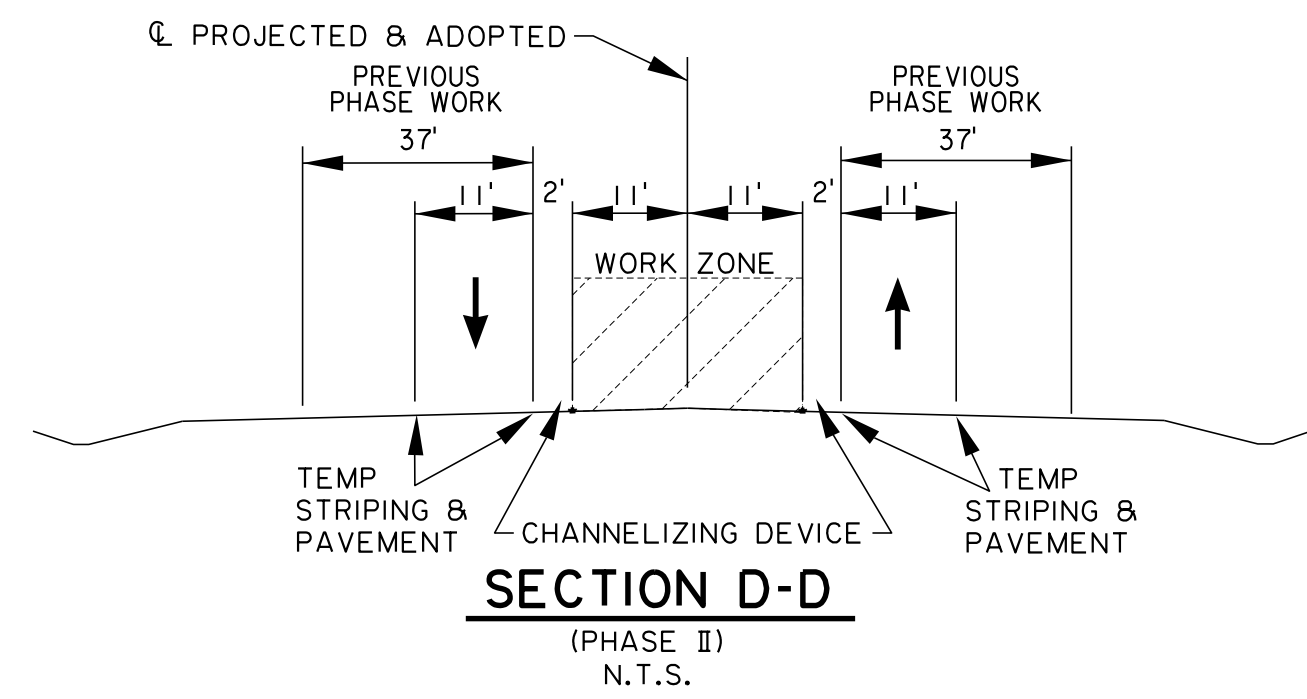
NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO
 APPROVAL OF PROJECT PERMIT FROM LADOTD.

LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- ▨ WORK AREA (PHASE III)
- ▨ TEMPORARY PAVEMENT WIDENING
- ▨ WORK PREVIOUS PHASE

*NOTE:
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.

50' 25' 0 50' 100'
 1"=50'



- PHASE III**
1. INSTALL/MODIFY ALL NECESSARY TRAFFIC CONTROL DEVICES.
 2. INSTALL TEMPORARY STRIPING AND SHIFT TRAFFIC AS SHOWN ON LA 1088 AND US 190.
 3. CLOSE EXISTING US 190 FROM STA. 298+00 TO STA. 307+02, STA. 307+45 TO STA. 316+75, AND EXISTING LA 1088 FROM STA. 137+00 TO STA. 153+60.
 4. CLOSE EXISTING ST. TAMMANY TRACE FROM BYPASS STA. 103+35 TO WHERE IT TIES TO PROPOSED SIDEWALK AT BYPASS STA. 98+50.
 5. CONSTRUCT LA 1088 ROUNDABOUT LANES, TRUCK APRON, SPLITTER ISLANDS AND EXISTING PAVEMENT.
 6. CONSTRUCT US 190 ROUNDABOUT LANES, TRUCK APRON, WEST SPLITTER ISLAND FROM STA. 302+11 TO STA 307+00, ENTIRE EAST SPLITTER ISLAND AND EXISTING PAVEMENT FROM STA. 298+00 TO STA 307+00 AND STA. 307+46 TO 316+75.
 7. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 300+09 TO STA. 306+43 (LT), STA. 300+09 TO STA. 301+74 (RT), AND STA. 310+66 TO STA. 315+40 (RT).

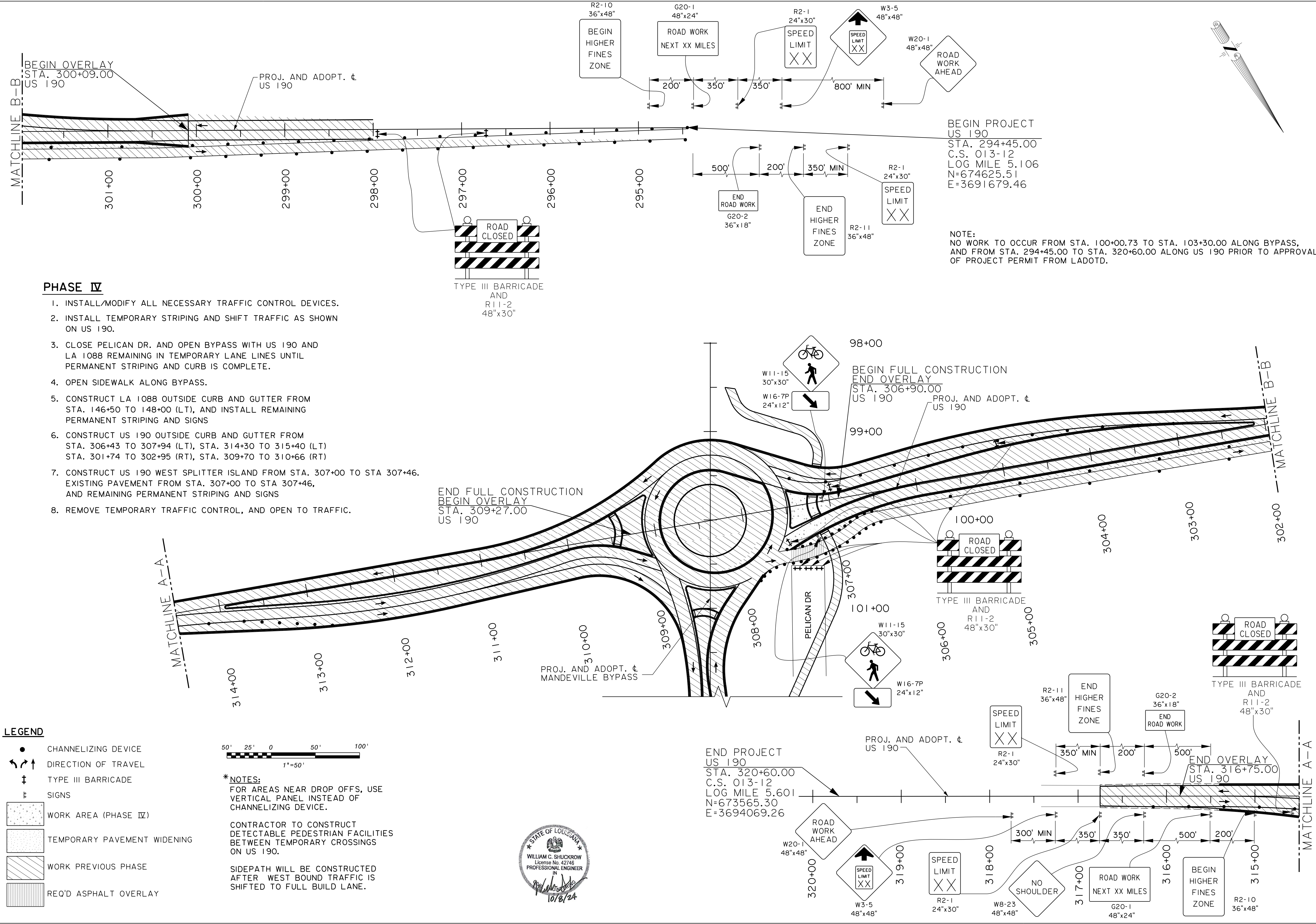


SHEET NUMBER	129
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	
LA 1088 TO US 190	
SEQUENCE OF CONSTRUCTION	
DESIGNED	WCS
CHECKED	DSY
DATE	10/9/2024
SHEET	23 OF 25
BY	
NO.	
DATE	

XREF:

10/9/2024

SOC_PHASE3_LAYOUT_1.dgn

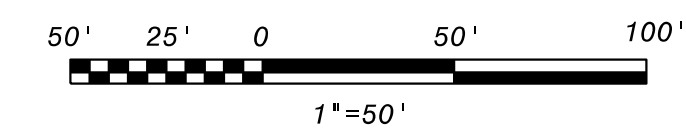


PHASE IV

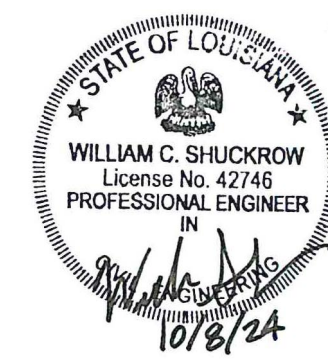
1. INSTALL/MODIFY ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY STRIPING AND SHIFT TRAFFIC AS SHOWN ON US 190.
3. CLOSE PELICAN DR. AND OPEN BYPASS WITH US 190 AND LA 1088 REMAINING IN TEMPORARY LANE LINES UNTIL PERMANENT STRIPING AND CURB IS COMPLETE.
4. OPEN SIDEWALK ALONG BYPASS.
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 146+50 TO 148+00 (LT), AND INSTALL REMAINING PERMANENT STRIPING AND SIGNS
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 306+43 TO 307+94 (LT), STA. 314+30 TO 315+40 (LT) STA. 301+74 TO 302+95 (RT), STA. 309+70 TO 310+66 (RT)
7. CONSTRUCT US 190 WEST SPLITTER ISLAND FROM STA. 307+00 TO STA 307+46. EXISTING PAVEMENT FROM STA. 307+00 TO STA 307+46, AND REMAINING PERMANENT STRIPING AND SIGNS
8. REMOVE TEMPORARY TRAFFIC CONTROL, AND OPEN TO TRAFFIC.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE
- SIGNS
- WORK AREA (PHASE IV)
- TEMPORARY PAVEMENT WIDENING
- WORK PREVIOUS PHASE
- REQ'D ASPHALT OVERLAY



***NOTES:**
 FOR AREAS NEAR DROP OFFS, USE VERTICAL PANEL INSTEAD OF CHANNELIZING DEVICE.
 CONTRACTOR TO CONSTRUCT DETECTABLE PEDESTRIAN FACILITIES BETWEEN TEMPORARY CROSSINGS ON US 190.
 SIDEPATH WILL BE CONSTRUCTED AFTER WEST BOUND TRAFFIC IS SHIFTED TO FULL BUILD LANE.



BEGIN PROJECT US 190
 STA. 294+45.00
 C.S. 013-12
 LOG MILE 5.106
 N=674625.51
 E=3691679.46

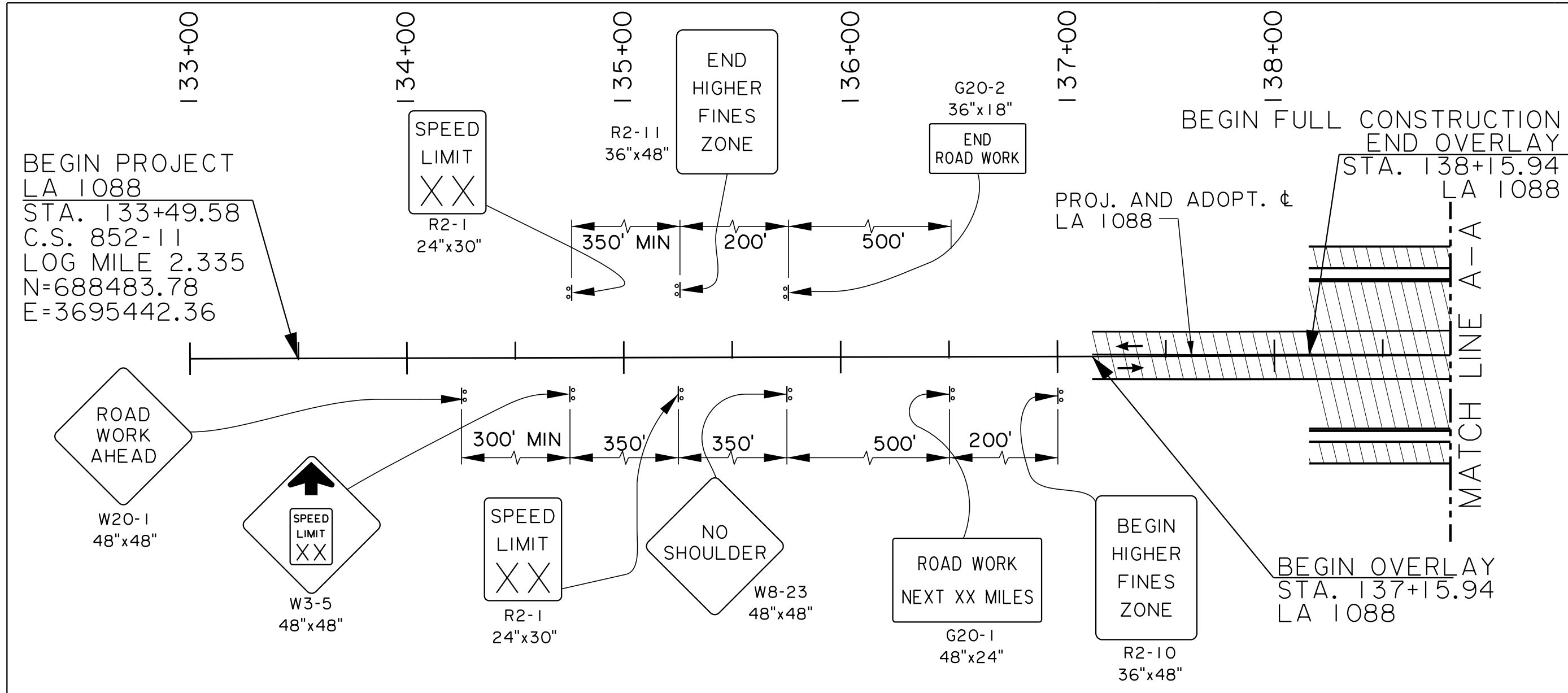
NOTE:
 NO WORK TO OCCUR FROM STA. 100+00.73 TO STA. 103+30.00 ALONG BYPASS, AND FROM STA. 294+45.00 TO STA. 320+60.00 ALONG US 190 PRIOR TO APPROVAL OF PROJECT PERMIT FROM LADOTD.

SHEET NUMBER	130
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BKIL PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BY PASS	SEQUENCE OF CONSTRUCTION
LA 1088 TO US 190	
ROADWAY PLANS	
DESIGNED WCS	
CHECKED DSY	
DATE	10/9/2024
REVISION DESCRIPTION	
BY	
DATE	24 OF 25

XREF:

10/9/2024

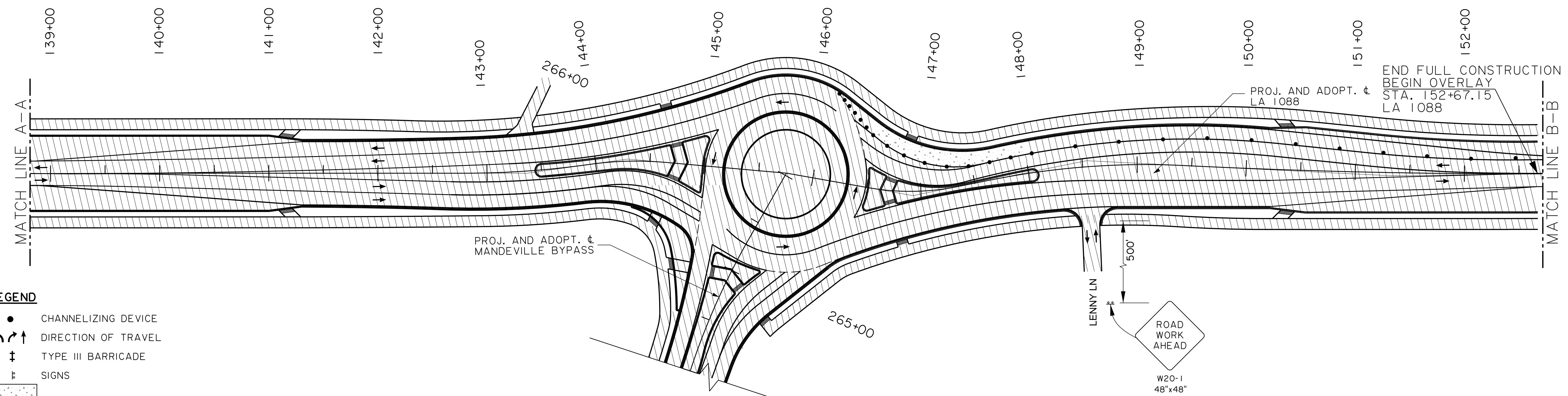
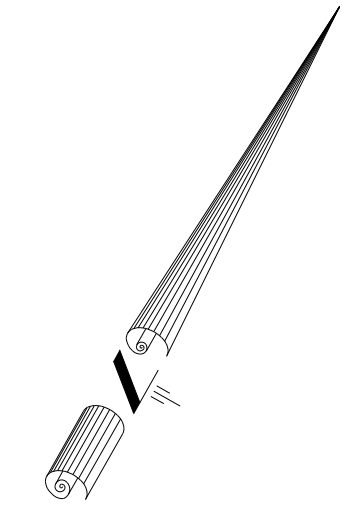
SOC_PHASE3_LAYOUT_10.dgn



PHASE IV

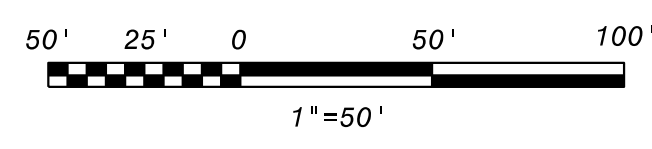
1. INSTALL/MODIFY ALL NECESSARY TRAFFIC CONTROL DEVICES.
2. INSTALL TEMPORARY STRIPING AND SHIFT TRAFFIC AS SHOWN ON US 190.
3. CLOSE PELICAN DR. AND OPEN BYPASS WITH US 190 AND LA 1088 REMAINING IN TEMPORARY LANE LINES UNTIL PERMANENT STRIPING AND CURB IS COMPLETE.
4. OPEN SIDEWALK ALONG BYPASS.
5. CONSTRUCT LA 1088 OUTSIDE CURB AND GUTTER FROM STA. 146+50 TO 148+00 (LT), AND INSTALL REMAINING PERMANENT STRIPING AND SIGNS
6. CONSTRUCT US 190 OUTSIDE CURB AND GUTTER FROM STA. 306+43 TO 307+94 (LT), STA. 314+30 TO 315+40 (LT) STA. 301+74 TO 302+95 (RT), STA. 309+70 TO 310+66 (RT)
7. CONSTRUCT US 190 WEST SPLITTER ISLAND FROM STA. 307+00 TO STA 307+46. EXISTING PAVEMENT FROM STA. 307+00 TO STA 307+46, AND REMAINING PERMANENT STRIPING AND SIGNS
8. REMOVE TEMPORARY TRAFFIC CONTROL, AND OPEN TO TRAFFIC.

NOTE:
 NO WORK TO OCCUR FROM STA. 262+08.42 TO STA. 266+02.24 ALONG BYPASS,
 AND FROM STA. 133+49.58 TO STA. 158+72.70 ALONG LA 1088 PRIOR TO APPROVAL
 OF PROJECT PERMIT FROM LADOTD.

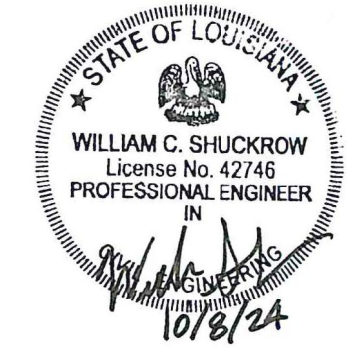
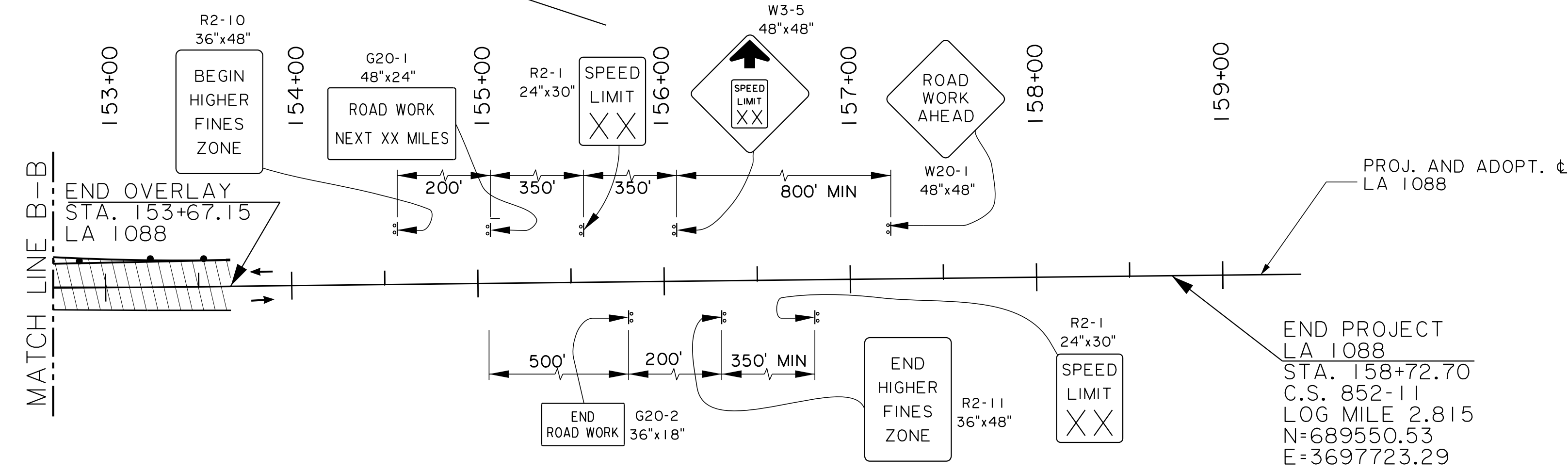


LEGEND

- CHANNELIZING DEVICE
- ↔ DIRECTION OF TRAVEL
- ⊥ TYPE III BARRICADE
- ⊥ SIGNS
- [Stippled Box] WORK AREA (PHASE IV)
- [Dotted Box] TEMPORARY PAVEMENT WIDENING
- [Hatched Box] WORK PREVIOUS PHASE
- [Vertical Panel Box] REQ'D ASPHALT OVERLAY



*NOTES:
 FOR AREAS NEAR DROP OFFS, USE
 VERTICAL PANEL INSTEAD OF
 CHANNELIZING DEVICE.



SHEET NUMBER	131
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BY PASS	SEQUENCE OF CONSTRUCTION
LA 1088 TO US 190	
BKI	
DESIGNED WCS	25 OF 25
CHECKED DSY	
DATE	10/9/2024
DATE	25 OF 25
BY	
NO.	
DATE	

XREF:

10/9/2024

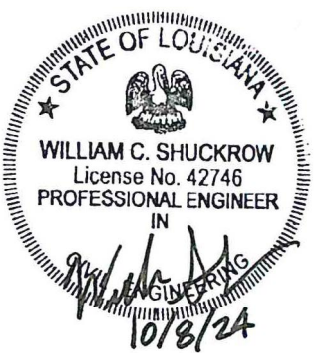
SIGNING_QUANTITIES_1.dgn



SIGN ASSEMBLY NUMBER	REMARKS	SIGN CATALOG NUMBER	SIGN SIZE		MOUNTING LOCATION (FT - IN)		SIGN (SQ. FT.)			SUPPORTS POST MOUNTING (EACH)						DEAD END (EACH)		
			LENGTH (FT-IN)	HEIGHT (FT-IN)	HEIGHT	INSIDE EDGE OF SIGN	ITEM 729-01-00100	ITEM 729-02-00100	ITEM 729-04-00100	ITEM 729-08-00100	ITEM 729-08-00200	ITEM 729-08-00600	ITEM 729-22-00200	ITEM NS-729-00029	ITEM NS-729-00031	ITEM TS-736-00017	ITEM 729-19-00100	
							HORIZ.	VERT.	TYPE "A"	TYPE "B"	TYPE "D"	2 1/2"	3 1/2"	W6 X12	SQUARE TUBING	BREAKAWAY SQUARE TUBING SIGN SUPPORT w/MOWING PAD	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)	SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED
C.S. 013-12 (US 190)																		
137-01	I	R4-7	2'-0"	2'-6"	7'-0"	4'-6"	5.0											
137-02	I	R2-1	2'-0"	2'-6"	7'-0"	7'-0"	5.0							1				
137-03	C	M3-4	2'-0"	1'-0"			2.0											
	I	M1-4	2'-6"	2'-0"	7'-0"	7'-0"	5.0							1				
137-04	C	W2-6	2'-6"	2'-6"			6.3							1				
	I	W13-1P	1'-6"	1'-6"	7'-0"	7'-0"	2.3											
137-05	C	M3-2	2'-0"	1'-0"				2.0										
	A	M1-4	2'-6"	2'-0"		7'-0"		5.0			1							
	C	M6-3	1'-9"	1'-3"	7'-0"			2.2										
137-05a	C	M4-5	2'-0"	1'-0"				2.0										
	C	M1-1	2'-0"	2'-0"		7'-0"		4.0										
	C	M5-1	1'-9"	1'-3"	7'-0"			2.2										
137-06	I	R3-8	3'-0"	3'-0"	7'-0"	7'-0"	9.0							1				
* 138-01	C	W11-15	3'-0"	3'-0"			9.0											
	C	W16-7PL	2'-0"	1'-0"	7'-0"	7'-0"	2.0											
138-01a	C	W11-15	3'-0"	3'-0"			9.0								1			
	C	W16-7PL	2'-0"	1'-0"	7'-0"	5'-0"	2.0											
* 138-02	C	W11-15	3'-0"	3'-0"			9.0											
	C	W16-7PR	2'-0"	1'-0"	7'-0"	7'-0"	2.0											
138-02a	C	W11-15	3'-0"	3'-0"			9.0								1			
	C	W16-7PR	2'-0"	1'-0"	7'-0"	5'-0"	2.0											
* 138-03	C	R1-1	1'-6"	1'-6"	7'-0"	5'-0"	2.3									1		
138-03a	C	R1-1	1'-6"	1'-6"	7'-0"	5'-0"	2.3											
138-04	C	R6-1R	4'-6"	1'-6"			6.8											
	I	R1-2	4'-0"	4'-0"	7'-0"	7'-0"	6.9								2			
138-05	C	M3-4	2'-0"	1'-0"			2.0											
	I	M1-4	2'-6"	2'-0"		7'-0"	5.0											
	C	M6-2	1'-9"	1'-3"	7'-0"		2.2								2			
138-06	I	R1-2	3'-0"	3'-0"	7'-0"	7'-0"	3.9					1						
138-07	I	R1-2	3'-0"	3'-0"	7'-0"	4'-6"	3.9								1			
138-09	C	M3-1	2'-0"	1'-0"			2.0											
	I	-	3'-0"	1'-6"		6'-0"	4.5								1			
	C	M6-2R	1'-9"	1'-3"	7'-0"		2.2											
138-10	I	R1-2	4'-0"	4'-0"	7'-0"	7'-0"	6.9						1					
138-11	C	R6-1R	4'-6"	1'-6"			6.8											
	I	R1-2	4'-0"	4'-0"	7'-0"	4'-0"	6.9								2			
138-12	I	R1-2	4'-0"	4'-0"	7'-0"	7'-0"	6.9						1					
138-13	C	M3-2	2'-0"	1'-0"			2.0											
	I	M1-4	2'-6"	2'-0"		6'-6"	5.0								2			
	C	M6-2R	1'-9"	1'-3"	7'-0"		2.2											
138-14	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	22'-0"	8.0								1			
138-15	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	22'-0"	8.0								1			
138-16	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	30'-0"	8.0								1			
C.S. 013-12 (US 190) SUBTOTALS							192.3	17.4	0.0	0	1	0	2	5	14	3	0	
C.S. 000-52 (BYPASS) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0	0
C.S. 852-11 (LA 1088) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0	0

* ITEM TS-736-00017 INCLUDES 2 FLASHING BEACONS

LEGEND

- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
- (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



SHEET NUMBER		132
PARISH	PROJECT	NO. 15.012
ST. TAMMANY	2014EN0001	
		
MANDEVILLE BY PASS LA 1088 TO US 190		
SIGNING QUANTITIES		
		
DESIGNED	GNL	
CHECKED	DSY	
DATE	10/9/2024	
BY	JAT	
DATE	10/9/2024	
REVISION DESCRIPTION		
NO.		
DATE		

XREF:

10/9/2024

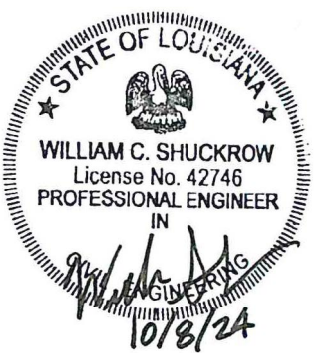
SIGNING_QUANTITIES_2.dgn

SIGN ASSEMBLY NUMBER	REMARKS	SIGN CATALOG NUMBER	SIGN SIZE		MOUNTING LOCATION (FT - IN)		SIGN (SQ. FT.)			SUPPORTS POST MOUNTING (EACH)					DEAD END (EACH)		
			LENGTH (FT-IN)	HEIGHT (FT-IN)	HEIGHT	INSIDE EDGE OF SIGN	ITEM 729-01-00100	ITEM 729-02-00100	ITEM 729-04-00100	ITEM 729-08-00100	ITEM 729-08-00200	ITEM 729-08-00600	ITEM 729-22-00200	ITEM NS-729-00029	ITEM NS-729-00031	ITEM TS-736-00017	ITEM 729-19-00100
							HORIZ.	VERT.	TYPE "A"	TYPE "B"	TYPE "D"	2 1/2"	3 1/2"	W6 X12	SQUARE TUBING	BREAKAWAY SQUARE TUBING SIGN SUPPORT w/MOWING PAD	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)
139-01	C	M3-2	2'-0"	1'-0"			2.0										
	I	M1-4	2'-6"	2'-0"	7'-0"	7'-0"	5.0						1				
139-02	I	R2-1	2'-0"	2'-6"	7'-0"	7'-0"	5.0					1					
139-03	I	R4-7	2'-0"	2'-6"	7'-0"	6'-6"	5.0						1				
139-04	C	W2-6	2'-6"	2'-6"			6.3										
	I	W13-1P	1'-6"	1'-6"	7'-0"	7'-0"	2.3						1				
139-05	C	M3-4	2'-0"	1'-0"				2.0									
	A	M1-4	2'-6"	2'-0"		7'-0"		5.0			1						
	C	M6-3	1'-9"	1'-3"	7'-0"			2.2									
139-05a	C	M4-5	2'-0"	1'-0"				2.0									
	C	M1-1	2'-0"	2'-0"		7'-0"		4.0									
	C	M5-1	1'-9"	1'-3"	7'-0"			2.2									
139-06	I	R3-8	3'-0"	3'-0"	7'-0"	7'-0"	9.0							1			
C.S. 000-52 (BYPASS)																	
138-08	C	M3-1	2'-0"	1'-0"			2.0										
	I	-	3'-0"	1'-6"	7'-0"	7'-0"	4.5						1				
140-01	C	M3-2	2'-0"	1'-0"				2.0									
	A	M1-4	2'-6"	2'-0"		14'-0"		5.0			1						
	C	M5-1	1'-9"	1'-3"	7'-0"			2.2									
140-01a	C	M3-4	2'-0"	1'-0"				2.0									
	C	M1-4	2'-6"	2'-0"		14'-0"		5.0									
	C	M5-1	1'-9"	1'-3"	7'-0"			2.2									
140-02	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
140-03	C	W2-6	2'-6"	2'-6"			6.3										
	I	W13-1P	1'-6"	1'-6"	7'-0"	14'-0"	2.3						1				
140-04	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
140-05	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
* 140-06	C	W2-10	3'-0"	3'-0"	7'-0"	14'-0"	9.0								1		
140-06a	C	W2-10	3'-0"	3'-0"	7'-0"	14'-0"	9.0										
141-01	A	D1-1	6'-6"	1'-6"	7'-0"	14'-0"			9.8			2					
141-02	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0					1					
141-03	I	R4-7c	1'-6"	2'-6"	7'-0"	3'-6"	3.8						1				
141-04	I	R1-1	1'-6"	1'-6"	8'-0"	14'-0"	2.3						1				
141-05	I	R5-3	2'-0"	2'-0"	8'-0"	14'-0"	4.0						1				
141-06	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
141-07	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
141-08	I	R4-7c	1'-6"	2'-6"	7'-0"	4'-0"	3.8							1			
141-09	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
141-10	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
141-11	I	R4-7c	1'-6"	2'-6"	7'-0"	4'-0"	3.8							1			
141-12	I	R1-1	1'-6"	1'-6"	7'-0"	14'-0"	2.3						1				
141-13	C	W11-15	2'-6"	2'-6"			6.3										
	I	W16-7PL	2'-0"	1'-0"	7'-0"	14'-0"	2.0						1				
141-14	I	R5-3	2'-0"	2'-0"	7'-0"	14'-0"	4.0						1				
141-15	I	R4-7	2'-0"	2'-6"	7'-0"	10'-0"	5.0							1			
141-16	C	W11-15	2'-6"	2'-6"			6.3										
	I	W16-7PL	2'-0"	1'-0"	7'-0"	14'-0"	2.0							1			
142-01	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0							1			
142-02	A	D1-1	6'-6"	1'-6"	7'-0"	14'-0"			9.8			2					
142-03	A	D1-1	6'-6"	1'-6"	7'-0"	14'-0"			9.8			2					
142-04	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0							1			
C.S. 013-12 (US 190) SUBTOTALS							34.6	17.4	0.0	0	1	0	1	3	1	0	0
C.S. 000-52 (BYPASS) SUBTOTALS							133.9	18.4	29.4	0	1	6	15	3	4	1	0
C.S. 852-11 (LA 1088) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0

* ITEM TS-736-00017 INCLUDES 2 FLASHING BEACONS

LEGEND

- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
- (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



SHEET NUMBER	133	ST. TAMMANY	2014EN0001	NO. 15.012
PARISH PROJECT	BK1 PROJECT			
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SIGNING QUANTITIES				
DESIGNED GNL	CHECKED DSY	DATE 10/9/2024	SHEET 2 OF 17	
DETAILED JAT	CHECKED DSY	REVISION DESCRIPTION		
NO.	DATE	BY		

XREF:

10/9/2024

SIGNING_QUANTITIES_3.dgn

SIGN ASSEMBLY NUMBER	REMARKS	SIGN CATALOG NUMBER	SIGN SIZE		MOUNTING LOCATION (FT - IN)		SIGN (SQ. FT.)			SUPPORTS POST MOUNTING (EACH)					DEAD END (EACH)		
			LENGTH (FT-IN)	HEIGHT (FT-IN)	HEIGHT	INSIDE EDGE OF SIGN	ITEM 729-01-00100	ITEM 729-02-00100	ITEM 729-04-00100	ITEM 729-08-00100	ITEM 729-08-00200	ITEM 729-08-00600	ITEM 729-22-00200	ITEM NS-729-00029	ITEM NS-729-00031	ITEM TS-736-00017	ITEM 729-19-00100
							HORIZ.	VERT.	TYPE "A"	TYPE "B"	TYPE "D"	2 1/2"	3 1/2"	W6 X12	SQUARE TUBING	BREAKAWAY SQUARE TUBING SIGN SUPPORT w/MOWING PAD	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)
143-01	I	R4-7c	1'-6"	2'-6"	7'-0"	4'-0"	3.8								1		
143-02	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
143-03	I	R1-1	1'-6"	1'-6"	7'-0"	14'-0"	2.3						1				
143-04	I	R5-3	2'-0"	2'-0"	7'-0"	14'-0"	4.0						1				
143-05	C	W11-15	2'-6"	2'-6"			6.3										
	I	W16-7PL	2'-0"	1'-0"	7'-0"	14'-0"	2.0						1				
143-06	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
143-07	I	R4-7c	1'-6"	2'-6"	7'-0"	4'-0"	3.8							1			
143-08	I	R1-1	1'-6"	1'-6"	7'-0"	14'-0"	2.3						1				
143-09	I	R5-3	2'-0"	2'-0"	7'-0"	14'-0"	4.0						1				
143-10	C	W11-15	2'-6"	2'-6"			6.3										
	I	W16-7PL	2'-0"	1'-0"	7'-0"	10'-0"	2.0						1				
143-11	I	R4-7	2'-0"	2'-6"	7'-0"	14'-0"	5.0							1			
143-12	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
143-13	A	D1-1	6'-6"	1'-6"	7'-0"	14'-0"			9.8			2					
144-01	I	R1-1	2'-6"	2'-6"	7'-0"	14'-0"	6.3						1				
144-02	I	R4-7c	1'-6"	2'-6"	7'-0"	4'-0"	3.8							1			
144-03	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
144-04	C	M4-5	2'-0"	1'-0"				2.0									
	A	M1-5	2'-6"	2'-0"		14'-0"		5.0			1						
	C	M6-3	1'-9"	1'-3"	7'-0"			2.2									
144-04a	C	M4-5	2'-0"	1'-0"				2.0									
	C	M1-1	2'-0"	2'-0"	7'-0"	14'-0"		4.0									
	C	M6-3	1'-9"	1'-3"				2.2									
144-05	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
145-01	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
145-02	C	-	-	-	-	-	-	-								1	
145-03	I	R2-1	2'-0"	2'-6"	7'-0"	14'-0"	5.0						1				
145-04	C	W2-6	2'-6"	2'-6"			6.3										
	I	W13-1P	1'-6"	1'-6"	7'-0"	14'-0"	2.3						1				
145-05	C	M3-4	2'-0"	1'-0"			2.0										
	I	M1-5	2'-6"	2'-0"		14'-0"	5.0						1				
	C	M5-1	1'-9"	1'-3"	7'-0"		2.2										
145-05a	C	M3-2	2'-0"	1'-0"			2.0										
	I	M1-5	2'-6"	2'-0"		14'-0"	5.0						1				
	C	M5-1	1'-9"	1'-3"	7'-0"		2.2										
145-05b	C	M4-5	2'-0"	1'-0"			2.0										
	I	M1-1	2'-0"	2'-0"		14'-0"	4.0						1				
	C	M5-1	1'-9"	1'-3"	7'-0"		2.2										
C.S. 013-12 (US 190) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0
C.S. 000-52 (BYPASS) SUBTOTALS							123.4	17.4	9.8	0	1	2	12	6	4	0	1
C.S. 852-11 (LA 1088) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0

LEGEND

- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
- Ⓛ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



SHEET NUMBER	134	PARISH	ST. TAMMANY	PROJECT	2014EN0001
PARISH PROJECT	ST. TAMMANY	BKLI PROJECT	NO. 15.012		
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SIGNING QUANTITIES					
DESIGNED	GNL	CHECKED	DSY	DATE	10/9/2024
DETAILED	JAT	CHECKED	DSY	SHEET	3 OF 17
NO.	DATE	REVISION DESCRIPTION	BY		

XREF:

10/9/2024

SIGNING_QUANTITIES_4.dgn

SIGN ASSEMBLY NUMBER	REMARKS	SIGN CATALOG NUMBER	SIGN SIZE		MOUNTING LOCATION (FT - IN)		SIGN (SQ. FT.)			SUPPORTS POST MOUNTING (EACH)						DEAD END (EACH)		
			LENGTH (FT-IN)	HEIGHT (FT-IN)	HEIGHT	INSIDE EDGE OF SIGN	ITEM 729-01-00100	ITEM 729-02-00100	ITEM 729-04-00100	ITEM 729-08-00100	ITEM 729-08-00200	ITEM 729-08-00600	ITEM 729-22-00200	ITEM NS-729-00029	ITEM NS-729-00031	ITEM TS-736-00017	ITEM 729-19-00100	
							HORIZ.	VERT.	TYPE "A"	TYPE "B"	TYPE "D"	2 1/2"	3 1/2"	W6 X12	SQUARE TUBING	BREAKAWAY SQUARE TUBING SIGN SUPPORT w/MOWING PAD	BREAKAWAY SQUARE TUBING SIGN SUPPORT (SURFACE MOUNT)	SOLAR POWERED FLASHING BEACON, PEDESTAL MOUNTED
146-01	C	M3-3	2'-0"	1'-0"							2.0							
	A	-	3'-0"	1'-6"	8'-0"	3'-0"			4.5	1								
146-02	I	R4-7	2'-0"	2'-6"	7'-0"	10'-6"	5.0							1				
146-24	C	W11-15	3'-0"	3'-0"			9.0											
	I	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0					2						
146-25	I	R3-8 (MOD)	3'-0"	3'-0"	7'-0"	7'-0"	9.0						1					
146-26	C	W11-15	3'-0"	3'-0"			9.0							2				
	I	W16-7PR	2'-0"	1'-0"	7'-0"	7'-0"	2.0											
C.S. 852-11 (LA 1088)																		
146-03	C	-	3'-0"	1'-6"					4.5									
	I	M6-2R	1'-9"	1'-3"	7'-0"	12'-0"			2.2					1				
146-04	C	W11-15	3'-0"	3'-0"			9.0											
	I	W16-7PR	2'-0"	1'-0"	7'-0"	7'-0"	2.0							1				
146-05	C	W11-15	3'-0"	3'-0"			9.0											
	A	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0				1							
146-06	A	R1-2	4'-0"	4'-0"	8'-0"	3'-0"	6.9				1							
146-07	C	W11-15	3'-0"	3'-0"			6.3											
	A	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0				1							
146-08	C	W11-15	3'-0"	3'-0"			9.0											
	I	W16-7PR	2'-0"	1'-0"	8'-0"	7'-0"	2.0							2				
146-09	C	W11-15	3'-0"	3'-0"			9.0											
	I	W16-7PR	2'-0"	1'-0"	8'-0"	7'-0"	2.0							2				
146-10	C	W11-15	3'-0"	3'-0"			6.3											
	A	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0				1							
146-11	C	R6-1R	4'-6"	1'-6"			6.8											
	I	R1-2	4'-0"	4'-0"	7'-0"	7'-0"	6.9							2				
146-12	C	M3-4	2'-0"	1'-0"			2.0											
	I	M1-5	2'-6"	2'-0"		7'-0"	5.0							2				
	C	M6-2R	1'-9"	1'-3"	7'-0"		2.2											
146-13	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	20'-0"	8.0							1				
146-14	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	20'-0"	8.0							1				
146-15	C	R6-1R	3'-0"	1'-0"			3.0											
	I	R6-4a	4'-0"	2'-0"	4'-0"	20'-0"	8.0							1				
146-16	C	R6-1R	4'-6"	1'-6"			6.8											
	I	R1-2	4'-0"	4'-0"	7'-0"	7'-0"	6.9							2				
146-17	A	R1-2	4'-0"	4'-0"	7'-0"	3'-0"	6.9				1							
146-18	C	W11-15	3'-0"	3'-0"			9.0											
	A	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0				1							
146-19	C	W11-15	3'-0"	3'-0"			6.3											
	I	W16-7PR	2'-0"	1'-0"	7'-0"	7'-0"	2.0							2				
146-20	C	W11-15	3'-0"	3'-0"			9.0											
	A	W16-7PL	2'-0"	1'-0"	8'-0"	3'-0"	2.0				1							
C.S. 013-12 (US 190) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0	0
C.S. 000-52 (BYPASS) SUBTOTALS							36.0	0.0	6.5	1	0	0	2	1	3	0	0	
C.S. 852-11 (LA 1088) SUBTOTALS							174.3	0.0	6.7	2	5	0	0	0	17	0	0	

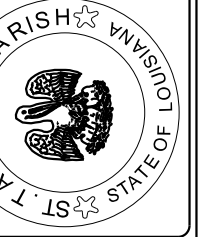
LEGEND

- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
- Ⓓ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

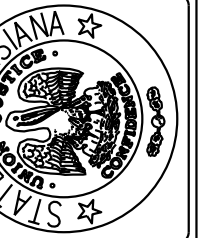


SHEET NUMBER 135

ST. TAMMANY
2014EN0001
NO. 15.012



MANDEVILLE BY PASS
LA 1088 TO US 190
SIGNING QUANTITIES



DESIGNED GNL
CHECKED DSY
DATE 10/9/2024
SHEET 4 OF 17

DETAILED JAT
CHECKED DSY
DATE 10/9/2024
SHEET 4 OF 17

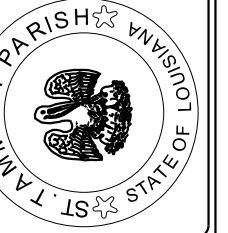
REVISION DESCRIPTION

NO. DATE BY

SIGN ASSEMBLY NUMBER	REMARKS	SIGN CATALOG NUMBER	SIGN SIZE		MOUNTING LOCATION (FT - IN)		SIGN (SQ. FT.)			SUPPORTS POST MOUNTING (EACH)					DEAD END (EACH)				
			LENGTH (FT-IN)	HEIGHT (FT-IN)	HEIGHT	INSIDE EDGE OF SIGN	ITEM 729-01-00100	ITEM 729-02-00100	ITEM 729-04-00100	ITEM 729-08-00100	ITEM 729-08-00200	ITEM 729-08-00600	ITEM 729-22-00200	ITEM NS-729-00029	ITEM NS-729-00031	ITEM TS-736-00017	ITEM 729-19-00100		
																		HORIZ.	VERT.
146-21	C	M3-2	2'-0"	1'-0"															
	A	M1-5	2'-6"	2'-0"		7'-0"													
	C	M6-2R	1'-9"	1'-3"		7'-0"													
146-21a	C	M4-5	2'-0"	1'-0"															
	C	M1-1	2'-0"	2'-0"		7'-0"													
	C	M6-2R	1'-9"	1'-3"		7'-0"													
146-22	C	R6-1R	4'-6"	1'-6"						6.8									
	A	R1-2	4'-0"	4'-0"		7'-0"				6.9									
	C	-	2'-6"	2'-6"		7'-0"				6.3									
146-23	C	R1-2	4'-0"	4'-0"						6.9									
	A	-	2'-6"	2'-6"		7'-0"	3'-0"			6.3									
146-27	C	W11-15	3'-0"	3'-0"						9.0									
	I	W16-7PR	2'-0"	1'-0"		7'-0"	7'-0"			2.0					2				
147-01	C	W2-6	2'-6"	2'-6"						6.3									
	A	W13-1P	1'-6"	1'-6"		8'-0"	3'-0"			2.3									
147-02	C	M3-2	2'-0"	1'-0"															
	A	M1-5	2'-6"	2'-0"		3'-0"				2.0									
	C	M6-3	1'-9"	1'-3"		8'-0"				5.0									
147-02a	C	M4-5	2'-0"	1'-0"						2.2									
	C	M1-1	2'-0"	2'-0"		3'-0"				2.0									
	C	M6-3	1'-9"	1'-3"		8'-0"				4.0									
147-03	A	R2-1	2'-0"	2'-6"		8'-0"	3'-0"			2.2									
147-04	C	M3-4	2'-0"	1'-0"						5.0									
	A	M1-5	2'-6"	2'-0"		8'-0"	3'-0"			2.0									
147-05	A	W4-2R	3'-0"	3'-0"		8'-0"	3'-0"			5.0									
147-06	I	R4-7	2'-0"	2'-6"		7'-0"	9'-0"			9.0					1				
147-07	A	R3-8 (MOD)	3'-0"	3'-0"		8'-0"	3'-0"			5.0									
										0.0									
148-01	A	R3-8 (MOD)	3'-0"	3'-0"		8'-0"	3'-0"			9.0									
148-02	A	W4-2R	3'-0"	3'-0"		8'-0"	3'-0"			9.0									
148-03	I	R4-7	2'-0"	2'-6"		7'-0"	6'-0"			5.0					1				
148-04	I	R1-1	3'-0"	3'-0"		7'-0"	4'-6"			9.0					1				
148-05	C	M3-2	2'-0"	1'-0"						9.0									
	A	M1-5	2'-6"	2'-0"		8'-0"	3'-0"			2.0									
148-06	C	M3-4	2'-0"	1'-0"						5.0									
	A	M1-5	2'-6"	2'-0"		3'-0"				2.0									
	C	M6-3	1'-9"	1'-3"		8'-0"				5.0					1				
148-07	C	W2-6	2'-6"	2'-6"						2.2									
	A	W13-1P	1'-6"	1'-6"		8'-0"	3'-0"			6.3									
148-08	A	R2-1	2'-0"	2'-6"		8'-0"	3'-0"			2.3									
										5.0					1				
										1									
C.S. 013-12 (US 190) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	
C.S. 000-52 (BYPASS) SUBTOTALS							0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0
C.S. 852-11 (LA 1088) SUBTOTALS							149.6	34.8	0.0	10.0	5.0	0.0	0.0	1.0	4.0	0.0	0.0	0.0	0.0
C.S. 013-12 (US 190) TOTAL							226.9	34.8	0.0	0	2	0	3	8	15	3	0	0	
C.S. 000-52 (BYPASS) TOTAL							293.3	35.8	45.7	1	2	8	29	10	11	1	1		
C.S. 852-11 (LA 1088) TOTAL							323.9	34.8	6.7	12	10	0	0	1	21	0	0		
PROJECT TOTAL							844.1	105.4	52.4	13	14	8	32	19	47	4	1		

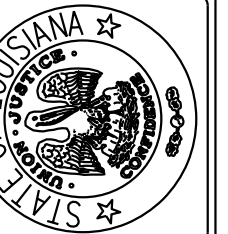
LEGEND

- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
- Ⓜ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



MANDEVILLE BY PASS
 LA 1088 TO US 190

ROADWAY PLANS SIGNING QUANTITIES



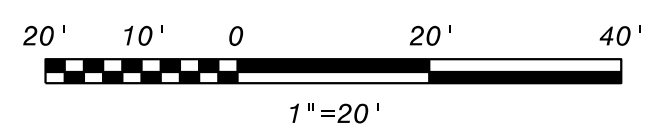
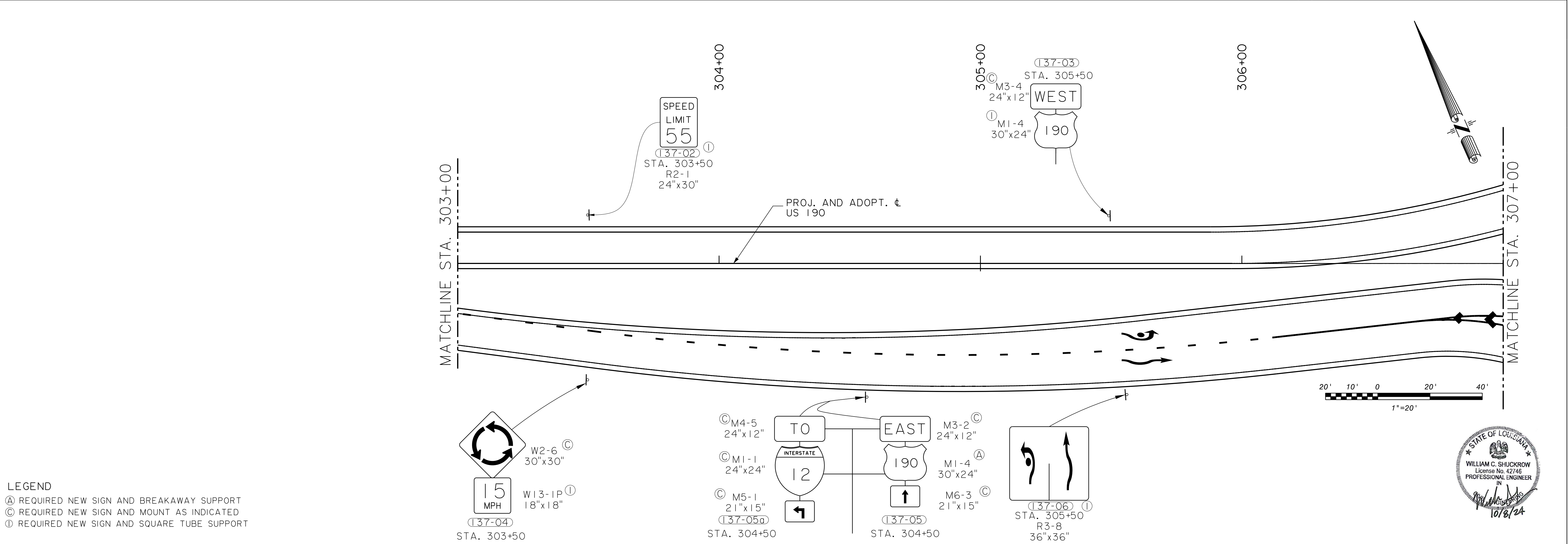
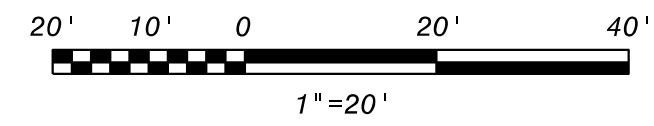
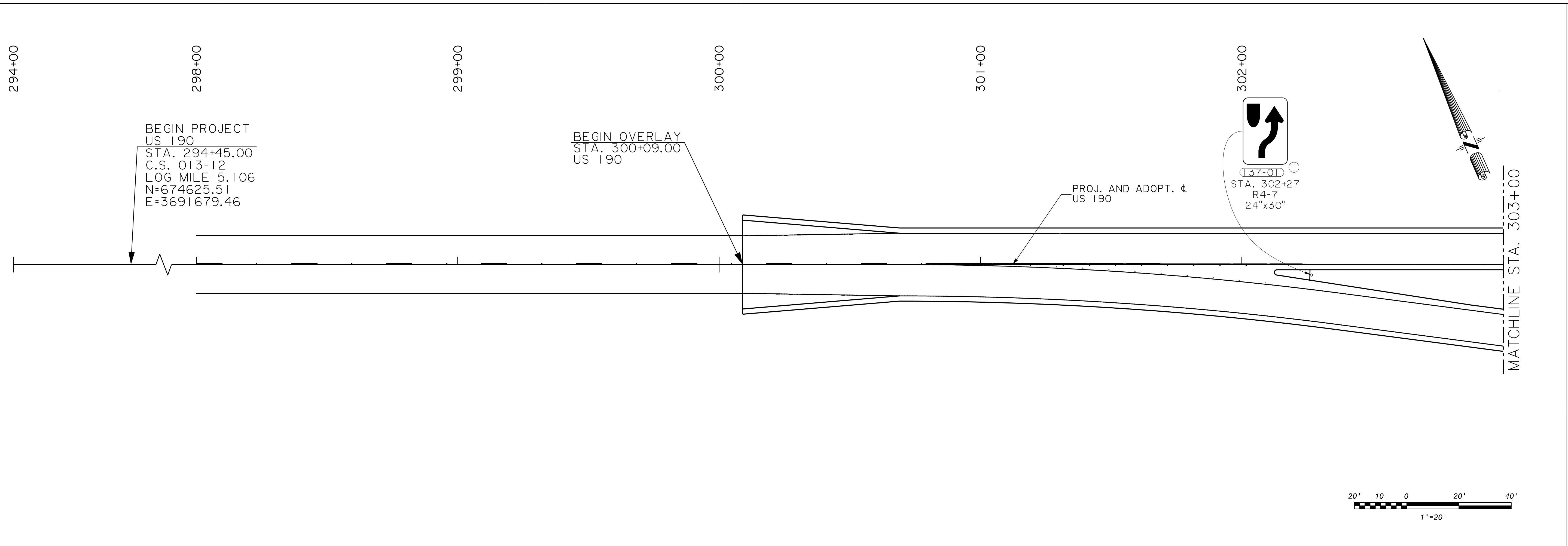
DESIGNED GNL
 CHECKED DSY
 DETAILED JAT
 CHECKED DSY
 DATE 10/9/2024
 SHEET 5 OF 17

NO.	DATE	BY	REVISION DESCRIPTION

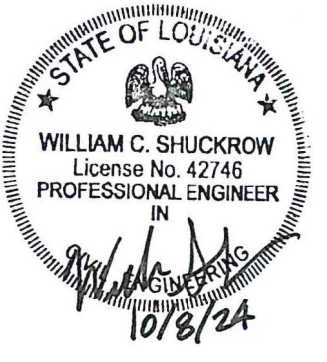
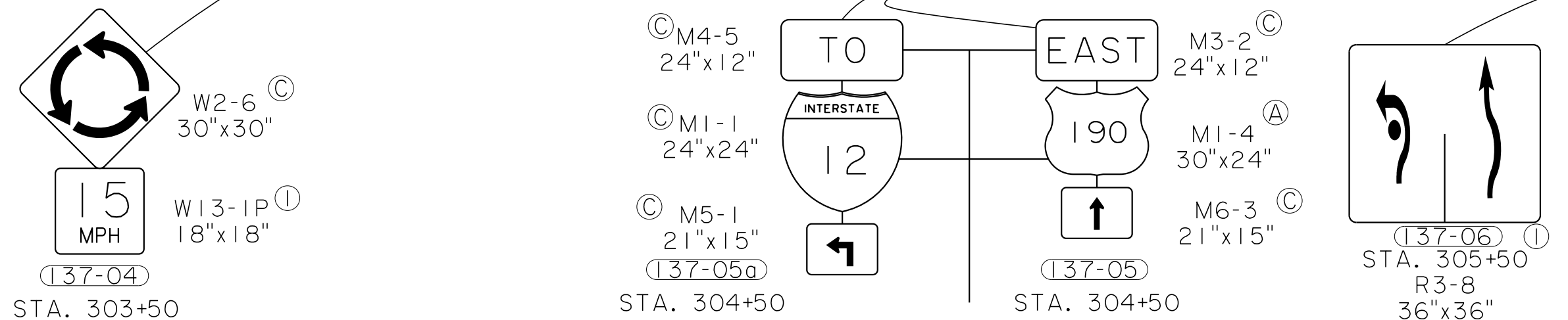
XREF:

10/9/2024

SIGNING_12629_1.dgn



- LEGEND**
- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - Ⓛ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

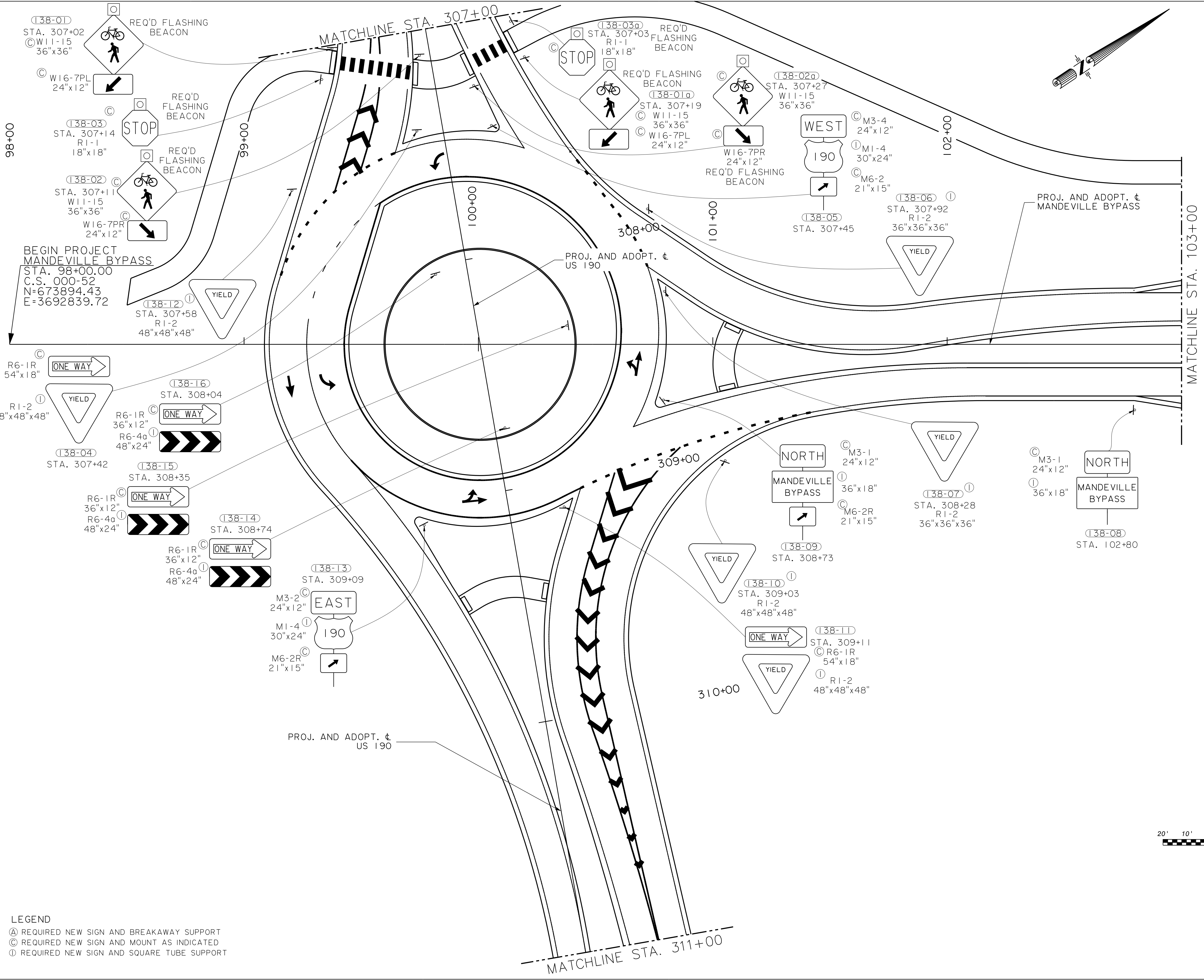


SHEET NUMBER	137
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	6 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

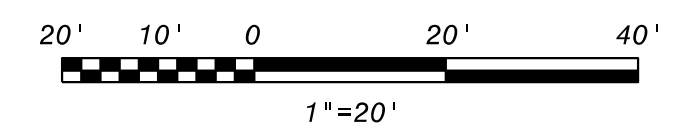
XREF:

10/9/2024

SIGNING_12629_2.dgn



- LEGEND**
- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - Ⓛ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

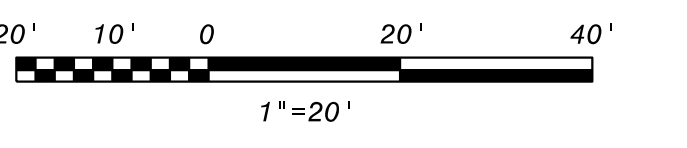
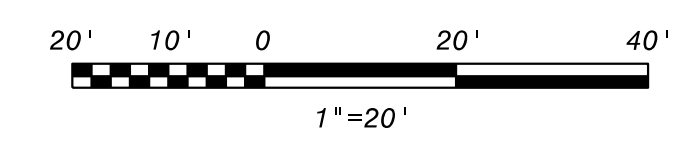
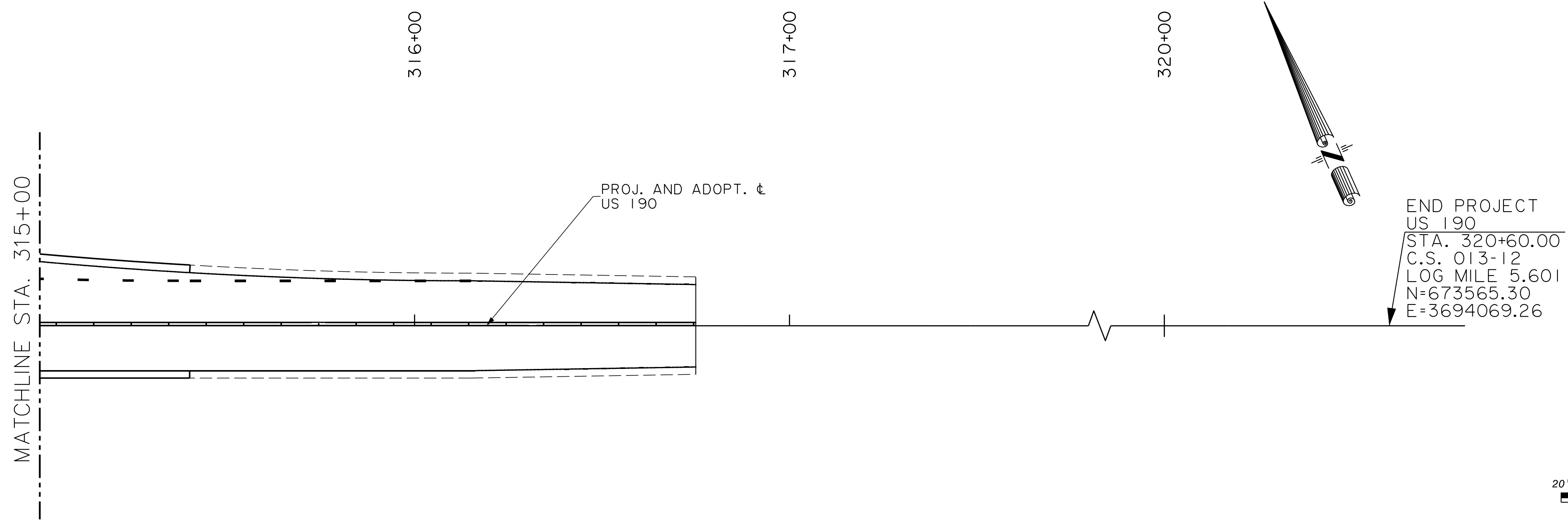
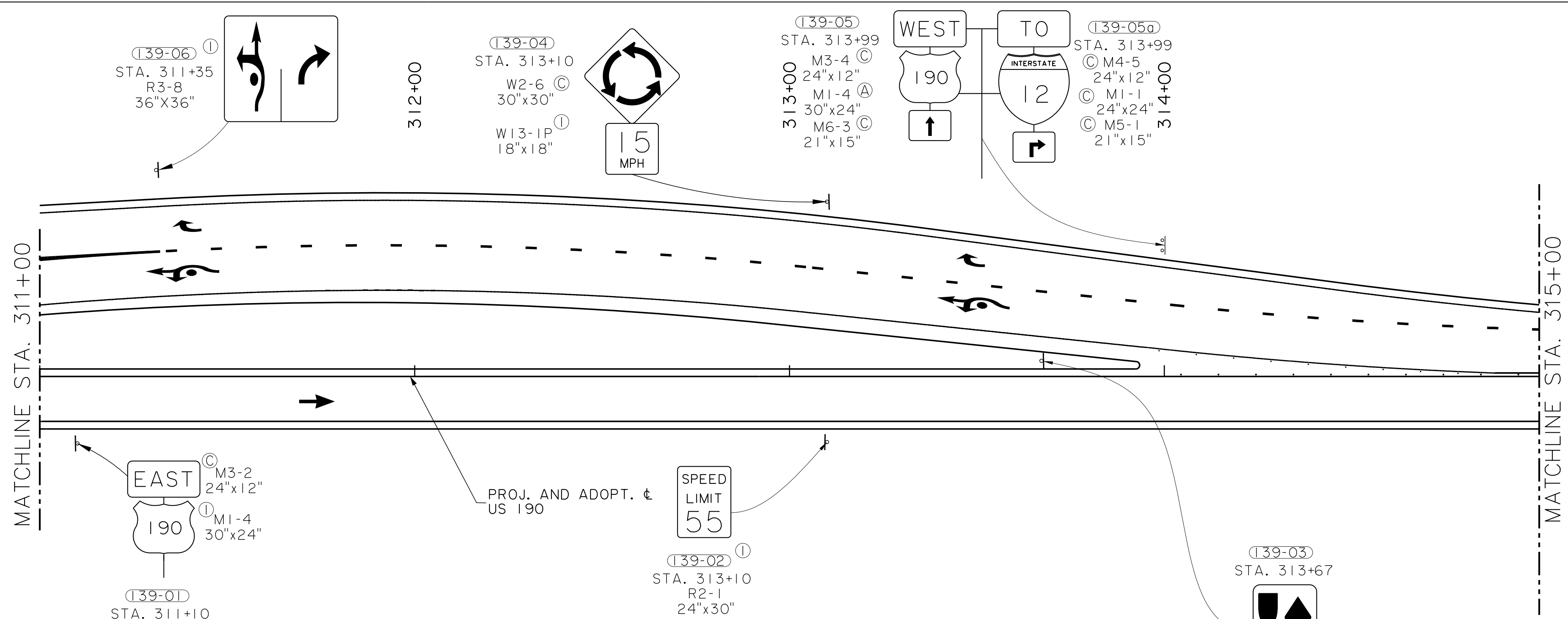


SHEET NUMBER	138
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BKLI PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
BKI	
DESIGNED GNL	CHECKED DSY
DATE	10/9/2024
SHEET	7 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

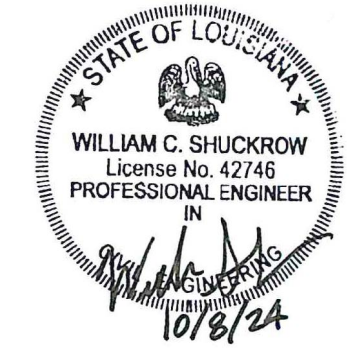
XREF:


10/9/2024

SIGNING_12629_3.dgn



- LEGEND**
- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



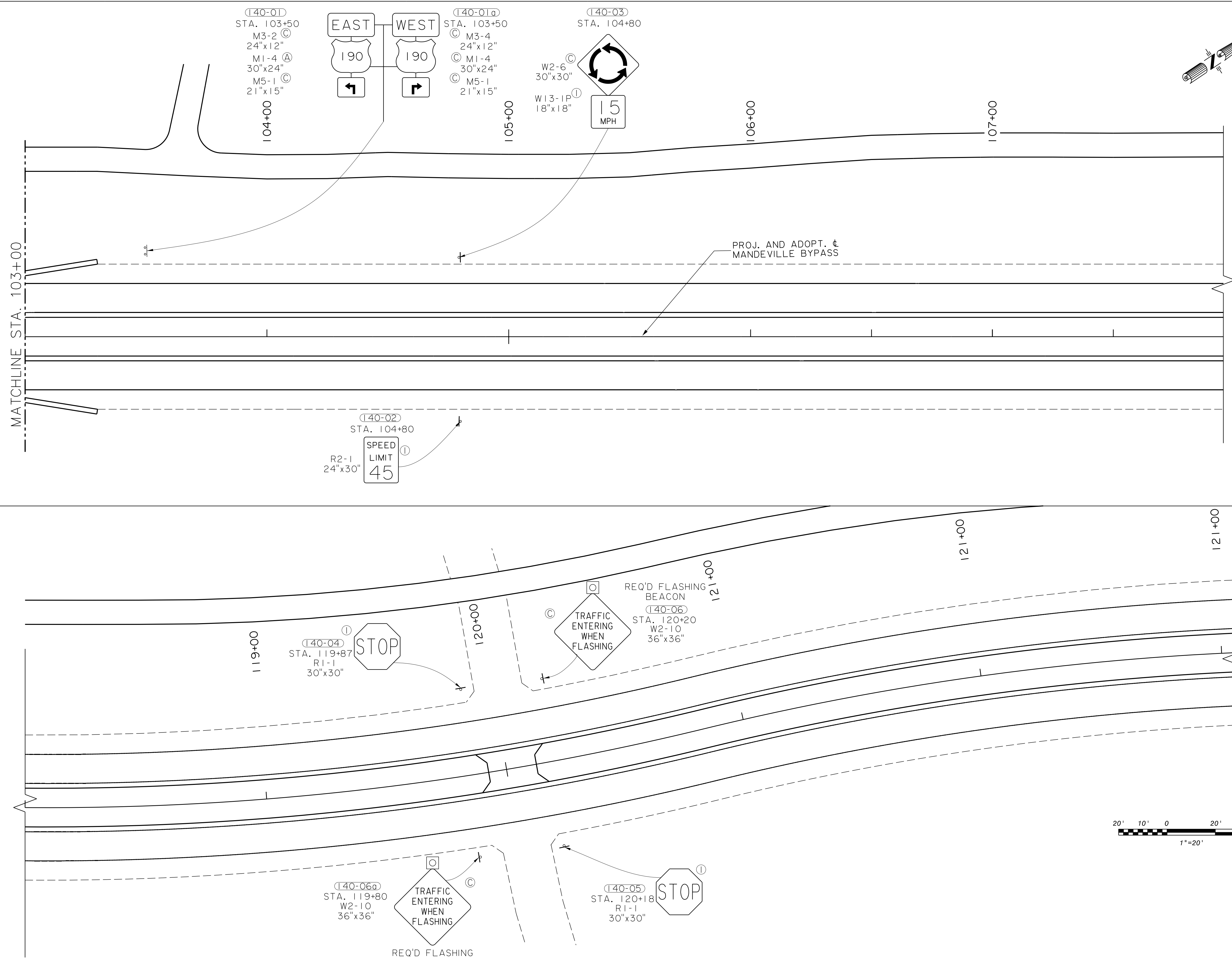
SHEET NUMBER	139
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
	
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DATE	10/9/2024
SHEET	8 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

END PROJECT
 US 190
 STA. 320+60.00
 C.S. 013-12
 LOG MILE 5.601
 N=673565.30
 E=3694069.26

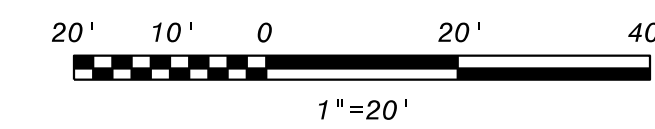
XREF:

10/9/2024

SIGNING_12629_4.dgn



- LEGEND**
- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

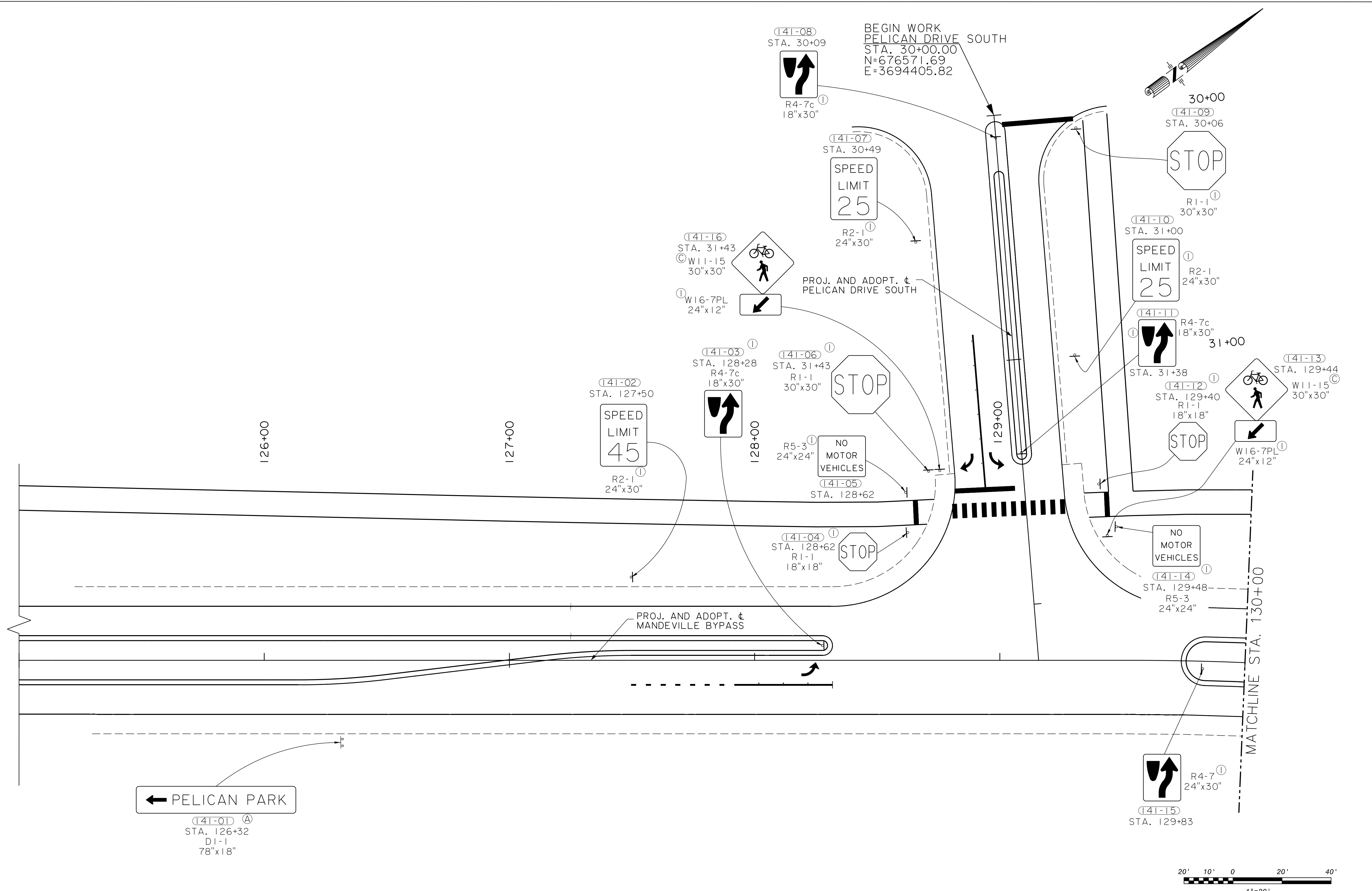


SHEET NUMBER	140
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DATE	10/9/2024
SHEET	9 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

10/9/2024

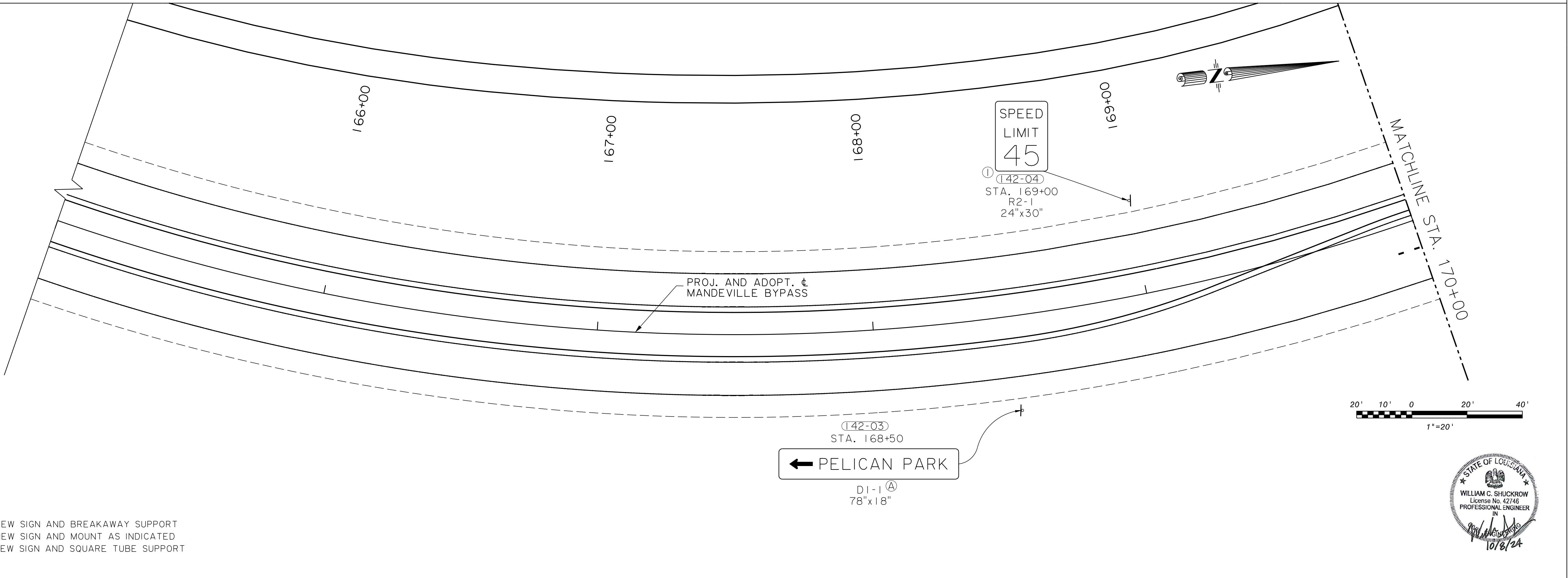
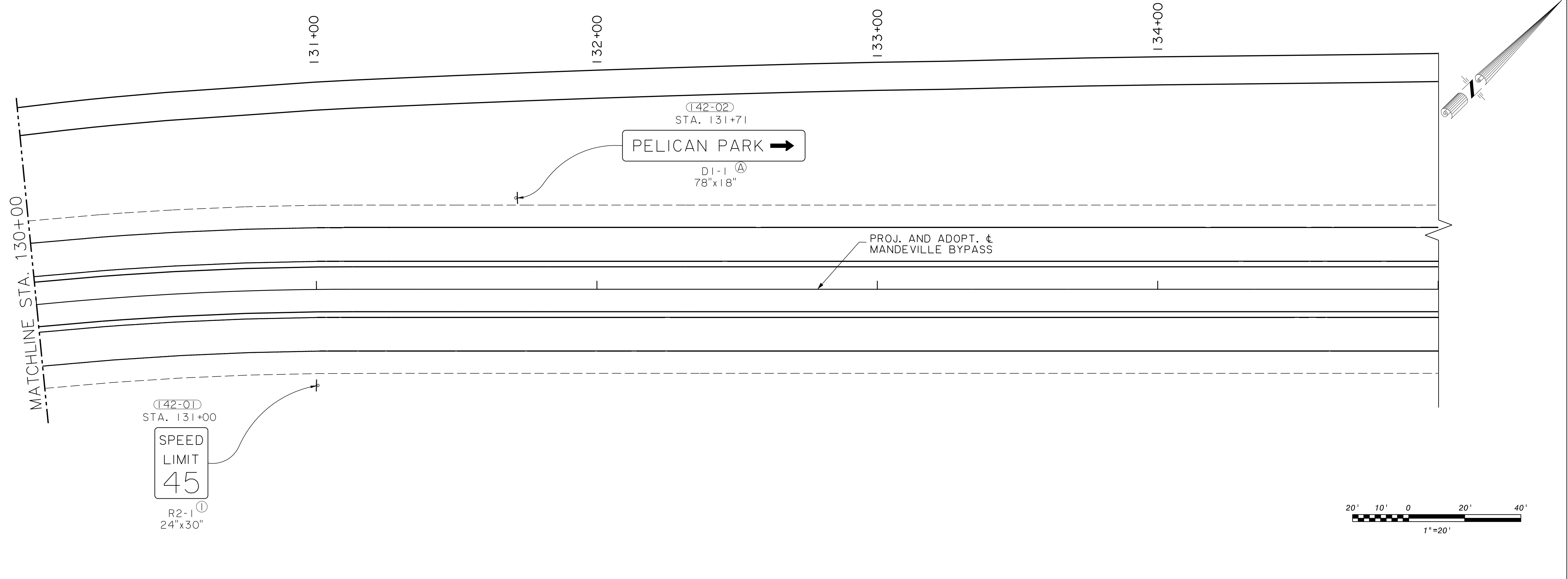
SIGNING_12629_5.dgn



- LEGEND
- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - (1) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



SHEET NUMBER	141
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK1 PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	10 OF 17
NO.	DATE
BY	REVISION DESCRIPTION



- LEGEND**
- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - Ⓛ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



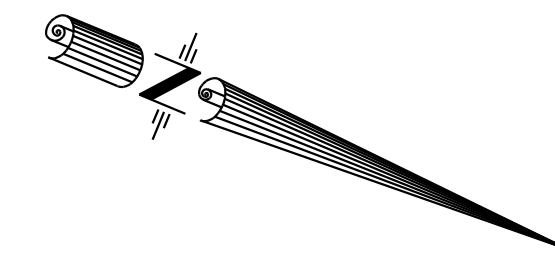
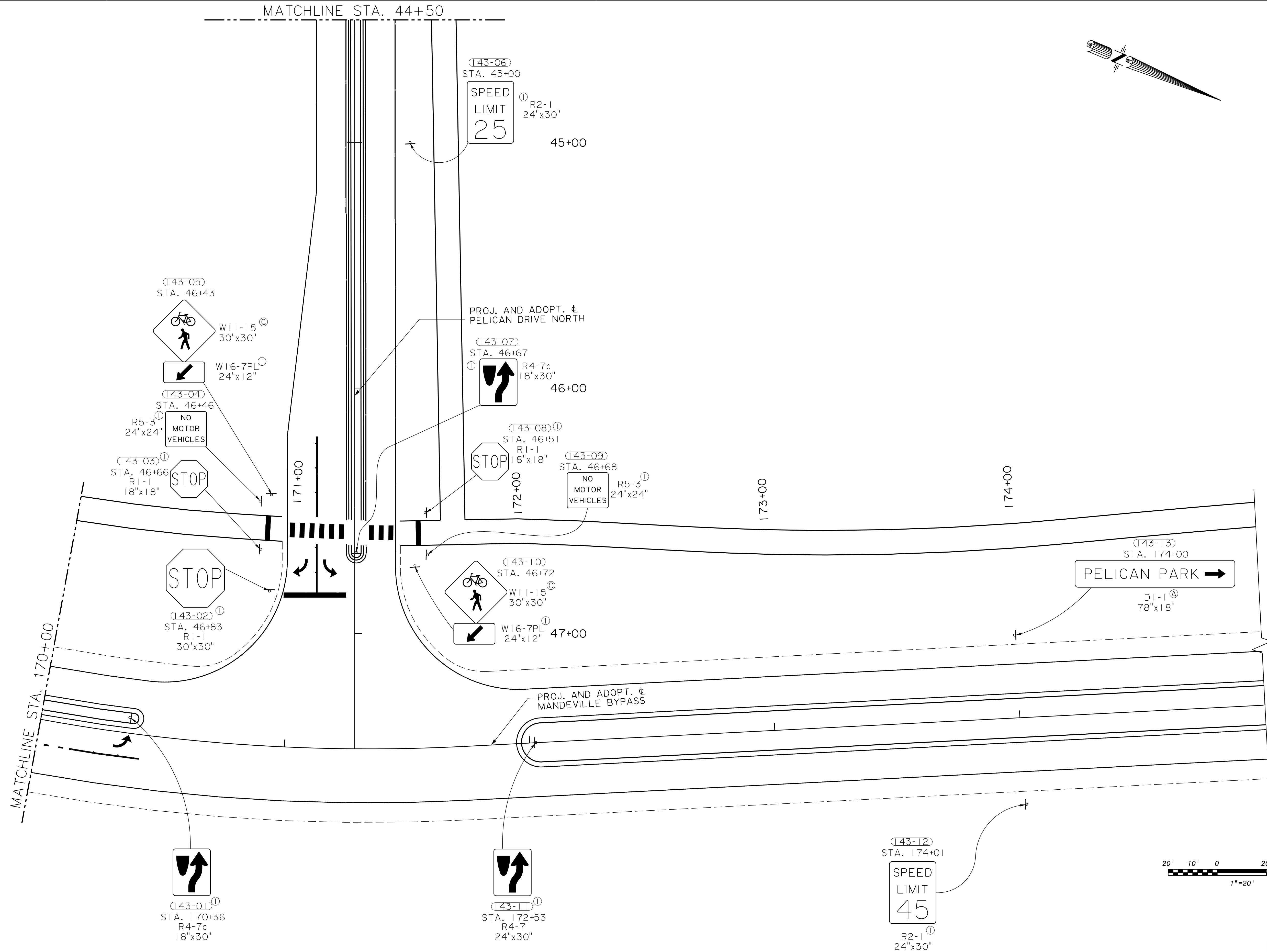
SHEET NUMBER	142
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.L. PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
BKI	
DESIGNED	GNY
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	11 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

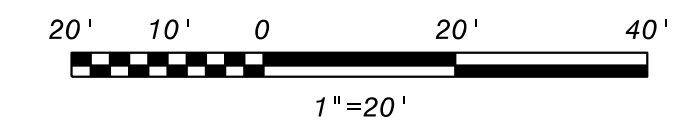
10/9/2024

SIGNING_12629_7.dgn

MATCHLINE STA. 44+50



- LEGEND**
- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - Ⓒ REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - Ⓛ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



SHEET NUMBER	143
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DATE	10/9/2024
SHEET	12 OF 17
NO.	DATE
BY	REVISION DESCRIPTION



XREF:

10/9/2024

SIGNING_12629_8.dgn

BEGIN WORK
PELICAN DRIVE NORTH
STA. 40+00.00
N=679363.96
E=3696398.24

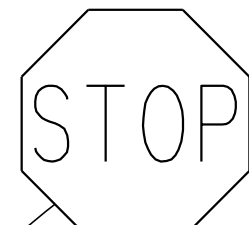
40+00

41+00

42+00

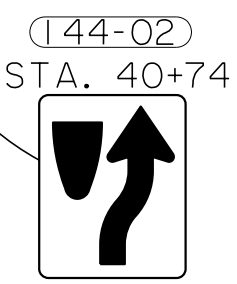
43+00

44+00



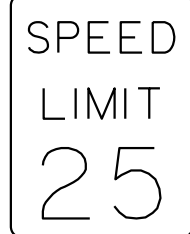
(144-01)
STA. 40+67

R1-1
30"x30"



(144-02)
STA. 40+74

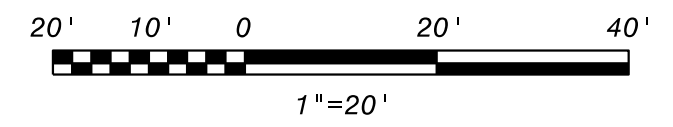
R4-7c
18"x30"



(144-03)
STA. 42+50
R2-1
24"x30"

PROJ. AND ADOPT. CL
PELICAN DRIVE NORTH

MATCHLINE STA. 44+50



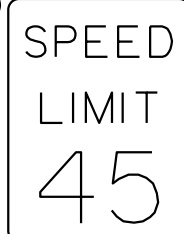
226+00

227+00

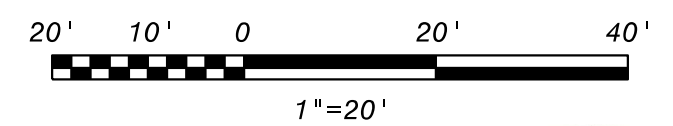
228+00

229+00

(144-05)
STA. 228+99
R2-1
24"x30"



PROJ. AND ADOPT. CL
MANDEVILLE BYPASS



(144-04)
STA. 227+97
M4-5
24"x12"

M1-5
30"x24"

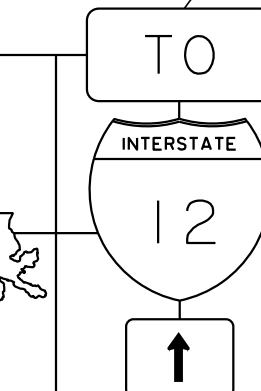
M6-3
21"x15"



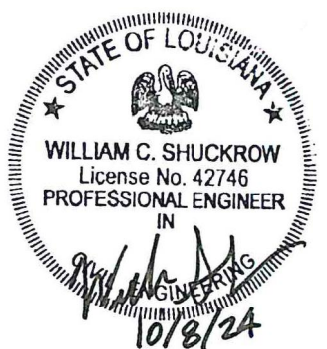
(144-04a)
STA. 227+97
M4-5
24"x12"

M1-1
24"x24"

M6-3
21"x15"



- LEGEND
- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

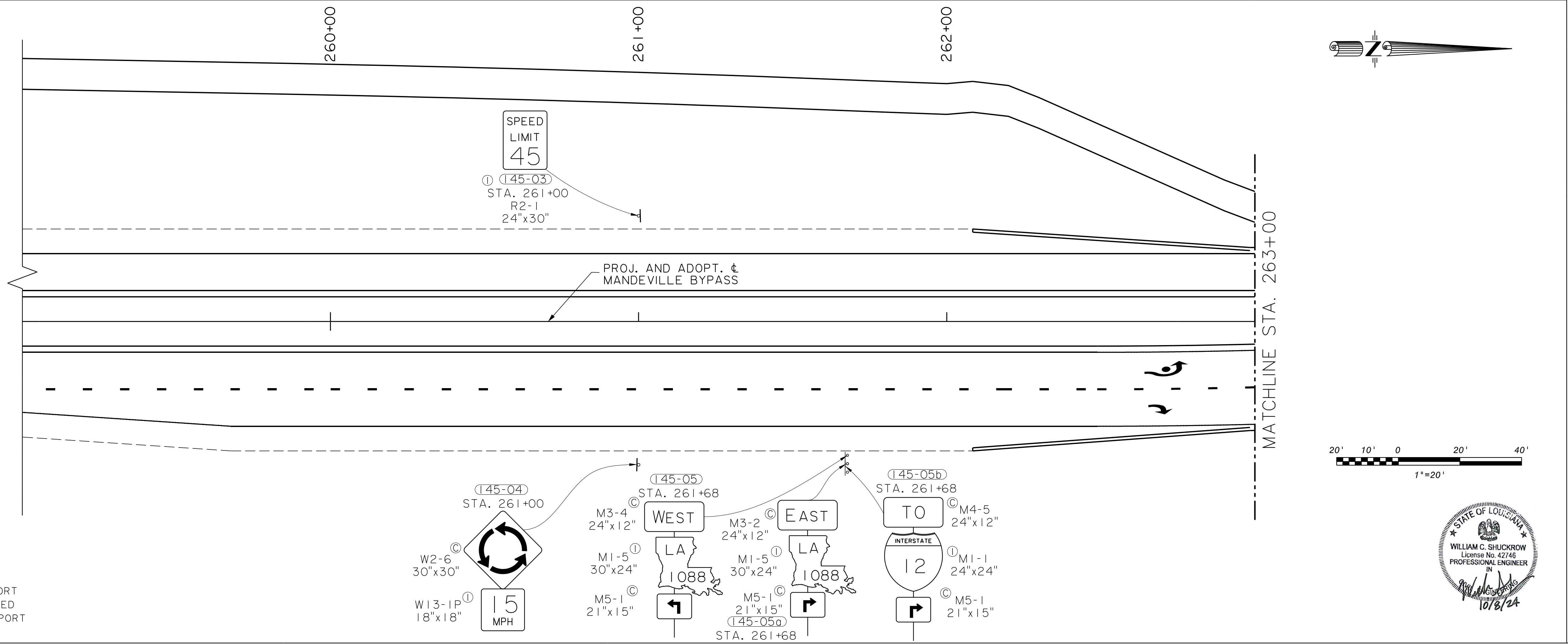
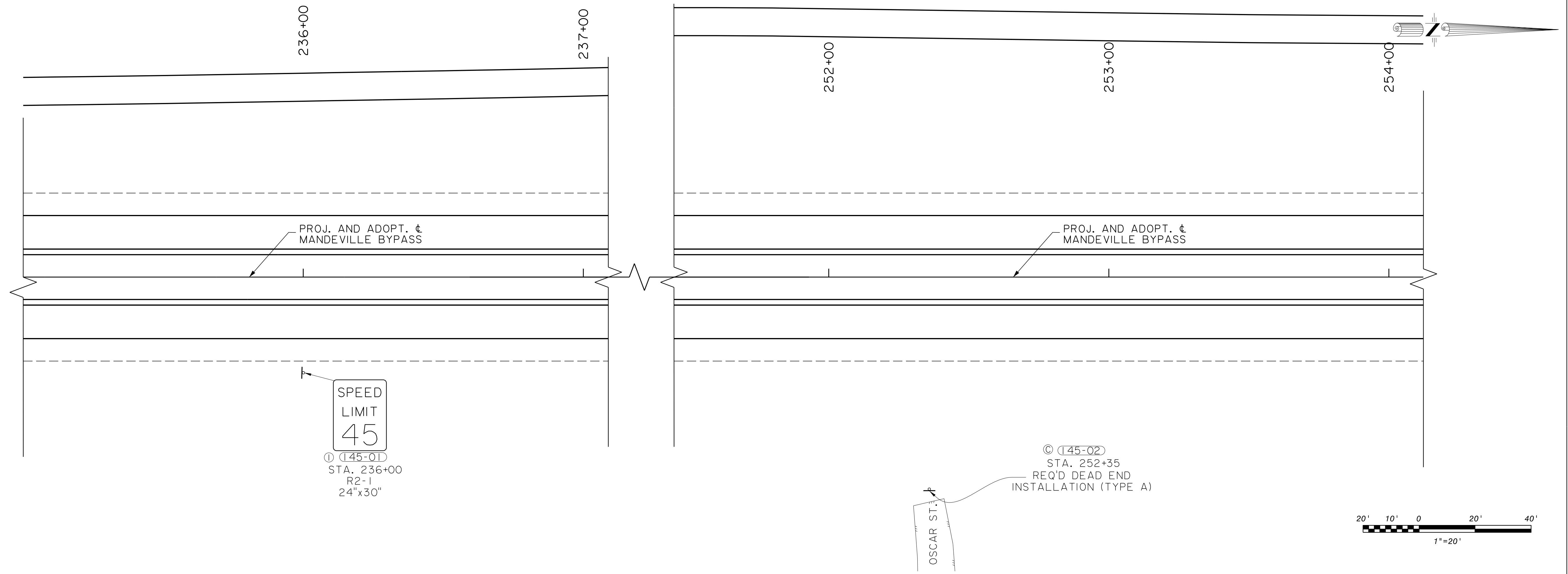


SHEET NUMBER	144
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BK.I. PROJECT	
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED GNL	
CHECKED DSY	
DETAILED JAT	
CHECKED DSY	
DATE	10/9/2024
SHEET	13 OF 17
NO.	
DATE	
BY	
REVISION DESCRIPTION	

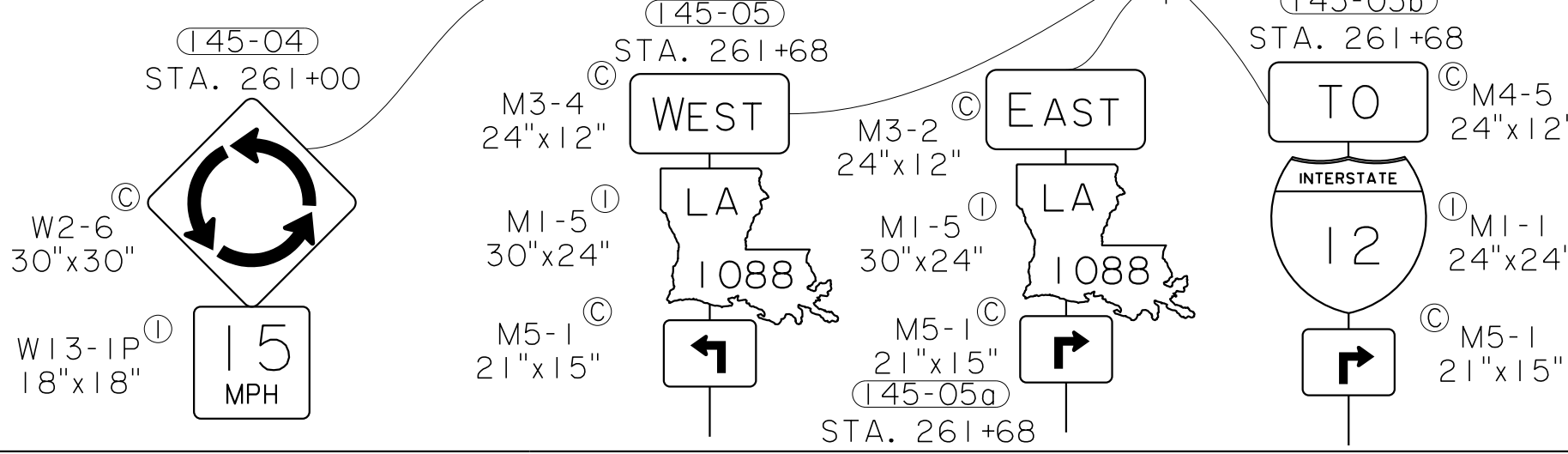
XREF:

10/9/2024

SIGNING_12629_9.dgn



- LEGEND
- Ⓐ REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 - Ⓑ REQUIRED NEW SIGN AND MOUNT AS INDICATED
 - Ⓒ REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

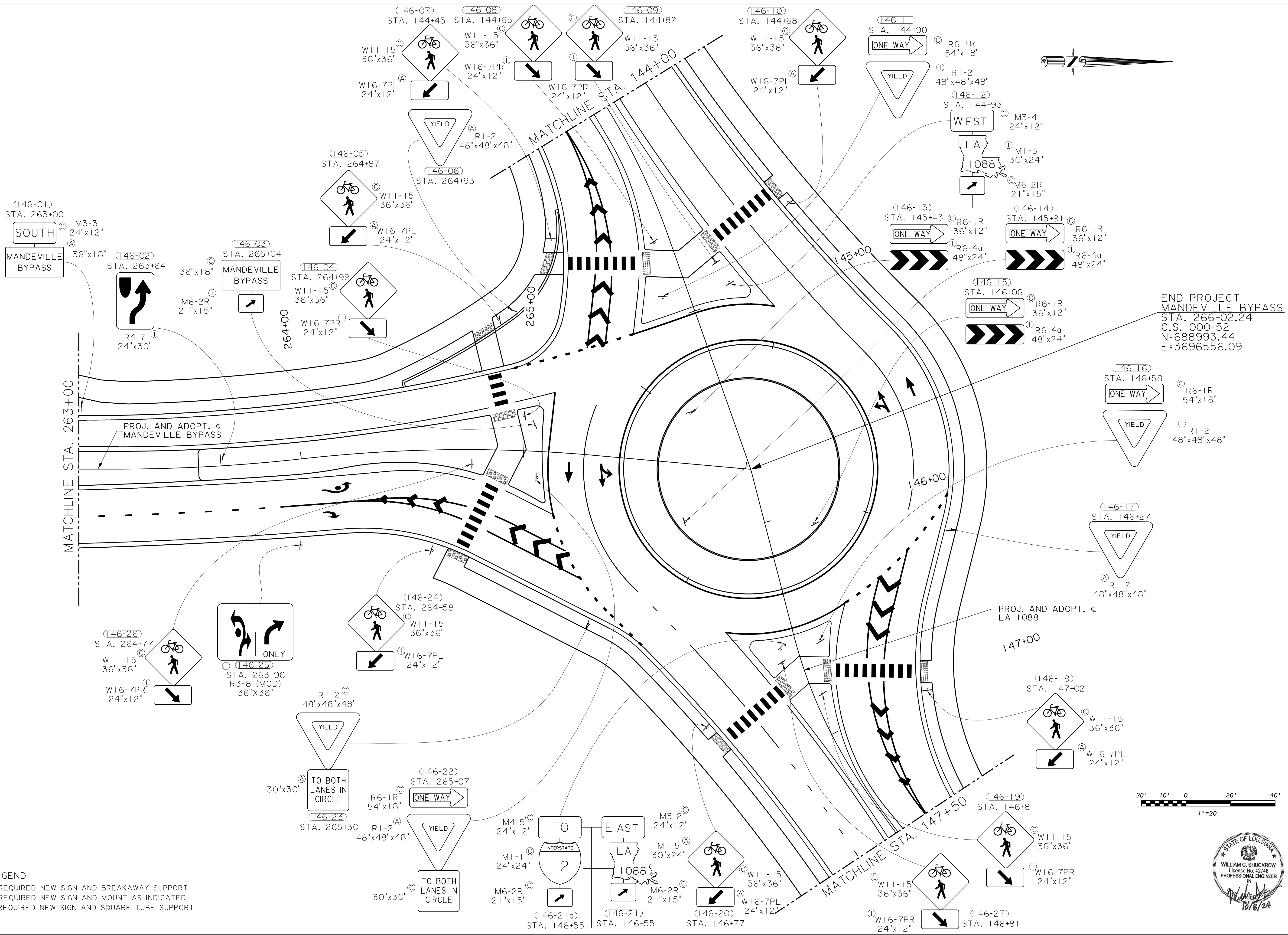


SHEET NUMBER	145
PARISH	ST. TAMMANY
PROJECT	2014EN0001
BK/L PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
DESIGNED	WCS
CHECKED	DSY
DETAILED	RML
CHECKED	DSY
DATE	10/9/2024
SHEET	14 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

XREF:

10/9/2024

SIGNING_12629_10.dgn



LEGEND

- (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
- (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
- (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT

END PROJECT
 MANDEVILLE BYPASS
 STA. 266+02.24
 C.S. 000-52
 N=688993.44
 E=3696556.09

SHEET NUMBER	146
ST. TAMMANY	
PARISH PROJECT	2014EN0001
BKLI PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190	
SIGNING DETAILS	
BKI	
DESIGNED	GNL
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	15 OF 17
NO.	
DATE	
BY	
REVISION DESCRIPTION	

STATE OF LOUISIANA
 WILLIAM G. SHUCKROW
 License No. 42746
 PROFESSIONAL ENGINEER
 IN
 CIVIL
 10/8/24

XREF:

10/9/2024

SIGNING_12629_11.dgn

133+00

134+00

136+00

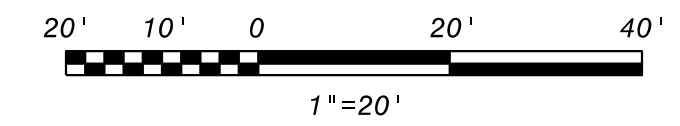
137+00

138+00

BEGIN PROJECT
 LA 1088
 STA. 133+49.58
 C.S. 825-11
 LOG MILE 2.335
 N=688483.78
 E=3695442.36

PROJ. AND ADOPT. ϕ
 LA 1088

MATCHLINE STA. 139+00



MATCHLINE STA. 139+00

140+00

141+00

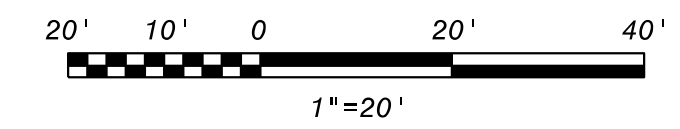
142+00

143+00

MATCHLINE STA. 144+00

PROJ. AND ADOPT. ϕ
 LA 1088

PROJ. AND ADOPT. ϕ
 LA 1088



(147-03)
 STA. 141+00
 SPEED
 LIMIT
 45
 R2-1
 24"x30"

(147-04)
 STA. 142+50
 WEST
 M3-4
 24"x12"
 M1-5
 30"x24"
 LA 1088

(147-05)
 STA. 142+96
 W4-2R
 36"x36"

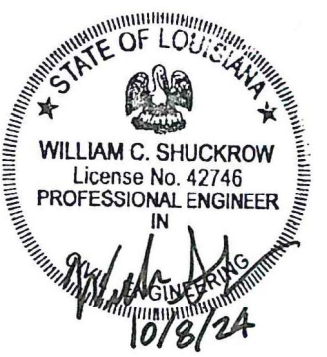
W2-6
 30"x30"
 W13-1P
 18"x18"
 (147-01)
 STA. 141+00

(147-02)
 STA. 142+40
 M3-2
 24"x12"
 M1-5
 30"x24"
 M6-3
 21"x15"
 EAST
 LA 1088
 TO
 INTERSTATE
 12
 (147-02a)
 STA. 142+40
 M4-5
 24"x12"
 M1-1
 24"x24"
 M6-3
 21"x15"

(147-06)
 STA. 143+51
 R4-7
 24"x30"

(147-07)
 STA. 143+60
 R3-8 (MOD)
 36"x36"

LEGEND
 (A) REQUIRED NEW SIGN AND BREAKAWAY SUPPORT
 (C) REQUIRED NEW SIGN AND MOUNT AS INDICATED
 (I) REQUIRED NEW SIGN AND SQUARE TUBE SUPPORT



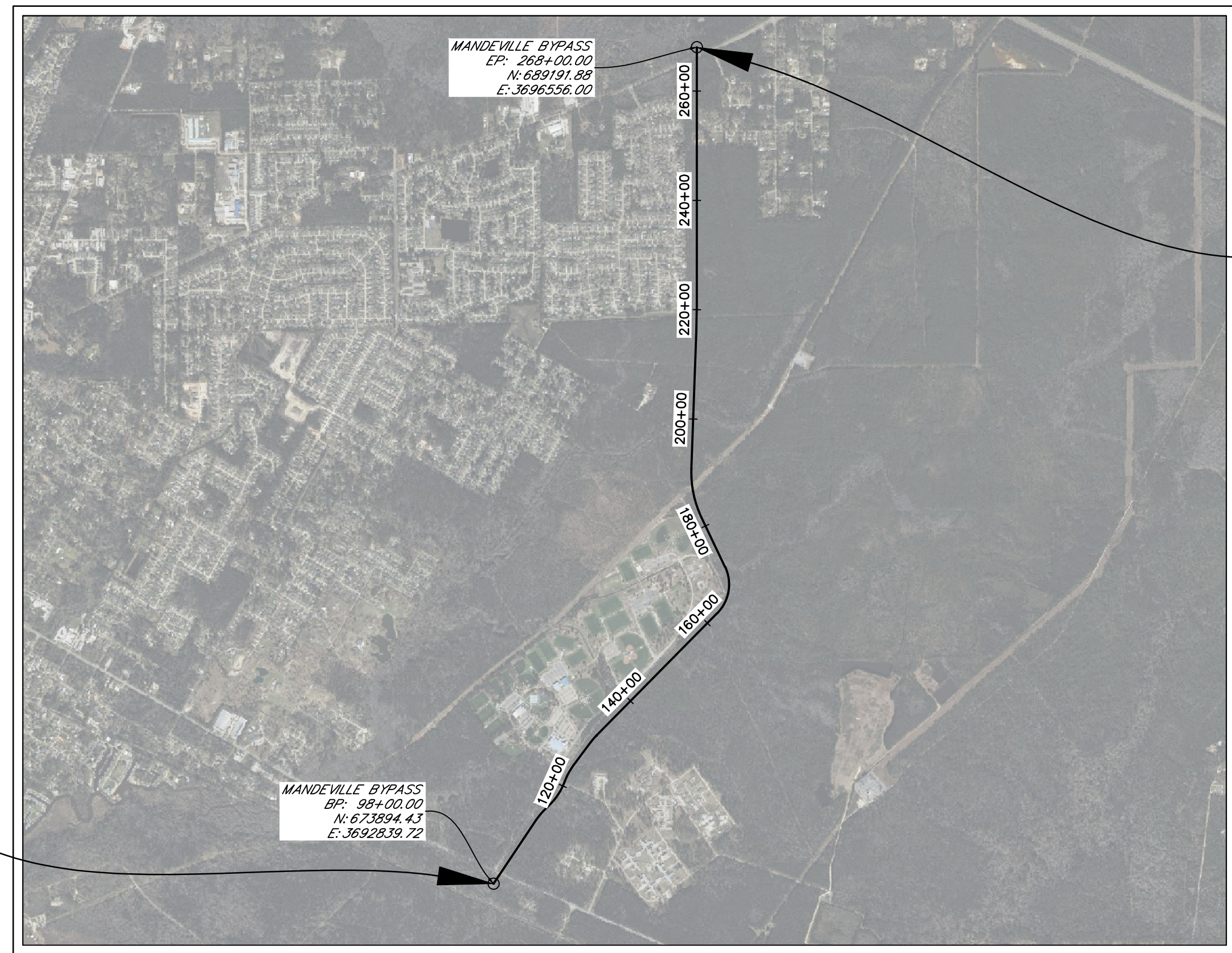
SHEET NUMBER	147
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.L. PROJECT	NO.15.012
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS SIGNING DETAILS	
DESIGNED	GNL
CHECKED	DSY
DETAILED	JAT
CHECKED	DSY
DATE	10/9/2024
SHEET	16 OF 17
NO.	DATE
BY	REVISION DESCRIPTION

STATE OF LOUISIANA

RIGHT OF WAY PROPERTY MAP OF PROPOSED
MANDEVILLE BYPASS

MANDEVILLE BYPASS (U.S. HWY. 190 - LA HWY 1088)

ST. TAMMANY PARISH

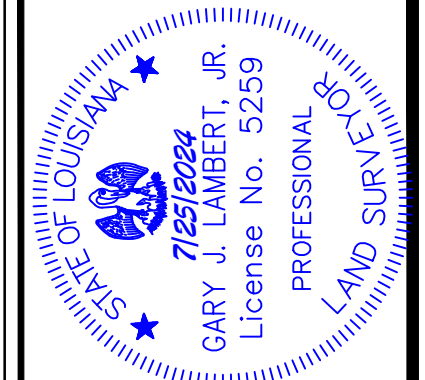
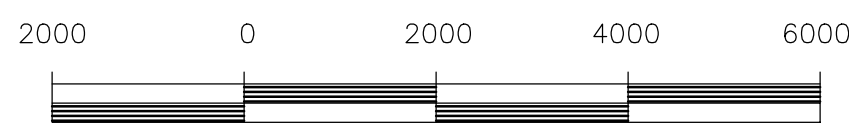


END PROJECT
STA. 268+00

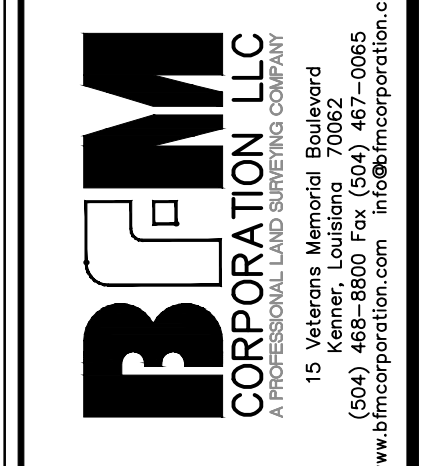
BEGIN PROJECT
STA. 98+00

LAYOUT MAP

SCALE: 1 INCH = 2000 FEET



Gary J. Lambert, Jr.
REGISTERED PROFESSIONAL LAND SURVEYOR
GARY J. LAMBERT, JR.
REGISTRATION NO. 5259



RIGHT OF WAY MAP
U.S. HWY 190 - LA HWY 1088
SECTIONS 5, 8, 43, & 44, T-8-S, R-12-E,
AND SECTION 32, T-7-S, R-12-E,
ST. TAMMANY PARISH, LOUISIANA

I certify that this plat represents an actual ground survey made by me or under my direction, and it does not conform to the requirements for the Minimum Standards for Property Boundary Surveys as found in Louisiana Administrative Code Title 46, L.A.I. Chapter 28 for a Class "A" -

BURK - KLEINPETER, INC.

REV.	DESCRIPTION	DATE	BY	CHK'D

SCALE: 1" = 2000'

DATE: 04/15/2024

DRAWN: APW	CHECKED: GJL
CREW CHIEF(S) INITIALS	
FILE No. 10723	PROJECT No. 10723

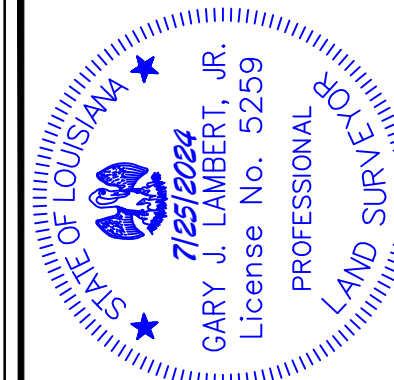
V-001

SHEET 1 OF 16

SOUTHEASTERN LAND DISTRICT, WEST OF THE MISSISSIPPI RIVER
T8S – R12E
SECTION 37 & 43



GRID NORTH
NORTH REFERENCED TO
LOUISIANA STATE PLANE
COORDINATE SYSTEM
SOUTH ZONE, NAD 83



Gary J. Lambert, Jr.
PROFESSIONAL LAND SURVEYOR
GARY J. LAMBERT, JR.
REGISTRATION NO. 5259



RIGHT OF WAY MAP
U.S. HWY 190 – LA HWY 1088
SECTIONS 5, 8, 43, & 44, T-8-S, R-12-E,
AND SECTION 32, T-7-S, R-12-E,
ST. TAMMANY PARISH, LOUISIANA

I certify that this plat represents an actual ground survey made by me or under my direction, and it does not conform to the requirements for the Minimum Standards for Property Boundary Surveys as found in Louisiana Administrative Code, Title 48, L.A.C. Chapter 2, Part 6, Class 2.4.

BURK – KLEINPETER, INC.

REV.	DESCRIPTION	DATE	BY

SCALE: 1" = 60'	
DATE: 04/15/2024	
DRAWN: APW	CHECKED: GJL
CREW CHIEF(S) INITIALS	
FILE No. 10723	PROJECT No. 10723
V-101	
SHEET 2	OF 16

SOUTHEAST LOUISIANA STATE HOSPITAL

LOUISIANA STATE PARK & RECREATION COMMISSION

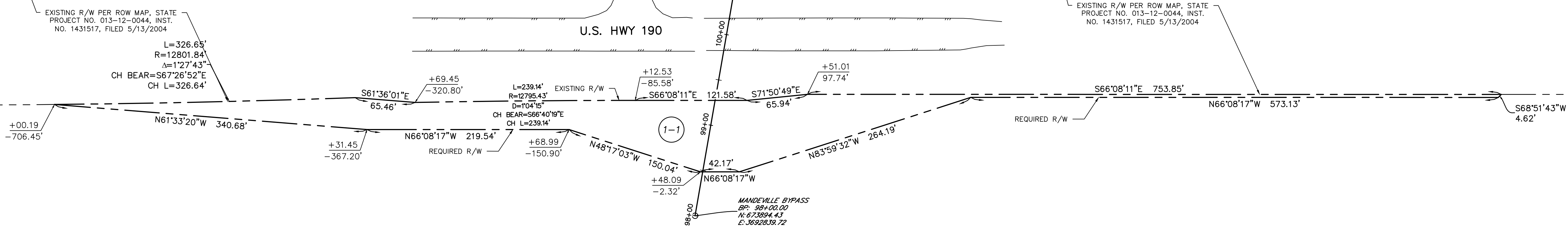
U.S. HWY 190

FONTAINBLEAU STATE PARK

LOUISIANA STATE PARK & RECREATION COMMISSION

MANDEVILLE BYPASS R/W

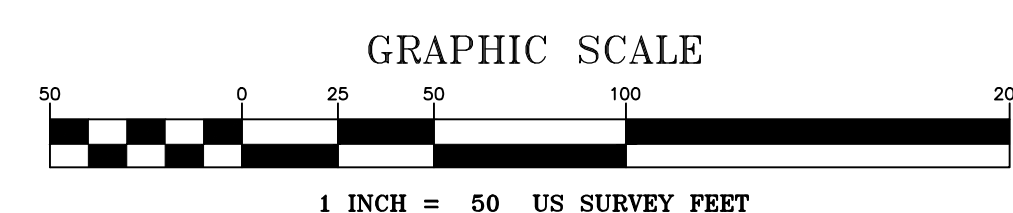
PELICAN DRIVE
(ASPHALT)



NOTES:

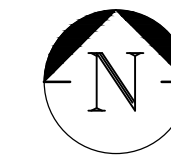
- THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM SOUTH ZONE (NAD 83). TO CONVERT FROM GRID BEARINGS TO TRUE BEARINGS, USE: 00°35'49.0".
- DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES. TO CONVERT DISTANCES DERIVED FROM COORDINATES SHOWN HEREON TO HORIZONTAL GROUND DISTANCES, USE SCALE FACTOR: 0.99992768.
- REFERENCE SURVEY: RIGHT OF WAY MAP WITH PROPOSED TAKINGS, BY RANDALL W. BROWN & ASSOCIATES, INC., DATED AUGUST 7, 2019, AND FILED UNDER INSTRUMENT NO. 2346278 AND INSTRUMENT NO. 2346279.

1-1	DEPT. OF CULTURE, RECREATION & TOURISM	INST. NO. 63160	0.831 ACRES
PARCEL	OWNER	ACQUISITION	AREA



F:\10723 Mandeville Bypass ROW Takings St. Tammany Parish DWG\10723_rev1.dwg

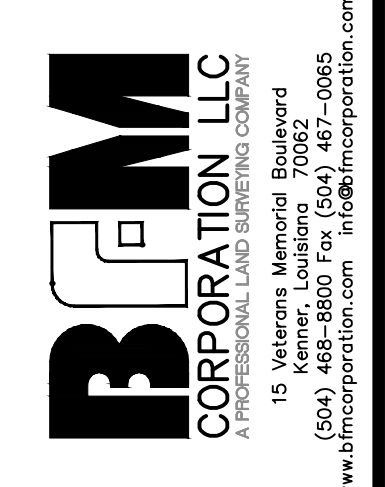
SOUTHEASTERN LAND DISTRICT, WEST OF THE MISSISSIPPI RIVER
T8S - R12E
SECTION 5 & 32



GRID NORTH
NORTH REFERENCED TO
LOUISIANA STATE PLANE
COORDINATE SYSTEM
SOUTH ZONE, NAD 83



Gary J. Lambert, Jr.
PROFESSIONAL LAND SURVEYOR
REGISTRATION NO. 9259



RIGHT OF WAY MAP
U.S. HWY 190 - LA HWY 1088
SECTIONS 5, 8, 43, & 44, T-8-S, R-12-E,
AND SECTION 32, T-7-S, R-12-E,
ST. TAMMANY PARISH, LOUISIANA

I certify that this plat represents an actual ground survey made by me or under my direction, and it does not conform to the requirements for the Minimum Standards for Property Boundary Surveys as found in Louisiana Administrative Code Title 46, L.A.C. Chapter 5, Part 6, Class 2.

BURK - KLEINPETER, INC.

REV.	DESCRIPTION	DATE	BY	CHK'D

SCALE: 1" = 80'

DATE: 04/15/2024

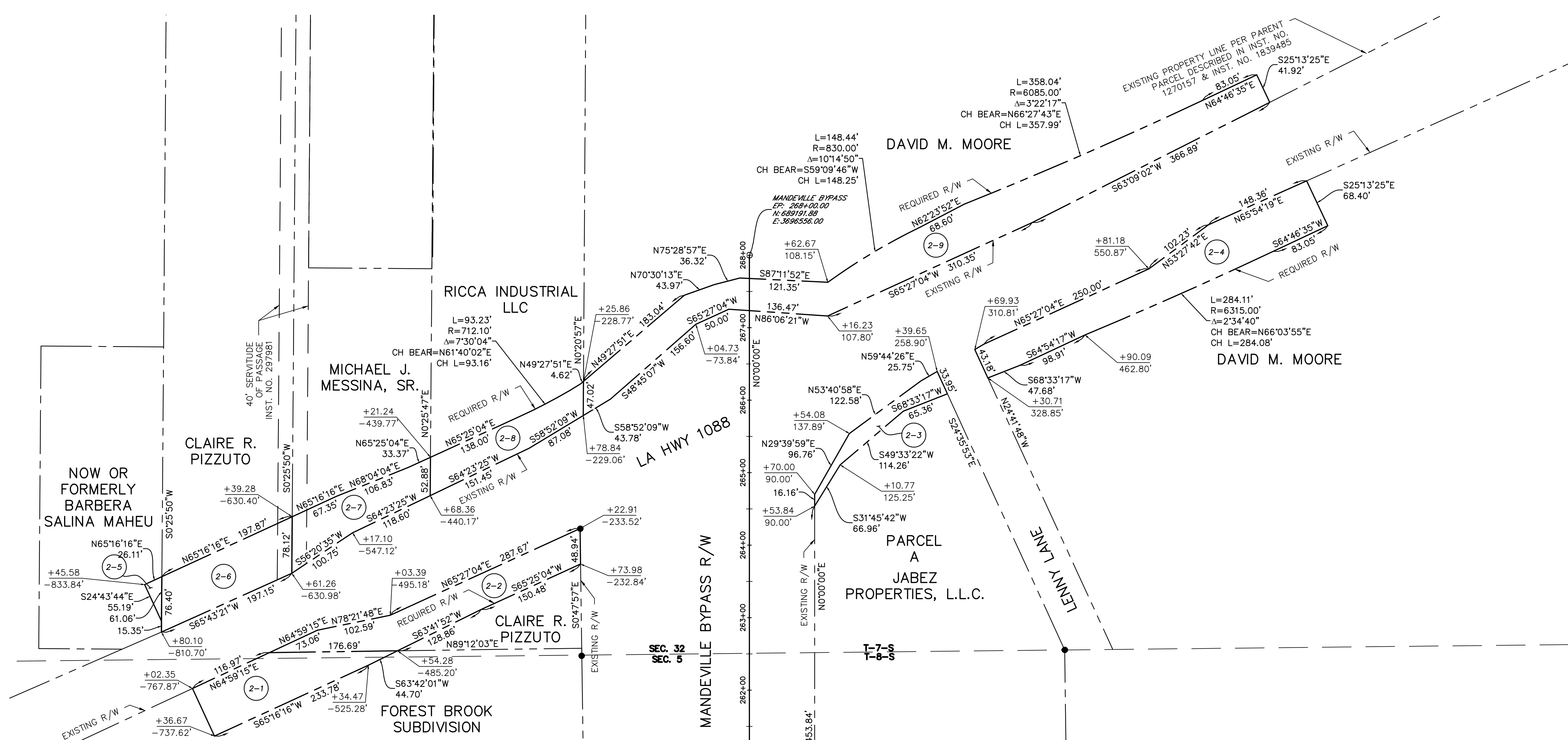
DRAWN: APW	CHECKED: GJL
CREW CHIEF(S) INITIALS	
FILE NO. 10723	PROJECT NO. 10723

GRAPHIC SCALE

1 INCH = 80 US SURVEY FEET

V-102

SHEET 3 OF 16

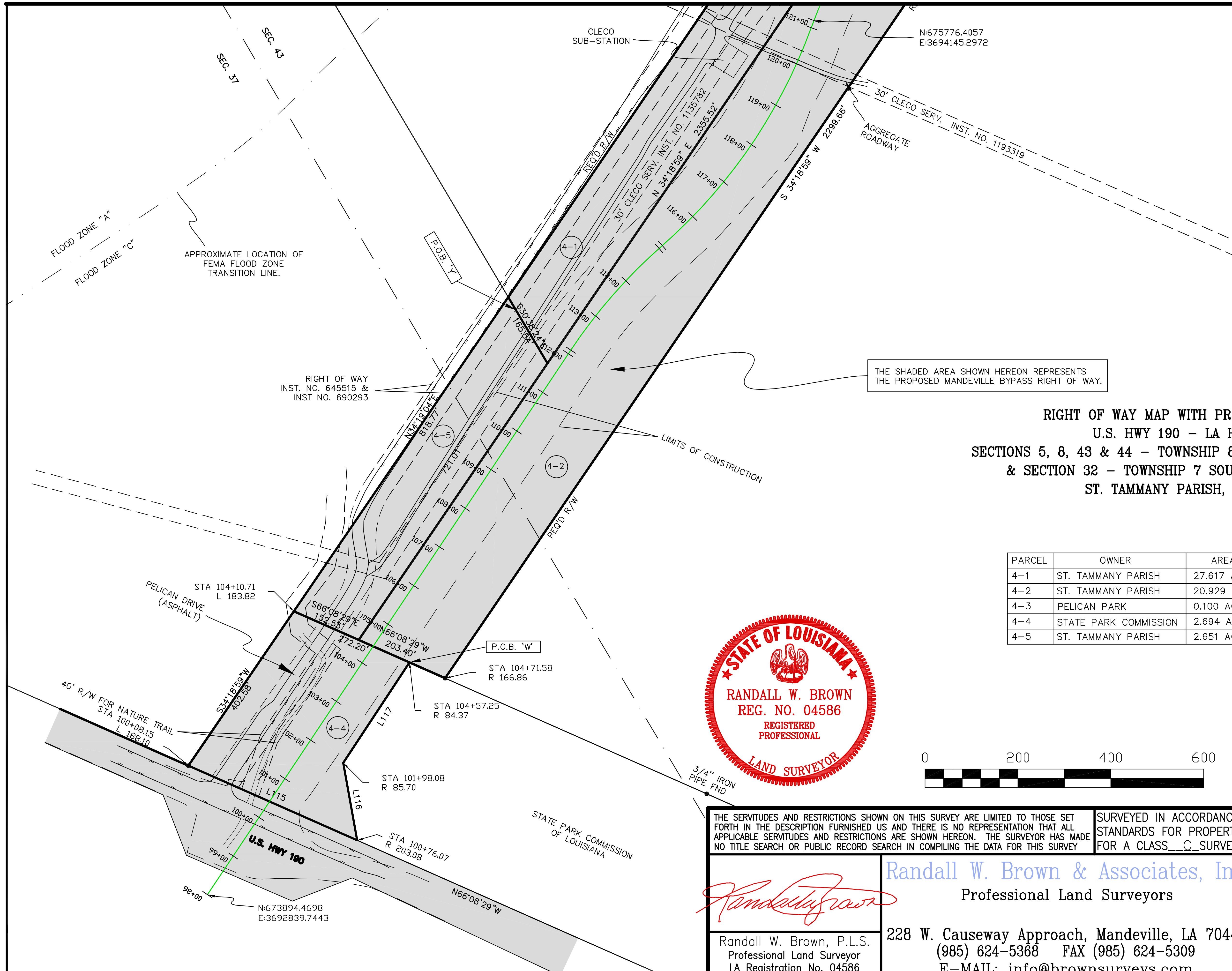
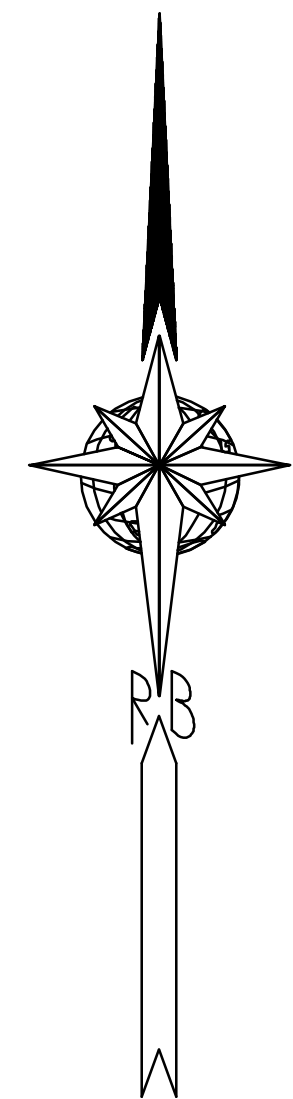


PARCEL	OWNER	ACQUISITION	AREA
2-9	DAVID M. MOORE	INST. NO. 1839485	1.172 ACRES
2-8	RICCA INDUSTRIAL L.L.C.	INST. NO. 2274302	0.241 ACRES
2-7	MICHAEL J. MESSINA SR.	INST. NO. 2238323	0.269 ACRES
2-6	CLAIRE R. PIZZUTO	INST. NO. 1567658	0.318 ACRES
2-5	BARBERA SALINA MAHEU	INST. NO. 2172402	0.017 ACRES
2-4	DAVID M. MOORE	ASSESSMENT NO. 1128193373	0.662 ACRES
2-3	JABES PROPERTIES, L.L.C.	ASSESSMENT NO. 1120211176	0.110 ACRES
2-2	CLAIRE R. PIZZUTO	INST. NO. 1567658	0.417 ACRES
2-1	FOREST BROOK SUBDIVISION	BOOK PAGE DATE	0.332 ACRES

NOTES:

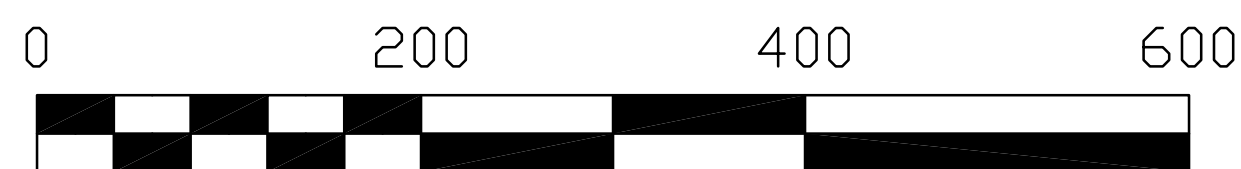
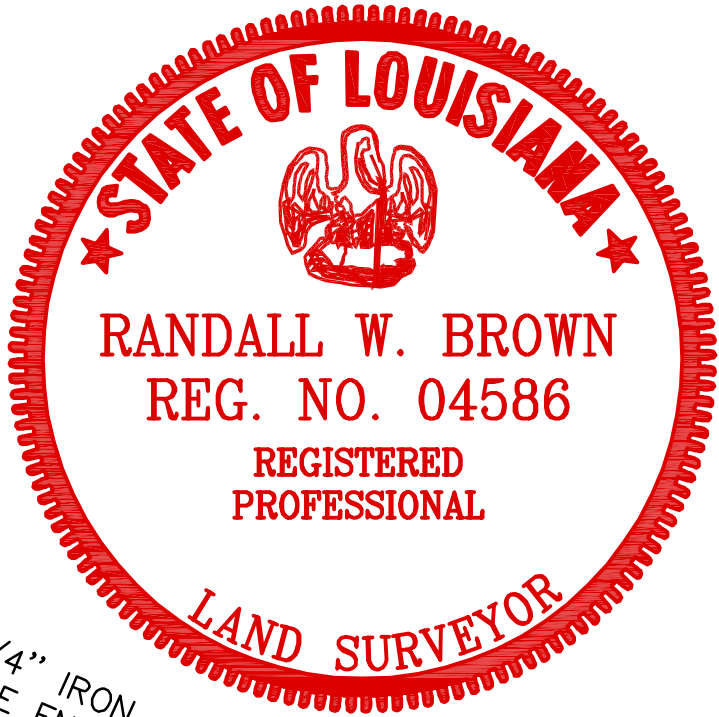
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E:\10723 Mandeville Bypass ROW Takings St. Tammany Parish DWG\10723_rev1.dwg



RIGHT OF WAY MAP WITH PROPOSED TAKINGS
U.S. HWY 190 - LA HWY 1088
SECTIONS 5, 8, 43 & 44 - TOWNSHIP 8 SOUTH - RANGE 12 EAST
& SECTION 32 - TOWNSHIP 7 SOUTH - RANGE 12 EAST
ST. TAMMANY PARISH, LOUISIANA

PARCEL	OWNER	AREA	ASSESSMENT No.
4-1	ST. TAMMANY PARISH	27.617 ACRES	1128132898
4-2	ST. TAMMANY PARISH	20.929 ACRES	1120192406
4-3	PELICAN PARK	0.100 ACRES	1120219606
4-4	STATE PARK COMMISSION	2.694 ACRES	N/A
4-5	ST. TAMMANY PARISH	2.651 ACRES	1128132898



COORDINATES SHOWN HEREON ARE REFERENCE TO LOUISIANA STATE PLANE COORDINATE SYSTEM, 1702

DENOTES 1/2" IRON ROD FND UNLESS OTHERWISE NOTED

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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

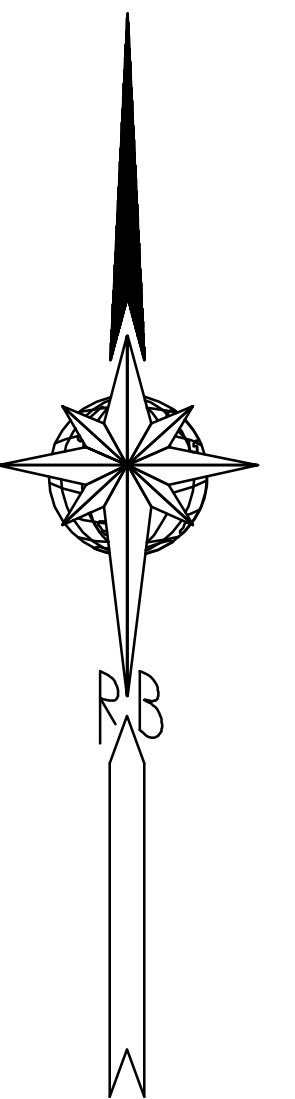
Randall W. Brown
 Randall W. Brown, P.L.S.
 Professional Land Surveyor
 LA Registration No. 04586

Randall W. Brown & Associates, Inc.
 Professional Land Surveyors
 228 W. Causeway Approach, Mandeville, LA 70448
 (985) 624-5368 FAX (985) 624-5309
 E-MAIL: info@brownsurveys.com

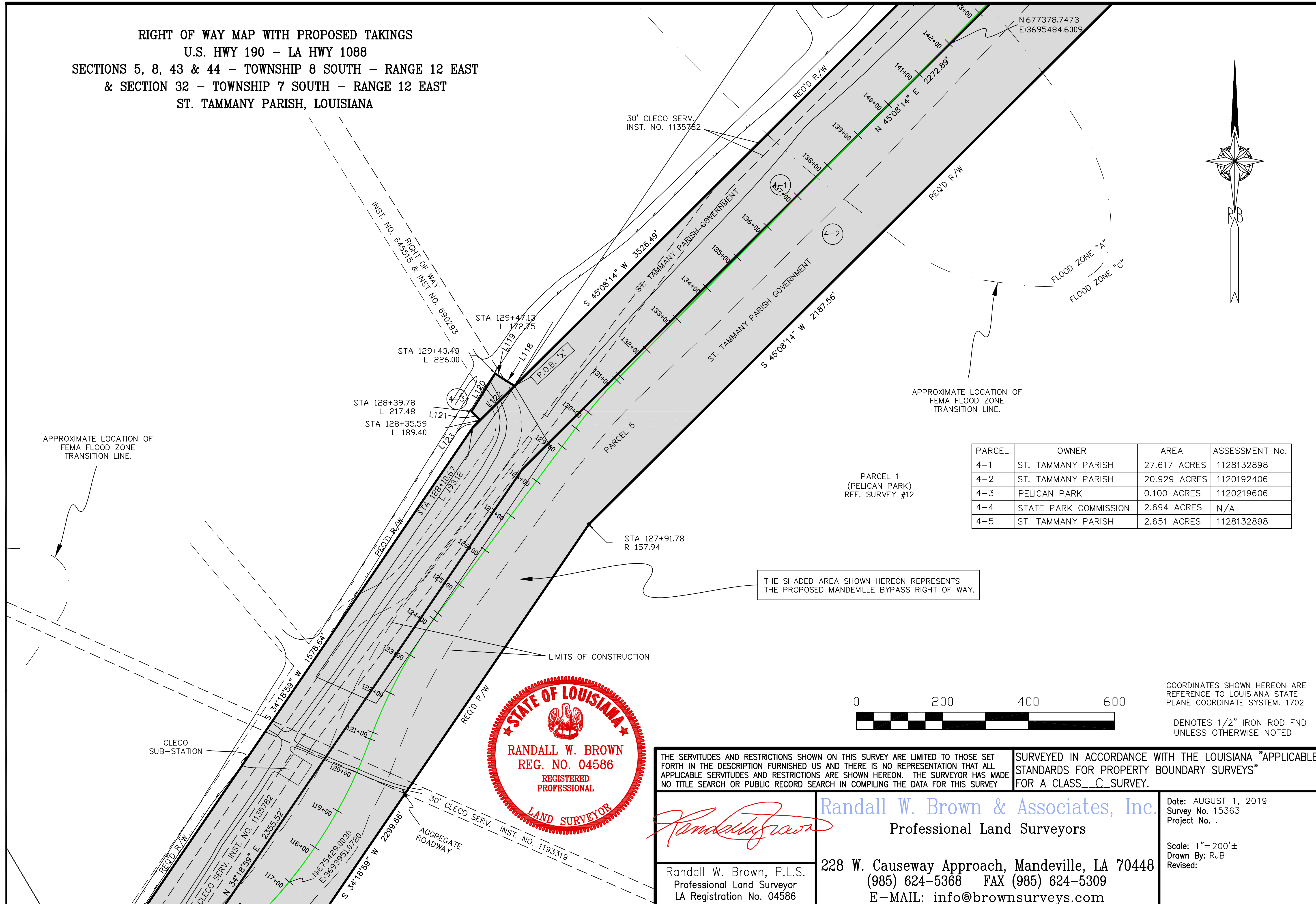
Date: AUGUST 1, 2019
 Survey No. 15363
 Project No. .
 Scale: 1"=200'±
 Drawn By: RJB
 Revised:

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 ST. TAMMANY PARISH, LOUISIANA

N:677378.7473
 E:3695484.6009



Copyright 2020 - Randall W. Brown & Associates, Inc.



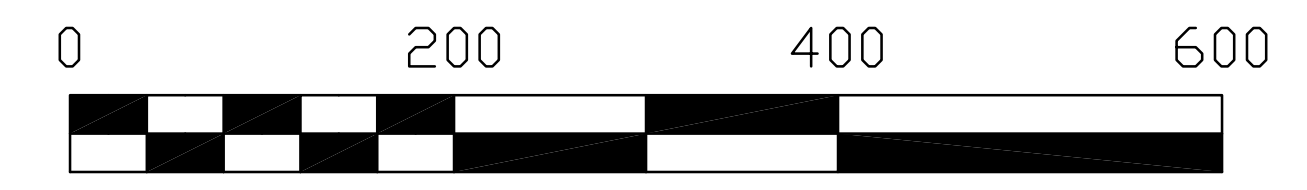
APPROXIMATE LOCATION OF FEMA FLOOD ZONE TRANSITION LINE.

APPROXIMATE LOCATION OF FEMA FLOOD ZONE TRANSITION LINE.

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4-2	ST. TAMMANY PARISH	20.929 ACRES	1120192406
4-3	PELICAN PARK	0.100 ACRES	1120219606
4-4	STATE PARK COMMISSION	2.694 ACRES	N/A
4-5	ST. TAMMANY PARISH	2.651 ACRES	1128132898

PARCEL 1
 (PELICAN PARK)
 REF. SURVEY #12

THE SHADED AREA SHOWN HEREON REPRESENTS THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.



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 Project No. .
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E:\RIGHT OF WAY PARCELS\by-pass sheets.dwg

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SECTIONS 5, 8, 43 & 44 - TOWNSHIP 8 SOUTH - RANGE 12 EAST
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ST. TAMMANY PARISH, LOUISIANA

N:679230.6231
E:3697130.5080

STA 164+82.46
L 96.36

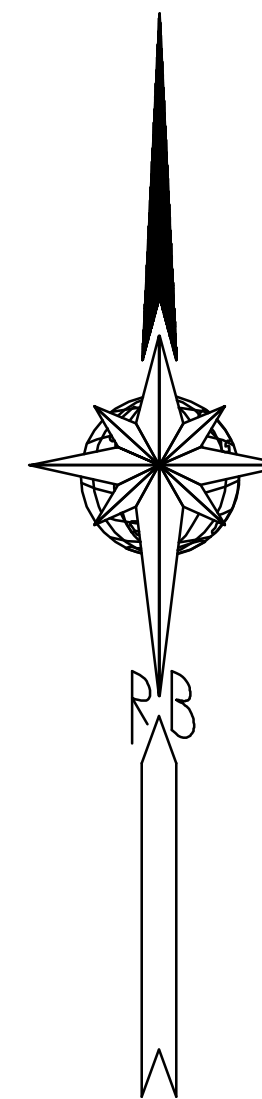
STA 164+65.15
R 95.37

STA 163+85.37
R 238.48

30' CLECO SERV.
INST. NO. 1135782

APPROXIMATE LOCATION OF
FEMA FLOOD ZONE
TRANSITION LINE.

APPROXIMATE LOCATION OF
FEMA FLOOD ZONE
TRANSITION LINE.

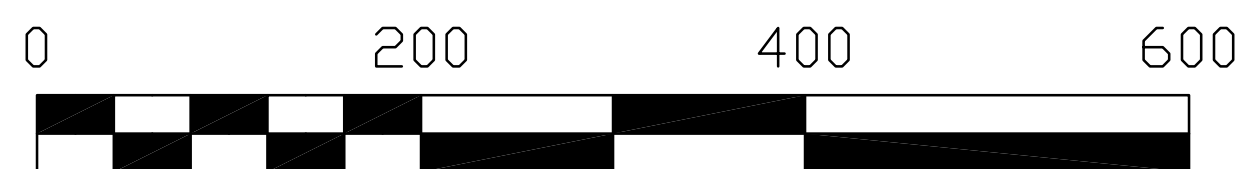


DAVID M. MOORE

THE SHADED AREA SHOWN HEREON REPRESENTS
THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.

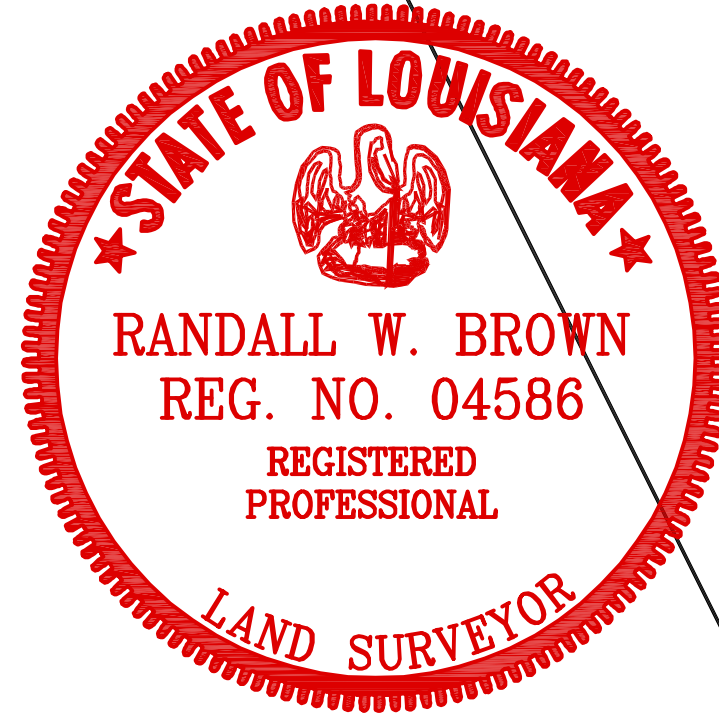
NOW OR FORMER BOUNDARY LINE
FOR THE ST. TAMMANY PARISH
CANE BAYOU MITIGATION BANK

PARCEL	OWNER	AREA	ASSESSMENT No.
4-1	ST. TAMMANY PARISH	27.617 ACRES	1128132898
4-2	ST. TAMMANY PARISH	20.929 ACRES	1120192406
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4-4	STATE PARK COMMISSION	2.694 ACRES	N/A
4-5	ST. TAMMANY PARISH	2.651 ACRES	1128132898



COORDINATES SHOWN HEREON ARE
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PLANE COORDINATE SYSTEM, 1702

DENOTES 1/2" IRON ROD FND
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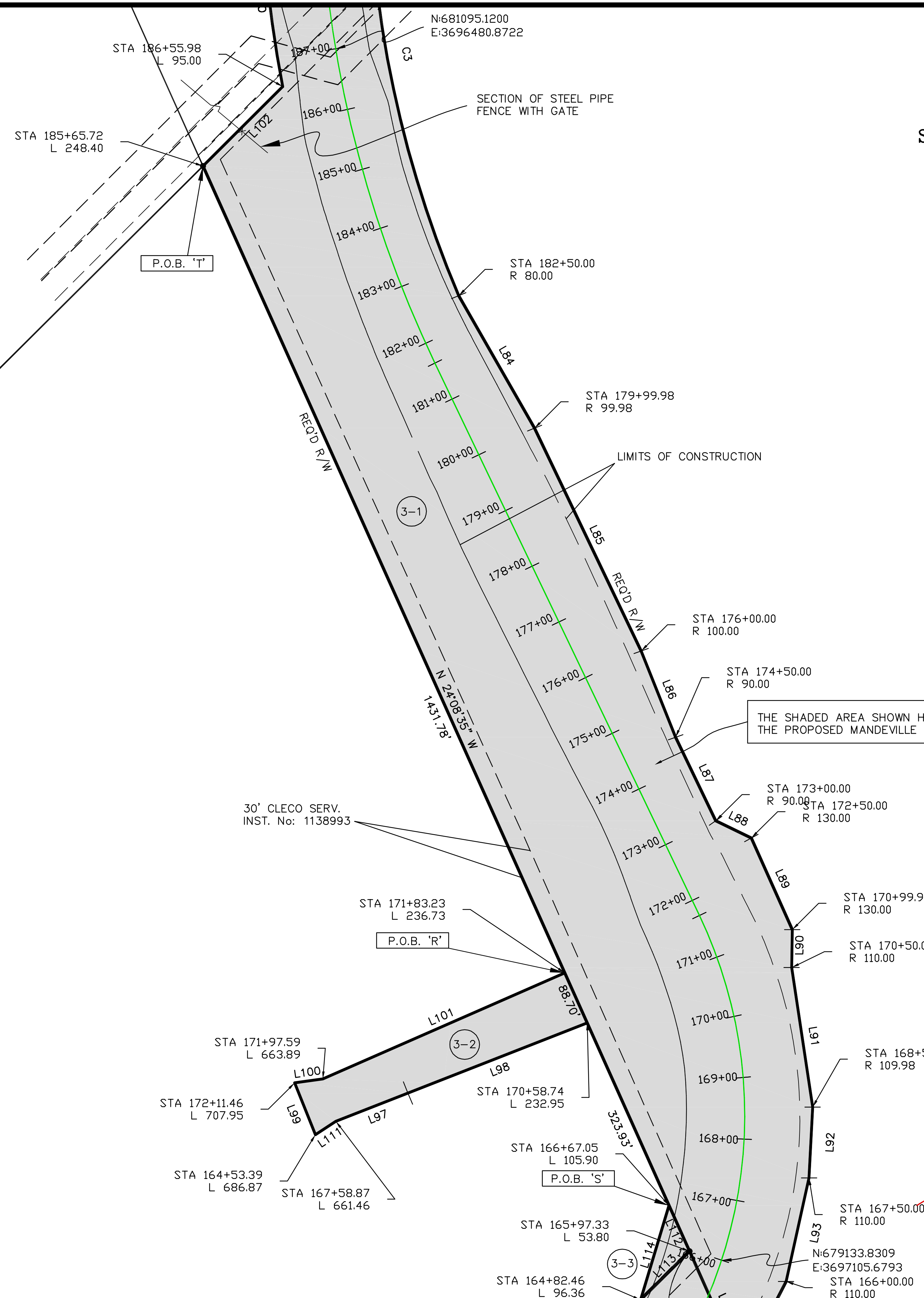
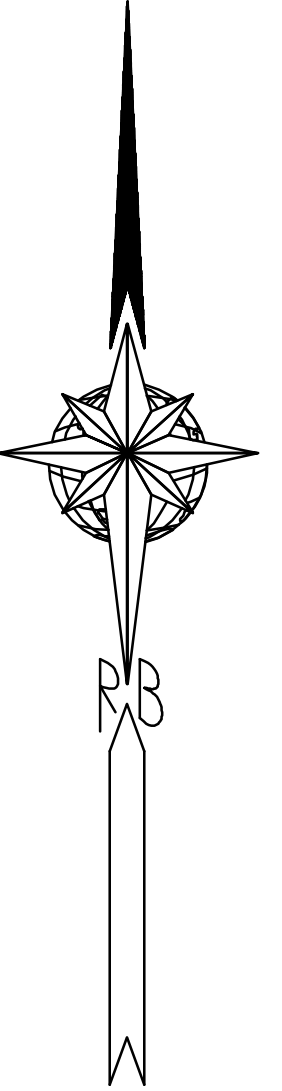
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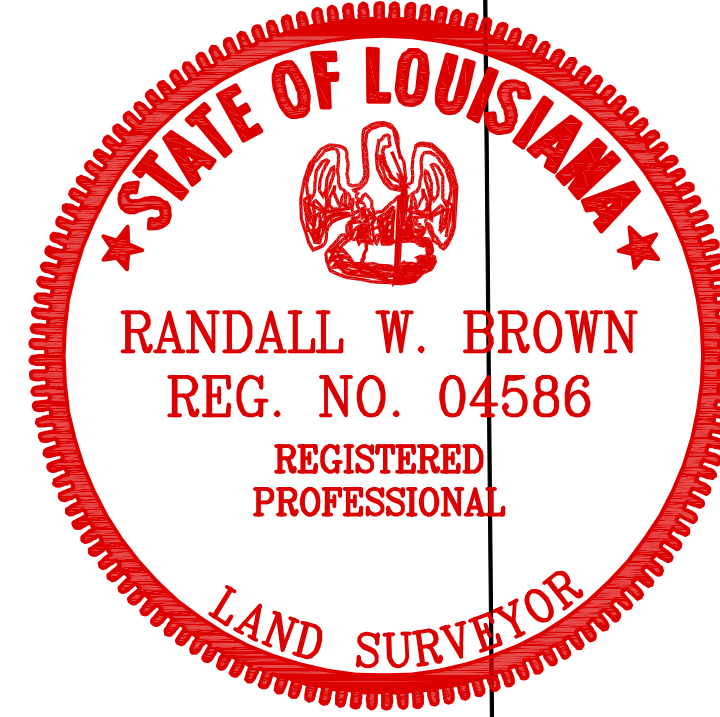
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Revised:

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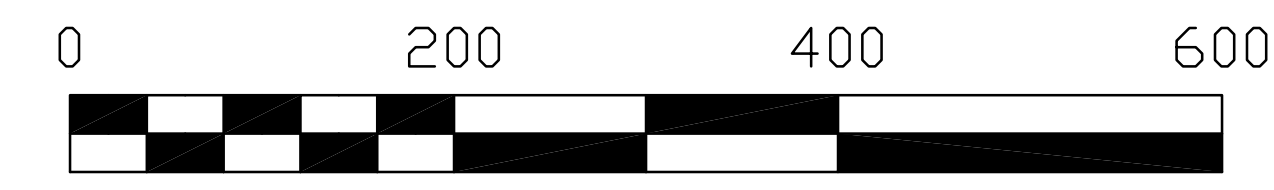


THE SHADED AREA SHOWN HEREON REPRESENTS THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.

POITEVENT INTERESTS, LLC



PARCEL	OWNER	AREA	ASSESSMENT No.
3-1	DAVID M. MOORE	21.274 ACRES	N/A
3-2	PELICAN PARK	0.872 ACRES	N/A
3-3	PELICAN PARK	0.097 ACRES	N/A



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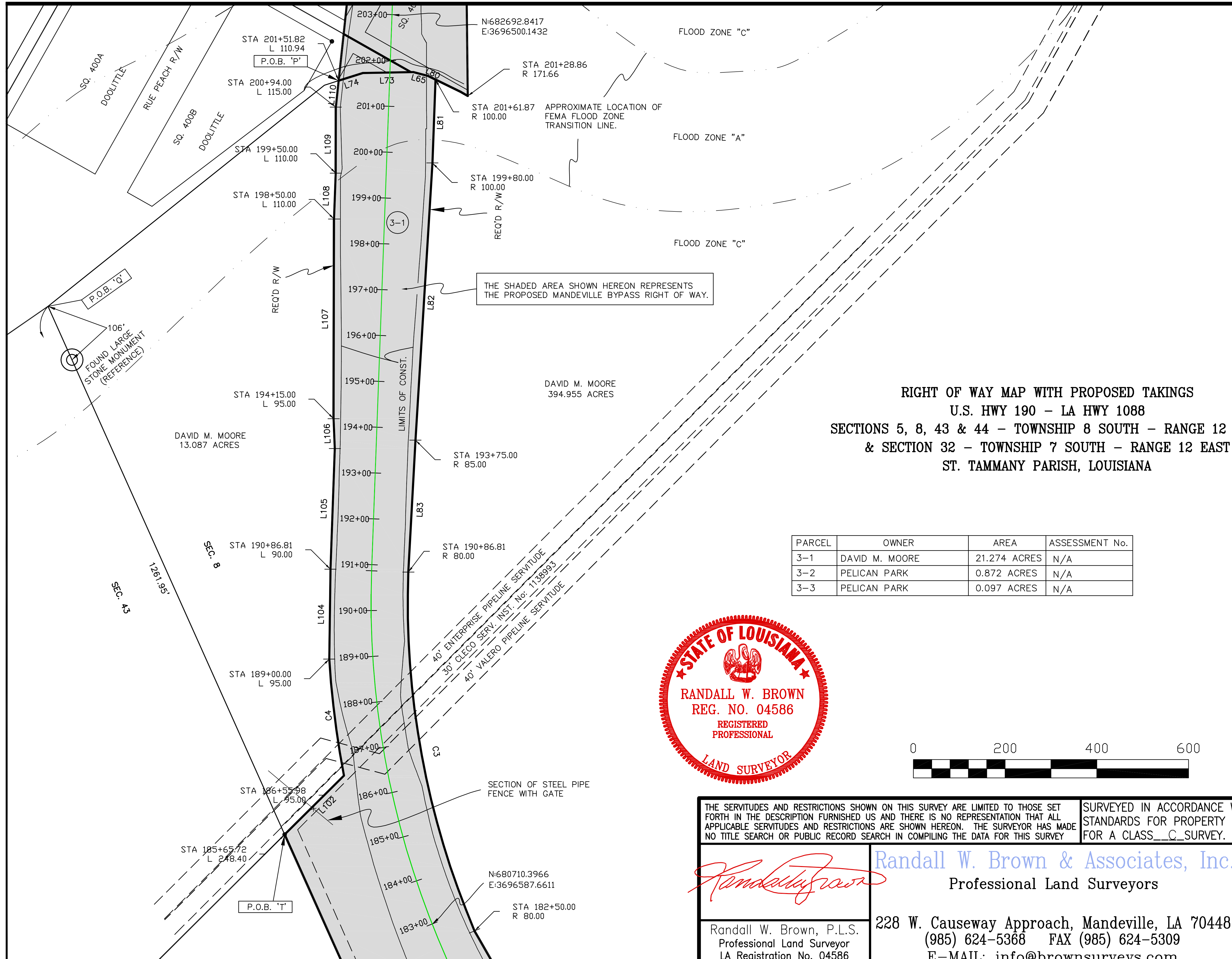
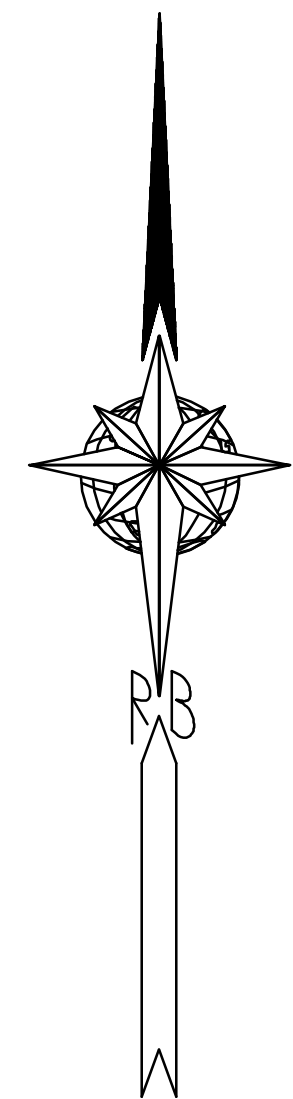
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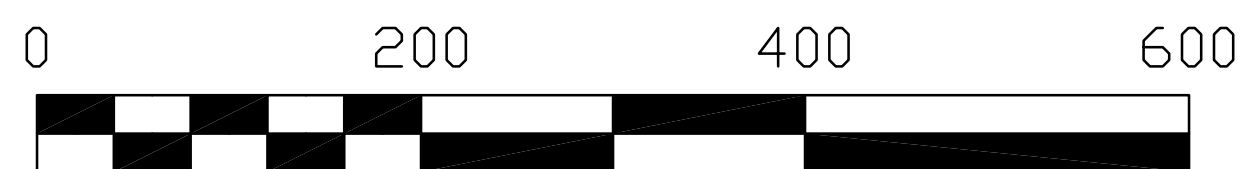
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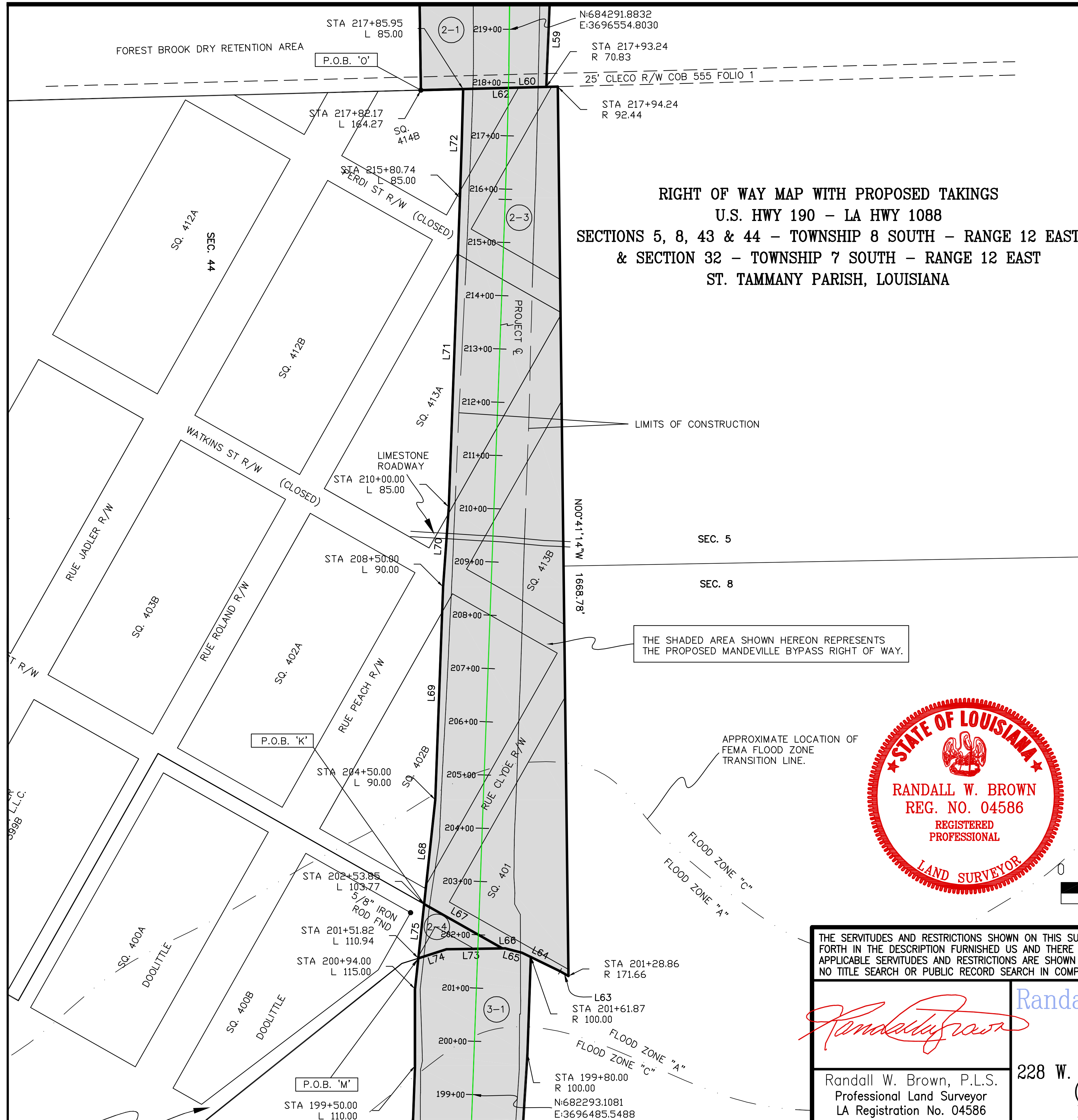
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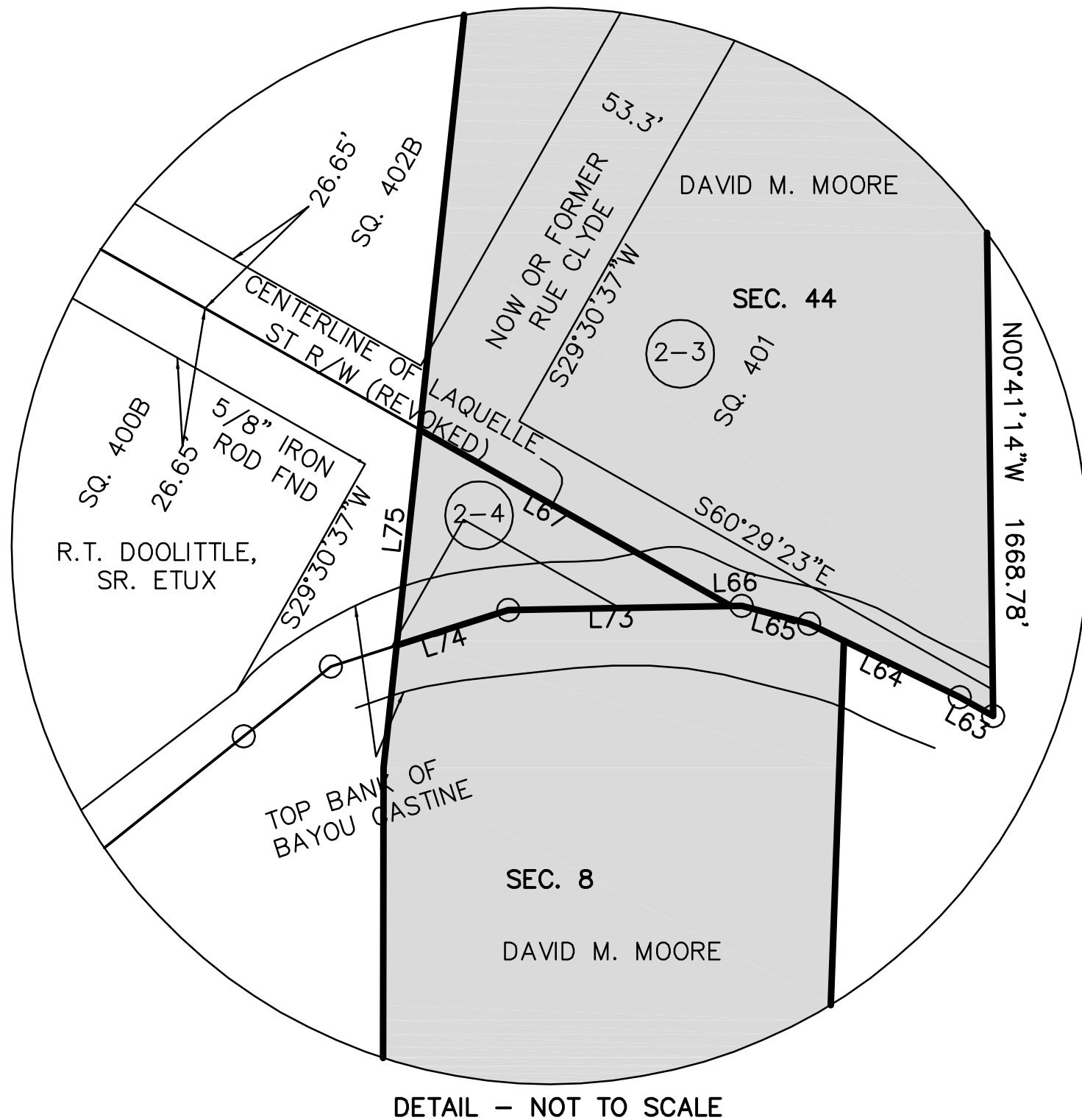
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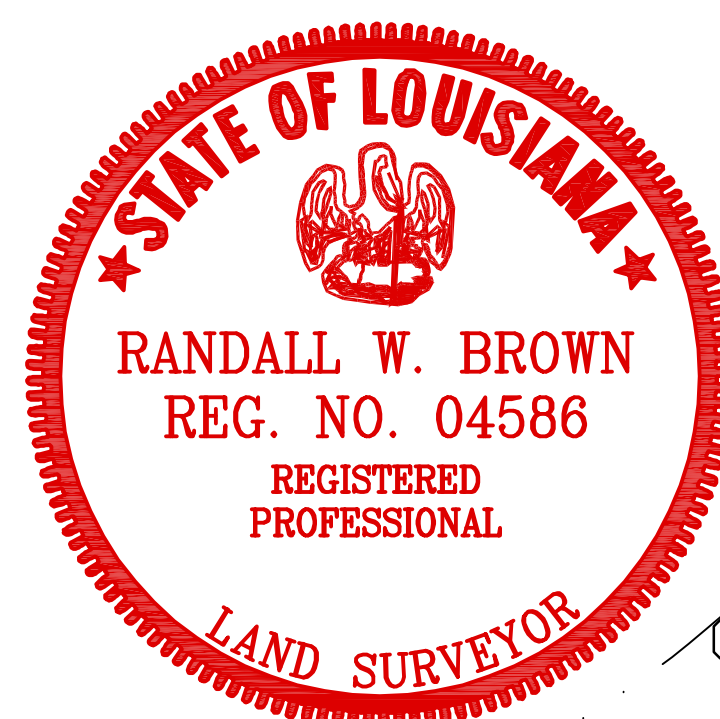
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ST. TAMMANY PARISH, LOUISIANA



DETAIL - NOT TO SCALE

PARCEL	OWNER	AREA	ASSESSMENT No.
2-1	DAVID M. MOORE	20.863 ACRES	N/A
2-2	FOREST BROOK SUBD.	0.410 ACRES	1121340042
2-3	DAVID M. MOORE	8.041 ACRES	1120219606
2-4	R.T. DOOLITTLE, SR. ETUX	0.163 ACRES	N/A

THE SHADED AREA SHOWN HEREON REPRESENTS THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.



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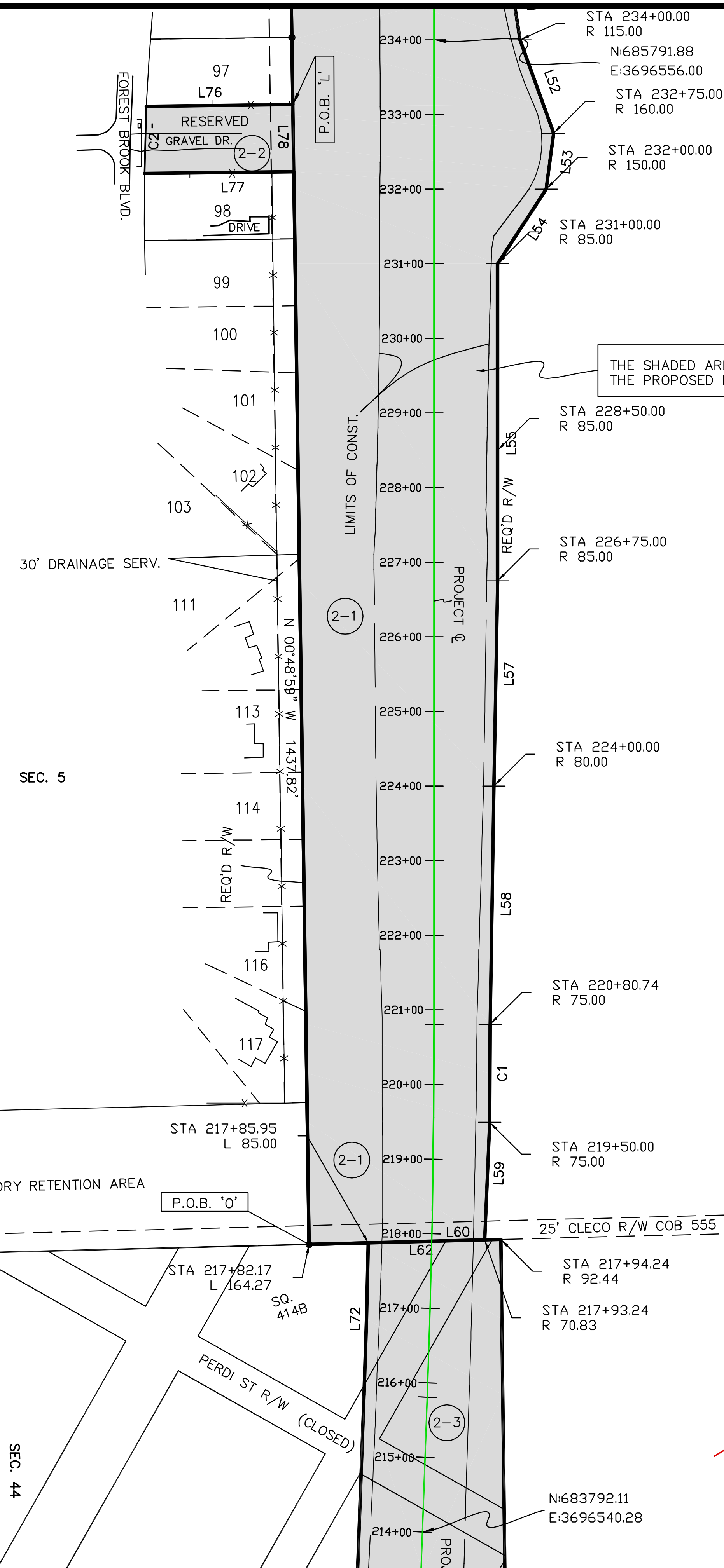
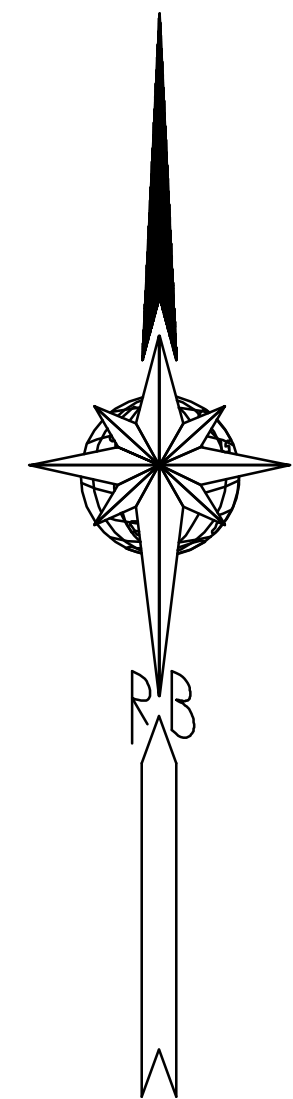
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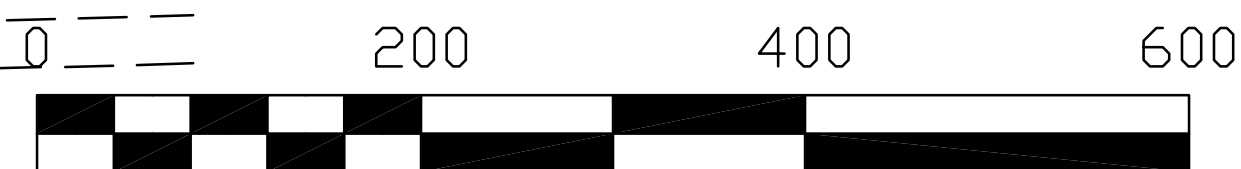


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DAVID M. MOORE
394.955 ACRES



PARCEL	OWNER	AREA	ASSESSMENT No.
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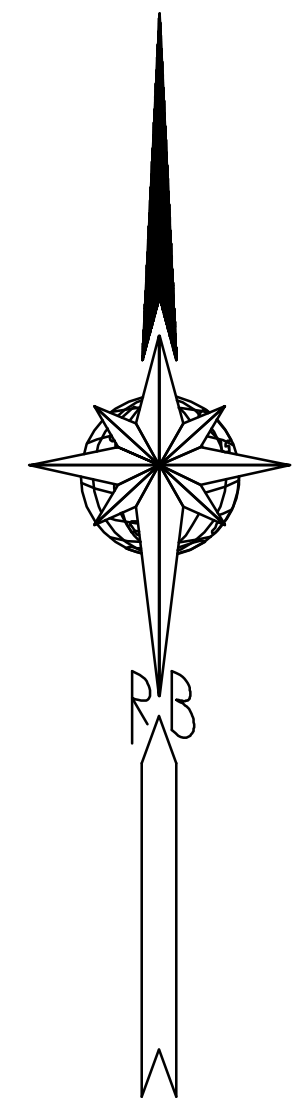
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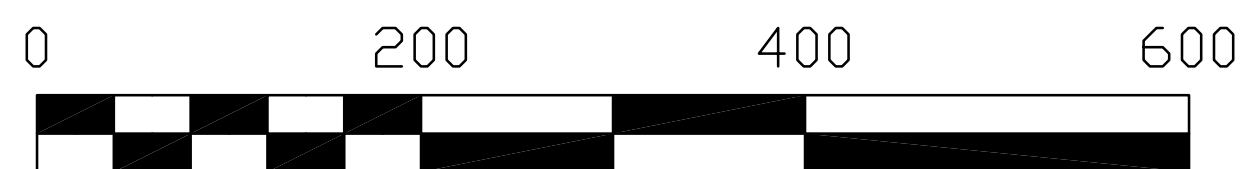


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DAVID M. MOORE
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COORDINATES SHOWN HEREON ARE
 REFERENCE TO LOUISIANA STATE
 PLANE COORDINATE SYSTEM, 1702

DENOTES 1/2" IRON ROD FND
 UNLESS OTHERWISE NOTED

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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

Randall W. Brown

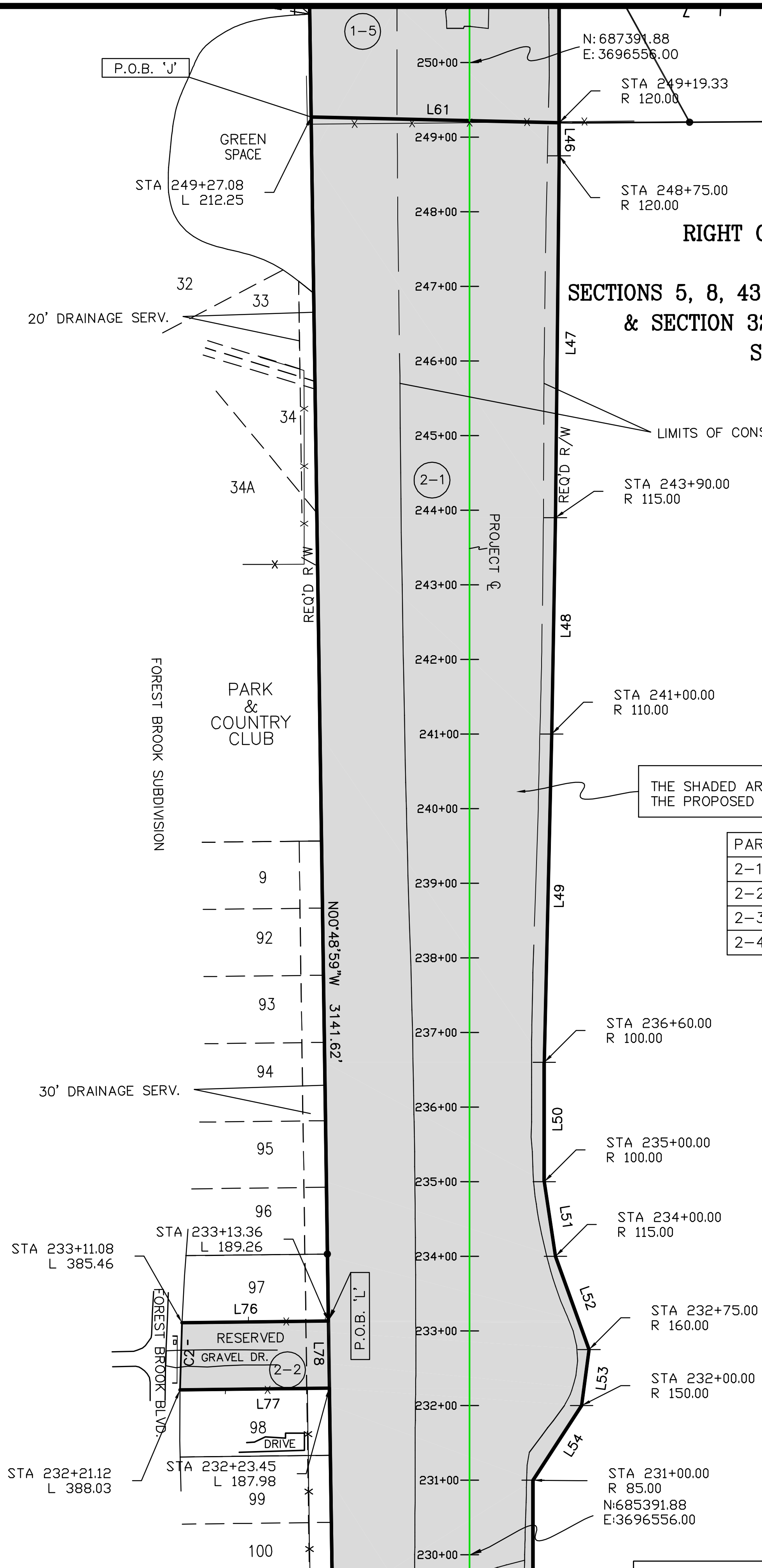
Randall W. Brown & Associates, Inc.
 Professional Land Surveyors

Date: AUGUST 1, 2019
 Survey No. 15363
 Project No. .

Randall W. Brown, P.L.S.
 Professional Land Surveyor
 LA Registration No. 04586

228 W. Causeway Approach, Mandeville, LA 70448
 (985) 624-5368 FAX (985) 624-5309
 E-MAIL: info@brownsurveys.com

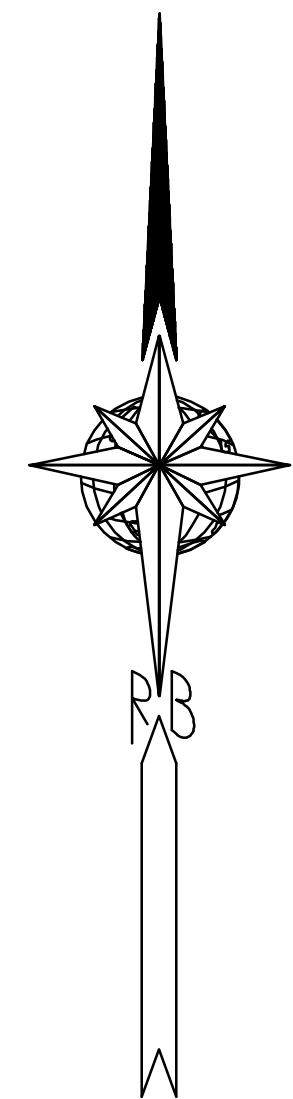
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 Drawn By: RJB
 Revised:



PINEVIEW HEIGHTS FARMS

MULBERRY LANE

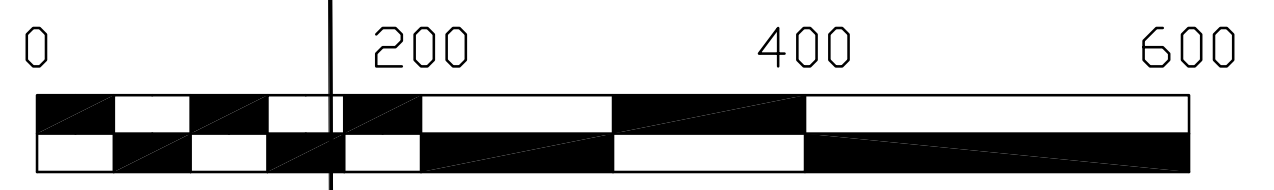
RIGHT OF WAY MAP WITH PROPOSED TAKINGS
U.S. HWY 190 - LA HWY 1088
SECTIONS 5, 8, 43 & 44 - TOWNSHIP 8 SOUTH - RANGE 12 EAST
& SECTION 32 - TOWNSHIP 7 SOUTH - RANGE 12 EAST
ST. TAMMANY PARISH, LOUISIANA



THE SHADED AREA SHOWN HEREON REPRESENTS THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.

PARCEL	OWNER	AREA	ASSESSMENT No.
1-1	MICHAEL J. MESSINA SR.	0.075 ACRES	1120204315
1-2	RICCA INDUSTRIAL LLC	0.118 ACRES	1120229210
1-3	DAVID M. MOORE	0.602 ACRES	1128193373
1-4	JABEZ PROPERTIES, L.L.C.	6.605 ACRES	1120211176
1-5	ALBERT S. BALIUS	4.618 ACRES	1120257036
1-6	RITA TURBEVILLE DOWDY	0.936 ACRES	1120218235
1-7	MICHAEL J. RICCA	0.162 ACRES	N/A
1-8	DAVID M. MOORE	0.120 ACRES	1128193373

PARCEL	OWNER
1-1	MICHAEL J. MESSINA SR.
1-2	RICCA INDUSTRIAL LLC
1-3	DAVID M. MOORE
1-4	JABEZ PROPERTIES, L.L.C.
1-5	ALBERT S. BALIUS
1-6	RITA TURBEVILLE DOWDY
1-7	MICHAEL J. RICCA
1-8	DAVID M. MOORE



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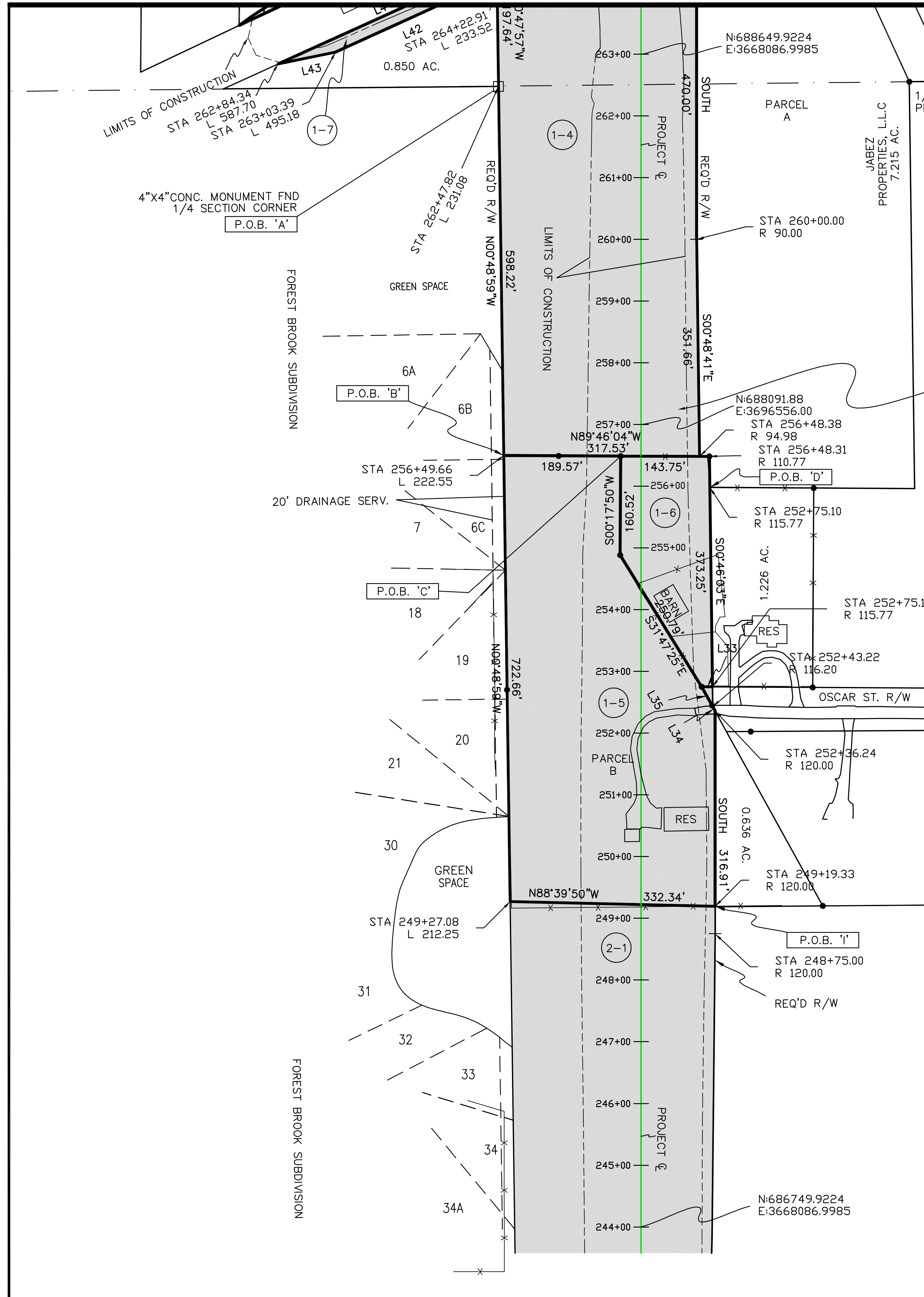
Randall W. Brown & Associates, Inc.
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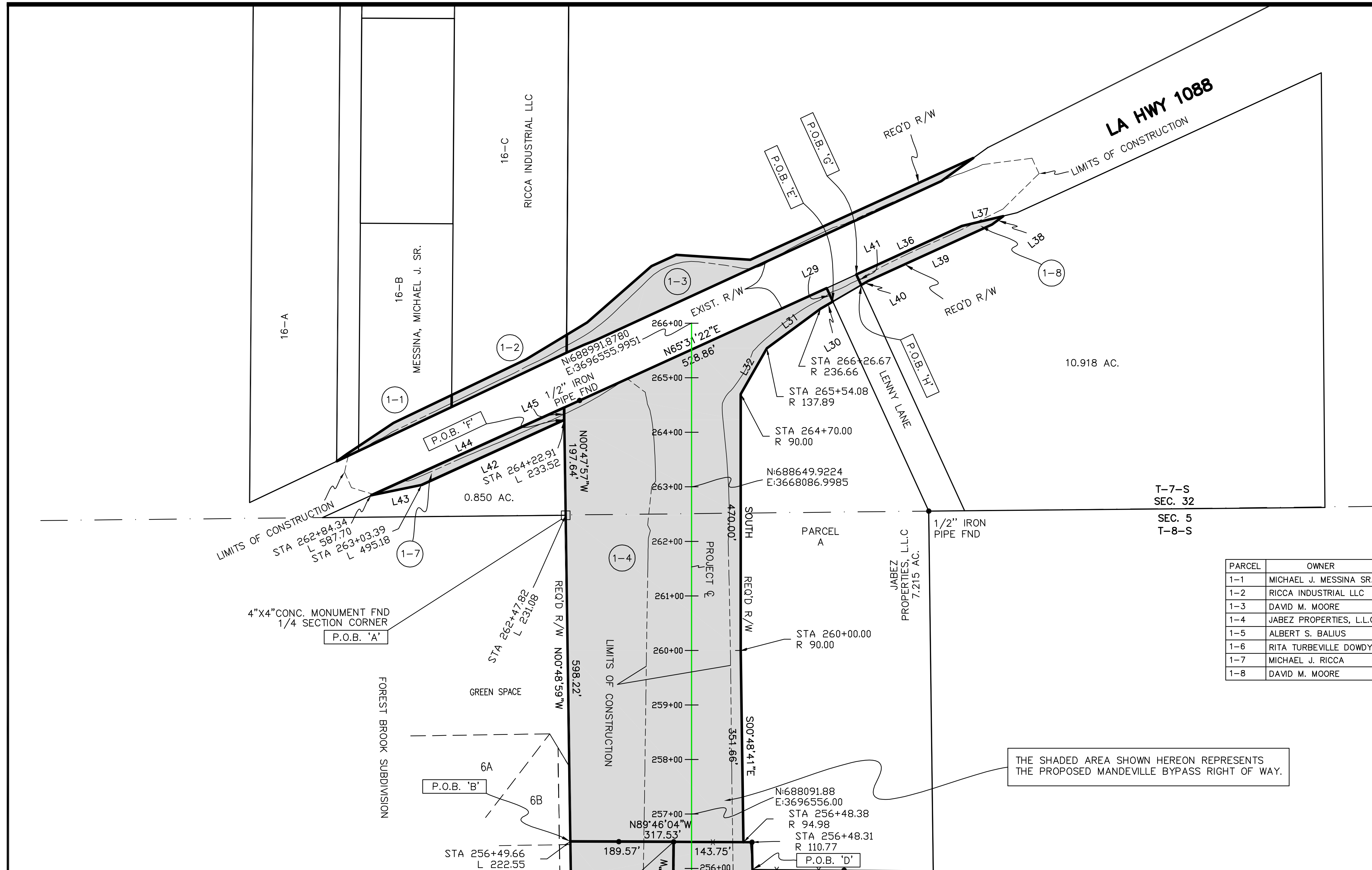
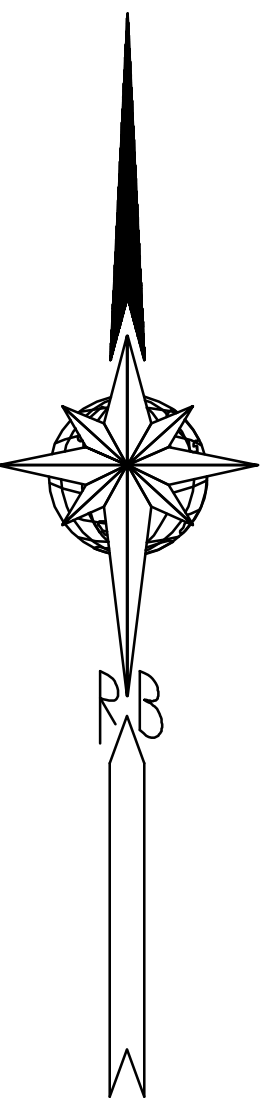
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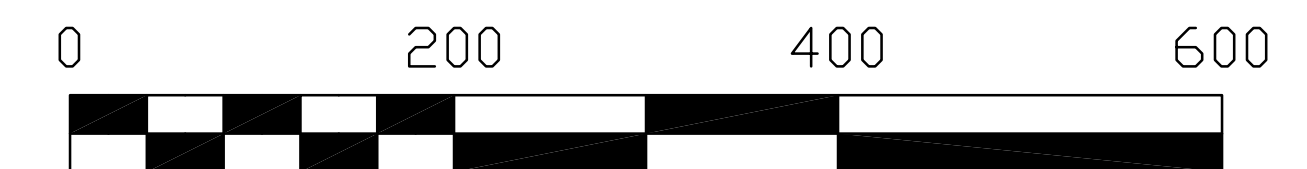
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 Drawn By: RJB
 Revised:





PARCEL	OWNER	AREA	ASSESSMENT No.
1-1	MICHAEL J. MESSINA SR.	0.075 ACRES	1120204315
1-2	RICCA INDUSTRIAL LLC	0.118 ACRES	1120229210
1-3	DAVID M. MOORE	0.602 ACRES	1128193373
1-4	JABEZ PROPERTIES, L.L.C.	6.605 ACRES	1120211176
1-5	ALBERT S. BALIUS	4.618 ACRES	1120257036
1-6	RITA TURBEVILLE DOWDY	0.936 ACRES	1120218235
1-7	MICHAEL J. RICCA	0.162 ACRES	N/A
1-8	DAVID M. MOORE	0.120 ACRES	1128193373

THE SHADED AREA SHOWN HEREON REPRESENTS THE PROPOSED MANDEVILLE BYPASS RIGHT OF WAY.



COORDINATES SHOWN HEREON ARE REFERENCE TO LOUISIANA STATE PLANE COORDINATE SYSTEM, 1702

DENOTES 1/2" IRON ROD FND UNLESS OTHERWISE NOTED

RIGHT OF WAY MAP WITH PROPOSED TAKINGS
U.S. HWY 190 - LA HWY 1088
SECTIONS 5, 8, 43 & 44 - TOWNSHIP 8 SOUTH - RANGE 12 EAST
& SECTION 32 - TOWNSHIP 7 SOUTH - RANGE 12 EAST
ST. TAMMANY PARISH, LOUISIANA



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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

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 E-MAIL: info@brownsurveys.com

Date: AUGUST 1, 2019
 Survey No. 15363
 Project No. .
 Scale: 1"=200'±
 Drawn By: RJB
 Revised:

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
PARCEL A

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go North 00 degrees 47 minutes 57 seconds West a distance of 197.64 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 528.86 feet; thence South 24 degrees 35 minutes 53 seconds East a distance of 27.40 feet to the Point of Beginning 'E'. From the Point of Beginning 'E' go South 24 degrees 35 minutes 53 seconds East a distance of 422.57 feet; thence South 00 degrees 45 minutes 05 seconds East a distance of 659.50 feet; thence North 89 degrees 37 minutes 09 seconds West a distance of 332.01 feet; thence North 00 degrees 45 minutes 51 seconds West a distance of 50.13 feet; thence North 89 degrees 45 minutes 05 seconds West a distance of 15.79 feet; thence North 00 degrees 20 minutes 50 seconds West a distance of 821.64 feet; thence North 29 degrees 39 minutes 59 seconds East a distance of 96.76 feet; thence North 53 degrees 40 minutes 58 seconds East a distance of 122.58 feet; thence North 59 degrees 44 minutes 26 seconds East a distance of 25.75 feet back to the Point of Beginning 'E'. Said parcel contains 7.215 acres or 314272 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
PARCEL B

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 1320.88 feet; thence South 88 degrees 39 minutes 50 seconds East a distance of 332.34 feet to the Point of Beginning 'I'. From the Point of Beginning 'I' go North 00 degrees 00 minutes 00 seconds West a distance of 316.91 feet; thence South 28 degrees 34 minutes 57 seconds East a distance of 23.60 feet; thence South 28 degrees 56 minutes 11 seconds East a distance of 337.59 feet; thence South 89 degrees 34 minutes 33 seconds West a distance of 156.90 feet; thence North 88 degrees 39 minutes 50 seconds West a distance of 17.74 feet; back to the Point of Beginning 'I'. Said parcel contains 0.636 acres or 27689 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
2.161 ACRE PARCEL

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 598.22 feet; thence South 89 degrees 46 minutes 04 seconds East a distance of 333.32 feet; thence South 00 degrees 46 minutes 03 seconds East a distance of 50.13 feet to the Point of Beginning 'D'. From the Point of Beginning 'D' go South 00 degrees 48 minutes 59 seconds East a distance of 598.22 feet; thence South 89 degrees 46 minutes 04 seconds East a distance of 333.32 feet; thence South 00 degrees 46 minutes 03 seconds East a distance of 50.13 feet; thence South 89 degrees 37 minutes 09 seconds East a distance of 168.28 feet; thence South 00 degrees 16 minutes 05 seconds West a distance of 322.95 feet; thence North 89 degrees 39 minutes 12 seconds West a distance of 162.44 feet; thence North 00 degrees 46 minutes 03 seconds West a distance of 323.12 feet back to the Point of Beginning 'D'. Said parcel contains 1.226 acres or 53411 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
1.012 ACRE PARCEL

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east, also the Point of Beginning 'A'. From the Point of Beginning 'A' go South 89 degrees 27 minutes 27 seconds West a distance of 446.15 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 98.34 feet; thence North 78 degrees 21 minutes 48 seconds East a distance of 94.45 feet; thence North 65 degrees 27 minutes 04 seconds East a distance of 287.67 feet; thence South 00 degrees 47 minutes 57 seconds East a distance of 175.11 feet back to the Point of Beginning 'A'. Said parcel contains 0.850 acres or 37040 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
11.038 ACRE PARCEL

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go North 00 degrees 47 minutes 57 seconds West a distance of 197.64 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 528.86 feet; thence North 65 degrees 23 minutes 28 seconds East a distance of 60.00 feet; thence South 24 degrees 35 minutes 53 seconds East a distance of 21.46 feet to the point of beginning 'H'. From the point of beginning 'H' go North 59 degrees 44 minutes 26 seconds East a distance of 14.45 feet; thence North 65 degrees 27 minutes 04 seconds East a distance of 250.00 feet; thence North 53 degrees 27 minutes 42 seconds East a distance of 25.68 feet; thence North 76 degrees 28 minutes 08 seconds East a distance of 26.30 feet; thence North 65 degrees 25 minutes 04 seconds East a distance of 138.64 feet; thence North 65 degrees 16 minutes 27 seconds East a distance of 475.40 feet; thence South 00 degrees 28 minutes 46 seconds East a distance of 797.03 feet; thence South 89 degrees 28 minutes 14 seconds West a distance of 661.14 feet; thence North 24 degrees 35 minutes 53 seconds West a distance of 455.32 feet back to the point of beginning 'H'. Said parcel contains 10.918 acres or 475569 square feet of ground more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 1-4

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east, also the Point of Beginning 'A'. From the Point of Beginning 'A' go North 00 degrees 47 minutes 57 seconds West a distance of 197.64 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 528.86 feet; thence South 24 degrees 35 minutes 53 seconds East a distance of 27.40 feet; thence South 59 degrees 44 minutes 26 seconds West a distance of 25.75 feet; thence South 53 degrees 40 minutes 58 seconds West a distance of 122.58 feet; thence South 29 degrees 39 minutes 59 seconds West a distance of 96.76 feet; thence South 00 degrees 00 minutes 00 seconds East a distance of 470.00 feet; thence South 00 degrees 48 minutes 41 seconds East a distance of 351.66 feet; thence North 89 degrees 46 minutes 04 seconds West a distance of 317.53 feet; thence North 00 degrees 48 minutes 59 seconds West a distance of 598.22 feet back to the Point of Beginning 'A'. Said parcel contains 6.605 acres or 287711 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 1-5

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 598.22 feet to the Point of Beginning 'B'. From the Point of Beginning 'B' go South 89 degrees 46 minutes 04 seconds East a distance of 189.57 feet; thence South 00 degrees 17 minutes 50 seconds West a distance of 160.52 feet; thence South 31 degrees 47 minutes 25 seconds East a distance of 250.79 feet; thence South 29 degrees 15 minutes 01 seconds East a distance of 34.68 feet; thence South 28 degrees 34 minutes 57 seconds East a distance of 9.92 feet; thence South 00 degrees 00 minutes 00 seconds East a distance of 316.91 feet; thence North 88 degrees 39 minutes 50 seconds West a distance of 332.34 feet; thence North 00 degrees 48 minutes 59 seconds West a distance of 722.66 feet back to the Point of Beginning 'B'. Said parcel contains 4.618 acres or 201151 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 1-6

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 598.22 feet; thence South 89 degrees 46 minutes 04 seconds East a distance of 189.57 feet to the Point of Beginning 'C'. From the Point of Beginning 'C' go South 89 degrees 46 minutes 04 seconds East a distance of 143.75 feet; thence South 00 degrees 46 minutes 03 seconds East a distance of 373.25 feet; thence North 89 degrees 38 minutes 18 seconds West a distance of 17.46 feet; thence North 31 degrees 47 minutes 25 seconds West a distance of 250.79 feet; thence North 00 degrees 17 minutes 50 seconds East a distance of 160.52 feet back to the Point of Beginning 'C'. Said parcel contains 0.936 acres or 40771 sq. feet of ground, more or less.

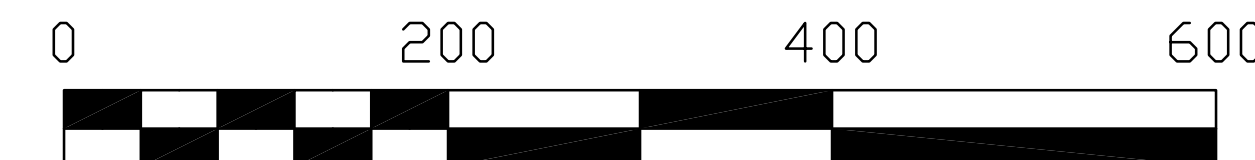
PROPERTY DESCRIPTION
TAKING PARCEL 1-7

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go North 00 degrees 47 minutes 57 seconds West a distance of 175.11 feet to the Point of Beginning 'F'. From the Point of Beginning 'F' go South 65 degrees 27 minutes 04 seconds West a distance of 287.67 feet; thence South 78 degrees 21 minutes 48 seconds West a distance of 94.45 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 388.81 feet; thence South 00 degrees 47 minutes 57 seconds East a distance of 22.53 feet back to the Point of Beginning 'F'. Said parcel contains 0.162 acres or 7047 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 1-8

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section section 5, township 8 south, range 12 east and go North 00 degrees 47 minutes 57 seconds West a distance of 197.64 feet; thence North 65 degrees 31 minutes 22 seconds East a distance of 528.86 feet; thence North 65 degrees 23 minutes 28 seconds East a distance of 60.00 feet to the point of beginning 'G'. From the point of beginning 'G' go South 76 degrees 28 minutes 08 seconds West a distance of 78.02 feet; thence South 65 degrees 23 minutes 28 seconds West a distance of 212.93 feet; thence South 24 degrees 35 minutes 53 seconds East a distance of 21.46 feet; thence North 59 degrees 44 minutes 26 seconds East a distance of 14.45 feet; thence North 65 degrees 27 minutes 04 seconds East a distance of 250.00 feet; thence North 53 degrees 27 minutes 42 seconds East a distance of 25.68 feet back to the point of beginning 'G'. Said parcel contains 0.120 acres or 5210 square feet of ground more or less.

PARCEL	OWNER	AREA	ASSESSMENT No.
1-1	MICHAEL J. MESSINA SR.	0.075 ACRES	1120204315
1-2	RICCA INDUSTRIAL LLC	0.118 ACRES	1120229210
1-3	DAVID M. MOORE	0.602 ACRES	1128193373
1-4	JABEZ PROPERTIES, L.L.C.	6.605 ACRES	1120211176
1-5	ALBERT S. BALIUS	4.618 ACRES	1120257036
1-6	RITA TURBEVILLE DOWDY	0.936 ACRES	1120218235
1-7	MICHAEL J. RICCA	0.162 ACRES	N/A
1-8	DAVID M. MOORE	0.120 ACRES	1128193373



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Randall W. Brown

Randall W. Brown & Associates, Inc.
Professional Land Surveyors

Date: AUGUST 1, 2019
Survey No. 15363
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Scale: 1"=200'±
Drawn By: RJB
Revised:

PROPERTY DESCRIPTION
TAKING PARCEL 2-1

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 1320.88 feet to the Point of Beginning 'J'.
From the Point of Beginning go South 88 degrees 39 minutes 50 seconds East a distance of 332.34 feet; thence South a distance of 44.33 feet; thence South 00 degrees 35 minutes 26 seconds West a distance of 485.03 feet; thence South 00 degrees 59 minutes 16 seconds West a distance of 290.04 feet; thence South 01 degrees 18 minutes 07 seconds West a distance of 440.11 feet; thence South a distance of 160.00 feet; thence South 08 degrees 31 minutes 51 seconds East a distance of 101.12 feet; thence South 19 degrees 47 minutes 56 seconds East a distance of 132.85 feet; thence South 07 degrees 35 minutes 41 seconds West a distance of 75.66 feet; thence South 33 degrees 01 minutes 26 seconds West a distance of 119.27 feet; thence South a distance of 425.00 feet; thence South 01 degrees 02 minutes 30 seconds West a distance of 275.05 feet; thence South 00 degrees 53 minutes 50 seconds West a distance of 319.30 feet; thence along a curve to the right with a radius of 13775.77 feet, an arc length of 131.45 feet, a chord bearing of South 00 degrees 16 minutes 24 seconds West, and a chord distance of 131.45 feet; thence South 02 degrees 23 minutes 22 seconds West a distance of 157.65 feet; thence South 88 degrees 32 minutes 17 seconds West a distance of 235.36 feet; thence North 00 degrees 48 minutes 59 seconds West a distance of 3141.62 feet back to the Point of Beginning 'J'.
Said parcel contains 20.863 acres or 908799 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
450.179 ACRE PARCEL

Commencing from the corner common to sections 8, 9, 16 and 17, township 8 south, range 12 east, also the Point of Beginning 'N'.
From the Point of Beginning go North 89 degrees 22 minutes 07 seconds West a distance of 1512.08 feet; thence North 24 degrees 08 minutes 35 seconds West a distance of 802.04 feet; thence North 24 degrees 08 minutes 35 seconds West a distance of 172.99 feet; thence North 33 degrees 52 minutes 34 seconds East a distance of 39.66 feet; thence North 27 degrees 01 minutes 55 seconds East a distance of 114.35 feet; thence North 12 degrees 28 minutes 40 seconds East a distance of 171.71 feet; thence North 02 degrees 54 minutes 45 seconds East a distance of 114.73 feet; thence North 08 degrees 31 minutes 59 seconds West a distance of 228.50 feet; thence North 00 degrees 57 minutes 10 seconds East a distance of 61.32 feet; thence North 24 degrees 06 minutes 09 seconds West a distance of 162.61 feet; thence North 64 degrees 14 minutes 02 seconds West a distance of 64.03 feet; thence North 25 degrees 34 minutes 27 seconds West a distance of 150.00 feet; thence North 21 degrees 45 minutes 36 seconds West a distance of 150.33 feet; thence North 25 degrees 34 minutes 36 seconds West a distance of 399.98 feet; thence North 29 degrees 47 minutes 16 seconds West a distance of 247.09 feet; thence with a curve turning to the right with an arc length of 801.71 feet, with a radius of 1829.86 feet, with a chord bearing of North 10 degrees 27 minutes 42 seconds West, with a chord length of 795.31 feet; thence North 03 degrees 05 minutes 06 seconds East a distance of 288.28 feet; thence North 03 degrees 30 minutes 40 seconds East a distance of 605.19 feet; thence North 02 degrees 05 minutes 27 seconds East a distance of 181.87 feet; thence South 63 degrees 53 minutes 20 seconds East a distance of 60.91 feet; thence South 60 degrees 45 minutes 12 seconds East a distance of 18.01 feet; thence North 00 degrees 41 minutes 14 seconds West a distance of 1668.78 feet; thence South 88 degrees 32 minutes 18 seconds West a distance of 21.64 feet; thence North 02 degrees 23 minutes 22 seconds East a distance of 157.65 feet; thence with a curve turning to the left with an arc length of 131.45 feet, with a radius of 13775.77 feet, with a chord bearing of North 00 degrees 16 minutes 24 seconds East, with a chord length of 131.45 feet; thence North 00 degrees 53 minutes 50 seconds East a distance of 319.30 feet; thence North 01 degrees 02 minutes 30 seconds East a distance of 275.05 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 175.00 feet; thence North 00 degrees 00 minutes 00 seconds East a distance of 250.00 feet; thence North 33 degrees 01 minutes 26 seconds East a distance of 119.27 feet; thence North 07 degrees 35 minutes 41 seconds East a distance of 75.66 feet; thence North 19 degrees 47 minutes 56 seconds West a distance of 132.85 feet; thence North 08 degrees 31 minutes 51 seconds West a distance of 101.12 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 160.00 feet; thence North 01 degrees 18 minutes 07 seconds East a distance of 440.11 feet; thence North 00 degrees 59 minutes 16 seconds East a distance of 290.04 feet; thence North 00 degrees 35 minutes 26 seconds East a distance of 485.03 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 44.33 feet; thence South 88 degrees 39 minutes 50 seconds East a distance of 17.74 feet; thence North 89 degrees 34 minutes 33 seconds East a distance of 156.90 feet; thence North 89 degrees 34 minutes 33 seconds East a distance of 810.43 feet; thence South 00 degrees 14 minutes 21 seconds East a distance of 1330.23 feet; thence North 89 degrees 23 minutes 39 seconds East a distance of 1328.20 feet; thence South 00 degrees 22 minutes 35 seconds East a distance of 5310.72 feet; thence South 88 degrees 27 minutes 20 seconds West a distance of 1317.97 feet; thence South 00 degrees 31 minutes 58 seconds East a distance of 1299.45 feet; thence North 89 degrees 10 minutes 15 seconds East a distance of 1314.19 feet; thence South 00 degrees 22 minutes 35 seconds East a distance of 1317.03 feet back to the Point of Beginning 'N'.
Said parcel contains 394.955 acres or 17,204,239 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 2-2

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 2934.75 feet to the Point of Beginning 'L'.
From the Point of Beginning go South 89 degrees 20 minutes 00 seconds West a distance of 198.21 feet; thence with a curve turning to the left with an arc length of 90.00 feet, with a radius of 2999.99 feet, with a chord bearing of South 01 degrees 38 minutes 18 seconds West, with a chord length of 90.00 feet; thence North 89 degrees 20 minutes 00 seconds East a distance of 200.07 feet; thence North 00 degrees 48 minutes 59 seconds West a distance of 89.92 feet back to the Point of Beginning 'L'.
Said parcel contains 0.410 acres or 17838 sq. feet of ground more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 2-3

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go North 51 degrees 21 minutes 25 seconds East a distance of 719.13 feet; thence North 51 degrees 21 minutes 25 seconds East a distance of 52.73 feet; thence North 72 degrees 21 minutes 11 seconds East a distance of 32.51 feet; thence North 06 degrees 06 minutes 29 seconds East a distance of 102.28 feet to the Point of Beginning 'K'.
From the Point of Beginning 'K' go North 06 degrees 06 minutes 29 seconds East a distance of 196.63 feet; thence North 02 degrees 05 minutes 27 seconds East a distance of 400.00 feet; thence North 04 degrees 00 minutes 00 seconds East a distance of 150.08 feet; thence North 02 degrees 05 minutes 27 seconds East a distance of 580.74 feet; thence North 01 degrees 39 minutes 43 seconds East a distance of 203.93 feet; thence North 88 degrees 32 minutes 18 seconds East a distance of 177.64 feet; thence South 00 degrees 41 minutes 14 seconds East a distance of 1668.78 feet; thence North 60 degrees 45 minutes 12 seconds West a distance of 18.01 feet; thence North 63 degrees 53 minutes 20 seconds West a distance of 79.12 feet; thence North 75 degrees 17 minutes 59 seconds West a distance of 33.00 feet; thence South 88 degrees 59 minutes 17 seconds West a distance of 5.26 feet; thence North 60 degrees 29 minutes 23 seconds West a distance of 168.62 feet back to the Point of Beginning 'K'.
Said parcel contains 8.041 acres or 350249 sq. feet of ground more or less.

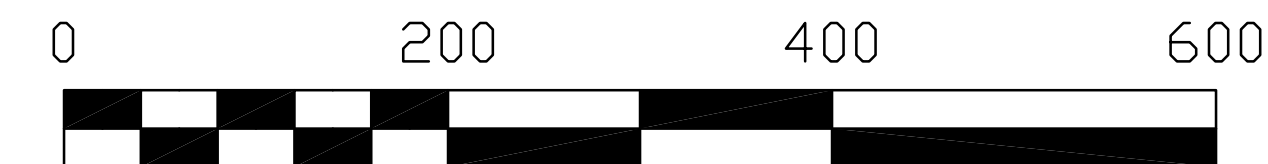
PROPERTY DESCRIPTION
TAKING PARCEL 2-4

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go North 51 degrees 21 minutes 25 seconds East a distance of 719.13 feet; thence North 51 degrees 21 minutes 25 seconds East a distance of 52.73 feet; thence North 72 degrees 21 minutes 11 seconds East a distance of 32.51 feet to the Point of Beginning 'M'.
From the Point of Beginning go North 51 degrees 21 minutes 25 seconds East a distance of 719.13 feet; thence North 51 degrees 21 minutes 25 seconds East a distance of 52.73 feet; thence North 72 degrees 21 minutes 11 seconds East a distance of 32.51 feet; thence North 06 degrees 06 minutes 29 seconds East a distance of 102.28 feet; thence South 60 degrees 29 minutes 23 seconds East a distance of 168.62 feet; thence South 88 degrees 59 minutes 17 seconds West a distance of 104.86 feet; thence South 72 degrees 21 minutes 11 seconds West a distance of 55.39 feet back to the Point of Beginning 'M'.
Said parcel contains 0.163 acres or 7083 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
89.534 ACRE PARCEL

Commencing from the quarter corner common to section 32, township 7 south, range 12 east and section 5, township 8 south, range 12 east and go South 00 degrees 48 minutes 59 seconds East a distance of 4462.50 feet to the Point of Beginning 'O'.
From the Point of Beginning go thence south 88 degrees 32 minutes 18 seconds west a distance of 3611.99 feet; thence south 60 degrees 29 minutes 23 seconds east a distance of 3280.78 feet; thence north 29 degrees 30 minutes 37 seconds east a distance of 532.85 feet; thence south 60 degrees 29 minutes 23 seconds east a distance of 573.88 feet; thence north 06 degrees 06 minutes 29 seconds east a distance of 196.63 feet; thence north 02 degrees 05 minutes 27 seconds east a distance of 400.00 feet; thence north 04 degrees 00 minutes 00 seconds east a distance of 150.08 feet; thence north 02 degrees 05 minutes 27 seconds east a distance of 580.74 feet; thence north 01 degrees 39 minutes 43 seconds east a distance of 203.93 feet; thence south 88 degrees 32 minutes 18 seconds west a distance of 79.36 feet back to the Point of Beginning 'O'.
Said parcel contains 81.493 acres or 3549841 sq. feet of ground, more or less.
Less and Except square 395-B and square 399B.

PARCEL	OWNER	AREA	ASSESSMENT No.
2-1	DAVID M. MOORE	20.863 ACRES	N/A
2-2	FOREST BROOK SUBD.	0.410 ACRES	1121340042
2-3	DAVID M. MOORE	8.041 ACRES	1120219606
2-4	R.T. DOOLITTLE, SR. ETUX	0.163 ACRES	N/A



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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

Randall W. Brown

Randall W. Brown & Associates, Inc.
Professional Land Surveyors

Date: AUGUST 1, 2019
Survey No. 15363
Project No. .

Scale: 1"=200'±
Drawn By: RJB
Revised:

Randall W. Brown, P.L.S.
Professional Land Surveyor
LA Registration No. 04586

228 W. Causeway Approach, Mandeville, LA 70448
(985) 624-5368 FAX (985) 624-5309
E-MAIL: info@brownsurveys.com

PROPERTY DESCRIPTION
TAKING PARCEL 3-1

commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go north 51 degrees 21 minutes 25 seconds east a distance of 719.13 feet; thence north 51 degrees 21 minutes 25 seconds east a distance of 52.73 feet; thence north 72 degrees 21 minutes 11 seconds east a distance of 32.51 feet to the point of beginning 'P'.
from the point of beginning go north 72 degrees 21 minutes 11 seconds east a distance of 55.39 feet; thence north 88 degrees 59 minutes 17 seconds east a distance of 110.13 feet; thence south 75 degrees 17 minutes 59 seconds east a distance of 33.00 feet; thence south 63 degrees 53 minutes 20 seconds east a distance of 18.21 feet; thence south 02 degrees 05 minutes 27 seconds west a distance of 181.87 feet; thence south 03 degrees 30 minutes 40 seconds west a distance of 605.19 feet; thence south 03 degrees 05 minutes 06 seconds west a distance of 288.24 feet; thence with a curve turning to the left with an arc length of 801.75 feet, with a radius of 1829.86 feet, with a chord bearing of south 10 degrees 27 minutes 40 seconds east, with a chord length of 795.36 feet; thence south 29 degrees 47 minutes 16 seconds east a distance of 247.08 feet; thence south 25 degrees 34 minutes 36 seconds east a distance of 399.98 feet; thence south 21 degrees 45 minutes 36 seconds east a distance of 150.33 feet; thence south 25 degrees 34 minutes 27 seconds east a distance of 150.00 feet; thence south 64 degrees 14 minutes 02 seconds east a distance of 64.03 feet; thence south 24 degrees 06 minutes 09 seconds east a distance of 162.61 feet; thence south 00 degrees 57 minutes 10 seconds west a distance of 61.32 feet; thence south 08 degrees 31 minutes 59 seconds east a distance of 228.50 feet; thence south 02 degrees 54 minutes 45 seconds west a distance of 114.73 feet; thence south 12 degrees 28 minutes 40 seconds west a distance of 171.71 feet; thence south 27 degrees 01 minutes 55 seconds west a distance of 114.35 feet; thence south 33 degrees 52 minutes 34 seconds west a distance of 39.66 feet; thence north 24 degrees 08 minutes 35 seconds west a distance of 2126.78 feet; thence north 45 degrees 08 minutes 13 seconds east a distance of 182.19 feet; thence with a curve turning to the right with an arc length of 256.16 feet, with a radius of 2004.86 feet, with a chord bearing of north 07 degrees 10 minutes 25 seconds west, with a chord length of 255.99 feet; thence north 02 degrees 05 minutes 27 seconds east a distance of 263.19 feet; thence north 02 degrees 18 minutes 28 seconds west a distance of 65.19 feet; thence north 00 degrees 06 minutes 58 seconds east a distance of 435.26 feet; thence north 02 degrees 05 minutes 27 seconds east a distance of 100.00 feet; thence north 00 degrees 06 minutes 08 seconds east a distance of 144.09 feet; thence north 06 degrees 06 minutes 29 seconds east a distance of 57.96 feet back to the point of beginning 'P'.
said parcel contains 21.274 acres or 926707 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
450.179 ACRE PARCEL

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east, also the point of beginning 'Q'.
From the point of beginning go north 51 degrees 21 minutes 25 seconds east a distance of 719.13 feet; thence north 51 degrees 21 minutes 25 seconds east a distance of 52.73 feet; thence north 72 degrees 21 minutes 11 seconds east a distance of 32.51 feet; thence south 06 degrees 06 minutes 29 seconds west a distance of 57.96 feet; thence south 00 degrees 06 minutes 08 seconds west a distance of 144.09 feet; thence south 02 degrees 05 minutes 27 seconds west a distance of 100.00 feet; thence south 00 degrees 06 minutes 58 seconds west a distance of 435.26 feet; thence south 02 degrees 18 minutes 28 seconds east a distance of 65.19 feet; thence south 02 degrees 05 minutes 27 seconds west a distance of 263.19 feet; thence south 00 degrees 45 minutes 00 seconds west a distance of 195.84 feet; thence with a curve turning to the left with an arc length of 256.16 feet, with a radius of 2004.86 feet, with a chord bearing of south 07 degrees 10 minutes 25 seconds east, with a chord length of 255.99 feet; thence south 45 degrees 08 minutes 13 seconds west a distance of 182.19 feet; thence north 24 degrees 08 minutes 35 seconds west a distance of 1261.95 feet back to the Point of Beginning 'Q'.
Said parcel contains 13.087 acres or 570052 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
450.179 ACRE PARCEL

Commencing from the corner common to sections 8, 9, 16 and 17, township 8 south, range 12 east, also the Point of Beginning 'N'.
From the Point of Beginning go North 89 degrees 22 minutes 07 seconds West a distance of 1512.08 feet; thence North 24 degrees 08 minutes 35 seconds West a distance of 802.04 feet; thence North 24 degrees 08 minutes 35 seconds West a distance of 172.99 feet; thence North 33 degrees 52 minutes 34 seconds East a distance of 39.66 feet; thence North 27 degrees 01 minutes 55 seconds East a distance of 114.35 feet; thence North 12 degrees 28 minutes 40 seconds East a distance of 171.71 feet; thence North 02 degrees 54 minutes 45 seconds East a distance of 114.73 feet; thence North 08 degrees 31 minutes 59 seconds West a distance of 228.50 feet; thence North 00 degrees 57 minutes 10 seconds East a distance of 61.32 feet; thence North 24 degrees 06 minutes 09 seconds West a distance of 162.61 feet; thence North 64 degrees 14 minutes 02 seconds West a distance of 64.03 feet; thence North 25 degrees 34 minutes 27 seconds West a distance of 150.00 feet; thence North 21 degrees 45 minutes 36 seconds West a distance of 150.33 feet; thence North 25 degrees 34 minutes 27 seconds West a distance of 399.98 feet; thence North 29 degrees 47 minutes 16 seconds West a distance of 247.08 feet; thence with a curve turning to the right with an arc length of 801.75 feet, with a radius of 1829.86 feet, with a chord bearing of North 10 degrees 27 minutes 42 seconds West, with a chord length of 795.31 feet; thence North 03 degrees 05 minutes 06 seconds East a distance of 288.28 feet; thence North 03 degrees 30 minutes 40 seconds East a distance of 605.19 feet; thence North 02 degrees 05 minutes 27 seconds East a distance of 181.87 feet; thence South 63 degrees 53 minutes 20 seconds East a distance of 60.91 feet; thence South 60 degrees 45 minutes 12 seconds East a distance of 18.01 feet; thence North 00 degrees 41 minutes 14 seconds West a distance of 1668.78 feet; thence South 88 degrees 32 minutes 18 seconds West a distance of 21.64 feet; thence North 02 degrees 23 minutes 22 seconds East a distance of 157.65 feet; thence with a curve turning to the left with an arc length of 131.45 feet, with a radius of 13775.77 feet, with a chord bearing of North 00 degrees 16 minutes 24 seconds East, with a chord length of 131.45 feet; thence North 00 degrees 53 minutes 50 seconds East a distance of 319.30 feet; thence North 01 degrees 02 minutes 30 seconds East a distance of 275.05 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 175.00 feet; thence North 00 degrees 00 minutes 00 seconds East a distance of 250.00 feet; thence North 33 degrees 01 minutes 26 seconds East a distance of 119.27 feet; thence North 07 degrees 35 minutes 41 seconds East a distance of 75.66 feet; thence North 19 degrees 47 minutes 56 seconds West a distance of 132.85 feet; thence North 08 degrees 31 minutes 51 seconds West a distance of 101.12 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 160.00 feet; thence North 01 degrees 18 minutes 07 seconds East a distance of 440.11 feet; thence North 00 degrees 59 minutes 16 seconds East a distance of 290.04 feet; thence North 00 degrees 35 minutes 26 seconds East a distance of 485.03 feet; thence North 00 degrees 00 minutes 00 seconds West a distance of 44.33 feet; thence South 88 degrees 39 minutes 50 seconds East a distance of 17.74 feet; thence North 89 degrees 34 minutes 33 seconds East a distance of 156.90 feet; thence North 89 degrees 34 minutes 33 seconds East a distance of 810.43 feet; thence South 00 degrees 14 minutes 21 seconds East a distance of 1330.23 feet; thence North 89 degrees 23 minutes 39 seconds East a distance of 1328.20 feet; thence South 00 degrees 22 minutes 35 seconds East a distance of 5310.72 feet; thence South 88 degrees 27 minutes 20 seconds West a distance of 1317.97 feet; thence South 00 degrees 31 minutes 58 seconds East a distance of 1299.45 feet; thence North 89 degrees 10 minutes 15 seconds East a distance of 1314.19 feet; thence South 00 degrees 22 minutes 35 seconds East a distance of 1317.03 feet back to the Point of Beginning.
Said parcel contains 394.955 acres or 17,204,239 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 3-2

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go south 24 degrees 08 minutes 35 seconds east a distance of 2693.73 feet to the Point of Beginning 'R'.
From the Point of Beginning go south 66 degrees 21 minutes 04 seconds west a distance of 427.40 feet; thence south 81 degrees 53 minutes 45 seconds west a distance of 46.19 feet; thence south 21 degrees 52 minutes 21 seconds east a distance of 90.25 feet; thence north 56 degrees 47 minutes 38 seconds east a distance of 39.50 feet; thence north 68 degrees 38 minutes 11 seconds east a distance of 436.86 feet; thence north 24 degrees 08 minutes 35 seconds west a distance of 88.70 feet back to the Point of Beginning 'R'.
Said parcel contains 0.872 acres or 37967 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
232.005 ACRE PARCEL
(PELICAN PARK)

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go south 24 degrees 08 minutes 35 seconds east a distance of 1261.95 feet to the point of beginning 'T'.
From the Point of Beginning go south 24 degrees 08 minutes 35 seconds east a distance of 1431.78 feet; thence south 66 degrees 21 minutes 04 seconds west a distance of 427.40 feet; thence south 81 degrees 53 minutes 45 seconds west a distance of 46.19 feet; thence south 21 degrees 52 minutes 21 seconds east a distance of 90.25 feet; thence north 56 degrees 47 minutes 38 seconds east a distance of 39.50 feet; thence north 68 degrees 38 minutes 11 seconds east a distance of 436.86 feet; thence south 24 degrees 08 minutes 35 seconds east a distance of 323.93 feet; thence south 16 degrees 43 minutes 58 seconds west a distance of 159.58 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 3526.49 feet; thence north 57 degrees 19 minutes 25 seconds west a distance of 53.38 feet; thence south 31 degrees 56 minutes 59 seconds west a distance of 104.00 feet; thence south 44 degrees 51 minutes 46 seconds east a distance of 28.40 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 25.19 feet; thence south 34 degrees 18 minutes 59 seconds west a distance of 1578.64 feet; thence north 30 degrees 38 minutes 24 seconds west a distance of 2372.01 feet; thence north 48 degrees 38 minutes 36 seconds east a distance of 722.40 feet; thence north 56 degrees 31 minutes 36 seconds east a distance of 261.10 feet; thence north 50 degrees 38 minutes 57 seconds east a distance of 465.47 feet; thence north 50 degrees 40 minutes 34 seconds east a distance of 637.36 feet; thence north 45 degrees 08 minutes 13 seconds east a distance of 3350.44 feet back to the Point of Beginning 'T'.
Said parcel contains 230.936 acres or 10059568 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 3-3

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go south 24 degrees 08 minutes 35 seconds east a distance of 3106.35 feet to the point of beginning 'S'.
From the point of beginning go south 24 degrees 08 minutes 35 seconds east a distance of 81.16 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 111.65 feet; thence south 16 degrees 43 minutes 58 seconds east a distance of 159.58 feet back to the Point of Beginning 'S'.
Said parcel contains 0.097 acres or 4238 sq. feet of ground, more or less.

PARCEL	OWNER	AREA	ASSESSMENT No.
3-1	DAVID M. MOORE	21.274 ACRES	N/A
3-2	PELICAN PARK	0.872 ACRES	N/A
3-3	PELICAN PARK	0.097 ACRES	N/A



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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

Randall W. Brown & Associates, Inc.
Professional Land Surveyors

Date: AUGUST 1, 2019
Survey No. 15363
Project No. .

Randall W. Brown, P.L.S.
Professional Land Surveyor
LA Registration No. 04586

228 W. Causeway Approach, Mandeville, LA 70448
(985) 624-5368 FAX (985) 624-5309
E-MAIL: info@brownsurveys.com

Scale: 1"=200'±
Drawn By: RJB
Revised:

PROPERTY DESCRIPTION
TAKING PARCEL 4-1

Commencing from the corner common to sections 8, 17 and 43, township 8 south, range 12 east and go north 24 degrees 14 minutes 32 seconds west a distance of 802.04 feet to the Point of Beginning 'U'. From the Point of Beginning go south 45 degrees 08 minutes 14 seconds west a distance of 1423.01 feet; thence north 26 degrees 30 minutes 06 seconds west a distance of 210.76 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 2272.89 feet; thence south 34 degrees 18 minutes 59 seconds west a distance of 2355.52 feet; thence north 66 degrees 08 minutes 29 seconds west a distance of 152.53 feet; thence north 34 degrees 19 minutes 01 seconds east a distance of 2397.41 feet; thence north 45 degrees 08 minutes 14 seconds east a distance of 3776.11 feet; thence south 24 degrees 08 minutes 35 seconds east a distance of 374.20 feet back to the Point of Beginning 'U'. Said parcel contains 27.617 acres or 1203003 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 4-2
(PARCEL 5)

Commencing from the corner common to sections 8, 17 and 43, township 8 south, range 12 east and go north 24 degrees 08 minutes 35 seconds west a distance of 802.04 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 1423.01 feet to the Point of Beginning 'V'. From the Point of Beginning go south 45 degrees 08 minutes 14 seconds west a distance of 2187.56 feet; thence south 34 degrees 18 minutes 59 seconds west a distance of 2299.66 feet; thence north 66 degrees 08 minutes 13 seconds west a distance of 203.40 feet; thence north 34 degrees 18 minutes 59 seconds east a distance of 2355.52 feet; thence north 45 degrees 08 minutes 14 seconds east a distance of 2272.89 feet; thence south 26 degrees 30 minutes 03 seconds east a distance of 210.76 feet back to the Point of Beginning 'V'. Said parcel contains 20.929 acres or 911685 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 4-3

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go south 24 degrees 08 minutes 35 seconds east a distance of 3187.51 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 3638.14 feet to the Point of Beginning 'X'. From the Point of Beginning go north 58 degrees 02 minutes 41 seconds west a distance of 38.37 feet; thence north 55 degrees 28 minutes 50 seconds west a distance of 15.02 feet; thence south 31 degrees 56 minutes 59 seconds west a distance of 104.00 feet; thence south 44 degrees 51 minutes 46 seconds east a distance of 28.40 feet; thence north 45 degrees 08 minutes 14 seconds east a distance of 112.77 feet back to the Point of Beginning 'X'. Said parcel contains 0.100 acres or 4364 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
REMAINING PROPERTY OF
232.005 ACRE PARCEL
(PELICAN PARK)

Commencing from the corner common to sections 8, 43 and 44, township 8 south, range 12 east and go south 24 degrees 08 minutes 35 seconds east a distance of 1261.95 feet to the point of beginning 'T'. From the Point of Beginning go south 24 degrees 08 minutes 35 seconds east a distance of 1431.78 feet; thence south 66 degrees 21 minutes 04 seconds west a distance of 427.40 feet; thence south 81 degrees 53 minutes 45 seconds west a distance of 46.19 feet; thence south 21 degrees 52 minutes 21 seconds east a distance of 90.25 feet; thence north 56 degrees 47 minutes 38 seconds east a distance of 39.50 feet; thence north 68 degrees 38 minutes 11 seconds east a distance of 436.86 feet; thence south 24 degrees 08 minutes 35 seconds east a distance of 323.93 feet; thence south 16 degrees 43 minutes 58 seconds west a distance of 159.58 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 3526.49 feet; thence north 57 degrees 19 minutes 25 seconds west a distance of 53.38 feet; thence south 31 degrees 56 minutes 59 seconds west a distance of 104.00 feet; thence south 44 degrees 51 minutes 46 seconds east a distance of 28.40 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 25.19 feet; thence south 34 degrees 18 minutes 59 seconds west a distance of 1578.64 feet; thence north 30 degrees 38 minutes 24 seconds west a distance of 2372.01 feet; thence north 48 degrees 38 minutes 36 seconds east a distance of 722.40 feet; thence north 56 degrees 31 minutes 36 seconds east a distance of 261.10 feet; thence north 50 degrees 38 minutes 37 seconds east a distance of 465.47 feet; thence north 50 degrees 40 minutes 34 seconds east a distance of 637.36 feet; thence north 45 degrees 08 minutes 13 seconds east a distance of 3350.44 feet back to the Point of Beginning 'T'. Said parcel contains 230.936 acres or 10059568 sq. feet of ground, more or less.

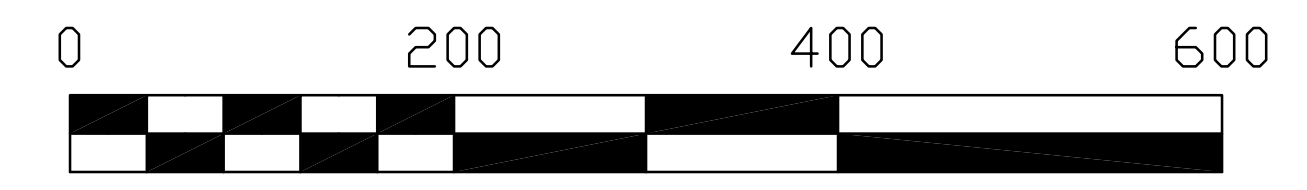
PROPERTY DESCRIPTION
TAKING PARCEL 4-4

Commencing from the corner common to sections 8, 17 and 43, township 8 south, range 12 east and go north 24 degrees 14 minutes 32 seconds west a distance of 802.04 feet; thence south 45 degrees 08 minutes 14 seconds west a distance of 3610.57 feet; thence south 34 degrees 18 minutes 59 seconds west a distance of 2299.66 feet; thence north 66 degrees 08 minutes 29 seconds west a distance of 83.73 feet to the Point of Beginning 'W'. From the Point of Beginning go south 33 degrees 24 minutes 46 seconds west a distance of 259.17 feet; thence south 10 degrees 10 minutes 56 seconds east a distance of 169.31 feet; thence north 66 degrees 08 minutes 29 seconds west a distance of 397.05 feet; thence north 34 degrees 18 minutes 59 seconds east a distance of 402.58 feet; thence south 66 degrees 08 minutes 17 seconds east a distance of 272.20 feet back to the Point of Beginning 'W'. Said parcel contains 2.694 acres or 117340 sq. feet of ground, more or less.

PROPERTY DESCRIPTION
TAKING PARCEL 4-5

Commencing from the corner common to sections 8, 17 and 43, township 8 south, range 12 east and go North 89 degrees 22 minutes 07 seconds West a distance of 1512.08 feet; thence North 24 degrees 08 minutes 35 seconds West a distance of 1176.24 feet; thence South 45 degrees 08 minutes 14 seconds West a distance of 3776.11 feet; thence South 34 degrees 18 minutes 59 seconds West a distance of 1578.64 feet to the Point of Beginning 'X'. From the Point of Beginning go South 30 degrees 38 minutes 24 seconds East a distance of 165.54 feet; thence South 34 degrees 18 minutes 59 seconds West a distance of 721.01 feet; thence North 66 degrees 08 minutes 29 seconds West a distance of 152.53 feet; thence North 34 degrees 19 minutes 04 seconds East a distance of 818.77 feet back to the Point of Beginning 'X'. Said parcel contains 2.651 acres or 115472 sq. feet of ground, more or less.

PARCEL	OWNER	AREA	ASSESSMENT No.
4-1	ST. TAMMANY PARISH	27.617 ACRES	1128132898
4-2	ST. TAMMANY PARISH	20.929 ACRES	1120192406
4-3	PELICAN PARK	0.100 ACRES	1120219606
4-4	STATE PARK COMMISSION	2.694 ACRES	N/A
4-5	ST. TAMMANY PARISH	2.651 ACRES	1128132898



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SURVEYED IN ACCORDANCE WITH THE LOUISIANA "APPLICABLE STANDARDS FOR PROPERTY BOUNDARY SURVEYS" FOR A CLASS C SURVEY.

Randall W. Brown

Randall W. Brown & Associates, Inc.
Professional Land Surveyors

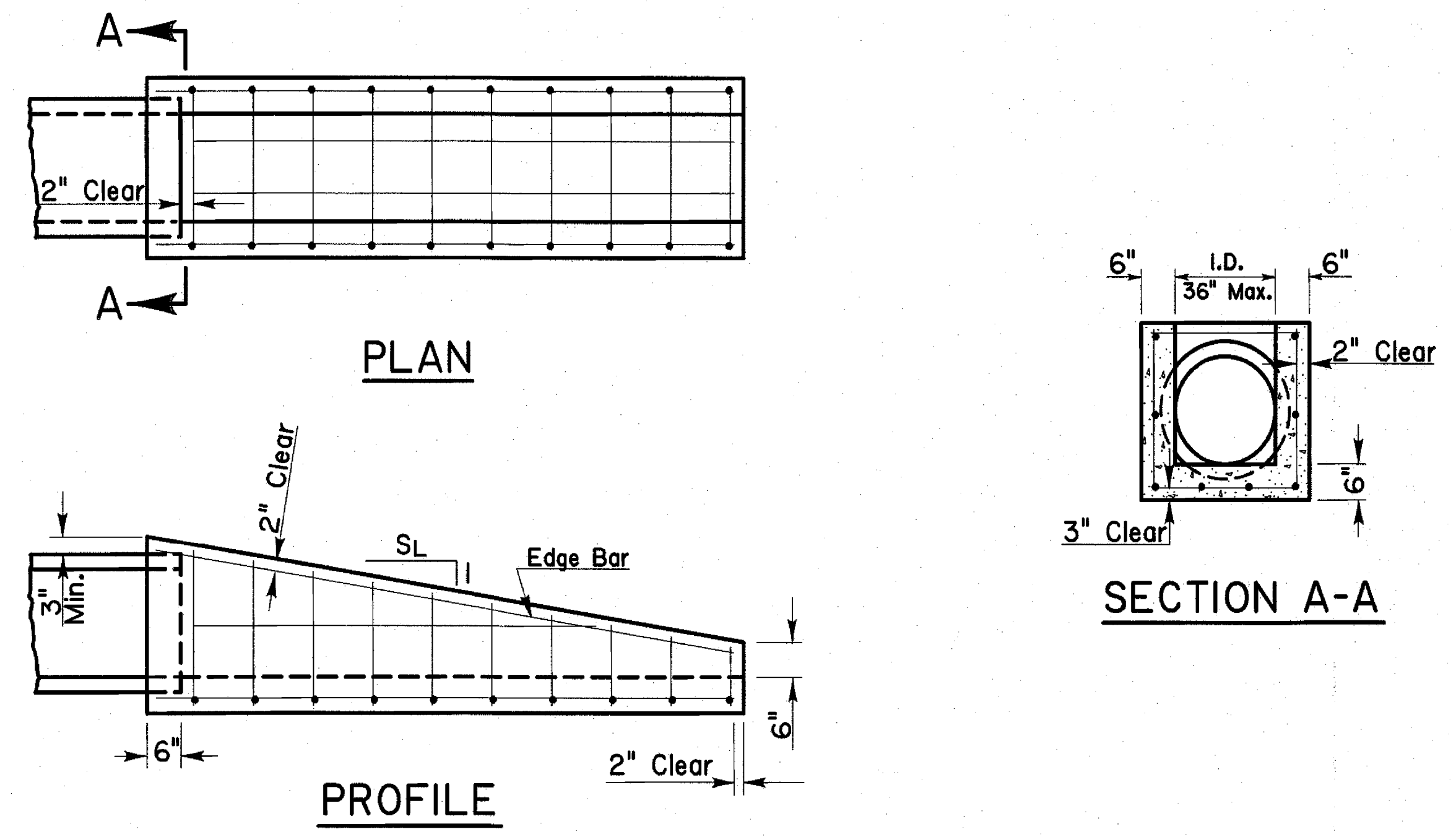
Date: AUGUST 1, 2019
Survey No. 15363
Project No. .

Randall W. Brown, P.L.S.
Professional Land Surveyor
LA Registration No. 04586

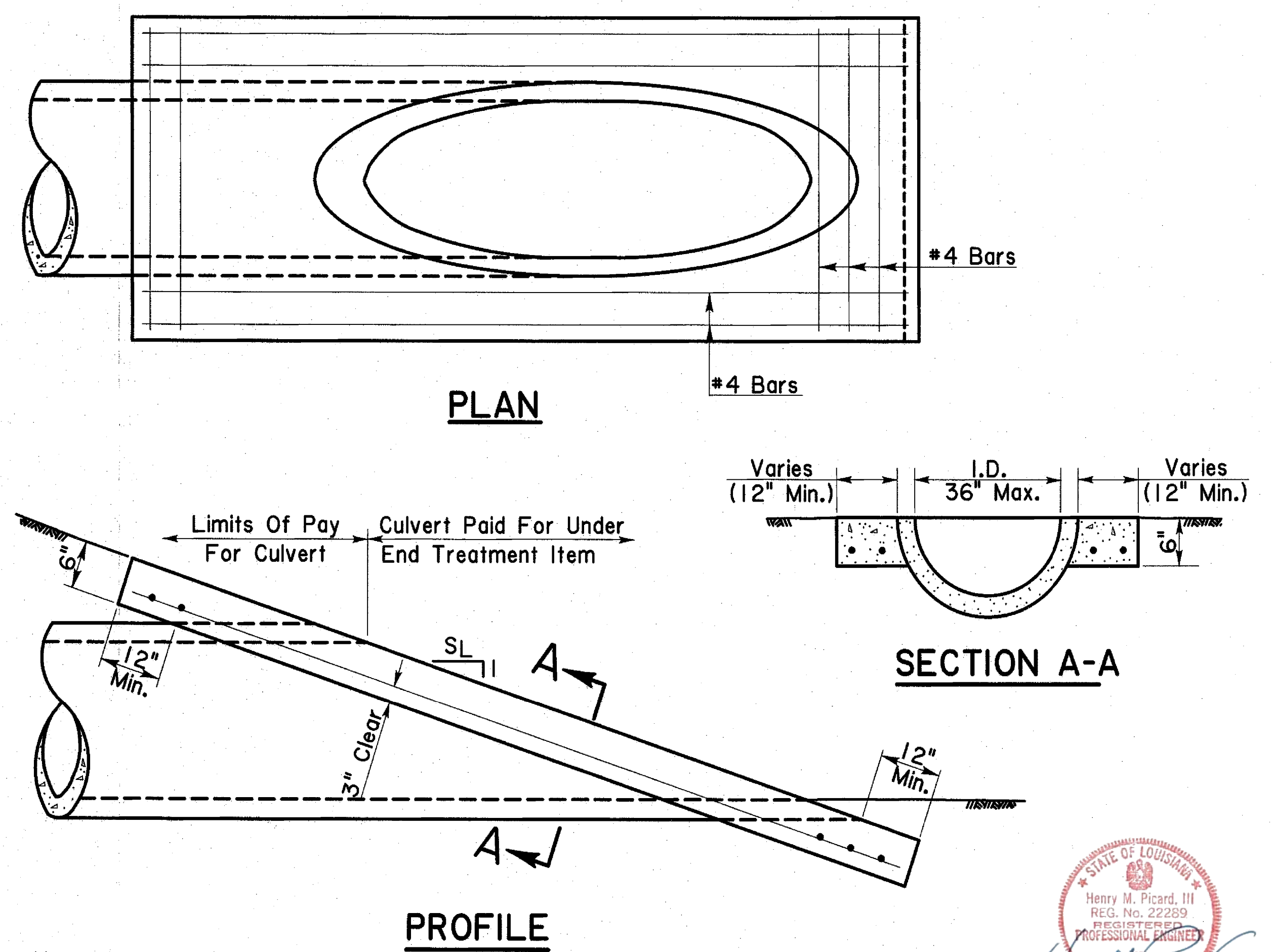
228 W. Causeway Approach, Mandeville, LA 70448
(985) 624-5368 FAX (985) 624-5309
E-MAIL: info@brownsurveys.com

Scale: 1"=200'±
Drawn By: RJB
Revised:

CAST-IN-PLACE ALTERNATE

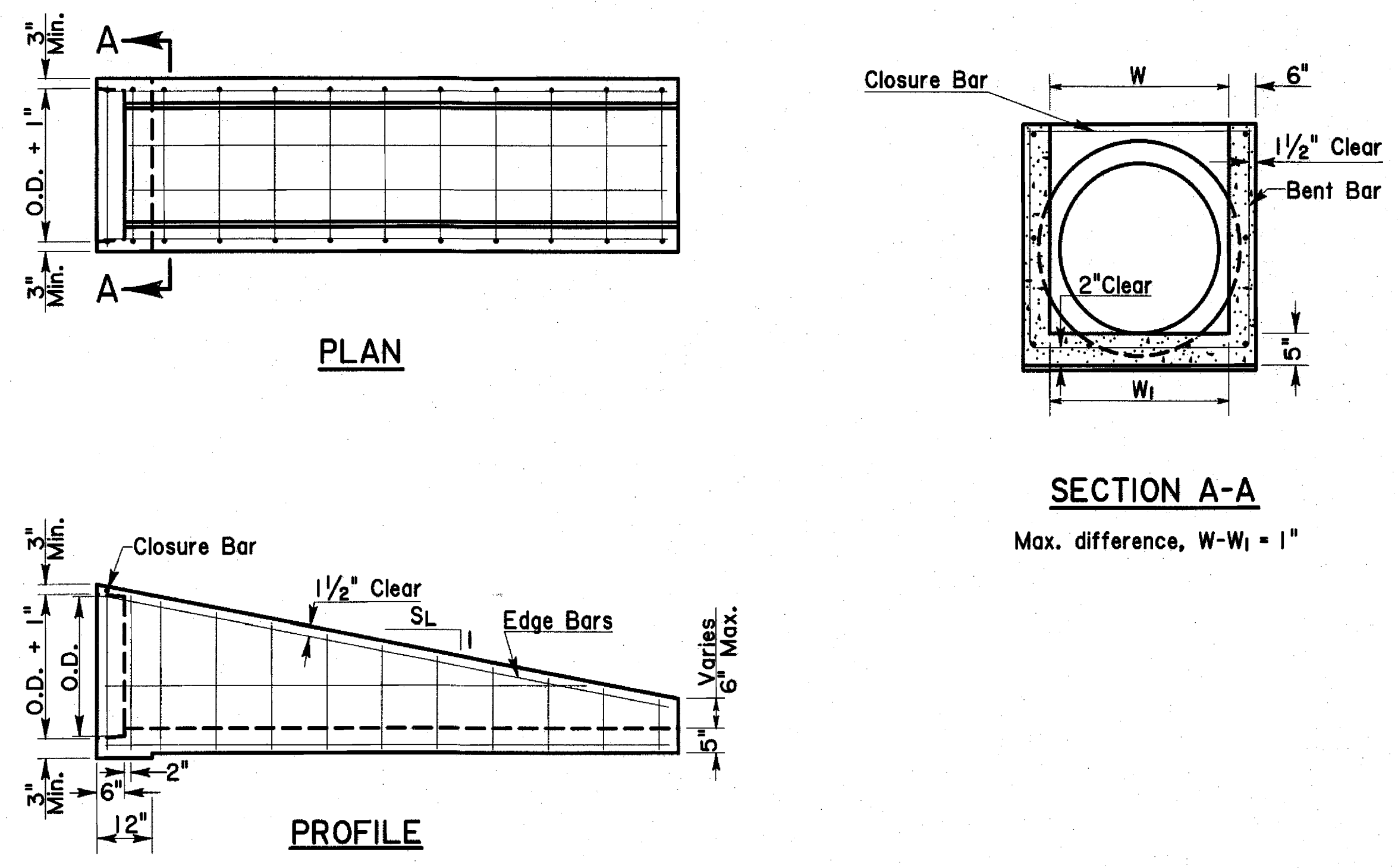


MITERED PIPE ALTERNATE



PRECAST ALTERNATE

- Notes:
1. RCP bell ends which exceed the normal pipe outside diameter (O.D.) shall be removed.
 2. Pipe connections shall be sealed with flexible joint sealant.
 3. Exposed corners may be chamfered 3/4".



- Notes:
1. Mitered Pipe Alternate shall be fabricated from pipe. Cut edge of pipe to be hand finished or cast into concrete slope.

STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

- General Notes: (Cast-In-Place, Precast & Mitered Pipe Alternate)**
- 1) While a RCP culvert is detailed, this Safety End shall also be used with RCPA, CMP, CMPA, and RCB culverts. Multiple culverts require multiple Safety Ends.
 - 2) Slope of Safety End walls (S₁:1) shall match the required sideslope. If no sideslope is given, a slope of 4:1 shall be required.
 - 3) The Safety End shall be cast-in-place or precast concrete units and shall be in accordance with Section 702 of the LA DOTD Standard Specifications.
 - 4) Concrete to be Class A1 and reinforcing steel to be #4 Grade 60.
 - 5) Reinforcing steel at 9" maximum centers unless detailed otherwise.

STATE OF LOUISIANA
 ALDEN M. ALLEN
 REG. No. 20252
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 6-27-2018

DATE	DESCRIPTION	BY
6-12-18	Revised Precast To Uniform 6" Wall Thickness	AMA
1-16-98	Added Special Detail Name SETCRD1	JCM
10-27-97	Added Limits Of Pay For Culvert	JCM
9-27-93	General Revisions	WMR
7-10-92	Revised General Notes & Notes	PAA
6-22-92	Removed Sack Alternate, added Precast & Mitered Pipe Alternate, revised Cast-In-Place	PAA
8-5-91	General Revisions	PAA

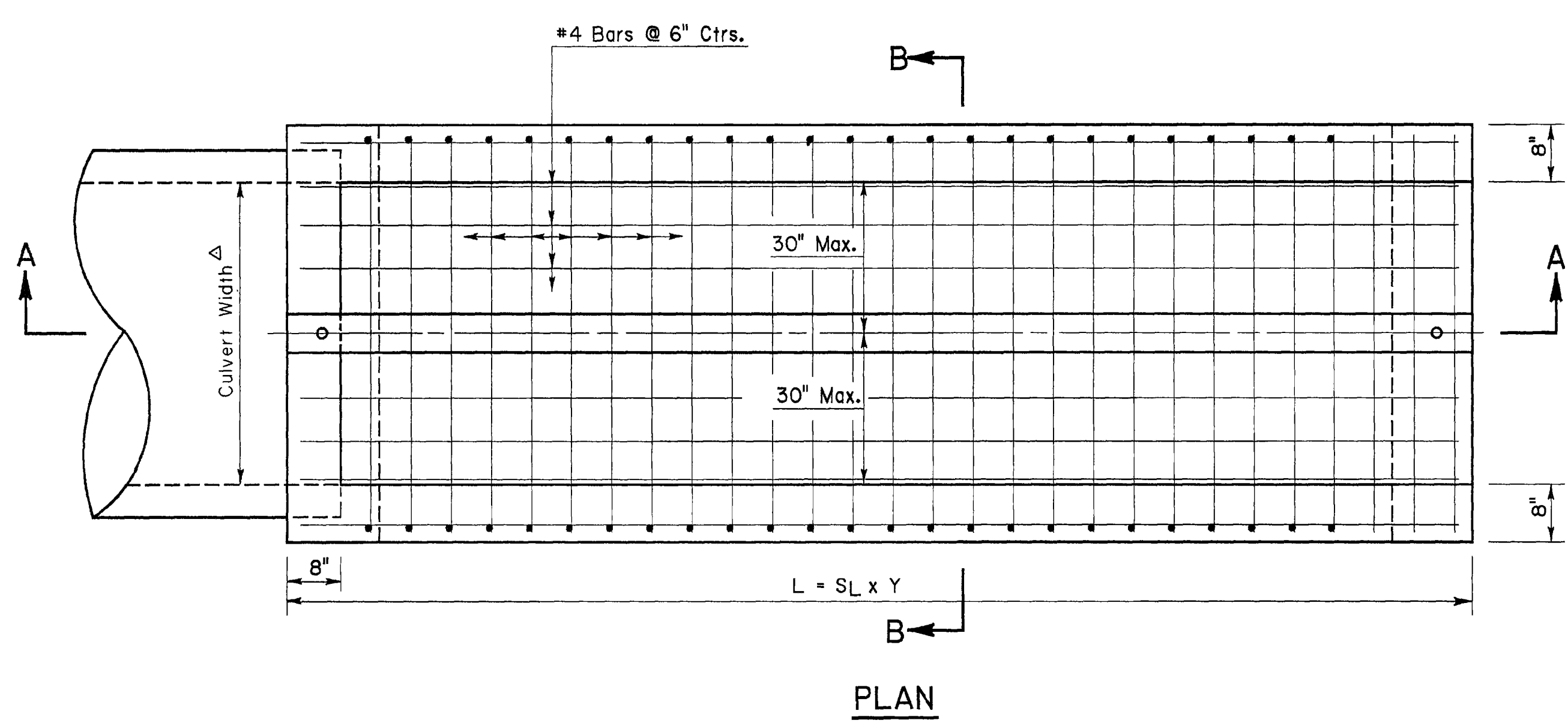
SPECIAL DETAIL NO. **SETCRD1** SHEET **1** OF **1**

CROSS DRAIN SAFETY END - TYPE 1
 Maximum Pipe Sizes: 36" RCP
 36" CMP
 30" Eq. RCPA
 30" Eq. CMPA

DESIGNED PAA CHECKED KAJ DIR. spdetail/softyend
 CHECKED PAA FILE setcrd1.dgn

STATE OF LOUISIANA
 DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
 HYDRAULICS SECTION

FEDERAL PROJECT	STATE PROJECT	PARISH	SHEET NO.
		ST. TAMMANY	167



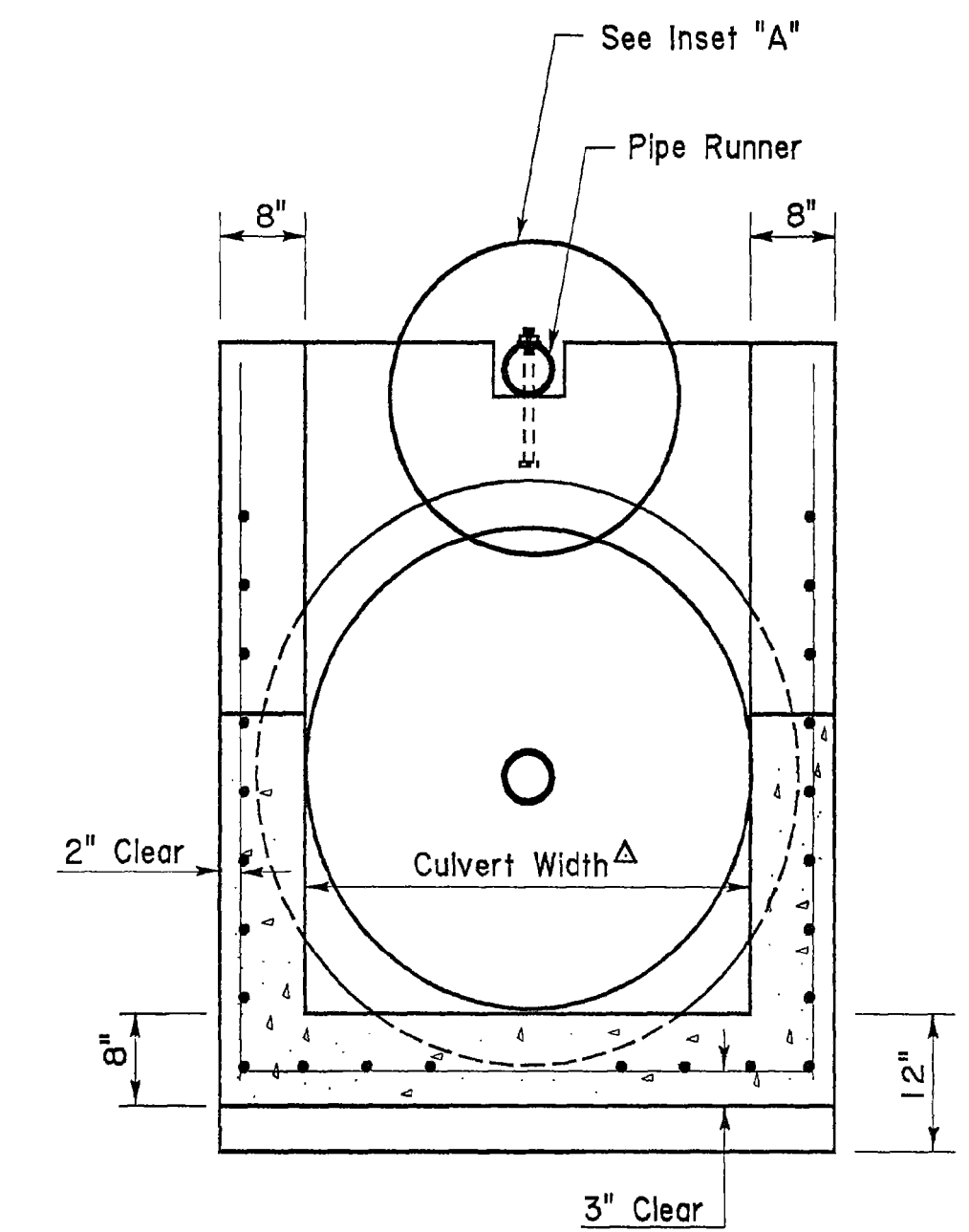
PLAN

- General Notes:**
- 1) While a RCP culvert is detailed, this Safety End shall also be used with RCPA, CMP, CMPA, and RCB culverts. Safety Ends for skewed culverts shall also be skewed with walls parallel to the centerline of the culvert.
 - 2) The slope of the Safety End walls (SL:1) shall match the embankment foreslope required on the typical section. If no foreslope is given, a slope of 4:1 shall be required. Skewed Safety Ends shall require flatter wall slopes to match embankment foreslopes.
 - 3) Pipe Runners shall be galvanized steel pipe conforming to ASTM A53, Type E or S, Grade B, 35ksi; or ASTM A501, 36ksi. Required Pipe Runner diameters and strengths for various maximum spans are:

Nominal Diameter	Strength/Schedule	Maximum* Span	Outside Diameter	Wall Thickness	Weight Per Foot
3"	XS/80	14'-5"	3.5"	0.300"	10.25 lbs
3 1/2"	Std/40	15'-6"	4.0"	0.226"	9.11 lbs
3 1/2"	XS/80	20'-4"	3.548"	0.318"	12.50 lbs
4"	Std/40	20'-10"	4.5"	0.237"	10.78 lbs
4"	XS/80	27'-8"	4.5"	0.337"	14.98 lbs
5"	Std/40	35'-4"	5.563"	0.258"	14.62 lbs
5"	XS/80	48'-2"	5.563"	0.375"	20.78 lbs
6"	Std/40	55'-1"	6.625"	0.280"	18.97 lbs
6"	XS/80	79'-0"	6.625"	0.432"	28.57 lbs

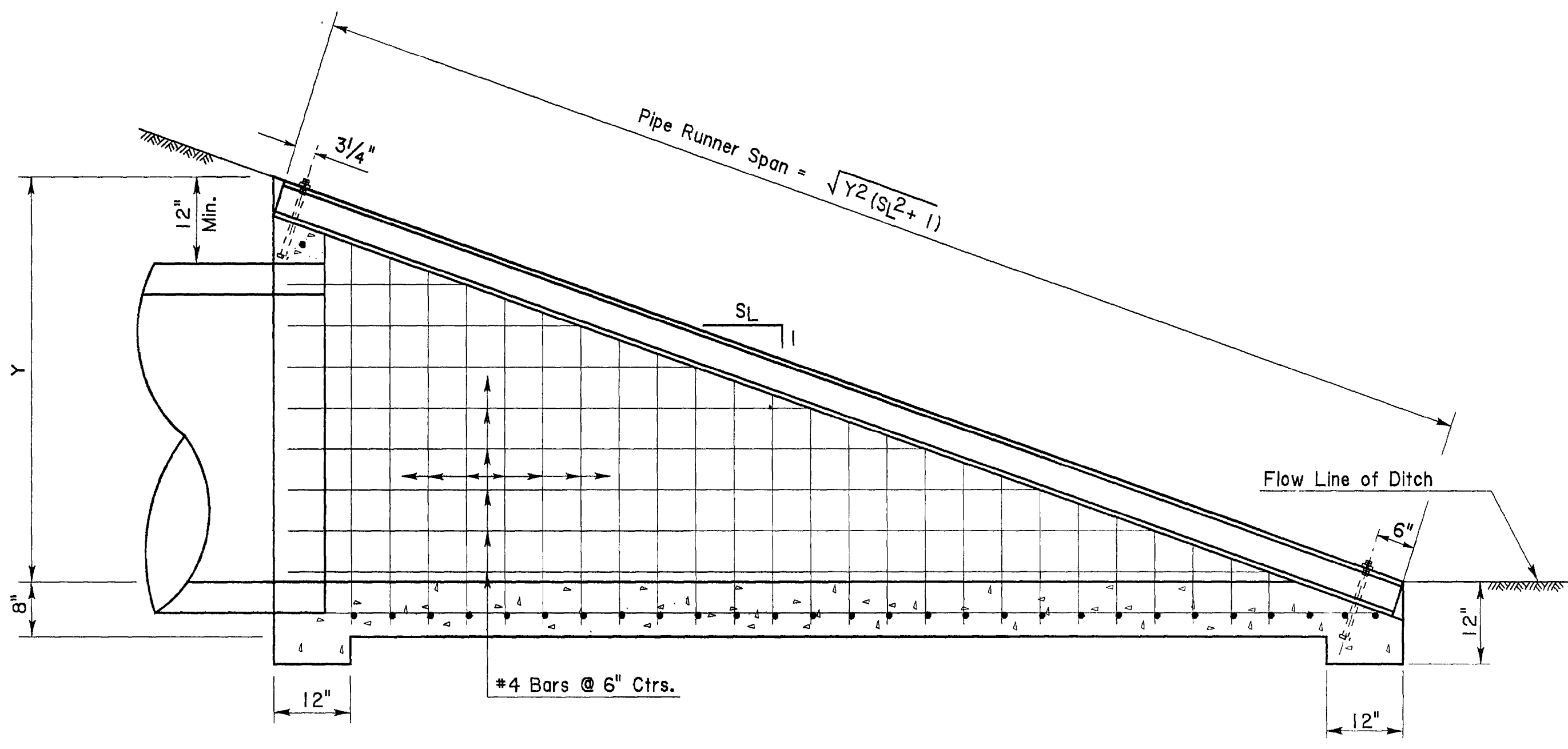
*Pipe Runners are designed for a traversing load of 1,800 pounds at yield.

- 4) For culvert widths of 60" and less a single pipe runner is required. For larger culvert widths, multiple pipe runners are required. The maximum pipe runner spacing is 30".

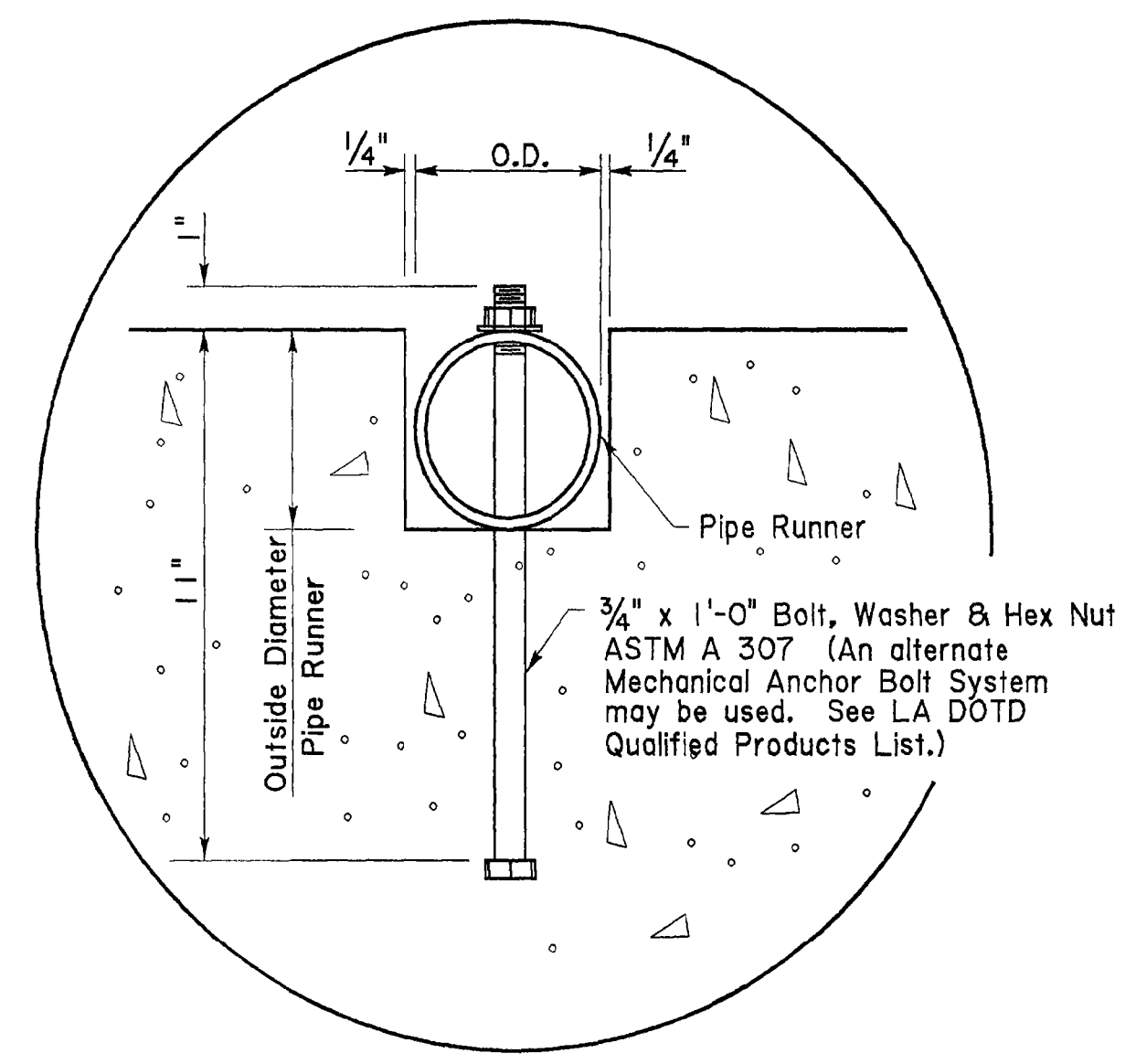


SECTION B-B

Δ Culvert width shown is for a single culvert. For multiple culverts, culvert width will be adjusted to include all culvert openings.

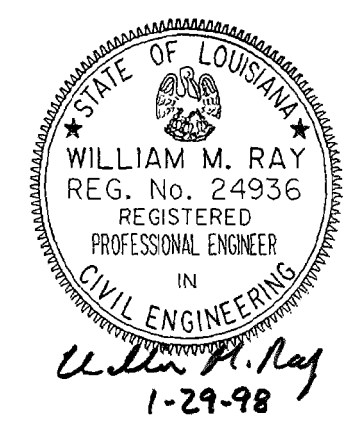


SECTION A-A



INSET "A"

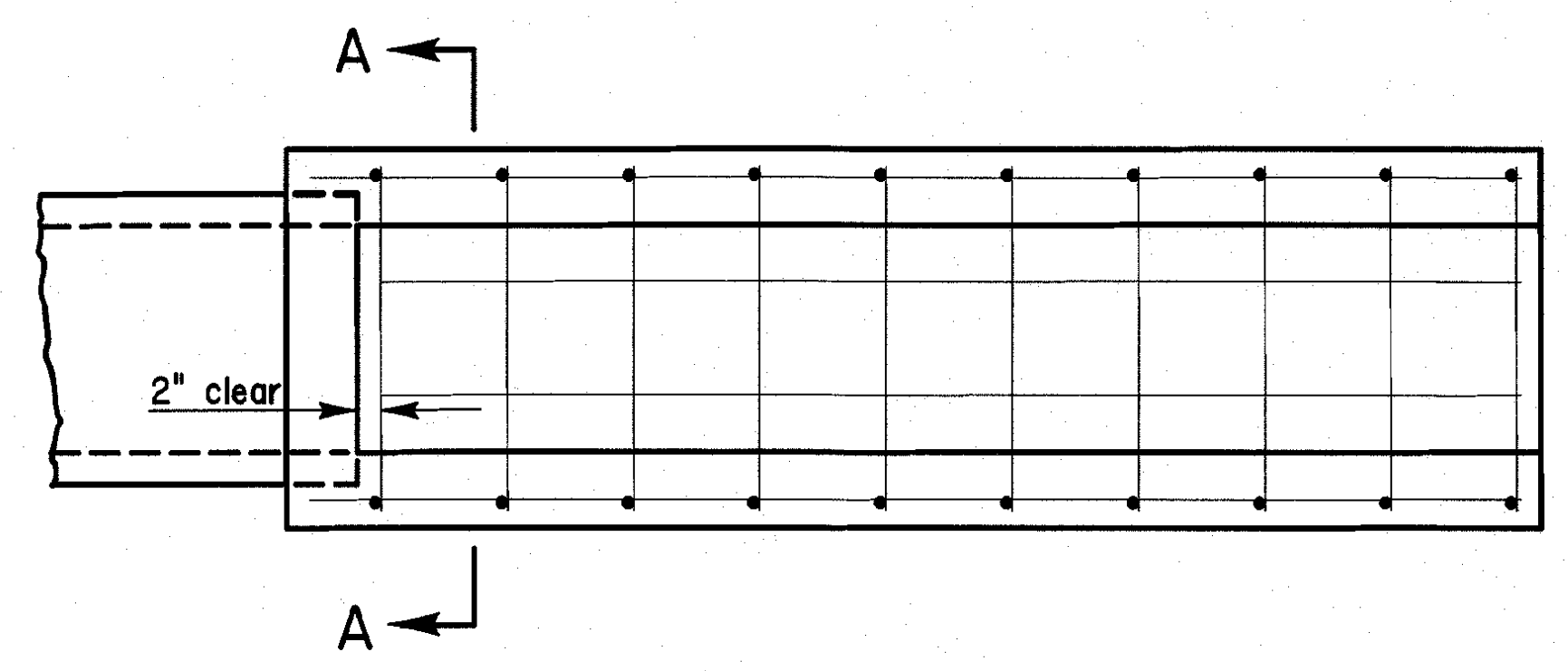
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



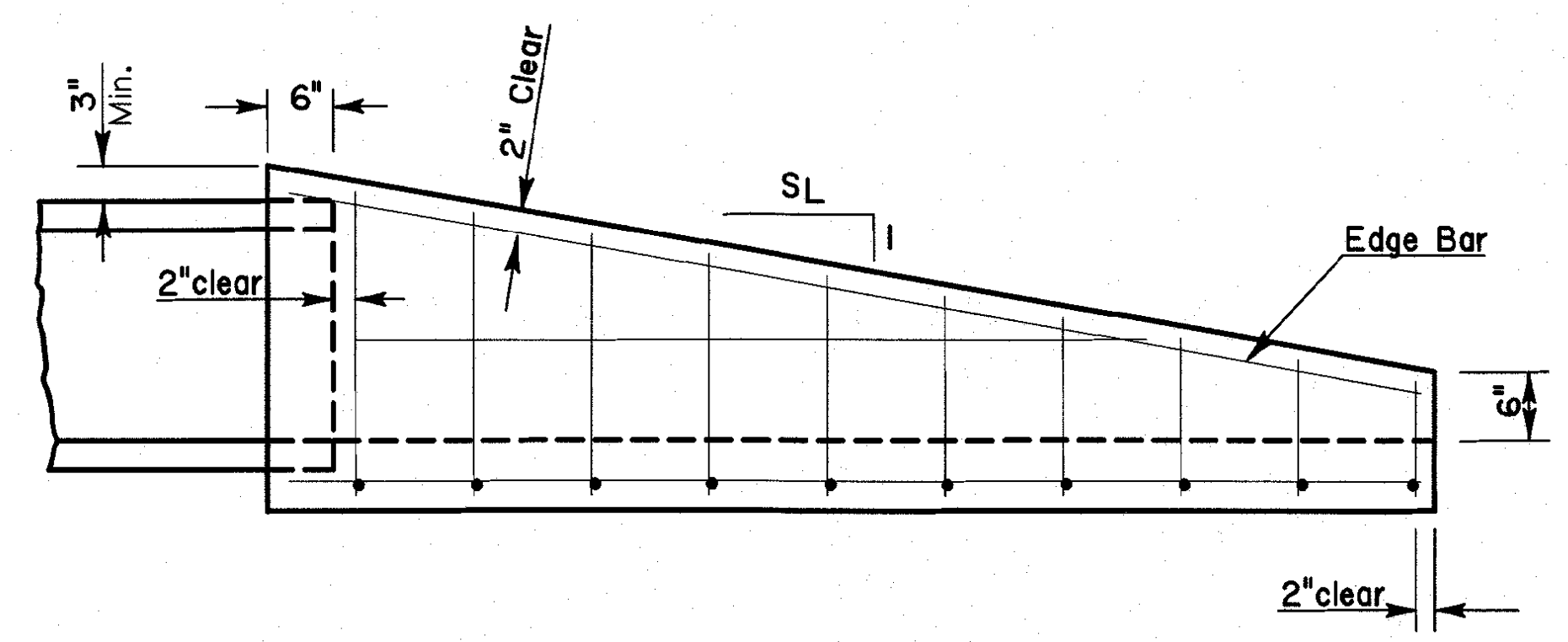
SPECIAL DETAIL NO. SETCRD2		SHEET
CROSS DRAIN SAFETY END		1 OF 1
TYPE 2		
37" MINIMUM WIDTH		
DATED August 5, 1991		
STATE OF LOUISIANA		
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT		
DESIGNED PAA	DETAILED KAJ	DR. spdetail/safyend
CHECKED JCM	CHECKED PAA	FILE safcrd2.dgn
HYDRAULICS SECTION		

DATE	DESCRIPTION	BY
1-16-98	Added Special Detail Name SETCRD2	JCM
6-25-92	General Revisions	PAA
3-31-92	Corrected formula for pipe runner span	PAA
REVISIONS		

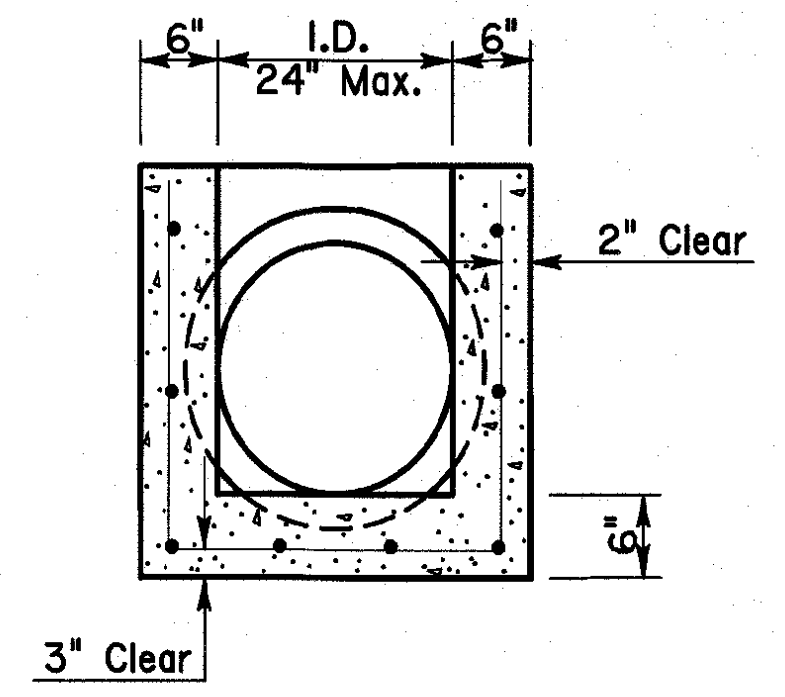
CAST-IN-PLACE ALTERNATE



PLAN



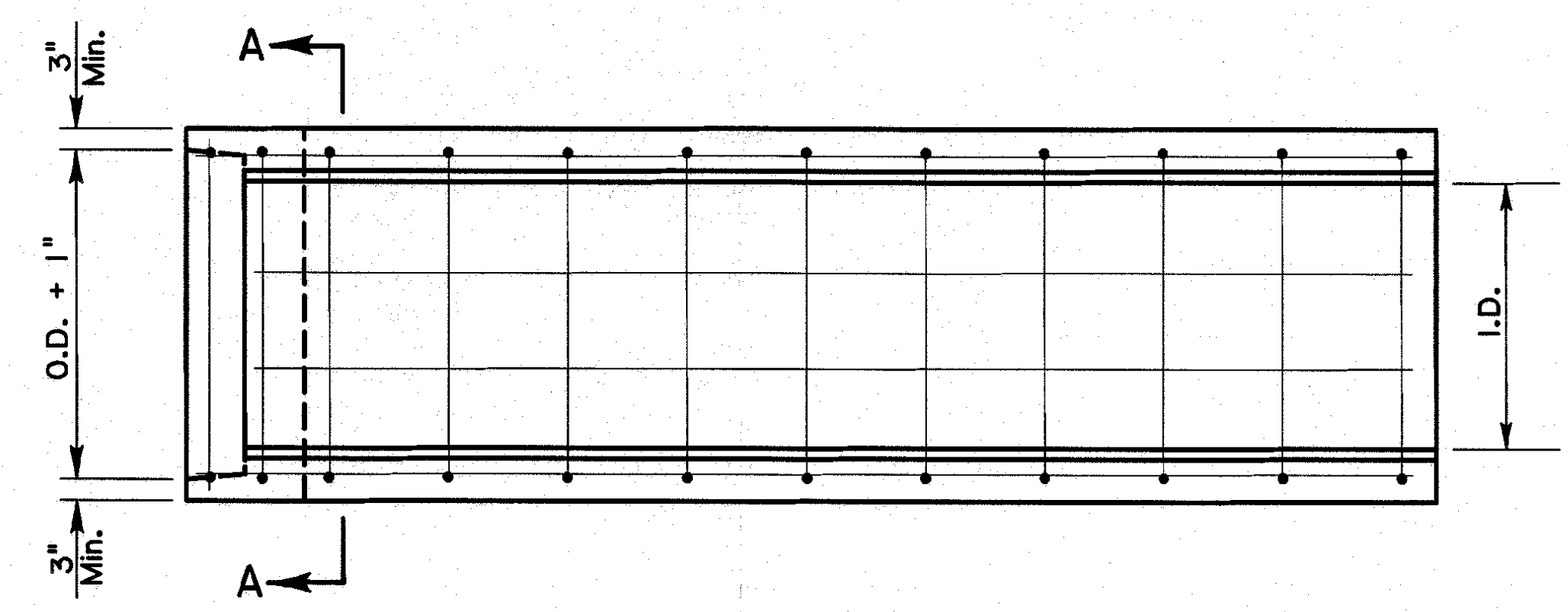
PROFILE



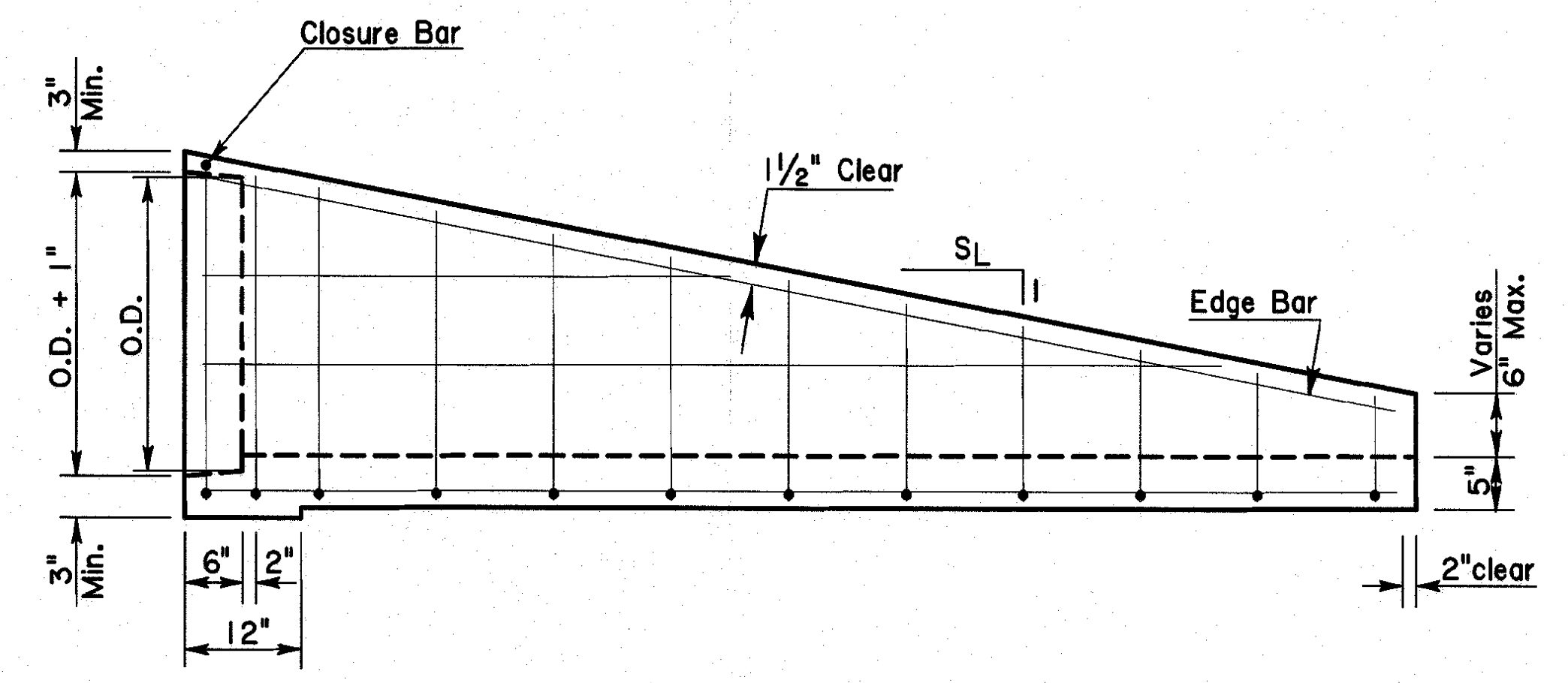
SECTION A-A

PRECAST ALTERNATE

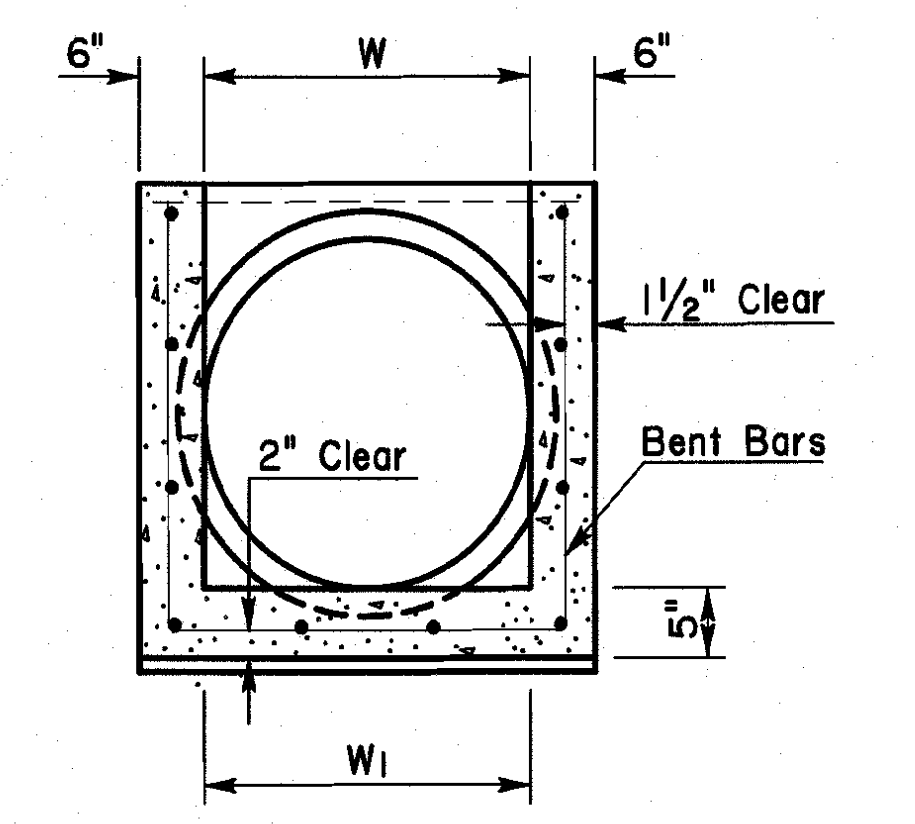
- Notes: 1. RCP bell ends which exceed the normal pipe outside diameter (O.D.) shall be removed.
 2. Pipe connections shall be sealed with flexible joint sealant.
 3. Exposed corners may be chamfered 3/4".



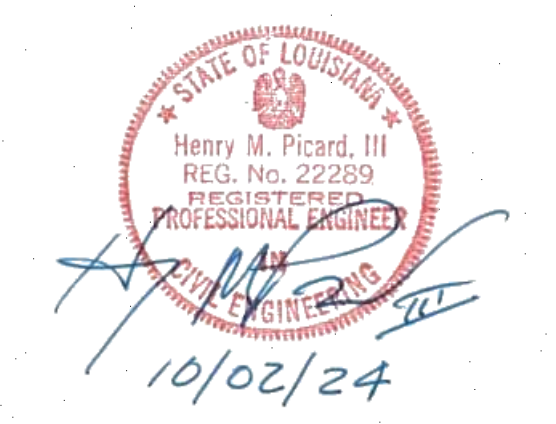
PLAN



PROFILE



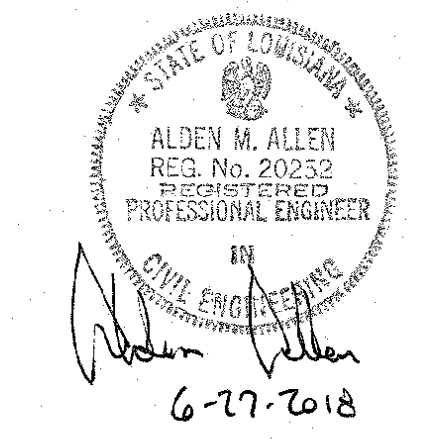
SECTION A-A
Max. difference, $W - W_1 = 1"$



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

General Notes: (Cast-in-Place & Precast Alternate)

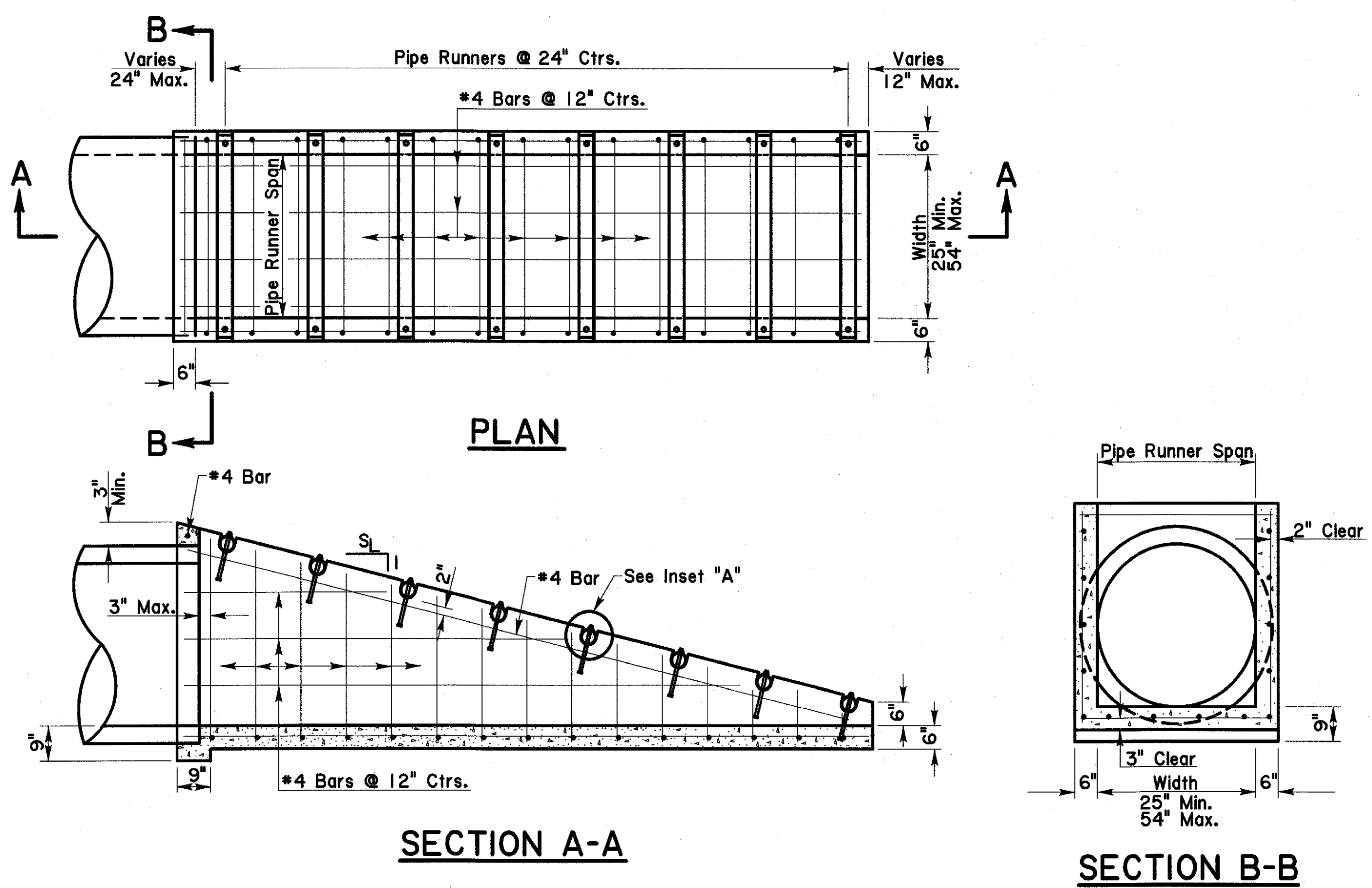
- While a RCP culvert is detailed, this Safety End shall also be used with RCPA, CMP, CMPA, and RCB culverts. Multiple culverts require multiple Safety Ends.
- Slope of Safety End walls (SL:1) shall match the required sideslope. If no sideslope is given, a slope of 6:1 shall be required.
- The Safety End shall be cast-in-place or precast concrete units and shall be in accordance with Section 702 of the LA DOTD Standard Specifications.
- Concrete to be Class A1 and reinforcing steel to be #4 Grade 60.
- Reinforcing steel at 9" maximum centers



DATE	DESCRIPTION	BY
6-12-18	Revise Precast To Uniform 6" Wall Thickness	AMA
1-16-98	Added Special Detail Name SETSD1	JCM
9-27-93	Revised General Notes	WMR
7-10-92	Revised General Notes	PAA
6-22-92	Removed Sack Alternate, added Precast Alternate, revised Cast-in-Place Alternate	PAA
8-5-91	General Revisions	PAA

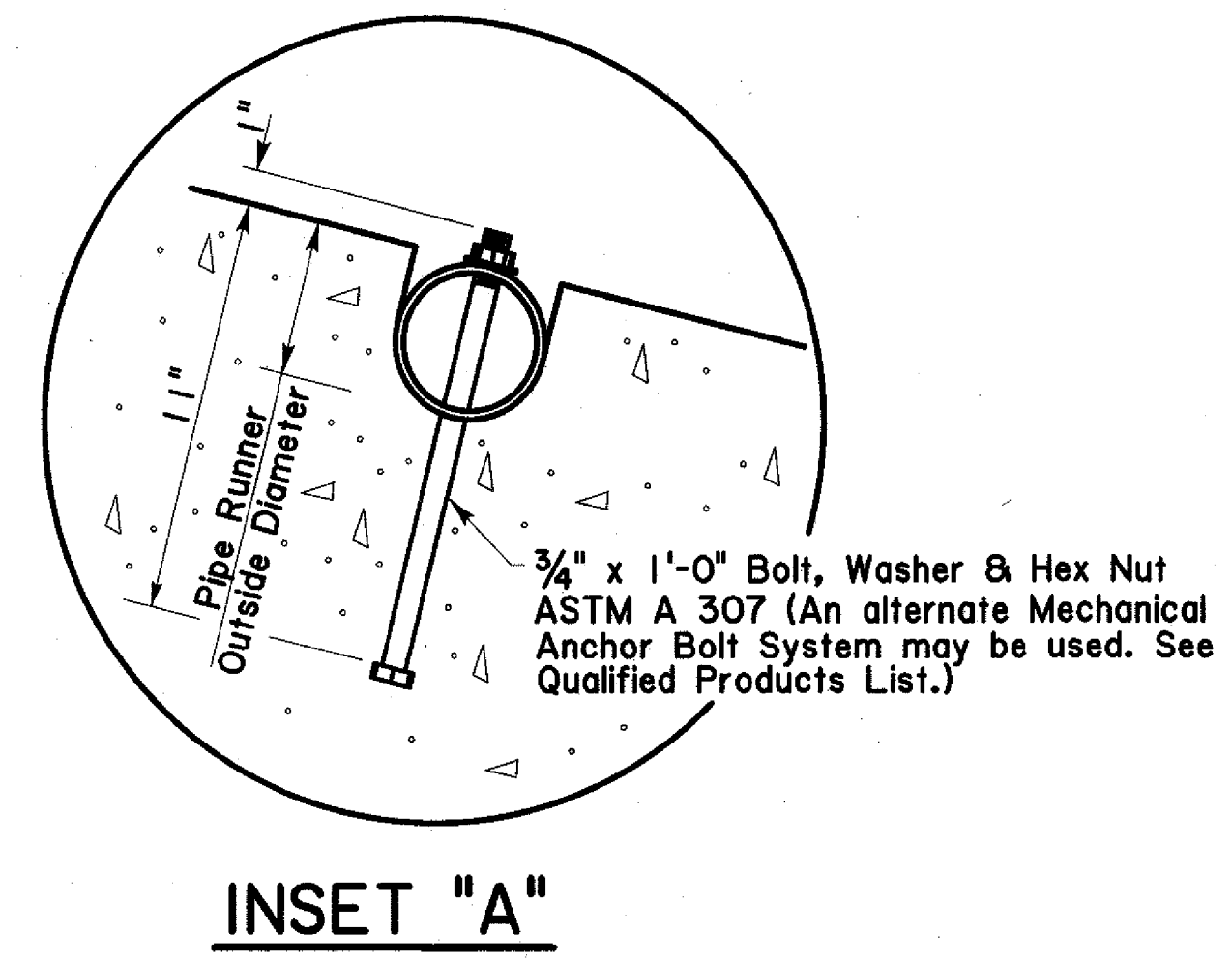
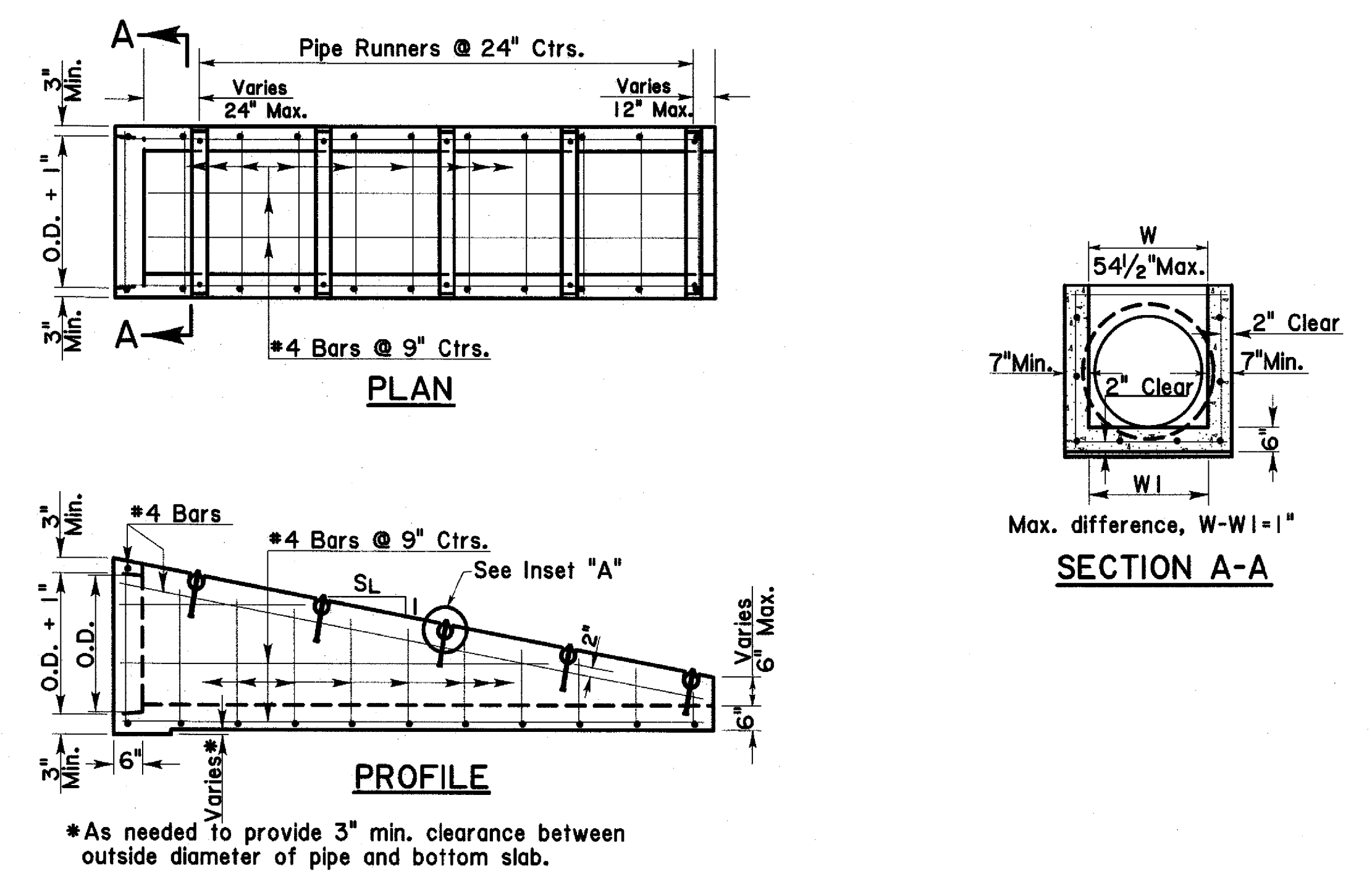
SPECIAL DETAIL NO. SETSD1	SHEET 1 OF 1
SIDE DRAIN SAFETY END - TYPE I	
Maximum Pipe Sizes: 24" RCP 24" CMP 18" Eq. RCPA 18" Eq. CMPA	
DATED APRIL 22, 1991	
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	
DESIGNED PAA	DIR. spdetail/softyend
DETAILED KAJ	FILE setsd1.dgn
CHECKED PAA	
HYDRAULICS SECTION	

CAST-IN-PLACE ALTERNATE



PRECAST ALTERNATE

- Notes:
1. Concrete to be class A1 & reinforcing steel to be Grade 60.
 2. RCP bell ends which exceed the normal pipe outside diameter (O.D.) shall be removed.
 3. Pipe connections shall be sealed with flexible gasket material.
 4. Exposed corners may be chamfered 3/4".



General Notes: (Cast-in-Place & Precast)

- 1) While a RCP culvert is detailed, this Safety End shall also be used with RCPA, CMP, CMA, and RCB culverts. Multiple culverts will require multiple ends.
 - 2) Slope of Safety End walls (S_L:1) shall match the required sideslope. If no sideslope is given, a slope of 6:1 shall be required.
 - 3) Pipe Runners shall be galvanized steel pipe conforming to ASTM A53, Type E or S, Grade B, 35ksi; or ASTM A501, 36ksi. Required Pipe Runner diameters and strengths for various maximum spans are:
- | Nominal Diameter | Strength/Schedule | Maximum* Span | Outside Diameter | Wall Thickness | Weight Per Foot |
|------------------|-------------------|---------------|------------------|----------------|-----------------|
| 3" | Std/40 | 11'-2" | 3.5" | 0.216" | 7.58 lbs |
- *Pipe Runners are designed for a traversing load of 1800 pounds at yield.
- 4) Side Drain Safety Ends may be provided as cast-in-place or precast, and shall be in accordance with Section 702 of the LA DOTD Standard Specifications.

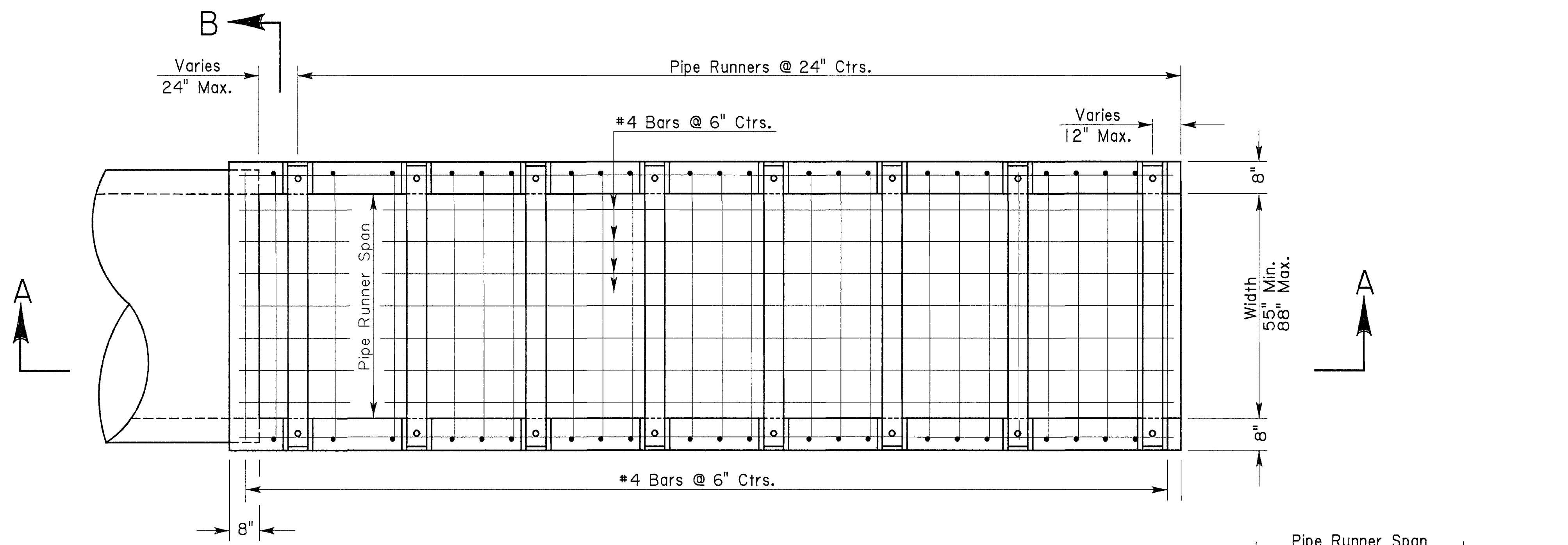
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



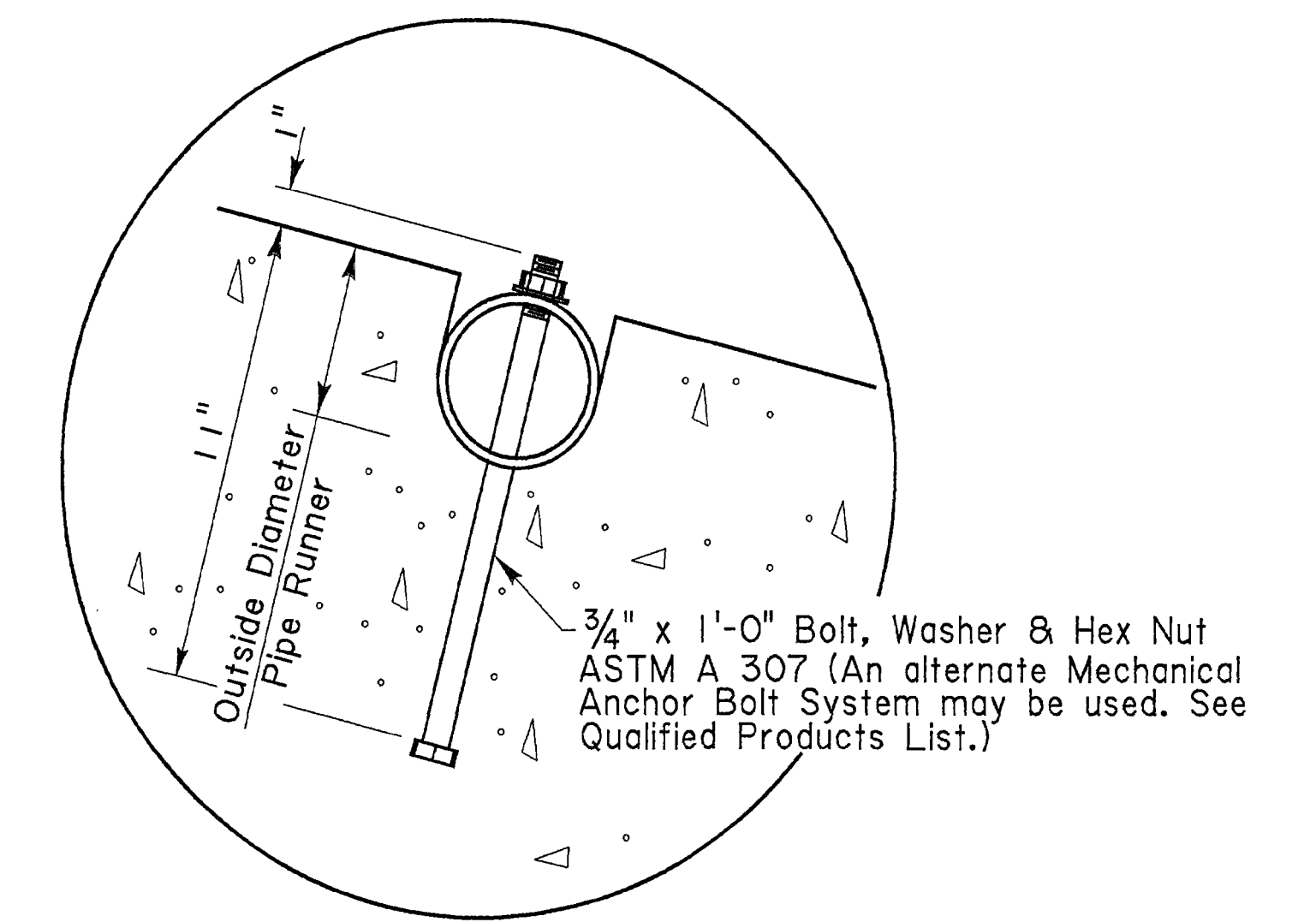
SPECIAL DETAIL NO.	SETSD2	SHEET	1 OF 1
SIDE DRAIN SAFETY END TYPE 2			
Pipe Sizes: 30" - 48" RCP 30" - 54" CMP 24" Eq. - 36" Eq. RCPA 24" Eq. - 42" Eq. CMA			
DATED April 22, 1991			
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT			
DESIGNED PAA	DETAILED KAJ	DIR. spdetail/safyend	
CHECKED JCM	CHECKED PAA	FILE setsd2.dgn	
HYDRAULICS SECTION			

DATE	DESCRIPTION	BY
7-29-19	Changed 4000 psi to class A1	MH
1-16-98	Added Special Detail Name SETSD2	JCM
1-24-94	General Revisions	MR
6-24-92	Added Precast Alternate & revised Cast-in-Place	PAA
8-5-91	General Revisions	PAA

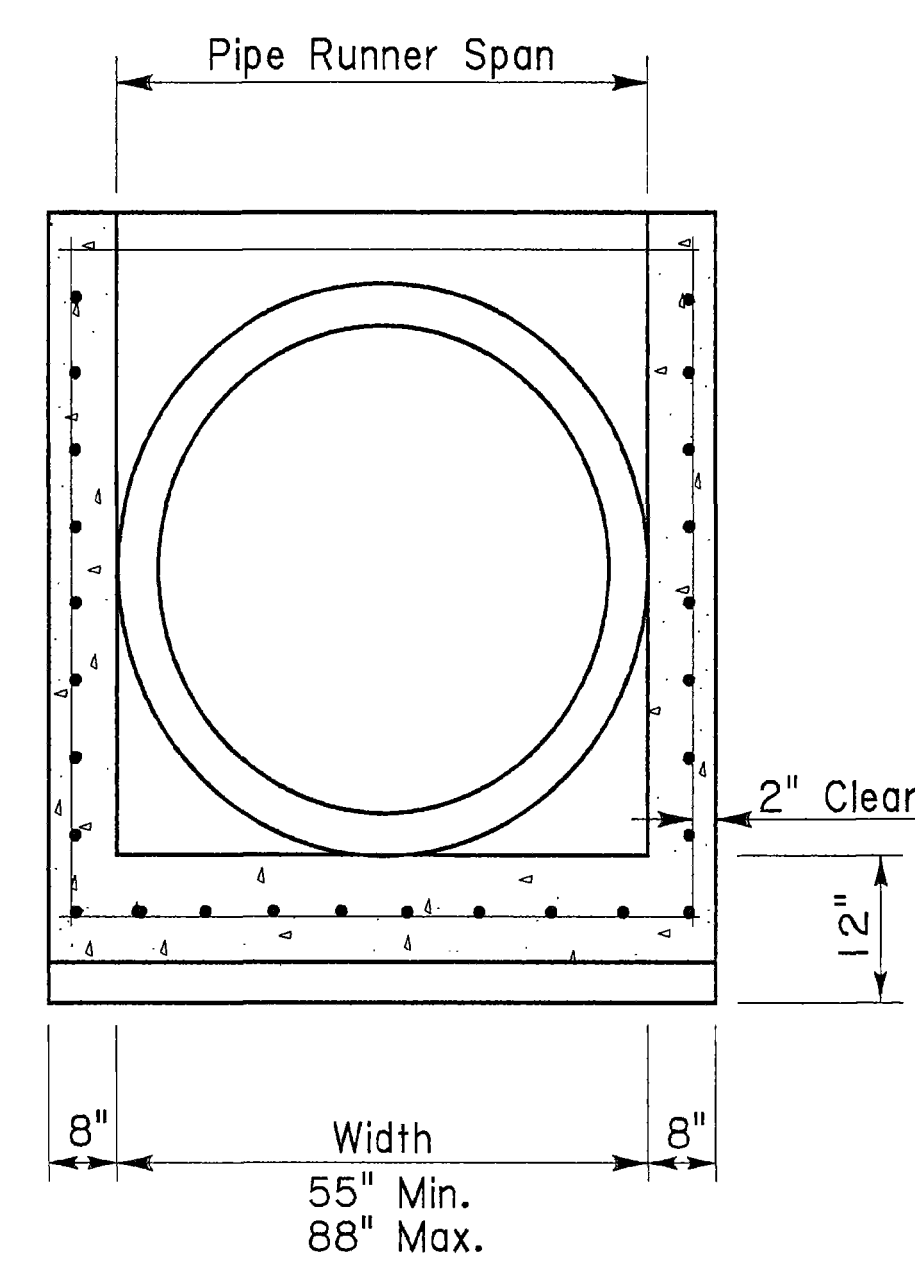
FEDERAL PROJECT	STATE PROJECT	PARISH	SHEET NO.
		ST. TAMMANY	170



PLAN



INSET "A"



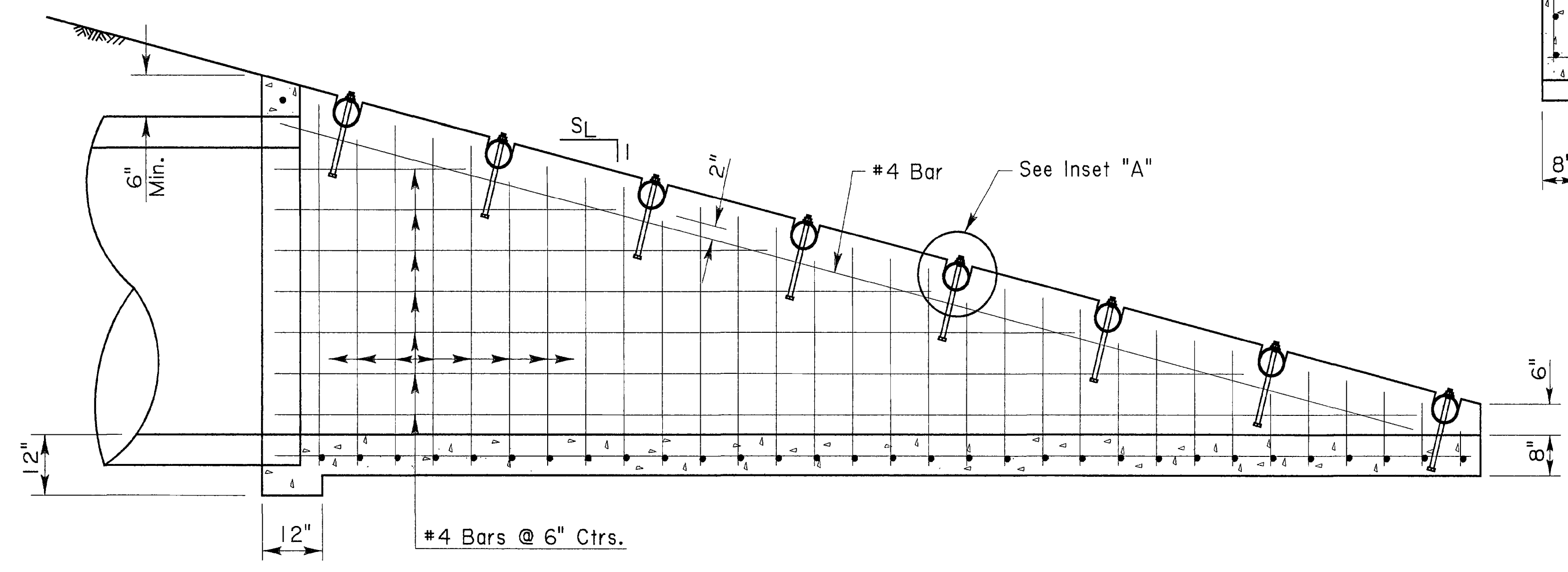
SECTION B-B

General Notes:

- 1) While a RCP culvert is detailed, this Safety End shall also be used with RCPA, CMP, CMPA, and RCB culverts. Multiple culverts will require multiple Safety Ends.
- 2) Slope of Safety End walls (S_L:1) shall match the required sideslope. If no sideslope is given, a slope of 6:1 shall be required.
- 3) Pipe Runners shall be galvanized steel pipe conforming to ASTM A53, Type E or S, Grade B, 35ksi; or ASTM A501, 36ksi. Required Pipe Runner diameters and strengths for various maximum spans are:

Nominal Diameter	Strength/Schedule	Maximum* Span	Outside Diameter	Wall Thickness	Weight Per Foot
3"	Std/40	11'-2"	3.5"	0.216"	7.58 lbs

*Pipe Runners are designed for a traversing load of 1800 pounds at yield.



SECTION A-A

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

STATE OF LOUISIANA
WILLIAM M. RAY
REG. No. 24936
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
1-29-98

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

DATE	DESCRIPTION	BY
1-16-98	Added Special Detail Name SETSD3	JCM
7-10-92	Revised General Notes	PAA
6-25-92	General Revisions	PAA
8-5-91	General Revisions	PAA

SPECIAL DETAIL NO. SETSD3	SHEET 1 OF 1
SIDE DRAIN SAFETY END TYPE 3 55" MIN. TO 88" MAX. WIDTH	
DATED May 1, 1991	
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	
DESIGNED PAA	DETAILED KAJ
CHECKED PAA	DIR. spdetail/saftyend
HYDRAULICS SECTION	




BRIDGE GENERAL NOTES

1. **DESIGN SPECIFICATIONS:** AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION. DESIGN LOAD = LADV-11. DESIGNED FOR FUTURE WEARING SURFACE OF 25 PSF.
2. **CONSTRUCTION SPECIFICATIONS:** CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
3. **DESIGN SPEED:** THE DESIGN SPEED IS 45 MPH.
4. **ELEVATIONS:** ALL ELEVATIONS ARE BASED ON N.A.V.D.88.
5. **DIMENSIONS:** ALL DIMENSIONS ARE GIVEN AT NORMAL TEMPERATURE (68° F).
6. **BASIS OF PAYMENT:** CONCRETE SHALL BE PAID FOR UNDER "CLASS A1 CONCRETE". REINFORCING STEEL SHALL BE PAID UNDER "DEFORMED REINFORCING STEEL". BRIDGE RAILING SHALL BE PAID UNDER "CONCRETE BRIDGE RAILING (TYPE). 1/2" BEARING PADS SHALL BE PAID UNDER "ELASTOMERIC BEARING PADS (NON-REINFORCED)". JOINT SEALANT, BACKER MATERIAL, AND PREFORMED JOINT FILLER SHALL BE PAID UNDER "JOINT SEAL (POURED)". FILLER FOR WINGWALLS SHALL BE PAID UNDER "CLASS A1 CONCRETE (BENT CAP)". CONCRETE SURFACE FINISH ON BRIDGE RAILING TO BE PAID UNDER "CONCRETE FINISH (CLASS)".
7. **BRIDGE RAILING:** SEE BRIDGE RAILING SPECIAL DETAILS FOR CONCRETE BARRIER RAILING DETAILS.
8. **CONSTRUCTION JOINT:** THE VERTICAL SURFACES OF THE CONSTRUCTION JOINTS BETWEEN ADJACENT POURS SHALL BE COATED PRIOR TO SUCCEEDING POURS WITH A TYPE V EPOXY RESIN SYSTEM IN ACCORDANCE WITH SUBSECTION 805.05.8.2 OF THE STANDARD SPECIFICATIONS. EPOXY IS TO BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
9. **GUARD RAIL:** SEE STANDARD PLAN GR-MASH-ON, GR-MASH-OFF, AND ROADWAY PLANS FOR ADDITIONAL GUARD RAIL INFORMATION AND EMBANKMENT WIDENING DETAILS.
10. **MATERIALS:** EXCEPT AS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY FOR THE COMPLETION OF THE CONTRACT. ALL MATERIALS OF EVERY DESCRIPTION FURNISHED BY THE CONTRACTOR FOR PERMANENT INSTALLATION IN THIS PROJECT SHALL BE NEW AND IN PRISTINE CONDITION WHEN INSTALLED AND/OR PROCURED FOR USE ON THE PROJECT. MATERIALS THAT ARE INSTALLED IN ACCORDANCE WITH THE AFOREMENTIONED BUT BECOME DAMAGED OR WORN BEYOND WHAT IS TO BE REASONABLY EXPECTED DURING THE DURATION OF THE PROJECT SHALL BE REPLACED WITH THE NEW IN-KIND MATERIALS AT THE SOLE DISCRETION OF THE ENGINEER.
11. **CONCRETE BRIDGE RAILING:** ALL CONCRETE AND REINFORCING STEEL IN CONCRETE RAILING TO BE PAID FOR PER LINEAR FOOT OF RAILING, INCLUDING BARS THAT PROJECT INTO THE RAILING FROM THE WINGWALL OR DECK. CONCRETE RAILING TO BE MEASURED FROM THE CENTERLINE TO CENTERLINE OF JOINTS. SEE STANDARD PLAN SWBS-100 FOR BAR SUPPORTS FOR REINFORCING STEEL.
12. **PRE-ENGINEERED TRUSS:** ANCHOR BOLT LOCATIONS AND SPECIFICATIONS WERE BASED ON PRODUCTS DESIGNED AND MANUFACTURED BY CONTECH ENGINEERED SOLUTIONS. OTHER BRIDGE SUPPLIERS MAY BE USED WITH PRE-APPROVAL FROM THE OWNERS AGENT. FOR QUALIFIED BRIDGE MANUFACTURER REQUIREMENTS SEE SPECIFICATIONS.

BRIDGE PLANS	
201	BRIDGE GENERAL NOTES & INDEX
202	GENERAL BRIDGE PLAN
203	FOUNDATION LAYOUT
204	PILE DATA TABLE
205	DECK DETAILS
206	APPROACH SLAB DETAILS
207	INTERMEDIATE BENT DETAILS
208	END BENT DETAILS
209	PEDESTRIAN GENERAL BRIDGE PLAN
210	PEDESTRIAN END BENT DETAILS
211	PEDESTRIAN APPROACH SLAB DETAILS
212	BD.2.4.5.3.01 - MISC. SPAN DETAILS POURED SILICONE JOINT
213	BD.2.5.1.0.01 - P.P.C. PILES (CS-216)
214	BD.2.6.1.1.01 - BR COMMON
215	BD.2.6.1.3.01 - 36SS
216	BD.2.6.1.3.02 - 36SS
217-222	BD.2.10.1.0.01-06 - APPROACH SLAB COMMON
223-226	BD.2.10.1.0.07-10 - APPROACH SLAB COMMON
227	BD.2.11.10.0.01 - CONC. SURFACE FINISHES
228	BD.2.11.10.0.02 - CONC. SURFACE FINISHES
229	BD.2.11.3.2.01 - (FR-01)
230	YP-01
231-241	BORING LOGS

DATE: 10/8/24

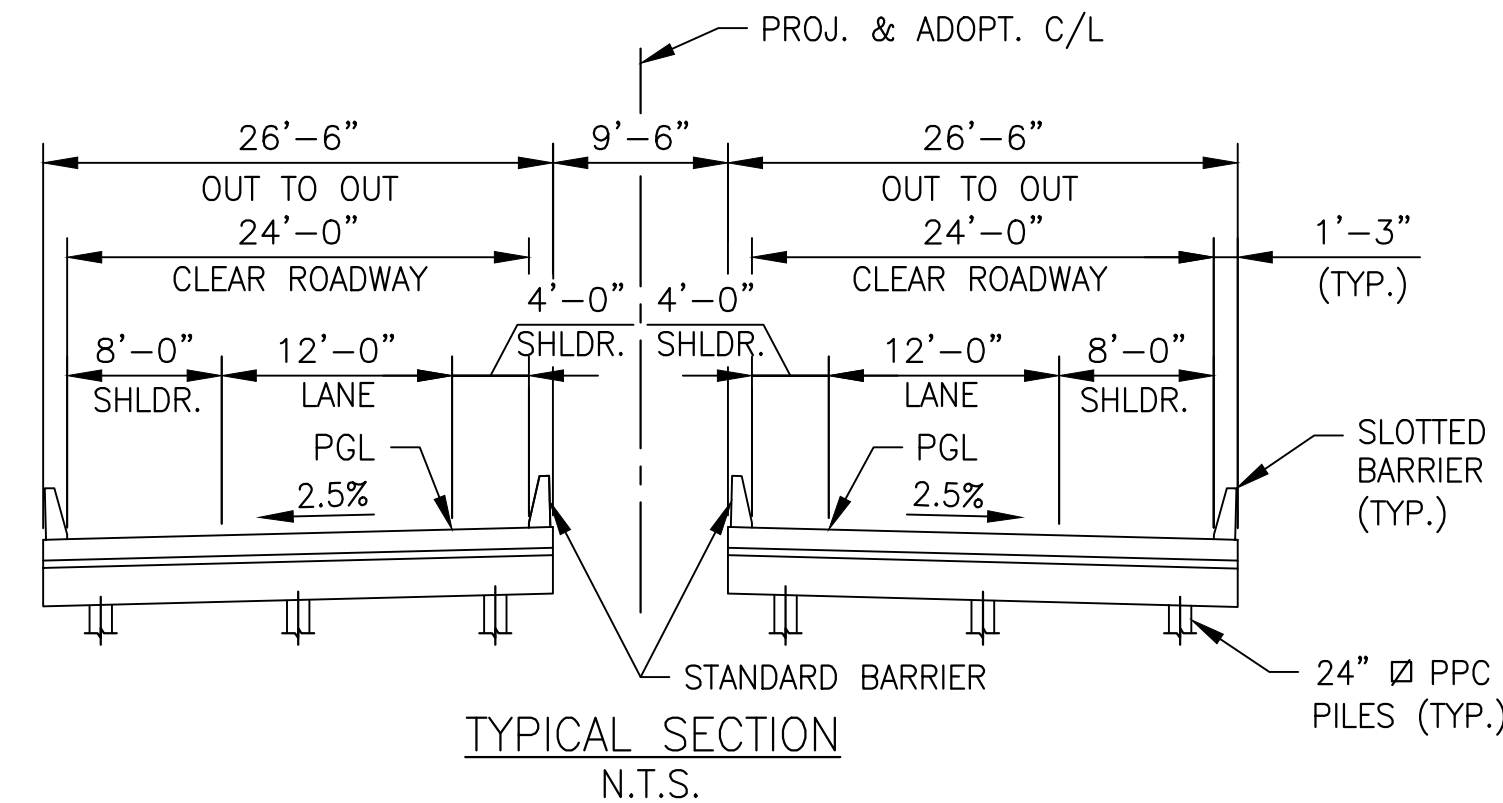
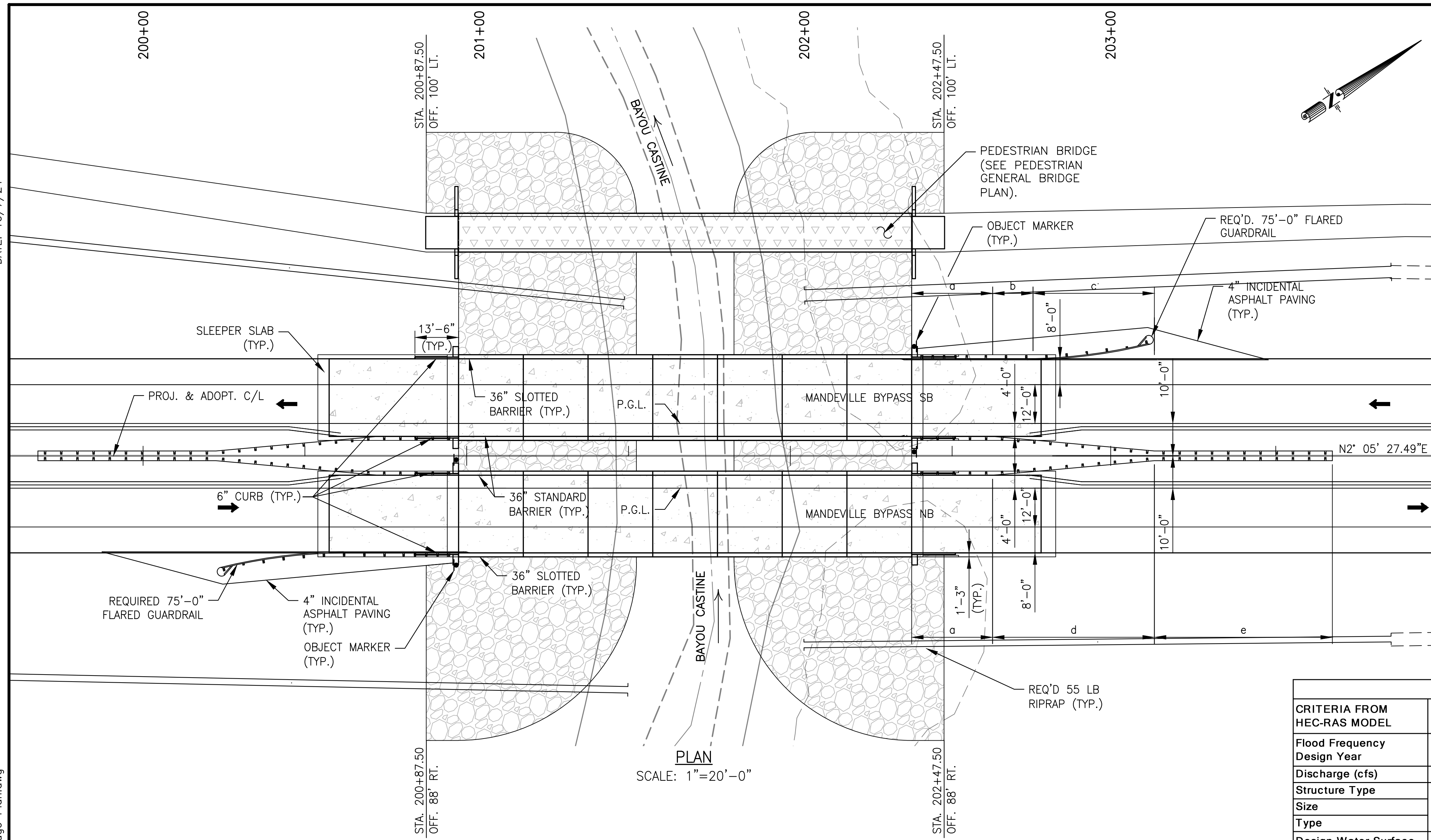
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SHEET NUMBER	201				
PARISH	ST. TAMMANY	PARISH PROJECT	2014EN0001	B.K.I. PROJECT	NO.15.012
					
MANDEVILLE BYPASS LA 1088 TO US 190					
BRIDGE GENERAL NOTES & INDEX					
					
					
DESIGNED	R.J.C.	CHECKED	R.A.C.	DATE	10/8/2024
DESIGNED	R.J.C.	CHECKED	G.V.	DATE	10/8/2024
DESIGNED	R.J.C.	CHECKED	R.J.C.	DATE	10/8/2024
1 of 1					
NO.	DATE	REVISION	DESCRIPTION	BY	



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\200\02_Design\02_Civil\01 Drawings\202_General Bridge Plan.dwg



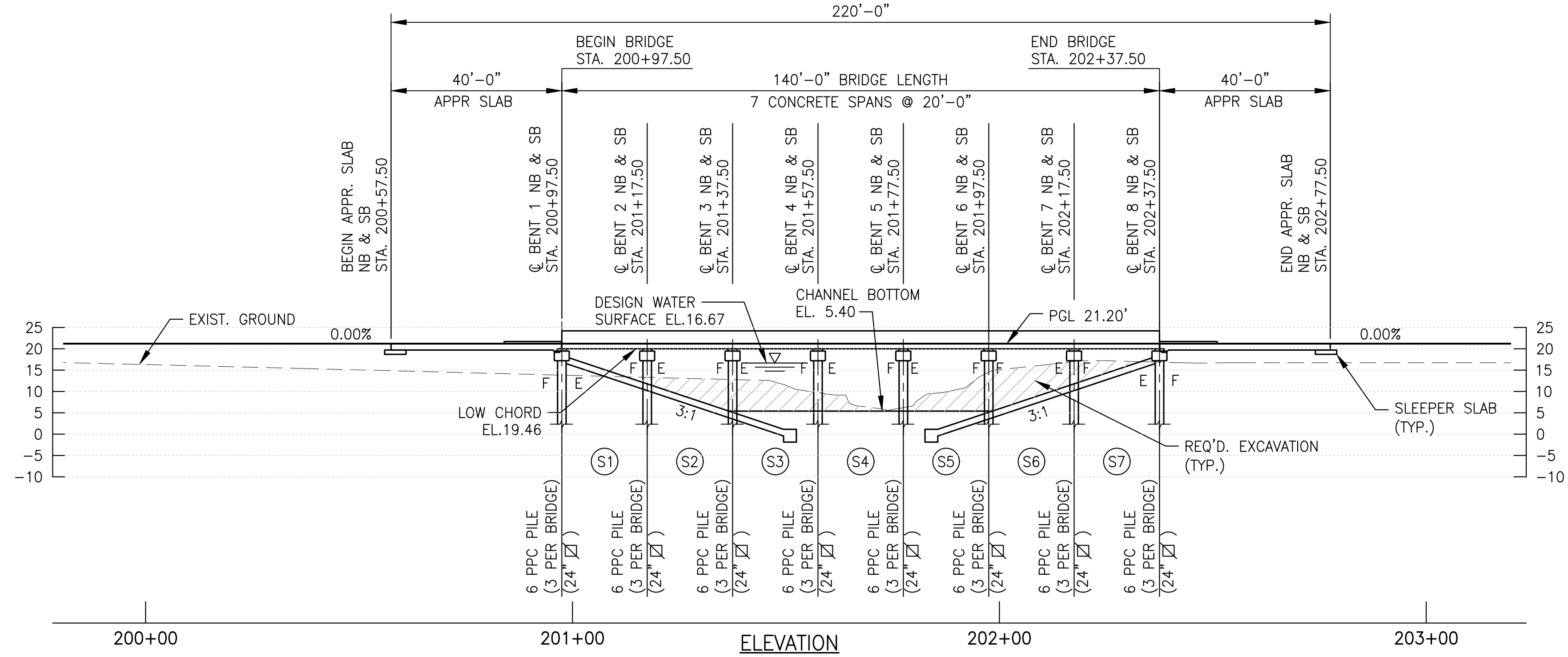
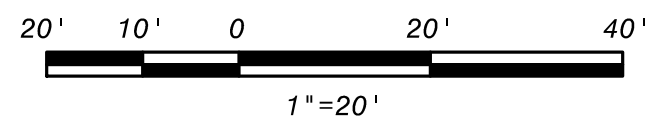
GUARD RAIL ITEM LENGTHS		
SECTION	PAY ITEMS	LENGTH
a	704-07-00200	25'-0"
b	704-03-00200	12'-6"
c	704-10-00310	37'-6"
d	704-03-00200	50'-0"
e	704-10-00305	55'-0"

HYDRAULIC DATA TABLE					
CRITERIA FROM HEC-RAS MODEL	EXISTING CONDITIONS	PROPOSED CONDITIONS		PREDICTED SCOUR	
		50 Year	100 Year	Flood Frequency Design Year	500
Flood Frequency Design Year	50 Year	50 Year	100 Year	Flood Frequency Design Year	500
Discharge (cfs)	1,053	1,053	1,187	Discharge (cfs)	1,734
Structure Type	Existing Conditions at Prop. Bridge Location;	Proposed Structure	Proposed Structure	Contraction Scour Depth (ft)	0.00
Size	No Exist. Structure	140' long by 62.5' wide	140' long by 62.5' wide	Maximum Local (Pier) Scour Depth (ft)	2.35
Type		Concrete Slab Span	Concrete Slab Span	Abutment Scour Depth (ft)	N/A
Design Water Surface Elevation (NAVD 88)	16.62	16.62	16.96	Bridge Scour Elevation (ft)	0.40
Average Velocity (ft/s)	3.36	1.11	1.20		
Flow Area (sq ft)	292.43	952.27	991.76		
Area of Opening (sq ft)	N/A	1264.93	1264.93		
Backwater (ft)	N/A	Negligible	Negligible		

THE BRIDGE SCOUR ELEVATION REFLECTS THE 5-FT MINIMUM REQUIREMENTS.

- LEGEND**
- CONCRETE BRIDGE
 - PEDESTRIAN BRIDGE
 - 55 LB. RIPRAP
 - DRAINAGE EXCAVATION

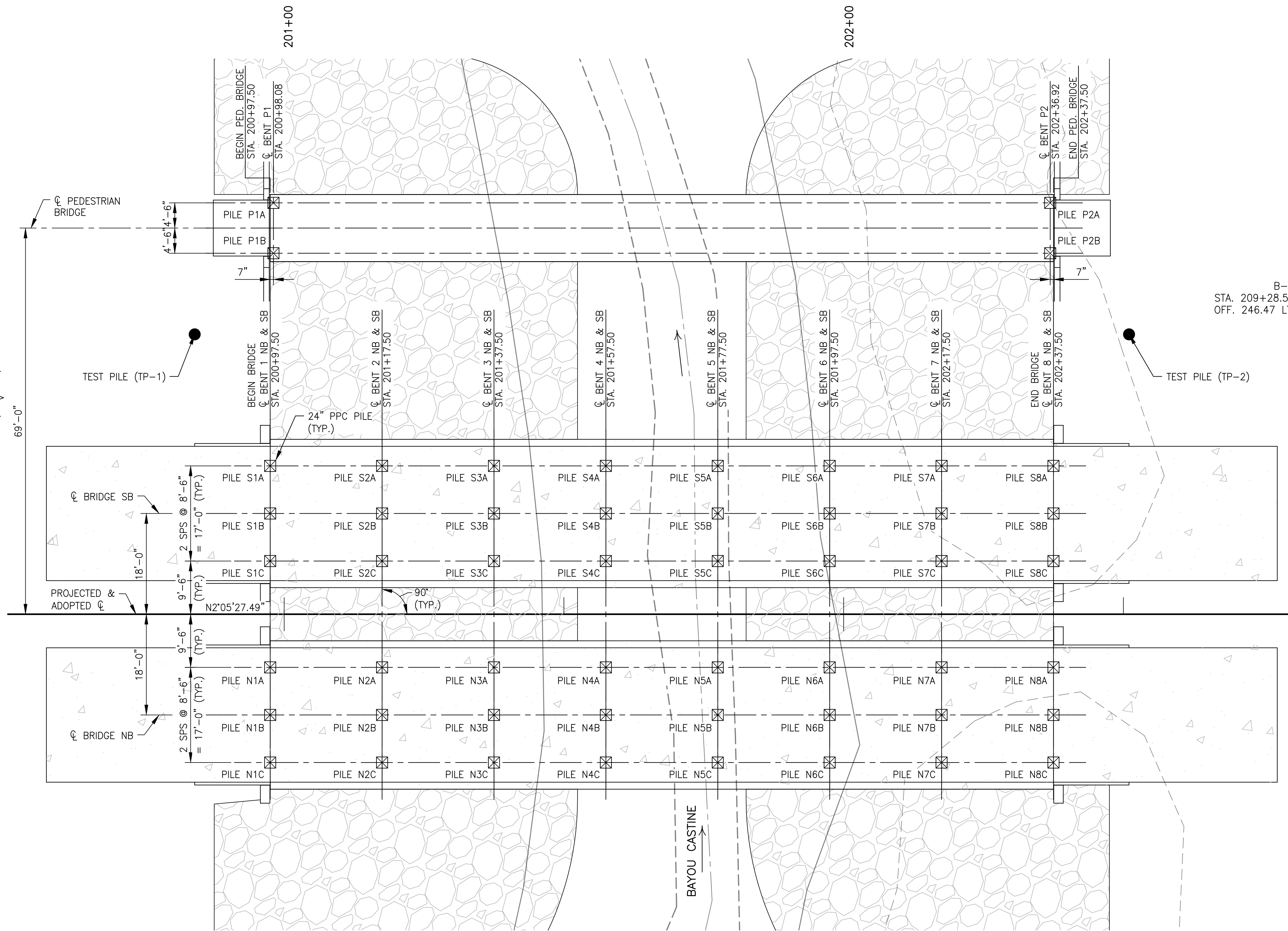
- NOTES:**
1. BENTS ARE NORMAL (90°) TO THE BASELINE.
 2. GUARDRAILS SHALL CONFORM TO LADOTD STANDARD PLAN GR-MASH-OFF.
 3. IMPROVED CHANNEL BOTTOM IS CENTERED BETWEEN BENTS 4 & 5.
 4. 5 FT. SCOUR DEPTH IS USED FOR BRIDGE DESIGN.



SHEET NUMBER	202	ST. TAMMANY	2014EN0001	NO.15.012
PARISH PROJECT		PARISH PROJECT		
MANDEVILLE BYPASS LA 1088 TO US 190				
GENERAL BRIDGE PLAN				
DESIGNED	R.J.C.	CHECKED	R.A.C.	DATE
DETAILED	G.V.	CHECKED	R.J.C.	OCT. 2024
				1 of 1
BY _____				
REVISION DESCRIPTION				
DATE				
NO.				

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\203_Bridge Foundation Layout.dwg



LEGEND

- ☒ REQ'D. 24" ∅ P.P.C. PILE
- BORING

FOUNDATION LAYOUT
SCALE : 1"=10'-0"



B-3
STA. 173+73.00
OFF. 225.36 LT.

B-4
STA. 209+28.57
OFF. 246.47 LT.

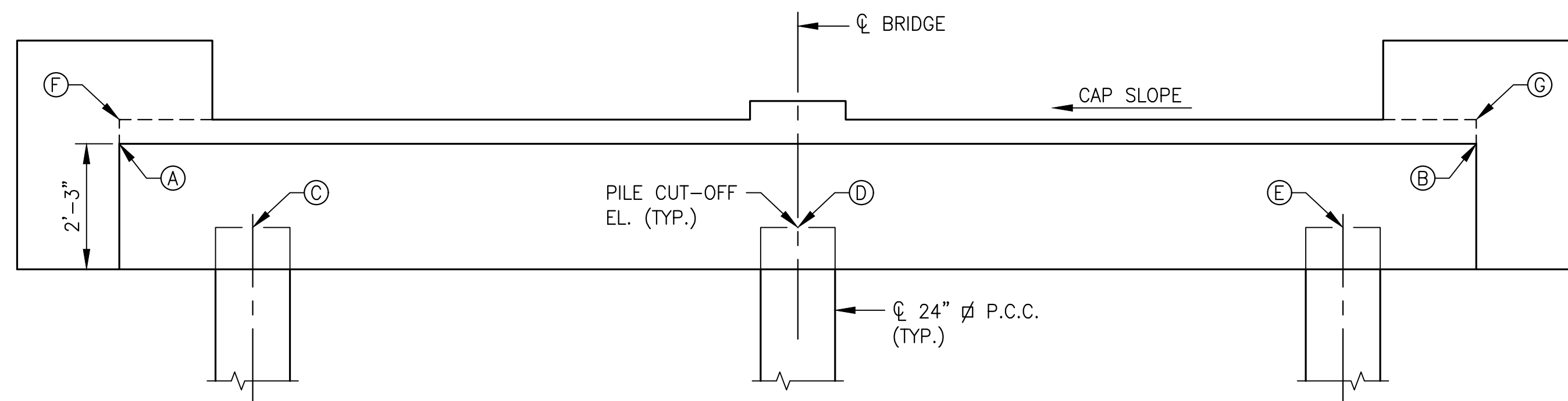
SHEET NUMBER	203
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
PROJECT	
ROADWAY PLANS	FOUNDATION LAYOUT
DESIGNED	R.J.C.
CHECKED	R.A.C.
DATE	Oct. 2024
SHEET	1 of 1
NO.	
DATE	
REVISION	DESCRIPTION
BY	

DATE: 10/7/24

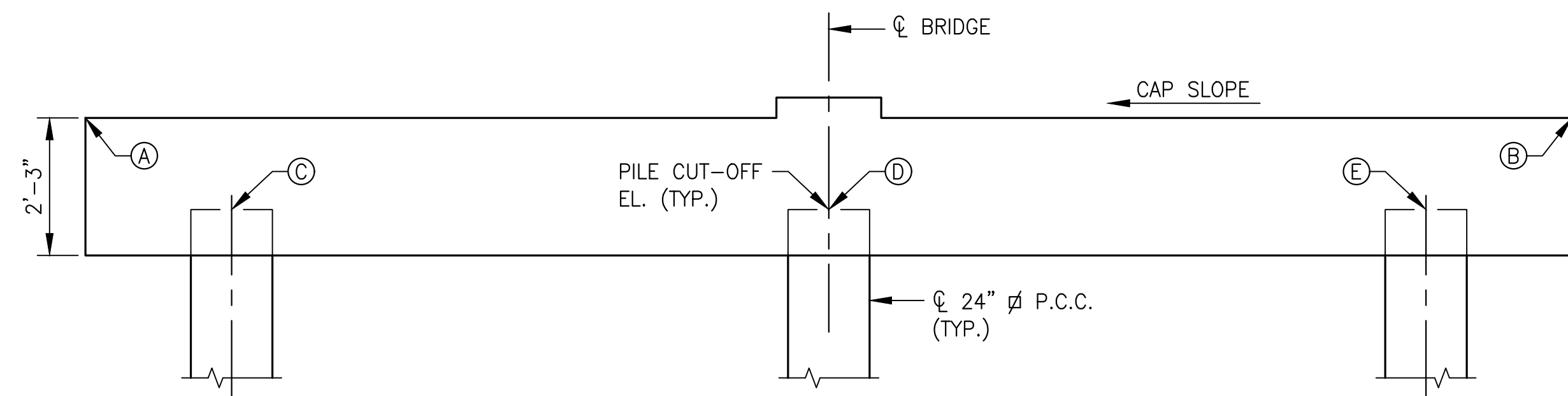
FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\204_Bridge Pile Data.dwg

PRODUCTION PILE DATA TABLE																							
BENT NO.	STATION	NO. OF PILES PER BENT	PILE TYPE & SIZE	MONITOR PILE REQUIRED (Y OR N)	LOAD (TONS)						SOIL RESISTANCE FACTOR (φ)			REQUIRED NOMINAL RESISTANCE (TONS)		MAX. CUTOFF EL. (FT.)	PLAN LENGTH (FT.)	PLAN TIP EL. (FT.)	ORDER LENGTH (FT.)	AS-BUILT TIP EL. (FT.)			
					SERVICE		STRENGTH		EXTREME		SERVICE	STRENGTH		EXTREME	WITHOUT PREBORING					PREBORING TO SCOUR DEPTH	MAX.	MIN.	AVG.
					PERMANENT LOAD	TRANSIENT LOAD	COMPRESSION	TENSION	COMPRESSION	TENSION		COMPRESSION	TENSION										
1 SB	200+97.50	3	24" PPC	Y	49	62	147	-	-	-	-	0.7	0.6	-	-	-	17.63	94	-76				
2 SB	201+17.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	85	-66				
3 SB	201+37.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
4 SB	201+57.50	3	24" PPC	Y	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
5 SB	201+77.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
6 SB	201+97.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
7 SB	202+17.50	3	24" PPC	Y	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	85	-66				
8 SB	202+37.50	3	24" PPC	N	49	62	147	-	-	-	-	0.7	0.6	-	-	-	17.63	94	-76				
1 NB	200+97.50	3	24" PPC	N	49	62	147	-	-	-	-	0.7	0.6	-	-	-	17.63	94	-76				
2 NB	201+17.50	3	24" PPC	Y	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	85	-66				
3 NB	201+37.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
4 NB	201+57.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
5 NB	201+77.50	3	24" PPC	Y	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
6 NB	201+97.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	91	-72				
7 NB	202+17.50	3	24" PPC	N	33	48	107	-	-	-	-	0.7	0.6	-	-	-	18.09	85	-66				
8 NB	202+37.50	3	24" PPC	Y	49	62	147	-	-	-	-	0.7	0.6	-	-	-	17.63	94	-76				
P1	200+98.08	2	24" PPC	N	-	-	64	-	-	-	-	0.7	0.6	-	-	-	17.46 *	54	-36				
P2	202+36.92	2	24" PPC	N	-	-	64	-	-	-	-	0.7	0.6	-	-	-	17.46 *	54	-36				

* ELEVATION TO BE COORDINATED WITH PEDESTRIAN BRIDGE MANUFACTURER.



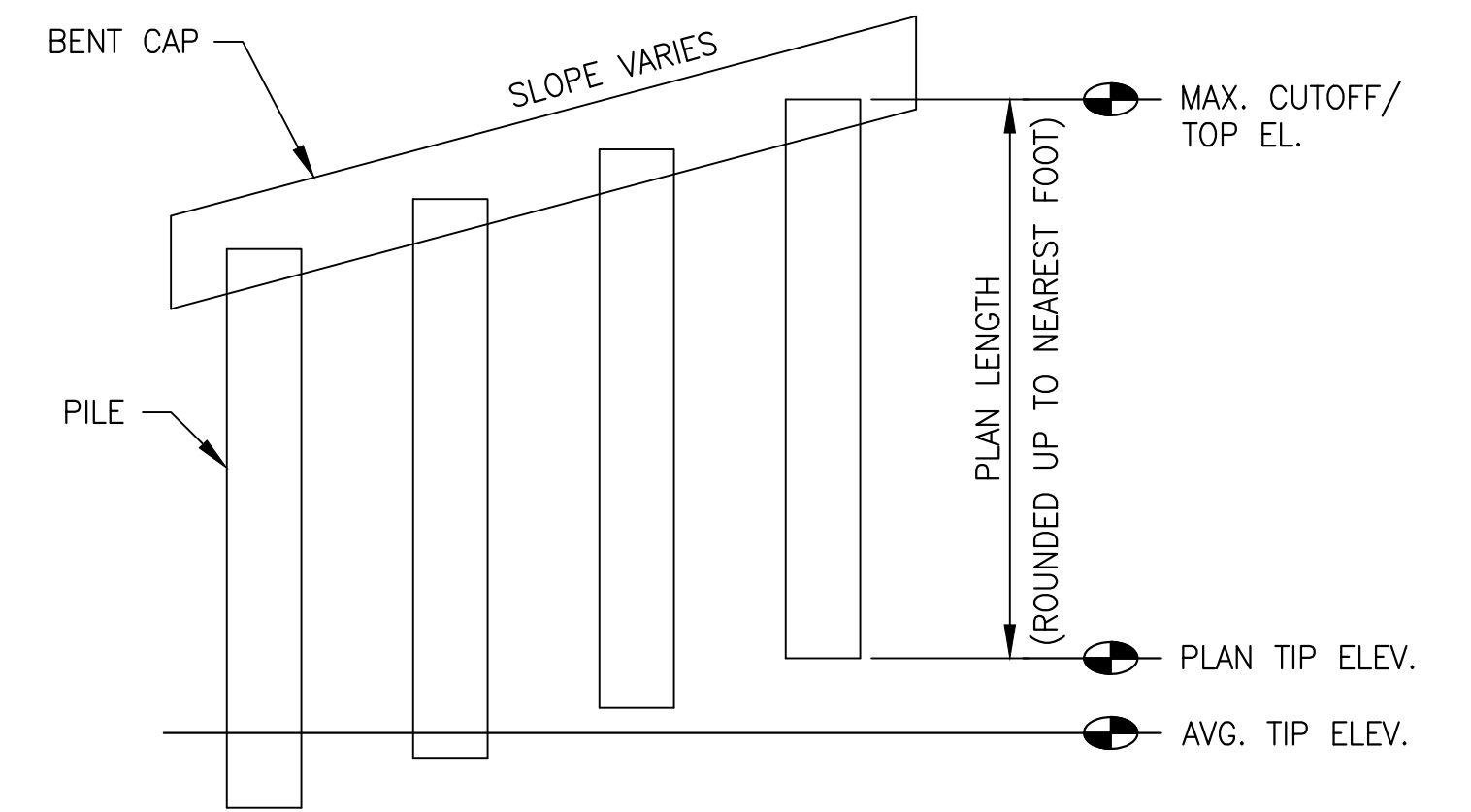
ELEVATION - END BENT
N.T.S.



ELEVATION - INTERMEDIATE BENT
N.T.S.

CAP AND PILE CUTOFF ELEVATIONS									
BRIDGE	BENT NO.	CAP ELEVATIONS				CAP SLOPE	PILE CUTOFF ELEVATIONS		
		A	B	F	G		C	D	E
SOUTHBOUND	1 & 8	18.59	19.25	19.04	19.71	2.5%	17.20	17.42	17.63
SOUTHBOUND	2 - 7	19.04	19.71	-	-	2.5%	17.66	17.88	18.09
NORTHBOUND	1 & 8	19.25	18.59	19.71	19.04	-2.5%	17.63	17.42	17.20
NORTHBOUND	2 - 7	19.71	19.04	-	-	-2.5%	18.09	17.88	17.66

TEST PILE DATA TABLE						
TEST PILE NO.	STATION	LOCATION	PILE TYPE & SIZE	TIP EL. (FT.)	BOTTOM OF CASING EL. (FT.)	TEST LOAD (TONS)
TP-1	200+84.00	50' OFFSET LEFT FROM PROJ. & ADOPT C/L	24" SQ. PPC.	-76	-	TO FAIL
TP-2	202+51.00	50' OFFSET LEFT FROM PROJ. & ADOPT C/L	24" SQ. PPC.	-76	-	TO FAIL



PILE AND DRILLED SHAFT LENGTH DIAGRAM

- PILES:** ALL PILE REQUIREMENTS INCLUDING SIZE, TYPE, LOCATION, AND MAXIMUM DESIGN LOAD SHALL BE AS DESCRIBED IN THE CONTRACT DOCUMENTS. THE MINIMUM PILE TIP ELEVATION WILL BE THE PLAN TIP ELEVATION AS SHOWN IN THE PRODUCTION PILE DATA TABLE, UNLESS OTHERWISE NOTED OR OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER. PILE ORDER LENGTHS WILL BE PROVIDED AFTER COMPLETION OF TEST AND/OR INDICATOR PILE TESTING AND EVALUATION.
- DYNAMIC MONITORING:** PILE DRIVING ANALYZER (PDA) MONITORING WILL BE REQUIRED AT EACH TEST PILE, INDICATOR PILE, MONITOR PILE, AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER. ALL COSTS AND DELAYS ASSOCIATED WITH PDA MONITORING SHALL BE INCLUDED UNDER ITEM NO. 804-14-00100, DYNAMIC MONITORING.
- MONITOR PILES:** THE FIRST PLUMB PILE DRIVEN AT EACH BENT INDICATED ON THE PRODUCTION PILE DATA TABLE SHALL BE MONITORED WITH THE PILE DRIVING ANALYZER (PDA). AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER, A ONE DAY RESTRIKE MAY BE REQUIRED AT EACH MONITOR PILE.
- PILE CAPACITY VERIFICATION:** SHALL BE BASED ON DRIVING CRITERIA ESTABLISHED FROM PILE DATA AND WAVE EQUATION ANALYSIS.
- REQUIRED NOMINAL RESISTANCE:** REQUIRED NOMINAL RESISTANCE "WITHOUT PREBORING" SHALL BE USED TO VERIFY PILE CAPACITY IF NO PREBORING IS PERFORMED. IF PREBORING IS PERFORMED, THE REQUIRED NOMINAL RESISTANCE "PREBORING TO SCOUR" SHALL BE USED FOR PILE CAPACITY VERIFICATION.



SHEET NUMBER **204**

ST. TAMMANY
PARISH PROJECT
2014EN0001
B.C.I. PROJECT
NO. 15.012

MANDEVILLE BYPASS
LA 1088 TO US 190

PILE DATA TABLE

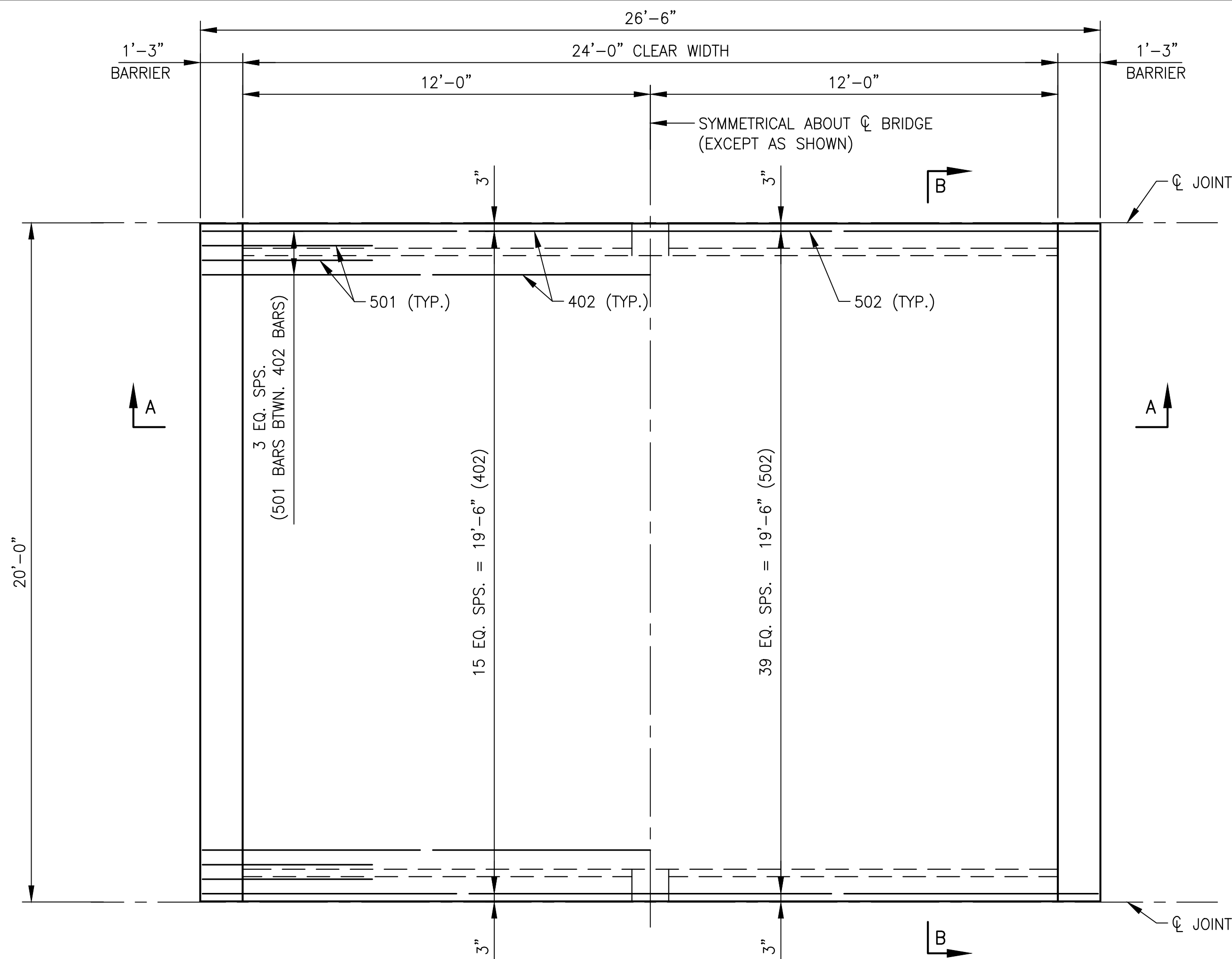
DESIGNED R.J.C.
CHECKED R.A.C.
DETAILED G.V.
CHECKED R.J.C.
DATE Oct. 2024
SHEET 1 of 1

BY _____
REVISION DESCRIPTION
DATE

NO. _____

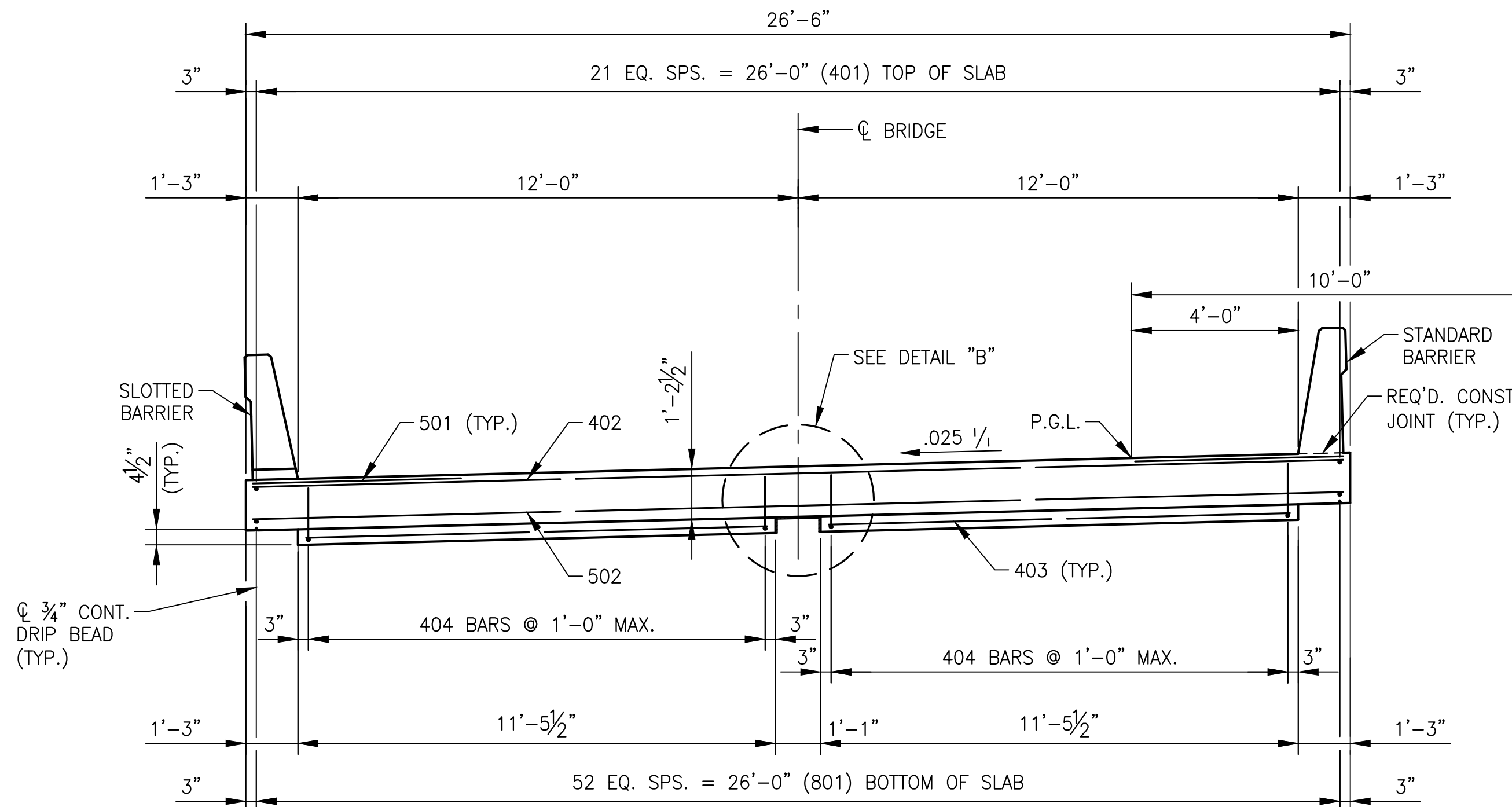
DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\205_Bridge Deck Details.DWG

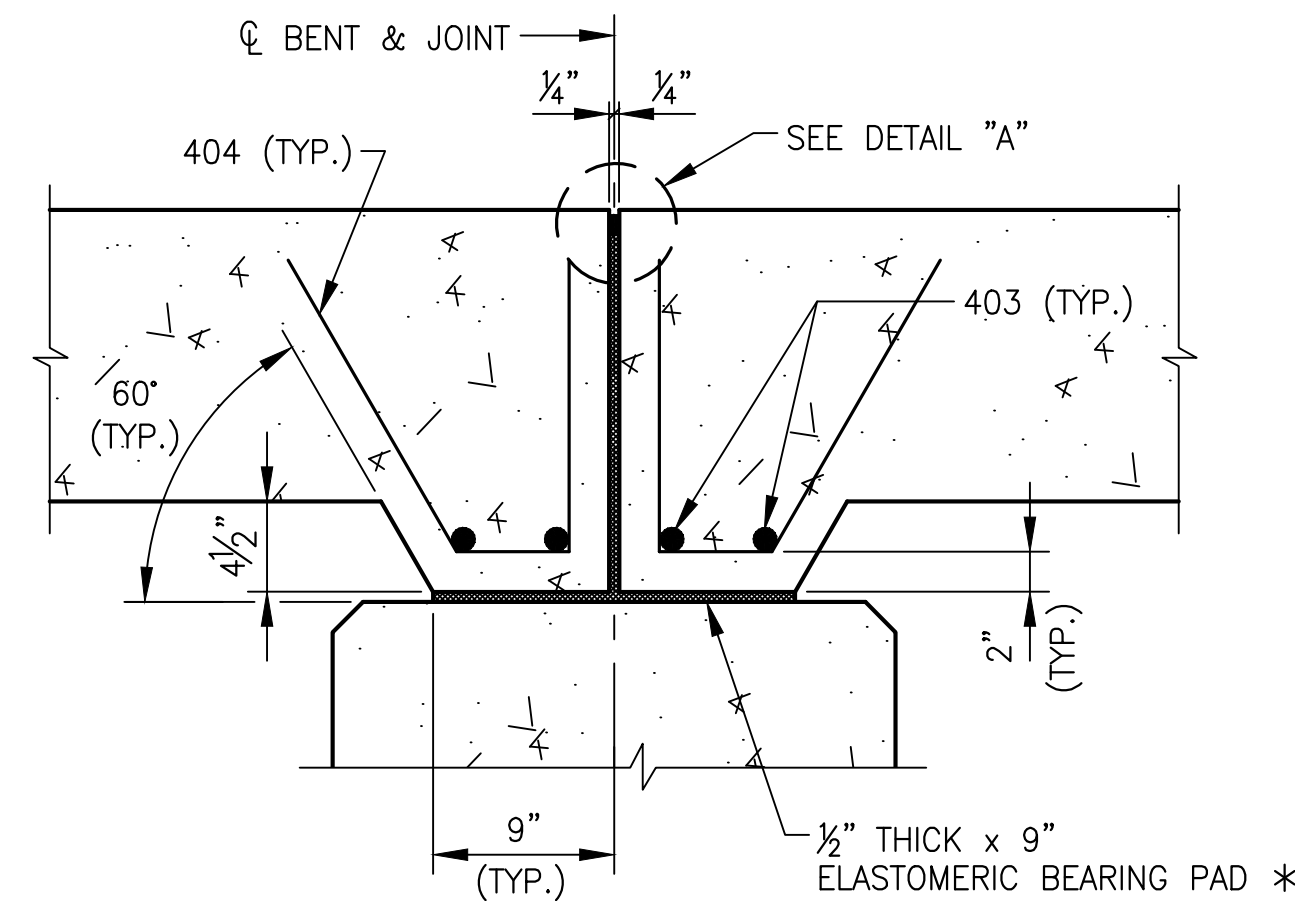


HALF PLAN
(SHOWING TOP REINFORCING)
SCALE: 3/8"=1'-0"

HALF PLAN
(SHOWING BOTTOM REINFORCING)
SCALE: 3/8"=1'-0"

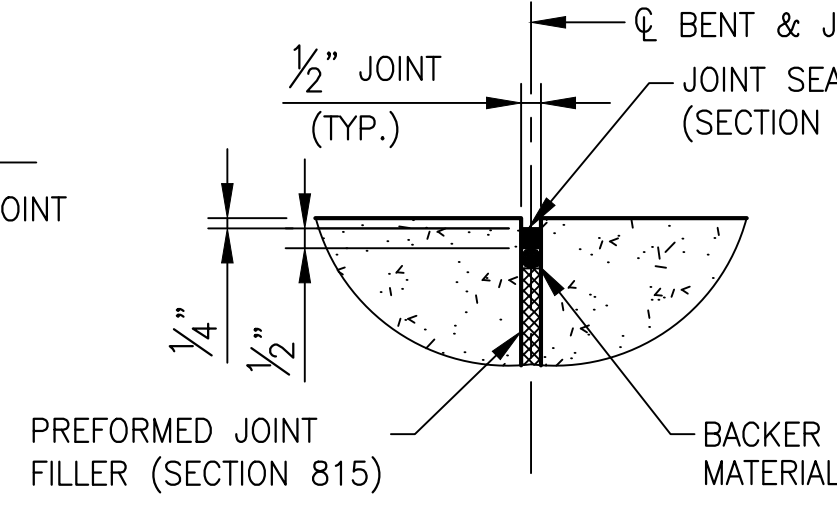


SECTION A-A
SCALE: 3/8"=1'-0"
SOUTHBOUND SHOWN
(NORTHBOUND IS MIRROR IMAGE ABOUT ϕ BYPASS)

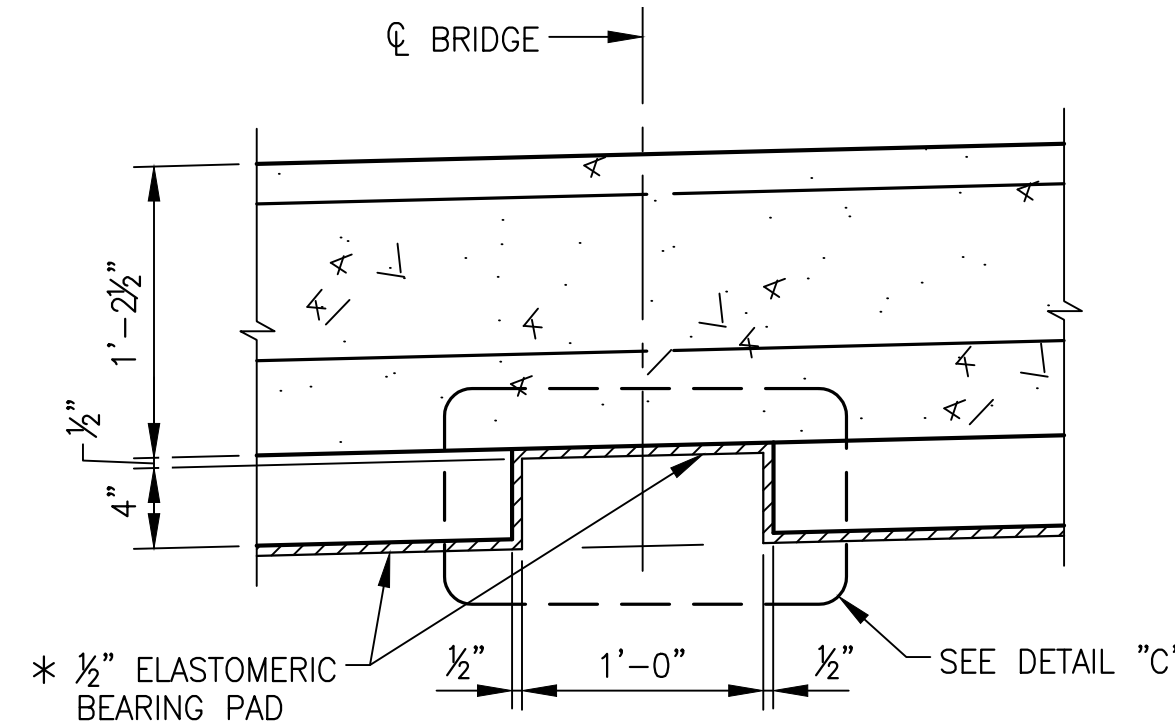


DETAIL SHOWING TYPICAL JOINT & HAUNCH
SCALE: N.T.S.

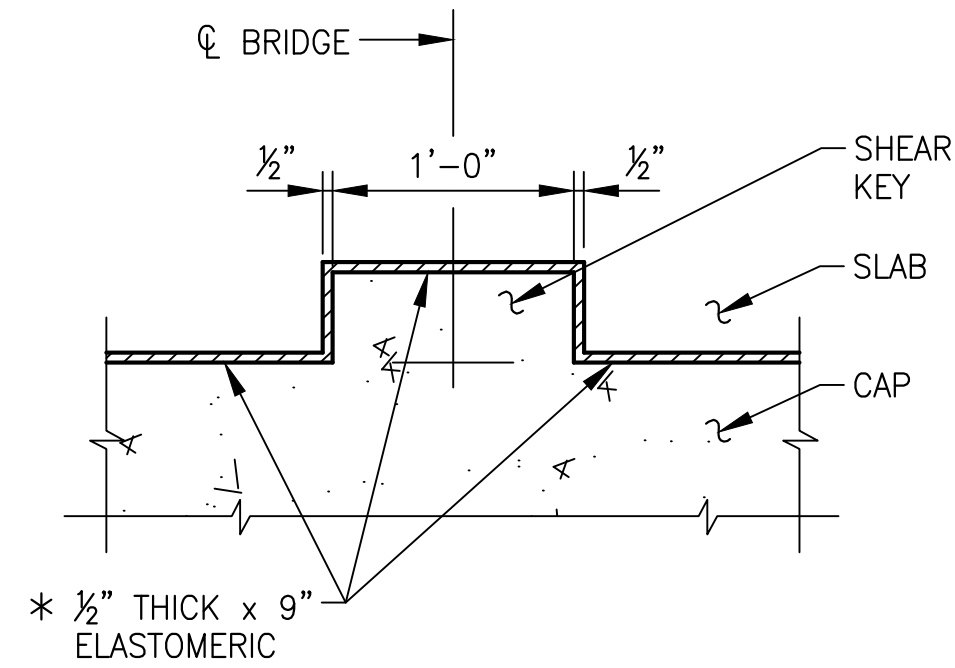
* 1/2" THICK x 9" WIDE ELASTOMERIC BEARING PAD (70 HARDNESS) ALONG FULL LENGTH OF BENT DIRECTLY UNDERNEATH THE SLAB HAUNCH. ADHESIVE SHALL BE USED IN ACCORDANCE WITH BEARING PAD AND ADHESIVE MANUFACTURER'S RECOMMENDATIONS TO HOLD 1/2" ELASTOMERIC MATERIAL IN PLACE DURING CONCRETE PLACEMENT.



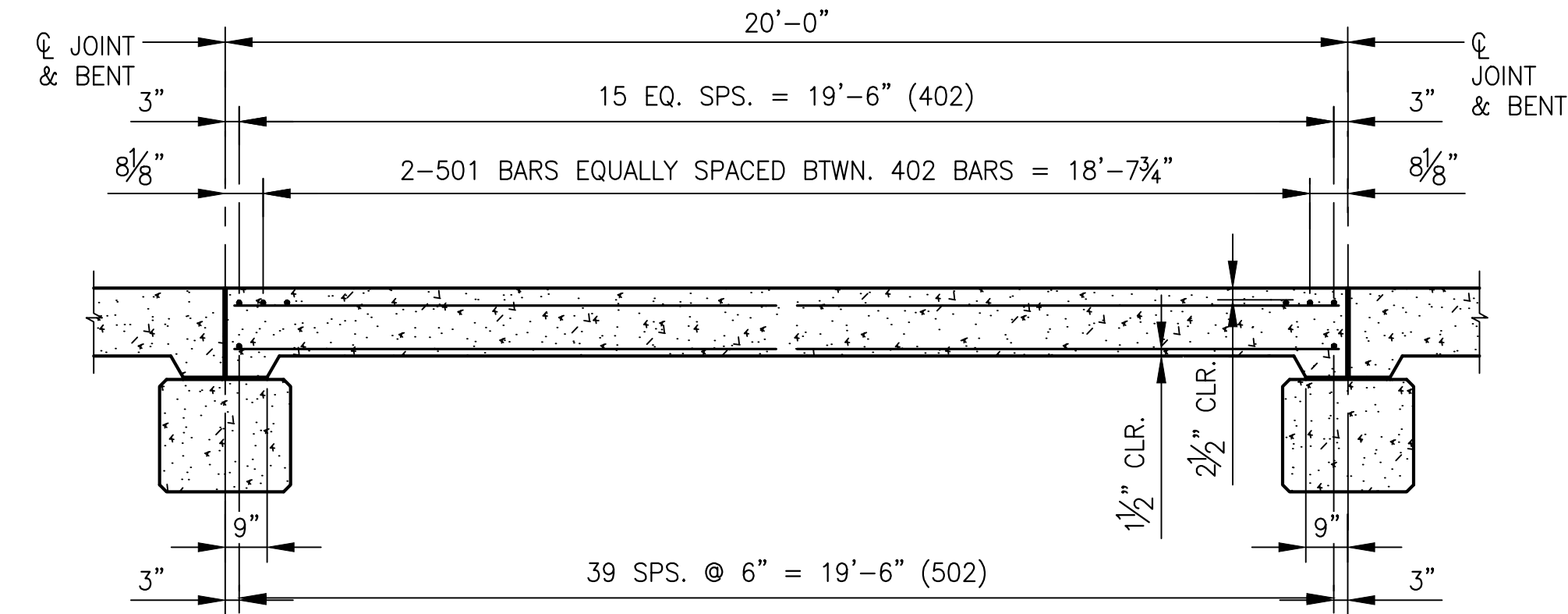
DETAIL "A"
N.T.S.



DETAIL "B"
SCALE: N.T.S.
SOUTHBOUND SHOWN
(NORTHBOUND IS MIRROR IMAGE ABOUT ϕ BYPASS)



DETAIL "C"
SCALE: N.T.S.



SECTION B-B
SCALE: 3/8"=1'-0"

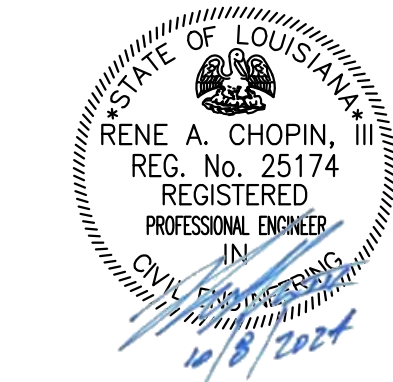
SLAB SPAN GENERAL NOTES:

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT(S) OF THE REINFORCING BAR NUMBER INDICATE(S) BAR SIZE. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED.

ESTIMATED QUANTITIES - ONE SPAN				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
801	53	1933'-6"	LONGIT. BOT. OF SLAB	
TOTAL #8 BARS = 1033'-6"		2760 LBS.		
501	60	300'-0"	TRANS. TOP OF SLAB	
502	40	1040'-0"	TRANS. BOT. OF SLAB	
TOTAL #5 BARS = 1340'-0"		1398 LBS.		
401	22	429'-0"	LONGIT. TOP OF SLAB	
402	16	416'-0"	TRANS. TOP OF SLAB	
403	8	88'-0"	LONGIT. IN HAUNCH	
404	48	140'-0"	STIRRUPS IN HAUNCH	
TOTAL #4 BARS = 1073'-0"		717 LBS.		
TOTAL DEFORMED REINF. STEEL =		4875 LBS.		
CLASS A1 CONCRETE (SLAB SPAN) =		24.27 CU YD		
CONCRETE BRIDGE RAILING =		40 LNFT		
ELASTOMERIC BEARING PAD =		18 SFIN		

- SLOTTED BARRIER SHALL BE USED ON LOW SIDE OF BRIDGE AS CALLED FOR IN THE PLANS. CONCRETE BRIDGE RAILING (STANDARD) SHALL BE USED OTHERWISE.



SHEET NUMBER 205

ST. TAMMANY

MANDEVILLE BYPASS

LA 1088 TO US 190

2014EN0001

NO.15.012

PARISH PROJECT

STATE OF LOUISIANA

DECK DETAILS

ROADWAY PLANS

DESIGNED R.J.C.

CHECKED R.A.C.

DATE Oct. 2024

SHEET 1 of 1

BY

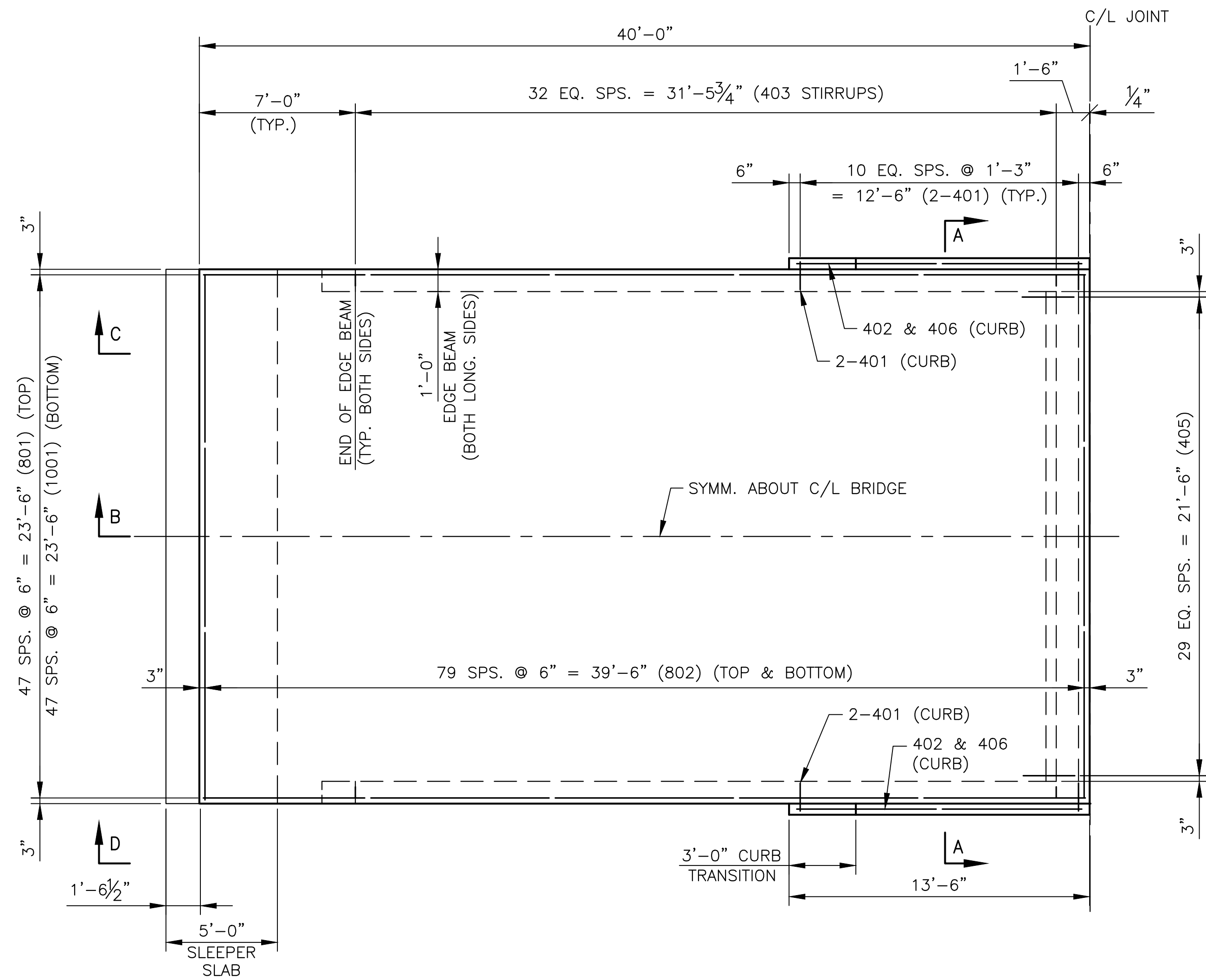
REVISION DESCRIPTION

NO.

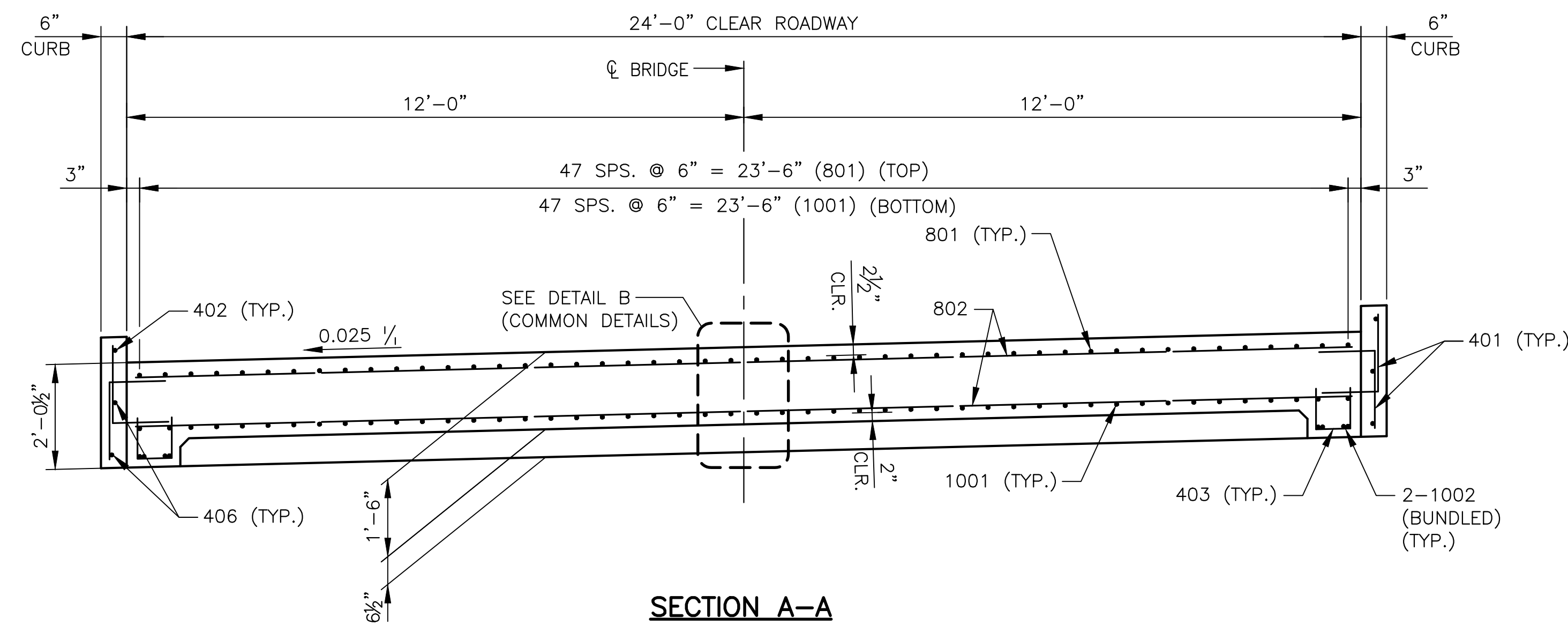
DATE

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\206_Approach Slab Details.dwg

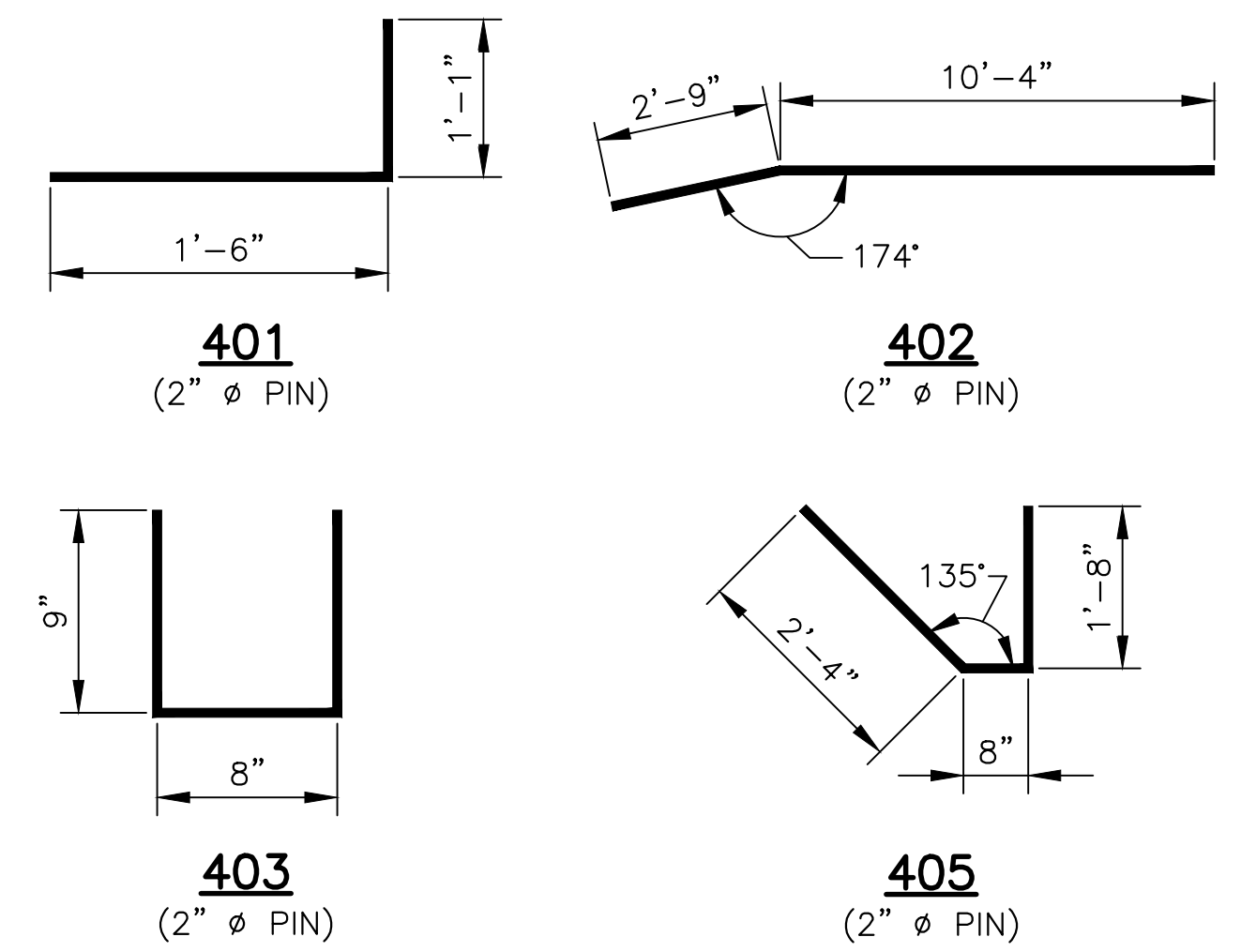


PLAN
SCALE : 1/4" = 1'-0"
(SOUTHWEST APPROACH SLAB SHOWN)



SECTION A-A
SCALE : 1/2" = 1'-0"
(DOWN STATION, SOUTHBOUND SHOWN)

ESTIMATED QUANTITIES - ONE APPROACH SLAB				
BAR NO.	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
1001	48	39'-8"	1904'-0"	LONG. IN BOT. OF SLAB
1002	8	32'-10"	262'-8"	BOTTOM OF EDGE BEAMS
TOTAL #10 BARS = 2166'-8"			9324 LBS.	
801	48	39'-8"	1904'-0"	LONG. IN TOP OF SLAB
802	160	23'-8"	3786'-8"	TRANS. IN TOP & BOT. OF SLAB
TOTAL #8 BARS = 5690'-8"			15195 LBS.	
501	14	23'-8"	331'-4"	TOP & BOT. OF SLEEPER SLAB
502	66	4'-8"	308'-0"	TOP & BOT. OF SLEEPER SLAB
TOTAL #5 BARS = 639'-4"			667 LBS.	
401	44	2'-7"	113'-8"	DOWELS IN CURB
402	2	13'-1"	26'-2"	LONG. IN CURBS
403	66	2'-2"	143'-0"	STIRRUPS IN EDGE BEAMS
404	2	23'-8"	47'-4"	BOTTOM OF HAUNCH
405	30	4'-8"	140'-0"	STIRRUPS IN HAUNCH
406	4	13'-2"	52'-8"	LONG. IN CURBS
TOTAL #4 BARS = 522'-10"			350 LBS.	
TOTAL DEFORMED REINF. STEEL			25536 LBS.	
CONCRETE APPROACH SLAB			960 SQ. FT.	



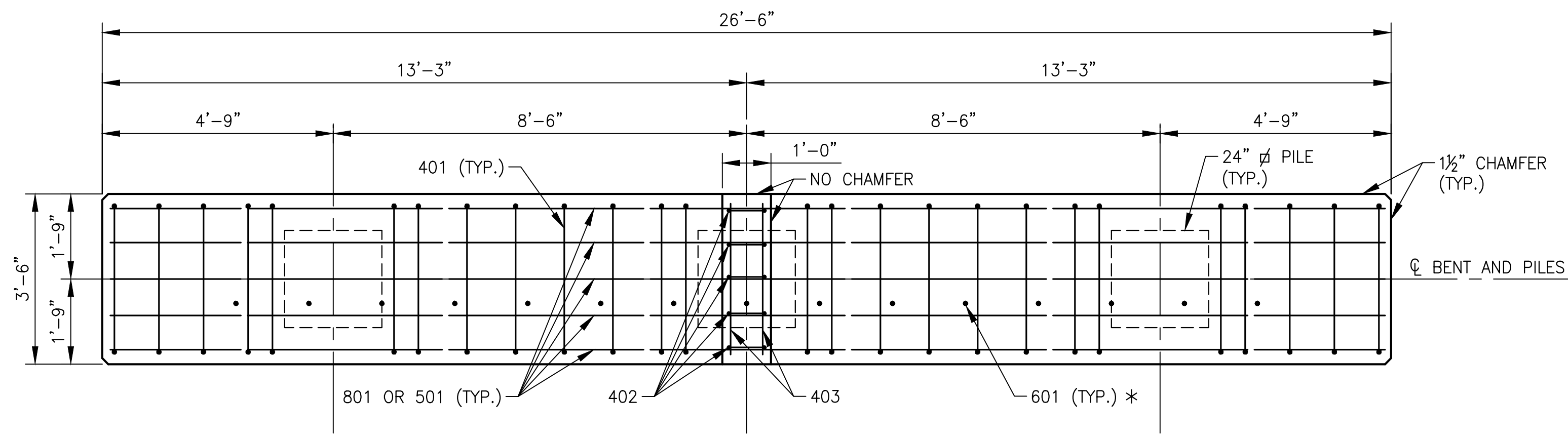
- NOTES :**
- FOR SECTIONS AND DETAILS NOT SHOWN, SEE BD.2.10.1.0.01-06 - APPROACH SLAB COMMON
 - ALL MATERIAL TO BE PAID FOR UNDER ITEM "CONCRETE APPROACH SLABS (CAST-IN-PLACE)." QUANTITIES ARE FOR INFORMATION PURPOSES ONLY.



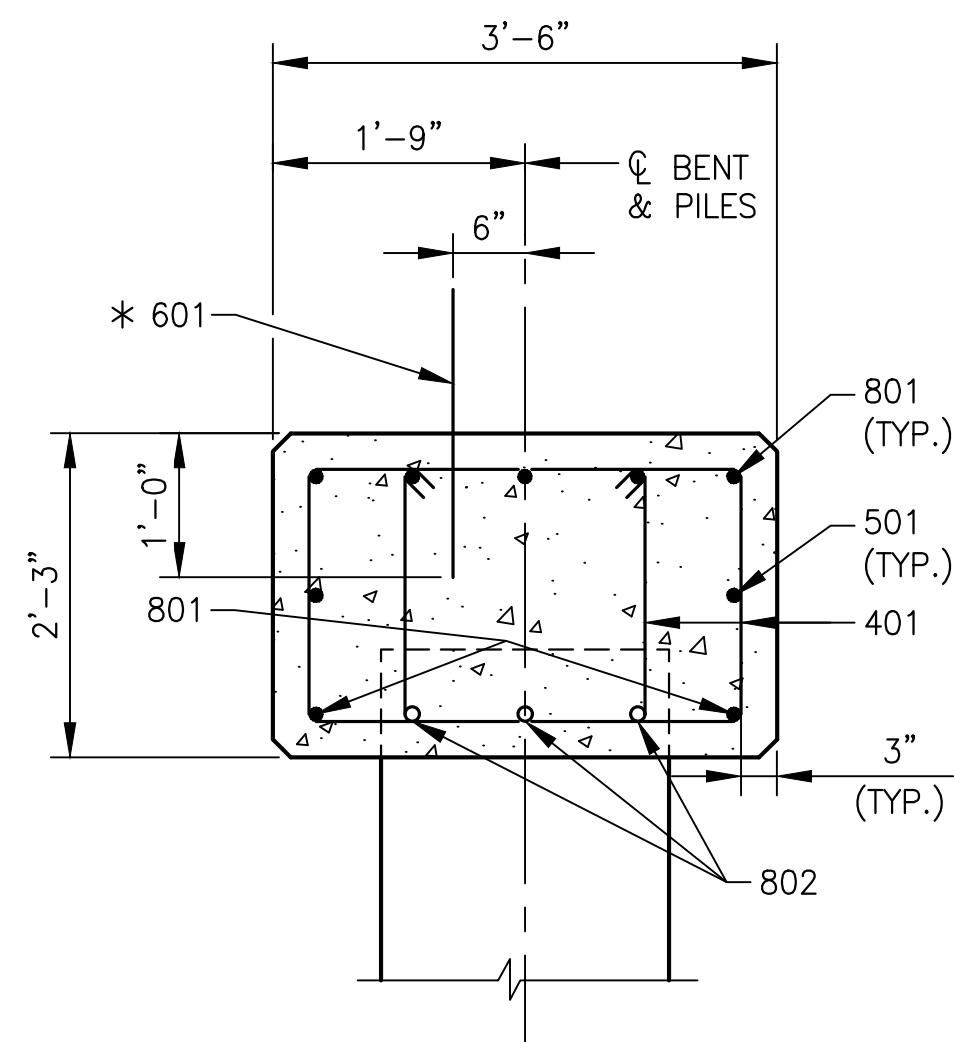
SHEET NUMBER	206
ST. TAMMANY	PROJECT NO. 15.012
MANDEVILLE BYPASS LA 1088 TO US 190	APPROACH SLAB DETAILS
DESIGNED: R.J.C.	CHECKED: R.A.C.
DATE: Oct. 2024	SHEET: 1 of 1
NO.	DATE
BY	REVISION DESCRIPTION

DATE: 10/7/24

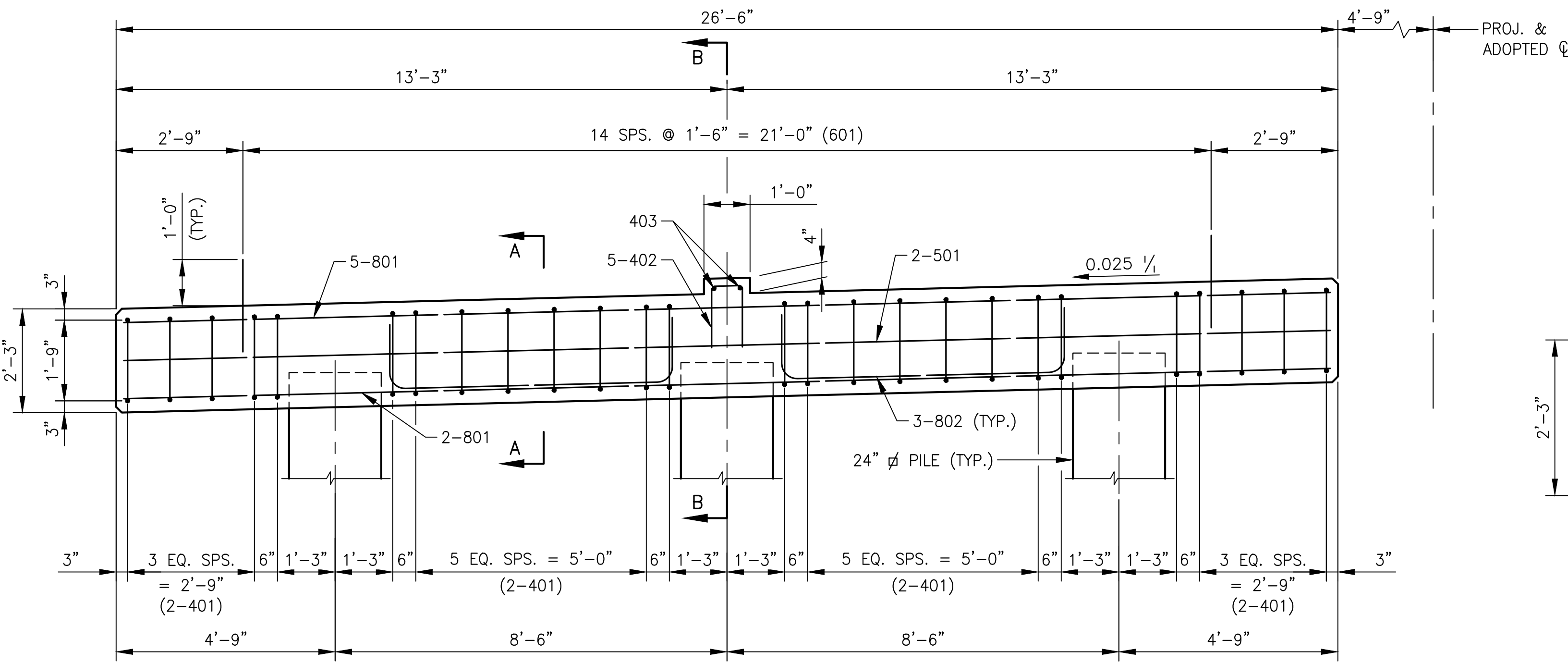
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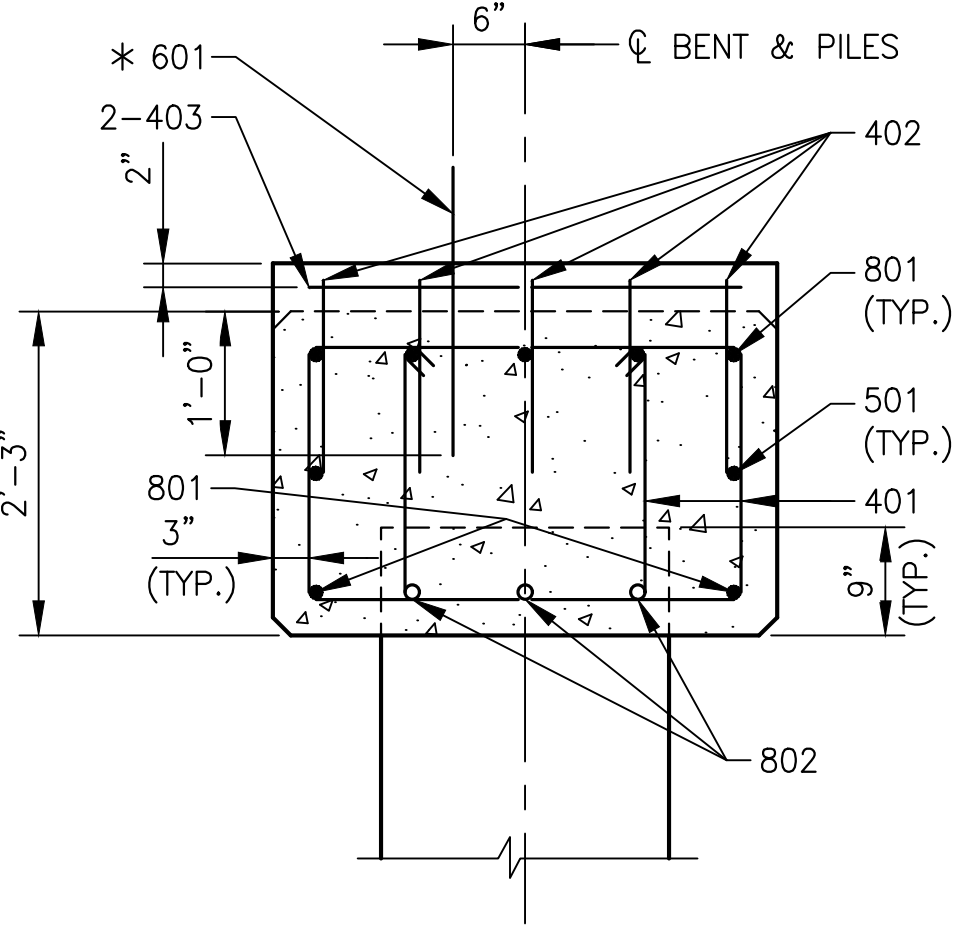
PLAN
SCALE: 1/2"=1'-0"



SECTION A-A
SCALE: 3/4"=1'-0"



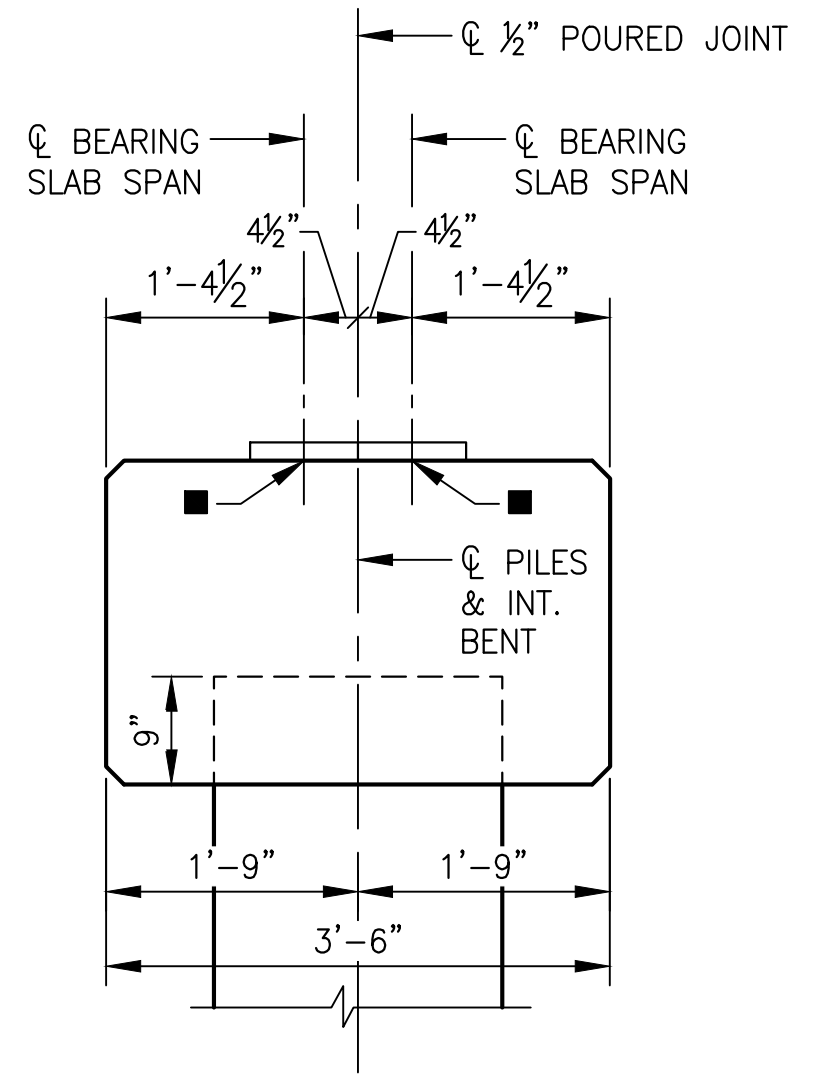
ELEVATION
SCALE: 1/2"=1'-0"



SECTION B-B
SCALE: 3/4"=1'-0"

ESTIMATED QUANTITIES (ONE BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	7	26'-0"	182'-0"	LONGIT. IN CAP
802	6	8'-6"	51'-0"	LONGIT. IN CAP
TOTAL #8 BARS = 233'-0"			623 LBS.	
601	15	2'-0"	30'-0"	DOWELS
TOTAL #6 BARS = 30'-0"			46 LBS.	
501	2	26'-0"	52'-0"	LONGIT. IN CAP
TOTAL #5 BARS = 52'-0"			55 LBS.	
401	52	9'-1"	472'-4"	STIRRUPS IN CAP
402	5	3'-4"	16'-8"	STIRRUPS IN KEY
403	2	3'-2"	6'-4"	LONGIT. IN KEY
TOTAL #4 BARS = 495'-4"			331 LBS.	
TOTAL DEFORMED REINF. STEEL			1055 LBS.	
CLASS A1 CONCRETE (BENTS)			7.44 CU. YDS.	

• ADD 46 LBS. OF REINFORCING STEEL (15-601 DOWELS) WHEN TWO FIXED ENDS OCCUR ON THE SAME BENT.



SECTION A-A
(SHOWING SPAN PLACEMENT)
SCALE: 3/4"=1'-0"

BENT GENERAL NOTES:

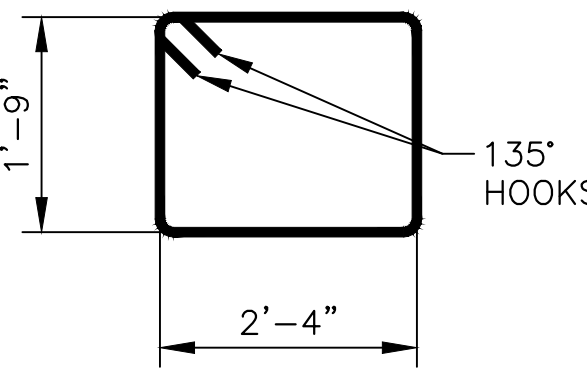
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT(S) OF THE REINFORCING BAR NUMBER INDICATE(S) BAR SIZE. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED.

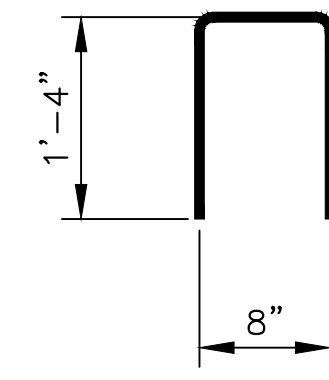
PRECAST CONCRETE PILES: SEE PRECAST PRESTRESSED CONCRETE PILES SPECIAL DETAIL FOR PILE DETAILS.

■ 1/2" THICK x 9" WIDE ELASTOMERIC BEARING PAD (70 HARDNESS) ALONG FULL LENGTH OF BENT DIRECTLY UNDERNEATH SLAB HAUNCH.

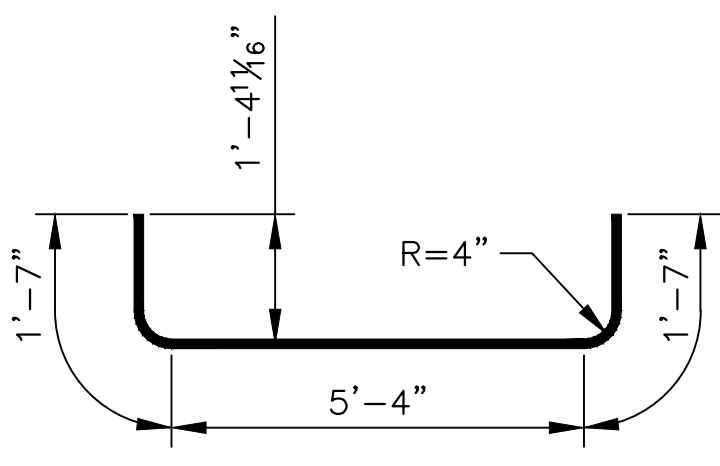
* 601 DOWELS: DOWELS (601 BARS) SHALL BE PROVIDED AT ALL FIXED BEARINGS AND APPROACH SLAB BEARINGS (SEE GENERAL PLAN FOR FIXED BEARING LOCATIONS). ALL EXPOSED ENDS OF DOWELS SHALL BE WRAPPED WITH TWO LAYERS OF 15LB. ASPHALT SATURATED FELT. CLOSE-FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3/16" THICK MAY BE SUBSTITUTED.



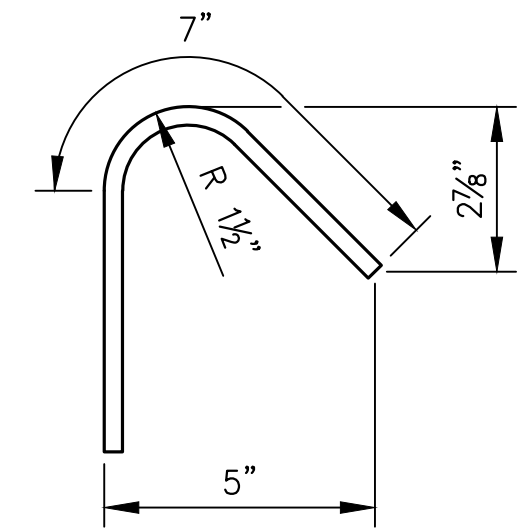
401
2" Ø PIN (N.T.S.)



402
2" Ø PIN (N.T.S.)



802
6" Ø PIN (N.T.S.)



135° HOOK 401
2" Ø PIN (N.T.S.)



SHEET NUMBER: 207

ST. TAMMANY PARISH PROJECT: 2014EN0001

MANDEVILLE BYPASS LA 1088 TO US 190

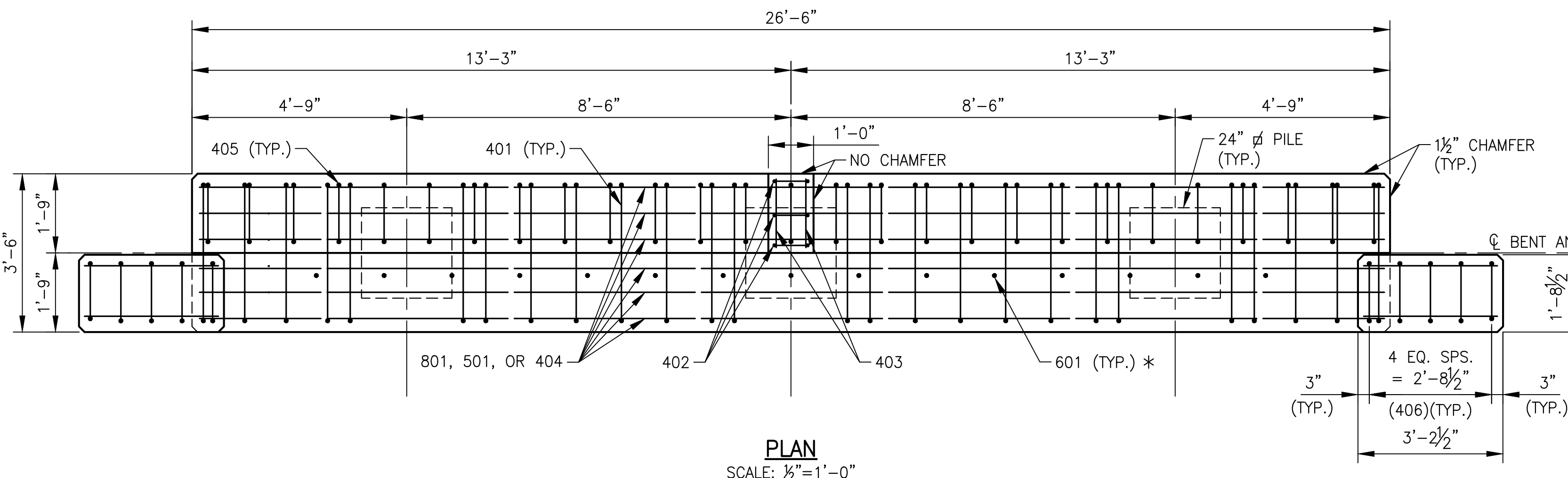
INTERMEDIATE BENT DETAILS

DESIGNED: R.J.C. CHECKED: R.A.C. DETAILED: G.V. CHECKED: R.J.C. DATE: Oct. 2024 SHEET: 1 of 1

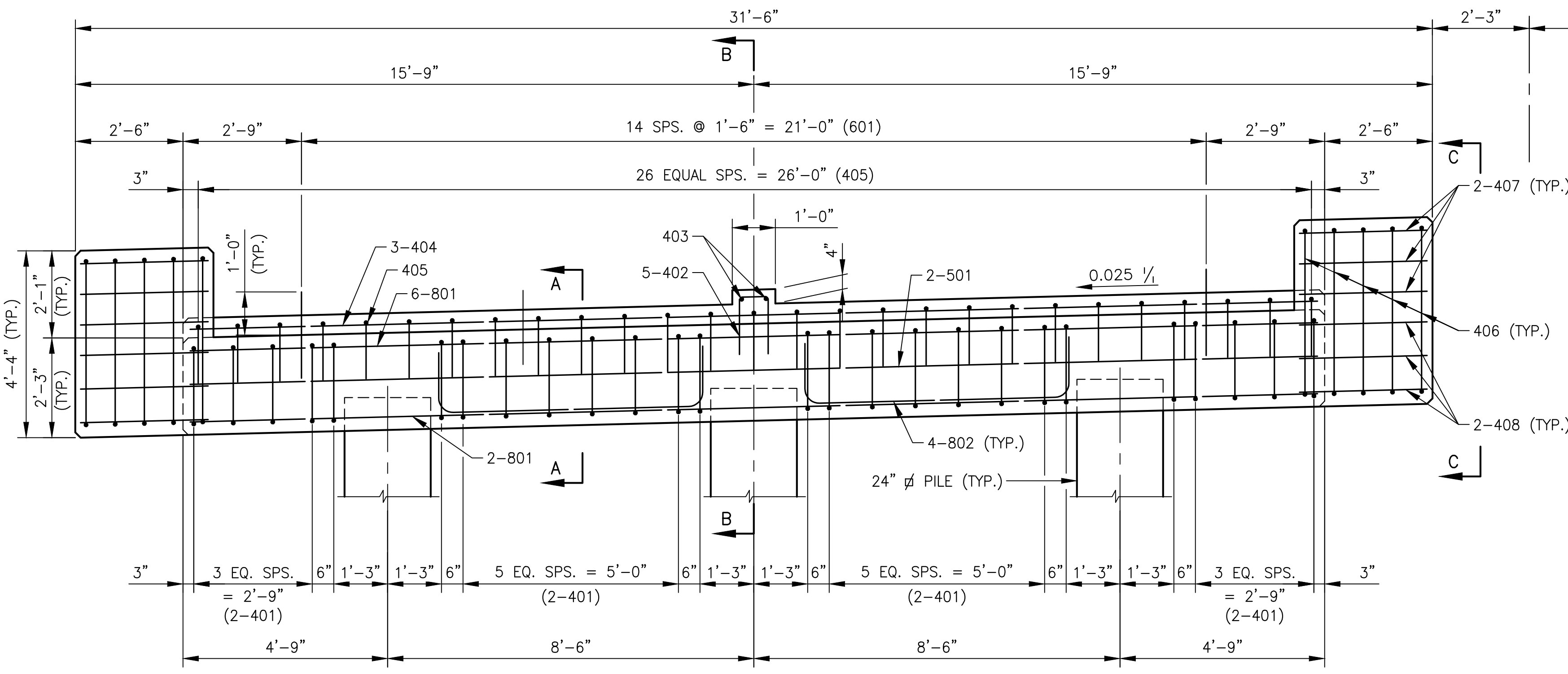
REVISION DESCRIPTION

DATE: 10/7/24

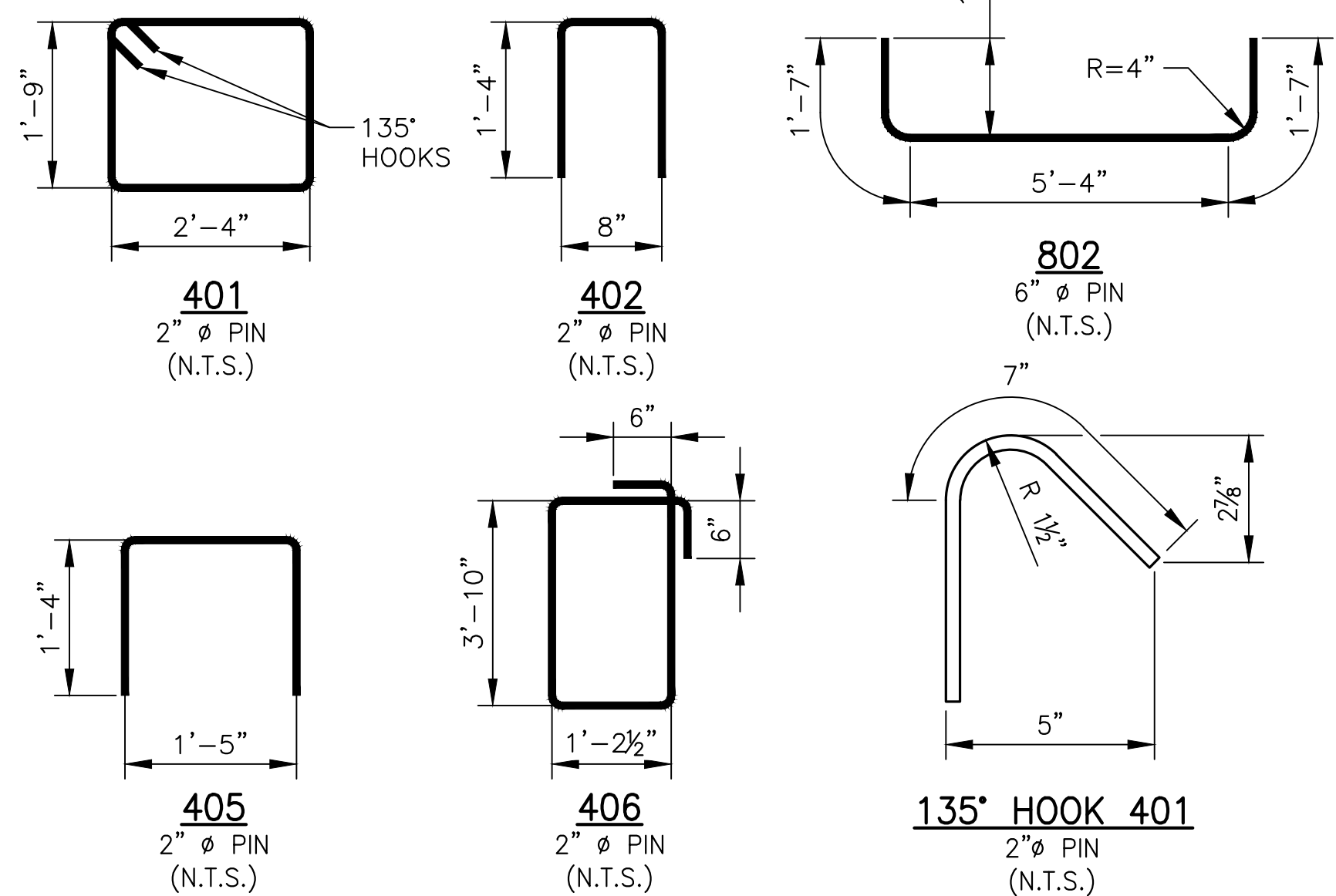
FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\208_End Bridge Bent Details.dwg



PLAN
SCALE: 1/2"=1'-0"



ELEVATION
SCALE: 1/2"=1'-0"



BENT GENERAL NOTES:

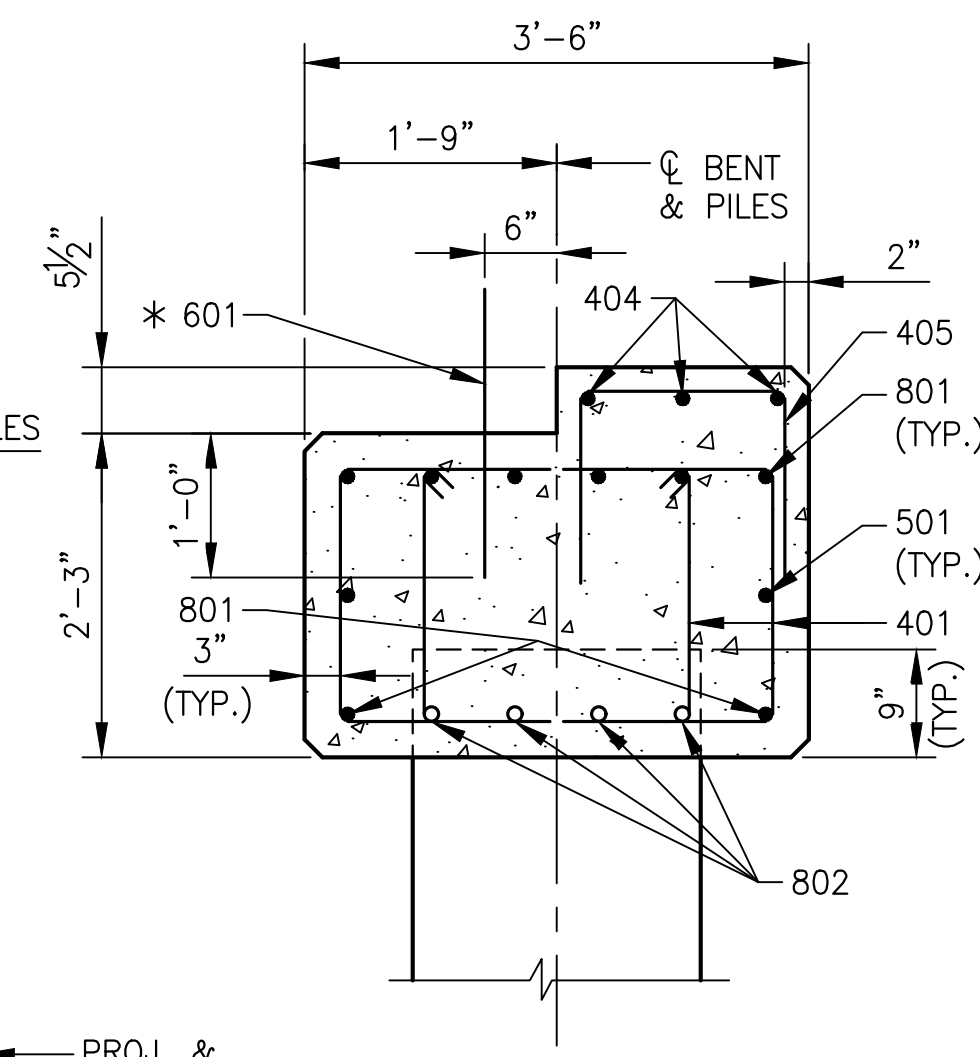
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT(S) OF THE REINFORCING BAR NUMBER INDICATE(S) BAR SIZE. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED.

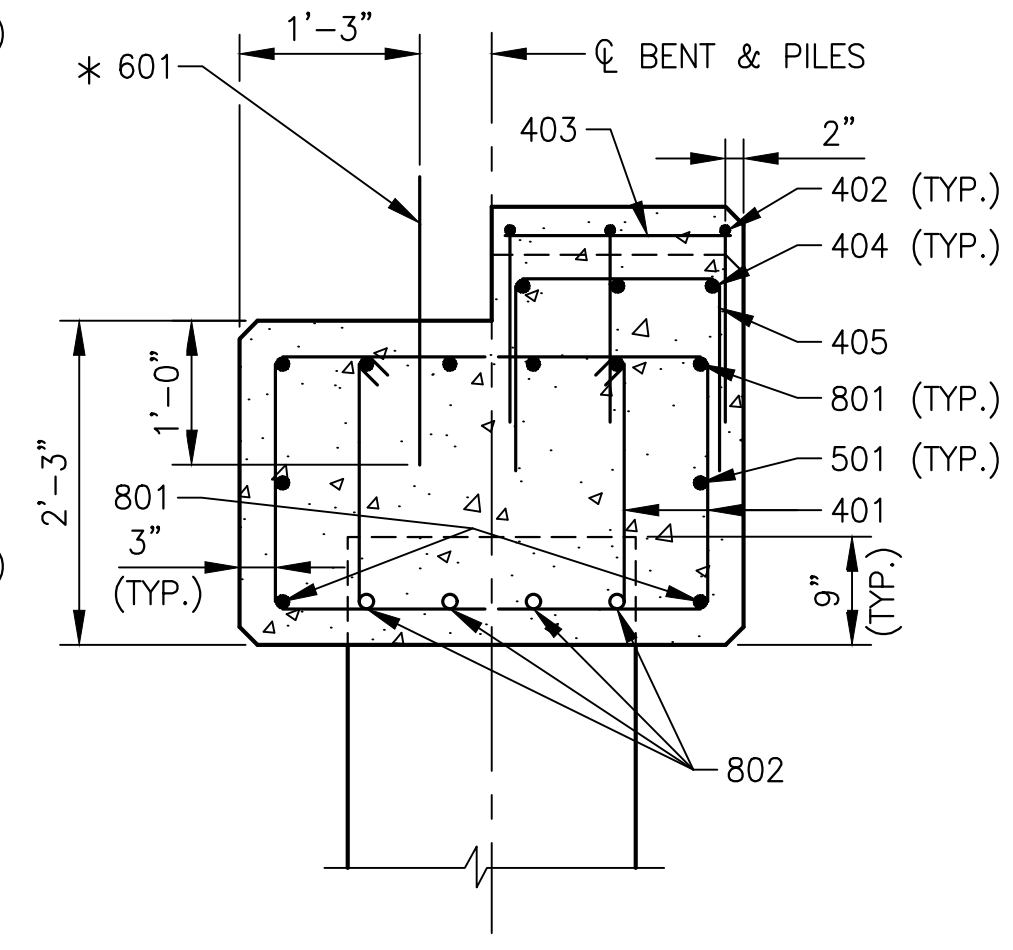
PRECAST CONCRETE PILES: SEE PRECAST PRESTRESSED CONCRETE PILES SPECIAL DETAIL FOR PILE DETAILS.

■ 1/2" THICK x 9" WIDE ELASTOMERIC BEARING PAD (70 HARDNESS) ALONG FULL LENGTH OF BENT DIRECTLY UNDERNEATH SLAB HAUNCH.

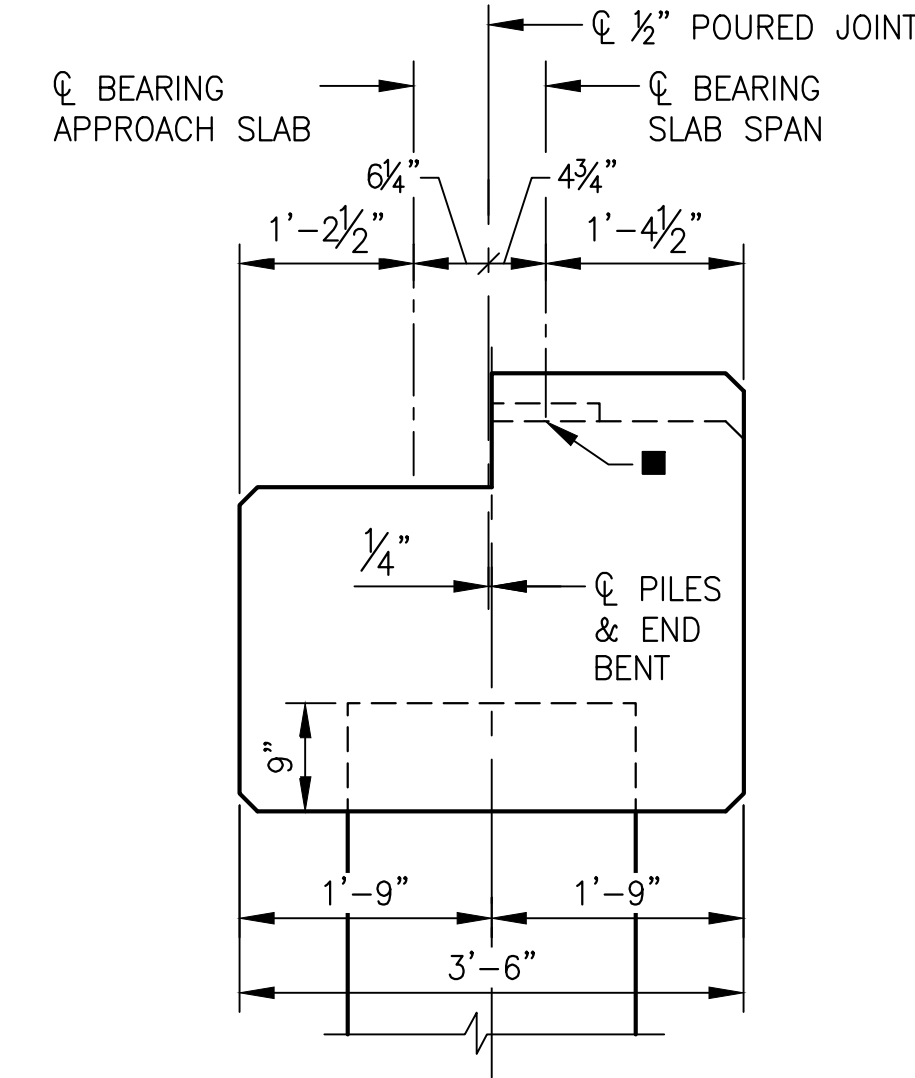
* 601 DOWELS: DOWELS (601 BARS) SHALL BE PROVIDED AT ALL FIXED BEARINGS AND APPROACH SLAB BEARINGS (SEE GENERAL PLAN FOR FIXED BEARING LOCATIONS). ALL EXPOSED ENDS OF DOWELS SHALL BE WRAPPED WITH TWO LAYERS OF 15LB. ASPHALT SATURATED FELT. CLOSE-FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3/16" THICK MAY BE SUBSTITUTED.



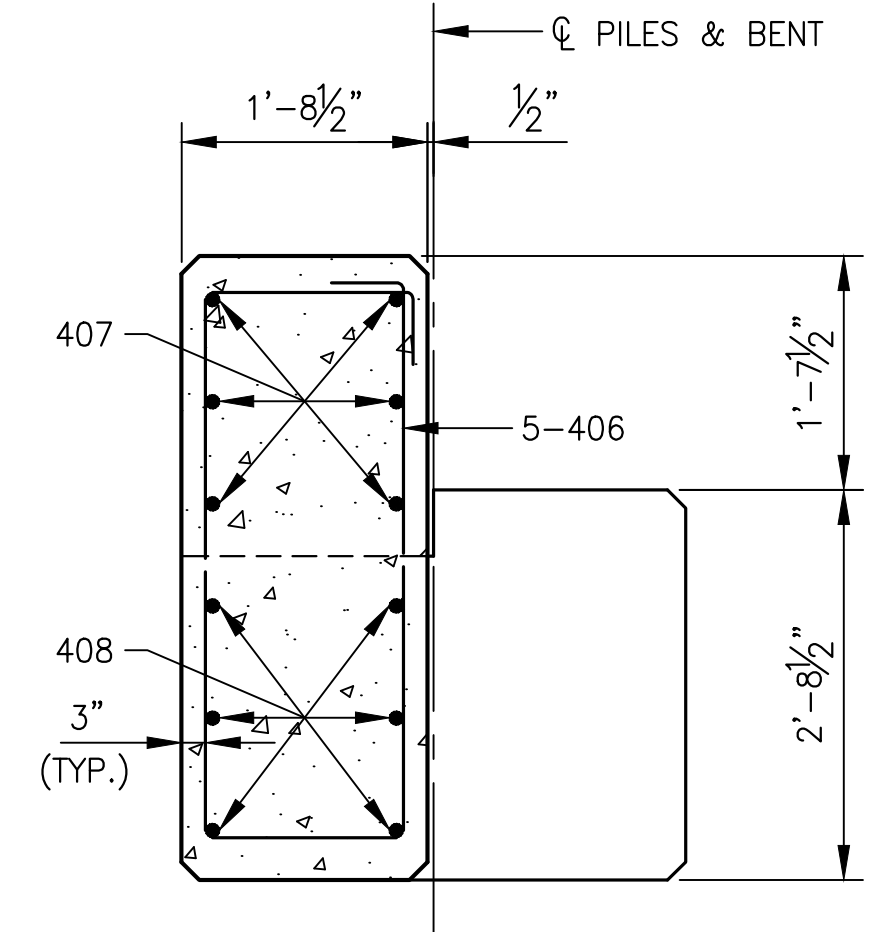
SECTION A-A
SCALE: 3/4"=1'-0"



SECTION B-B
SCALE: 3/4"=1'-0"



SECTION A-A (SHOWING SPAN PLACEMENT)
SCALE: 3/4"=1'-0"



SECTION C-C
SCALE: 3/4"=1'-0"

ESTIMATED QUANTITIES (ONE BENT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	8	26'-0"	208'-0"	LONGIT. IN CAP
802	8	8'-6"	68'-0"	LONGIT. IN CAP
TOTAL #8 BARS = 276'-0"			737 LBS.	
601	15	2'-0"	30'-0"	DOWELS
TOTAL #6 BARS = 30'-0"			46 LBS.	
501	2	26'-0"	52'-0"	LONGIT. IN CAP
TOTAL #5 BARS = 52'-0"			55 LBS.	
401	52	9'-1"	472'-4"	STIRRUPS IN CAP
402	3	3'-4"	10'-0"	STIRRUPS IN KEY
403	2	1'-5"	2'-10"	LONGIT. IN KEY
404	3	26'-0"	78'-0"	LONGIT. IN RISER
405	27	4'-1"	110'-3"	STIRRUPS IN RISER
406	10	11'-1"	110'-10"	STIRRUPS IN WINGWALL
407	12	2'-10"	34'-0"	LONGIT. IN WINGWALL
408	12	4'-0"	48'-0"	LONGIT. IN WINGWALL
TOTAL #4 BARS = 866'-3"			579 LBS.	
TOTAL DEFORMED REINF. STEEL			1417 LBS.	
CLASS A1 CONCRETE (BENTS)			9.76 CU. YDS.	



SHEET NUMBER: 208

PROJECT: ST. TAMMANY

PROJECT: 2014EN0001

PROJECT: NO.15.012

MANDEVILLE BYPASS LA 1088 TO US 190

END BENT DETAILS

DESIGNED: R.J.C.

CHECKED: R.A.C.

DATE: Oct. 2024

SHEET: 1 of 1

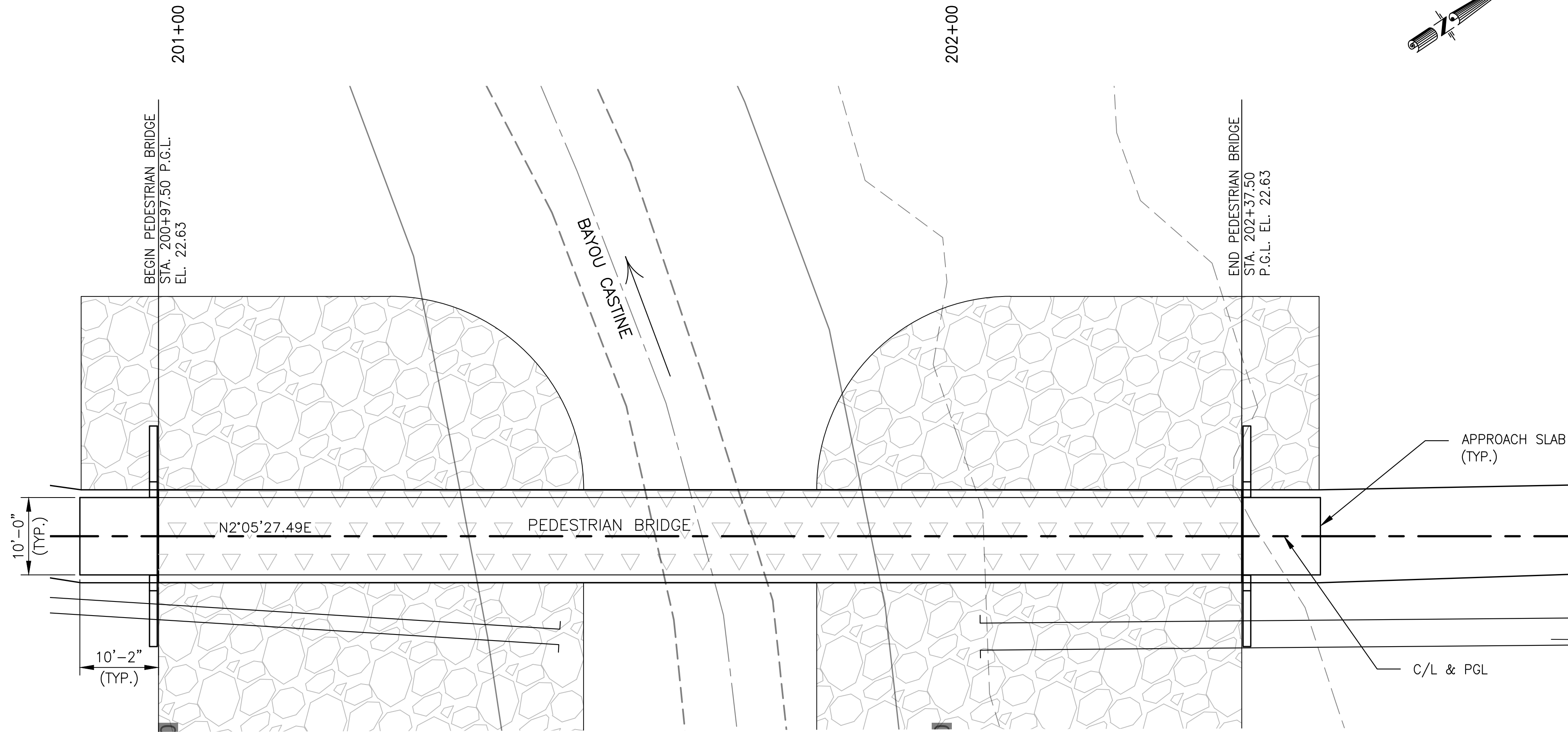
BY: [Signature]

REVISION DESCRIPTION

NO. DATE

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\209_Ped General Bridge Plan.dwg



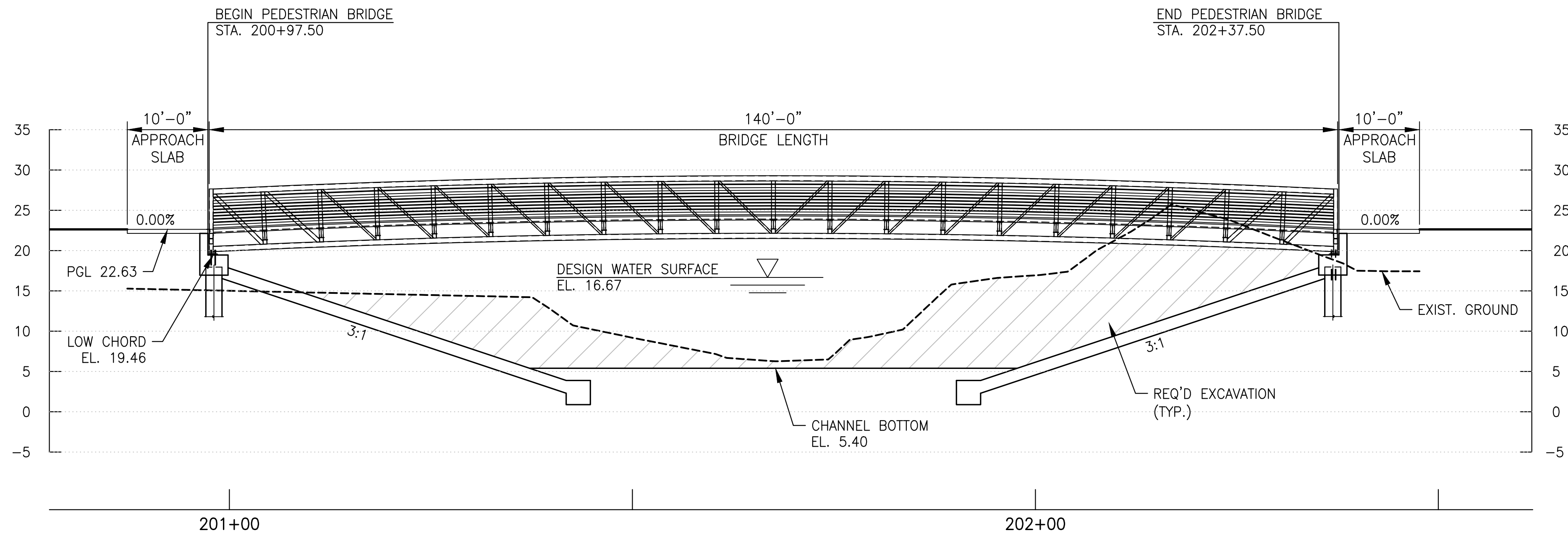
PLAN
SCALE: 1"=10'-0"

LEGEND

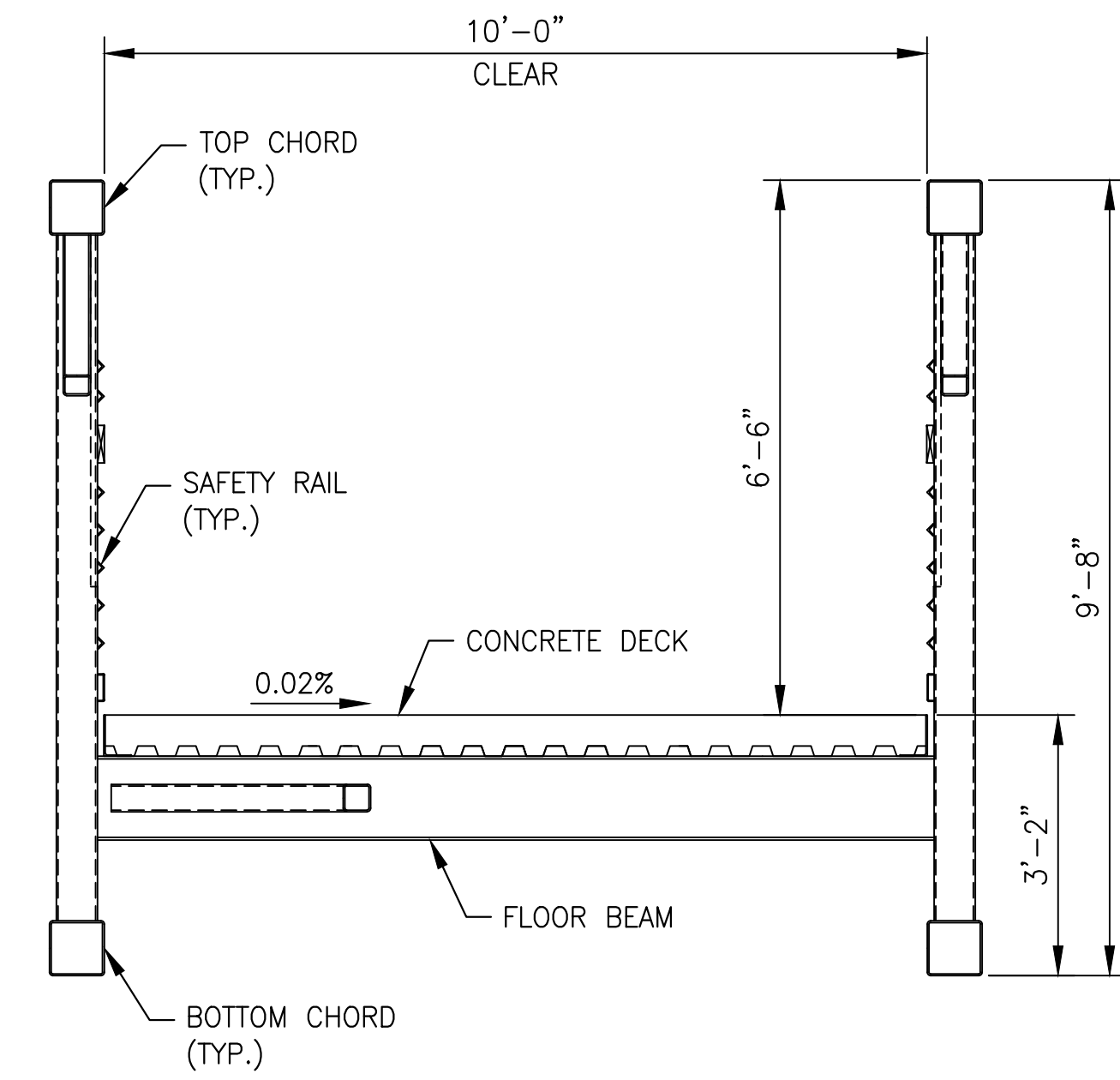
- PEDESTRIAN BRIDGE
- 55 LB. RIPRAP
- DRAINAGE EXCAVATION

NOTES:

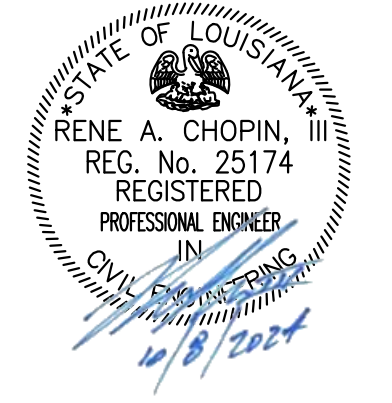
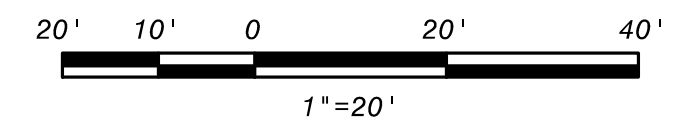
1. BENTS ARE NORMAL (90°) TO THE BASELINE.
2. 5 FT. SCOUR DEPTH IS USED FOR BRIDGE DESIGN.
3. THE TRUSS CONFIGURATION SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS INTENDED TO SHOW THE DESIRED GENERAL CHARACTER OF THE STRUCTURE. IT IS ACKNOWLEDGED THAT THE FINAL TRUSS DESIGN MAY VARY DEPENDENT ON THE MANUFACTURER, BUT SHOULD GENERALLY ADHERE TO THE CONCEPT SHOWN.
4. THE BRIDGE CROSS SECTION SHALL BE DETERMINED BY THE CONTRACTOR BUT SHALL MAINTAIN THE WIDTH OF THE WALKING AREA, CROSS SLOPE, RAIL AND HANDRAIL DETAILS SHOWN IN THE TYPICAL SECTION AND ELEVATION VIEW.



ELEVATION
SCALE: 1"=10'-0"



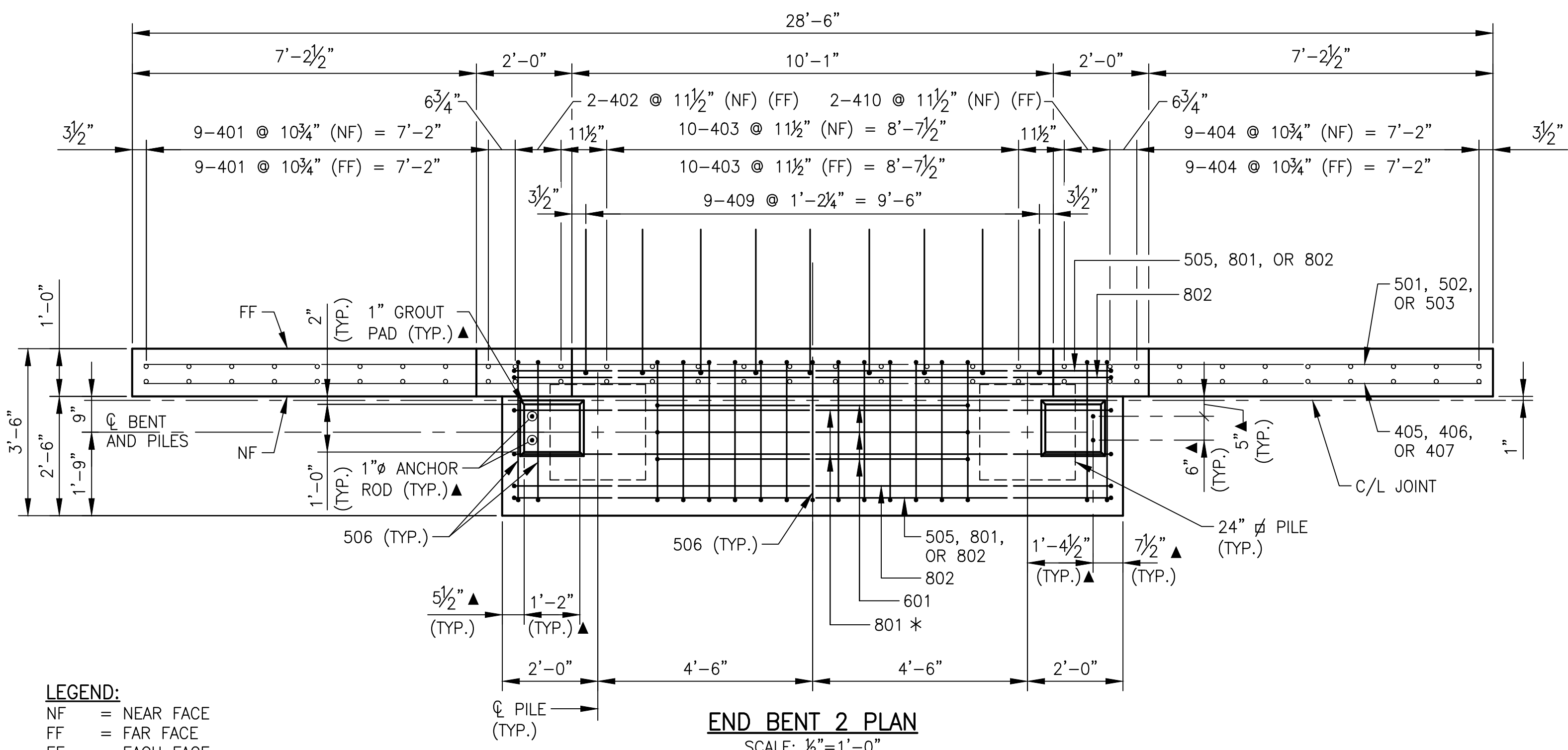
TYPICAL SECTION
N.T.S.



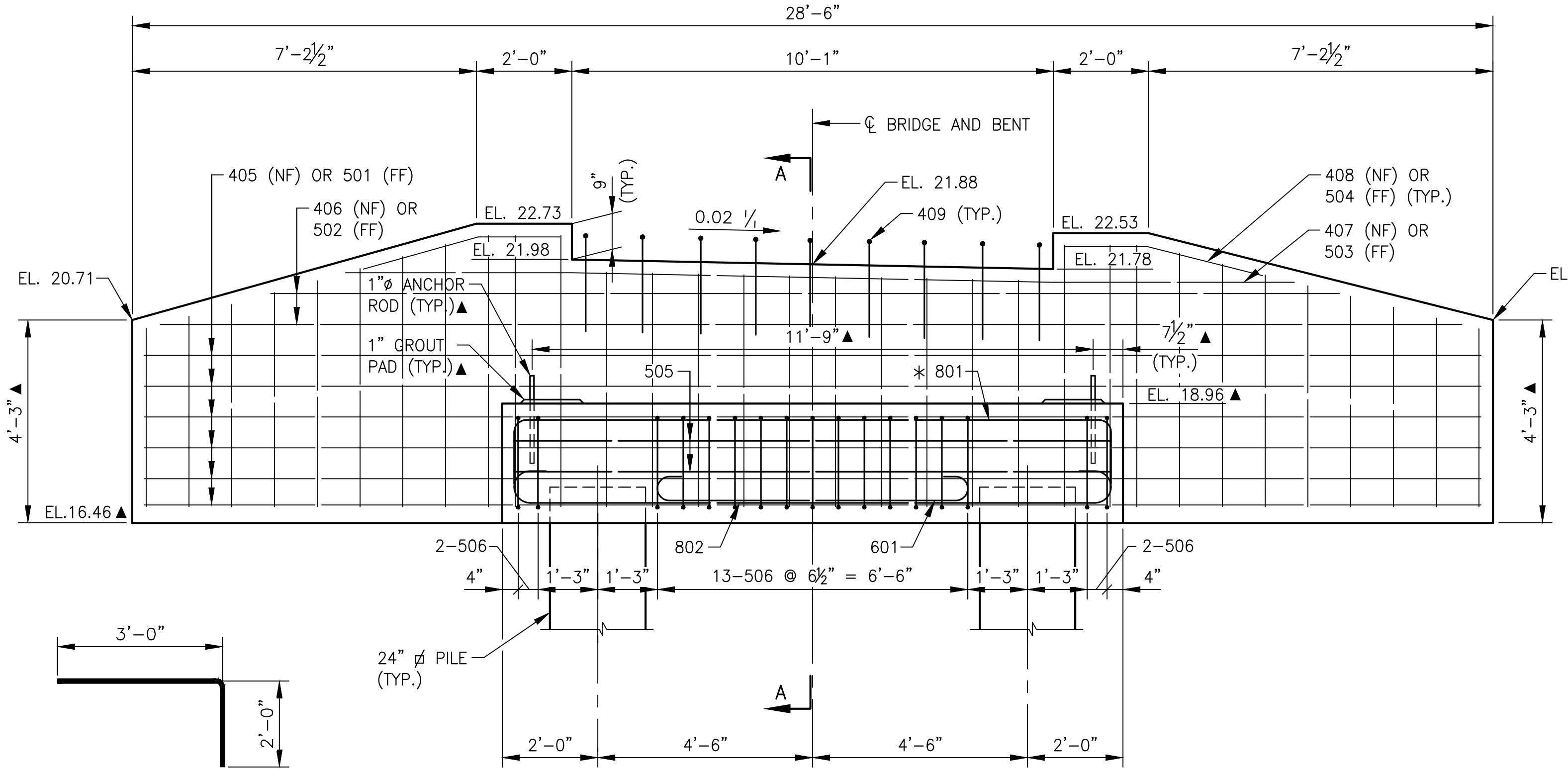
SHEET NUMBER	209
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
STATE OF LOUISIANA	
MANDEVILLE BYPASS LA 1088 TO US 190	PEDESTRIAN GENERAL BRIDGE PLAN
ROADWAY PLANS	
DESIGNED R.J.C.	CHECKED R.A.C.
DATE	10/8/2024
SHEET	1 OF 1
REVISION DESCRIPTION	BY
NO.	DATE

DATE: 10/7/24

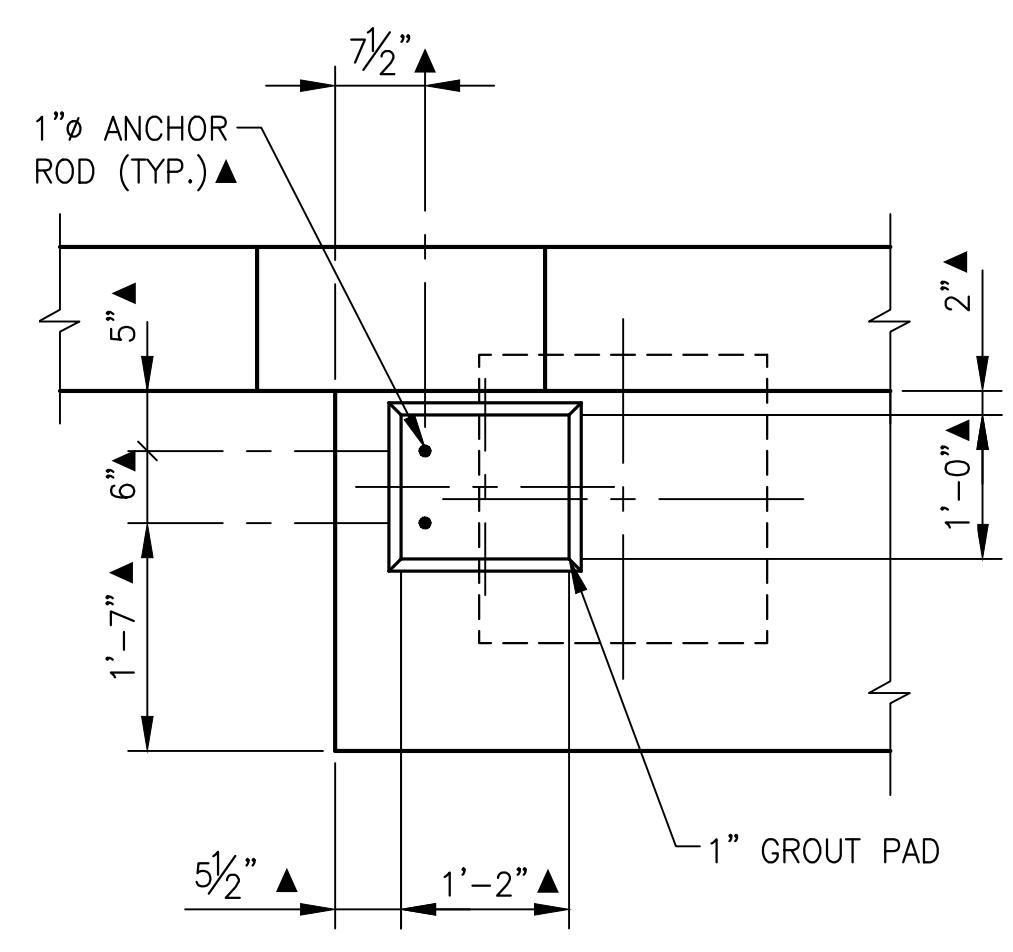
FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\210_Ped End Bent Details.dwg



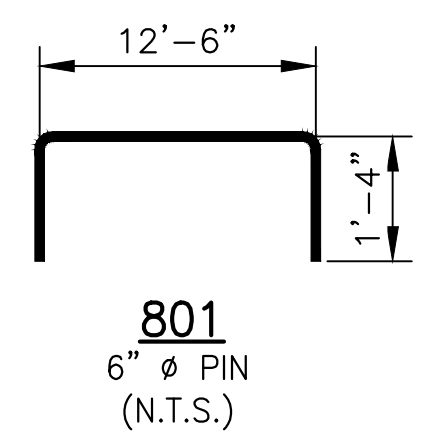
END BENT 2 PLAN
SCALE: 1/2"=1'-0"
(END BENT 1 IS OPPOSITE HAND)



ELEVATION
SCALE: 1/2"=1'-0"

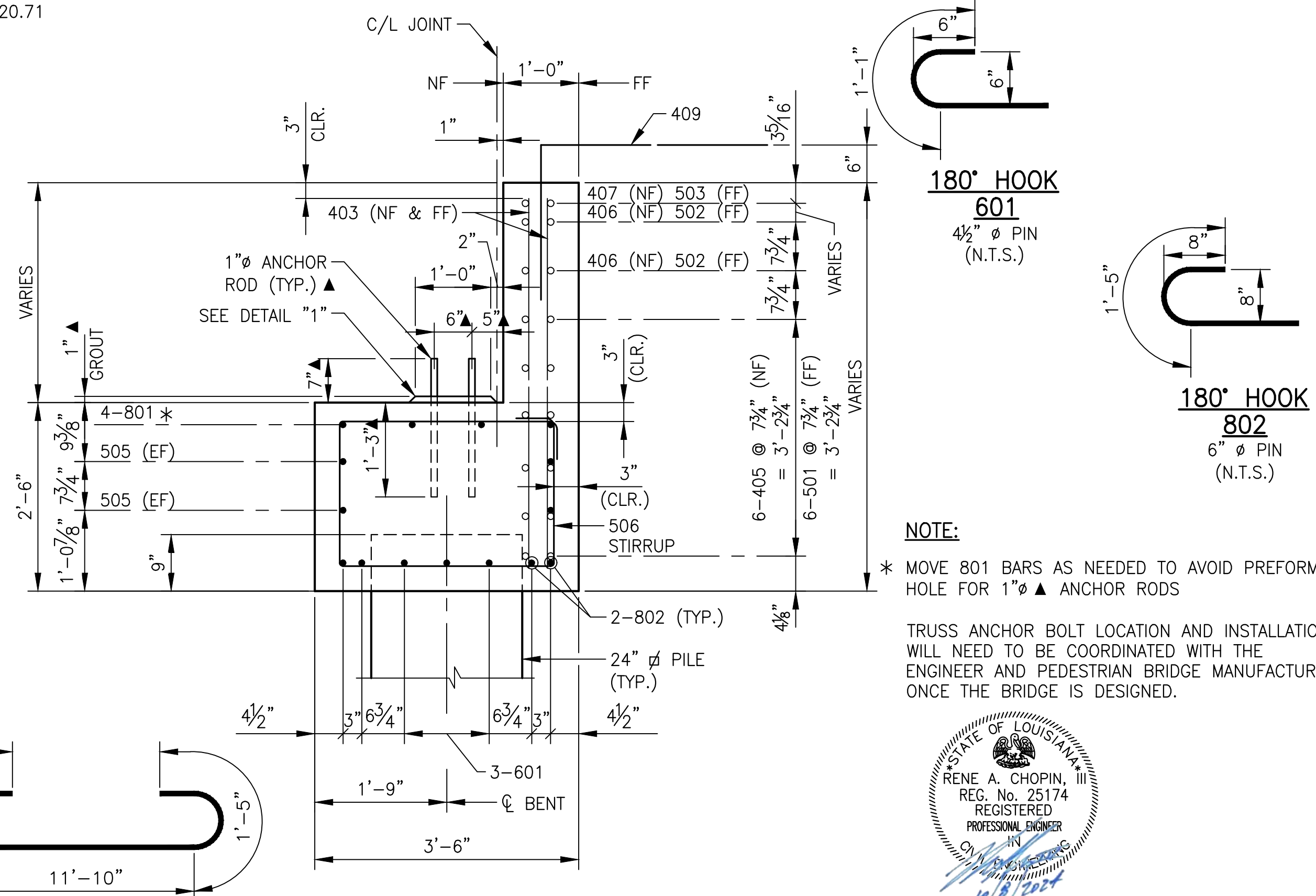


DETAIL "1"
SCALE: 3/4"=1'-0"

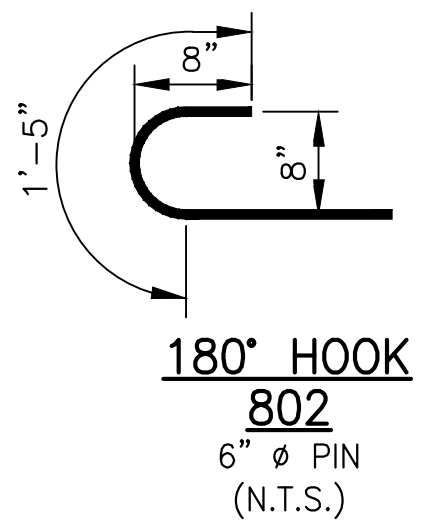
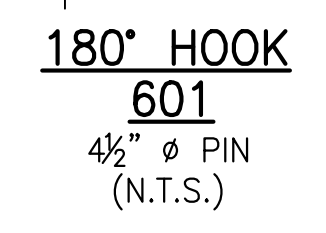
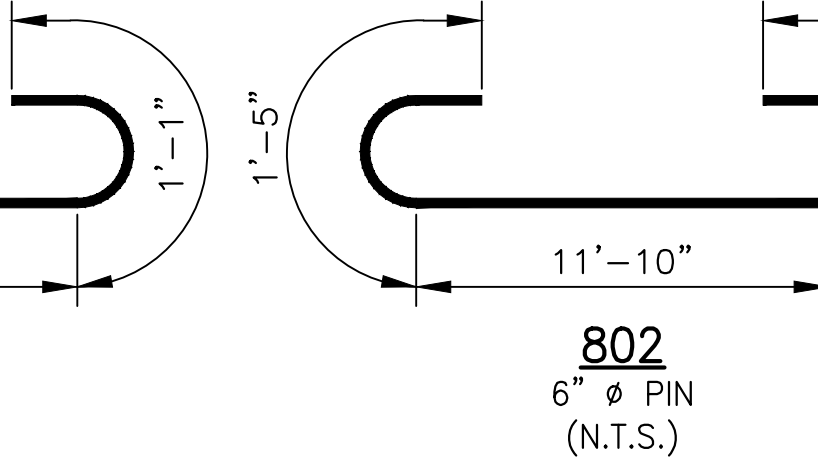
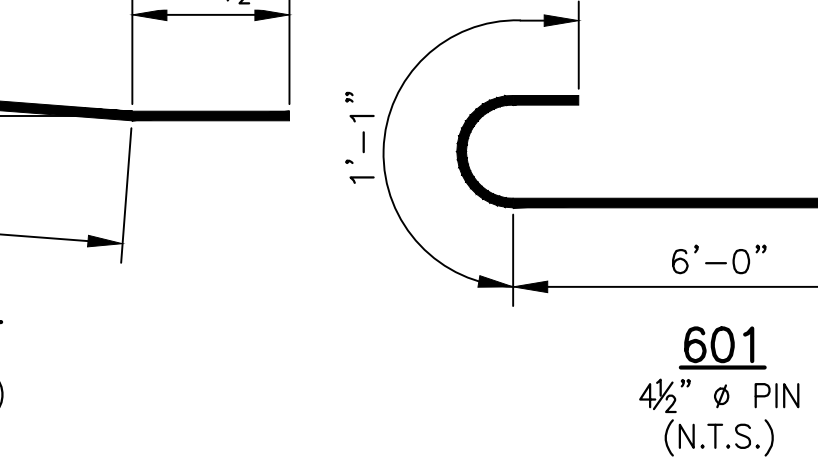
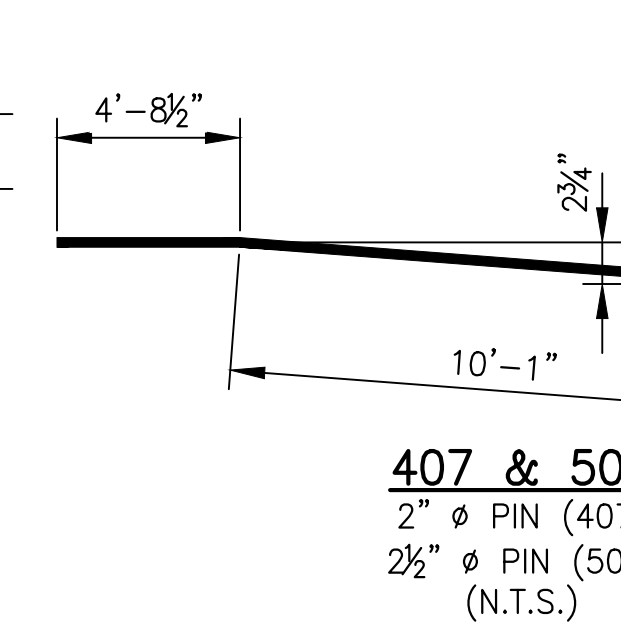
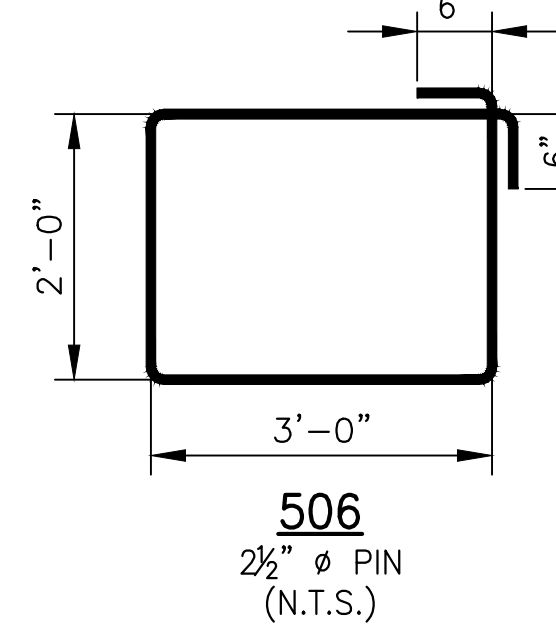
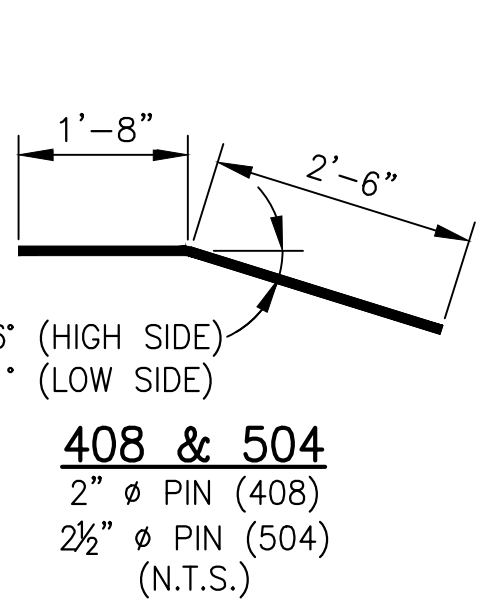


▲ DIMENSION, ELEVATION, AND ADJUSTMENTS TO REINFORCEMENT TO BE COORDINATED WITH PEDESTRIAN BRIDGE MANUFACTURER.

ESTIMATED QUANTITIES (ONE BENT)						
BAR NO.	NO.	SHORT BAR	VAR (IN.)	LONG BAR	TOTAL LENGTH	LOCATION
801	4			15'-2"	60'-8"	LONGIT. IN CAP
802	4			14'-8"	58'-8"	LONGIT. IN CAP
TOTAL #8 BARS = 119'-4"					319 LBS.	
601	3			8'-2"	24'-6"	LONGIT. IN CAP
TOTAL #6 BARS = 24'-6"					37 LBS.	
501	6			28'-0"	168'-0"	LONGIT. IN WINGWALL
502	2	22'-5"	58.0000	27'-3"	49'-8"	LONGIT. IN WINGWALL
503	1			19'-10"	19'-10"	LONGIT. IN WINGWALL
504	2			4'-2"	8'-4"	LONGIT. IN WINGWALL
505	4			12'-6"	50'-0"	LONGIT. IN BENT CAP
506	17			11'-0"	187'-0"	STIRRUP IN BENT CAP
TOTAL #5 BARS = 482'-10"					504 LBS.	
401	18	3'-9"	2.8750	5'-8"	84'-9"	VERTICAL IN WINGWALL
402	4			5'-9"	23'-0"	VERTICAL IN WINGWALL
403	20	4'-9"	0.2222	4'-11"	96'-8"	VERTICAL IN BACKWALL
404	18	3'-9"	2.6250	5'-6"	83'-3"	VERTICAL IN WINGWALL
405	6			28'-0"	168'-0"	LONGIT. IN WINGWALL
406	2	22'-5"	58.0000	27'-3"	49'-8"	LONGIT. IN WINGWALL
407	1			19'-10"	19'-10"	LONGIT. IN WINGWALL
408	2			4'-2"	8'-4"	LONGIT. IN WINGWALL
409	9			5'-0"	45'-0"	END BENT BACKWALL
410	4			5'-6"	22'-0"	VERTICAL IN WINGWALL
TOTAL #4 BARS = 600'-6"					402 LBS.	
TOTAL DEFORMED REINF. STEEL					1262 LBS.	
CLASS A1 CONCRETE (BENTS)					8.51 CU. YDS.	



SECTION A-A
SCALE: 3/4"=1'-0"



NOTE:
* MOVE 801 BARS AS NEEDED TO AVOID PREFORMED HOLE FOR 1" ANCHOR RODS

TRUSS ANCHOR BOLT LOCATION AND INSTALLATION WILL NEED TO BE COORDINATED WITH THE ENGINEER AND PEDESTRIAN BRIDGE MANUFACTURER ONCE THE BRIDGE IS DESIGNED.



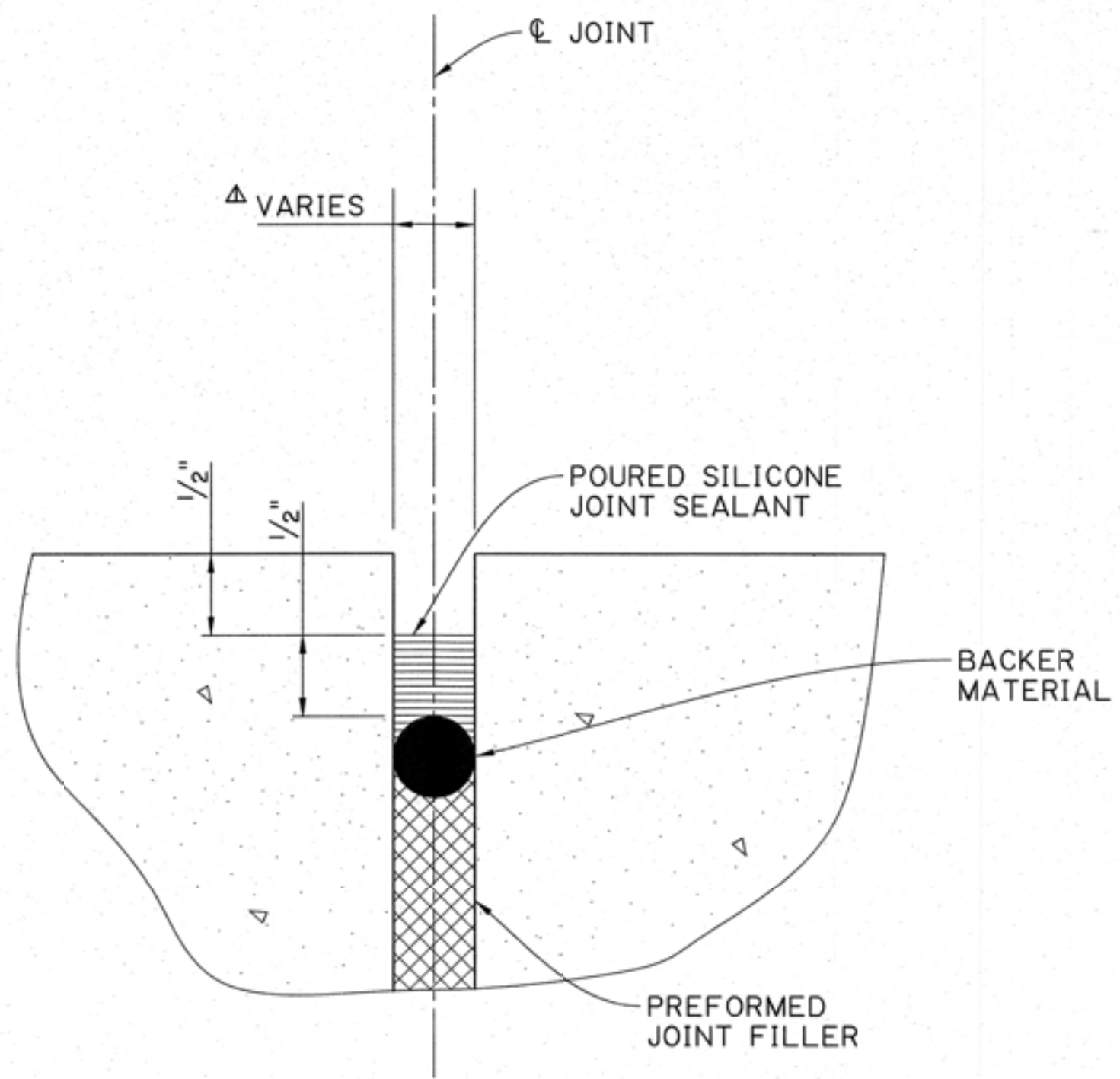
SHEET NUMBER	210
DESIGNED	R.A.C.
CHECKED	G.V.
DATE	Oct. 2024
SHEET	1 of 1
REVISION	DESCRIPTION
NO.	

ST. TAMMANY
PROJECT
2014EN0001
NO.15.012

MANDEVILLE BYPASS
LA 1088 TO US 190

PEDESTRIAN END BENT DETAILS

STATE OF LOUISIANA
RENE A. CHOPIN, II
REG. No. 25174
PROFESSIONAL ENGINEER



POURED SILICONE JOINT - SECTION
(N.T.S.)

NOTES:

1. JOINT FABRICATION AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 815.
2. THE MANUFACTURER'S RECOMMENDED CONSTRUCTION METHODS SHALL BE FOLLOWED.
3. PREFORMED JOINT FILLER SHALL CONFORM TO SECTION 1005.
4. POURED SILICONE JOINT SEALANT AND BACKER MATERIAL SHALL CONFORM TO SECTION 1005. THE BACKER MATERIAL SHALL BE COMPRESSED TO 80% OR LESS OF ITS ORIGINAL DIAMETER FOR INSTALLATION.
5. SEE THE JOINT DATA TABLE IN PLANS FOR DESIGN AND INSTALLATION REQUIREMENTS.
- Δ 6. JOINT WILL BE PAID FOR UNDER PAY ITEM JOINT SEAL (POURED).



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	212	PARISH	CONTROL SECTION	STATE PROJECT
DESIGN CHECK	DETAIL CHECK	REVIEW	SERIES # OF	
A.L. LANCASTER	K. KEMP	J. W. P.	K. KEMP	Y. SHEN
APPROVED BY CHIEF ENGINEER: DATE: 5/12/2021				
MISC. SPAN DETAILS POURED SILICONE JOINT				
STANDARD PLAN JOINT-SC-P				

SHEET NUMBER	213
DESIGNED BY	V. SANCHEZ
CHECKED BY	A. LANCASTER
DATE	
PROJECT	
STATE	LA
SECTION	
PARISH	ST. TAMMANY
REVISION OF CHANGE ORDER DESCRIPTION	
NO.	
DATE	
BY	
REVISION OF CHANGE ORDER DESCRIPTION	
NO.	
DATE	
BY	
REVISION OF CHANGE ORDER DESCRIPTION	
NO.	
DATE	
BY	
REVISION OF CHANGE ORDER DESCRIPTION	
NO.	
DATE	
BY	

GENERAL NOTES

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6th EDITION 2012, WITH 2013 INTERIMS.
 CONCRETE IN PILE: THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A "P1" CONCRETE MIX WITH A MINIMUM COMPRESSIVE CYLINDER STRENGTH OF 6000 PSI AT 28 DAYS. CONCRETE STRENGTH AT THE TIME OF TRANSFER OF PRESTRESSED FORCE SHALL BE 4500 PSI OR GREATER.

CONCRETE IN BUILD-UP: BUILD-UP CONCRETE SHALL MEET OR EXCEED THE CONCRETE REQUIREMENTS OF THE ORIGINAL PILE. BUILT UP CONCRETE NOT MEETING THE ABOVE REQUIREMENTS SHALL BE REMOVED AND REPLACED AT NO DIRECT PAY.

PRESTRESSING STEEL: PRETENSIONED REINFORCEMENT SHALL BE 1/2" DIA. SEVEN-WIRE, UNCOATED LOW-RELAXATION STRANDS GRADE 270 AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M203. AN INITIAL TENSION OF 30,980 LBS. SHALL BE APPLIED TO EACH STRAND.

DEFORMED REINFORCING STEEL: REINFORCING STEEL SHALL BE DEFORMED STEEL BARS, GRADE 60 AND SHALL MEET THE REQUIREMENTS OF AASHTO M31.

SPIRAL REINFORCING STEEL: SPIRAL REINFORCEMENT SHALL BE SIZE W-4.5 COLD-DRAWN STEEL WIRE AND SHALL CONFORM TO AASHTO M 32M.

FABRICATION TOLERANCES: MANUFACTURE OF THE PILING AND FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH THE "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS (MNL-116, LATEST EDITION) PUBLISHED BY PCI, AND THE DRAFT DETAIL SHOWN BELOW.

CHAMFERS AND CORNERS: ON PILES 18" Ø OR SMALLER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE 3/4" CHAMFERS. ON PILES 20" Ø OR LARGER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE 1/2" CHAMFERS. A 1" RADIUS CURVE WILL BE PERMITTED IN LIEU OF CHAMFERS SHOWN ABOVE. HOWEVER, ALL PILES FURNISHED SHALL BE OF THE SAME CONFIGURATION.

PICK-UP AND HANDLING: LOADING CRITERIA ARE BASED ON CAREFUL HANDLING OF THE PILE. ROTATION OF THE PILE IN THE SLING SHALL BE PREVENTED UNTIL THE PILE IS IN VERTICAL POSITION.

PICK-UP POINTS FOR ALL THE PILES SHALL BE CLEARLY MARKED ON PILES. SUPPORT FOR STORAGE SHALL BE AT PICK-UP POINTS. IN THE CASE OF 1-POINT PICK-UP, SUPPORT PILE AT 0.29L₁ FROM EACH END.

PILES SHALL BE MADE AT A CENTRAL PLANT AND BE TRANSPORTED TO THE BRIDGE SITE. BEFORE TRANSPORTATION, ALL PRESTRESSED PILING SHALL BE HELD AT THE PLANT FOR 14 DAYS AFTER CASTING AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI.

PICK-UP POINTS SHOWN MAY BE MODIFIED FOR TRANSPORTATION PURPOSES, PROVIDED THE PILE STRESSES ARE IN ACCORDANCE WITH THE DESIGN CRITERIA. ANY SUPPORT CONFIGURATION DIFFERING FROM THOSE SHOWN ON THIS PLAN SHALL REQUIRE STAMPED AND SIGNED CALCULATIONS TO BE SENT TO THE BRIDGE DESIGN ENGINEER FOR REVIEW.

PILES REQUIRING THREE PICK-UP POINTS AND TRUCK TRANSPORTATION SHALL REQUIRE PIVOTING SPREADER BEAMS THAT PROVIDE FOUR POINTS OF SUPPORT TO THE PILE, RESULTING IN PILE STRESSES WITHIN DESIGN CRITERIA. THE TRUCK TRANSPORT SUPPORT POINTS SHALL BE SENT TO THE BRIDGE DESIGN ENGINEER FOR REVIEW.

ALL EMBEDDED LIFTING LOOPS SHALL BE PROVIDED WITH 2" DEEP FOAM BLOCK-OUTS. PRIOR TO TRANSPORT, LIFTING LOOPS SHALL BE REMOVED TO PROVIDE 2" MINIMUM CLEAR COVER. THE REMAINING CAVITIES SHALL BE CLEAR OF ALL SLAG AND LOOSE MATERIAL, AND THEN FILLED WITH A PATCHING MATERIAL FROM QPL NO. 49. THE PATCHING MATERIAL MUST MEET OR EXCEED PILE CONCRETE REQUIREMENTS FOR STRENGTH AND PERMEABILITY.

VENT HOLES: FOR VOIDED PILES THAT REQUIRE BUILD-UP OR CUT-OFF, THE VENT HOLES SHALL BE RE-ESTABLISHED AT 6" BELOW THE BOTTOM OF THE BENT CAP, AS SHOWN IN THE "CUT OFF" AND "BUILD-UP" PILE DETAILS ON THIS PLAN.

SHOP DRAWINGS: ANY DEVIATION FROM THE DETAILS SHOWN ON THIS SHEET, OR ANY DESIGN CHANGES MADE TO THE PILES SHALL REQUIRE SHOP DRAWINGS TO BE SUBMITTED TO THE BRIDGE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

ALLOWABLE HANDLING STRESSES: THE MAXIMUM LENGTHS FOR PICK-UP HAVE BEEN DETERMINED USING THE FOLLOWING AASHTO LRFD STRESSES FOR BOTH 14 AND 90 DAYS.

CONTROL OF CRACKS IN CONCRETE: VOIDS SHALL TERMINATE NOT LESS THAN 12 INCHES BEYOND THE LONGEST PILE SPLICE REBAR EXTENSION.

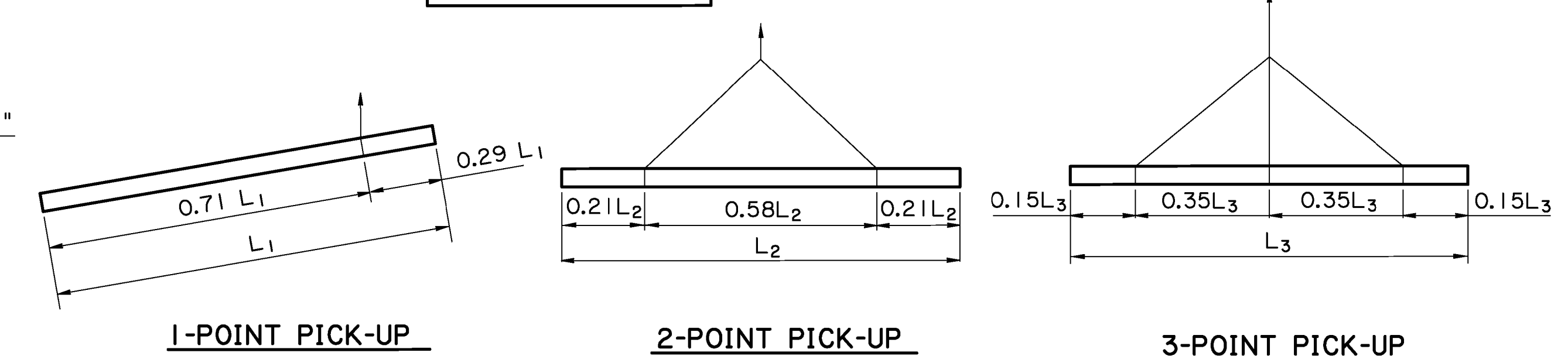
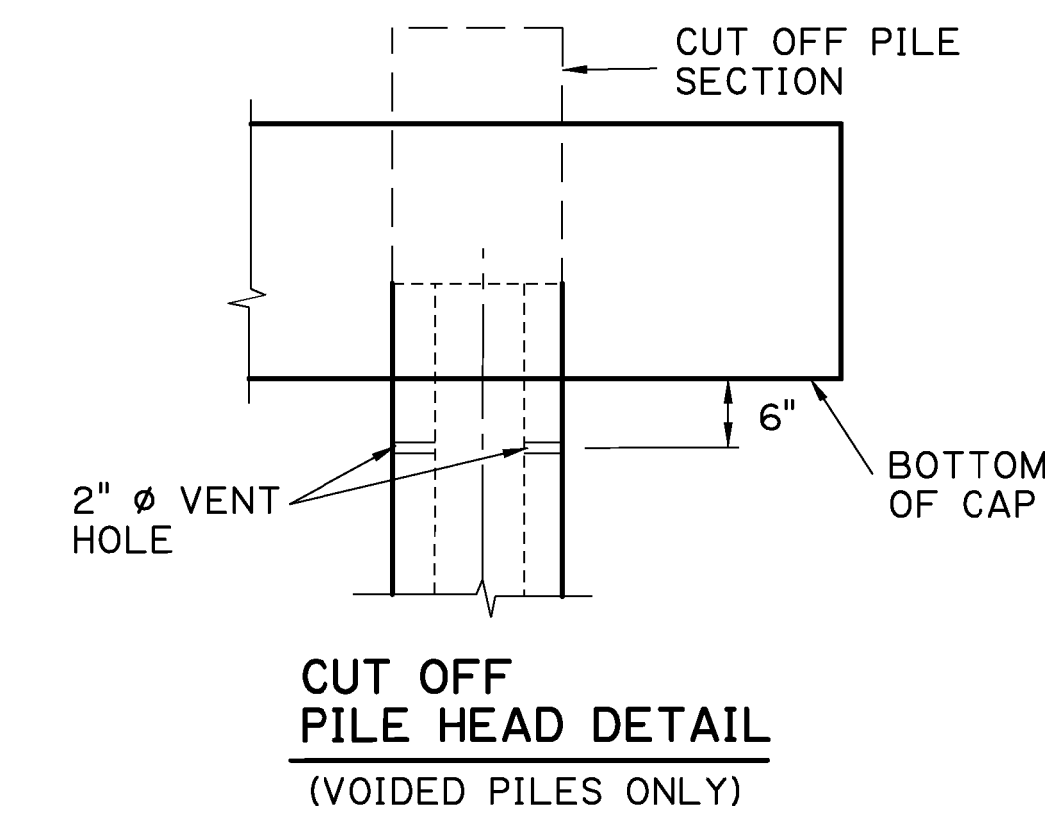
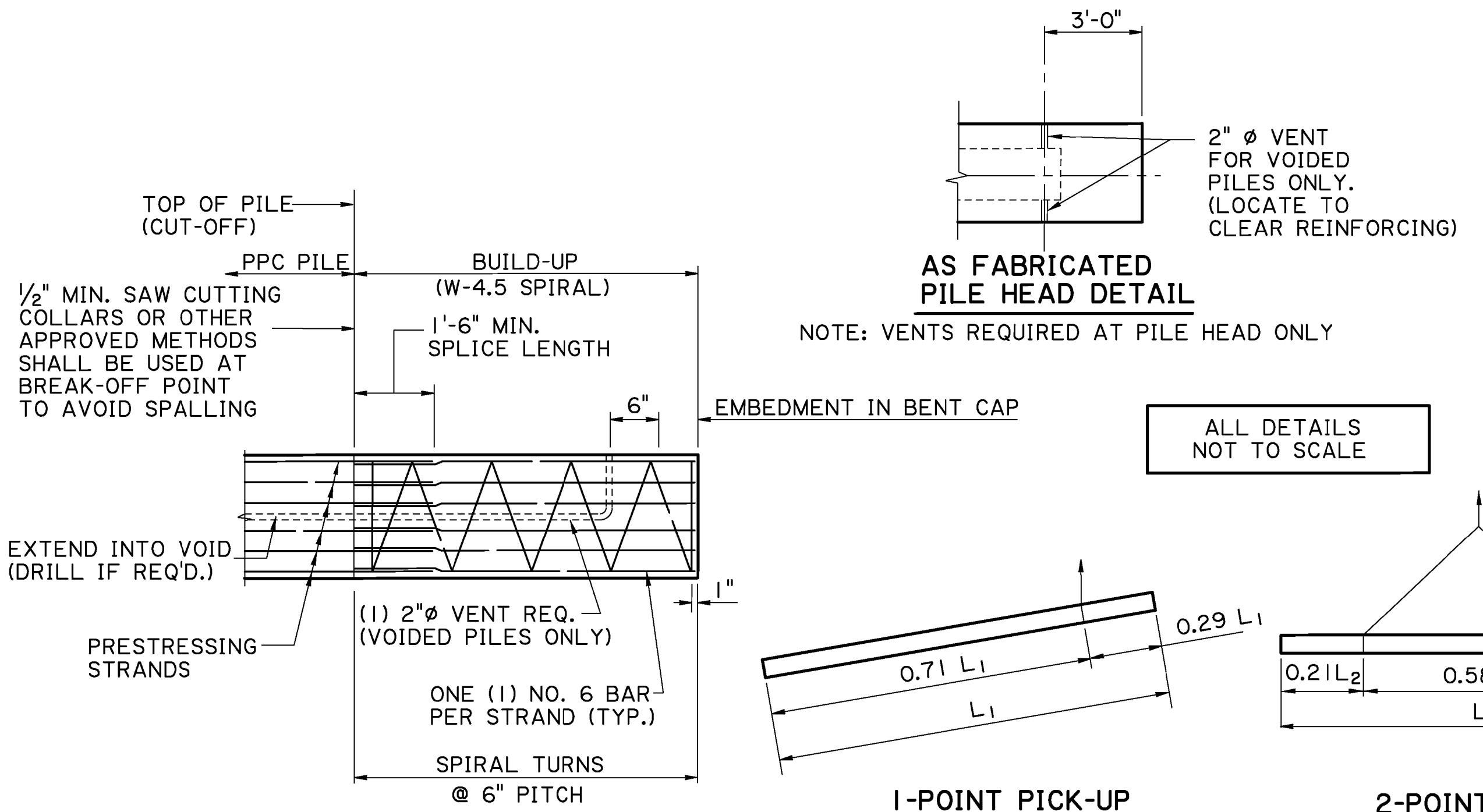
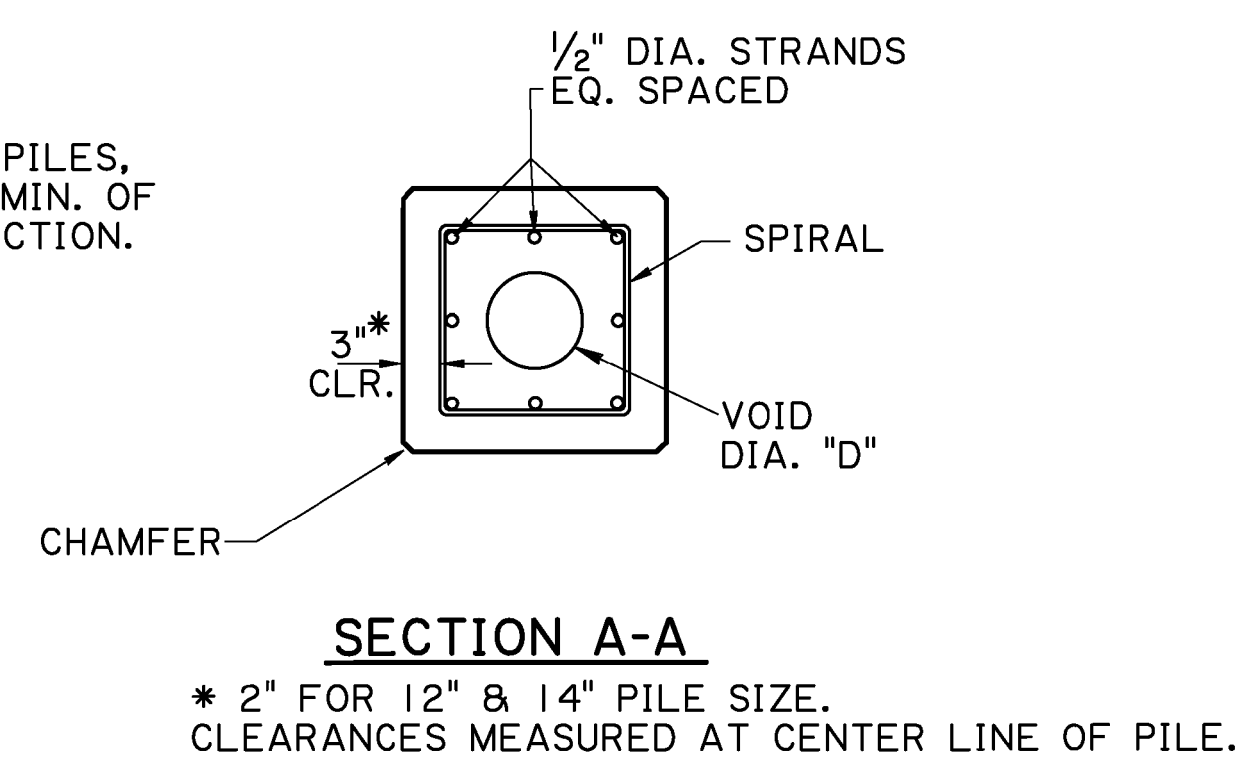
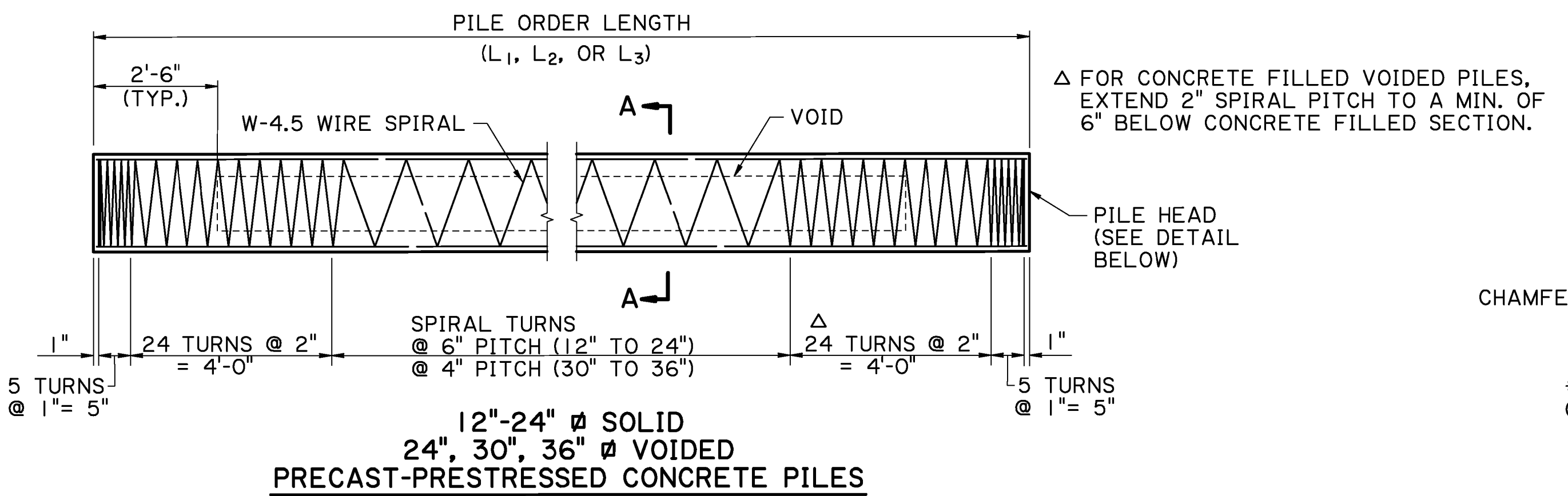
MOMENT CONNECTIONS: WHENEVER METAL PIPE IS USED TO FORM A MOMENT CONNECTION THE SPIRAL SPACING (2") SHALL EXTEND THE FULL LENGTH OF AND AT LEAST 18 INCHES BEYOND THE END OF THE PILE.

ALLOWABLE TENSILE STRESS (ksi): $0.19 \sqrt{f'_c}$
 ALLOWABLE COMPRESSIVE STRESS (ksi): $0.45 f'_c$
 IMPACT FACTOR: 1.5
 MIN. FINAL COMPRESSIVE STRESS: 0.7 ksi

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



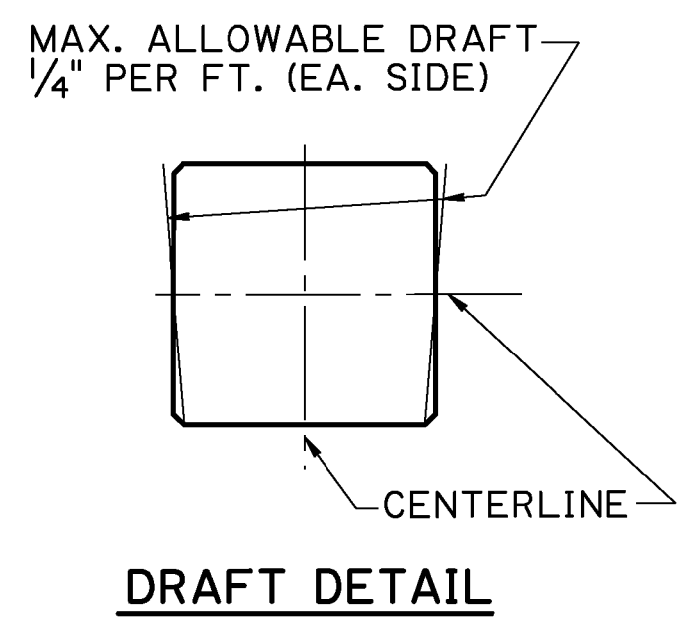
05/17/17



TYP. BUILD-UP WHERE REDRIVING IS NOT REQUIRED (WHERE REDRIVING IS REQUIRED PILE BUILD-UP IS NOT ALLOWED)

2 POINT PICK-UP SHALL TAKE PRECEDENCE OVER 3 POINT PICK-UP WHERE APPLICABLE.

PILE SIZE (in.)	SECTION PROPERTIES					SQUARE SPIRAL LAYOUTS					
	VOID "D" (in.)	AREA (in. ²)	SECTION MODULUS (in. ³)	WEIGHT PER FOOT (lb/ft)	CHAMFER (in.)	NO. OF STRANDS	PRESTRESS IN CONCRETE (psi)		MAX. CASTING LENGTH (ft)		
							AT RELEASE	AT 90 DAYS	L ₁	L ₂	L ₃
12 SOLID	0	144	288	150	3/4"	4	830	774	53.3	76.0	105.0
14 SOLID	0	196	457	204	3/4"	8	1203	1116	66.0	93.4	130.4
16 SOLID	0	256	683	267	3/4"	12	1373	1273	67.6	95.7	136.7
18 SOLID	0	324	972	338	3/4"	12	1096	1026	72.0	102.7	142.5
20 SOLID	0	400	1333	417	1/2"	16	1180	1106	78.4	111.3	154.6
24 SOLID	0	576	2304	600	1/2"	24	1227	1154	86.7	122.7	172.0
24 VOIDED	10.5	489	2254	510	1/2"	20	1204	1119	92.9	131.4	183.2
30 VOIDED	16.5	686	4257	715	1/2"	28	1203	1120	107.8	152.6	212.5
36 VOIDED	22.5	898	7077	936	1/2"	36	1182	1102	120.6	170.9	237.9



PRE-CAST PRESTRESSED CONCRETE PILES



DOTD BRIDGE DESIGN

BRIDGE BARRIER GENERAL NOTES

- CONSTRUCTION SPECIFICATIONS:** CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST APPROVED EDITION, EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.
- CONCRETE:** BRIDGE BARRIER RAILING CONCRETE, INCLUDING ANY BARRIER RAILING TRANSITIONS, SHALL CONFORM WITH SECTION 810. UNLESS NOTED OTHERWISE, ALL EXPOSED EDGES OF BARRIER RAILING CONCRETE SHALL BE CHAMFERED 3/4".
- BASIS OF PAYMENT:** ALL CONCRETE AND REINFORCING STEEL IN BRIDGE BARRIER RAILING AND BARRIER RAILING TRANSITIONS SHALL BE PAID FOR PER LINEAR FOOT OF RAILING, INCLUDING ROADS THAT PROJECT INTO THE BARRIER RAILING OR TRANSITIONS FROM THE WINGWALL OR DECK. BARRIER RAILING TO BE MEASURED FROM CENTERLINE TO CENTERLINE OF JOINTS. SEE GENERAL PLAN OR SUMMARY OF ESTIMATED QUANTITIES SHEETS FOR BARRIER RAILING TYPES AND PAY ITEM NUMBERS.
- CONSTRUCTION JOINT:** REQUIRED CONSTRUCTION JOINT BETWEEN BRIDGE BARRIER RAILING AND DECK SLAB SHALL BE POURED IN ACCORDANCE WITH SECTION 805 AND 810 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
- FINISH OF CONCRETE:** ALL CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH SECTION 805 AND SECTION 810 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
- REINFORCING STEEL:** REINFORCING STEEL SHALL CONFORM TO SECTION 806 AND SECTION 1009. THE FIRST DIGIT(S) OF THE REINFORCING BAR NUMBER INDICATE(S) BAR SIZE. UNLESS NOTED OTHERWISE, DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT-TO-OUT OF BARS AND DIMENSIONS RELATED TO REINFORCING STEEL SPACING ARE CENTER-TO-CENTER OF BARS.

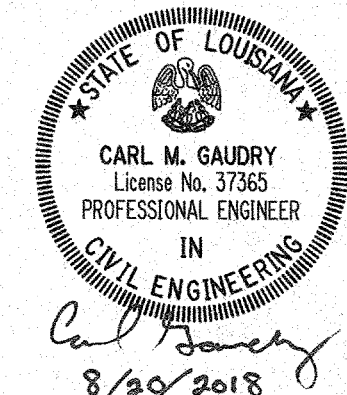
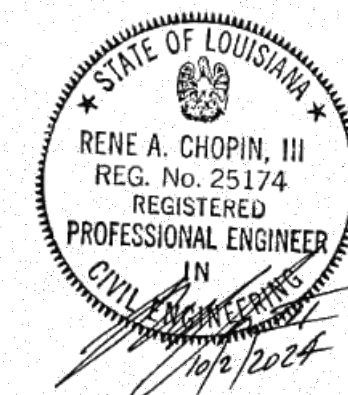
THE MINIMUM COVERING FROM THE SURFACE OF THE BARRIER RAILING CONCRETE TO THE FACE OF ANY DEFORMED REINFORCING BAR SHALL NOT BE LESS THAN 1 1/2". WHEN GALVANIZED OR STAINLESS REINFORCING STEEL IS REQUIRED IN THE BRIDGE DECK, LONGITUDINAL BARS AND STIRRUPS IN THE BARRIER RAIL SHALL HAVE THE SAME PROTECTION.
- BARRIER JOINTS:** ALL BARRIER JOINTS SHALL CONFORM TO SECTION 810.05 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. SEE BRIDGE GENERAL PLAN FOR SPACING OF OPEN JOINTS.

AT SPAN EXPANSION JOINTS, GAPS BETWEEN ADJACENT SECTIONS OF BARRIERS SHALL NOT EXCEED 4" UNLESS A SLIDING ARMORED PLATE IS EMPLOYED TO SHIELD THE OPENING.
- DECK DRAINAGE:** SEE GENERAL PLAN OR SPAN DETAILS FOR LOCATIONS AND TYPE OF DECK DRAINAGE.
- GUARD RAIL:** FOR ADDITIONAL GUARD RAIL DETAILS AND INFORMATION, SEE THE BRIDGE GENERAL PLAN AND THE APPLICABLE GUARD RAIL STANDARD PLANS.
- YEAR PLATE:** THE DATE OF CONSTRUCTION IS REQUIRED ON THE OUTSIDE SHOULDER BRIDGE BARRIER TRANSITION FOR ONCOMING LANES OF TRAFFIC, SEE THE YEAR PLATE SPECIAL DETAIL FOR ADDITIONAL INFORMATION. FOR TAPERED DOWN BARRIER TRANSITIONS, THE YEAR PLATE SHALL BE PLACED ON THE OUTSIDE SHOULDER BRIDGE BARRIER.

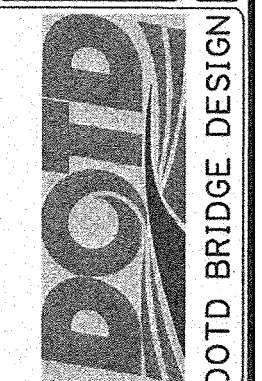
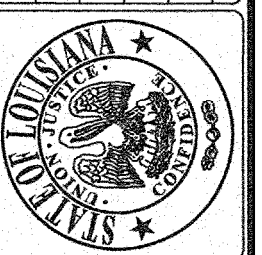
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COMMON DETAILS	BD.2.6.1.1.01	I OF I	BRIDGE BARRIER COMMON - GENERAL NOTES & INDEX	
SPECIFIC DETAILS	32" F-SHAPE BRIDGE BARRIER (32FFS)	BD.2.6.1.2.01	I OF I * 32" F-SHAPE BRIDGE BARRIER DETAILS	
		BD.2.6.1.2.02	I OF I * 32" F-SHAPE TRANSITION ON BRIDGE SPAN	
		BD.2.6.1.2.03	I OF I * 32" F-SHAPE TRANSITION ON WINGWALL	
		BD.2.6.1.2.04	I OF I * 32" F-SHAPE TRANSITION (40' LONG) TO 4" MOUNTABLE CURB	
		BD.2.6.1.2.05	I OF I * 32" F-SHAPE TRANSITION (10' LONG) TO 4" MOUNTABLE CURB	
		BD.2.6.1.2.06	I OF I * 32" F-SHAPE TRANSITION (40' LONG) TO 6" BARRIER CURB	
		BD.2.6.1.2.07	I OF I * 32" F-SHAPE TRANSITION (10' LONG) TO 6" BARRIER CURB	
	36" SINGLE SLOPE BRIDGE BARRIER (36SS)	BD.2.6.1.3.01	I OF I	36" SINGLE SLOPE BRIDGE BARRIER DETAILS
		BD.2.6.1.3.02	I OF I	36" SINGLE SLOPE TRANSITION ON BRIDGE SPAN
		BD.2.6.1.3.03	I OF I	36" SINGLE SLOPE TRANSITION ON WINGWALL
		BD.2.6.1.3.04	I OF I	* 36" SINGLE SLOPE TRANSITION (40' LONG) TO 4" MOUNTABLE CURB
		BD.2.6.1.3.05	I OF I	* 36" SINGLE SLOPE TRANSITION (10' LONG) TO 4" MOUNTABLE CURB
		BD.2.6.1.3.06	I OF I	* 36" SINGLE SLOPE TRANSITION (40' LONG) TO 6" BARRIER CURB
		BD.2.6.1.3.07	I OF I	* 36" SINGLE SLOPE TRANSITION (10' LONG) TO 4" BARRIER CURB

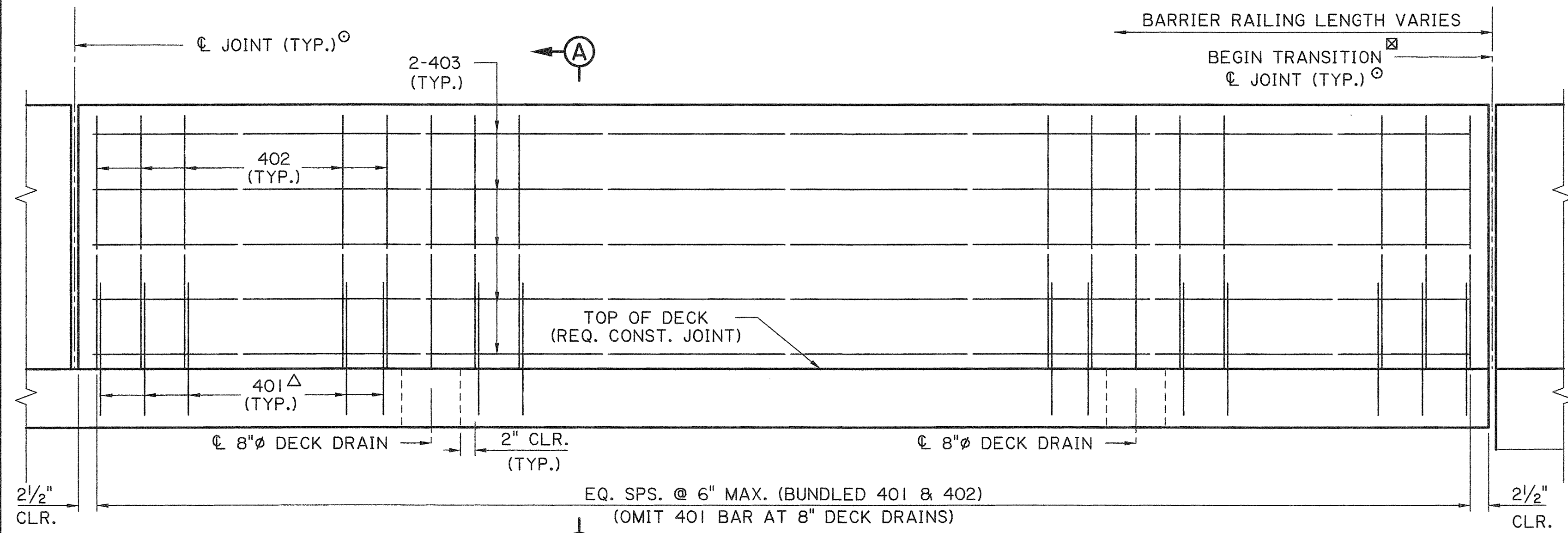
NOTE: NOT EVERY SHEET LISTED IN THE INDEX IS APPLICABLE FOR EVERY PROJECT. THE PROJECT'S BRIDGE DESIGN ENGINEER OF RECORD SHALL SELECT THE APPLICABLE BARRIER OR BARRIER TRANSITION SHEETS TO INCLUDE IN EACH PROJECT PLAN SET.

*: TO BE DEVELOPED

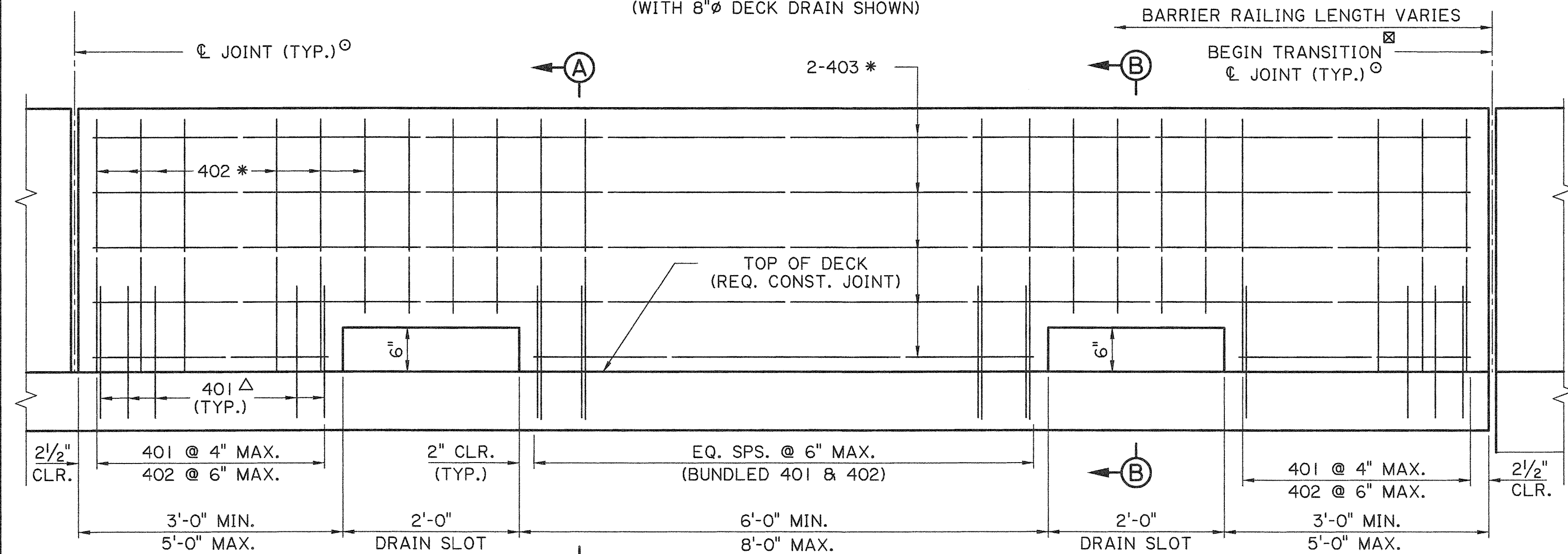


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

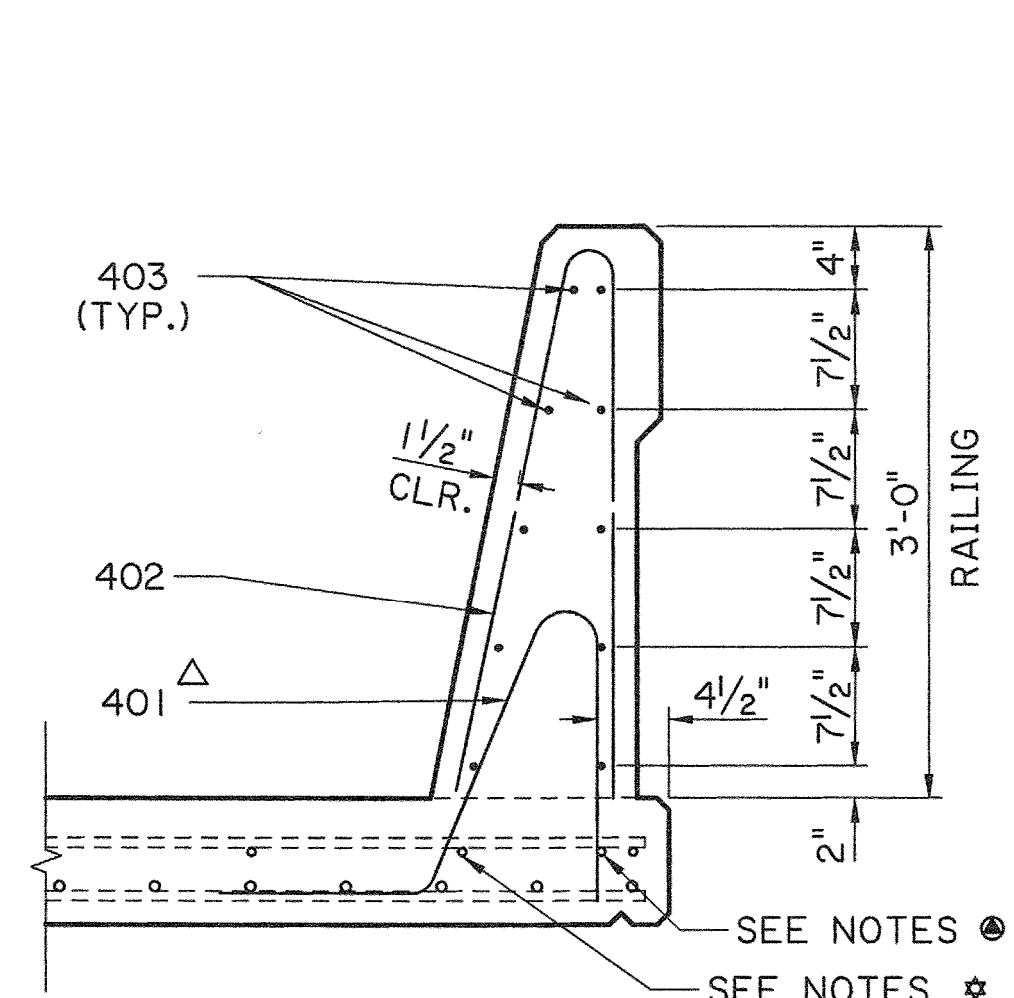




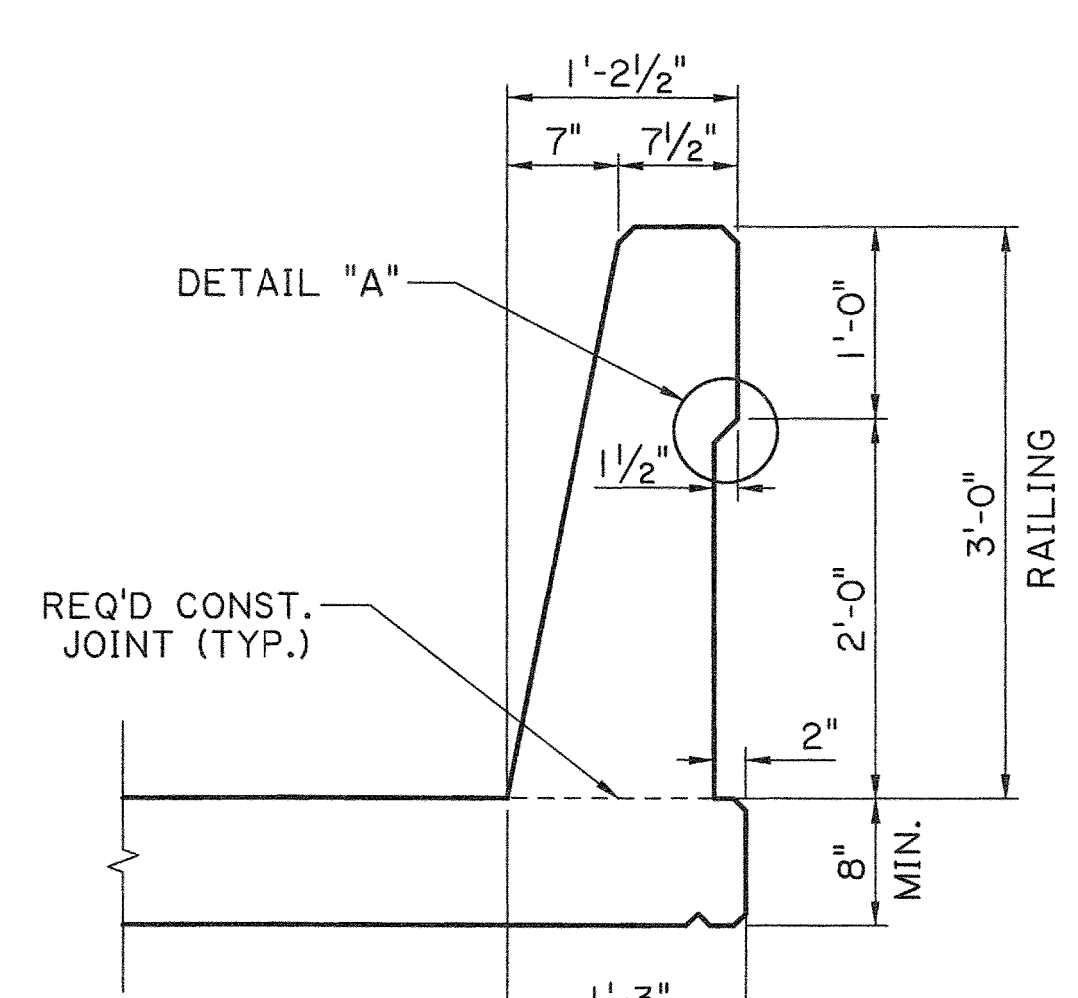
ELEVATION
STANDARD BRIDGE BARRIER RAILING
(WITH 8" DECK DRAIN SHOWN)



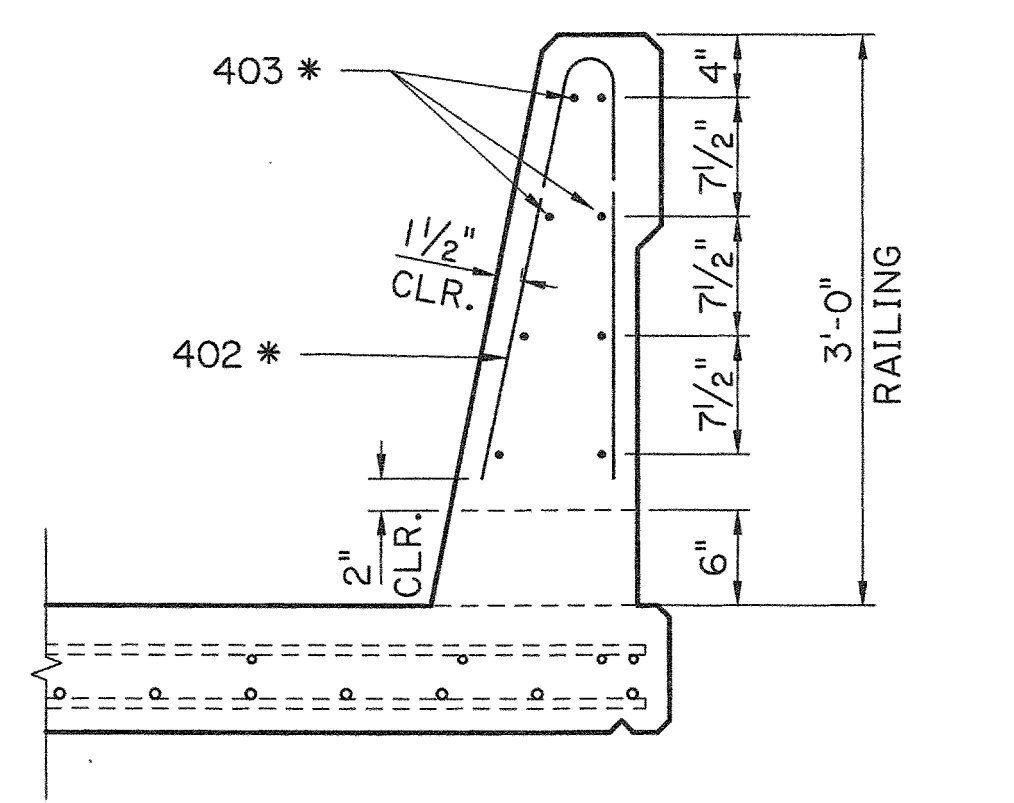
ELEVATION
SLOTTED BRIDGE BARRIER RAILING
WITH HORIZONTAL DRAIN SLOTS



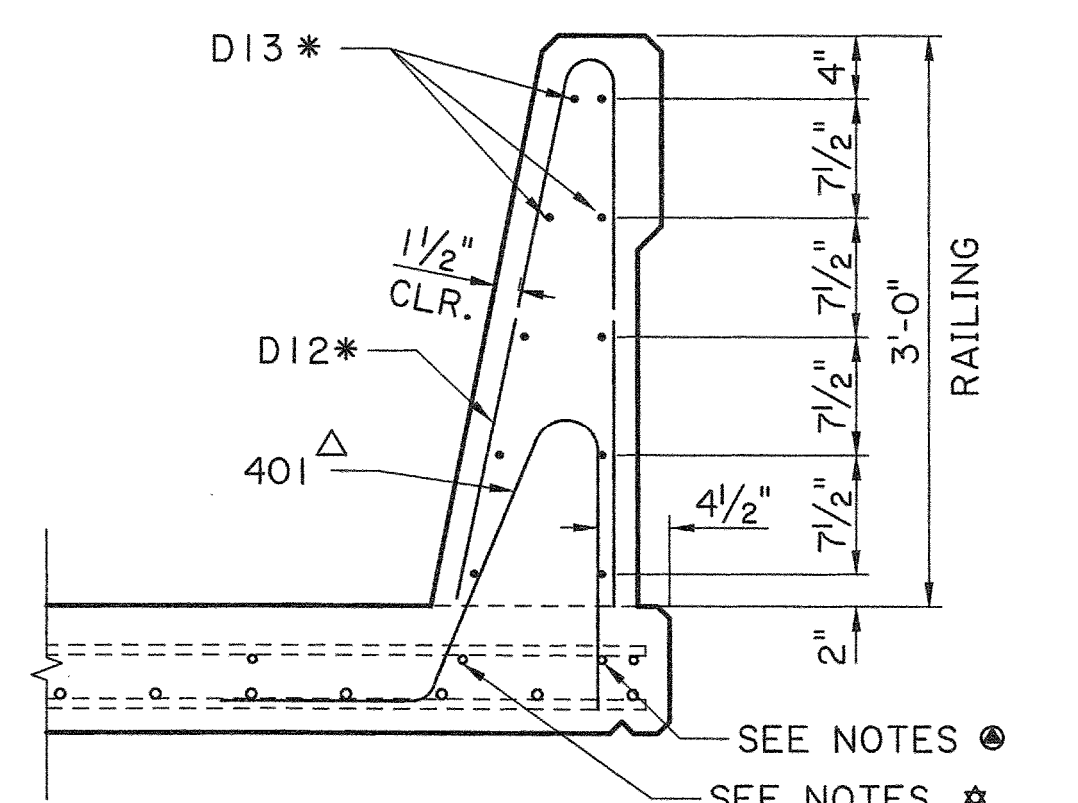
SECTION A-A



TYPICAL SECTION
SHOWING BARRIER DIMENSIONS
(SURFACE AREA = 6.72 SQFT/FT)



SECTION B-B

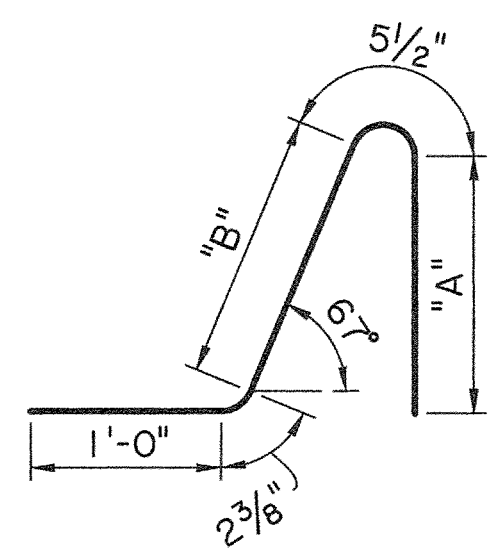


OPTIONAL WELDED WIRE REINFORCEMENT (WWR)

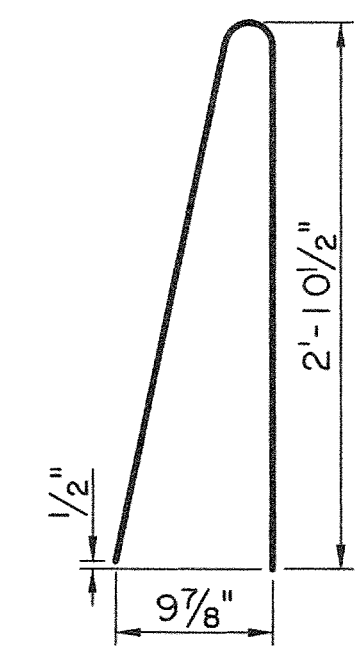
NOTES:

1. SEE "BRIDGE BARRIER COMMON - GENERAL NOTES & INDEX" SHEET FOR GENERAL BRIDGE BARRIER NOTES.
2. THIS RAIL HAS BEEN SUCCESSFULLY EVALUATED BY FULL-SCALE CRASH TESTING TO MEET MASH TL-4 CRITERIA.
3. REINFORCING STEEL DIMENSIONS SHOWN ARE APPLICABLE FOR DECK THICKNESSES SHOWN IN TABLE. ADJUSTMENTS SHALL BE MADE FOR DECKS WITH OTHER THICKNESSES. SEE SPAN DETAILS FOR DECK THICKNESS.
4. DEFORMED WELDED WIRE REINFORCEMENT (WWR) SHALL BE GRADE 70 AND MEET SECTION 1009 WHEN SUBSTITUTED FOR BARS 402 AND 403, AS SHOWN.
- △ 5. OMIT 401 BAR AT 8" DECK DRAINS AND AT BARRIER DRAIN SLOTS.
- ☒ 6. REFER TO BRIDGE GENERAL PLAN FOR BARRIER RAILING TRANSITION TYPE. SEE TRANSITION DETAILS FOR MORE INFORMATION.
- 7. 1" MINIMUM BARRIER JOINT. WHEN COINCIDENT TO SPAN EXPANSION JOINTS, JOINT SHALL BE EQUAL TO SPAN JOINT WIDTH.
- * 8. CUT WHERE REQUIRED TO CLEAR DRAIN SLOTS, MAINTAIN 6" MAX. SPACING OF 402 BAR OVER DRAIN SLOTS.
- 9. AT THE CONTRACTOR'S OPTION, AN ADDITIONAL BAR CAN BE PLACED IN THE DECK TO AID REBAR PLACEMENT.
- * 10. TOP LONGITUDINAL SLAB BAR MAY BE ADJUSTED LATERALLY ±3" TO TIE REINFORCING.

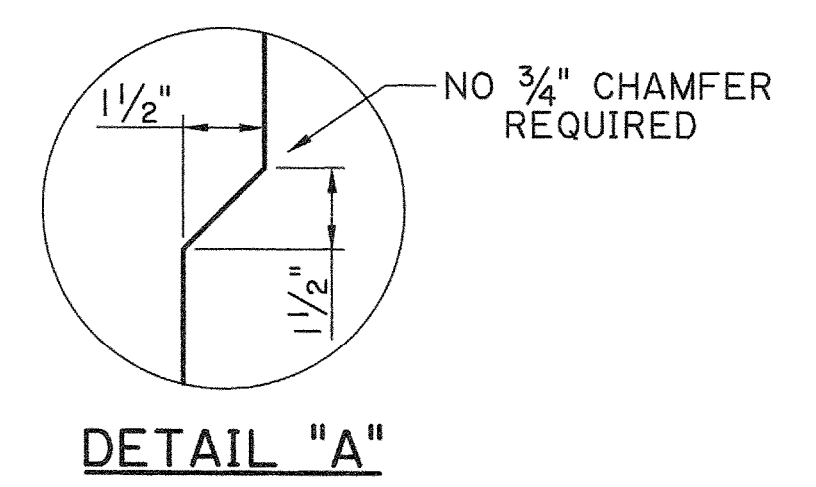
401 BAR DIMENSIONS		
DIMENSION	A	B
8" DECK	1'-4 1/4"	1'-5 1/4"
8 1/2" DECK	1'-4 3/4"	1'-5 7/8"
9" DECK	1'-5 1/4"	1'-6 3/8"
9 1/2" DECK	1'-5 3/4"	1'-7"
13" SLAB SPAN	1'-8 3/4"	1'-10 1/4"
14 1/2" SLAB SPAN	1'-9 5/8"	1'-11 1/4"



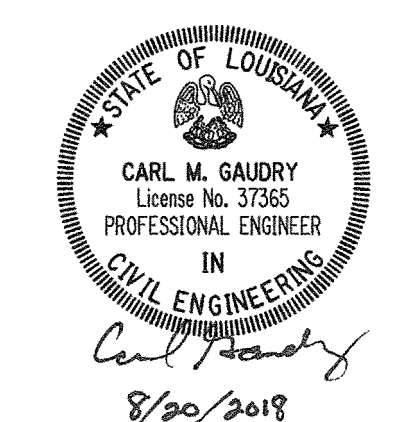
401
(3" Ø PIN)



402
(2" Ø PIN)



DETAIL "A"



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER **215**

ST. TAMMANY

DESIGNED BY S. MAZUR
CHECKED BY C. GAUDRY

DATE

NO.

REVISION OR CHANGE ORDER DESCRIPTION

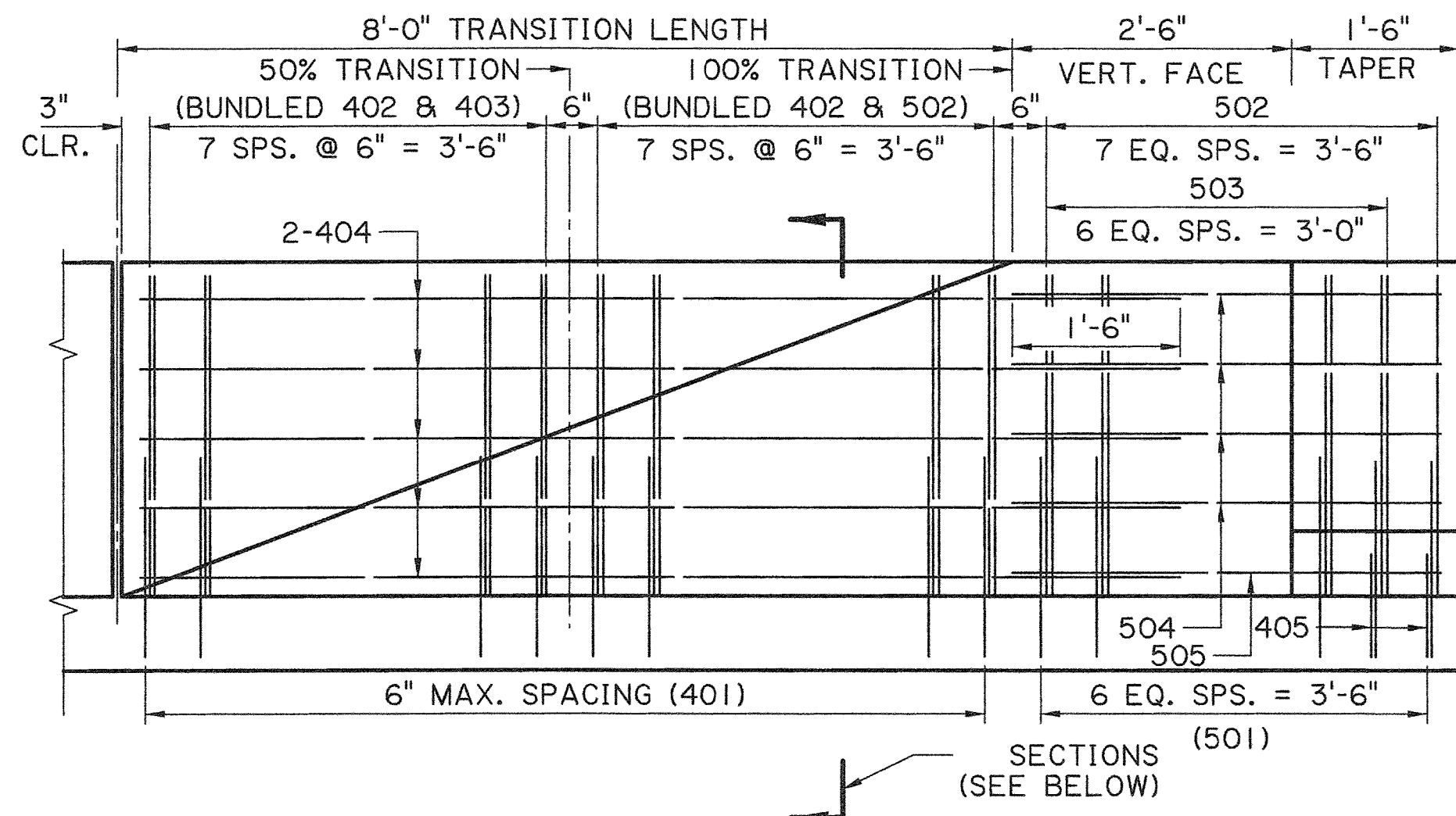
BY

BRIDGE BARRIER DETAILS
36" SINGLE SLOPE

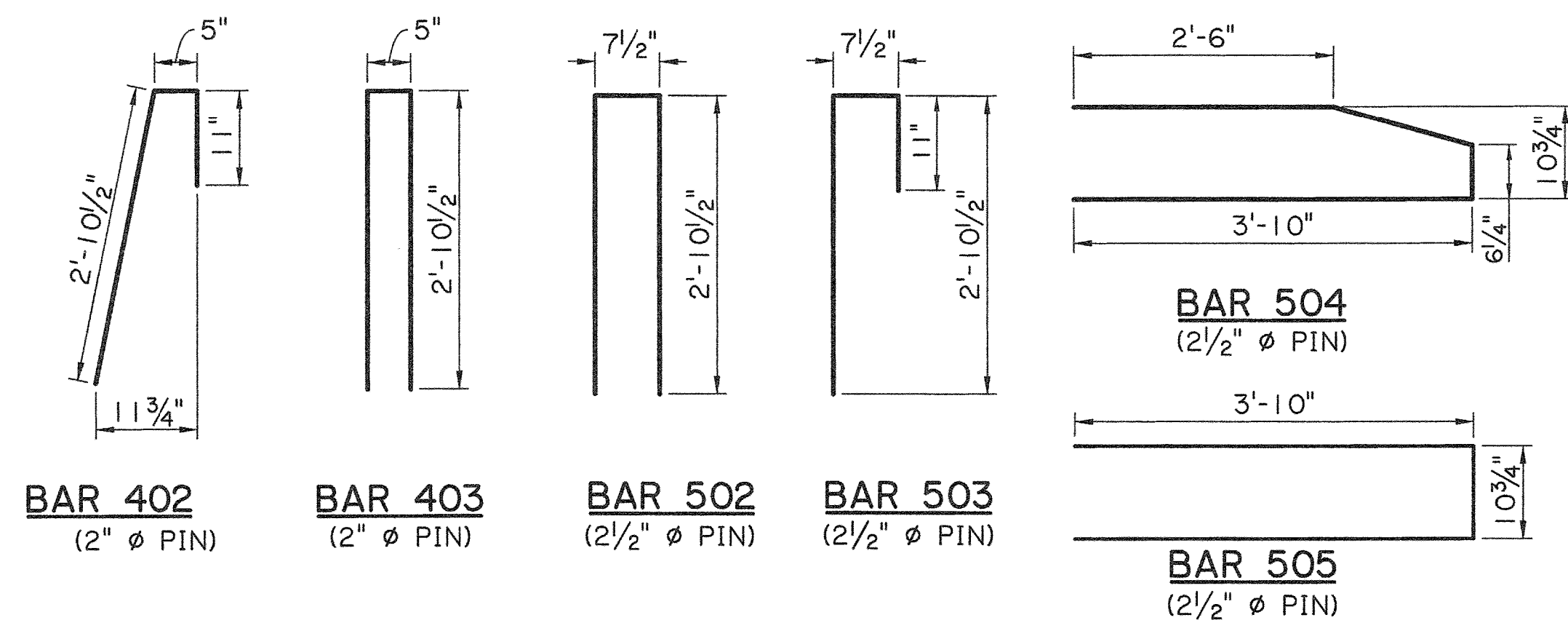
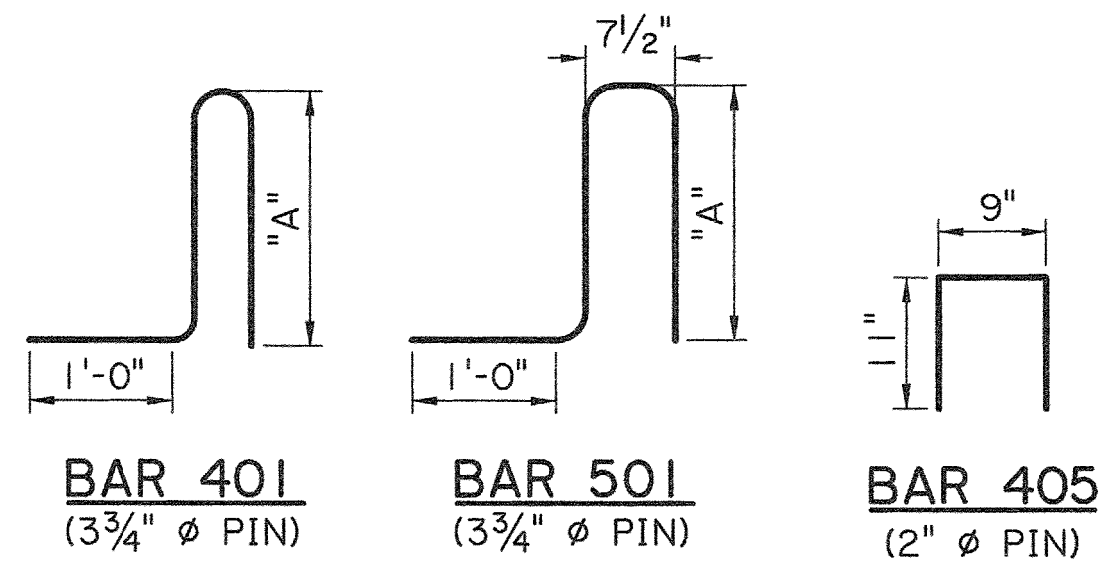
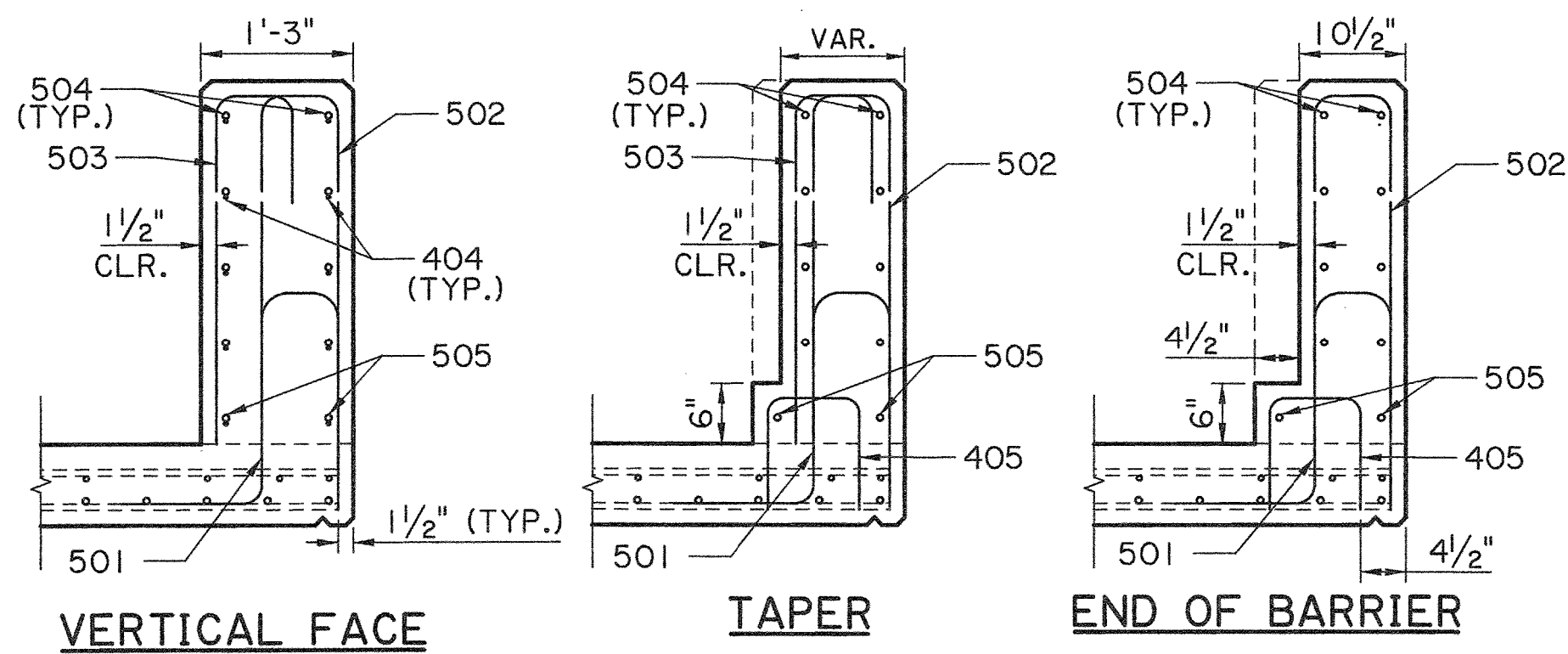
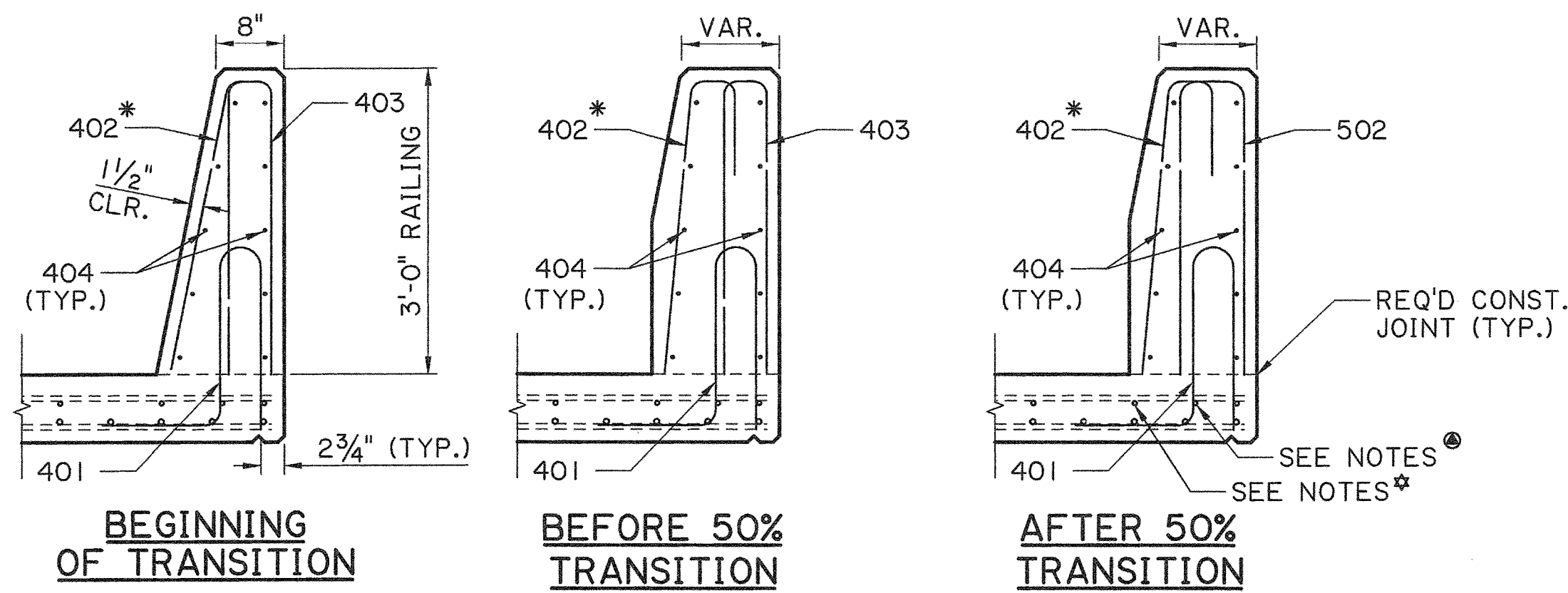
36SS

BD.2.6.1.3.01

DOTD
DOTD BRIDGE DESIGN



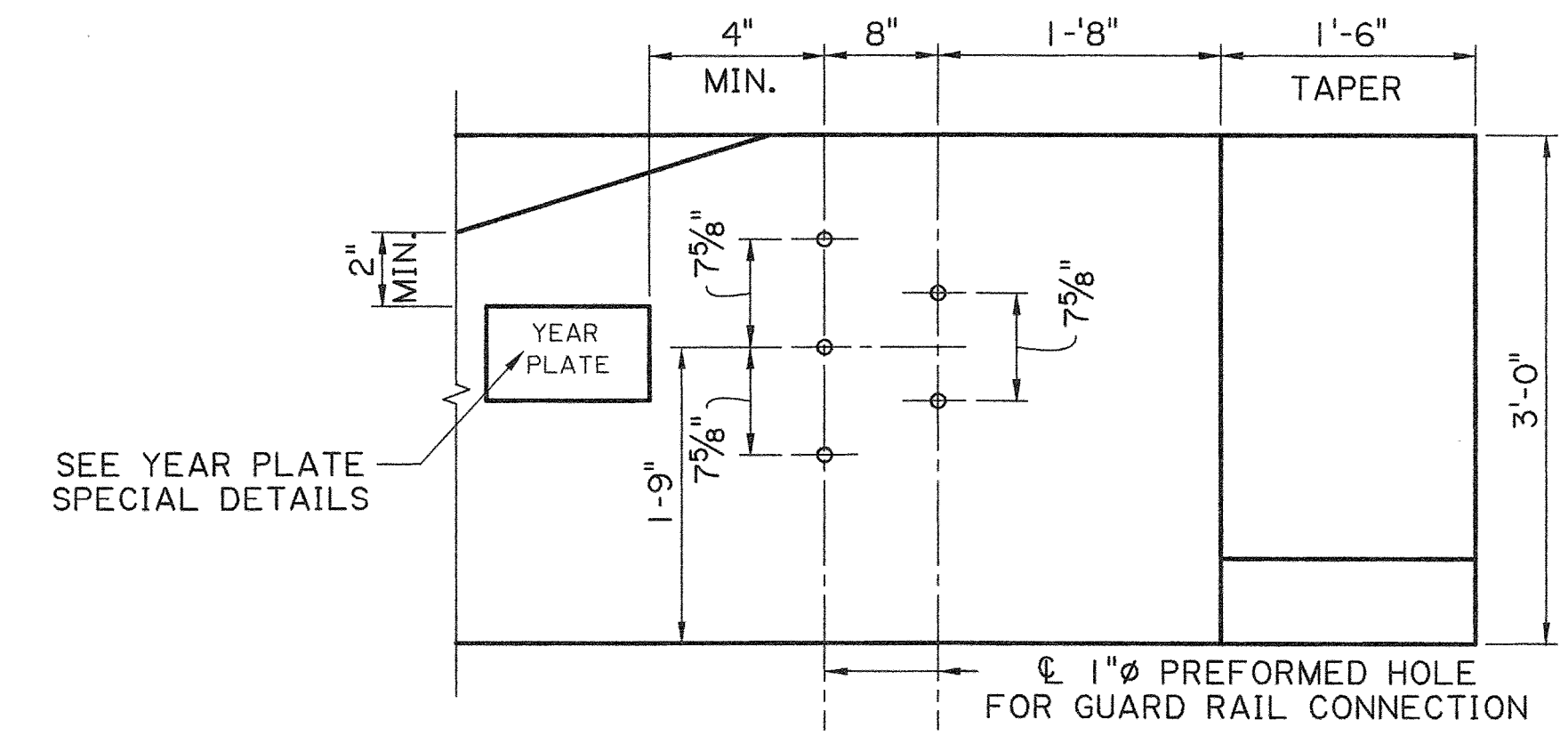
BARRIER RAILING TRANSITION ELEVATION



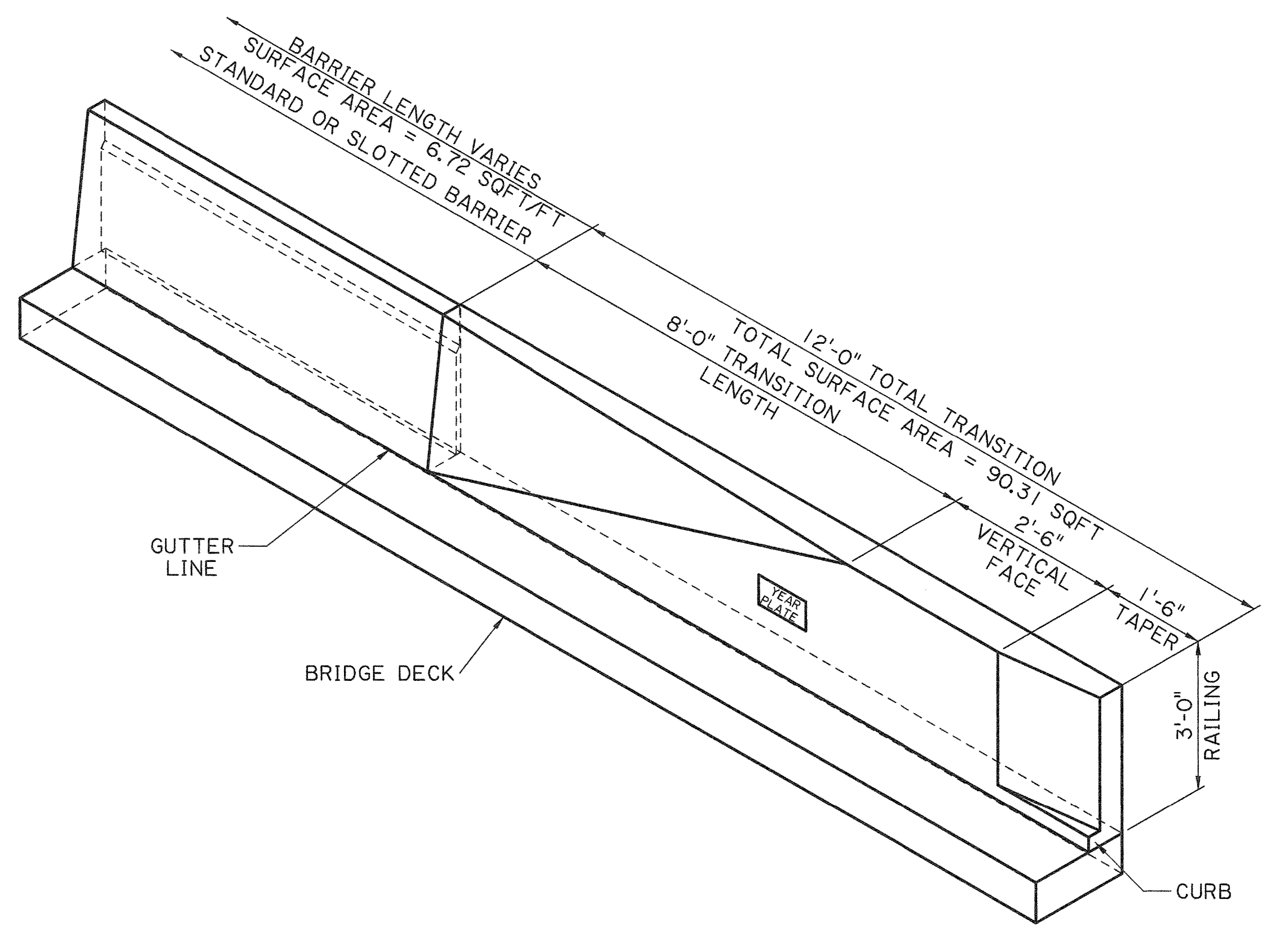
- NOTES:**
- SEE "BRIDGE BARRIER COMMON - GENERAL NOTES & INDEX" SHEET FOR GENERAL BRIDGE BARRIER NOTES.
 - REINFORCING STEEL DIMENSIONS SHOWN ARE APPLICABLE FOR DECK THICKNESSES SHOWN IN TABLE. ADJUSTMENTS SHALL BE MADE FOR DECKS AND SPANS WITH OTHER THICKNESSES. SEE SPAN DETAILS FOR DECK THICKNESS.
 - CURB SHALL BE POURED MONOLITHIC WITH BARRIER.
 - AT THE CONTRACTORS OPTION, AN ADDITIONAL BAR CAN BE PLACED IN THE DECK TO AID REBAR PLACEMENT.
 - TOP LONGITUDINAL SLAB BAR MAY BE ADJUSTED Laterally ±3" TO TIE REINFORCING.
 - ADJUST ANGLE OF LEG AS NEEDED TO MAINTAIN MIN. COVER AT FACE OF BARRIER.

401 & 501 BAR DIMENSIONS

DIMENSION	"A"
8" DECK	1'-9 1/2"
8 1/2" DECK	1'-10"
9" DECK	1'-10 1/2"
9 1/2" DECK	1'-11"
13" SLAB SPAN	2'-2"
14 1/2" SLAB SPAN	2'-3"



GUARD RAIL CONNECTION DETAIL
SEE HIGHWAY GUARD RAIL (MASH) STANDARD PLANS FOR MORE INFORMATION



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer, I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



ST. TAMMANY

DESIGNED BY S. MAZUR
CHECKED BY C. GAUDRY

DATE: _____

NO. _____

REVISION OR CHANGE ORDER DESCRIPTION

BY _____

DATE _____

NO. _____

STATE OF LOUISIANA
REGISTERED PROFESSIONAL ENGINEER

STATE OF LOUISIANA
REGISTERED PROFESSIONAL ENGINEER

TRANSITION ON BRIDGE SPAN
36" SINGLE SLOPE BRIDGE BARRIER

36SS

BD.2.6.1.3.02

DOTD
DOTD BRIDGE DESIGN

SHEET NUMBER 216

APPROACH SLAB SPECIAL DETAILS INDEX

Table with columns: CLEAR WIDTH, BRIDGE STANDARD INDEX NO., SERIES, DESCRIPTION. Rows include COMMON DETAILS (20' AND 40' LONG SLABS), COMMON DETAILS (DRAINAGE), and SPECIFIC DETAILS (40' LONG SLAB, 0°, 15°, 30° AND 45° SKEWS).

* : TO BE DEVELOPED

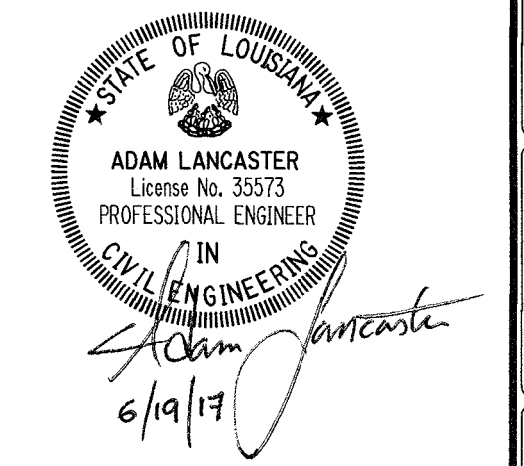
Table with columns: CLEAR WIDTH, BRIDGE STANDARD INDEX NO., SERIES, DESCRIPTION. Rows include SPECIFIC DETAILS (20' LONG SLAB, 0°, 15°, 30° AND 45° SKEWS).

* : TO BE DEVELOPED

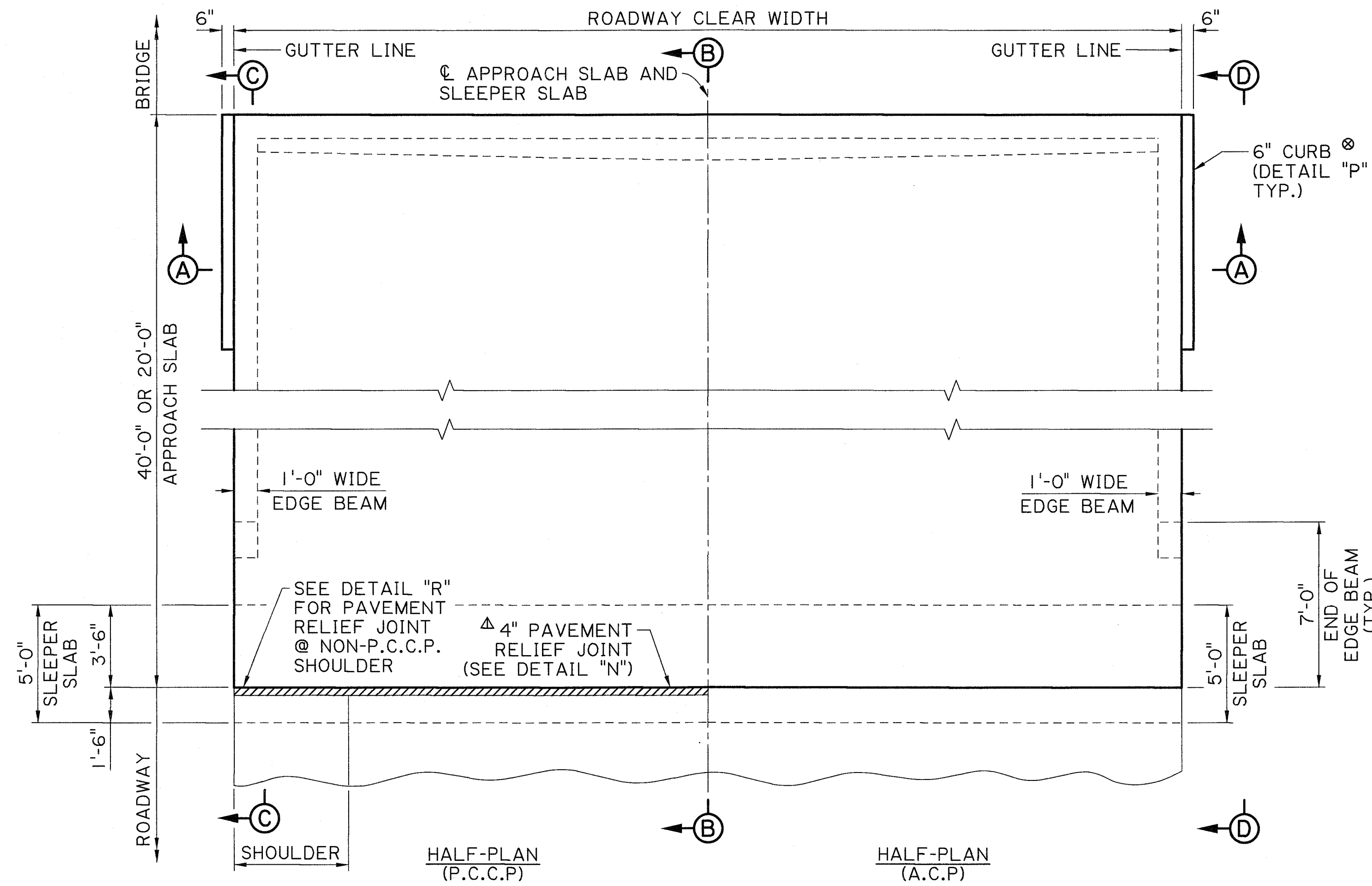
APPROACH SLAB GENERAL NOTES

- 1. DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7th EDITION. DESIGN LIVE LOAD = LADV-11.
2. CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
3. STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED.
4. BASIS OF PAYMENT: BRIDGE END DRAIN SYSTEM, IF REQUIRED, TO BE PAID FOR UNDER ITEM "BRIDGE END DRAIN SYSTEM (TYPE)." FOR SLAB SPAN AND QUAD BEAM BRIDGE APPROACH SLABS, THE "JOINT SEALANT" AND "BACKER MATERIAL" TO BE PAID FOR IN ACCORDANCE WITH SECTION 815 OF THE STANDARD SPECIFICATIONS, AND THE "PREFORMED JOINT FILLER" TO BE PAID FOR IN ACCORDANCE WITH SECTION 805 OF THE STANDARD SPECIFICATIONS. FOR ASPHALT ROADWAYS ADJACENT TO THE APPROACH SLAB, THE "ASPHALT PATCH" AND "SAWCUT AND SEAL" SHALL BE PAID FOR BY OTHERS. ALL OTHER MATERIAL AND WORK ASSOCIATED WITH APPROACH SLABS SHALL BE PAID FOR UNDER ITEM "CONCRETE APPROACH SLABS (CAST-IN-PLACE)", UNLESS OTHERWISE NOTED.
5. THESE STANDARDS ARE ONLY APPLICABLE FOR APPROACH SLABS WITH UNIFORM WIDTH ON A STRAIGHT ALIGNMENT.
6. NOT EVERY SHEET LISTED IN THE INDEX IS APPLICABLE FOR EVERY PROJECT. THE BRIDGE DESIGN ENGINEER SHALL SELECT THE APPLICABLE SHEETS PER PROJECT, NOTING THAT SHEETS IN A SERIES SHALL BE KEPT TOGETHER.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



Vertical sidebar containing: SHEET NUMBER 217, ST. TAMMANY, DESIGNER/checked, CONTROL SECTION, REVISION OR CHANGE ORDER DESCRIPTION, APPROACH SLAB GENERAL NOTES AND INDEX, BRIDGE AND STRUCTURAL DESIGN, and various project codes.



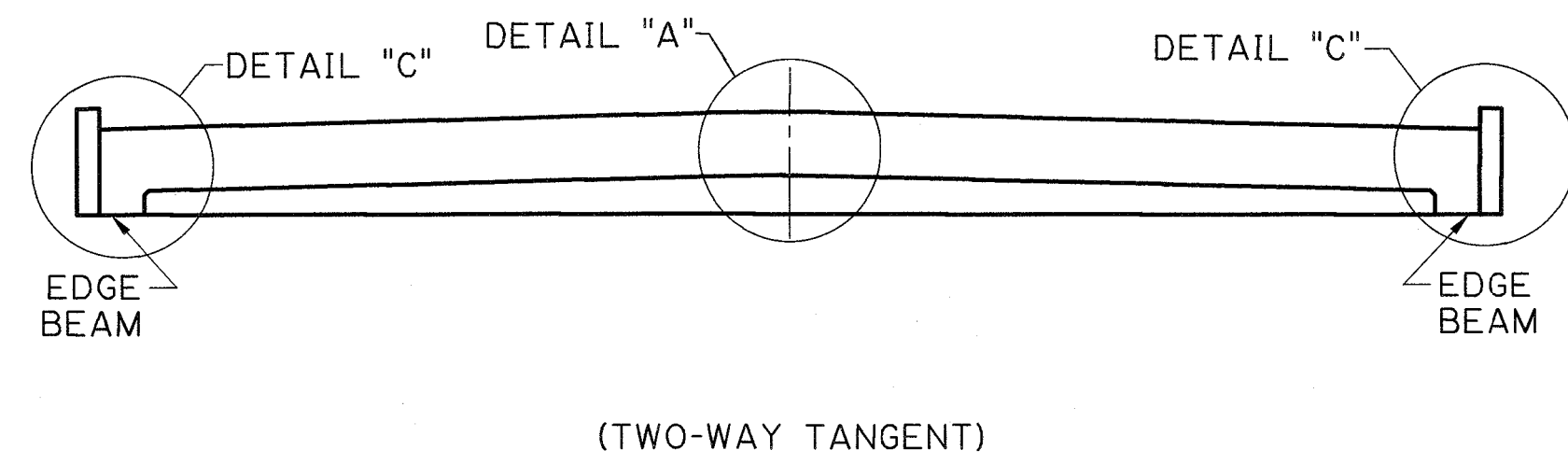
APPROACH SLAB PLAN
(SLAB SPAN AND QUAD BEAM BRIDGES)
(0° SKEW SHOWN)

NOTES:

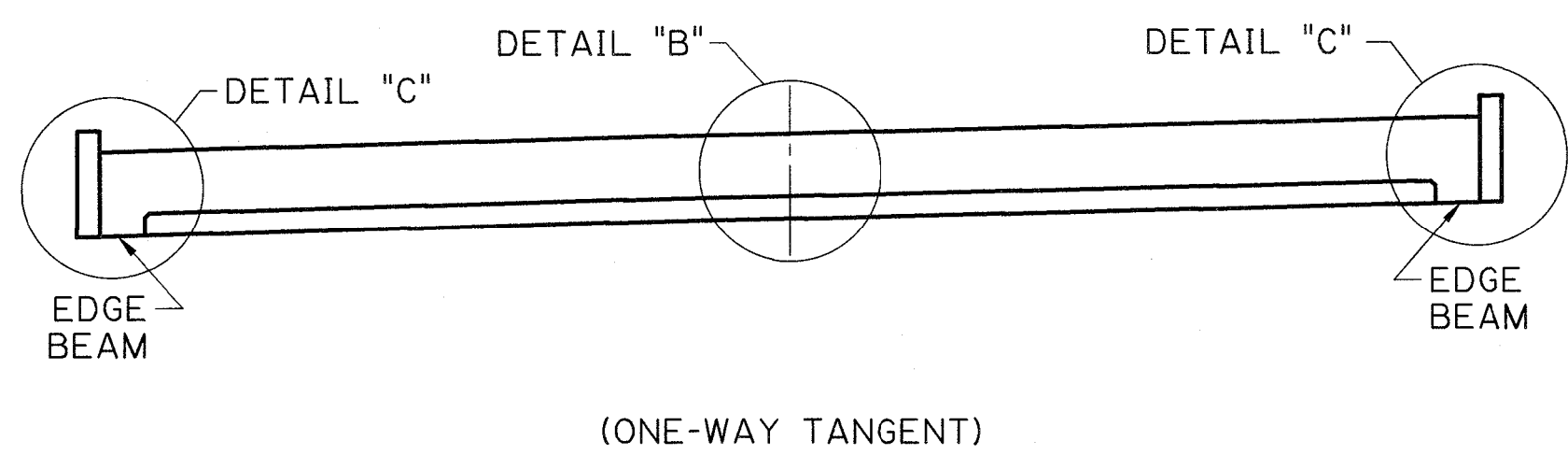
1. P.C.C.P. = PORTLAND CEMENT CONCRETE PAVEMENT
A.C.P. = ASPHALTIC CONCRETE PAVEMENT
2. FOR DETAILS "A" THROUGH "G" FOR SLAB SPAN OR QUAD BEAM BRIDGES, SEE SHEET 3 OF 6.
FOR DETAILS "N" THROUGH "R", SEE SHEET 6 OF 6.
3. FOR P.C.C.P. ROADWAY, "EJ-4" JOINTS SHALL BE CONSTRUCTED AS SHOWN ON ROADWAY STANDARD PLAN "CP-01". THREE (3) EJ-4" JOINTS ARE REQUIRED.
4. DETAIL "P" APPLIES TO BRIDGES WITH GUARDRAIL BUT WITHOUT AN END DRAIN SYSTEM. WHEN AN END DRAIN INSTALLATION IS REQUIRED, SEE SPECIAL DETAIL SHEET "BRIDGE END DRAIN SYSTEM (OPEN)" OR "BRIDGE END DRAIN SYSTEM (CLOSED)" (AS APPLICABLE) FOR CURB LENGTH AND DETAILS. BRIDGES WITHOUT GUARDRAIL OR END DRAINS DO NOT REQUIRE A CURB, UNLESS OTHERWISE STATED IN THE PLANS.
5. PAVEMENT RELIEF JOINT FOR P.C.C.P. ROADWAY WITH P.C.C.P. SHOULDER IS SHOWN. FOR PAVEMENT RELIEF JOINT AT P.C.C.P. ROADWAY WITH NON-P.C.C.P. SHOULDER, SEE DETAIL "R".
- * 6. DIMENSION "D" AT THE APPROACH SLAB CENTERLINE DEPENDS ON THE ROADWAY CLEAR WIDTH. FOR VALUES OF "D", SEE THE TABLE IN DETAIL "A".



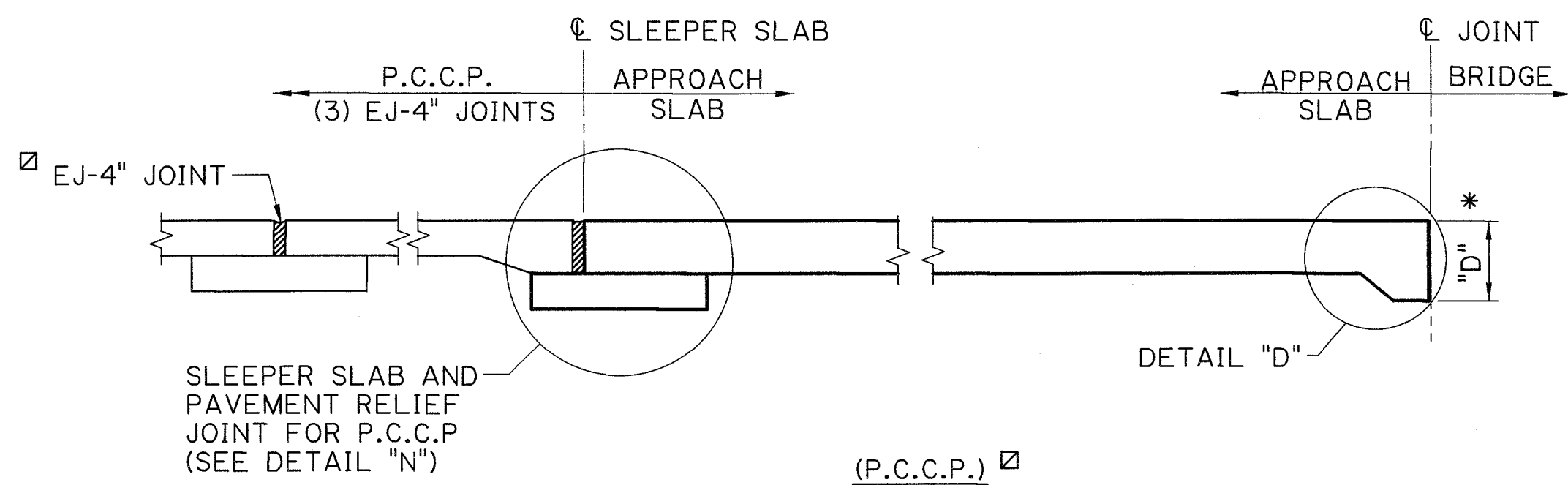
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



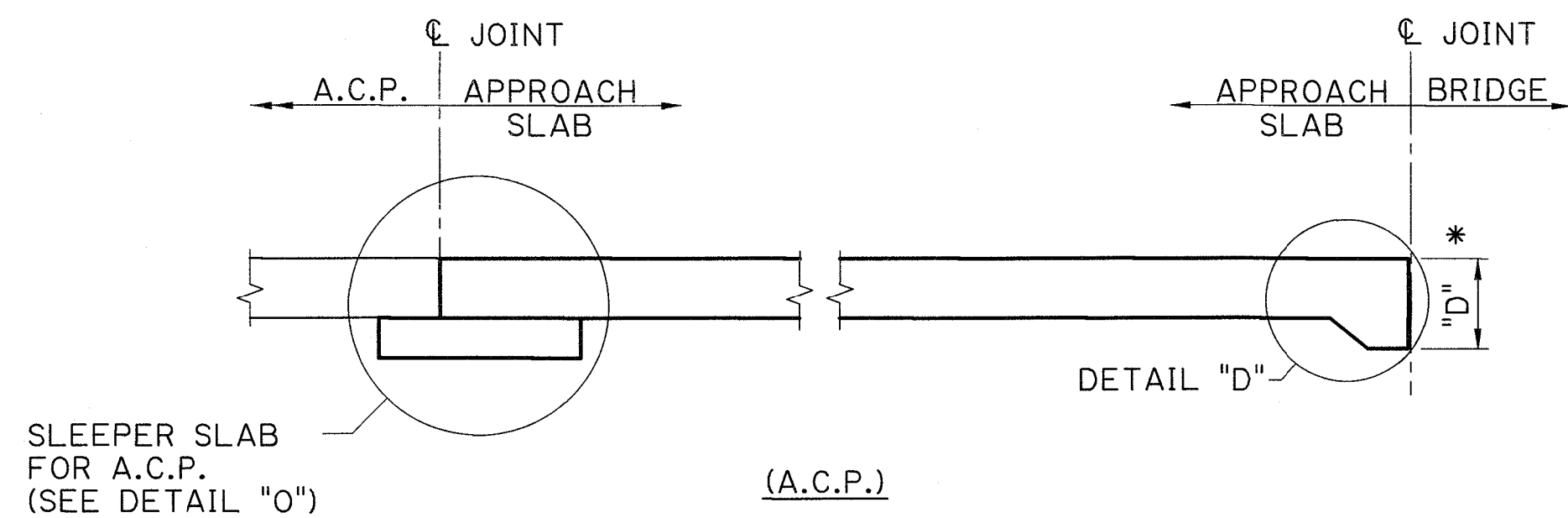
SECTION A-A
(N.T.S.)



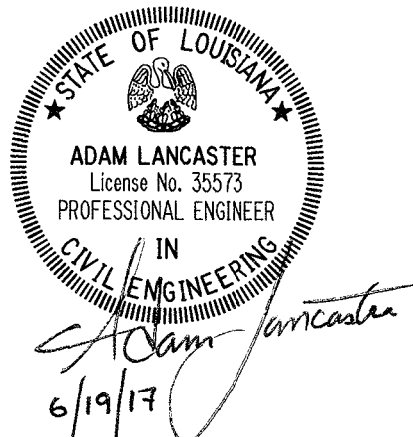
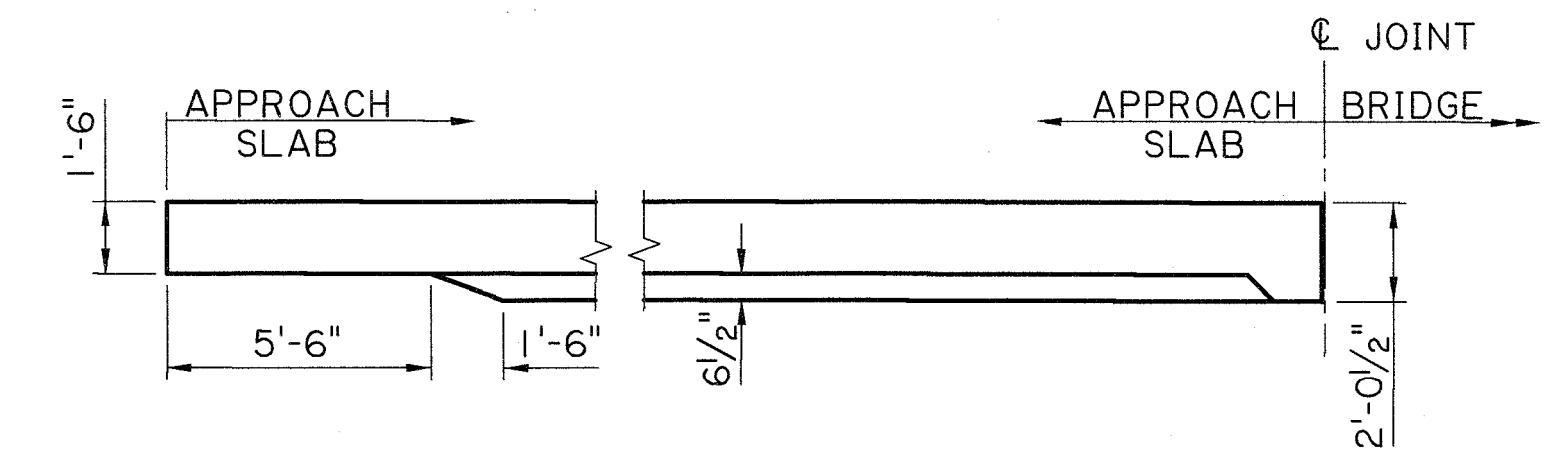
SECTION B-B
(N.T.S.)



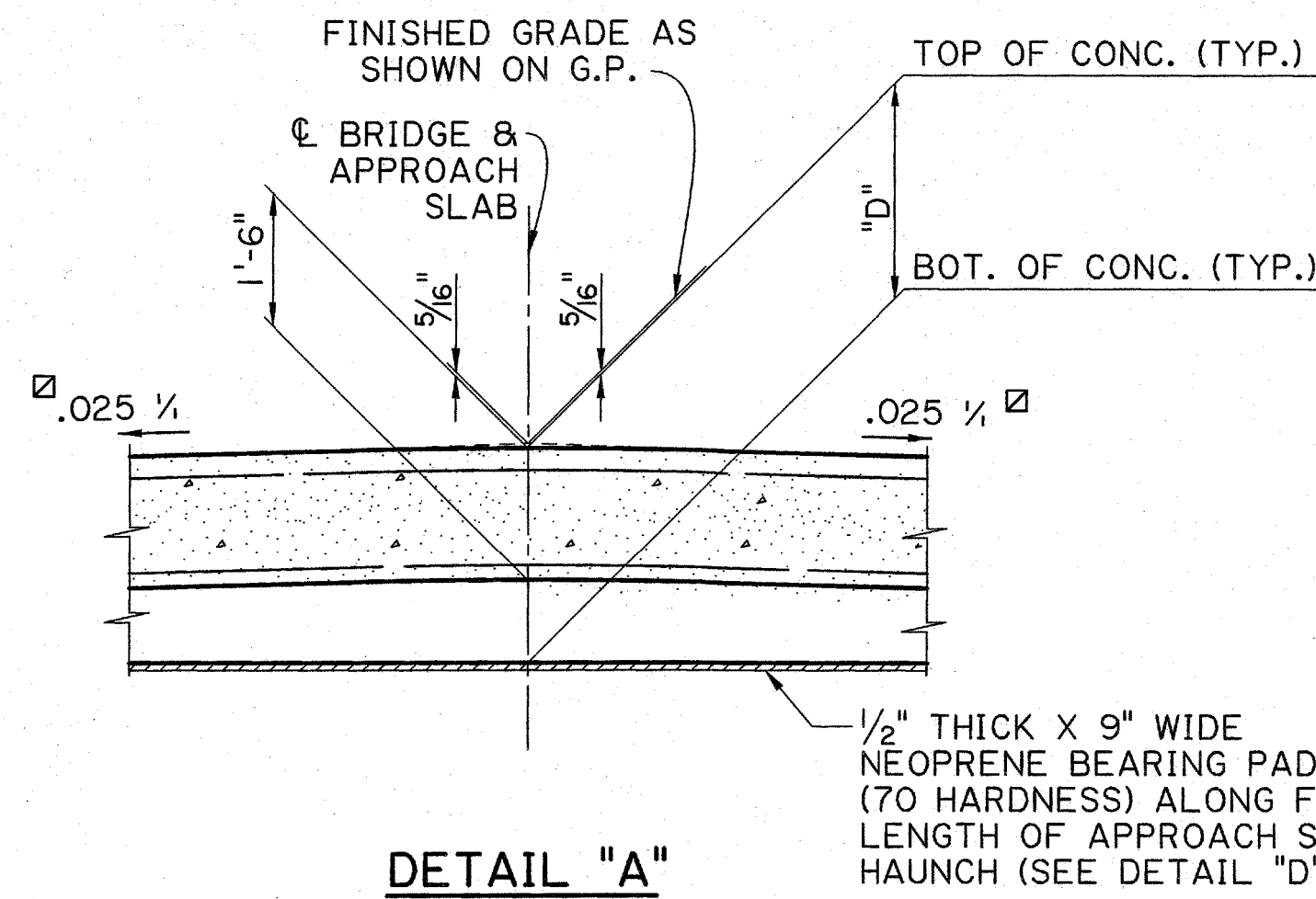
SECTION C-C
(SHOWING EDGE BEAM ONLY)
(N.T.S.)



SECTION D-D
(SHOWING EDGE BEAM ONLY)
(N.T.S.)



SHEET NUMBER	218
DESIGNED	A. LANCASTER
CHECKED	X. WANG
PARISH	ST. TAMMANY
CONTROL SECTION	A. LANCASTER
REVIEWER	Z. Z. FU
DATE	6/19/17
PROJECT	BRIDGE AND STRUCTURAL DESIGN
SERIES #	2 OF 6
BY	
REVISION OR CHANGE ORDER DESCRIPTION	
NO.	
DATE	
STATE OF LOUISIANA	
APPROACH SLAB PLANS AND SECTIONS	
SLAB SPAN AND QUAD BEAM BRIDGES	
BD.2.10.1.0.02 - APPROACH SLAB COMMON	
BRIDGE AND STRUCTURAL DESIGN	



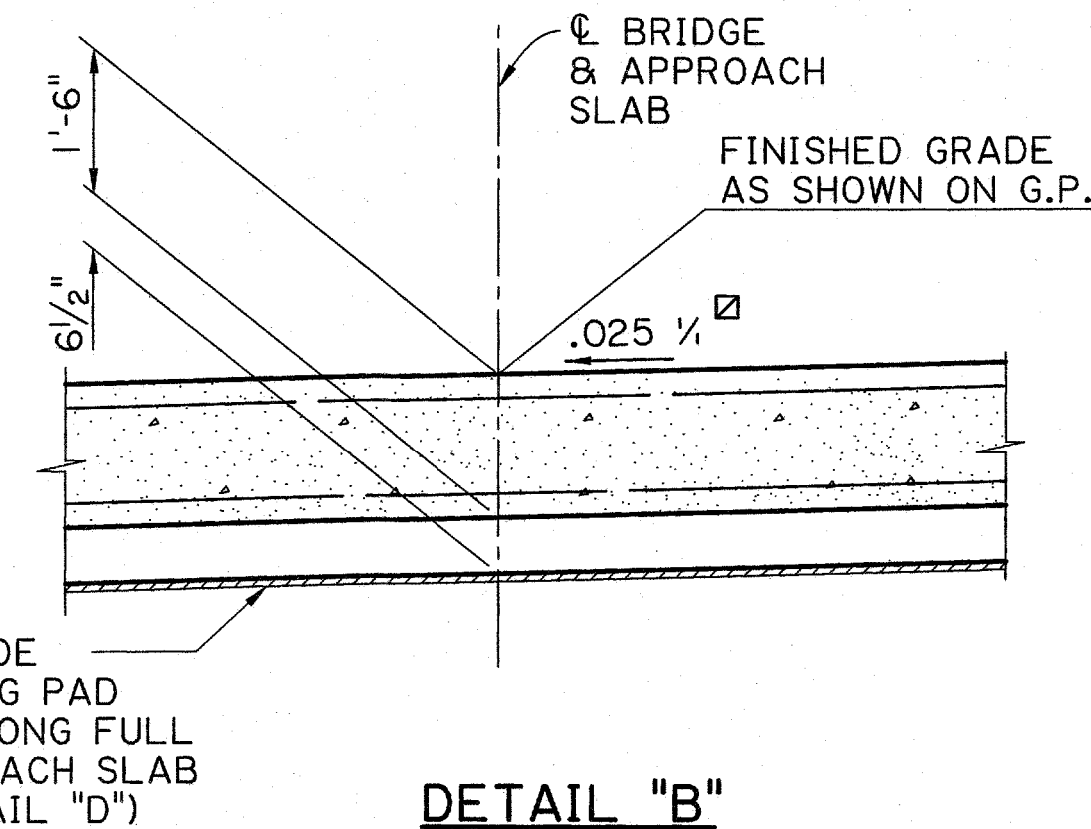
DETAIL "A"

(TWO-WAY TANGENT)

SCALE : 1/2" = 1'-0"

UNLESS OTHERWISE NOTED IN PLANS

ROADWAY CLEAR WIDTH	DIMENSION "D" (2-WAY TANGENT W/ .025 % SLOPE)
24'	2'-3 3/4"
28'	2'-4 3/8"
32'	2'-5"
36'	2'-5 5/8"
40'	2'-6 1/4"
44'	2'-6 3/4"



DETAIL "B"

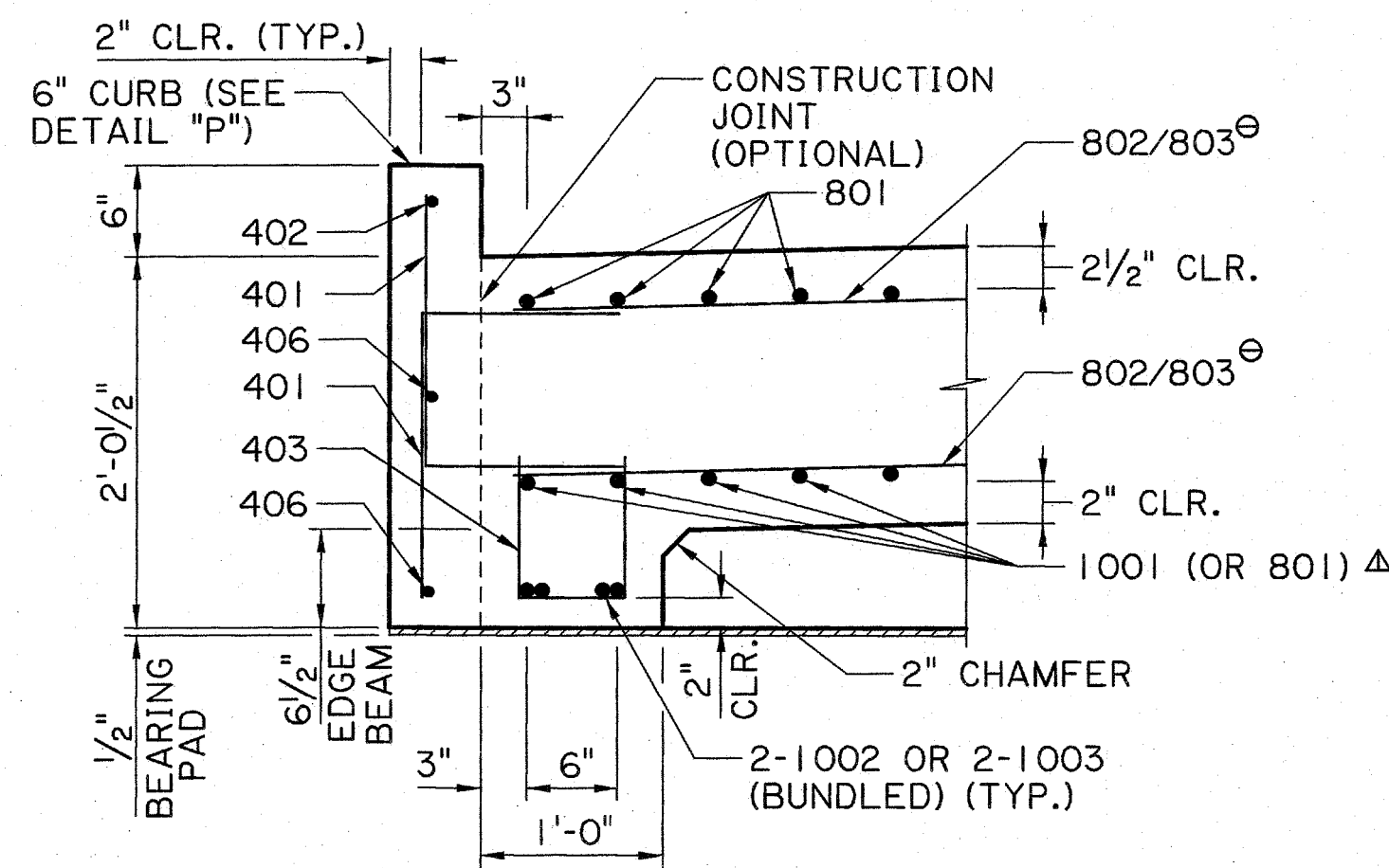
(ONE-WAY TANGENT)

SCALE : 1/2" = 1'-0"

UNLESS OTHERWISE NOTED IN PLANS

NOTES:

- FOR REINFORCEMENT LOCATION AND QUANTITIES, SEE APPROACH SLAB "SPECIFIC DETAILS".
- 1001 BARS IN THE BOTTOM OF THE SLAB ARE FOR A 40' LONG SLAB. FOR A 20' LONG SLAB, THESE BOTTOM BARS SHALL BE 801.
- 803 BARS ARE USED IN SKEWED SLABS ONLY.
- JOINT SEALANT AND BACKER MATERIAL TO BE PAID FOR IN ACCORDANCE WITH SECTION 815. JOINT FILLER TO BE PAID FOR IN ACCORDANCE WITH SECTION 805.

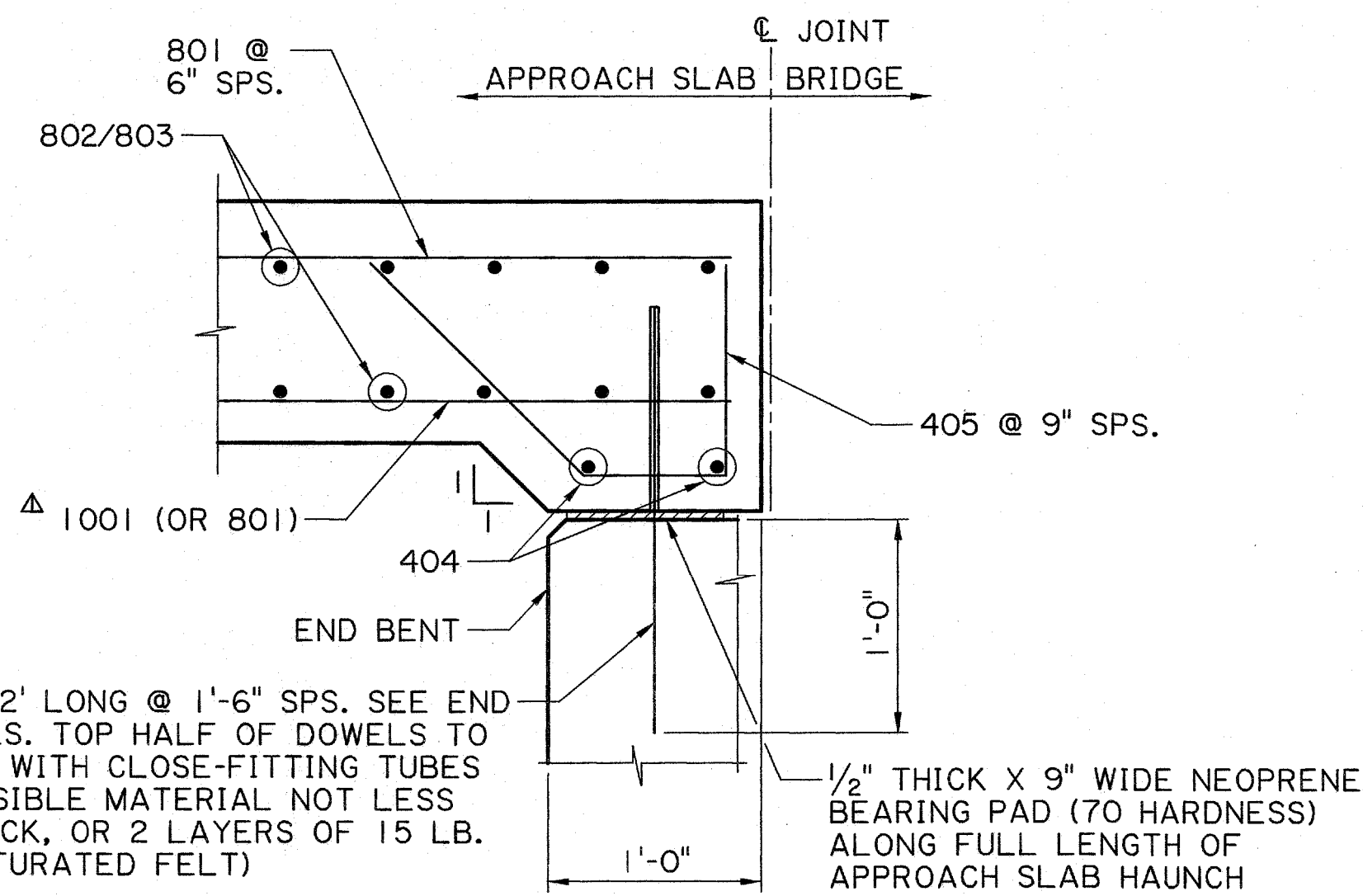


DETAIL "C"

(AT EDGE BEAM)

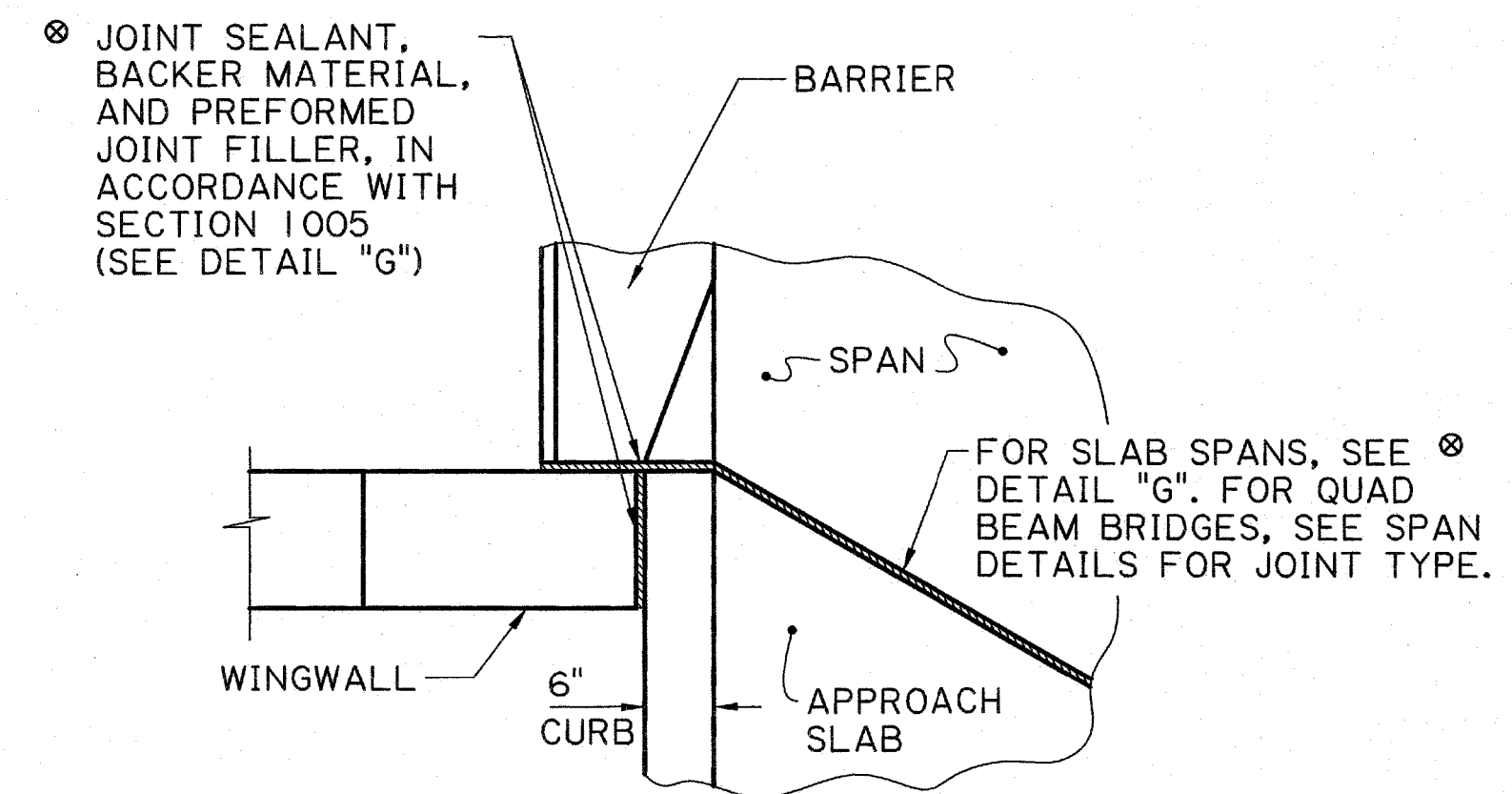
(N.T.S.)

SEE DETAIL "D"



DETAIL "D"

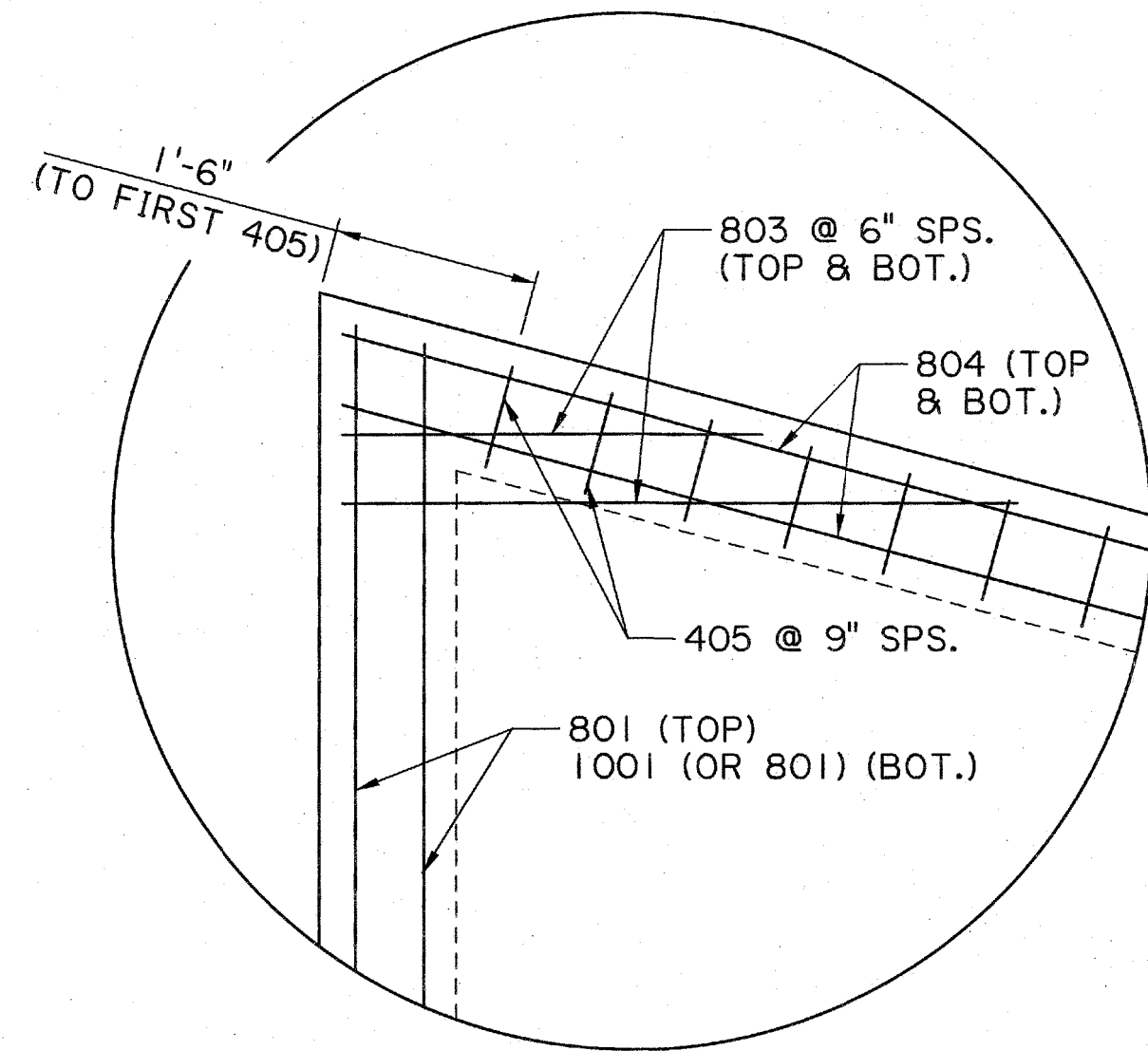
(N.T.S.)



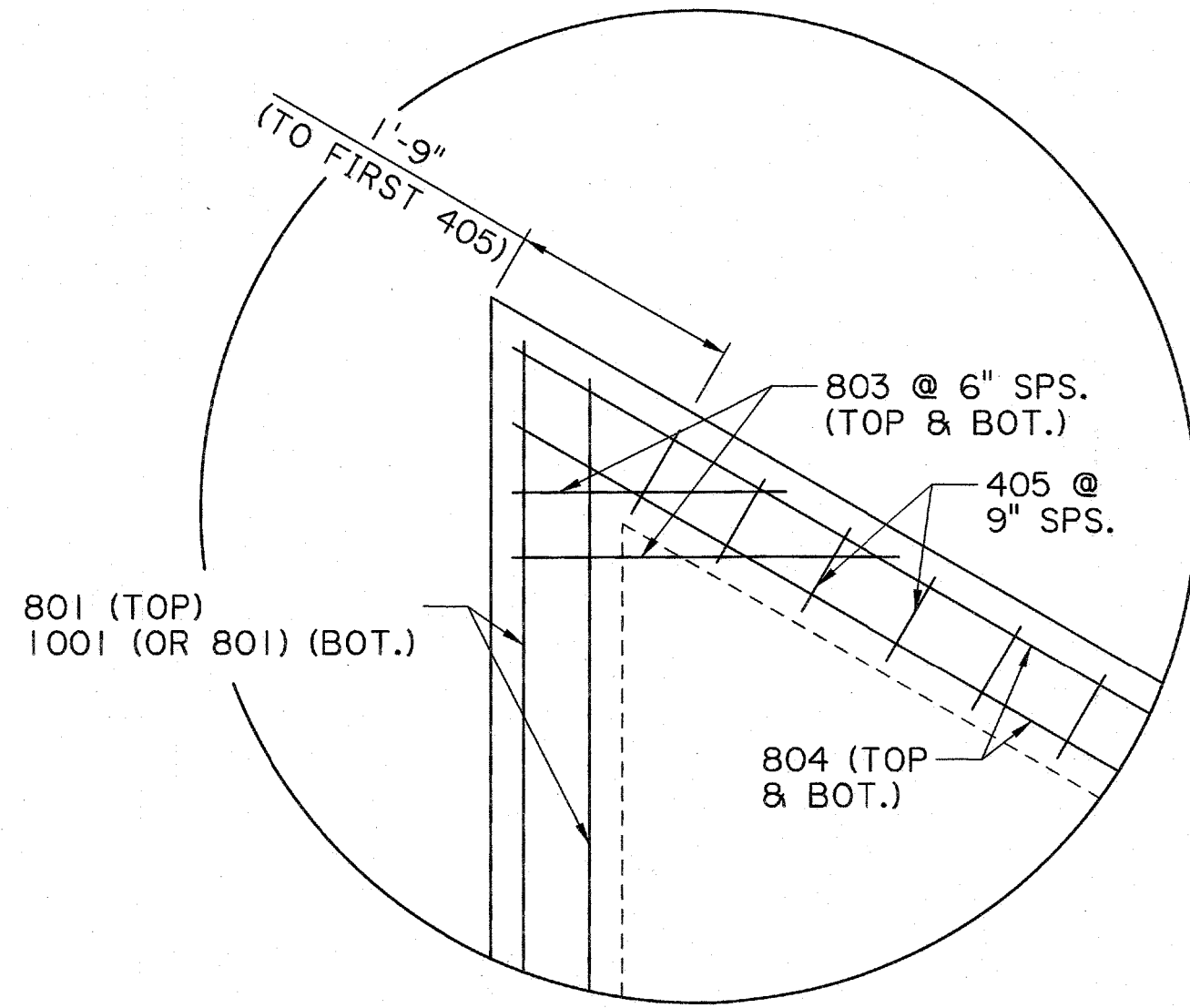
DETAIL "F"

JOINT DETAIL @ WINGWALL

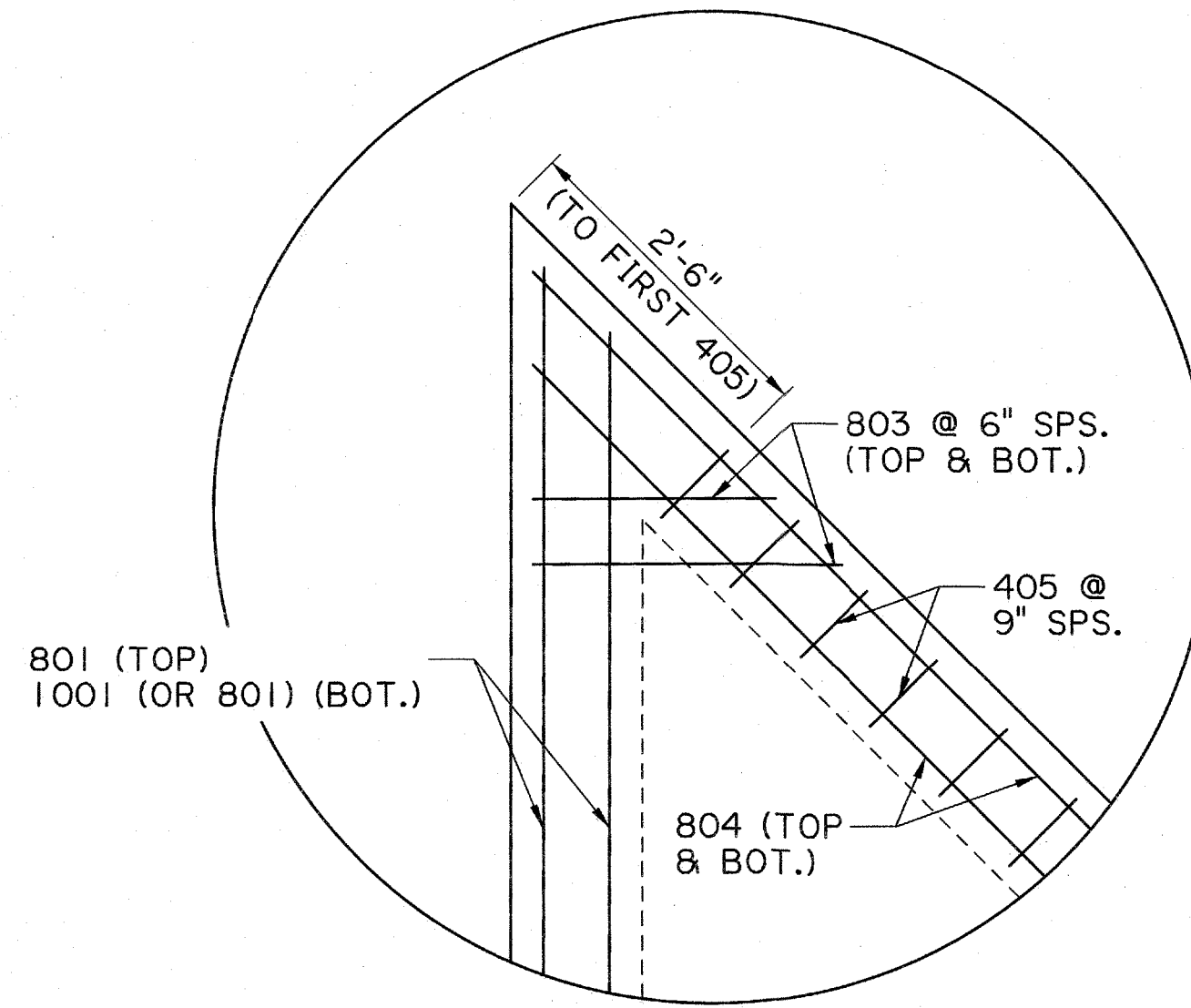
(N.T.S.)



(15° SKEW)



(30° SKEW)

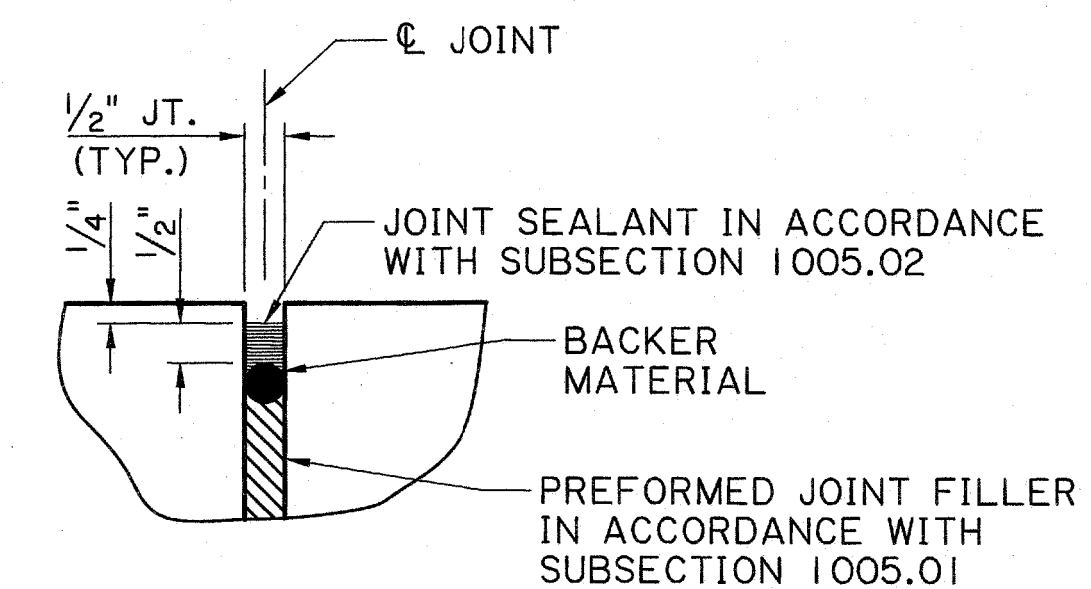


(45° SKEW)

DETAIL "E"

(N.T.S.)

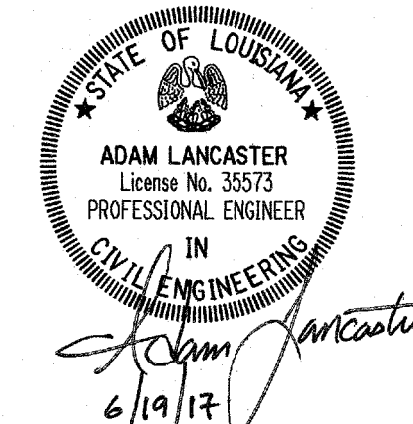
(401, 402, 403, 404, 406 BARS AND CURB NOT SHOWN FOR CLARITY)



DETAIL "G"

(N.T.S.)

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SHEET NUMBER 219

ST. TAMMANY

DESIGNED: A. LANCASTER
CHECKED: R. MORVANT

CONTROL SECTION: A. LANCASTER
REVIEWED: Z.Z. FU

PARISH: ST. TAMMANY
STATE PROJECT: 3 OF 6

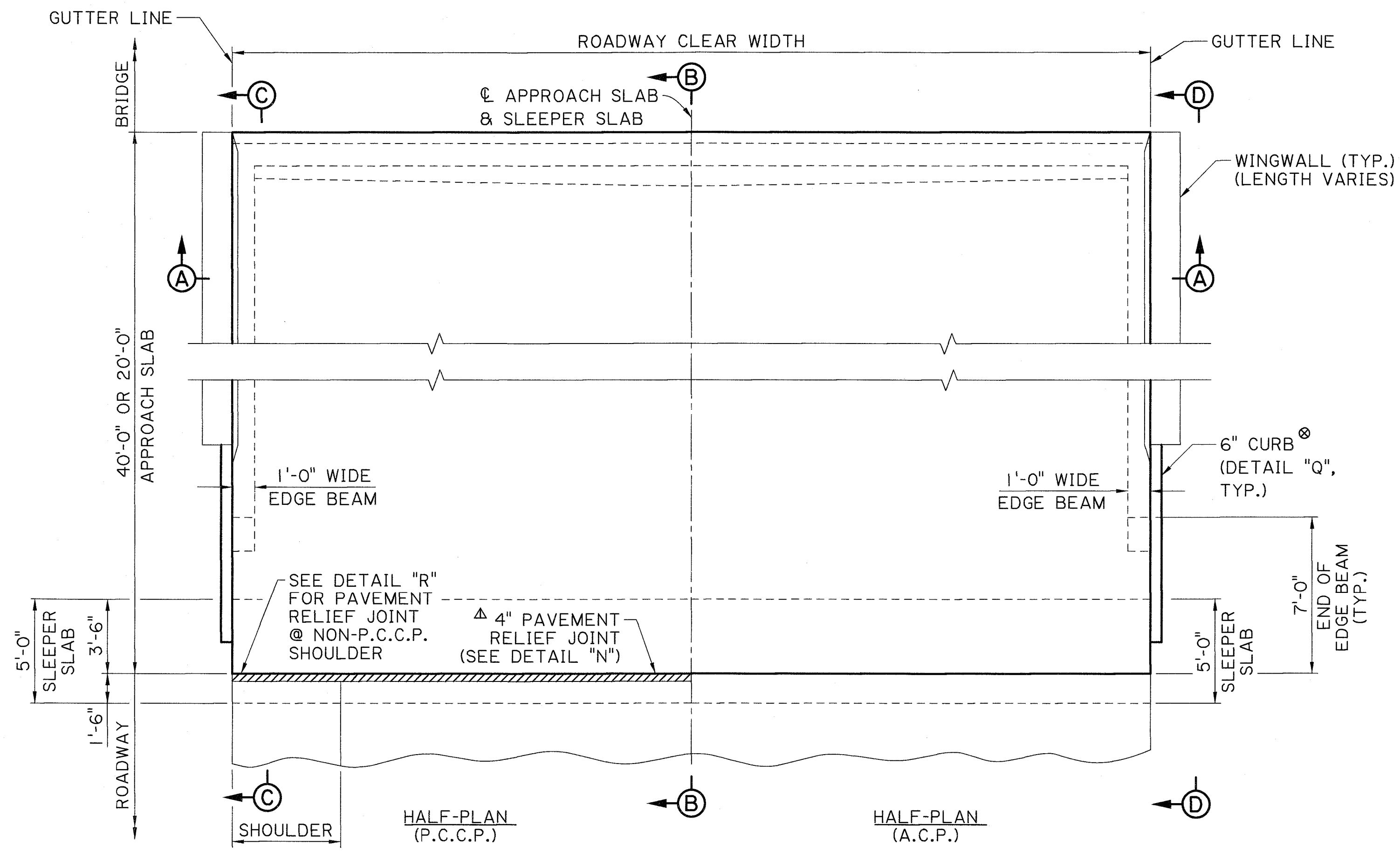
BY: [Signature]
DATE: [Blank]
NO. [Blank]

REVISION OR CHANGE ORDER DESCRIPTION

APPROACH SLAB DETAILS "A" TO "G"
SLAB SPAN AND QUAD BEAM BRIDGES

BD.2.10.1.0.03 - APPROACH SLAB COMMON

BRIDGE AND STRUCTURAL DESIGN



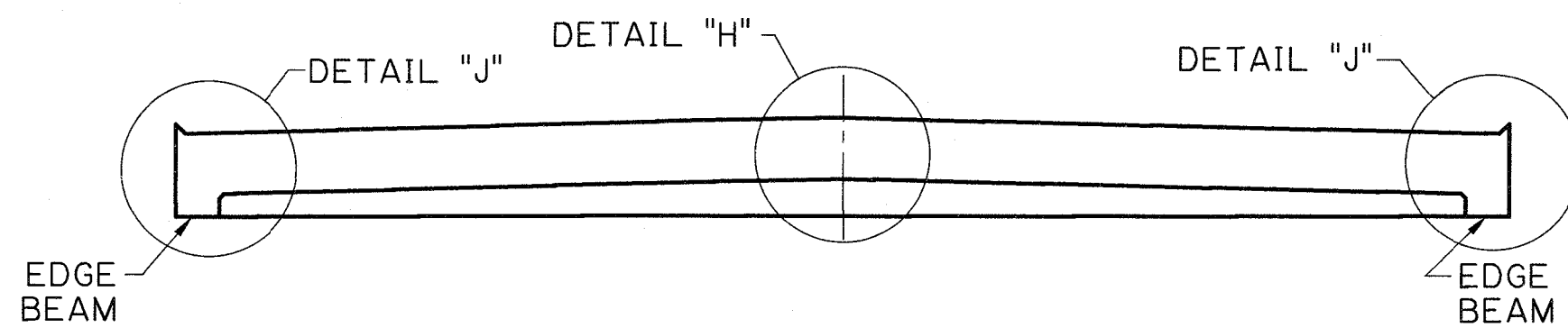
APPROACH SLAB PLAN
(GIRDER SPAN BRIDGES, EXCLUDING QUAD BEAMS)
(0° SKEW SHOWN)

NOTES:

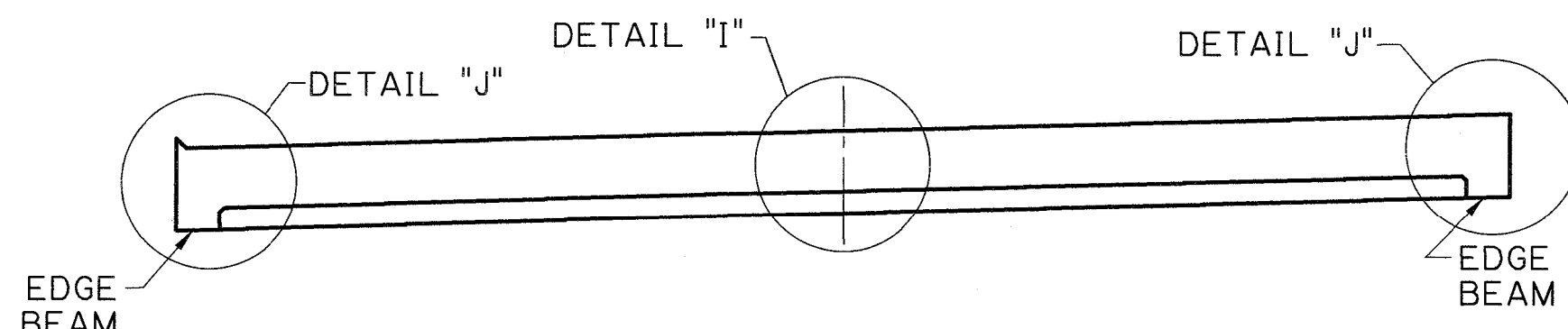
- 1. P.C.C.P. = PORTLAND CEMENT CONCRETE PAVEMENT
A.C.P. = ASPHALTIC CONCRETE PAVEMENT
- 2. FOR DETAILS "H" THROUGH "M" FOR GIRDER SPAN BRIDGES, EXCLUDING QUAD BEAMS, SEE SHEET 5 OF 6.
FOR DETAILS "N" THROUGH "R", SEE SHEET 6 OF 6.
- 3. FOR P.C.C.P. ROADWAY, "EJ-4" JOINTS" SHALL BE CONSTRUCTED AS SHOWN ON ROADWAY STANDARD PLAN "CP-01". THREE (3) EJ-4" JOINTS ARE REQUIRED.
- 4. DETAIL "Q" APPLIES TO BRIDGES WITH GUARDRAIL BUT WITHOUT AN END DRAIN SYSTEM. WHEN AN END DRAIN INSTALLATION IS REQUIRED, SEE SPECIAL DETAIL SHEET "BRIDGE END DRAIN SYSTEM (OPEN)" OR "BRIDGE END DRAIN SYSTEM (CLOSED)" (AS APPLICABLE) FOR CURB LENGTH AND DETAILS. BRIDGES WITHOUT GUARDRAIL OR END DRAINS DO NOT REQUIRE A CURB, UNLESS OTHERWISE STATED IN THE PLANS.
- 5. PAVEMENT RELIEF JOINT FOR P.C.C.P. ROADWAY WITH P.C.C.P. SHOULDER IS SHOWN. FOR PAVEMENT RELIEF JOINT AT P.C.C.P. ROADWAY WITH NON-P.C.C.P. SHOULDER, SEE DETAIL "R".
- 6. DIMENSION "D" AT THE APPROACH SLAB CENTERLINE DEPENDS ON THE ROADWAY CLEAR WIDTH. FOR VALUES OF "D", SEE THE TABLE IN DETAIL "H".



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

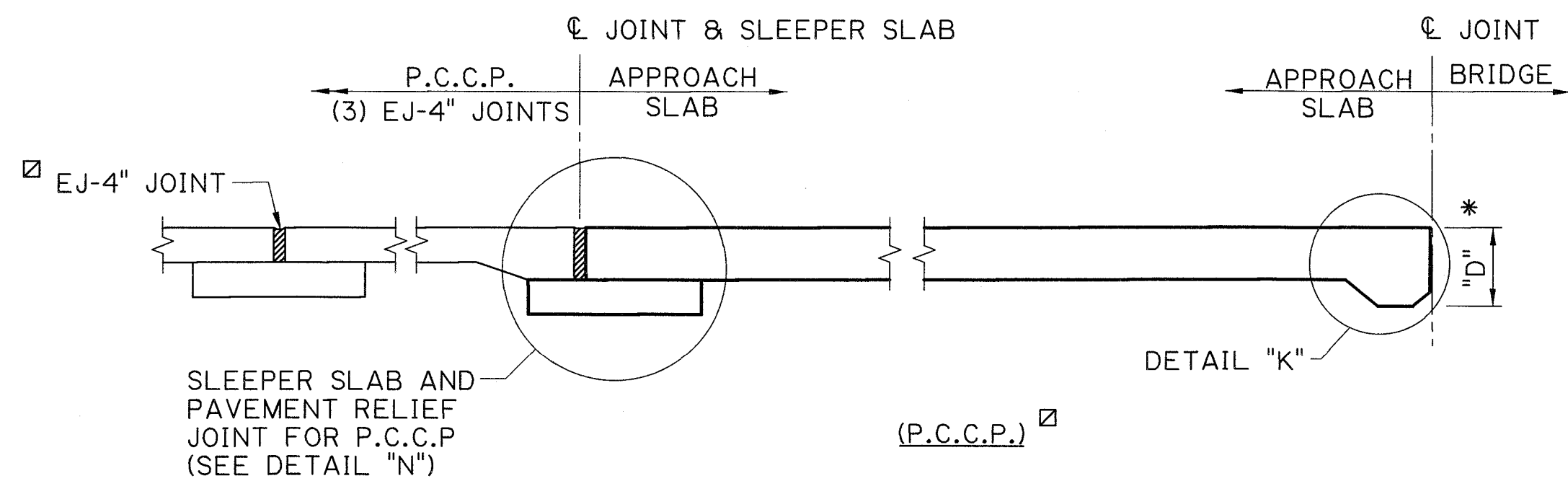


(TWO-WAY TANGENT)

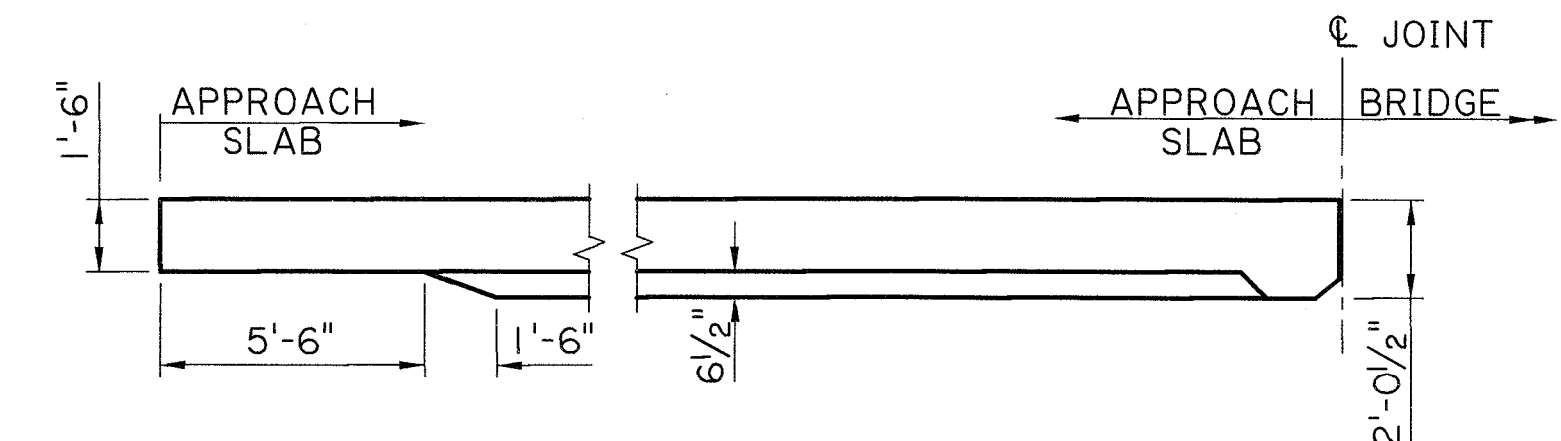


(ONE-WAY TANGENT)

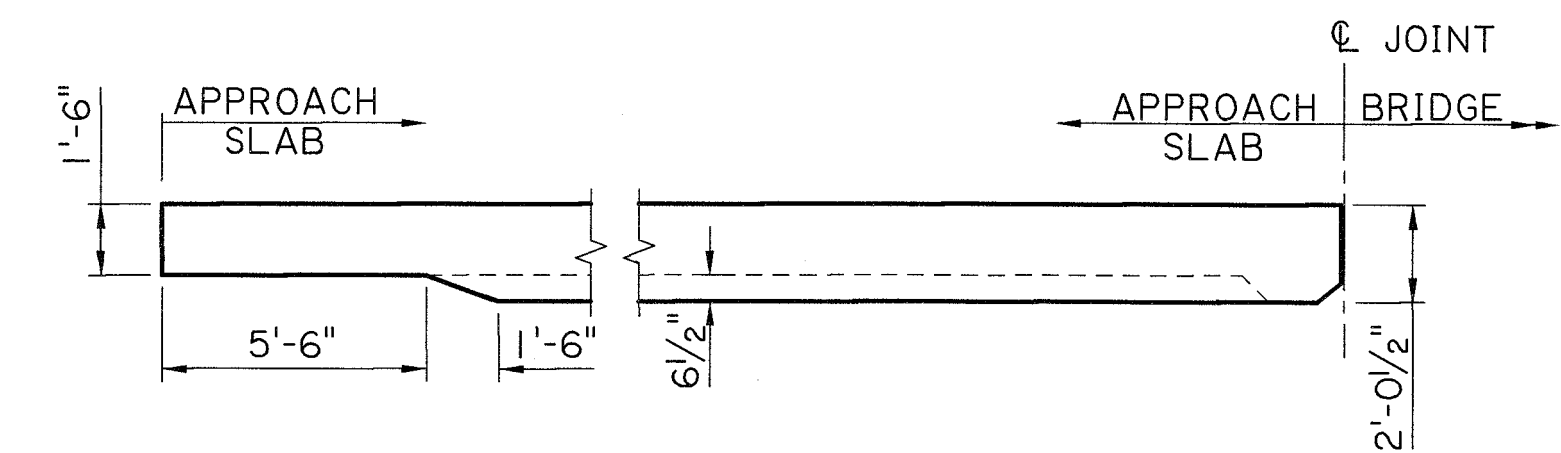
SECTION A-A
(N.T.S.)
(WINGWALLS AND CURBS NOT SHOWN FOR CLARITY)



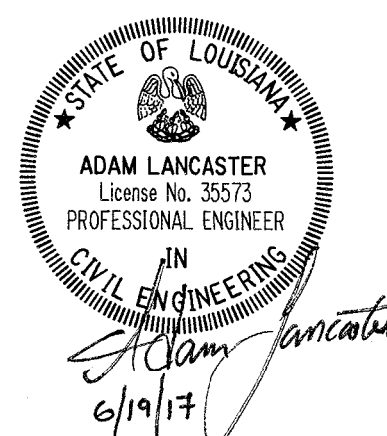
SECTION B-B
(N.T.S.)



SECTION C-C
(SHOWING EDGE BEAM ONLY)
(N.T.S.)



SECTION D-D
(SHOWING EDGE BEAM ONLY)
(N.T.S.)



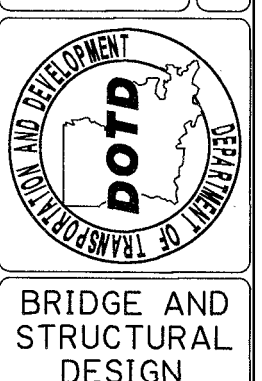
6/19/17

DESIGNED	A.L. LANCASTER	PARISH	
CHECKED	X. WANG	CONTROL SECTION	
DETAILS	A.L. LANCASTER	SECTION	
CHECKED	R. MORVANT	DATE	
REVIEWED	Z.Z. FU	PROJECT	
SERIES #	4	OF	6

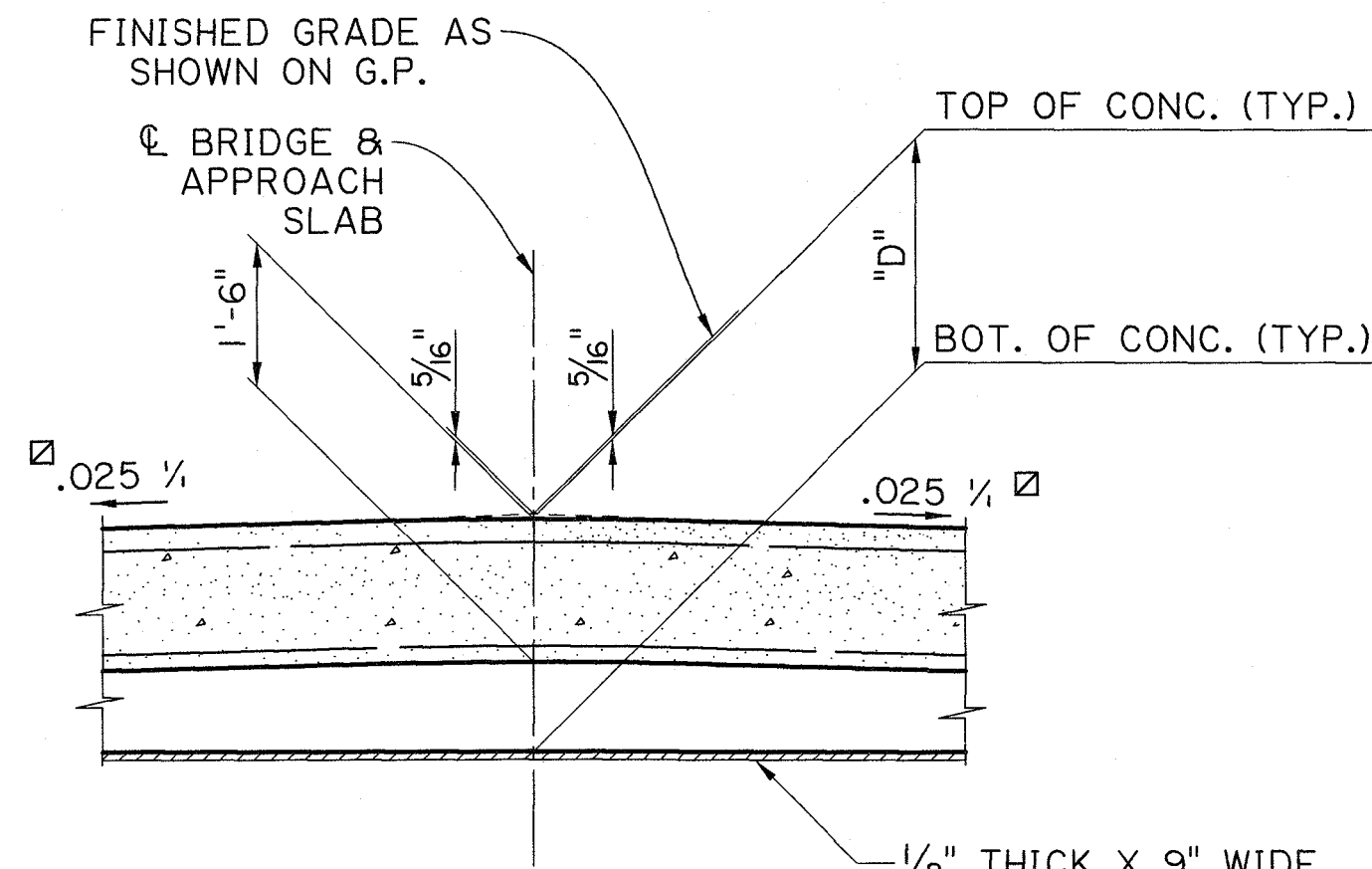
REVISION OR CHANGE ORDER DESCRIPTION	NO.	DATE	BY



APPROACH SLAB PLANS AND SECTIONS
GIRDER SPANS EXCLUDING QUAD BEAMS
BD.2.10.1.0.04 - APPROACH SLAB COMMON



BRIDGE AND STRUCTURAL DESIGN

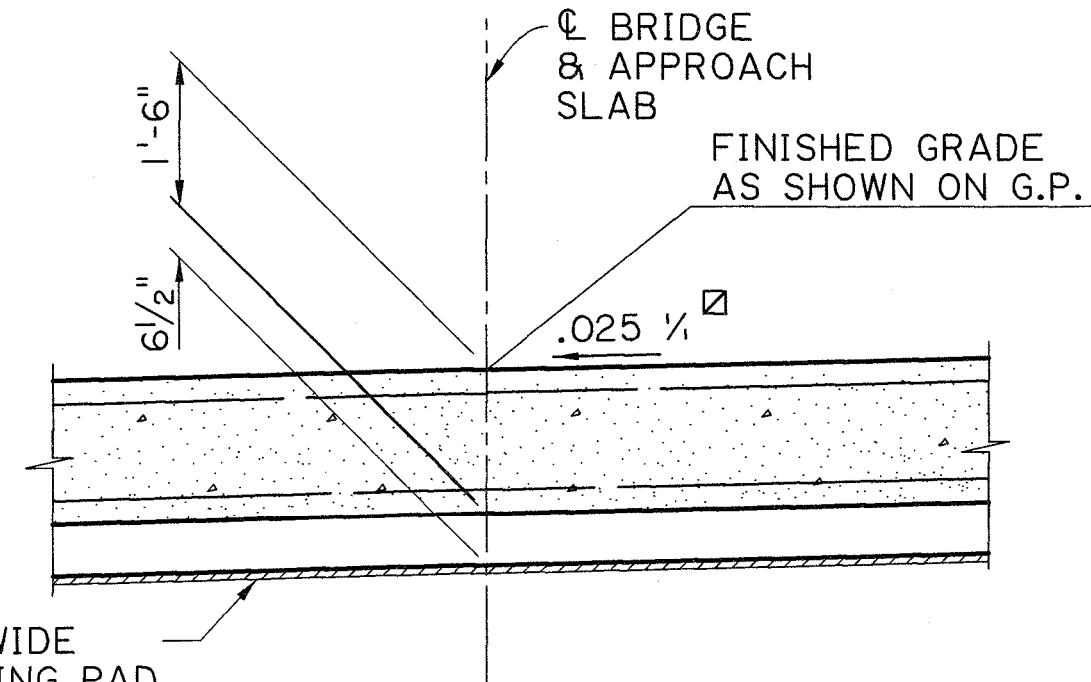


DETAIL "H"

(TWO-WAY TANGENT)
SCALE: 1/2" = 1'-0"

UNLESS OTHERWISE NOTED IN PLANS

ROADWAY CLEAR WIDTH	DIMENSION "D" (2-WAY TANGENT W/ .025 % SLOPE)
24'	2'-3 3/4"
28'	2'-4 3/8"
32'	2'-5"
36'	2'-5 5/8"
40'	2'-6 1/4"
44'	2'-6 3/4"

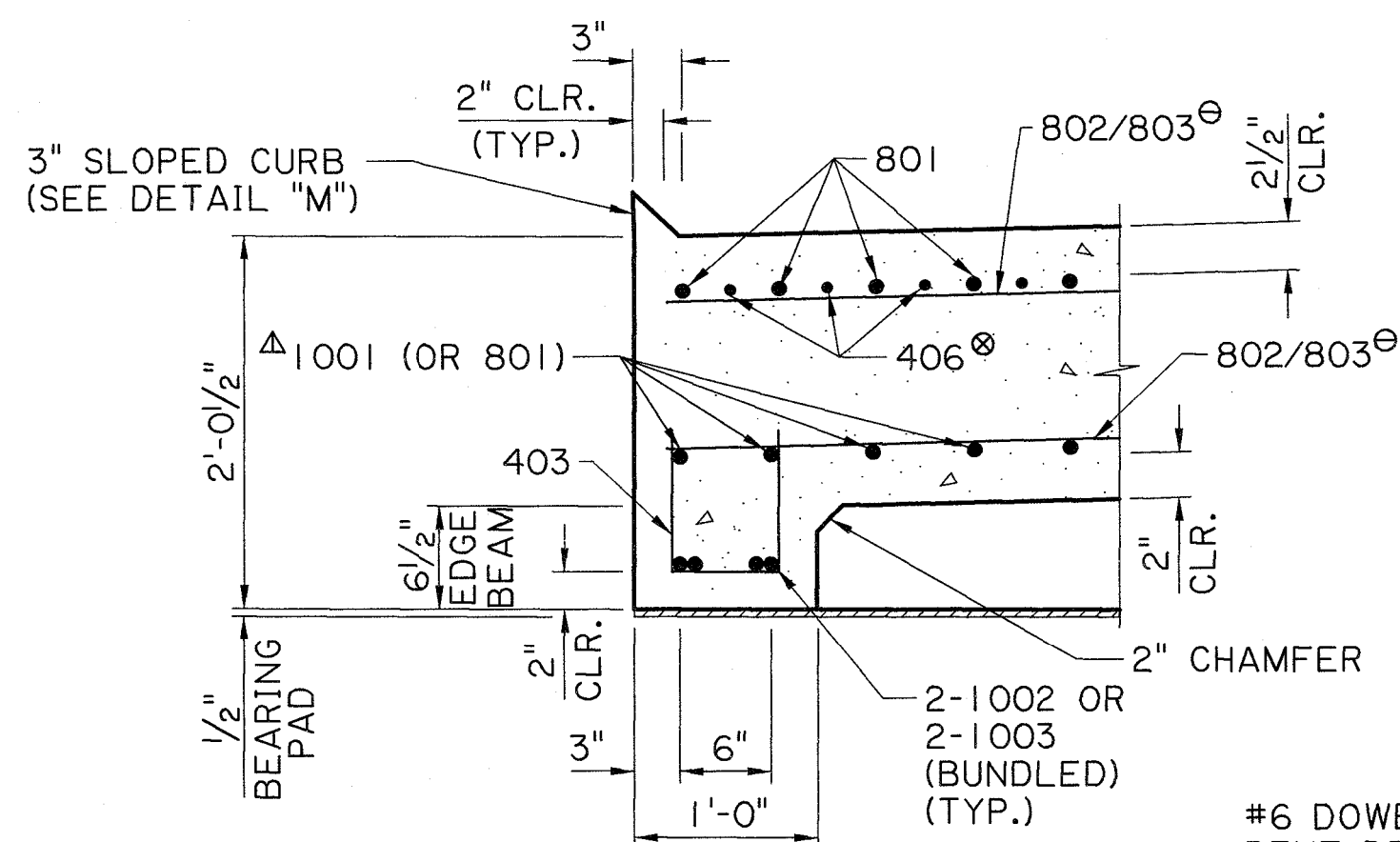


DETAIL "I"

(ONE-WAY TANGENT)
SCALE: 1/2" = 1'-0"

UNLESS OTHERWISE NOTED IN PLANS

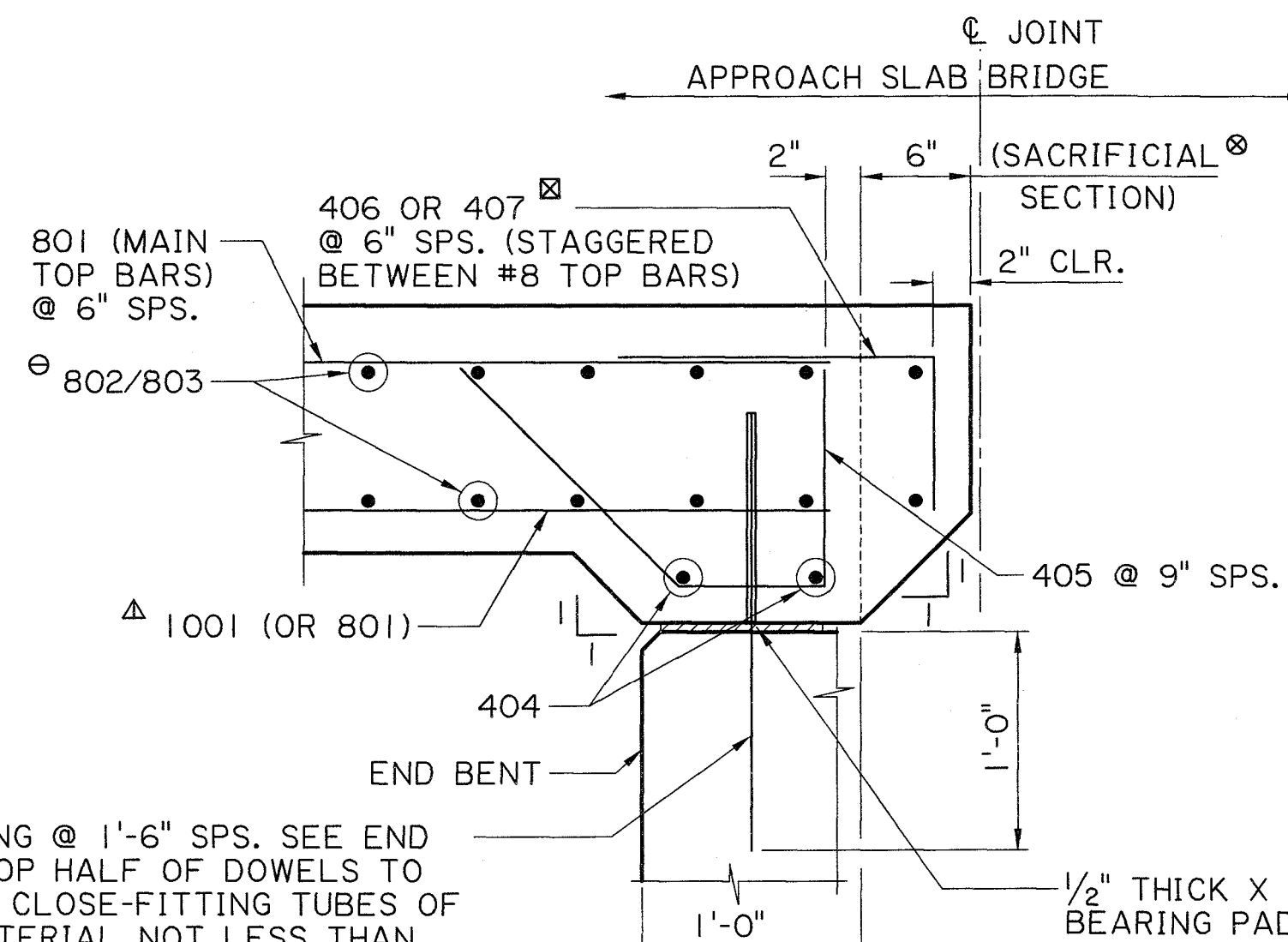
1/2" THICK X 9" WIDE NEOPRENE BEARING PAD (70 HARDNESS) ALONG FULL LENGTH OF APPROACH SLAB HAUNCH (SEE DETAIL "K")



DETAIL "J"

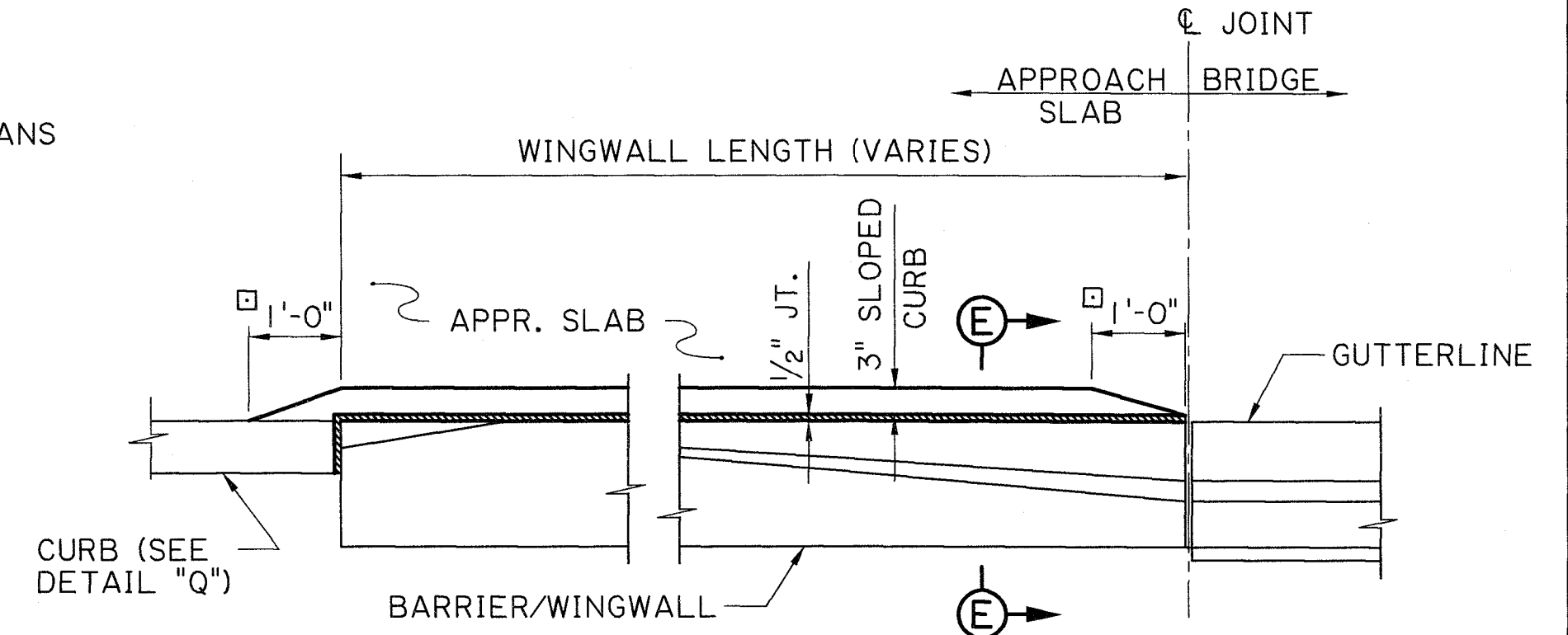
(AT EDGE BEAM)
SEE DETAIL "K" (N.T.S.)

#6 DOWELS (2' LONG @ 1'-6" SPS. SEE END BENT DETAILS. TOP HALF OF DOWELS TO BE WRAPPED WITH CLOSE-FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3/4" THICK, OR 2 LAYERS OF 15 LB. ASPHALT SATURATED FELT.)



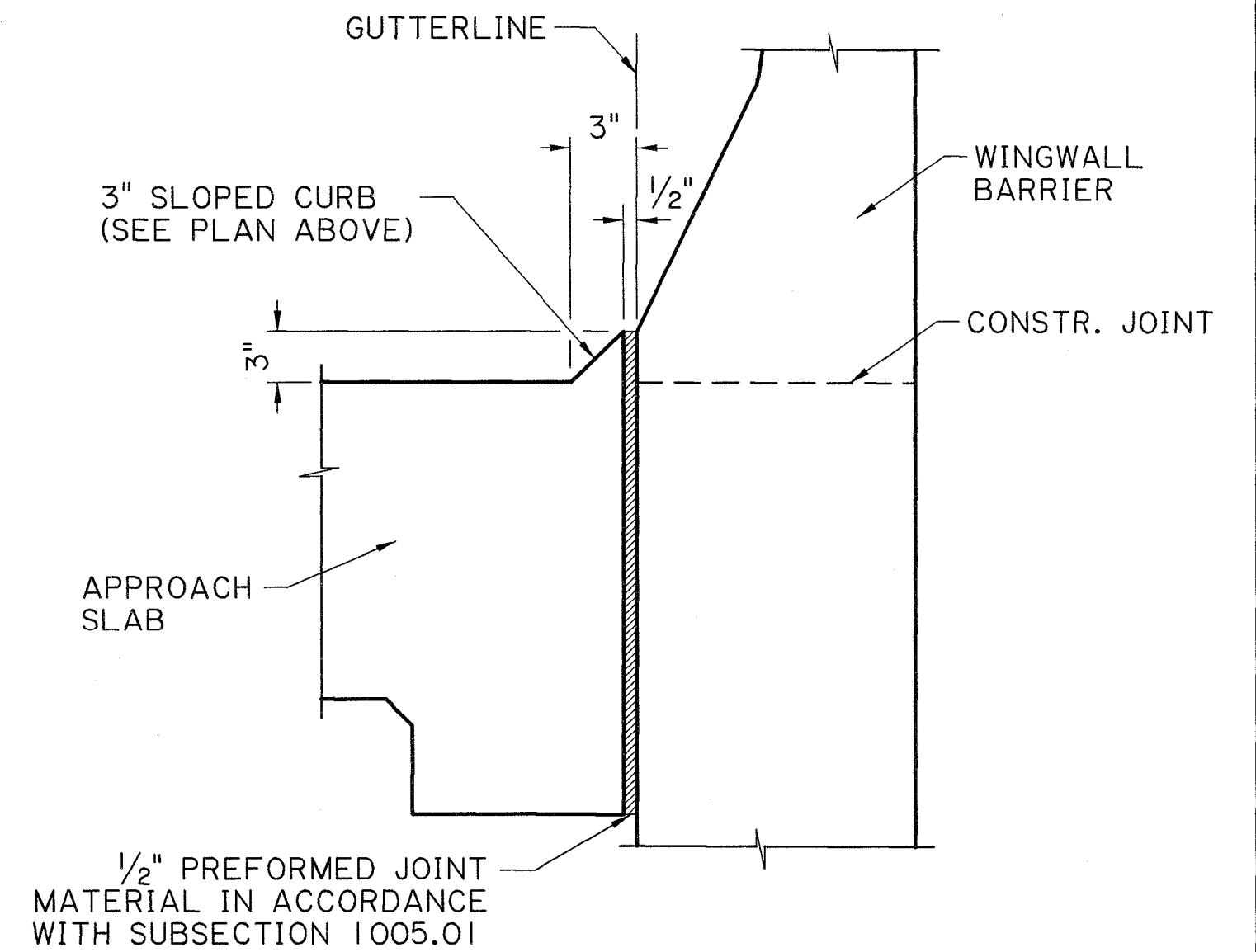
DETAIL "K"

(N.T.S.)



PLAN

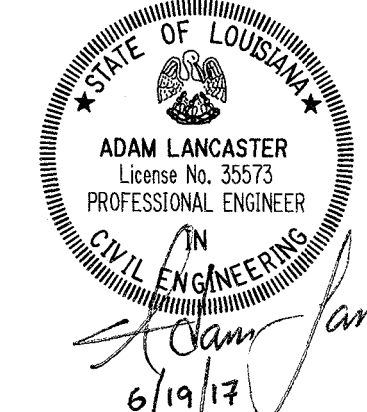
(TAPER DOWN TO TOP OF APPROACH SLAB)



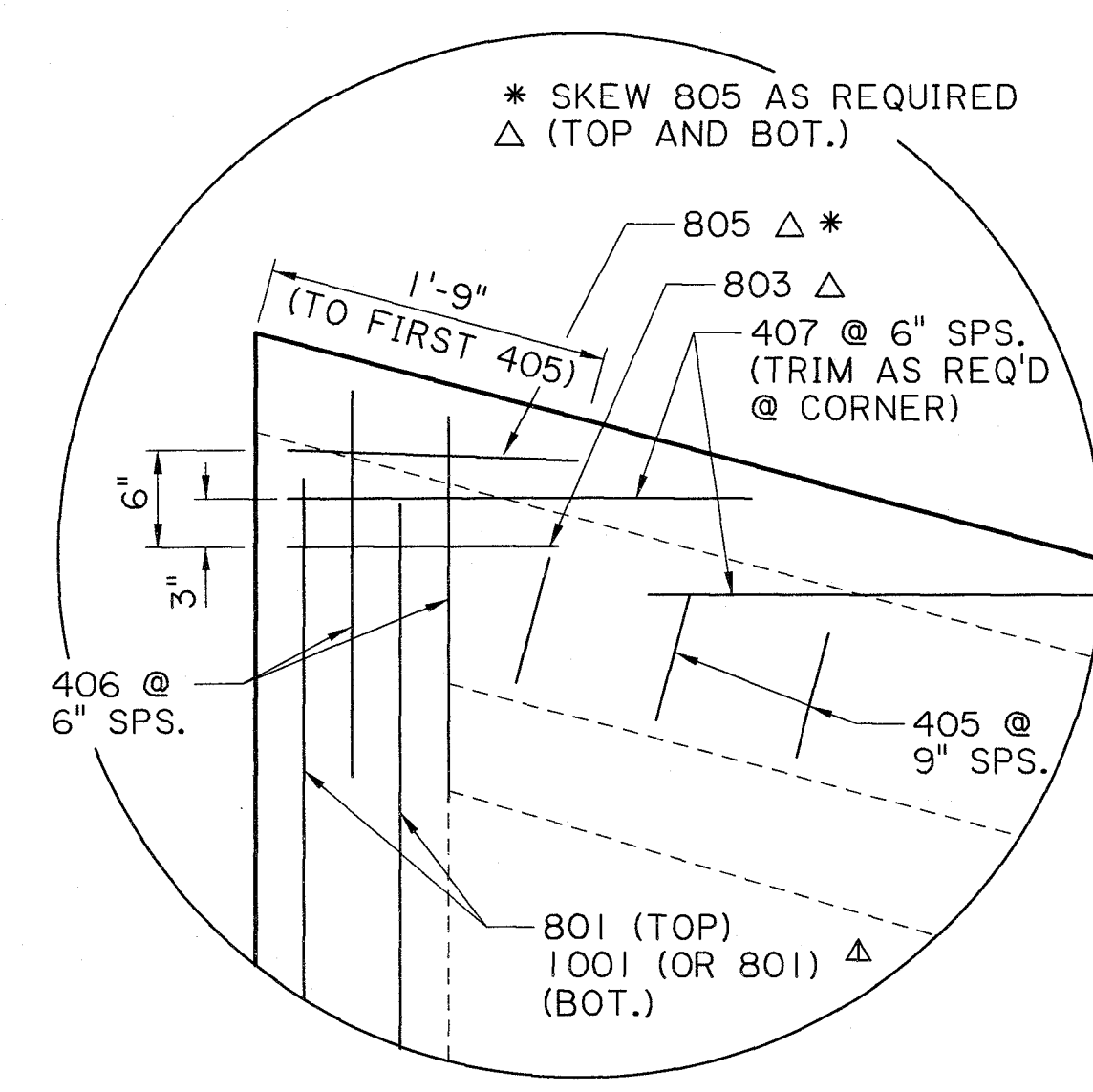
SECTION E-E

DETAIL "M" (SHOWING 3" SLOPED CURB AT WINGWALL) (N.T.S.)

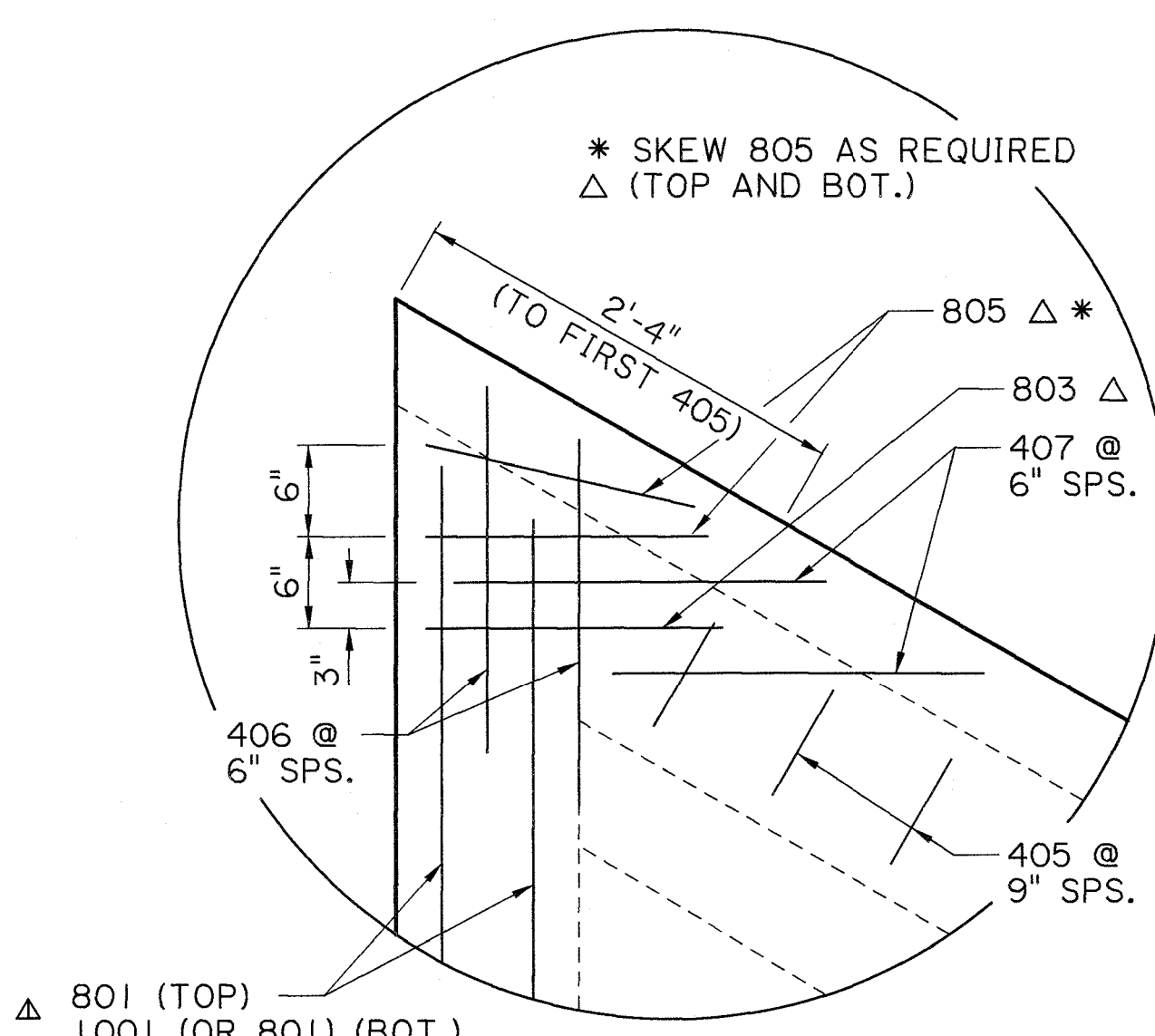
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



6/19/17

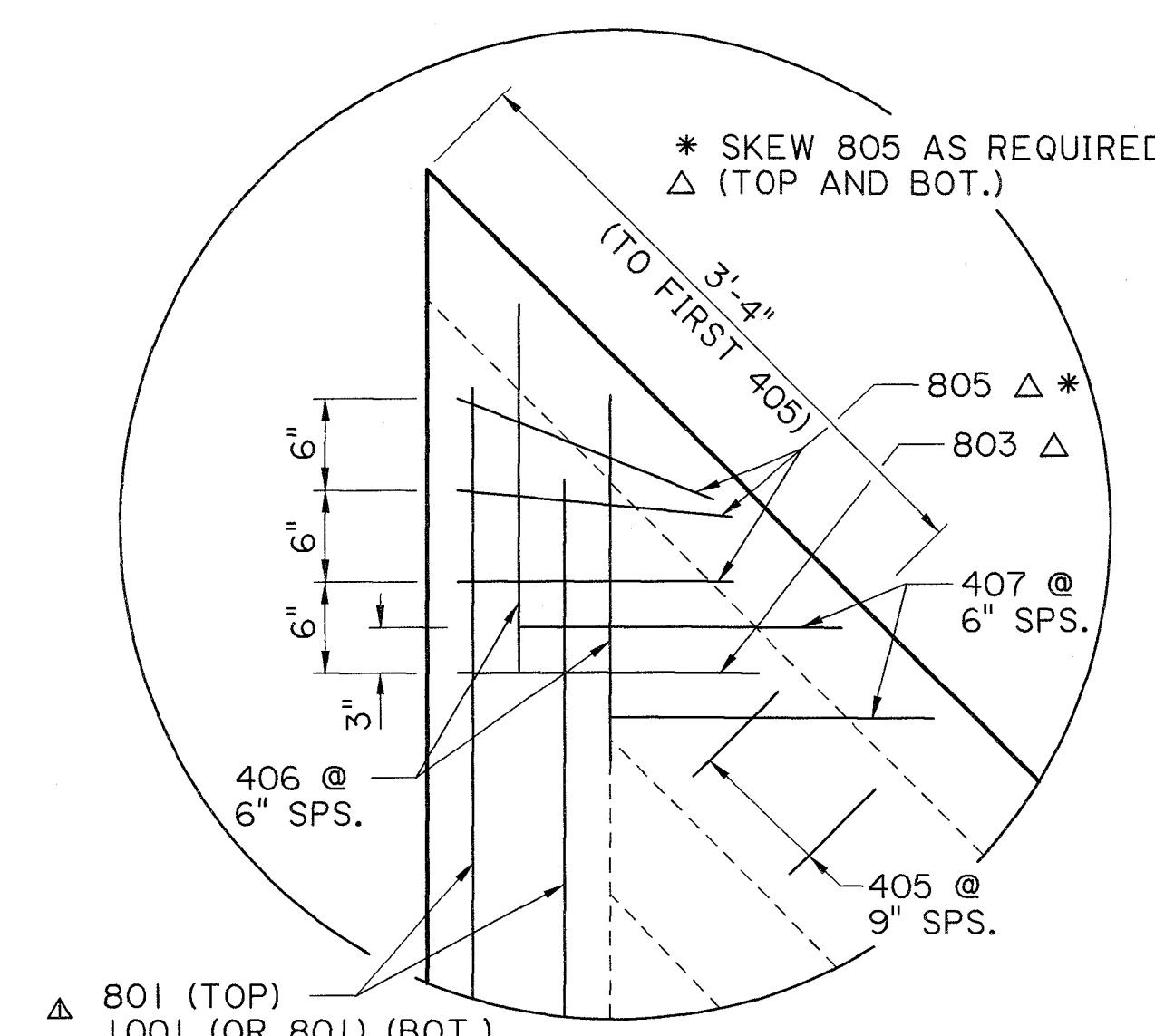


(15° SKEW) (N.T.S.)



(30° SKEW) (N.T.S.)

DETAIL "L" (N.T.S.) (404 AND 804 BARS NOT SHOWN FOR CLARITY)



(45° SKEW) (N.T.S.)

NOTES:

- FOR REINFORCEMENT LOCATION AND QUANTITIES, SEE APPROACH SLAB "SPECIFIC DETAILS".
- 1001 BARS IN THE BOTTOM OF THE SLAB ARE FOR A 40' LONG SLAB. FOR A 20' LONG SLAB, THESE BOTTOM BARS SHALL BE 801 BARS.
- 803 BARS ARE USED IN SKEWED SLABS ONLY.
- THE SACRIFICIAL SECTION IS PROVIDED FOR THE POSSIBLE CASE WHERE ROADWAY PAVEMENT GROWTH HAS PUSHED THE APPROACH SLAB INTO THE BRIDGE, CLOSING THE JOINT. IF REHABILITATION IS REQUIRED, UP TO 6 INCHES MAY BE REMOVED TO REESTABLISH THE JOINT.
- 407 BARS ARE ONLY REQUIRED FOR SKEWED APPROACH SLABS, AND ARE PLACED TRANSVERSE (PERPENDICULAR) TO THE ROADWAY CENTERLINE, STAGGERED BETWEEN 803 TOP BARS.

SHEET NUMBER 221

DESIGNED: A. LANCASTER
CHECKED: X. WANG
PARISH: ST. TAMMANY

CONTROL SECTION: R. MORVANT
CHECKED: A. LANCASTER

REVIEWER: Z. Z. FU
SERIES #: 5 OF 6

NO. DATE

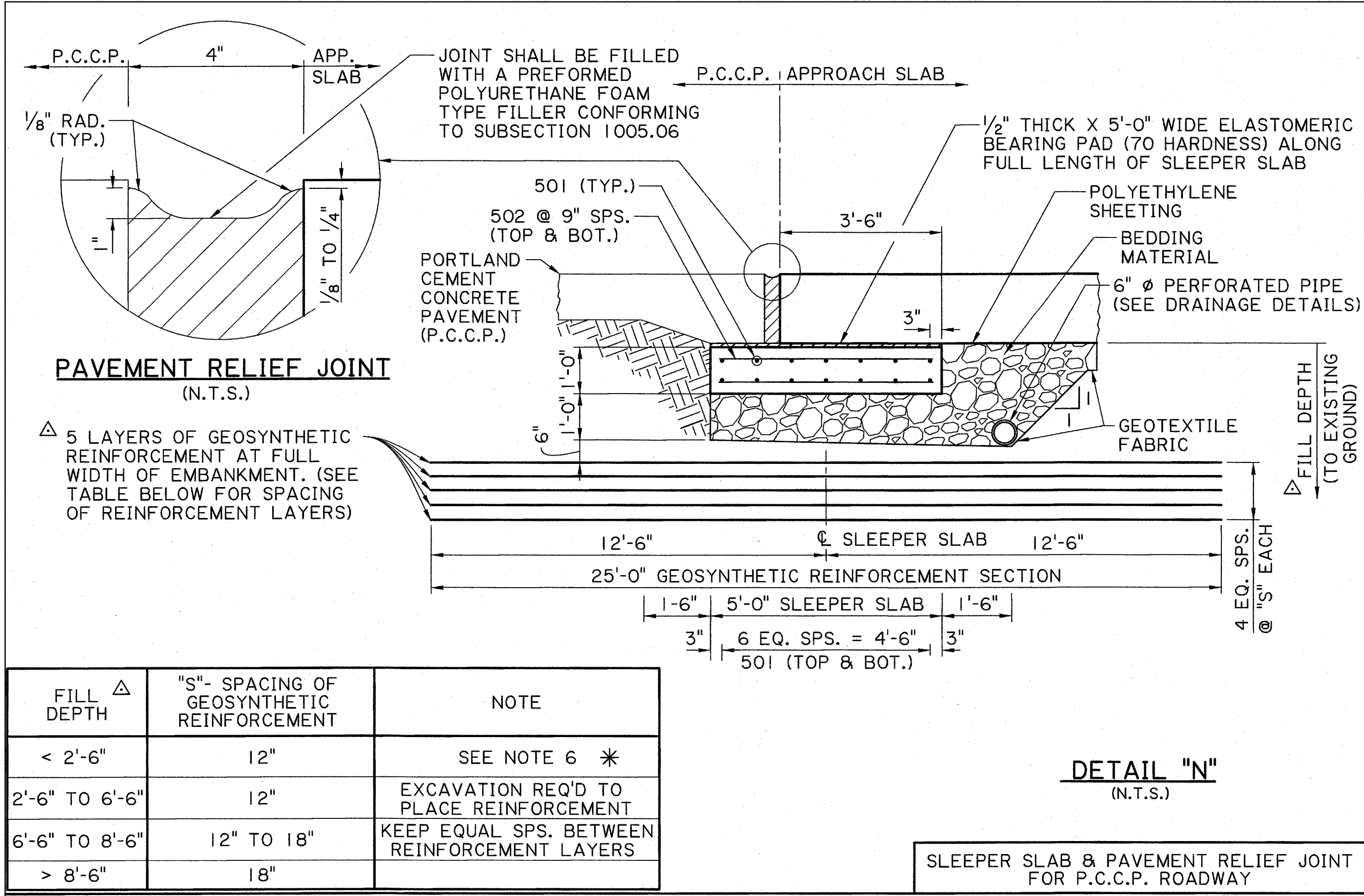
REVISION OR CHANGE ORDER DESCRIPTION

BY

APPROACH SLAB DETAILS "H" TO "M" GIRDER SPANS EXCLUDING QUAD BEAMS

BD.2.10.1.0.05 - APPROACH SLAB COMMON

BRIDGE AND STRUCTURAL DESIGN



FILL DEPTH	"S"- SPACING OF GEOSYNTHETIC REINFORCEMENT	NOTE
< 2'-6"	12"	SEE NOTE 6 *
2'-6" TO 6'-6"	12"	EXCAVATION REQ'D TO PLACE REINFORCEMENT
6'-6" TO 8'-6"	12" TO 18"	KEEP EQUAL SPS. BETWEEN REINFORCEMENT LAYERS
> 8'-6"	18"	

NOTES:

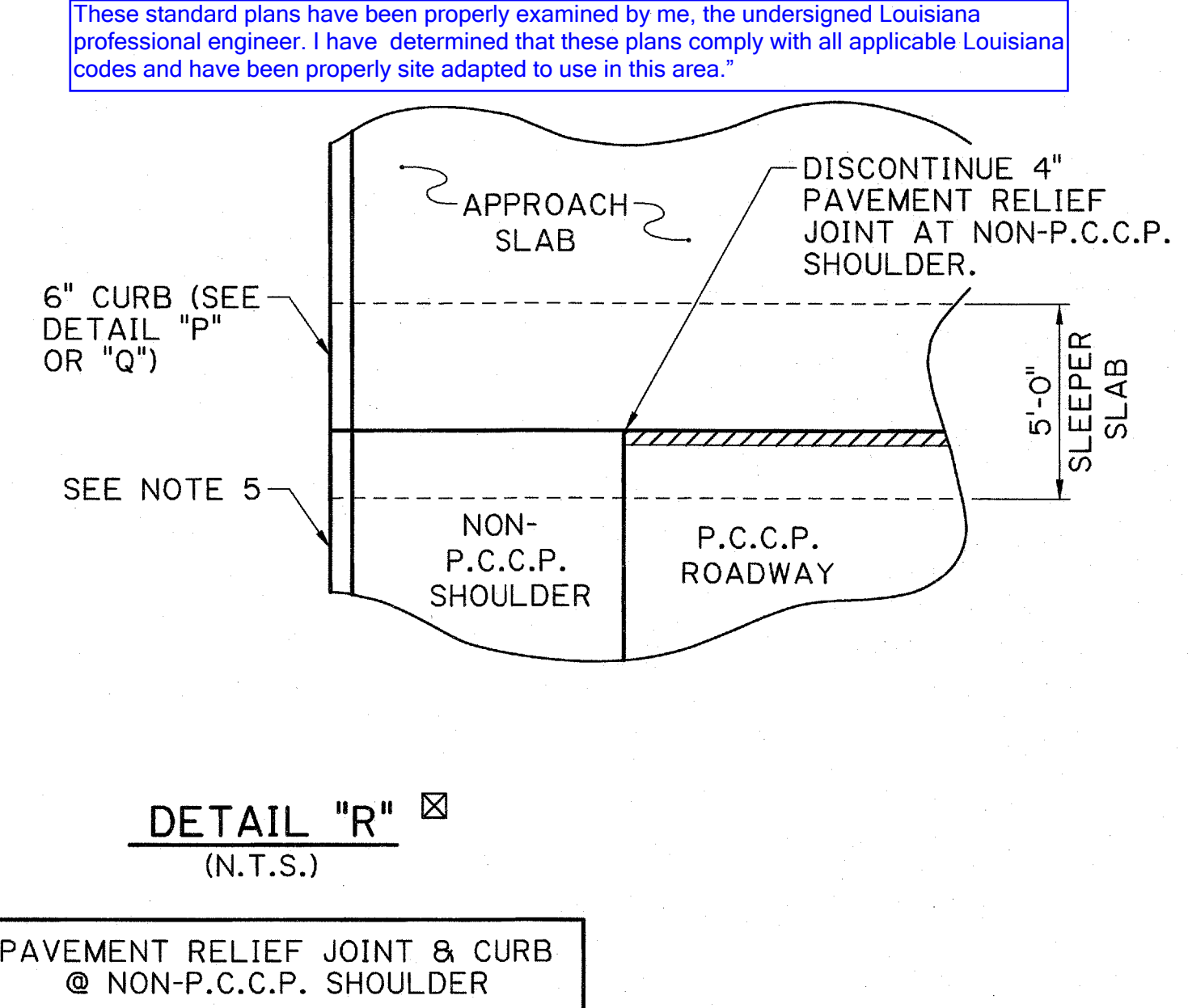
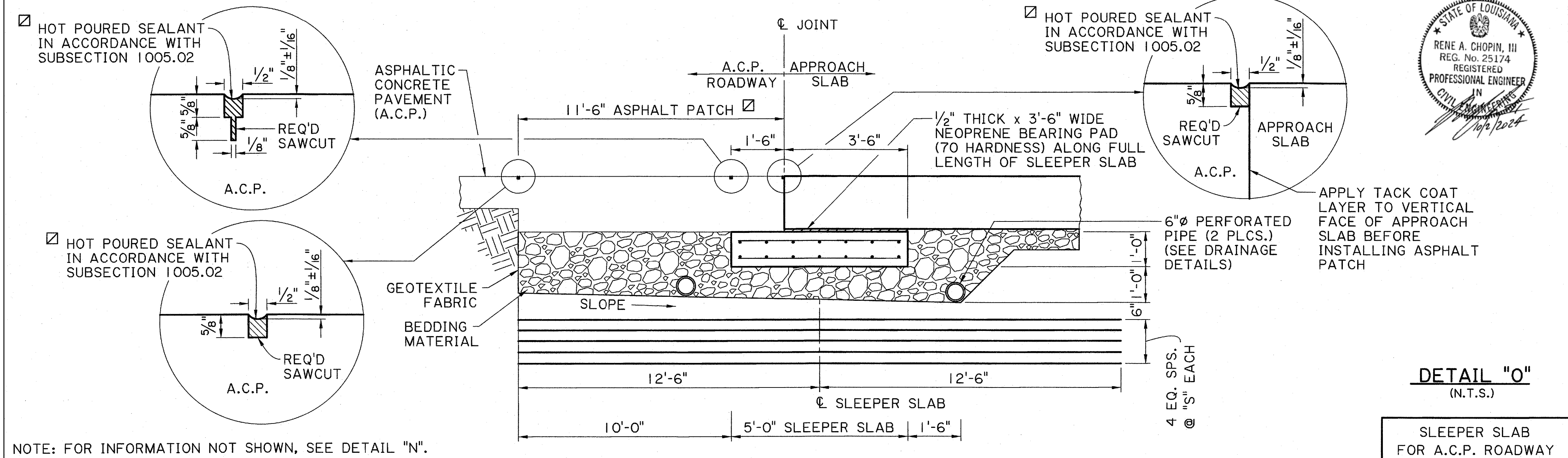
- BUILD SLEEPER SLAB TO THE FULL WIDTH OF THE APPROACH SLAB.
- LAYERS OF GEOTEXTILE FABRIC UNDER THE SLEEPER SLAB ARE ONLY REQUIRED IN A NEW FILL SECTION. SEE GENERAL NOTES FOR DIRECTION WHEN PROJECT INVOLVES AN EXISTING EMBANKMENT.

GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF A BIAXIAL, WOVEN GEOTEXTILE FABRIC CONFORMING TO THE "GENERAL REQUIREMENTS" IN SUBSECTION 1019.01 OF THE STANDARD SPECIFICATIONS. THE "DETAILED REQUIREMENTS" OF 1019.01 DO NOT APPLY. FURNISH A CERTIFICATE OF COMPLIANCE AND TEST DATA FROM AN APPROVED LABORATORY SHOWING THE REINFORCEMENT MEETS OR EXCEEDS THE FOLLOWING STRENGTH REQUIREMENTS:

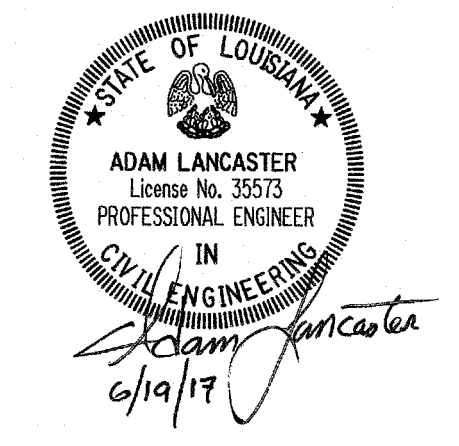
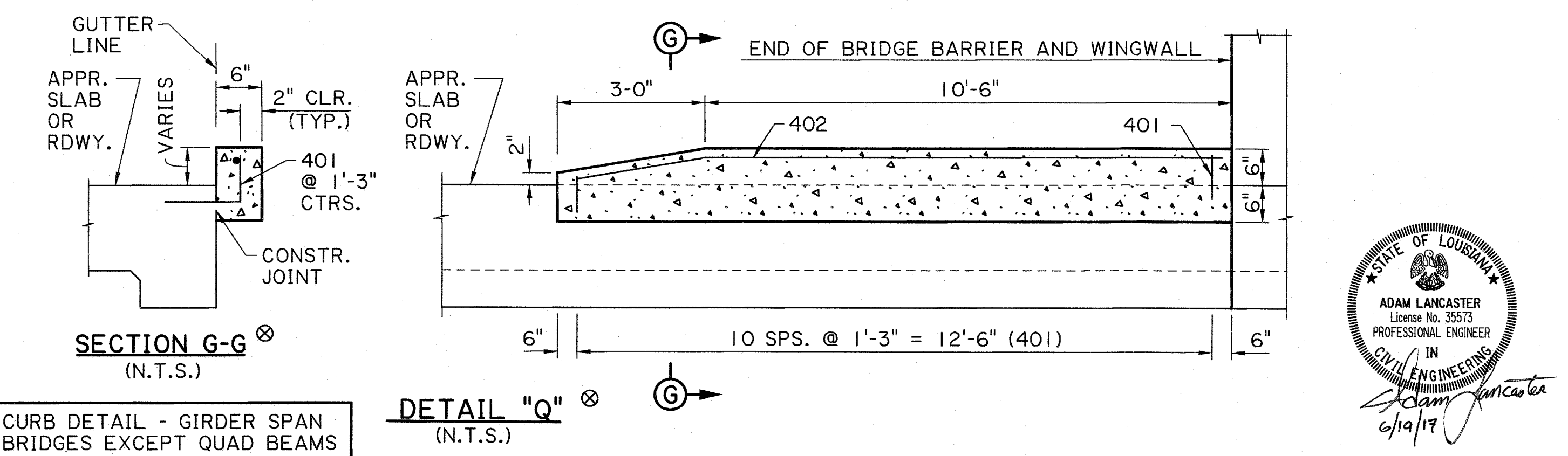
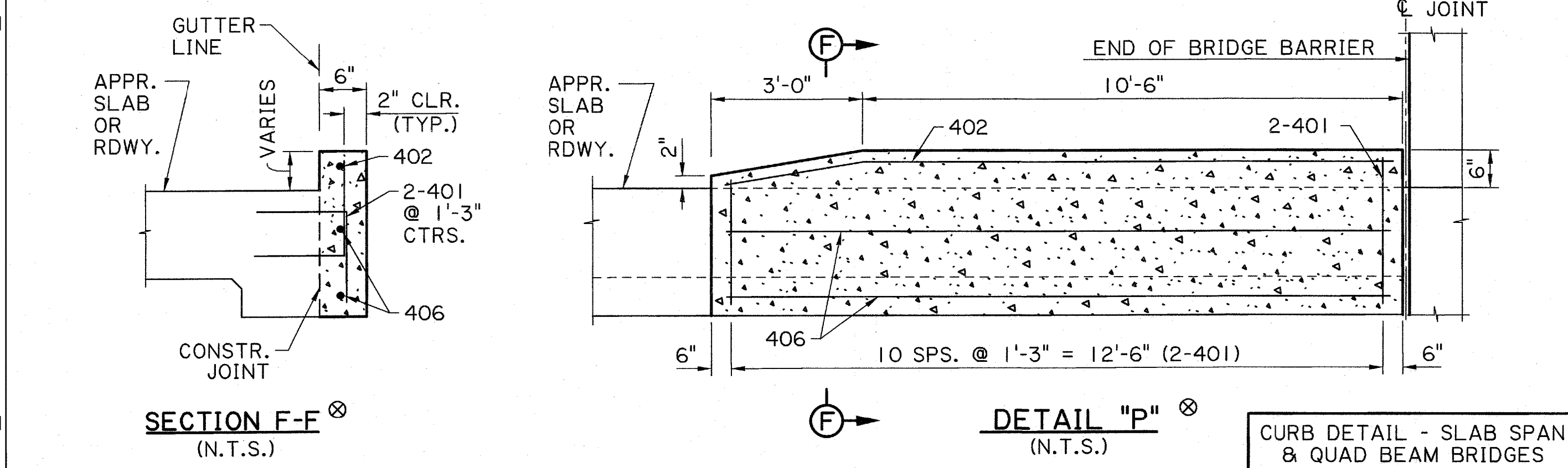
TENSILE STRENGTH @ 2% STRAIN: 550 LB/FT (ASTM D4595)
ULTIMATE TENSILE STRENGTH: 3000 LB/FT (ASTM D4595)
TENSILE STRENGTH RETAINED AFTER WEATHERING (500 HRS, UVA LAMPS) = 80% (ASTM D7238)

FURNISH GEOSYNTHETIC REINFORCEMENT IN 25' LONG SECTIONS. PLACE SECTIONS SO THAT REINFORCEMENT RUNS CONTINUOUSLY IN THE DIRECTION OF THE ROADWAY. INSTALL LAYERS OF REINFORCEMENT FLAT AND TAUT, AND SECURE LAYERS IN PLACE WITH SHOVELLED PILES OF FILL, PINS, OR STAPLES. PLACE AND SPREAD LAYERS OF FILL IN THE DIRECTION OF OVERLAPS TO PREVENT PEELING OR SEPARATION OF REINFORCEMENT LAYERS AT THE OVERLAPS. LAYERS OF REINFORCEMENT MUST REMAIN FLAT AND TAUT DURING AND AFTER FILL PLACEMENT. HANDLING AND PLACEMENT OF REINFORCEMENT SHALL CONFORM TO THE "CONSTRUCTION REQUIREMENTS" OF SUBSECTION 203.11.
- "ASPHALT PATCH" AND "SAW CUT AND SEAL" TO BE PAID UNDER APPROPRIATE PAY ITEMS BY OTHERS.
- DETAILS "P" AND "Q" APPLY TO BRIDGES WITH GUARDRAIL BUT WITHOUT AN END DRAIN SYSTEM. WHEN AN END DRAIN INSTALLATION IS REQUIRED, SEE SPECIAL DETAIL SHEET "BRIDGE END DRAIN SYSTEM (OPEN)" OR "BRIDGE END DRAIN SYSTEM (CLOSED)" (AS APPLICABLE) FOR CURB LENGTH AND DETAILS. BRIDGES WITHOUT GUARDRAIL OR END DRAINS DO NOT REQUIRE A CURB, UNLESS OTHERWISE STATED IN THE PLANS.
- FOR A P.C.C.P. ROADWAY WITH NON-P.C.C.P. SHOULDERS, DISCONTINUE THE 4" PAVEMENT RELIEF JOINT AT THE EDGE OF ROADWAY, AS SHOWN IN DETAIL "R".

IN CASES WHERE THE REQUIRED CURB LENGTH EXTENDS BEYOND THE END OF THE APPROACH SLAB ONTO AN ASPHALT SHOULDER, THE SEGMENT OF THE CURB ON THE ASPHALT SHOULDER MAY BE CONSTRUCTED OF ASPHALT. IN THESE CASES, BARS 401 AND 402 MAY BE OMITTED FROM THE CURB.
- IF WARRANTED BY PROJECT CONDITIONS, GEOTEXTILE REINFORCEMENT UNDER SLEEPER SLAB MAY BE OMITTED, BUT SUBSURFACE SOIL CONDITIONS SHOULD BE INVESTIGATED TO DETERMINE SOIL BEARING CAPACITY AND EXPECTED SETTLEMENT. IF SOIL BEARING CAPACITY UNDER THE SLEEPER SLAB EXCEEDS 2000 PSF, NO GEOSYNTHETIC REINFORCEMENT IS REQUIRED.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SHEET NUMBER 222

ST. TAMMANY

DESIGNED BY A.L. LANCASTER
CHECKED BY X. WANG

CONTROL SECTION
CHECKED BY R. MORVANT

FILE PROJECT
REVIEWED BY Z.Z. FU
SERIES # 16 OF 6

REVISION OR CHANGE ORDER DESCRIPTION

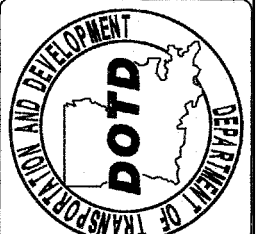
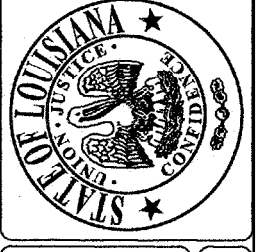
DATE

NO.

APPROACH SLAB DETAILS "N" TO "R"

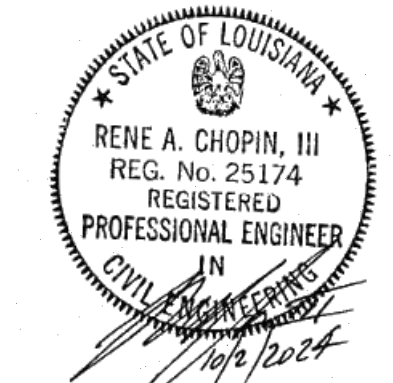
BD.2.10.1.0.06 - APPROACH SLAB COMMON

BRIDGE AND STRUCTURAL DESIGN

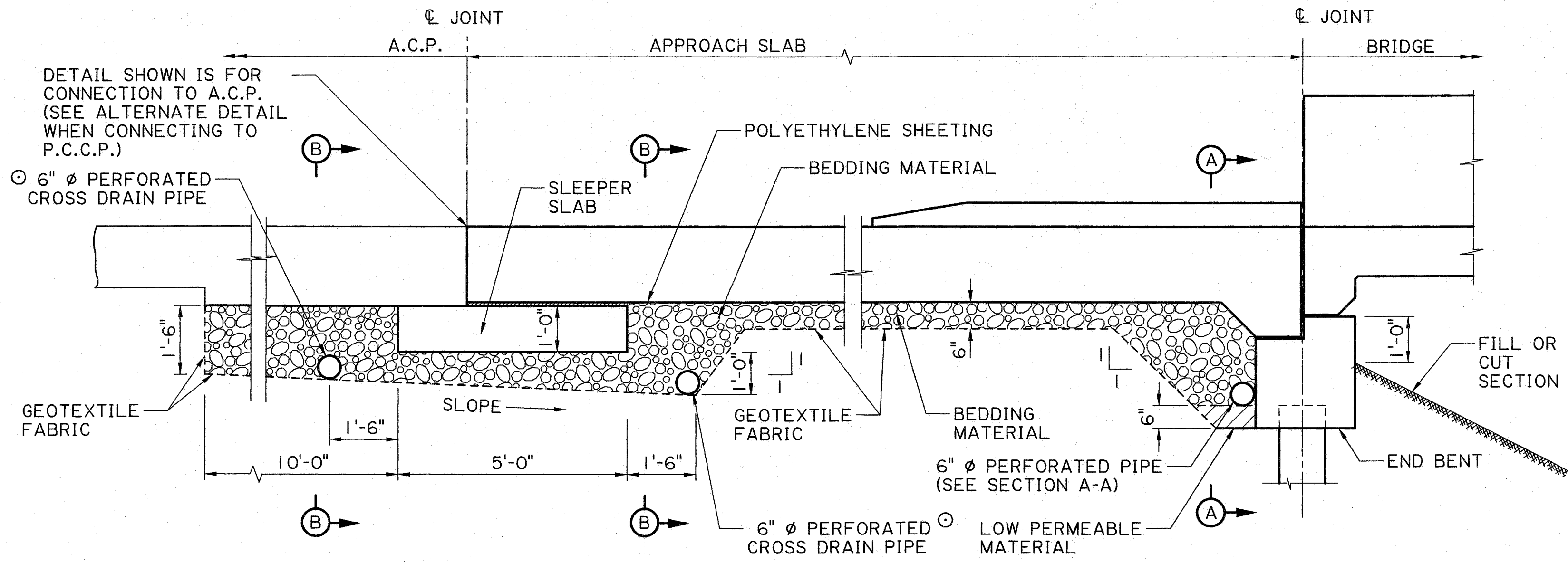


NOTES:

1. INSTALL POLYETHYLENE SHEETING (6 MIL. THICKNESS) BETWEEN THE BEDDING MATERIAL AND APPROACH SLAB. INSTALL GEOTEXTILE FABRIC DIRECTLY BELOW THE BEDDING MATERIAL. LIMITS SHALL BE THE OUTER EDGES OF THE APPROACH SLAB.
2. UNDERDRAIN MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE STANDARD SPECIFICATIONS.
3. LOW PERMEABLE MATERIAL SHALL BE DEFINED AS A SOIL HAVING THE SAME PI LIMITS AS PLASTIC SOIL BLANKETS, SEE SECTION 203.10.
4. WRAP GEOTEXTILE FABRIC (CLASS C OR D) AROUND THE PERFORATED PIPE AS SHOWN.
5. FOR ROADWAYS WITH A ONE-WAY TANGENT, THE 6" Ø CROSS DRAINAGE PIPE MAY SLOPE ONE-WAY WITH ONLY ONE CONCRETE HEADWALL AT THE LOWER END. PLUG THE HIGH END OF THE 6" Ø PIPE.
6. CROSS DRAIN PIPE SHALL NOT EXCEED LIMITS OF RIGHT OF WAY (SEE DETAIL "A").
7. APPROACH SLAB WITHOUT SLEEPER SLAB TO ONLY BE USED ON OFF-SYSTEM PROJECTS OR BY SPECIAL PERMISSION FROM THE BRIDGE DESIGN ADMINISTRATOR.

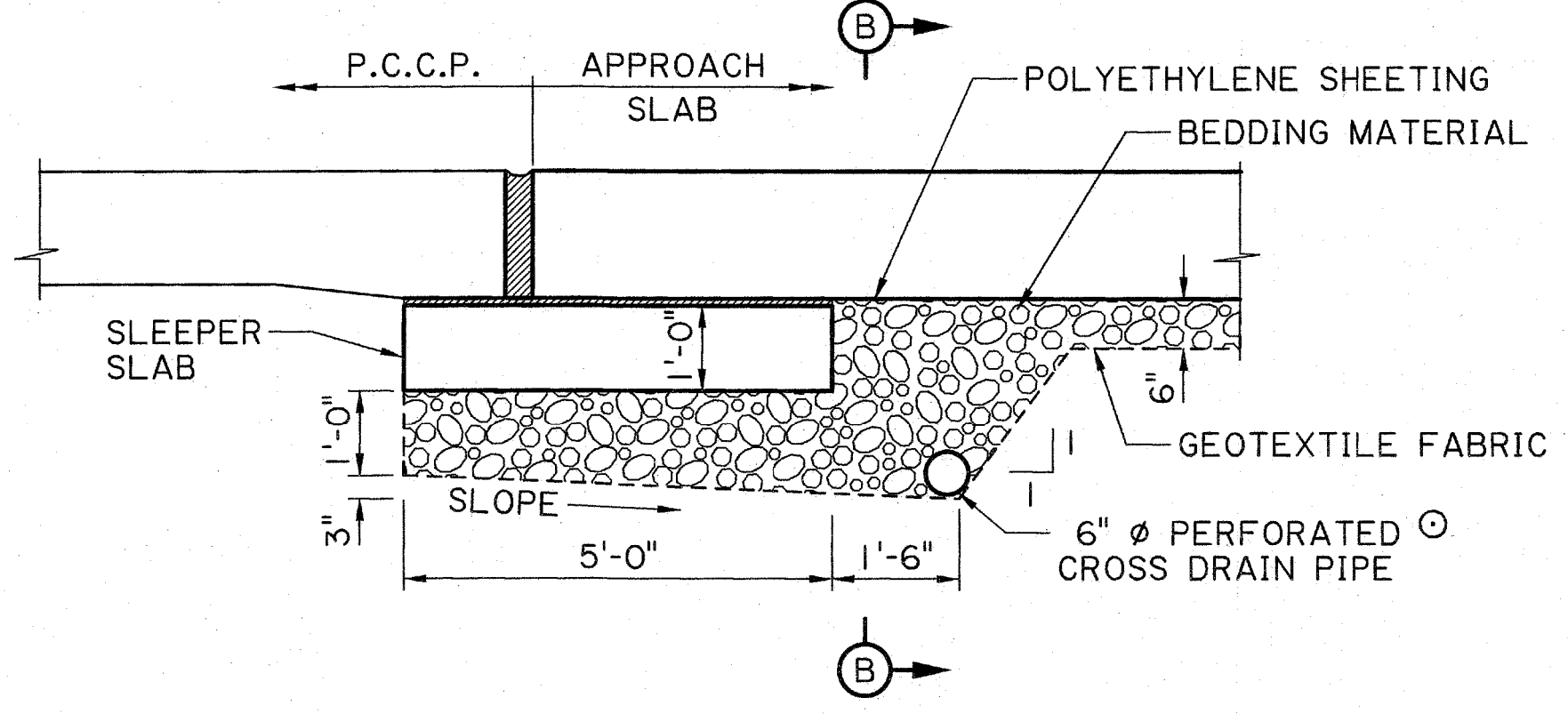


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

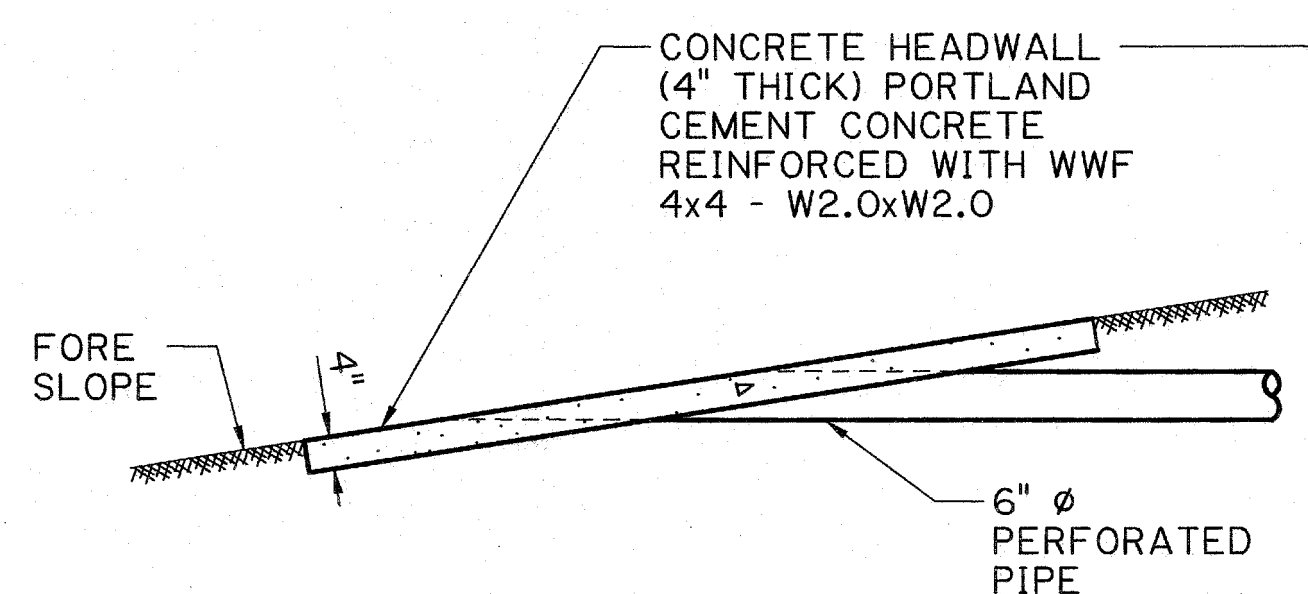


ELEVATION @ APPROACH SLAB

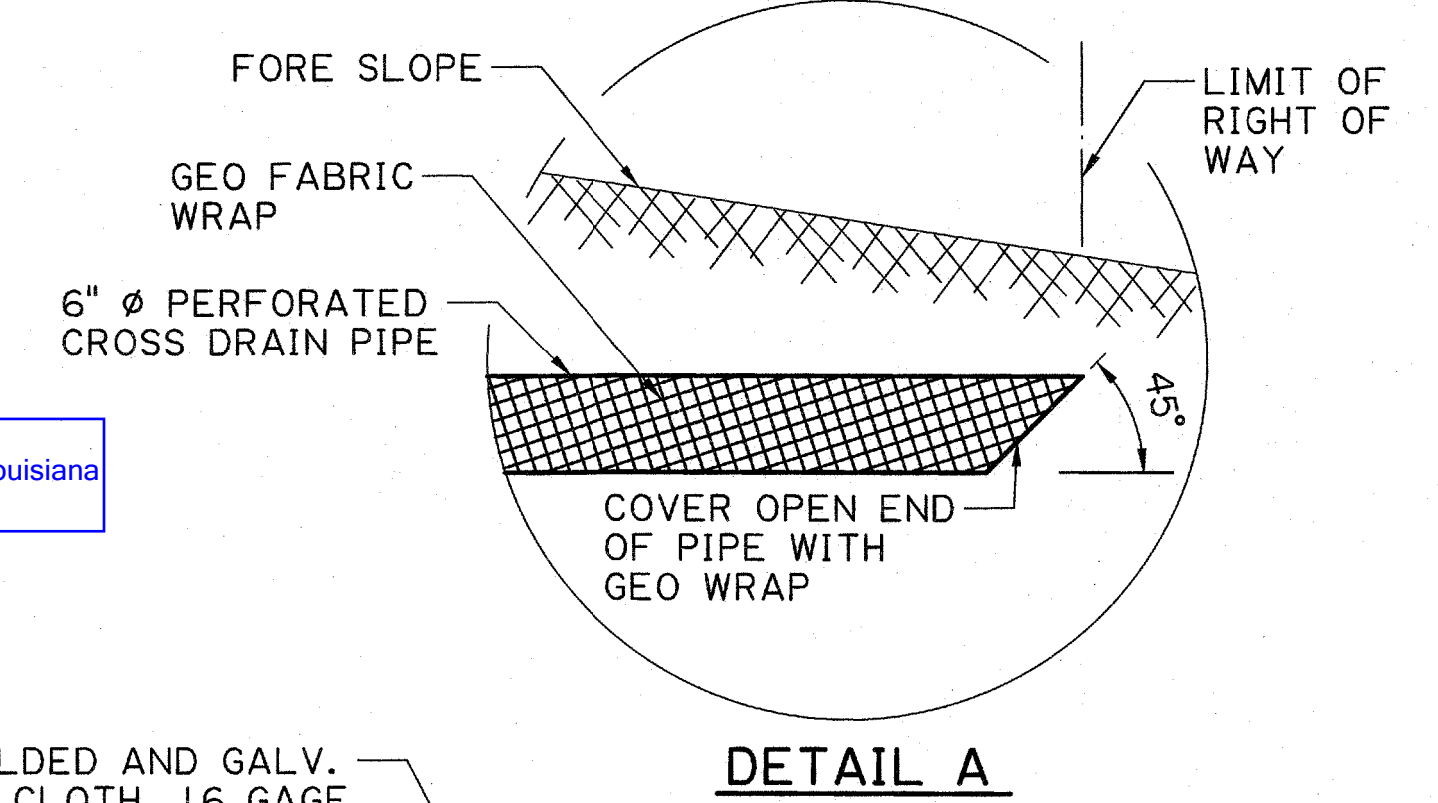
(SLAB SPAN BRIDGE SHOWN. QUAD BEAM DETAIL SIMILAR)
(ASPHALTIC CONCRETE ROADWAY SHOWN. FOR ALTERNATE DETAILS AT ROADWAY, SEE BELOW)



ALTERNATE DETAIL FOR P.C.C.P. ROADWAY

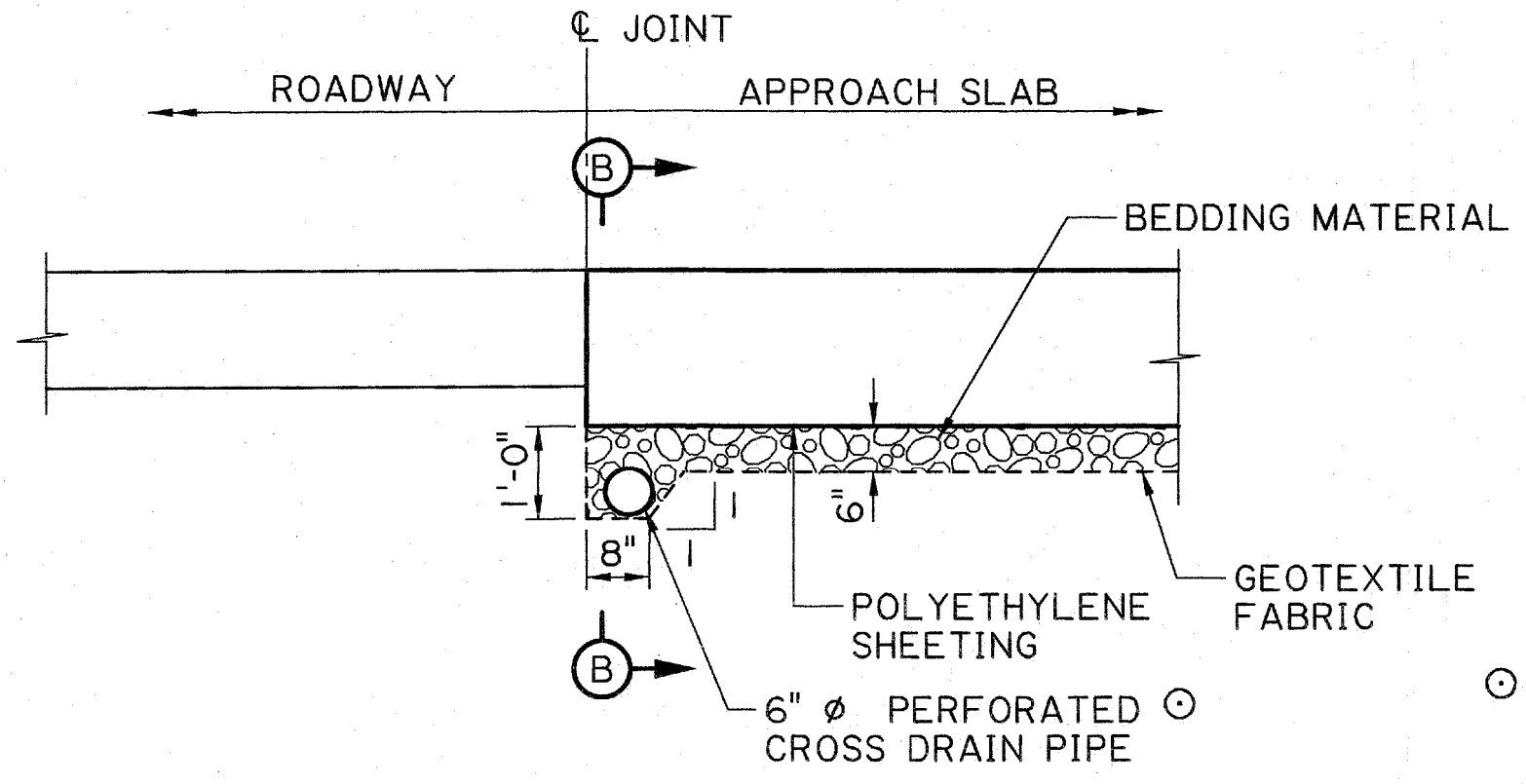


CONCRETE HEADWALL



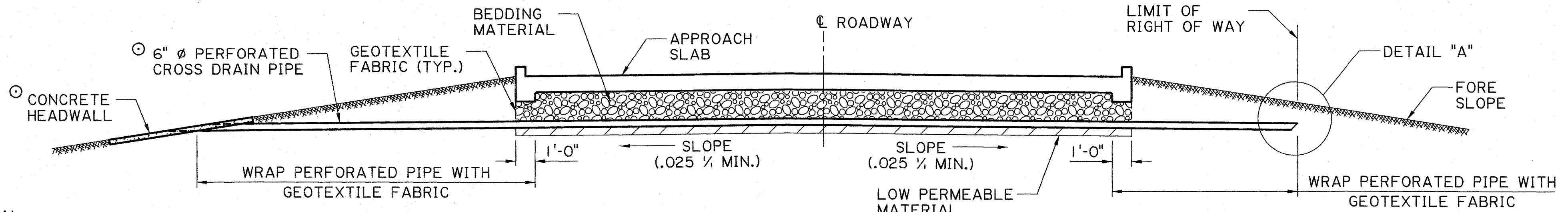
DETAIL A

END TREATMENT FOR 6" PERFORATED CROSS DRAIN PIPES

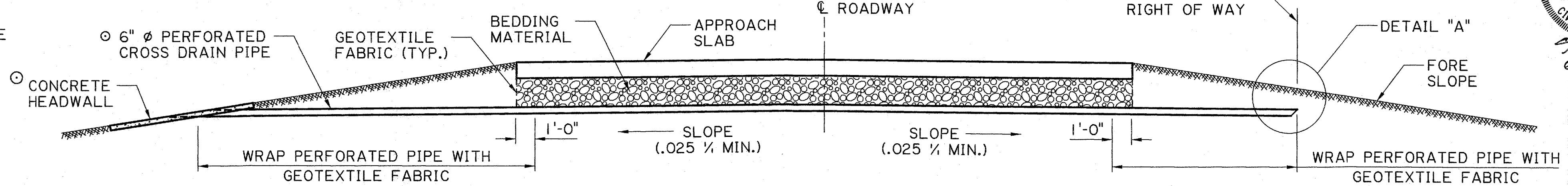


ALTERNATE DETAIL FOR APPROACH SLAB WITHOUT SLEEPER SLAB

(NOTE: SECTION A-A ALSO APPLIES TO APPROACH SLABS WITHOUT A SLEEPER SLAB AND OFF-SYSTEM BRIDGES)

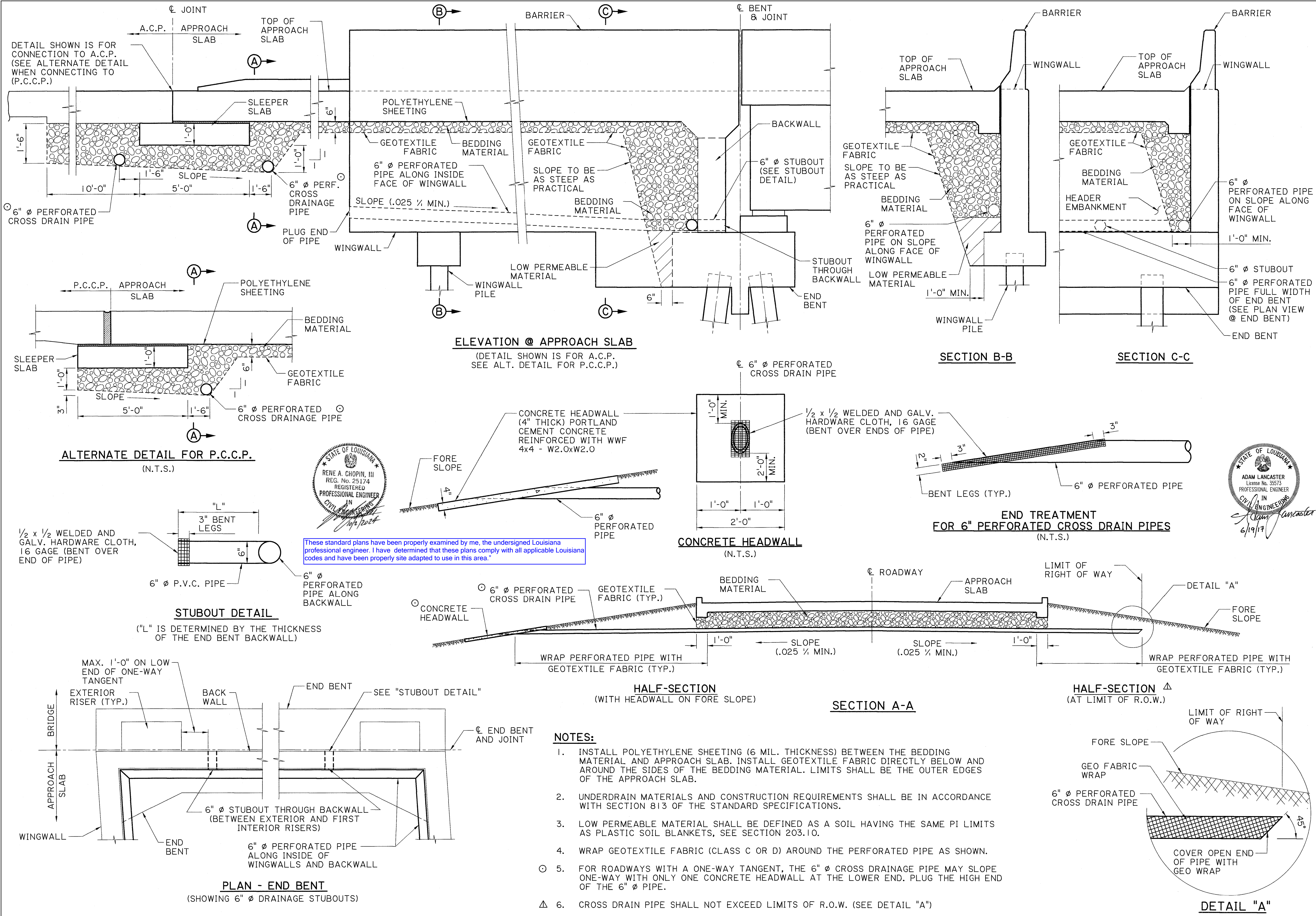


SECTION A-A



SECTION B-B

(ALL DETAILS ON THIS SHEET ARE N.T.S.)

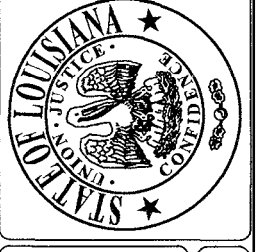


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

NOTES:

1. INSTALL POLYETHYLENE SHEETING (6 MIL. THICKNESS) BETWEEN THE BEDDING MATERIAL AND APPROACH SLAB. INSTALL GEOTEXTILE FABRIC DIRECTLY BELOW AND AROUND THE SIDES OF THE BEDDING MATERIAL. LIMITS SHALL BE THE OUTER EDGES OF THE APPROACH SLAB.
2. UNDERDRAIN MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE STANDARD SPECIFICATIONS.
3. LOW PERMEABLE MATERIAL SHALL BE DEFINED AS A SOIL HAVING THE SAME PI LIMITS AS PLASTIC SOIL BLANKETS, SEE SECTION 203.10.
4. WRAP GEOTEXTILE FABRIC (CLASS C OR D) AROUND THE PERFORATED PIPE AS SHOWN.
5. FOR ROADWAYS WITH A ONE-WAY TANGENT, THE 6" Ø CROSS DRAINAGE PIPE MAY SLOPE ONE-WAY WITH ONLY ONE CONCRETE HEADWALL AT THE LOWER END. PLUG THE HIGH END OF THE 6" Ø PIPE.
6. CROSS DRAIN PIPE SHALL NOT EXCEED LIMITS OF R.O.W. (SEE DETAIL "A")

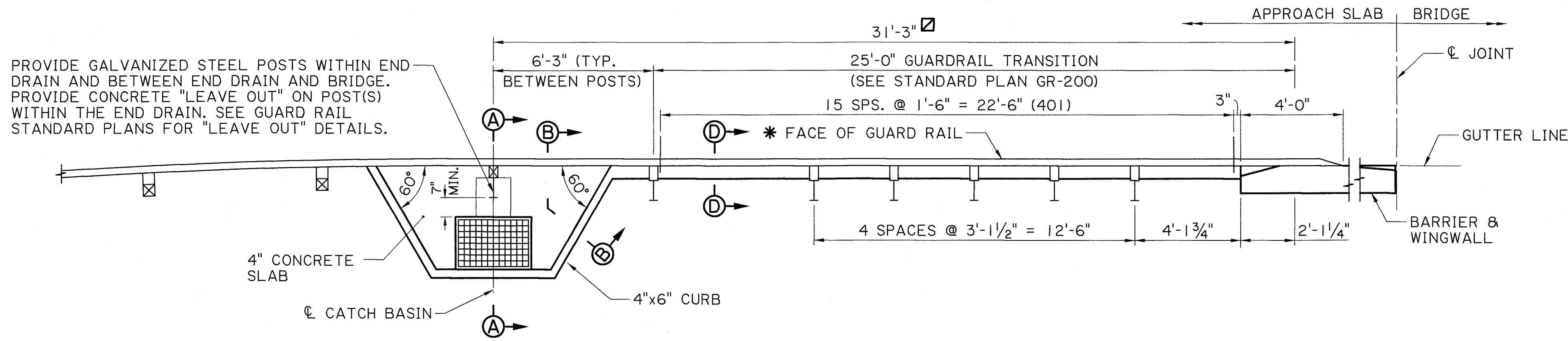
SHEET NUMBER	224
DESIGNED	A.L. LANCASTER
CHECKED	X. WANG
CONTROL SECTION	A. KUYORO
DATE	6/19/17
PROJECT	BRIDGE AND STRUCTURAL DESIGN
REVISION OR CHANGE ORDER DESCRIPTION	
NO.	
DATE	
BY	



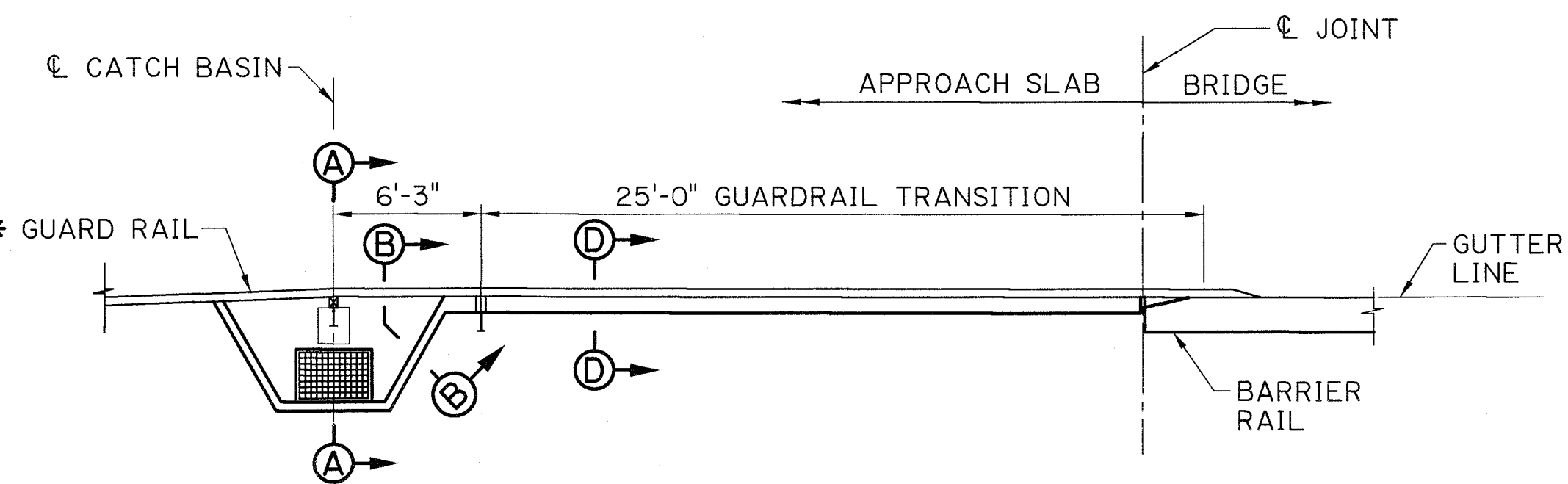
BRIDGE AND STRUCTURAL DESIGN

DRAINAGE DETAILS FOR CONCRETE APPROACH SLAB
GIRDER SPANS EXCLUDING QUAD BEAMS

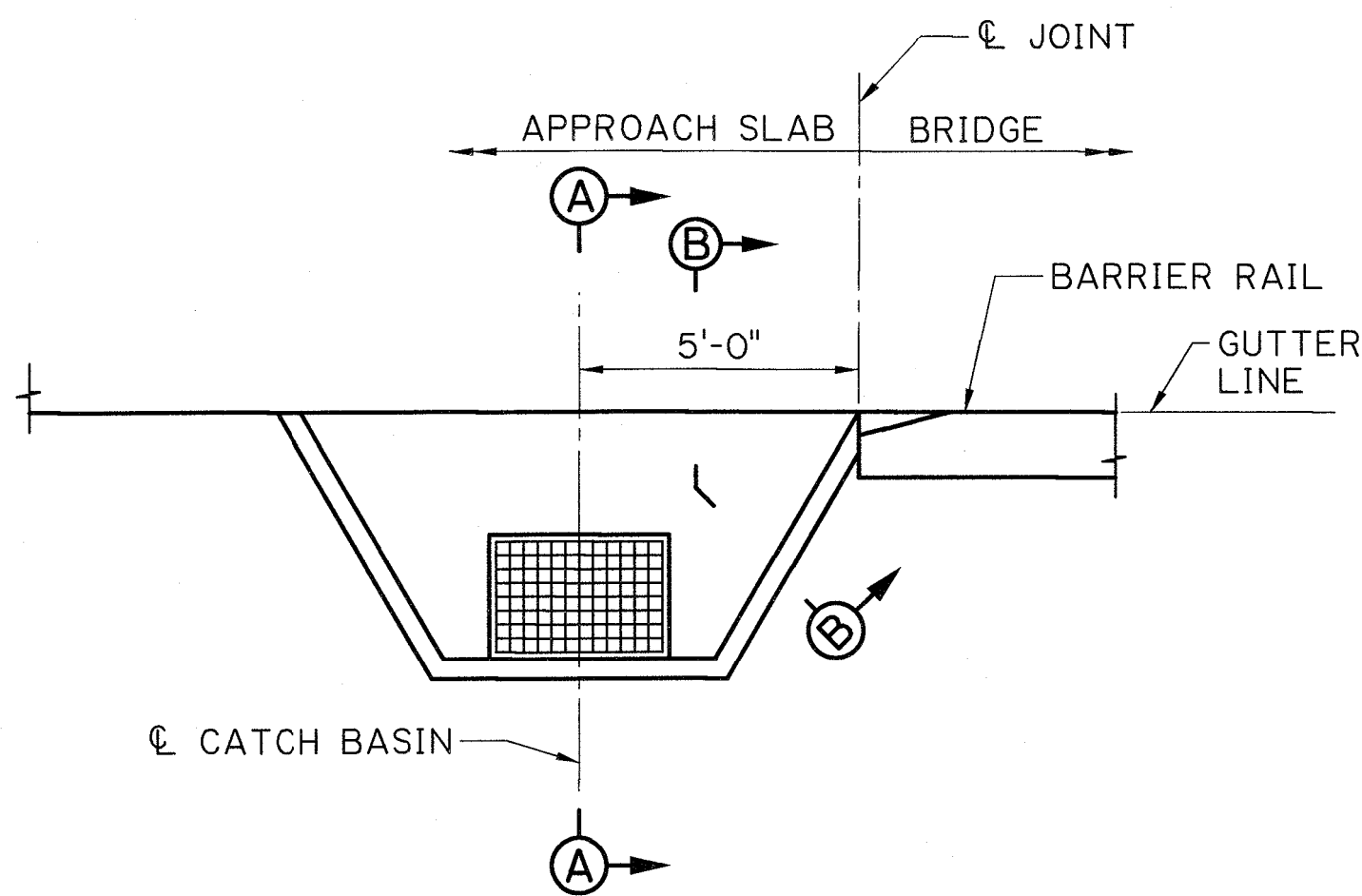
BD.2.10.1.0.08 - APPROACH SLAB COMMON



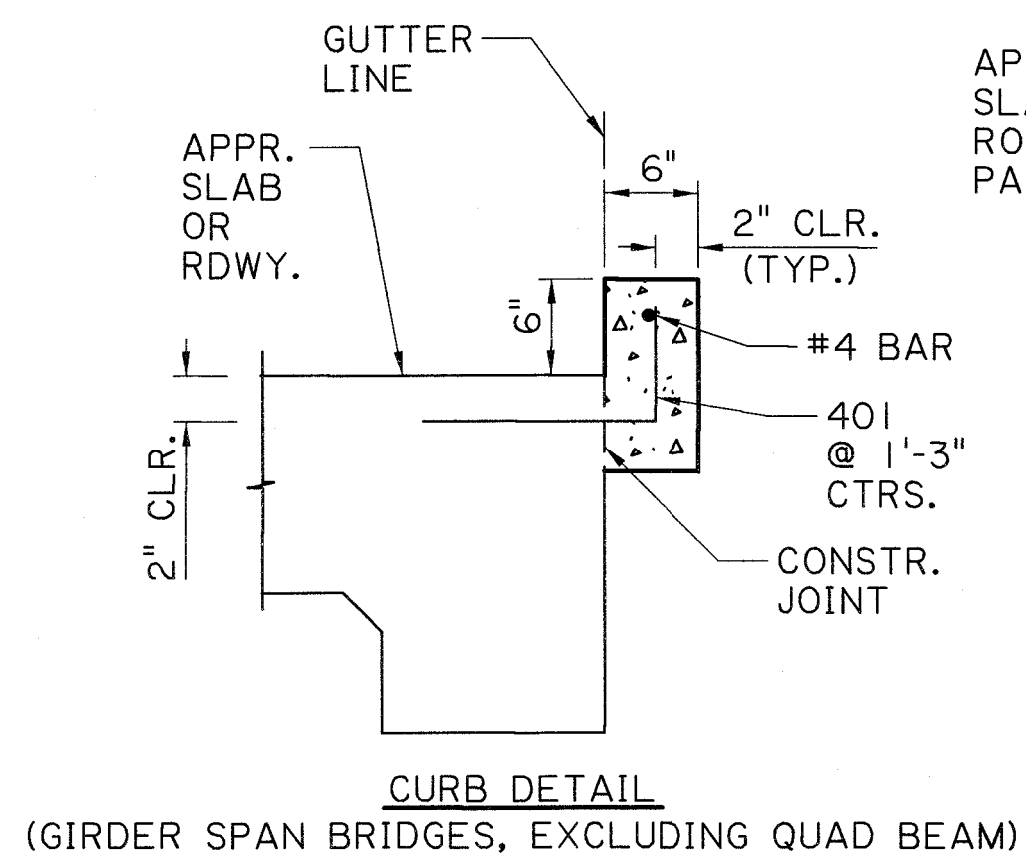
**PLAN "A"- CLOSED END DRAIN
FOR GIRDER SPAN BRIDGES (EXCEPT QUAD BEAMS)**
(WINGWALL PARALLEL TO ROADWAY)
(N.T.S.)



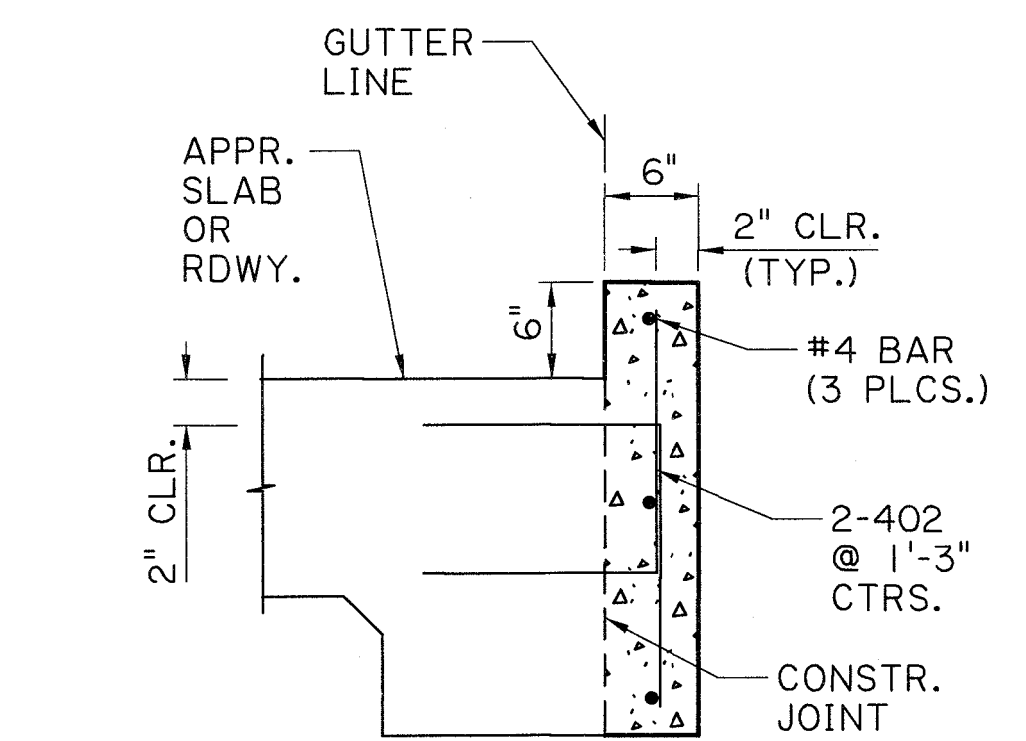
**PLAN "B"- CLOSED END DRAIN
FOR SLAB SPAN AND QUAD BEAM BRIDGES**
(FOR INFORMATION NOT SHOWN, SEE PLAN "A")
(WINGWALL NOT PARALLEL TO ROADWAY)
(N.T.S.)



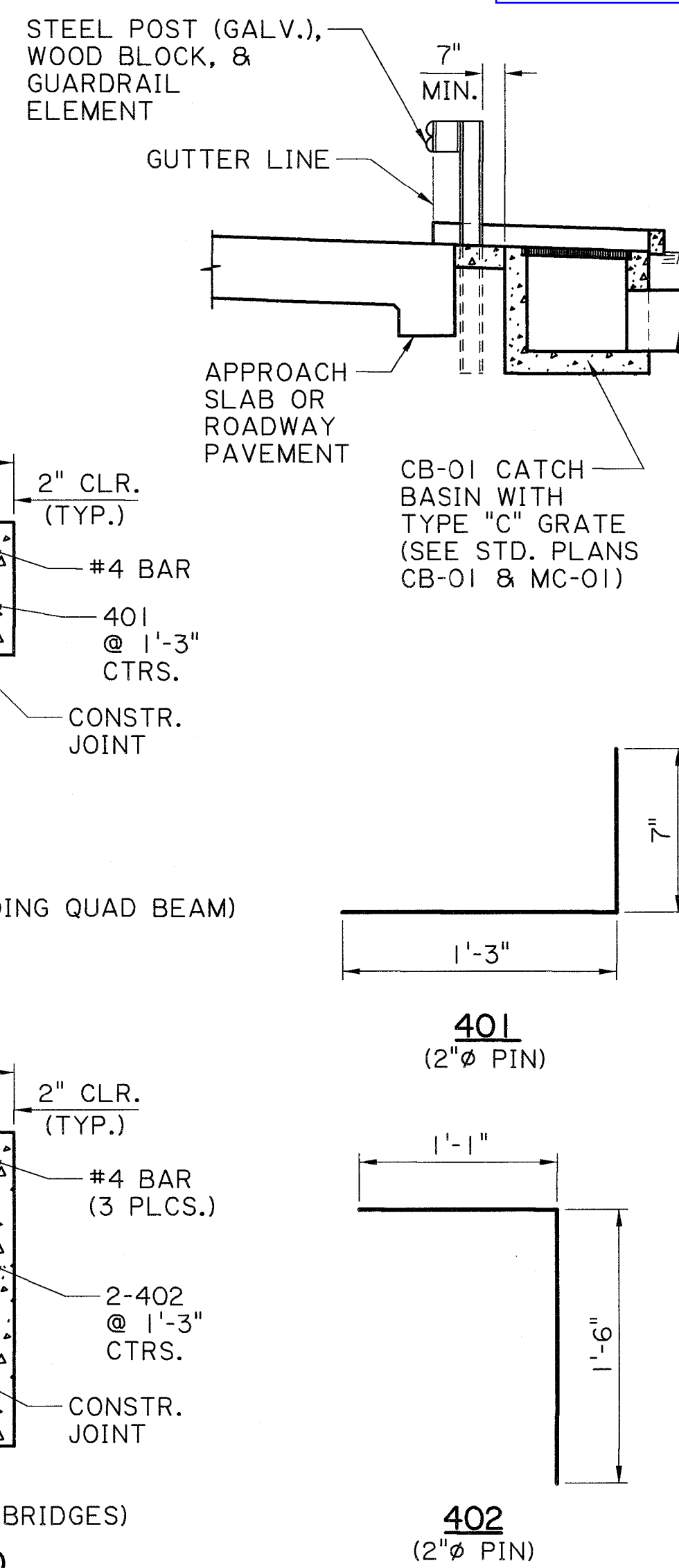
**PLAN "C"- CLOSED END DRAIN WHEN
WINGWALLS AND GUARDRAIL ARE NOT REQUIRED**
(FOR INFORMATION NOT SHOWN, SEE PLAN "A")
(N.T.S.)



**CURB DETAIL
(GIRDER SPAN BRIDGES, EXCLUDING QUAD BEAM)**



**CURB DETAIL
(SLAB SPAN AND QUAD BEAM BRIDGES)**
**SECTION D-D
(N.T.S.)**



**SECTION A-A
(N.T.S.)**

**SECTION B-B
(N.T.S.)**

**SECTION C-C
(CONCRETE SLOPE PROTECTION AT PIPE END)
(N.T.S.)**

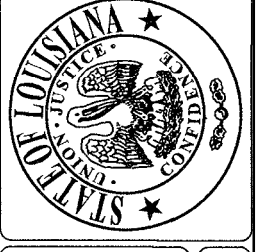
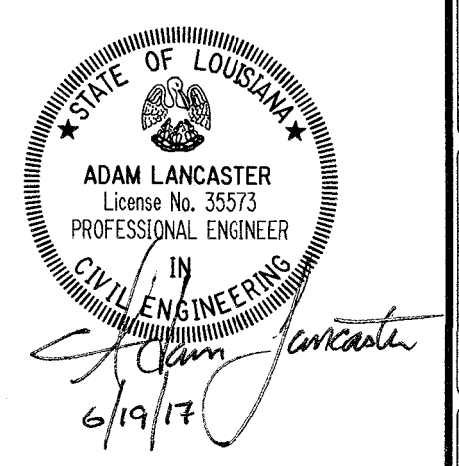


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

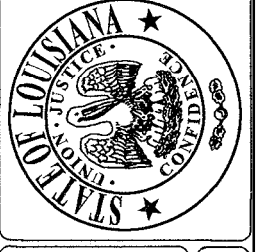
NOTES:

1. SEE GENERAL PLAN FOR END DRAIN SYSTEM REQUIREMENT.
- * 2. GUARD RAIL SHALL BE LAID OUT PRIOR TO BUILDING THE CATCH BASIN AND END DRAIN. FRONT FACE OF CURB TO BE FLUSH WITH BACK FACE OF THRE BEAM RAIL (SEE GUARD RAIL STANDARD PLANS FOR GUARD RAIL DETAILS).
3. COST OF CB-01 CATCH BASIN, 18"Ø PIPE, FABRICATED CONDUIT FITTINGS, SLOPE PROTECTION, 4" CONCRETE SLAB, 4"x6" CURB, WWF, AND #4 DOWELS TO BE INCLUDED IN THE COST OF ITEM "BRIDGE END DRAIN SYSTEM (CLOSED)". 6"x6" CURB TO BE INCLUDED IN THE COST OF ITEM "CONCRETE APPROACH SLABS". GUARDRAIL TO BE PAID FOR SEPARATELY. (SEE STANDARD PLAN FOR GUARD RAIL DETAILS.)
- ☑ 4. DIMENSION TO CENTER OF CATCH BASIN MAY BE LENGTHENED AS WARRANTED BY PROJECT-SPECIFIC CONDITIONS. FOR EXAMPLE, IT IS UNDESIRABLE FOR THE CATCH BASIN AND ASSOCIATED 4" CONCRETE SLAB TO BE LOCATED AT THE END OF THE APPROACH SLAB WHERE THE 4" SLAB WOULD BE CONNECTED TO BOTH THE APPROACH SLAB AND THE ROADWAY. DIFFERENTIAL SETTLEMENT BETWEEN THE ROADWAY AND APPROACH SLAB IN THIS CASE COULD DAMAGE THE END DRAIN SYSTEM. SEE GENERAL PLAN FOR LOCATION OF END DRAIN SYSTEM.

SHEET NUMBER	225
DESIGNED	A. LANCASTER
CHECKED	X. WANG
CONTROL SECTION	R. MORVANT
STATE PROJECT	Z.Z. FU
PARISH	ST. TAMMANY
REVISION OR CHANGE ORDER DESCRIPTION	
DATE	
NO.	
BY	
BRIDGE AND STRUCTURAL DESIGN	

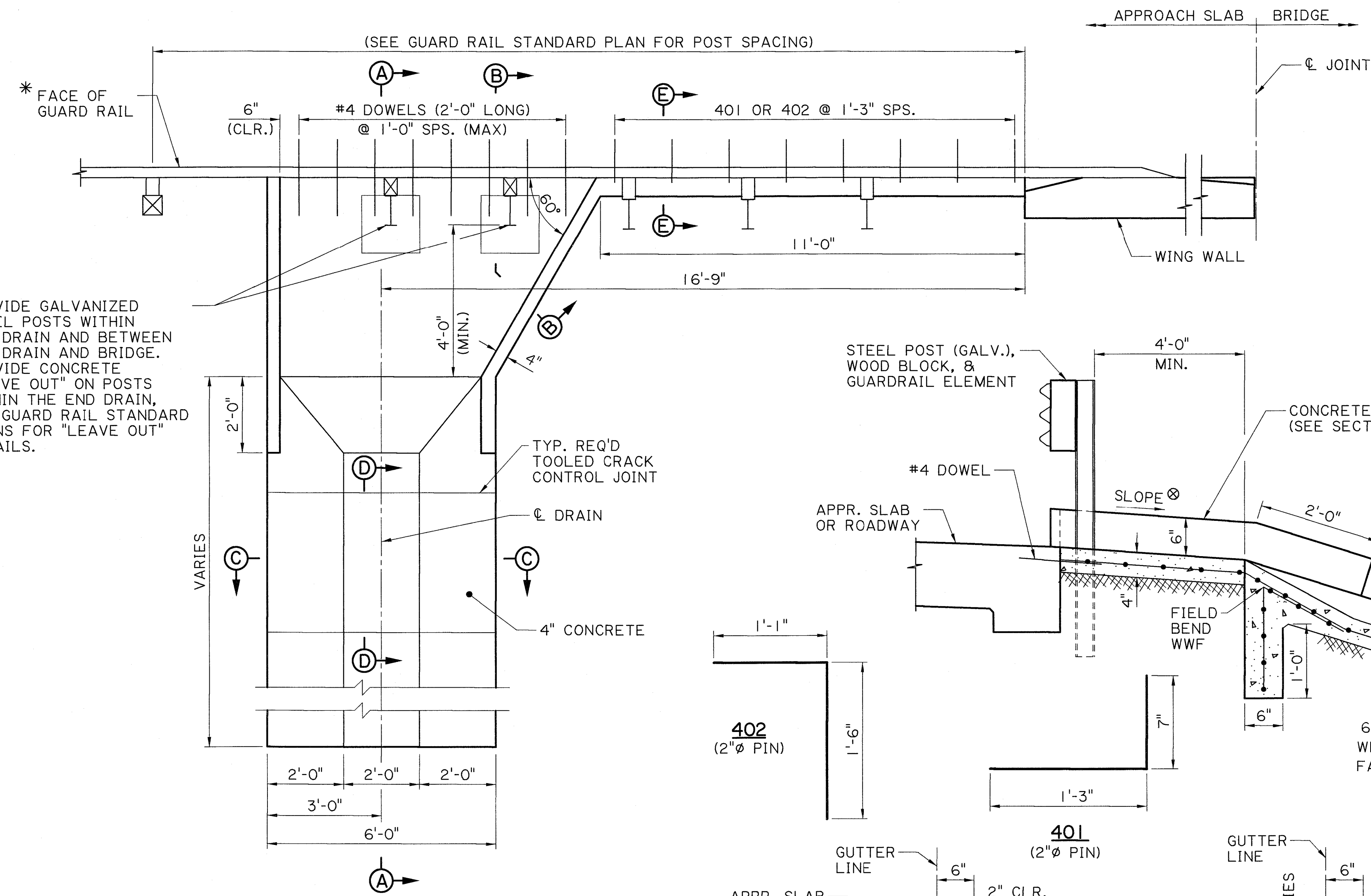


**BRIDGE END DRAIN SYSTEM
CLOSED DRAIN**
BD.2.10.1.0.09 - APPROACH SLAB COMMON

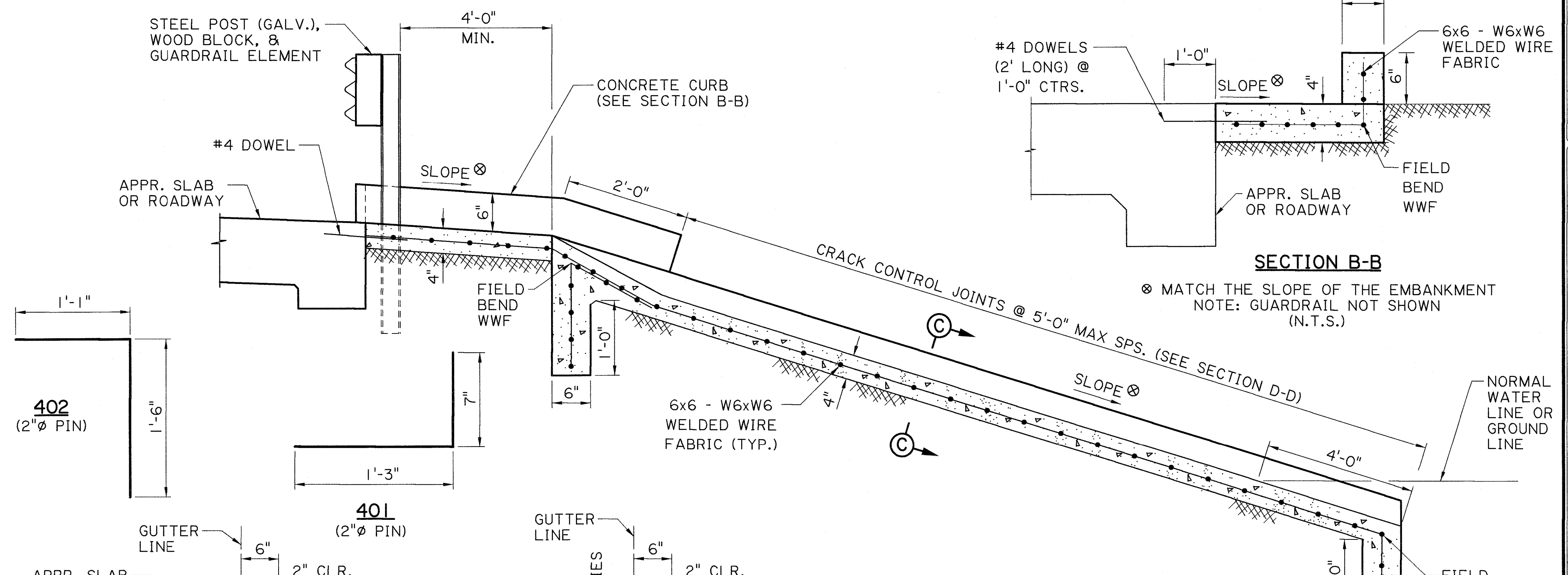


NOTES:

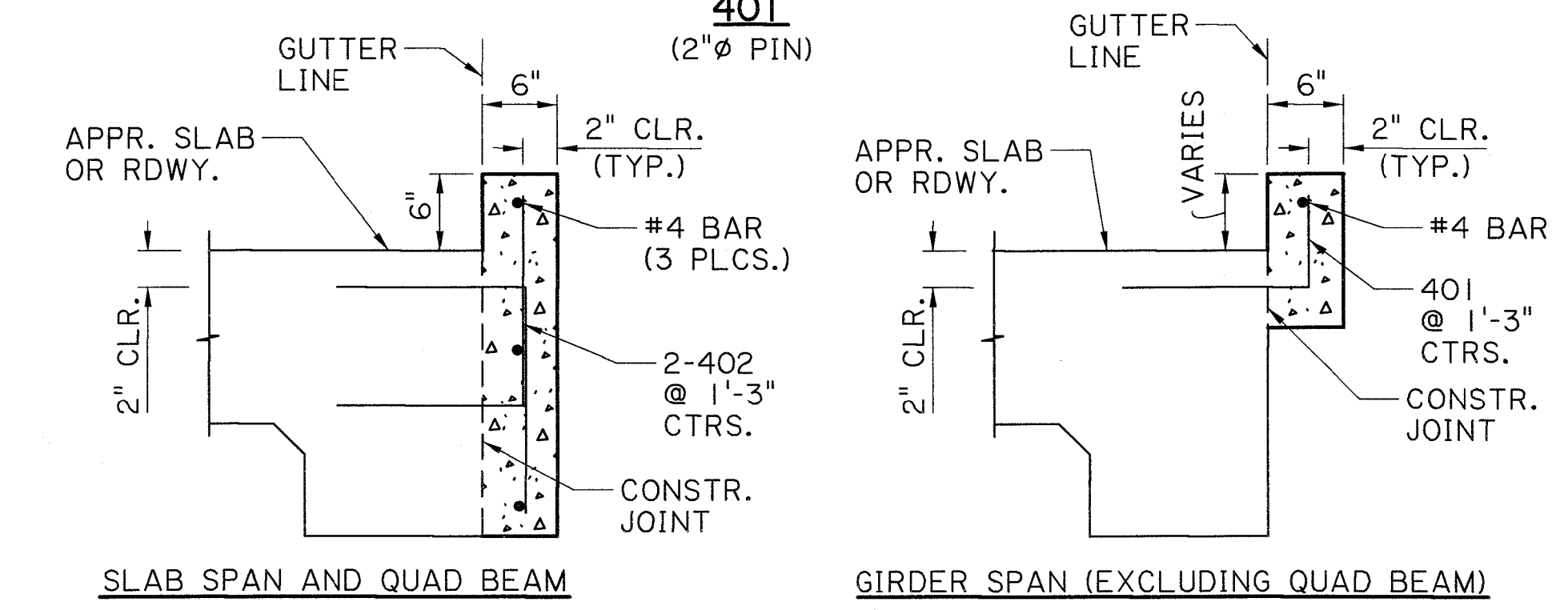
1. SEE GENERAL PLAN FOR END DRAIN REQUIREMENT.
- * 2. GUARD RAIL SHALL BE LAID OUT PRIOR TO BUILDING THE END DRAIN. FRONT FACE OF CURB TO BE FLUSH WITH BACK FACE OF THRIE BEAM RAIL (SEE GUARD RAIL STANDARD PLAN.)
- Δ 3. EMBANKMENT/NATURAL GROUND SHALL BE A MINIMUM OF 1/2" ABOVE ALL EXPOSED EDGES OF CONCRETE DRAIN, AND THE EROSION CONTROL SYSTEM SHALL OVERLAP THESE EDGES A MINIMUM OF 2", AS SHOWN. EROSION CONTROL SYSTEM SHALL BE PLACED IN ACCORDANCE WITH SECTION 720 OF THE STANDARD SPECIFICATIONS.
4. CONCRETE CURB ON APPROACH SLAB, GUARD RAIL COMPONENTS, AND EROSION CONTROL SYSTEM WILL BE PAID FOR UNDER SEPARATE PAY ITEMS. REMAINING ITEMS SHOWN ON THIS SHEET, INCLUDING EXCAVATION, WILL BE PAID FOR UNDER THE BRIDGE END DRAIN SYSTEM (OPEN DRAIN) PAY ITEM.



PLAN "A" - OPEN END DRAIN FOR GIRDER BRIDGES (EXCEPT QUAD BEAMS) (WINGWALL PARALLEL TO ROADWAY) (N.T.S.)

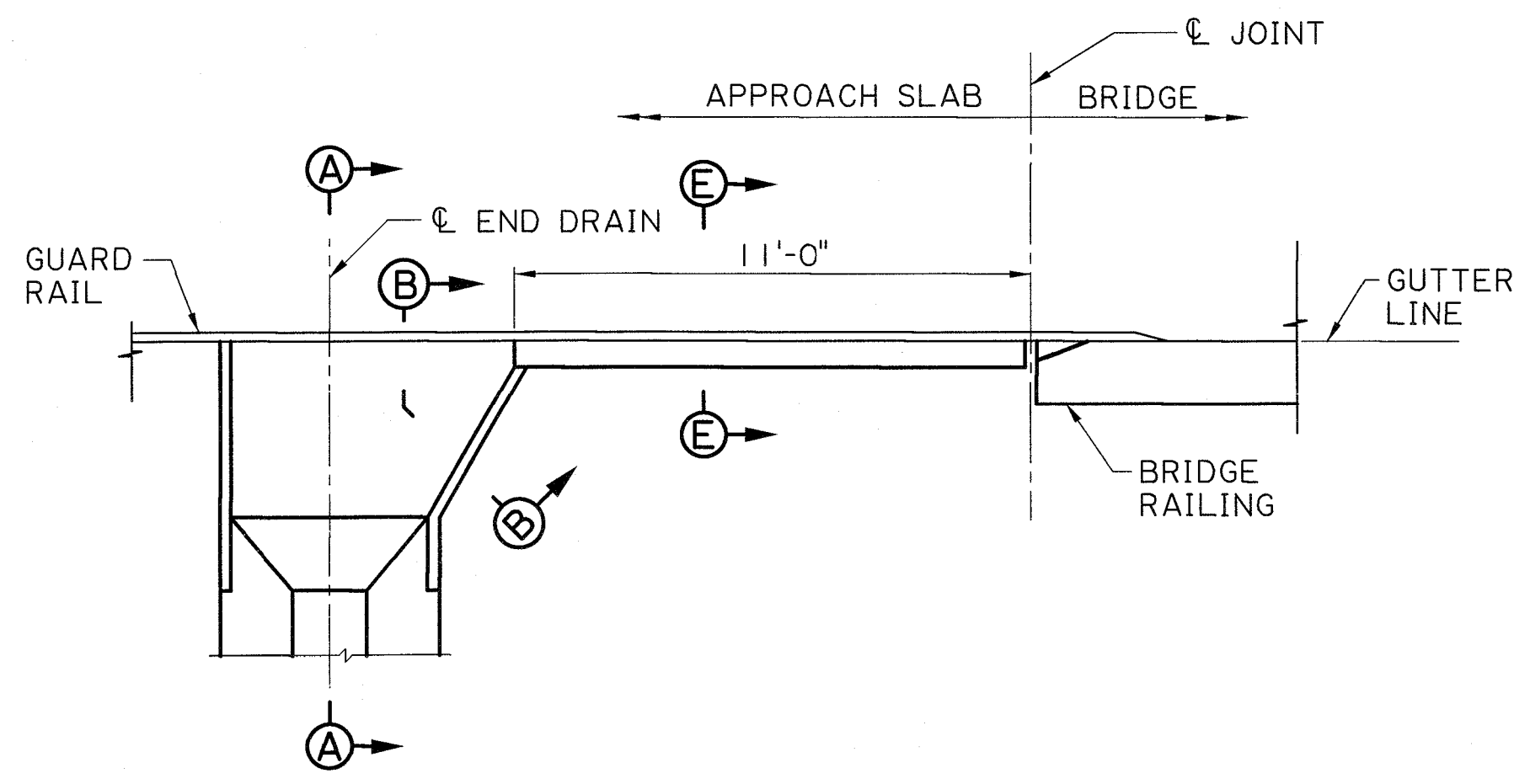


SECTION B-B
MATCH THE SLOPE OF THE EMBANKMENT
NOTE: GUARDRAIL NOT SHOWN (N.T.S.)

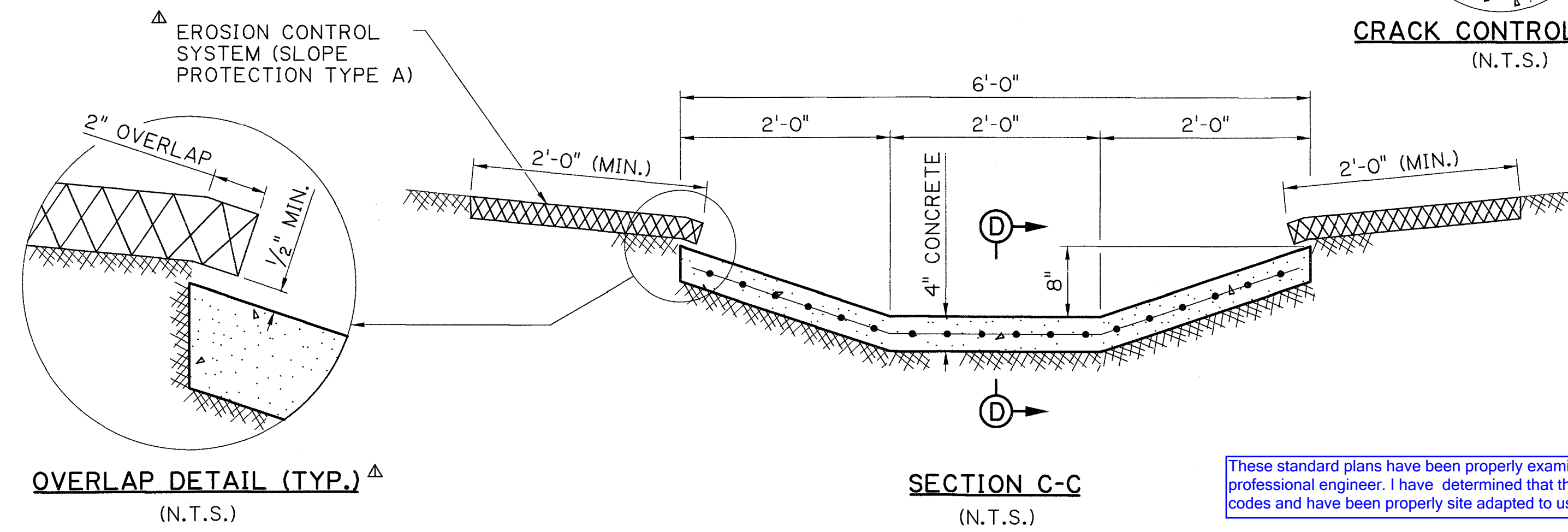


SECTION E-E (N.T.S.)

SECTION A-A
MATCH THE SLOPE OF THE EMBANKMENT. (N.T.S.)

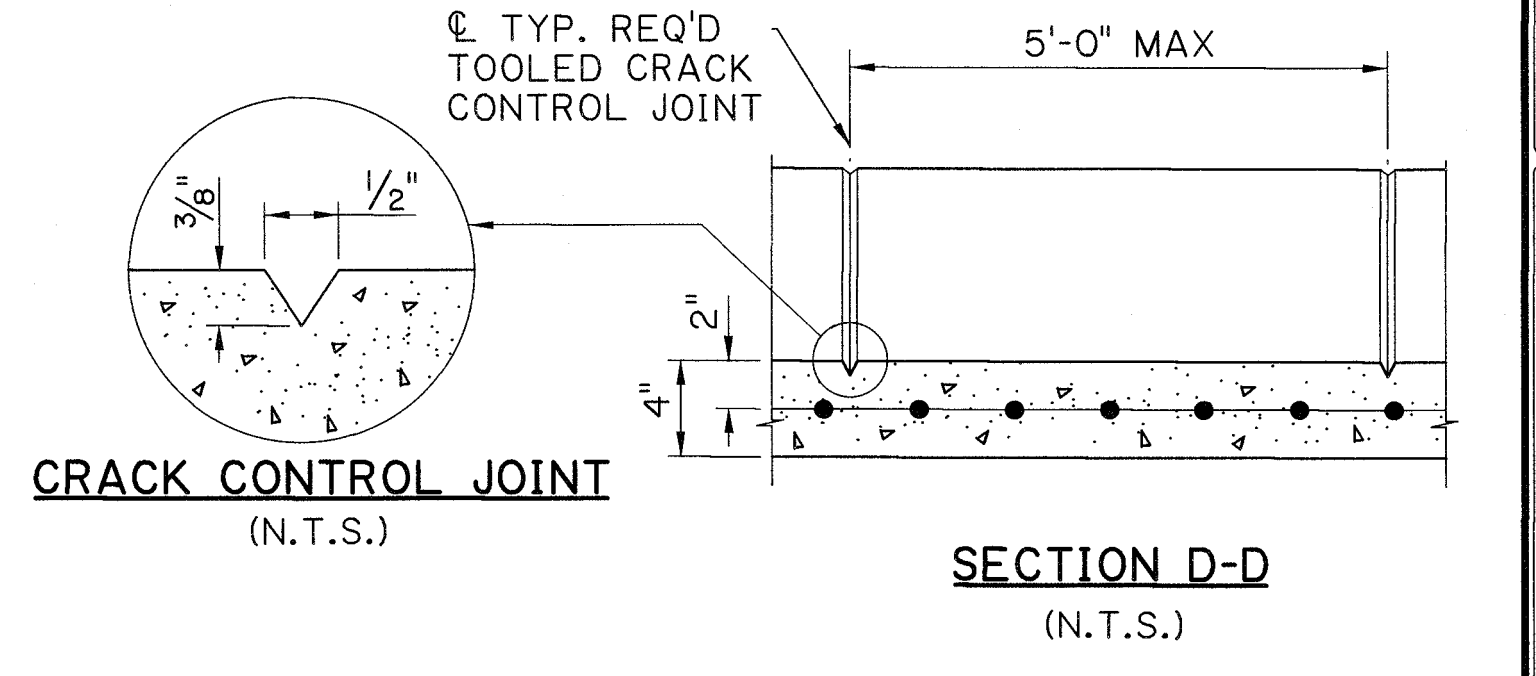


PLAN "B" - OPEN END DRAIN FOR SLAB SPAN AND QUAD BEAM BRIDGES (WINGWALL NOT PARALLEL TO ROADWAY) (FOR INFORMATION NOT SHOWN, SEE PLAN "A") (N.T.S.)



OVERLAP DETAIL (TYP.) (N.T.S.)

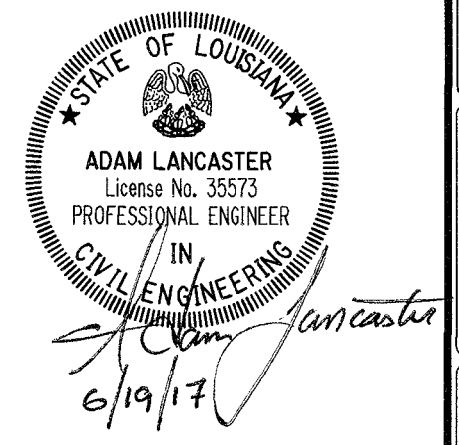
SECTION C-C (N.T.S.)

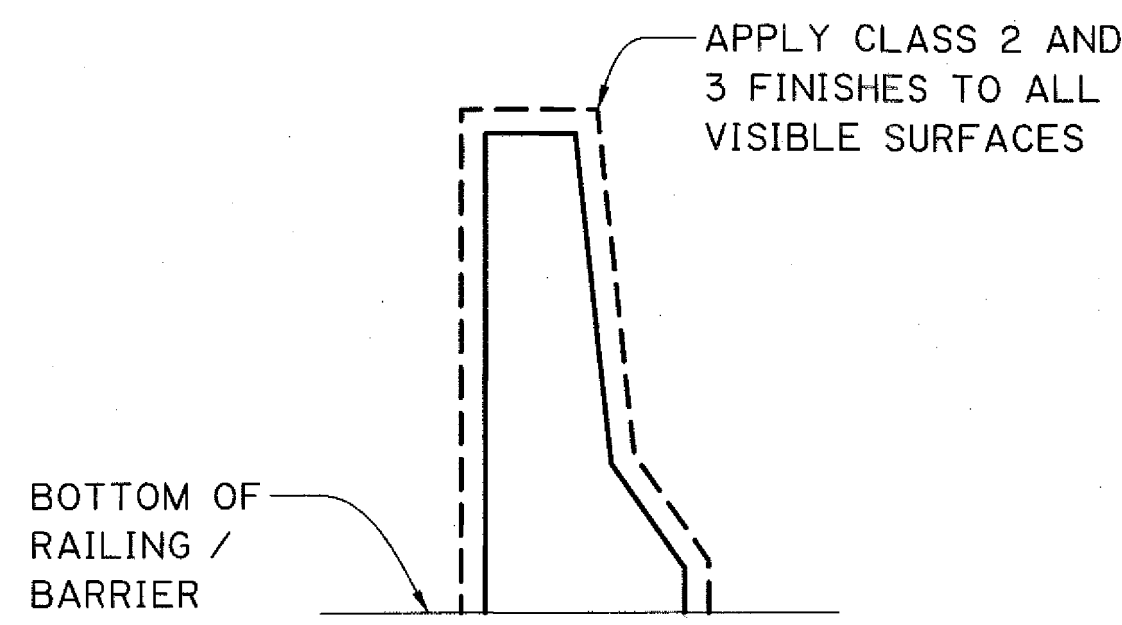


CRACK CONTROL JOINT (N.T.S.)

SECTION D-D (N.T.S.)

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

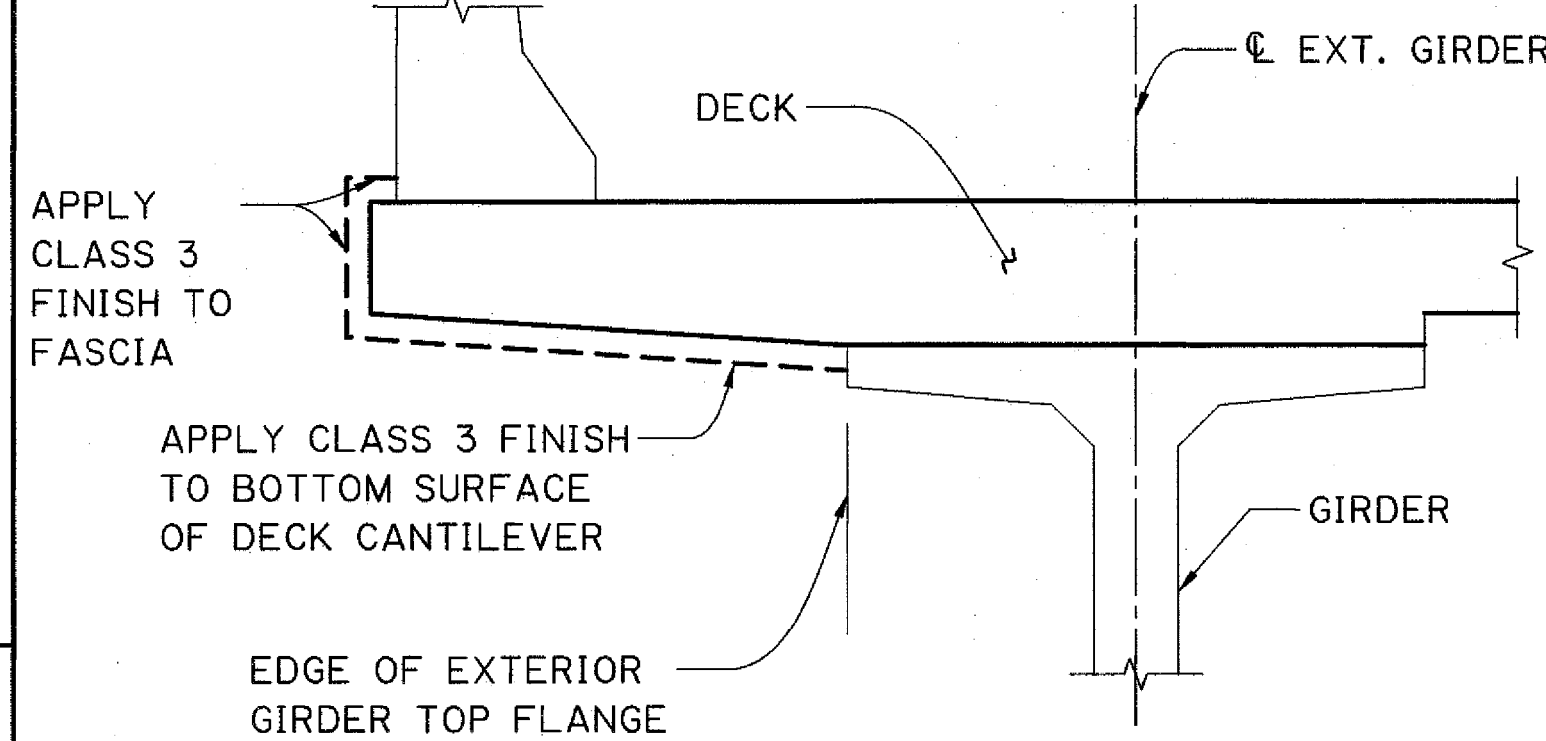




DETAIL 1
(N.T.S.)

BRIDGE RAILING / PERMANENT ROADWAY BARRIER / PIER PROTECTION

NOTE:
VISIBLE CONCRETE PORTIONS OF HANDRAILING SHALL BE FINISHED WITH A CLASS 2 & CLASS 3 SURFACE FINISH. SEE PLANS FOR DETAILS WHEN THESE COMPONENTS ARE REQUIRED.



DETAIL 2
(N.T.S.)

DECK / SLAB

APPLY CLASS 3 FINISH TO FASCIA

APPLY CLASS 3 FINISH TO FASCIA

APPLY CLASS 3 FINISH TO BOTTOM SURFACE OF DECK CANTILEVER

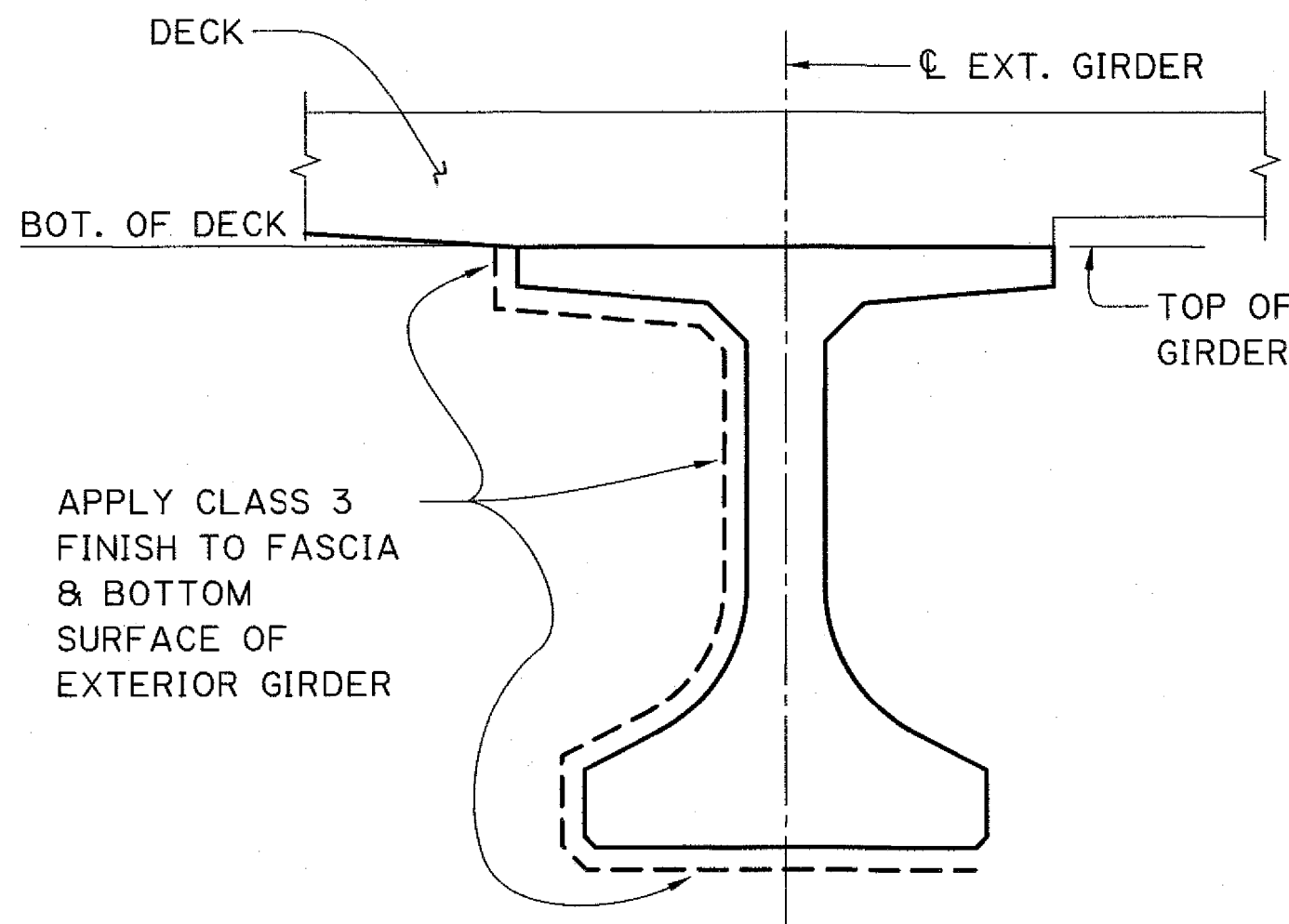
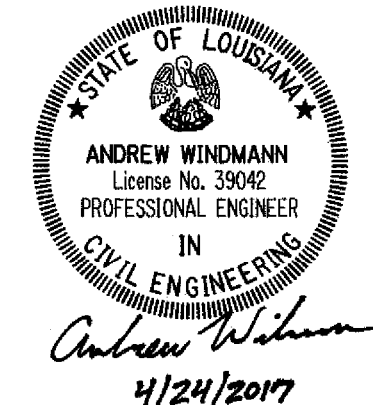
EDGE OF EXTERIOR GIRDER TOP FLANGE

DECK

SLAB

NOTES:

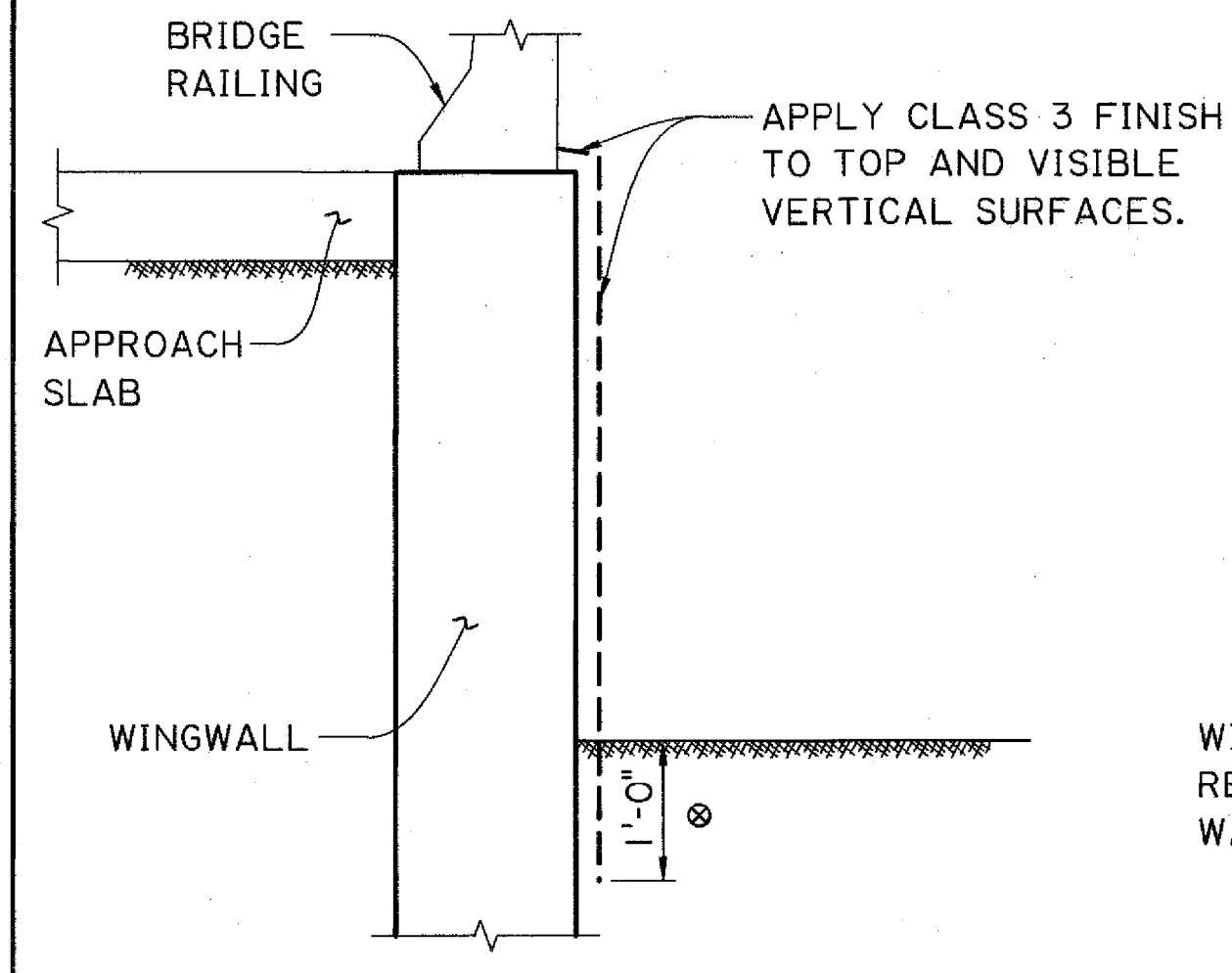
1. CONFORM TO SECTION 805.08 CONCRETE SURFACE FINISHES OF THE 2016 LADOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
2. APPLY FINISHES TO STRUCTURAL CONCRETE COMPONENTS IN ACCORDANCE WITH THE DETAILS ON THIS SHEET AND QUANTITIES SPECIFIED ON SHEET 2 OF 2.
3. DETAILS SHOWN ARE TYPICAL AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY, ACTUAL SURFACE SHAPES MAY VARY. REFER TO THE SUMMARY TABLES ON SHEET 2 OF 2 FOR REQUIRED LOCATION OF SURFACE FINISHES AND QUANTITIES.
4. THE TERM "VISIBLE" USED HEREIN IS TAKEN TO MEAN VISIBLE AFTER CONSTRUCTION IS COMPLETE, FINISHED GROUND LINES ARE IN PLACE, AND WITH RESPECT TO THE WATER SURFACE ELEVATION AT THE TIME OF APPLICATION.
5. EXTEND CLASS 3 FINISH TO 1'-0" BELOW FINISHED GROUND LINE.
6. THE "SURFACE FINISH WATER ELEVATION" SHALL BE TAKEN AS THE WATER SURFACE ELEVATION AT THE TIME OF THE CONCRETE SURFACE FINISH APPLICATION. EXTEND SURFACE FINISH TO THIS ELEVATION.



DETAIL 3
(N.T.S.)

EXTERIOR CONCRETE GIRDER

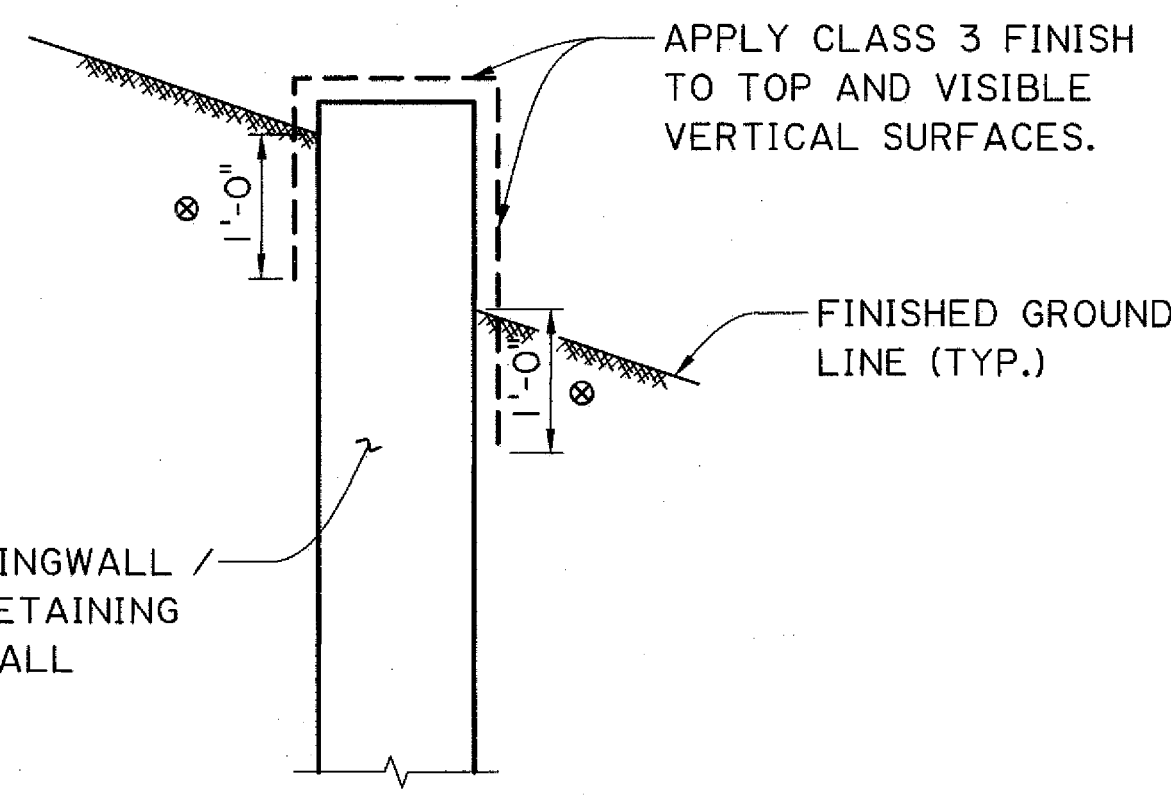
NOTE:
GIRDER TYPE VARIES. LG GIRDER SHOWN FOR ILLUSTRATION PURPOSE ONLY.



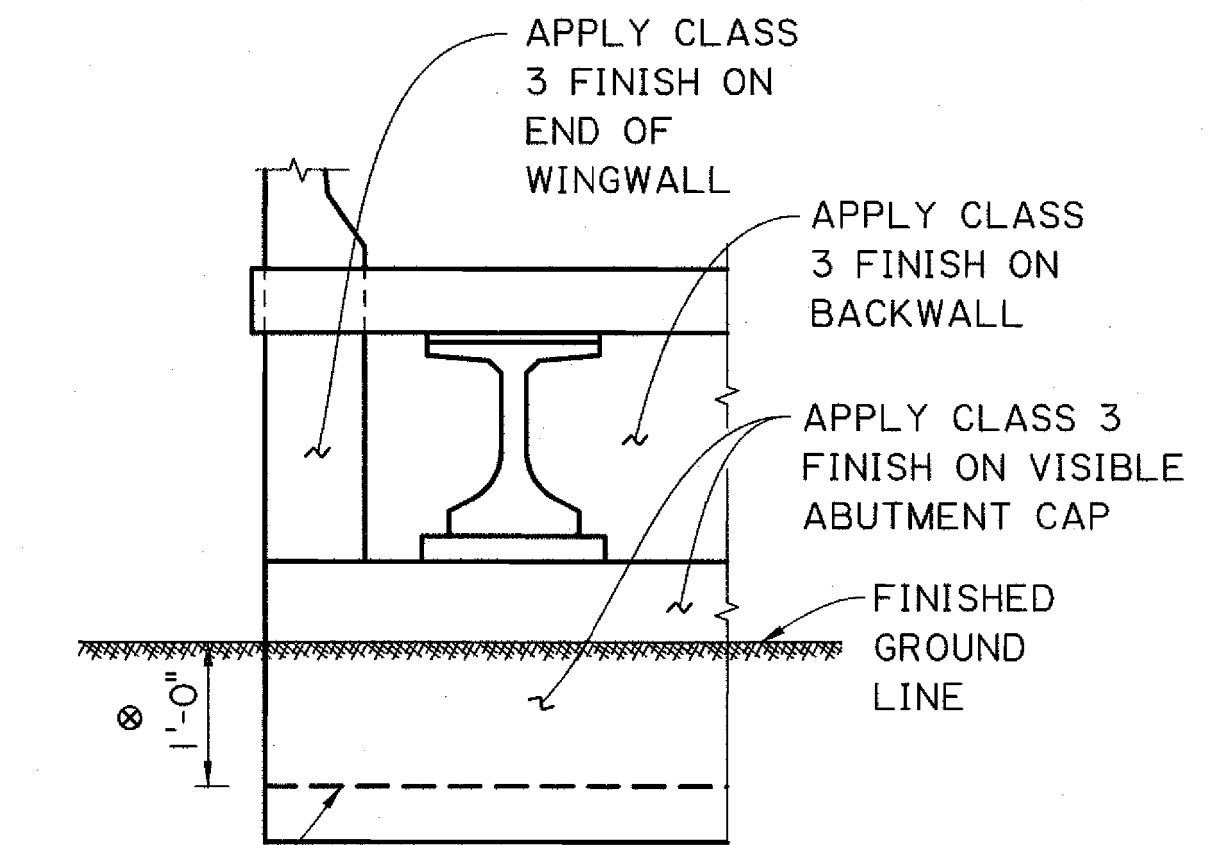
DETAIL 4
(N.T.S.)

SECTION WINGWALL PARALLEL TO ROADWAY

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

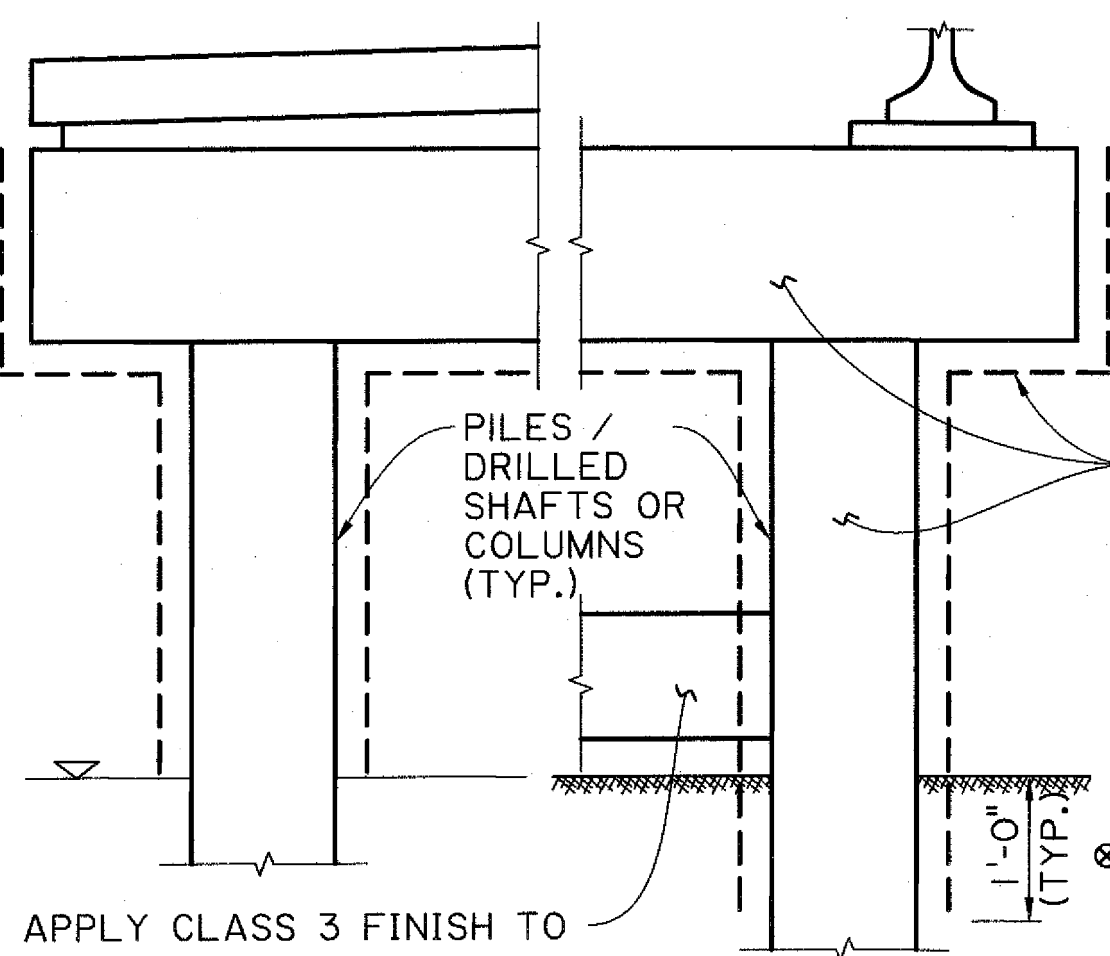


WINGWALL & CAST-IN-PLACE RETAINING WALL

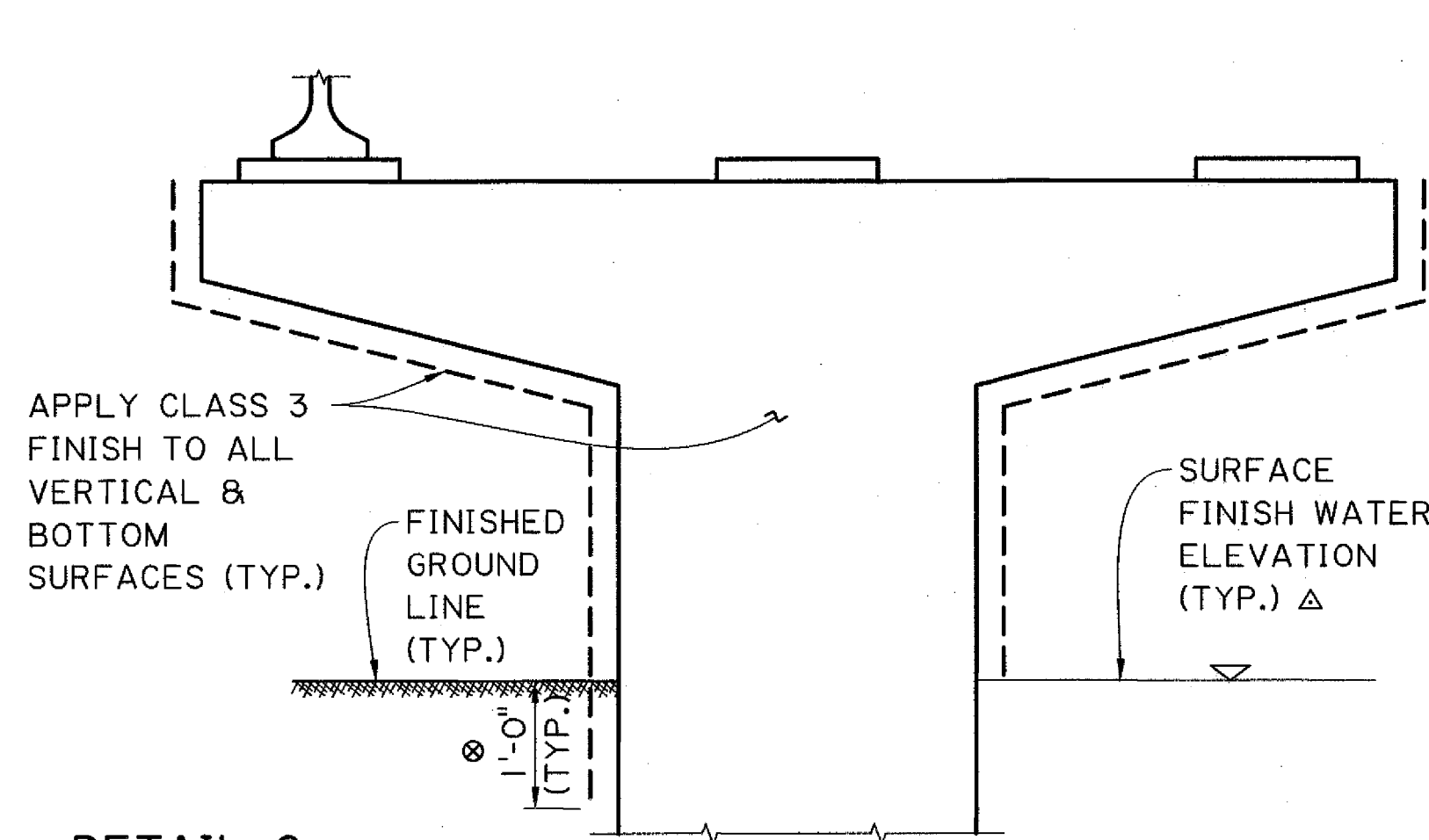


DETAIL 5
(N.T.S.)

BACKWALL & ABUTMENT CAP



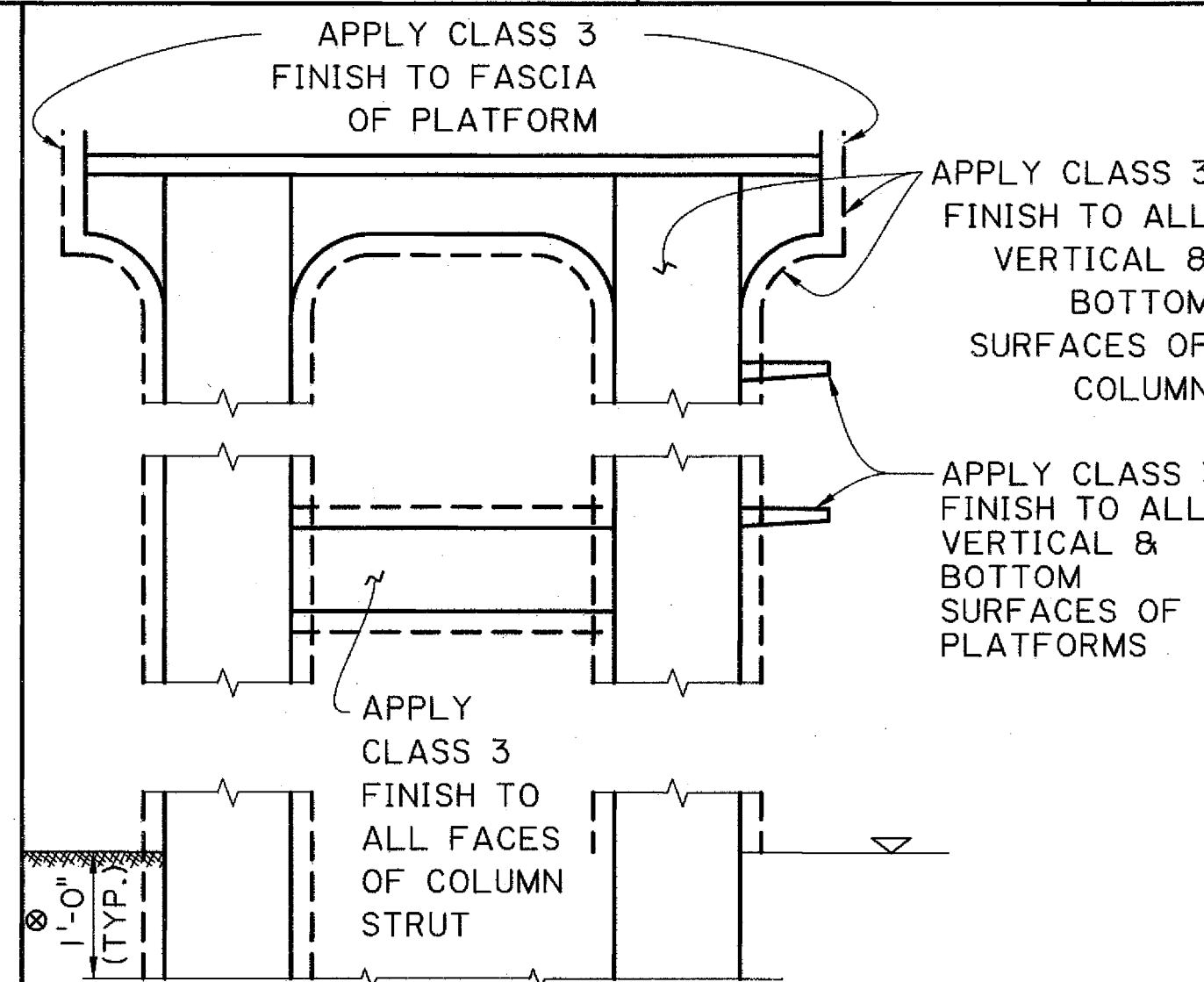
HALF SECTION
SLAB SPAN BRIDGE



DETAIL 6
(N.T.S.)

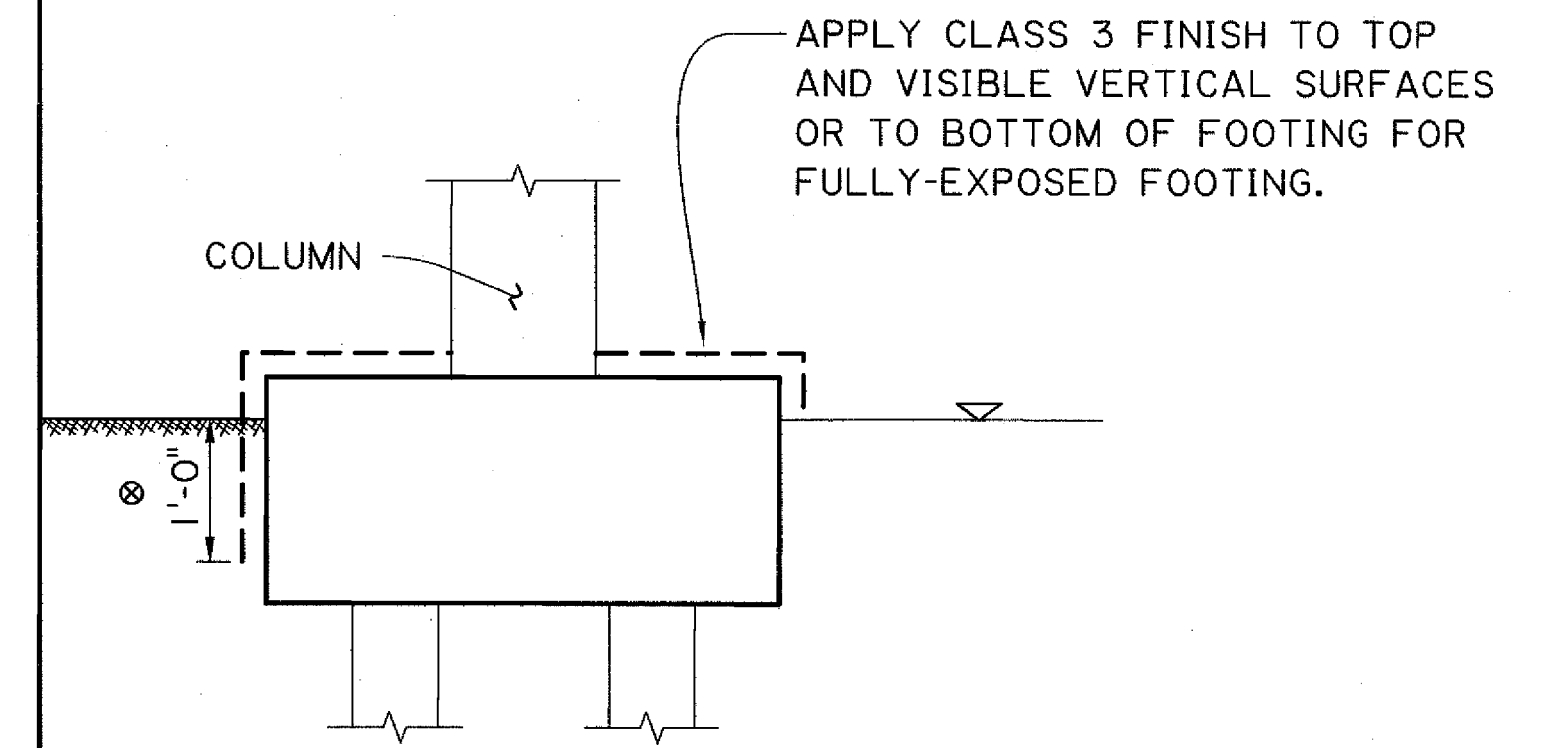
SECTION
HAMMERHEAD BENT

COLUMN BENT, PILE BENT, & HAMMERHEAD BENT



DETAIL 7
(N.T.S.)

CONCRETE TOWER



DETAIL 8
(N.T.S.)

EXPOSED FOOTING

SHEET NUMBER	227
DESIGNED	A. WINDMANN
CHECKED	A. LANCASTER
DETAILED	J. PRESTRIDGE
CONTROL	A. WINDMANN
STATE PROJECT	ST. TAMMANY
REVIEWER	Z. FU
SERIES #	1 OF 2
DATE	4/24/2017
BY	Andrew Windmann
REVISION OR CHANGE ORDER DESCRIPTION	
NO.	
CONCRETE SURFACE FINISH (CLASS 2 & CLASS 3)	
BD.2.11.10.0.01 - CONC. SURFACE FINISHES	
DOTD BRIDGE DESIGN	

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\228_Conc Surface Finish_Detail.dwg

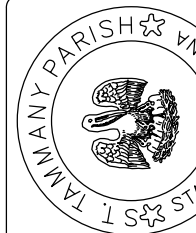
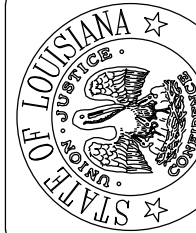
SUMMARY OF SURFACE FINISH QUANTITIES			
STRUCTURE COMPONENT	CLASS 2 (SQ. FT.) (805-18-00100)	CLASS 3 (SQ. FT.) (805-18-00200)	LOCATION (STATIONS, BENT NOS., SPAN NOS., ETC.)
STRUCTURE: NORTHBOUND BRIDGE			
WATER SURFACE ELEVATION: 16.62			
BRIDGE RAILING	1882	1882	SPAN 1-7 NORTHBOUND
WINGWALL	-	116	BENT 1 & 8 NORTHBOUND
ABUTMENT CAP	-	162	BENT 1 & 8 NORTHBOUND
DECK/SLAB	-	385	SPAN 1-7 NORTHBOUND
BENT CAP/PIER CAP	-	1367	BENT 2-7 NORTHBOUND
PILES	-	181	BENT 2-7 NORTHBOUND
SUBTOTAL:	1882	4093	
STRUCTURE: SOUTHBOUND BRIDGE			
WATER SURFACE ELEVATION: 16.62			
BRIDGE RAILING	1882	1882	SPAN 1-7 SOUTHBOUND
WINGWALL	-	116	BENT 1 & 8 SOUTHBOUND
ABUTMENT CAP	-	162	BENT 1 & 8 SOUTHBOUND
DECK/SLAB	-	385	SPAN 1-7 SOUTHBOUND
BENT CAP/PIER CAP	-	1367	BENT 2-7 SOUTHBOUND
PILES	-	181	BENT 2-7 SOUTHBOUND
SUBTOTAL:	1882	4093	
STRUCTURE: PEDESTRIAN BRIDGE			
WATER SURFACE ELEVATION: 16.62			
WINGWALL	-	299	PEDESTRIAN END BENT 1 & 2
ABUTMENT CAP	-	90	PEDESTRIAN END BENT 1 & 2
SUBTOTAL:	0	389	

TOTAL CONCRETE FINISH (CLASS 2) ITEM NO. 805-18-00100 =	3763 SQ. FT.
TOTAL CONCRETE FINISH (CLASS 3) ITEM NO. 805-18-00200 =	8574 SQ. FT.

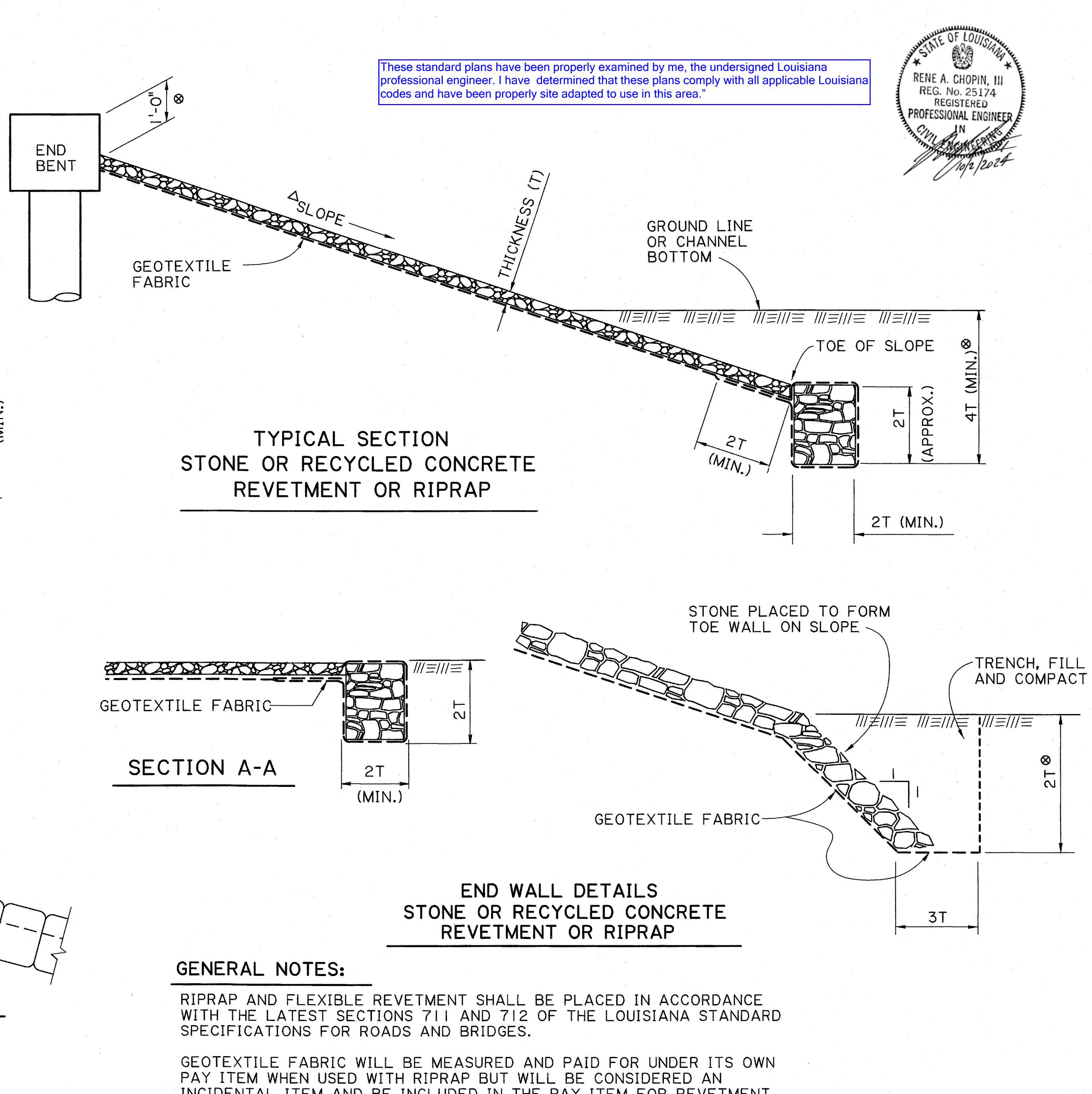
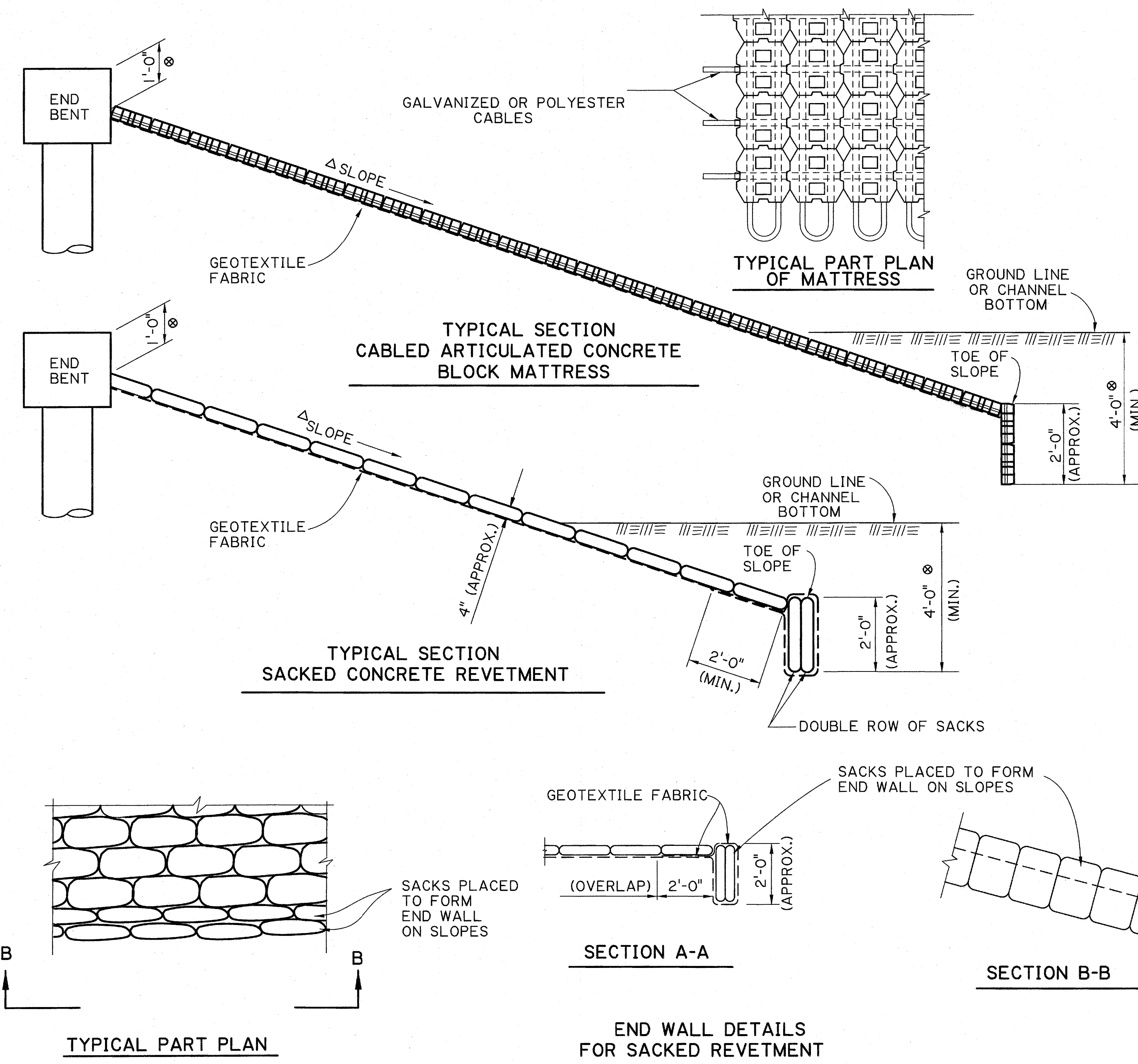
NOTES:

- SEE SHEET 1 OF 2 FOR DETAILS/APPLICATION OF CONCRETE SURFACE FINISH.
- THE ELEVATION PROVIDED IS FOR ESTIMATION PURPOSES ONLY. SEE NOTE 6 ON SHEET 1 OF 2 FOR INFORMATION REGARDING THE ACTUAL LIMITS OF APPLICATION.



SHEET NUMBER	228				
PARISH	ST. TAMMANY	PARISH PROJECT	2014EN0001	B.K.I. PROJECT	NO.15.012
					
MANDEVILLE BYPASS LA 1088 TO US 190					
		CONC. SURFACE FINISHES			
DESIGNED	R.J.C.	CHECKED	R.A.C.	DATE	SHEET
DESIGNED	G.V.	CHECKED	R.J.C.	DATE	SHEET
				Oct. 2024	2 of 2
NO.	DATE	REVISION	DESCRIPTION		

BD-2.11.10.0.02



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



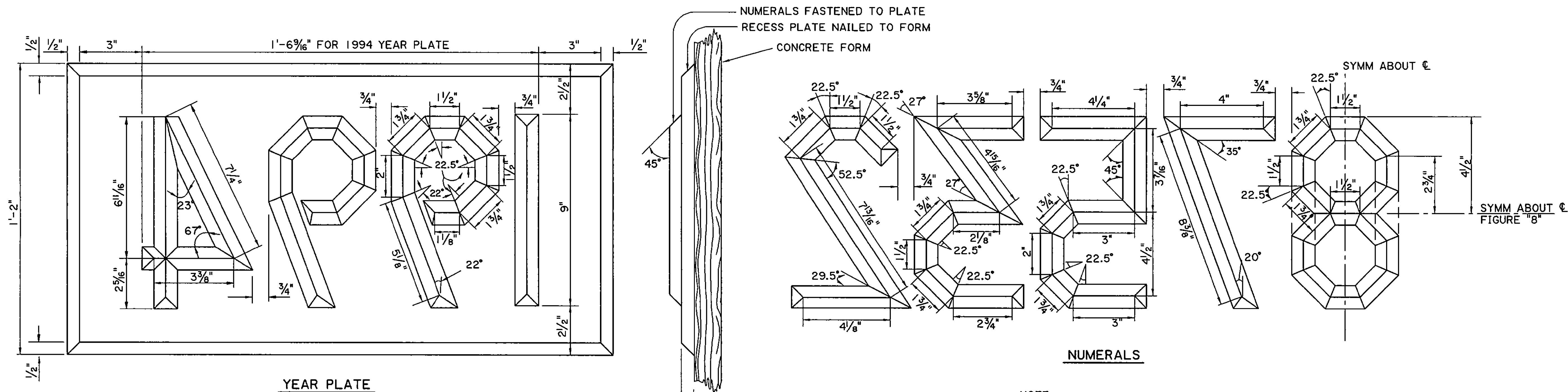
GENERAL NOTES:

- RIPRAP AND FLEXIBLE REVETMENT SHALL BE PLACED IN ACCORDANCE WITH THE LATEST SECTIONS 711 AND 712 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
 - GEOTEXTILE FABRIC WILL BE MEASURED AND PAID FOR UNDER ITS OWN PAY ITEM WHEN USED WITH RIPRAP BUT WILL BE CONSIDERED AN INCIDENTAL ITEM AND BE INCLUDED IN THE PAY ITEM FOR REVETMENT.
 - ALTERNATE DESIGNS MAY BE SUBMITTED TO THE HYDRAULIC ENGINEER FOR APPROVAL.
 - ELEVATION OF TOE OF SLOPE TO REMAIN CONSTANT FOR ALL PROTECTED SIDES OF THE EMBANKMENT, UNLESS OTHERWISE NOTED.
 - WHERE SLOPE PROTECTION FOR ADJACENT EMBANKMENTS INTERSECT, TERMINATE EACH WITH A TOE WALL AS DETAILED ON THIS SHEET EXCEPT WALLS ABUT.
- | RIPRAP CLASS (LBS.) | MINIMUM THICKNESS (T) (INCHES) |
|---------------------|--------------------------------|
| ☐ 30 | 14 |
| * 55 | 18 |
| * 130 | 24 |
| * 250 | 30 |
- * STONE ONLY
 - ☐ EQUIVALENT TO STONE OR RECYCLED CONCRETE REVETMENT.
 - ⊗ UNLESS OTHERWISE SHOWN ON PLANS.
 - Δ SEE GENERAL PLAN FOR EMBANKMENT HEADER SLOPE AND LIMITS OF SLOPE PROTECTION ALONG ROADWAY EMBANKMENT.



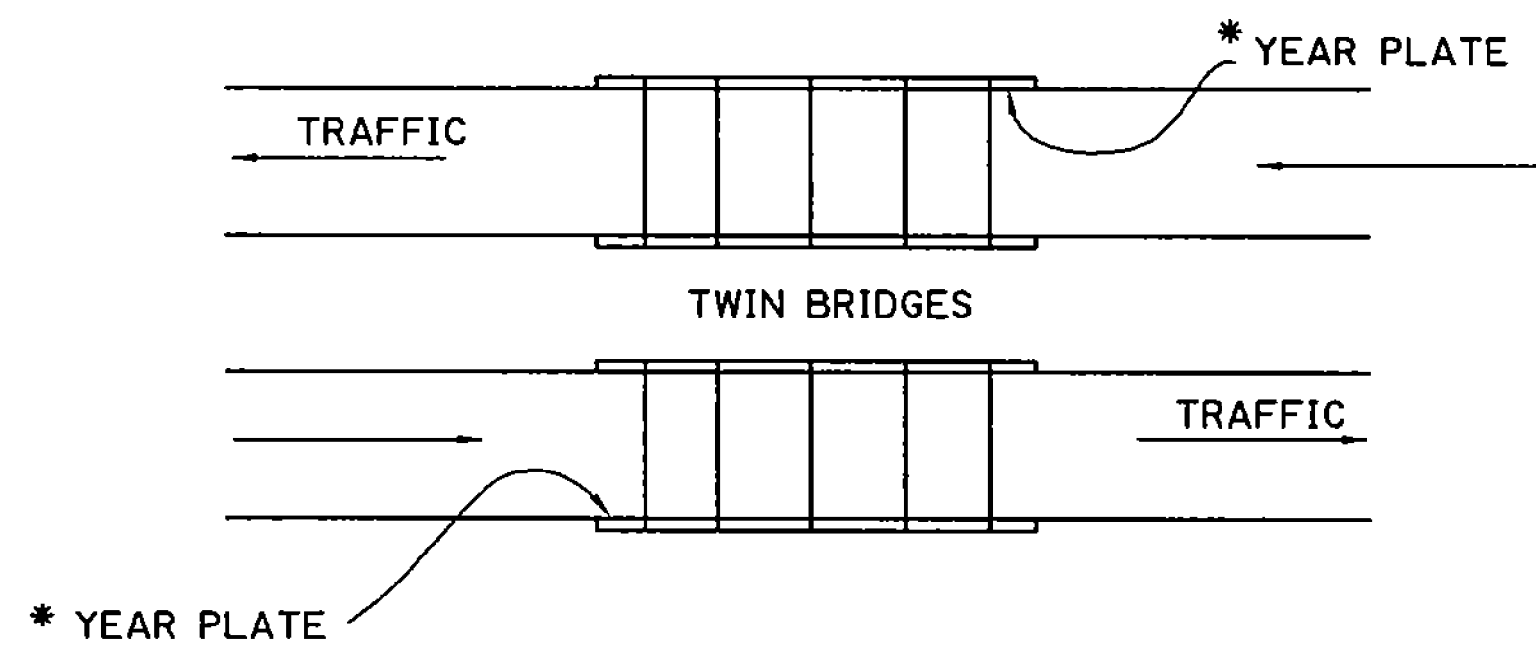
ALL DETAILS NTS

SHEET NUMBER	229
DESIGNED	A. ALLEN
CHECKED	G. GRASS
DATE	MAY, 2000
PROJECT	ARTICULATED CONCRETE MATTRESS
REVISION DESCRIPTION	
NO.	1
DATE	12-18-09
BY	P.B.F.
PROJECT	ST. TAMMANY
FEDERAL PROJECT	
PARISH	
BRIDGE AND STRUCTURAL DESIGN	

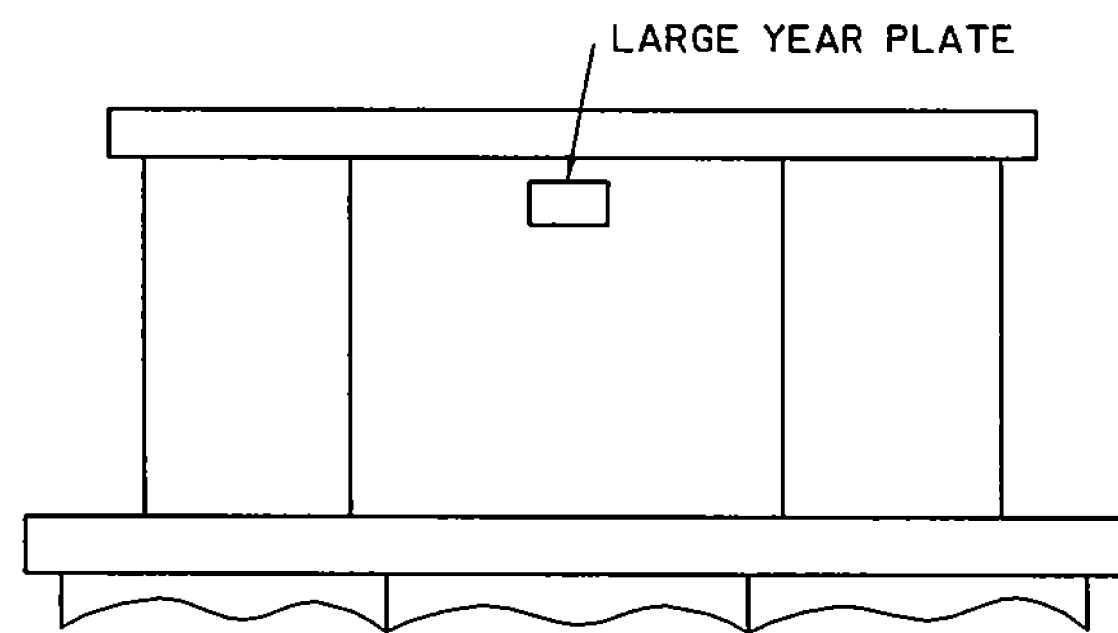
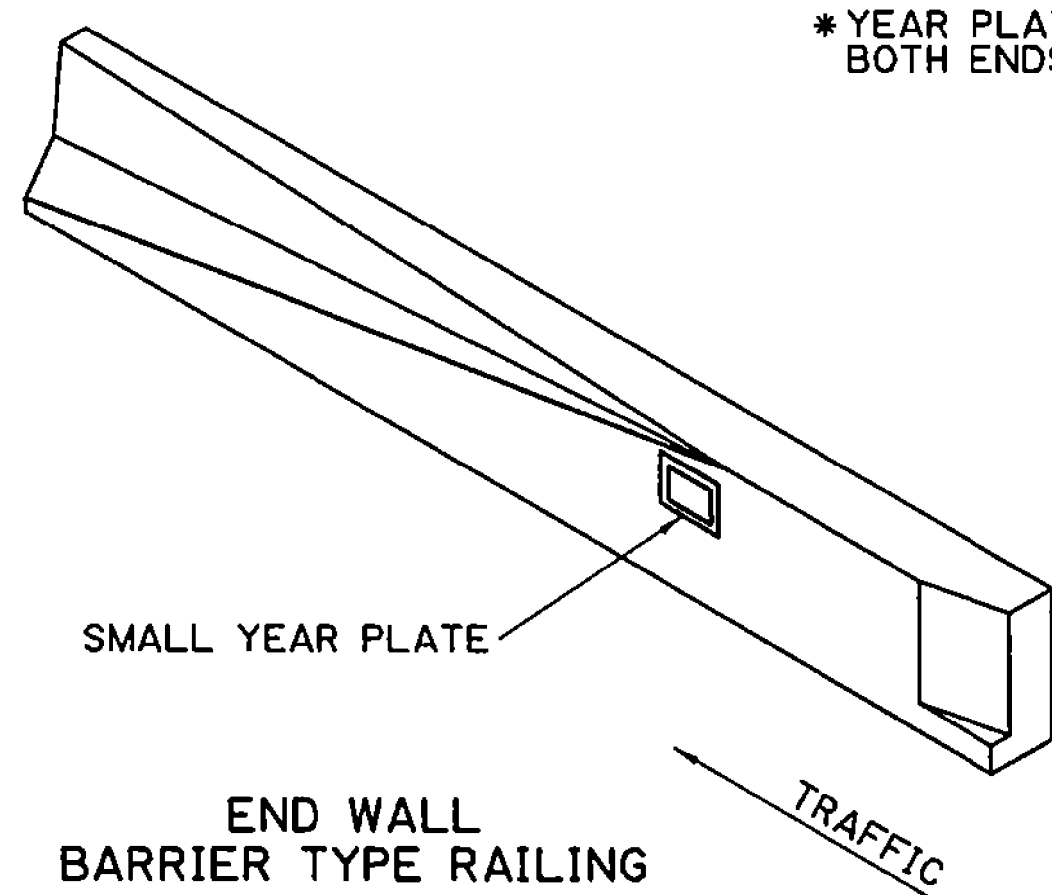


DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
 USE ONE HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.
 YEAR PLATE TO CORRESPOND TO YEAR IN WHICH STRUCTURE IS COMPLETED.

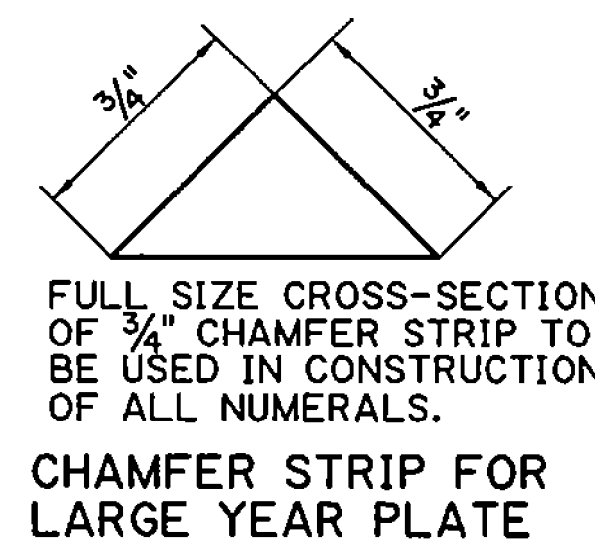
NOTE:
 FIGURE "6" TO BE "9" INVERTED.
 FIGURE "0" TO BE MADE USING DASHED LINES INDICATED ON DETAIL OF FIGURE "8."
 DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
 USE ONE-HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.



BRIDGE PLAN
 * YEAR PLATE ON THE APPROACH SIDE OF BOTH ENDS ON TWO-WAY TRAFFIC BRIDGES.



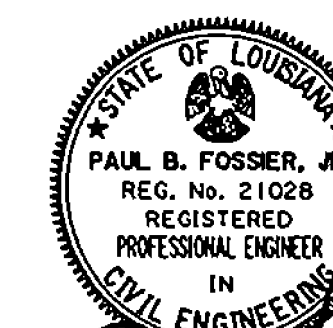
SKETCHES SHOWING LOCATION OF YEAR PLATE ON VARIOUS CONCRETE STRUCTURES



FULL SIZE CROSS-SECTION OF 3/4" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.
CHAMFER STRIP FOR LARGE YEAR PLATE



FULL SIZE CROSS SECTION OF 3/8" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.
CHAMFER STRIP FOR SMALL YEAR PLATE



Paul B. Fossier, Jr.
 8/28/00



Rene A. Chopin, III
 8/28/00

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:1
PROJECT NO. 5075
DATE 2-17-17
SURFACE ELEVATION NA
NORTH 30.351333
WEST -90.022694

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:1
PROJECT NO. 5075
DATE 2-17-17
SURFACE ELEVATION NA
NORTH 30.351333
WEST -90.022694

FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger with wet rotary	
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
				LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 12 feet during drilling								
DESCRIPTION OF STRATUM								
								0.2 2 inches of Topsoil
								2.0 Light gray, stiff SILTY CLAY with roots
								Light gray, brown and tan, firm to stiff FAT CLAY WITH SAND and with silt lenses
5			P=1.5	22	60	17	43	79
			P=1.5	21				
			P=1.5	22	101	54	17	37
			P=1.5	25				1.1
10			P=1.5	25				
			P=1.0	36	54	19	35	95
15			P=2.0	44				
			P=1.5	30				
20			P=2.0	34				
			P=2.0	17				
25			N=34	23				11
30								30.0
								Gray, medium dense to dense to very dense SILTY SAND

FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger with wet rotary	
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
				LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 12 feet during drilling								
DESCRIPTION OF STRATUM								
								Gray, medium dense to dense to very dense SILTY SAND (continued)
								-with shells
45			N=65	22				
			N=12	28				
50								50.0
								Gray, soft SANDY LEAN CLAY with shells
55			P=0.25	30	93	40	15	25
								0.3
55.0								
								Gray, loose to medium dense SILTY SAND with shells and wood
60			N=18	22				
			N=7	28				
65								65.0
								Gray, soft to stiff to very stiff SANDY LEAN CLAY with shells
70			P=0.25	33				
			P=3.0	31	40	17	23	76
75								
			P=1.5	32				

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil_Boring_01.dwg

SHEET NUMBER 231

ST. TAMMANY PARISH PROJECT 2014EN0001 B.K.I. PRODUCT NO.15.012

MANDEVILLE BYPASS LA 1088 TO US 190 ROADWAY PLANS

DESIGNED: R.J.C. CHECKED: R.A.C. DETAILED: G.V. CHECKED: R.J.C. DATE: Oct. 2024 SHEET: 1 of 1

REVISION DESCRIPTION BY DATE

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:2
PROJECT NO. 5075
DATE 2-21-17
SURFACE ELEVATION NA
NORTH 30.355583
WEST -90.019806

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:2
PROJECT NO. 5075
DATE 2-21-17
SURFACE ELEVATION NA
NORTH 30.355583
WEST -90.019806

DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
45.0		N=17		25						
50.0		N=3		29						
55.0		P=0.5		24	38	17	21	48		
60.0		P=2.5		25						
65.0		P=2.75		33						
70.0		P=3.75		22						
75.0		N=9		20						
		N=66		24						8

DRILLING METHOD(S):	
Continuous flight auger with wet rotary	
GROUNDWATER INFORMATION:	
Groundwater encountered at a depth of 11 feet during drilling	
DESCRIPTION OF STRATUM	
45.0	Gray, medium dense SILTY SAND with shells
	Dark gray, very loose CLAYEY SAND with shells
55.0	Dark gray, very stiff FAT CLAY with sand lenses
68.0	Gray, loose CLAYEY SILT
70.0	Gray, loose SILTY SAND
	-very dense

Rajesh
10/07/2024
STATE OF LOUISIANA
RAJESH TOLIKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
85.0		N=6"-50+		21						
90.0		N=66		20						
95.0		N=45		35					28	
100.0		N=32		22						
105.0		N=66		44					15	
110.0		N=6"-50+		22						
115.0		N=6"-50+		22						
		N=6"-50+		22						9

DRILLING METHOD(S):	
Continuous flight auger with wet rotary	
GROUNDWATER INFORMATION:	
Groundwater encountered at a depth of 11 feet during drilling	
DESCRIPTION OF STRATUM	
	Gray, loose SILTY SAND (continued)
	-dense with clay
	-very dense with clay
	120.0

Rajesh
10/07/2024
STATE OF LOUISIANA
RAJESH TOLIKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02 Civil\01 Drawings\231-241_Soil Boring_01.dwg

SHEET NUMBER	233
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BYPASS	
LA 1088 TO US 190	
ROADWAY PLANS	
DESIGNED R.J.C.	
CHECKED R.A.C.	
DATE	Oct. 2024
SHEET	1 of 1
REVISION DESCRIPTION	
NO.	
DATE	

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:3
PROJECT NO. 5075
DATE 2-23-17
SURFACE ELEVATION NA
NORTH 30.362667
WEST -90.014444

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:3
PROJECT NO. 5075
DATE 2-23-17
SURFACE ELEVATION NA
NORTH 30.362667
WEST -90.014444

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil_Boring_01.dwg

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger with wet rotary		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling										
DESCRIPTION OF STRATUM										
0.3			P=3.25	15					73	3 inches of Topsoil Dark gray, very stiff SILTY CLAY with roots
4.0			P=3.25	17						Gray and tan, firm to stiff SANDY FAT CLAY with silt lenses
5			P=2.0	23						
			P=0.75	24						
10			P=2.0	25	67	22	45		69	
15			P=2.0	35						
20			P=1.75	34						
25			P=2.0	34	79	73	23	50	82	0.7 -with shells and sand
30			P=0.75	24						
35.0			P=0.50	106						-with organics, wood and vegetations
			P=2.75	23		48	18	30	80	Gray, stiff to very stiff LEAN CLAY WITH SAND with silt lenses

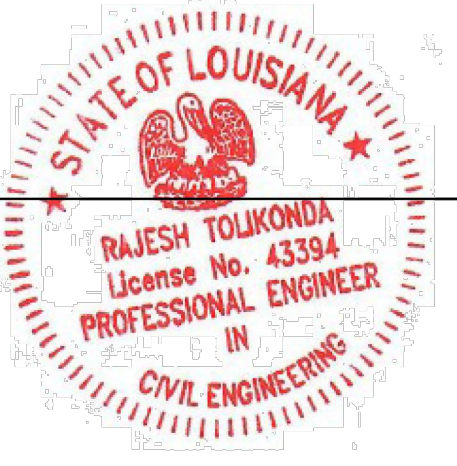
Ryesh
10/07/2024



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger with wet rotary		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling										
DESCRIPTION OF STRATUM										
			P=1.25	22						Gray, stiff to very stiff LEAN CLAY WITH SAND with silt lenses (continued)
45.0										Gray, very loose SAND
50.0			P=1.25	26					21	Gray, firm to stiff SANDY LEAN CLAY
55			N=7	25						
60			P=1.5	17	113	28	14	14	59	1.2 -with silt lenses
65			P=2.5	27						
70			P=2.0	30						Dark gray, very stiff FAT CLAY with sand lenses
75.0			P=2.0	37		88	29	59	95	Gray, medium dense SAND
			N=28	23						

Ryesh
10/07/2024



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

SHEET NUMBER	234
PARISH	ST. TAMMANY
PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190 ROADWAY PLANS	
DESIGNED	R.J.C.
CHECKED	R.A.C.
DATE	Oct. 2024
SHEET	1 of 1
BY	
NO.	
DATE	
REVISION	DESCRIPTION

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA

BORING NO. B:3
PROJECT NO. 5075
DATE 2-23-17
SURFACE ELEVATION NA
NORTH 30.362667
WEST -90.014444

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA

BORING NO. B:4
PROJECT NO. 5075
DATE 2-27-17
SURFACE ELEVATION NA
NORTH 30.372444
WEST -90.015889

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S):			
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)		
						LL	PL	PI			
DRILLING METHOD(S): Continuous flight auger with wet rotary GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling DESCRIPTION OF STRATUM											
85		N=3		24						Gray, medium dense SAND (continued) -very loose	
90		N=69		24						-very dense	
95		N=6"-50+		22						95.0 Gray, stiff SANDY LEAN CLAY	
100		N=10		43				57		100.0 Gray, very loose SAND with clay	
105		P=0.25		28						105.0 Gray, medium dense CLAYEY SAND	
110		N=12		32						110.0 Dark gray, stiff FAT CLAY	
115		N=3		36							
		P=1.5		48	73	90	29	61	91	1.0	120.0

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S):		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
DRILLING METHOD(S): Continuous flight auger with wet rotary GROUNDWATER INFORMATION: Groundwater encountered at a depth of 12 feet during drilling DESCRIPTION OF STRATUM										
0.3			P=0.0	18		20	15	5	43	3 inches of Topsoil Gray, soft SANDY LEAN CLAY with organics and roots
4.0			P=0.75	16						Gray and tan, stiff SANDY LEAN CLAY
5			P=1.25	16		29	15	14	41	
			P=1.5	14						
8.0			P=1.0	22						Gray and tan, stiff FAT CLAY WITH SAND and silt lenses
15			P=2.25	27						
20			P=2.0	26		59	18	41	74	
25			P=1.5	42						
30			P=1.75	48						
35			P=1.5	66						
			P=0.5	43						75 -soft, with organics and wood

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil Boring_01.dwg

SHEET NUMBER	235	ST. TAMMANY	2014EN0001	NO.15.012
PARISH PROJECT	NO.15.012	STATE OF LOUISIANA	PROFESSIONAL ENGINEER	
MANDEVILLE BYPASS LA 1088 TO US 190				
DESIGNED R.J.C.	CHECKED R.A.C.	DATE	10/07/2024	SHEET 1 of 1
REVISION	DESCRIPTION	DATE		

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:4
PROJECT NO. 5075
DATE 2-27-17
SURFACE ELEVATION NA
NORTH 30.372444
WEST -90.015889

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:4
PROJECT NO. 5075
DATE 2-27-17
SURFACE ELEVATION NA
NORTH 30.372444
WEST -90.015889

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil_Boring_01.dwg

DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
45			P=2.25	23						
50			P=2.5	29						
55			P=0.5	26				15		
60			N=39	20						
65			N=46	22				13		
70			N=2	45						
75			P=1.0	34						
			P=0.75	32						

DRILLING METHOD(S):
Continuous flight auger with wet rotary

GROUNDWATER INFORMATION:
Groundwater encountered at a depth of 12 feet during drilling

DESCRIPTION OF STRATUM

Gray and tan, stiff FAT CLAY WITH SAND and silt lenses
(continued)

50.0

Light gray, medium dense SILTY SAND with shells

65.0

Gray, very soft to stiff FAT CLAY with wood chips at bottom

Rajesh
10/07/2024

STATE OF LOUISIANA
RAJESH TOLKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
85			P=0.75	44						
90			P=1.5	99	98	30	68			
95			P=1.25	96						
100			P=0.75	50						
105			P=1.25	44	76	77	24	53	62	0.7
110			P=0.75	42	100	32	68	81		
115			P=0.75	32						
			P=0.5	24	88	38	17	21	31	0.5

DRILLING METHOD(S):
Continuous flight auger with wet rotary

GROUNDWATER INFORMATION:
Groundwater encountered at a depth of 12 feet during drilling

DESCRIPTION OF STRATUM

Gray, very soft to stiff FAT CLAY with wood chips at bottom
(continued)

-with silty clay

-with wood chips

110.0

Tan and gray, soft SANDY LEAN CLAY with wood

Rajesh
10/07/2024

STATE OF LOUISIANA
RAJESH TOLKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

SHEET NUMBER 236

ST. TAMMANY PARISH PROJECT 2014EN0001 B.K.I. PROJECT NO. 15.012

MANDEVILLE BYPASS LA 1088 TO US 190 ROADWAY PLANS

DESIGNED: R.J.C. CHECKED: R.A.C. DETAILED: G.V. CHECKED: R.J.C. DATE: Oct. 2024 SHEET: 1 of 1

REVISION DESCRIPTION

NO. DATE

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:5
PROJECT NO. 5075
DATE 2-24-17
SURFACE ELEVATION NA
NORTH 30.387056
WEST -90.013417

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:5
PROJECT NO. 5075
DATE 2-24-17
SURFACE ELEVATION NA
NORTH 30.387056
WEST -90.013417

DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
0.3										
0.3 - 1.0			P=1.0	17		23	15	8	57	
1.0 - 1.75			P=0.75	19		36	15	21	65	
1.75 - 2.25			P=2.25	15						
2.25 - 4.0			P=4.0	18		48	18	30	83	
4.0 - 10.0			P=1.5	30						
10.0 - 15.0			P=1.0	26						
15.0 - 20.0			P=1.25	29	57	19	38	98		
20.0 - 25.0			P=0.75	40						
25.0 - 30.0			P=0.75	59						
30.0 - 35.0			P=1.75	23	99	64	22	42	81	0.4
35.0 - 51.0			P=1.0	51						

DRILLING METHOD(S): Continuous flight auger with wet rotary	
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling	
DESCRIPTION OF STRATUM	
0.3 - 3 inches	3 inches of Topsoil
3 inches - 8.0	Gray, firm to stiff to very stiff SANDY LEAN CLAY with wood
8.0 - 13.0	Gray, stiff FAT CLAY with sand lenses

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P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
0.3 - 45.0										
45.0 - 50.0			P=0.50	57						
50.0 - 55.0			N=12	21	48	20	28	68		
55.0 - 60.0			P=1.75	42						
60.0 - 65.0			P=0.75	28					28	
65.0 - 70.0			P=1.75	25						
70.0 - 75.0			P=3.0	23	41	18	23	84		
75.0 - 80.0			N=35	21						
80.0 - 85.0										
85.0 - 90.0			N=17	18						

DRILLING METHOD(S): Continuous flight auger with wet rotary	
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling	
DESCRIPTION OF STRATUM	
0.3 - 45.0	Gray, stiff FAT CLAY with sand lenses (continued)
45.0 - 50.0	-with wood chips
50.0 - 55.0	Dark gray, stiff SANDY LEAN CLAY with silt and roots
55.0 - 60.0	Dark gray, stiff FAT CLAY with shells and sand lenses
60.0 - 65.0	Gray, loose CLAYEY SAND
65.0 - 70.0	Gray, stiff to very stiff LEAN CLAY WITH SAND
70.0 - 75.0	-with silt
75.0 - 80.0	Gray, dense SAND
80.0 - 85.0	Gray, stiff LEAN CLAY WITH SAND
85.0 - 90.0	-with silty clay

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil Boring_01.dwg

SHEET NUMBER	237
ST. TAMMANY PARISH PROJECT	2014EN0001
B.K.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
DESIGNED BY	R.J.C.
CHECKED BY	R.A.C.
DATE	Oct. 2024
SHEET	1 of 1
REVISION DESCRIPTION	

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA

CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:5
PROJECT NO. 5075
DATE 2-24-17
SURFACE ELEVATION NA
NORTH 30.387056
WEST -90.013417

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA

CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:6
PROJECT NO. 5075
DATE 2-20-17
SURFACE ELEVATION NA
NORTH 30.351417
WEST -90.022833

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil Boring_01.dwg


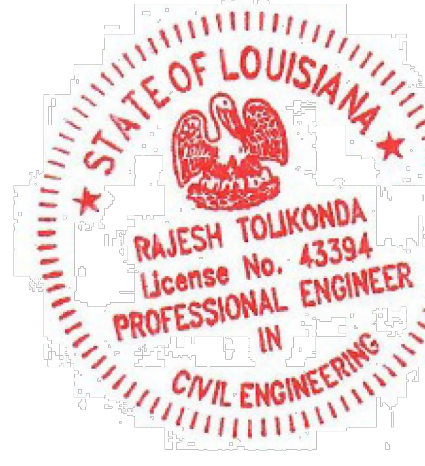
FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger with wet rotary		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI	
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 13 feet during drilling									
DESCRIPTION OF STRATUM									
Gray, stiff LEAN CLAY WITH SAND (<i>continued</i>)									
85.0		N=14		30	44	17	27	80	85.0
Gray, medium dense SAND with clay at top									
90		N=29		29					
95		N=80		29					
100		N=6"-50+		22				8	
105		N=63		26					
110		N=63		27					
115		N=57		28				20	
120.0		N=72		28					


 10/07/2024





N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger with wet rotary			
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater not encountered										
DESCRIPTION OF STRATUM										
0.3 3 inches of Topsoil										
Gray, firm to stiff SANDY LEAN CLAY with silt lenses										
2		P=0.50		18	102	23	18	5	70	1.0
4		P=1.75		18						
6		P=2.5		17						
6.0		P=2.0		23	66	22	44	65		
Gray, stiff SANDY FAT CLAY with silt lenses										
10		P=2.0		24						
14		P=1.25		34						
15.0										


 10/07/2024




N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

SHEET NUMBER	238	ST. TAMMANY	2014EN0001	NO. 15.012
PARISH PROJECT		PARISH PROJECT		B.K.I. PROJECT
				
MANDEVILLE BYPASS LA 1088 TO US 190 ROADWAY PLANS				
DESIGNED	R.J.C.	CHECKED	R.A.C.	DATE
DETAILED	G.V.	CHECKED	R.J.C.	Oct. 2024
				1 of 1
REVISION DESCRIPTION NO. DATE BY				

LOG OF BORING


LOG OF BORING


PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:7
PROJECT NO. 5075
DATE 2-20-17
SURFACE ELEVATION NA
NORTH 30.349056
WEST -90.025417

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B:8
PROJECT NO. 5075
DATE 2-22-17
SURFACE ELEVATION NA
NORTH 30.355083
WEST -90.020361

FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger			
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 11.5 feet during drilling										
DESCRIPTION OF STRATUM										
0.3										4 inches of Topsoil
2		P=4.0		11						Gray, stiff LEAN CLAY WITH SAND with silt lenses
4		P=4.25		12	111	43	16	27	82	1.3
6		P=2.5		18						6.0
8		P=3.0		19						Gray, stiff SANDY FAT CLAY with silt lenses
10		P=1.25		26		50	17	33	65	
12										-with organics
14		P=1.0		37						15.0
<p>N - STANDARD PENETRATION TEST RESISTANCE T - TORVANE P - POCKET PENETROMETER RESISTANCE R - PERCENTAGE OF ROCK CORE RECOVERY RQD - ROCK QUALITY DESIGNATION</p> 										

FIELD DATA		LABORATORY DATA					DRILLING METHOD(S): Continuous flight auger			
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			MINUS NO. 200 SIEVE (%)	SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 11 feet during drilling										
DESCRIPTION OF STRATUM										
0.3										3 inches of Topsoil
2		P=1.25		20		29	15	14	61	Gray, stiff to very stiff SANDY LEAN CLAY with silt lenses
4		P=3.25		20						
6		P=2.5		18						6.0
8		P=2.25		24		58	19	39	89	Gray, stiff SANDY FAT CLAY with silt lenses
10		P=1.5		31						
12										
14		P=2.0		40						15.0
<p>N - STANDARD PENETRATION TEST RESISTANCE T - TORVANE P - POCKET PENETROMETER RESISTANCE R - PERCENTAGE OF ROCK CORE RECOVERY RQD - ROCK QUALITY DESIGNATION</p> 										

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil Boring_01.dwg

SHEET NUMBER 239

ST. TAMMANY 2014EN0001 NO.15.012

MANDEVILLE BYPASS LA 1088 TO US 190

DESIGNED: R.J.C. CHECKED: R.A.C. DETAILED: G.V. CHECKED: R.J.C. DATE: Oct. 2024 SHEET: 1 of 1

NO. DATE REVISION DESCRIPTION

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B-9
PROJECT NO. 5075
DATE 2-22-17
SURFACE ELEVATION NA
NORTH 30.356111
WEST -90.019306

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B-10
PROJECT NO. 5075
DATE 2-22-17
SURFACE ELEVATION NA
NORTH 30.356556
WEST -90.018667

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger	
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI	
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 11 feet during drilling									
DESCRIPTION OF STRATUM									
0.2									2 inches of Topsoil Gray, firm SILTY CLAY
2.0									Light gray, stiff to very stiff FAT CLAY WITH SAND and silt lenses
		P=0.75		20					
		P=1.5		27	99	64	20	44	0.7
		P=1.5		20					
		P=3.5		21		53	18	35	83
		P=1.0		25					-with organics
		P=1.25		35		58	18	40	91
15.0									

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger	
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)
						LL	PL	PI	
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 10 feet during drilling									
DESCRIPTION OF STRATUM									
0.3									3 inches of Topsoil Gray, firm SILTY CLAY
2.0									Light gray, stiff to very stiff FAT CLAY WITH SAND and silt lenses
		P=0.75		23					
		P=1.75		27		53	16	37	87
		P=2.0		21					
		P=3.0		25					
		P=1.0		42					
10.0									Gray and tan, LEAN CLAY with silt lenses
15.0									

DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\231-241_Soil Boring_01.dwg

Rajesh
10/07/2024
STATE OF LOUISIANA
RAJESH TOLKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

Rajesh
10/07/2024
STATE OF LOUISIANA
RAJESH TOLKONDA
License No. 43394
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION

SHEET NUMBER	240
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
B.K.I. PROJECT	
STATE OF LOUISIANA	
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS	
DESIGNED R.J.C.	
CHECKED R.A.C.	
DATE	Oct. 2024
SHEET	1 of 1
BY	
REVISION DESCRIPTION	
NO.	
DATE	

LOG OF BORING

LOG OF BORING

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B-11
PROJECT NO. 5075
DATE 2-22-17
SURFACE ELEVATION NA
NORTH
WEST

PROJECT: Mandeville Bypass
US190 and 1088
Mandeville, LA
CLIENT: BKI (St. Tammany Parish)
Mandeville, LA

BORING NO. B-12
PROJECT NO. 5075
DATE 2-22-17
SURFACE ELEVATION NA
NORTH 30.361556
WEST -90.013833

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
GROUNDWATER INFORMATION: Groundwater encountered at a depth of 12 feet during drilling										
DESCRIPTION OF STRATUM										
0.3									3 inches of Topsoil Tan, loose CLAYEY SAND	
2.0			P=0.75	23		42	17	25	46	Light gray, firm to stiff SANDY FAT CLAY
4.0			P=1.25	22						
6.0			P=1.75	18	107	54	18	36	60	0.9
8.0			P=0.50	27						
10.0			P=2.0	28		54	17	37	40	Gray, stiff CLAYEY SAND
12.0										Gray, soft CLAYEY SILT
14.0			P=0.75	30						
15.0										

FIELD DATA		LABORATORY DATA						DRILLING METHOD(S): Continuous flight auger		
DEPTH (FT)	SOIL SYMBOL	SAMPLES	N: BLOWS/FT T: TONS/SQ FT P: TONS/SQ FT R: PERCENT RQD: PERCENT	MOISTURE CONTENT (%)	DRY DENSITY POUNDS/CU.FT	ATTERBERG LIMITS (%)			SHEAR STRENGTH (TONS/SQ FT)	
						LL	PL	PI		
GROUNDWATER INFORMATION: Ground saturated with water during drilling										
DESCRIPTION OF STRATUM										
0.3										3 inches of Topsoil Tan and gray, stiff SANDY LEAN CLAY
2.0			P=1.0	19		26	17	9	62	Light gray, stiff to very stiff SANDY FAT CLAY with silt lenses
4.0			P=1.75	23	94	52	18	34	55	0.8
6.0			P=3.5	24						
8.0			P=1.5	22						
10.0			P=1.25	24		54	19	35	77	Brown and gray, soft SILTY CLAY
12.0										
14.0			P=0.50	28						
15.0										

N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



N - STANDARD PENETRATION TEST RESISTANCE
T - TORVANE
P - POCKET PENETROMETER RESISTANCE
R - PERCENTAGE OF ROCK CORE RECOVERY
RQD - ROCK QUALITY DESIGNATION



DATE: 10/7/24

FILE NAME: P:\NO.15-XXX\NO.15.012\1200\02_Design\02 Civil\01 Drawings\231-241_Soil Boring_01.dwg

SHEET NUMBER 241

ST. TAMMANY PARISH PROJECT 2014EN0001 B.K.I. PROJECT NO.15.012

MANDEVILLE BYPASS LA 1088 TO US 190 ROADWAY PLANS

DESIGNED R.J.C. CHECKED R.A.C. DETAILED G.V. CHECKED R.J.C. DATE SHEET 1 of 1

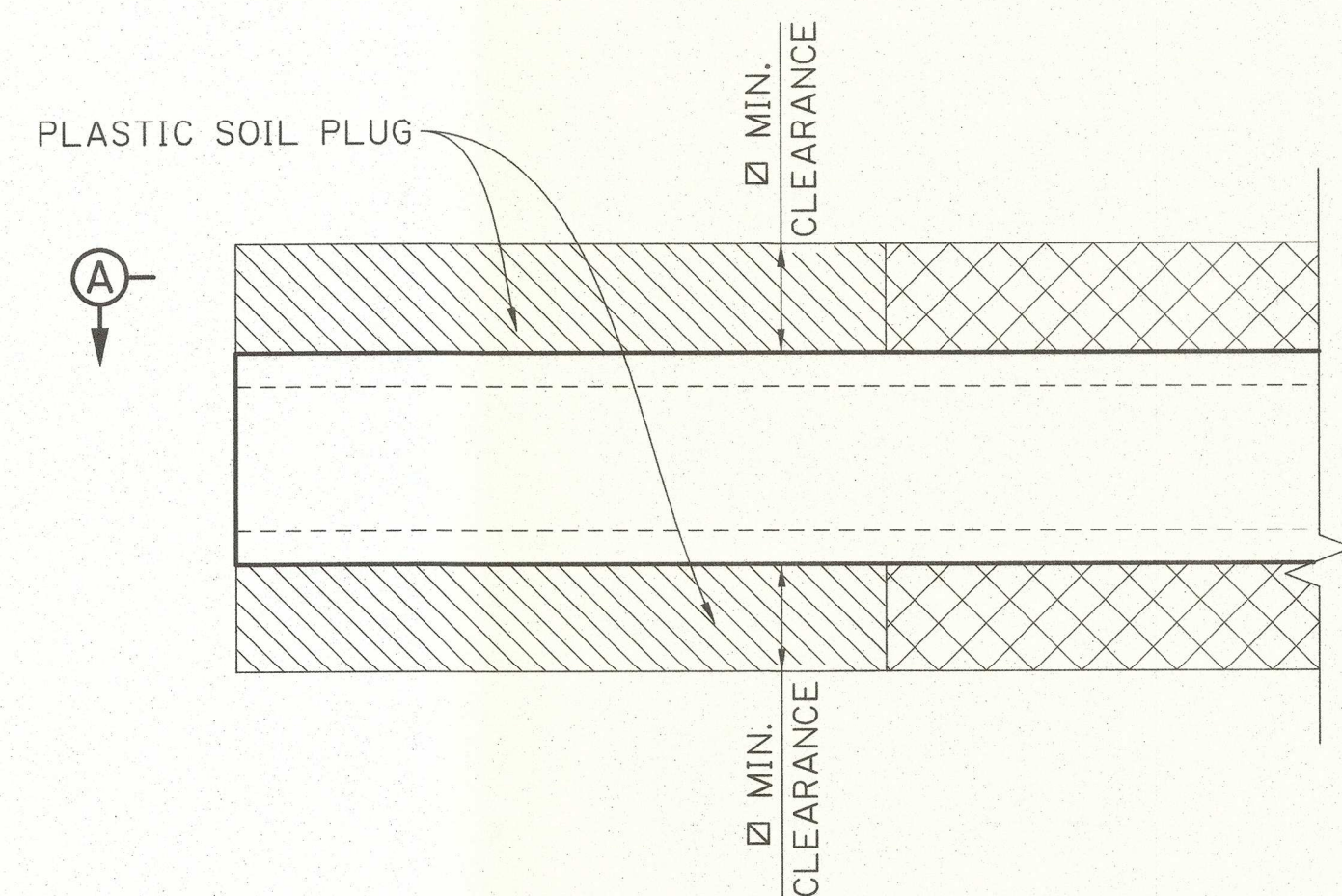
NO. DATE REVISION DESCRIPTION

09:45
10/23/2023

GENERAL NOTES :

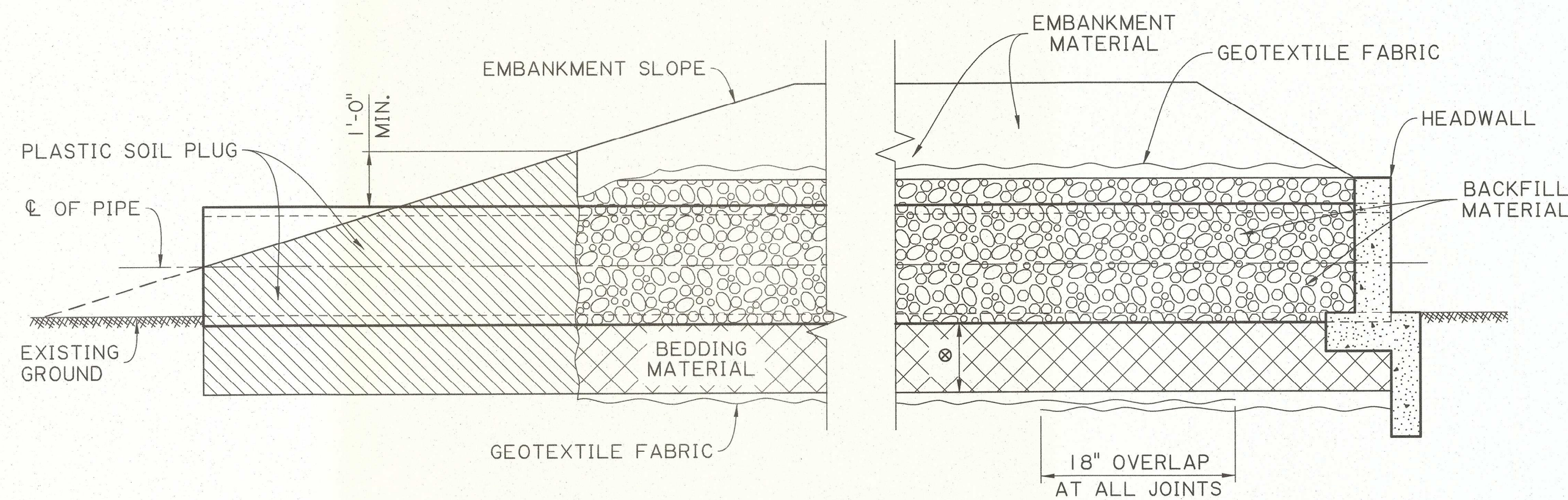
1. REINFORCED CONCRETE PIPE AND FLEXIBLE PIPE ARE SHOWN AS TYPICAL STRUCTURES. DETAILS ALSO APPLY TO REINFORCED CONCRETE BOX CULVERT, REINFORCED CONCRETE PIPE ARCH, CORRUGATED METAL PIPE ARCH, AND CORRUGATED STRUCTURAL PLATE STRUCTURES.
2. CONSTRUCTION COVER REQUIREMENTS MAY EXCEED FINAL COVER.
3. CROSS DRAIN DETAILS APPLY TO ALL REACHES OF PIPE UNDER RIGID OR FLEXIBLE ROADWAYS.
4. FOR STRUCTURES INSTALLED OUTSIDE THE LIMITS OF THE ROADWAY, THE 12" OF FINAL BACKFILL ABOVE TYPE B BACKFILL UP TO THE EXISTING GROUND SHALL BE PLASTIC SOIL BLANKET MATERIAL. IF THE EMBANKMENT TO BE INSTALLED IS GREATER THAN 12" ABOVE EXISTING GROUND IN THE AREA OVER THE STRUCTURE, THEN THE PLASTIC SOIL BLANKET IS NOT REQUIRED AND TYPE B BACKFILL MAY EXTEND TO EXISTING GROUND.

MINIMUM TRENCH CLEARANCE		
TYPE OF STRUCTURE	INSIDE DIAMETER	MIN. CLEARANCE
REINFORCED CONCRETE	ALL	18"
FLEXIBLE PIPE	<48"	18"
FLEXIBLE PIPE	≥48"	24"

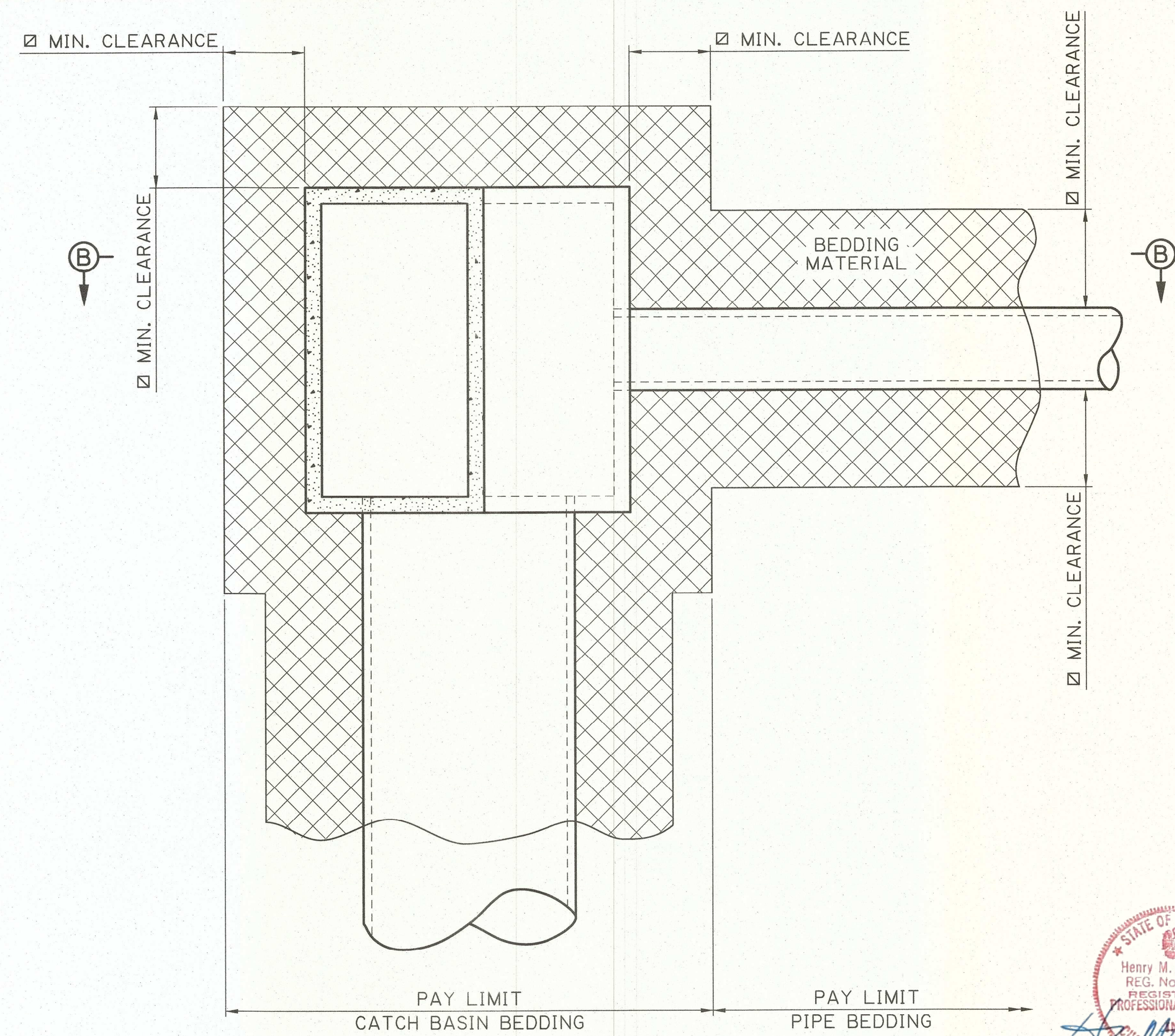


TYPICAL CROSS DRAIN INSTALLATION

WITH AND WITHOUT HEADWALL
(EMBANKMENT MATERIAL NOT SHOWN FOR CLARITY)
NTS



SECTION A-A
WITH AND WITHOUT HEADWALL
NTS

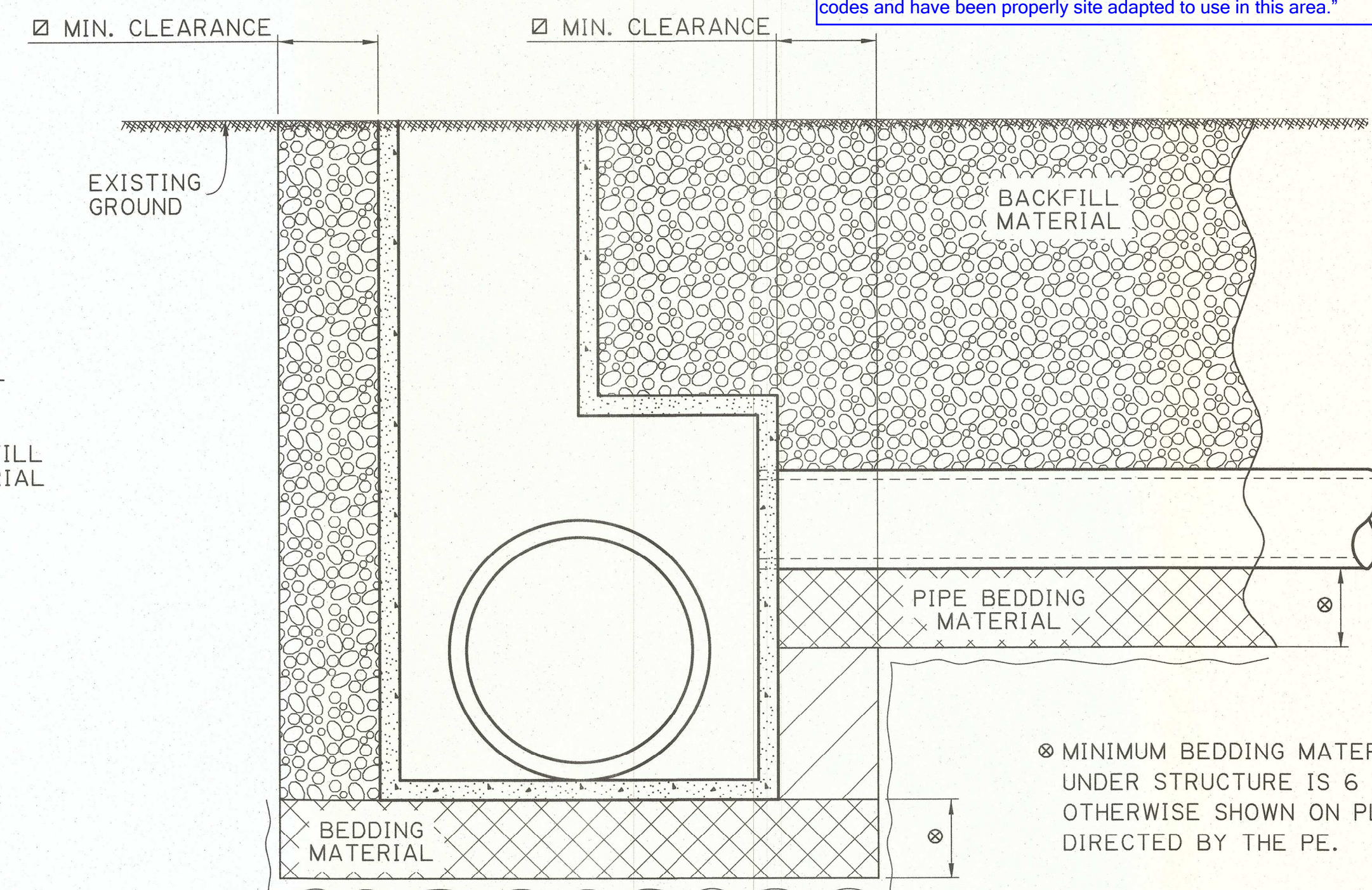


TYPICAL CATCH BASIN AND STORM DRAIN INSTALLATION

NTS

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/23/2023



SECTION B-B
NTS

⊗ MINIMUM BEDDING MATERIAL THICKNESS UNDER STRUCTURE IS 6 INCHES UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE PE.

SHEET NUMBER	301
DESIGN	C. NICKEL
CHECK	J. RAUSER
DETAIL	L. HASTINGS
CHECK	A. NICKEL
REVIEW	C. NICKEL
SERIES #	1 OF 2

STATE OF LOUISIANA
CHRISTOPHER J. NICKEL
License No. 30572
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/23/2023

APPROVED BY CHIEF ENGINEER:
DATE: 10/26/2023

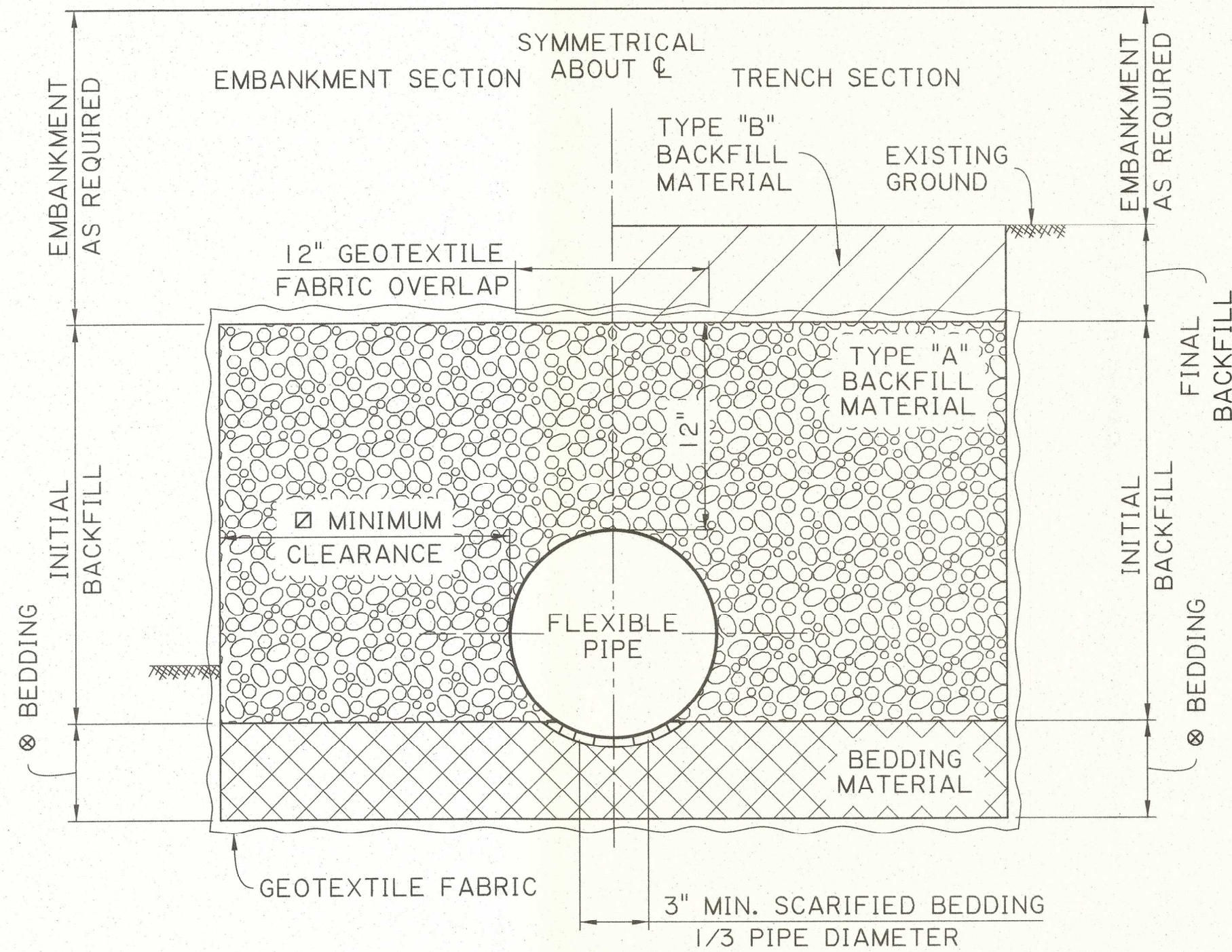
STATE OF LOUISIANA
REGISTERED PROFESSIONAL ENGINEER

DRAINAGE STRUCTURES
BEDDING & BACKFILL
BM-01

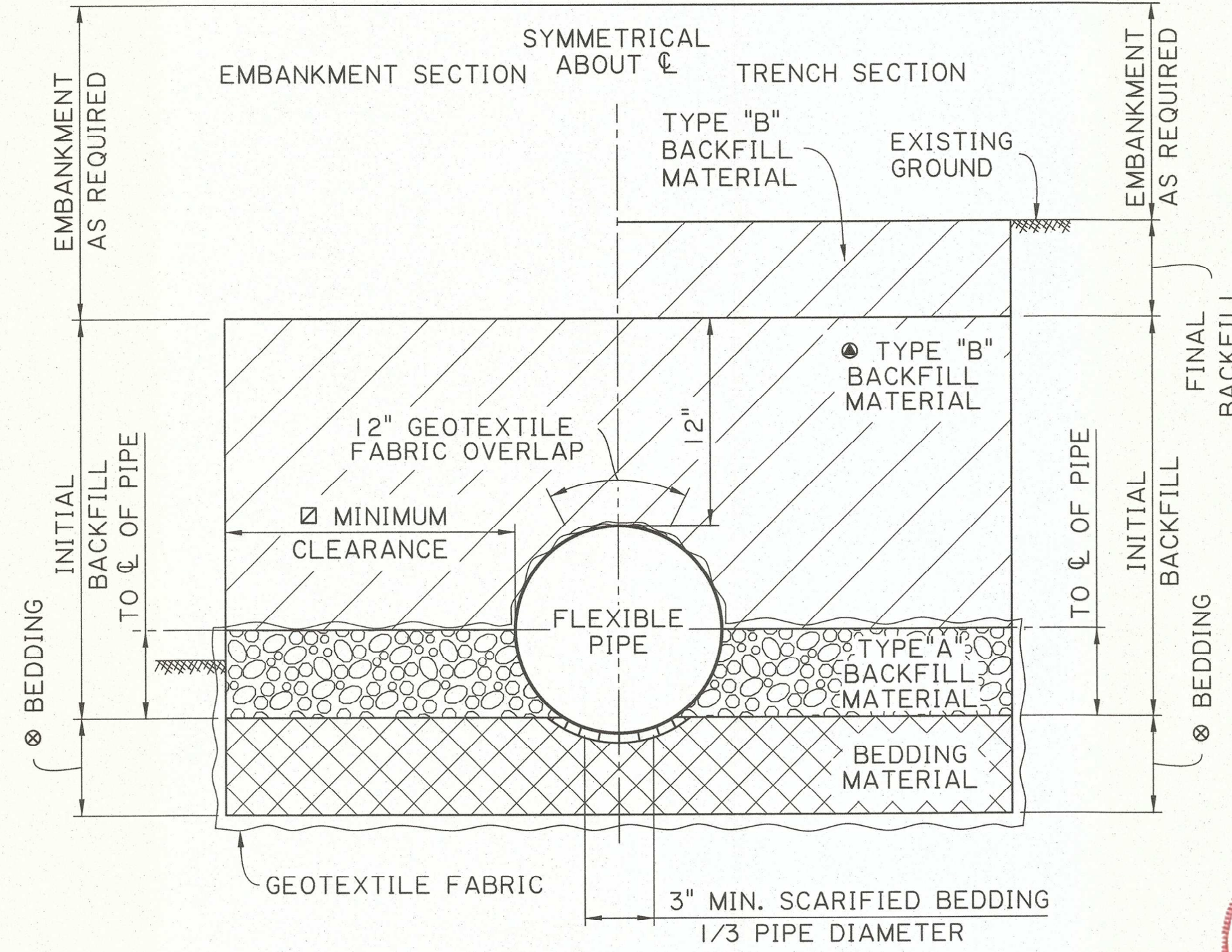
STANDARD PLAN
DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
PAVEMENT & GEOTECHNICAL SERVICES

MINIMUM TRENCH CLEARANCE		
TYPE OF STRUCTURE	INSIDE DIAMETER	MIN. CLEARANCE
REINFORCED CONCRETE	ALL	18"
FLEXIBLE PIPE	<48"	18"
FLEXIBLE PIPE	≥48"	24"

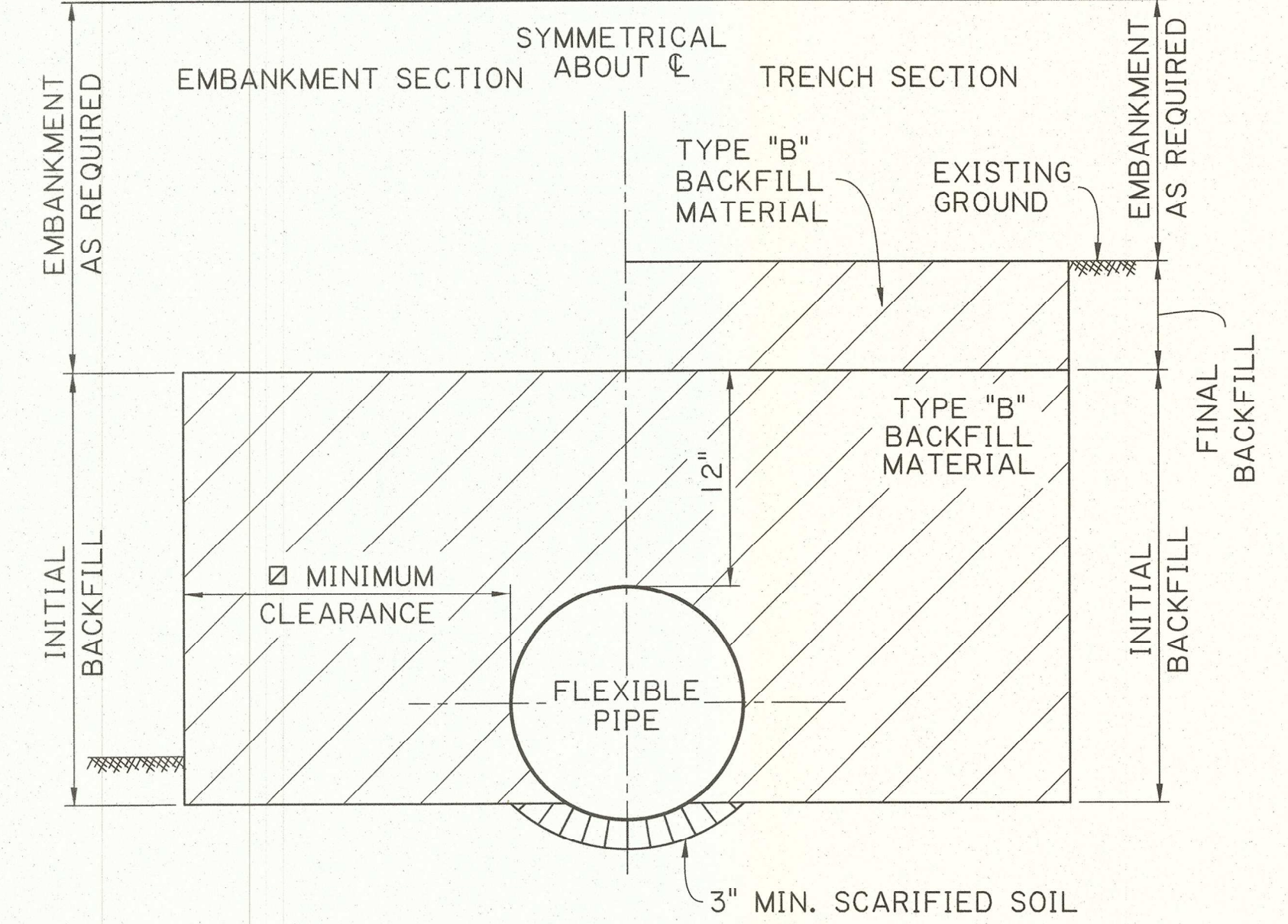
- ⊗ MINIMUM BEDDING MATERIAL THICKNESS UNDER STRUCTURE IS 6 INCHES UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE PE.
- △ NO BEDDING MATERIAL REQUIRED UNLESS OTHERWISE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE PE.
- REFER TO NOTE 3 ON SHEET 1 OF THIS SERIES.



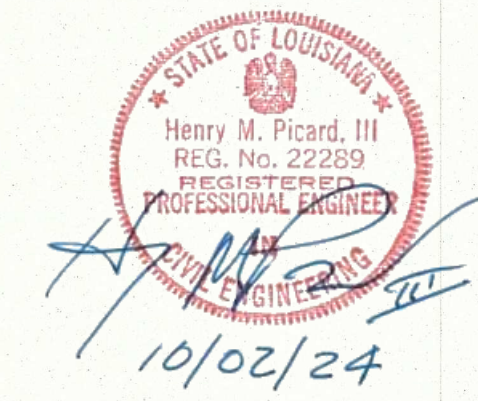
FLEXIBLE PIPE CROSS DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"



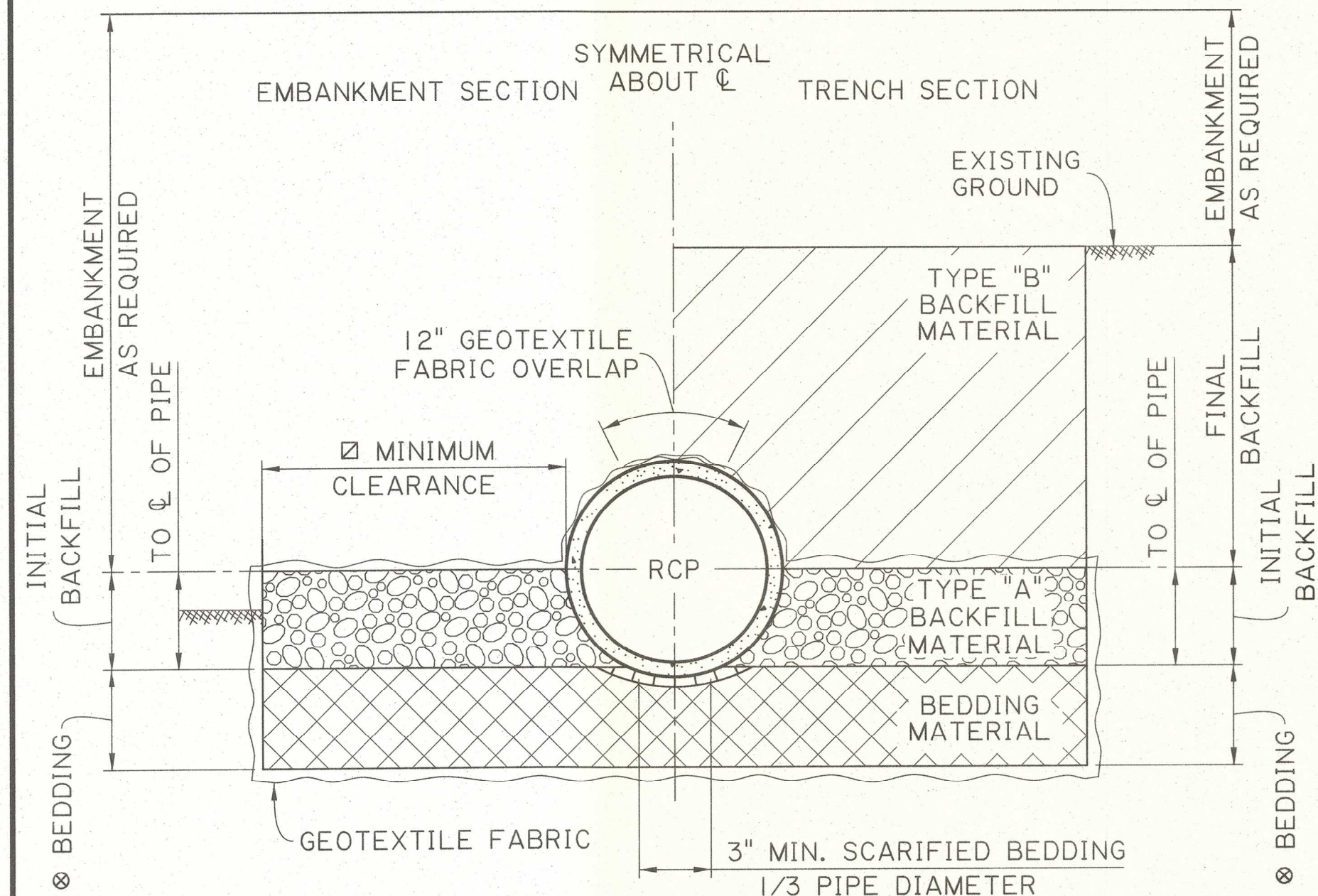
FLEXIBLE PIPE STORM DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"



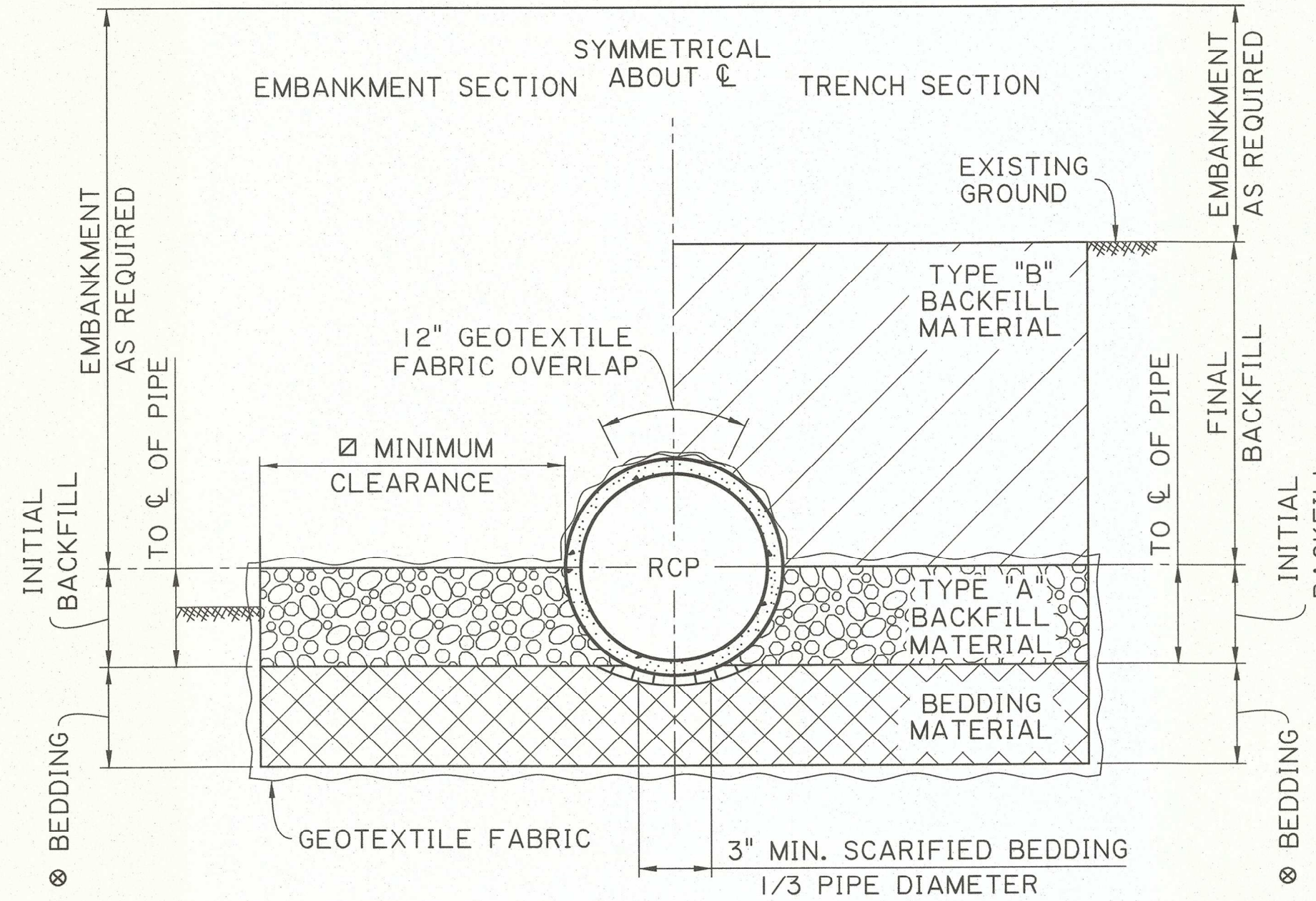
△ FLEXIBLE PIPE SIDE DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"



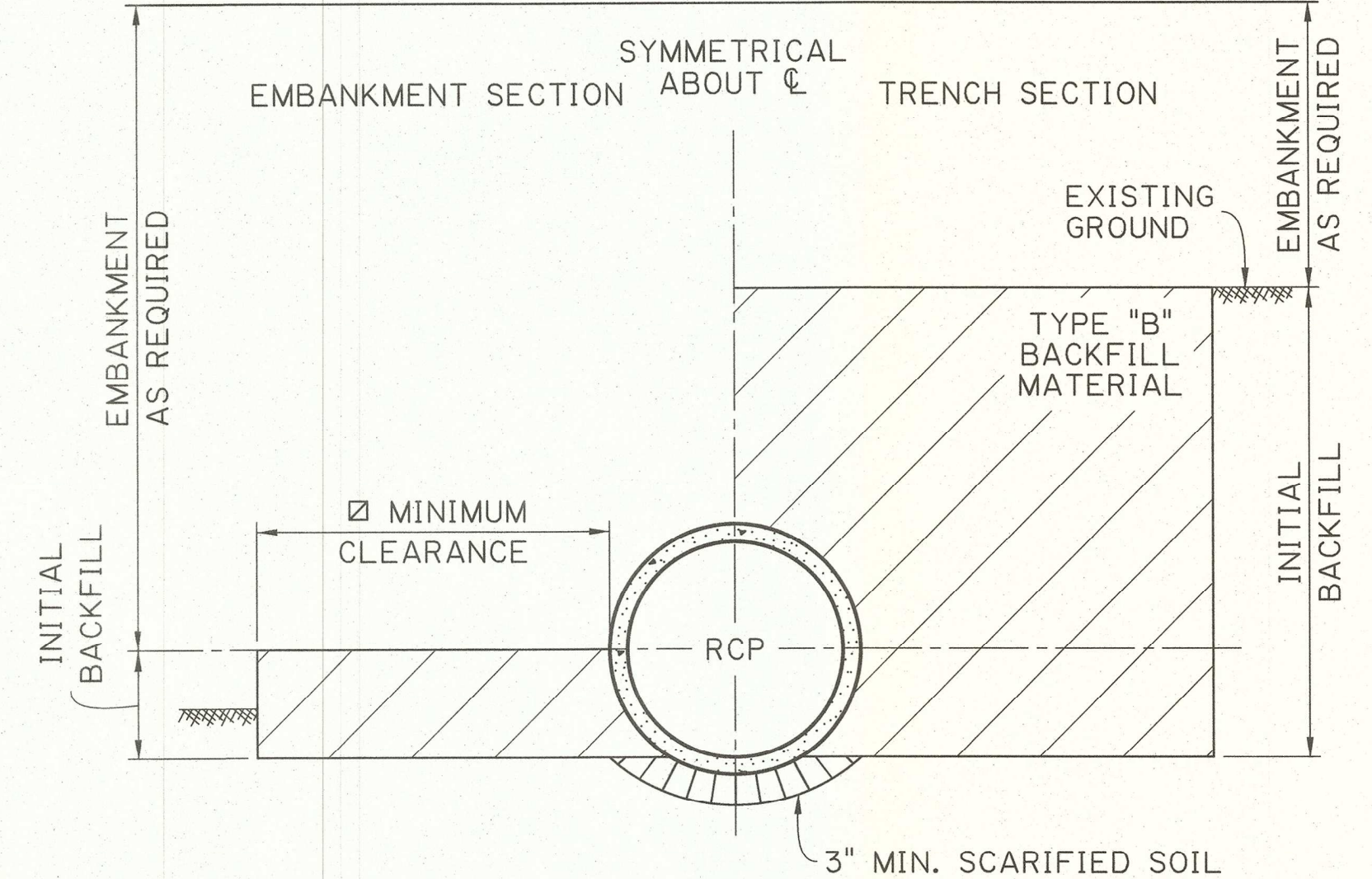
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



REINFORCED CONCRETE PIPE CROSS DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"

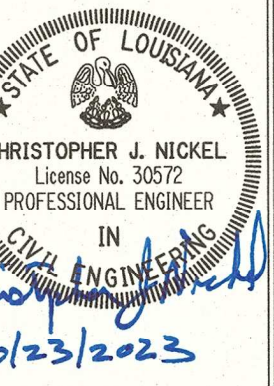


REINFORCED CONCRETE PIPE STORM DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"



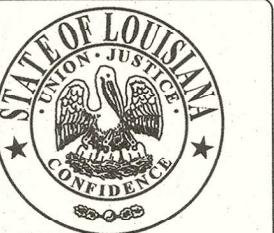
△ REINFORCED CONCRETE PIPE SIDE DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1/2"=1'-0"

DESIGN	C. NICKEL	PARISH	
CHECK	J. RAUBER	CONTROL SECTION	
DETAIL	L. HASTINGS	STATE PROJECT	
CHECK	A. NICKEL		
REVIEW	C. NICKEL		
SERIES	# 2 OF 2		



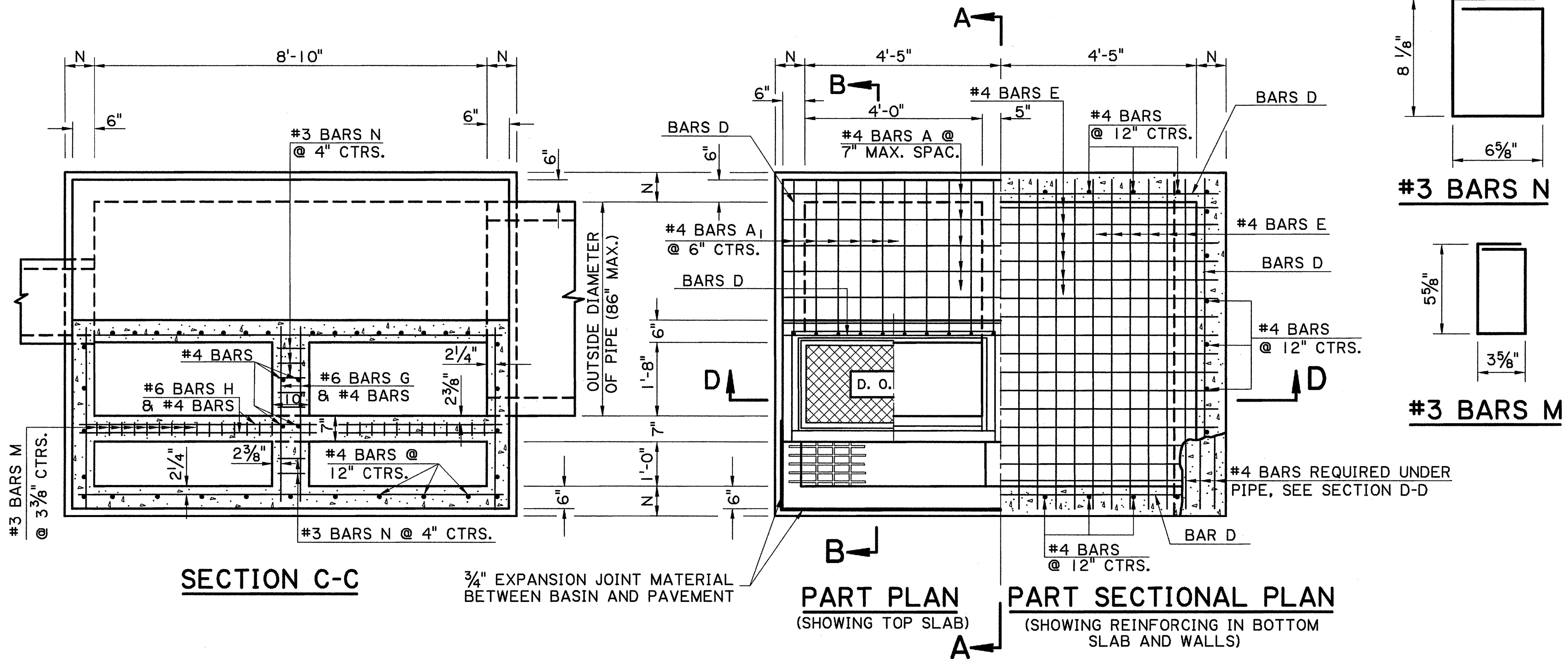
APPROVED BY: CHIEF ENGINEER

DATE: 10/26/2023



DRAINAGE STRUCTURES
TYPICAL SECTIONS FOR CROSS
DRAINS & SIDE DRAINS
STANDARD PLAN BM-01



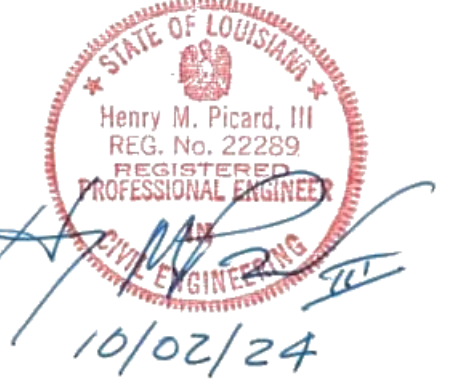
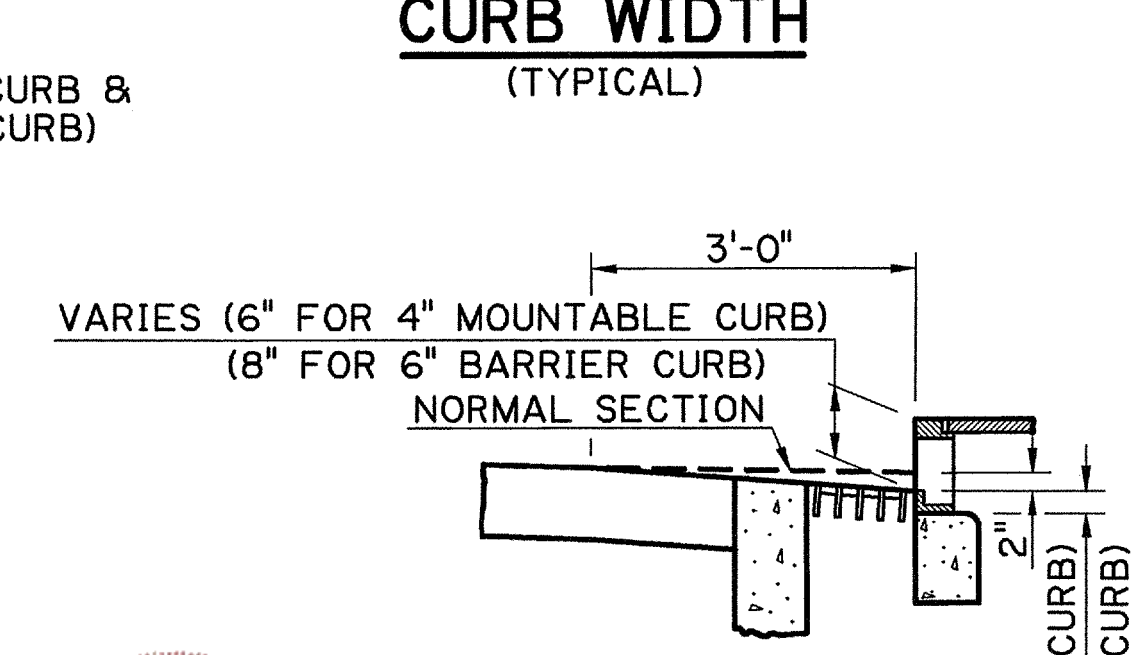
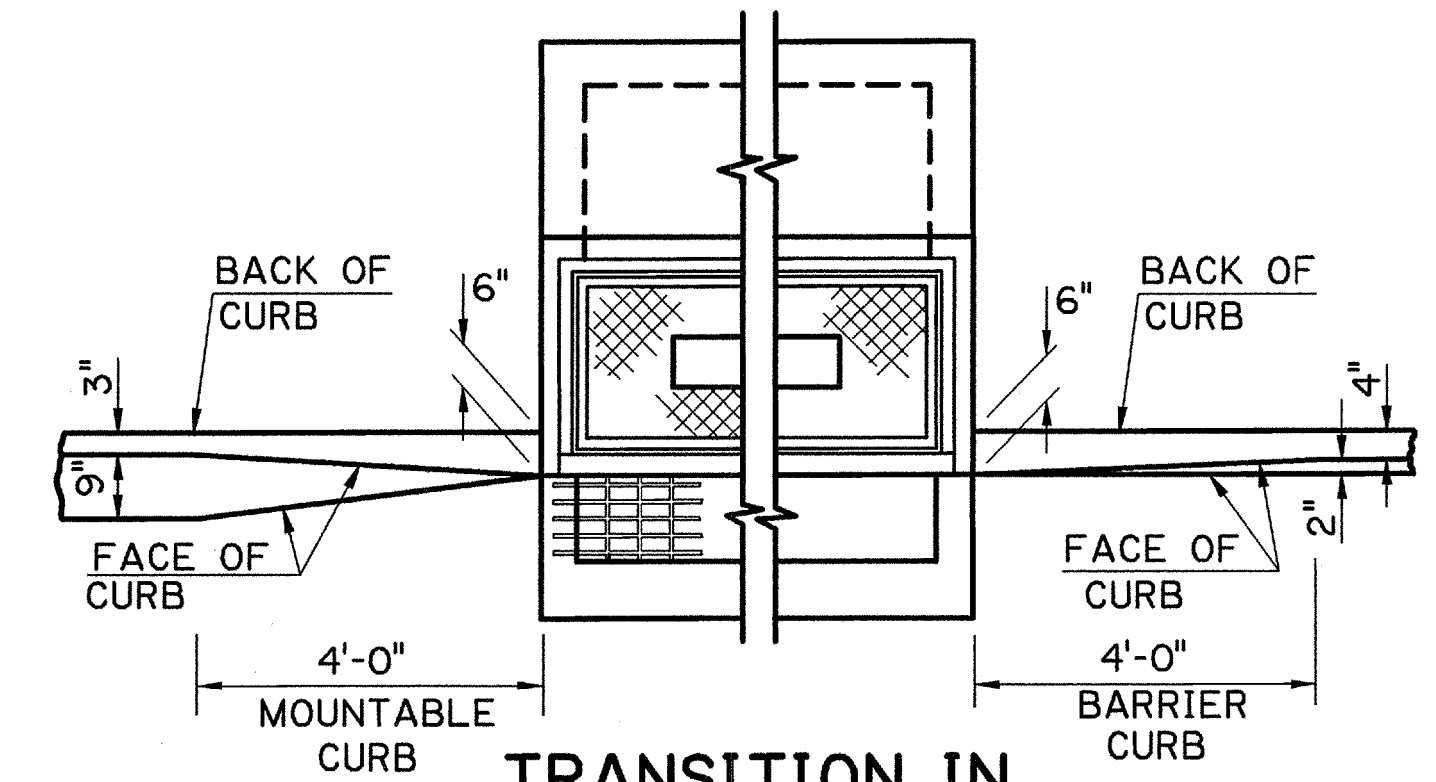


GENERAL NOTES:

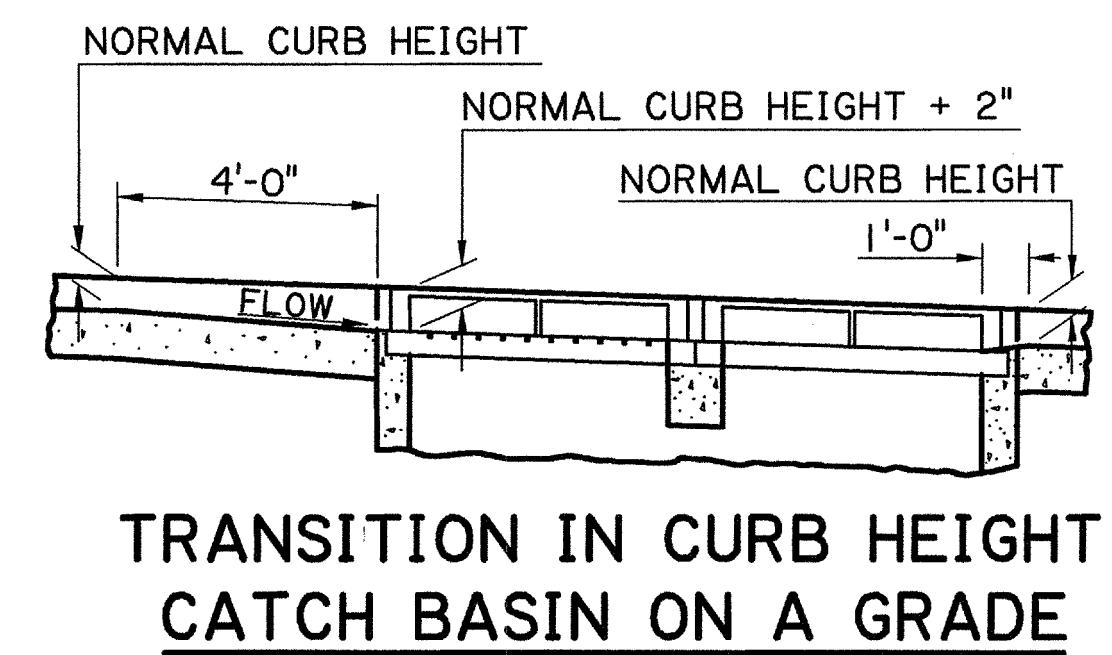
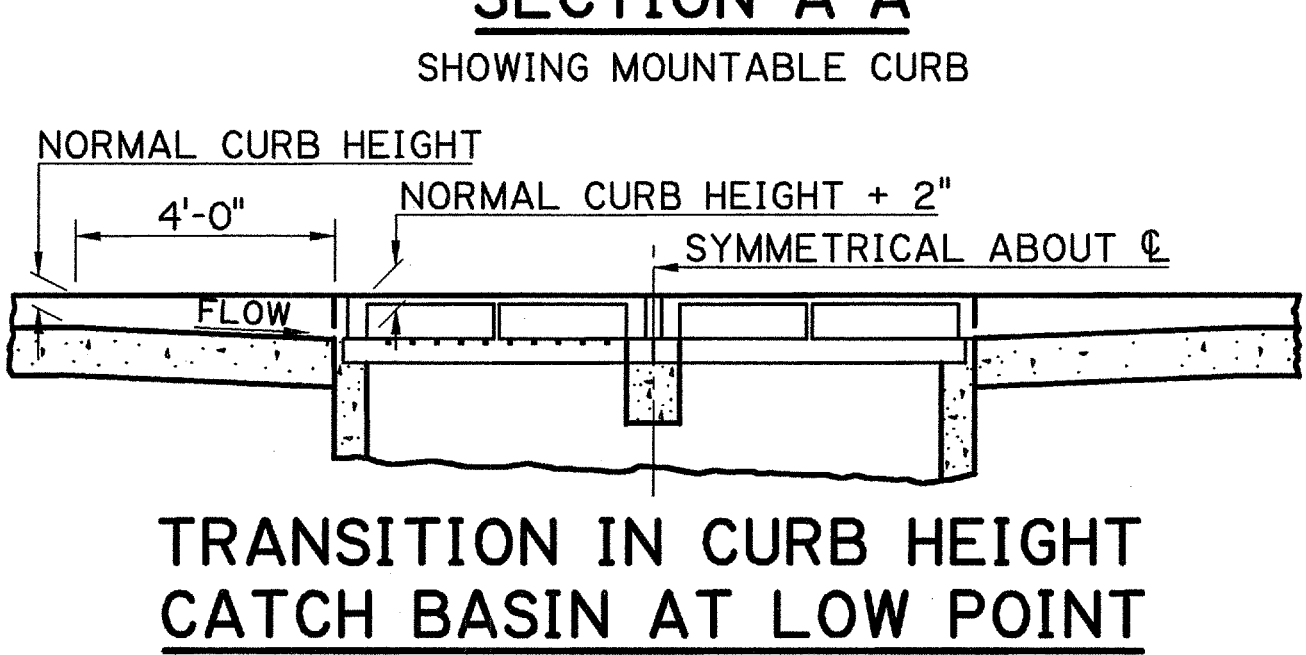
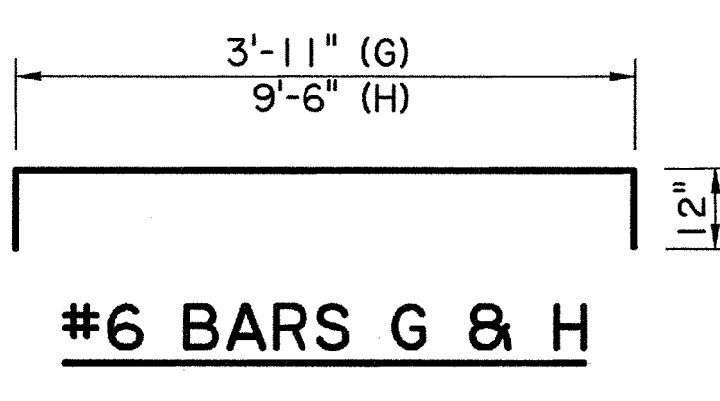
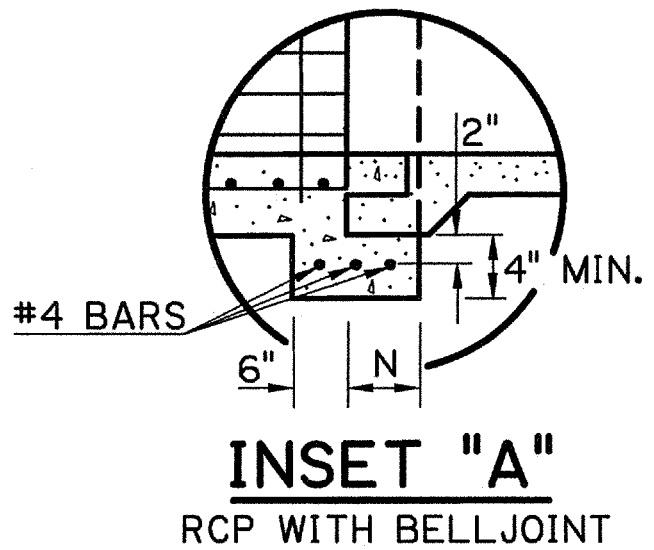
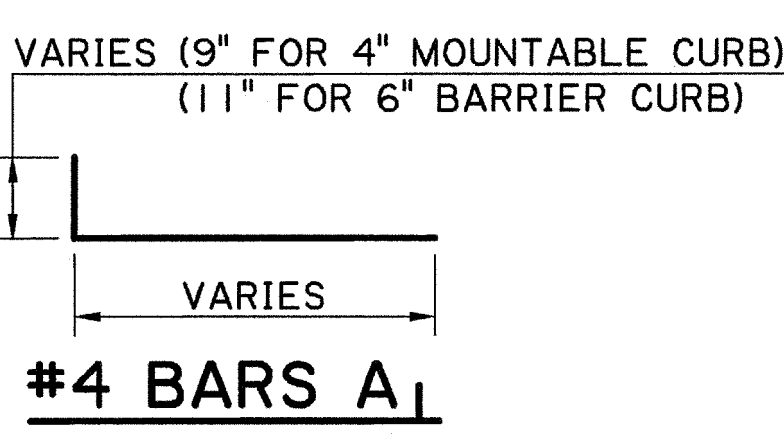
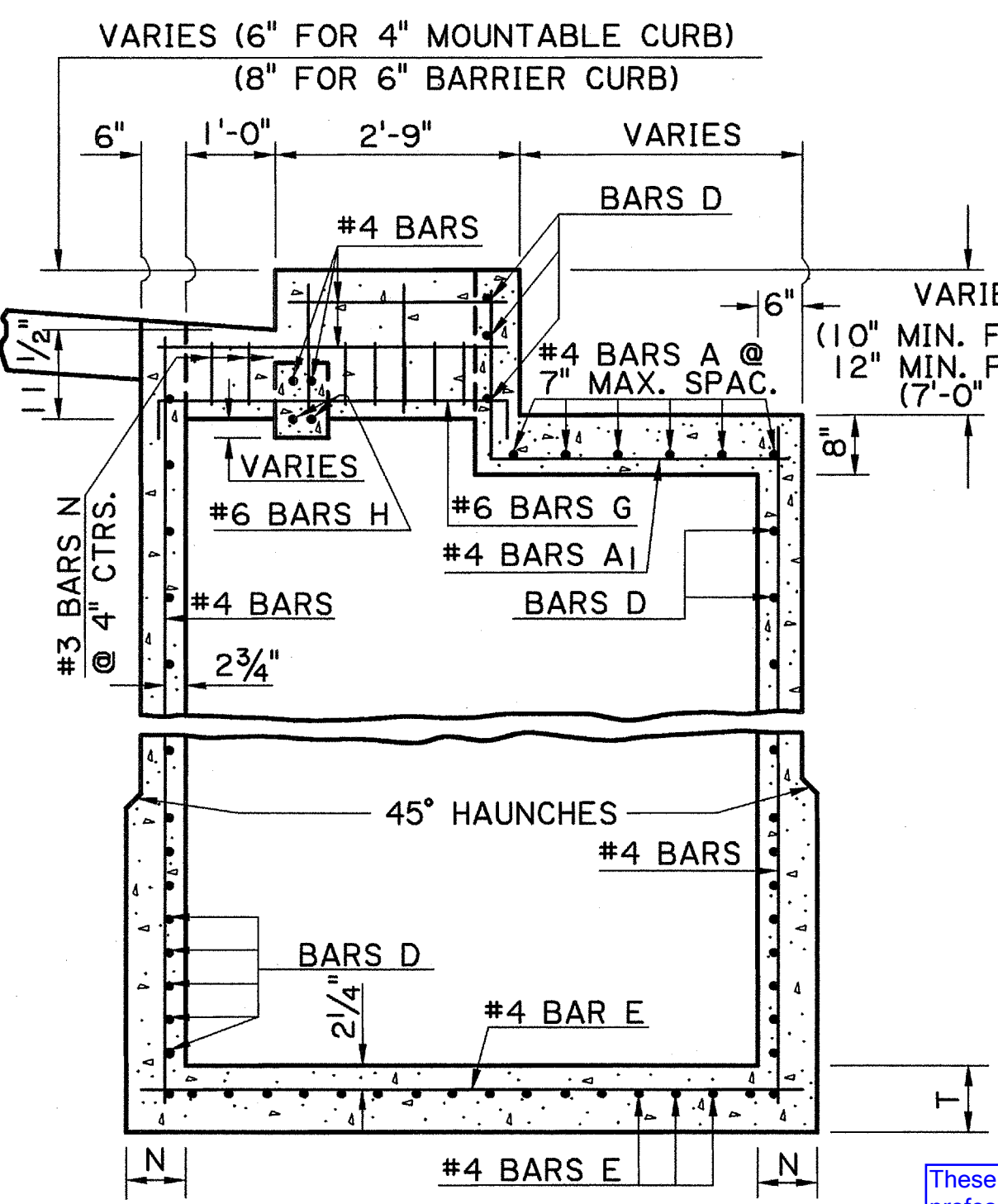
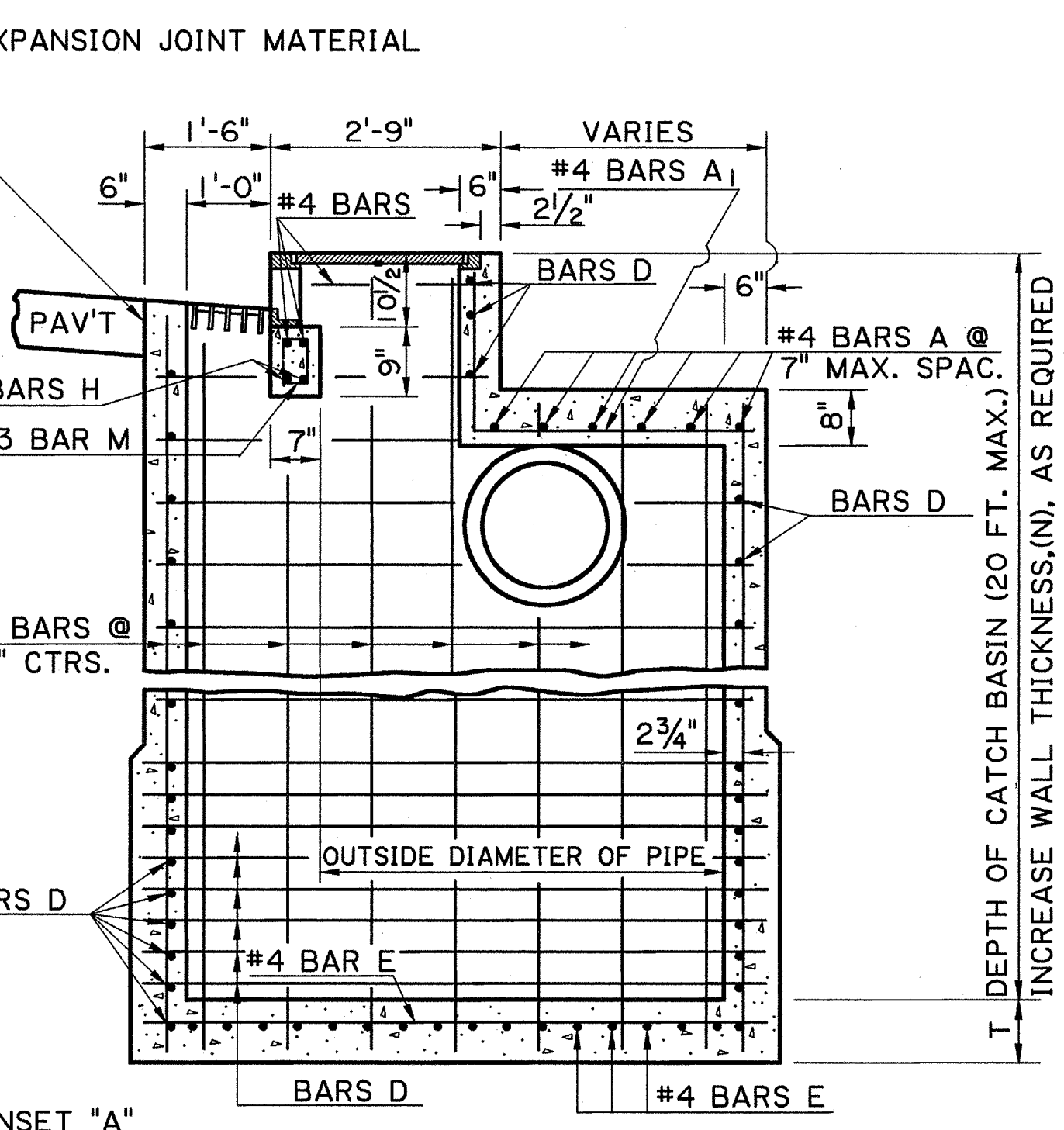
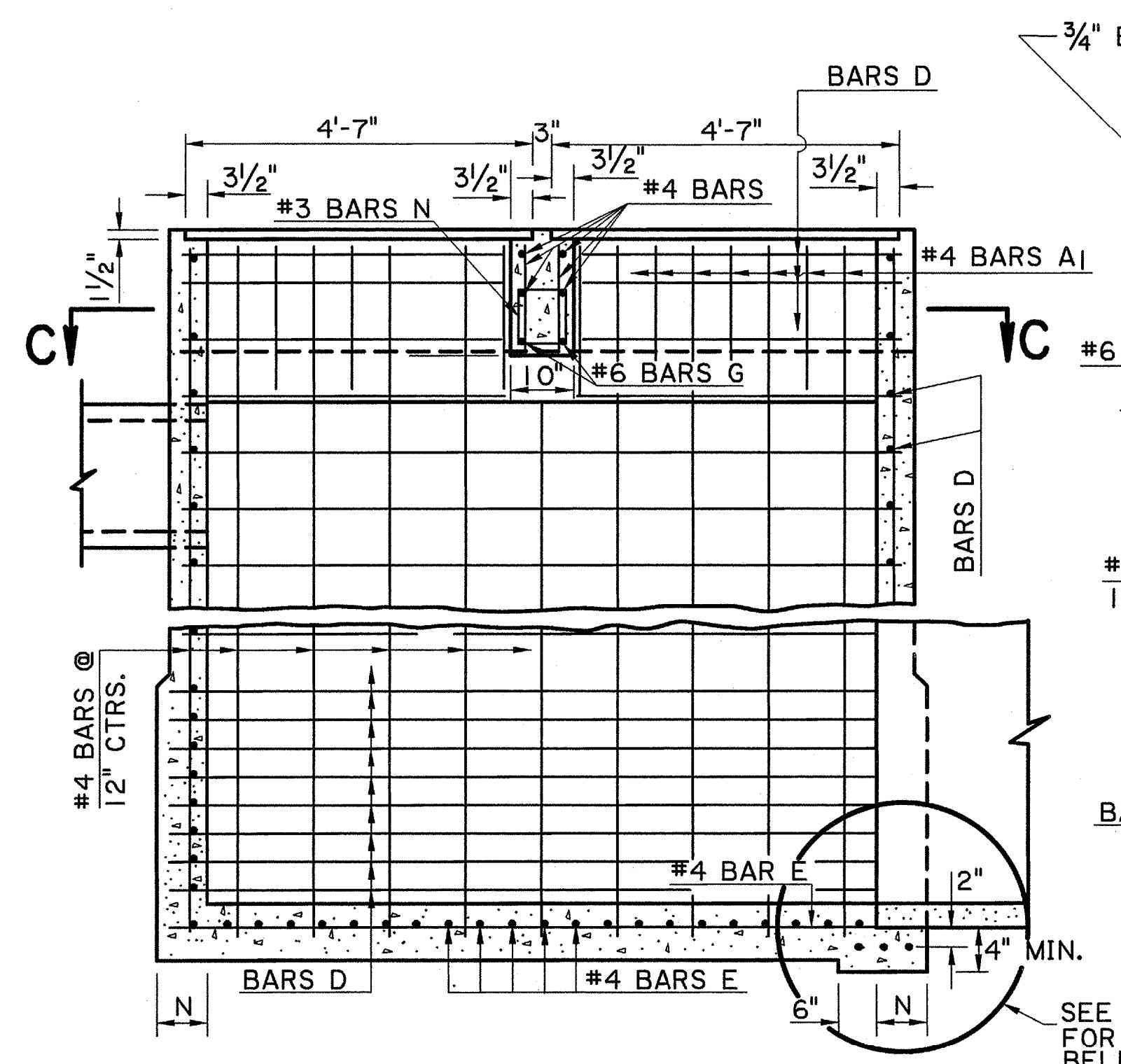
- CATCH BASIN IS DESIGNED ACCORDING TO 4TH ED. 2007 AASHTO LRFD PROCEDURES. SECTION 702 OF THE DOTD STANDARD SPECIFICATIONS SHALL APPLY.
- CONCRETE: ALL CONCRETE SHALL BE CLASS "M" MINOR STRUCTURE. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4 IN. EXCEPT AS NOTED.
- REINFORCING STEEL: REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS ARE TO BAR CENTERS. MINIMUM COVER FOR REINFORCING BARS SHALL BE 2 IN. CLEAR UNLESS SHOWN OTHERWISE.
- AS DEPTH INCREASES THE WALL AND SLAB THICKNESSES AND REINFORCEMENT SHOULD BE INCREASED AS SHOWN IN THE TABLE BELOW. THE CONTRACTOR HAS THE OPTION TO PROVIDE THE MAXIMUM REQUIRED WALL THICKNESS FOR THE FULL DEPTH OF THE STRUCTURE.

DEPTH RANGE	WALLS			BOTTOM SLAB		
	N	D BARS	T	E BARS	T	E BARS
	IN.	SIZE	SPAC., IN.	IN.	SIZE	SPAC., IN.
0' TO 7'	6.0	4	4.5	6.0	4	7.5
7'-1" TO 11'	7.0	4	5.0	6.5	4	5.5
11'-1" TO 18'	8.0	5	5.5	7.5	4	4.5
18'-1" TO 20'	8.5	5	5.5	8.0	4	4.0

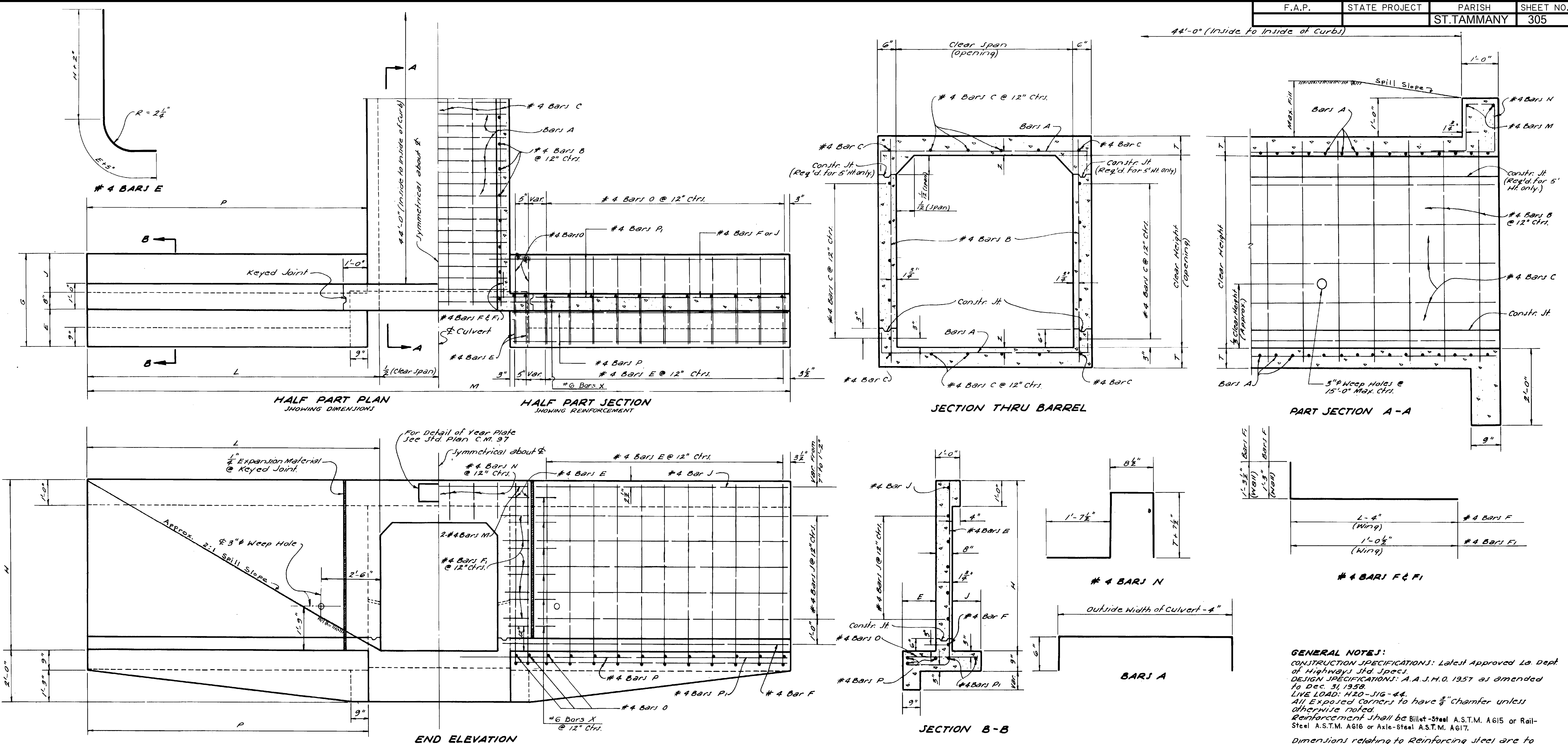
- FOR DETAILS OF METAL COVER, FRAME, AND GRATE, SEE STD. PLAN MC-01, TYPE H & TYPE I.
- THE CONTRACTOR WILL NOT POUR ABOVE THE BOTTOM OF THE SLAB UNTIL THE PAVING ADJACENT TO THE CATCH BASIN HAS BEEN COMPLETED.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SHEET NUMBER: 304
 PROJECT: ST. TAMMANY
 DESIGNED: PAA
 CHECKED: KAJ
 RETAILER: WMR
 DATE: 7-16-97
 SHEET: 1 OF 1
 DATE: 10.7.10
 APPROVED BY: [Signature]
 CHIEF ENGINEER
 10-7-10 Revised To 2007 AASHTO LRFD Procedures
 11-2-00 Converted Metric CB-08M to English CB-08
 DATE: 10/02/24
 STANDARD PLAN: CB-08
 CONCRETE CATCH BASIN
 DOUBLE COMBINATION TYPE
 4" Mountable Or 6" Barrier Curb
 Max. Pipes: 72" x 84" RCP, Max. Depth: 20'
 HYDRAULICS SECTION



GENERAL NOTES:
CONSTRUCTION SPECIFICATIONS: Latest Approved La. Dept. of Highways Std. Specs.
DESIGN SPECIFICATIONS: A.A.J.H.O. 1957 as amended to Dec. 31, 1959.
LIVE LOAD: H20-S16-44.
 All Exposed Corners to have 3/8" Chamfer unless otherwise noted.
 Reinforcement shall be Billet-Steel A.S.T.M. A615 or Rail-Steel A.S.T.M. A616 or Axle-Steel A.S.T.M. A617.
 Dimensions relating to Reinforcing Steel are to Bar Centers.
 Concrete to be class "A".
 A 1'-6" Square of Plastic Filter Cloth (See Qualified Products List) shall be placed in contact with Concrete behind each Weep Hole, in addition to approx. 2 Cu.Ft. of Concrete Sand.
 For Details of Joints, See Std. Plan C.M.-49.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



DIMENSIONS															BILL OF REINFORCING STEEL FOR 44'-0" CULVERT															QUANTITIES				OPENINGS														
OPENINGS		MAX. FILL			BARREL			WINGS & CURBS						BARREL REINFORCEMENT					WING AND CURB REINFORCEMENT										PER LIN. FT. OF BARREL		44'-0" CULVERT		CLEAR SPAN	CLEAR HEIGHT														
FEET	FT.-IN.	JQ. FT.	FEET	FEET	FEET	IN.	IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.	FR. IN.										
2	2-0	4	44	42	54	6	1 3/8	0-9	0-8	2-1	3-6	6-0	5-6	14-0	#4	220	3-8	5	92	2-8	10	47-2	28	4-10	4	6-11	8	2-4	12	4-2	6	4-7	28	1-8	12	5-2	8	6-10	4	4-5	12	2-0	22.00	0.1862	13.40	18.02	2	2-0
3	2-0	6	28	27	51	6 1/2	1 3/8	0-9	0-8	2-1	3-6 1/2	6-1	5-7	15-2	#5	170	4-8	6 1/2	92	2-9	12	47-2	28	4-10 1/2	4	7-0	8	2-4	12	4-3	8	4-8	28	1-8	12	5-3	8	6-11	4	5-5	12	2-0	29.66	0.2869	17.17	15.58	3	2-0
3	2-6	7.5	28	27	35	6 1/2	1 3/8	0-9	0-8	2-1	4-0 1/2	7-1	6-7	17-2	#5	170	4-8	6 1/2	92	3-3	14	47-2	32	5-4 1/2	4	8-0	8	2-4	16	5-3	8	4-8	32	1-8	12	6-3	8	7-11	4	5-5	12	2-0	31.67	0.2534	18.77	17.46	3	2-6
3	3-0	9	28	27	24	6 1/2	1 3/8	1-0	0-8	2-4	4-6 1/2	8-1	7-7	19-2	#5	170	4-8	6 1/2	92	3-9	14	47-2	36	6-7 1/2	4	9-0	12	2-4	16	6-3	8	4-8	36	1-11	12	7-9	8	8-11	4	5-5	16	2-0	32.33	0.2739	19.95	19.68	3	3-0
4	2-0	8	21	20	50	7	1 3/8	0-9	0-8	2-1	3-7	6-2	5-8	16-4	#5	200	5-8	5 1/2	92	2-10	14	47-2	28	4-11	4	7-1	8	2-4	12	4-4	10	4-9	28	1-8	12	5-4	8	7-0	4	6-5	12	2-0	38.93	0.2942	21.52	18.45	4	2-0
4	2-6	10	21	20	34	7	1 3/8	0-9	0-8	2-1	4-1	7-2	6-8	18-4	#5	200	5-8	5 1/2	92	3-4	16	47-2	32	5-5	4	8-1	8	2-4	16	5-4	10	4-9	32	1-8	12	6-4	8	8-0	4	6-5	12	2-0	40.93	0.3128	23.12	20.33	4	2-6
4	3-0	12	21	20	24	7	1 3/8	1-0	0-8	2-4	4-7	8-2	7-8	20-4	#5	200	5-8	5 1/2	92	3-10	16	47-2	36	6-2	4	9-1	12	2-4	16	6-4	10	4-9	36	1-11	12	7-4	8	9-0	4	6-5	16	2-0	41.60	0.3313	24.31	22.56	4	3-0
4	4-0	16	21	20	13	7	1 3/8	1-3	0-10	2-9	5-7	10-2	9-8	24-4	#5	200	5-8	5 1/2	92	4-10	18	47-2	44	7-5	4	11-1	16	2-4	20	8-4	10	4-9	44	2-4	12	9-4	8	11-0	4	6-5	20	2-0	44.27	0.3683	27.41	27.37	4	4-0
5	2-0	10	17	15	46	7 1/2	1 3/8	0-9	0-8	2-1	3-7 1/2	6-4	5-10	17-8	#5	220	6-8	5	92	2-11	18	47-2	28	4-11 1/2	4	7-3	8	2-4	12	4-6	12	4-10	28	1-8	12	5-6	8	7-2	4	7-5	12	2-0	47.96	0.3583	26.45	21.67	2	2-0
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*Length includes 1'-1 1/2" Lap Splice. (A) #6 Bars X to be 3/4" Smooth and Greased for 1'-0" of Length.

APPROVED BY:
 Dempsey D. White 1-5-78
 CHIEF ENGINEER DATE

DATE	DESCRIPTION	BY
10/02/24	Rev. Weep Hole Note	W.T.J.
	Rev. General Notes for Steel	W.E.M.
	Rev. #4 Bars P & Quantities	W.E.M.
	Added Axle Steel	W.E.M.
	Revised Details X to Smooth	W.E.M.
	Added #6 Dowels to Keyed Jt.	W.E.M.
	SP AND LENGTH OF BARS C	M.C.L.

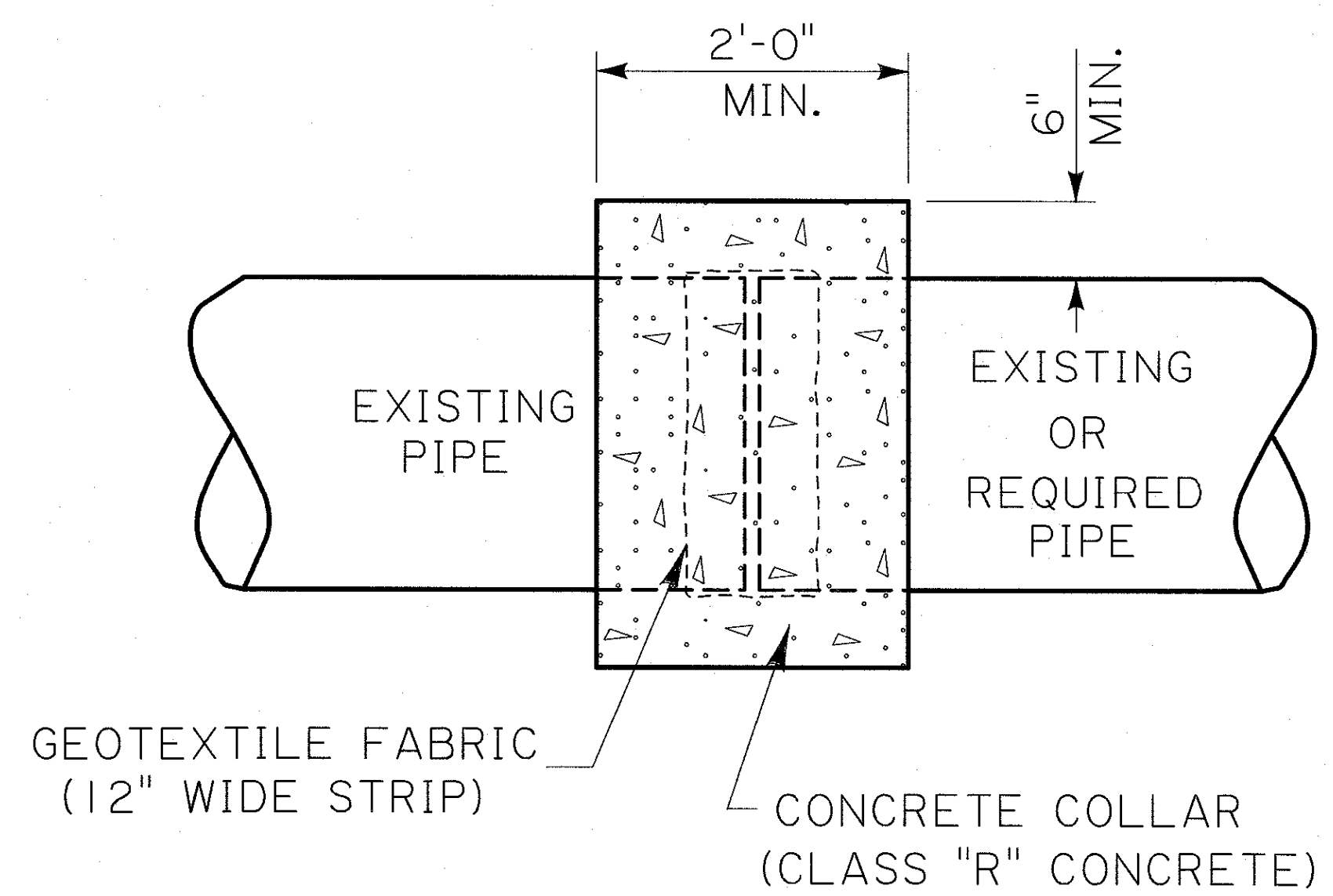
CC-30-20
 STANDARD PLAN
 REINFORCED CONC. BOX CULVERT
 STRAIGHT WINGWALLS
 2:1 SPILL SLOPE NORMAL TO CHANNEL
 2" THRU 5' CLEAR SPANS, 2" THRU 5' CLEAR HTS.
 DATED: May 19, 1959

STATE OF LOUISIANA DEPARTMENT OF HIGHWAYS			
DESIGNED	DETAILED	TRACED	CHECKED
Malamos	Malamos	C. Malamos	Malamos
Malamos	Malamos	Malamos	Malamos

SHEET NUMBER	307
PARISH	ST. TAMMANY
CONTROL SECTION	
STATE PROJECT	
DESIGN	
CHECK	
DETAIL	
CHECK	
REVIEW	
SERIES #	

CONCRETE COLLAR DETAIL

TO REPAIR EXISTING PIPE JOINT SEPARATION
AND/OR
TO CONNECT EXISTING PIPE TO NEW PIPE



NOTES:

- 1) NEW PIPE EXTENSION SHALL MATCH EXISTING PIPE IN MATERIAL TYPE AND SIZE BASED ON THE LATEST INDUSTRY STANDARDS.

Henry M. Picard, III
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

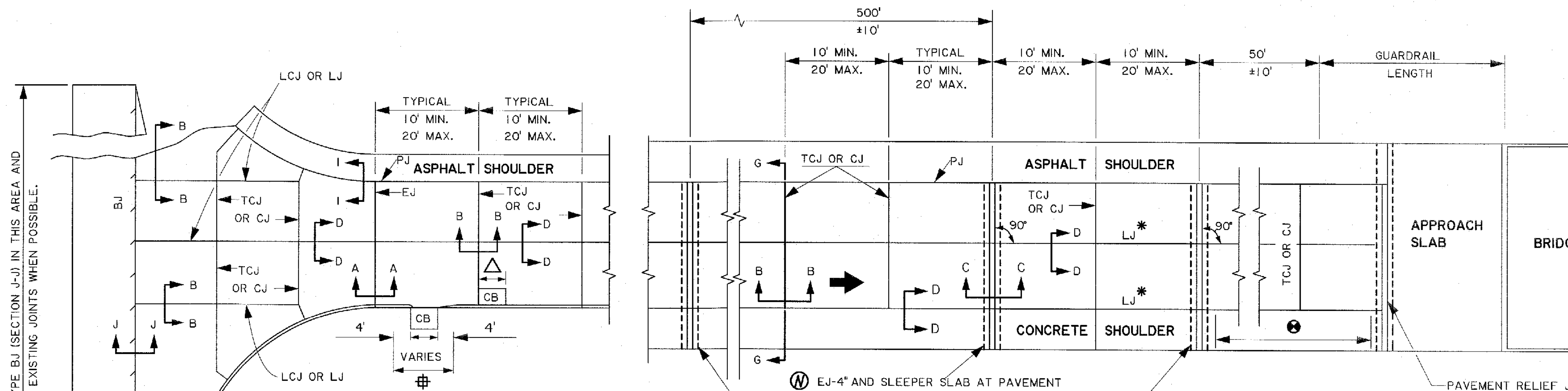
Mitra Hasemeh
 5/15/2022

APPROVED BY CHIEF ENGINEER:
Mitra Hasemeh
 DATE: 5/16/2022

CONCRETE COLLAR DETAIL
 STANDARD PLAN COLLAR-01

HYDRAULICS SECTION

**PLAN VIEW
ROADWAY SHOWING JOINTS**



- JOINT ABBREVIATIONS:**
- LJ - LONGITUDINAL JOINT
 - EJ - TRANSVERSE EXPANSION JOINT
 - TCJ - TRANSVERSE CONTRACTION JOINT
 - CJ - CONSTRUCTION JOINT
 - LCJ - LONGITUDINAL CONSTRUCTION JOINT
 - LBJ - LONGITUDINAL BUTT JOINT
 - BJ - TRANSVERSE BUTT JOINT
 - PJ - PAVEMENT EDGE SEAL JOINT

USE TYPE BJ (SECTION J-J) IN THIS AREA AND MATCH EXISTING JOINTS WHEN POSSIBLE.

USE TYPE LBJ (SECTION H-H) IN THIS AREA AND MATCH EXISTING JOINTS (JOINTS AT EQUAL SPACES NOT EXCEEDING 20' MAX.)

- * USE TYPE LCJ JOINT WITH SPLIT SLAB CONSTRUCTION.
 - # WHEN POSSIBLE, AT CATCH BASINS NO JOINTS SHALL BE PLACED IN THE LIMITS SHOWN.
 - △ TRANSVERSE JOINTS NEAR CATCH BASIN (CB-07, 08 & 09) THAT EXTEND INTO THE PAVEMENT SHALL BE ADJUSTED TO COINCIDE WITH ONE EDGE OF THE CATCH BASIN OR THE CENTER OF THE CATCH BASIN. SEE DETAIL E (SHEET 3 OF 3).
 - Ⓜ SEE SECTION C-C (SHEET 2 OF 3) AND DETAIL "G" (SHEET 3 OF 3) FOR EJ-4" JOINT, SLEEPER SLAB AND DRAINAGE DETAILS. (REQUIRED (3) PLACES.)
 - ⊙ CJ OR TCJ JOINTS AT 20' MAX. CTRS.
- NOTE:** MAXIMUM JOINT SPACING AT 18' WHEN PAVEMENT IS PLACED ON PERMEABLE BASE. (SEE SECTION 307)

TABLE I - SCHEDULE OF DIMENSIONS
(ALL DIMENSIONS ARE IN INCHES)

SLAB THICKNESS	SMOOTH DOWEL BARS			DEFORMED TIE BARS			KEYWAY	
	SIZE (DIA.)	LENGTH	SPACING	SIZE (DIA.)	LENGTH	SPACING	A ±1/4"	B ±1/4"
8	1/4	18	12	1/2	24	24	2 1/2	1 1/4
9	1/4	18	12	1/2	24	24	2 1/2	1 1/4
10	1/2	18	12	1/2	24	24	2 1/2	1 1/4
11	1/2	18	12	5/8	30	24	2 1/2	1 1/4
12	1/2	18	12	5/8	30	24	3	1 1/2
13	1/2	18	12	5/8	30	24	3	1 1/2
14	1/2	18	12	5/8	30	24	3	1 1/2

NOTES:

- 1 PAVEMENT EDGES SHALL BE SLIGHTLY ROUNDED (1/4" APPROX.).
- 2 ASPHALT CONCRETE SHOULDER: THE SHOULDER JOINTS SHALL BE SAW CUT AND CONSTRUCTED IN ACCORDANCE WITH SECTION I-I (SHEET 2 OF 3).
- 3 FOR SECTIONS A-A THROUGH J-J (SEE SHEET 2 OF 3).
- 4 ALL JOINTS TO BE USED WHERE SHOWN ON THIS SHEET OR AS SHOWN ELSEWHERE IN THE PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER.
- 5 ON TYPE EJ ALTERNATE JOINTS, SPOT WELD ALTERNATE ENDS OF DOWEL BARS TO DOWEL BASKETS AND PLACE EXPANSION TUBES ON FREE ENDS OF DOWEL BARS.
- 6 FOR DESIGN SPEEDS GREATER THAN 45MPH: SAW CUT AND CONSTRUCT THE TYPE LJ, TCJ, AND CJ JOINTS AS IN DETAILS "A, B OR C" TO A DEPTH OF 1/3 INCHES. THOROUGHLY CLEAN THE JOINT FACES BY SANDBLASTING; FOLLOWED BY AN OIL-FREE AIR JET IMMEDIATELY PRIOR TO SEALING WITH A POURED OR EXTRUDED SEALANT CONFORMING TO SECTION 1005.
- 7 FOR DESIGN SPEEDS OF 45MPH OR LESS:
 - A. SAW CUT AND SEAL TYPE LJ JOINTS AS DESCRIBED IN NOTE 6.
 - B. CONSTRUCT TYPE TCJ OR CJ JOINTS AS DESCRIBED IN NOTE 6 OR CONSTRUCT WITH A REMOVABLE FORMING DEVICE AS SPECIFIED IN DETAIL "C" (SHEET 3 OF 3). THOROUGHLY CLEAN THE JOINT FACES BY SANDBLASTING; FOLLOWED BY AN OIL-FREE AIR JET IMMEDIATELY PRIOR TO SEALING WITH A POURED OR EXTRUDED SEALANT CONFORMING TO SECTIONS 601 AND 1005. WITH A COMBINATION JOINT FORMER/SEALER AS SHOWN IN DETAIL "D" (SHEET 3 OF 3), THE SEALER SHALL CONFORM TO SECTION 1005 AND BE INSTALLED IN ACCORDANCE WITH SECTION 601 AND NO ADDITIONAL SEALANT IS REQUIRED.
- 8 EXCEPT AS NOTED BELOW, DOWEL BARS & TIE BARS SHALL BE HELD IN PLACE BY SUPPORTS SIMILAR TO THE ONES SHOWN, OR APPROVED EQUALS. APPROVED MECHANICAL PLACEMENT OF DOWEL BARS AND TIE BARS WILL BE ALLOWED WITH ALL PAVING METHODS.
- 9 INSTALL GEOTEXTILE FABRIC (TYPE B, C, OR D) UNDER ALL TCJ, CJ, AND EJ ALTERNATE JOINTS WHEN CONCRETE PAVEMENT IS PLACED ON PERMEABLE BASE. WHEN DOWEL BARS ARE MECHANICALLY IMPLANTED, THE GEOTEXTILE FABRIC SHALL BE ANCHORED TO THE BASE COURSE WITH PINS.
- 10 WHEN CONSTRUCTING CONCRETE CURB AND GUTTER ADJACENT TO NEW P.C.C. PAVEMENT, USE TYPE LCJ JOINT. WHEN ADJACENT TO EXISTING P.C.C. PAVEMENT, USE TYPE LBJ JOINT. THE FIRST LOAD TRANSFER DEVICE SHALL BE INSTALLED 18" FROM THE PAVEMENT EDGE.
- 11 TRANSVERSE EXPANSION JOINTS ARE NOT TO BE USED FOR CONSTRUCTION JOINTS.
- 12 CONCRETE SHOULDERS:
 - A. CONSTRUCT TCJ JOINTS IN ACCORDANCE WITH SECTION B-B (SHEET 2 OF 3).
 - B. CONSTRUCT LCJ JOINTS IN ACCORDANCE WITH TYPE LCJ DETAIL AND LJ JOINTS IN ACCORDANCE WITH TYPE LJ DETAIL. SEE SECTION D-D (SHEET 2 OF 3).
 - C. USE THE MAXIMUM SHOULDER THICKNESS WHEN DETERMINING DOWEL BAR AND TIE BAR SIZES IN TABLE I.
 - D. WHEN SKEWED JOINTS ARE USED ON MAINLINE PAVING THE SHOULDER TCJ JOINTS MAY BE SKEWED OR CONSTRUCTED AT 90°.
 - E. SHOULDER JOINTS AND JOINT MATERIALS SHALL MATCH THE MAINLINE.
 - F. HEIGHT OF DOWEL BASKET SHALL BE BASED ON THE THINNEST SHOULDER THICKNESS. VARYING HEIGHT DOWEL BASKETS WILL BE ALLOWED TO KEEP THE DOWEL BAR LOCATED WITHIN TOLERANCE.
- 13 TIE BARS SHALL NOT BE PLACED WITHIN 18" OF CONTRACTION OR EXPANSION JOINTS.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	308
PARISH	ST. TAMMANY
CONTROL SECTION	
STATE PROJECT	
DESIGN	T. LAM
CHECK	D. SMITH
DETAIL	T. LAM
CHECK	D. SMITH
REVIEW	
SERIES #	I OF 3

APPROVED BY CHIEF ENGINEER: *Christy P. Holt* DATE: 10/13/2021

PORTLAND CEMENT CONCRETE PAVEMENT DETAILS

STANDARD PLAN CP-01

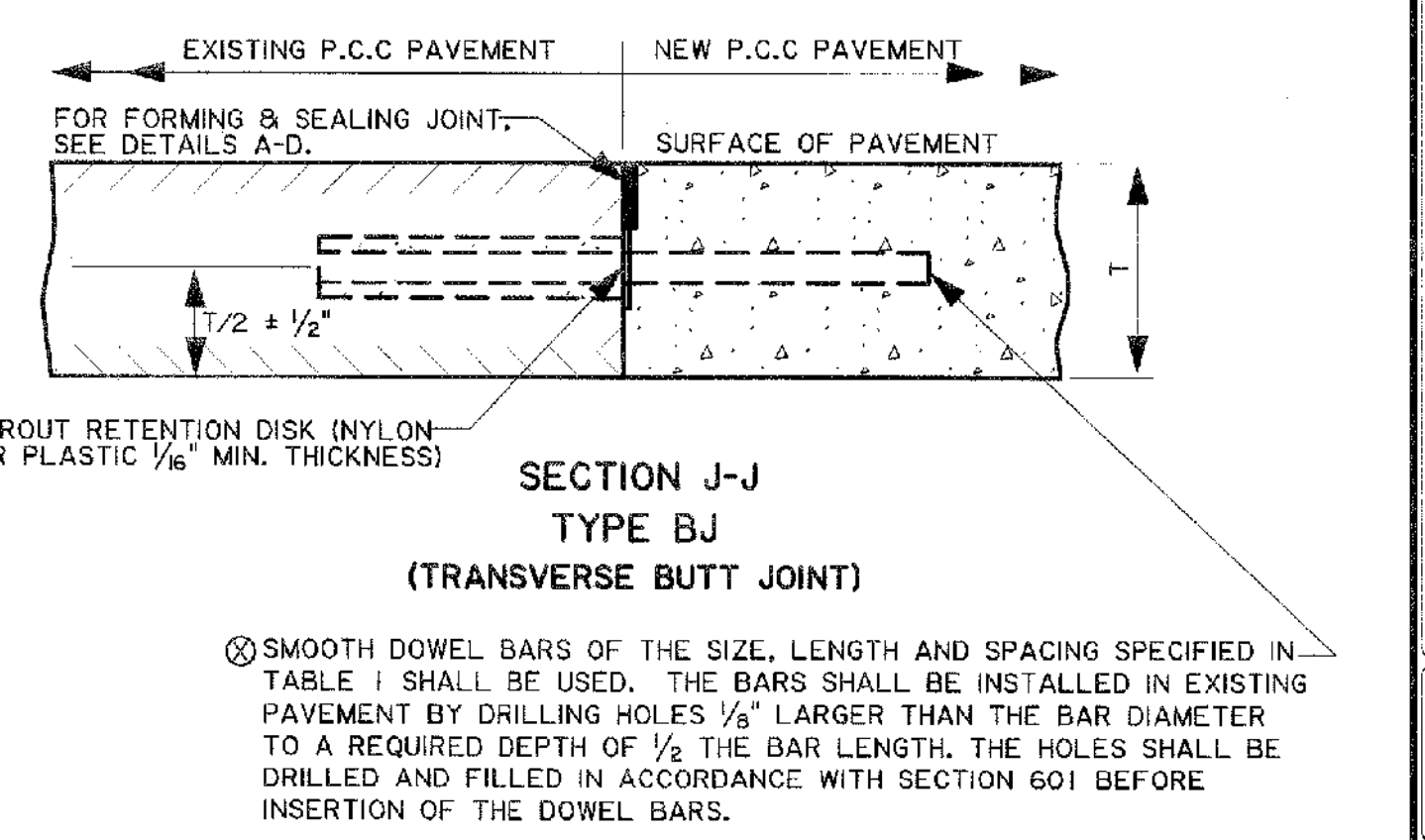
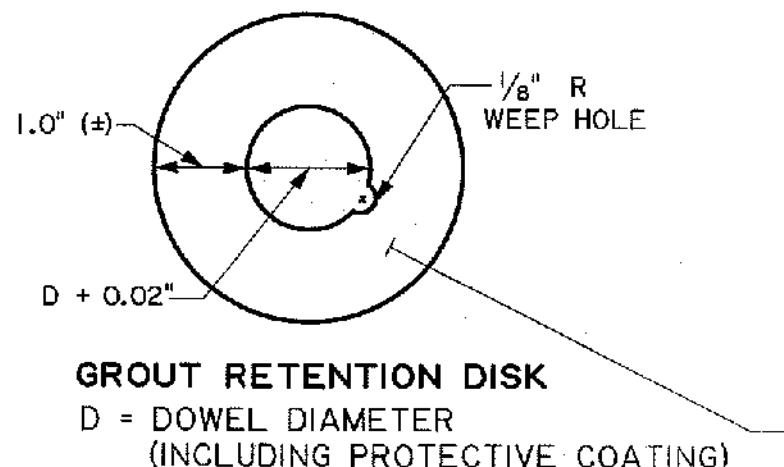
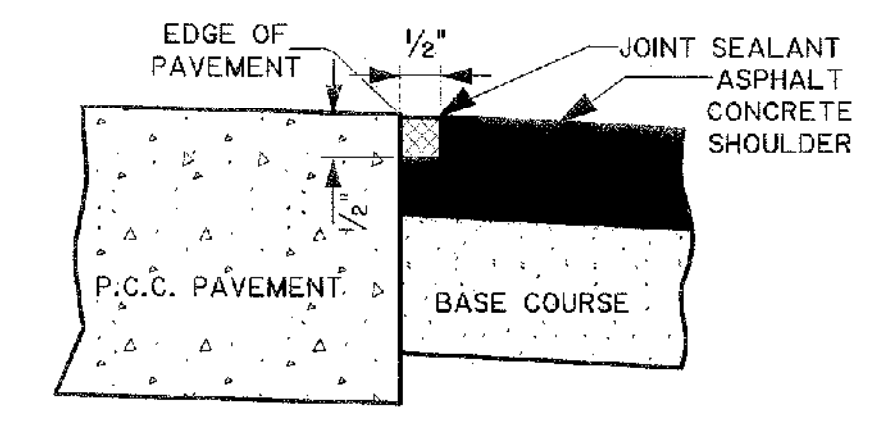
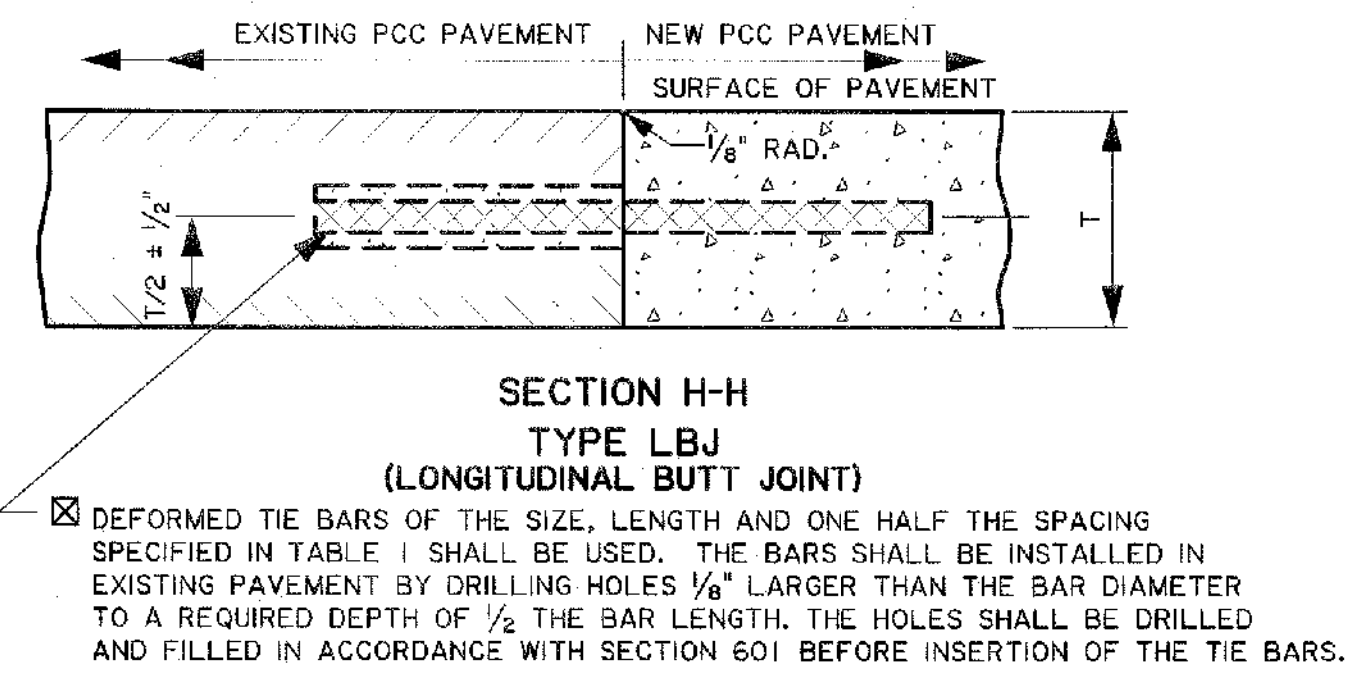
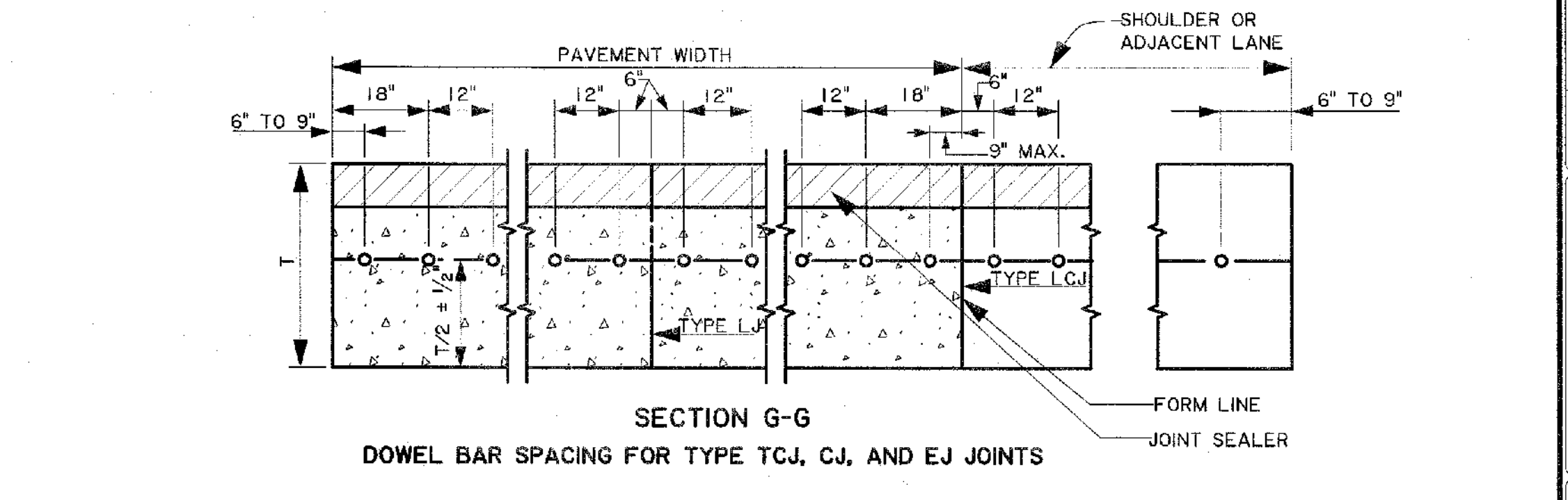
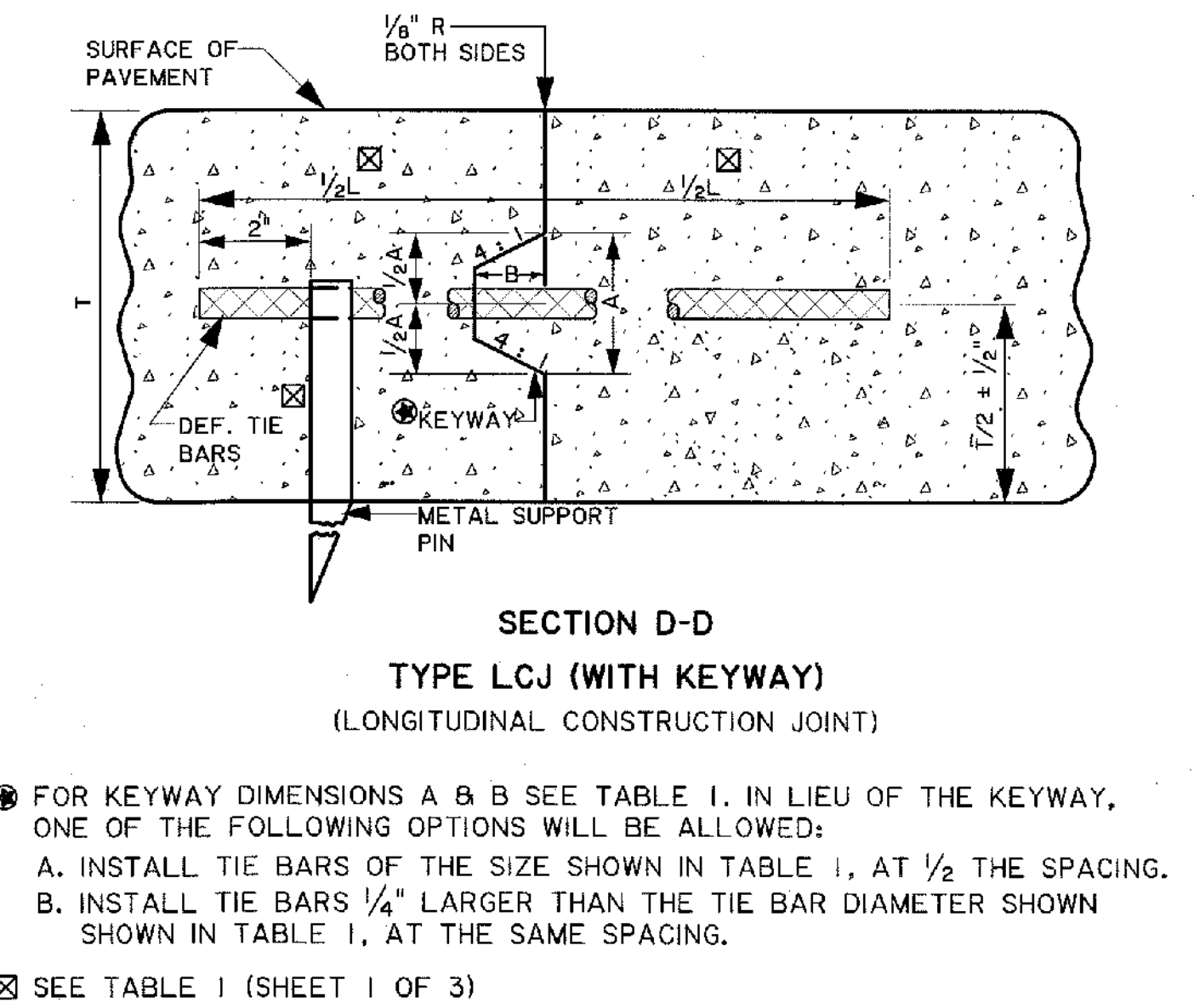
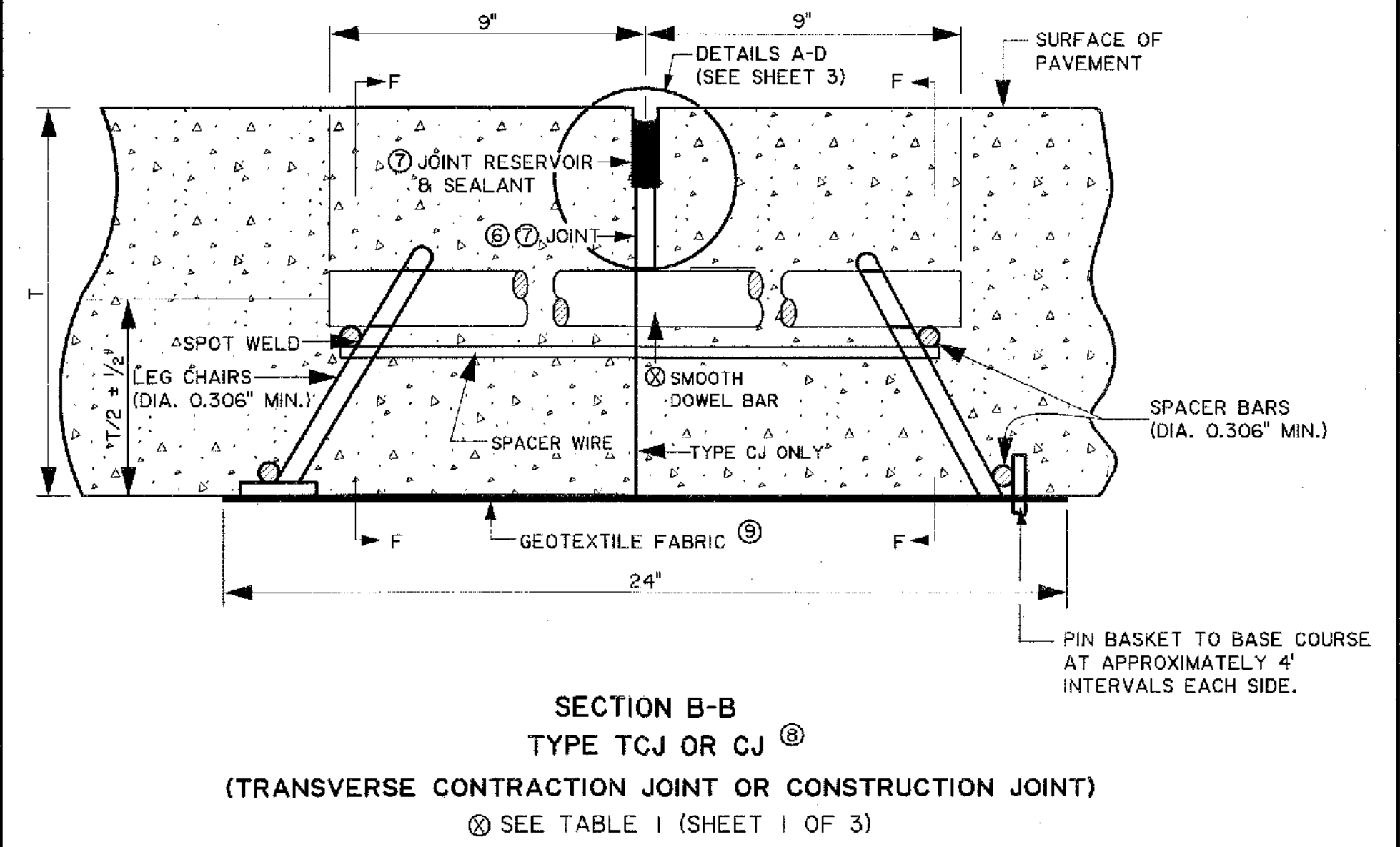
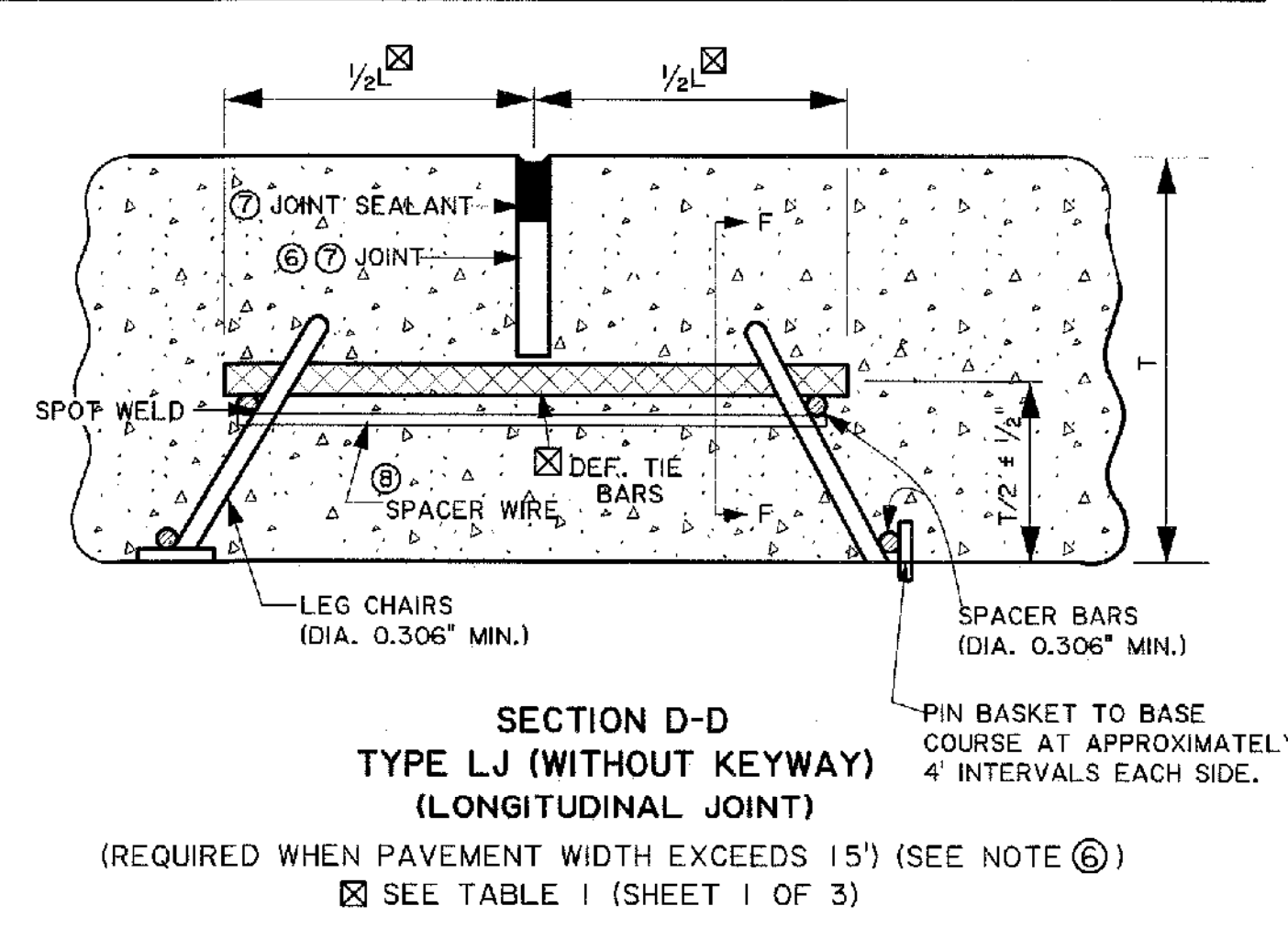
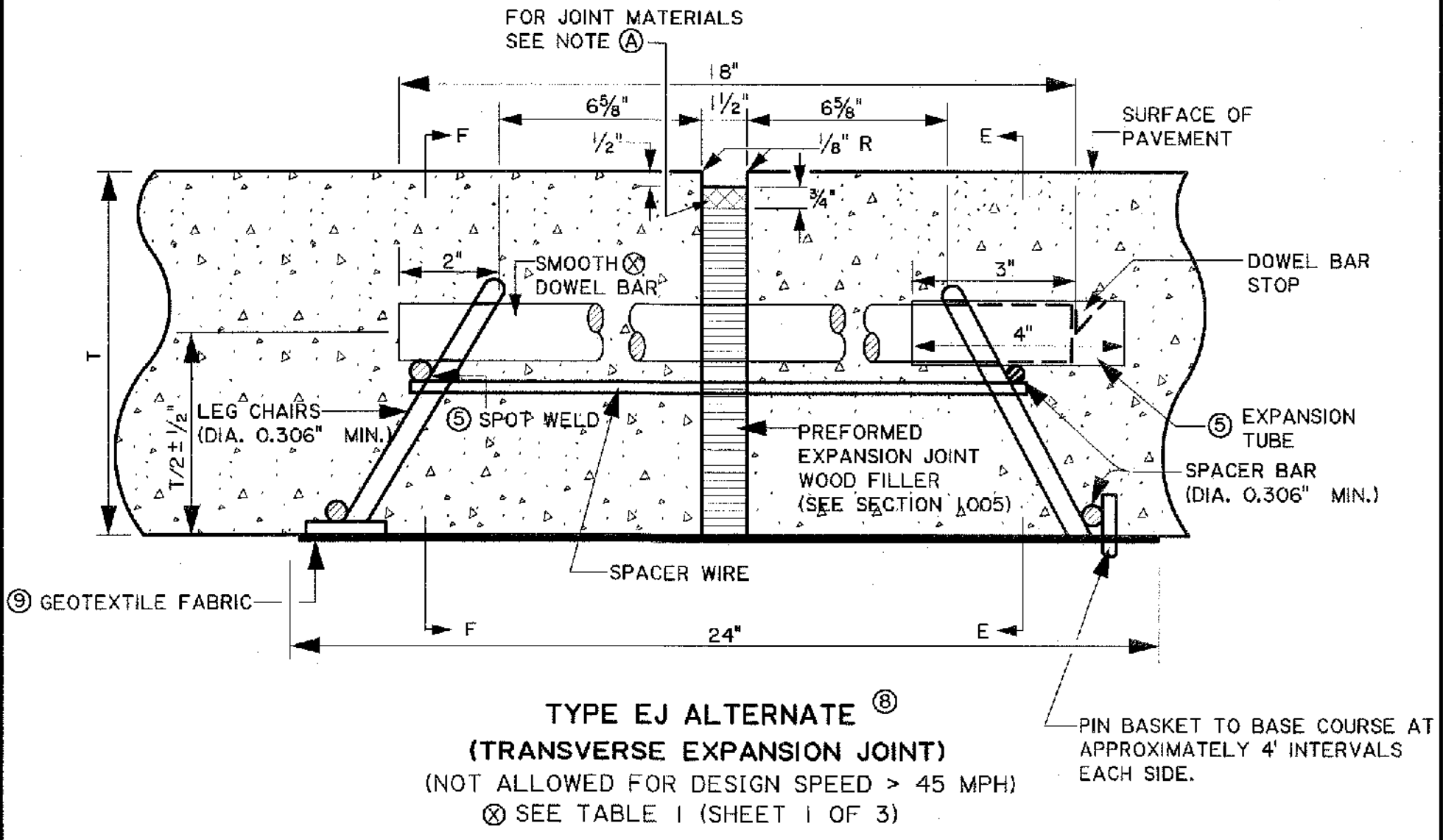
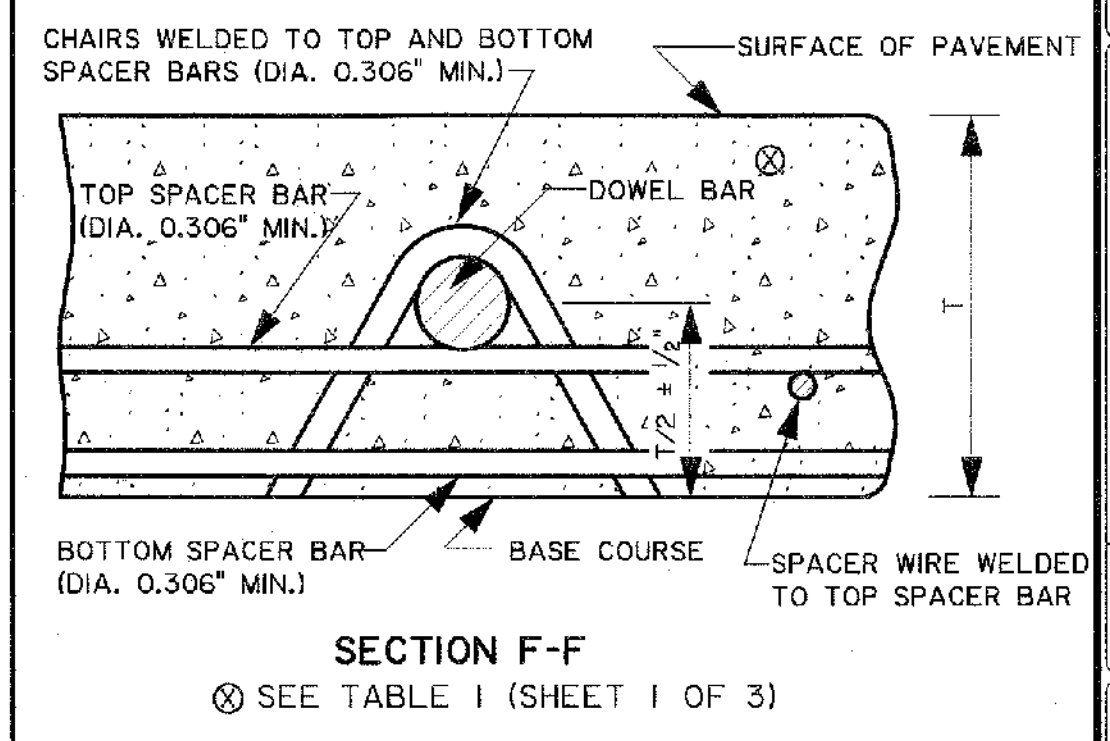
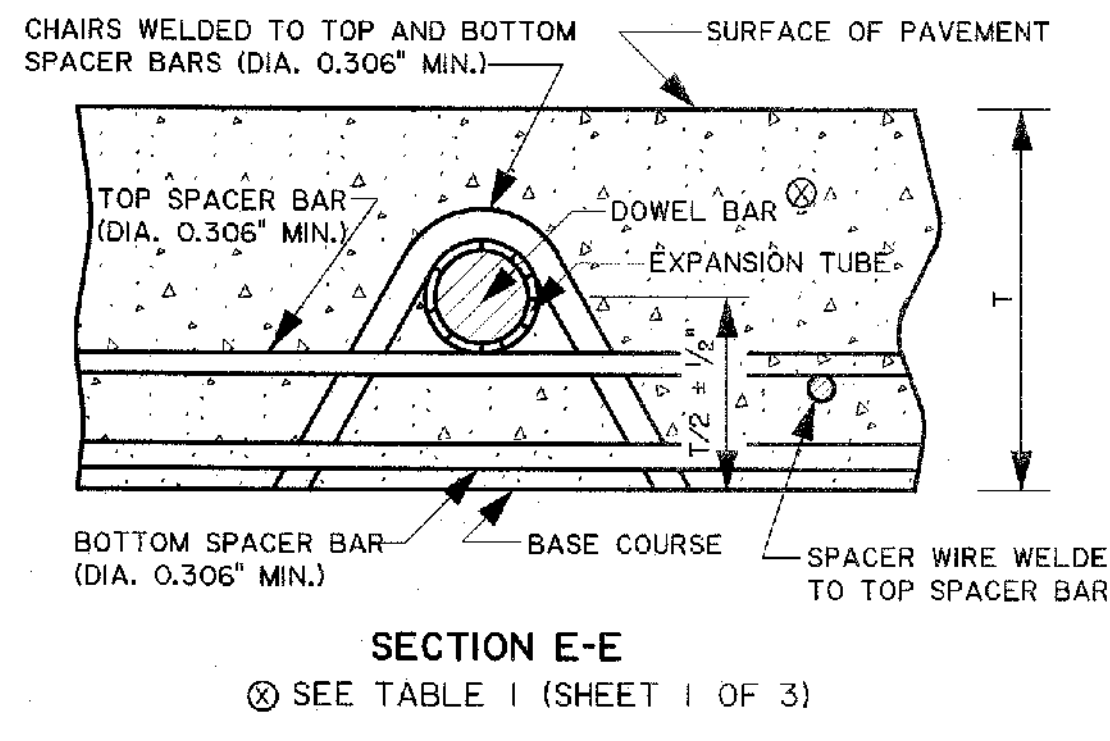
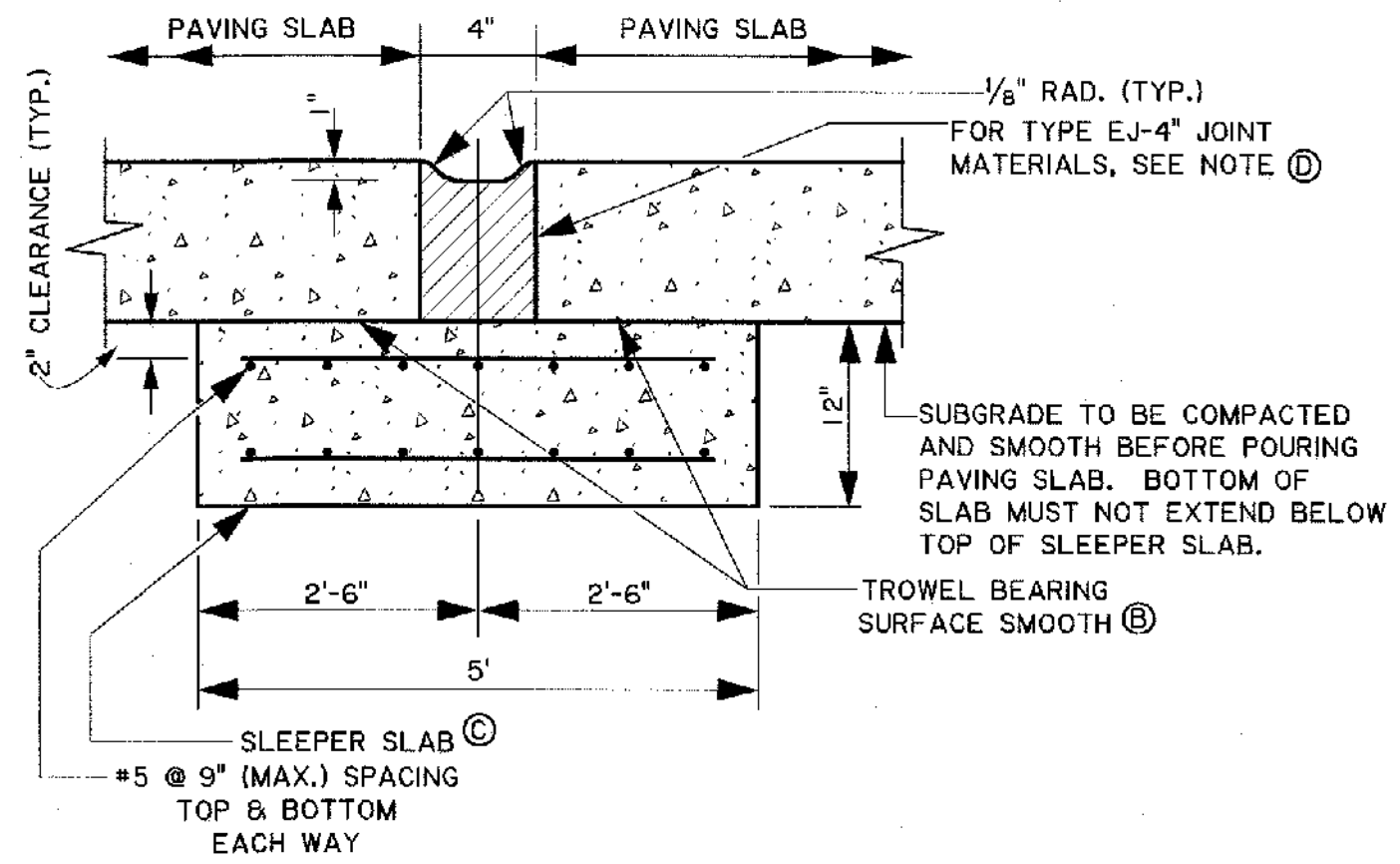
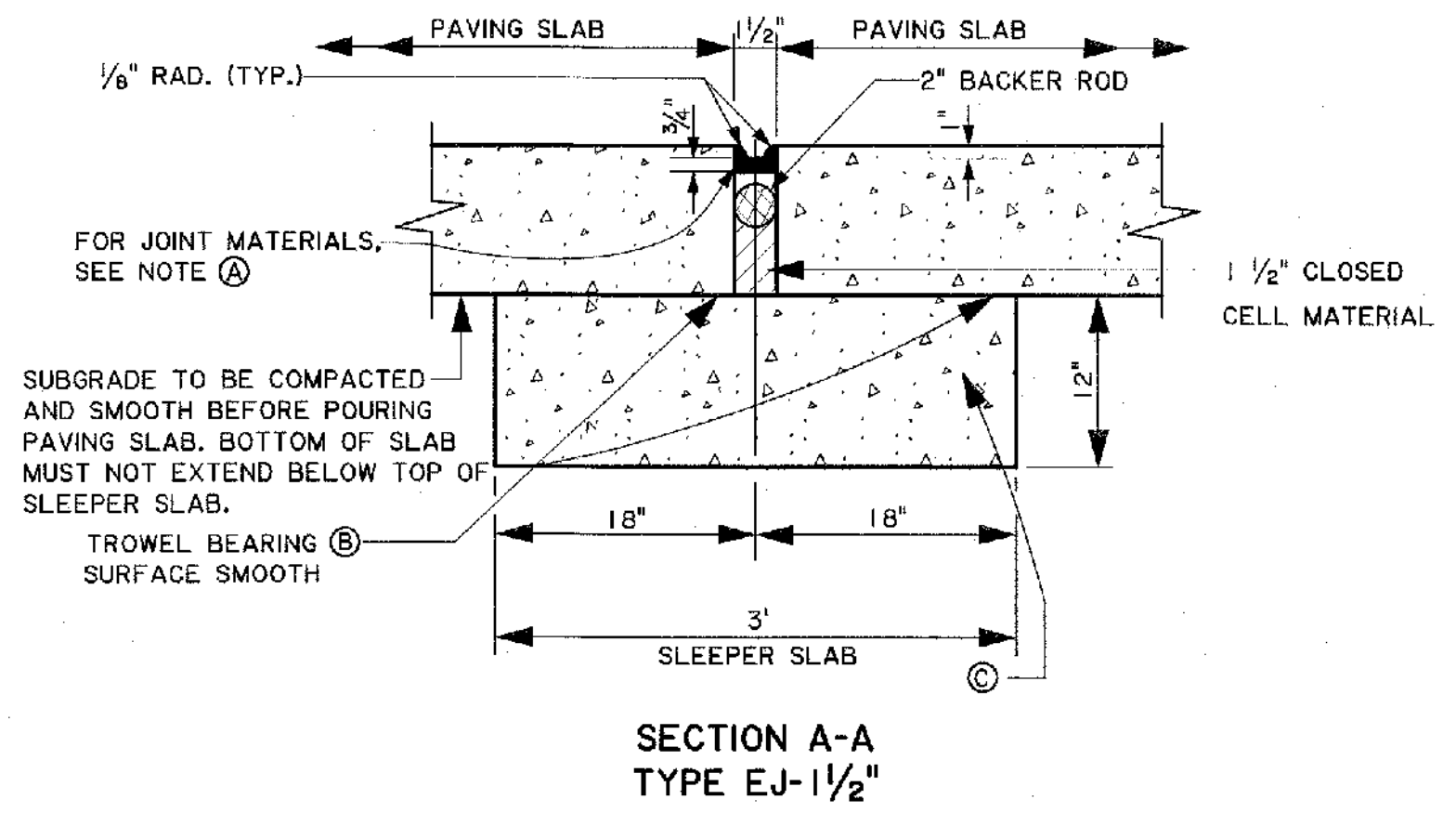
NOT TO SCALE

ROAD DESIGN



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

- NOTES:**
- (A) ONE OR TWO COMPONENT SILICONE CONFORMING TO SECTION 1005.
 - (B) TAR PAPER EQUIVALENT TO 30 lbs./100 ft² SHALL BE PLACED BETWEEN THE SLEEPER SLAB AND THE PAVING SLAB.
 - (C) SLEEPER SLAB SHALL BE CONSTRUCTED OF CLASS "A1" OR PAVEMENT TYPE CONCRETE AND INCLUDED IN THE COST OF THE PAVEMENT. PROVIDE DEFORMED GRADE 60 REINFORCING STEEL.
 - (D) JOINT SHALL BE FILLED WITH A PREFORMED POLYURETHANE FOAM TYPE FILLER CONFORMING TO SECTION 1005.
 - (E) SEE DETAIL "G" - EJ-4" BASE DRAIN OUTLET FOR UNDERDRAIN DETAILS (SHEET 3 OF 3)



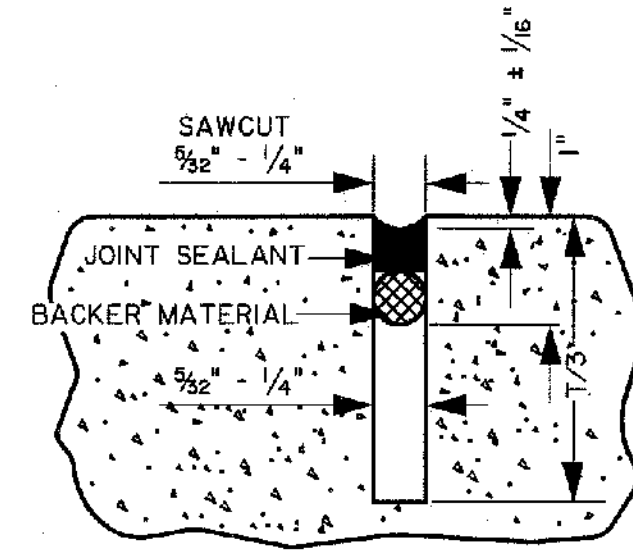
SHEET NUMBER	309
DESIGNER	T. LAM
CHECKER	D. SMITH
DETAILER	T. LAM
REVIEWER	D. SMITH
DATE	10/13/2021
PROJECT	PORTLAND CEMENT CONCRETE PAVEMENT DETAILS
PLAN	CP-01
ROAD DESIGN	

APPROVED BY CHIEF ENGINEER: *Chas. P. Hoops*

STATE OF LOUISIANA PROFESSIONAL ENGINEER: DAVID S. SMITH, License No. 30863

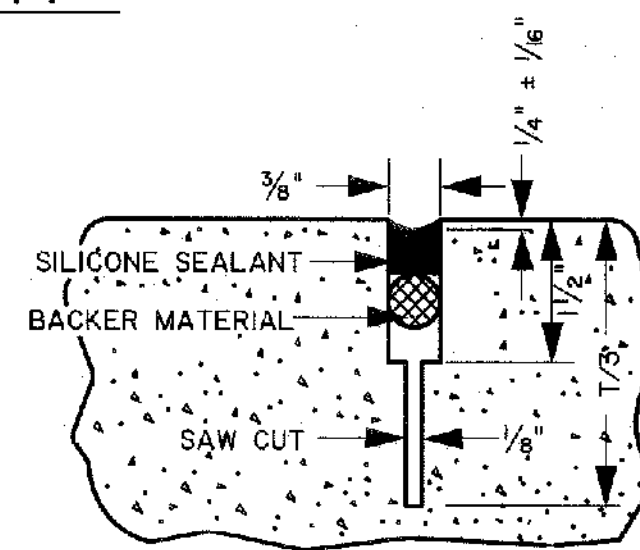
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DETAILS "A-F"



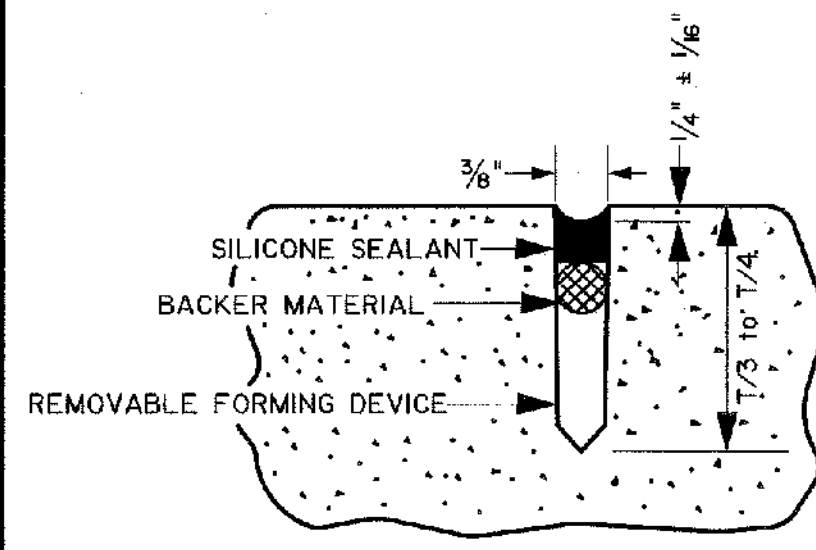
DETAIL "A"

USE THIS DETAIL IN CONJUNCTION WITH TYPE TCJ (SECTION B-B) AND TYPE LJ JOINT (SECTION D-D) AND NOTES 6 & 7 ON SHEET #1.



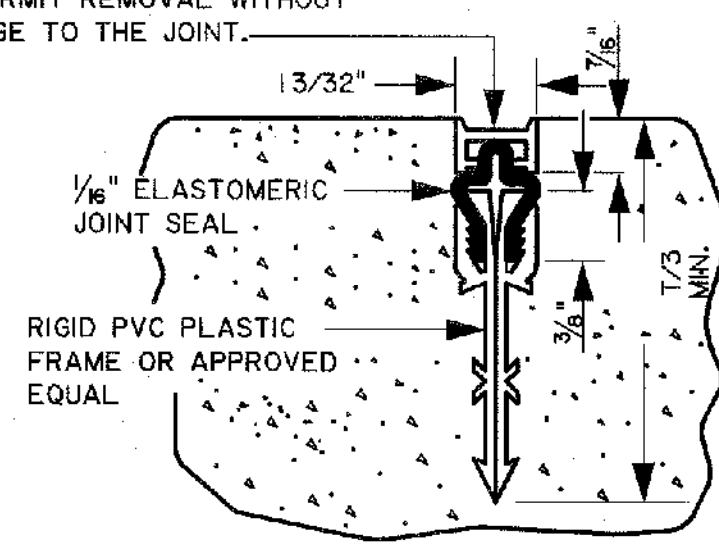
DETAIL "B"

REMOVE CAP AFTER CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT REMOVAL WITHOUT DAMAGE TO THE JOINT.



DETAIL "C"

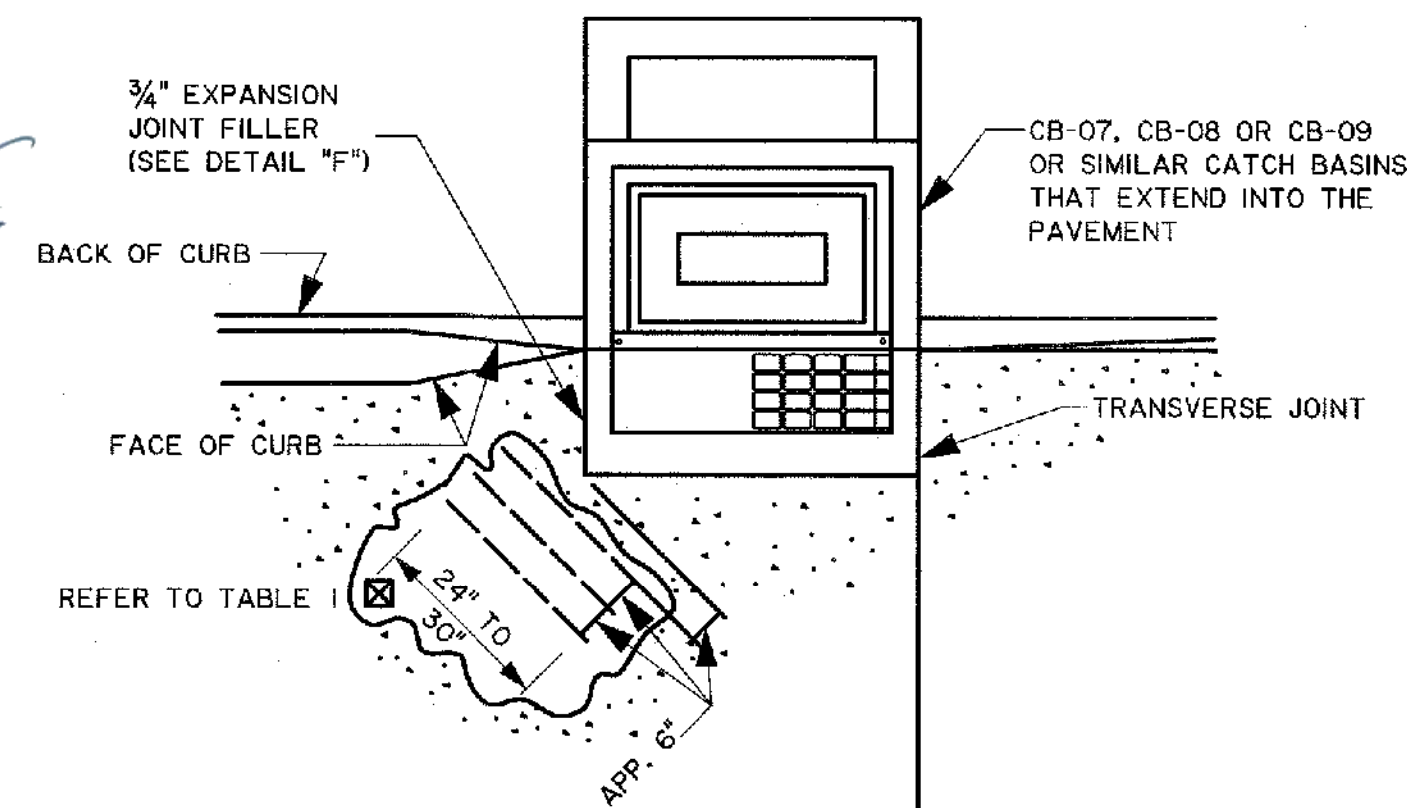
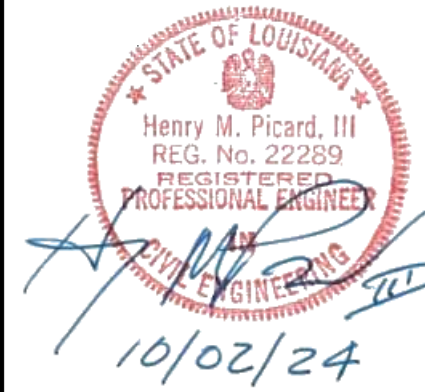
NOT ALLOWED FOR DESIGN SPEEDS GREATER THAN 45 MPH.



DETAIL "D"

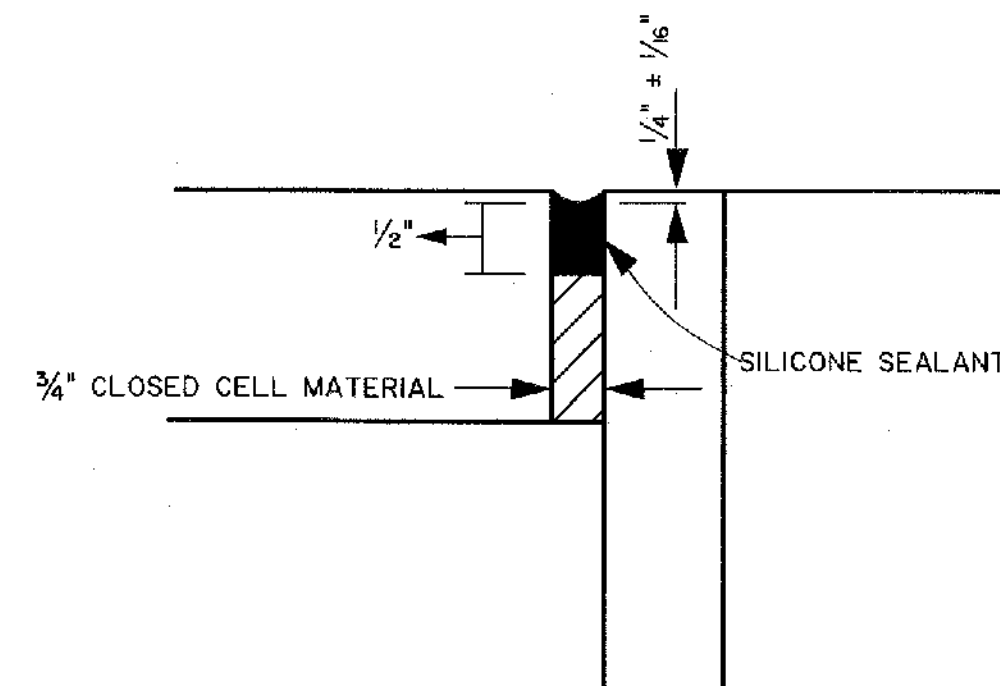
NOT ALLOWED WHEN THE PAVEMENT IS PLACED ON PERMEABLE BASES
NOT ALLOWED FOR DESIGN SPEEDS GREATER THAN 45 MPH.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



DETAIL "E"

TRANSVERSE JOINT AT CATCH BASIN



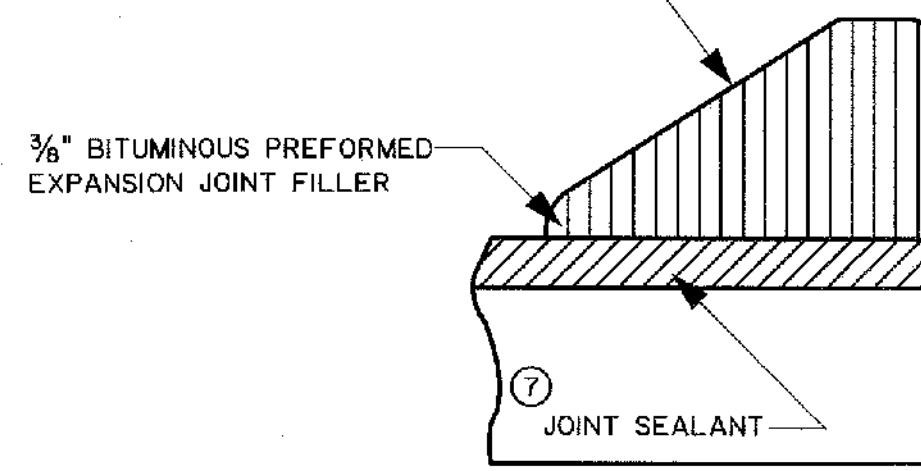
DETAIL "F"

AFTER CATCH BASIN TOP IS POURED, THE TOP OF THE 3/4" JOINT FILLER IS TO BE REMOVED TO THE DEPTH SHOWN PRIOR TO SEALING. THE CURB FACES ADJACENT TO THE BASIN SHALL ALSO BE SEALED. JOINT FACES SHALL BE CLEANED IN ACCORDANCE WITH SECTION 601.

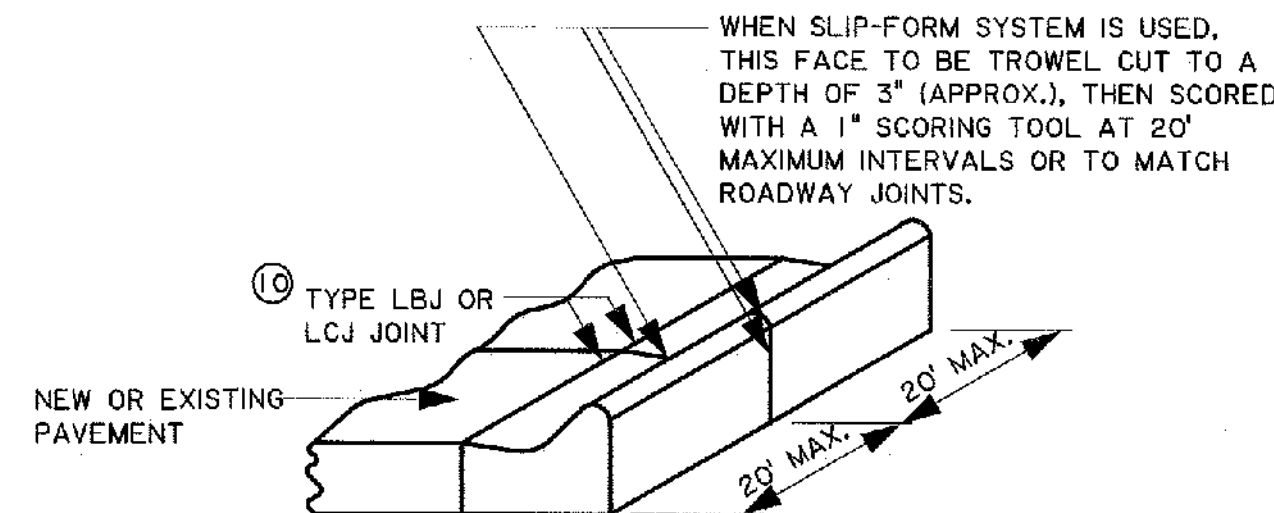
NOTE: SEE STANDARD PLAN DW-01 AND PLANS FOR CURB PLACEMENT DETAILS.

NOTE:

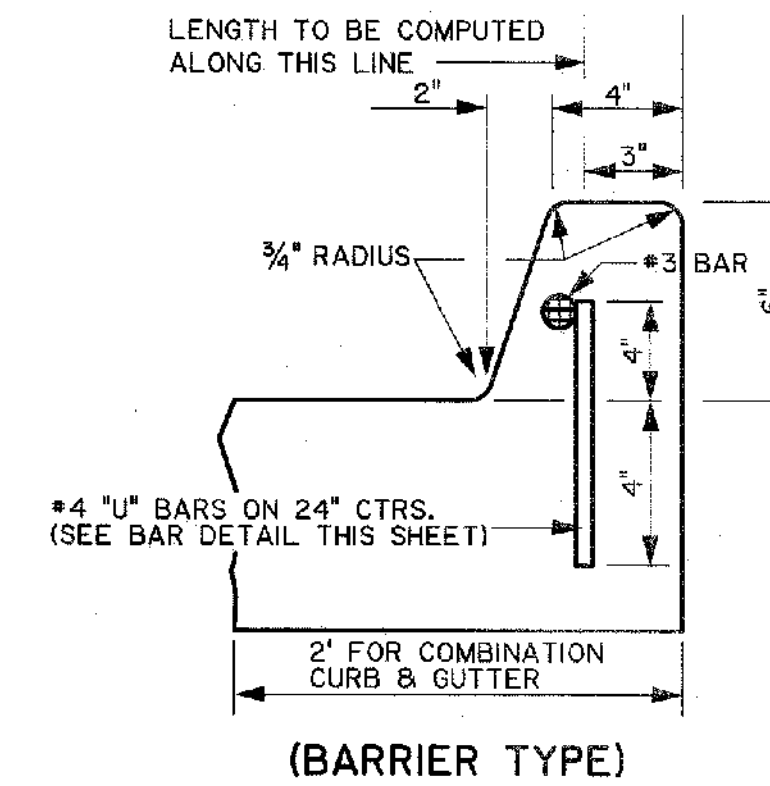
WHEN CURB IS POURED MONOLITHICALLY WITH PAVEMENT, THE BITUMINOUS PREFORMED EXPANSION JOINT FILLER SHALL EXTEND TO THE TOP OF JOINT INSERT. WHEN TRANSVERSE JOINTS ARE CONSTRUCTED BY SAWING, THE INITIAL SAW CUT SHALL EXTEND THROUGH THE CURBED SECTION (CURB AND UNDERLYING PAVEMENT). THE SUBSEQUENT WIDENING CUT FOR THE JOINT SEALANT RESERVOIR SHALL EXTEND INTO THE CURB FOR A DISTANCE NECESSARY TO ENSURE THE SPECIFIED RESERVOIR DEPTH IS BEING MAINTAINED AT THE GUTTER LINE. ALL CURB FACES REGARDLESS OF CURB TYPE SHALL BE SEALED WHEN TRANSVERSE JOINT IS SAWS THROUGH CURB.



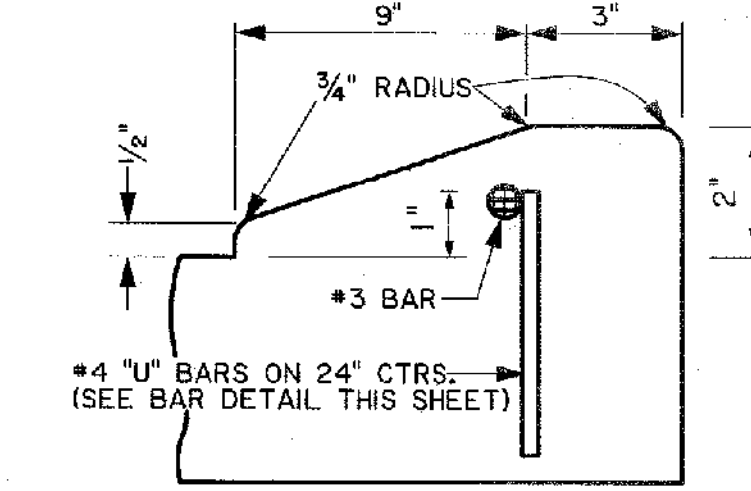
JOINT FILLER DETAIL FOR INTEGRAL CONCRETE CURB (MOUNTABLE OR BARRIER TYPE)



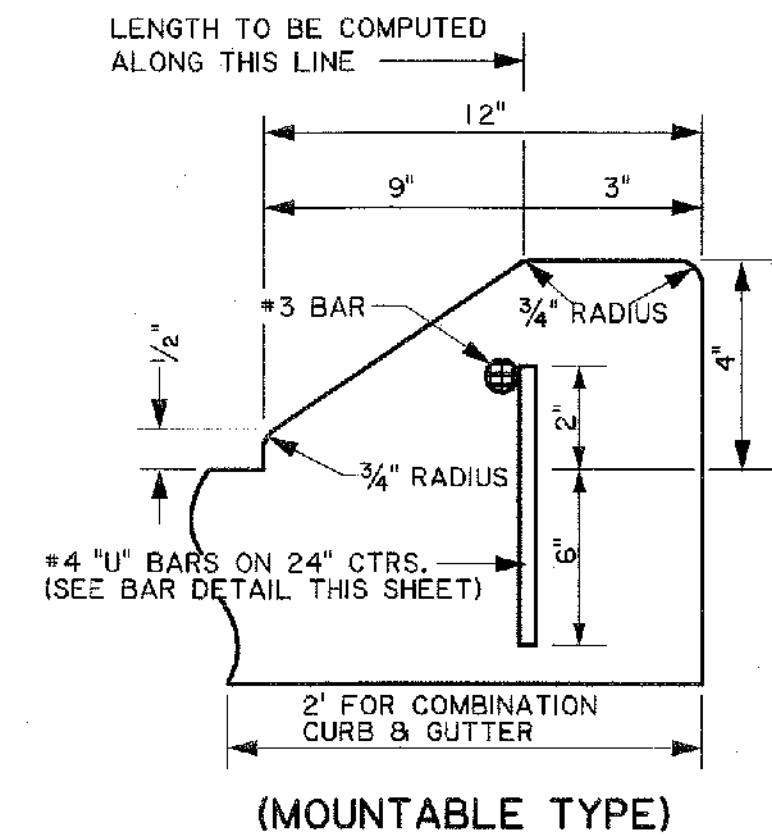
DETAIL SHOWING JOINTS IN CONCRETE CURB AND GUTTER (EXTEND ALL TCJ THROUGH CURB & GUTTER)



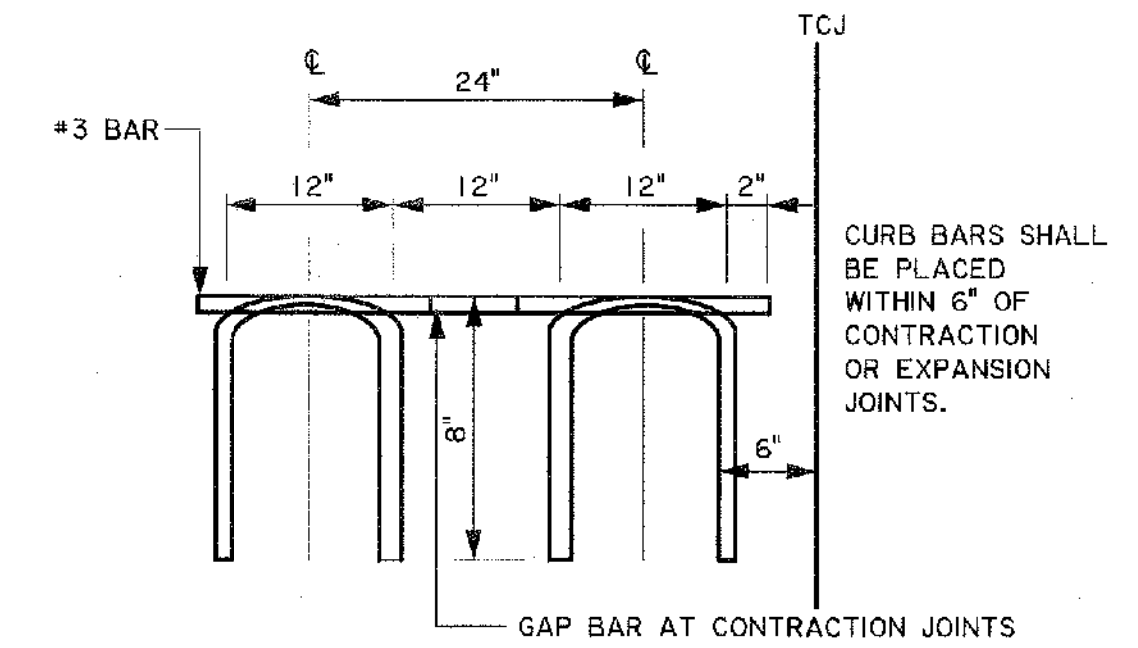
(BARRIER TYPE)



MODIFIED BARRIER OR MOUNTABLE CURB THRU DRIVEWAY



(MOUNTABLE TYPE)

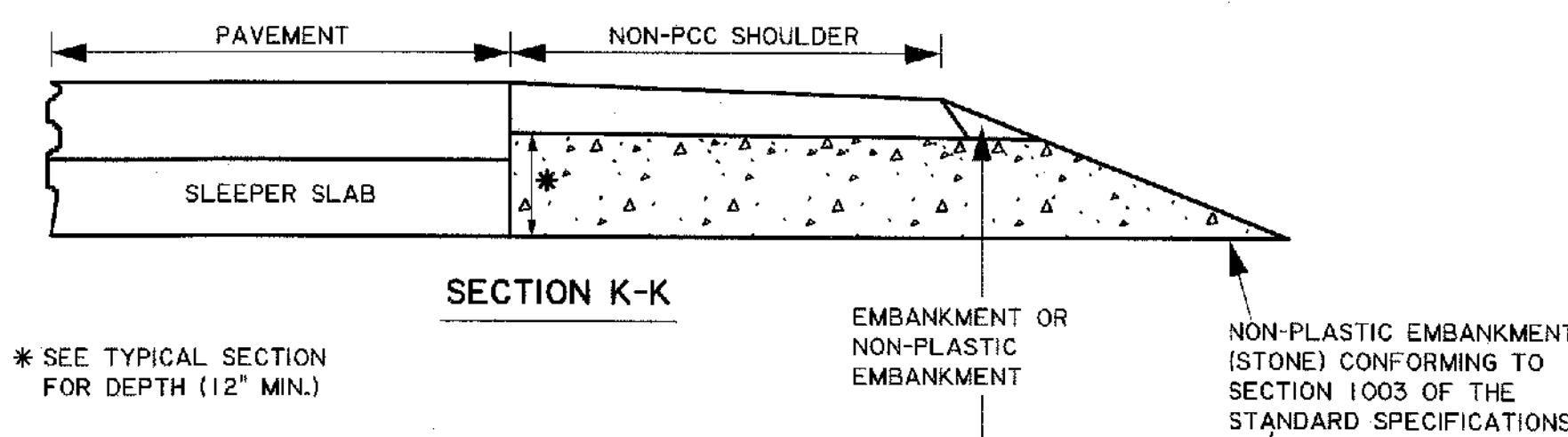


BAR DETAIL
SHOWING DIMENSIONS AND SPACING OF #4 "U" BARS AND LONGITUDINAL BARS FOR CONC. CURB

CURB DETAILS

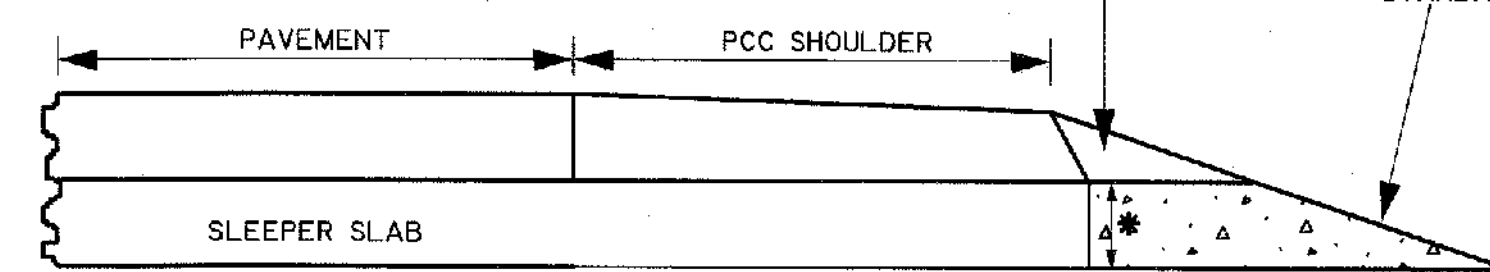
NOTES:

- POUR CURB INTEGRAL WITH PCC PAVEMENT OR GUTTER TO INSURE MONOLITHIC CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER. CURB BARS ARE NOT REQUIRED WHERE CURB IS CONSTRUCTED MONOLITHIC WITH THE PAVEMENT.
- ALL BARS SHOWN SHALL BE DEFORMED REINFORCING STEEL.
- WHEN REPLACING OR ADDING CONCRETE CURB TO EXISTING PAVEMENT, CONNECT THE NEW CONCRETE CURB TO THE PAVEMENT WITH THE DEFORMED REINFORCING STEEL SHOWN BY DRILLING HOLES INTO THE EXISTING PAVEMENT 1/8" LARGER THAN THE BAR DIAMETER. ANCHOR THE BARS WITH AN APPROVED EPOXY RESIN SYSTEM FROM THE DOTD AML. APPLY EPOXY ADHESIVE, COMPLYING WITH AASHTO M235, TYPE V, TO THE SURFACE AREA WHERE THE CONCRETE CURB WILL BE PLACED. INCLUDE ALL COST RELATED TO THE CONSTRUCTION OF THE CURB, INCLUDING THE DRILLED HOLES, DEFORMED REINFORCING BARS, AND EPOXY, IN THE UNIT PRICE FOR THE CURB ITEM.

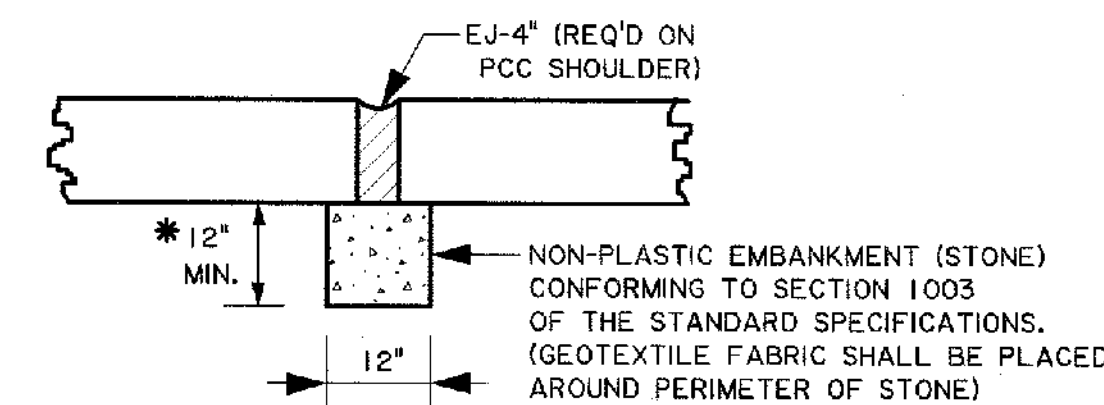


SECTION K-K

* SEE TYPICAL SECTION FOR DEPTH (12" MIN.)

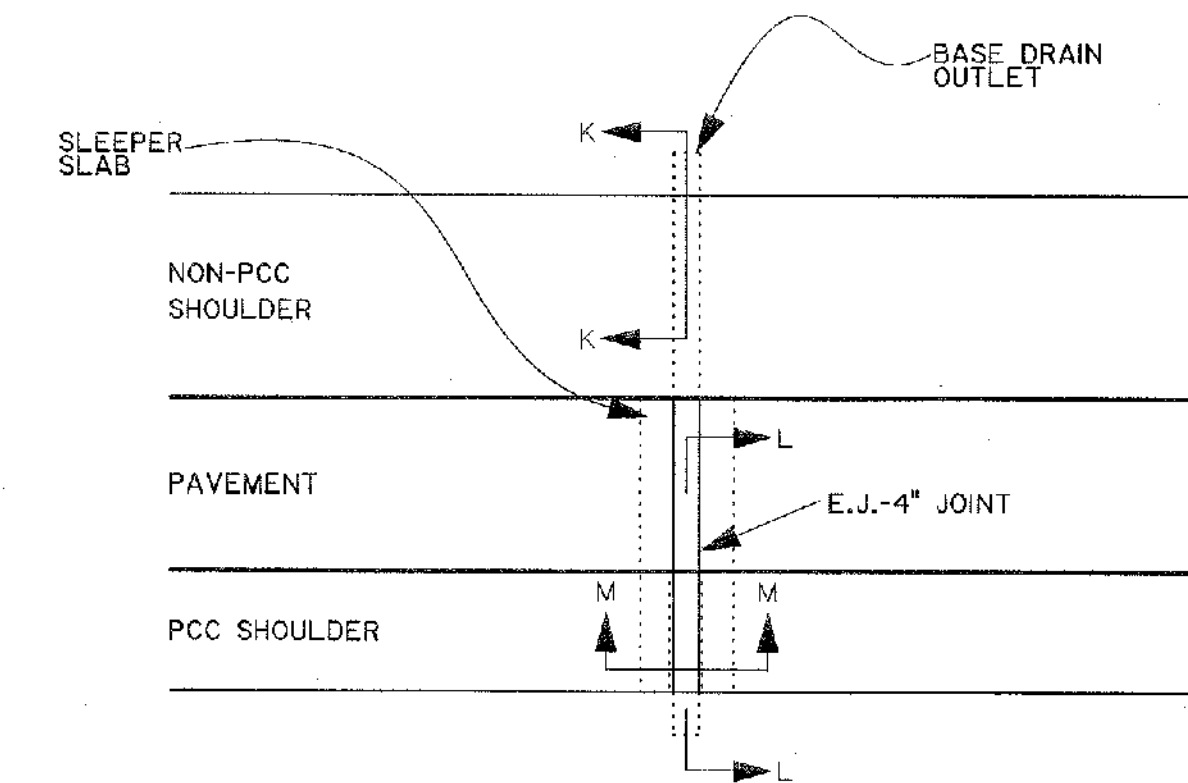


SECTION L-L (WITH CONCRETE SHOULDER)



SECTION M-M
(SLEEPER SLAB NOT SHOWN)

A BASE DRAIN OUTLET WILL BE REQUIRED AT E.J.-4" JOINTS UNLESS A SHOULDER UNDER DRAIN SYSTEM IS SPECIFIED ON THE PLANS, IN WHICH CASE, THE SHOULDER UNDER DRAIN FOR THE E.J. JOINT SHALL BE CONNECTED TO THE NEAREST STORM SEWER OR DISCHARGED THROUGH A HEADWALL. THE COST FOR THE BASE DRAIN OUTLET FOR THE E.J. JOINT IS TO BE INCLUDED IN THE COST OF THE PAVEMENT.



PLAN - BASE DRAIN OUTLET AT 4" E.J. EJ-4 JOINTS

DETAIL "G" - EJ-4" BASE DRAIN OUTLET

NOT TO SCALE

SHEET NUMBER	310
ST. TAMMANY	
PARISH	
CONTROL SECTION	
STATE PROJECT	
DESIGN	T. LAM
CHECK	D. SMITH
DETAIL	T. LAM
OFFICE	D. SMITH
REVIEW	
SERIES #	3 OF 3

APPROVED BY CHIEF ENGINEER: *David S. Smith* DATE: 10/13/2021

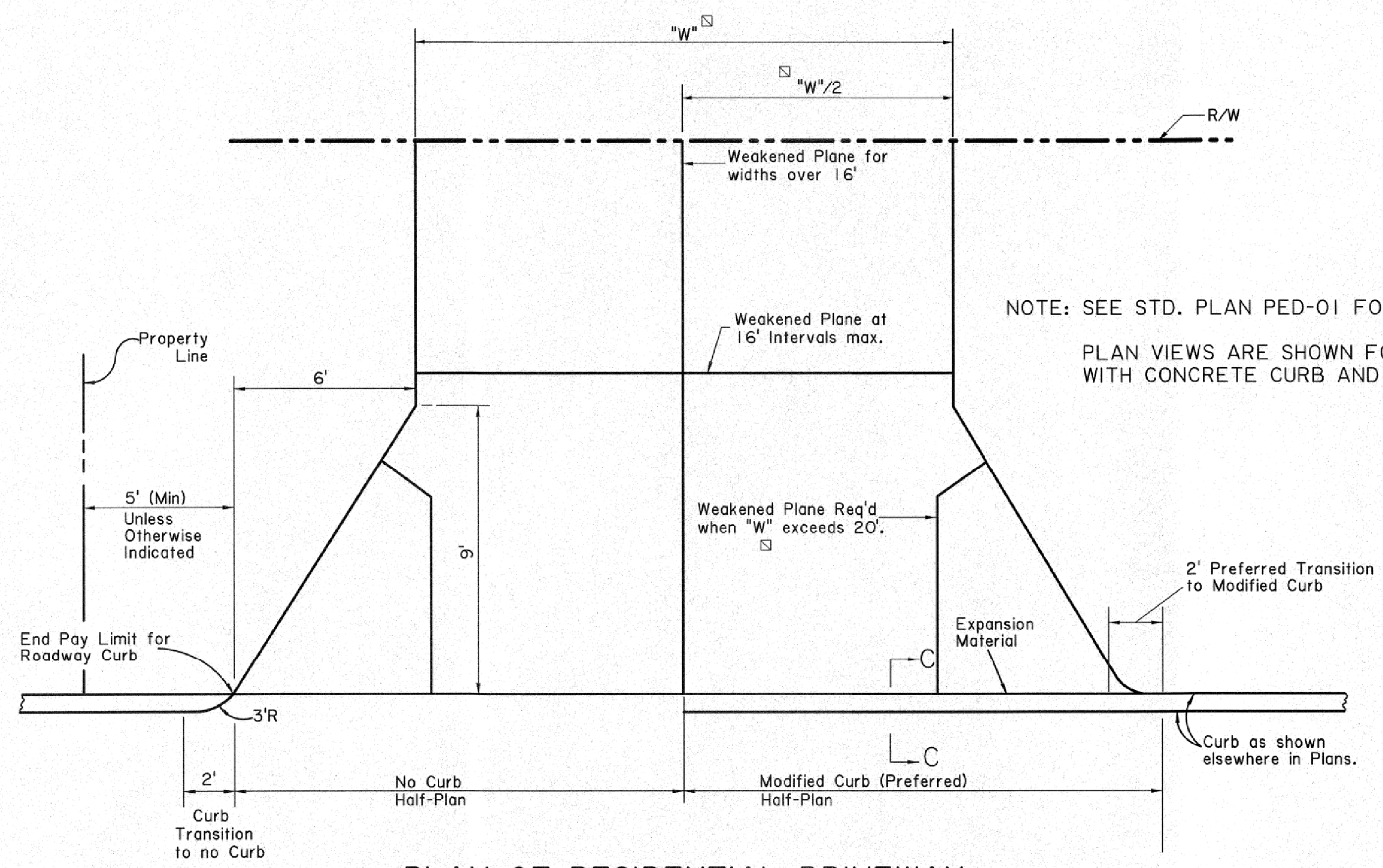
STATE OF LOUISIANA
DAVID S. SMITH
License No. 30683
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

PORTLAND CEMENT CONCRETE PAVEMENT DETAILS

STANDARD PLAN CP-01

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ROAD DESIGN



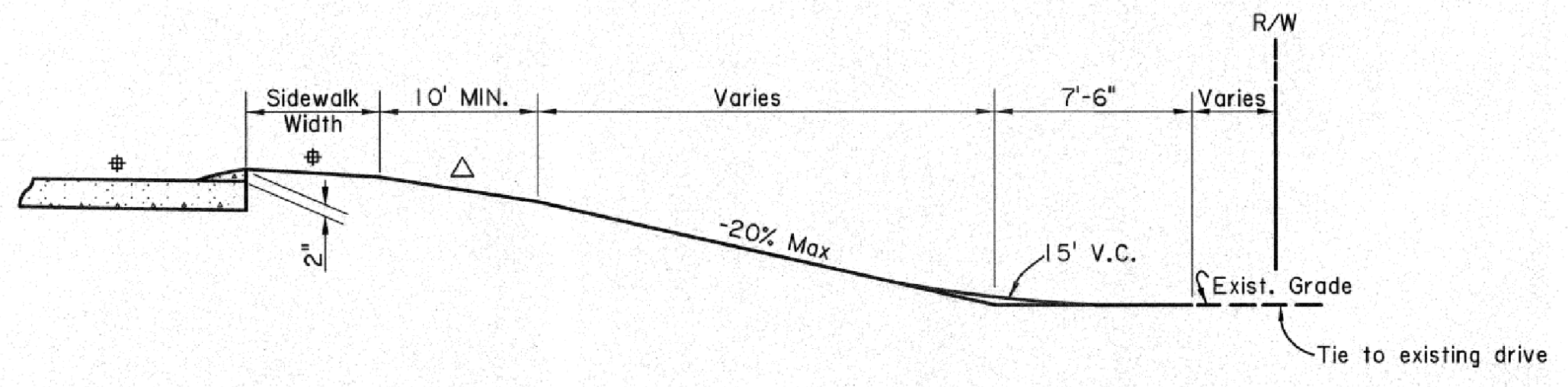
PLAN OF RESIDENTIAL DRIVEWAY

NOTE: MODIFIED CURB TO BE PAID FOR AS CURB AND WILL BE USED AS SHOWN IN THE PLANS OR WHEN DIRECTED BY THE PROJECT ENGINEER.

RADI TRANSITION SHAPE MAY BE USED IN LIEU OF A FLARE.

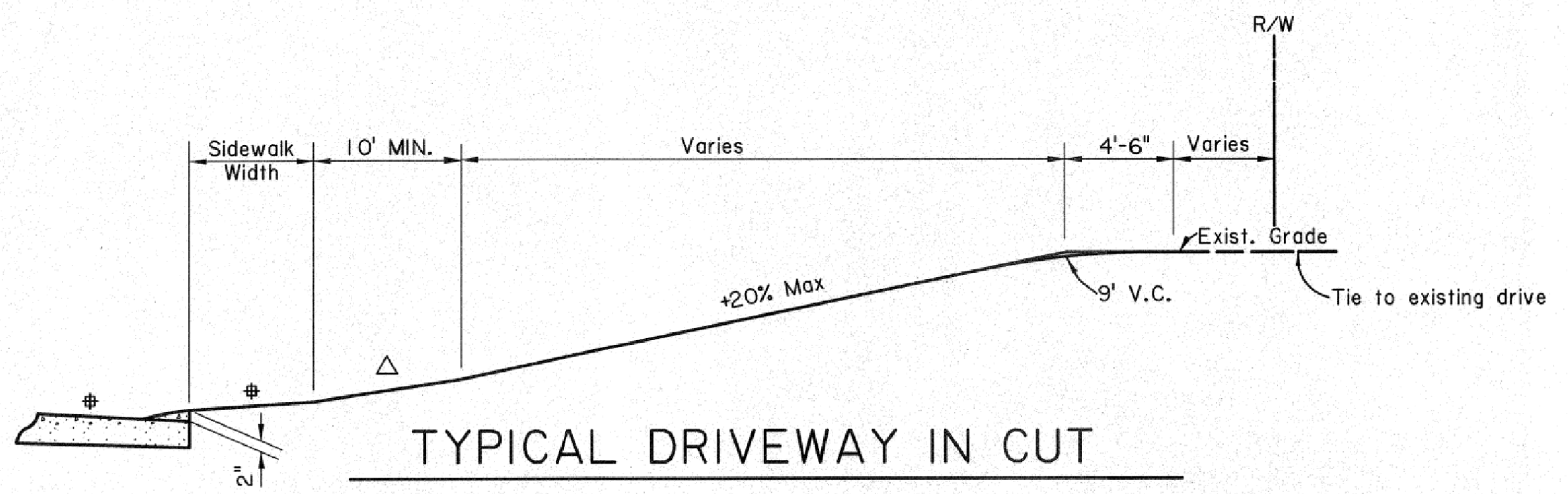
NOTE: SEE STD. PLAN PED-01 FOR TREATMENT OF SIDEWALKS AT DRIVEWAYS.

PLAN VIEWS ARE SHOWN FOR PCC DRIVES. ASPHALT CONCRETE DRIVES WITH CONCRETE CURB AND GUTTER ARE SIMILAR.

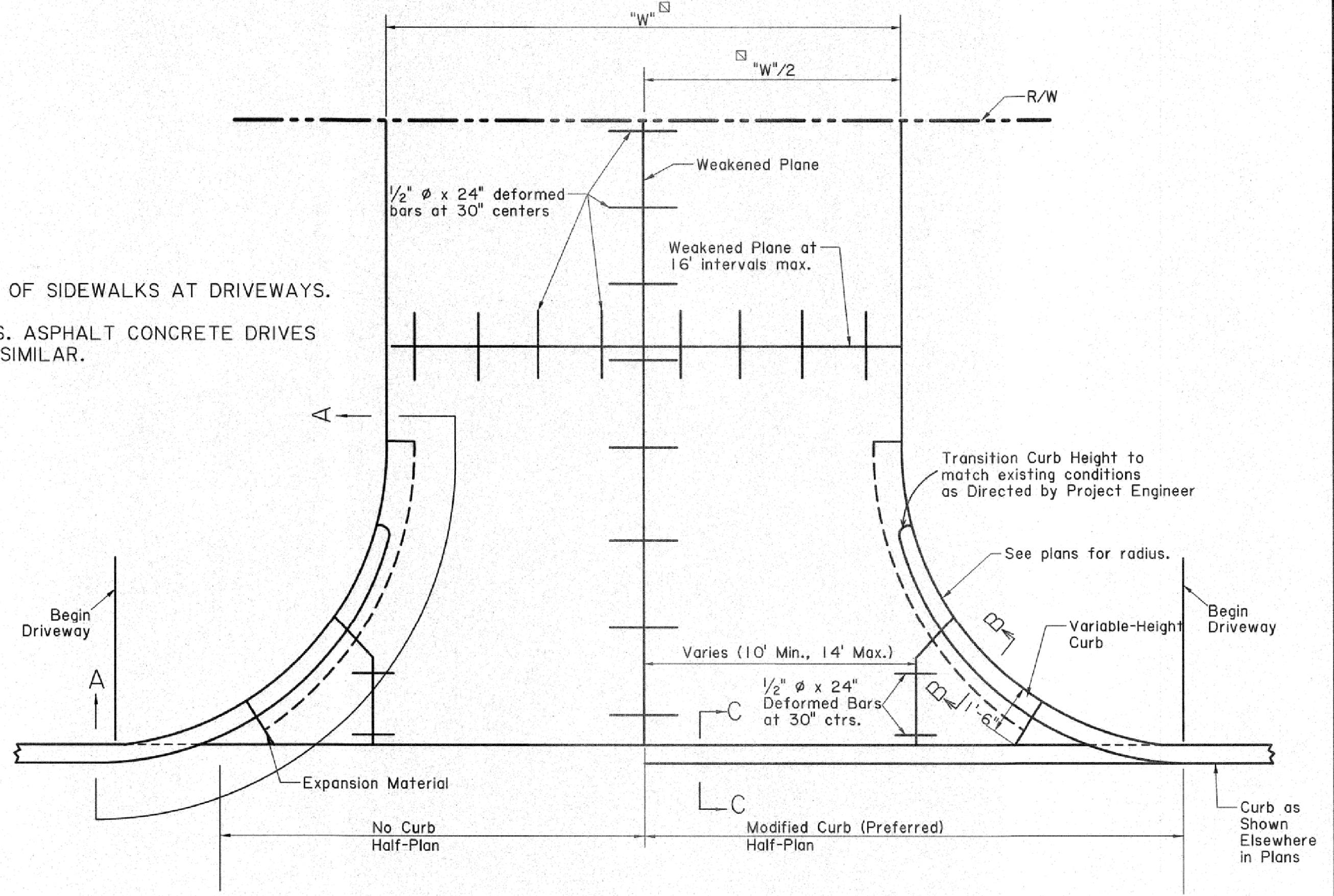


TYPICAL DRIVEWAY IN FILL

- NOTES:
1. DRIVEWAY PROFILES SHOWN ASSUME A SIDEWALK ADJACENT TO THE CURB.
 2. MAXIMUM DRIVEWAY GRADE SHALL BE 20% (25% FOR SPECIAL CASES). MAXIMUM BREAK IN GRADE WITHOUT A VERTICAL CURVE SHALL BE 10% FOR CRESTS AND 9% FOR SAGS, AT NOT LESS THAN 10' INTERVALS.
 3. ROADWAY AND SIDEWALK SLOPES VARY AS PER PLANS.



TYPICAL DRIVEWAY IN CUT



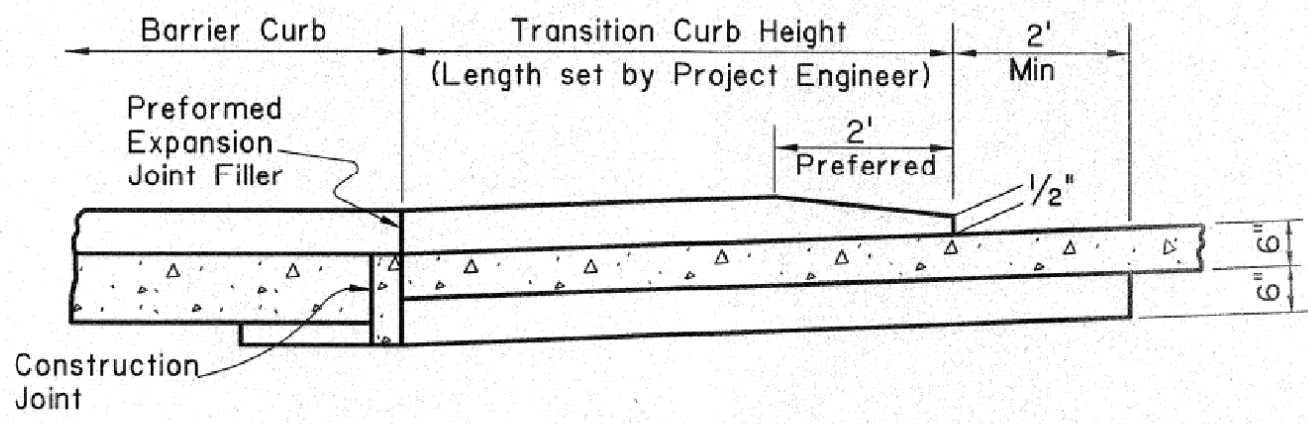
PLAN OF COMMERCIAL DRIVEWAY

NOTE: MODIFIED CURB TO BE PAID FOR AS CURB AND WILL BE USED AS SHOWN IN THE PLANS OR WHEN DIRECTED BY THE PROJECT ENGINEER.

WHEN CURB IS REQUIRED ALONG RADII OF DRIVEWAY, PAYMENT FOR TOE WALL AND CURB WILL BE INCLUDED IN THE PRICE FOR DRIVEWAY ITEMS.

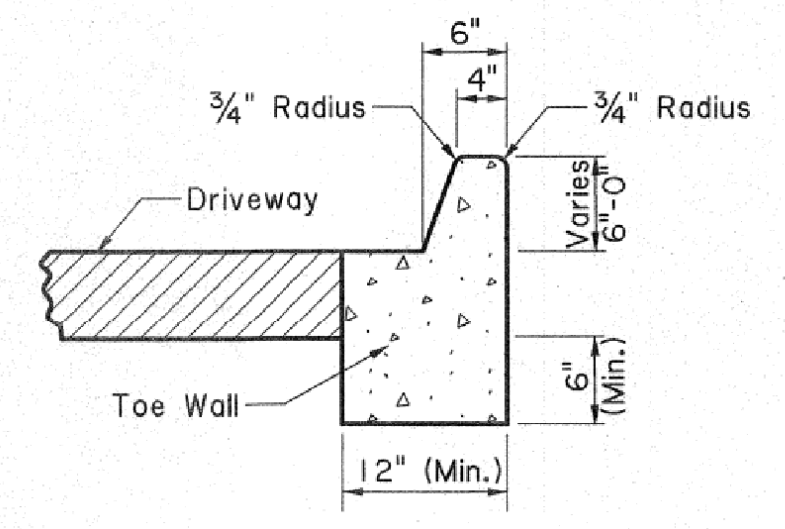
WHEN CURB IS NOT REQUIRED ALONG RADII, TRANSITION CURB AS SHOWN ON RESIDENTIAL DRIVEWAY.

□ "W" = Width as per plans



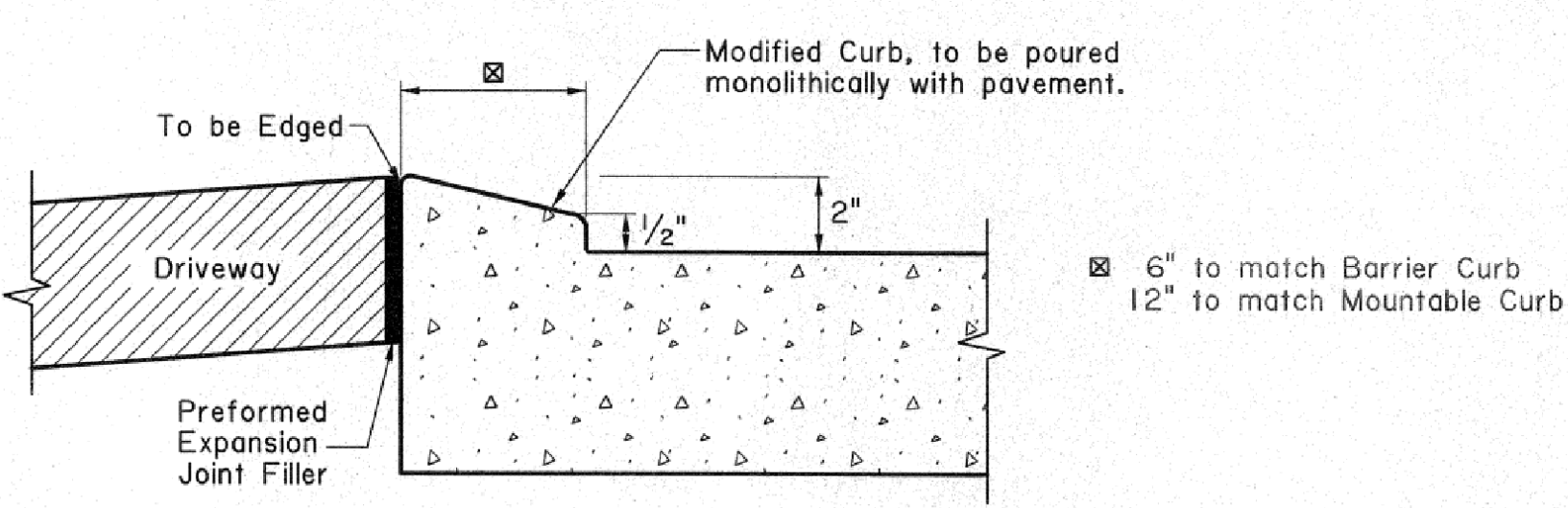
SECTION A-A

(Weakened Plane not shown.)



SECTION B-B

NOTE: For PCC Driveway, Curb, Toe Wall & Driveway to be poured monolithically.



SECTION C-C

NOTE: See Std. Plan CP-01 for Curb construction

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

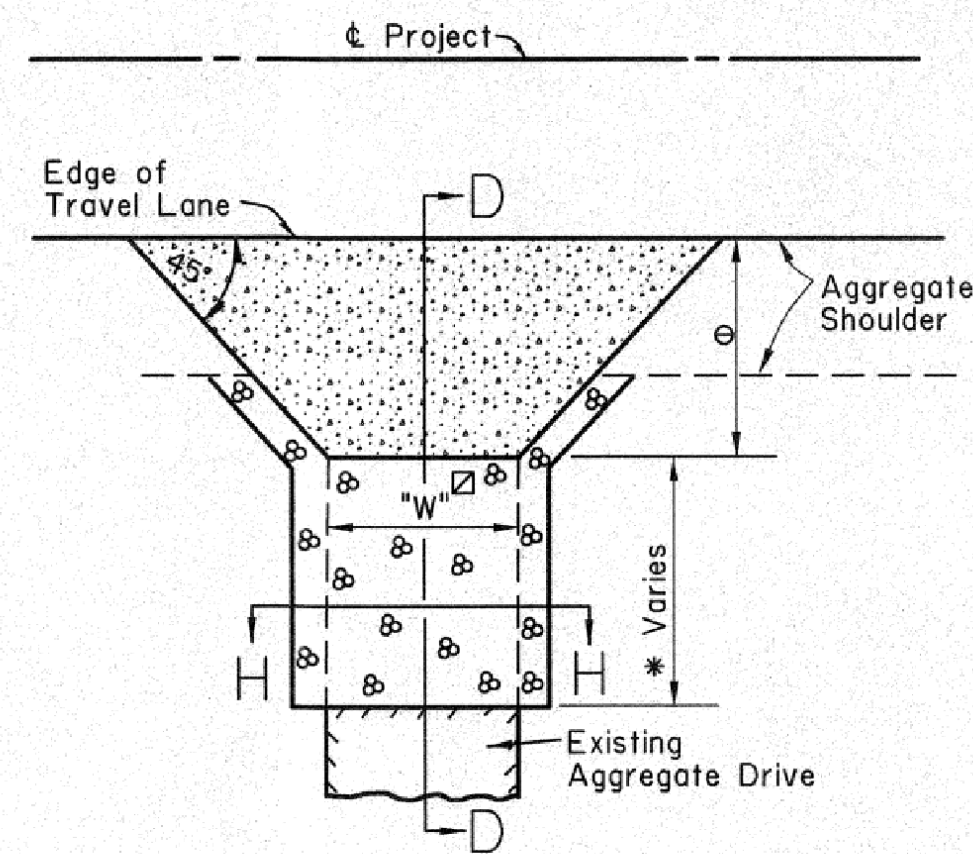
SHEET NUMBER	311
PARISH	ST. TAMMANY
DESIGN	P. TONEY
CHECK	R. MCMILLAN
DETAIL	P. TONEY
CHECK	R. MCMILLAN
REVIEW	D. SMITH
SERIES #	1 OF 3

APPROVED BY CHIEF ENGINEER: *Aidan Eymard* DATE: 8/1/2022

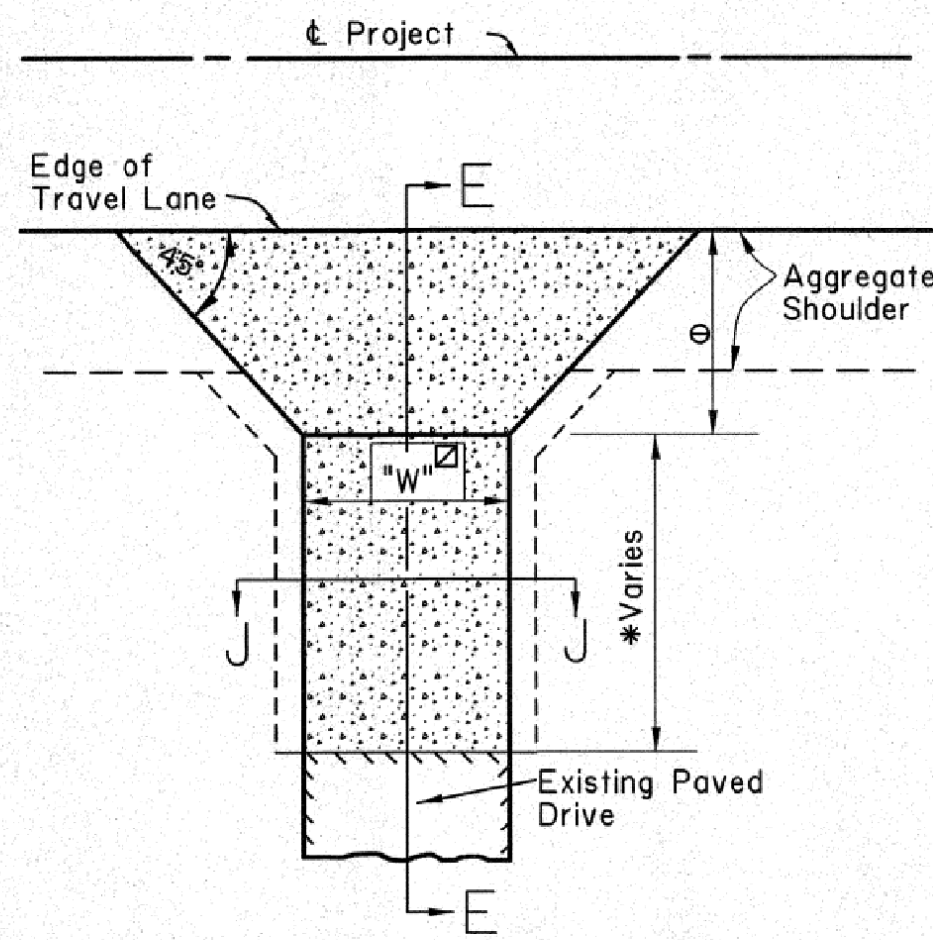
STATE OF LOUISIANA
AIDAN EYMAR
License No. 46220
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
Aidan Eymard
8/2/2022

DRIVEWAYS ON CURBED ROADWAYS
STANDARD PLAN DW-01

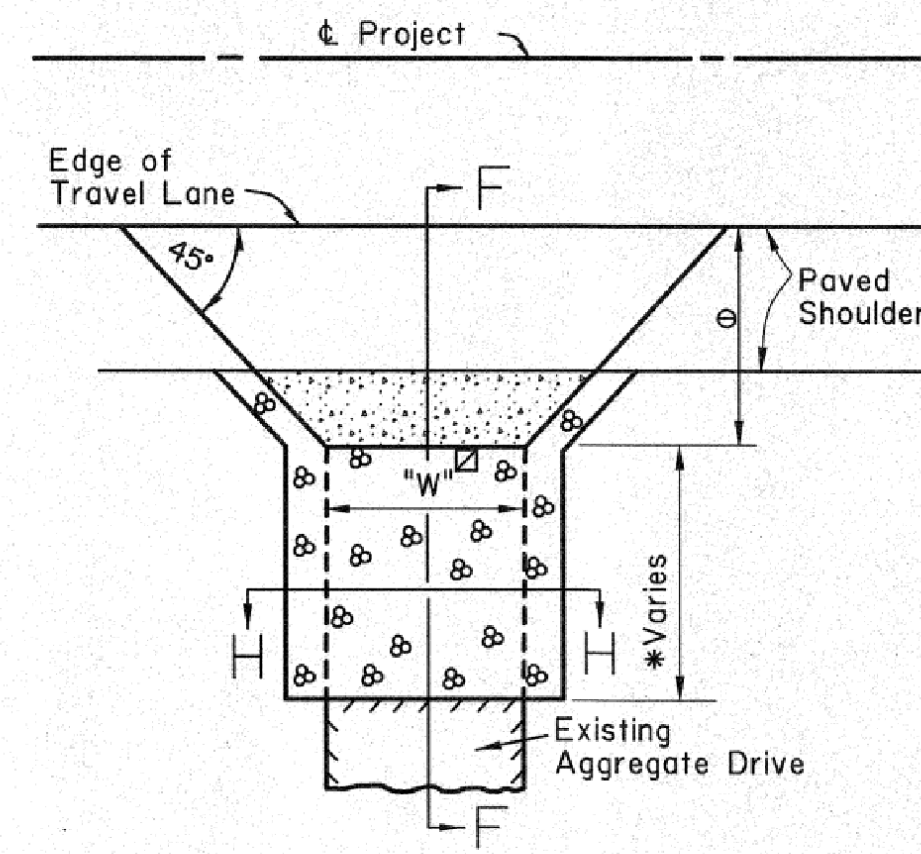
DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
STANDARD PLAN



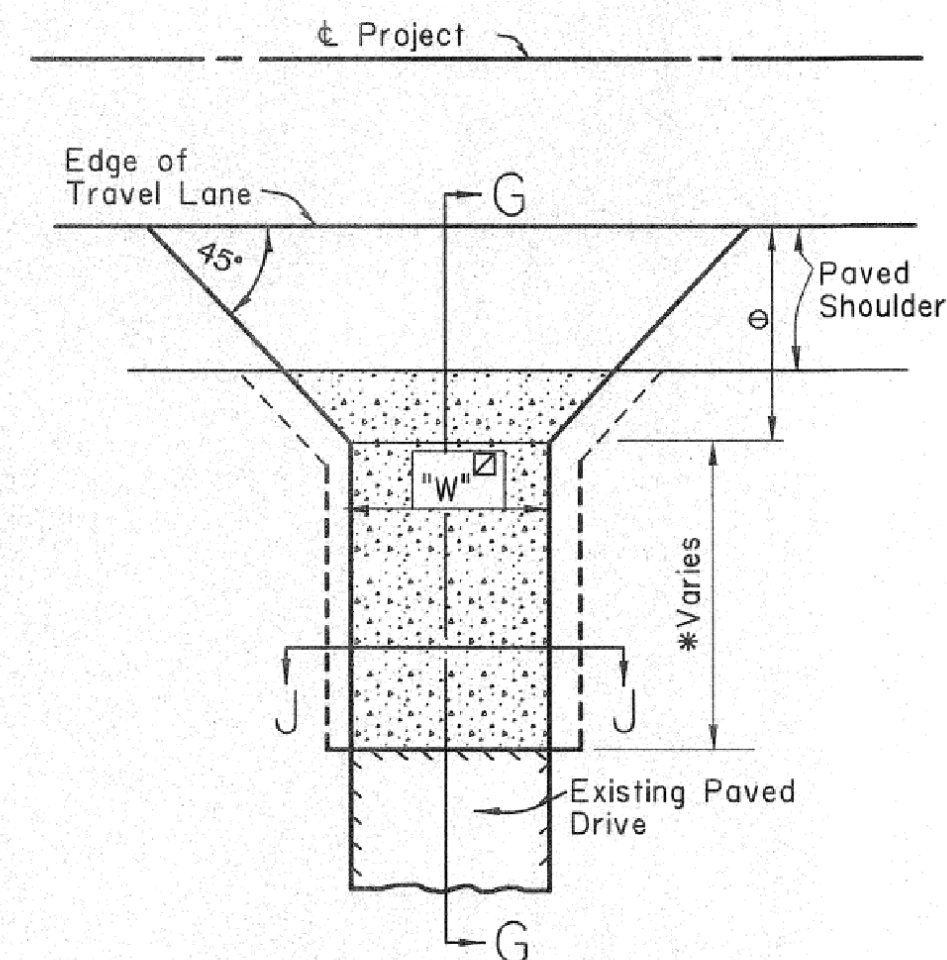
TYPE "A"
Paved Driveway Flare
Along Aggregate Shoulder



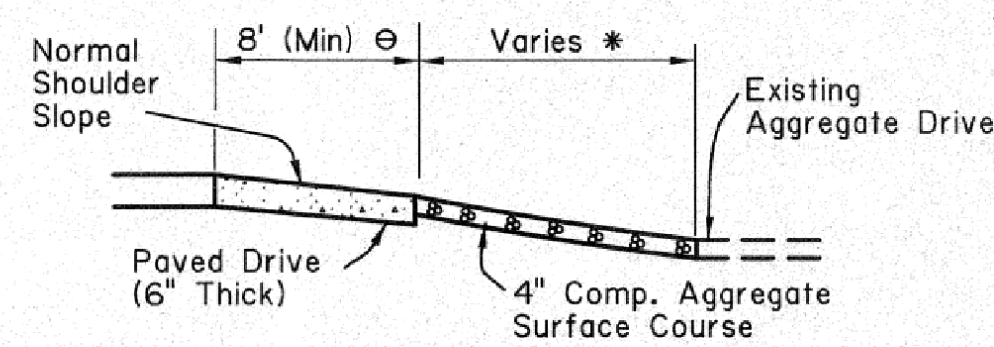
TYPE "B"
Paved Driveway Flare
Along Aggregate Shoulder
Connecting Existing Paved Drive



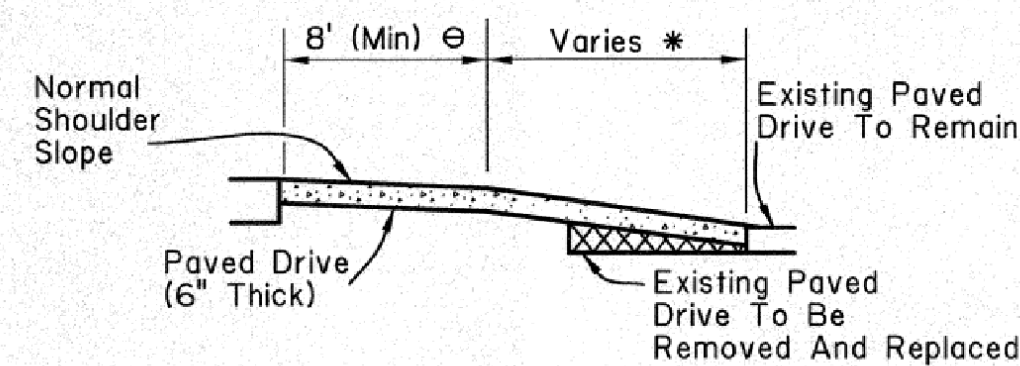
TYPE "C"
Paved Driveway Flare
Along Paved Shoulder



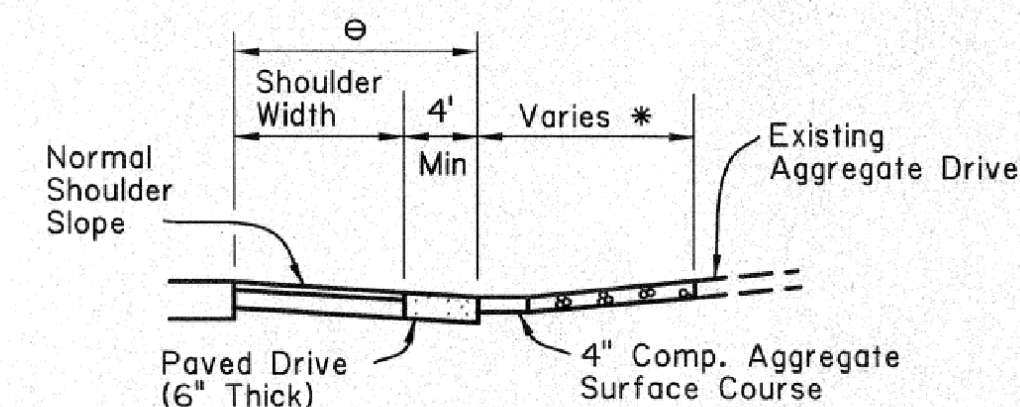
TYPE "D"
Paved Driveway Flare
Along Paved Shoulder
Connecting Existing Paved Drive



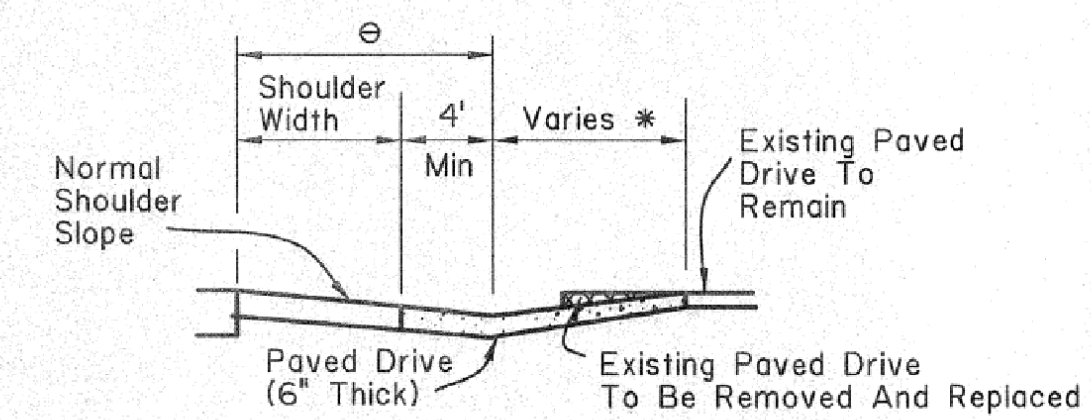
SECTION D-D



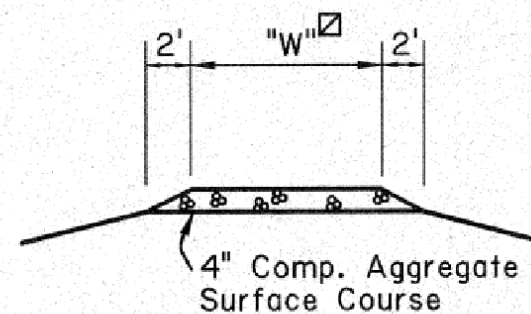
SECTION E-E



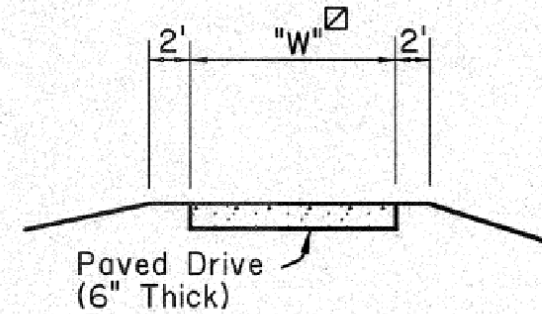
SECTION F-F



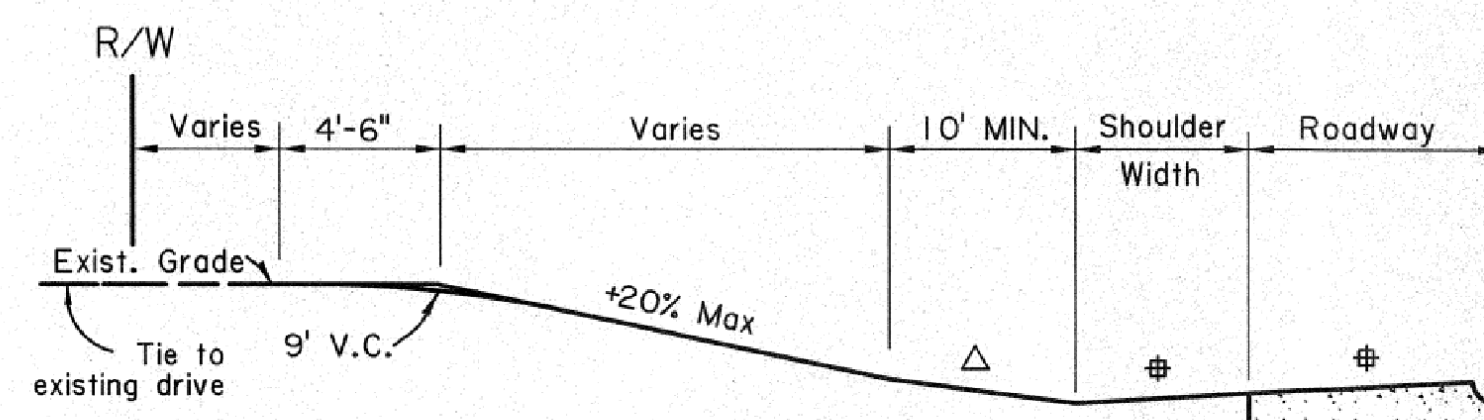
SECTION G-G



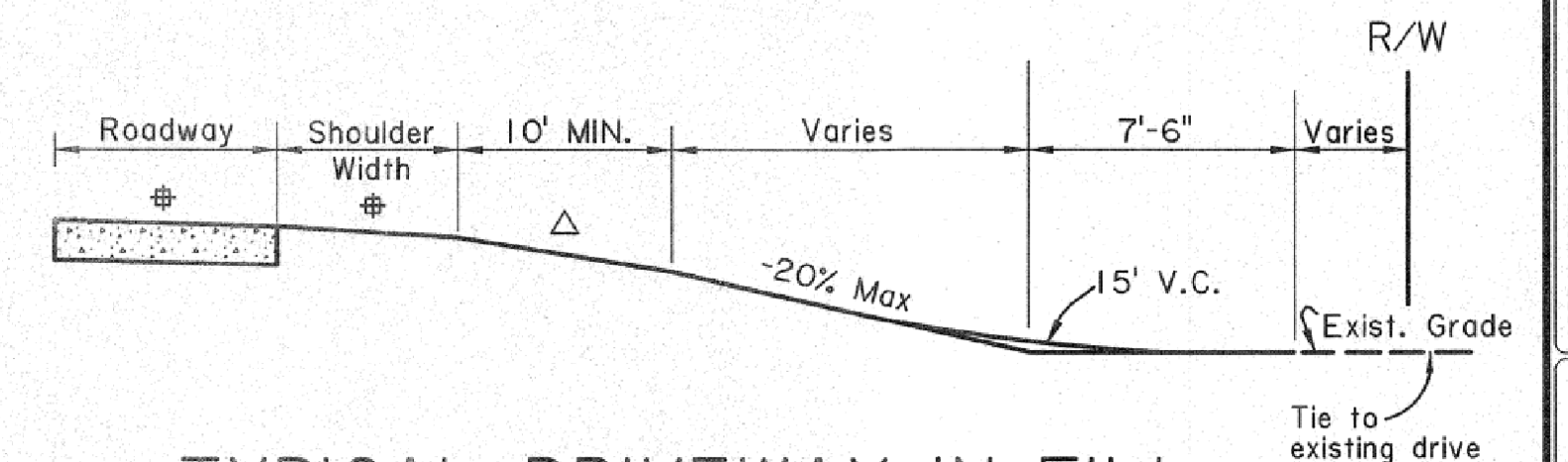
SECTION H-H



SECTION J-J



TYPICAL DRIVEWAY IN CUT



TYPICAL DRIVEWAY IN FILL

□ "W" = Width as per plans

NOTES:

1. PORTLAND CEMENT CONCRETE DRIVES WILL BE CONSTRUCTED TO REPLACE OR CONNECT TO EXISTING CONCRETE DRIVES.
- * 2. SEE PLANS: APPLIES WHERE EXISTING DRIVE IS TO BE REMOVED FOR ROADWAY CONSTRUCTION AND/OR TO ACHIEVE VERTICAL GEOMETRY REQUIREMENTS.
- ⊖ 3. PAVEMENT SHALL EXTEND 8' MINIMUM FROM EDGE OF PAVED ROADWAY SURFACE (TRAVEL LANE) FOR SINGLE-FAMILY RESIDENTIAL/NON-COMMERCIAL AGRICULTURE TYPE CONNECTIONS, AND 25' FOR TRAFFIC GENERATOR (COMMERCIAL) TYPE CONNECTIONS, OR AS PER THE PLANS. PAVED DRIVEWAY FLARE SHALL EXTEND 4' MINIMUM FROM EDGE OF PAVED SHOULDER. RADII TRANSITION SHAPE MAY BE USED IN LIEU OF FLARE.
4. COMPACTION OF SUBGRADE AND GRADING WORK FOR CONSTRUCTION OF DRIVES SHALL BE SATISFACTORY TO THE ENGINEER AND PAYMENT SHALL BE INCLUDED IN THE DRIVEWAY ITEMS.
- Δ 5. MAXIMUM DRIVEWAY GRADE SHALL BE 20% (25% FOR SPECIAL CASES). MAXIMUM BREAK IN GRADE WITHOUT A VERTICAL CURVE SHALL BE 10% FOR CRESTS AND 9% FOR SAGS, AT NOT LESS THAN 10' INTERVALS.
- # 6. ROADWAY AND SHOULDER SLOPES VARY AS PER PLANS

LEGEND

- ASPHALT
- AGGREGATE
- REMOVAL

STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	312
DESIGN	P. TONEY
CHECK	R. MCMILLAN
DETAIL	P. TONEY
CHECK	R. MCMILLAN
REVIEW	D. SMITH
SERIES	# 2 OF 3



Under Seal
 8/2/2022

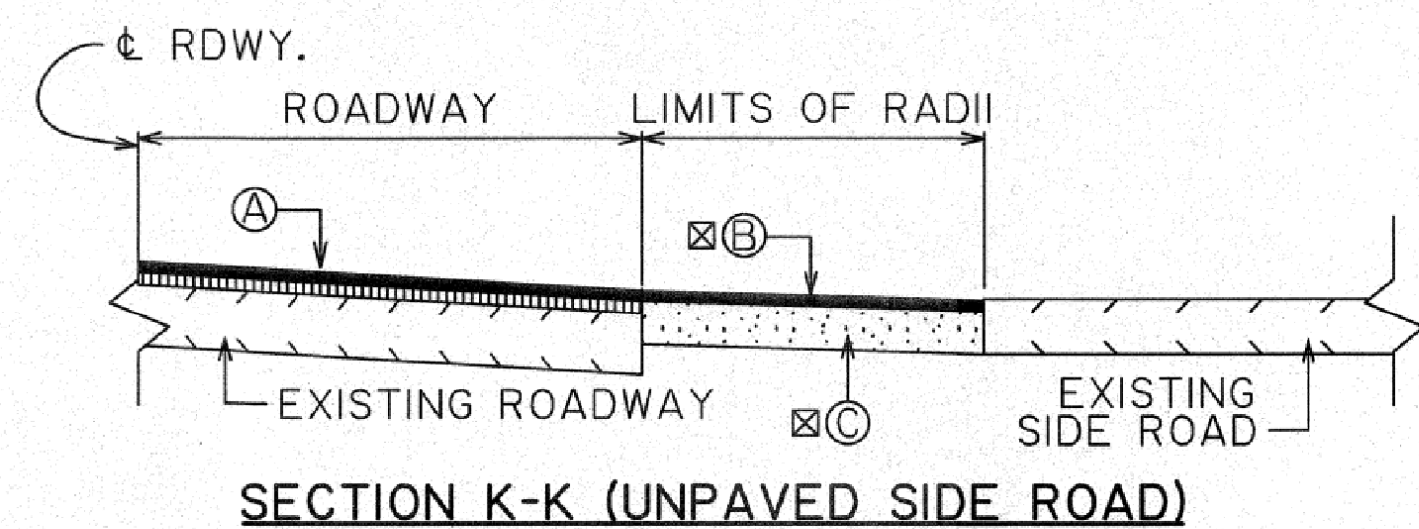
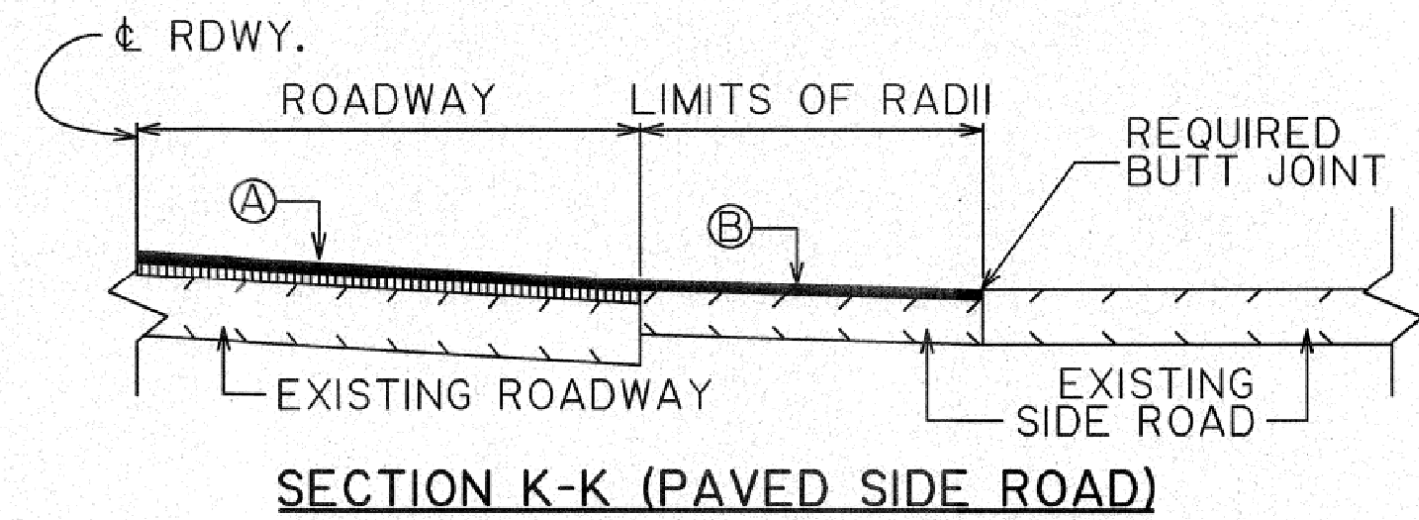
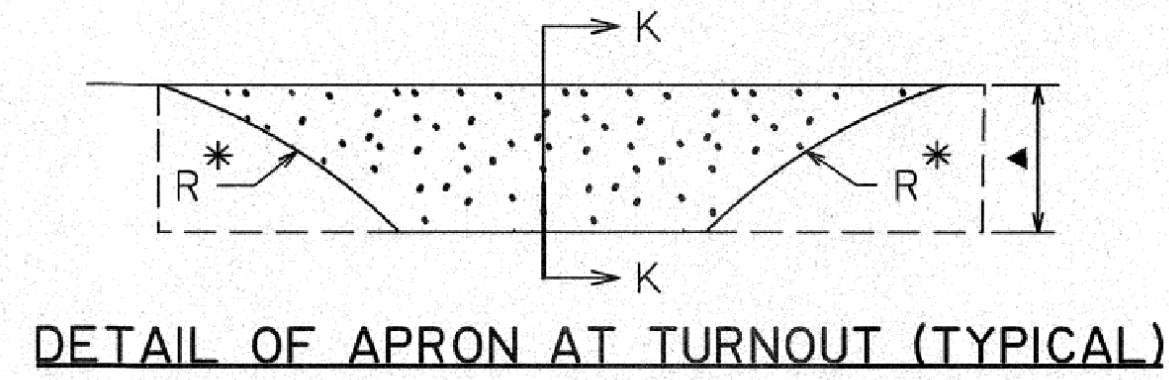
APPROVED BY CHIEF ENGINEER
 [Signature]
 DATE: 8/14/2022



DRIVEWAYS ON
 NON-CURBED ROADWAYS
 STANDARD PLAN DW-01



TURNOUT TIE-IN DETAILS FOR OVERLAY PROJECTS

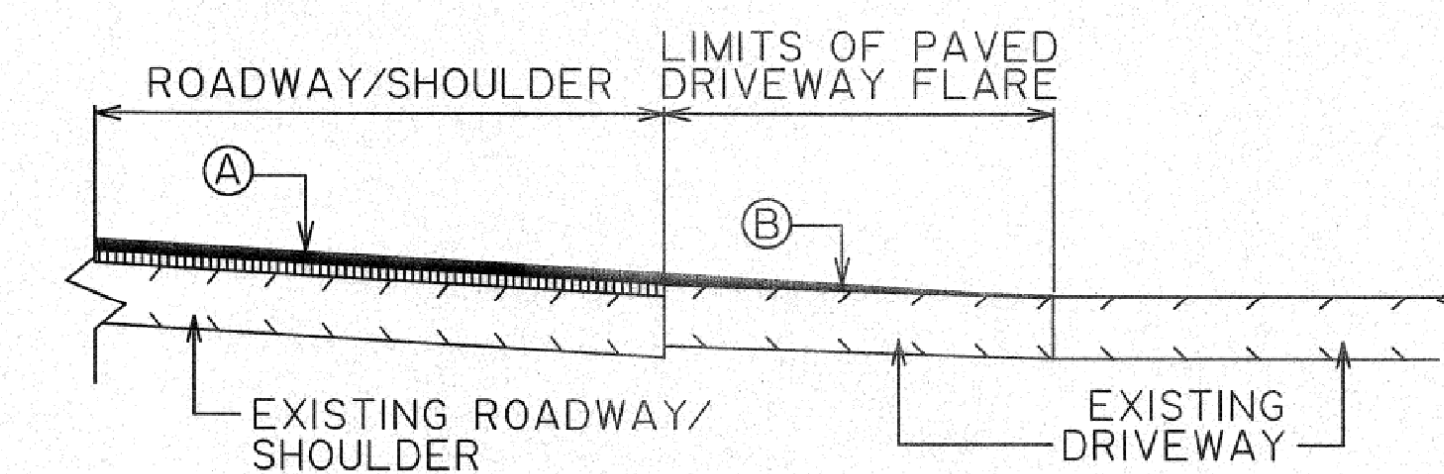
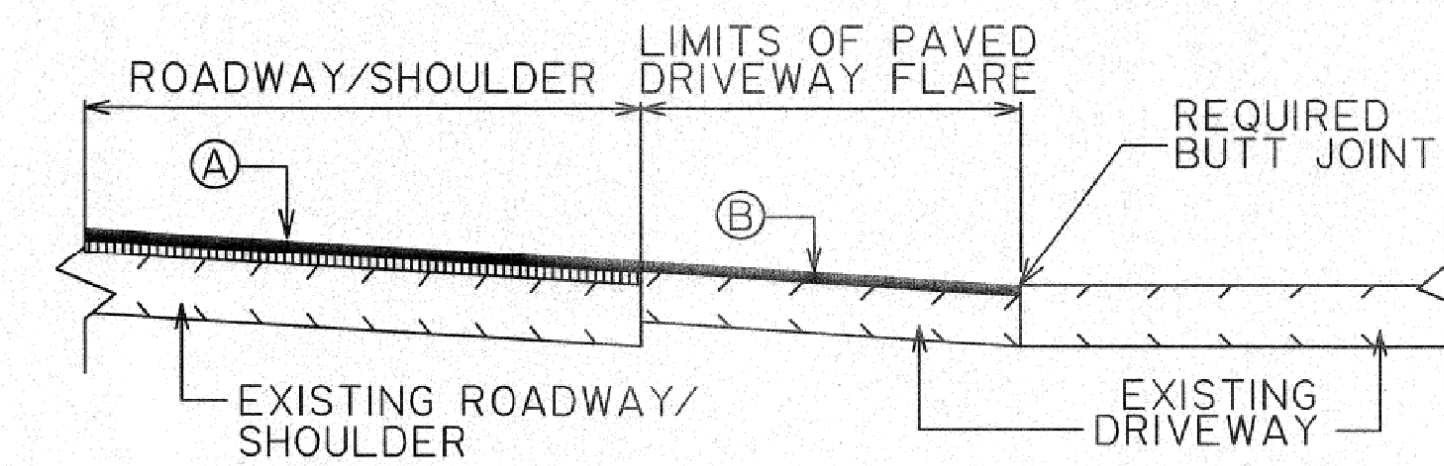
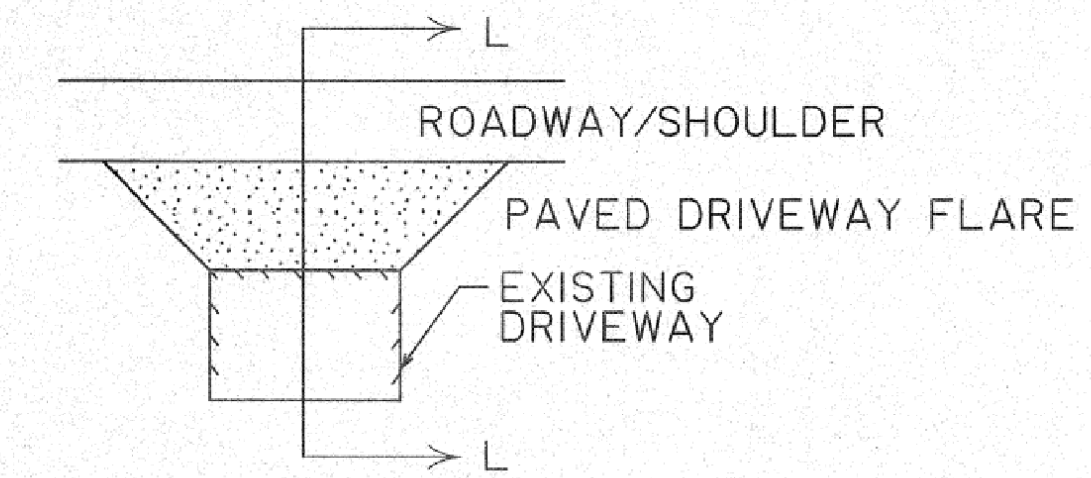


- Ⓐ ASPHALT CONCRETE (COURSES AND TYPES SHOWN ON ROADWAY TYPICAL SECTION)
- Ⓑ ASPHALT CONCRETE (THICKNESS SHALL MATCH ROADWAY WEARING SURFACE)
- ⓐ ASPHALT CONCRETE BASE COURSE
- * MATCH EXISTING RADIUS
- ▲ VERTICAL TRANSITION FROM ROADWAY TO BUTT JOINT TIE-IN WHERE NEEDED
- ⓧ TOTAL THICKNESS OF WEARING COURSE AND BASE COURSE SHALL BE A MINIMUM OF 6"

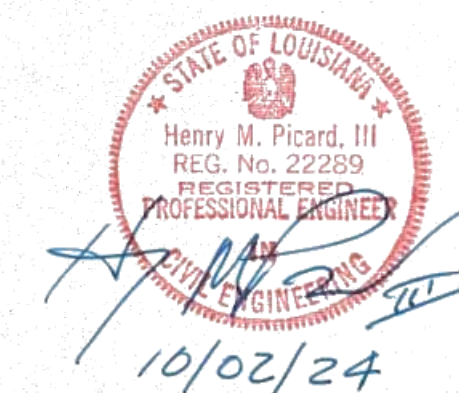
NOTES:

1. DRIVE WIDTHS AND FLARE DIMENSIONS TO BE ADJUSTED TO MATCH EXISTING CONDITIONS AS DIRECTED BY THE PROJECT ENGINEER.
2. TYPE OF TIE-IN AND LENGTH OF OVERLAY TRANSITION TO BE SET BY PROJECT ENGINEER TO ACHIEVE A SUITABLE CONNECTION FOR EXISTING DRIVE.
3. REFER TO SHEET 2 OF DW-01 FOR SUGGESTED TIE-IN CRITERIA OF STEEP GRADES.

DRIVEWAY TIE-IN DETAILS FOR OVERLAY PROJECTS

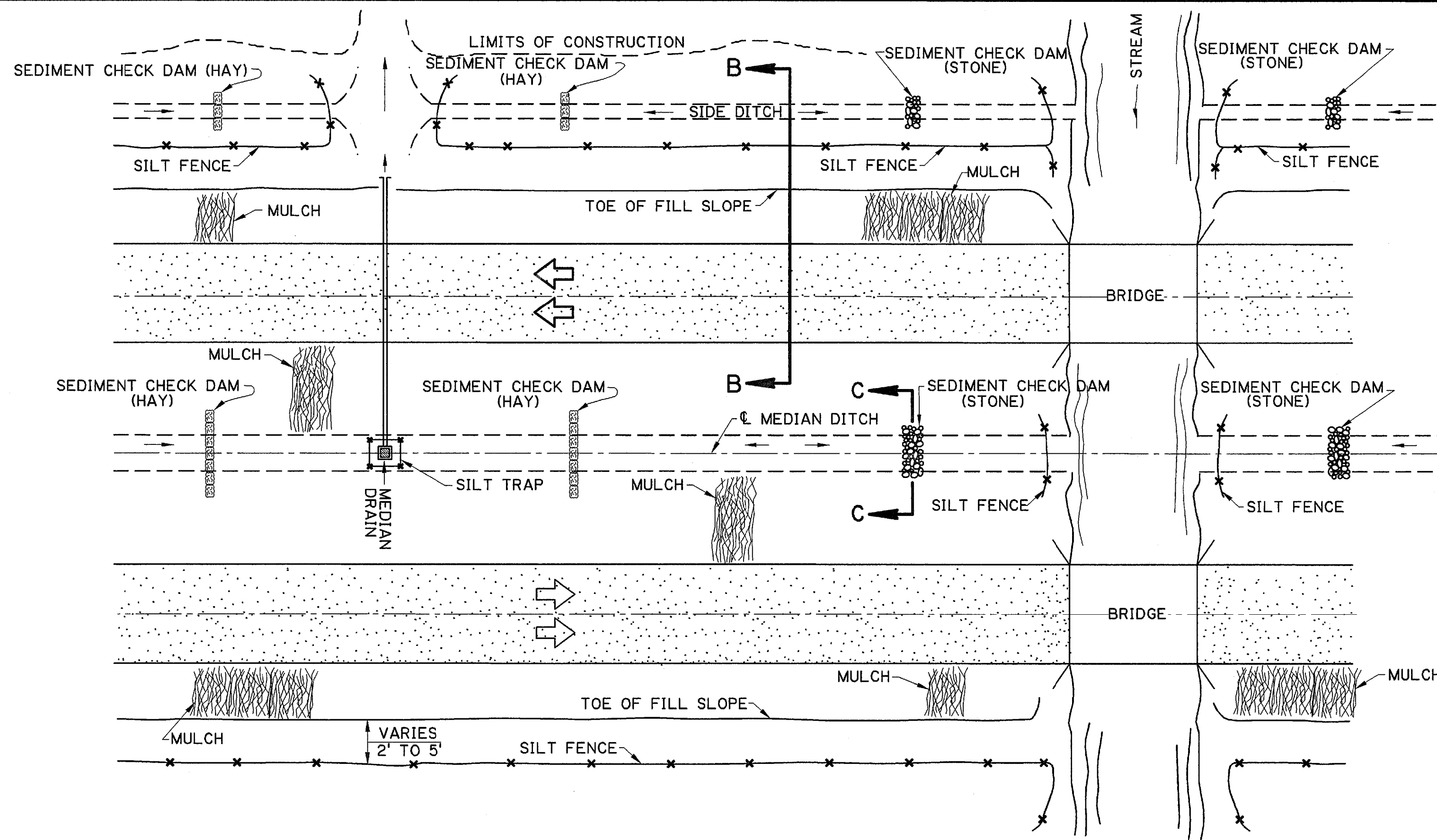


- Ⓐ ASPHALT CONCRETE (COURSES AND TYPES SHOWN ON ROADWAY TYPICAL SECTION)
- Ⓑ ASPHALT CONCRETE (THICKNESS SHALL MATCH ROADWAY WEARING COURSE)



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	313	PARISH	CONTROL SECTION	STATE PROJECT
ST. TAMMANY				
DESIGN	P. TONEY	CHECK	R. MCMILLAN	REVIEW
DETAIL	P. TONEY	CHECK	R. MCMILLAN	D. SMITH
				SERIES # 3 OF 3
APPROVED BY CHIEF ENGINEER: <i>[Signature]</i> DATE: 8/4/2022				
TURNOUT AND DRIVEWAY TIE-IN DETAILS STANDARD PLAN DW-01				
STANDARD PLAN				

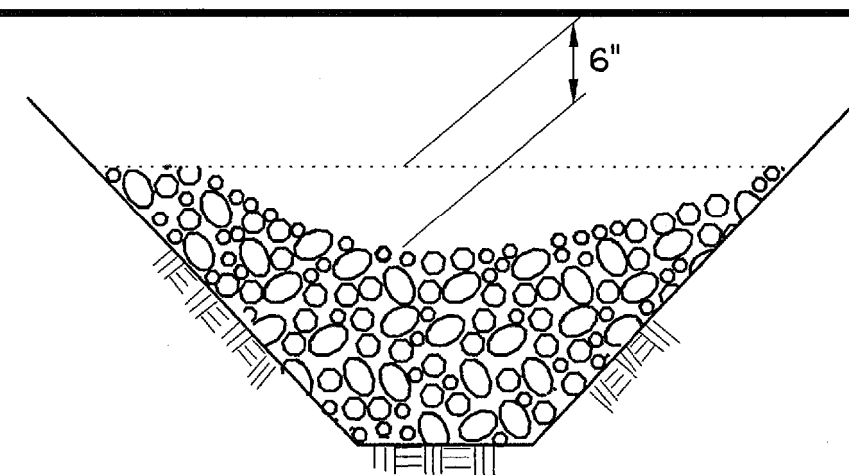


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

MULCHES

MULCHES ARE THE APPLICATION OF MATS OF MATERIAL PLACED ON THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND TO REDUCE THE VELOCITY OF OVERLAND FLOW. MULCHES CAN BE ORGANIC OR SYNTHETIC. MULCHES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW GUIDELINES FOR THE USE OF MULCHES ARE:

1. USE ON CUT AND EMBANKMENT SLOPES WHICH HAVE NOT BEEN COMPLETED TO PLAN GRADE OR WHERE THE WEATHER OR SOIL CONDITIONS WILL NOT PERMIT COMPLETING THEM WITHIN A REASONABLE TIME
2. USE ON CLEARED, GRUBBED, AND SCALPED AREAS WHERE SOIL EROSION IS LIKELY TO OCCUR
3. USE WITH TEMPORARY SEEDING



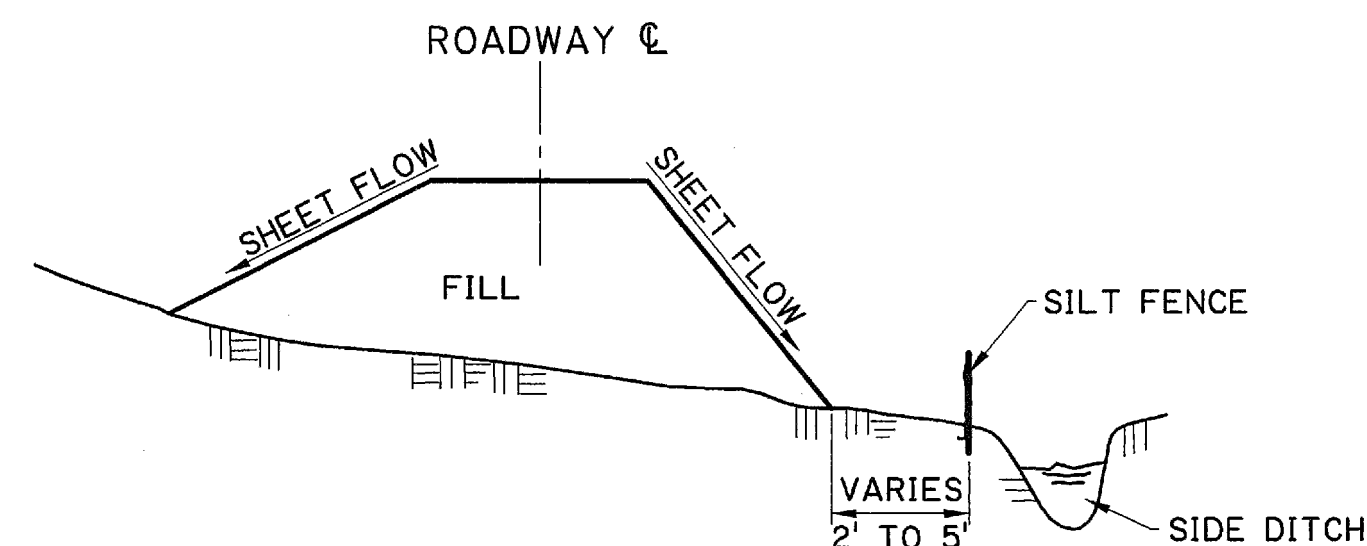
TEMPORARY SEDIMENT CHECK DAM (STONE)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (STONE)

NOTES:

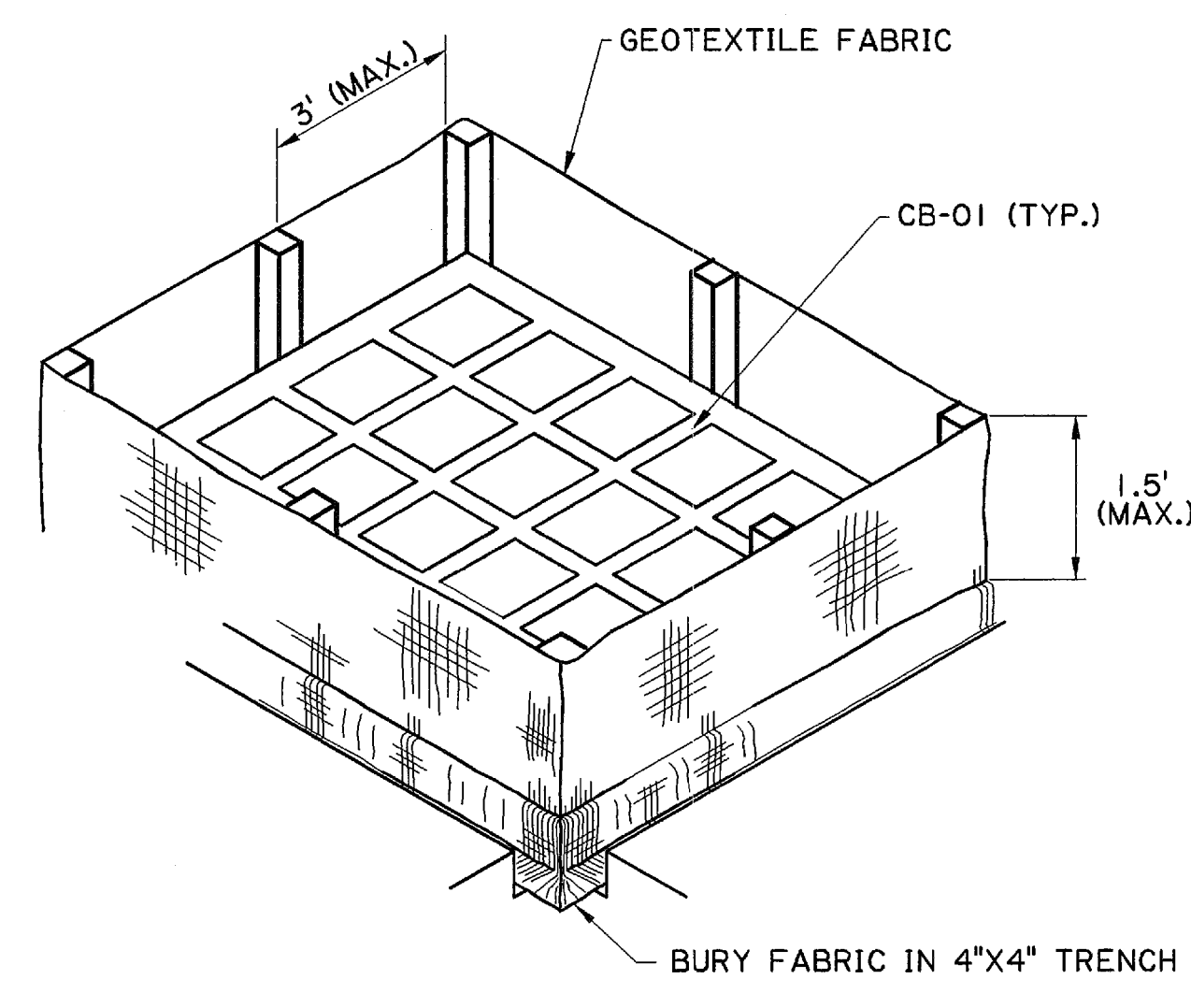
A STONE CHECK DAM IS A SMALL TEMPORARY DAM CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. THE PURPOSE OF THIS MEASURE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THE STONE CHECK DAM WILL TRAP SMALL AMOUNTS OF SEDIMENTS GENERATED IN THE DITCH ITSELF. HOWEVER IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING DEVICE. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF STONE CHECK DAMS ARE:

1. USE IN SMALL OPEN CHANNELS WHICH DRAIN 10 ACRES OR LESS
2. DO NOT USE IN A LIVE STREAM
3. USE IN A TEMPORARY DITCH OR SWALE WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, CANNOT RECEIVE A NON-ERODIBLE LINING
4. USE IN PERMANENT DITCHES OR SWALES WHICH WILL NOT RECEIVE A PERMANENT LINING FOR AN EXTENDED PERIOD OF TIME
5. USE IN TEMPORARY OR PERMANENT DITCHES OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS
6. FOR STONE SPECIFICATIONS, SEE PROJECT SPECIFICATIONS FOR RIPRAP, (CLASS 2 LB)



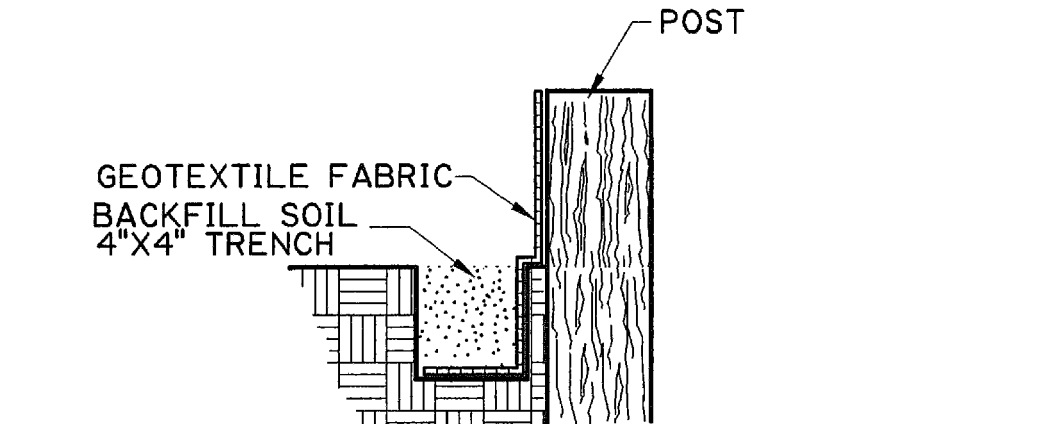
TEMPORARY SILT FENCE APPLICATION

(FOR CONSTRUCTION DETAILS AND SPECIFICATIONS SEE SHEET 2 OF 2.)

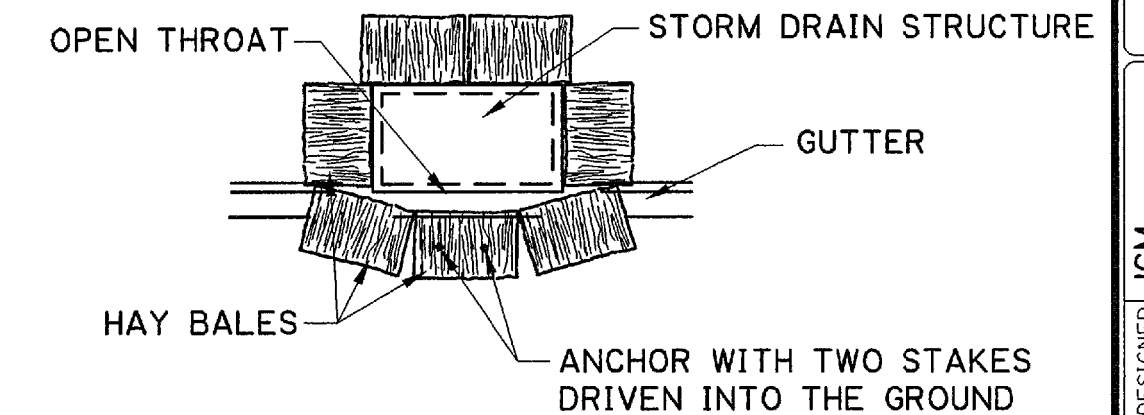


ISOMETRIC VIEW SHOWING GEOTEXTILE FABRIC

(BACKFILL SOIL NOT SHOWN)



SECTION THRU TRENCH SHOWING GEOTEXTILE FABRIC



PLAN SHOWING HAY BALES

PAY ITEM: TEMPORARY HAY OR STRAW BALES

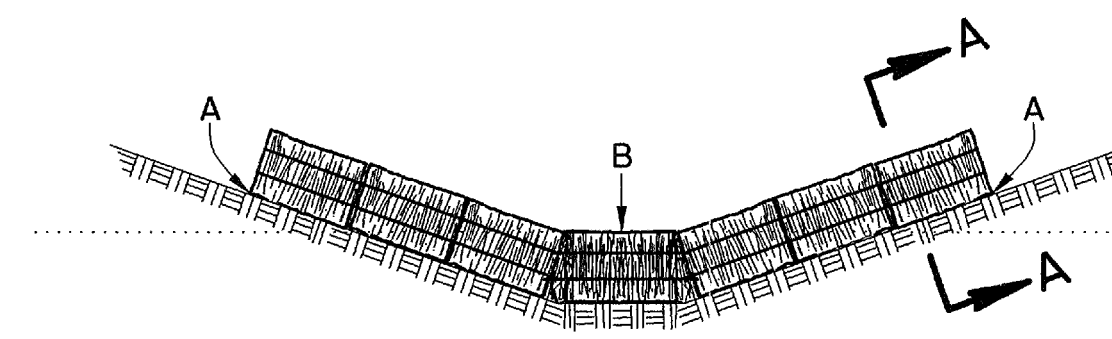
TEMPORARY INLET SILT TRAP

THE TEMPORARY DROP INLET SILT TRAP IS TO BE USED FOR SMALL DRAINAGE AREAS (LESS THAN 1 ACRE) WHERE THE STORM DRAIN IS FUNCTIONAL BEFORE THE AREA IS STABILIZED. THE TRAP CAN BE EITHER GEOTEXTILE FABRIC OR HAY BALES.

1. THE GEOTEXTILE FABRIC SHALL CONFORM TO PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS G).
2. WOODEN STAKES SUPPORTING THE FABRIC SHALL BE 2" X 2" OR 2" X 4" WITH A MINIMUM LENGTH OF 3 FEET. THE STAKES SHALL BE SPACED AROUND THE INLET AT A MAXIMUM SPACING OF 3 FEET.
3. THE HEIGHT OF THE FABRIC ABOVE THE INLET SHALL BE LIMITED TO 1.5' AND THE BOTTOM OF THE FABRIC SHALL BE BURIED IN A TRENCH APPROXIMATELY 4" WIDE BY 4" DEEP. THE FABRIC SHALL BE STAPLED TO THE POST WITH 1/2" STAPLES.
4. THE TRAP SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM. THE SEDIMENT SHOULD BE REMOVED AND EACH STAKE SHOULD BE FIRMLY IN THE GROUND.
5. HAY BALES SHALL BE PLACED SO THAT THE BINDING WIRE OR TWINE IS NOT IN CONTACT WITH THE GROUND.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



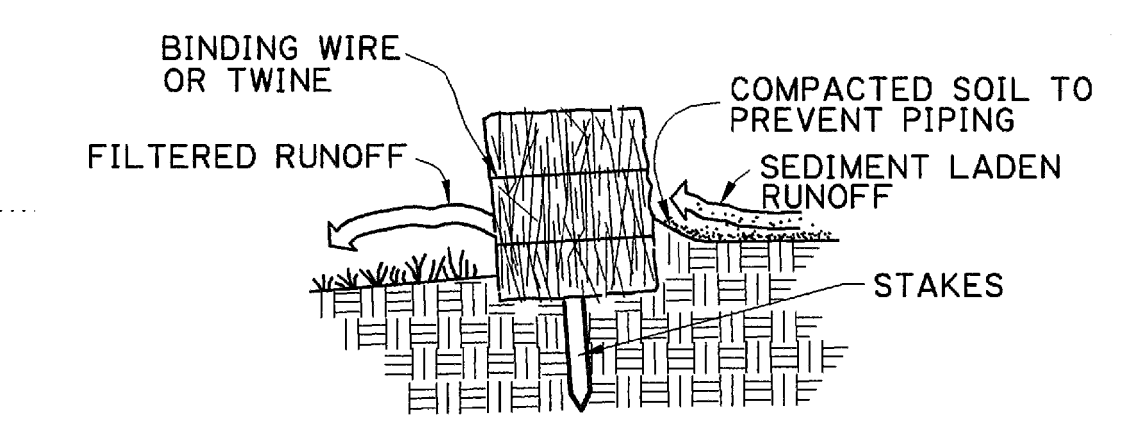
ELEVATION

TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (HAY)

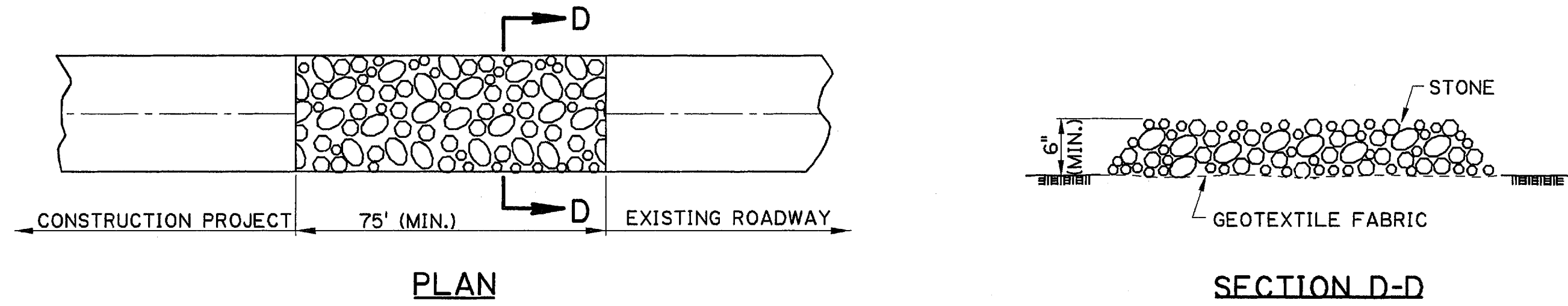
NOTES:

- A HAY BALE BARRIER IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF STRAW OR HAY. THE HAY BALE BARRIER IS ALSO USED AS A CHECK DAM TO REDUCE THE VELOCITY IN SMALL DITCHES OR SWALES. THE HAY BALES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A HAY BALE BARRIER ARE:
1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
 2. USE IN MINOR SWALES OR DITCHES WHERE THE MAXIMUM DRAINAGE AREA IS 2 ACRES
 3. ONLY USE WHERE THE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS
 4. DO NOT USE IN LIVE STREAMS OR IN SWALES OR DITCHES WHERE THERE IS A POSSIBILITY OF A WASHOUT



SECTION A-A

SHEET NUMBER	314
DESIGNED	JCM
CHECKED	JCM
DATE	1-14-94
BY	1 OF 2
REVISION DESCRIPTION	
DATE	10-1-08
CHIEF ENGINEER	W. H. Temple
APPROVED BY	
REVISION	
GENERAL REVISIONS	
PAY ITEM NOS.	
REMOVE SPECIFIC	
REVISION DESCRIPTION	
DATE	
BY	
DATE	
REVISION	
GENERAL REVISIONS	
PAY ITEM NOS.	
REMOVE SPECIFIC	
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PAY ITEM NOS.	
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PAY ITEM NOS.	
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REVISION DESCRIPTION	
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DATE	
REVISION	
GENERAL REVISIONS	
PAY ITEM NOS.	
REMOVE SPECIFIC	
REVISION DESCRIPTION	
DATE	
BY	
DATE	
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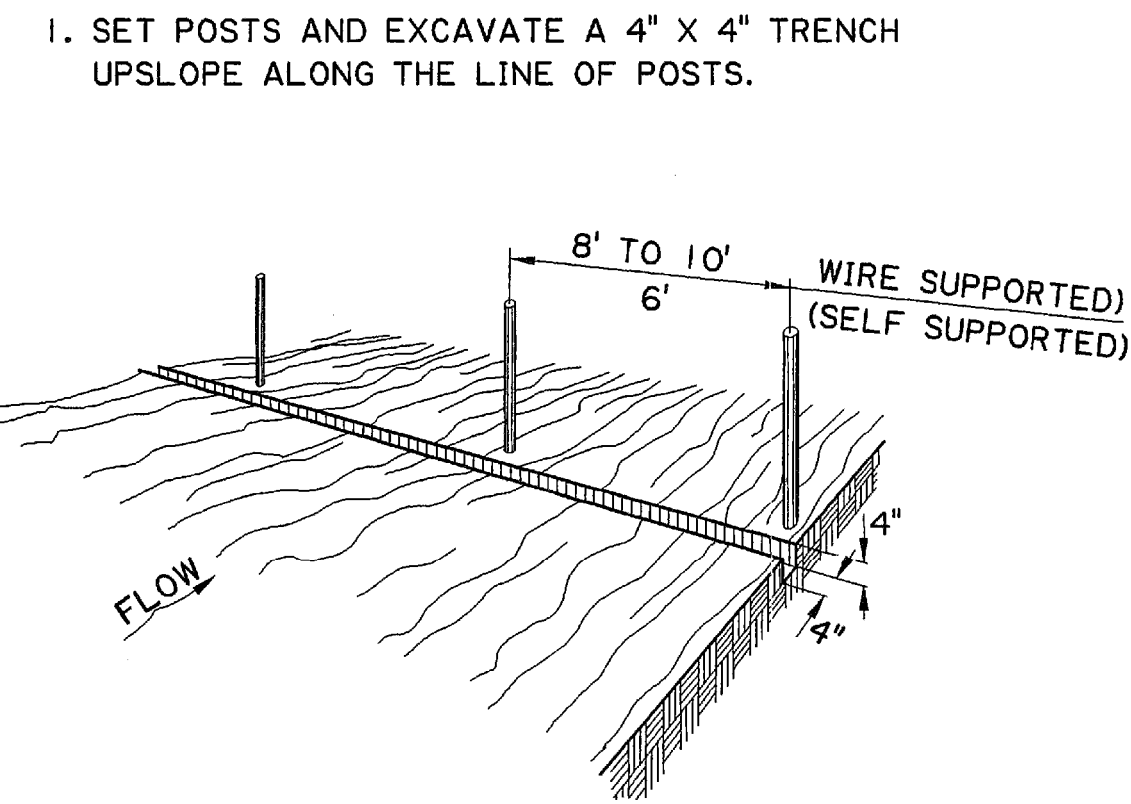


TEMPORARY STONE CONSTRUCTION ENTRANCE
 PAY ITEM: TEMPORARY STONE CONSTRUCTION ENTRANCE

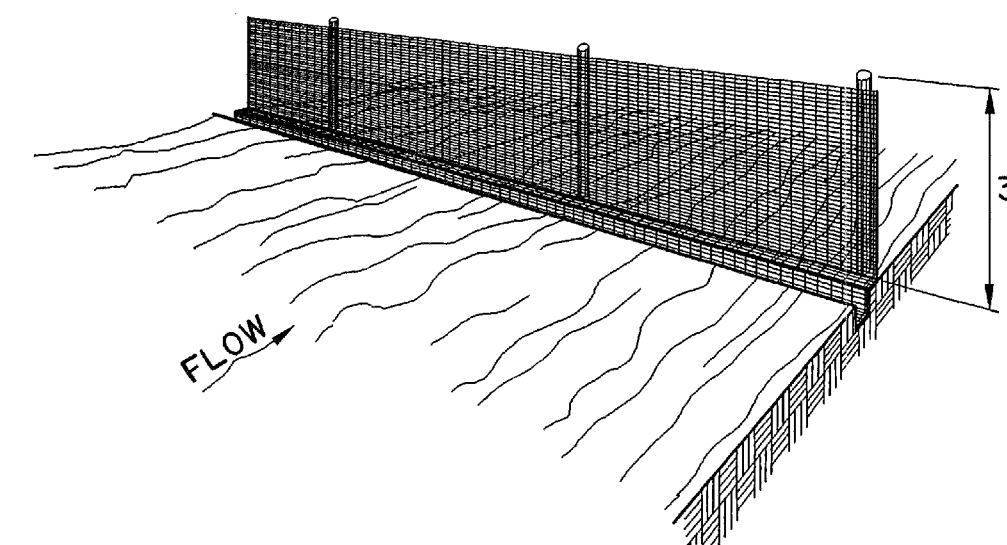
NOTES:
 TEMPORARY STONE CONSTRUCTION ENTRANCE AND/OR WASH RACK

A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON THE CONSTRUCTION SITE TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A STONE ENTRANCE AND/OR WASH RACKS ARE:

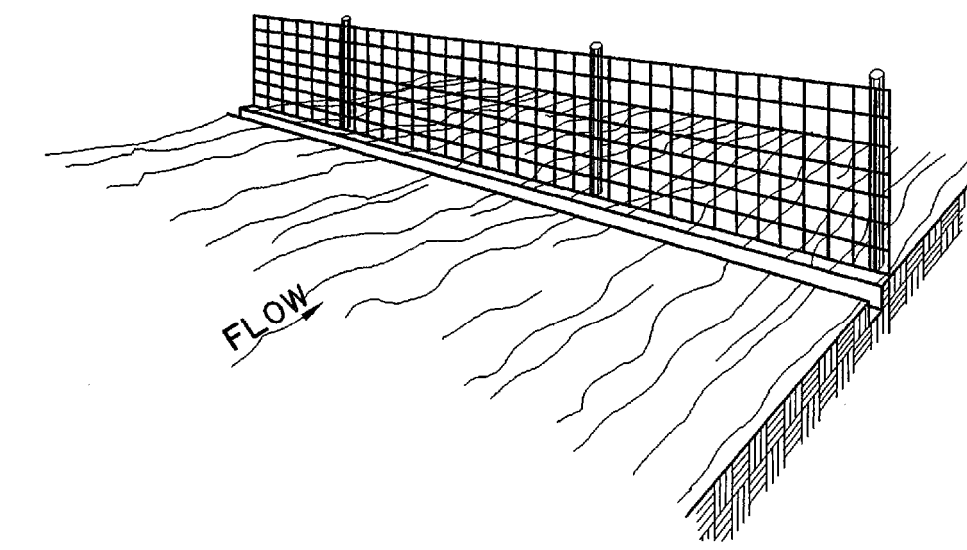
1. THE STONE LAYER MUST BE AT LEAST 6 INCHES THICK.
2. THE STONE SHALL CONFORM TO PROJECT SPECIFICATIONS FOR RIPRAP (CLASS 2 LB).
3. THE LENGTH OF THE PAD MUST BE A LEAST 75 FEET AND IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS.
4. A GEOTEXTILE FABRIC UNDERLINER IS REQUIRED. THE GEOTEXTILE FABRIC SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS D).
5. IF A WASH RACK IS NECESSARY, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.



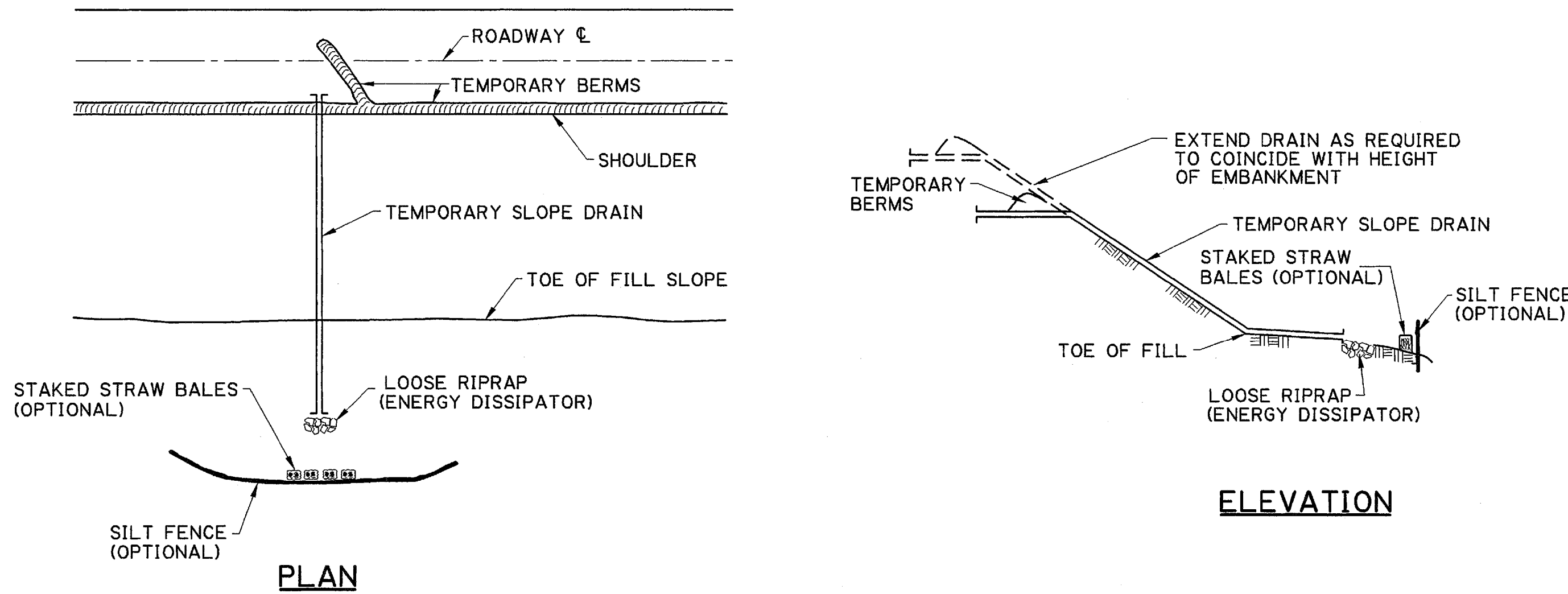
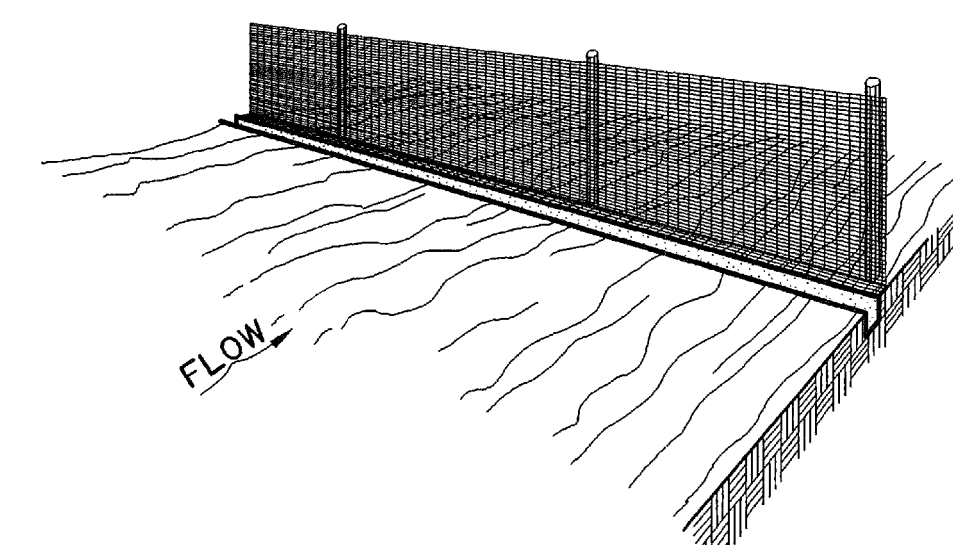
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



2. STAPLE WIRE FENCING TO THE POSTS.



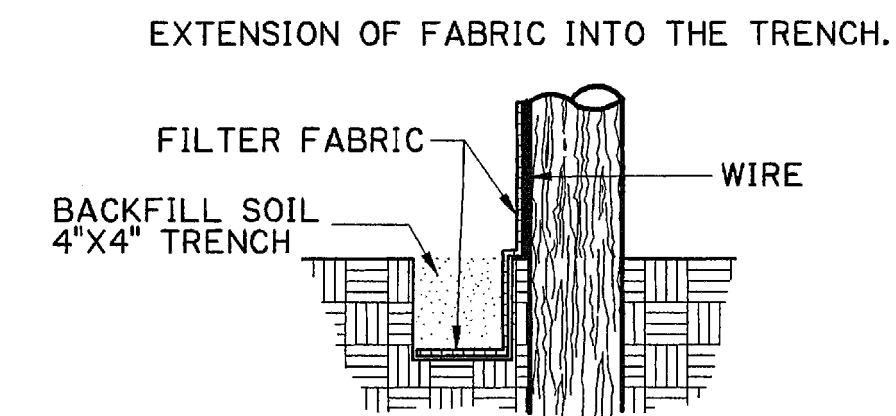
4. BACKFILL AND COMPACT EXCAVATED SOIL.



TEMPORARY SLOPE DRAIN

A TEMPORARY SLOPE DRAIN IS A DEVICE USED TO CARRY WATER FROM THE CONSTRUCTION WORK AREA TO A LOWER ELEVATION. SLOPE DRAINS MAY BE PLASTIC SHEET, METAL OR PLASTIC PIPE, STONE GUTTERS, FIBER MATS, OR CONCRETE OR ASPHALT DITCHES. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A TEMPORARY SLOPE DRAIN ARE:

1. THE SPACING OF THE SLOPE DRAINS VARIES WITH THE ROAD GRADE.
 FOR GRADES: 0.0% - 2.0% USE 500' SPACING
 2.1% - 5.0% USE 200' SPACING
 GREATER THAN 5.0% USE 100' SPACING
2. SLOPE DRAIN MATERIAL: SMOOTH PIPE - 8" MINIMUM - 3 MILS THICK MIN.
 CORRUGATED PIPE - 12" MINIMUM
 PLASTIC SHEETING - 4' WIDE MINIMUM
 PLASTIC SHEETING - 3 MILS THICK MIN.
3. PLASTIC SHEETING CAN BE STAKED DOWN OR WEIGHTED WITH ROCKS OR LOGS. THE AREA UNDER THE SHEETING SHOULD BE SHAPED TO PROVIDE AN ADEQUATE CHANNEL.
4. THE OUTLET END SHOULD BE PROTECTED OR HAVE SOME MEANS OF DISSIPATING ENERGY. THE FLOW SHOULD BE DIRECTED THROUGH A SEDIMENT TRAP SUCH AS A SILT FENCE, HAY BALES, OR OTHER APPROVED SEDIMENT CONTROL DEVICES.
5. TO INSURE PROPER OPERATION, TEMPORARY SLOPE DRAINS SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM, FOR CLOGGING OR DISPLACEMENT. EROSION AT THE OUTLET SHOULD BE CHECKED AND THE SILT TRAPS CLEANED IF NECESSARY.



CONSTRUCTION OF TEMPORARY SILT FENCING

(WIRE SUPPORTED SILT FENCE IS SHOWN. SELF SUPPORTED SILT FENCE WILL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.)



NOTES:

SILT FENCING IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC SUPPORTED BY POSTS AND STRETCHED ACROSS AN AREA TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT. THE SILT FENCING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC GUIDELINES FOR THE USE OF SILT FENCING ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE WHERE THE MAXIMUM DRAINAGE AREA BEHIND THE SILT FENCE IS 1/4 ACRE PER 100 FEET OF SILT FENCE LENGTH
3. USE WHERE THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100 FEET
4. USE THERE THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1
5. DO NOT USE SILT FENCES IN LIVE STREAMS OR IN DITCHES OR SWALES WHERE FLOWS EXCEED ONE CUBIC FOOT PER SECOND

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	315
DESIGNED	JCM
CHECKED	KAJ
DATE	1-14-94
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DATE	10-1-08
BY	W. H. Temp
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APPROVED BY	
CHIEF ENGINEER	
STANDARD PLAN	EC-01
TEMPORARY EROSION CONTROL DETAILS	
HYDRAULICS SECTION	

GUARD RAIL GENERAL NOTES:

- 1. DESIGN REFERENCE: THE LATEST EDITIONS OF THE AASHTO ROADSIDE DESIGN GUIDE (RDG) AND THE LADOTD BRIDGE DESIGN AND EVALUATION MANUAL (BDEM), PART II, VOLUME 4 - HIGHWAY SAFETY.
2. GUARD RAIL LENGTH: TOTAL GUARD RAIL LENGTH AND LENGTH OF NEED SHALL BE BASED ON THE LATEST AASHTO ROADSIDE DESIGN GUIDE LENGTH OF NEED REQUIREMENTS.
3. FOR BRIDGES WITH GUARD RAILS IN URBAN AREAS WITH A DESIGN SPEED OF 45 MPH OR LESS, SEE DOTD EDSM NO. II.3.1.4 FOR DESIGN INFORMATION.
4. FOR GUARD RAIL ON EXISTING HIGHWAYS, SEE DOTD EDSM NO. II.3.1.3 FOR DESIGN INFORMATION.
5. EMBANKMENT WIDENING IS TO PROVIDE SLOPES NOT STEEPER THAN 10H:1V IN FRONT OF THE GUARD RAIL.
6. ALL GUARD RAIL COMPONENTS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFIC PLAN LAYOUT DETAILS, GUARD RAIL DESIGN DATA, PAY ITEMS, AND QUANTITY TABLES PROVIDED IN THE PROJECT PLANS.
7. LONGITUDINAL DIMENSIONS FOR GUARD RAIL ARE MEASURED ALONG THE PROJECTED FACE OF RAILING.
8. THE QUANTITY FOR THE EMBANKMENT WIDENING IS TO BE INCLUDED IN THE EMBANKMENT PAY ITEM QUANTITY FOR THE ROADWAY.
9. A TANGENT END TREATMENT MAY BE USED AS AN ALTERNATE TO THE FLARED END TREATMENT. A ZERO FLARE RATE (b/a=0) IS REQUIRED WHEN THE TANGENT END TREATMENT IS USED AND THE LENGTH OF NEED "X" SHALL BE CALCULATED BASED ON A "ZERO" FLARE RATE.
10. THE POINT WITHIN THE GUARD RAIL END TREATMENT WHERE THE LENGTH OF NEED TERMINATES MAY VARY WITH EACH TYPE OF GUARD RAIL END TREATMENT. THE 12'-6" LENGTH APPLIES TO MOST END TREATMENTS.
11. RETROREFLECTIVE ADHESIVE SHEETING (12" X 2'-8")(TYPE III HIGH INTENSITY OBJECT MARKER PATTERN) SHALL BE APPLIED TO THE END TREATMENT NOSE. SEE THE LATEST LA. STANDARD SPECS. FOR ROADS AND BRIDGES FOR SPECIFICATIONS AND THE SHEETING MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION. FOR PATTERN DETAIL, SEE OBJECT MARKER STANDARD PLANS.
12. GUARD RAIL INSTALLATIONS MAY BE PAVED BY USING CONCRETE PAVING OR ASPHALT CONCRETE. THE INCIDENTAL CONCRETE OR ASPHALT WILL BE USED IF A LAYOUT DETAIL, PAY ITEM, AND QUANTITY IS INDICATED IN THE PLANS. SEE SHEET 11 FOR REQUIRED POST DETAILS WHEN PAVING IS USED AROUND POSTS.
13. GUARD RAIL END TREATMENTS SHALL BE SELECTED FROM THE DOTD APPROVED MATERIALS LIST (AML), AND SHALL BE AASHTO MASH, TEST LEVEL 3 (TL-3) UNLESS OTHERWISE NOTED IN THE PLANS. IF TEST LEVEL 2 (TL-2) GUARD RAIL END TREATMENTS ARE USED, A DESIGN WAIVER SHALL BE REQUIRED. IF MASH FLARED END TREATMENTS ARE NOT AVAILABLE, USE GUARD RAIL END TREATMENT, NCHRP 350 - 31" (TL-3 FLARED), WITH APPROVAL OF PROJECT ENGINEER.
14. FLARED GUARD RAIL END TREATMENTS (12'-6" OR 18'-9"), (PAY ITEMS 704-10-00105 AND 704-10-00110) ARE GENERIC TEST LEVEL 2 (TL-2) NCHRP 350 SYSTEMS THAT CAN ONLY BE USED WITH PERMISSION FROM THE BRIDGE DESIGN ENGINEER ADMINISTRATOR AND AN APPROVED DESIGN WAIVER. SEE BRIDGE DESIGN SPECIAL DETAILS FOR THESE END TREATMENT DETAILS.
15. GUARD RAIL DESIGN VARIABLES FOR STANDARD PLAN SHEETS:

- L1 = LENGTH OF TANGENT SECTION OF RAIL IN ADVANCE OF OBJECT. (FT)
L2 = DISTANCE FROM EDGE OF TRAVEL LANE TO TANGENT SECTION OF RAIL. (FT)
L3 = DISTANCE FROM EDGE OF TRAVEL LANE TO OBJECT OF CONCERN.
LR = RUNOUT LENGTH (FT)
Lc = REQUIRED CLEAR ZONE (FT)
LA = DISTANCE FROM THE EDGE OF THE TRAVEL LANE TO THE LATERAL EXTENT OF THE OBJECT. (FT)
LA = Lc FOR BRIDGE APPLICATIONS
X = CALCULATED LENGTH OF NEED (FT)
Y = DISTANCE FROM EDGE OF THE TRAVEL LANE TO THE BEGINNING OF THE LENGTH OF NEED.
Z = DISTANCE FROM EDGE OF THE TRAVEL LANE TO THE EDGE OF EMBANKMENT.
b/a = FLARE RATE (VERTICAL/HORIZONTAL)

FOR CLEAR ZONE, RUNOUT, FLARE RATE, SHYLINE, AND HORIZONTAL CURVE ADJUSTMENTS, SEE LATEST AASHTO ROADSIDE DESIGN GUIDE AND THE DOTD BRIDGE DESIGN AND EVALUATION MANUAL.

- 16. STEEL POSTS MAY BE USED AS AN ALTERNATE TO WOOD POSTS, UNLESS SHOWN OTHERWISE.
17. INTERMIXING OF STEEL AND WOOD POSTS IN ANY ONE SECTION OF THE GUARD RAIL SHALL NOT BE PERMITTED.
18. ALL MATERIAL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
19. GUARD RAIL HEIGHT TOLERANCE ALLOWED FOR INSTALLATION IS 1 INCH ABOVE AND 0.5 INCH BELOW THE SPECIFIED HEIGHT.
20. GUARD RAIL TRAILING END ANCHORAGE SHALL BE USED TO ANCHOR DOWNSTREAM END OF GUARD RAIL ONLY WHEN TYPICAL GUARD RAIL END TREATMENTS ARE NOT REQUIRED.
21. STANDARD COMPONENTS: STANDARD GUARD RAIL COMPONENTS, INCLUDING POSTS, PANELS, AND BOLT SYSTEM ARE BASED UPON ENGLISH UNIT CONVERSIONS OF THE AASHTO-AGC-ARTBA JOINT COMMITTEE TASK FORCE 13 REPORT: A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE.
* 22. IF OFF-SYSTEM BRIDGE OR BOX CULVERT DETAILS ARE USED, THE PLANS MUST ALSO INCLUDE THE COMMON DETAILS (SHTS. 1-11).

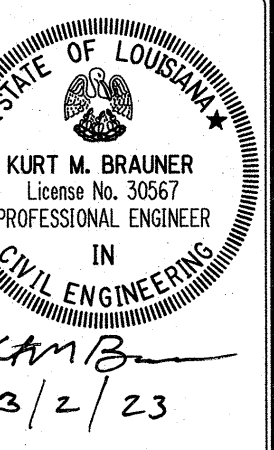
GUARD RAIL AND RELATED PAY ITEMS :

- 202-02-14500 REMOVAL OF GUARD RAIL, (LN FT)
704-01-01000 GUARD RAIL (SINGLE THRIE BEAM) (3'-1 1/2" POST SPACING), (LN FT)
704-01-01020 GUARD RAIL (SINGLE THRIE BEAM) (6'-3" POST SPACING), (LN FT)
704-01-02000 GUARD RAIL (DOUBLE THRIE BEAM) (3'-1 1/2" POST SPACING), (LN FT)
704-01-02020 GUARD RAIL (DOUBLE THRIE BEAM) (6'-3" POST SPACING), (LN FT)
704-03-00200 BLOCKED OUT GUARD RAIL - 31", (6'-3" POST SPACING), (LN FT)
704-04-00200 BLOCKED OUT GUARD RAIL - 31", (DOUBLE FACED, 6'-3" POST SPACING), (LN FT)
704-05-00300 GUARD RAIL ANCHOR SECTIONS - 31", (TRAILING END), (LN FT)
704-06-00100 GUARD RAIL BRIDGE ATTACHMENTS, (LN FT)
704-06-00200 GUARD RAIL BRIDGE ATTACHMENTS (SINGLE THRIE BEAM), (LN FT)
704-07-00200 GUARD RAIL TRANSITION, (DOUBLE THRIE BEAM), (LN FT)
704-09-00100 GUARD RAIL ANCHOR BLOCK, (EA.)
* 704-10-00105 GUARD RAIL END TREATMENT (FLARED, 12'-6" LENGTH), (EA.)
* 704-10-00110 GUARD RAIL END TREATMENT (FLARED, 18'-9" LENGTH), (EA.)
* 704-10-00120 GUARD RAIL END TREATMENT, MASH, (TL-3 FLARED), (EA.)
* 704-10-00204 GUARD RAIL END TREATMENT, MASH, (TL-2 TANGENT), (EA.)
* 704-10-00205 GUARD RAIL END TREATMENT, MASH, (TL-3 TANGENT), (EA.)
* 704-10-00305 GUARD RAIL END TREATMENT, MASH, (TL-3 BI-DIRECTIONAL), (EA.)
* 704-10-00310 GUARD RAIL END TREATMENT, NCHRP 350 - 31" (TL-3 FLARED), (EA.)
810-06-00100 CONCRETE PIER PROTECTION SYSTEM (VEHICLE), (LN FT)
* SEE NOTE NO.13
* SEE NOTE NO.14

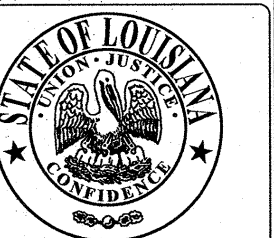
GUARD RAIL STANDARD PLAN INDEX

Table with 3 columns: BRIDGE STANDARD INDEX NO., SERIES, and DESCRIPTION. Rows include COMMON DETAILS, BRIDGE END AND NON-BRIDGE APPLICATIONS, OFF - SYSTEM BRIDGE, and BOX CULVERT DETAILS.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

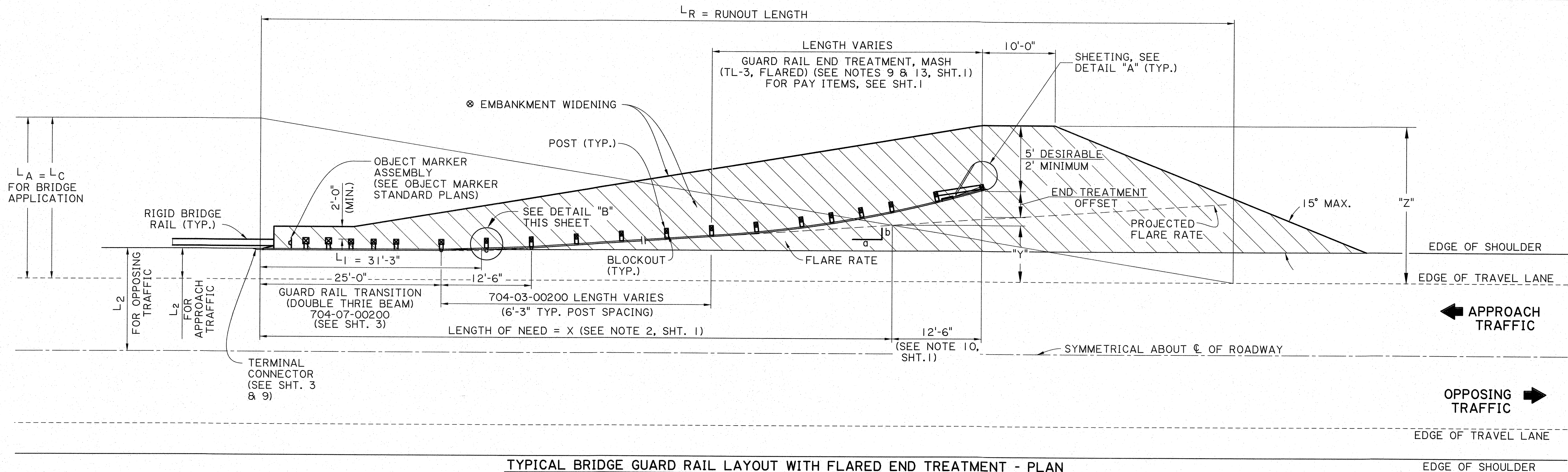


APPROVED BY CHIEF ENGINEER [Signature] DATE: 4/13/2023



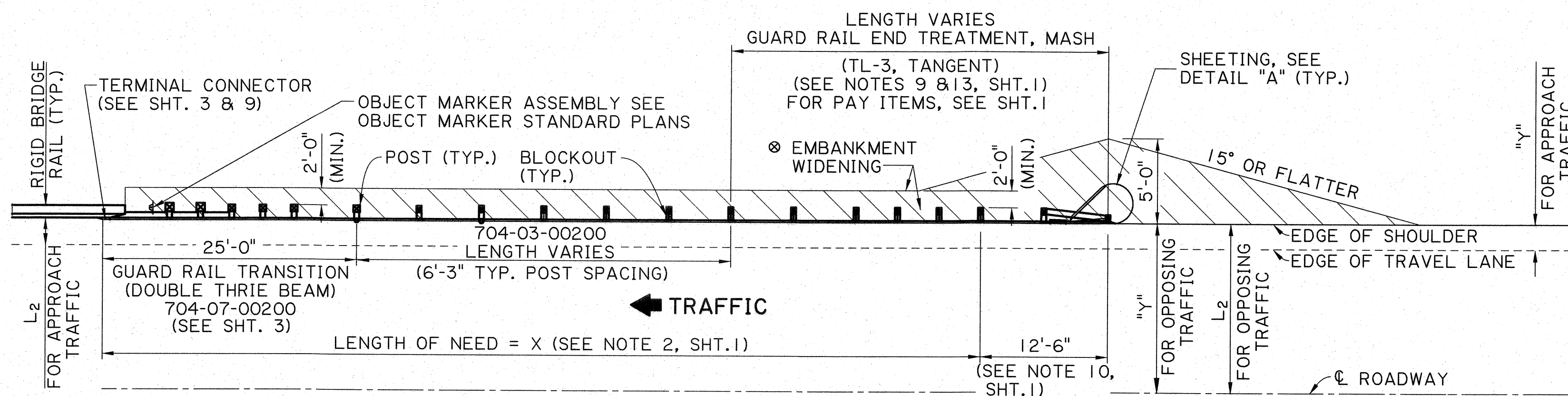
HIGHWAY GUARD RAIL (MASH) GENERAL NOTES, PAY ITEMS AND STANDARD PLAN INDEX BD.1.1.0.01 GR-MASH-ON STANDARD PLAN





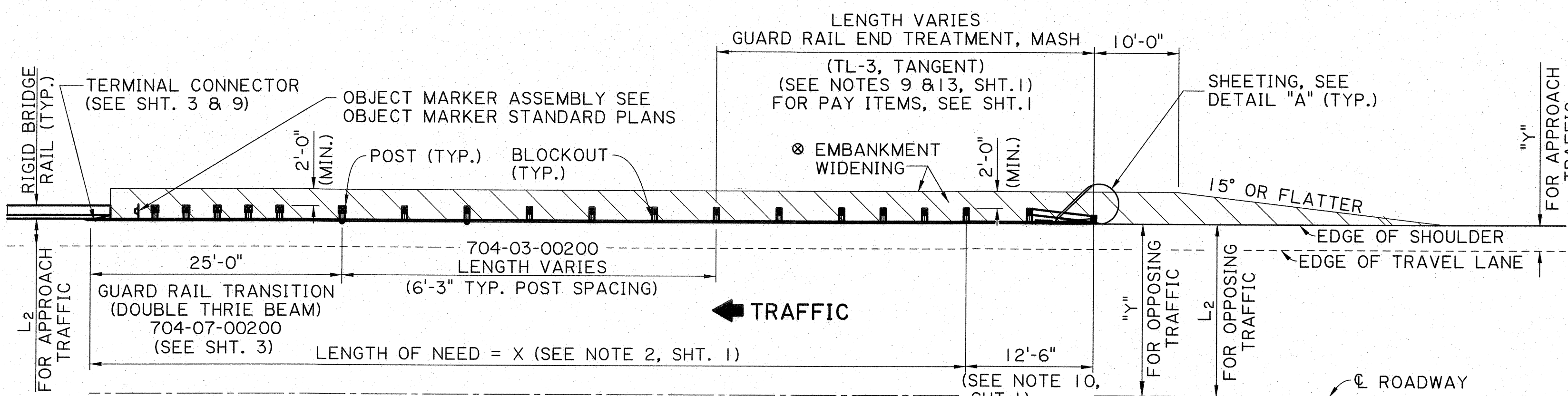
TYPICAL BRIDGE GUARD RAIL LAYOUT WITH FLARED END TREATMENT - PLAN

NOTE: LAYOUT SIMILAR FOR OTHER QUADRANTS OF BRIDGE END
SEE NOTES 5, 8, AND 12, SHT. 1.



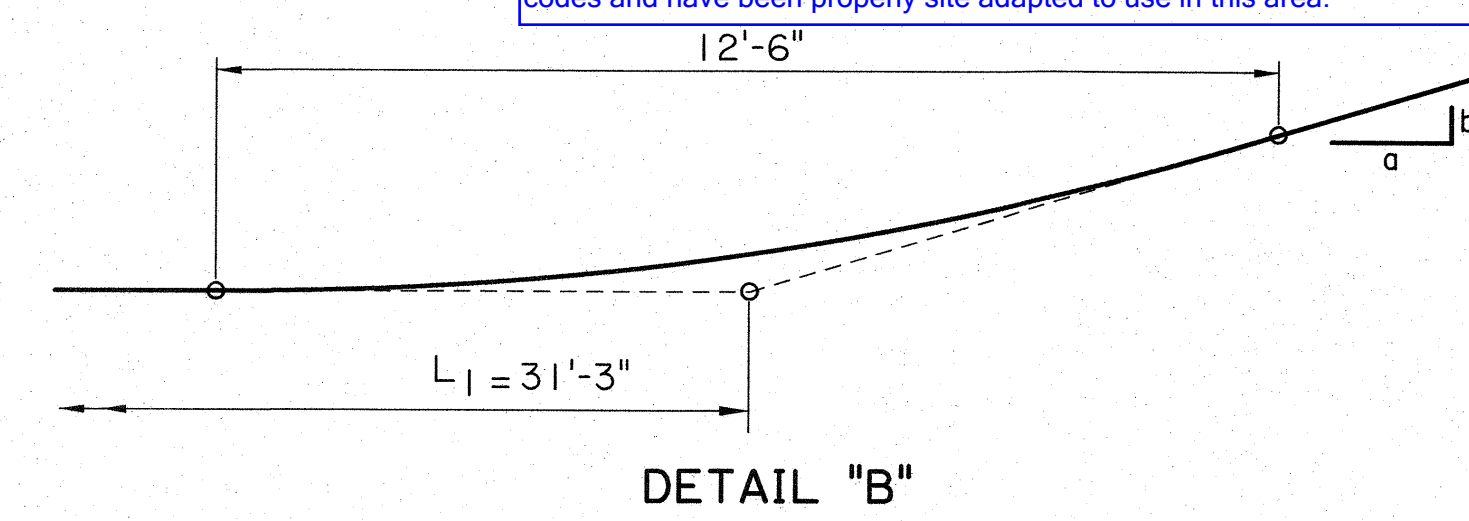
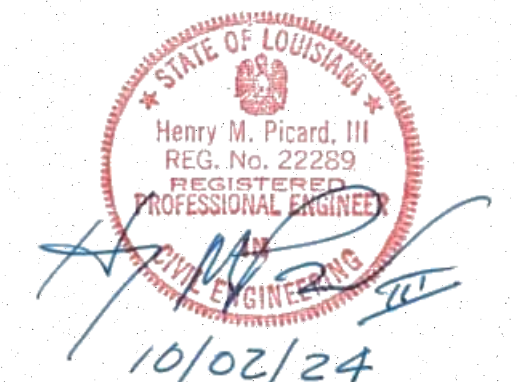
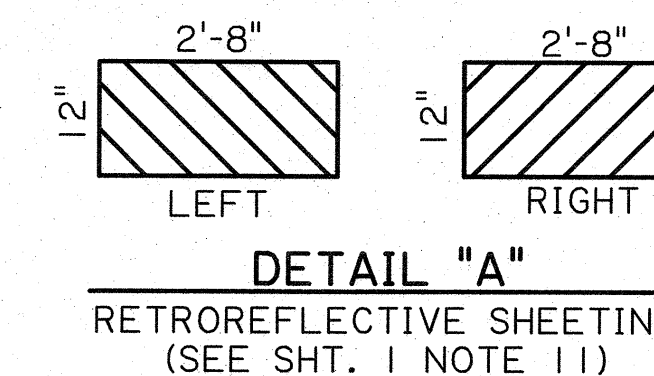
TYPICAL BRIDGE GUARD RAIL LAYOUT WITH TANGENT END TREATMENT - PREFERRED GRADING - PLAN

SEE NOTES 5, 8, AND 12, SHT. 1.



TYPICAL BRIDGE GUARD RAIL LAYOUT WITH TANGENT END TREATMENT - ALTERNATIVE GRADING - PLAN

SEE NOTES 5, 8, AND 12, SHT. 1.



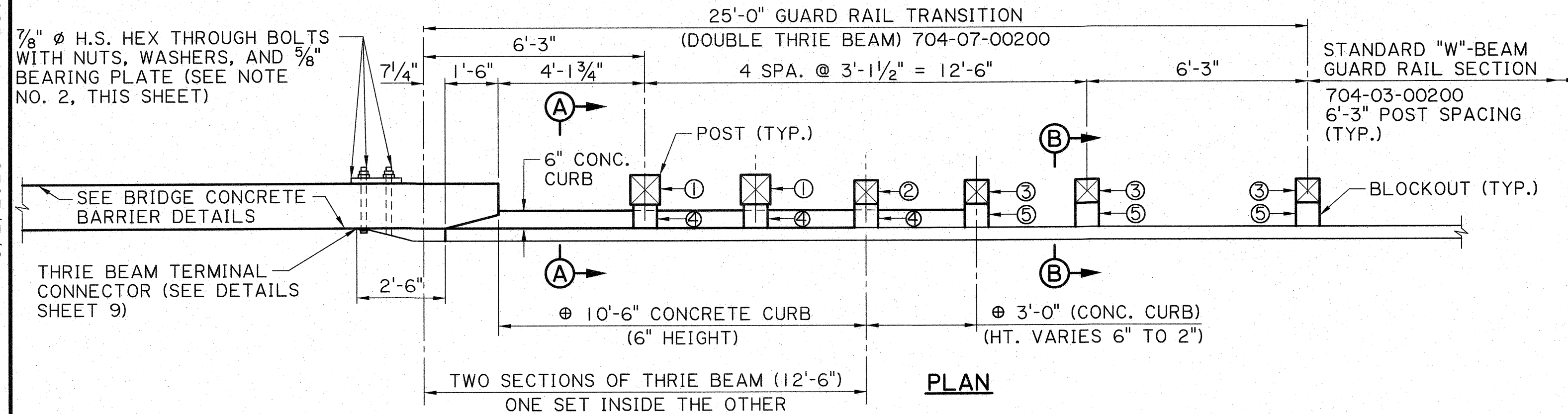
TYPICAL EMBANKMENT WIDENING SECTION

NOTES:

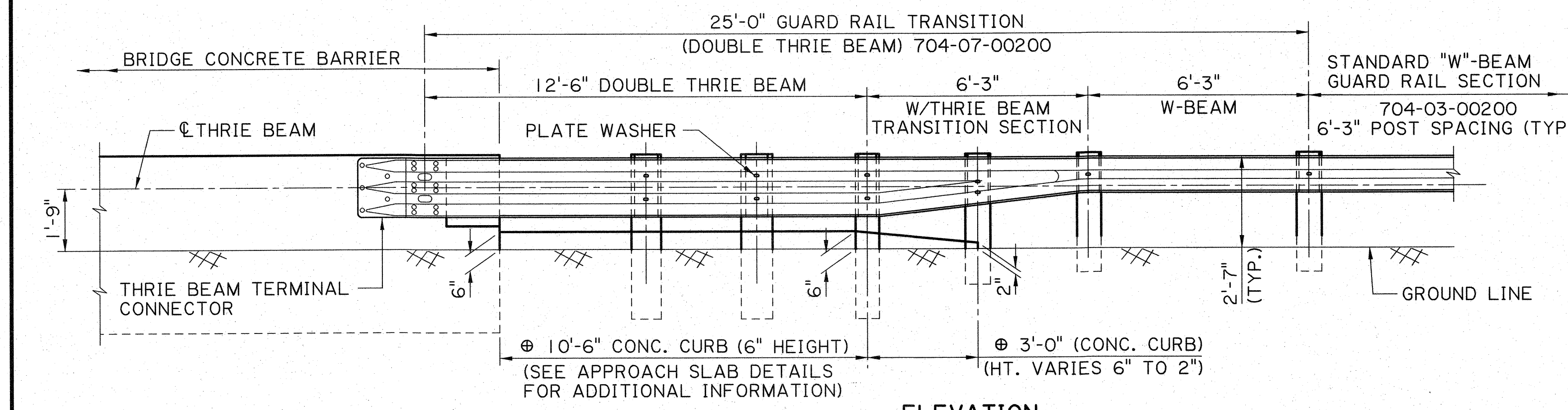
THE DETAILS SHOWN ON THIS SHEET SHALL BE USED TO CONNECT GUARD RAIL TO RIGID BRIDGE RAILS. DETAILS FOR CONNECTING TO A FLEXIBLE BRIDGE RAIL ARE SHOWN ON STANDARD PLAN GRR-06, "APPROACH GUARD RAIL FOR STRUCTURES WITH FLEXIBLE RAILS."

SHEET NUMBER		317	
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DESIGN	P. FOSSIER	CHECK	K. BRAUNER
DRAWING	J. DOUCET	CHECK	K. BRAUNER
REVIEW	C. GUIDRY	SERIES	2 OF 11
APPROVED BY CHIEF ENGINEER: <i>Henry M. Picard, III</i> DATE: 10/02/24			
HIGHWAY GUARD RAIL (MASH) BRIDGE APPLICATION (TYPICAL LAYOUT)			
BD.1.1.0.02 GR-MASH-ON			
BRIDGE AND STRUCTURAL DESIGN			

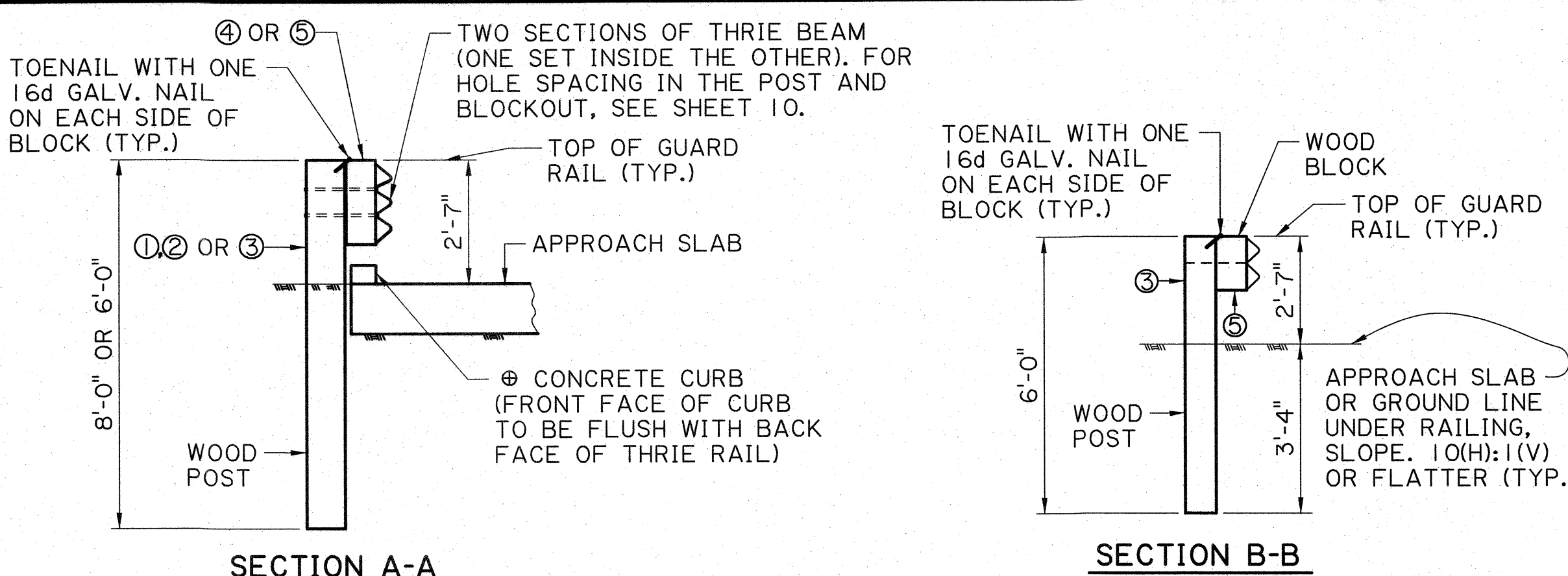
13:25
 3/1/2023
 IP_PWP:d1074021\BD.1.1.0.03 - HIGHWAY GUARD RAIL (MASH).dgn



PLAN



ELEVATION

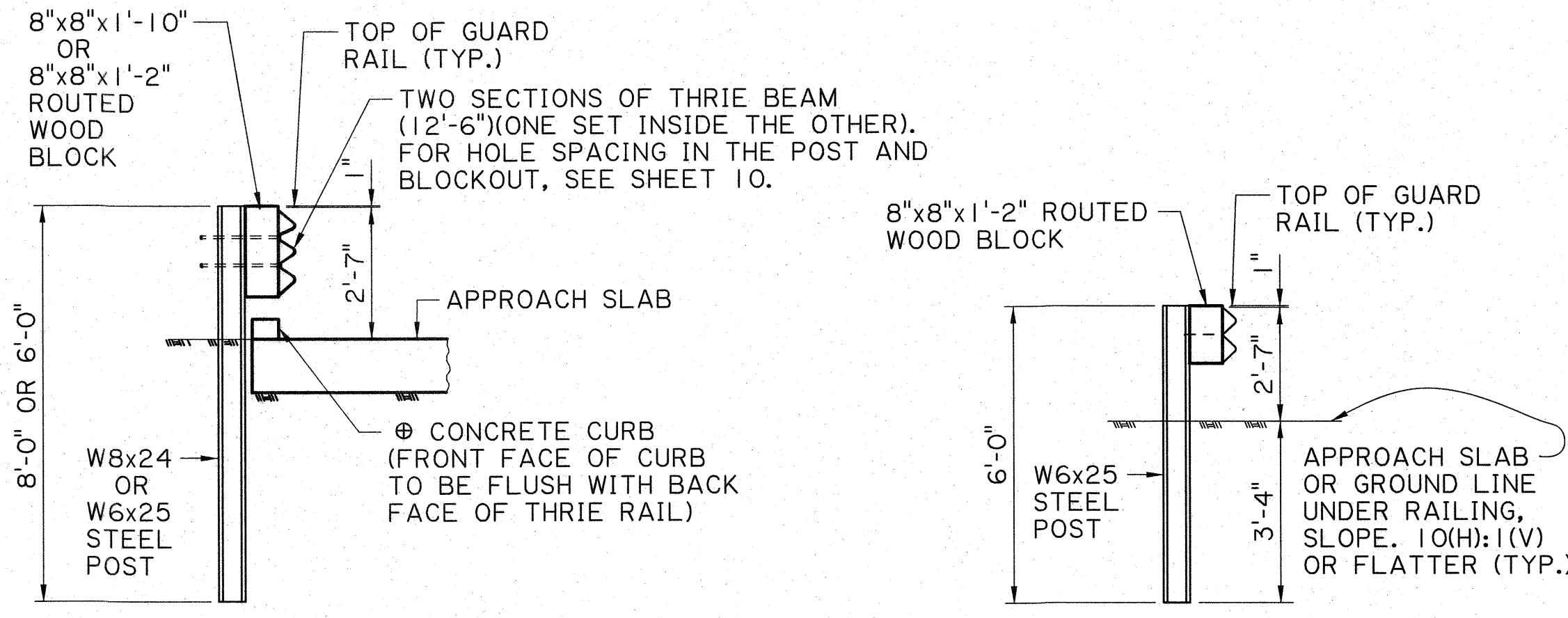


SECTION A-A

SECTION B-B

WOOD POST & WOOD BLOCKOUT

(POST & BLOCKOUT SIZE VARY IN TRANSITION, SEE PLAN VIEW)



SECTION A-A

SECTION B-B

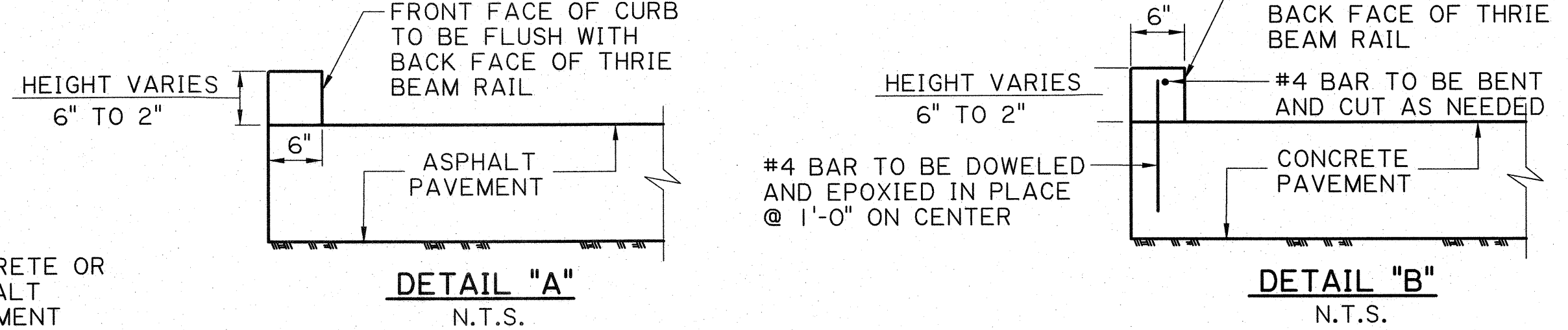
STEEL POST & ROUTED WOOD BLOCKOUT ALTERNATE

(POST & BLOCKOUT SIZE VARY IN TRANSITION, SEE PLAN VIEW)

***WOOD POST & WOOD BLOCKOUT FOR GUARD RAIL TRANSITION**

NO.	SIZE (WIDTHxDEPTHxLENGTH)
①	10" x 10" x 8'-0" POST
②	8" x 8" x 8'-0" POST
③	8" x 8" x 6'-0" POST
④	8" x 8" x 1'-10" BLOCKOUT
⑤	8" x 8" x 1'-2" BLOCKOUT

*SEE NOTE FOR STEEL POST ALTERNATE



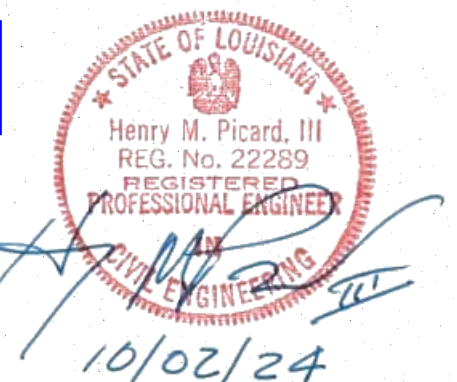
DETAIL "A"

DETAIL "B"

N.T.S.

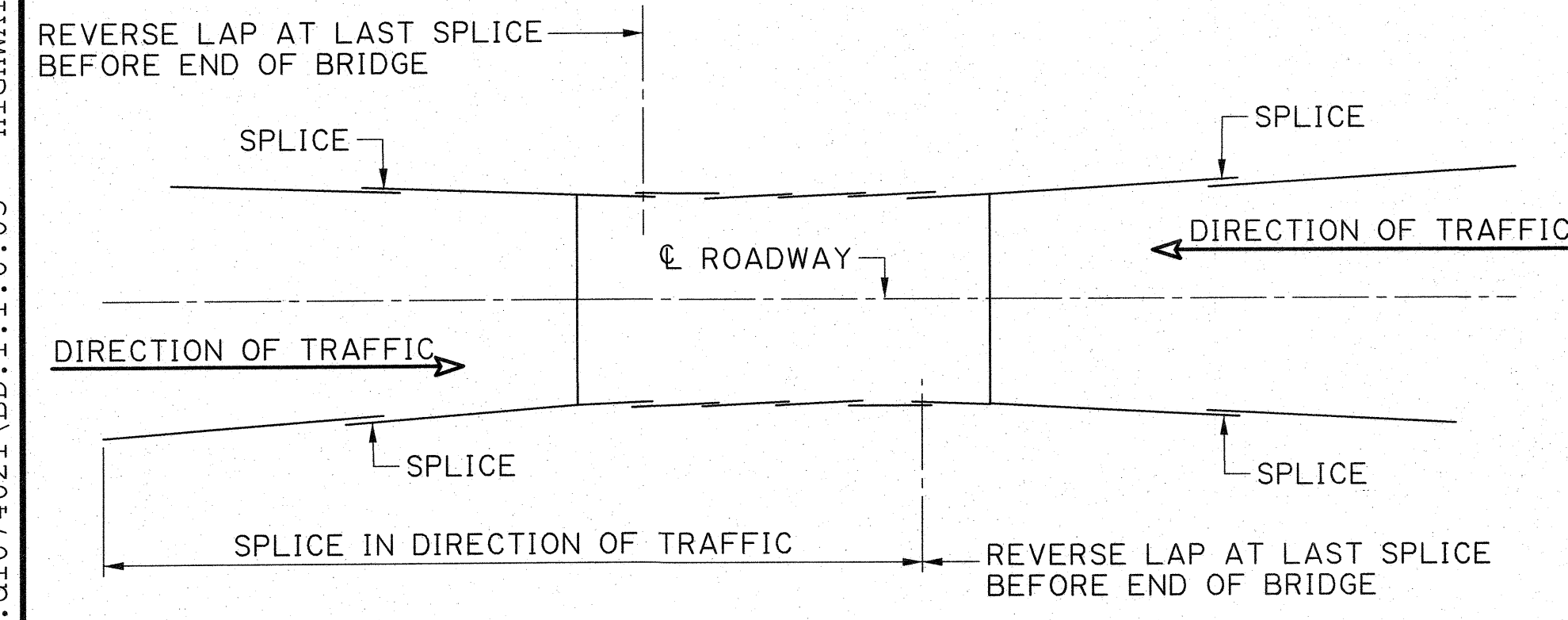
N.T.S.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



NOTES

- THIS GUARD RAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO THE CONCRETE BARRIER SHAPE AS SHOWN. SEE BRIDGE BARRIER RAILING DETAILS FOR INFORMATION.
- 7/8" Ø H.S. BOLTS FOR CONCRETE BARRIER AND THRIE BEAM TERMINAL CONNECTOR SHALL BE ASTM A449. FOR 5/8" STEEL BEARING PLATE, SEE SHEET 9. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A153.
- STEEL POST ALTERNATES: STEEL POSTS ARE ALLOWED AS AN ALTERNATE TO WOOD POSTS. USE W8 x 24 STEEL POST ALTERNATE FOR 10" x 10" WOOD POST. USE W6 x 25 STEEL POST ALTERNATE FOR 8" x 8" WOOD POST. USE SAME LENGTHS AS WOOD POSTS.
- BLOCKOUTS: USE WOOD BLOCKOUTS ONLY, STEEL AND RECYCLED BLOCKOUTS ARE NOT PERMITTED FOR THE GUARD RAIL TRANSITION. ALL WOOD BLOCKOUTS ARE REQUIRED TO BE ROUTED WHEN USED WITH STEEL POSTS. SEE SHEET 10.
- INTERMIXING OF STEEL AND WOOD POSTS IN THE GUARD RAIL TO BRIDGE RAIL TRANSITION SECTION IS NOT ALLOWED.
- FOR GUARD RAIL TRANSITIONS CONSTRUCTED WITH NEW APPROACH SLABS, CONCRETE CURBS SHALL BE USED AND PAID FOR WITH THE APPROACH SLAB PAY ITEM. FOR GUARD RAIL TRANSITIONS CONSTRUCTED WHEN THE APPROACH SLAB OR PAVEMENT IS EXISTING AND A NEW CURB IS NEEDED, THE ASPHALT CURB ALTERNATE DETAIL SHALL BE USED ON ASPHALT PAVEMENTS, AND PAID FOR UNDER 707-04-00100, "ASPHALT CURB" OR AS INDICATED IN THE PLANS. ON EXISTING CONCRETE PAVEMENTS, THE CONCRETE CURB ALTERNATE DETAIL SHALL BE USED AND PAID FOR UNDER 707-01-00100, "CONCRETE CURB" OR AS INDICATED IN THE PLANS.
- THE USE OF THIS BRIDGE BARRIER TRANSITION HAS ONLY BEEN APPROVED FOR USE UNDER NCHRP REPORT 350. AS PER LADOTD'S MASH IMPLEMENTATION POLICY, THEIR CONTINUED USE IS ALLOWED WHILE A MASH ALTERNATIVE IS DEVELOPED OR EVALUATED.

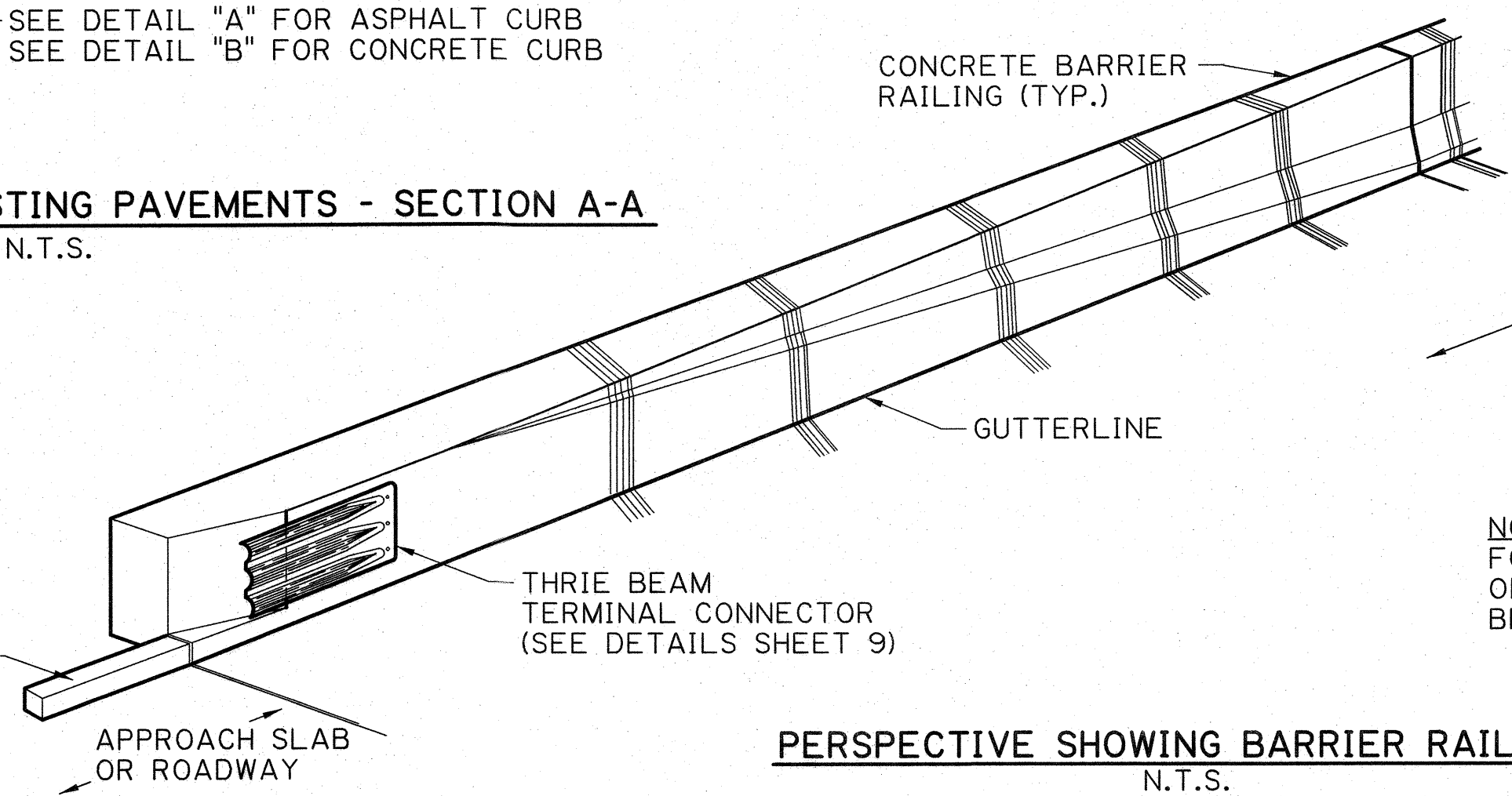


LAYOUT SHOWING DIRECTION OF GUARD RAIL SPLICE FOR TWO WAY TRAFFIC

N.T.S.

***CURB ALTERNATE FOR EXISTING PAVEMENTS - SECTION A-A**

N.T.S.



PERSPECTIVE SHOWING BARRIER RAIL END

N.T.S.

NOTE:
FOR TRANSITION LENGTH & DETAILS OF THE CONCRETE BARRIER, SEE BRIDGE BARRIER RAILING DETAILS.

SHEET NUMBER: 318

ST. TAMMANY

DESIGN: P. FOSSIER
CHECK: K. BRAUNER
DETAIL: J. DOUCET
CHECK: K. BRAUNER
REVIEW: C. GUIDRY
SERIES: 3 OF 11

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
3/2/23

APPROVED BY: CHIEF ENGINEER
10/13/2023

STATE OF LOUISIANA
HENRY M. PICARD, III
REG. No. 22299
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
10/02/24

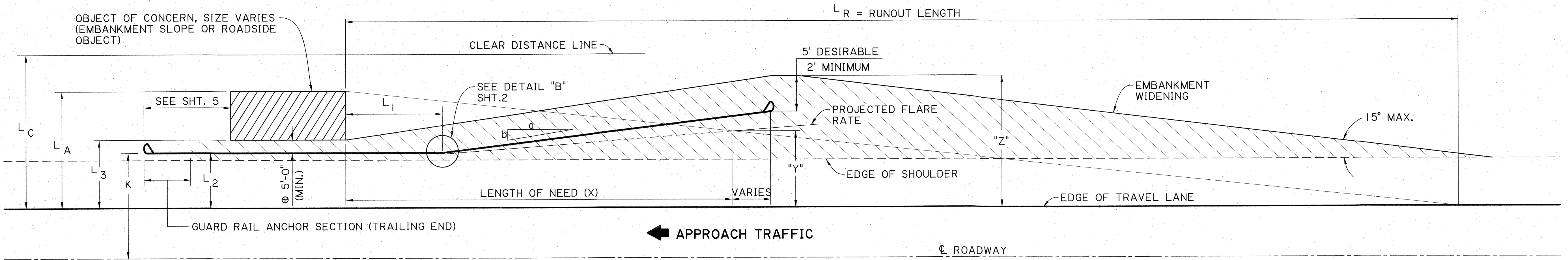
HIGHWAY GUARD RAIL (MASH)
THRIE BEAM GUARD RAIL
TRANSITION TO BRIDGE RAIL

BRIDGE AND STRUCTURAL DESIGN

13:26

3/1/2023

IP_PWP:d1074021\BD.1.1.0.04 - HIGHWAY GUARD RAIL (MASH) .dgn



GUARD RAIL LAYOUT FOR SHOULDER APPLICATIONS - APPROACH VARIABLES

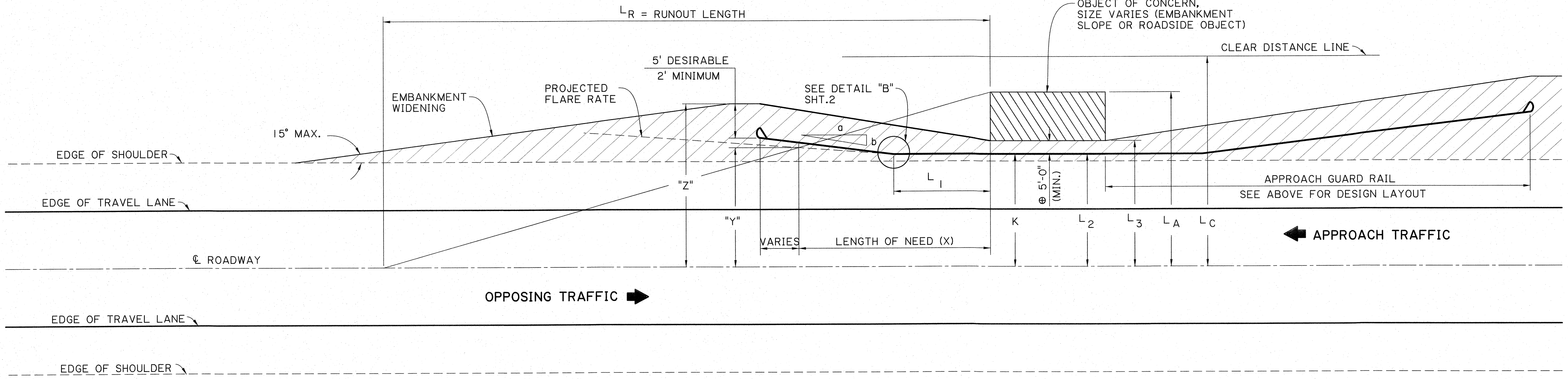
(GUARD RAIL OUTSIDE OF OPPOSING TRAFFIC'S CLEAR ZONE ; $K > Lc$)
N.T.S.

⊕ MINIMUM DISTANCE MEASURED FROM BACK FACE OF GUARD RAIL TO FRONT FACE OF OBJECT OF CONCERN.

LAYOUT FOR TANGENT GUARD RAIL SECTIONS AND END TREATMENTS SIMILAR. FOR EMBANKMENT WIDENING DETAILS, SEE SHT. NO. 2.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



GUARD RAIL LAYOUT FOR SHOULDER APPLICATIONS - OPPOSING VARIABLES

(GUARD RAIL INSIDE OF OPPOSING TRAFFIC'S CLEAR ZONE ; $K < Lc$)
N.T.S.

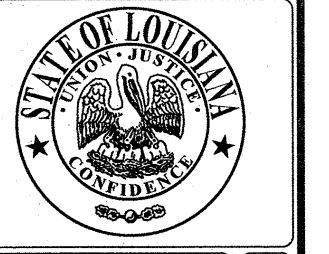
SHEET NUMBER 319

ST. TAMMANY

DESIGN	P. FOSSIER
CHECK	K. BRAUNER
DETAIL	J. DOUCET
CHECK	K. BRAUNER
REVIEW	C. GUIDRY
SERIES	4 OF 11

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/02/24

APPROVED BY: CHIEF ENGINEER
DATE: 4/13/2023



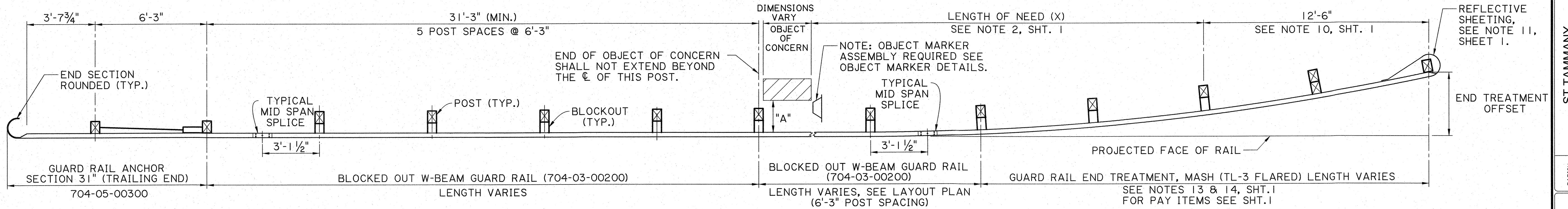
HIGHWAY GUARD RAIL (MASH)
NON-BRIDGE APPLICATION
(TYPICAL LAYOUT)
BD.1.1.0.04
GR-MASH-ON
STANDARD PLAN



BRIDGE AND STRUCTURAL DESIGN

13:27

3/1/2023

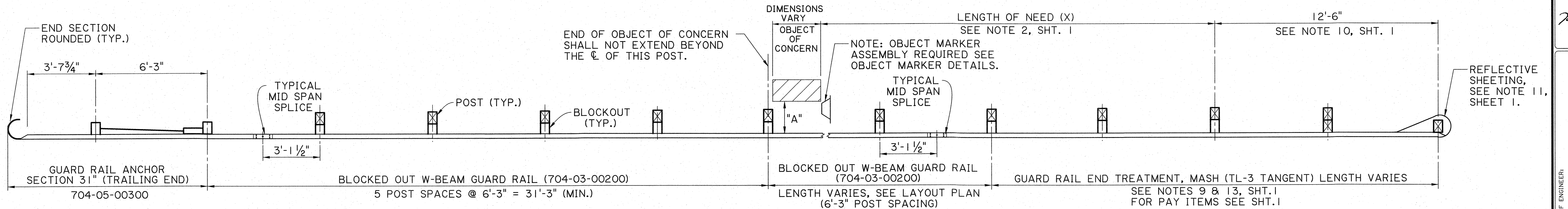


FOR TRAILING END TERMINAL DETAILS AND NOTES, SEE SHTS. 7 & 8.

PLAN - NON-BRIDGE END APPLICATION - FLARED

BACK FACE OF GUARD RAIL TO FRONT FACE OF OBJECT = "A" = 5'-0" MIN.

N.T.S.

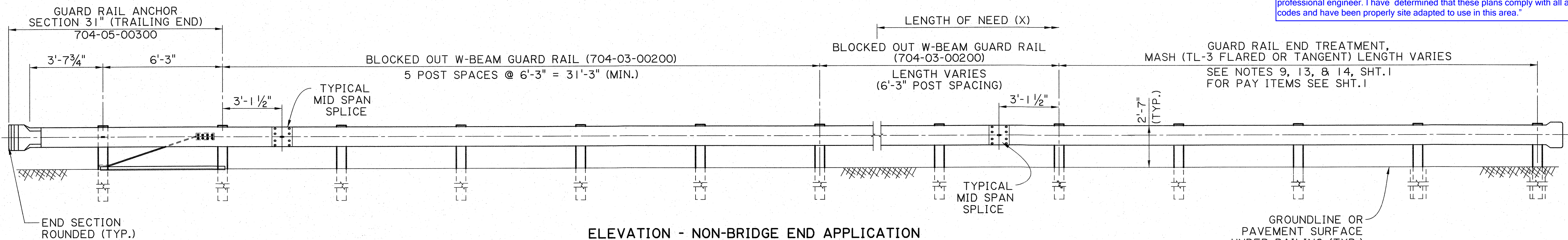


FOR TRAILING END TERMINAL DETAILS AND NOTES, SEE SHTS. 7 & 8.

PLAN - NON-BRIDGE END APPLICATION - TANGENT

BACK FACE OF GUARD RAIL TO FRONT FACE OF OBJECT = "A" = 5'-0" MIN.

N.T.S.

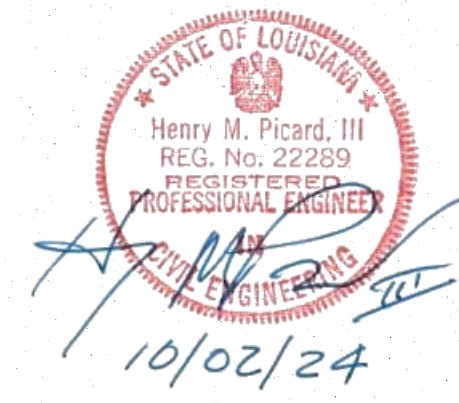


ELEVATION - NON-BRIDGE END APPLICATION

FOR POST, BLOCKOUTS AND GUARD RAIL DETAILS, SEE SHTS. 6, 9, 10, & 11

N.T.S.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



IP_PWP:d1074021\BD.1.1.0.05 - HIGHWAY GUARD RAIL (MASH) .dgn

SHEET NUMBER		320
ST. TAMMANY		
DESIGN	P. FOSSIER	CONTROL SECTION
CHECK	K. BRAUNER	STATE PROJECT
DETAIL	J. DOUCET	5 OF 11
CHECK	K. BRAUNER	
REVIEW	C. GUIDRY	
SERIES		

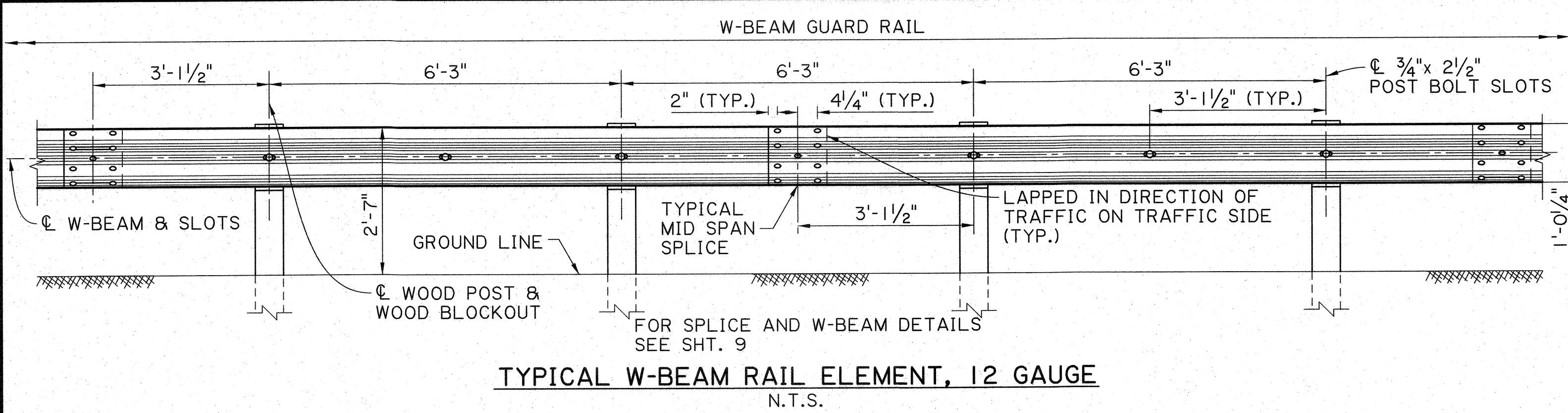
APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 4/13/2023

REGISTERED PROFESSIONAL ENGINEER: *[Signature]* DATE: 10/02/24

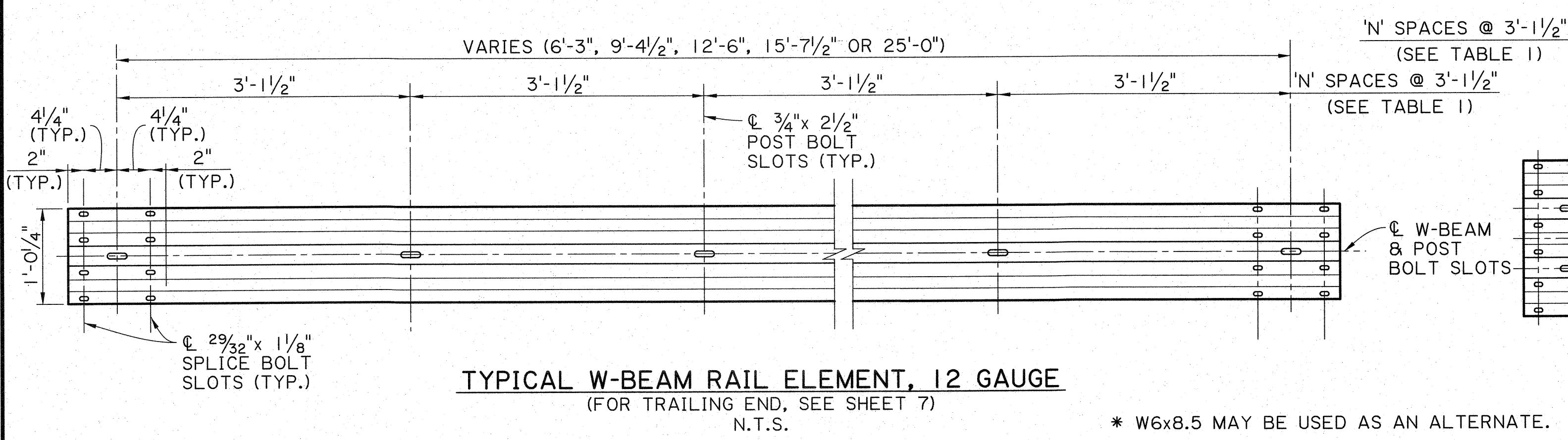
HIGHWAY GUARD RAIL (MASH) NON-BRIDGE APPLICATION (TYPICAL LAYOUT)

BRIDGE AND STRUCTURAL DESIGN

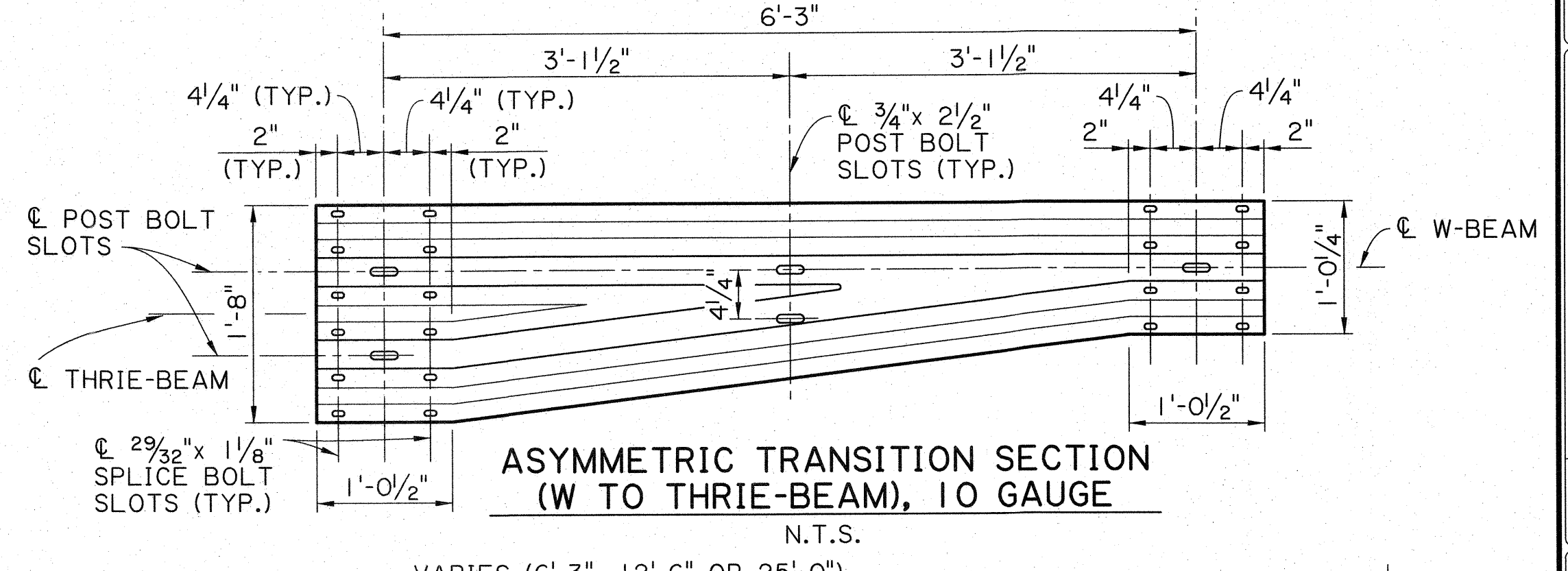
13:28
3/1/2023



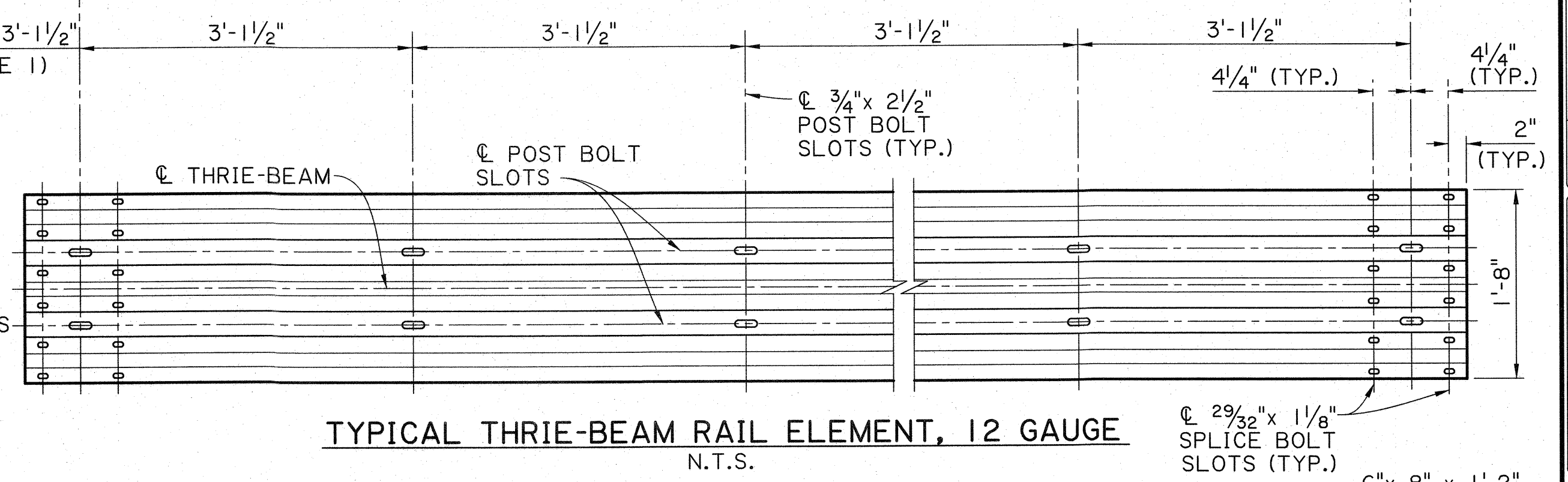
TYPICAL W-BEAM RAIL ELEMENT, 12 GAUGE
N.T.S.



TYPICAL W-BEAM RAIL ELEMENT, 12 GAUGE
(FOR TRAILING END, SEE SHEET 7)
N.T.S.



ASYMMETRIC TRANSITION SECTION
(W TO THRIE-BEAM), 10 GAUGE
N.T.S.



TYPICAL THRIE-BEAM RAIL ELEMENT, 12 GAUGE
N.T.S.

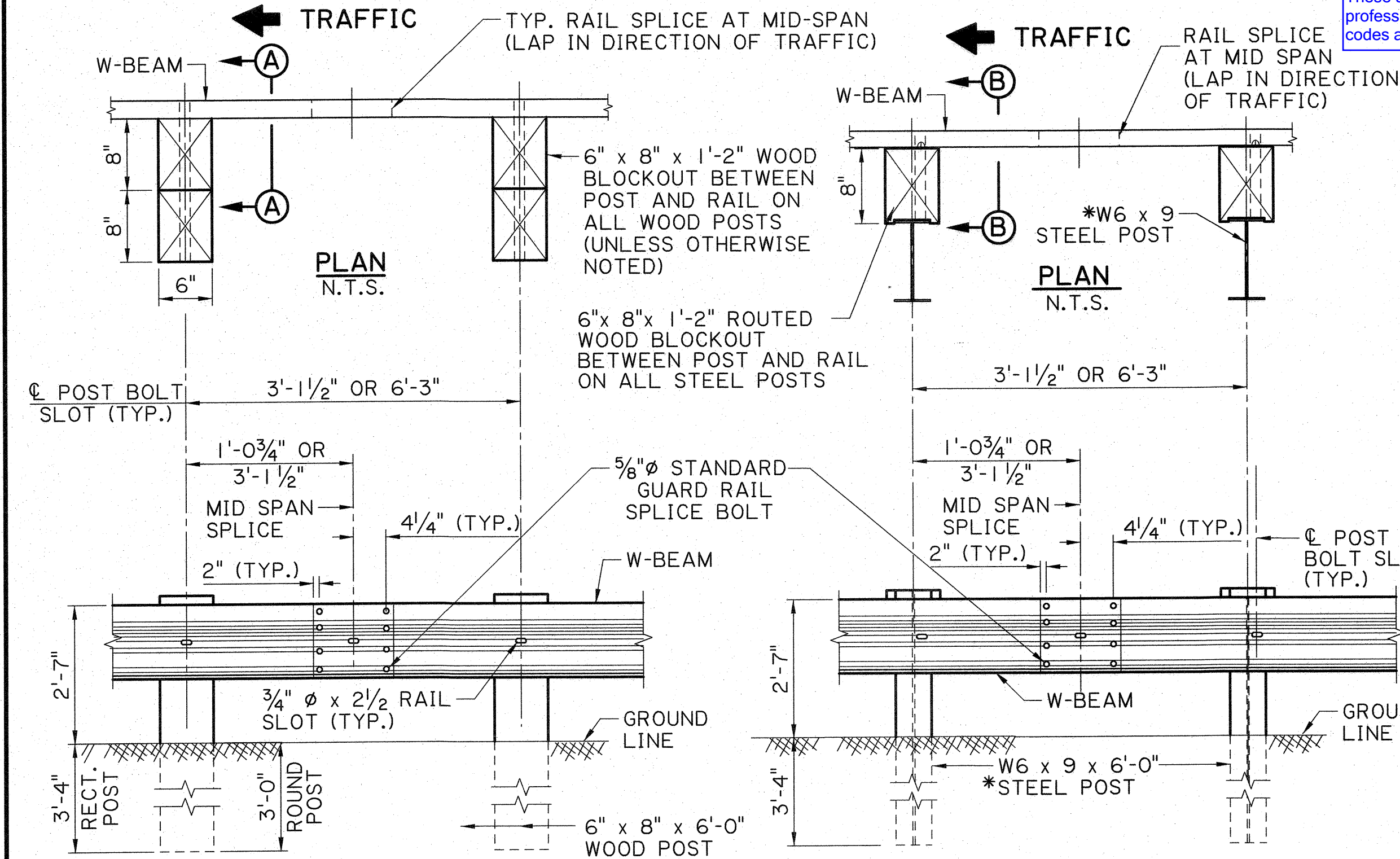
TABLE 1: ELEMENT SUMMARY TABLE:

PANEL TYPE	NUMBER OF SPACES 'N'	GAUGE	PANEL TYPE	NUMBER OF SPACES 'N'	GAUGE
6'-3" W-BEAM	2	12	6'-3" THRIE-BEAM	2	12
9'-4 1/2" W-BEAM	3	12	12'-6" THRIE-BEAM	4	12
12'-6" W-BEAM	4	12	25'-0" THRIE-BEAM	8	12
15'-7 1/2" W-BEAM	5	12	THRIE-BEAM TRANSITION	2	10
25'-0" W-BEAM	8	12			

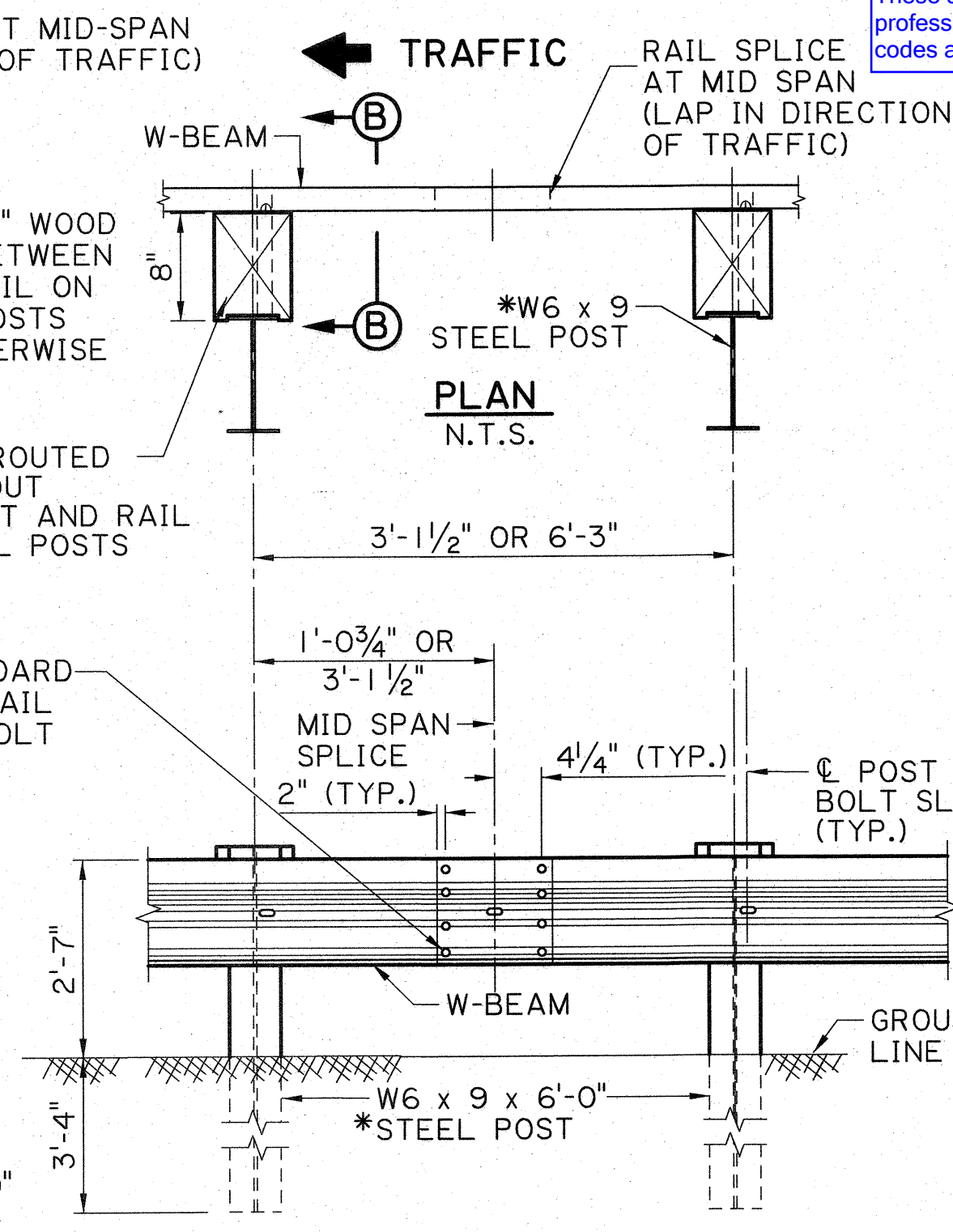
* W6x8.5 MAY BE USED AS AN ALTERNATE.



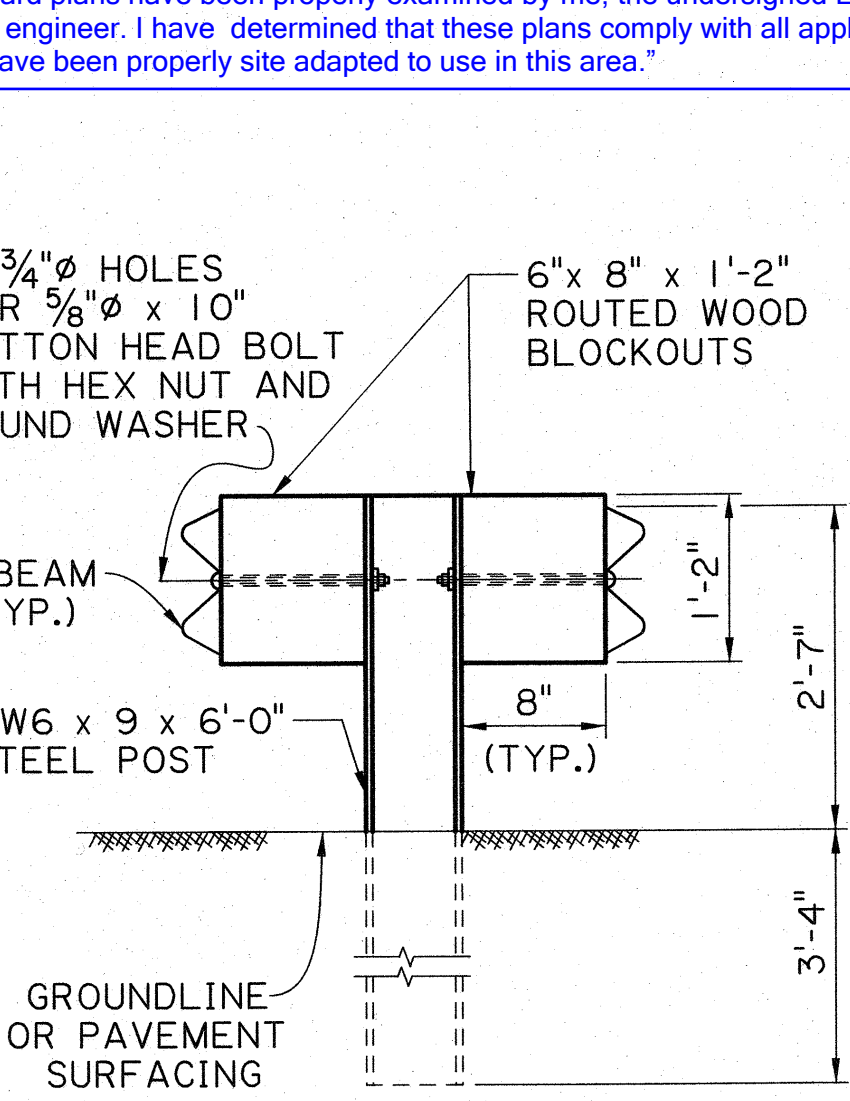
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



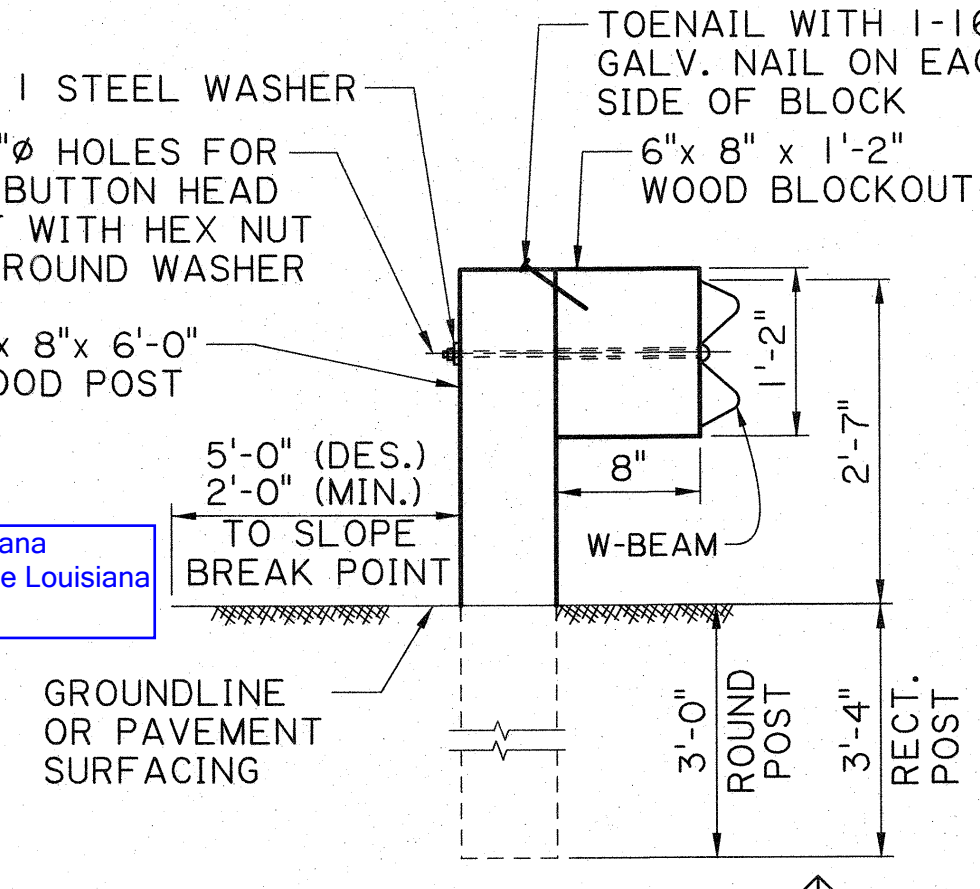
DETAIL OF 6" x 8" x 6'-0" WOOD POSTS AND WOOD BLOCKS-STD. GUARD RAIL
N.T.S.



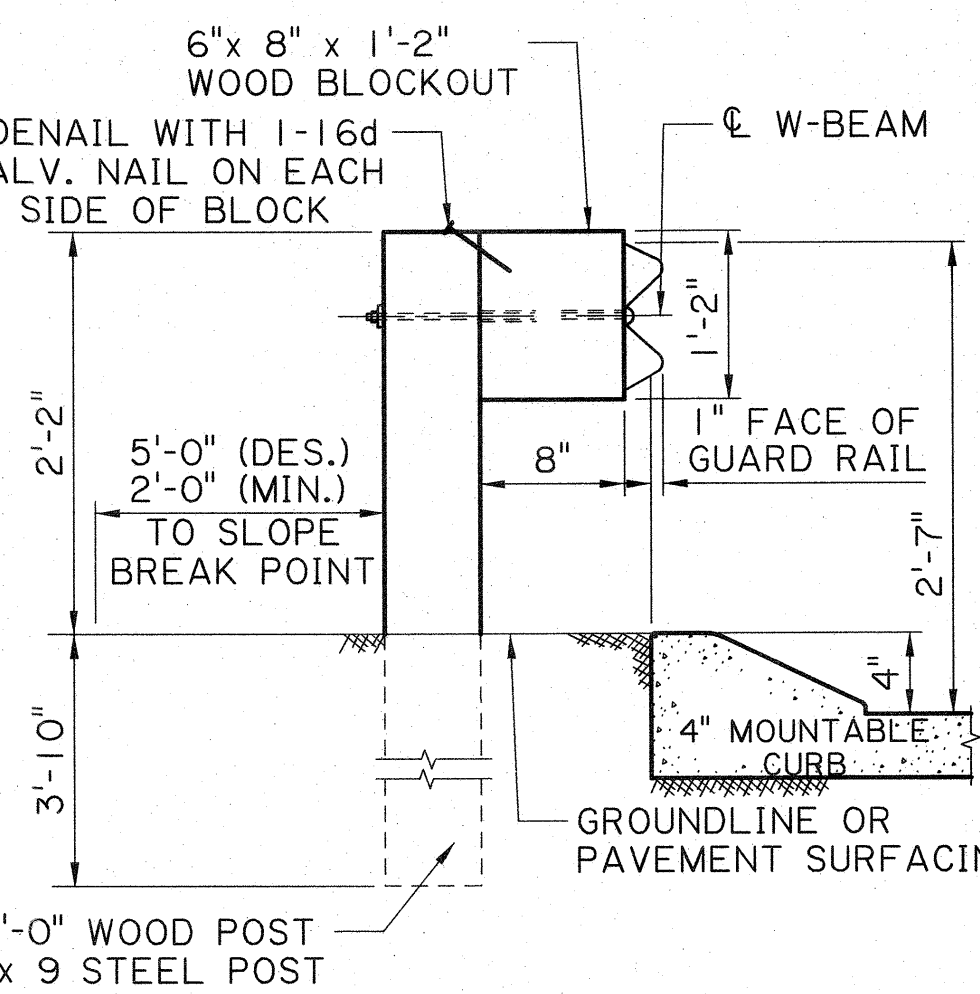
*DETAIL OF W6 x 9 STEEL POSTS AND WOOD BLOCKS-STD. GUARD RAIL
N.T.S.



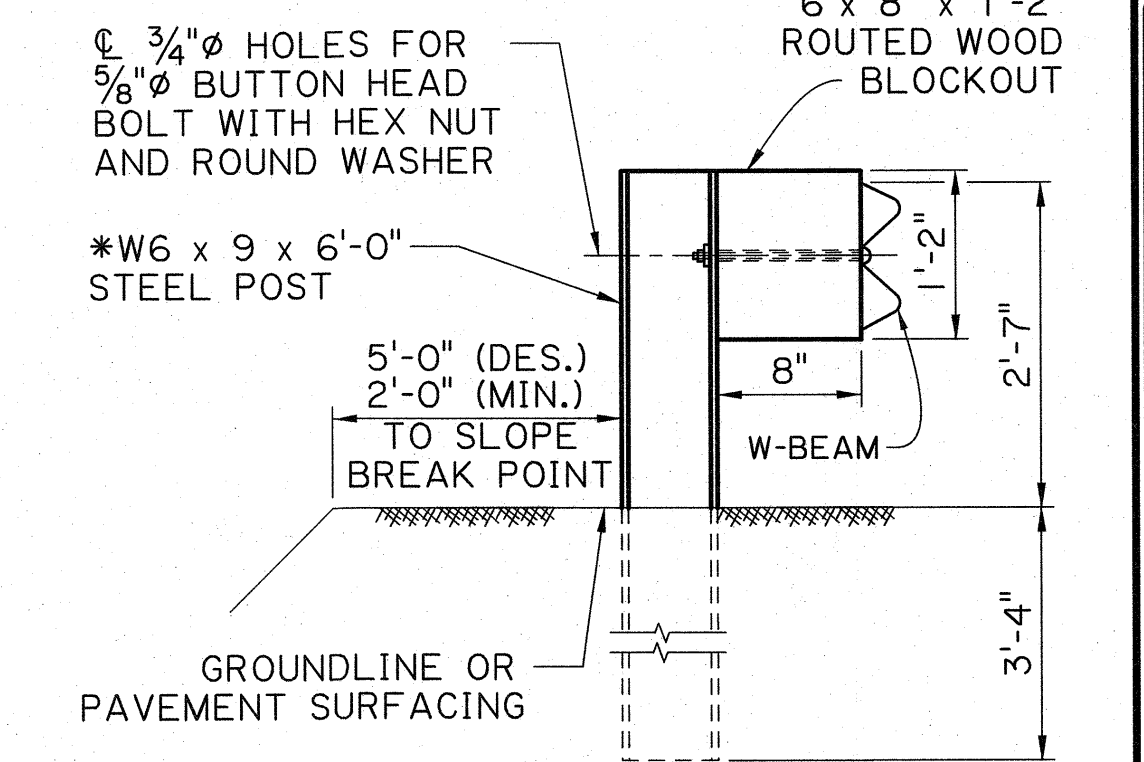
TYPICAL W-BEAM MEDIAN BARRIER DETAIL STEEL POST ONLY
N.T.S.



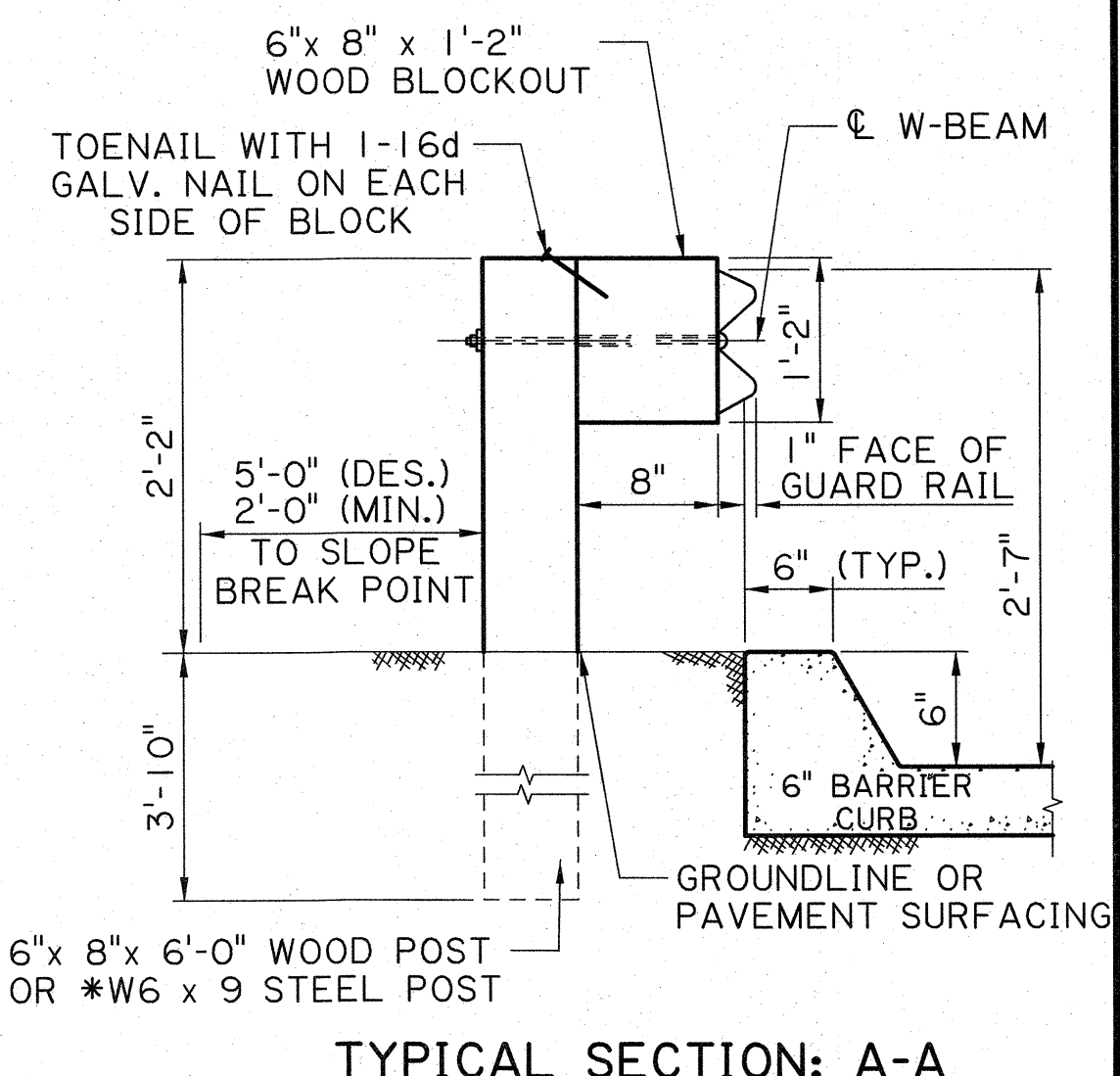
TYPICAL SECTION: A-A WOOD POST & WOOD BLOCKOUT (W-BEAM)
N.T.S.



TYPICAL SECTION: A-A WOOD POST & WOOD BLOCKOUT WITH 4" MOUNTABLE CURB
N.T.S.



TYPICAL SECTION: B-B STEEL POST & WOOD BLOCKOUT (W-BEAM)
N.T.S.



TYPICAL SECTION: A-A WOOD POST & WOOD BLOCKOUT WITH 6" BARRIER CURB
N.T.S.

IP_PWP:d1074021\BD.1.1.0.06 - HIGHWAY GUARD RAIL (MASH).dgn

SHEET NUMBER 321

ST. TAMMANY

DESIGN P. FOSSIER
CHECK K. BRAUNER
DETAIL J. DOUCET
CHECK K. BRAUNER
REVIEW C. GUIDRY

CONTROL SECTION
STATE PROJECT

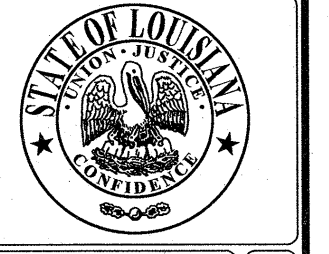
SERIES # 6 OF 11

DATE 3/2/23

APPROVED BY CHIEF ENGINEER
Kurt M. Brauner
Professional Engineer
IN CIVIL ENGINEERING

APPROVED BY CHIEF ENGINEER
Kurt M. Brauner
Professional Engineer
IN CIVIL ENGINEERING

DATE 4/13/2023

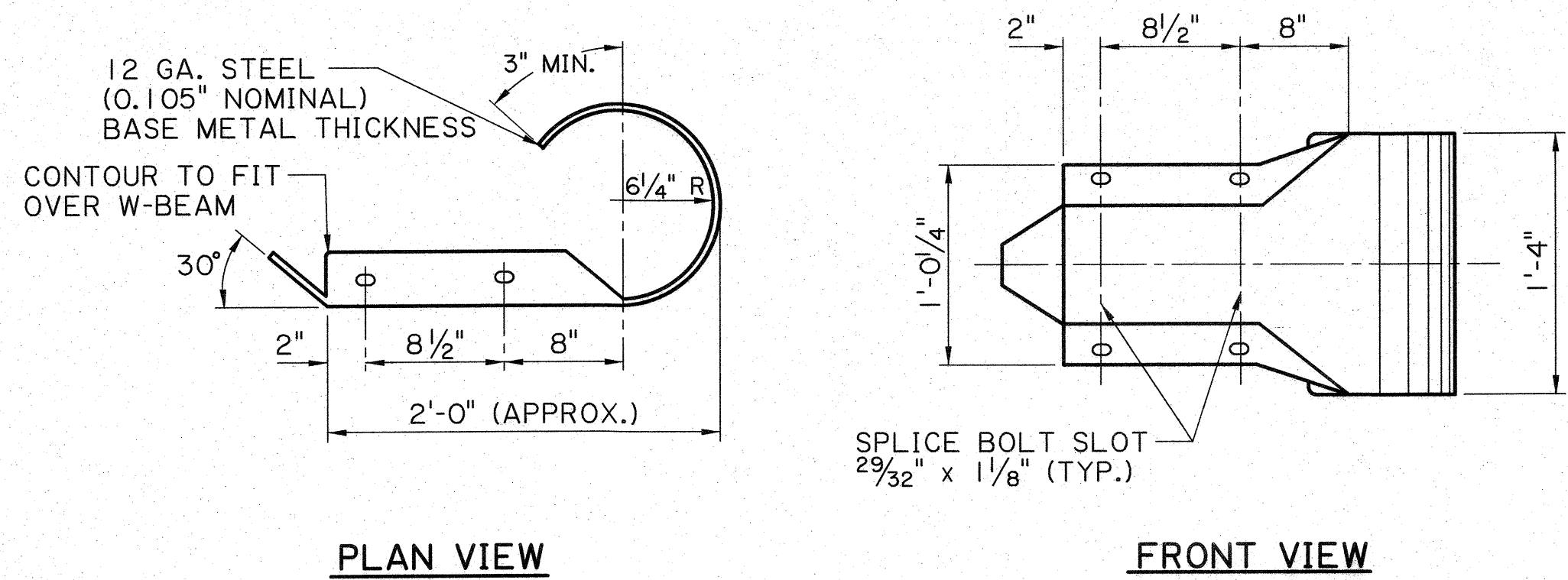


BD.1.1.0.06
GR-MASH-ON
STANDARD PLAN

HIGHWAY GUARD RAIL (MASH)
TYPICAL DETAILS AND SECTIONS

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

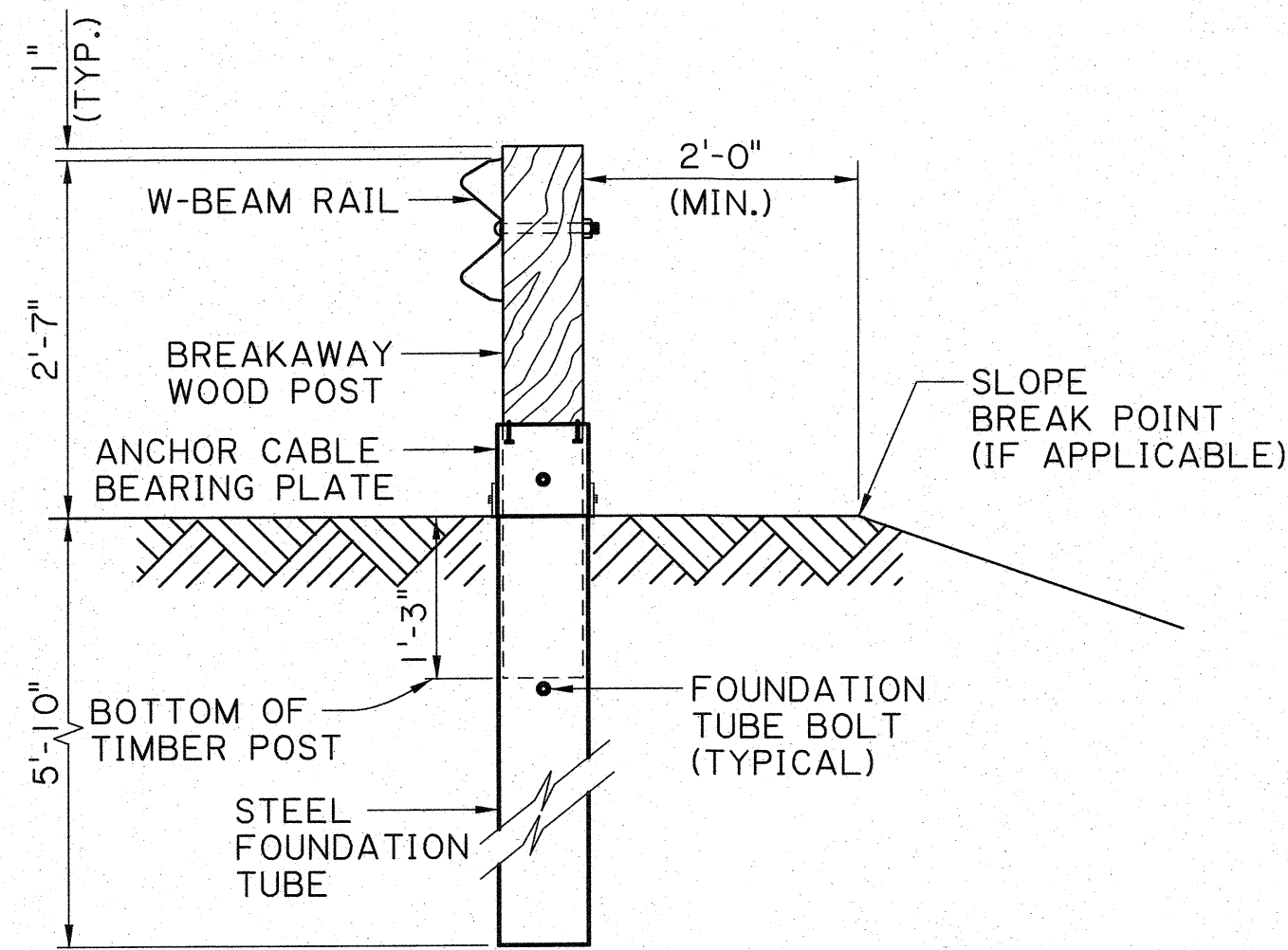
BRIDGE AND STRUCTURAL DESIGN



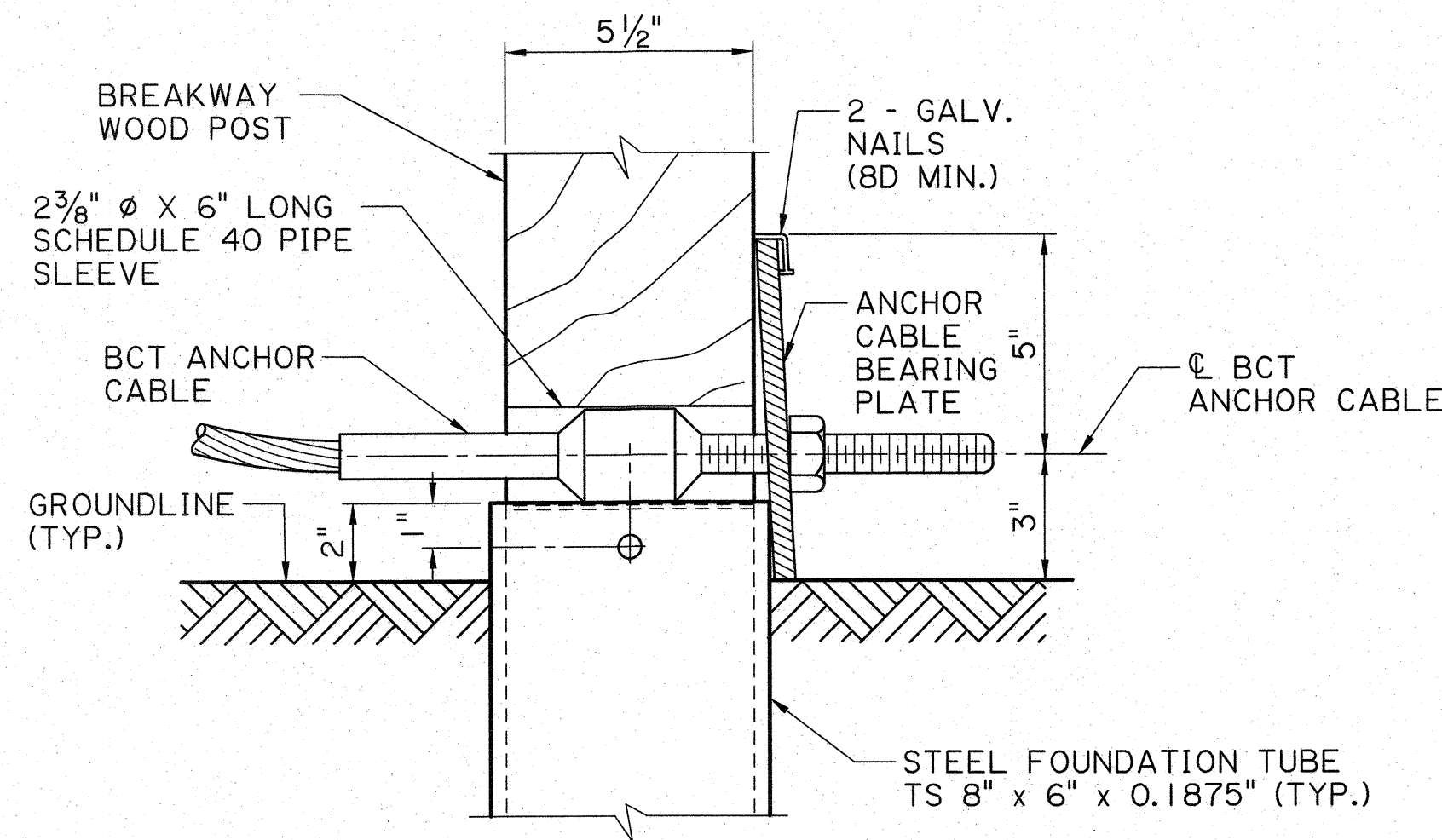
PLAN VIEW

FRONT VIEW

W BEAM END SECTION ROUNDED N.T.S.



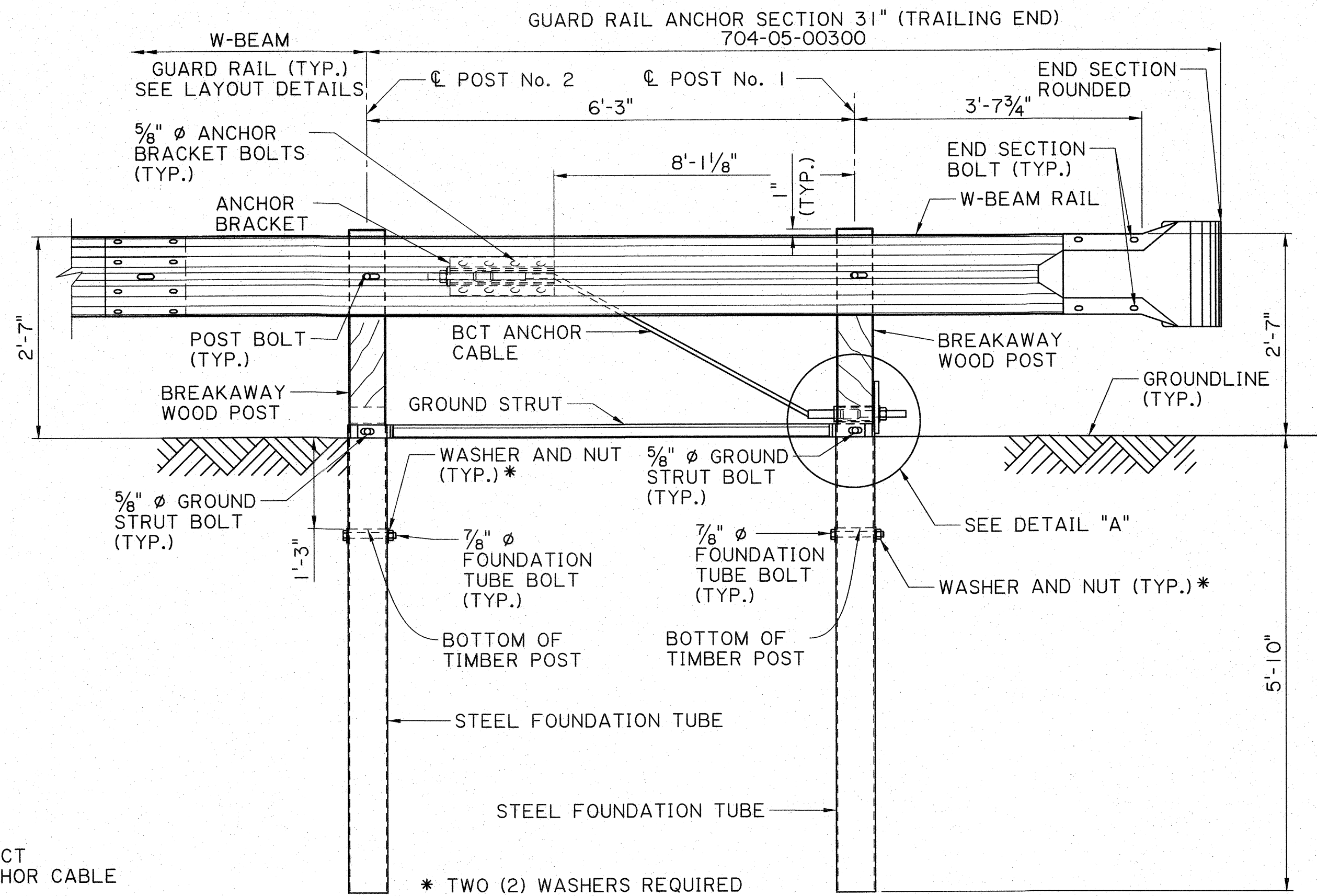
SECTION A-A - POST No. 1 N.T.S.



DETAIL "A" - POST No. 1

POST #1 GROUND STRUT NOT SHOWN FOR CLARITY. POST #2 SIMILAR W/O BCT ANCHOR CABLE AND BEARING PLATE.

N.T.S.



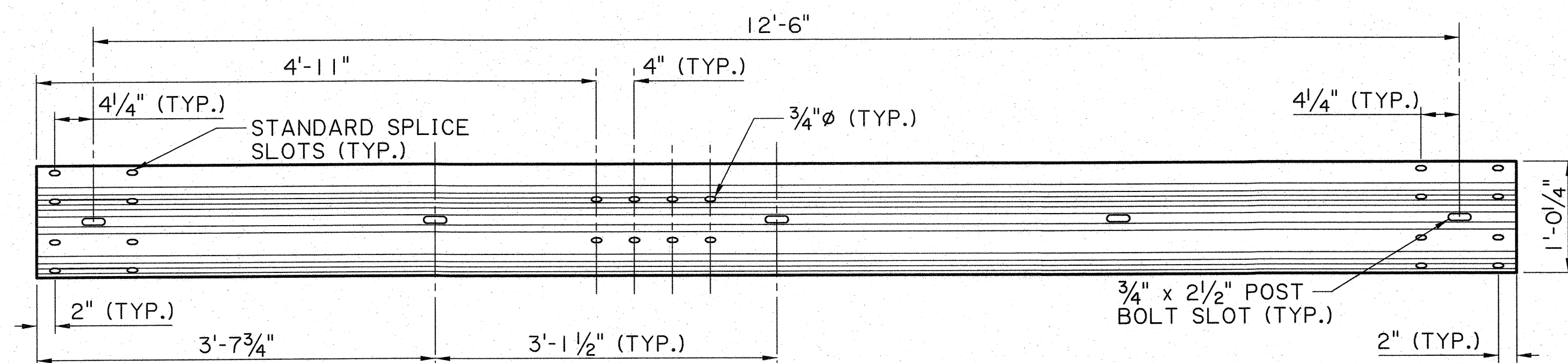
TRAILING END RAIL DETAIL - ELEVATION

NOTE: FOR OTHER TRAILING END TERMINAL DETAILS, SEE SHT. 8 OF 11.

N.T.S.

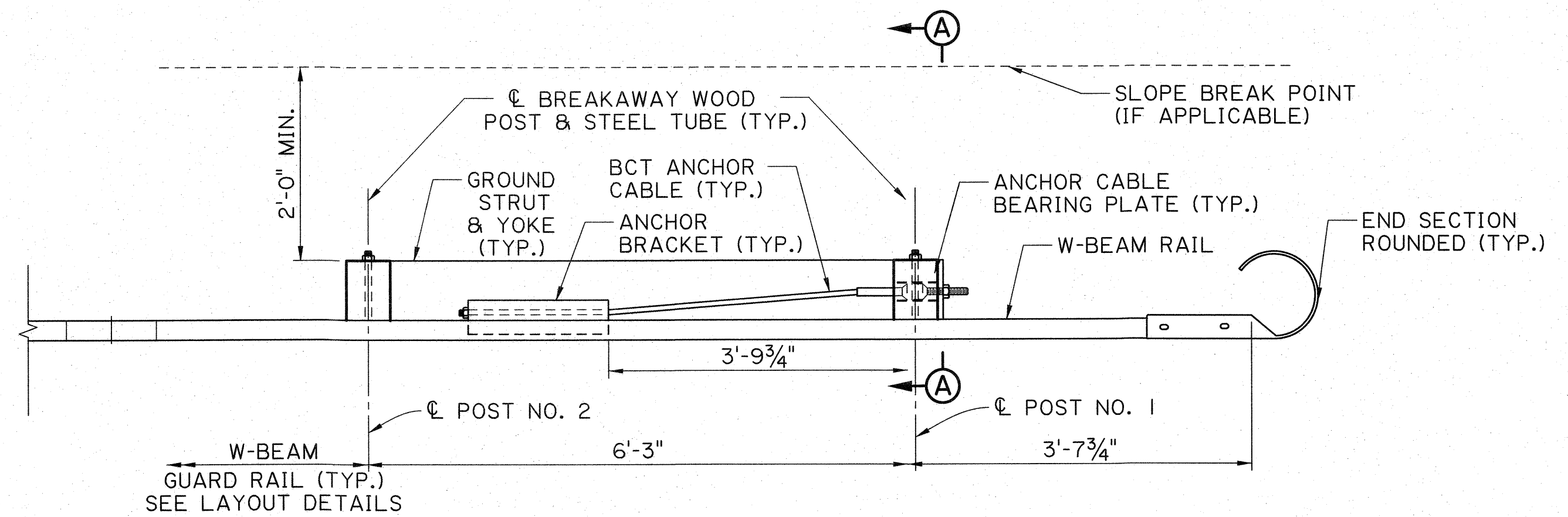


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



TYPICAL 12'-6\"/>

N.T.S.



TRAILING END RAIL DETAIL - PLAN

N.T.S.

SHEET NUMBER	322
PROJECT	ST. TAMMANY
DESIGN	P. FOSSIER
CHECK	K. BRAUNER
DETAIL	J. DOUCET
CHECK	K. BRAUNER
REVIEW	C. GUIDRY
SERIES #	7 OF 11

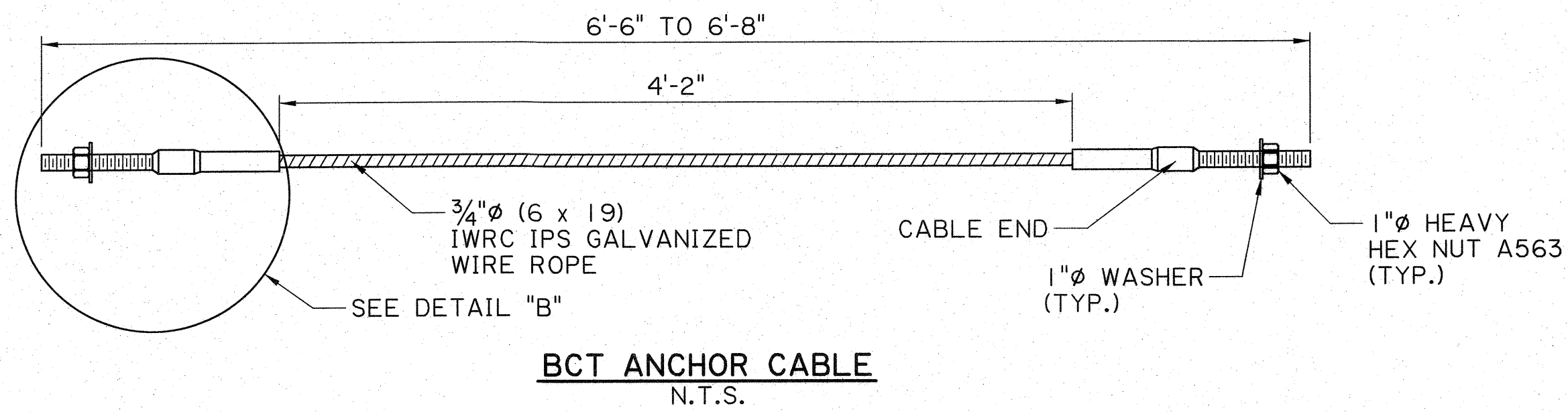
APPROVED BY CHIEF ENGINEER
 KURT M. BRAUNER
 License No. 30667
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 4/13/2023



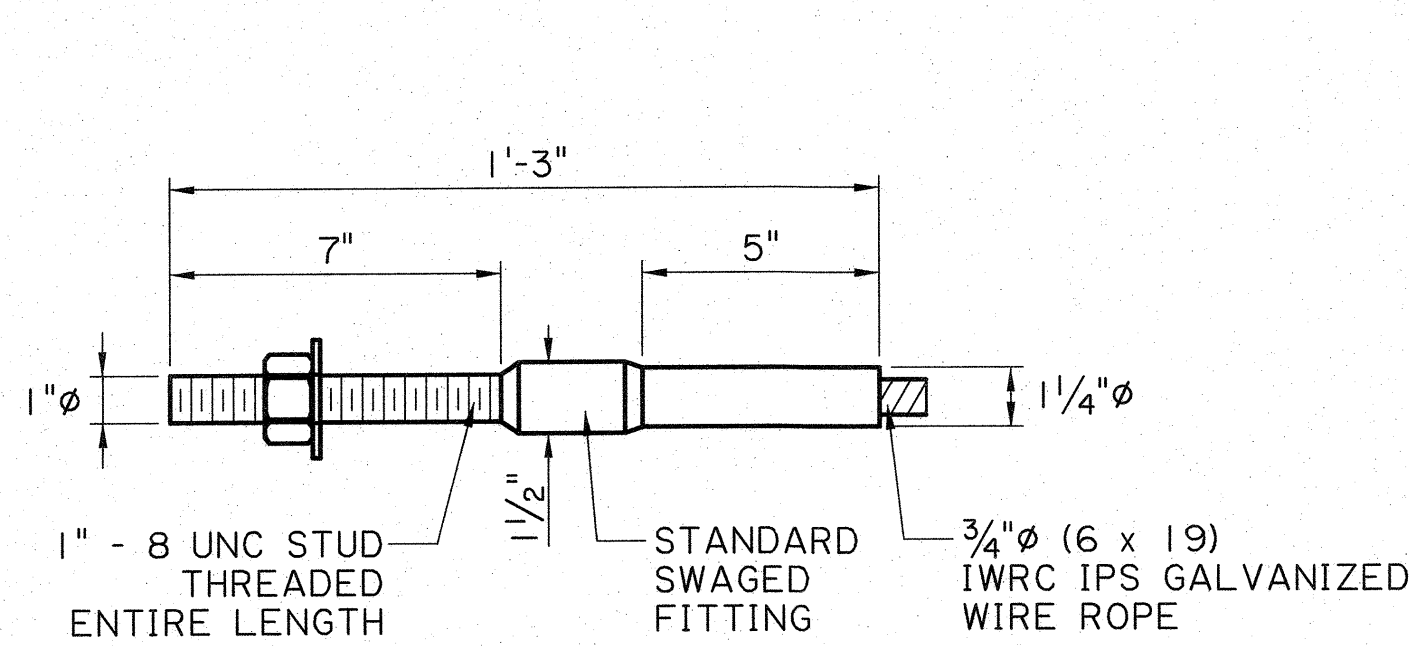
BD.1.1.0.07
 GR-MASH-ON
 STANDARD PLAN
 HIGHWAY GUARD RAIL (MASH) TRAILING END DETAILS



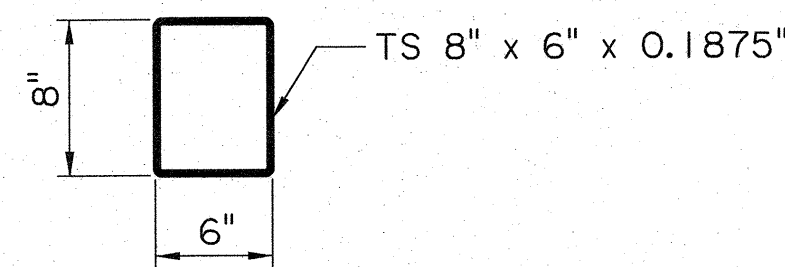
BRIDGE AND STRUCTURAL DESIGN



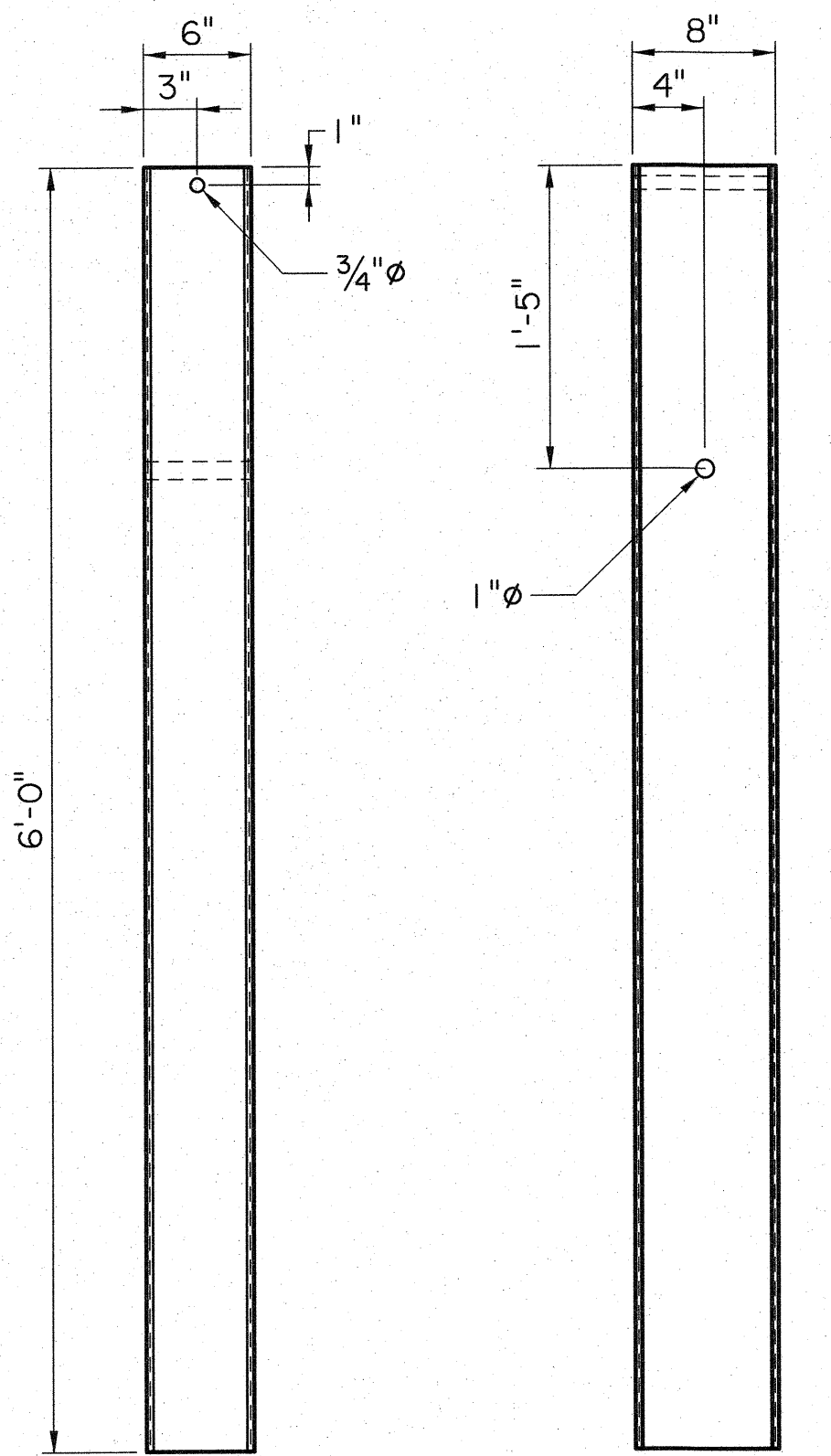
BCT ANCHOR CABLE
N.T.S.



DETAIL "B"



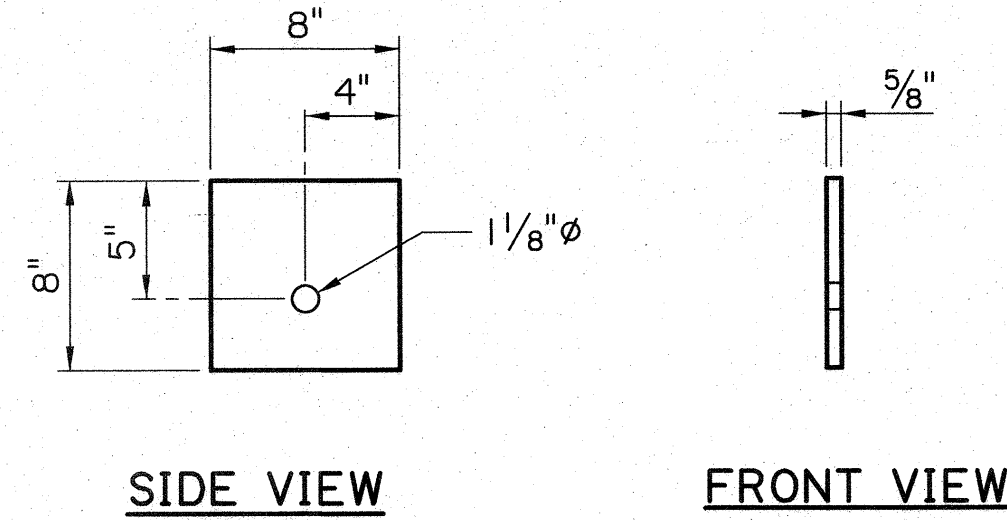
PLAN VIEW



FRONT VIEW

SIDE VIEW

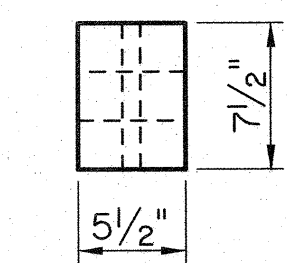
FOUNDATION TUBE
N.T.S.



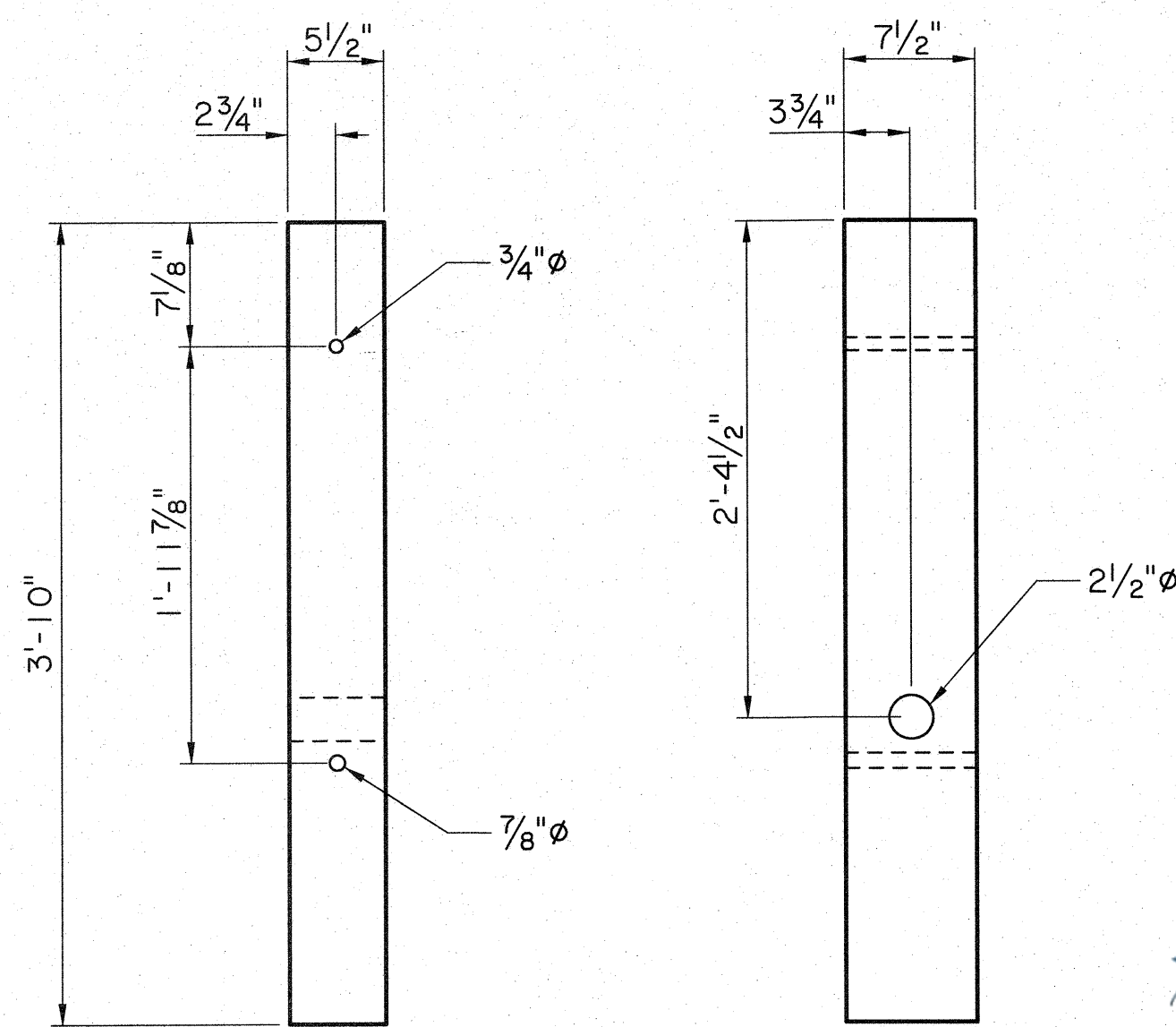
SIDE VIEW

FRONT VIEW

ANCHOR CABLE BEARING PLATE
N.T.S.



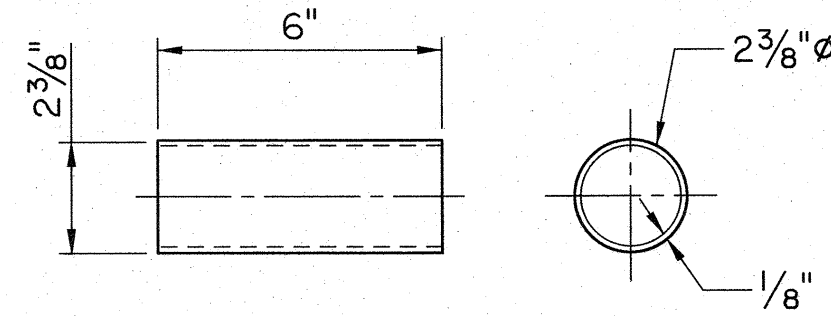
PLAN VIEW



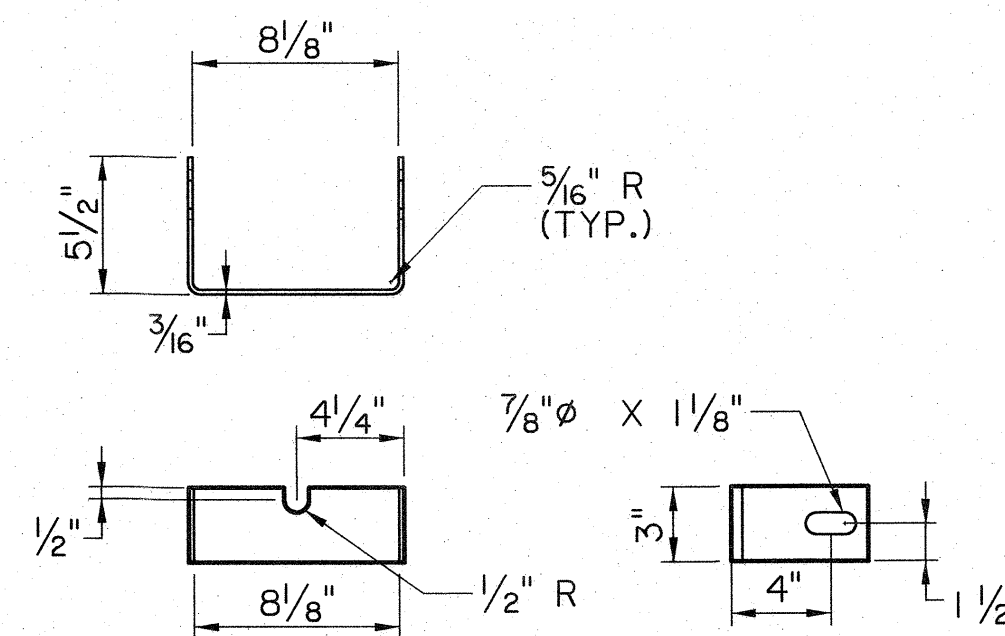
FRONT VIEW

SIDE VIEW

BREAKAWAY WOOD POST
N.T.S.



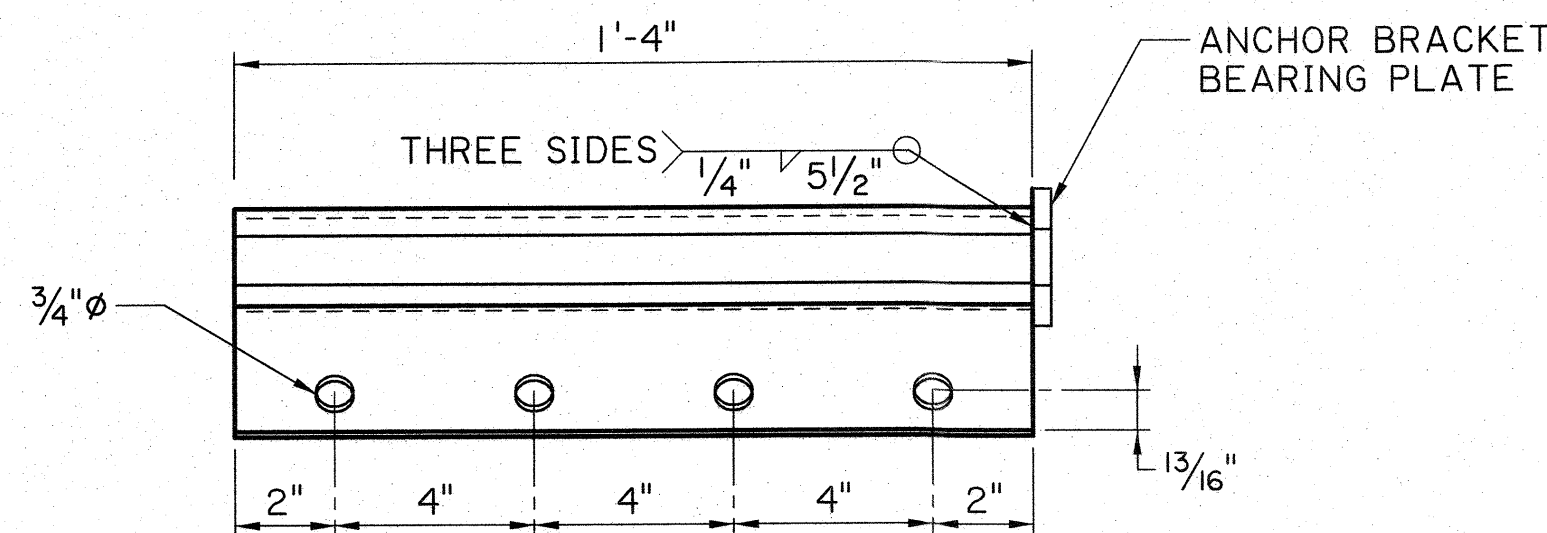
2 3/8" POST SLEEVE
N.T.S.



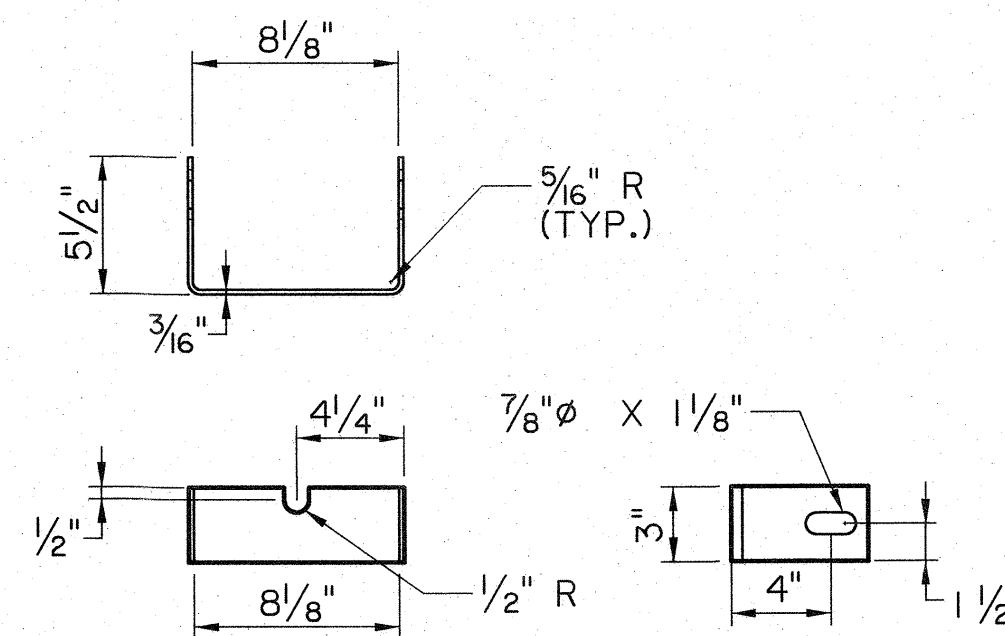
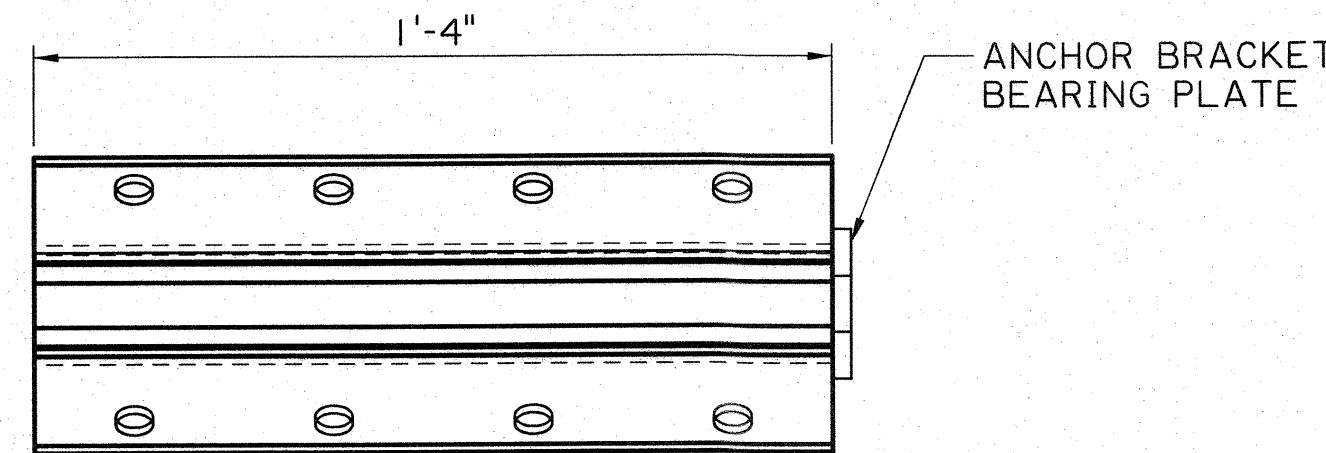
YOKE DETAIL
N.T.S.

STATE OF LOUISIANA
 REGISTERED PROFESSIONAL ENGINEER
 Henry M. Picard, III
 REG. No. 22289
 10/02/24

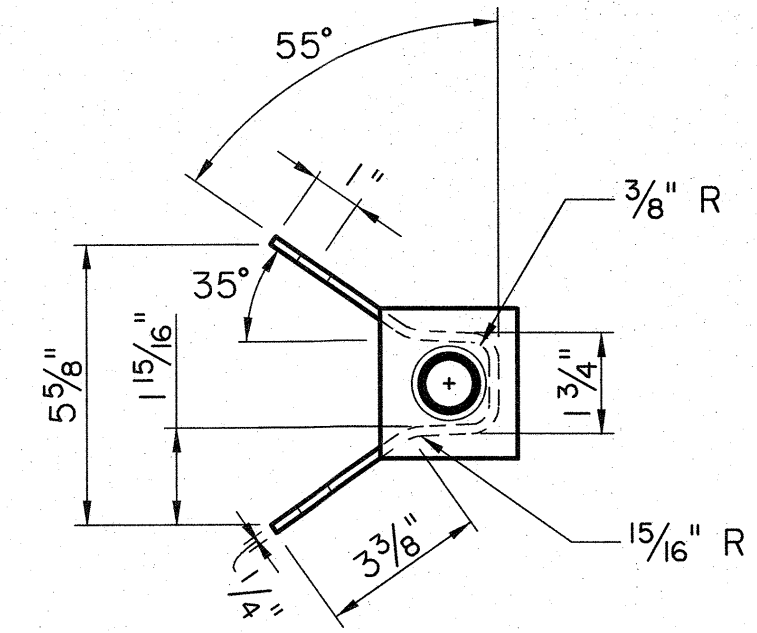
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



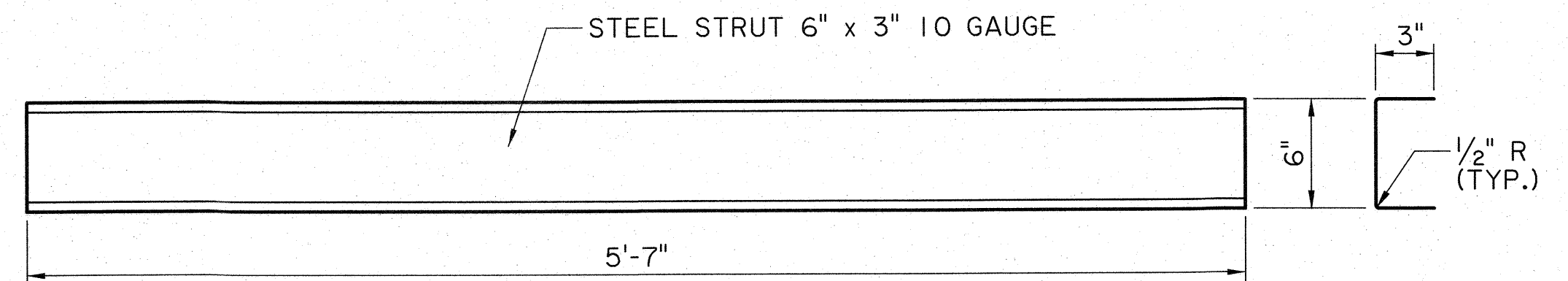
STEEL ANCHOR BRACKET
N.T.S.



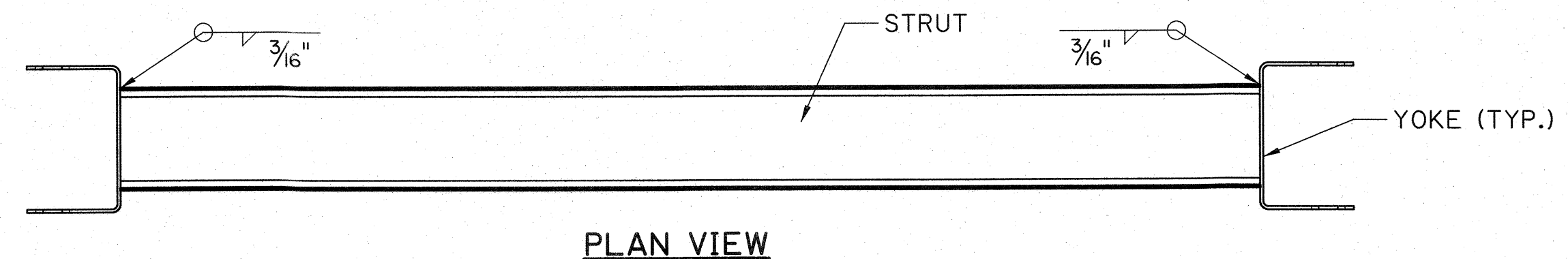
YOKE DETAIL
N.T.S.



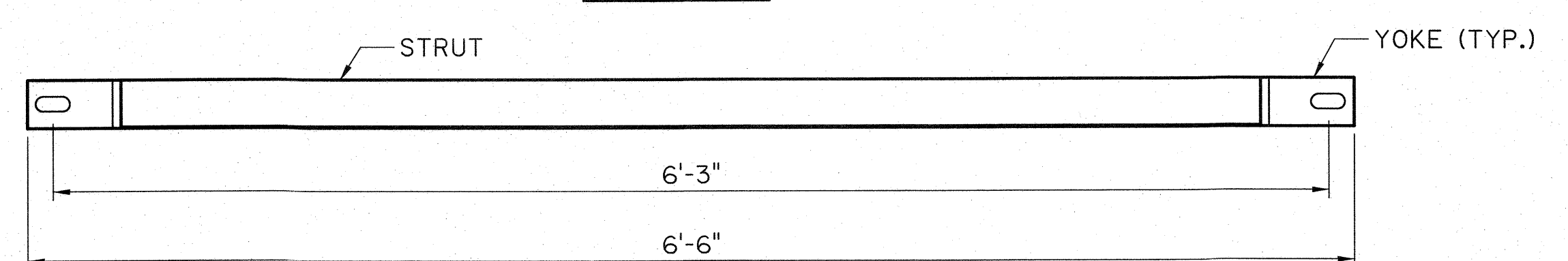
ANCHOR BRACKET BEARING PLATE
N.T.S.



STRUT - PLAN VIEW
N.T.S.



PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL
N.T.S.

NOTES:

FOUNDATION TUBE BOLTS ARE 7/8" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 7/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE 5/8" DIAMETER ASTM A307 HEX HEAD BOLTS AND REQUIRE ASTM A563 A NUTS AND TWO ASTM F844 5/8" DIAMETER FLAT WASHERS EACH. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

DESIGN	P. FOSSIER	PARISH	
CHECK	K. BRAUNER	CONTROL SECTION	
DETAIL	J. DOUCET	STATE PROJECT	
CHECK	K. BRAUNER		
REVIEW	C. GUIDRY		
SERIES #	8 OF 11		

STATE OF LOUISIANA
 KURT M. BRAUNER
 License No. 30567
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 3/2/23

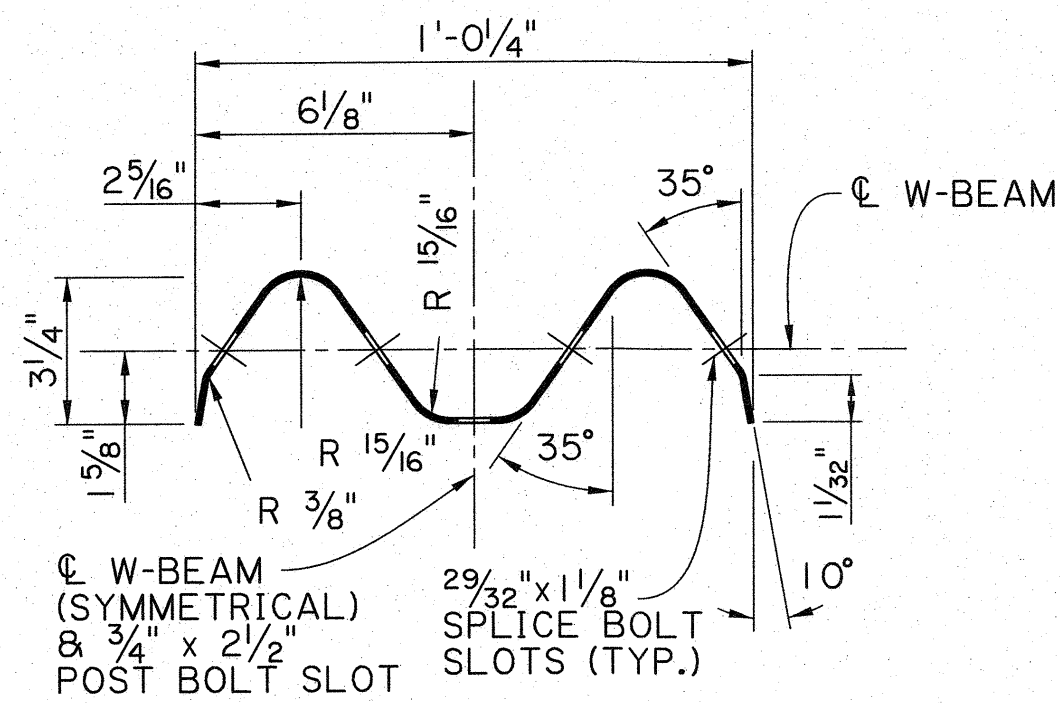
APPROVED BY CHIEF ENGINEER
 DATE: 4/13/2023

STATE OF LOUISIANA
 REGISTERED PROFESSIONAL ENGINEER

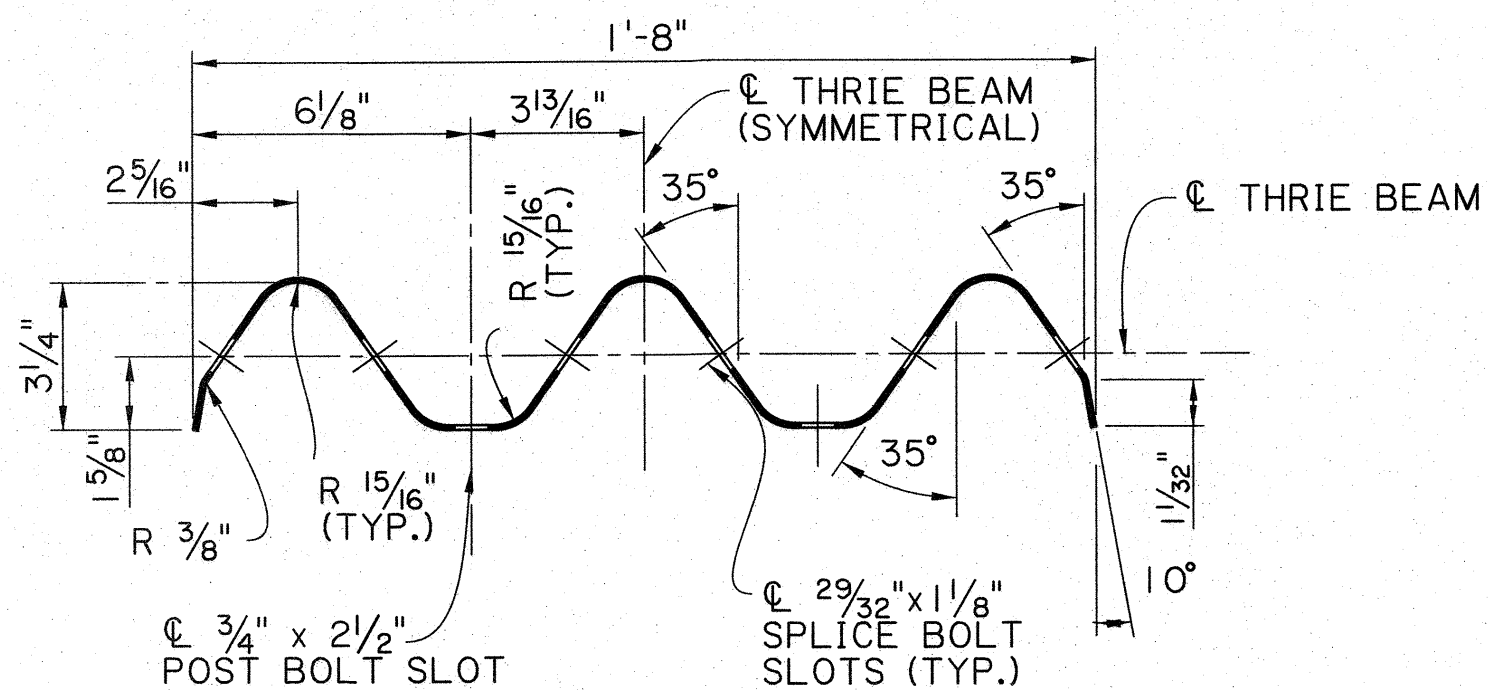
BD. 1.1.0.08
 GR-MASH-ON
 STANDARD PLAN

HIGHWAY GUARD RAIL (MASH)
 TRAILING END DETAILS

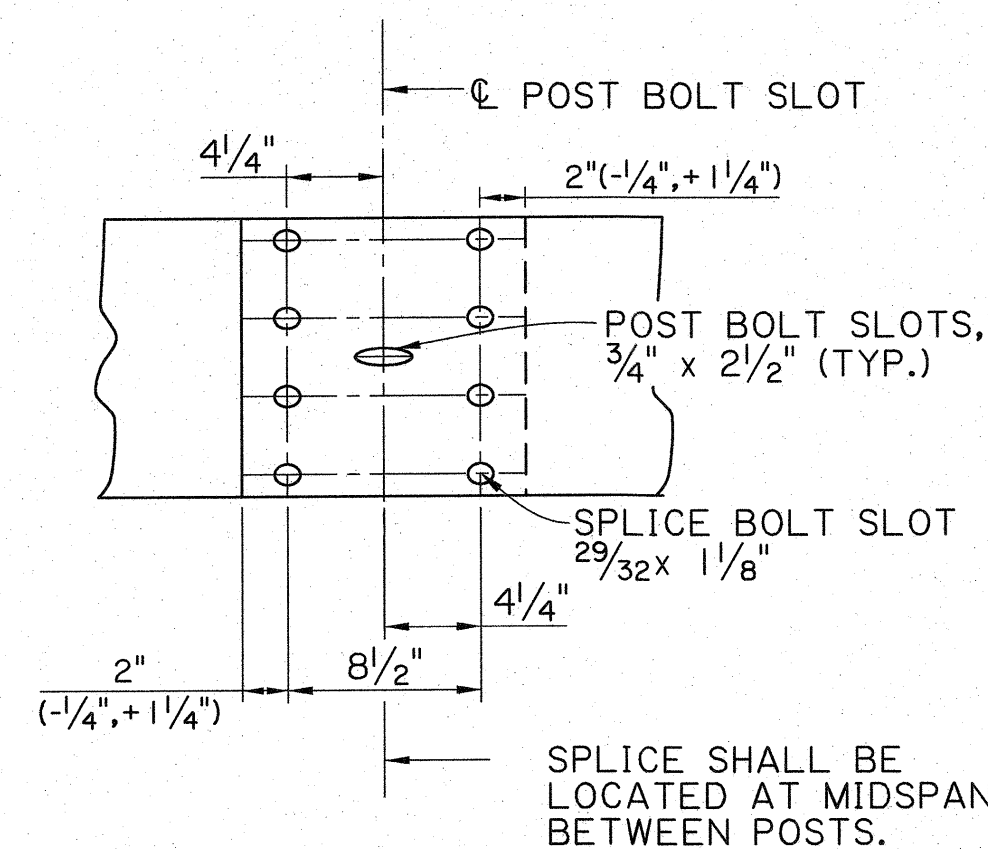
DOTD
 LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
 BRIDGE AND STRUCTURAL DESIGN



TYPICAL W BEAM
N.T.S.



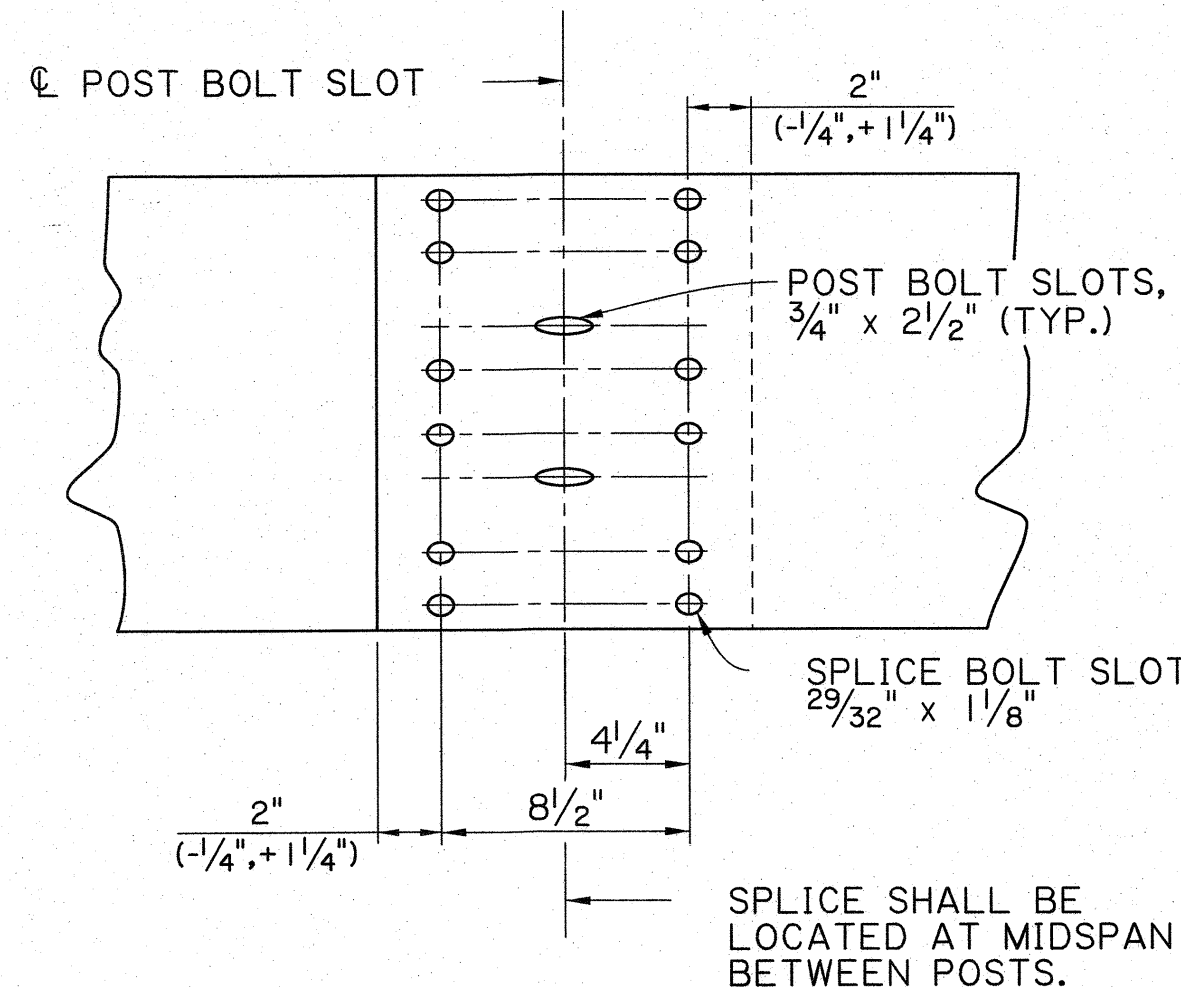
TYPICAL THRIE BEAM
N.T.S.



TYPICAL W-BEAM SPLICE DETAIL - ELEVATION

5/8" ϕ x 1 1/4" BUTTON HEAD OVAL SHOULDER BOLTS WITH 5/8" ϕ RECESSED HEX NUTS-TOTAL 8 PER SPLICE. LAP IN DIRECTION OF TRAFFIC.

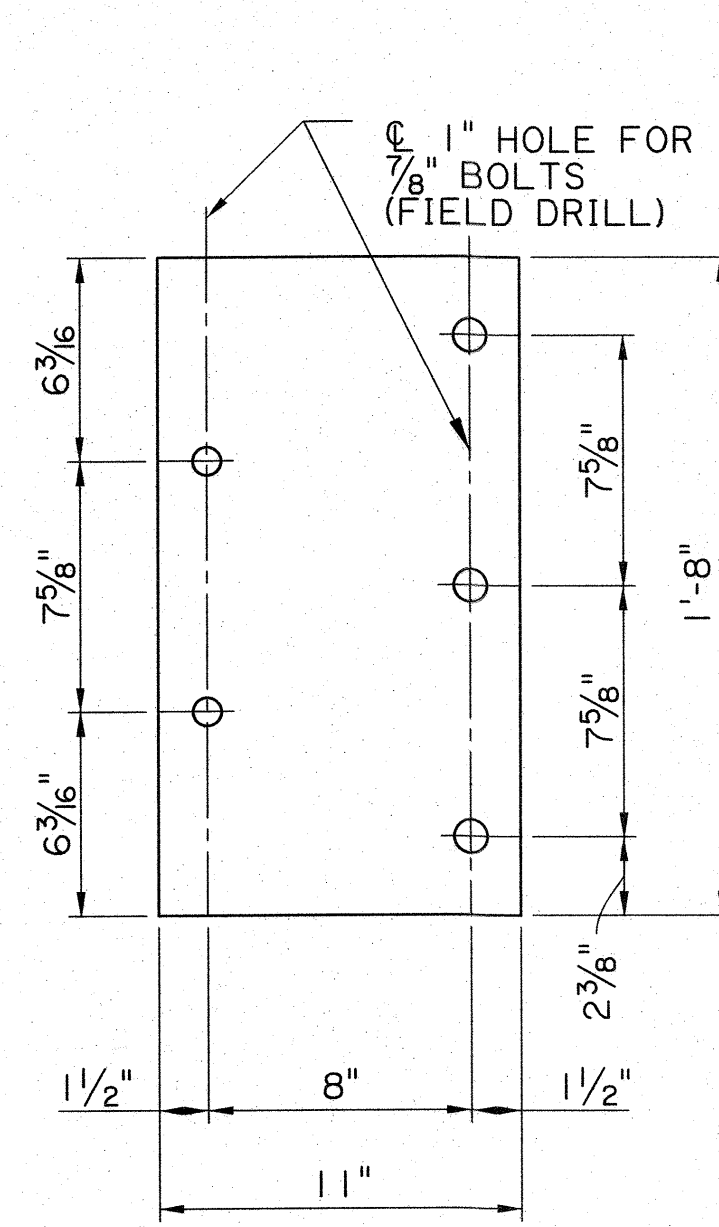
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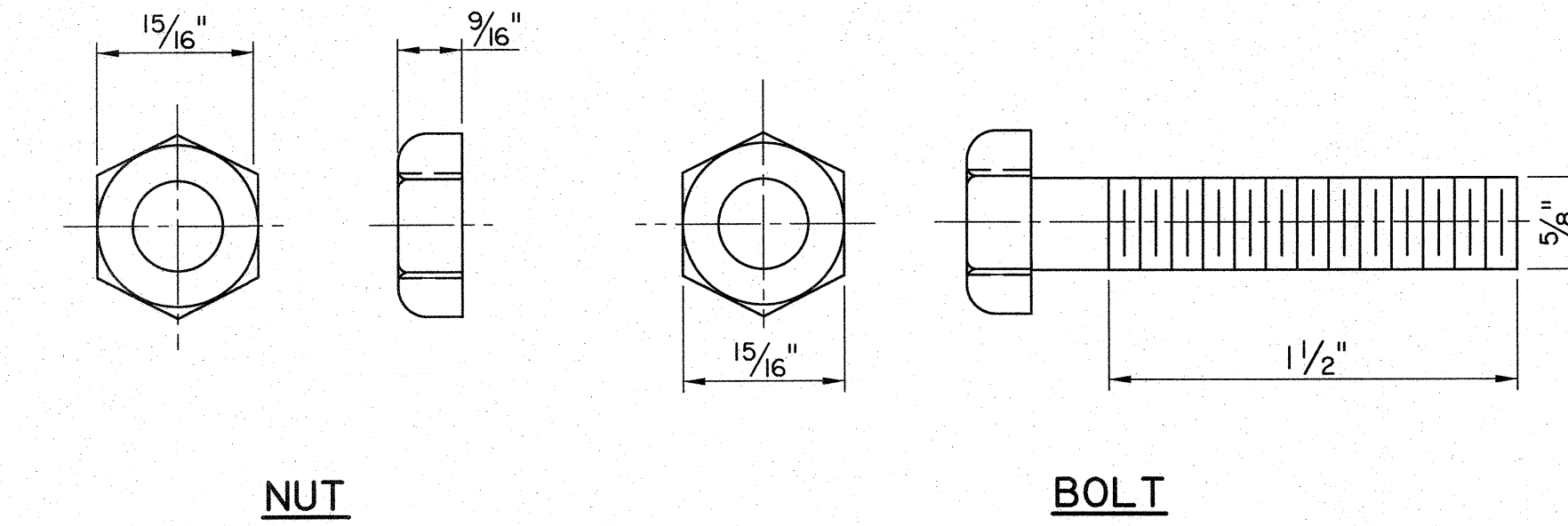
TYPICAL THRIE BEAM SPLICE DETAIL - ELEVATION

5/8" ϕ x 1 1/4" BUTTON HEAD OVAL SHOULDER BOLTS WITH 5/8" ϕ RECESSED HEX NUTS-TOTAL 12 PER SPLICE. LAP IN DIRECTION OF TRAFFIC.

N.T.S.



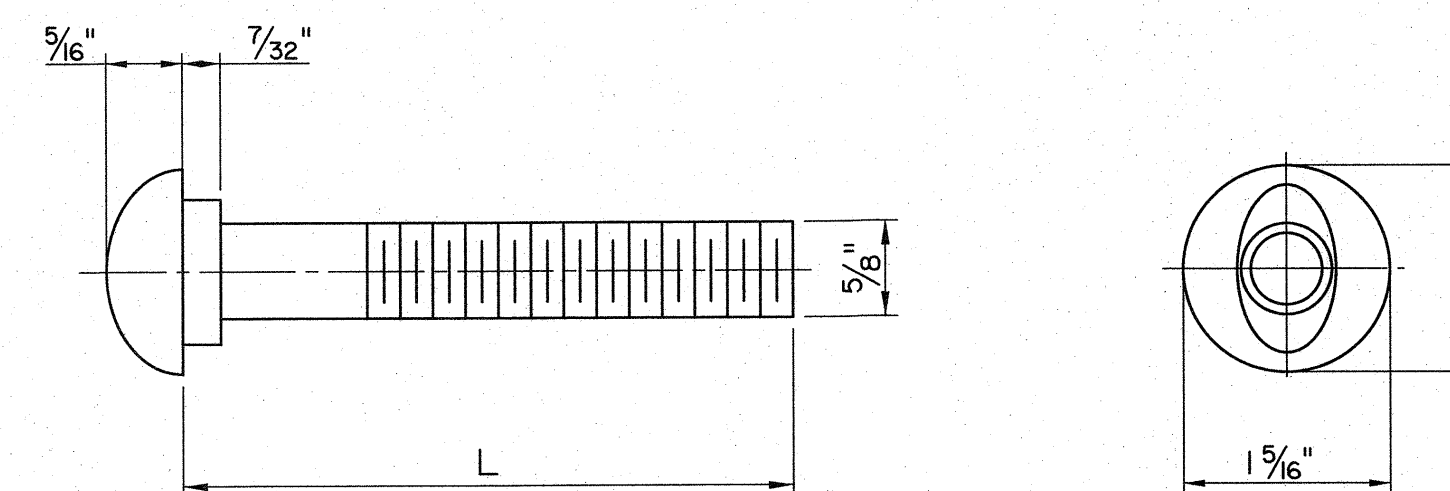
5/8" ϕ BEARING PLATE
(FOR ANCHORING THRIE BEAM TO CONCRETE BARRIER RAIL)
N.T.S.



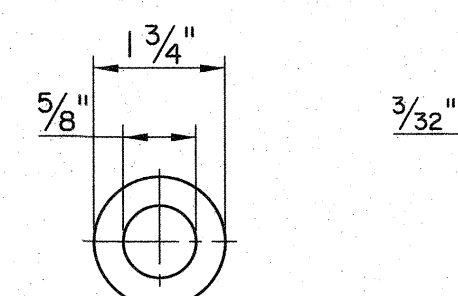
NUT

BOLT

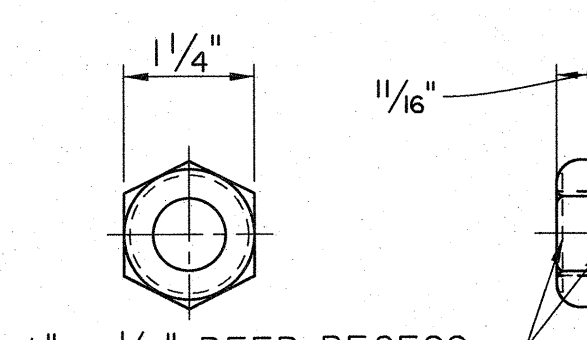
5/8" ϕ HEX BOLT & HEX NUT
(FOR FASTENING THE ANCHOR BRACKET TO RAIL IN TRAILING END)
N.T.S.



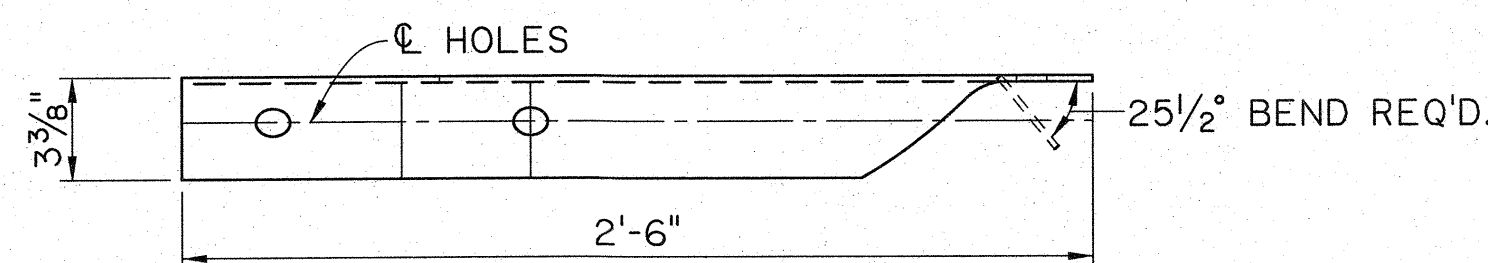
5/8" ϕ BUTTON HEAD BOLT
N.T.S.



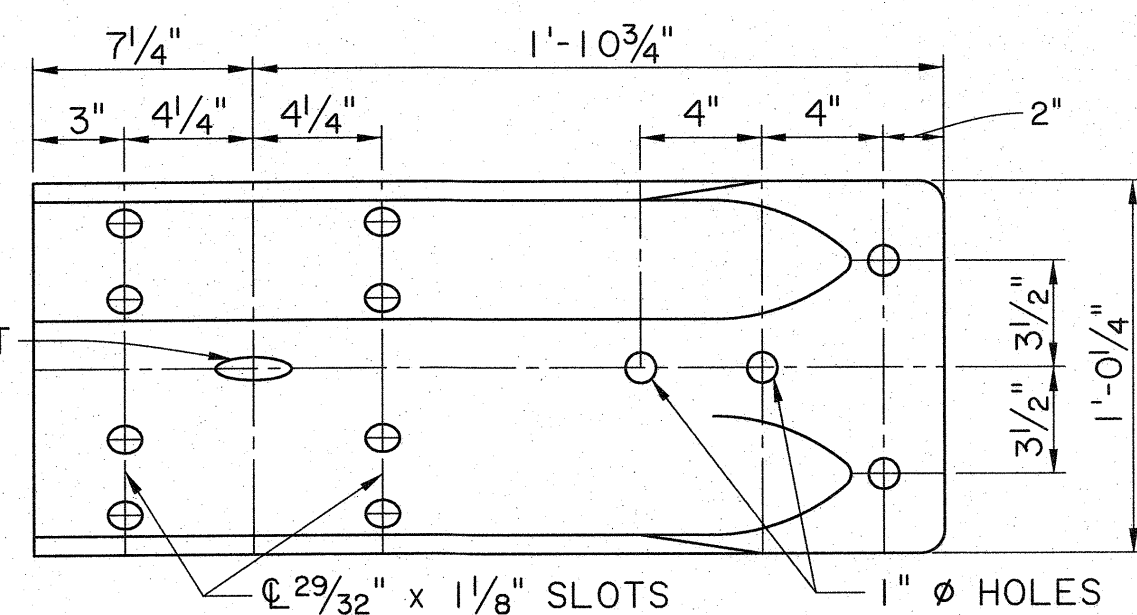
5/8" ϕ POST BOLT WASHERS
N.T.S.



5/8" ϕ RECESS NUT
N.T.S.



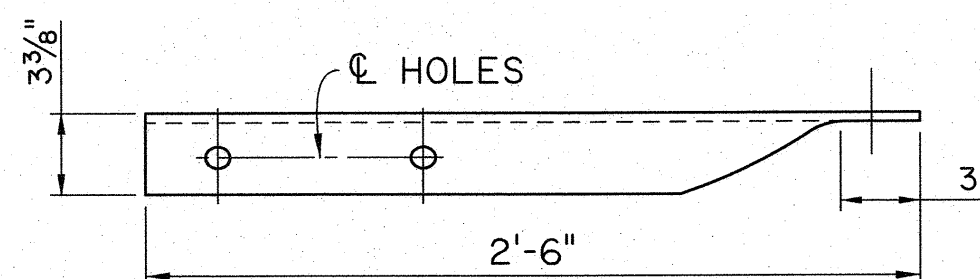
PLAN



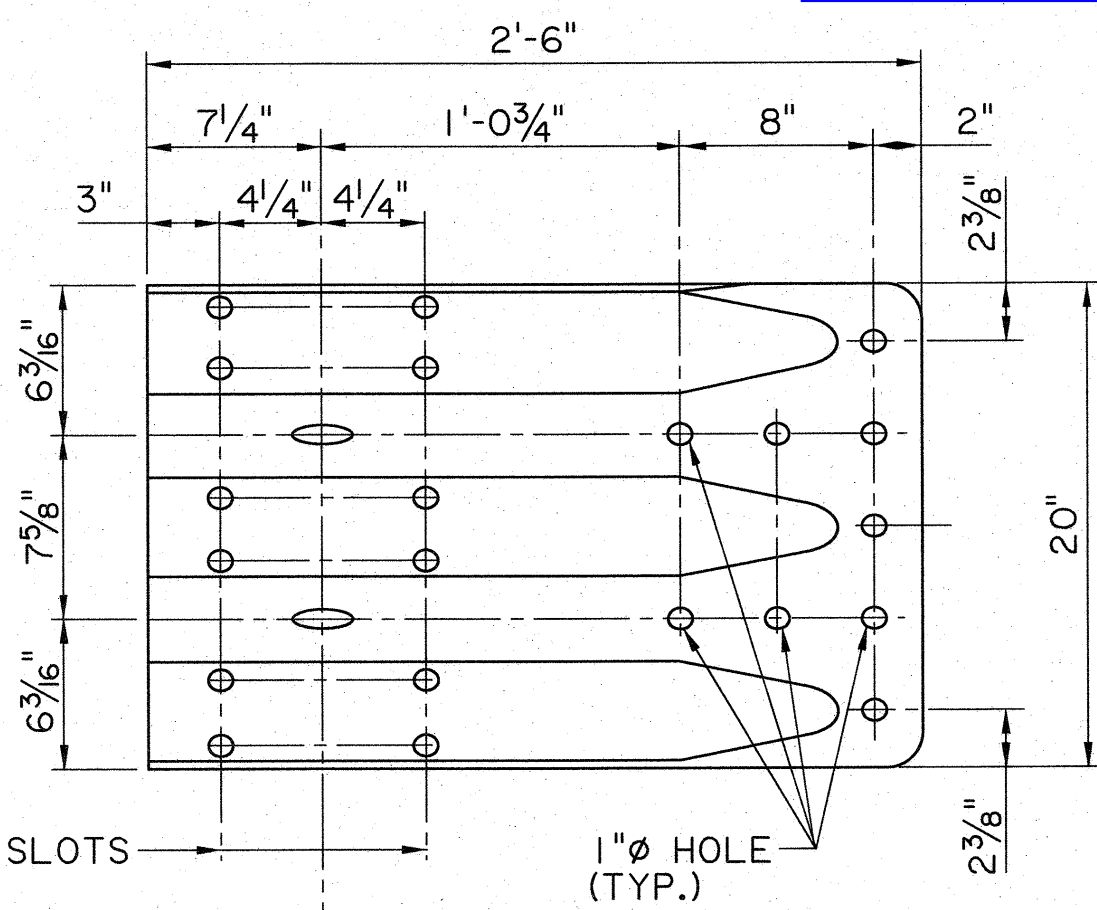
ELEVATION

TYPICAL W BEAM TERMINAL CONNECTOR, 10 GAUGE

N.T.S.



PLAN

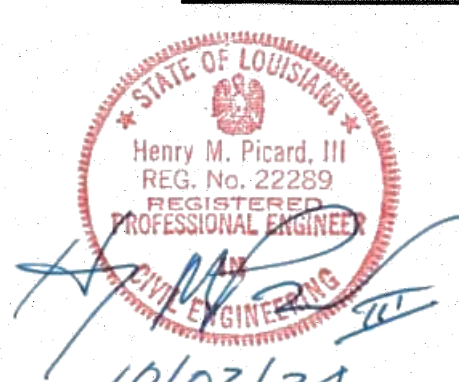


ELEVATION

TYPICAL THRIE BEAM TERMINAL CONNECTOR, 10 GAUGE

N.T.S.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



NOTES:

5/8" ϕ BUTTON HEAD BOLTS:

(1 1/4" LENGTH): THIS BOLT IS USED TO SPLICE RAIL ELEMENTS USED IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.

(2" LENGTH): THIS BOLT IS FOR FASTENING RAILS TO STEEL POSTS WHEN USED IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.

(10" LENGTH): THIS BOLT IS USED FOR FASTENING RAILS TO WOOD BLOCK AND STEEL POST IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.

(1'-6" LENGTH): THIS BOLT IS FOR FASTENING WOOD BLOCKS & WOOD POSTS IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.

(1'-8" LENGTH): THIS BOLT IS FOR FASTENING NESTED THRIE BEAM TO WOOD BLOCKS AND POST AT THE FIRST TWO POST LOCATIONS IN THE GUARD RAIL TRANSITION AT THE ENDS OF RIGID (CONCRETE) STRUCTURES, UNLESS OTHERWISE SHOWN IN THE PLANS.

5/8" ϕ BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 GRADE "A" AND NUTS SHALL BE IN ACCORDANCE WITH ASTM A 563 GRADE "A" OR BETTER. BOLTS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

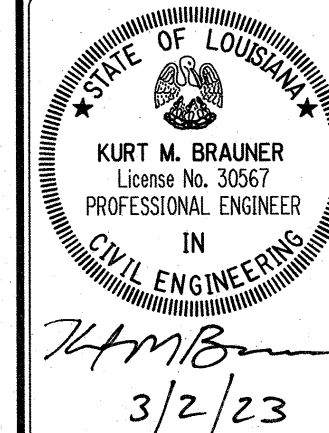
STEEL POST & PLATES:

ALL STEEL POSTS AND PLATES SHALL CONFORM TO ASTM A 36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM 123, NO PUNCHING, DRILLING OR CUTTING WILL BE PERFORMED AFTER GALVANIZING.

5/8" ϕ BUTTON HEAD NUT	
L	THREAD LENGTH
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
1'-6"	4"
1'-8"	4"

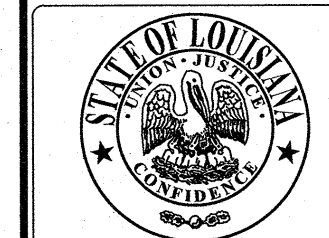
ST. TAMMANY

DESIGN	CHECK	DETAIL	CHECK	REVIEW	SERIES #
P. FOSSIER	K. BRAUNER	J. DOUCET	K. BRAUNER	C. GUIDRY	9 OF 11



DATE: 4/13/2023

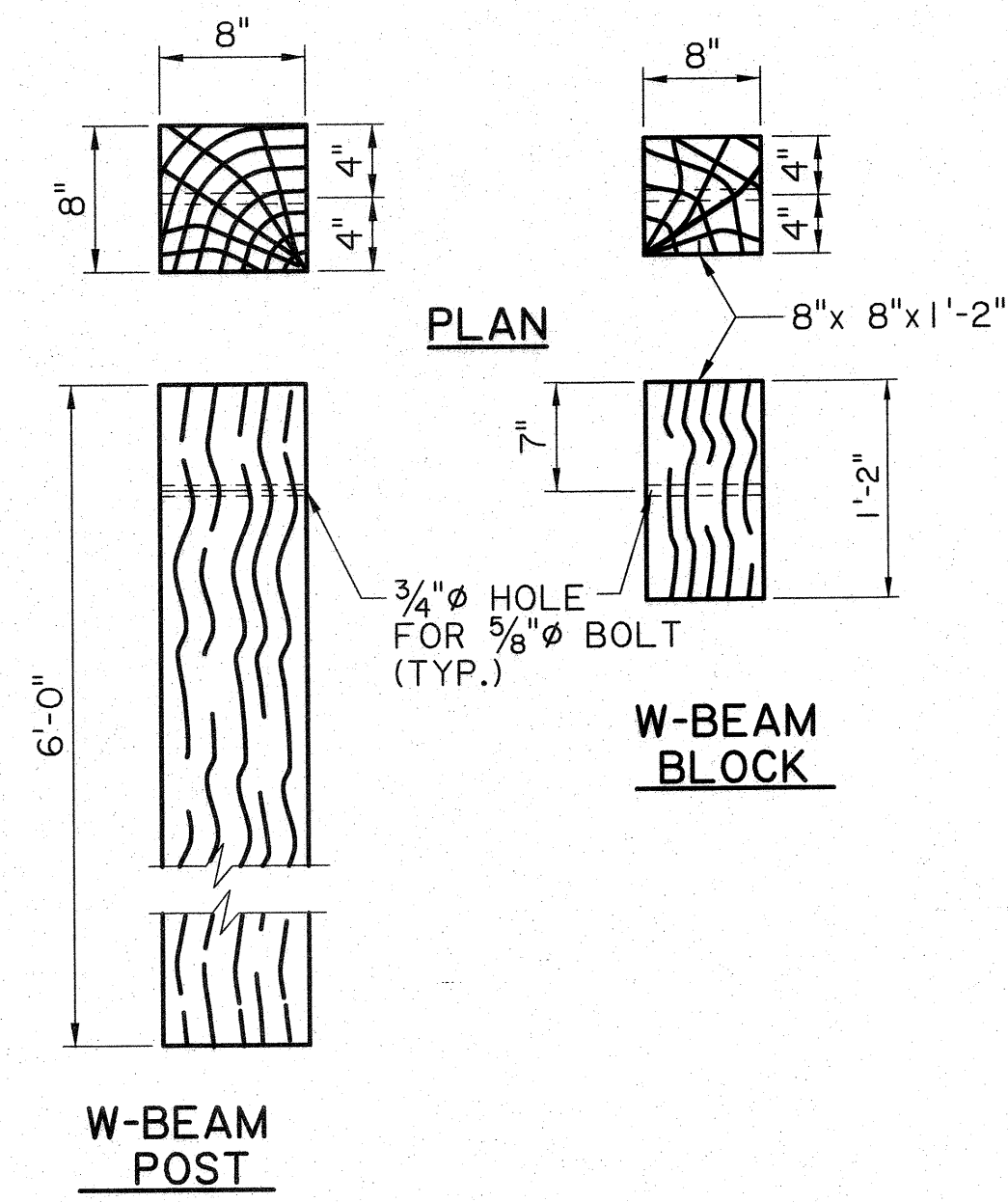
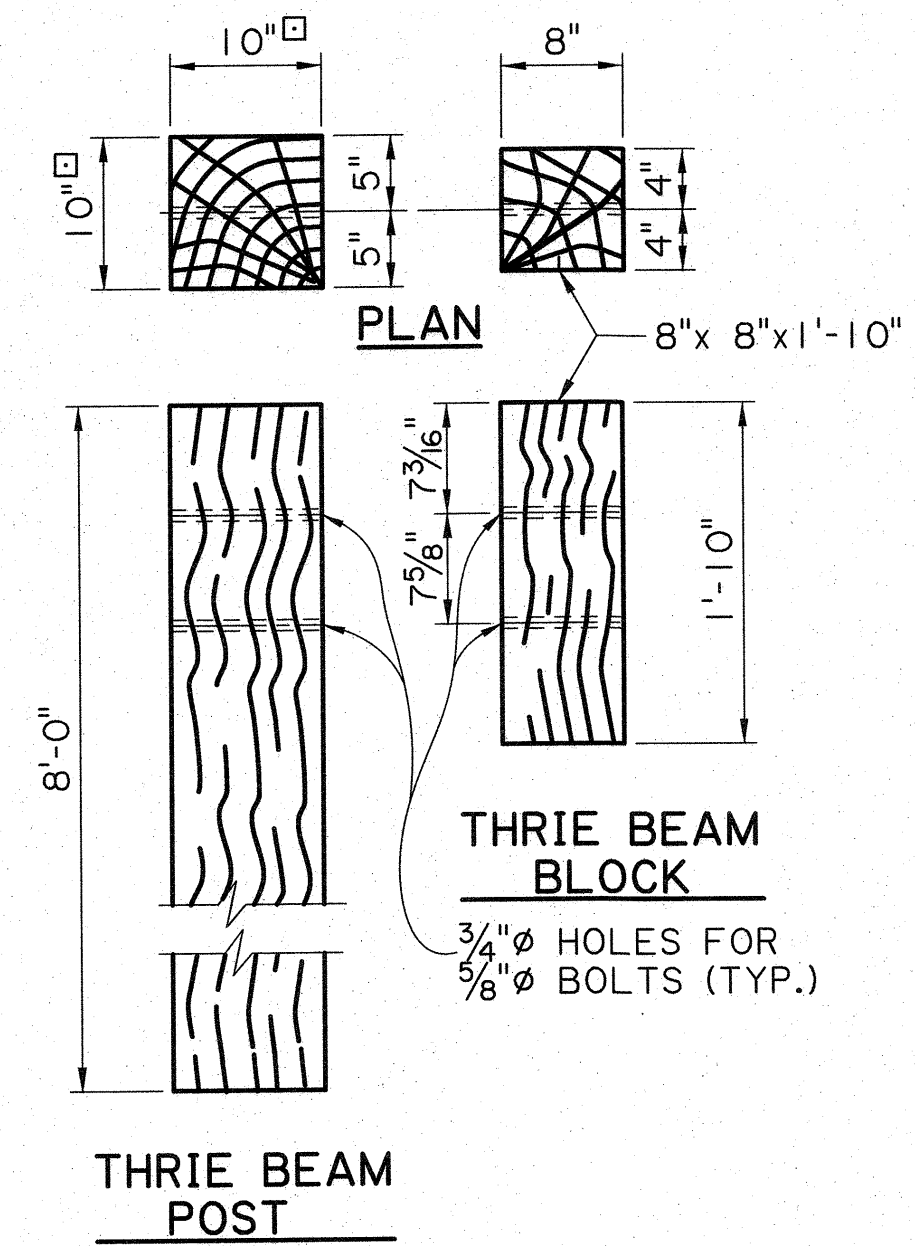
APPROVED BY CHIEF ENGINEER



HIGHWAY GUARD RAIL (MASH) RAIL STRUCTURAL DETAILS



BRIDGE AND STRUCTURAL DESIGN

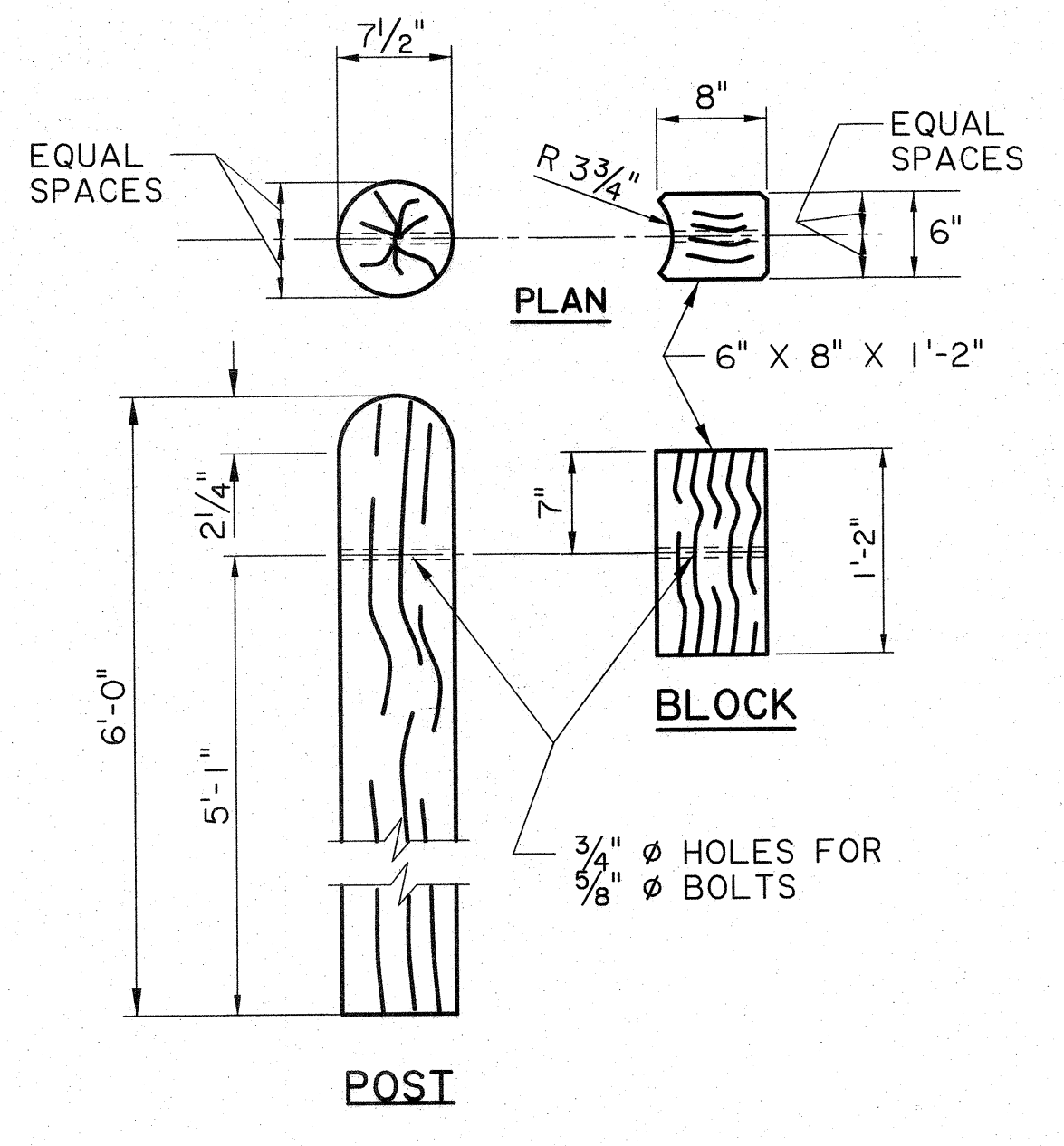
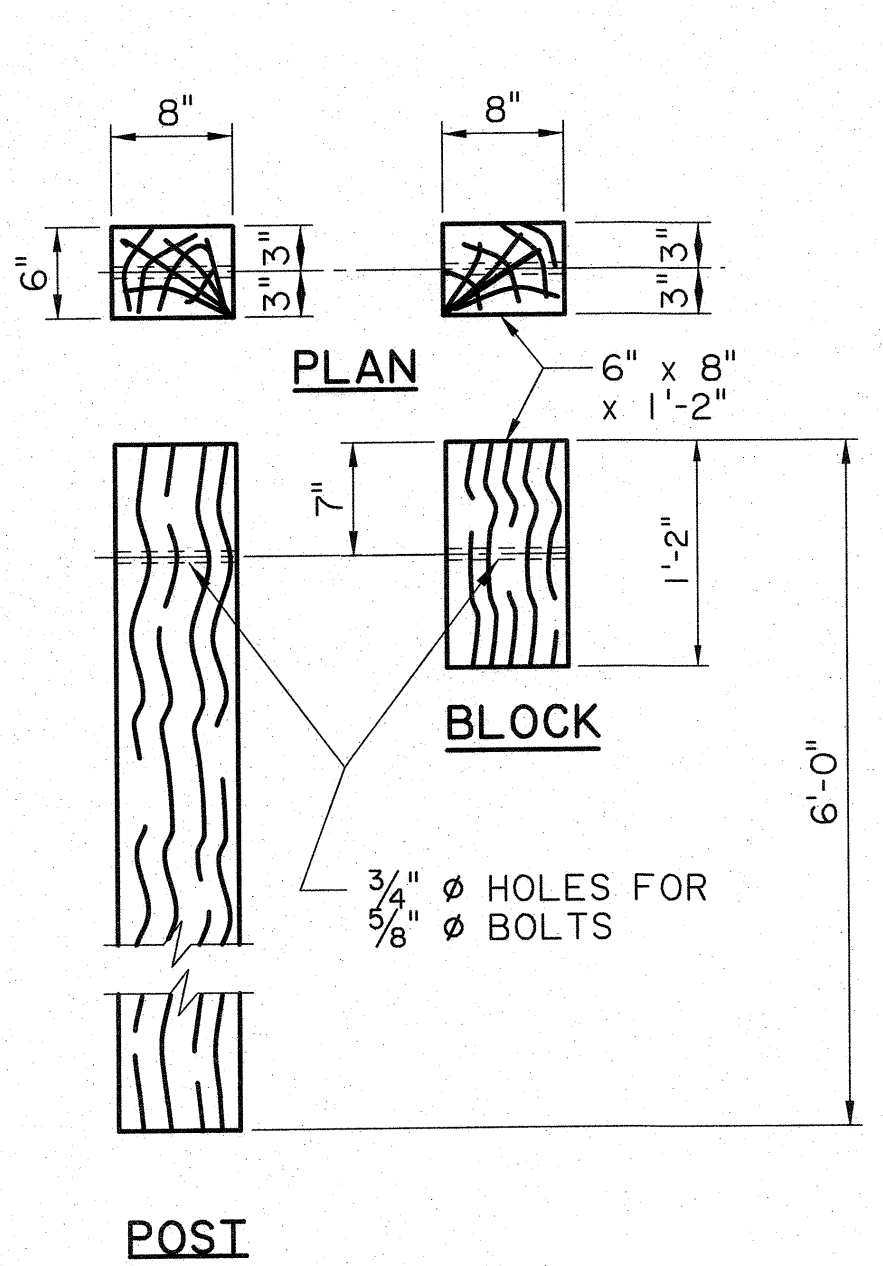


THRIE BEAM POST IS 8" x 8" x 8'-0" FOR TRANSITION POST No. 3.

THRIE BEAM POST IS W6 x 25 (8'-0") FOR TRANSITION POST No. 3.

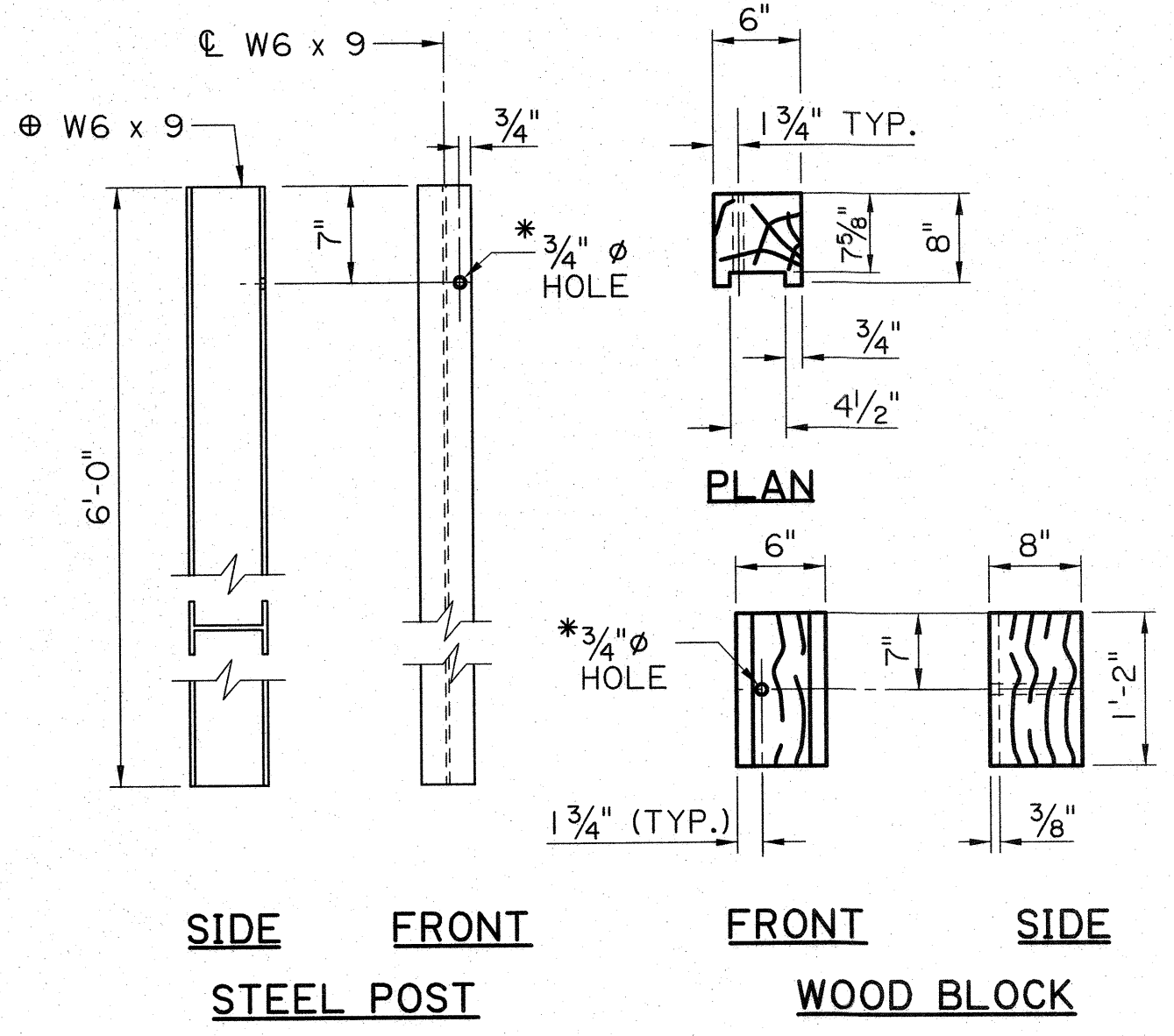
WOOD POST AND WOOD BLOCK FOR THRIE BEAM TRANSITION TO BRIDGE RAIL
 (POST SIZE, BLOCK SIZE AND HOLE LOCATIONS VARY WITH LOCATION IN TRANSITION, SEE SHT.3)
 N.T.S.

STEEL POST AND ROUTED WOOD BLOCK FOR THRIE BEAM TRANSITION TO BRIDGE RAIL
 (POST SIZE, BLOCK SIZE AND HOLE LOCATIONS VARY WITH LOCATION IN TRANSITION, SEE SHT.3)
 N.T.S.



WOOD POST AND WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL
 N.T.S.

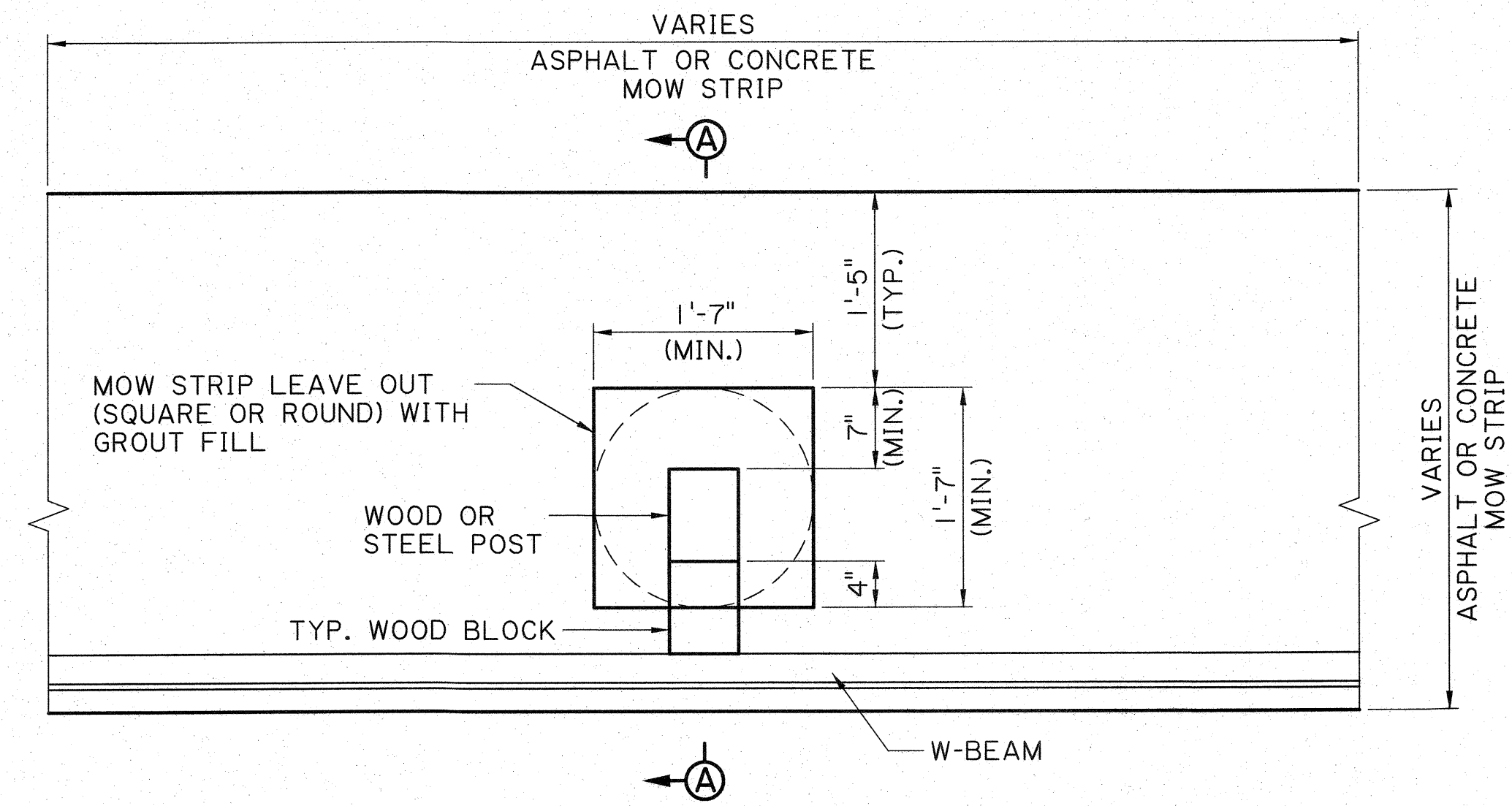
ROUND WOOD POST AND WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL
 N.T.S.



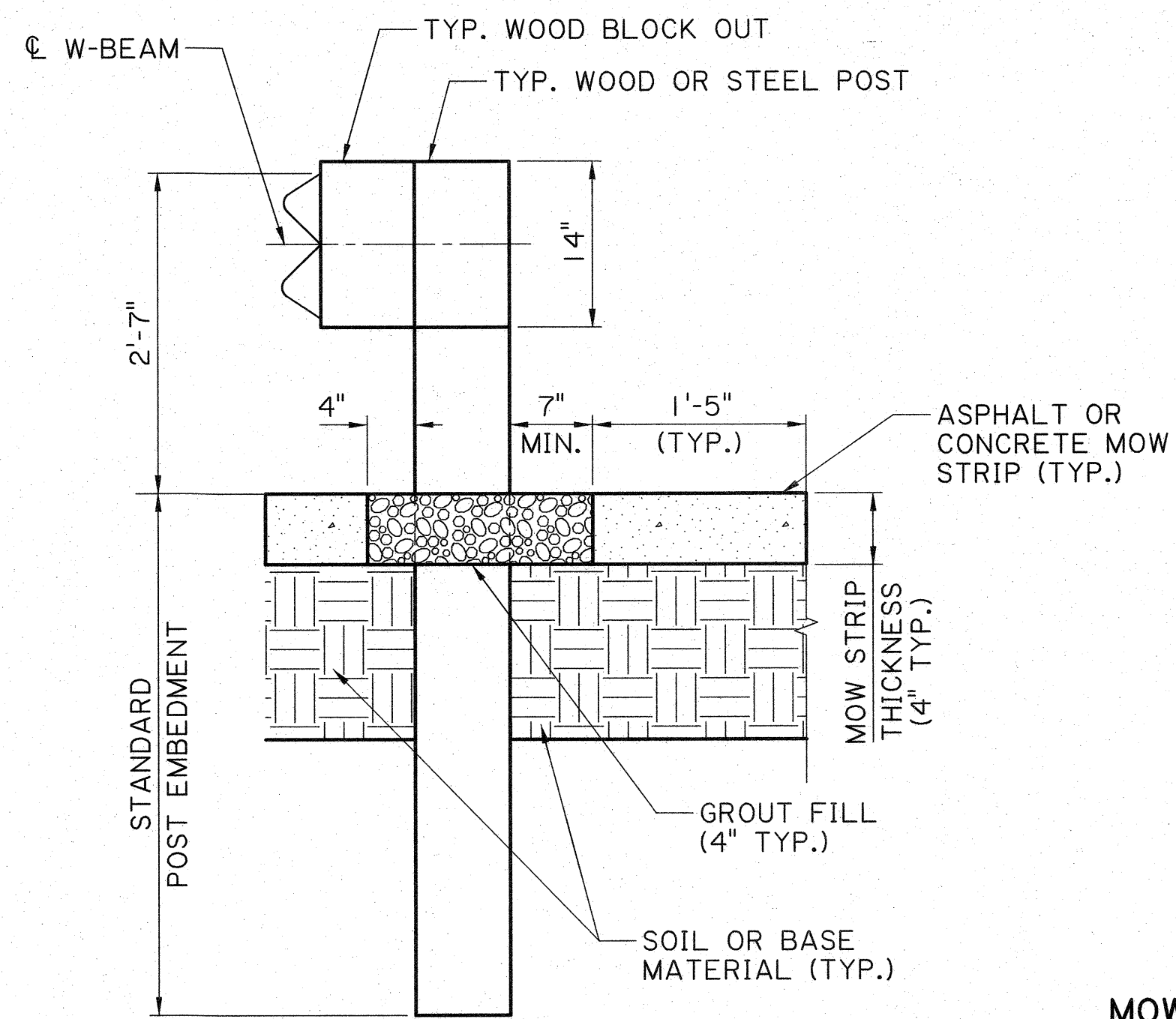
STEEL POST AND ROUTED WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL
 N.T.S.

- NOTES:
- A RECYCLED BLOCK ALTERNATE IS ALLOWED AS A SUBSTITUTE FOR THE WOOD BLOCK ON A 1 FOR 1 BASIS IN A STANDARD BLOCKED-OUT SECTION AT NO ADDITIONAL PAYMENT. RECYCLED BLOCKS SHALL NOT BE USED IN TRANSITIONS, END TREATMENTS, OR IN TRAILING END SECTIONS. THE RECYCLED BLOCK SHALL HAVE FHWA HARDWARE ELIGIBILITY AND SHALL MEET AASHTO MASH REQUIREMENTS.
 - A W6 x 8.5 STEEL POST MAY BE USED AS AN ALTERNATE FOR A W6 x 9 POST.
 - POST AND BLOCK HOLES SHALL BE DRILLED ADJACENT TO THE DIRECTION OF THE ON-COMING TRAFFIC.
 - ALL WOOD BLOCKS SHALL BE TOE-NAILED TO WOOD POSTS AND BLOCKS (INCLUDING BLOCK COMBINATIONS) WITH A 16d GALVANIZED NAIL TO PREVENT BLOCK ROTATION. (ONE ON EACH SIDE)
 - THE ROUND WOOD POST AND WOOD BLOCKOUT IS ALLOWED TO REPLACE THE 6" x 8" STANDARD LINE POST AND BLOCKOUT FOR W BEAM. THE ROUND WOOD POSTS SHALL NOT BE USED AS AN ALTERNATE FOR CRT POSTS, BCT POSTS, OR THE POSTS IN THE GUARD RAIL TO BRIDGE RAIL TRANSITION SECTION. ROUND POSTS SHALL NOT BE USED IN THE TRAILING END SECTION, BEHIND A CURB, OR IN A GUARD RAIL END TREATMENT UNLESS SPECIFICALLY ALLOWED BY THE MANUFACTURER.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



PLAN



SECTION A-A

ASPHALT OR CONCRETE MOW STRIPS
N.T.S.

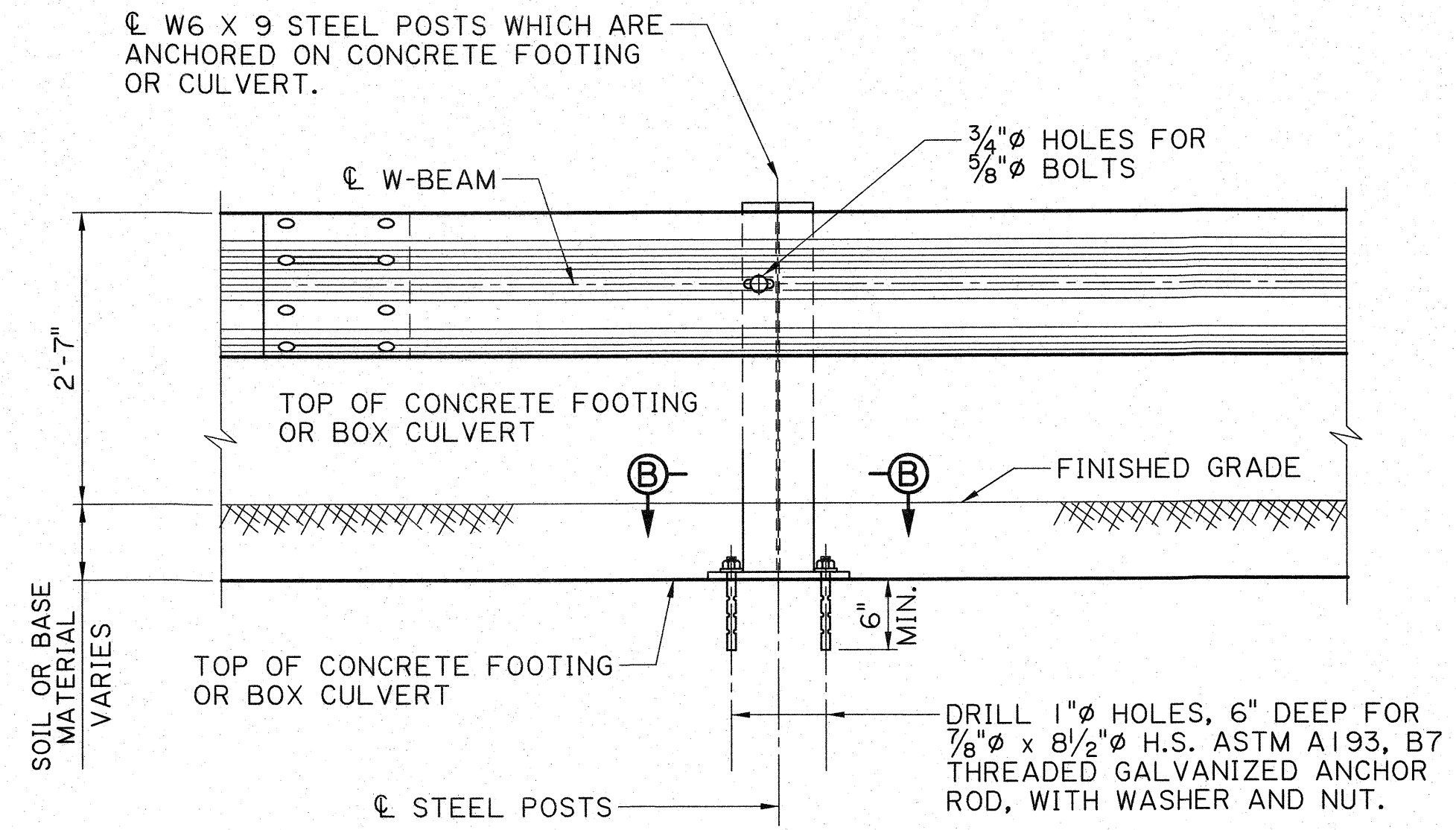
MOW STRIP NOTES:

ALL GUARD RAIL POSTS LOCATED WITHIN CONCRETE OR ASPHALT MOW STRIPS SHALL MEET INSTALLATION REQUIREMENTS SHOWN ON THIS SHEET.

THE LEAVE OUTS SHALL BE FILLED WITH A GROUT MIXTURE CONSISTING OF: 2719 POUNDS SAND, 188 POUNDS TYPE I OR II CEMENT, AND 550 POUNDS OF WATER PER CUBIC YARD WITH A 28 DAY COMPRESSIVE STRENGTH OF 230 PSI OR LESS. PROVIDE GROUT WITH A CONSISTENCY THAT WILL FLOW INTO AND COMPLETELY FILL ALL VOIDS.

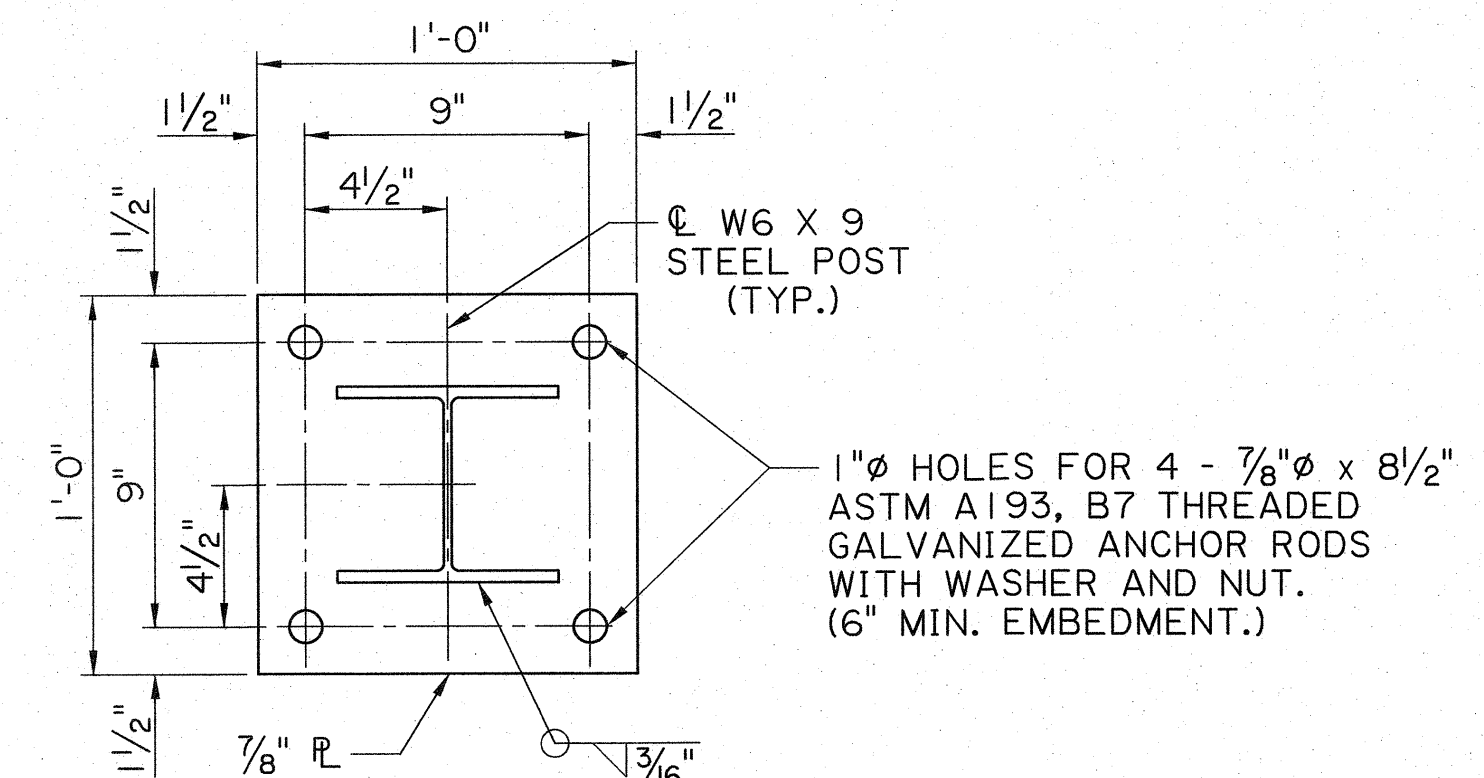
ALL LABOR AND MATERIALS TO PLACE GROUT FILL SHALL BE INCLUDED IN PAYMENT FOR CONCRETE OR ASPHALT PAVING PAY ITEMS.

THE USE OF 6" X 8" RECTANGULAR TIMBER POSTS IN MOW STRIPS HAS ONLY BEEN APPROVED FOR USE UNDER NCHRP REPORT 350. AS PER LADOTD'S MASH IMPLEMENTATION POLICY, THEIR CONTINUED USE IS ALLOWED WHILE A MASH ALTERNATIVE IS DEVELOPED OR EVALUATED.



GALVANIZED STEEL BASE PLATE & STEEL POST

SPECIAL POST WITH BASE PLATE TO BE USED WHEN REQUIRED EMBEDMENT OF CONVENTIONAL POST IN SOIL CANNOT BE OBTAINED, FOR BOX CULVERTS OR OTHER CONCRETE FOOTINGS.



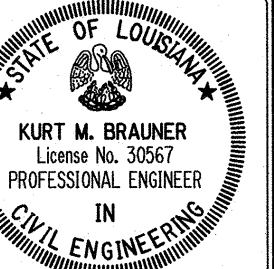
SECTION B-B



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

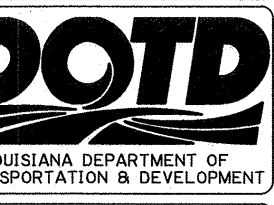
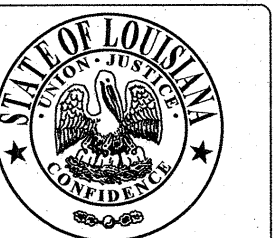
ANCHOR ROD INSTALLATION

ALL HOLES DRILLED INTO AN EXISTING CONCRETE STRUCTURE SHALL BE CLEANED WITH COMPRESSED AIR AND MAKE THEM FREE OF ANY OIL OR RESIDUE. THREADED RODS TO BE ANCHORED USING THE HILTI RE500 EPOXY ANCHORING SYSTEM. PLACE ANCHOR BOLT IN HOLE IMMEDIATELY AND WAIT FOR THE MANUFACTURER'S CURE TIME. COST FOR LABOR, MATERIAL AND INSTALLMENT OF BASE PLATE & ANCHOR ROD TO BE PAID FOR AS PART OF GUARD RAIL PAY ITEM.



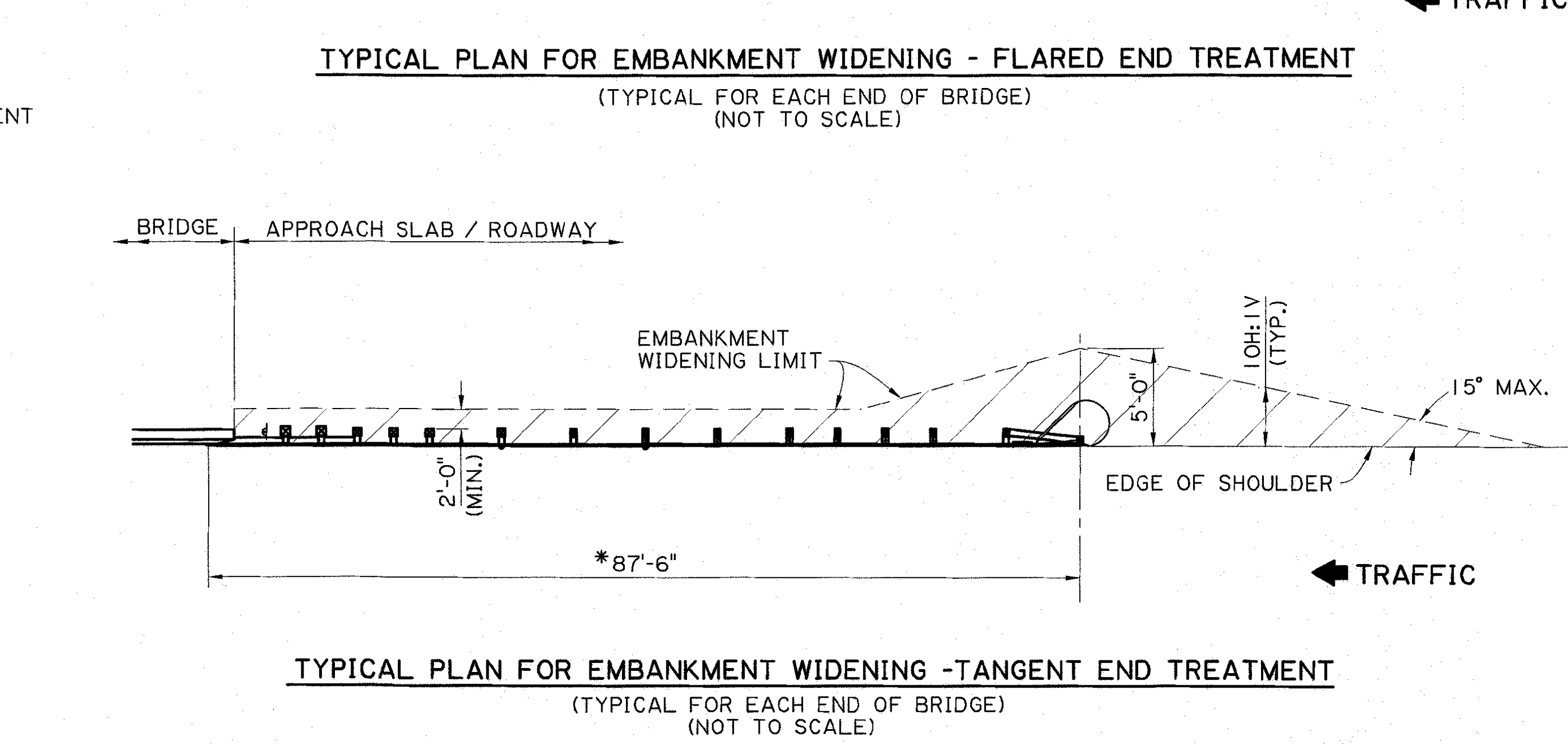
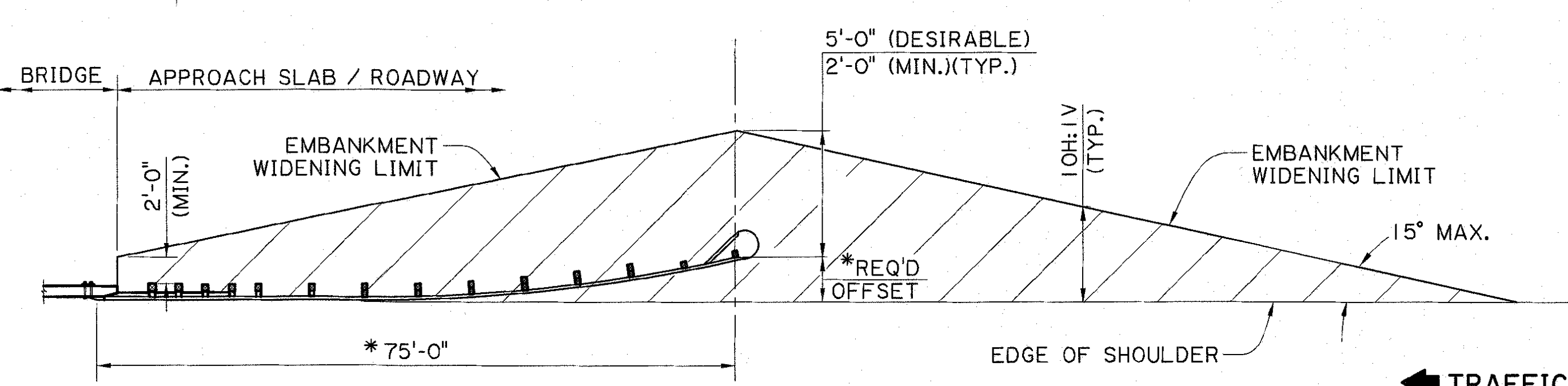
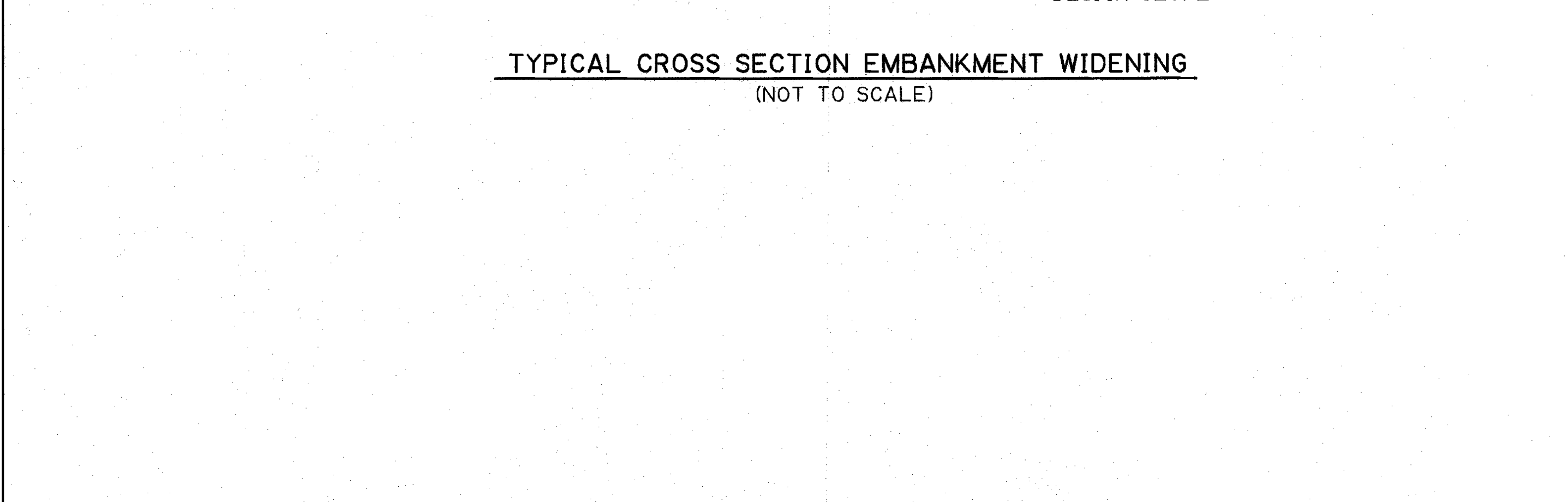
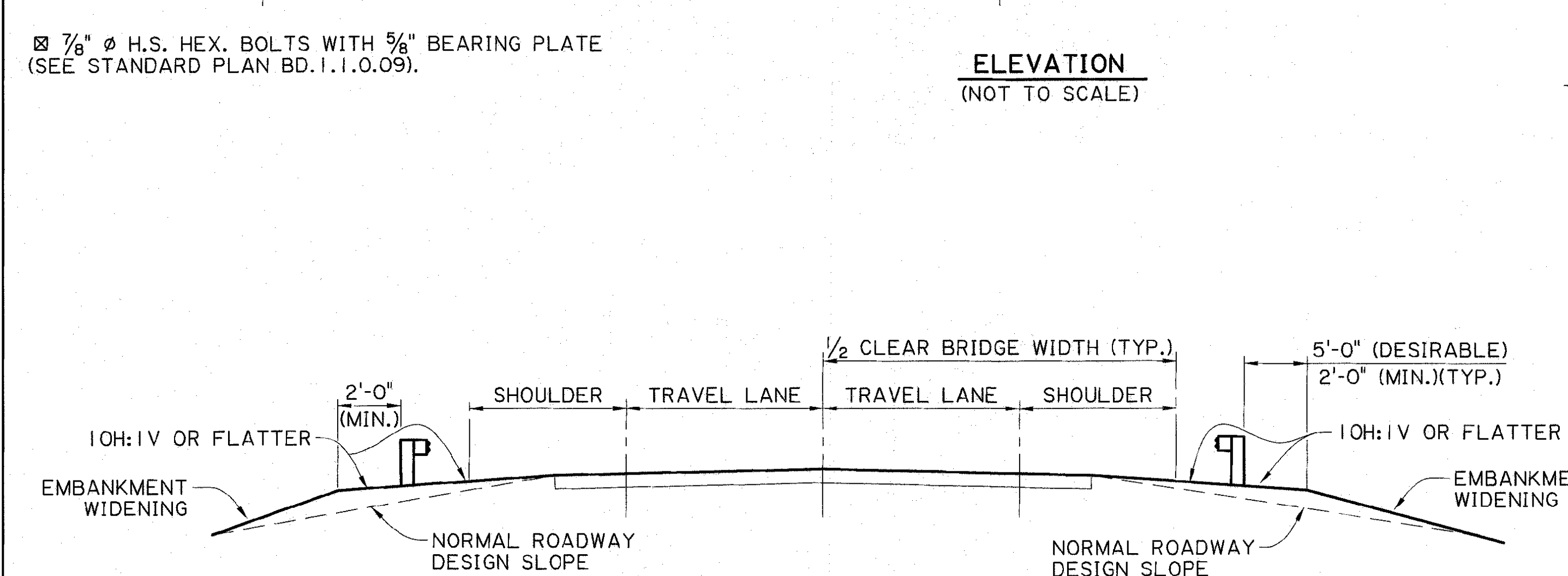
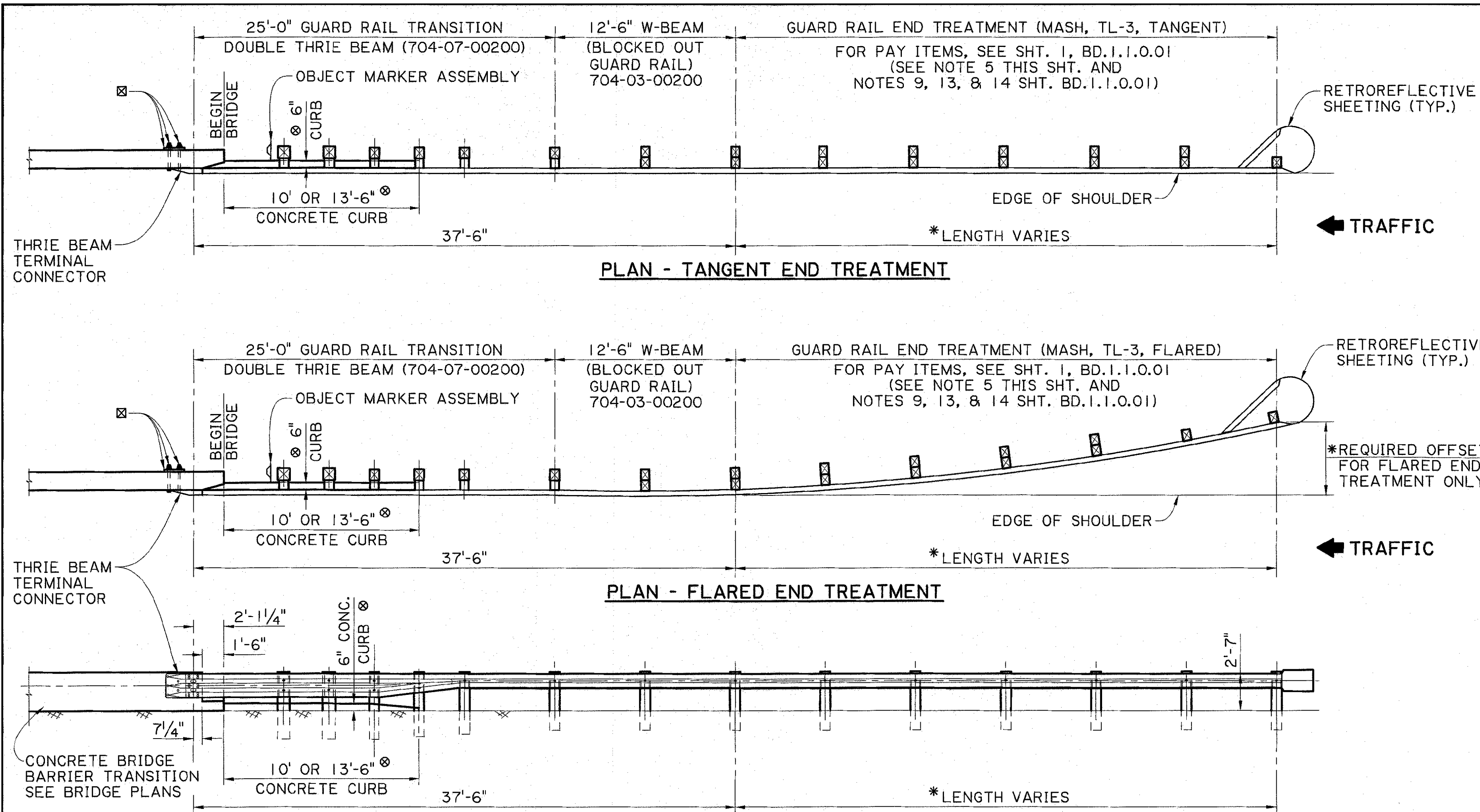
3/2/23

Christopher P. ...
DATE: 4/13/2023



15:49
3/14/2022

IP_PWP:d0966978\BD.1.2.0.01 - Highway Guard Rail (MASH) raster.dgn



- NOTES**
- 1) FOR ADDITIONAL GUARD RAIL DETAILS AND INFORMATION, SEE STANDARD PLAN BD.1.1.0.01 THRU BD.1.1.0.11.
 - 2) FOR CONCRETE BRIDGE BARRIER TRANSITION DETAILS, SEE BRIDGE PLANS.
 - 3) OBJECT MARKERS (TYPE 3) SHALL BE PAID UNDER ITEM 729-16-00300.
 - 4) THE QUANTITY FOR THE EMBANKMENT WIDENING AT BRIDGE ENDS SHALL BE INCLUDED IN THE EMBANKMENT QUANTITY FOR THE ROADWAY.
 - * 5) USE REQUIRED OFFSET AS PER GUARD RAIL FLARED END TREATMENT REQUIREMENTS. SEE DOTD APPROVED MATERIALS LIST (AML) FOR GUARD RAIL END TREATMENTS (MASH). LENGTH VARIES BASED ON END TREATMENT TYPE USED.
 - ⊗ 6) USE 10'-0" LONG CONCRETE CURB AND 6" CURB HEIGHT FOR 10' APPROACH SLAB, SEE APPROACH SLAB DETAILS FOR FURTHER INFORMATION.

USE 13'-6" LONG CONCRETE CURB FOR ≥ 20' APPROACH SLAB, CURB HEIGHT VARIES FROM 6" TO 2", SEE APPROACH SLAB DETAILS FOR FURTHER INFORMATION.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

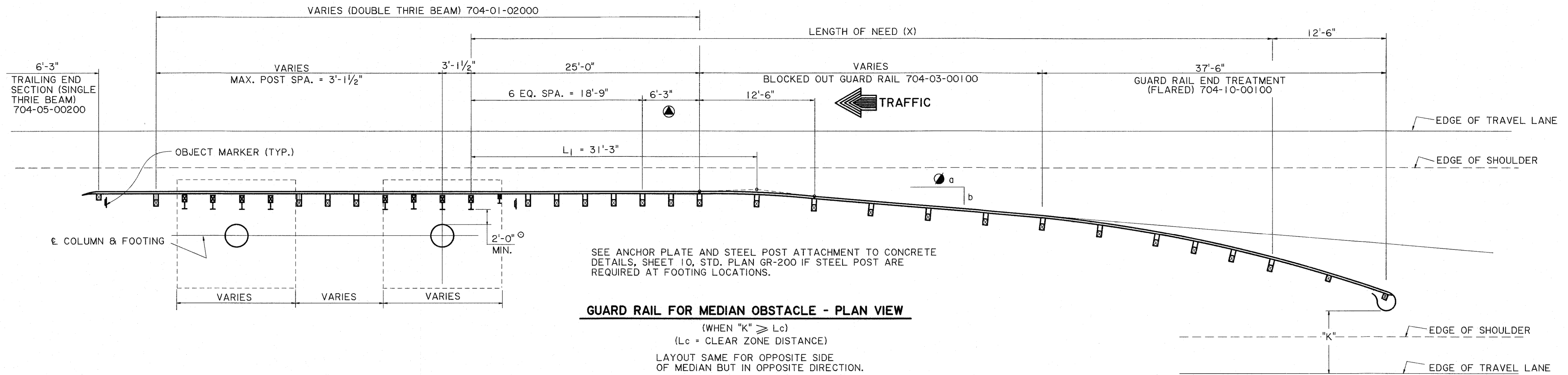
SHEET NUMBER		327	
ST. TAMMANY			
DESIGN	P. FOSSIER	PARISH	
CHECK	K. BRAUNER	CONTROL SECTION	
DETAIL	J. DOUGET	STATE PROJECT	
CHECK	K. BRAUNER		
REVIEW	C. GUIDRY		
SERIES #	1 OF 1		

APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 1/3/19

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/02/24

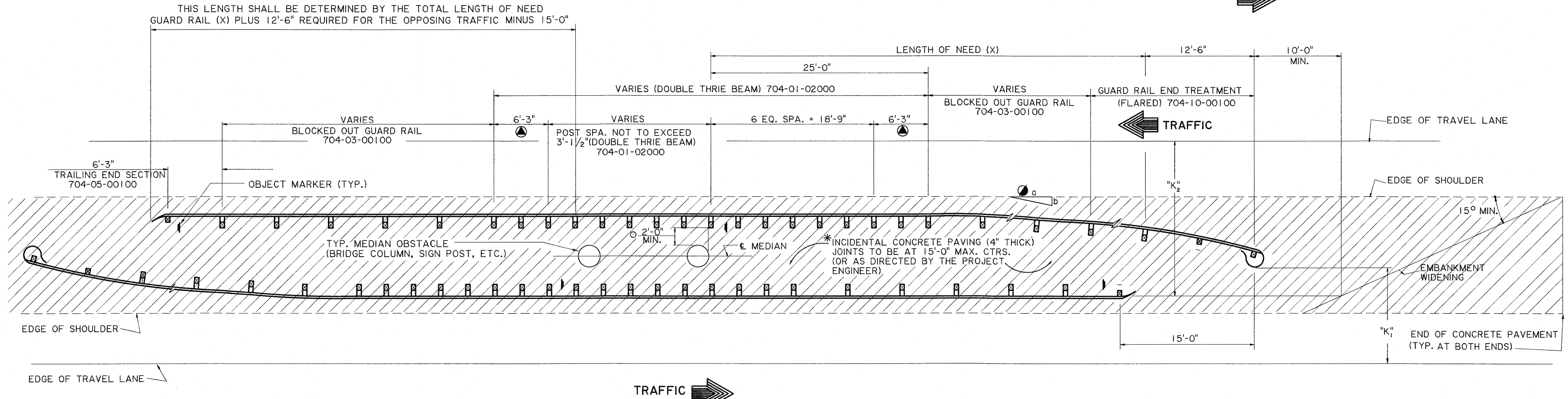
HIGHWAY GUARD RAIL (MASH)
OFF-SYSTEM BRIDGE APPLICATION
BD. 1.2.0.01
GR-MASH-OFF
STANDARD PLAN

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & INFRASTRUCTURE DEVELOPMENT
BRIDGE AND STRUCTURAL DESIGN



GUARD RAIL FOR MEDIAN OBSTACLE - PLAN VIEW

(WHEN "K" ≥ L_c)
(L_c = CLEAR ZONE DISTANCE)
LAYOUT SAME FOR OPPOSITE SIDE OF MEDIAN BUT IN OPPOSITE DIRECTION.



GUARD RAIL FOR MEDIAN OBSTACLE - PLAN VIEW

(ONLY WHEN "K"₁ < L_c AND "K"₂ > L_c)
SEE SHT. 2 OF 8 FOR DESIRABLE LAYOUT

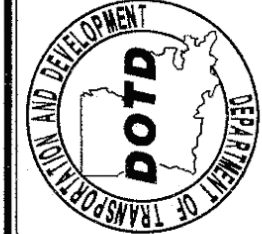
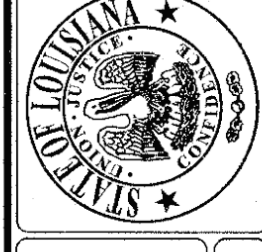
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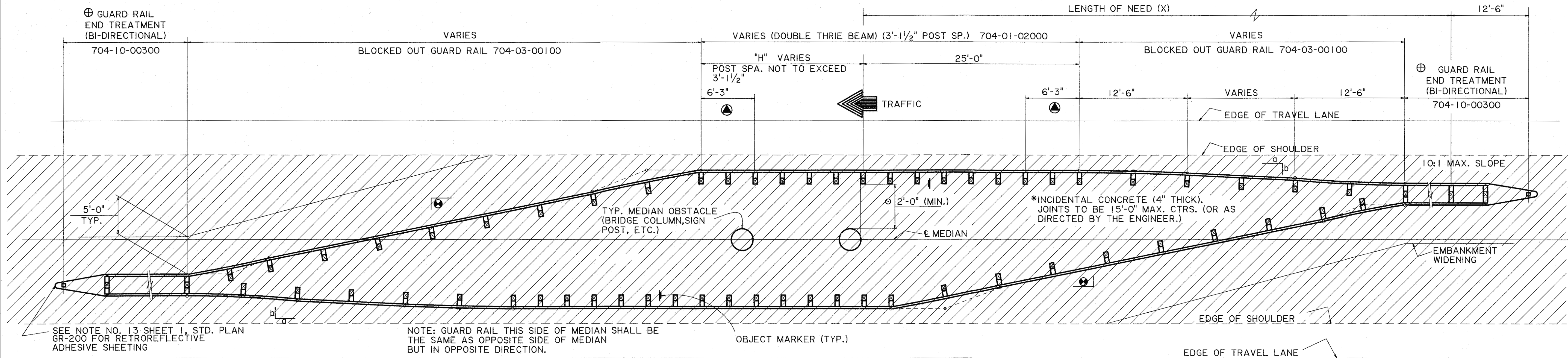
- THIS STANDARD SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200
- DESIRABLE LOCATION FOR GUARD RAIL: GUARD RAIL SHALL BE PLACED AS FAR AWAY FROM TRAFFIC AS POSSIBLE BUT NO CLOSER THAN 2'-0" FROM THE OBSTACLE AS SHOWN.
- FOR CLEARANCES OF MORE THAN 5'-0", ITEM 704-01-02000, GUARD RAIL (DOUBLE THRIE BEAM) (3'-1 1/2" POST SPA.) MAY BE REPLACED BY ITEM 704-01-01020 WHICH IS A SINGLE THRIE BEAM WITH 6'-3" POST SPACING.
- FOR CLEAR ZONE DISTANCE (L_c) SEE TABLE 1, SHEET 2, STD. PLAN GR-200. "K", "K₁" AND "K₂" ARE DISTANCES MEASURED FROM EDGE OF TRAVEL LANE TO BACK FACE OF GUARD RAIL.
- * INCIDENTAL CONCRETE PAVING (4" THICK) TO BE PAID FOR UNDER ITEM 706-03-00100, PER SQ. YARD. THE INCIDENTAL CONCRETE WILL BE USED ON THE PROJECT ONLY IF A QUANTITY & PAY ITEM ARE SHOWN ON THE SUMMARY OF ESTIMATED QUANTITIES. SEE SHEET 10, GR-200 STD. PLAN FOR REQUIRED POST PAVING DETAILS.
- 6'-3" W BEAM/THRIE BEAM TRANSITION SECTION.
- LENGTH OF NEED (X) TO BEGIN AT FIRST POST PRIOR TO OBSTACLE AS SHOWN.
- DIMENSION MEASURED FROM BACK FACE OF GUARD RAIL POST TO FRONT FACE OF OBSTACLE.
- FLARE RATE SHALL BE IN ACCORDANCE WITH DESIGN SPEED AS SHOWN ON SHEET 2 STD. PLAN GR-200.

STATE OF LOUISIANA
 Henry M. Picard, III
 License No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 10/02/24

STATE OF LOUISIANA
 PAUL B. FOSSIER, JR.
 License No. 21708
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 5-31-17

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.





GUARD RAIL FOR MEDIAN OBSTACLE (DESIRABLE) - PLAN VIEW
 (WHEN "K" < Lc, SEE NOTES AND DETAILS SHT. 1 OF 8)

NOTES:

THIS STANDARD PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200.

DESIRABLE LOCATION FOR GUARD RAIL: GUARD RAIL SHALL BE PLACED AS FAR AWAY FROM TRAFFIC AS POSSIBLE BUT NO CLOSER THAN 2'-0" FROM THE OBSTACLE SHOWN.

FOR CLEARANCES OF MORE THAN 5'-0", ITEM 704-01-02000, GUARD RAIL (DOUBLE THRIE BEAM) (3'-1 1/2" POST SPA.) MAY BE REPLACED BY ITEM 704-01-01020 WHICH IS SINGLE THRIE BEAM WITH 6'-3" POST SPACING.

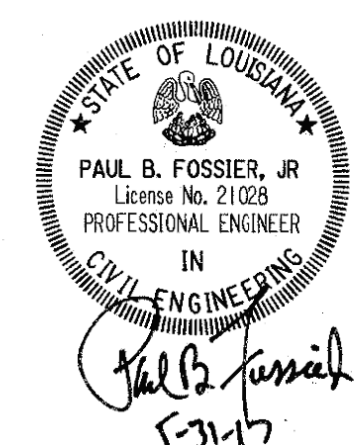
FOR CLEAR ZONE DISTANCE (Lc), SEE TABLE 1, SHEET 2, STD. PLAN GR-200

* INCIDENTAL CONCRETE PAVING (4" THICK) IS TO BE PAID FOR UNDER ITEM 706-03-00100 PER SQ. YARD. THE INCIDENTAL CONCRETE WILL BE USED ON THE PROJECT ONLY IF A QUANTITY & PAY ITEM ARE SHOWN ON THE SUMMARY OF ESTIMATED QUANTITIES. SEE SHT. 10, STD. PLAN GR-200 FOR REQUIRED POST PAVING DETAILS.

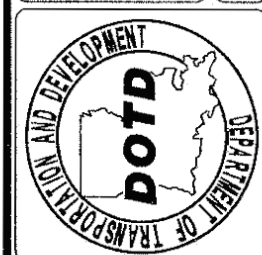
SEE NOTE 13, SHEET 1, STD. PLAN GR-200 FOR INFORMATION ON RETROREFLECTIVE ADHESIVE SHEETING FOR GUARD RAIL SYSTEMS.

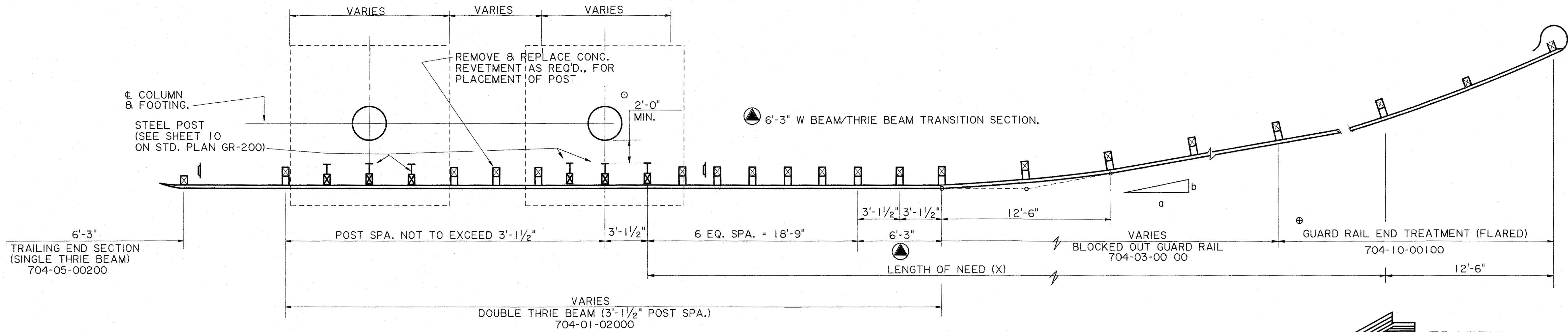
"H" IS THE SHORTEST MULTIPLE OF 6'-3" WHICH EXCEEDS THE HAZARD LENGTH.

- GUARD RAIL SHALL BE FLARED TO MEET THE FRONT THRIE BEAM GUARDRAIL.
- ⊕ SEE STANDARD ITEM, 704-10-00300 FOR GUARD RAIL END TREATMENT (BI-DIRECTIONAL).
- 6'-3" W BEAM/THRIE BEAM TRANSITION SECTION.
- DIMENSION MEASURED FROM BACK FACE OF GUARD RAIL POST TO FRONT FACE OF OBSTACLE.



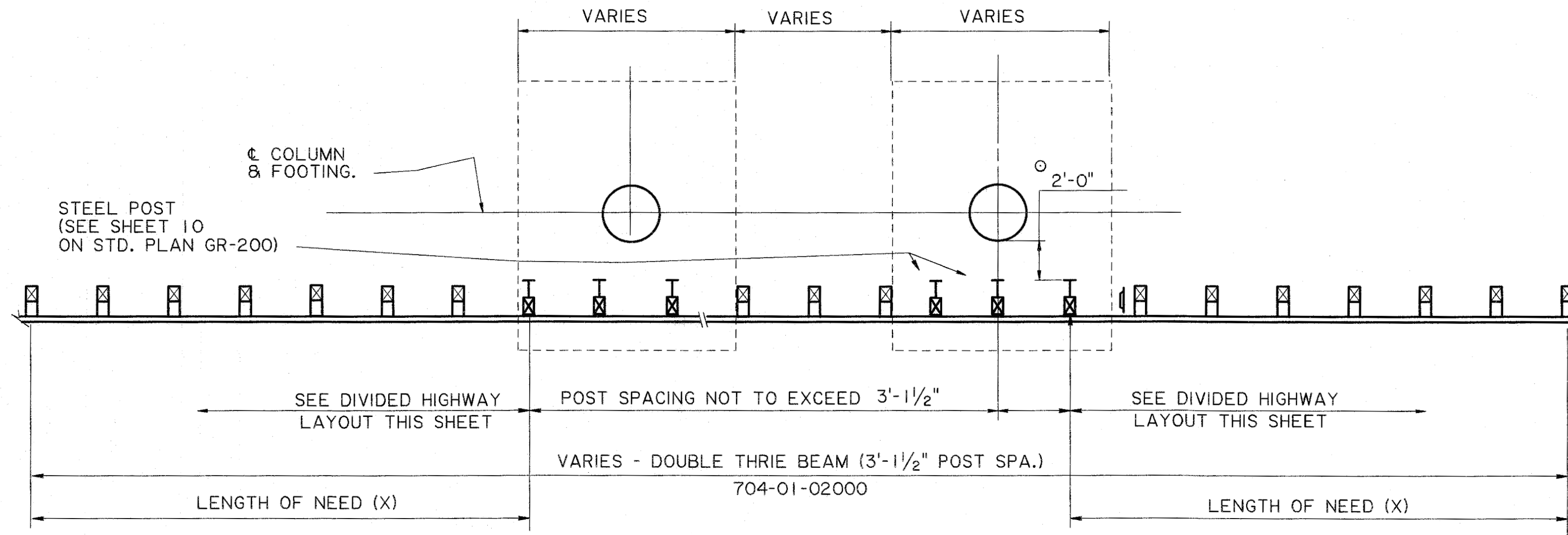
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.





TYPICAL PLAN FOR DIVIDED HIGHWAY - SHOULDER APPLICATIONS

LAYOUT SAME FOR OPPOSITE SIDE OF HIGHWAY BUT IN OPPOSITE DIRECTION.



TYPICAL PLAN FOR UNDIVIDED HIGHWAY - SHOULDER APPLICATIONS

LAYOUT SAME FOR OPPOSITE SIDE OF HIGHWAY BUT IN OPPOSITE DIRECTION.

NOTES:

THIS STANDARD PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200.

IDEAL LOCATION FOR GUARD RAIL: GUARD RAIL SHALL BE PLACE AS FAR AWAY FROM TRAFFIC AS POSSIBLE BUT NO CLOSER THAN 2'-0" FROM THE OBSTACLE AS SHOWN.

FOR CLEARANCES OF MORE THAN 5'-0", ITEMS 704-01-02000, DOUBLE THRIE BEAM (3'-1 1/2" POST SPA.) & 704-01-01000, SINGLE THRIE BEAM (3'-1 1/2" POST SPA.) MAY BE REPLACED BY ITEM 704-01-01020 WHICH IS A SINGLE THRIE BEAM WITH 6'-3" POST SPACING.

FOR CLEAR ZONE DISTANCE (Lc) SEE TABLE 1, SHEET 2, STD. PLAN GR-200

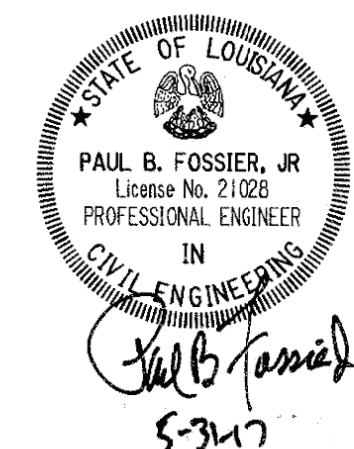
SEE ANCHOR PLATE AND STEEL POST ATTACHMENT TO CONCRETE DETAILS, SHEET 10, STD. PLAN GR-200 IF STEEL POST ARE REQUIRED AT FOOTING LOCATIONS.

⊙ DIMENSION MEASURED FROM BACK FACE OF GUARD RAIL POST TO FRONT FACE OF OBSTACLE.

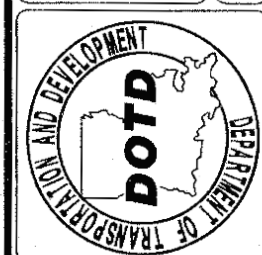
⊕ SEE NOTE 11, SHT. 1, GR-200 STD. PLAN

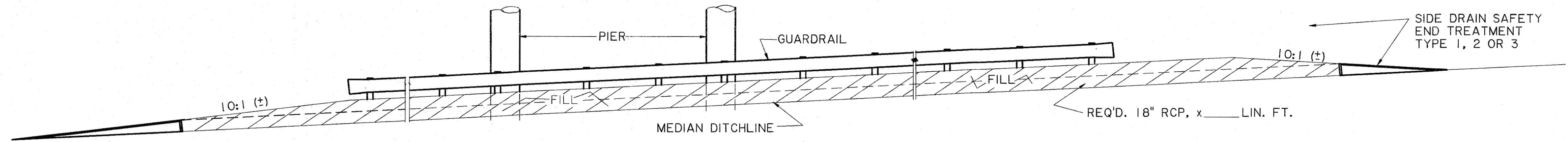
LENGTH OF NEED (X) TO BEGIN AT FIRST POST PRIOR TO THE OBSTACLE AS SHOWN.

FOR EMBANKMENT WIDENING, SEE SHT. 1 STD. PLAN GR-200.

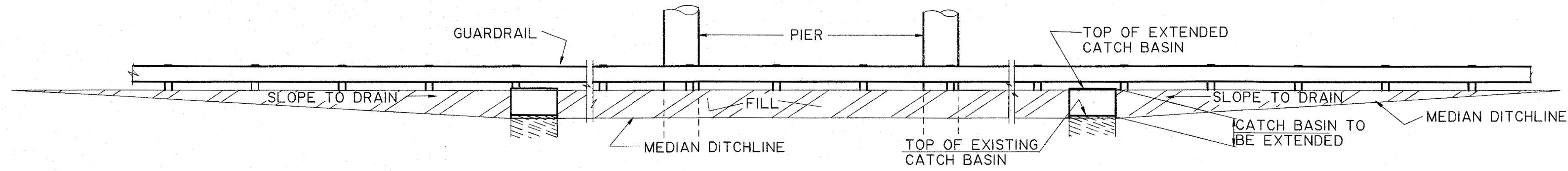


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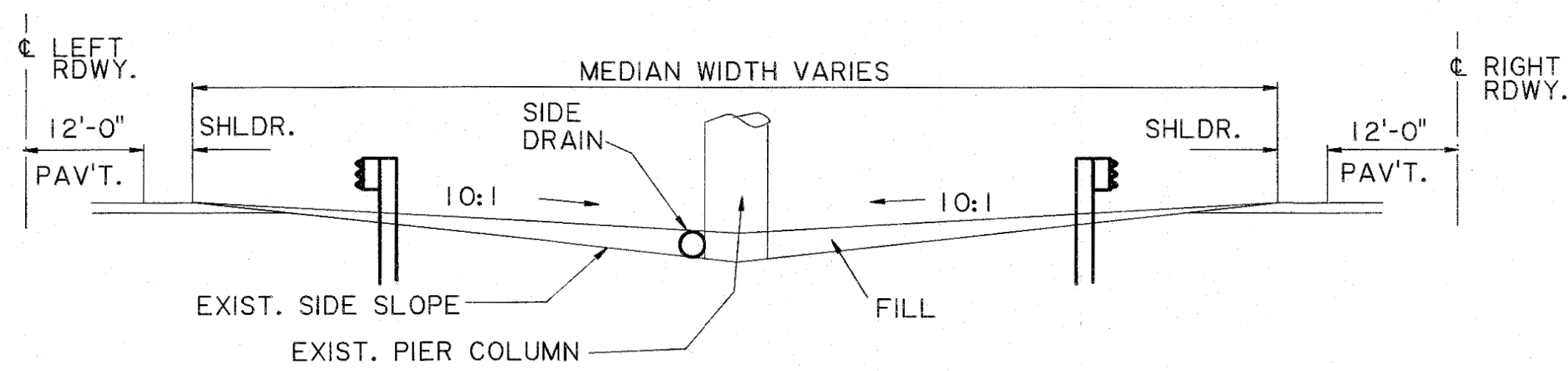




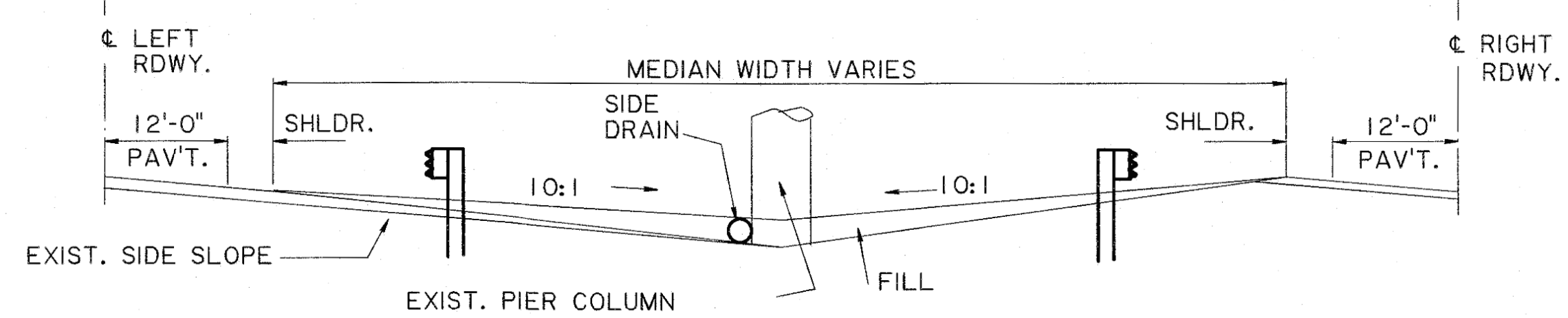
MEDIAN BANK FILL WITH DRAIN FLOW PIPE



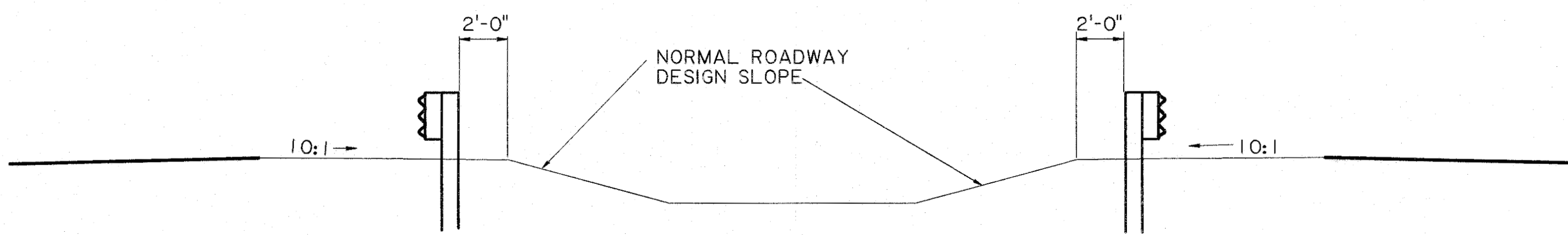
MEDIAN BANK FILL WITH CATCH BASIN



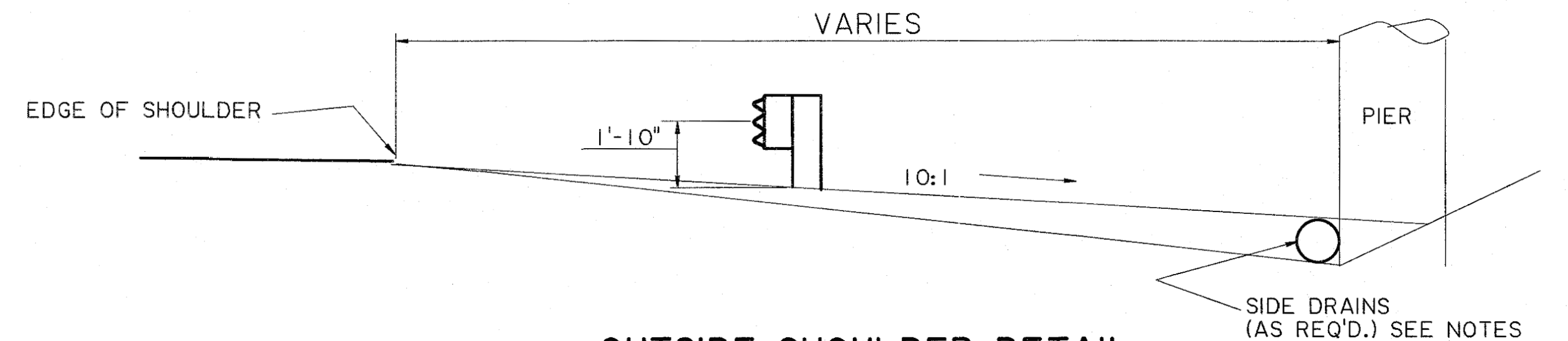
NORMAL SECTION



TYPICAL MEDIAN FILL TREATMENTS



ALTERNATE MEDIAN TREATMENT



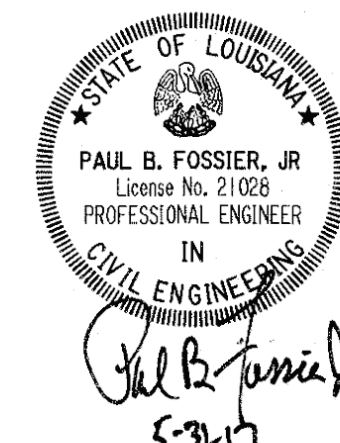
OUTSIDE SHOULDER DETAIL

NOTES

UNDER NO CIRCUMSTANCES SHALL THE MEDIAN OR SIDE SLOPE FILL INTERFERE WITH THE DRAINAGE. IF A CATCH BASIN FALLS WITHIN THE AREA OF NEW FILL, IT SHALL BE EXTENDED TO TOP OF THE NEW FILL TO ALLOW PROPER DRAINAGE. IF NECESSARY, PIPES MAY BE USED TO ACCOMMODATE SUBSURFACE DRAINAGE.

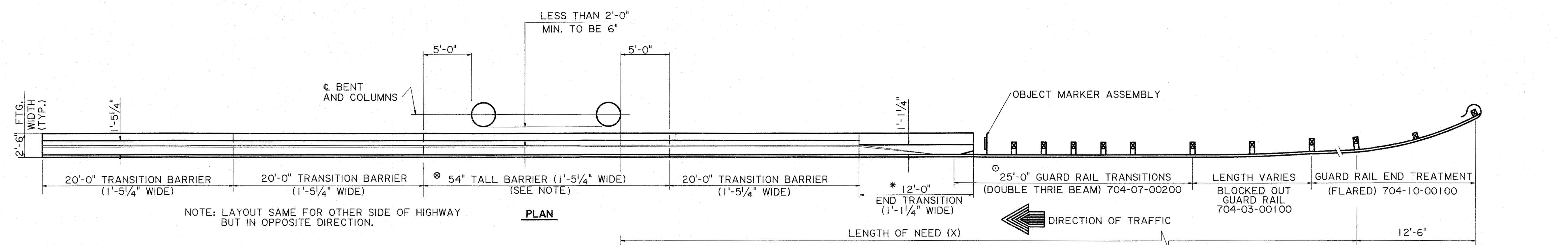
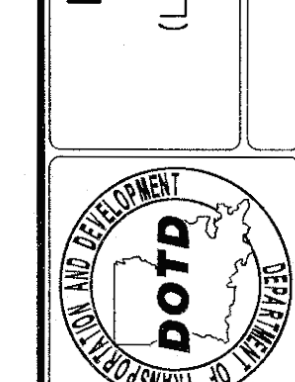
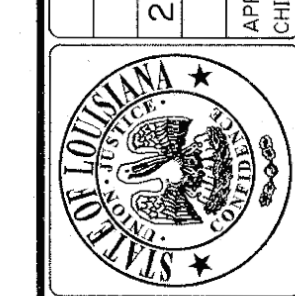
SLOPED CATCH BASIN, EXTENDING CATCH BASIN, SIDE DRAIN PIPE AND FILL TO BE PAID FOR UNDER THEIR RESPECTIVE PAY ITEMS.

THIS STANDARD PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200.



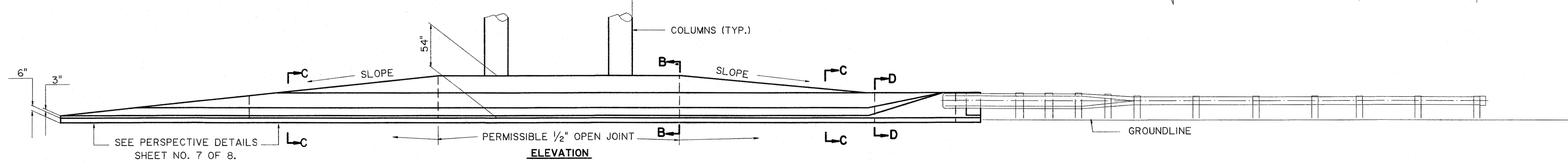
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.





NOTE: LAYOUT SAME FOR OTHER SIDE OF HIGHWAY BUT IN OPPOSITE DIRECTION.

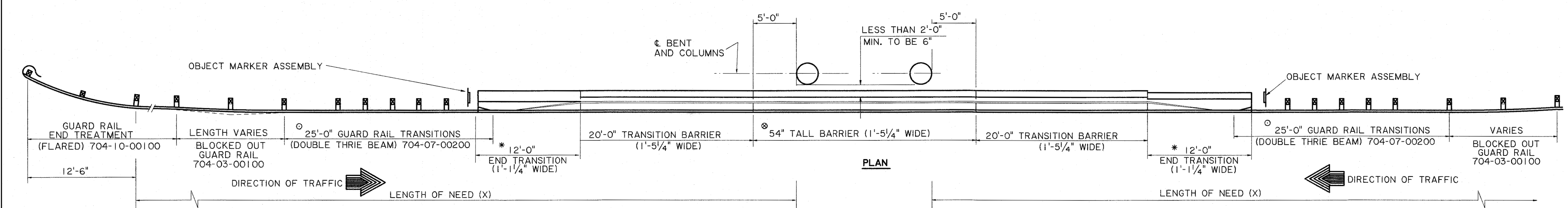
PLAN



SEE PERSPECTIVE DETAILS SHEET NO. 7 OF 8.

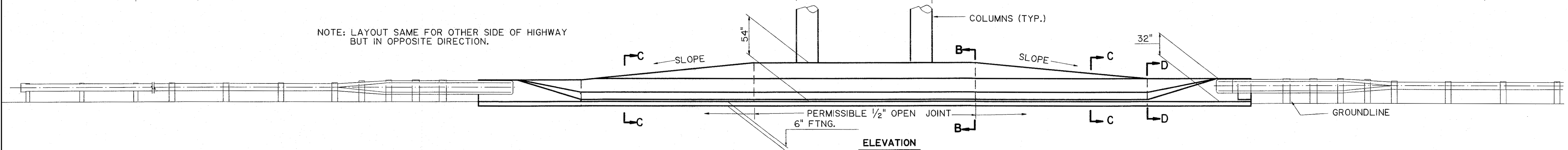
ELEVATION

TYPICAL FOR DIVIDED HIGHWAY



NOTE: LAYOUT SAME FOR OTHER SIDE OF HIGHWAY BUT IN OPPOSITE DIRECTION.

PLAN



ELEVATION

TYPICAL FOR UNDIVIDED HIGHWAY WITH FILL SECTION

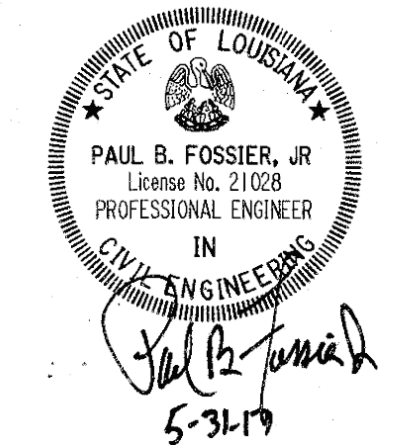
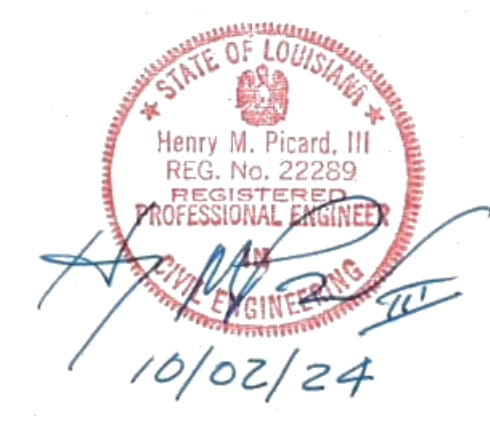
NOTES:

- LENGTH OF 54" TALL BARRIER TO BE DETERMINED BY THE LENGTH OF THE OBJECT TO BE PROTECTED. REGARDLESS OF LENGTH OF NEED (X), A MINIMUM OF 75'-0" GUARD RAIL SHALL BE INSTALLED AT THE END OF CONCRETE BARRIER. WHEN MINIMUM GUARD RAIL IS USED, SEE NOTE 2, SHT. 1 OF GR-200.
- FOR ADDITIONAL INFORMATION AND BARRIER RAIL DETAILS, SECTION B-B, C-C, D-D & E-E SEE SHEET 7 AND 8 OF 8.
- THIS STANDARD PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200.
- FOR REINFORCING DETAILS OF 12'-0" TRANSITION & TAPER, SEE BARRIER RAIL SPECIAL DETAILS.
- 10' CURB REQUIRED, SEE SHT. 3, STD. PLAN GR-200 FOR DETAILS.

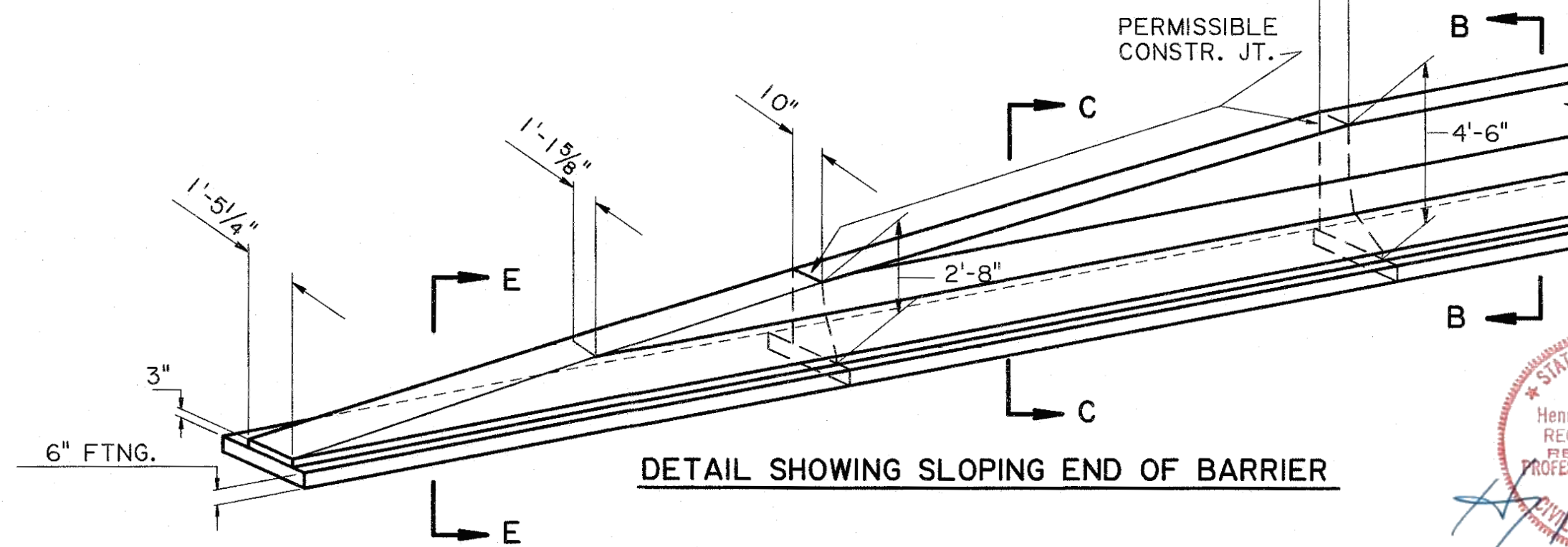
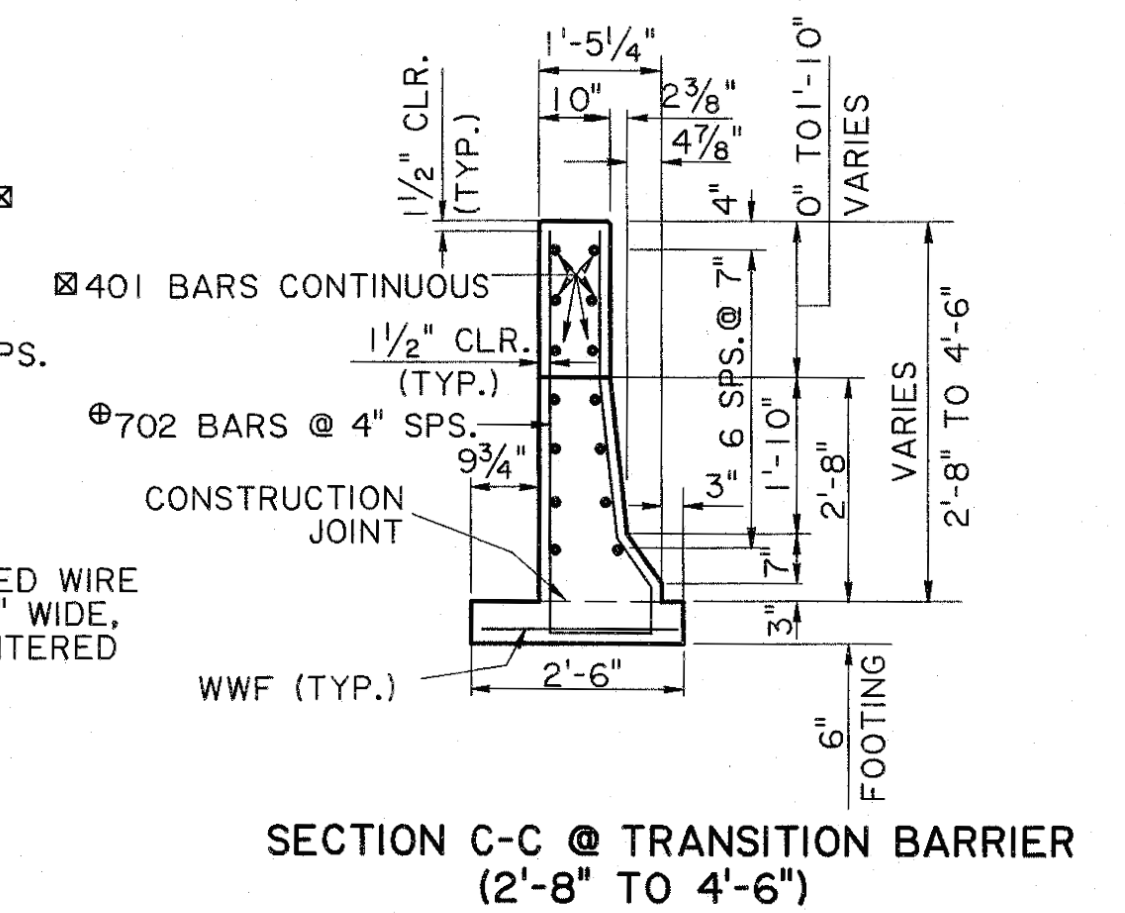
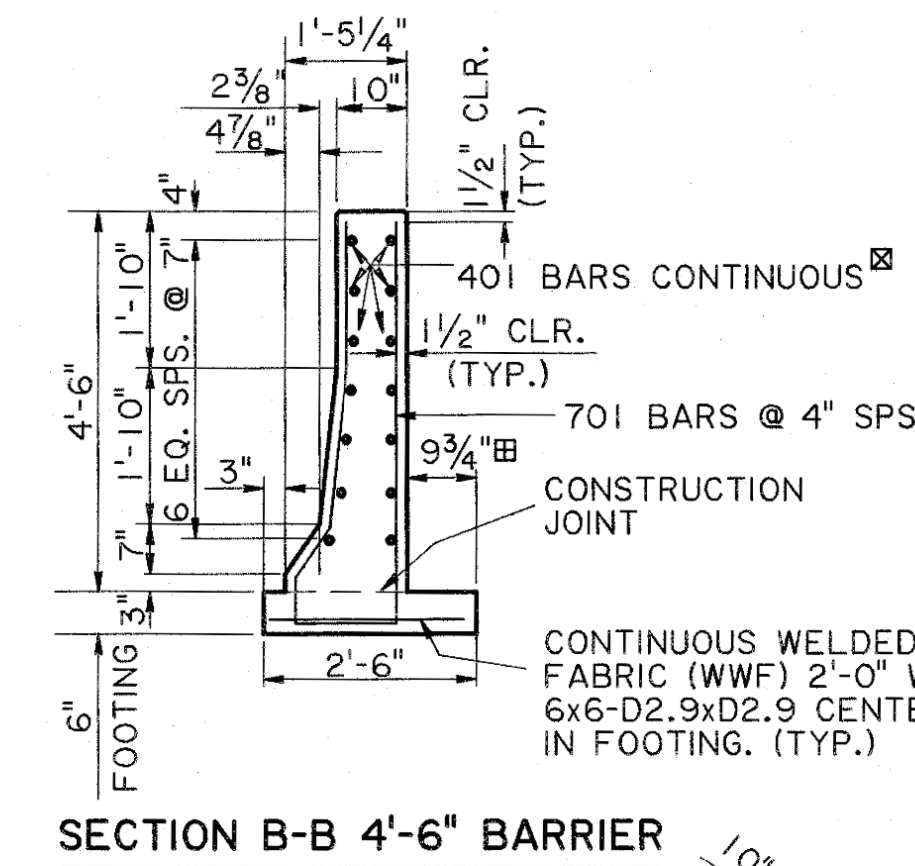
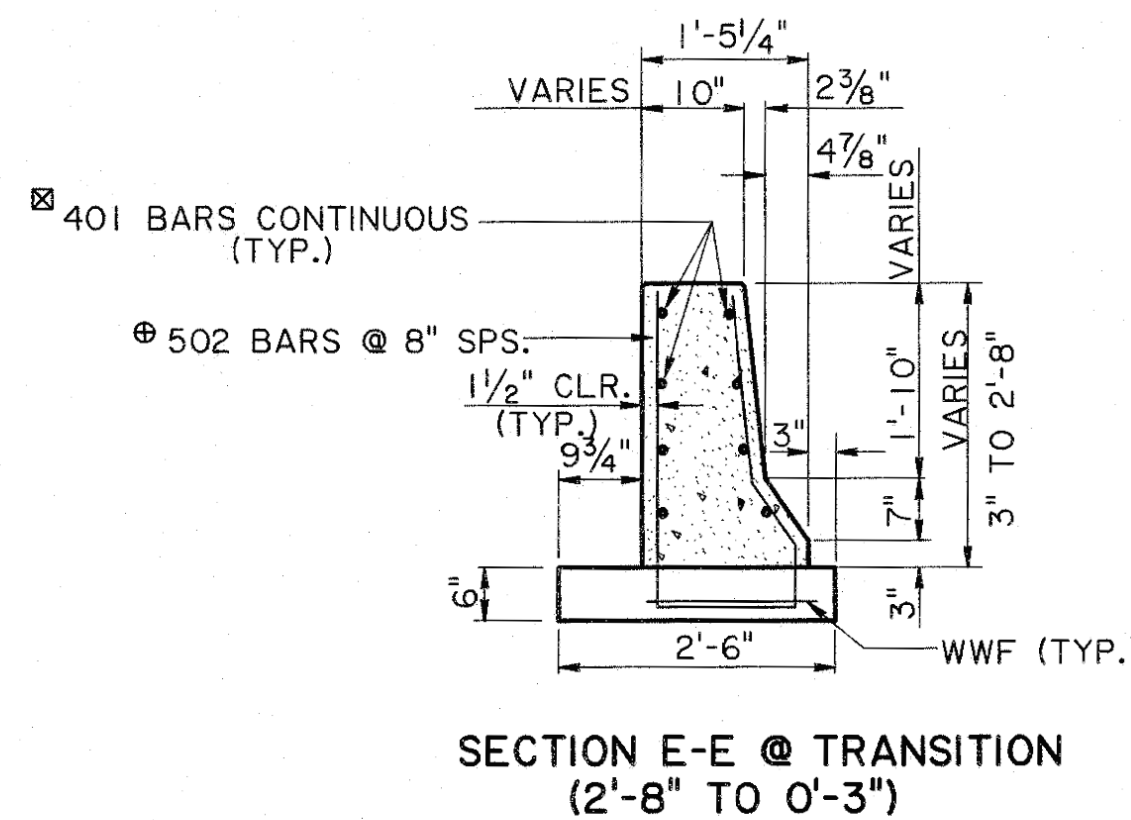
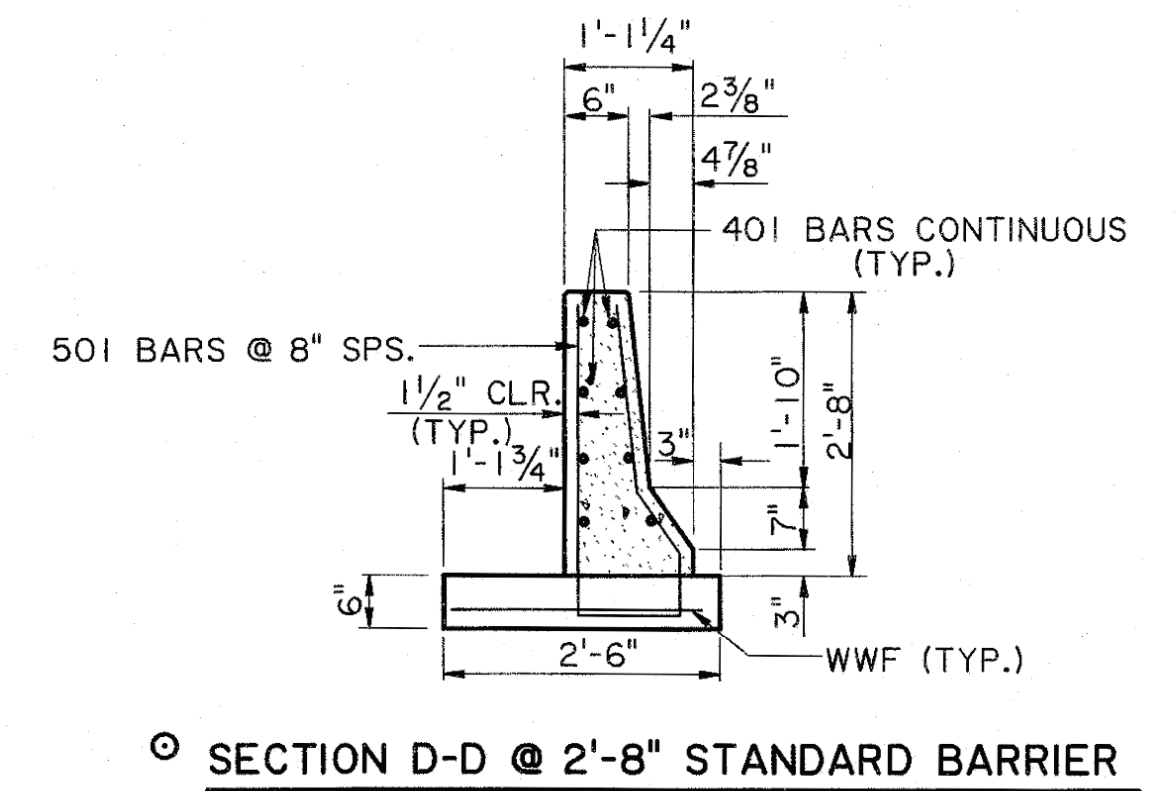
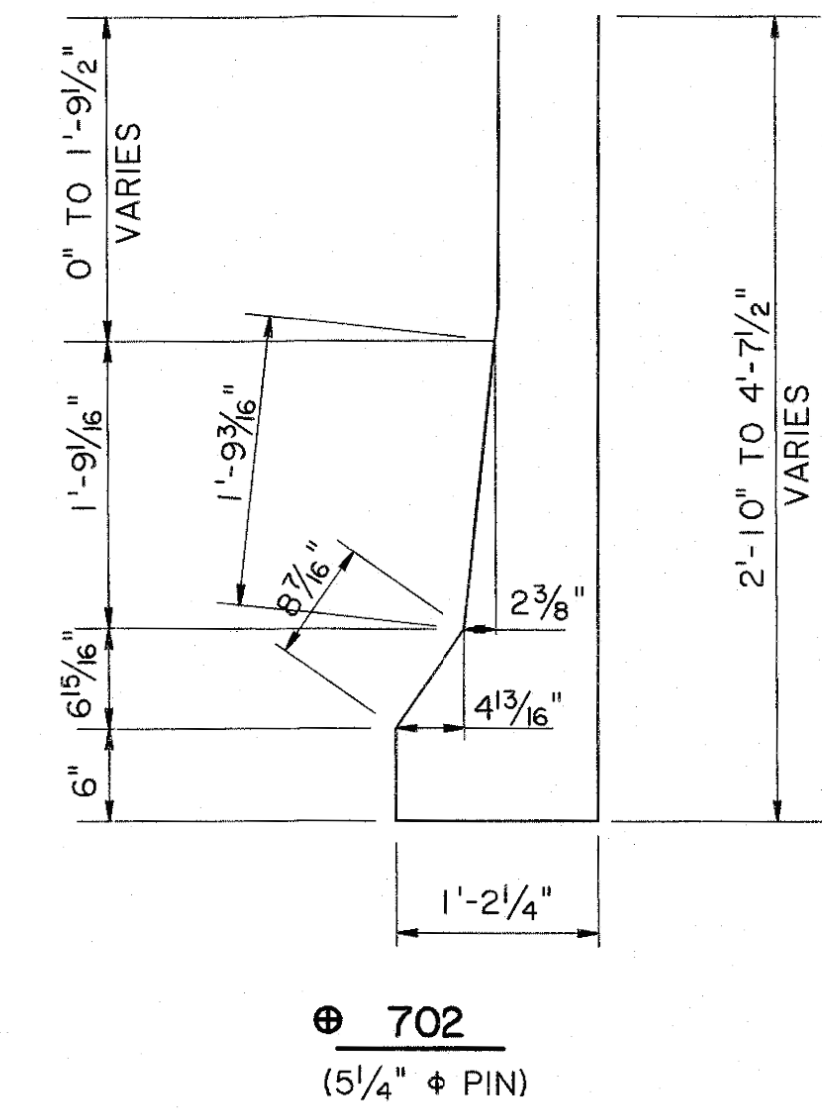
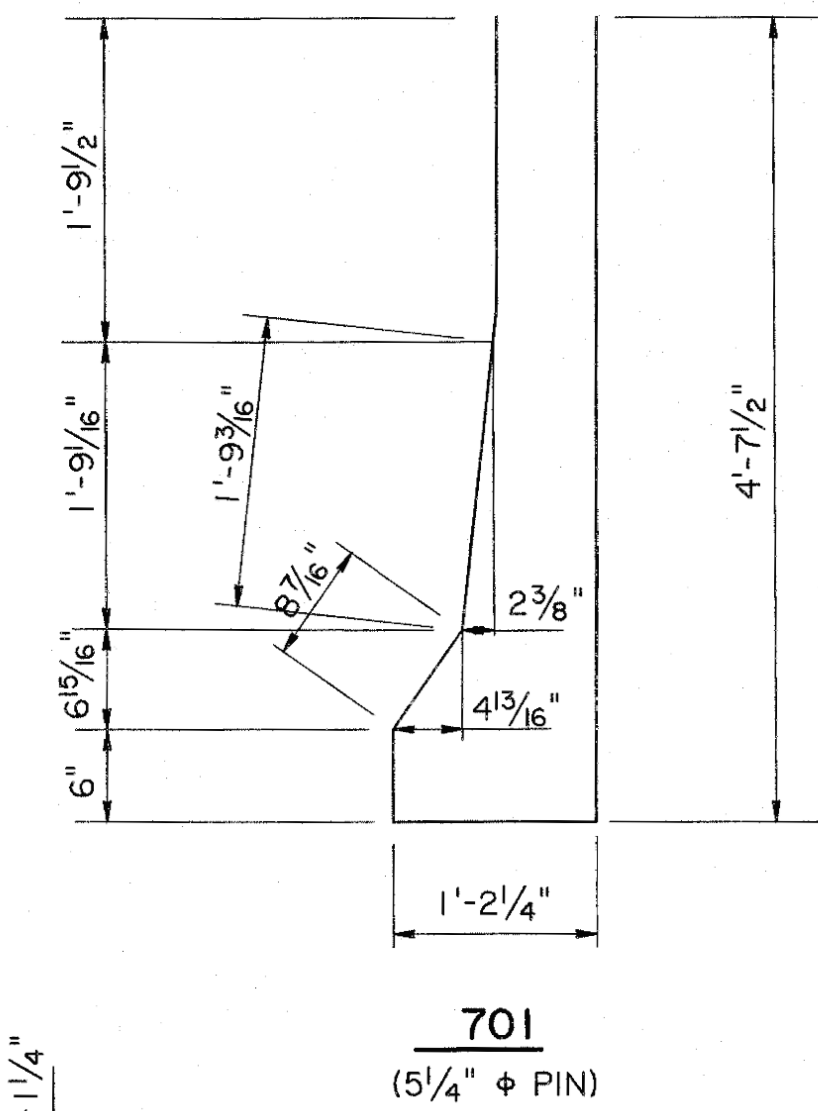
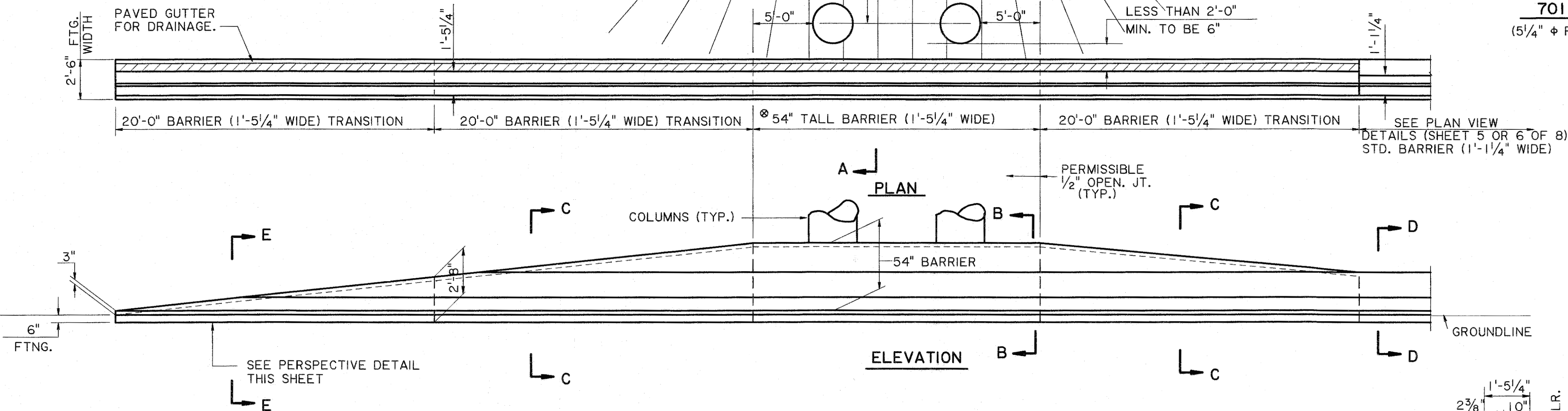
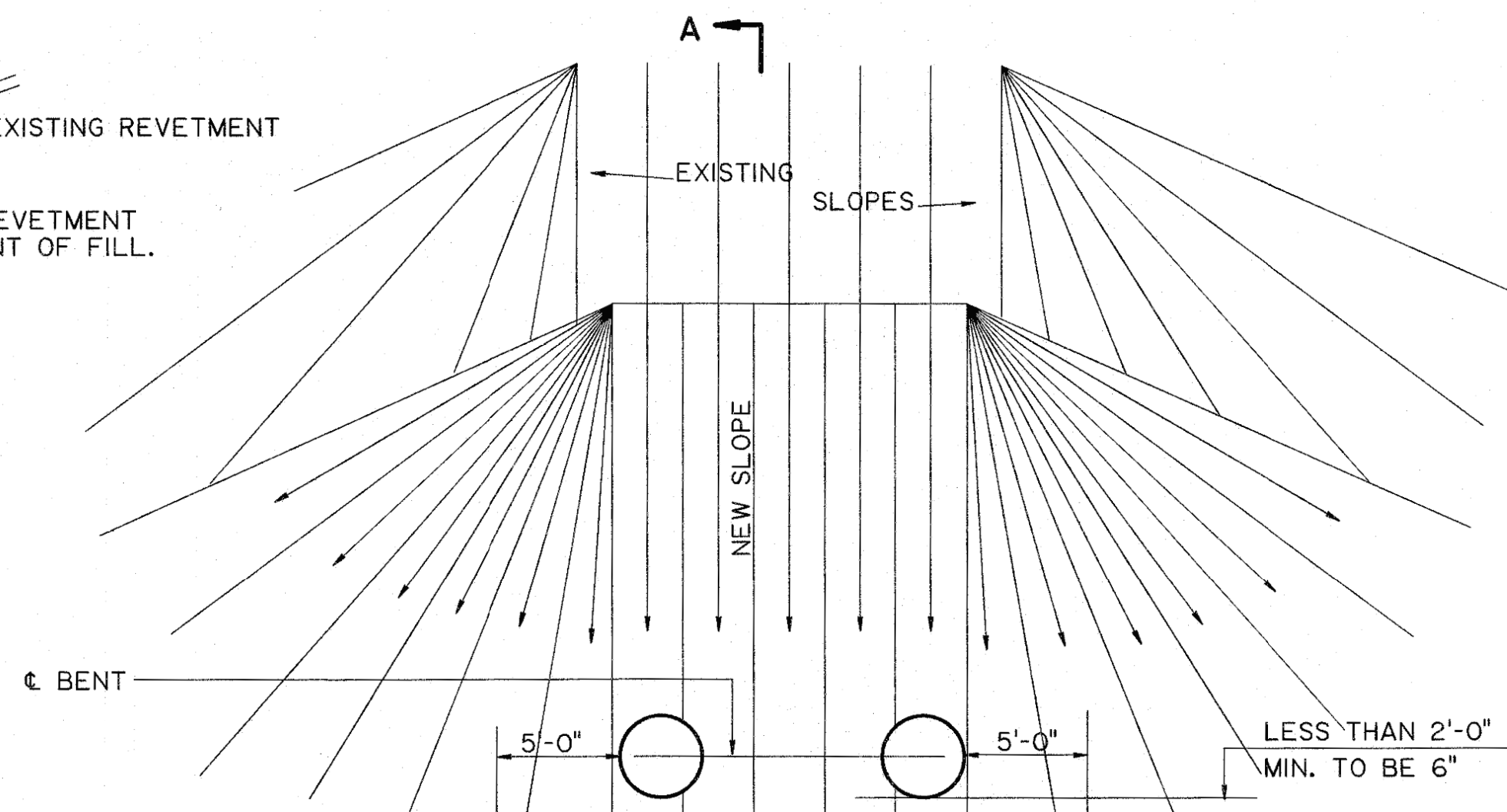
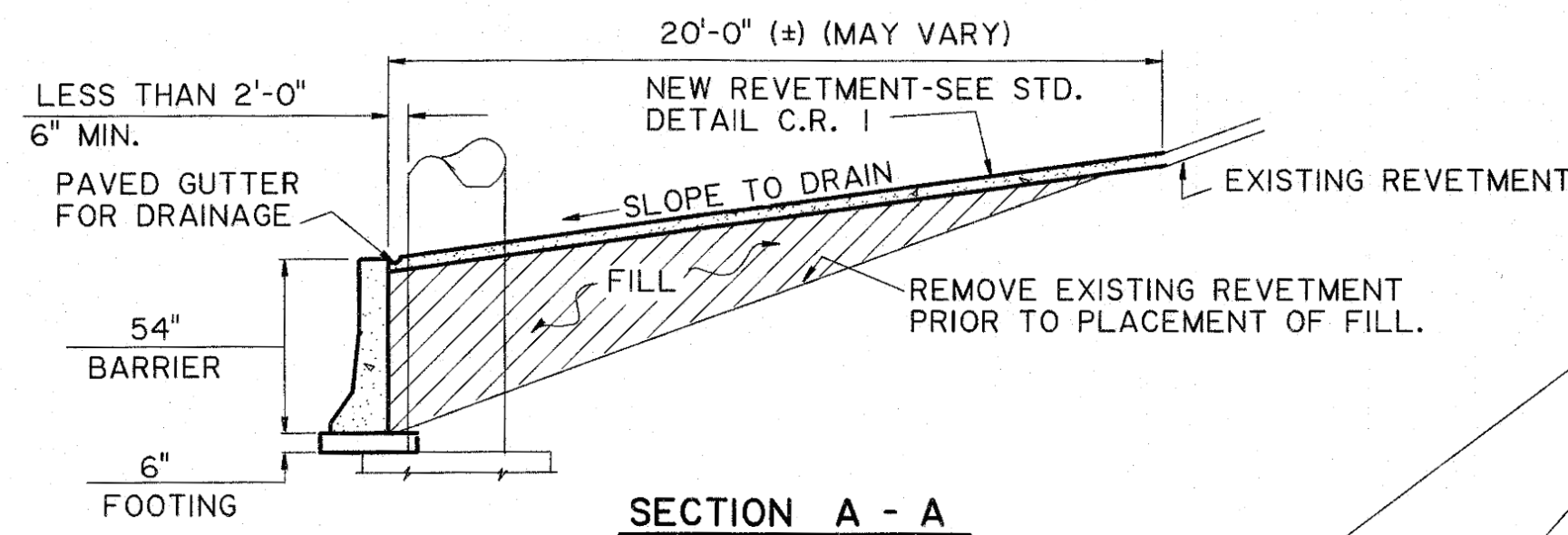
FUTURE OVERLAYS:

FOR FUTURE OVERLAY ON THE SHOULDER, WHERE IT MEETS THE PIER PROTECTION, THE OVERLAY SHALL PREFERABLY BE A MAXIMUM OF 3". THUS THE EFFECTIVE HEIGHT OF THE BARRIER AT 32" AND THE ATTACHED THRIE BEAM CAN BE LOWERED UP TO 3" WITHOUT FURTHER MODIFICATION TO THE HEIGHT OF THE BARRIER SYSTEM.

WHEN THE OVERLAY ON THE SHOULDER MUST EXCEED THE 3" MAXIMUM REQUIREMENT, MODIFY THE APPROACH SECTION OF THE PIER PROTECTION SYSTEM AT SECTION D-D TO WHICH THE THRIE BEAM CONNECTS, BY RAISING IT TO A HEIGHT EQUAL TO THE DEPTH OF THE REQUIRED OVERLAY. THIS WOULD ALSO REQUIRE THE GUARDRAIL TO BE RAISED BY AN EQUAL AMOUNT.

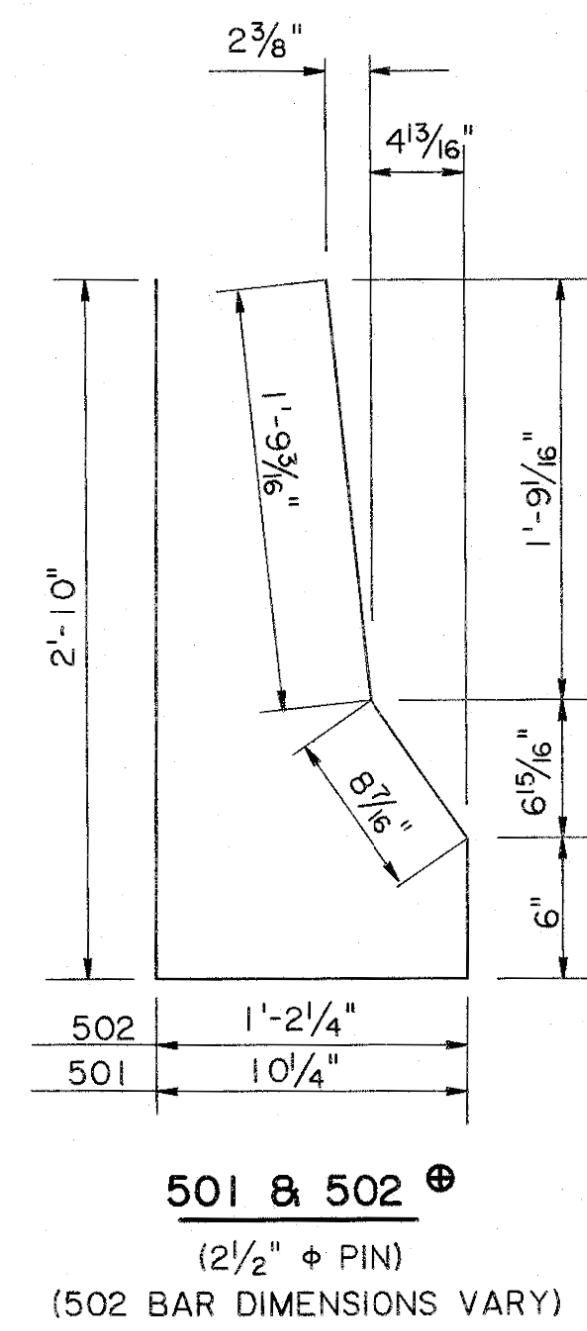


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



NOTES

- EXISTING SLOPE SHOWN IS FOR ILLUSTRATION ONLY. (SLOPES VARY AT EACH LOCATION)
- LENGTH OF 54" TALL BARRIER TO BE DETERMINED BY THE LENGTH OF THE OBJECT TO BE PROTECTED.
- 1/2" OPEN JOINTS TO BE AT 20'-0" MAX. CTRS.
- TRAILING END SHOWN IS FOR USE WITH THE FILL SECTIONS.
- FOR TRAILING END ON CUT SECTIONS SEE SHEET 5 OF 8.
- SEE SHEET 5 OF 8 FOR OTHER PIER PROTECTION SYSTEM NOTES.
- REINFORCING STEEL BAR DETAILS THAT ARE SHOWN ARE FOR FABRICATION. STRAIGHT REBAR DETAILS NOT SHOWN, ONLY THE SIZE IS SHOWN IN THE SECTIONS.
- THESE REINFORCING STEEL BAR DIMENSIONS VARY AND SHALL BE ADJUSTED AND FABRICATED TO FIT IN THE TRANSITION AREA.
- THIS STANDARD PLAN SHALL BE USED IN CONJUNCTION WITH STANDARD PLAN GR-200.
- SEE BARRIER RAIL SPECIAL DETAILS FOR FURTHER REINFORCING INFORMATION.
- 401 BARS WILL TERMINATE IN TRANSITION SECTION WITH 1/2" REQUIRED BAR CLEARANCE.
- FOOTING WIDTH MAY BE ADJUSTED TO 6" TO FIT AROUND COLUMN INTERFERENCE WHEN NEEDED. ADJUSTMENTS TO BE MADE AT NO ADDITIONAL COST. ANY REVISED DETAILS TO BE APPROVED BY THE ENGINEER



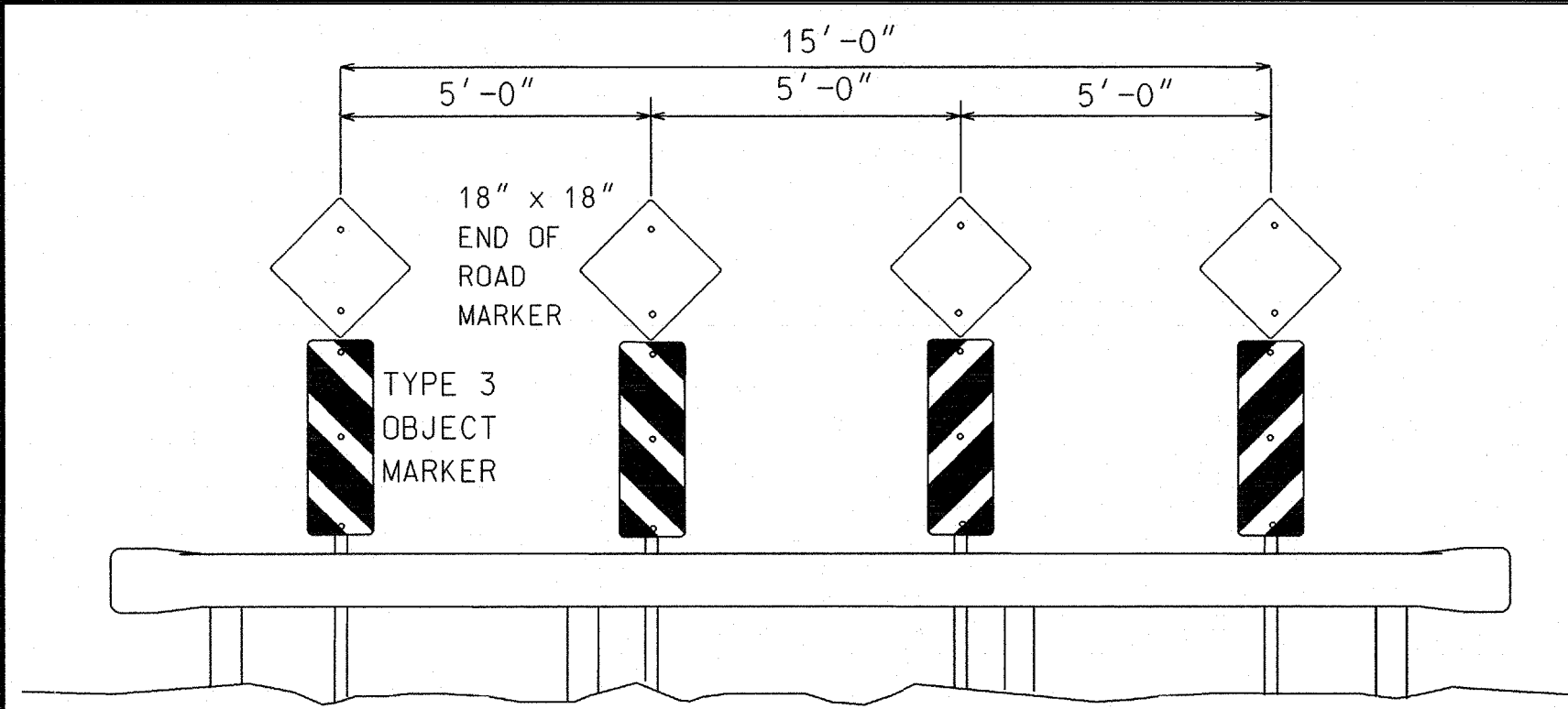
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Henry M. Picard, III
REG. No. 22289
PROFESSIONAL ENGINEER
10/02/24

PAUL B. FOSSIER, JR.
License No. 21028
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
5-31-17

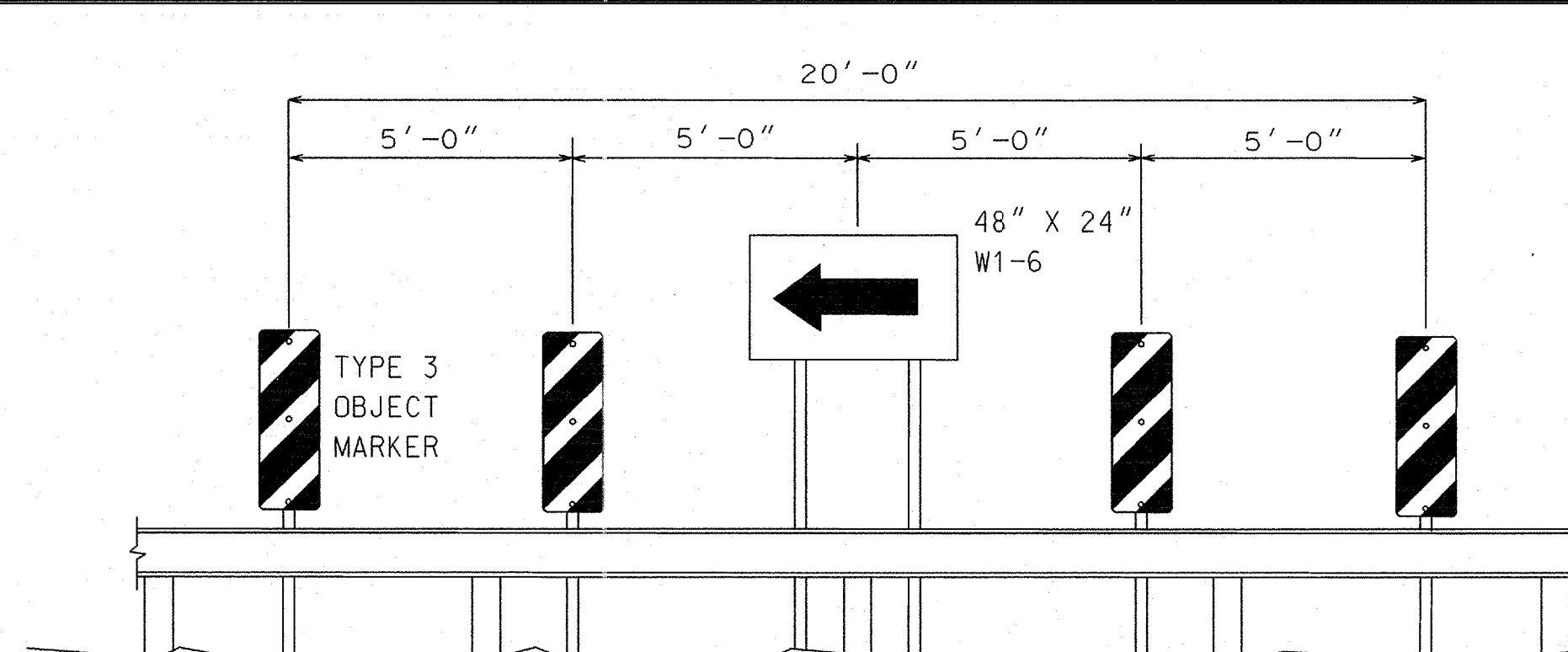
SHEET NUMBER	334
PROJECT	ST. TAMMANY
DESIGNED	C. GRASS
CHECKED	P. FOSSIER
DATE	OCT., 2008
SHEET	7 OF 8
DATE	6-13-2017
APPROVED BY	Jane P. Williams
CHIEF ENGINEER	
DATE	2-15-17
REVISION DESCRIPTION	UPDATED FOR 2016 SPECIFICATIONS
BY	K.M.B.
DATE	

HIGHWAY GUARD RAILS
BACKFILL SUPPORTED BARRIER
CUT & FILL SECTION
GR-201
BRIDGE AND STRUCTURAL DESIGN



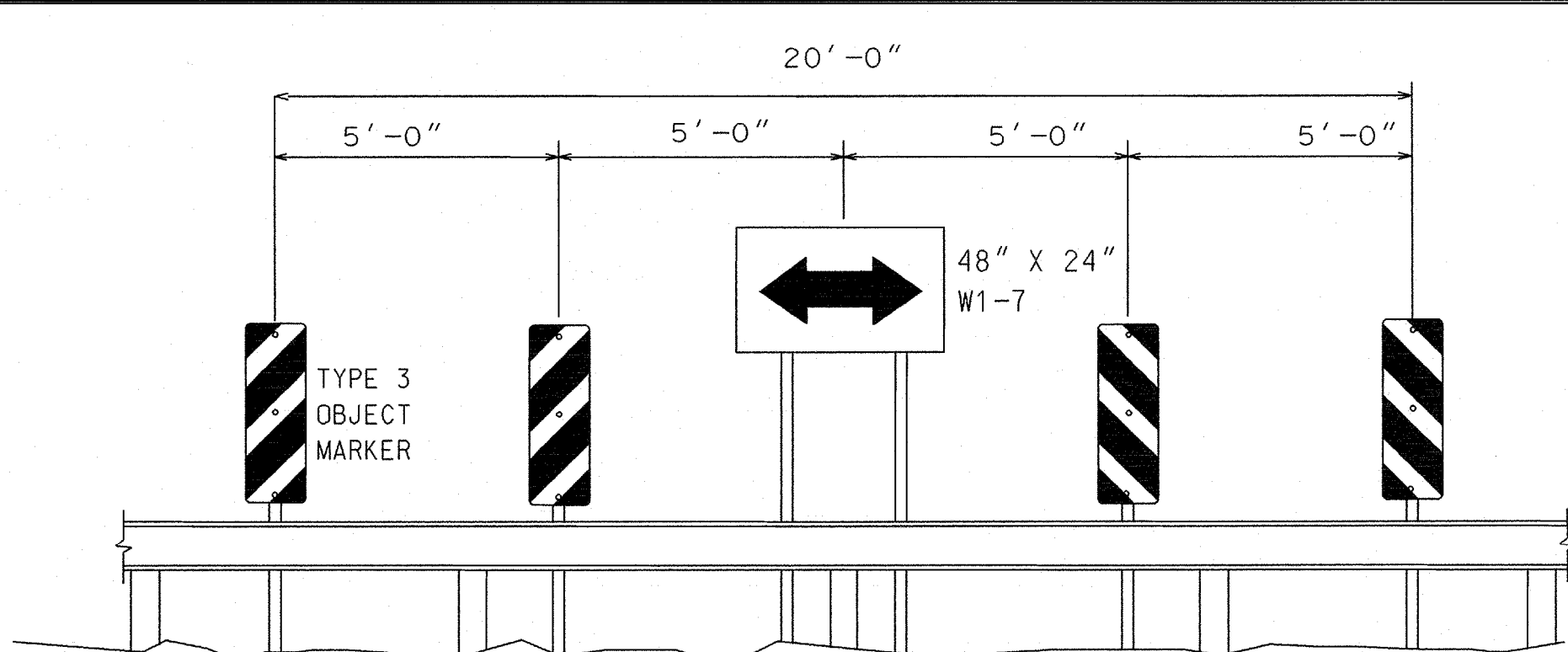
END-OF-ROADWAY INSTALLATION

DEAD END ROAD INSTALLATION
 (TYPE A - WITH GUARD RAIL, TYPE D - WITHOUT GUARDRAIL)
 For End of Road installation Object Marker stripes shall slope downward toward the center.
 Guardrail to be installed in accordance with guardrail Standard Plans.
 Typical installation requires 25 ft. of rail with flared end sections.



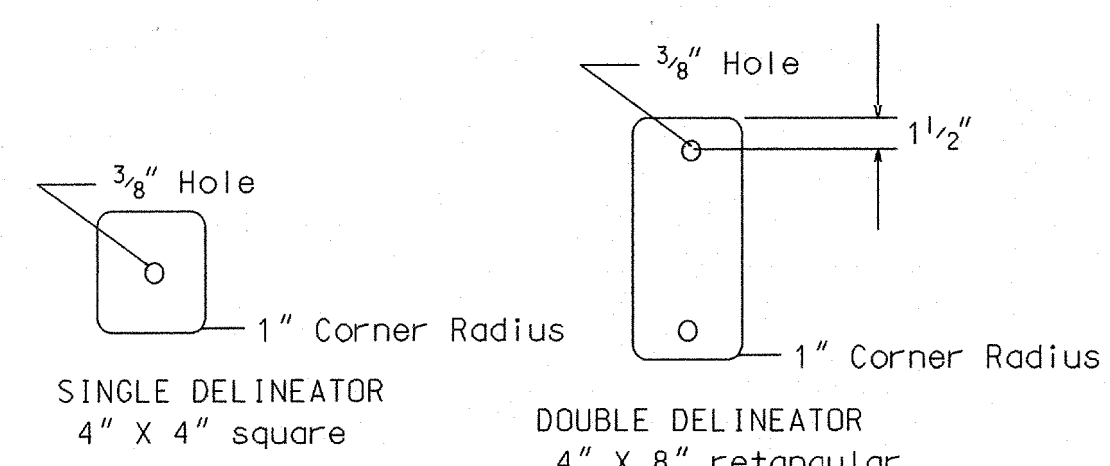
TURN INSTALLATION

DEAD END ROAD INSTALLATION
 (TYPE B - WITH GUARD RAIL, TYPE C - WITHOUT GUARDRAIL)
 For Turn installations Object Marker stripes shall slope downward toward the direction of travel.
 Guard rail to be installed in accordance with guardrail Standard Plans.
 Typical installation requires 25 ft. of rail with flared end sections.



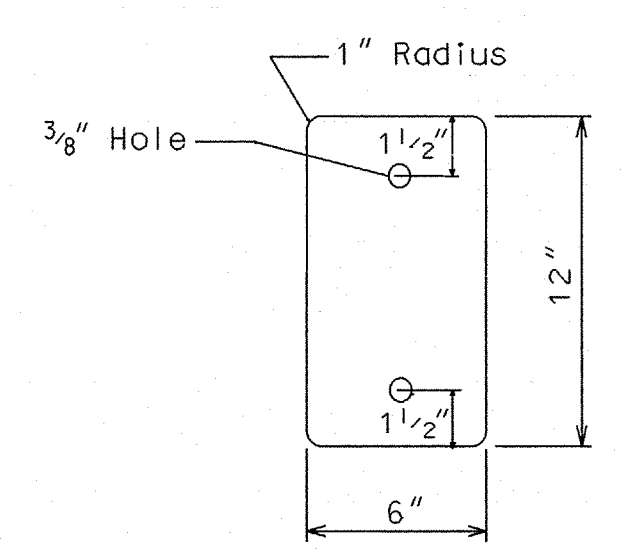
T-INTERSECTION INSTALLATION

DEAD END ROAD INSTALLATION
 (TYPE B - WITH GUARD RAIL, TYPE C - WITHOUT GUARDRAIL)
 For T-intersection installations Object Marker stripes shall slope away from center.
 Guardrail to be installed in accordance with guardrail Standard Plans.
 Typical installation requires 25 ft. of rail with flared end sections.



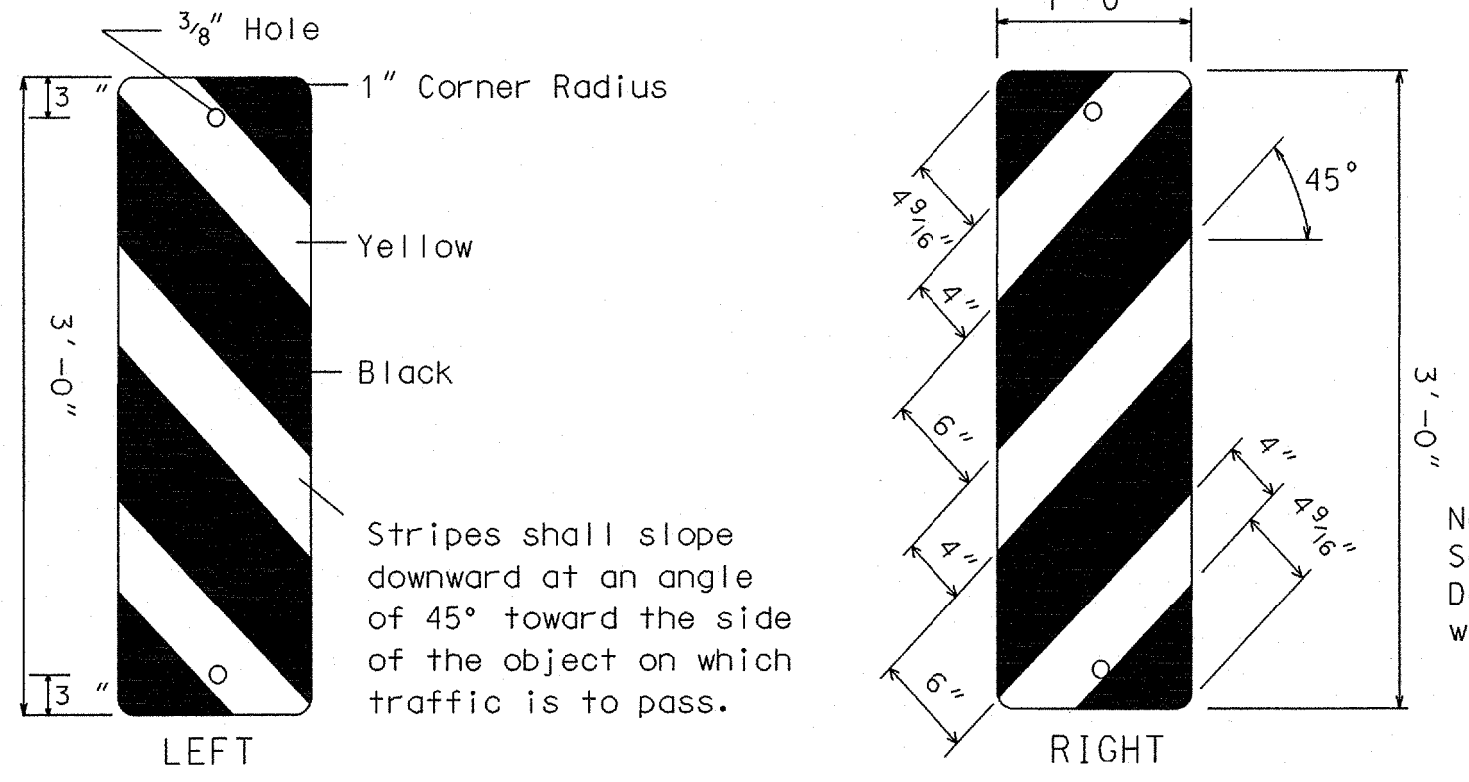
DETAIL OF DELINEATORS

Colors shall be red, white, or yellow.
 The sheeting shall be in accordance with DOTD Standard Specification
 For alternate Delineator/Flexible Post systems see the DOTD Approved Materials List. Alternates shall have an equivalent area of sheeting and shall not be less than 3 in. wide.
 The mounting height shall be the same as for Milepost Markers.
 Post penetration in ground shall be a minimum of 2 ft.



DETAIL OF TYPE 2 OBJECT MARKER

The face shall be yellow. The sheeting shall be in accordance with DOTD Standard Specification.
 The typical mounting height from the ground line to the bottom of the object marker shall be 36 in.
 Post penetration in ground shall be a minimum of 2 ft.
 Type 2 Object Markers are typically used in the right-of-way to mark objects for mowing operations.



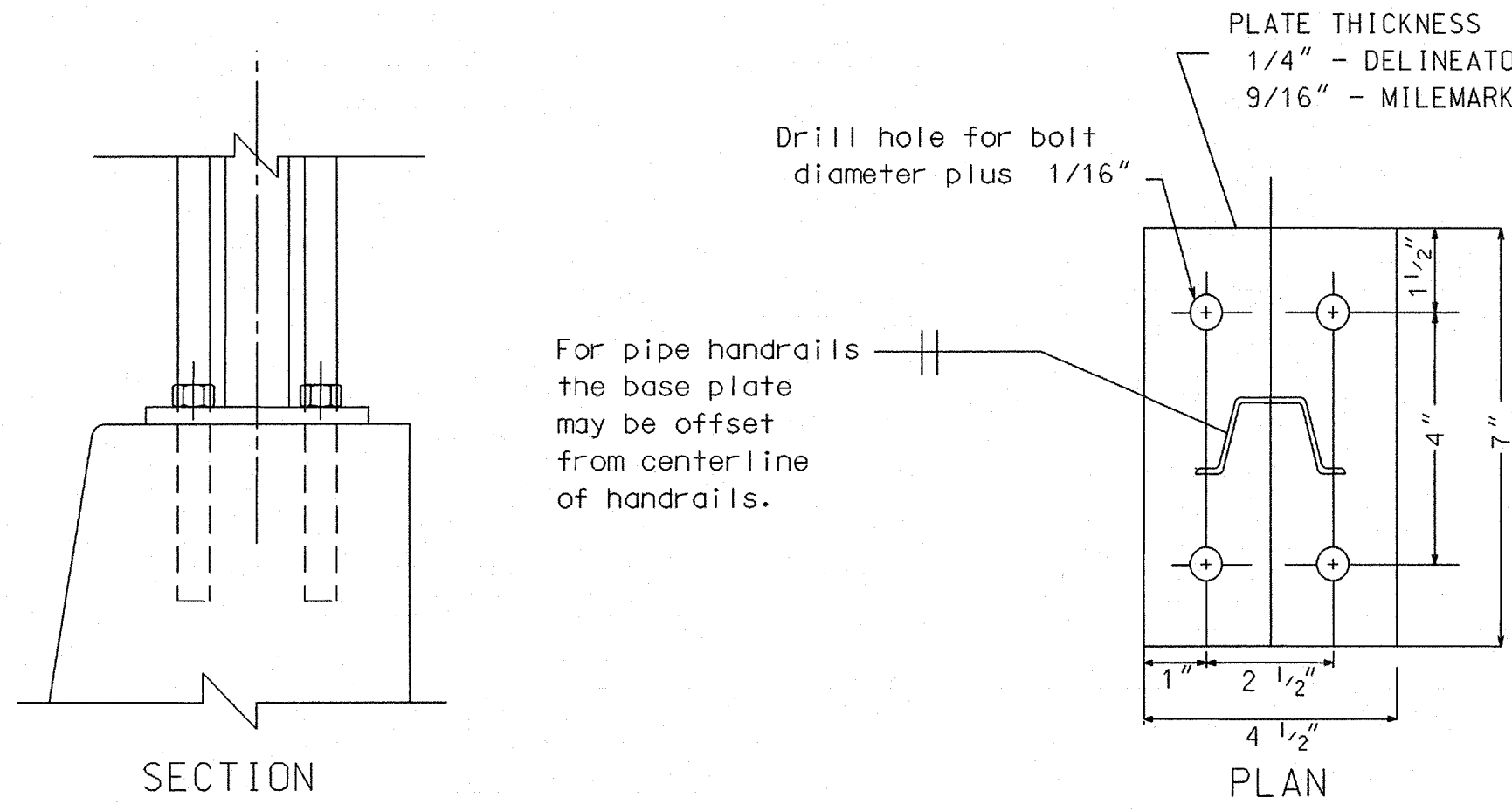
DETAIL OF TYPE 3 OBJECT MARKER

The markings on the Object Markers shall be diagonal, black and yellow stripes. The sheeting shall be in accordance with DOTD Standard Specifications.
 Post penetration in ground shall be a minimum of 3 ft.
 Type 3 Object Markers are typically used to mark objects in the roadway (travel lanes and shoulder) and to mark guard rail installation (see guard rail Standard Plans).

When used for marking objects in the roadway or objects that are 8 ft. or less from the shoulder or curb, the mounting height to the bottom of the object marker should be at least 4 ft. above the surface of the nearest traffic lane.

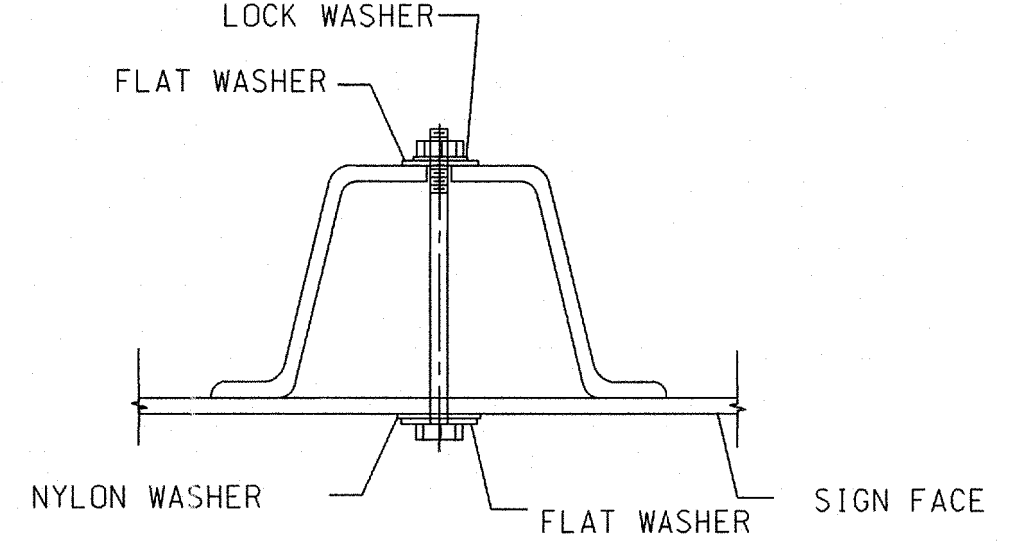
When used to mark objects more than 8 ft. from the shoulder or curb, the mounting height to the bottom of the object marker should be at least 4 ft. above the ground.

Note: For mile markers on conventional roads. See the details shown on the Special Signing Details sheets-B. This is in accordance with MUTCD signs D10-4 & D10-5 in Figure 2H-4.



Anchor Bolts
 1/4 in. plate - 5/16 in. x 4 in. bolt
 3/16 in. plate - 1/2 in. x 5 in. bolt
 For bolt anchors see DOTD Approved Materials List.

DETAIL FOR MOUNTING SIGN POST TO CONCRETE BARRIER RAIL



Steel U-channel sign post shall have 3/8 in. dia. holes drilled in channel on 1 in. centers from top of post. Steel tube post (Min. 2.23 lb/ft) may be used in lieu of U-channel posts.
 Post Weight: 2.0 lbs/ft - DELINEATORS and TYPE 2 OBJECT MARKERS
 2.5 lbs/ft - MILEMARKERS and TYPE 3 OBJECT MARKERS
 3.0 lbs/ft - WARNING SIGNS, W1-6, W1-7
 Fasteners shall be either bolts or rivets.

Bolts shall be 5/16 in. diameter electroplated steel hex head bolts with one nylon washer, two flat washers, one lock washer, and one vandal resistant hex nut.

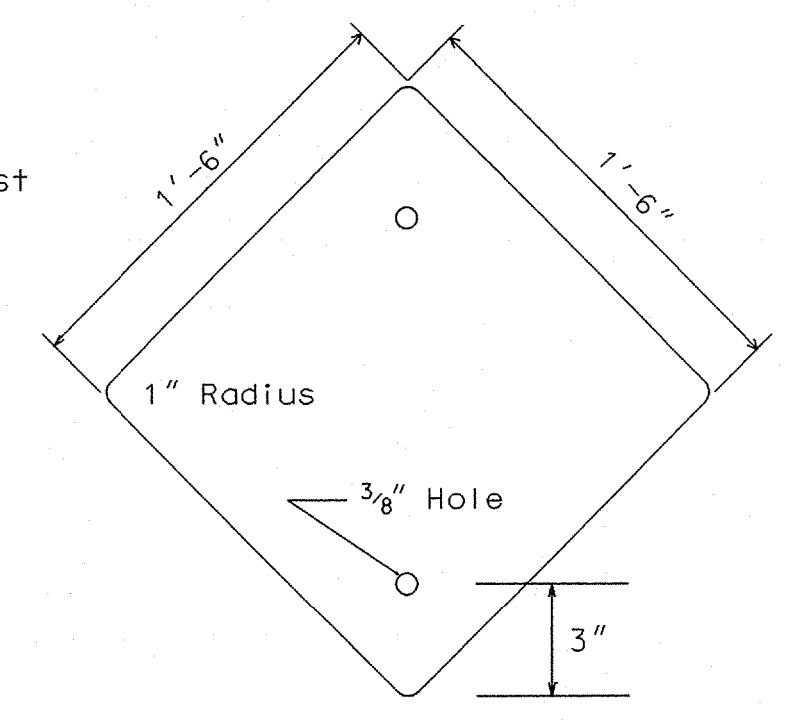
Rivets shall be vandal resistant 1/4 in. diameter aluminum blind rivets with smooth, low profile heads on each end.

DETAIL FOR MOUNTING SIGN TO U-CHANNEL POST

MOUNTING DETAILS



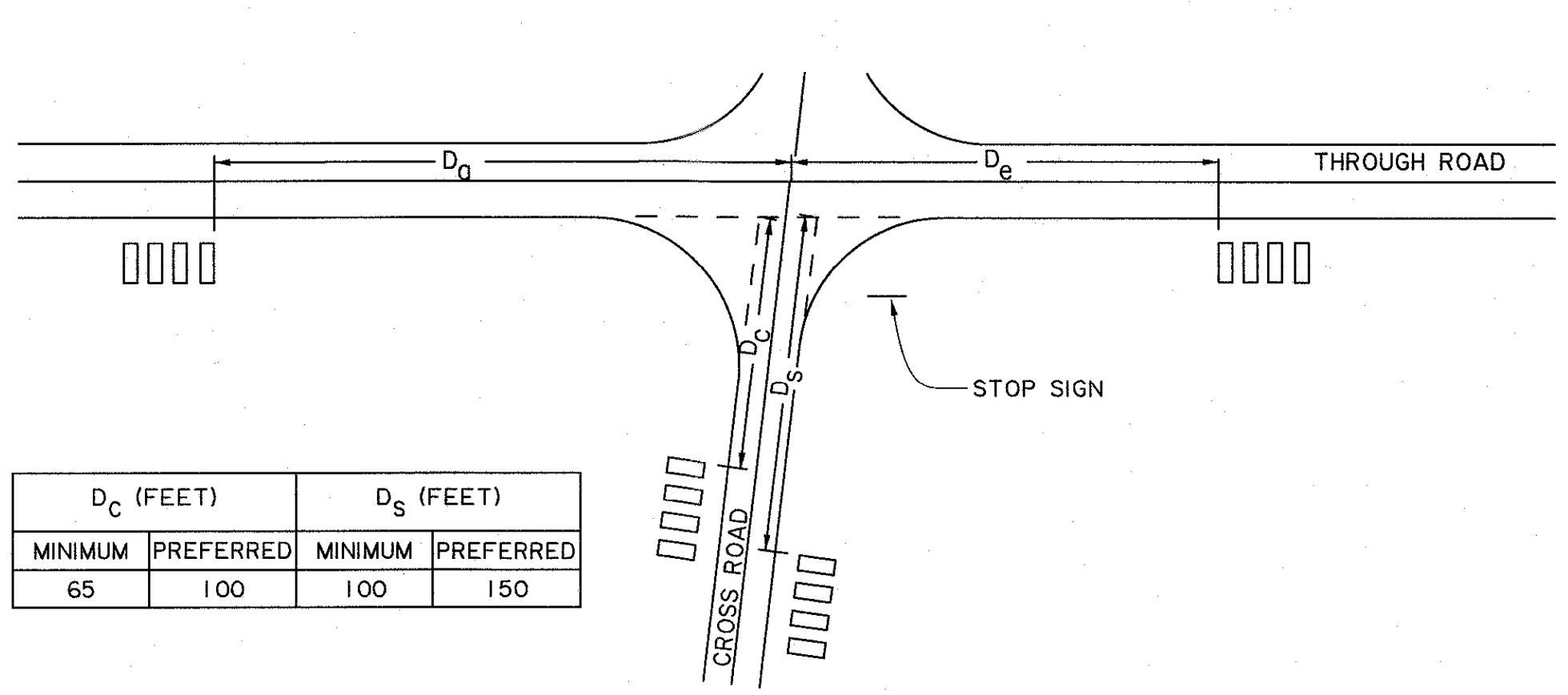
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



DETAIL OF END OF ROAD MARKER

Colors shall be red.
 The sheeting shall be in accordance with DOTD Standard Specification.
 The minimum mounting height from the ground line to the bottom of the marker shall be 5 ft.
 Post penetration in ground shall be a minimum of 3 ft.

SHEET NUMBER	336
DESIGNED	J. COLVIN
CHECKED	P. ALLAIN
RETAINED	M.D. ORIGIN
CHECKED	J. COLVIN
DATE	02/13/2013
DATE	4-7-2014
DATE	10/02/24
REVISION DESCRIPTION	
BY	Jamie P. Williams
CHIEF ENGINEER	
STANDARD PLAN	HS-03
OBJECT MARKERS AND DEAD END ROAD INSTALLATION	
TRAFFIC ENGINEERING	



D _c (FEET)		D _s (FEET)	
MINIMUM	PREFERRED	MINIMUM	PREFERRED
65	100	100	150

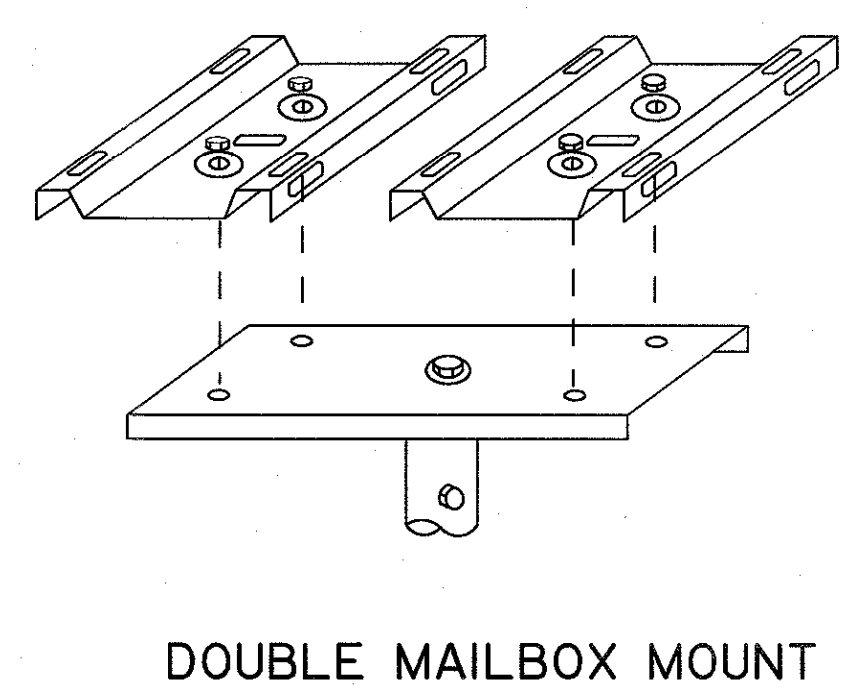
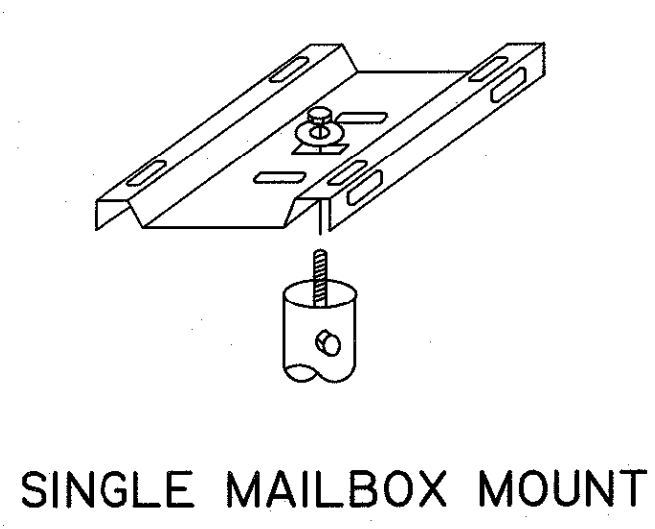
THROUGH ROAD SPEED (M.P.H.)	D _q (FEET)		D _e (FEET)		
	n V _c V _m ≤ 4000	n V _c V _m > 4000	$\frac{V_c}{1.5n-5} \leq 50$	$50 < \frac{V_c}{1.5n-5} \leq 400$	$\frac{V_c}{1.5n-5} > 400$
35	65	200	65	100	100
≥ 55	65	295	150	150	200

V_c = AVERAGE DAILY TRAFFIC ON CROSS ROAD (VEHICLES PER DAY)

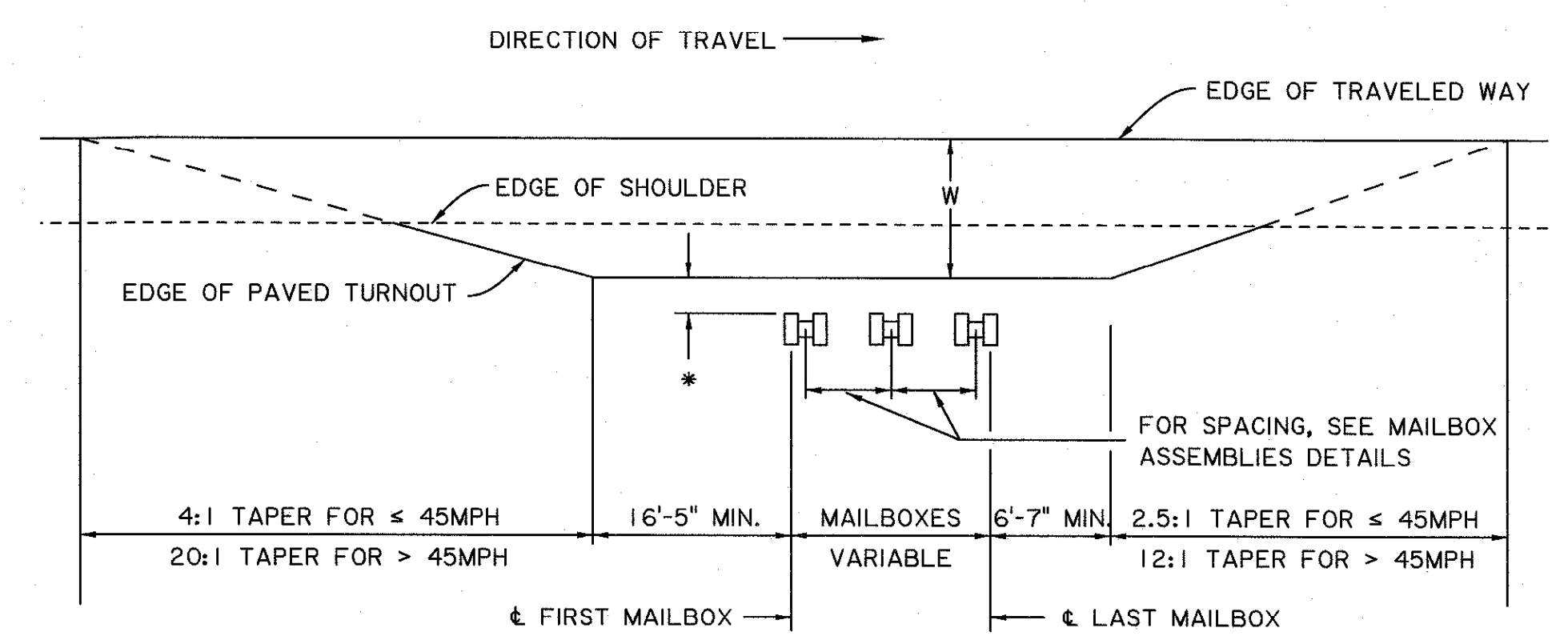
V_m = AVERAGE DAILY TRAFFIC ON THROUGH ROAD (VEHICLES PER DAY)

n = NUMBER OF MAILBOXES AT MAIL STOP

MINIMUM CLEARANCES TO NEAREST MAILBOX IN MAIL STOPS AT INTERSECTIONS



SINGLE AND DOUBLE MAILBOX MOUNTS SERIES C



W = FOR SUGGESTED WIDTHS, SEE TABLE BELOW.
 MAILBOXES = A MINIMUM DESIGN FOR ROADS CARRYING LOW-SPEED TRAFFIC AND FOR LOCAL AND COLLECTOR ROADS.
 * = FOR MAILBOX FACE OFFSET, SEE TABLE BELOW, 0" - 12".

DETAIL OF MAILBOX TURNOUT

* SUGGESTED GUIDELINES FOR LATERAL PLACEMENT OF MAILBOXES

HIGHWAY TYPE AND ADT (VPD)	WIDTH OF ALL-WEATHER SURFACE TURNOUT OR AVAILABLE SHOULDER AT MAILBOX (FT)		DISTANCE ROADSIDE FACE OF MAILBOX IS TO BE OFFSET BEHIND EDGE OF TURNOUT OR USABLE SHOULDER (IN)	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
RURAL HIGHWAY OVER 10,000	12	8	6 to 8	0
RURAL HIGHWAY 1,500 TO 10,000	12	8		
RURAL HIGHWAY 400 TO 1,500	10	8		
RURAL ROAD UNDER 400	8	6 ^b		
RESIDENTIAL STREET WITHOUT CURB OR ALL-WEATHER SHOULDER	6	0		6 ^c
CURBED RESIDENTIAL STREET OR URBAN AND SUBURBAN AREAS	NOT APPLICABLE		8 to 12 ^d	6 ^d

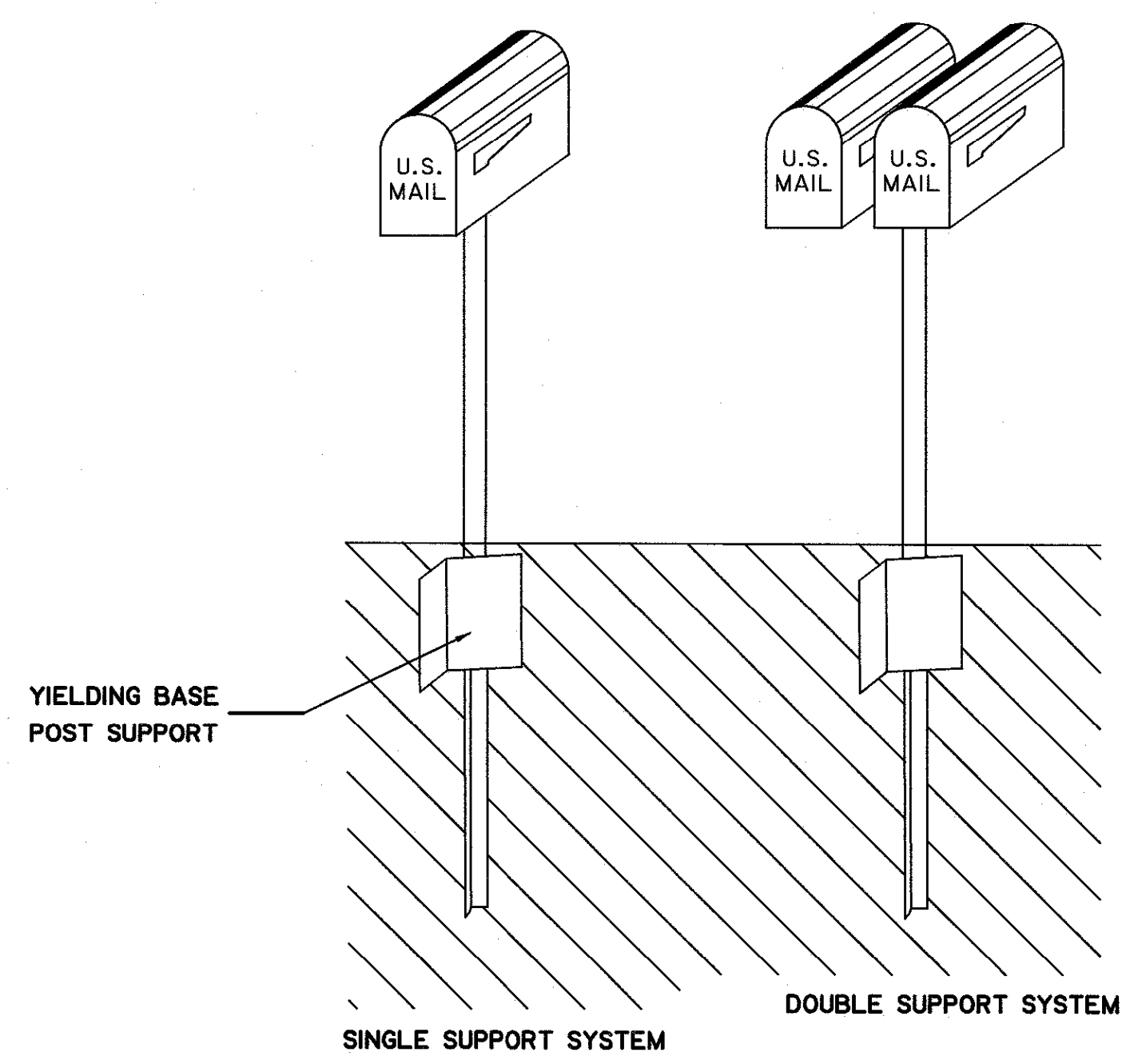
NOTES: ADT = AVERAGE DAILY TRAFFIC
 VPD = VEHICLES PER DAY

a) IF INCREASE ACCESS IS NEEDED, THE FOLLOWING MAY BE CONSIDERED IN CONJUNCTION WITH THE LOCAL POSTMASTER:
 - PROVIDE A LEVEL CLEAR SPACE 30 IN. BY 48 IN. CENTERED ON THE BOX FOR EITHER SIDE OR FORWARD APPROACH.
 - PROVIDE AN ACCESSIBLE PASSAGE TO AND FROM THE MAILBOX AND PROJECT INTO A CIRCULATION ROUTE--NO MORE THAN 4 IN. IF BETWEEN 28 IN. AND 80 IN.-- SO THAT THE MAILBOX DOES NOT BECOME A PROTRUDING OBJECT FOR PEDESTRIANS WITH IMPAIRED VISION.

b) PROVIDE AN ACCESSIBLE PASSAGE TO AND FROM THE MAILBOX. THE MAILBOX PROJECTION INTO A CIRCULATION ROUTE SHALL NOT BE MORE THAN 4 IN., SO THAT THE MAILBOX DOES NOT BECOME A PROTRUDING OBJECT FOR PEDESTRIANS WITH IMPAIRED VISION.

c) IF A TURNOUT IS PROVIDED, THIS MAY BE REDUCED TO ZERO.

d) BEHIND TRAFFIC-FACE OF CURB.



EXAMPLES OF SINGLE AND DOUBLE MAILBOX INSTALLATIONS SERIES C

NOTES:

NO MAILBOX WILL BE PERMITTED WHERE ACCESS IS OBTAINED FROM THE LANES OF A FREEWAY OR WHERE ACCESS IS OTHERWISE PROHIBITED BY LAW OR REGULATION.

MAILBOXES SHALL BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY IN THE DIRECTION OF DELIVERY ROUTE EXCEPT ON ONE-WAY STREETS WHERE THEY MAY BE PLACED ON EITHER SIDE. THE BOTTOM OF THE BOX SHALL BE SET AT AN ELEVATION (H) ESTABLISHED BY THE U.S. POSTAL SERVICE, USUALLY BETWEEN 3'4" AND 4'0" ABOVE THE ROADWAY SURFACE. THE ROADSIDE FACE OF THE BOX SHALL BE OFFSET FROM THE EDGE OF THE TRAVELED WAY. SEE THE SUGGESTED GUIDELINES FOR LATERAL PLACEMENT OF MAILBOXES AT LEFT.

ALL MAILBOX INSTALLATIONS MUST CONFORM TO THE REQUIREMENTS OF THE U.S. POSTAL SERVICE.

WHERE FEASIBLE, NEW INSTALLATION SHOULD BE LOCATED ON THE FAR RIGHT SIDE OF AN INTERSECTION WITH A ROAD OR DRIVEWAY ENTRANCE. HOWEVER, CONSIDERATION SHOULD BE GIVEN TO

- MINIMIZING WALKING DISTANCE WITHIN THE ROADWAY FOR THE PATRON,
- AVAILABLE STOPPING SIGHT DISTANCE IN ADVANCE OF THE MAILBOX SITE, AND
- POSSIBLE RESTRICTIONS TO CORNER SIGHT DISTANCES AT INTERSECTIONS AND DRIVEWAY ENTRANCES.

FOR LOCATION OF MAILBOXES AT AN INTERSECTING ROADWAY, SEE DETAIL AT LEFT.

MAILBOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION MANUFACTURED BY AN APPROVED MANUFACTURERS CONFORMING TO THE REQUIREMENTS OF THE U.S. POSTAL SERVICE. MAILBOXES MUST BE FULL-SCALE CRASH TESTED IN ACCORDANCE WITH THE LATEST EDITION OF MASH. NEWSPAPER DELIVERY BOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION OF MINIMUM DIMENSIONS SUITABLE FOR HOLDING A NEWSPAPER.

MANUFACTURERS WHOSE MAILBOXES HAVE BEEN APPROVED BY THE POSTMASTER GENERAL WILL BE LISTED IN THE POSTAL OPERATION MANUAL (POM) AND PUBLISHED IN THE POSTAL BULLETIN. NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SUPPORT STRUCTURE UNLESS THE SUPPORT STRUCTURE AND MAILBOX ARRANGEMENT HAVE BEEN SHOWN TO BE SAFE BY CRASH TESTING IN ACCORDANCE WITH THE LATEST EDITION OF MASH. HOWEVER, LIGHTWEIGHT NEWSPAPER BOXES MAY BE MOUNTED BELOW THE MAILBOX ON THE SIDE OF THE MAILBOX SUPPORT.

MAILBOX SUPPORTS SHALL NOT BE SET IN CONCRETE UNLESS THE SUPPORT DESIGN HAS BEEN SHOWN TO BE SAFE BY CRASH TESTING IN ACCORDANCE WITH THE LATEST EDITION OF MASH WHEN SO INSTALLED.

POSTS SHALL BE STRONG ENOUGH TO SUPPORT THE BOX, BUT CAPABLE OF BENDING WHEN STRUCK BY AN AUTOMOBILE OR A LIGHT TRUCK. MAXIMUM STRENGTH POSTS ARE EITHER A METAL POST WITH A STRENGTH NO GREATER THAN A 2" DIAMETER STANDARD STRENGTH STEEL PIPE OR A 2"x4" FLANGED CHANNEL OR A 4"x4" WOODEN POST. POSTS ARE ACCEPTABLE MAILBOX SUPPORTS WHEN EMBEDDED NO MORE THAN 24" INTO THE GROUND. A METAL POST SHALL NOT BE FITTED WITH AN ANCHOR PLATE, BUT MAY HAVE AN ANTI-TWIST DEVICE THAT EXTENDS NO MORE THAN 10" BELOW THE GROUND SURFACE.

THE POST-TO-BOX ATTACHMENT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT THE BOX FROM SEPARATING FROM THE POST TOP IF THE INSTALLATION IS STRUCK BY AN AUTOMOBILE OR LIGHT TRUCK.

THE MINIMUM SPACING BETWEEN THE CENTERS OF SUPPORT POSTS SHALL BE THREE-FOURTHS THE HEIGHT OF THE POSTS ABOVE THE GROUND LINE

MAILBOX SUPPORT DESIGNS NOT DETAILED WILL BE ACCEPTABLE IF FULL-SCALE CRASH TESTED IN ACCORDANCE WITH THE LATEST EDITION OF MASH AND IF APPROVED BY THE ENGINEER.

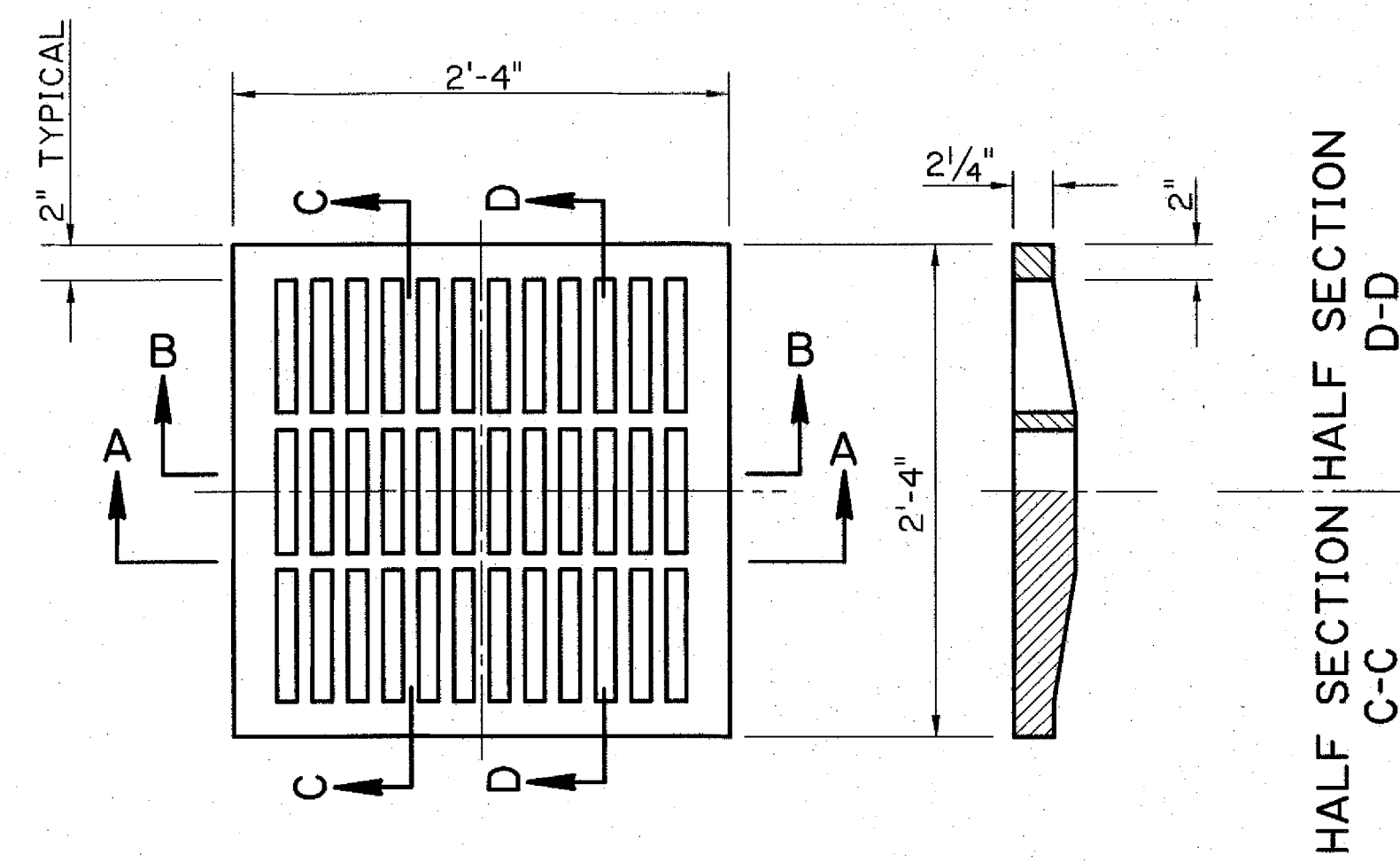
FOR POST-TO-BOX ATTACHMENT DETAILS, SEE SHEET 2 OF 2.

MASH - MANUAL FOR ASSESSING SAFETY HARDWARE.

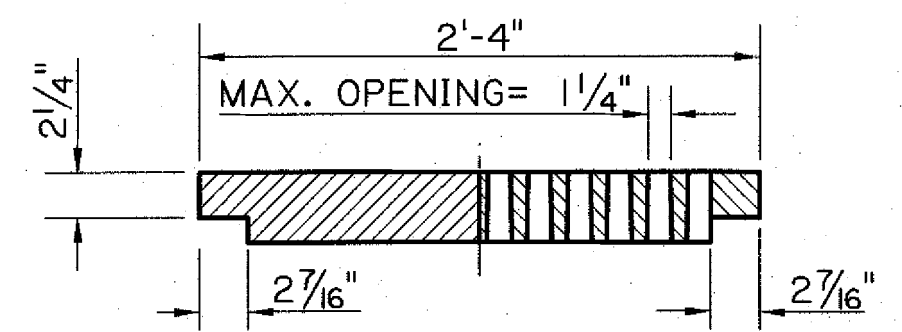
STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

NOTE: SUPPORT FRAME AND FOUNDATION SHOWN ARE PROPRIETARY PRODUCTS.

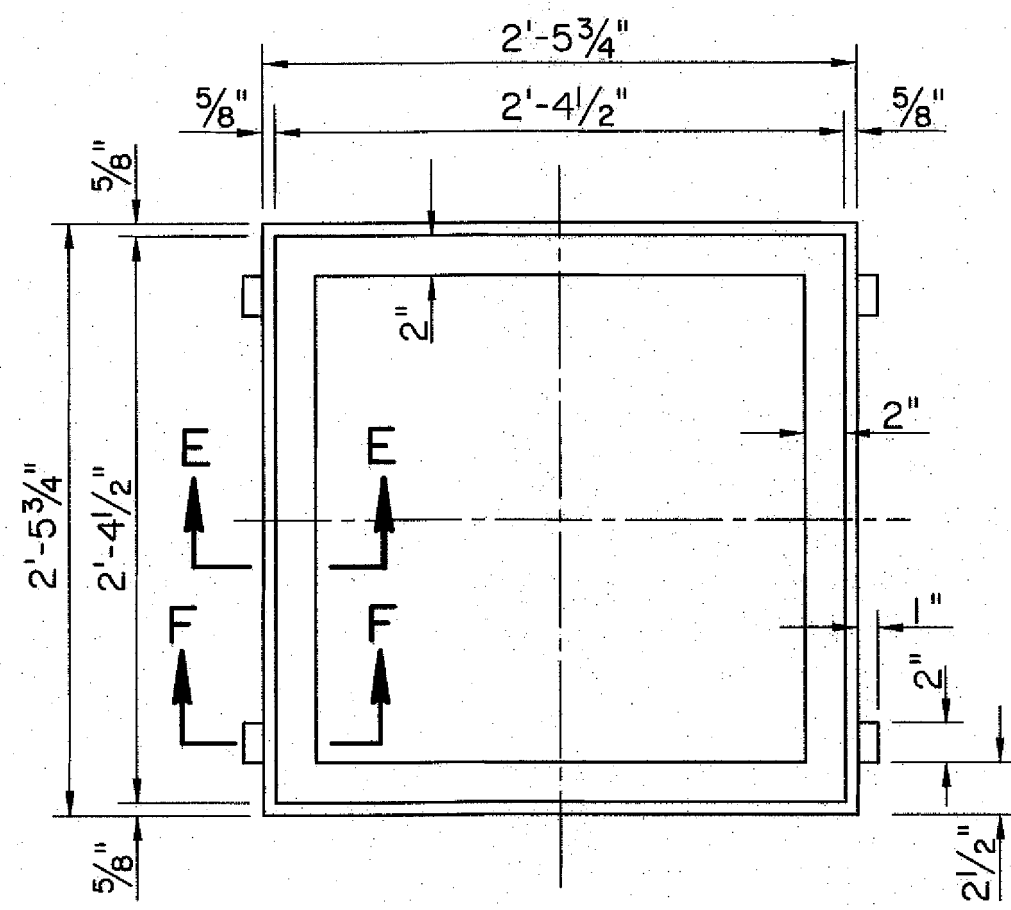


PLAN OF CAST IRON GRATE

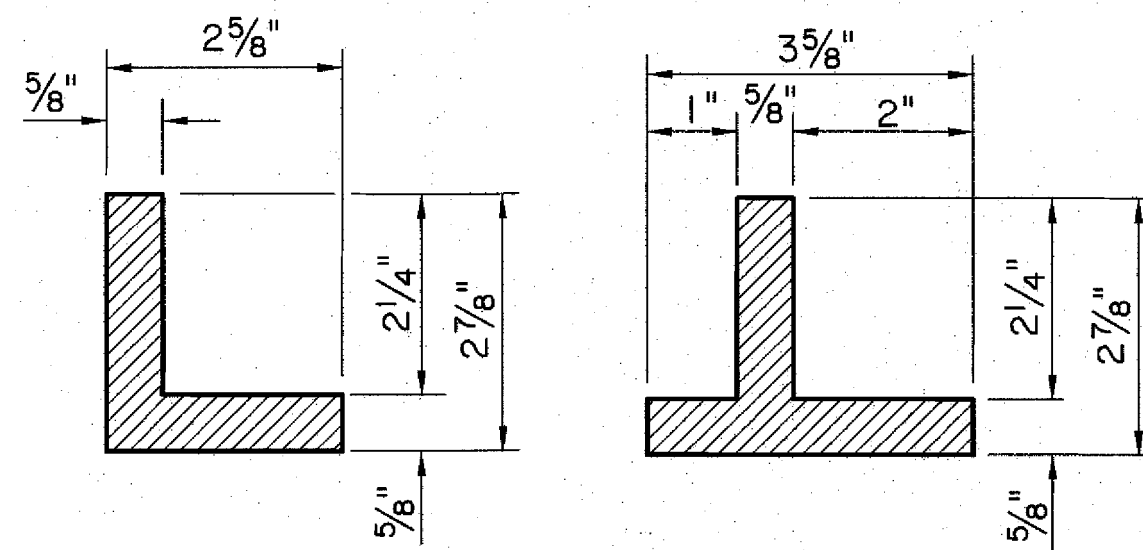


HALF SECTION A-A HALF SECTION B-B

HALF SECTION HALF SECTION C-C D-D

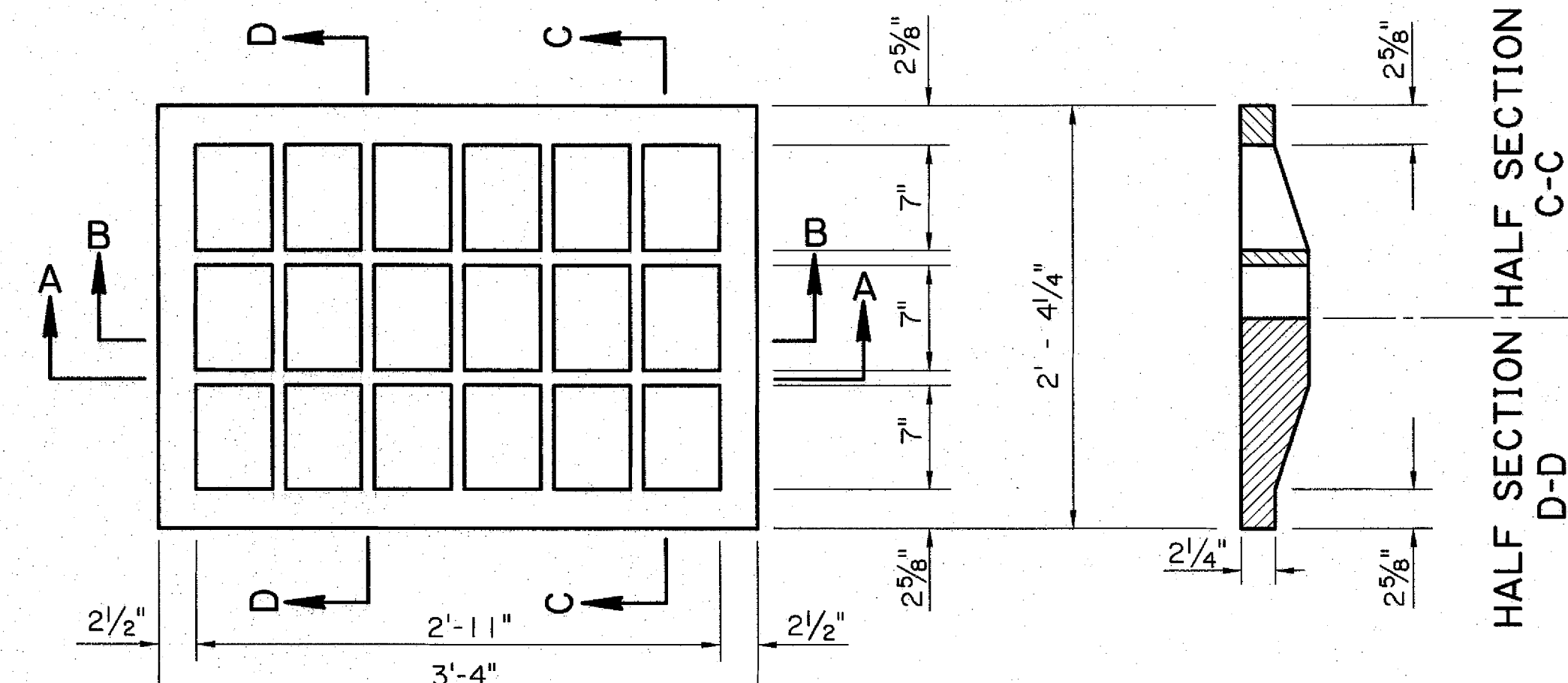


PLAN OF CAST IRON FRAME

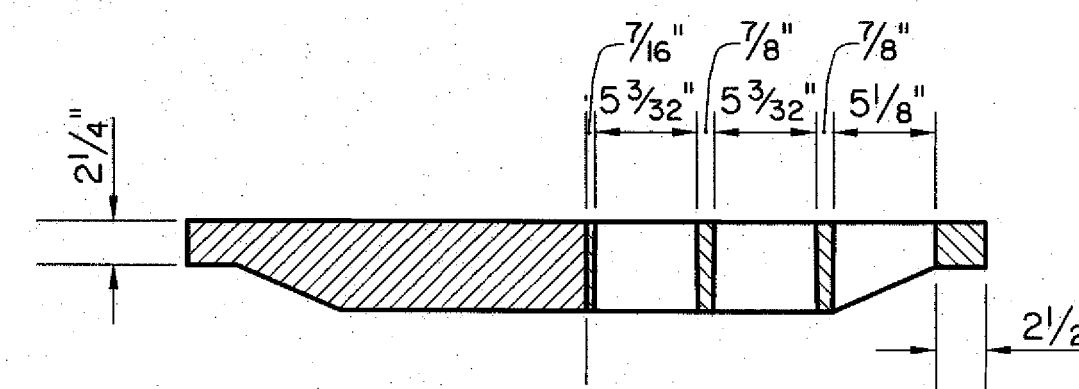


SECTION E-E SECTION F-F

TYPE "A"
CAST IRON GRATE & FRAME
MIN. OPENING = 290 SQ. IN. AREA

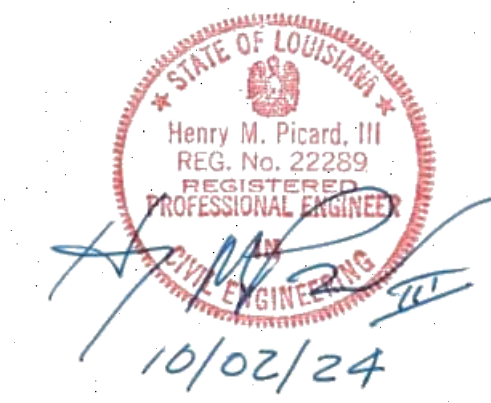


PLAN OF CAST IRON GRATE



HALF SECTION A-A HALF SECTION B-B

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



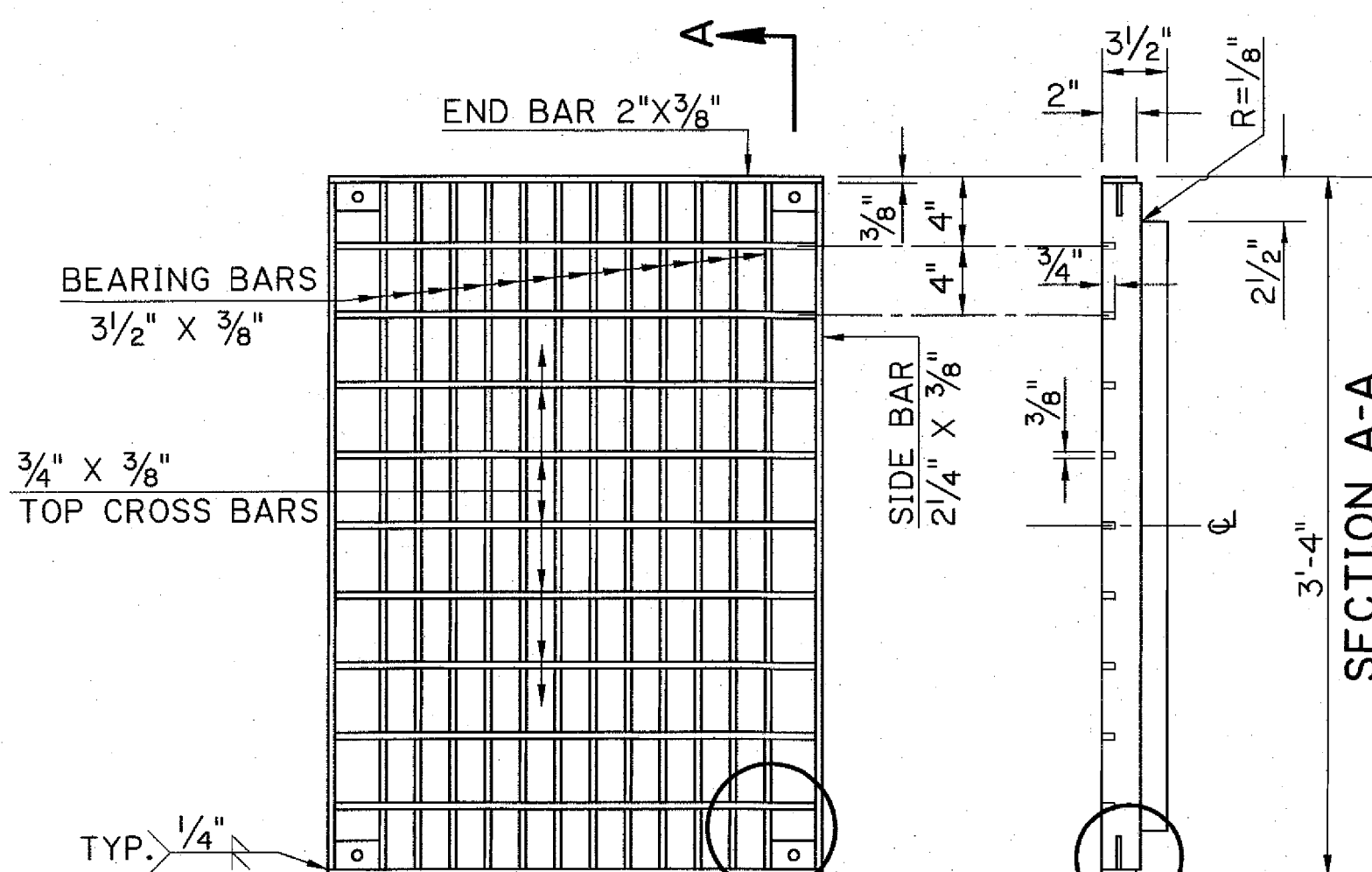
TYPE "B"
CAST IRON GRATE

NOTE: UNLESS OTHERWISE STATED, TYPE "E" FRAME WILL BE USED WITH THIS GRATE.

TYPE "C"

STEEL DRAIN GRATE

- NOTES:
1. GRATES TO BE GALVANIZED AFTER FABRICATION.
 2. UNLESS OTHERWISE STATED, TYPE "E," FRAME IS TO BE USED WITH THESE GRATES. (SEE SHEET 2)
 3. SUPPLIER OF GRATE ALSO IS TO FURNISH PRE-FITTED GRATE FRAME.



WELDED & SEALED DRAIN GRATE

ALL JOINTS FULL DEPTH 1/4" FILLET WELDS WITH SEAL WELDS TOP AND BOTTOM UNLESS NOTED OTHERWISE.

ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.

WEIGHT OF DRAIN GRATE = 233 LBS. ± 5%

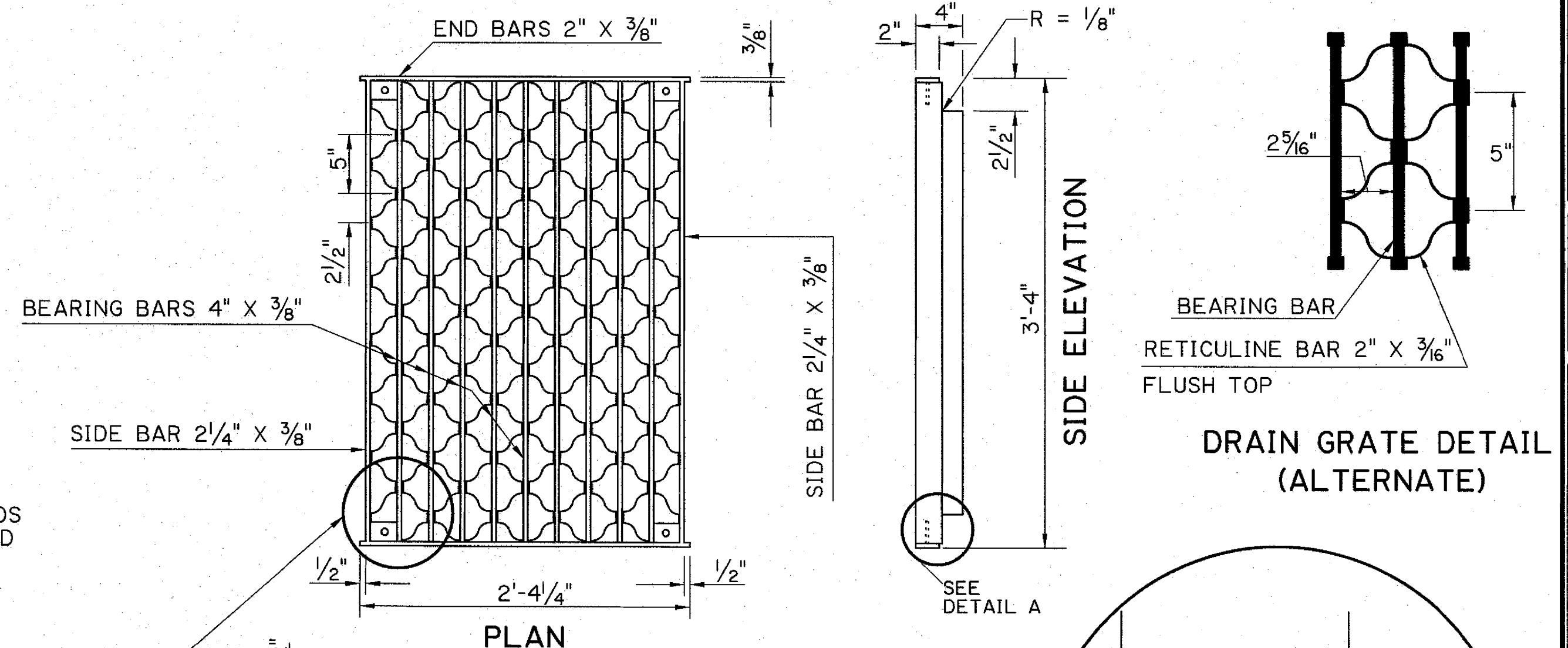
RIVETED RETICULINE DRAIN GRATE (ALTERNATE)

ALL JOINTS FULL DEPTH 1/4" FILLET WELDS WITH SEAL WELDS TOP AND BOTTOM UNLESS NOTED OTHERWISE.

ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.

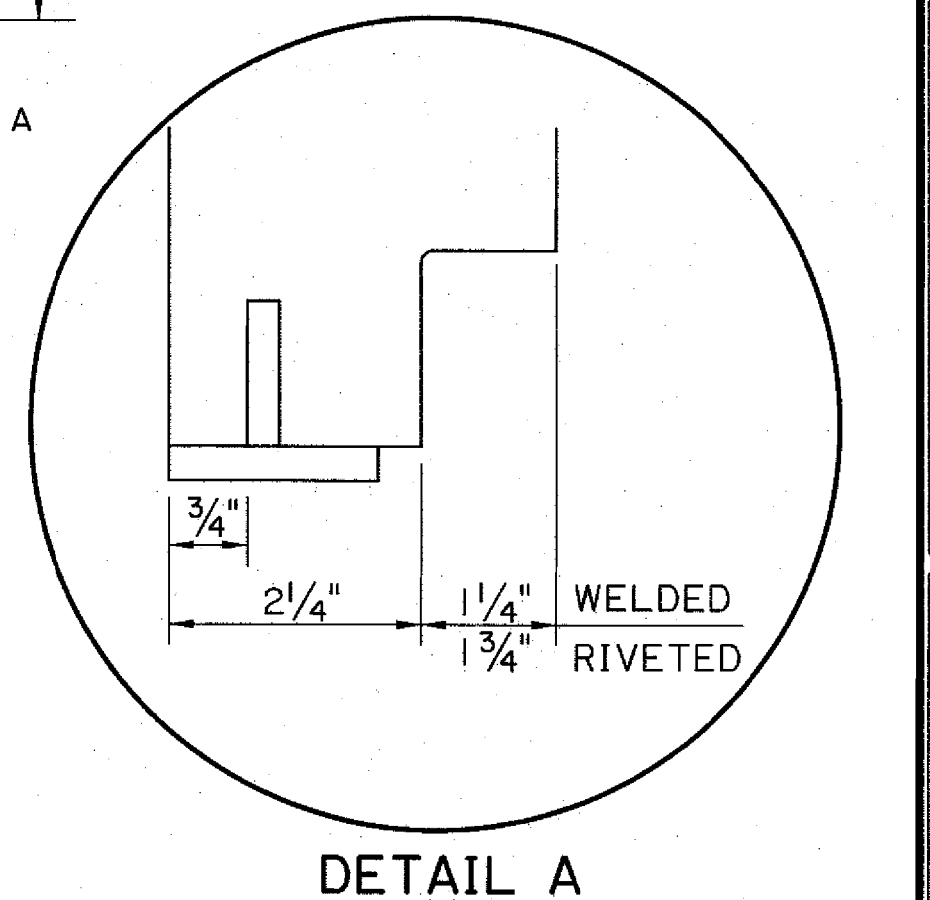
CENTER TO CENTER OF BEARING BARS EQUAL 2 5/16" PLUS BEARING BAR THICKNESS.

WEIGHT OF DRAIN GRATE = 266 LBS. ± 5%

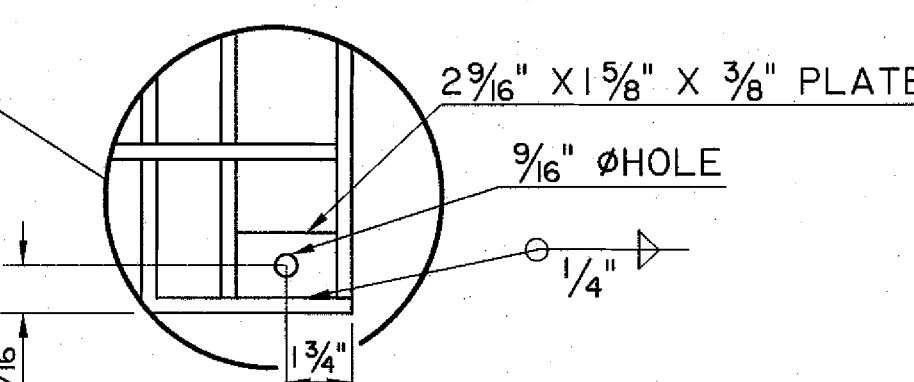


DRAIN GRATE DETAIL (ALTERNATE)

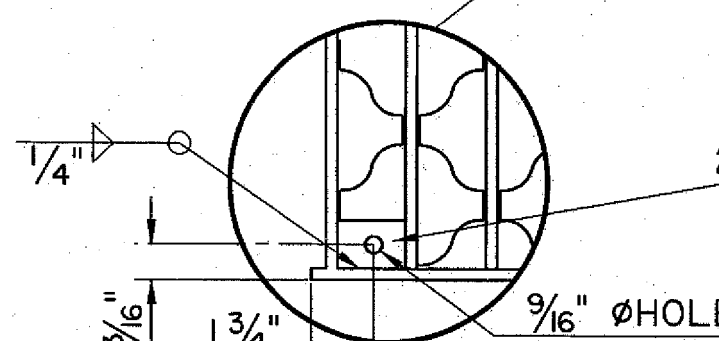
BEARING BAR
RETICULINE BAR 2" X 3/16"
FLUSH TOP



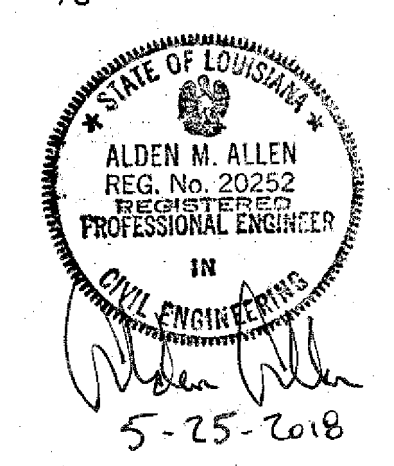
DETAIL A



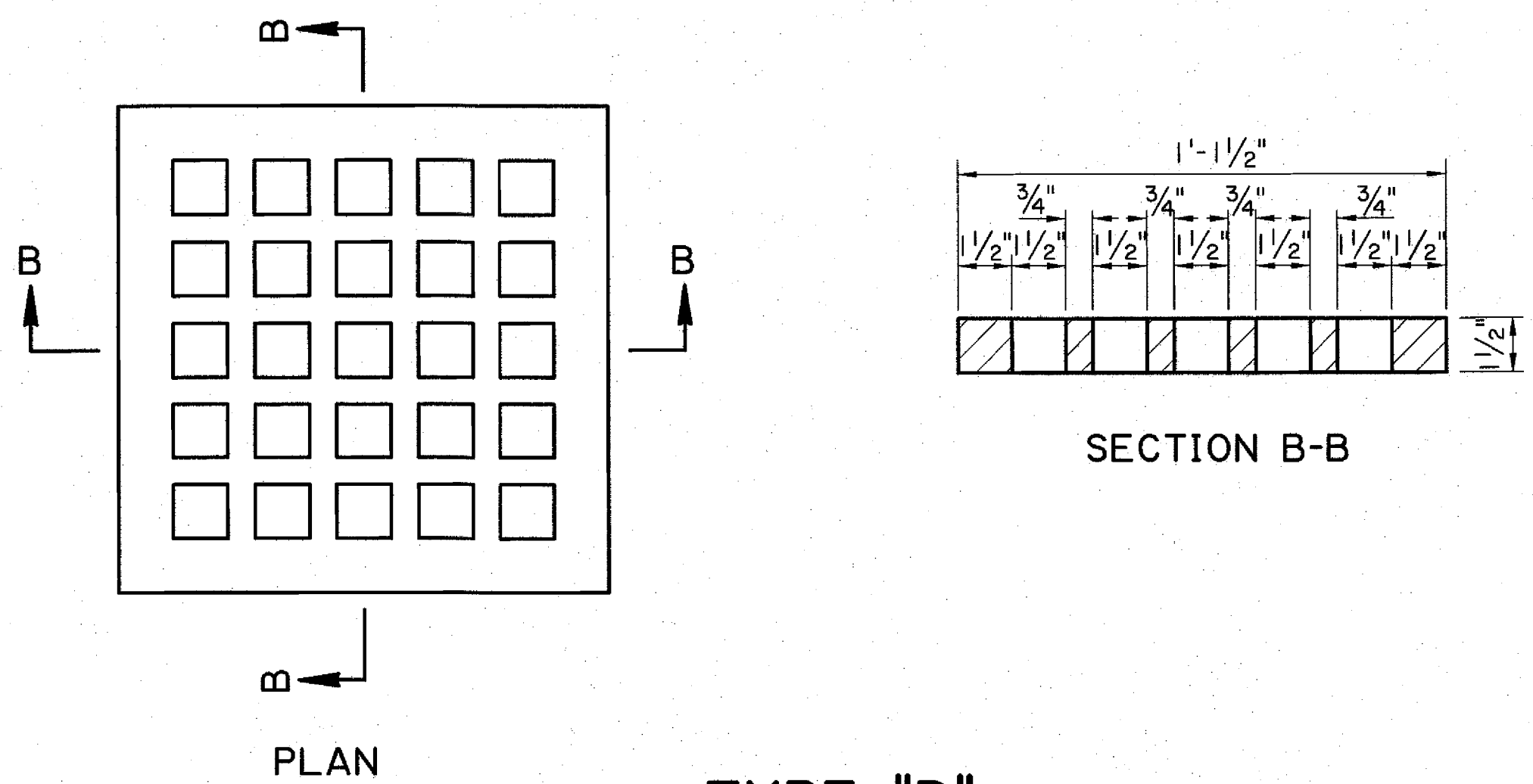
HOLD-DOWN PLATE



HOLD-DOWN PLATE

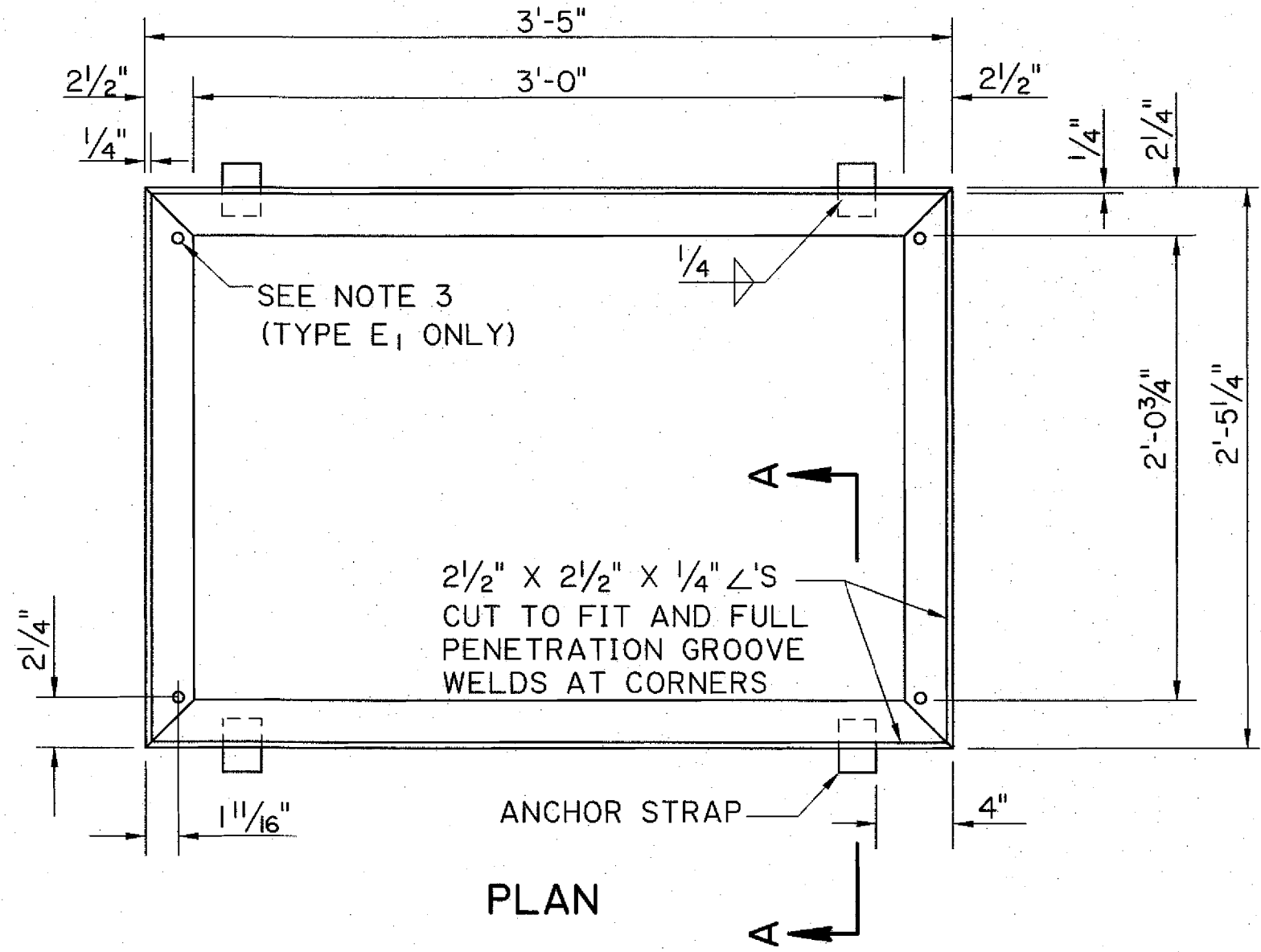


SHEET NUMBER	339
DESIGNED	AMA
CHECKED	AMA
DETAILS	TL
CHECKED	AMA
DATE	9/01/17
SERIES NUMBER	1 OF 6
DATE	5/25/18
REVISION DESCRIPTION	
APPROVED BY	
CHIEF ENGINEER	
DATE	
STANDARD PLAN	MC-01
DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES	
HYDRAULICS SECT.	
ST. TAMMANY	
PARISH	
CONTROL SECTION	
STATE PROJECT	

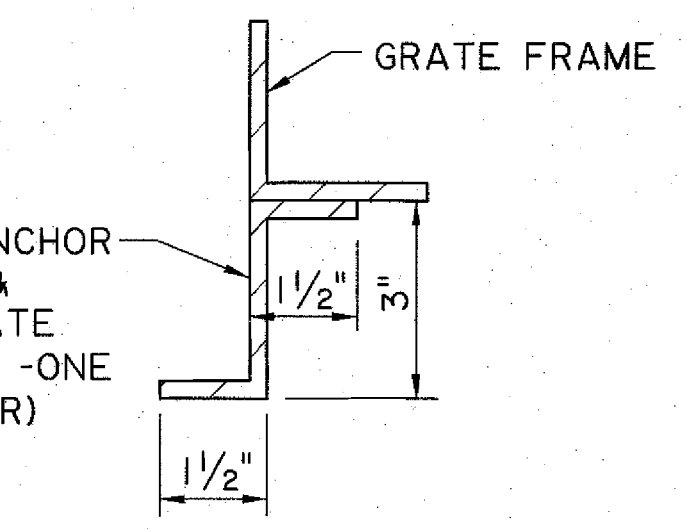


TYPE "D"

CAST IRON GRATE
 WEIGHT OF CASTING = 49 LBS



PLAN

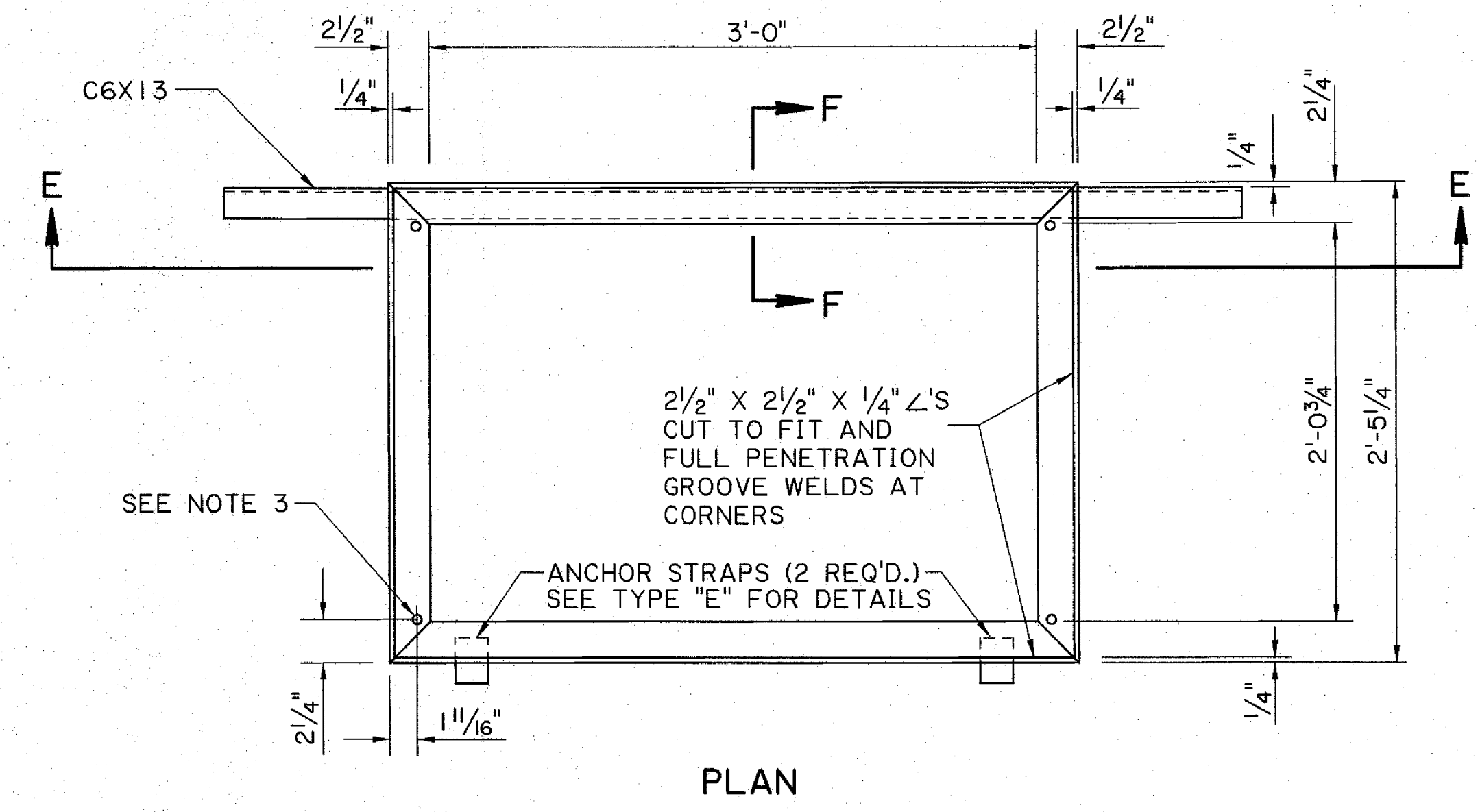


SECTION A-A

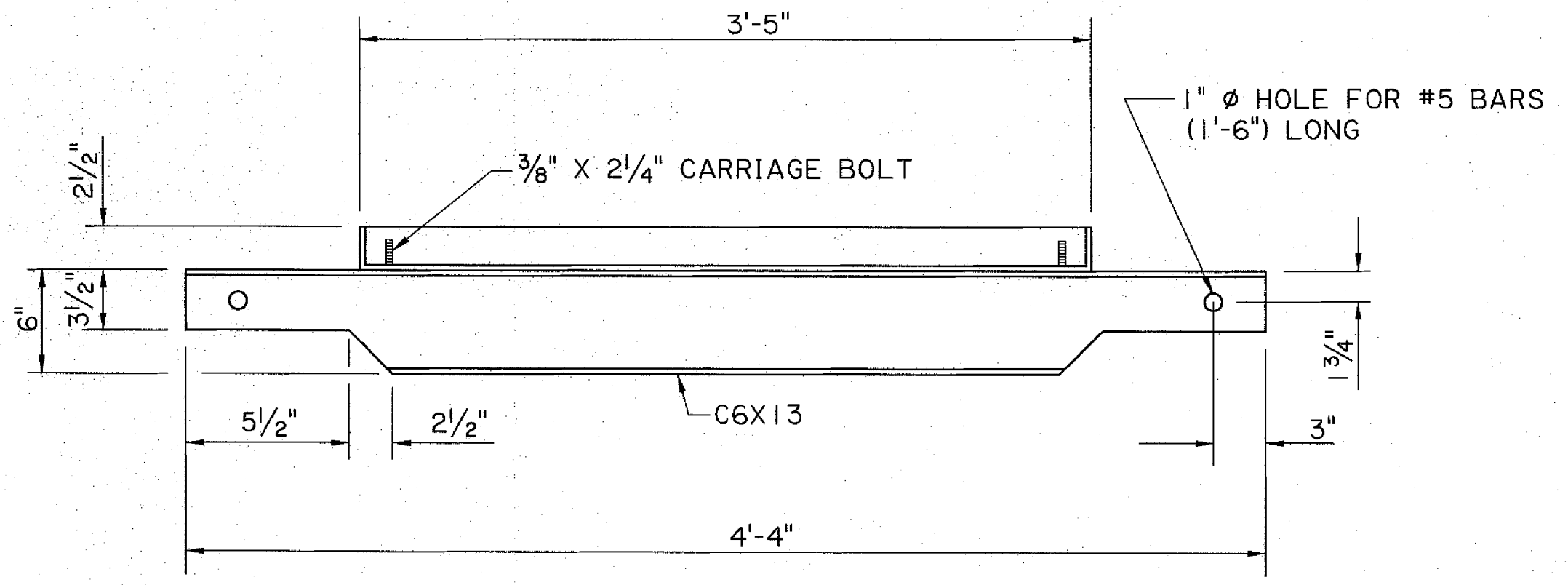
TYPE "E" AND "E1"

STEEL GRATE FRAME

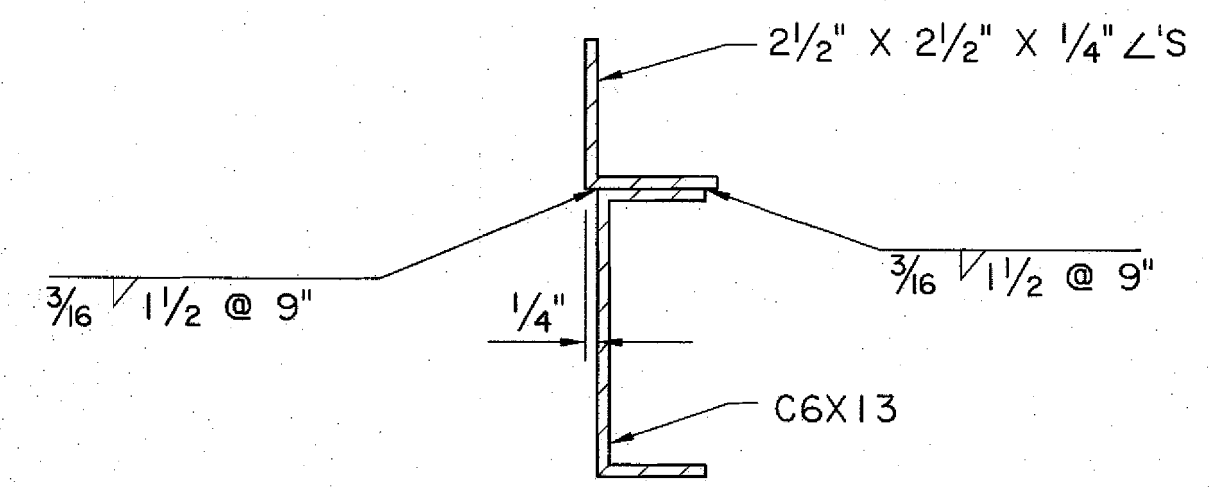
- NOTES:
1. GRATE FRAME TO BE GALVANIZED AFTER FABRICATION
 2. WEIGHT OF GRATE FRAME = 52 LBS
 3. SQUARE PUNCH HOLE PRIOR TO GALVANIZING. ADD A 3/8" ϕ x 2 1/4" LONG -16 UNC ROUND HEAD SQUARE NECK CARRIAGE BOLT WITH JAM NUT, HEX HEAD NUT, AND FLAT WASHER (ALL STAINLESS STEEL) AFTER FRAME IS GALVANIZED.



PLAN



SECTION E-E



SECTION F-F

TYPE "F"

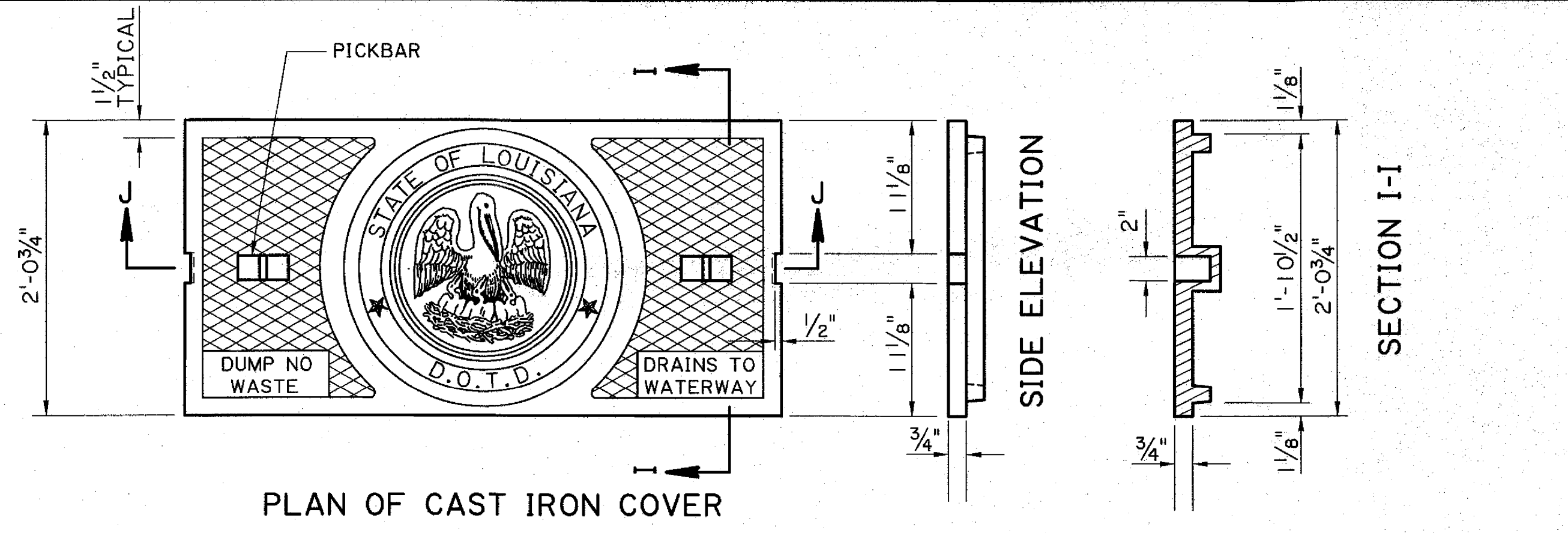
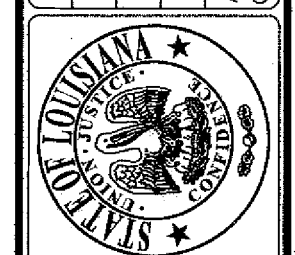
STEEL GRATE FRAME

- NOTES:
1. GRATE FRAME TO BE GALVANIZED AFTER FABRICATION
 2. WEIGHT OF GRATE FRAME = 52 LBS \pm 5%
 3. SQUARE PUNCH HOLE PRIOR TO GALVANIZING. ADD A 3/8" ϕ x 2 1/4" LONG -16 UNC ROUND HEAD SQUARE NECK CARRIAGE BOLT WITH JAM NUT, HEX HEAD NUT, AND FLAT WASHER (ALL STAINLESS STEEL) AFTER FRAME IS GALVANIZED.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

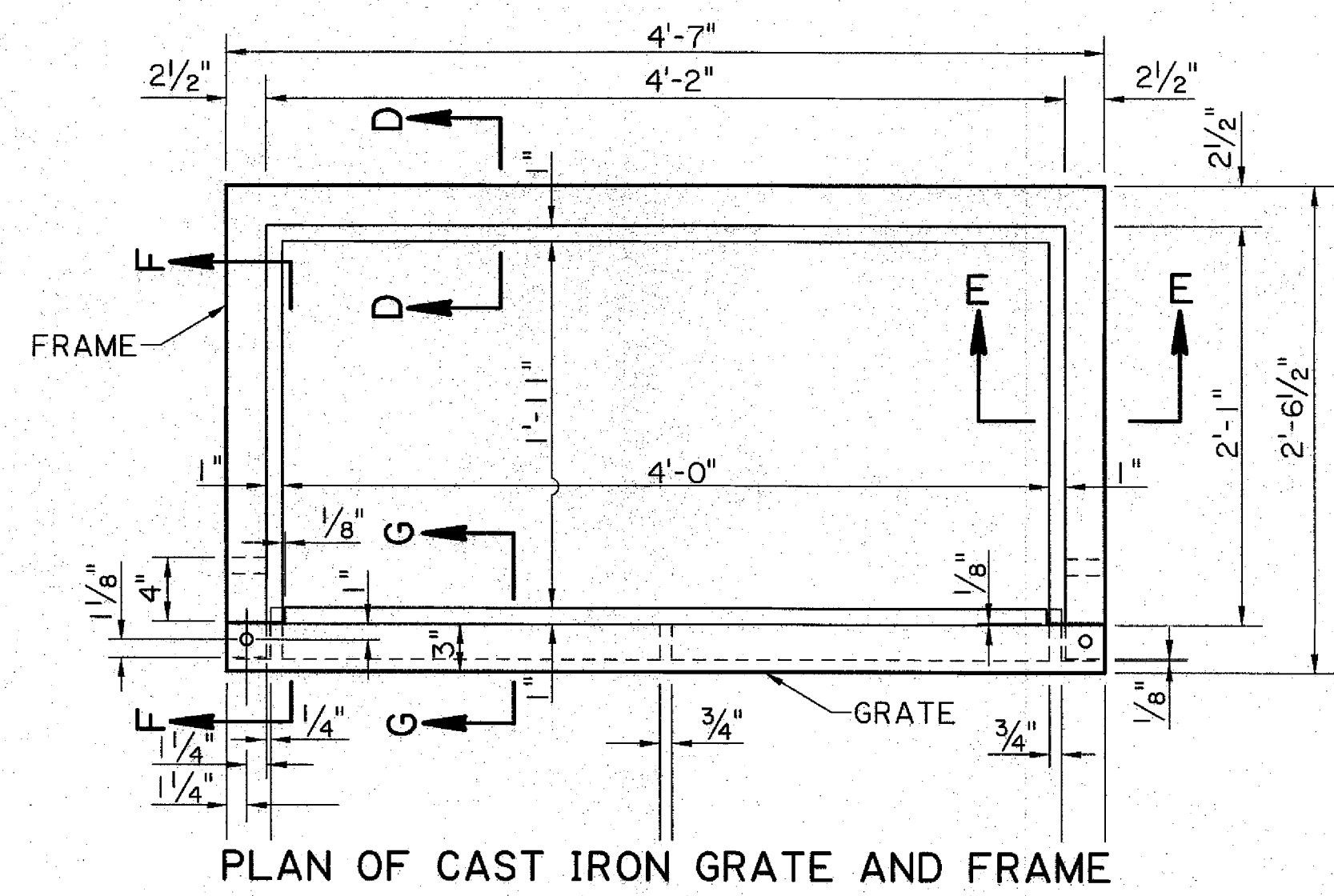
[Signature]
 10/02/24

ALDEN M. ALLEN
 REG. No. 20252
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 5-25-2018

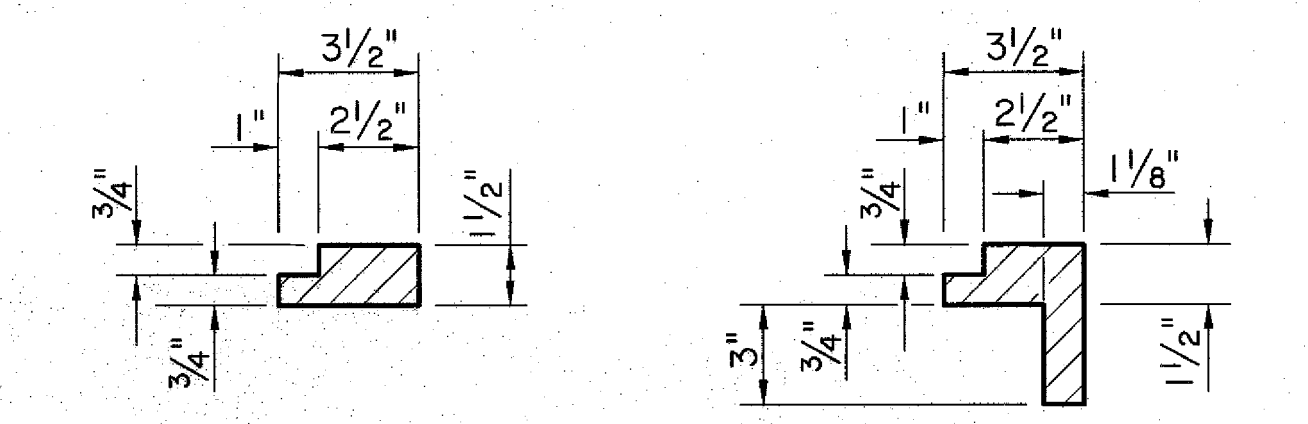


PLAN OF CAST IRON COVER

SECTION I-I



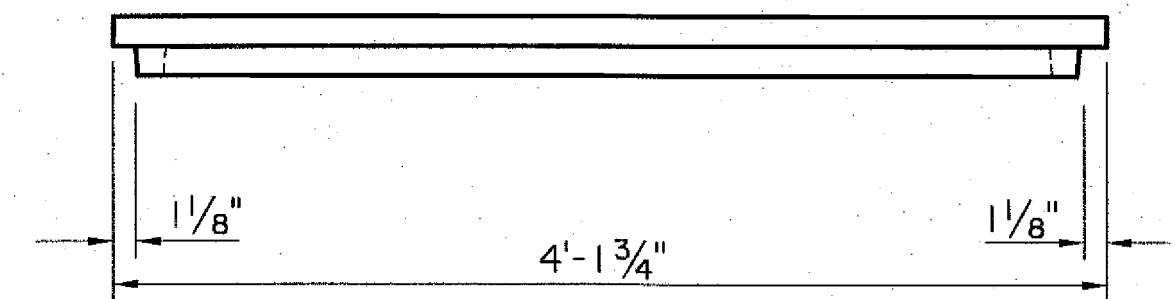
PLAN OF CAST IRON GRATE AND FRAME



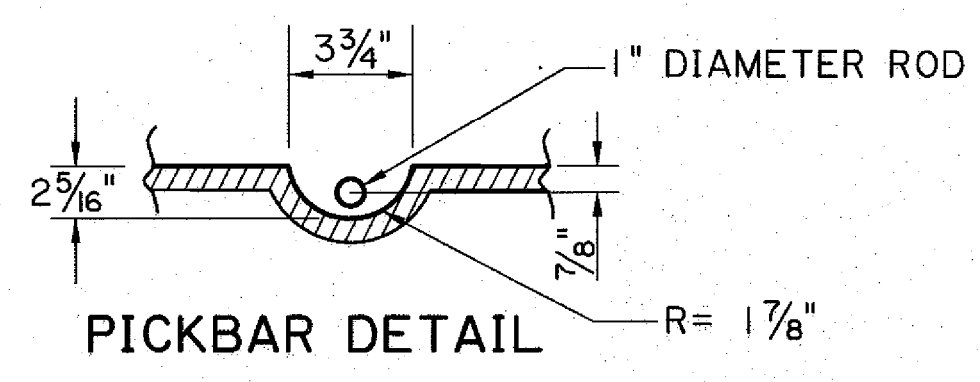
FOR CATCH BASIN "H" FOR PAVED GUTTER "H1"

SECTION D-D

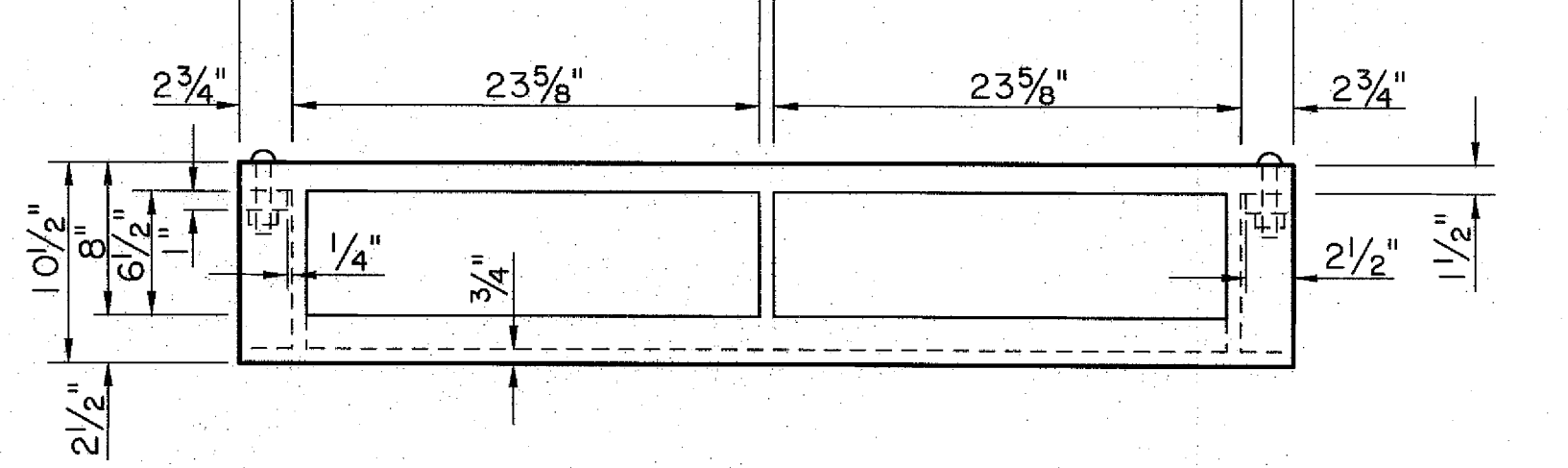
SECTION E-E



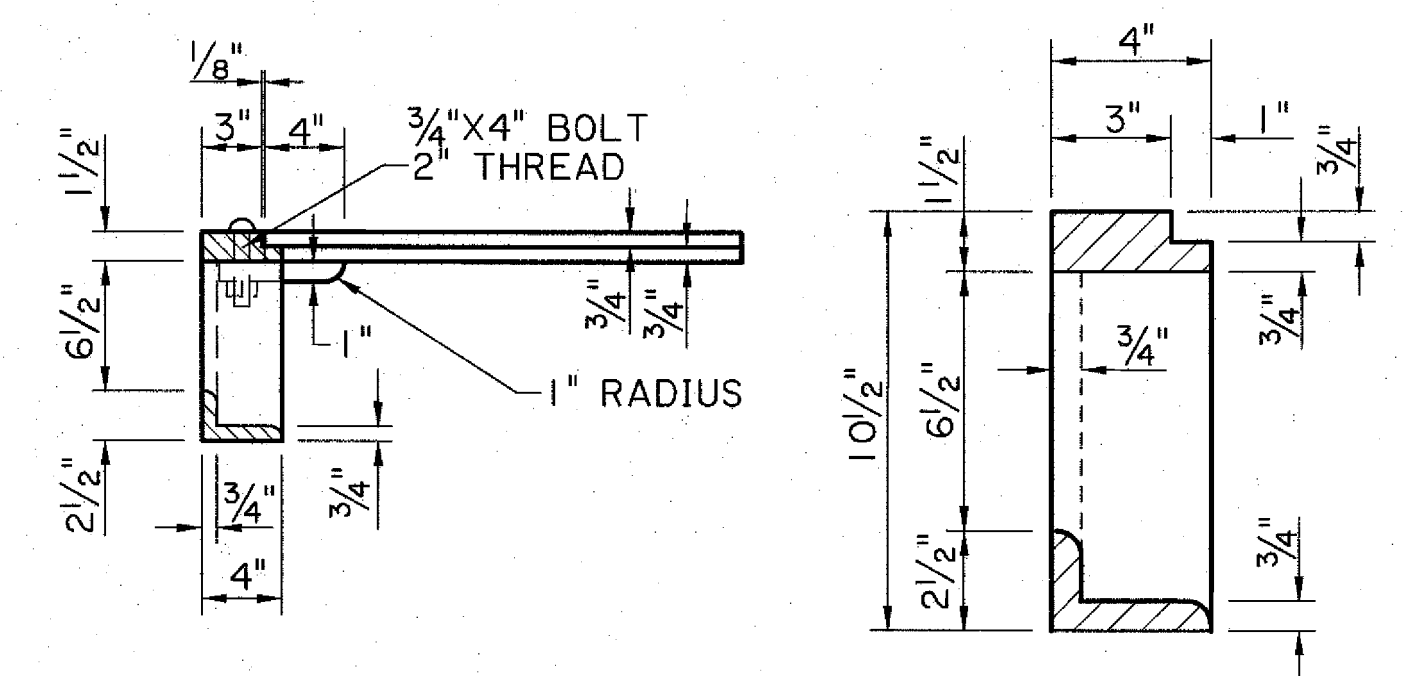
FRONT ELEVATION OF CAST IRON COVER



PICKBAR DETAIL



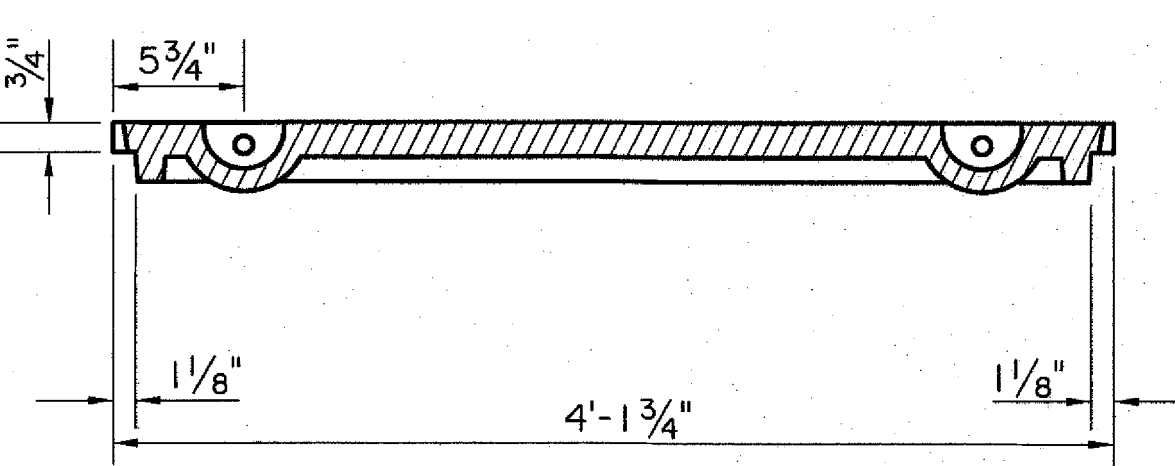
FRONT ELEVATION OF CAST IRON GRATE



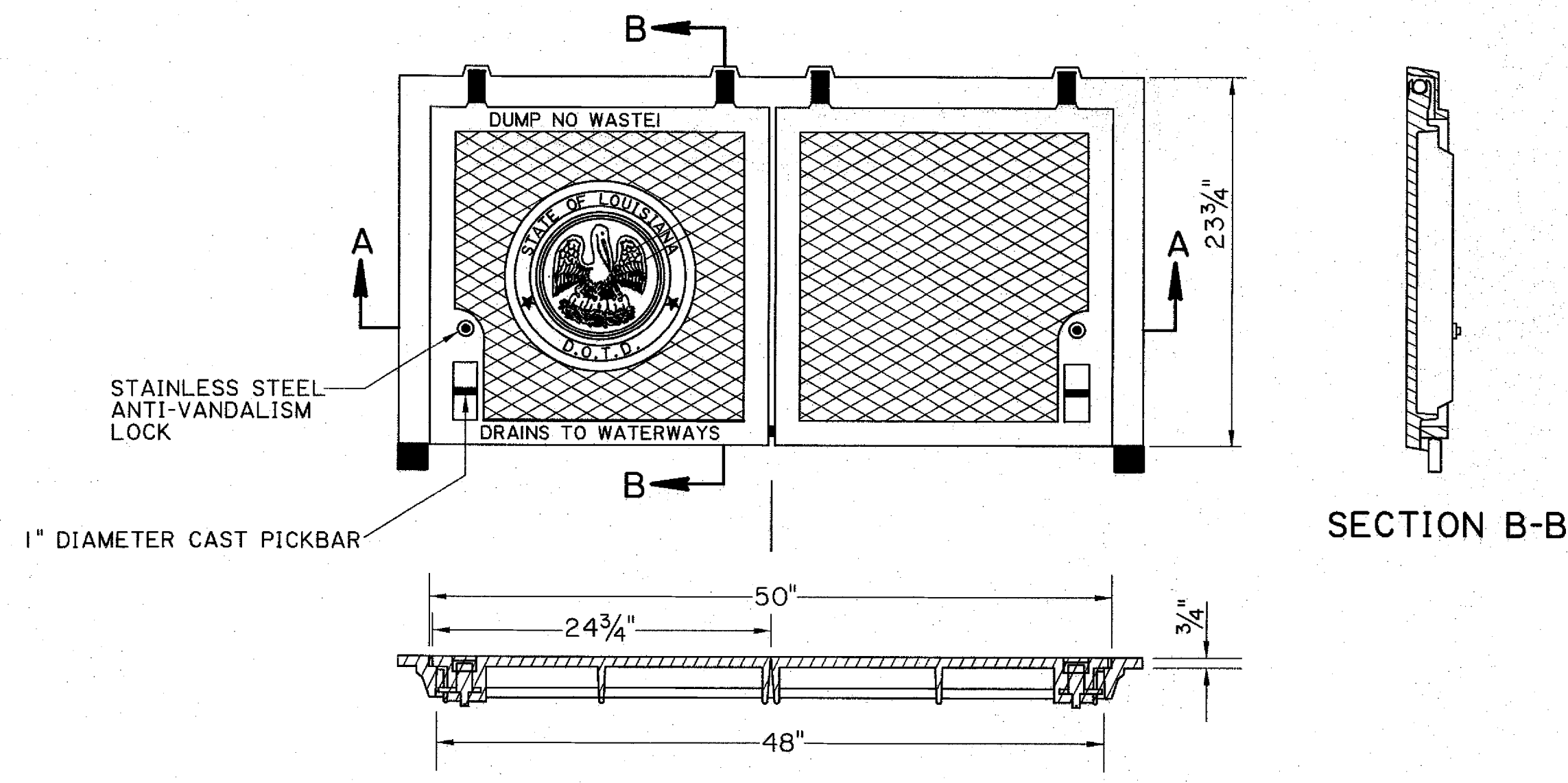
SECTION F-F

SECTION G-G

TYPE "H" AND "H1" CAST IRON COVER, GRATE AND FRAME

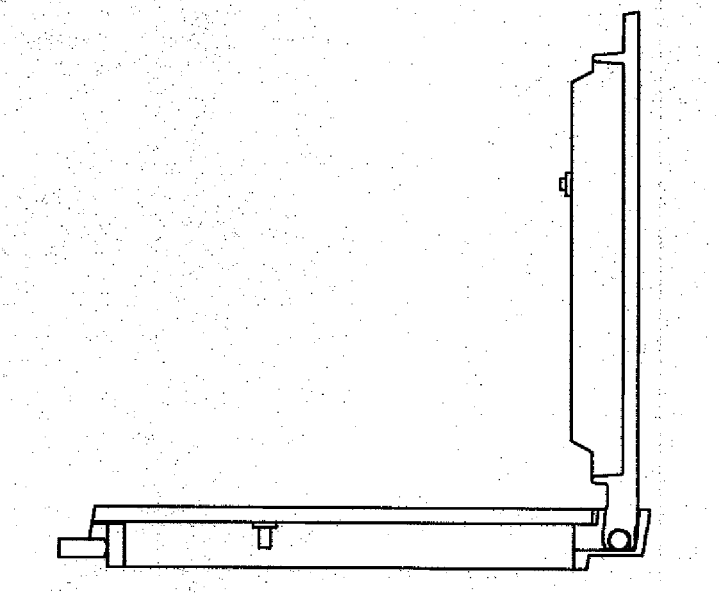


SECTION J-J

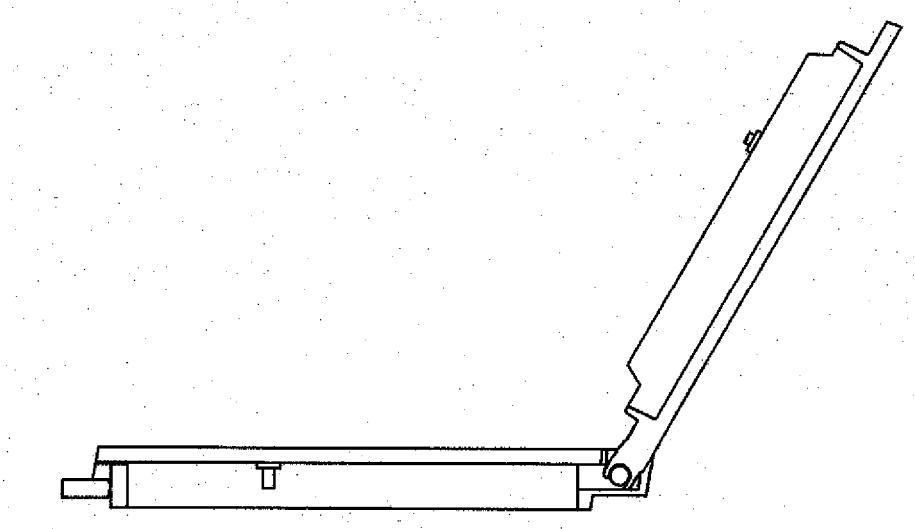


SECTION A-A

SECTION B-B



COVER AT 90 DEGREES SAFETY STOP POSITION



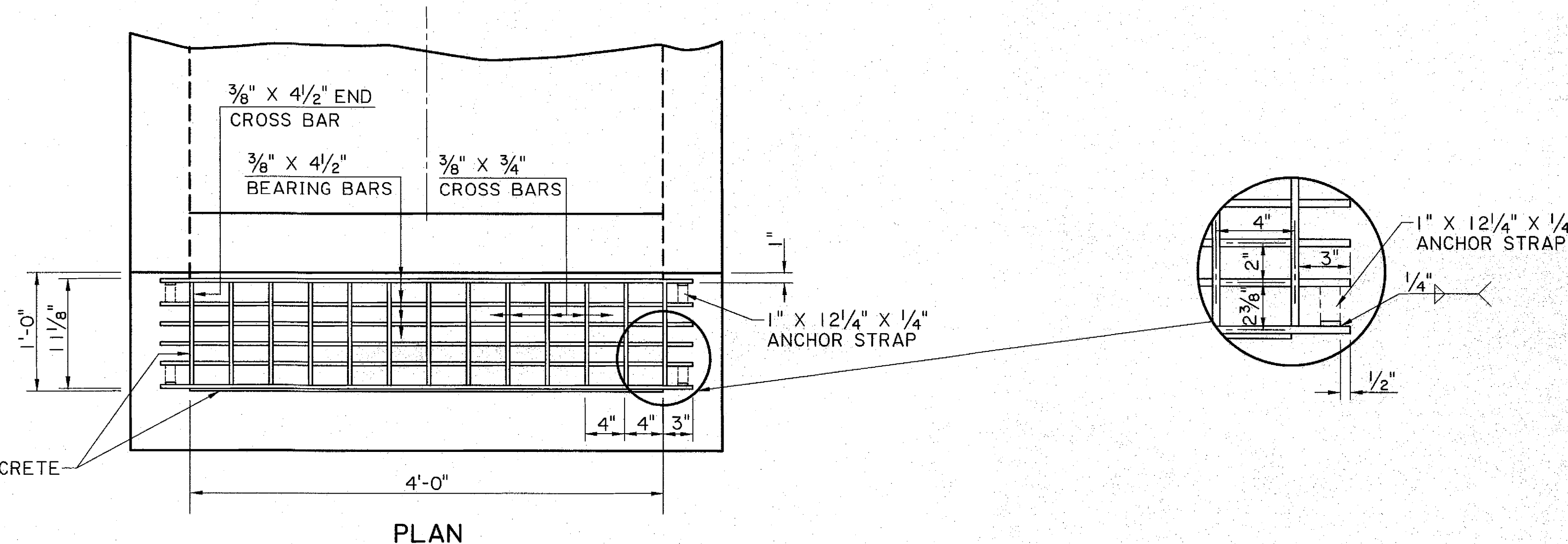
COVER FULLY OPEN TO 120 DEGREES

TYPE "H_s" CAST IRON COVER AND FRAME SHOWN (SEE GRATE ABOVE)

Henry M. Picard, III
REG. No. 22289
PROFESSIONAL ENGINEER
10/02/24

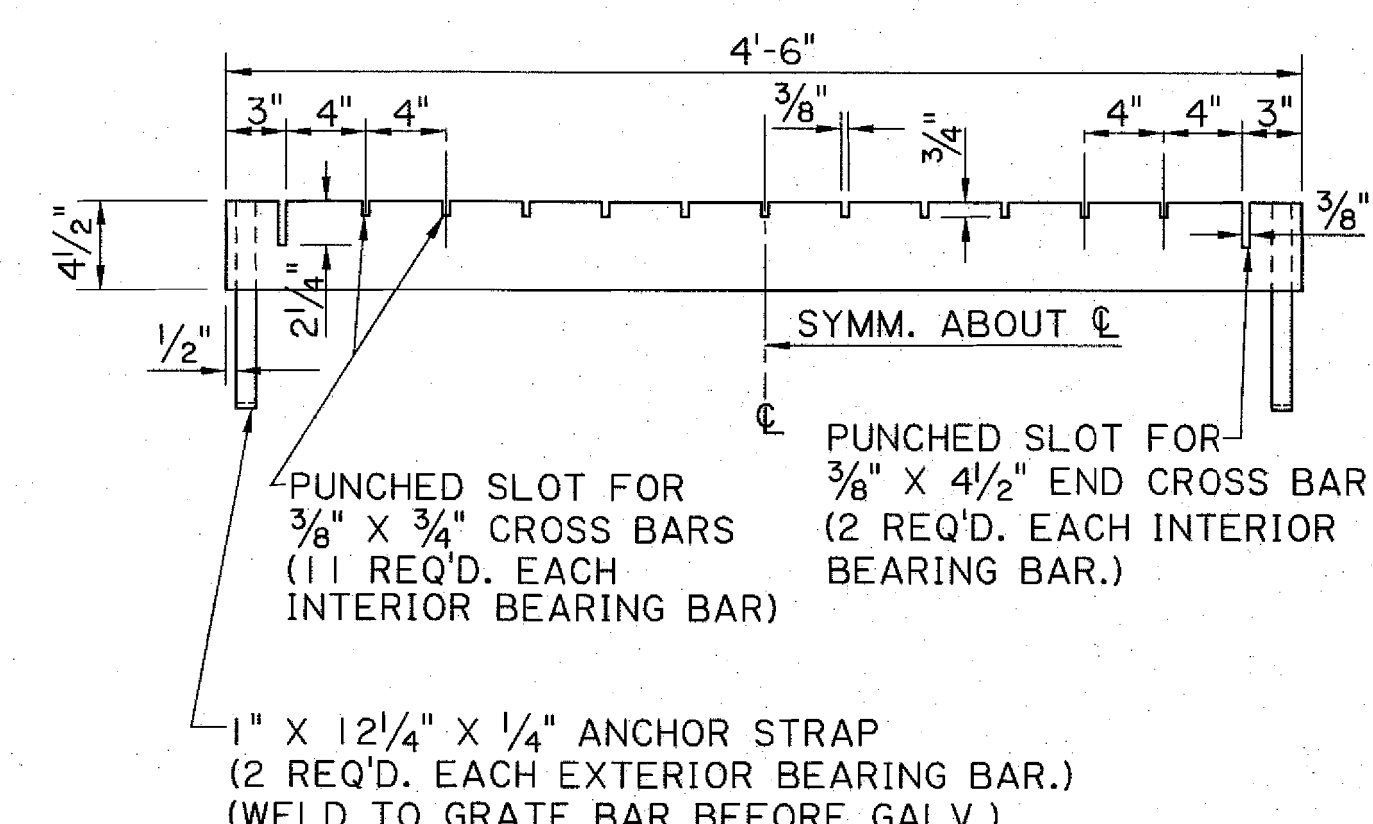
ALDEN M. ALLEN
REG. No. 20252
PROFESSIONAL ENGINEER
5-25-2018

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



PLAN

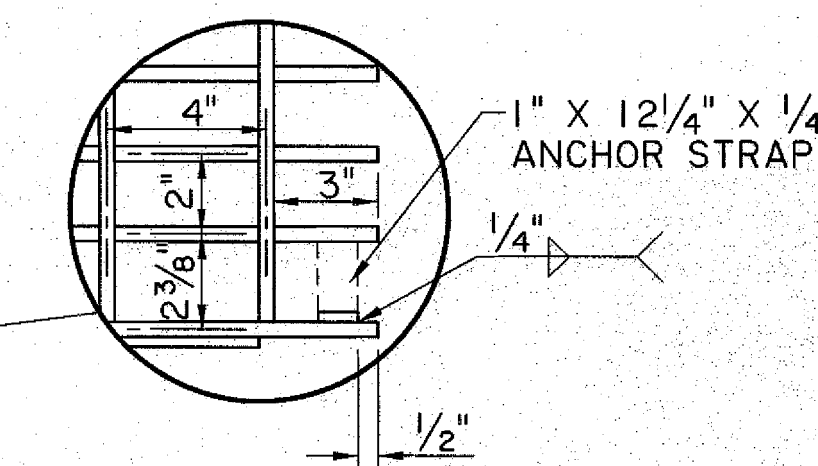
FACE OF CONCRETE



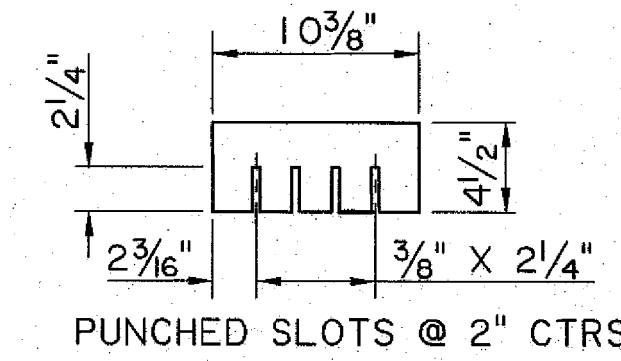
ELEVATION

WELDED & SEALED DRAIN GRATE

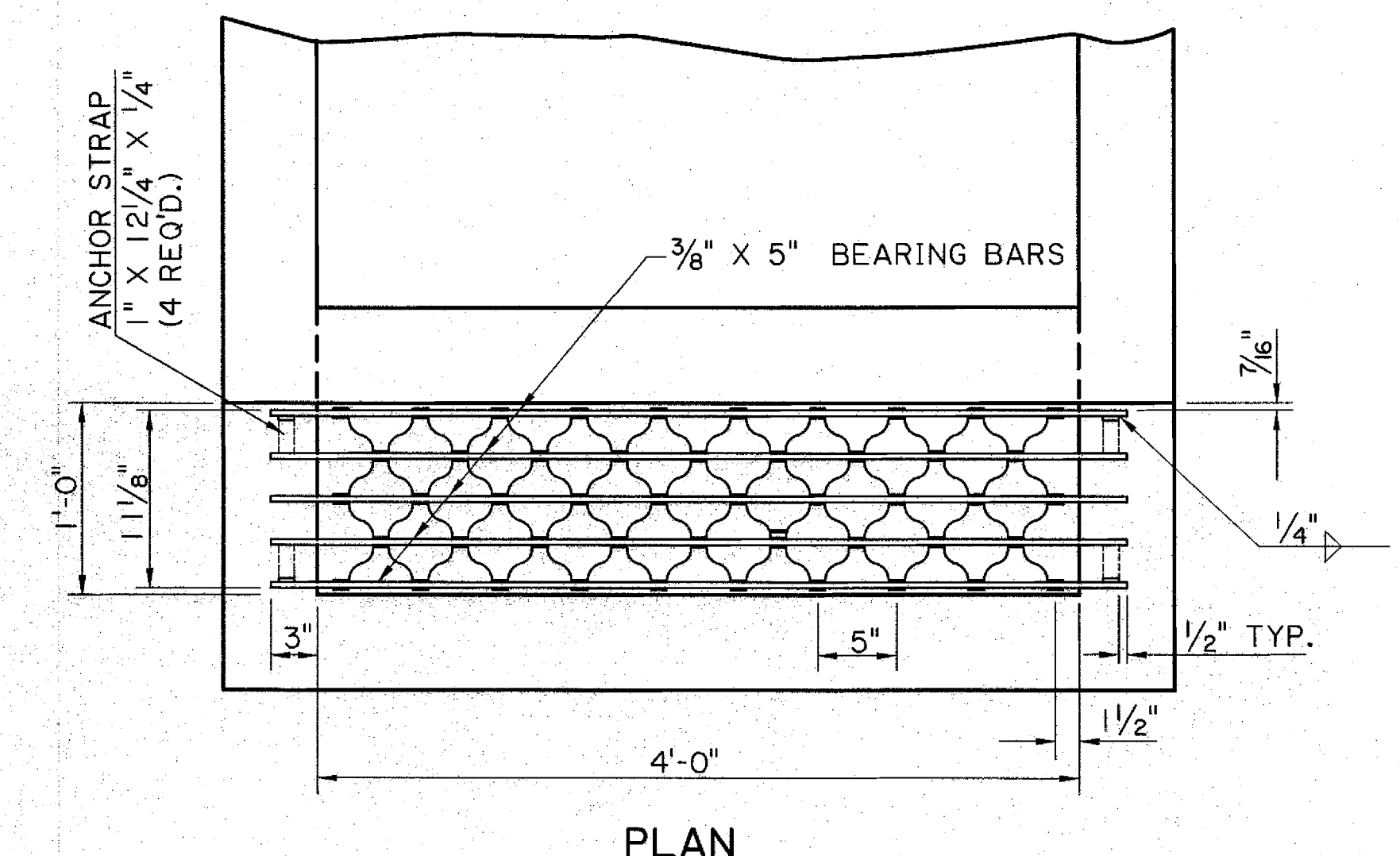
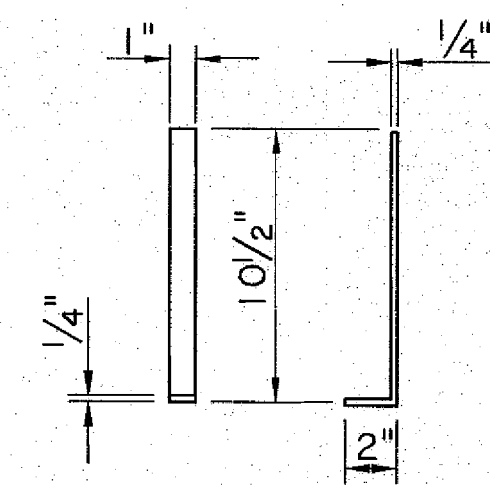
ALL JOINTS FULL DEPTH 1/4" FILLET WELDS WITH SEAL WELD TOP AND BOTTOM UNLESS NOTED OTHERWISE.
 WEIGHT OF DRAIN GRATE = 185 LBS. ± 5%



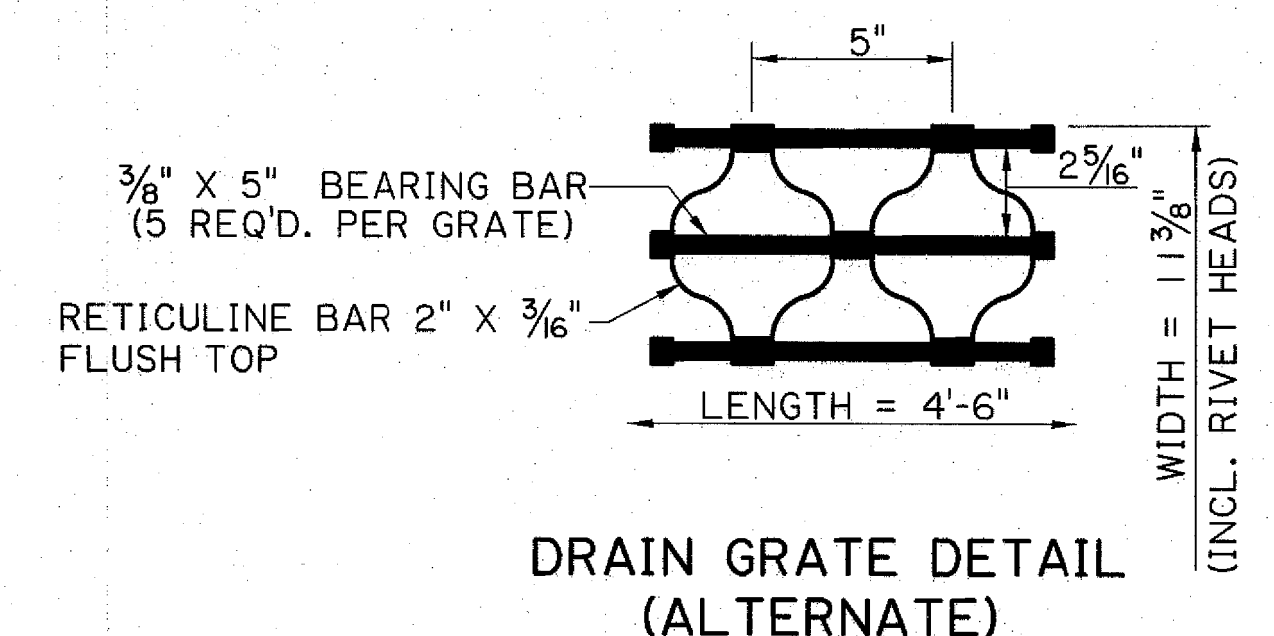
3/8" X 4 1/2" END CROSS BAR
(2 REQ'D. PER GRATE)



STEEL ANCHOR STRAP
(4 REQ'D. PER GRATE)



PLAN



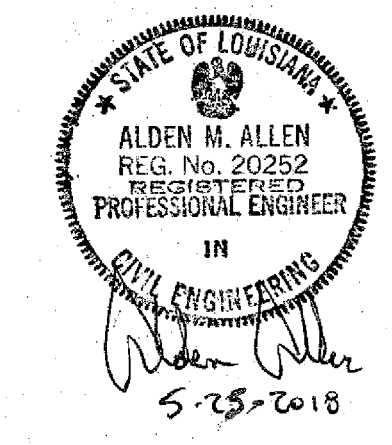
DRAIN GRATE DETAIL (ALTERNATE)

RIVETED RETICULINE DRAIN GRATE (ALTERNATE)

CENTER TO CENTER OF BEARING BARS EQUAL 2 1/16".
 WEIGHT OF DRAIN GRATE = 176 LBS. ± 5%

TYPE " I "
STEEL DRAIN GRATE
GRATE TO BE GALVANIZED AFTER FABRICATION.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

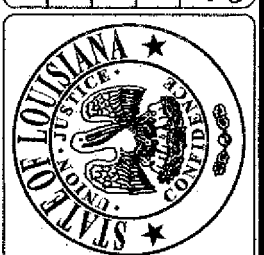


SHEET NUMBER	342
DESIGNED	AMA
CHECKED	AMA
DATE	9/01/17
REVISION DESCRIPTION	
BY	5/25/18
DATE	5/25/18
APPROVED BY	
CHIEF ENGINEER	
STANDARD PLAN	MC-01
DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES	
HYDRAULICS SECT.	

ST. TAMMANY
 PARISH
 CONTROL SECTION
 STATE PROJECT

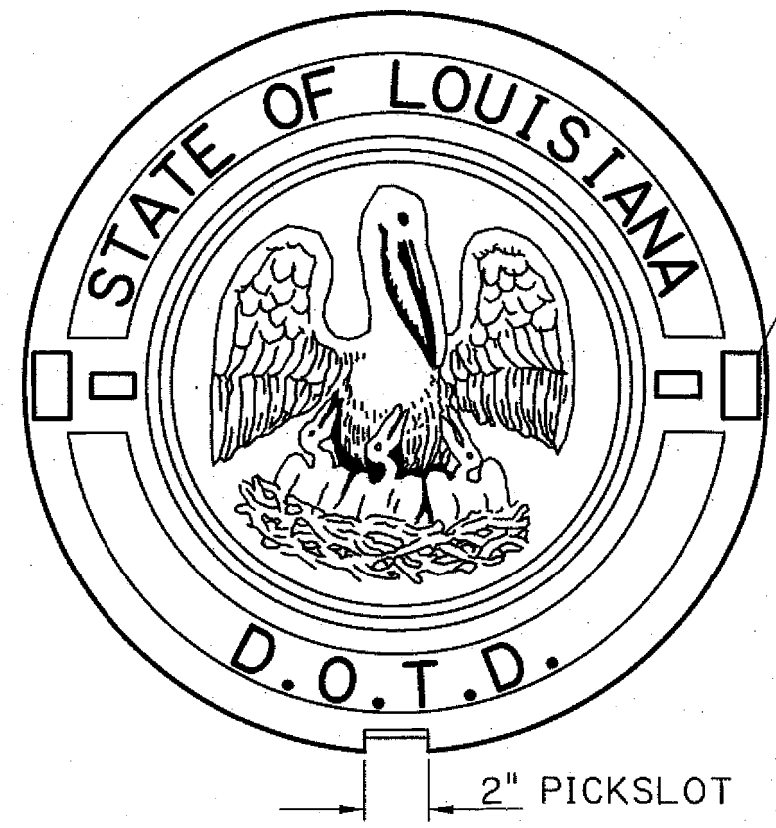
DESIGNED AMA
 CHECKED AMA
 DETAILED TL
 CHECKED AMA
 SERIES NUMBER 4 OF 6

REVISION DESCRIPTION
 BY
 DATE

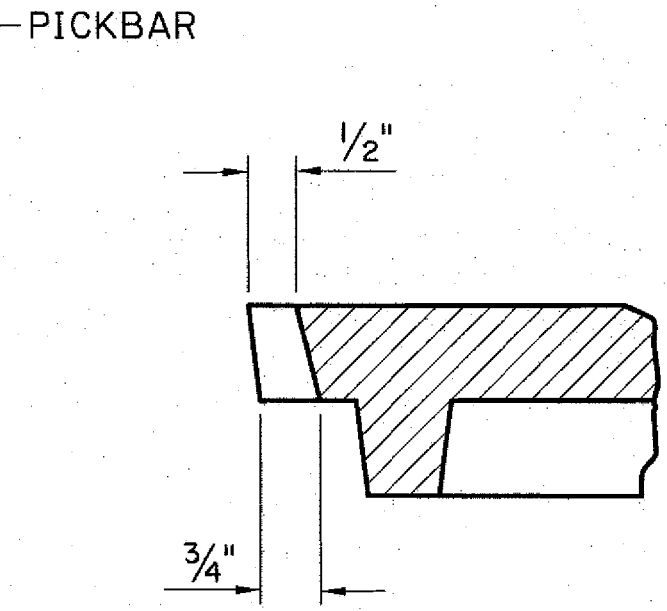


DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES

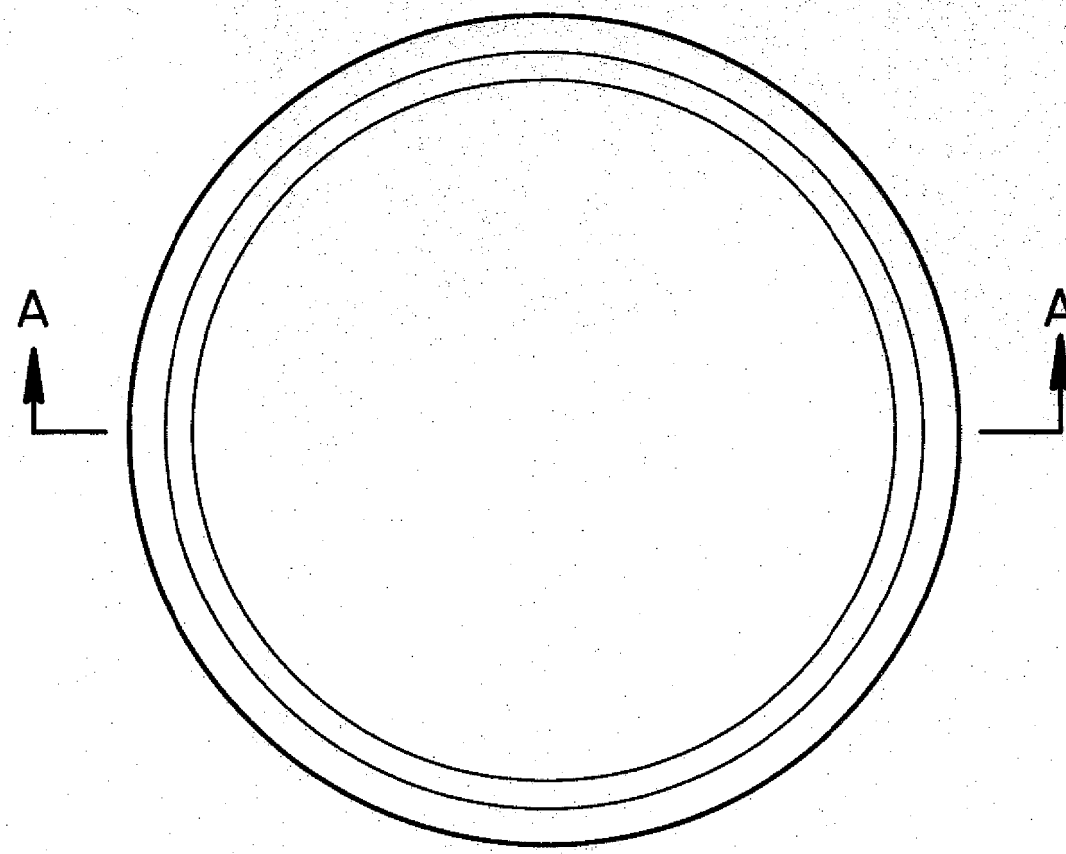




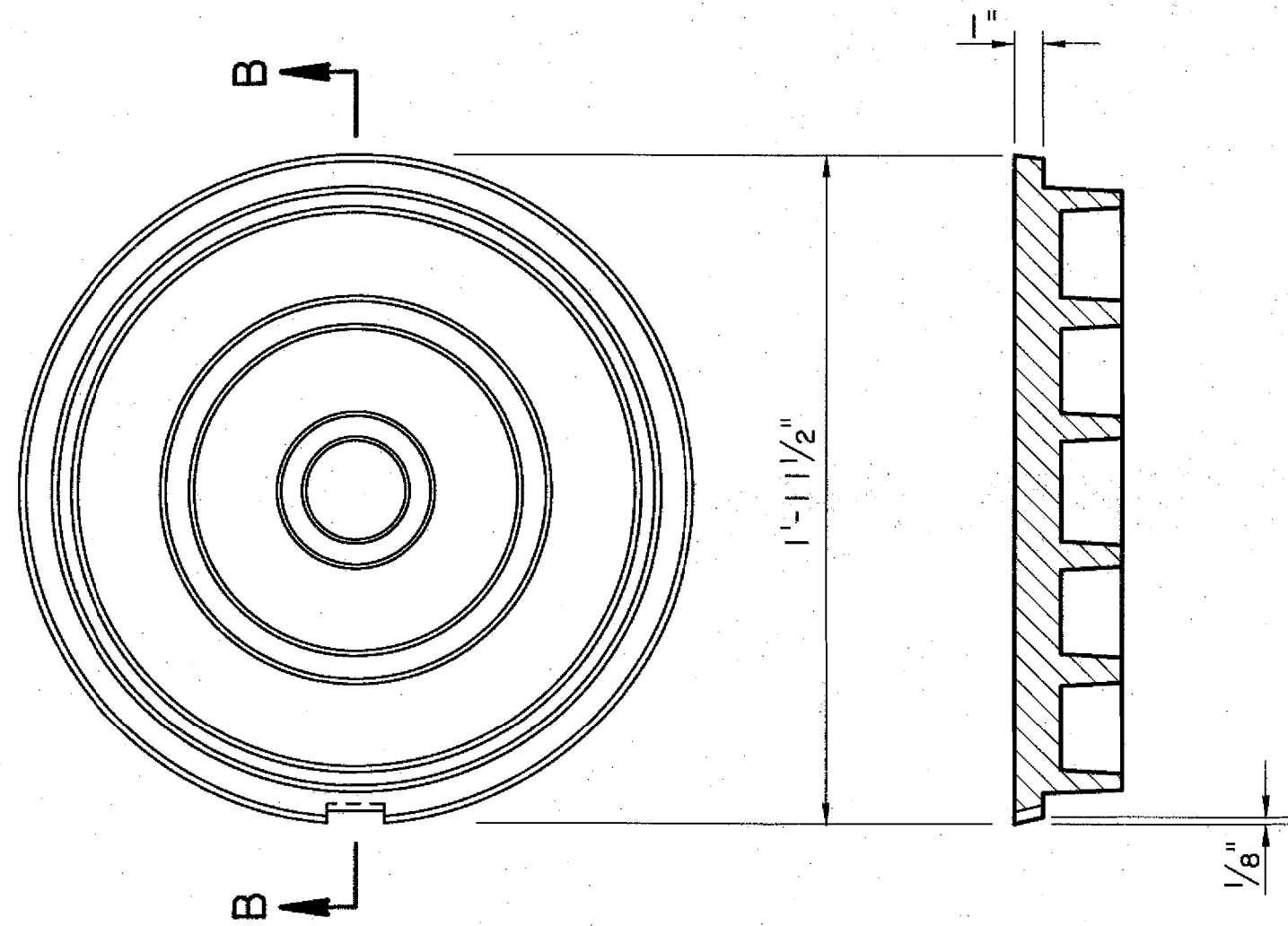
PLAN OF CAST IRON COVER



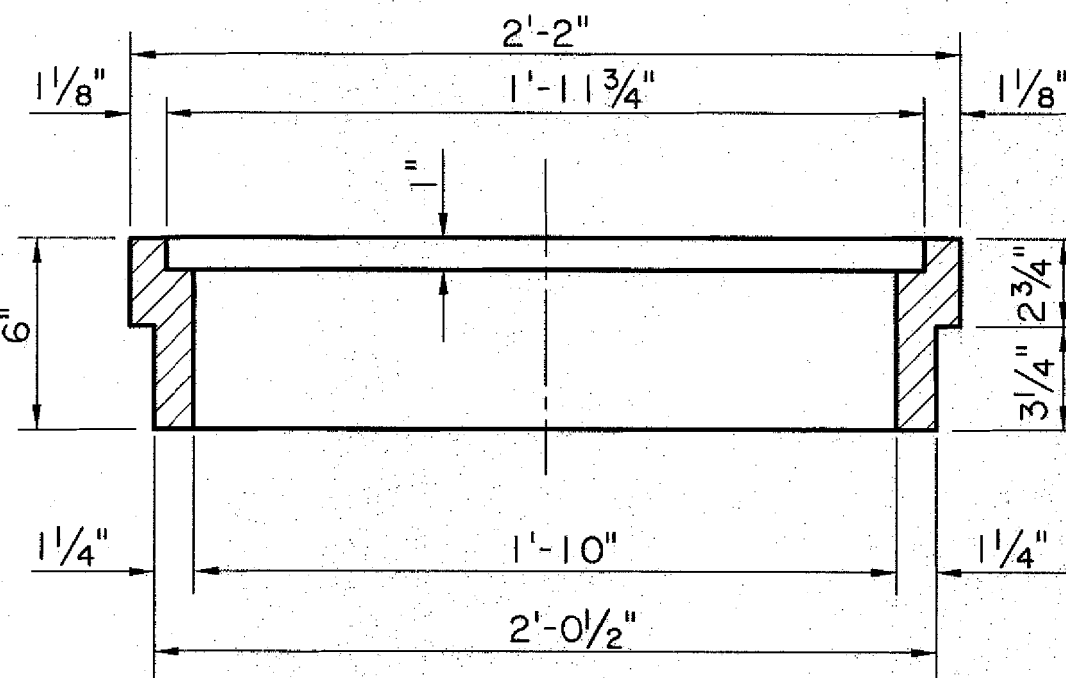
PICKSLOT DETAIL



PLAN OF CAST IRON FRAME



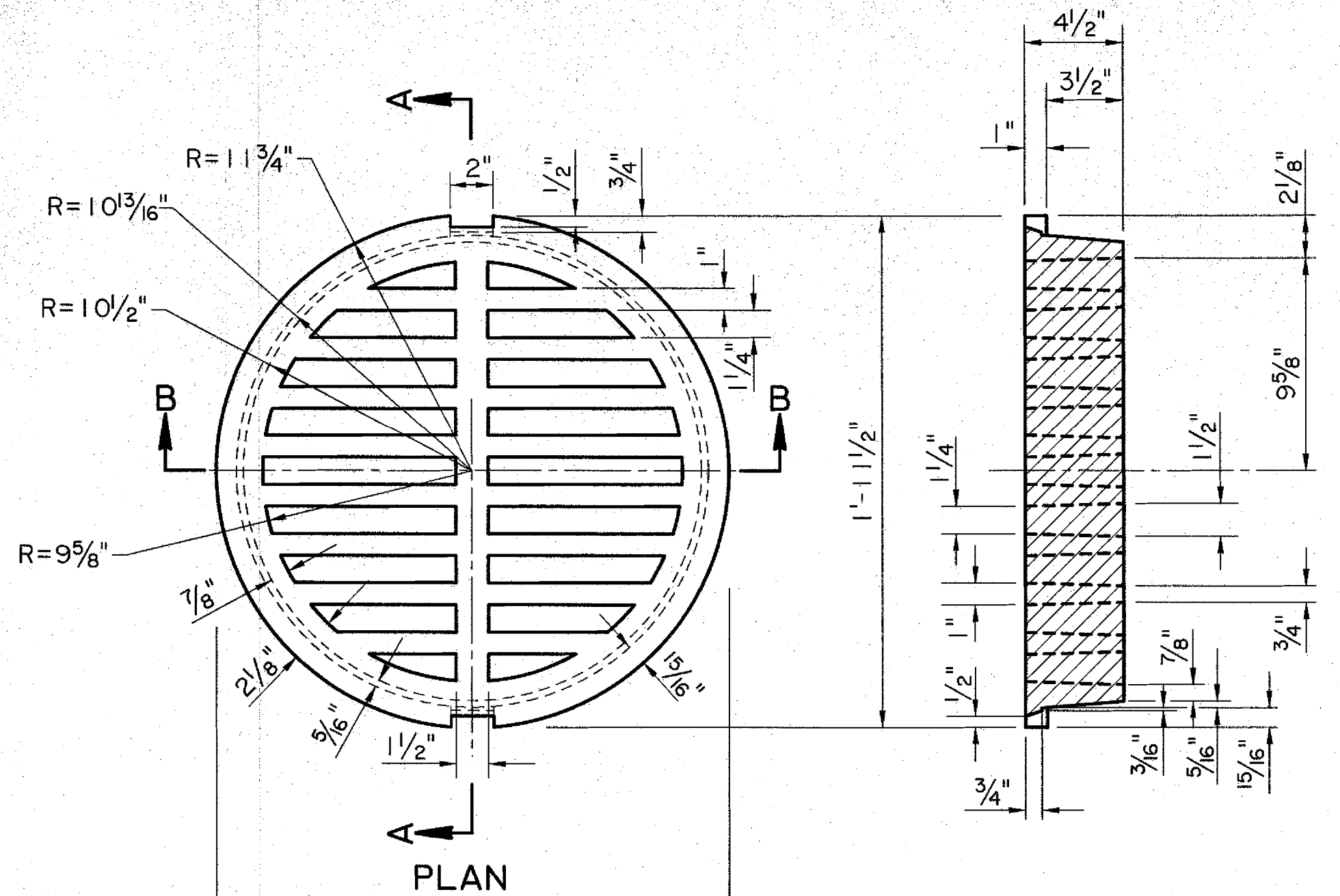
BOTTOM OF CAST IRON COVER



SECTION A-A

TYPE "K"

CAST IRON COVER & FRAME
PICKBAR DETAIL LEFT TO FABRICATOR



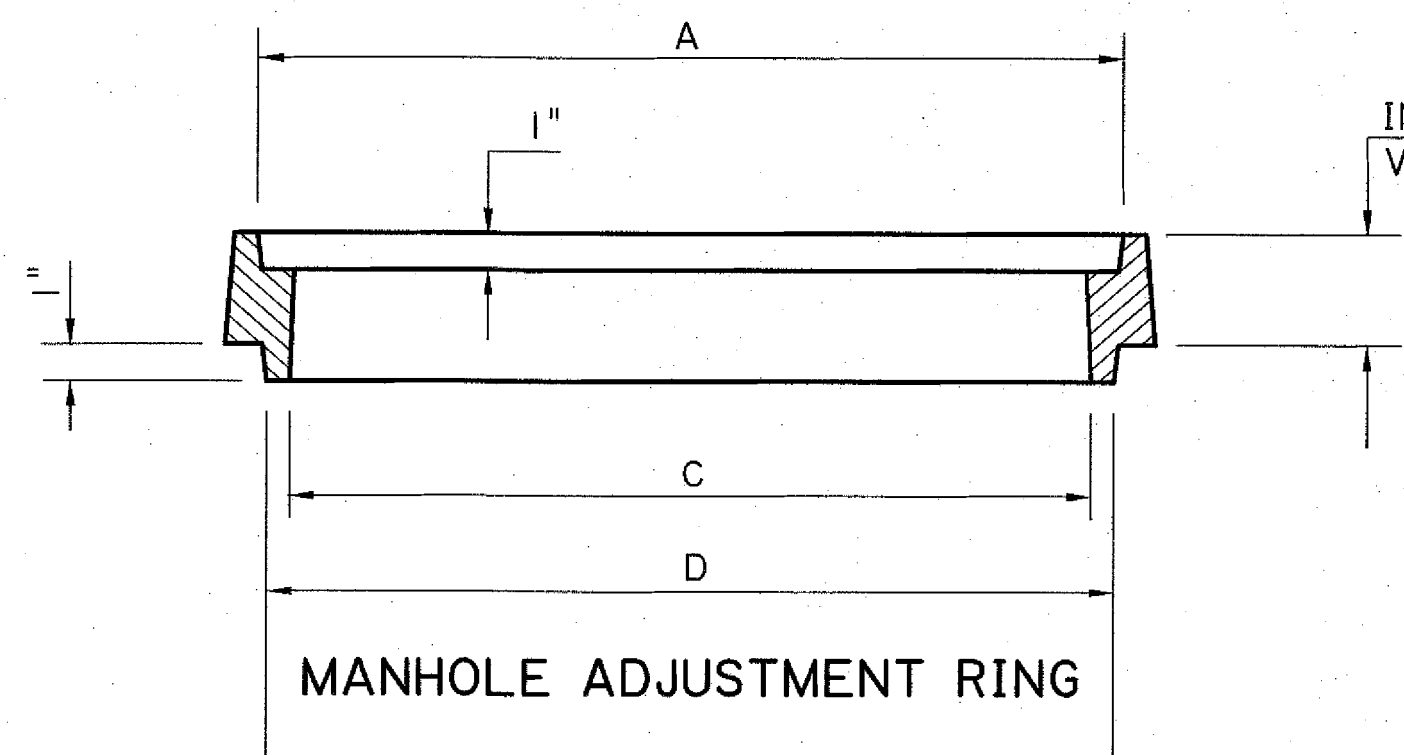
PLAN

SECTION B-B

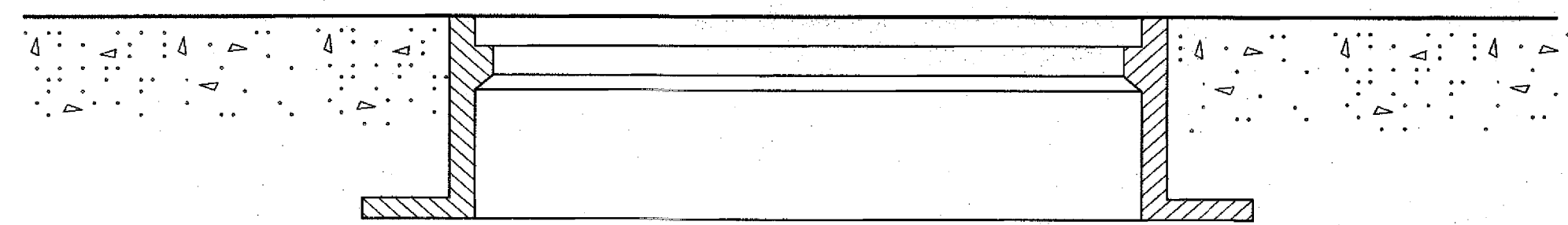
TYPE "K"

CAST IRON GRATE

- NOTES: 1. APPROX. WEIGHT OF CAST IRON COVER = 250 LBS.
2. TO BE USED WITH TYPE "K" CAST IRON FRAME.



MANHOLE ADJUSTMENT RING



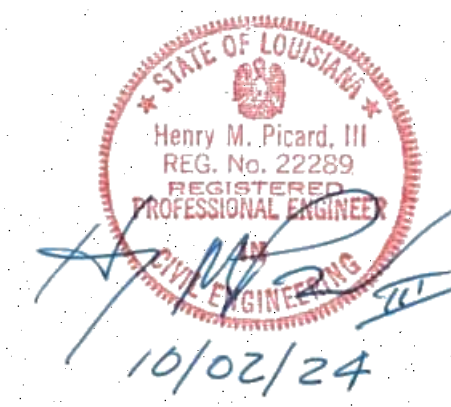
EXISTING GRATE SEAT

MANHOLE ADJUSTMENT RINGS		
A (IN.)	C (IN.)	D (IN.)
23 1/2	22 1/4	23 1/2
23 3/4	22 1/2	23 3/4

MANHOLE ADJUSTMENT RING

CAST IRON OR STEEL

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SHEET NUMBER 343

ST. TAMMANY

PARISH CONTROL SECTION STATE PROJECT

DESIGNED BY AMA CHECKED BY AMA

DATE 9/01/17

REVISION DESCRIPTION

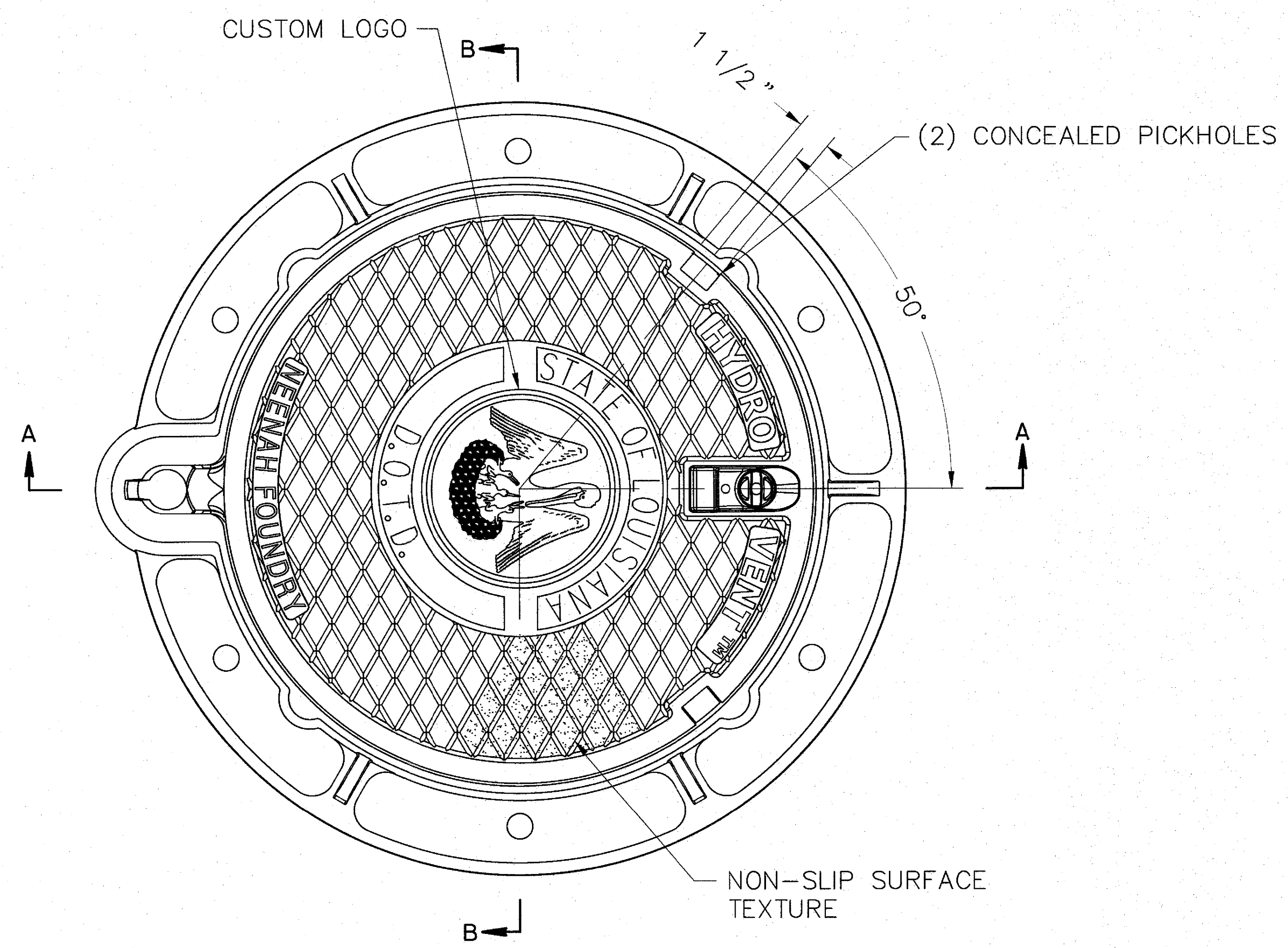
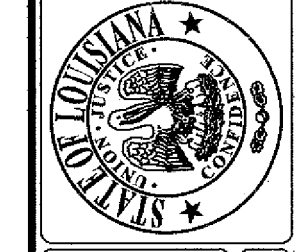
DATE 5/25/18

APPROVED BY CHIEF ENGINEER

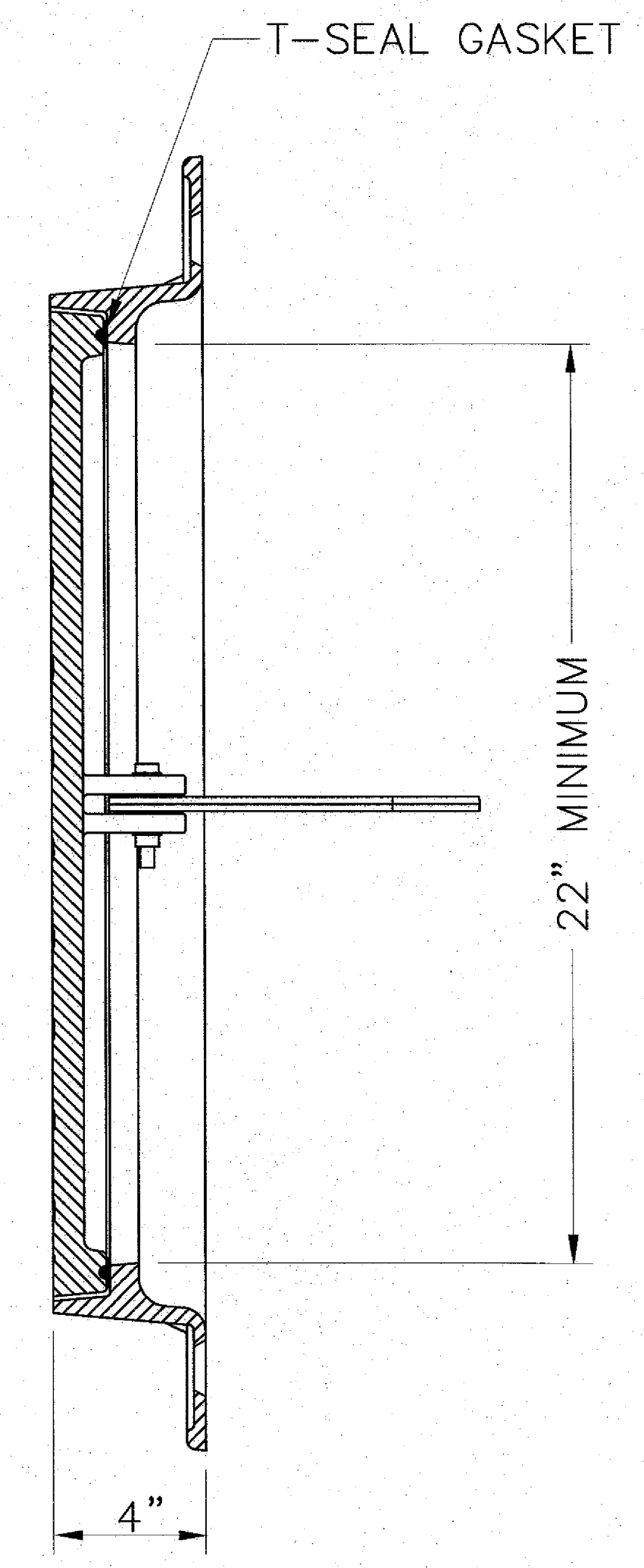


DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES

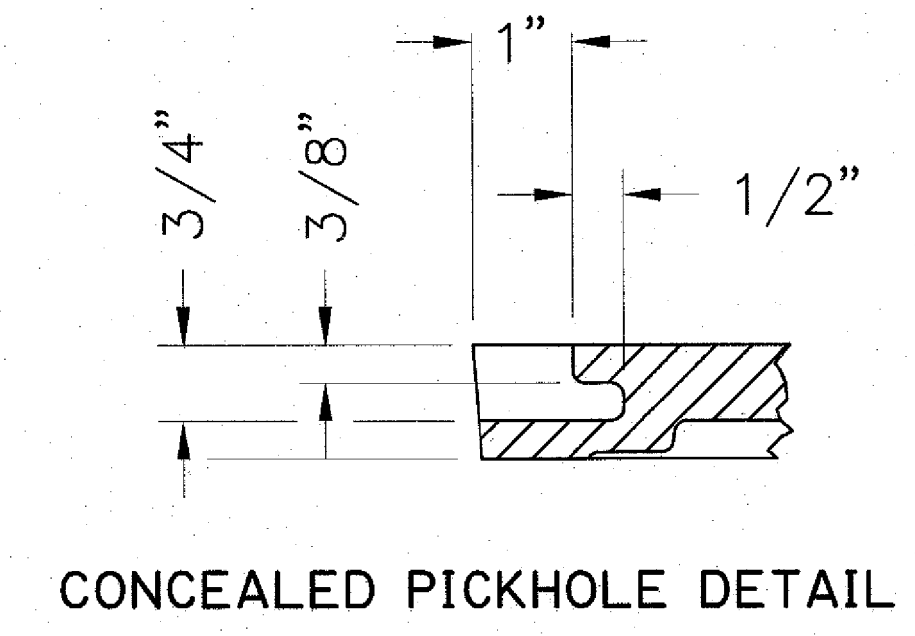




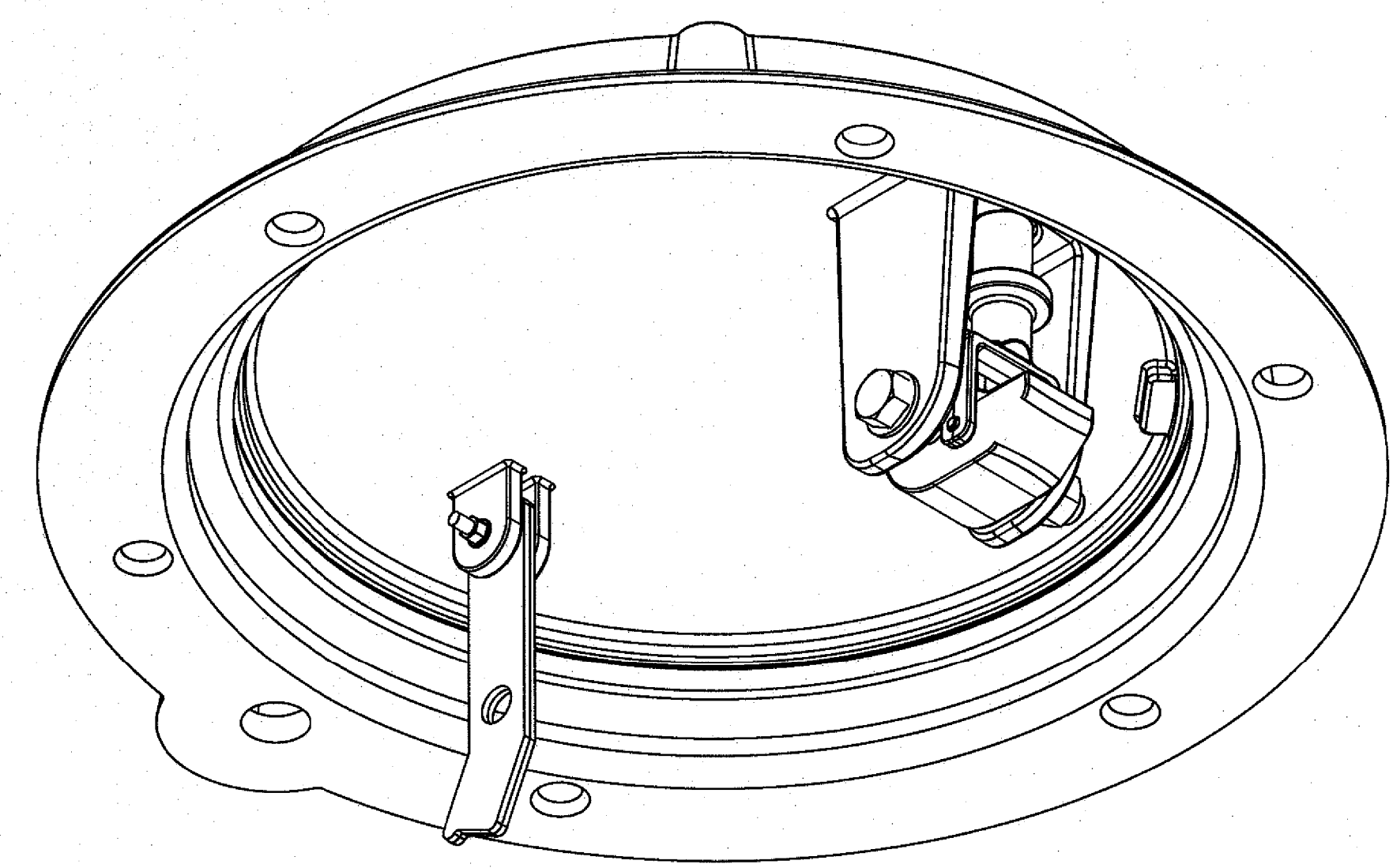
PLAN OF CAST IRON COVER



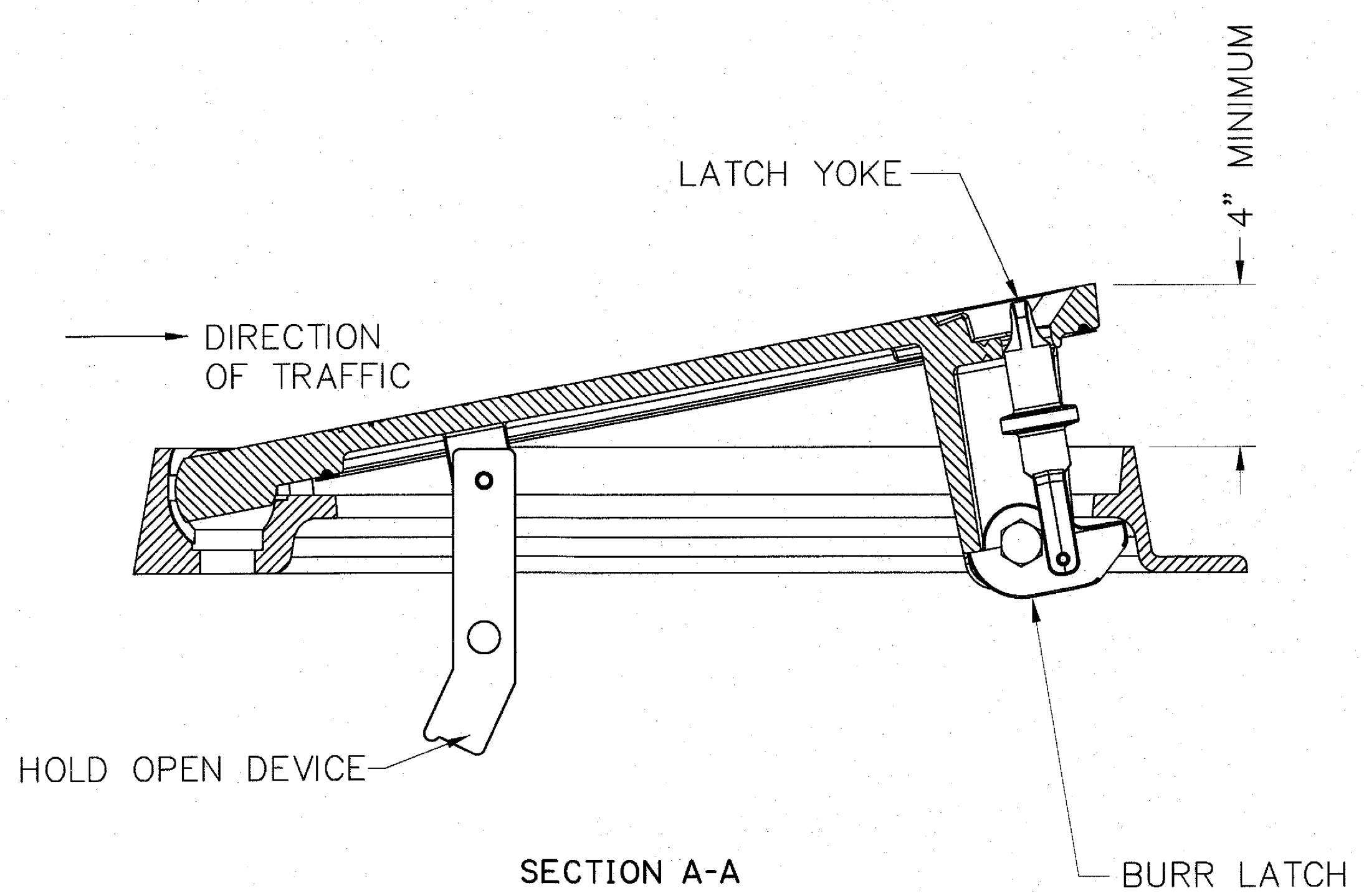
SECTION B-B



CONCEALED PICKHOLE DETAIL



ISOMETRIC BOTTOM VIEW



SECTION A-A

VENTING MANHOLE
CAST IRON COVER AND FRAME
NEENAH FOUNDRY 1650-HV SHOWN
EJ STORMSURGE 24 APPROVED BUT NOT SHOWN

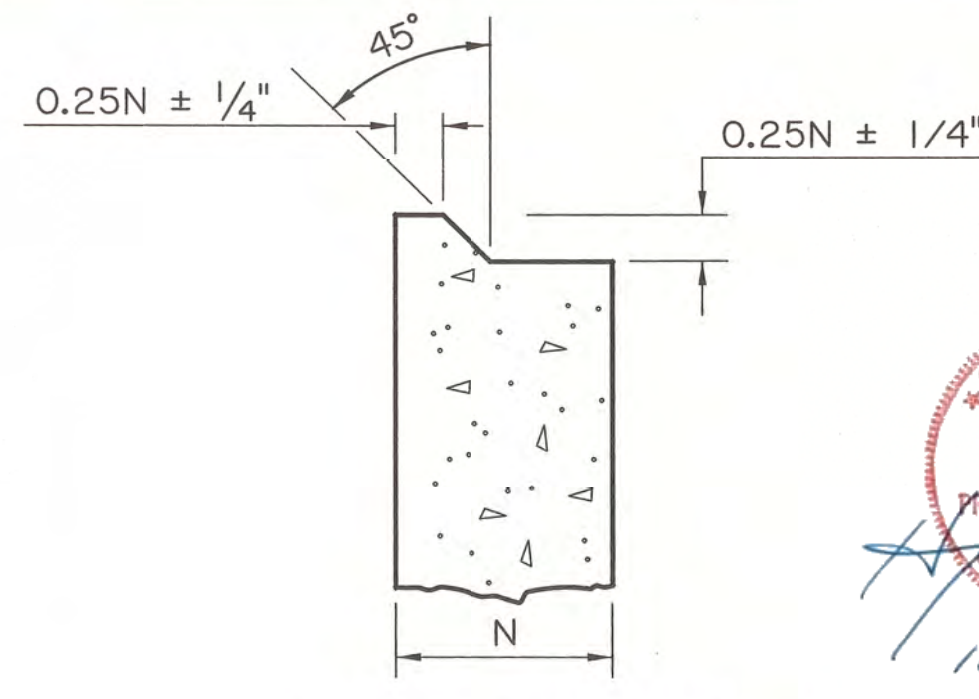
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

ALDEN M. ALLEN
REG. No. 20252
REGISTERED PROFESSIONAL ENGINEER
IN
5-25-2018

GENERAL NOTES:

- THIS STRUCTURE MEETS ALL DOTD HYDRAULIC PERFORMANCE CRITERIA WHEN USED IN ACCORDANCE WITH THE DOTD HYDRAULICS MANUAL AND ALL DOTD HYDRAULIC DESIGN POLICIES.
- PROVIDE PRECAST UNITS AS THE LOWER PORTION OF A COMPOSITE STRUCTURE. PROVIDE CAST-IN-PLACE CONCRETE (SEE APPROPRIATE STANDARD PLAN FOR REQUIRED REINFORCING AND DIMENSIONS) FOR THE TOP 1'-6" OF THE STRUCTURE AS FOLLOWS:
 - CB-01, CB-02, CB-04, CB-05, AND MANHOLES MAY BE FULLY PRECAST IF THE STRUCTURES ARE NOT EXPOSED TO TRAFFIC LOADS; ELEVATIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.
 - CB-06, CB-07, CB-08, AND CB-09 STRUCTURES MUST HAVE THE TOP 18" CAST-IN-PLACE; ELEVATIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.
- DESIGN IS TO BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION, 2017, AND THE LATEST LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
- FINISH CAST-IN-PLACE CONCRETE IN ACCORDANCE WITH OTHER STANDARD PLANS AND 805.
- FORM PIPE OPENINGS ONLY AS REQUIRED FOR INTERSECTING PIPES. PROVIDE OPENING DIMENSIONS TO ACCOMMODATE PIPE DIAMETER AND SKEW ANGLE. PROVIDE OPENING DIMENSION THAT IS 4+1/2 INCH LARGER THAN OUTSIDE PIPE DIMENSION.
- RESILIENT CONNECTORS OR CONCRETE COLLARS ARE REQUIRED FOR CONNECTIONS OF ALL PIPE SIZES (EXCEPT YARD DRAIN PIPE AND UNDERDRAINS) WITH COST TO BE INCLUDED IN THE COST OF THE PRECAST STRUCTURE.



**JOINT DETAIL A
PRECAST/PRECAST**

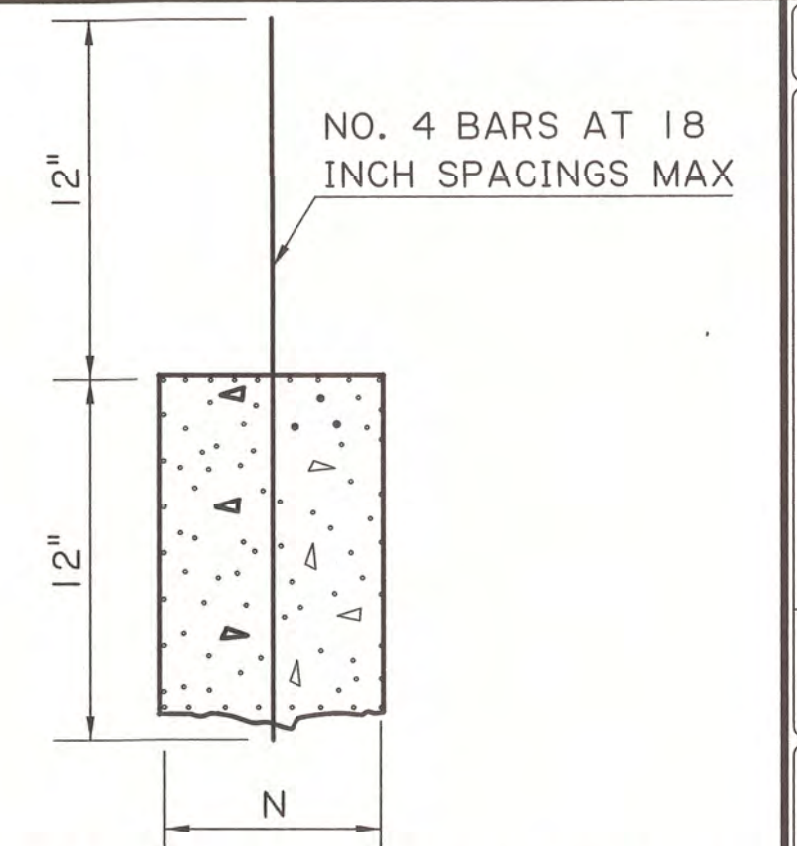
1. SEAL AND WRAP JOINT IN ACCORDANCE WITH 702.04.01



USE DIMENSIONS FROM JOINT DETAIL "A"



**JOINT DETAIL B - OPTION 1
CAST-IN-PLACE/PRECAST**



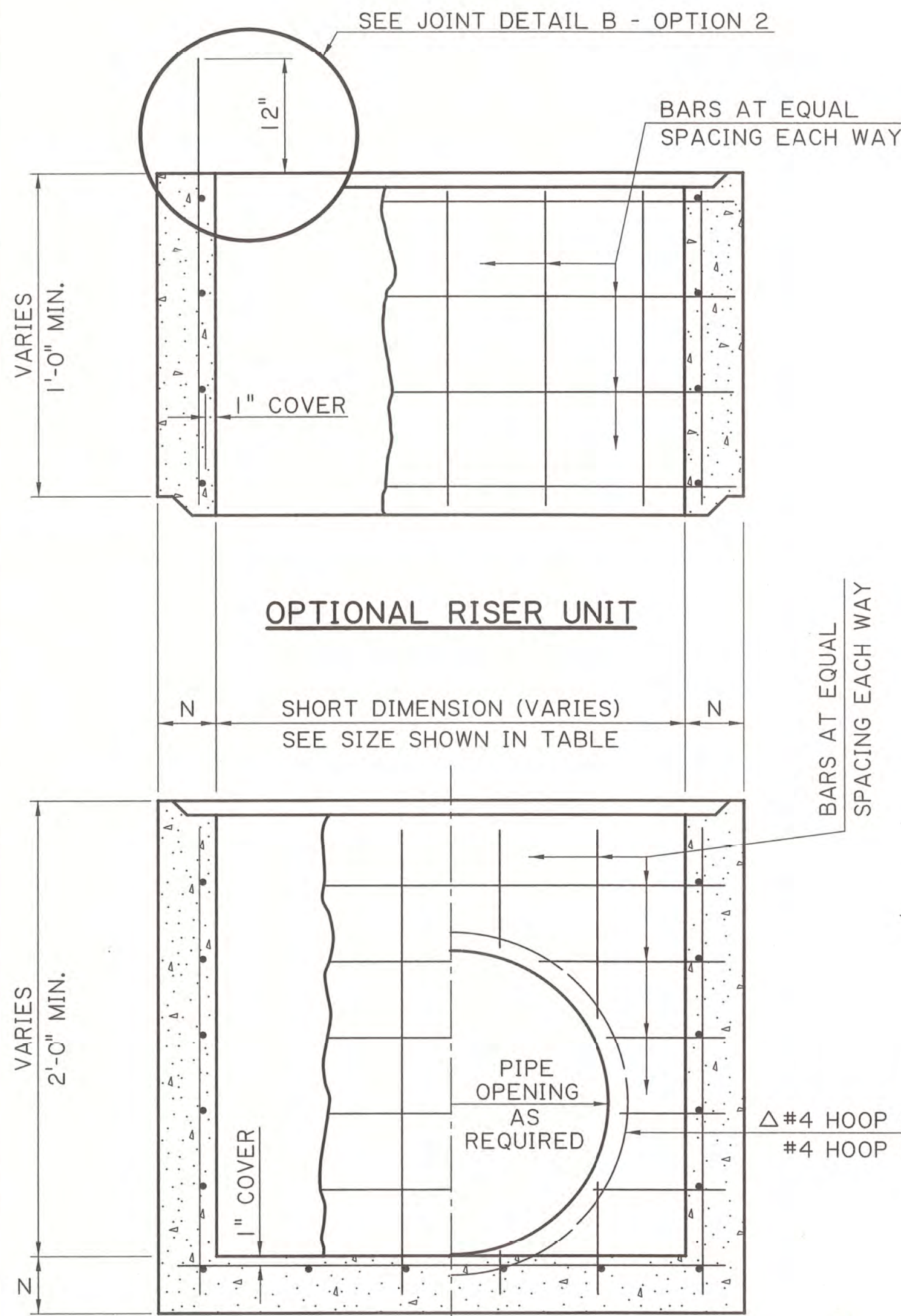
**JOINT DETAIL B - OPTION 2
CAST-IN-PLACE/PRECAST**

IN OPTIONS 1 AND 2, COAT PRECAST CONCRETE JOINT SURFACE AND A MAXIMUM OF 2 INCHES OF REINFORCING STEEL WITH TYPE V, GRADE 2 OR GRADE 3 EPOXY RESIN CONFORMING TO 1017. APPLY EPOXY RESIN AND PLACE CONCRETE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

MAXIMUM HEIGHT		4' MAX. DIMENSION				6' MAX. DIMENSION			8' MAX. DIMENSION			10' MAX. DIMENSION		
N		TYPICAL SIZES 3'x3' 4'x4'				TYPICAL SIZES 6'x4' 6'x6'			TYPICAL SIZES 8'x4' 8'x6' 8'x8'			TYPICAL SIZES 10'x4' 10'x6' 10'x8' 10'x10'		
FT.	IN.	BAR SIZE	SPAC.* IN.	As IN ² /FT.	BAR SIZE	SPAC.* IN.	As IN ² /FT.	BAR SIZE	SPAC.* IN.	As IN ² /FT.	BAR SIZE	SPAC.* IN.	As IN ² /FT.	
8	4	4	6	0.40										
8	6	4	9	0.27	4	8	0.30	4	5.5	0.44	5	5.5	0.68	
14	6	4	9	0.27	4	6	0.40	5	5	0.74	5	3.25	1.14	
20	6	4	7	0.34	4	4.5	0.53							

OTHER SIZES ARE ACCEPTABLE AS LONG AS THE DIMENSIONS DO NOT EXCEED THE MAXIMUM DIMENSIONS.
 * BAR SPACING APPLIES TO BOTH DIRECTIONS AND AT ALL LOCATIONS.
 As BAR SIZES AND SPACING MAY DIFFER FROM VALUES SHOWN, BUT THE AREA OF STEEL (As) SHALL BE EQUAL TO OR GREATER THAN VALUE SHOWN, AND BAR SPACING SHALL NOT EXCEED 1.5 TIMES THE WALL THICKNESS. THE AREA OF STEEL (As) MAY BE PROVIDED WITH STEEL DEFORMED WELDED WIRE FABRIC.

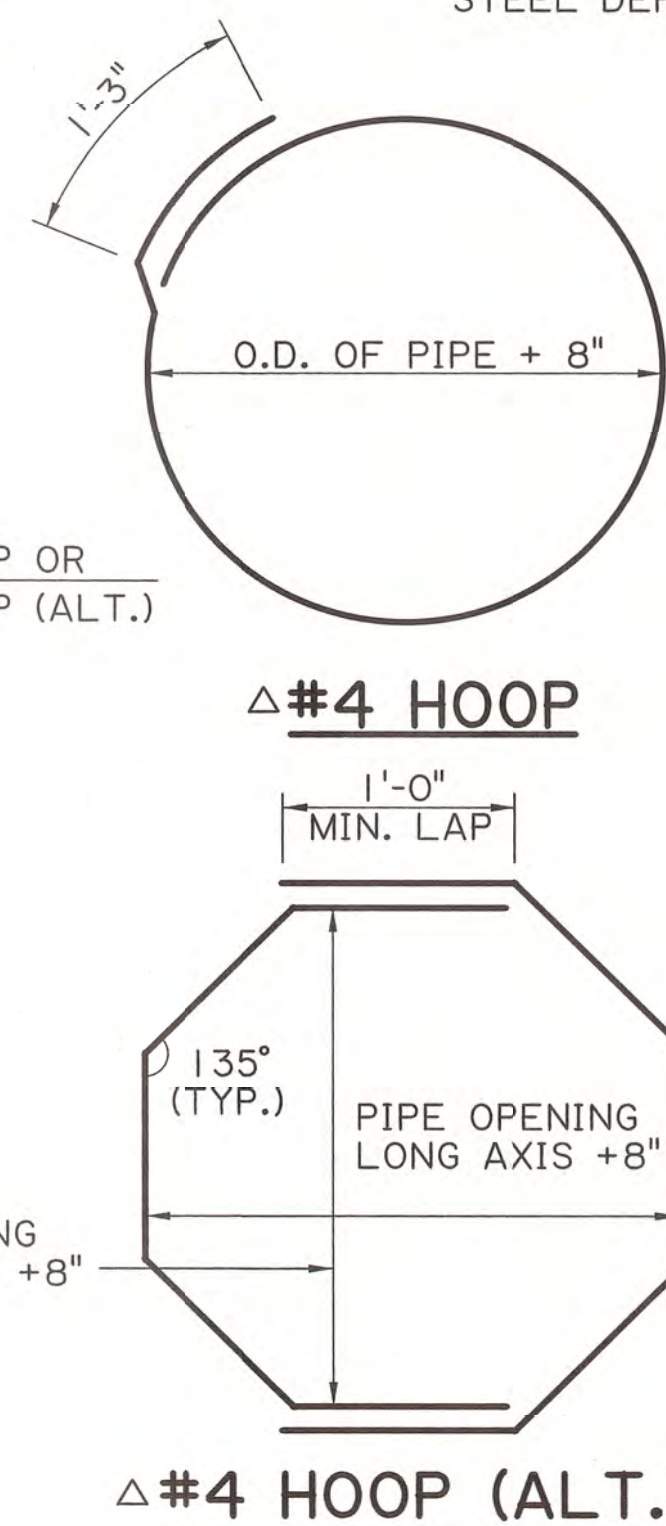


OPTIONAL RISER UNIT

**BASE UNIT
SECTION B-B**

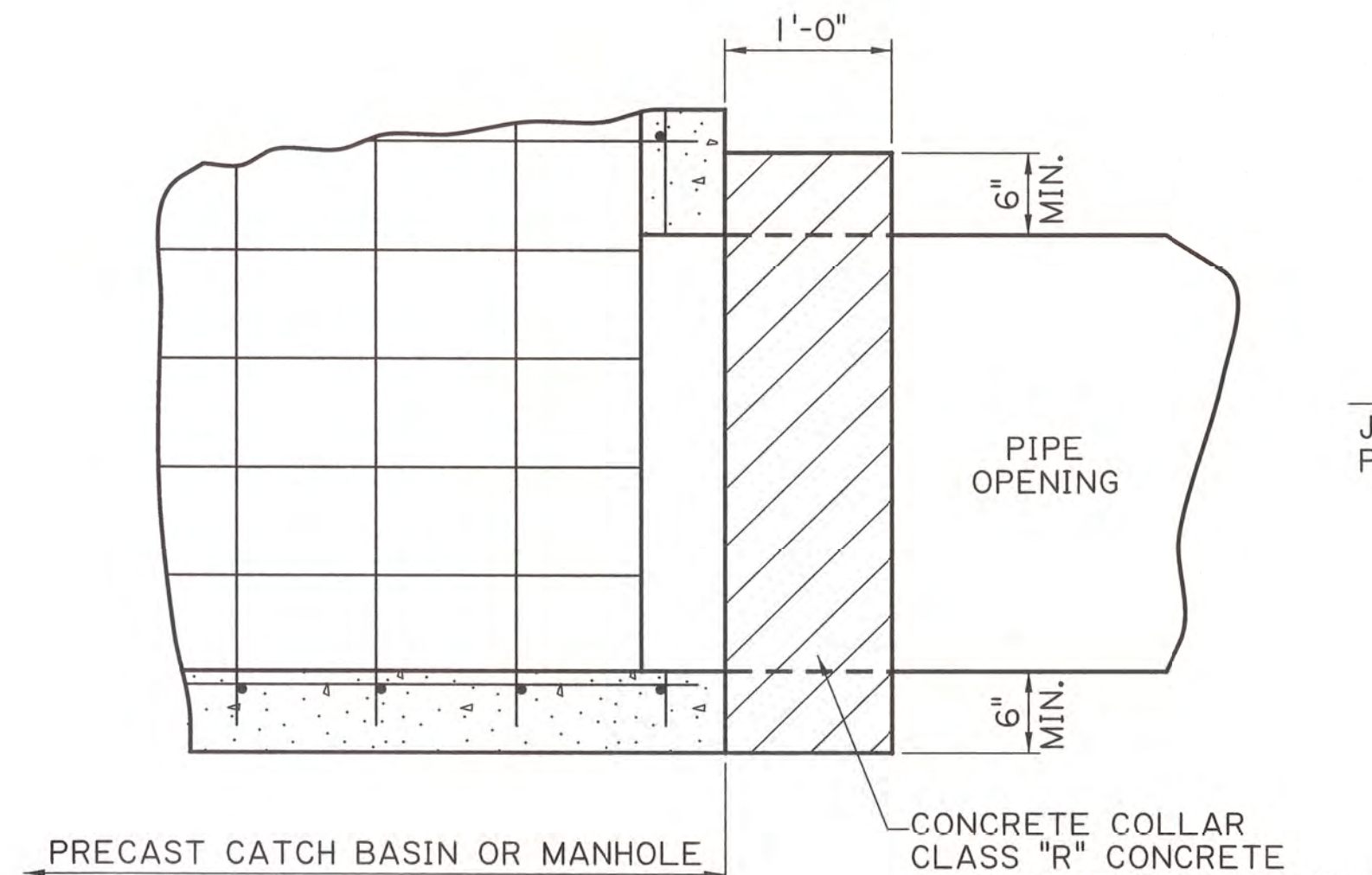
Δ #4 HOOP MAY BE USED WHEN PIPE IS CIRCULAR AND CONNECTS TO THE CATCH BASIN AT +/- 90 (DEGREE) ANGLE. #4 HOOP (ALT.) SHALL BE USED FOR NON-CIRCULAR (ELLIPTICAL) PIPES AND ALL PIPES THAT ENTER THE CATCH BASIN AT A SKEWED ANGLE.

PIPE OPENING SHORT AXIS +8"

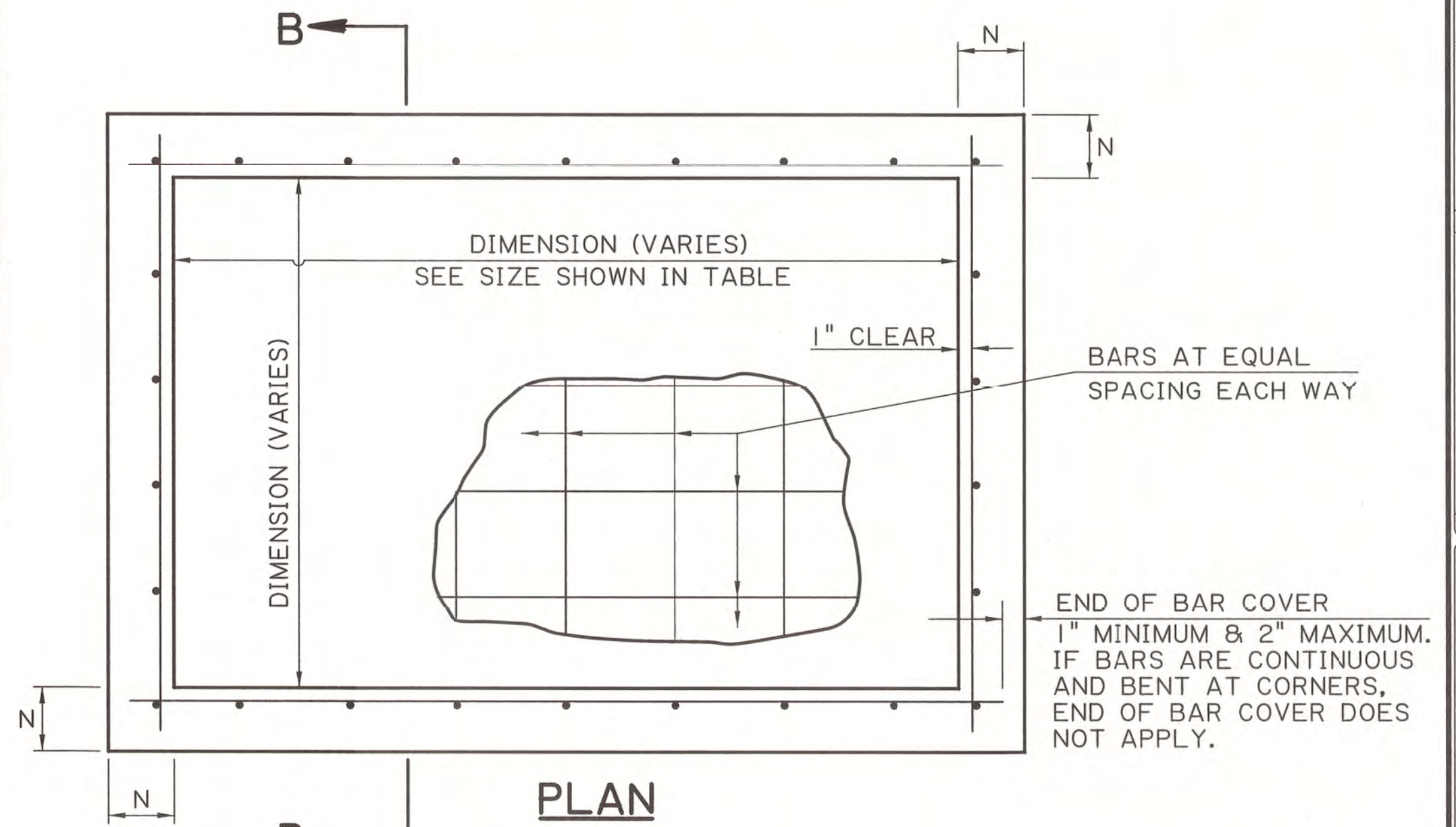


Δ#4 HOOP

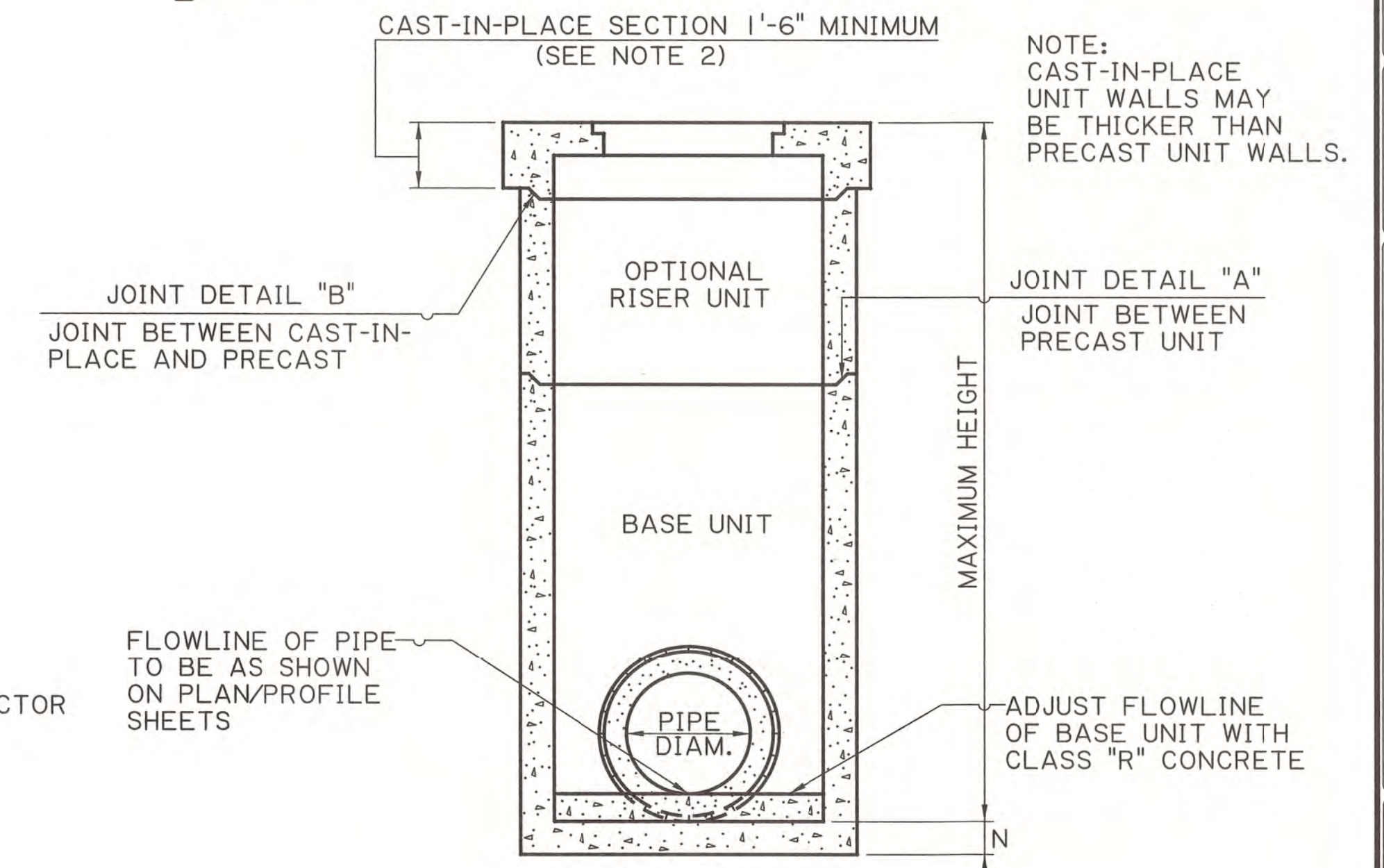
Δ#4 HOOP (ALT.)



PIPE CONNECTION DETAIL



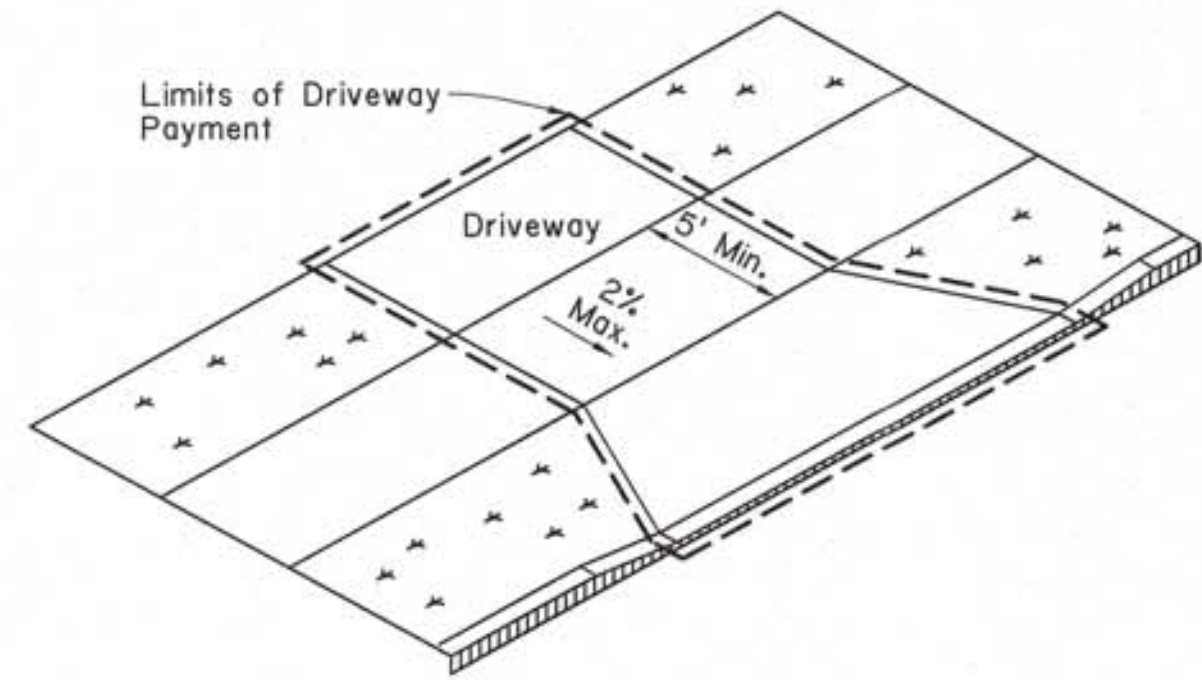
PLAN



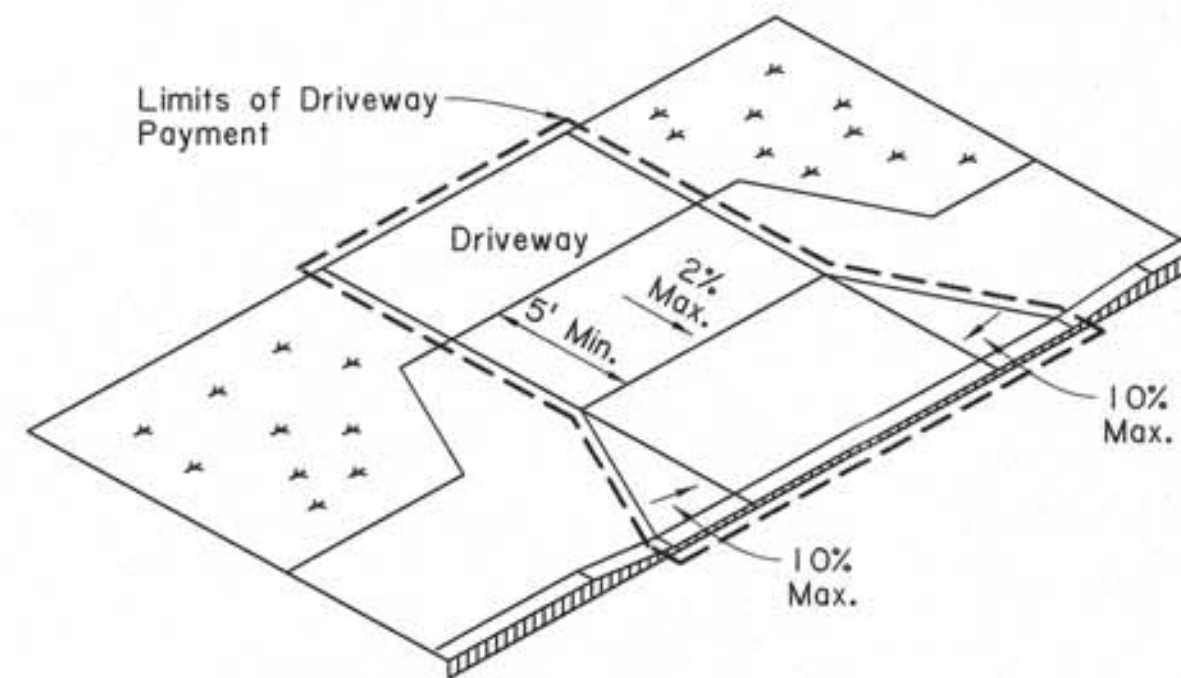
ELEVATION

TYPICAL COMPOSITE STRUCTURE

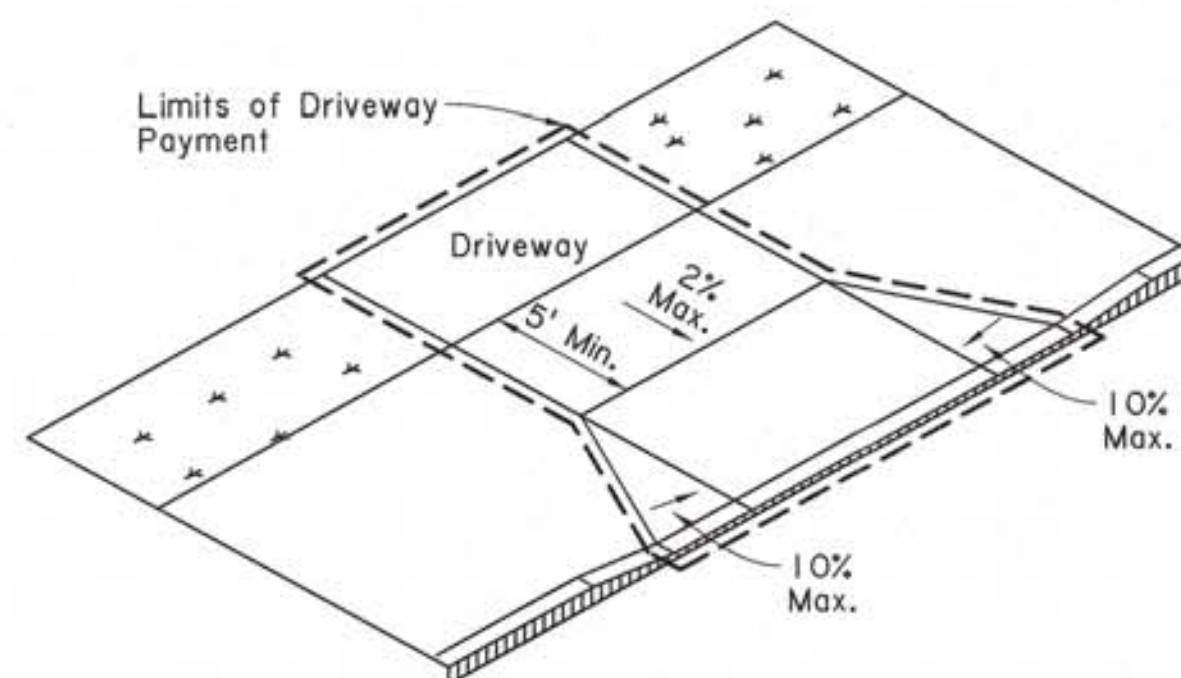
SHEET NUMBER	345
ST. TAMMANY	
PARISH	
CONTROL SECTION	
STATE PROJECT	
DESIGN	
CHECK	
DETAIL	
CHECK	
REVIEW	
SERIES	1 OF 1
APPROVED BY CHIEF ENGINEER: DATE: 10-2-2023	
PRECAST CATCH BASINS AND MANHOLES	
STANDARD PLAN	PC-01
HYDRAULICS SECTION	



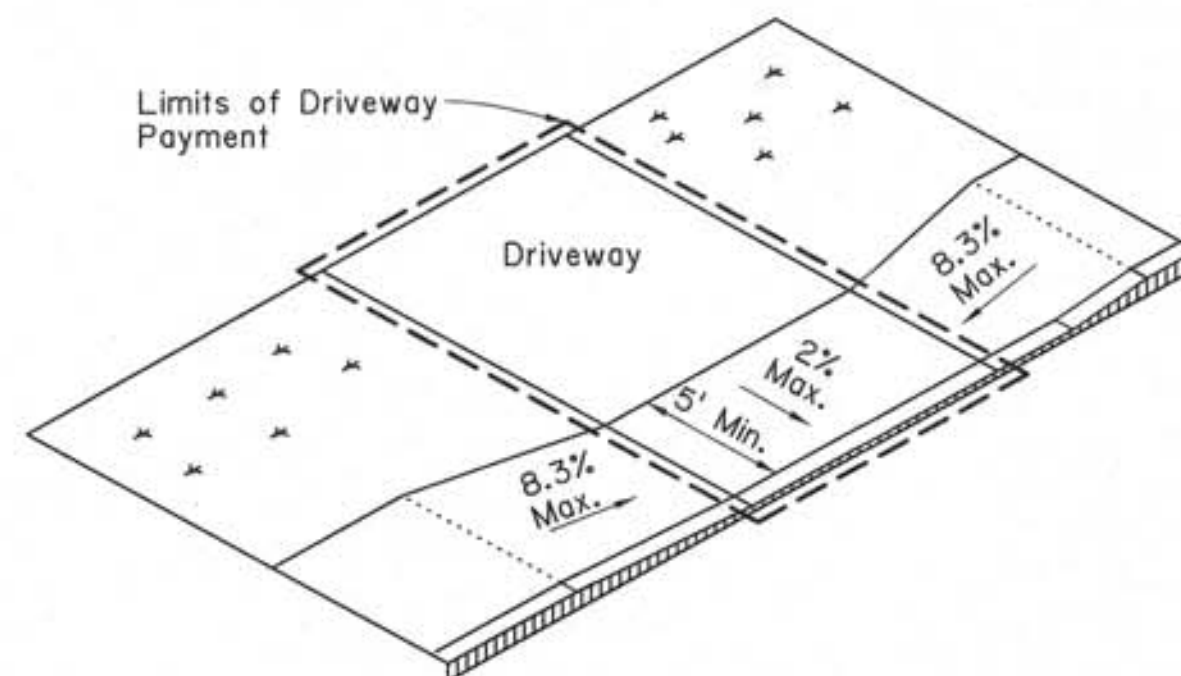
SETBACK SIDEWALK



APRON OFFSET SIDEWALK

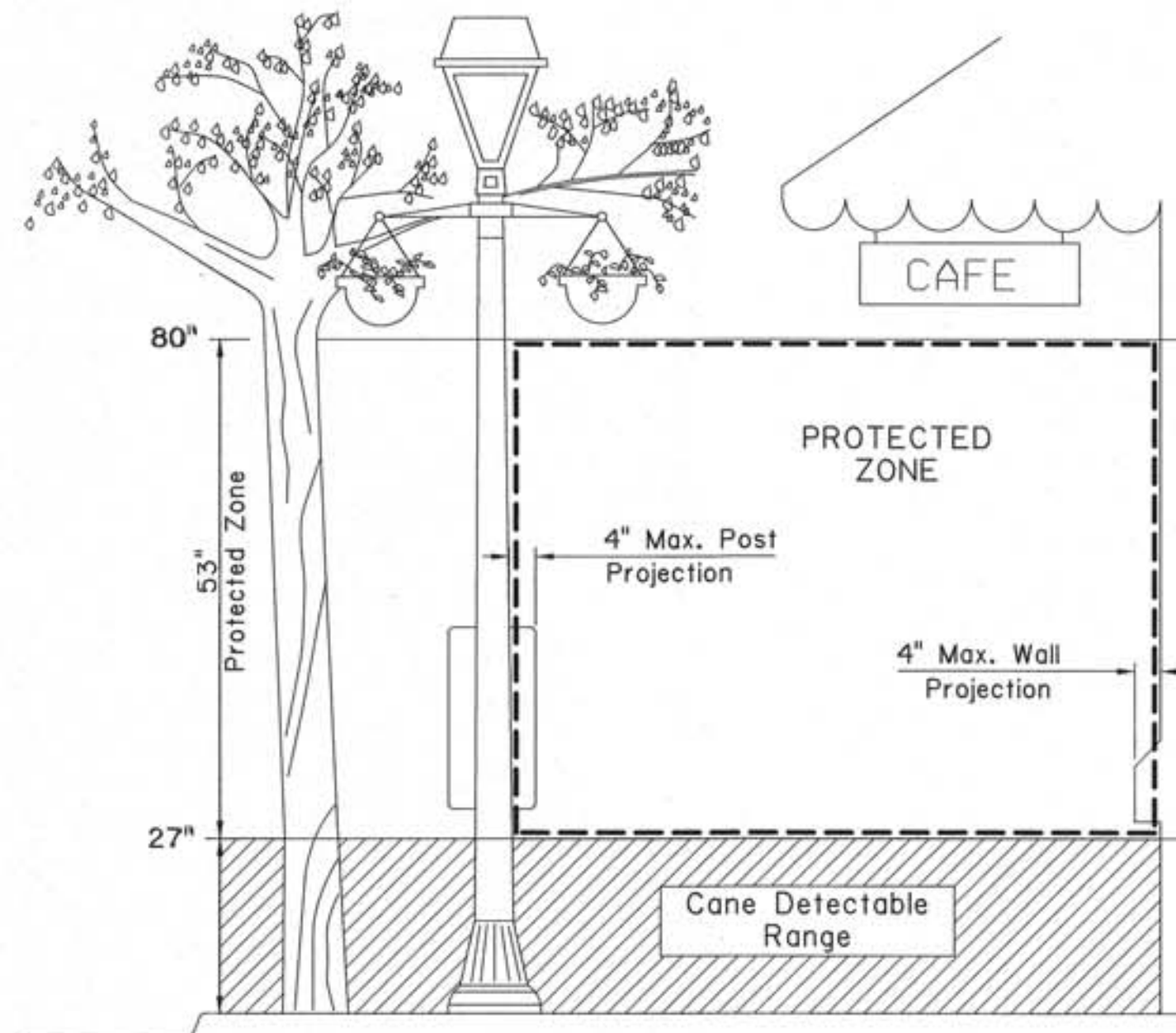


WIDE SIDEWALK



RAMP SIDEWALK

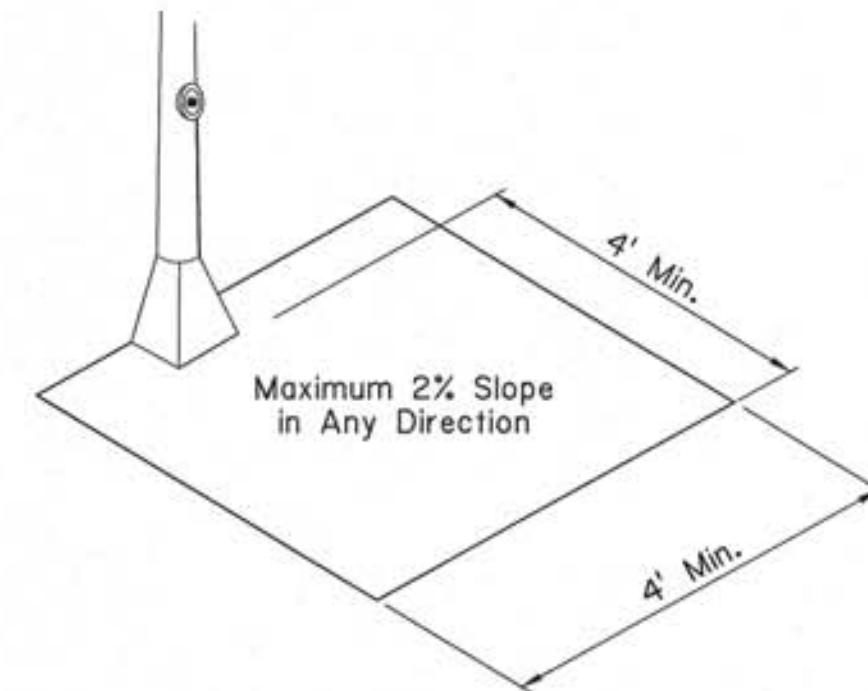
SIDEWALK TREATMENT AT DRIVEWAYS
Refer to Driveway Standard Plans for further details.



PROTECTED ZONE

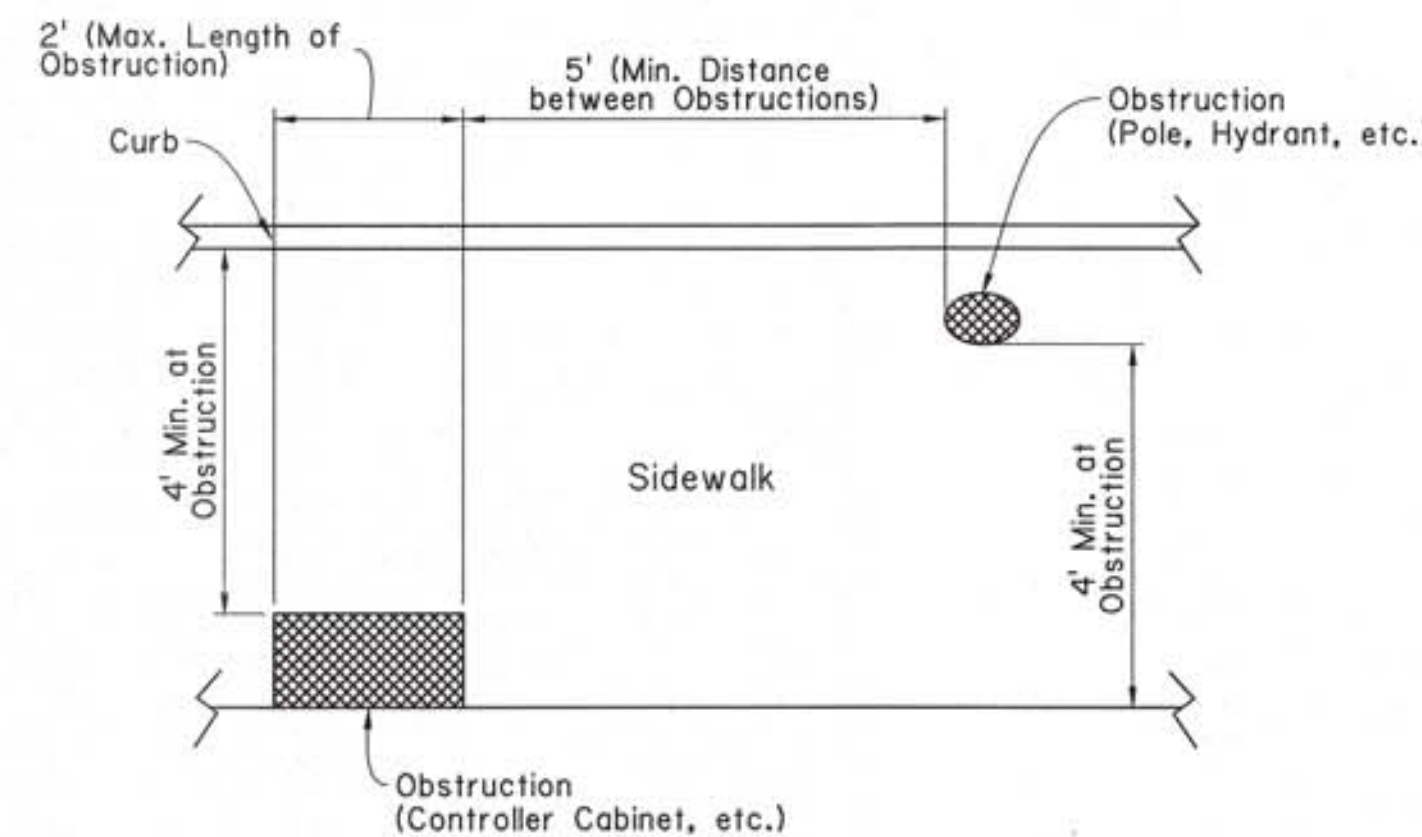
Notes:

1. In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.
2. When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.
3. Protruding objects of a height less than 27" are detectable by cane and do not require additional treatment.



CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON

Minimum 4' x 4' clear space required at public use fixtures.



**PLAN VIEW
PLACEMENT OF OBSTRUCTIONS**
Items not intended for public use.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

PEDESTRIAN FACILITIES GENERAL NOTES

Curb Ramps

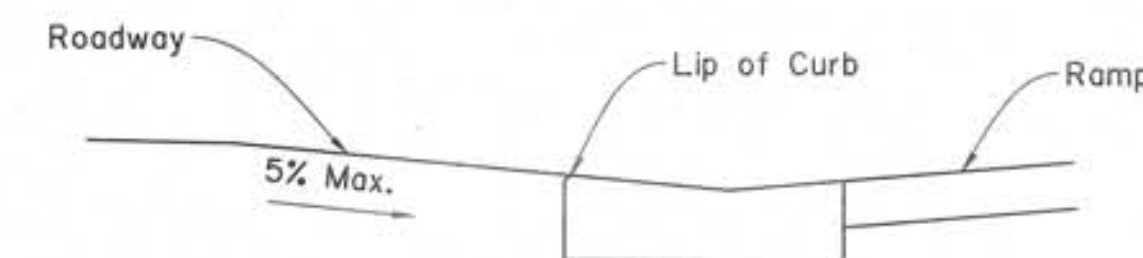
1. Maximum allowable cross slope of curb ramp surfaces is 2%; desired cross slope is 1.5%.
2. Theoretical pay areas for curb ramps are as shown on sheet 2, unless otherwise noted in the plans. These areas may be field adjusted as approved by the Project Engineer.
3. Grade breaks at the top and bottom of curb ramps runs shall be perpendicular to the direction of the ramp run.
4. Where curb ramps are located adjacent to a walking surface, a flare must be provided; otherwise a curb may be provided. For an example, refer to curb ramp Type 2 on sheet 2.
5. The landing dimensions are 5'x5' with a maximum 2% slope in any direction. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.
6. Small raised channelization islands, which cannot provide a minimum of 5'x5' landing at the top of ramps, shall be cut through level with the surface of the street.
7. Raised medians should be 6' wide in the direction of pedestrian travel to serve as a pedestrian refuge area. Medians with pedestrian access routes through them shall be designed in accordance with Draft PROWAG.
8. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x4' completely contained within the crosswalk and completely outside the parallel vehicle travel lane.
9. It is desirable to provide a no-parking zone 50' from crosswalks on each intersection approach or provide a curb extension.
10. Drainage structures should be located on the upstream side of the ramp and located to prevent ponding near the curb ramp. Drainage structures should be placed outside the crosswalk.
11. Slopes of adjoining gutters and roadway surfaces immediately adjacent to the curb ramp shall not exceed 5%. Refer to the Transition from the Curb Ramp to Roadway Detail on sheet 1.
12. Curb ramps should be aligned with the direction of pedestrian travel on the crosswalk or theoretical crosswalk. Refer to sheet 3 for typical crossing layouts and refer to the pavement marking standards for crosswalk markings.
13. Crosswalk markings shall be placed a distance of 24" from the flare on each side of a diagonal curb ramp. Refer to sheet 3 for an example.
14. Curb ramps shall include detectable warning surfaces. Refer to sheet 4 for details of detectable warning surfaces.
15. Where a curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be removed to the nearest joint beyond the curb transition or the extent that no remaining section of curb or curb and gutter is less than 5' long or as directed by the Project Engineer. Existing sidewalks shall be removed to the nearest joint beyond the flare slope or to the extent that no remaining section of sidewalk is less than 5' long or as directed by the Project Engineer.

Sidewalks

1. Where a 5' sidewalk cannot be provided due to site constraints, 5'x5' passing areas at intervals not to exceed 200' are required.
2. Where sidewalks and crosswalks are contained within street or highway right-of-way, the grade of the sidewalk or crosswalk shall not exceed the grade of the adjacent street or highway. Where sidewalks are not contained within a street or highway right-of-way, the grade of the sidewalk shall be 5% maximum.
3. Maximum allowable cross slope of sidewalk surfaces is 2%; desired cross slope is 1.5%.
4. Vertical surface discontinuities along a sidewalk shall be 1/2" maximum. Discontinuities between 1/4" and 1/2" shall be beveled at a 1:2 maximum slope.
5. Where sidewalks intersect with streets, detectable warning surfaces are required. Refer to sheet 4 for details of detectable warning surfaces.
6. Traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items shall be placed so as not to obstruct the accessible route.
7. When a sidewalk crosses a driveway and exceeds the 2% maximum cross slope, the driveway or driveway portion shall be reconstructed to meet the 2% maximum cross slope requirement. Refer to driveway standard plans for driveway details.
8. Handrails are not required on sidewalks within highway right-of-way, unless site specific conditions, such as a vertical drop-off, dictate. Where handrails are provided, they must comply with ADAAG 505.
9. To prevent tracking of gravel onto the sidewalk, gravel driveways should be paved from the roadway edge to a point 10' behind the sidewalk or the right-of-way, whichever is less.

ADA - Americans with Disabilities Act
ADAAG - Americans with Disabilities Act Accessibility Guidelines
Draft PROWAG - Draft Public Rights-of-Way Accessibility Guidelines

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24



TRANSITION FROM CURB RAMP TO ROADWAY

DESIGN	MAL	BPW	DESIGN	MAL	BPW
CHECK			DETAIL	MAL	BPW
			CHECK		
			REVIEW		
			SERIES #	1	OF 5

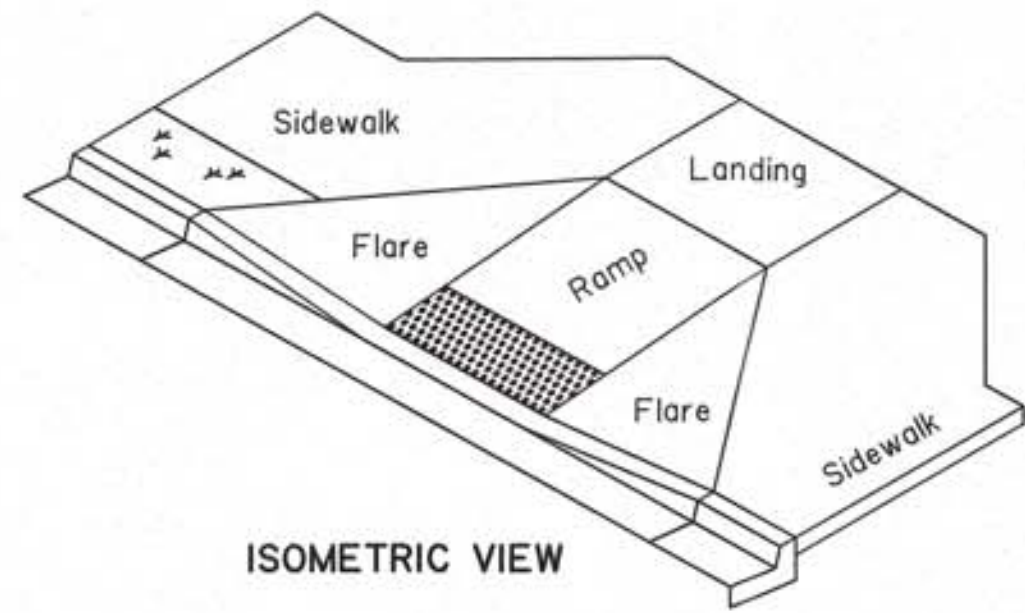
STATE OF LOUISIANA
MELISSA LEBAS
License No. 39111
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
Melissa Lebas
7/14/2022

APPROVED BY CHIEF ENGINEER
Melissa Lebas
7/14/2022
DATE:

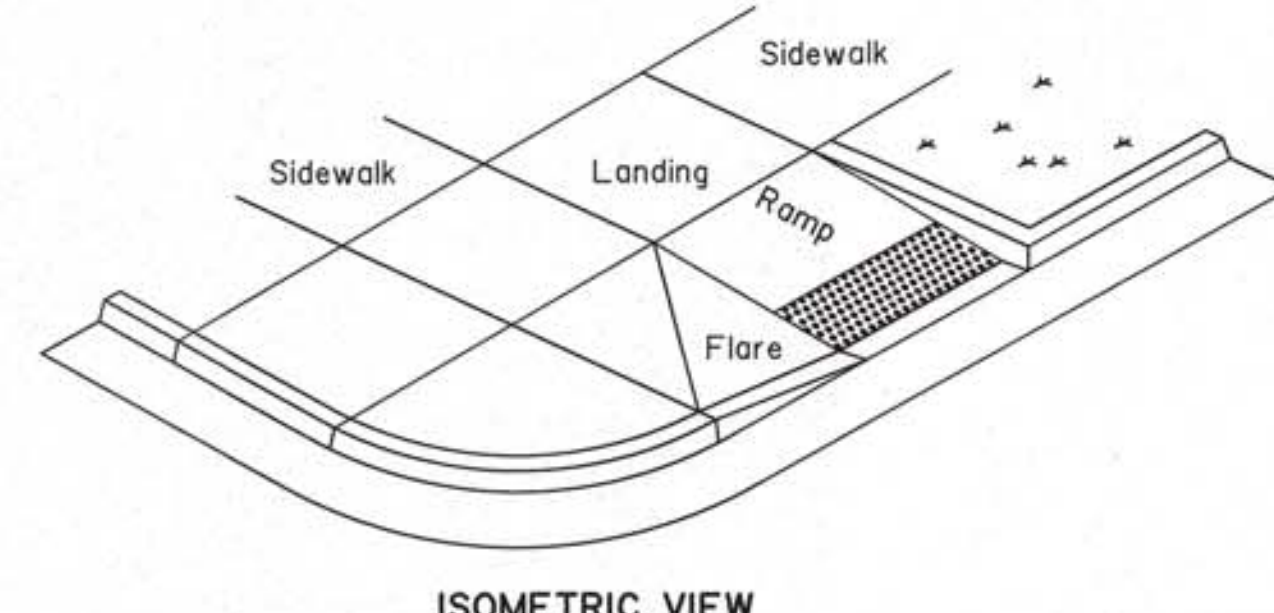
STATE OF LOUISIANA
CONFIDENTIAL

PEDESTRIAN FACILITIES
GENERAL NOTES AND MISC. DETAILS
PED-01

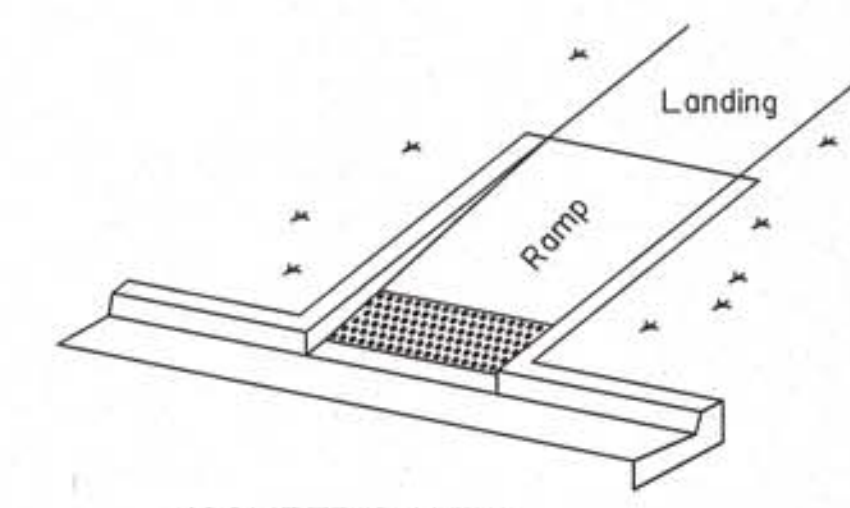
12:04
7/14/2022



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

LEGEND OF PATTERNS

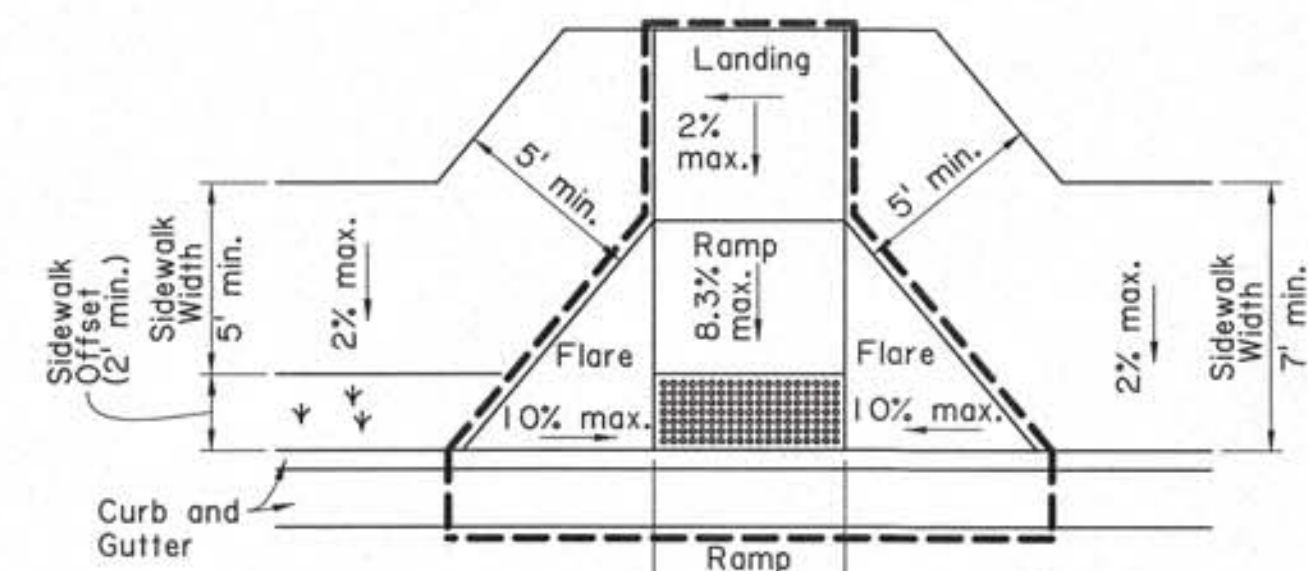
- Denotes Non-Walking Surface Not Part of Pedestrian Path
- Detectable Warning Surface
- Limits of Payment
- Slope

All slopes shown are maximum allowable. The least possible slope that will drain properly should be used.

Curb ramps shall be placed and designed where ponding does not occur at the bottom or on the curb ramp.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SIDEWALK OFFSET FROM CURB
SIDEWALK ADJACENT TO CURB

PLAN VIEW

TYPE 1

THEORETICAL PAY AREA = 12.8 SQ. YDS.

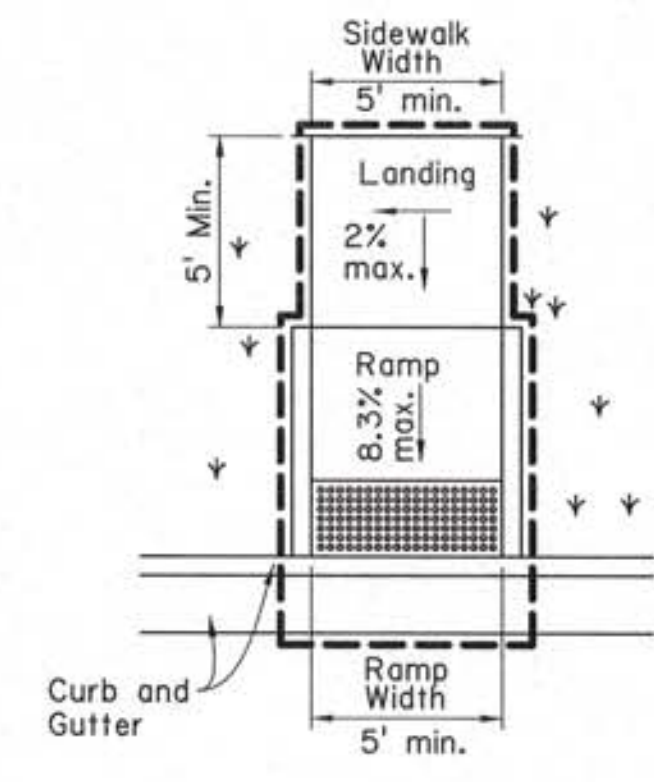


SIDEWALK ADJACENT TO CURB
SIDEWALK OFFSET FROM CURB

PLAN VIEW

TYPE 2

THEORETICAL PAY AREA = 10.4 SQ. YDS.



SIDEWALK OFFSET FROM CURB

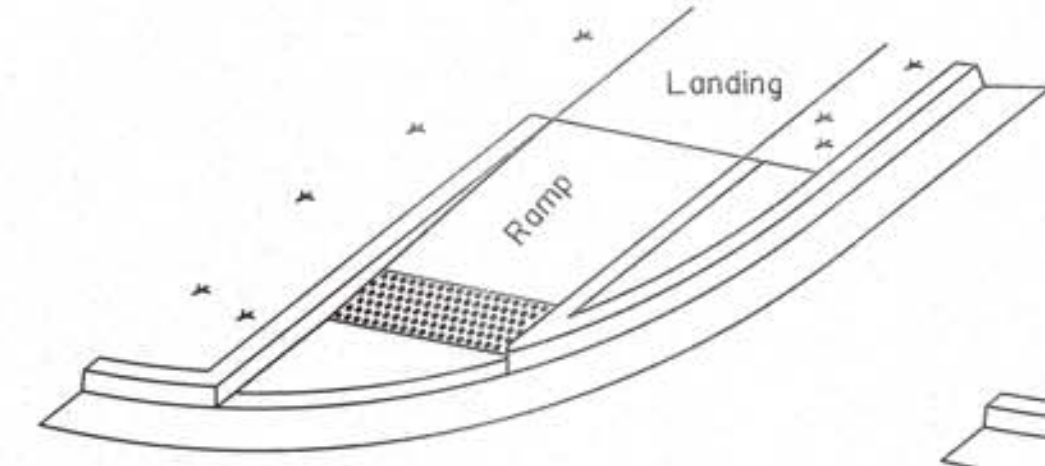
PLAN VIEW

TYPE 3

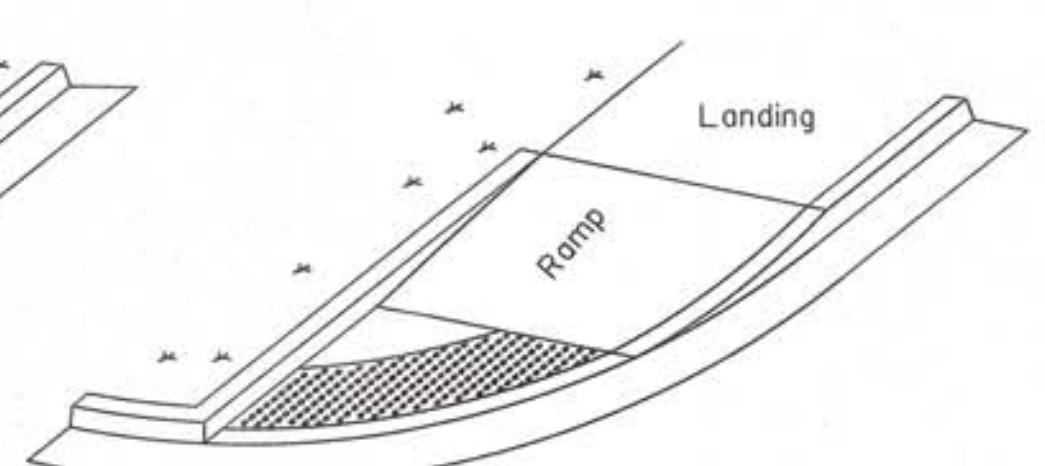
THEORETICAL PAY AREA = 8.1 SQ. YDS.

PERPENDICULAR CURB RAMPS

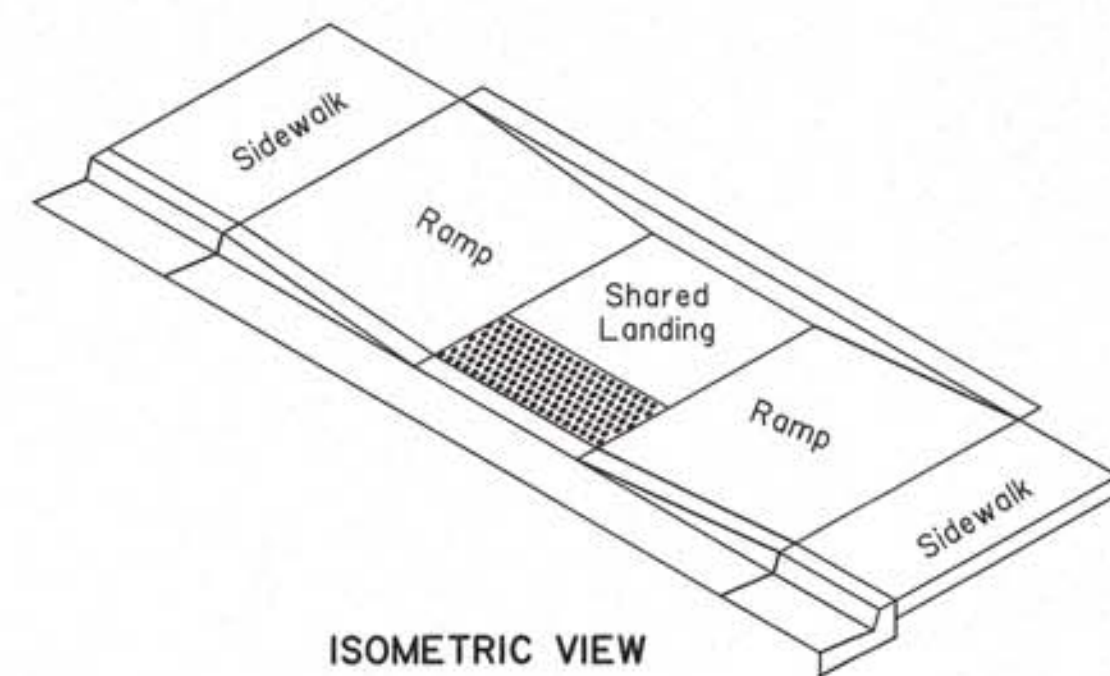
If a level landing of at least 3' cannot be provided, a perpendicular curb ramp should not be used.



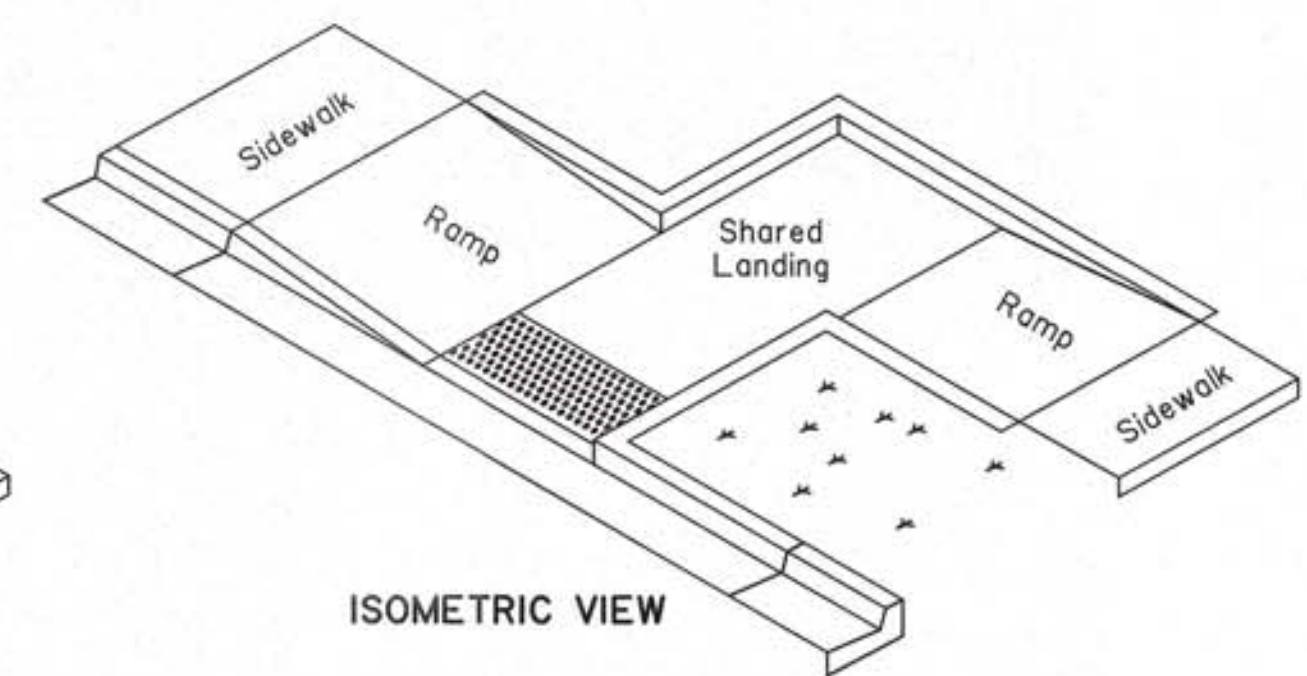
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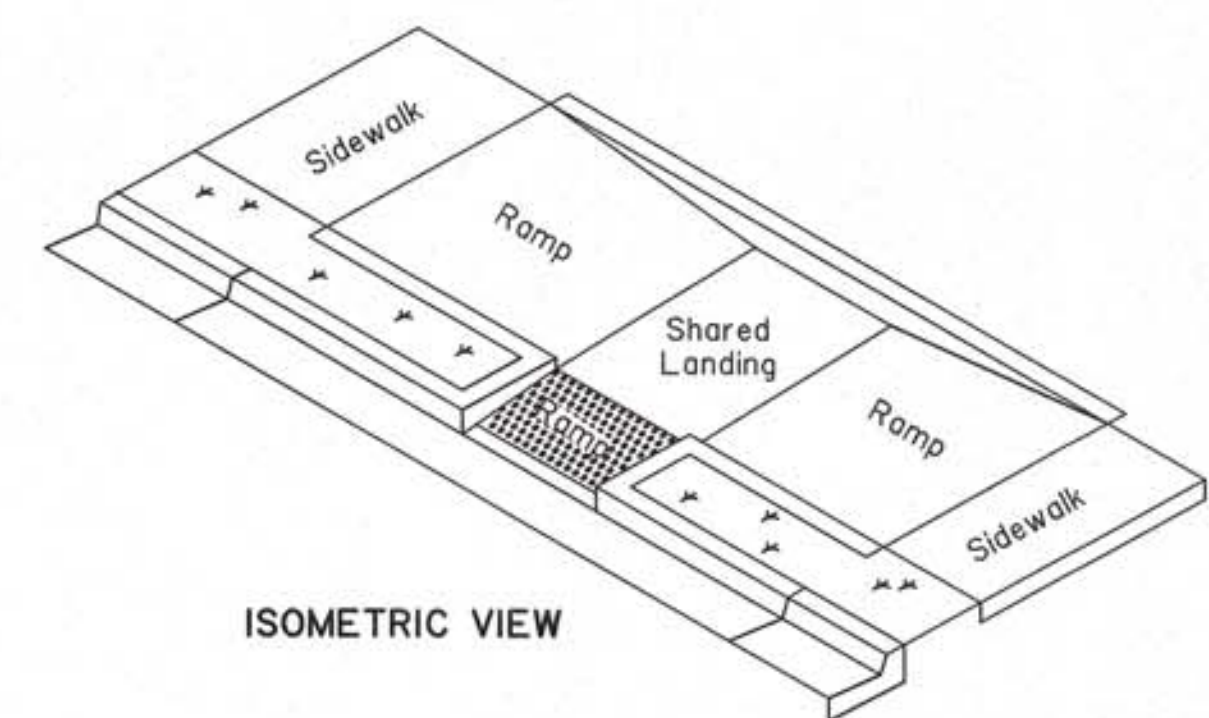
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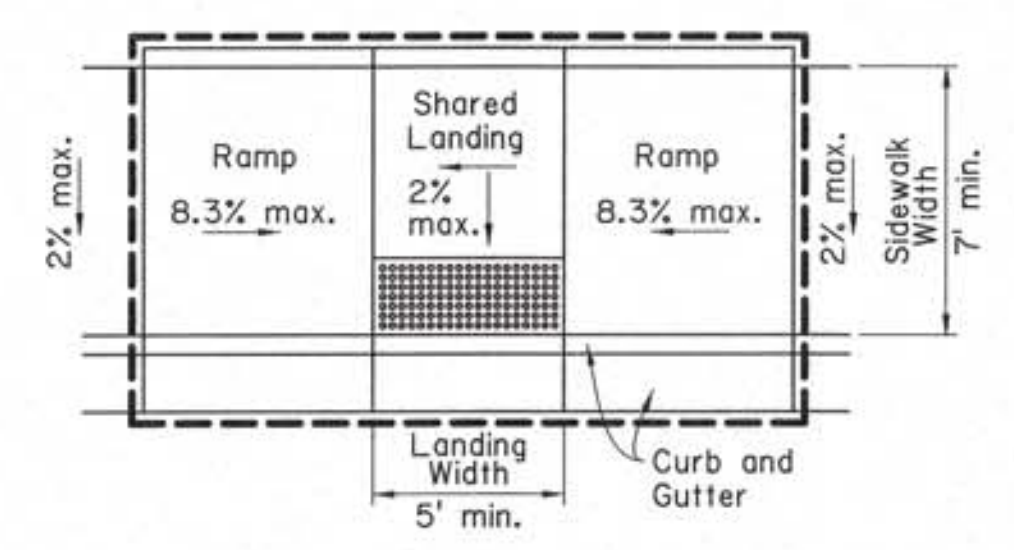
ISOMETRIC VIEW



ISOMETRIC VIEW



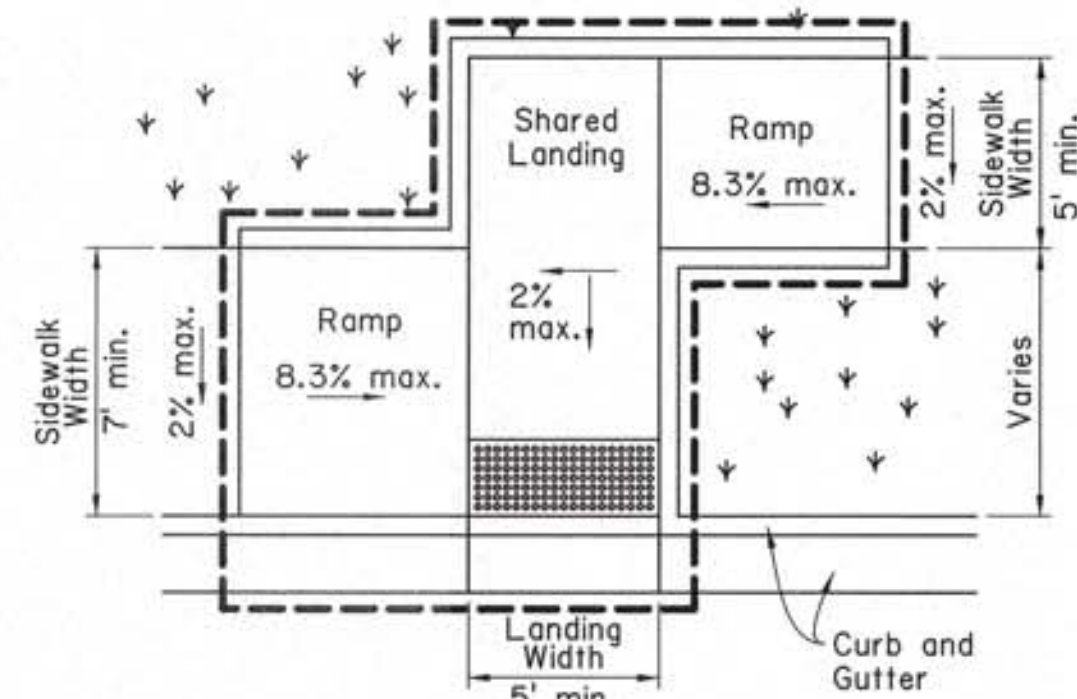
ISOMETRIC VIEW



PLAN VIEW

TYPE 4

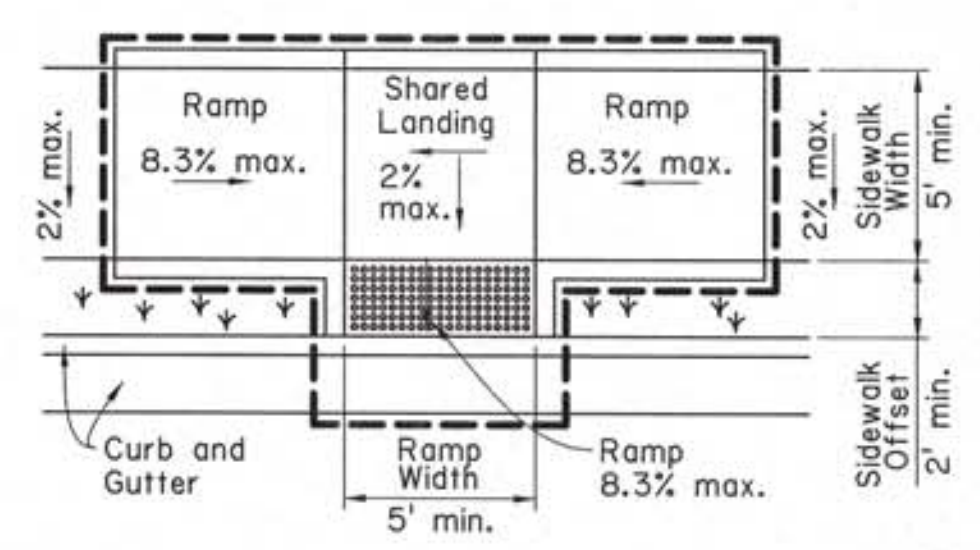
THEORETICAL PAY AREA = 17.9 SQ. YDS.



PLAN VIEW

TYPE 5

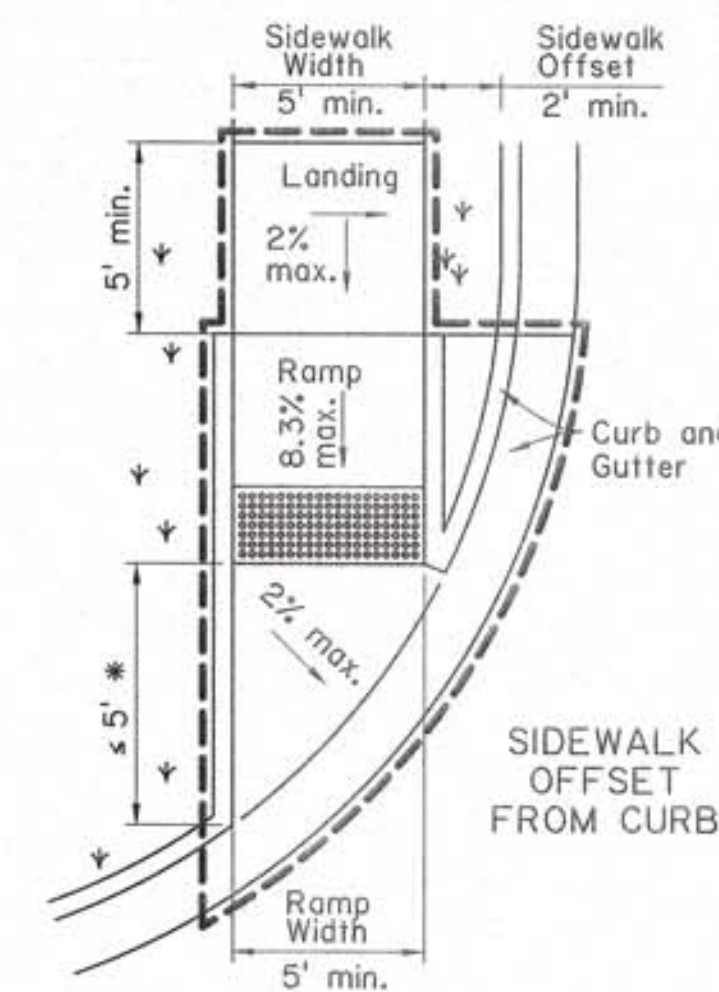
THEORETICAL PAY AREA = 19.1 SQ. YDS.



PLAN VIEW

TYPE 6

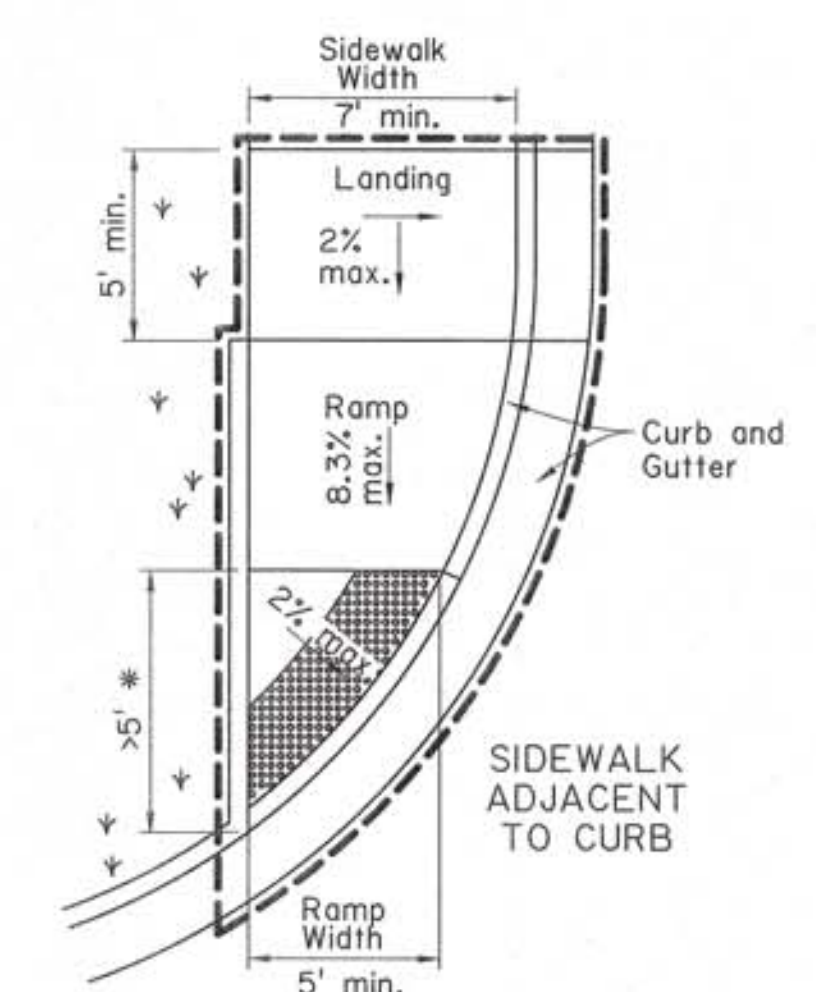
THEORETICAL PAY AREA = 13.7 SQ. YDS.



PLAN VIEW

TYPE 7

THEORETICAL PAY AREA = 13.3 SQ. YDS.



PLAN VIEW

TYPE 8

THEORETICAL PAY AREA = 15.5 SQ. YDS.

DIRECTIONAL CURB RAMPS

* Where the grade break is less than or equal to 5' from the back of curb, place detectable warning surface as shown in Type 7. Where grade break is greater than 5' from the back of the curb, place detectable warning surface as shown in Type 8.

PARALLEL CURB RAMPS

COMBINATION CURB RAMP

SHEET NUMBER		347	
ST. TAMMANY			
PARISH	CONTROL SECTION	STATE PROJECT	
DESIGN	MAL	CHECK	BPW
DETAIL	MAL	CHECK	BPW
REVIEW		SERIES	2 OF 5

APPROVED BY CHIEF ENGINEER: *Christy P. Hayes* 7/12/2022

DATE: 7/12/2022

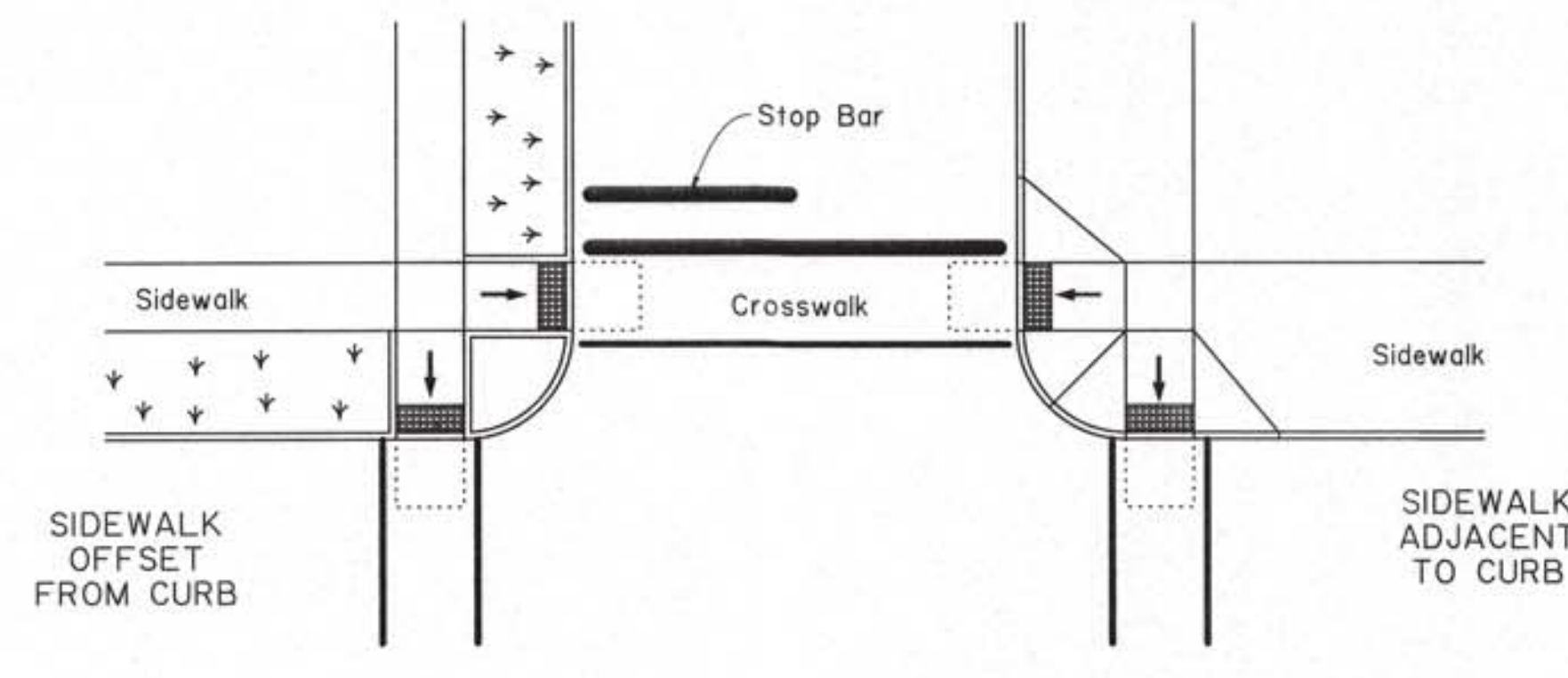
STATE OF LOUISIANA
MELISSA LEBAS
License No. 39111
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
Melissa Lebas
7/14/2022

PEDESTRIAN FACILITIES
CURB RAMPS AND DETECTABLE
WARNING LOCATION
PED-01

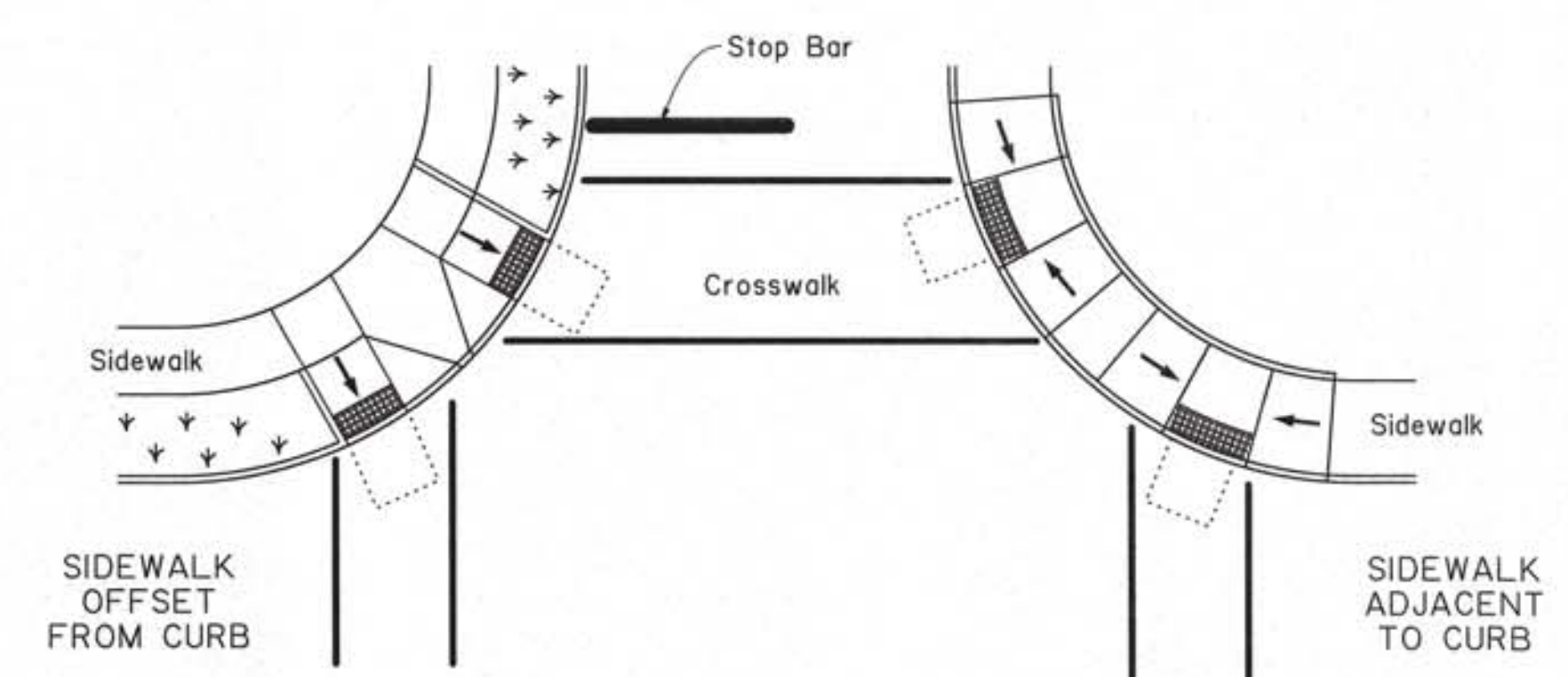
DOTD
LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

STANDARD
PLAN

12:04
7/14/2022



DETAIL A: CURB RAMP PLACED OUTSIDE THE RADIUS OF A CURVE



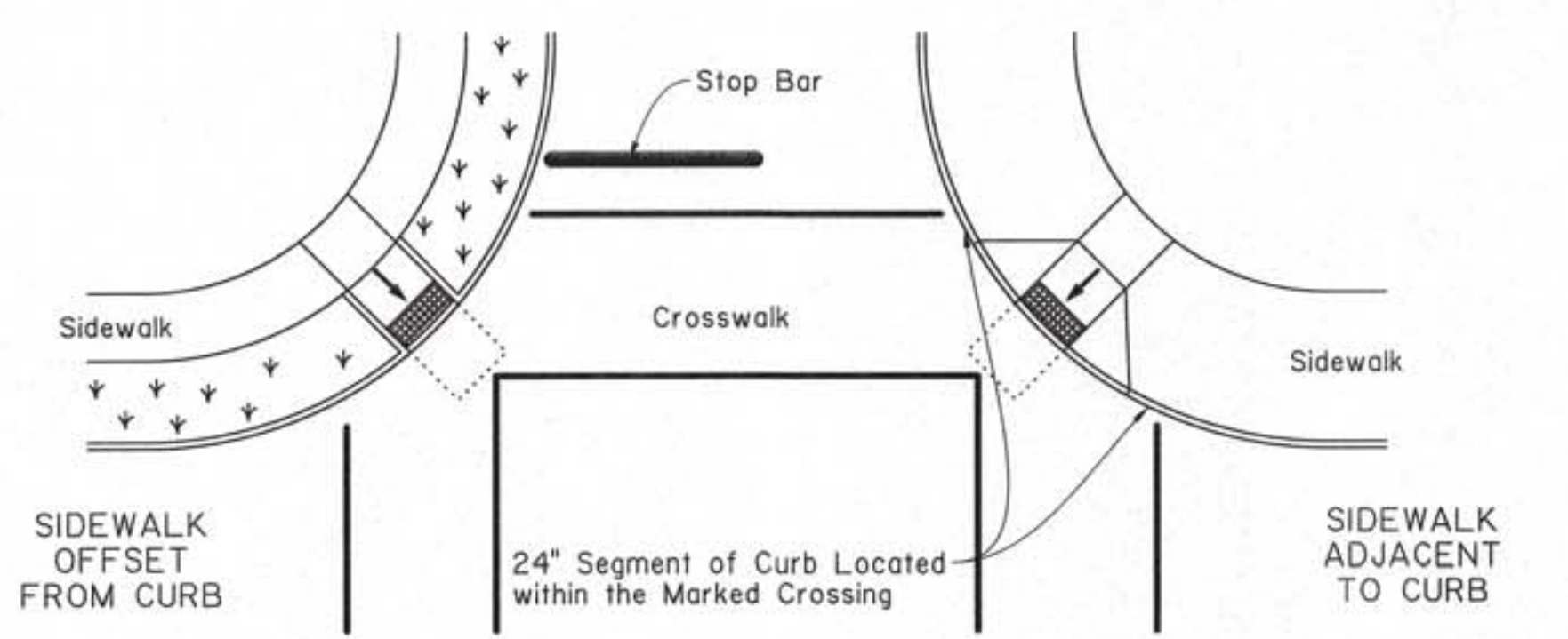
DETAIL B: PAIRED CURB RAMP PLACED WITHIN THE RADIUS OF A CURVE

GENERAL NOTES:

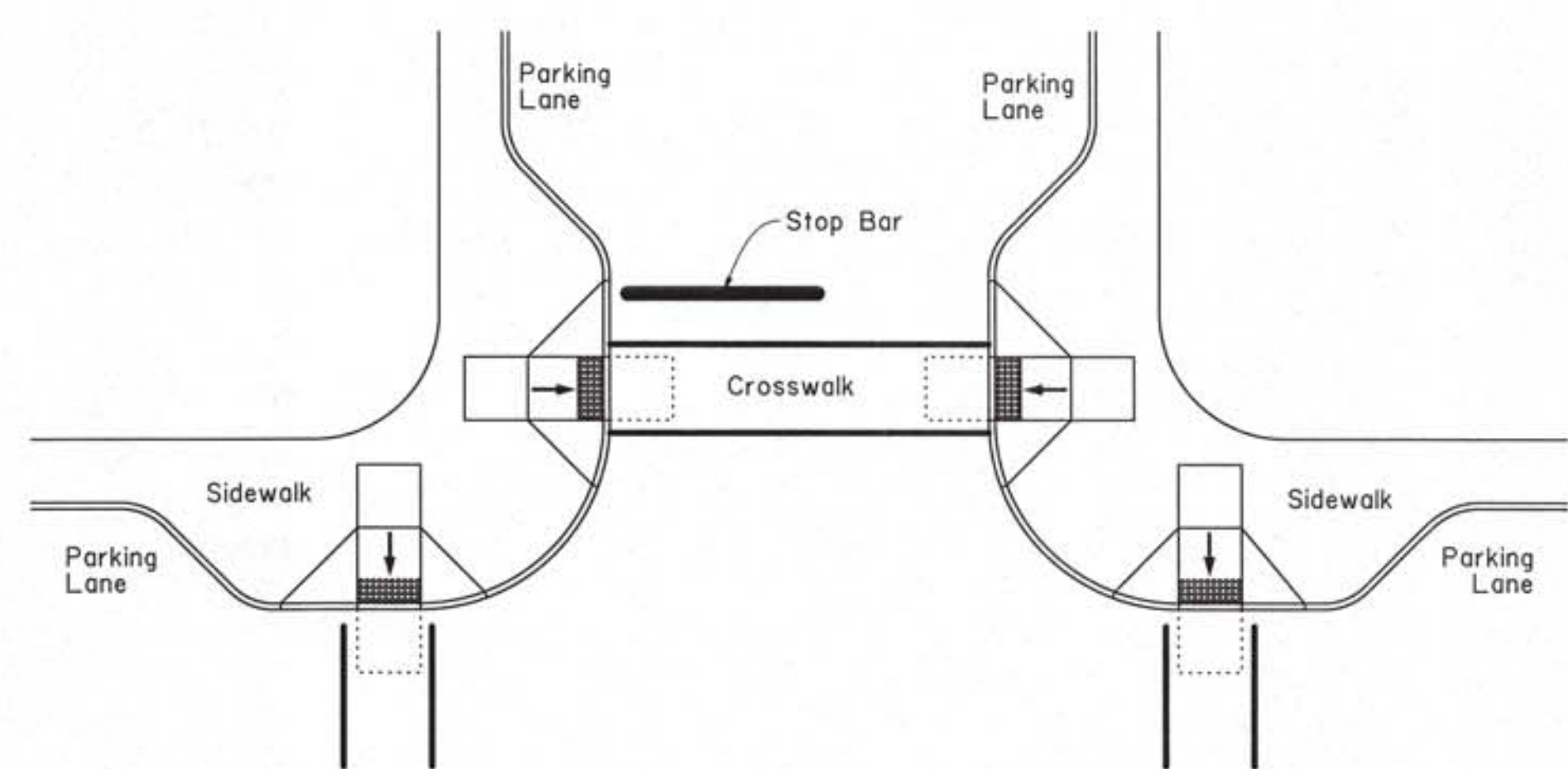
1. Curb ramps placed outside the radius of the curve are preferred. Paired curb ramps placed within the radius of a curve are acceptable. Single curb ramps placed on the apex of a curb should not be used unless site constraints, such as the location of drainage structures, require it.
2. Details and dimensions of curb ramps, sidewalks, and detectable warning surfaces are shown elsewhere.
3. Striping (crosswalks and stop bars) are shown for reference only. Refer to the pavement marking standard plans for striping details.

LEGEND

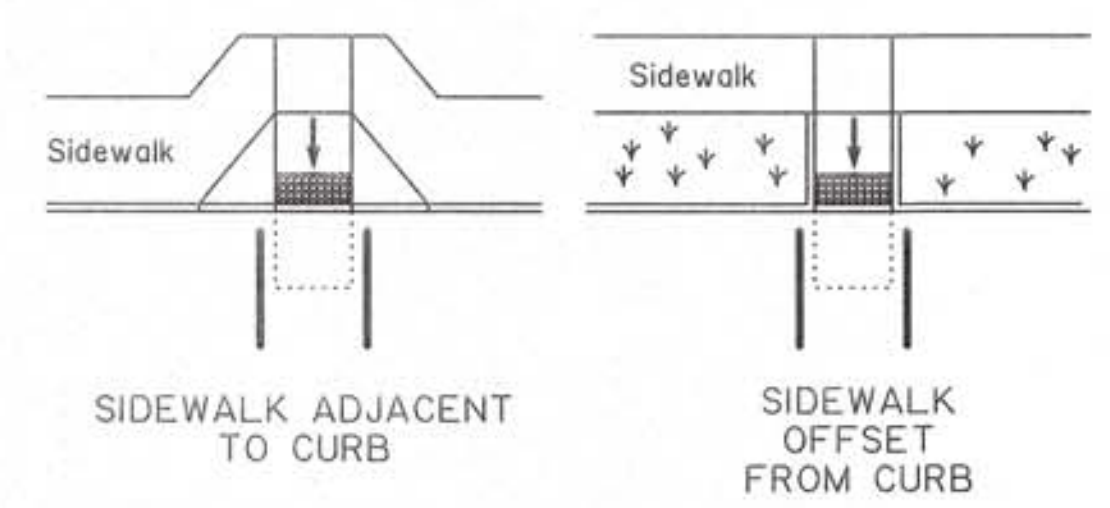
- Denotes non-walking surface not part of pedestrian path
- Detectable Warning Surface
- Maneuvering Space (4'x4' Min.)
- Ramp Surface



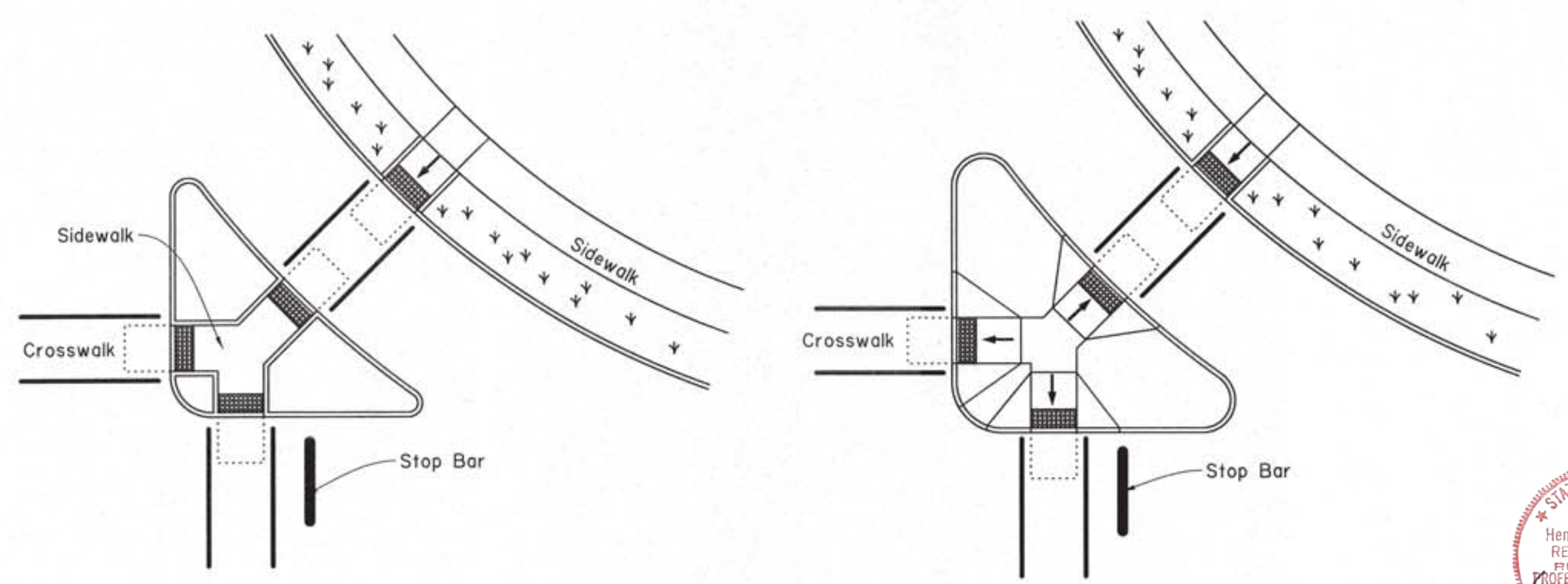
DETAIL C: SINGLE CURB RAMP PLACED ON APEX OF A CURVE (DIAGONAL CURB RAMP)



DETAIL D: CURB RAMP PLACED ON CURB EXTENSION (BULB-OUTS)

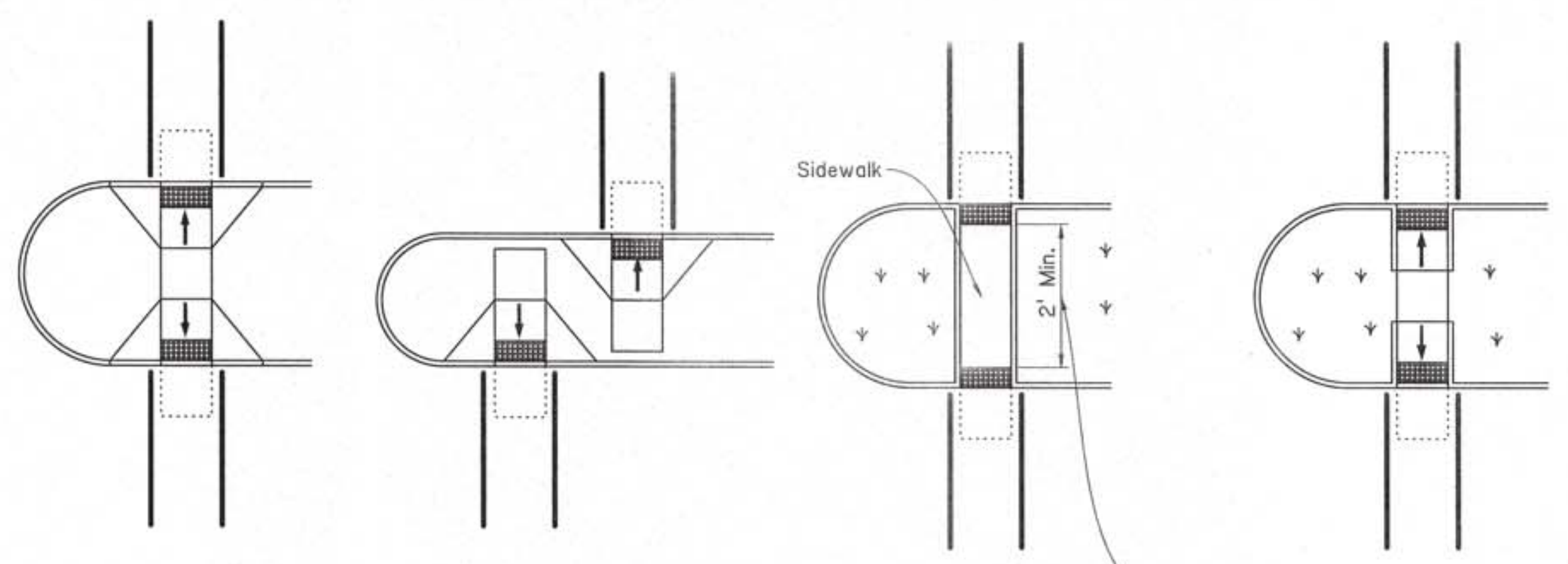


DETAIL E: CURB RAMP PLACED AT MID-BLOCK CROSSING



DETAIL F: SIDEWALKS AND CURB RAMP AT ISLANDS

STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24



DETAIL G: SIDEWALKS AND CURB RAMP AT MEDIANS

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

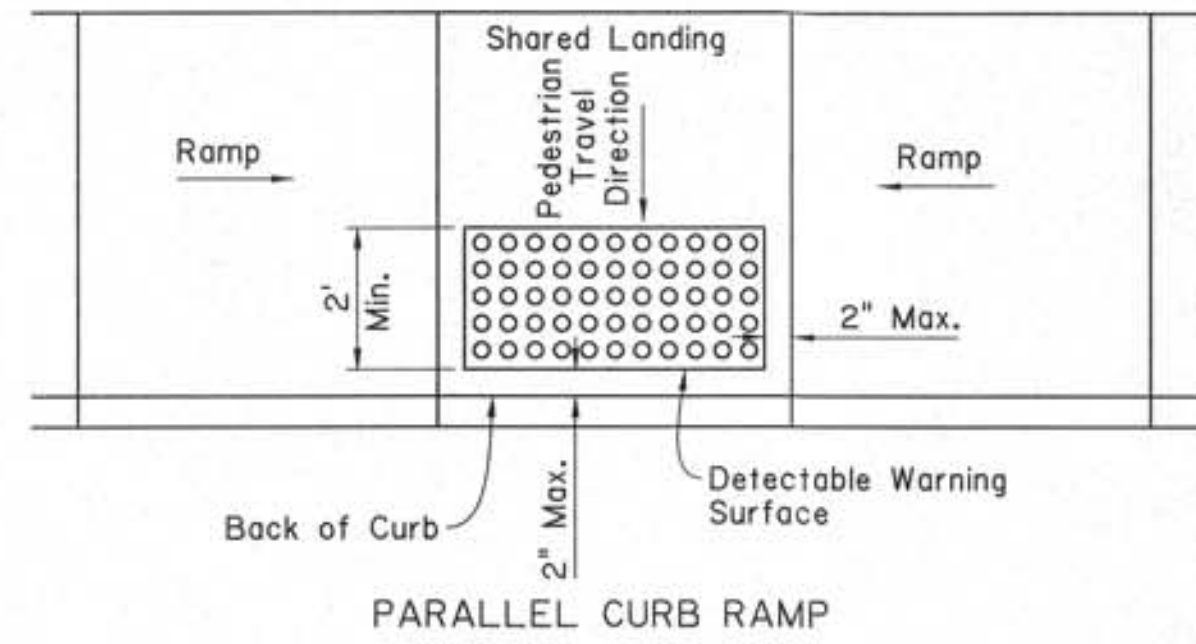
SHEET NUMBER	348
DESIGNER	ST. TAMMANY
PARISH	
CONTROL SECTION	
STATE PROJECT	
DESIGN CHECK	MAL
DETAIL CHECK	BPW
REVIEW	
SERIES	3 OF 5

STATE OF LOUISIANA
MELISSA LEBAS
License No. 39111
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
Melissa Lebas
7/14/2022

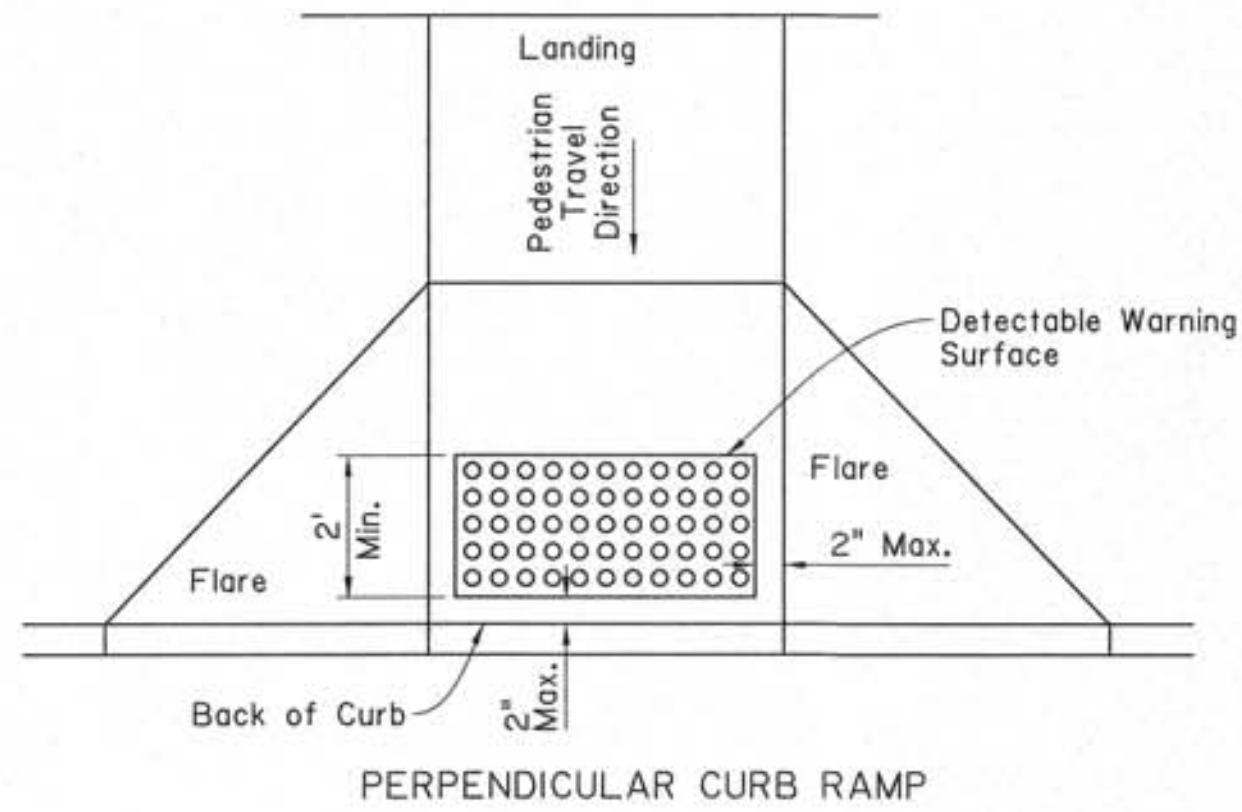
APPROVED BY CHIEF ENGINEER:
Christal P. Hayes
DATE: 7/21/2022

STATE OF LOUISIANA
PEDESTRIAN FACILITIES
TYPICAL CROSSING LAYOUTS
PED-01

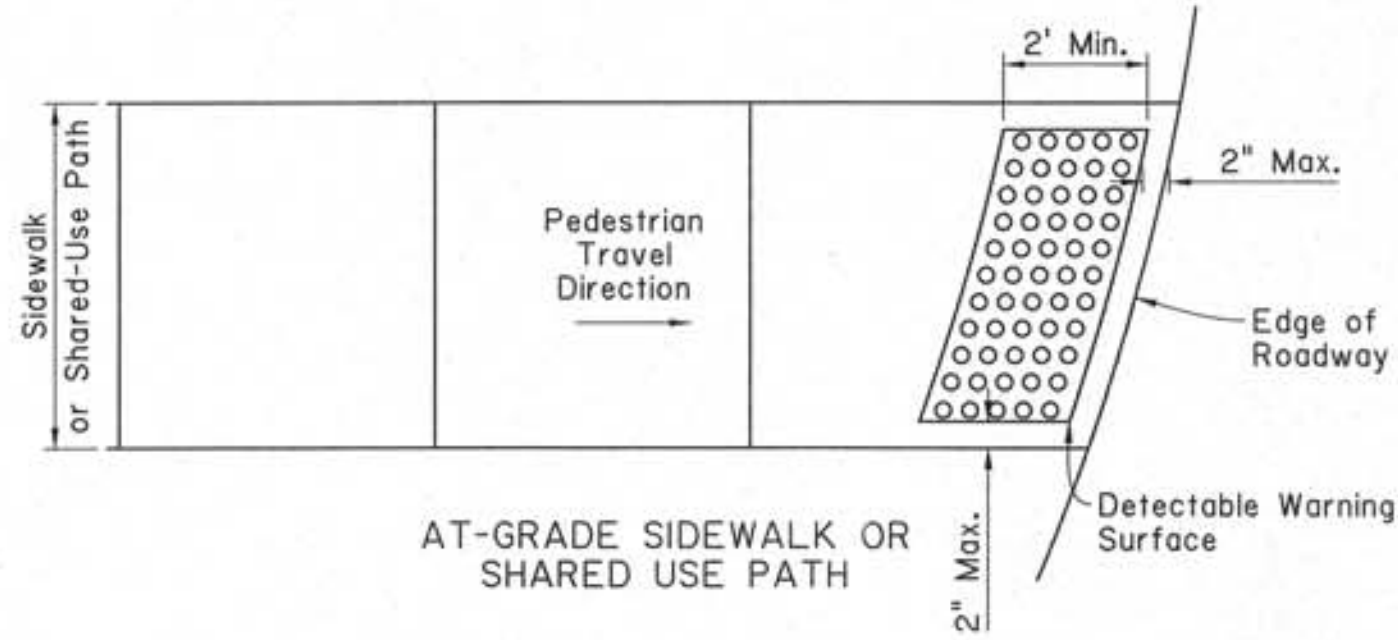
DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
STANDARD PLAN



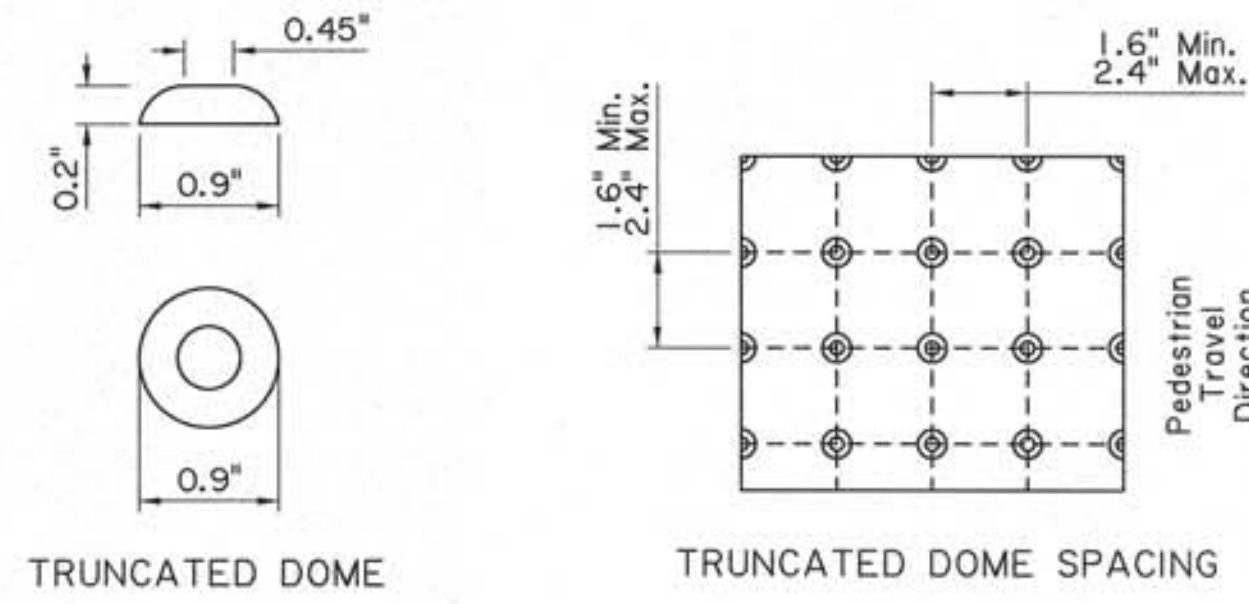
PARALLEL CURB RAMP



PERPENDICULAR CURB RAMP

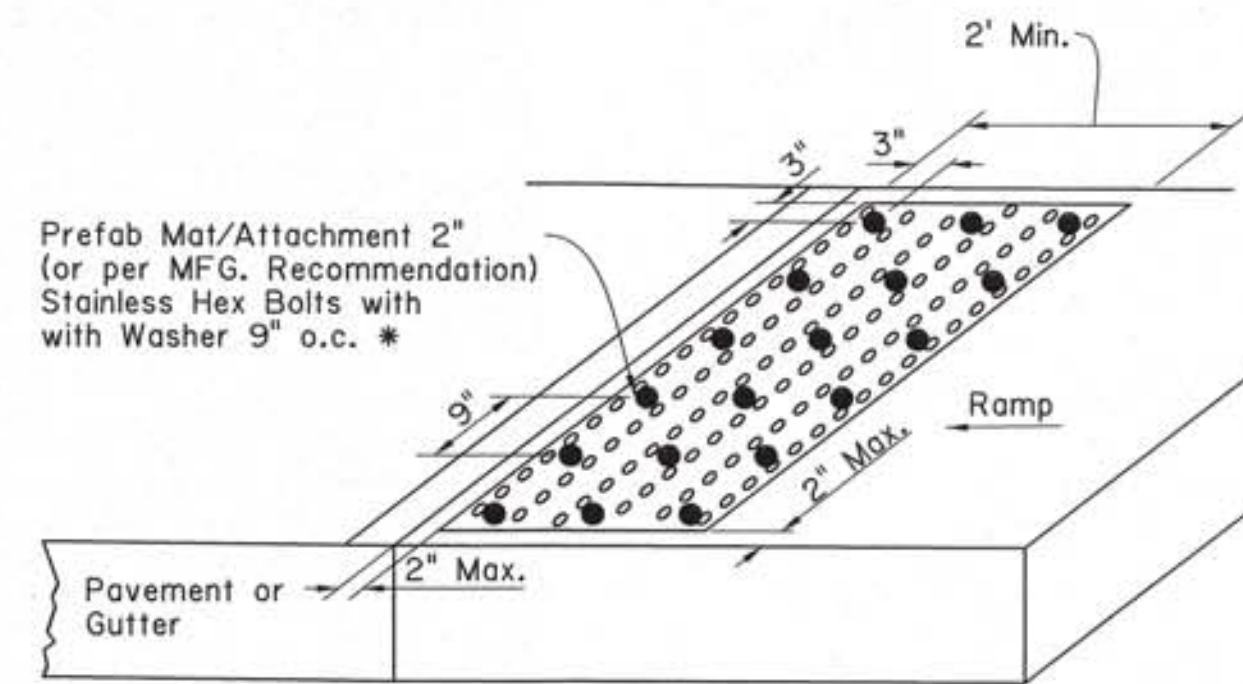


TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE



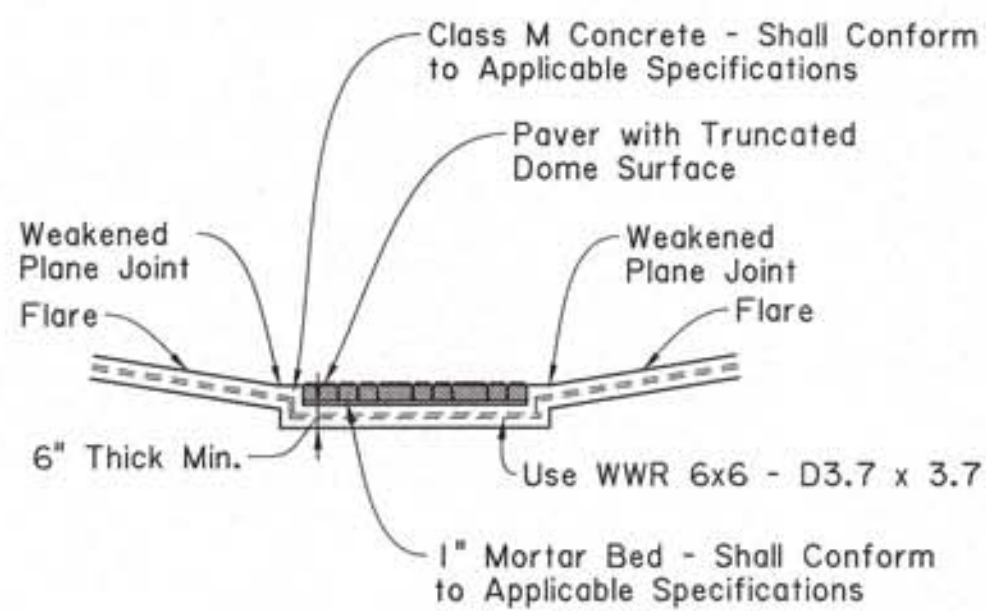
Notes:
Domes shall be arranged in a square in-line pattern or radial pattern
Color Fastness: Paver's composite coloring and ultra-violet stabilization must be homogeneous through the product.

TRUNCATED DOME DETAILS

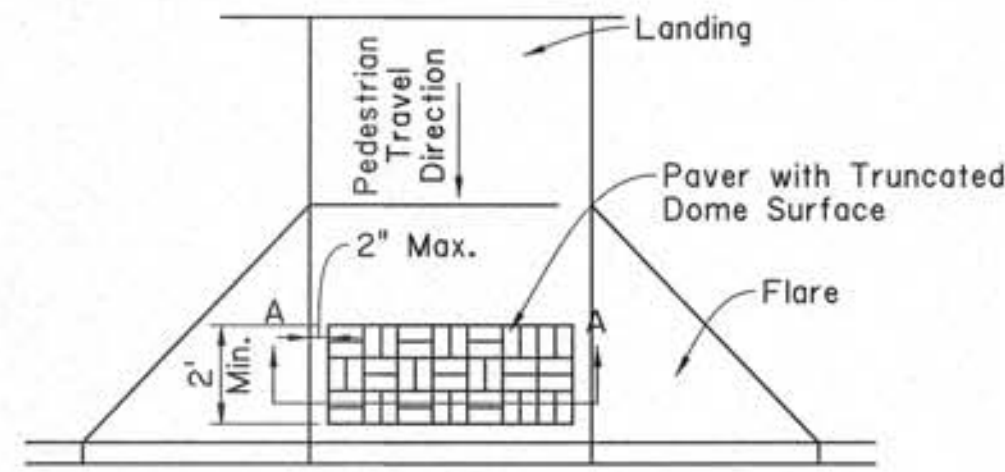


*Note: Retrofit application placed on top of existing ramp with drilled and epoxied bolts. Epoxy full surface area per manufacturer's recommendation.

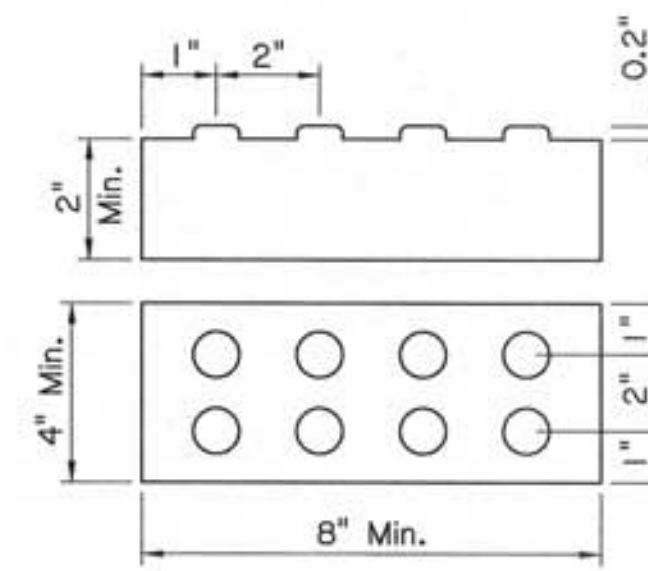
PREFABRICATED MAT OPTION (INLAID)



SECTION A-A



TRUNCATED DOME PATTERN CURB RAMP



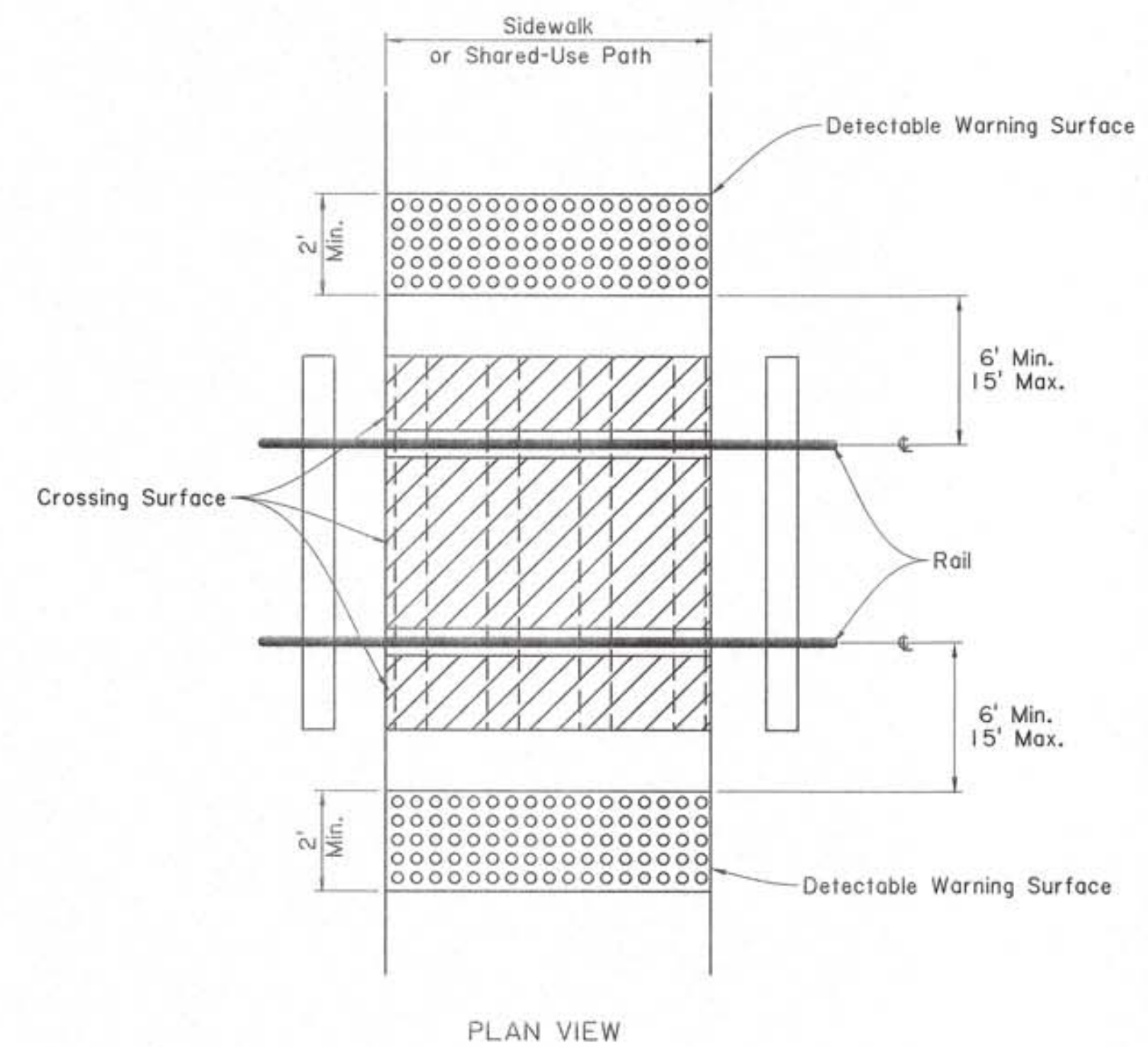
PAVER WITH TRUNCATED DOME SURFACE

Notes: Paver units shall meet all requirements of the applicable ASTM Standards. Layout pattern shall be appropriate for size of paver used. 4"x8" pavers shall be laid out in a 2x2 basket weave pattern. 12"x12" pavers shall be laid out in a block pattern.
Paver units shall be saw cut only and any cut unit shall not be less than 25% of a full unit.
Installation should meet compliance with Draft PROWAG R302.7.2 (Vertical Surface Discontinuities). Vertical surface discontinuities shall be 1/2" maximum. Discontinuities between 1/4" and 1/2" shall be beveled at a 1:2 maximum slope.

DETECTABLE WARNING SURFACE
PAVER OPTION

GENERAL NOTES:

- For ADA compliance, detectable warning surfaces must be provided on all pedestrian curb ramps, medians and pedestrian refuge islands (width 6' or greater), railroad crossings and at-grade sidewalk and shared-use paths intersecting with roadways.
- Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with ADA guidelines. The surface must contrast visually with adjoining surfaces, including side flares, in accordance with Section 706 of the Standard Specifications. Color for detectable warning surface shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light.
- Detectable warning surfaces must be slip resistant and not allow water to accumulate.
- Truncated domes should be aligned perpendicular or radial to the grade break between the curb ramp or at-grade sidewalk and the street.
- Detectable warning surfaces shall be a minimum of 24" in depth in direction of pedestrian travel and extend the full width of the ramp run or landing where the pedestrian access route enters the street. Some detectable warning products may require a concrete border. The concrete border should not exceed 2".
- Detectable warning surfaces shall be placed at the back of curb or no greater than 5' from the back of curb. Detectable warning surfaces may be curved along the corner radius. Refer to sheet 2 for typical placement of detectable warning surfaces on curb ramp types.
- Detectable warning surfaces may be stamped, constructed of brick pavers or inlaid prefabricated mats attached by epoxy adhesive and mechanical attachment. Other detectable warning installations may be installed with approval from the Project Engineer, provided that the detectable warning surface meets ADA guidelines. No painted surfaces will be allowed.
- Any retrofit application of detectable warning surfaces must have beveled edges. The beveled edge shall not exceed a slope greater than 1:2.



LOCATION OF DETECTABLE WARNING SURFACES
AT RAILROAD CROSSINGS

Note: Rows of truncated domes should be aligned parallel with the direction of wheelchair travel.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

Professional Engineer Seal: Henry M. Picard, III, REG. No. 22289, REGISTERED PROFESSIONAL ENGINEER, CIVIL ENGINEERING, State of Louisiana. Date: 10/02/24.

SHEET NUMBER 349
ST. TAMMANY
PARISH
CONTROL SECTION
STATE PROJECT
DESIGN CHECK DETAIL CHECK REVIEW SERIES # 4 OF 5
MELISSA LEBAS
LICENSE NO. 39111
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
Melissa Lebas
7/14/2022

APPROVED BY CHIEF ENGINEER
Melissa Lebas
7/21/2022
DATE



PEDESTRIAN FACILITIES
DETECTABLE WARNING SURFACES
PED-01



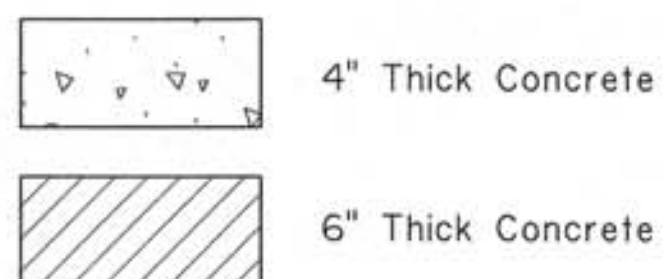
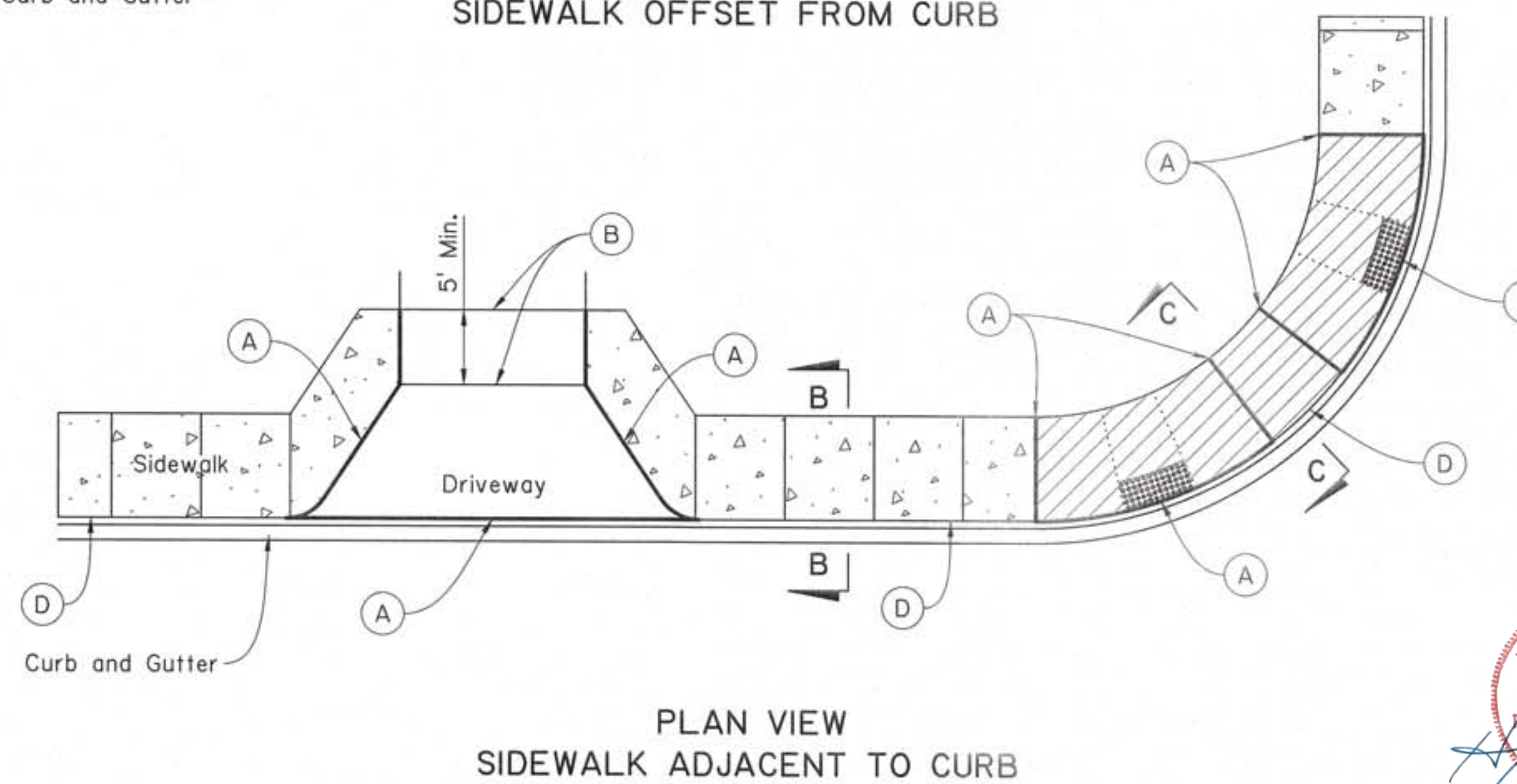
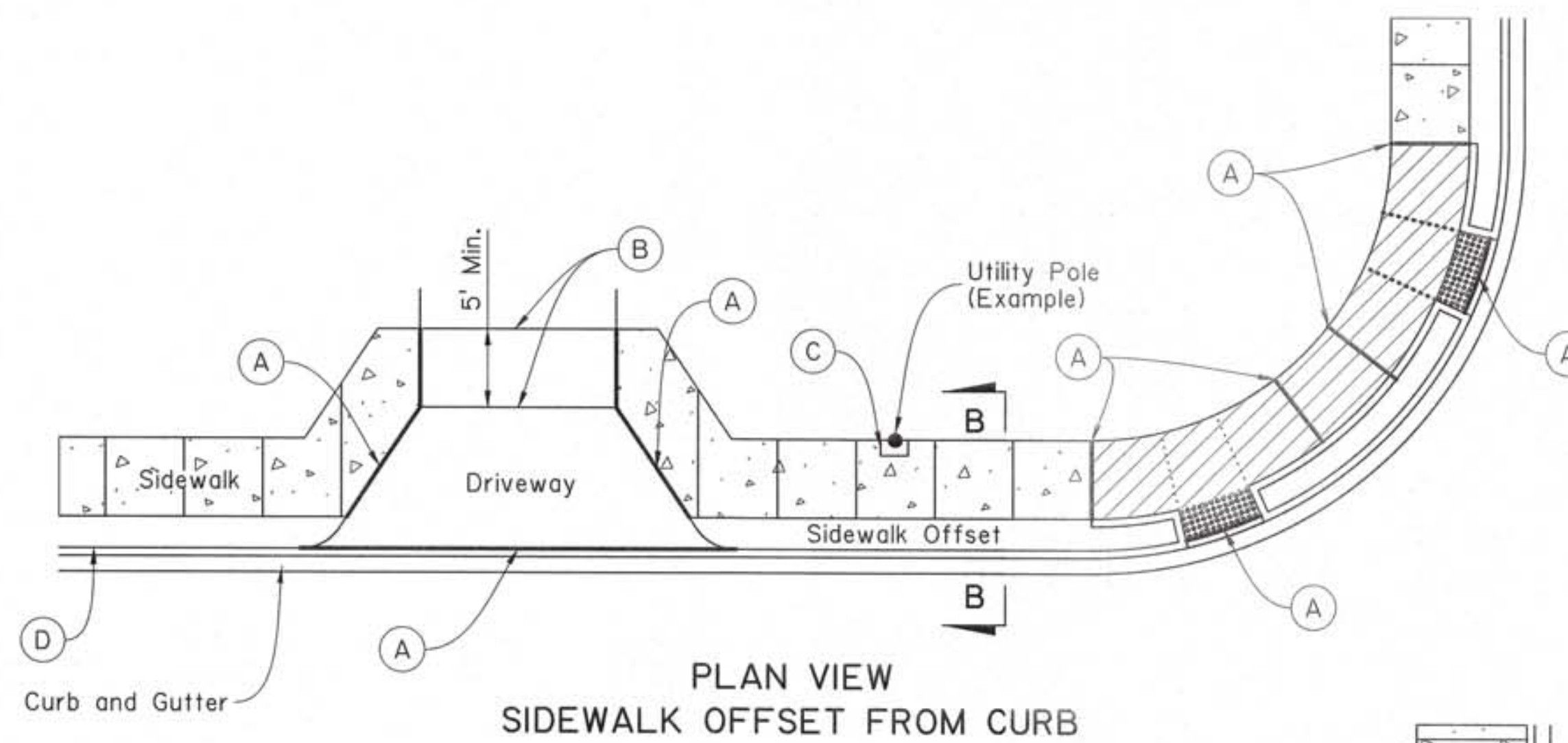
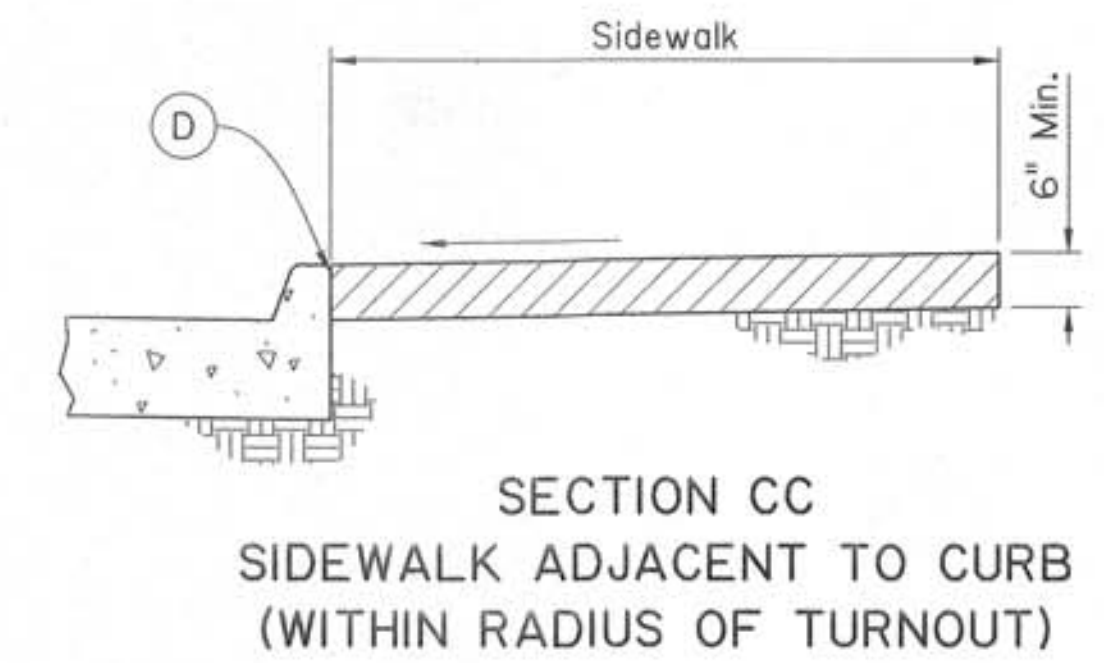
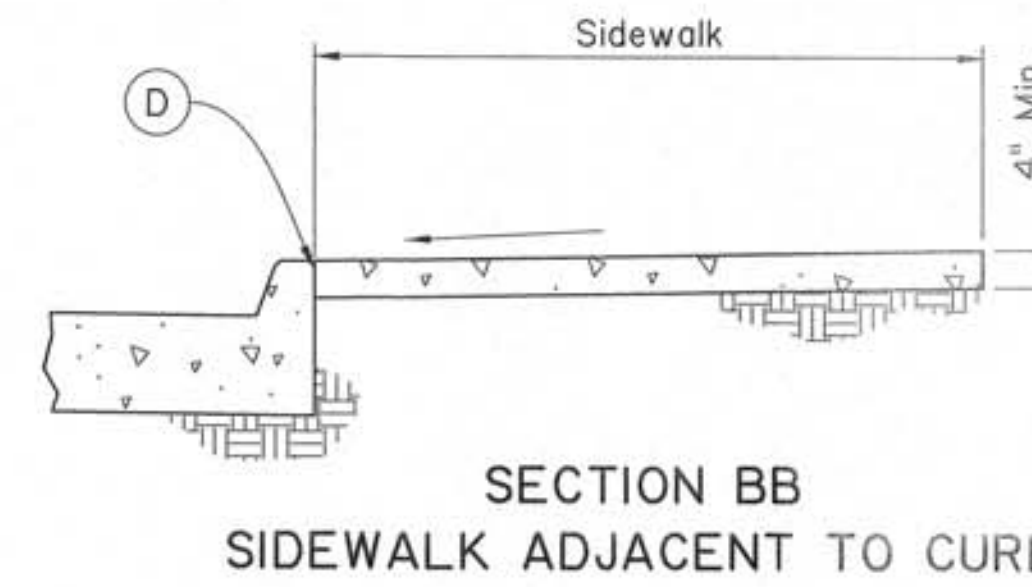
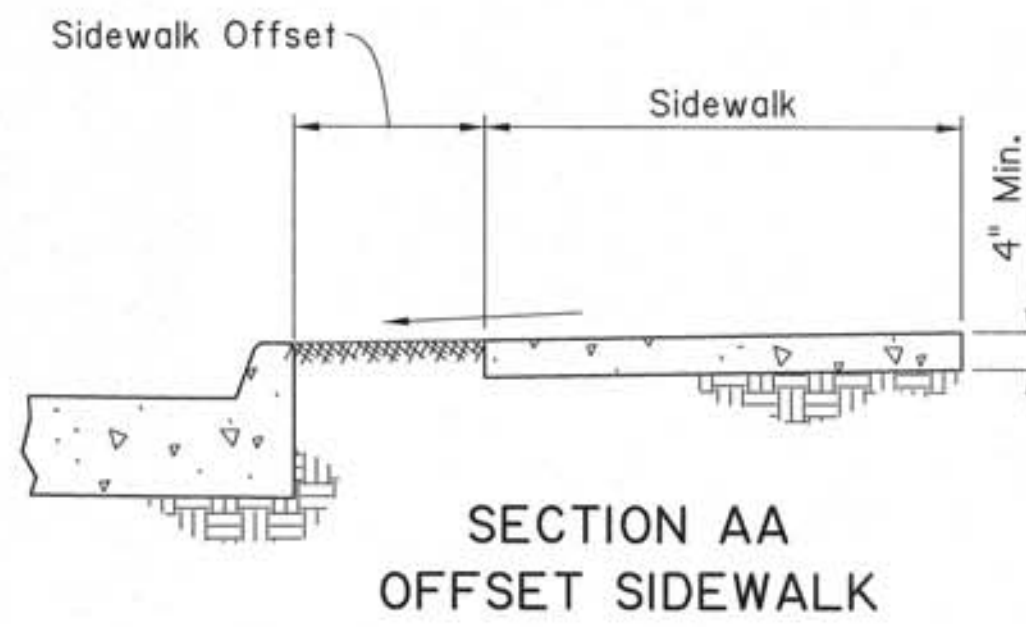
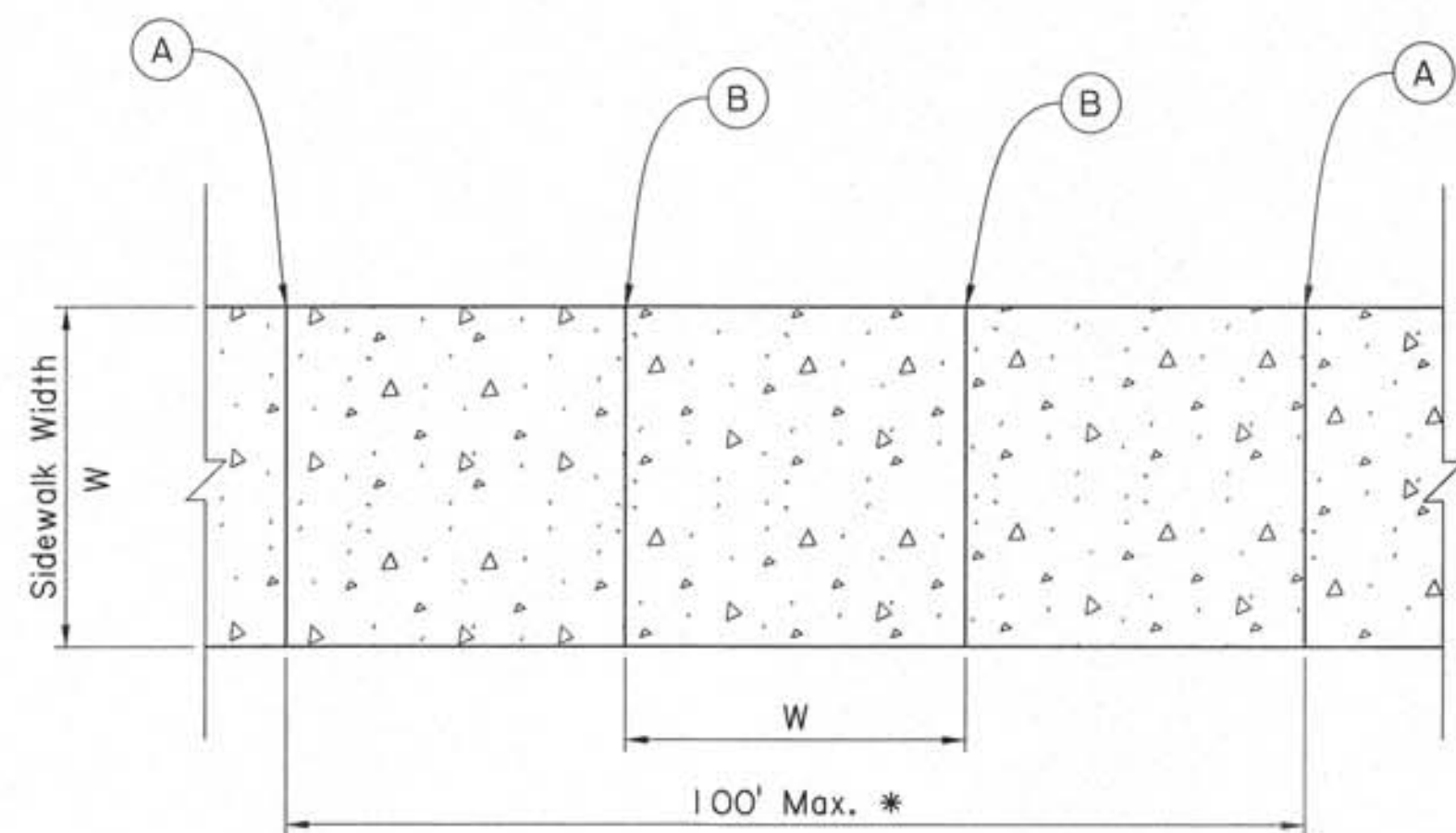
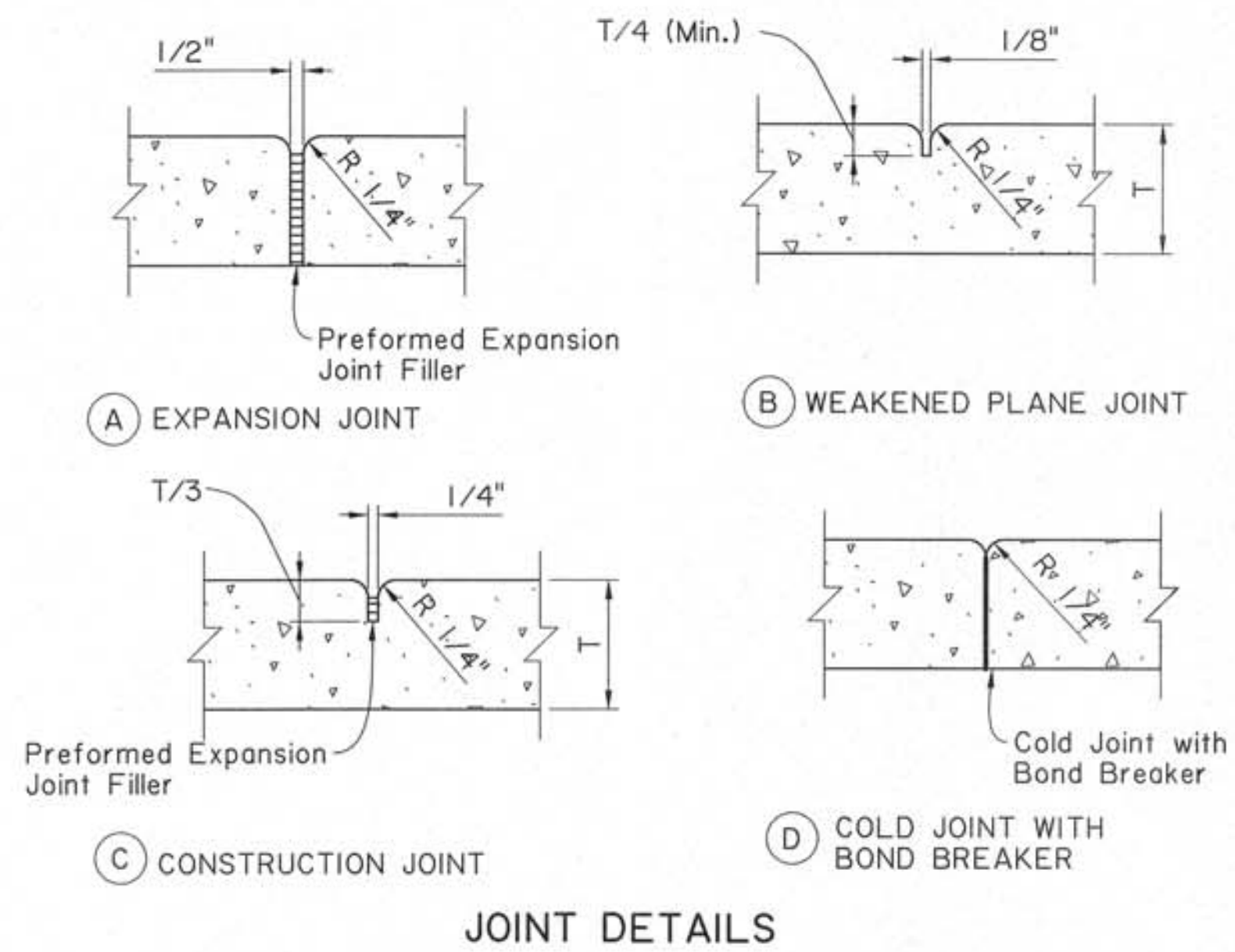
12:04
7/14/2022

GENERAL NOTES:

1. Weakened plane joints are required at all sidewalk ramps or driveways slope break lines.
2. Separate curb ramps and landing from adjacent sidewalk with preformed joint filler of 1/2".

JOINT LEGEND

- (A) 1/2" Expansion Joints (Preformed Joint Filler)
- (B) 1/8" Weakened Plane Joint
- (C) Construction Joint
- (D) Cold Joint with Bond Breaker



Note: Driveways and curb ramps are shown for reference only. Refer to the driveway standard plans and curb ramp sheet for details.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	350
PARISH	ST. TAMMANY
CONTROL SECTION	
STATE PROJECT	
DESIGN	MAL
CHECK	BPW
DETAIL	MAL
CHECK	BPW
REVIEW	
SERIES	5 OF 5



APPROVED BY CHIEF ENGINEER: *[Signature]*
DATE: 7/21/2022



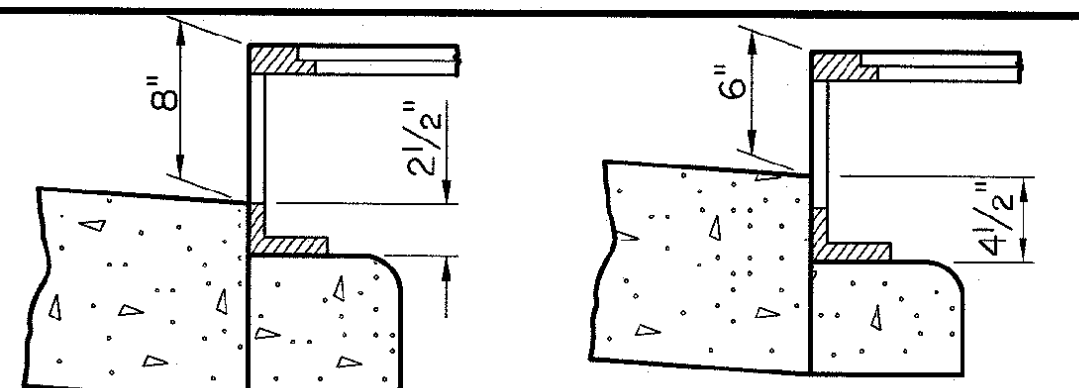
PEDESTRIAN FACILITIES
JOINT DETAILS
PED-01



STANDARD PLAN

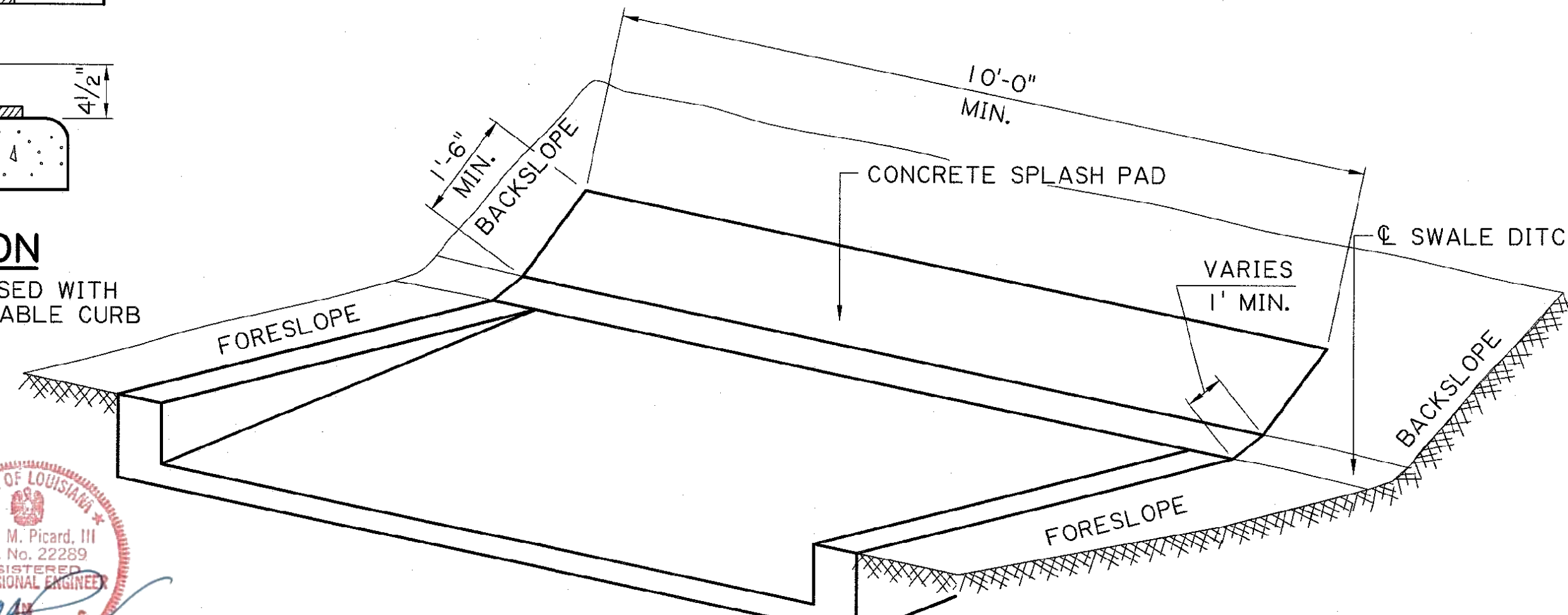
GENERAL NOTES:

1. THIS STRUCTURE MEETS ALL DOTD HYDRAULIC PERFORMANCE CRITERIA WHEN USED IN ACCORDANCE WITH THE DOTD HYDRAULICS MANUAL AND ALL DOTD HYDRAULIC DESIGN POLICIES.
2. CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LA DOTD STANDARD SPECIFICATIONS.
3. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT-TO-OUT OF BARS AND DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER-TO-CENTER OF BARS.
5. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE SPECIFIED.
6. IF PRECAST CATCH BASIN IS USED, PLEASE REFER TO STANDARD PLAN PC-01 FOR DETAILS AND SPECIFICATIONS.
7. PAVED GUTTER DRAINS SHALL BE POURED MONOLITHICALLY.

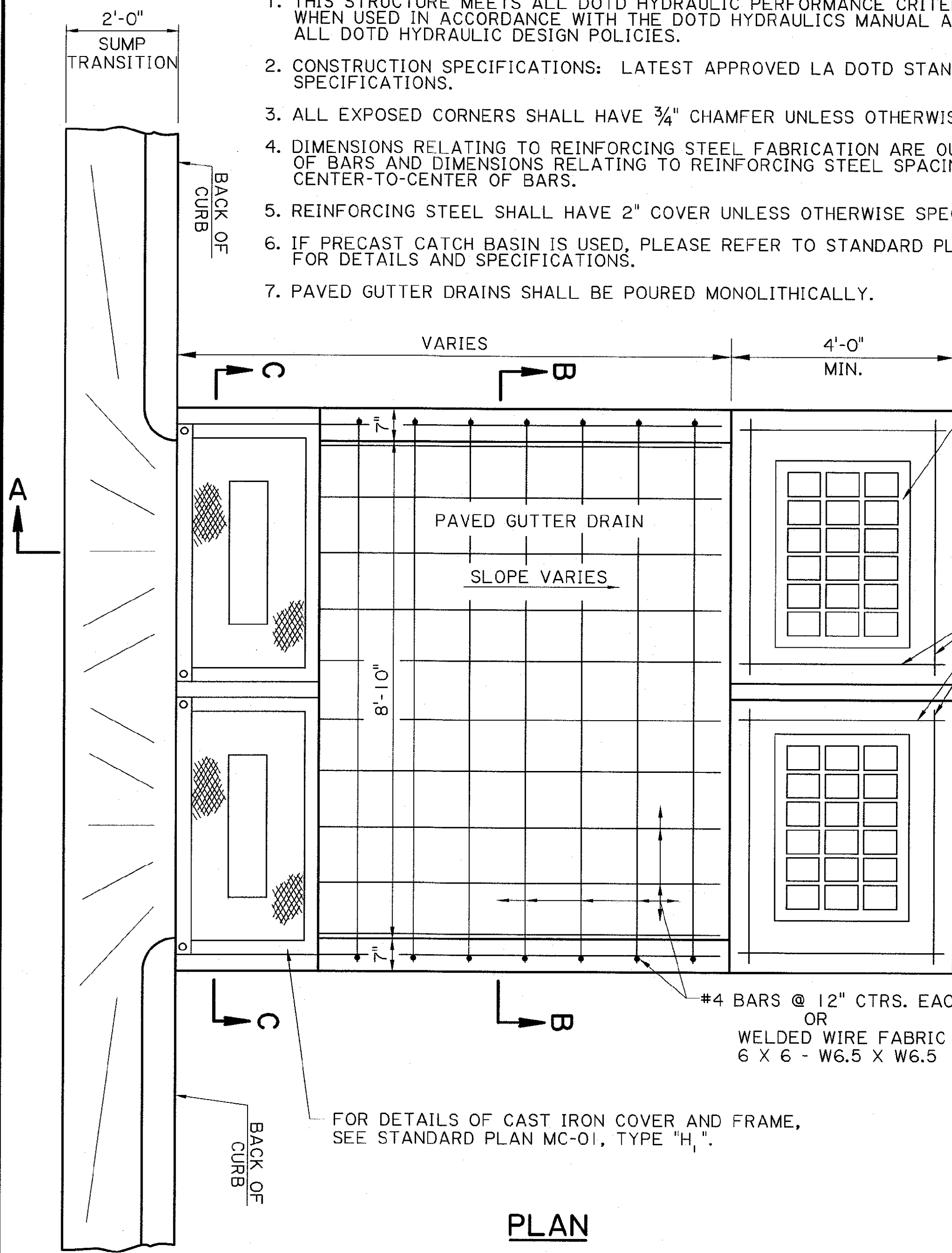


INLET CONFIGURATION

WHEN USED WITH 6" BARRIER CURB WHEN USED WITH 4" MOUNTABLE CURB



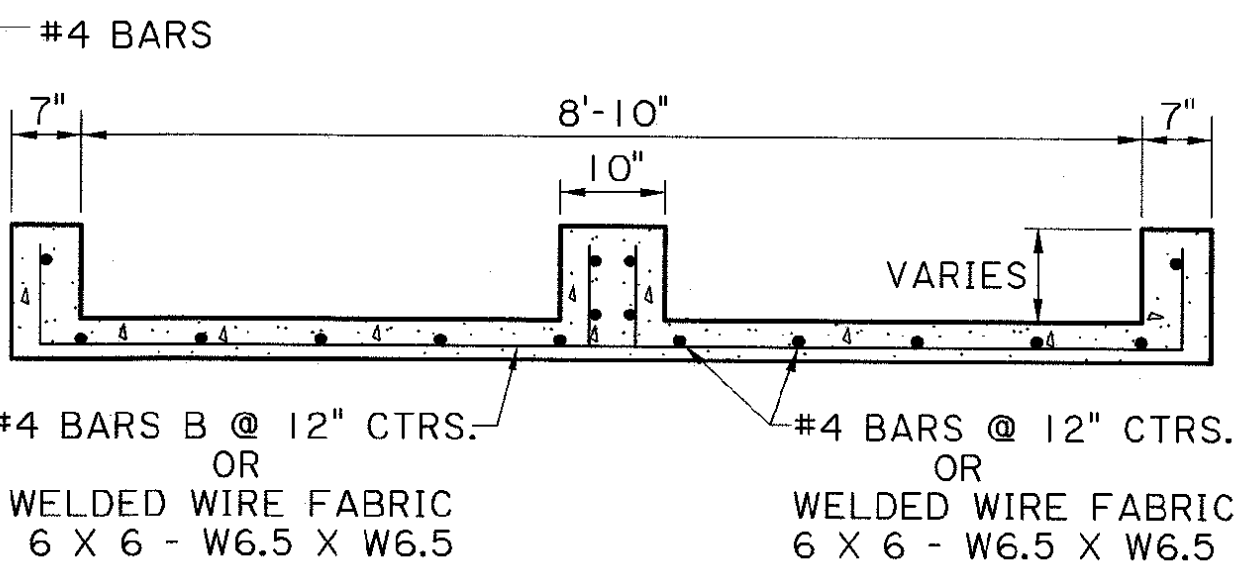
PARTIAL VIEW SHOWING PAVED GUTTER DRAIN WITHOUT DROP INLET



PLAN

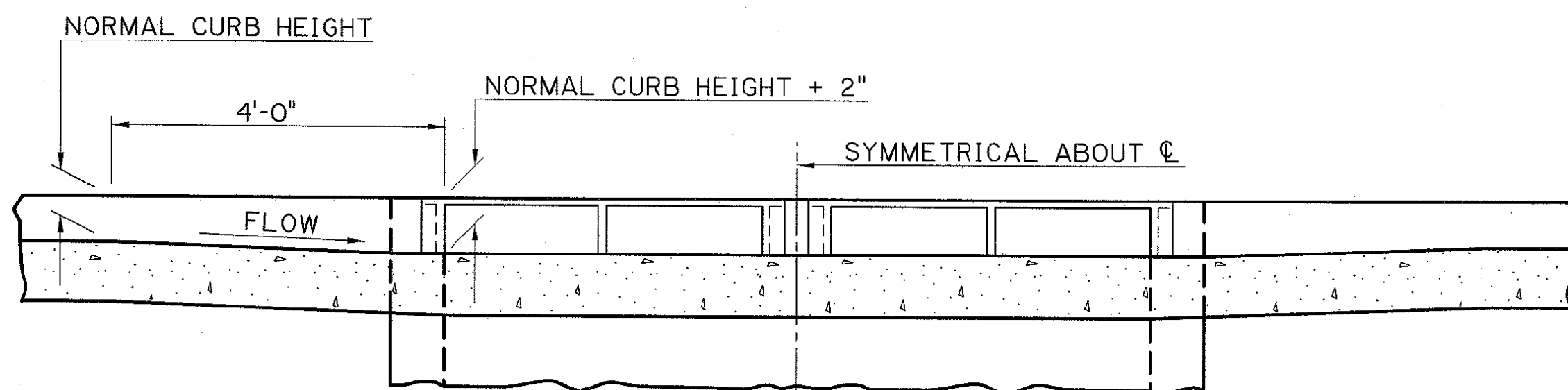
FOR GRATE AND FRAME DETAILS, SEE APPROPRIATE CATCH BASIN STANDARD PLAN OR SPECIAL DETAIL AND STANDARD PLAN MC-01.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

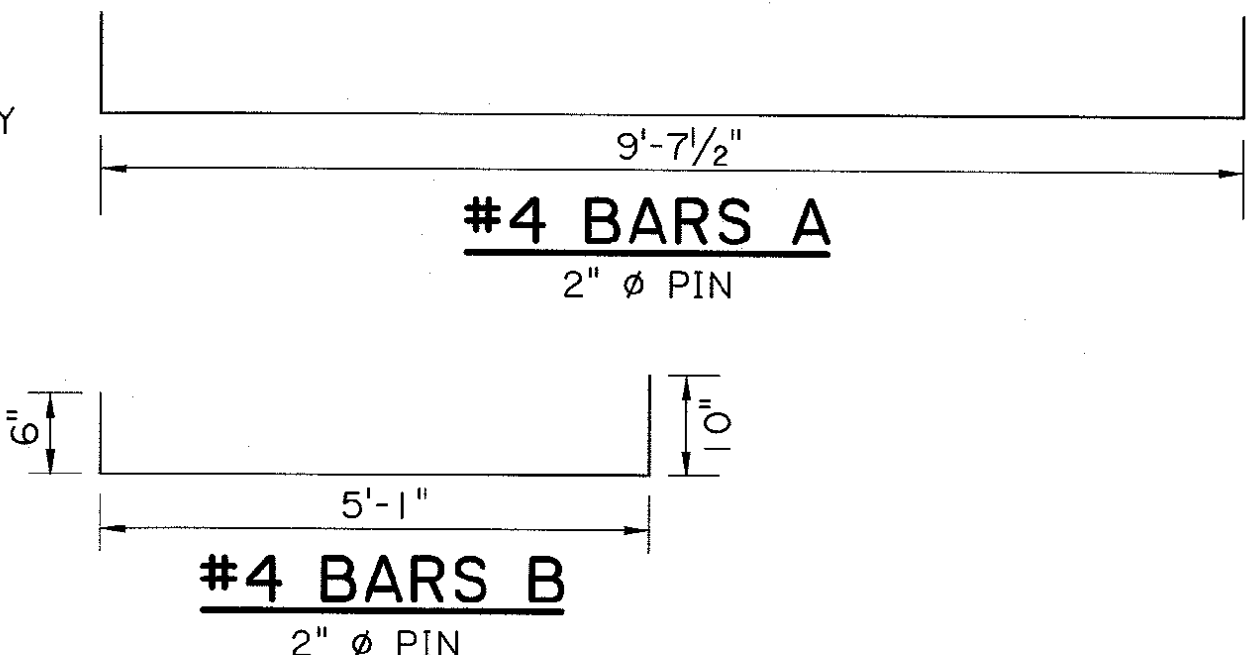


SECTION C-C

(CAST IRON COVER NOT SHOWN)

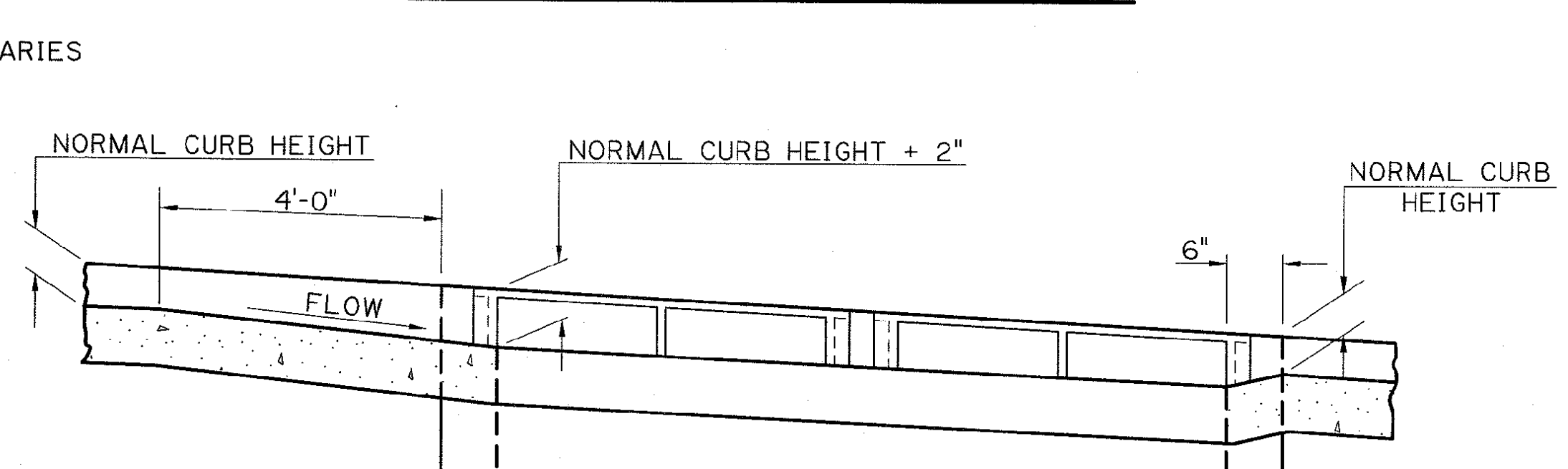


TRANSITION IN CURB HEIGHT GUTTER DRAIN AT LOW POINT

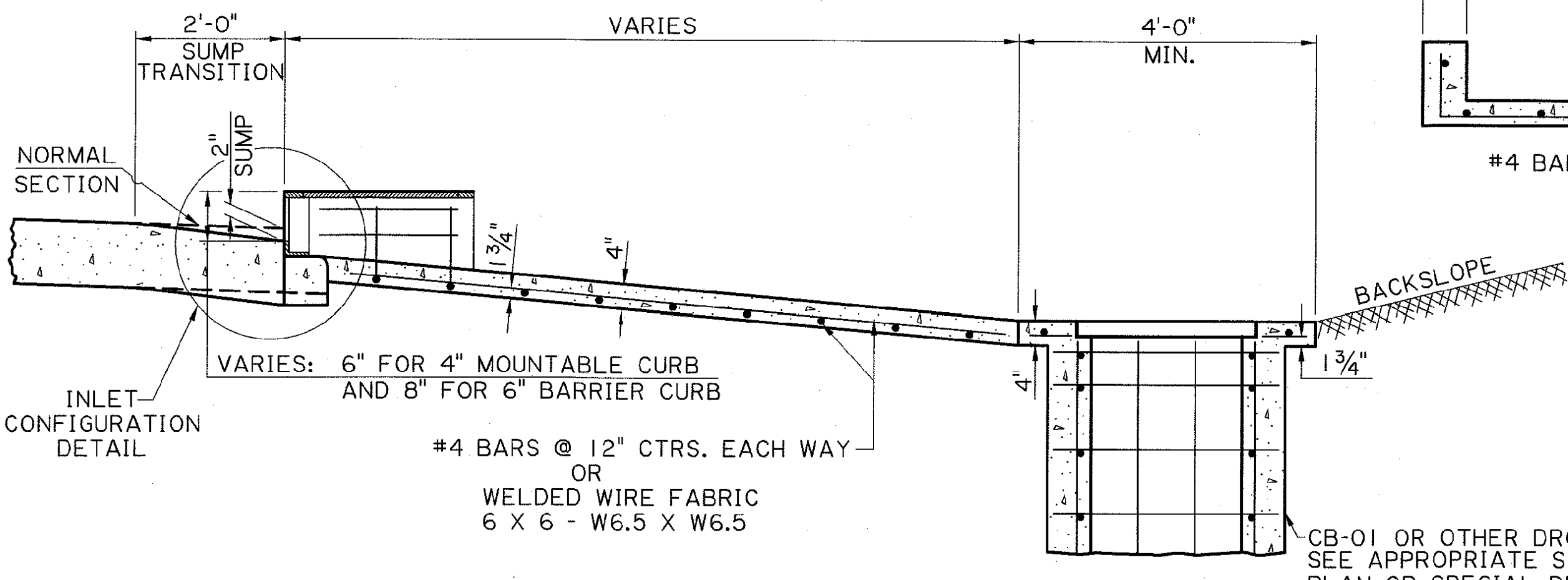


#4 BARS A

#4 BARS B



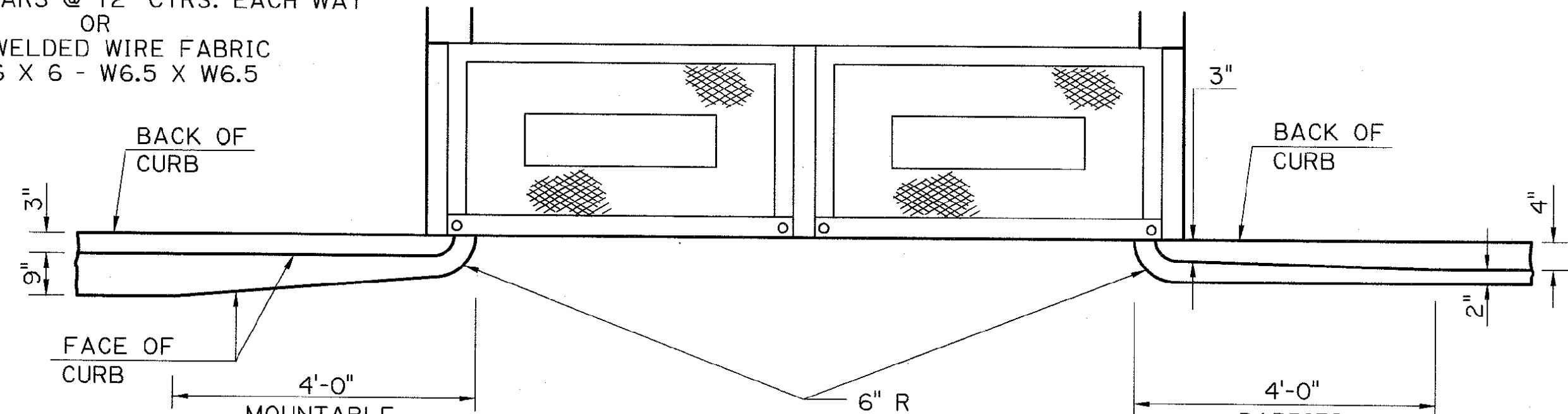
TRANSITION IN CURB HEIGHT GUTTER DRAIN ON A GRADE



SECTION A-A

SECTION B-B

WELDED WIRE FABRIC 6 X 6 - W6.5 X W6.5

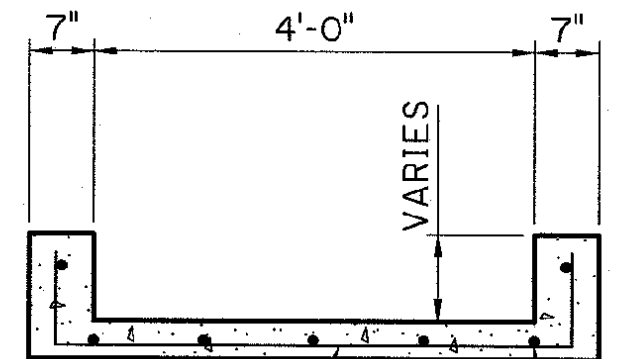


TRANSITION IN CURB WIDTH (TYPICAL)

SHEET NUMBER	351
DESIGNER	ST. TAMMANY
CHECK	
DETAIL	
CHECK	
REVIEW	
SERIES #	
PARISH	
CONTROL SECTION	
STATE PROJECT	
APPROVED BY CHIEF ENGINEER: <i>Christy Roberts</i> DATE: 9/22/2020	
DOUBLE PAVED GUTTER DRAIN STANDARD PLAN PC-DRAIN (DOUBLE)	
HYDRAULICS SECTION	

GENERAL NOTES:

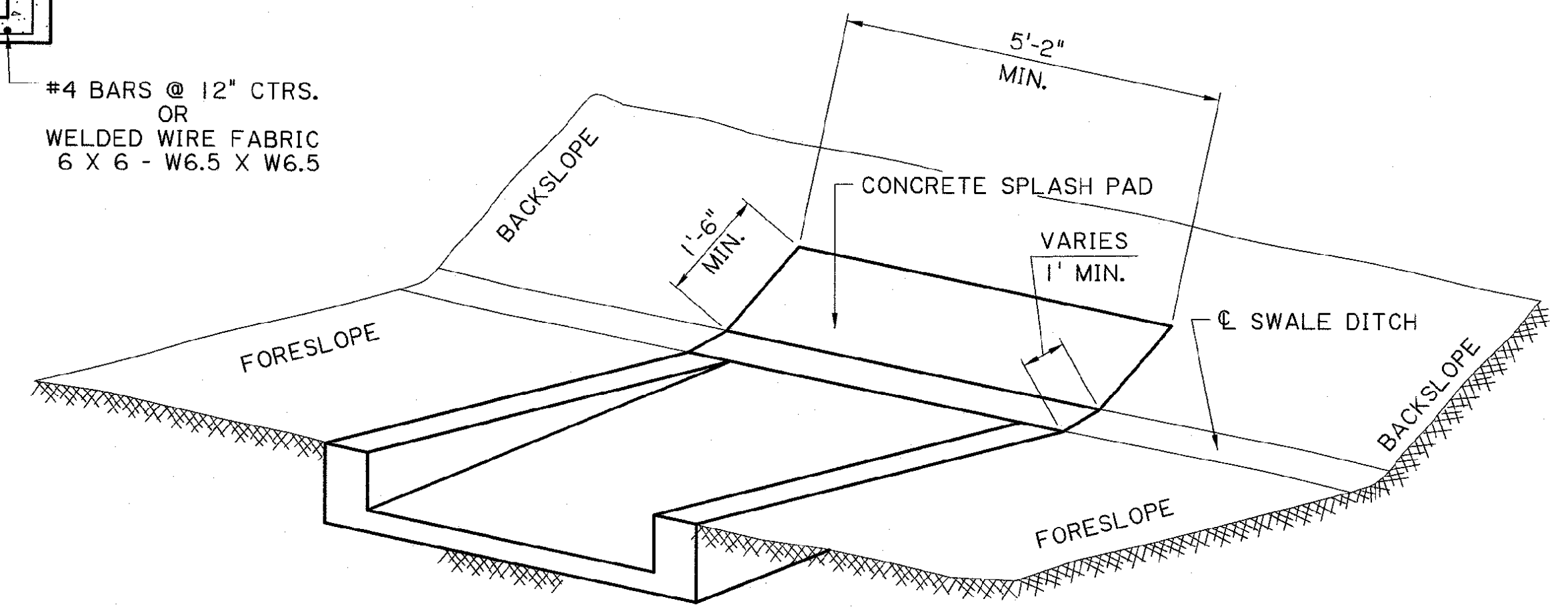
1. THIS STRUCTURE MEETS ALL DOTD HYDRAULIC PERFORMANCE CRITERIA WHEN USED IN ACCORDANCE WITH THE DOTD HYDRAULICS MANUAL AND ALL DOTD HYDRAULIC DESIGN POLICIES.
2. CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LA DOTD STANDARD SPECIFICATIONS.
3. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT-TO-OUT OF BARS AND DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER-TO-CENTER OF BARS.
5. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE SPECIFIED.
6. IF PRECAST CATCH BASIN IS USED, PLEASE REFER TO STANDARD PLAN PC-01 FOR DETAILS AND SPECIFICATIONS.



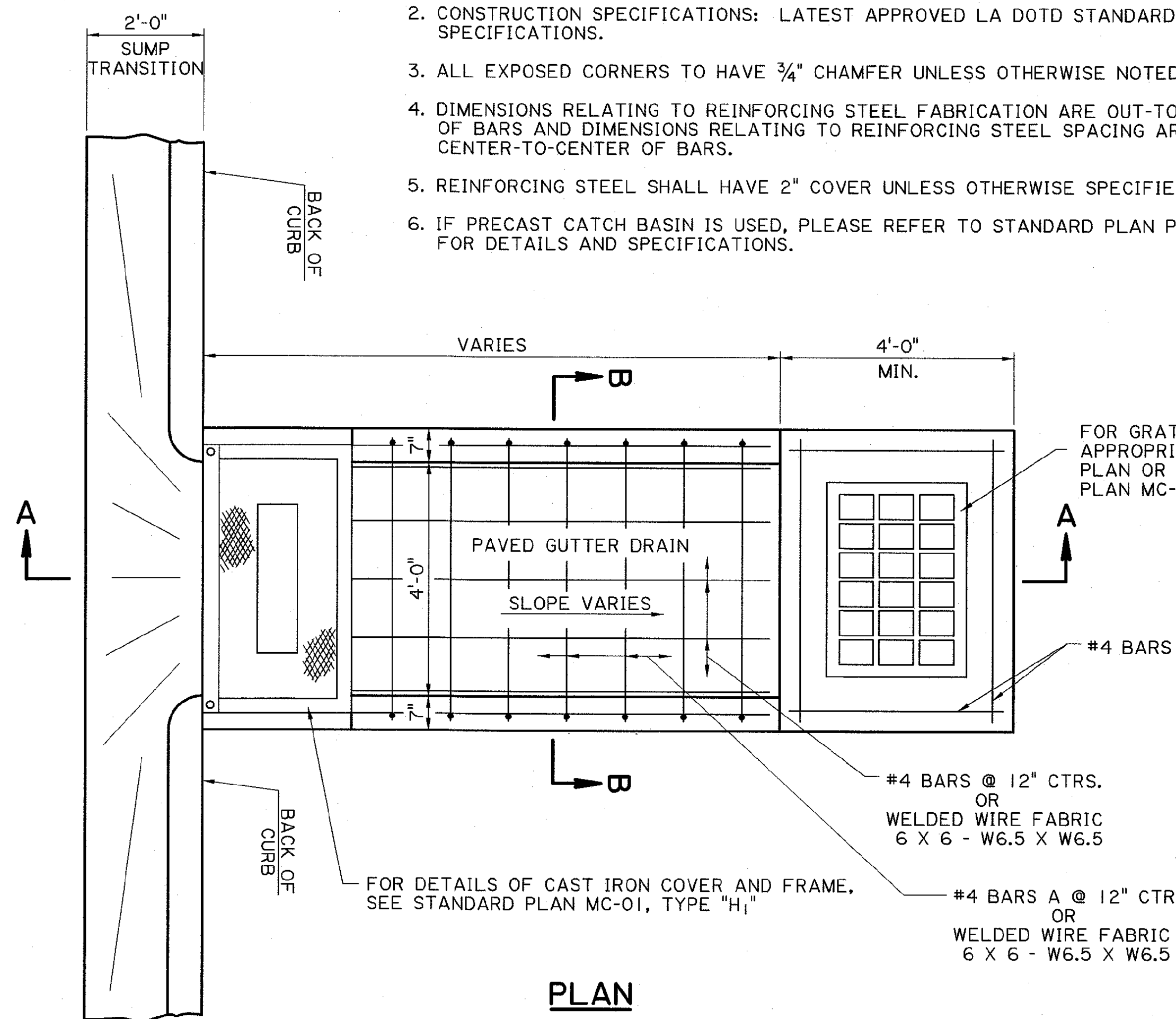
#4 BARS A @ 12" CTRS.
OR
WELDED WIRE FABRIC
6 X 6 - W6.5 X W6.5

#4 BARS @ 12" CTRS.
OR
WELDED WIRE FABRIC
6 X 6 - W6.5 X W6.5

SECTION B-B



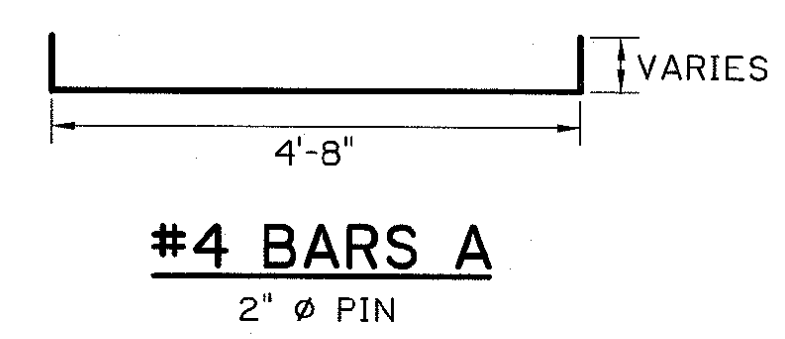
PARTIAL VIEW SHOWING PAVED GUTTER DRAIN WITHOUT DROP INLET



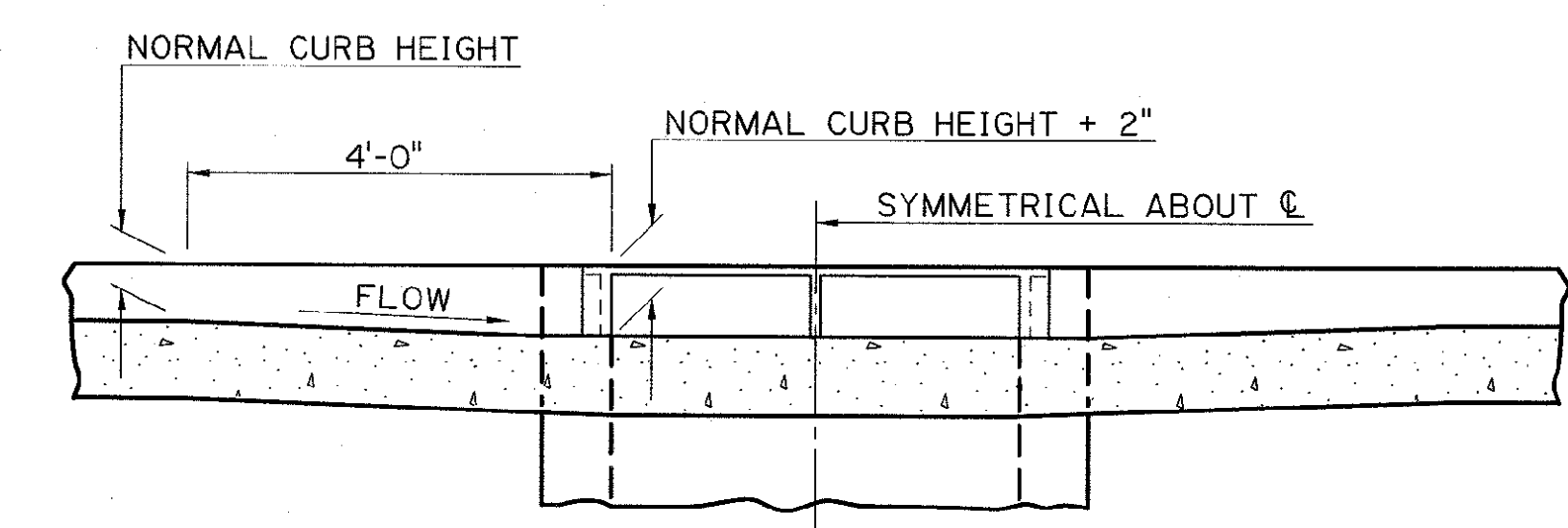
PLAN

FOR GRATE AND FRAME DETAILS, SEE APPROPRIATE CATCH BASIN STANDARD PLAN OR SPECIAL DETAIL AND STANDARD PLAN MC-01.

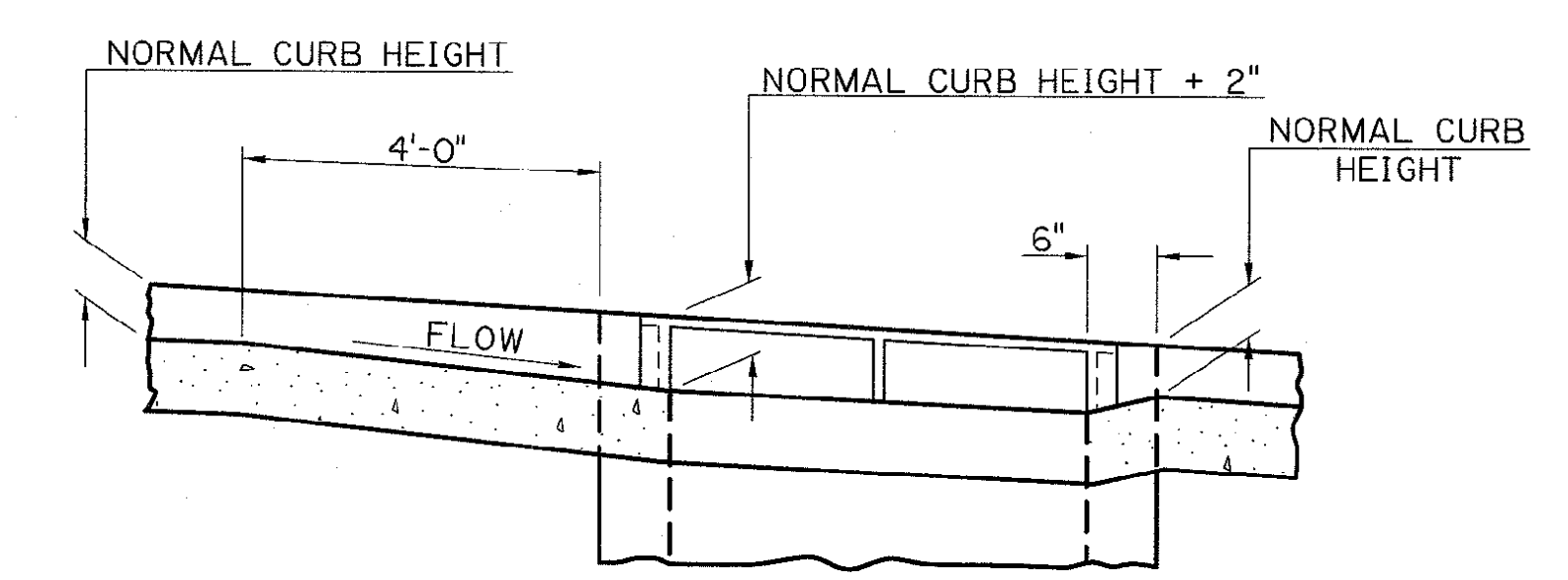
FOR DETAILS OF CAST IRON COVER AND FRAME, SEE STANDARD PLAN MC-01, TYPE "H1"



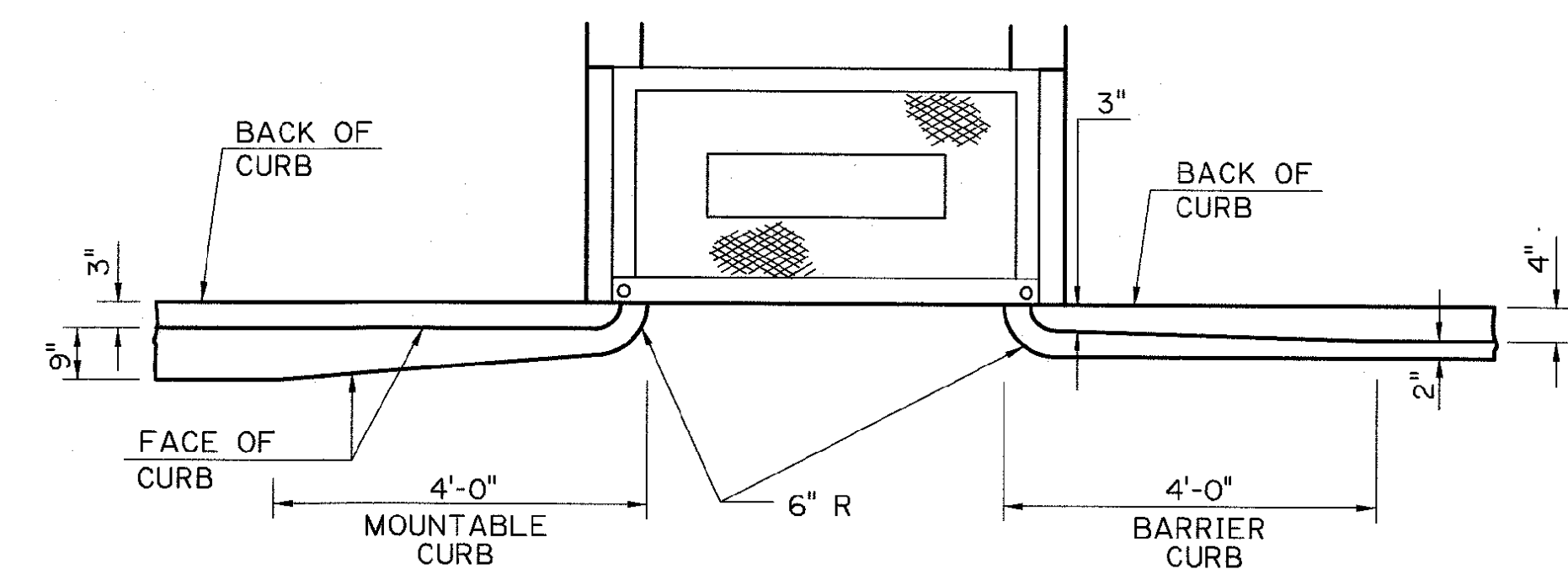
#4 BARS A
2" Ø PIN



TRANSITION IN CURB HEIGHT GUTTER DRAIN AT LOW POINT



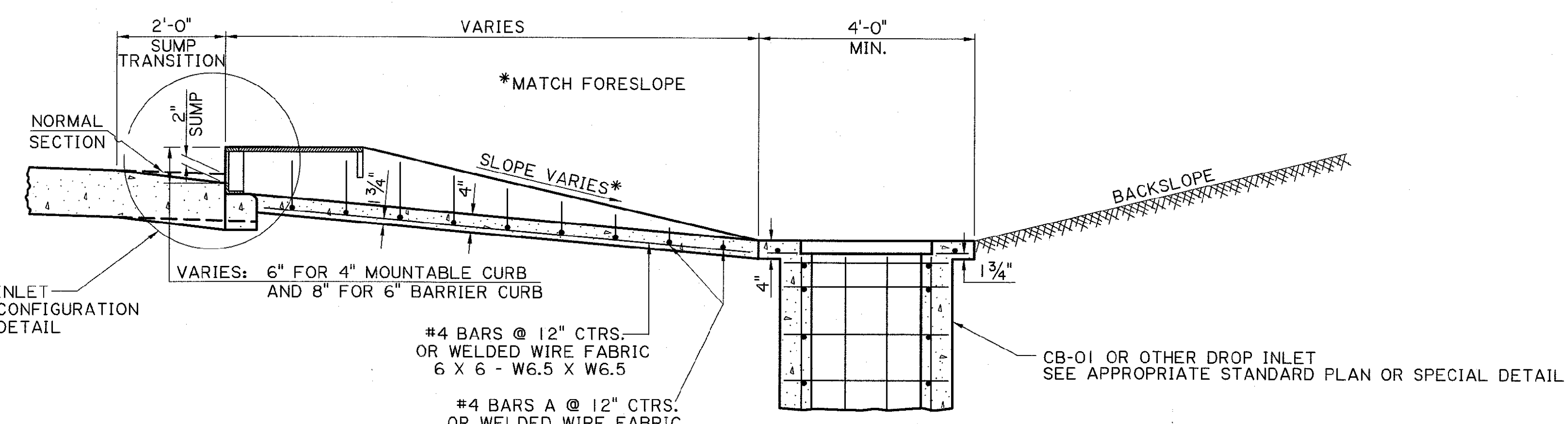
TRANSITION IN CURB HEIGHT GUTTER DRAIN ON A GRADE



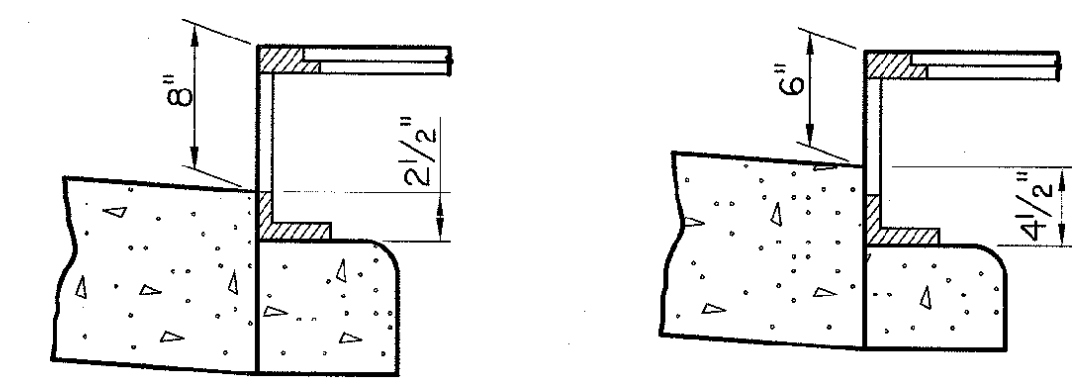
TRANSITION IN CURB WIDTH (TYPICAL)

STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



SECTION A-A



INLET CONFIGURATION

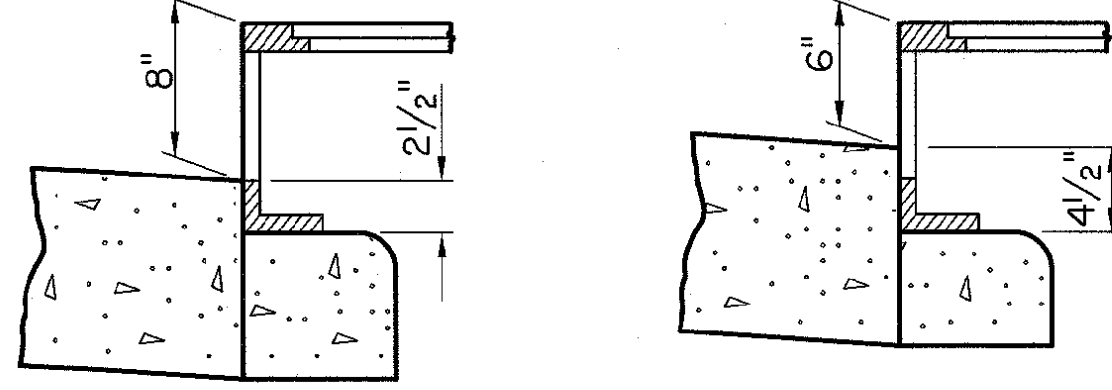
WHEN USED WITH 6" BARRIER CURB

WHEN USED WITH 4" MOUNTABLE CURB

SHEET NUMBER	352
DESIGNER	ST. TAMMANY
CHECK	
DETAIL	
REVIEW	
DATE	9/22/2020
PROJECT	
SECTION	
STATE	
SERIES	
<p>STATE OF LOUISIANA MITRA HASHEMIEH REG. No. 28546 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING 9/11/2020</p>	
<p>STATE OF LOUISIANA ADAM LANGASTER REG. No. 35573 REGISTERED PROFESSIONAL ENGINEER IN CHALLENGING ENGINEERING 9/10/20</p>	
<p>APPROVED BY CHIEF ENGINEER: <i>Christy P. Hoops</i> DATE: 9/22/2020</p>	
<p>STATE OF LOUISIANA REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING</p>	
<p>SINGLE PAVED GUTTER DRAIN STANDARD PLAN PG-DRAIN (SINGLE)</p>	
<p>DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT</p>	
<p>HYDRAULICS SECTION</p>	

GENERAL NOTES:

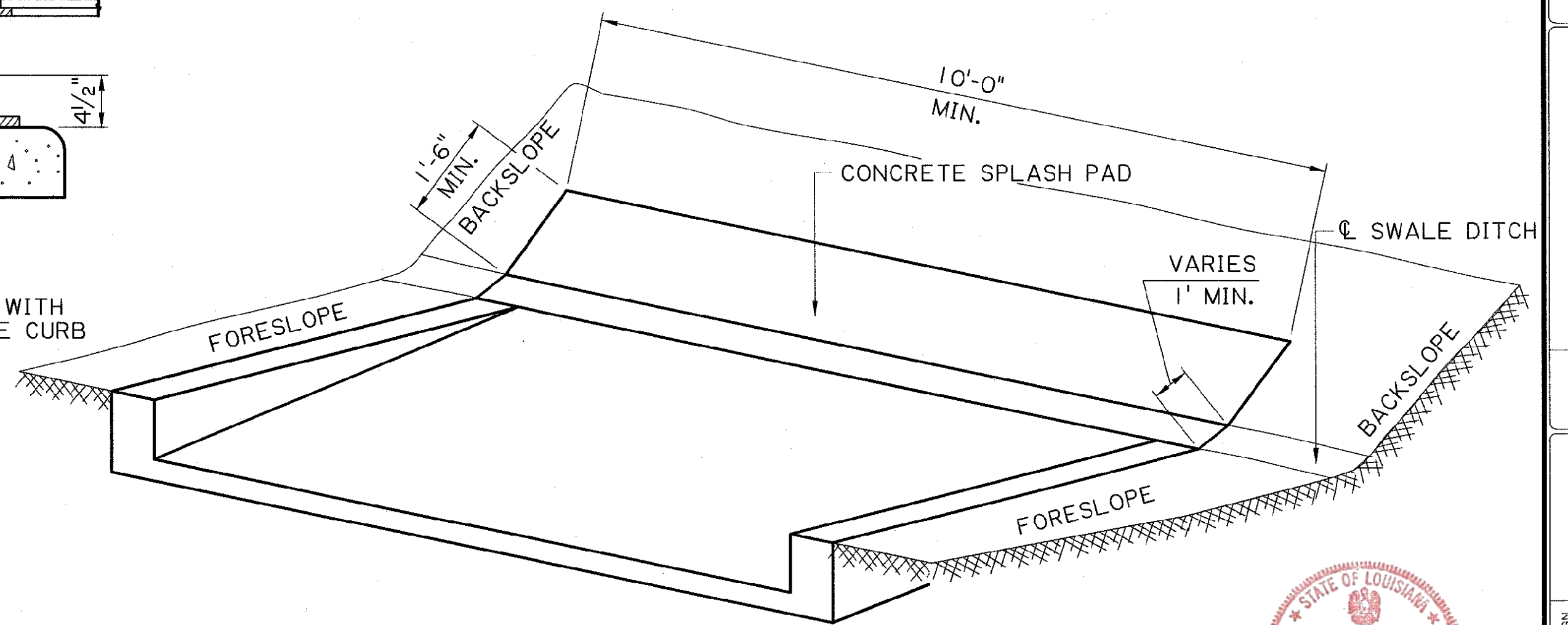
1. THIS STRUCTURE MEETS ALL DOTD HYDRAULIC PERFORMANCE CRITERIA WHEN USED IN ACCORDANCE WITH THE DOTD HYDRAULICS MANUAL AND ALL DOTD HYDRAULIC DESIGN POLICIES.
2. CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LA DOTD STANDARD SPECIFICATIONS.
3. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT-TO-OUT OF BARS AND DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER-TO-CENTER OF BARS.
5. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE SPECIFIED.
6. IF PRECAST CATCH BASIN IS USED, PLEASE REFER TO STANDARD PLAN PC-01 FOR DETAILS AND SPECIFICATIONS.
7. PAVED GUTTER DRAINS SHALL BE POURED MONOLITHICALLY.



INLET CONFIGURATION

WHEN USED WITH 6" BARRIER CURB WHEN USED WITH 4" MOUNTABLE CURB

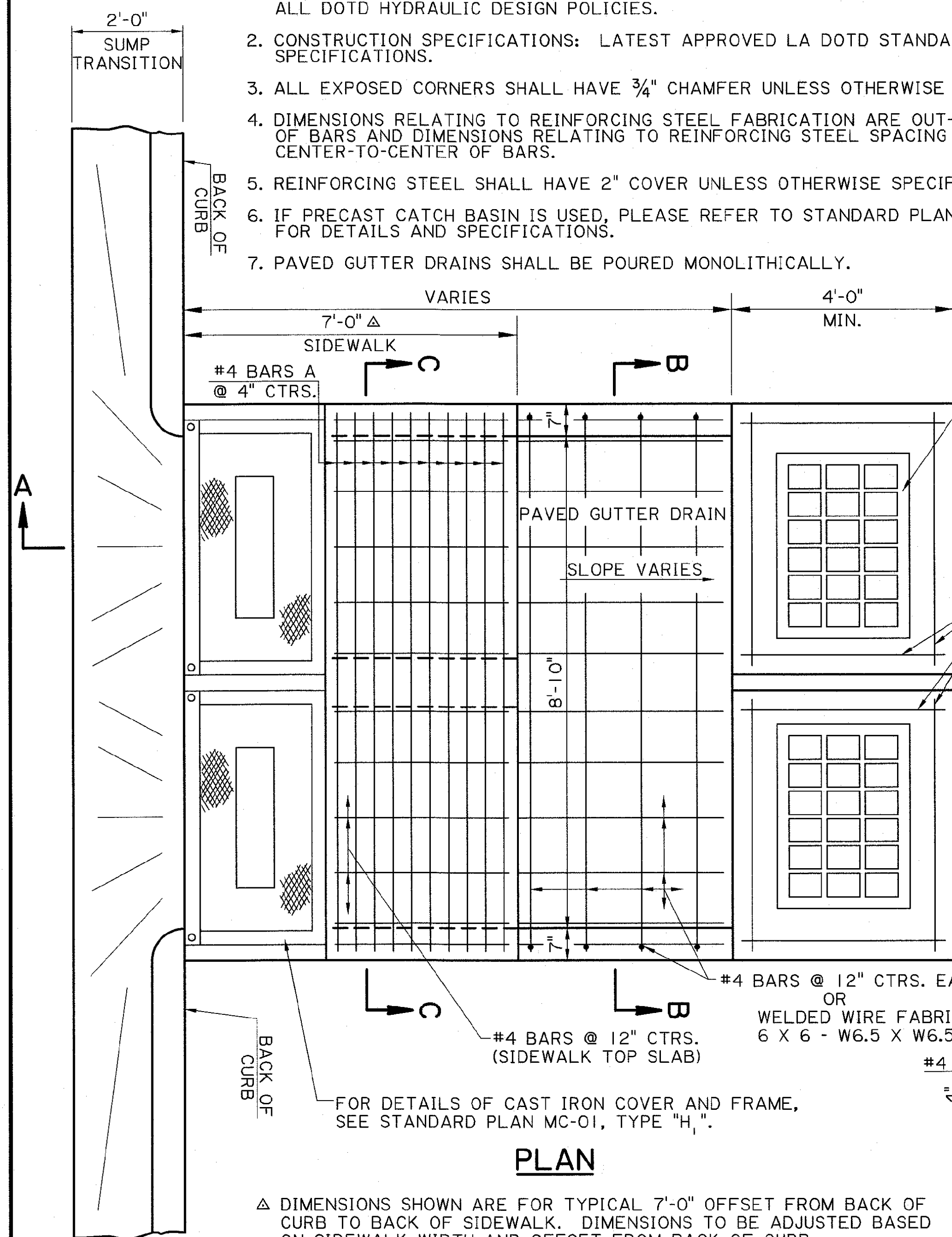
FOR GRATE AND FRAME DETAILS, SEE APPROPRIATE CATCH BASIN STANDARD PLAN OR SPECIAL DETAIL AND STANDARD PLAN MC-01.



PARTIAL VIEW SHOWING PAVED GUTTER DRAIN WITHOUT DROP INLET

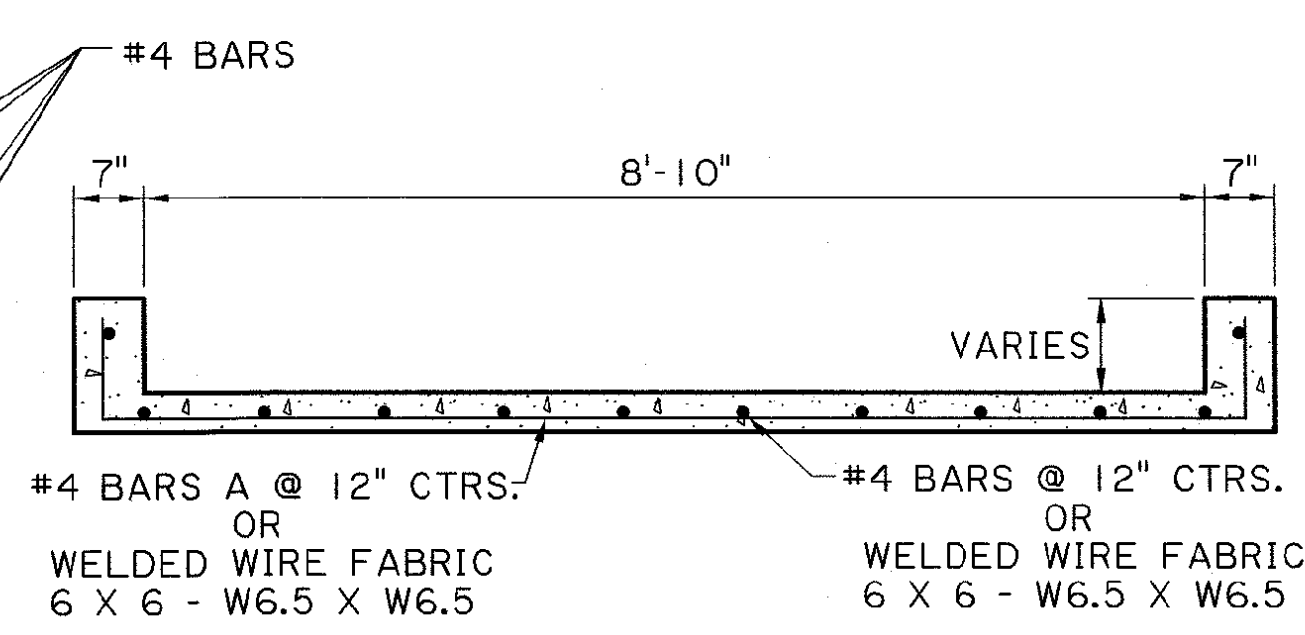
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 PROFESSIONAL ENGINEER
 10/02/24

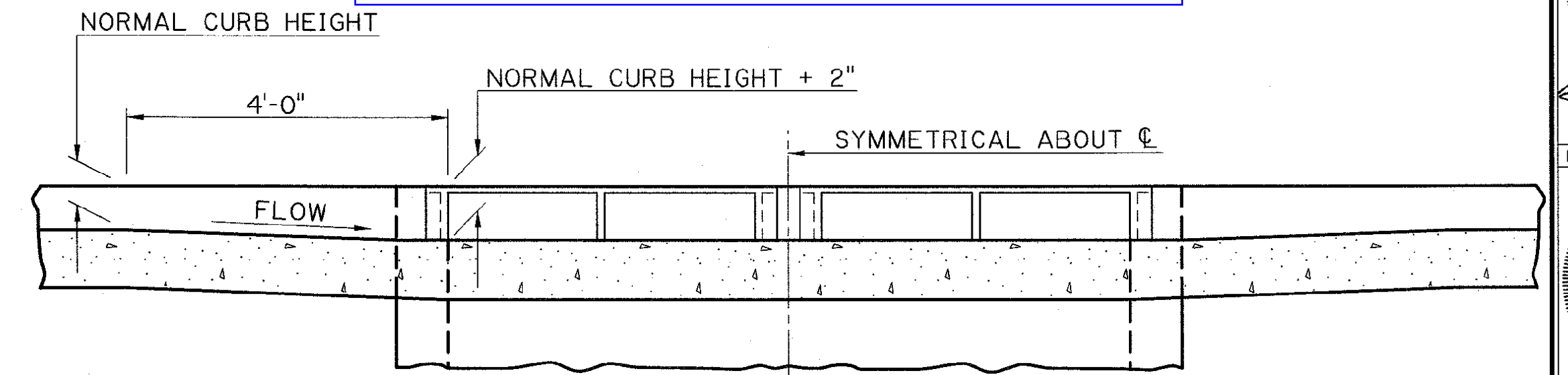


PLAN

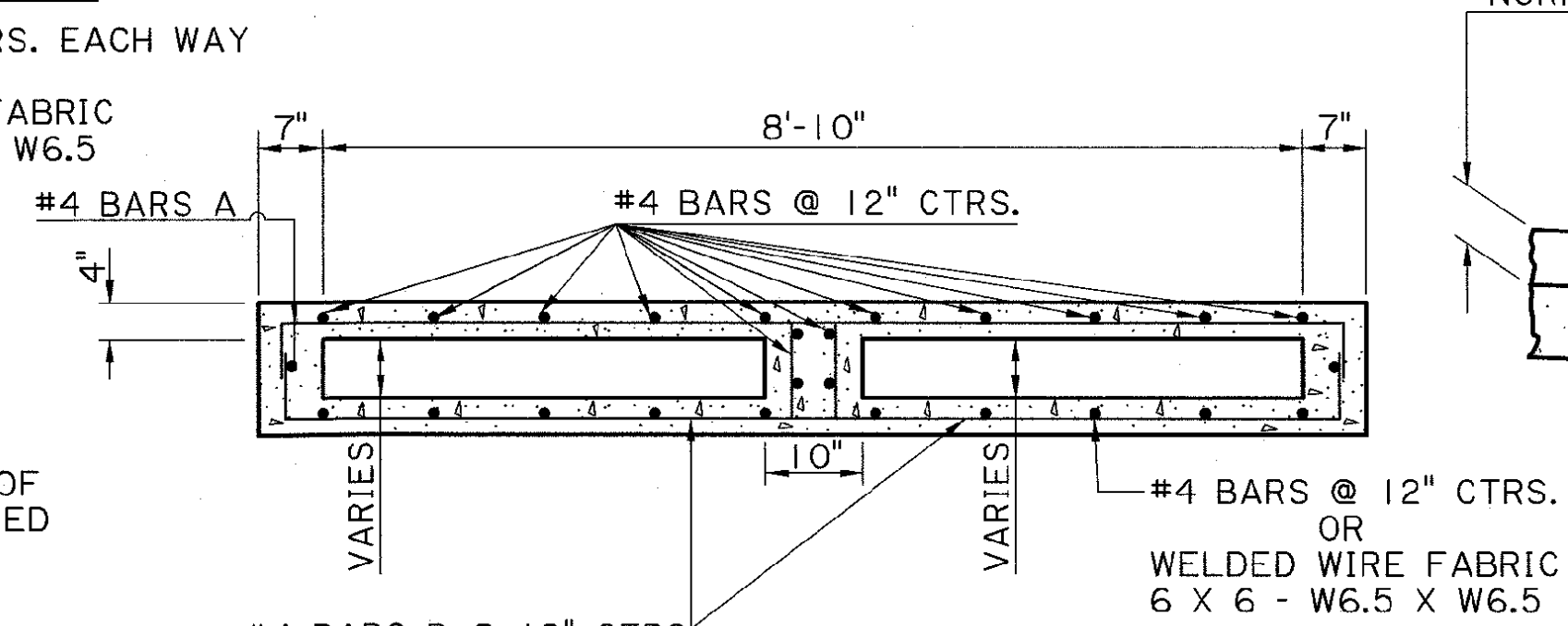
Δ DIMENSIONS SHOWN ARE FOR TYPICAL 7'-0" OFFSET FROM BACK OF CURB TO BACK OF SIDEWALK. DIMENSIONS TO BE ADJUSTED BASED ON SIDEWALK WIDTH AND OFFSET FROM BACK OF CURB.



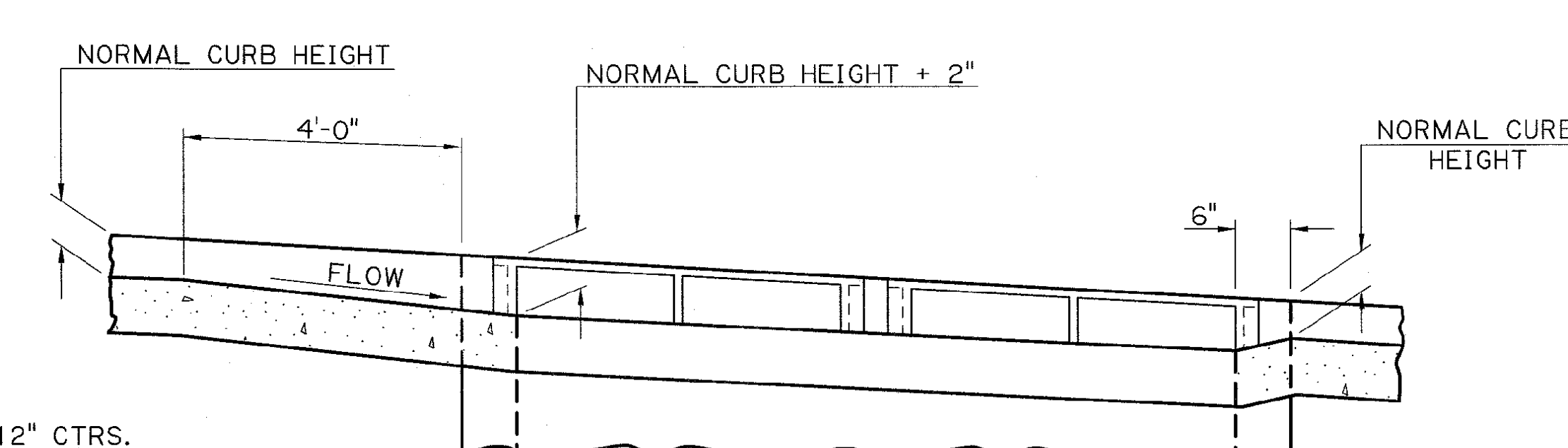
SECTION B-B



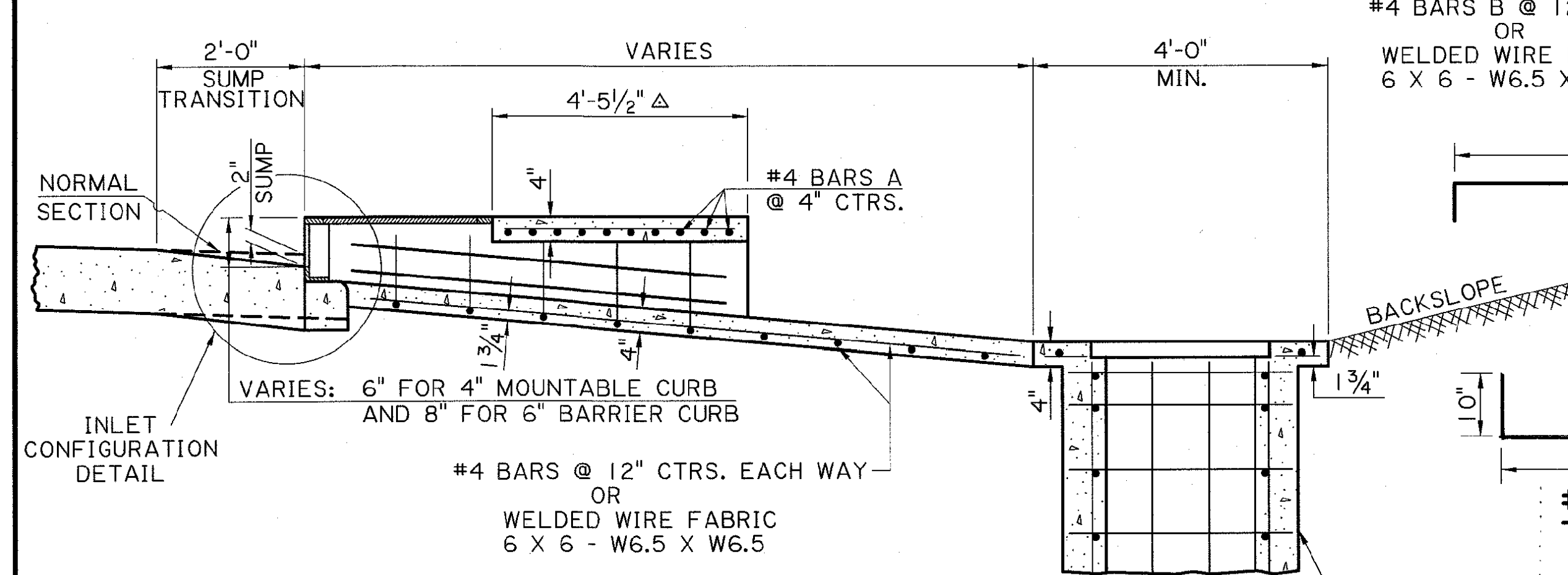
TRANSITION IN CURB HEIGHT GUTTER DRAIN AT LOW POINT



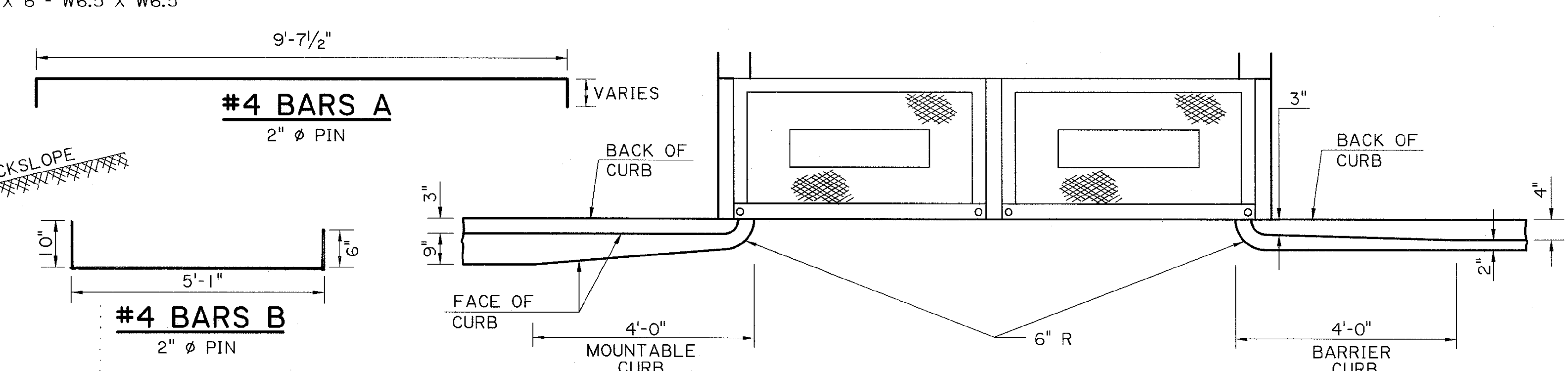
SECTION C-C



TRANSITION IN CURB HEIGHT GUTTER DRAIN ON A GRADE



SECTION A-A



TRANSITION IN CURB WIDTH (TYPICAL)

SHEET NUMBER	353
ST. TAMMANY	
PARISH	
CONTROL SECTION	
STATE PROJECT	
DESIGN	
CHECK	
DETAIL	
CHECK	
REVIEW	
SERIES #	

MITRA HASHEMIEH
 REG. No. 28846
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 9/11/2020

ADAM LANCASTER
 REG. No. 35573
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 9/10/20

APPROVED BY CHIEF ENGINEER: *Christoph P. Hoff* DATE: 9/22/2020

STATE OF LOUISIANA
 PROFESSIONAL ENGINEER

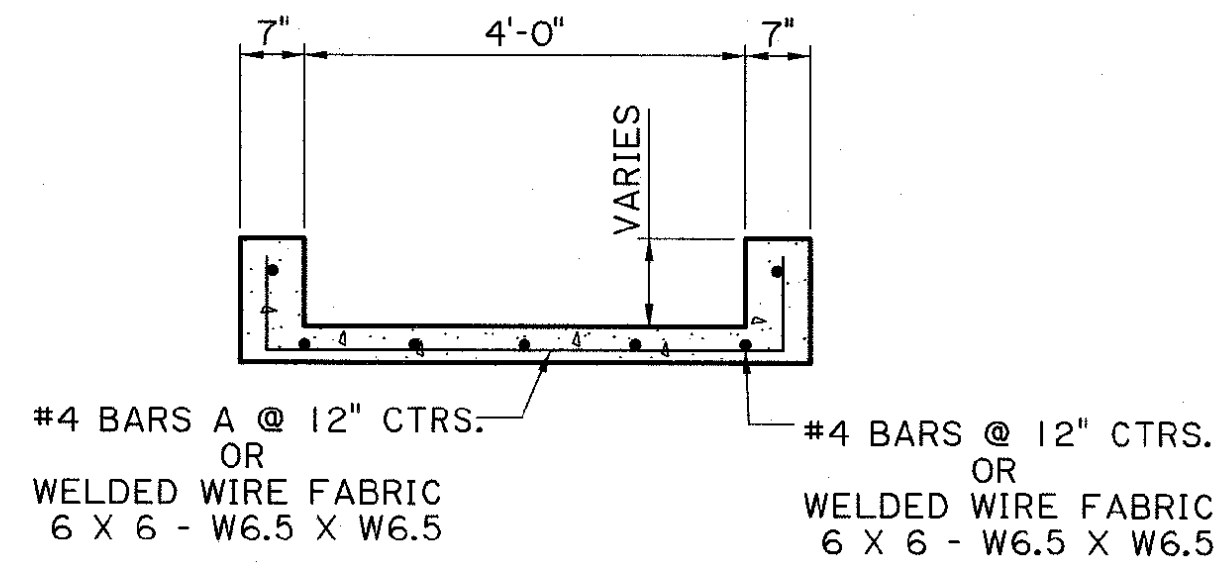
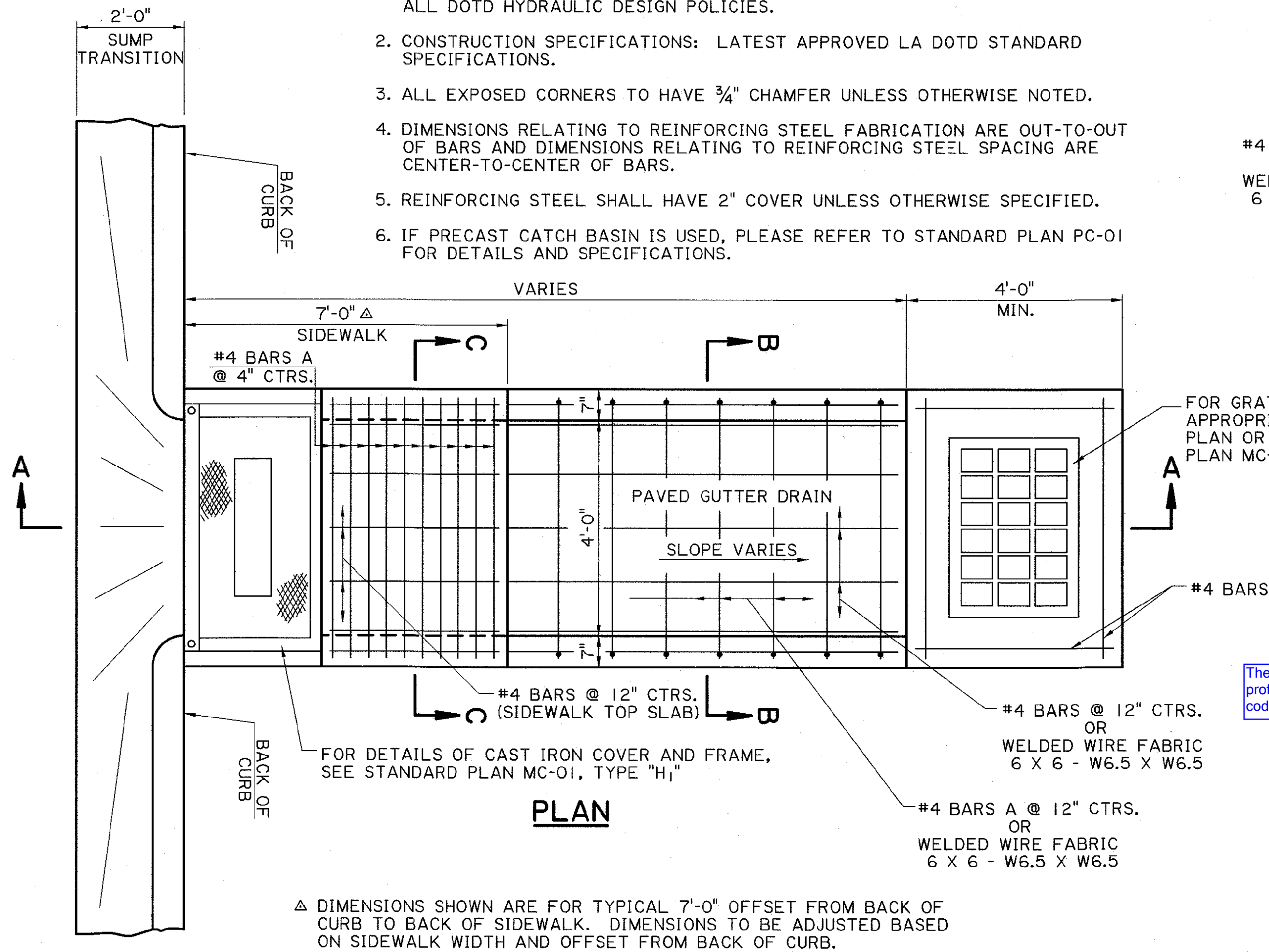
DOUBLE PAVED GUTTER DRAIN WITH SIDEWALK
 STANDARD PLAN PG-DRAIN WITH SIDEWALK (DOUBLE)

DOTD
 LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

HYDRAULICS SECTION

GENERAL NOTES:

1. THIS STRUCTURE MEETS ALL DOTD HYDRAULIC PERFORMANCE CRITERIA WHEN USED IN ACCORDANCE WITH THE DOTD HYDRAULICS MANUAL AND ALL DOTD HYDRAULIC DESIGN POLICIES.
2. CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LA DOTD STANDARD SPECIFICATIONS.
3. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT-TO-OUT OF BARS AND DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER-TO-CENTER OF BARS.
5. REINFORCING STEEL SHALL HAVE 2" COVER UNLESS OTHERWISE SPECIFIED.
6. IF PRECAST CATCH BASIN IS USED, PLEASE REFER TO STANDARD PLAN PC-01 FOR DETAILS AND SPECIFICATIONS.

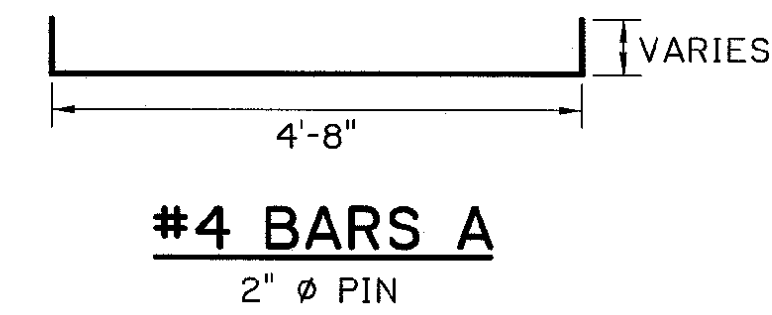


SECTION B-B

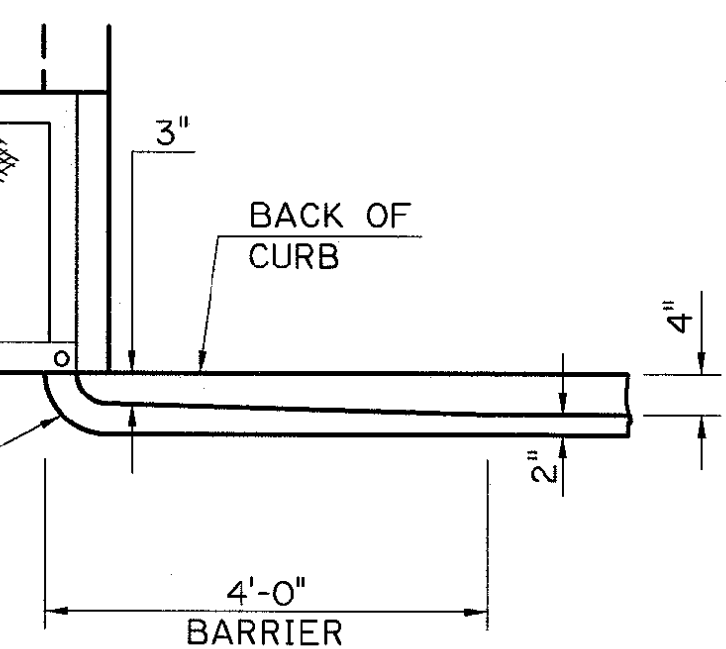
FOR GRATE AND FRAME DETAILS, SEE APPROPRIATE CATCH BASIN STANDARD PLAN OR SPECIAL DETAIL AND STANDARD PLAN MC-01.



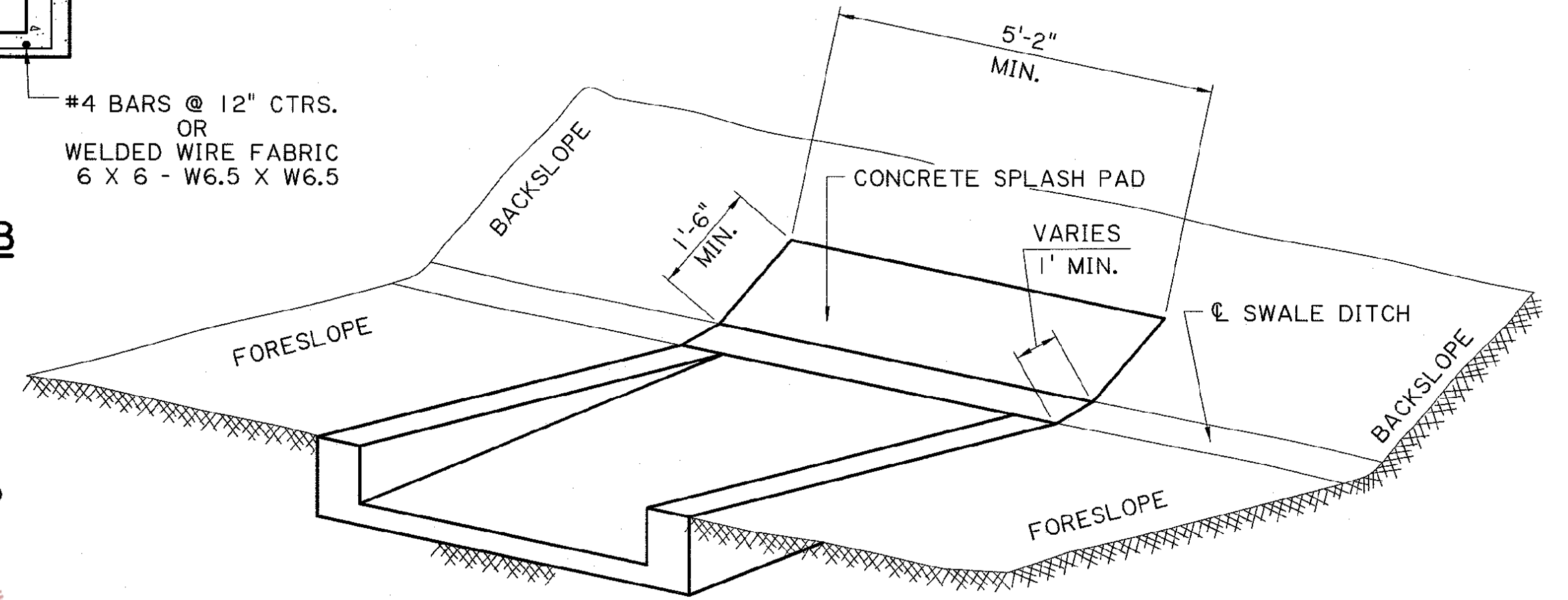
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



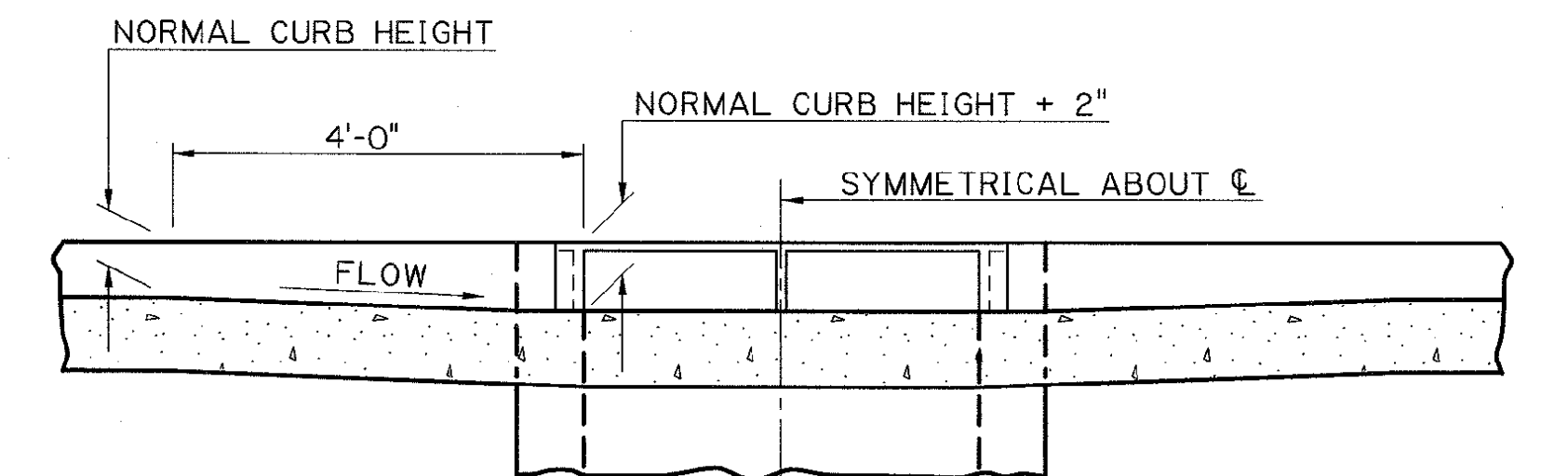
#4 BARS A
2" Ø PIN



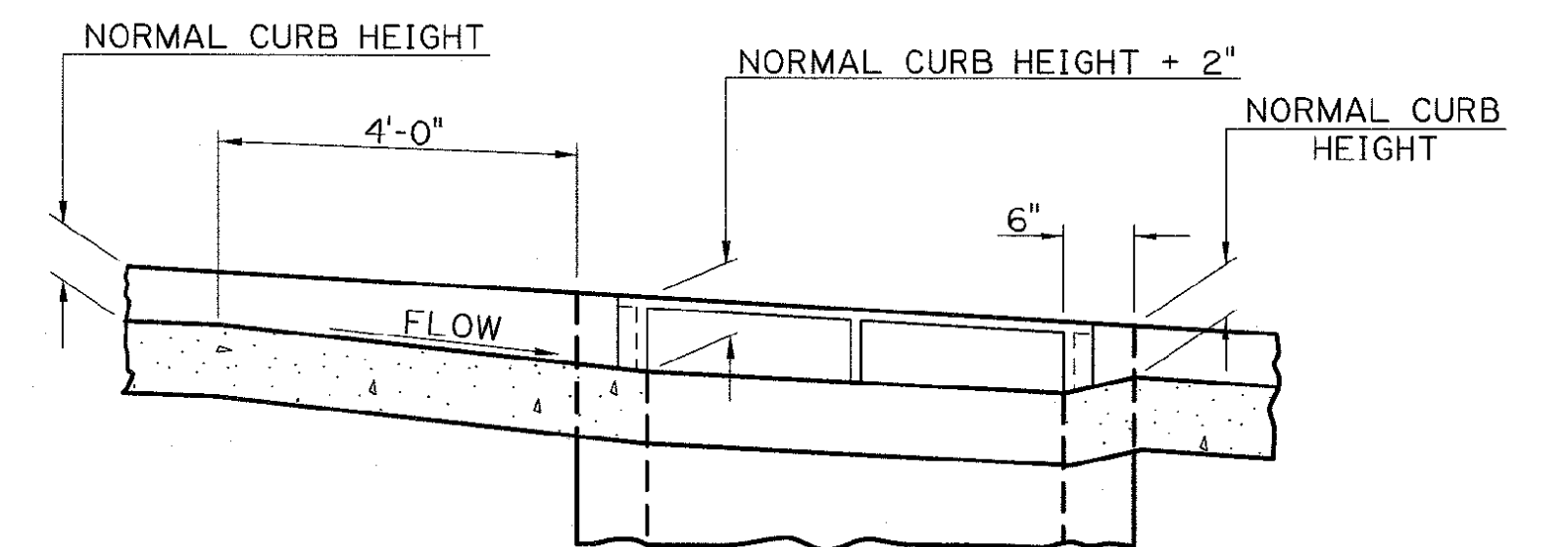
TRANSITION IN CURB WIDTH
(TYPICAL)



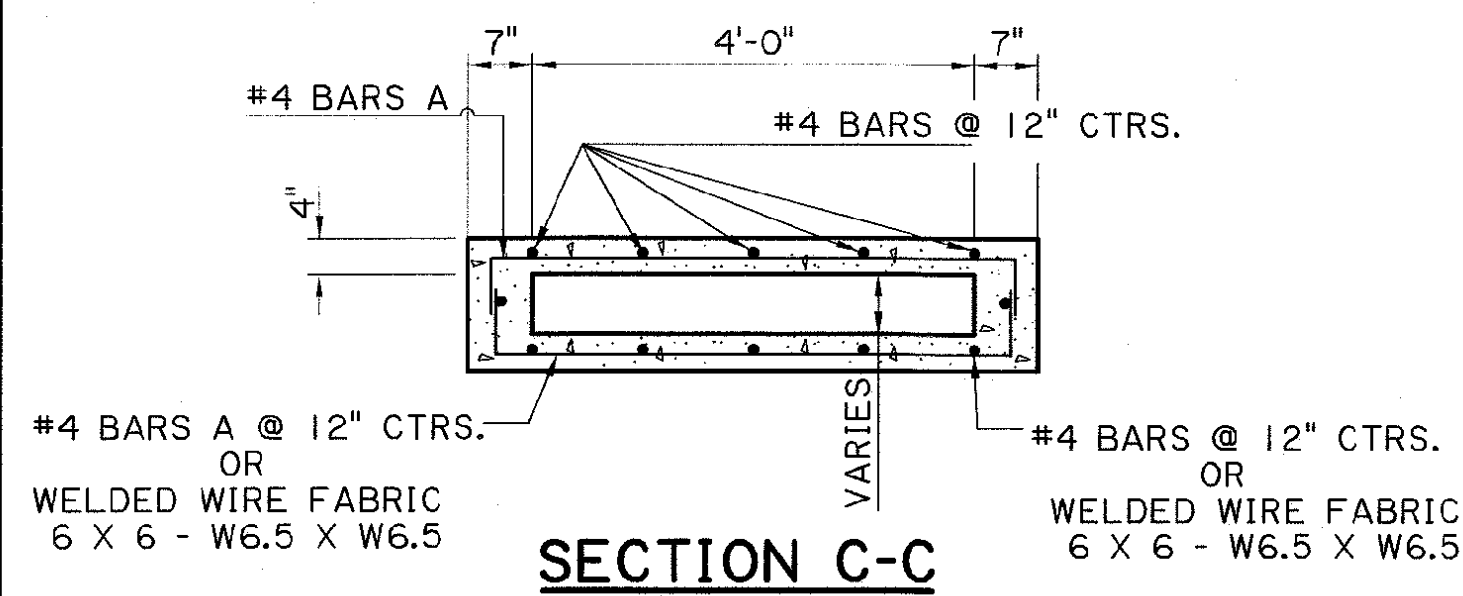
PARTIAL VIEW SHOWING PAVED GUTTER DRAIN WITHOUT DROP INLET



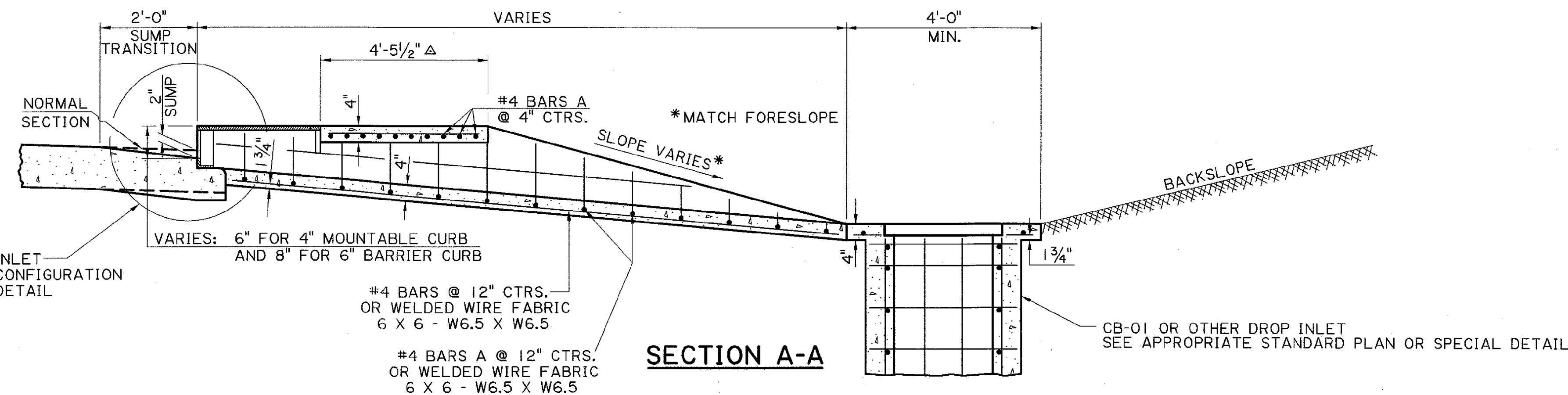
TRANSITION IN CURB HEIGHT GUTTER DRAIN AT LOW POINT



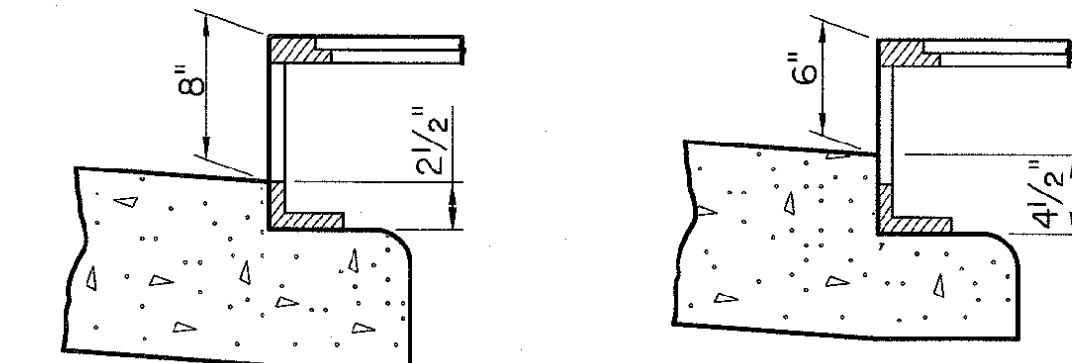
TRANSITION IN CURB HEIGHT GUTTER DRAIN ON A GRADE



SECTION C-C



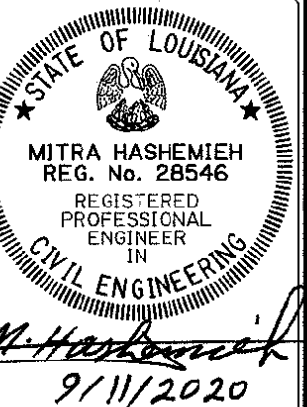
SECTION A-A



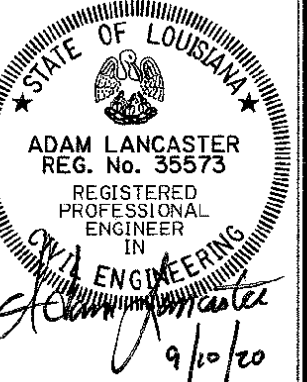
WHEN USED WITH 6" BARRIER CURB

WHEN USED WITH 4" MOUNTABLE CURB

INLET CONFIGURATION



HYDRAULICS

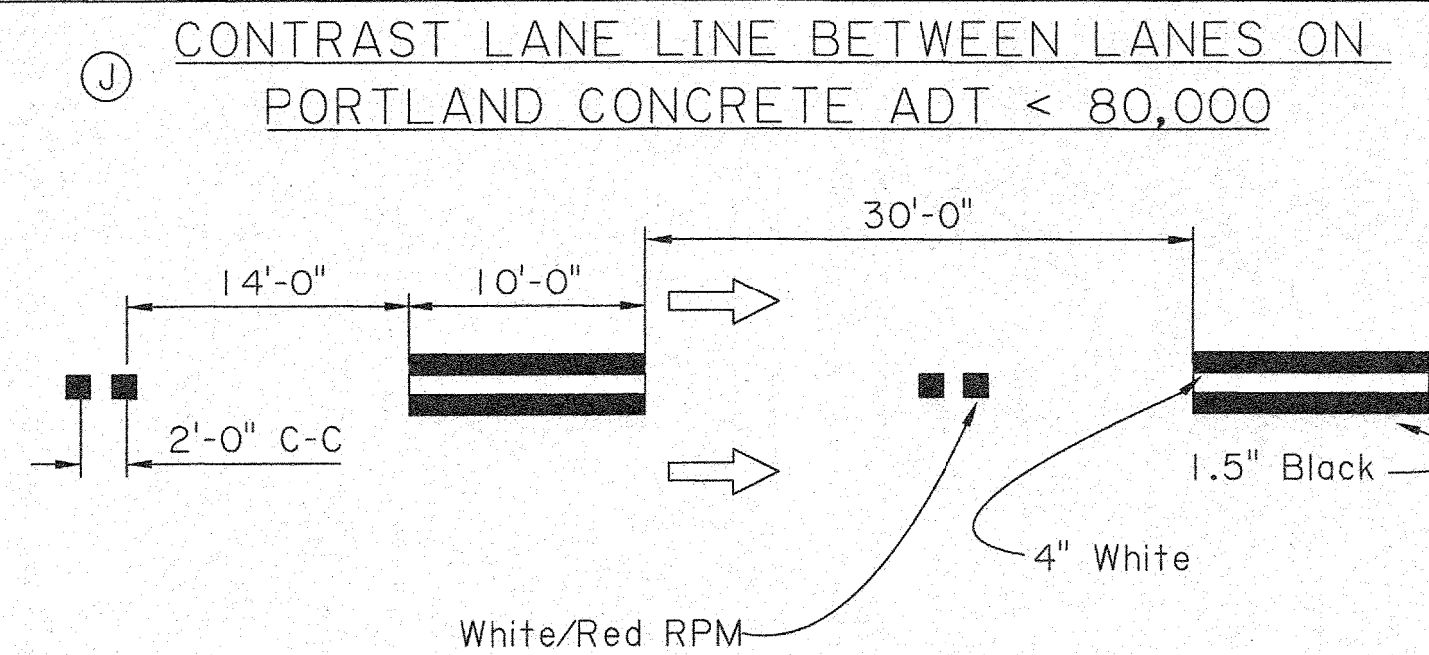
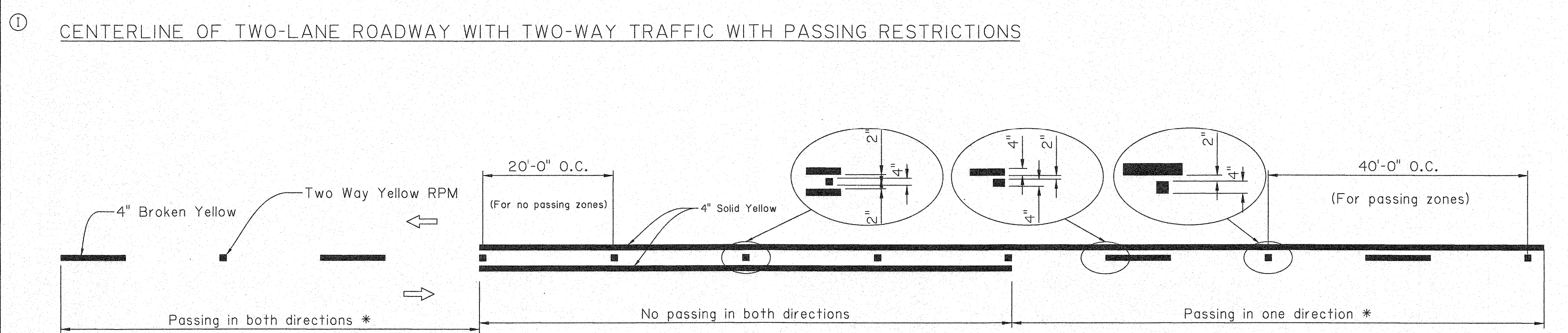
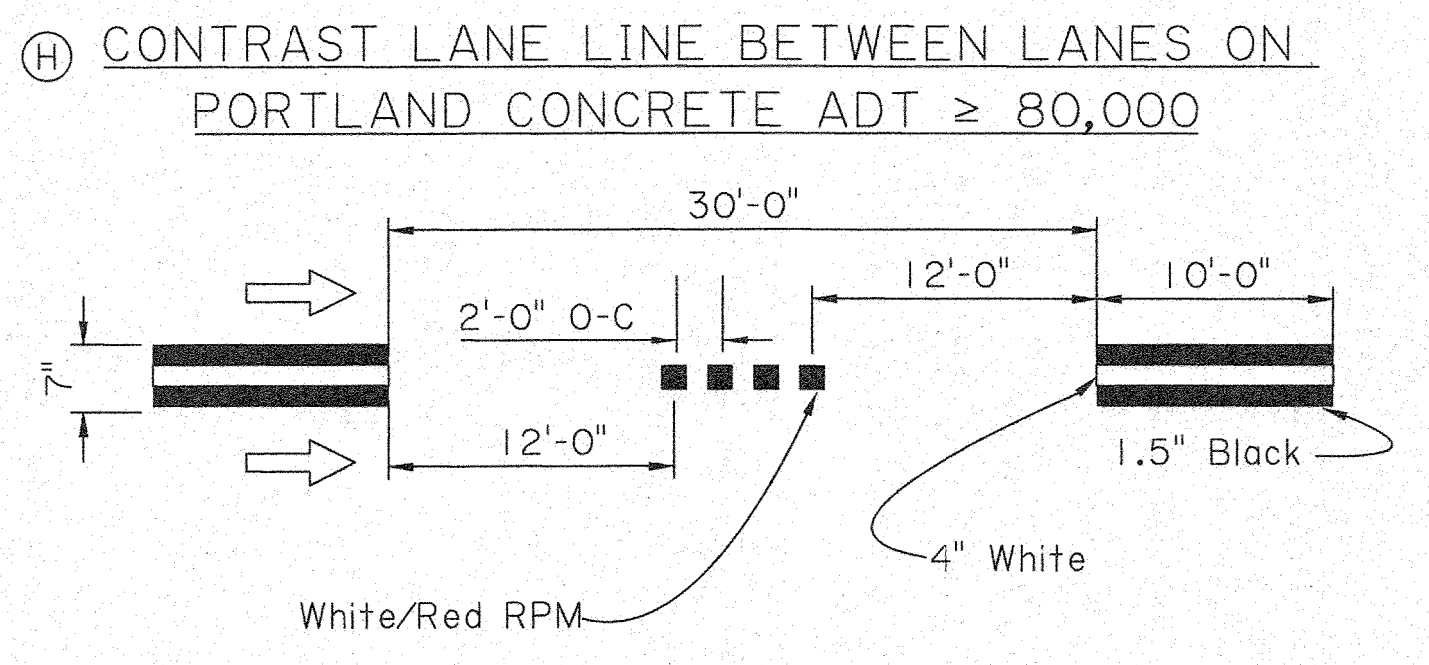
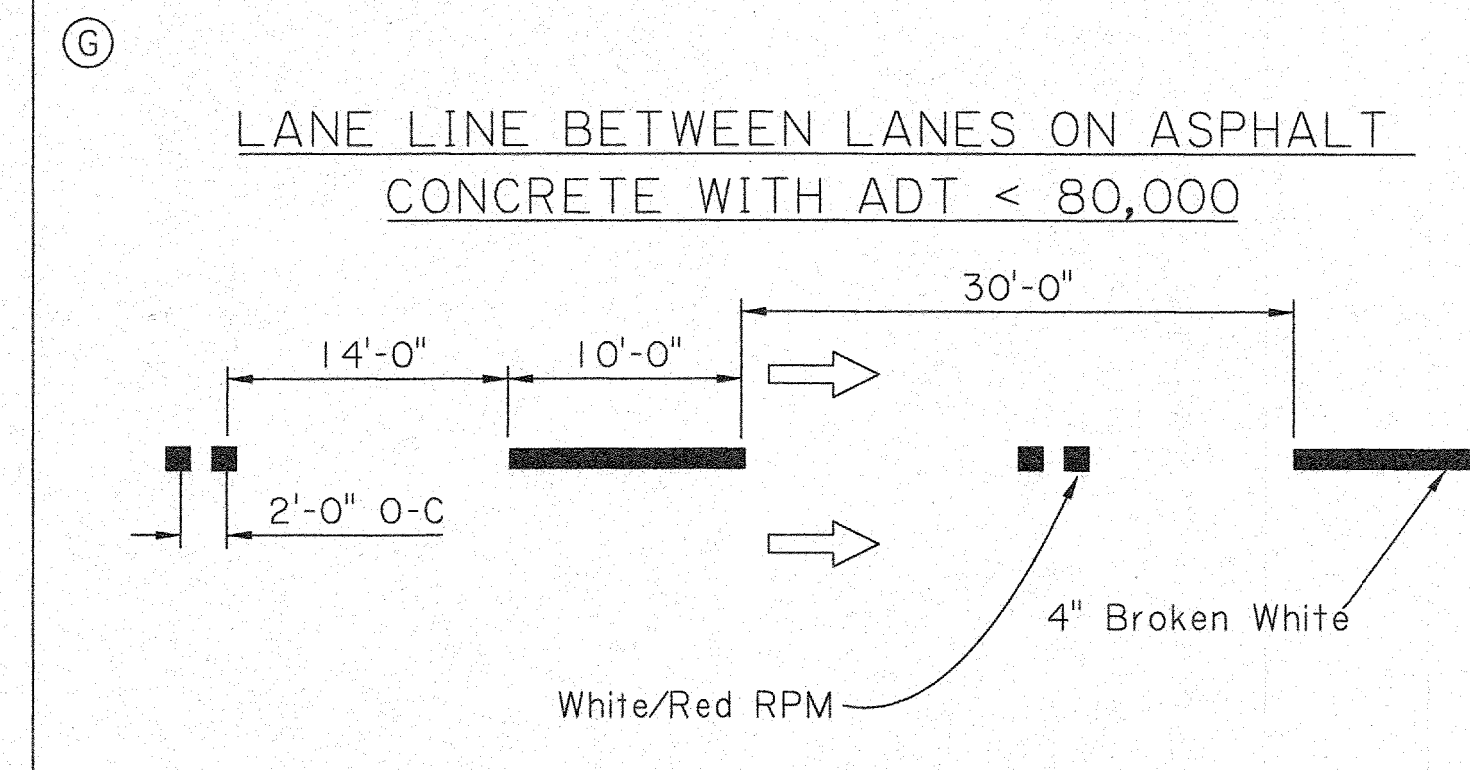
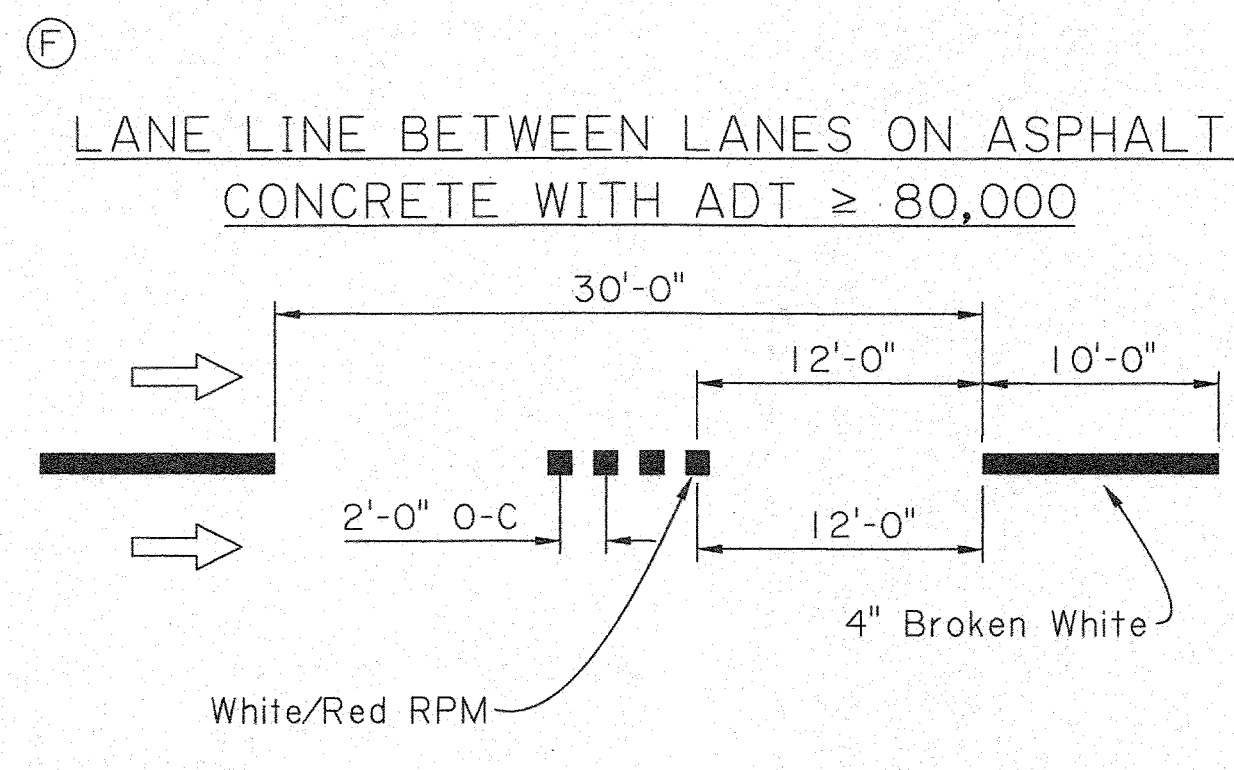
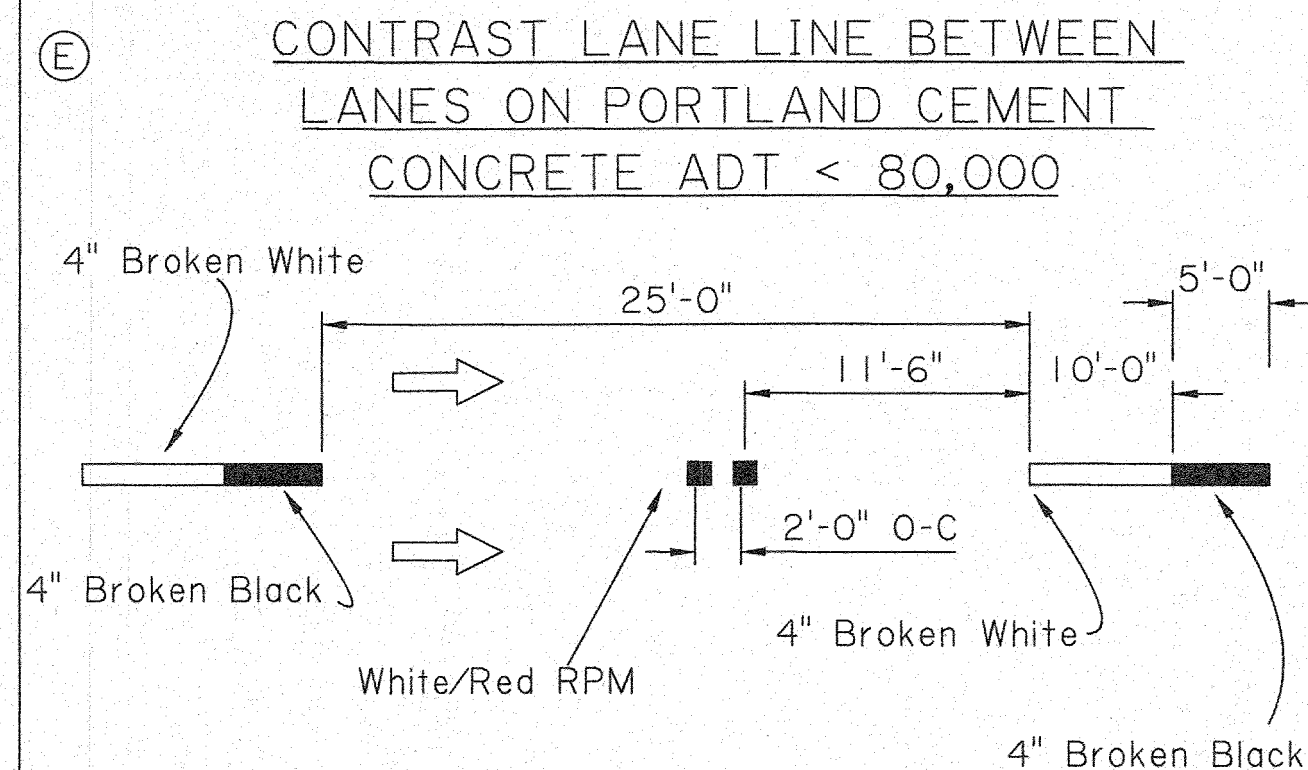
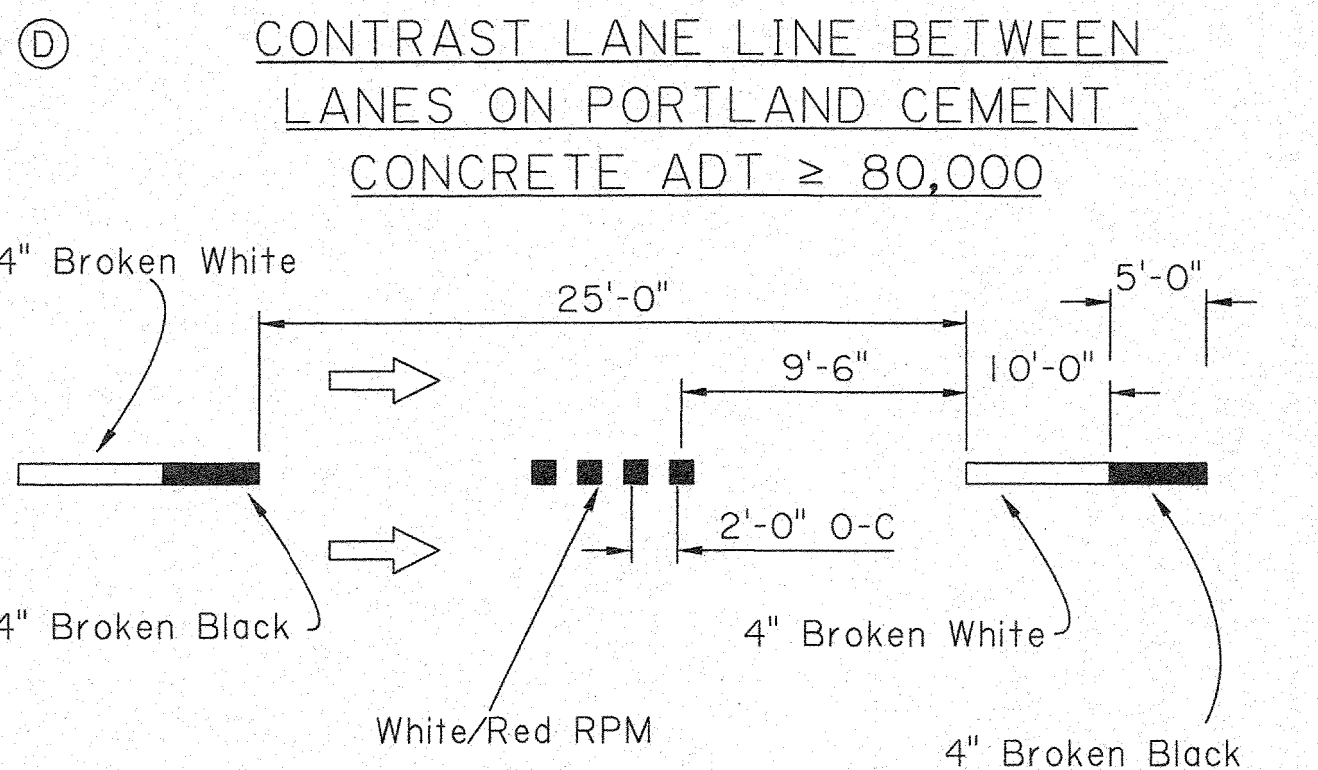
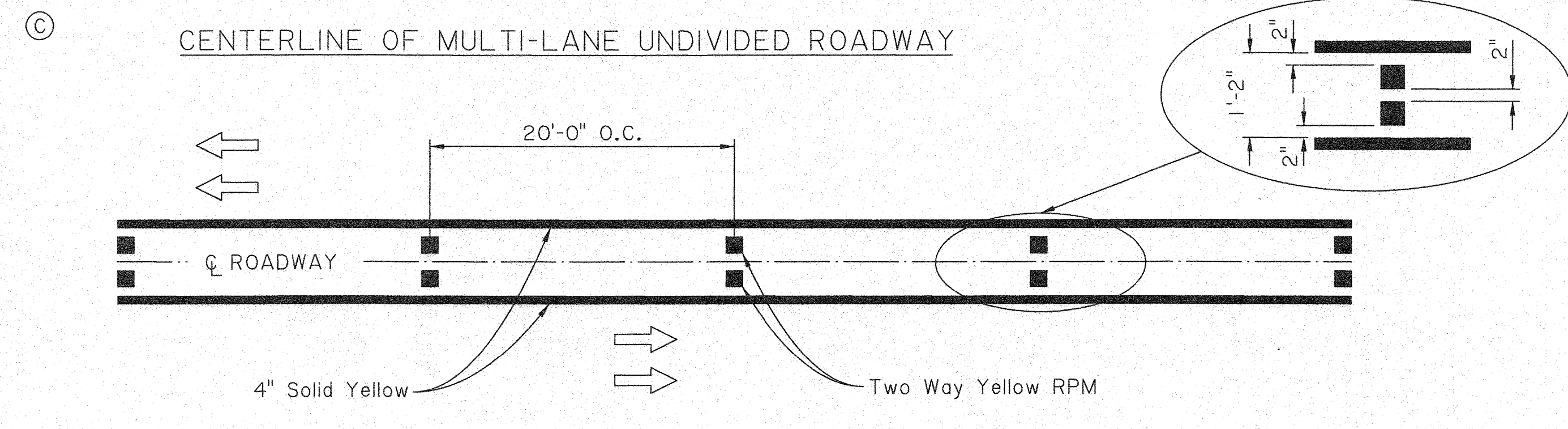
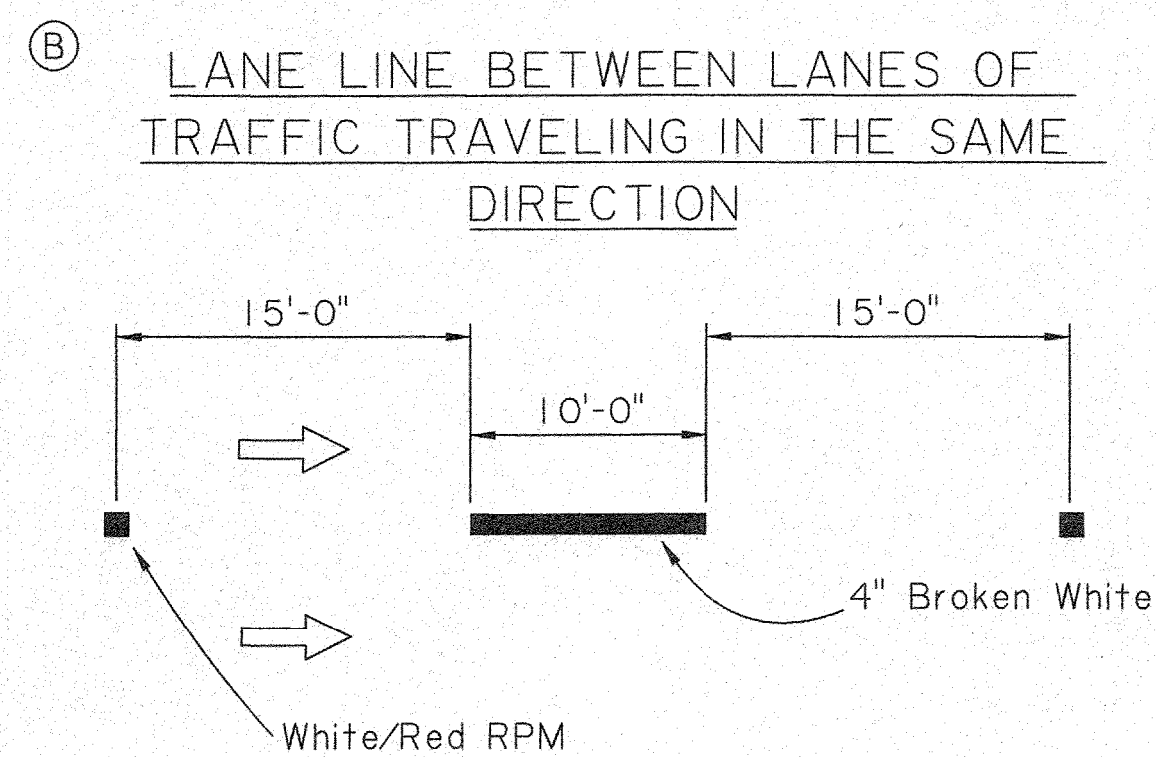
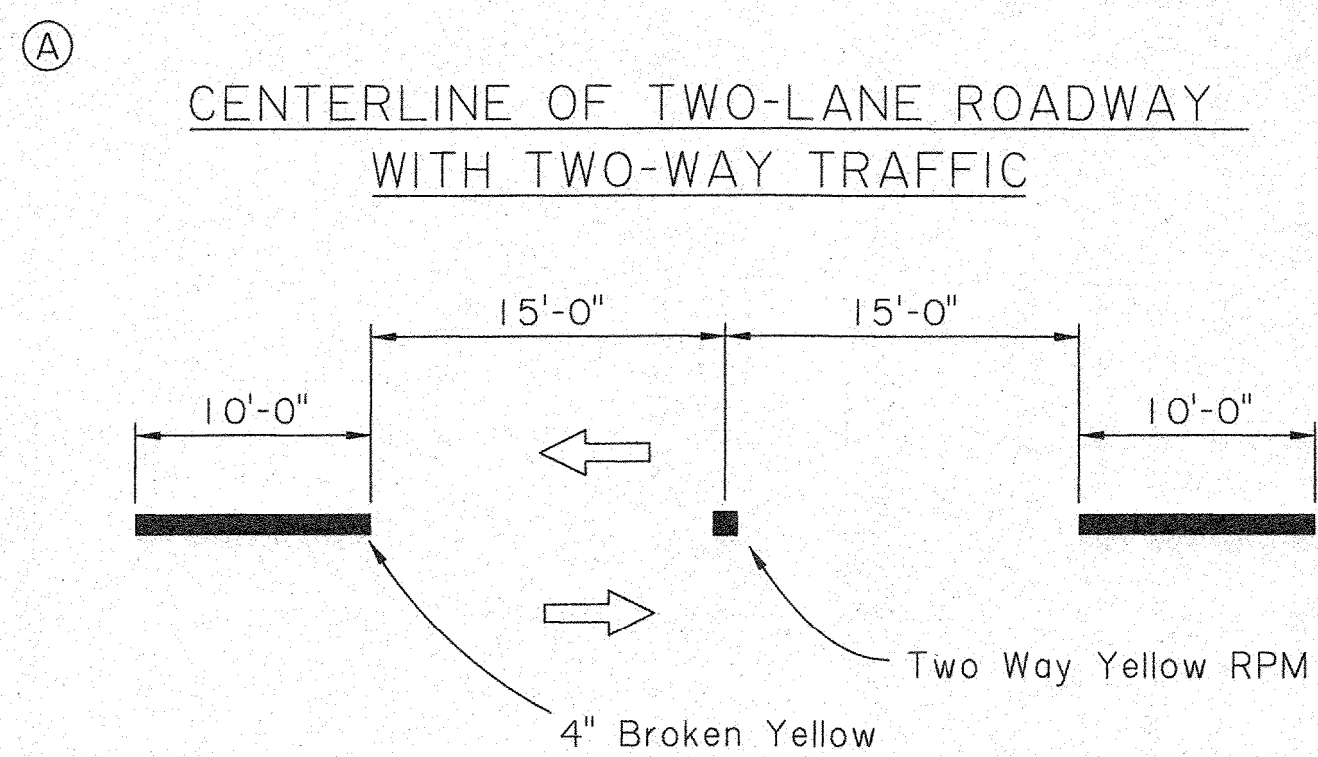


STRUCTURAL

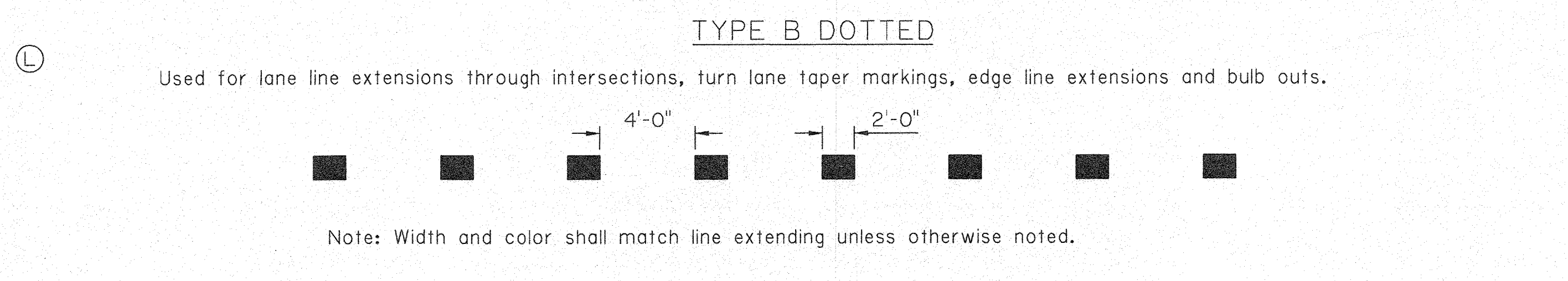
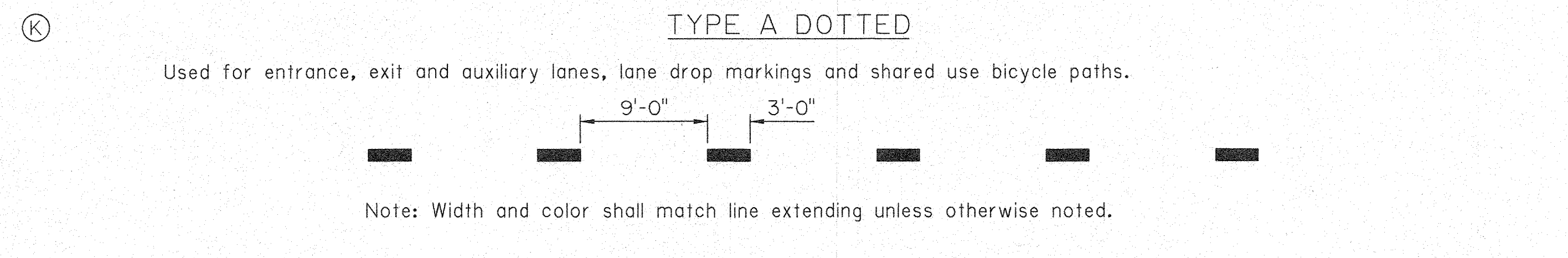
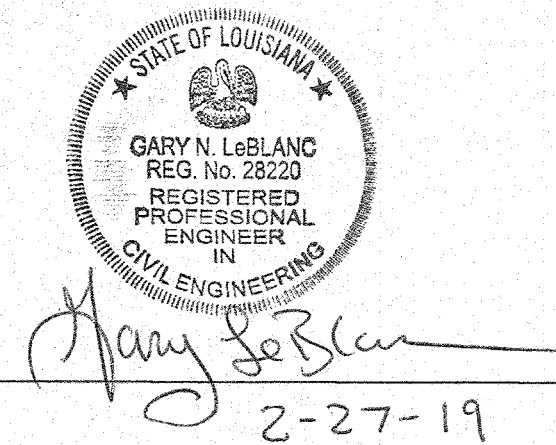
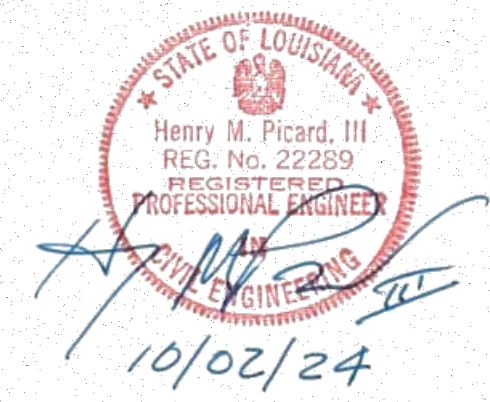
APPROVED BY CHIEF ENGINEER: *Christy D. Hardy* DATE: 9/22/2020



SINGLE PAVED GUTTER DRAIN WITH SIDEWALK
PG-DRAIN WITH SIDEWALK (SINGLE)



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



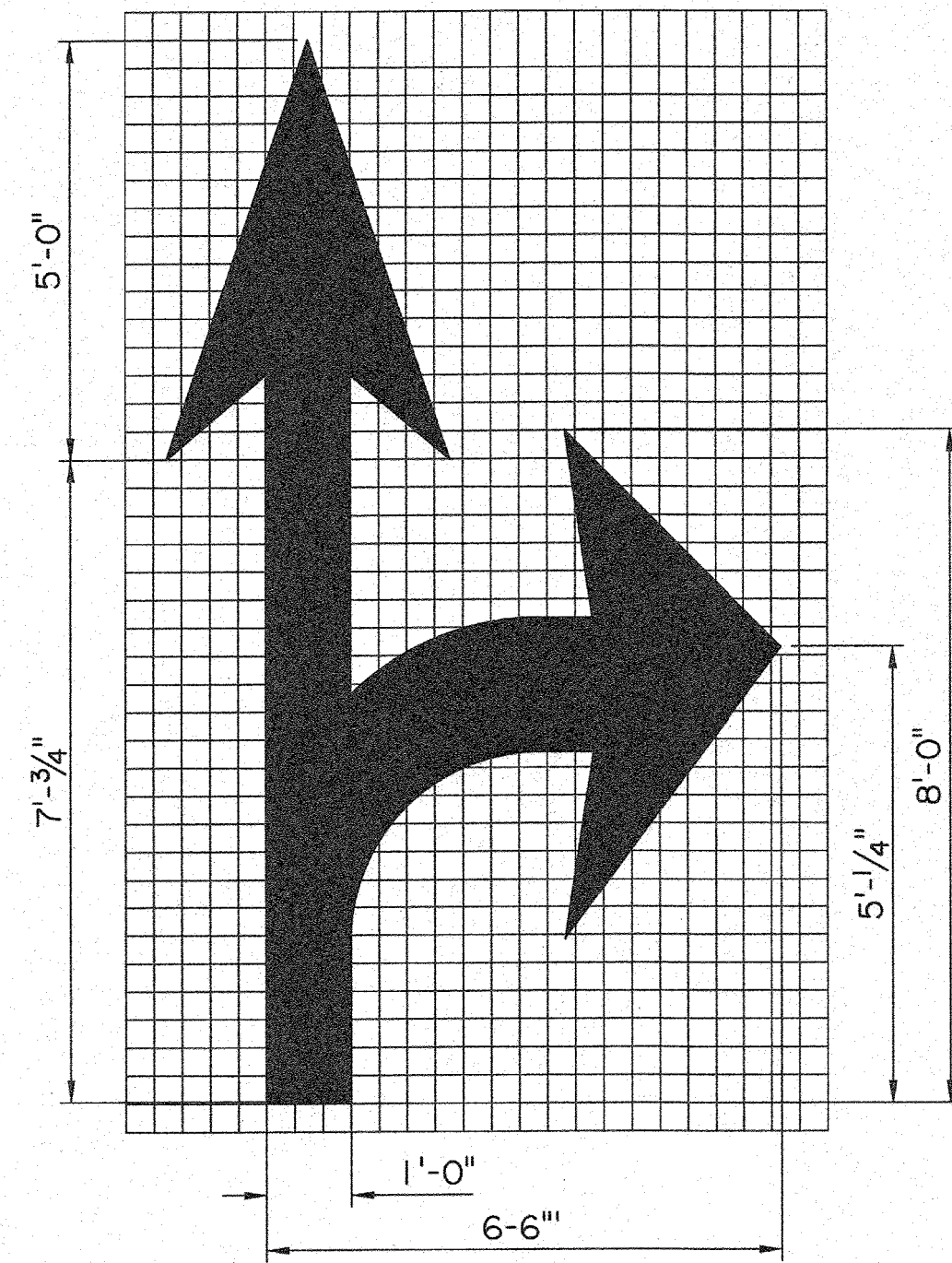
- GENERAL NOTES:**
- 4" Edge lines shall be placed on all roadways.
 - Place edge lines, centerlines and lane lines to avoid longitudinal joints as directed by the project engineer.
 - Edge lines in a curb and gutter section should be kept out of the gutter and clear from debris.
 - If rumble strips are used, striping details remain unchanged.
 - Centerlines shall be placed on roadways with a traveled way width of 16 feet or greater.
 - Where the clear width of a bridge is less than the clear width of the roadway, reflectorized pavement markers shall be placed adjacent to the edge line at 20' centers.
 - ⇒ indicates the direction of travel (not a pavement marker).
 - For non-interstate striping, use one Raised Reflectorized Pavement Marker.
 - White Reflectorized Pavement Marker faces same direction traffic and red faces opposing traffic.

SHEET NUMBER	355
DESIGNED BY	ST. TAMMANY
CHECKED BY	G. LEBLANC
DATE	2/28/19
CONTROL SECTION	K. WILLIAMS
STATE PROJECT	G. LEBLANC
APPROVED BY	Chief Engineer
DATE	2/28/19
PAVEMENT MARKING DETAILS	PM-01
Centerline and Edgeline Markings	
TRAFFIC ENGINEERING	

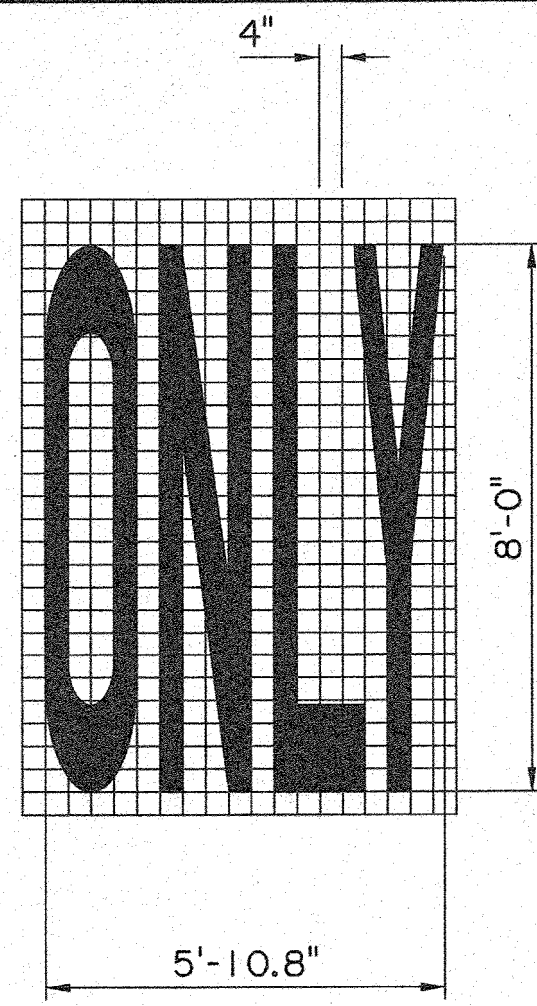
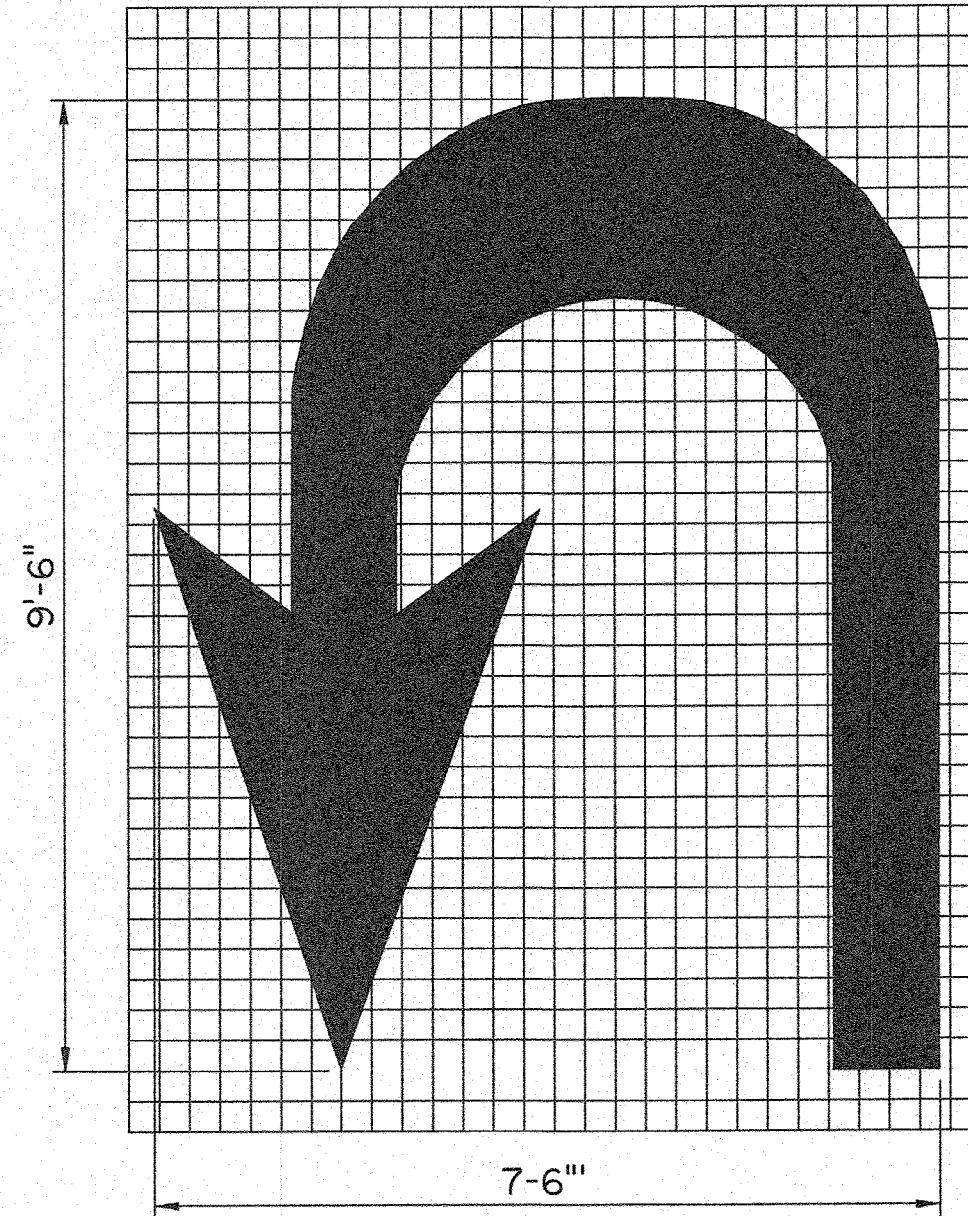
A TURN ARROW AND ONLY WORD MARKING

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

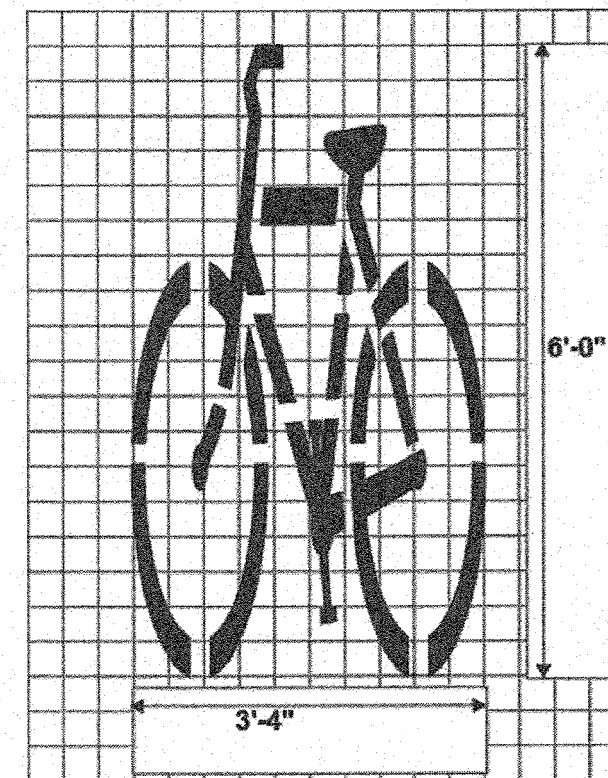
STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24



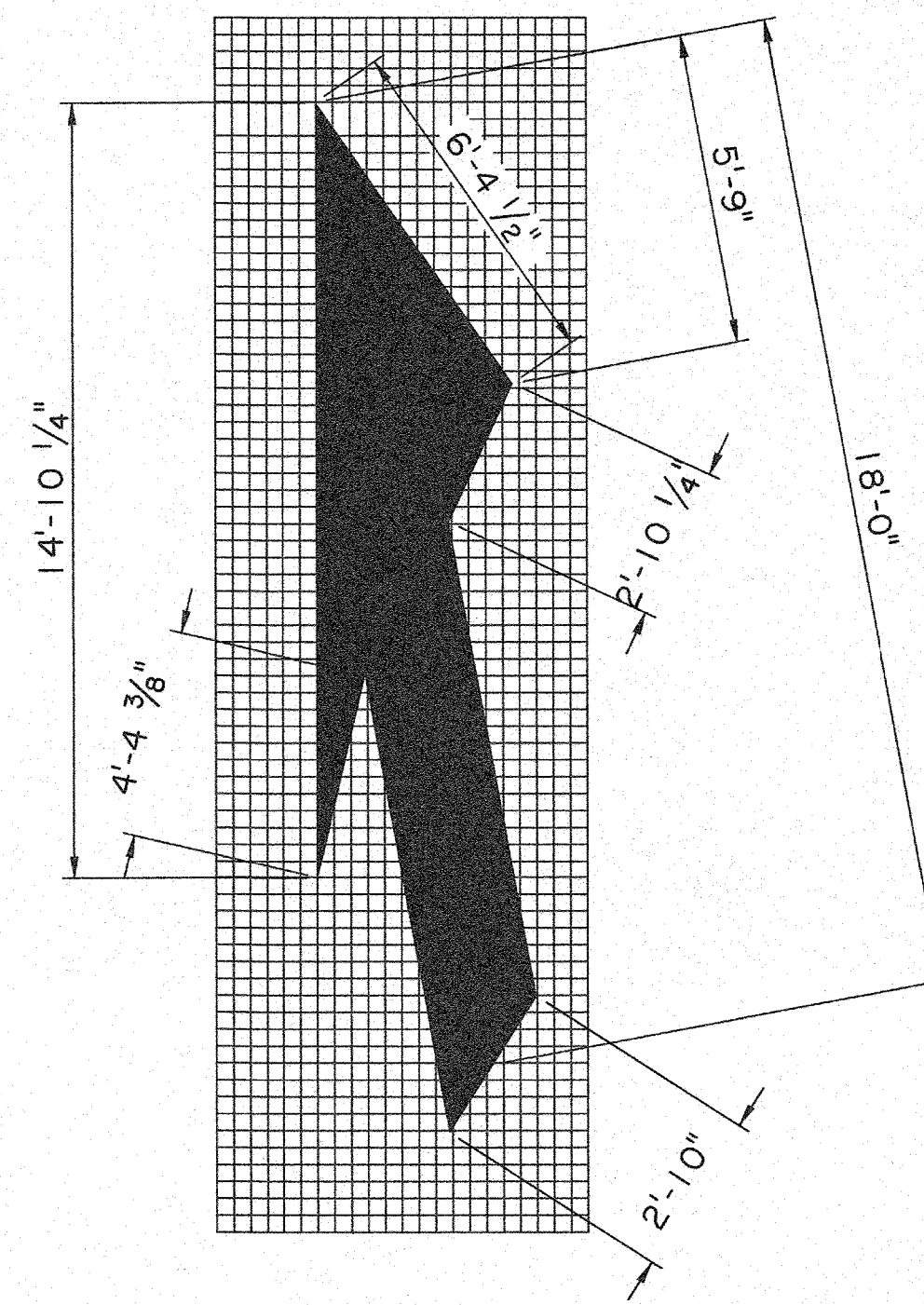
*For left turn arrow, use mirror image.



B BIKE SYMBOL

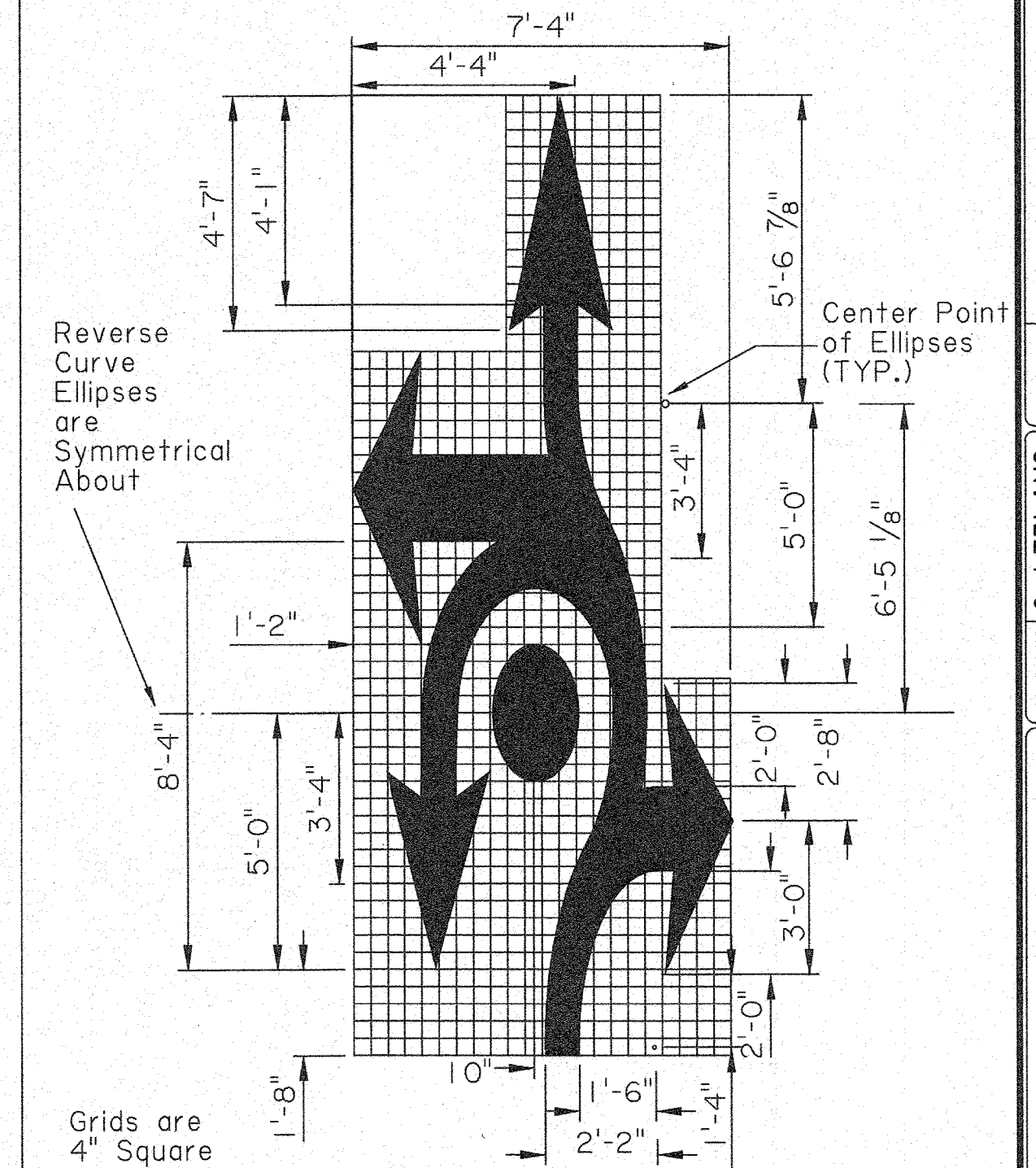


C LANE REDUCTION ARROW



*For left lane reduction, use mirror image.

D DIRECTIONAL ARROWS FOR ROUNDABOUTS (FISHHOOK)



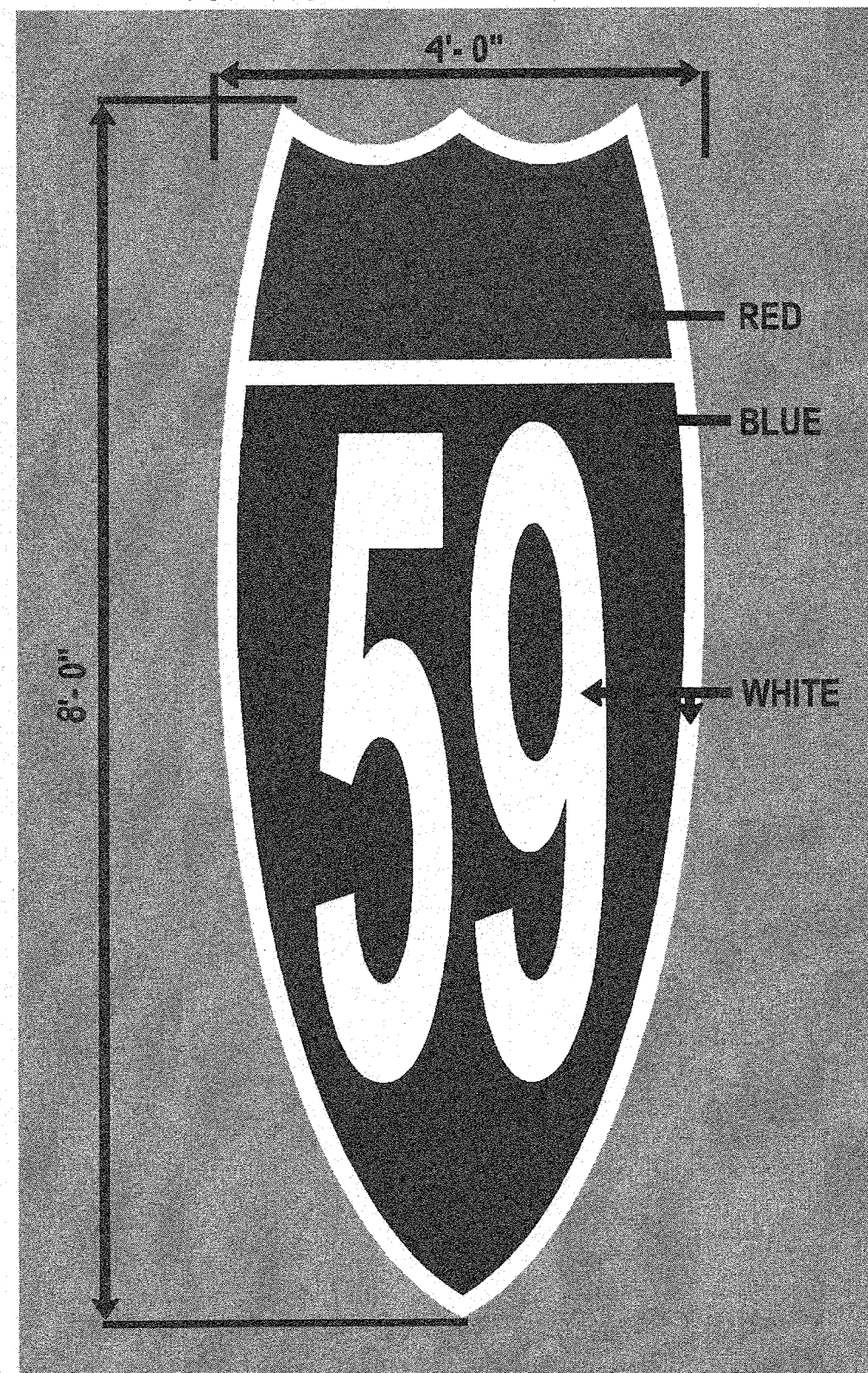
Reverse Curve Ellipses are Symmetrical About

Center Point of Ellipses (TYP.)

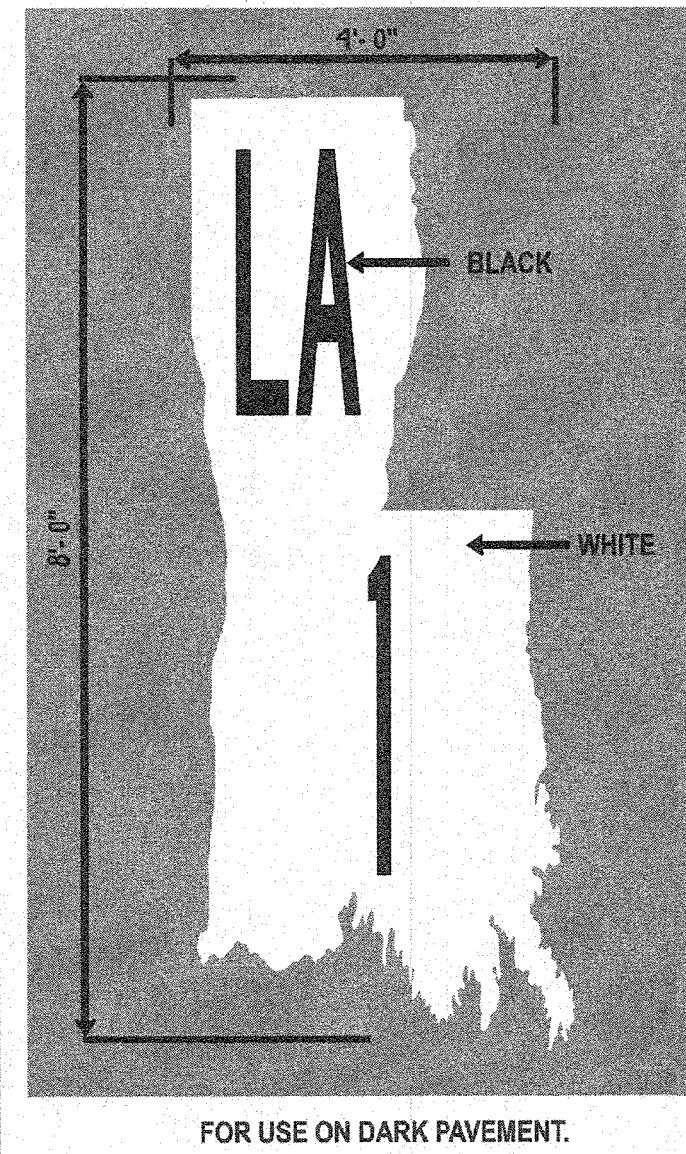
Grids are 4" Square
Assume Points Not Dimensioned to be Coincident with Grid Lines

Only Fishhook Combinations That Have Pay Items May Be Used.

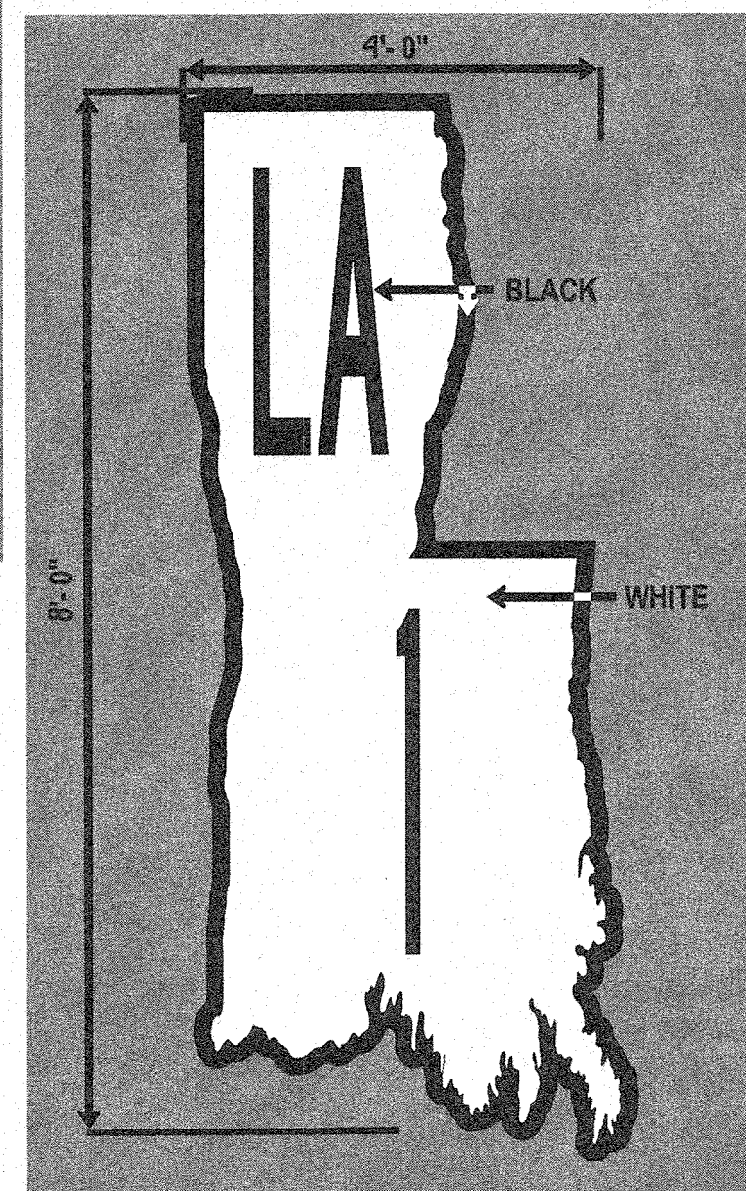
E INTERSTATE SHIELD for Non-Interstate Use



F STATE HIGHWAY SHIELDS for Non-Interstate Use

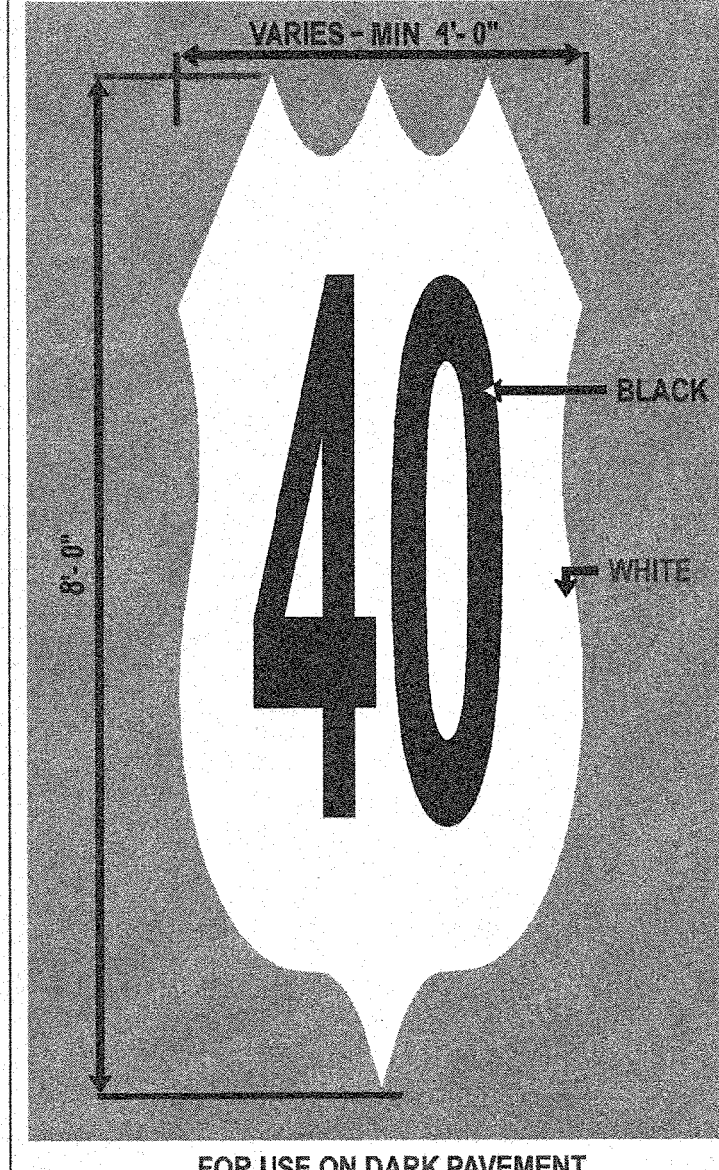


FOR USE ON DARK PAVEMENT.

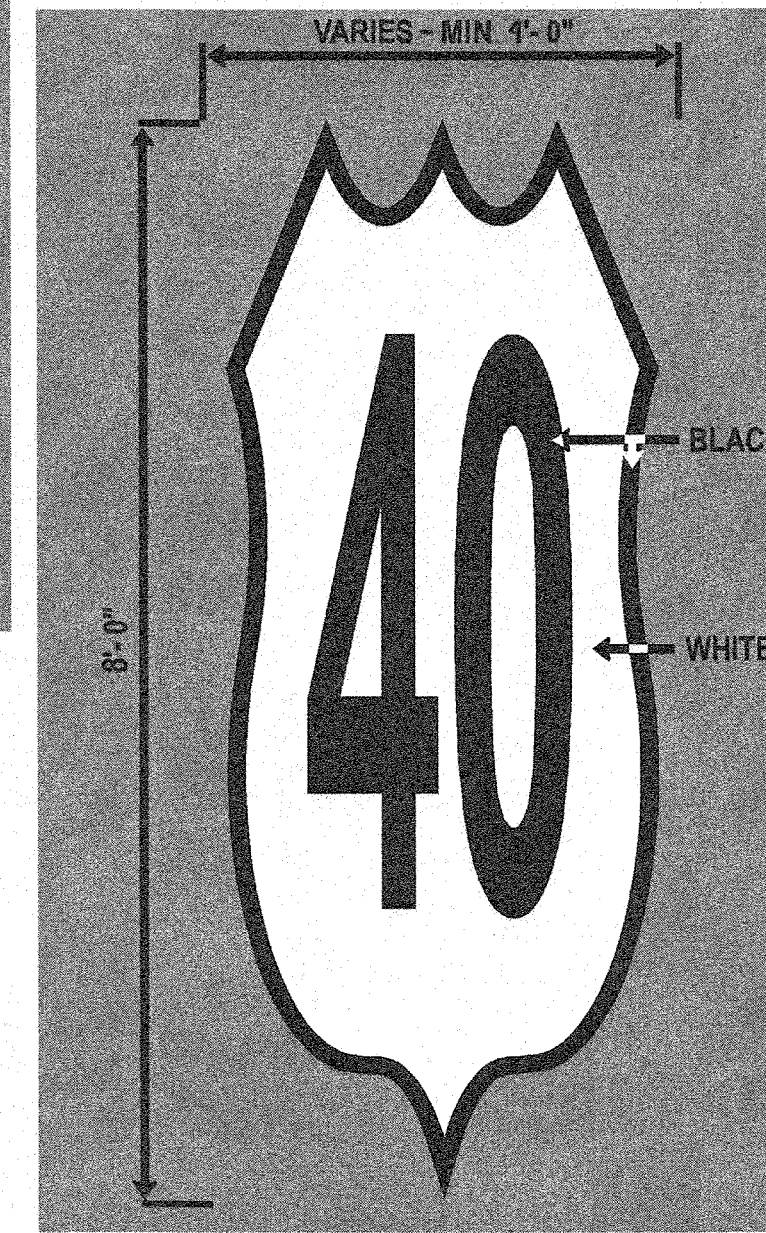


FOR USE ON LIGHT PAVEMENT.

G STATE HIGHWAY SHIELDS for Non-Interstate Use



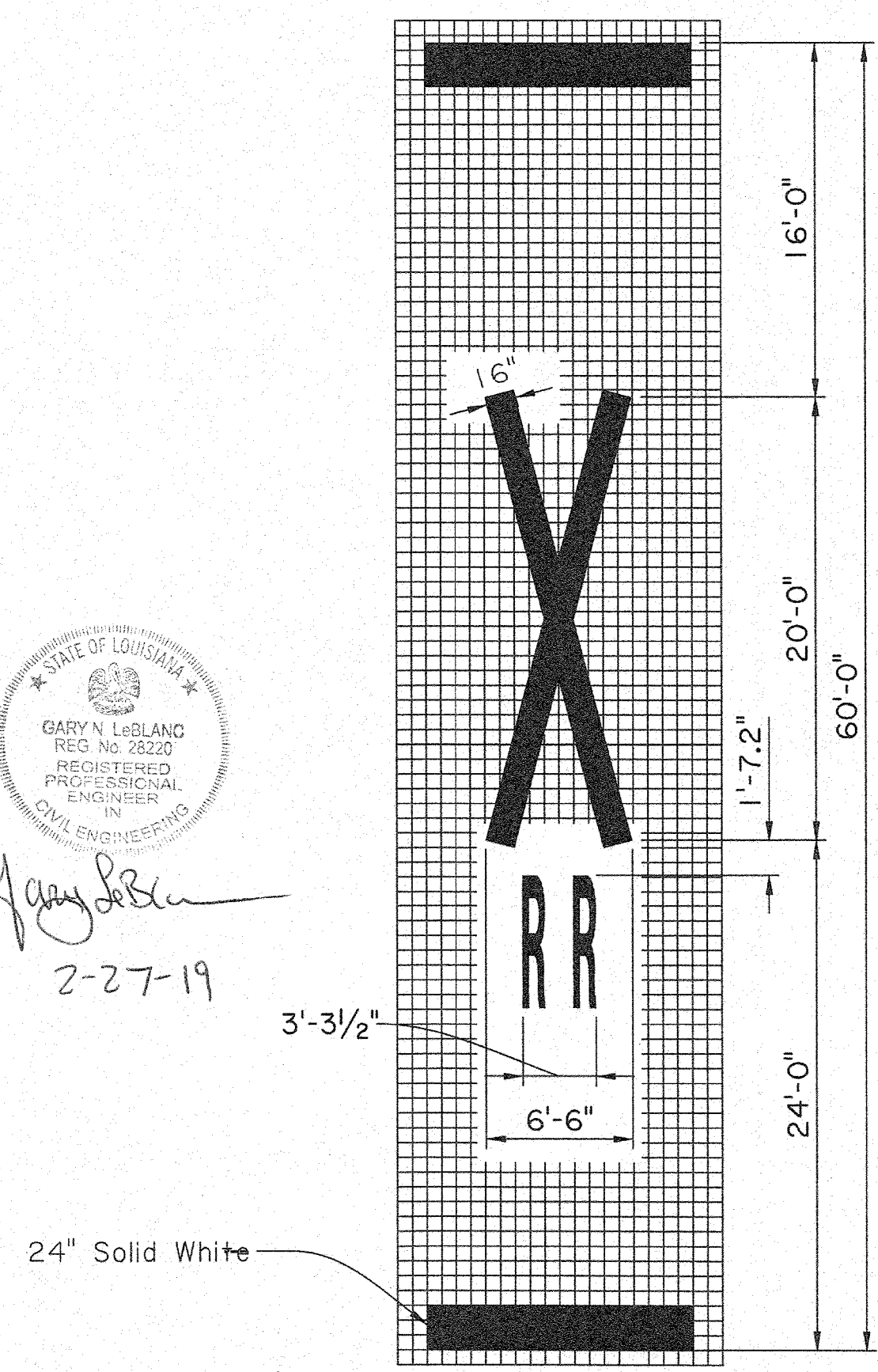
FOR USE ON DARK PAVEMENT.



FOR USE ON LIGHT PAVEMENT.

H RAILROAD CROSSING PAVEMENT MARKINGS


STATE OF LOUISIANA
GARY N. LESBLANC
REG. No. 22220
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
2-27-19

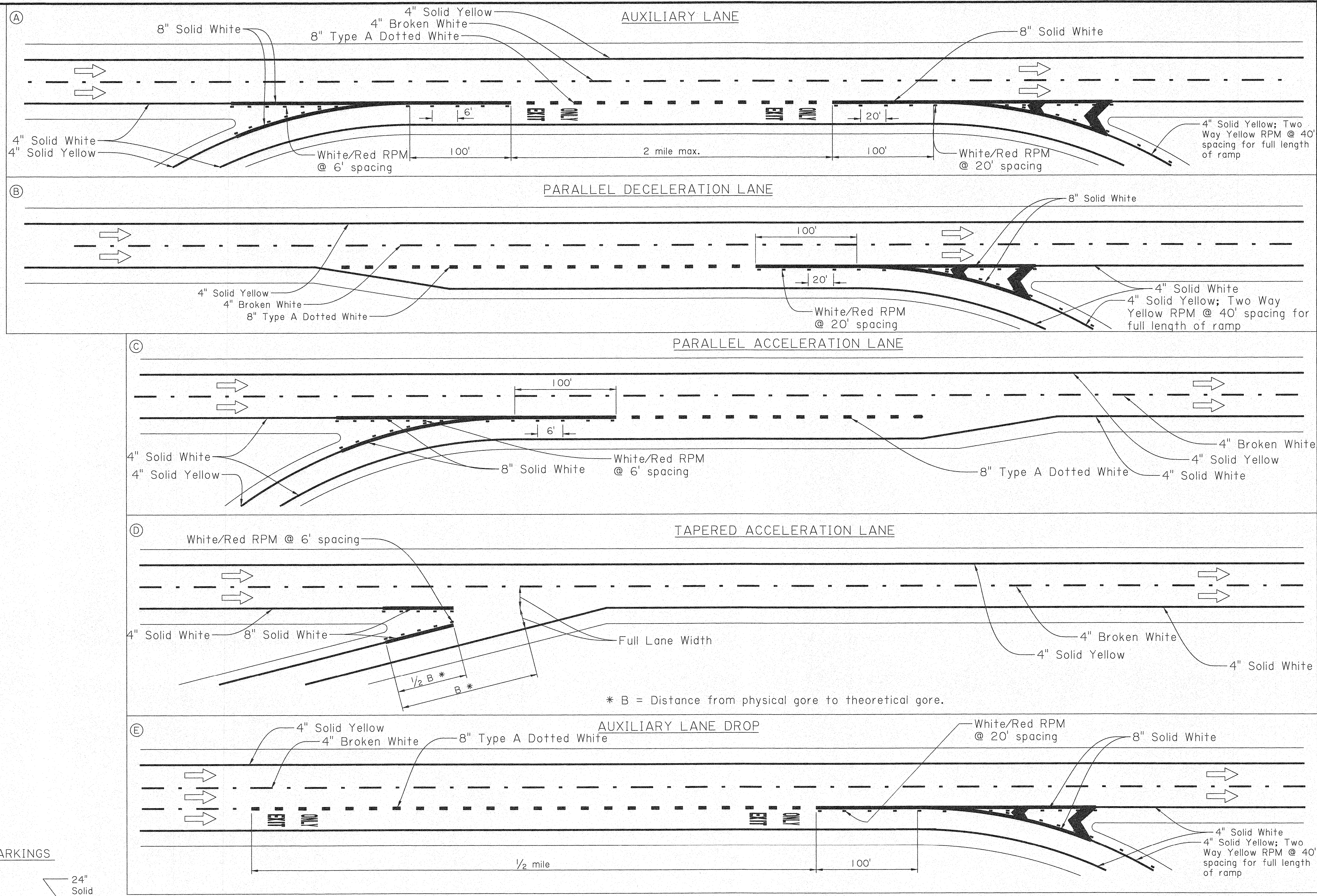


SHEET NUMBER	356
DESIGNED BY	G. LEBLANC
CHECKED BY	J. COLVIN
DATE	
DESIGNED BY	K. WILLIAMS
CHECKED BY	G. LEBLANC
DATE	
APPROVED BY	Chief Engineer
DATE	2/28/19
PROJECT	PAVEMENT MARKING DETAILS
STATE	LOUISIANA
SECTION	
PARISH	ST. TAMMANY
TRAFFIC ENGINEERING	

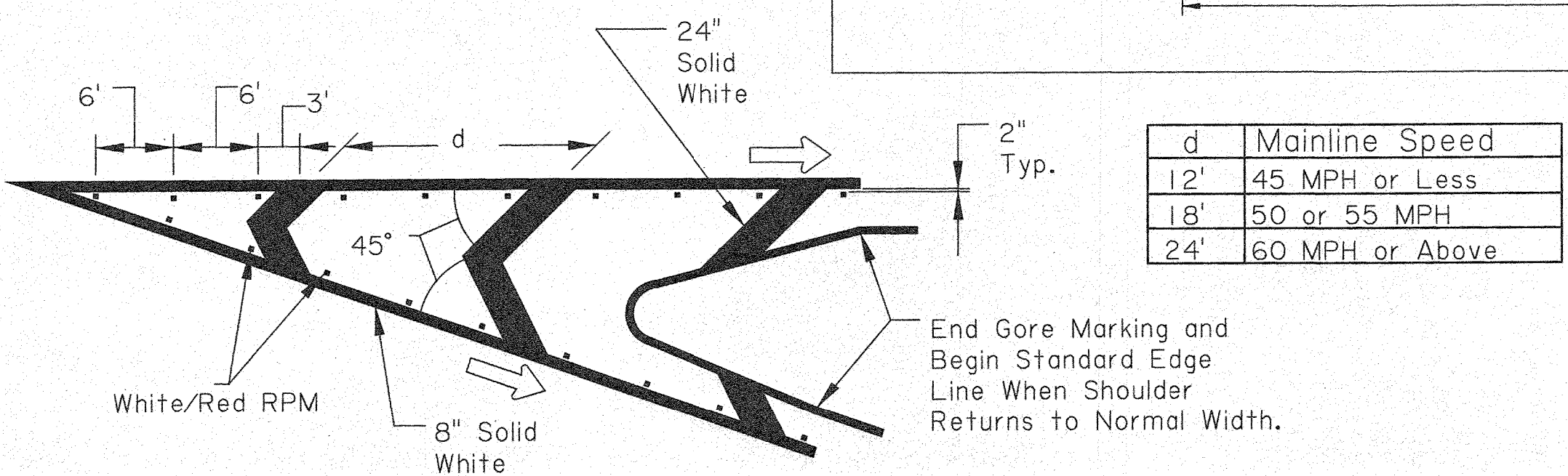
9/21/2020 09:52

IP_PWP:dms12298\PM-04.dgn

Note:
 indicates the direction of travel (not a pavement marker).



TYPICAL EXIT GORE MARKINGS



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/02/24

STATE OF LOUISIANA
 GARY N. LeBLANC
 REG. No. 28220
 REGISTERED PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 2-27-19

SHEET NUMBER **357**

PROJECT **ST. TAMMANY**

DESIGNED BY **G. LeBLANC** | CHECKED BY **J. COLVIN**

CONTROL SECTION **WILLIAMS** | CHECKED BY **G. LeBLANC**

DATE **2/23/19**

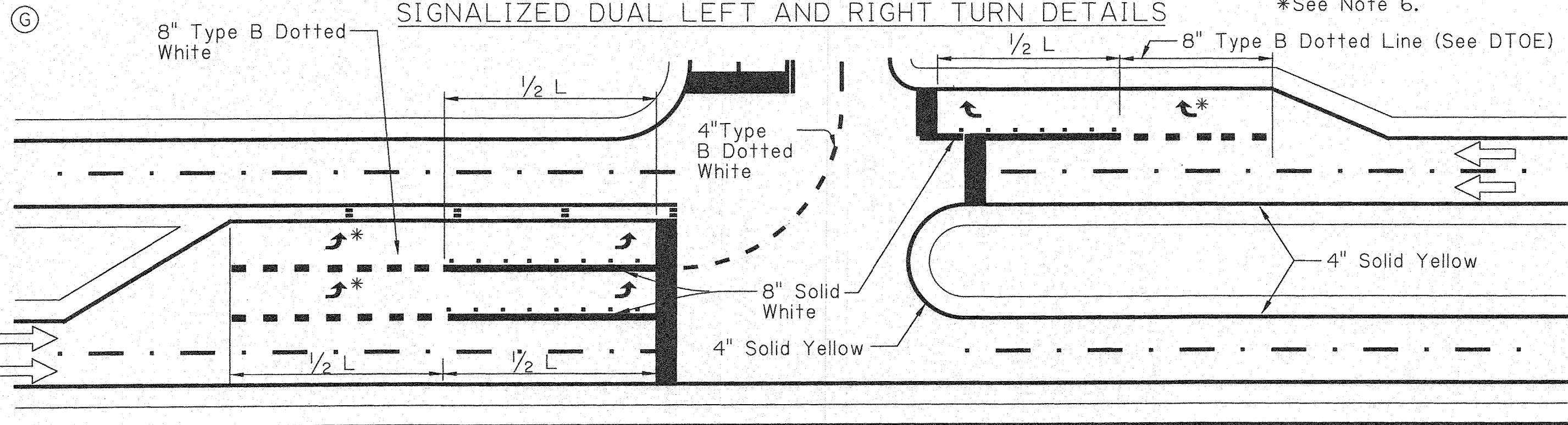
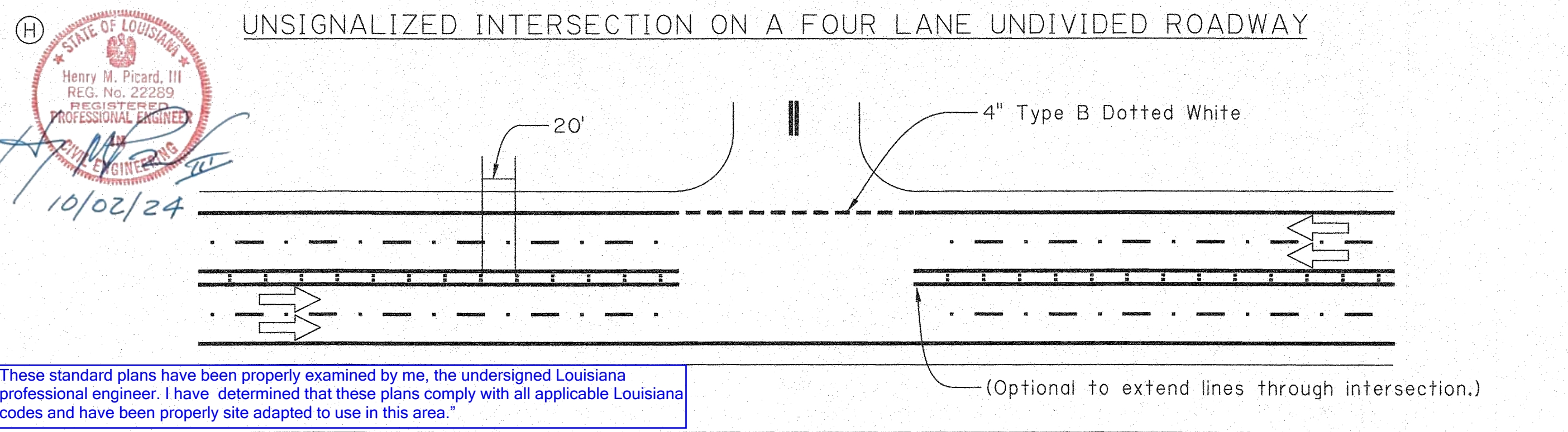
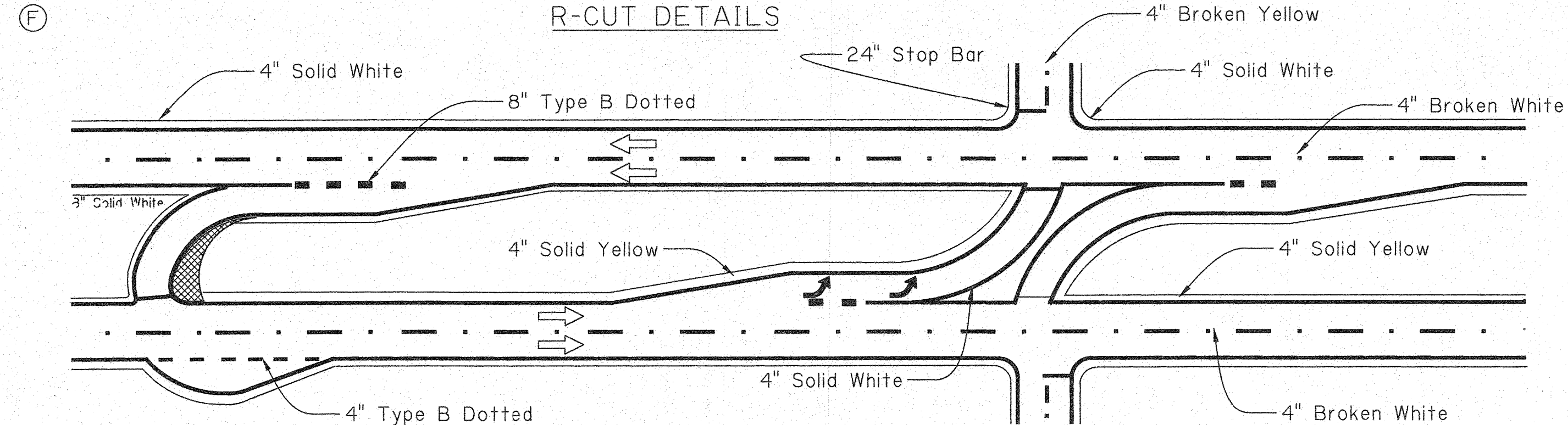
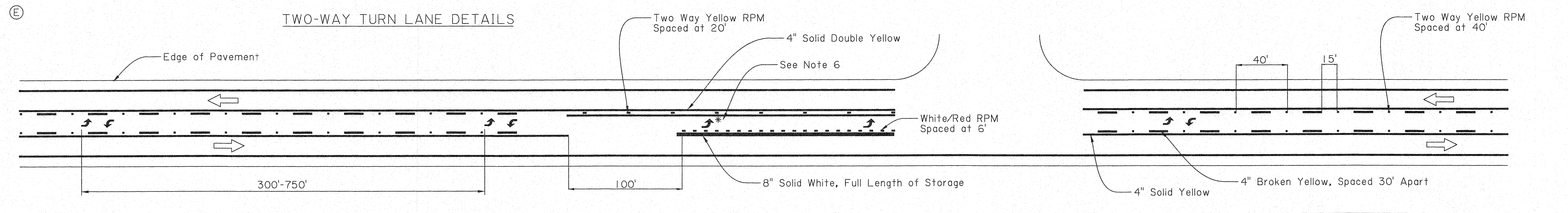
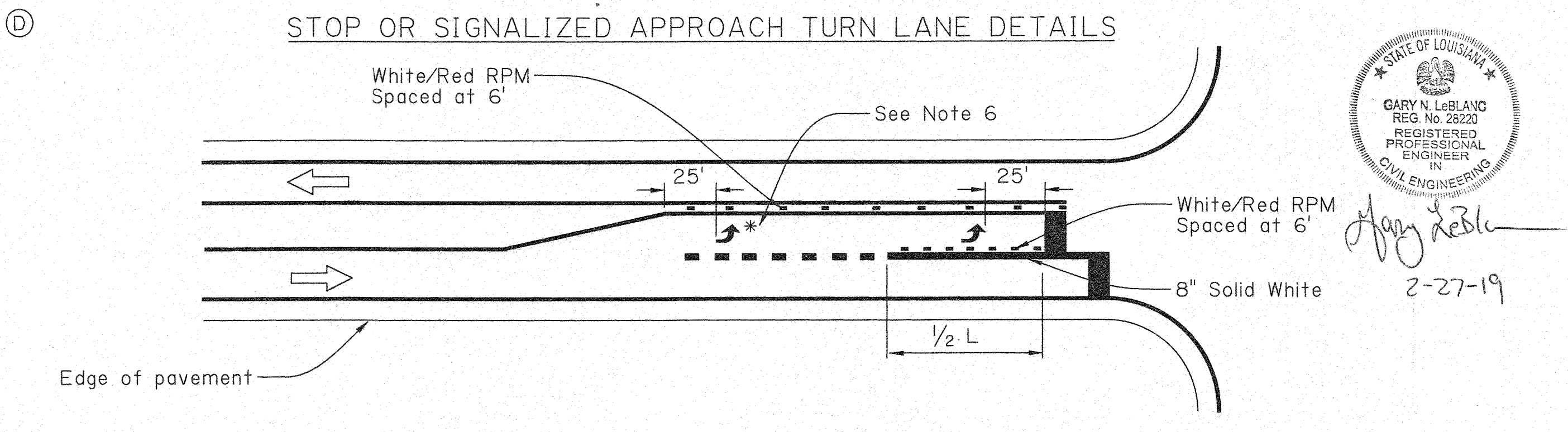
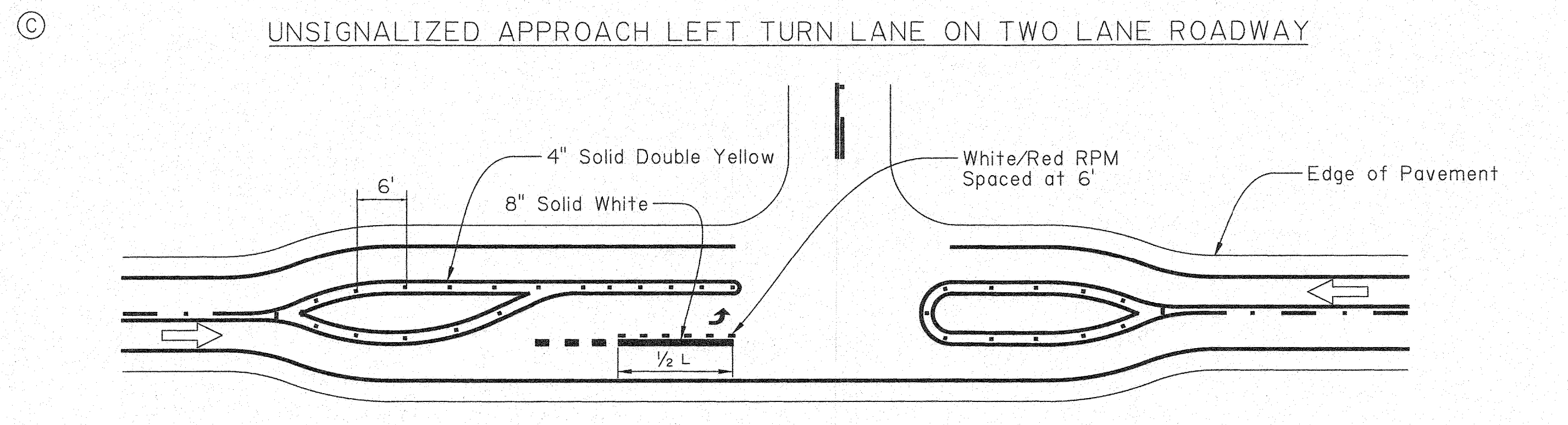
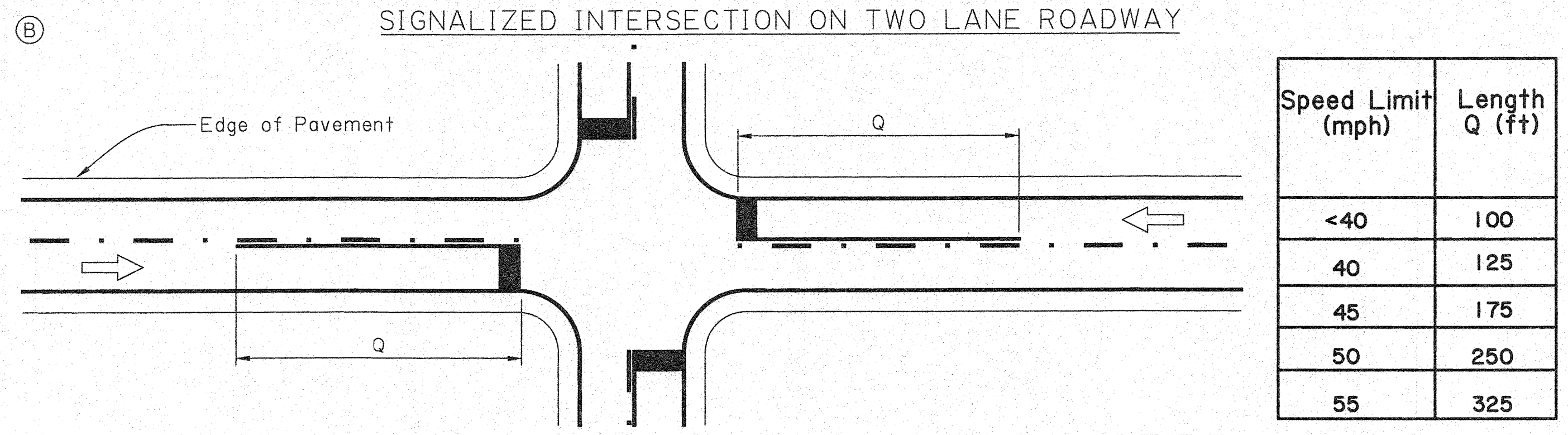
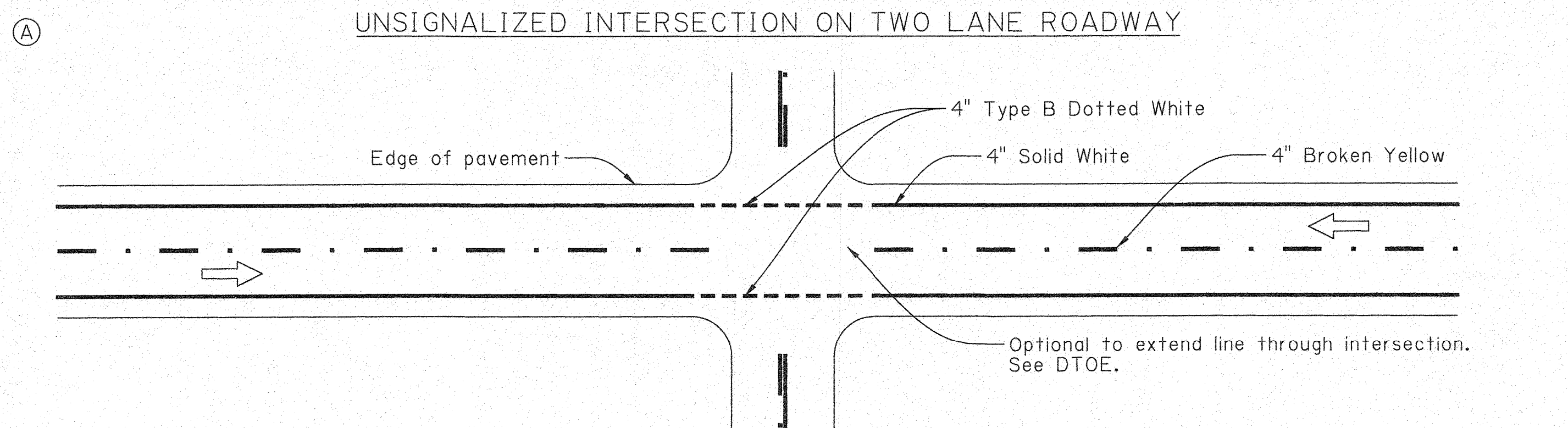
DATE **2/23/19**

APPROVED BY CHIEF ENGINEER *Christophe P. Kelly*

STATE OF LOUISIANA ENGINEERING BOARD

PM-04
 Auxiliary, Deceleration and Acceleration Lanes and Gore Striping Layouts
 PAVEMENT MARKING DETAILS

TRAFFIC ENGINEERING



GENERAL NOTES:

1. If the minor street has edge lines, the edge lines on the major street shall wrap to meet the edge lines on the minor street.
2. Stop bars shall be 24". Stop bars shall not be placed at a distance greater than 30 feet or less than 4 feet from the nearest edge line. Stop bars at right turn lanes should be placed to provide adequate sight distance for right turning traffic.
3. The location of stop bars at left turn lanes should be determined by the turning radius needed by the side street vehicles.
4. See PM-01 for centerline and lane line details.
5. The ONLY word marking shall be used when a through lane terminates as a turn lane.
6. The asterisk (*) indicates that 2nd arrow is optional. If more than two arrows are used, minimum spacing should be 150'.
7. Edge lines should not be broken for driveways.
8. indicates the direction of travel (not a pavement marker).
9. L equals the full length of turn lane.
10. Use of dotted lines require DTOE approval.

SHEET NUMBER **358**

DESIGNED BY **G. LEBLANC**

CHECKED BY **J. COLVIN**

DATE **2/28/19**

PROJECT **ST. TAMMANY**

CONTROL SECTION **K. WILLIAMS**

STATE PROJECT

DESIGNED BY **G. LEBLANC**

CHECKED BY **G. LEBLANC**

DATE **2/28/19**

PROJECT **ST. TAMMANY**

CONTROL SECTION **K. WILLIAMS**

STATE PROJECT

DATE **2/28/19**

APPROVED BY **Chief Engineer**

Professional Engineer Seal: **GARY N. LEBLANC**, REG. No. 28220, REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING.

Professional Engineer Seal: **Henry M. Picard, III**, REG. No. 22289, REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING.

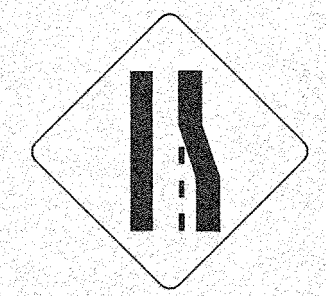
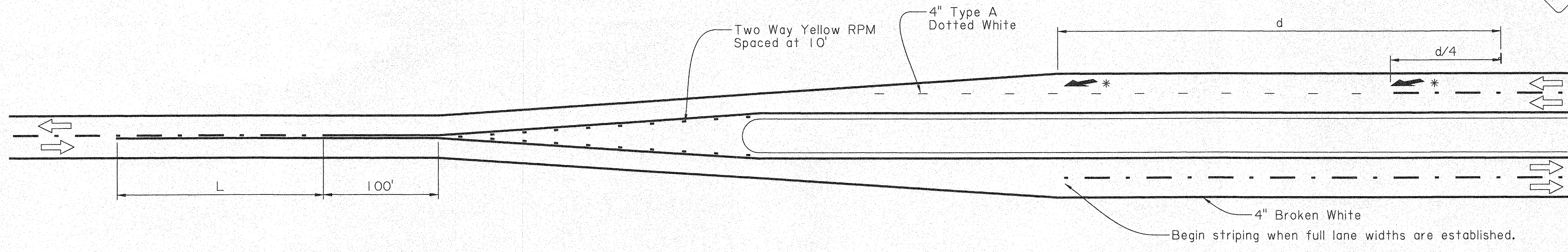
PM-05 Typical Intersection Striping Layouts

PAVEMENT MARKING DETAILS

DOTD TRAFFIC ENGINEERING

(A)

TWO LANE TO FOUR LANE DIVIDED HIGHWAY

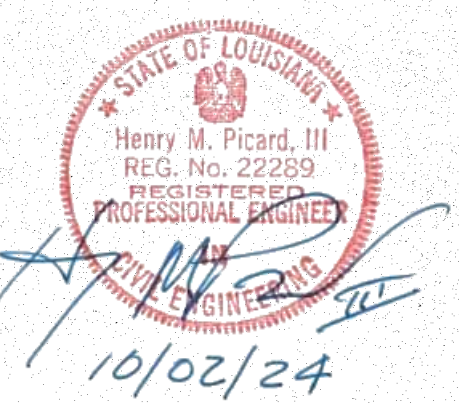


85th Percentile or Speed Limit (mph)	Length of No Passing Minimum (L in feet)
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550

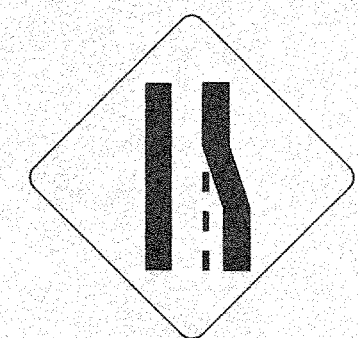
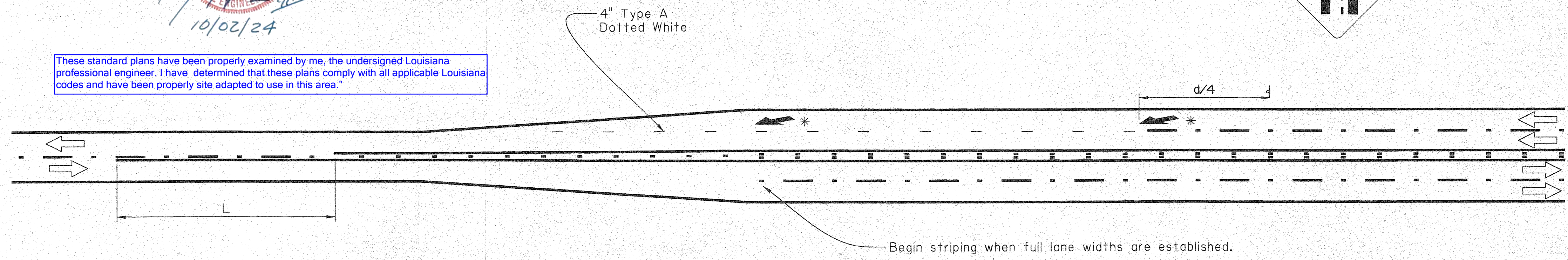
* No more than two reduction arrows shall be used per lane reduction.

(B)

TWO LANE TO FOUR LANE UNDIVIDED HIGHWAY



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

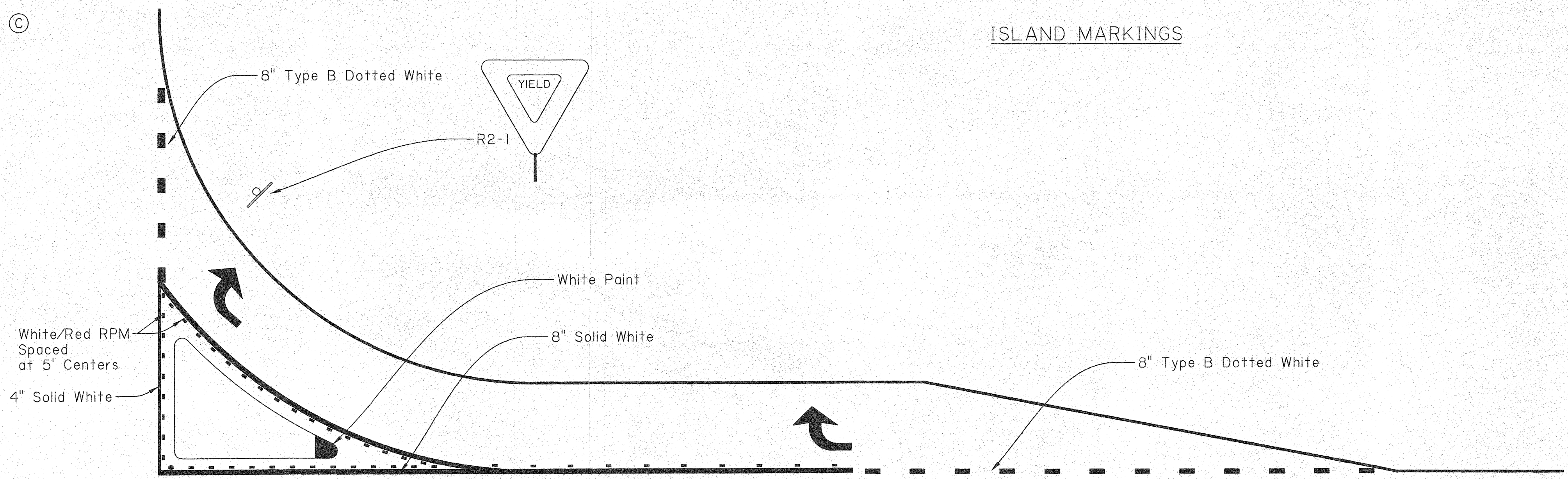


85th Percentile or Speed Limit (mph)	Distance, d (ft)
20	225
25	325
30	460
35	565
40	670
45	775
50	885
55	990
60	1100
65	1200
70	1250

* No more than two reduction arrows shall be used per lane reduction.

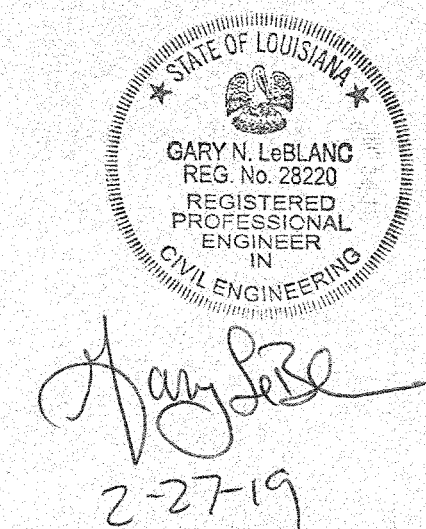
(C)

ISLAND MARKINGS



General Notes:

- ⇒ indicates direction of travel (not a pavement marker).
- See PM-01 for centerline and lane line details.
- All dotted lines are optional with DTOE Approval.
- White paint for island marking shall be a minimum of 2' width or as directed by DTOE.



SHEET NUMBER 359

ST. TAMMANY

DESIGNED BY: G. LEBLANC
 CHECKED BY: J. COLVIN
 PARISH: ST. TAMMANY

DETAILER: K. WILLIAMS
 CHECKED BY: G. LEBLANC
 CONTROL SECTION: STATE PROJECT

DATE: 2/28/19

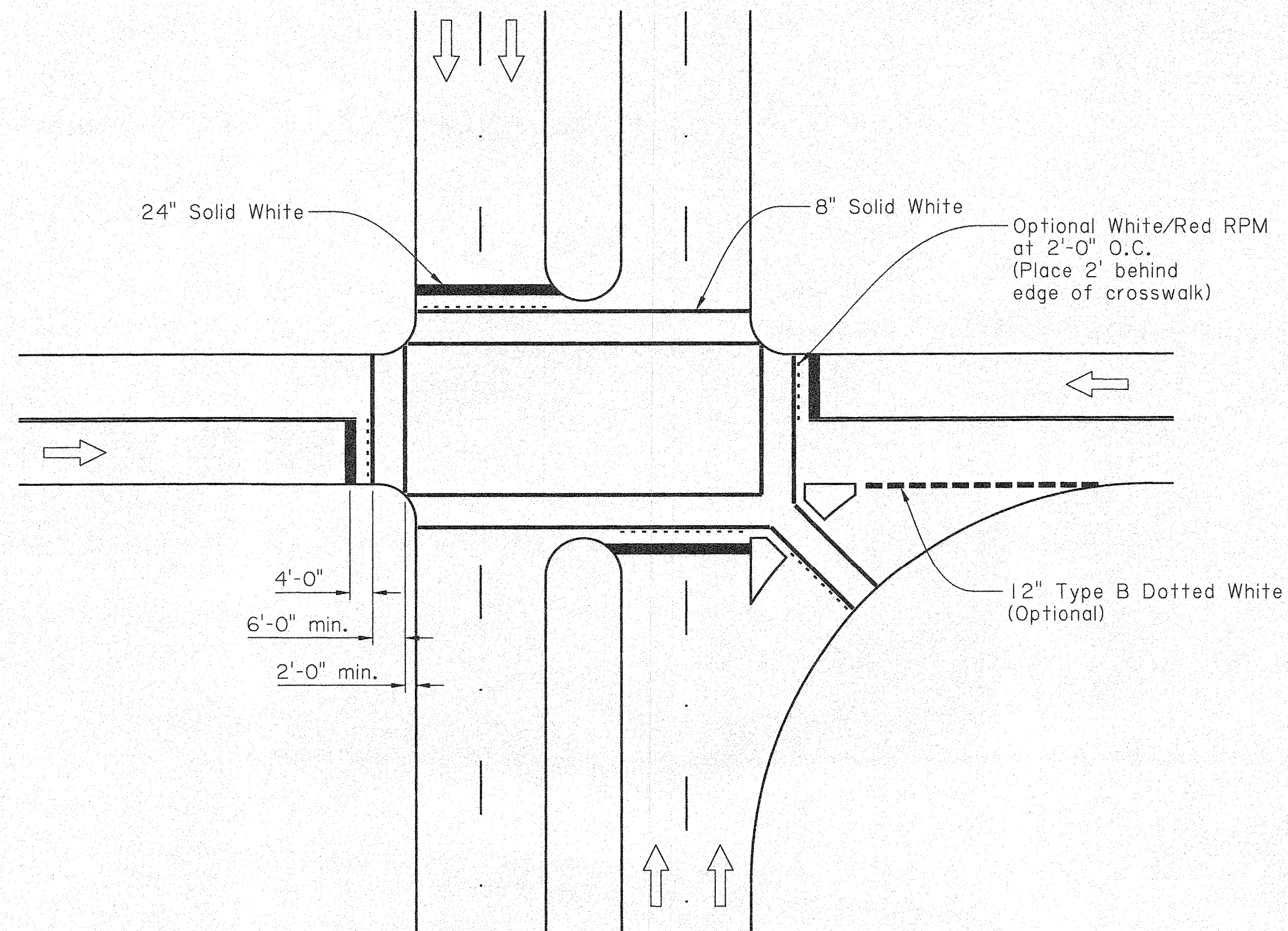
APPROVED BY: CHIEF ENGINEER: *Christina P. Roberts*

STATE OF LOUISIANA
 GARY N. LEBLANC
 REG. NO. 25220
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING

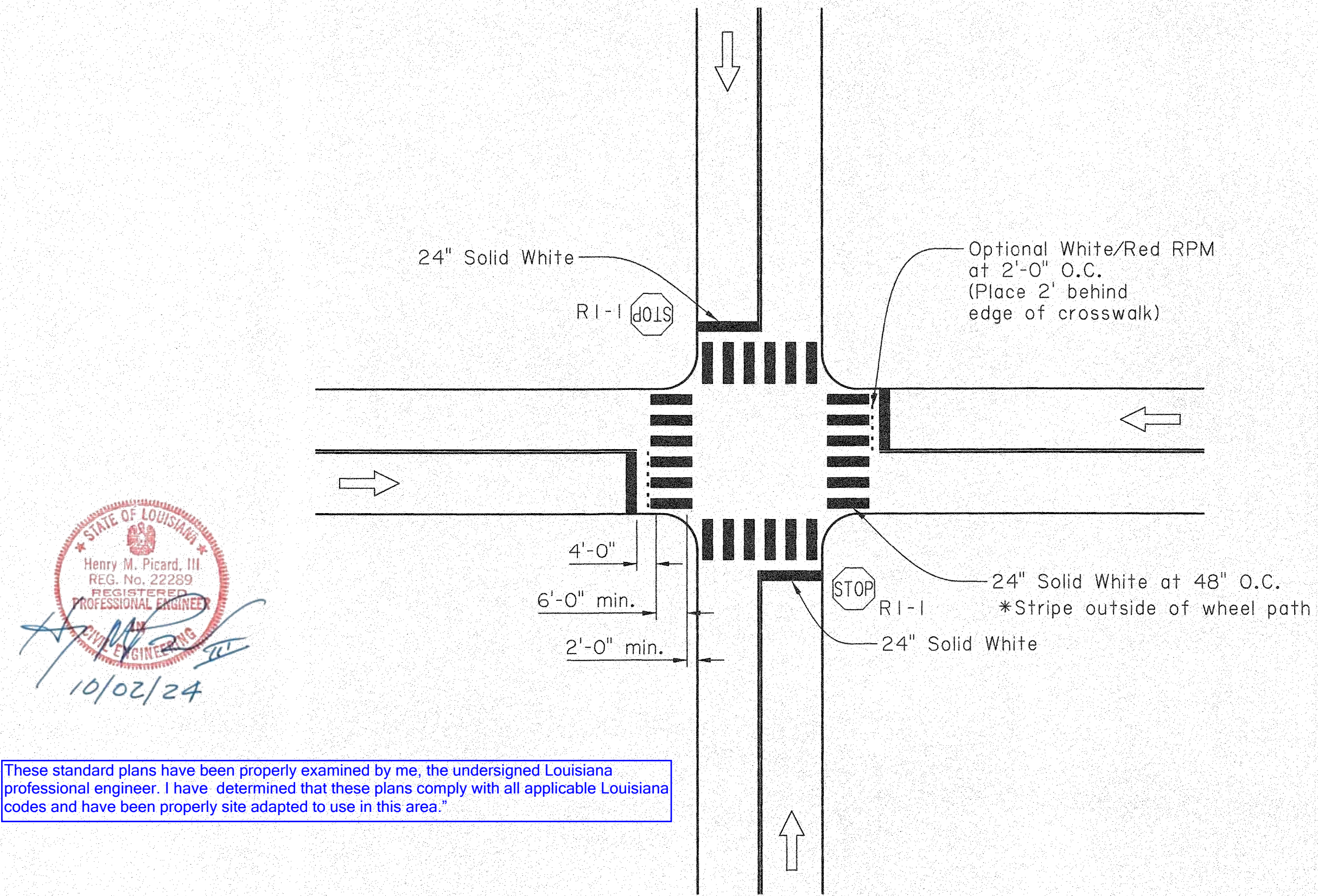
PM-06
 Lane Reduction and Island Layouts
 PAVEMENT MARKING DETAILS

DOTD
 TRAFFIC ENGINEERING

(A) CROSSWALK MARKINGS AT SIGNALIZED INTERSECTION



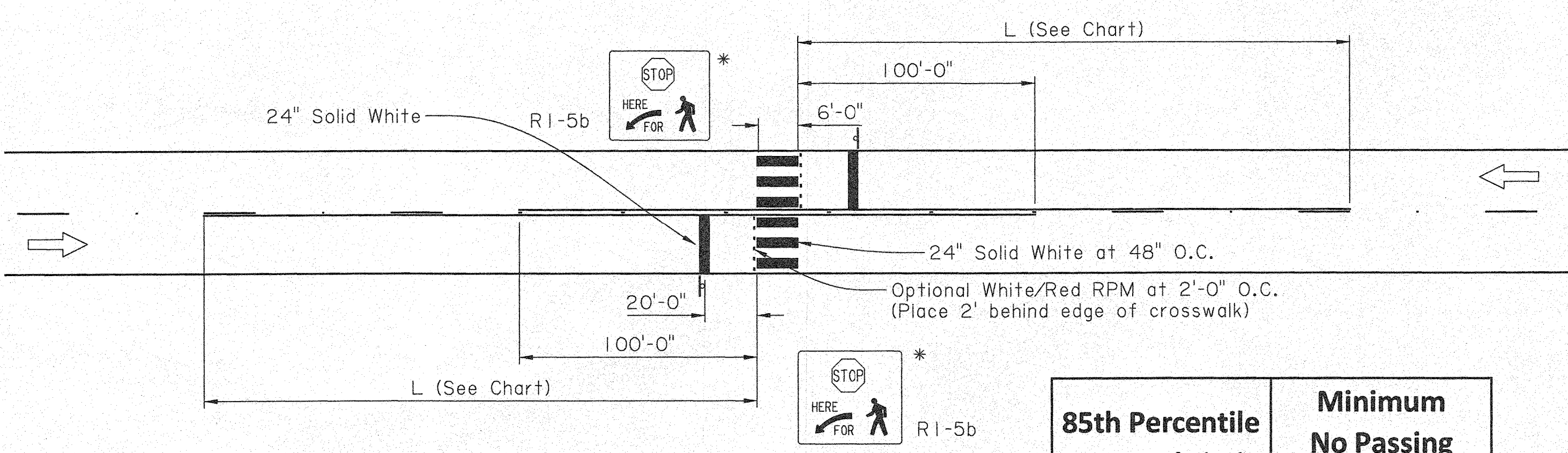
(B) CROSSWALK MARKINGS AT UNSIGNALIZED INTERSECTION



STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

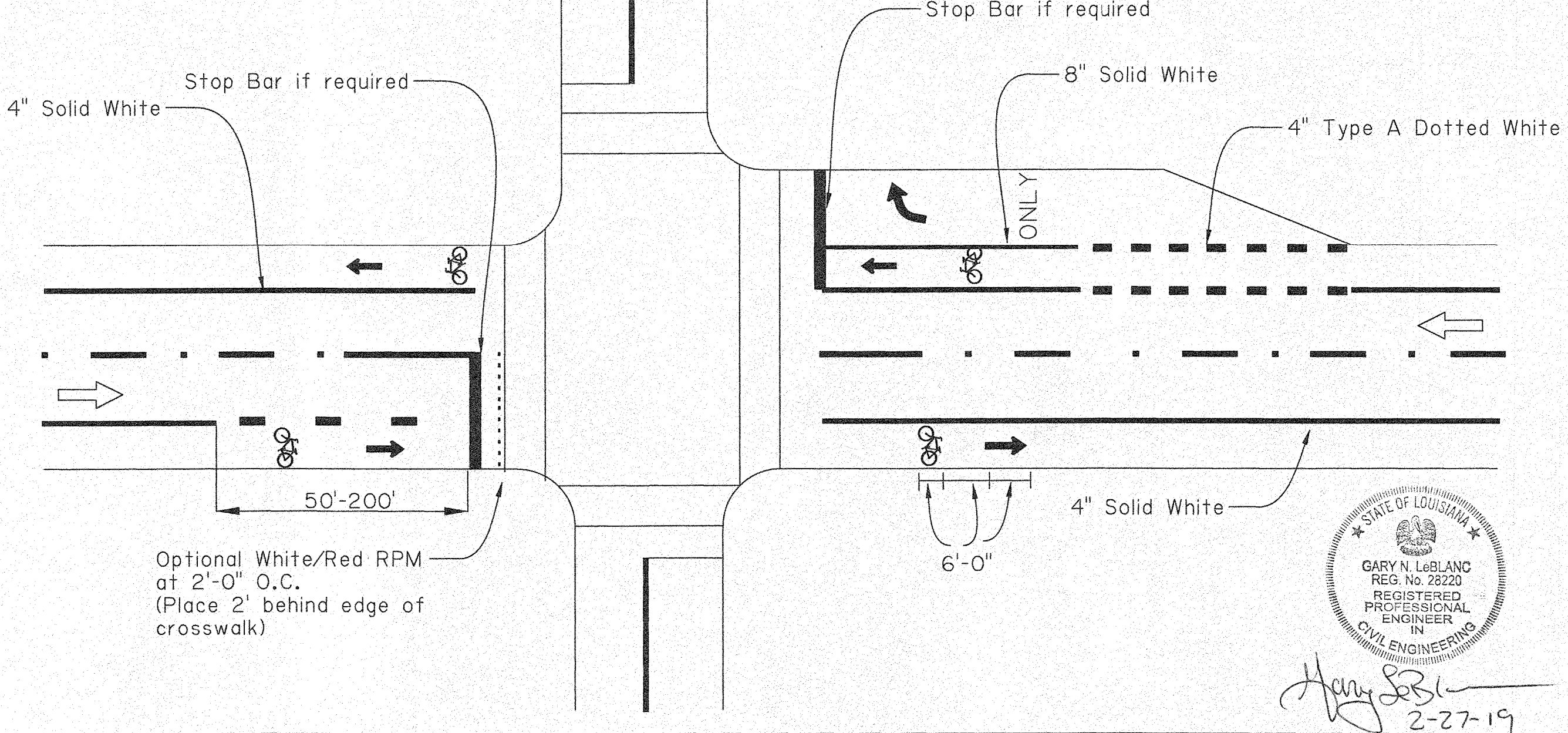
(C) MID-BLOCK CROSSWALK MARKINGS



85th Percentile or Speed Limit (mph)	Minimum No Passing on Approach (L in feet)
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550

*If within a school zone, sign may be changed to the In Street Schoolchildren Crossing (R1-6c) sign.

(D) BIKE LANE AT INTERSECTION WITH RIGHT TURN LANE



STATE OF LOUISIANA
 GARY N. LeBLANC
 REG. No. 28220
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 2-27-19

- GENERAL NOTES:
- All new and existing crosswalk placement shall require approval by the DTOE and justification through an engineering study.
 - If the width of the existing sidewalk is greater than 6 feet, the width of the crosswalk should match the width of the sidewalk.
 - ⇒ indicates direction of travel (not a pavement marker).
 - Bicycle pavement markings should be placed at the beginning of bike lanes, before and after each intersection with a minimum spacing of 100 ft in urban areas to a maximum of 1000 feet in suburban areas.

SHEET NUMBER 360

DESIGNED BY G. LEBLANC
 CHECKED BY J. COLVIN
 DETAILED BY K. WILLIAMS
 CHECKED BY G. LEBLANC

DATE 3/23/19

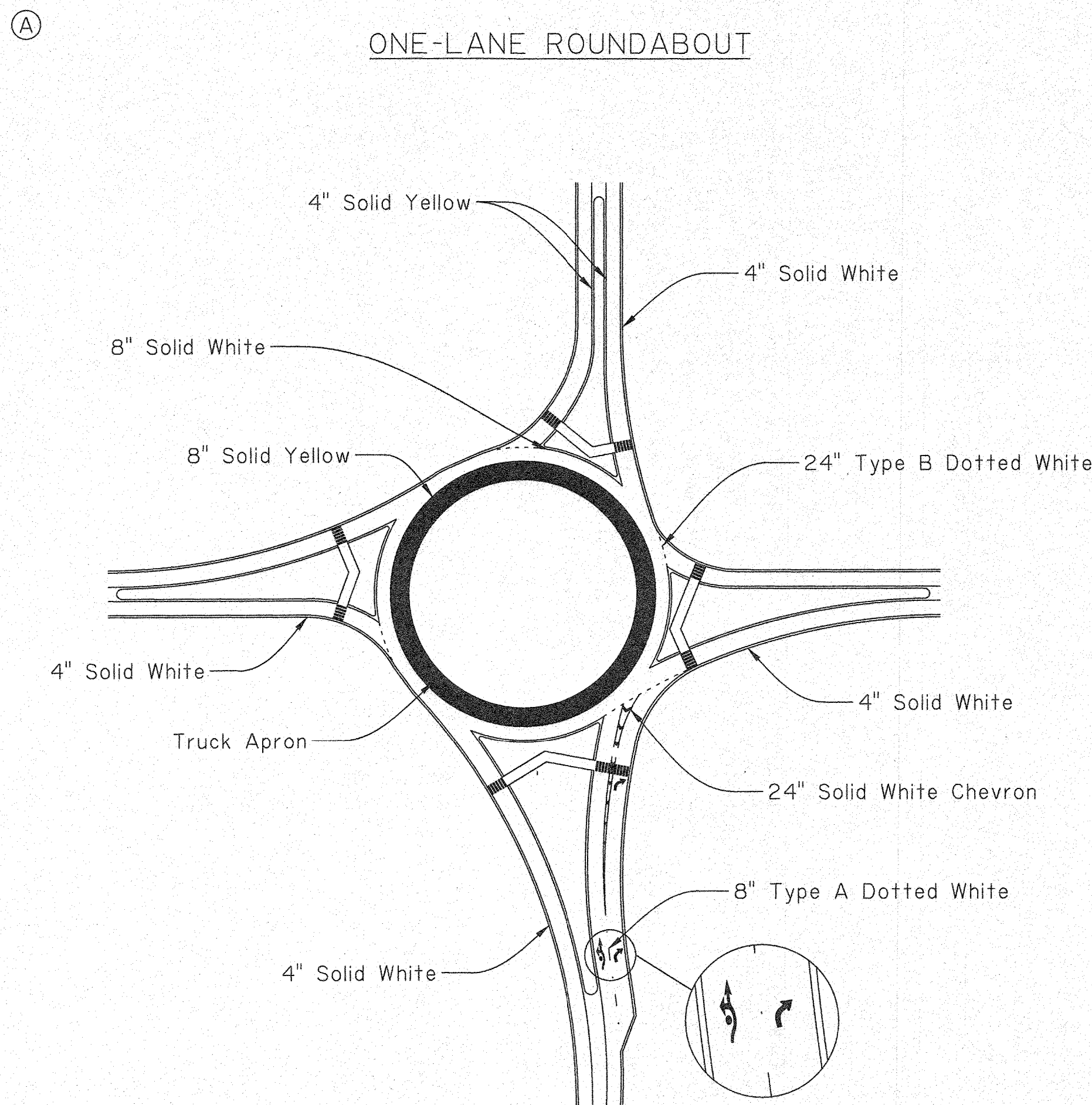
DATE 3/23/19

APPROVES BY: [Signature]
 CHIEF ENGINEER

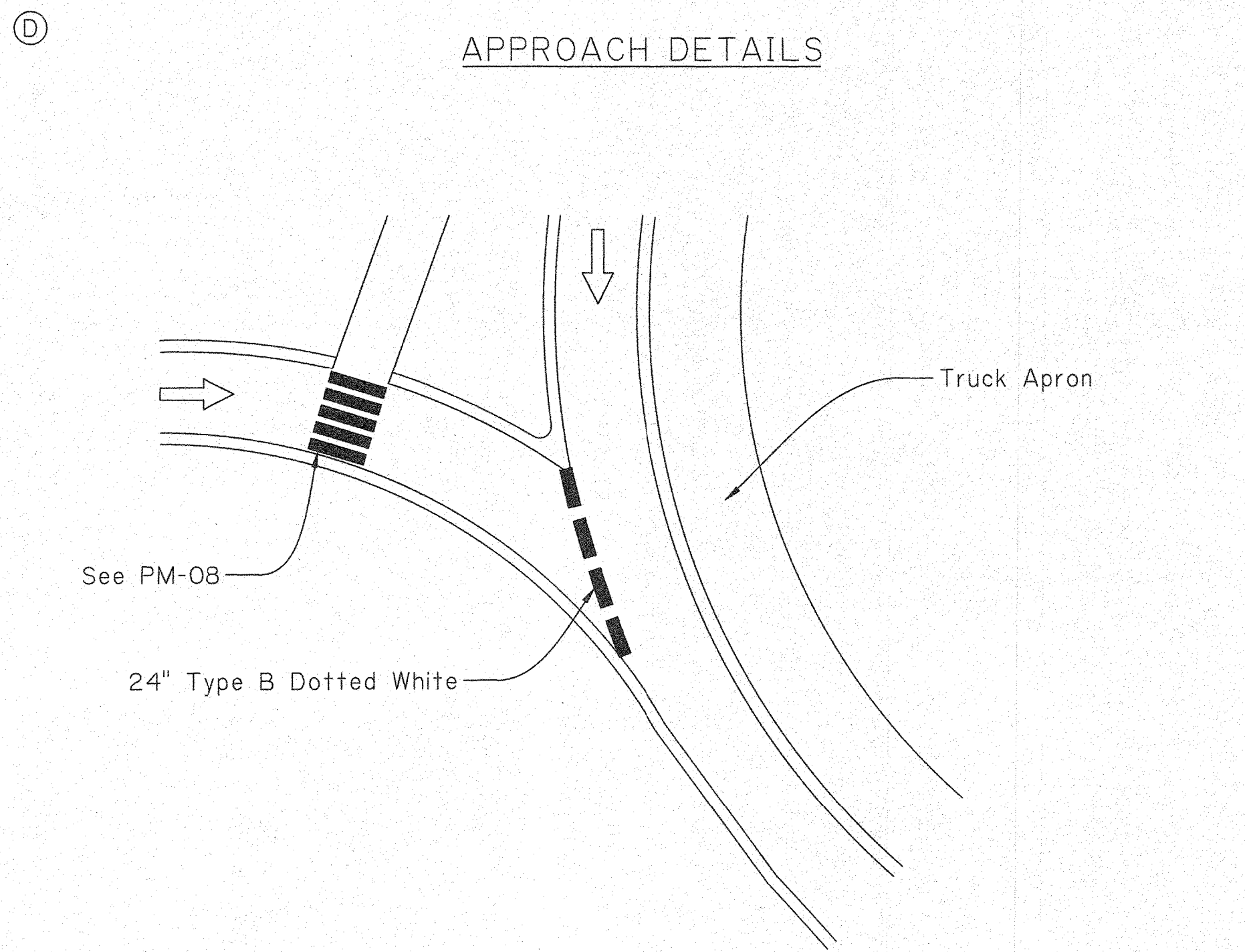
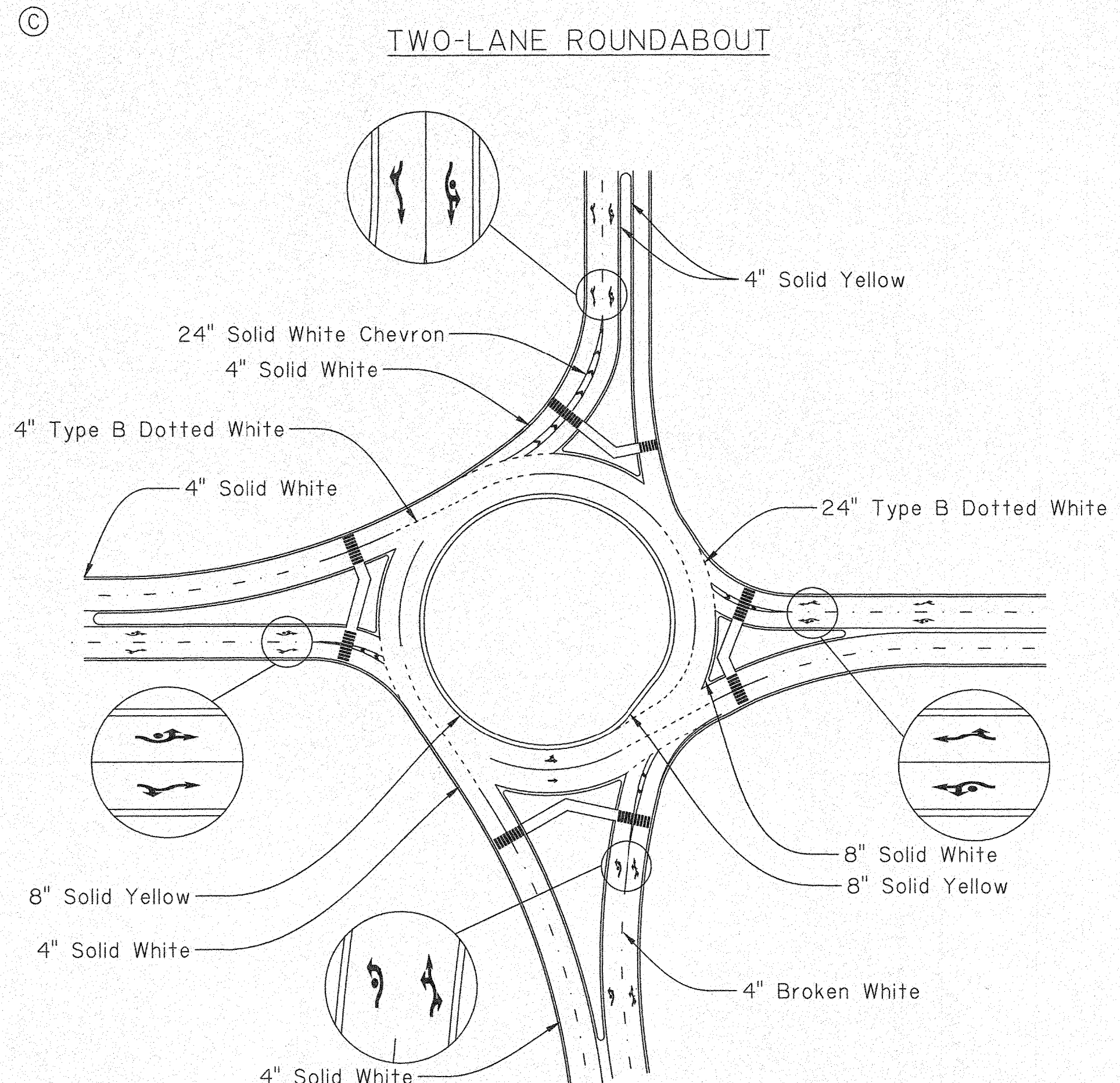
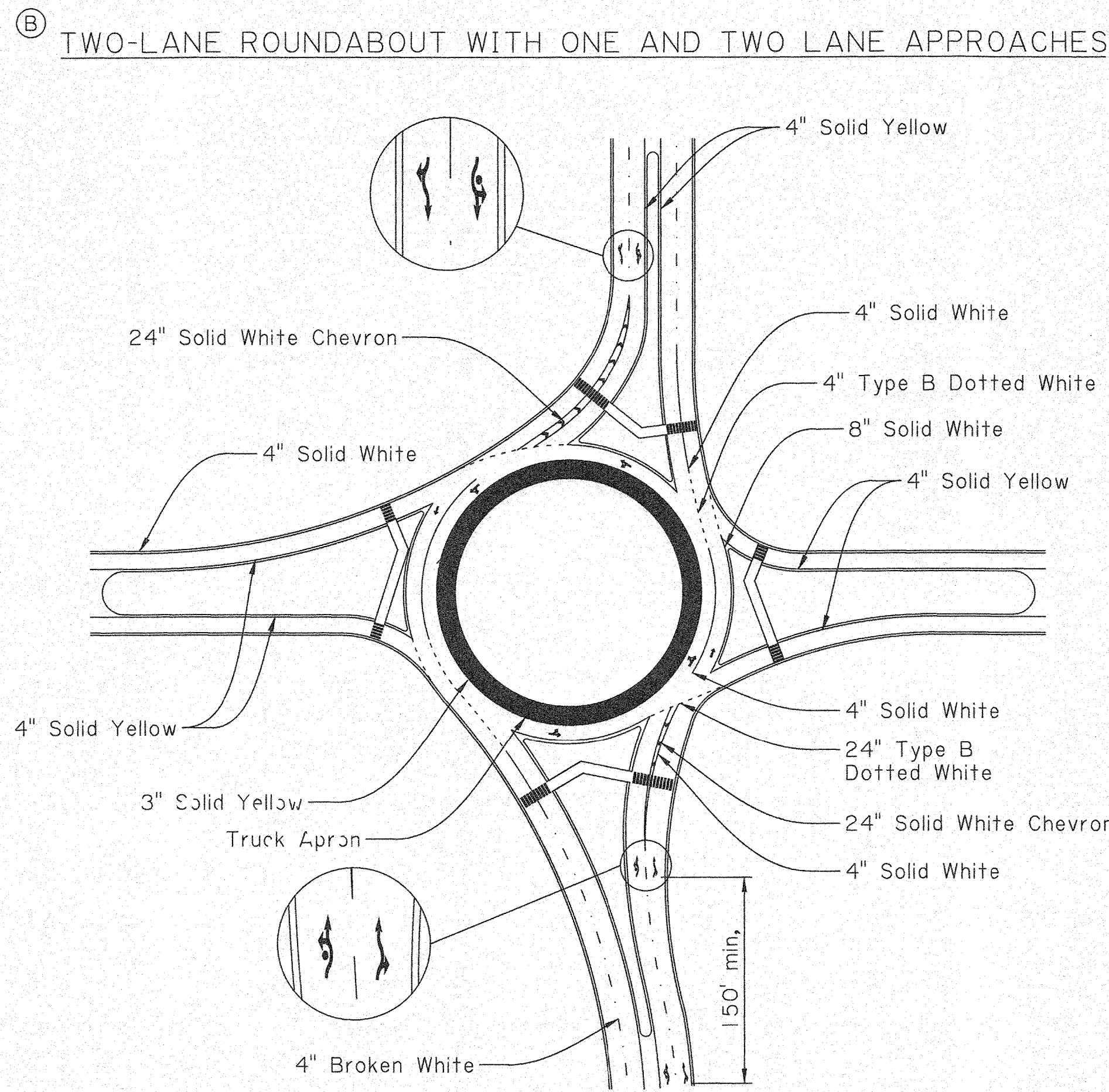
STATE OF LOUISIANA REGISTERED PROFESSIONAL ENGINEER

PM-08 Pedestrian/Bike Striping Layout
 PAVEMENT MARKING DETAILS

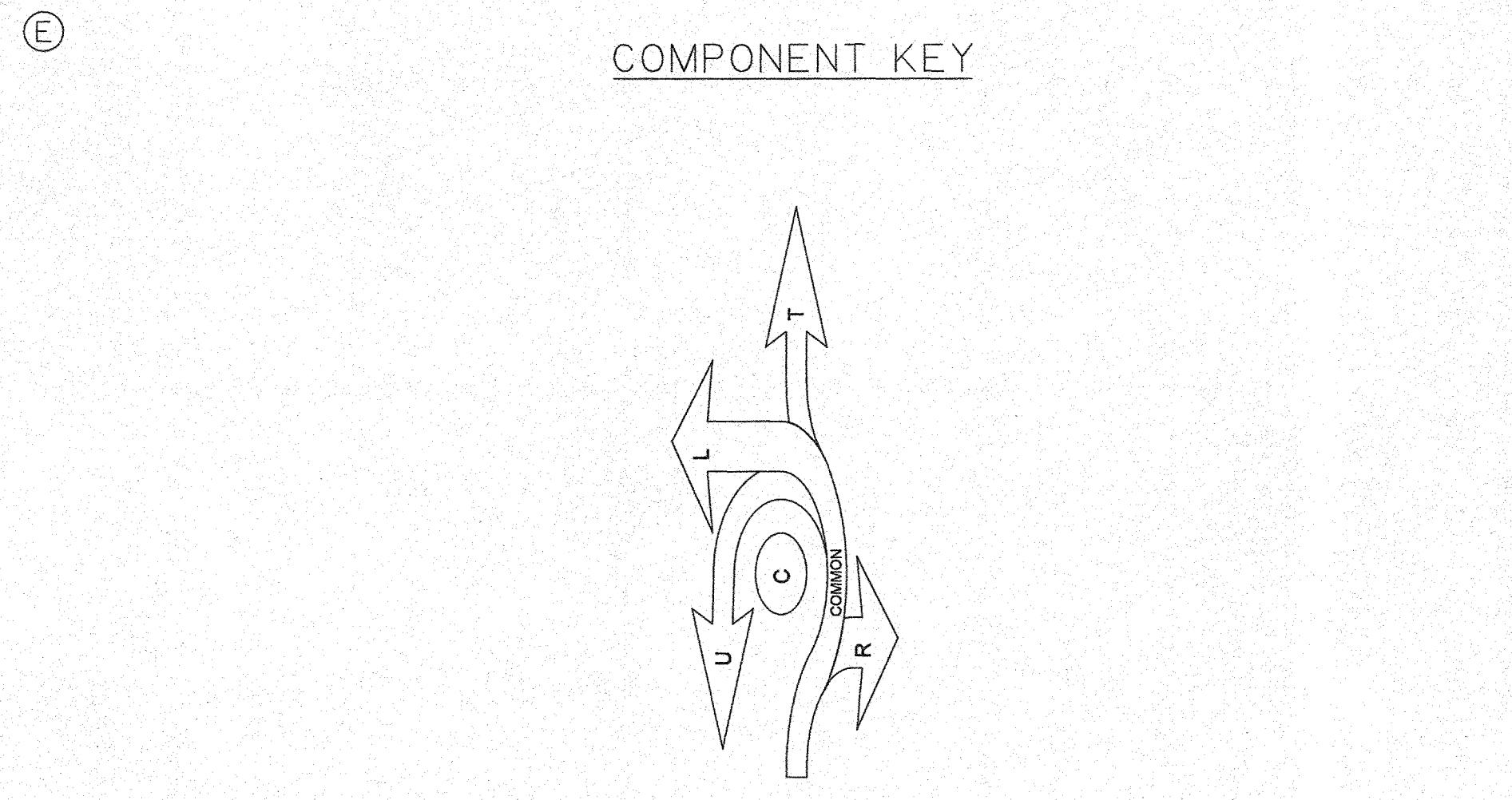
DOTD TRAFFIC ENGINEERING



Note: No arrow pavement markings are to be used on single lane approaches.



Note: → indicates direction of travel (not a pavement marker).



The labeled areas above correspond to the portions needed for each type of roundabout traffic arrow.
"C" should only be used in the inside lane.

- GENERAL NOTES:**
1. Each roundabout approach shall have two sets of arrows. The first set shall be located at the guide sign. The second set shall be located at the theoretical gore of the splitter island.
 2. Crosswalks shall be placed a minimum of 20 feet from the edge line of the circulatory roadway. See PM-08 for crosswalk details.
 3. See PM-02 for fishhook details.
 4. See PM-06 for island details.

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

GARY N. LEBLANC
REG. No. 28220
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

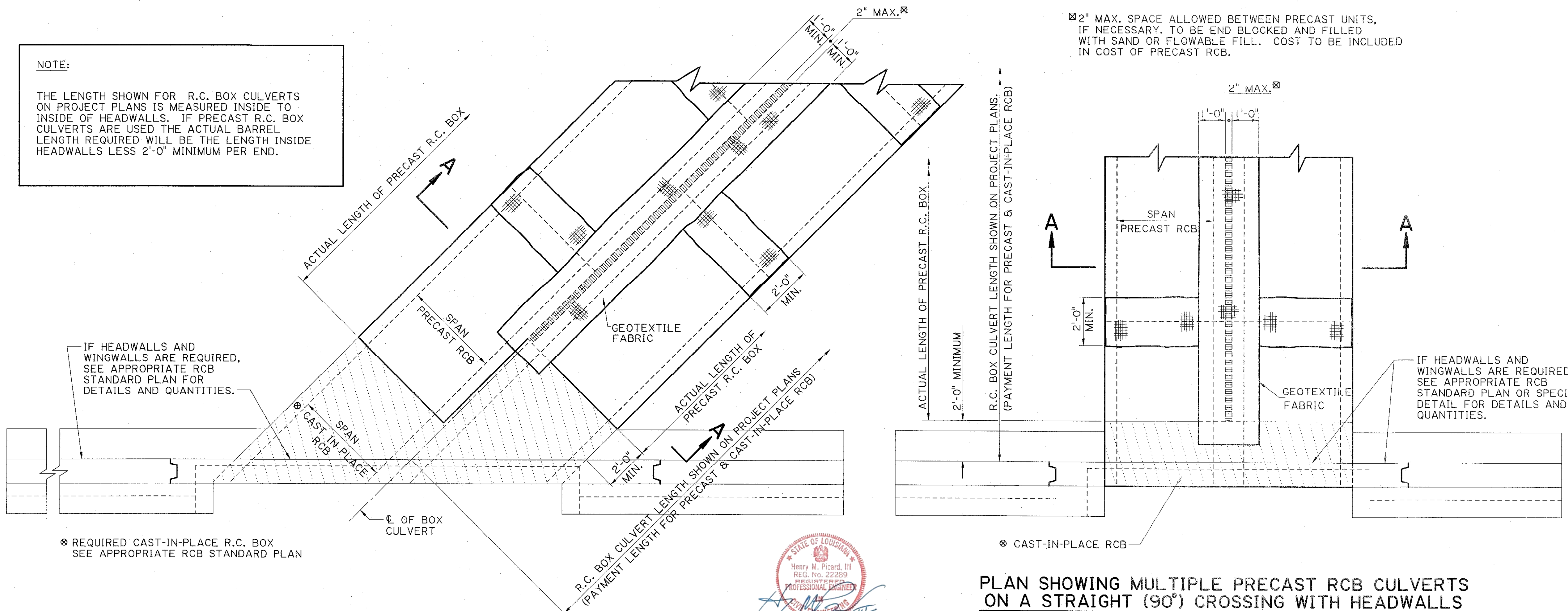
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

2-27-19

SHEET NUMBER	361
DESIGNED BY	G. LEBLANC
CHECKED BY	J. COLVIN
DATE	2/28/19
CONTROL SECTION	WILLIAMS
STATE PROJECT	ST. TAMMANY
DATE SHEET	
APPROVED BY	Chief Engineer
CHIEF ENGINEER	
PM-09	Roundabout Striping Layout
PAVEMENT MARKING DETAILS	
DOTD TRAFFIC ENGINEERING	

NOTE:
THE LENGTH SHOWN FOR R.C. BOX CULVERTS ON PROJECT PLANS IS MEASURED INSIDE TO INSIDE OF HEADWALLS. IF PRECAST R.C. BOX CULVERTS ARE USED THE ACTUAL BARREL LENGTH REQUIRED WILL BE THE LENGTH INSIDE HEADWALLS LESS 2'-0" MINIMUM PER END.

2" MAX. SPACE ALLOWED BETWEEN PRECAST UNITS, IF NECESSARY. TO BE END BLOCKED AND FILLED WITH SAND OR FLOWABLE FILL. COST TO BE INCLUDED IN COST OF PRECAST RCB.



PLAN SHOWING MULTIPLE PRECAST RCB CULVERTS ON A SKEWED CROSSING WITH HEADWALLS

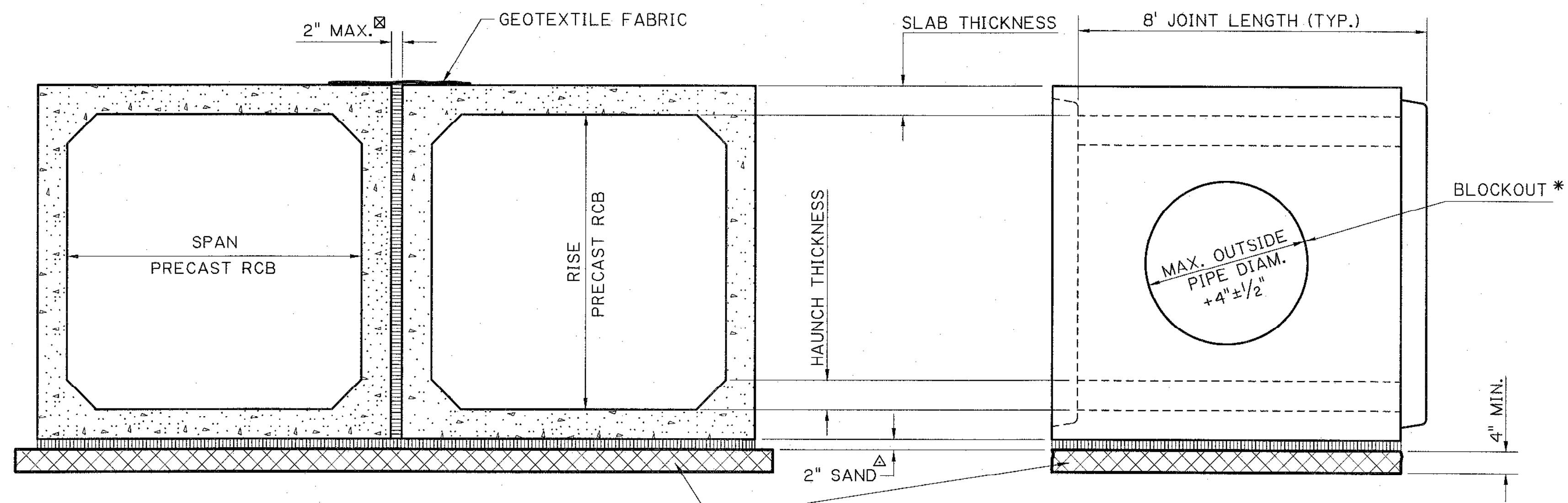
PLAN SHOWING MULTIPLE PRECAST RCB CULVERTS ON A STRAIGHT (90°) CROSSING WITH HEADWALLS

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

GENERAL NOTES

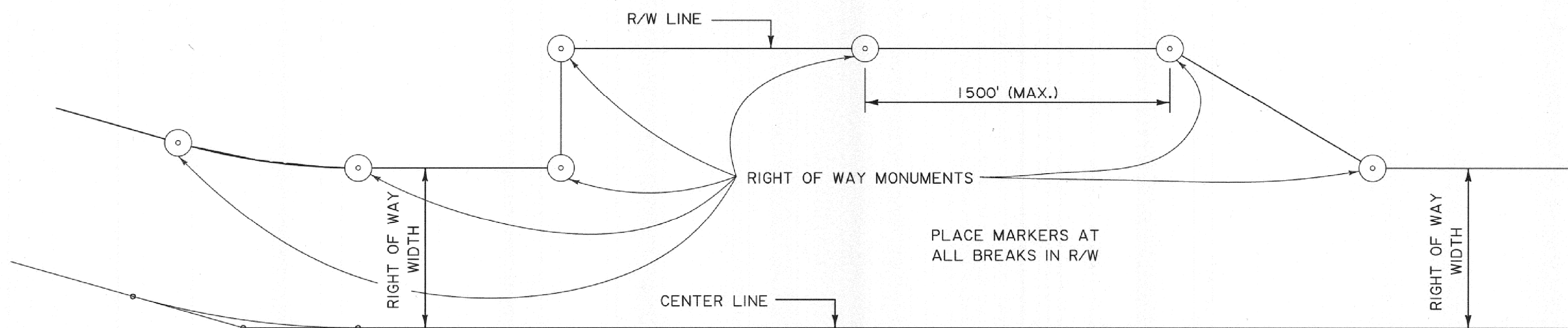
- 1) FOR GENERAL SPECIFICATIONS OF PRECAST RCB SEE SECTION 805 AND 1016 OF THE LA DOTD STANDARD SPECIFICATIONS.
- 2) A MINIMUM 2 FOOT WIDE STRIP OF GEOTEXTILE FABRIC SHALL COVER THE ADJOINING LONGITUDINAL EDGES OF MULTI-BARREL BOXES AND JOINTS BETWEEN PRECAST UNITS. FABRIC EDGES AND ENDS SHALL BE SUITABLY SECURED. GEOTEXTILE FABRIC SPECIFICATIONS SHALL CONFORM TO THE SPECIFICATIONS FOR PIPE UNDER SECTION 1019 OF THE LA DOTD STANDARD SPECIFICATIONS. COST TO BE INCLUDED IN COST OF PRECAST RCB.
- 3) #4 DOWEL BARS, MINIMUM 20" LONG (10" EMBEDDED) AT 12" CENTERS ARE REQUIRED, TO CONNECT THE LAST PRECAST UNIT TO ANY CAST-IN-PLACE SECTION OF BOX.
- * 4) BLOCKOUTS FOR PIPE INTO PRECAST RCB'S ARE THE RESPONSIBILITY OF THE CONTRACTOR. BLOCKOUT LOCATIONS ARE AS DIRECTED BY THE PROJECT ENGINEER. BLOCKOUT SHALL NOT BE GREATER THAN 1/2 THE RISE OF PRECAST RCB AND SHALL NOT BE LOCATED IN THE HAUNCH.
- △ 5) IN ADDITION TO BEDDING MATERIAL, A MINIMUM 4 INCH THICK, CLASS R CONCRETE, WORKING TABLE WILL BE REQUIRED FOR 6' X 6' AND LARGER PRECAST RCB FIELD INSTALLATIONS. AN ADDITIONAL 2 INCHES OF SAND SHALL BE PLACED AND LEVELED UPON THE CONCRETE WORKING TABLE. COST OF WORKING TABLE AND SAND TO BE INCLUDED IN COST OF PRECAST RCB.
- ⊗ 6) FOR THE CAST-IN-PLACE PORTIONS OF THE CULVERT, THE REBAR SIZE AND SPACING SHALL MATCH OR EXCEED THE PRECAST SECTIONS. CONTRACTOR TO USE APPROVED PRECAST RCB SHOP DRAWING FOR REBAR REQUIREMENTS.
- 7) WALL AND SLAB THICKNESSES MAY VARY IN THE TRANSITION AREA BETWEEN THE LAST PRECAST UNIT AND THE CAST-IN-PLACE SECTION OF THE BOX AND HEADWALL. CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE DIMENSIONS AND QUANTITIES OF REINFORCING STEEL AND CONCRETE IN THE CAST-IN-PLACE SECTIONS AS NECESSARY AT NO ADDITIONAL COST.



⊗ REQUIRED 4" MIN. WORKING TABLE FOR LARGER PRECAST RCB'S. SEE NOTE 5 OF THE GENERAL NOTES.

SECTION A-A

SIDE ELEVATION OF PIPE JOINT SHOWING MAXIMUM BLOCKOUT AND PIPE DIAMETER



STANDARD RIGHT OF WAY MONUMENT PLAN
 MONUMENTS TO BE PLACED AT RIGHT OF WAY INTERSECTIONS

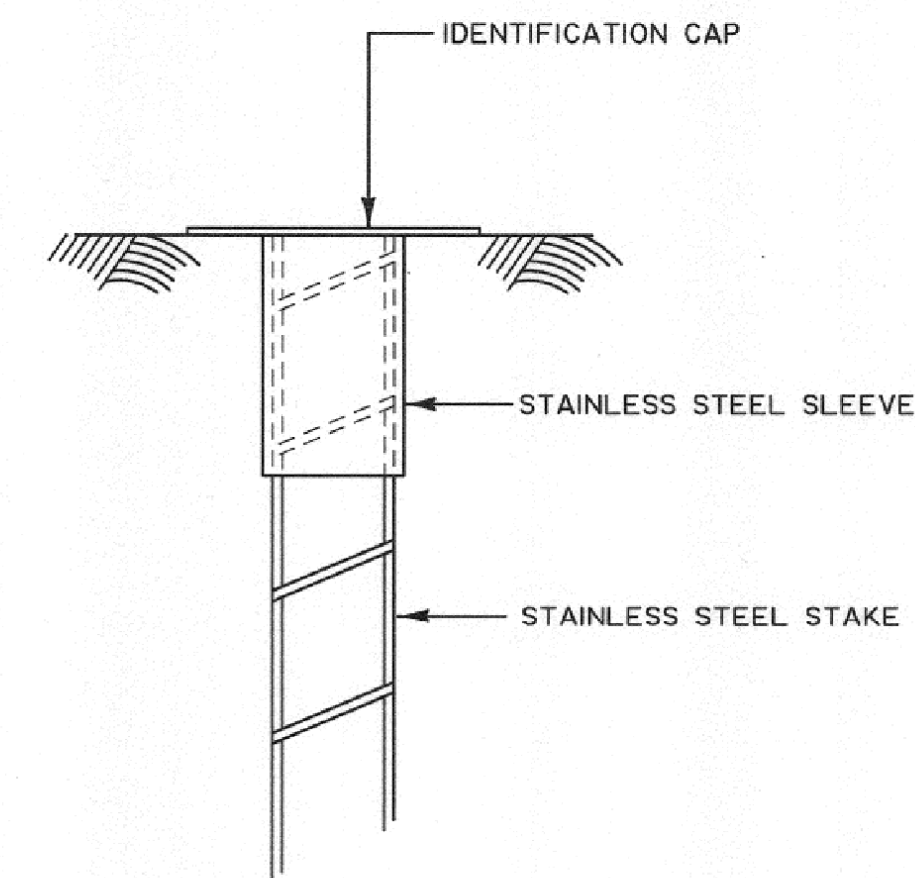
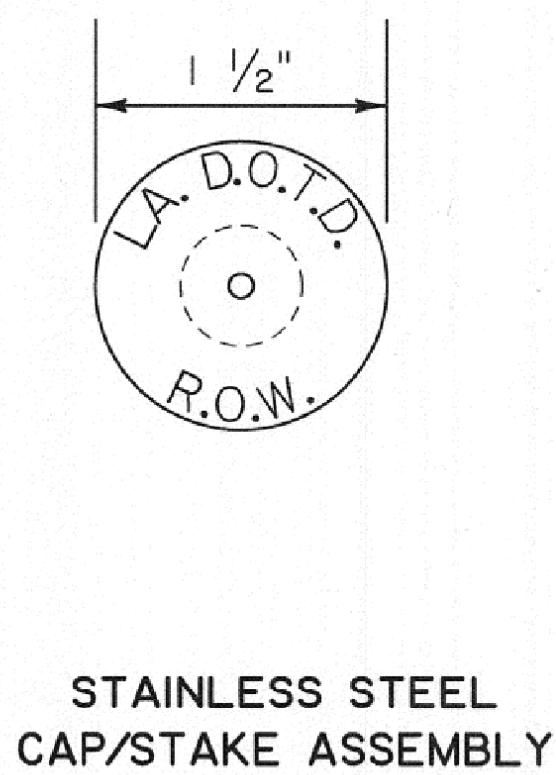
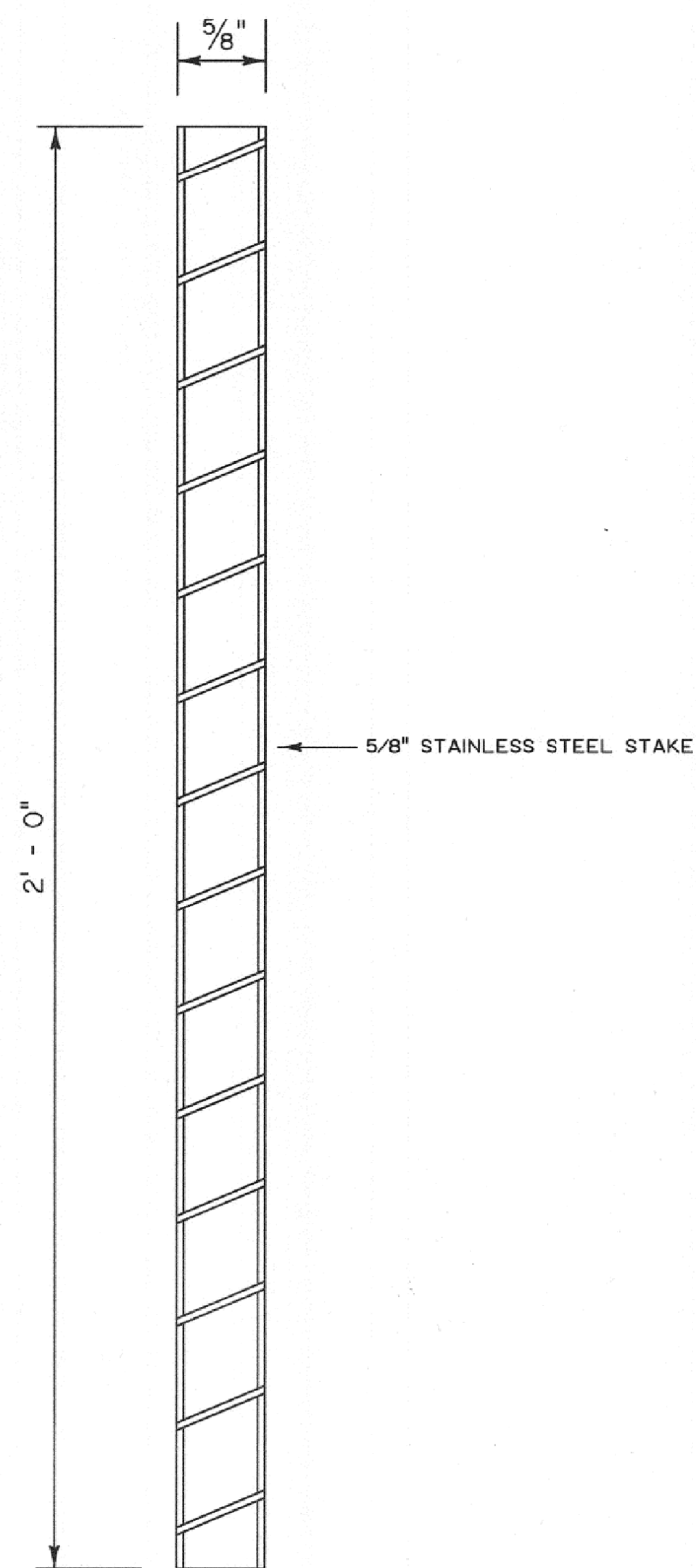
NOTES:

MONUMENTS ARE TO BE PLACED AT EVERY POINT WHERE BREAKS IN THE RIGHT OF WAY OCCUR: AT P.C.'S AND P.T.'S OF CURVES AND AT TOPS OF HILLS AND AT SUCH OTHER INTERMEDIATE POINTS AS ARE NECESSARY TO PROPERLY INDICATE THE RIGHT OF WAY. MONUMENTS SHOULD NOT BE MORE THAN ONE THOUSAND FEET (1000') APART ON CURVES, NOR MORE THAN FIFTEEN HUNDRED FEET (1500') APART ON TANGENTS.

MONUMENTS ARE INDICATED ON PLANS BY THE FOLLOWING SYMBOL.

MONUMENTS SHALL BE A 1-1/2" STAINLESS STEEL CAP FASTENED TO A 5/8" (#5) STAINLESS STEEL REBAR BY A STAINLESS STEEL SLEEVE AS INDICATED BELOW.

RIGHT OF WAY MONUMENTS SHALL BE SET BY, OR UNDER THE RESPONSIBLE CHARGE OF A LOUISIANA REGISTERED PROFESSIONAL LAND SURVEYOR IN CONFORMANCE WITH CHAPTER 29, TITLE 46 PART LXI, OF THE RULES OF THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.



SET BOTTOM OF IDENTIFICATION CAP FLUSH WITH THE EXISTING GROUND

10/02/24

SHEET NUMBER		364	
ST. TAMMANY			
PARISH	CONTROL SECTION	STATE PROJECT	
DESIGN	CHECK	DETAIL	CHECK
		REVIEW	SERIES #
 DATE: 4/1/2021			
APPROVED BY CHIEF ENGINEER: <i>Christoph P. Harts</i>			
RIGHT OF WAY MONUMENTS			
STANDARD PLAN	RM-01		
LOCATION AND SURVEY			

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

GENERAL NOTES - ROADSIDE TRAFFIC SIGNS

CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. LATEST EDITION EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 1994 AND INTERM SPECIFICATIONS.

STEEL: STEEL SHALL CONFORM TO A.S.T.M. A-709, GRADE 36. STEEL TUBING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF A.S.T.M. DESIGNATION A-36 OR HOT-FORMED TUBING (A-501) OR PIPE (A-53) TYPE "E" OR "S", GRADE "B" OR COLD-FORMED TUBING (A-500) GRADE "B" OR "C", UNLESS OTHERWISE NOTED.

ALUMINUM: ALL ALUMINUM EXCEPT SIGN PANELS SHALL CONFORM TO ASTM B-221, B-308, OR B-429 ALLOY 6061-T6 UNLESS OTHERWISE NOTED. SIGN PANELS SHALL BE .080" THICK ALUMINUM CONFORMING TO ASTM B-209 ALLOY 5052-H38 OR 6061-T6.

CONCRETE AND REINFORCING STEEL: CONCRETE SHALL BE CLASS "M", UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR OR FACE OF CONCRETE TO CENTERLINE OF BAR. REINFORCING STEEL SHALL HAVE A MINIMUM COVERING OF 2" EXCEPT WHEN CONCRETE IS CAST AGAINST THE EARTH THEN THE COVERING WILL BE 3". ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT OF REINFORCING BAR NUMBER INDICATES THE BAR SIZE. THE TOP EDGES OF THE FOOTING SHALL BE CHAMFERED 3/4".

CONCRETE FINISH: ALL PORTIONS OF THE FOOTINGS FOR CANTILEVERS AND TRUSSES ABOVE GROUNDLINE SHALL HAVE A FINISH IN ACCORDANCE WITH LOUISIANA SPECIFICATION. 805.08.3.

WELDING: ALL WELDING SHALL CONFORM TO THE LA. STANDARD SPECIFICATIONS, SECTION 809 AND SUPPLEMENTAL SPECIFICATIONS.

GALVANIZING: ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123. DAMAGE TO GALVANIZED SURFACES THAT ARE NOT TO BE ENCASED IN CONCRETE SHALL BE REPAIRED IN ACCORDANCE WITH LA. STANDARD SPECIFICATIONS, SECTION 811.08. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153. ALL FIELD HOLES IN GALVANIZED MATERIAL SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND FROM THE A.M.L.

BOLTS: UNLESS NOTED, ALL THREADED CONNECTIONS SHALL INCORPORATE A LOCKING DEVICE AND HAVE A MINIMUM OF 3 THREADS BEYOND THE NUTS. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS, A.S.T.M. A-325, UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55 (OR APPROVED EQUAL) AND BE HOT DIP GALVANIZED TO A.S.T.M. A-153. STAINLESS STEEL FOR BOLTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-320 B8, CLASS 2 TYPE 304, OR A-193 B8, CLASS 2 TYPE 304, UNLESS OTHERWISE NOTED. STAINLESS STEEL NUTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-194, GRADE 8, TYPE 304. ALUMINUM BOLTS SHALL CONFORM TO A.S.T.M. F-468 ALLOY 2024-T4 AND NUTS ARE A.S.T.M. F-467 ALLOY 6061-T6 OR 6262-T9. WHERE BOLTS ARE USED ON BEVELED SURFACES, BEVELED WASHERS SHALL BE PROVIDED TO GIVE FULL BEARING TO THE HEAD AND/OR THE NUT.

RIVETS: ALL RIVETS SHALL BE 1/4" DIAMETER BLIND RIVETS WITH POSITIVE MANDREL RETENTION. THE RIVET BODY AND MANDREL SHALL BE ALUMINUM WITH A 1/2" MAXIMUM DIAMETER DOME HEAD. THE RIVETS SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH = 875 LBS., AND CONFORM TO ASTM B-316 5056-H32.

BREAK-AWAY BASE: BASES FOR SIGNS LOCATED ADJACENT TO MORE THAN ONE ROADWAY (RAMP TERMINALS, INTERSECTIONS, ETC.) SHALL BE ORIENTED IN THE DIRECTION OF THE HIGHEST SPEED TRAFFIC. ALL MULTI-POST SIGNS WITH A DISTANCE BETWEEN POSTS OF 7'-0" CENTERS OR LESS SHALL HAVE BEVELED BASE CONNECTION. BASE CONNECTIONS SHALL BE WRAPPED PRIOR TO POURING THE FOOTING, WITH MATERIAL SUFFICIENT TO PREVENT CONCRETE SPLATTER ON THE BREAK-AWAY BASE ASSEMBLY.

ANCHOR BOLTS: ANCHOR BOLT NUTS TO BE TIGHTENED A MINIMUM ROTATION OF 240° (2/3 TURNS) FROM THE SNUG TIGHT CONDITION.

SIGN SHEETING: UNLESS OTHERWISE NOTED, ALL SIGN MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 1015 IN THE STANDARD SPECIFICATIONS. IN ORDER TO OBTAIN AN ACCEPTABLE COLOR MATCH BETWEEN MULTIPLE PANELS ON A GUIDE SIGN, ALL OF THE BACKGROUND SHEETING FOR ANY GUIDE SIGN SHALL BE THE MINIMUM WIDTH OF THE LARGEST PANEL AND SHALL COME FROM THE SAME LOT OR RUN NUMBER FROM THE SHEETING MANUFACTURER UNLESS OTHERWISE APPROVED IN WRITING. RETRO-REFLECTIVE SHEETING SHALL BE APPLIED TO ALL PANELS IN SUCH A MANNER THAT THERE ARE NO HORIZONTAL SPLICES.

OVERLAY PANELS FULL SIGN OVERLAY PANELS SHALL BE IN ACCORDANCE WITH SECTION 729.05.3. PARTIAL SIGN OVERLAYS AND ALL SHIELDS SHALL HAVE SHIMS AT ALL RIVETS. SHIMS SHALL BE AT LEAST .080" THICK AND SIZED SO THEY WILL NOT EXTEND BEYOND EDGE OF OVERLAY. RIVETS SHALL BE AS SPECIFIED ON THIS STANDARD DETAIL SHEET.

SIGN LOCATIONS: FOR GROUND MOUNTED SIGN INSTALLATIONS, THE ENGINEER MAY ADJUST THE TYPE D AND E SIGN LOCATIONS INDICATED ON THE PLANS. THIS WILL BE ALLOWED TO AVOID PLACEMENT IN DEEP DITCHES, STEEP BACKSLOPES, TREE LINES, AND ANY OTHER UNACCOUNTED FOR FIELD CONDITIONS AND TO PROVIDE BETTER MESSAGE PRESENTATION. ANY ADJUSTMENTS MUST BE WITH THE CONCURRENCE OF THE GEOMETRIC DESIGN ENGINEER.

SIGN TYPES: TYPE A = SMALL SIGN WITH ONE POST; TYPE B = CLUSTER ASSEMBLY OF TYPE A SIGNS; TYPE D = LARGE RECTANGULAR SIGN ADJACENT TO TRAFFIC MOUNTED WITH MULTIPLE POSTS; TYPE E = SECONDARY SIGN (SUCH AS AN EXIT NUMBER PANEL) ATTACHED TO A LARGE RECTANGULAR PRIMARY SIGN; DELINEATOR, MILEPOST AND OBJECT MARKER SIGNS ARE NOT COVERED UNDER TRAFFIC SIGNS. SEE STANDARD PLAN HS-03.

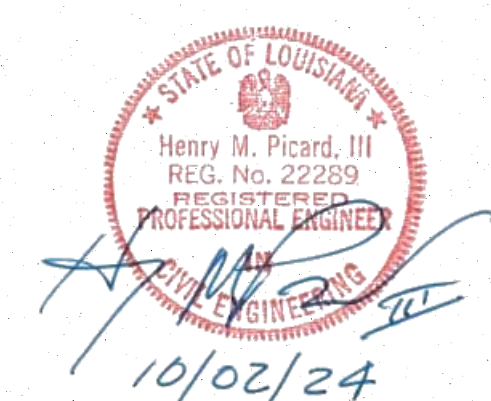
MISCELLANEOUS: THE CONTRACTOR SHALL MARK THE DATE OF FABRICATION, SHEETING MANUFACTURER CODE, AND SIZE OF SIGN ON THE BACK OF EACH SIGN. FOR EXTRUDED PANEL SIGNS THE LETTER HEIGHT SHALL BE 2". FOR ALL OTHER FLAT SHEETING SIGNS, THE LETTER HEIGHT SHALL BE 3/4". THE SIGN ID NUMBERS SHALL FOLLOW THE ABOVE REQUIREMENTS BUT SHALL HAVE A BLUE BACKGROUND WITH WHITE NUMBERS. ALL MARKINGS SHALL HAVE A CLEAR UV PROTECTIVE FILM INSTALLED OVER THEM. SEE DETAIL "A" SHEET 5 OF 17.

POST HINGE SPLICE ON MULTI-POST SIGNS WITH ALL POSTS CONNECTED BY A SECONDARY SIGN SHALL BE LOCATED BELOW THE SECONDARY SIGN. STUB POST SHALL BE ASSEMBLED TO SIGN POST WITH REQUIRED BOLTS AND ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES PRIOR TO SHIPMENT. POST SPLICE SLIP PLATE SHALL BE ASSEMBLED TO MINIMUM BOLT TENSION IN SHOP PRIOR TO SHIPMENT. SIGN POST SHALL BE SHIPPED TO JOB SITE ASSEMBLED WITH ALL HARDWARE REQUIRED IN PLACE AND SECURED. EXPOSED ENDS OF ALL PIPE SHALL BE CAPPED. USE OF SECTIONS PROVIDING EQUAL OR GREATER STRENGTH FOR ANY MEMBER DESIGNATED ON THE PLANS SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.

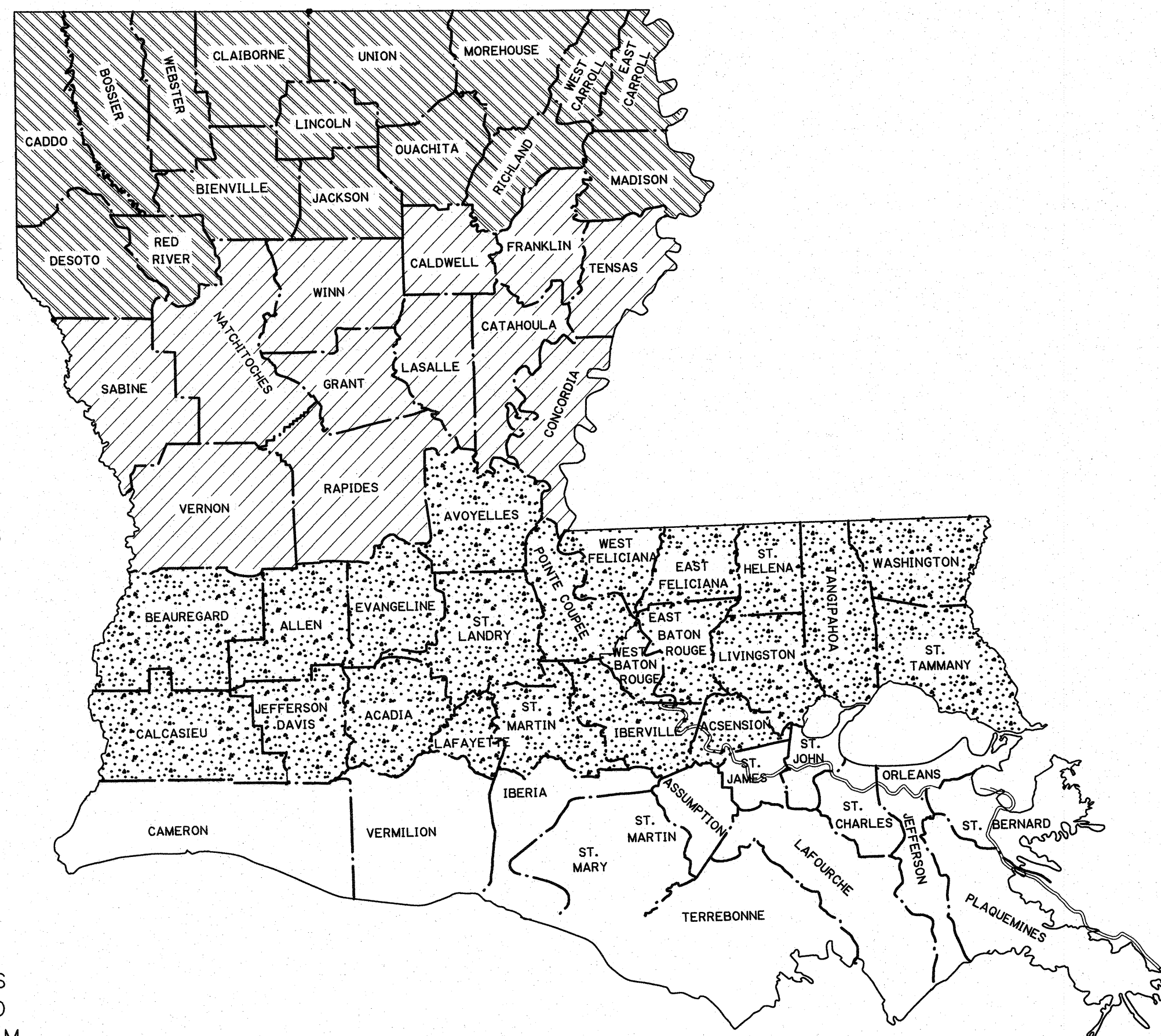
ALL DIMENSIONS REQUIRED FOR SATISFACTORY INSTALLATION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE FABRICATION. ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER.

ALL ALUMINUM SURFACES PLACED IN CONTACT WITH, OR FASTENED TO UNGALVANIZED STEEL MEMBERS SHALL BE THOROUGHLY COATED WITH AN APPROVED ALUMINUM IMPREGNATED CAULKING COMPOUND. PAINT ALUMINUM SECTIONS IN CONTACT WITH CONCRETE WITH A HEAVY COAT OF AN ALKALI RESISTANT BITUMINOUS PAINT OR A COAT OF ZINC CHROMATE PAINT AND ALLOW TO DRY BEFORE PLACING. ALUMINUM ALLOYS SHALL NOT BE PLACED IN CONTACT WITH COPPER, COPPER BASED ALLOYS, LEAD, OR NICKEL.

SHOP DRAWINGS: NOT REQUIRED FOR SIGN BACKING AND SMALL GROUND MOUNTED SIGN SUPPORTS, UNLESS FABRICATOR INTENDS TO DEVIATE FROM THE DETAILS HEREIN. SHOP DRAWING ARE REQUIRED FOR ALL STRUCTURE MOUNTED SIGNS.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



WIND LOAD MAP

WIND LOAD MAP LEGEND			
SYMBOL	ROADSIDE MOUNTED		
	ZONE	WIND VELOCITY (MPH) ⊗	WIND LOAD (PSF) Δ
[Diagonal Hatching]	1	70	20
[Dotted]	2	80	27

⊗ 25 YEAR MEAN RECURRENCE INTERVAL
 Δ INCLUDES C_d = 1.2

SHEET	BRIDGE STANDARD INDEX NO.	DESCRIPTION
1 OF 17	BD.2.7.2.0.1	WIND LOAD MAP & GENERAL NOTES
2 OF 17	BD.2.7.2.0.2	PANEL DETAILS (TYPE A & B SIGNS)
3 OF 17	BD.2.7.2.0.3	MOUNTING DETAILS (TYPE A & B SIGNS)
4 OF 17	BD.2.7.2.0.4	SPACING OF POSTS FOR GROUND MOUNTED SIGNS
5 OF 17	BD.2.7.2.0.5	EXTRUDED ALUMINUM SIGNS (TYPE D & E SIGNS)
6 OF 17	BD.2.7.2.0.6	EXTRUDED ALUMINUM PANELS (TYPE D & E SIGNS)
7 OF 17	BD.2.7.2.0.7	ROADSIDE MOUNTED SIGNS (TYPE A, B, & D SIGNS)
8 OF 17	BD.2.7.2.0.8	ROADSIDE MOUNTED SIGN DETAILS (TYPE A & B SIGNS)
9 OF 17	BD.2.7.2.0.9	ROADSIDE MOUNTED SIGN DETAILS (TYPE D SIGNS)
10 OF 17	BD.2.7.2.0.10	SQUARE TUBE SIGN DETAILS
11 OF 17	BD.2.7.2.0.11	Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)
12 OF 17	BD.2.7.2.0.12	Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)
13 OF 17	BD.2.7.2.0.13	Z - BRACKET SIGN SUPPORT (POST AND RAIL BARRIER)
14 OF 17	BD.2.7.2.0.14	Z - BRACKET SIGN SUPPORT (POST AND RAIL BARRIER)
15 OF 17	BD.2.7.2.0.15	CONTRAFLOW SIGNS (GROUND MOUNTED)
16 OF 17	BD.2.7.2.0.16	CONTRAFLOW SIGNS (F - SHAPE BARRIER)
17 OF 17	BD.2.7.2.0.17	CONTRAFLOW SIGNS (POST AND RAIL BARRIER)

SHEET NUMBER 365

ST. TAMMANY

K. BRAUNER C. GUIDRY
 K. BRAUNER C. GUIDRY
 C. BOURGEOIS

DESIGN CHECK DETAIL CHECK REVIEW SERIES # 1 OF 17

STATE OF LOUISIANA
 KURT M. BRAUNER
 License No. 30567
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 6/24/22

APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022

STATE OF LOUISIANA
 CONFERENCE

WIND LOAD MAP & GENERAL NOTES

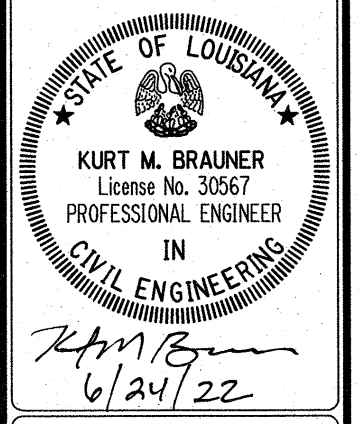
ROADSIDE SIGNING STANDARDS

STANDARD PLAN

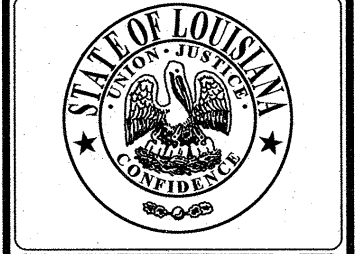
DOTD
 LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

BRIDGE AND STRUCTURAL DESIGN

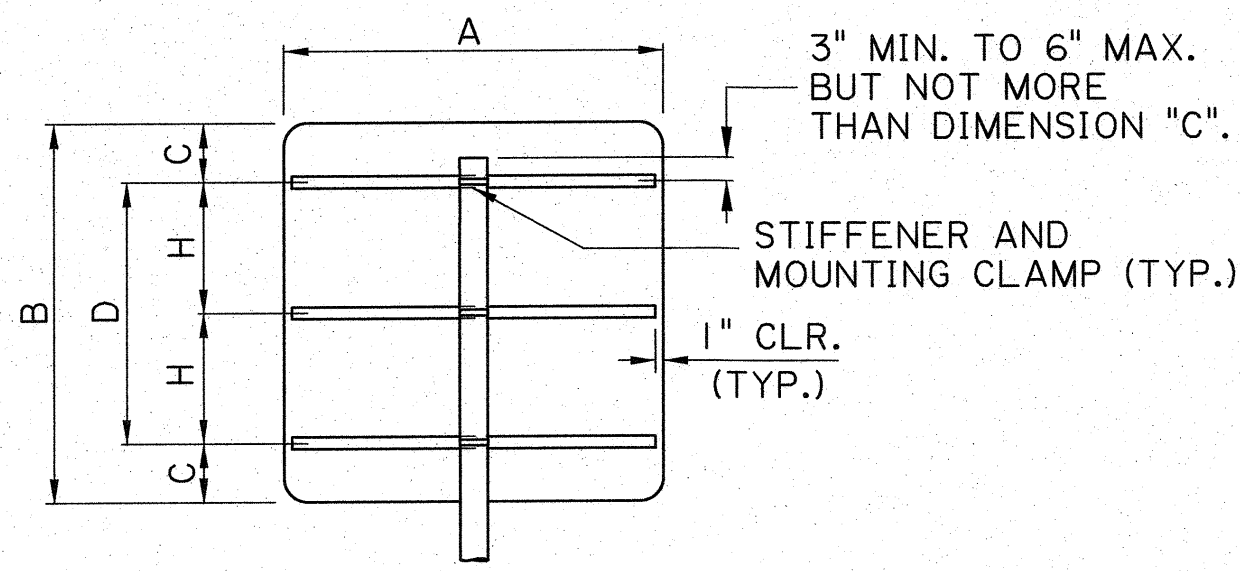
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APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022



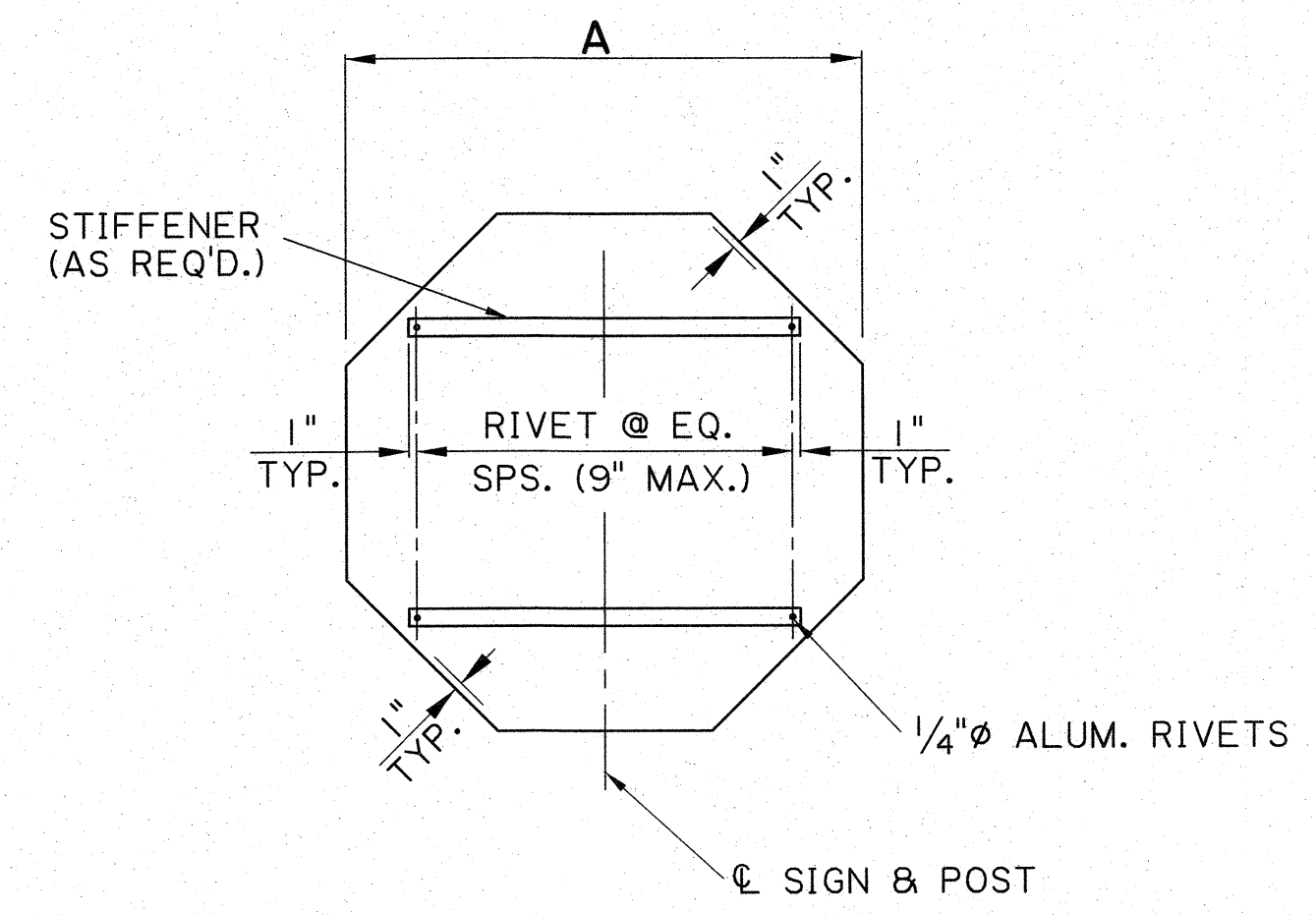
PANEL DETAILS (TYPE A & B SIGNS)
ROADSIDE SIGNING STANDARDS
STANDARD PLAN



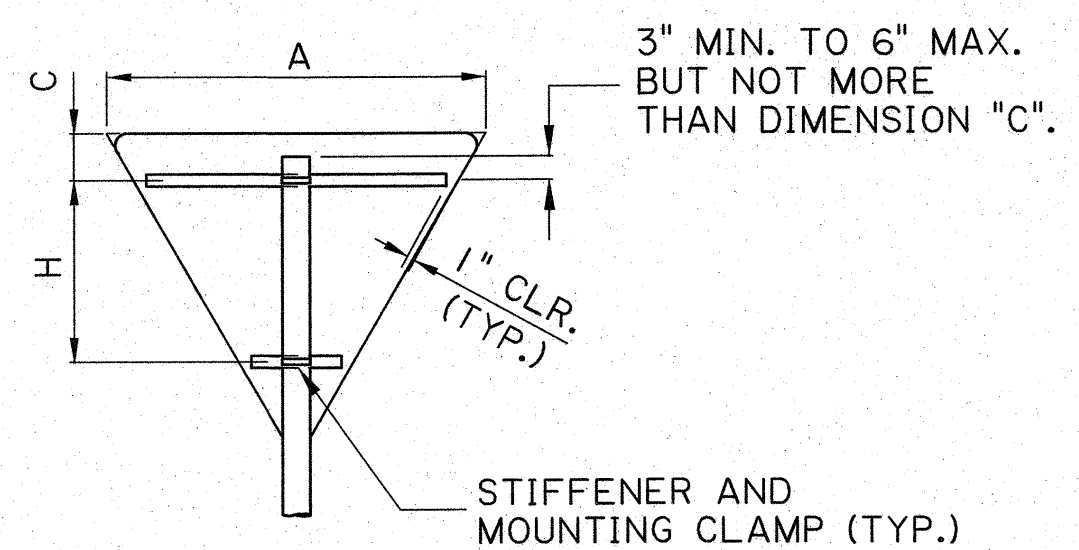
SQUARE, RECTANGLE, CIRCLE, OCTAGON AND ROUTE MARKERS

SQUARE, RECTANGLE, CIRCLE, OCTAGON AND ROUTE MARKERS					
A (IN.)	B (IN.)	C (IN.)	D (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
↑ VARIABLE 12" TO 48" ↓	6	3			1
	12	6			1
	15	7.5			1
	18	9			1
	24	6	12		2
	30	7.5	15		2
	36	7.5	21		2
	48	10	28		2
	60	9	42	21	3
	72	11	6 [△]	25	3
	84	10.5	6 [△]	21	4
	48	96	12	6 [△]	24

△ LOCATION OF BORDER ANGLE FROM EDGE



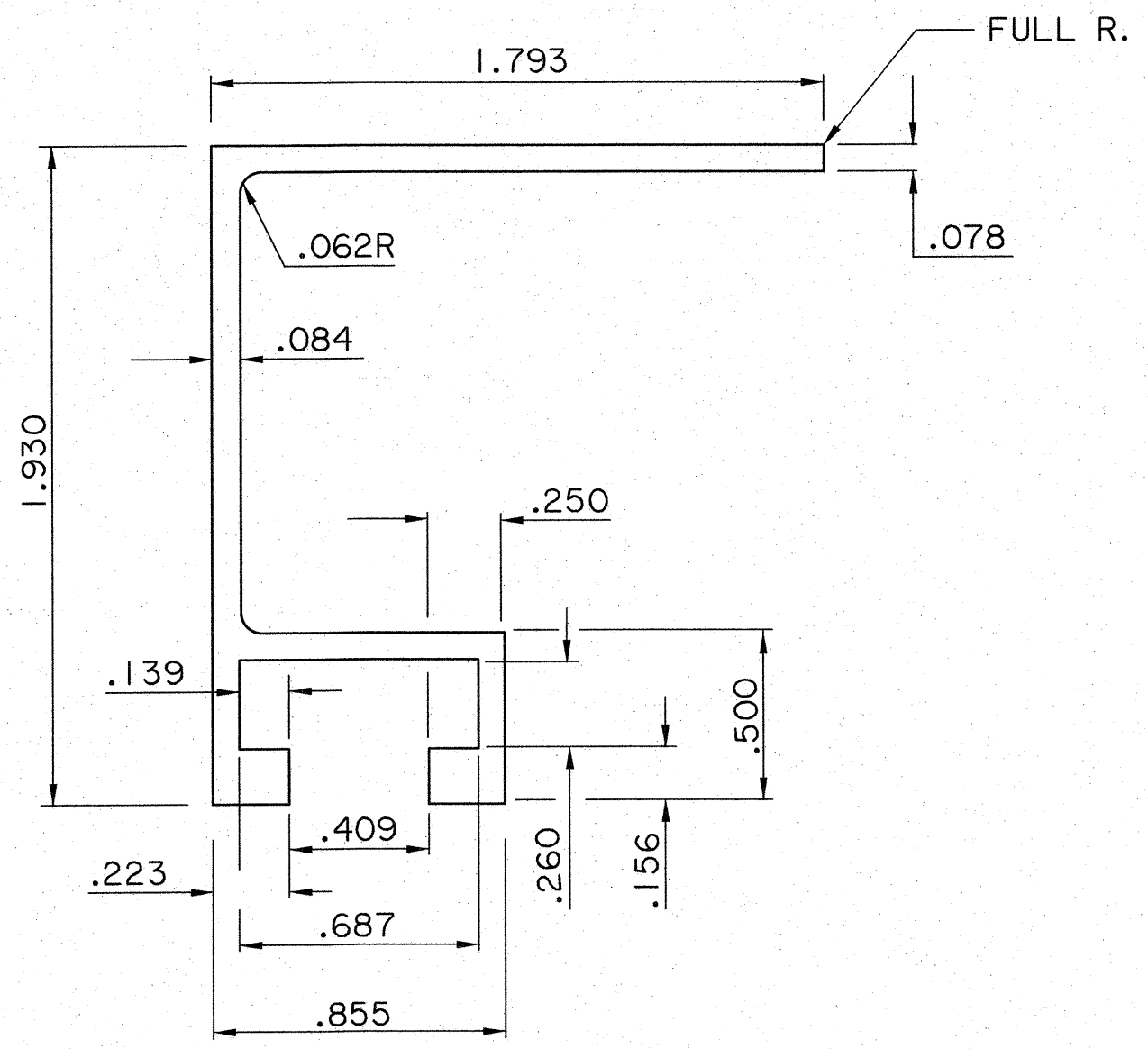
TYPICAL SIGN BACKING DETAIL



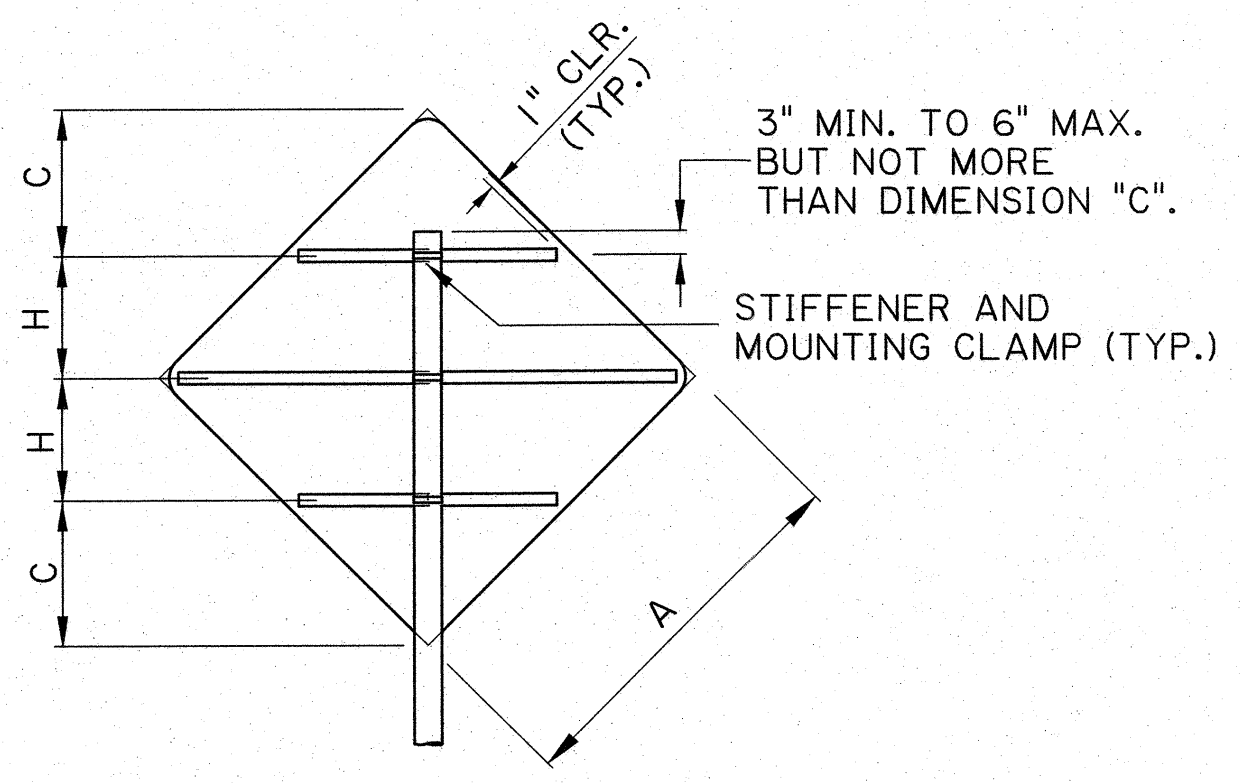
EQUILATERAL TRIANGLE

EQUILATERAL TRIANGLE			
A (IN.)	C (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
24	8		1
30	6	10	2
36	6	12.5	2
48	6	23	2
60	6	33.5	2

TYPE A SIGNS



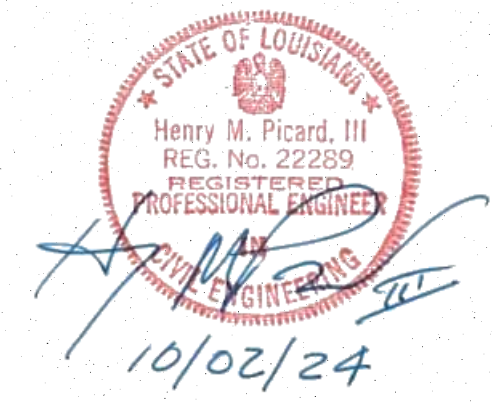
EXTRUSION STIFFENER THIS STIFFENER REQUIRES THE USE OF RIVETS



DIAMOND

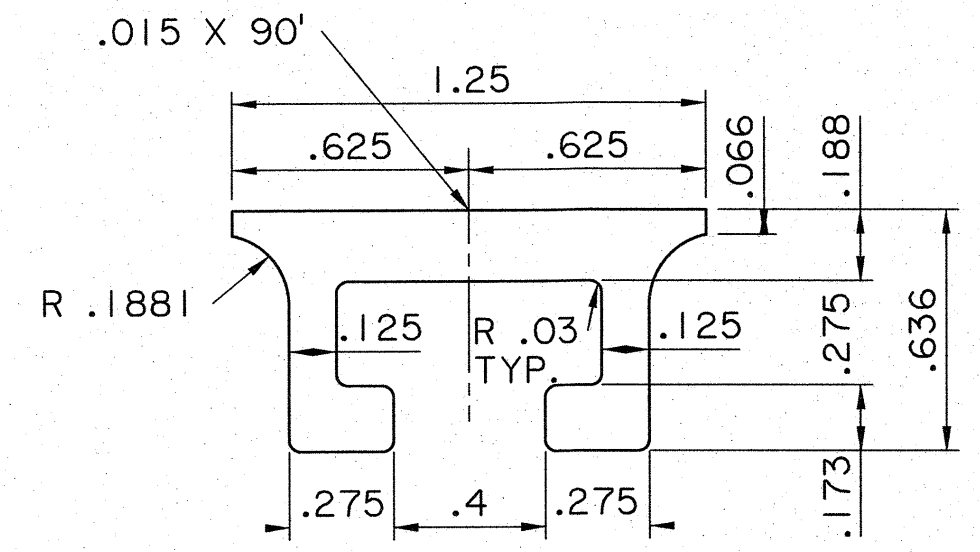
DIAMOND			
A (IN.)	C (IN.)	H (IN.)	STIFFENER NUMBER REQUIRED
24	10	6.97	1
30	12	9.21	2
36	14	11.46	2
48	18.5	15.44	3
60	22.5	19.93	3

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

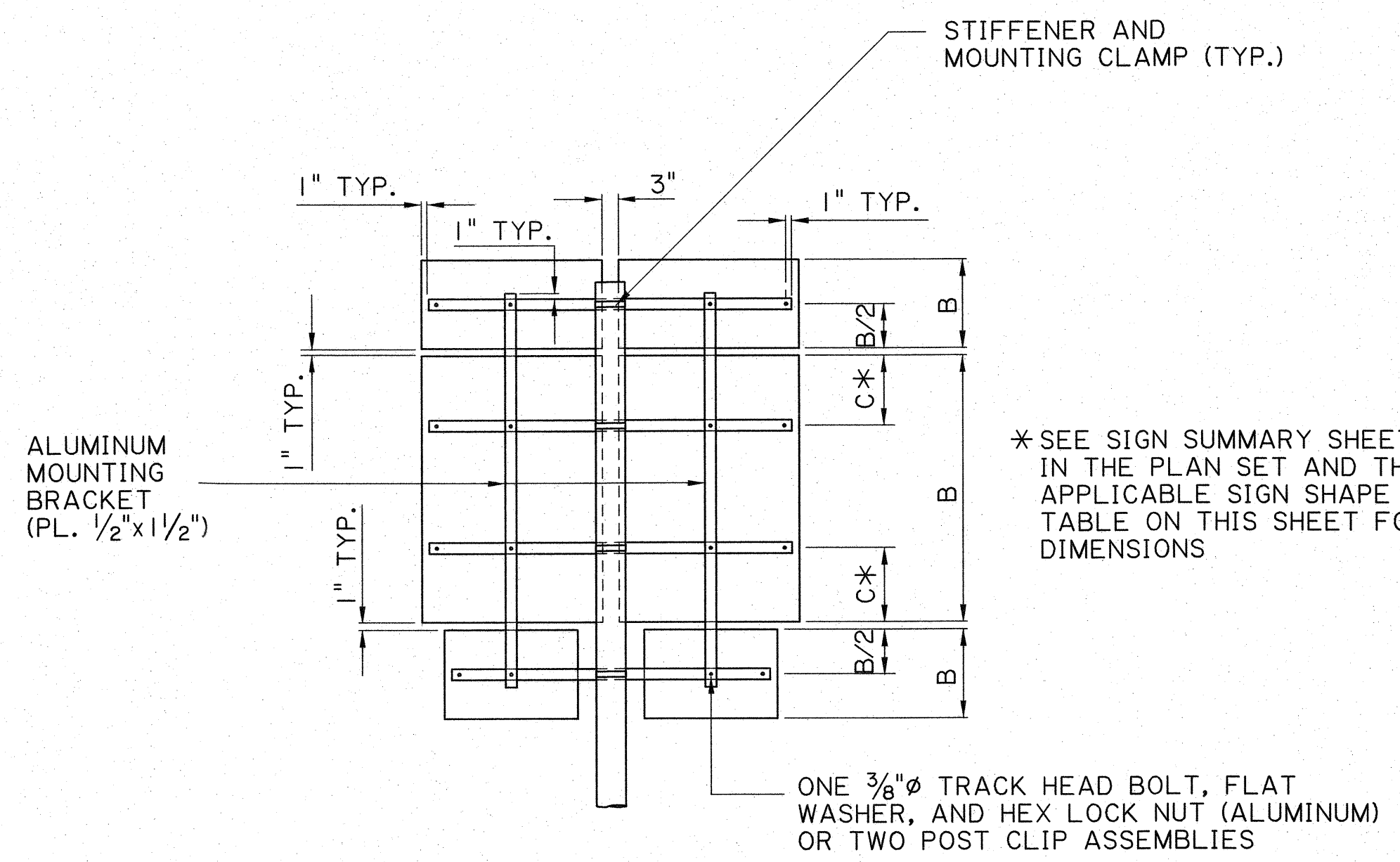


NOTES:

- NO BOLTS SHALL BE PLACED THROUGH FACE OF SIGN.
- ALL TRACK HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO BOLT SLOTS IN THE STIFFENER.
- STIFFENERS SHALL BE ALUMINUM EXTRUSIONS AS DETAILED ON THIS SHEET UNLESS OTHERWISE NOTED.
- MOUNTING CLAMPS REQUIRED AT EACH HORIZONTAL STIFFENER.
- SIGN PANELS AND POSTS SHALL BE THE SIZE REQUIRED ON THE PLANS AND SUMMARY SHEET.
- SEE OTHER SHEETS FOR MOUNTING DETAILS.
- ALL SIGNS THAT REQUIRE BACKING SHALL BE INSTALLED WITH RIVETS.
- THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES SHEET.



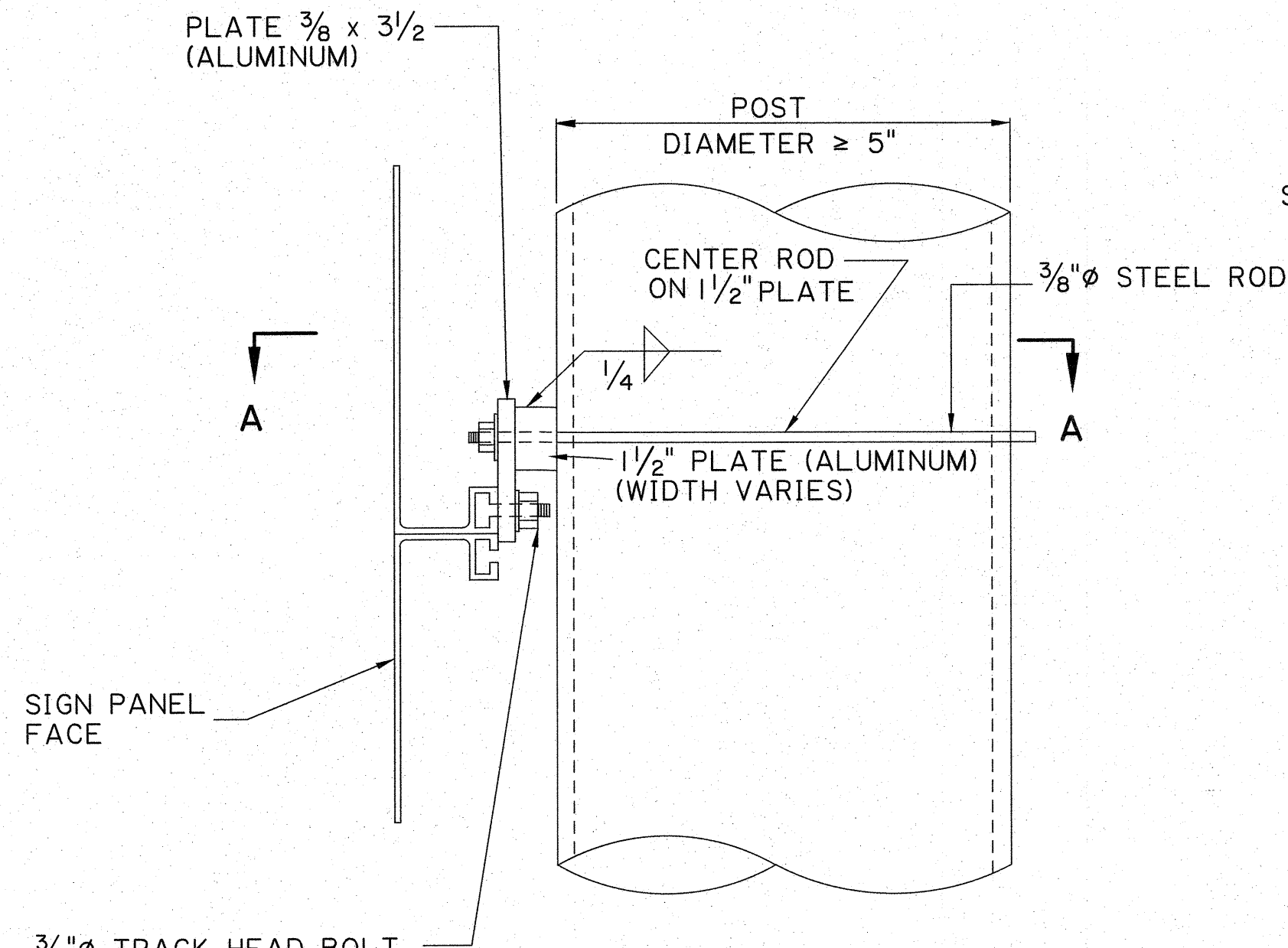
EXTRUDED CHANNEL DETAIL



TYPE B SIGN CLUSTER ASSEMBLY

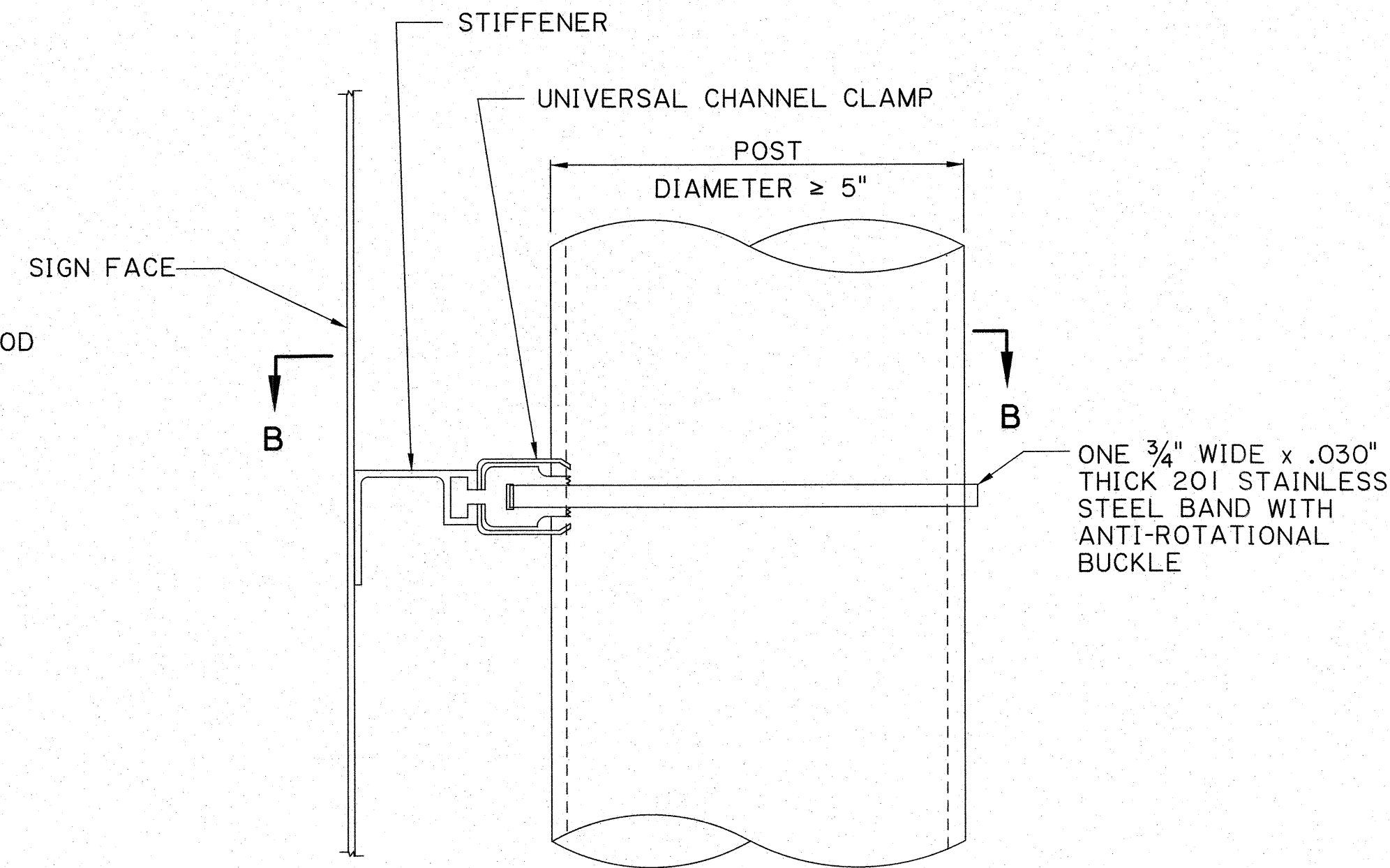
* SEE SIGN SUMMARY SHEET IN THE PLAN SET AND THE APPLICABLE SIGN SHAPE TABLE ON THIS SHEET FOR DIMENSIONS

ONE 3/8" TRACK HEAD BOLT, FLAT WASHER, AND HEX LOCK NUT (ALUMINUM) OR TWO POST CLIP ASSEMBLIES

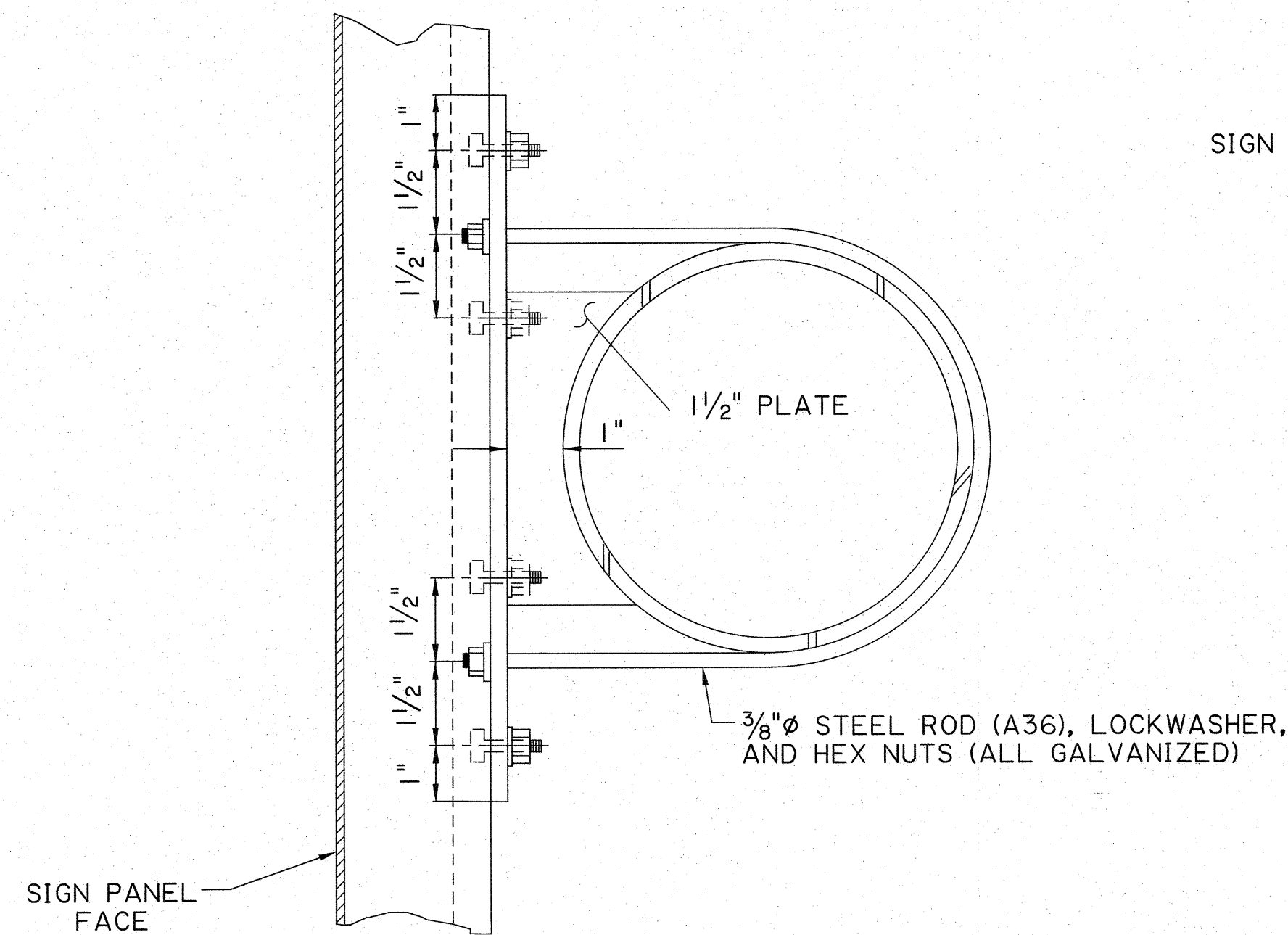


3/8" Ø TRACK HEAD BOLT, FLAT WASHER, AND HEX LOCK NUT (ALUMINUM) AT MAXIMUM 3" SPACING

ELEVATION
(TYPICAL AT EACH STIFFENER)

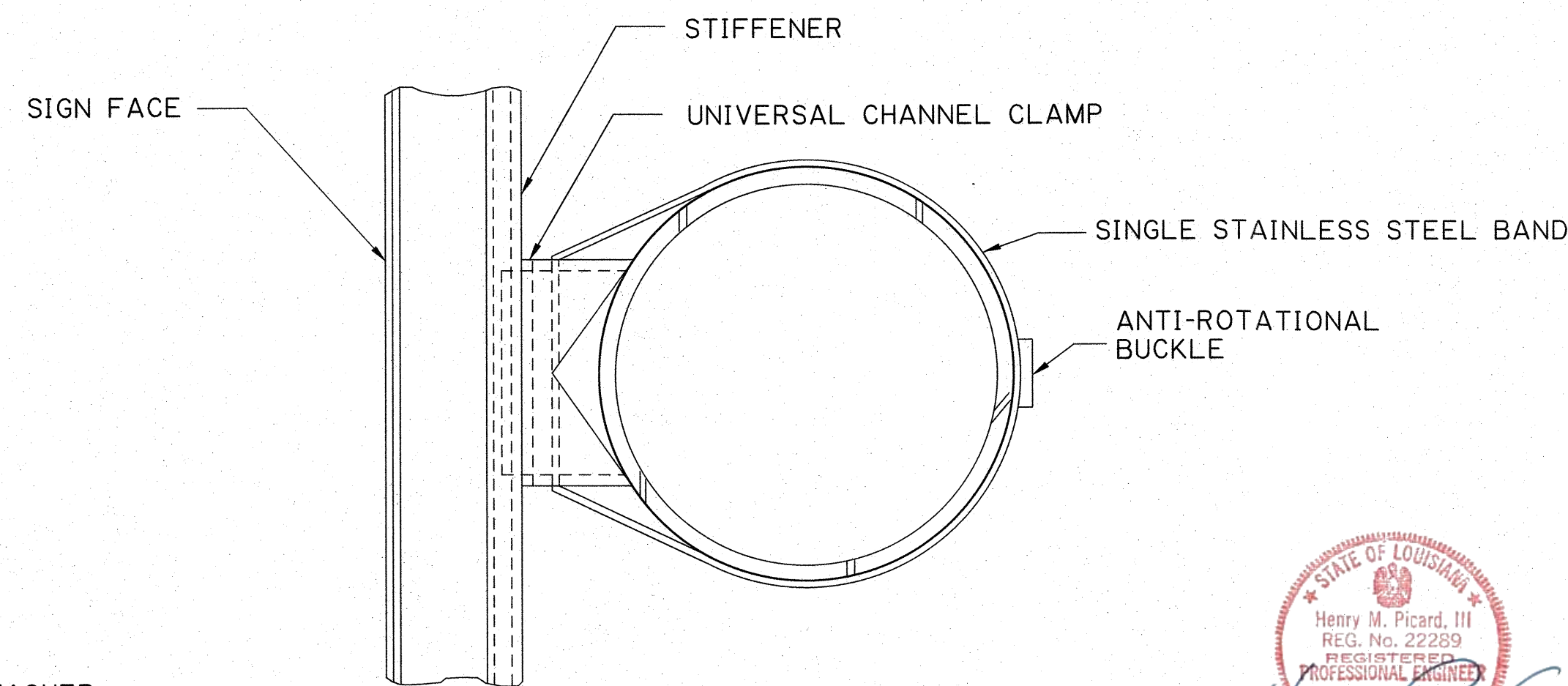


ELEVATION
TYPICAL AT EACH STIFFENER



SECTION A-A

MOUNTING DETAIL (TYPE I)
FOR NON-TAPERED ROUND METAL POST
SIZES ≥ 5" DIAMETER AND SIGNS > 20 SQ. FT.



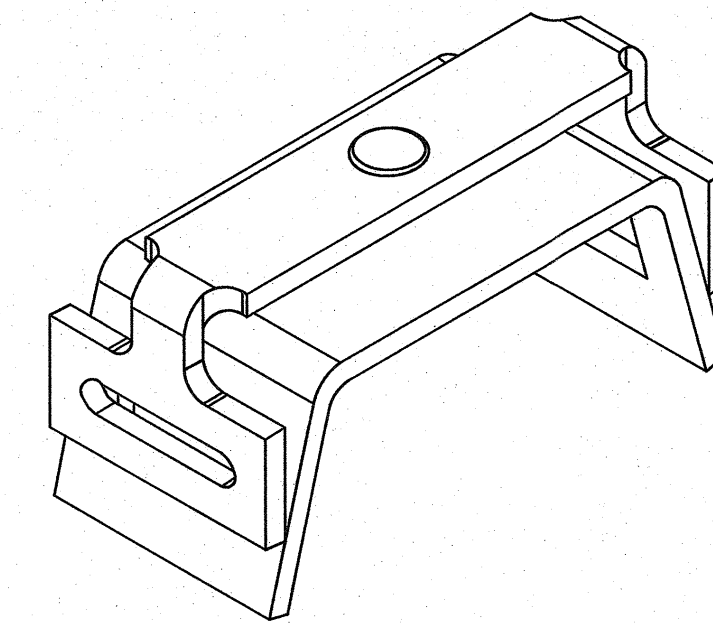
SECTION B-B

MOUNTING DETAIL (BAND TYPE)
FOR ALL POSTS ≥ 5" AND WITH SIGN AREAS
≤ 20 SQ. FT. OR LESS THAN 4 FEET WIDE

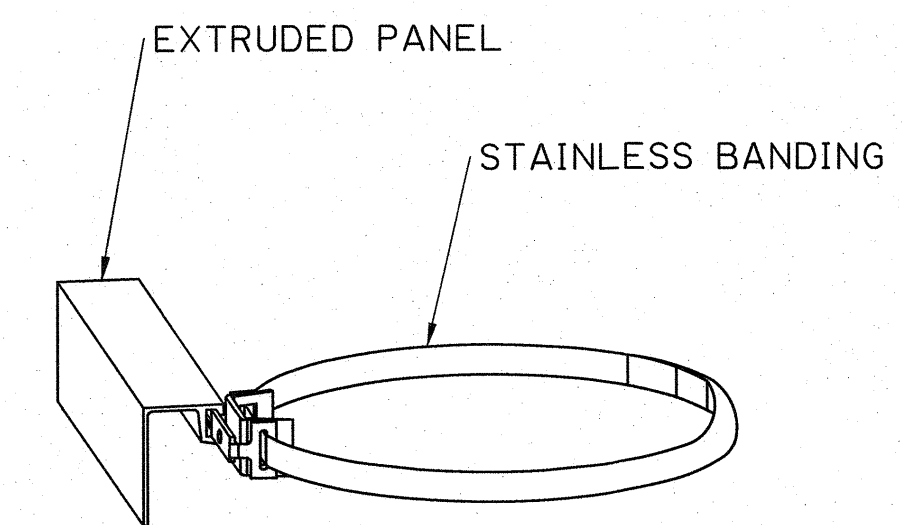


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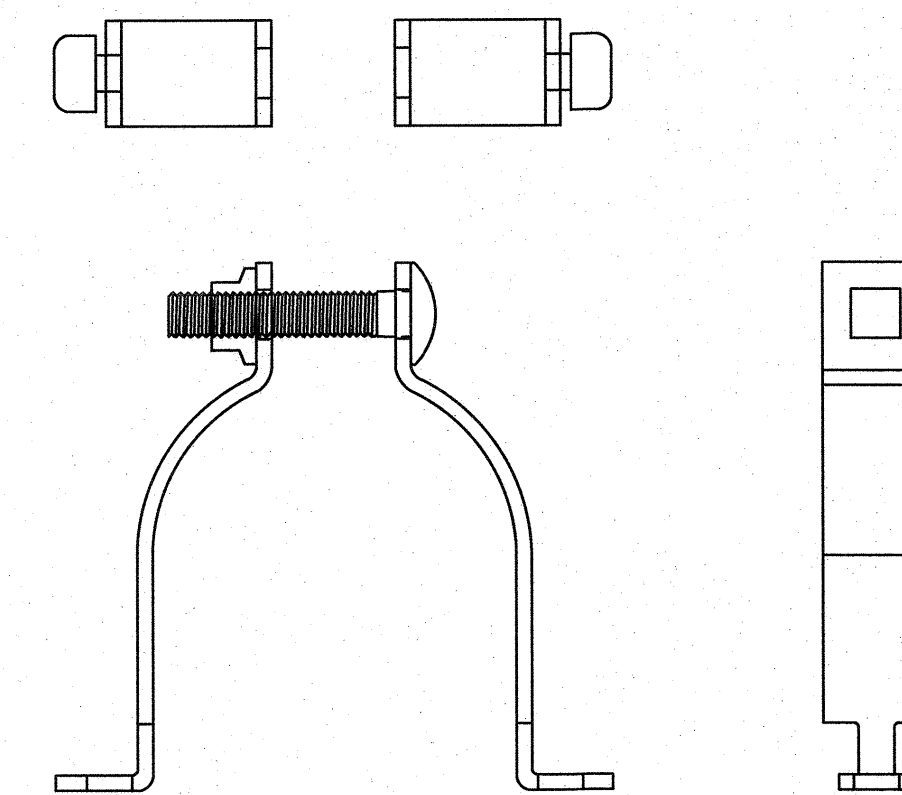
NOTES:
NO BOLTS SHALL BE PLACED THROUGH FACE OF SIGN.
ALL TRACK HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO BOLT SLOTS IN THE STIFFENER.
MOUNTING CLAMP REQUIRED AT EACH HORIZONTAL STIFFENER.



STAINLESS STEEL BANDING

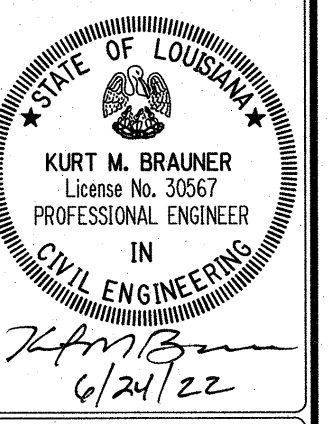


EXTRUDED PANEL BANDING CLIP

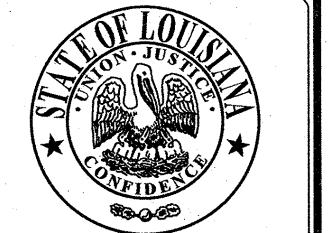


ROUND POST CLAMPS

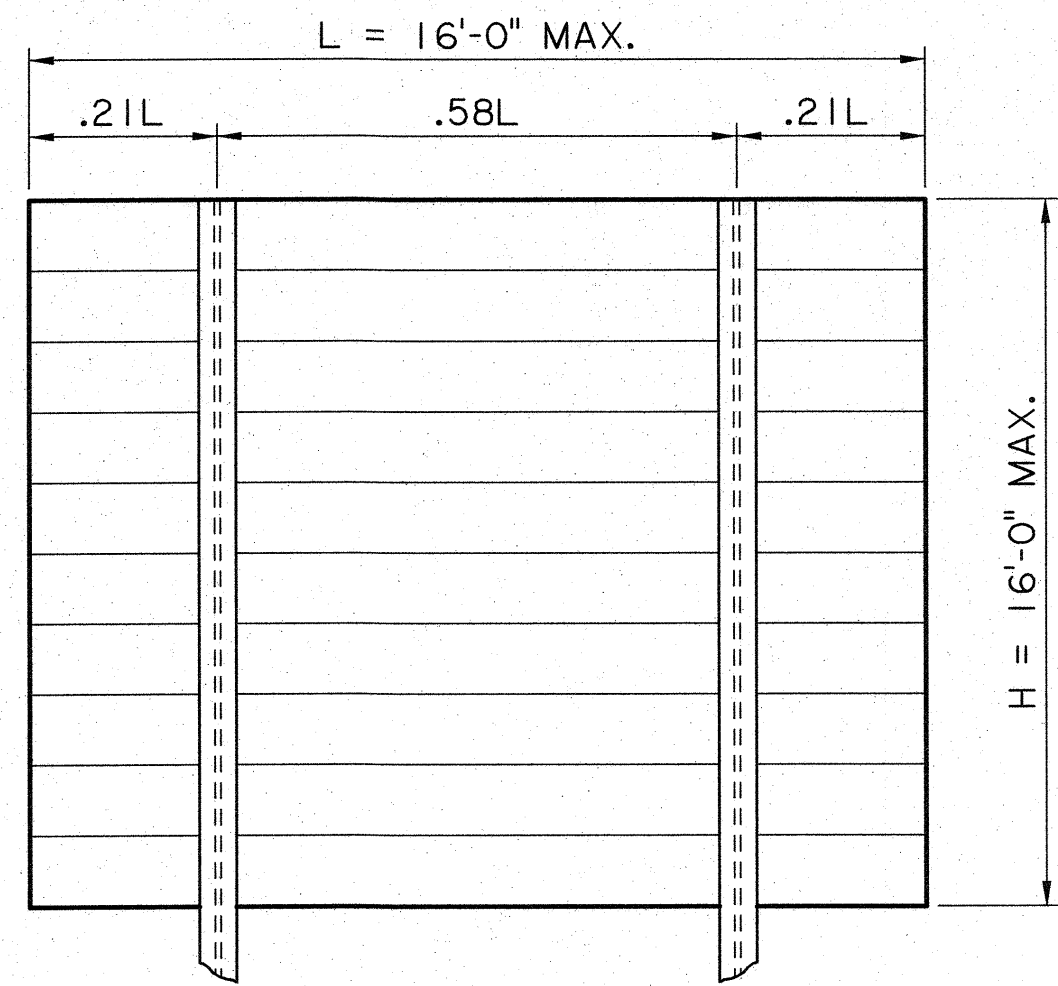
DESIGN	K. BRAUNER	CONTROL SECTION	STATE PROJECT
CHECK	C. GUIDRY	CHECK	REVIEW
DETAIL	K. BRAUNER	REVIEW	SERIES # 3 OF 17
CHECK	C. GUIDRY		



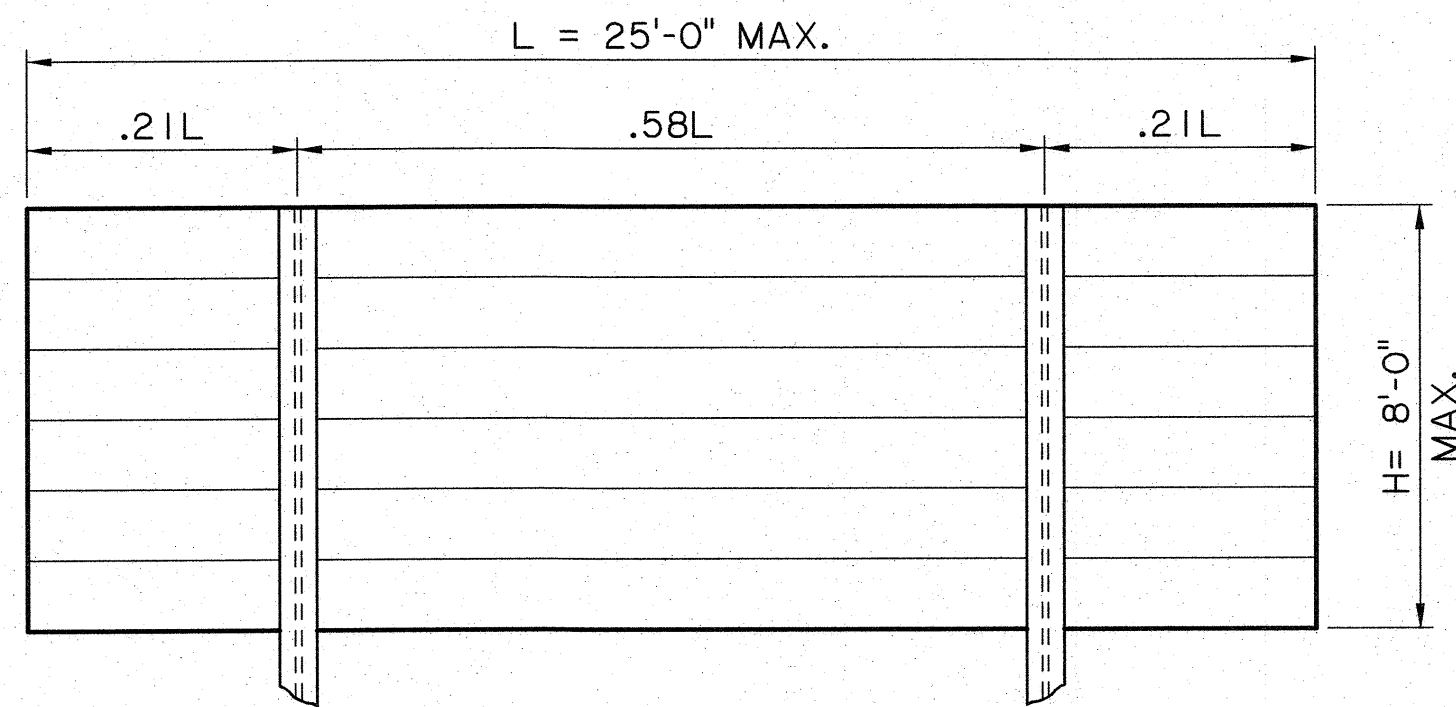
APPROVED BY CHIEF ENGINEER:
Christy P. Foy
DATE: 7/1/2022



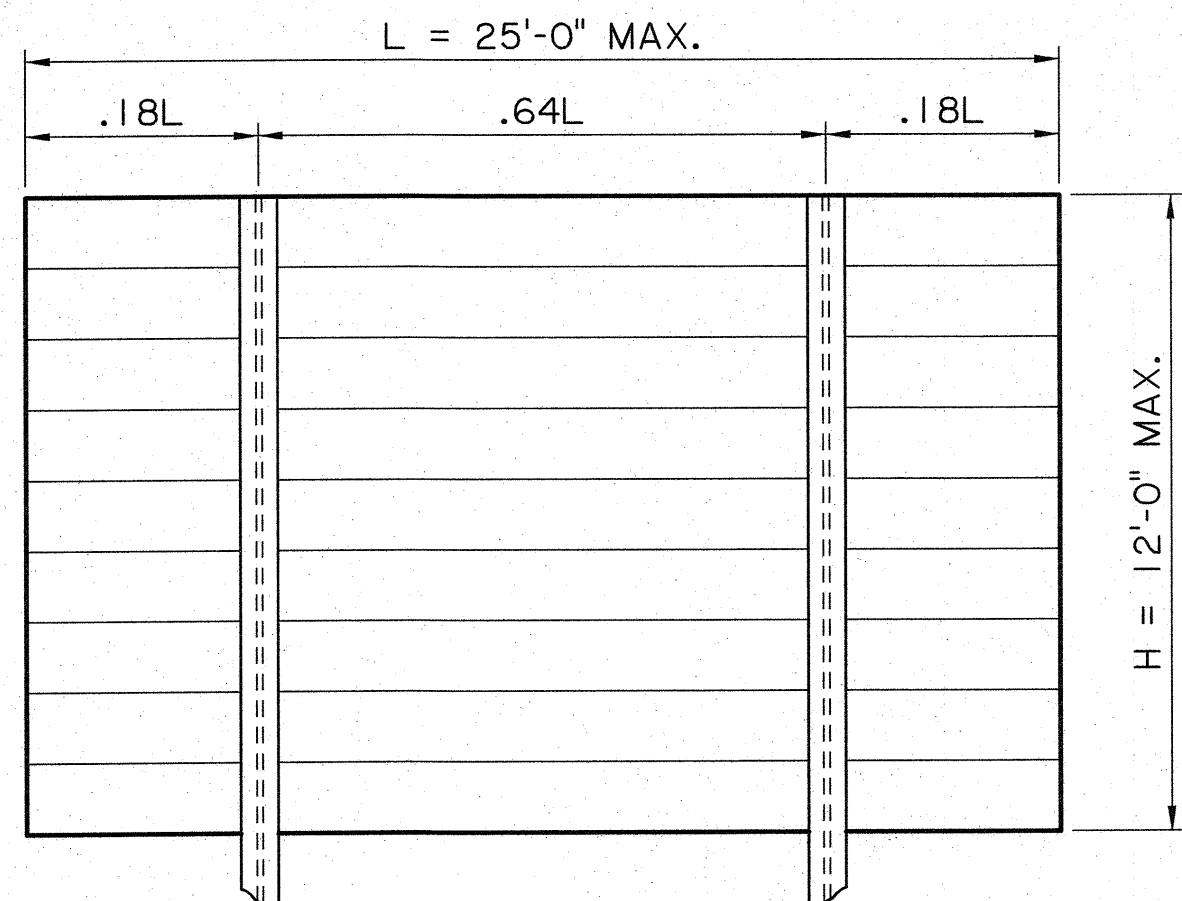
MOUNTING DETAILS (TYPE A & B SIGNS)



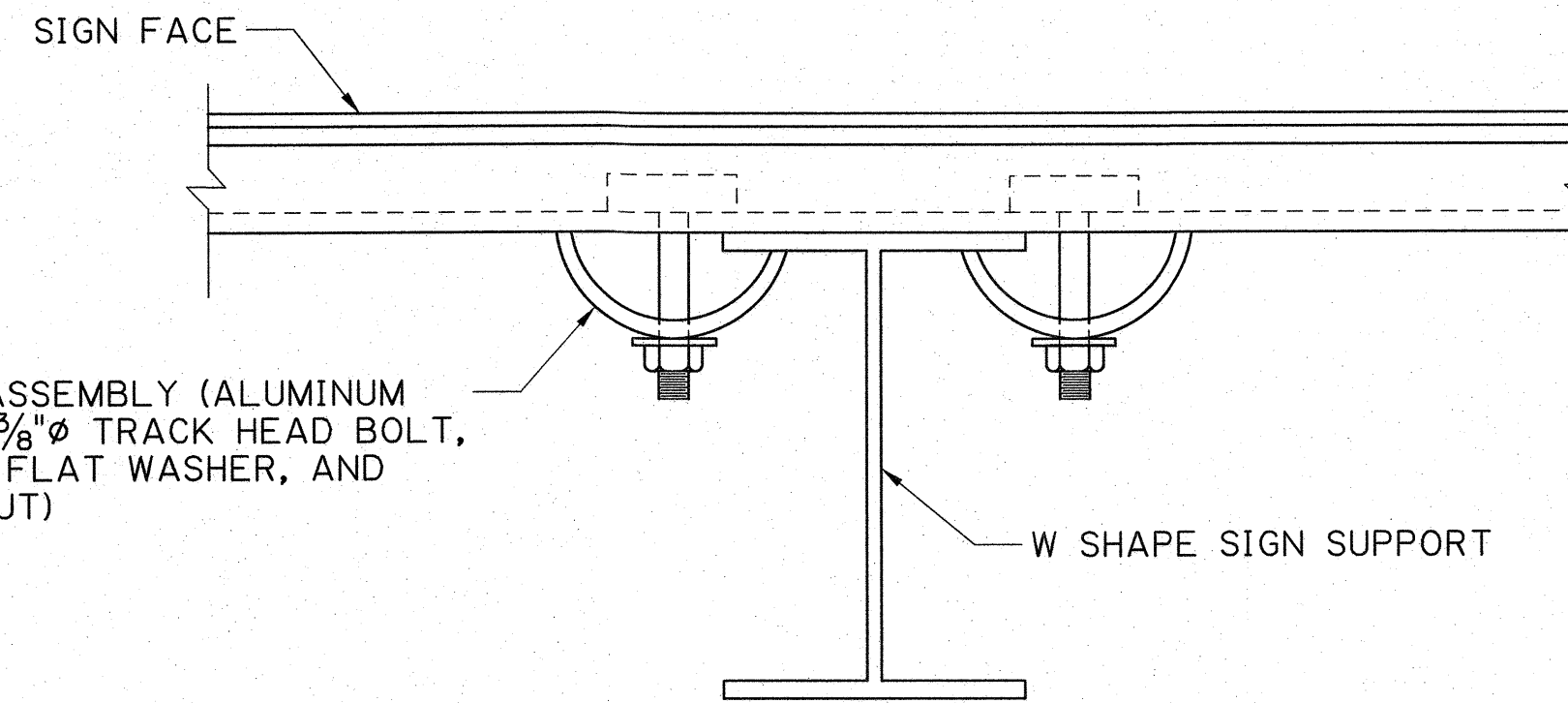
2 POSTS



2 POSTS



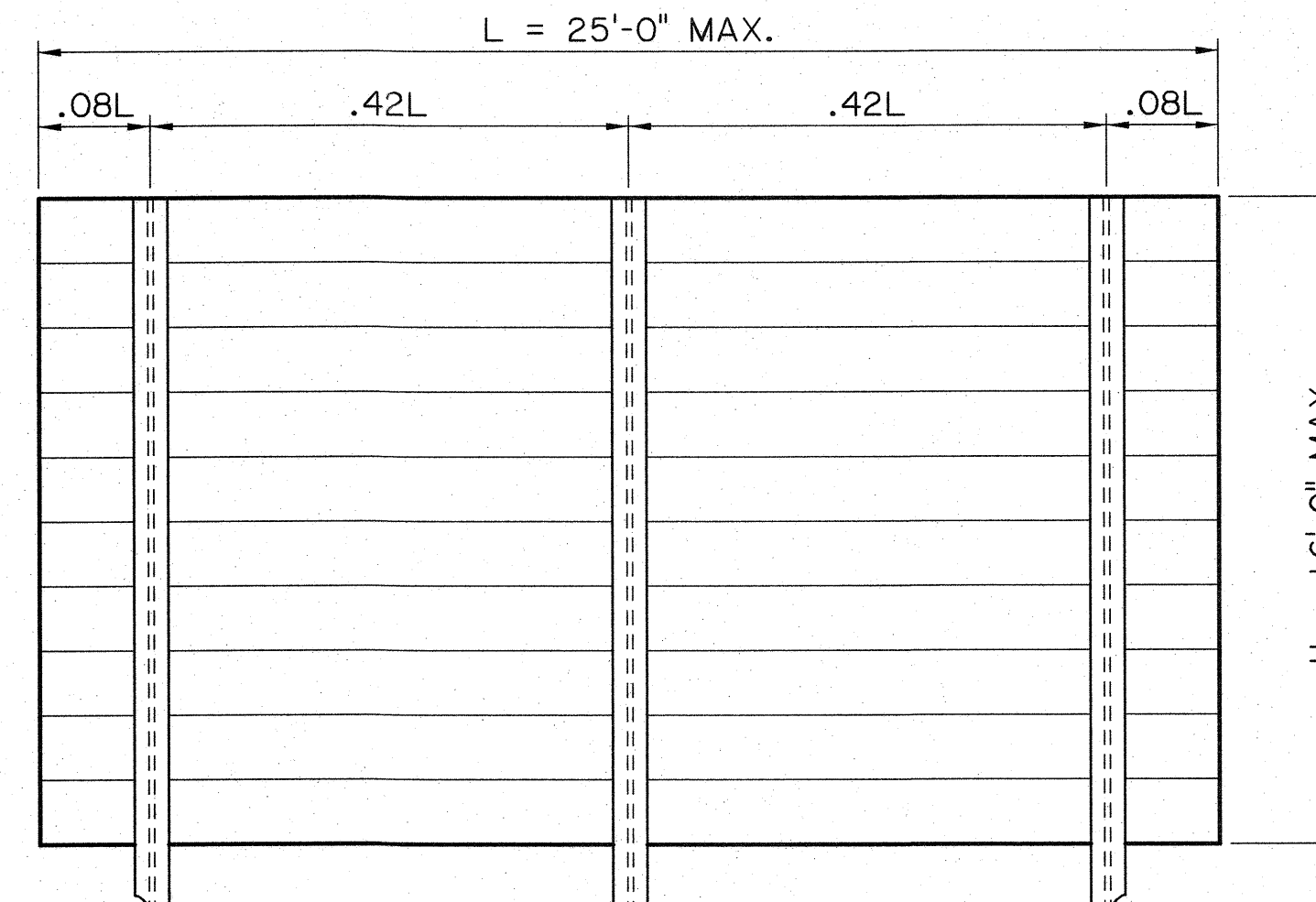
2 POSTS



MOUNTING DETAIL (TYPE II)



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



3 POSTS

SHEET NUMBER		368	
DESIGN		ST. TAMMANY	
DESIGN	K. BRAUNER	PARISH	
CHECK	C. GUIDRY	CONTROL SECTION	
DETAIL	K. BRAUNER	STATE	
CHECK	C. GUIDRY	PROJECT	
REVIEW	C. BOURGEOIS		
SERIES	4 OF 17		

APPROVED BY CHIEF ENGINEER	
	DATE: 7/1/2022

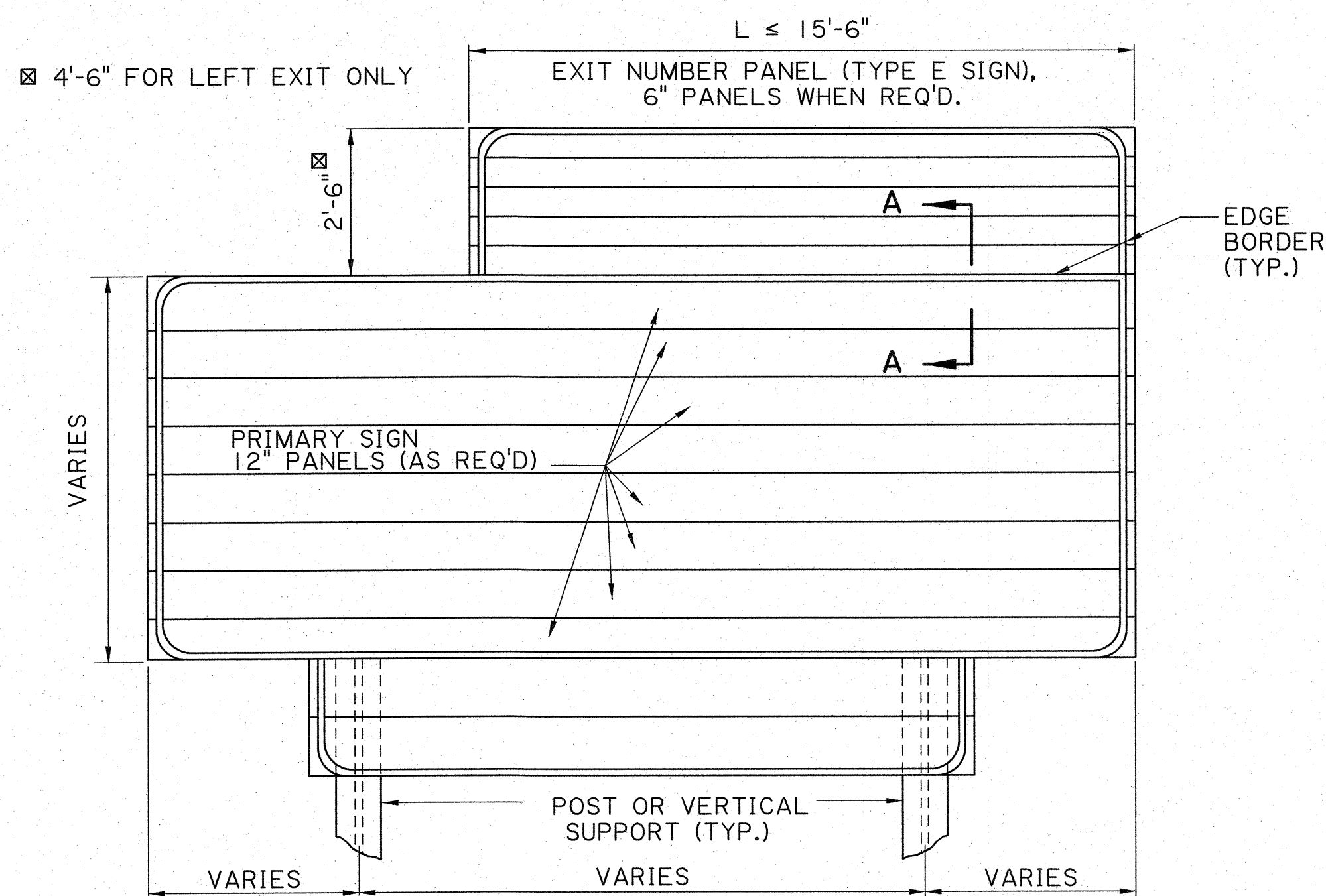
SPACING OF POSTS FOR GROUND MOUNTED SIGNS

ROADSIDE SIGNING STANDARDS

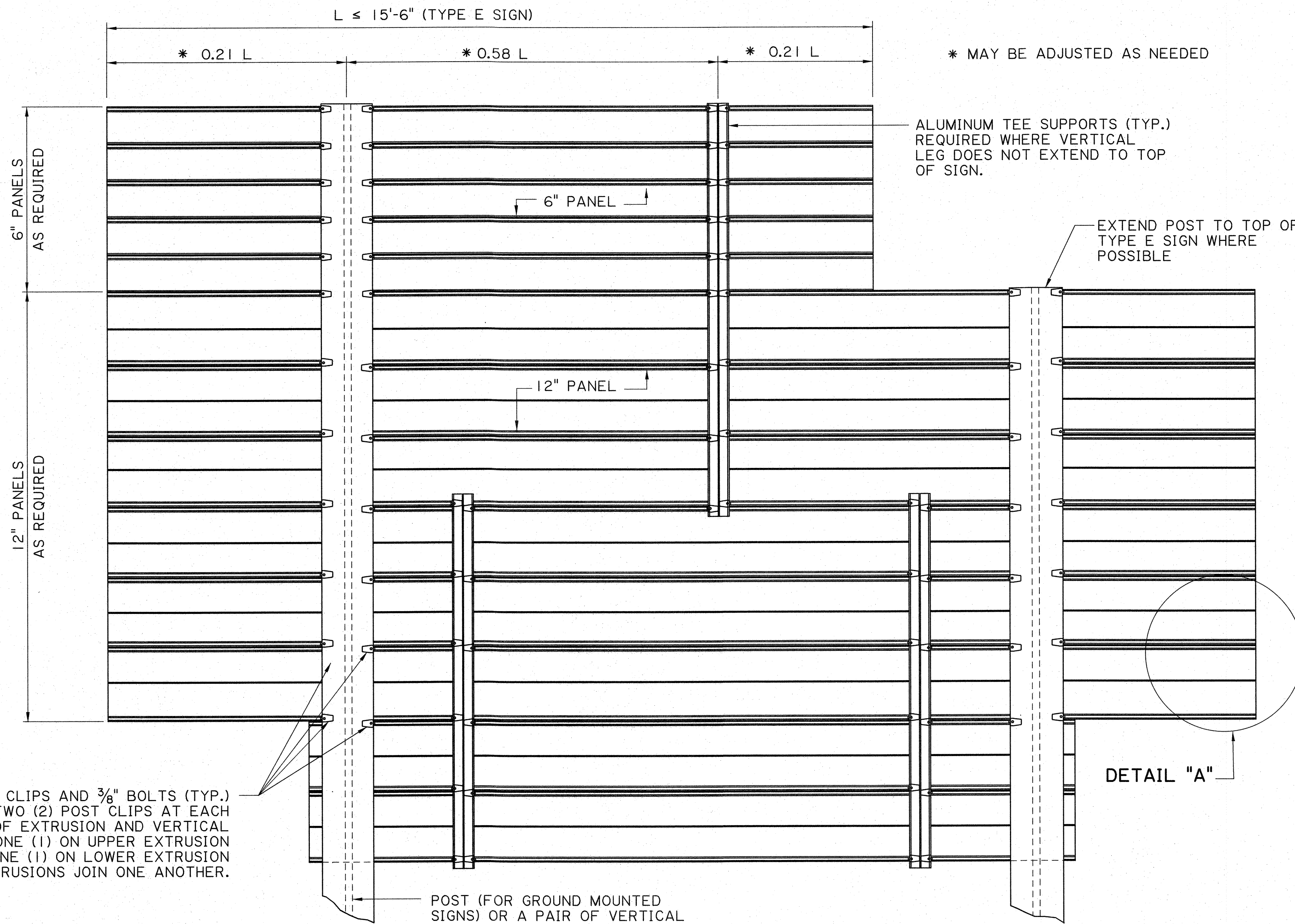
STANDARD PLAN

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

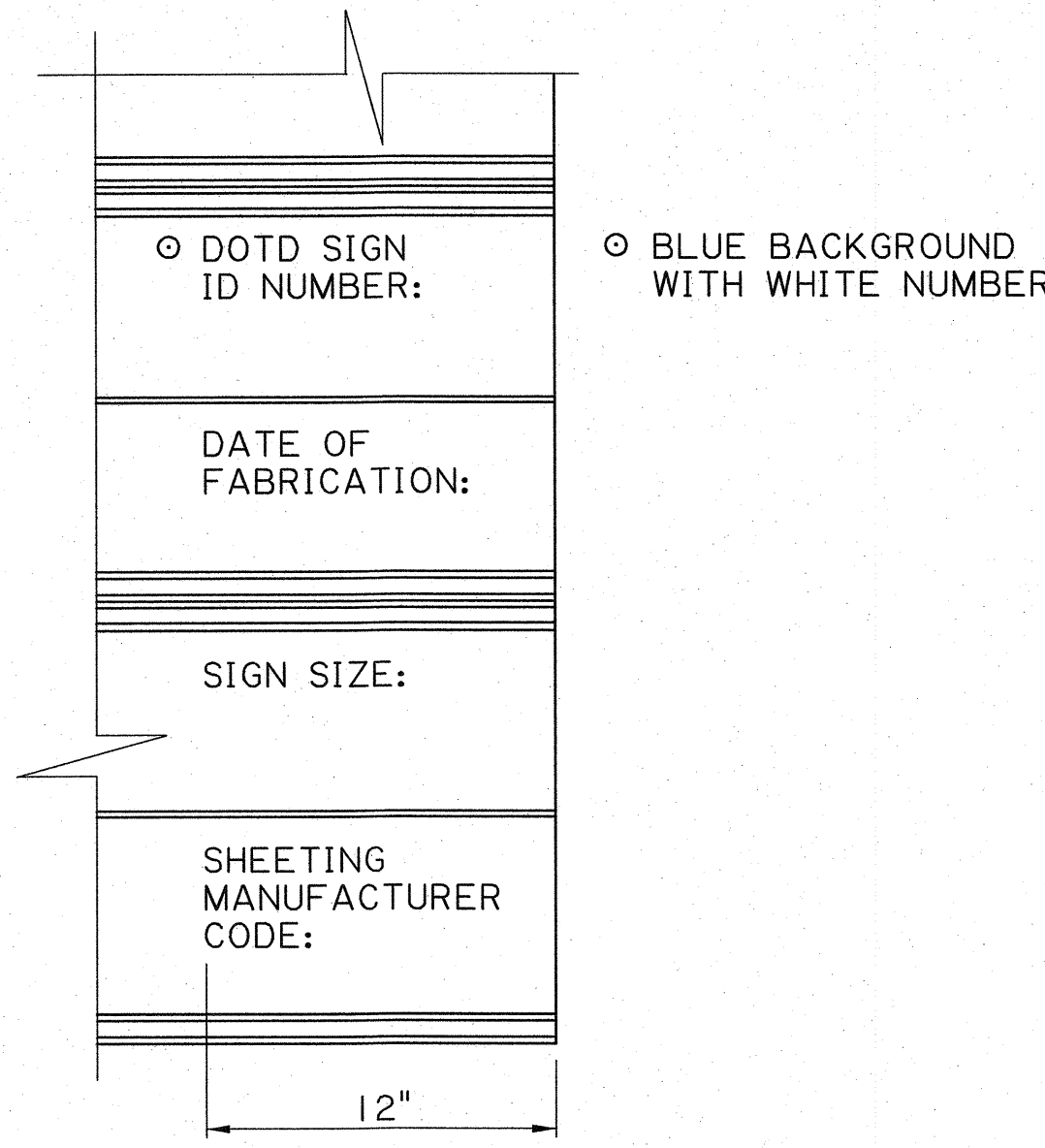
BRIDGE AND STRUCTURAL DESIGN



FRONT ELEVATION



BACK ELEVATION



DETAIL "A"

NOTES:

EXTRUDED ALUMINUM PANELS WILL BE ALLOWED AS AN ALTERNATE TO SIGN PANEL DETAILS FOR TYPE "D" AND "E" GROUND MOUNTED SIGNS ONLY. NUMBER AND SPACING OF POST SHALL MATCH THOSE SHOWN FOR PANEL DETAILS.

ALL 12" EXTRUDED ALUMINUM PANELS SHALL BE ALUMINUM ALLOY 6063-T6. ALL POST CLIPS SHALL BE ALUMINUM ALLOY 356-T6. ALL EXTRUDED PANEL BOLTS AND POST CLIP BOLTS SHALL BE ALUMINUM. ALL HEX LOCK NUTS SHALL BE ALUMINUM ALLOY 2017-T4. ALL POST CLIP BOLTS SHALL BE TORQUED TO A MINIMUM OF 175 IN-LBS. ALL POST CLIP BOLTS SHALL HAVE HEADS DESIGNED TO FIT THE BOLT SLOTS IN THE PANELS.

TYPE E SIGNS SHALL BE ATTACHED TO PRIMARY SIGNS WITH ALUMINUM TEE SUPPORTS, (5'-1" LENGTH), POST CLIPS, POST CLIP BOLTS, AND HEX LOCK NUTS.

FOR NEW OVERHEAD SIGNS (INCLUDING FASCIA MOUNTED) INCORPORATING EXISTING MOUNTS, THE CONTRACTOR WILL PLACE VERTICAL SUPPORT ANGLES WITHOUT SPLICES THAT EXTEND THE FULL HEIGHT OF THE EXTRUDED PRIMARY SIGN PANEL.

FOR NEW TYPE D SIGNS INCORPORATING EXISTING MOUNTS, THE EXISTING POST MAY BE REUSED IF THE NEW SIGN PANEL DOES NOT EXTEND OVER 2'-0" ABOVE THE EXISTING POST. SUCH NEW SIGNS WILL BE MOUNTED TO ALUMINUM TEE SUPPORTS BEGINNING AT THE TOP OF THE SIGN AND EXTENDING DOWNWARD FROM THE TOP OF THE POST THE DISTANCE THE NEW SIGN IS ABOVE THE EXISTING POST PLUS 1'-0". ONE TEE IS REQUIRED ADJACENT TO EACH EXISTING POST AND ATTACHED WITH POST CLIPS AS SHOWN FOR NEW TYPE E SIGNS. IF THE NEW SIGN EXTENDS OVER 2'-0" ABOVE THE EXISTING POST, THE CONTRACTOR IS TO REPLACE THE EXISTING POST AND MEET DETAILS FOR NEW CONSTRUCTION.

REFLECTIVE SHEETING FOR EXTRUDED PANELS; ONLY SPLICES THAT OCCUR AS PART OF THE MANUFACTURING PROCESS SHALL BE PERMITTED. A MAXIMUM OF TWO VERTICAL SPLICES ON ANY ONE SIGN FABRICATED USING EXTRUDED PANELS, WITH ONE SPLICE PER EXTRUDED PANELS SHALL BE ALLOWED. ALL "EXIT ONLY" PANELS THAT ARE DETAILED WITH THE TOP AND/OR BOTTOM EDGE NOT AT AN EXTRUDED PANEL EDGE SHALL BE FABRICATED FROM .080" ALUMINUM AND ATTACHED AS AN OVERLAY. ALL OTHER "EXIT ONLY" PANELS SHALL BE FABRICATED BY APPLYING THE YELLOW REFLECTIVE SHEETING ON THE EXTRUDED PANELS. THE REFLECTIVE SHEETING APPLIED TO EXTRUDED PANELS SHALL EXTEND APPROXIMATELY 1/4" OVER EACH SIDE AND SHALL BE ADHERED TO THE SIDE OF THE PANEL.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

POST CLIPS AND 3/8" BOLTS (TYP.) INSTALL TWO (2) POST CLIPS AT EACH JUNCTION OF EXTRUSION AND VERTICAL SUPPORT, ONE (1) ON UPPER EXTRUSION AND ONE (1) ON LOWER EXTRUSION WHERE EXTRUSIONS JOIN ONE ANOTHER.

POST (FOR GROUND MOUNTED SIGNS) OR A PAIR OF VERTICAL SUPPORT ANGLES (FOR OVERHEAD MOUNTED OR FASCIA MOUNTED SIGNS) (TYP.)

ALUMINUM TEE SUPPORTS (TYP.) REQUIRED WHERE VERTICAL LEG DOES NOT EXTEND TO TOP OF SIGN.

EXTEND POST TO TOP OF TYPE E SIGN WHERE POSSIBLE

* MAY BE ADJUSTED AS NEEDED



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2" LETTERING IN LAST 12" OF SIGN, SEE MISCELLANEOUS NOTE ON GENERAL NOTE SHEET OF TRAFFIC SIGN DETAILS.

SHEET NUMBER	369
PARISH	ST. TAMMANY
CONTROL SECTION	
STATE PROJECT	
DESIGN	K. BRAUNER
CHECK	C. GUIDRY
DETAIL	K. BRAUNER
CHECK	C. GUIDRY
REVIEW	C. BOURGEOIS
SERIES	5 OF 17

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30667
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
7/1/2022

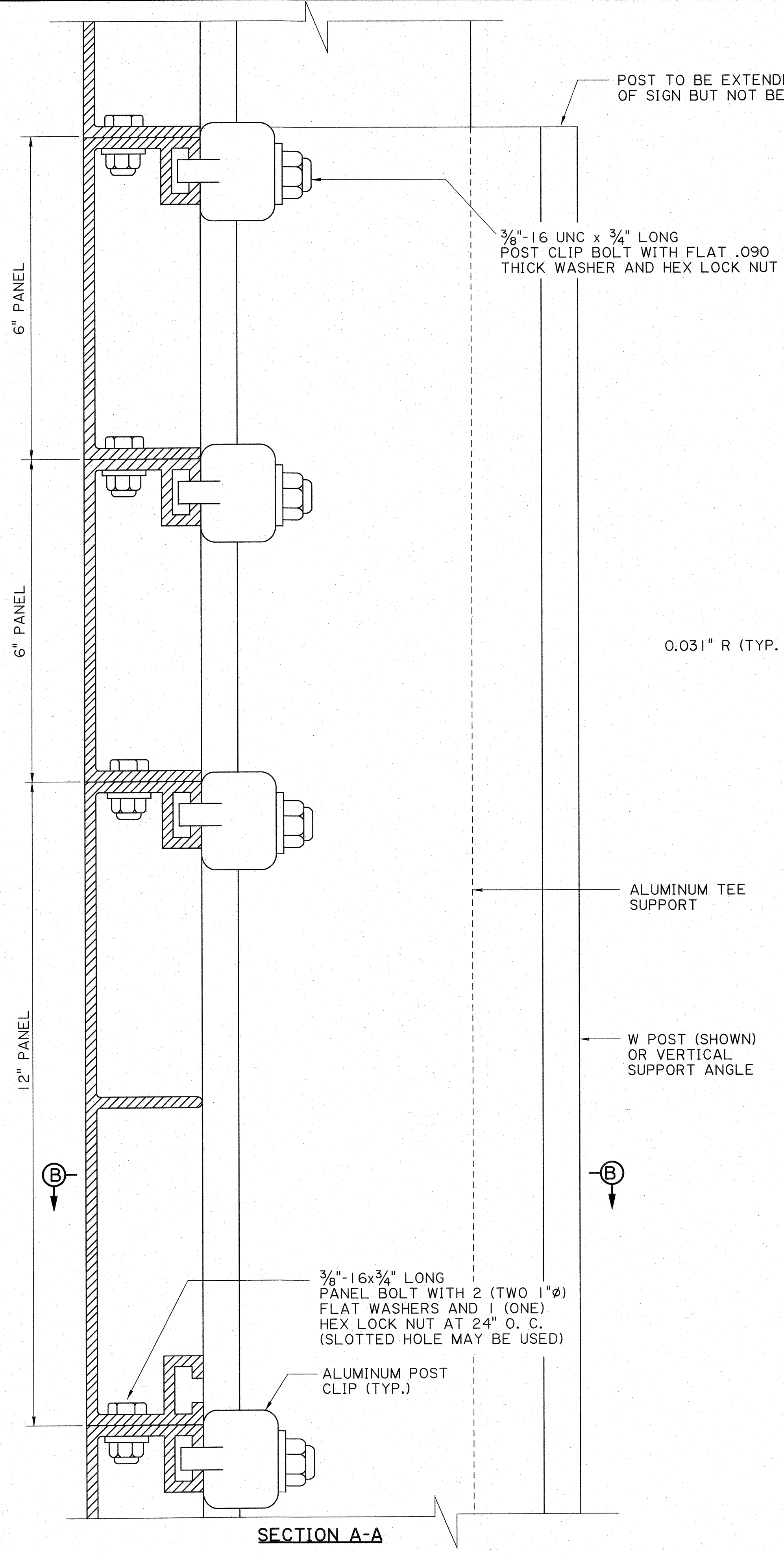
APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022

EXTRUDED ALUMINUM SIGNS (TYPE D & E SIGNS)

ROADSIDE SIGNING STANDARDS

STANDARD PLAN

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
BRIDGE AND STRUCTURAL DESIGN



SECTION A-A

POST TO BE EXTENDED TO TOP OF SIGN BUT NOT BEYOND

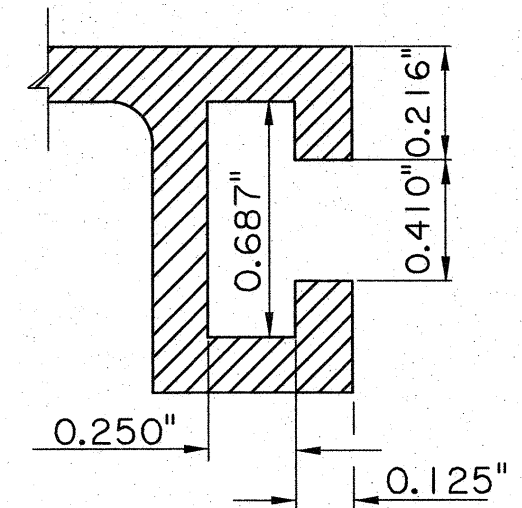
3/8"-16 UNC x 3/4" LONG POST CLIP BOLT WITH FLAT .090 THICK WASHER AND HEX LOCK NUT

3/8"-16x3/4" LONG PANEL BOLT WITH 2 (TWO 1"Ø) FLAT WASHERS AND 1 (ONE) HEX LOCK NUT AT 24" O. C. (SLOTTED HOLE MAY BE USED)

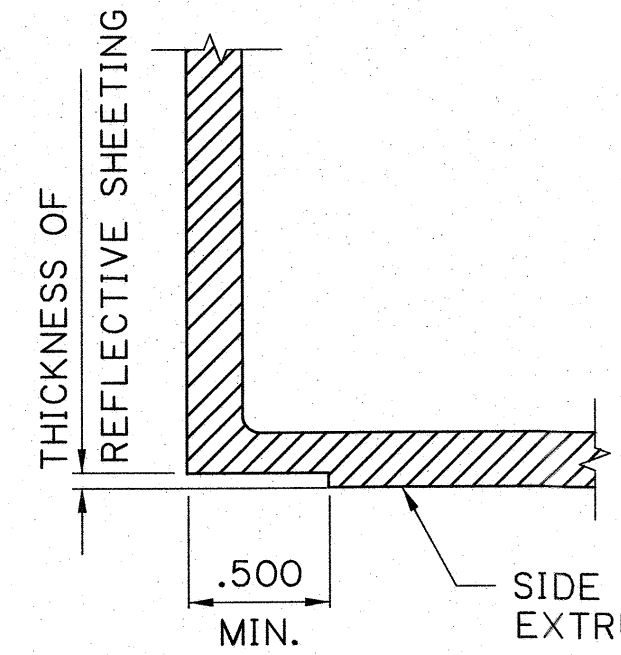
ALUMINUM POST CLIP (TYP.)

ALUMINUM TEE SUPPORT

W POST (SHOWN) OR VERTICAL SUPPORT ANGLE

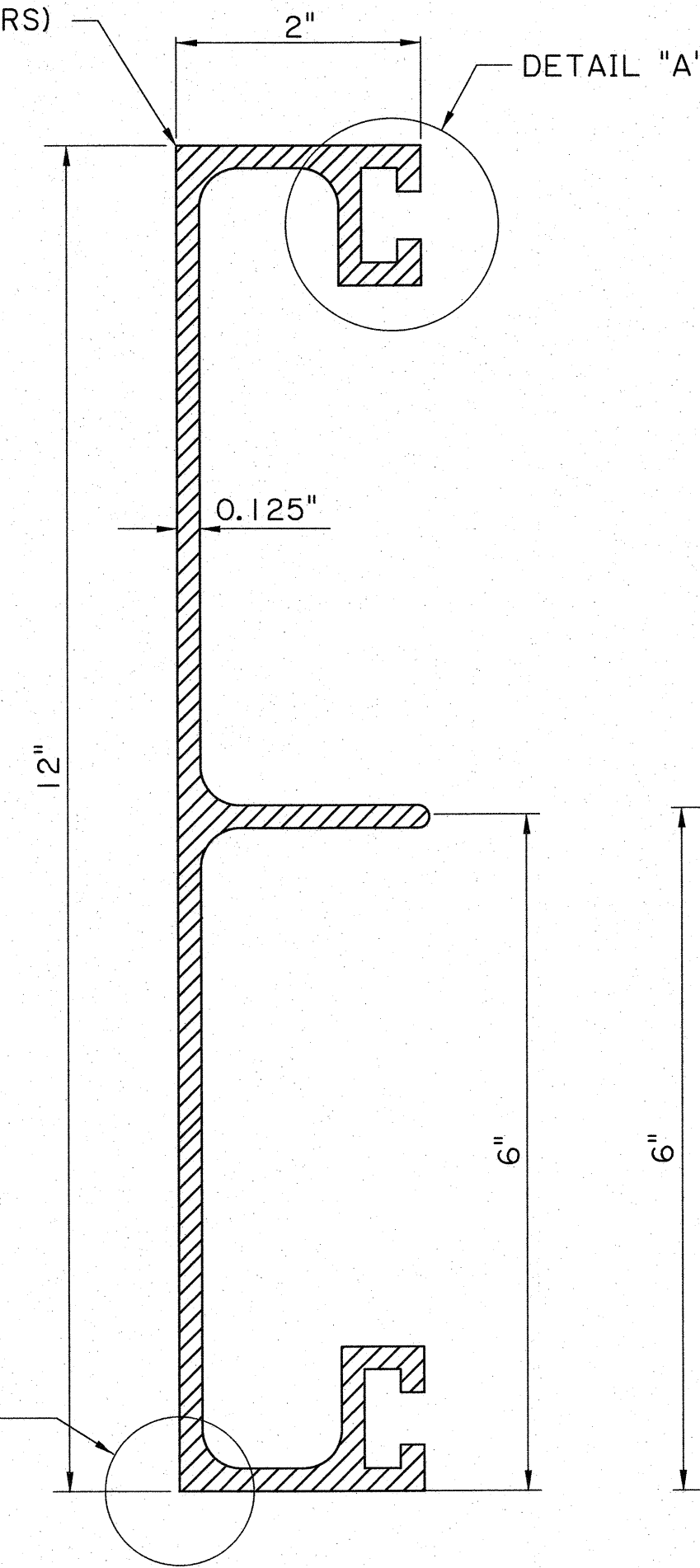


DETAIL "A"



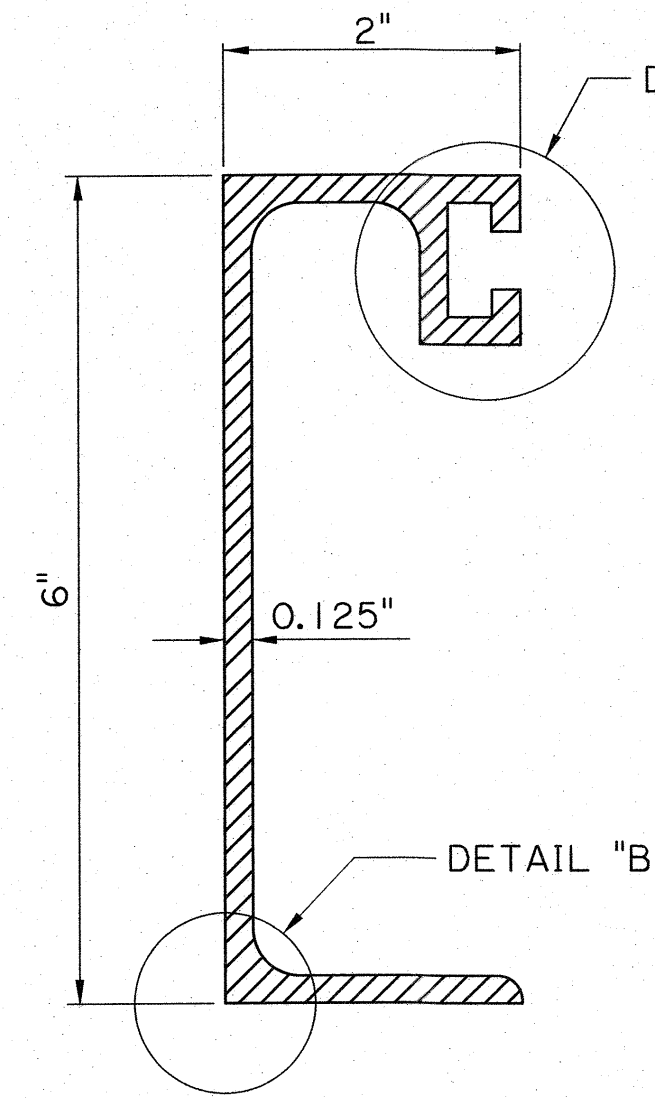
DETAIL "B"

0.031" R (TYP. FACE CORNERS)



12" PANEL

MINIMUM WALL THICKNESS IS 0.080" UNLESS OTHERWISE SPECIFIED



6" PANEL

MINIMUM WALL THICKNESS IS 0.080" UNLESS OTHERWISE SPECIFIED

EXTRUDED ALUMINUM PANEL

ALUMINUM POST CLIPS (TYP.)

3/8" POST CLIP BOLT

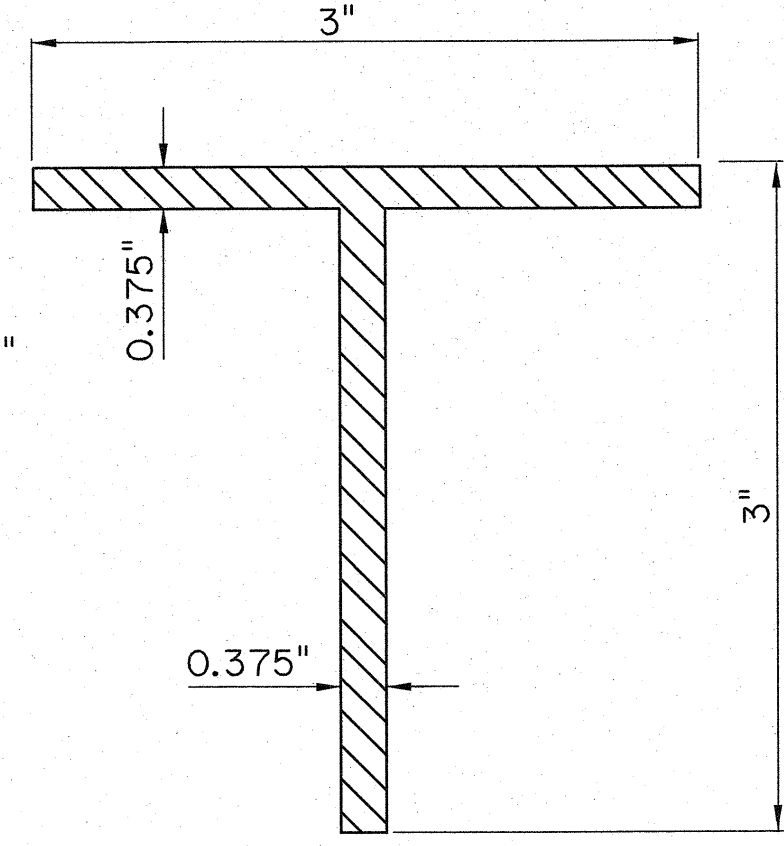
3/8" PANEL BOLT @ 24" O.C.

SIGN FACE

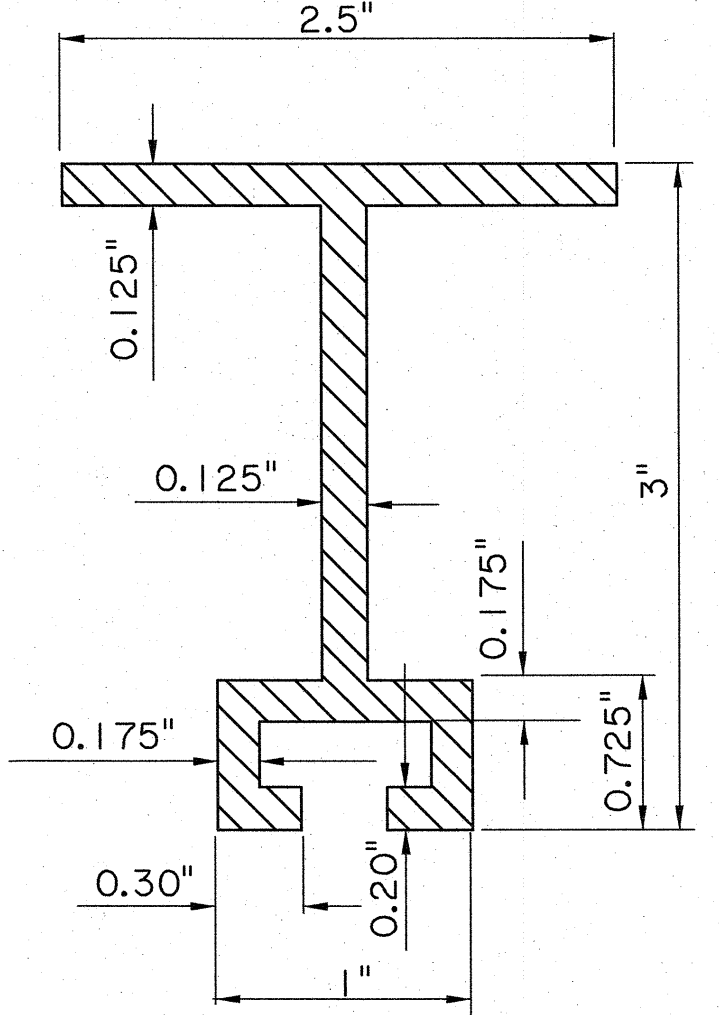
ALUMINUM TEE SUPPORTS (FOR TYPE E SIGNS)

SECTION B-B

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

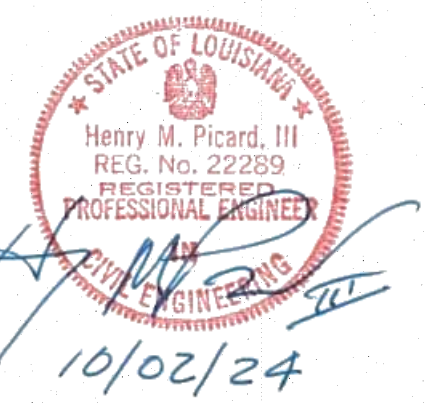


3"x3"x3/8"



3"x2.5"

ALUMINUM TEE SUPPORTS FOR TYPE E SIGNS



SHEET NUMBER		370	
DESIGN		ST. TAMMANY	
CHECK	K. BRAUNER	CONTROL SECTION	
DETAIL CHECK	C. GUIDRY	STATE PROJECT	
REVIEW	K. BRAUNER	SERIES #	16 OF 17
	C. GUIDRY		
APPROVED BY CHIEF ENGINEER: <i>[Signature]</i> DATE: 7/1/2022			
		ROADSIDE SIGNING STANDARDS	
EXTRUDED ALUMINUM PANELS (TYPE D & E SIGNS)			
BRIDGE AND STRUCTURAL DESIGN			

TYPE A SIGN TYPE B SIGN

RECTANGULAR SHAPES: 4'-0" MAX. HORIZ. DIM. DIAMOND SHAPES: 5'-0" MAX. EDGE DIM. OTHER SHAPES: 5'-0" MAX. HORIZ. DIM. CLUSTER ASSEMBLY MAX. DIM. FOR DIFFERENT SIGN BLANK SHAPES ON SINGLE POST SIGNS. DIAMOND: 5'-0"x5'-0" TRIANGLE: 5'-0"x5'-0"x5'-0" OTHERS: 5'-0" MAX. HORIZ. DIM.

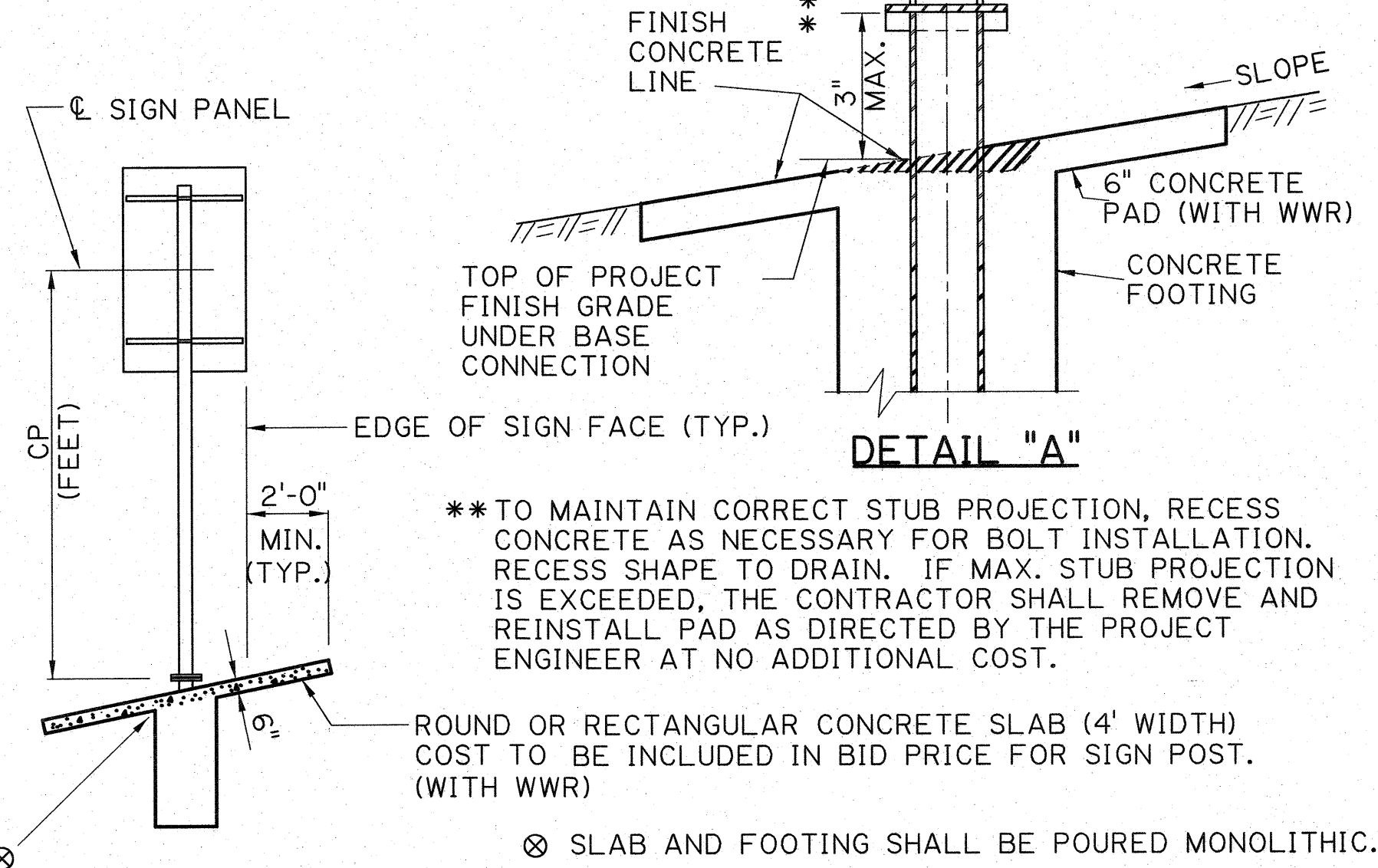


Table with columns: SINGLE POST MOUNTS, TOTAL SQ. FT. SIGN AREA, STEEL ALTERNATE, ZONE I, ZONE II. Rows 5-16 with values for different sign sizes.

Table: SINGLE POST PIPE & TUBE SECTIONS. Columns: NO., STEEL. Rows 1-4 with specifications like 2 1/2" SCH. 40, 3 1/2" SCH. 40, 5" SCH. 40, 6" SCH. 40.

NOTES:

W POST SECTIONS AND TABLE: COLUMNS HEADED BY THE NUMBERS 27 AND 20 REPRESENT THE DESIGN WIND PRESSURE IN POUNDS PER SQUARE FOOT. SEE ACCOMPANYING LOUISIANA WIND MAP TO DETERMINE THE DESIGN WIND PRESURE. L - LENGTH OF SIGN PANEL DESIGNED. H - HEIGHT OF SIGN PANEL DESIGNED. ALL DIMENSIONS ARE IN INCREMENTS OF EVEN FEET.

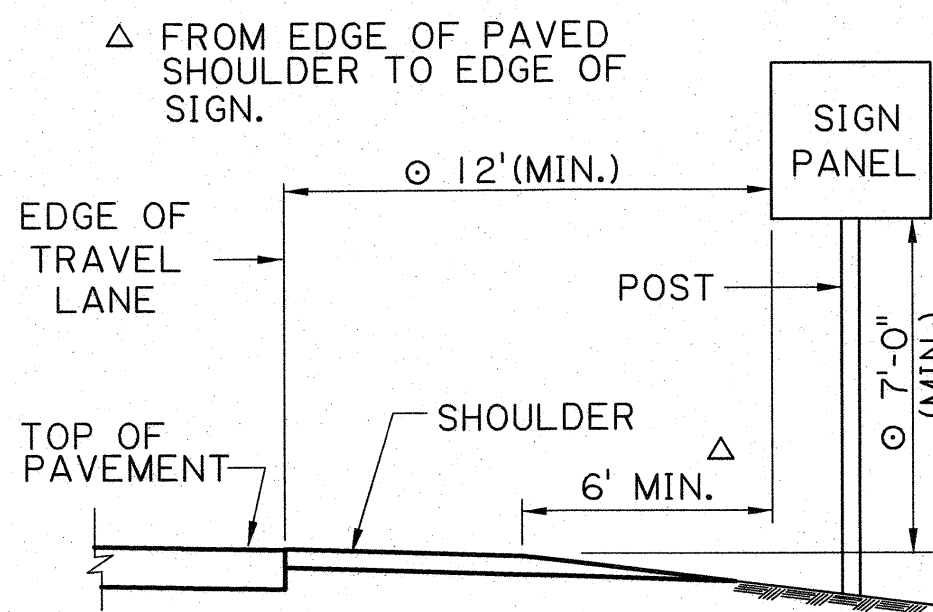
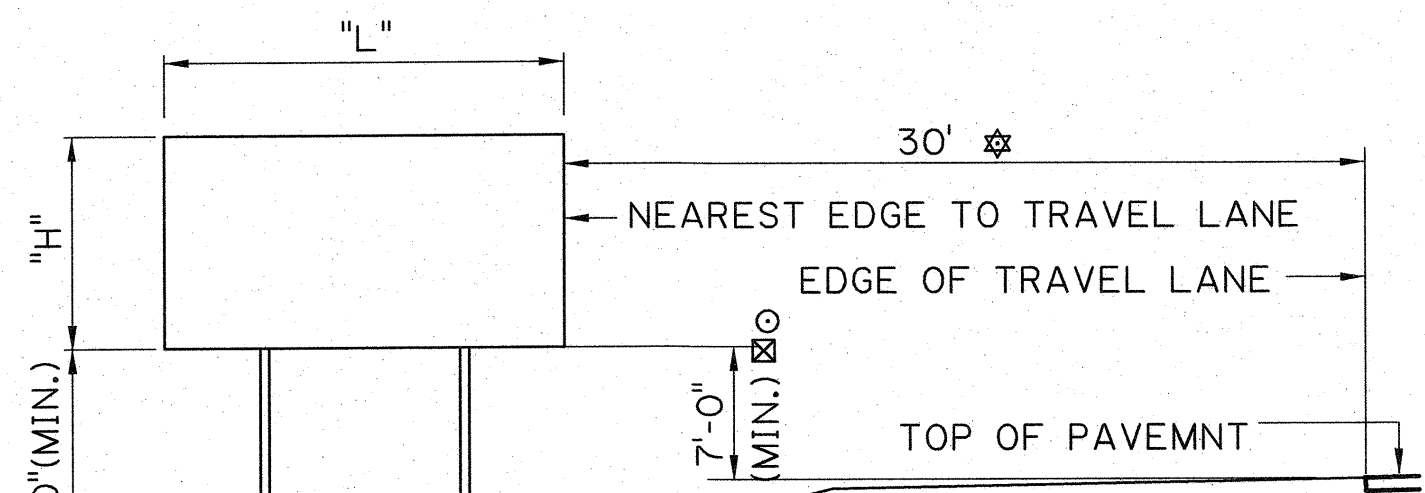
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

CONCRETE SLAB TO BE REINFORCED WITH A.S.T.M. A1064 WWR 4x4-W4.0 x W4.0 AND FINISHED IN ACCORDANCE WITH LA. STD. SPECS. 805.08.5.

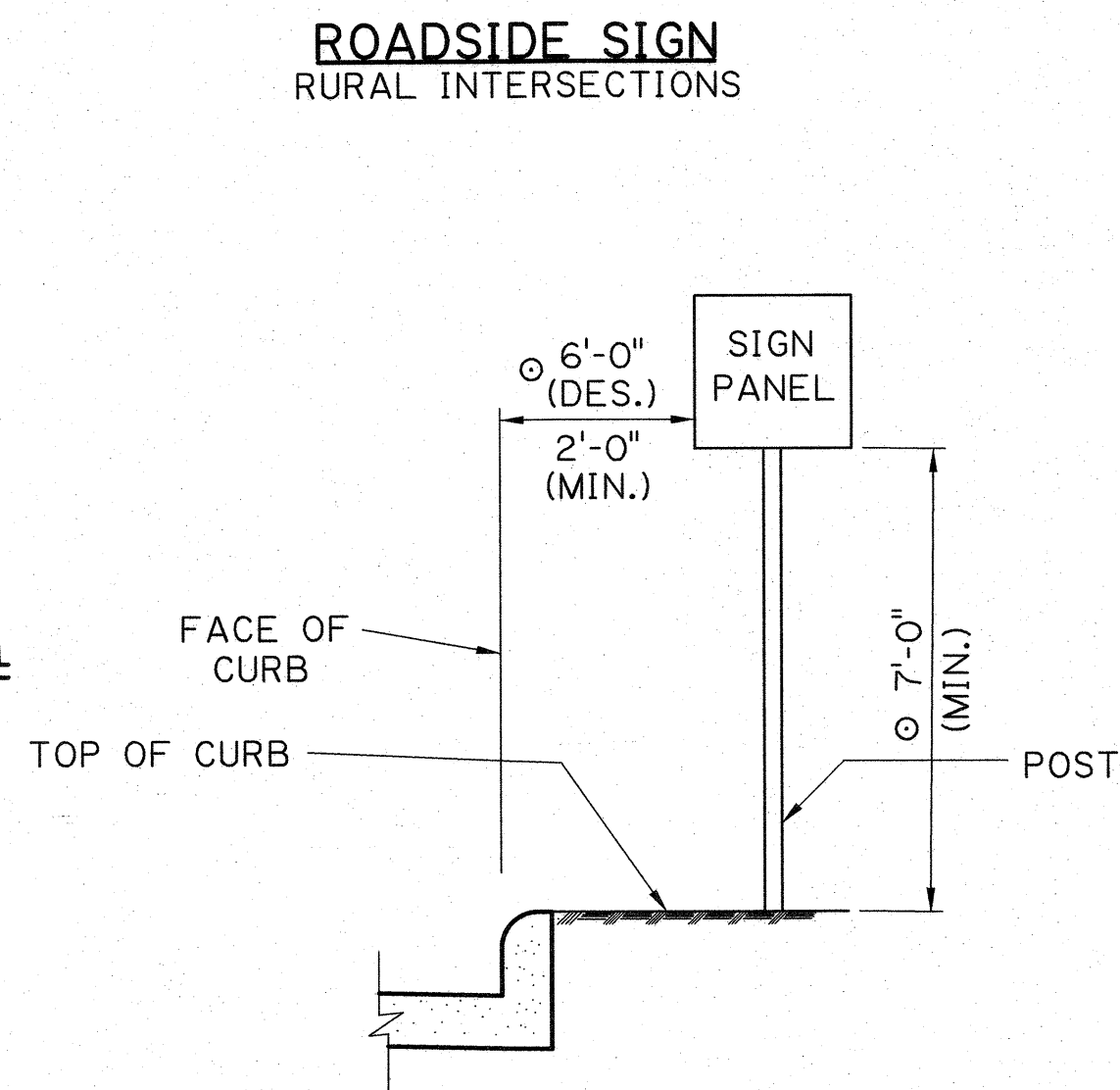
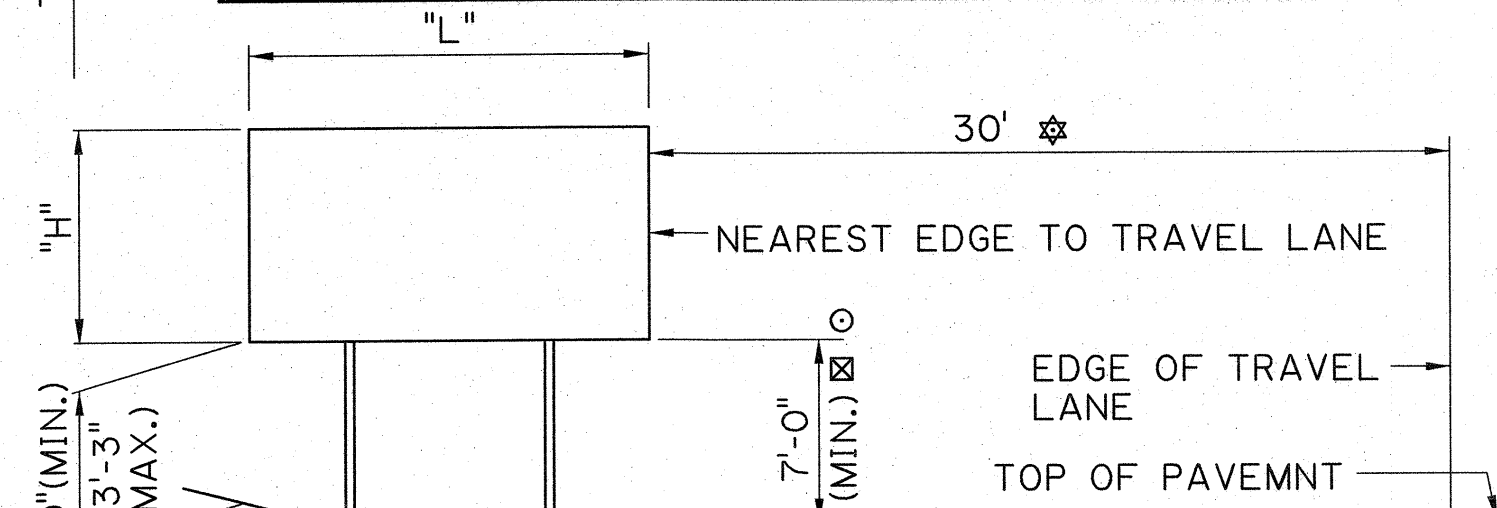
- 30' MAX. (15' MIN.) FOR FREEWAYS AND EXPRESSWAYS. 15' FOR FRONTAGE ROADS, "BRIDGE ICES BEFORE ROAD" SIGNS, AND TYPE D RAMP SIGNS. SEE SIGN SUMMARY SHEETS. PROJECT ENGINEER MAY ADJUST ON A CASE-BY-CASE BASIS.
7' MINIMUM FOR ROUTE MARKERS, WARNING AND REGULATORY SIGNS. 8' MINIMUM FOR GUIDE SIGNS WHEN SECONDARY SIGN MOUNTED BELOW.
MOUNTING HEIGHT SHALL BE 7'-0" MIN. UNLESS OTHERWISE NOTED ON THE SIGN SUMMARY SHEET. CHEVRON SIGNS (W1-8) MAY BE INSTALLED AT 4'-0" OR HIGHER.

Table: W POST SECTIONS FOR DOUBLE & TRIPLE POST MOUNTINGS. Columns: PL, STEEL, L, H, PL, STEEL, L, H, PL, STEEL, L, H, PL, STEEL, L, H. Rows 5-124 with values for different sign sizes and wind pressures.

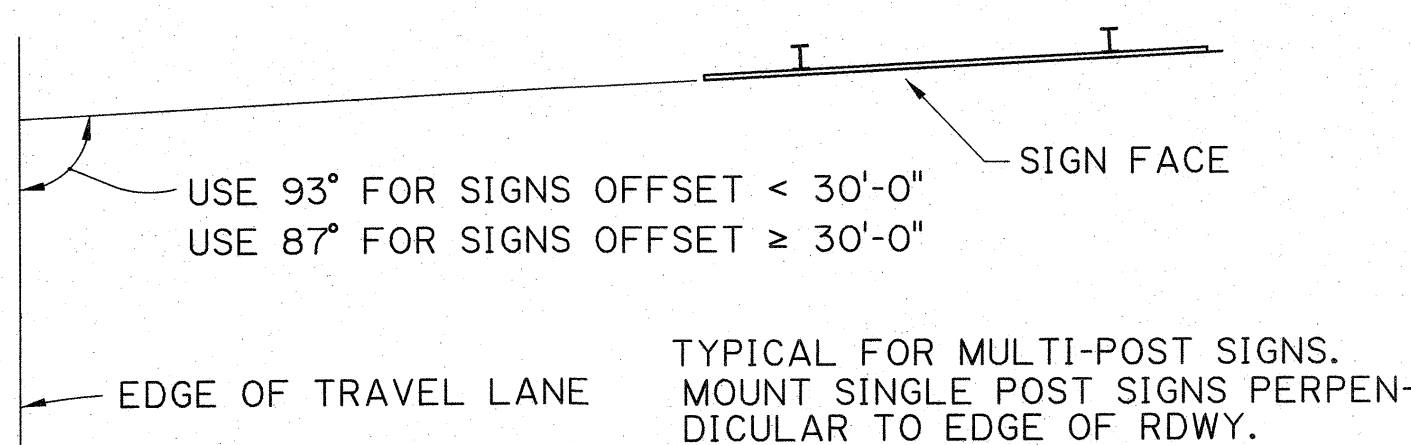
REAR ELEVATION OF SINGLE POST MOUNTING



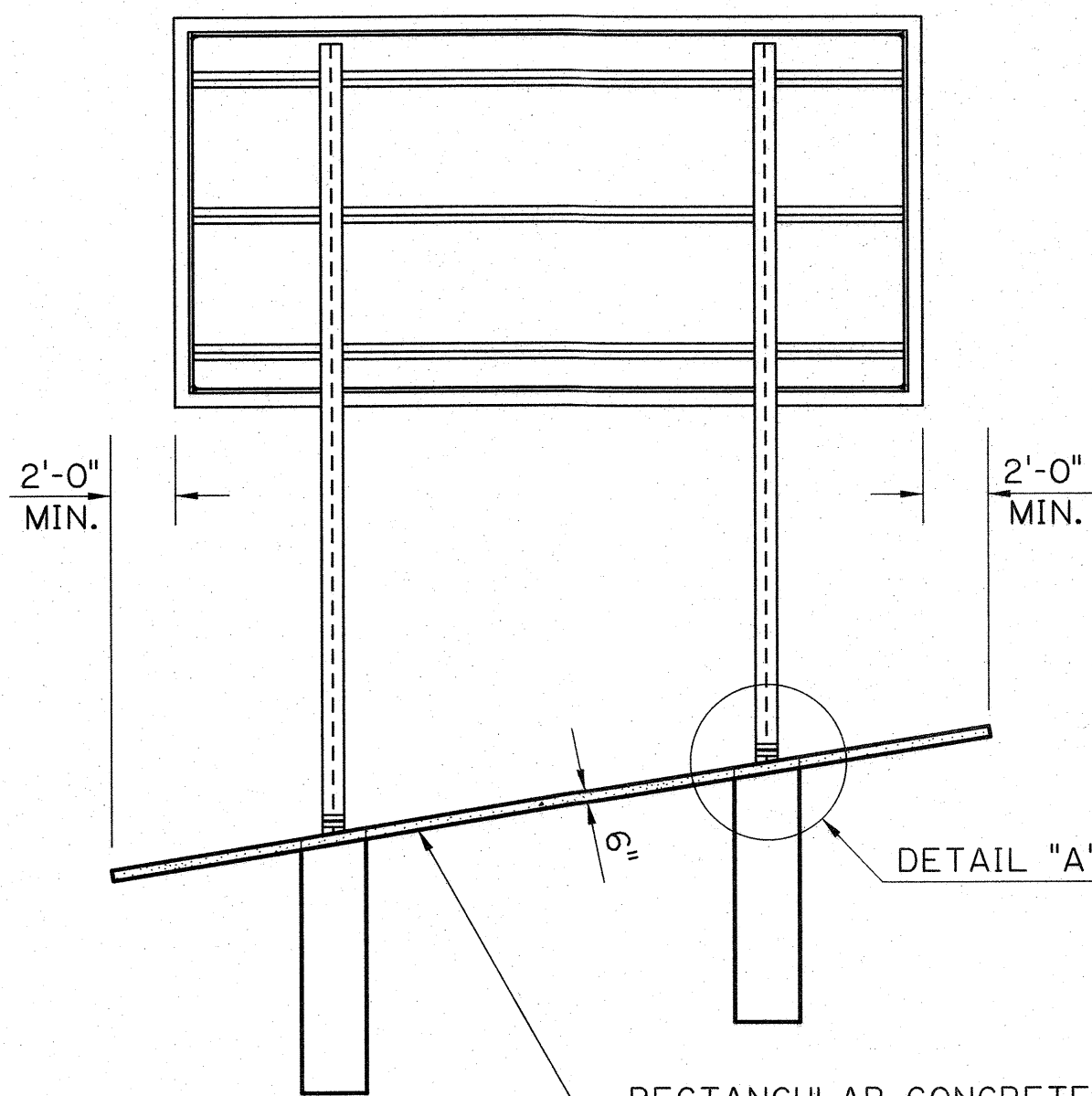
DETAIL FOR ALL SIGNS LOCATED ON FORE SLOPE (TWO SUPPORTS SHOWN)



DETAIL FOR ALL SIGNS LOCATED ON BACK SLOPE (TWO SUPPORTS SHOWN)

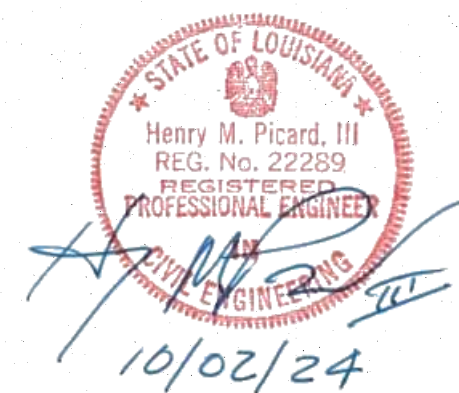


LOCATION OF ALL GROUND MOUNTED SIGN STRUCTURES (TWO SUPPORTS SHOWN)



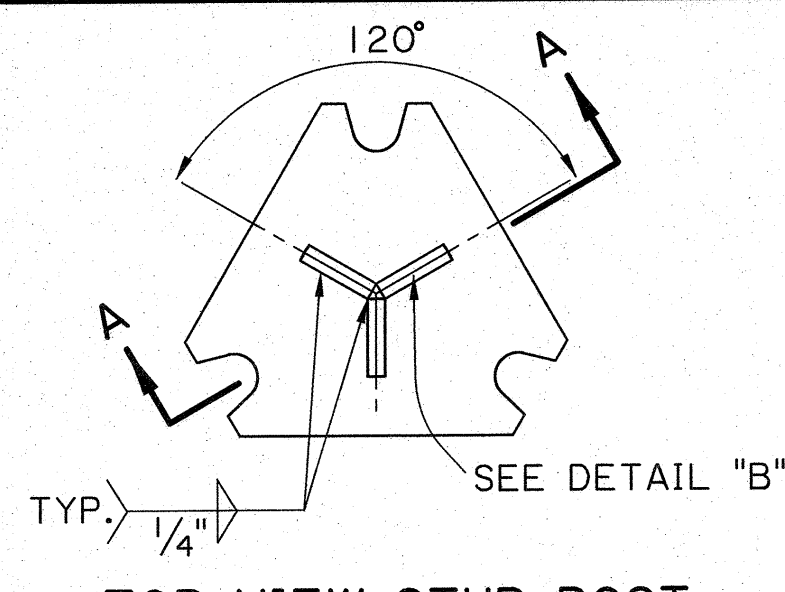
REAR ELEVATION OF MULTI - POST MOUNTING

Table: W SECTIONS. Columns: NO., STEEL. Rows 1-6 with specifications like W6x12, W8x18, W8x24, W10x33, W12x40, W12x45.

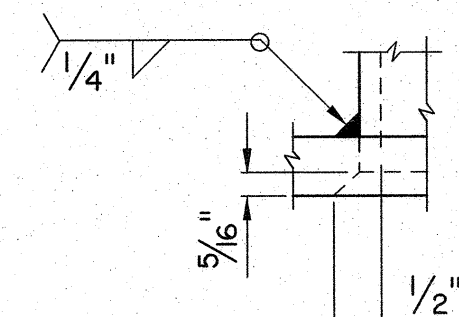


These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

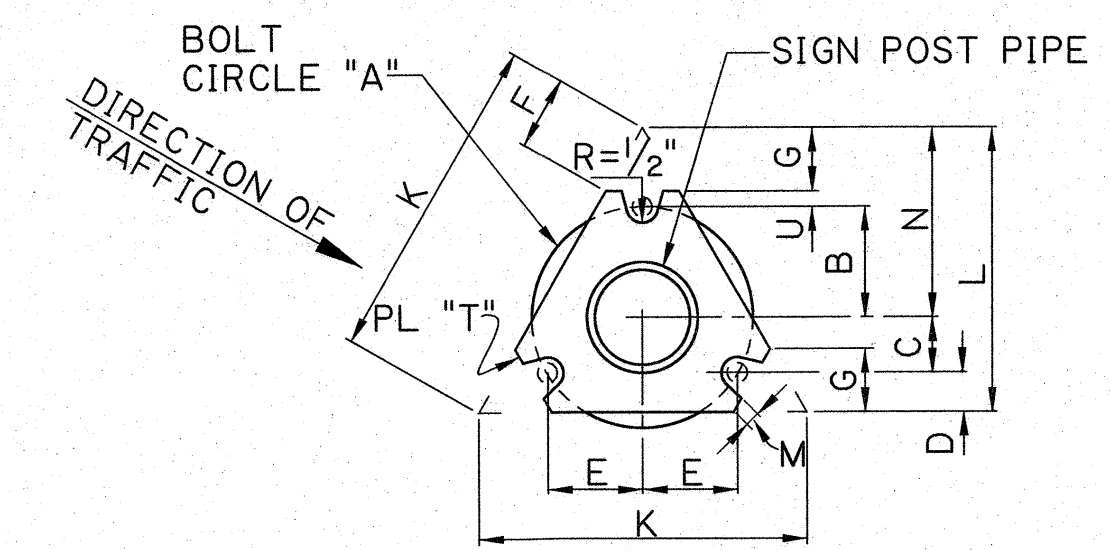
Vertical sidebar containing: SHEET NUMBER 371, ST. TAMMANY, K. BRAUNER, C. GUIDRY, KURT M. BRAUNER License No. 30567 CIVIL ENGINEERING, APPROVED BY CHIEF ENGINEER, DATE 7/1/2022, ROADSIDE MOUNTED SIGNS (TYPE A, B, & D SIGNS), ROADSIDE SIGNING STANDARDS, DOTD, BRIDGE AND STRUCTURAL DESIGN.



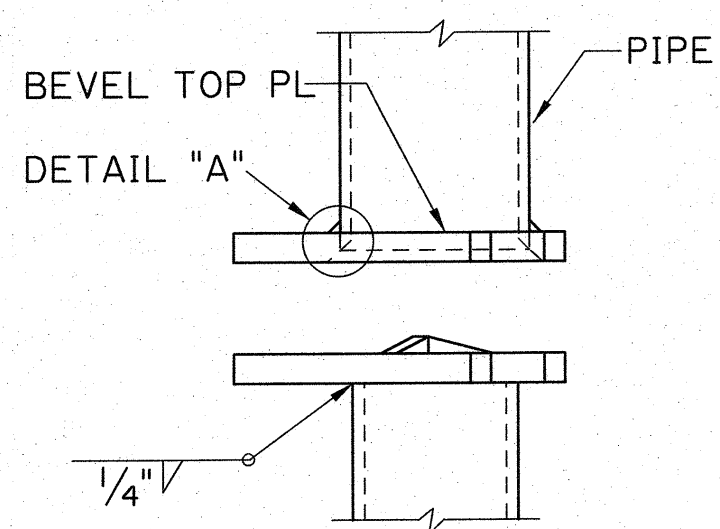
TOP VIEW STUB POST



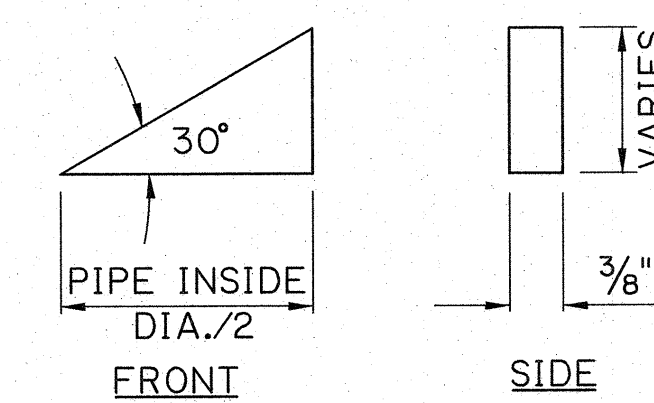
DETAIL "A"



PLAN OF BASE

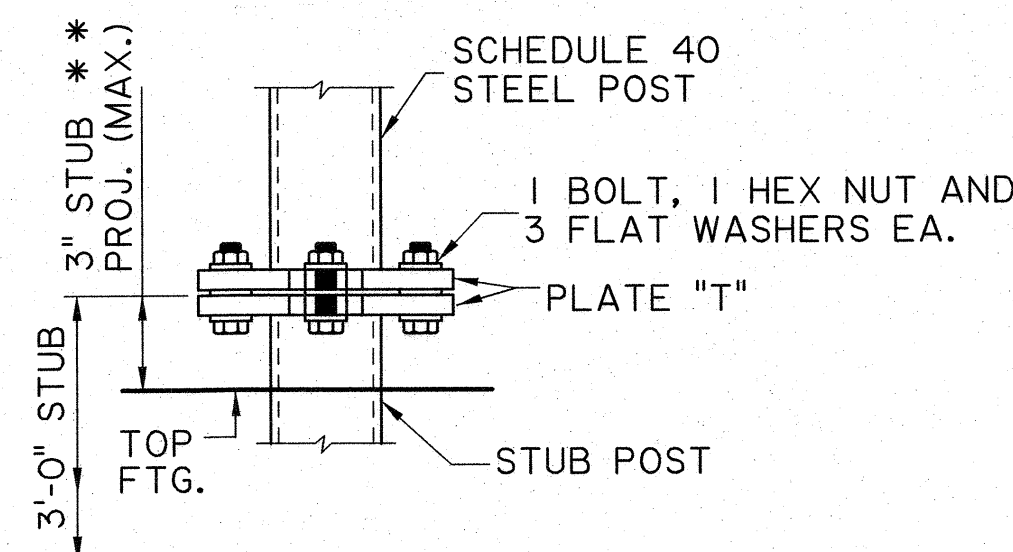


SECTION A-A



DETAIL "B"

3 REQ'D.



ELEVATION OF BASE CONNECTION

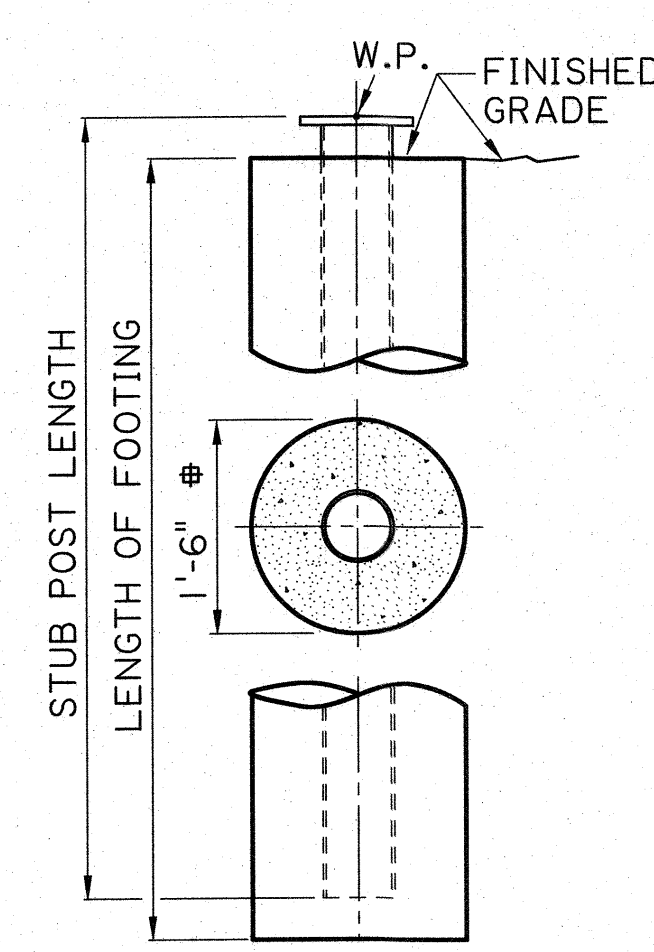
STEEL

** IF MAX. STUB PROJECTION IS EXCEEDED, CONTRACTOR SHALL REMOVE AND REINSTALL PAD AS DIRECTED BY THE PROJECT ENGINEER AT NO COST TO THE DEPARTMENT.

MULTI-DIRECTIONAL BASE
SINGLE STEEL POST ONLY

STEEL MULTI-DIRECTIONAL BASE CONNECTION DATA																
NOMINAL PIPE SIZE	BOLT SIZE & TORQUE	WELD SIZE	T	Y	A	B	C	D	E	F	G	K	L	M	N	U
2 1/2" OR 3 1/2" DIA.	5/8" T=226	3/8"	5/8"	7"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/16"	2"	10 3/8"	9"	1/2"	6"	1/2"

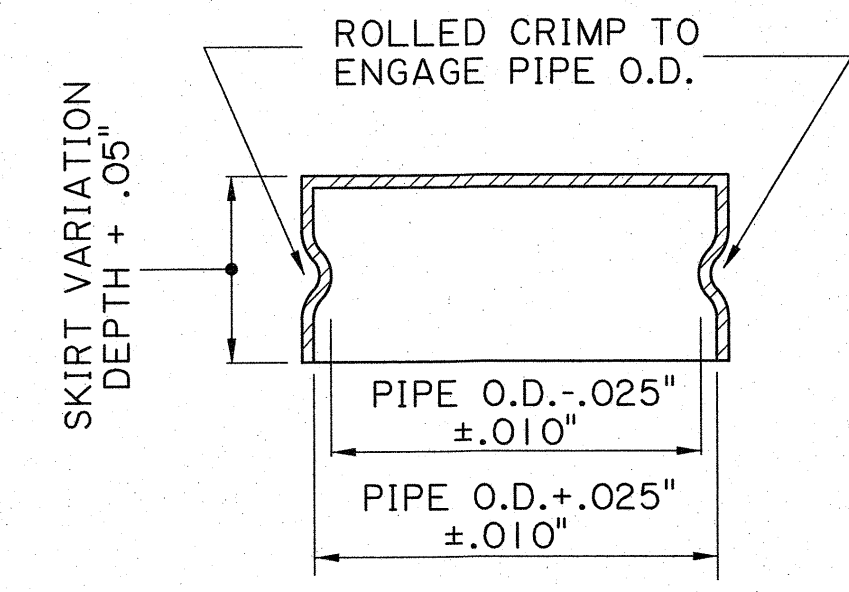
FOR STUB POST LENGTH & FOOTING DIMENSION SEE TABLE BELOW AND FOOTING DETAIL.
o TORQUE IN INCH-LBS., BOLTS ARE HIGH STRENGTH



FOOTING DETAIL
PIPE SECTIONS

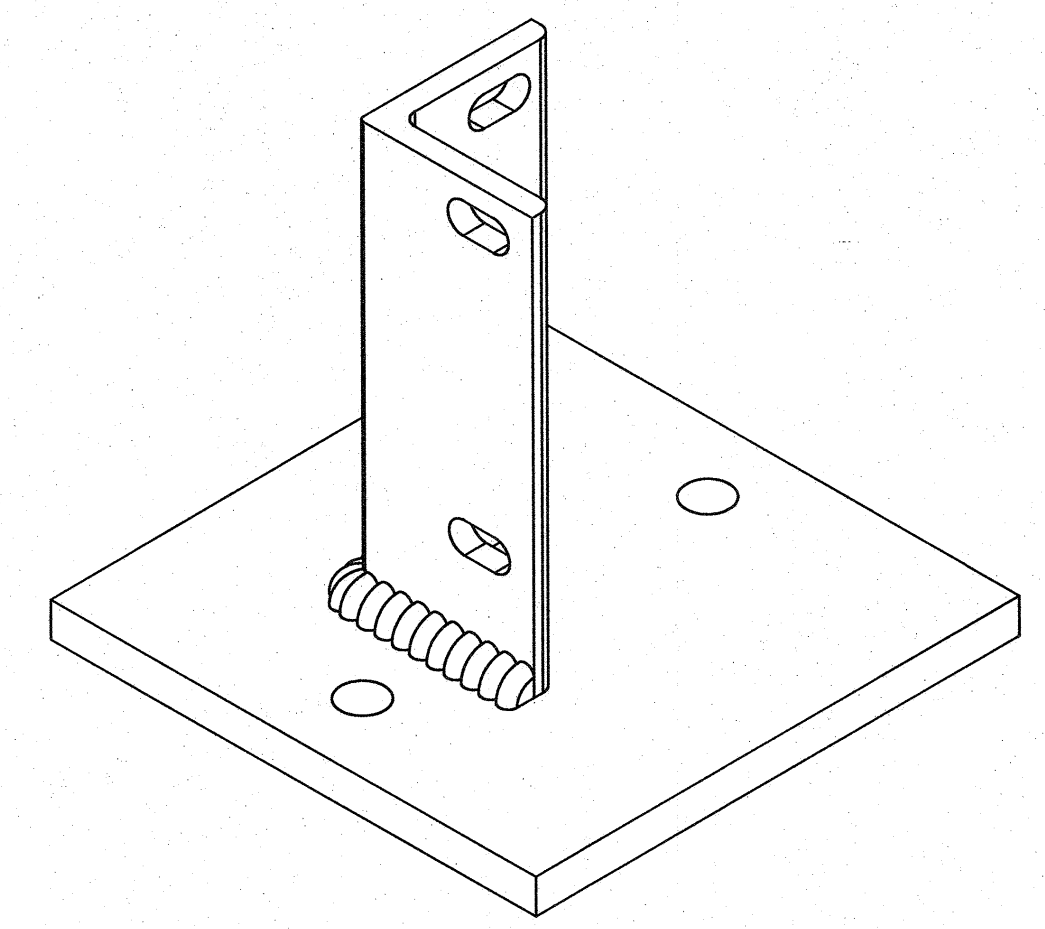
FOR 2 1/2"Ø (STEEL) POST SECTIONS, FOOTING DIAMETER SHALL BE 1'-0"

FOOTING DATA			
POST DIA.	STUB L	FOOTING L	CU.YD. CONC.
2 1/2"	36"	36"	0.09
3 1/2"	36"	36"	0.20
5"	48"	48"	0.26

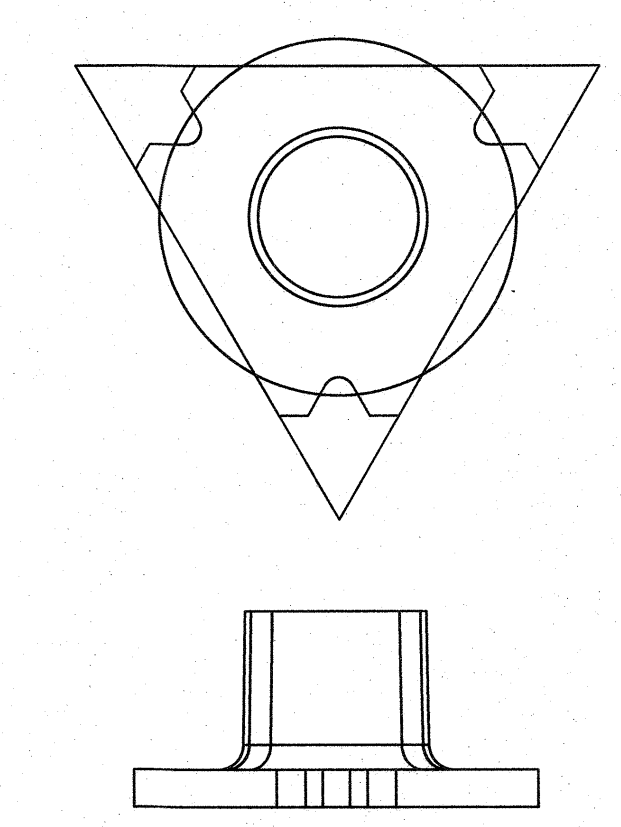


FRICTION CAP DETAIL

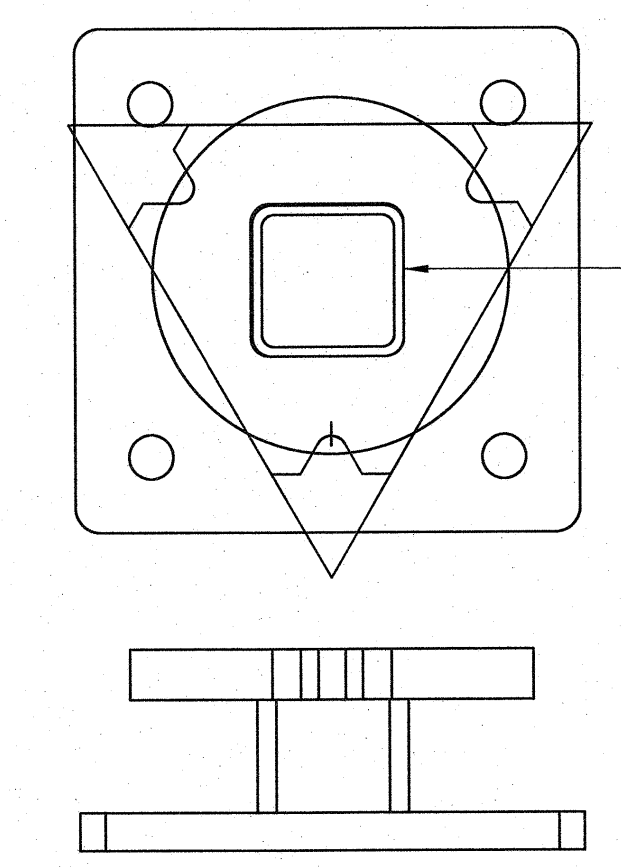
USED AT TOP OF ALL POSTS



SURFACE MOUNT FOR MILE MARKERS
(SQUARE TUBE ONLY)



TYPICAL TOP ASSEMBLY



TYPICAL BOTTOM ASSEMBLY

ANY SHAPE AND SIZE ALLOWED FOR CENTER CONNECTION

CONCRETE SURFACE MOUNT

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUM TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED.

1. BASE SHALL BE ALIGNED AND SET PLUM BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

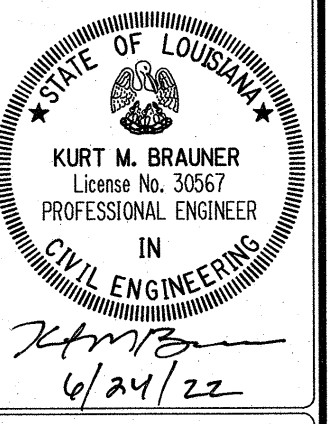
FRICTION CAPS:

CAPS MAY BE MANUFACTURED FROM EITHER HOT ROLLED OR COLD ROLLED STEEL SHEETS. FOR PIPE SIZES 3 1/2" AND SMALLER THE MINIMUM SHEET METAL THICKNESS SHALL BE 24 GAUGE. THE RIM EDGES SHALL BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PRODUCE A DRIVE-ON FRICTION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON THE PIPE. THE DEPTH SHALL BE SUFFICIENT TO GIVE POSITIVE PROTECTION AGAINST ENTRANCE OF RAINWATER. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS AND SHOW NO EVIDENCE OF METAL FRACTURE. CAPS SHALL HAVE A ELECTRODEPOSITED COATING OF ZINC IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION B633 SC4, TYPE 1.

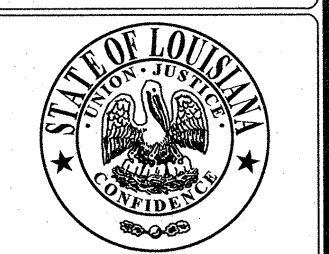
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

ST. TAMMANY

DESIGN	K. BRAUNER	PARISH	CONTROL SECTION	STATE PROJECT
CHECK	C. GUIDRY			
DETAIL	K. BRAUNER			
CHECK	C. GUIDRY			
REVIEW	C. BOURGEOIS			
SERIES	# 8 OF 17			



APPROVED BY CHIEF ENGINEER:
[Signature]
DATE: 7/1/2022



ROADSIDE MOUNTED SIGN DETAILS
(TYPE A & B SIGNS)

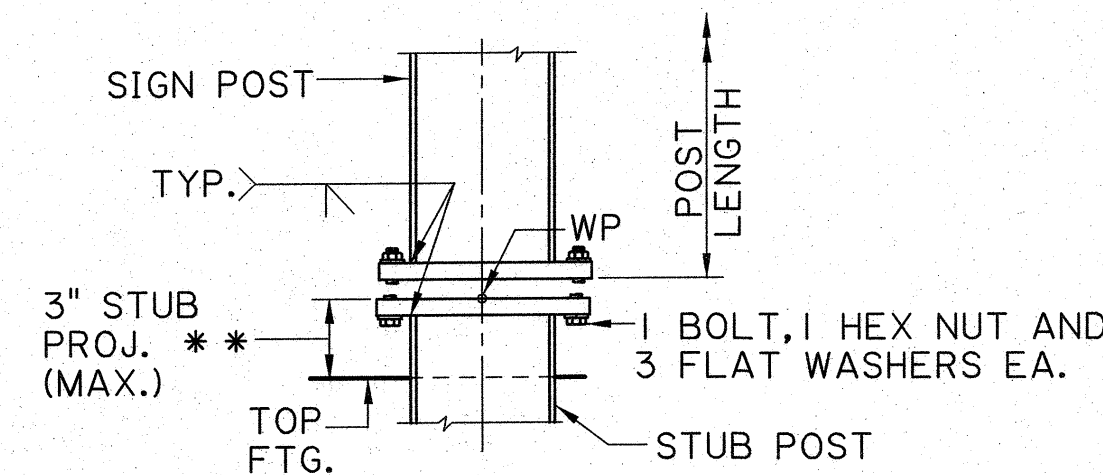
ROADSIDE SIGNING STANDARDS



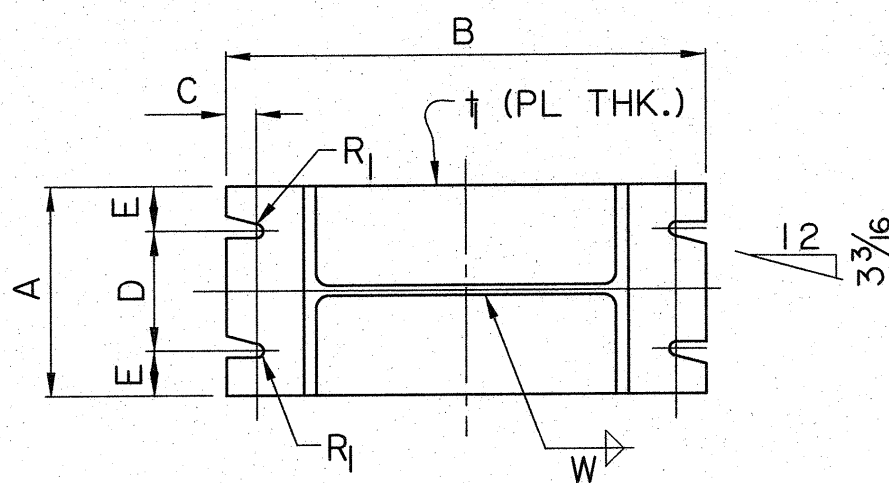
BRIDGE AND STRUCTURAL DESIGN

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24



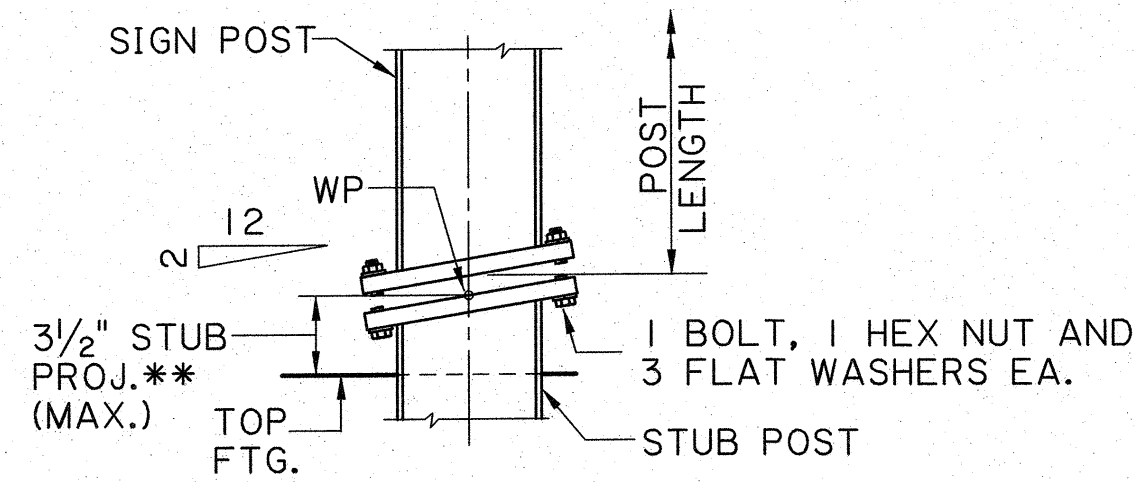
ELEVATION OF HORIZONTAL CONNECTION W SECTION



PLAN BASE PLATE AND POST

ADD 1/2" FOR BEVELED BASE PLATES

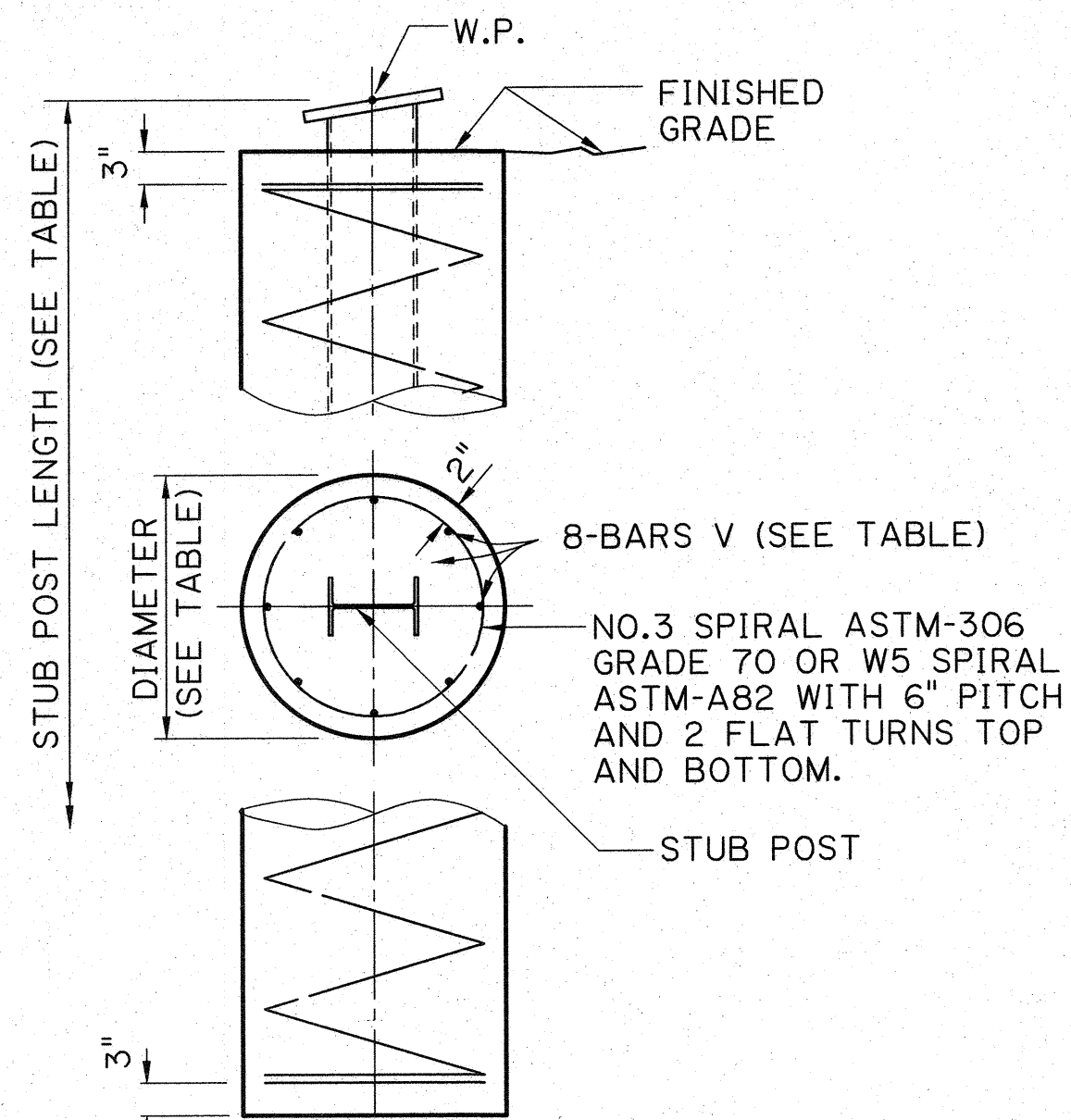
DIRECTION OF HIGHEST SPEED TRAFFIC



ELEVATION OF BEVELED CONNECTION W SECTION

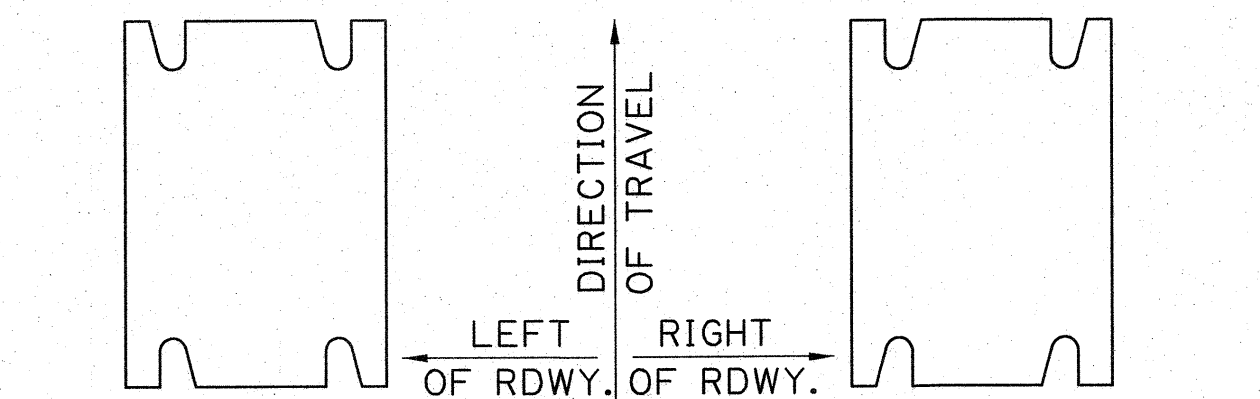
TO BE USED ON ALL MULTI-POST SIGNS WITH DISTANCE BETWEEN POSTS 7'-0" ϕ TO ϕ OR LESS.

** IF MAX. STUB PROJECTION IS EXCEEDED, CONTRACTOR SHALL REMOVE AND REINSTALL PAD AS DIRECTED BY THE PROJECT ENGINEER AT NO COST TO THE DEPARTMENT.



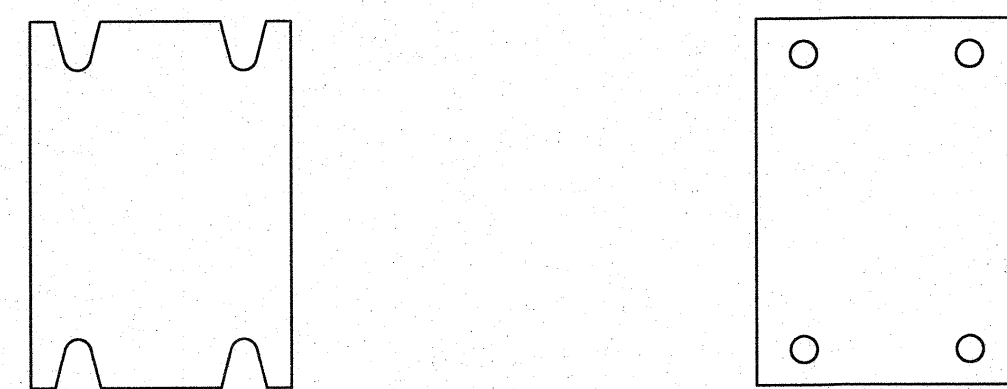
CONCRETE FOOTING DETAIL W SECTION

NOTE:
NO REINFORCING STEEL IS REQUIRED FOR 'S' SECTION.



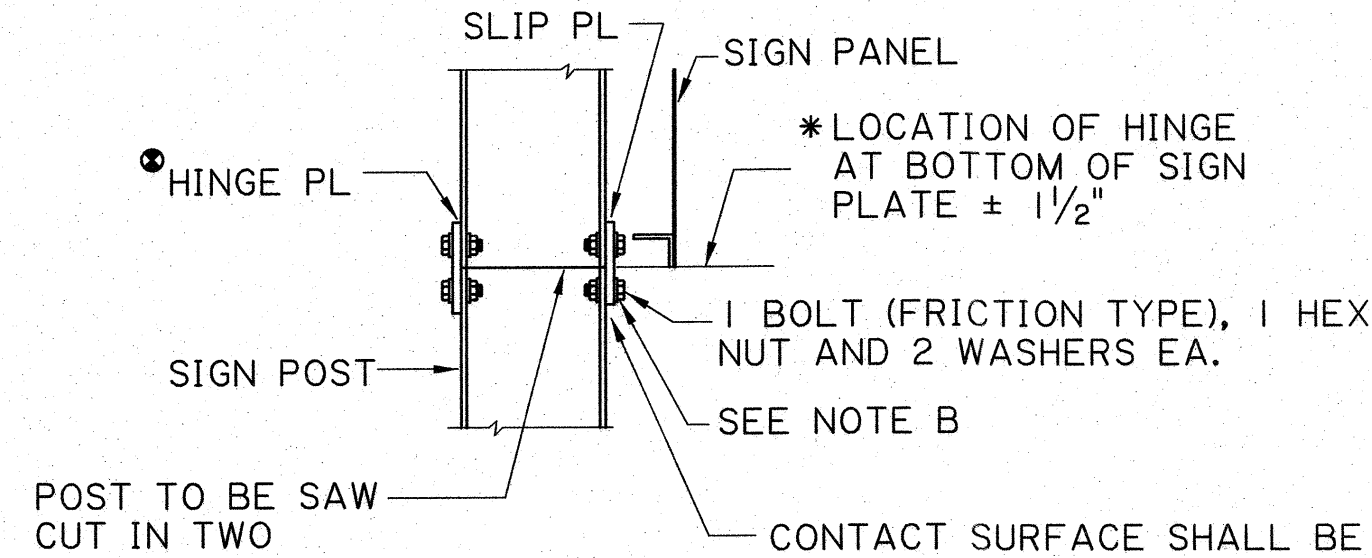
LEFT HAND SLOTS RIGHT HAND SLOTS

FOR ONE-WAY TRAFFIC LANES. FOR TWO-WAY TRAFFIC LANES, USE RIGHT HAND SLOTS ONLY.



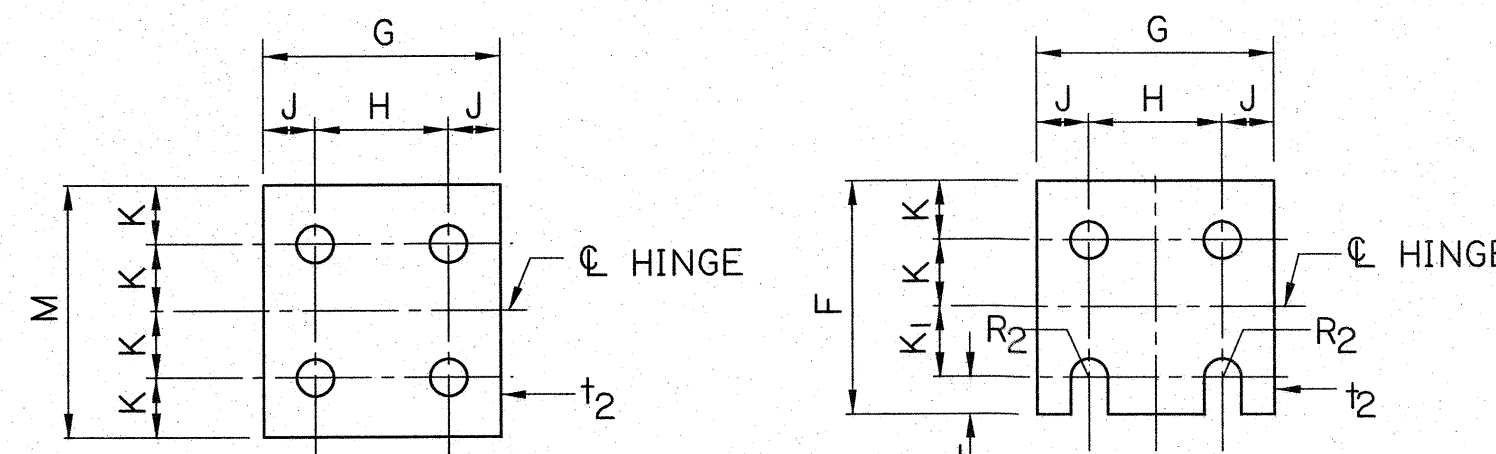
TWO-WAY SLOTS FOR GORE INSTALLATIONS
HOLES FOR BRIDGE MOUNTED SIGNS & SIGNS BEHIND GUARDRAIL

ORIENTATION AND USE OF SLOTS AND HOLES



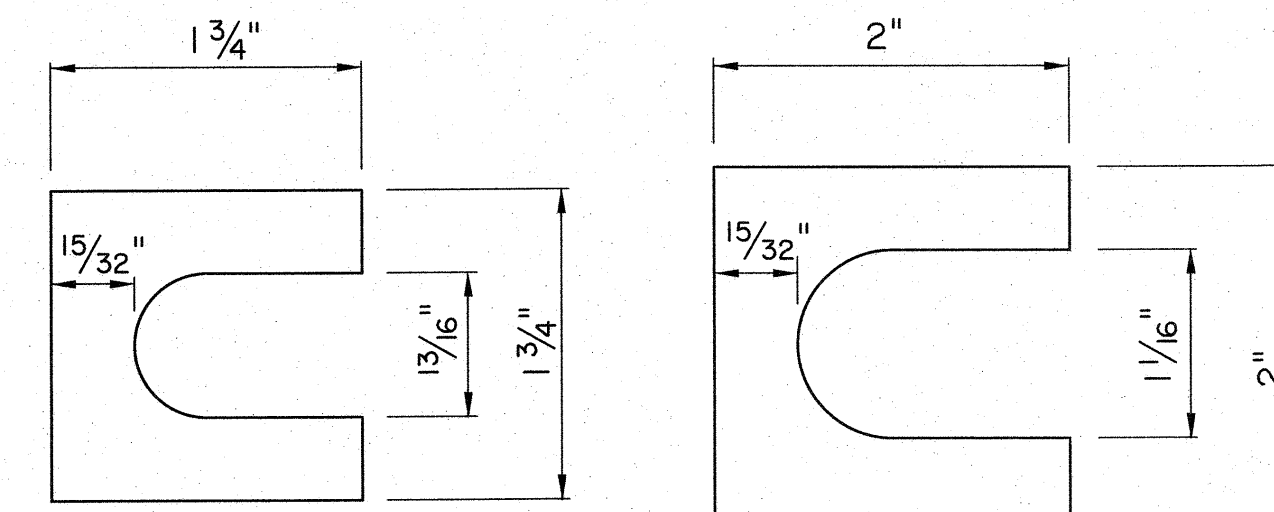
SLIP PLATE CONNECTION DETAIL

WHEN SIGN IS LOCATED ON SIDE OF ROADWAY WITH TWO WAY TRAFFIC, A SLIP PLATE WILL BE USED ON BOTH SIDES OF THE POST IN LIEU OF THE HINGE PLATE SHOWN
* FOR EXTRUSION SIGN PANEL ALTERNATE, LOCATION OF ϕ HINGE SHALL BE 3 1/2" FROM BOTTOM OF SIGN PANEL.



HINGE PLATE DETAIL

SLIP PLATE DETAIL
BOLT HOLE DIAMETERS TO BE EQUAL TO BOLT DIA. + 1/16" IN POST FLANGE AND SLIP PLATE.



*** SHIM DETAIL BOLTS UP TO 3/4" ϕ BOLTS**
*** SHIM DETAIL BOLTS UP TO 1" ϕ BOLTS**

* FURNISH 2 SHIMS 0.012" \pm THICK AND 2 SHIMS 0.032" \pm THICK PER POST. SHIMS SHALL BE BRASS CONFORMING TO A.S.T.M. SPEC. B-36 AND BE USED AS DIRECTED BY THE PROJECT ENGINEER.

SLIP PLATE CONNECTION NOTES:

- POST SHALL BE SAW CUT OR TORCH CUT PRIOR TO GALVANIZING.
- SLIP PLATE SHALL BE INSTALLED WITH H.S. BOLTS AT MINIMUM BOLT TENSION.
- TIGHTING SHALL BE OBTAINED BY (a) TURN OF NUT METHOD; OR (b) DIRECT TENSION INDICATOR METHOD USING LOAD INDICATOR WASHER. SEE NOTE A.
- TIGHTING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM BOLT TENSION AS SPECIFIED IN STANDARD SPECIFICATIONS SUBSECTION 807.05, CURRENT AT TIME OF FABRICATION.
- TIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED MINIMUM BOLT TENSION.

NOTE A:

WHEN HIGH STRENGTH BOLT IS TIGHTENED BY USE OF A DIRECT TENSION INDICATOR, THE INSTALLATION AND INSPECTION SHALL BE IN ACCORDANCE WITH SPECIFICATION FOR STRUCTURAL JOINTS, SECTION 5 AND 6 FOR ASTM A-325 BOLTS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS. FOR DETAILED INSTALLATION AND INSPECTION PROCEDURES FOLLOWED MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT BROCHURES TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL.

NOTE B:

WHEN HIGH STRENGTH BOLT IS TIGHTENED BY USE OF A DIRECT TENSION INDICATOR METHOD, THE WASHER UNDER THE BOLT HEAD SHALL BE A LOAD INDICATOR WASHER.

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUMB TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED. SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

- BASE SHALL BE ALIGNED AND SET PLUMB BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
- H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SECTION	DIMENSION (INCH)	BASE CONNECTION DATA										SLIP PLATE & HINGE PLATE DATA										FOOTING DATA				
		BOLT SIZE & * TORQUE LIMITS		A	B	C	D	E	t ₁	R	W	W (ALT.) SEE NOTE	F	G	H	J	K	L	M	t ₂	R ₂	H.S. BOLT DIA.	STUB LTH.	FTG. DIA.	LTH. OF FTG.	BARS V SIZE
W6x12	5/8" ϕ T = 226-345	4	10	3/4	2	1	1 1/2	1 1/32	5/16	5/16	3 5/8	4	2 1/4	7/8	1	1 1/4	5/8	4 1/4	3/8	9/32	1/2	24	24	48	#5	0.46
W8x18		5 1/4	12	3/4	3	1 1/8	1 1/2	1 1/32	5/16	5/16	4 1/8	5 1/4	2 3/4	1 1/4	1 1/8	1 3/8	3/4	4 3/4	1/2	1 1/32	5/8	24	24	60	#6	0.58
W8x24	3/4" ϕ T = 369-554	6 1/2	12 1/2	7/8	3 1/4	1 5/8	1 3/4	1 3/32	3/8	7/16	4 1/8	6 1/2	3 1/2	1 1/2	1 1/8	1 3/8	3/4	4 3/4	1/2	1 1/32	5/8	30	24	72	#7	0.70
W10x33		8	15 1/2	1 1/4	4 1/2	1 3/4	2	1 7/32	3/8	7/16	4 5/8	8	5 1/2	1 1/4	1 1/4	1 1/2	7/8	5 1/4	5/8	1 3/32	3/4	30	24	96	#9	0.93
W12x40	1" ϕ T = 460-735	8	17 1/2	1 1/4	4 1/2	1 3/4	2	1 7/32	3/8	7/16	4 5/8	8	5 1/2	1 1/4	1 1/4	1 1/2	7/8	5 1/4	5/8	1 3/32	3/4	36	24	120	#10	1.16
W12x45		10	17 1/2	1 1/4	6	2	2	1 7/32	3/8	7/16	5 1/2	10	5 1/2	2 1/4	1 1/2	1 3/4	1	6 1/4	3/4	1 5/32	7/8	36	36	96	#9	2.09

* BASE PLATE TO POST WELD ALTERNATE (AS AN ALTERNATE TO WELDS SHOWN IN DETAILS, THE POST MEMBERS TABULATED MAY BE WELDED ALL AROUND WITH A FILLET WELD W(ALT.)) ALL BOLTS SHALL HAVE A MINIMUM OF 3 THREADS BEYOND THE NUT. BOLT TORQUE LIMITS ARE IN INCH POUNDS. (THE HIGH STRENGTH BOLTS AT THE BASE CONNECTION SHOULD BE TORQUED WITHIN THE LIMITS SPECIFIED, HOWEVER, THE LOWER LIMIT IS DESIRABLE). FOR NON-BREAKAWAY USE TORQUE LIMITS GIVEN IN THE STANDARD SPECIFICATIONS

SHEET NUMBER 373

ST. TAMMANY

DESIGN: K. BRAUNER, C. GUIDRY
CHECK: K. BRAUNER, C. GUIDRY
DETAIL: K. BRAUNER, C. GUIDRY
REVIEW: C. BOURGEOIS
SERIES: 9 OF 17

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
6/24/22

APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022

STATE OF LOUISIANA
Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

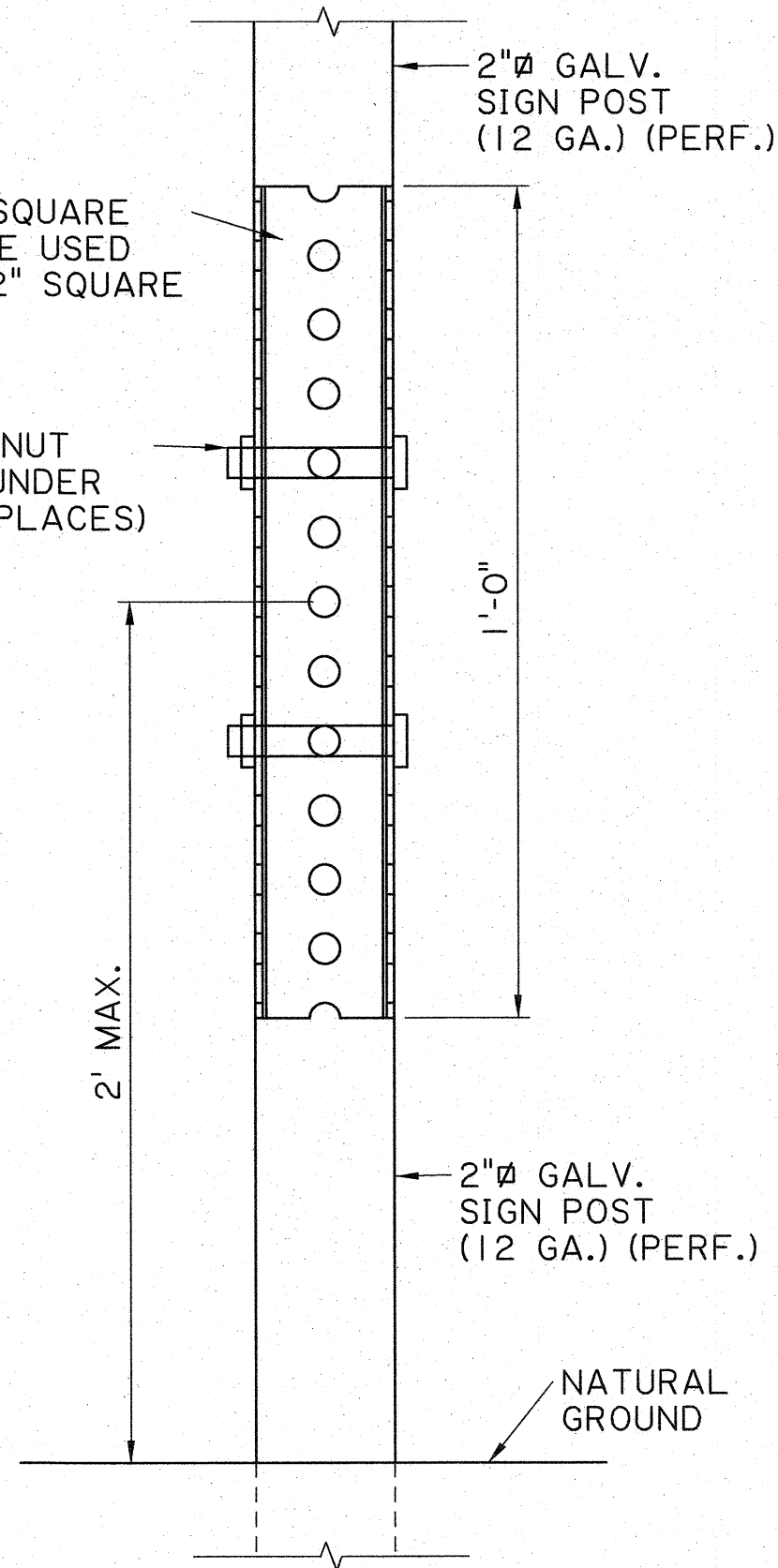
ROADSIDE MOUNTED SIGN DETAILS (TYPE D SIGNS)

STANDARD PLAN
ROADSIDE SIGNING STANDARDS

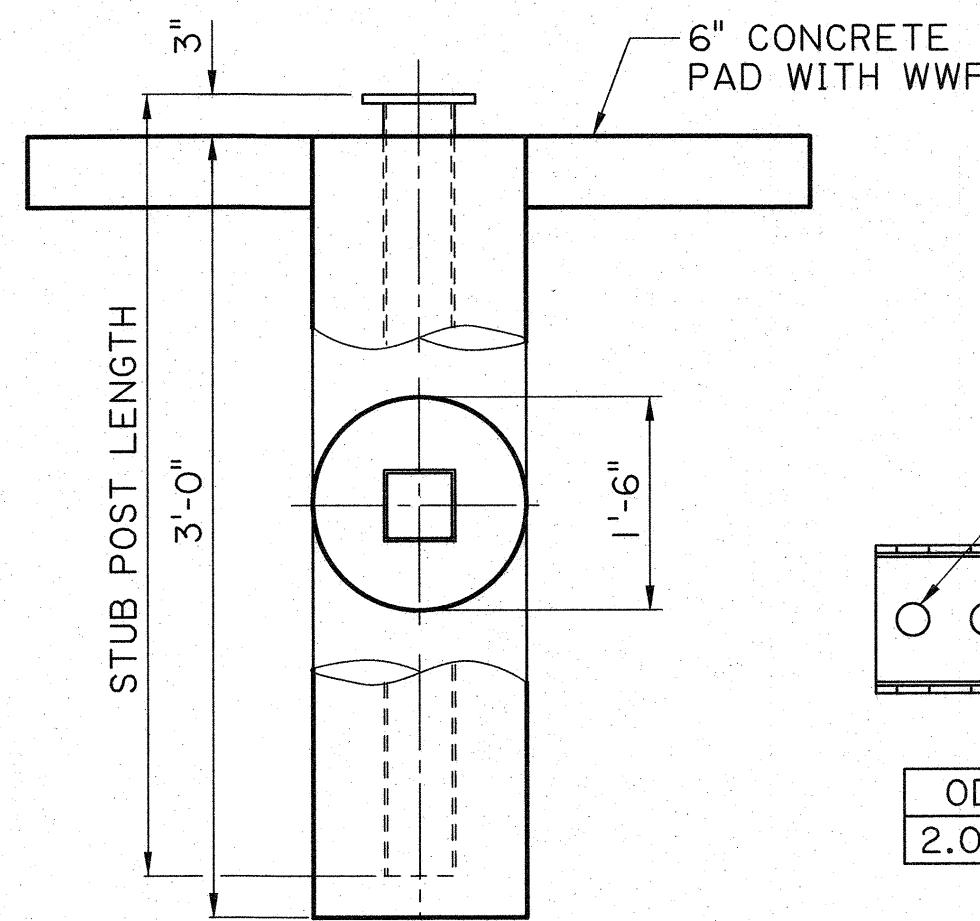
BRIDGE AND STRUCTURAL DESIGN

1 3/4" (12 GA.) PERF. SQUARE TUBING, GALV., TO BE USED AS SPLICE "INSIDE" 2" SQUARE TUBING POST

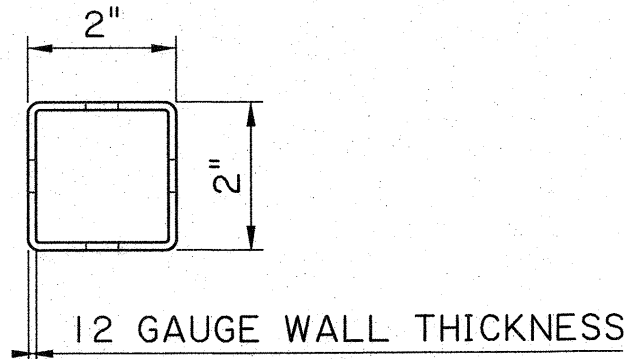
3/8" Ø 3" BOLT & NUT WITH WASHERS UNDER HEAD & NUT (4 PLACES)



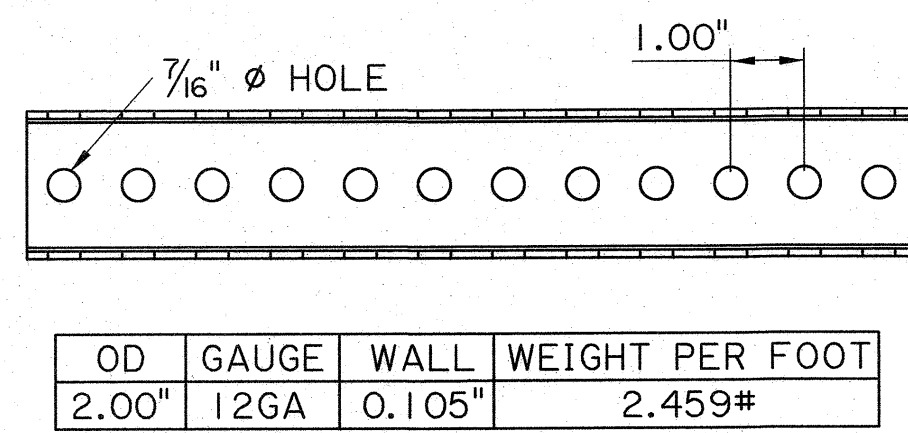
SPLICE JOINT FOR SIGN 2" POST



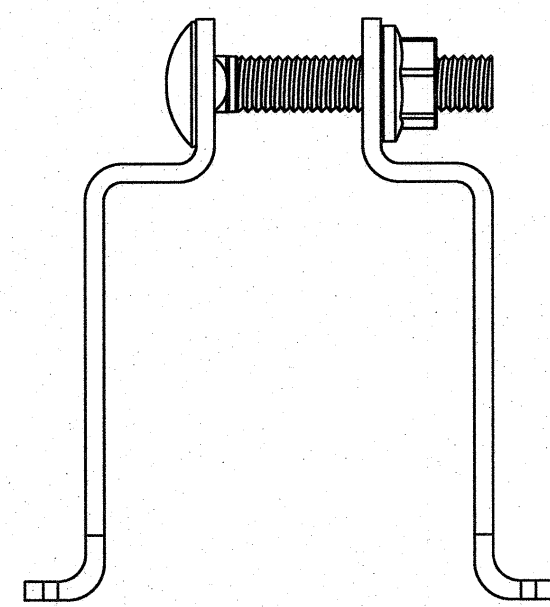
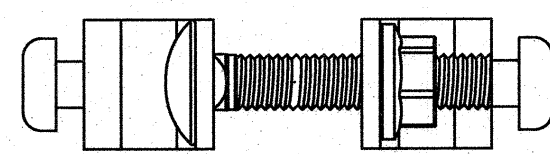
FOOTING DETAIL SQ. TUBE SECTIONS



2" SQUARE TUBING

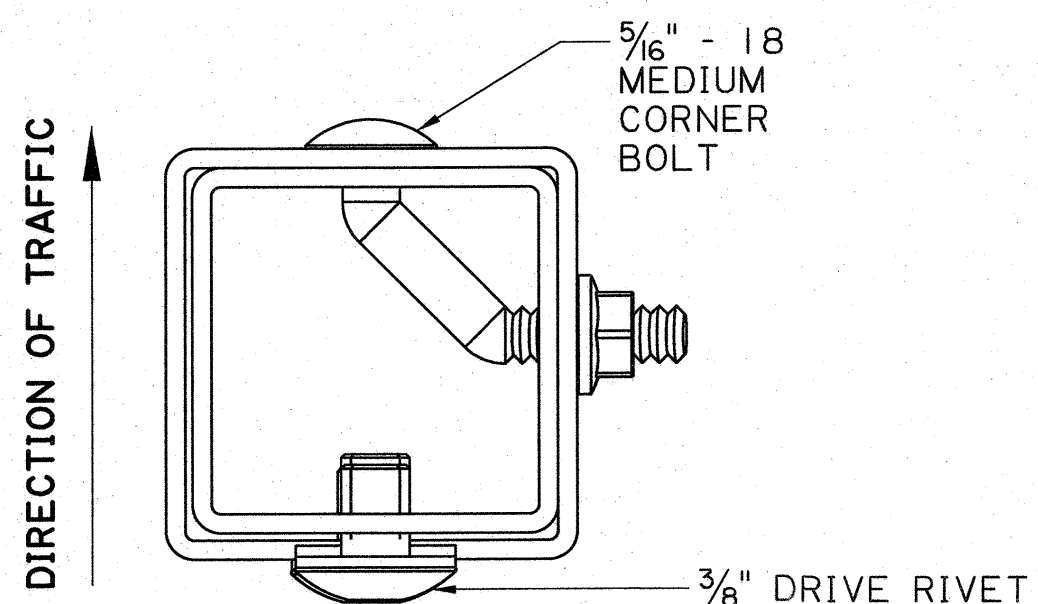


OD	GAUGE	WALL	WEIGHT PER FOOT
2.00"	12GA	0.105"	2.459#

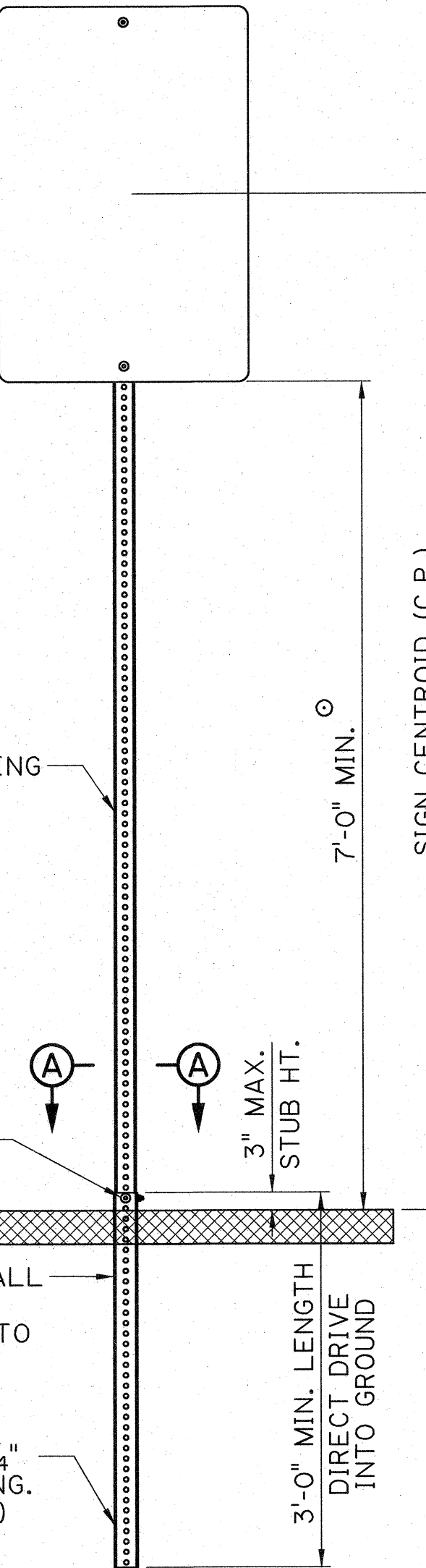


SIGN CLAMP FOR SQUARE POSTS

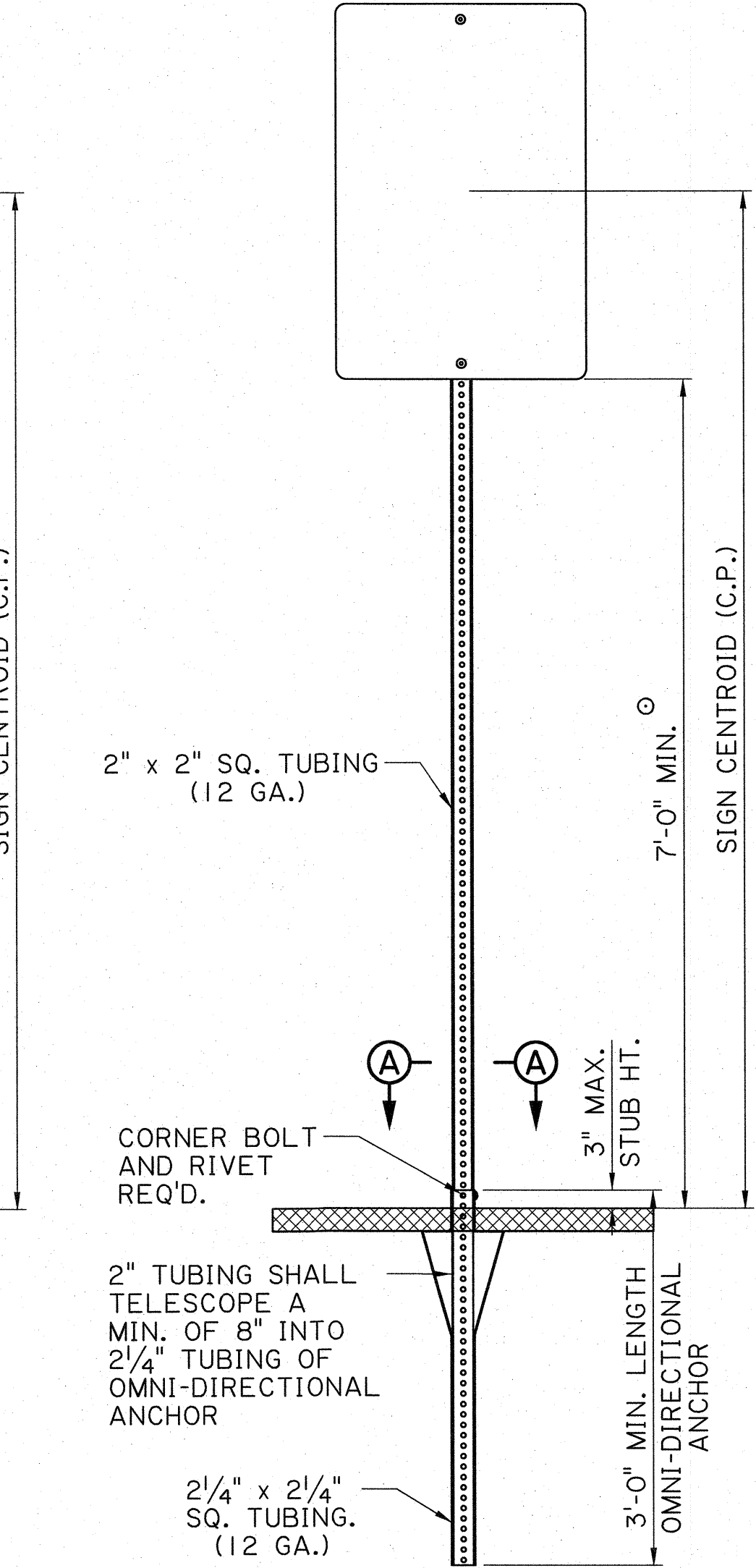
7/8" WIDE X 1 1/8". TYPE 304, #2B FINISHED STAINLESS STEEL INCLUDES 3/8" - 16 X 2" CARRIAGE BOLT AND CASE HARDENED FLANGE NUT.



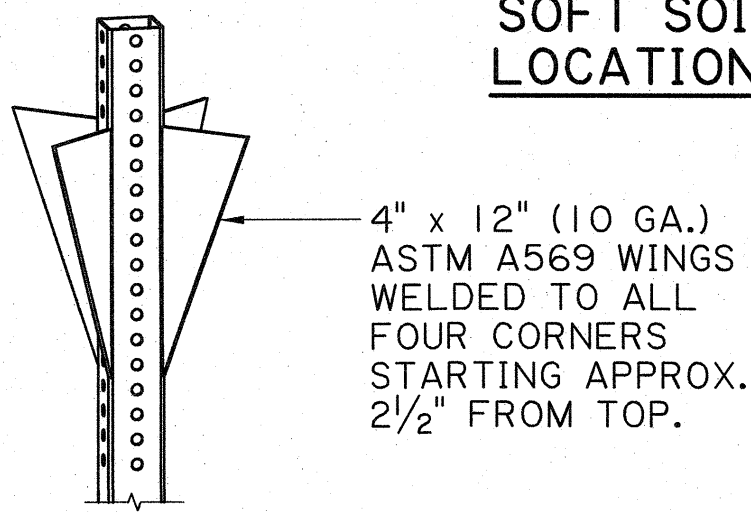
SECTION A-A



HARD SOIL LOCATIONS



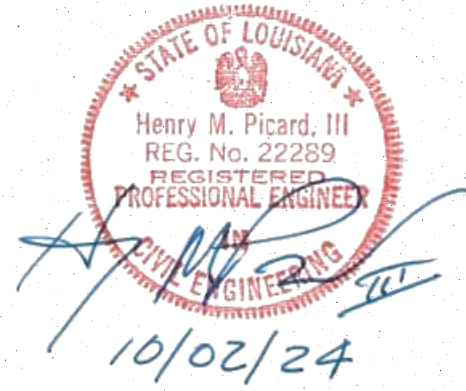
SOFT SOIL LOCATIONS



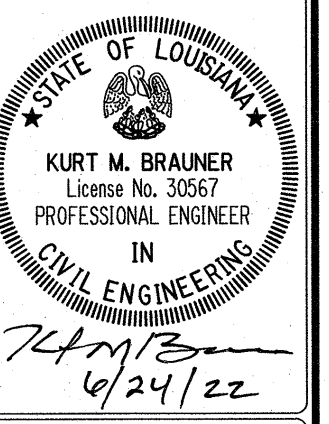
OMNI-DIRECTIONAL ANCHOR

SIGN CENTROID (CP)	ALLOWABLE SIGN AREA (FT ²)			
	70 MPH + 30% GUST		80 MPH + 30% GUST	
	SINGLE POST (2" x 12GA PERF.)	DOUBLE POST (2" x 12GA PERF.)	SINGLE POST (2" x 12GA PERF.)	DOUBLE POST (2" x 12GA PERF.)
14'	3.99	7.98	2.99	5.97
13.5'	4.14	8.28	3.10	6.19
13'	4.30	8.59	3.21	6.43
12.5'	4.47	8.93	3.34	6.68
12'	4.65	9.30	3.48	6.96
11.5'	4.85	9.70	3.63	7.26
11'	5.07	10.14	3.79	7.59
10.5'	5.31	10.62	3.97	7.95
10'	5.57	11.15	4.17	8.34
9.5'	5.86	11.73	4.39	8.77
9'	6.19	12.37	4.63	9.26
8.5'	6.55	13.09	4.90	9.79
8'	6.95	13.90	5.20	10.40
7.5'	7.41	14.81	5.54	11.08
7'	7.93	15.86	5.93	11.86

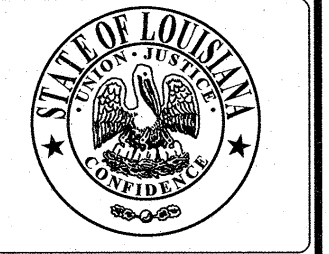
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



DESIGN	CHECK	DETAIL	CHECK	REVIEW	STATE PROJECT
K. BRAUNER	C. GUIDRY	K. BRAUNER	C. GUIDRY	C. BOURGEOIS	10 OF 17



APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022



SQUARE TUBE SIGN DETAILS
ROADSIDE SIGNING STANDARDS
STANDARD PLAN



NOTES:

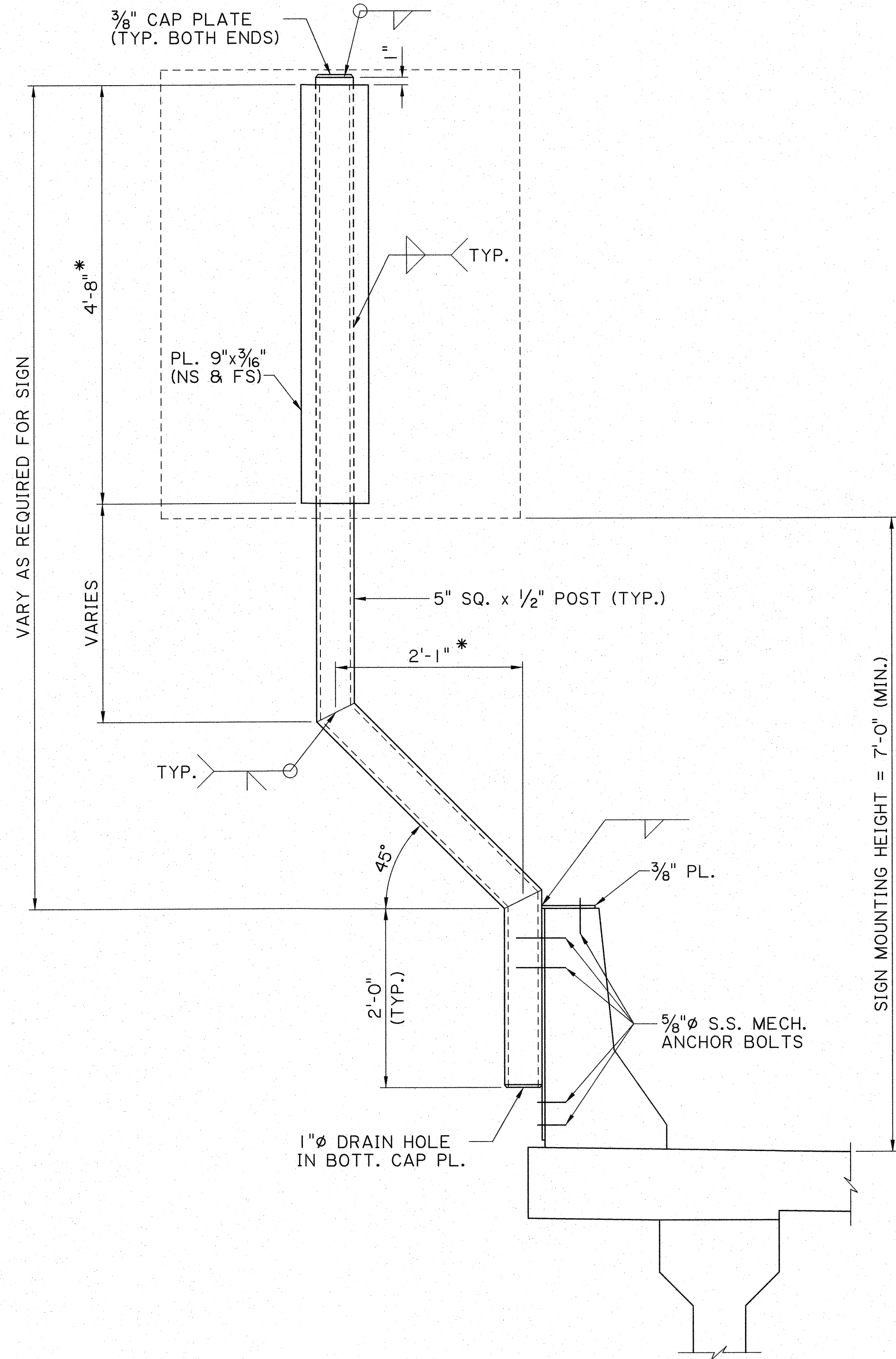
SEE SECTION 1015.02 IN THE STANDARD SPECIFICATIONS FOR INFORMATION RELATED TO THE ALLOWABLE MATERIALS.

SIGNS MOUNTED TO SINGLE SQUARE TUBE POSTS DO NOT REQUIRE STIFFENERS UNLESS THE SIGN HAS AT LEAST ONE SIDE GREATER THAN 36" LONG.

FOR DUAL POSTS, LOCATE POSTS AT 58% SPACING FROM CENTER OF SIGN, OR 21% FROM EACH EDGE OF SIGN. USE STIFFENERS ON BACK OF SIGNS MOUNTED ON DUAL POSTS.

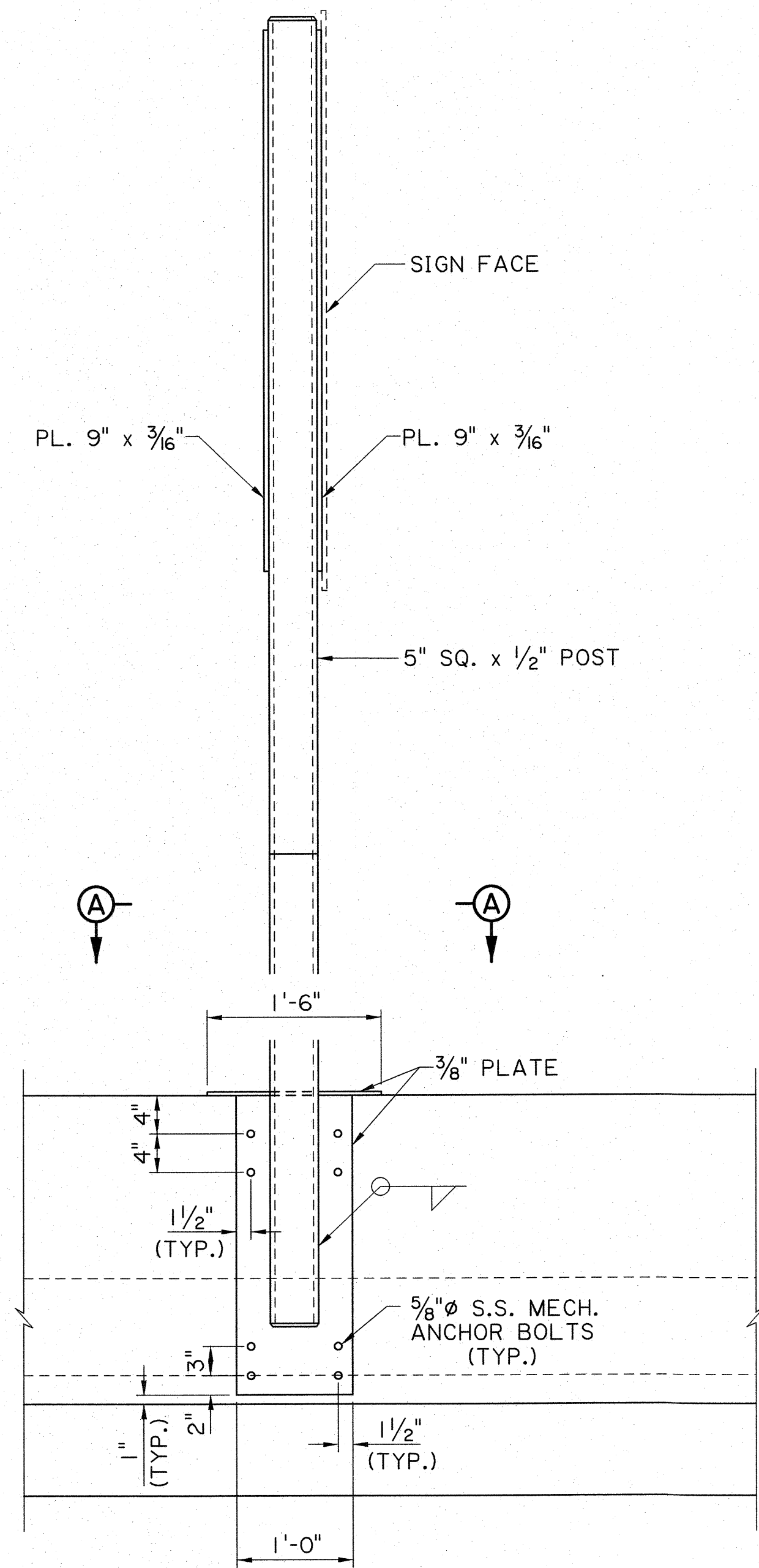
SIGNS MAY BE MOUNTED BACK TO BACK ON THE POST.

○ MOUNTING HEIGHT SHALL BE 7'-0" MIN. UNLESS OTHERWISE NOTED ON THE SIGN SUMMARY SHEET. CHEVRON SIGNS (W1-8) MAY BE INSTALLED AT 4'-0" OR HIGHER.

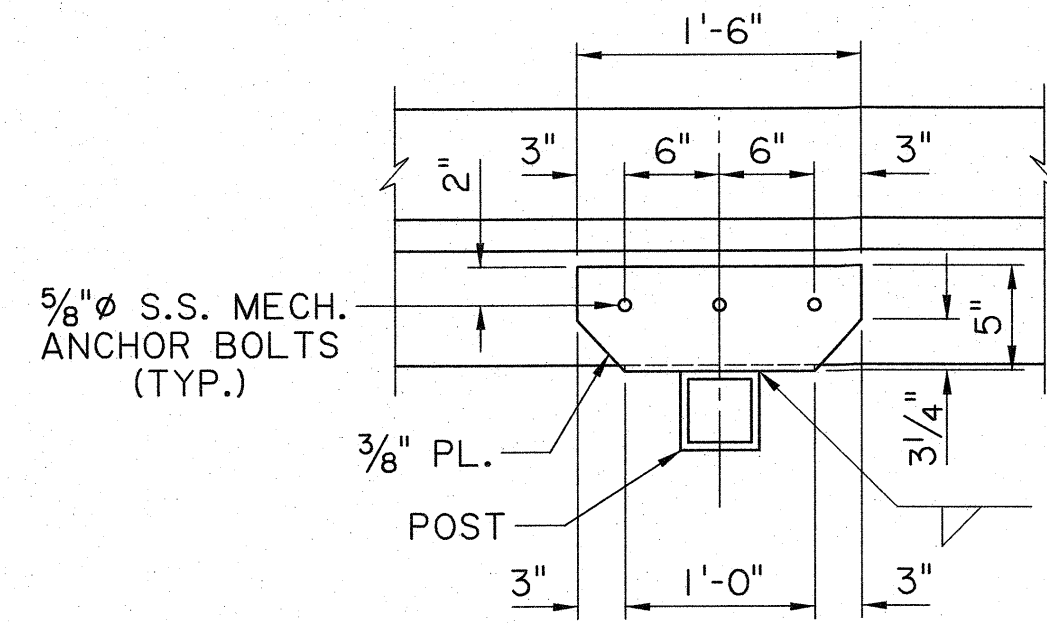


OFFSET SIGN SUPPORT

* DIMENSIONS ARE BASED ON A 5 FT. x 4 FT. SIGN. ADJUST AS NEEDED FOR DIFFERENT SIGN SIZES.



OUTSIDE ELEVATION SHOWING BARRIER (TYPICAL INSTALLATION)



SECTION A-A



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123.

MECHANICAL ANCHOR BOLTS SHALL BE 5/8" STAINLESS STEEL (MIN. FY = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.L. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.5-10), AND SECTION 809 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2016 EDITION.

NO PART OF ANY SIGN SHALL PROTRUDE INTO THE SHOULDER AREA. DIMENSIONS OF SUPPORT POST AND BRACKET SHALL BE ADJUSTED AS NEEDED PRIOR TO FABRICATION.

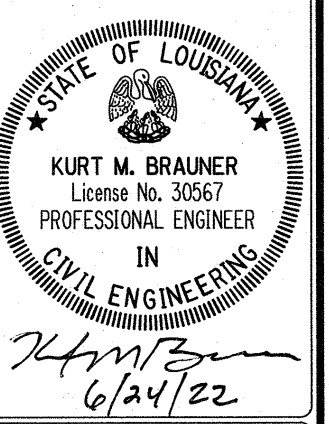
ANY PORTIONS OF THE EXISTING BARRIER THAT ARE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER.

DIMENSIONS RELATED TO THE BARRIER CONNECTION ARE BASED ON AS-BUILT DRAWINGS AND PREVIOUS STANDARDS. DIMENSIONS SHALL BE ADJUSTED AS NEEDED BASED ON FIELD MEASUREMENTS.

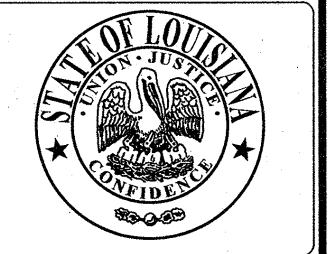
A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

MAX SIGN AREA = 20 SQFT.

DESIGN	K. BRAUNER	PARISH	
CHECK	V. TOURRES	CONTROL SECTION	
DETAIL	K. BRAUNER	STATE PROJECT	
CHECK	V. TOURRES		
REVIEW	C. GUIDRY		
SERIES #	11 OF 17		



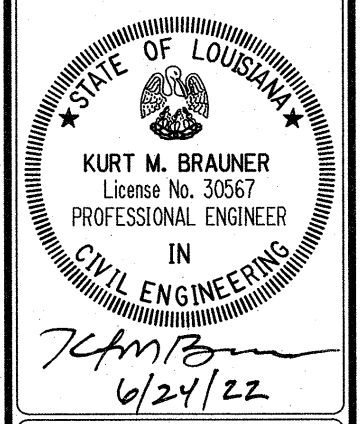
APPROVED BY CHIEF ENGINEER:
[Signature]
 DATE: 7/1/2022



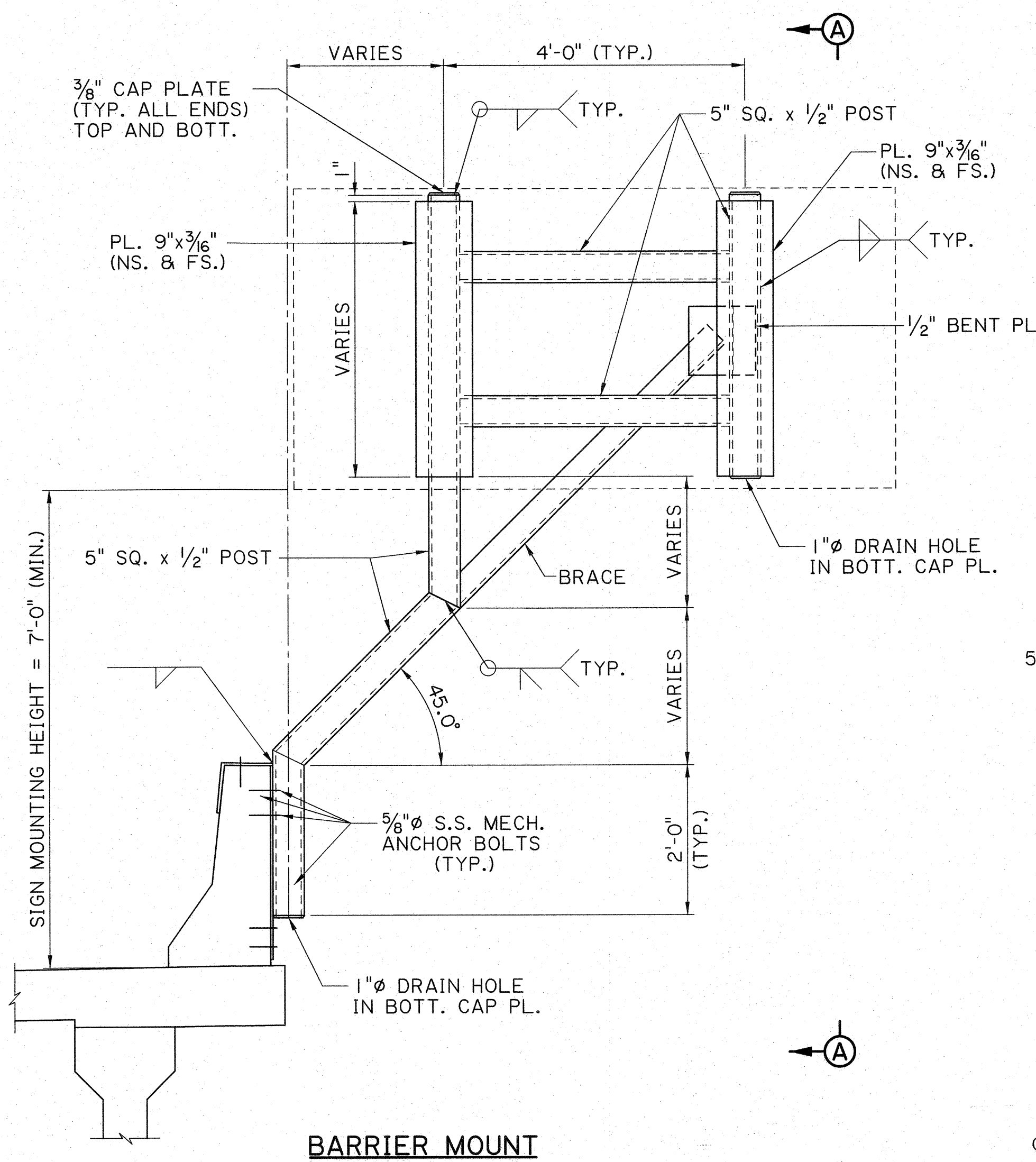
Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)



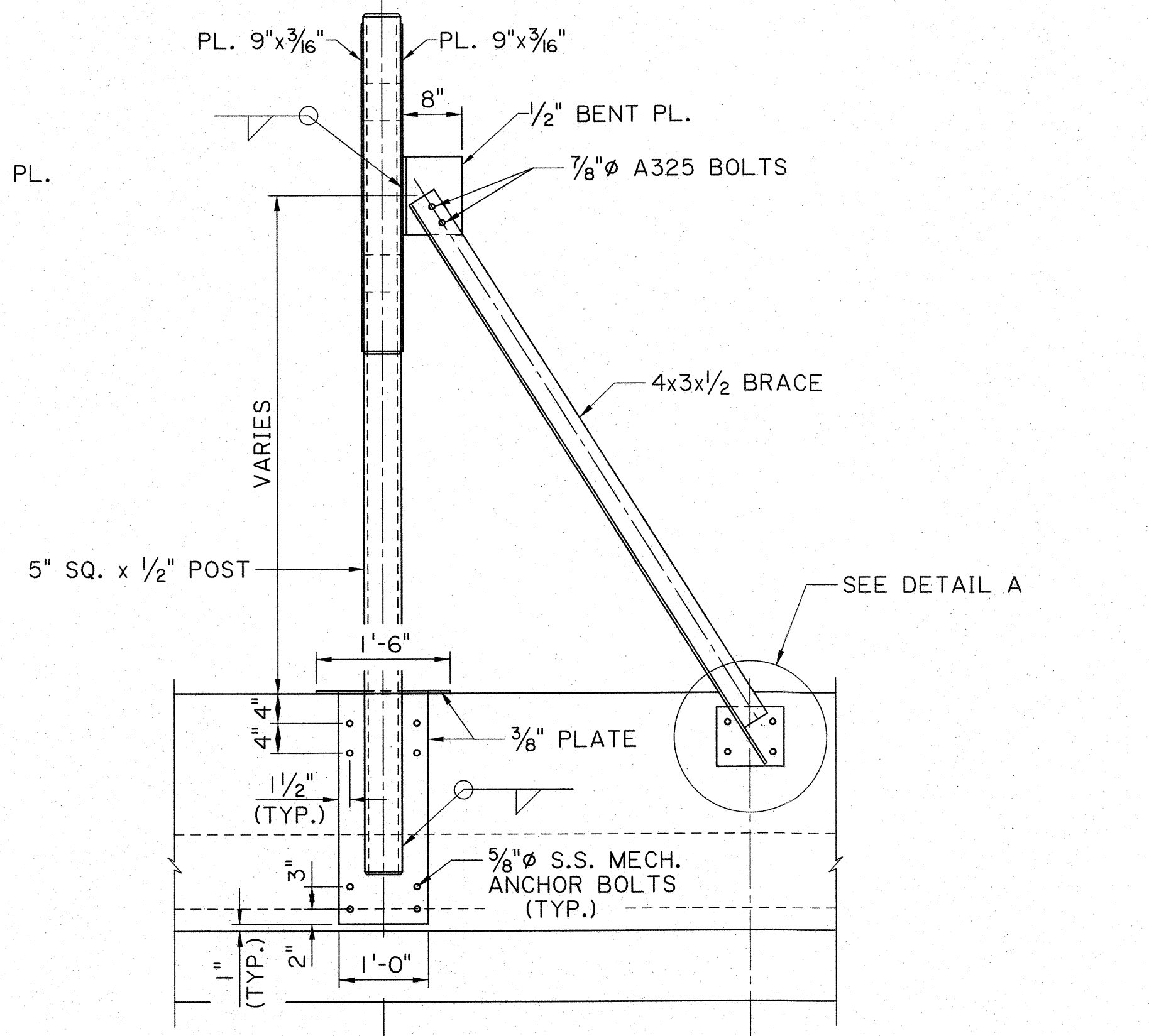
BRIDGE AND STRUCTURAL DESIGN



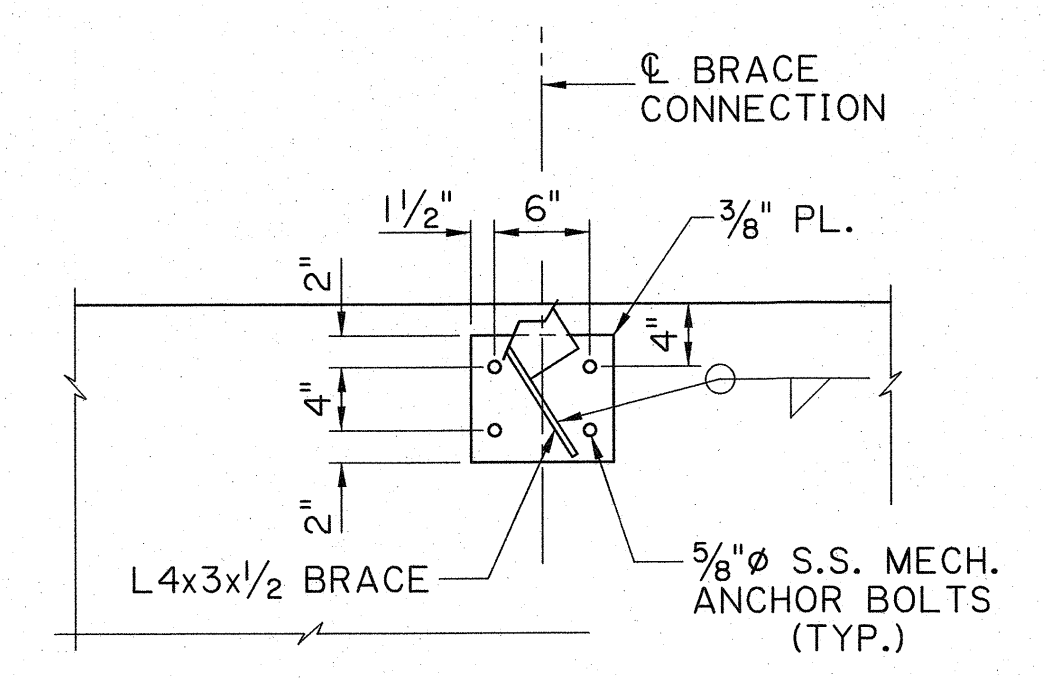
APPROVED BY CHIEF ENGINEER:
[Signature]
 DATE: 7/1/2022



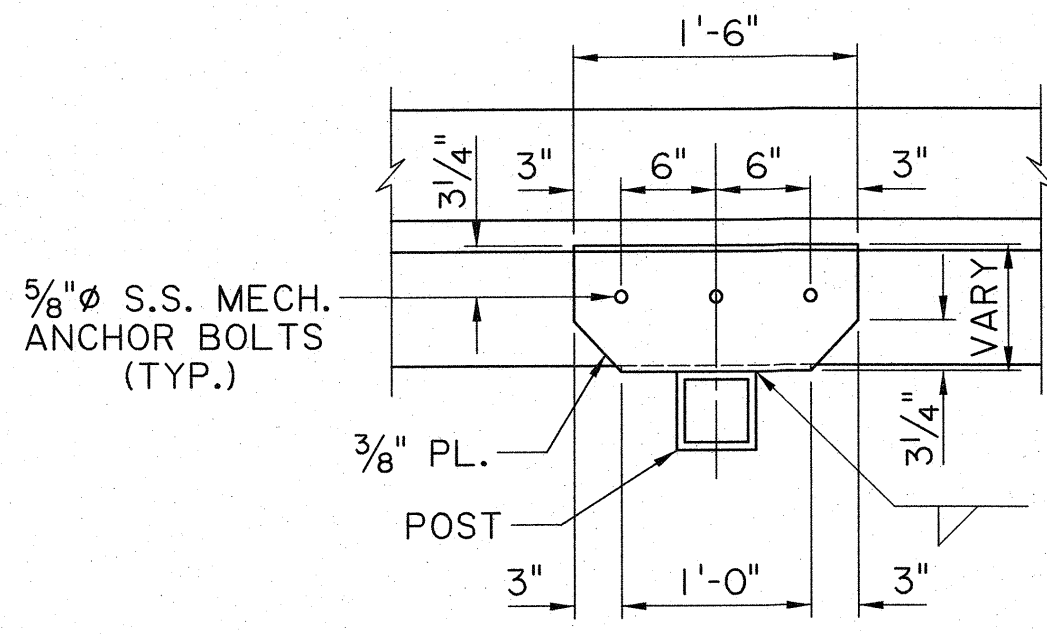
BARRIER MOUNT



VIEW A-A



DETAIL A



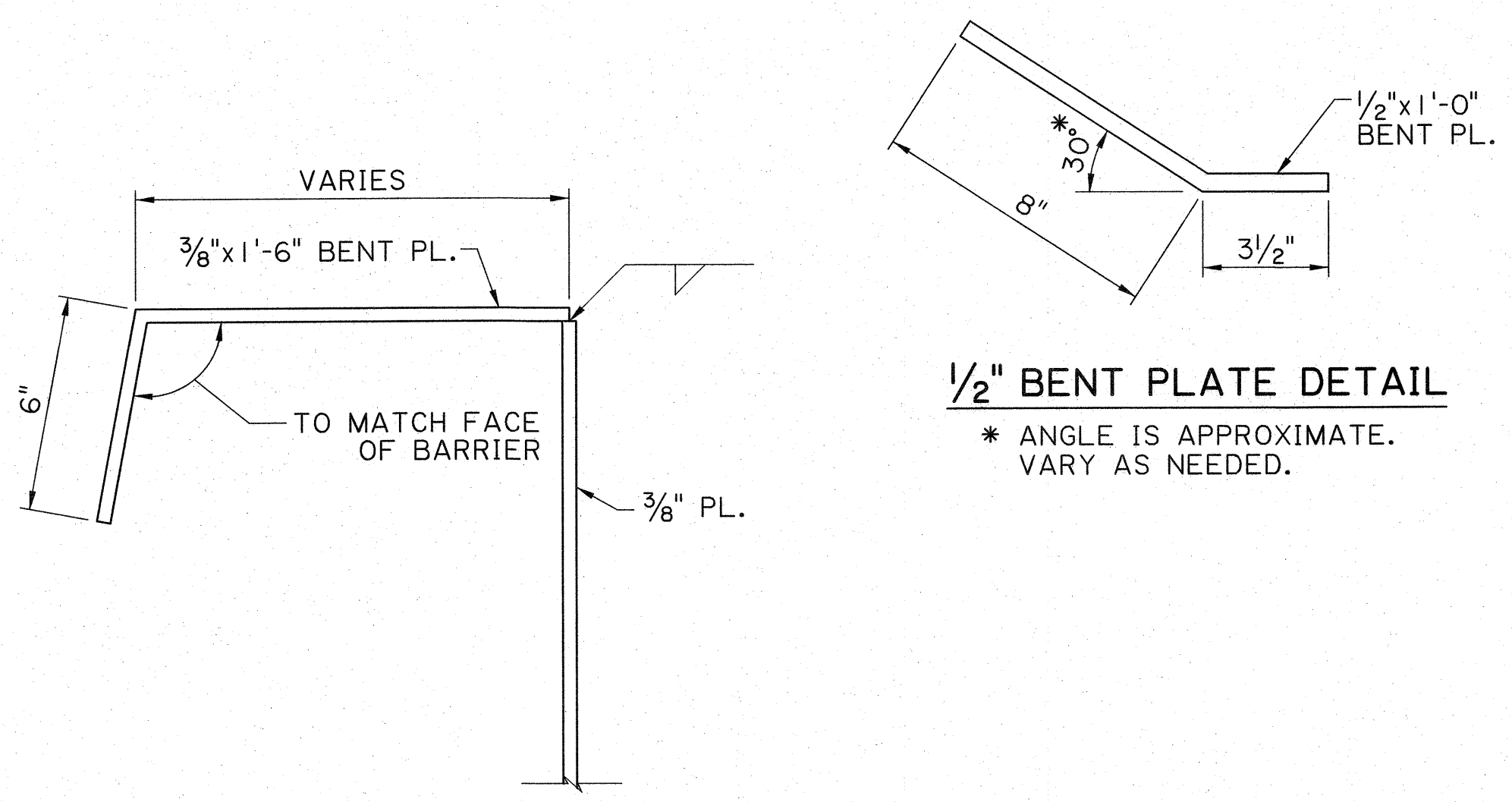
DETAIL B

APPROVED BY CHIEF ENGINEER:
 Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
[Signature]
 10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

NOTES:

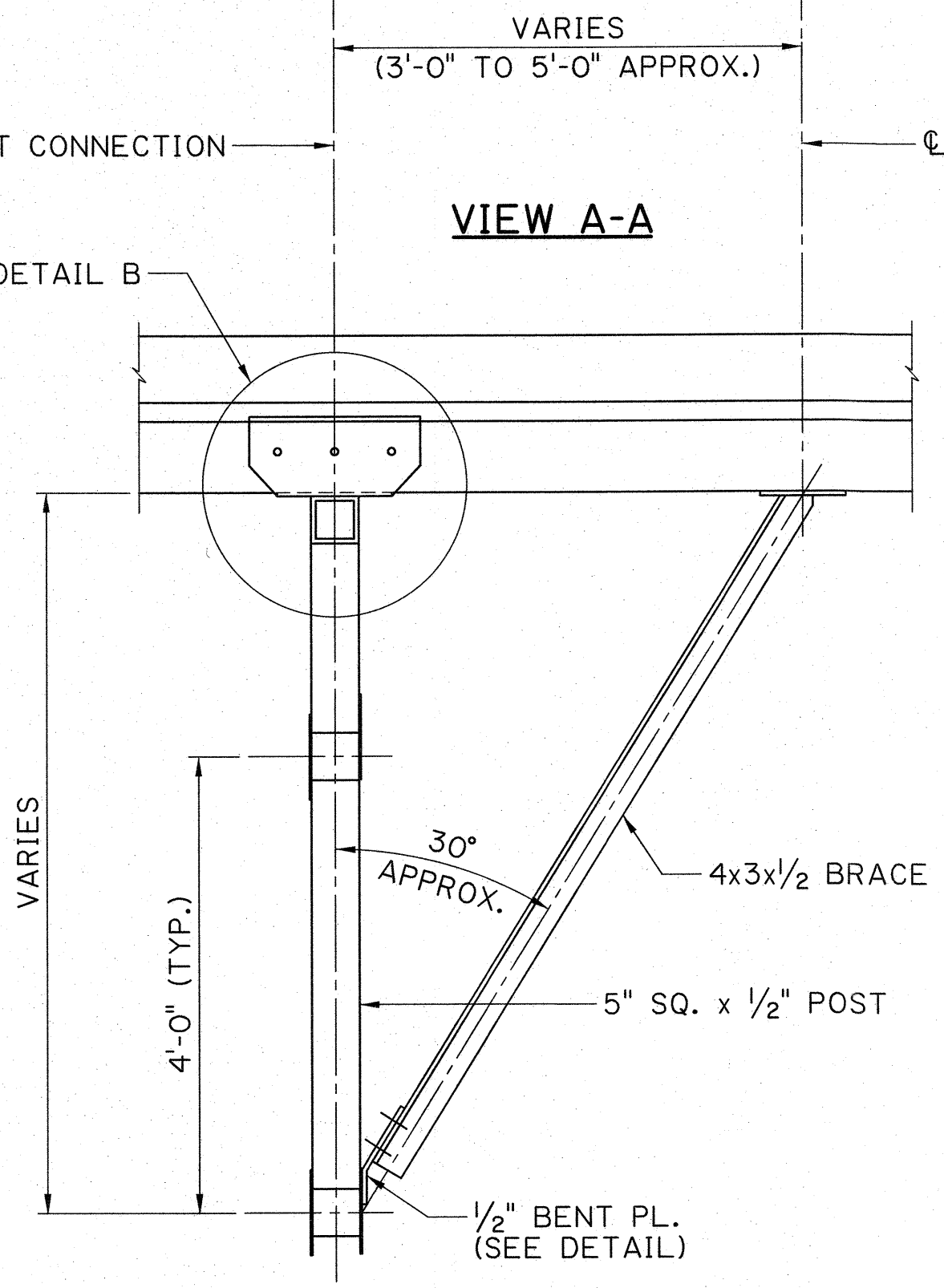
- STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. A325 BOLTS TO BE GALVANIZED PER ASTM A-153.
- MECHANICAL ANCHOR BOLTS SHALL BE 5/8" STAINLESS STEEL (MIN. F_y = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.L. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.
- WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.5-10), AND SECTION 809 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2016 EDITION.
- NO PART OF ANY SIGN SHALL PROTRUDE INTO THE SHOULDER AREA. DIMENSIONS OF SUPPORT POST AND BRACKET SHALL BE ADJUSTED AS NEEDED PRIOR TO FABRICATION.
- ANY PORTIONS OF THE EXISTING BARRIER THAT ARE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER.
- DIMENSIONS RELATED TO THE BARRIER CONNECTION ARE BASED ON AS-BUILT DRAWINGS AND PREVIOUS STANDARDS. DIMENSIONS SHALL BE ADJUSTED AS NEEDED BASED ON FIELD MEASUREMENTS.
- A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.
- MAX SIGN AREA = 40 SQFT.



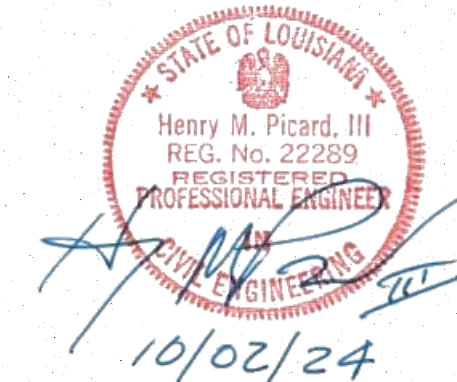
BARRIER CONNECTION DETAIL

1/2" BENT PLATE DETAIL

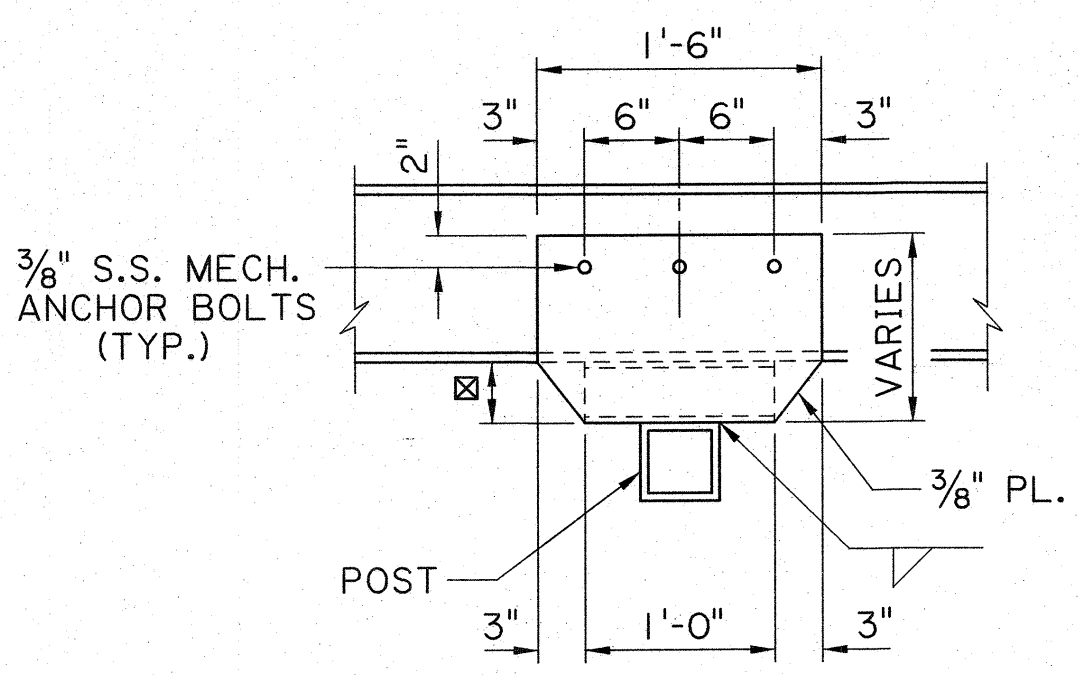
* ANGLE IS APPROXIMATE. VARY AS NEEDED.



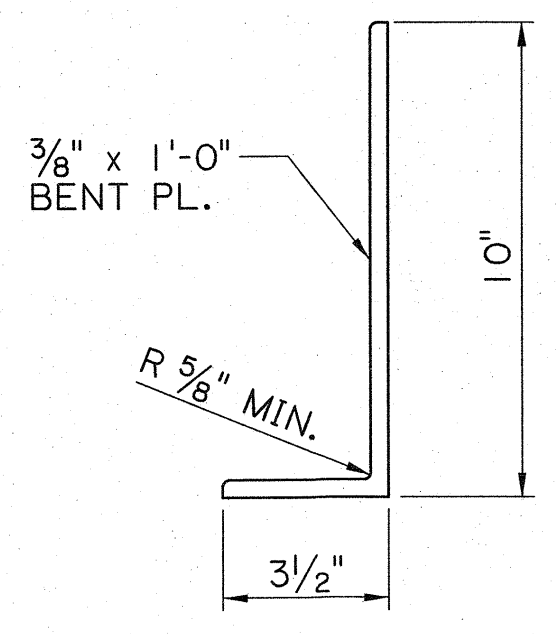
TOP VIEW



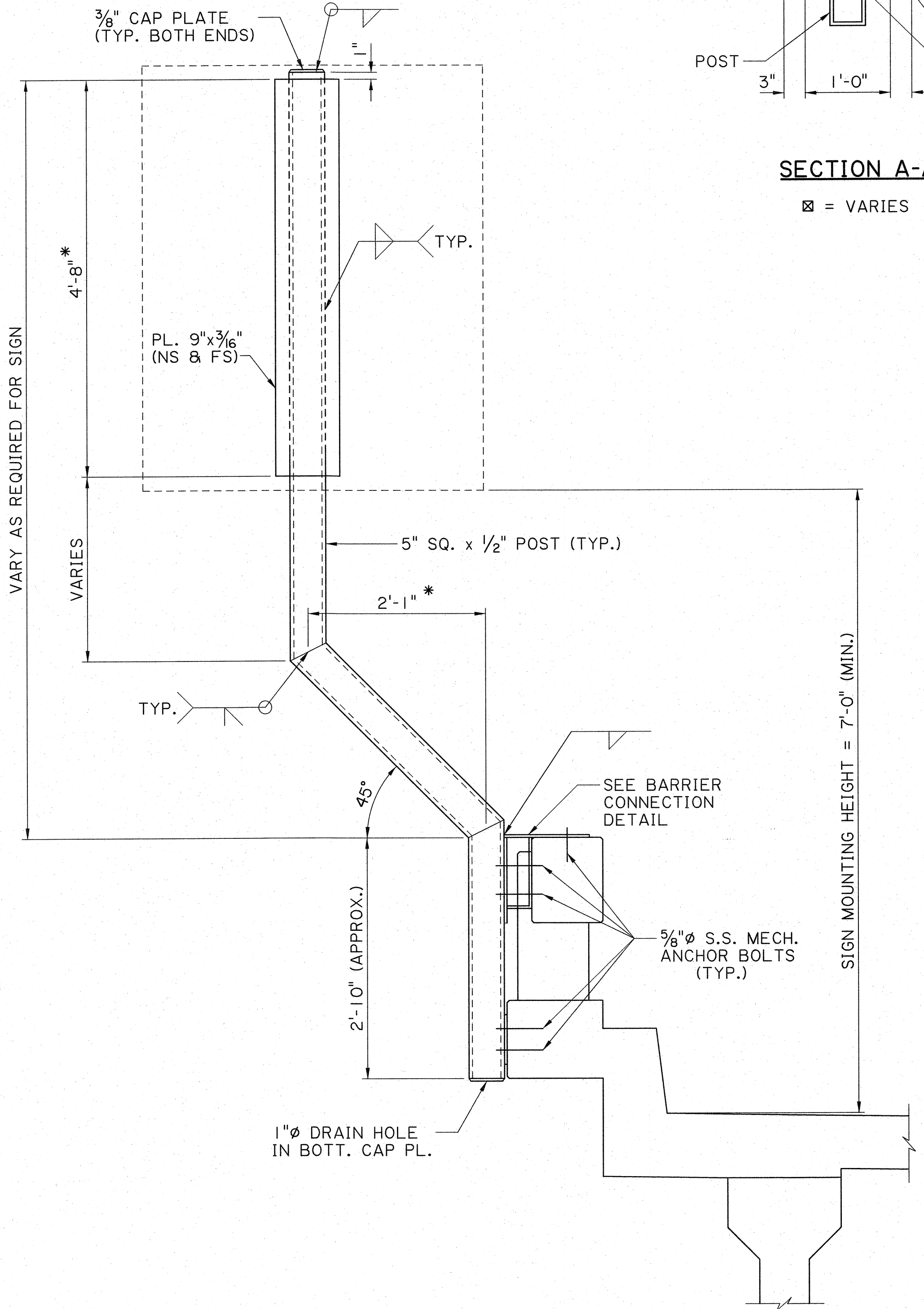
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SECTION A-A
☒ = VARIES

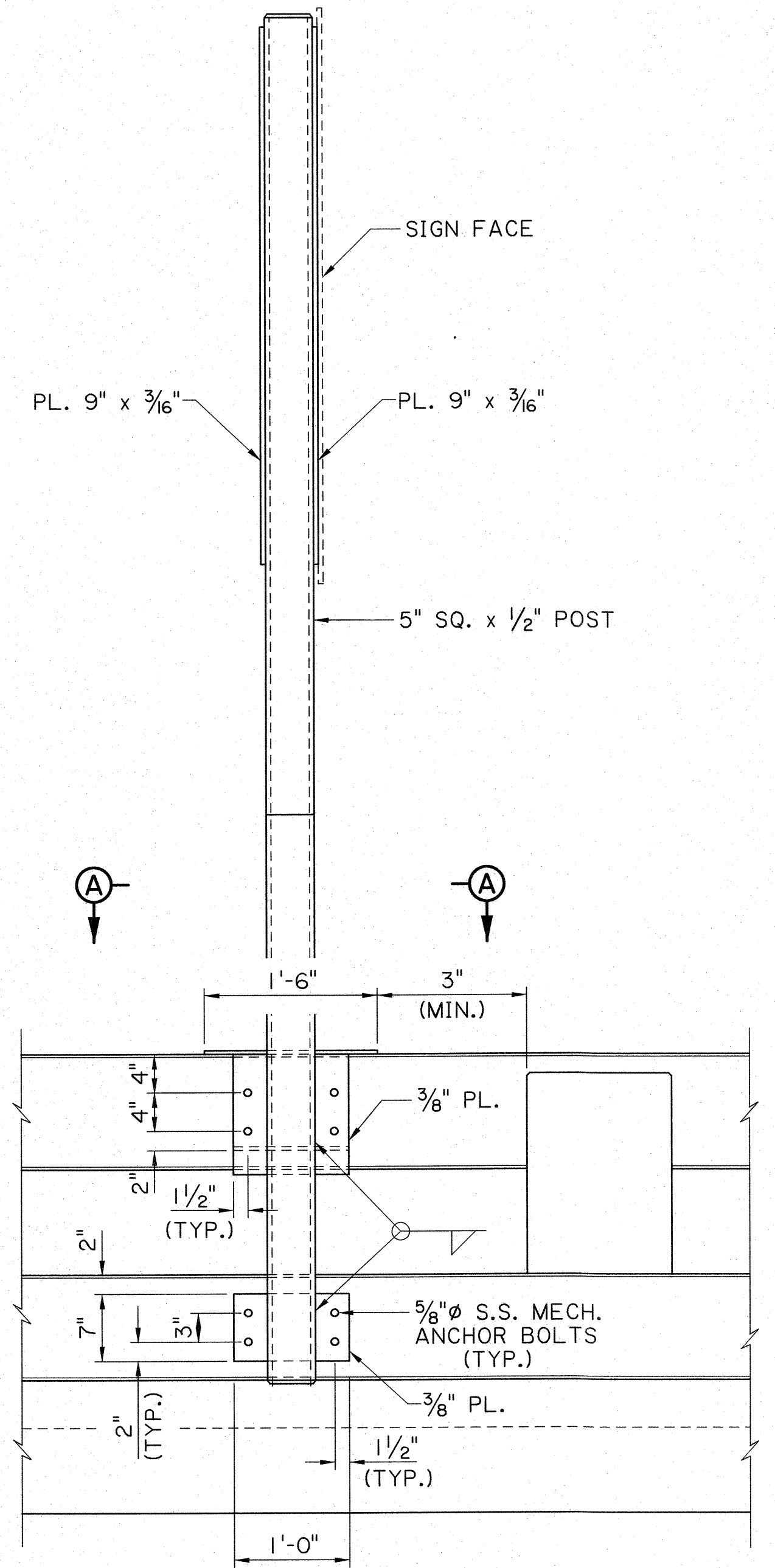


3/8" BENT PL. DETAIL

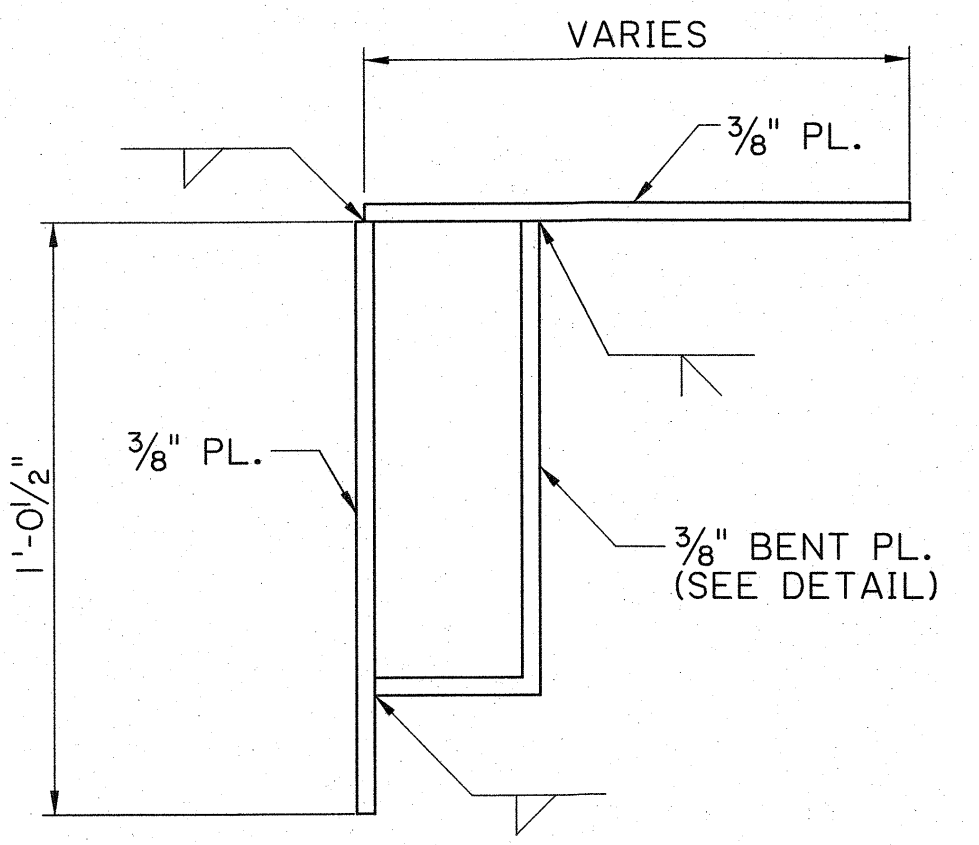


OFFSET SIGN SUPPORT

* DIMENSIONS ARE BASED ON A 5 FT. x 4 FT. SIGN. ADJUST AS NEEDED FOR DIFFERENT SIGN SIZES.



OUTSIDE ELEVATION SHOWING BARRIER



BARRIER CONNECTION DETAIL

- NOTES:**
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 - MAX SIGN AREA = 20 SQFT.

SHEET NUMBER		377	
DESIGN		ST. TAMMANY	
CHECK	K. BRAUNER	PARISH	
DETAIL	V. TOURRES	CONTROL SECTION	
CHECK	K. BRAUNER	STATE PROJECT	
REVIEW	V. TOURRES		
SERIES	C. GUIDRY		
	13 OF 17		

APPROVED BY CHIEF ENGINEER:	DATE:
<i>Kurt M. Brauner</i>	7/1/2022

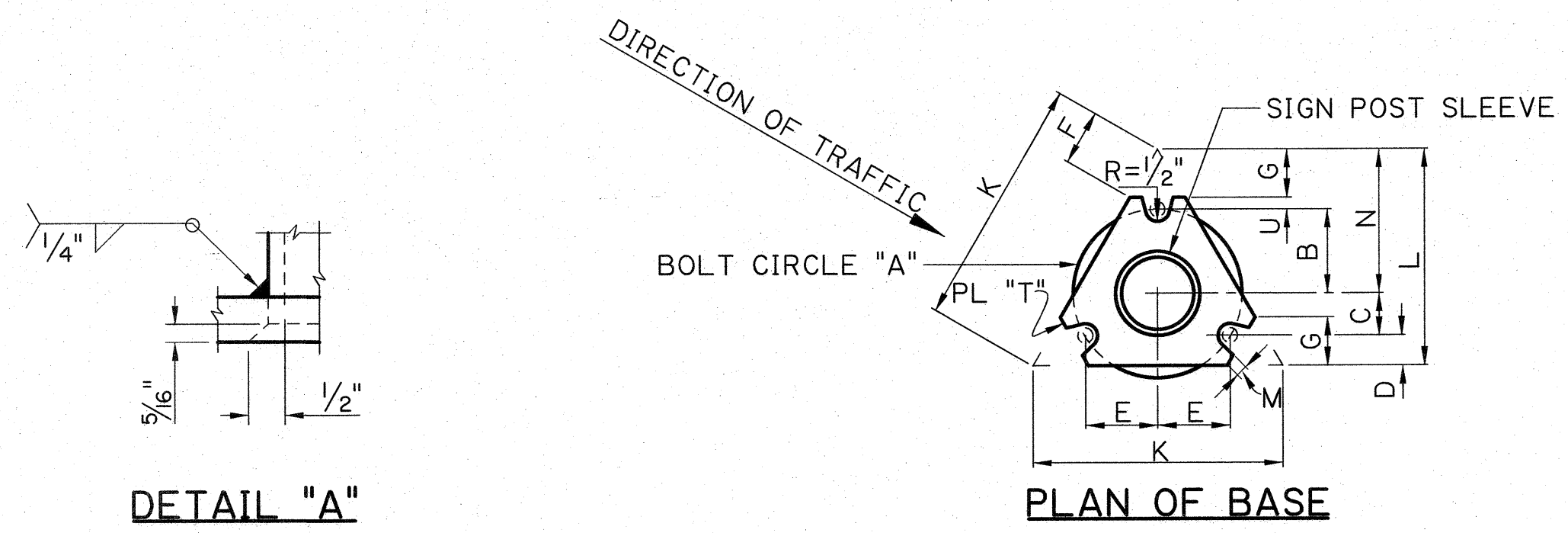
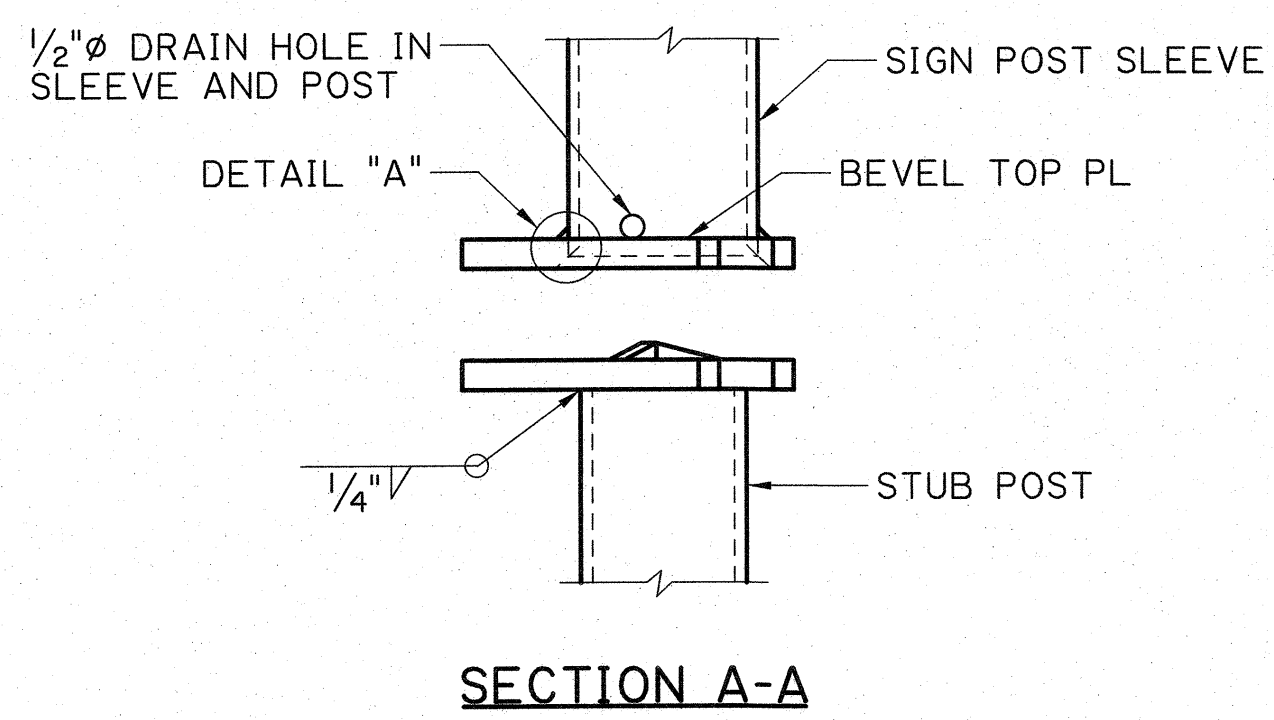
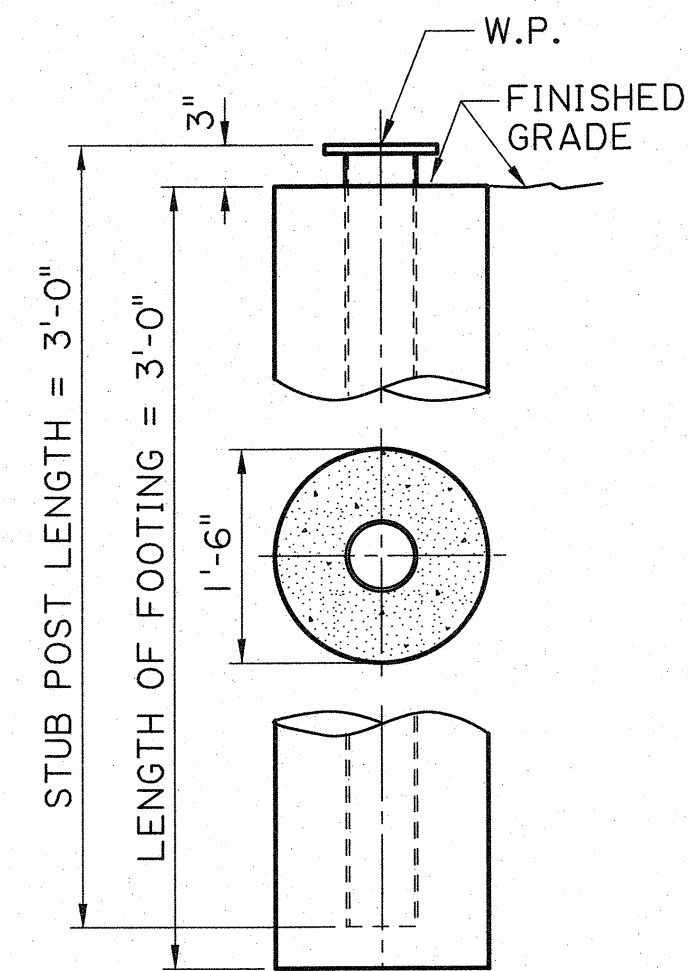
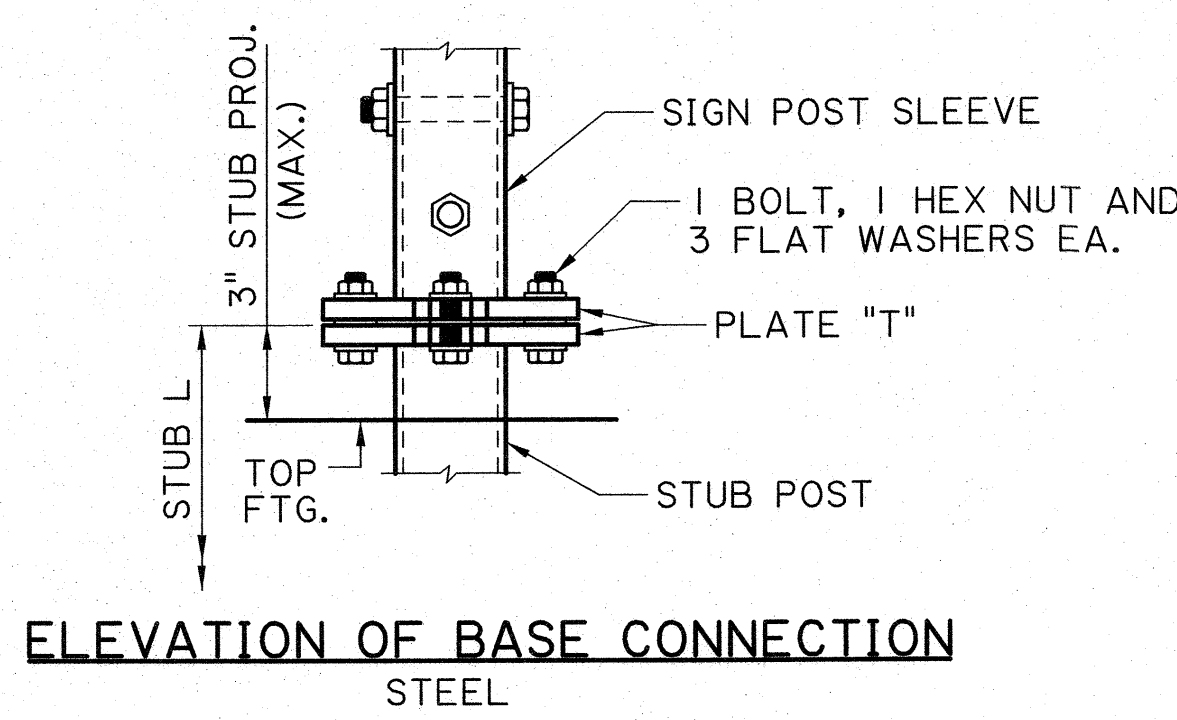
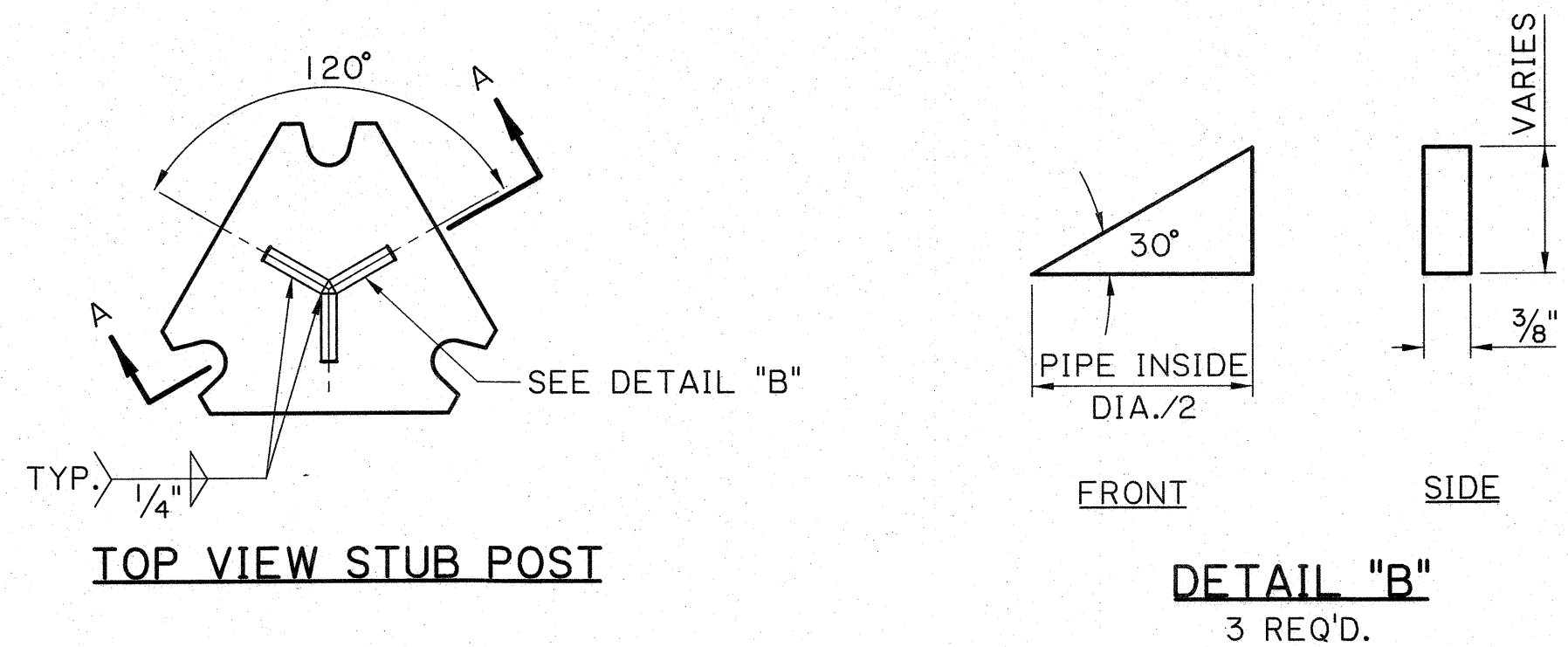
Z - BRACKET SIGN SUPPORT (POST AND RAIL BARRIER)

ROADSIDE SIGNING STANDARDS

STANDARD PLAN

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

BRIDGE AND STRUCTURAL DESIGN



STEEL MULTI-DIRECTIONAL BASE CONNECTION DATA																
NOMINAL PIPE SIZE FOR POST SLEEVE	BOLT SIZE & TORQUE	WELD SIZE	T	A	B	C	D	E	F	G	K	L	M	N	U	
3/2" SCH 40	5/8" T=226	3/8"	5/8"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/16"	2"	10 3/8"	9"	1 1/2"	6"	1 1/2"	

FOR STUB POST LENGTH & FOOTING DIMENSION SEE FOOTING DETAIL.
 TORQUE IN INCH-LBS., BOLTS ARE HIGH STRENGTH

STATE OF LOUISIANA
 Henry M. Picard, III
 REG. No. 22299
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 10/02/24

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PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUMB TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED. SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

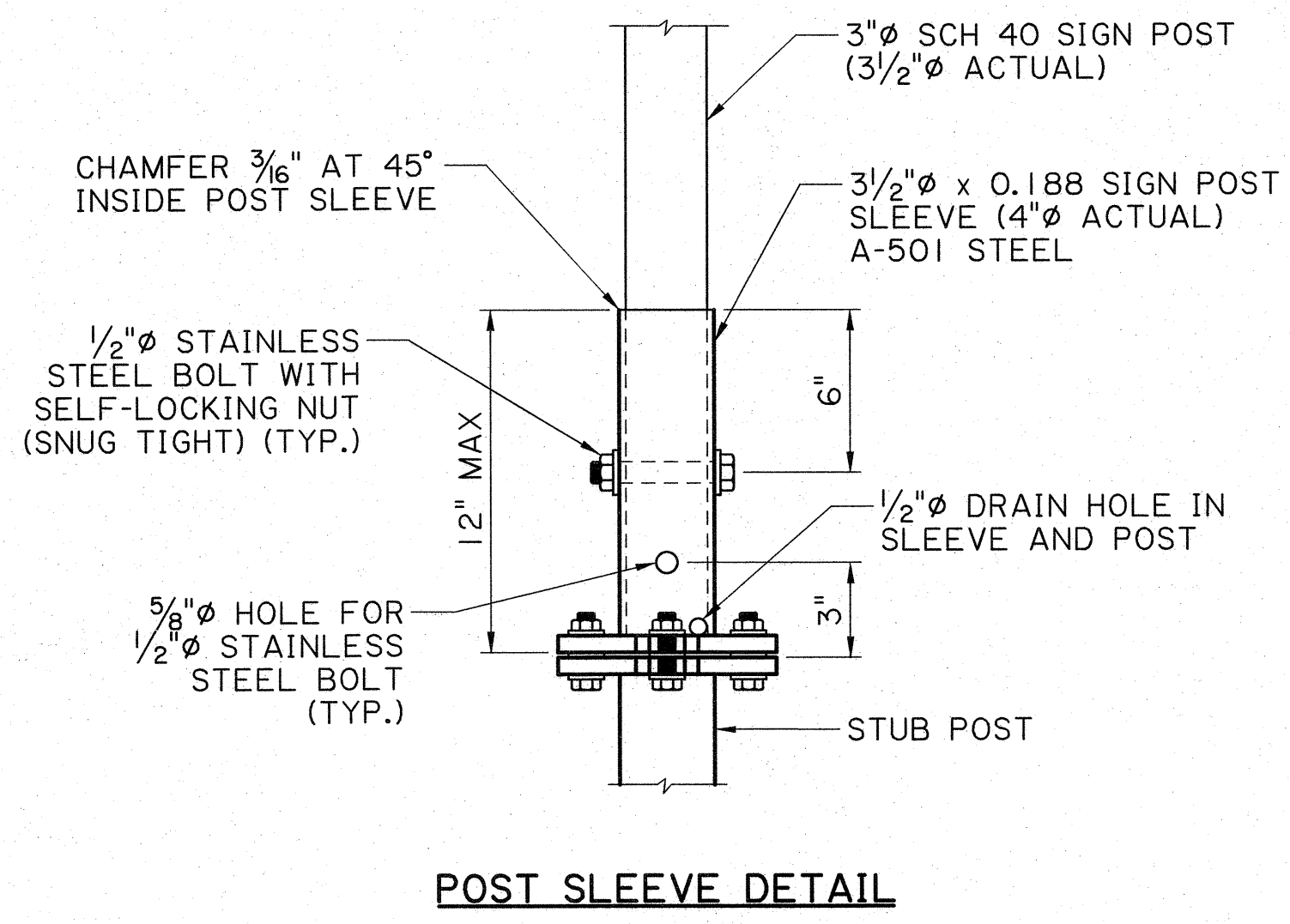
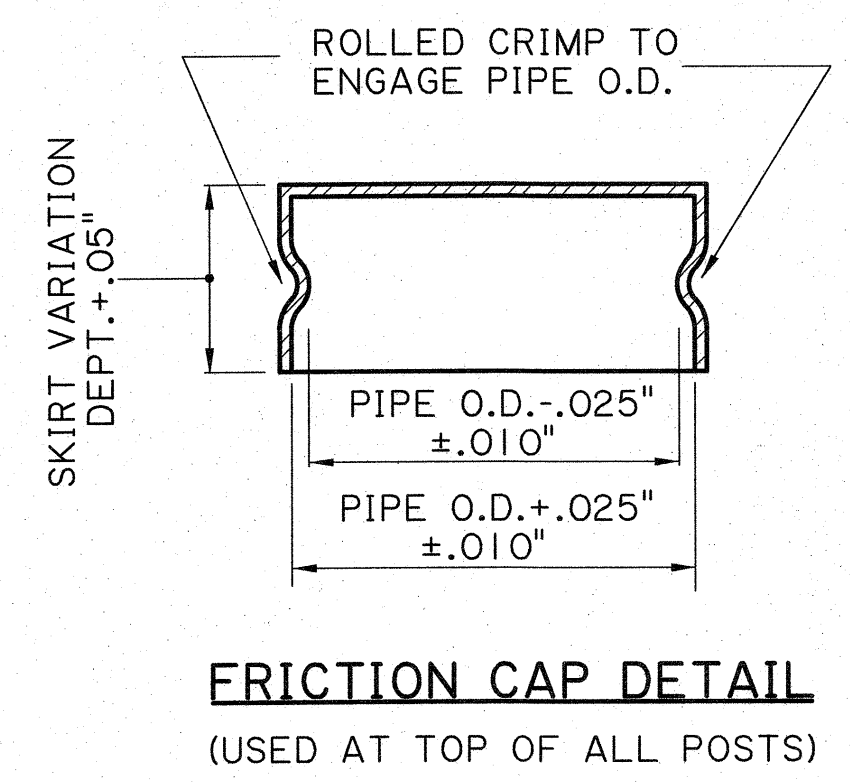
1. BASE SHALL BE ALIGNED AND SET PLUMB BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

FRICION CAPS:

CAPS MAY BE MANUFACTURED FROM EITHER HOT ROLLED OR COLD ROLLED STEEL SHEETS. THE MINIMUM SHEET METAL THICKNESS SHALL BE 24 GAUGE. THE RIM EDGES SHALL BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PRODUCE A DRIVE-ON FRICTION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON THE PIPE. THE DEPTH SHALL BE SUFFICIENT TO GIVE POSITIVE PROTECTION AGAINST ENTRANCE OF RAINWATER. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS AND SHOW NO EVIDENCE OF METAL FRACTURE. CAPS SHALL HAVE A ELECTRODEPOSITED COATING OF ZINC IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION B633 SC4, TYPE 1.

GALVANIZING:

ALL STEEL POST, PLATE, AND SLEEVE MEMBERS SHALL BE GALVANIZED PER ASTM A-123.
 ALL MISC. HARDWARE (EXCEPT FOR STAINLESS STEEL BOLTS) SHALL BE GALVANIZED PER ASTM A-153.



SHEET NUMBER 379

ST. TAMMANY

DESIGN: K. BRAUNER
 CHECK: C. GUIDRY
 DETAIL: K. BRAUNER
 CHECK: C. GUIDRY
 REVIEW: C. BOURGEOIS
 SERIES # 15 OF 17

STATE OF LOUISIANA
 KURT M. BRAUNER
 License No. 30567
 PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 6/24/22

APPROVED BY CHIEF ENGINEER: *Henry M. Picard, III* DATE: 7/1/2022

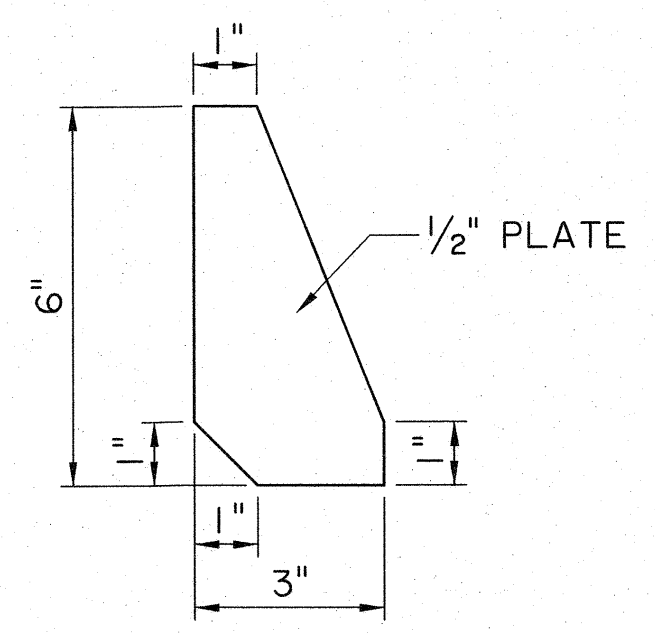
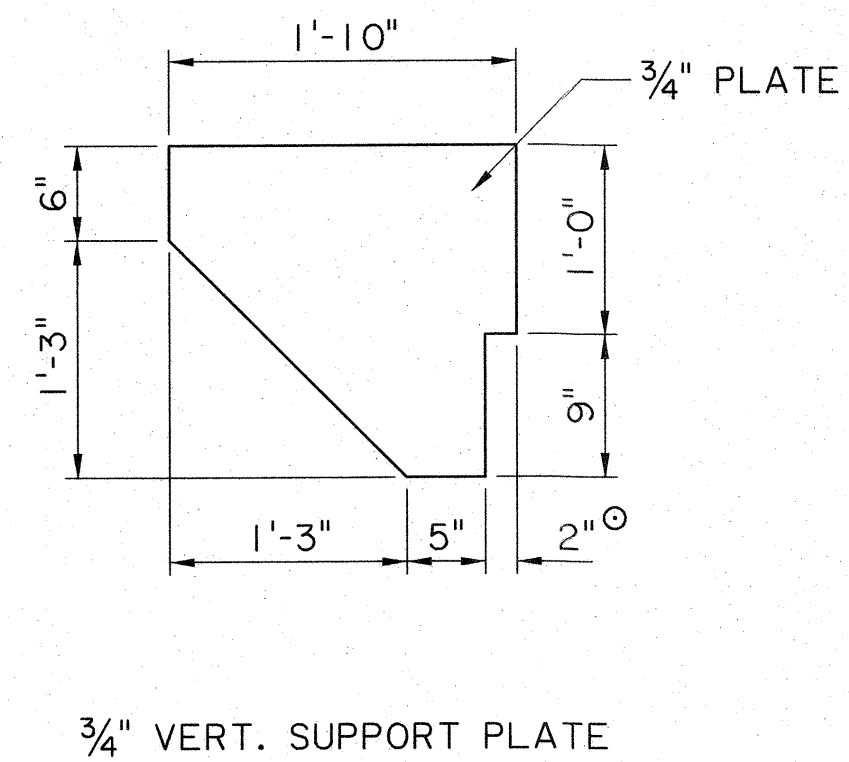
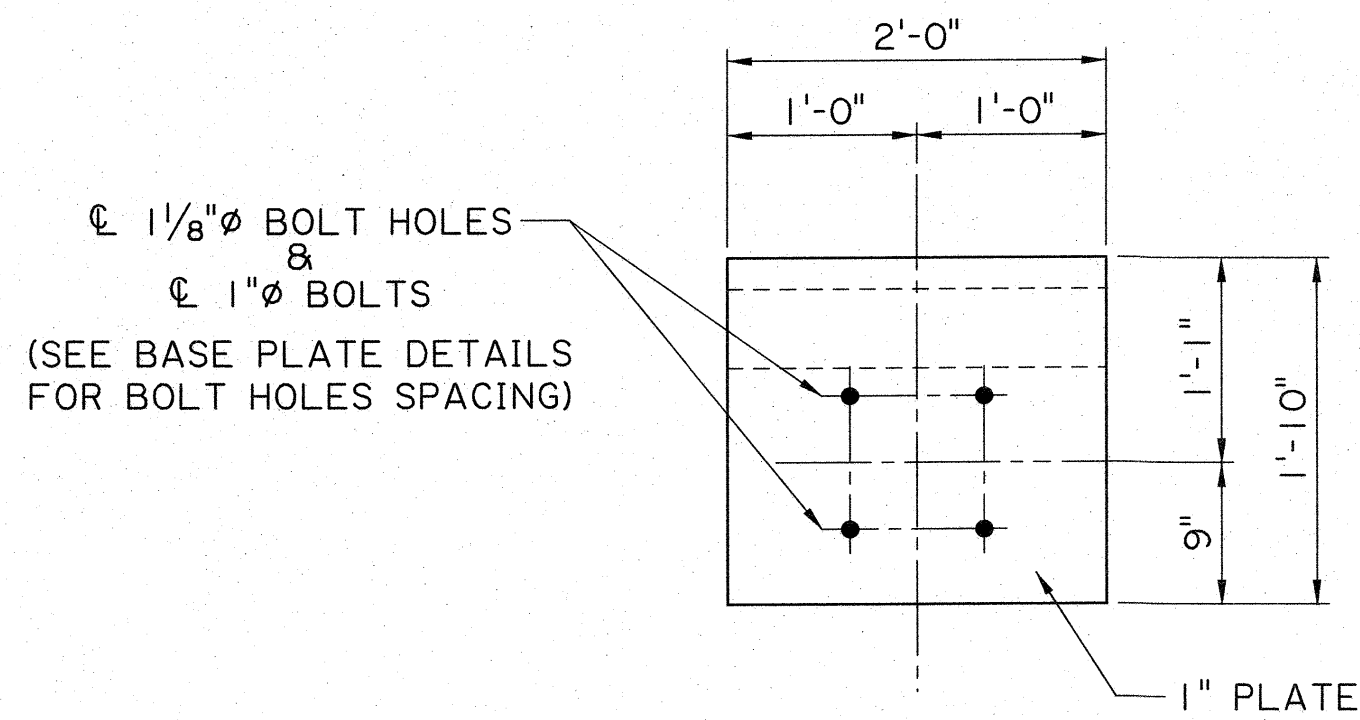
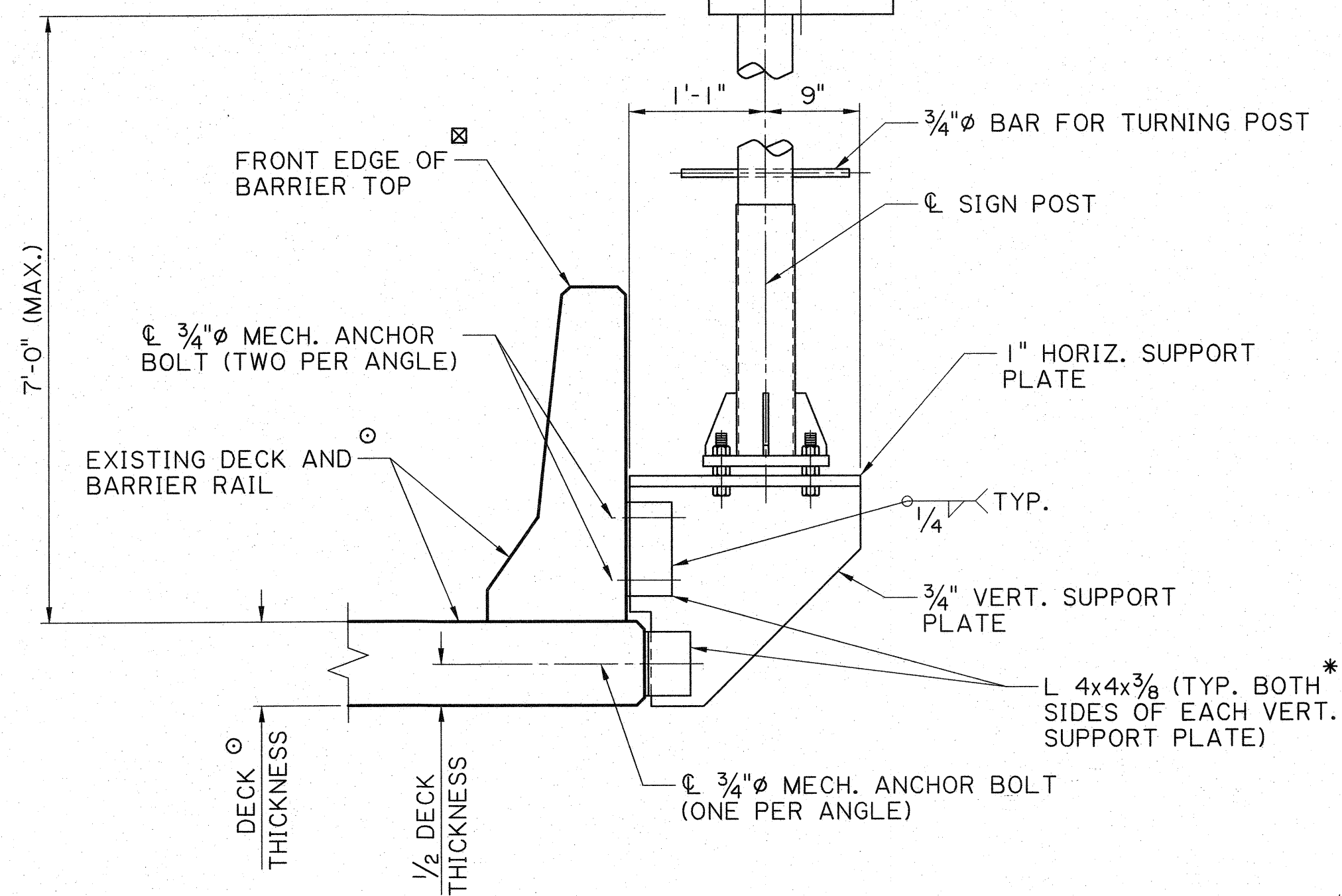
CONTRAFLOW SIGNS (GROUND MOUNTED)

ROADSIDE SIGNING STANDARDS

STANDARD PLAN

DOTD
 LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
 BRIDGE AND STRUCTURAL DESIGN

☒ SIGN MAY BE OFFSET FROM THE CENTERLINE OF POST. REGARDLESS OF ITS ORIENTATION, NO PART OF THE SIGN SHALL EXTEND BEYOND THE FRONT EDGE OF THE TOP OF BARRIER RAIL. COST OF OFFSET SIGN ATTACHMENT SHALL BE PAID FOR UNDER 729-08-00210 "MOUNTING (3/2" SIZE POST) (STRUCTURE MOUNT)".



SIGN SUPPORT BRACKET DETAILS

NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL MISC. HARDWARE (EXCEPT STAINLESS STEEL BOLTS) SHALL BE GALVANIZED AS PER ASTM A-153.

○ ALL EXISTING DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION. ANY ADJUSTMENTS TO SUPPORT BRACKET DIMENSIONS SHALL BE APPROVED BY THE ENGINEER.

* EQUIVALENT BENT PLATES MAY BE USED. ADJUST ANGLE OF BEND AS NEEDED TO ATTACH TO BARRIER RAIL.

PAYMENT FOR THE TYPE "A" SIGN POST AND SUPPORT BRACKET SHALL BE UNDER ITEM NO. 729-08-00210, "MOUNTING (3/2" SIZE POST) (STRUCTURE MOUNT)".

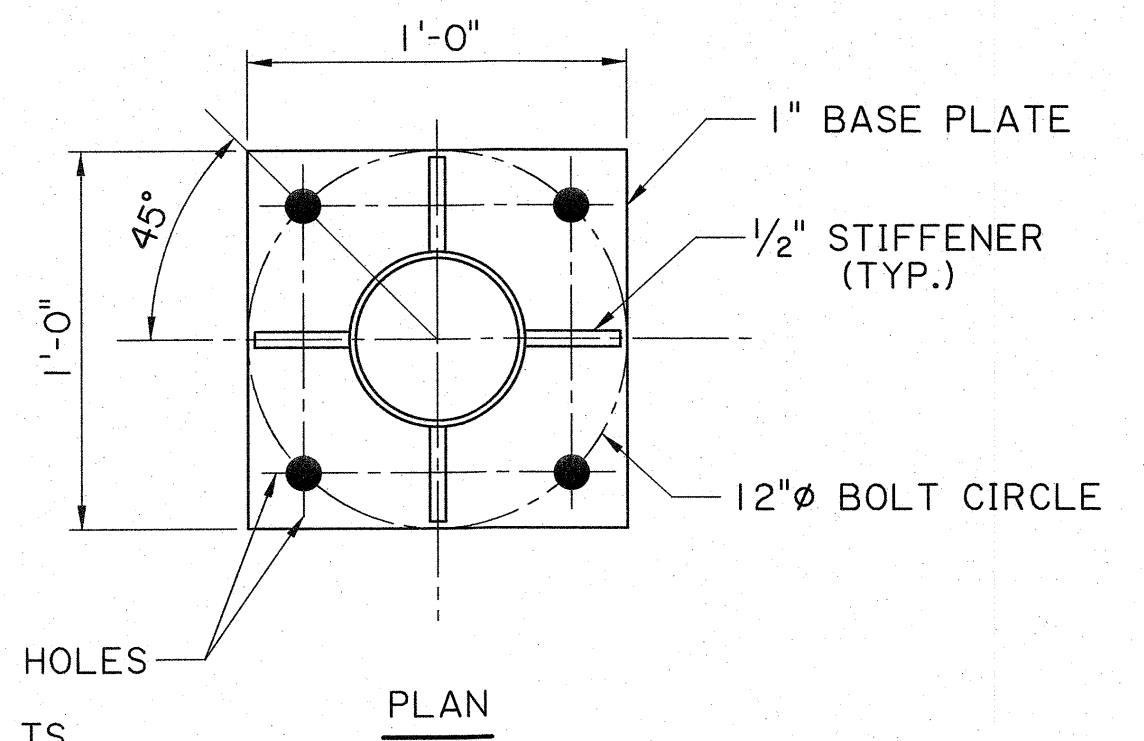
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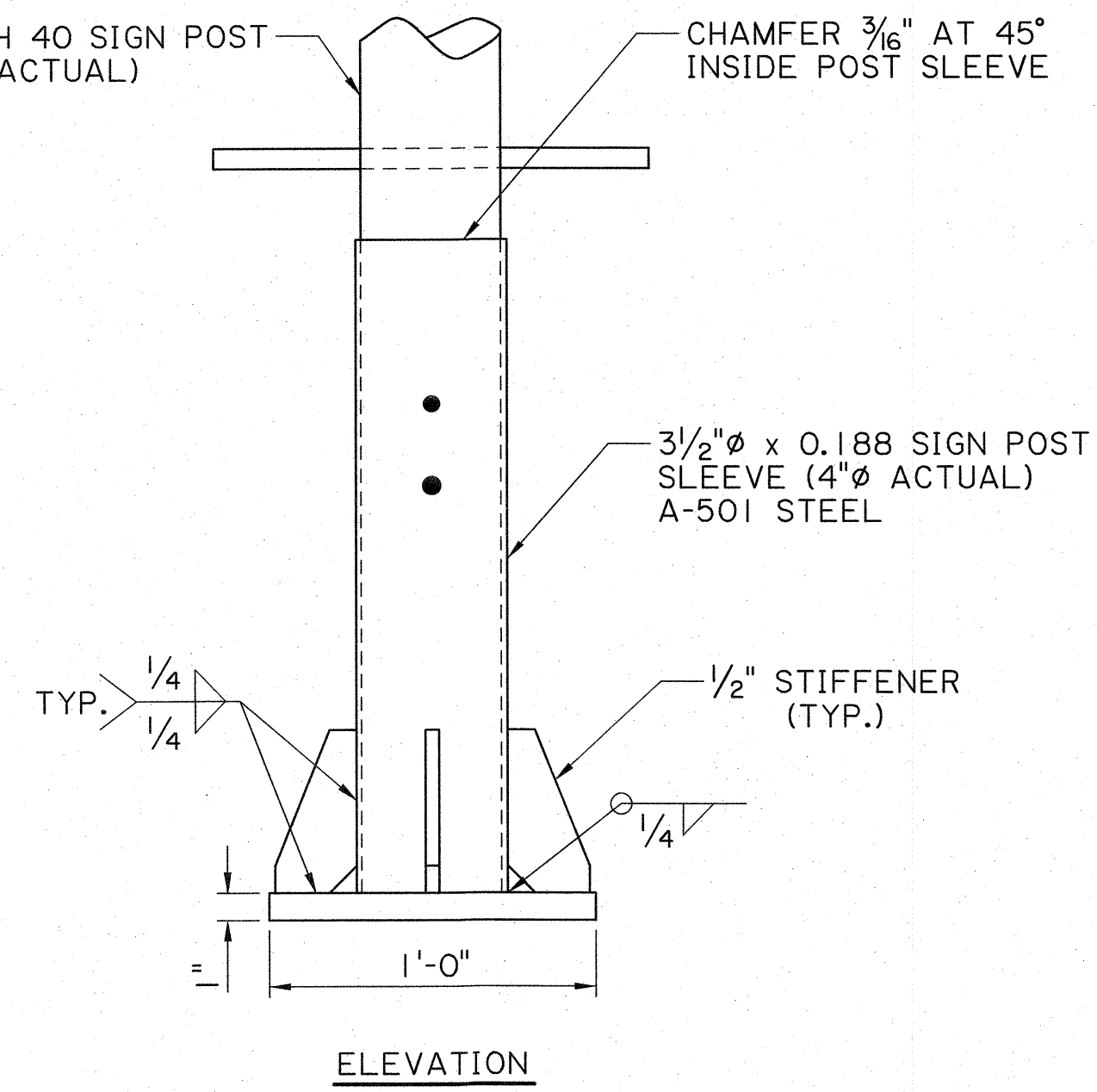
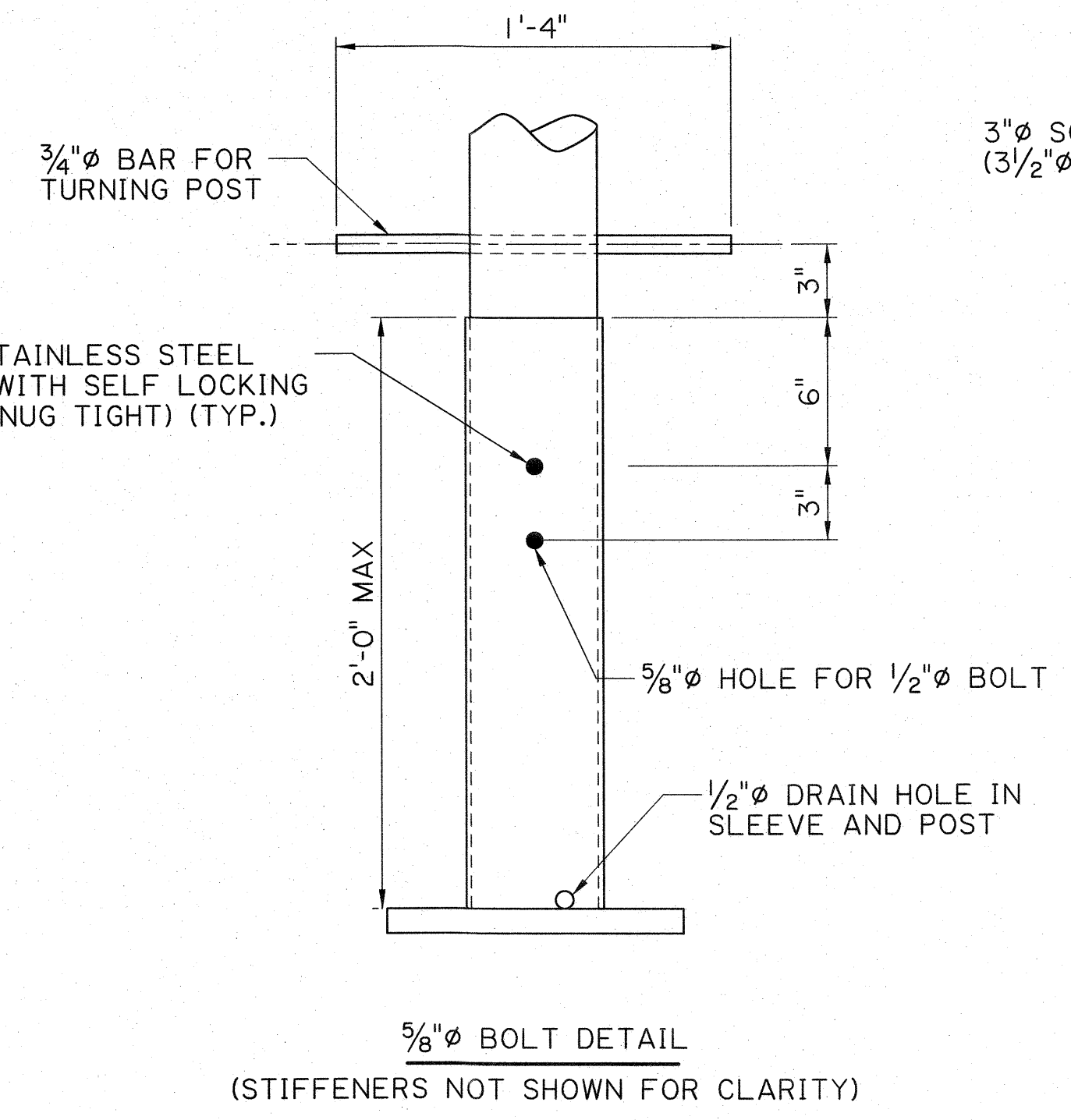
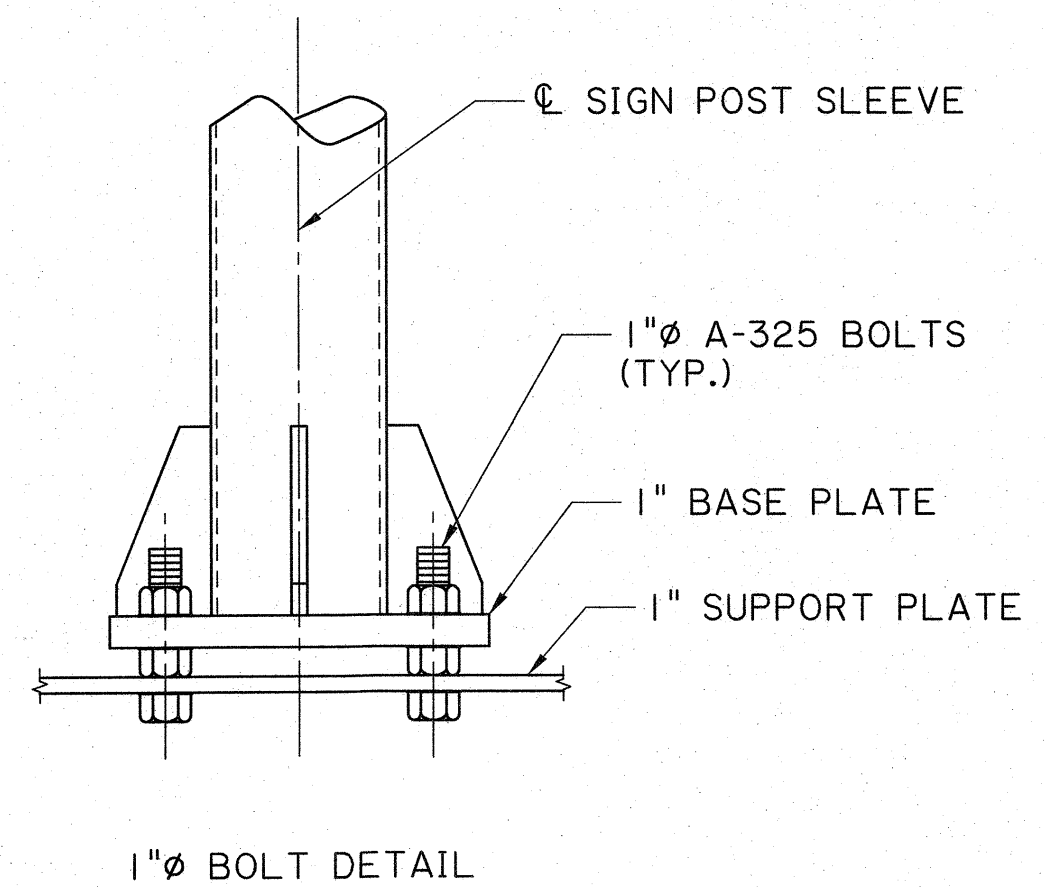
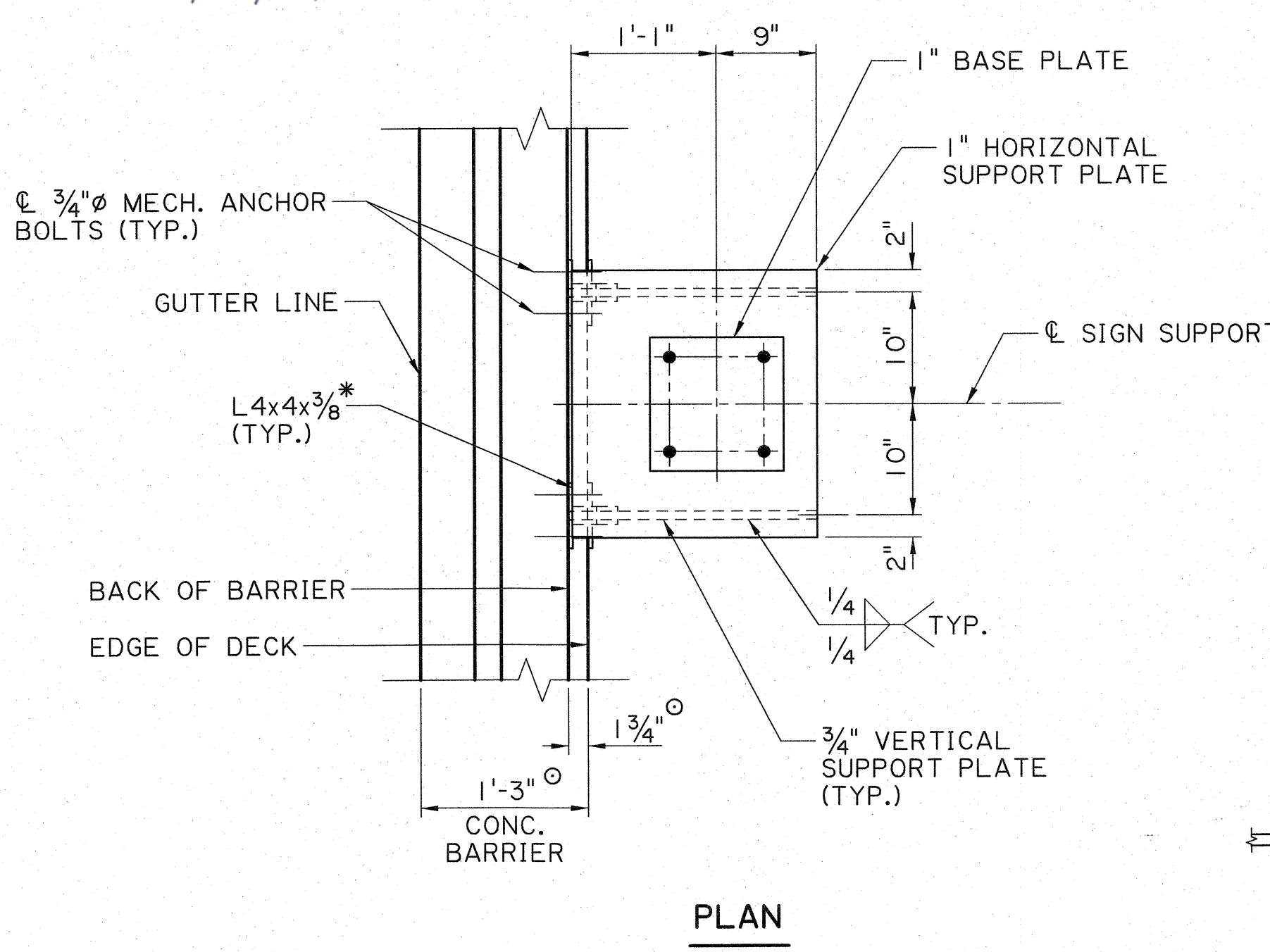
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MAXIMUM ALLOWABLE SIGN AREA = 20 SQ. FT.



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SHEET NUMBER		380	
DESIGN		ST. TAMMANY	
CHECK	K. BRAUNER	CONTROL SECTION	
DETAIL	K. BRAUNER	STATE PROJECT	
CHECK	C. GUIDRY		
REVIEW	C. BOURGEOIS		
SERIES	16 OF 17		

APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 7/1/2022

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
6/24/22

CONTRAFLOW SIGNS (F - SHAPE BARRIER)

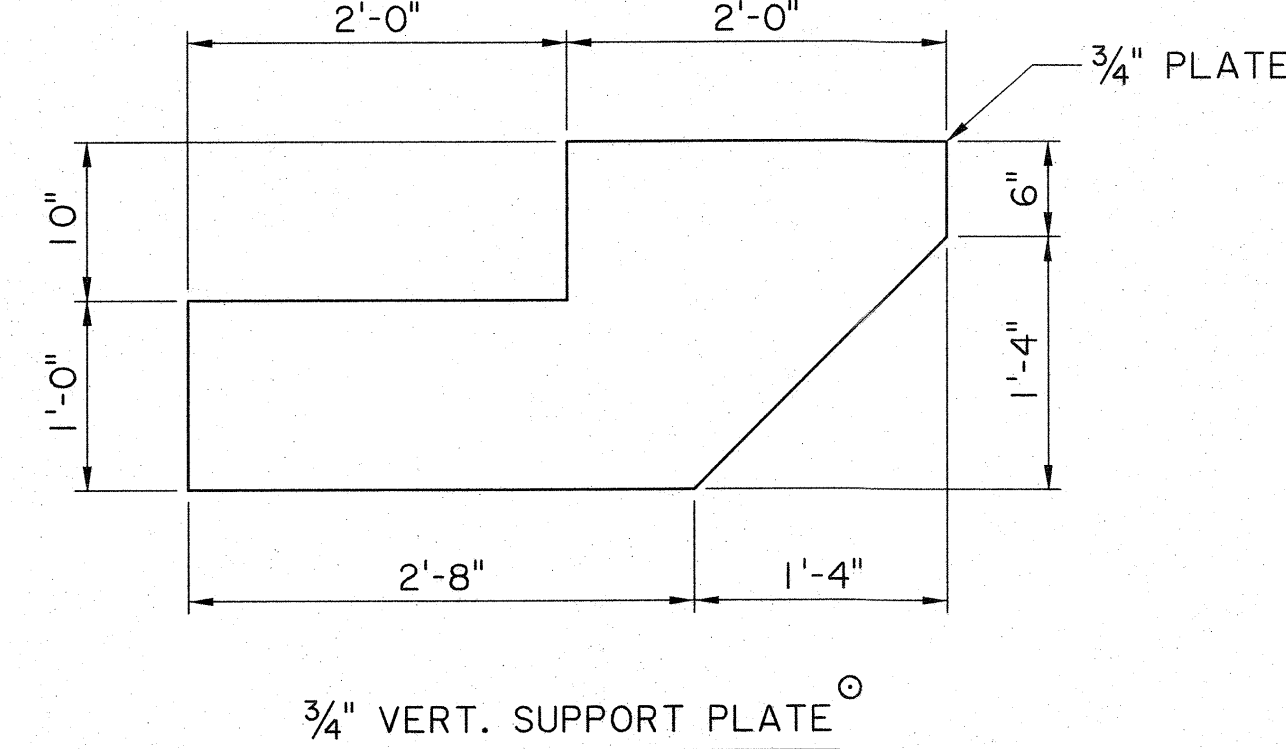
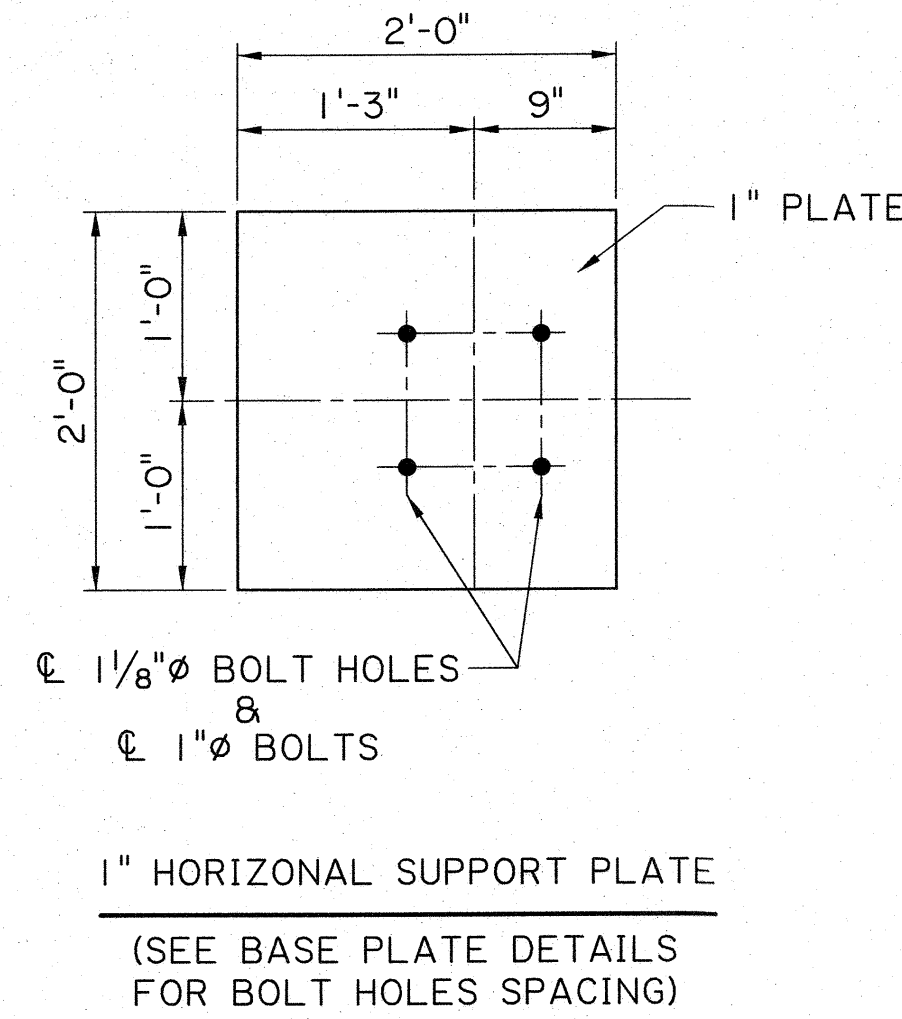
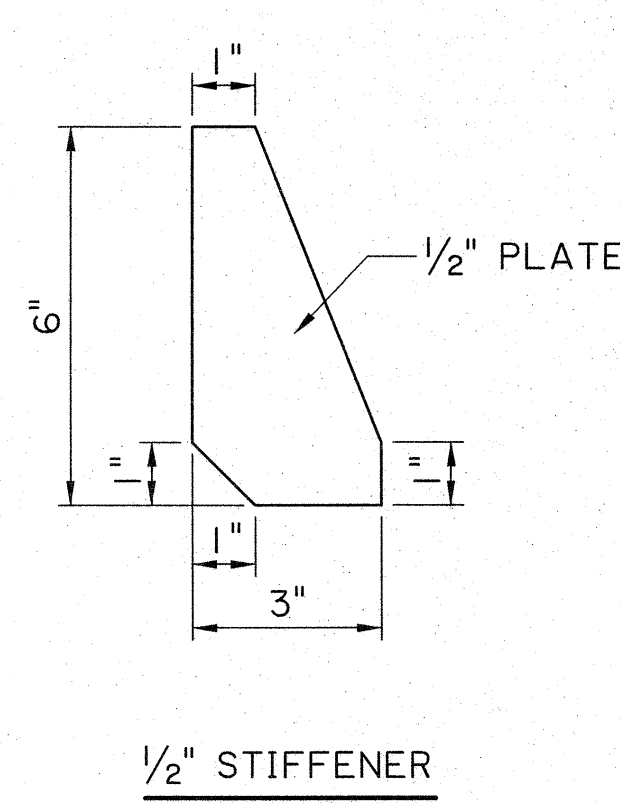
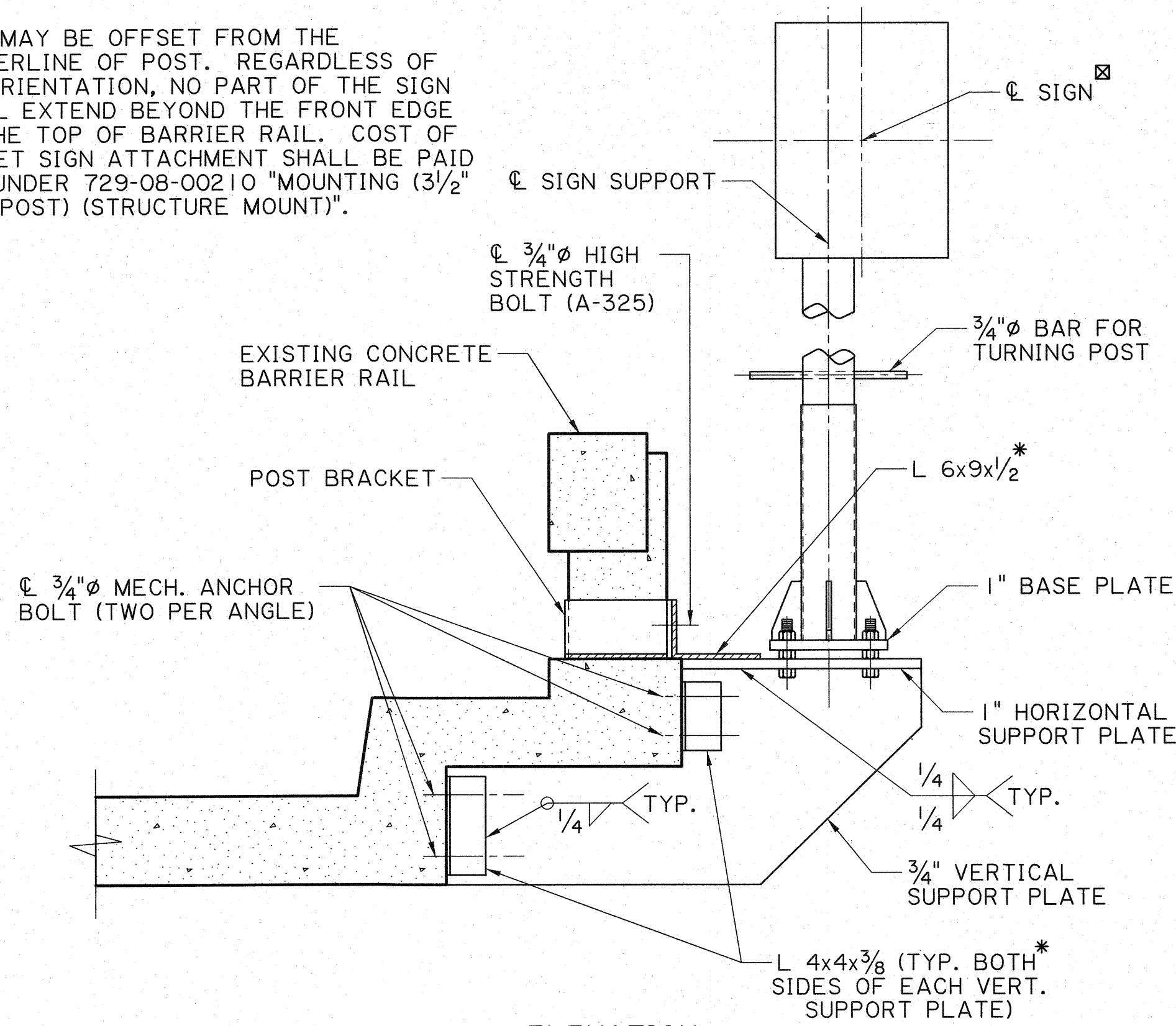
ROADSIDE SIGNING STANDARDS

STANDARD PLAN

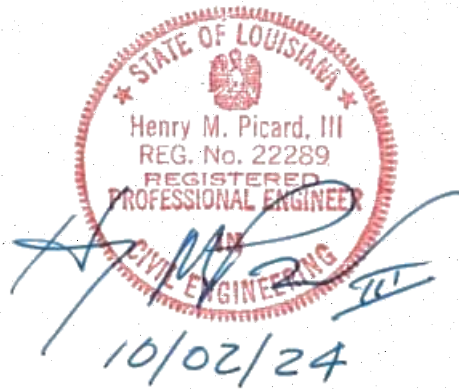
DOT
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

BRIDGE AND STRUCTURAL DESIGN

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SIGN SUPPORT BRACKET DETAILS



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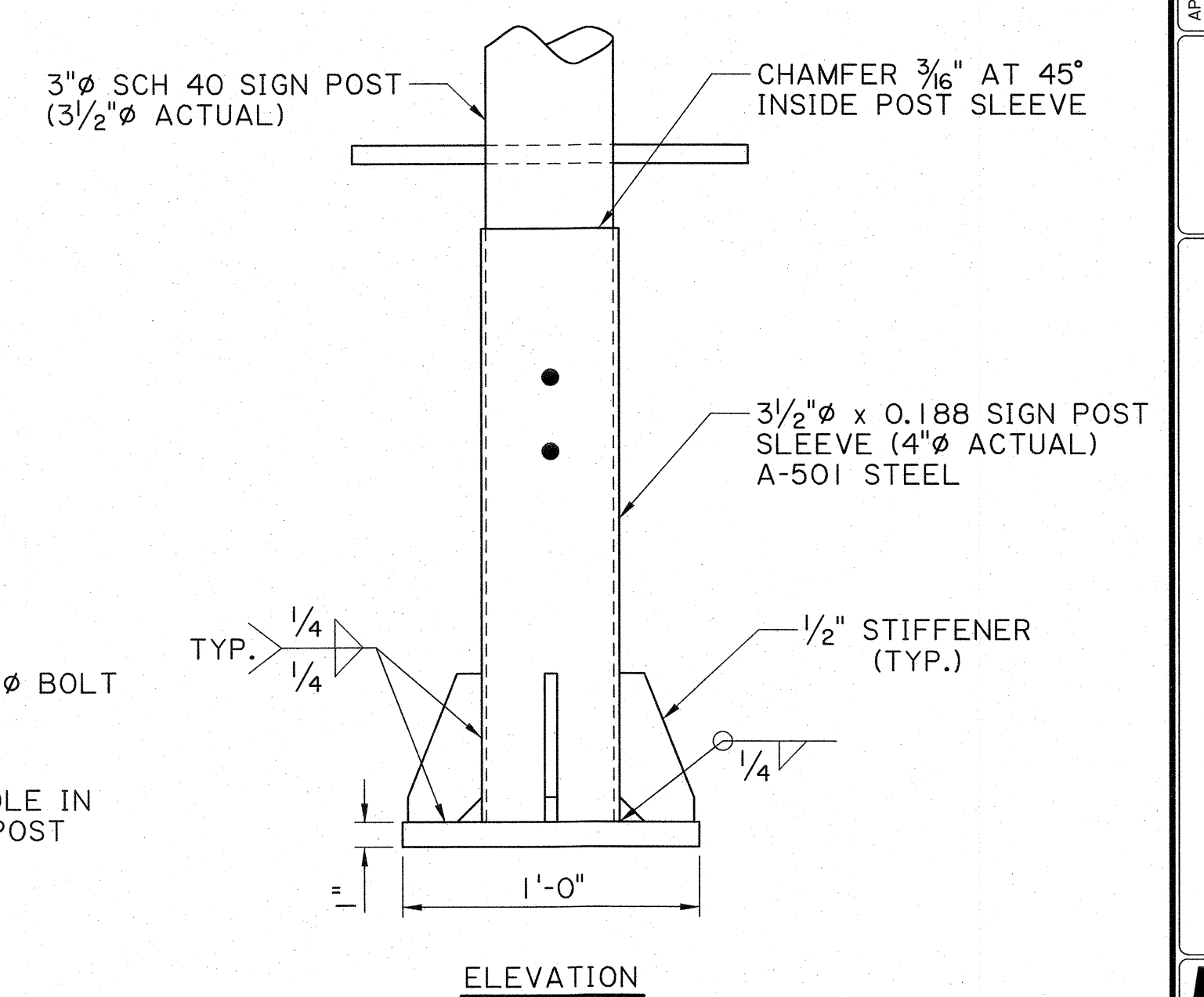
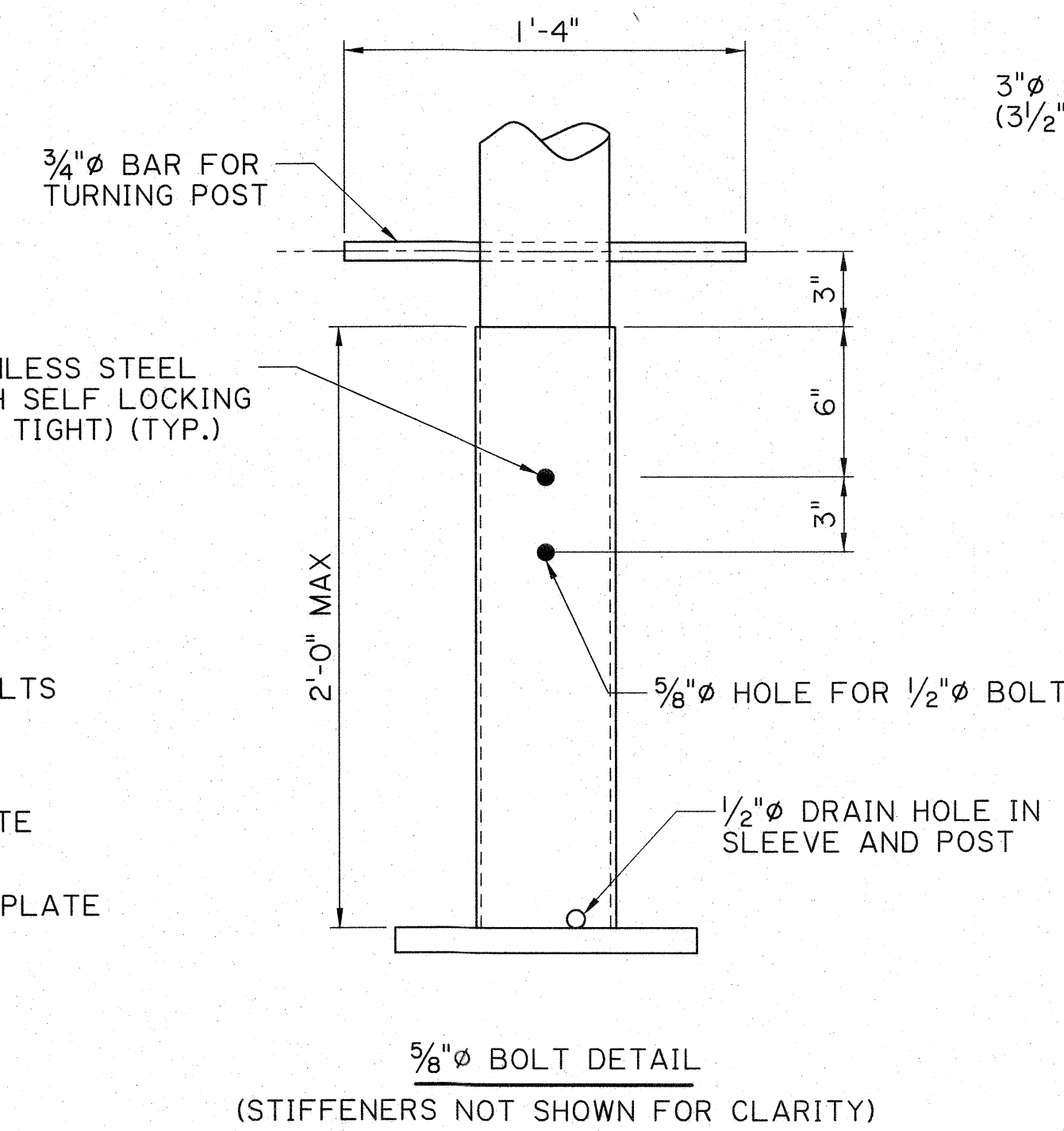
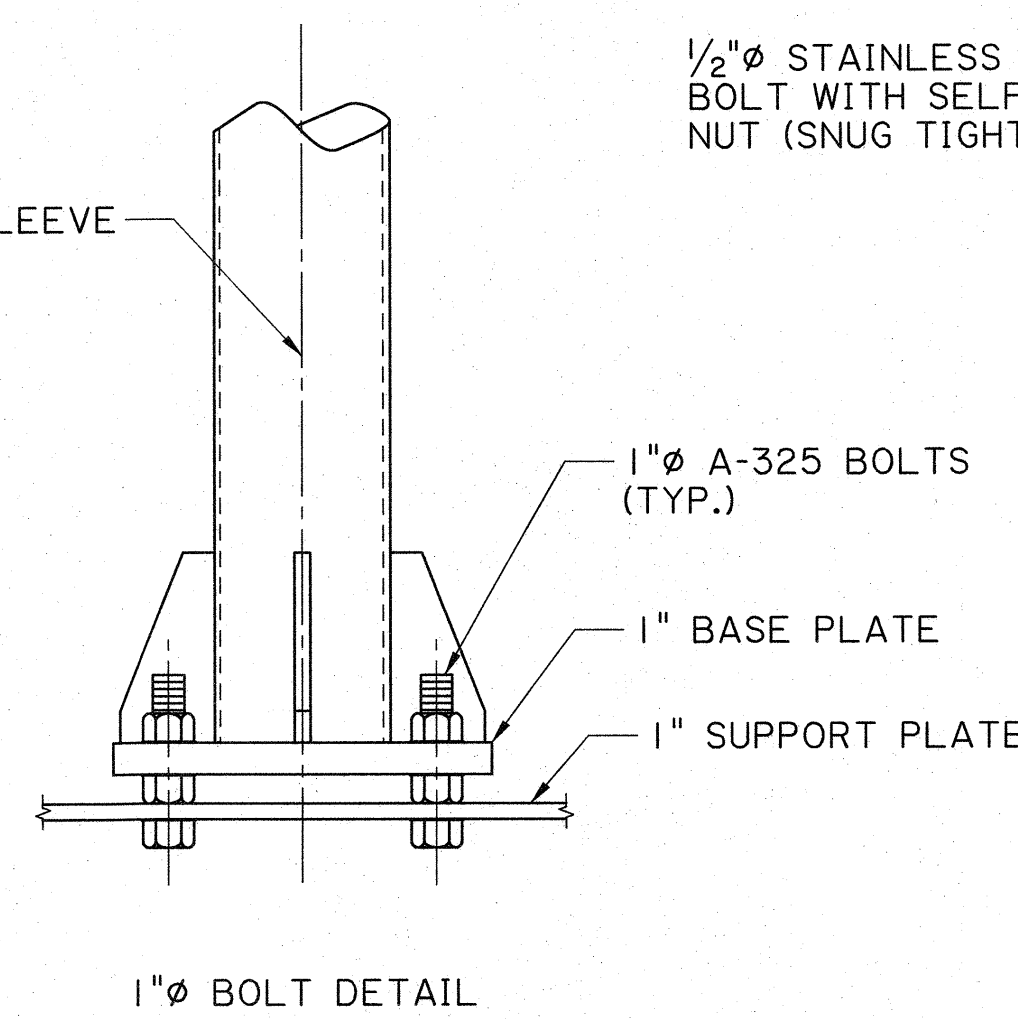
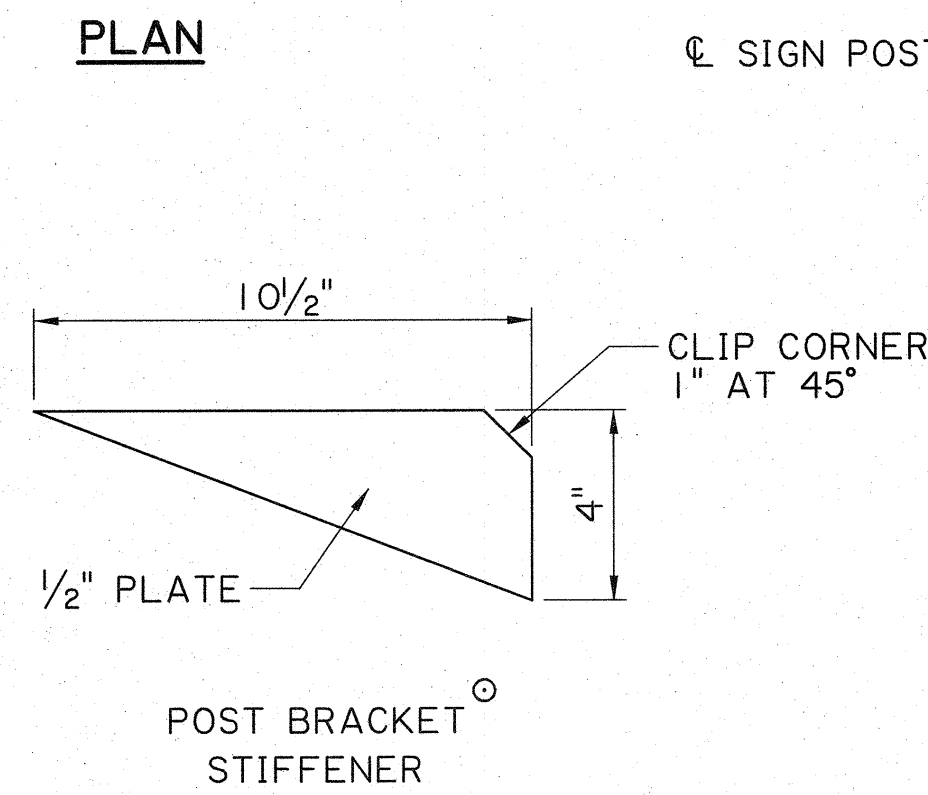
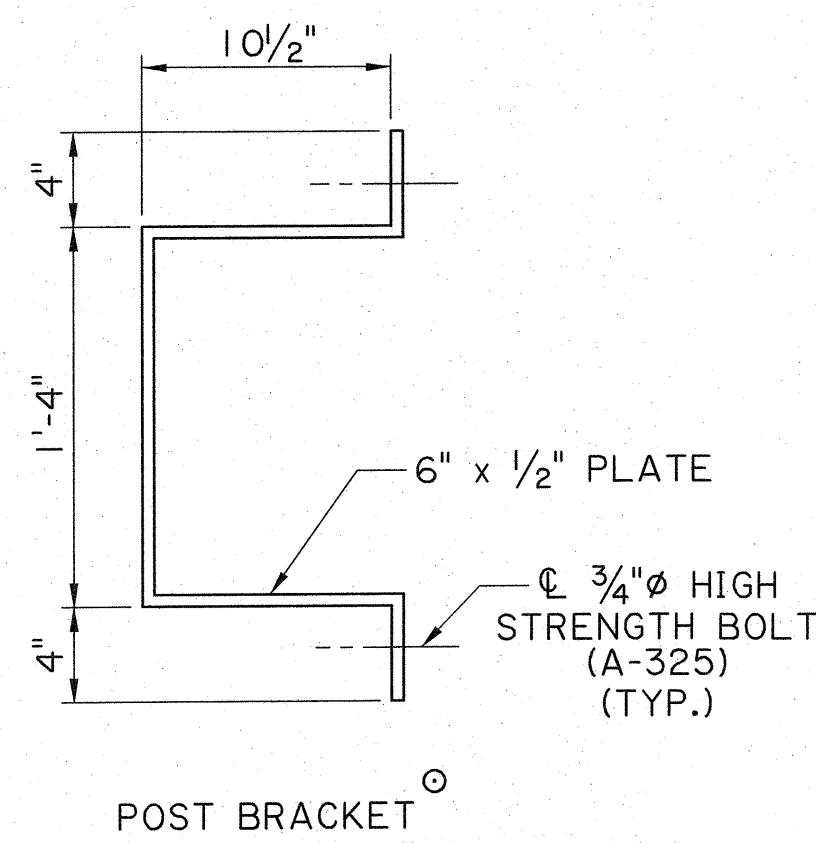
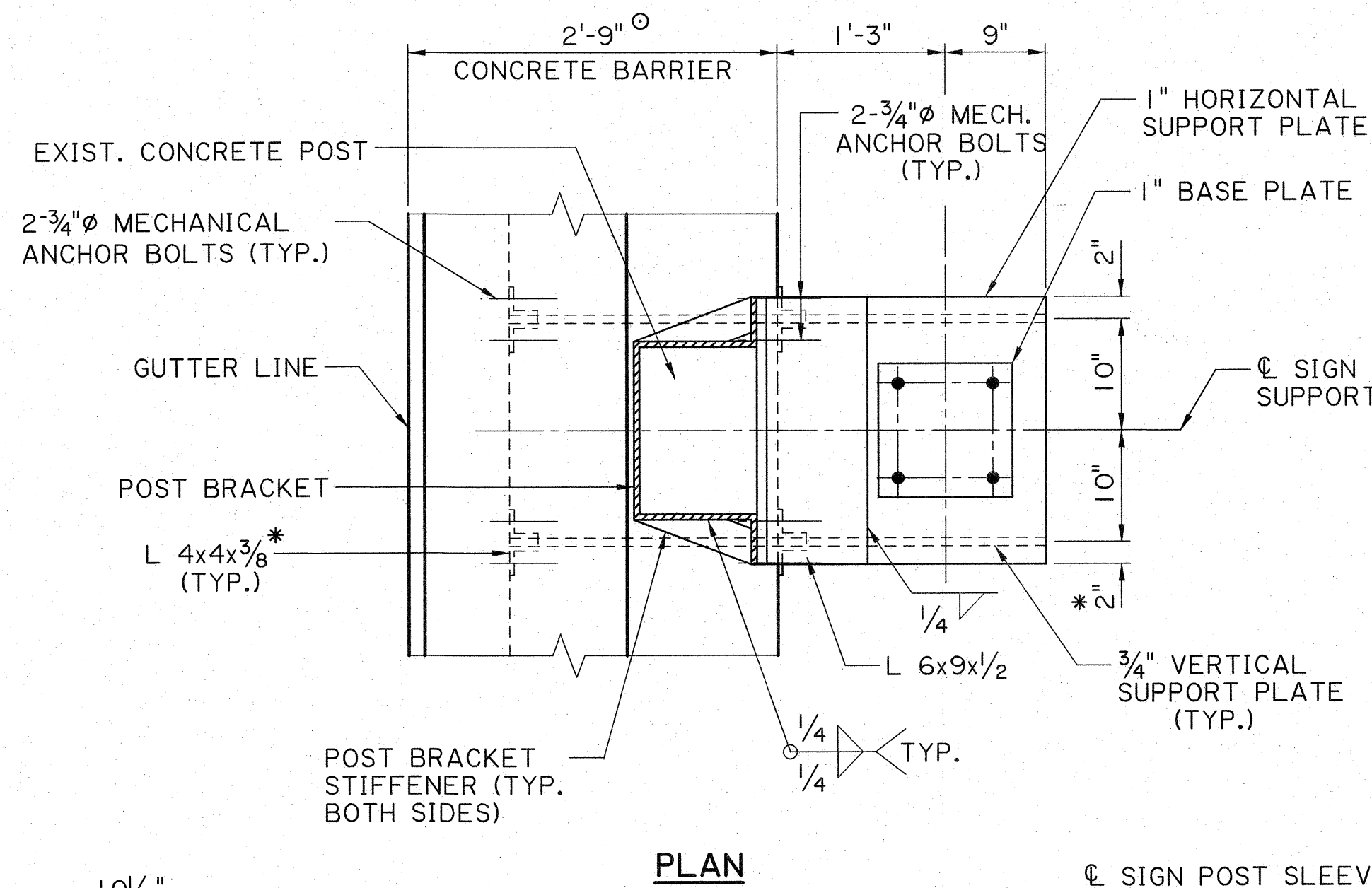
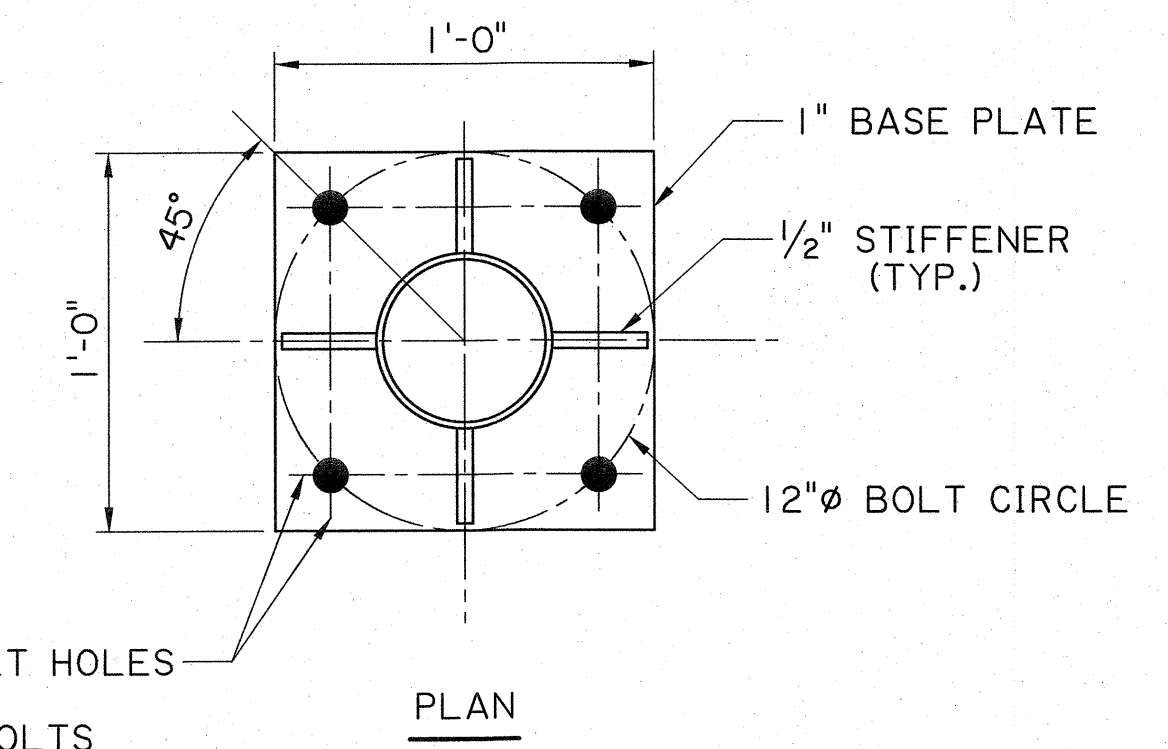
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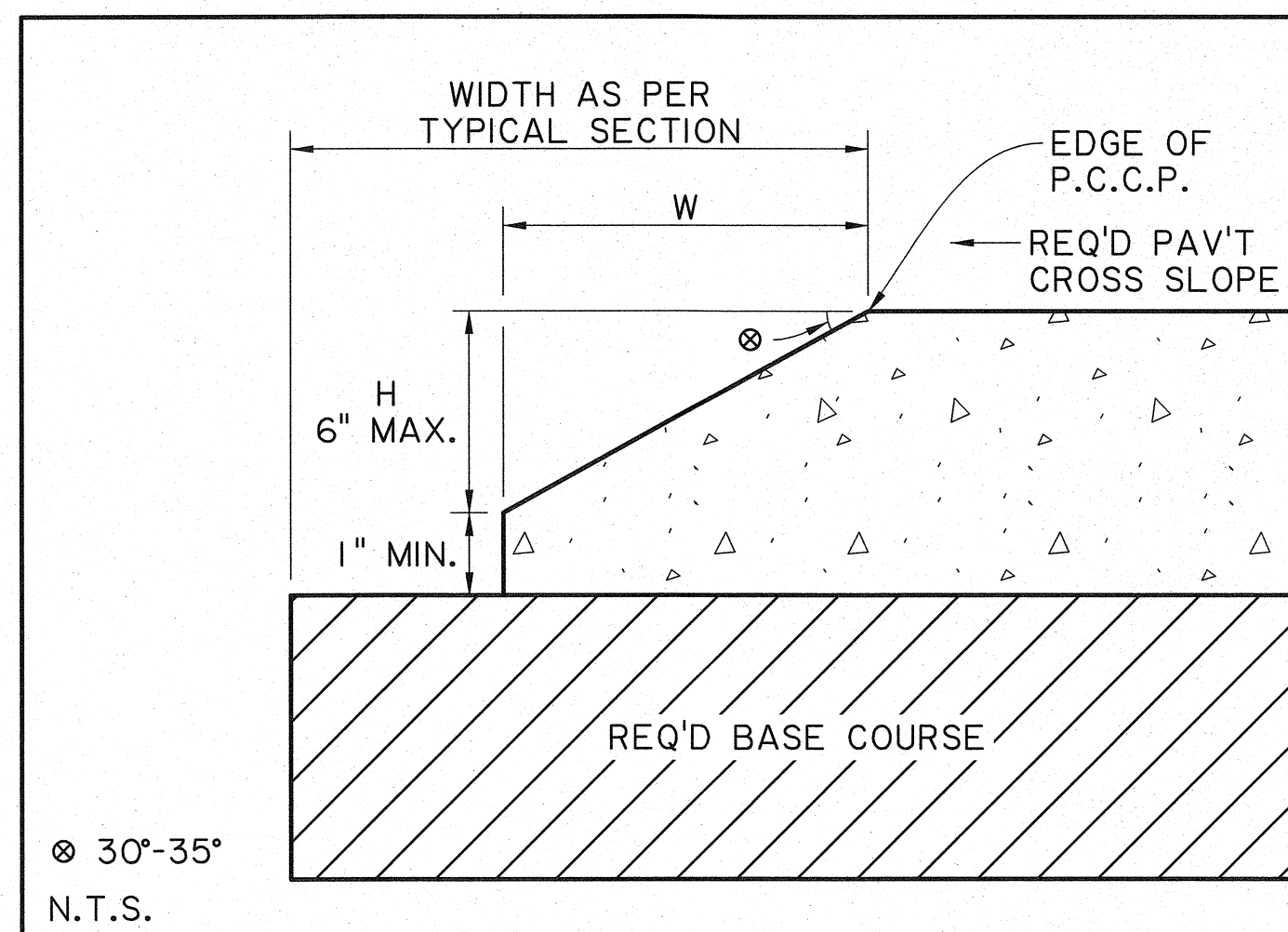
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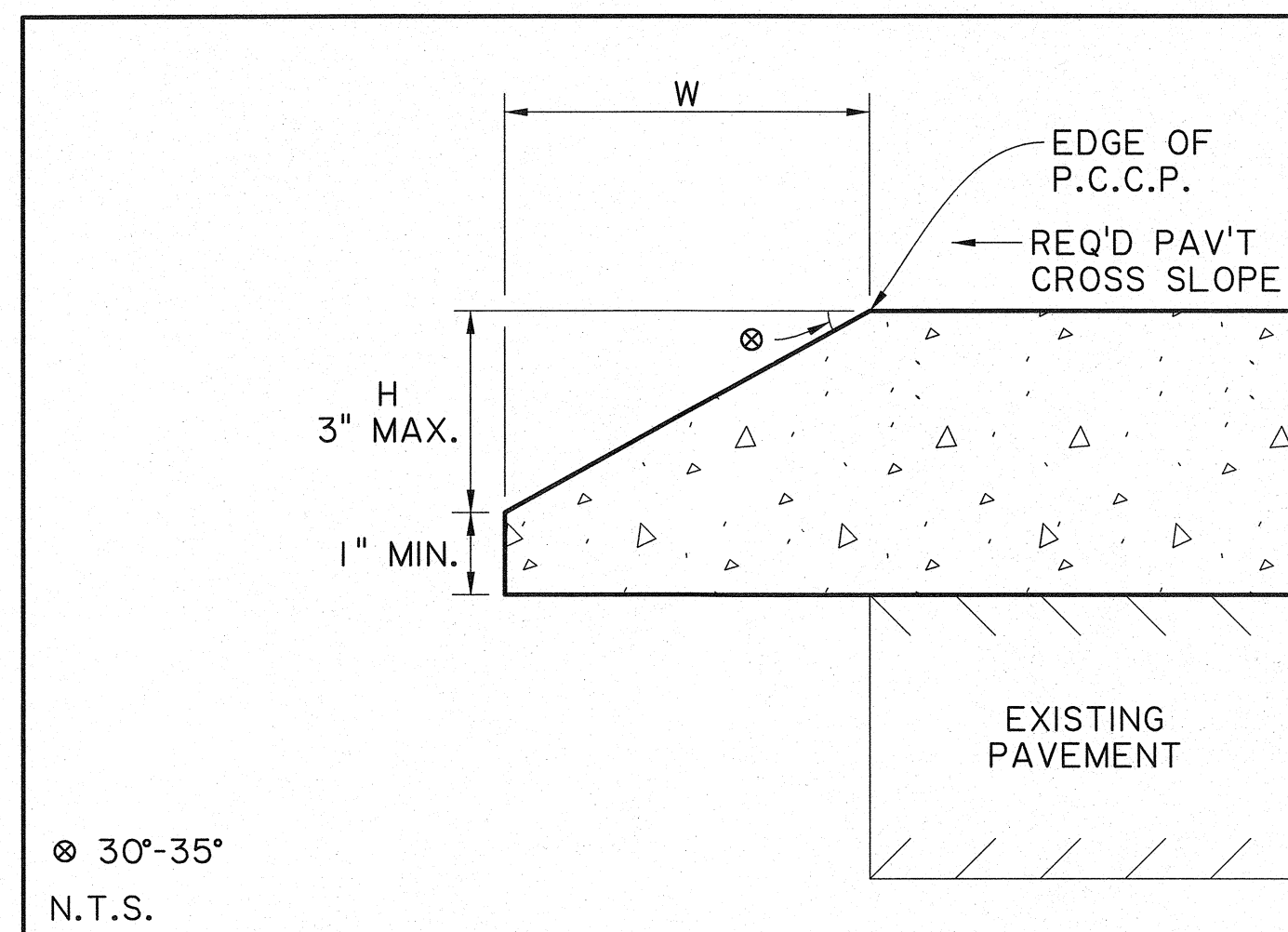


SHEET NUMBER		381	
ST. TAMMANY			
DESIGN	CHECK	CONTROL SECTION	STATE PROJECT
K. BRAUNER	C. GUIDRY	K. BRAUNER	C. GUIDRY
REVIEW	C. BOURGEOIS	SERIES # 17 OF 17	
APPROVED BY CHIEF ENGINEER: <i>Kurt M. Brauner</i> DATE: 7/1/2022			
CONTRAFLOW SIGNS (POST AND RAIL BARRIER)			
ROADSIDE SIGNING STANDARDS			
BRIDGE AND STRUCTURAL DESIGN			

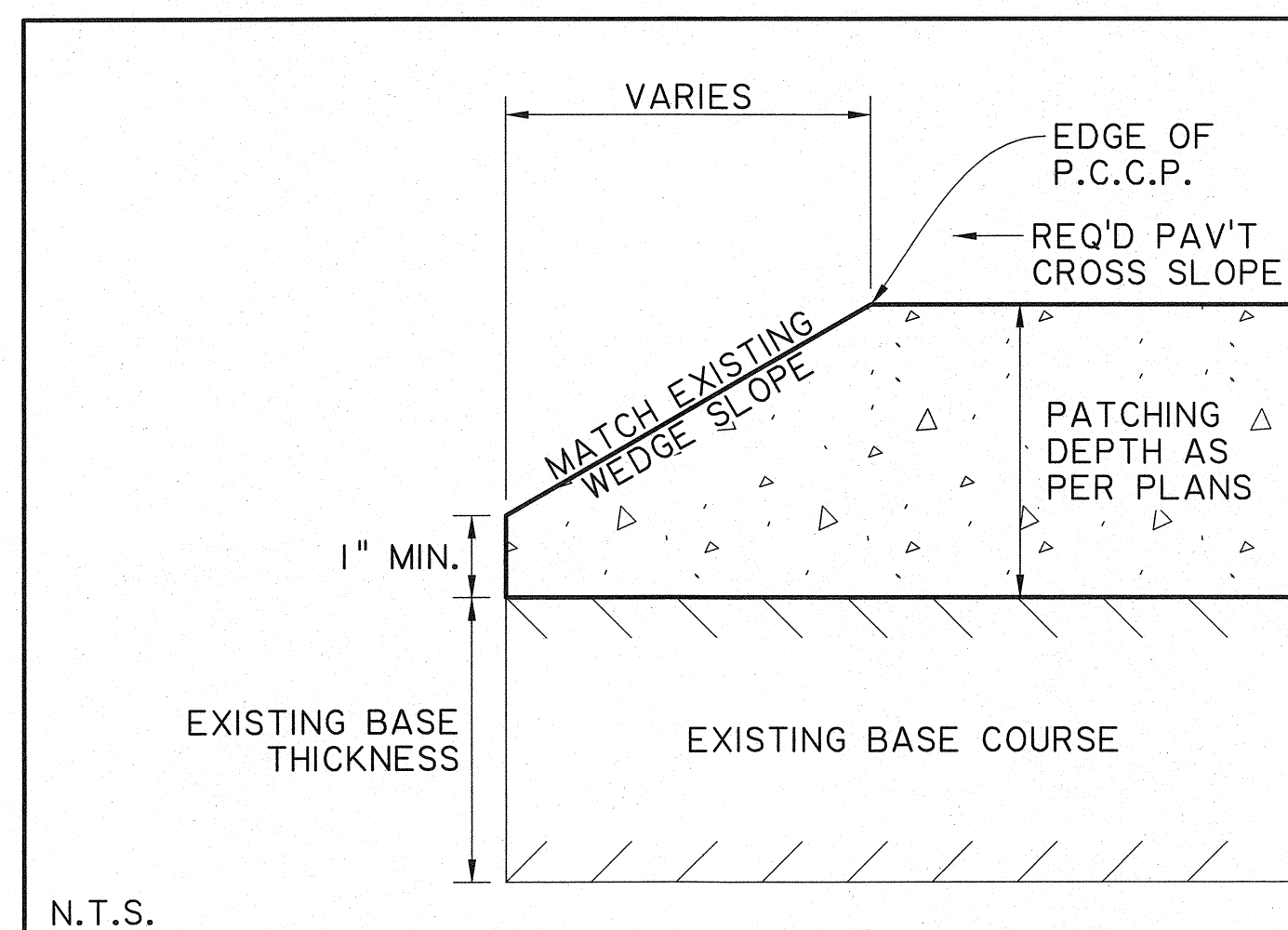
P.C.C.P. SHOULDER WEDGE



P.C.C. SHOULDER WEDGE FOR NEW CONSTRUCTION



P.C.C. SHOULDER WEDGE FOR WHITETOPPING



P.C.C. SHOULDER WEDGE FOR PAVEMENT PATCHING WITH EXISTING WEDGE

NOTES:

- SHOULDER WEDGES SHALL BE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER), UNLESS THE TOTAL REQUIRED ASPHALT CONCRETE THICKNESS IS LESS THAN 2" AND FOR PAVEMENT PATCHING PROJECTS WHERE THE EXISTING PAVEMENT DOES NOT HAVE SHOULDER WEDGES.
- FOR ASPHALT CONCRETE PAVEMENTS, SHOULDER WEDGES SHALL BE UTILIZED ON SINGLE LIFTS IF THE LAYER THICKNESS IS GREATER THAN OR EQUAL TO 2" AND, AT A MINIMUM, ON EACH OF THE TOP 2 LIFTS OF A MULTI-LIFT PAVEMENT.
- EQUIP THE PAVER WITH A MECHANICAL DEVICE THAT WILL PRODUCE A WEDGE WITH A UNIFORM TEXTURE, SHAPE, AND DENSITY, WHILE AUTOMATICALLY ADJUSTING TO VARYING HEIGHTS ENCOUNTERED ALONG THE PAVEMENT EDGE.
- THE CONTRACTOR SHALL BLADE AND SHAPE EXISTING GROUND OR SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE ASPHALT SHOULDER WEDGE PRIOR TO PLACEMENT OF PAVEMENT.
- FOR ASPHALT CONCRETE PAVEMENTS, THE MAXIMUM SHOULDER WEDGE HEIGHT ("H") SHALL EQUAL 6". IF THE TOTAL ASPHALT THICKNESS IS GREATER THAN 6", THE CONTRACTOR SHALL STAGE CONSTRUCTION BY PULLING UP THE SHOULDERS OR FORE SLOPE MATERIAL IN THE LOWER LIFTS, THEN UTILIZING THE WEDGE IN EACH OF THE FINAL 2 LIFTS.
- REQUIRED BASE WIDTHS ARE AS SHOWN ON TYPICAL SECTIONS. IT IS NOT REQUIRED FOR THE BASE COURSE WIDTH TO INCLUDE THE WIDTH OF THE ASPHALT WEDGE. THE ASPHALT WEDGE MAY BE SUPPORTED BY THE EXISTING GROUND, EMBANKMENT, OR SHOULDER MATERIAL. HOWEVER, THE DESIGNER SHOULD MAKE EVERY EFFORT TO SUPPORT THE SHOULDER WEDGE WITH NEW BASE COURSE MATERIAL UNLESS PREVENTED BY PROJECT SCOPE, PHYSICAL RESTRAINTS, OR DEEMED IMPRACTICAL. FOR CONCRETE SHOULDER WEDGES, THE REQUIRED BASE WIDTH SHOULD INCLUDE THE WIDTH OF THE SHOULDER WEDGE AND THE DESIRED ADDITIONAL WIDTH BEYOND THE SURFACING, EXCEPT FOR WHITETOPPING.
- SEE TYPICAL SECTION SHEETS FOR PAVEMENT DETAILS.
- THE ANGLE SHOWN FOR AN ASPHALT CONCRETE SHOULDER WEDGE IS MEASURED AFTER COMPACTION.
- THE SHOULDER WEDGE SHALL NOT BE CONSIDERED PART OF THE REQUIRED PAVEMENT WIDTH.
- ANGLE OF SHOULDER WEDGE IS MEASURED FROM THE FACE OF THE WEDGE TO A LINE REPRESENTING THE THEORETICAL PROJECTION OF THE PAVEMENT CROSS SLOPE.
- SHOULDER WEDGES SHALL NOT BE CONSTRUCTED AT INTERSECTIONS, PAVED DRIVEWAYS, OR BEHIND GUARDRAILS UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE PROJECT ENGINEER. IF SHOULDER WEDGES ARE CONSTRUCTED AT THESE LOCATIONS DURING PAVING OPERATIONS, THEY SHALL BE REMOVED BY SAWCUTTING AT NO DIRECT PAY. NO QUANTITY DEDUCTIONS WILL BE MADE IN THE PLANS FOR SUCH GAPS.
- SHOULDER WEDGES SHALL BE REQUIRED AT THE OUTSIDE EDGES OF WHITETOPPING UNLESS THE REQUIRED THICKNESS IS 2" OR AN ASPHALT SHOULDER IS PROPOSED IN ADDITION TO WHITETOPPING. THE PROPOSED ASPHALT SHOULDER IS REQUIRED TO HAVE WEDGES UNLESS THE TOTAL REQUIRED ASPHALT CONCRETE THICKNESS IS LESS THAN 2".

P.C.C.P. SHOULDER WEDGE QUANTITIES

HEIGHT "H" INCHES	30° WEDGES		35° WEDGES	
	WIDTH "W" INCHES	SQYD PER MILE	WIDTH "W" INCHES	SQYD PER MILE
4.0	6.9	674.7	5.7	557.3
5.0	8.7	850.7	7.1	694.2
6.0	10.4	1016.9	8.6	840.9

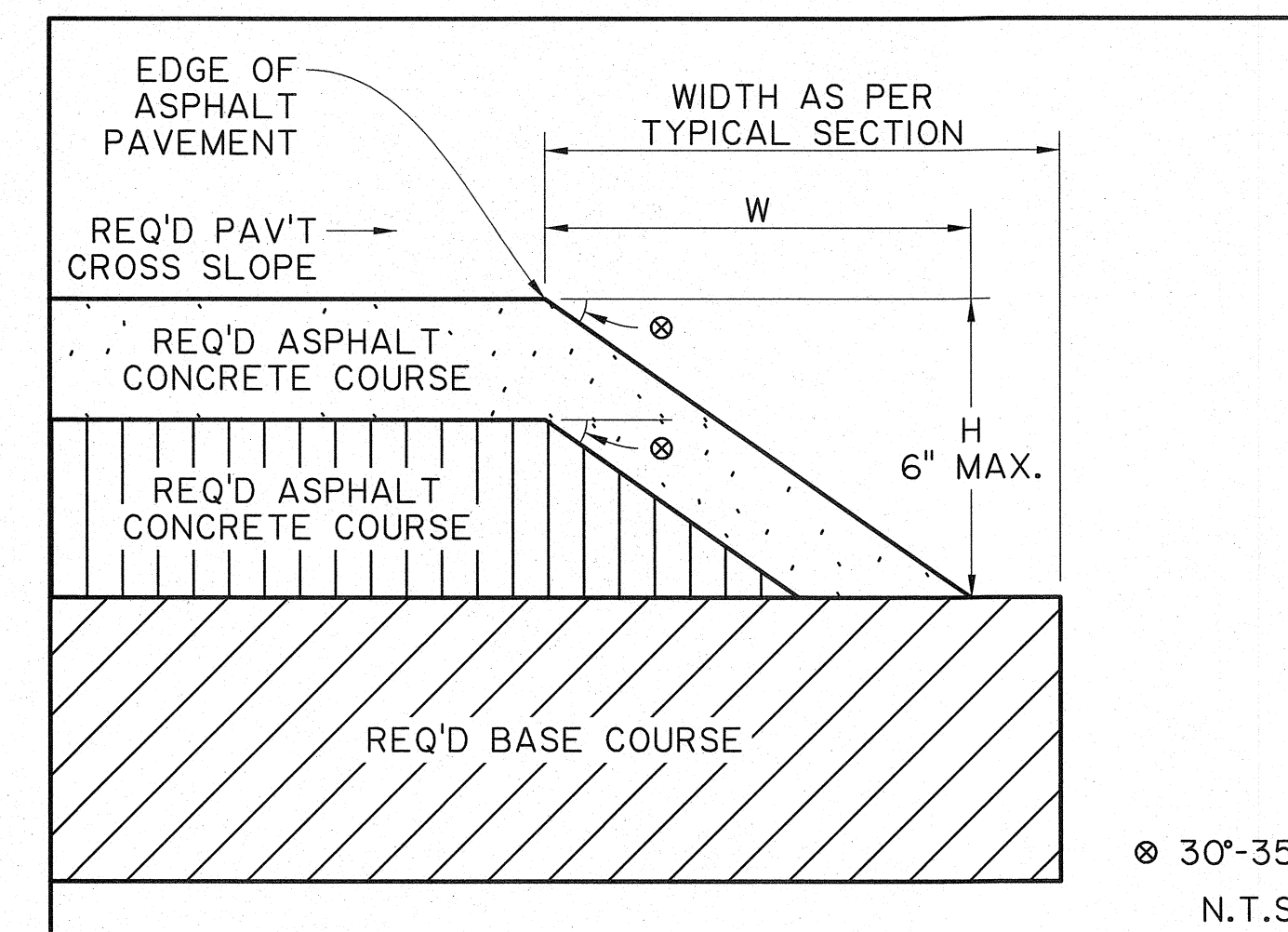
QUANTITIES SHOWN IN PLANS ARE BASED ON A 35° WEDGE
QUANTITIES SHOWN ARE FOR 2 WEDGES (ONE AT EACH SIDE OF ROADWAY)

WHITETOPPING WEDGE QUANTITIES

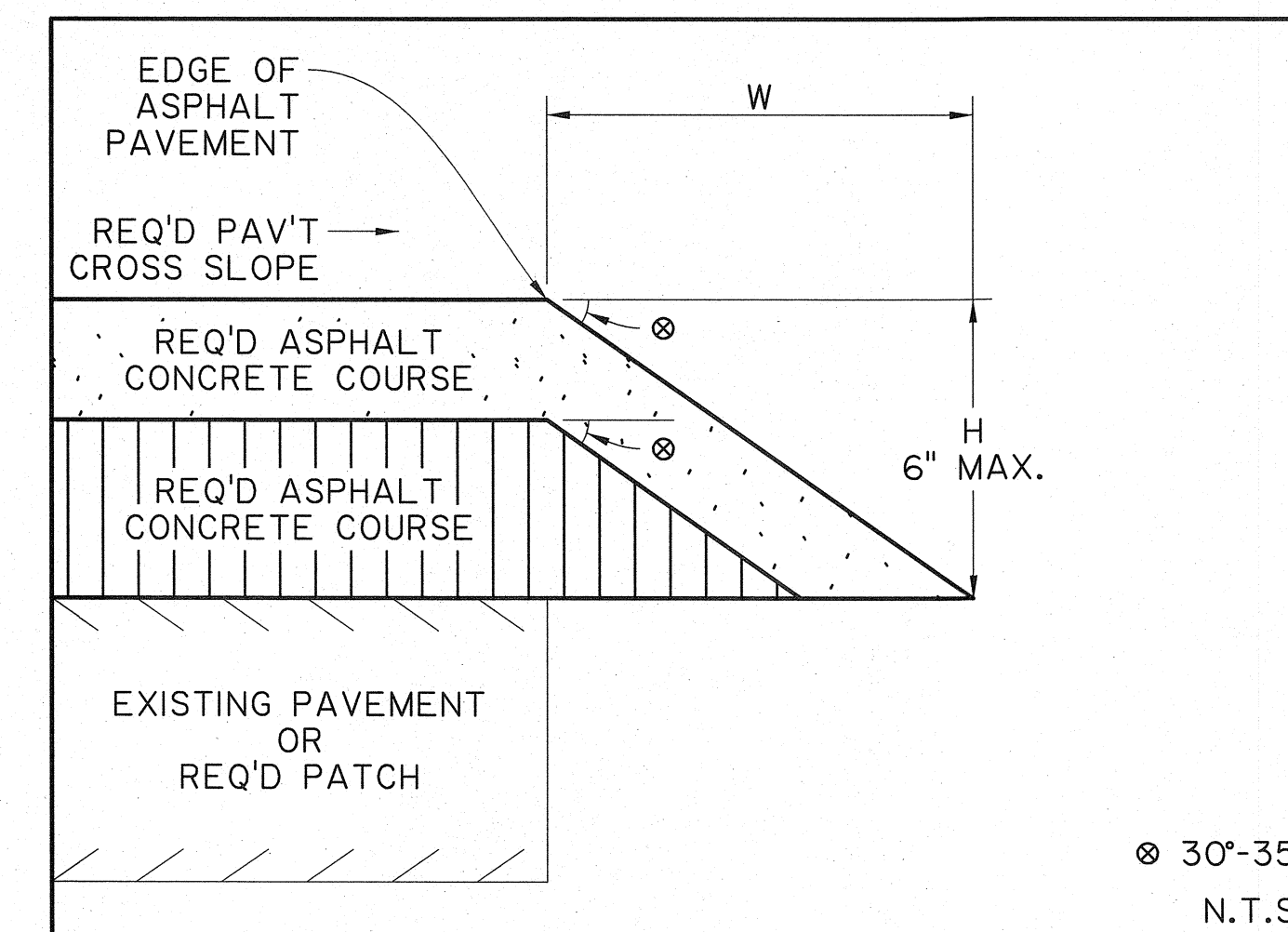
HEIGHT "H" INCHES	30° WEDGES		35° WEDGES	
	WIDTH "W" INCHES	SQYD PER MILE	WIDTH "W" INCHES	SQYD PER MILE
2.0	3.5	342.2	2.9	283.6
3.0	5.2	508.4	4.3	420.4

QUANTITIES SHOWN IN PLANS ARE BASED ON A 35° WEDGE
QUANTITIES SHOWN ARE FOR 2 WEDGES (ONE AT EACH SIDE OF ROADWAY)

ASPHALT CONCRETE SHOULDER WEDGE



ASPHALT CONCRETE SHOULDER WEDGE FOR NEW CONSTRUCTION OR BASE REHABILITATION



ASPHALT CONCRETE SHOULDER WEDGE FOR OVERLAY OR PATCHING

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

ASPHALT CONCRETE SHOULDER WEDGE QUANTITIES

HEIGHT "H" INCHES	30° WEDGES		35° WEDGES	
	WIDTH "W" INCHES	TONS PER MILE	WIDTH "W" INCHES	TONS PER MILE
2.0	3.5	18.8	2.9	15.6
2.5	4.3	28.9	3.6	24.2
3.0	5.2	41.9	4.3	34.7
3.5	6.1	57.4	5.0	47.1
4.0	6.9	74.2	5.7	61.3
4.5	7.8	94.4	6.4	77.4
5.0	8.7	117.0	7.1	95.5
5.5	9.5	140.5	7.9	116.8
6.0	10.4	167.8	8.6	138.7

QUANTITIES SHOWN IN PLANS ARE BASED ON A 35° WEDGE
QUANTITIES SHOWN IN TABLE ARE BASED ON 110 LB/SQYD
QUANTITIES SHOWN ARE FOR 2 WEDGES (ONE AT EACH SIDE OF ROADWAY)

SHEET NUMBER 382

ST. TAMMANY

PARISH CONTROL SECTION STATE PROJECT

DESIGN CHECK JML

DRAWING CHECK JML

REVIEW JML

SERIES # 1 OF 1

10/24/2022

STATE OF LOUISIANA

RYAN A. NOLAN License No. 40078 PROFESSIONAL ENGINEER

IN

APPROVED BY CHIEF ENGINEER: *Charles H. Hays* 10/25/2022 DATE:

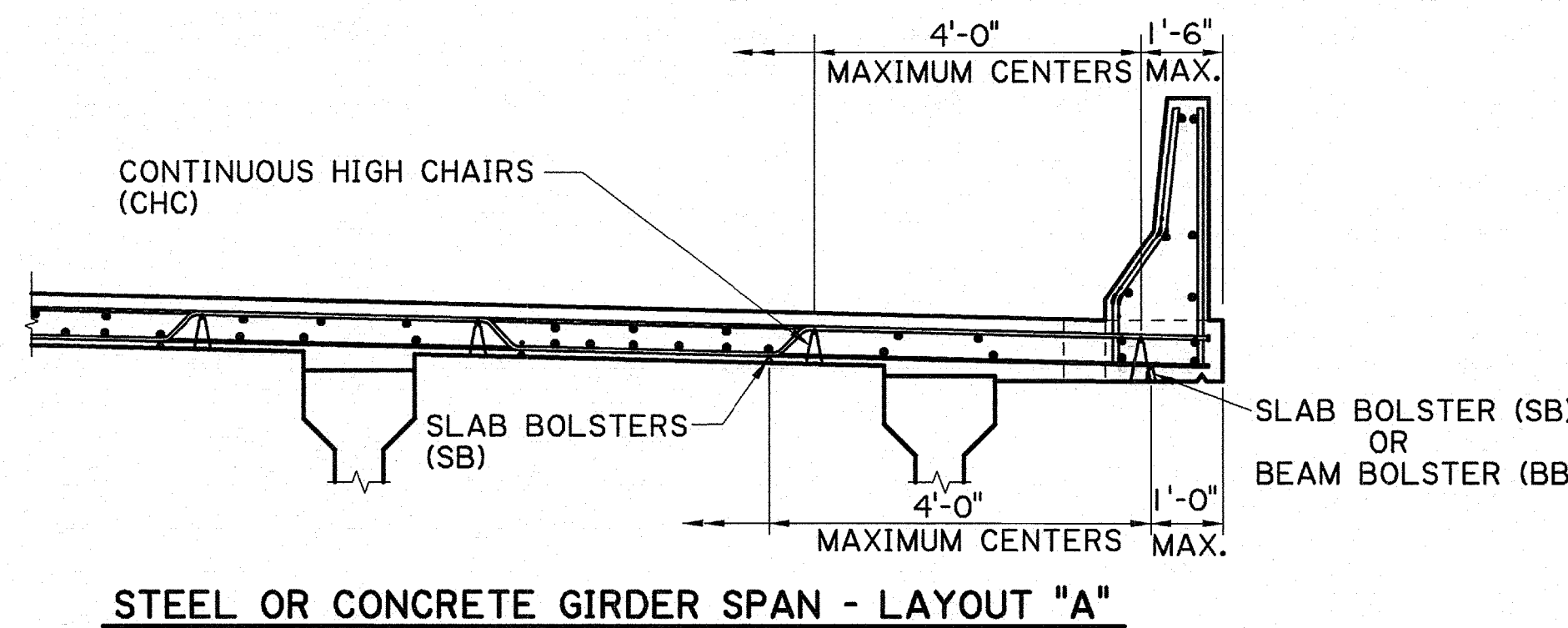
SHOULDER WEDGE

STANDARD PLAN SW-01

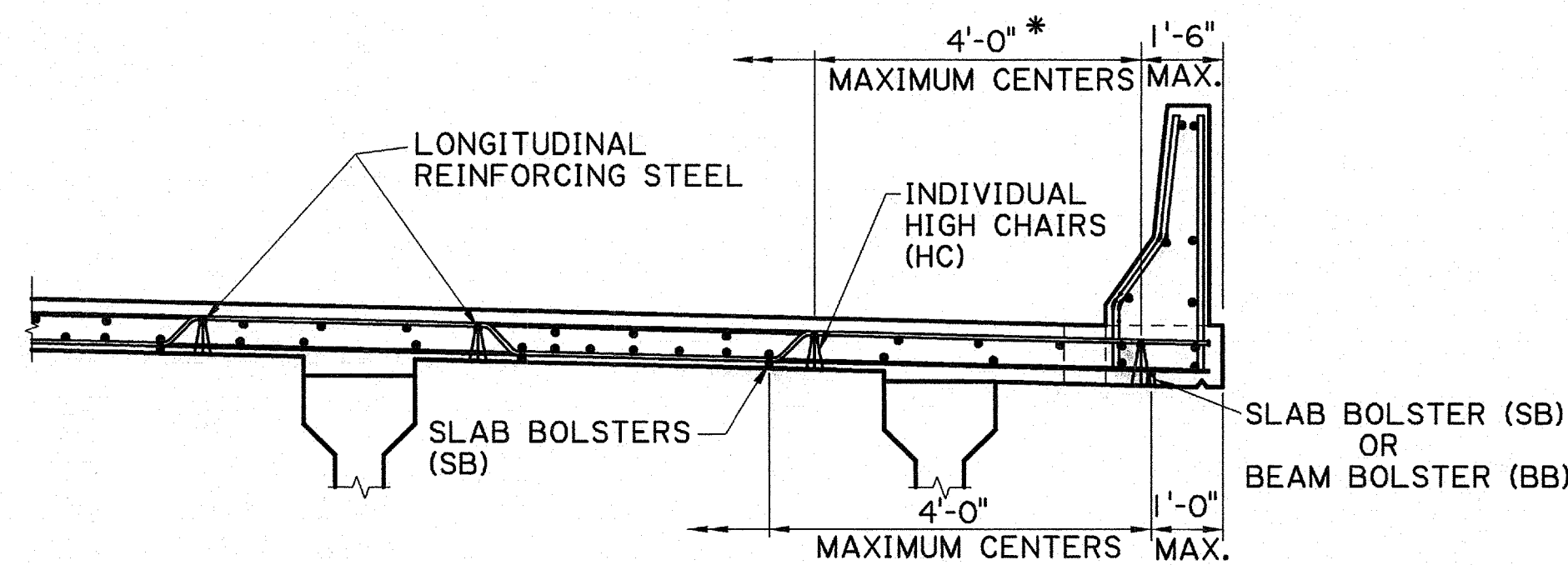
DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ROAD DESIGN

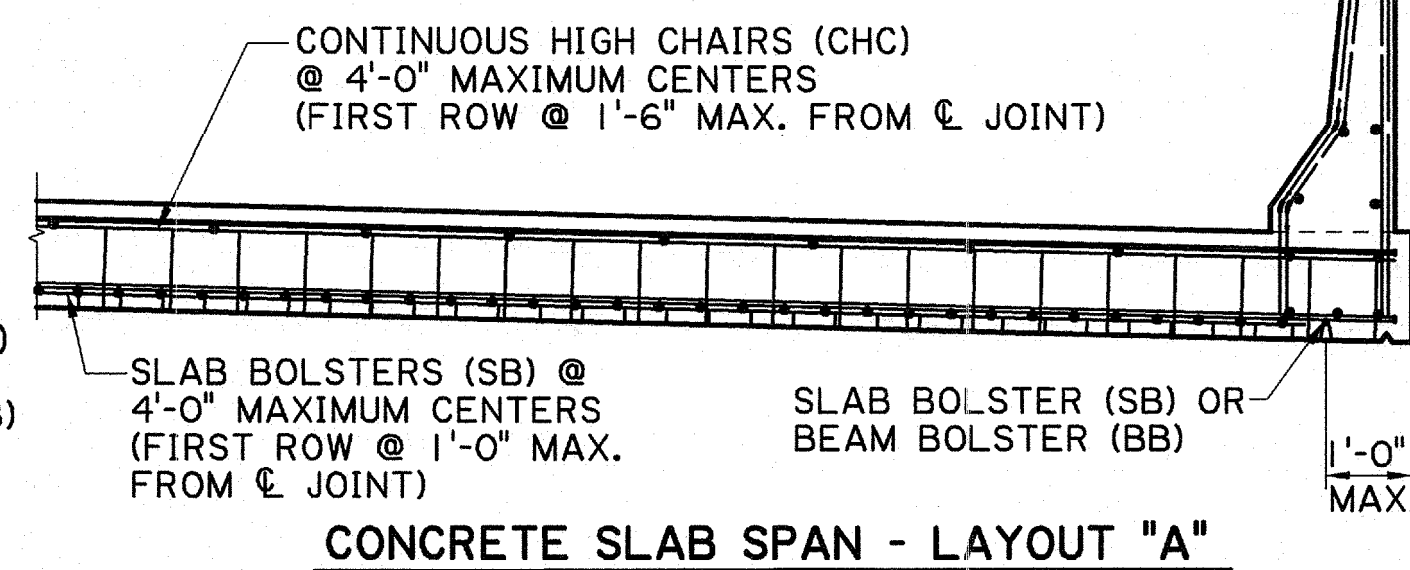
Henry M. Picard, III
REG. No. 22259
REGISTERED PROFESSIONAL ENGINEER
10/02/24



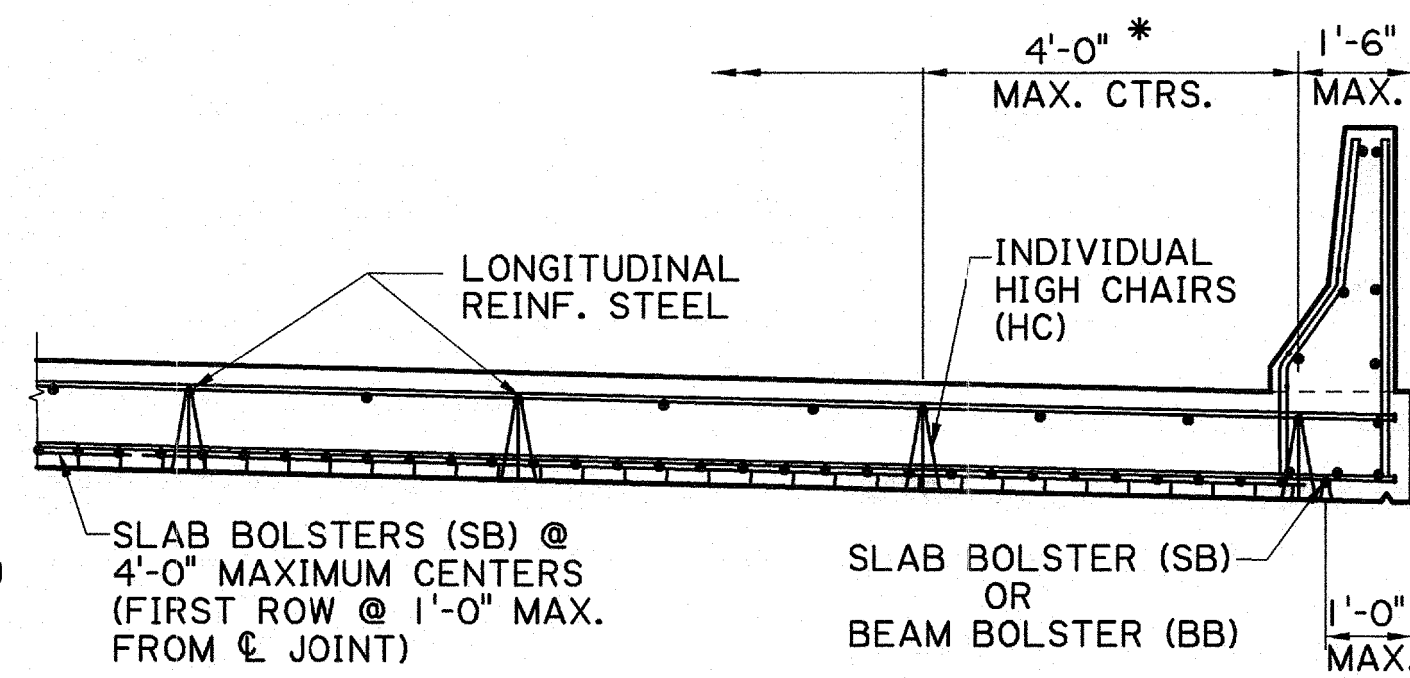
STEEL OR CONCRETE GIRDER SPAN - LAYOUT "A"



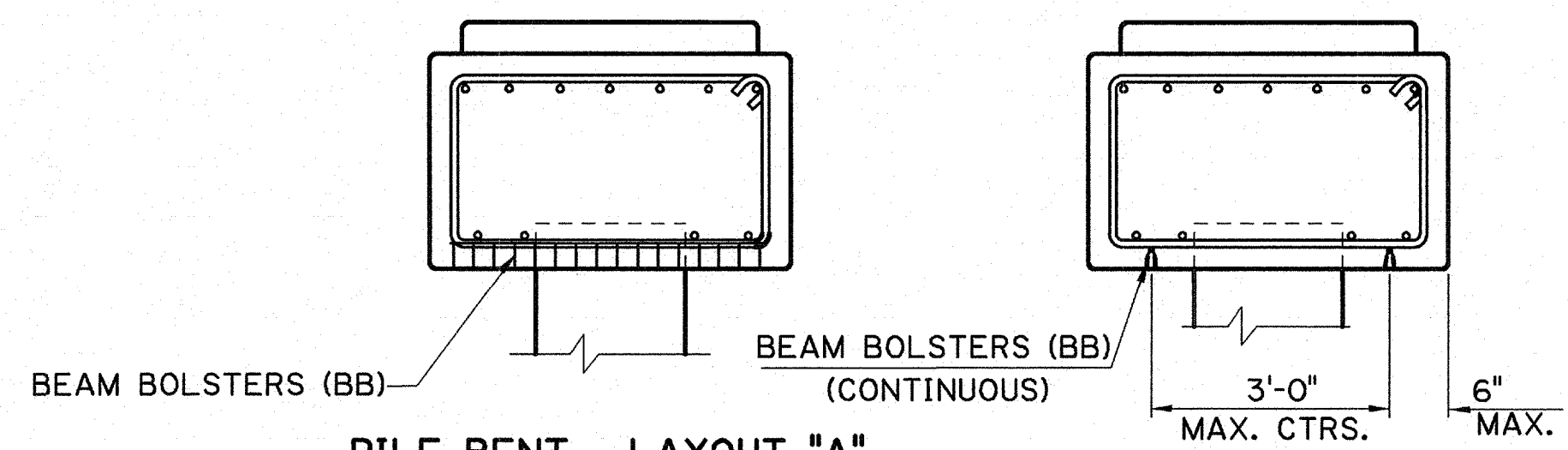
STEEL OR CONCRETE GIRDER SPAN - LAYOUT "B" (ALTERNATE)



CONCRETE SLAB SPAN - LAYOUT "A"

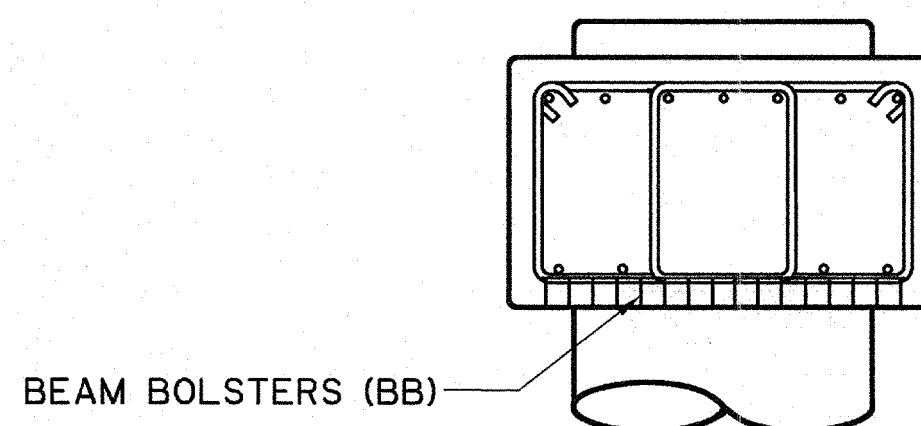


CONCRETE SLAB SPAN - LAYOUT "B" (ALTERNATE)

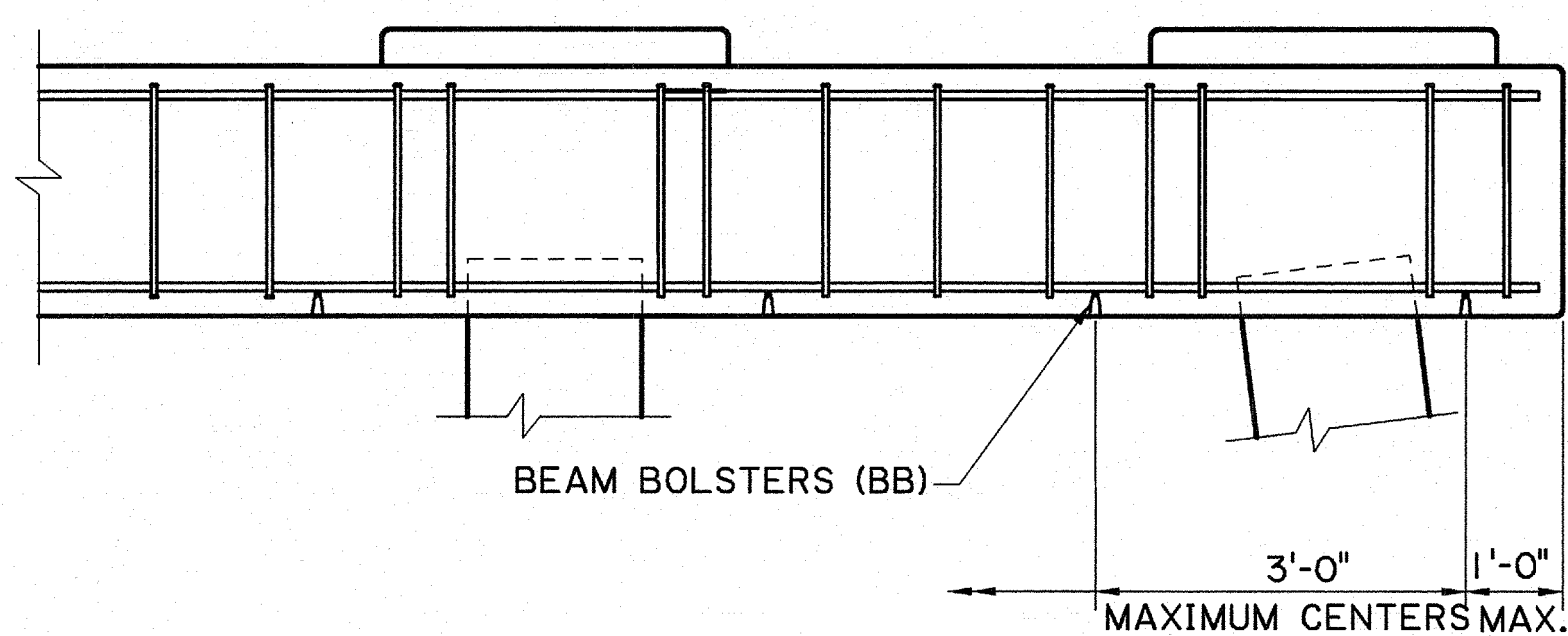


PILE BENT - LAYOUT "A"

PILE BENT - LAYOUT "B" (ALTERNATE)



COLUMN BENT



PILE BENT - LAYOUT "A"



COLUMN BENT

GENERAL NOTES:

STEEL WIRE BAR SUPPORTS AND REINFORCING STEEL BARS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS AMENDED BY THE SPECIAL PROVISIONS AND/OR SUPPLEMENTAL SPECIFICATIONS.

HEIGHT OF BAR SUPPORTS ARE TO BE THAT REQUIRED TO SUPPORT THE REINFORCING BARS AT POSITIONS SHOWN IN THE PLANS. BAR SUPPORTS ARE NOT INTENDED, AND SHALL NOT BE USED, TO SUPPORT RUNWAYS FOR CONCRETE BUGGIES OR SIMILAR LOADS.

WHEN BAR SUPPORTS ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK THE LAST LEGS ON ADJOINING PIECES, BUT NO BAR SHALL BE PLACED MORE THAN 2" BEYOND THE LAST LEG AT THE END OF A RUN OF ANY CONTINUOUS SUPPORTS.

WHERE BAR SUPPORTS ARE USED ON EARTH OR AGGREGATE SUB GRADES, SUITABLE PLATES SHALL BE PROVIDED TO PREVENT DISPLACEMENT OF THE SUPPORT FOOT. ALL BAR SUPPORTS BEARING ON THE FORMS SHALL HAVE RADIUS BEARING LEGS IN THE FORM OF A HOOK (UPTURNED LEGS) OR SPHERICAL FOOT AT THE LOWER END OF THE LEGS.

THE BOTTOM OF BAR SUPPORTS SHALL BE COATED WITH AN ACCEPTABLE EPOXY OR PLASTIC MATERIAL FOR A MINIMUM DISTANCE OF 2 INCHES FROM THE POINT OF CONTACT WITH THE FORMS.

METAL TIE WIRES AND BAR SUPPORTS SHALL BE COATED FULLY WITH AN ACCEPTABLE EPOXY, PLASTIC OR NYLON MATERIAL IF USING EPOXY COATED REINFORCING STEEL.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



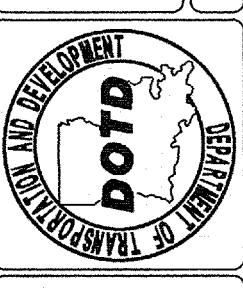
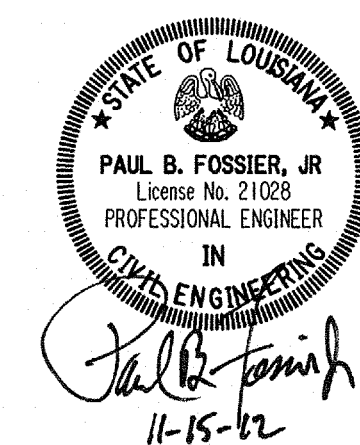
TYPE OF SUPPORT	BAR SUPPORT ILLUSTRATION	MINIMUM WIRE DIAMETER Δ			REMARKS
		HEIGHT	TOP	LEGS	
SLAB BOLSTER (SB)		ALL	NO. 4 CORRUGATED	NO. 6	VERTICAL CORRUGATIONS SPACED 1" ON CENTERS
BEAM BOLSTER (BB)		UP TO 2" OVER 2"	NO. 7 NO. 4	NO. 7 NO. 4	
CONTINUOUS HIGH CHAIR (CHC)		2" TO 5" 5" TO 9" OVER 9"	NO. 2 NO. 2 NO. 2	NO. 4 NO. 2 NO. 0	LAYOUT "A" FOR SPANS
INDIVIDUAL HIGH CHAIR (HC)		2" TO 5" 5" TO 9" OVER 9"	N/A N/A N/A	NO. 4 NO. 2 NO. 0	LAYOUT "B" FOR SPANS (ALTERNATE)

Δ AMERICAN STEEL AND WIRE GAUGES.

● LEGS SHALL BE 20 DEGREES OR LESS WITH VERTICAL WHEN HEIGHT EXCEEDS 1'-0". REINFORCE LEGS WITH WELDED CROSS WIRES OR ENCIRCLING WIRES.

□ LEGS SHALL BE 20 DEGREES OR LESS WITH VERTICAL, ON 8/4" CENTER MAXIMUM, WITHIN 4" OF END CHAIR, AND SPREAD BETWEEN LEGS NOT LESS THAN 50% OF NORMAL HEIGHT.

* IF LONGITUDINAL REINFORCING BARS ARE NO. 4, SPACE THE INDIVIDUAL HIGH CHAIRS (HC) @ 3'-0" MAXIMUM CENTERS LONGITUDINALLY; FOR NO. 5 BARS OR LARGER, SPACE @ 4'-0" MAXIMUM CENTERS.



GENERAL PROVISIONS

- All temporary traffic control (TTC) devices used shall be in accordance with the Louisiana Standard Specifications for Roads and Bridges, the MUTCD, and shall meet the NCHRP Report 350 or MASH requirements for Test Level 3 devices where applicable.
- Materials used for TTC shall be in accordance with the Louisiana Standard Specifications for Roads and Bridges and, when applicable, the LADOTD AML.
- Placement of TTC devices shall not commence without the approval of the Engineer and until work is about to begin, unless they are covered.
- No lane closures, lane shifts, diversions or detours shall occur without the approval of the Engineer.
- Responsibility is hereby placed upon the contractor for the installation, maintenance and operation of all TTC devices called for in these plans or required by the Engineer for the protection of the traveling public as well as all LADOTD and construction personnel.
- The contractor shall also be responsible for the maintenance of all permanent signs, pavement markings, and traffic signals left in place as essential to the safe movement and guidance of traffic within the project limits unless noted in the plans.
- The DTOE shall serve as a technical advisor to the Engineer for all traffic control matters.
- The Chief Construction Engineer or his appointed designee shall approve all signs and situations not addressed in the plans based on the recommendations of the Project Engineer and the DTOE. All changes shall be noted in all project traffic control diaries.
- The Chief Construction Engineer or his appointed designee shall approve all design speeds of diversions or shifts, if it differs from design plans, based on the recommendations of the Project Engineer and the DTOE.
- All temporary traffic control plans shall comply with the Transportation Management Plan.
- Any additional signs shown in the MUTCD and required by the Engineer shall be installed under Item 713-01-00100.
- Neither work activity nor storage of equipment, vehicles, TMAs, or materials shall occur within the buffer space.
- When a work area has been established on one side of the roadway only, there shall be no conflicting operations or parking on the opposite shoulder within 500 feet of the work area.
- A lighting plan shall be submitted to the Engineer 30 days prior to night work for approval. (See section 105.20 of the Louisiana Standard Specifications for Roads and Bridges.)
- Parking of vehicles or unattended equipment or storage of materials, within the clear zone shall not be permitted unless protected by guardrail or barriers. If the clear zone is not defined on the plan sheets, the Engineer shall verify.
- Immediately upon removal of existing guardrail, the contractor shall install and maintain an NCHRP Report 350 or MASH approved device to protect the blunt end of the bridge or column until new guardrail is installed. After removal of the existing guardrail, new guardrail should be installed within seven (7) days. On non-NHS routes with shoulders less than 8 feet wide: If an NCHRP 350 Report Test Level 3 or MASH device is required but the field conditions of the roadway cannot support a Test Level 3 device, then a Test Level 2 device can be substituted in its place upon approval by the Engineer. If utilized, a TMA is allowed for a maximum of 72 hours.
- All costs associated with crash devices are to be included in Item 713-01-00100.
- Sight distance should be considered when placing traffic control devices.
- On all mainline Interstates, a minimum of 1.5 feet of paved shoulder on the left and right side shall be maintained at all times.

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

- On Interstates, a minimum of 11 foot lanes shall be maintained. On all other roadways, a 10 foot minimum travel lane should be maintained where practical.
- TTC Standards are not drawn to scale.
- The contractor shall develop an internal traffic control plan approved by the Engineer prior to each phase.
- Truck restrictions such as (but not limited to) restricting lanes, oversize loads or times of travel, may be required for narrow lanes or other field conditions.

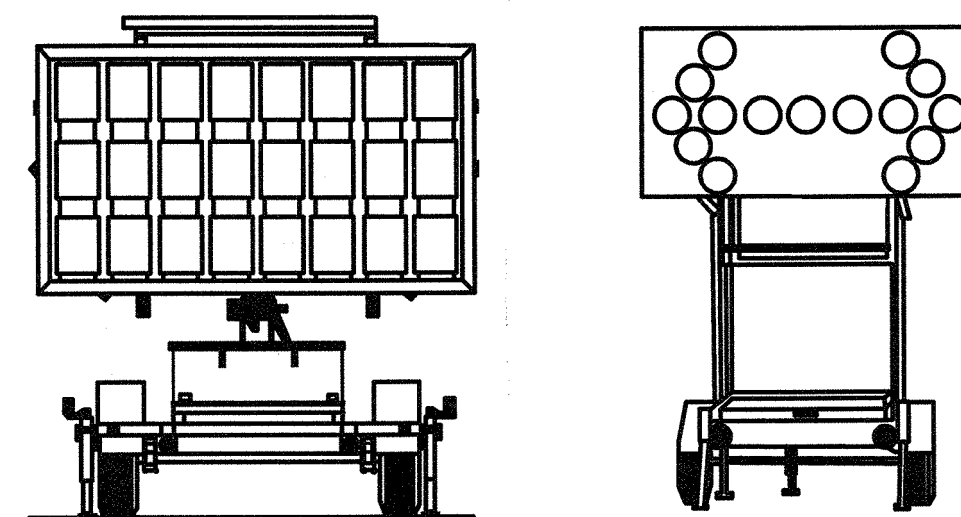
PAVEMENT MARKINGS (see AML)

- All pavement markings within the limits of the project or adjacent to the project limits that are in conflict with the project signing or the required traffic movements shall be removed from the pavement by blast cleaning or grinding. (Existing striping shall not be painted over with black paint or covered with tape.)
- If special pavement markings are needed, they shall be reflectorized, removable and accompanied by the proper signage.
- Temporary Raised Pavement Markers may be added to supplement temporary striping in areas of transition, in tapers, in diversions and in other areas of need as shown in the plans or as directed by the Engineer.
- Materials and placement of temporary pavement markings shall conform to Section 713 of the Louisiana Standard Specifications for Roads and Bridges. If no pay item exists for temporary markings, they shall be installed under item 713-01-00100.
- Temporary markings installed in the permanent configuration shall comply with LADOTD pavement marking standard plans, MUTCD and/or the permanent striping plans.

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

- PCMS shall be used on all Interstate Highways. PCMS shall be used on all other roadways (where space is available) with an ADT greater than 20,000.
- When used in advance of a lane closure or a lane shift, the PCMS should be placed on the right hand side of the road a minimum distance of 2 miles in advance of the taper for interstates and to be determined by the Engineer on other highways.
- For interstates and multi-lane highways, if vehicles are queuing beyond the 2 mile PCMS, an additional PCMS should be placed on the right hand side of the road approximately 5 miles in advance of the taper or at the end of the queue, whichever is greater.
- PCMS messages shall be approved by the DTOE. Messages shall be no more than 3 lines and 2 screens.
- Messages shall display only traffic operational, regulatory, warning, and guidance information. PCMS messages shall not display advertising or safety messages. Messages should only convey information concerning the problem/situation, location, and recommended driver action.
- PCMS should be placed as far from the traveled lane as possible. They shall be shielded by guardrail or barriers. If this is not possible they shall be delineated with a min. 3 drum taper spaced at 20ft with a 4th drum alongside the PCMS.
- If the PCMS encroaches on the improved shoulder then the contractor shall install a shoulder closure.
- When the PCMS is not displaying a work zone appropriate message pertaining to the ongoing construction project it shall be shielded by guard rail or barriers, or removed from the clear zone.

STATE OF LOUISIANA
Henry M. Picard, III
REG. NO. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24



STATE OF LOUISIANA
GARY N. LEBLANC
REG. NO. 22220
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
6-27-18

ALL TTC STANDARDS SHOW MINIMUM CONSTRUCTION SIGNING.
ALL SITUATIONS SHALL BE REVIEWED AND/OR DESIGNED BY THE ENGINEER.
CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

SPEED LIMITS

- The Engineer may approve a 10 mph drop in the speed limit for posted speeds of 45 mph or greater and for any construction, maintenance or utility operation that requires one or more of the following:
 - (A) The condition of the traveled way is degraded due to milled surfaces or uneven travel lane lines greater than 1.5 inches.
 - (B) Work is in progress in the immediate vicinity of the travel way requiring lane closures or lane width reductions less than 11 feet.
 - (C) Workers present on the shoulder within 2 feet of the edge of the traveled way without barrier protection.
- The reduced speed zone shall only apply to those portions of the project limits affected. The Engineer may allow SPEED LIMIT WHEN FLASHING signs to supplement reduced speed zones.
- If the speed limit is reduced, speed limit signs shall be placed:
 - (A) beyond major intersections;
 - (B) at one mile intervals in rural areas;
 - (C) at half mile intervals in urban areas.
- At the end of the reduced speed zone, a speed limit sign displaying the original speed limit prior to construction shall be installed.
- For all other speed limit reductions not listed above, the Project Engineer and the DTOE shall recommend the speed reduction to the Chief Construction Engineer or his appointed designee for approval.
- If the speed limit is reduced more than 10 mph, placement of the signs shall be re-evaluated according to the MUTCD.

FLASHING ARROW BOARDS

- All Flashing Arrow Boards shall be 4 feet by 8 feet and Type C.
- Flashing Arrow Boards should be placed on the shoulder. When there is no shoulder or median area, the arrow board shall be placed within the closed lane behind the channelizing devices and as close to the beginning of the taper as practical.
- Flashing arrow boards shall be delineated with retroreflective TTC devices.
- At no time shall the arrow board encroach in the traveled way. When Flashing Arrow Board signs are not being used, they shall be shielded by guard rail or barriers, or removed.
- Arrow boards shall only be used for lane reduction tapers and shall not be used for lane shifts.

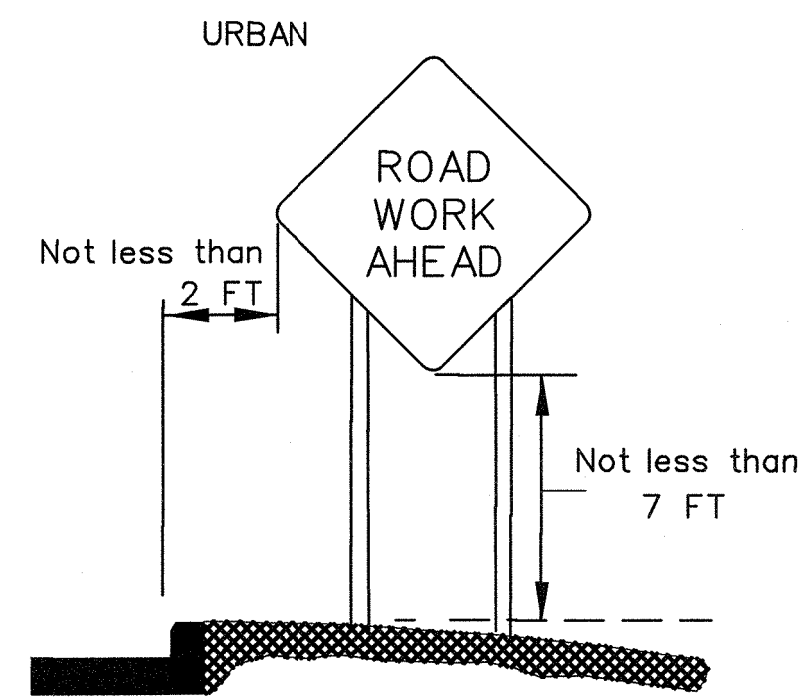
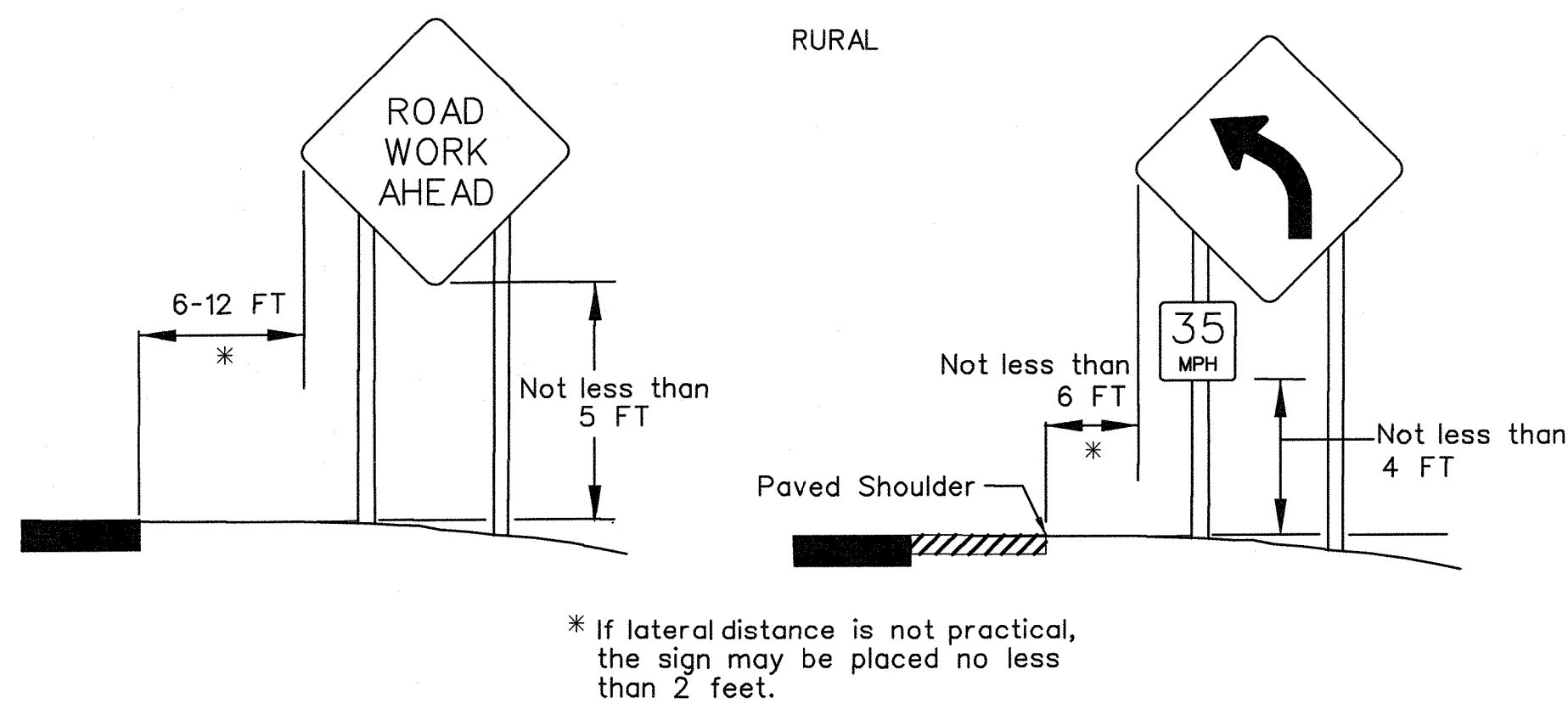
ABBREVIATIONS

- AASHTO American Association of State Highway and Transportation Officials
- ADT Average Daily Traffic
- AGCI Associated General Contractors of America
- AML Approved Materials List
- ANSI American National Standards Institute
- ATSSA American Traffic Safety Services Association
- B.O.P. Beginning of Project
- DTOE District Traffic Operations Engineer
- E.O.P. End of Project
- LADOTD Louisiana Department of Transportation and Development
- MASH AASHTO Manual for Assessing Safety Hardware
- MUTCD Manual on Uniform Traffic Control Devices
- NCHRP National Cooperative Highway Research Program
- NHS National Highway System
- PCMS Portable Changeable Message Sign
- TMA Truck Mounted Attenuator
- TMC Traffic Management Center
- TTC Temporary Traffic Control
- TTC Standards .. Temporary Traffic Control Standard Plans

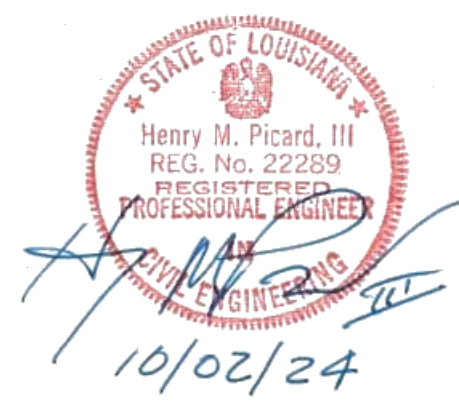
SHEET NUMBER 384	
DESIGNED BY: G. LEBLANC	PARISH: ST. TAMMANY
CHECKED BY: J. COLVIN	CONTROL SECTION:
DETAILED BY: C. FAKOURI	STATE PROJECT:
CHECKED BY: G. LEBLANC	
SERIES NUMBER:	
NO.:	DATE: 7/2/18
DATE:	BY:
REVISION OR CHANGE ORDER DESCRIPTION:	
APPROVED BY: CHIEF ENGINEER:	
TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET TTC-00 (A)	

SIGNS

- All signs used for temporary traffic control shall follow the plans, the LADOTD TTC Standards and the MUTCD.
- Signs shown in the TTC illustrations are typical and may vary with each specific condition.
- One Type B High Intensity light shall be used to supplement the first sign (or pair of signs) that gives warning about a lane closure during nighttime operations (See AML).
- Mesh rollup signs shall not be allowed on any project.
- Contractor shall use caution not to damage existing signs which remain in place. Any LADOTD signs damaged by work operations shall be replaced by the contractor under item 713-01-00100.
- All signs (permanent and temporary) shall be removed or completely covered with a strong, lightweight, opaque material when no longer applicable. (Burlap is not an acceptable material to cover signs).
- At no time shall signs warning against a particular operation be left in place once the operation has been completed or where the condition has been removed.
- Warning signs used for temporary traffic controls shall meet the following guidelines unless otherwise noted in the plans:
 - (A) size shall be 48 inches by 48 inches.
 - (B) see the Louisiana Standard Specifications for Roads and Bridges and the AML for sheeting information.
 - (C) lateral distance of signs shall be a minimum of 6 feet from the edge of shoulder or edge of pavement if no shoulder exists and 2 feet from the back of curb in urban areas (see diagram).
- When portable sign frames are not in use, they shall be moved to an area inaccessible to traffic and not visible to the driver.
- Left side mounted signs will not be required for roadways with a center left turn lane and for undivided roadways.
- Vinyl rollup signs may be used if work zone is in place for 12 hours or less, there are no more than 2 lanes in each direction and if signs meet all size, color, retroreflectivity and NCHRP 350 Report or MASH requirements.
- All signs shall be visible to the drivers (i.e. no obstructions such as on street parking or other traffic control devices shall block the sign).
- On divided highways, signs shall be placed on the right and the left as shown on the TTC standards.
- 1 foot portable sign stands may be used if the work zone is in place for 14 hours or less and there are no more than 2 lanes in each direction.
- Sign posts:
 - Signs measuring 10 square feet or less shall be mounted on 1 rigid post
 - Signs over 10 square feet shall be mounted on 2 rigid posts
 - Signs over 20 square feet shall be mounted on at least 3 rigid posts
- Rigid sign supports shall be driven to a minimum depth of 3 feet. (If splicing is required, see Allowable Lap Splice U-channel Post.)
- For sign height, see the Rural and Urban diagrams:



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

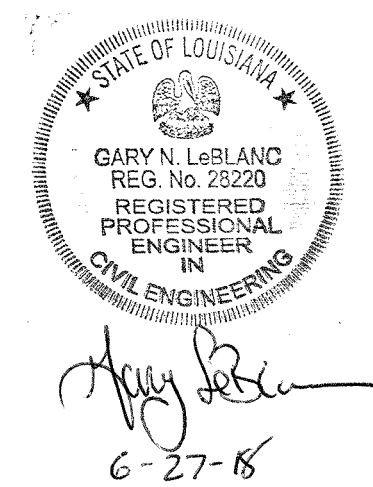
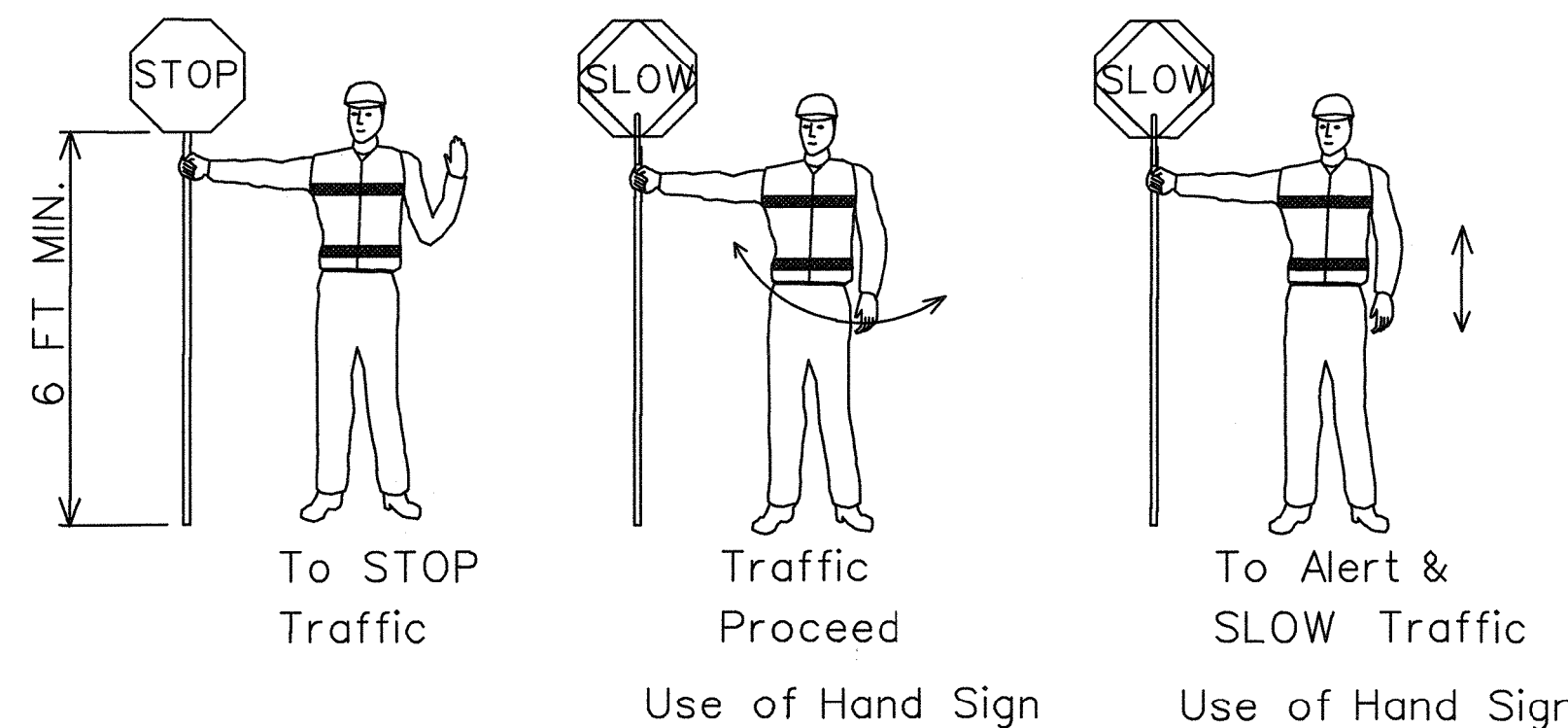


LANE CLOSURES

- All proposed lane, road or shoulder closures shall be reviewed by the DTOE and approved by the Engineer.
- Two lane, two-way highways shall have a maximum work area of two miles; all other roadways shall have a four mile maximum work area.
- A queue analysis shall be performed prior to approval of lane closures on all Interstates according to Section 6A.1 of the Traffic Engineering Manual.
- Closure plans and times shall be turned in to the Engineer for review according to the following:
 - (A) 5 working days minimum if traffic control plan has been approved or is contained in the plans.
 - (B) 10 working days minimum and a traffic control plan must be submitted for lane closures not addressed in the plans.
- Weekly updates to the DTOE, Project Engineer, the LADOTD TMC operator and the regional TMC operator (if applicable) will be required for all ongoing lane closures to update the closure status.
- Daily updates to the DTOE, Project Engineer and TMC operator (if applicable) will be required for all projects where active closures are in place.

FLAGGERS

- All flaggers shall be qualified.
- The contractor shall be responsible for training or assuring that all flaggers are qualified to perform flagging duties.
- A Qualified Flagger is one that has completed courses such as those offered by ATSSA or other courses approved by the LADOTD Work Zone Task Force. The contractor shall be responsible for getting the flagger course approved.
- When utilized, a flagger shall use a minimum 18 inch octagonal shape sign on a minimum 6 foot stop/slow paddle and wear ANSI Class 2 Lime Green vest during day time operations and ANSI Class 3 Lime Green ensemble during night operations.
- In all flagging operations, the flagger must be visible from the flagger advance warning sign.
- Flaggers shall not be used on the Interstate.



PEDESTRIAN CONSIDERATIONS

- If the TTC zone affects the movement of pedestrians, adequate pedestrian access and walkways shall be provided either through the TTC zone or a designated alternate route.
- Pedestrians should be provided with a convenient and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk(s) or footpath(s).
- Advance notification of sidewalk closures shall be provided by the maintaining agency.

REFERENCES

- The contractor shall be responsible for understanding all rules and requirements in the current edition of the following documents:
 - 1) Louisiana Standard Specifications for Roads and Bridges. <http://www.dotd.la.gov/highways/specifications/>
 - 2) Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). <http://mutcd.fhwa.dot.gov/>
 - 3) LADOTD Approved Materials List (AML) Manual. http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Materials_Lab/Pages/Menu_QPL.aspx
 - 4) LADOTD Traffic Engineering Manual http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Misc%20Documents/Traffic%20Engineering%20Manual.pdf
 - 5) National Cooperative Highway Research Program (NCHRP) Report 350: "Guidelines for Work Zones Traffic Control Devices". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_350-a.pdf
 - 6) NCHRP Report 475: "A Procedure for Assessing and Planning Nighttime Highway Construction and Maintenance". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_475.pdf
 - 7) NCHRP Report 476: "Guidelines for Design and Operation of Nighttime Traffic Control for Highway Maintenance". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_476.pdf
 - 8) NCHRP Report 498: "Illumination Guidelines for Nighttime Highway Work". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_498.pdf
 - 9) American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide.
 - 10) American Traffic Safety Services Association (ATSSA) Quality Guidelines for Work Zone Traffic Control Devices and Features.
 - 11) U.S. Department of Transportation Federal Highway Administration Traffic Control Handbook for Mobile Operations at Night. <http://www.dot.state.il.us/blr/1023.pdf>

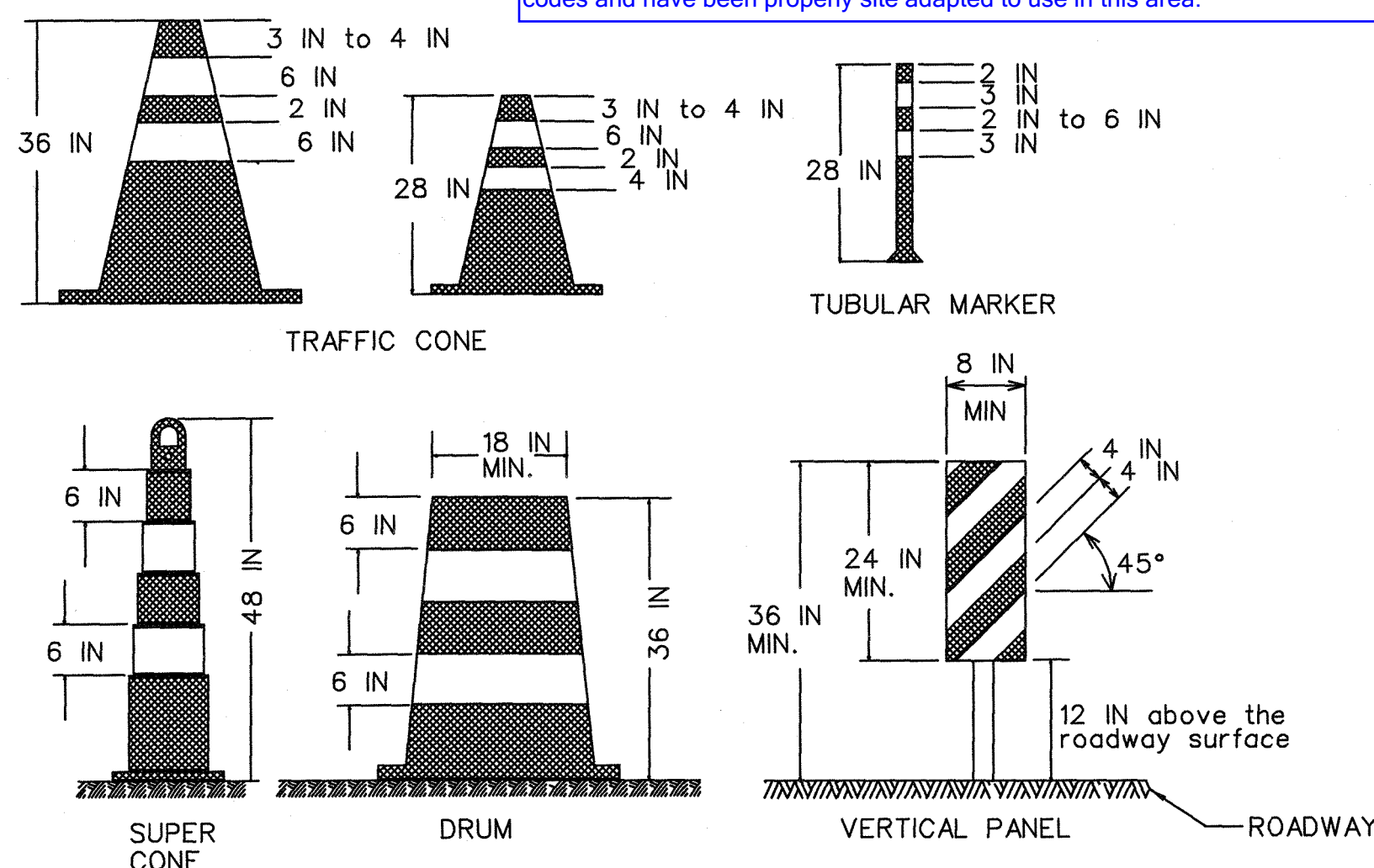
ALL TTC STANDARDS SHOW MINIMUM CONSTRUCTION SIGNING. ALL SITUATIONS SHALL BE REVIEWED AND/OR DESIGNED BY THE ENGINEER. CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

SHEET NUMBER	385	DESIGNED BY	G. LEBLANC	CHECKED BY	J. COLVIN	PARISH	ST. TAMMANY
		DETAILED BY	C. FAKOURT	CONTROL SECTION	G. LEBLANC		
		CHECKED BY	G. LEBLANC	STATE PROJECT			
		SERIES NUMBER		DATE	7/2/18		
		REVISION OR CHANGE ORDER DESCRIPTION		APPROVED BY	[Signature]		
				CHIEF ENGINEER			
TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET							
TTC-00 (B)							

CHANNELIZING DEVICES

- The following devices may be used as channelizing devices: Tubular Markers, Vertical Panels, Cones, Drums and Super Cones.
- 28 inch traffic cones are not allowed on:
 - Interstates
 - Highways with speeds greater than 40 mph.
- During nighttime operations, 28 inch and 36 inch cones are not allowed.
- Retroreflective material pattern used on super cones shall match that used on drums.
- Tangent Areas:**
 - Standard Spacing:** See Standard Device Spacing and Buffer Space table.
 - Daylight Operations:** Drums and super cones are spaced at standard spacing. All other devices are at 1/2 standard spacing.
 - Nighttime Operations:** Drums and supercones at standard spacing are the only devices allowed.
- Taper Areas:**
 - Standard Spacing:** See Standard Device Spacing and Buffer Space table.
 - Daylight Operations:** Drums are spaced at standard spacing. All other devices are 1/2 standard spacing.
 - Nighttime Operations:** Drums (at standard spacing) are the only devices allowed.
- Type C steady burn lights shall be used on all channelizing devices in the taper as well as the first two devices in the tangent at night, (see the AML).
- Typical channelizing device lateral placement (do not include when it is used as a divider for opposing directions of traffic) shall be 2 feet off the lane line in the closed lane or shoulder.
- Devices may be adjusted laterally to accommodate ongoing work in the immediate vicinity but must be returned to the closed lane after the work activity has moved.
- Channelizing devices on the lane line shall be of the same type.
- Channelizing devices in each taper shall be of the same type.

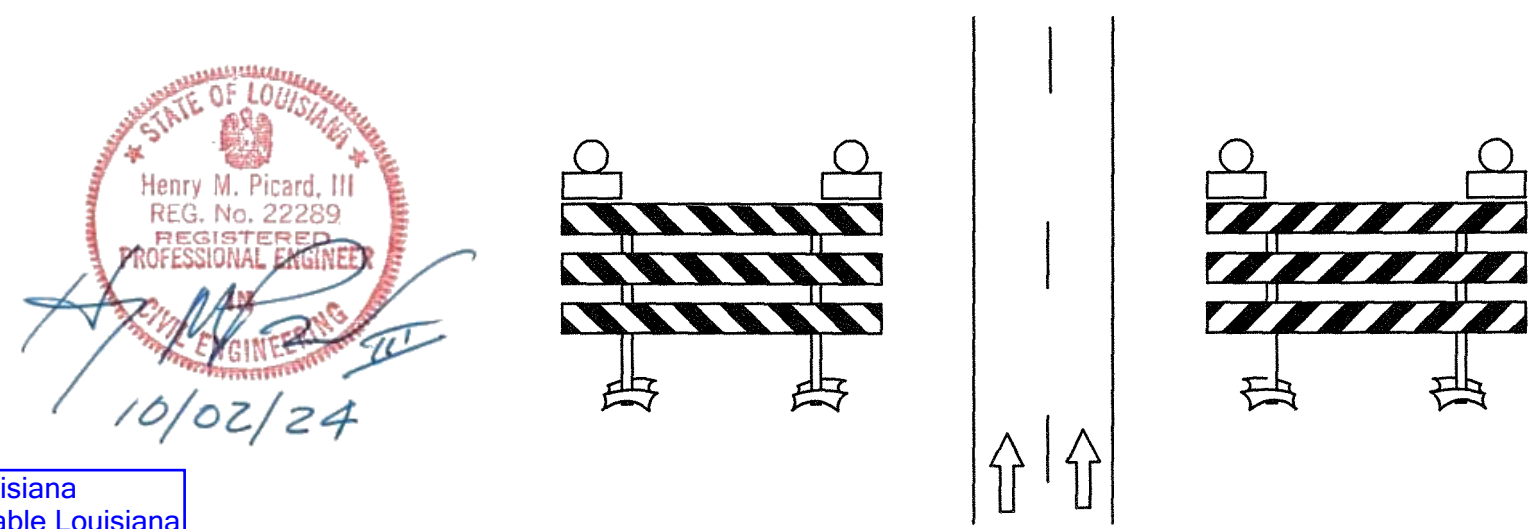
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



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CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

TYPE III BARRICADES

- Only Type III Barricades shall be used.
- All barricades shall use Type 3 High Intensity Sheeting on both sides of the barricade.
- All barricades shall be a minimum of 8 feet in length and must meet NCHRP Report 350 or MASH requirements.
- When used for overnight closures, two Type B High Intensity Lights shall supplement all barricades that are placed in a closed lane or that extend across a highway. Two Type A Low Intensity Lights may be used in urban areas if approved by the Engineer (See AML).
- When signs and lights are to be mounted to a barricade, they must meet NCHRP Report 350 or MASH requirements.
- A truck with a TMA may be substituted for a barricade when workers are present.
- Barricades shall be placed:
 - at the beginning of a closed lane or shoulder and at 1,000 foot intervals where no active work is ongoing and the lane must remain closed. A minimum of 2 barricades shall be placed if the lane or shoulder closure is less than 2,000 feet. (One barricade shall be placed at the beginning of the lane closure after the buffer space and one shall be placed in the middle of the lane closure.)
 - before each or group of unfilled holes or holes filled with temporary material.
 - before uncured concrete.
 - in the closed lane on each side of every intersection and crossover. (Do not block sight distance.)
 - in front of piles of material (dirt, aggregate, broken concrete), culverts and equipment which is near the work zone.



TTC for DROP-OFFS

NON-INTERSTATE	
Average Drop-off	Current Posted Speed (Prior to Construction)
	> 45 MPH ≤ 45 MPH
≤ 3 IN	Low Shoulder Sign (Optional) Low Shoulder Sign (Optional)
> 3 IN	Shoulder Drop Off Sign & Edge Lines or Shoulder Drop Off Sign & Channelizing Device Shoulder Drop Off Sign
> 6 IN	No Shoulder Sign, Edge Lines & Vertical Panel No Shoulder Sign & Channelizing Device
> 10 IN	Concrete Barrier (if drop off is < 12 FT from edge of travel lane) & Edge Lines No Shoulder Sign & Vertical Panel
INTERSTATE	
Average Drop-off	
≤ 2 IN	Low Shoulder Sign (Optional)
> 2 IN	Shoulder Drop Off Sign & Edge Lines or Shoulder Drop Off Sign & Channelizing Device
> 6 IN	Concrete Barrier (if drop off is < 12 FT from edge of travel lane), Shoulder Drop Off Sign, & Edge Lines

STATE OF LOUISIANA
GARY N. LEBLANC
REG. No. 28220
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
6-27-18

- If a portable concrete barrier will be required then the deflection shall be considered in the design.
- For Interstate ramps, refer to non-Interstate drop offs.

STANDARD DEVICE SPACING AND BUFFER SPACE

SPEED LIMIT (prior to construction) MPH	MERGING TAPER LENGTH (L) Lane Width (FT)				STANDARD DEVICE SPACING IN FEET		BUFFER SPACE FT
	9	10	11	12	Along Taper	Along Tangent	
25	94	105	115	125	20	40	155
30	135	150	165	180	30	60	200
35	184	205	225	245	35	70	250
40	240	267	294	320	40	80	305
45	405	450	495	540	40	80	360
50	450	500	550	600	40	80	425
55	495	550	605	660	40	80	495
60	540	600	660	720	40	80	570
65	585	650	715	780	40	80	645
70	630	700	770	840	40	80	730
75	675	750	825	900	40	80	820

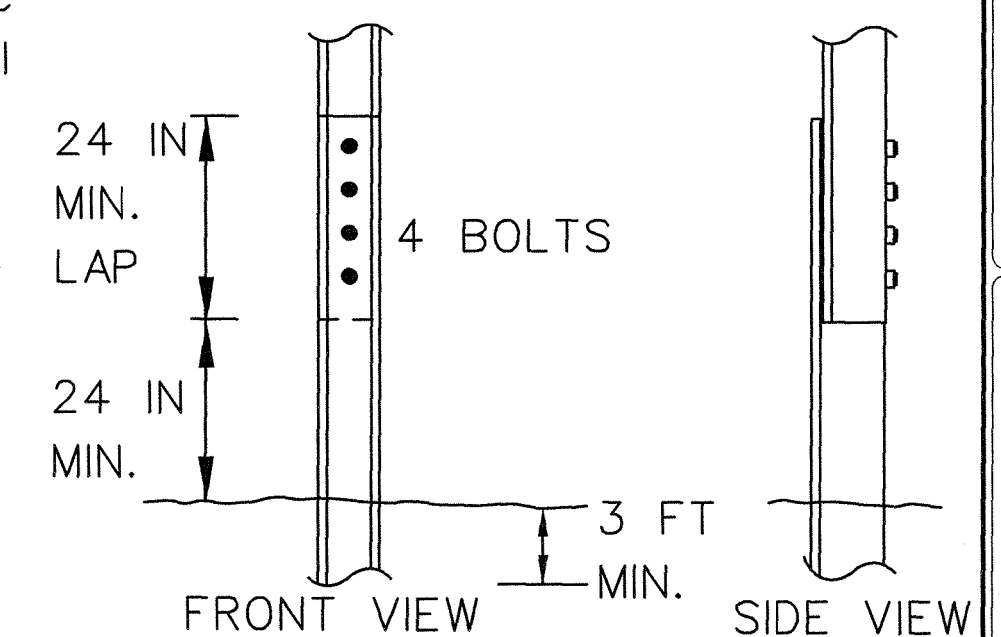
SPEED LIMIT (prior to construction) MPH	SHIFTING TAPER LENGTH (1/2)L Lane Shift (FT)						STANDARD DEVICE SPACING IN FEET		BUFFER SPACE FT
	2	4	6	8	10	12	Along Taper	Along Tangent	
25	11	21	32	42	52	63	20	40	155
30	15	30	45	60	75	90	30	60	200
35	21	41	62	82	102	123	35	70	250
40	27	54	80	107	134	160	40	80	305
45	45	90	135	180	225	270	40	80	360
50	50	100	150	200	250	300	40	80	425
55	55	110	165	220	275	330	40	80	495
60	60	120	180	240	300	360	40	80	570
65	65	130	195	260	325	390	40	80	645
70	70	140	210	280	350	420	40	80	730
75	75	150	225	300	375	450	40	80	820

SPEED LIMIT (prior to construction) MPH	SHOULDER TAPER LENGTH (1/3)L Shoulder Width (FT)						STANDARD DEVICE SPACING IN FEET		BUFFER SPACE FT
	2	4	6	8	10	12	Along Taper	Along Tangent	
25	7	14	21	28	35	42	20	40	155
30	10	20	30	40	50	60	30	60	200
35	14	28	41	55	68	82	35	70	250
40	18	36	54	72	89	107	40	80	305
45	30	60	90	120	150	180	40	80	360
50	34	67	100	134	167	200	40	80	425
55	37	74	110	147	184	220	40	80	495
60	40	80	120	160	200	240	40	80	570
65	44	87	130	174	217	260	40	80	645
70	47	94	140	187	234	280	40	80	730
75	50	100	150	200	250	300	40	80	820

- All termination and flagger tapers are 100 feet. (MIN. 6 channelizing devices per lane equally spaced 20 feet apart.)
- See TTC Standards for flagger taper.
- See MUTCD for taper formulas.

ALLOWABLE LAP SPLICE FOR U-CHANNEL POST

U-Channel posts may be spliced where long lengths are required. The upper section shall overlap the lower section by at least 24 inches. The bottom edge of the upper section of the splice shall be a minimum of 24 inches above the ground. The spliced sections shall be secured with at least four 5/16 inch diameter hex bolts spaced equally along the splice.



SHEET NUMBER **386**

ST. TAMMANY

DESIGNED BY: G. LEBLANC
CHECKED BY: J. COLVIN
DATE: 7/2/18

REVISION OR CHANGE ORDER DESCRIPTION: *[Signature]*

DATE: 7/2/18

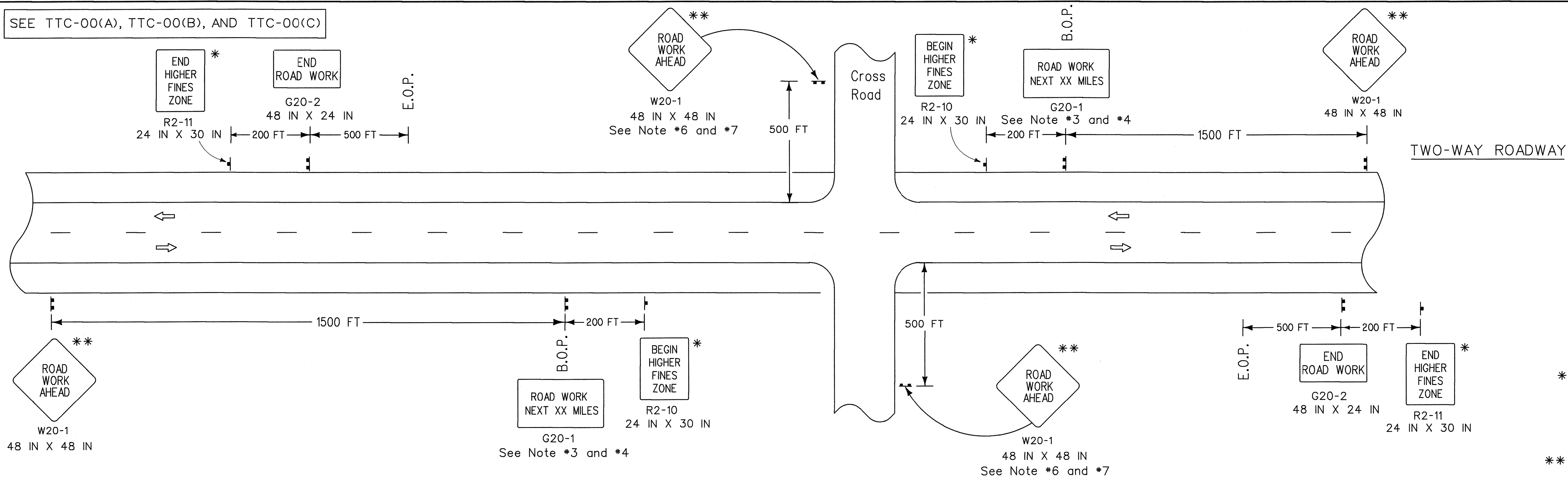
APPROVED BY: *[Signature]*
CHIEF ENGINEER

TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET

TTC-00 (C)

DOTD
TRAFFIC ENGINEERING

SEE TTC-00(A), TTC-00(B), AND TTC-00(C)



* For divided roadways with speeds \geq 50 mph use larger sign, 36 IN X 48 IN.
 ** Any sign of the W20-1 series may be used.

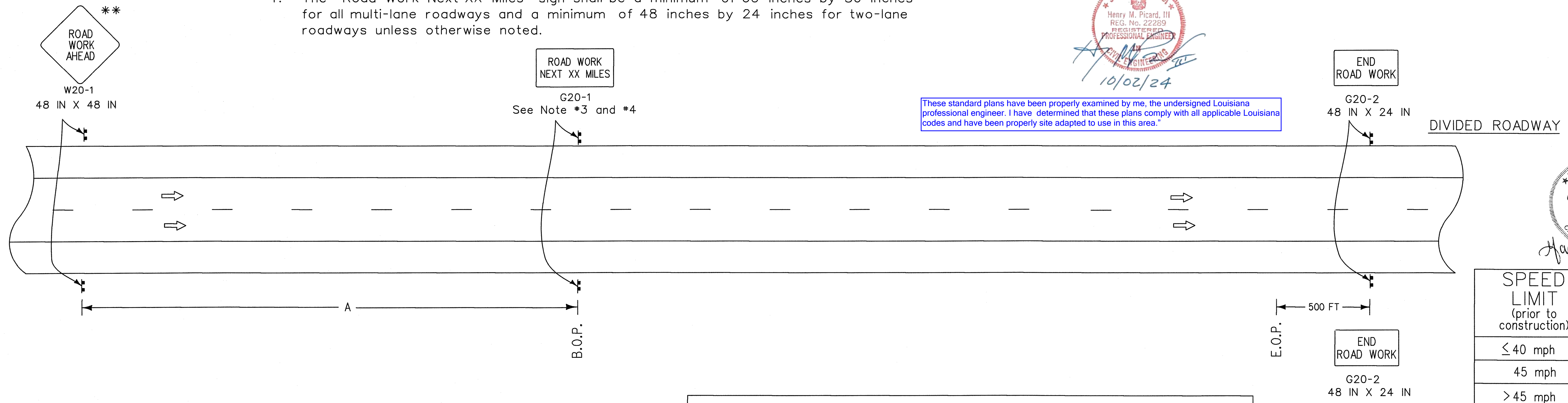
NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), TTC-00(C), and other Temporary Traffic Control Sheets as appropriate.

1. This layout represents the minimum traffic controls required for placement of "Road Work Next XX Miles" and "End Road Work" signs.
2. This layout does not replace other TTC Standard Sheets, but is intended as a supplement to the required signing.
3. The distance on the "Road Work Next XX Miles" sign shall be stated to the nearest whole mile. This sign shall be placed at the Beginning of Project (B.O.P.) limits. This sign may be omitted if work zone is less than 0.5 miles.
4. The "Road Work Next XX Miles" sign shall be a minimum of 60 inches by 36 inches for all multi-lane roadways and a minimum of 48 inches by 24 inches for two-lane roadways unless otherwise noted.
5. The "End Road Work" sign shall be placed 500 feet past the End of Project (E.O.P.) limits.
6. If "Road Work Ahead" sign is used on a cross road to warn of road work on another route, then "End Road Work" sign is not required.
7. When projects are separated by less than 1 mile, they shall be signed as one project; this may require coordination.

LEGEND

- ▬ Traffic Sign
- ⇒ Direction of Travel



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

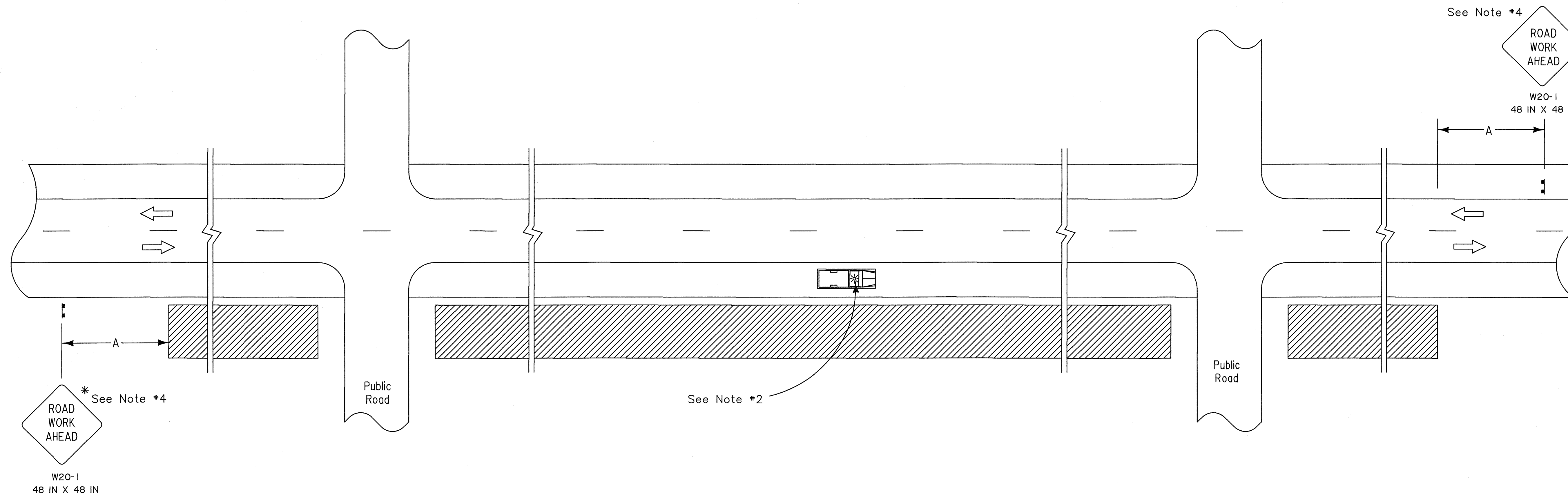


SPEED LIMIT (prior to construction)	SPACING
\leq 40 mph	1500 FT
45 mph	2640 FT
$>$ 45 mph	5280 FT

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- Sign spacing to be adjusted for Horizontal and Vertical curves.
- For work outside of the traveled way, see TTC-01 and TTC-02.

SHEET NUMBER	387	ST. TAMMANY	PARISH	CONTROL SECTION	STATE PROJECT
DESIGNED BY	LEBLANC, G.	CHECKED BY	COLVIN, J.	DATE	7/2/18
REVISION OR CHANGE ORDER DESCRIPTION		BY		DATE	
APPROVED BY	[Signature]		CHIEF ENGINEER		
TEMPORARY TRAFFIC CONTROL LAYOUT FOR PLACEMENT OF ROAD WORK NEXT XX MILES AND END ROAD WORK SIGNS					
TTC-00 (D)					
DOTD TRAFFIC ENGINEERING					



LEGEND

- Traffic Sign
- Work Area
- Direction of Travel
- Truck with Amber Light

SPEED LIMIT (prior to construction)	SPACING 'A'
≤ 40 mph	500 FT
45-50 mph	1000 FT
≥ 55 mph	1500 FT

NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B) and TTC-00(C).

1. This layout represents the minimum traffic controls required for workers and equipment operating more than 15 feet from the travel way.
2. If the operation results in equipment or other vehicles being parked closer than 15 feet to the travelway, but not within the roadway, each vehicle shall have an amber light.
3. When a work area has been established on one side of the roadway only, there shall be no parking on the opposite shoulder within 500 feet of the work area.
4. Other signs may be used in place of the "Road Work Ahead" sign, such as W21-8 (Mowing), W21-7 (Utility), or W21-6 (Survey) when applicable.

* Any sign of the W20-1 series may be used.

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Henry M. Picard, III
 REG. No. 22289
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 10/02/24

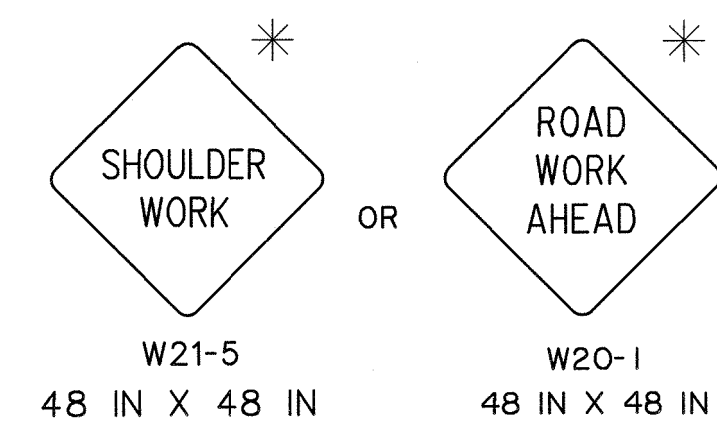
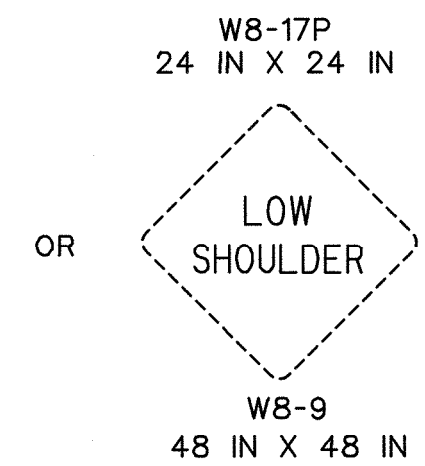
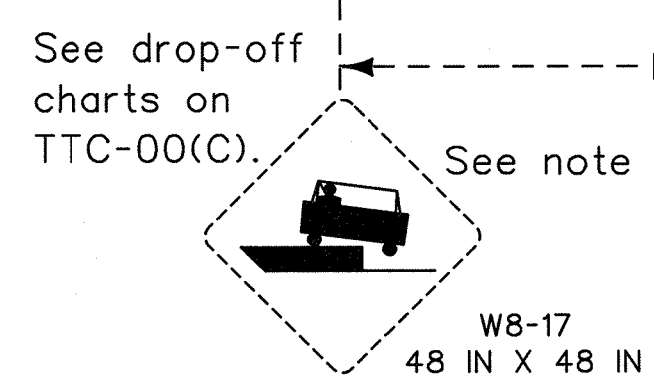
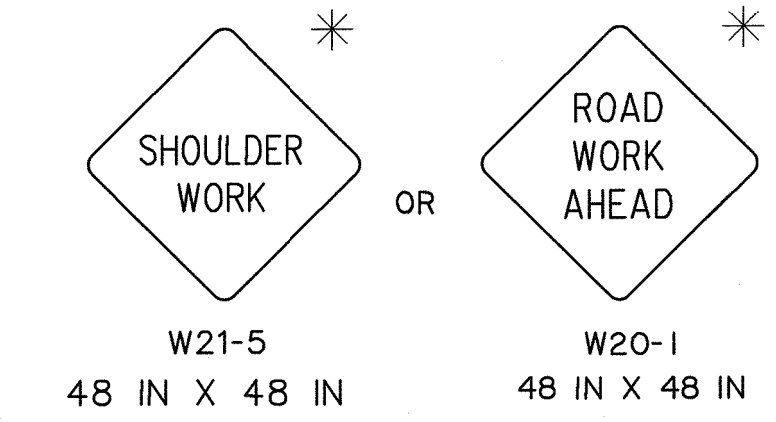
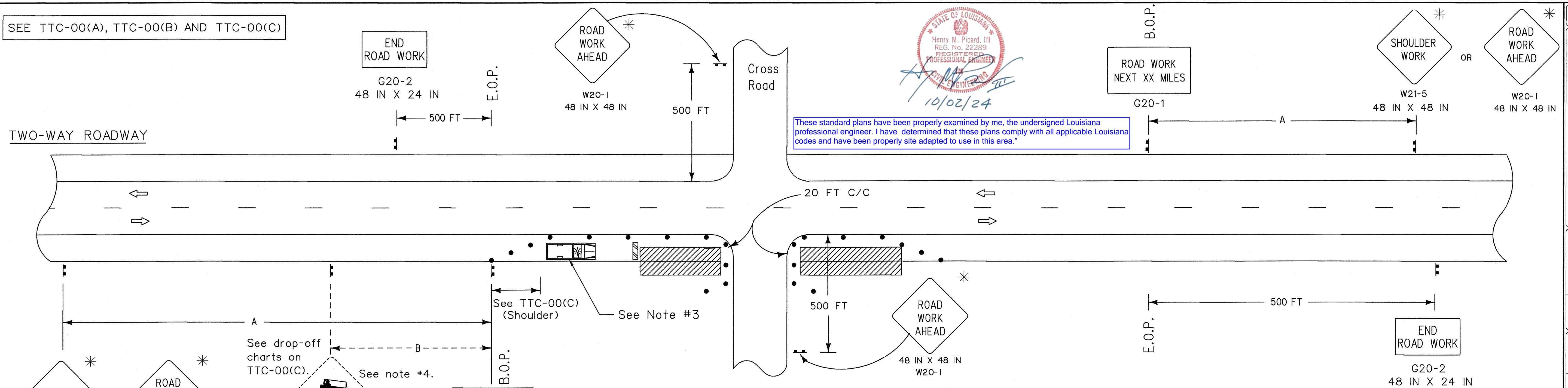
GARY N. LeBLANC
 REG. No. 28220
 REGISTERED PROFESSIONAL ENGINEER
 IN CIVIL ENGINEERING
 6-27-18

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SHEET NUMBER	388	PARISH	ST. TAMMANY	CONTROL SECTION	STATE PROJECT
DESIGNED BY	G. LEBLANC	CHECKED BY	J. COLVIN	DETAILED BY	C. FAKOURI
CHECKED BY	G. LEBLANC	SERIES NUMBER		DATE	7/2/18
REVISION OR CHANGE ORDER DESCRIPTION BY: <i>[Signature]</i>					
DATE: 7/2/18 CHIEF ENGINEER: <i>[Signature]</i>					
TEMPORARY TRAFFIC CONTROL FOR WORK GREATER THAN 15 FEET FROM THE TRAVELED WAY TTC-01					

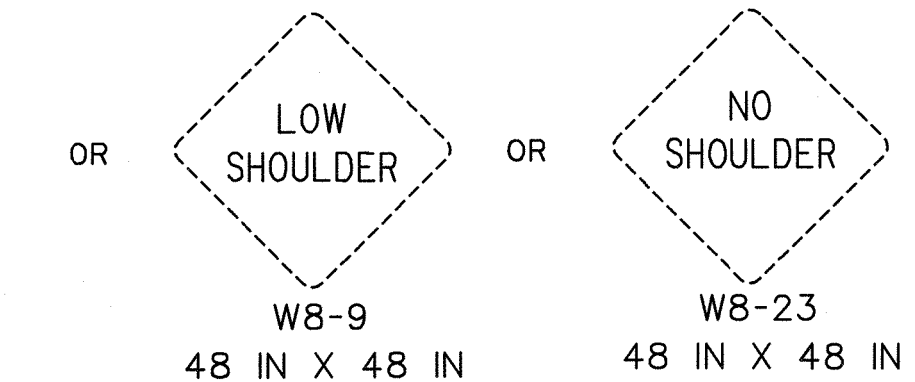
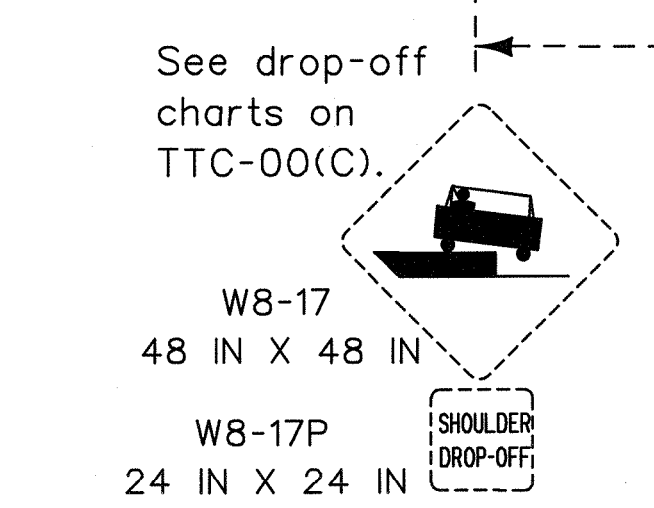
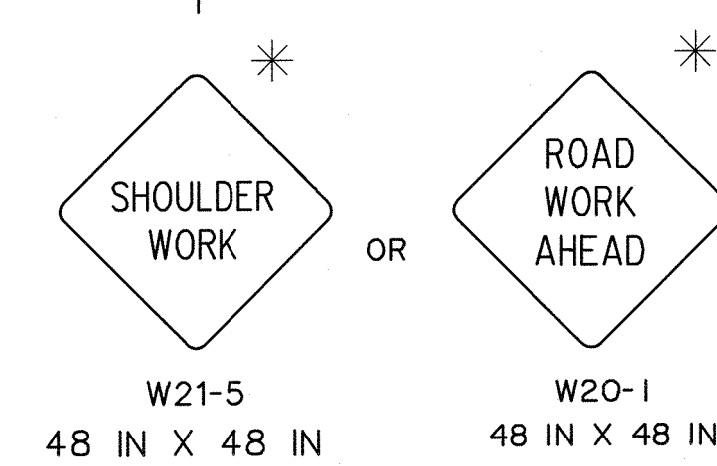
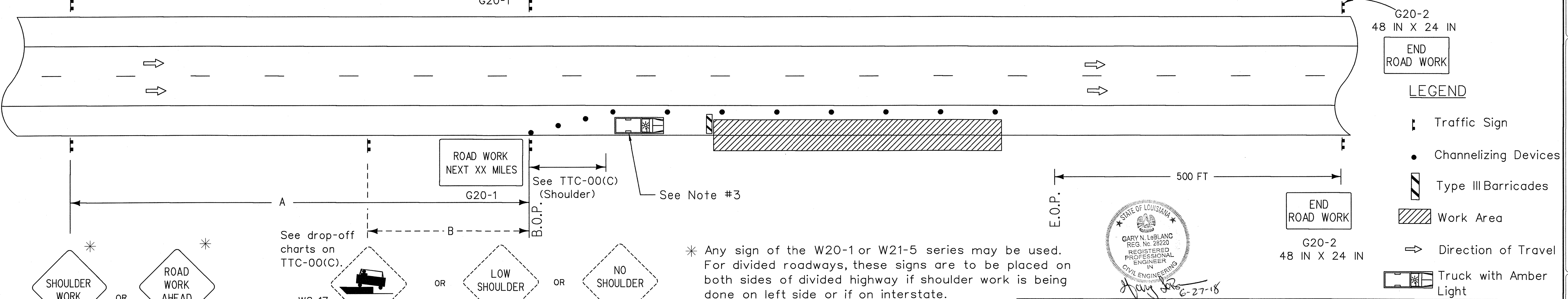
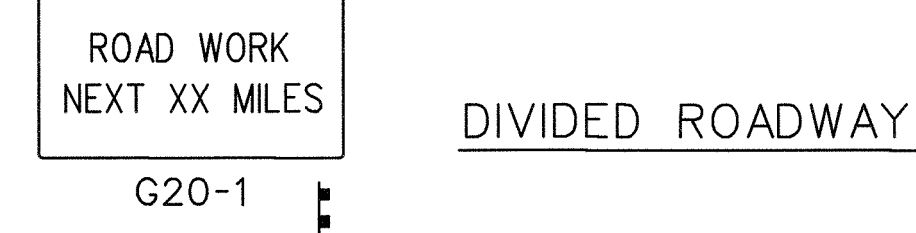
SEE TTC-00(A), TTC-00(B) AND TTC-00(C)

TWO-WAY ROADWAY

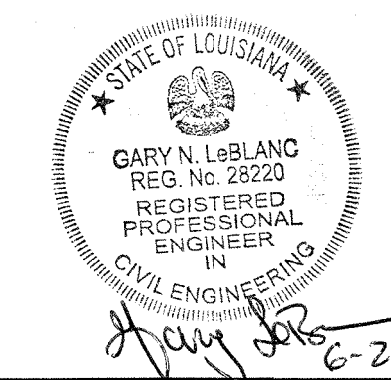


SPEED LIMIT (prior to construction)	SPACING	
	'A'	'B'
≤ 40 mph	500 FT	250 FT
45-50 mph	1000 FT	350 FT
≥ 55 mph	1500 FT	500 FT
Expressway/Interstate	2500 FT	1000 FT

- See TTC-00(C) for minimum taper length and maximum device spacing for shoulder closure tapers.
- If horizontal curve radius is less than 300 feet, device spacing shall be 25 feet.



* Any sign of the W20-1 or W21-5 series may be used. For divided roadways, these signs are to be placed on both sides of divided highway if shoulder work is being done on left side or if on interstate.



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NOTES

1. This layout represents the minimum traffic controls required for workers and equipment operating less than 15 feet from the traveled way for more than one hour. Less than one hour, see figure TA-4 of the MUTCD.
2. No signs or barricades are required for equipment operating or work in progress greater than 15 feet from the traveled way. (See TTC-01).
3. Work or equipment confined to a spot location (less than 200 feet) shall be marked by channelizing devices spaced at 25 feet or by a vehicle with an amber light visible to traffic. Work extending more than 200 feet of roadway length shall be marked with appropriate devices spaced as noted on TTC-00(C).
4. Applicable drop-off sign options are defined on TTC-00(C).
5. The distance on the "Road Work Next XX Miles" sign shall be stated to the nearest whole mile. This sign shall be placed at the Beginning of Project (B.O.P.) limits. This sign may be omitted if work zone is less than 0.5 miles.
6. A vehicle with a flashing amber light and a truck mounted attenuator shall be used on all roadways with an ADT greater than 20,000 and a pre-construction speed greater than or equal to 40 mph. This vehicle shall move with work operations not to exceed the roll-ahead distance required by the manufacturer plus 100 feet.

LEGEND

- Traffic Sign
- Channelizing Devices
- Type III Barricades
- Work Area
- Direction of Travel
- Truck with Amber Light



SHEET NUMBER **389**

ST. TAMMANY

DESIGNED BY: G. LEBLANC
CHECKED BY: J. COLVIN

DATE: 7/2/18

REVISION OR CHANGE ORDER DESCRIPTION: [Blank]

DATE: [Blank]

BY: [Signature]

CHIEF ENGINEER

TEMPORARY TRAFFIC CONTROL LAYOUT FOR WORK LESS THAN 15 FEET FROM THE TRAVELED WAY

TTC-02

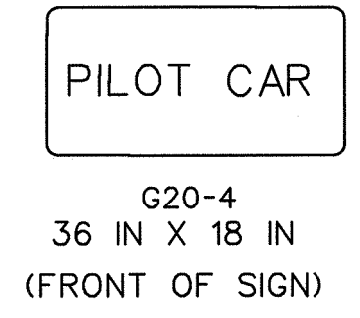
DOTD
TRAFFIC ENGINEERING



SEE TTC-00(A), TTC-00(B), TTC-00(C), AND TTC-00(D)

PILOT CAR

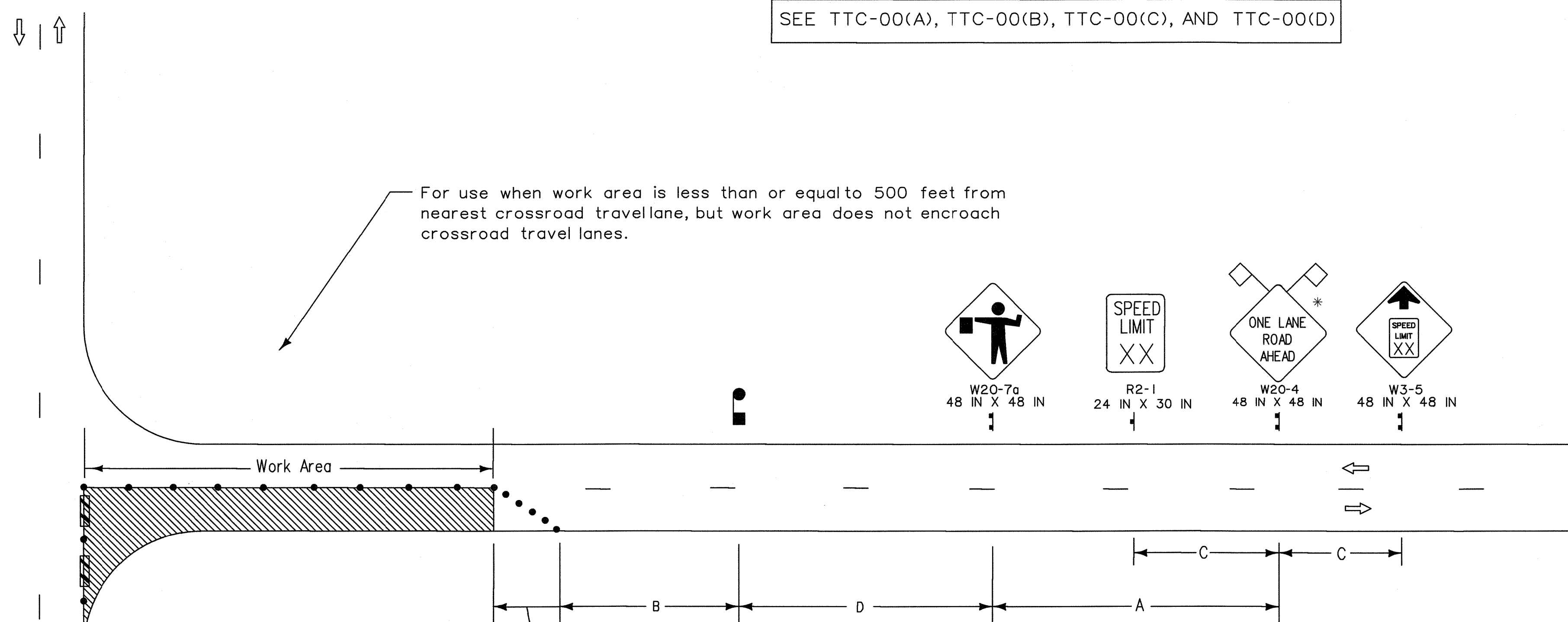
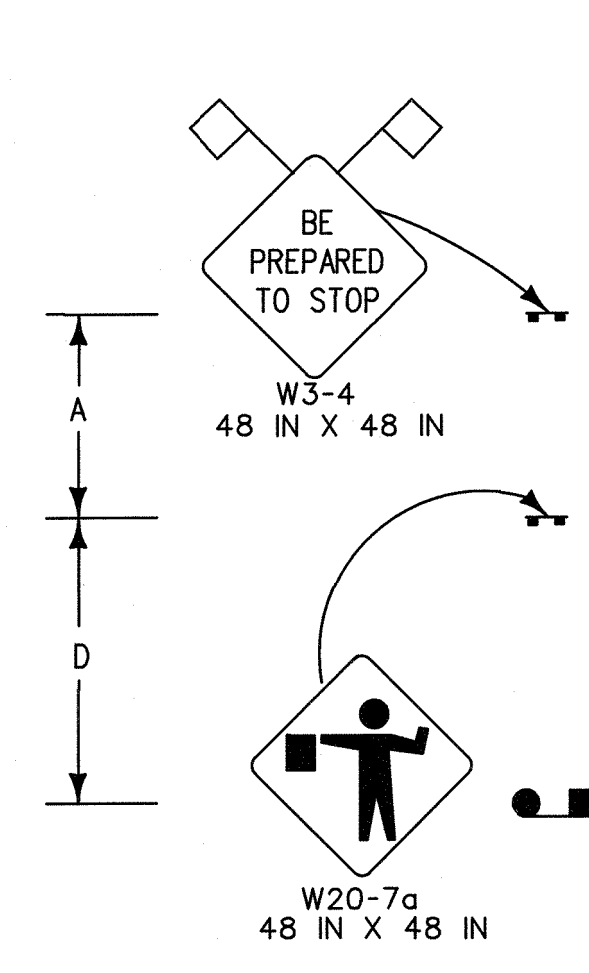
- If used, a pilot car shall guide a queue of vehicles through the work zone or diversion.
- It shall be used in restricted visibility operations such as lime or cement stabilization, chip seals, or operations in hilly or curvy terrains, where flaggers cannot see each other (no clear line-of-sight).
- The operation of the pilot vehicle shall be coordinated with flagging operations or other controls at each end of the one-lane section and all major driveways and street intersections.
- The pilot car sign should be mounted 7 feet above roadway in a position visible to oncoming and following traffic.
- The pilot car shall have an amber beacon light.
- The sign mounted on the vehicle shall be two-sided.



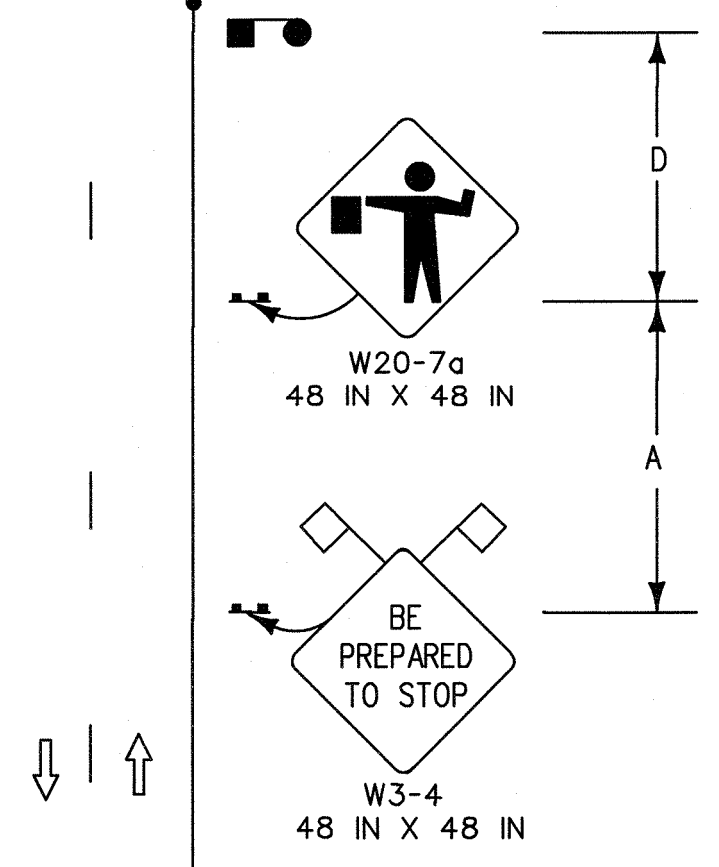
LEGEND

- ⬮ Traffic Sign
- Channelizing Devices
- ▨ Type III Barricades
- ▨ Work Area
- ⬮ Flagger
- ⬮ Type B Light
- ➡ Direction of Travel
- 🚚 Truck with Amber Light and TMA

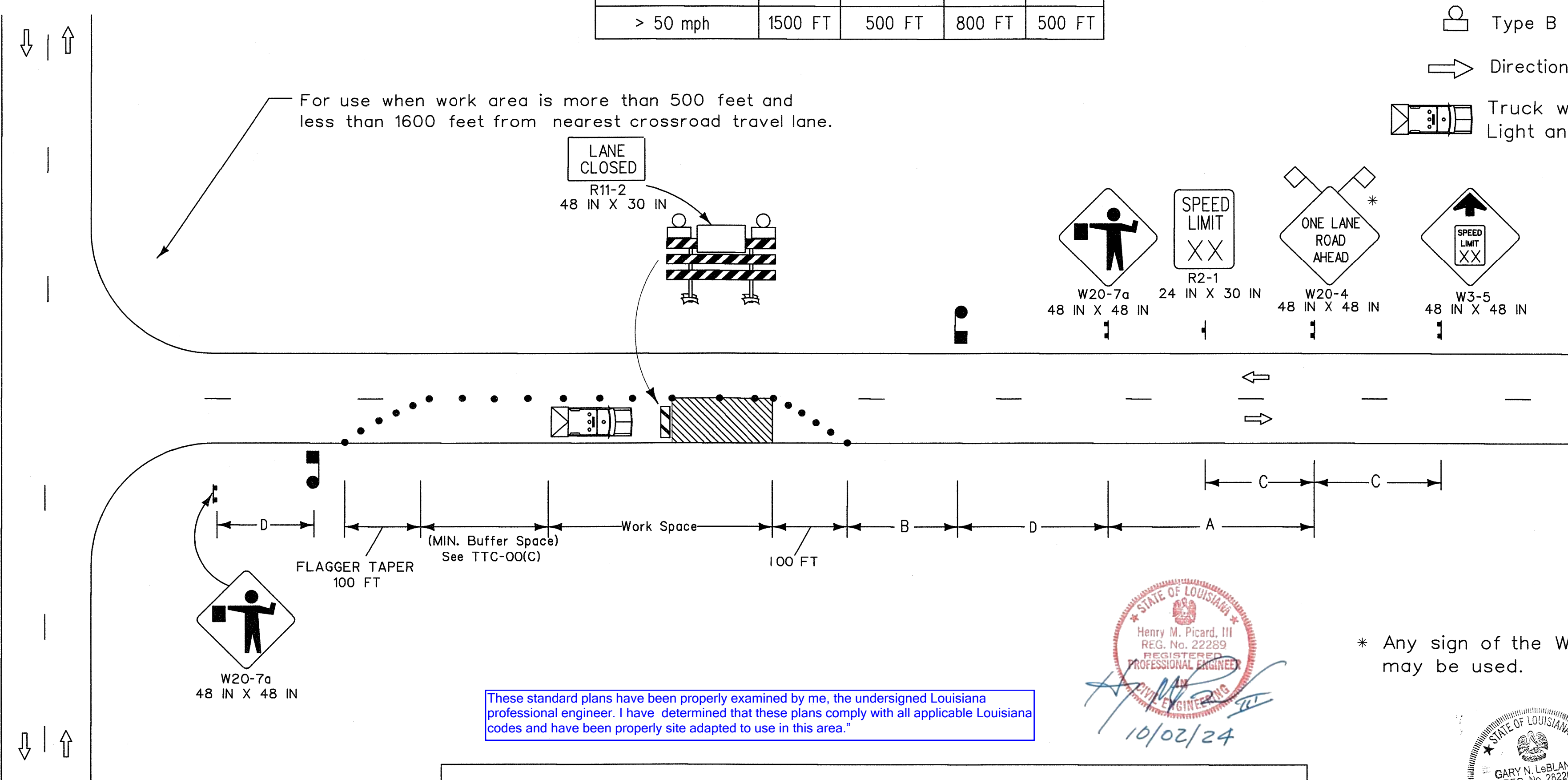
SPEED LIMIT (prior to construction)	SPACING			
	'A'	'B'	'C'	'D'
≤ 40 mph	500 FT	100 FT	N/A	125 FT
45-50 mph	1000 FT	350 FT	500 FT	350 FT
> 50 mph	1500 FT	500 FT	800 FT	500 FT



For use when work area is less than or equal to 500 feet from nearest crossroad travel lane, but work area does not encroach crossroad travel lanes.



For use when work area is more than 500 feet and less than 1600 feet from nearest crossroad travel lane.



NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), TTC-00(C), and TTC-00(D).

1. This layout represents the minimum traffic controls required for lane closures on two-lane roads with two-way traffic less than 1600 feet from an intersection. For advance signing see TTC-00(D).
2. Visual or radio contact shall be required between flaggers at all times. The flagger shall be visible from flagger sign.
3. Only law officers shall direct traffic against a traffic signal indication.
4. If work area is greater than 1600 feet see TTC-04.
5. If a pilot car is required then the contractor is not required to have channelizing devices in the tangent section.
6. A vehicle with a flashing amber light and a truck mounted attenuator shall be used on all roadways with an ADT greater than 20,000 and a pre-construction speed greater than or equal to 40 mph. This vehicle shall move with work operations not to exceed the roll-ahead distance required by the manufacturer plus 100 feet.

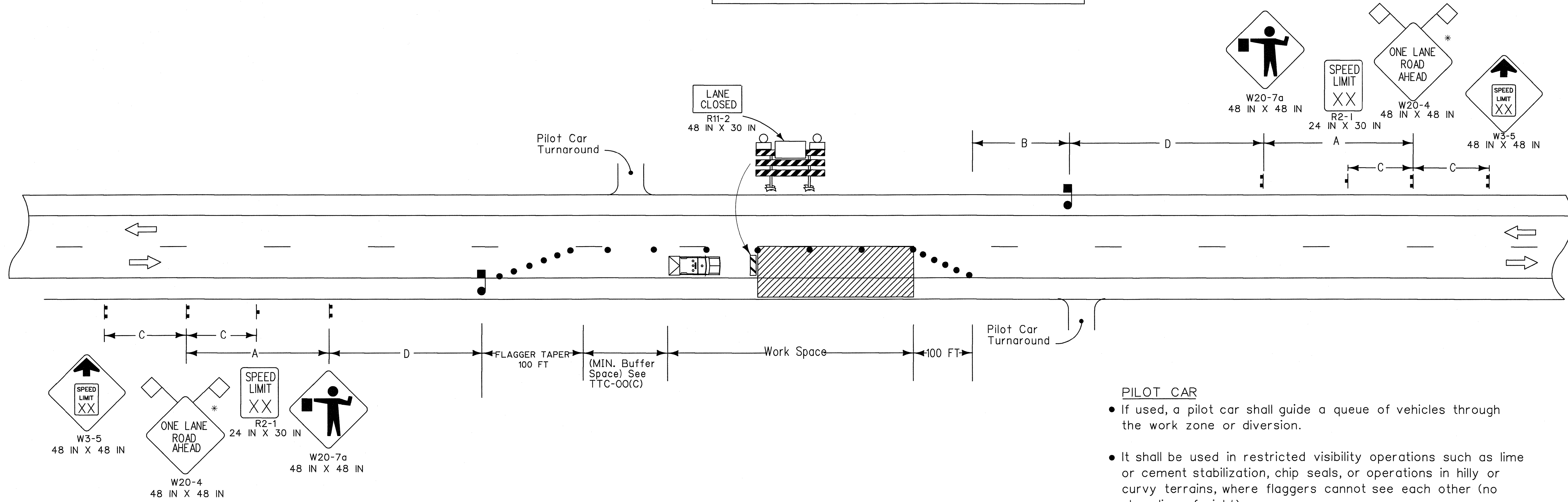
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



* Any sign of the W20-4 series may be used.



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NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), TTC-00(C) and TTC-00(D).

- This layout represents the minimum traffic controls required for lane closures on two-lane roads with two-way traffic greater than 1600 feet from an intersection. For this type of closure either a flagger or a pilot car will be required. For advance signing see TTC-00(D).
- To prevent vehicles from entering the work area against the flow of traffic, an additional flagger shall be stationed at each intersection, major driveway, railroad crossing, or crossing within the work area.
- For projects in rural areas the distance between flaggers shall not exceed:
 - (A) 2.5 miles for ADT < 2,500
 - (B) 2.0 miles for 2,500 < ADT < 5,000
 - (C) 1.5 miles for ADT > 5,000
- The flagger station shall be near the beginning of the taper and shall have adequate sight distance to be visible to oncoming traffic. If sight distance cannot be achieved, the distance between flaggers may be extended for a short duration.
- Visual or radio contact shall be required between flaggers at all times. The flagger shall be visible from the flagger sign.
- A vehicle with a flashing amber light and a truck mounted attenuator shall be used on all roadways with an ADT greater than 20,000 and a pre-construction speed greater than or equal to 40 mph. This vehicle shall move with work operations not to exceed the roll-ahead distance required by the manufacturer plus 100 feet.

- If a pilot car is required then the contractor is not required to have channelizing devices in the tangent section.
- If work zone is less than 1600 feet from an intersection see TTC-03.



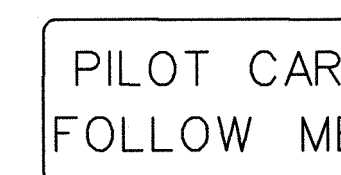
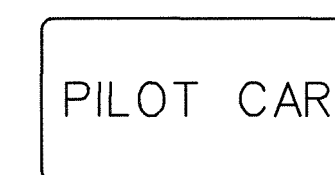
These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

SPEED LIMIT (prior to construction)	SPACING			
	'A'	'B'	'C'	'D'
≤ 40 mph	500 FT	100 FT	N/A	125 FT
45-50 mph	1000 FT	350 FT	500 FT	350 FT
≥ 55 mph	1500 FT	500 FT	800 FT	500 FT

ALL TTC STANDARDS SHOW MINIMUM CONSTRUCTION SIGNING.
ALL SITUATIONS SHALL BE REVIEWED AND/OR DESIGNED BY THE ENGINEER.
CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

PILOT CAR

- If used, a pilot car shall guide a queue of vehicles through the work zone or diversion.
- It shall be used in restricted visibility operations such as lime or cement stabilization, chip seals, or operations in hilly or curvy terrains, where flaggers cannot see each other (no clear line-of-sight).
- The operation of the pilot vehicle shall be coordinated with flagging operations or other controls at each end of the one-lane section and all major driveways and street intersections.
- The pilot car sign should be mounted 7 feet above roadway in a position visible to oncoming and following traffic.
- The pilot car shall have an amber beacon light.
- The sign mounted on the vehicle shall be two-sided.



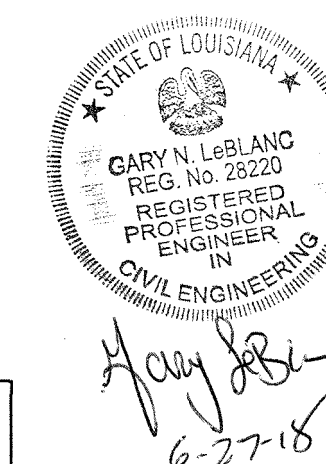
G20-4
36 IN X 18 IN
(FRONT OF SIGN)

G20-4
36 IN X 18 IN
(BACK OF SIGN)

* Any sign of the W20-4 series may be used.

LEGEND

- Traffic Sign
- Flagger
- Channelizing Devices
- Type III Barricades
- Work Area
- Type B Light
- Direction of Travel
- Truck with Amber Light and TMA



SHEET NUMBER **391**

ST. TAMMANY

DESIGNED BY: G. LEBLANC
CHECKED BY: J. COLVIN

DATE: 7/2/18

REVISION OF CHANGE ORDER DESCRIPTION: BY: [Signature]

DATE: 7/2/18

CHIEF ENGINEER: [Signature]

TTC-04

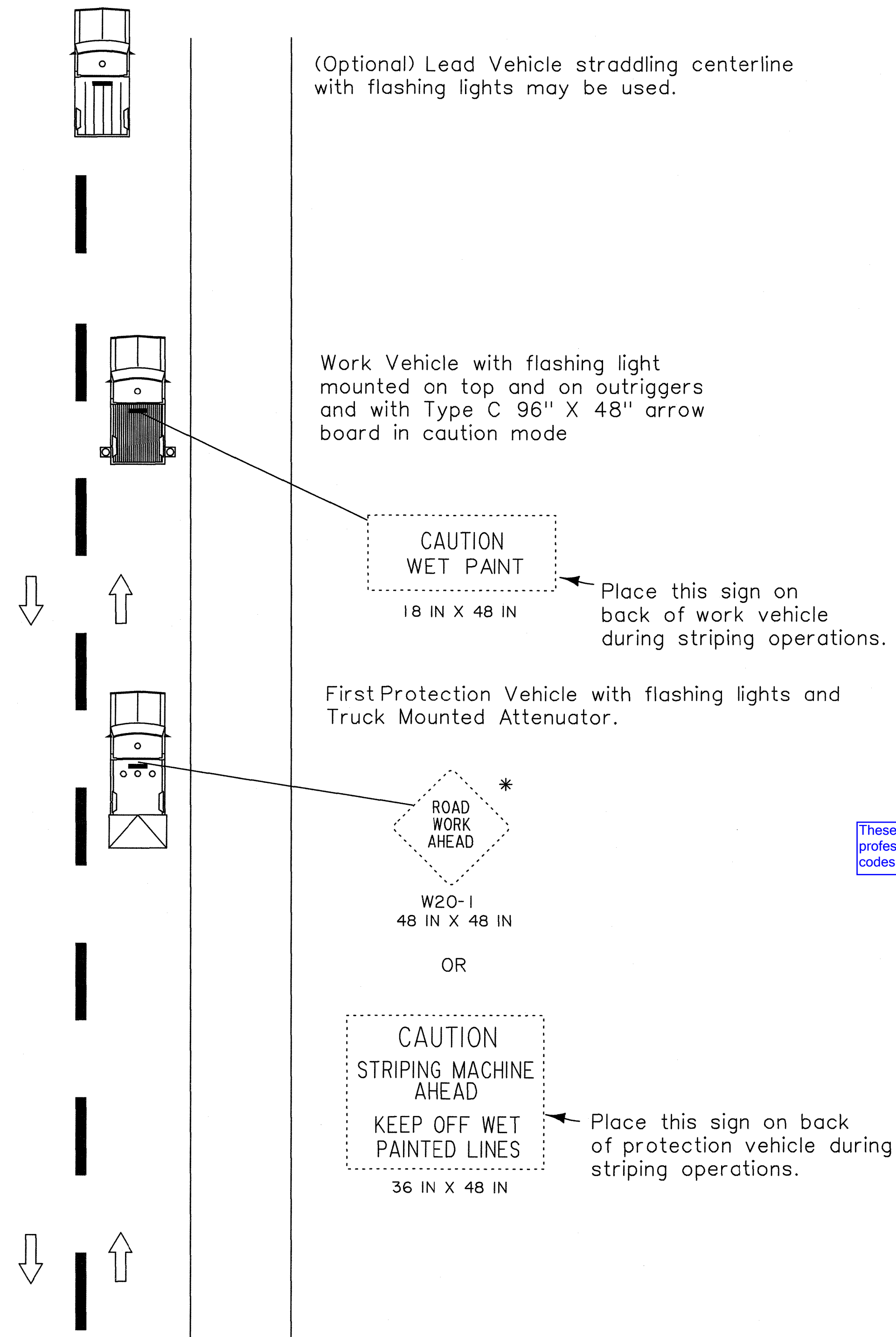
TEMPORARY TRAFFIC CONTROL LAYOUT FOR LANE CLOSURES ON TWO LANE ROADS WITH TWO-WAY TRAFFIC (FLAGGING OPERATIONS)

DOTD
TRAFFIC ENGINEERING

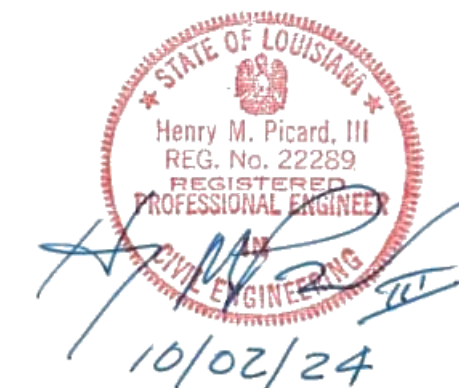
NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), and TTC-00(C).

1. This layout represents the minimum traffic controls required for moving operations on two-lane roads with two-way traffic, such as striping, street sweeping, and placement of raised pavement markers.
2. Distances between vehicles may vary and should be adjusted due to drying time and sight obstructions such as overpasses and hills. Vehicles with attenuators shall move with work operations. Buffer space shall not exceed rolldistance required by the manufacturer plus 100 feet.
3. If a queue greater than 5 minutes (about 1000 feet) exists, the contractor shall cease operations and pull over to the shoulder until the queue dissipates.
4. Flaggers may be used with this layout, if needed. See TTC-00(B).



These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.



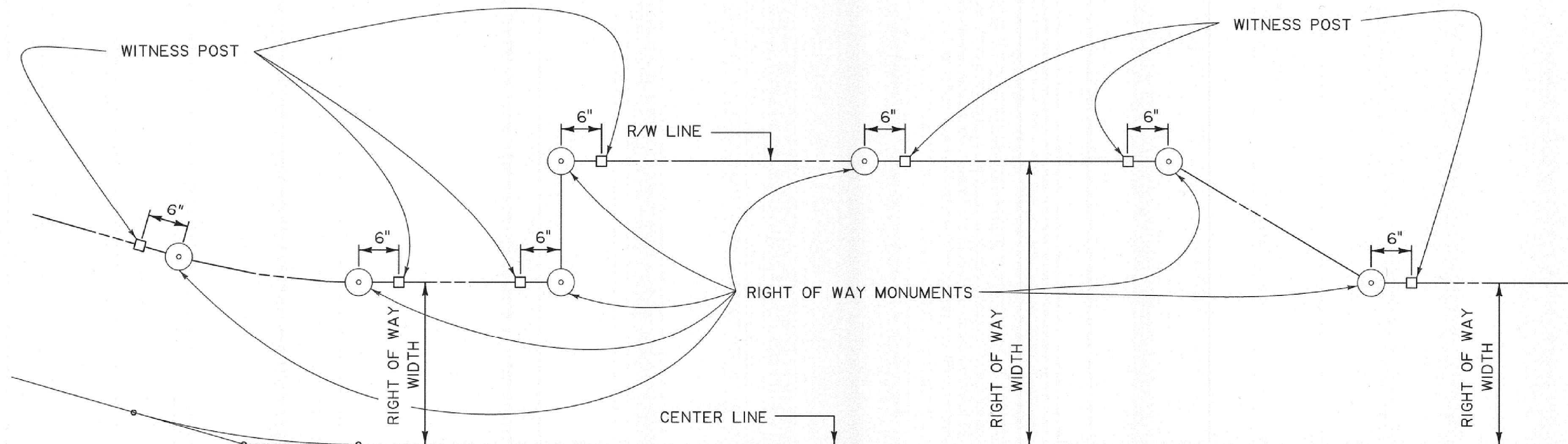
LEGEND

- Direction of Travel
- Work Vehicle
- Lead Vehicle
- Protection Vehicle

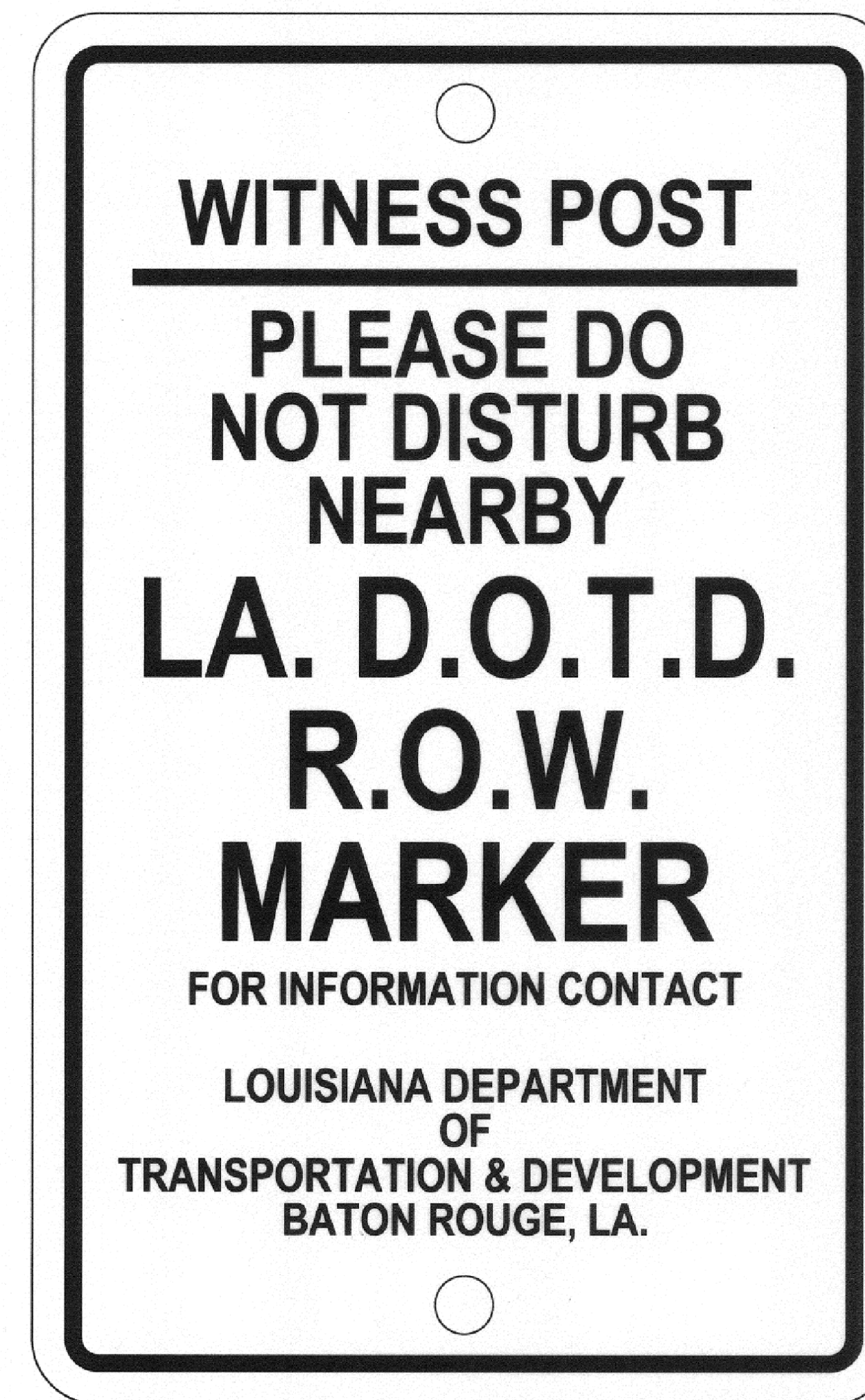
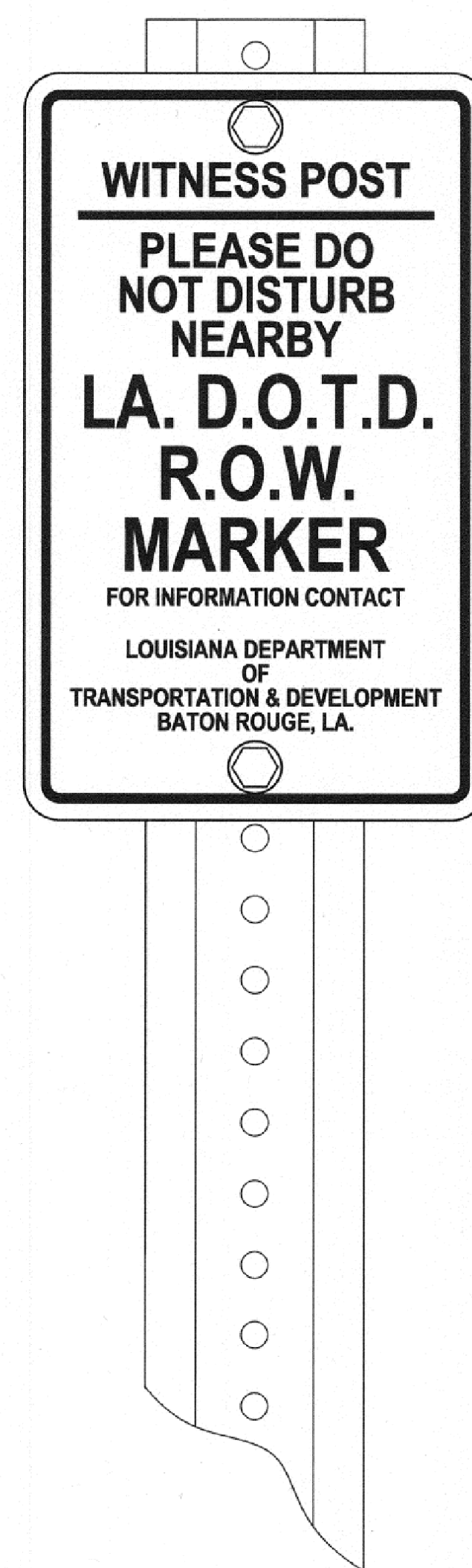
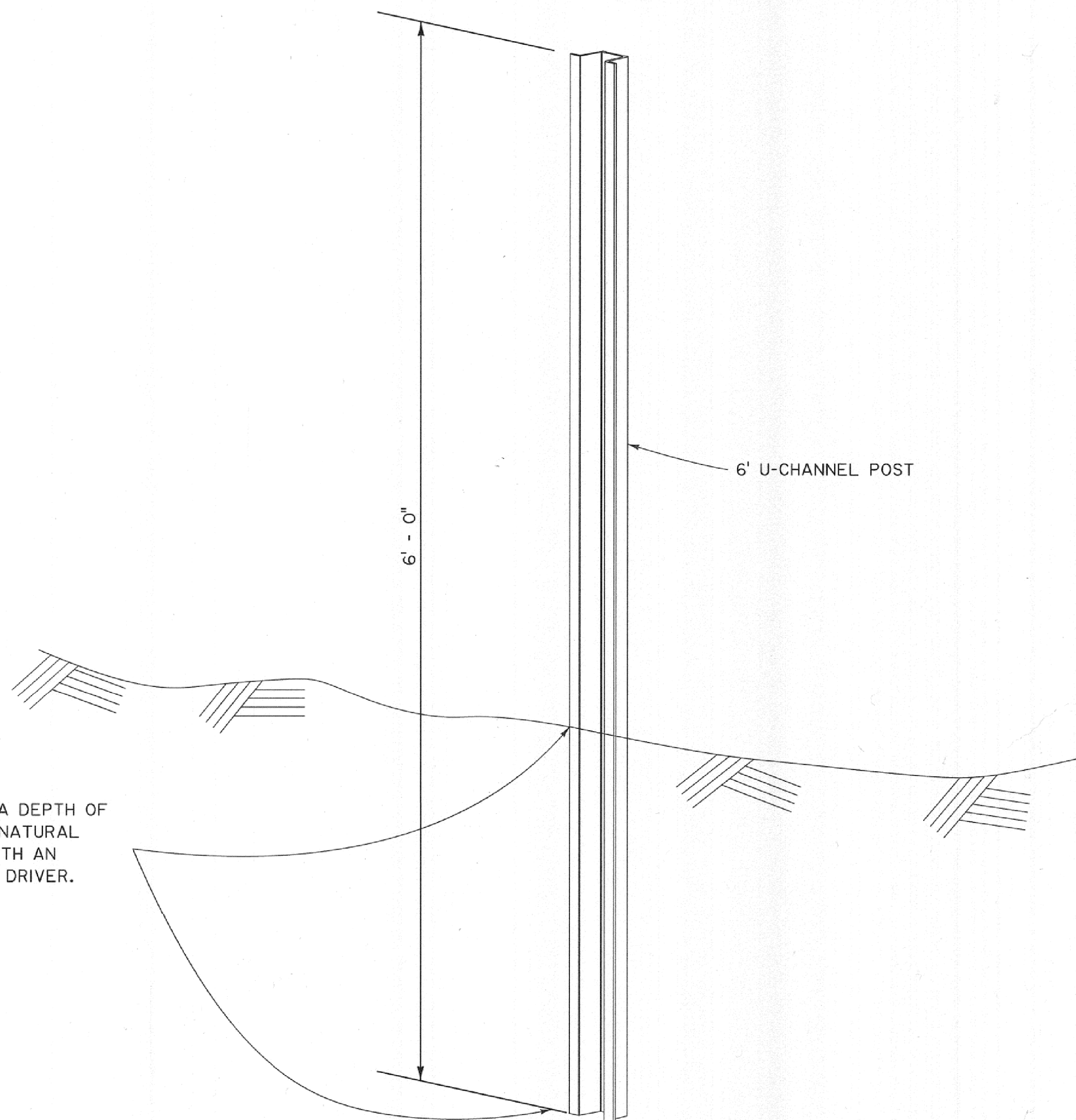
ALL TTC STANDARDS SHOW MINIMUM CONSTRUCTION SIGNING.
ALL SITUATIONS SHALL BE REVIEWED AND/OR DESIGNED BY THE ENGINEER.
CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

* Any sign of the W20-1 series may be used.

ST. TAMMANY	
DESIGNED BY: G. LEBLANC	CONTROL SECTION: STATE PROJECT
CHECKED BY: J. COLVIN	CHECKED BY: G. LEBLANC
DATE: 7/12/13	SERIES NUMBER:
REVISION OR CHANGE ORDER DESCRIPTION: _____ BY: _____ DATE: _____ APPROVED BY: _____ CHIEF ENGINEER: _____	
STATE OF LOUISIANA Henry M. Picard, III REG. No. 22289 REGISTERED PROFESSIONAL ENGINEER CIVIL ENGINEERING 10/02/24	
STATE OF LOUISIANA GARY N. LEBLANC REG. No. 28220 REGISTERED PROFESSIONAL ENGINEER CIVIL ENGINEERING 6-27-18	
TEMPORARY TRAFFIC CONTROL FOR MOVING OPERATIONS ON TWO-WAY TWO-LANE ROADWAYS TTC-18	
DOTD TRAFFIC ENGINEERING	



STANDARD RIGHT OF WAY MONUMENT
WITNESS POST
PLAN SHOWING WHERE POSTS ARE TO BE PLACED



WITNESS POST SHALL CONSIST OF A U-CHANNEL POST AND RIGHT OF WAY MARKER SIGN DESCRIBED FURTHER AS A HEAVY DUTY GALVANIZED U-CHANNEL POST WEIGHING APPROXIMATELY 2 POUNDS PER FOOT, BEING 6 FOOT IN LENGTH, WITH 3/8 INCH BOLT HOLES SPACED 1 INCH APART ALONG THE LENGTH OF THE POST. THE SIGN SHALL BE MADE OF ALUMINUM WITH A THICKNESS OF 1/16 INCH, MEASURING 6 1/2 INCHES BY 10 1/2 INCHES WITH A DURABLE DECAL AND HAVING 2 BOLT HOLES, SPACED 9 INCHES APART, TO ACCOMMODATE A 3/8 INCH BOLT. THE POST AND SIGN MUST MEET THE STANDARDS AS SHOWN ON THE PLANS OR AN APPROVED EQUAL. SUBSTITUTIONS MUST BE APPROVED BY THE LOCATION AND SURVEY SECTION ADMINISTRATOR, BATON ROUGE, LOUISIANA.

THE SIGN SHALL BE FASTENED TO THE POST USING EITHER GALVANIZED OR STAINLESS STEEL BOLTS, NUTS AND WASHERS, WITH SAID BOLT BEING 3/8 INCH DIAMETER AND LONG ENOUGH TO PROTRUDE 1/2 INCH OR LONGER BEYOND THE REAR OF THE POST.

Henry M. Picard, III
REG. No. 22289
REGISTERED PROFESSIONAL ENGINEER
10/02/24

These standard plans have been properly examined by me, the undersigned Louisiana professional engineer. I have determined that these plans comply with all applicable Louisiana codes and have been properly site adapted to use in this area.

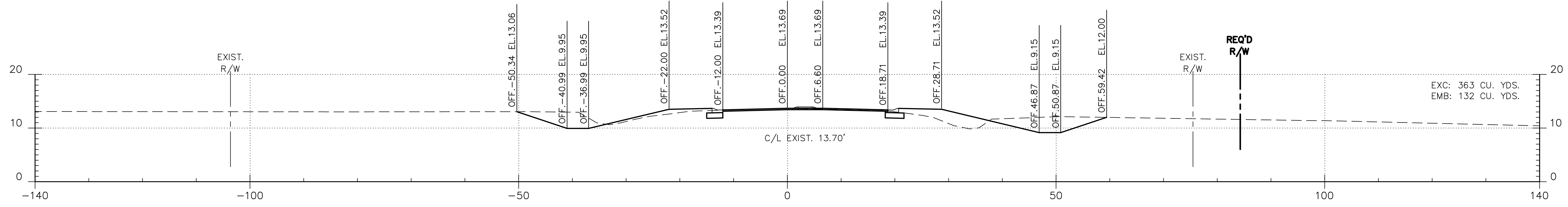
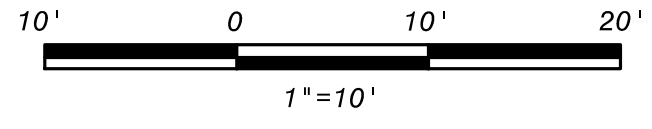
ERIC R. LANIER
REG. No. 06854
REGISTERED PROFESSIONAL SURVEYOR
2/1/2021

Christy P. Scott

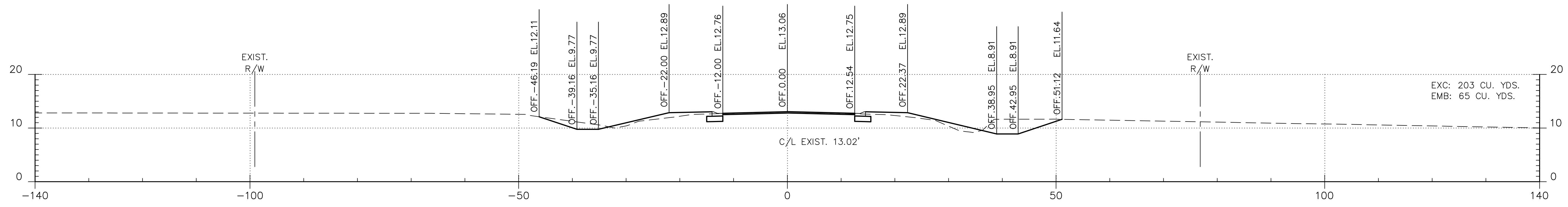


DATE: 10/7/24

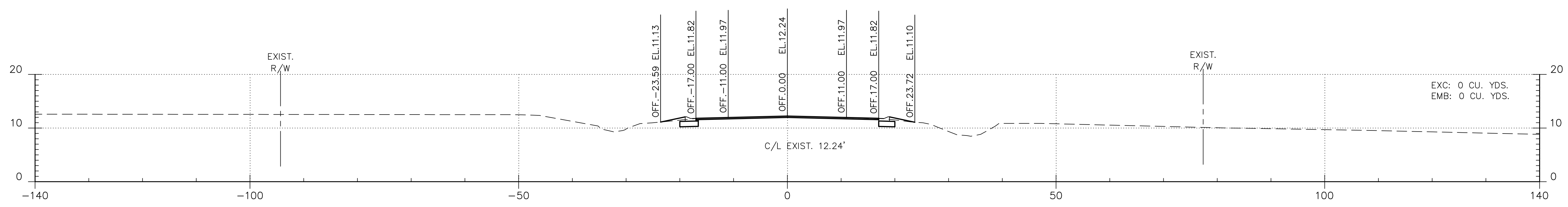
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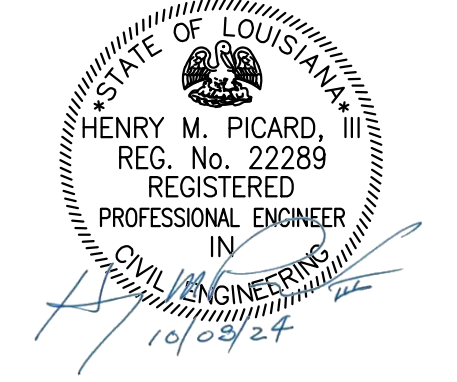
302+00



301+00



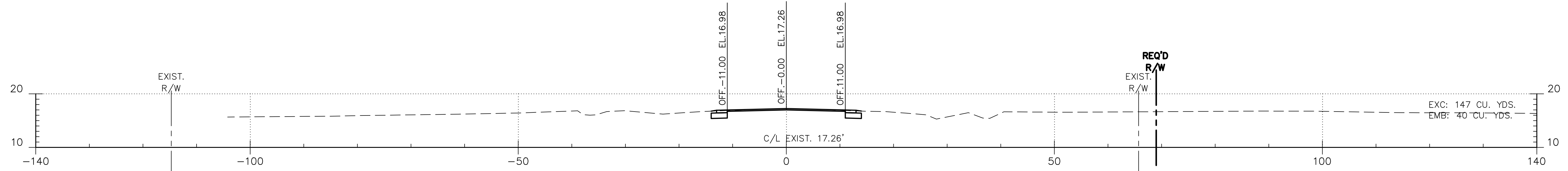
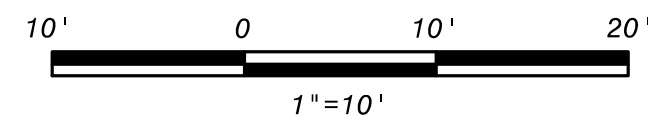
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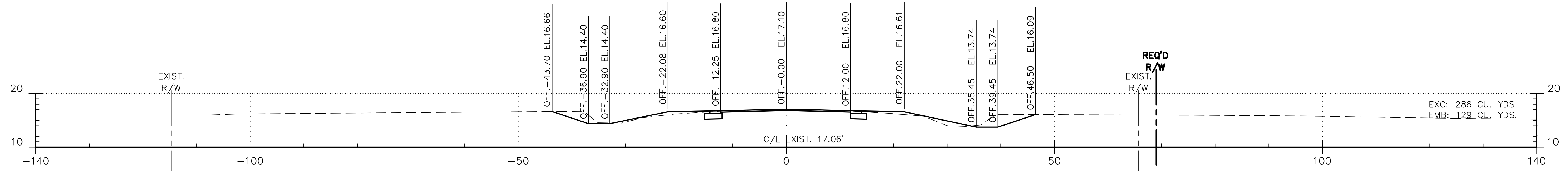
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PROJECT		2014EN0001	
B.C.I. PROJECT		NO.15.012	
MANDEVILLE BYPASS LA 1088 TO US 190			
ROADWAY PLANS		CROSS SECTIONS US 190	
DESIGNED		AJ	
CHECKED		RCIII	
DETAILED		SG	
CHECKED		AJ	
DATE		Oct. 2024	
SHEET		of	
NO.	DATE	REVISION DESCRIPTION	BY

DATE: 10/7/24

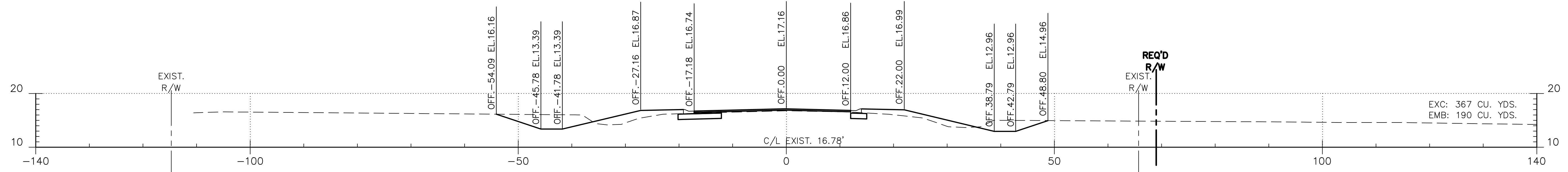
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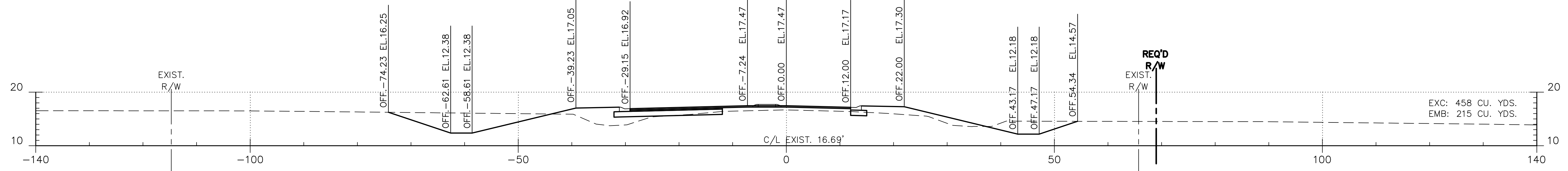
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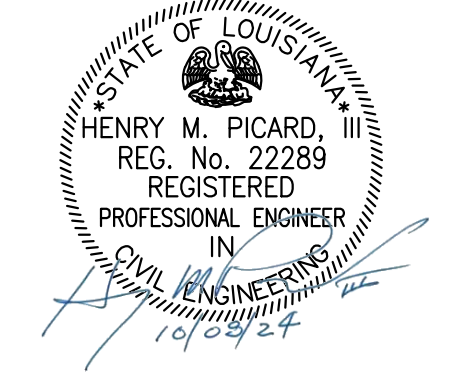
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315+00



314+00



SHEET NUMBER		404	
PARISH	PROJECT	ST. TAMMANY	2014EN0001
ROADWAY PLANS	CROSS SECTIONS US 190		
NO.	DATE	BY	REVISION DESCRIPTION
DESIGNED	RCIII		
CHECKED	SG		
DATE	Oct. 2024		
DESIGNED	AJ		
CHECKED	AJ		
DATE			

ST. TAMMANY PARISH PROJECT NO. 2014EN0001

ROADWAY PLANS CROSS SECTIONS US 190

MANDEVILLE BYPASS LA 1088 TO US 190

EXC: 147 CU. YDS.
EMB: 40 CU. YDS.

EXC: 286 CU. YDS.
EMB: 129 CU. YDS.

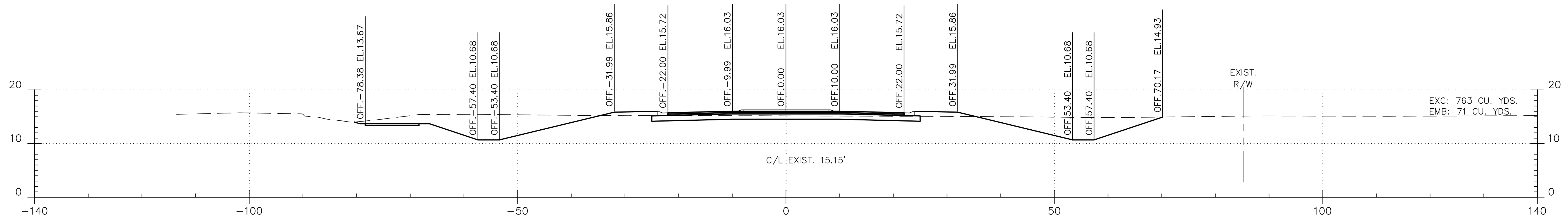
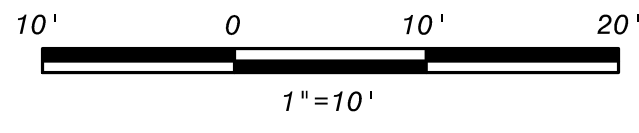
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EMB: 190 CU. YDS.

EXC: 458 CU. YDS.
EMB: 215 CU. YDS.

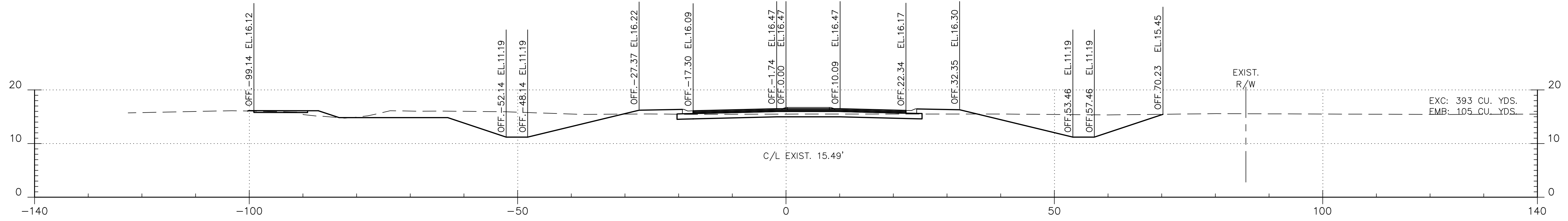


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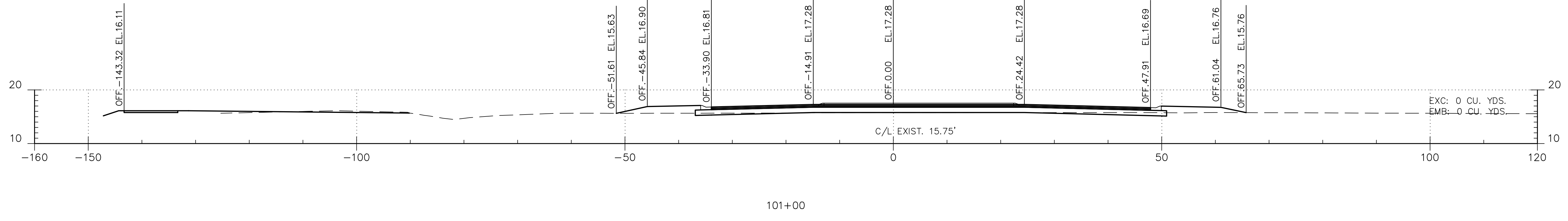
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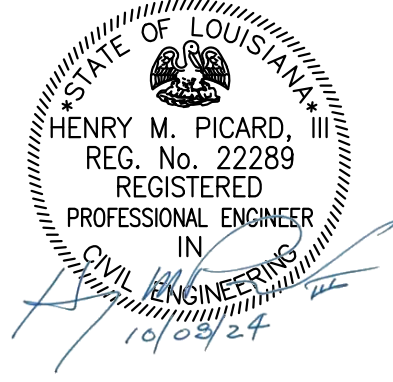
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EMB: 71 CU. YDS.



EXC: 393 CU. YDS.
EMB: 105 CU. YDS.



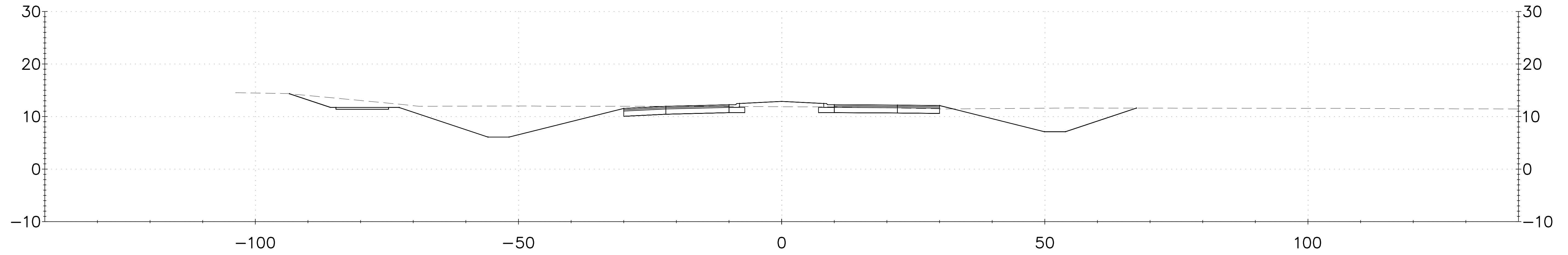
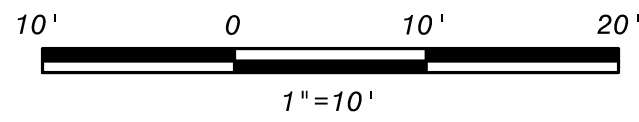
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EMB: 0 CU. YDS.



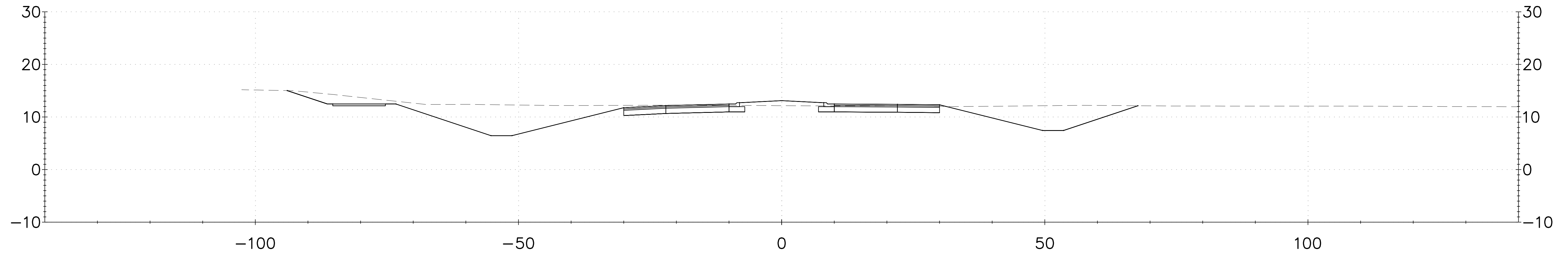
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ST. TAMMANY	2014EN0001
PARISH PROJECT	NO.15.012
BLK.I. PROJECT	
ROADWAY PLANS	CROSS SECTIONS
DESIGNED	CHECKED
DATE	SHEET
Oct. 2024	of
NO.	DATE
REVISION DESCRIPTION	BY

DATE: 10/7/24

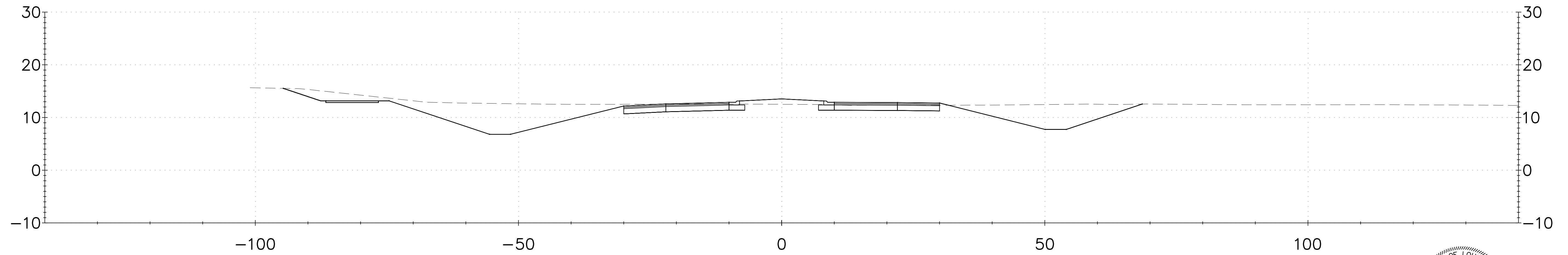
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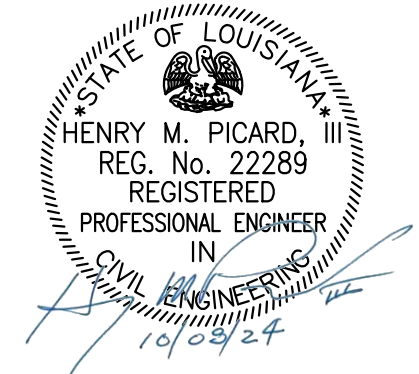
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111+00.00



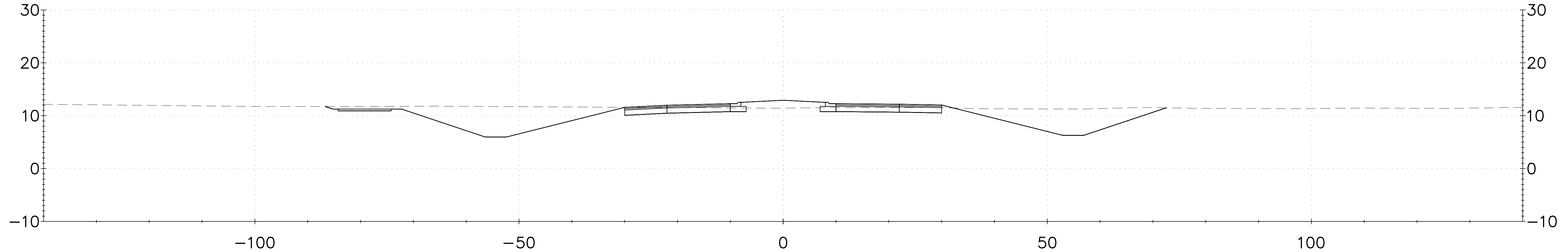
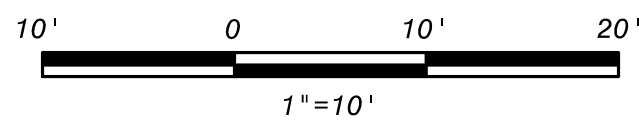
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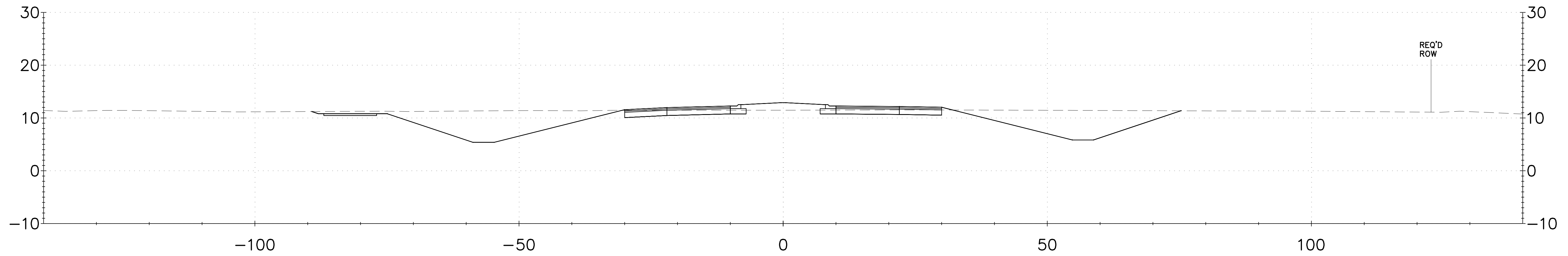
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B.K.I.	PROJECT	NO.15.012
		
MANDEVILLE BYPASS LA 1088 TO US 190		
ROADWAY PLANS		CROSS SECTIONS
		
BK		
DESIGNED	DATE	BY
CHECKED	SHEET	
DETAILED	OF	
CHECKED	Oct. 2024	
REVISION DESCRIPTION		
NO.	DATE	

DATE: 10/7/24

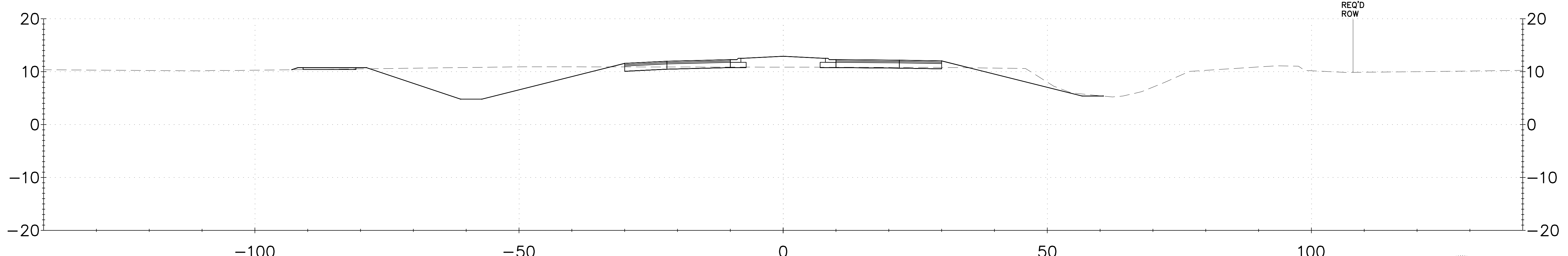
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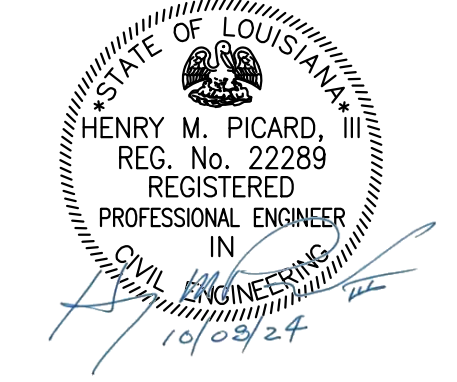
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120+00.00

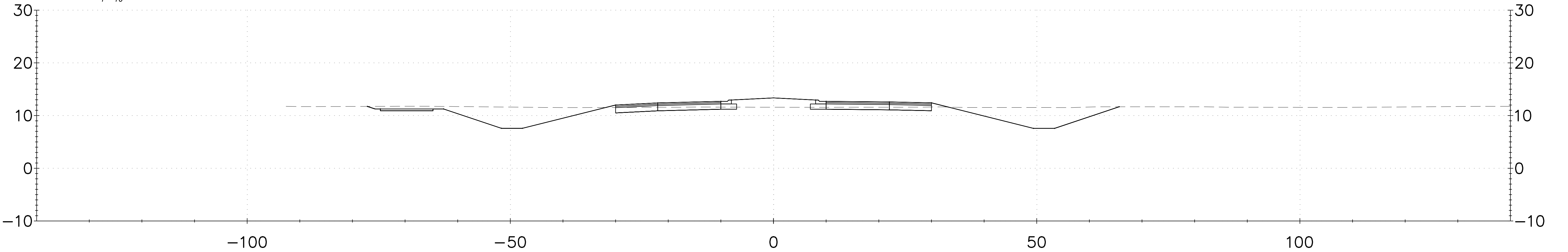
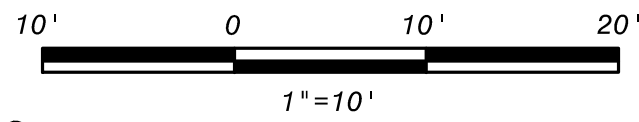


119+00.00

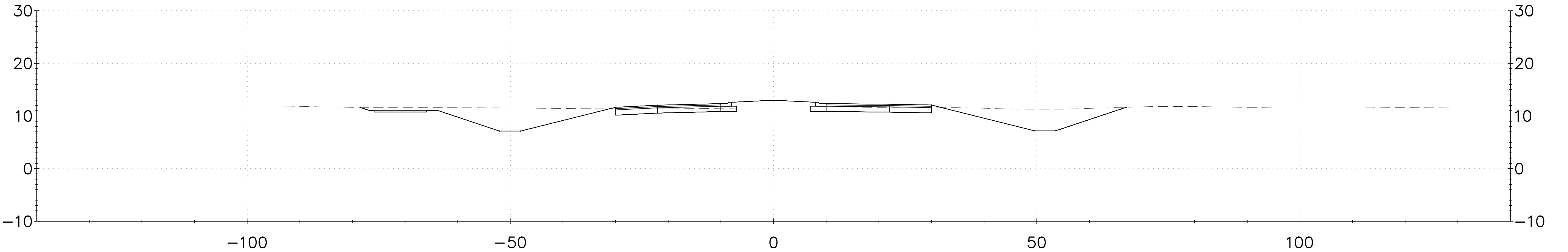


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ST. TAMMANY	2014EN0001	Oct. 2024	of
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MANDEVILLE BYPASS LA 1088 TO US 190			
NO.	DATE	REVISION DESCRIPTION	BY

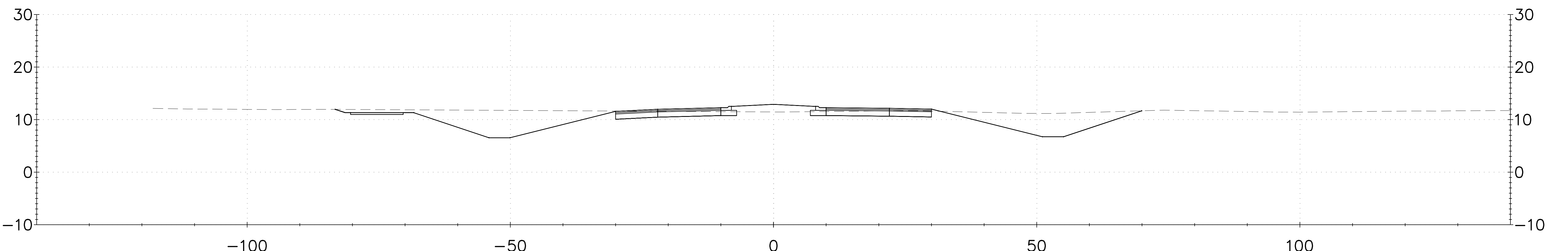
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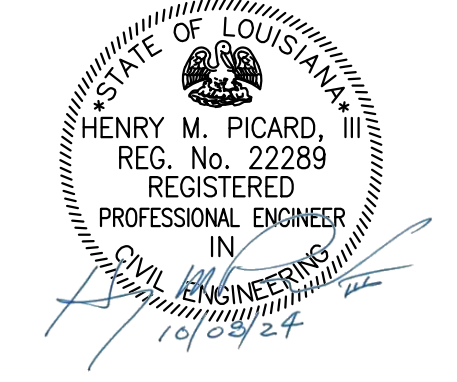
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123+00.00



122+00.00



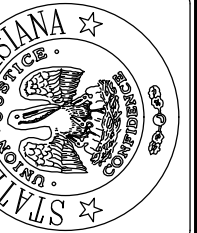
SHEET NUMBER 412

ST. TAMMANY
2014EN0001
NO. 15.012

PARISH PROJECT
PARISH PROJECT
B.C.I. PROJECT



MANDEVILLE BYPASS
LA 1088 TO US 190
ROADWAY PLANS
CROSS SECTIONS



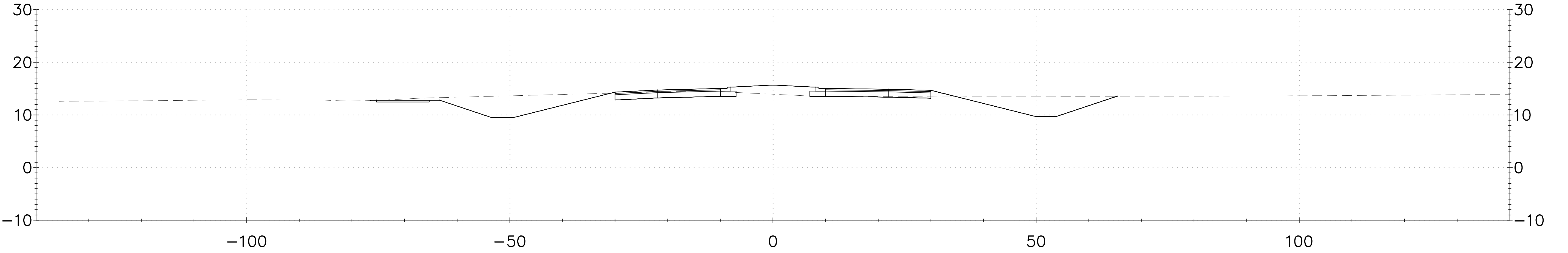
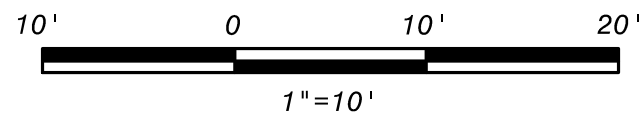
Oct. 2024 of

DESIGNED CHECKED
CHECKED
DATE SHEET

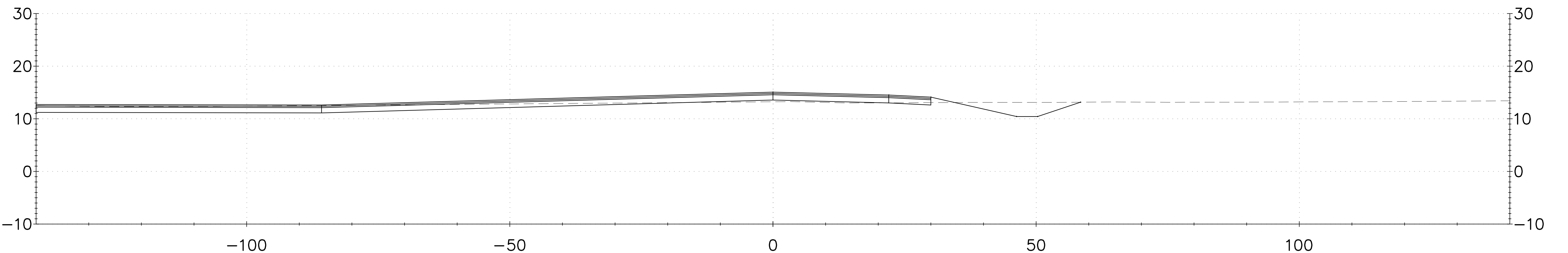
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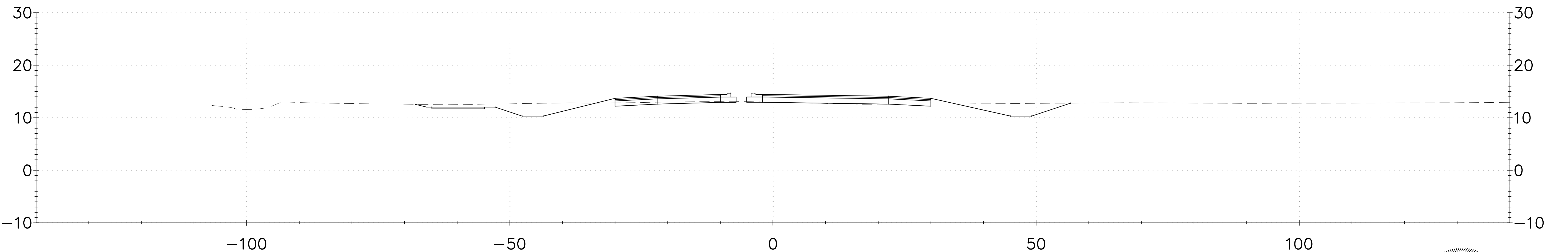
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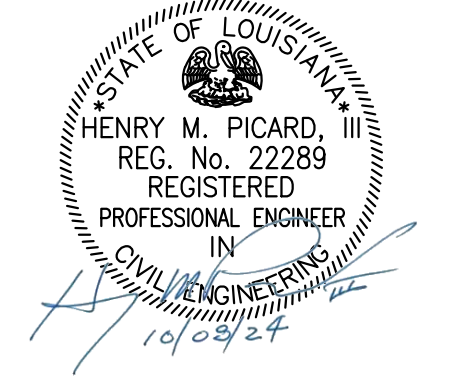
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129+00.00



128+00.00



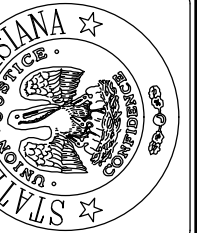
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ST. TAMMANY
2014EN0001
NO. 15.012

PARISH PROJECT
B.K.I. PROJECT



MANDEVILLE BYPASS
LA 1088 TO US 190
ROADWAY PLANS
CROSS SECTIONS



Oct. 2024 of

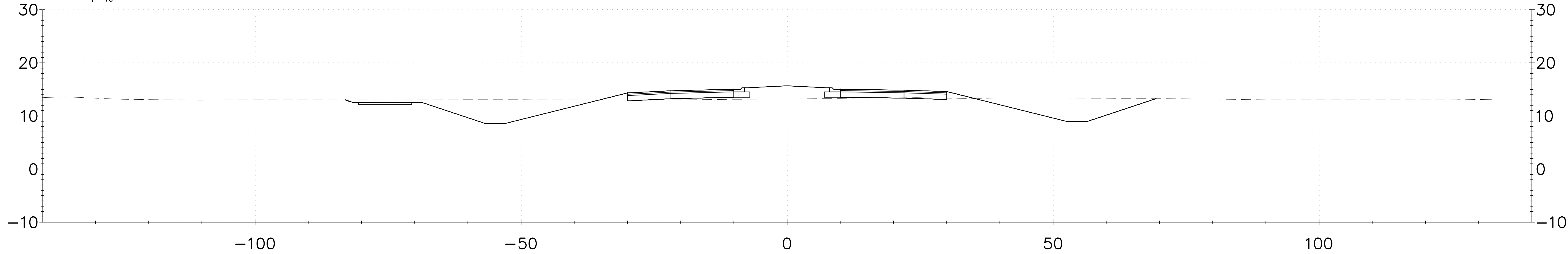
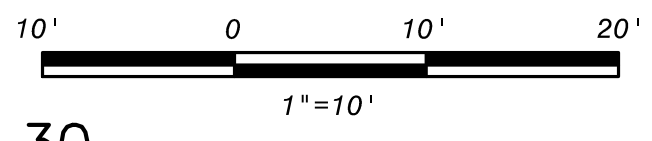
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DATE SHEET

NO.	DATE	REVISION DESCRIPTION	BY

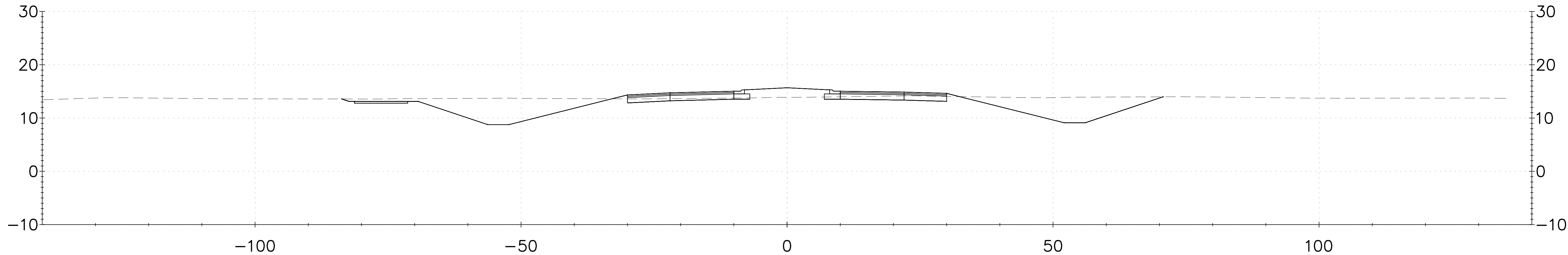
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DATE: 10/7/24

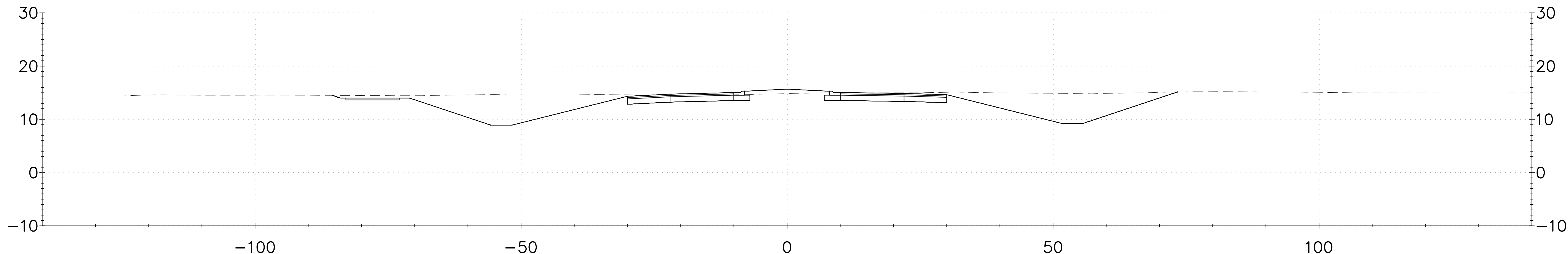
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136+00.00



135+00.00



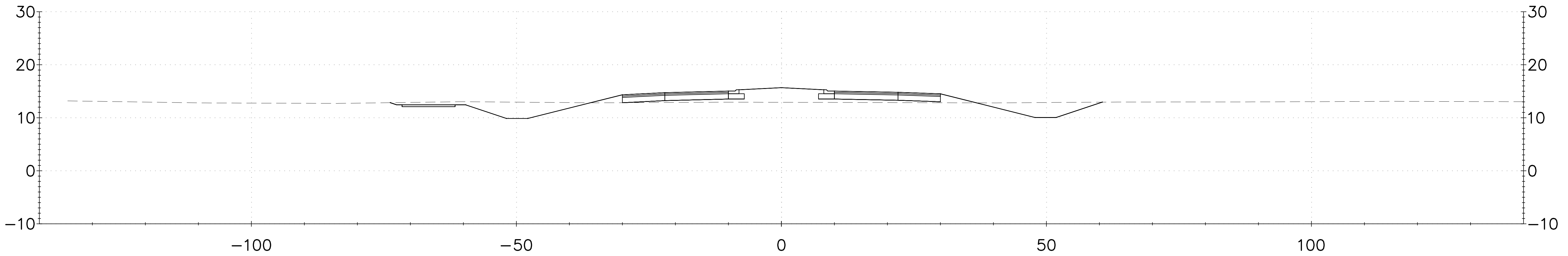
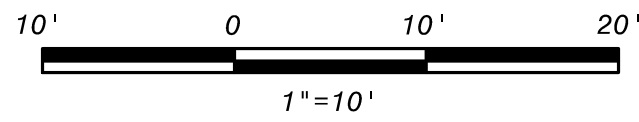
134+00.00

STATE OF LOUISIANA
 HENRY M. PICARD, III
 REG. No. 22289
 REGISTERED
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/24

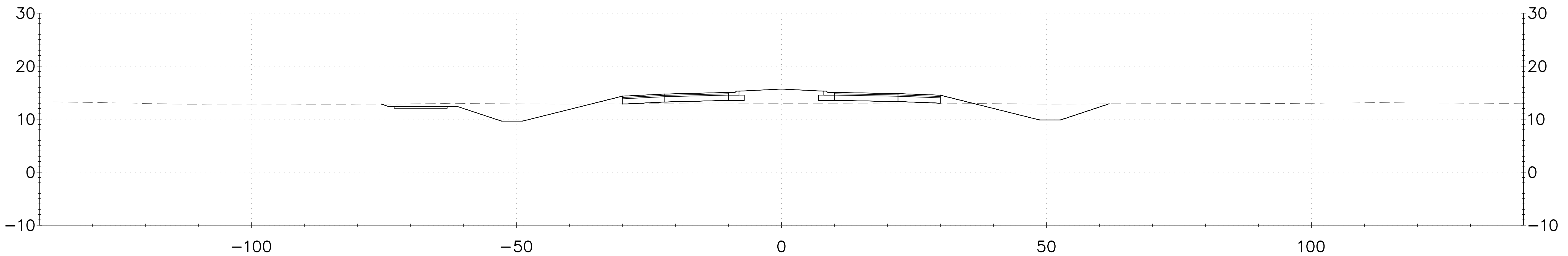
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B.K.I.	PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190 CROSS SECTIONS		
DESIGNED	CHECKED	DATE
CHECKED	DATE	SHEET
		Oct. 2024
		of
		BY
		REVISION DESCRIPTION
		NO.
		DATE

DATE: 10/7/24

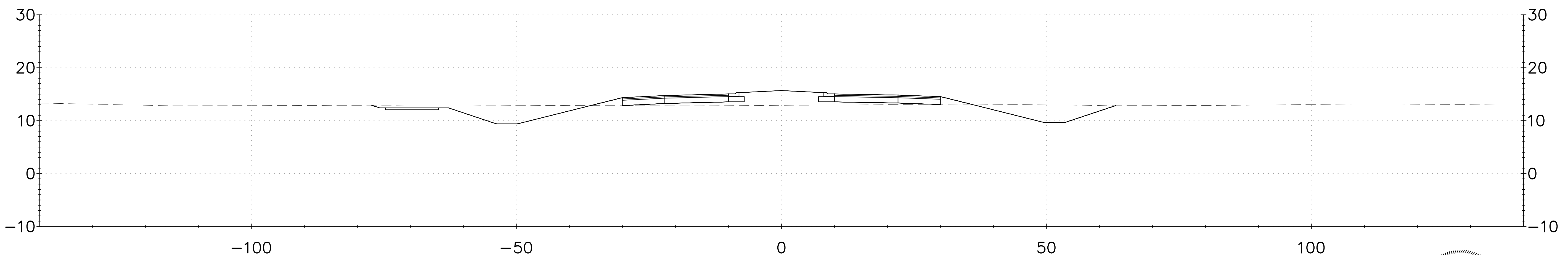
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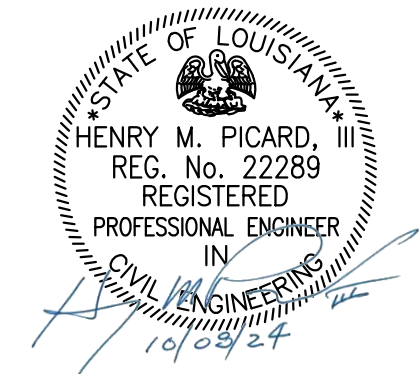
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144+00.00

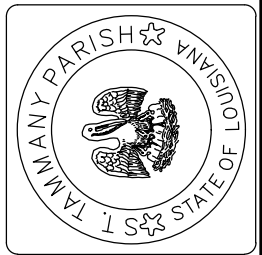


143+00.00



SHEET NUMBER 419

ST. TAMMANY
2014EN0001
NO.15.012



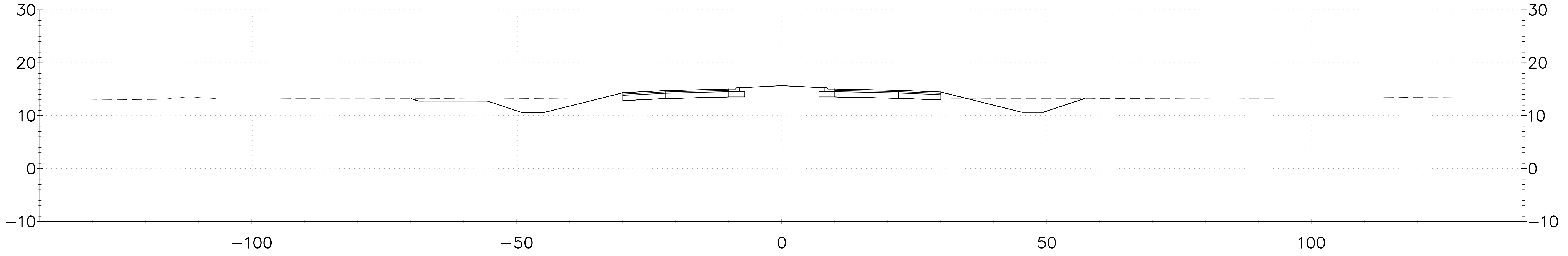
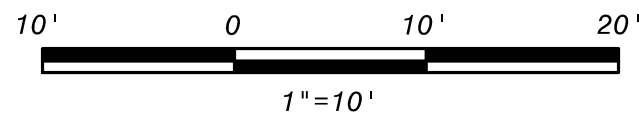
MANDEVILLE BYPASS
LA 1088 TO US 190
CROSS SECTIONS



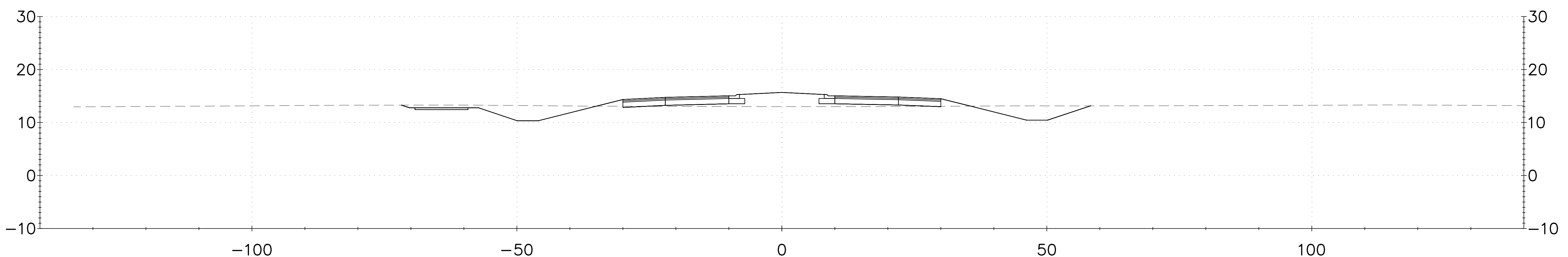
DESIGNED
CHECKED
DATE SHEET
Oct. 2024
of

NO.	DATE	REVISION DESCRIPTION	BY

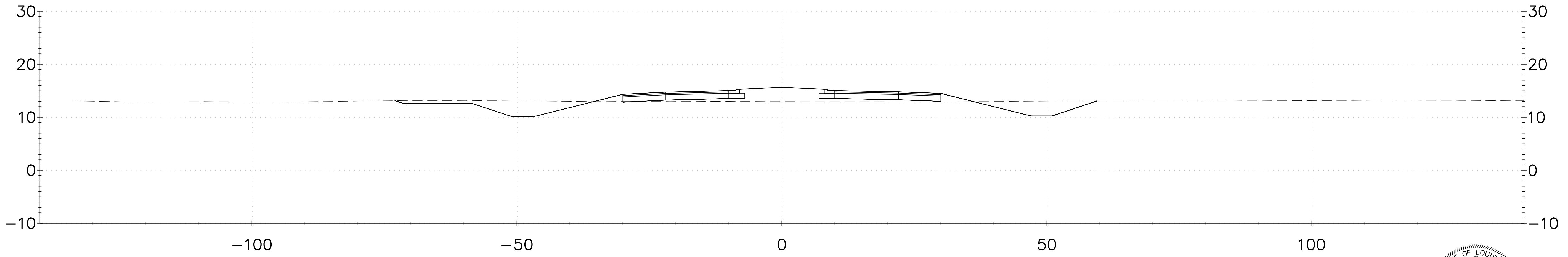
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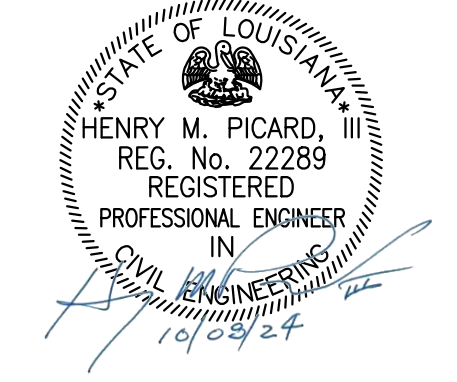
148+00.00



147+00.00



146+00.00



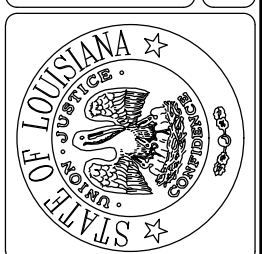
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SHEET NUMBER 420

ST. TAMMANY
 2014EN0001
 NO.15.012



MANDEVILLE BYPASS
 LA 1088 TO US 190
 CROSS SECTIONS

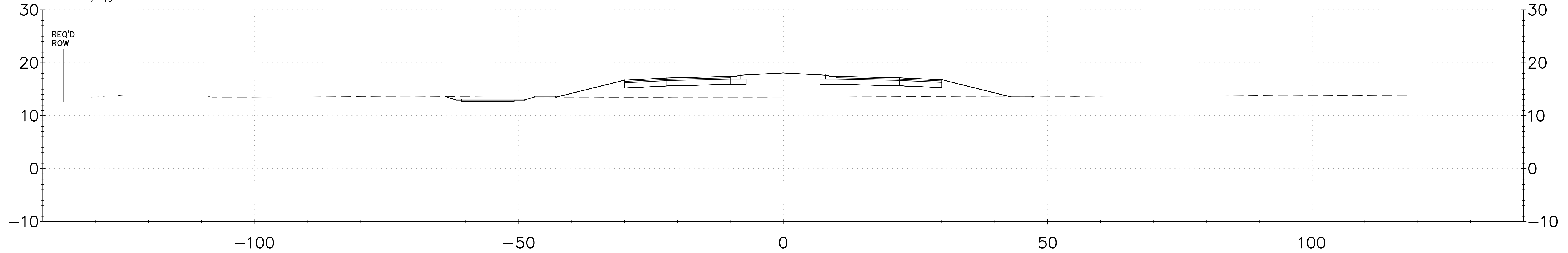
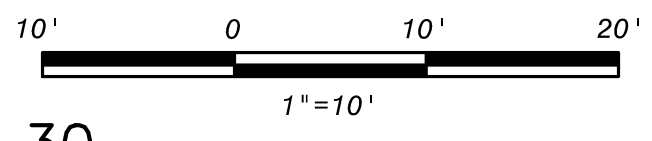


DESIGNED
 CHECKED
 DETAILED
 CHECKED
 DATE SHEET
 Oct. 2024 of

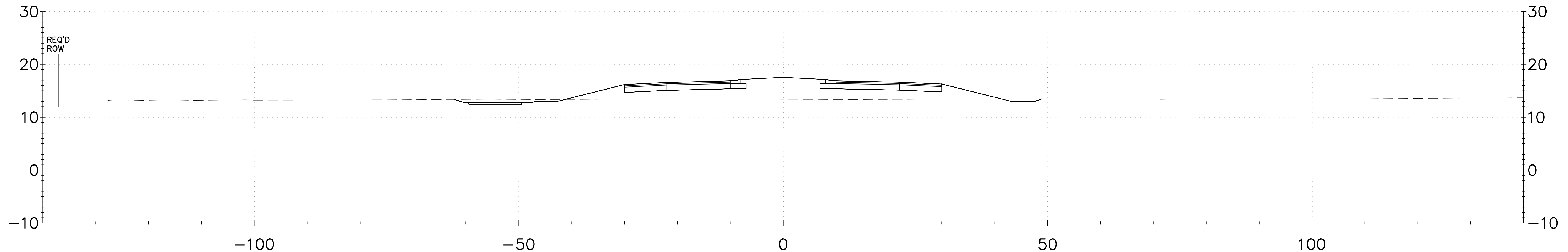
NO.	DATE	REVISION DESCRIPTION	BY

DATE: 10/7/24

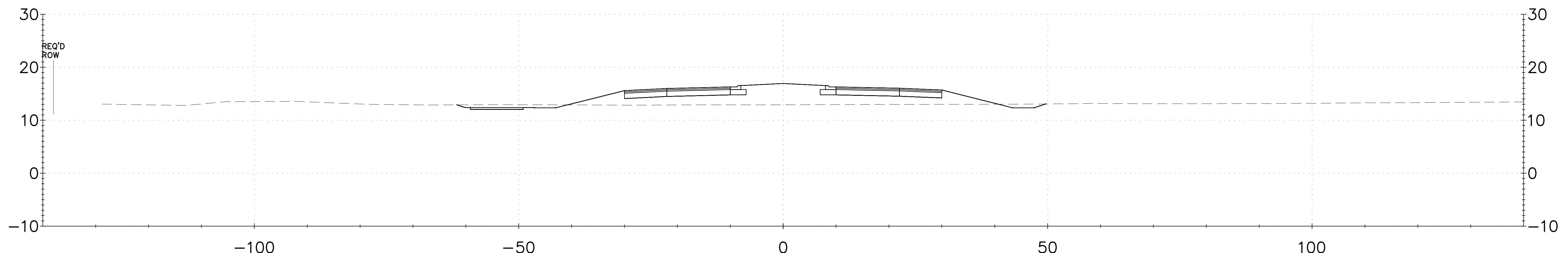
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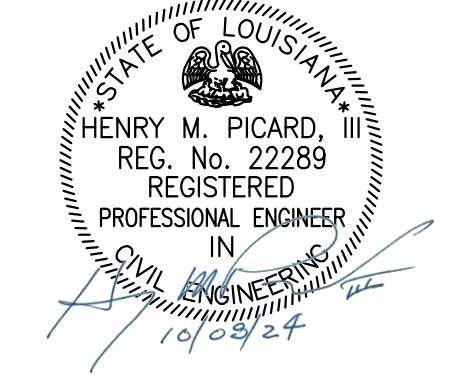
154+00.00



153+00.00



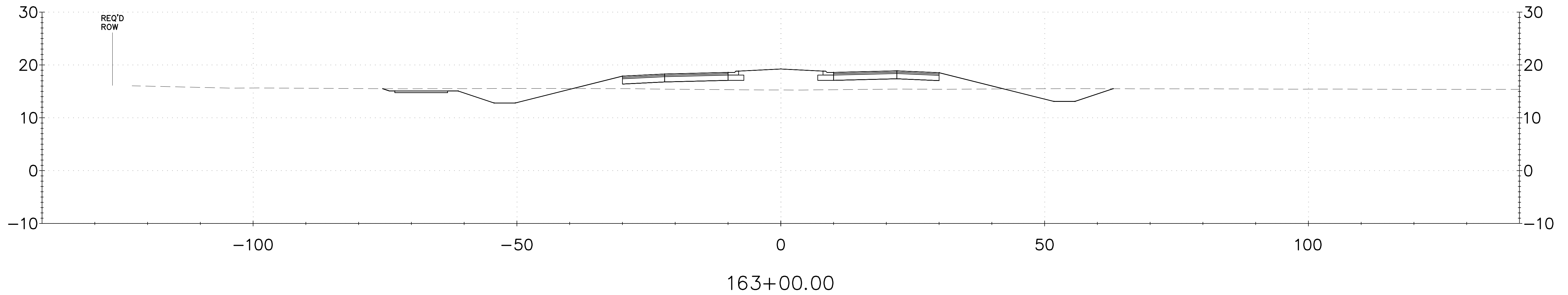
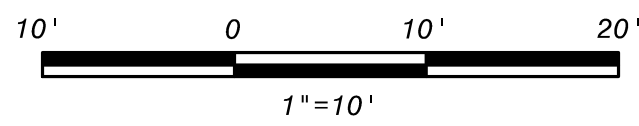
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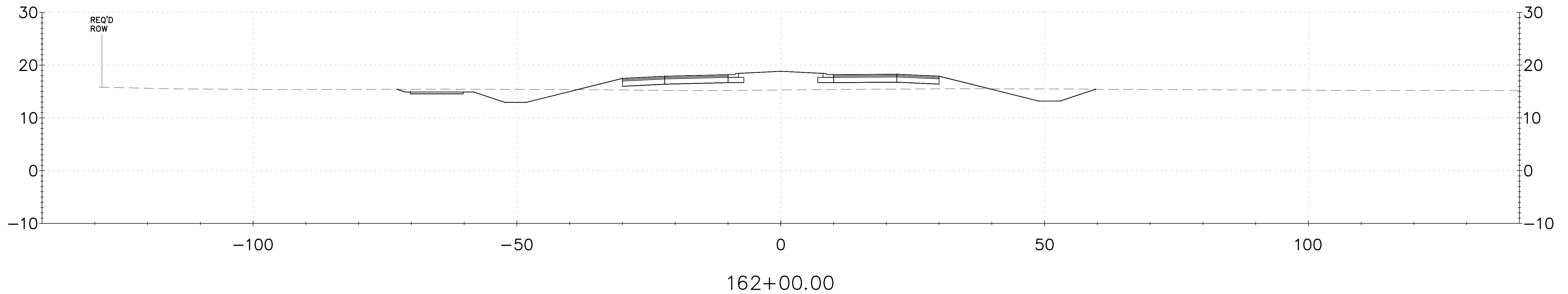
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PARISH	PROJECT	NO. 15.012
ST. TAMMANY	2014EN0001	
ROADWAY PLANS		CROSS SECTIONS
STATE OF LOUISIANA		
MANDEVILLE BYPASS		
LA 1088 TO US 190		
DESIGNED	CHECKED	DATE
		Oct. 2024
BY	REVISION DESCRIPTION	
NO.	DATE	

DATE: 10/7/24

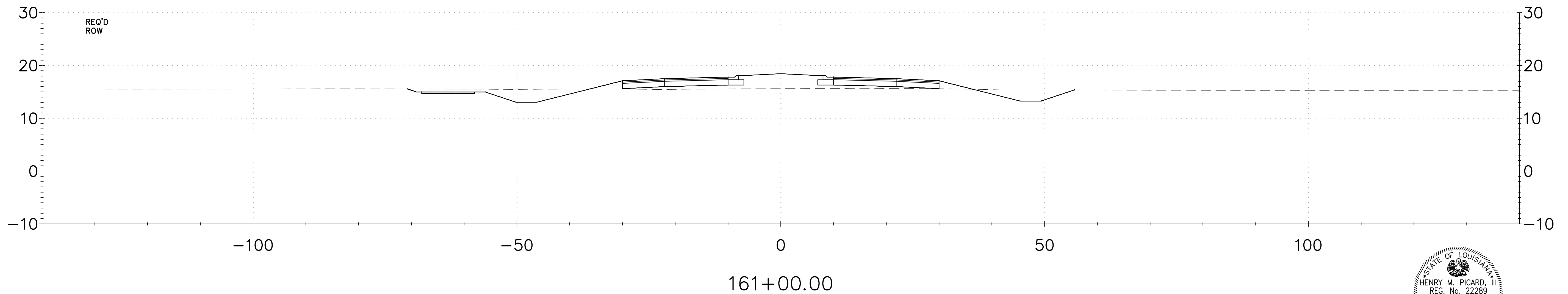
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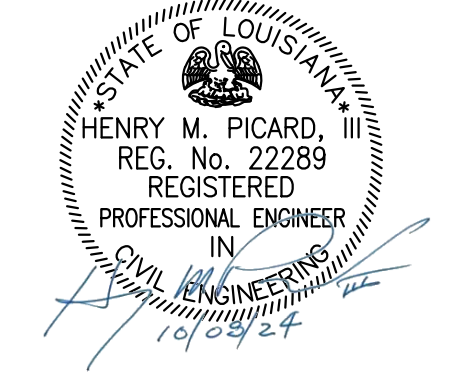
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162+00.00



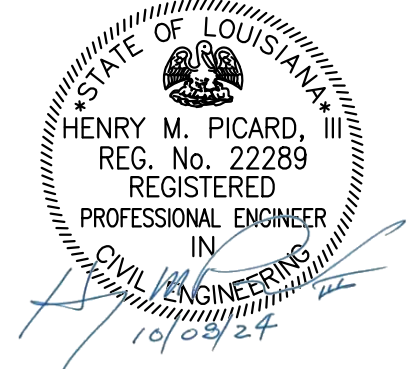
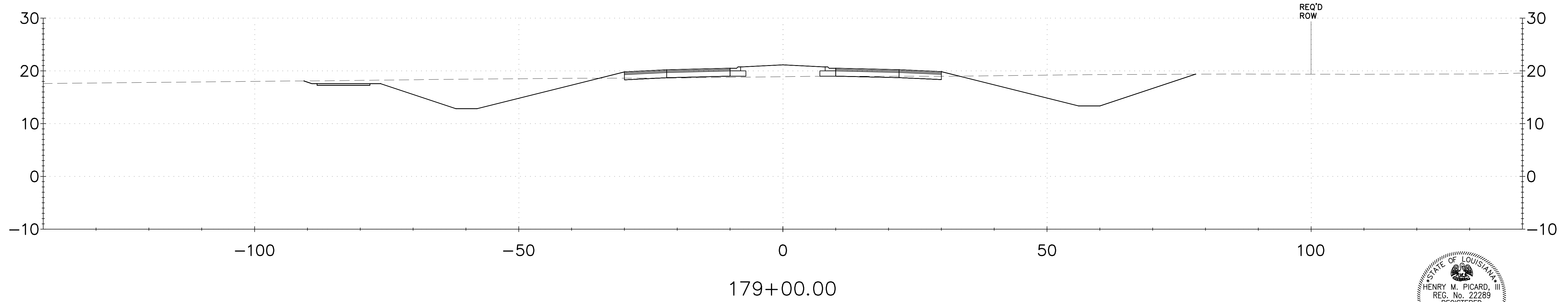
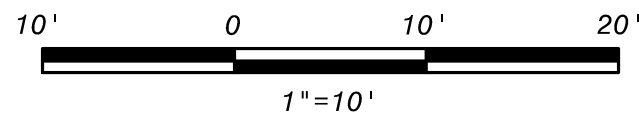
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SHEET NUMBER		425	
PARISH	PROJECT	PARISH	PROJECT
ST. TAMMANY	2014EN0001	ST. TAMMANY	2014EN0001
ROADWAY PLANS	CROSS SECTIONS	B.K.I.	PROJECT
MANDEVILLE BYPASS LA 1088 TO US 190		NO. 15.012	
DESIGNED	CHECKED	DATE	SHEET
			Oct. 2024
REVISION DESCRIPTION		BY	
NO.	DATE		

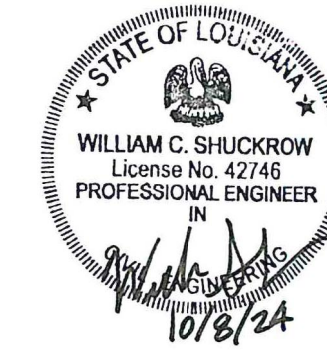
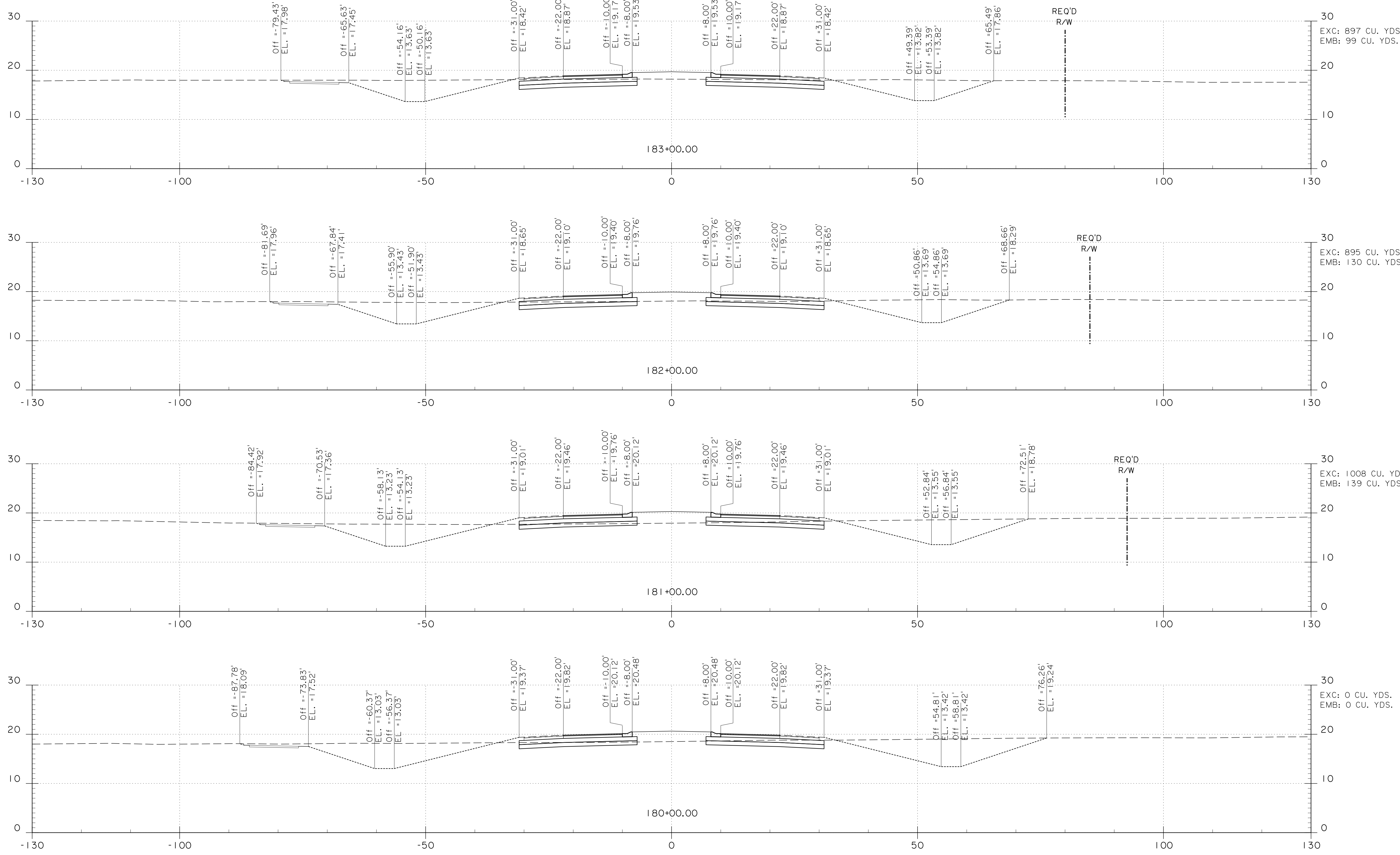
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SHEET NUMBER		431	
PARISH		ST. TAMMANY	
PARISH PROJECT		2014EN0001	
B.K.I. PROJECT		NO.15.012	
ROADWAY PLANS		CROSS SECTIONS	
DESIGNED		BY	
CHECKED		DATE	
DETAILED		REVISION DESCRIPTION	
CHECKED		NO.	
DATE		DATE	
SHEET		O.C.T. 2024	
		OF	





SHEET NUMBER 432

ST. TAMMANY
 2014EN0001
 NO. 15.012



MANDEVILLE BY PASS
 LA 1088 TO US 190
 CROSS SECTIONS MBP



BKI

DESIGNED WCS
 CHECKED DSY
 DETAILED JKS
 CHECKED DSY
 DATE 10-27-23
 SHEET 32 OF 62

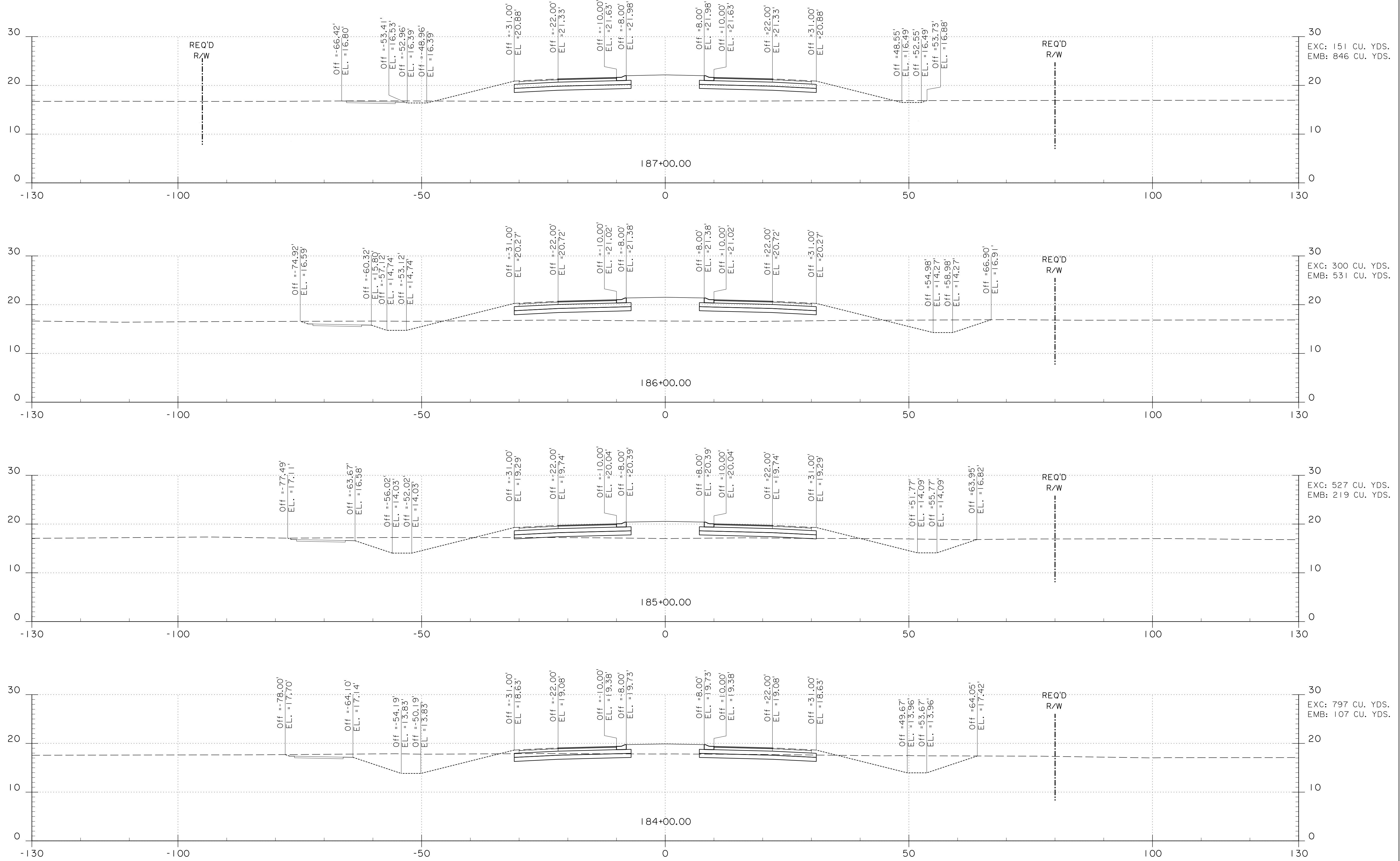
NO.	DATE	REVISION DESCRIPTION	BY

NOTES: PRIOR TO WORKING IN VICINITY OF 16" PARKWAY PIPELINE, CONTACT JODY LAMBRIGHT AT 409-839-3518 (OFFICE), 409-673-7612 (CELL)

PRIOR TO WORKING IN VICINITY OF 30" GULFSOUTH PIPELINE, CONTACT LAMAR GARLOTTE AT 228-596-5788.

PRIOR TO WORKING IN VICINITY OF 12" ENTERPRISE PIPELINE (TRI-STATES NGL PIPELINE LLC), CONTACT ENTERPRISE LAND ENCROACHMENT GROUP AT 866-901-8170.

WARNING!
HIGH PRESSURE PIPELINE(S)
EXCAVATION AND/OR CONSTRUCTION PROHIBITED WITHOUT
WRITTEN PERMISSION FROM TRI-STATES NGL PIPELINE LLC.



XREF:

10/9/2024

XSEC_BYPASS_12629.dgn

SHEET NUMBER 433

ST. TAMMANY
2014EN0001
NO.15.012



MANDEVILLE BY PASS
LA 1088 TO US 190
CROSS SECTIONS MBP



DESIGNED WCS
CHECKED DSY
DATE 10-27-23
SHEET 33 OF 62

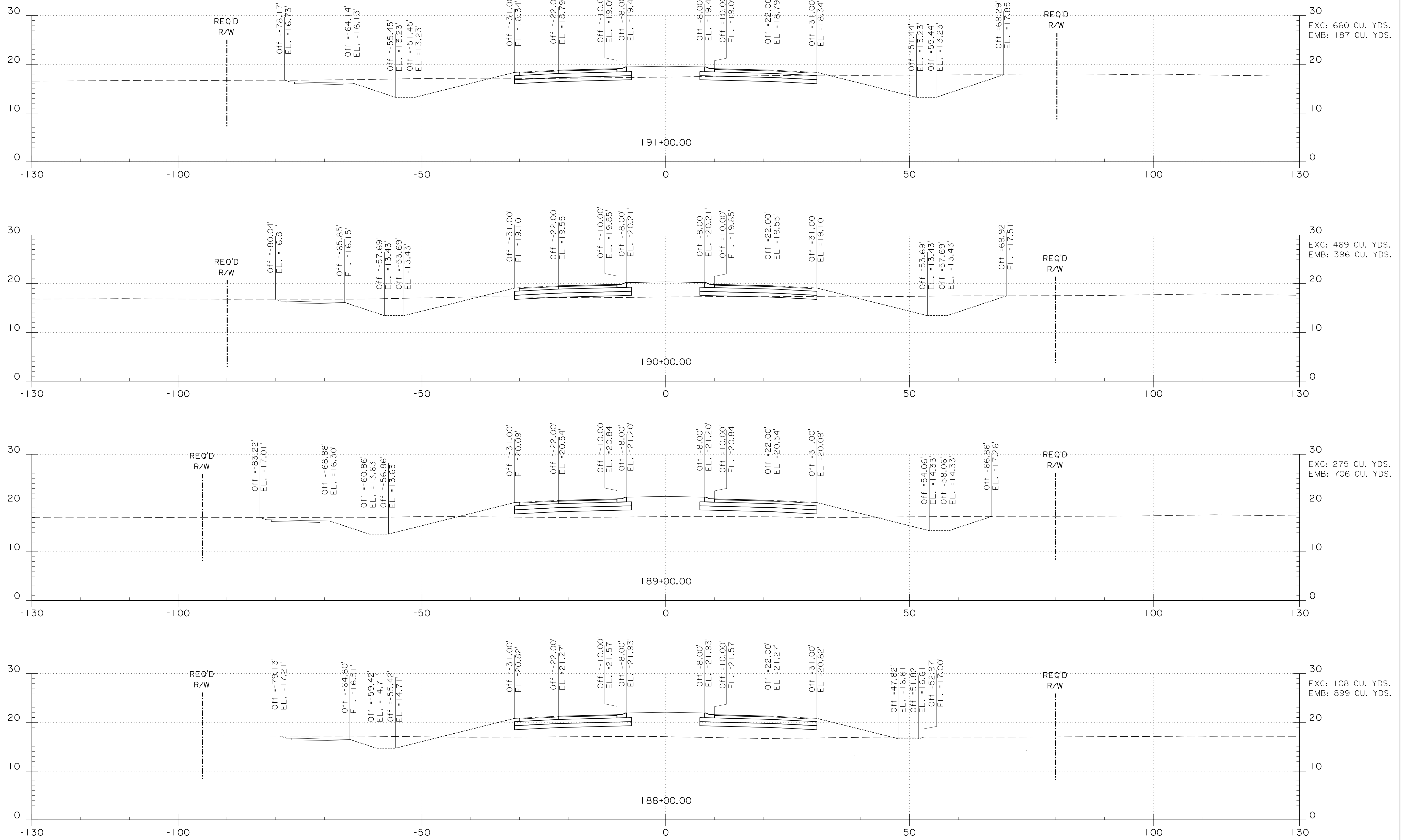
NO.	DATE	REVISION DESCRIPTION	BY

NOTES: PRIOR TO WORKING IN VICINITY OF 16" PARKWAY PIPELINE, CONTACT JODY LAMBRIGHT AT 409-839-3518 (OFFICE), 409-673-7612 (CELL)

PRIOR TO WORKING IN VICINITY OF 30" GULFSOUTH PIPELINE, CONTACT LAMAR GARLOTTE AT 228-596-5788.

PRIOR TO WORKING IN VICINITY OF 12" ENTERPRISE PIPELINE (TRI-STATES NGL PIPELINE LLC), CONTACT ENTERPRISE LAND ENCROACHMENT GROUP AT 866-901-8170.

WARNING!
HIGH PRESSURE PIPELINE(S)
EXCAVATION AND/OR CONSTRUCTION PROHIBITED WITHOUT
WRITTEN PERMISSION FROM TRI-STATES NGL PIPELINE LLC.

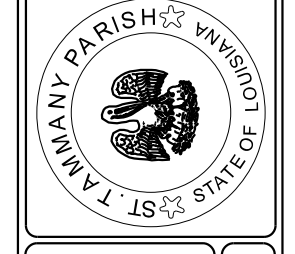
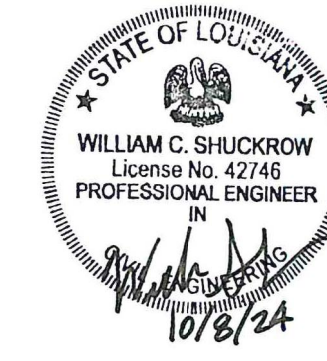
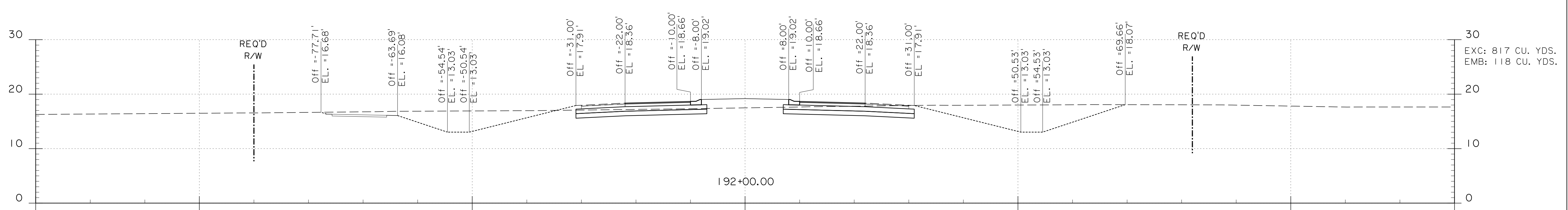
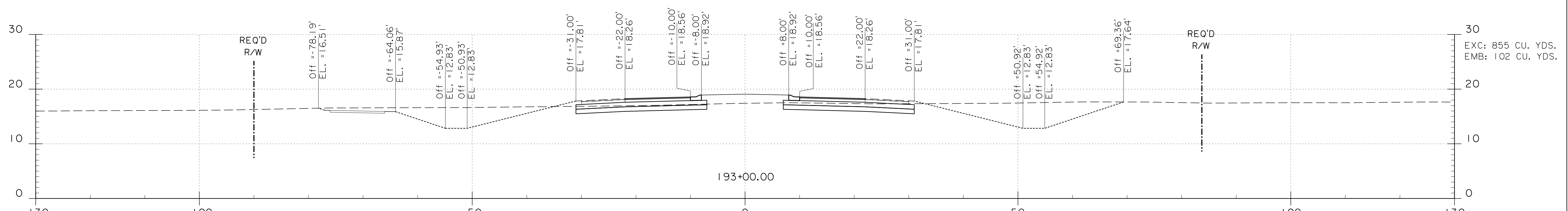
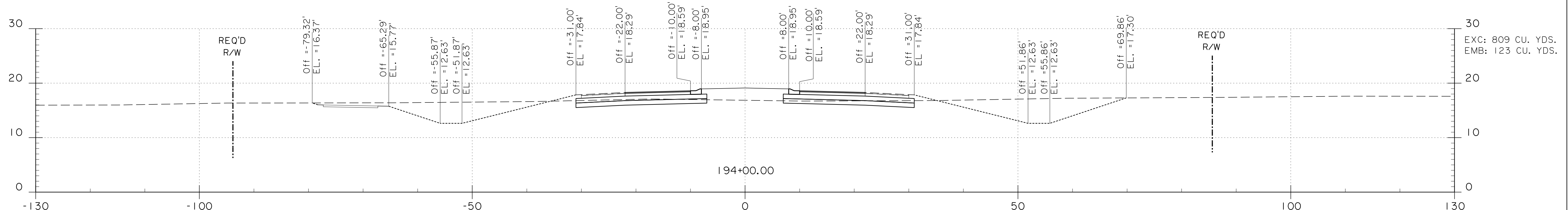
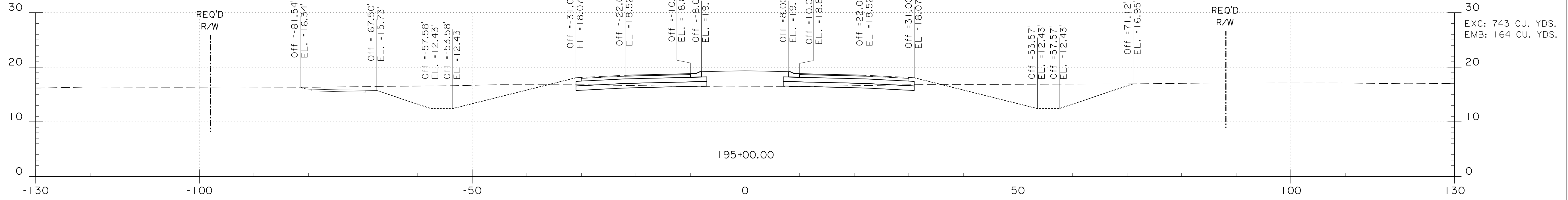


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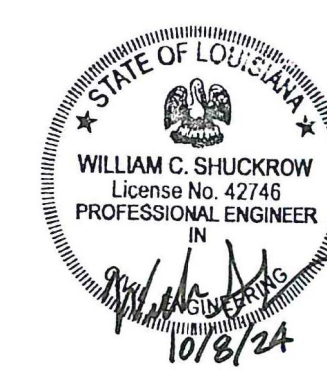
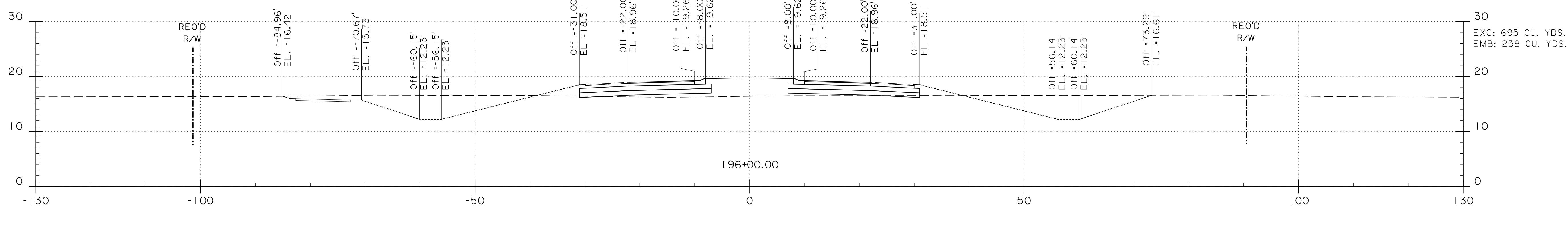
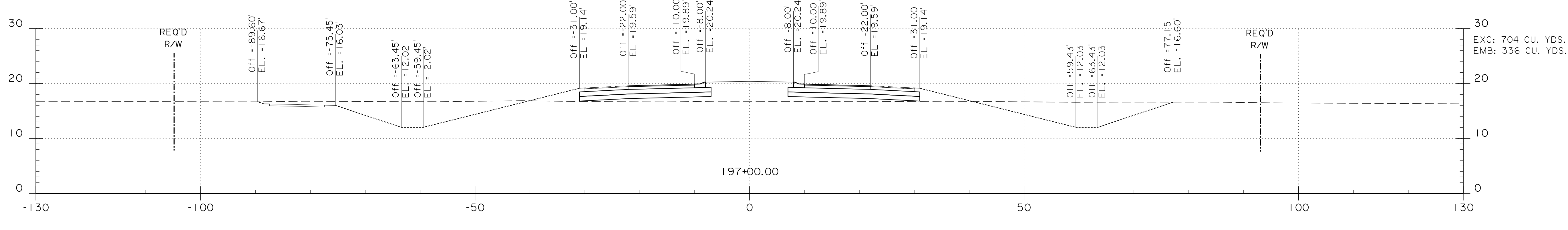
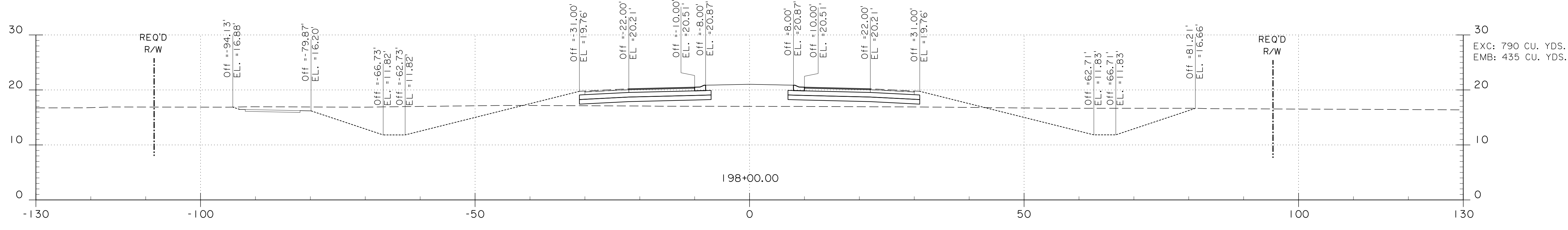
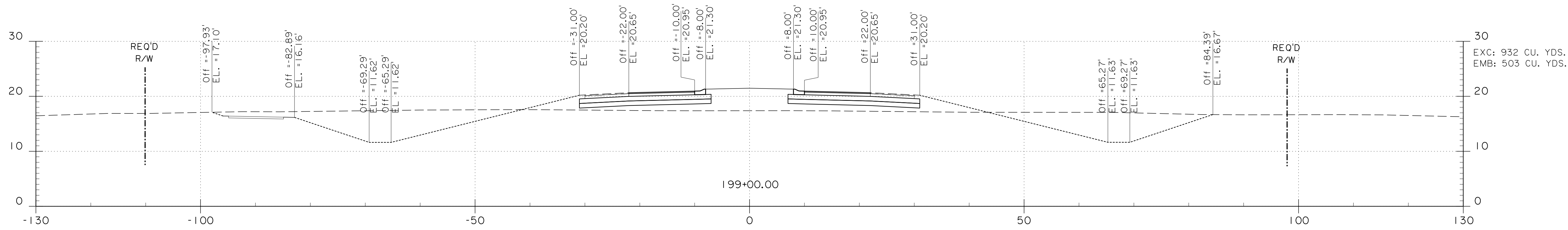
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SHEET NUMBER	434
ST. TAMMANY	2014EN0001
PARISH PROJECT	NO. 15.012
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS CROSS SECTIONS MBP	
DESIGNED	WCS
CHECKED	DSY
DATE	10-27-23
BY	34 OF 62
NO.	REVISION DESCRIPTION



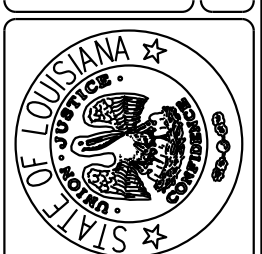
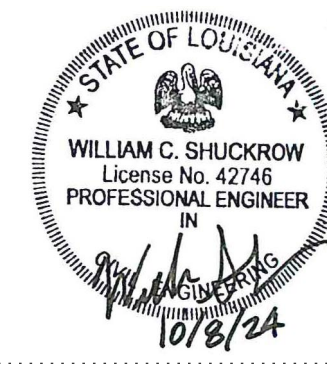
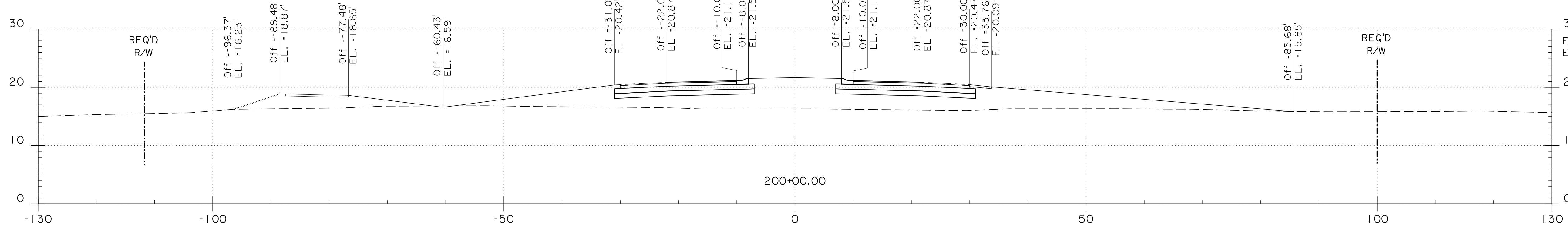
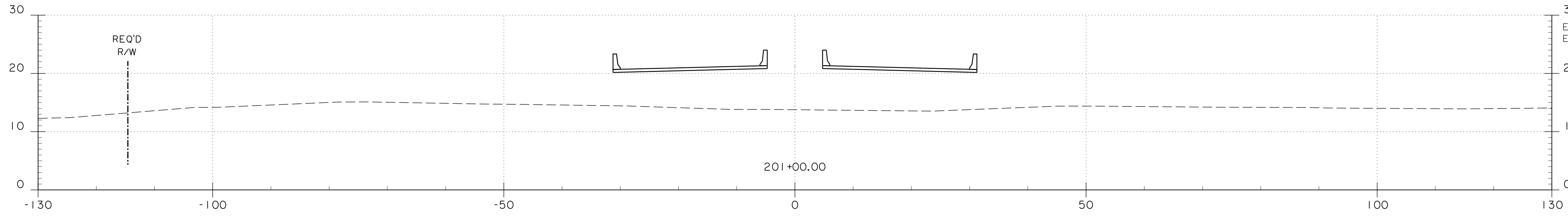
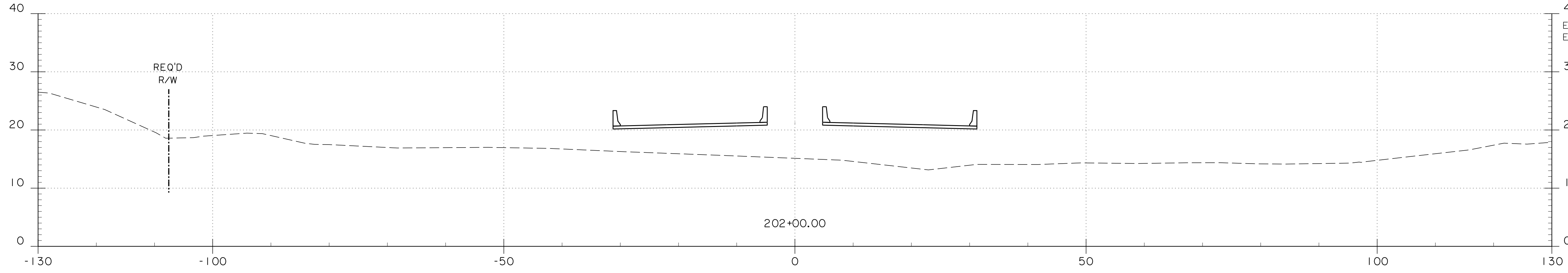
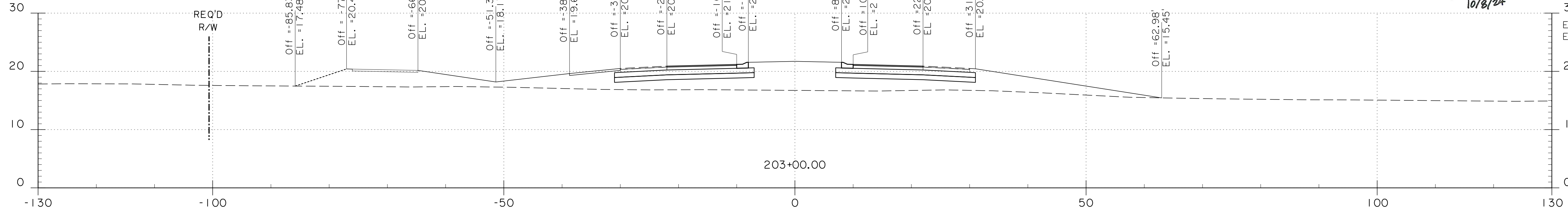
DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	35 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



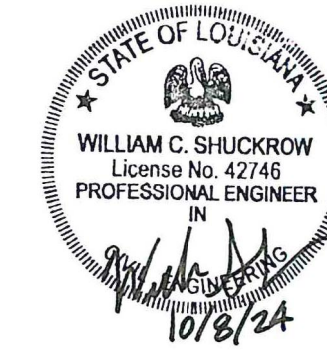
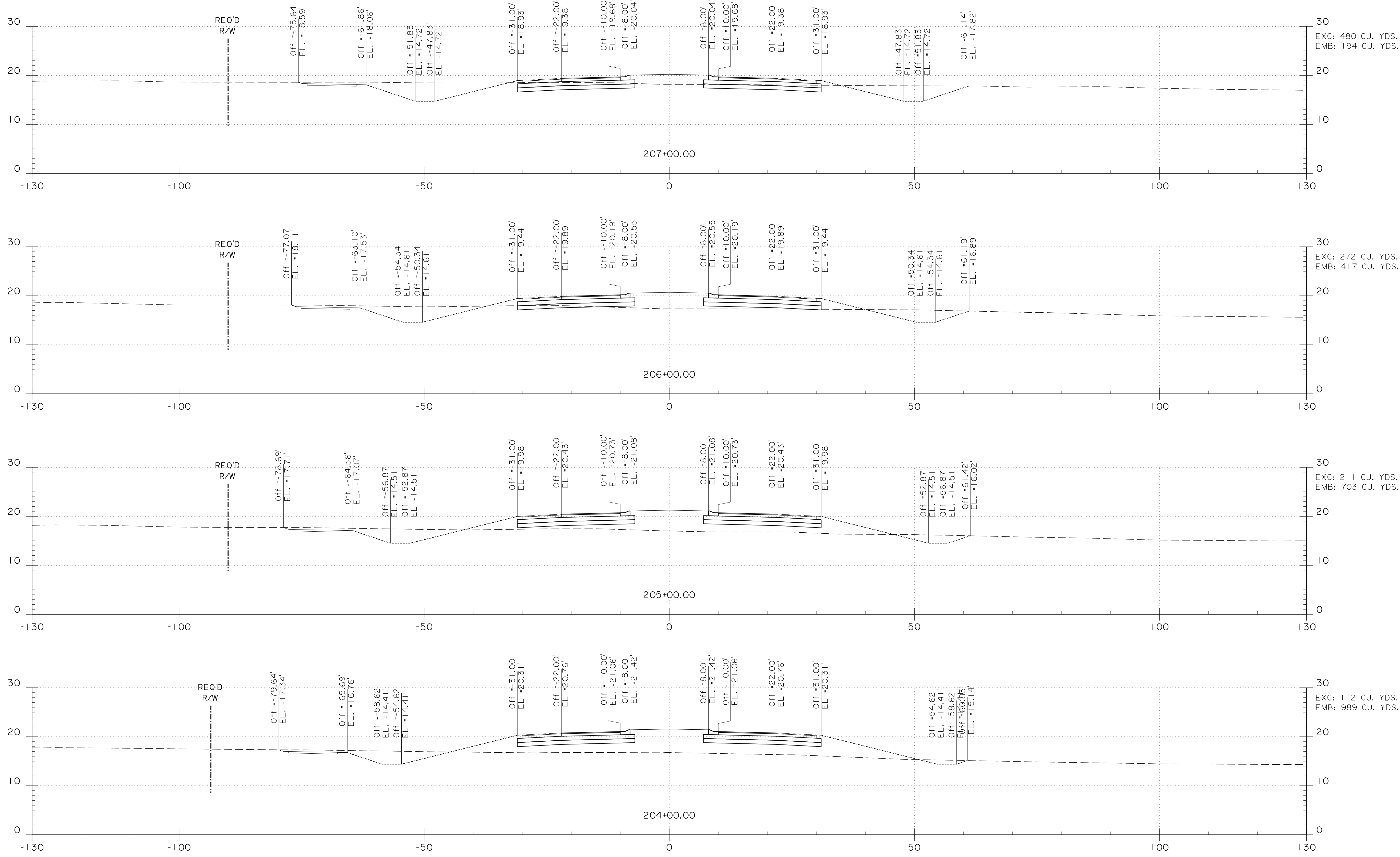
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CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	36 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



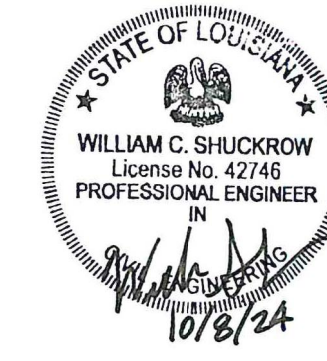
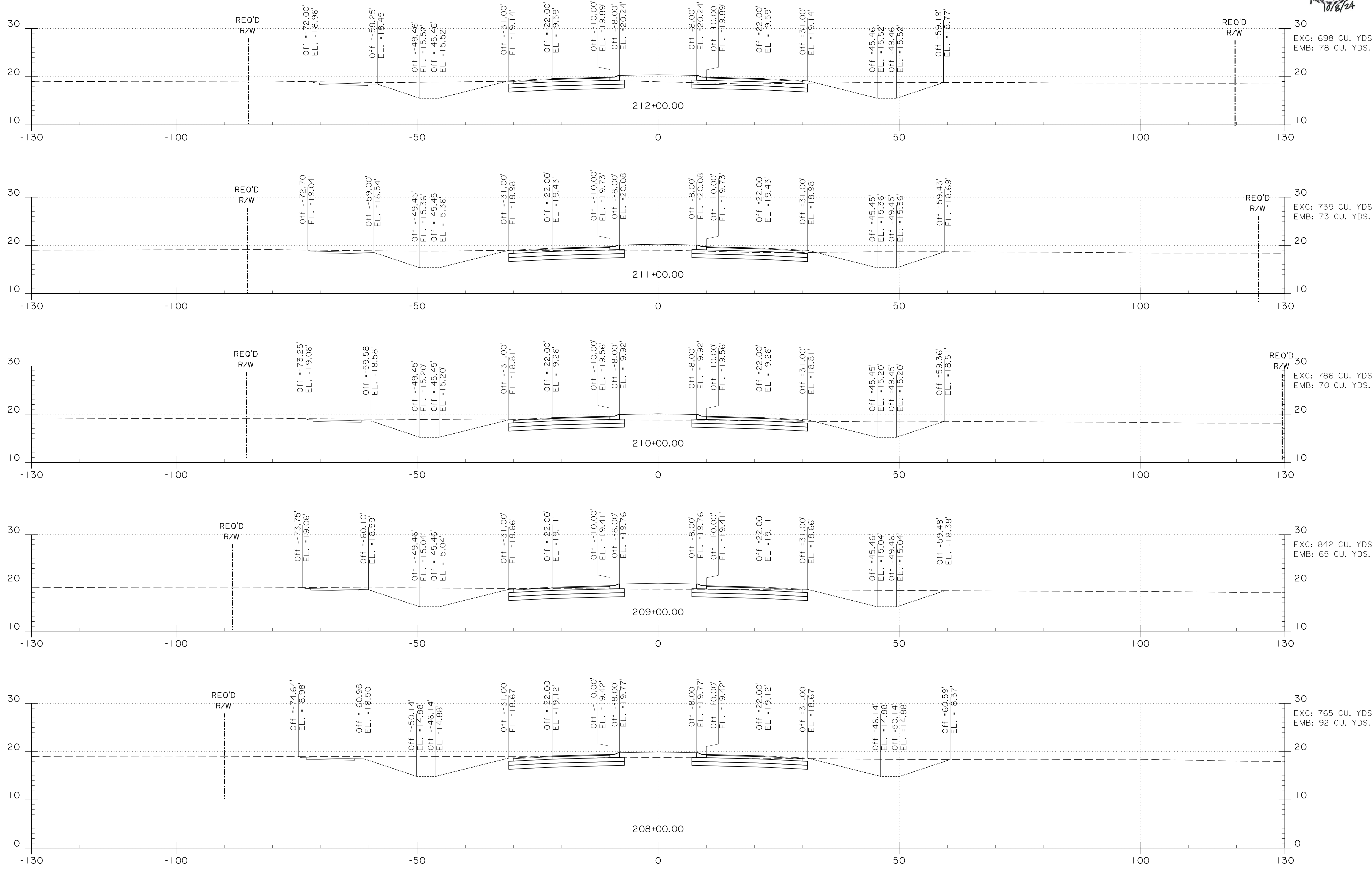
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DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	37 OF 62

NO.	DATE	REVISION DESCRIPTION	BY

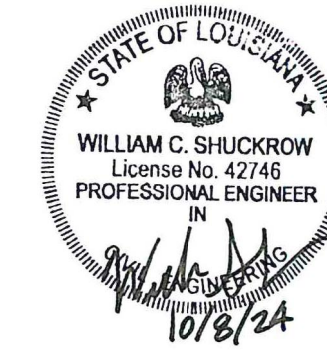
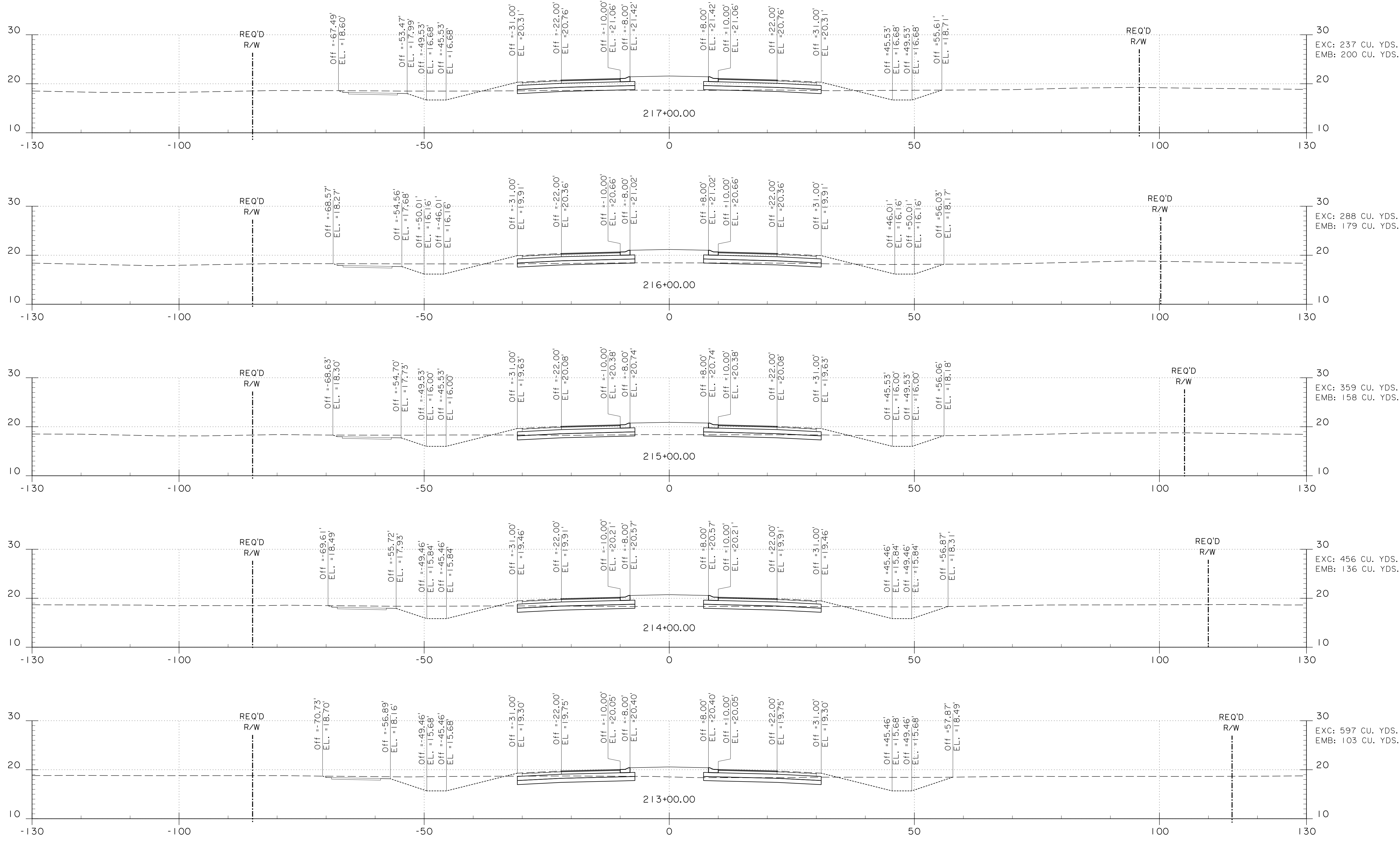


DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	38 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



SHEET NUMBER 439	
ST. TAMMANY	2014EN0001
PARISH PROJECT	BK1 PROJECT
NO. 15.012	
MANDEVILLE BY PASS LA 1088 TO US 190 CROSS SECTIONS MBP	
DESIGNED WCS	CHECKED DSY
DATE 10-27-23	SHEET 39 OF 62
NO.	DATE
	REVISION DESCRIPTION
	BY



SHEET NUMBER 440

ST. TAMMANY
 2014EN0001
 NO. 15.012

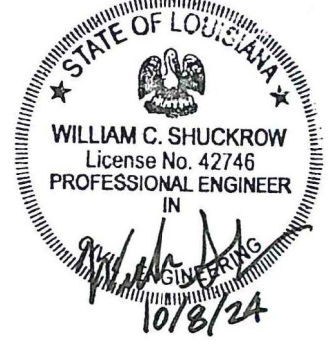
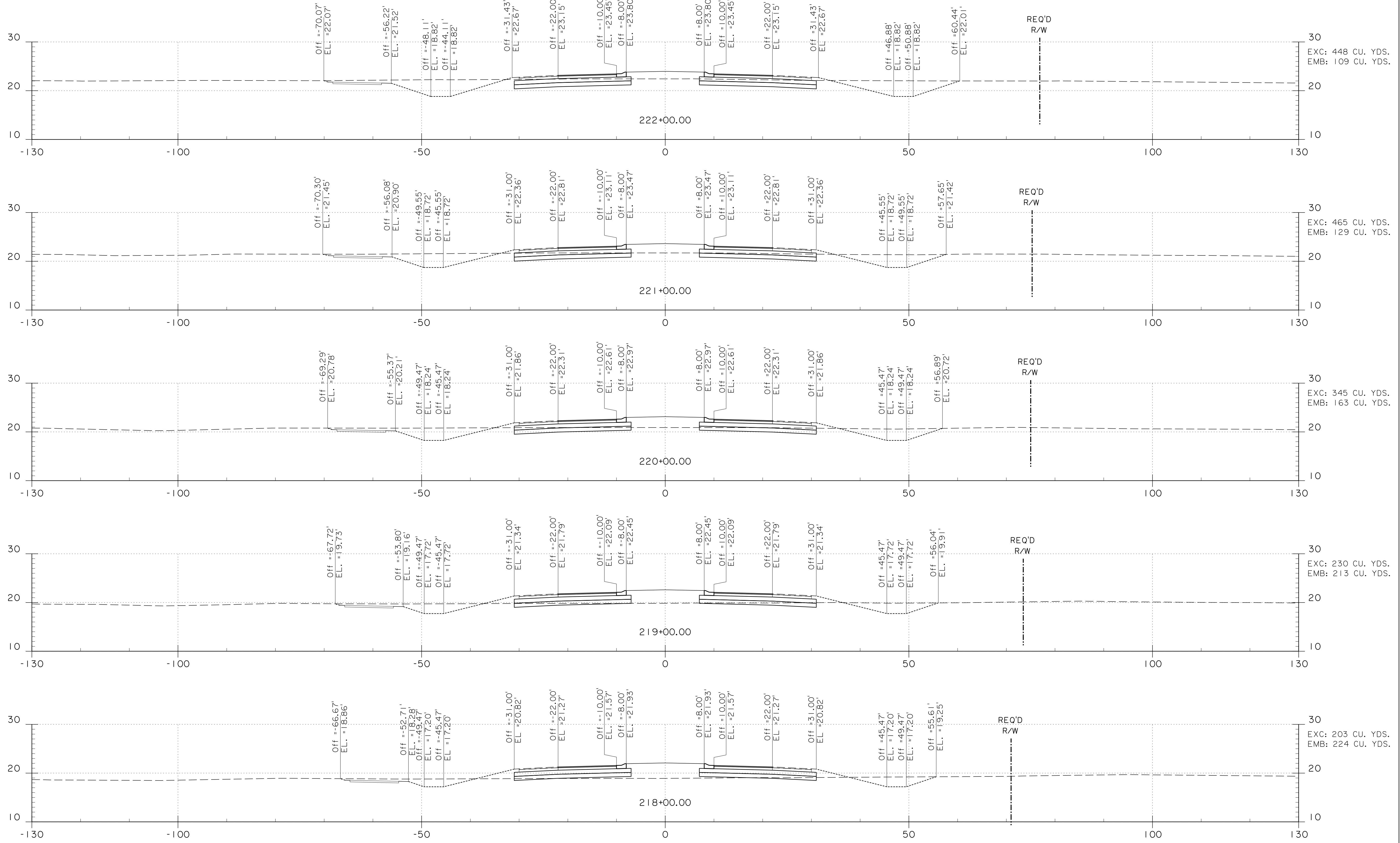


MANDEVILLE BY PASS
 LA 1088 TO US 190
 CROSS SECTIONS MBP



DESIGNED WCS
 CHECKED DSY
 DETAILED JKS
 CHECKED DSY
 DATE 10-27-23
 SHEET 40 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



SHEET NUMBER 441

ST. TAMMANY
 PROJECT 2014EN0001
 B.K.L. PROJECT NO. 15.012



MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS CROSS SECTIONS MBP



DESIGNED WCS

CHECKED DSY

DATE 10-27-23

SHEET 41 OF 62

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REVISION DESCRIPTION

NO. DATE

NO. DATE

NO. DATE

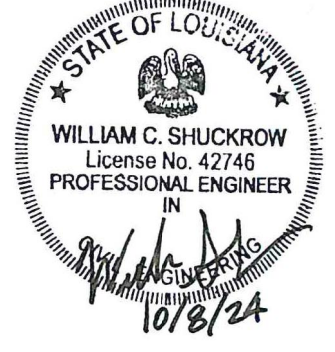
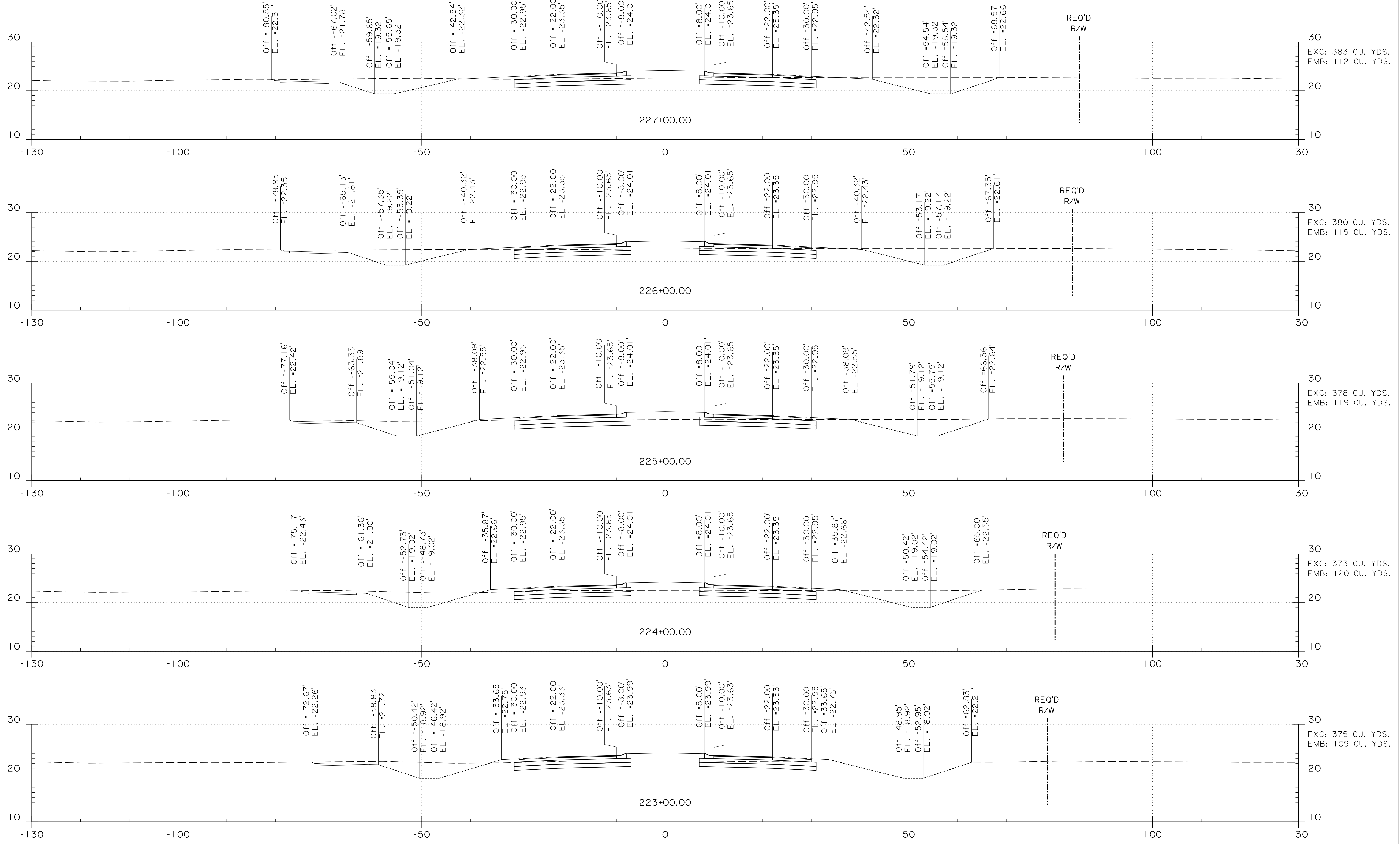
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NO. DATE

NO. DATE

NO. DATE



SHEET NUMBER 442

ST. TAMMANY
 2014EN0001
 NO. 15.012

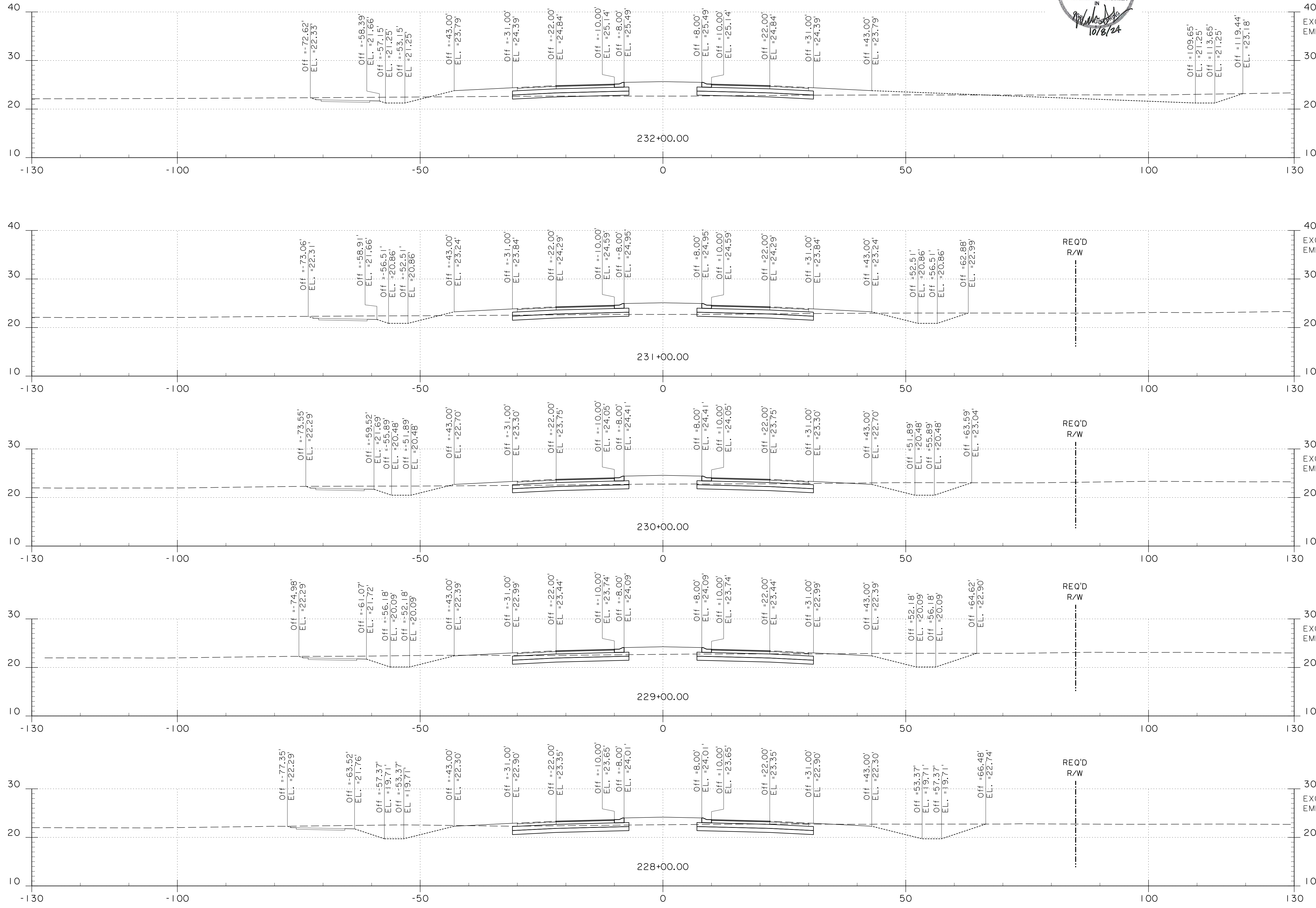


MANDEVILLE BY PASS
 LA 1088 TO US 190
 CROSS SECTIONS MBP



DESIGNED: WCS
 CHECKED: DSJ
 DETAILED: JKS
 CHECKED: DSJ
 DATE: 10-27-23
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NO. DATE REVISION DESCRIPTION BY



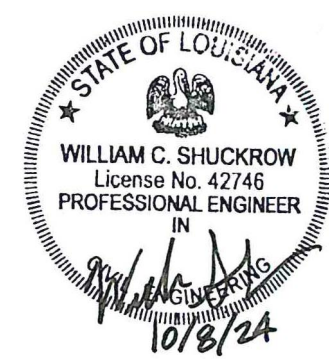
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EMB: 275 CU. YDS.

EXC: 383 CU. YDS.
EMB: 172 CU. YDS.

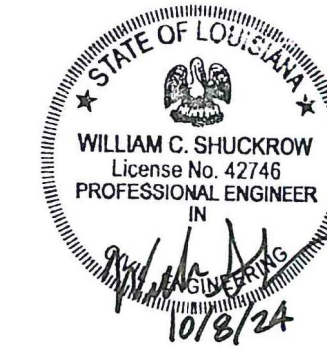
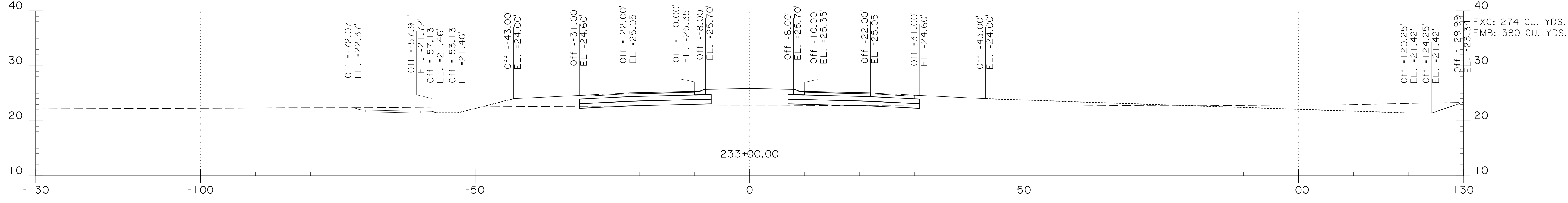
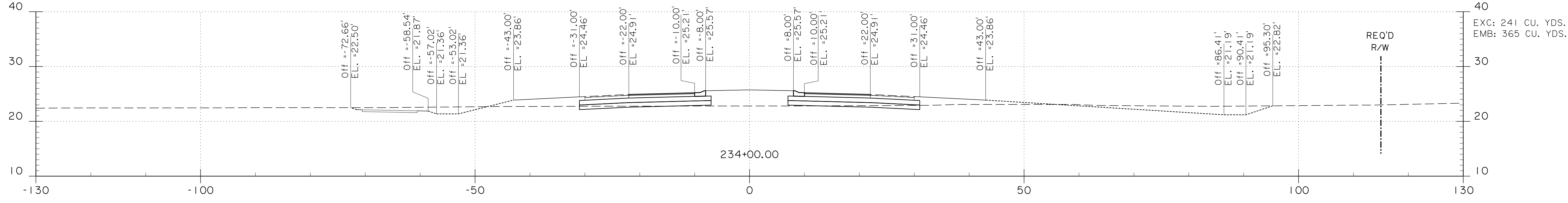
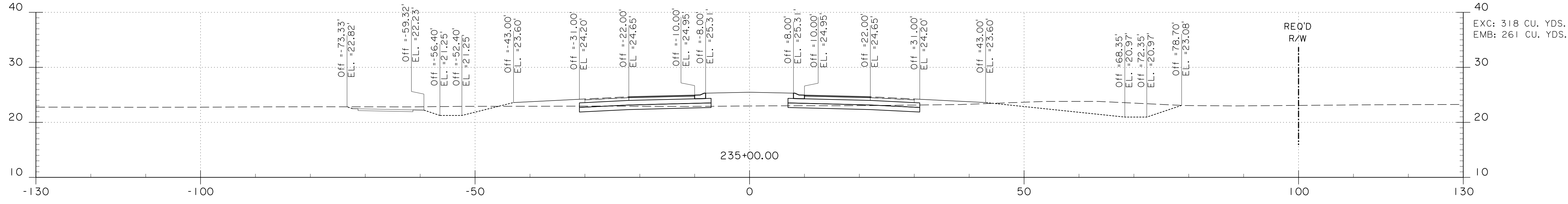
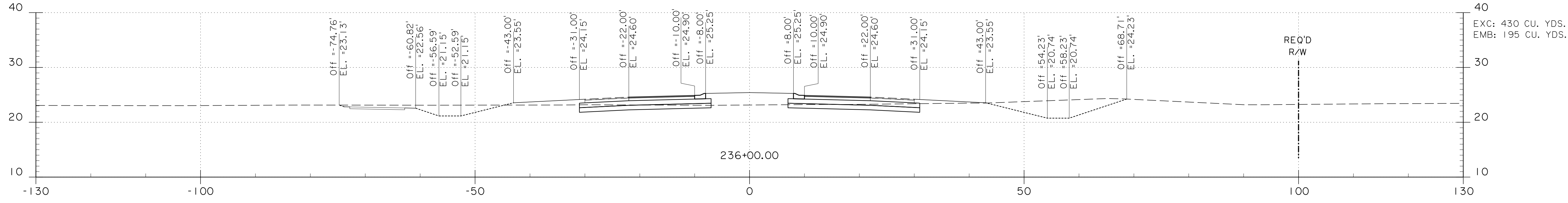
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EXC: 584 CU. YDS.
EMB: 99 CU. YDS.

EXC: 499 CU. YDS.
EMB: 106 CU. YDS.



SHEET NUMBER 443	
ST. TAMMANY	2014EN0001
PARISH PROJECT	BK1 PROJECT
NO. 15.012	
MANDEVILLE BY PASS LA 1088 TO US 190 CROSS SECTIONS MBP	
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CHECKED	DSY
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SHEET	43 OF 62
NO.	DATE
	REVISION DESCRIPTION
	BY



SHEET NUMBER 444

ST. TAMMANY
 PROJECT 2014EN0001
 B/L PROJECT NO. 15.012

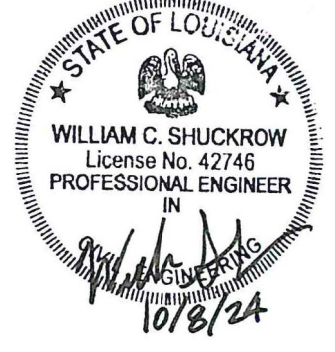
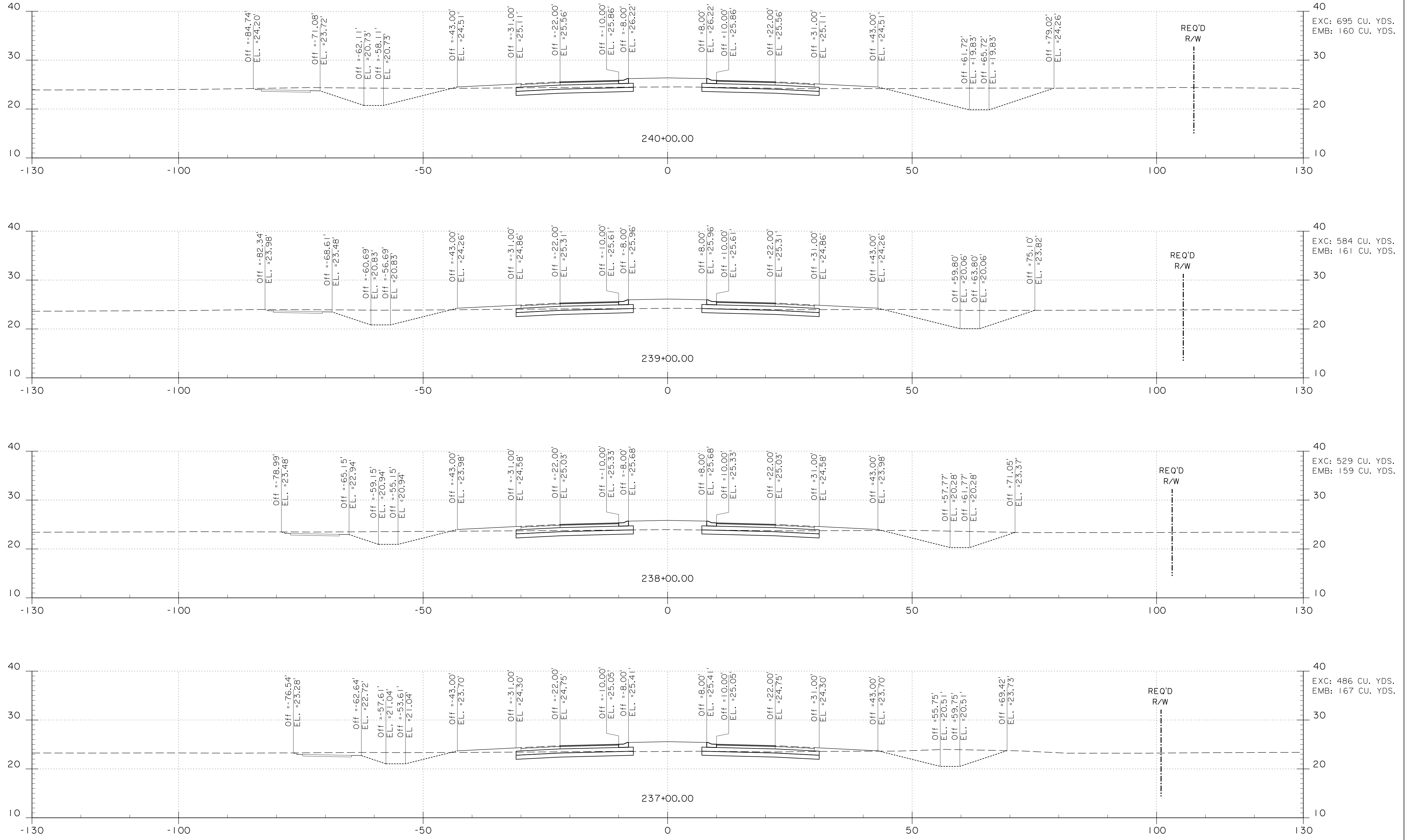


MANDEVILLE BY PASS
 LA 1088 TO US 190
 ROADWAY PLANS CROSS SECTIONS MBP



DESIGNED WCS
 CHECKED DSY
 DETAILED JKS
 CHECKED DSY
 DATE 10-27-23
 SHEET 44 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



SHEET NUMBER 445

ST. TAMMANY
 2014EN0001
 NO. 15.012

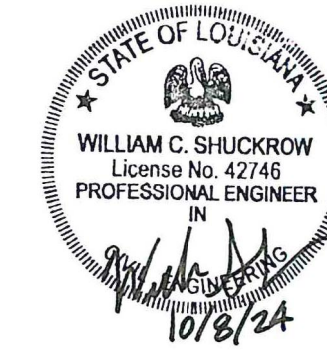
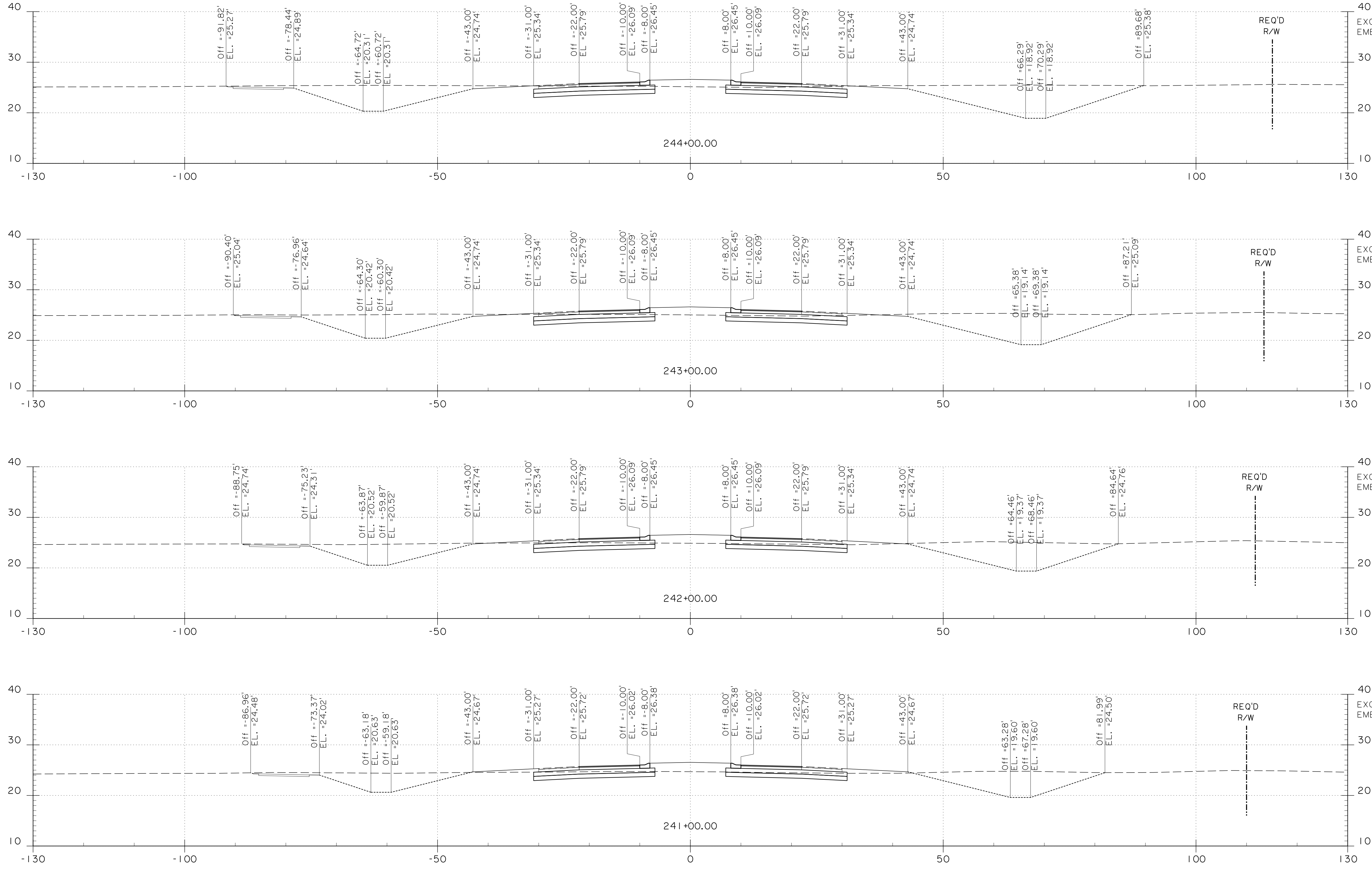


MANDEVILLE BY PASS
 LA 1088 TO US 190
 CROSS SECTIONS MBP



DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
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NO.	DATE	REVISION DESCRIPTION	BY



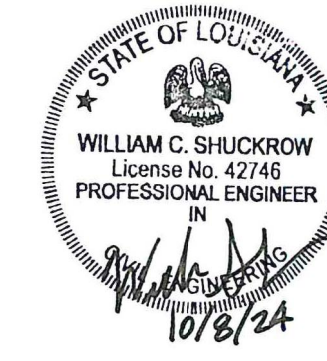
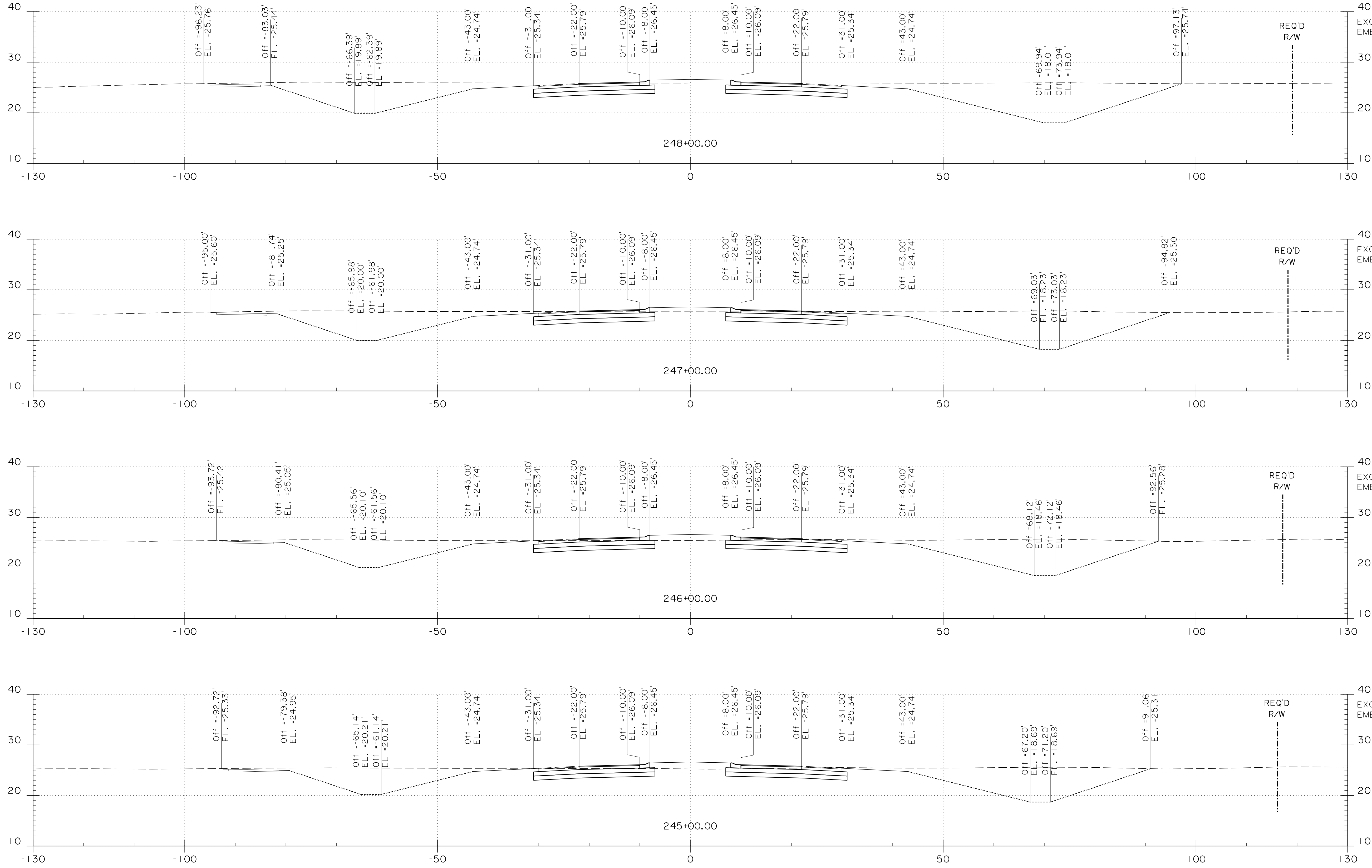
EXC: 1310 CU. YDS.
EMB: 87 CU. YDS.

EXC: 1132 CU. YDS.
EMB: 107 CU. YDS.

EXC: 967 CU. YDS.
EMB: 134 CU. YDS.

EXC: 826 CU. YDS.
EMB: 153 CU. YDS.

SHEET NUMBER 446	
PARISH ST. TAMMANY	PROJECT 2014EN0001
B.K.L. PROJECT NO. 15.012	
MANDEVILLE BY PASS LA 1088 TO US 190 ROADWAY PLANS CROSS SECTIONS MBP	
DESIGNED WCS	CHECKED DSY
DATE 10-27-23	SHEET 46 OF 62
NO.	DATE
	REVISION DESCRIPTION
	BY



EXC: 1880 CU. YDS.
EMB: 45 CU. YDS.

EXC: 1712 CU. YDS.
EMB: 58 CU. YDS.

EXC: 1567 CU. YDS.
EMB: 69 CU. YDS.

EXC: 1454 CU. YDS.
EMB: 77 CU. YDS.

SHEET NUMBER 447

PARISH ST. TAMMANY

PROJECT 2014EN0001

BK1 PROJECT NO. 15.012

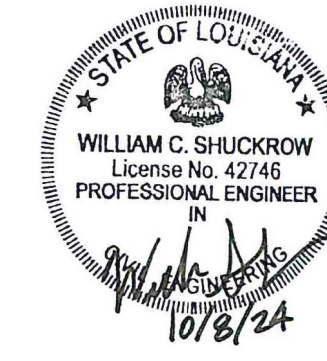
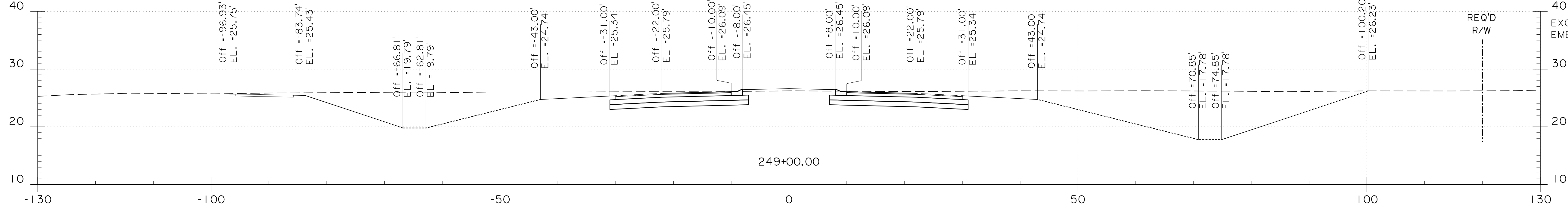
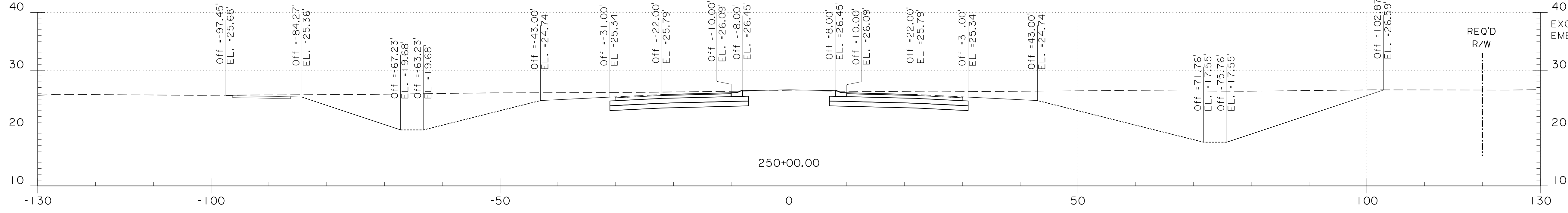
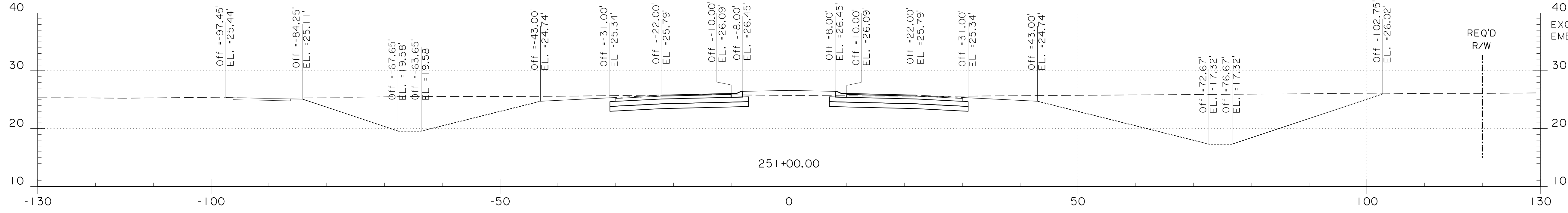
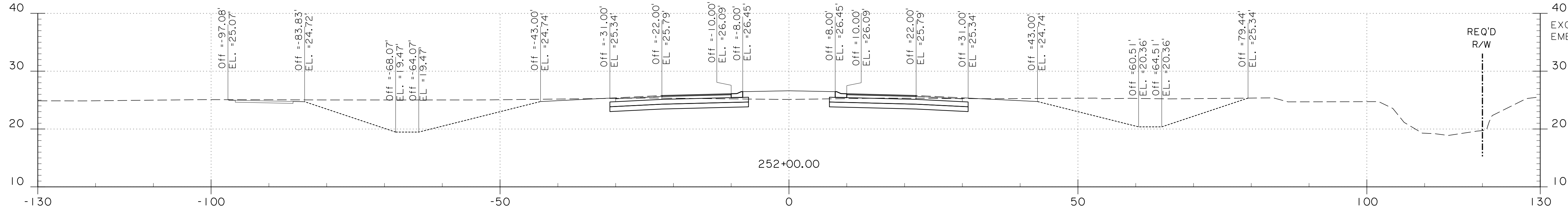


MANDEVILLE BY PASS
LA 1088 TO US 190



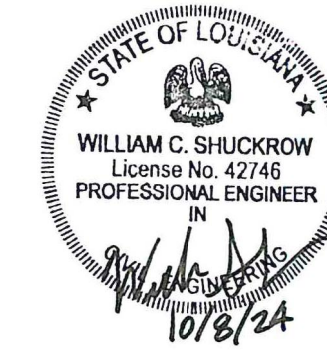
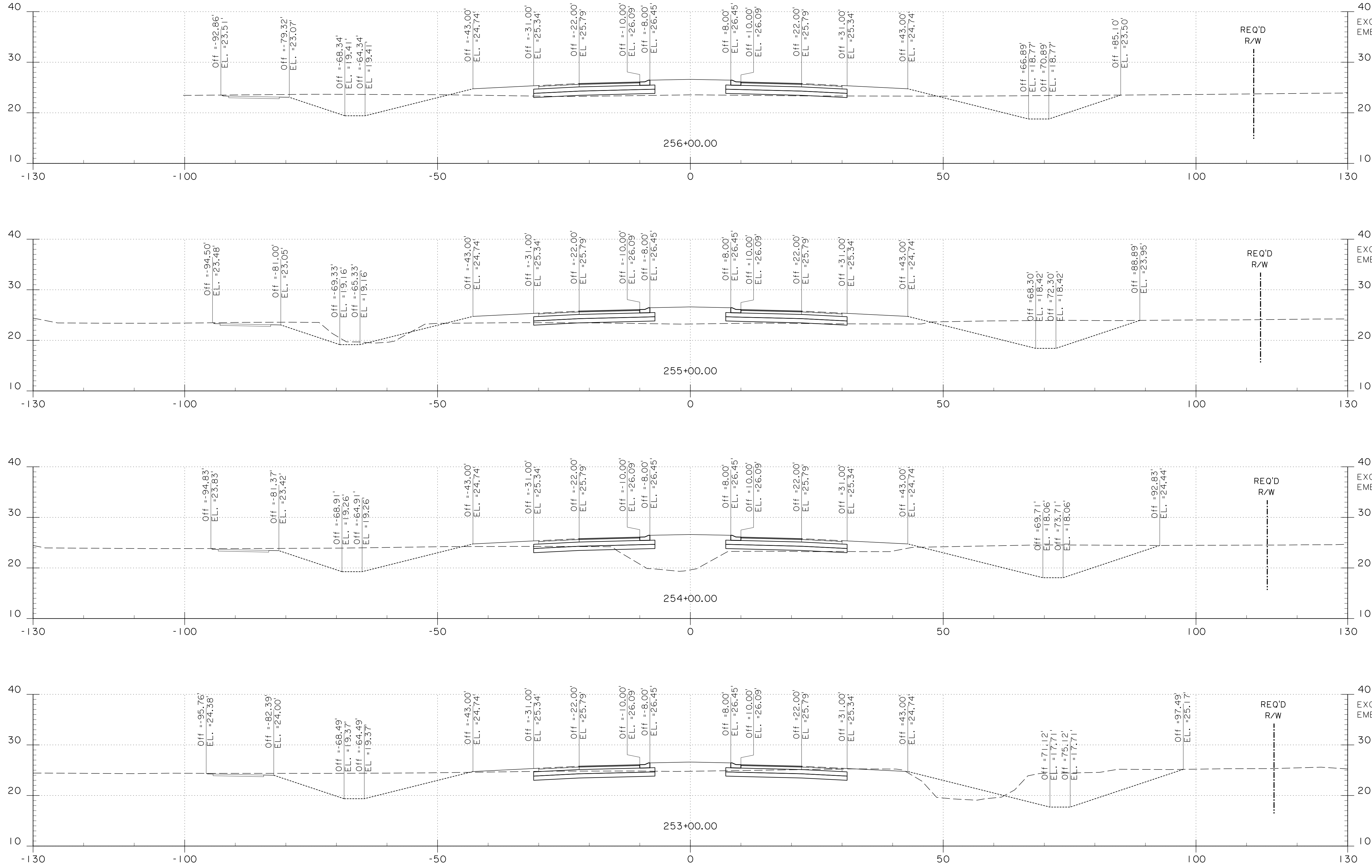
DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	47 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



DESIGNED	WCS	CHECKED	DSY	DATE
				10-27-23
DETAILED	JKS	CHECKED	DSY	BY
				48 OF 62

NO.	DATE	REVISION DESCRIPTION



SHEET NUMBER 449

ST. TAMMANY
 2014EN0001
 NO. 15.012



MANDEVILLE BY PASS
 LA 1088 TO US 190
 CROSS SECTIONS MBP



DESIGNED	WCS
CHECKED	DSY
DATE	10-27-23
SHEET	49 OF 62

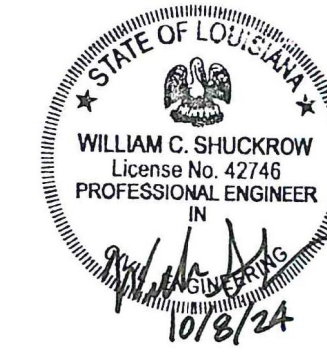
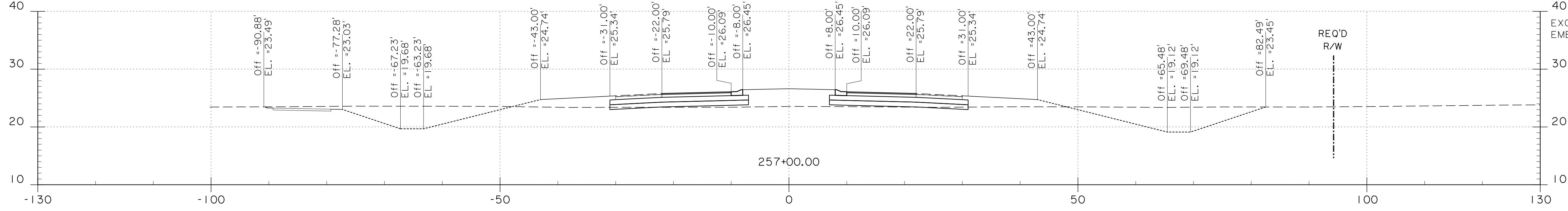
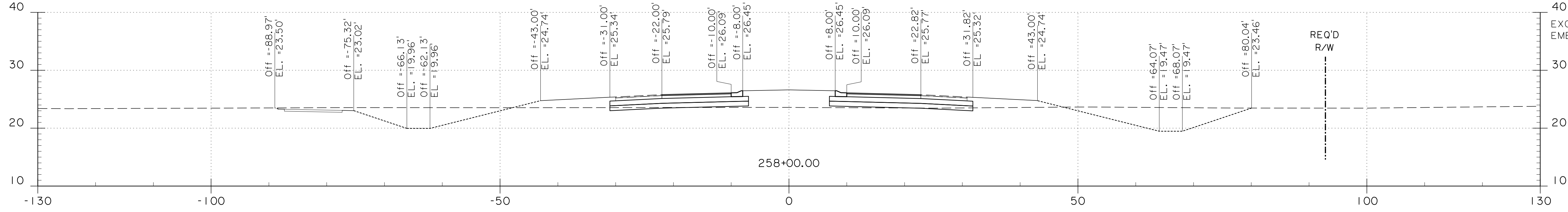
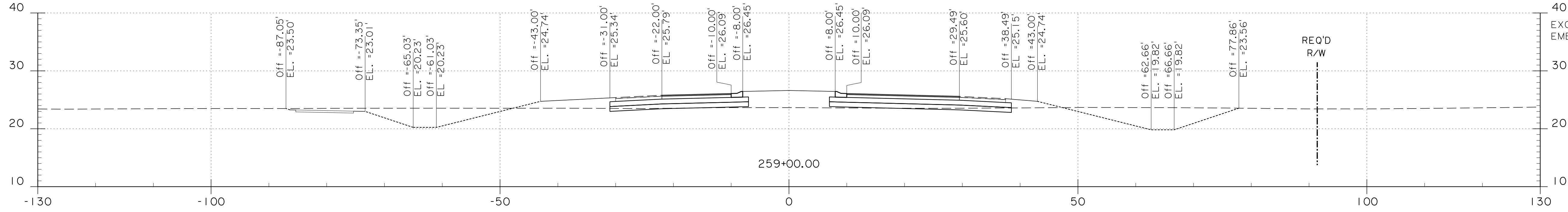
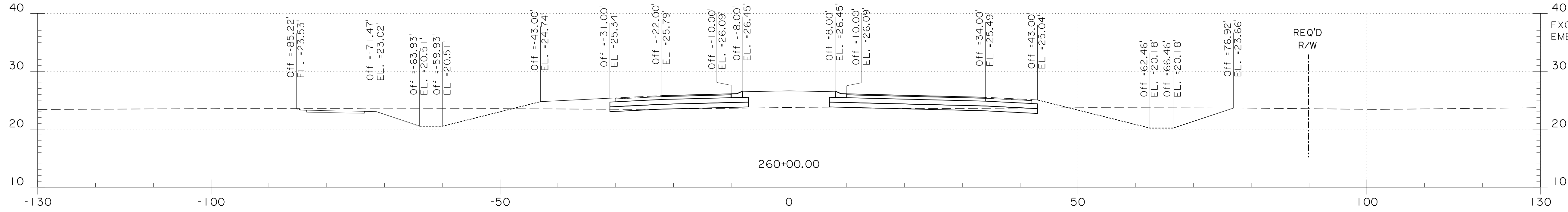
NO.	DATE	REVISION DESCRIPTION	BY

EXC: 641 CU. YDS.
 EMB: 392 CU. YDS.

EXC: 833 CU. YDS.
 EMB: 475 CU. YDS.

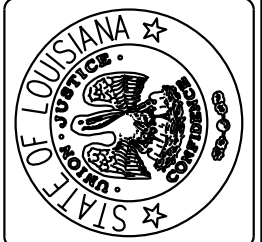
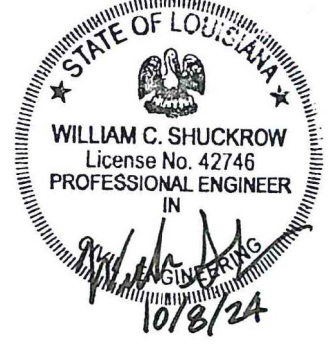
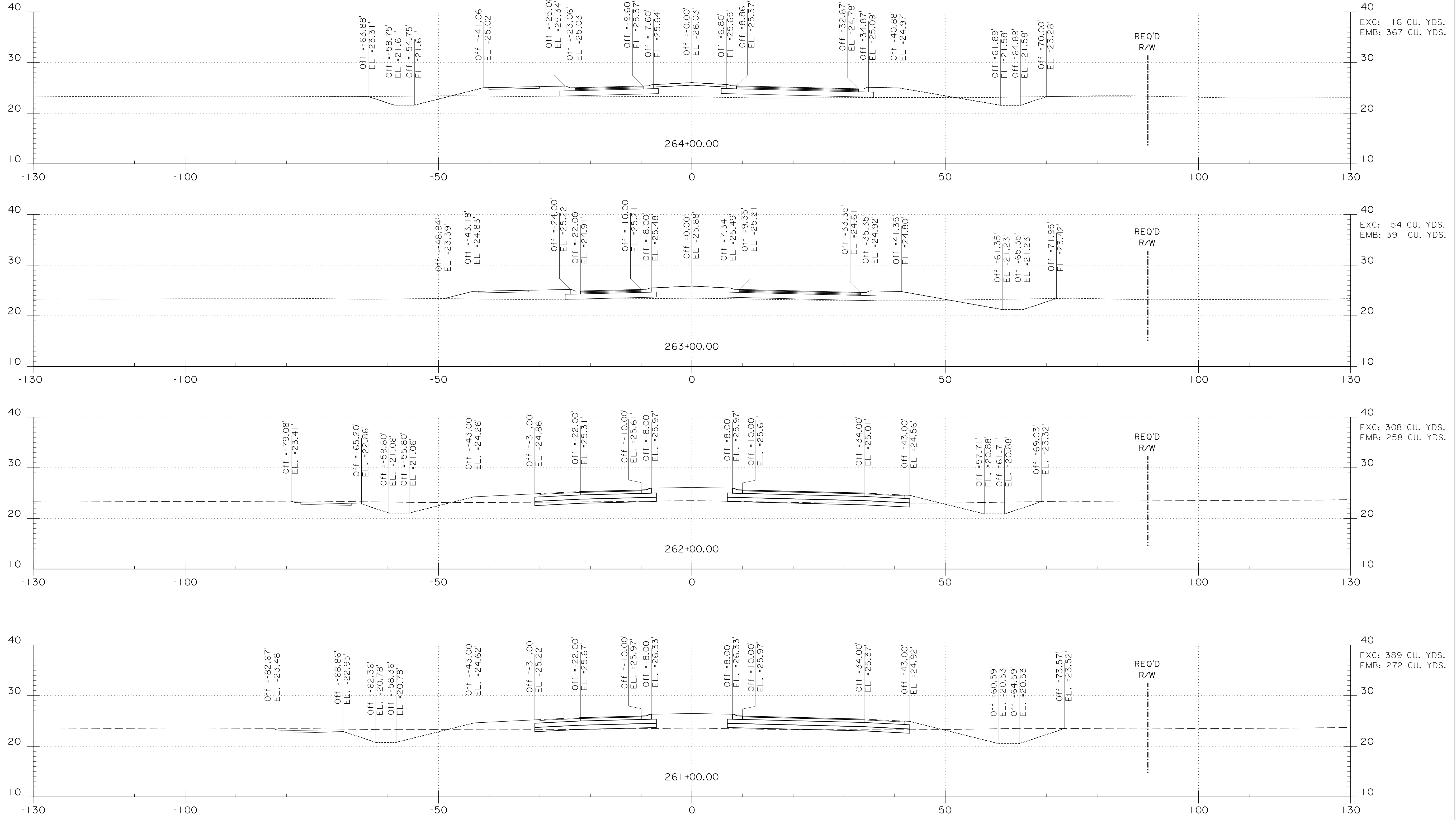
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 EMB: 403 CU. YDS.

EXC: 1443 CU. YDS.
 EMB: 171 CU. YDS.



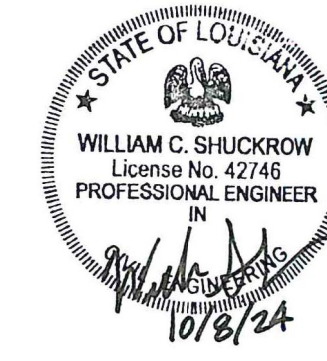
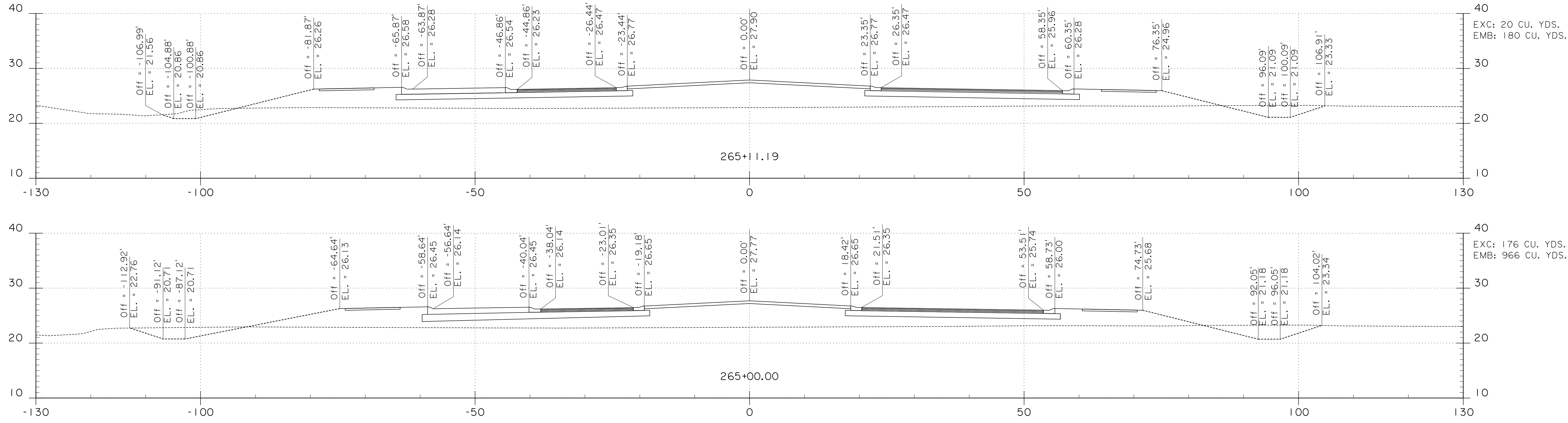
DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	50 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	51 OF 62

NO.	DATE	REVISION DESCRIPTION	BY

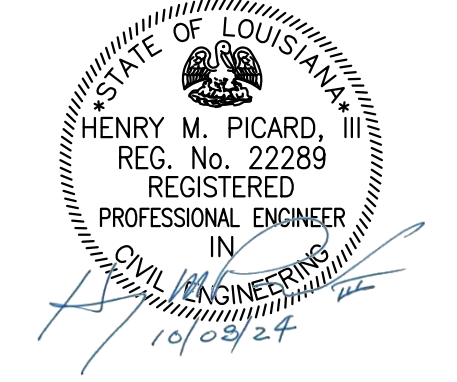
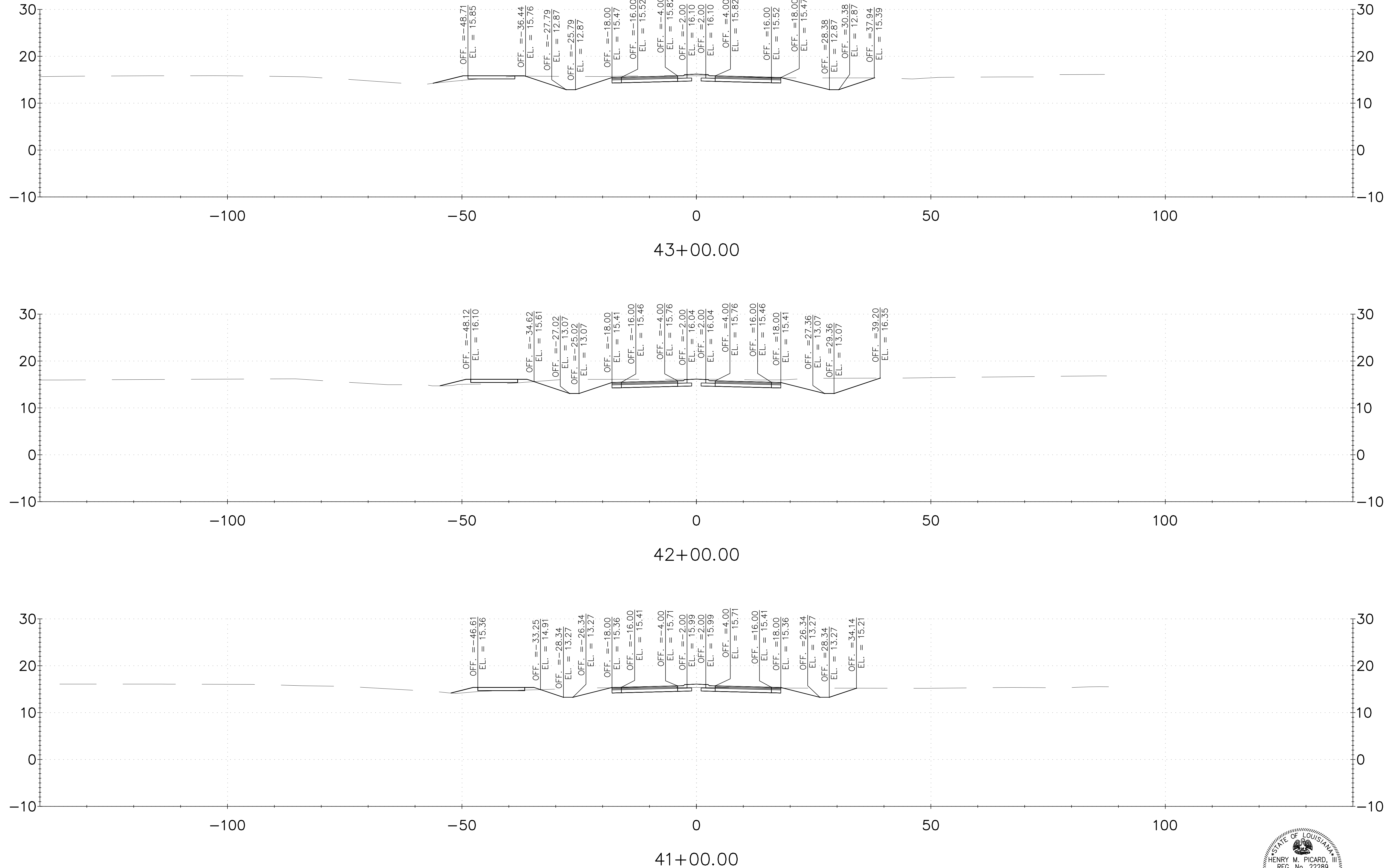
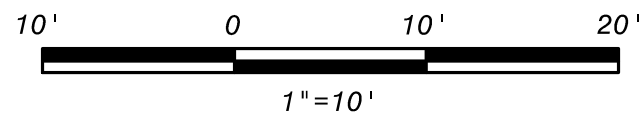


DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	52 OF 62

NO.	DATE	REVISION DESCRIPTION	BY

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01 Drawings\454_Cross Sections.dwg

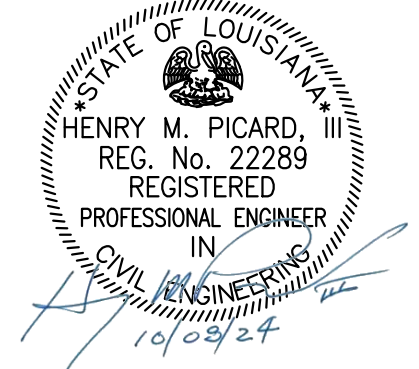
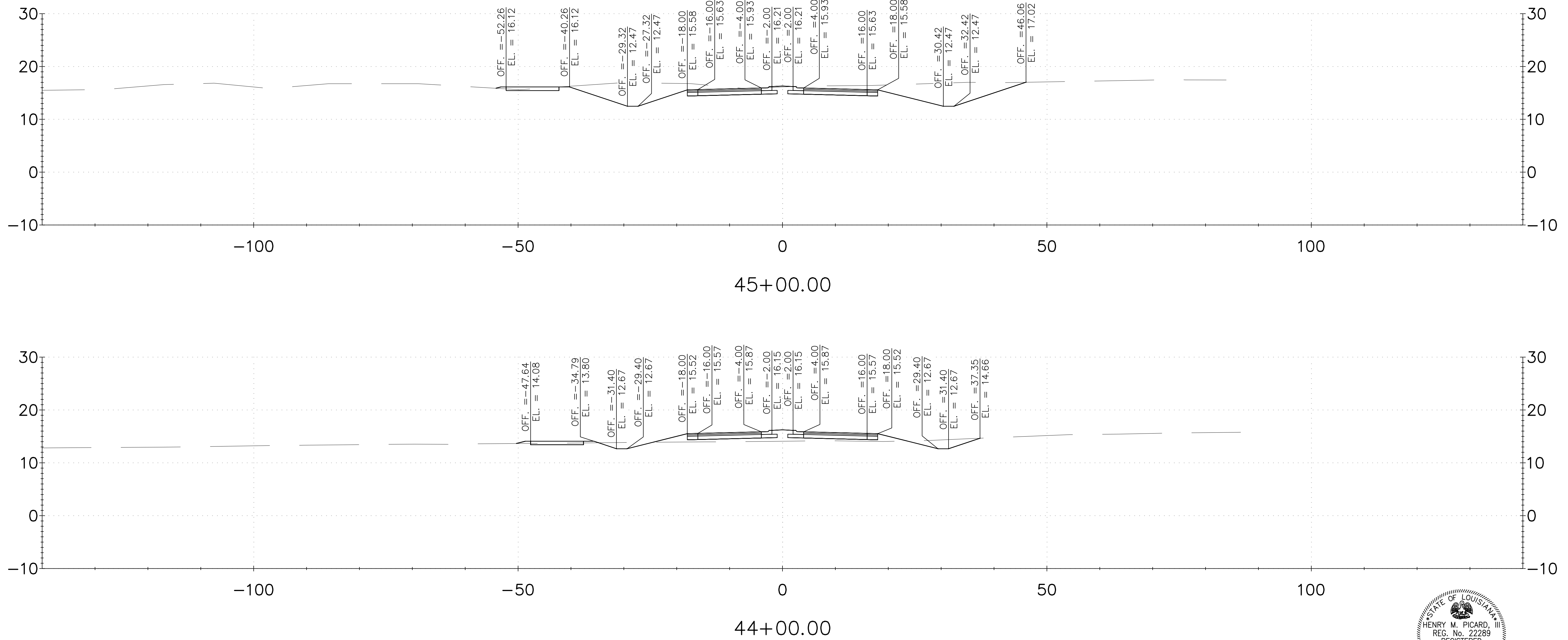
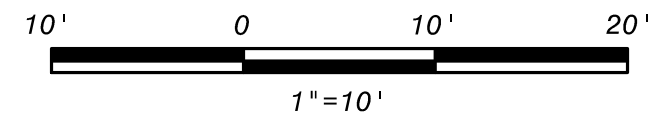
DATE: 10/7/24



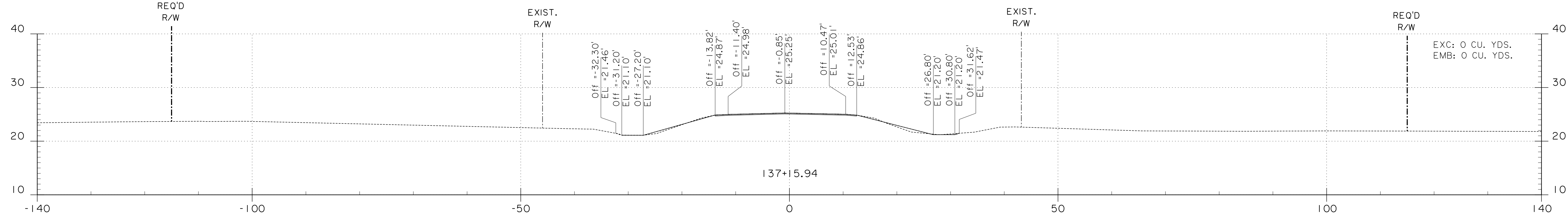
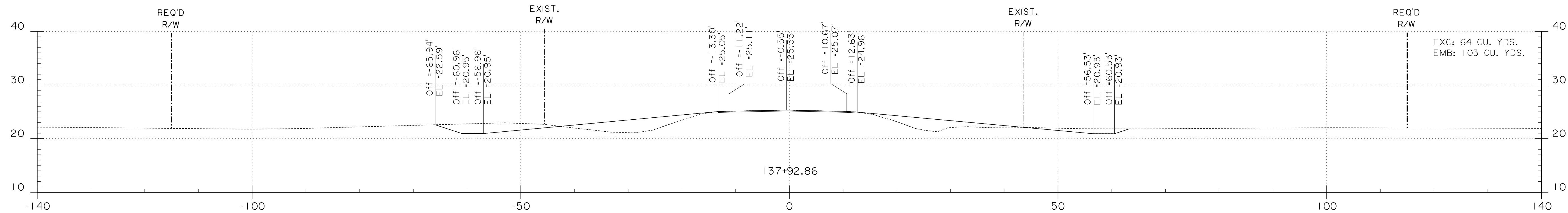
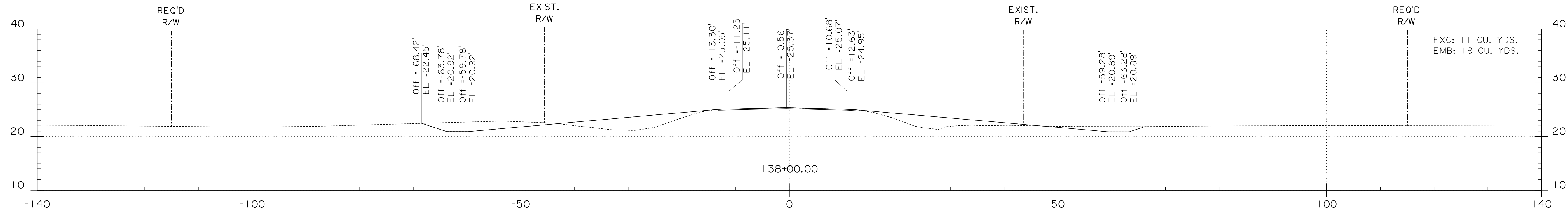
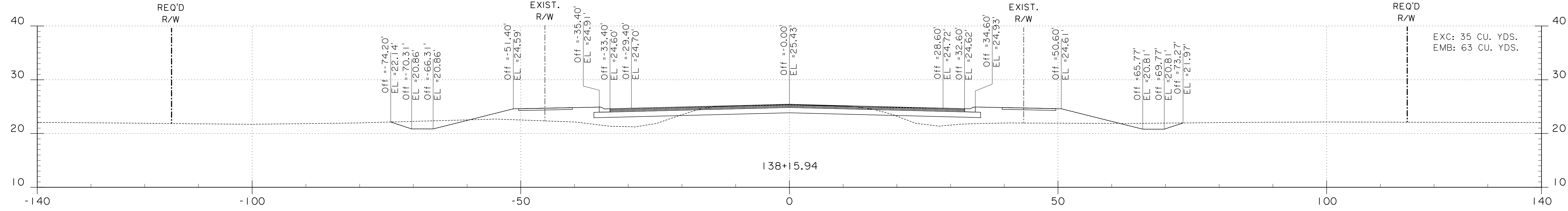
SHEET NUMBER	454
PARISH	ST. TAMMANY
PARISH PROJECT	2014EN0001
B.C.I. PROJECT	NO.15.012
MANDEVILLE BYPASS LA 1088 TO US 190	
ROADWAY PLANS	CROSS SECTIONS
DESIGNED	
CHECKED	
DATE	Oct. 2024
SHEET	OF
NO.	DATE
REVISION	DESCRIPTION
BY	

DATE: 10/7/24

FILE NAME: P:\NO.15.XXX\NO.15.012\1200\02_Design\02_Civil\01_Drawings\455_Cross Sections.dwg

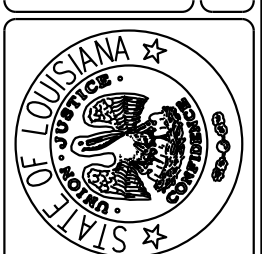
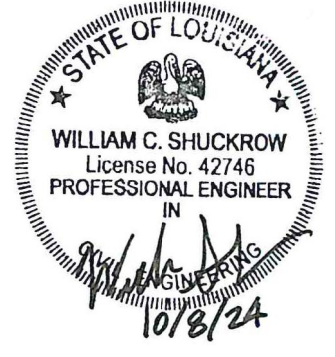
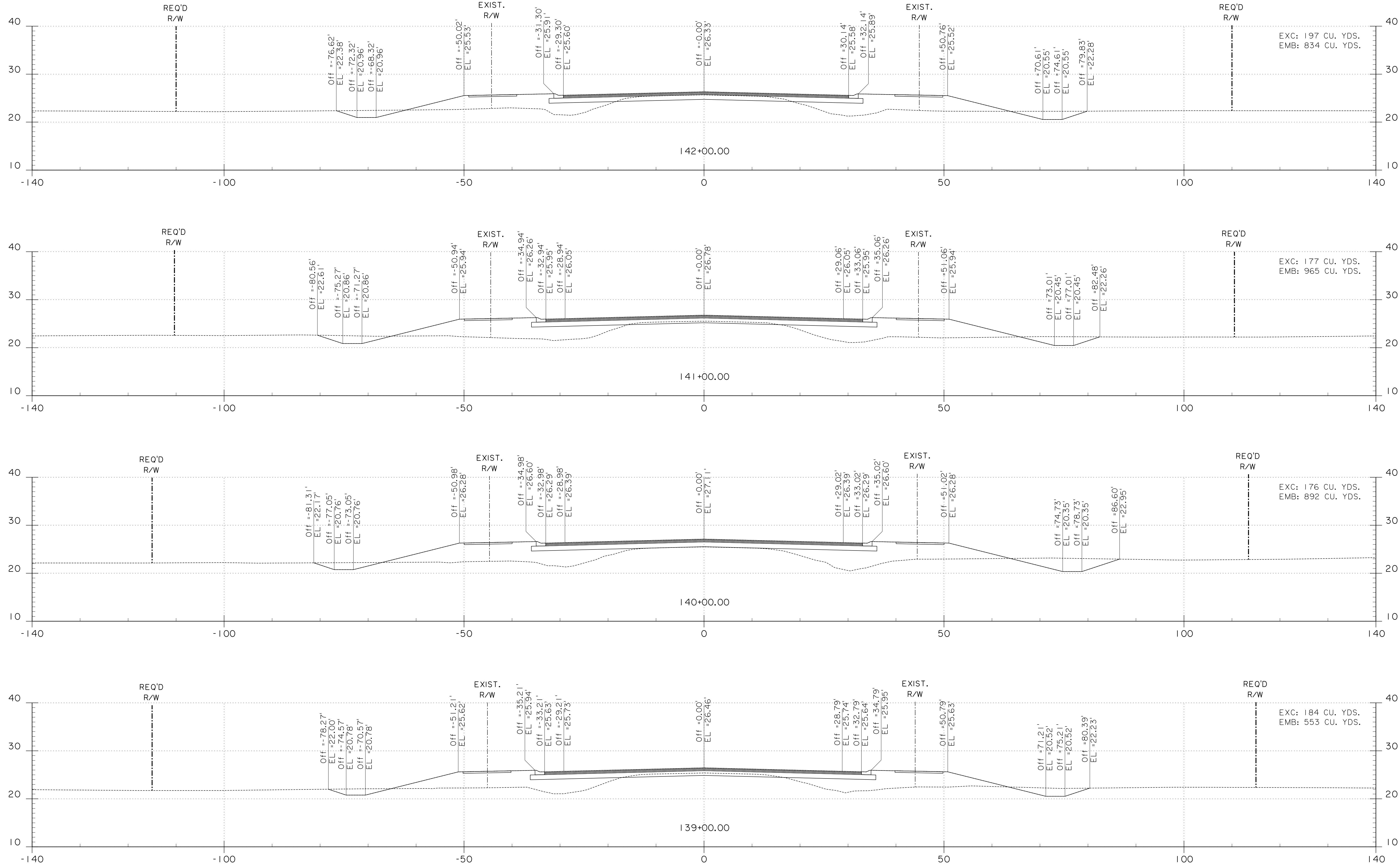


<small>SHEET NUMBER</small>	455	<small>PARISH</small>	ST. TAMMANY	<small>PARISH PROJECT</small>	2014EN0001
<small>ROADWAY PLANS</small>	<small>CROSS SECTIONS</small>	<small>PARISH PROJECT</small>	<small>B.K.I. PROJECT</small>	<small>NO. 15.012</small>	
MANDEVILLE BYPASS LA 1088 TO US 190					
		<small>DESIGNED CHECKED</small>			
<small>DATE SHEET</small>		<small>BY</small>			
<small>REVISION DESCRIPTION</small>		<small>DATE</small>			
<small>NO.</small>		<small>DATE</small>			
<small>DESIGNED</small>		<small>DATE</small>			
<small>CHECKED</small>		<small>DATE</small>			
<small>DETAILED</small>		<small>DATE</small>			
<small>CHECKED</small>		<small>DATE</small>			
<small>DATE SHEET</small>		<small>DATE</small>			
<small>REVISION DESCRIPTION</small>		<small>DATE</small>			
<small>NO.</small>		<small>DATE</small>			
<small>DESIGNED</small>		<small>DATE</small>			
<small>CHECKED</small>		<small>DATE</small>			
<small>DETAILED</small>		<small>DATE</small>			
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<small>DATE SHEET</small>		<small>DATE</small>			
<small>REVISION DESCRIPTION</small>		<small>DATE</small>			
<small>NO.</small>		<small>DATE</small>			



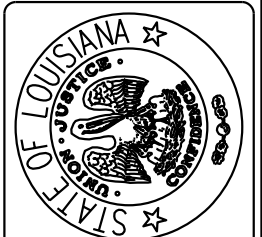
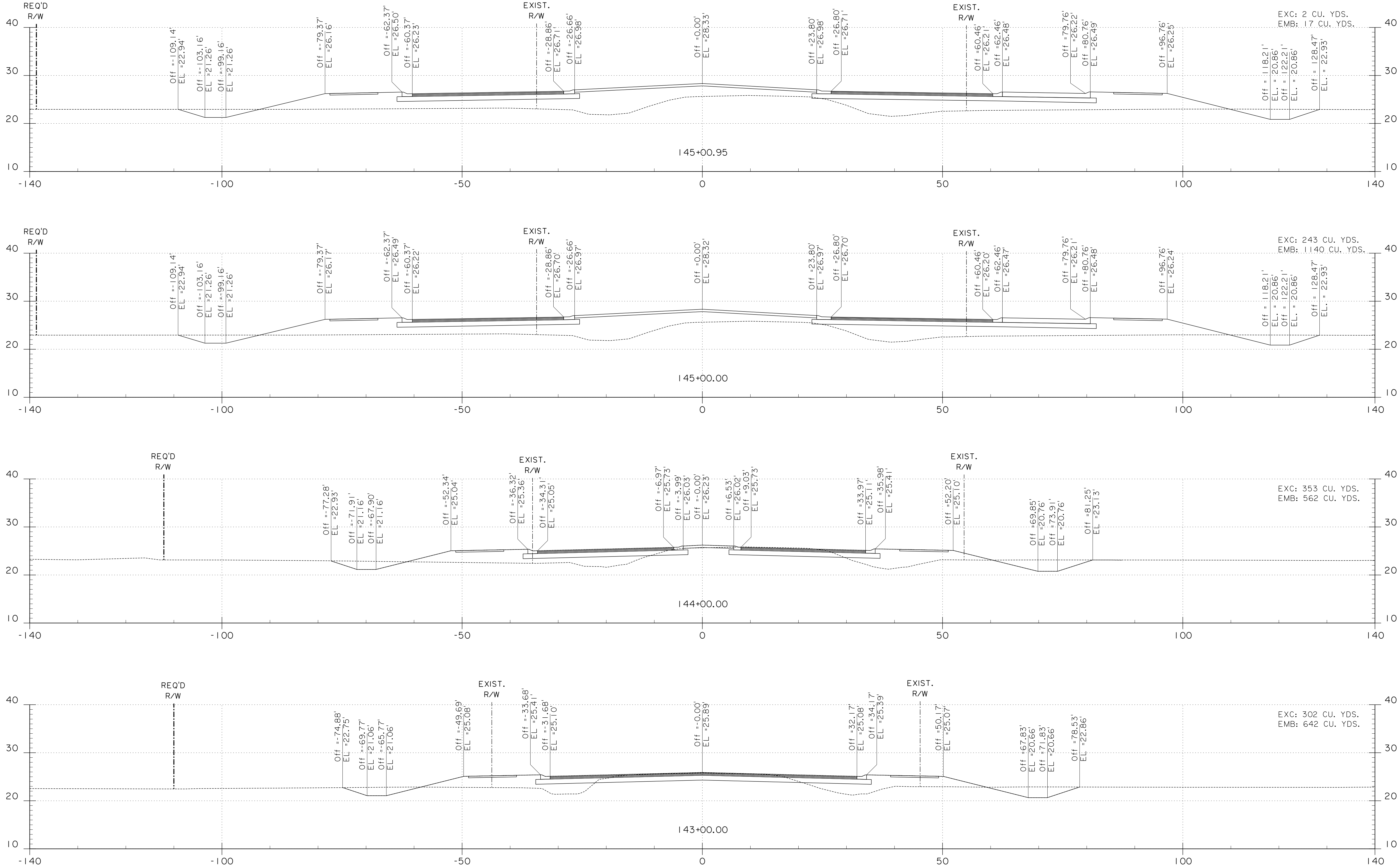
DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	56 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



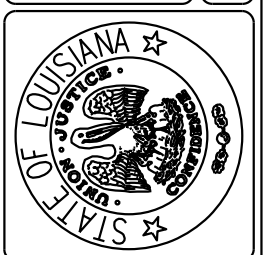
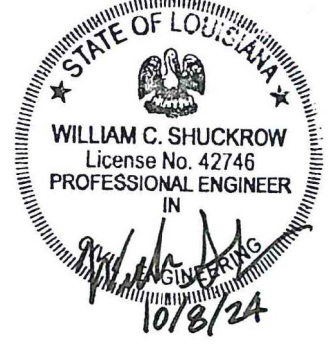
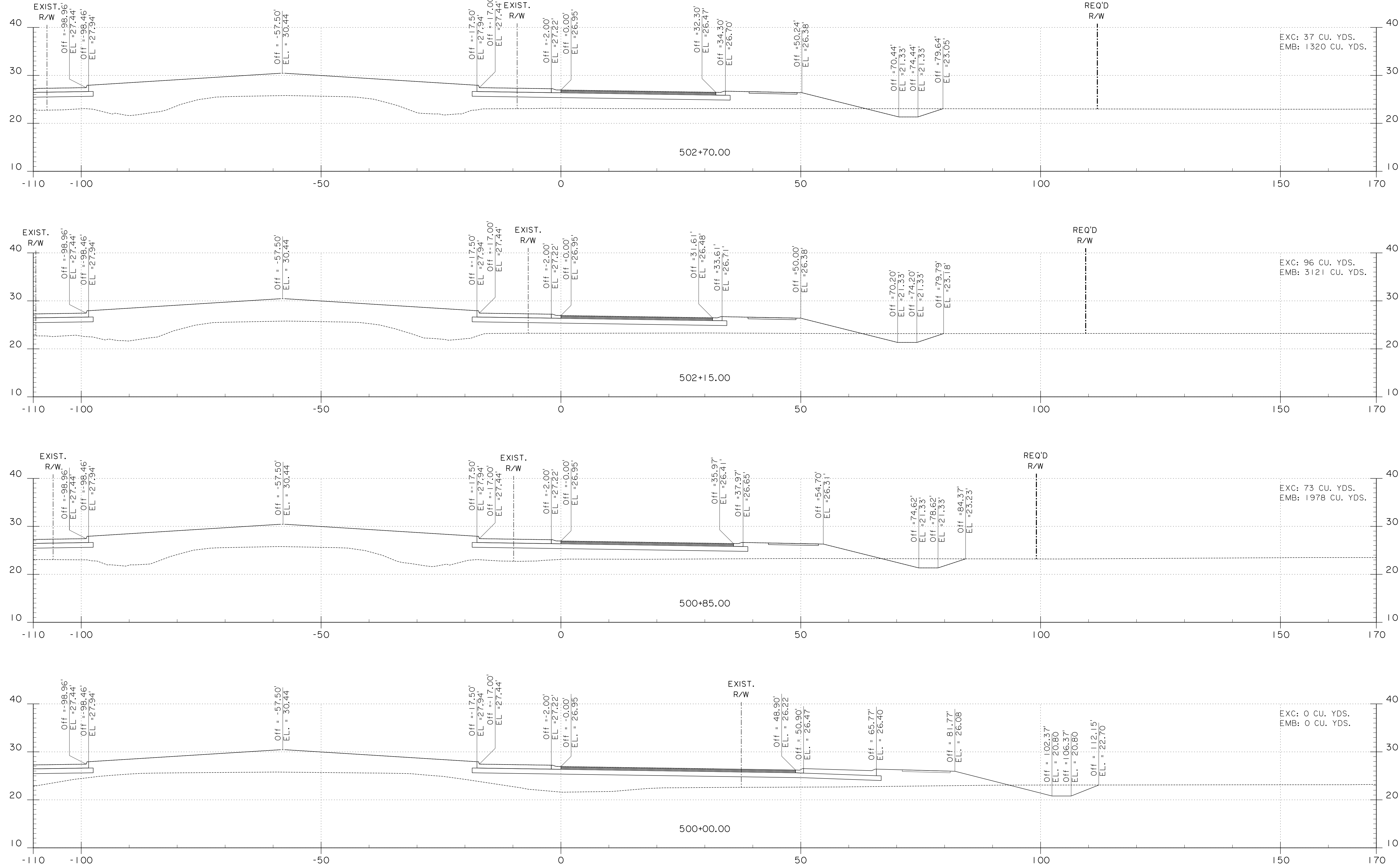
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CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	57 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



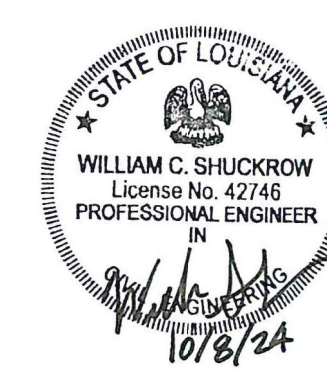
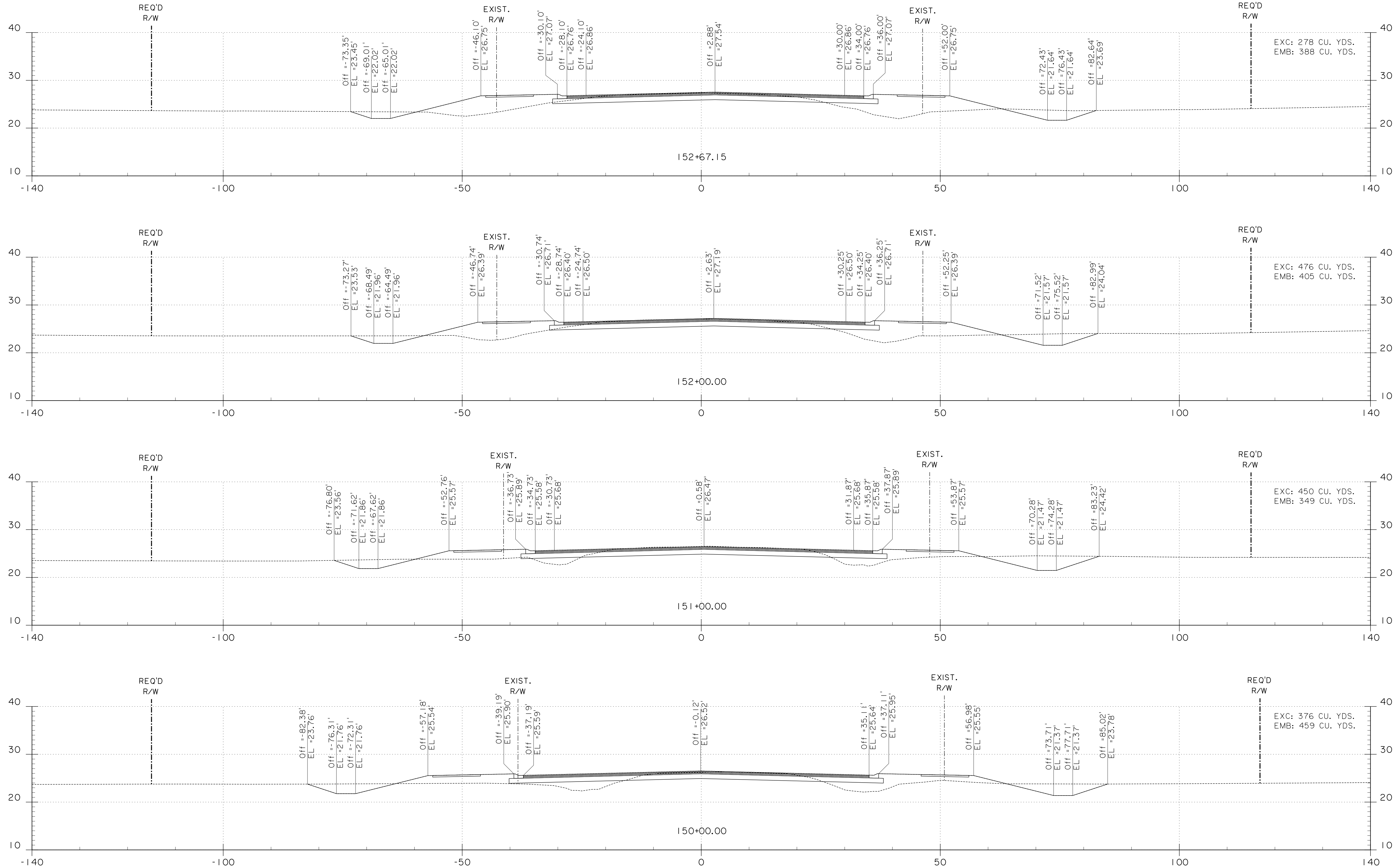
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CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	58 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



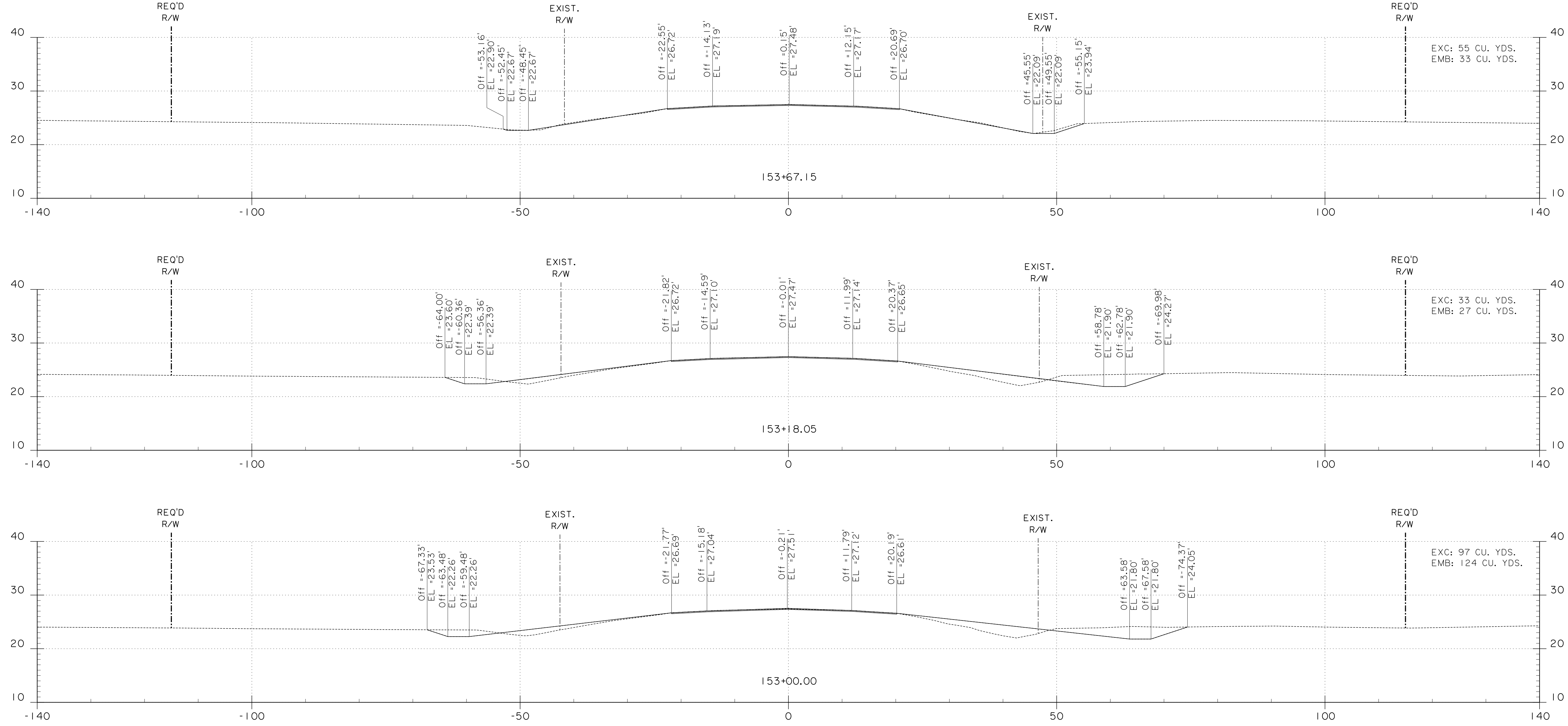
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CHECKED	DSY
DATE	10-27-23
SHEET	59 OF 62

NO.	DATE	REVISION DESCRIPTION	BY



DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	61 OF 62

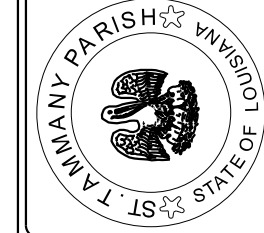
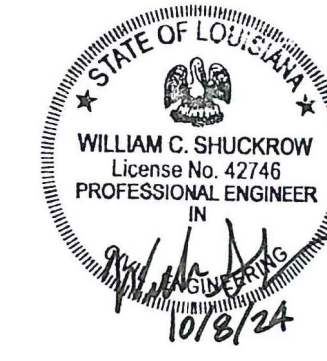
NO.	DATE	REVISION DESCRIPTION	BY



EXC: 55 CU. YDS.
EMB: 33 CU. YDS.

EXC: 33 CU. YDS.
EMB: 27 CU. YDS.

EXC: 97 CU. YDS.
EMB: 124 CU. YDS.



DESIGNED	WCS
CHECKED	DSY
DETAILED	JKS
CHECKED	DSY
DATE	10-27-23
SHEET	62 OF 62

NO.	DATE	REVISION DESCRIPTION	BY