



Advertise Date: Friday, February 28, 2020

**Lee County Board of County Commissioners  
DEPARTMENT OF PROCUREMENT MANAGEMENT**

**Invitation to Bid (B)  
DOT Construction Only**

Solicitation No.:	<b>B200121CJV</b>		
Solicitation Name:	<b>Gateway Blvd. &amp; Commerce Lakes Dr. Intersection Improvements</b>		
Open			
Date/Time:	<b>Tuesday, March 31, 2020</b>	<b>Time:</b>	<b>2:30 PM</b>
Location:	<b>Lee County Procurement Management</b> <b>2115 Second Street, 1<sup>st</sup> Floor</b> <b>Fort Myers, FL 33901</b>		
Procurement Contact:	<b>Christy VanAllen</b>	Title	<b>Procurement Analyst</b>
Phone:	<b>(239) 533-8839</b>	Email:	<b><a href="mailto:cvanallen@leegov.com">cvanallen@leegov.com</a></b>
Requesting Dept.	<b>Transportation</b>		

**Pre-Bid Conference:**

Type: No meeting scheduled at this time

All solicitation documents are available for download at  
[www.leegov.com/procurement](http://www.leegov.com/procurement)



Advertisement Date: Friday, February 28, 2020

## INTRODUCTIONS AND BACKGROUND

### Notice to Bidder

#### Invitation to Bid (B) Construction

Lee County, Florida, is requesting bids from qualified individuals/firms for

#### **B200121CJV – Gateway Blvd. & Commerce Lakes Dr. Intersection Improvement**

Then and there to be publicly opened and read aloud for the purpose of selecting a vendor to furnish all necessary labor, services, materials, equipment, tools, consumables, transportation, skills and incidentals required for Lee County, Florida, in conformance with the Solicitation Documents, which include technical Specifications and/or a Scope of Work.

Those individuals/firms interested in being considered for this Solicitation are instructed to submit, in accordance with the Specifications, their Bids, pertinent to this project prior to

**2:30 PM Tuesday, March 31, 2020**

to the office of the **Procurement Management Director, 2115 Second Street, 1<sup>st</sup> Floor, Fort Myers, Florida 33901.** The Invitation to Bid shall be received in a sealed envelope, prior to the time scheduled to receive Bid(s), and shall be clearly marked with the Solicitation name, Solicitation number, Bidder name, and contact information as identified in these Solicitation Documents.

The Scope of Work/Specifications for this solicitation is available from [www.leegov.com/procurement](http://www.leegov.com/procurement). Bidders who obtain Scope of Work/Specifications from sources other than [www.leegov.com/procurement](http://www.leegov.com/procurement) are cautioned that the solicitation package may be incomplete. The County's official bidders list, addendum(s) and information must be obtained from [www.leegov.com/procurement](http://www.leegov.com/procurement). It is the bidder's responsibility to check for posted information. The County may not accept incomplete Bids.

#### **There will be no Pre-Bid Conference for this solicitation.**

It has been determined that the specifications and scope of work within this solicitation are adequate to describe the product or services being requested. A pre-bid conference and site visit has not been scheduled for this solicitation. Questions regarding this solicitation are to be directed, in writing, to the individual listed below using the email address listed below or faxed to (239) 485 8383 during normal working hours.

**Christy VanAllen [cvanallen@leegov.com](mailto:cvanallen@leegov.com)**

Sincerely,

Lindsay Cepero, CPPB  
Procurement Manager

\*[WWW.leegov.Com/Procurement](http://WWW.leegov.Com/Procurement) is the County's official posting site



**Terms and Conditions**  
**INVITATION TO BID (B)**  
**CONSTRUCTION**

1. DEFINITIONS. Additional definitions may be found in the Draft Construction Agreement attached hereto.
  - 1.1. **Addendum/Addenda:** A written document used to modify the terms of a procurement instrument (such as an Invitation to Bid or Request for Proposals). An addendum is not to be confused with a contract "amendment."
  - 1.2. **Approved Alternate:** Solicitation documents may make reference of specific manufacturer(s) or product(s). These references serve only as a recommendation and a guide to minimum quality and performance. The references are not intended to exclude Approved Alternatives of other manufacturer(s) or product(s).
  - 1.3. **Award:** The determination of a successful Bidder(s) in response to this Solicitation.
  - 1.4. **Bid/Proposal Package:** An offer specifically given to the County in response to an informal or competitive procurement invitation issued by the County. This is also referred to as a "Response."
  - 1.5. **Bid Bond/Security:** Security in the form and amount required by the County pledging that the Bidder shall enter into a Contract with the County in accordance with the terms stated in its Bid.
  - 1.6. **Bidder:** Any individual, firm, partnership, joint venture, or corporation submitting a Bid for this project, acting directly or through an authorized representative.
  - 1.7. **County:** The Board of County Commissioners of Lee County, Florida, a political subdivision of the State of Florida, its successors and assigns.
  - 1.8. **Contract/Agreement:** The written contract between the County and a successful Bidder pursuant to this Solicitation, a draft copy of which is attached hereto.
  - 1.9. **Contract Documents:** The documents listed in Section 1 of the attached draft Agreement.
  - 1.10. **Department of Procurement Management:** Shall mean the Lee County Department of Procurement Management.
  - 1.11. **Due Date and Time/Opening:** The date and time upon which a Bid or Proposal shall be submitted to, and actually received by, the Lee County Department of Procurement Management. Only Bids or Proposals received prior to the established date and time shall be considered.
  - 1.12. **Liquidated Damages:** Damages, usually in the form of monetary payment, agreed to by the parties to a contract which are due and payable as damages in the event of a breach of all or part of such contract. Liquidated Damages may be applied on a daily basis for as long as the breach is in effect.
  - 1.13. **Local Bidder:** Any person, firm, partnership, company or corporation whose principal place of business, in the sole opinion of the County, is located within the boundaries of Lee County, Florida; or (b) any person, firm, partnership, company or corporation that has provided goods or services to Lee County on a regular basis for the preceding consecutive three (3) years, and that has the personnel, equipment and materials located within the boundaries of Lee County sufficient to constitute a present ability to perform the service or provide the goods; or (c) any person, firm, partnership, company or corporation that qualifies as a "local business" under the terms of the Collier County Local Vendor Preference Program on or after the date Lee and Collier County enter an agreement extending reciprocity under their respective local vendor preference programs to the firms eligible for those programs in the adjoining county; or (d) any person, firm, partnership, company or corporation that qualifies as a "local bidder" or similar term under the local bidder preference program of any county adjoining Lee County on or after the date Lee County and the adjoining county enter a reciprocity agreement that is substantially similar to any such agreement between Lee and Collier County.
  - 1.14. **Responsible Bidder:** A Bidder submitting a Response who has the capability in all respects to perform fully the Contract requirements and the experience, capacity, facilities, equipment, credit, sufficient qualified personnel, and having the integrity and reliability with a record of timely and acceptable past performance that will ensure good faith performance.
  - 1.15. **Responsive Bidder:** A Bidder submitting a Response that substantially conforms with all material respects to the requirements and criteria set forth in this Solicitation.
  - 1.16. **Solicitation/Solicitation Documents:** This document, its attachments, and any document hereinafter incorporated by reference.

- 1.17. Work:** All labor, materials, equipment and incidentals required to fully, finally and properly complete the construction project described herein and otherwise fully, finally and properly comply with all terms and conditions of the Contract Documents.
2. ORDER OF PRECEDENCE
- 2.1.** In resolving conflicts, errors, and discrepancies among the provisions of the Contract Documents, the order of precedence shall be as follows
- 2.1.1.** Florida State Law as applied to County Purchasing
  - 2.1.2.** Lee County Procurement Ordinance 18-22
  - 2.1.3.** Change Orders
  - 2.1.4.** Contract/Agreement including amendments and Exhibits
  - 2.1.5.** Field Directive Change Orders
  - 2.1.6.** The Solicitation Documents, including any Addenda
3. RULES, REGULATIONS, LAWS, ORDINANCES AND LICENSES
- 3.1.** It shall be the responsibility of the Bidder to ensure compliance with all federal, state, or county codes, rules, regulations, or other requirements, as each may apply.
- 3.2. Local Business Tax Account:** As applicable, anyone providing merchandise or services to the public within the jurisdiction of Lee County must obtain a Lee County business tax account to operate unless specifically exempted.
- 3.3. License(s):** Bidder should provide, at the time of the opening of the Bid, licenses required for this product and/or service.
4. PREPARATION OF SUBMITTAL
- 4.1. Sealed Bid:** Submission must be in a sealed envelope/box, and the outside of the submission should be marked with the following information (Sealed Bid Label Form is attached for your use):
- 4.1.1.** “Sealed Bid”
  - 4.1.2.** Bid number
  - 4.1.3.** Bid title
  - 4.1.4.** Bid due date
  - 4.1.5.** Name of the Bidder submitting the Bid
  - 4.1.6.** Bidder’s Contact e-mail and telephone number
- 4.2. Bid submission shall:**
- 4.2.1.** Provide two (2) hard copies. Mark one “Original,” one “Copy.”
  - 4.2.2.** Provide one (1) electronic flash drive set of the entire submission documents.
  - 4.2.3.** Provide that the electronic submission document is one single Adobe PDF file in the same order as the original hard copy.
  - 4.2.4.** Limit the color and number of images to avoid unmanageable file sizes.
  - 4.2.5.** Not lock files.
- 4.3. Submission Format:**
- 4.3.1.** Required Forms: complete and return **all** required forms. If the form is not applicable, please return with “Not Applicable” or “N/A” in large letters across the form.
  - 4.3.2.** Failure to submit required or requested information may result in the Bidder being considered non-responsive.
  - 4.3.3.** Execution of Bid: All documents must be signed by a corporate authorized representative, witnessed, and corporate and/or notary seals affixed, where applicable. All Bids shall be typed or printed in ink. The Bidder may not use erasable ink. All corrections made to the Bids shall be initialed.
  - 4.3.4.** The County may request specific files be submitted in specialty format (i.e. Microsoft Excel, PowerPoint etc.). Vendor shall accommodate such specialty requests as stated or described herein. Should files not be provide in the format or quantity as requested Bidder may be deemed Non-Responsive and therefore ineligible for award.
  - 4.3.5.** The submission should not contain links to other web pages.

**4.3.6.** Include any information requested by the County necessary to analyze your Bid, i.e., required submittals, literature, technical data, or financial statements.

**4.3.7.** Bid Security/Bond(s), as applicable.

**4.4. Preparation Cost:** The Bidder is solely responsible for any and all costs associated with responding to this Solicitation. No reimbursement shall be made for any costs associated with the preparation and submittal of any Bid, or for any travel and per diem costs that are incurred by any Bidder.

## 5. RESPONSES RECEIVED LATE

**5.1.** It shall be the Bidder's sole responsibility to deliver the Bid submission to the Lee County Department of Procurement Management prior to or on the time and date required. All references to date and time herein reference Lee County, FL local time.

**5.2.** Any Bids received after the stated time and date shall not be considered. Late Bids shall not be opened at the public opening.

**5.3.** The Lee County Department of Procurement Management shall not be responsible for delays caused by the method of delivery such as, but not limited to: internet, United States Postal Service, overnight express mail service(s), or delays caused by any other occurrence.

## 6. BIDDER REQUIREMENTS (unless otherwise noted)

**6.1. Responsive and Responsible Bidders:** Only Bids received from Responsive and Responsible Bidders shall be considered. The County reserves the right, before recommending any Award, to inspect the facilities and organization; or to take any other necessary action, such as background checks, to determine if the Bidder is satisfactorily able to perform, and reserves the right to reject submission packages where evidence submitted or investigation and evaluation indicates an inability for the Bidder to perform.

**6.1.1.** Additional sources may be utilized to determine credit worthiness and ability to perform.

**6.1.2.** Any Bidder or sub-contractor that will have access to County facilities or property may be required to be screened to a level that may include, but is not limited to fingerprinting and a statewide criminal background check. There may be fees associated with these procedures. These costs are the responsibility of the Bidder or sub-contractor.

**6.1.3.** Bidders are responsible for ensuring that any required background screening are conducted in accordance with Chapter 435. Bidders shall be aware, understand, and ensure compliance with the statutory requirements regarding background checks. FL Statutes Chapter 435 governs required background screenings for any employees, contractors, subcontractors, or agents of the Bidder who will have contact with any vulnerable person, as defined by statute, or who otherwise are required to undergo a Level 1 or Level 2 background screening in accordance with Florida law. Such requirements shall flow down to sub-contractors/consultants of the prime Bidder and prime Bidder shall ensure compliance with Chapter 435 of such parties.

**6.1.3.1.** Documentation of such completed background screenings must be maintained for a period of no less than five (5) years and are subject to audit by Lee County at any time during such five (5) year period.

**6.2. Past Performance:** A Bidder's past performance and prior dealings with Lee County (i.e., failure to meet specifications, poor workmanship, late delivery, etc.) may be reviewed. Poor or unacceptable past performance may result in Bidder disqualification.

## 7. PRE-BID CONFERENCE

**7.1.** A pre-bid conference will be held in the location, date, and time specified on the cover of this Solicitation. The cover will also note if the pre-bid conference is non-mandatory or mandatory. All prospective Bidders are encouraged to obtain and review the Solicitation Documents prior to the pre-bid conference so they may be prepared to discuss any questions or concerns they have concerning this project. All questions must be submitted formally in writing to the procurement staff noted on the first page of the Solicitation Documents. A formal response will be provided in the form of an Addendum (see "County Interpretation/Addendums" for additional information). If appropriate, a site visit may follow the pre-bid conference.

**7.2. Non-Mandatory:** Pre-bid conferences are generally non-mandatory, but it is highly recommended that prospective Bidders participate.

- 7.3. Mandatory:** In the event a mandatory pre-bid conference is held, no Bids shall be considered by Bidders that fail to attend, and a Bid submitted by any such Bidder shall be considered **non-responsive**.

#### 8. COUNTY INTERPRETATION/ADDENDUMS

- 8.1.** Each Bidder shall examine the Solicitation Documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries, suggestions or requests concerning interpretation, clarification or additional information pertaining to the Bid shall be made **in writing, submitted at least eight (8) calendar days prior to the date when the Bid is due**.
- 8.2.** Response(s) will be in the form of an Addendum posted on [www.leegov.com/procurement](http://www.leegov.com/procurement). It is solely the Bidder's responsibility to check the website for information. The Lee County Department of Procurement Management will send no notifications regarding postings associated with this solicitation.
- 8.3.** All Addenda shall be incorporated into the Contract Documents.
- 8.4.** The County shall not be responsible for oral interpretations given by any County employee, representative, agent, or other person. Interpretation of the meaning of the plans, Specifications or any other Contract Document, or for correction of any apparent ambiguity, inconsistency or error there in, shall be in writing. Issuance of a written Addendum by the County's Department of Procurement Management is the only official method whereby interpretation, clarification or additional information may be given.

#### 9. QUALITY GUARANTEE/WARRANTY (as applicable)

- 9.1.** Bidder will guarantee their work without disclaimers, unless otherwise specifically approved by the County, for a minimum of twelve (12) months from the date of final completion.
- 9.2.** Unless otherwise specifically provided in the specifications, all equipment and materials and articles incorporated in the work covered by this contract shall be new, unused and of the most suitable grade for the purpose intended. Refurbished parts or equipment are not acceptable unless otherwise specified in the specifications. All warranties will begin from the date of final completion.
- 9.3.** Unless otherwise specifically provided in the specifications, the equipment must be warranted for twelve (12) months, shipping, parts and labor. Should the equipment be taken out of service for more than forty-eight (48) hours to have warranty work performed, a loaner machine of equal capability or better shall be provided for use until the repaired equipment is returned to service at no additional charge to the County.
- 9.4.** If any product does not meet performance representation or other quality assurance representations as published by manufacturers, producers or distributors of such products or the specifications listed, the vendor shall pick up the product from the County at no expense to the County. The County reserves the right to reject any or all materials, if in its judgment the item reflects unsatisfactory workmanship or manufacturing or shipping damage. The vendor shall refund, to the County, any money which has been paid for same.

#### 10. SUBSTITUTION(S)/APPROVED ALTERNATE(S)

- 10.1.** Unless otherwise specifically provided in the Specifications, reference to any equipment, material, article or patented process, by trade name, brand name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. If a Bidder wishes to make a substitution in the Specifications, the Bidder shall furnish to the County, **no later than ten (10) business days prior to the Bid opening date**, the name of the manufacturer, the model number, and other identifying data and information necessary to aid the County in evaluating the substitution. Such information is submitted through the Department of Procurement Management. Any such substitution shall be subject to County approval through the issuance of a written Addendum by the County's Department of Procurement Management. Substitutions shall be approved only if determined by the County to be an **Approved Alternate** to the prescribed Specifications.
- 10.2.** A Bid containing a substitution is subject to disqualification if the substitution is not approved by the County. Items Bid must be identified by brand name, number, manufacturer and model, and shall include full descriptive information, brochures, and appropriate attachments. Brand names are used for descriptive purposes only. An **Approved Alternate** product or service may be used.

## 11. ADDITIONS, REVISIONS AND DELETIONS

- 11.1.** Additions, revisions, or deletions to the Terms and Conditions, specifications that change the intent of the solicitation will cause the solicitation to be non-responsive and the proposal will not be considered. The Procurement Management Director shall be the sole judge as to whether or not any addition, revision, or deletion changes the intent of the solicitation.

## 12. NEGOTIATED ITEMS

- 12.1.** Any item not outlined in the Scope of Work/Specifications may be subject to negotiations between the County and the successful Bidder.
- 12.2.** After Award of this Bid, the County reserves the right to add or delete items/services at prices to be negotiated at the time of addition or deletion.
- 12.3.** At contract renewal time(s) or in the event of significant industry wide market changes, the County may negotiate justified adjustments such as price, terms, etc., if in its sole judgment, the County considers such adjustments to be in their best interest.

## 13. CALCULATION ERRORS

- 13.1.** In the event of multiplication/addition error(s), the unit price shall prevail and the corrected sum shall be considered the bid price. All Bids will be reviewed mathematically and corrected, if necessary, using these standards, prior to further evaluation.

## 14. CONFIDENTIALITY

- 14.1.** Bidders should be aware that all submissions provided are generally considered public records subject to public disclosure upon conclusion of the Solicitation process, and shall **not** be afforded confidentiality, unless otherwise provided by law.
- 14.2.** If information is submitted with a Bid that is deemed “confidential,” the Bidder must stamp those pages of the submission that are considered confidential. The Bidder must provide sufficient documentation demonstrating why such documents should be deemed confidential in accordance with Florida law.
- 14.3.** Lee County **will not reveal engineering estimates or budget amounts for a project** unless required by grant funding or unless it is in the best interest of the County. Pursuant to § 337.168, F.S.: A document or electronic file revealing the official cost estimate of the department of a project is confidential and exempt from the provisions of § 119.07(1), F.S. until the Contract for the project has been executed or until the project is no longer under active consideration.

## 15. CONFLICT OF INTEREST

- 15.1. Business Relationship Disclosure Requirement:** The Award hereunder is subject to the provisions of Chapter 112, F.S. All Bidders must disclose with their submission the name of any officer, director or agent who is also an officer or employee of Lee County or any of its agencies or a spouse or child of such officers or employees. Furthermore, all Bidders must disclose the name of any County officers, employees, or spouses or children thereof who own directly or indirectly, an interest of five percent (5%) or more in the Bidder’s firm or any of its branches.

## 16. ANTI-LOBBYING CLAUSE (Cone of Silence)

- 16.1.** Upon the issuance of the Solicitation, prospective Bidders or any agent, representative or person acting at the request of said Bidder shall not have any contact, communicate with or discuss any matter relating in any way to the Solicitation with any commissioner, evaluation review committee, agent or employee of the County other than the Procurement Management Director or their designee. This prohibition begins with the issuance of any Solicitation, and ends upon issuance of the Notice of Intended Decision, the rejection of all responses, or the termination of this competitive procurement. **If it is determined that improper communications were conducted, the Bidder may be declared non-responsive.**

## 17. DRUG FREE WORKPLACE

- 17.1.** The County encourages Drug Free Workplace programs.



## 18. DISADVANTAGED BUSINESS ENTERPRISE (DBE) and MINORITY-OWNED AND WOMEN-OWNED FIRMS (W/MBE)

- 18.1.** The County encourages interested Disadvantaged Business Enterprise Bidder(s) (DBE), as defined and certified by the Florida Department of Transportation, as well as other minority-owned and women-owned firms, as defined and certified by the State of Florida Office of Supplier Diversity (W/MBE), to do business with the County and respond to this solicitation.

As described in the required forms, the Bidder is required to indicate whether they and/or any proposed sub-contractor(s) are DBEs and W/MBE. Lee County encourages the utilization and participation of DBEs and W/MBE in procurements, and evaluation proceedings will be conducted within the established guidelines regarding equal employment opportunity and nondiscriminatory action based upon the grounds of race, color, sex or national origin. Each bidder that intends to use subcontractors shall also use the State of Florida, and/or when deemed appropriate directories of DBE and W/MBE to solicit for subcontracting opportunities under a primary contract. Each bidder that intends to use subcontractors shall be responsible for documenting outreach activities in accordance with the competitive procurement document.

## 19. ANTI-DISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY

- 19.1.** The Bidder agrees to comply, at its own expense, with all federal, state, and local laws and regulations, including federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Work, including but not limited to those dealing with taxation, workers' compensation, equal employment and safety. Bidder acknowledges and agrees, in accordance with § 287.134, F.S., the Rehabilitation Act of 1973 as amended, the Americans with Disabilities Act of 1990 (ADA), and the ADA Amendments Act of 2008 (ADAAA), that in performing the Work hereunder, no person on the grounds of race, religion, color, age, sex, national origin, disability or marital status shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.
- 19.2.** The Bidder shall not discriminate against any employee or applicant for employment because of race, religion, color, age, sex, national origin, disability or marital status. The Bidder shall make affirmative efforts to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, age, sex, national origin, disability or marital status.
- 19.3.** The Bidder shall include the provisions of this section in every sub-contract under this Contract to ensure its provisions will be binding upon each sub-contractor. The Bidder shall take such actions in respect to any sub-contractor, as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance.
- 19.4.** An entity or affiliate who has been placed on the State of Florida's Discriminatory Vendor List (this list may be viewed by going to the Department of Management Services website at <http://www.dms.myflorida.com>) may not submit a Bid on a contract to provide goods or services to a public entity, may not submit a Bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not award or perform work as a vendor, supplier, sub-contractor, or consultant under contract with any public entity, and may not transact business with any public entity.

## 20. SUB-CONTRACTORS

- 20.1.** The use of sub-contractors under this Solicitation requires prior written authorization from the County representative.

## 21. PROJECT GUIDELINES (as applicable)

- 21.1.** The County has established the following guidelines, criteria, goals, objectives, constraints, schedule, budget and or requirements which shall serve as a guide to the Bidder(s) in performing the Work provided for pursuant to this Contract:
- 21.1.1.** No amount of Work is guaranteed upon the execution of a Contract.
- 21.1.2.** Rates and all other negotiated expenses shall remain in effect throughout the duration of the Contract period inclusive of any renewals unless otherwise specified herein.
- 21.1.3.** This Contract does not entitle any Bidder to exclusive rights to County contracts. The County reserves the right to perform any and all available required Work in-house or by any other means it so desires.

- 21.1.4. In reference to vehicle travel, mileage and man-hours spent in travel, time is considered incidental to the Work and not an extra compensable expense.
- 21.1.5. Lee County reserves the right to add or delete, at any time, any or all material, tasks or services associated with this Contract.
- 21.1.6. Any Single Large Project: The County, in its sole discretion, reserves the right to separately solicit any project that is outside the scope of this Solicitation, whether through size, complexity or the dollar value.
- 21.1.7. Background Check(s): The County is committed to maintaining a safe and secure environment. The following shall apply to the contractor, contractor employees, employees hired through a third party staffing vendor, subcontractors and any other staffing that may be working in or around a County Facility, School, Library and other locations as deemed necessary.  
Upon written request by Lee County Procurement Management, the contractor at its expense must conduct a background check for each of its employees, as well as for the employees of its subcontractors, who will provide services to the County or have access to the County computer systems, through either onsite or remote access. Contractor employees, for the purpose of this requirement, include such temporary staff as office support, custodial service and any third party vendor. Background checks shall be conducted through the Florida Department of Law Enforcement and provided to Lee County Procurement Management Department at [procurement@leegov.com](mailto:procurement@leegov.com). Background checks must be conducted prior to commencement of said project(s).

## 22. TIEBREAKER

- 22.1. Whenever two or more Bids, which are equal with respect to price, quality and service, are received for procurement of commodities or contractual services, from Responsive and Responsible Bidders, the following steps shall be taken to establish the Award to the lowest Bidder. This method shall be used for all ties.
  - 22.1.1. Step 1 - Local Bidder: Between a Local Bidder, and a non-Local Bidder, a Contract Award, or the first opportunity to negotiate, as applicable, shall be made to the Local Bidder. **If local preference is prohibited by the funding source then step 2 will replace step 1.**
  - 22.1.2. Step 2 - Drug Free Workplace: At the conclusion of step 1, if all is equal, the Bidder with a Drug Free Workplace program shall be given preference over a Bidder with no Drug Free Workplace program. The Contract Award, or the first opportunity to negotiate, as applicable, shall be made to the Bidder with the Drug Free Workplace program.
  - 22.1.3. Step 3 - Coin Flip: At the conclusion of Step 1 and Step 2, if all is equal, the Contract Award, or the first opportunity to negotiate, as applicable, the final outcome shall be determined by the flip of a coin.
- 22.2. When the tie has been broken pursuant to the above procedures, the Contract Award, or the first opportunity to negotiate, as applicable, shall be furnished to the prevailing Bidder.
- 22.3. If an Award or negotiation is unsuccessful with the initial Bidder, Award or negotiations may commence with the next highest Bidder, utilizing the tiebreaker steps above to make the determination of next lowest Bidder, if necessary.

## 23. WITHDRAWAL OF BID

- 23.1. No Bid may be withdrawn for a period of **180 calendar days** after the scheduled time for receiving submissions. A Bid may be withdrawn prior to the Solicitation opening date and time. Withdrawal requests must be made in writing to the Procurement Management Director, who will approve or disapprove the request.
- 23.2. After submissions are opened, but prior to Award of the Contract by the County Commission, the Procurement Management Director may allow the withdrawal of a Bid because of the mistake of the Bidder in the preparation of the submission document. In such circumstance, the decision of the Procurement Management Director to allow the submission withdrawal, although discretionary, shall be based upon a finding that the Bidder, by clear and convincing evidence, has met each of the following four tests:
  - 23.2.1. The Bidder acted in good faith in submitting the Bid;
  - 23.2.2. The mistake in Bid preparation was of such magnitude that to enforce compliance by the Bidder would cause a severe hardship on the Bidder;

- 23.2.3. The mistake was not the result of gross negligence or willful inattention by the Bidder; and
- 23.2.4. The mistake was discovered and was communicated to the County prior to the County Commission having formally Awarded the Contract.

#### 24. PROTEST RIGHTS

- 24.1. Any Bidder that has submitted a formal Response to Lee County, and who is adversely affected by an intended decision with respect to the Award, has the right to protest an intended decision posted by the County as part of the Solicitation process.
- 24.2. Notice of Intended Decision is posted on the Lee County Department of Procurement Management website ([www.leegov.com/procurement](http://www.leegov.com/procurement)). Bidders are solely responsible to check for information regarding the Solicitation.
- 24.3. Refer to the "Procurement Protest" section of the Lee County Procurement Ordinance 18-22 for a complete description of the protest process and associated requirements. The ordinance is posted on the Lee County website or may be obtained by contacting the Procurement Management Director.
- 24.4. In order to preserve the right to protest, a written **"Notice Of Intent To File A Protest" must be filed with the Lee County Procurement Management Director within seventy-two (72) hours of Posting of the Notice of Intended Decision.**
  - 24.4.1. The notice shall clearly indicate all grounds being claimed for the protest.
  - 24.4.2. The notice must be physically received by the Procurement Management Director within the required time frame described above. No additional time will be granted for mailing.
- 24.5. Following receipt of the Notice of Intent to File a Protest, a **"Protest Bond" and "Formal Written Protest"** must be filed **within ten (10) business days** of Posting of the Notice of Intended Decision.
- 24.6. **Failure to follow the protest procedures requirement within the time frames as prescribed herein and in the Lee County Procurement Ordinance 18-22 shall constitute a waiver of the right to protest and shall bar any resulting claims.**

#### 25. AUTHORITY TO UTILIZE BY OTHER GOVERNMENT ENTITIES

- 25.1. This procurement opportunity is also made available to any government entity. Pursuant to their own governing laws, and subject to the Agreement/Contract of the Bidder, other entities may be permitted to make purchases at the terms and conditions contained herein. The Lee County Board of County Commissioners shall not be financially responsible for the purchases of other entities from this Solicitation.

#### 26. CONTRACT ADMINISTRATION

- 26.1. **Designated Contact:**
  - 26.1.1. The Awarded Bidder shall appoint a person(s) to act as a primary contact for all County departments. This person or their designee shall be readily available during normal working hours by phone or in person, and shall be knowledgeable of the terms and procedures involved.
  - 26.1.2. Lee County requires that the Awarded Bidder provide the name of a contact person(s) and phone number(s) which will afford Lee County access twenty-four (24) hours per day, 365 days per year, in the event of major breakdowns or natural disasters.
- 26.2. **Basis of Award:**
  - 26.2.1. The County shall issue a Notice of Intended Decision to the lowest Responsive and Responsible Bidder who submits a Bid.
  - 26.2.2. In the event the lowest Responsive and Responsible Bid exceeds the architectural or engineering cost estimates or the amount of available funds, the County Administrator or designee may, when time or economic considerations preclude re-bidding of Work of a reduced scope, negotiate an adjustment of the Scope of Work with the lowest Responsive and Responsible Bidder, in order to bring the Bid within the amount of available funds.
  - 26.2.3. The County reserves the right to make Award(s) by individual item, group of items, all or none, or a combination thereof. The County reserves the right to reject any and all Bids or to waive any minor irregularity or technicality in the Bids received. Award shall be made to the lowest Responsive and Responsible Bidder(s) within the category chosen for basis of Award.



**26.2.4.** The County reserves the right to Award to one or multiple Bidders at the discretion of the requesting authority and approval of the Procurement Management Director.

**26.3. Contract:**

**26.3.1.** The Awarded Bidder will be required to enter into the Contract with the County and will be required to perform the Work in accordance with the Contract terms and conditions. The draft Contract is attached to this Solicitation and incorporated herein by reference. The Contract may be viewed on-line at <http://www.leegov.com/procurement/forms>.

**26.4. Records:**

**26.4.1. Retention:** The Bidder shall maintain such financial records and other records as may be prescribed by Lee County or by applicable federal and state laws, rules and regulations. Unless otherwise stated in the Specifications, the Bidder shall retain these records for a period of ten (10) years after final payment, or until they are audited by Lee County, whichever event occurs first.

**26.4.2. Right to Audit/Disclosure:** These records shall be made available during the term of the Contract as well as the retention period. These records shall be made readily available to County personnel with reasonable notice and other persons in accordance with the Florida General Records Schedule. Awarded Bidder(s) are hereby informed of their requirement to comply with Chapter 119, F.S., specifically to:

26.4.2.1. Keep and maintain public records required by the County to perform the service.

26.4.2.2. Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided or as otherwise provided by law.

26.4.2.3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the contractor does not transfer the records to the County.

26.4.2.4. Upon completion of the Contract, transfer, at no cost, to the County all public records in possession of the Bidder or keep and maintain public records required by the County to perform the service. If the Bidder transfers all public records to the County upon completion of the Contract, the Bidder shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Bidder keeps and maintains public records upon completion of the Contract, the Bidder shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the information technology systems of the County.

**26.4.3. Public Records: IF THE BIDDER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE BIDDER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, [publicrecords@leegov.com](mailto:publicrecords@leegov.com) or <http://www.leegov.com/publicrecords>.**

**26.4.4. Ownership:** It is understood and agreed that all documents, including detailed reports, plans, original tracings, specifications and all data prepared or obtained by the successful Bidder in connection with its services hereunder, including any documents bearing the professional seal of the successful Bidder, shall be delivered to and become the property of Lee County, prior to final payment to the successful Bidder or the termination of the Contract. This includes any electronic versions, such as CAD or other computer aided drafting programs.

**26.5. Termination:**

- 26.5.1.** Termination of an Award or Contract entered into pursuant to this Solicitation shall be governed by the terms of such Contract and by the provisions of this section.
- 26.5.2.** The Procurement Management Director may immediately terminate any Award resulting from this Solicitation for emergency purposes, as defined by the Lee County Procurement Ordinance 18-22.
- 26.5.3.** Any Bidder who has voluntarily withdrawn from a Solicitation without the County's mutual consent during the Contract period shall be barred from further County procurement for a **period of 180 calendar days**. The Bidder may apply to the Board for a waiver of this debarment. Such application for waiver of debarment must be coordinated with and processed by the Procurement Management Department.
- 26.5.4.** For a Contract over \$1,000,000, the County reserves the right to terminate an award of such contract upon information or belief of any of the following, when, applicable:
  - 26.5.4.1. Bidder is found to have submitted a false certification as provided under § 287.135 (5), F.S.;
  - 26.5.4.2. Bidder has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List (§ 215.473, F.S.);
  - 26.5.4.3. Bidder has engaged in business operations in Cuba or Syria (§ 215.471, F.S.);
  - 26.5.4.4. Bidder has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel (§ 215.4725, F.S.).
  - 26.5.4.5. The County reserves the right to review, on a case-by-case basis, and waive this stipulation if it is deemed to be advantageous to the County.

**26.6 Termination for Convenience:**

- 26.6.1.** The County may terminate the entire Contract or any portion thereof, if the Director determines that a termination is in the County's interest. The Director will deliver to the Contractor a Written Notice of Termination specifying the extent of termination and the effective date.
  - 26.6.1.1. When the County terminates the entire Contract, or any portion thereof, before the Contractor completes all items of work in the Contract, the County will make payment for the actual number of units or items of work that the Contractor has completed, at the Contract unit price, and according to the formulas and provisions set forth in the contract documents for work partially completed, and such payments will constitute full and complete compensation for such work or items. No payment of any kind or amount will be made for items of work not started. The County will not consider any claim for loss of anticipated profits, or overhead of any kind (including home office and jobsite overhead or other indirect impacts) except as provided for within the contract documents for partially completed work.
  - 26.6.1.2. The County will consider reimbursing the Contractor for actual cost of mobilization (when not otherwise included in the Contract) including moving equipment to the job where the volume of the work that the Contractor has completed is too small to compensate the Contractor for these expenses under the Contract unit prices.
  - 26.6.1.3. The County may purchase at actual cost acceptable materials and supplies procured for the work, that the County has inspected, tested, and approved and that the Contractor has not incorporated in the work. Submit the proof of actual cost, as shown by receipted bills and actual cost records, at such points of delivery as the Director may designate.
  - 26.6.1.4. Termination of a contract or a portion thereof, does not relieve the Contractor or the surety of its responsibilities for the completed portion of the contract or its obligations for and concerning any just claims arising out of the work performed.

26.6.1.5. All Contractor claims for additional payment, due to the County's termination of the entire Contract or any portion thereof, must meet the requirements as stated within the contract documents.

## 27. WAIVER OF CLAIMS

- 27.1.** Once the Contract associated with this Solicitation expires, or final payment has been requested and made, the Awarded Bidder shall have waived any claims against the County concerning such Contract, except those previously made in writing and identified by the Awarded Bidder as unsettled at the time of the final application for payment.

## 28. LEE COUNTY PAYMENT PROCEDURES

- 28.1.** Unless otherwise noted, all Awarded Bidders are requested to mail an original invoice to:  
**Lee County Finance Department**  
**Post Office Box 2238**  
**Fort Myers, FL 33902-2238**
- 28.2.** All invoices shall be paid as directed by the Lee County payment procedure, unless otherwise stated in the Contract or detailed Specifications for this project.
- 28.3.** Lee County shall not be liable for requests for payment deriving from aid, assistance, or help by any individual, vendor, proposer, or Bidder for the preparation of these Specifications.

## 29. SAFETY DATA SHEETS (SDS) (as applicable)

- 29.1.** It is the Bidder's responsibility to provide Lee County with Safety Data Sheets on Bid materials, as may apply to this procurement.

## 30. BOND/SURETY

- 30.1.** Bonding/Surety is required in accordance with the Lee County Procurement Ordinance 18-22.
- 30.2. Bid Bond/Security: The Procurement Management Department shall determine if a Bid Bond shall be required for any Competitive Procurement.** Each Bidder shall submit **not less than five percent (5%) of the proposed dollar amount** (including applicable Alternates) as Bid Bond/Security. One **ORIGINAL** Bid Bond/Security shall be submitted to the County with each Bid submission. The Bid Bond/Security of the Bidder will be retained until the Bidder and the County have entered into the Contract, whereupon the Bid Bond/Security may be returned. The Bid Bond/Security of a Bidder whom the County believes to have a reasonable chance of receiving the Award may be retained by the County until the effective date of the Contract, whereupon any Bid Bonds/Securities furnished by a Bidder may be returned. The following types of Bid Security shall be accepted:
- 30.2.1. A Certified Check or a Cashier's Check** in the amount of not less than five percent (5%) of the proposed dollar amount. Any Certified Check or Cashier's Check submitted in lieu of a Bid Bond shall be drawn on a solvent bank or trust company, made payable to Lee County Board of County Commissioners and shall have all necessary documentary revenue stamps attached (if required by law); or
- 30.2.2. A Bid Bond** may be submitted on a Lee County paper Bid Bond Form. Such Bid Bond must be signed by all required parties, must be in the amount of not less than five percent (5%) of the proposed dollar amount (including Alternate(s) as applicable), and shall accompany each submission. The Bid Bond shall be issued by a surety authorized to do business and in good standing with the Florida Department of State.
- 30.3. Performance and Payment Bond:** As further described in the Contract, the successful Bidder shall provide Performance and Payment Bonds in the amount of one hundred percent (100%) of the total Awarded Contract amount within **seven (7) calendar days** after notification by the County of the approval to award the Contract, the costs of which are to be paid by the successful Bidder. Such Performance and Payment Bonds shall be in the form prescribed by the Exhibits to the attached Contract. The Performance and Payment Bonds shall be underwritten by a surety authorized to do business in the State of Florida and otherwise acceptable to the County; provided, however, the surety shall be rated as "B" or better as reported in the most current Best's Key Rating Guide, published by A.M. Best Company, Inc. The successful Bidder shall

record the Performance and Payment Bond with the Lee County Clerk of Courts, at its sole expense, and provide the original, recorded bond document to the County.

**30.4. A Clean Irrevocable Letter of Credit or Cash Bond** may be accepted by the County in lieu of the Public Payment and Performance Bond.

**30.5. Personal Checks are not acceptable to Lee County as a Bid Security.**

31. INSURANCE (AS APPLICABLE)

**31.1.** Insurance shall be provided by the Awarded Bidder pursuant to the Specifications provided herein and/or in the Contract. Prior to execution of the Contract, a certificate of insurance (COI) complying with the Solicitation Documents shall be provided by the Bidder.

End of Terms and Conditions Section

## INSURANCE GUIDE



<b>Lee County Insurance Requirements</b>
--

**Minimum Insurance Requirements:** *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:

\$1,000,000 per occurrence  
 \$2,000,000 general aggregate  
 \$1,000,000 products and completed operations  
 \$1,000,000 personal and advertising injury

- b. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 combined single limit (CSL); or  
 \$500,000 bodily injury per person  
 \$1,000,000 bodily injury per accident  
 \$500,000 property damage per accident

- c. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:

\$500,000 per accident  
 \$500,000 disease limit  
 \$500,000 disease – policy limit

*\*The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*



**Verification of Coverage:**

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:
  - a. The certificate holder shall read as follows:

Lee County Board of County Commissioners  
P.O. Box 398  
Fort Myers, Florida 33902
  - b. *“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials” will be named as an "Additional Insured" on the General Liability policy, including Products and Completed Operations coverage.*

**Special Requirements:**

1. An appropriate "Indemnification" clause shall be made a provision of the contract.
2. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.



## SPECIAL CONDITIONS

These are conditions that are in relation to this Solicitation only and have not been included in the County's standard Terms and Conditions or the Scope of Work and Specifications.

### 1. TERM

- 1.1 From the Notice to Proceed or the Purchase Order date, whichever applies, the timeframe for completion of all Work to Final Acceptance shall be **365 CALENDAR DAYS**.

### 2. LIQUIDATED DAMAGES

- 2.1 In accordance with the terms set forth in the Agreement, should the Contractor fail to achieve final acceptance of the Work within the time period stated in the Agreement, the County shall be entitled to assess the amount set forth in Article 8-10 of Exhibit E Standard Specifications, as Liquidated Damages, but not as a penalty, for each calendar day thereafter until Final Acceptance is achieved.

### 3. BASIS OF AWARD

- 3.1 The basis of award shall be determined by the lowest Project Total, Base Bid plus Bid Alternate No. 1, of the most responsive, responsible, and qualified Contractor meeting all bid specifications.
- 3.2 The County reserves the right to reject any bids or portion of the bid with just cause, which shall include, but not be limited to, an "unbalanced bid," to the detriment of the County. An "unbalanced bid" shall include: excessive unit pricing, other unfair pricing for materials or labor, or a disproportionate allocation of cost to the County for the actual construction performed.
- 3.3 The County further reserves the right to reject any bids or portion of the bid on behalf of the Gateway Services Community Development District, at its sole discretion, as deemed to be in its best interest.
- 3.4 In the event the Gateway Services Community Development District enforces their right to not move forward with their portion of the work as defined, described and titled as Bid Alternate No. 1, the County reserves the right to review the bids received, and award the work to the lowest Project Total Base Bid of the most responsive, responsible, and qualified Contractor meeting all bid specifications. This award is only allowable with the clear and expressed notice from the Gateway Services Community Development District that they are not intending to award their portion of the work under this solicitation and associated agreement.
- 3.5 Contractor must bid all line items associated with the Base Bid and Bid Alternate No. 1 as listed within the Bid Schedule. Failure to bid all line items may deem Contractor as non-responsive.

## **MINIMUM QUALIFICATIONS**

Contractor/Sub-Contractor shall meet the minimum qualifications described below and provide sufficient evidence with bid submission that such qualifications have been met. Failure to meet all minimum qualifications listed will deem Contractor as Non-Responsive at the sole discretion of the County.

County reserves the right to request clarification or additional documentation to support qualification details provided by Contractor/Sub-Contractor.

### **1. QUALIFICATIONS**

- 1.1. Bidder must provide evidence that he/she is licensed to provide general construction services in the State of Florida as described per the construction plans and/or Work description. This evidence should include verifiable proof of a minimum of three (3) consecutive years as a State of Florida Licensed General Contractor under the same name as listed on the Bid Form.
- 1.2. A bidder officially changing their name any time during the three (3) year period prior to the bid submittal due date should provide verifiable documentation of the name change and verifiable evidence of a minimum of three (3) consecutive years as State of Florida Licensed General Contractor. Bidders not meeting this requirement may be deemed as being non-responsive and their bid rejected. Bidders will be required to identify the Contractor's license number, expiration date and name of the primary qualifying agent of the Bidder. If the primary qualifying agent is not the owner, an officer, partner, a member, a joint venture managing partner, etc., the Bidder will be required to describe the relationship to the company and provide verifiable evidence of such relationship and/or license use agreement.

### **2. LICENSING**

- 2.1. Contractor to perform the utility work shall hold an active and valid State of Florida issued Certified Underground Utility and Excavation Contractor license.

### **3. RECORD OF PERFORMANCE - SIMILAR PROJECTS**

- 3.1. List three contracts that included a minimum length of 500 LF of sewer force main with a diameter of 12-inches or larger installed in existing developed neighborhoods and completed within the past five years. For each project provide: name, phone number, and email address of Owner's representative; total contract value; a narrative of the project scope of work.
- 3.2. List three contracts that included a minimum length of 500 LF of potable water main with a diameter of 12-inches or larger installed in existing developed neighborhoods and completed within the past five years. For each project provide: name, phone number, and email address of Owner's representative; total contract value; and a narrative of the project scope of work.
- 3.3. List three contracts that included a minimum length of 500 LF of irrigation/non-potable water main with a diameter of 12-inches or larger installed in existing developed neighborhoods and completed within the past five years. For each project provide: name, phone number, and email address of Owner's representative; total contract value; and a narrative of the project scope of work.
- 3.4. List all construction projects your company currently has in progress or has been recently awarded through the date of bid submittal giving the name of project, owner, engineer, contract amount, percent complete, and scheduled completion date.
- 3.5. A single project may be utilized to meet more than one of the Record of Performance requested experience requirements. A total of three contracts must be provided to support request made under 3.1, 3.2, and 3.3 listed above.

End of Special Conditions Section



## **SCOPE OF WORK AND SPECIFICATIONS**

### **1. GENERAL SCOPE OF WORK SUMMARY**

- 1.1. Lee County Board of County Commissioners seeks to contract with a qualified Contractor to perform utility work, roadway and drainage improvements to the intersection of Gateway Blvd and Commerce Lakes Drive in Fort Myers, Florida. Work will consist of the following: removal and relocation of existing utilities, open cuts, and construction of a roundabout with drainage improvements at the intersection of Gateway Blvd and Commerce Lakes Drive.
- 1.2. All work performed is to follow Federal, State, Local, OSHA, and County mandated regulations and specifications for associated work.
- 1.3. The scope is further defined and detailed within Exhibits E-O found attached to the draft construction agreement affixed to this solicitation package as well as within the plans associated with this project. Contractor is responsible for reviewing all documentation associated with this project.

End of Scope of Work and Specifications Section

## LEE COUNTY DOCUMENT MANAGEMENT FORM

For

**B200121CJV – Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements**

These forms are required as indicated below and all required forms should be submitted with the Bidder's/Proposer's submission package. If it is determined that forms in this selection are not applicable to your company or solicitation they should be marked "N/A or Not Applicable" across the form in large letters and returned with your submission package.

FORM #	TITLE / DESCRIPTION	REQUIRED STATUS (Required, Not Required, If Applicable)	VENDOR CHECK-OFF
1	Solicitation Response Form	Required	
1a	Bid/Proposal Form	Required	
N/A	Business Relationship Disclosure Requirement	If Applicable	
2	Affidavit Certification Immigration Laws	Required	
3	Reference Survey <i>*(Requested after opening of lowest Bidder only)</i>	Required	
4	Negligence or Breach of Contract Disclosure Form	Required	
5	Affidavit - Principal Place of Business	Required	
6	Sub-Contractor List	Required	
7	Public Entity Crime Form	Required	
8	Trench Safety	Required	
9	Bid Bond	Required	
*	Proposal Label	Required	
*	Minimum Qualifications	Required	

It is the Bidder's/Proposer's responsibility to review the submittal request in its entirety and ensure that all submittal requirements are included within their submission package. Failure to submit required forms may deem your company as non-responsive.

# FORMS DESCRIPTION & INSTRUCTIONS

## INVITATION TO BID

This table provides a brief list, description, and instructions regarding the standard requested forms that should be submitted with all bids or proposals. This is not intended to be an all-inclusive list of forms required for your submission, but rather a guide to assist in completion of the County's standard forms. Bidders/Proposers should utilize the Lee County Document Management Form for a complete list of all forms required for project submission.

<u>Form #</u>	<u>Title/Description</u>
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<b>1</b>	<b><i>Solicitation Response Form</i></b>
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All signatures must be by a corporate authorized representative, witnessed, and corporate and/or notary seal (as applicable.) The corporate or mailing address must match the company information as it is listed with the Florida Department of State Division of Corporations. Attach a copy of the web-page(s) from <http://www.sunbiz.org> as certification of this required information. Sample attached for your reference.

Verify that all Addenda and tax identification number have been provided.

<b>1a</b>	<b><i>Bid/Proposal Form</i></b>
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This form is used to provide itemization of project cost. A more detailed "schedule of values" may be requested by the County.

<b>N/A</b>	<b><i>Business Relationship Disclosure Requirement</i></b>
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Sections 112.313(3) and 112.313(7), F.S., prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. If this **disclosure is applicable, the Bidder must request the form entitled "INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS"** (Required by § 112.313(12)(b), F.S.) to be completed and **returned with the Solicitation Response**. **It is the Bidder's responsibility to request the form and disclose this relationship; failure to do so may result in being declared non-responsive.**

NOTICE: UNDER THE PROVISIONS OF § 112.317, F.S., A FAILURE TO MAKE ANY REQUIRED DISCLOSURE CONSTITUTES GROUNDS FOR, AND MAY BE PUNISHED BY, ONE OR MORE OF THE FOLLOWING: IMPEACHMENT, REMOVAL OR SUSPENSION FROM OFFICE OR EMPLOYMENT, DEMOTION, REDUCTION IN SALARY, REPRIMAND, OR A CIVIL PENALTY NOT TO EXCEED \$10,000.00.

<b>2</b>	<b><i>Affidavit Certification Immigration Laws</i></b>
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Submission of this form constitutes acknowledgement that the Bidder is in compliance in regard to all applicable immigration laws.

<b>3</b>	<b><i>Reference Survey</i></b>
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Provide this form to reference respondents. For Bids, this form will be requested from the apparent low Bidder prior to the award. (not required to submit with bid)

1. **Section 1:** Bidder/Proposer to complete with reference respondent's information prior to providing to them for their response. (This is **not** the Bidder/Proposer's information.)
2. **Section 2:** Enter the name of the Bidder/Proposer; provide the project information in which the reference respondent is to provide a response.
3. The reference respondent should complete "**Section 3.**"
4. **Section 4:** The reference respondent to print and sign name
5. **Three (3) Reference responses** are to be provided upon request.
6. **References shall be for projects of similar size, scope and budget as the subject project. Specify what tasks were completed by prime and/or sub-contractors as applicable.**
7. Failure to obtain reference surveys may make your company non-responsive.

**4**      ***Negligence or Breach of Contract Disclosure Form***

The form may be used to disclose negligence or breach of contract litigation that your company may have been a part of over the past ten (10) years. You may need to duplicate this form to list all history. If the Bidder has more than ten (10) lawsuits, you may narrow them to litigation of the company or subsidiary submitting the Solicitation Response. Include, at a minimum, litigation for similar projects completed in the State of Florida. Final outcome should include in whose favor the litigation was settled and whether a monetary amount was awarded. The settlement amount may remain anonymous.

If you have **no litigation**, enter **“None”** in the first **“type of incident”** block of the form. Please do not write N/A on this form.

**5**      ***Affidavit - Principal Place of Business***

Certifies Bidder’s location information.

**6**      ***Sub-Contractor List***

To be completed and returned when sub-contractors are to be utilized and are known at the time of the submission.

**7**      ***Public Entity Crime Form***

Any person or affiliate, as defined by statute, who has been placed on the convicted vendor list following a conviction for a public entity crime, may not submit a Bid on a Contract to provide any goods or services to the County; may not submit a Bid on a contract with the County for the construction or repair of a public building or a public work; may not submit Bids or leases of real property to the County; may not be Awarded or perform Work as a contractor, supplier, subcontractor, or consultant under a contract with the County, and may not transact business with the County in excess of \$25,000.00 for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

**8**      ***Trench Safety***

Typically required in construction projects where trench excavations are in excess of 5 feet deep per Florida Trench Safety Act (90-96, Laws of Florida)

**9**      ***Bid Bond***

Guarantee to County that Bidder/Proposer will take on job if selected.

**\***      ***Bid/Proposal Label***

Self-explanatory. Please affix to the outside of the sealed submission documents.

**\***      ***Include any licenses or certifications requested***

Local Business Tax Account (as applicable) issued by City and/or County entity. This is necessary for all Florida vendors.

It is the Bidder’s responsibility to ensure the Solicitation Response is mailed or delivered in time to be received no later than the specified opening date and time. (If Solicitation is not received prior to the deadline, it cannot be considered or accepted)

**Form 1 – Solicitation Response Form**

V09/12/2016


**LEE COUNTY**  
 SOUTHWEST FLORIDA

**LEE COUNTY PROCUREMENT MANAGEMENT**  
**SOLICITATION RESPONSE FORM**

 Date Submitted: \_\_\_\_\_ Bid Due Date: 3/31/2020

 SOLICITATION IDENTIFICATION: B200121CJV

 SOLICITATION NAME: Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements

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

NAME &amp; TITLE: (TYPED OR PRINTED) \_\_\_\_\_

BUSINESS ADDRESS: (PHYSICAL) \_\_\_\_\_

CORPORATE OR MAILING ADDRESS: \_\_\_\_\_

☐ SAME AS PHYSICAL

**ADDRESS MUST MATCH SUNBIZ.ORG**

E-MAIL ADDRESS: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_ FAX \_\_\_\_\_

**NOTE REQUIREMENT: IT IS THE SOLE RESPONSIBILITY OF THE BIDDER/PROPOSER TO CHECK THE LEE COUNTY PROCUREMENT MANAGEMENT WEB SITE FOR ANY ADDENDA ISSUED FOR THIS PROJECT. THE COUNTY WILL POST ADDENDA TO THIS WEB PAGE, BUT WILL NOT NOTIFY.**

By responding to this sealed Solicitation, the Bidder/Proposer makes all representations required by the instructions and further warrants and represents that: Bidder/Proposer has examined copies of all the Solicitation Documents and of the following Addenda:

No. _____ Dated: _____	No. _____ Dated: _____	No. _____ Dated: _____
No. _____ Dated: _____	No. _____ Dated: _____	No. _____ Dated: _____

Tax Payer Identification Number: \_\_\_\_\_

(1) Employer Identification Number -OR- (2) Social Security Number:

 \*\* *Lee County collects your social security number for tax reporting purposes only*

Please submit a copy of your registration from the website [www.sunbiz.org](http://www.sunbiz.org) establishing your firm as authorized (including authorized representatives) to conduct business in the State of Florida, as provided by the *Florida Department of State, Division of Corporations*. (a sample is attached for your reference)

1 **Collusion Statement:** Lee County, Florida. The undersigned, as Bidder/Proposer, hereby declares that no person or other persons, other than the undersigned, are interested in this Solicitation as principal, and that this Solicitation is submitted without collusion with others; and that they have carefully read and examined the Specifications or Scope of Work, and with full knowledge of all conditions under which the services herein is contemplated must be furnished, hereby Bid and agree to furnish this service according to the requirements set out in the Solicitation Documents, Specifications or Scope of Work for said service for the prices as listed on the County provided price sheet or (CCNA) agree to negotiate prices in good faith if a contract is Awarded.

2 **Scrutinized Companies Certification:**

Section 287.135, F.S., entitled "Prohibition against contracting with scrutinized companies" prohibits agencies from contracting with companies, for goods or services over \$1,000,000, that are on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, Scrutinized Companies that Boycott Israel List, have been engaged in a boycott of Israel, or been engaged in business operations in Cuba or Syria. The County reserves the right to review, on a case-by-case basis, and waive this stipulation if it is deemed advantageous to the County.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above is in compliance with Section 287.135, F.S. I understand that submission of a false certification may subject company to contract termination, civil penalties, attorney's fees, and/or costs.

**Form#1 – Solicitation Form, Page 2**

- 3 Business Relationship Disclosure Requirement:** Sections 112.313(3) and 112.313(7), F.S., prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. See Part III, Chapter 112, F.S., and/or the brochure entitled "A Guide to the Sunshine Amendment and Code of Ethics for Public Officers, Candidates and Employees" for more details on these prohibitions. However, Section 112.313(12), F.S., provides certain limited exemptions to the above-referenced prohibitions, including one where the business is awarded under a system of sealed, competitive bidding; the public official has exerted no influence on bid negotiations or specifications; and where disclosure is made, prior to or at the time of the submission of the bid, of the official's or his/her spouse's or child's interest and the nature of the intended business. The Commission on Ethics has promulgated this form for such disclosure, if and when applicable to a public officer or employee.

**If this disclosure is applicable, the Bidder must request form “*INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS*” (Required by 112.313(12)(b), F.S.) to be completed and returned with Solicitation Response. It is the Bidder/proposer’s responsibility to disclose this relationship, failure to do so could result in being declared non-responsive.**

☐

*Business Relationship Applicable (request form)*

☐

*Business Relationship NOT Applicable*

- 4** Disadvantaged Business Enterprise (DBE) Bidder/proposer? If yes, please attach a current certificate.

☐

Yes

☐

No

**ALL SUBMISSIONS MUST BE EXECUTED BY AN AUTHORIZED AUTHORITY OF THE BIDDER/PROPOSER. WITNESSED AND SEALED (AS APPLICABLE)**

\_\_\_\_\_  
Company Name (Name printed or typed)

\_\_\_\_\_  
Authorized Representative Name (printed or typed)

\_\_\_\_\_  
Authorized Representative’s Title (printed or typed)

\_\_\_\_\_  
Authorized Representative’s Signature

(Affix Corporate Seal, as applicable)

\_\_\_\_\_  
Witnessed/Attested by:

(Witness/Secretary name and title printed or typed)

\_\_\_\_\_  
Witness/Secretary Signature

Any blank spaces on the form(s), qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County’s form may result in the submission being declared non-responsive by the County.

**Detail by Entity Name****Florida Profit Corporation**

Bill's Widget Corporation

**Filing Information**

Document Number 655555  
FEI/EIN Number 5111111111  
Date Filed 09/22/1980  
State FL  
Status ACTIVE  
Last Event AMENDED AND RESTATED ARTICLES  
Event Date Filed 07/25/2006  
Event Effective Date NONE

**Principal Address**

555 N Main Street  
Your Town, USA 99999  
Changed 02/11/2012

**Mailing Address**

555 N Main Street  
MYour Town, USA 99999  
Changed 02/11/2012

**Registered Agent Name & Address**

My Registered Agent  
111 Registration Road  
Registration, USA99999

Name Changed: 12/14/2006

Address Changed: 12/14/2006

**Officer/Director Detail****Name & Address**

Title P

President, First  
555 AVENUE  
Anytown, USA99999

Title V

President, Second  
555 AVENUE  
Anytown, USA99999



Lee County Procurement Management  
**BID/PROPOSAL FORM**

Company Name: \_\_\_\_\_

Solicitation # B200121CJV Solicitation Name Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements

This page serves as a header/placeholder only. Please refer to the Excel document provided with the solicitation for the complete Bid Schedule. The Excel document contains formulas for convenience, however it is the Contractor's responsibility to verify all pricing and calculations are CORRECT. Lee County is not responsible for errors in formulas or calculations contained within Excel document(s).

**REMINDER:** In the event there is a discrepancy between the total quoted amount or the extended amounts and the unit prices quoted, the unit prices will prevail and the corrected sum will be considered the quoted price.

The County will only accept bids submitted on bid forms provided by the County. Bids submitted on other forms, other than those provided by the County, will deem Bidder as non-responsive and ineligible for award.

Bidders may not adjust or modify data provided within the Bid Schedule. Bids received with modified data may deem the Bidder as non-responsive and ineligible for award.

**PLEASE ENSURE** you have provided a printed copy of the Bid Schedule with your hard copy submission packages and provided the excel version with your digital submission package.

**PRICING**

Pricing shall be inclusive of all labor, equipment, supplies, overhead, profit, materials, and any other incidental costs required to perform and complete all work as specified herein.





## AFFIDAVIT CERTIFICATION IMMIGRATION LAWS

SOLICITATION NO.: B200121CJV

SOLICITATION NAME: Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements

LEE COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT (“INA”).

LEE COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY LEE COUNTY.**

BIDDER/PROPOSER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Company Name: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

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

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

The foregoing instrument was signed and acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_  
20\_\_\_\_, by \_\_\_\_\_ who has produced

(Print or Type Name)

\_\_\_\_\_ as identification.

(Type of Identification and Number)

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
Printed Name of Notary Public

\_\_\_\_\_  
Notary Commission Number/Expiration

The signee of this Affidavit guarantees, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**

***Lee County Procurement Management Reference Survey***  
***\*\*REQUIRED OF THE LOWEST APPARENT BIDDER ONLY\*\****

*Reference surveys submitted can be a maximum of twelve (12) months old. If using a previous reference, Proposers must clearly identify the project name and number the reference is being submitted for.*

*Please submit only non-Lee County employees as references.*

***Project Name & Number:***

<b>Section 1</b>		Reference Respondent Information		<b>Please return completed form to:</b>	
<b>FROM:</b>				<b>Bidder/Proposer:</b>	
<b>COMPANY:</b>				<b>Due Date:</b>	
<b>PHONE #:</b>				<b>Total # Pages: 1</b>	
<b>FAX #:</b>				<b>Phone #: Fax #:</b>	
<b>EMAIL:</b>				<b>Bidder/Proposer E-Mail:</b>	
<b>Section 2</b>		Enter Bidder/Proposer Information , as applicable Similar Performed Project (Bidder/Proposer to enter details of a project performed for above reference respondent)			
Bidder/Proposer Name:					
Project Name:		Project Address:		Project Cost:	
Detailed Scope:					
<p><b>You as an individual or your company has been given as a reference on the project identified above. Please provide your responses in Section 3 below.</b></p>					
<b>Section 3</b>					Indicate: "Yes" or "No"
1. Did this company have the proper resources and personnel by which to get the job done?					
2. Were any problems encountered with the company's work performance?					
3. Were any change orders or contract amendments issued, other than owner initiated?					
4. Was the job completed on time?					
5. Was the job completed within budget?					
6. On a scale of one to ten, ten being the highest/best, how would you rate the overall work performance, considering professionalism; final product; personnel; resources?					
7. If the opportunity were to present itself, would you rehire this company?					
8. State what percentage of the work was done by the prime contractor and what percentage, if any, was done by a sub-contractor. Specify tasks completed by each.					
<b>Section 4</b>					

### Reference Signature



## ALLEGED NEGLIGENCE OR BREACH OF CONTRACT DISCLOSURE FORM

Please fill in the form below. Provide each incident in regard to alleged negligence or breach of contract that has occurred over the past 10 years. Please complete in chronological order with the most recent incident on starting on page 1.

**Company Name:** \_\_\_\_\_

<b>Type of Incident</b> <i>Alleged Negligence or Breach of Contract</i>	<b>Incident Date And Date Filed</b>	<b>Plaintiff</b> <i>(Who took action against your company)</i>	<b>Case Number</b>	<b>Court</b> <i>County/State</i>	<b>Project</b>	<b>Claim Reason</b> <i>(initial circumstances)</i>	<b>Final Outcome</b> <i>(who prevailed)</i>

Make as many copies of this sheet as necessary in order to **provide a ten (10) year history** of the requested information. If there is no action pending or action taken in the last ten (10) years, complete the **company name** and write **"NONE"** in the first **"Type of Incident"** box of this page and return with your submission package. This form should also include the primary partners listed in your submission. Do not include litigation with your company as the plaintiff. Final outcome should include who prevailed and what method of settlement was made. If a monetary settlement was made, the amount may remain anonymous. **Please do not modify this form (expansion of spacing allowed) or submit your own variation.**

Page Number: \_\_\_\_\_ Of \_\_\_\_\_ Total pages

Update the page number to reflect the current page and the total number of pages. Example: Page 3, of 5 total submitted pages of this form.



# LEE COUNTY

## SOUTHWEST FLORIDA

### AFFIDAVIT PRINCIPAL PLACE OF BUSINESS

Instructions: Please complete all information that is applicable to your firm.

**Company Name:** \_\_\_\_\_

Printed name of authorized signer \_\_\_\_\_

Title \_\_\_\_\_

⇒

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

Date \_\_\_\_\_

The signee of this affidavit guarantees, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**

Notary:

State of \_\_\_\_\_

County of \_\_\_\_\_

The foregoing instrument was signed and acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_

**20** \_\_\_\_\_ by \_\_\_\_\_ who has produced

\_\_\_\_\_ as identification (or personally known)

Type of ID and number

⇒

Notary Public Signature \_\_\_\_\_

Notary Commission Number and expiration \_\_\_\_\_

1. Principal place of business is located within the boundaries of: \_\_\_\_\_ Lee County  
 \_\_\_\_\_ Collier County  
 \_\_\_\_\_ Non-Local

Local Business Tax License # \_\_\_\_\_

2. Address of Principal Place of Business: \_\_\_\_\_

3. Number of years at this location \_\_\_\_\_ years

4. Have you provided goods or services to Lee County on a regular basis within the past 3 consecutive years

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

\_\_\_\_\_ No

\*If yes, attach contractual history for past 3 consecutive years

5. Number of available employees for this Contract \_\_\_\_\_

6. Does your company have a Drug Free Workplace Policy

\_\_\_\_\_ Yes

\_\_\_\_\_ No

*Form 6-Sub-contractor List***SUB-CONTRACTOR LIST**

**THIS FORM MUST BE COMPLETED IN ITS ENTIRETY.  
FAILURE TO DO SO MAY DEEM BIDDER NON-RESPONSIVE.**

Sub-contractor Name	Area Of Work	Point Of Contact Or Project Supervisor	Phone Number and Email	Qualified DBE Yes/No	Amount or Percentage of Total

Please include sub-contractors name, area of work (i.e. mechanical, electrical, etc.) and a **valid** phone number and email. Also include the dollar value or percentage that the sub-contractor will be performing. If sub-contractors qualify as DBE and/or W/MBE contractors, please attach a current certificate.

## Public Entity Crime Form

This form must be signed and sworn to in the presence of a notary public or other officer authorized to administer oaths.

1. This sworn statement is submitted to \_\_\_\_\_  
(Print name of the public entity)

by \_\_\_\_\_  
(Print individual's name and title)

for \_\_\_\_\_  
(Print name of entity submitting sworn statement)

whose business address is \_\_\_\_\_

(If applicable) its Federal Employer Identification Number (FEIN) is \_\_\_\_\_

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: On the attached sheet.) Required as per IRS Form W-9.

2. I understand that a "public entity crime" as defined in Section 287.133(1) (g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, a bid or contract for goods or services to be provided to any public entity or agency or political subdivision or any other state or of the United States, and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Section 287.133(1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that "affiliate" as defined in Section 287.133(1)(a), Florida Statutes, means:
  1. A predecessor or successor of a person convicted of a public entity crime:  
or:
  2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those offices, directors, executives, partners, shareholders, employees, members and agents who are active in the management of the affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not fair market value under an arm's length Agreement/Contract, shall be a facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding thirty-six (36) months shall be considered an affiliate.
5. I understand that a "person" as defined in Section 287.133(1) (c), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of the entity.
8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting those sworn statement. (Please indicate which statement applies)

\_\_\_\_\_ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

**Public Entity Crime Form**

Page 2 of 2

\_\_\_\_\_ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

\_\_\_\_\_ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, member, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearing and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of the final order)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OR ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

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

\_\_\_\_\_  
(Date)

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

PERSONALLY APPEARED BEFORE ME, the undersigned authority, \_\_\_\_\_  
(Name of individual signing)

who, after first being sworn by me, affixed his/her signature in the space provided above on this \_\_\_\_\_ day  
of \_\_\_\_\_, 2\_\_\_\_\_.

\_\_\_\_\_  
(NOTARY PUBLIC)

My Commission Expires: \_\_\_\_\_

**Form#8: Trench Safety****TRENCH SAFETY**

Contractor/vendor acknowledges that included in the appropriate Solicitation items of the Solicitation and in the total Solicitation price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The contractor/vendor further identifies the costs of such compliance to be summarized below:

	Trench Safety Measure (Description)	Units of Measure (LF, SF)	Unit (Quantity)	Unit Cost	Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____
TOTAL \$ _____					

If applicable, the contractor/vendor certifies that all trench excavation done within its control in excess of five feet (5') in depth shall be in accordance with the Florida Department of Transportation's Special Provisions Article 125-1 and Sub-article 125-4.1 (TRENCH EXCAVATION SAFETY SYSTEM AND SHORING, SPECIAL-TRENCH EXCAVATION).

Failure to complete the above may result in the Solicitation being declared non-responsive.

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

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

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

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_ by \_\_\_\_\_  
(name and title of corporate officer) of \_\_\_\_\_ (name of corporation), a \_\_\_\_\_ (state or place of  
incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced  
\_\_\_\_\_ (type of identification) as identification.

\_\_\_\_\_  
(signature line for notary public)

\_\_\_\_\_  
(name of notary typed, printed or stamped)

\_\_\_\_\_  
(title or rank)

My commission expires:

\_\_\_\_\_  
(serial number, if any)



**BID BOND**

Complete EITHER Lee County Paper Bid Bond OR provide cashier's check

KNOW ALL MEN BY THESE PRESENTS, that we

\_\_\_\_\_ as Principal, and  
(BIDDER'S Name)

\_\_\_\_\_ a corporation licensed to do  
(Surety's Name)

business under the laws of the State of Florida as a Surety, are held and firmly bound unto LEE COUNTY BOARD OF COUNTY COMMISSIONERS, LEE COUNTY, FLORIDA, a political subdivision of the State of Florida,

in the SUM OF \_\_\_\_\_

for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

WHEREAS, said Principal is herewith submitting a Bid/Proposal for the project know as:

**B200121CJV – Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements**

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be Awarded the Contract upon said Bid/Proposal within the specified time and shall enter into a written Contract, satisfactory in form, provide an acceptable Public Performance and Payment Bond from a Surety acceptable to the County and provide other insurance as may be required to the County within seven (7) calendar days after the written Notice of Intent to Award date, or within such extended period as the County may grant, then this obligation shall be null and void; otherwise said Principal and Surety shall pay to said County in money the difference between the amount of the Bid of said Principal and the amount for which said County may legally contract with another party to perform said Work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said County if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon a finding from the Board of County Commissioners for Lee County that the bid protest was frivolous and/or lacked merit. The liability of the Surety shall not exceed the penal sum of the bid bond.

Witness as to Principal:

\_\_\_\_\_  
(Principal) (SEAL)

(By) \_\_\_\_\_

\_\_\_\_\_  
Printed Name

Witness as to Surety:

\_\_\_\_\_  
(Surety's Name) (SEAL)

\_\_\_\_\_  
(By-As Attorney-in-Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.

**Cut along the outer border and affix this label to  
your sealed solicitation envelope to identify it as  
a “Sealed Bid”.**

<b>SEALED BID DOCUMENTS • DO NOT OPEN</b>	
BID No.:	B200121CJV
BID TITLE:	Gateway Blvd. & Commerce Lakes Dr. Intersection Improvements
DATE DUE:	<b>Tuesday, March 31, 2020</b>
TIME DUE:	<b>Prior to: 2:30 PM</b>
SUBMITTED BY:	
	(Name of Company)
e-mail address	Telephone
<b>DELIVER TO:</b>	Lee County Procurement Management 2115 Second Street, 1 <sup>st</sup> Floor Fort Myers FL 33901



**\*Notice:** the Date Due/Bid Due Date/Opening Date as stated on this label and other forms contained herein may have been updated via issuance of Addenda against this project. It is the sole responsibility of the Contractor to monitor the County project webpage for any updates to the Date Due/Bid Due Date/Opening Date via Addenda. This label nor other original forms may not be updated. Contractor may strike through and update Date Due/Bid Due Date/Opening Date at their discretion to match any updates to this date that have been published via Addenda.

Submission received after the time and date of the Date Due/Bid Due Date/Opening Date will not be acceptable at the sole discretion of the County.

**PLEASE PRINT CLEARLY**

## **DRAFT CONSTRUCTION AGREEMENT**

## **CONSTRUCTION AGREEMENT**

LEE COUNTY, a political subdivision of the State of Florida, by and through its Board of County Commissioners, situated at 2115 Second St., Fort Myers, FL 33901 (the "County"), hereby contracts with [Contractor's name **exactly** as it appears on Sunbiz] (the "Contractor") of [Contractor's primary business address] a [Contractor's state] contractor licensed to perform all Work in the State of Florida in connection with the County's Solicitation No. [Solicitation Number and Project Name] (the "Project"), as said Work is set forth in the Plans and Specifications prepared by [Engineer of Record's name], the "Engineer of Record," and other Contract Documents hereafter specified (the "Work").

The County and the Contractor, for the consideration herein set forth, agree as follows:

### Section 1. Contract Documents.

A. The Contract Documents consist of this Agreement, the Exhibits described in Section 6 hereof, the legal advertisement, the instructions to bidders, the Proposal and Proposal Forms, the solicitation documents and any duly executed and issued addenda, the Contractor's proposal, Change Orders, Field Directive Change Orders, and amendments relating thereto. All of the foregoing Contract Documents are incorporated by reference and made a part of this Agreement with the exception of the solicitation which shall be incorporated to the extent that it does not conflict with the remainder of the Agreement (all of said documents including the Agreement sometimes being referred to herein as the "Contract Documents" or "Contract" and sometimes as the "Agreement"). A copy of the Contract Documents shall be maintained by Contractor at the Project Site at all times during the performance of the Work.

B. The Engineer of Record is the initial interpreter of the Contract Documents concerning design intent, but is not the judge between the County and the Contractor. The County reserves the right to make final decisions considering the Engineer of Record's recommendations or interpretations of the Contract Documents. The Engineer of Record does not have authority to obligate or commit the County to fund additional expenditures or approve extensions of time over the approved Contract Time or Amount. However, the Engineer of Record's interpretation as to the intent of her or his design shall be final and not subject to interpretation by the County's staff.

C. The Construction Engineering and Inspection Consultant ("CEI Consultant") is the initial interpreter of the Contract Documents in all matters not concerning design intent. The CEI Consultant shall administer, monitor, test, sample, and inspect the Construction of the Project to ensure that the Project is constructed in reasonable conformity with the plans, specifications, and special provisions of the Contract Documents and shall observe the Contractor's work to determine the progress and quality of work, identify discrepancies, report significant discrepancies to the County, and direct the Contractor to correct such observed discrepancies. The County reserves the right to make final decisions considering the CEI Consultant's recommendations or

interpretations of the Contract Documents. The CEI Consultant may issue Field Directive Change Orders to the Contractor, but the CEI Consultant does not have authority to change the scope of the Project, obligate or commit the County to fund additional expenditures, or approve extensions of time over the approved Contract Time or Amount. The CEI Consultant shall consult with the Engineer of Record regarding any questions concerning the intent of the Project design.

D. Any Work that may be reasonably inferred from the Plan and Specifications as being required to produce the intended result shall be supplied whether or not it is specifically called for. In case of any inconsistency or conflict among the provisions of the Contract Documents, the order of precedence shall be as follows: (1) Change Orders; (2) the Agreement, including amendments and Exhibits; (3) Field Directive Change Orders; (4) the solicitation documents, including any addenda. Exhibit E, Article 5-2 provides the order of precedence for Specifications, Plans, Special Provisions, Technical Special Provisions, and other Project specifications. The Contract Documents represent the entire and integrated Agreement between the parties hereto, and supersede prior negotiations, representations, or agreements, either written or oral.

E. Work, materials or equipment described in words which have a well-known technical or trade meaning, shall be deemed to refer to such recognized standards.

F. The County shall furnish to the Contractor Contract Documents in electronic form and PDF file format.

G. The Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the County.

H. The Work to be provided by Contractor for the Project shall be under the general direction of the CEI Consultant, or their successor, who shall act as the County's representative during the term of this Agreement. If the County's representative is not a County employee, then County's representative is not authorized to issue changes to the Contract Amount, Contract Time, or Scope of Work without express approval by the County Director, County Manager, or Board of County Commissioners.

## Section 2. Scope of Work.

A. The Contractor agrees to furnish and pay for all management, supervision, financing, labor, materials, tools, transportation, fuel, supplies, utilities, equipment and services of every kind and type necessary to diligently, timely, and fully perform and complete in a good and workmanlike manner the Work required by this Agreement.

B. The Work shall be prosecuted and administered in accordance with the Standard Specifications attached hereto and incorporated herein as Exhibit E.

### Section 3. Contract Amount.

A. In consideration of the faithful performance by the Contractor of the covenants in this Contract to the full satisfaction and acceptance of the County, the County agrees to pay, or cause to be paid, to Contractor the following Contract Amount in accordance with the terms of this Agreement: \$[Contract amount in numbers] or in words: [Contract amount in words].

B. Measurement and payment provisions are provided in Division 1, Section 9 of the Standard Specifications attached hereto as Exhibit E.

### Section 4. Bonds.

A. The Contractor shall provide and maintain through the life of the Contract, including the warranty period, Performance and Payment Bonds, in the form prescribed in the Exhibits to the Agreement, in the amount of 100% of the Contract Amount, the costs of which are to be paid by Contractor. If the Contract is increased by a Change Order, it shall be the Contractor's responsibility to ensure that the Performance and Payment Bonds are amended accordingly and a copy of the amendment recorded by the Lee County Clerk of Court and forwarded to the County. The Performance and Payment Bonds shall be underwritten by a Surety authorized to do business in the State of Florida and otherwise acceptable to the County; provided, however, the Surety shall be rated as "B or better" as to general policy holders rating as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc.

B. Attorneys-in-Fact who sign Bonds for County projects must file with such Bond a certified copy of their Power of Attorney to sign such Bond. All agents of Surety companies must list their name, address, and telephone number on all Bonds. The life of all Bonds provided to the County shall extend twelve (12) months beyond the date of final payment and shall contain a waiver of alternation to the terms of the Contract, extensions of time and/or forbearance on the part of the County. The Surety must have fulfilled all of its obligations on all other Bonds previously provided to the County. The Surety must have a minimum underwriting limitation of \$5,000,000 published in the latest edition of the Federal Register for Federal Bonds (U.S. Dept. of Treasury).

C. If the Surety for any Bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Contractor shall, within five (5) calendar days thereafter, substitute at Contractor's cost another Bond and Surety, both of which shall be subject to the County's approval.

D. If the Contractor cannot obtain another Bond and Surety within five (5) calendar days, the County may accept and the Contractor shall submit an irrevocable letter of credit drawn on a Lee County, Florida bank until the Bond and Surety can be obtained.

E. In case of default on the part of the Contractor, the County will charge against the Contract/Performance Bond all expenses for services incidental to ascertaining and collecting losses under the Contract/Performance Bond, including accounting, engineering, and legal services, together with any and all costs incurred in connection with renegotiation of the Contract.

F. The Surety shall indemnify and provide defense for the County when called upon to do so for all claims or suits against the County, by third parties, pertaining to Contractor payment or performance issues arising out of the Contract where the Contractor has failed to timely provide the County such defense. It is expressly understood that the monetary limitation on the extent of the indemnification shall be the approved Contract amount, which shall be the original Contract amount as may be modified by subsequent Supplemental Agreements.

G. The principal and Surety executing the Contract/Performance Bond shall be liable to the County in any civil action that might be instituted by the County or any officer of the County authorized in such cases, for triple any amount in money or property the County might lose, or be overcharged, or otherwise be defrauded of by any wrongful or criminal act of the Contractor, their agent or their employees.

## Section 5. Contract Time and Liquidated Damages

A. Time is of the essence in the performance of the Work under this Agreement. The Commencement Date is established in the Notice to Proceed to be issued by the County, and the Contractor must begin the Work within the number of days specified by the Notice to Proceed. Written Notice to Proceed is contingent upon and will be done subsequent to the Contractor fully satisfying the County's stated insurance and Bond submittal requirements. No Work shall be performed at the Project Site prior to the Commencement Date. Any Work performed by the Contractor prior to the Commencement Date shall be at the sole risk of the Contractor. Final Acceptance of the Work shall be achieved within [The number of days specified in the Contractor's proposal in words and (number)] calendar days from the Commencement Date, and that time period shall be the Contract Time. The date of Final Acceptance of the Work (or designated portions thereof) is the date certified by the Director pursuant to Exhibit E, Article 5-11.

B. Prosecution and progress of the Work provisions are provided in Division 1, Section 8 of the Standard Specifications attached hereto as Exhibit E.

C. The County and the Contractor recognize that, since time is of the essence for this Agreement, the County will suffer financial loss if Final Acceptance of the Work is not achieved within the time specified above, as said time may be adjusted as provided for herein. Should the Contractor fail to achieve Final Acceptance of the Work within the time period noted above, the County shall be entitled to assess the amount set forth in



Article 8-10 of the Standard Specifications, as Liquidated Damages, but not as a penalty, for each calendar day thereafter until Final Acceptance is achieved. Final Acceptance of the Work shall be deemed to occur on the date the Director issues a written notice of Final Acceptance pursuant to the terms hereof. The Contractor hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted Liquidated Damages as a penalty, which the parties agree represents a fair and reasonable estimate of the County's actual damages at the time of contracting if the Contractor fails to achieve Final Acceptance of the Work in a timely manner.

D. When any period of time is referenced by days herein, it shall be computed to include the first day and last day of such period. All days shall mean calendar day and not business day.

E. Any agreed upon changes to the Contract Time must be accomplished by an approved, written Change Order in the form attached to this Agreement.

#### Section 6. Exhibits Incorporated.

The following documents are attached and expressly agreed as incorporated into and made a part of this Agreement:

- A. Legal Advertisement
- B. Invitation to Bid and all addenda, including the Project Plans
- C. Bid Form and Required Documents
- D. Form of Public Construction Performance and Payment Bond
- E. Standard Specifications
- F. Insurance Requirements, including Certificates of Insurance
- G. Form of Release and Affidavit
- H. Change Order Form
- I. Supplemental Specifications
- J. Special Provisions
- K. Technical Special Provisions
- L. FDOT and Lee County Design Standards
- M. Developmental Specifications
- N. Contractor's Background Screening Affidavit
- O. Other relevant forms

#### Section 7. Public Records.

A. In addition to other requirements provided herein, Contractor shall comply with public records laws embodied in Chapter 119, Florida Statutes, and specifically shall:

A.1. Keep and maintain public records required by the County in order to perform the Scope of Services identified herein.

A.2. Upon request from the County provide the County with any requested public

records or allow the requested records to be inspected or copied within a reasonable time by the County.

A.3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and thereafter if the Contractor does not transfer all records to the County.

A.4. Transfer, at no cost, to County all public records in possession of the Contractor upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the County, upon request from the County, in a format that is compatible with the information technology systems of the County. If the Contractor keeps and maintains public records upon the conclusion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records that would apply to the County.

B. If Contractor does not comply with a public records request, the County shall treat that omission as a breach of this Agreement and enforce the Contract provisions accordingly. Additionally, if the Contractor fails to provide records when requested, the Contractor may be subject to penalties under Section 119.10, Florida Statutes, and reasonable costs of enforcement, including attorney fees.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 239-533-2221, 2115 SECOND STREET, FORT MYERS, FL 33901, [publicrecords@leegov.com](mailto:publicrecords@leegov.com); <http://www.leegov.com/publicrecords>.**

#### Section 8. Audit.

A. Upon execution of the Contract, the County reserves the right to conduct an audit of the Contractor's records pertaining to the Project. The County or its representatives may conduct an audit, or audits, at any time prior to final payment, or thereafter pursuant to 5-12 of the Standard Specifications. The County may also require submittal of the records from either the Contractor or any subcontractor or material supplier. As the County deems necessary, records include all books of account, supporting documents, and papers pertaining to the cost of performance of the Work.

B. The Contractor must retain all records pertaining to the Contract for a period of not less than five (5) years from the date of the Director's final acceptance of the Project, unless a longer minimum period is otherwise specified. Upon request, make all such records available to the County or its representative(s). For the purpose of this section, records include but are not limited to all books of account, supporting documents,

and papers that the County deems necessary to ensure compliance with the provisions of the Contract Documents.

C. If the Contractor fails to comply with these requirements, the County may disqualify or suspend the Contractor from bidding on or working as a subcontractor on future Contracts.

D. The Contractor must ensure that the subcontractors provide access to their records pertaining to the project upon request by the County.

#### Section 9. Indemnification and Insurance.

A. Contractor agrees to save harmless, indemnify, and defend or, at the option of the County, pay the cost of defense, the County and its representative from any and all claims, losses, penalties, demands, judgments, and costs of suit, including attorneys' fees and paralegals' fees, for any expense, damage or liability incurred by any of them, whether for personal injury, property damage, direct or consequential damages, or economic loss, arising directly or indirectly on account of or in connection with the Work performed by Contractor under this Agreement or by any person, firm or corporation to whom any portion of the Work is subcontracted by Contractor or resulting from the use by Contractor, or by any one for whom Contractor is legally liable, of any materials, tools, machinery or other property of the County. This provision is intended to apply even if the injury or damage is caused in whole or in part by any act, omission or default of the County or Engineer of Record or their consultants, agents, officers and employees. The County and Contractor agree the first \$100.00 of the Contract Amount paid by the County to Contractor shall be given as separate consideration for this indemnification, and any other indemnification of the County by Contractor provided for within the Contract Documents, the sufficiency of such separate consideration being acknowledged by Contractor by Contractor's execution of the Agreement. The Contractor's obligation under this provision shall not be limited in any way by the agreed upon Contract Amount as shown in this Contract or the Contractor's limit of, or lack of, sufficient insurance protection.

B. The Contractor guaranties the payment of all just claims for materials, supplies, tools, or labor and other just claims against him or any subcontractor, in connection with the Contract. The Department's final acceptance and payment does not release the Contractor's bond until all such claims are paid or released.

C. Contractor shall obtain and carry, at all times during its performance under the Contract Documents, insurance of the types and in the amounts set forth in the Insurance Requirements attached to this Agreement. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and/or responsible risk retention group insurance companies which are registered with the State of Florida. Prior to execution of the Agreement, Contractor shall provide the County with properly executed Certificates of Insurance to evidence Contractor's compliance with the insurance requirements of the Contract Documents. Said Certificates of Insurance shall be on forms approved by the County. The Certificates of Insurance shall be personally,

manually signed by the authorized representatives of the insurance company/companies shown on the Certificates of Insurance, with proof that they are authorized representatives thereof. In addition, certified, true and exact copies of all insurance policies required hereunder shall be provided to the County, on a timely basis, when requested by the County.

D. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) calendar days prior written notice by registered or certified mail shall be given to the County of any cancellation, intent not to renew, or reduction in the policies or coverages, except in the application of the aggregate limits provisions. In the event of a reduction in the aggregate limit of any policy, Contractor shall immediately take steps to have the aggregate limit reinstated to the full extent permitted under such policy.

E. To the extent multiple insurance coverage and/or County's self-insured retention may apply, any and all insurance coverage purchased by Contractor and its Subcontractors identifying the County as an additional named insured shall be primary. The acceptance by the County of any Certificate of Insurance does not constitute approval or agreement by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with the requirements of the Contract Documents. No Work shall commence at the Project Site unless and until the required Certificates of Insurance are received by the County.

F. The Contractor will be fully responsible for all acts and omissions of his Subcontractors and of persons directly or indirectly employed by them and of persons for whose acts they may be liable to the same extent that they are employed by him. Nothing in the Contract Documents shall create any contractual relationship between any Subcontractor and the County. The County may, upon request, furnish to any Subcontractor, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done.

G. Contractor shall require each of its Subcontractors to procure and maintain, until the completion of the Subcontractor's work, insurance of the types and to the limits specified in the Insurance Requirements attached to this Agreement, unless such insurance requirements for the Subcontractor are expressly waived in writing by the County. All liability insurance policies, other than professional liability, workers' compensation, employer's liability and business auto liability policies, obtained by Contractor to meet the requirements of the Contract Documents shall name the County and Engineer of Record as additional insureds. If any insurance provided pursuant to the Contract Documents expires prior to the completion of the Work, renewal Certificates of Insurance and, if requested by the County, certified, true copies of the renewal policies, shall be furnished by Contractor within thirty (30) calendar days prior to the date of expiration.

H. Should at any time the Contractor not maintain the insurance coverages required herein, the County may terminate the Agreement or at its sole discretion shall be authorized to purchase such coverages and charge the Contractor for such coverages

purchased. The County shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the County to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the Contract Documents.

I. Contractor shall submit to Engineer of Record a copy of all accident reports arising out of any injuries to its employees or those of any firm or individual to whom it may have subcontracted a portion of the Work, or any personal injuries or property damages arising or alleged to have arisen on account of any Work by Contractor under the Contract Documents.

#### Section 10. Compliance with Laws and Regulations

A. Contractor agrees to comply, at its own expense, with all federal, state, and local Laws and Regulations, including federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Project, including but not limited to those dealing with taxation, workers' compensation, equal employment and safety. If Contractor observes that the Contract Documents are at variance therewith, it shall promptly notify the County and Engineer of Record in writing.

B. Legal Requirements and provisions concerning Laws and Regulations to be observed are provided in Division 1, Section 7 of the Standard Specifications attached hereto as Exhibit E.

#### Section 11. Warranty

A. Contractor shall obtain and assign to the County all express warranties given to Contractor or any Subcontractors by any materialmen supplying materials, equipment or fixtures to be incorporated into the Project.

B. Contractor warrants to the County that any materials and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Contractor further warrants to the County that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, Suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after Final Acceptance, any Work is found to be Defective or not in conformance with the Contract Documents, Contractor shall correct it promptly after receipt of written notice from the County. Contractor shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. These warranties are in addition to those express or implied warranties to which the County is entitled as a matter of law.

C. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an application for progress payment, whether incorporated in the Project or not, will be passed to the County prior to the next application for progress payment, free and clear of all liens, claims, security interest and encumbrances; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the Project subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

## Section 12. Notices.

A. All notices required or made pursuant to this Agreement by the Contractor to the County shall be in writing and delivered by hand or by United States Postal Service, first class mail, postage pre-paid, return receipt requested, or by courier, addressed to the following:

Roger Desjarlais  
Lee County Manager  
P.O. Box 398  
Fort Myers, FL 33902

With copies addressed to each of the following:

[County Project Manager Name], Project Manager, P.O. Box 398, Fort Myers, FL 33902

[County Procurement Director Name], Procurement Management Director, P.O. Box 398, Fort Myers, FL 33902

[County DOT Director Name], Department of Transportation Director, P.O. Box 398, Fort Myers, FL 33902

B. All notices required or made pursuant to this Agreement by the County to Contractor shall be made in writing and shall be delivered by hand or by United States Postal Service, first class mail, postage pre-paid, return receipt requested, or by courier, addressed to the following:

[Corporate Name of Contractor]

Attention: [Name of person with their title to whose attention the notice should be sent]

[Address (including city, state and zip)]

Telephone: [Telephone Number] Fax: [Fax Number]

C. Either party may change its above noted address by giving written notice to the other party in accordance with the requirements of this Section.

#### Section 13. Modification.

No modification or change to the Agreement shall be valid or binding upon the parties unless in writing and executed by the appropriate parties intended to be bound by it.

#### Section 14. Successors and Assigns.

Subject to other provisions hereof, the Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties to the Agreement.

#### Section 15. No Waiver.

The failure of the County to enforce, at any time or for any period of time, any one or more of the provisions of the Agreement shall not be construed to be, and shall not be, a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

#### Section 16. Federal Requirements

A. In the event this Project is funded in whole or in part from any granting agency or source, the specific terms, regulations and requirements governing the disbursement of those funds are incorporated by reference and made a part of the Contract Documents.

#### Section 17. Entire Agreement.

Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, Work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by the Agreement.

#### Section 18. Severability.

Should any provision of the Agreement be determined by a court to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.



IN WITNESS WHEREOF, the parties have executed this Agreement on the date(s) indicated below.

WITNESS:

**CONTRACTOR:** [Contractor Name]

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

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

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**OWNER: LEE COUNTY**

BOARD OF COUNTY COMMISSIONERS  
OF LEE COUNTY, FLORIDA

BY: \_\_\_\_\_  
CHAIR

DATE: \_\_\_\_\_

ATTEST:  
CLERK OF THE CIRCUIT COURT  
Linda Doggett, Clerk

BY: \_\_\_\_\_

APPROVED AS TO FORM FOR THE  
RELIANCE OF LEE COUNTY ONLY:

BY: \_\_\_\_\_  
OFFICE OF THE COUNTY ATTORNEY

**EXHIBIT A**  
**LEGAL ADVERTISEMENT**

**EXHIBIT B**  
**INVITATION TO BID**

[Include the entire bid package with all addenda, plans and drawings. Include the solicitation package **up to the label page**. Do not include the Draft Construction Agreement title page.]

**EXHIBIT C**  
**BID FORM AND REQUIRED DOCUMENTS**

[Include the Contractor's bid submission: the bid form and all the documents required by the solicitation.]

**EXHIBIT D**  
**PUBLIC CONSTRUCTION PERFORMANCE AND PAYMENT BOND**

By this bond, we [Name of Contractor], as **Principal**, and [Name of Surety], as **Surety**, are bound to **Lee County Board of County Commissioners**, a political subdivision of the State of Florida, herein called **Owner**, in the sum of **[Total Contract Price]**, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

**THE CONDITION OF THIS BOND IS** that is that if Principal:

1. Performs this contract dated \_\_\_\_\_, 20\_\_\_\_, between Principal and Owner for construction of improvements known as **[Name of Project]** located at **[Street Address or Legal Description]**, under Lee County Solicitation No. [Solicitation number], the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05 (1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes do not affect Surety's obligation under this bond.

	<b>OWNER</b>	<b>PRINCIPAL</b>	<b>SURETY</b>
<b>NAME</b>	Lee County Board of County Commissioners	[Name of Contractor]	[Name of Surety]
<b>ADDRESS</b>	2115 Second St. Fort Myers, FL 33901	[Principal Business Address of Contractor]	[Principal Business Address of Surety]
<b>PHONE NUMBER</b>	239-533-2221	[Principal Business Phone of Contractor]	[Principal Business Phone of Surety]

[The remainder of this page intentionally left blank.]

**BOND NO. [Surety to enter bond #]**

\_\_\_\_\_  
[Name of Contractor]

DATED THIS \_\_\_\_\_ DAY

OF \_\_\_\_\_, 2 \_\_\_\_\_

By: \_\_\_\_\_  
[Printed Name and Title of Signer]

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

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by [name of person acknowledging].

(NOTARY SEAL)

\_\_\_\_\_  
Signature of Notary Public  
[Name of Notary Typed, Printed, or Stamped]

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_  
Type of Identification Produced:

\_\_\_\_\_  
[Name of Surety]

DATED THIS \_\_\_\_\_ DAY

OF \_\_\_\_\_, 2 \_\_\_\_\_

By: \_\_\_\_\_  
[Printed Name] as Attorney in Fact

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

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

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by [name of person acknowledging].

(NOTARY SEAL)

\_\_\_\_\_  
Signature of Notary Public  
[Name of Notary Typed, Printed, or Stamped]

Personally Known \_\_\_\_\_ OR Produced Identification \_\_\_\_\_  
Type of Identification Produced:

**EXHIBIT E**  
**STANDARD SPECIFICATIONS**

The Standard Specifications comprise Divisions I, II and III as noted below:

1. Division I General Requirements and Covenants, Sections 1-9 as included herein.
2. Division II-Construction Details and Division III-Materials refer to the July, 2019 edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, available at the following link:

<http://www.fdot.gov/programmanagement/Implemented/SpecBooks/>



# **DIVISION I**

## **General Requirements and Covenants**

### **SECTION 1**

#### **DEFINITIONS AND TERMS**

##### **1-1 General.**

These Specifications are written to the bidder, prior to award of the Contract, and to the Contractor. Within Divisions I and II of the specifications, sentences that direct the Contractor to perform work are written in the active voice-imperative mood. These directions to the Contractor are written as commands. In the imperative mood, the subject “the bidder” or “the Contractor” is understood.

All other requirements to be performed by others, with the exception of the Method of Measurement and the Basis of Payment Articles, have been written in the active voice, but not in the imperative mood. Sentences written in the active voice identify the party responsible for performing the action. For example, “The Engineer will determine the density of the compacted material.” Certain requirements of the Contractor may also be written in the active voice, rather than active voice-imperative mood.

Division III of the Specifications (Materials) is written in the passive voice writing style.

##### **1-2 Abbreviations.**

The following abbreviations, when used in the Contract Documents, represent the full text shown.

<b>AAN</b>	American Association of Nurserymen, Inc.
<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>ACI</b>	American Concrete Institute
<b>AGC</b>	The Associated General Contractors of America, Inc.
<b>AGMA</b>	American Gear Manufacturers Association
<b>AIA</b>	American Institute of Architects.
<b>AISI</b>	American Iron and Steel Institute
<b>ANSI</b>	American National Standards Institute, Inc.
<b>AREA</b>	American Railway Engineering Association
<b>ASCE</b>	American Society of Civil Engineers
<b>ASME</b>	American Society of Mechanical Engineers
<b>ASTM</b>	American Society for Testing and Materials
<b>AWG</b>	American Wire Gauge
<b>AWPA</b>	American Wood Preservers Association
<b>AWS</b>	American Welding Society
<b>AWWA</b>	American Water Works Association
<b>CRSI</b>	Concrete Reinforcing Steel Institute
<b>EASA</b>	Electrical Apparatus Service Association
<b>EPA</b>	Environmental Protection Agency of the United States Government
<b>FDOT</b>	Florida Department of Transportation
<b>FHWA</b>	Federal Highway Administration
<b>FSS</b>	Federal Specifications and Standards
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>IES</b>	Illuminating Engineering Society

<b>IPCEA</b>	Insulated Power Cable Engineers Association
<b>ISO</b>	International Organization for Standards
<b>MASH</b>	<b>AASHTO Manual for Assessing Safety Hardware</b>
<b>MUTCD</b>	Manual on Uniform Traffic Control Devices
<b>NEC</b>	National Electrical Code
<b>NEMA</b>	National Electrical Manufacturers Association
<b>NFPA</b>	National Fire Protection Association
<b>NIST</b>	National Institute for Standards and Technology
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>OSHA</b>	Occupational Safety and Health Administration
<b>SAE</b>	Society of Automotive Engineers
<b>SI</b>	International System of Units
<b>SSPC</b>	Society of Protective Coatings
<b>UL</b>	Underwriters' Laboratories

Each of the above abbreviations, when followed by a number or letter designation, or combination of numbers and letters, designates a specification, test method, or other code or recommendation of the particular authority or organization shown.

Use standards, specifications, test methods, or other codes as specified in the current edition at the time of the bid opening.

### **1-3 Definitions.**

The following terms, when used in the Contract Documents, have the meaning described

**Advertisement.**

The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished, usually issued as “Notice to Contractors,” or “Notice to Bidders.”

**Article.**

The numbered prime subdivision of a Section of these Specifications.

**Bidder.**

An individual, firm, or corporation submitting a proposal for the proposed work.

**Bridge.**

A structure, including supports, erected over a depression or over an obstruction such as water, highway or railway, or for elevated roadway, for carrying traffic or other moving loads, and having a length, measured along the center of the roadway, of more than 20 feet between the inside faces of end supports. A multiple-span box culvert is considered a bridge, where the length between the extreme ends of the openings exceeds 20 feet.

**Calendar day.**

Every day shown on the calendar, ending and beginning at midnight.

**Chair.**

The Chairman of the Lee County Board of County Commissioners.

**Change Order.**

See definition for Supplemental Agreement.

**Construction Engineering and Inspection (CEI) Consultant.**

The consultant contracted by the Department for professional services during the construction phase of the project, or a qualified person in the firm’s employ authorized as his official representative. In the absence of such a contract, the duties of the CEI Consultant will be fulfilled by

the Department Project Manager. The CEI Consultant is not authorized to issue change orders to the contract sum, contract time, or scope of work.

**Contract.**

The term “Contract” means the entire and integrated agreement between the parties thereunder and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract Documents form the Contract between the Department and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the Work and the basis of payment.

**Contract Claim (Claim).**

A written demand submitted to the Department by the Contractor in compliance with 5-12.3 seeking additional monetary compensation, time, or other adjustments to the Contract, the entitlement or impact of which is disputed by the Department.

**Contract Documents.**

The term “Contract Documents” includes: this Agreement, the Exhibits described in Section 6 of the Agreement, the legal advertisement, the instructions to bidders, the Proposal and Proposal Forms, the solicitation documents and any duly executed and issued addenda, Change Orders, Field Directive Change Orders, and amendments relating thereto, all of which are to be treated as one instrument whether or not set forth at length in the form of contract.

**Contract Bond or Performance Bond.**

The security furnished by the Contractor and the surety as a guaranty that the Contractor shall fulfill the terms of the Contract and pay all legal debts pertaining to the construction of the project.

**Contract Letting.**

The date that the Department opened the bid proposals.

**Contract Time.**

The number of calendar days allowed for completion of the Contract work, including authorized time extensions.

**Contractor.**

The individual, firm, joint venture, or company contracting with the Department to perform the work.

**Contractor’s Engineer of Record.**

A Professional Engineer registered in the State of Florida, other than the Engineer of Record or his subcontracted consultant, who undertakes the design and drawing of components of the permanent structure as part of a redesign or Cost Savings Initiative Proposal, or for repair designs and details of the permanent work. The Contractor’s Engineer of Record may also serve as the Specialty Engineer.

The Contractor’s Engineer of Record must be an employee of a pre-qualified firm. The firm shall be pre-qualified in accordance with the Rules of the Department of Transportation, Chapter 14-75. Any Corporation or Partnership offering engineering services must hold a Certificate of Authorization from the Florida Department of Business and Professional Regulation.

As an alternate to being an employee of a pre-qualified firm, the Contractor’s Engineer of Record may be a Department-approved Specialty Engineer. For items of the permanent work declared by the State Construction Office to be “major” or “structural”, the work performed by a Department-approved Specialty Engineer must be checked by another Department-approved Specialty Engineer. An individual Engineer may become a Department-approved Specialty Engineer

if the individual meets the Professional Engineer experience requirements set forth within the individual work groups in Chapter 14-75, Rules of the Department of Transportation, Florida Administrative Code. Department-approved Specialty Engineers are listed on the State Construction Website. Department-approved Specialty Engineers will not be authorized to perform redesigns or Cost Savings Initiative Proposal designs of items fully detailed in the Plans.

**Controlling Work Items.**

The activity or work item on the critical path having the least amount of total float. The controlling item of work will also be referred to as a Critical Activity.

**County.**

The Board of County Commissioners of Lee County, Florida, as Owner.

**Culverts.**

Any structure not classified as a bridge that provides an opening under the roadway.

**Delay.**

Any unanticipated event, action, force or factor which extends the Contractor's time of performance of any controlling work item under the Contract. The term "delay" is intended to cover all such events, actions, forces or factors, whether styled "delay", "disruption", "interference", "impedance", "hindrance", or otherwise, which are beyond the control of and not caused by the Contractor, or the Contractor's subcontractors, materialmen, suppliers or other agents. This term does not include "extra work".

**Department.**

As used in Divisions II and III of the Standard Specifications, the Department shall mean the County.

**Department Project Manager.**

An employee of Lee County designated by the Director as the representative of the Board of County Commissioners in matters concerning the project. The Department Project Manager will act in the role of the CEI Consultant in the absence of a contract with a third party consultant. The Department Project Manager is not authorized to issue changes to the Contract Amount, Contract Time, or Scope of Work without the express approval by the Director, County Manager, and/or Board of County Commissioners as may be applicable.

**Developmental Specification.**

See definition for Specifications.

**Director.**

The Director of the Lee County Department of Transportation, acting directly or through duly authorized representatives; such representatives acting within the scope of the duties and authority assigned to them. Note: In order to avoid cumbersome and confusing repetition of expressions in these Specifications, it is provided that whenever anything is, or is to be done, if, as, or, when, or where "acceptable, accepted, approval, approved, authorized, condemned, considered necessary, contemplated, deemed necessary, designated, determined, directed, disapproved, established, given, indicated, insufficient, ordered, permitted, rejected, required, reserved, satisfactory, specified, sufficient, suitable, suspended, unacceptable, or unsatisfactory," it shall be understood as if the expression were followed by the words "by the Director," "to the Director," or "of the Director."

**Engineer.**

As used in Divisions II and III of the Standard Specifications, the Engineer shall mean the Director.

**Engineer of Record.**

The Professional Engineer or Engineering Firm registered in the State of Florida that develops the criteria and concept for the project, performs the analysis, and is responsible for the preparation of the Plans and Specifications. The Engineer of Record may be Departmental in-house staff or a consultant retained by the Department.

The Contractor shall not employ the Engineer of Record as the Contractor's Engineer of Record or as a Specialty Engineer.

**Equipment.**

The machinery and equipment, together with the necessary supplies for upkeep and maintenance thereof, and all other tools and apparatus necessary for the construction and acceptable completion of the work.

**Extra Work.**

Any "work" which is required by the Director to be performed and which is not otherwise covered or included in the project by the existing Contract Documents, whether it be in the nature of additional work, altered work, deleted work, work due to differing site conditions, or otherwise. This term does not include a "delay".

**Federal, State, and Local Rules and Regulations.**

The term "Federal, State and Local Rules and Regulations" includes: any and all Federal, State, and Local laws, bylaws, ordinances, rules, regulations, orders, permits, or decrees including environmental laws, rules, regulations, and permits.

**Field Directive Change Orders.**

A written order making a minor amendment to the Agreement, which is signed by the Contractor and approved in accordance with County policies and procedures. An amendment is minor if it does not change: (i) the scope of the Project, (ii) the Contract Amount, or (iii) the Contract Time.

All Field Directive Change Orders shall be summarized and approved as a Supplemental Agreement or Change Order prior to Project close-out.

**Financial Project Identification Number.**

If applicable, the Florida Department of Transportation Financial Project Identification Number (FPID).

**FDOT.**

The Florida Department of Transportation, an agency of the State of Florida.

**Highway, Street, or Road.**

A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

**Holidays.**

Days designated by the Lee County Board of County Commissioners as holidays.

**Inspector.**

An authorized representative of the Director, assigned to make official inspections of the materials furnished and of the work performed by the Contractor.

**Laboratory.**

The official testing laboratory used by the Department.

**Laws and Regulations .**

Any and all applicable laws rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

**Major Item of Work.**

Any item of work having an original Contract value in excess of 5% of the original Contract amount.

**Materials.**

Any substances to be incorporated in the work under the Contract.

**Median.**

The portion of a divided highway or street separating the traveled ways for traffic moving in opposite directions.

**Plans.**

The approved Plans, including reproductions thereof, showing the location, character, dimensions, and details of the work.

**Project.**

The entire undertaking of the County, identified by County as indicated in the Exhibits of the Contract, of which the Work to be provided under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

**Project Number.**

The Lee County project number as listed in the Advertisement.

**Proposal (Bid, Bid Proposal).**

The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

**Proposal Form.**

The official form on which the Department requires formal bids to be prepared and submitted for the work.

**Proposal Guaranty**

The security furnished by the bidder as guaranty that the bidder will enter into the Contract for the work if the Department accepts the proposal.

**Right-of-Way.**

The land that the Department has title to, or right of use, for the road and its structures and appurtenances, and for material pits furnished by the Department.

**Roadbed.**

The portion of the roadway occupied by the subgrade and shoulders.

**Roadway.**

The portion of a highway within the limits of construction.

**Secretary.**

As used in Divisions II and III of the Standard Specifications, the Secretary shall mean the Chair.

**Section.**

A numbered prime division of these Specifications.

**Site.**

The real property or other areas designated in the Contract Documents as being furnished by County for the performance of the Work, storage, or access.

**Special Event.**

Any event, including but not limited to, a festival, fair, run or race, motorcade, parade, civic activity, cultural activity, charity or fund drive, sporting event, or similar activity designated in the Contract Documents.

**Special Provisions.**

See definition for Specifications.

**Specialty Engineer.**

A Professional Engineer registered in the State of Florida, other than the Engineer of Record or his subcontracted consultant, who undertakes the design and drawing preparation of components, systems, or installation methods and equipment for specific temporary portions of the project work or for special items of the permanent works not fully detailed in the Plans and required to be furnished by the Contractor. The Specialty Engineer may also provide designs and details, repair designs and details, or perform Engineering Analyses for items of the permanent work declared by the State Construction Office to be “minor” or “non-structural”.

For items of work not specifically covered by the Rules of the Department of Transportation, a Specialty Engineer is qualified if he has the following qualifications:

1. Registration as a Professional Engineer in the State of Florida.
2. The education and experience necessary to perform the submitted design as required by the Florida Department of Business and Professional Regulation.

**Specifications.**

The directions, provisions, and requirements contained herein, together with all stipulations contained in the Contract Documents, setting out or relating to the method and manner of performing the work, or to the quantities and qualities of materials and labor to be furnished under the Contract.

Standard Specifications: Specifications for construction applicable to all Department Contracts containing adopted requirements, setting out or relating to the method or manner of performing work, or to the quantities and qualities of materials and labor. The Standard Specifications comprise three Divisions, as follows:

Division I: “Lee County Department of Transportation Division I General Requirements and Covenants” contained in the Contract Documents.

Division II and III: Divisions II and III of the “FDOT Standard Specifications for Road and Bridge Construction”, as otherwise amended herein. The applicable version is cited in the Special Provisions.

Supplemental Specifications: Approved additions and revisions to Divisions II and III of the Standard Specifications, applicable to all Department Contracts.

Special Provisions: Specific clauses adopted by the Department that add to or revise the Standard Specifications or supplemental specifications, setting forth conditions varying from or additional to the Standard Specifications applicable to a specific project.

Technical Special Provisions: Specifications, of a technical nature, prepared, signed, and sealed by an Engineer registered in the State of Florida that are made part of the Contract as an attachment to the Contract Documents.

**Standard Plans.**

“Standard Plans for Road and Bridge Construction”, an electronic book describing and detailing aspects of the Work. Where the term Design Standards appears in the Contract Documents, it will be synonymous with Standard Plans.

**Standard Specifications.**

See definition for Specifications.



**State.**

State of Florida.

**Subarticle.**

A headed and numbered subdivision of an Article of a Section of these Specifications.

**Subgrade.**

The portion of the roadbed immediately below the base course or pavement, including below the curb and gutter, valley gutter, shoulder and driveway pavement. The subgrade limits ordinarily include those portions of the roadbed shown in the Plans to be constructed to a design bearing value or to be otherwise specially treated. Where no limits are shown in the Plans, the subgrade section extends to a depth of 12 inches below the bottom of the base or pavement and outward to 6 inches beyond the base, pavement, or curb and gutter.

**Substructure.**

All of that part of a bridge structure below the bridge seats, including the parapets, backwalls, and wingwalls of abutments.

**Superintendent.**

The Contractor's authorized representative in responsible charge of the work.

**Superstructure.**

The entire bridge structure above the substructure, including anchorage and anchor bolts, but excluding the parapets, backwalls, and wingwalls of abutments.

**Supplemental Agreement**

A written agreement between the Contractor and the Department, modifying the Contract within the limitations set forth in these Specifications, may also be referred to as a Change Order.

**Supplemental Specifications**

See definition for Specifications.

**Surety.**

The corporate body that is bound by the Contract Bond with and for the Contractor and responsible for the performance of the Contract and for payment of all legal debts pertaining thereto.

**Technical Special Provisions.**

See definition for Specifications.

**Traveled Way.**

The portion of the roadway for the movement of vehicles, exclusive of shoulders and bicycle lanes.

**Unilateral Payment.**

A payment of money made to the Contractor by the Department for sums the Department determines to be due to the Contractor for work performed on the project, and whereby the Contractor by acceptance of such payment does not waive any rights the Contractor may otherwise have against the Department for payment of any additional sums the Contractor claims are due for the work.

**Work.**

All labor, materials and incidentals required to execute and complete the requirements of the Contract including superintendence, use of equipment and tools, and all services and responsibilities prescribed or implied.

**Work Order.**

A written agreement between the Contractor and the Department modifying the Contract within the limitations set forth in these Specifications. Funds for this agreement are drawn against the Initial Contingency Pay Item or a Contingency Supplemental Agreement.

**Working Day.**

Any calendar day on which the Contractor works or is expected to work in accordance with the approved work progress schedule.

## **SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS**

### **2-1 Reserved**

### **2-2 Reserved**

### **2-3 Interpretation of Estimated Quantities.**

**2-3.1 Lump Sum Contracts:** The Contractor is responsible for the determination of the quantities for those items constructed within the authorized plan limits or dimensions.

The County does not assume any responsibility for any incidental information in bid documents that may be construed as a quantity of work and/or materials.

**2-3.2 Contracts other than Lump Sum:** For those items constructed within authorized plan limits or dimensions, use the quantities shown in the Plans and in the Proposal Form as the basis of the bid. The County will also use these quantities for final payment as limited by the provisions for the individual items. For those items having variable final pay quantities that are dependent on actual field conditions, use and measurement, the quantities shown in the Plans and in the Proposal Form are approximate and provide only a basis for calculating the bid upon which the County will award the Contract. Where items are listed for payment as lump sum units and the Plans show estimates of component quantities, the County is responsible for the accuracy of those quantities limited to the provisions of 9-3.3. Where items are listed for payment as lump sum units and the Plans do not show estimates of component quantities, the Contractor is solely responsible for their own estimates of such quantities.

The County may increase, decrease, or omit the estimated quantities of work to be done or materials to be furnished.

### **2-4 Examination of Plans, Specifications, Special Provisions and Site of Work.**

The Contractor is responsible for examining the Contract Documents and the site of the proposed Work carefully before submitting a Proposal for the Work contemplated. Contractor shall investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of all Contract Documents.

The County does not guarantee the details pertaining to borings, as shown in the Plans, to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. The Contractor shall examine boring data, where available, and make their own interpretation of the subsoil investigations and other preliminary data, and shall base their bid solely on their own opinion of the conditions likely to be encountered.

The Contractor's submission of a Proposal is prima facie evidence that the Contractor has made an examination as described in this Article.

### **2-5 Reserved**

### **2-6 Reserved**

**2-7 Reserved**

**2-8 Reserved**

**2-9 Reserved**

**2-10 Reserved**

**2-11 Reserved**

**2-12 Material, Samples and Statement.**

The County may require that the Contractor furnish a statement of the origin, composition, and manufacture of any and all materials to be used in the construction of the work, together with samples that may be subjected to the tests provided for in these Specifications to determine the materials' quality and fitness for the work.

## **SECTION 3**

## **RESERVED**

## **SECTION 4 SCOPE OF THE WORK**

### **4-1 Intent of Contract.**

The intent of the Contract is to provide for the construction and completion in every detail of the Work described in the Contract. Furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the Contract Documents.

### **4-2 Work not covered by Standard Specifications.**

Proposed construction and any contractual requirements not covered by these Standard Specifications may be covered by Contract Plan notes or by Supplemental Specifications or Special Provisions for the Contract, and all requirements of such Supplemental Specifications or Special Provisions shall be considered as a part of these Specifications.

### **4-3 Alteration of Plans or of Character of Work.**

**4-3.1 General:** The Director reserves the right to make, at any time prior to or during the progress of the work, such increases or decreases in quantities, whether a significant change or not, and such alterations in the details of construction, whether a substantial change or not, including but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable by the Director. Such increases, decreases or alterations shall not constitute a breach of Contract, shall not invalidate the Contract, nor release the Surety from any liability arising out of this Contract or the Surety bond. Minor increases, decreases or alterations that do not change the scope of the Project, the Project cost, or the Contract Time may be initially authorized in a Field Directive Change Order. The Contractor agrees to perform the work, as altered, the same as if it had been a part of the original Contract. All Field Directive Change Orders shall be approved as a Supplemental Agreement pursuant to 4-3.4 prior to Project close-out.

The term "significant change" applies only when:

1. The Director determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction, or
2. A major item of work, as defined in 1-3, is increased in excess of 125% or decreased below 75% of the original Contract quantity. The County will apply any price adjustment for an increase in quantity only to that portion in excess of 125% of the original Contract item quantity in accordance with 4-3.2 below. In the case of a decrease below 75% the County will only apply a price adjustment for the additional costs that are a direct result of the reduction in quantity.

In (1) above, the determination by the Director shall be conclusive. If the determination is challenged by the Contractor in any proceeding, the Contractor must establish by clear and convincing proof that the determination by the Director was without any reasonable basis.

**4-3.2 Increase, Decrease or Alteration in the Work:** The Director reserves the right to make alterations in the character of the work which involve a substantial change in the nature of the design or in the type of construction or which materially increases or decreases the cost or time of performance. Such alteration shall not constitute a breach of Contract, shall not invalidate the Contract or release the Surety.

Notwithstanding that the Contractor shall have no formal right whatsoever to any extra compensation or time extension deemed due by the Contractor for any cause unless and until the Contractor follows the procedures set forth in 5-12.2 for preservation, presentation and resolution of the claim, the Contractor may at any time, after having otherwise timely submitted a

notice of intent to claim or preliminary time extension request pursuant to 5-12.2 and 8-7.3.2, submit to the County a request for equitable adjustment of compensation or time or other dispute resolution proposal. The Contractor shall in any request for equitable adjustment of compensation, time, or other dispute resolution proposal certify under oath and in writing, in accordance with the formalities required by Florida law, that the request is made in good faith, that any supportive data submitted is accurate and complete to the Contractor's best knowledge and belief, and that the amount of the request accurately reflects what the Contractor in good faith believes to be the County's responsibility. Such certification must be made by an officer or director of the Contractor with the authority to bind the Contractor. Any such certified statements of entitlement and costs shall be subject to the audit provisions set forth in 5-12.14. While the submittal or review of a duly certified request for equitable adjustment shall neither create, modify, nor activate any legal rights or obligations as to the Contractor or the County, the County will review the content of any duly certified request for equitable adjustment or other dispute resolution proposal, with any further action or inaction by the County thereafter being in its sole discretion. Any request for equitable adjustment that fails to fully comply with the certification requirements will not be reviewed by the County.

The monetary compensation provided for below constitutes full and complete payment for such additional work and the Contractor shall have no right to any additional monetary compensation for any direct or indirect costs or profit for any such additional work beyond that expressly provided below. The Contractor shall be entitled to a time extension only to the extent that the performance of any portion of the additional work is a controlling work item and the performance of such controlling work item actually extends completion of the project due to no fault of the Contractor. All time related costs for actual performance of such additional work are included in the compensation already provided below and any time extension entitlement hereunder will be without additional monetary compensation. The Contractor shall have no right to any monetary compensation or damages whatsoever for any direct or indirect delay to a controlling work item arising out of or in any way related to the circumstances leading up to or resulting from additional work (but not relating to the actual performance of the additional work, which is paid for as otherwise provided herein), except only as provided for under 5-12.6.2.1.

**4-3.2.1 Allowable Costs for Extra Work:** The Director may direct in writing that extra work be done and, at the Director's sole discretion, the Contractor will be paid pursuant to an agreed Supplemental Agreement or in the following manner:

1. Labor and Burden: The Contractor will receive payment for actual costs of direct labor and burden for the additional or unforeseen work. Labor includes foremen actually engaged in the work; and will not include project supervisory personnel nor necessary on-site clerical staff, except when the additional or unforeseen work is a controlling work item and the performance of such controlling work item actually extends completion of the project due to no fault of the Contractor. Compensation for project supervisory personnel, but in no case higher than a Project Manager's position, shall only be for the pro-rata time such supervisory personnel spent on the contract. In no case shall an officer or director of the Company, nor those persons who own more than 1% of the Company, be considered as project supervisory personnel, direct labor or foremen hereunder.

Payment for burden shall be limited solely to the following:

Table 4-3.2.1
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Item	Rate
FICA	Rate established by Law
FUTA/SUTA	Rate established by Law
Medical Insurance	Actual
Holidays, Sick & Vacation benefits	Actual
Retirement benefits	Actual
Workers Compensation	Rates based on the National Council on Compensation Insurance basic rate tables adjusted by Contractor's actual experience modification factor in effect at the time of the additional work or unforeseen work.
Per Diem	Actual but not to exceed State of Florida's rate
Insurance*	Actual
* Compensation for Insurance is limited solely to General Liability Coverage and does not include any other insurance coverage (such as, but not limited to, Umbrella Coverage, Automobile Insurance, etc.).	

At the Pre-construction conference, certify to the Director the following:

- a. A listing of on-site clerical staff, supervisory personnel and their pro-rated time assigned to the contract,
- b. Actual Rate for items listed in Table 4-3.2.1,
- c. Existence of employee benefit plan for Holiday, Sick and Vacation benefits and a Retirement Plan, and,
- d. Payment of Per Diem is a company practice for instances when compensation for Per Diem is requested.

Such certification must be made by an officer or director of the Contractor with authority to bind the Contractor. Timely certification is a condition precedent to any right of the Contractor to recover compensations for such costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such costs. Any subsequent changes shall be certified to the Director as part of the cost proposal or seven calendar days in advance of performing such extra work.

2. Materials and Supplies: For materials accepted by the Director and used on the project, the Contractor will receive the actual cost of such materials incorporated into the work, including Contractor paid transportation charges (exclusive of equipment as hereinafter set forth). For supplies reasonably needed for performing the work, the Contractor will receive the actual cost of such supplies.

3. Equipment: For any machinery or special equipment (other than small tools), including fuel and lubricant, the Contractor will receive 100% of the "Rental Rate Blue Book" for the actual time that such equipment is in operation on the work, and 50% of the "Rental Rate Blue Book" for the time the equipment is directed to standby and remain on the project site, to be calculated as indicated below. The equipment rates will be based on the latest edition (as of the date the work to be performed begins) of the "Rental Rate Blue Book for Construction Equipment" or the "Rental Rate Blue Book for Older Construction Equipment," whichever is applicable, as published by Machinery Information Division of PRIMEDIA Information, Inc. (version current at the time of bid), using all instructions and adjustments contained therein and as modified below. On



all projects, the Director will adjust the rates using regional adjustments and Rate Adjustment Tables according to the instructions in the Blue Book.

Allowable Equipment Rates will be established as set out below:

- a. Allowable Hourly Equipment Rate = Monthly Rate/176 x Adjustment Factors x 100%.
- b. Allowable Hourly Operating Cost = Hourly Operating Cost x 100%.
- c. Allowable Rate Per Hour = Allowable Hourly Equipment Rate + Allowable Hourly Operating Cost.
- d. Standby Rate = Allowable Hourly Equipment Rate x 50%.

The Monthly Rate is The Basic Machine Rate Plus Any Attachments. Standby rates will apply when equipment is not in operation and is directed by the Director to standby at the project site when needed again to complete work and the cost of moving the equipment will exceed the accumulated standby cost. Standby rates will not apply on any day the equipment operates for eight or more hours. Standby payment will be limited to only that number of hours which, when added to the operating time for that day equals eight hours. Standby payment will not be made on days that are not normally considered work days on the project.

The County will allow for the cost of transporting the equipment to and from the location at which it will be used. If the equipment requires assembly or disassembly for transport, the County will pay for the time to perform this work at the rate for standby equipment.

Equipment may include vehicles utilized only by Labor, as defined above.

4. Indirect Costs, Expenses, and Profit: Compensation for all indirect costs, expenses, and profit of the Contractor, including but not limited to overhead of any kind, whether jobsite, field office, division office, regional office, home office, or otherwise, is expressly limited to the greater of either (a) or (b) below:

a. Solely a mark-up of 17.5% on the payments in (1) through (3), above.

1. Bond: The Contractor will receive compensation for any premium for acquiring a bond for such additional or unforeseen work at the original Contract bond rate paid by the Contractor. No compensation for bond premium will be allowed for additional or unforeseen work paid by the County via initial contingency pay item.

2. The Contractor will be allowed a markup of 10% on the first \$50,000 and a markup of 5% on any amount over \$50,000 on any subcontract directly related to the additional or unforeseen work. Any such subcontractor mark-up will be allowed only by the prime Contractor and a first tier subcontractor, and the Contractor must elect the markup for any eligible first tier subcontractor to do so.

b. Solely the formula set forth below and only as applied solely as to such number of calendar days of entitlement that are in excess of ten cumulative calendar days as defined below.

$$D = \frac{A \times C}{B}$$

Where A = Original Contract Amount  
B = Original Contract Time

$$C = 8\%$$

D = Average Overhead Per Day

Cumulative Calendar Days is defined as the combined total number of calendar days granted as time extensions due to either extra work, excluding overruns to existing contract items, that extend the duration of the project or delay of a controlling work item caused solely by the County, or the combined total number of calendar days for which a claim of entitlement to a time extension due to delay of a controlling work item caused solely by the County is otherwise ultimately determined to be in favor of the Contractor.

No compensation, whatsoever, will be paid to the Contractor for any jobsite overhead and other indirect impacts when the total number of calendar days granted for time extension due to delay of a controlling work item caused solely by the County is, or the total number of calendar days for which entitlement to a time extension due to delay of a controlling work item caused solely by the County is otherwise ultimately determined in favor of the Contractor to be, equal to or less than ten calendar days and the Contractor also fully assumes all monetary risk of any and all partial or single calendar day delay periods, due to delay of a controlling work item caused solely by the County, that when combined together are equal to or less than ten calendar days and regardless of whether monetary compensation is otherwise provided for hereunder for one or more calendar days of time extension entitlement for each calendar day exceeding ten calendar days. All calculations under this provision shall exclude weather days, Holidays, and Special Events.

Further, for (a) or (b) above, in the event there are concurrent delays to one or more controlling work items, one or more being caused by the County and one or more being caused by the Contractor, the Contractor shall be entitled to a time extension for each day that a controlling work item is delayed by the County but shall have no right to nor receive any monetary compensation for any indirect costs for any days of concurrent delay.

**4-3.2.2 Subcontracted Work:** Compensation for the additional or unforeseen work performed by a subcontractor shall be limited solely to that provided for in 4-3.2.1 (1), (2), (3) and (4)(a). In addition, the Contractor compensation is expressly limited to the greater of the total provided in either 4-3.2.1(4)(a) or (4)(b), except that the Average Overhead Per-Day calculation is as follows:

$$Ds = \frac{As \times C}{B}$$

Where As = Original Contract Amount minus Original Subcontract amounts(s)\*

B = Original Contract Time

C = 8%

Ds = Average Overhead Per-Day

\* deduct Original Subcontract Amount(s) of subcontractor(s) performing the work

The subcontractor may receive compensation for any premium for acquiring a bond for the additional or unforeseen work; provided, however, that such payment for additional subcontractor bond will only be paid upon presentment to the County of clear and convincing proof

that the subcontractor has actually submitted and paid for separate bond premiums for such additional or unforeseen work in such amount and that the subcontractor was required by the Contractor to acquire a bond.

The Contractor shall require the subcontractor to submit a certification, in accordance with 4-3.2.1 (1), as part of the cost proposal and submit such to the Director. Such certification must be made by an officer or director of the subcontractor with authority to bind the subcontractor. Timely certification is a condition precedent to any right of the Contractor to recover compensation for such subcontractor costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such subcontractor costs.

**4-3.3 No Waiver of Contract:** Changes made by the Director will not be considered to waive any of the provisions of the Contract, nor may the Contractor make any claim for loss of anticipated profits because of the changes, or by reason of any variation between the approximate quantities and the quantities of work actually performed. All work shall be performed as directed by the Director and in accordance with the Contract Documents.

**4-3.4 Conditions Requiring a Supplemental Agreement or Unilateral Payment:** A Supplemental Agreement or Unilateral Payment will be used to clarify the Plans and Specifications of the Contract; to provide for unforeseen work, grade changes, or alterations in the Plans which could not reasonably have been contemplated or foreseen in the original Plans and Specifications; to change the limits of construction to meet field conditions; to provide a safe and functional connection to an existing pavement; to settle documented Contract claims; to make the project functionally operational in accordance with the intent of the original Contract and subsequent amendments thereto.

A Supplemental Agreement or Unilateral Payment may be used to expand the physical limits of the project only to the extent necessary to make the project functionally operational in accordance with the intent of the original Contract. The cost of any such agreement extending the physical limits of the project shall not exceed \$100,000 or 10% of the original Contract price, whichever is greater.

Except for Work included within a Field Directive Change Order, perform no work to be covered by a Supplemental Agreement or Unilateral Payment before written authorization is received from the Director. The Director's written authorization will set forth sufficient work information to allow the work to begin. The work activities, terms and conditions will be reduced to written Supplemental Agreement or Unilateral Payment form promptly thereafter. No payment will be made on a Supplemental Agreement or Unilateral Payment prior to the County's approval of the document.

**4-3.5 Extra Work:** Extra work authorized in writing by the Director will be paid in accordance with the formula in 4-3.2. Such payment will be the full extent of all monetary compensation entitlement due to the Contractor for such extra work. Any entitlement to a time extension due to extra work will be limited solely to that provided for in 4-3.2 for additional work.

**4-3.6 Connections to Existing Pavement, Drives and Walks:** Generally adhere to the limits of construction at the beginning and end of the project as detailed in the Plans. However, if the Director determines that it is necessary to extend the construction in order to make suitable connections to existing pavement, the Director will authorize such a change in writing.

For necessary connections to existing walks and drives that are not indicated in the Plans, the Director will submit direction regarding the proper connections in accordance with the Standard Plans.

**4-3.7 Differing Site Conditions:** During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the Contract, or if unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the Contractor disturbs the conditions or performs the affected work.

Upon receipt of written notification of differing site conditions from the Contractor, the Director will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment will be made, excluding loss of anticipated profits, and the Contract will be modified in writing accordingly. The Director will notify the Contractor whether or not an adjustment of the Contract is warranted.

The Director will not allow a Contract adjustment for a differing site condition unless the Contractor has submitted the required written notice.

The Director will not allow a Contract adjustment under this clause for any effects caused to any other County or non-County projects on which the Contractor may be working.

**4-3.8 Changes Affecting Utilities:** The Contractor shall be responsible for identifying and assessing any potential impacts to a utility that may be caused by the changes proposed by the Contractor, and the Contractor shall at the time of making the request for a change notify the County in writing of any such potential impacts to utilities.

County approval of a Contractor proposed change does not relieve the Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those in the original Contract Specifications, Design Plans (including Traffic Control Plans) or other Contract Documents and which effect a change in utility work different from that shown in the Utility Plans, joint project agreements or utility relocation schedules.

#### **4-3.9 Cost Savings Initiative Proposal:**

##### **4-3.9.1 Intent and Objective:**

1. This Subarticle applies to any cost reduction proposal (hereinafter referred to as a Proposal) that the Contractor initiates and develops for the purpose of refining the Contract to increase cost effectiveness or significantly improve the quality of the end result. County Potential Proposals will be discussed as an agenda item at the pre-construction meeting. This Subarticle does not, however, apply to any such proposal unless the Contractor identifies it at the time of its submission to the County as a proposal submitted pursuant to this Subarticle.

2. The County will consider Proposals that would result in net savings to the County by providing a decrease in the cost of the Contract. Proposals must result in savings without impairing essential functions and characteristics such as safety, service, life, reliability, economy of operation, ease of maintenance, aesthetics and necessary standard design features. However, nothing herein prohibits the Contractor from submitting Proposals when the required functions and characteristics can be combined, reduced or eliminated because they are nonessential or excessive. The County will not recognize the Contractor's correction of plan errors that result in a cost reduction, as a Proposal.

3. The County shall have the right to reject, at its discretion, any Proposal submitted that proposes a change in the design of the pavement system or that would require additional right-of-way. Pending the County's execution of a formal supplemental agreement

implementing an approved Proposal, the Contractor shall remain obligated to perform the work in accordance with the terms of the existing Contract. The County may grant time extensions to allow for the time required to develop and review a Proposal.

4. For potential Proposals not discussed at the Cost Savings Initiative Workshop, a mandatory concept meeting will be held for the Contractor and County to discuss the potential Proposal prior to development of the Proposal.

**4-3.9.2 Subcontractors:** The County encourages the Contractor to include the provisions of this Subarticle in Contracts with subcontractors and to encourage submission of Proposals from subcontractors. However, it is not mandatory to submit Proposals to the County or to accept or transmit subcontractor proposed Proposals to the County.

**4-3.9.3 Data Requirements:** As a minimum, submit the following information with each Proposal:

1. a description of the difference between the existing Contract requirement, including any time extension request, and the proposed change, and the comparative advantages and disadvantages.

2. separate detailed cost estimates for both the existing Contract requirement and the proposed change. Break down the cost estimates by pay item numbers indicating quantity increases or decreases and deleted pay items. Identify additional proposed work not covered by pay items within the Contract, by using pay item numbers in the Basis of Estimates Manual. In preparing the estimates, include overhead, profit, and bond within pay items in the Contract. Separate pay item(s) for the cost of overhead, profit, and bond will not be allowed.

3. an itemization of the changes, deletions or additions to Plan details, plan sheets, Standard Plans and Specifications that are required to implement the Proposal if the County adopts it. Submit preliminary plan drawings sufficient to describe the proposed changes.

4. engineering or other analysis in sufficient detail to identify and describe specific features of the Contract that must be changed if the County accepts the Proposal with a proposal as to how these changes can be accomplished and an assessment of their effect on other project elements. The County may require that engineering analyses be performed by a prequalified consultant in the applicable class of work. Support all design changes that result from the Proposal with drawings and computations signed and sealed by the Contractor's Engineer of Record. Written documentation or drawings will be submitted clearly delineating the responsibility of the Contractor's Engineer of Record.

5. the date by which the County must approve the Proposal to obtain the total estimated cost reduction during the remainder of the Contract, noting any effect on the Contract completion time or delivery schedule.

6. a revised project schedule that would be followed upon approval of the Proposal. This schedule would include submittal dates and review time for the County and Peer reviews.

**4-3.9.4 Processing Procedures:** Submit Proposals to the Director or his duly authorized representative. The County will process Proposals expeditiously; however, the County is not liable for any delay in acting upon a Proposal submitted pursuant to this Subarticle. The Contractor may withdraw, in whole or in part, a Proposal not accepted by the County within the period specified in the Proposal. The County is not liable for any Proposal development cost in the case where the County rejects or the Contractor withdraws a Proposal.

The Director is the sole judge of the acceptability of a Proposal and of the estimated net savings in construction costs from the adoption of all or any part of such proposal. In

determining the estimated net savings, the County reserves the right to disregard the Contract bid prices if, in the judgment of the Director, such prices do not represent a fair measure of the value of work to be performed or to be deleted.

Prior to approval, the Director may modify a Proposal, with the concurrence of the Contractor, to make it acceptable. If any modification increases or decreases the net savings resulting from the Proposal, the County will determine the Contractor's fair share upon the basis of the Proposal as modified and upon the final quantities. The County will compute the net savings by subtracting the revised total cost of all bid items affected by the Proposal from the total cost of the same bid items as represented in the original Contract.

Prior to approval of the Proposal that initiates the supplemental agreement, submit acceptable Contract-quality plan sheets revised to show all details consistent with the Proposal design.

**4-3.9.5 Computations for Change in Contract Cost of Performance:** If the Proposal is adopted, the Contractor's share of the net savings as defined hereinafter represents full compensation to the Contractor for the Proposal.

The County will not include its costs to process and implement a Proposal in the estimate. However, the County reserves the right, where it deems such action appropriate, to require the Contractor to pay the County's cost of investigating and implementing a Proposal as a condition of considering such proposal. When the County imposes such a condition, the Contractor shall accept this condition in writing, authorizing the County to deduct amounts payable to the County from any monies due or that may become due to the Contractor under the Contract.

**4-3.9.6 Conditions of Acceptance for Major Design Modifications of Category 2 Bridges:** A Proposal that proposes major design modifications of a category 2 bridge, as determined by the Director, shall have the following conditions of acceptance:

All bridge Plans relating to the Proposal shall undergo an independent peer review conducted by a single independent engineering firm referred to for the purposes of this article as the Independent Review Engineer who is not the originator of the Proposal design, and is pre-qualified by the County in accordance with Rule 14-75, Florida Administrative Code. The independent peer review is intended to be a comprehensive, thorough verification of the original work, giving assurance that the design is in compliance with all County requirements. The Independent Review Engineer's comments, along with the resolution of each comment, shall be submitted to the County. The Independent Review Engineer shall sign and seal the submittal cover letter stating that all comments have been adequately addressed and the design is in compliance with the County requirements. If there are any unresolved comments the Independent Review Engineer shall specifically list all unresolved issues in the signed and sealed cover letter.

The Contractor shall designate a primary engineer responsible for the Proposal design and as such will be designated as the Contractor's Engineer of Record for the Proposal design. The County reserves the right to require the Contractor's Engineer of Record to assume responsibility for design of the entire structure.

New designs and independent peer reviews shall be in compliance with all applicable County, FHWA and AASHTO criteria requirements including bridge load ratings.

**4-3.9.7 Sharing Arrangements:** If the County approves a Proposal, the Contractor shall receive 50% of the net reduction in the cost of performance of the Contract as determined by the final negotiated agreement between the Contractor and the County. The net reduction will be determined by subtracting from the savings of the construction costs the reasonable documented engineering costs incurred by the contractor to design and develop a Proposal. The reasonable

documented engineering costs will be paid by the County. Engineering costs will be based on the consultant's certified invoice and may include the costs of the Independent Review Engineer in 4-3.9.6. The total engineering costs to be subtracted from the savings to determine the net reduction will be limited to 25% of the construction savings and shall not include any markup by the Contractor or the costs for engineering services performed by the Contractor.

**4-3.9.8 Notice of Intellectual Property Interests and County's Future Rights to a Proposal:**

**4-3.9.8.1 Notice of Intellectual Property Interests:** The Contractor's Proposal submittal shall identify with specificity any and all forms of intellectual property rights that either the Contractor or any officer, shareholder, employee, consultant, or affiliate, of the Contractor, or any other entity who contributed in any measure to the substance of the Contractor's Proposal development, have or may have that are in whole or in part implicated in the Proposal. Such required intellectual property rights notice includes, but is not limited to, disclosure of any issued patents, copyrights, or licenses; pending patent, copyright or license applications; and any intellectual property rights that though not yet issued, applied for or intended to be pursued, could nevertheless otherwise be subsequently the subject of patent, copyright or license protection by the Contractor or others in the future. This notice requirement does not extend to intellectual property rights as to stand-alone or integral components of the Proposal that are already on FDOT's Approved Product List (APL) or Standard Plans, or are otherwise generally known in the industry as being subject to patent or copyright protection.

**4-3.9.8.2 County's Future Rights to a Proposal:** Notwithstanding 7-3 nor any other provision of the Standard Specifications, upon acceptance of a Proposal, the Contractor hereby grants to the County and its contractors (such grant being expressly limited solely to any and all existing or future County construction projects and any other County projects that are partially or wholly funded by or for the County) a royalty-free and perpetual license under all forms of intellectual property rights to manufacture, to use, to design, to construct, to disclose, to reproduce, to prepare and fully utilize derivative works, to distribute, display and publish, in whole or in part, and to permit others to do any of the above, and to otherwise in any manner and for any purpose whatsoever do anything reasonably necessary to fully utilize any and all aspects of such Proposal on any and all existing and future construction projects and any other County projects.

Contractor shall hold harmless, indemnify and defend the County and its contractors and others in privity therewith from and against any and all claims, liabilities, other obligations or losses, and reasonable expenses related thereto (including reasonable attorneys' fees), which are incurred or are suffered by any breach of the foregoing grants, and regardless of whether such intellectual property rights were or were not disclosed by the Contractor pursuant to 4-3.9.8.1, unless the County has by express written exception in the Proposal acceptance process specifically released the Contractor from such obligation to hold harmless, indemnify and defend as to one or more disclosed intellectual property rights.

**4-4 Unforeseeable Work.**

When the County requires work that is not covered by a price in the Contract and such work does not constitute a "Significant Change" as defined in 4-3.1, and the County finds that such work is essential to the satisfactory completion of the Contract within its intended scope, the County will make an adjustment to the Contract. The Director will determine the basis of payment for such an adjustment in a fair and equitable amount.

#### **4-5 Rights in and Use of Materials Found on the Site of the Work.**

**4-5.1 Ownership and Disposal of Existing Materials:** Take ownership and dispose of all materials that are not designated as the property of other parties, in both roadway and structures, found on the right-of-way, and all material in structures designated for removal. Such materials do not include earth or other excavated material required for the construction of the project. During construction, the Contractor may use materials from existing structures that are required to be removed and that are designated to remain the property of the County. Do not cut or otherwise damage such material during removal unless the Director gives permission to do so. Store material in an accessible location as the Director directs. The County is not responsible for the quality or quantity of any material salvaged.

**4-5.2 Ornamental Trees and Shrubs:** Take ownership of all ornamental trees or shrubs existing in the right-of-way that are required to be removed for the construction operations and which are not specifically designated in the Plans to be reset, or to be removed by others prior to the construction operations.

#### **4-6 Final Cleaning Up of Right-of-Way.**

Upon completion of the work, and before the County accepts the work and makes final payment, remove from the right-of-way and adjacent property all falsework, equipment, surplus and discarded materials, rubbish and temporary structures; restore in an acceptable manner all property, both public and private, that has been damaged during the prosecution of the work; and leave the waterways unobstructed and the roadway in a neat and presentable condition throughout the entire length of the work under Contract. Do not dispose of materials of any character, rubbish or equipment, on abutting property, with or without the consent of the property owners. The Director will allow the Contractor to temporarily store equipment, surplus materials, usable forms, etc., on a well-kept site owned or leased by the Contractor, adjacent to the project. However, do not place or store discarded equipment, materials, or rubbish on such a site.

Shape and dress areas adjacent to the project right-of-way that were used as plant sites, materials storage areas or equipment yards when they are no longer needed for such purposes. Restore these areas in accordance with 7-11.1 and 7-11.2. Grass these areas when the Director directs.



## **SECTION 5 CONTROL OF THE WORK**

### **5-1 Plans and Working Drawings.**

**5-1.1 Contract Documents:** Have available the Contract Documents on the worksite at all times.

**5-1.2 County Plans:** Plans consist of general drawings showing such details as are necessary to give a comprehensive idea of the construction contemplated. In general, roadway plans will show alignment, profile grades, typical cross-sections and general cross-sections. In general, structure plans will show in detail all dimensions of the work contemplated. When the structure plans do not show the dimensions in detail, they will show general features and such details as are necessary to give a comprehensive idea of the structure.

Grades shown are finished grades, and B.M. Datum is North American Vertical Datum 1988 (NAVD-1988), National Geodetic Vertical Datum of 1929 (NGVD-1929), or other datum as noted in the Plans.

**5-1.3 Alterations in Plans:** The County will issue, in writing, all authorized alterations affecting the requirements and information given on the approved Plans.

### **5-1.4 Shop Drawings:**

#### **5-1.4.1. Definitions:**

1. Shop Drawings: All working, shop and erection drawings, associated trade literature, calculations, schedules, manuals and similar documents submitted by the Contractor to define some portion of the project work. The type of work includes both permanent and temporary works as appropriate to the project.

2. Permanent Works: All the permanent structures and parts thereof required of the completed Contract.

3. Temporary Works: Any temporary construction work necessary for the construction of the permanent works. This includes but is not limited to bracing, falsework, formwork, scaffolding, shoring, temporary earthworks, sheeting, cofferdams, and special erection equipment.

4. Construction Affecting Public Safety: Construction that may jeopardize public safety such as structures spanning functioning vehicular roadways, demolition of a continuous span structure while traffic is under any span, pedestrian walkways, railroads, navigation channels of navigable waterways and walls or other structure foundations located in embankments immediately adjacent to functioning roadways. It does not apply to those areas of the site under the Contractor's control and outside the limits of normal public access.

5. Major and Unusual Structures: Bridges of complex geometry and/or complex design. Generally, this includes the following types of structures:

- a. Bridges with an individual span longer than 300 feet.
- b. Structurally continuous superstructures with spans over 150 feet.
- c. Steel box and plate girder bridges.
- d. Steel truss bridges.
- e. Concrete segmental and longitudinally post-tensioned continuous girder bridges.
- f. Cable stayed or suspension bridges.
- g. Arch bridges.
- h. Tunnels.

i. Movable bridges (specifically electrical and mechanical components).

j. Rehabilitation, widening, or lengthening of any of the above.

6. Special Erection Equipment includes launching gantries, beam and winch equipment, form travelers, stability towers, strong-backs, erection trusses, launching noses or similar items made purposely for construction of the structure. It does not apply to commonly available proprietary construction equipment such as cranes.

7. Falsework includes any temporary construction work used to support the permanent structure until it becomes self-supporting. Falsework includes steel or timber beams, girders, columns, piles and foundations, and any proprietary equipment including modular shoring frames, post shores, and adjustable horizontal shoring.

8. Formwork includes any structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Formwork comprises common materials such as wood or metal sheets, battens, soldiers and walers, ties, proprietary forming systems such as stay-in-place metal forms, and proprietary supporting bolts, hangers and brackets. Formwork may be either permanent formwork requiring a shop drawing submittal such as stay-in-place metal or concrete forms, or may be temporary formwork which requires certification by the Specialty Engineer for Construction Affecting Public Safety and for Major and Unusual Structures.

9. Scaffolding is an elevated work platform used to support workmen, materials and equipment, but not intended to support the structure.

10. Shoring is a component of falsework such as horizontal, vertical or inclined support members. In this Section, this term is interchangeable with falsework.

11. Bracing is a temporary structural member(s) placed between beams, girders, piles columns, etc. to provide stability during construction activities.

12. Contractor Originated Designs: Items which the Contract Documents require the Contractor to design, detail and incorporate into the permanent works.

**5-1.4.2 Work Items Requiring Shop Drawings:** In general, the County requires shop drawings for items of work not fully detailed in the Plans which require additional drawings and coordination prior to constructing the item, including but not limited to:

1. Bridge components not fully detailed in the Plans, i.e. segments, steel girder details, post-tensioning details, handrails, etc.

2. Retaining Wall Systems

3. Precast Box Culverts

4. Non-standard structures and components for drainage, lighting, signalization and signing

5. Building structures

6. Non-standard crash cushions and other nonstructural items

7. Design and structural details furnished by the Contractor in compliance with the Contract

8. Temporary Works affecting public safety

Additional clarification for certain types of bridge structures is provided in 5-1.4.7. Other provisions of the Contract Documents may waive the requirement for submittals for certain items; i.e., items constructed from standard drawings or those complying with alternate details for prestressed members under Section 450. Review the Contract Documents to determine the submittals required.

**5-1.4.3 Schedule of Submittals:** Prepare and submit a schedule of submittals that identifies the work for which shop drawings apply. For each planned submittal, define the type, and approximate number of drawings or other documents that are included and the planned submittal date, considering the processing requirements herein. Submit the schedule of submittals to the CEI Consultant within 60 days of the start of the Contract, and prior to the submission of any shop drawings.

Coordinate subsequent submittals with construction schedules to allow sufficient time for review, approval, and re-submittal as necessary.

**5-1.4.4 Style, Numbering, and Material of Submittals:**

**5-1.4.4.1 Drawings:** Submit all shop drawings that are necessary to complete the structure in compliance with the design shown in the Plans. Prepare all shop drawings using the same units of measure as those used in the Contract Plans. Consecutively number each sheet in the submittal series, and indicate the total number in the series (i.e., 1 of 12, 2 of 12 . . . 12 of 12). Include on each sheet the following items as a minimum requirement: the complete Project Number, Financial Project Identification Number (if applicable), Bridge Number(s), drawing title and number, a title block showing the names of the fabricator or producer and the Contractor for which the work is being done, the initials of the person(s) responsible for the drawing, the date on which the drawing was prepared, the location of the item(s) within the project, the Contractor's approval stamp with date and initials, and, when applicable, the documents shall be signed and sealed by the Specialty Engineer or Contractor's Engineer of Record, as appropriate. A re-submittal will be requested when any of the required information is not included.

Shop drawings shall be submitted in Portable Document Format (PDF) files, formatted on 11 inch by 17 inch sheets.

**5-1.4.4.2 Other Documents:** Submit PDF files of other documents such as trade literature, catalogue information, calculations, and manuals formatted on sheets no larger than 11 inch by 17 inches. Clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12 . . . 12 of 12).

Prepare all documents using the same units of measure as the Contract Plans and include a Table of Contents cover sheet. List on the cover sheet the total number of pages and appendices, and include the complete Project Number, Financial Project Identification Number (if applicable), a title referencing the submittal item(s), the name of the firm and person(s) responsible for the preparation of the document, the Contractor's approval stamp with date and initials, and, when applicable, the documents shall be signed and sealed by the Specialty Engineer or Contractor's Engineer of Record, as appropriate.

Submit appropriately prepared and checked calculations and manuals that clearly outline the design criteria. Include on the internal sheets the complete Financial Project Identification Number and the initials of the person(s) responsible for preparing and checking the document.

Clearly label trade literature and catalogue information on the front cover with the title, Financial Project Identification Number, date and name of the firm and person(s) responsible for that document.

**5-1.4.5 Submittal Paths:**

**5-1.4.5.1 General:** Shop drawings are not required for prequalified items. For non-prequalified items, details of the submittal path and protocol to be followed will be established by the CEI Consultant and communicated at the preconstruction conference. Shop

drawing review will be performed by the Engineer of Record for the project feature associated with each submittal and communicated through the CEI Consultant. Shop drawing submittals shall include other information such as catalog data, procedure manuals, fabrication/welding procedures, and maintenance and operating procedures when required by the work. Submit material certifications and material tests to the CEI Consultant. The Contractor is responsible for checking and verifying any necessary field dimensions required in the development of shop drawings.

**5-1.4.5.2 Building Structures:** Submit working, shop and erection drawings, and all correspondence related to building structures to the CEI Consultant for review and approval.

**5-1.4.5.3 Contractor-Originated Design:** Submit shop drawings and applicable calculations to the CEI Consultant for review. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer or the Contractor's Engineer of Record. Submit in accordance with the requirements of 5-1.4.5.1 through 5-1.4.5.3, as appropriate.

**5-1.4.5.4 Temporary Works:** For Construction Affecting Public Safety, submit to the CEI Consultant shop drawings and the applicable calculations for the design of special erection equipment, bracing, falsework, scaffolding, etc. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.5.1 through 5-1.4.5.3, as appropriate.

**5-1.4.5.5 Falsework Founded on Shallow Foundations:** When vertical displacement limits are provided in the Plans for falsework founded on shallow foundations such as spread footings and mats, submit to the CEI Consultant shop drawings and applicable calculations of the falsework system including subsurface conditions and settlement estimates. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.5.1 through 5-1.4.5.3, as appropriate.

**5-1.4.5.6 Formwork and Scaffolding:** The Contractor is solely responsible for the safe installation and use of all formwork and scaffolding. The County does not require any formwork or scaffolding submittals unless such work would be classified as Construction Affecting Public Safety. For formwork, scaffolding, or other temporary works affecting public safety; develop the required designs in accordance with the AASHTO Guide Design Specifications for Bridge Temporary Works, the AASHTO Construction Handbook for Bridge Temporary Works, and Chapter 11 of the Structures Design Guidelines (SDG) using wind loads specified in the SDG.

**5-1.4.5.7 Beam and Girder Temporary Bracing:** The Contractor is solely responsible for ensuring stability of beams and girders during all handling, storage, shipping and erection. Adequately brace beams and girders to resist wind, weight of forms and other temporary loads, especially those eccentric to the vertical axis of the products, considering actual beam geometry and support conditions during all stages of erection and deck construction. At a minimum, provide temporary bracing at each end of each beam or girder. Develop the required bracing designs in accordance with the AASHTO LRFD Bridge Design Specifications (LRFD) and Chapter 11 of the SDG using wind loads specified in the SDG. For information not included in the SDG or LRFD, refer to the AASHTO Guide Design Specifications for Bridge Temporary Works and the AASHTO Construction Handbook for Bridge Temporary Works.

For Construction Affecting Public Safety, when temporary bracing requirements are shown in the Plans, submit plans and calculations signed and sealed by a Specialty Engineer for the design of temporary bracing members and connections based on the forces shown in the Plans. In addition, submit a written certification that construction loads do not exceed the assumed loads shown in the Plans.

For Construction Affecting Public Safety, when temporary bracing requirements are not shown in the Plans or an alternate temporary bracing system is proposed, submit plans and calculations signed and sealed by a Specialty Engineer including the stability analysis and design of temporary bracing members and connections.

**5-1.4.5.8 Erection Plan:** Submit, for the Director's review, an Erection Plan that meets the specific requirements of Sections 450, 452 and 460 and this section. Refer to Standard Plans, Index-102- 600 for construction activities not permitted over traffic.

**5-1.4.5.9 Other Miscellaneous Design and Structural Details Furnished by the Contractor in Compliance with the Contract:** Submit to the CEI Consultant shop drawings and the applicable calculations. The shop drawings and applicable calculations must be signed and sealed by the Specialty Engineer. Submit in accordance with the requirements of 5-1.4.5.1 through 5-1.4.5.3, as appropriate.

**5-1.4.5.10 Project Shop Drawing Package:** Upon completion of the work, but prior to authorization of final payment, the Contractor shall furnish the Director one complete, indexed and cataloged PDF file containing all of the Contractors, Subcontractors, and manufacturers shop drawings and catalog data as finally checked and reviewed by the Director with all modifications accepted by the Director subsequent thereto, showing the work as actually completed.

#### **5-1.4.6 Processing of Shop Drawings:**

**5-1.4.6.1 Contractor Responsibility for Accuracy and Coordination of Shop Drawings:** Coordinate, schedule, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and engineers, to provide for an orderly and balanced distribution of the work.

Coordinate, review, date, stamp, approve and sign all shop drawings prepared by the Contractor or agents (subcontractor, fabricator, supplier, etc.) prior to submitting them to the CEI Consultant. Submittal of the drawings confirms verification of the work requirements, units of measurement, field measurements, construction criteria, sequence of assembly and erection, access and clearances, catalog numbers, and other similar data. Indicate on each series of drawings the specification section and sheet or drawing number of the Contract Plans to which the submission applies. Indicate on the shop drawings all deviations from the Contract drawings and itemize all deviations in the letter of transmittal. Likewise, whenever a submittal does not deviate from the Contract Plans, clearly state so in the submittal.

Schedule the submission of shop drawings to allow for a 45 calendar day review period for all submittals associated with a category 2 bridge; tolling components identified in the current FDOT General Tolling Requirements (GTR) Part 3; and the tolling-related signing, DMS and ITS infrastructure. Schedule the submission of shop drawings to allow for a 25 day review period for all other items. The review period commences upon the CEI Consultant's receipt of the valid submittal or valid re-submittal and terminates upon the transmittal of the submittal back to the Contractor. A valid submittal includes all the minimum requirements outlined in 5-1.4.4.

Submit shop drawings to facilitate expeditious review. The Contractor is discouraged from transmitting voluminous submittals of shop drawings at one time. For submittals transmitted in this manner, allow for the additional review time that may result.

Only shop drawings distributed with the approval stamps are valid and all work that the Contractor performs in advance of approval will be at the Contractor's risk.

**5-1.4.6.2 Scope of Review by Engineer:** The Engineer of Record's review of the shop drawings is for conformity to the requirements of the Contract Documents and to the intent of the design. The Engineer of Record's review of shop drawings which include means, methods, techniques, sequences, and construction procedures are limited to the effects on the permanent works. The Engineer of Record's review of submittals which include means, methods, techniques, sequences, and construction procedures does not include an in-depth check for the ability to perform the work in a safe or efficient manner. Review by the Engineer of Record does not relieve the Contractor of responsibility for dimensional accuracy to ensure field fit and for conformity of the various components and details.

**5-1.4.6.3 Special Review by Engineer of Shop Drawings for Construction Affecting Public Safety:** For Construction Affecting Public Safety, the Engineer of Record, or other Engineer as the County appoints for this purpose, will make an independent review of all relevant shop drawings and similar documents. Do not proceed with construction of the permanent works until receiving the Engineer of Record's written approval. The review of these shop drawings is for overall structural adequacy of the item to support the imposed loads and does not include a check for economy, efficiency or ease of construction.

**5-1.4.7 Other Requirements for Shop Drawings for Bridges:**

**5-1.4.7.1 Shop Drawings for Structural Steel and Miscellaneous Metals:** Submit shop drawings for structural steel and miscellaneous metals. Shop drawings shall consist of working, shop, and erection drawings, welding procedures, and other working plans, showing details, dimensions, sizes of material, and other information necessary for the complete fabrication and erection of the metal work.

**5-1.4.7.2 Shop Drawings for Concrete Structures:** Submit shop drawings for concrete components that are not cast-in-place and are not otherwise exempted from submittal requirements. Also, submit shop drawings for all details that are required for the effective prosecution of the concrete work and are not included in the Contract Documents such as: special erection equipment, masonry layout diagrams, and diagrams for bending reinforcing steel, in addition to any details required for concrete components for the permanent work.

**5-1.4.7.3 Shop Drawings for Major and Unusual Structures:** In addition to any other requirements, within 60 days from the Notice to Proceed, submit information to the Director outlining the integration of the Major and Unusual Structure into the overall approach to the project. Where applicable to the project, include, but do not limit this information to:

1. The overall construction program for the duration of the Contract. Clearly show the Milestone dates. (For example, the need to open a structure by a certain time for traffic operations.)

2. The overall construction sequence. The order in which individual structures are to be built, the sequence in which individual spans of girders or cantilevers are erected, and the sequence in which spans are to be made continuous.

3. The general location of any physical obstacles to construction that might impose restraints or otherwise affect the construction, and an outline of how to deal

with such obstacles while building the structure(s). (For example, obstacles might include road, rail and waterway clearances, temporary diversions, transmission lines, utilities, property, and the Contractor's own temporary works, such as haul roads, cofferdams, plant clearances and the like.)

4. The approximate location of any special lifting equipment in relation to the structure, including clearances required for the operation of the equipment. (For example, crane positions, operating radii and the like.)

5. The approximate location of any temporary falsework, and the conceptual outline of any special erection equipment. Provide the precise locations and details of attachments, fixing devices, loads, etc. in later detailed submittals.

6. An outline of the handling, transportation, and storage of fabricated components, such as girders or concrete segments. Provide the precise details in later detailed submittals.

7. Any other information pertinent to the proposed scheme or intended approach.

Clearly and concisely present the above information on as few drawings as possible in order to provide an overall, integrated summary of the intended approach to the project. The County will use these drawings for information, review planning, and to assess the Contractor's approach in relation to the intent of the original design. Submittal to and receipt by the Director does not constitute any County acceptance or approval of the proposals shown thereon. Include the details of such proposals on subsequent detailed shop drawing submittals. Submit timely revisions and re-submittals for all variations from these overall scheme proposals.

**5-1.4.8 Modifications for Construction:** Where the Director allows the Contractor to make modifications to the permanent works for the purposes of expediting the Contractor's chosen construction methods, the Contractor shall submit proposals to the Engineer of Record for review and approval prior to modifying the works. Submit proposals for minor modifications under the shop drawing process. Indicate on all drawings the deviations from the Contract Documents and itemize all deviations in the letter of transmittal. The County will require additional submittals and/or submittal under a Cost Savings Initiative Proposal for major modifications.

Minor modifications are those items that, in the opinion of the Director, do not significantly affect the quantity of measured work, or the integrity or maintainability of the structure or its components. (For example, adjusting concrete dimensions, substituting steel plate sizes, changing reinforcing bar size and spacing, etc., all within the acceptable limits of the design.)

Major modifications are any modifications that, in the opinion of the Director, significantly affect the quantity of measured work, or the integrity or maintainability of the structure or its' components. (For example, substituting alternative beam sizes and spacings, changing material strength or type, and the like.). Submit signed and sealed revised sheets to the Director for any such revisions to the Contract Plans prior to submitting shop drawings.

The Director's decision on the delineation between a minor and a major modification and the disposition of a proposal is final.

**5-1.4.9 Cost of Shop Drawings:** Include the cost of shop and working drawings submittal in the Contract prices for the work requiring the shop and working drawings. The County will not pay the Contractor additional compensation for such drawings.

#### **5-1.5 Certifications:**

**5-1.5.1 Special Erection Equipment:** Prior to its use, ensure that the Specialty Engineer personally inspects the special erection equipment and submits a written certification to the Director that the equipment has been fabricated in accordance with the submitted drawings and calculations. In addition, after assembly, ensure that the Specialty Engineer observes the equipment in use and submits a written certification to the Director that such equipment is being used as intended and in accordance with the submitted drawings and calculations. In each case, the Specialty Engineer must sign and seal the letter of certification.

**5-1.5.2 Falsework and Shoring Requiring Shop Drawings:** After its erection or installation but prior to the application of any superimposed load, ensure that a Specialty Engineer or a designee inspects the falsework and certifies to the Director in writing that the falsework has been constructed in accordance with the materials and details shown on the submitted drawings and calculations. The letter of certification must be signed and sealed by the Specialty Engineer. Where so directed in the shop drawings, ensure all welds are performed by welders qualified under AWS D1.5 for the type of weld being performed.

**5-1.5.3 Temporary Formwork:** For Construction Affecting Public Safety and for Major and Unusual Structures, prior to the placement of any concrete, ensure that a Specialty Engineer or a designee inspects the formwork and submits a written certification to the Director that the formwork has been constructed to safely withstand the superimposed loads to which it will be subjected. The Specialty Engineer must sign and seal the letter of certification.

**5-1.5.4 Erection:** For Construction Affecting Public Safety, submit an erection plan signed and sealed by the Specialty Engineer to the Director at least four weeks prior to erection commencing. Include, as part of this submittal, signed and sealed calculations and details for any falsework, bracing or other connection supporting the structural elements shown in the erection plan. Unless otherwise specified in the Plans, erection plans are not required for simple span precast prestressed concrete girder bridges with spans of 170 feet or less.

At least two weeks prior to beginning erection, conduct a Pre-erection meeting to review details of the plan with the Specialty Engineer that signed and sealed the plan, and any Specialty Engineers that may inspect the work and the Director.

After erection of the elements, but prior to opening of the facility below the structure, ensure that a Specialty Engineer or a designee has inspected the erected member. Ensure that the Specialty Engineer has submitted a written certification to the Director that the structure has been erected in accordance with the signed and sealed erection plan.

For structures without temporary supports but with temporary girder bracing systems, perform, as a minimum, weekly inspections of the bracing until all the diaphragms and cross frames are in place. For structures with temporary supports, perform daily inspections until the temporary supports are no longer needed as indicated in the erection plans. Submit written documentation of the inspections to the Director within 24 hours of the inspection.

**5-1.6 Corrections for Construction Errors:** For work that the Contractor constructs incorrectly or does not meet the requirements of the Contract Documents, the Contractor has the prerogative to submit an acceptance proposal to the Director for review and disposition. The acceptance proposal shall describe the error or defect and either describe remedial action for its correction or propose a method for its acceptance. In either case, the acceptance proposal shall address structural integrity, aesthetics, maintainability, and the effect on Contract Time. The County will judge any such proposal for its effect on these criteria and also for its effect on Contract Administration.



When the Director judges that a proposal infringes on the structural integrity or maintainability of the structure, the Contractor's Engineer of Record will perform a technical assessment and submit it to the Director for approval. Do not take any corrective action without the Director's written approval.

Carry out all approved corrective construction measures at no expense to the County.

Notwithstanding any disposition of the compensation aspects of the defective work, the Director's decision on the technical merits of a proposal is final.

## **5-2 Coordination of Contract Documents.**

These Specifications, the Plans, Special Provisions, and all supplementary documents are integral parts of the Contract Documents; a requirement occurring in one is as binding as though occurring in all. All parts of the Contract Documents are complementary and describe and provide for a complete work. In addition to the work and materials specified in the Specifications as being included in any specific pay item, include in such pay items additional, incidental work, not specifically mentioned, when so shown in the Plans, or if indicated, or obvious and apparent, as being necessary for the proper completion of the work under such pay item and not stipulated as being covered under other pay items.

In cases of discrepancy, the governing order of the documents is as follows:

1. Special Provisions.
  2. Technical Special Provisions.
  3. Plans.
  4. Standard Plans.
  5. Developmental Specifications.
  6. Supplemental Specifications.
  7. Standard Specifications.
- Computed dimensions govern over scaled dimensions.

## **5-3 Conformity of Work with Contract Documents.**

Perform all work and furnish all materials in reasonably close conformity with the lines, grades, cross-sections, dimensions, and material requirements, including tolerances, as specified in the Contract Documents.

In the event that the Director finds that the Contractor has used material or produced a finished product that is not in reasonably close conformity with the Contract Documents, but that the Contractor has produced reasonably acceptable work, the Director will determine if the County will accept the work in place. In this event, the Director will document the basis of acceptance by Contract modification, which provides for an appropriate reduction in the Contract price for such work or materials included in the accepted work as deemed necessary to conform to the determination based on engineering judgment.

In the event that the Director finds that the Contractor has used material or produced a finished product that is not in reasonably close conformity with the Contract Documents, and that the Contractor has produced an inferior or unsatisfactory product, the Contractor shall remove and replace or otherwise correct the work or materials at no expense to the County.

For base and surface courses, the County will allow the finished grade to vary as much as 0.1 foot from the grade shown in the Plans, provided that the Contractor's work meets all templates and straightedge requirements and contains suitable transitions.

#### **5-4 Errors or Omissions in Contract Documents.**

Do not take advantage of any apparent error or omission discovered in the Contract Documents, but immediately notify the Director in writing of such discovery. The Director will then make such corrections and interpretations as necessary to reflect the actual spirit and intent of the Contract Documents.

#### **5-5 Authority of the Director.**

Perform all work to the satisfaction of the Director.

The Director will decide all questions, difficulties, and disputes, of whatever nature, that may arise relative to the interpretation of the Plans, construction, prosecution, and fulfillment of the Contract, and as to the character, quality, amount, and value of any work done, and materials furnished, under or by reason of the Contract.

#### **5-6 Authority and Duties of Director's Assistants.**

The Director may appoint such assistants and representatives as desired. These assistants and representatives are authorized to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the manufacture, preparation, or fabrication of the materials to be used. Such assistants and representatives are not authorized to revoke, alter, or waive any requirement of these Specifications. Rather, they are authorized to call to the attention of the Contractor any failure of the work or materials to meet the Contract Documents, and have the authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the Director. The Director will immediately submit written notification to the Contractor of any such suspension of the work, stating in detail the reasons for the suspension. The presence of the inspector or other assistant in no way lessens the responsibility of the Contractor.

#### **5-7 Engineering and Layout.**

**5-7.1 Control Points Furnished by the County:** The Director will provide control points at various locations along the project alignment (Begin Project, End Project, PIs, PTs, etc.) and bench marks along the line of the project to facilitate the proper layout of the work. Control points and bench marks provided by the engineer, if any, will be indicated in the Plans. Preserve all control points and bench marks that the County furnishes. Any points carelessly or willfully disturbed or destroyed shall be reset at the sole expense of the Contractor.

As an exception to the above, for projects where the Plans do not show a centerline or other survey control line for construction of the work (e.g., resurfacing, safety modifications, etc.) the Director may provide only points marking the beginning and ending of the project, and all exceptions.

Prior to commencing the work, the Contractor shall perform a quality control check of all horizontal and vertical control points provided by the County and carefully compare all lines depicted in the plans with existing lines and levels, and shall call any discrepancies to the attention of the Director for resolution. Upon resolution of any discrepancies, the Contractor shall submit a letter to the County accepting the control points and bench marks for use. In any event, the Contractor shall be responsible for the accuracy of the Work and shall make good any work performed in error, at no cost to the County. All construction surveying and layout work to be provided herein shall be coordinated with and subject to the approval of the Director.

**5-7.1.1 Third Party Survey Monumentation:** The Contractor is responsible for the protection and preservation of any third party survey monumentation (National Geodetic Survey

points, property corners, etc.) located within the project limits. Any points carelessly or willfully disturbed or destroyed shall be reset at the sole expense of the Contractor. Any third party survey monumentation designated by the Director to be removed and re-established will be paid for at the unit prices set forth in the Contract, or if no such item exists in accordance with Section 4-3.2.1.

**5-7.2 Furnishing of Stake Materials:** Furnish all stakes, templates, and other materials necessary for establishing and maintaining the lines and grades necessary for control and construction of the work.

**5-7.3 Layout of Work:** Utilizing the control points and bench marks furnished by the County and accepted by the Contractor in accordance with 5-7.1, establish all horizontal and vertical controls necessary to construct the work in conformity to the Contract Documents. Perform all calculations required, and set all stakes needed such as grade stakes, offset stakes, reference point stakes, slope stakes, and other reference marks or points necessary to provide lines and grades for construction of all roadway, bridge, and miscellaneous items.

When performing utility construction as part of the project, establish all horizontal and vertical controls necessary to carry out such work.

**5-7.4 Specific Staking Requirements:** When performing new base construction as part of the project, set stakes to establish lines and grades for subgrade, base, curb, and related items at intervals along the line of the work. If Automated Machine Guidance is utilized, set stakes as needed. If Automated Machine Guidance is not utilized, set stakes no greater than 50 feet on tangents and 25 feet on curves. Set grade stakes at locations that the Director directs to facilitate checking of subgrade, base, and pavement elevations in crossovers, intersections, and irregular shaped areas.

For bridge construction stakes and other control, set references at sufficiently frequent intervals to ensure construction of all components of a structure in accordance with the lines and grades shown in the Plans.

For projects where the Plans do not show a centerline or other survey control line for construction of the work (resurfacing, safety modifications, etc.), provide only such stakes as necessary for horizontal and vertical control of work items.

For resurfacing and resurfacing-widening type projects, establish horizontal controls adequate to ensure that the asphalt mix added matches with the existing pavement. In tangent sections, set horizontal control points at 100 foot intervals by an instrument survey. In curve sections, set horizontal control points at 25 foot intervals by locating and referencing the centerline of the existing pavement. Alternate intervals may be used on resurfacing projects with prior written approval of the Director.

Establish by an instrument survey, and mark on the surface of the finished pavement at 25 foot intervals, the points necessary for striping of the finished roadway. As an exception, for resurfacing and resurfacing/widening projects, establish these points in the same manner as used for horizontal control of paving operations. Mark the pavement with white paint. If performing striping, the Director may approve an alternate method for layout of striping provided that the Contractor achieves an alignment equal to or better than the alignment that would be achieved using an instrument survey.

For projects that include temporary or permanent striping of “no passing zones”, provide the location and length of these zones as shown in the Plans, except projects where the vertical or horizontal alignment is new or altered from preconstruction alignment. For projects that consist of new or altered vertical or horizontal alignment, the County will provide the

location and length of the "no passing zones" during construction. For these projects, submit written notification to the Director not less than 21 calendar days prior to beginning striping.

For all projects, set a station identification stake at each right-of-way line at 100 foot intervals and at all locations where a change in right-of-way width occurs, or as otherwise approved by the Director. Mark each of these stakes with painted numerals, of a size readable from the roadway, corresponding to the project station at which it is located. As an exception to the above, for projects where Plans do not show right-of-way lines, set station identification stakes at locations and intervals appropriate to the type of work being done. For resurfacing and resurfacing/widening projects, set station identification stakes at 200 foot intervals, or as otherwise approved by the Director.

**5-7.4.1 As-Built Drawings and Certified Surveys:** The Contractor shall maintain one record copy of all specifications, plans, addenda, and shop drawings on site and in good order, annotated in red to depict all changes made during construction and exact location of underground or otherwise concealed components of the project, and any modifications to material types from that specified in the bid plans and specifications ("red line documents"). All subsurface improvements shall be as-built prior to backfilling. As-built red line plans shall be maintained on 11-inch by 17-inch prints and red line annotations shall be completed in a neat draftsman-like manner.

As-built red lines shall include both authorized and unauthorized changes to all project features, including but not limited to: horizontal pavement dimensions; finished pavement grades; finish dimensions, elevations, and alignment of all storm sewer, drainage structures, ponds, water main, sanitary sewer, force main, service lines, conduit, wiring, traffic loops, and signal interconnects; signal poles; light poles; and signs.

Demonstrating proper maintenance of as-built drawings shall be a precedent to each progress payment. The Contractor shall make available to Director, at any time requested, as-built information through the date of the request. If the Director determines the as-built information is inaccurate, inadequate, or untimely payment may be withheld until such time that the Contractor cures any noted deficiencies.

Upon completion of all work, but prior to authorization of final payment, the Contractor shall deliver to the Director one complete set as-built red line documents and certified surveys providing verification of all as-built dimensions and grades for review and approval. The certified survey shall include, but not be limited to:

1. Level Circuit: the survey shall include a final bench mark level circuit indicating the accuracy of vertical closure.
2. Control structure bench marks: the Contractor shall establish and document the location and elevation of bench marks on or within 100-feet of each control structure constructed or modified as part of the project. Each control structure bench mark elevation shall be clearly and permanently indicated on the bench mark.
3. Cross-sections: as-built finished cross-sections shall be performed at intervals not exceeding 100 feet, extending from right-of-way to right-of-way, but also including temporary or permanent easements as may be applicable. Cross sections shall include all elevation break points, and shall include edge of pavement and centerlines for all pavements.

4. Discharge structures: structure identification number, type, locations (latitude and longitude), dimensions, and elevations of all, including weirs, bleeders, orifices, gates, pumps, pipes, and oil and grease skimmers.
5. Side bank and underdrain filters, or exfiltration trenches: locations, dimensions and elevations of all, including clean-outs, pipes, connections to control structures and points of discharge to receiving waters.
6. Storage areas for treatment and attenuation: storage area identification number, dimensions, elevations, contours, or cross-sections of all, sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems.
7. System grading: dimensions, elevations, contours, and final grades or cross-sections to determine contributing drainage areas, flow directions, and conveyance of runoff to the system discharge points.
8. Conveyance: dimensions, elevations, contours, final grades or cross-sections of systems utilized to divert off-site runoff around or through the new system.
9. Water levels: existing water elevations and the date recorded.
10. South Florida Water Management District (SFWMD): as-built surveys shall conform to any additional requirements and special conditions listed in the SFWMD's Environmental Resource Permit and any applicable local permit(s).
11. Bridge clearances: for projects under the authority of a U.S. Coast Guard bridge permit, as-built clearances as described in the U.S. Coast Guard Owner's Certification of Bridge Completion. For bridges spanning roadways, provide a full as-built clearance envelope across the full width of the lower roadway(s).
12. Projects under the authority of a U.S. Army Corps of Engineers permit: as-built surveys shall satisfy all of the requirements and special conditions listed in the U.S. Army Corps of Engineers permit.

All as-built survey information shall be signed and sealed by a licensed Professional Surveyor and Mapper duly registered in the State of Florida. No direct payment will be made for the cost of preparing, maintaining, and furnishing as-built plans and surveys as specified in this Article, the costs thereof shall be included in other items of work.

**5-7.5 Personnel, Equipment, and Record Requirements:** Employ only competent personnel and use only suitable equipment in performing layout work. Do not engage the services of any person or persons in the employ of the County for performance of layout work. All construction surveying and layout work, including dimensions and elevations associated with as-builts, shall be completed under the responsible charge of a licensed Professional Surveyor and Mapper duly registered in the State of Florida.

Keep adequate field notes and records while performing as layout work. Make these field notes and records available for the Director's review as the work progresses, and

submit to the Director at the time of completion of the project. The Director's inspection, checking, or acceptance of the Contractor's field notes or layout work does not relieve the Contractor of his responsibility to achieve the lines, grades, and dimensions shown in the Contract Documents.

Prior to final acceptance of the project, mark, in a permanent manner on the surface of the completed work, all horizontal control points originally furnished by the County.

**5-7.6 Global Navigation Satellite Systems (GNSS) Work Plan:** If used, submit a comprehensive written GNSS Work Plan to the Director for County review and acceptance at the preconstruction conference or at least 30 days before starting work using GNSS. Update the plan as necessary during construction and notify the County of all changes. The GNSS Work Plan shall describe how GNSS enabled Automated Machine Guidance technology will be integrated into other technologies employed on the project. At a minimum, the GNSS Work Plan will include the following:

1. Designate which portions of the Contract will be done using GNSS enabled Automated Machine Guidance and which portions will be constructed using conventional survey methodology.

2. Describe the manufacturer, model, and software version of the GNSS equipment.

3. Provide information on the qualifications of Contractor staff. Include formal training and field experience. Designate a single staff person as the primary contact for GNSS technology issues.

4. Describe how project control will be established. Include a list and map showing control points enveloping the site.

5. Describe site calibration procedures. Include a map of the control points used for site calibration and control points used to validate the site calibration. Describe the frequency of site calibration and how site calibration will be documented. At a minimum, verify the site calibration twice daily.

6. Describe the Contractor's quality control procedures for verifying mechanical calibration and maintenance of construction and guidance equipment. Include the frequency and type of verification performed to ensure the constructed grades conform to the Contract Documents.

Keep on site and provide upon request, a copy of the project's most up-to-date GNSS Work Plan at the project site.

**5-7.7 Payment:** Include the cost of performing layout work as described above in the Contract unit prices for the various items of work that require layout.

## **5-8 Contractor's Supervision.**

**5-8.1 Prosecution of Work:** Give the work the constant attention necessary to ensure the scheduled progress, and cooperate fully with the Director and with other contractors at work in the vicinity.

**5-8.2 Contractor's Superintendent:** Maintain a competent superintendent at the site at all times while work is in progress to act as the Contractor's agent. Provide a superintendent who is a competent superintendent capable of properly interpreting the Contract Documents and is thoroughly experienced in the type of work being performed. Provide a superintendent with the full authority to receive instructions from the Director and to execute the orders or directions of the Director, including promptly supplying any materials, tools, equipment, labor, and

incidentals that may be required. Provide such superintendence regardless of the amount of work sublet.

Provide a superintendent who speaks and understands English, and maintain at least one other responsible person who speaks and understands English, on the project during all working hours.

**5-8.3 Supervision for Emergencies:** Provide a responsible person, who speaks and understands English, and who is available at or reasonably near the worksite on a 24 hour basis, seven days a week. Designate this person as the point of contact for emergencies and in cases that require immediate action to maintain traffic or to resolve any other problem that might arise. Submit the phone numbers and names of personnel designated to be contacted in cases of emergencies, along with a description of the project location, to the Florida Highway Patrol and all other local law enforcement agencies.

## **5-9 General Inspection Requirements.**

**5-9.1 Cooperation by Contractor:** Do not perform work or furnish materials without obtaining inspection by the Director. Provide the Director with safe means of access to the work, so the Director can determine whether the work performed and materials used are in accordance with the requirements and intent of the Contract Documents. If the Director so requests at any time before final acceptance of the work, remove or uncover such portions of the finished work as directed. After examination, restore the uncovered portions of the work to the standard required by the Contract Documents. If the Director determines that the work so exposed or examined is unacceptable, perform the uncovering or removal, and the replacing of the covering or making good of the parts removed, at no expense to the County. However, if the Director determines that the work thus exposed or examined is acceptable, the County will pay for the uncovering or removing, and the replacing of the covering or making good of the parts removed in accordance with Section 4-4.

**5-9.2 Failure of Director to Reject Work During Construction:** If, during or prior to construction operations, the Director fails to reject defective work or materials, whether from lack of discovery of such defect or for any other reason, such initial failure to reject in no way prevents the later rejection when such defect is discovered, or obligates the County to final acceptance. The County is not responsible for losses suffered due to any necessary removals or repairs of such defects.

**5-9.3 Failure to Remove and Renew Defective Materials and Work:** If the Contractor fails or refuses to remove and renew any defective materials used or work performed, or to make any necessary repairs in an acceptable manner and in accordance with the requirements of the Contract within the time indicated in writing, the Director has the authority to repair, remove, or renew the unacceptable or defective materials or work as necessary, all at the Contractor's expense. The County will obtain payment for any expense it incurs in making these repairs, removals, or renewals, that the Contractor fails or refuses to make, by deducting such expenses from any moneys due or which may become due the Contractor, or by charging such amounts against the Contract bond.

**5-9.4 Inspection by Federal Government:** When the United States Government or the State of Florida pays a portion of the cost of construction, its representatives may inspect the construction work as they deem necessary. However, such inspection will in no way make the Federal Government or the State of Florida a party to the Contract.

## **5-10 Final Inspection.**

**5-10.1 Maintenance until Acceptance:** Maintain all Work until the Director has given final acceptance in accordance with 5-11.

**5-10.2 Inspection for Acceptance:** Upon submittal of written notification that all Contract Work, or all Contract Work on the portion of the Contract scheduled for acceptance, has been completed, the Director will make an inspection for acceptance. The inspection will be made within seven days of such notification. If the Director finds that all work has been satisfactorily completed, the County will consider such inspection as the final inspection. If any or all of the Work is found to be unsatisfactory, the Director will detail the remedial work required to achieve acceptance. Immediately perform such remedial work. Subsequent inspections will be made on the remedial work until the Director accepts all Work.

Upon satisfactory completion of the Work, the County will submit written notice of acceptance, either partial or final, to the Contractor.

Until final acceptance in accordance with 5-11, replace or repair any damage to the accepted Work. Payment of such work will be as provided in 7-14.

**5-10.3 Partial Acceptance:** At the Director's sole discretion, the Director may accept any portion of the Work under the provisions of 5-10.2.

**5-10.4 Conditional Acceptance:** The Director will not make, or consider requests for conditional acceptance of a project.

## **5-11 Final Acceptance.**

When, upon completion of the final construction inspection of the entire project, the Director determines that the Contractor has satisfactorily completed the work, the Director will submit written notice of final acceptance to the Contractor.

## **5-12 Claims by Contractor.**

**5-12.1 General:** When the Contractor deems that extra compensation or a time extension is due beyond that agreed to by the Director, whether due to delay, additional work, altered work, differing site conditions, breach of Contract, or for any other cause, the Contractor shall follow the procedures set forth herein for preservation, presentation and resolution of the claim.

Submission of timely notice of intent to file a claim, preliminary time extension request, time extension request, and the certified written claim, together with full and complete claim documentation, are each a condition precedent to the Contractor bringing any circuit court, arbitration, or other formal claims resolution proceeding against the County for the items and for the sums or time set forth in the Contractor's certified written claim. The failure to provide such notice of intent, preliminary time extension request, time extension request, certified written claim and full and complete claim documentation within the time required shall constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to additional compensation or a time extension for such claim.

### **5-12.2 Notice of Claim:**

**5-12.2.1 Claims For Extra Work:** Where the Contractor deems that additional compensation or a time extension is due for work or materials not expressly provided for in the Contract or which is by written directive expressly ordered by the Director pursuant to 4-3, the Contractor shall submit written notification to the Director of the intention to make a claim for additional compensation before beginning the work on which the claim is based, and if seeking a time extension, the Contractor shall also submit a preliminary request for time extension pursuant to 8-7.3.2 within ten calendar days after commencement of a delay and a request for



Contract Time extension pursuant to 8-7.3.2 within thirty calendar days after the elimination of the delay. If such written notification is not submitted and the Director is not afforded the opportunity for keeping strict account of actual labor, material, equipment, and time, the Contractor waives the claim for additional compensation or a time extension. Such notice by the Contractor, and the fact that the Director has kept account of the labor, materials and equipment, and time, shall not in any way be construed as establishing the validity of the claim or method for computing any compensation or time extension for such claim. On projects with an original Contract amount of \$3,000,000 or less within 90 calendar days after final acceptance of the project in accordance with 5-11, and on projects with an original Contract amount greater than \$3,000,000 within 180 calendar days after final acceptance of the project in accordance with 5-11, the Contractor shall submit full and complete claim documentation as described in 5-12.3 and duly certified pursuant to 5-12.9. However, for any claim or part of a claim that pertains solely to final estimate quantities disputes the Contractor shall submit full and complete claim documentation as described in 5-12.3 and duly certified pursuant to 5-12.9, as to such final estimate claim dispute issues, within 90 or 180 calendar days, respectively, of the Contractor's receipt of the County's final estimate.

If the Contractor fails to submit a certificate of claim as described in 5-12.9, the County will so notify the Contractor in writing. The Contractor shall have ten calendar days from receipt of the notice to resubmit the claim documentation, without change, with a certificate of claim as described in 5-12.9, without regard to whether the resubmission is within the applicable 90 or 180 calendar day deadline for submission of full and complete claim documentation. Failure by the Contractor to comply with the ten calendar day notice shall constitute a waiver of the claim.

**5-12.2.2 Claims For Delay:** Where the Contractor deems that additional compensation or a time extension is due on account of delay, differing site conditions, breach of Contract, or any other cause other than for work or materials not expressly provided for in the Contract (Extra Work) or which is by written directive of the Director expressly ordered by the Director pursuant to 4-3, the Contractor shall submit a written notice of intent to the Director within ten days after commencement of a delay to a controlling work item expressly notifying the Director that the Contractor intends to seek additional compensation, and if seeking a time extension, the Contractor shall also submit a preliminary request for time extension pursuant to 8-7.3.2 within ten calendar days after commencement of a delay to a controlling work item, as to such delay and providing a reasonably complete description as to the cause and nature of the delay and the possible impacts to the Contractor's work by such delay, and a request for Contract Time extension pursuant to 8-7.3.2 within thirty calendar days after the elimination of the delay. On projects with an original Contract amount of \$3,000,000 or less within 90 calendar days after final acceptance of the project in accordance with 5-11, and on projects with an original Contract amount greater than \$3,000,000 within 180 calendar days after final acceptance of the project in accordance with 5-11, the Contractor shall submit full and complete documentation as described in 5-12.3 and duly certified pursuant to 5-12.9.

If the Contractor fails to submit a certificate of claim as described in 5-12.9, the County will so notify the Contractor in writing. The Contractor shall have ten calendar days from receipt of the notice to resubmit the claim documentation, without change, with a certificate of claim as described in 5-12.9, without regard to whether the resubmission is within the applicable 90 or 180 calendar day deadline for submission of full and complete claim

documentation. Failure by the Contractor to comply with the ten calendar day notice shall constitute a waiver of the claim.

There shall be no Contractor entitlement to any monetary compensation or time extension for any delays or delay impacts, whatsoever, that are not to a controlling work item, and then as to any such delay to a controlling work item entitlement to any monetary compensation or time extension shall only be to the extent such is otherwise provided for expressly under 4-3 or 5-12, except that in the instance of delay to a non-controlling item of work the Contractor may be compensated for the direct costs of idle labor or equipment only, at the rates set forth in 4-3.2.1(1) and (3), and then only to the extent the Contractor could not reasonably mitigate such idleness.

**5-12.3 Content of Written Claim:** As a condition precedent to the Contractor being entitled to additional compensation or a time extension under the Contract, for any claim, the Contractor shall submit a certified written claim to the County which will include for each individual claim, at a minimum, the following information:

1. A detailed factual statement of the claim providing all necessary dates, locations, and items of work affected and included in each claim;
2. The date or dates on which actions resulting in the claim occurred or conditions resulting in the claim became evident;
3. Identification of all pertinent documents and the substance of any material oral communications relating to such claim and the name of the persons making such material oral communications;
4. Identification of the provisions of the Contract which support the claim and a statement of the reasons why such provisions support the claim, or alternatively, the provisions of the Contract which allegedly have been breached and the actions constituting such breach;
5. A detailed compilation of the amount of additional compensation sought and a breakdown of the amount sought as follows:
  - a. documented additional job site labor expenses;
  - b. documented additional cost of materials and supplies;
  - c. a list of additional equipment costs claimed, including each piece of equipment and the rental rate claimed for each;
  - d. any other additional direct costs or damages and the documents in support thereof;
  - e. any additional indirect costs or damages and all documentation in support thereof.
6. A detailed compilation of the specific dates and the exact number of calendar days sought for a time extension, the basis for entitlement to time for each day, all documentation of the delay, and a breakout of the number of days claimed for each identified event, circumstance or occurrence.

Further, the Contractor shall be prohibited from amending either the bases of entitlement or the amount of any compensation or time stated for any and all issues claimed in the Contractor's written claim submitted hereunder, and any circuit court, arbitration, or other formal claims resolution proceeding shall be limited solely to the bases of entitlement and the amount of any compensation or time stated for any and all issues claimed in the Contractor's written claim submitted hereunder. This shall not, however, preclude a Contractor from withdrawing or reducing any of the bases of entitlement and the amount of any compensation or

time stated for any and all issues claimed in the Contractor's written claim submitted hereunder at any time.

**5-12.4 Action on Claim:** The Director will respond in writing on projects with an original Contract amount of \$3,000,000 or less within 90 calendar days of receipt of a complete claim submitted by a Contractor in compliance with 5-12.3, and on projects with an original Contract amount greater than \$3,000,000 within 120 calendar days of receipt of a complete claim submitted by a Contractor in compliance with 5-12.3. Failure by the Director to respond to a claim in writing within 90 or 120 days, respectively, after receipt of a complete claim submitted by the Contractor in compliance with 5-12.3 constitutes a denial of the claim by the Director. If the Director finds the claim or any part thereof to be valid, such partial or whole claim will be allowed and paid for to the extent deemed valid and any time extension granted, if applicable, as provided in the Contract. No circuit court proceedings on any claim, or a part thereof, may be filed until after final acceptance per 5-11 of all Contract work by the County or denial hereunder, whichever occurs last.

**5-12.5 Pre-Settlement and Pre-Judgment Interest:** Entitlement to any pre-settlement or pre-judgment interest on any claim amount determined to be valid subsequent to the County's receipt of a certified written claim in full compliance with 5-12.3, whether determined by a settlement or a final ruling in formal proceedings, the County shall pay to the Contractor simple interest calculated at the Prime Rate (as reported by the Wall Street Journal as the base rate on corporate loans posted by at least 75% of the nations 30 largest banks) as of the 60th calendar day following the County's receipt of a certified written claim in full compliance with 5-12.3, such interest to accrue beginning 60 calendar days following the County's receipt of a certified written claim in full compliance with 5-12.3 and ending on the date of final settlement or formal ruling.

**5-12.6 Compensation for Extra Work or Delay:**

**5-12.6.1 Compensation for Extra Work:** Notwithstanding anything to the contrary contained in the Contract Documents, the Contractor shall not be entitled to any compensation beyond that provided for in 4-3.2.

**5-12.6.2 Compensation for Delay:** Notwithstanding anything to the contrary contained in the Contract Documents, the additional compensation set forth in 5-12.6.2.1 shall be the Contractor's sole monetary remedy for any delay other than to perform extra work caused by the County unless the delay shall have been caused by acts constituting willful or intentional interference by the County with the Contractor's performance of the work and then only where such acts continue after Contractor's written notice to the County of such interference. The parties anticipate that delays may be caused by or arise from any number of events during the term of the Contract, including, but not limited to, work performed, work deleted, supplemental agreements, work orders, disruptions, differing site conditions, utility conflicts, design changes or defects, time extensions, extra work, right-of-way issues, permitting issues, actions of suppliers, subcontractors or other contractors, actions by third parties, suspensions of work by the Director pursuant to 8-6.1, shop drawing approval process delays, expansion of the physical limits of the project to make it functional, weather, weekends, holidays, special events, suspension of Contract Time, or other events, forces or factors sometimes experienced in construction work. Such delays or events and their potential impacts on the performance by the Contractor are specifically contemplated and acknowledged by the parties in entering into this Contract, and shall not be deemed to constitute willful or intentional interference with the Contractor's performance of the work without clear and convincing proof that they were the

result of a deliberate act, without reasonable and good-faith basis, and specifically intended to disrupt the Contractor's performance.

**5-12.6.2.1 Compensation for Direct Costs, Indirect Costs, Expenses, and Profit thereon, of or from Delay:** For any delay claim, the Contractor shall be entitled to monetary compensation for the actual idle labor and equipment, and indirect costs, expenses, and profit thereon, as provided for in 4-3.2.1(4) and solely for costs incurred beyond what reasonable mitigation thereof the Contractor could have undertaken.

**5-12.7 Mandatory Claim Records:** After submitting to the Director a notice of intent to file a claim for extra work or delay, the Contractor must keep daily records of all labor, material and equipment costs incurred for operations affected by the extra work or delay. These daily records must identify each operation affected by the extra work or delay and the specific locations where work is affected by the extra work or delay, as nearly as possible. The Director may also keep records of all labor, material and equipment used on the operations affected by the extra work or delay. The Contractor shall, once a notice of intent to claim has been timely filed, and not less than weekly thereafter as long as appropriate, submit the Contractor's daily records to the Director and be likewise entitled to receive the County's daily records. The daily records to be submitted hereunder shall be done at no cost to the recipient.

**5-12.8 Claims For Acceleration:** The County shall have no liability for any constructive acceleration of the work, nor shall the Contractor have any right to make any claim for constructive acceleration nor include the same as an element of any claim the Contractor may otherwise submit under this Contract. If the Director gives express written direction for the Contractor to accelerate its efforts, such written direction will set forth the prices and other pertinent information and will be reduced to a written Contract Document promptly. No payment will be made on a Supplemental Agreement for acceleration prior to the County's approval of the documents.

**5-12.9 Certificate of Claim:** When submitting any claim, the Contractor shall certify under oath and in writing, in accordance with the formalities required by Florida law, that the claim is made in good faith, that the supportive data are accurate and complete to the Contractor's best knowledge and belief, and that the amount of the claim accurately reflects what the Contractor in good faith believes to be the County's liability. Such certification must be made by an officer or director of the Contractor with the authority to bind the Contractor.

**5-12.10 Non-Recoverable Items:** The parties agree that for any claim the County will not have liability for the following items of damages or expense:

1. Loss of profit, incentives or bonuses;
2. Any claim for other than extra work or delay;
3. Consequential damages, including, but not limited to, loss of bonding capacity, loss of bidding opportunities, loss of credit standing, cost of financing, interest paid, loss of other work or insolvency;
4. Acceleration costs and expenses, except where the County has expressly and specifically directed the Contractor in writing "to accelerate at the County's expense"; nor
5. Attorney fees, claims preparation expenses and costs of litigation.

**5-12.11 Exclusive Remedies:** Notwithstanding any other provision of this Contract, the parties agree that the County shall have no liability to the Contractor for expenses, costs, or items of damages other than those which are specifically identified as payable under 5-12. In the event any legal action for additional compensation, whether on account of delay, acceleration, breach

of contract, or otherwise, the Contractor agrees that the County's liability will be limited to those items which are specifically identified as payable in 5-12.

**5-12.12 Settlement Discussions:** The content of any discussions or meetings held between the County and the Contractor to settle or resolve any claims submitted by the Contractor against the County shall be inadmissible in any legal, equitable, or administrative proceedings brought by the Contractor against the County for payment of such claim.

**5-12.13 Personal Liability of Public Officials:** In carrying out any of the provisions of the Contract, Director or any of their respective employees or agents, there shall be no liability on behalf of any employee, officer or official of the County for which such individual is responsible, either personally or as officials or representatives of the County. It is understood that in all such matters such individuals act solely as agents and representatives of the County.

**5-12.14 Auditing of Claims:** All claims filed against the County shall be subject to audit at any time following the filing of the claim, whether or not such claim is part of a suit pending in the Courts of this State. The audit may be performed, at the County's sole discretion, by employees of the County or by any independent auditor appointed by the County, or both. The audit may begin after ten days written notice to the Contractor, subcontractor, or supplier. The Contractor, subcontractor, or supplier shall make a good faith effort to cooperate with the auditors. As a condition precedent to recovery on any claim, the Contractor, subcontractor, or supplier must retain sufficient records, and provide full and reasonable access to such records, to allow the County's auditors to verify the claim and failure to retain sufficient records of the claim or failure to provide full and reasonable access to such records shall constitute a waiver of that portion of such claim that cannot be verified and shall bar recovery thereunder. Further, and in addition to such audit access, upon the Contractor submitting a written claim, the County shall have the right to request and receive, and the Contractor shall have the affirmative obligation to submit to the County any and all documents in the possession of the Contractor or its subcontractors, materialmen or suppliers as may be deemed relevant by the County in its review of the basis, validity or value of the Contractor's claim.

Without limiting the generality of the foregoing, the Contractor shall upon written request of the County make available to the County's auditors, or upon the County's written request, submit at the County's expense, any or all of the following documents:

1. Daily time sheets and foreman's daily reports and diaries;
2. Insurance, welfare and benefits records;
3. Payroll register;
4. Earnings records;
5. Payroll tax return;
6. Material invoices, purchase orders, and all material and supply acquisition contracts;
7. Material cost distribution worksheet;
8. Equipment records (list of company owned, rented or other equipment used);
9. Vendor rental agreements and subcontractor invoices;
10. Subcontractor payment certificates;
11. Canceled checks for the project, including, payroll and vendors;
12. Job cost report;
13. Job payroll ledger;

14. General ledger, general journal, (if used) and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals;

15. Cash disbursements journal;

16. Financial statements for all years reflecting the operations on this project;

17. Income tax returns for all years reflecting the operations on this project;

18. All documents which reflect the Contractor's actual profit and overhead during the years this Contract was being performed and for each of the five years prior to the commencement of this Contract;

19. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based;

20. All documents which relate to each and every claim together with all documents which support the amount of damages as to each claim;

21. Worksheets used to prepare the claim establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, and all documents that establish which time periods and individuals were involved, and the hours and rates for such individuals.

#### **5-13 Recovery Rights, Subsequent to Final Payment.**

The County reserves the right, if it discovers an error in the partial or final estimates, or if it discovers that the Contractor performed defective work or used defective materials, after the final payment has been made, to claim and recover from the Contractor or his surety, or both, by process of law, such sums as may be sufficient to correct the error or make good the defects in the work and materials.

## SECTION 6 CONTROL OF MATERIALS

### **6-1 Acceptance Criteria.**

**6-1.1 General:** Acceptance of materials is based on the following criteria. All requirements may not apply to all materials. Use only materials in the work that meet the requirements of these Specifications. The Director may inspect and test any material, at points of production, distribution and use.

**6-1.2 Sampling and Testing:** Use the FDOT's current sample identification and tracking system to provide related information and attach the information to each sample. Restore immediately any site from which material has been removed for sampling purposes to the pre-sampled condition with materials and construction methods used in the initial construction, at no additional cost to the County.

Ensure when a material is delivered to the location as described in the Contract Documents, there is enough material delivered to take samples, at no expense to the County.

**6-1.2.1 Pretest by Manufacturers:** Submit certified manufacturer's test results to the Director for qualification and use on County projects. Testing will be as specified in the Contract Documents. The County may require that manufacturers submit samples of materials for independent verification purposes.

**6-1.2.2 Point of Production Test:** Test the material during production as specified in the Contract Documents.

**6-1.2.3 Point of Distribution Test:** Test the material at Distribution facilities as specified in the Contract Documents.

**6-1.2.4 Point of Use Test:** Test the material immediately following placement as specified in the Specifications. After delivery to the project, the County may require the retesting of materials that have been tested and accepted at the source of supply, or may require the testing of materials that are to be accepted by manufacturer certification. The County may reject all materials that, when retested, do not meet the requirements of these Specifications.

### **6-1.3 Certification:**

**6-1.3.1 Manufacturer Material Certification:** Submit material certifications for all materials to the Director for approval when required by the Specifications. Materials will not be considered for payment when not accompanied by a material certification. Sample material certification forms are available on FDOT's website at the following URL: <https://www.fdot.gov/materials/administration/resources/library/publications/certifications/sampleforms.shtm>. Ensure that the material certification follows the format of the sample form, is submitted on the manufacturer's letterhead and is signed by a legally responsible person employed by the manufacturer.

**6-1.3.1.1 FDOT Approved Product List:** The FDOT Approved Products List (APL) is a database that provides assurance to Contractors, consultants, designers, and County personnel that specific products and materials are approved for use on County facilities. The County will limit the Contractor's use of products and materials that require use of APL items to those listed on the FDOT APL effective at the time of placement. Where the terms Qualified Products List (QPL) appear in the Contract Documents, they will be synonymous with Approved Product List (APL).

Manufacturers seeking to have a product evaluated for the FDOT APL must do so through coordination with FDOT. Information on the process may be obtained

on the FDOT website at the following URL:  
<https://www.fdot.gov/programmanagement/ProductEvaluation/Default.shtm>

**6-1.3.2 Contractor Installation Certification:** Submit installation certifications as required by the Contract Documents.

## **6-2 Applicable Documented Authorities Other Than Specifications.**

**6-2.1 General:** Details on individual materials are identified in various material specific Sections of the Specifications that may refer to other documented authorities for requirements. When specified, meet the requirements as defined in such references.

**6-2.2 Test Methods:** Methods of sampling and testing materials are in accordance with the Florida Methods (FM). If an FM does not exist for a particular test, perform the testing in accordance with the method specified in the Specification. When test methods or other standards are referenced in the Specifications without identification of the specific time of issuance, use the most current issuance, including interims or addendums thereto, at the time of bid opening.

**6-2.3 Construction Aggregates:** Aggregates used on County projects must be in accordance with Rule 14-103, FAC.

## **6-3 Storage of Materials and Samples.**

**6-3.1 Method of Storage:** Store materials in such a manner as to preserve their quality and fitness for the work, to facilitate prompt inspection, and to minimize noise impacts on sensitive receivers. More detailed specifications concerning the storage of specific materials are prescribed under the applicable Specifications. The County may reject improperly stored materials.

**6-3.2 Use of Right-of-Way for Storage:** If the Director allows, the Contractor may use a portion of the right-of-way for storage purposes and for placing the Contractor's plant and equipment. Use only the portion of the right-of-way that is outside the clear zone, which is the portion not required for public vehicular or pedestrian travel. When used, restore the right-of-way to pre-construction condition at no additional cost to the County or as specified in the Contract Documents. Provide any additional space required at no expense to the County.

**6-3.3 Responsibility for Stored Materials:** Accept responsibility for the protection of stored materials. The County is not liable for any loss of materials, by theft or otherwise, or for any damage to the stored materials.

**6-3.4 Storage Facilities for Samples:** Provide facilities for storage of samples as described in the Contract Documents and warranted by the test methods and Specifications.

## **6-4 Defective Materials.**

Materials not meeting the requirements of these Specifications will be considered defective. The Director will reject all such materials, whether in place or not. Remove all rejected material immediately from the site of the work and from storage areas, at no expense to the County.

Do not use material that has been rejected, until the Director has approved the material's use. Upon failure to comply promptly with any order of the Director made under the provisions of this Article, the Director has the authority to have the defective material removed and replaced by other forces and deduct the cost of removal and replacement from any moneys due or to become due the Contractor.

**6-4.1 Engineering Analysis:** As an exception to the above, within 30 calendar days of the termination of the LOT or rejection of the material, the Contractor may submit to the



Director a proposed Engineering Analysis Scope to determine the disposition of the material. The Engineering Analysis Scope must contain at a minimum:

1. Description of the defective materials.
2. Supporting information, testing or inspection reports with nonconformities, pictures, drawings, and accurately dimensioned deficiency maps as necessary. For cracked elements, provide drawings showing the location, average width, depth, length, and termination points of each crack along the surfaces. Provide the distance from each termination point to a fixed reference point on the component, such as beam end or edge of flange.
3. Proposed approach of investigation and analysis.
4. Name and credentials of the proposed Specialty Engineer or Contractor's Engineer of Record who will perform the engineering analysis.
5. Proposed testing laboratories, qualified in accordance with Section 105-7.

Upon approval of the Engineering Analysis Scope by the Director, the Specialty Engineer or Contractor's Engineer of Record may perform the engineering analysis as defined in the approved scope and submit a signed and sealed Engineering Analysis Report (EAR) to the Director. The EAR must contain at a minimum:

1. The approved Engineering Analysis Scope.
2. Any investigations performed and the associated results obtained.
3. Analysis and conclusion.
4. Proposed disposition of the material, addressing the performance and durability of the proposed action.

Provide as appropriate:

1. Written evidence of a previously approved comparable deficiency and its repair.
2. Documented research demonstrating the effectiveness of the proposed repair.
3. Engineering calculations.

A Specialty Engineer, who is an independent consultant, or the Contractor's Engineer of Record as stated within each individual Section shall perform any such analysis within 45 calendar days of the Director's approval of the Engineering Analysis Scope, complete and submit the EAR. The EAR must be signed and sealed by the Specialty Engineer or the Contractor's Engineer of Record that performed the engineering analysis. The Director will determine the final disposition of the material after review of the EAR. No additional monetary compensation or time extension will be granted for the impact of any such analysis or review.

6-5 Products and Source of Supply.

#### **6-5.1 Source of Supply—Convict Labor (Designated Federal-Aid Contracts Only):**

Do not use materials that were produced after July 1, 1991, by convict labor for Federal-aid highway construction projects unless the prison facility has been producing convict-made materials for Federal-aid highway construction projects before July 1, 1987.

Use materials that were produced prior to July 2, 1991, by convicts on Federal-aid highway construction projects free from the restrictions placed on the use of these materials by 23 U.S.C. 114. The County will limit the use of materials produced by convict labor for use in Federal-aid highway construction projects to:

1. Materials produced by convicts on parole, supervised release, or probation from a prison or,

2. Materials produced in a qualified prison facility.

The amount of such materials produced for Federal-aid highway construction during any 12-month period shall not exceed the amount produced in such facility for use in such construction during the 12-month period ending July 1, 1987.

**6-5.2 Source of Supply-Steel (Designated State or Federal-Aid Contracts Only):** Use steel and iron manufactured in the United States, in accordance with the Buy America provisions of 23 CFR 635.410, as amended. Ensure that all manufacturing processes for this material occur in the United States. As used in this specification, a manufacturing process is any process that modifies the chemical content, physical shape or size, or final finish of a product, beginning with the initial melting and continuing through the final shaping and coating. If a steel or iron product is taken outside the United States for any manufacturing process, it becomes foreign source material. When using steel or iron materials as a component of any manufactured product (e.g., concrete pipe, prestressed beams, corrugated steel pipe, etc.), these same provisions apply. Foreign steel and iron may be used when the total actual cost of such foreign materials does not exceed 0.1% of the total Contract amount or \$2,500, whichever is greater. These requirements are applicable to all steel and iron materials incorporated into the finished work, but are not applicable to steel and iron items that the Contractor uses but does not incorporate into the finished work. Submit a certification from the manufacturer of steel or iron, or any product containing steel or iron, stating that all steel or iron furnished or incorporated into the furnished product was produced and manufactured in the United States or a statement that the product was produced within the United States except for minimal quantities of foreign steel and iron valued at \$ (actual cost). Submit each such certification to the Director prior to incorporating the material or product into the project. Prior to the use of foreign steel or iron materials on a project, submit invoices to document the actual cost of such material, and obtain the Director's written approval prior to incorporating the material into the project

**6-5.3 Contaminated, Unfit, Hazardous, and Dangerous Materials:** Do not use any material that, after approval and/or placement, has in any way become unfit for use. Do not use materials containing any substance that has been determined to be hazardous by the State of Florida County of Environmental Protection or the U.S. Environmental Protection Agency (EPA). Provide workplaces free from serious recognized hazards and to comply with occupational safety and health standards, as determined by the U.S. County of Labor Occupational Safety and Health Administration (OSHA).

## SECTION 7 LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC

### **7-1 Laws to be Observed.**

**7-1.1 General:** Become familiar with and comply with all Laws and Regulations, including all Federal, State, and Local Rules and Regulations that control the action or operation of those engaged or employed in the work or that affect material used. Pay particular attention called to the safety regulations promulgated by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). In addition, comply with Chapter 403, of the Florida Statutes, regarding control of air pollution. Direct special attention to that portion of Chapter 62-256, Rules of the Department of Environmental Protection, Florida Administrative Code, pertaining to open burning in land clearing operations. Where work or structures included in the Contract are in “Navigable Waters of the U.S.,” (reference 33 of the Code of Federal Regulations, Part 329); “Waters of the U.S.,” (reference 33 of the Code of Federal Regulations, Parts 323 and 328); or “Waters of the State,” (reference Part 4, Chapters 253 and 373 of the Florida Statutes and Section 62-340 of the Florida Administrative Code); comply with the regulatory provisions of Section 404 of the Federal Clean Water Act of 1977; Sections 9 and 10 of the Federal River and Harbor Act of 1899; Chapter 161 of the Florida Statutes; and any local authority having jurisdiction over such waters.

Obtain certification from the Construction Industry Licensing Board as required by Part I, Chapter 489, of the Florida Statutes, regardless of exemptions allowed by subsection 489.103, prior to removing underground pollutant storage tanks. Dispose of tanks and pollutants in accordance with the requirements and regulations of any Federal, State, or local, agency having jurisdiction.

Prior to building construction or renovation, submit current registrations or certifications issued by the Florida Construction Industry Licensing Board in accordance with Chapter 489, for the appropriate category of construction.

Corporations must be registered with the State of Florida, Department of State, Division of Corporations, and hold a current State Corporate Charter Number in accordance with Chapter 607, Florida Statutes.

The Contractor or the authorized subcontractor applying the roofing material must be licensed or be an approved dealer and applicator of the proposed roofing material.

Indemnify, defend, and save harmless the County and all of its officers, agents, and employees, in the amount of the Contract price, against all claims or liability arising from or based on the violation of any such Federal, State, and Local Rules and Regulations, whether by himself or his employees.

The Contractor shall comply with all environmental permits, including measures identified in the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan and Sediment and Erosion Control Plan for the work. The Contractor’s attention is also directed to the applicable regulations of the South Florida Water Management District.

The Lee County Noise Control Ordinance is in effect regulating noise generated from construction activity associated with the project. The Contractor shall comply with the requirements therein.

The Contractor shall exert every reasonable and diligent effort to ensure that all labor employed by the Contractor and his subcontractors for work on the project work harmoniously and

compatibly with all labor used by other building and construction contractors now or hereafter on the site of the work covered by this Contract. Include this provision in all subcontracts, and require all subcontractors to include it in their subcontracts with others. However, do not interpret or enforce this provision so as to deny or abridge, on account of membership or non-membership in any labor union or labor organization, the right of any person to work as guaranteed by Article I, Section 6 of the Florida Constitution.

Comply with Chapter 556 of the Florida Statutes during the performance of excavation or demolition operations.

The Executive Order 11246 Electronic version, dated September 24, 1965 is posted on FDOT's website at the following URL address:

[https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlinspecs/files/deo11246.pdf?sfvrsn=3613622\\_6](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlinspecs/files/deo11246.pdf?sfvrsn=3613622_6)

Take responsibility to obtain the information posted on this website up through five calendar days before the opening of bids and comply with the provisions contained in Executive Order 11246.

If the FDOT's website cannot be accessed, contact the FDOT's Specifications Office Web Coordinator at (850) 414-4101.

**7-1.2 Plant Quarantine Regulations:** The U.S. Department of Agriculture and the Florida Department of Agriculture and Consumer Services have issued quarantine regulations pertaining to control of the nematodes of citrus, Rule 5B-44, Florida Administrative Code, and other plant pests. Contact the local (or other available) representatives of the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture, and the Division of Plant Industry of the Florida Department of Agriculture and Consumer Services to ascertain all current restrictions regarding plant pests that are imposed by these agencies. Keep advised of current quarantine boundary lines throughout the construction period.

These restrictions may affect operations in connection with such items as clearing and grubbing, earthwork, grassing and mulching, sodding, landscaping, and other items which might involve the movement of materials containing plant pests across quarantine lines.

Obtain quarantine regulations and related information from the following:

Animal and Plant Health Inspection Service

U.S. Department of Agriculture

3029 Lake Alfred Road

Winter Haven, Florida 33881

Director, Division of Plant Industry

Florida Department of Agriculture and Consumer Services

Post Office Box 147100

Gainesville, Florida 32614-7100

**7-1.3 Introduction or Release of Prohibited Aquatic Plants, Plant Pests, or Noxious Weeds:** Do not introduce or release prohibited aquatic plants, plant pests, or noxious weeds into the project limits as a result of clearing and grubbing, earthwork, grassing and mulching, sodding, landscaping, or other such activities. Immediately notify the Director upon discovery of all prohibited aquatic plants, plant pests, or noxious weeds within the project limits. Do not move prohibited aquatic plants, plant pests, or noxious weeds within the project limits or to locations outside of the project limits without the Director's permission. Maintain all borrow material brought onto the project site free of prohibited aquatic plants, plant pests, noxious weeds, and their

reproductive parts. Refer to Rule 16C-52 and Rule 5B-57, of the Florida Administrative Code for the definition of prohibited aquatic plants, plant pests, and noxious weeds.

#### **7-1.4 Compliance with Federal Endangered Species Act and other Wildlife Regulations:**

The Federal Endangered Species Act requires that the County investigate the potential impact to a threatened or endangered species prior to initiating an activity performed in conjunction with a road construction project. If the County's investigation determines that there is a potential impact to a protected, threatened or an endangered species, the County will conduct an evaluation to determine what measures may be necessary to mitigate such impact. When mitigation measures and/or special conditions are necessary, these measures and conditions will be addressed in the Contract Documents or in permits as identified in 7-2.1.

In addition, in cases where certain protected, threatened or endangered species are found or appear within close proximity to the project boundaries, the County has established guidelines that will apply when interaction with certain species occurs, absent of any special mitigation measures or permit conditions otherwise identified for the project.

These guidelines are posted at the following URL address:

[https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlsinspecs/files/endangeredwildlifeguidelines.pdf?sfvrsn=e27baf3f\\_4](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/urlsinspecs/files/endangeredwildlifeguidelines.pdf?sfvrsn=e27baf3f_4).

Take responsibility to obtain this information and take all actions and precautions necessary to comply with the conditions of these guidelines during all project activities.

Prior to establishing any off-project activity in conjunction with a project, notify the Director of the proposed activity. Covered activities include but are not necessarily limited to borrow pits, concrete or asphalt plant sites, disposal sites, field offices, and material or equipment storage sites. Include in the notification the Project Number, Financial Project ID, a description of the activity, the location of the site by township, range, section, county, and city, a site location map including the access route, the name of the property owner, and a person to contact to arrange a site inspection. Submit this notification at least 30 days in advance of planned commencement of the off-site activity, to allow for the County to conduct an investigation without delaying job progress.

Do not perform any off-project activity without obtaining written clearance from the Director. In the event the County's investigation determines a potential impact to a protected, threatened or endangered species and mitigation measures or permits are necessary, coordinate with the appropriate resource agencies for clearance, obtain permits and perform mitigation measures as necessary. Immediately notify the Director in writing of the results of this coordination with the appropriate resource agencies. Additional compensation or time will not be allowed for permitting or mitigation, associated with Contractor initiated off-project activities. The Contractor shall maintain at the jobsite written proof of authorization for the use of any off-project property in conjunction with the project. All off-project properties shall be maintained in a neat and orderly fashion and then restored to the property owner's satisfaction upon terminating the use associated with the project.

**7-1.5 Occupational Safety and Health Requirements:** The Contractor shall take all precautions necessary for the protection of life, health, and general occupational welfare of all persons, including employees of both the Contractor and the County, until the Contractor has completed the work required under the Contract as provided in 5-10 and 5-11.

Comply at all times with applicable Federal, State, and local laws, provisions, and policies governing safety and health, including 29 CFR 1926, including all subsequent revisions and updates.

**7-1.6 Discovery of an Unmarked Human Burial:** When an unmarked human burial is discovered, immediately cease all activity that may disturb the unmarked human burial and notify the Director. Do not resume activity until specifically authorized by the Director.

**7-1.7 Insecticides, Herbicides and Fertilizers:**

**7-1.7.1 Insecticides and Herbicides:** Use products found on the following website, <http://state.ceris.purdue.edu/>, approved by the Florida Department of Agriculture and Consumer Services. The use of restricted products is prohibited. Do not use any products in the sulfonylurea family of chemicals. Herbicide application by broadcast spraying is not allowed.

Procure any necessary licenses, pay all charges and fees, and give all notices necessary for lawful performance of the work.

Ensure that all insecticides and herbicides are applied in accordance with Chapter 5E-9, Florida Administrative Code. Submit a copy of current certificates to the Director upon request.

Ensure that employees who work with herbicides comply with all applicable Federal, State, and local regulations.

Comply with all regulations and permits issued by any regulatory agency within whose jurisdiction work is being performed. Post all permit placards in a protected, conspicuous location at the work site.

Acquire any permits required for work performed on the rights-of-way within the jurisdiction of National Forests in Florida. Contact the Local National Forest Ranger District, or the United States Department of Agriculture (USDA) office for the proper permits and subsequent approval.

Acquire all permits required for aquatic plant control as outlined in Chapter 62C-20, Florida Administrative Code, Rules of the Florida Department of Environmental Protection. Contact the Regional Field Office of Bureau of Invasive Plant Management of the Florida Department of Environmental Protection for proper permits and subsequent approval. If application of synthetic organo-auxin herbicides is necessary, meet the requirements of Chapter 5E-2, Florida Administrative Code.

**7-1.7.2 Fertilizer:** Ensure that all employees applying fertilizer, possess a current Florida Department of Agriculture and Consumer Services Commercial Applicator license in accordance with Section 482.1562, F.S. Upon request, submit the current certificates to the Director.

**7-1.8 Compliance with Section 4(f) of the USDOT Act (Designated State or Federal-Aid Contracts Only):** Section 4(f) of the USDOT Act prohibits the U. S. Secretary of Transportation from approving a project which requires the use of publicly owned land of a public park, recreation area or a wildlife and waterfowl refuge, or of any historic site of national, state, or local significance unless there is no prudent or feasible alternative to using that land and the program or project includes all possible planning to minimize the harm to the site resulting from the use.

Before undertaking any off-project activity associated with any federally assisted undertaking, ensure that the proposed site does not represent a public park, recreation area, wildlife or waterfowl refuge, or a historic site (according to the results of the Cultural Resources Survey discussed in 120-6.2). If such a site is proposed, notify the Director and provide a description of the proposed off-site activity, Project Number, Financial Project ID, the location of the site by township, range, section, a county or city map showing the site location, including the access route and the name of the property. It is the Contractor's responsibility to submit justification for use of Section 4(f) property that is sufficient for the County, the Florida Department of Transportation and the Federal Highway Administration to make a Section 4(f) determination. Submit this notification

sufficiently in advance of planned commencement of the off-site activity to allow a reasonable time for the Director to conduct an investigation without delaying job progress. Do not begin any off-project activity without obtaining written clearance from the Director.

#### **7-1.9 Reserved.**

### **7-2 Permits and Licenses.**

**7-2.1 General:** Pursuant to Section 218.80, Florida Statutes, the County will pay for all County permits and fees, including license fees, permit fees, impact fees or inspection fees applicable to the Work. Contractor is not responsible for paying for permits issued by the County wherein the Work is to be performed, but is responsible for acquiring all other permits. The County may require the Contractor to deliver internal budget transfer documents to applicable County agencies when the Contractor is acquiring permits. Except for permits procured by the County, as incorporated by Special Provision expanding this Subarticle, if any, the Contractor will procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

The County will also acquire any modifications or revisions to an original permit incorporated by Special Provision to this Subarticle when the Contractor requires such modifications or revisions to complete the construction operations specified in the Plans or Special Provisions and within the right-of-way limits.

Acquire all permits for work performed outside the right-of-way or easements for the project.

In carrying out the work in the Contract, when under the jurisdiction of any environmental regulatory agency, comply with all regulations issued by such agencies and with all general, special, and particular conditions relating to construction activities of all permits issued to the County as though such conditions were issued to the Contractor. Post all permit placards in a protected location at the worksite.

The Contractor shall be fully responsible for the execution and adherence to all directives, instructions, conditions, special conditions, and limiting conditions contained in permits specifically issued for the Work and which pertain to or affect the construction phase of this project, and shall be solely responsible for issuance of any Notices required thereby.

In case of a discrepancy between any permit condition and other Contract Documents, the more stringent condition shall prevail.

**7-2.2 Work or Structures in Navigable Waters of the U.S., Waters of the U.S., and Waters of the State:** In general, one or more governmental agencies will exercise regulatory authority over work or structures, including related construction operations, in all tidal areas (channelward of the mean high water lines on the Atlantic and Gulf Coast); in the ocean and gulf waters to the outer limits of the continental shelf; in all rivers, streams, and lakes to the ordinary high water line; in marshes and shallows that are periodically inundated and normally characterized by aquatic vegetation capable of growth and reproduction; in all artificially created channels and canals used for recreational, navigational, or other purposes that are connected to navigable waters; and in all tributaries of navigable waters up to their headwaters.

Whenever the work under or incidental to the Contract requires structures or dredge/fill/construction activities in “Navigable Waters of the U.S.,” “Waters of the U.S.,” and “Waters of the State,” the Federal, State, county, and local regulatory agencies may require the County to obtain a permit. For such dredge/fill /construction specified in the Plans to be

accomplished within the limits of the project, or for any dredge/fill/construction within the limits of County-furnished borrow areas, the County will procure the necessary permits prior to advertising for bids.

#### **7-2.3 Reserved.**

#### **7-3 Patented Devices, Materials and Processes.**

Include all royalties and costs arising from patents, trademarks, and copyrights, in any way involved in the work in the Contract price. Whenever using any design, device, material, or process covered by letters patent or copyright, obtain the right for such use by suitable legal agreement with the patentee or owner of the copyright. File a copy of such agreement with the Director. However, whether or not such agreement is made or filed as noted, the Contractor and the surety in all cases shall indemnify, defend, and save harmless, the County from all claims for infringement by reason of the use of any such patented design, device, material, or process on work under the Contract, and shall indemnify the County for all costs, expenses, and damages that it may be obliged to pay by reason of any such infringement, at any time during the prosecution or after the completion of the work.

#### **7-4 Right-of-Way Furnished by the County.**

Except as otherwise stipulated in these Specifications or as shown in the Plans, the County will furnish all rights-of-way necessary for the proper completion of the work at no expense to the Contractor.

Should County-furnished areas for obtaining borrow material, contain limerock material do not remove such material from the pit unless the Director gives specific approval.

Use of County owned right-of-way for the purpose of equipment or material storage, lay-down facilities, pre-cast material fabrication sites, batch plants for the production of asphalt, concrete or other construction related materials, or other similar activities, shall require advance written approval by the County prior to making use of said County owned right of way. Use of County owned right of way for these purposes is expressly limited to the storage of equipment and materials for the Project or production of materials or products for the Project. As a precedence to Final Acceptance of the project, any County owned right-of-way used by the Contractor shall be restored to the condition existing prior to construction, or as otherwise approved by the Director.

The County reserves the right to allow parties other than the Contractor, upon presentation of a duly authorized and satisfactory Lee County Department of Transportation Right-of-Way Permit, to perform work within the limits of construction. In all such instances, the Contractor will afford parties bearing such permits reasonable accommodation for the proper execution of the work described under the permit, including the right to store materials and equipment. All parties authorized to perform work within the right-of-way shall make, in an acceptable manner, all necessary repairs due to such work ordered by the Director and shall be subject to the conditions specified in Section 11-12 of the Lee County Administrative Code, as amended.



## **7-5 Reserved.**

## **7-6 Sanitary Provisions.**

The Contractor shall provide and maintain, in a neat and sanitary condition, such accommodations for the use of his employees as are necessary to comply with the requirements and regulations of the State and local boards of health. Commit no public nuisance.

## **7-7 Control of the Contractor's Equipment.**

**7-7.1 Traffic Interference:** Do not allow equipment, while it is on or traversing a road or street, to unreasonably interfere with traffic.

**7-7.2 Overloaded Equipment:** Do not operate on any road, street or bridge including a County owned temporary bridge, any hauling unit or equipment loaded in excess of:

1. the maximum weights specified in the Florida Highway Patrol, Commercial Motor Vehicle Manual (Trucking Manual), or
2. lower weight limits legally established and posted for any section of road or bridge by FDOT, the County or other local authorities.

The governmental unit having jurisdiction over a particular road or bridge may provide exceptions by special permit under the provisions of 7-7.3.

This restriction applies to all roads and bridges inside and outside the Contract limits as long as these roads and bridges are open for public use. The Contractor may overload roads and bridges which are to be demolished after they are permanently closed to the public. The Contractor is responsible for all loss or damages resulting from equipment operated on a structure permanently closed to the public.

**7-7.3 Crossings:** Where it is necessary to cross an existing road or street, including specifically the existing traveled lanes of a divided highway within the limits of the project, obtain permits from the County, for crossing overloaded or oversized equipment. Cross existing roads or streets only at Director-designated points. The Director may require the Contractor to protect the pavement or Roadway at the crossing by using lumber, planks, or fill. Provide flagging and watchman service, or approved signal devices, for the protection of traffic at all such crossings, in accordance with an approved written plan for that activity. Movement of equipment around the project site must be in accordance with requirements of the Standard Plans and not create an undue hazard to the traveling public or workers.

**7-7.4 Protection from Damage by Tractor-Type Equipment:** Take positive measures to ensure that tractor-type equipment does not damage the road. If any such damage should occur, repair it without delay, at no expense to the County and subject to the Director's approval.

**7-7.5 Contractor's Equipment on Bridge Structures:** The Contractor's Engineer of Record shall analyze the effect of imposed loads on bridge structures, within the limits of a construction contract, resulting from the following operations:

1. Overloaded Equipment as defined in 7-7.2:
  - a. Operating on or crossing over completed bridge structures.
  - b. Operating on or crossing over partially completed bridge structures.
2. Equipment within legal load limits:
  - a. Operating on or crossing over partially completed bridge structures.
3. Construction cranes:
  - a. Operating on completed bridge structures.
  - b. Operating on partially completed bridge structures.

Any pipe culvert(s) or box culvert(s) qualifying as a bridge under 1-3 is excluded from the requirements above.

A completed bridge structure is a bridge structure in which all elemental components comprising the load carrying assembly have been completed, assembled, and connected in their final position. The components to be considered shall also include any related members transferring load to any bridge structure.

The Contractor's Engineer of Record shall determine the effect that equipment loads have on the bridge structure and develop the procedures for using the loaded equipment without exceeding the structure's design load capacity.

Submit to the County for approval the design calculations, layout drawings, and erection drawings showing how the equipment is to be used so that the bridge structure will not be overstressed. The Contractor's Engineer of Record shall sign and seal the drawings and the cover sheet of the calculations for the County's Record Set.

**7-7.6 Posting of the Legal Gross Vehicular Weight:** Display the maximum legal gross weight, as specified in the Florida Uniform Traffic Code, in a permanent manner on each side of any dump truck or dump type tractor-trailer unit hauling embankment material, construction aggregates, road base material, or hot bituminous mixture to the project over any public road or street. Display the weight in a location clearly visible to the scale operator, in numbers that contrast in color with the background and that are readily visible and readable from a distance of 50 feet.

## **7-8 Structures over Navigable Waters.**

**7-8.1 Compliance with Federal and Other Regulations:** When working on structures in, adjacent to, or over, navigable waters, observe all regulations and instructions of Federal and other authorities having control over such waters. Do not obstruct navigation channels without permission from the proper authority, and provide and maintain navigation lights and signals in accordance with the Federal requirements for the protection of the structure, of false work, and of navigation.

When working on moveable bridges, requests for temporarily changing the operating requirements for the moveable bridge must be submitted in writing to the appropriate Coast Guard District Bridge Branch, 90 days before the start of any action.

For all other bridges, notify the appropriate Coast Guard District Bridge Branch, at least 60 days prior to the start of any operations including construction and 30 days prior to any channel operations, closures, or opening restrictions.

When work platforms are indicated in the permit for construction, submit work platform construction plans to the appropriate Coast Guard District for approval. Obtain approval prior to beginning construction on the platform.

**7-8.2 Maintenance of Channel:** Where the work includes the excavation of a channel or other underwater areas to a required section, maintain the section from shoaling or other encroachment until final acceptance of the project.

In the event of accidental blocking of the navigation channel, immediately notify the U.S. Coast Guard of the blockage and upon removal of the blockage.

## **7-9 Use of Explosives.**

When using explosives for the prosecution of the work, exercise the utmost care not to endanger life or property, including new work. The Contractor is responsible for all damage resulting from the use of explosives. Any use of explosives shall be subject to the prior written authorization of the Director.

Store all explosives in a secure manner in compliance with all laws and ordinances, and clearly mark all such storage places with the words: "DANGEROUS - EXPLOSIVES". Place such storage in the care of a competent watchman. Where no local laws or ordinances apply, provide storage satisfactory to the Director and, in general, not closer than 1,000 feet from the road or from any building, camping area, or place of human occupancy.

Notify each public utility company having structures in proximity to the site of the work of the intention to use explosives. Give such notice sufficiently in advance to enable the companies to take precautionary steps to protect their property from injury.

## **7-10 Forest Protection.**

**7-10.1 Compliance with State and Federal Regulations:** In carrying out work within or adjacent to State or National forests or parks, comply with all of the regulations of the State or Federal authority having jurisdiction, governing the protection of and the carrying out of work in forests or parks, and observe all sanitary laws and regulations with respect to the performance of work in these areas. Keep the areas in an orderly condition, dispose of all refuse, and obtain permits for the construction, installation, and maintenance of any construction camps, living quarters, stores, warehouses, sanitary facilities, and other structures; all in accordance with the requirements of the forest or park official.

**7-10.2 Prevention and Suppression of Forest Fires:** Take all reasonable precautions to prevent and suppress forest fires. Require employees and subcontractors, both independently and at the request of forest officials, to do all reasonably within their power to prevent and suppress forest fires. Assist in preventing and suppressing forest fires, and make every possible effort to notify a forest official at the earliest possible moment of the location and extent of all fires. Extinguish the fire if practicable.

## **7-11 Preservation of Existing Property.**

**7-11.1 General:** Preserve from damage all existing property within the project limits of or in any way affected by the Work, the removal or destruction of which is not specified in the Plans. This applies to, but is not limited to, public and private property, public and private utilities (except as modified by the provisions of 7-11.5), trees, shrubs, crops, sod, signs, monuments, fences, guardrail, pipe and underground structures, Intelligent Transportation Systems (ITS) facilities, traffic control signals and devices, highway lighting, and public highways (except natural wear and tear of highway resulting from legitimate use thereof by the Contractor).

County owned underground facility locations shown in the Plans are approximate. Unless otherwise shown in the Plans, County owned underground facilities will not be located by the County nor through notification to "Sunshine 811".

Whenever the Contractor's activities damage such existing property, immediately restore it to a condition equal to or better than that existing at the time such damage occurred, at no expense to the County. Temporary repairs may be used to immediately restore ITS facilities and traffic control signals and devices. Permanent repairs to ITS facilities and traffic control signals and devices shall be made within 90 days of any temporary repairs and prior to final acceptance of the project. Submit permanent ITS facility repair plans to the Director prior to beginning repair work.

Protect existing bridges during the entire construction period from damage caused by the Work. Immediately repair, at no expense to the County, all damage to existing bridges caused by the Work, prior to continuing the Work. The County will not require the Contractor to provide routine repairs or maintenance for such structures.

Direct special attention to the protection of all geodetic monuments, horizontal or vertical, and Public Land Survey Corners located within the project. If any geodetic monument or Public Land Survey Corner, located within the project, is at risk of being damaged or destroyed, immediately notify the Director. Locate and replace any damaged or destroyed geodetic monuments or Public Land Survey Corners under the direction of a Professional Surveyor and Mapper registered in the State of Florida.

Whenever the actions of a third party damage such existing property and is not otherwise due to any fault or activities of the Contractor, either restore it to a condition equal to or better than that existing at the time such damage occurred or provide access and coordinate with the County's maintenance Contractor in accordance with 8-4.4 as directed by the Director. The County will compensate the Contractor for the costs associated with the repairs for restoring the existing property in accordance with 4-4. Theft and vandalism are considered damage caused by a third party.

**7-11.2 Failure to Restore Damaged Existing Property:** In case of failure on the part of the Contractor to restore such property, bridge, road or street, or to make good such damage or injury, the Director may, upon 48 hours notice, proceed to repair, rebuild, or otherwise restore such property, road, or street as may be deemed necessary, and the County will deduct the cost thereof from any monies due or which may become due the Contractor under the Contract. Nothing in this clause prevents the Contractor from receiving proper compensation for the removal, damage, or replacement of any public or private property, not shown in the Plans, that is made necessary by alteration of grade or alignment. The Director will authorize such work, provided that the Contractor, or his employees or agents, have not, through their own fault, damaged such property.

**7-11.3 Contractor's Use of Streets and Roads:**

**7-11.3.1 Street and Road System:** When hauling materials or equipment to the project over roads and bridges on the State Highway System, State park road system, county road system, or city street system, and such use causes damage, immediately, at no expense to the County, repair such road or bridge to as good a condition as before the hauling began.

The County may modify the above requirement in accordance with any agreement the Contractor might make with the governmental unit having jurisdiction over a particular road or bridge, provided that the Contractor submits written evidence of such agreement to the Director.

**7-11.3.2 Reserved.**

**7-11.3.3 Within the Limits of a Construction Project:** The County will not allow the operation of equipment or hauling units of such weight as to cause damage to previously constructed elements of the project, including but not necessarily limited to bridges, drainage structures, base course, and pavement. Do not operate hauling units or equipment loaded in excess of the maximum weights specified in 7-7.2 on existing pavements that are to remain in place (including pavement being resurfaced), cement-treated subgrades and bases, concrete pavement, any course of asphalt pavement, and bridges. The Director may allow exceptions to these weight restrictions for movement of necessary equipment to and from its worksite, for hauling of offsite fabricated components to be incorporated into the project, and for crossings as specified in 7-7.3.

**7-11.4 Operations within Railroad Right-of-Way:**

**7-11.4.1 Notification to the Railroad Company:** Notify the superintendent of the railroad company, as shown in the Plans, and the Director at least 72 hours before beginning any operation within the limits of the railroad right-of-way; any operation requiring movement of

employees, trucks, or other equipment across the tracks of the railroad company at other than an established public crossing; and any other work that may affect railroad operations or property.

**7-11.4.2 Contractor's Responsibilities:** Comply with whatever requirements an authorized representative of the railroad company deems necessary in order to safeguard the railroad's property and operations. The Contractor is responsible for all damages, delays, or injuries and all suits, actions, or claims brought on account of damages or injuries resulting from the Contractor's operations within or adjacent to railroad company right-of-way.

**7-11.4.3 Watchman or Flagging Services:** The railroad company will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations during certain periods of the project. The Contractor will reimburse the railroad company for the cost thereof. Schedule work that affects railroad operations so as to minimize the need for protective services by the railroad company.

#### **7-11.5 Utilities:**

**7-11.5.1 Arrangements for Protection or Adjustment:** Do not commence work at points where the construction operations are adjacent to utility facilities until all necessary arrangements have been made for removal, temporary removal, relocation, de-energizing, deactivation or adjustment with the utility facilities owner to protect against damage that might result in expense, loss, disruption of service, or other undue inconvenience to the public or to the owners. The Contractor is solely and directly responsible to the owners and operators of such properties for all damages, injuries, expenses, losses, inconveniences, or delays caused by the Contractor's operations.

Do not request utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment when work can be accomplished within the utility work schedules. In the event that removal, temporary removal, relocation, de-energizing, deactivation, or adjustment of a utility or a particular sequence of timing in the relocation of a utility is necessary and has not been addressed in a utility work schedule, the Director will determine the necessity for any such utility work. Coordinate such work as to cause the least impediment to the overall construction operations and utility service. The County is not responsible for utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment work where such work is determined not necessary by the Director or done solely for the benefit or convenience of the utility owner or its contractor, or the Contractor.

**7-11.5.2 Cooperation with Utility Owners:** Cooperate with the owners of all underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication or rearrangement work may be reduced to a minimum, and that services rendered by the utility owners will not be unnecessarily interrupted.

In the event of interruption of water or other utility services as a result of accidental breakage, exposure, or lack of support, promptly notify the proper authority and cooperate with the authority in the prompt restoration of service. If water service is interrupted and the Contractor is performing the repair work, the Contractor shall work continuously until the service is restored. Do not begin work around fire hydrants until the local fire authority has approved provisions for continued service.

**7-11.5.3 Utility Adjustments:** Certain utility adjustments and reconstruction work may be underway during the progress of the Contract. Cooperate with the various utility construction crews who are maintaining utility service. Exercise due caution when working adjacent to relocated utilities. The Contractor shall repair all damage to the relocated utilities resulting from his operations

at no expense to the County. The requirements of 7-11.1 and 7-11.5.2 outline the Contractor's responsibility for protecting utility facilities. The County will include in the Contract the utility authorities who are scheduled to perform utility work on the project.

**7-11.5.4 Weekly Meetings:** Conduct weekly meetings on the job site with all the affected utility companies and the Director in attendance to coordinate project construction and utility relocation. Submit a list of all attendees one week in advance to the Director for approval.

Submit the approved Work Progress Schedule and Work Plan for the project, as specified in 8-3.2, to document the schedule and plan for road construction and utility adjustments.

When utility relocations no longer affect construction activities, the Contractor may discontinue the meetings with the Director's approval.

**7-12 Reserved.**

**7-13 Reserved.**

**7-13.1 Reserved.**

**7-13.2 Reserved.**

**7-13.3 Reserved.**

**7-13.4 Insurance for Protection of Utility Owners:** When the Contract involves work on or in the vicinity of utility-owned property or facilities, the utility shall be added along with the County as an Additional Insured on the policy/ies procured pursuant to subsection 7-13.2 above.

**7-14 Contractor's Responsibility for Work.**

The Contractor will take charge and custody of the Work, and take every necessary precaution against damage to the Work, by the action of the elements, third parties, or from any other cause whatsoever, until the County's final acceptance of the Work. The Contractor will rebuild, repair, restore, and make good all damage to any portion of the Work occasioned by any of the above causes before final acceptance of the Contract.

The County will have no obligation to pay any reimbursement for damage caused by the execution or nonexecution of the Work by the Contractor or its sub-contractors, or damage the Contractor was negligent in preventing.

The County may, at its sole discretion, reimburse the Contractor for the repair of damage to the Work not caused by a third party and due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to Acts of God, of the public enemy, or of governmental authorities.

**7-15 Opening Sections of the Project to Traffic.**

Whenever any section of the project is in acceptable condition for use, the Director may direct the Contractor to open it to vehicular or pedestrian traffic. The County's direction to open a section of the project does not constitute an acceptance of the project, or any part thereof, or waive any Contract provisions. Perform all necessary repairs or renewals, on any section of the project thus opened to traffic under direction from the Director, due to defective material or work or to any cause other than ordinary wear and tear, pending completion and the Director's acceptance of the project, or other work, at no expense to the County.

#### **7-16 Wage Rates for Federal-Aid Projects (Designated Federal-Aid Contracts Only).**

For all projects that include Federal-aid participation, the Special Provisions contain requirements with regard to payment of predetermined minimum wages. Predetermined Wage Rate Decisions (U.S. County of Labor provided Wage Rate Tables) exist for Heavy, Highway, and Building Construction Projects.

#### **7-17 Supplemental Agreements.**

Supplemental Agreements (Change Orders) shall be authorized in accordance with Procurement Policies adopted by the Lee County Board of County Commissioners.

#### **7-18 Scales for Weighing Materials.**

**7-18.1 Applicable Regulations:** When determining the weight of material for payment, use scales meeting the requirements of Chapter 531 of Florida Statutes, pertaining to specifications, tolerances, and regulations, as administered by the Bureau of Weights and Measures of the Florida Department of Agriculture.

**7-18.2 Base for Scales:** Place such scales on a substantial horizontal base to provide adequate support and rigidity and to maintain the level of the scales.

**7-18.3 Protection and Maintenance:** Maintain all scale parts in proper condition as to level and vertical alignment, and fully protect them against contamination by dust, dirt, and other matter that might affect their operation.

#### **7-19 Source of Forest Products.**

As required by Section 255.2575 of the Florida Statutes, where price, fitness and quality are equal, and when available, use only timber, timber piling, or other forest products that are produced and manufactured in the State of Florida. This provision does not apply to Federal-aid projects.

#### **7-20 Regulations of Air Pollution from Asphalt Plants.**

**7-20.1 General:** Perform all work in accordance with all Federal, State, and local laws and regulations regarding air pollution and burning. In particular, pay attention to Chapters 62-210 and 62-256, Rules of the Department of Environmental Protection, Florida Administrative Code, and to any part of the State Implementation Plan applicable to the project. See also 110-9.2 regarding burning of debris.

**7-20.2 Dust Control:** Control dust during the storage and handling of dusty materials by wetting, covering, or other means as approved by the Director.

**7-20.3 Asphalt Material:** Use only emulsified asphalt, unless otherwise stated in the Plans and allowed by Chapter 62-210, Rules of the Department of Environmental Protection, Florida Administrative Code. Store and handle asphalt materials and components so as to minimize unnecessary release of hydrocarbon vapors.

**7-20.4 Asphalt Plants:** Operate and maintain asphalt plants in accordance with Chapter 62-210, Rules of the Department of Environmental Protection, Florida Administrative Code. Provide the plant site with a valid permit as required under Chapter 62-210 prior to start of work.

#### **7-21 Dredging and Filling.**

Section 370.033 of the Florida Statutes, requires that all persons, who engage in certain dredge or fill activities in the State of Florida, obtain a certificate of registration from the Florida Department of Environmental Protection, Tallahassee, Florida 32301, and that they keep accurate

logs and records of all such activities for the protection and conservation of the natural resources. Obtain details as to the application of this law from the Department of Environmental Protection.

#### **7-22 Available Funds.**

All funds for payment by the County under this Contract are subject to the availability of an annual appropriation for this purpose by the County. In the event of nonappropriation of funds by the County for the work provided under this Contract, the County will terminate the Contract, without termination charge or other liability, on the last day of the then current fiscal year or when the appropriation made for the then-current year for the services covered by this Agreement has been expended, whichever event occurs first. If at any time funds are not appropriated for the continuance of this Agreement, cancellation shall be accepted by the Contractor upon 30 days prior written notice, but failure to give such notice shall be of no effect and the County shall not be obligated under this Contract beyond the date of termination.

#### **7-23 Contractor's Motor Vehicle Registration (Designated State Aid Projects Only).**

The Contractor shall provide the County with proof that all motor vehicles operated or caused to be operated by such Contractor are registered in compliance with Chapter 320 of the Florida Statutes. Submit such proof of registration on FDOT Form 700-010-52 to the County.

The County will not make payment to the Contractor until the required proof of registration is on file with the Department.

If the Contractor fails to register any motor vehicle that he operates in Florida, pursuant to Chapter 320 of the Florida Statutes, the Department may disqualify the Contractor from bidding, or the Department may suspend and revoke the Contractor's certificates of qualification.

#### **7-24 Disadvantaged Business Enterprise Program.**

The County encourages the inclusion of Disadvantage Business Enterprise (DBE) participants as defined and certified by FDOT. The Contractor shall submit to the County with the final payment documents a DBE Participation Certification, indicating all DBE Subcontractor(s) and amount(s) utilized for the project. If the Contractor did not utilize the DBE firm(s) listed on the Bid Proposal, a letter of justification shall be submitted along with the DBE Participation Certification.

#### **7-25 On-The-Job Training Requirements (Designated Federal Aid Contracts Only).**

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide On-The-Job Training aimed at developing full journeymen in the type of trade or job classification involved in the work. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Section. Ensure that, when feasible, 25% of trainees in each occupation are in their first year of training. The Contractor shall incorporate the requirements of this Section into such subcontract.

The number of trainees will be estimated on the number of calendar days of the contract, the dollar value, and the scope of work to be performed. The trainee goal will be finalized at a Post-Preconstruction Trainee Evaluation Meeting and the goal will be distributed among the work classifications based on the following criteria:

1. Determine the number of trainees on Federal Aid Contract:



a. No trainees will be required for contracts with a Contract Time allowance of less than 275 calendar days.

b. If the Contract Time allowance is 275 calendar days or more, the number of trainees shall be established in accordance with the following chart:

Estimated Contract Amount	Trainees Required
\$2,000,000 or less	0
Over \$2,000,000 to \$4,000,000	2
Over \$4,000,000 to \$6,000,000	3
Over \$6,000,000 to \$12,000,000	5
Over \$12,000,000 to \$18,000,000	7
Over \$18,000,000 to \$24,000,000	9
Over \$24,000,000 to \$31,000,000	12
Over \$31,000,000 to \$37,000,000	13
Over \$37,000,000 to \$43,000,000	14
Over \$43,000,000 to \$49,000,000	15
Over \$49,000,000 to \$55,000,000	16
Over \$55,000,000 to \$62,000,000	17
Over \$62,000,000 to \$68,000,000	18
Over \$68,000,000 to \$74,000,000	19
Over \$74,000,000 to \$81,000,000	20
Over \$81,000,000 to \$87,000,000	21
Over \$87,000,000 to \$93,000,000	22
Over \$93,000,000 to \$99,000,000	23
Over \$99,000,000 to \$105,000,000	24
Over \$105,000,000 to \$112,000,000	25
Over \$112,000,000 to \$118,000,000	26
Over \$118,000,000 to \$124,000,000	27
Over \$124,000,000 to \$130,000,000	28
Over \$130,000,000 to *	
*One additional trainee per \$6,000,000 of estimated Construction Contract amount over \$130,000,000	

Further, if the Contractor or subcontractor requests to utilize banked trainees as discussed later in this Section, a Banking Certificate will be validated at this meeting allowing credit to the Contractor for previously banked trainees. Banked credits of prime Contractors working as Subcontractors may be accepted for credit. The Contractor's Project Manager, the CEI Consultant and the Director will attend this meeting. Within ten days after the Post-Preconstruction Training Evaluation Meeting, the Contractor shall submit to the County for approval an On-The-Job Training Schedule indicating the number of trainees to be trained in each selected classification and the portion of the Contract Time during which training of each trainee is to take place. This schedule may be subject to change if any of the following occur:

1. When a start date on the approved On-The-Job Training Schedule has been missed by 14 or more days;
2. When there is a change in previously approved classifications; or

3. When replacement trainees are added due to voluntary or involuntary termination The revised schedule will be resubmitted to and approved by the Director.

The following criteria will be used in determining whether or not the Contractor has complied with this Section as it relates to the number of trainees to be trained:

1. Credit will be allowed for each trainee that is both enrolled and satisfactorily completes training on this Contract. Credit for trainees, over the established number for this Contract, will be carried in a “bank” for the Contractor and credit will be allowed for those surplus trainees in subsequent, applicable projects. A “banked” trainee is described as an employee who has been trained on a project, over and above the established goal, and for which the Contractor desires to preserve credit for utilization on a subsequent project.

2. Credit will be allowed for each trainee that has been previously enrolled in the County’s approved training program on another contract and continues training in the same job classification and completes their training on a different contract.

3. Credit will be allowed for each trainee who, due to the amount of work available in their classification, is given the greatest practical amount of training on the contract regardless of whether or not the trainee completes training.

4. Credit will be allowed for any training position indicated in the approved On-The-Job Training Schedule, if the Contractor can demonstrate that a good faith effort to provide training in that classification was made.

5. No credit will be allowed for a trainee whose employment by the Contractor is involuntarily terminated unless the Contractor can clearly demonstrate good cause for this action.

Training and upgrading of minorities, women and economically disadvantaged persons toward journeyman status is a primary objective of this Section. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. If a non-minority male is enrolled into the On-The-Job Training Program, the On-The-Job Training Notification of Personnel Action Form notifying the District Contract Compliance Manager of such action shall be accompanied by a disadvantaged certification or a justification for such action acceptable to the County. The Contractor will be given an opportunity and will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Section. This training is not intended, and shall not be used, to discriminate against any applicant for training, whether a minority, woman or disadvantaged person.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman status, or have been employed as a journeyman. The Contractor may satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor’s records should document the findings in each case.

The minimum length and type of training for each classification will be as established at the Post-Preconstruction Trainee Evaluation Meeting and approved by the County. Graduation to journeyman status will be based upon satisfactory completion of a Proficiency Demonstration set up at the completion of training and established for the specific training classification, completion of the minimum hours in a training classification range, and the employer’s satisfaction that the trainee does meet journeyman status in the classification of training. Upon reaching journeyman status, the following documentation must be forwarded to the Director:

1. Trainee Enrollment and Personnel Action Form

2. Proficiency Demonstration Verification Form indicating completion of each standard established for the classification signed by representatives of both the Contractor and the County.

The County and the Contractor shall establish a program that is tied to the scope of the work in the project and the length of operations providing it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classifications concerned, by at least, the minimum hours prescribed for a training classification. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal Aid highway construction contract. Approval or acceptance of a training schedule shall be obtained from the County prior to commencing work on the classifications covered by the program.

A voluntary On-The-Job Training Program is available to a Contractor which has been awarded a state funded project. Through this program, the Contractor will have the option to train employees on state funded projects for "banked credit" as discussed previously in this provision, to be utilized on subsequent Federal Aid Projects where training is required. Those Contractors availing themselves of this opportunity to train personnel on state funded projects and bank trainee hours for credit shall comply with all training criteria set forth in this Section for Federal Aid Projects; voluntary banking may be denied by the County if staff is not available to monitor compliance with the training criteria.

It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial type positions. Training is permissible in lower level management positions such as office engineers, estimators, etc., where the training is oriented toward construction applications. Training in the laborer classifications, except Common/General Laborer, may be permitted provided that significant and meaningful training is provided and approved by the Director.

When approved in advance by the Director, credit will be given for training of persons in excess of the number specified herein under the current contract or a Contractor will be allowed to bank trainees who have successfully completed a training program and may apply those trainees to a training requirement in subsequent project(s) upon approval of the Director. This credit will be given even though the Contractor may receive training program funds from other sources, provided such other source do not specifically prohibit the Contractor from receiving other form of compensation. Offsite training is permissible as long as the training is an integral part of an approved training program and does not compromise a significant part of the overall training. Credit for offsite training indicated above may only be made to the Contractor when it does one or more of the following and the trainees are concurrently employed on a Federal Aid Project:

1. Contributes to the cost of the training,
2. Provides the instruction to the trainee,
3. Pays the trainee's wages during the offsite training period.

The Contractor shall compensate the trainee at no less than the laborer rate established in the Contract at the onset of training. The compensation rate will be increased to the journeyman's wage upon graduation from the training program for the remainder of the time the trainee works in the classification in which they were trained.

The Contractor shall furnish the trainee a copy of the program they will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed. The Contractor shall enroll a trainee in one training classification at a time to completion before the trainee can be enrolled in another classification on the same project.

The Contractor shall maintain records to document the actual hours each trainee is engaged in training on work being performed as a part of this Contract.

The Contractor shall submit to the Director a copy of an On-The-Job Training Notification of Personnel Action form no later than seven days after the effective date of the action when the following actions occur: a trainee is transferred on the project, transferred from the project to continue training on another contract, completes training, is upgraded to journeyman status or voluntarily terminates or is involuntary terminated from the project.

The Contractor shall furnish to the Director a copy of a Monthly Time Report for each trainee. The Monthly Time Report for each month shall be submitted no later than the tenth day of the subsequent month. The Monthly Time Report shall indicate the phases and sub-phases of the number of hours devoted to each proficiency.

Highway or Bridge Carpenter Helper, Mechanic Helper, Rodman/Chainman, and Timekeeper classifications will not be approved for the On-The-Job Training Program.

The number of trainees may be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

The Contractor will have fulfilled the responsibilities of this Specification when acceptable training has been provided to the trainee as specified above.

#### **7-26 Cargo Preference Act – Use of United States-Flag Vessels (Designated State or Federal Aid Contracts Only).**

Pursuant to Title 46 CFR 381, the Contractor agrees

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this Contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this Article to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this Contract.

## **SECTION 8 PROSECUTION AND PROGRESS**

### **8-1 Subletting or Assigning of Contracts.**

Do not, sell, transfer, assign or otherwise dispose of the Contract or Contracts or any portion thereof, or of the right, title, or interest therein, without prior written consent of the County. If the Contractor chooses to sublet any portion of the Contract, the Contractor must submit a written request to sublet work on Form 6-Subcontractor List contained in the Proposal.

The Contractor shall provide the Director a list of all proposed subcontractors and major material suppliers at the preconstruction conference. A revised list shall be distributed each time a modification thereto is made.

Execute all agreements to sublet work in writing and include all pertinent provisions and requirements of the Contract. All other agreements must be in writing and reference all applicable Contract provisions. Upon request, submit to the County a copy of the subcontract and agreement. The subletting of work does not relieve the Contractor or the surety of their respective liabilities under the Contract.

The County recognizes a subcontractor only in the capacity of an employee or agent of the Contractor, and the Director may require the Contractor to remove the subcontractor as in the case of an employee.

### **8-2 Reserved.**

### **8-3 Prosecution of Work.**

**8-3.1 Compliance with Time Requirements:** Commence work in accordance with the accepted working schedule and provide sufficient labor, materials and equipment to complete the work within the time limit(s) set forth in the proposal. Should the Contractor fail to furnish sufficient and suitable equipment, forces, and materials, as necessary to prosecute the work in accordance with the required schedule, the Director may withhold all estimates that are, or may become due, or suspend the work until the Contractor corrects such deficiencies.

**8-3.2 Submission of Contract Schedule:** Within 21 calendar days after Contract award or at the preconstruction conference, whichever is earlier, submit to the Director a Contract Schedule for the project. The Director will review and respond to the Contractor within 15 calendar days of receipt.

Provide a Contract Schedule that shows the various activities of work in sufficient detail to demonstrate a reasonable and workable plan to complete the project within the Contract Time. Show the order and interdependence of activities and the sequence for accomplishing the work. Describe all activities in sufficient detail so that the Director can readily identify the work and measure the progress on of each activity. Show each activity with a beginning work date, a duration, and an ending work date. Include activities for procurement, fabrication, and delivery of materials, plant, and equipment, and review time for shop drawings and submittals. Include milestone activities when milestones are required by the Contract Documents. In a project with more than one phase, adequately identify each phase and its completion date, and do not allow activities to span more than one phase.

Conduct sufficient liaison and provide sufficient information to indicate coordination activities with utility owners that have facilities within the limits of construction requiring adjustment.

Submit a working plan with the Contract Schedule, consisting of a concise written description of the construction plan.

The Director will return inadequate Contract Schedules to the Contractor for corrections. Resubmit a corrected schedule within 15 calendar days from the date of the Director's return transmittal.

Submit an updated Contract Schedule, for Director's acceptance, with each application for payment. The Director will review the updated schedule and respond within 7 calendar days of receipt.

By acceptance of the Contract Schedule, the Director does not endorse or otherwise certify the validity or accuracy of the activity durations or sequencing of activities. The Director will use the accepted schedule as the baseline against which to measure the progress.

If the Contractor fails to finalize either the initial or a revised Contract Schedule in the time specified, the Director will withhold all Contract payments until the Director accepts the schedule.

The Contract Schedule may indicate a completion date in advance of the expiration of Contract Time. However, the County will not be liable in any way for the Contractor's failure to complete the project prior to the expiration of Contract Time. Any additional costs, including extended overhead incurred between the Contractor's scheduled completion date and the expiration of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such cost from the County.

**8-3.3 Beginning Work:** Do not commence work under the Contract until after the County has issued a written Notice to Proceed. The Contract Time shall commence to run from the date specified in the Notice to Proceed. Issuance of the Notice to Proceed is contingent upon and will be done subsequent to the Contractor fully satisfying the County's stated insurance and bond submittal requirements. Until the Contractor receives the Department's Notice to Proceed, the Contractor is advised that the County will not be liable for any expenses which the Contractor may incur relative to the Contract before the written Notice to Proceed is issued.

**8-3.4 Provisions for Convenience of Public:** Schedule construction operations so as to minimize any inconvenience to adjacent businesses or residences. Where necessary, the Director may require the Contractor to first construct the work in any areas along the project where inconveniences caused by construction operations would present a more serious handicap. In such critical locations, where there is no assurance of continuous effective prosecution of the work once the construction operations are begun, the Director may require the Contractor to delay removal of the existing (usable) facilities.

**8-3.5 Preconstruction Conference:** County After the award of the Contract but prior to the issuance of the written Notice-to-Proceed, a conference will be held to establish lines of communication; procedures for handling shop drawings, requests for information, applications for payment, and other submissions; and to establish a working understanding between the parties as to the Contractor's project management responsibilities.

Present at the conference will be the Contractor and his subcontractors, utility companies, CEI Consultant and the Director. The time and place of this conference will be set by the Director. The Contractor shall be represented at the conference by a person duly authorized to speak on behalf of and represent the Contractor, together with all of the Contractor's supervisory personnel who will be assigned to the project. The Contractor shall submit the

following minimum information to the Director for his review and approval on or prior to the date established for the pre-construction conference:

- a. Name of the Contractor's proposed project manager.
- b. Name of the Contractor's proposed full-time superintendent.
- c. Name of the Contractor's representative for implementing and maintaining the Maintenance of Traffic Plan during construction.
- d. Personnel qualifications as may be requested by the County.
- e. Listing/qualifications of the Contractor's proposed subcontractors.
- f. Project Schedule.
- g. Traffic Control Plan/Maintenance of Traffic Plan.
- h. Applicable quality control plan(s).
- i. Name/qualifications of Contractor's Registered Professional Surveyor and Mapper in responsible charge of project layout.
- j. Name/qualifications of Contractor's quality control technician.
- k. Schedule and plan for prevention, control and abatement of erosion and water pollution per Section 104-5 of the Standard Specifications.

**8-3.6 Progress Meetings:** The Contractor shall attend regular progress meetings with and between the County's field representatives and those of the Contractor, subcontractors, utility companies, CEI Consultant and other parties having an interest in the Contract. The progress meetings shall be hosted by the County and shall be held at locations to be mutually agreed upon by the County and the Contractor at no less than two week intervals. The purpose of such meetings shall include, but not to be limited to, discussing all general aspects of the project and specifically addressing problem areas, schedules, progress payments, etc. The CEI Consultant shall be responsible for the preparation and distribution of the minutes.

#### **8-4 Limitations of Operations.**

**8-4.1 Night Work:** During active nighttime operations, furnish, place and maintain lighting sufficient to permit proper workmanship and inspection. Use lighting with 5 ft-cd minimum intensity. Arrange the lighting to prevent interference with traffic or produce undue glare to property owners. Operate such lighting only during active nighttime construction activities. Provide a light meter to demonstrate that the minimum light intensity is being maintained.

Lighting may be accomplished by the use of portable floodlights, standard equipment lights, existing street lights, temporary street lights, or other lighting methods approved by the Director.

Submit a lighting plan at the Preconstruction Conference for review and acceptance by the Director. Submit the plan as a PDF file, in the same scale as the Contract Plans, and formatted on 11 inch by 17 inch sheets. Do not start night work prior to the Director's acceptance of the lighting plan.

During active nighttime operations, furnish, place and maintain variable message signs to alert approaching motorists of lighted construction zones ahead. Operate the variable message signs only during active construction activities.

Include compensation for lighting for night work in the Contract prices for the various items of the Contract. Take ownership of all lighting equipment for night work.

**8-4.1.1 Holiday and Weekend Work:** If work is authorized by the Director on holidays, weekends, or nights the Contractor shall notify the Director 72 hours in advance of the time and date on which the Contractor or any of his subcontractors propose to perform work during such time periods to afford the Director ample time to effectively schedule his inspection personnel in accordance with the Contractor's timetable.

**8-4.2 Sequence of Operations:** Do not open up work to the prejudice of work already started. The Director may require the Contractor to finish a section on which work is in progress before starting work on any additional section. Specific requirements pertaining to the sequence of operations for constructing the project and maintaining traffic shall be included in the Contractor's work progress schedule.

**8-4.3 Interference with Traffic:** At all times conduct the work in such manner and in such sequence as to ensure the least practicable interference with traffic. Operate all vehicles and other equipment safely and without hindrance to the traveling public. Park all private vehicles outside the clear zone. Place materials stored along the roadway so as to cause no obstruction to the traveling public as possible.

Where existing pavement is to be widened and stabilizing is not required, prevent any open trench from remaining after working hours by scheduling operations to place the full thickness of widened base by the end of each day. Do not construct widening strips simultaneously on both sides of the road, except where separated by a distance of at least 1/4 mile along the road and where either the work of excavation has not been started or the base has been completed.

**8-4.4 Coordination with other Contractors:** Sequence the work and dispose of materials so as not to interfere with the operations of other Contractors engaged upon adjacent work; join the work to that of others in a proper manner, in accordance with the spirit of the Contract Documents; and perform the work in the proper sequence in relation to that of other contractors; all as may be directed by the Director.

Each contractor is responsible for any damage done by him or his agents to the work performed by another contractor.

**8-4.5 Drainage:** Conduct the operations and maintain the work in such condition to provide adequate drainage at all times. Do not obstruct existing functioning storm sewers, gutters, ditches, and other run-off facilities. Maintain all existing storm sewers, gutters, ditches, and other run-off facilities in an operable condition as necessary to provide adequate drainage at all times.

**8-4.6 Fire Hydrants:** Keep fire hydrants on or adjacent to the highway accessible to fire apparatus at all times, and do not place any material or obstruction within 15 feet of any fire hydrant.

**8-4.7 Protection of Structures:** Do not operate heavy equipment close enough to pipe headwalls or other structures to cause their displacement.

**8-4.8 Fencing:** Erect permanent fence as a first order of business on all projects that include fencing where the Director determines that the fencing is necessary to maintain the security of livestock on adjacent property, or for protection of pedestrians who are likely to gain access to the project from adjacent property.

**8-4.9 Contaminated Materials:** When the construction operations encounter or expose any abnormal condition that may indicate the presence of a contaminated material, discontinue such operations in the vicinity of the abnormal condition and notify the Director immediately. Be alert for the presence of tanks or barrels; discolored or stained earth, metal, wood, ground water;



visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal as possible indicators of the presence of contaminated materials. Treat these conditions with extraordinary caution.

Make every effort to minimize the spread of any contaminated materials into uncontaminated areas.

Do not resume the construction operations in the vicinity of the abnormal conditions until so directed by the Director.

Dispose of the contaminated material in accordance with the requirements and regulations of any Local, State, or Federal agency having jurisdiction. Where the Contractor performs work necessary to dispose of contaminated material, and the Contract does not include pay items for disposal, the County will pay for this work as provided in 4-4.

The County agrees to hold harmless and indemnify the Contractor for damages when the Contractor discovers or encounters contaminated materials or pollutants during the performance of services for the County when the presence of such materials or pollutants were unknown or not reasonably discoverable. Such indemnification agreement is only effective if the Contractor immediately stops work and notifies the County of the contaminated material or pollutant problem.

Such indemnification agreement is not valid for damages resulting from the Contractor's willful, wanton, or intentional conduct or the operations of Contaminated and Hazardous Material Contractors.

#### **8-5 Qualifications of Contractor's Personnel.**

Provide competent, careful, and reliable superintendents, foremen, and workmen. Provide workmen with sufficient skill and experience to properly perform the work assigned to them. Provide workmen engaged on special work, or skilled work, such as bituminous courses or mixtures, concrete bases, pavements, or structures, or in any trade, with sufficient experience in such work to perform it properly and satisfactorily and to operate the equipment involved. Provide workmen that shall make due and proper effort to execute the work in the manner prescribed in the Contract Documents, or the Director may take action as prescribed below.

The Contractor shall assign a full-time superintendent to routinely and constantly supervise, manage, plan, monitor, schedule, and control the construction operations on behalf of the Contractor. Trade workers will not be considered to be a full-time superintendent. The Contractor's superintendent shall be present on the project at all times when the Contractor's work crews, or work crews of other parties authorized by the Director, are engaged in any activity whatsoever associated with the project. Should the Contractor fail to comply with the above condition, the Director may, at his discretion, deduct from the Contractor's partial monthly payment estimate, the amount of \$250 per hour for each hour lacking adequate superintendence. This deduction is to account for the County's loss of adequate supervision, not as a penalty, but as liquidated damages for services not rendered.

It is prohibited as a conflict of interest for a Contractor to subcontract with a Consultant to perform Contractor Quality Control when the Consultant is under contract with the County to perform work on any project described in the Contractor's Contract with the County. Prior to approving a Consultant for Contractor Quality Control, the Contractor shall submit to the County a Certificate from the proposed Consultant certifying that no conflict of interest exists.

Whenever the Director determines that any person employed by the Contractor is incompetent, unfaithful, intemperate, disorderly, or insubordinate, the Director will provide written notice and the Contractor shall discharge the person from the work. Do not employ any

discharged person on the project without the written consent of the Director. If the Contractor fails to remove such person or persons, the Director may withhold all estimates that are or may become due, or suspend the work until the Contractor complies with such orders. Protect, defend, indemnify, and hold the County, its agents, officials, and employees harmless from all claims, actions, or suite arising from such removal, discharge, or suspension of employees.

## **8-6 Temporary Suspension of Contractor's Operations.**

**8-6.1 Authority to Suspend Contractor's Operations:** The Director has the authority to suspend the Contractor's operations, wholly or in part. The Director will order such suspension in writing, giving in detail the reasons for the suspension. Contract Time will be charged during all suspensions of Contractor's operations. The County may grant an extension of Contract Time in accordance with 8-7.3.2 when determined appropriate in the County's sole judgment.

No additional compensation or time extension will be paid or granted to the Contractor when the operations are suspended for the following reasons:

1. The Contractor fails to comply with the Contract Documents.
2. The Contractor fails to carry out orders given by the Director.
3. The Contractor causes conditions considered unfavorable for continuing

the Work.

Immediately comply with any suspension order. Do not resume operations until authorized to do so by the Director in writing. Any operations performed by the Contractor, and otherwise constructed in conformance with the provisions of the Contract, after the issuance of the suspension order and prior to the Director's authorization to resume operations will be at no cost to the County. Further, failure to immediately comply with any suspension order will also constitute an act of default by the Contractor and is deemed sufficient basis in and of itself for the County to declare the Contractor in default, in accordance with 8-9, with the exception that the Contractor will not have ten calendar days to correct the conditions for which the suspension was ordered.

**8-6.1.1 State of Emergency:** The Director has the authority to suspend the Contractor's operations, wholly or in part, pursuant to a Governor's Declaration of a State of Emergency. The Director will order such suspension in writing, giving in detail the reasons for the suspension. Contract Time will be charged during all suspensions of Contractor's operations. The County, at its sole discretion, may grant an extension of Contract Time and reimburse the Contractor for specific costs associated with such suspension. Further, in such instances, the County's determination as to entitlement to either time or compensability will be final, unless the Contractor can prove by clear and convincing evidence to a Disputes Review Board that the County's determination was without any reasonable factual basis

**8-6.2 Prolonged Suspensions:** If the Director suspends the Contractor's operations for an indefinite period, store all materials in such manner that they will not obstruct or impede the traveling public unnecessarily or become damaged in any way. Take every reasonable precaution to prevent damage to or deterioration of the work performed. Provide suitable drainage of the roadway by opening ditches, shoulder drains, etc., and provide any temporary structures necessary for public travel through the project.

**8-6.3 Permission to Suspend Contractor's Operations:** Do not suspend operations or remove equipment or materials necessary for completing the work without obtaining the Director's written permission. Submit all requests for suspension of operations in writing to the Director, and identify specific dates to begin and end the suspension. The Contractor is not entitled to any additional compensation for suspension of operations during such periods.

**8-6.4 Suspension of Contractor's Operations - Holidays and Special Events:** Unless the Contractor submits a written request to work during one or more days of a Holiday or Special Event at least ten calendar days in advance of the beginning date of the Holiday or Special Event and receives written approval from the Director, the Contractor shall not work on the following days: Martin Luther King, Jr. Day; Memorial Day; the Saturday and Sunday immediately preceding Memorial Day; Independence Day; Independence Day (Observed); Labor Day; the Friday, Saturday, and Sunday immediately preceding Labor Day; Veterans Day; Veterans Day (Observed); the Wednesday immediately preceding Thanksgiving Day; Thanksgiving Day; the Friday, Saturday and Sunday immediately following Thanksgiving Day; December 24 through January 2, inclusive; and Special Events noted in the Plans. Contract Time will be charged during these Holiday and Special Event periods. Contract Time will be adjusted in accordance with 8-7.3.2. The Contractor is not entitled to any additional compensation beyond any allowed Contract Time adjustment for suspension of operations during such Holiday and Special Event periods.

During such suspensions, remove all equipment and materials from the clear zone, except those required for the safety of the traveling public and retain sufficient personnel at the job site to properly meet the requirements of Sections 102 and 104. The Contractor is not entitled to any additional compensation for removal of equipment from clear zones or for compliance with Section 102 and Section 104 during such Holiday and Special Event periods.

## **8-7 Computation of Contract Time.**

**8-7.1 General:** Perform the contracted work fully, entirely, and in accordance with the Contract Documents within the Contract Time specified in the proposal, or as may be extended in accordance with the provisions herein below.

The County considers in the computation of the Contract Time the effect that utility relocation and adjustments have on job progress and the scheduling of construction operations required in order to adequately maintain traffic, as detailed in the Plans or as scheduled in the Special Provisions.

**8-7.2 Date of Beginning of Contract Time:** The date on which Contract Time begins is either the date on which the Contractor actually begins work, or the date for beginning the charging of Contract Time as set forth in the proposal; whichever is earlier.

### **8-7.3 Adjusting Contract Time:**

**8-7.3.1 Increased Work:** The County may grant an extension of Contract Time when it increases the Contract amount due to overruns in original Contract items, adds new work items, or provides for unforeseen work. The County will base the consideration for granting an extension of Contract Time on the extent that the time normally required to complete the additional designated work delays the Contract completion schedule.

**8-7.3.2 Contract Time Extensions:** The County may grant an extension of Contract Time when a controlling item of work is delayed by factors not reasonably anticipated or foreseeable at the time of bid. The County may allow such extension of time only for delays occurring during the Contract Time period or authorized extensions of the Contract Time period. When failure by the County to fulfill an obligation under the Contract results in delays to the controlling items of work, the County will consider such delays as a basis for granting a time extension to the Contract.

Whenever the Director suspends the Contractor's operations, as provided in 8-6, for reasons other than the fault of the Contractor, the Director will grant a time extension

for any delay to a controlling item of work due to such suspension. The County will not grant time extensions to the Contract for delays due to the fault or negligence of the Contractor.

The County does not include an allowance for delays caused by the effects of inclement weather or suspension of Contractor's operations as defined in 8-6.4, in establishing Contract Time. The Director will continually monitor the effects of weather and, when found justified, grant time extensions on either a bimonthly or monthly basis. The Director will not require the Contractor to submit a request for additional time due to the effects of weather.

The County will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions, related adverse soil conditions or suspension of operations as defined in 8-6.4 that prevent the Contractor from productively performing controlling items of work resulting in:

1. The Contractor being unable to work at least 50% of the normal work day on pre-determined controlling work items; or

2. The Contractor must make major repairs to work damaged by weather, provided that the damage is not attributable to the Contractor's failure to perform or neglect; and provided that the Contractor was unable to work at least 50% of the normal workday on pre-determined controlling work items.

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

The County will consider the delays in delivery of materials or component equipment that affect progress on a controlling item of work as a basis for granting a time extension if such delays are beyond the control of the Contractor or supplier. Such delays may include an area-wide shortage, an industry-wide strike, or a natural disaster that affects all feasible sources of supply. In such cases, the Contractor shall submit substantiating letters from a representative number of manufacturers of such materials or equipment clearly confirming that the delays in delivery were the result of an area-wide shortage, an industry-wide strike, etc. No additional compensation will be made for delays caused by delivery of materials or component equipment.

The County will not consider requests for time extension due to delay in the delivery of custom manufactured equipment such as traffic signal equipment, highway lighting equipment, etc., unless the Contractor submits documentation that he placed the order for such equipment in a timely manner, the delay was caused by factors beyond the manufacturer's control, and the lack of such equipment caused a delay in progress on a controlling item of work. No additional compensation will be paid for delays caused by delivery of custom manufactured equipment.

The County will consider the effect of utility relocation and adjustment work on job progress as the basis for granting a time extension only if all the following criteria are met:

1. Delays are the result of either utility work that was not detailed in the Plans, or utility work that was detailed in the Plans but was not accomplished in reasonably close accordance with the schedule included in the Contract Documents.

2. Utility work actually affected progress toward completion of controlling work items.

3. The Contractor took all reasonable measures to minimize the effect of utility work on job progress, including cooperative scheduling of the Contractor's operations with the scheduled utility work at the preconstruction conference and providing

adequate advance notification to utility companies as to the dates to coordinate their operations with the Contractor's operations to avoid delays.

As a condition precedent to an extension of Contract Time the Contractor must submit to the Director:

A preliminary request for an extension of Contract Time must be submitted in writing to the Director within ten calendar days after the commencement of a delay to a controlling item of work. If the Contractor fails to submit this required preliminary request for an extension of Contract Time, the Contractor fully, completely, absolutely and irrevocably waives any entitlement to an extension of Contract Time for that delay. In the case of a continuing delay only a single preliminary request for an extension of Contract Time will be required. Each such preliminary request for an extension of Contract Time shall include as a minimum the commencement date of the delay, the cause of the delay, and the controlling item of work affected by the delay.

Furthermore, the Contractor must submit to the Director a request for a Contract Time extension in writing within 30 days after the elimination of the delay to the controlling item of work identified in the preliminary request for an extension of Contract Time. Each request for a Contract Time extension shall include as a minimum all documentation that the Contractor wishes the County to consider related to the delay, and the exact number of days requested to be added to Contract Time. If the Contractor contends that the delay is compensable, then the Contractor shall also be required to submit with the request for a Contract Time extension a detailed cost analysis of the requested additional compensation. If the Contractor fails to submit this required request for a Contract Time extension, with or without a detailed cost analysis, depriving the Director of the timely opportunity to verify the delay and the costs of the delay, the Contractor waives any entitlement to an extension of Contract Time or additional compensation for the delay.

Upon timely receipt of the preliminary request of Contract Time from the Contractor, the Director will investigate the conditions, and if it is determined that a controlling item of work is being delayed for reasons beyond the control of the Contractor the Director will take appropriate action to mitigate the delay and the costs of the delay. Upon timely receipt of the request for a Contract Time extension the Director will further investigate the conditions, and if it is determined that there was an increase in the time or the cost of performance of the controlling item of work beyond the control of the Contractor, then an adjustment of Contract Time will be made, and a monetary adjustment will be made, excluding loss of anticipated profits, and the Contract will be modified in writing accordingly.

The existence of an accepted schedule, including any required update(s), as stated in 8-3.2, is a condition precedent to the Contractor having any right to the granting of an extension of Contract Time or any monetary compensation arising out of any delay. Contractor failure to have an accepted schedule, including any required update(s), for the period of potential impact, or in the event the currently accepted schedule and applicable updates do not accurately reflect the actual status of the project or fail to accurately show the true controlling or non-controlling work activities for the period of potential impact, will result in any entitlement determination as to time or money for such period of potential impact being limited solely to the County's analysis and identification of the actual controlling or non-controlling work activities. Further, in such instances, the County's determination as to entitlement as to either time or compensability will be final, unless the Contractor can prove by clear and convincing evidence

to a Disputes Review Board that the County's determination was without any reasonable factual basis.

## **8-8 Reserved**

### **8-9 Default and Termination of Contract.**

**8-9.1 Determination of Default:** The following acts or omissions constitute acts of default and, except as to subparagraphs 9 and 11, the County will give notice, in writing, to the Contractor and his surety for any delay, neglect or default, if the Contractor:

1. fails to begin the work under the Contract within the time specified in the Notice to Proceed;

2. fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure prompt completion of the Contract;

3. performs the work unsuitably, or neglects or refuses to remove materials or to perform anew such work that the Director rejects as unacceptable and unsuitable;

4. discontinues the prosecution of the work, or fails to resume discontinued work within a reasonable time after the Director notifies the Contractor to do so;

5. becomes insolvent or is declared bankrupt, or files for reorganization under the bankruptcy code, or commits any act of bankruptcy or insolvency, either voluntarily or involuntarily;

6. allows any final judgment to stand against him unsatisfied for a period of ten calendar days;

7. makes an assignment for the benefit of creditors;

8. fails to comply with Contract requirements regarding minimum wage payments or EEO requirements;

9. fails to comply with the Director's written suspension of work order within the time allowed for compliance and which time is stated in that suspension of work order; or

10. for any other cause whatsoever, fails to carry on the work in an acceptable manner, or if the surety executing the bond, for any reasonable cause, becomes unsatisfactory in the opinion of the County.

11. fails to comply with 3-9.

For a notice based upon reasons stated in subparagraphs (1) through (8) and (10): if the Contractor, within a period of ten calendar days after receiving the notice described above, fails to correct the conditions of which complaint is made, the County will, upon written certificate from the Director of the fact of such delay, neglect, or default and the Contractor's failure to correct such conditions, have full power and authority, without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

If the Contractor, after having received a prior notice described above for any reason stated in subparagraph (2), (3), (4), (5), (6) or (8), commits a second or subsequent act of default for any reason covered by the same subparagraph (2), (3), (4), (5), (6) or (8) as stated in the prior notice, and regardless whether the specific reason is the same, then, regardless of whether the Contractor has cured the deficiency stated in that prior notice, the County will, upon written certificate from the Director of the fact of such delay, neglect or default and the Contractor's failure to correct such conditions, have full power and authority, without any prior written notice to the Contractor and without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (9), if the Contractor fails to comply with the Director's written suspension of work order within the time allowed for compliance and which time is stated in that suspension of work order, the County will, upon written certificate from the Director of the fact of such delay and the Contractor's failure to correct that condition, have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (11), if the Contractor fails to comply with 3-9, the County will have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

The County has no liability for anticipated profits for unfinished work on a Contract that the County has determined to be in default.

Notwithstanding the above, the County shall have the right to declare the Contractor (or its "affiliate") in default and immediately terminate this Contract, without any prior notice to the Contractor, in the event the Contractor (or its "affiliate") is at any time "convicted" of a "contract crime," as these terms are defined in Section 337.165(1), Florida Statutes. The County's right to default the Contractor (or its "affiliate") for "conviction" of a "contract crime" shall extend to and is expressly applicable to any and all County Contracts that were either advertised for bid; for which requests for proposals or letters of interest were requested; for which an intent to award was posted or otherwise issued; or for which a Contract was entered into, after the date that the underlying or related criminal indictment, criminal information or other criminal charge was filed against the Contractor (or its "affiliate") that resulted in the "conviction." In the event the County terminates this Contract for this reason, the Contractor shall hereby forfeit any claims for additional compensation, extra time, or anticipated profits. The Contractor shall only be paid for any completed work up to the date of termination. Further, the Contractor shall be liable for any and all additional costs and expenses the County incurs in completing the Contract work after such termination.

**8-9.2 Termination of Contract for Convenience:** The County may terminate the entire Contract or any portion thereof, if the Director determines that a termination is in the County's interest. The Director will deliver to the Contractor a Written Notice of Termination specifying the extent of termination and the effective date.

When the County terminates the entire Contract, or any portion thereof, before the Contractor completes all items of work in the Contract, the County will make payment for the actual number of units or items of work that the Contractor has completed, at the Contract unit price, and according to the formulas and provisions set forth in 4-3.2 for items of work partially completed, and such payments will constitute full and complete compensation for such work or items. No payment of any kind or amount will be made for items of work not started. The County will not consider any claim for loss of anticipated profits, or overhead of any kind (including home office and jobsite overhead or other indirect impacts) except as provided in 4-3.2 for partially completed work.

The County will consider reimbursing the Contractor for actual cost of mobilization (when not otherwise included in the Contract) including moving equipment to the job where the volume of the work that the Contractor has completed is too small to compensate the Contractor for these expenses under the Contract unit prices.

The County may purchase at actual cost acceptable materials and supplies procured for the work, that the County has inspected, tested, and approved and that the

Contractor has not incorporated in the work. Submit the proof of actual cost, as shown by receipted bills and actual cost records, at such points of delivery as the Director may designate.

Termination of a contract or a portion thereof, under the provisions of this Subarticle, does not relieve the Contractor or the surety of its responsibilities for the completed portion of the Contract or its obligations for and concerning any just claims arising out of the work performed.

All Contractor claims for additional payment, due to the County's termination of the entire Contract or any portion thereof, must meet the requirements of 5-12.

**8-9.3 Completion of Work by County:** Upon declaration of default, the County will have full authority to appropriate or use any or all suitable and acceptable materials and equipment on the site and may enter into an agreement with others to complete the work under the Contract, or may use other methods to complete the work in an acceptable manner. The County will charge all costs that the County incurs because of the Contractor's default, including the costs of completing the work under the Contract, against the Contractor. If the County incurs such costs in an amount that exceeds the sum that would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay the County the amount of the excess.

If, after the ten day notice period and prior to any action by the County to otherwise complete the work under the Contract, the Contractor establishes his intent to prosecute the work in accordance with the County's requirements, then the County may allow the Contractor to resume the work, in which case the County will deduct from any monies due or that may become due under the Contract, any costs to the County incurred by the delay, or from any reason attributable to the delay.

## **8-10 Liquidated Damages for Failure to Complete the Work.**

### **8-10.1 Reserved.**

**8-10.2 Amount of Liquidated Damages:** Applicable liquidated damages are the amounts established in the following schedule:

Original Contract Amount	Daily Charge Per Calendar Day
\$50,000 and under.....	\$956
Over \$50,000 but less than \$250,000.....	\$964
\$250,000 but less than \$500,000.....	\$1,241
\$500,000 but less than \$2,500,000.....	\$1,665
\$2,500,000 but less than \$5,000,000.....	\$2,712
\$5,000,000 but less than \$10,000,000.....	\$3,447
\$10,000,000 but less than \$15,000,000.....	\$4,866
\$15,000,000 but less than \$20,000,000.....	\$5,818
\$20,000,000 and over.....	\$9,198 plus 0.00005 of any amount over \$20 million (Round to nearest whole dollar)

**8-10.3 Determination of Number of Days of Default:** For all contracts, regardless of whether the Contract Time is stipulated in calendar days or working days, the Director will count default days in calendar days.

**8-10.4 Conditions under which Liquidated Damages are Imposed:** If the Contractor or, in case of his default, the surety fails to complete the work within the time stipulated in the Contract, or within such extra time that the County may have granted then the Contractor or, in



case of his default, the surety shall pay to the County, not as a penalty, but as liquidated damages, the amount so due as determined in 8-10.2.

**8-10.5 Right of Collection:** The County has the right to apply, as payment on such liquidated damages, any money the County owes the Contractor.

**8-10.6 Allowing Contractor to Finish Work:** The County does not waive its right to liquidated damages due under the Contract by allowing the Contractor to continue and to finish the work, or any part of it, after the expiration of the Contract Time.

**8-10.7 Completion of Work by County:** In the case of a default of the Contract and the completion of the work by the County, the Contractor and his surety are liable for the liquidated damages under the Contract, but the County will not charge liquidated damages for any delay in the final completion of the County's performance of the work due to any unreasonable action or delay on the part of the County.

#### **8-11 Release of Contractor's Responsibility.**

The County considers the Contract complete when the Contractor has completed all work and the County has accepted the work. The County will then release the Contractor from further obligation except as set forth in his bond, and except as provided in 5-13.

#### **8-12 Recovery of Damages Suffered by Third Parties.**

In addition to the damages provided for in 8-10.2 and pursuant to Section 337.18 of the Florida Statutes, when the Contractor fails to complete the work within the Contract Time the County may recover from the Contractor amounts that the County pays for damages suffered by third parties unless the failure to timely complete the work was caused by the County's act or omission.

## **SECTION 9 MEASUREMENT AND PAYMENT**

### **9-1 Measurement of Quantities.**

**9-1.1 Measurement Standards:** The Director will measure all work completed under the Contract in accordance with the United States Standard Measures.

**9-1.2 Method of Measurements:** The Director will take all measurements horizontally or vertically.

#### **9-1.3 Determination of Pay Areas:**

**9-1.3.1 Final Calculation:** When measuring items paid for on the basis of area of finished work, where the pay quantity is designated to be determined by calculation, the Director will use lengths and widths in the calculations based on the station to station dimensions shown in the Plans; the station to station dimensions actually constructed within the limits designated by the Director; or the final dimensions measured along the surface of the completed work within the neat lines shown in the Plans or designated by the Director. The Director will use the method or combination of methods of measurement that reflect, with reasonable accuracy, the actual surface area of the finished work as the Director determines.

**9-1.3.2 Plan Quantity:** When measuring items paid for on the basis of area of finished work, where the pay quantity is designated to be the plan quantity, the Director will determine the final pay quantity based on the plan quantity subject to the provisions of 9-3.2. Generally, the Director will calculate the plan quantity using lengths based on station to station dimensions and widths based on neat lines shown in the Plans.

**9-1.4 Construction Outside Authorized Limits:** The Director will not pay for surfaces constructed over a greater area than authorized, or for material that the Contractor has moved from outside of slope stakes and lines shown in the Plans, except where the Director provides written instruction for the Contractor to perform such work.

**9-1.5 Truck Requirements:** Provide all trucks with numbers and certify that all trucks used have a manufacturer's certification or permanent decal showing the truck capacity rounded to the nearest tenth of a cubic yard placed on both sides of the truck. This capacity will include the truck body only and any side boards added will not be included in the certified truck body capacity. Ensure the lettering and numbers are legible for identification purposes at all times.

**9-1.6 Ladders and Instrument Stands for Bridge Projects:** On bridge projects, in order to facilitate necessary measurements, provide substantial ladders to the tops of piers and bents, and place and move such ladders as the Director directs.

For bridge projects crossing water or marshy areas, supply fixed stands for instrument mounting and measurements, in accordance with the details stipulated in the Specifications for the project.

### **9-2 Scope of Payments.**

**9-2.1 Items Included in Payment:** Accept the compensation as provided in the Contract as full payment for furnishing all materials and for performing all work contemplated and embraced under the Contract; also for all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its final acceptance; also for all other costs incurred under the provisions of Division I.

For any item of work contained in the proposal, except as might be specifically provided otherwise in the basis of payment clause for the item, include in the Contract unit price (or lump sum price) for the pay item or items the cost of all labor, equipment, materials, tools and incidentals required for the complete item of work, including all requirements of the Section specifying such item of work, except as specifically excluded from such payments.

#### **9-2.1.1 Reserved**

**9-2.1.2 Bituminous Material:** Prepare a Contractor's Certification of Quantities, using the FDOT's current approved form for Superpave Asphalt Base, Driveway Asphalt Base, Asphalt Treated Permeable Base, Superpave Asphaltic Concrete, Miscellaneous Asphalt Pavement, Asphalt Concrete Friction Course, and Asphalt Rubber Membrane Interlayer pay items. Submit this certification to the Director no later than Twelve O'clock noon Monday after the estimate cut-off or as directed by the Director, based on the quantity of asphalt produced and accepted on the roadway per Contract. Ensure the certification includes the Project Number, Contract Number, Financial Project Identification (FPID) Number (if applicable), Certification Date and Number, the period the certification represents and the tons produced for each asphalt pay item.

On Contracts having an original Contract Time of more than 365 calendar days, or more than 5,000 tons of asphalt concrete, the County will adjust the bid unit price for bituminous material, excluding cutback and emulsified asphalt to reflect increases or decreases in the Asphalt Price Index (API) of bituminous material from that in effect during the month in which bids were received. The Contractor will not be given the option of accepting or rejecting this adjustment. Bituminous adjustments will be made only when the current API (CAPI) varies by more than 5% of the API prevailing in the month when bids were received (BAPI), and then only on the portion that exceeds 5%.

The County will determine the API for each month by averaging quotations in effect on the first day of the month at all terminals that could reasonably be expected to furnish bituminous material to projects in the State of Florida.

The API will be available on the Construction Office website before the 15<sup>th</sup> day of each month at the following URL:

<https://www.fdot.gov/construction/fuel-Bit/Fuel-Bit.shtm> .

Payment on progress estimates will be adjusted to reflect adjustments in the prices for bituminous materials in accordance with the following:

$$\text{\$ Adjustment} = (\text{ID})(\text{Gallons})$$

Where ID = Index Difference =  $[\text{CAPI} - 0.95(\text{BAPI})]$  when the API has decreased between the month of bid and month of this progress estimate.

Where ID = Index Difference =  $[\text{CAPI} - 1.05(\text{BAPI})]$  when the API has increased between the month of bid and month of this progress estimate.

Payment will be made on the current progress estimate to reflect the index difference at the time work was performed.

For asphalt concrete items payable by the ton or square yard, the number of gallons will be determined assuming a mix design with 6.25% liquid asphalt weighing 8.58 pounds per gallon.

For asphalt concrete items payable by the cubic yard, the number of gallons will be determined assuming a mix design with 3% liquid asphalt weighing 8.58 pounds per gallon.

**9-2.2 Non-Duplication of Payment:** In cases where the basis of payment clause in these Specifications relating to any unit price in the bid schedule requires that the unit price cover and be considered compensation for certain work or material essential to the item, the County will not measure or pay for this same work or material under any other pay item that may appear elsewhere in these Specifications.

### **9-3 Compensation for Altered Quantities.**

**9-3.1 General:** When alteration in Plans or quantities of work not requiring a supplemental agreement as hereinbefore provided for are offered and performed, the Contractor shall accept payment in full at Contract unit bid prices for the actual quantities of work done, and no allowance will be made for increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor, resulting either directly from such alterations, or indirectly from unbalanced allocation among the Contract items of overhead expense on the part of the bidder and subsequent loss of expected reimbursement therefore, or from any other cause.

Compensation for alterations in Plans or quantities of work requiring supplemental agreements shall be stipulated in such agreement, except when the Contractor proceeds with the work without change of price being agreed upon, the Contractor shall be paid for such increased or decreased quantities at the Contract unit prices bid in the Proposal for the items of work. If no Contract unit price is provided in the Contract, and the parties cannot agree as to a price for the work, the Contractor agrees to do the work in accordance with 4-3.2.

#### **9-3.2 Payment Based on Plan Quantity:**

**9-3.2.1 Error in Plan Quantity:** As used in this Article, the term “substantial error” is defined as the smaller of (1) or (2) below:

1. a difference between the original plan quantity and final quantity of more than 5%,
2. a change in quantity which causes a change in the amount payable of more than \$5,000.

On multiple job Contracts, changes made to an individual pay item due to substantial errors will be based on the entire Contract quantity for that pay item.

Where the pay quantity for any item is designated to be the original plan quantity, the County will revise such quantity only in the event that the County determines it is in substantial error. In general, the County will determine such revisions by final measurement, plan calculations, or both, as additions to or deductions from plan quantities.

In the event that either the County or the Contractor contends that the plan quantity for any item is in error and additional or less compensation is thereby due, the claimant shall submit, at their own expense, evidence of such in the form of acceptable and verifiable measurements or calculations. The County will not revise the plan quantity solely on the basis of a particular method of construction that the Contractor selects. For earthwork items, the claimant must note any differences in the original ground surfaces from that shown in the original Plan cross-sections that would result in a substantial error to the plan quantity, and must be properly documented by appropriate verifiable level notes, acceptable to both the Contractor and the County, prior to disturbance of the original ground surface by construction operations. The claimant shall support any claim based upon a substantial error for differences in the original ground surface by documentation as provided above.

**9-3.2.2 Authorized Changes in Limits of Work:** Where the County designates the pay quantity for any item to be the original plan quantity and authorizes a plan change which

results in an increase or decrease in the quantity of that item, the County will revise the plan quantity accordingly. In general, the County will determine such revisions by final measurement, plan calculations or both.

**9-3.2.3 Specified Adjustments to Pay Quantities:** Do not apply the limitations specified in 9-3.2.1 and 9-3.2.2 to the following:

1. Where these Specifications or Special Provisions provide that the County determines the pay quantity for an item on the basis of area of finished work adjusted in accordance with the ratio of measured thickness to nominal thickness.

2. Where these Specifications provide for a deduction due to test results falling outside of the allowable specified tolerances.

3. To payment for extra length fence posts, as specified in 550-6.3.

### **9-3.3 Lump Sum Quantities:**

**9-3.3.1 Error in Lump Sum Quantity:** Where the County designates the pay quantity for an item to be a lump sum and the Plans show an estimated quantity, the County will adjust the lump sum compensation only in the event that either the Contractor submits satisfactory evidence or the County determines and furnishes satisfactory evidence that the lump sum quantity shown is in substantial error as defined in 9-3.2.1.

**9-3.3.2 Authorized Changes in Work:** Where the County designates the pay quantity for an item to be a lump sum and the Plans show an estimated quantity, the County will adjust compensation for that item proportionately when an authorized plan change is made which results in an increase or decrease in the quantity of that item. When the Plans do not show an estimated plan quantity or the applicable specifications do not provide adjustments for contingencies, the County will compensate for any authorized plan change resulting in an increase or decrease in the cost of acceptably completing the item by establishing a new unit price through a supplemental agreement as provided in 4-3.2.

**9-3.4 Deviation from Plan Dimensions:** If the Contractor fails to construct any item to Plan or to authorized dimensions within the specified tolerances, the Director, at his discretion will: require the Contractor to reconstruct the work to acceptable tolerances at no additional cost to the County; accept the work and provide the Contractor no pay; or accept the work and provide the Contractor a reduced final pay quantity or reduced unit price. The County will not make reductions to final pay quantities for those items designated to be paid on the basis of original plan quantity or a lump sum quantity under the provisions of this Article unless such reduction results in an aggregate monetary change per item of more than \$100, except that for earthwork items, the aggregate change must exceed \$5,000 or 5% of the original plan quantity, whichever is smaller. If, in the opinion of the Director, the Contractor has made a deliberate attempt to take advantage of the construction tolerances as defined in 120-12.1 to increase borrow excavation in fill sections or to decrease the required volume of roadway or lateral ditch excavation or embankment, the County will take appropriate measurements and will apply reductions in pay quantities. The County will not use the construction tolerance, as defined in 120-12.1, as a pay tolerance. The construction tolerance is not to be construed as defining a revised authorized template.

### **9-4 Deleted Work.**

The County will have the right to cancel the portions of the Contract relating to the construction of any acceptable item therein, by making an adjustment in payment to the Contractor of a fair and equitable amount covering the value of all cancelled work less all items of cost incurred prior to the date that the Director cancels the work.

## **9-5 Partial Payments.**

**9-5.1 General:** The Director will make partial payments on monthly estimates based on the amount of work that the Contractor completes during the month (including delivery of certain materials, as specified herein below). The Director will make approximate monthly payments, and the County will correct all partial estimates and payments in the subsequent estimates and in the final estimate and payment.

The County will base the amount of such payments on the total value of the work that the Contractor has performed to the date of the estimate, based on the quantities completed and the Contract prices, less payments previously made and less any retainage withheld.

Contract amount is defined as the original Contract amount adjusted by approved supplemental agreements.

**9-5.1.1 Applications for Payment:** On or before the 25<sup>th</sup> day of each month, the Contractor shall submit six notarized copies of its monthly application for payment to the CEI Consultant for Work performed during the previous month. Each application for payment shall be accompanied by the certifications described in 9-5.6. The County shall not be required to make payment until and unless these certifications are furnished by the Contractor.

Invoices received after the 25<sup>th</sup> day of each month shall be considered for payment as part of the next month's application. Within ten calendar days of receipt of each application for payment, the CEI Consultant will either:

1. indicate his approval of the requested amount;
2. indicate his approval of only a portion of the requested payment, stating in writing his reasons therefore; or
3. return the application for payment to the Contractor indicating, in writing, the reason for refusing to approve payment and the action necessary to make the payment request proper.

In the event of a total denial and return of the application for payment by the CEI Consultant, the Contractor may make the necessary corrections and resubmit the application for payment. The County shall, within thirty calendar days after County approval of an application for payment, pay the Contractor the amounts so approved. Provided, however, in no event shall the County be obligated to pay any amount greater than that portion of the application for payment approved by the CEI Consultant. Monthly payments to the Contractor shall in no way imply or constitute approval or acceptance of Contractor's Work.

**9-5.1.2 Retainage:** The County shall initially retain ten percent of the gross amount of each monthly application for payment or ten percent of the portion thereof approved by the CEI Consultant for payment, whichever is less. After 50% of the Contract amount has been earned, the County will reduce the retainage to five percent of each subsequent progress payment. Such sums shall be accumulated and released to the Contractor with final payment.

For purposes of determining when 50% of the Contract amount has been earned, stored materials and mobilization costs will be excluded.

Retainage will be determined for each job on multiple job Contracts. The County will not accept Securities, Certificates of Deposit or letters of credit as a replacement for retainage. Amounts withheld will not be released until payment of the final estimate.

### **9-5.2 Reserved**

### **9-5.3 Withholding Payment:**

**9-5.3.1 Withholding Payment for Defective Work:** If the County discovers any defective work or material prior to the final acceptance, or if the County has a reasonable doubt as to the integrity of any part of the completed work prior to final acceptance, then the County will not allow payment for such defective or questioned work until the Contractor has remedied the defect and removed any causes of doubt.

**9-5.3.2 Withholding Payment for Failure to Comply:** The County will withhold progress payments from the Contractor if he fails to comply with any or all of the following, as applicable, within 60 days after beginning work:

1. Comply with and submit required documentation relating to prevailing wage rate provisions, Equal Employment Opportunity, On-The-Job Training, and Affirmative Action;

2. Comply with the requirement to report all necessary information, including actual payments to DBEs, all other subcontractors and major suppliers, through the Internet based Equal Opportunity Reporting System;

3. Comply with or make a good faith effort to ensure employment opportunity for minorities and females in accordance with the required contract provisions for Federal Aid Construction Contracts, and

4. Comply with or make a good faith effort to meet On-The-Job Training goals.

The County will withhold progress payments until the Contractor has satisfied the above conditions.

**9-5.3.3 Withholding Payment for Other Reasons:** The County may withhold any payments otherwise due Contractor under this Agreement or any other agreement between the County and the Contractor, to such extent as may be necessary in the County's opinion to protect it from loss as a result of:

1. Third party claims filed or reasonable evidence indicating probable filing of such claims;

2. Failure of the Contractor to make payment properly to Subcontractors or for labor, materials, or equipment;

3. Reasonable doubt that the Work can be completed for the unpaid balance of the Contract amount;

4. Reasonable indication that the Work will not be completed within the Contract Time;

5. Unsatisfactory prosecution of the Work by the Contractor;

6. Failure to provide accurate and current red line documents, as-built drawings, or certified surveys;

7. Any other material breach of the Contract Documents.

If these conditions are not remedied or removed, the County may, after three calendar days' written notice, rectify the same at Contractor's expense. The County also may offset against any sums due Contractor the amount of any liquidated or unliquidated obligations of Contractor to the County.

**9-5.4 Release of Retainage After Acceptance:** When the Contractor has furnished the County with all submittals required by the Contract, such as invoices, DBE Participation Certification, properly executed and notarized Release and Affidavit, duly executed Surety's consent to final payment, EEO reports, materials certifications, certification of materials procured, etc., (excluding Contractor's letter of acceptance of final amount due and Form 21-A

release) and the Director has determined that the measurement and computation of pay quantities is correct, the County may reduce the retainage to two percent of the Contract plus any amount that the County elects to deduct for defective work as provided in 9-5.3.

The County will not allow a semifinal estimate under the provisions of the above paragraphs unless the time elapsing between (1) acceptance of the project and receipt of all test reports, invoices, etc., and (2) submission of the final estimate to the Contractor for acceptance, exceeds or is expected to exceed 30 days.

The County may deduct from payment estimates any sums that the Contractor owes to the County on any account. Where more than one project or job (separate project number) is included in the Contract, the County will distribute the reduced retainage as provided in the first paragraph of this subarticle to each separate project or job in the ratio that the Contract value of the work for the particular job bears to the total Contract amount.

#### **9-5.5 Partial Payments for Delivery of Certain Materials:**

**9-5.5.1 General:** The County will allow partial payments for new materials that will be permanently incorporated into the project and are stockpiled in approved locations in the project vicinity. Stockpile materials so that they will not be damaged by the elements and in a manner that identifies the project on which they are to be used.

The following conditions apply to all payments for stockpiled materials:

1. There must be reasonable assurance that the stockpiled material will be incorporated into the specific project on which partial payment is made.
2. The stockpiled material must be approved as meeting applicable specifications.
3. The total quantity for which partial payment is made shall not exceed the estimated total quantity required to complete the project.
4. The Contractor shall submit to the Director certified invoices to document the value of the materials received. The amount of the partial payment will be determined from invoices for the material up to the unit price in the Contract.
5. Delivery charges for materials delivered to the jobsite will be included in partial payments if properly documented.
6. Partial payments will not be made for materials which were stockpiled prior to award of the Contract for a project.

**9-5.5.2 Partial Payment Amounts:** The following partial payment restrictions apply:

1. Partial payments less than \$5,000 for any one month will not be processed.
2. Partial payments for structural steel and precast prestressed items will not exceed 85% of the bid price for the item. Partial payments for all other items will not exceed 75% of the bid price of the item in which the material is to be used.
3. Partial payment will not be made for aggregate and base course material received after paving or base construction operations begin except when a construction sequence designated by the County requires suspension of paving and base construction after the initial paving operations, partial payments will be reinstated until the paving and base construction resumes.

**9-5.5.3 Off Site Storage:** If the conditions of 9-5.5.1 are satisfied, partial payments will be allowed for materials stockpiled in approved in-state locations. Additionally,



partial payments for materials stockpiled in approved out-of-state locations will be allowed if the conditions of 9-5.5.1 and the following conditions are met:

1. Furnish the County a Materials Bond stating the supplier guarantees to furnish the material described in the Contract to the Contractor and County. Under this bond, the Obligor shall be the material supplier and the Obligees shall be the Contractor and the Lee County Board of County Commissioners. The bond shall be in the full dollar amount of the bid price for the materials described in the contract.

2. The following clauses must be added to the construction Contract between the Contractor and the supplier of the stockpiled materials:

“Notwithstanding anything to the contrary, <supplier> will be liable to the Contractor and Lee County, Florida County<supplier> default in the performance of this agreement.”

“Notwithstanding anything to the contrary, this agreement, and the performance bond issued pursuant to this agreement, does not alter, modify, or otherwise change the Contractor’s obligation to furnish the materials described in this agreement to Lee County, Florida County.”

3. The agreement between the Contractor and the supplier of the stockpiled materials must include provisions that the supplier will store the materials and that such materials are the property of the Contractor.

**9-5.6 Certification of Payment to Subcontractors:** The term “subcontractor,” as used herein, includes persons or firms furnishing materials or equipment incorporated into the work or stockpiled for which the County has made partial payment and firms working under equipment-rental agreements. The Contractor is required to pay all subcontractors for satisfactory performance of their Contracts before the County will make a further progress (partial) payment. The Contractor shall also return all retainage withheld to the subcontractors within 30 days after the subcontractor’s work is satisfactorily complete, as determined by the County. Prior to receipt of any progress (partial) payment, the prime contractor shall certify that all subcontractors having an interest in the Contract were paid for satisfactory performance of their Contracts and that the retainage is returned to subcontractors within 30 days after satisfactory completion of the subcontractor’s work. Submit this certification in the form designated by the County.

Within 30 days of the Contractor’s receipt of the final progress payment or any other payments thereafter, except the final payment, the Contractor shall pay all subcontractors and suppliers having an interest in the Contract for all work completed and materials furnished. The County will honor an exception to the above when the Contractor demonstrates good cause for not making any required payment and submits written notification of any such good cause to both the County and the affected subcontractors or suppliers within said 30 day period.

The Contractor shall indemnify and provide defense for the County when called upon to do so for all claims or suits against the County, by third parties, pertaining to Contractor payment or performance issues arising out of the Contract. It is expressly understood that the monetary limitation on the extent of the indemnification shall be the approved Contract amount, which shall be the original Contract amount as may be increased by subsequent Supplemental Agreements.

## **9-6 Record of Construction Materials.**

**9-6.1 General:** For all construction materials used in the construction of the project, (except materials exempted by 9-6.2), preserve for the County’s inspection the invoices and records of the materials for a period of three years from the date of completion of the project.

Apply this requirement when subcontractors purchase materials, and obtain the invoices and other materials records from the subcontractors. By providing the materials, the Contractor certifies that all invoices will be maintained for the required period.

**9-6.2 Non-Commercial Materials:** The provisions of 9-6.1 do not apply to materials generally classed as non-commercial, such as fill materials, local sand, sand-clay, or local materials used as stabilizer.

### **9-7 Disputed Amounts Due the Contractor.**

The County reserves the right to withhold from the final estimate any disputed amounts between the Contractor and the County. The County will release all other amounts due, as provided in 9-8.

### **9-8 Acceptance and Final Payment.**

**9-8.1 Acceptance and Final Payment Documents:** Whenever the Contractor has completely performed the work provided for under the Contract and the Director has performed a final inspection and made final acceptance (as provided in 5-10 and 5-11), and subject to the terms of 8-11, the Director will prepare a final estimate showing the value of the work as soon as the Director makes the necessary measurements and computations. The Director will correct all prior estimates and payments in the final estimate and payment. The County will pay the estimate, less any sums that the County may have deducted or retained under the provisions of the Contract, as soon as practicable after final acceptance of the work, along with all executed supplemental agreements received after final acceptance.

If the Contractor fails to furnish all required Contract Documents as listed in (1) through (9) below within 90 days of the County's offer of final payment or request for refund of overpayment, the County will not issue Acceptance and remaining retainage will continue to be withheld..

1. The Contractor has agreed in writing to accept the balance due or refund the overpayment, as determined by the County, as full settlement of his account under the Contract and of all claims in connection therewith, or the Contractor, has through the use of the Qualified Acceptance Letter, accepted the balance due or refunded the overpayment, as determined by the County, with the stipulation that his acceptance of such payment or the making of such refund does not constitute any bar, admission, or estoppel, or have any effect as to those payments in dispute or the subject of a pending claim between the Contractor and the County. To receive payment based on a Qualified Acceptance Letter, define in writing the dispute or pending claim with full particular of all items of all issues in dispute, including itemized amounts claimed for all particulars of all items, and submit it as part of the Qualified Acceptance Letter. The Contractor further agrees, by submitting a Qualified Acceptance Letter that any pending or future claim or suit is limited to those particulars, including the itemized amounts, defined in the original Qualified Acceptance Letter, and that he will commence with any such arbitration claim or suit within 820 calendar days from and after the time of final acceptance of the work and that his failure to file a formal claim within this period constitutes his full acceptance of the Director's final estimate and payment. The overpayment refund check from the Contractor, if required, will be considered a part of any Acceptance Letter executed.

2. The Contractor has properly maintained the project, as specified hereinbefore.

3. The Contractor has furnished a sworn affidavit to the effect that the Contractor has paid all bills and no suits are pending (other than those exceptions listed, if any)

**EXHIBIT F**  
**INSURANCE REQUIREMENTS**

**CERTIFICATES OF INSURANCE**

(1) The Contractor shall obtain and maintain such insurance as will protect it from: (1) claims under workers' compensation laws, disability benefit laws, or other similar employee benefit laws; (2) claims for damages because of bodily injury, occupational sickness or disease or death of its employees including claims insured by usual personal injury liability coverage; (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than its employees including claims insured by usual personal injury liability coverage; and (4) from claims for injury to or destruction of tangible property including loss of use resulting there from -- any or all of which claims may arise out of, or result from, the services, Work and operations carried out pursuant to and under the requirements of the Contract Documents, whether such services, Work and operations be by the Contractor, its employees, or by Subcontractor(s), or anyone employed by or under the supervision of any of them, or for whose acts any of them may be legally liable.

(2) This insurance shall be obtained and written for not less than the limits of liability specified hereinafter, or as required by law, whichever is greater.

(3) The Contractor shall require, and shall be responsible for ensuring throughout the time the Agreement is in effect, that any and all of its Subcontractors obtain and maintain until the completion of that Subcontractor's work, such of the insurance coverages described herein as are required by law to be provided on behalf of their employees and others.

(4) The Contractor shall obtain, have and maintain during the entire period of the Agreement insurance policies, which contain the following information and provisions:

- (A) The name and type of policy and coverages provided;
- (B) The amount or limit applicable to each coverage provided;
- (C) The date of expiration of coverage;
- (D) The designation of the County as an additional insured and a certificate holder (This requirement may be excepted for workers' compensation and professional liability Insurance);
- (E) The following clause must appear on the Certificate of Insurance:

Should any material change occur in any of the above described policies or should any of said policies be canceled before the expiration date thereof, the issuing company shall mail at least thirty (30) calendar days' written notice to the County.

(5) If the initial, or any subsequently issued Certificate of Insurance expires prior to the completion of the Work or termination of the Agreement, the Contractor shall furnish to the County, in triplicate, renewal or replacement Certificate(s) of Insurance not

later than thirty (30) calendar days prior to the date of their expiration. Failure of the Contractor to provide the County with such renewal certificate(s) shall be considered justification for the County to terminate the Agreement.

(6) Contractor shall include the County, the County's agents, officers and employees in the Contractor's General Liability and Automobile Liability policies as additional insureds.

(7) If the County has any objection to the coverage afforded by other provisions of the insurance required to be purchased and maintained by Contractor in accordance with the requirements of the Contract Documents on the basis of its not complying with the Contract Documents, the County shall notify Contractor in writing thereof within thirty (30) calendar days of the delivery of such certificates to the County. Contractor shall provide to the County such additional information with respect to its insurance as may be requested.

(8) The Contractor shall obtain and maintain the following insurance coverages as provided hereinbefore, and in the type, amounts and in conformance with the following minimum requirements:

## Lee County Insurance Requirements

**Minimum Insurance Requirements:** *Risk Management in no way represents that the insurance required is sufficient or adequate to protect the vendors' interest or liabilities. The following are the required minimums the vendor must maintain throughout the duration of this contract. The County reserves the right to request additional documentation regarding insurance provided*

- a. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and completed operations, independent contractors, contractual liability exposures with minimum limits of:

\$1,000,000 per occurrence  
\$2,000,000 general aggregate  
\$1,000,000 products and completed operations  
\$1,000,000 personal and advertising injury

- b. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 combined single limit (CSL); or  
\$500,000 bodily injury per person  
\$1,000,000 bodily injury per accident  
\$500,000 property damage per accident

- c. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Workers Compensation exemptions may be accepted with written proof of the State of Florida's approval of such exemption. Employers' liability will have minimum limits of:

\$500,000 per accident  
\$500,000 disease limit  
\$500,000 disease – policy limit

*\*The required minimum limit of liability shown in a. and b. may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*



**Verification of Coverage:**

1. Coverage shall be in place prior to the commencement of any work and throughout the duration of the contract. A certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

**a. The certificate holder shall read as follows:**

**Lee County Board of County Commissioners  
P.O. Box 398  
Fort Myers, Florida 33902**

- b. *“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials” will be named as an "Additional Insured" on the General Liability policy, including Products and Completed Operations coverage.***

**Special Requirements:**

1. An appropriate "Indemnification" clause shall be made a provision of the contract.
2. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

**EXHIBIT G**  
**RELEASE AND AFFIDAVIT**

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

STATE OF FLORIDA

Before me, the undersigned authority, personally appeared

\_\_\_\_\_,  
who after being duly sworn, deposes and says:

(1) In accordance with the Contract Documents and in consideration of \$\_\_\_\_\_ paid, \_\_\_\_\_ ("Contractor") releases and waives for itself and its subcontractors, materialmen, successors and assigns, all claims demands, damages, costs and expenses, whether in contract or in tort, against Lee County, Florida (the "County"), its Board of County Commissioners, employees and agents relating in any way to the performance of the Agreement between Contractor and the County, dated \_\_\_\_\_, \_\_\_\_\_, for the period from \_\_\_\_\_ to \_\_\_\_\_.

(2) Contractor certifies for itself and its subcontractors, materialmen, successors and assigns, that all charges for labor, materials, supplies, lands, licenses and other expenses for which the County might be sued or for which a lien or a demand against any Payment Bond might be filed, have been fully satisfied and paid.

(3) Contractor agrees to indemnify, defend and save harmless the County, its Board of County Commissioners, employees and agents from all demands or suits, actions, claims of liens or other charges filed or asserted against the County arising out of the performance by Contractor of the Work covered by this Release and Affidavit.

(4) This Release and Affidavit is given in connection with Contractor's [monthly/final] application for payment No.\_\_\_\_\_.

CONTRACTOR:

By: \_\_\_\_\_ (signature of the executive officer)

Its: \_\_\_\_\_ (title of the executive officer)

Date: \_\_\_\_\_

Witnesses

\_\_\_\_\_

[Corporate Seal]

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

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

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by \_\_\_\_\_, as \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of the corporation. He/she is personally known to me or has produced \_\_\_\_\_ as identification and did (did not) take an oath.

My Commission Expires: \_\_\_\_\_  
(Signature of Notary)

Name: \_\_\_\_\_  
(Legibly Printed)

(AFFIX OFFICIAL SEAL)

Notary Public, State of \_\_\_\_\_

Commission No.: \_\_\_\_\_



## EXHIBIT H CHANGE ORDER FORM



### Lee County Construction Contract Change Order

**Print Form**

Number: \_\_\_\_\_

A Change Order requires approval by the Department Director for expenditures under \$50,000, approval by the County Manager for expenditures between \$50,000.01 and \$100,000, or approval by the Board of County Commissioners for expenditures over \$100,000

Contract /  
Project  
Name: \_\_\_\_\_

Contractor: \_\_\_\_\_

Contract #: \_\_\_\_\_ Project #: \_\_\_\_\_ Bid #: \_\_\_\_\_

Lee County Project Manager: \_\_\_\_\_

Fiscal Staff: \_\_\_\_\_ Date of Request: \_\_\_\_\_

Upon the completion and execution of this Change Order by both parties to the Contract, the Contractor is authorized to and shall proceed to make the following changes in the Contract Documents:  
*(If you need space other than what has been provided, please attach additional sheets.)*

Attachments:  
(List documents supporting change) \_\_\_\_\_

Description: \_\_\_\_\_

Purpose of  
Change Order: \_\_\_\_\_

Change in Contract Price	Dollar Amount	Change in Contract Time	Calendar Days
Original Contract Price		Original Contract Time	
Previous Change Order No. _____		Net Change from Previous Change Orders	
Contract Price Prior to this Change Order		Contract Time Prior to this Change Order	
Net Increase (Decrease) of this Change Order		Net Increase (Decrease) of this Change Order	
Contract Price with All Approved Change Orders		Contract Time with All Approved Change Orders	

It is understood and agreed that the acceptance of this modification by the CONTRACTOR constitutes an accord and satisfaction, and represents payment in full (both time and money) for all costs arising out of, or incidental to, the above mentioned change.

_____ Name of Contractor	_____ Date Accepted
_____ Contact Email Address	_____ Contact Phone #

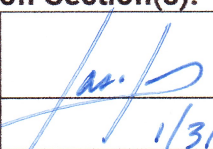
Lee County Board of County Commissioners  
2115 Second St. - Fort Myers, FL 33901  
PO Box 398 - Fort Myers, FL 33902-0398  
Main Phone: (239) 533-2111

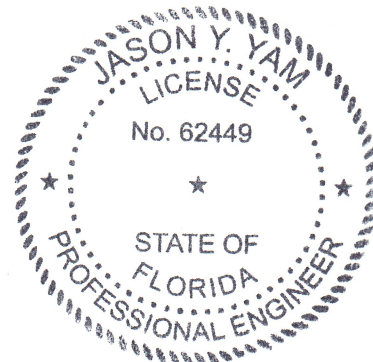
**EXHIBIT I**  
**SUPPLEMENTAL SPECIFICATIONS**

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***I hereby certify that these Supplemental Specifications have been properly prepared by me, or under my responsible charge:***

<b>Supplemental Specification Section(s): 102, 285, 430</b>	
<b>Signature:</b>	
<b>Date:</b>	1/31/20
<b>Engineer of Record:</b>	Jason Y. Yam, PE
<b>Florida License No.:</b>	62449
<b>Firm Name:</b>	Cardno, Inc
<b>Firm Address:</b>	380 Park Place Blvd, Suite 300
<b>City, State, Zip Code:</b>	Clearwater, FL 33759
<b>Cert. of Authorization No:</b>	29915



## **DIVISION I-GENERAL REQUIREMENTS AND COVENANTS**

RESERVED

## **DIVISION II-CONSTRUCTION DETAILS**

### **SECTION 102 – MAINTENANCE OF TRAFFIC (LCDOT 10/27/2017)**

Article 102-4: Delete Article 102-4 in its entirety and substitute the following:

The Contractor shall submit a complete Traffic Control Plan (TCP) to the Engineer for review and approval at the preconstruction meeting. Prepare the TCP in conformance with and in the form prescribed in the current version of the FDOT Design Manual, FDOT Standard Plans – Index 102-600 series and the MUTCD. Indicate in the plan a TCP for each phase of activities. Take responsibility for identifying and assessing any potential impacts to a utility that may be caused by the TCP, and notify the Department in writing of any such potential impacts to utilities. The TCP shall be signed and sealed by a professional engineer duly registered in the State of Florida.

Engineer's approval of the TCP does not relieve the Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those depicted in the original Contract Documents, and which effect a change in utility work different from that shown in the utility plans, joint project agreements, interlocal agreements or utility relocation schedules.

The County reserves the right to reject any Traffic Control Plan. Obtain the Engineer's written approval before beginning work using a TCP. The Engineer's written approval is required for all modifications to the TCP. The Engineer will only allow changes to the TCP without proper documentation on an emergency basis.

Pedestrian and/or bicycle traffic must be safely and continuously maintained through, or around, work zones on highway or streets where pedestrian and bicyclists were permitted at the start of the project. The Contractor shall submit a plan for approval signed and sealed by a professional engineer duly licensed in the State of Florida for the safe passage of pedestrian and bicycle traffic prior to closure of any existing pedestrian facility. Facilities constructed to specifically provide access for pedestrians in or around work zones must be consistent with the current PROWAG. The plan shall detail the rerouting of users, duration of closure and proposed construction methods for any temporary facility. Payment for this work shall be included in price bid for Pay Item 102-1a -Maintenance of Pedestrian and Bicycle Traffic.

All costs for maintenance of traffic including preparation of Traffic Control Plan shall be included in the price bids for Pay Item 102-1 – Maintenance of Traffic, except as expressly provided for in other pay items in the contract.

Subarticle 102-9.16: Delete Subarticle 102-9.16 in its entirety and substitute the following:

Temporary Traffic Detection Technology – Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the contract and restore any loss of detection within 12 hours. Video detection shall be installed at the beginning of the project before any loss of detection has occurred. The contractor shall furnish, install and operate video detection using technology approved by Lee DOT Traffic Division and as listed in Lee DOT Traffic plans specifications posted on the county website at [http://www.lee-county.com/publicworks/pdf/traffic/DOT\\_Plan\\_Specifications.pdf](http://www.lee-county.com/publicworks/pdf/traffic/DOT_Plan_Specifications.pdf).

## **SECTION 285– OPTIONAL BASE COURSE (LCDOT 05/31/2019)**

Article 285-2: Articles 285-2 Materials is modified as follows:

Meet the material requirements as specified in the Section covering the particular type of base to be constructed.

Graded Aggregate.....	Section 204
Asphalt.....	Section 234
Reclaimed Asphalt Pavement (RAP)*.....	Section 283
Limerock.....	Section 911
<del>Shell Base.....</del>	<del>Section 911</del>
<del>Shell Rock.....</del>	<del>Section 911</del>
<del>Cemented Coquina.....</del>	<del>Section 911</del>
Recycled Concrete Aggregate (RCA)**.....	Section 911

\*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.

\*\*Do not use on interstate roadways.

Article 285-3: Articles 285-3 Selection of Base Option is modified as follows:

The Plans will include typical cross-sections indicating the various types of base construction (material and thickness) allowable.

When base options are specified in the Plans, use only those options. When base options are not specified, select one base option as allowed for each typical cross-section shown in the Plans. Only one base option is permitted for each typical cross-section. See Tables 285-1 and 285-2 for optional base materials, thickness and additional restrictions.

Notify the Engineer in writing of the base option selected for each typical cross-section at least 45 calendar days prior to beginning placement of base material.

Table 285-1: Optional Base Groups 1 through 7							
Base Materials	Base Group (Base Group Pay Item)						
	1 (701)	2 (702)	3 (703)	4 (704)	5 (705)	6 (706)	7 (707)
Limerock, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Cemented Coquina, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Shell Rock, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"

Table 285-1: Optional Base Groups 1 through 7							
Base Materials	Base Group (Base Group Pay Item)						
	1 (701)	2 (702)	3 (703)	4 (704)	5 (705)	6 (706)	7 (707)
<del>Bank Run Shell, LBR 100</del>	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Recycled Concrete Aggregate, LBR 150 <sup>(1)</sup>	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Graded Aggregate Base, LBR 100	4-1/2"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	9"	10"
Type B-12.5	4" <sup>(3)</sup>	4" <sup>(3)</sup>	4" <sup>(3)</sup>	4" <sup>(3)</sup>	4-1/2"	5"	5-1/2"
B-12.5 and 4" Granular Subbase, LBR 100 <sup>(2)</sup>	-	-	-	-	-	-	-
RAP Base <sup>(4)</sup>	5" <sup>(4)</sup>	-	-	-	-	-	-
(1) Do not use on interstate roadways. (2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4" minimum. (3) Based on minimum practical thickness. (4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications. (5) To be used for widening, three feet or less.							

Table 285-1(continued): Optional Base Groups 8 through 15								
Base Materials	Base Group (Base Group Pay Item)							
	8 (708)	9 (709)	10 (710)	11 (711)	12 (712)	13 (713)	14 (714)	15 (715)
Limerock, LBR 100	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" <sup>(5)</sup>	14" <sup>(5)</sup>	-
<del>Cemented Coquina, LBR 100</del>	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" <sup>(5)</sup>	14" <sup>(5)</sup>	-
<del>Shell Rock, LBR 100</del>	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" <sup>(5)</sup>	14" <sup>(5)</sup>	-
<del>Bank Run Shell, LBR 100</del>	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" <sup>(5)</sup>	14" <sup>(5)</sup>	-
Recycled Concrete Aggregate, LBR 150 <sup>(1)</sup>	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" <sup>(5)</sup>	14" <sup>(5)</sup>	-
Graded Aggregate Base, LBR 100	11"	12"	13"	14"	-	-	-	-
Type B-12.5	5-1/2"	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"
B-12.5 and 4" Granular Subbase, LBR 100 <sup>(2)</sup>	-	4"	4-1/2"	5"	5-1/2"	6"	6-1/2"	7"
RAP Base <sup>(4)</sup>	-	-	-	-	-	-	-	-
(1) Do not use on interstate roadways. (2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4" minimum. (3) Based on minimum practical thickness. (4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications. (5) To be used for widening, three feet or less.								

Table 285-2: Limited Use Optional Base Groups <sup>(1)</sup>								
Base Materials	Base Group (Base Group Pay Item)							
	101 (701)	102 (702)	103 (703)	104 (704)	105 (705)	106 (706)	107 (707)	108 (708)
Limerock Stabilized, LBR 70	5"	6-1/2"	8"	9"	10"	11"	12-1/2"	-
<del>Shell, LBR 70</del>	<del>5"</del>	<del>6-1/2"</del>	<del>8"</del>	<del>9"</del>	<del>10"</del>	<del>11"</del>	<del>12-1/2"</del>	-
<del>Shell Stabilized, LBR 70</del>	<del>7"</del>	<del>8-1/2"</del>	<del>9-1/2"</del>	<del>10-1/2"</del>	<del>12"</del>	-	-	-
Sand-Clay, LBR 75	5"	6-1/2"	8"	9"	10"	11"	12-1/2"	-
Soil Cement (300 psi) (Plant Mixed)	5"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	9"	10"	11"
Soil Cement (300 psi) (Road Mixed)	5"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	-	-	-
Soil Cement (500 psi) (Plant Mixed)	4" <sup>(2)</sup>	4"	5"	5-1/2"	6"	7"	7-1/2"	8-1/2"
(1) Use only when specified in the Plans.								
(2) Based on minimum practical thicknesses.								

Article 285-4: Articles 285-4 Construction Requirements is modified as follows:

Construct the base in accordance with the Section covering the particular type of base to be constructed.

Graded Aggregate .....Section 204

Asphalt .....Section 234

Reclaimed Asphalt Pavement (RAP)\* .....Section 283

Limerock .....Section 200

~~Shell Base.....Section 200~~

~~Shell Rock.....Section 200~~

~~Cemented Coquina.....Section 200~~

Recycled Concrete Aggregate (RCA)\*\* .....Section 200

\*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.

\*\*Do not use on interstate roadways.

## **SECTION 430 – PIPE CULVERTS AND STORM SEWERS (LCDOT 10/27/2017)**

Article 430-3: Articles 430-3.1 is modified as follows:

Pipe material for storm sewer or cross drain installations under pavement shall consist of steel reinforced concrete pipe in accordance with Section 449 and shall be a minimum of Class III or HE-III.

## **DIVISION III-MATERIALS**

RESERVED

**EXHIBIT J**  
**SPECIAL PROVISIONS**

**1. CONTRACT TIME**

Contractor shall perform the contracted work fully, entirely, and in accordance with the Contract Documents within the Contract Time specified herein. If the Contractor fails to complete the work within the time stipulated, liquidated damages will apply in accordance with Standard Specification Article 8-10 Liquidated Damages for Failure to Complete the Work.

**Contract Time: 365 Calendar Days Commencement Date to Final Acceptance**

**2. PERMITS**

In accordance with Article 7-2 of Division I, permits and licenses procured by the County are listed below and attached hereto.

- a. South Florida Water Management District Exemption No. 36-102097-P
- b. Lee County LDO2019-00573

**3. GEOTECHNICAL INFORMATION**

Certain subsurface explorations and/or testing were conducted by the County in the design of this Project. Reports summarizing this work are listed below and attached hereto. The attached information is NOT a part of the Contract Documents and is provided as a supplement for informational purposes only. The County is not responsible for the accuracy, completeness or usefulness thereof. The County makes no warranty, express or implied, for the data, interpretations or opinions contained therein. Any person or party that utilizes the attached information does so purely at its own risk, and the County disclaims any responsibility or liability for any user's reliance upon the information.

- a. Seasonal High Groundwater Table Estimates - Gateway Boulevard and Commerce Lakes Drive

**4. GATEWAY SERVICES COMMUNITY DEVELOPMENT DISTRICT**

Gateway Services Community Development District technical specifications, included herein, are included by reference and shall be applicable to the utility improvements shown within the "Gateway Services District – Gateway Blvd at Commerce Lakes Dr. Utility Relocation" plans dated January 2020 including Bid Alternates, if applicable

- a. Gateway Services Community Development District technical specifications shall apply only to Gateway Services Community Development District items of work.

## **2. PERMITS**





# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

September 26, 2019

*\* Delivered via email*

Alejandro Slaibe \*  
Lee County Department Of Transportation  
1500 Monroe Street  
Fort Myers, FL 33901

**Subject: Exemption for Gateway Blvd At Commerce Lakes Dr Intersection Control**  
**Application No. 190822-1703**  
**Exemption No. 36-102097-P**  
**Lee County**

Dear Mr. Slaibe:

The South Florida Water Management District (District) reviewed the information submitted for the proposed construction of a roundabout for safety and operational improvements for motorists and pedestrian traffic. Existing drainage patterns are maintained. The District has determined that the proposed project is exempt from the requirement to obtain an Environmental Resource Permit, pursuant to rule 62-330.051(4)(c) Florida Administrative Code.

A location map is attached as Exhibit 1.0. Site Plans are attached as Exhibit No. 2.0.

Activities that qualify for this exemption must be conducted and operated using appropriate best management practices and in a manner which does not cause or contribute to a water quality violation, pursuant to Chapters 62-302 or 62-4, Florida Administrative Code.

This letter does not relieve you from the responsibility of obtaining other permits (federal, state or local) which may be required for the project.

The determination that this project qualifies as an exempt activity may be revoked if the installation is substantially modified, if the basis of the exemption is determined to be materially incorrect, or if the installation results in a violation of state water quality standards. Any changes made in the construction plans or location of the project may necessitate a permit from the District. Therefore, you are advised to contact the District before beginning any work in wetlands or other surface waters which is not specifically described in the submittal.

The notice of determination that the project qualifies as an exempt activity constitutes final agency action by the District unless a petition for administrative hearing is filed. Upon timely filing of a petition, this Notice will not be effective until further Order of the District. If you have any questions concerning this matter, please contact Andrea Adeagbo, Environmental Analyst II at (239) 338-2929 x7717 or abohara@sfwmd.gov, and Errol Noel, Engineering Reviewer at (239) 338-2929 ext 7736 or via email at enoel@sfwmd.gov.

Sincerely,

A handwritten signature in blue ink that reads "Melissa Roberts".

Melissa Roberts, P.E.  
Administrator, Environmental Resource Bureau

Lee County Department Of Transportation  
Gateway Blvd At Commerce Lakes Dr Intersection Control, Application No.190822-1703  
September 26, 2019  
Page 2

c: Hamid Faraji, Cardno, Inc \*  
Cheryl Carbone, Lee County Bocc \*

## **Exhibits**

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website (<http://my.sfwmd.gov/ePermitting>) and searching under this application number 190822-1703.

[Exhibit No. 1.0 Location Map](#)

[Exhibit No. 2.0 Plans](#)

## **NOTICE OF RIGHTS**

As required by Sections 120.569 and 120.60(3), Fla. Stat., the following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all of the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

### **RIGHT TO REQUEST ADMINISTRATIVE HEARING**

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a SFWMD decision which affects or may affect their substantial interests shall file a petition for hearing with the Office of the District Clerk of the SFWMD, in accordance with the filing instructions set forth herein, within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, or posting that the SFWMD has or intends to take final agency action, or publication of notice that the SFWMD has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action which materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional Rule 28-106.111, Fla. Admin. Code, point of entry.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Fla. Stat., shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

### **FILING INSTRUCTIONS**

A petition for administrative hearing must be filed with the Office of the District Clerk of the SFWMD. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at SFWMD headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day.

Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the District Clerk, 3301 Gun Club Road, West Palm Beach, Florida 33406.
- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to the SFWMD's security desk does not constitute filing. It will be necessary to request that the SFWMD's security officer contact the Office of the District Clerk. An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at [clerk@sfwmd.gov](mailto:clerk@sfwmd.gov). The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

### **INITIATION OF ADMINISTRATIVE HEARING**

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Fla. Stat., and Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, SFWMD file number or any other SFWMD identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

### **MEDIATION**

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

### **RIGHT TO SEEK JUDICIAL REVIEW**

Pursuant to Section 120.68, Fla. Stat., and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal with the Office of the District Clerk of the SFWMD in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the clerk of the appropriate district court of appeal.



**BOARD OF COUNTY COMMISSIONERS**

John E. Mannino  
*District One*

Cecil L. Pendergrass  
*District Two*

Ray Sandelli  
*District Three*

Brian Hamman  
*District Four*

Frank Mann  
*District Five*

Roger Desjarlais  
*County Manager*

Richard Wesch  
*County Attorney*

Donna Marie Collins  
*County Hearing Examiner*

Writer's Direct Dial Number: 239-533-8803

December 17, 2019

Kathleen Agoado  
Cardno  
380 Park Place Blvd  
Suite 300  
Clearwater, FL 33759

RE: Gateway Blvd at Commerce Lakes Dr Intersection Control (Roundabout)  
LDO2019-00573  
Type D Limited Review

Dear Kathleen Agoado:

Your plans for the above-referenced project have been reviewed and approved for a Development Order with stipulation(s). The Development Order is granted for the following:

Construction of a four leg roundabout at the intersection of Gateway Blvd and Commerce Lakes Dr.

This approval does not relieve the development from the responsibility to obtain all other necessary Federal, State and local permits.

THIS DEVELOPMENT ORDER WILL BE VALID FOR A PERIOD OF SIX (6) YEARS AND IS SCHEDULED TO EXPIRE ON 12/17/2025.

If you have any questions concerning this matter, please contact this office.

Sincerely,

LEE COUNTY ADMINISTRATION

Electronically signed on 12/20/2019 by  
Susan Hollingsworth, Sr. Development Review  
Representative  
Lee County Development Review

**Approval is subject to the following stipulation(s) and/or comment(s):**

**Development Services Comments:**

General Checklist Comments (Ord. 12-01)

[10-154(22) Other Federal and State Permits.

STIPULATION: Copies of all other necessary federal and state permits (e.g. HRS, FDEP, ACOE, etc.) must be submitted prior to commencement of any work on the site.

Please contact E. Tom Sawtell at [ESawtell@leegov.com](mailto:ESawtell@leegov.com) or by calling 239-533-8803 with any questions regarding the above review comments.

**NPDES Comments:**

STIPULATION: As per the Florida Department of Environmental Protection state permit FLR000035, a pre-construction meeting is required with the Division of Natural Resources prior to turning earth. Please contact Jennifer Hubbard [jhubbard@leegov.com](mailto:jhubbard@leegov.com) to schedule.

Please contact Jennifer S Hubbard at [JHubbard@leegov.com](mailto:JHubbard@leegov.com) or by calling 239-533-8121 with any questions regarding the above review comments.



# APPLICATION FOR A TYPE D LIMITED REVIEW DEVELOPMENT ORDER IN UNINCORPORATED AREAS ONLY

**Project Name:** Gateway Blvd At Commerce Lakes Dr Intersection Control (Roundabout)

**Request:** \_\_\_\_\_

CIP Project: ☐ No ☒ Yes

☒ This application will be processed electronically. I acknowledge that final plans and documents will only be available through Lee County's [ePlan](#) system.

1. **Name of Applicant:** Kathleen Agoado  
 Address: 380 Park Place Blvd, Suite 300  
 City, State, Zip: Clearwater, FL 33759  
 Phone Number: 727-531-3505 E-mail: Kathleen.Agoado@Cardno.com
2. **Relationship of Applicant to owner (check one) and provide Affidavit of Authorization form [10-107; 10-153(1)]:**  
☐ Applicant is the sole owner of the property.  
☒ Applicant has been authorized by the owner(s) to represent them for this action.
3. **Authorized Agent: (If different than applicant) Name of the person who is to receive all County-initiated correspondence regarding this application. [10-153(a); 10-153(2)]**
  - a. **Company Name:** Cardno, Inc.  
 Contact Person: Jason Yam  
 Address: 380 Park Place Blvd, Suite 300  
 City, State, Zip: Clearwater, FL 33759  
 Phone Number: 727-531-3505 E-mail: Jason.Yam@Cardno.com
  - b. **Additional Agent(s):** Provide the names and contact information of other agents that the County may contact concerning this application. **[10-153(2)f.]**
4. **Single owner (if different than applicant): [10-153(2)d.]**  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_ E-mail: \_\_\_\_\_
5. **STRAP Number(s):** [Attach extra sheets if additional space is needed.] **[10-153(3)a.]**  
18-45-26-00-000000000
6. **Street Address of Property:** Intersection of Gateway Blvd & Commerce Lakes Dr
7. **Planning Community or Community Plan Area\*:** 10. Gateway/Airport  
 \*Note: Additional requirements may apply. See LDC Chapter 33 for additional information.

LEE COUNTY COMMUNITY DEVELOPMENT  
PO BOX 398 (1500 MONROE STREET), FORT MYERS, FL 33902  
PHONE (239) 533-8585



8. **Improvements in County Rights-of-Way.** Is the proposed development solely for improvements within County owned rights-of-way?  
☒ **YES** – If **YES**, application items #10 through 17, 19 & 20 do not apply.  
☐ **NO**
9. **Utility Installations. Is the proposed development solely an installation of utilities?**  
☐ **YES** – If **YES**, application items #10 through 17, 19 & 20 do not apply.  
☒ **NO**
10. **Legal Description: [10-154(1)]**  
☐ Legal description (on 8½" x 11" paper) and sealed sketch of the legal description  
**OR**  
☐ The property is located within a subdivision platted per F.S. Chapter 177, and is recorded in the Official Records (or Plat Books) of Lee County.
11. **Boundary Survey: [10-154(3)]**  
☐ A Boundary survey, tied to the state plane coordinate system.  
**OR**  
☐ A copy of the subdivision plat if the property is located within a subdivision platted per F.S. Chapter 177, and is recorded in the Official Records (or Plat Books) of Lee County
12. **Use(s) of Property:**  
a. Current uses of property are: \_\_\_\_\_  
b. Intended uses of property are: \_\_\_\_\_
13. **Lee Plan (Future Land Use) Designation:** \_\_\_\_\_
14. **Current Zoning of Property:** \_\_\_\_\_
15. **Property Dimensions [10-153(3)(c)]:**  
a. Width (average if irregular parcel): \_\_\_\_\_ Feet  
b. Depth (average if irregular parcel): \_\_\_\_\_ Feet  
c. Total area: \_\_\_\_\_ Acres or square feet
16. **Zoning Approval(s).** List the case number or resolution number of any variance, special exception, rezoning, or other zoning actions that have been granted or requested on the property. **[10-153(4)]**  


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17. **DO/LDO Approval(s).** List the case number of any development order or development standards exemptions that have been approved or filed on the property. **[10-153(4)]**  


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18. **Site Plan.** Site plan (36"x24"), to scale, illustrating at a minimum: existing and proposed lot lines; buildings and uses; streets; accessways; off-street parking; water management facilities; buffering; open space; and any structures on adjacent property which may be affected by the requested development. **[10-175(2)]**
19. **Commercial Building Design.** Is the proposed development within a commercial zoning district? **[10-600]**  
☐ **YES** – If **YES**, Commercial Architectural Design Standards apply (see LDC Section 10-600)  
☐ **NO** – If **NO**, application items #20 through 22 do not apply.
20. **Commercial Architectural Design Applicability:** Which category best describes the proposed development? If the answer is anything other than "None of the above," then Commercial Architectural Compliance is required (see architectural review requirements in LDC Section 10-600, et al.). **[10-602]**  
☐ New Building  
☐ Building Addition (>50% of square footage of existing building)  
☐ Renovation (>50% of square footage of existing building)  
☐ Redevelopment (>50% of square footage of existing building)  
☐ Discontinuance (use of building was discontinued for one year or more)  
☐ None of the above (If none of the above, application items #21 & 22 do not apply)

21. **Architect Name:** \_\_\_\_\_ **Phone #:** \_\_\_\_\_

22. **Architectural Design Style:** Indicate the architectural design style proposed for this project. {Note: If the proposed development is within an individual Planning Community/Community Plan area (see application item #7), then refer to the specific Architectural style requirements outlined in LDC Chapter 33.}

- |   |                                       |   |
|---|---------------------------------------|---|
| <input type="checkbox"/> Mediterranean        | <input type="checkbox"/> Key West     | <input type="checkbox"/> Spanish            |
| <input type="checkbox"/> Old Florida          | <input type="checkbox"/> Colonial     | <input type="checkbox"/> Vernacular         |
| <input type="checkbox"/> Modern International | <input type="checkbox"/> Contemporary | <input type="checkbox"/> Florida Vernacular |
| <input type="checkbox"/> Main Street          | <input type="checkbox"/> Caribbean    | <input type="checkbox"/> Other _____        |

23. **Other documentation:** Other relevant documentation such as copies of permit applications or other approvals applicable to the requested development. **[10-175(7)]**

SUBMITTAL REQUIREMENTS	
<i>Clearly label your attachments as noted in bold below.</i>	
	SUBMITTAL ITEMS
<input checked="" type="checkbox"/>	Completed <b>application</b> [10-175(1)]
<input type="checkbox"/>	Filing Fee - [10-108(a)]
<input checked="" type="checkbox"/>	<b>Affidavit of Authorization</b> [10-153] <i>Prior to approval, one signed &amp; notarized original must be submitted</i>
<input type="checkbox"/>	<b>Additional Agents</b> [10-153(2)(f)]
<input type="checkbox"/>	List of <b>STRAP Numbers</b> (if additional sheet is required) [10-153(3)a]
<input type="checkbox"/>	<b>Legal description</b> and sealed sketch of legal description or copy of plat [10-154(1)] (if applicable)
<input type="checkbox"/>	<b>Boundary Survey</b> or <b>plat</b> [10-154(3)] (if applicable)
<input type="checkbox"/>	<b>Title Certification</b> [10-154(2)] (if applicable)
<input type="checkbox"/>	<b>Traffic Impact Statement</b> [10-154(10)] (if applicable)
<input type="checkbox"/>	<b>Protected Species Survey</b> [10-154(14)] (if applicable)
<input type="checkbox"/>	<b>Protected Species Management Plan</b> [10-154(15)] (if applicable)
<input type="checkbox"/>	<b>Certificate to Dig</b> [10-154(16)] (if applicable)
<input type="checkbox"/>	<b>Historical Impact Assessment</b> [10-154(17)] (if applicable)
<input type="checkbox"/>	<b>Exotic Vegetation Removal Plan</b> [10-154(18)] (if applicable)
<input type="checkbox"/>	<b>State/Federal Permit Applications</b> [10-154(22)] (if applicable)
<input type="checkbox"/>	<b>Port Facility Permits</b> (i.e. Tall Structures Permit) [10-154(13)] (if applicable)
<input type="checkbox"/>	<b>Operation &amp; Maintenance Covenants</b> [10-154(23)] (if applicable)
<input type="checkbox"/>	<b>Assignment of Maintenance</b> [10-154(24)] (if applicable)
<input type="checkbox"/>	<b>Cost Opinion</b> [10-154(25)] (if applicable)
<input type="checkbox"/>	<b>Surety/Cash Bond</b> [10-154(26)] (if applicable)
<input type="checkbox"/>	<b>Drainage Discharge Agreement</b> [10-154(28)] (if applicable)
	PLAN SETS
<input checked="" type="checkbox"/>	<b>Existing Conditions</b> Drawings [10-154(6)]
<input type="checkbox"/>	<b>Site Plan</b> [10-175(2)]
<input checked="" type="checkbox"/>	<b>Utility Plans</b> [10-154(6)(h); 10-154(7)(j)]
<input checked="" type="checkbox"/>	<b>Drainage Plans</b> [10-154(7)(k)]
<input type="checkbox"/>	<b>Landscaping Plans</b> [10-154(7)(l)]
<input checked="" type="checkbox"/>	<b>Exterior Lighting Plan</b> [10-154(8)] (if applicable)
<input type="checkbox"/>	<b>Architectural Elevations</b> [10-604] (if applicable)

## AFFIDAVIT OF AUTHORIZATION

## APPLICATION IS SIGNED BY INDIVIDUAL OWNER, APPLICANT, CORPORATION, LIMITED LIABILITY COMPANY (L.L.C.), LIMITED COMPANY (L.C.), PARTNERSHIP, LIMITED PARTNERSHIP, OR TRUSTEE

I, David Murphy (name), as Deputy Director of Lee County DOT (owner/title) of Gateway Blvd and Commerce Lakes Dr Intersection (company/property), swear or affirm under oath, that I am the owner or the authorized representative of the owner(s) of the property and that:

1. I have full authority to secure the approval(s) requested and to impose covenants and restrictions on the referenced property as a result of any action approved by the County in accordance with this application and the Land Development Code;
2. All answers to the questions in this application and any sketches, data or other supplementary matter attached hereto and made a part of this application are honest and true;
3. I have authorized the staff of Lee County Community Development to enter upon the property during normal working hours for the purpose of investigating and evaluating the request made thru this application; and that
4. The property will not be transferred, conveyed, sold or subdivided unencumbered by the conditions and restrictions imposed by the approved action.

## \*Notes:

- If the applicant is a corporation, then it is usually executed by the corp. pres. or v. pres.
- If the applicant is a Limited Liability Company (L.L.C.) or Limited Company (L.C.), then the documents should typically be signed by the Company's "Managing Member."
- If the applicant is a partnership, then typically a partner can sign on behalf of the partnership.
- If the applicant is a limited partnership, then the general partner must sign and be identified as the "general partner" of the named partnership.
- If the applicant is a trustee, then they must include their title of "trustee."
- In each instance, first determine the applicant's status, e.g., individual, corporate, trust, partnership, estate, etc., and then use the appropriate format for that ownership.

Under penalties of perjury, I declare that I have read the foregoing Affidavit of Authorization and that the facts stated in it are true.

David M. Murphy  
Signature

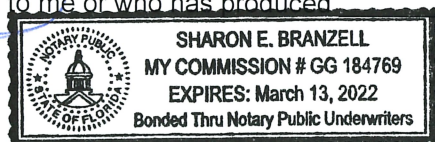
11-26-19  
Date

\*\*\*\*\*NOTE: NOTARY PUBLIC IS NOT REQUIRED FOR ADMINISTRATIVE APPROVALS\*\*\*\*\*  
ALL OTHER APPLICATION TYPES MUST BE NOTARIZED

STATE OF FLORIDA  
COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me on 11/26/2019 (date) by David M. Murphy (name of person providing oath or affirmation), who is personally known to me or who has produced \_\_\_\_\_ (type of identification) as identification.

STAMP/SEAL



Sharon E. Branzell  
Signature of Notary Public

**Sawtell, E. Tom**

---

**From:** Ame Davis [ADavis@southtrailfire.org]  
**Sent:** Monday, December 02, 2019 12:23 PM  
**To:** Plan Review; Spaar, Patricia; Martica Pitt; Nate Burley  
**Cc:** Sawtell, E. Tom  
**Subject:** [EXTERNAL] LDO2019-00573 Roundabout APPROVED

This permit has been reviewed and APPROVED by South Trail Fire Prevention.

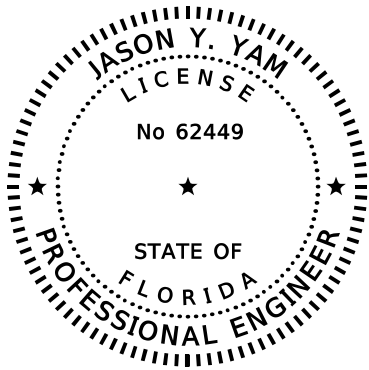
Kind Regards,

*Ame Davis*

Fire Inspector/ Plans Examiner  
South Trail Fire Prevention  
5531 Halifax Ave.  
Fort Myers, FL 33912  
Office (239) 482-8030  
Email: [adavis@southtrailfire.org](mailto:adavis@southtrailfire.org)







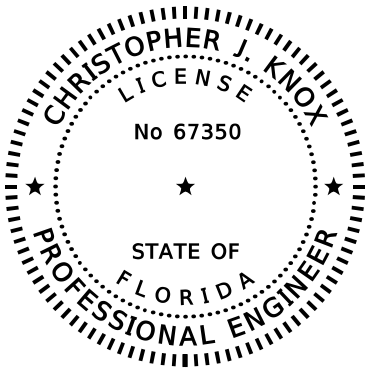
THIS DOCUMENT HAS BEEN DIGITALLY  
SIGNED AND SEALED BY:

Jason  
Yam

Date:  
2019.11.18  
17:25:33  
-05'00'

PRINTED COPIES OF THIS DOCUMENT ARE  
NOT CONSIDERED SIGNED AND SEALED.  
THE SIGNATURE SHOULD BE VERIFIED  
ON THE ELECTRONIC DOCUMENTS,

CARDNO  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FL 33759  
PHONE NUMBER: (727) 531-3505  
CERTIFICATE OF AUTHORIZATION NO. 29915  
JASON Y. YAM, P.E. 62449



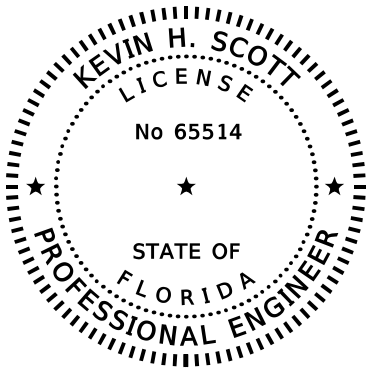
THIS DOCUMENT HAS BEEN DIGITALLY  
SIGNED AND SEALED BY:

Christopher  
J Knox

Christopher J Knox  
2019.11.18  
17:53:24 -05'00'

PRINTED COPIES OF THIS DOCUMENT ARE  
NOT CONSIDERED SIGNED AND SEALED.  
THE SIGNATURE SHOULD BE VERIFIED  
ON THE ELECTRONIC DOCUMENTS,

CARDNO  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FL 33759  
PHONE NUMBER: (727) 531-3505  
CERTIFICATE OF AUTHORIZATION NO. 29915  
CHRISTOPHER J. KNOX, P.E. 67350



THIS DOCUMENT HAS BEEN DIGITALLY  
SIGNED AND SEALED BY:

Kevin H Scott  
2019.11.18  
13:39:26-05'00'

PRINTED COPIES OF THIS DOCUMENT ARE  
NOT CONSIDERED SIGNED AND SEALED.  
THE SIGNATURE SHOULD BE VERIFIED  
ON THE ELECTRONIC DOCUMENTS,

TIERRA  
7351 TEMPLE TERRACE HIGHWAY  
TAMPA, FL 33637  
PHONE NUMBER: (727) 531-3505  
CERTIFICATE OF AUTHORIZATION NO. 6486  
KEVIN H. SCOTT, P.E. 65514

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
4-9	TYPICAL SECTIONS
10	TYPICAL SECTION DETAILS
12	PROJECT LAYOUT
13	PROJECT CONTROL
14	PROJECT NOTES
15-18	PLAN SHEETS
19-22	PROFILE SHEETS
23	INTERSECTION DETAILS
24-27	INTERSECTION GRADING DETAILS
31-43	CROSS SECTIONS
48-50	TEMPORARY TRAFFIC CONTROL
51-54	UTILITY ADJUSTMENTS
SQ-1 - SQ-12	SUMMARY OF QUANTITIES


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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
2	SIGNATURE SHEET
11	SUMMARY OF DRAINAGE STRUCTURES
28-29	DRAINAGE STRUCTURES
44-47	EROSION CONTROL

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
2	SIGNATURE SHEET
30	ROADWAY SOIL SURVEY


APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS					GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
			JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		SIGNATURE SHEET	200671	2

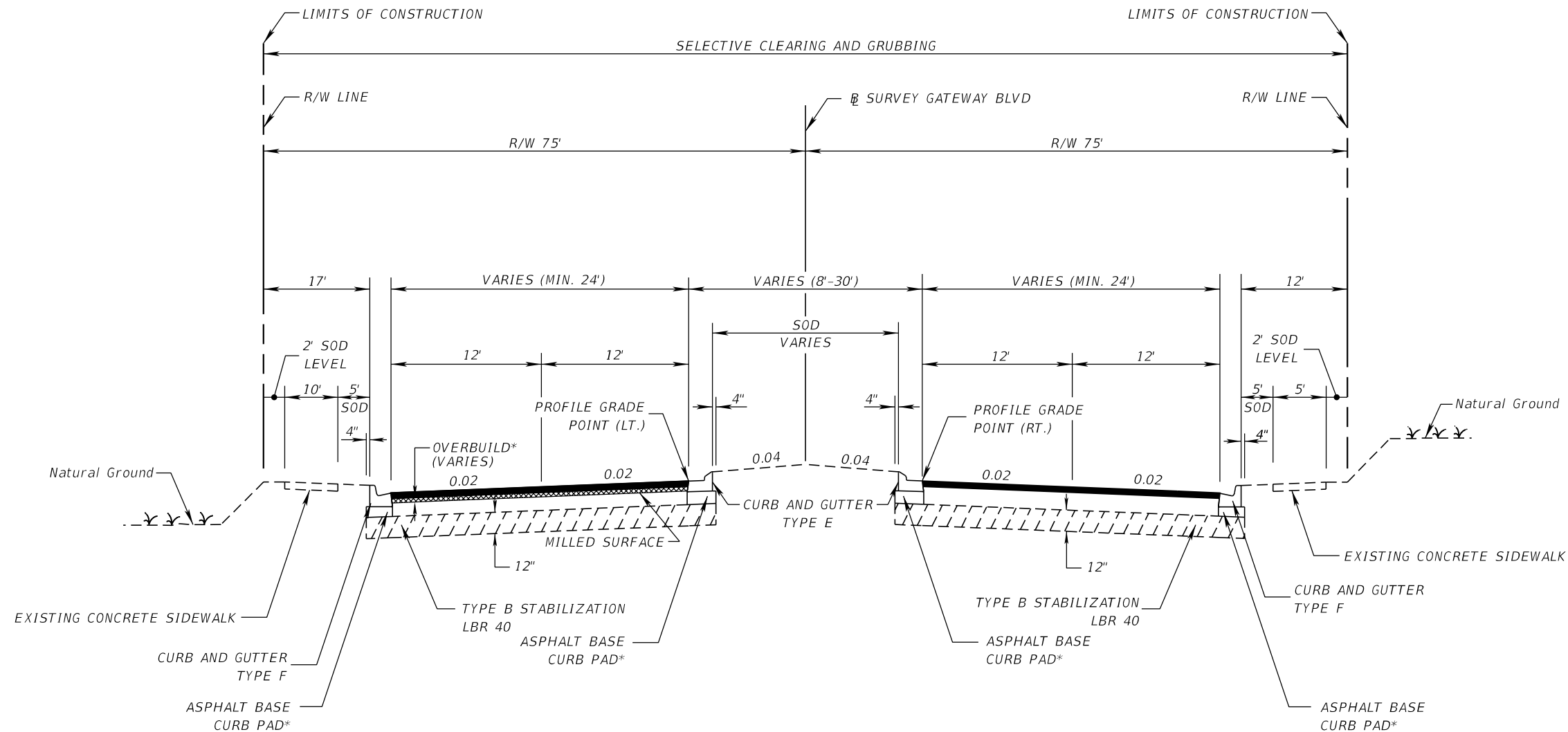
SUMMARY OF ROADWAY			
PAY ITEM	DESCRIPTION	UNITS	QTY
0101-1	MOBILIZATION	LS	1
0102-1	MAINTENANCE OF TRAFFIC	LS/DA	365
0104- 10- 3	SEDIMENT BARRIER	LF	3736
0104- 12	STAKED TURBIDITY BARRIER	LF	36
0104- 15-	SOIL TRACKING PREVENTION DEVICE	EA	4
0104- 18-	INLET PROTECTION SYSTEM	EA	19
0107- 1	LITTER REMOVAL	AC	29.64
0107- 2	MOWING	AC	29.64
0110- 2- 2	SELECTIVE CLEARING AND GRUBBING	LS/AC	1
0110 4	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	1178
0120 1	REGULAR EXCAVATION	CY	2840
0120 6	EMBANKMENT	CY	864
0160-4	TYPE B STABILIZATION	SY	7017
0285-709	OPTIONAL BASE GROUP 9	SY	5528
0327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	5657
0334-1-13	SUPERPAVE ASPHALT CONC, TRAFFIC LEVEL C (2.5")	TN	1185.6
0337-7-82	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5, PG76-22	TN	615.1
0350-30-13	CONCRETE PAVEMENT FOR ROUNDABOUT APRON, 12" DEPTH	SY	397
0400-0-11	CONCRETE CLASS NS, GRAVITY WALL	CY	4
0425-1-351	INLETS, CURB, TYPE P-5, < 10'	EA	2
0425-1-361	INLETS, CURB, TYPE P-6, < 10'	EA	1
0425-1-521	INLETS, DITCH BOTTOM, TYPE C, <10'	EA	2
0425-1-561	INLETS, DITCH BOTTOM, TYPE F, <10'	EA	3
0425-1-711	INLETS, GUTTER, TYPE V, <10'	EA	1
0430-174-130	PIPE CULVERT, CONCRETE, ROUND 30" SD	LF	20
0430-175-115	PIPE CULVERT, CONCRETE, ROUND 15" SDCD	LF	8
0430-175-118	PIPE CULVERT, CONCRETE, ROUND 18" SDCD	LF	91
0430-175-215	PIPE CULVERT, CONCRETE, ELLIPTICAL, 12" x 18" ID	LF	31
0430-175-218	PIPE CULVERT, CONCRETE, ELLIPTICAL, 14" x 23" ID	LF	478
515-2-311	PEDESTRIAN/BICYCLE RAILING, 42", ALUMINUM	LF	47
0520- 1- 7	CONCRETE CURB & GUTTER, TYPE E	LF	2509
0520- 1- 10	CONCRETE CURB & GUTTER, TYPE F	LF	2615
0520-2-4	CONCRETE CURB, TYPE D	LF	196
0520-2-8	CONCRETE CURB, TYPE RA	LF	269
0522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	1510
0524-1-29	CONCRETE DITCH PAVEMENT - REINFORCED (4")	SY	8
0527-2	DETECTABLE WARNINGS	SY	324
0570-1-2	PERFORMANCE TURF, SOD	SY	3609
0919-528	DIRECTIONAL INDICATORS	SY	97
***	ROOT BARRIER	LF	2286

SUMMARY OF SIGNING AND PAVEMENT MARKINGS			
PAY ITEM	DESCRIPTION	UNITS	QTY
654-2-21	RECTANGULAR RAPID FLASHING BEACON, F&I-SOLAR POWERED, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS	10
654-2-22	RECTANGULAR RAPID FLASHING BEACON, F&I-SOLAR POWERED, COMPLETE SIGN ASSEMBLY- BACK TO BACK	AS	3
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	21
700-1-13	SINGLE POST SIGN, F&I GROUND MOUNT, 21-30 SF	AS	4
700-1-60	SINGLE POST SIGN, REMOVE	AS	7
700-2-11	MULTI-POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	2
700-2-12	MULTI-POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	2
706-3	RETROREFLECTIVE PAVEMENT MARKERS (RPMs)	EA	157
710-90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	LS	1
711-11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	430
711-11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE, 6"	GM	0.043
711-11-144	THERMOPLASTIC, STANDARD, WHITE, 2-2 DOTTED GUIDELINE, 12" FOR ROUNDABOUT	GM	0.033
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	65
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, 6-10 DOTTED EXTENSION LINE, 6"	GM	0.025
711-14-123	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 12" FOR CROSSWALK	LF	455
711-14-125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	435
711-14-160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	9
711-14-170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	27
711-16-101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.739
711-16-102	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 8"	GM	0.175
711-16-131	THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6", 10-30 SKIP	GM	0.167
711-16-201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.605

SUMMARY OF LIGHTING			
PAY ITEM	DESCRIPTION	UNITS	QTY
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	285
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	2380
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	24
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12')	EA	3
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO 8 TO NO 6	LF	12559
715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF	4350
715-4-12	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT	EA	15
715-4-70	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA	8
715-7-11	LOAD CENTER, REWORK, SECONDARY VOLTAGE	EA	1

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF PAY ITEMS			
						SUMMARY OF PAY ITEMS		200671	3

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019



TYPICAL SECTION (1)  
GATEWAY BLVD.  
STA. 111+50.00 TO STA. 113+03.08 (LT.)

TRAFFIC DATA


CURRENT YEAR = 2019 AADT = 23,100  
ESTIMATED OPENING YEAR = 2020 AADT = 23,200  
ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
DESIGN HOUR T = 3.4%  
DESIGN SPEED = 35 MPH

MILLING AND RESURFACING

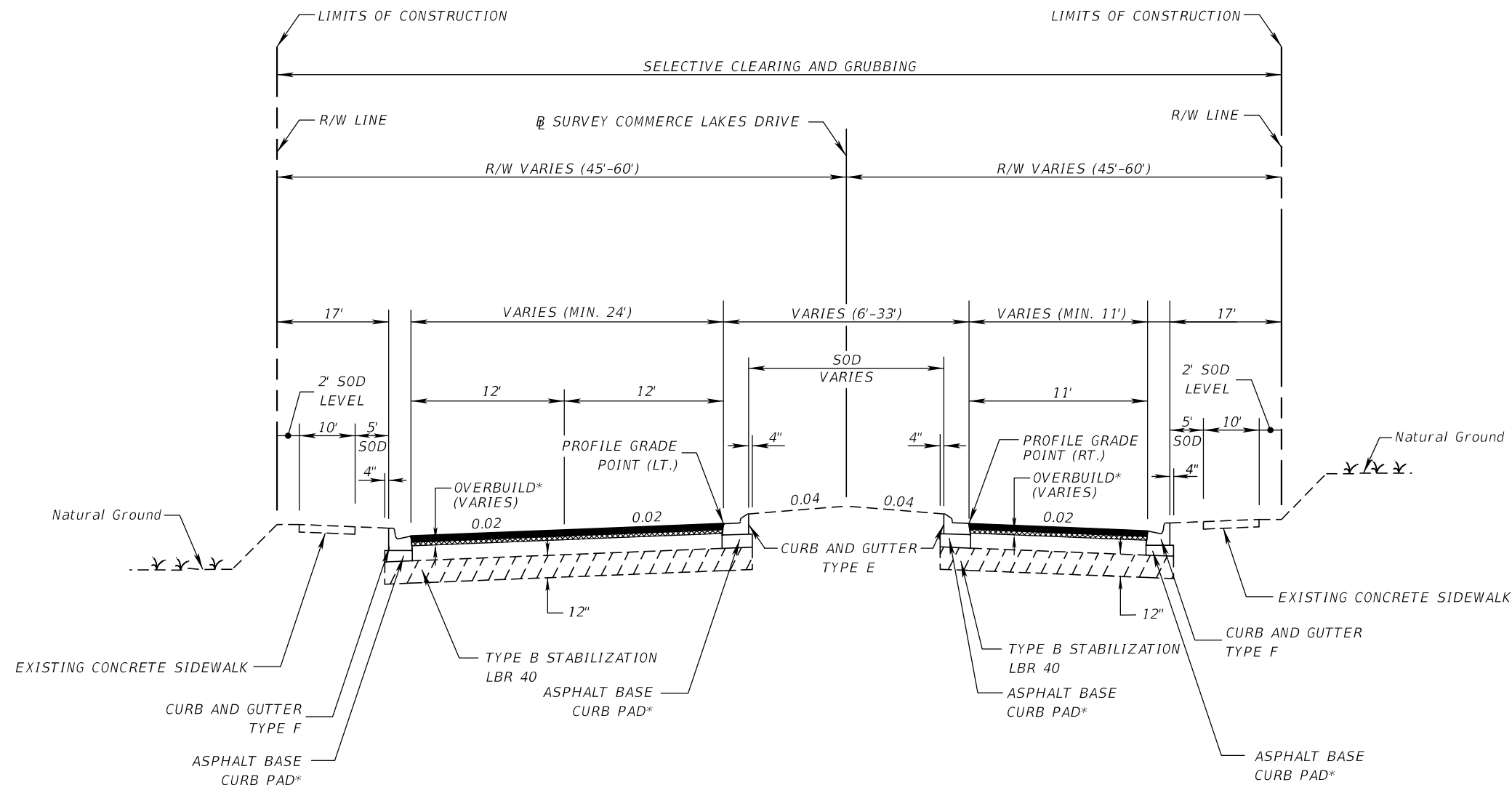
MILL (1")  
OVERBUILD (SEE TABLE)\*  
FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

\* SEE TYPICAL SECTION DETAIL SHEET

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION (1)		200671	4





TYPICAL SECTION (2)  
COMMERCE LAKES DR.  
STA. 197+57.05 TO STA. 208+89.09 (RT.)  
STA. 205+79.71 TO STA. 209+50.52 (LT.)  
STA. 213+00.00 TO STA. 215+20.46

TRAFFIC DATA


CURRENT YEAR = 2019 AADT = 23,100  
ESTIMATED OPENING YEAR = 2020 AADT = 23,200  
ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
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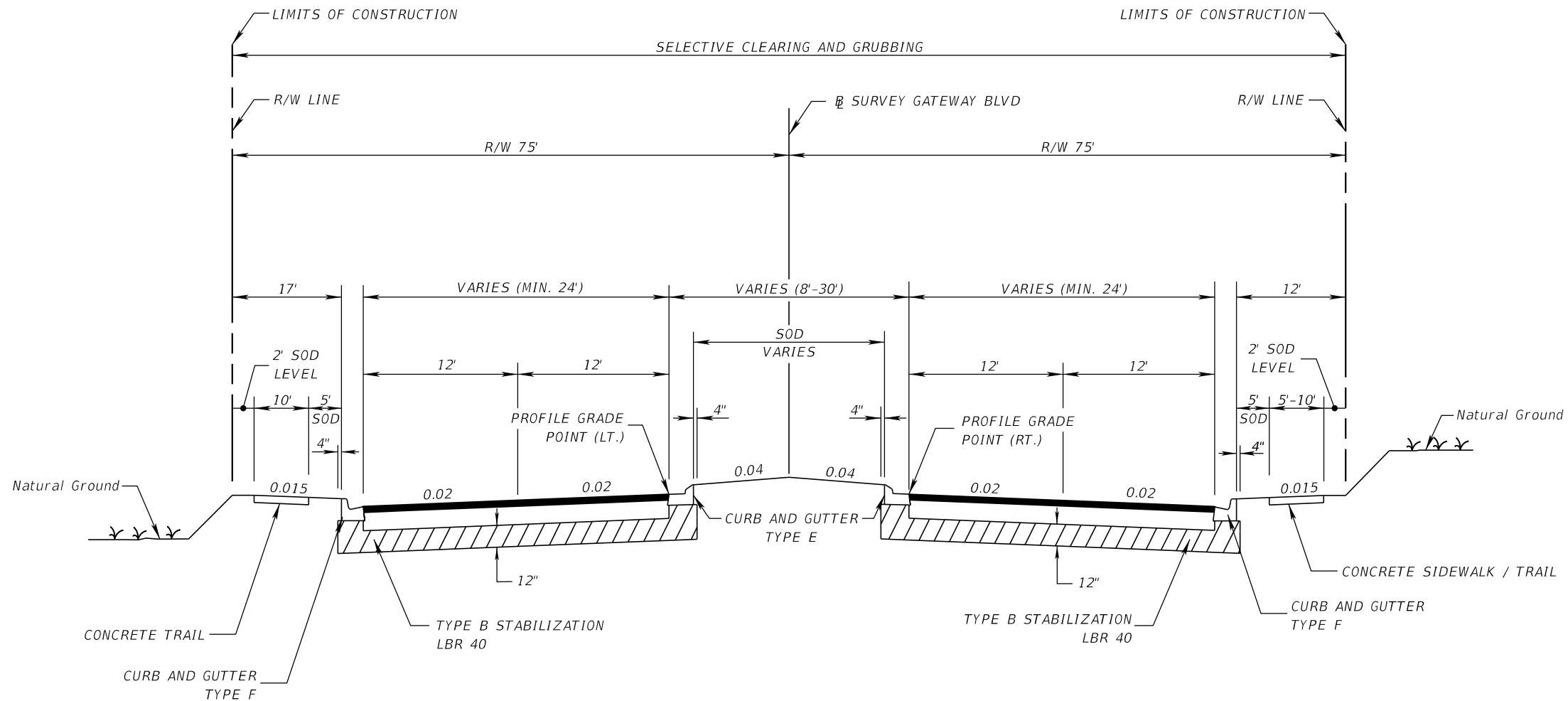
MILLING AND RESURFACING

MILL (1")  
OVERBUILD (SEE TABLE)\*  
FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

\* SEE TYPICAL SECTION DETAIL SHEET

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					
						TYPICAL SECTION (2)	200671	5



### TYPICAL SECTION (3)

#### GATEWAY BLVD.

STA. 105+19.88 TO STA. 107+39.24 (RT.)  
 STA. 105+46.40 TO STA. 107+39.24 (LT.)  
 STA. 108+88.84 TO STA. 110+94.60 (RT.)  
 STA. 108+88.84 TO STA. 111+50.00 (LT.)


#### NEW CONSTRUCTION

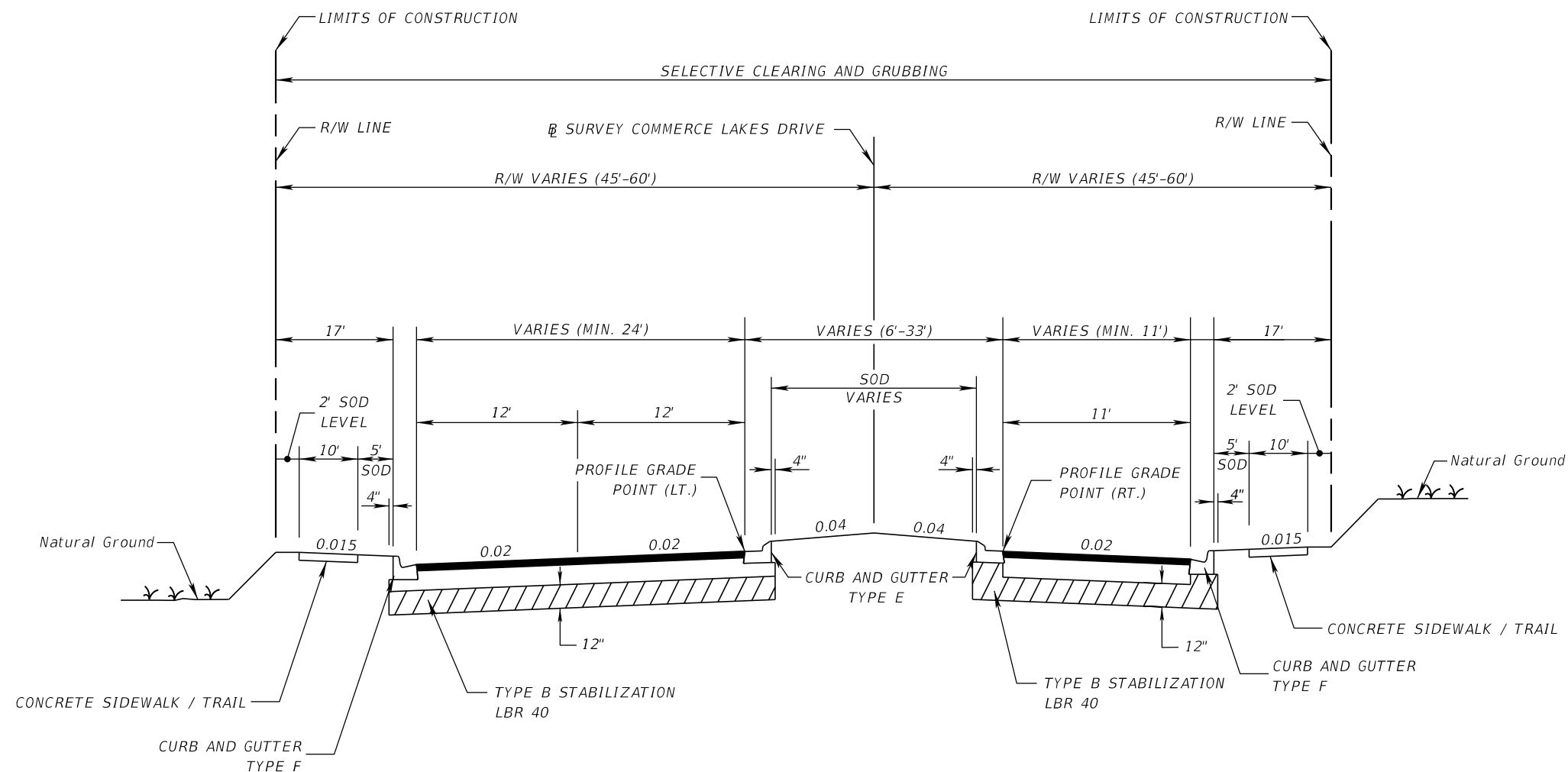
OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH  
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")  
 AND FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)

#### TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 23,100  
 ESTIMATED OPENING YEAR = 2020 AADT = 23,200  
 ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
 DESIGN HOUR T = 3.4%  
 DESIGN SPEED = 35 MPH

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION (3)		200671	6



TYPICAL SECTION (4)

COMMERCE LAKES DR.

STA. 208+89.09 TO STA. 210+14.05 (LT.)

STA. 209+50.52 TO STA. 210+14.05 (RT.)

STA. 211+57.03 TO STA. 213+00.00


TRAFFIC DATA

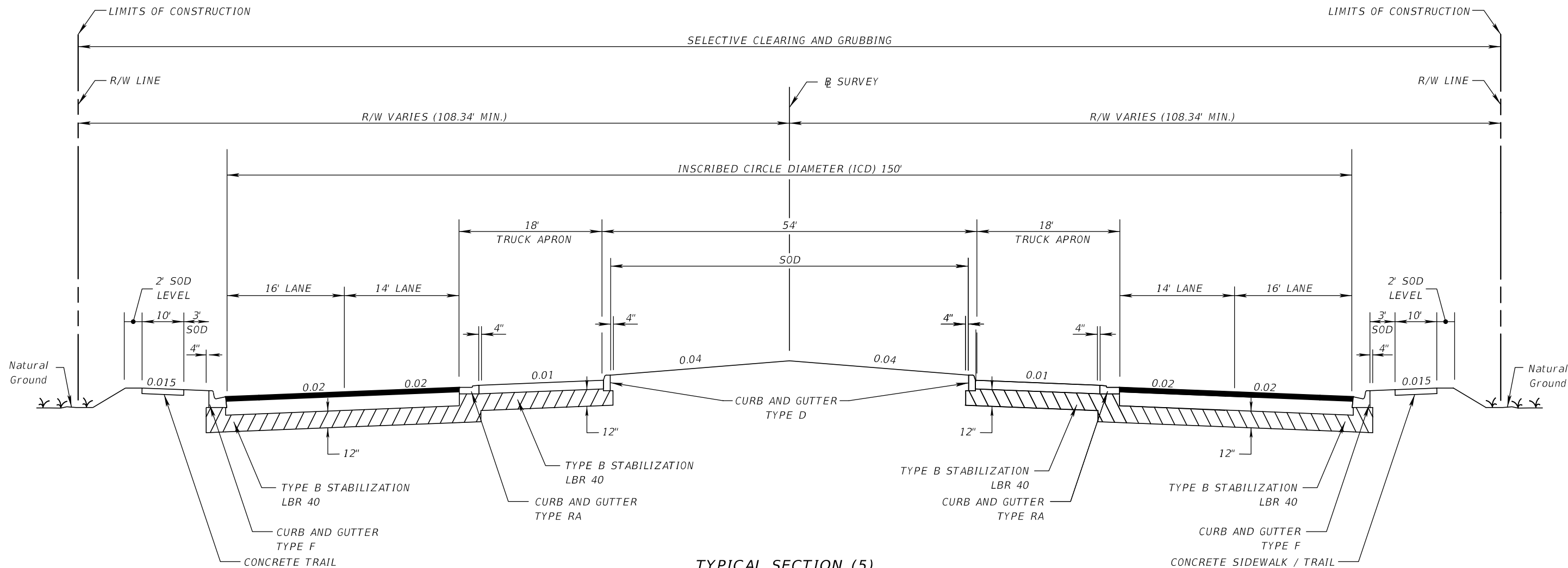
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NEW CONSTRUCTION

OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH  
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")  
 AND FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION (4)		200671	7



**TYPICAL SECTION (5)**  
**GATEWAY BLVD. ROUNDABOUT**  
**STA. 107+39.24 TO 108+88.84**

**NEW CONSTRUCTION**

OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH  
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")  
 AND FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)


**TRUCK APRON**

CONCRETE PAVEMENT (12")  
 (AMS-STD-595-21105 RED)

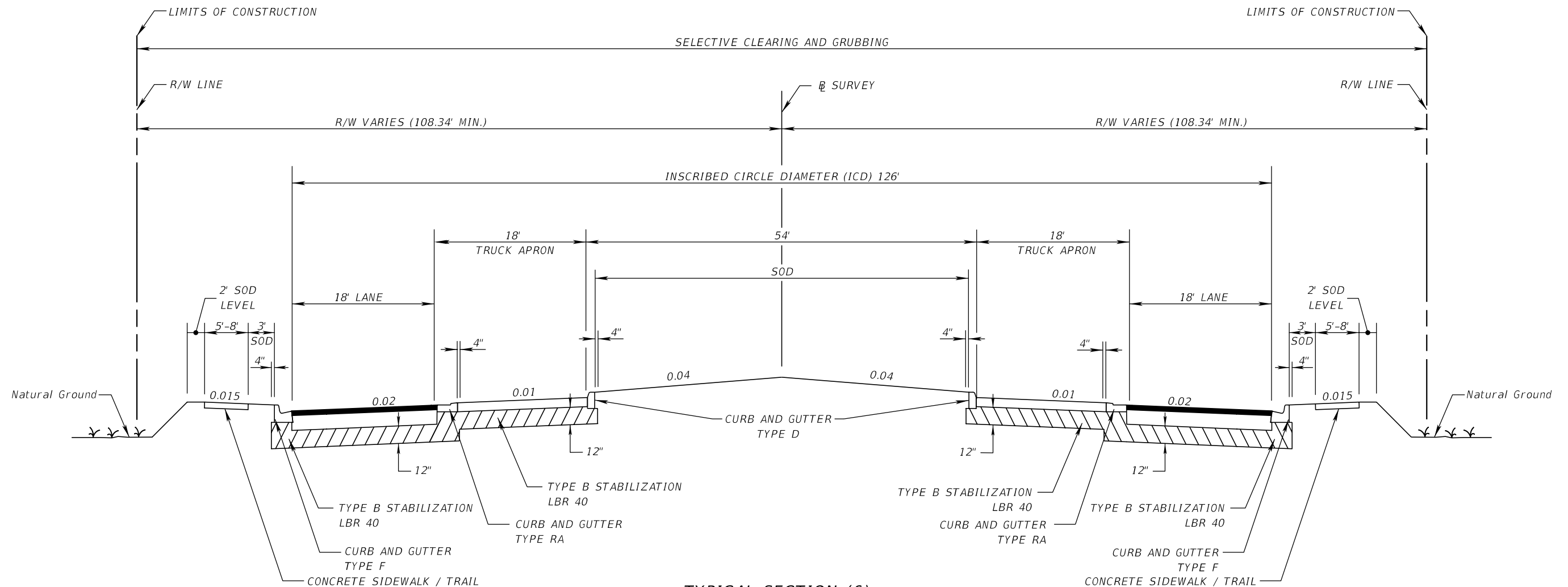
**TRAFFIC DATA**

CURRENT YEAR = 2019 AADT = 23,100  
 ESTIMATED OPENING YEAR = 2020 AADT = 23,200  
 ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
 DESIGN HOUR T = 3.4%  
 DESIGN SPEED = 35 MPH

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION (5)	200671	8

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



**TYPICAL SECTION (6)**  
**COMMERCE LAKES DR. ROUNDABOUT**  
**STA. 210+14.05 TO 211+57.03**

**NEW CONSTRUCTION**

OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH  
 TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2.5")  
 AND FRICTION COURSE FC-9.5 (TRAFFIC C) (1") (PG 76-22)


**TRUCK APRON**

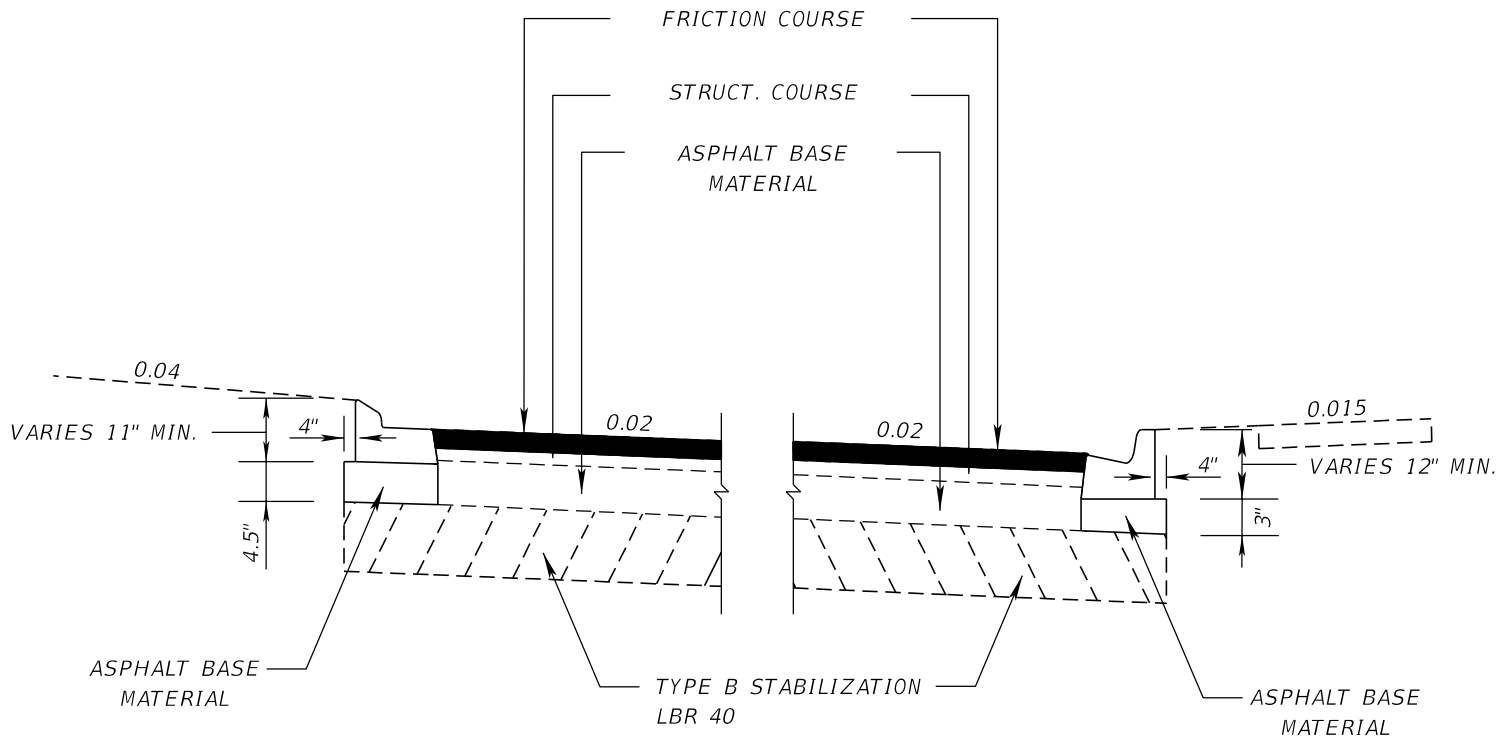
CONCRETE PAVEMENT (12")  
 (AMS-STD-595-21105 RED)

**TRAFFIC DATA**

CURRENT YEAR = 2019 AADT = 23,100  
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 ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
 DESIGN HOUR T = 3.4%  
 DESIGN SPEED = 35 MPH

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION (6)		200671	9



DETAIL OF ASPHALT BASE CURB PAD

NTS  
OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY)

TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 23,100  
ESTIMATED OPENING YEAR = 2020 AADT = 23,200  
ESTIMATED DESIGN YEAR = 2040 AADT = 24,407  
DESIGN HOUR T = 3.4%  
DESIGN SPEED = 35 MPH


SUMMARY OF ASPHALT OVERBUILD GATEWAY BLVD						
LOCATION		EXIST SLOPE	PROPOSED SLOPE	MAX DEPTH OF OVERBUILD (IN)	WIDTH OF OVERBUILD (FT)	END AREA OF OVERBUILD (SY)
STATION	LANE					
111+50	SB	0.010	0.008	0.36	22.54	1
112+00	SB	0.020	0.004	0.38	21.82	1
112+50	SB	0.008	0.015	0.16	21.5	1
113+00	SB	0.007	0.027	0.11	21.6	0
113+03	SB	0.011	0.020	0.11	21.6	0

SUMMARY OF ASPHALT OVERBUILD EAST COMMERCE LAKES DR						
LOCATION		EXIST CROSS SLOPE	PROPOSED SLOPE	MAX DEPTH OF OVERBUILD (IN)	WIDTH OF OVERBUILD (FT)	AREA OF OVERBUILD (SY)
STATION	LANE					
213+00	WB	0.011	0.020	1.19		1
213+50	WB	0.005	0.020	1.98	11	1
214+00	WB	0.012	0.020	1.06	11	0
214+50	WB	0.005	0.020	1.98	11	0
215+00	WB	-0.007	0.020	3.56	11	0
215+20	WB	0.005	0.020	1.98	11	0

SUMMARY OF ASPHALT OVERBUILD WEST COMMERCE LAKES DR						
LOCATION		EXIST CROSS SLOPE	PROPOSED SLOPE	MAX DEPTH OF OVERBUILD (IN)	WIDTH OF OVERBUILD (FT)	END AREA OF OVERBUILD (SY)
STATION	LANE					
205+79.71	EB	0.030	0.020	0.10	35.8	0
206+00	EB	0.012	0.020	0.10	35.87	0
206+50	EB	0.008	0.020	0.34	36.14	2
207+00	EB	0.007	0.020	0.31	35.7	2
207+50	EB	0.011	0.020	0.27	34.03	2
208+00	EB	0.008	0.020	0.28	30.34	1
208+50	EB	0.008	0.020	0.26	24.67	1
209+00	EB	0.006	0.020	0.25	24	1
209+50	EB	0.006	0.020	0.23	23.9	1
209+50.52	EB	0.006	0.020	0.23	23.9	0

SUMMARY OF ASPHALT OVERBUILD WEST COMMERCE LAKES DR						
LOCATION		EXIST CROSS SLOPE	PROPOSED SLOPE	MAX DEPTH OF OVERBUILD (IN)	WIDTH OF OVERBUILD (FT)	END AREA OF OVERBUILD (SY)
STATION	LANE					
205+79.71	WB	0.030	0.020	0.32	20	1
206+00	WB	0.012	0.020	1.06	11	1
206+50	WB	0.008	0.020	1.58	11	1
207+00	WB	0.007	0.020	1.72	11	0
207+50	WB	0.011	0.020	1.19	11	0
208+00	WB	0.008	0.020	1.58	11	1
208+50	WB	0.008	0.020	1.58	12	0
208+89.09	WB	0.006	0.020	1.85	11	0


APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TYPICAL SECTION DETAILS	200671	10



[illegible]

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS					GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		SUMMARY OF DRAINAGE STRUCTURES		200671	11

CURVE DATA BLCOMMERCE\_5  
 PI STA. = 206+09.64  
 $\Delta$  = 24° 51' 59" (RT)  
 D = 4° 30' 41"  
 T = 280.00  
 L = 551.18  
 R = 1,270.00  
 PC STA. = 203+29.64  
 PT STA. = 208+80.82

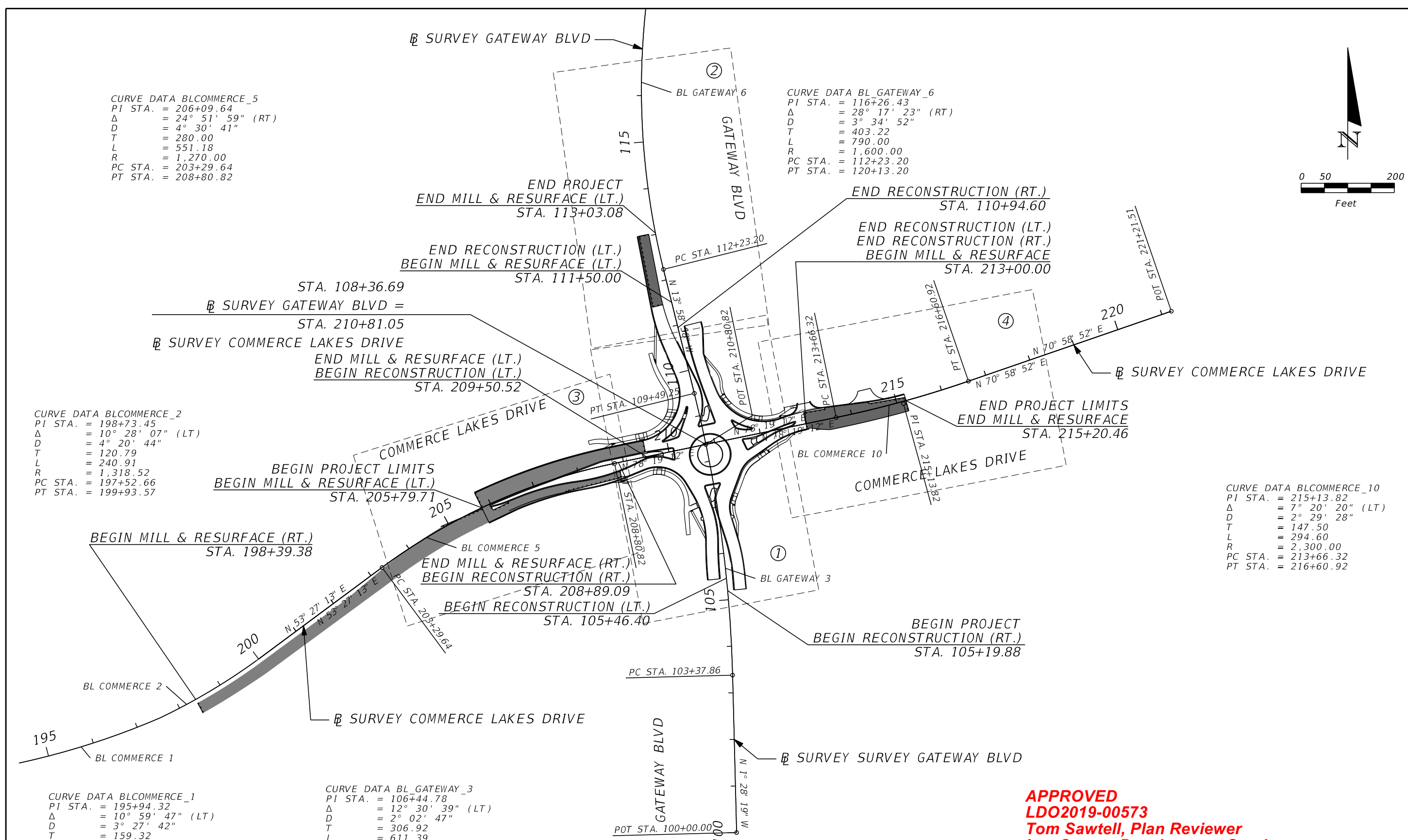
CURVE DATA BL\_GATEWAY\_6  
 PI STA. = 116+26.43  
 $\Delta$  = 28° 17' 23" (RT)  
 D = 3° 34' 52"  
 T = 403.22  
 L = 790.00  
 R = 1,600.00  
 PC STA. = 112+23.20  
 PT STA. = 120+13.20

CURVE DATA BLCOMMERCE\_2  
 PI STA. = 198+73.45  
 $\Delta$  = 10° 28' 07" (LT)  
 D = 4° 20' 44"  
 T = 120.79  
 L = 240.91  
 R = 1,318.52  
 PC STA. = 197+52.66  
 PT STA. = 199+93.57


CURVE DATA BLCOMMERCE\_10  
 PI STA. = 215+13.82  
 $\Delta$  = 7° 20' 20" (LT)  
 D = 2° 29' 28"  
 T = 147.50  
 L = 294.60  
 R = 2,300.00  
 PC STA. = 213+66.32  
 PT STA. = 216+60.92

CURVE DATA BLCOMMERCE\_1  
 PI STA. = 195+94.32  
 $\Delta$  = 10° 59' 47" (LT)  
 D = 3° 27' 42"  
 T = 159.32  
 L = 317.66  
 R = 1,655.11  
 PC STA. = 194+35.00  
 PT STA. = 197+52.66

CURVE DATA BL\_GATEWAY\_3  
 PI STA. = 106+44.78  
 $\Delta$  = 12° 30' 39" (LT)  
 D = 2° 02' 47"  
 T = 306.92  
 L = 611.39  
 R = 2,799.99  
 PC STA. = 103+37.86  
 PT STA. = 109+49.25



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**LDO2019-00573**  
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**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			PROJECT LAYOUT		200671	12

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



COORDINATE TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
122	809840.02'	737322.14'	28.36'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
130	809778.82'	737211.19'	27.04'	SET N-D "CARDNO T.P. LB 7975"
123	809894.71'	737559.52'	25.64'	SET N-D "CARDNO T.P. LB 7975"
124	809962.29'	737795.09'	25.48'	SET N-D "CARDNO T.P. LB 7975"
125	810003.95'	737813.64'	25.73'	SET N-D "CARDNO T.P. LB 7975"
126	809906.15'	737296.18'	28.48'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
127	810149.73'	737235.87'	26.45'	SET N-D "CARDNO T.P. LB 7975"
128	810392.61'	737183.96'	26.06'	SET N-D "CARDNO T.P. LB 7975"
129	809897.11'	737170.60'	27.13'	SET N-D "CARDNO T.P. LB 7975"
131	809783.81'	736952.21'	28.00'	SET 5/8" IR&C "CARDNO T.P. LB 7975"

COORDINATE TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
132	809651.32'	736731.37'	27.69'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
133	809731.90'	736671.33'	28.02'	SET N-D "CARDNO T.P. LB 7975"
134	809498.30'	737231.78'	26.88'	SET N-D "CARDNO T.P. LB 7975"
135	809611.40'	737291.19'	27.61'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
136	809440.05'	737353.83'	28.16'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
137	809177.49'	737384.98'	26.71'	SET 5/8" IR&C "CARDNO T.P. LB 7975"
138	809163.19'	737243.28'	26.64'	SET N-D "CARDNO T.P. LB 7975"
139	810579.94'	737116.84'	27.27'	SET N-D "CARDNO T.P. LB 7975"
140	810428.77'	737048.91'	26.29'	SET N-D "CARDNO T.P. LB 7975"
141	810172.10'	737103.05'	26.67'	SET N-D "CARDNO T.P. LB 7975"

LEGEND:

	AIR RELEASE VALVE		FORCE MAIN AIR RELEASE VALVE		SPRINKLER
	AUTO VACUUME		GAS PIPELINE MARKER		STEEL POST
	BACKFLOW PREVENTER		GAS VALVE		TELEPHONE BOX OR VAULT
	BACTERIAL SAMPLE POINT		GATE ACTUATOR BOX		TELEPHONE CANISTER
	BENCH MARK		GROUND LIGHT		TELEPHONE (BURIED) MARKER POST
	BOLLARD		GREASE MANHOLE		TELEPHONE MANHOLE
	CABLE RISER		GUARD RAIL		TELEPHONE RISER
	CABLE TV BOX		GUY POLE		TOE OF SLOPE
	CATCH BASIN		GUY WIRE		TOP OF BANK
	CENTERLINE		HANDI-CAP PARKING		TRAFFIC SIGNAL BOX
	CLEANOUT		HOSE BIB		TRAFFIC SIGNAL POLE
	COORDINATE NUMBER		IRRIGATION BOX		TRAFFIC SIGNAL LIGHT
	CONCRETE POWER POLE		IRRIGATION VALVE		UNDERGROUND UTILITIES
	CONCRETE POST		LIGHT POLE		UNKNOWN UTILITY VAULT
	DRAINAGE MANHOLE		MAIL BOX		UNKNOWN UTILITY MANHOLE
	ELECTRICAL BOX		MITERED END		WATER MAIN
	ELECTRIC OUTLET		WELL		WATER LINE FLAG
	ELECTRIC MANHOLE		OVERHEAD POWER LINE		WATER METER
	ELECTRIC METER		OVERHEAD TELEPHONE LINE		WATER VALVE
	ELECTRIC TRANSFORMER W/ PAD		PARKING PAY METER		WOOD POST
	ELECTRIC LINE		POWER POLE		WOOD SUPPORT POLE
	ELECTRIC FLAG		POWER POLE w/RISER		YARD DRAIN
	EXISTING ELEVATION		PROPANE VALVE		CROSS WALK SIGNAL POLE
	FENCE - BARBED WIRE		RECLAIM WATER LINE		CROSS WALK BUTTON POLE
	FENCE - CHAIN LINK / U.O.N.		RECLAIM WATER LINE FLAG		BUSH
	FENCE - WOOD / U.O.N.		SEWER LINE FLAG		CABBAGE PALM
	FIBER OPTIC MARKER / POST		SANITARY SEWER LINE		OAK TREE
	FIBER OPTIC BOX		SEWER MANHOLE		PALM TREE
	FIRE HYDRANT		SEWER VALVE		PINE TREE
	FIRE VALVE		SECURITY SENSOR		SHADE TREE (VARIOUS TYPE)
	FLAG POLE		SIGN SINGLE POST		
	FORCE MAIN		SIGN DOUBLE POST		

ABBREVIATIONS:

AC. = ACRE	MH = MANHOLE
A.C. = AIR CONDITIONER	MHWL = MEAN HIGH WATER LINE
A.K.A. = ALSO KNOWN AS	MISC. = MISCELLANEOUS
ALUM. = ALUMINUM	MON = MONUMENT
APPR. = APPROXIMATE	NAD = NORTH AMERICAN DATUM
ASPH. = ASPHALT	N.A.V.D. = NORTH AMERICAN VERTICAL DATUM
AVE. = AVENUE	NGS = NATIONAL GEODETIC SURVEY
BLDG. = BUILDING	N.G.V.D. = NATIONAL GEODETIC VERTICAL DATUM (1929)
BLVD. = BOULEVARD	No. = NUMBER
BM = BENCHMARK	N.T.S. = NOT TO SCALE
BOC = BACK OF CURB	N.T.T. = NAIL & TIN TAB
BOW = BACK OF WALK	O/H = OVERHANG
BSM = BUREAU OF SURVEYING AND MAPPING	O.H.W.L. = ORDINARY HIGH WATER LINE
(C) = CALCULATED	O.H.W.M. = ORDINARY HIGH WATER MARK
CATV = CABLE TELEVISION	O.R. = OFFICIAL RECORD BOOK / PAGE
CB = CATCH BASIN	(P) = PLAT
CBS = CONCRETE BLOCK STRUCTURE	PB = PLAT BOOK
C.C.R. = CERTIFIED CORNER RECORD	P.C. = POINT OF CURVATURE
CDB = CHORD BEARING	PCP = PERMANENT CONTROL POINT
CH = CHORD	PG (S). = PAGE(S)
CLF = CHAIN LINK FENCE	P.I. = POINT OF INTERSECTION
CM = CONCRETE MONUMENT	PKN&D = PARKER-KALON NAIL & DISK
CMP = CORRUGATED METAL PIPE	PKWY. = PARKWAY
C.O. = CLEANOUT	PL = PROPERTY LINE
CONC. = CONCRETE	PLS = PROFESSIONAL LAND SURVEYOR
CONT. = CONTROL	P.O.B. = POINT OF BEGINNING
CPP = CORRUGATED PLASTIC PIPE	P.O.C. = POINT OF COMMENCEMENT
COR. = CORNER	P.O.T. = POINT OF TERMINUS
CORP. = CORPORATION	PP = POWER POLE
C.P. = CONTROL POINT	P.R.M. = PERMANENT REFERENCE MONUMENT
C.R. = COUNTY ROAD	PROP. = PROPERTY
CT. = COURT	PSM = PROFESSIONAL SURVEYOR AND MAPPER
C.U.E. = COUNTY UTILITY EASEMENT	PT. = POINT
(D) = DEED	P.T. = POINT OF TANGENCY
D.E. = DRAINAGE EASEMENT	P.U.E. = PUBLIC UTILITY EASEMENT
(DESC.) = DESCRIPTION	PVC = POLY VINYL CHLORIDE
DH = DRILL HOLE	R = RADIUS OR RIGHT
DIA. = DIAMETER	(R) = RECORD
DR. = DRIVE	RCP = REINFORCED CONCRETE PIPE
DWG. = DRAWING	RGE = RANGE
EL. = ELEVATION	RLS = REGISTERED LAND SURVEYOR
ELEC. = ELECTRIC	R.R. = RAILROAD
EOP = EDGE OF PAVEMENT	RT = RIGHT
EOW = EDGE OF WATER	RTA = RIGHT ANGLE
ERCP = ELLIPTICAL REINFORCED CONCRETE PIPE	R/W = RIGHT-OF-WAY
ESMT. = EASEMENT	SEC. = SECTION
EXIST. = EXISTING	S.F. = SQUARE FEET
(F) = FIELD	SFWMD = SOUTH FLORIDA WATER MANAGEMENT DISTRICT
FDEP = FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	SHT. = SHEET
FDOT = FLORIDA DEPARTMENT OF TRANSPORTATION	S.R. = STATE ROAD
FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY	S.S. = SANITARY SEWER
F.F. = FINISHED FLOOR	STA. = STATION
FND = FOUND	ST. = STREET
FPL OR FP&L = FLORIDA POWER & LIGHT	SWFWMD = SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
F.S. = FLORIDA STATUTES	T = TANGENT
FT. = FOOT / FEET	TEL = TELEPHONE
GLO = GENERAL LAND OFFICE	TIIF = TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA
GPS = GLOBAL POSITIONING SYSTEM	TIITF = BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA
I.D. = IDENTIFICATION	TOB = TOP OF BANK
I.D.D. = IONA DRAINAGE DISTRICT	TOE = TOE OF SLOPE
I.N. = INSTRUMENT NUMBER	T.P. = TRAVERSE POINT
INC. = INCORPORATED	TRANS. = TRANSITION
INST. = INSTRUMENT	TWP = TOWNSHIP
INV. = INVERT	TYP = TYPICAL
I.P. = IRON PIPE	U.E. = UTILITY EASEMENT
IR = IRON ROD (5/8" DIA. U.O.N.)	U.O.N. = UNLESS OTHERWISE NOTED
IRC OR IR&C = IRON ROD & CAP	USGS = UNITED STATES GEOLOGICAL SURVEY
IRR. = IRRIGATION	w/ = WITH
L = LENGTH	Y.D. = YARD DRAIN
LABINS = LAND BOUNDARY INFORMATION SYSTEM (STATE OF FLORIDA)	Δ = DELTA ANGLE
LAT = LATITUDE	± = MORE OR LESS
LB = LICENSED BUSINESS	# = NUMBER
LN. = LANE	S** = STAMPING OF CAP OR DISK
LONG = LONGITUDE	
LS = LICENSED SURVEYOR	
LT = LEFT	
(M) = MEASURED	
MAG = MAGNETIC	
ME = MITERED END	

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS						GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					
				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		<b>PROJECT CONTROL</b>	200671	13

PROJECT NOTES:

1. BENCHMARK ELEVATIONS SHOWN ON THE PLANS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). COORDINATE SYSTEM FOR THIS PROJECT SHALL BE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE; NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT).

2. THE COST OF SAW CUTTING SHALL BE INCIDENTAL TO THE WORK BEING PERFORMED.

3. ALL LANES MUST BE ABLE TO BE RE-OPENED IN 12 HOURS FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER EMERGENCY EVENTS AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE PROJECT ENGINEER.

4. PAVEMENT MARKINGS AND SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND FDOT STANDARD PLANS, INDEX 711-001

5. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH, AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL LOCATE AND VERIFY THE SIZE, LOCATION, AND DEPTH OF ALL EXISTING UTILITIES IN THE FIELD

6. CONTRACTOR SHALL VERIFY ALL UTILITIES AND PROVIDE AT LEAST 48 HOURS NOTICE TO THE INDIVIDUAL UTILITY COMPANIES AND LCDOT PRIOR TO CONSTRUCTION.  
UTILITY/AGENCY OWNERS:COMPANY CONTACTTELEPHONE NUMBERS  
CENTURYLINKEZEKIEL REID239-336-2030  
COMCAST CABLESTEVE HUTSON754-221-1254  
FLORIDA POWER AND LIGHTJUAN CRUZ941-423-4842  
GATEWAY SERVICES DISTRICTCHRIS SHOEMAKER239-561-1313  
LEE COUNTY UTILITIESALLAN MAKAU239-533-8598  
TECO PEOPLES GAS (FT. MYERS)ANTHONY BAUBLITZ941-342-4025

7. A STORMWATER POLLUTION PREVENTION PLAN SHALL BE PREPARED IN ACCORDANCE WITH SECTION 104 OF THE FDOT SPECIFICATIONS, THE NOTICE OF INTENT SHALL BE PREPARED FOR THE NPDES STORMWATER PERMIT AND SUBMITTED TO OBTAIN PERMIT COVERAGE. FULL COMPENSATION FOR ALL ITEMS SHALL BE INCLUDED IN THE COST OF MAINTENANCE OF TRAFFIC.

8. IN ANY EXCAVATION WORK IT SHOULD BE NOTED THAT THE WATER TABLE IS HIGH IN THIS AREA.

9. ALL CONSTRUCTION IN THE COUNTY RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT LEE COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS. ALL REQUIRED INSPECTIONS SHALL BE PERFORMED AS REQUIRED BY THESE STANDARDS. CONTRACTOR SHALL PROVIDE BOND AND PERMIT FEE AS REQUIRED.

10. CONCRETE SIDEWALK: USE CLASS 1, 3000 PSI (MINIMUM) CONCRETE. APPLY BROOM FINISH AND MAKE VERTICAL SAW CUTS AT 5' ON CENTER AT A DEPTH OF ¼ OF THE SLAB THICKNESS. PROVIDE PRE-FORMED EXPANSION JOINTS AT 50' ON CENTER.

11. ALL MATERIALS AND WORKMANSHIP UNDER THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF LEE COUNTY DEVELOPMENT STANDARDS, LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) AND FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019-20, UNLESS OTHERWISE NOTED.

12. ALL PERVIOUS AREAS WITHIN THE PROJECT CONSTRUCTION LIMITS SHALL BE GRASSED, SODDED, MULCHED OR LANDSCAPED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN IF INCLUDED WITH THIS PLAN SET OR PROVIDED SEPARATELY AS PART OF CONTRACT. EXISTING SOD IS MOSTLY SAINT AUGUSTINE.

13. CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANS. IF ANY DISCREPANCIES IN QUANTITIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND/OR LCDOT.

14. ALL REGULATORY AND PERMITTING AGENCIES' REQUIREMENTS SHALL BE COMPLIED WITH.

15. WATER TABLE SHOWN ON CROSS SECTIONS MAY DIFFER FROM SEASONAL HIGH WATER TABLE (SHWT).

16. APPROPRIATE TURBIDITY CONTROL DEVICES SUCH AS SILT FENCES WILL BE UTILIZED DURING ALL PHASES OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NPDES NOTICE OF INTENT, NOTICE OF TERMINATION, AND LEE COUNTY RIGHT-OF-WAY PERMITS. NOI MUST BE FILED WITH FDEP IN ACCORDANCE WITH DEP DOCUMENT NO. 62-621 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND MAINTAINING AN EFFECTIVE STORMWATER POLLUTION PREVENTION PLAN.

17. ALL EXISTING PIPES THAT ARE TO REMAIN IN SERVICE WITHIN THE RIGHT-OF-WAY CORRIDOR ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED IN THE PLANS.

18. ALL EXISTING DRAINAGE STRUCTURES ARE TO REMAIN UNLESS NOTED ON THE ROADWAY PLANS.


19. CONTRACTOR SHALL MARK THE PROPERTY LINE LOCATION AND NOTIFY BUSINESS/HOME OWNERS TO REMOVE ANY EXISTING LANDSCAPING (I.E. SOD, BUSHES, TREES, ETC.) AND/OR SPRINKLER PIPE OR SPRINKLER HEADS AND FENCING THAT IS LOCATED WITHIN THE EXISTING PUBLIC RIGHT-OF-WAY OR EASEMENT AT LEAST ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

20. NOTIFY RESIDENCES AND BUSINESSES AT LEAST 48 HOURS IN ADVANCE OF ANY DISRUPTION IN SERVICE, INCLUDING DRIVEWAY CUTS.

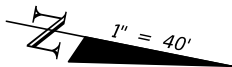
21. ALL CONCRETE SIDEWALK, TRAIL AND DRIVEWAYS TO BE 6" THICK.

22. TREES TO BE REMOVED ARE NOTED ON THE EROSION CONTROL PLANS.

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

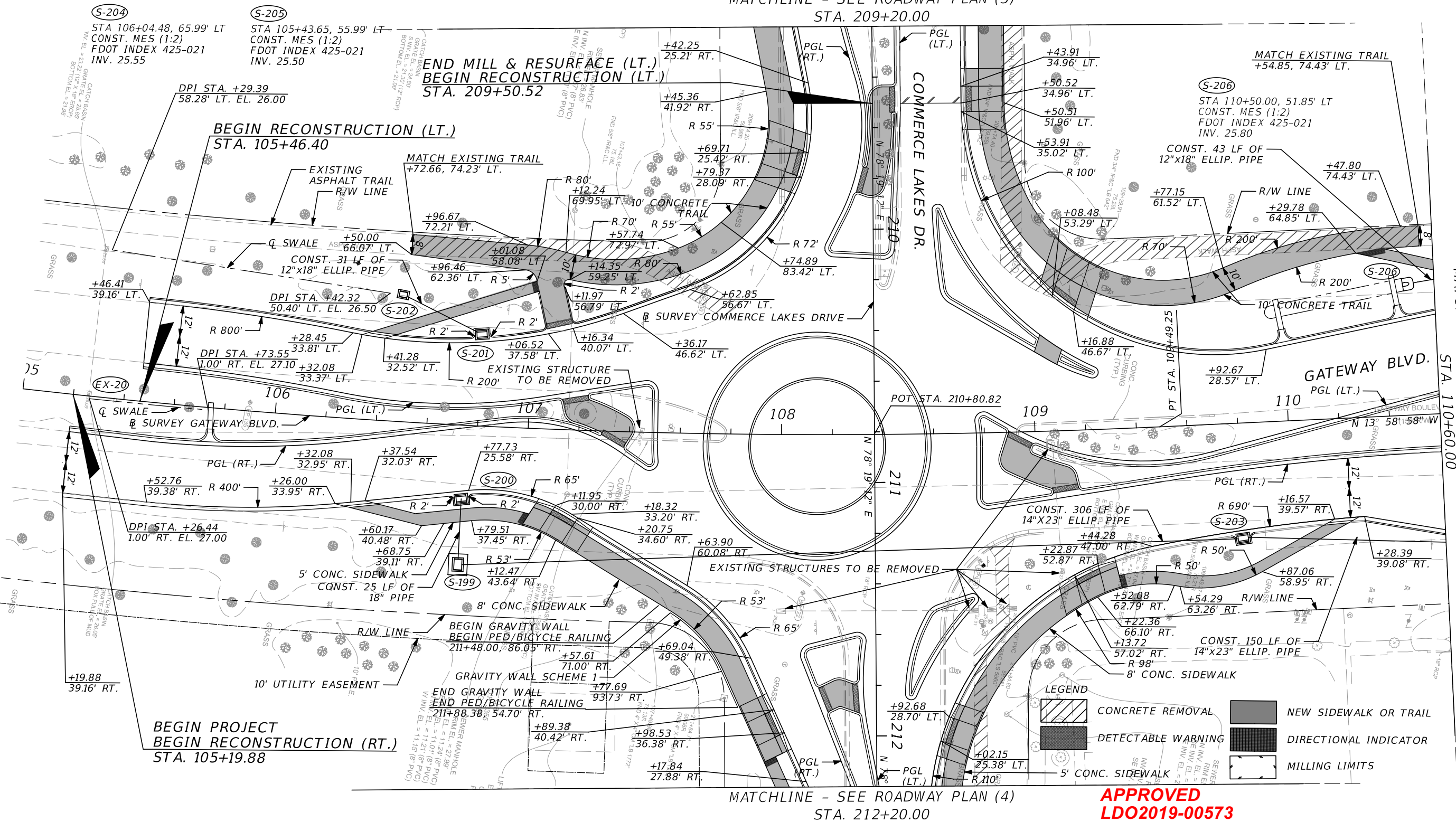
REVISIONS				<div>JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915</div>	<div> DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			PROJECT NOTES	200671	14






MATCHLINE - SEE ROADWAY PLAN (3)  
STA. 209+20.00

MATCHLINE - SEE ROADWAY PLAN (2)  
STA. 110+60.00

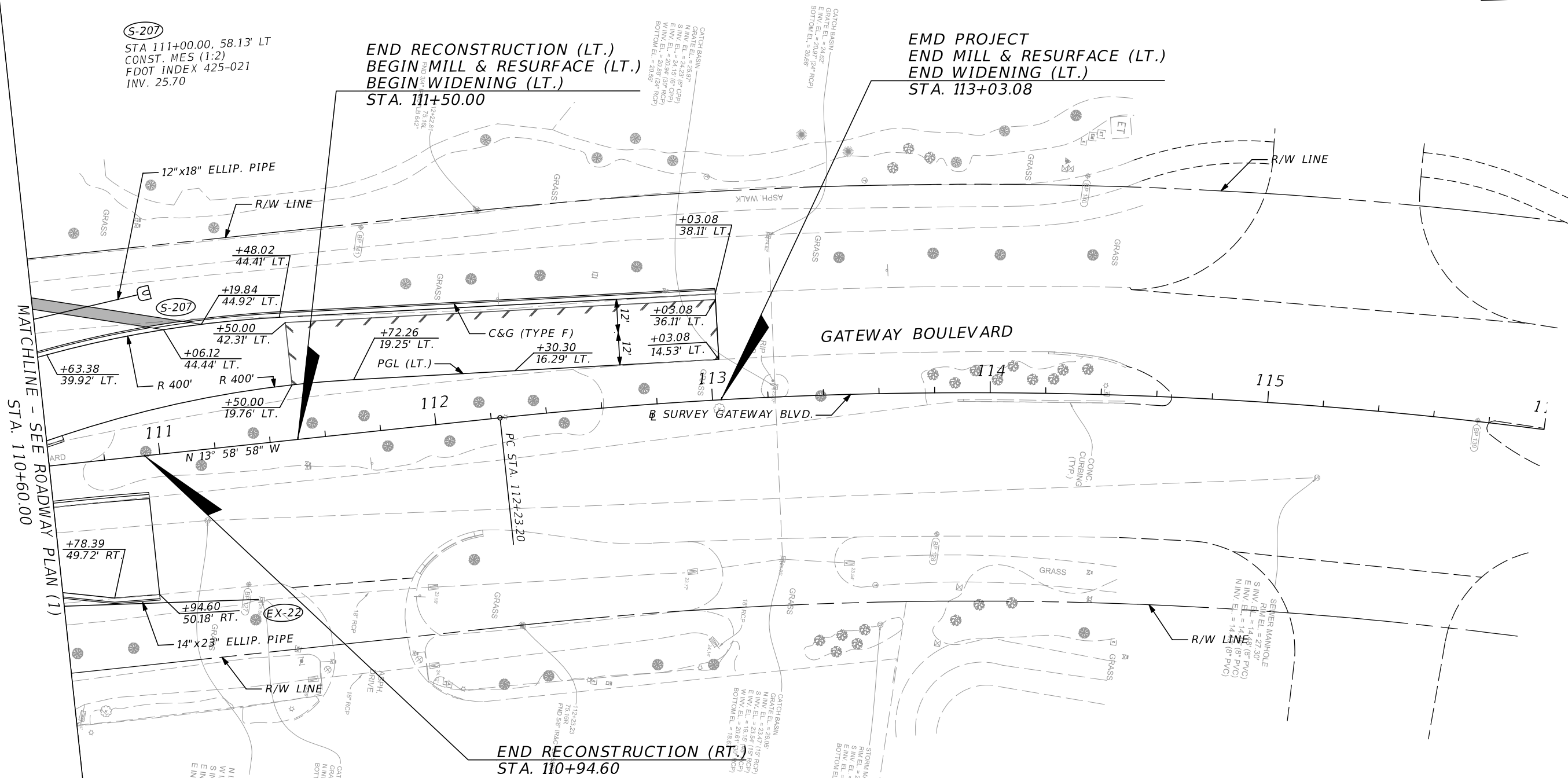
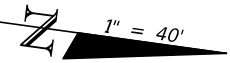


MATCHLINE - SEE ROADWAY PLAN (4)  
STA. 212+20.00

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PLAN (1) (GATEWAY BOULEVARD)	200671	15

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



**LEGEND**

- CONCRETE REMOVAL
- NEW SIDEWALK OR TRAIL
- MILLING LIMITS

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

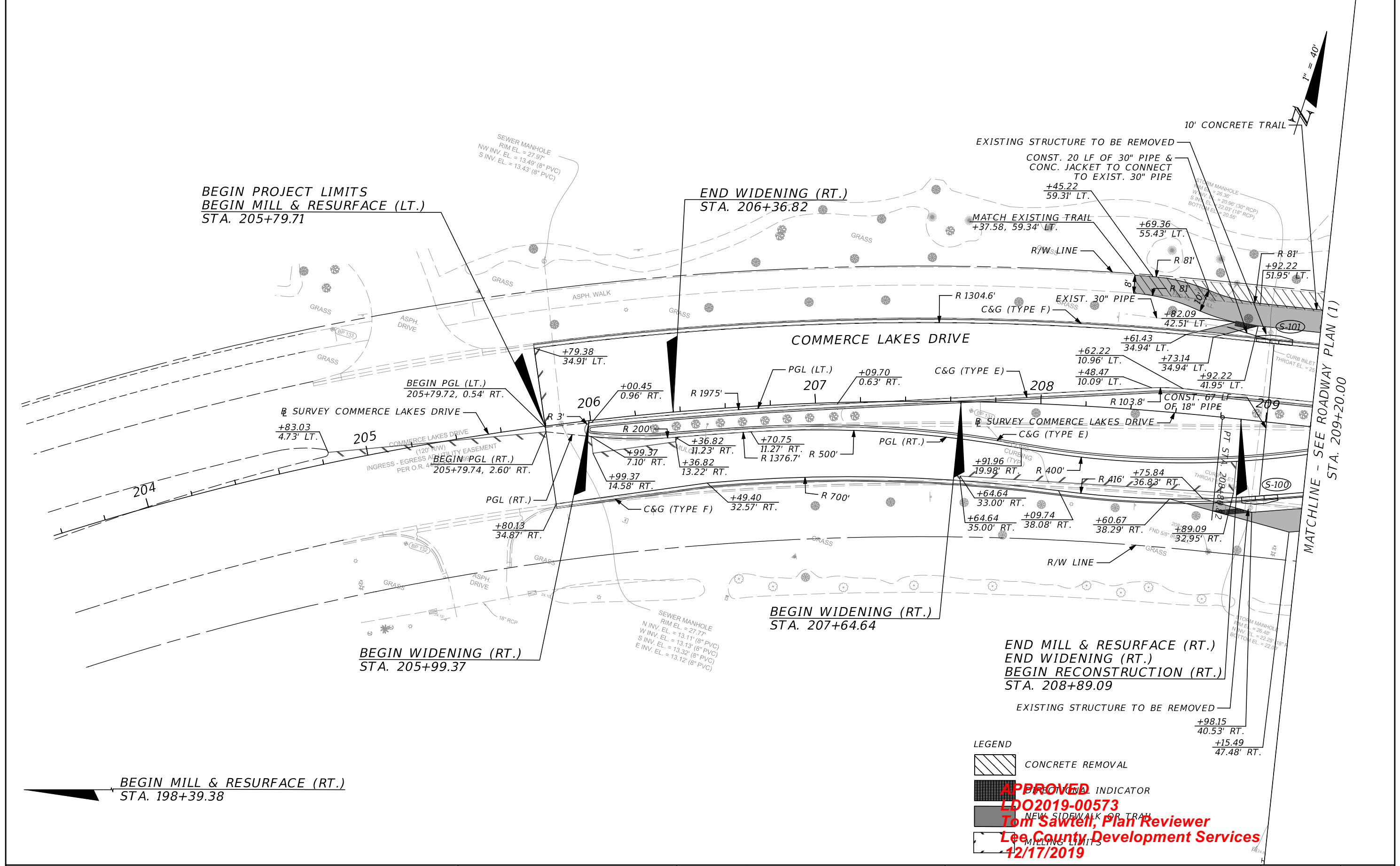
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION


JASON Y. YAM, P.E.  
P.E. LICENSE NUMBER 62449  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FLORIDA 33759  
CERTIFICATE OF AUTHORIZATION 29915



GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAUT)		CIP NO.	SHT. NO.
ROADWAY PLAN (2) (GATEWAY BOULEVARD)		200671	16





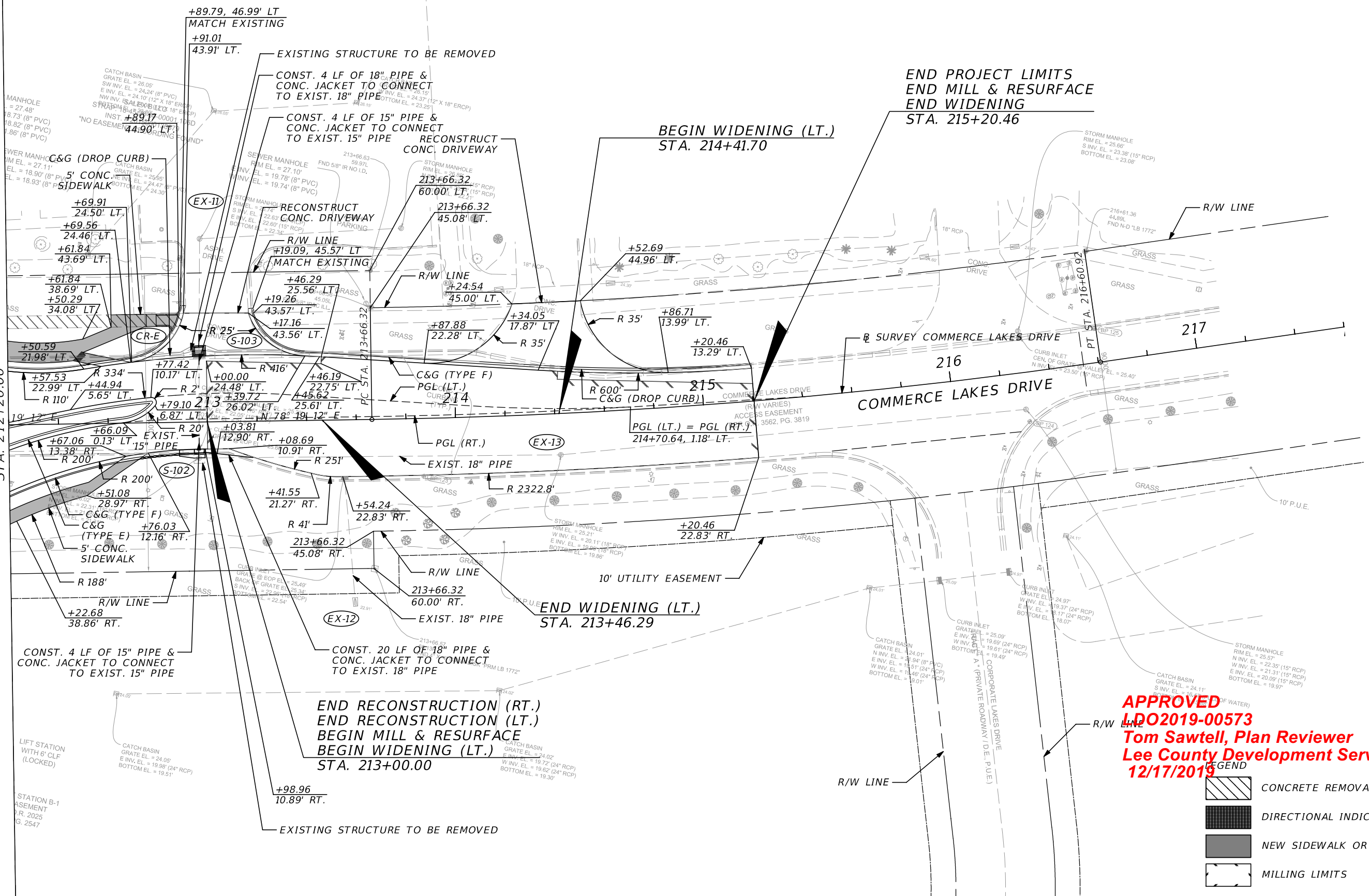
REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION	JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	ROADWAY PLAN (3) (COMMERCE LAKES DRIVE)	CIP NO. 200671	SHT. NO. 17
DATE	DESCRIPTION	DATE	DESCRIPTION										

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

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MATCHLINE - SEE ROADWAY PLAN (1)  
STA. 212+20.00

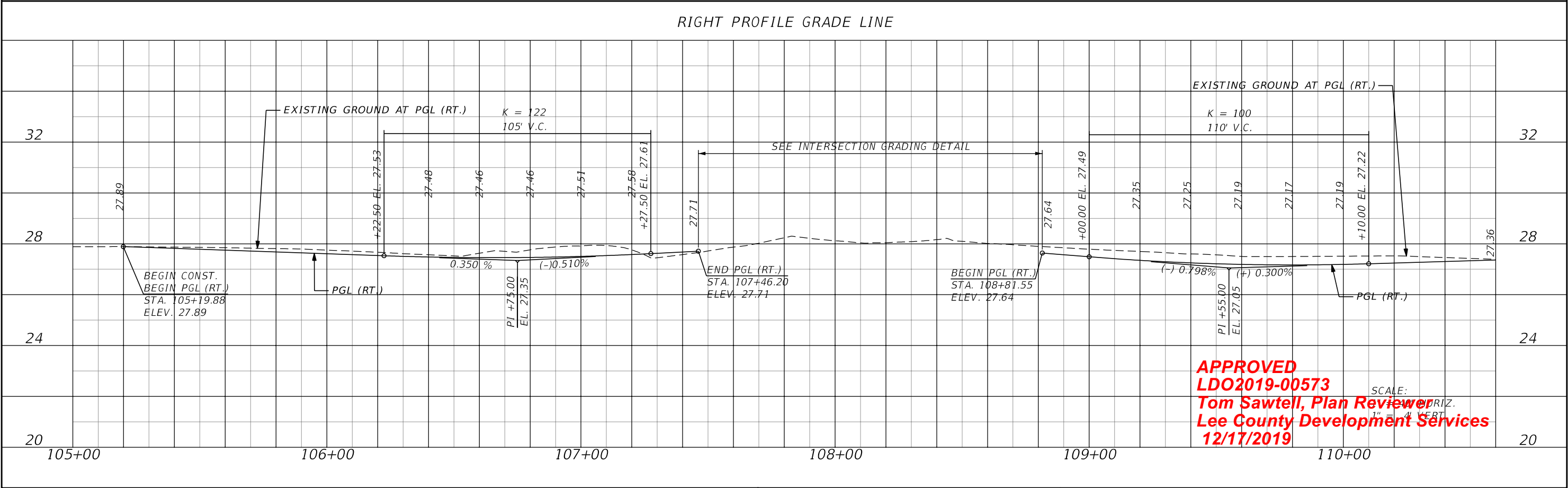
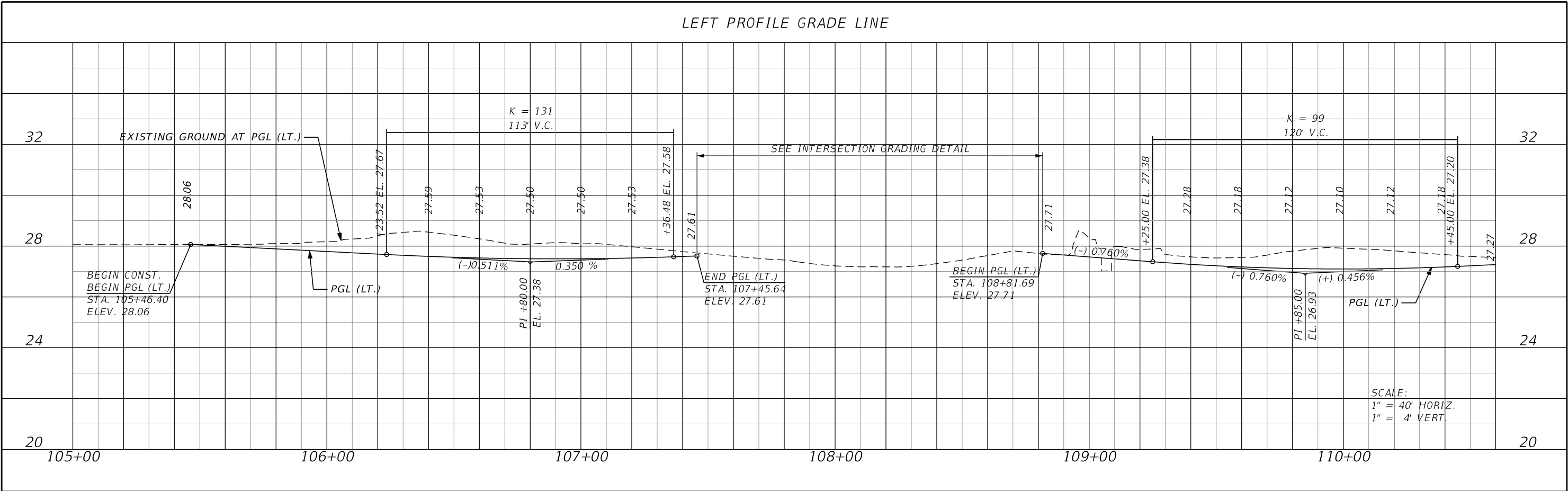



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**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

- LEGEND**
- CONCRETE REMOVAL
  - DIRECTIONAL INDICATOR
  - NEW SIDEWALK OR TRAIL
  - MILLING LIMITS

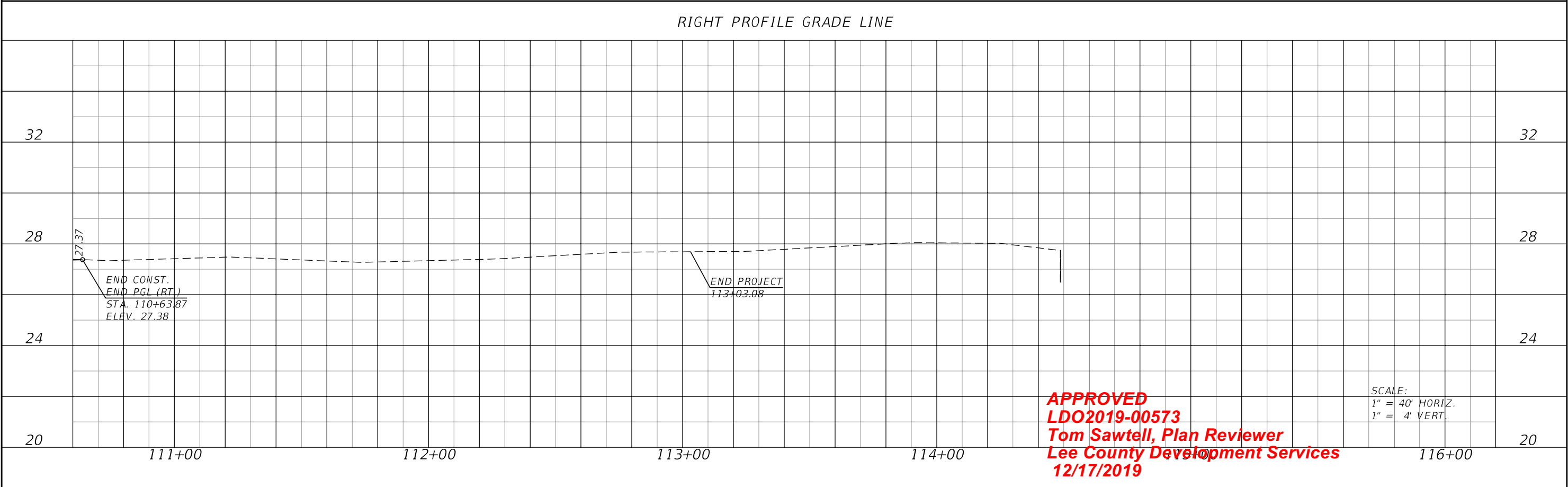
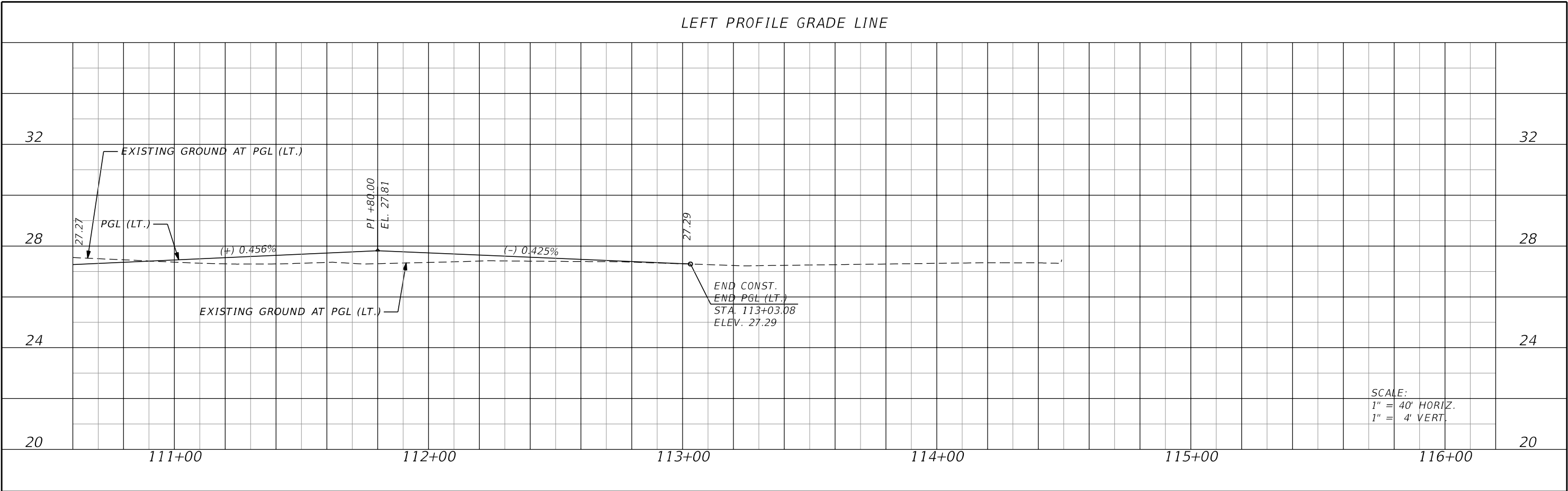
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PLAN (4) (COMMERCE LAKES DRIVE)		200671	18


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REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PROFILE (1) (GATEWAY BOULEVARD)		200671	19

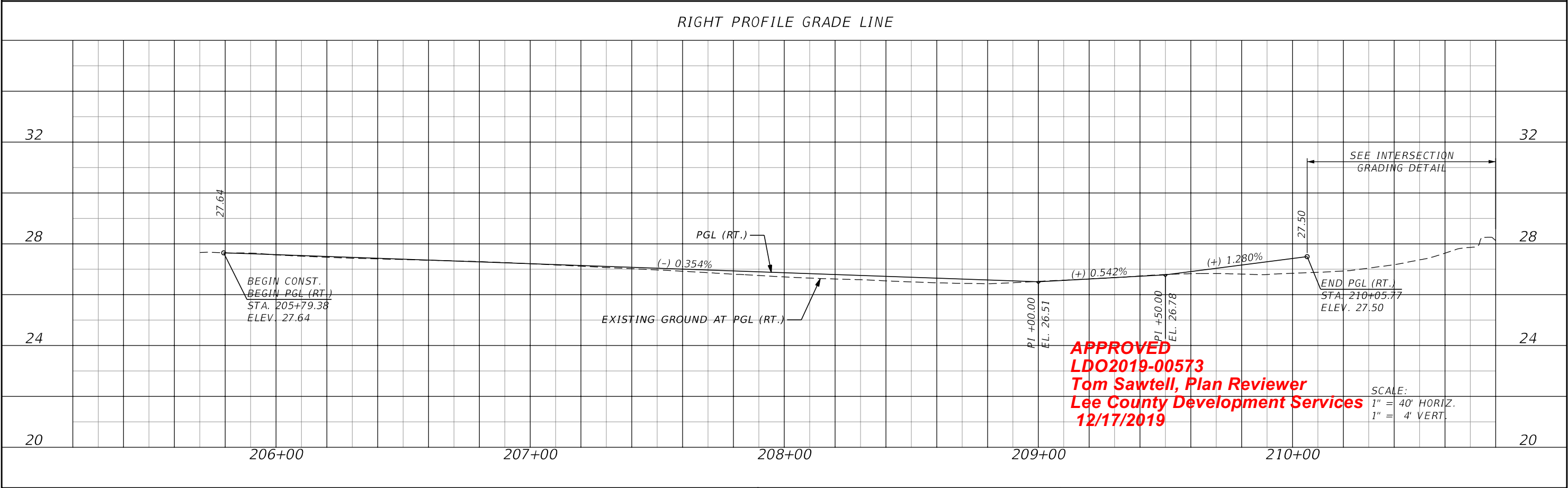
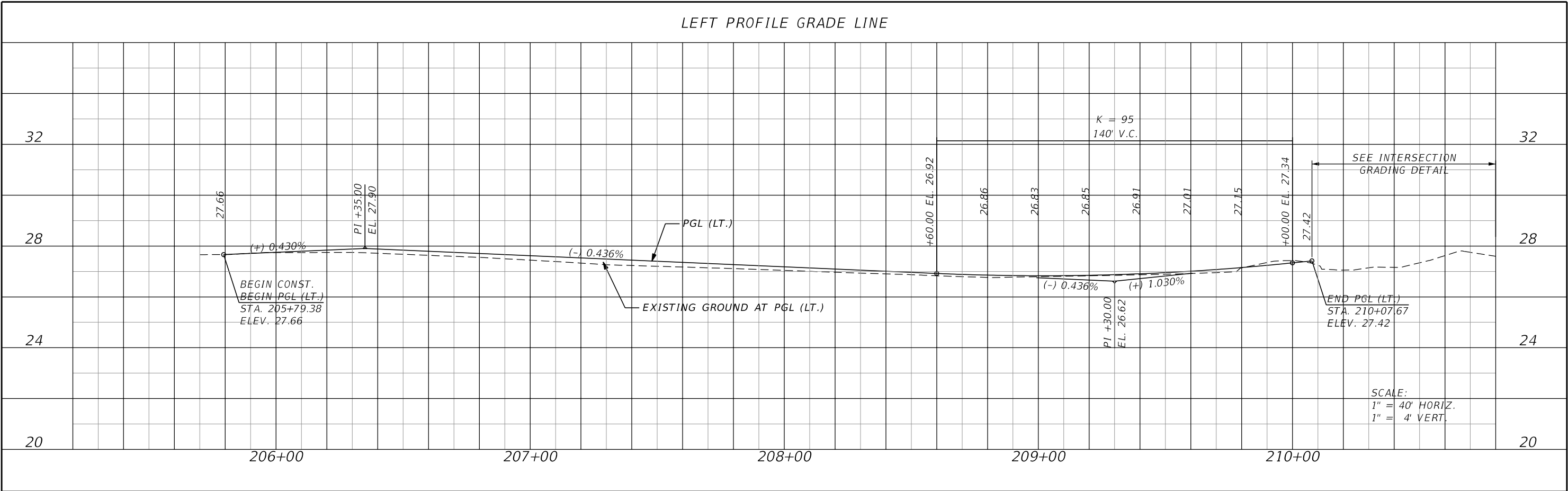
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REVISIONS				<div>JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915</div>	<div></div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PROFILE (2) (GATEWAY BOULEVARD)		200671	20

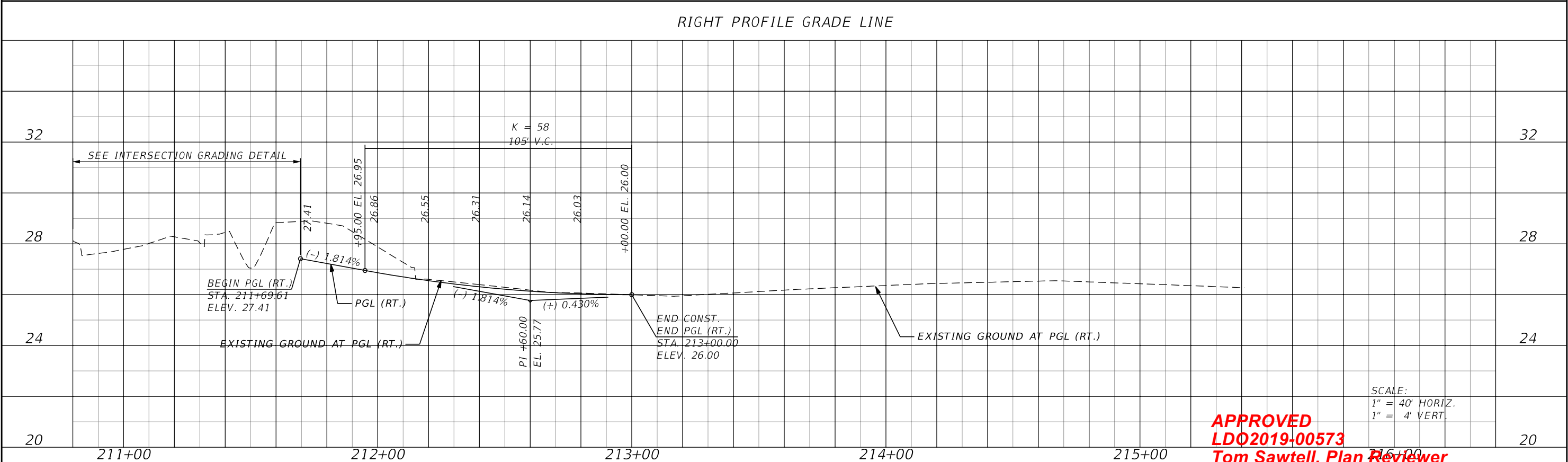
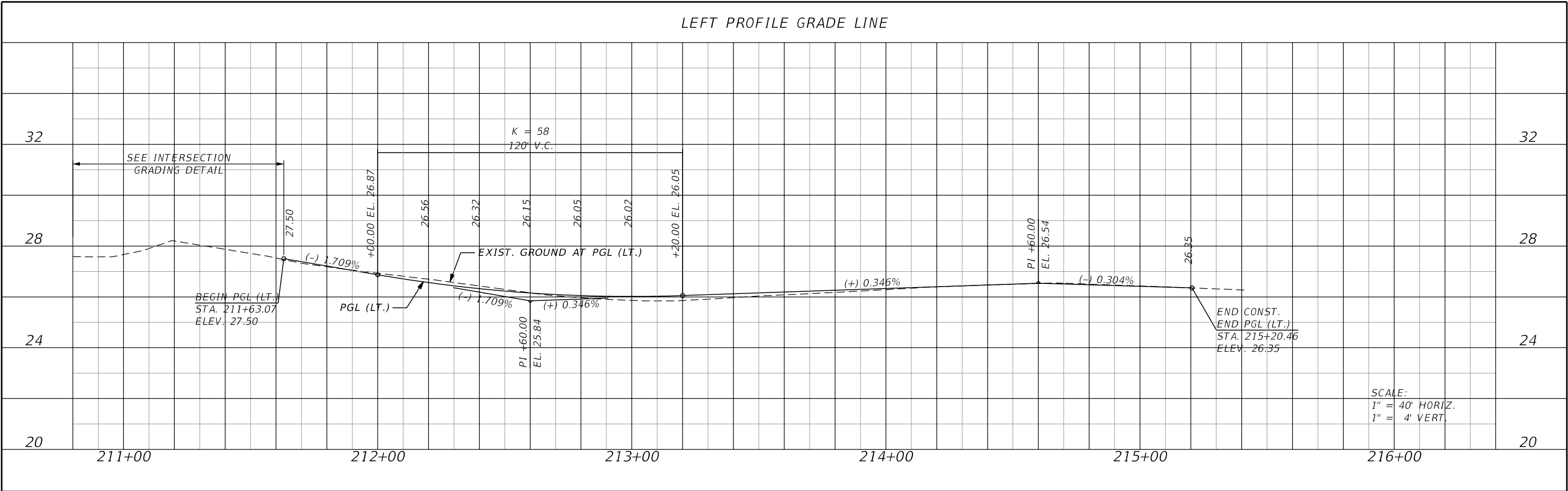
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REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PROFILE (3) (COMMERCE LAKES DRIVE)	200671	21

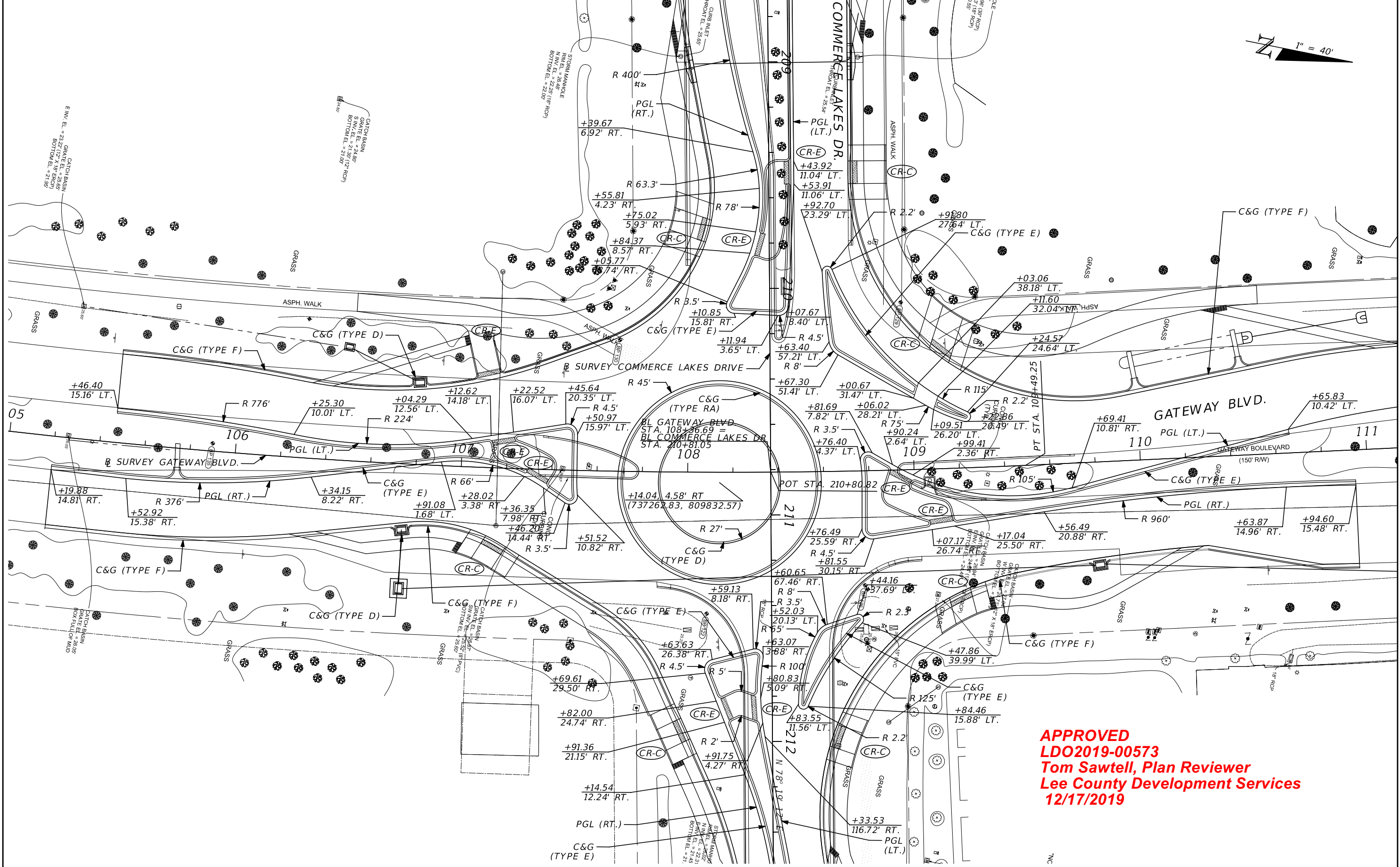
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REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AND COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY PROFILE (4) (COMMERCE LAKES DRIVE)		200671	22

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**LD02019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

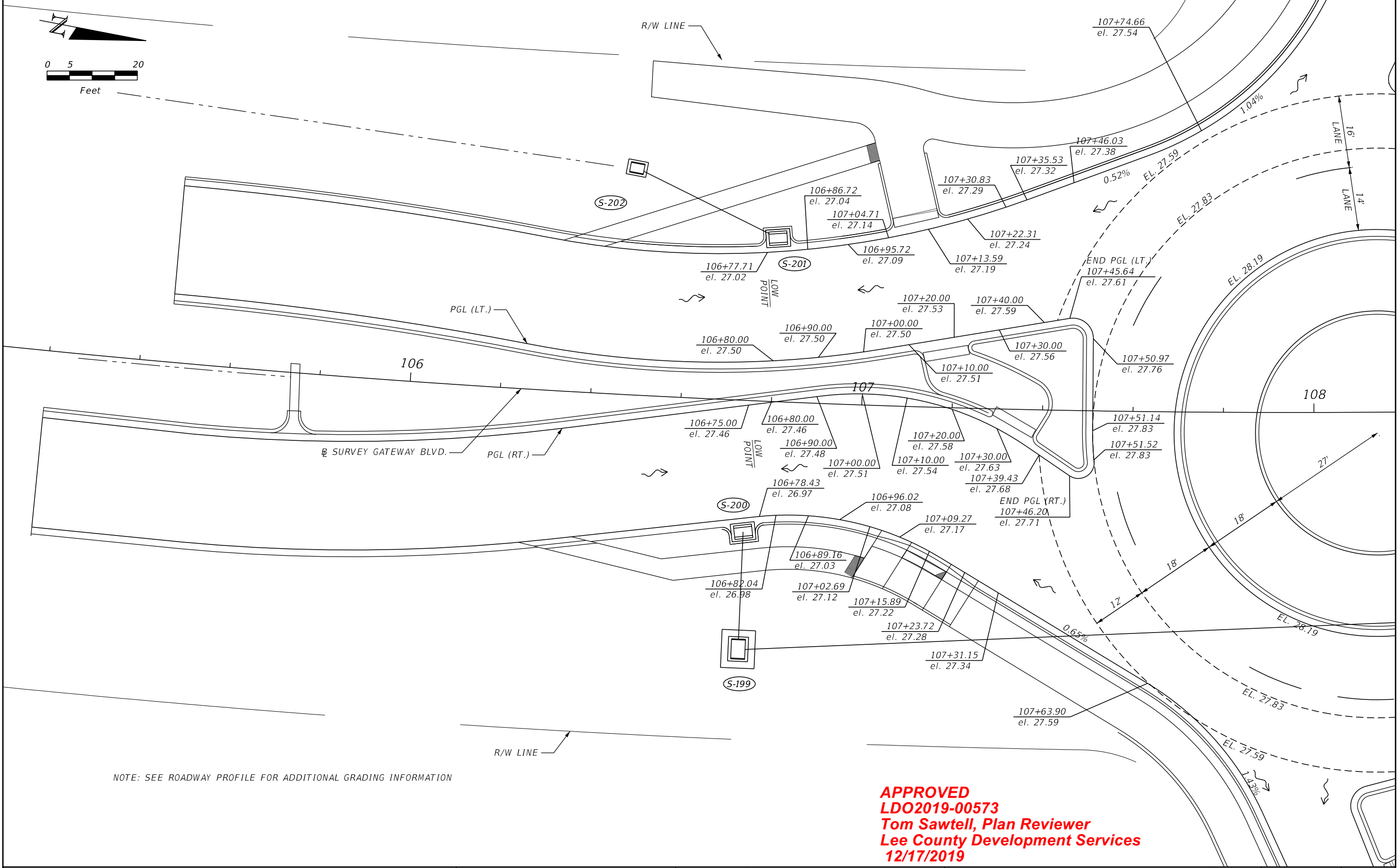
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**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			INTERSECTION DETAILS		200671	23

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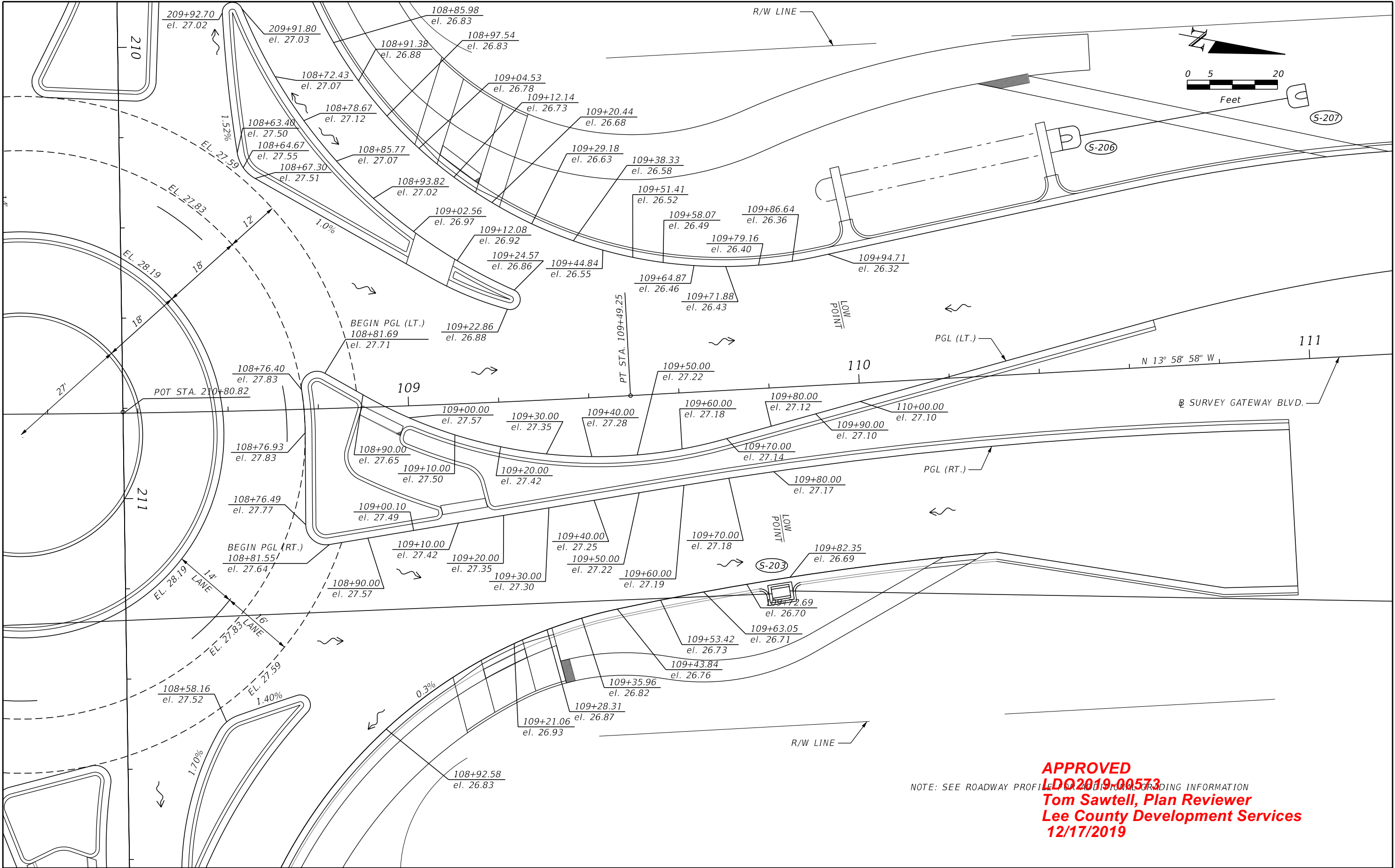


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**LDO2019-00573**  
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**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			INTERSECTION GRADING DETAIL (1)			


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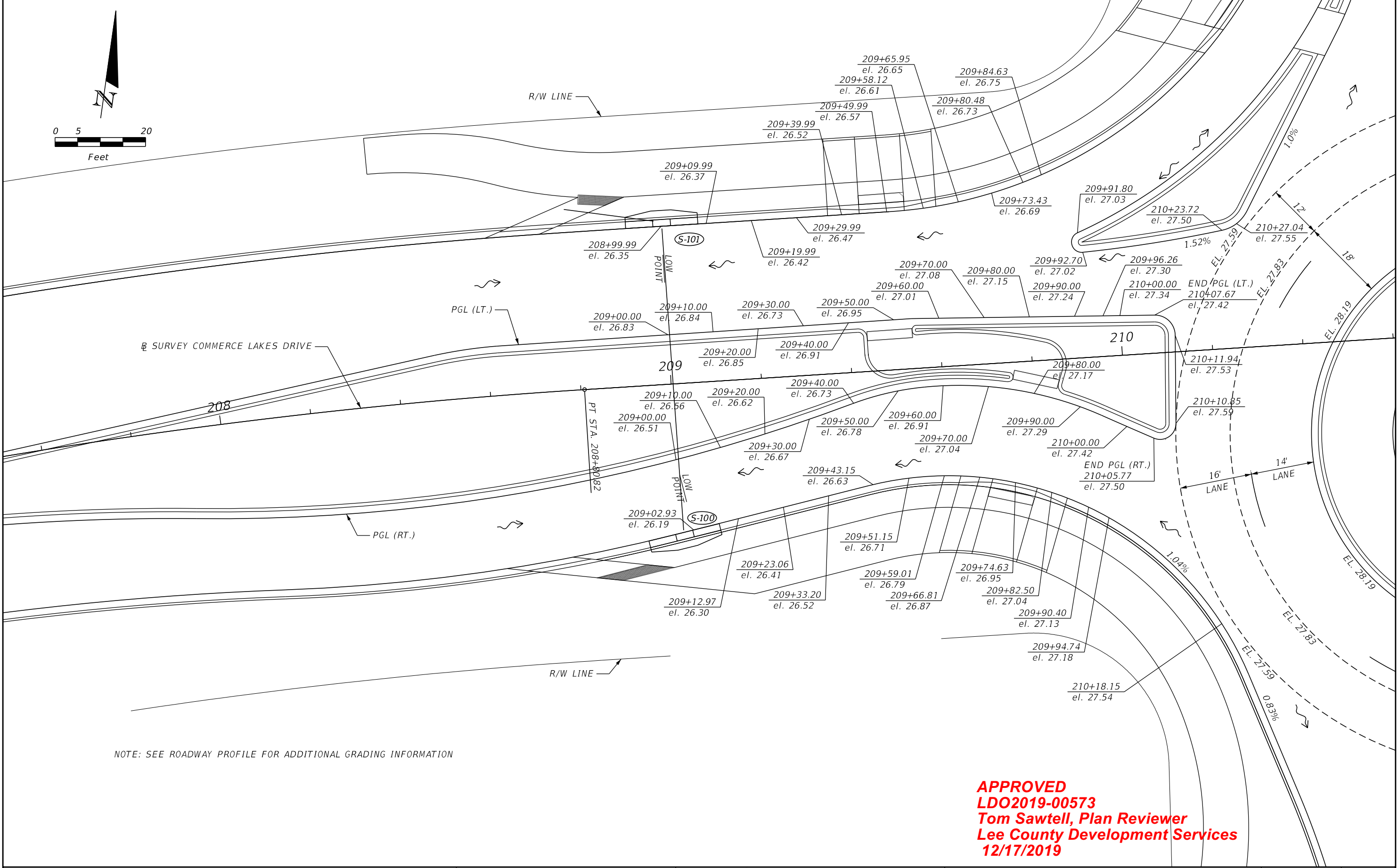



NOTE: SEE ROADWAY PROFILE AND DRAINAGE GRADING INFORMATION

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**LDO2019-00573**  
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**Lee County Development Services**  
**12/17/2019**

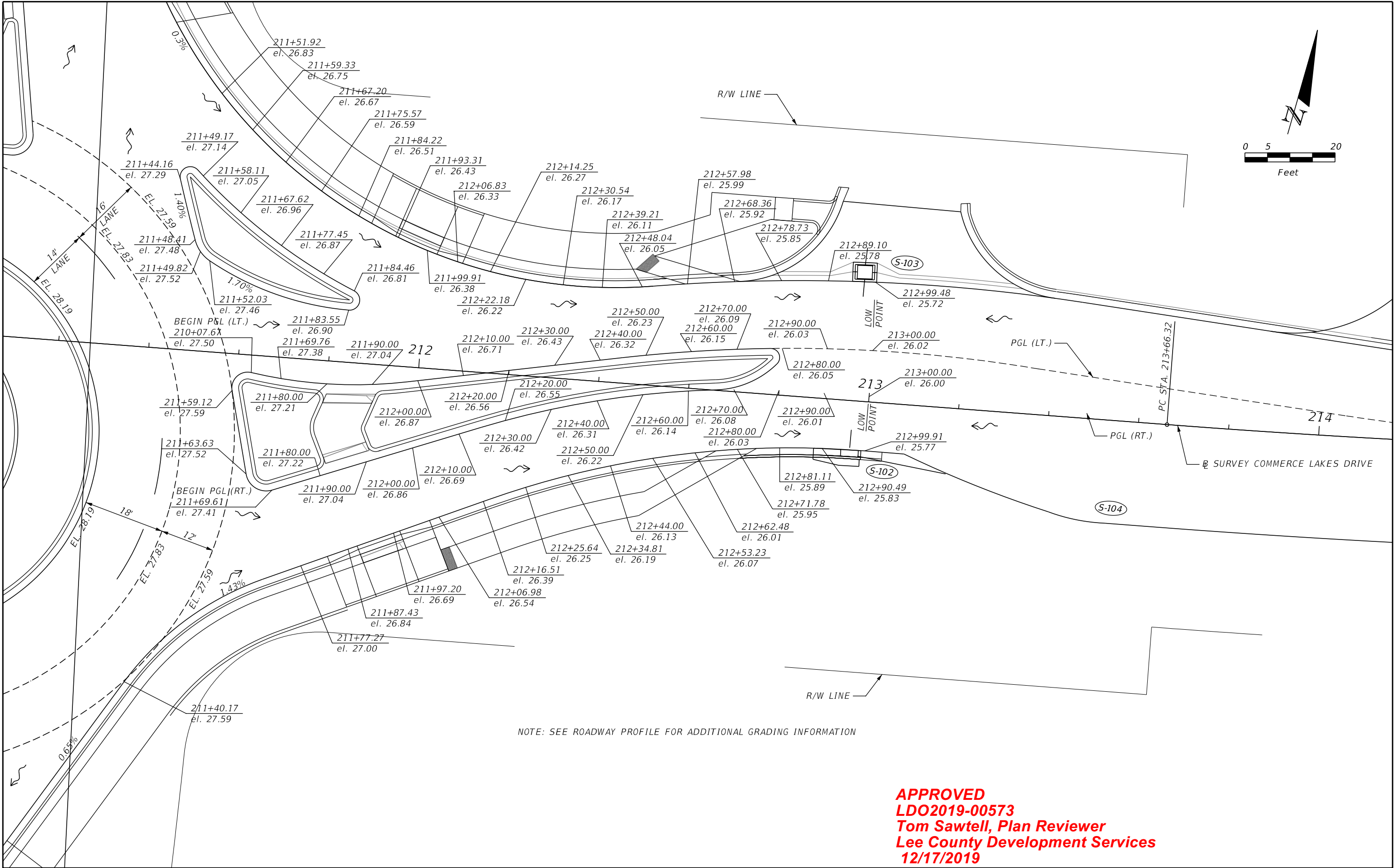
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			INTERSECTION GRADING DETAIL (2)			

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DATE	DESCRIPTION	DATE	DESCRIPTION			INTERSECTION GRADING DETAIL (3)		200671	26

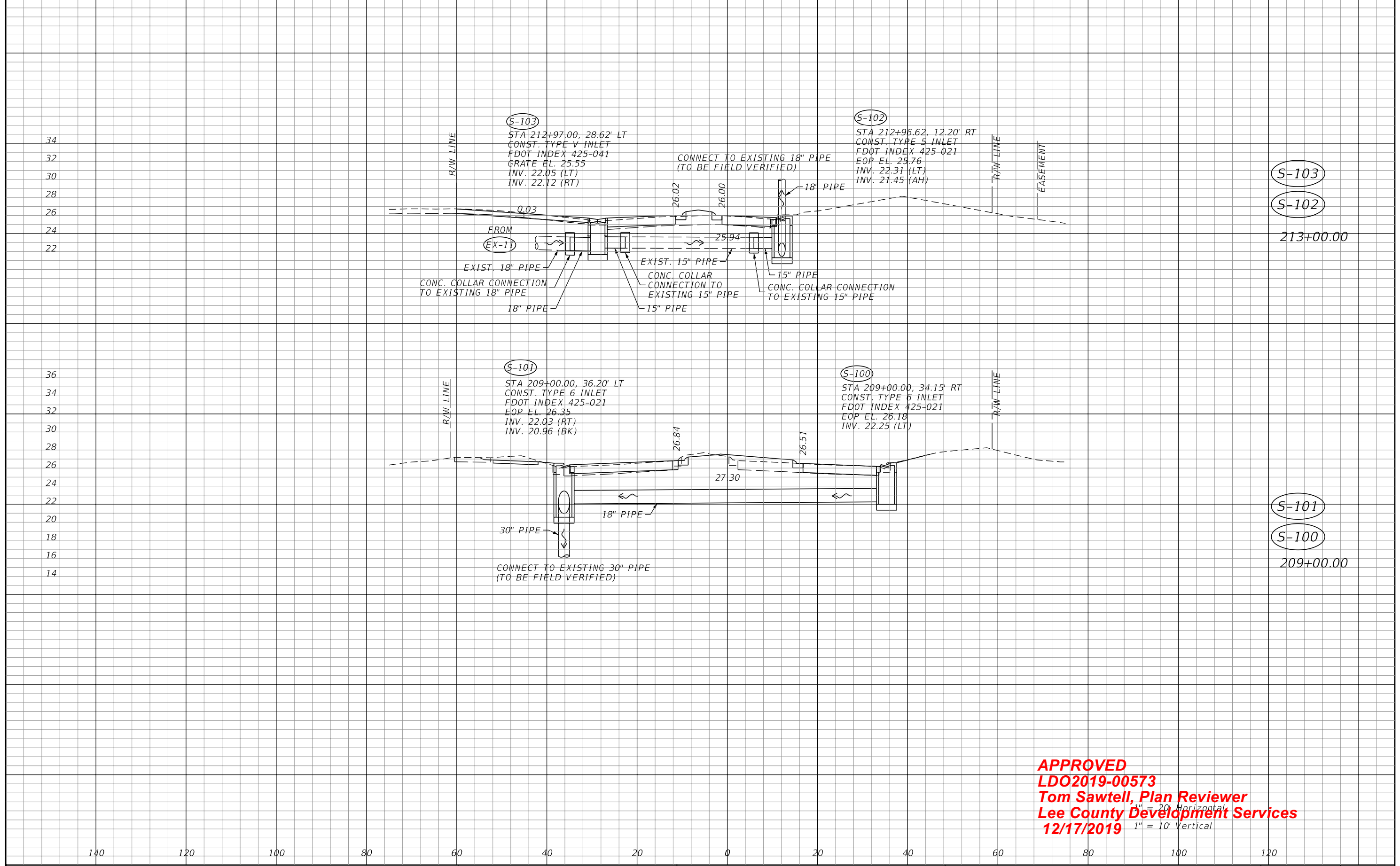
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**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			INTERSECTION GRADING DETAIL (4)			

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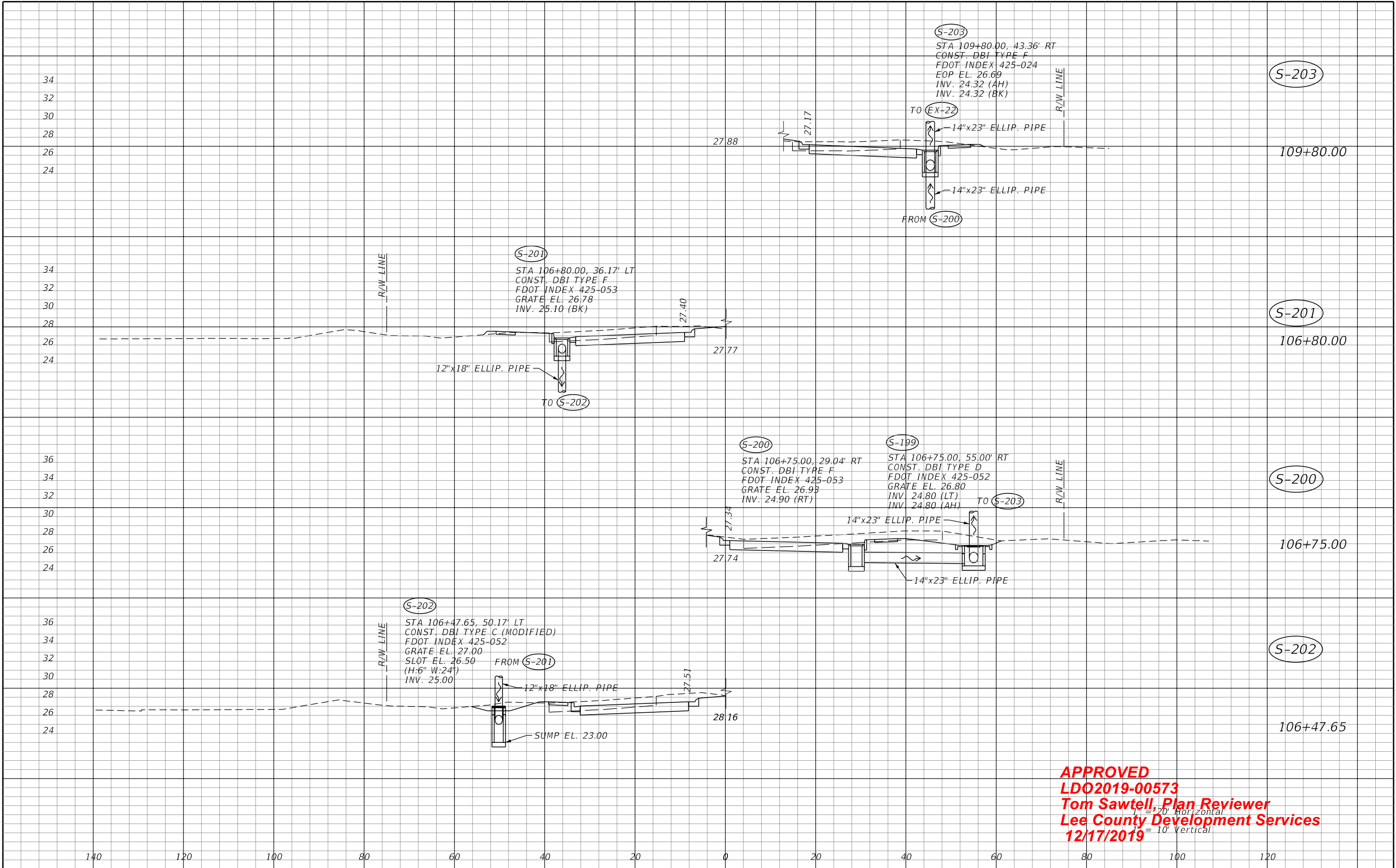


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**LDO2019-00573**  
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**Lee County Development Services**  
**12/17/2019**

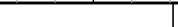
REVISIONS				CHRISTOPHER J. KNOX, P.E. P.E. LICENSE NUMBER 67350 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			DRAINAGE STRUCTURES (1)		200671	28

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**12/17/2019**

REVISIONS				CHRISTOPHER J. KNOX, P.E. P.E. LICENSE NUMBER 67350 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <b>Lee County</b> <i>Southwest Florida</i> DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			DRAINAGE STRUCTURES (2)		200671	29

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

DATE OF SURVEY: AUGUST 2019  
SURVEY MADE BY: TIERRA, INC.  
SUBMITTED BY: KEVIN H. SCOTT, P.E.

LEE COUNTY PUBLIC WORKS

COUNTY PROJECT NO. : 0671  
PROJECT NAME: GATEWAY BOULEVARD AND COMMERCE LAKES DRIVE

ORGANIC CONTENT			MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS (%)						ATTERBERG LIMITS (%)				CORROSION TEST RESULTS					
STRATUM NO.	NO. OF TESTS	% ORGANIC	NO. OF TESTS	MOISTURE CONTENT	NO. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX	AASHTO GROUP	DESCRIPTION	NO. OF TESTS	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	pH
1	--	--	--	--	1	--	--	--	--	3	--	--	--	A-3	GRAY TO BROWN SAND TO SAND WITH SILT SOMETIMES WITH LIMEROCK FRAGMENTS	--	--	--	--	--
2	--	--	1	23	1	--	--	--	--	13	1	NP	NP	A-2-4	LIGHT BROWN SILTY SAND SOMETIMES WITH LIMEROCK FRAGMENTS	--	--	--	--	--
3	--	--	1	20	1	--	--	--	--	17	1	20	5	A-2-4	LIGHT BROWN SILTY SAND SOMETIMES WITH LIMEROCK FRAGMENTS	--	--	--	--	--
4	--	--	1	17	1	--	--	--	--	44	1	17	4	A-4	LIGHT BROWN SILTY-CLAYEY SAND SOMETIMES WITH LIMEROCK FRAGMENTS	--	--	--	--	--

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING.

▼ - WATER TABLE ENCOUNTERED


▽ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

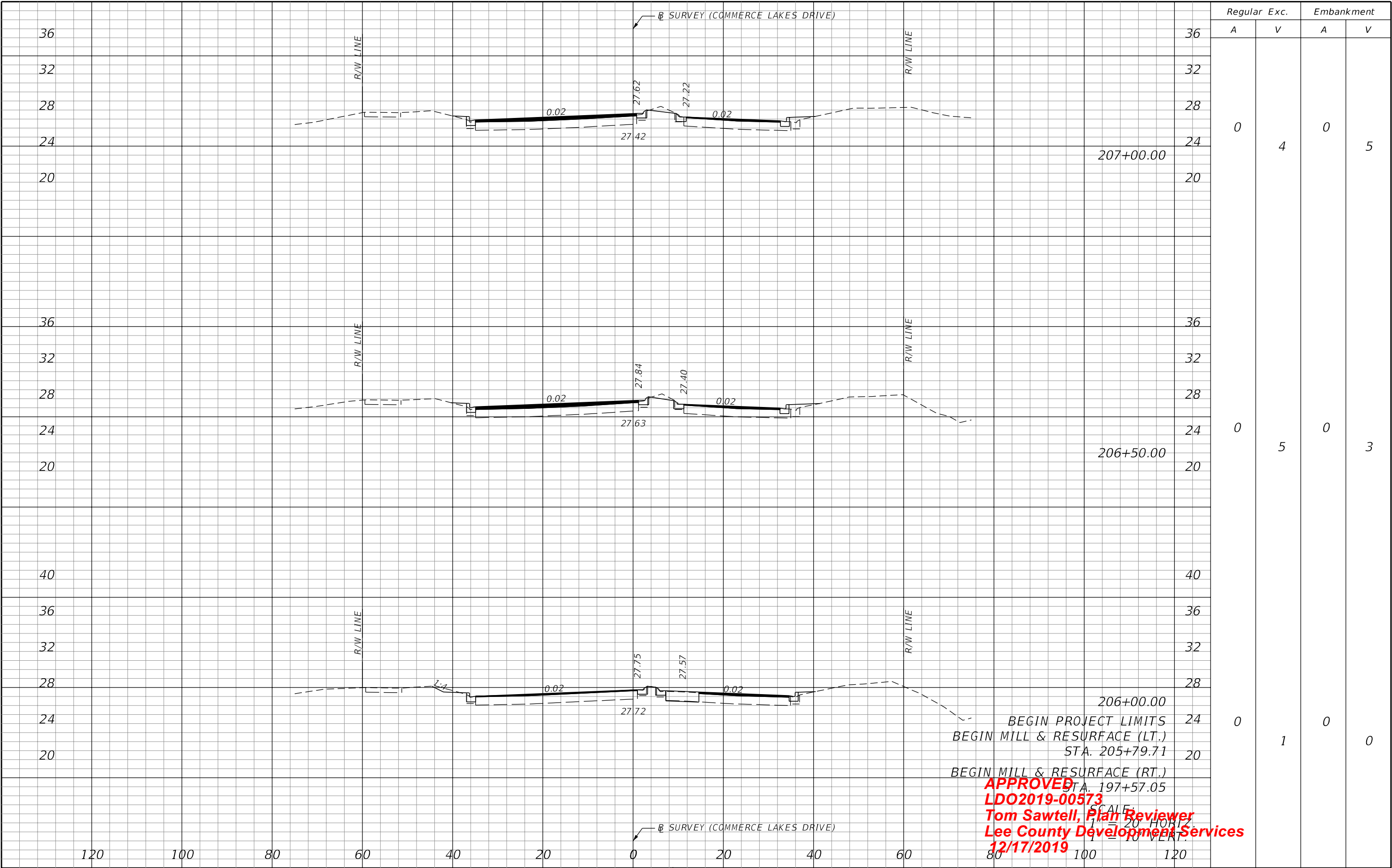
NP - NON-PLASTIC


NOTES:

- THE MATERIAL FROM STRATUM 1 (A-3) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
- THE MATERIAL FROM STRATA 2 AND 3 (A-2-4) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001. HOWEVER, THIS MATERIAL IS LIKELY TO RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT. IT SHOULD BE USED IN THE EMBANKMENT ABOVE THE WATER LEVEL EXISTING AT THE TIME OF CONSTRUCTION.
- THE MATERIAL FROM STRATUM 4 (A-4) IS PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001. THE REMOVAL LIMITS, IF NECESSARY, WILL BE PRESENTED ON THE NEXT SUBMITTAL.

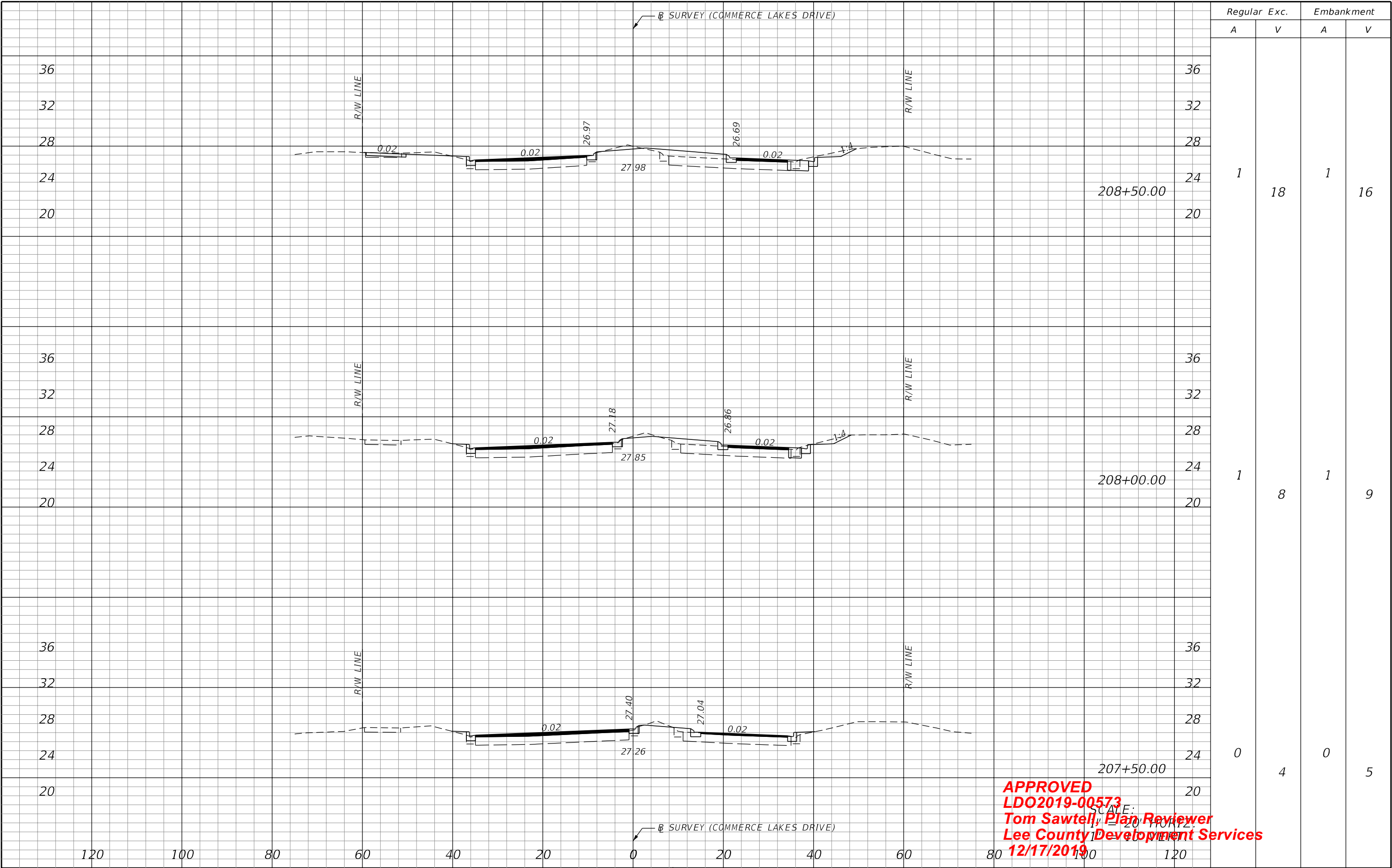
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LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019


REVISIONS				KEVIN H. SCOTT, P.E. P.E. LICENSE NUMBER 65514 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION NO. 6486		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROADWAY SOIL SURVEY	200671	30



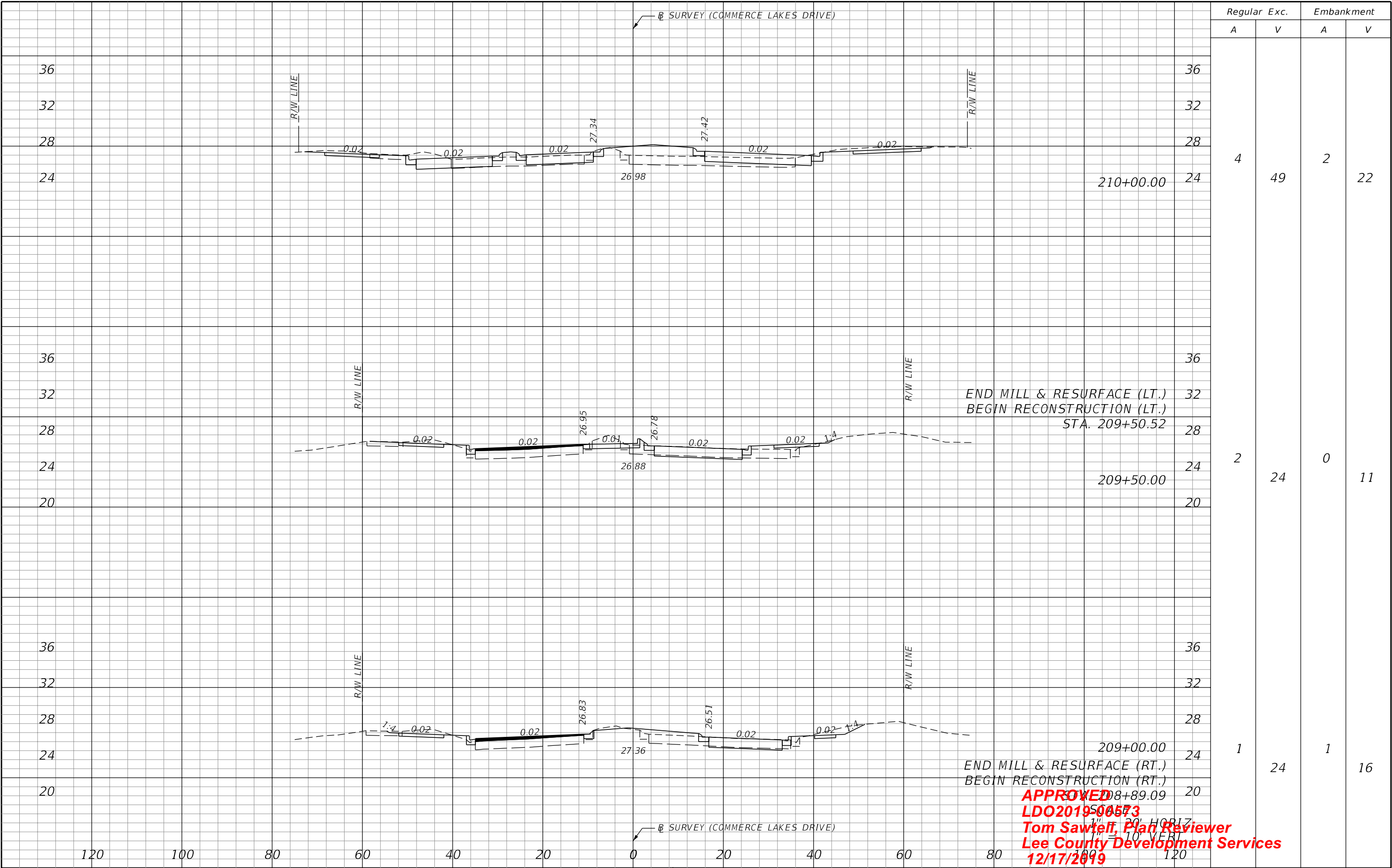
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			CROSS SECTIONS (COMMERCE LAKES DRIVE)			
								200671	31

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REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			CROSS SECTIONS (COMMERCE LAKES DRIVE)			
								200671	32

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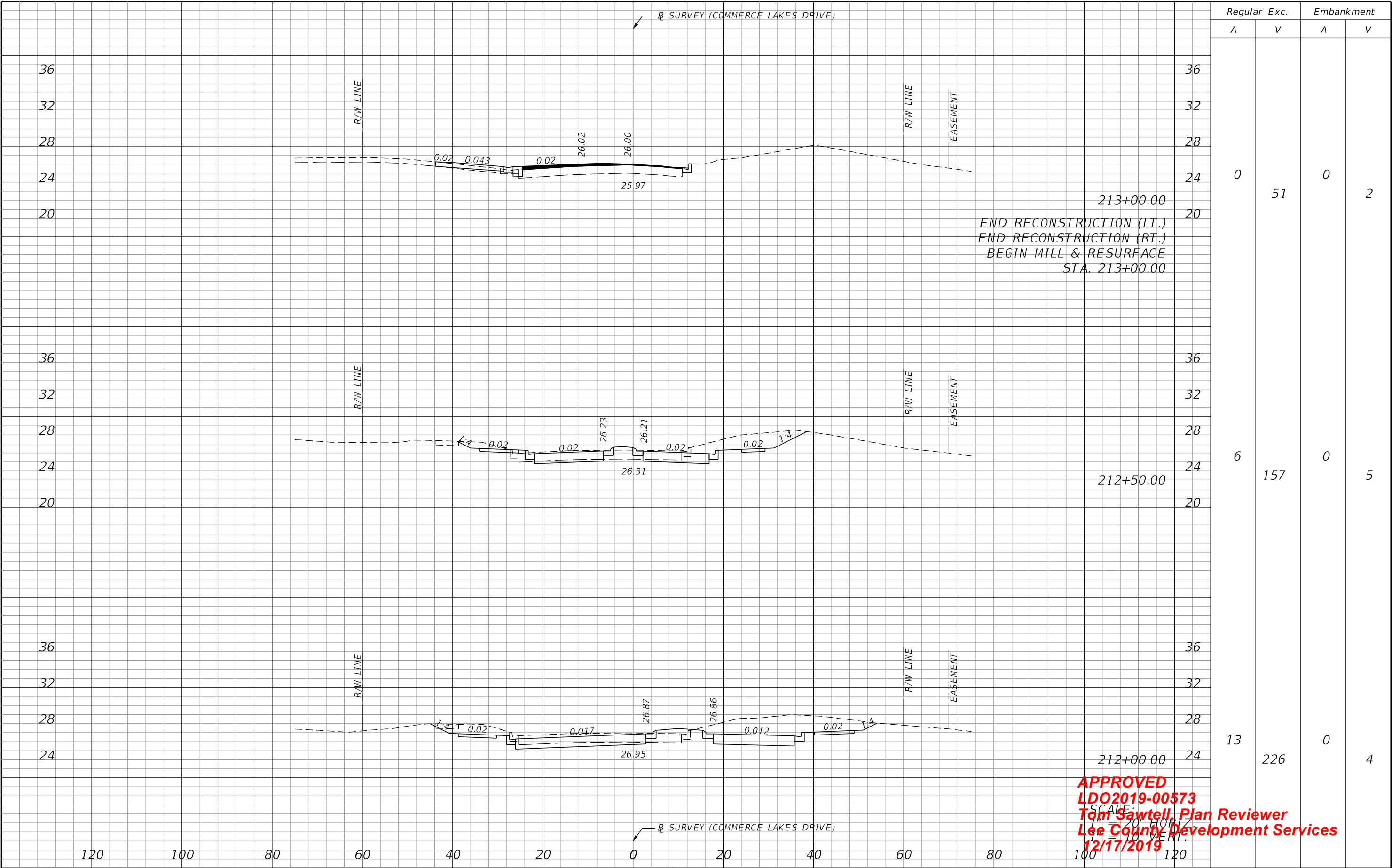
Regular		Exc.	Embankment	
A	V	A	V	
4	49	2	22	
2	24	0	11	
1	24	1	16	


REVISIONS		DATE		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION		
				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	
					
				GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	
				CROSS SECTIONS (COMMERCE LAKES DRIVE)	
				CIP NO.	SHT. NO.
				200671	33

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

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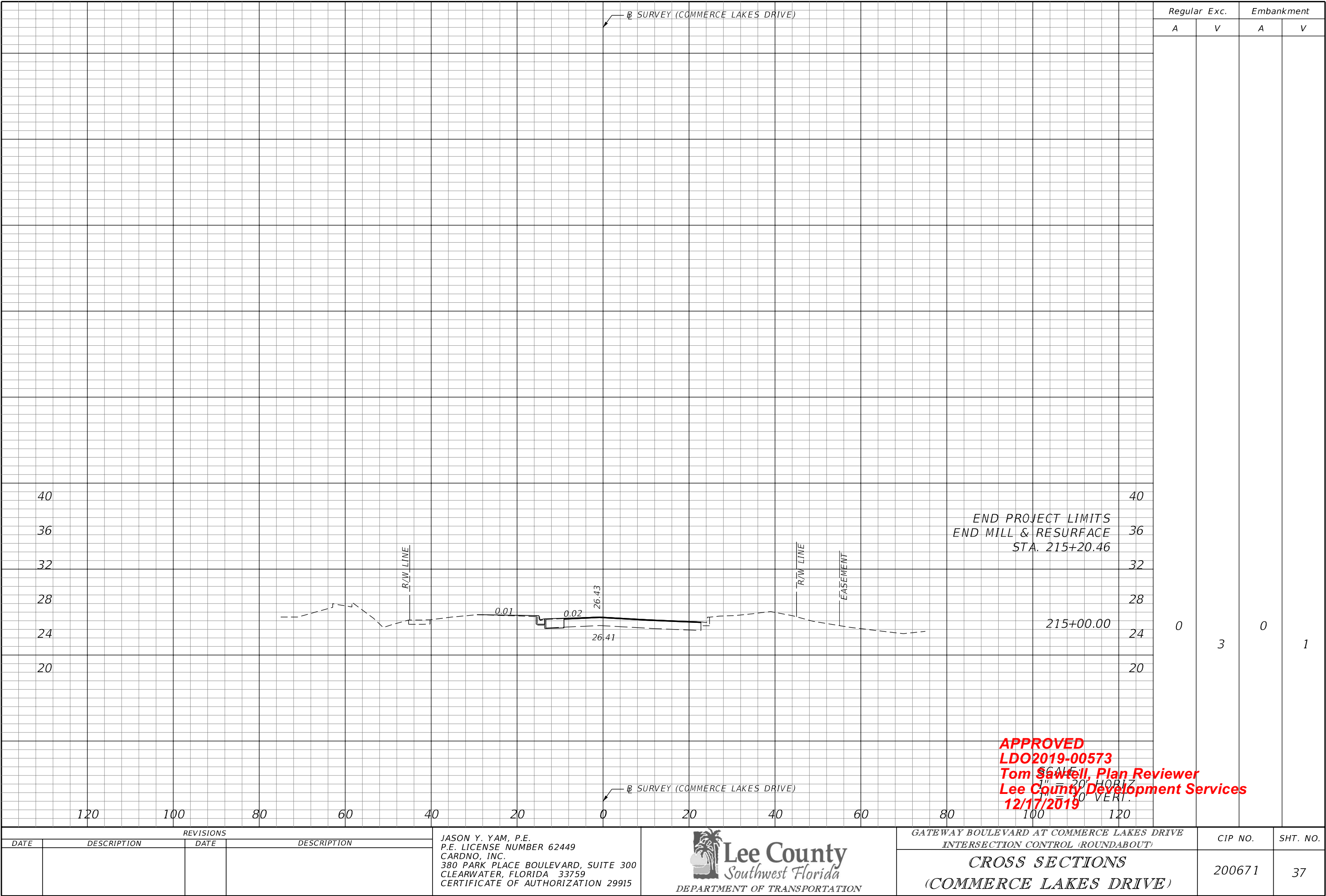
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			CROSS SECTIONS (COMMERCE LAKES DRIVE)			
								200671	35

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Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019



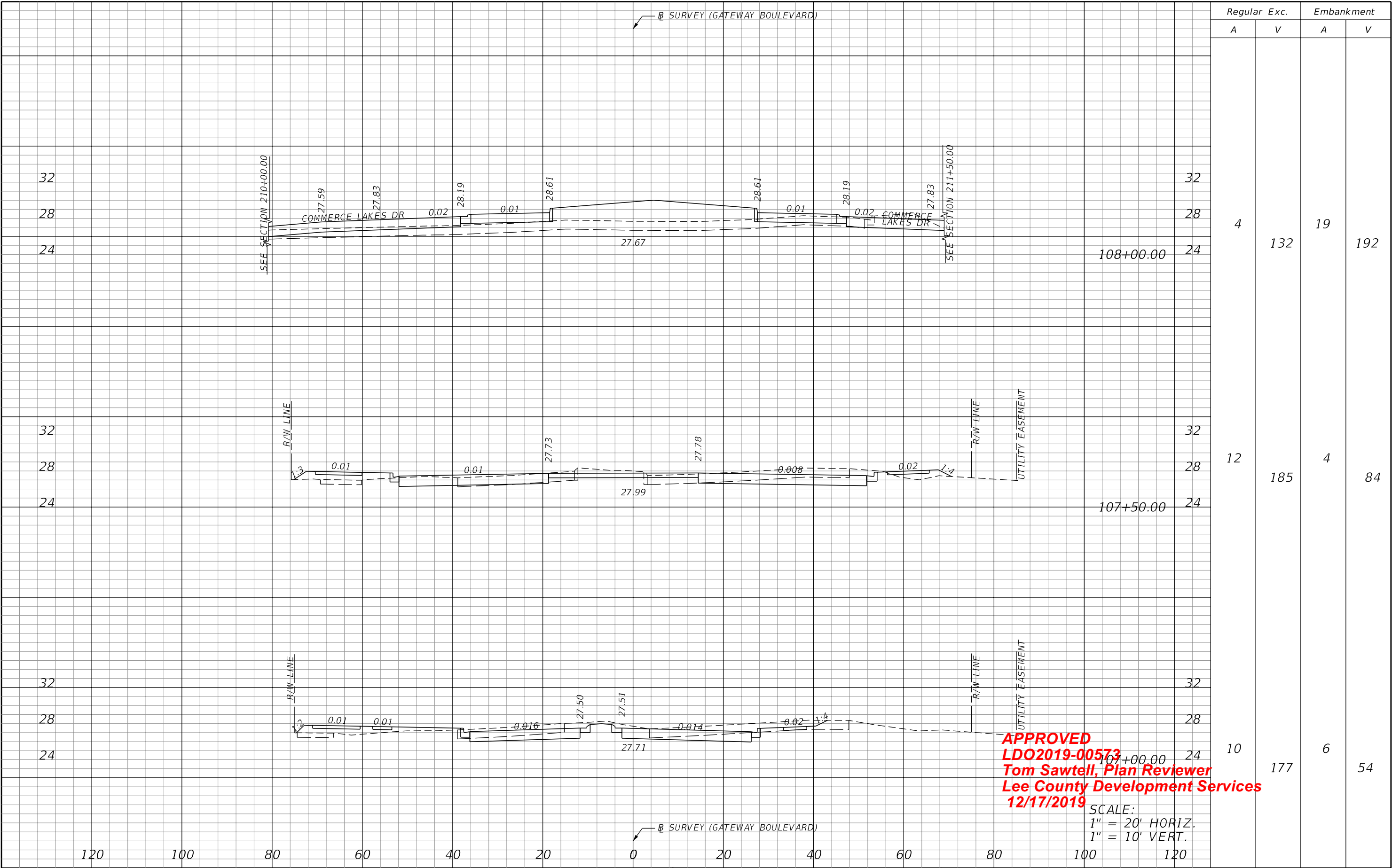







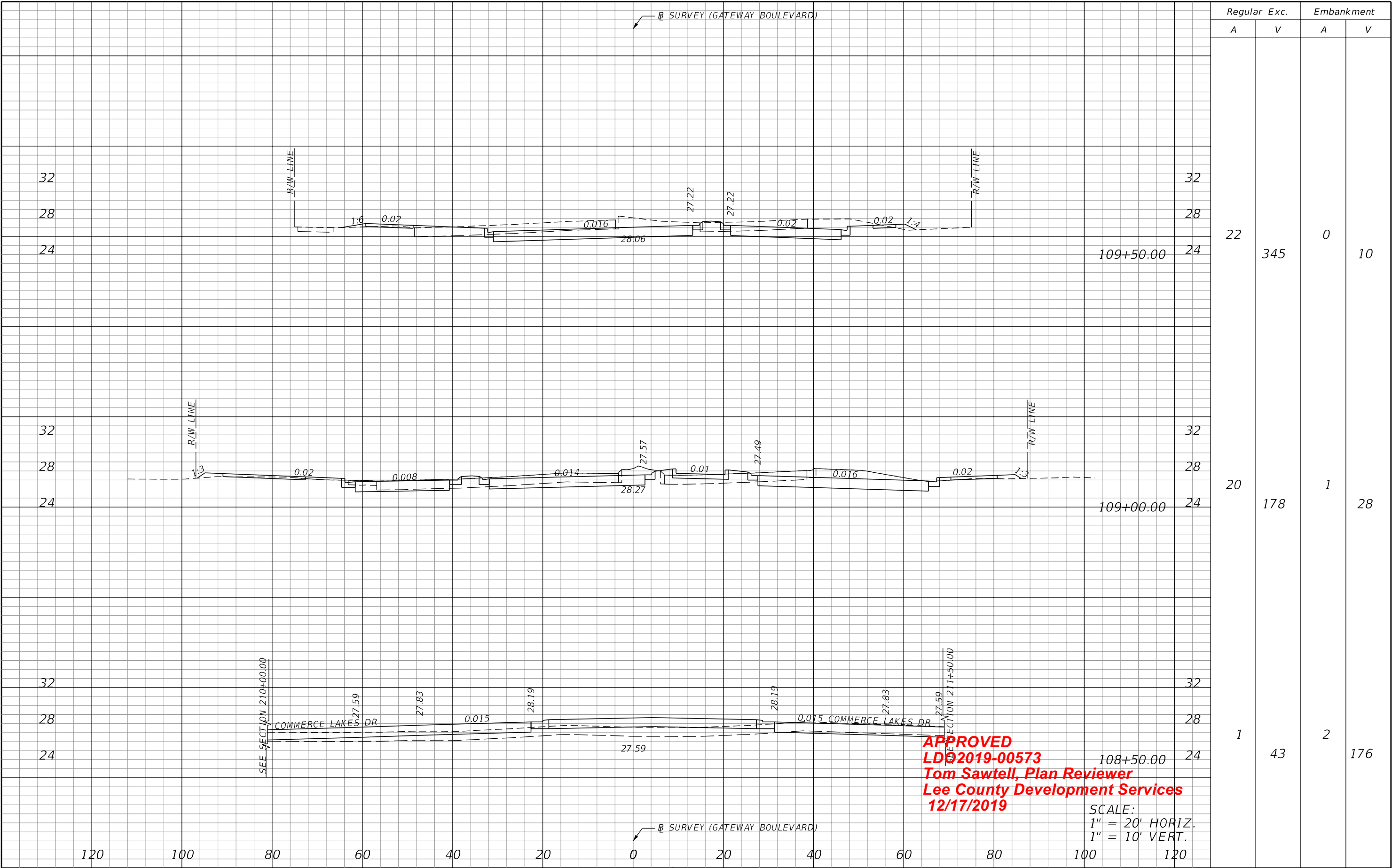
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REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			CROSS SECTIONS (GATEWAY BOULEVARD)		200671	39

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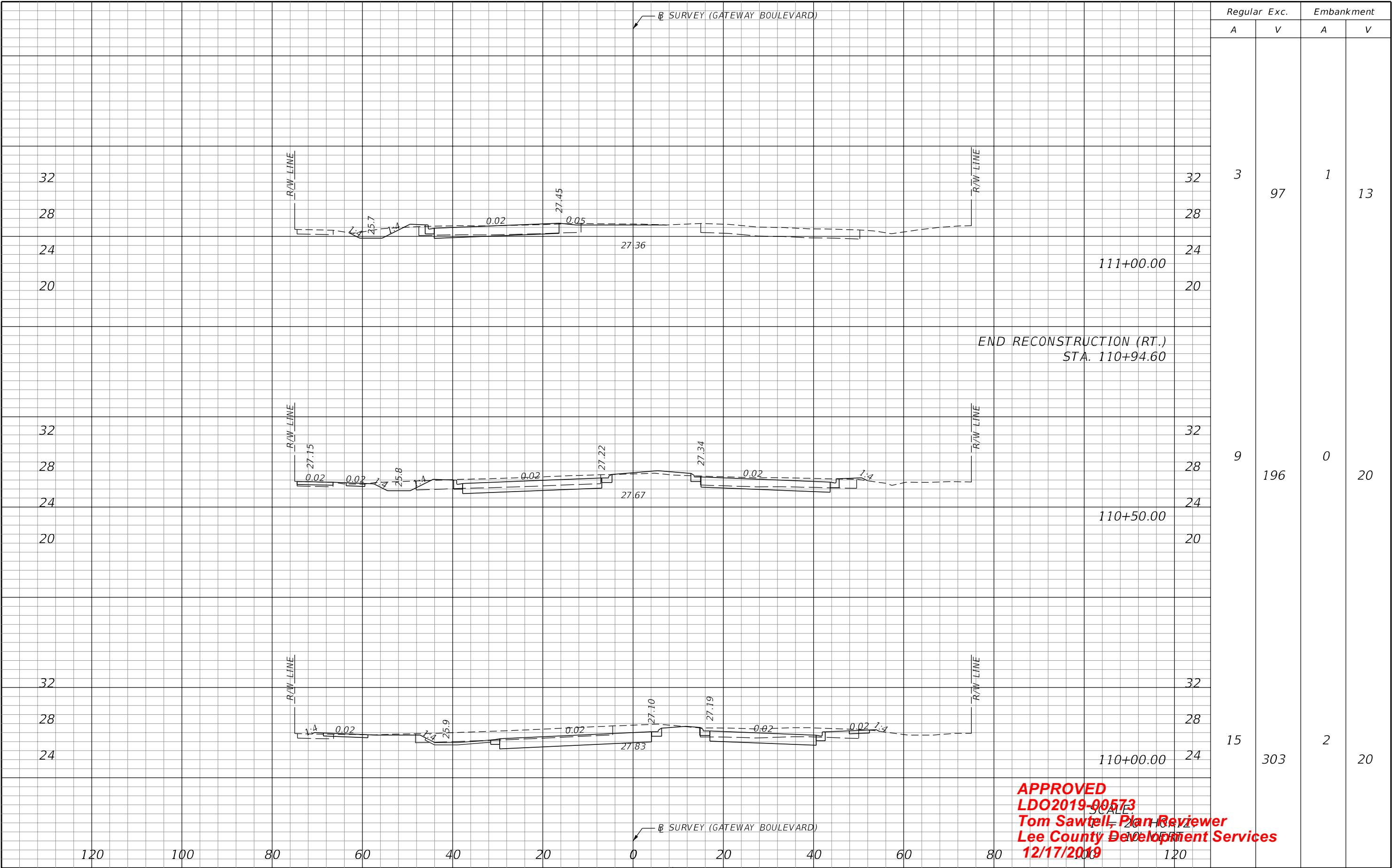


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**LD 2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**


SCALE:  
1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			CROSS SECTIONS (GATEWAY BOULEVARD)			

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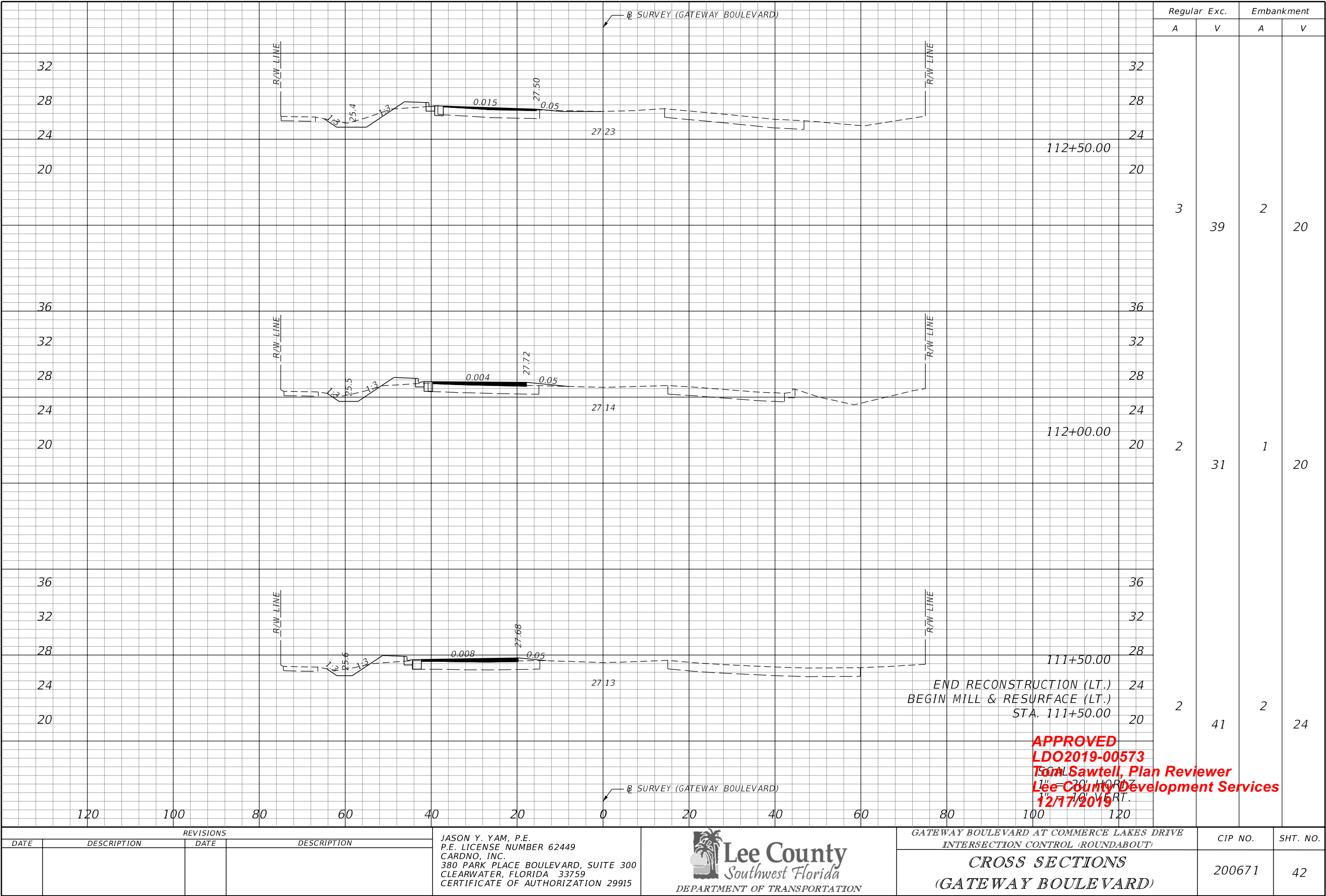


Regular		Exc.	Embankment	
A	V		A	V
3	97		1	13
9	196		0	20
15	303		2	20

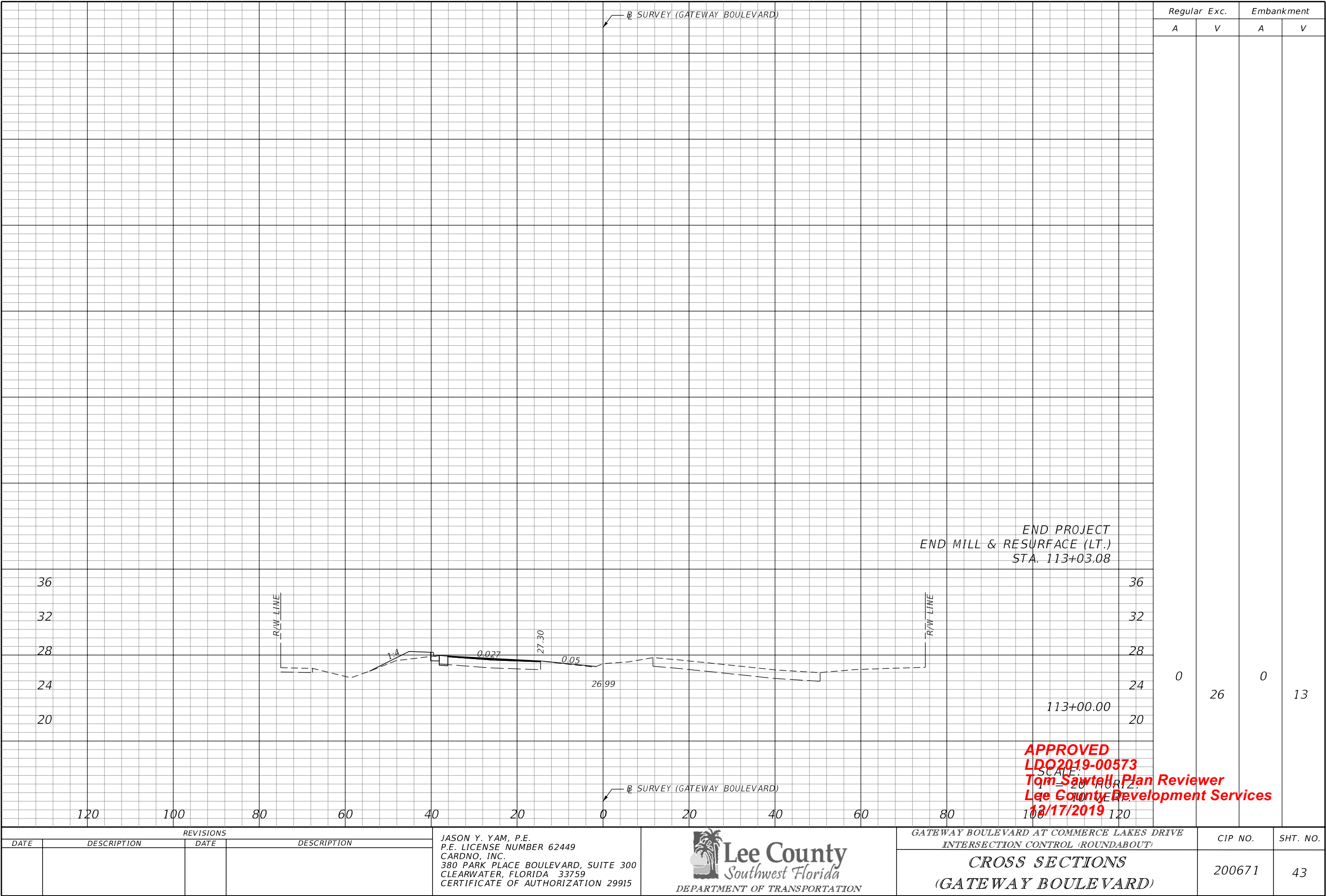
REVISIONS		DATE		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION		
				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	
					
				GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	
				CIP NO.	
				SHT. NO.	
				200671	
				41	

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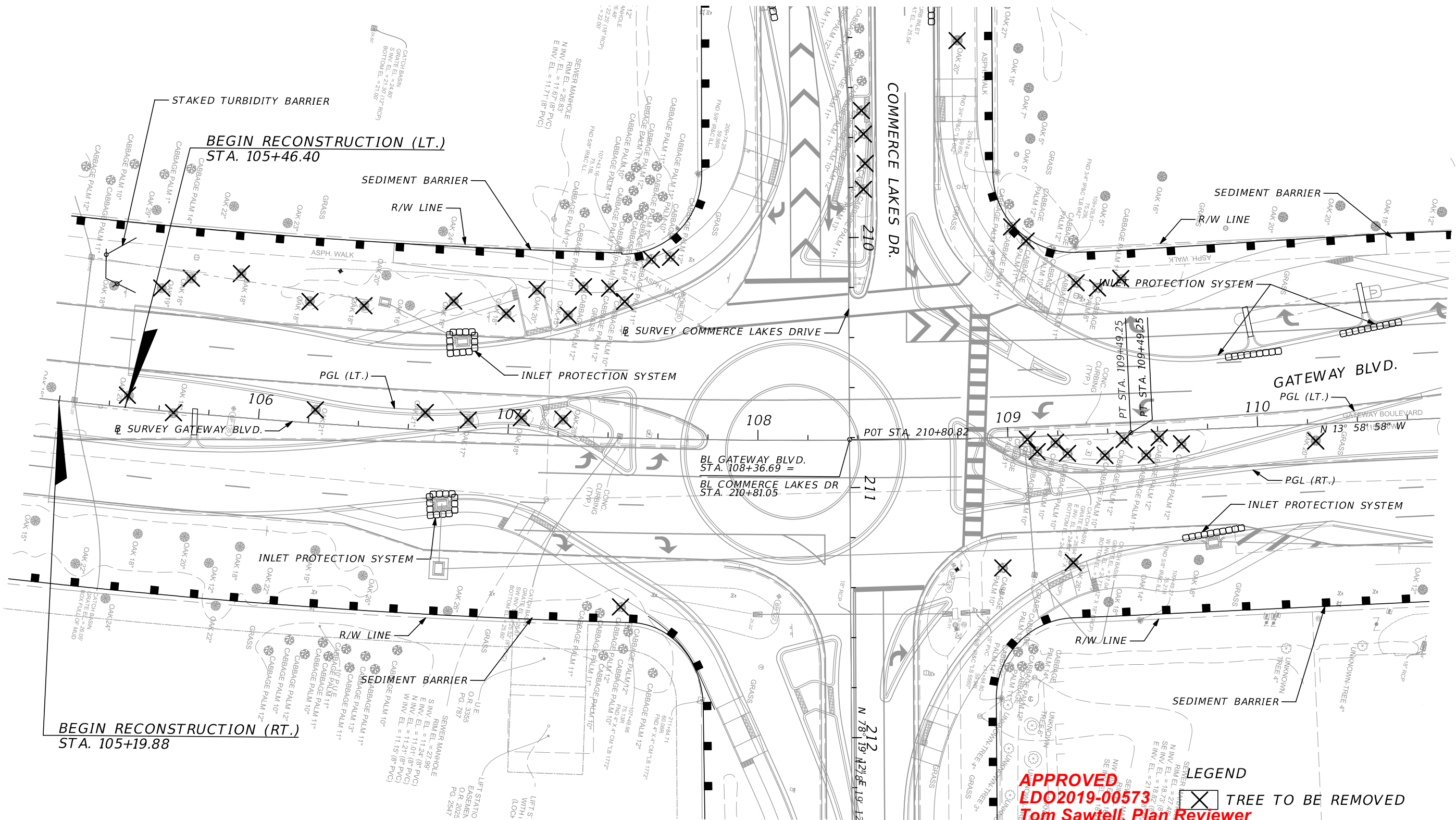


THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



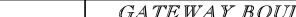
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



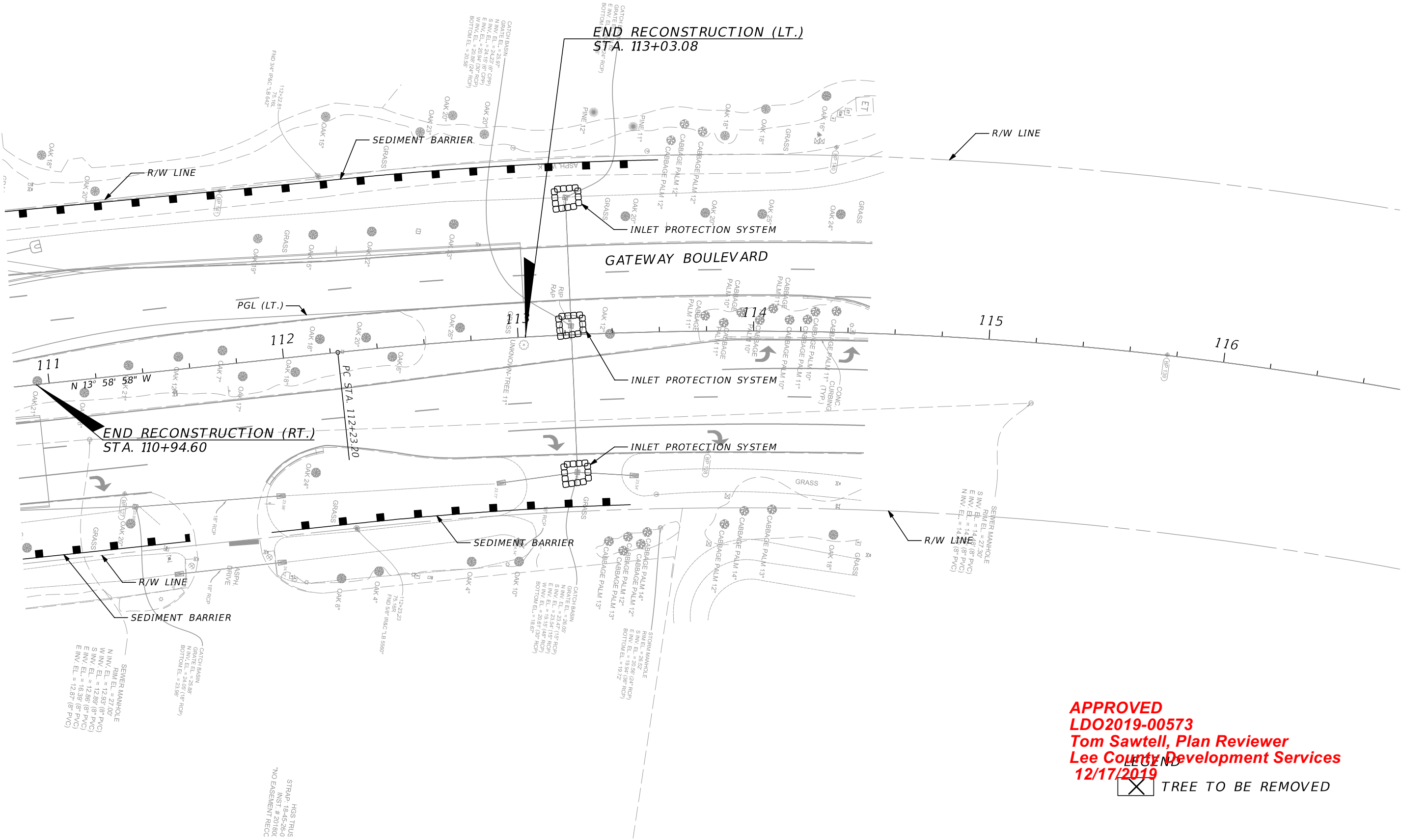
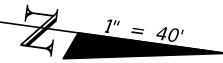


**APPROVED**  
**LD02019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

**LEGEND**  
[X] TREE TO BE REMOVED


REVISIONS				CHRISTOPHER J. KNOX, P.E. P.E. LICENSE NUMBER 67350 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			EROSION CONTROL (1) (GATEWAY BOULEVARD)	200671	44



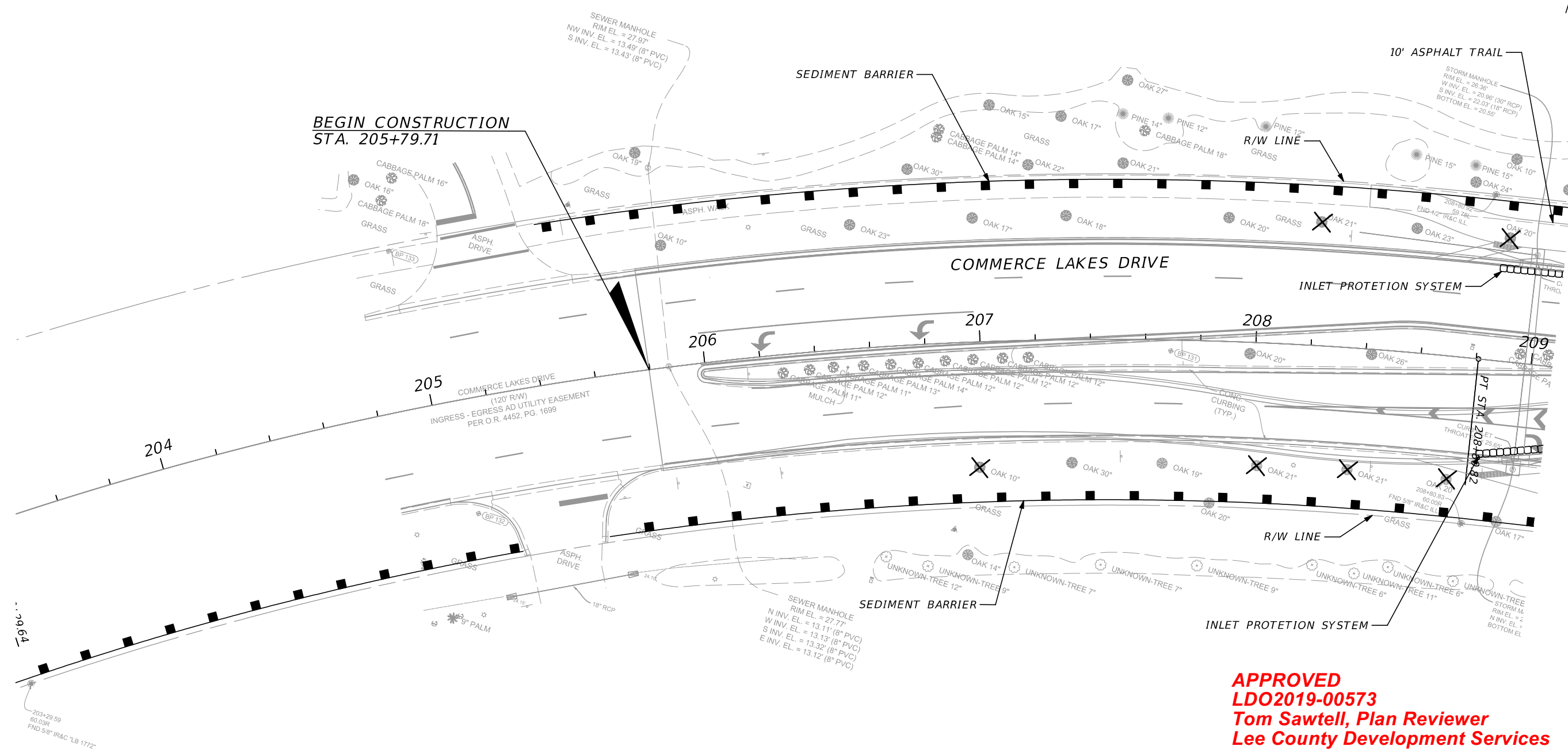
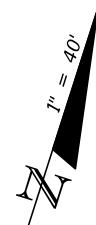


**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

**LEGEND**  
[Cross-hatched box] TREE TO BE REMOVED


REVISIONS				CHRISTOPHER J. KNOX, P.E. P.E. LICENSE NUMBER 67350 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.  200671	SHT. NO.  45
DATE	DESCRIPTION	DATE	DESCRIPTION			EROSION CONTROL (2) (GATEWAY BOULEVARD)			

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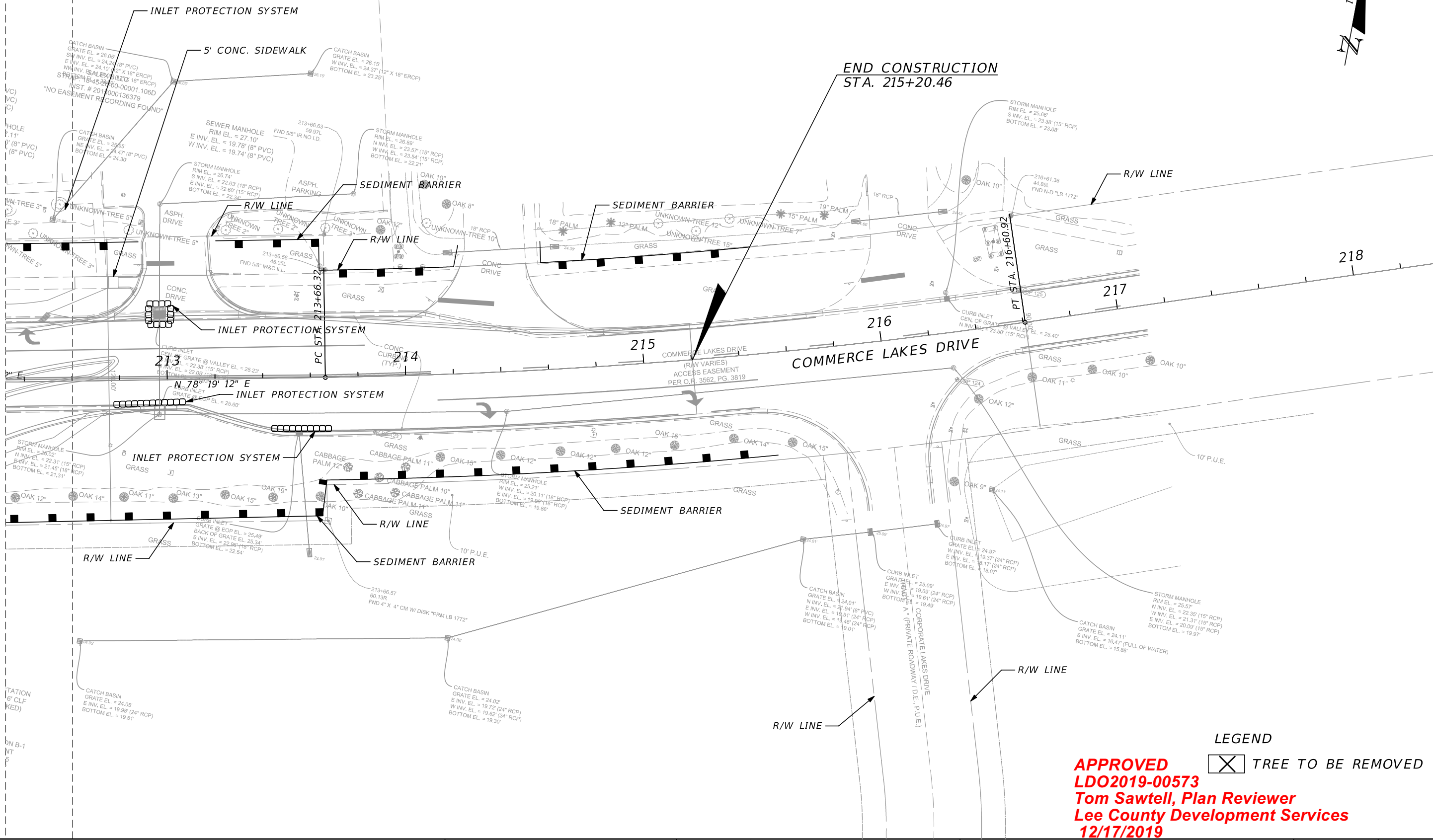


**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

**LEGEND**  
 **TREE TO BE REMOVED**

REVISIONS				CHRISTOPHER J. KNOX, P.E. P.E. LICENSE NUMBER 67350 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION						
						EROSION CONTROL (3) (COMMERCE LAKES DRIVE)		200671	46

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REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION
DATE	DESCRIPTION	DATE	DESCRIPTION								

CHRISTOPHER J. KNOX, P.E.  
P.E. LICENSE NUMBER 67350  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FLORIDA 33759  
CERTIFICATE OF AUTHORIZATION 29915

Lee County  
Southwest Florida  
DEPARTMENT OF TRANSPORTATION

GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE  
INTERSECTION CONTROL (ROUNDAABOUT)

EROSION CONTROL (4)  
(COMMERCE LAKES DRIVE)

CIP NO.  
200671

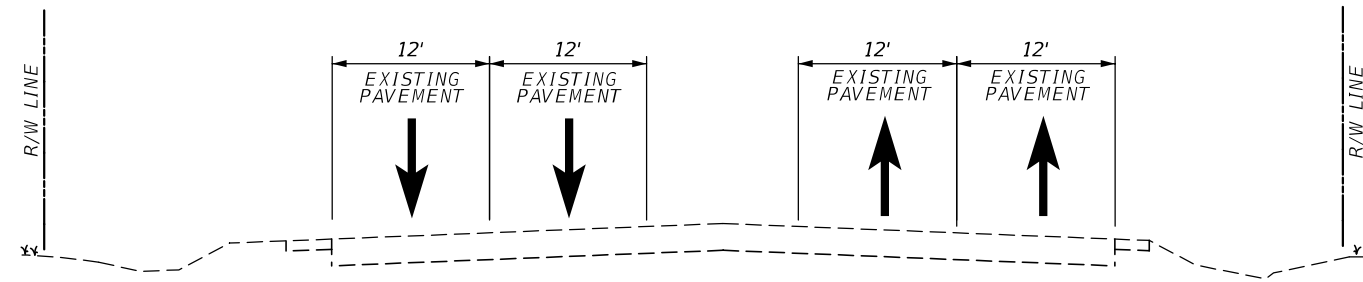
SHT. NO.  
47

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

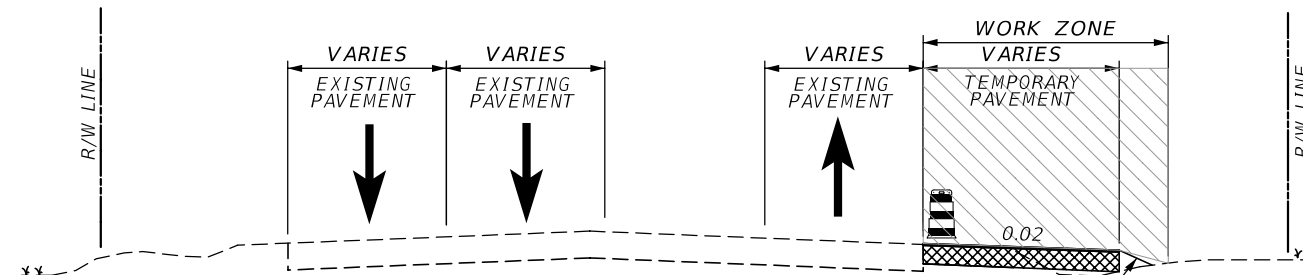
TREE TO BE REMOVED

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

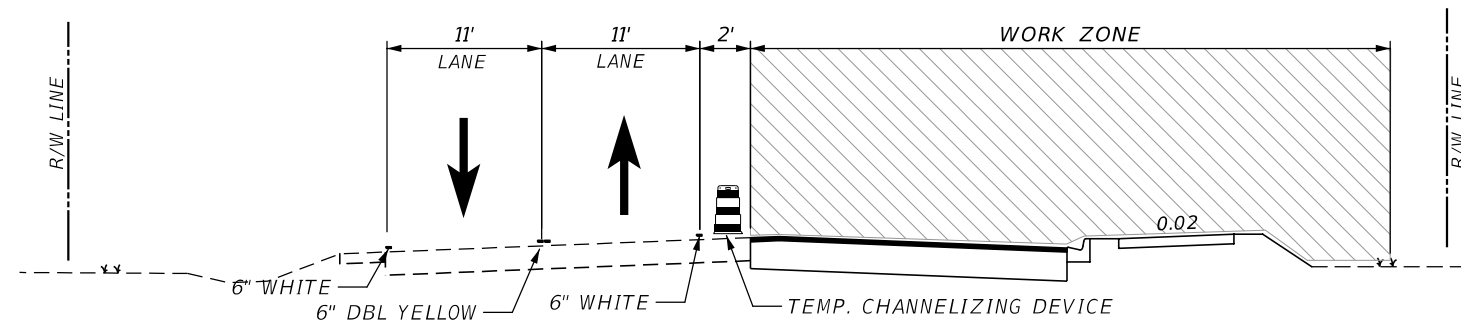
kathleen.agado 11/8/2019 5:49:48 PM J:\CR044\CR044002.03\ms\drainage\SWPPRD05.dgn



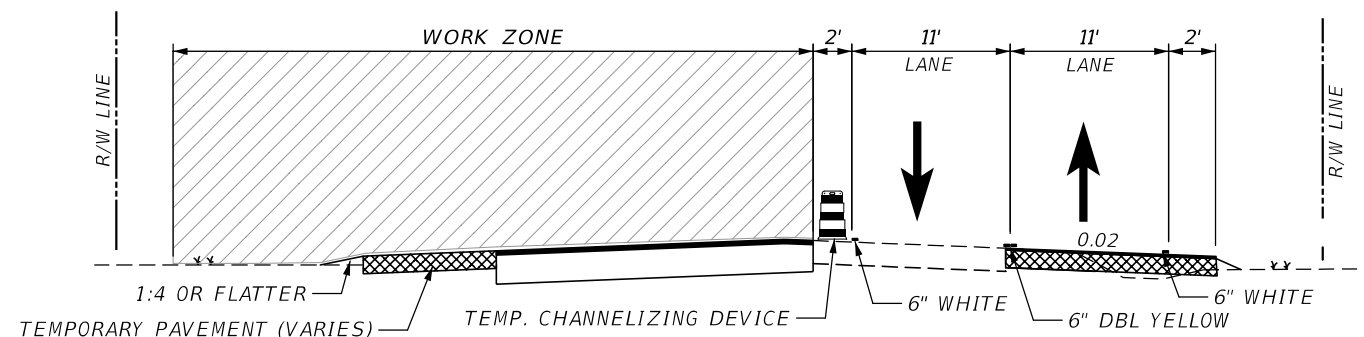
PHASE I GATEWAY BLVD



PHASE I COMMERCE LAKES DRIVE



PHASE II GATEWAY BLVD



PHASE II COMMERCE LAKES DRIVE

# CONSTRUCTION PHASING NOTES


PHASE I - OPERATIONS ARE TO INSTALL TEMPORARY PAVEMENT FOR PHASE II.

1. INSTALL SIGNING ON BOTH MAINLINE AND INTERSECTING ROAD IN ACCORDANCE WITH THESE PLANS.
2. SHIFT TRAFFIC AND CHANNELIZING DEVICES FOR PHASE I CONSTRUCTION.
3. CONSTRUCT TEMPORARY PAVEMENT FOR PHASE II.

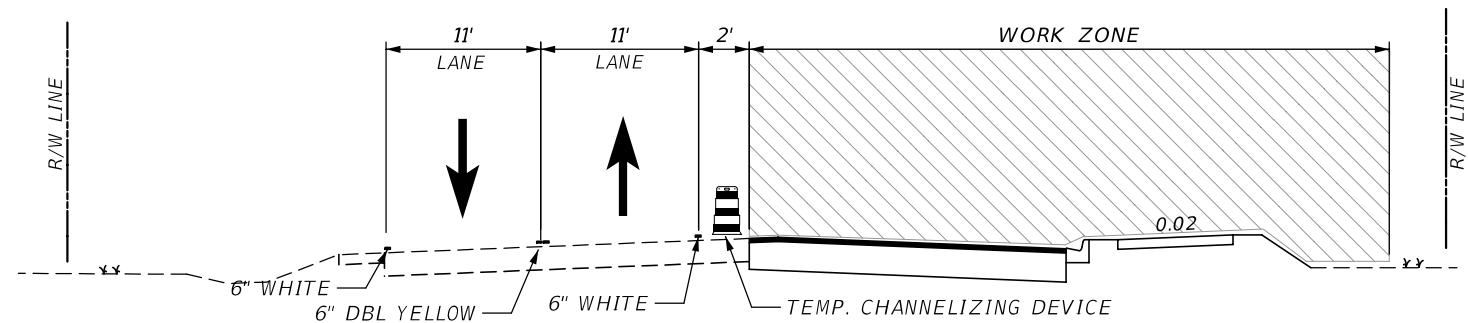
PHASE II - OPERATIONS ARE TO CONSTRUCT GATEWAY BLVD EAST SIDE (NB) AND COMMERCE LAKES DRIVE NORTH SIDE (WB) NEW ALIGNMENT ALONG WITH TEMPORARY PAVEMENT.

1. INSTALL SIGNING ON BOTH MAINLINE AND INTERSECTING ROAD IN ACCORDANCE WITH THESE PLANS.
2. SHIFT TRAFFIC AND CHANNELIZING DEVICES FOR PHASE II CONSTRUCTION.
3. CONSTRUCT GATEWAY BLVD EAST SIDE (NB) AND COMMERCE LAKES DRIVE NORTH SIDE (WB) NEW ALIGNMENT. THIS WILL INCLUDE LANES, SHOULDERS, CURB AND GUTTERS, SIDEWALKS, EXCLUDING TRAFFIC SEPARATORS AND ROUNDABOUT.
4. CONSTRUCT PROPOSED DRAINAGE AS INDICATED ON THIS PLAN SET.
5. CONSTRUCT TEMPORARY PAVEMENT FOR PHASE III.

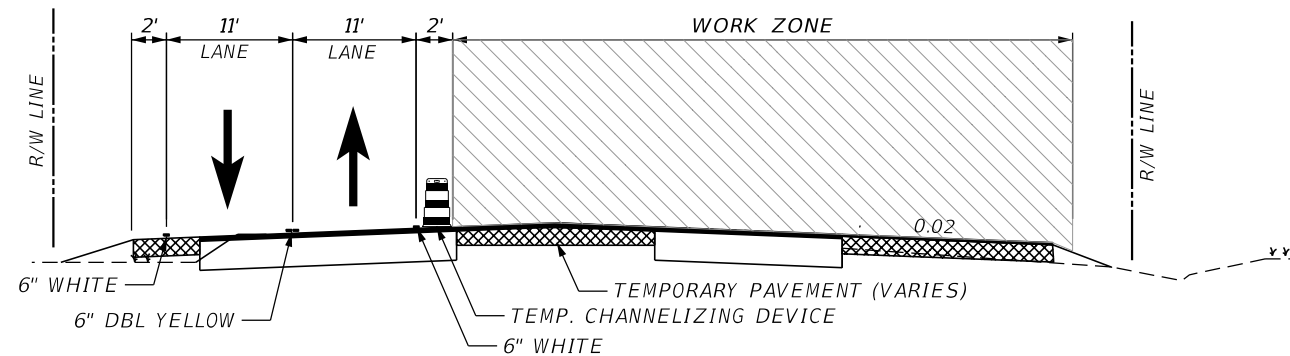
**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TEMPORARY TRAFFIC CONTROL		200671	48

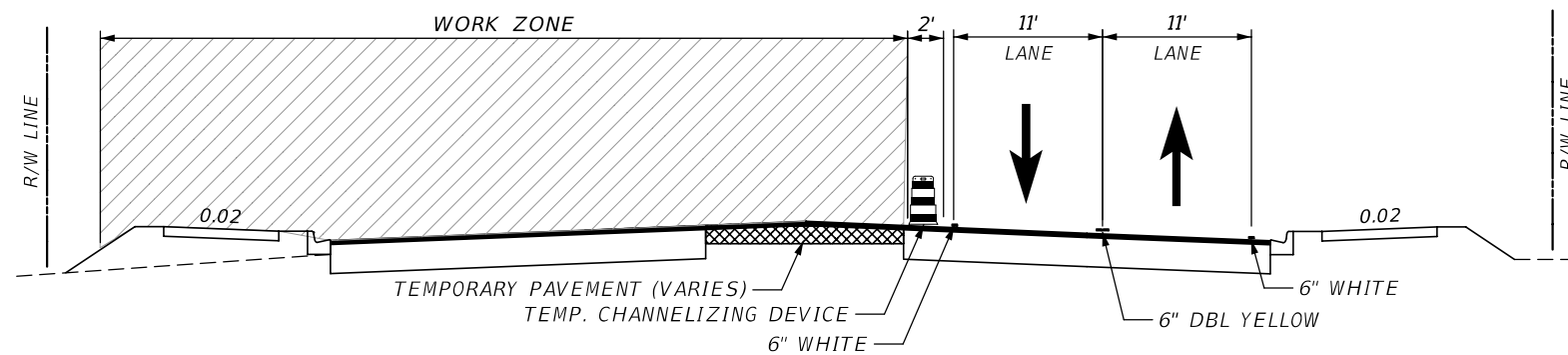




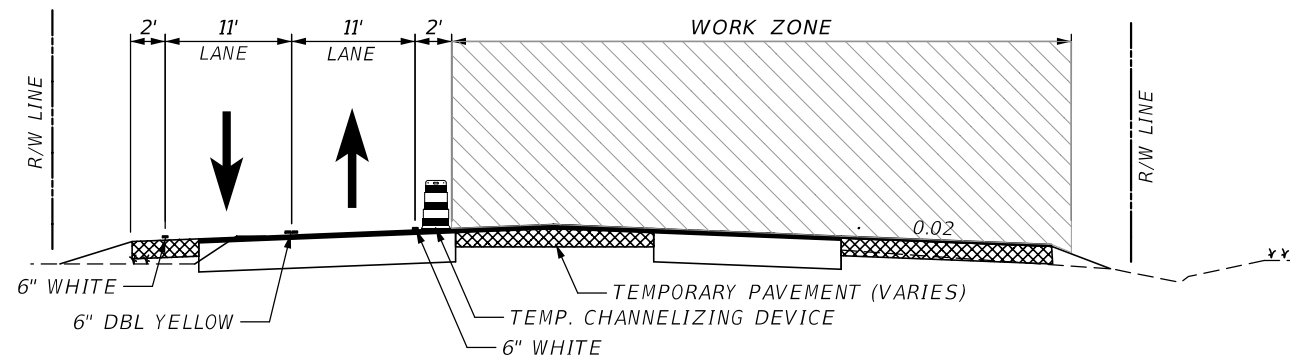
PHASE III GATEWAY BLVD



PHASE III COMMERCE LAKES DRIVE



PHASE IV GATEWAY BLVD



PHASE IV COMMERCE LAKES DRIVE

## CONSTRUCTION PHASING NOTES


PHASE III - OPERATIONS ARE TO CONSTRUCT COMMERCE LAKES DRIVE SOUTH SIDE (EB) NEW ALIGNMENT ALONG WITH TEMPORARY PAVEMENT.

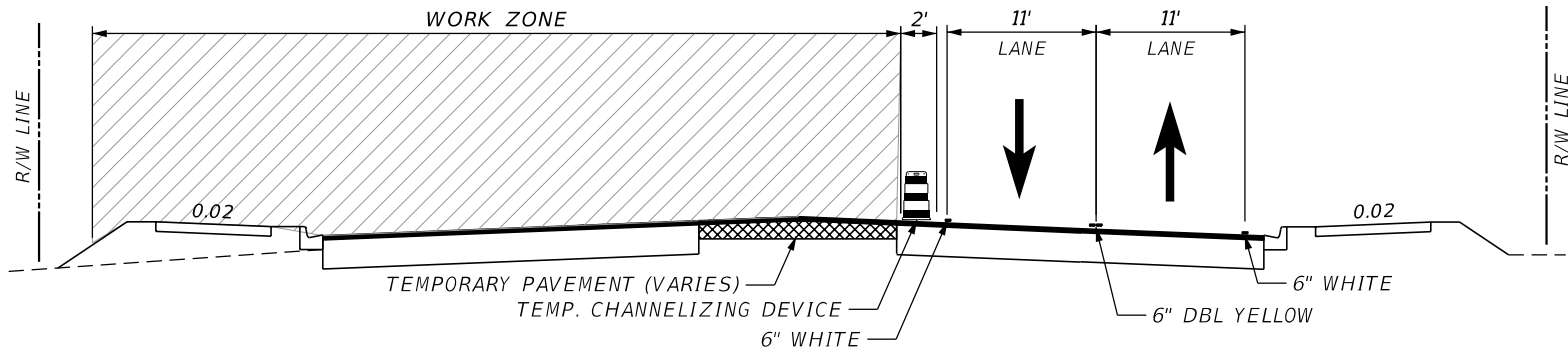
1. INSTALL SIGNING ON BOTH MAINLINE AND INTERSECTING ROAD IN ACCORDANCE WITH THESE PLANS.
2. SHIFT TRAFFIC AND CHANNELIZING DEVICES FOR PHASE III CONSTRUCTION.
3. CONSTRUCT COMMERCE LAKES DRIVE SOUTH SIDE (EB) NEW ALIGNMENT. THIS WILL INCLUDE LANES, SHOULDERS, CURB AND GUTTERS, SIDEWALKS, EXCLUDING TRAFFIC SEPARATORS AND ROUNDABOUT.
4. CONSTRUCT PROPOSED DRAINAGE AS INDICATED ON THIS PLAN SET.
5. CONSTRUCT TEMPORARY PAVEMENT FOR PHASE IV.

PHASE IV - OPERATIONS ARE TO CONSTRUCT GATEWAY BLVD WEST SIDE (SB) NEW ALIGNMENT INCLUDING ADJACENT DRIVEWAYS AND DRAINAGE.

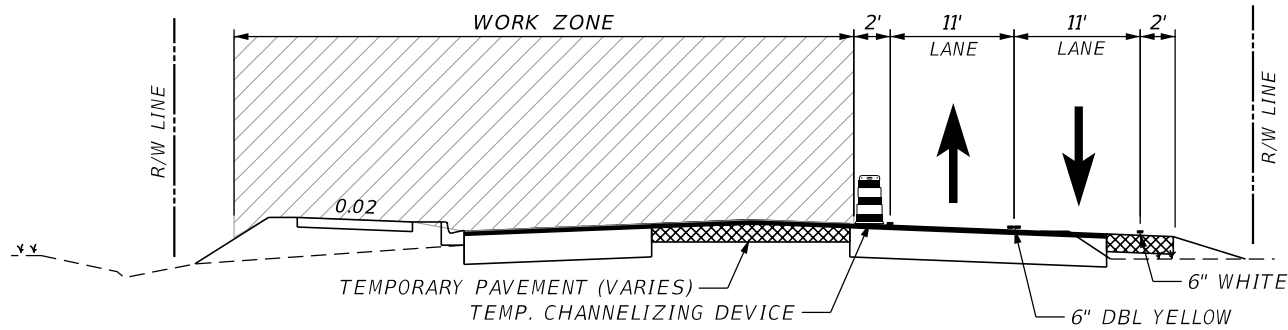
1. INSTALL SIGNING ON BOTH MAINLINE AND INTERSECTING ROAD IN ACCORDANCE WITH THESE PLANS.
2. SHIFT TRAFFIC AND CHANNELIZING DEVICES FOR PHASE IV CONSTRUCTION.
3. CONSTRUCT GATEWAY BLVD WEST SIDE (SB). THIS WILL INCLUDE LANES, SHOULDERS, CURB AND GUTTERS, SIDEWALKS, EXCLUDING TRAFFIC SEPARATORS AND INCLUDING IRRIGATION.
4. CONSTRUCT PROPOSED DRAINAGE AS INDICATED ON THIS PLAN SET.
5. CONSTRUCT TEMPORARY PAVEMENT FOR PHASE V.

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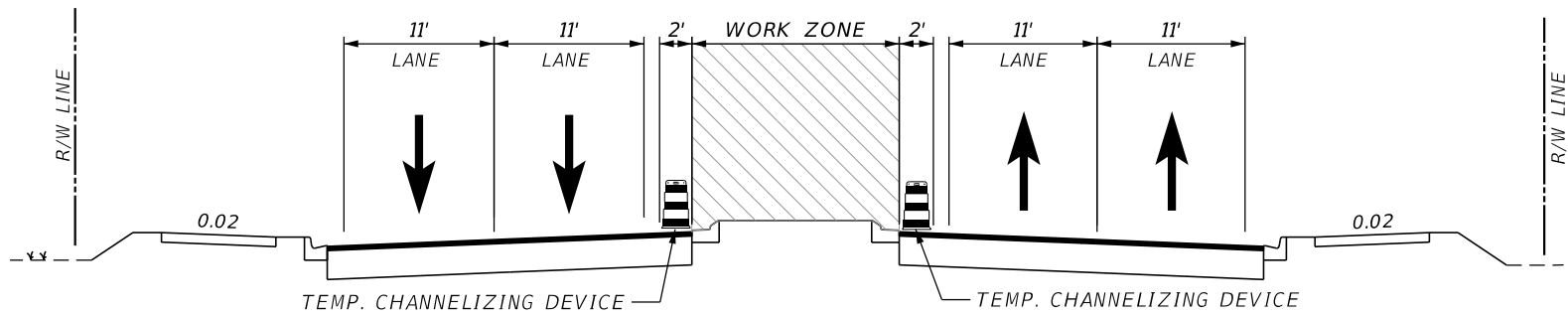
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TEMPORARY TRAFFIC CONTROL		200671	49



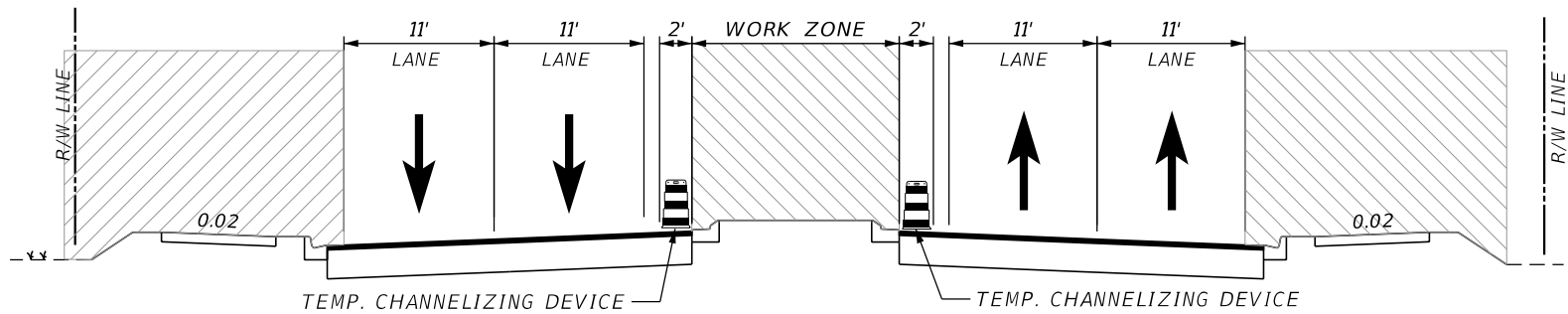
PHASE V GATEWAY BLVD



PHASE V COMMERCE LAKES DRIVE



PHASE VI GATEWAY BLVD AND COMERCE LAKES DRIVE



PHASE VI GATEWAY BLVD AND COMERCE LAKES DRIVE

CONSTRUCTION PHASING NOTES

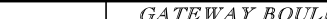
PHASE V - OPERATIONS ARE TO CONSTRUCT THE NORTHWEST CORNER OF THE ROUNDABOUT, SIDEWALKS, DRIVEWAYS, DRAINAGE, AND CURB AND GUTTER.

1. INSTALL SIGNING ON BOTH MAINLINE AN INTERSECTING ROAD IN ACCORDANCE WITH THESE PLANS.
2. SHIFT TRAFFIC AND CHANNELIZING DEVICES FOR PHASE IV CONSTRUCTION.
3. CONSTRUCT REMAINING QUADRANT OF ROUNDABOUT.
4. DEMOLISH TEMPORARY PAVEMENT FROM PHASE IV.

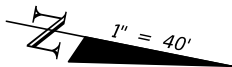
PHASE VI - OPERATIONS ARE TO MOVE TRAFFIC ONTO NEWLY CONSTRUCTED ROADWAY AND CONSTRUCT TRAFFIC SEPARATORS, THE CENTER OF THE ROUNDABOUT, COMPLETE ANY REMAINING SIDEWALKS ON COMMERCE LAKES DRIVE AND REMOVE TEMPORARY PAVEMENT FROM THE PREVIOUS PHASES OF CONSTRUCTION.

1. INSTALL SIGNING ON BOTH MAINLINE AN INTERSECTING ROAD IN ACCORDANCE WITH INDEX NO. 102-601, 102-602 AND 102-603.
2. MILL AND RESURFACE GATEWAY BLVD AND COMMERCE LAKES DRIVE.
3. MOVE CHANNELIZING DEVICES AND SHIFT TRAFFIC TO FINAL TRAFFIC PATTERN ON NEWLY CONSTRUCTED ROADWAYS. CONSTRUCT SPLITTER ISLANDS, REMAINING SIDEWALK ON COMMERCE LAKES DRIVE, AS WELL AS CENTER OF THE ROUNDABOUT.
4. REMOVE TEMPORARY PAVEMENT FROM PHASE V.
4. COMPLETE INSTALLATION OF PERMANENT SIGNING WITHIN PROJECT LIMITS.
5. COMPLETE FRICTION COURSE WITHIN PROJECT LIMITS.
6. COMPLETE PLACEMENT OF THERMOPLASTIC PAVEMENT MARKINGS.

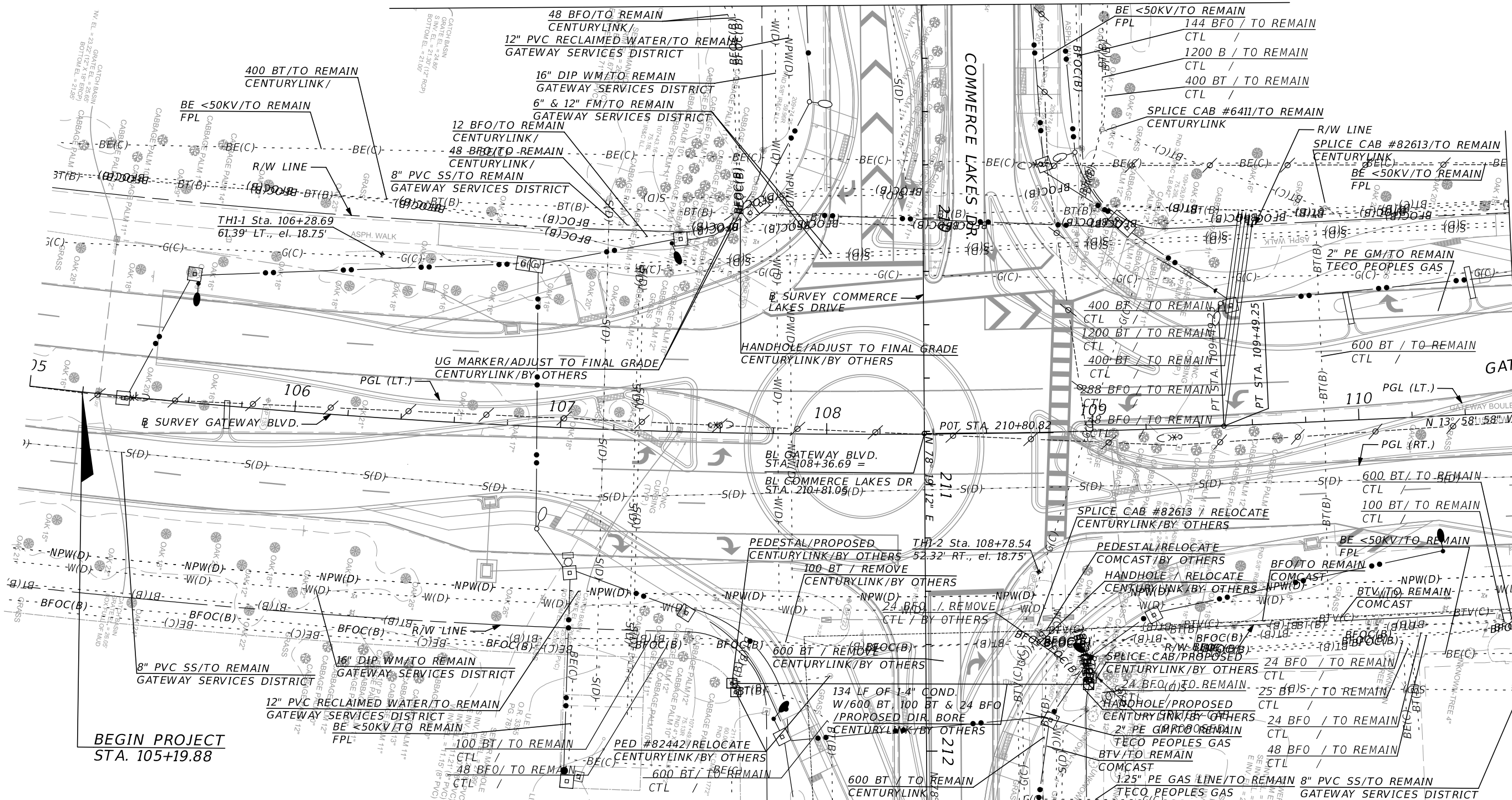
**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TEMPORARY TRAFFIC CONTROL	200671	50






MATCHLINE - SEE UTILITY ADJUSTMENT PLAN (3)  
STA. 209+20.00



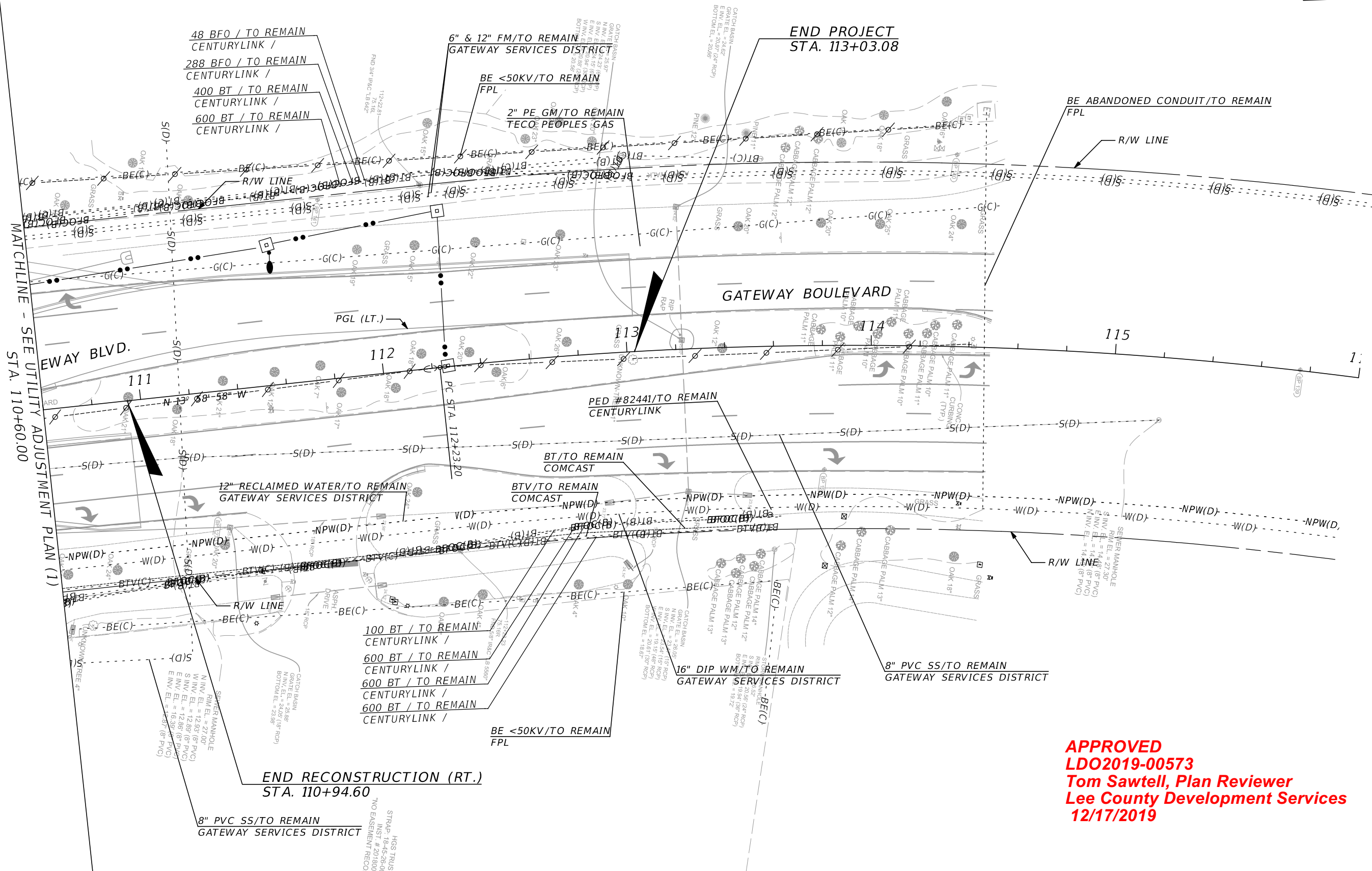
MATCHLINE - SEE UTILITY ADJUSTMENT PLAN (2)  
STA. 110+60.00

MATCHLINE - SEE UTILITY ADJUSTMENT PLAN (4)  
STA. 212+20.00

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			UTILITY ADJUSTMENT PLAN (1) (GATEWAY BOULEVARD)	200671	51

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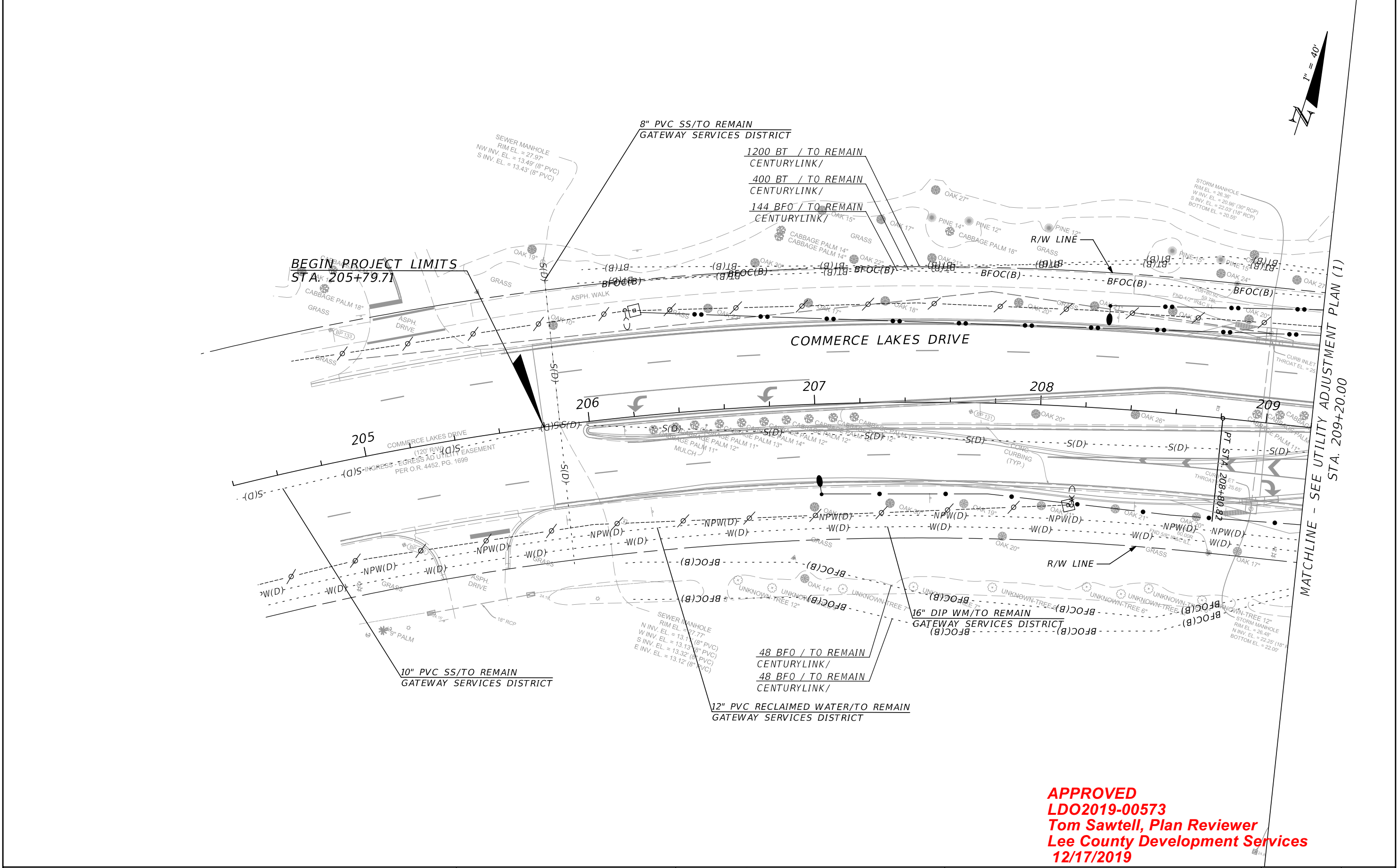


JASON Y. YAM, P.E.  
P.E. LICENSE NUMBER 62449  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FLORIDA 33759  
CERTIFICATE OF AUTHORIZATION 29915




REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

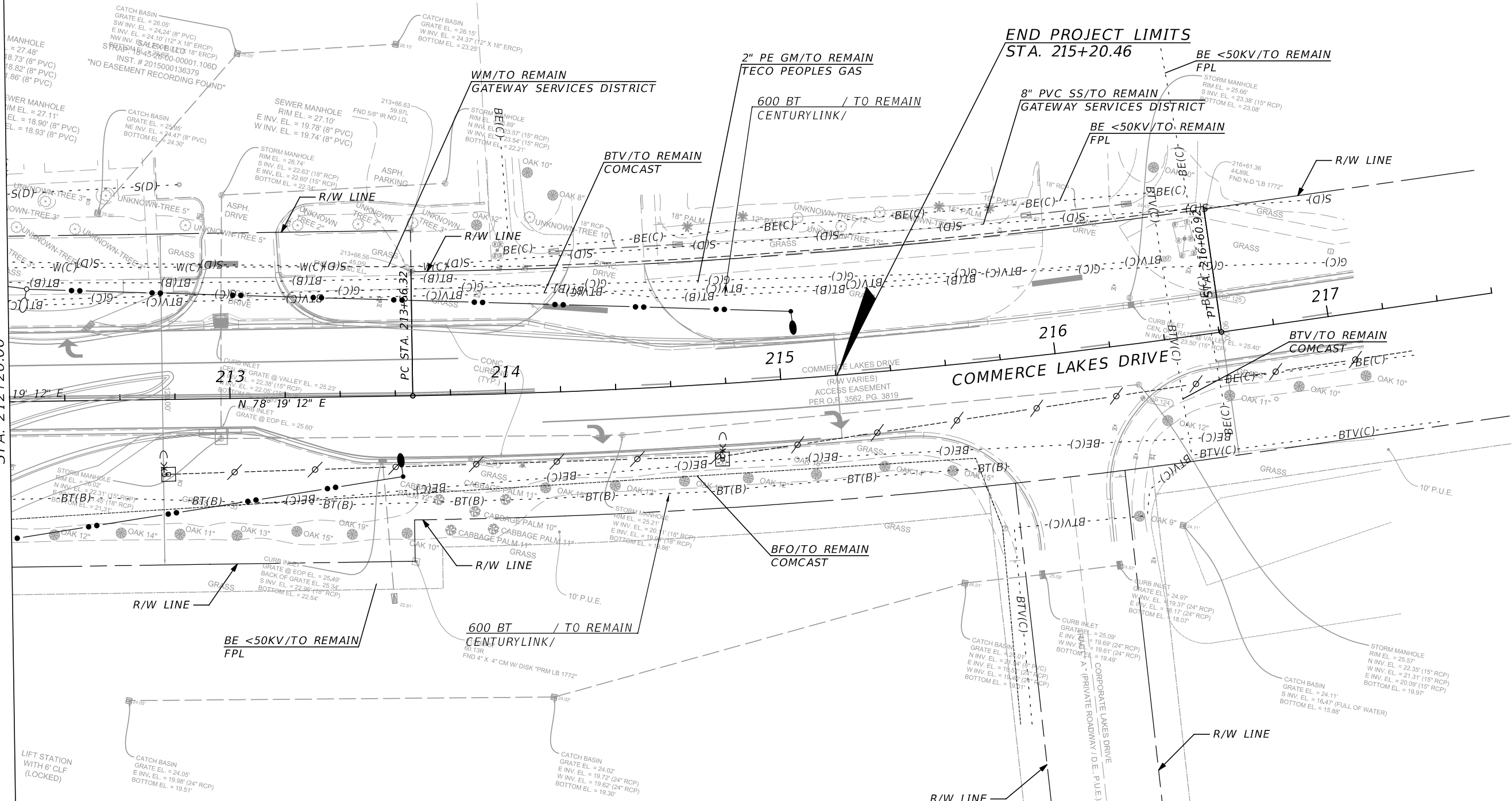





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LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			UTILITY ADJUSTMENT PLAN (3) (COMMERCE LAKES DRIVE)	200671	53

MATCHLINE - SEE UTILITY ADJUSTMENT PLAN (1)  
STA. 212+20.00



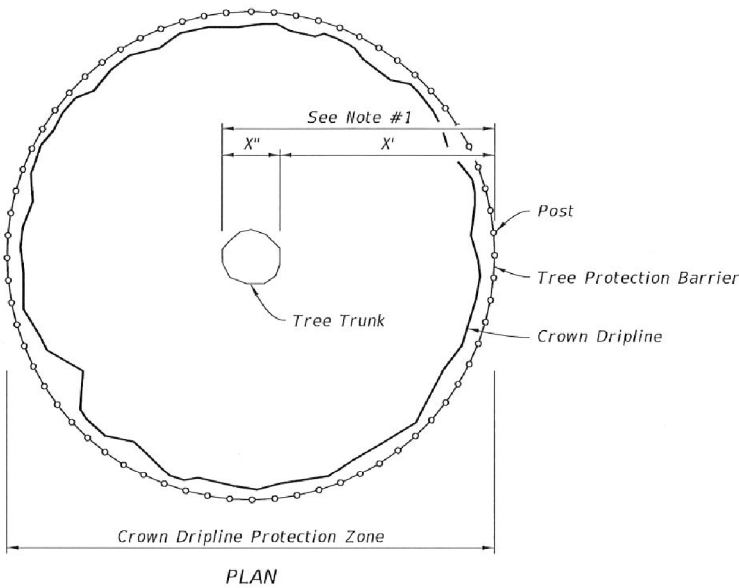
**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			UTILITY ADJUSTMENT PLAN (4) (COMMERCE LAKES DRIVE)		200671	54

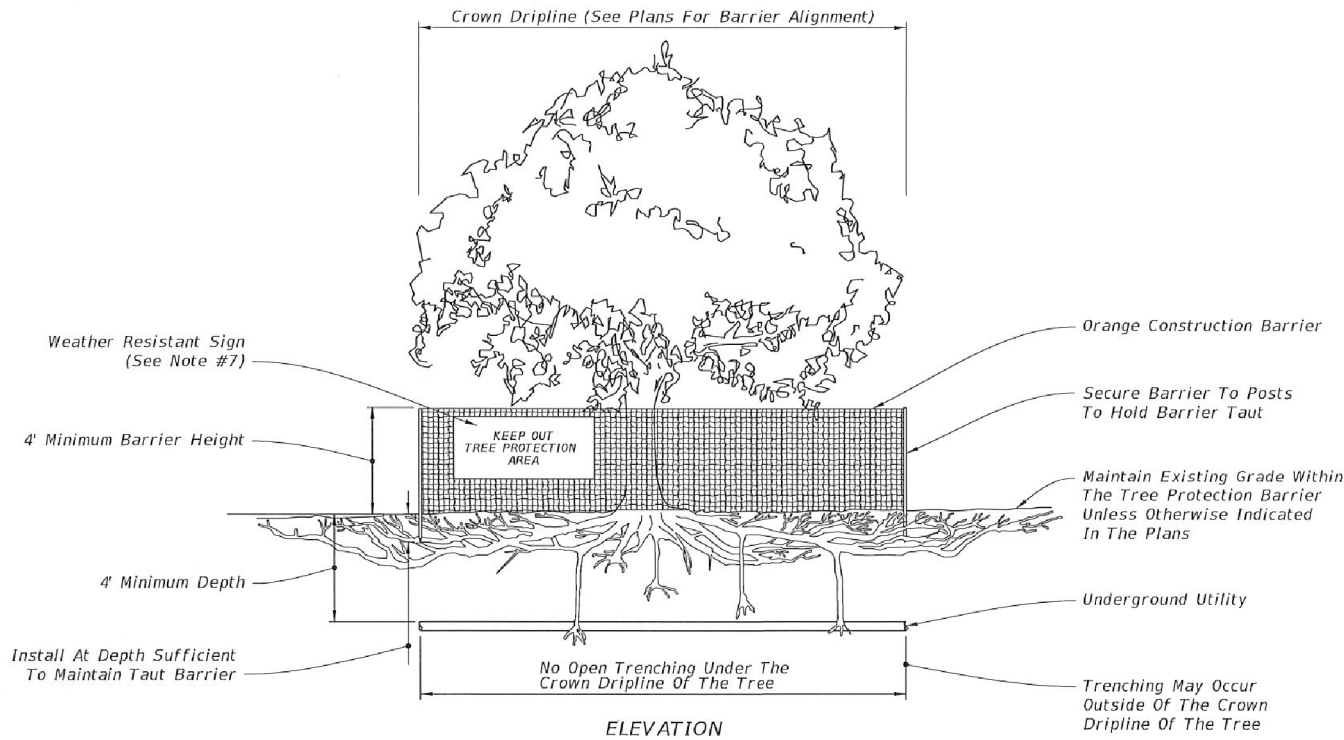


NOTES:

- 1. Crown Dripline Protection Zone: Extends in all directions from trunk of tree to a distance equal to one foot per inch of trunk diameter at breast height.
- 2. Staging, storage, dumping, washing and operation of equipment is not permitted within the limits of the tree protection barrier, including during barrier installation.
- 3. Install all tree protection prior to commencement of construction and remove when directed by the engineer. Maintain protection at all times.
- 4. For closely spaced groups of trees, place the tree protection barrier around the entire group.
- 5. Inspect trunk protection and tree quarterly to prevent girdling. Adjust bands to allow tree growth as needed.
- 6. See plans for any additional requirements or modifications within the tree protection area.
- 7. Place weather resistant sign every 50' along the barrier, with 6" minimum text height and provide text in English and Spanish. Sign should read "Keep Out Tree Protection Area".
- 8. Alternate tree protection systems approved by the Engineer may be used in lieu of the tree protection barrier detailed on this Index.

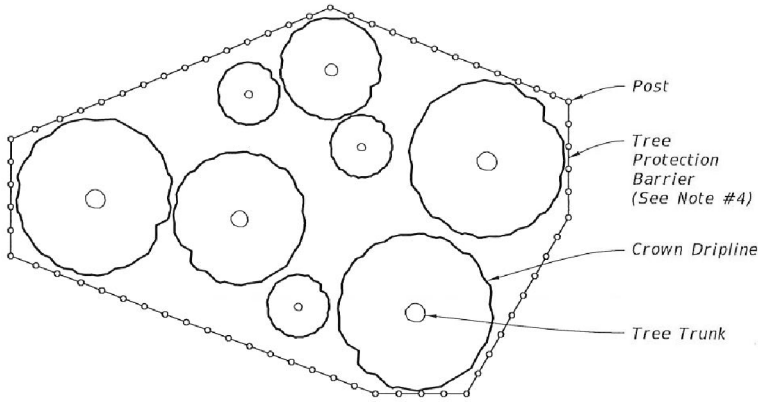


PLAN



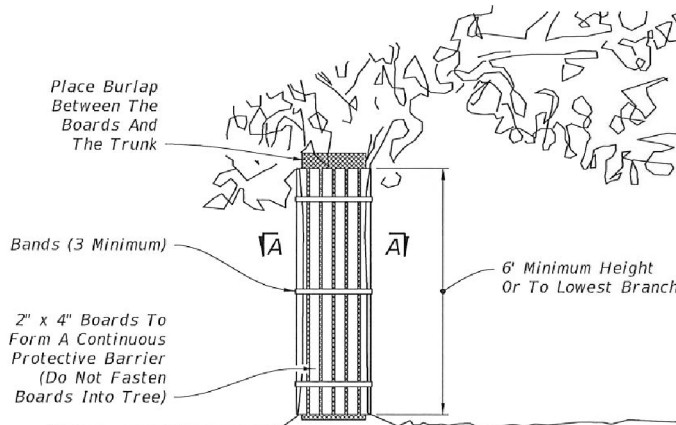
ELEVATION

TREE PROTECTION BARRIER

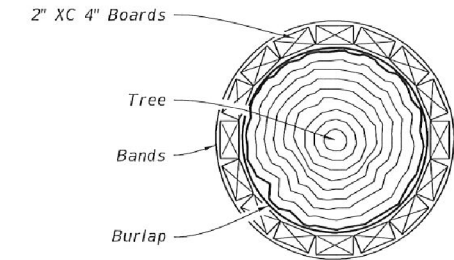


PLAN

PROTECTION BARRIER FOR TREE GROUPINGS



ELEVATION



SECTION A-A

NOTES:


- 1. Install trunk protection when Tree Protection Barrier can not be reasonably erected.
- 2. See Selective Clearing and Grubbing Plan for location of trunk protection.
- 3. Adjust bands to allow tree growth (inspect quarterly for girdling).

TRUNK PROTECTION

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

10/11/2016 9:24:43 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2017-18 DESIGN STANDARDS	TREE PROTECTION AND PRESERVATION	INDEX NO.	SHEET NO.
11/01/16					542	1 of 1

REVISIONS				CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	<div><div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div></div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBABOUT)		CIP NO.	SHT. NO.	
DATE	DESCRIPTION		DATE			DESCRIPTION		TREE PROTECTION DETAILS	200671	55

PAY ITEM NOTES:


110-2-2 SELECTIVE CLEARING AND GRUBBING INCLUDES THE COST OF TREE REMOVAL, TREE TRIMMING & ROOT PRUNING BY PROFESSIONAL ARBORISTS AND REMOVAL OF DEBRIS AT LOCATIONS WHERE TREE BRANCHES OR SHRUBS CONFLICT WITH THE PROPOSED LIGHTING POLES. TREES TO BE REMOVED SHOWN ON EROSION CONTROL SHEETS.

\*\*\*ROOT CONTROL BARRIER SHALL BE INSTALLED TO CONFORM TO THE REQUIREMENTS AS SET FORTH BY THE MANUFACTURER, TO A MINIMAL DEPTH OF 12" BELOW FINISH GRADE OF ADJACENT SIDEWALK OR CURBING. ROOT BARRIER SHALL BE FREE OF FOLDS AND TEARS TO PRODUCE AN EFFECTIVE BARRIER BETWEEN CONCRETE CONSTRUCTION AND TREES. INSTALLATION SHALL BE PERPENDICULAR TO FINISH GRADE AND ALL EDGES SHALL BE BELOW FINISH GRADE ONCE RESTORATION OF THE ADJACENT DISTRUBED AREA HAS BEEN COMPLETED. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A MANUFACTURER'S CERTIFICATE STATING THE MANUFACTURER'S NAME, PRODUCT NAME, STYLE NUMBER, CHEMICAL COMPOSITION AND OTHER PERTINENT INFORMATION TO FULLY DESCRIBE THE PRODUCT. THE CONTRACTOR SHALL AFFIX AN APPLICABLE MSDS TO THE OUTSIDE OF EACH SHIPPING CONTAINER FOR THE PRODUCT.

SUMMARY OF LUMP SUM ITEMS					
PAY ITEM NO.	PAY ITEM DESCRIPTION	QUANTITY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
101-1	MOBILIZATION	1			

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS								
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	TOTAL		GRAND TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			P	F	P	F		
102-1	MAINTENANCE OF TRAFFIC	LS	1		1		365 DA	


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Tom Sawtell, Plan Reviewer  
Lee County Development Services  
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REVISIONS				<div>JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915</div>	<div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES	200671	SQ-1

SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES


LOCATION	SIDE	AREA ID	SEDIMENT BARRIER		STAKED TURBIDITY BARRIER		INLET PROTECTION SYSTEM		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			0104 10 3		0104 12		0104 18			
			LF		LF		EA			
			P	F	P	F	P	F		
104+94.50 to 107+43.60	LT		242.5							
105+03.77 to 107+50.12	RT		252.8							
107+43.69 to 107+76.37	LT		50.1							
107+50.12 to 107+79.66	RT		51.8							
108+92.61 to 109+23.45	RT		49.3							
108+96.97 to 109+30.21	LT		51.3							
109+23.45 to 109+49.25	RT		26.5							
109+30.21 to 109+49.25	LT		18.5							
109+49.25 to 111+52.43	RT		203.2							
109+49.25 to 112+23.20	LT		274.0							
111+87.24 to 113+45.50	RT		152.7							
112+23.20 to 113+60.81	LT		143.9							
198+19.15 to 202+42.79	RT		431.9							
202+73.10 to 205+23.20	RT		241.3							
205+46.81 to 208+80.82	LT		349.3							
205+58.72 to 208+80.82	RT		307.4							
208+80.82 to 209+74.55	LT		93.7							
208+80.82 to 209+74.66	RT		93.8							
211+84.66 to 212+88.58	LT		103.9							
211+89.14 to 213+66.32	RT		190.3							
213+21.11 to 213+64.32	LT		56.2							
213+64.32 to 214+21.87	LT		56.5							
213+66.32 to 215+52.44	RT		189.6							
214+21.87 to 214+23.99	LT		9.2							
214+59.13 to 214+59.27	LT		8.9							
214+59.13 to 215+48.51	LT		87.6							
105+32.67 to 105+46.10	LT				36.4					
106+69.87 to 106+80.31	RT						1			
106+74.49 to 106+85.17	LT						1			
109+67.58 to 109+92.86	RT						1			
109+88.48 to 110+11.03	LT						1			
110+33.83 to 110+59.43	LT						1			
113+16.74 to 113+27.42	RT						1			
113+16.74 to 113+27.42	RT						1			
113+16.74 to 113+27.42	RT						1			
113+17.51 to 113+27.77	LT/RT						1			
113+17.51 to 113+27.77	LT/RT						1			
113+17.51 to 113+27.77	LT/RT						1			
113+18.18 to 113+28.11	LT						1			
113+18.18 to 113+28.11	LT						1			
113+18.18 to 113+28.11	LT						1			
208+83.56 to 209+13.34	RT						1			
208+85.18 to 209+15.41	LT						1			
212+77.43 to 213+07.75	RT						1			
212+92.54 to 213+01.88	LT						1			
213+43.52 to 213+68.91	RT						1			
SUB-TOTAL :			3736.2		36.4		19		APPROVED LDO2019-0 Tom Sawte Lee County 12/17/2019	
TOTAL :			3736		36		19			

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD <del>AT</del> COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES		200671	SQ-2

SUMMARY OF LITTER REMOVAL AND MOWING																	
CONST. PHASE	LOCATION	SIDE	DURATION (DAYS)	FREQUENCY (DAYS)	LITTER REMOVAL					MOWING					DESIGN NOTES	CONSTRUCTION REMARKS	
					0107 1					0107 2							
	AREA ID				CYCLES	AREA		AREA ID	CYCLES	AREA							
						AC/ CYCLE	TOTAL (AC)			AC/ CYCLE	TOTAL (AC)						
	STA. TO STA.							P	F				P	F			
ALL	105+18.49 to 107+59.72	RT		30	31401	12	0.2	2.47									
ALL	105+19.88 to 107+51.52	LT/RT		30	20841	12	0.2										
ALL	105+46.41 to 108+03.18	LT		30	31392	12	0.2										
ALL	107+87.14 to 108+40.99	LT/RT		30	20883	12	0.1										
ALL	108+60.74 to 109+25.82	LT		30	20874	12	0.0										
ALL	108+76.77 to 113+03.08	LT/RT		30	20858	12	0.3										
ALL	108+77.91 to 113+03.08	LT		30	31363	12	0.3										
ALL	108+75.84 to 110+63.87	RT		30	31435	12	0.1										
ALL	205+79.38 to 209+81.05	LT		30	31374	12	0.2										
ALL	205+79.38 to 209+89.21	RT		30	31382	12	0.3										
ALL	211+38.61 to 215+20.46	RT		30	31410	12	0.3										
ALL	211+59.13 to 213+41.02	LT/RT		30	20826	12	0.1										
ALL	211+71.03 to 215+20.46	LT		30	31426	12	0.2										
ALL	105+18.49 to 107+59.72	RT		30						31401	12	0.2	2.47				
ALL	105+19.88 to 107+51.52	LT/RT		30						20841	12	0.2					
ALL	105+46.41 to 108+03.18	LT		30						31392	12	0.2					
ALL	107+87.14 to 108+40.99	LT/RT		30						20883	12	0.1					
ALL	108+60.74 to 109+25.82	LT		30						20874	12	0.0					
ALL	108+76.77 to 113+03.08	LT/RT		30						20858	12	0.3					
ALL	108+77.91 to 113+03.08	LT		30						31363	12	0.3					
ALL	108+75.84 to 110+63.87	RT		30						31435	12	0.1					
ALL	205+79.38 to 209+81.05	LT		30						31374	12	0.2					
ALL	205+79.38 to 209+89.21	RT		30						31382	12	0.3					
ALL	211+38.61 to 215+20.46	RT		30						31410	12	0.3					
ALL	211+59.13 to 213+41.02	LT/RT		30						20826	12	0.1					
ALL	211+71.03 to 215+20.46	LT		30						31426	12	0.2					
SUB-TOTAL:								2.47			SUB-TOTAL:						

SUMMARY OF REMOVAL ITEMS														
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	LENGTH	WIDTH	UNITS	SECONDARY UNITS (IF LUMP SUM)	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.								P	F	P		
110-2-2	SELECTIVE CLEARING AND GRUBBING	105+18.49 TO 215+20.46	RT	20653			LS	0.480			1		1.91 TOTAL AC	
		105+46.41 TO 205+79.38	LT/RT	20675				0.456					SOUTHEAST QUADRANT	
		205+79.38 TO 113+03.08	LT	20691				0.585					SOUTHWEST QUADRANT	
		215+20.46 TO 110+94.60	LT/RT	25653				0.390					NORTHWEST QUADRANT	
110-4-10	REMOVAL OF EXISTING CONCRETE	106+50.00 TO 107+83.84	LT	25869			SY		119.2		1178		NORTHEAST QUADRANT	
		108+96.52 TO 110+54.85	LT	25925					139.5				SIDEWALK	
		208+37.55 TO 210+21.31	LT	25938					163.1				SIDEWALK	
		211+22.31 TO 212+91.09	LT	25857					96.5				SIDEWALK	
		107+34.85 TO 107+78.51	LT/RT	30483					7.6				SIDEWALK	
		108+92.67 TO 109+71.05	LT/RT	30401					10.2				MEDIAN CURB	
		205+79.38 TO 209+81.12	LT	30515					91.2				MEDIAN CURB	
		205+80.06 TO 209+89.65	RT	30499					89.1				CURB	
		205+96.96 TO 209+23.97	LT/RT	30627					190.0				CURB	
		211+18.70 TO 215+20.46	LT	30418					63.4				CURB	
		211+29.15 TO 213+03.81	RT	30459					32.8				CURB	
		212+78.30 TO 213+30.28	LT	30543					58.2				DRIVEWAY	
		214+09.50 TO 214+83.96	LT	30553					117.7				DRIVEWAY	

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES		200671	SQ-3

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



SUMMARY OF EARTHWORK					
PAY ITEM NO.	PAY ITEM DESCRIPTION	CY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
120-1	REGULAR EXCAVATION				
	MAINLINE GATEWAY BLVD.	2102			
	MAINLINE COMMERCE LAKES DR.	738			
	TOTAL REGULAR EXCAVATION	2840			
120-6	EMBANKMENT				
	MAINLINE GATEWAY BLVD.	737			
	MAINLINE COMMERCE LAKES DR.	127			
	TOTAL EMBANKMENT	864			

EARTHWORK HAS BEEN CALCULATED USING THE LIMEROCK BASE OPTION. IF ANOTHER OPTION IS CONSTRUCTED, THERE SHALL BE NO REVISION TO THE EARTHWORK QUANTITIES FOR WHICH PAYMENT IS MADE BY PLAN QUANTITY.

SUMMARY OF PAVEMENT												
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	AREA ID	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION				P	F	P	F		
0160 4	TYPE B STABILIZATION	105+19.88 TO 113+03.08	GATEWAY & INTERSECTION	LT/RT	26417	SY	5222		7017			
		107+71.36 TO 108+56.72	TRUCK APRON	LT/RT	25051		403					
		205+99.27 TO 206+36.82	COMMERCE MEDIAN WIDENING (WEST)	RT	25339		28					
		207+64.64 TO 210+08.25	COMMERCE LAKES DR (WEST)	RT	26398		383					
		209+50.52 TO 210+07.67	COMMERCE LAKES DR (WEST)	LT	26299		202					
		211+63.07 TO 213+46.29	COMMERCE LAKES DR (EAST)	LT/RT	26516		725					
		214+41.70 TO 215+20.46	COMMERCE WIDENING (EAST)	LT	25364		54					
285 709	OPTIONAL BASE, BASE GROUP 09	105+19.88 TO 113+03.08	GATEWAY & INTERSECTION	LT/RT	26039	SY	4455		5528			
		205+99.27 TO 206+36.82	COMMERCE MEDIAN WIDENING (WEST)	RT	26177		17					
		207+64.64 TO 210+08.25	COMMERCE LAKES DR (WEST)	RT	26115		287					
		209+50.52 TO 210+07.67	COMMERCE LAKES DR (WEST)	LT	26131		165					
		211+63.07 TO 213+46.29	COMMERCE LAKES DR (EAST)	LT/RT	26145		570					
		214+41.70 TO 215+20.46	COMMERCE WIDENING (EAST)	LT	24681		34					
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	111+50.00 TO 113+03.08	SOUTHBOUND GATEWAY BLVD	LT	119827	SY	373.7		5657			
		197+57.05 TO 205+80.06	EASTBOUND COMMERCE LAKES DR	RT	134642		2406.5			FOR S&PM MERGE		
		205+79.38 TO 209+50.52	W. COMMERCE LAKES DR	LT/RT	133494		1907.7					
		213+00.00 TO 215+20.46	E. COMMERCE LAKES DR	LT/RT	123991		968.9					
334 1 13	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC LEVEL C, , FC-12.5 (2.5")	105+19.88 TO 113+03.08	GATEWAY & INTERSECTION	LT/RT	26667	TN	612.5		1185.6			
		205+99.27 TO 206+36.82	COMMERCE MEDIAN WIDENING (WEST)	RT	24509		2.4					
		207+64.64 TO 210+08.25	COMMERCE LAKES DR (WEST)	RT	26530		39.5					
		209+50.52 TO 210+07.67	COMMERCE LAKES DR (WEST)	LT	26547		22.7					
		211+63.07 TO 213+46.29	COMMERCE LAKES DR (EAST)	LT/RT	26561		78.4					
		214+41.70 TO 215+20.46	COMMERCE WIDENING (EAST)	LT	24500		4.6					
		212+79.20 TO 213+30.31	DRIVEWAY	LT	10763		14.0					
		213+99.79 TO 214+74.69	DRIVEWAY	LT	10773		16.7					
		111+50.00 TO 113+03.08	SOUTHBOUND GATEWAY BLVD	LT			7.6					
		205+79.38 TO 209+50.52	W. COMMERCE LAKES DR	LT/RT			327.4					
		213+00.00 TO 215+20.46	E. COMMERCE LAKES DR	LT/RT			59.9					
337 7 82	ASPHALTIC CONCRETE FRICTION COURSE, TRAFFIC LEVEL C, FC-9.5, PG 76-22 (1")	105+19.88 TO 113+03.08	COMPLETE INTERSECTION	LT/RT	30693	TN	482.8		615.1			
		197+57.05 TO 205+80.06	EASTBOUND COMMERCE LAKES DR	RT	26758		132.4					
350 30 13	CONCRETE PAVEMENT FOR ROUNDABOUT APRON, 12" DEPTH	107+71.36 TO 108+56.72	TRUCK APRON	LT/RT	19164	SY	397.4		397			

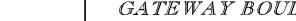
APPROVED

LD-2019-00573

Don Sawtell, Plan Reviewer

Lee County Development Services

12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 <b>Lee County</b> <i>Southwest Florida</i> DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES		200671	SQ-4


APPROVED  
LD-2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

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SUMMARY OF WALLS											
WALL NO.	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			STA. TO STA.			P	F	P	F		
1	0400 0 11	CONCRETE CLASS NS, GRAVITY WALL	211+50.00 to 211+88.38	RT	CY	3.8		4		SCHEME 1	

SUMMARY OF RAILING						
LOCATION	SIDE	PIPE HANDRAIL - GUIDERAIL		DESIGN NOTES	CONSTRUCTION REMARKS	
		0515    1    2				
STA. TO STA.		LF				
		P	F			
211+50.00 TO 211+88.38	RT	47				
SUB-TOTAL :		47				
TOTAL :		47				

APPROVED  
LDO2019-00573  
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Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES	200671	SQ-5




SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS															
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY				TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS		
		STA. TO STA.				GROSS LENGTH	DEDUCTIONS		NET LENGTH		P			F	
							TYPE	LENGTH	P	F					
0520 1 7	CONCRETE CURB & GUTTER, TYPE E	105+19.90 to 105+52.96	RT		LF	33.2			33.2		2509				
		105+46.40 to 106+25.01	LT			78.5			78.5						
		105+52.96 to 106+33.75	RT			81.5			81.5						
		106+25.01 to 107+04.73	LT			79.9			79.9						
		106+33.75 to 106+90.44	LT/RT			57.6			57.6						
		106+90.44 to 107+15.67	LT			25.4			25.4						
		107+04.73 to 107+12.22	LT			7.6			7.6						
		107+12.22 to 107+12.51	LT			0.4			0.4						
		107+12.51 to 107+13.77	LT			5.1			5.1						
		107+13.77 to 107+15.88	LT			3.9			3.9						
		107+15.67 to 107+15.88	LT			0.7			0.7						
		107+23.88 to 107+24.08	LT			0.4			0.4						
		107+23.88 to 107+24.10	LT			0.9			0.9						
		107+24.08 to 107+46.04	LT			22.2			22.2						
		107+24.10 to 107+24.27	LT			0.3			0.3						
		107+24.27 to 107+39.19	LT			16.2			16.2						
		107+38.44 to 107+38.52	RT			0.4			0.4						
		107+38.44 to 107+41.30	RT			5.5			5.5						
		107+38.52 to 107+47.43	RT			10.7			10.7						
		107+39.19 to 107+41.30	LT/RT			9.2			9.2						
		107+46.04 to 107+48.71	LT			3.9			3.9						
		107+47.42 to 107+49.31	RT			3.0			3.0						
		107+48.71 to 107+48.89	LT/RT			20.3			20.3						
		107+48.89 to 107+49.31	RT			6.8			6.8						
		108+10.12 to 108+11.61	RT			3.8			3.8						
		108+10.12 to 108+14.41	RT			12.1			12.1						
		108+11.61 to 108+29.27	RT			18.8			18.8						
		108+14.41 to 108+14.74	RT			0.4			0.4						
		108+14.74 to 108+20.22	RT			6.3			6.3						
		108+19.50 to 108+20.59	LT			2.5			2.5						
		108+19.50 to 108+25.06	LT			11.9			11.9						
		108+20.22 to 108+24.46	RT			4.5			4.5						
		108+20.59 to 108+40.56	LT			19.5			19.5						
		108+24.46 to 108+29.25	RT			5.3			5.3						
		108+25.06 to 108+25.40	LT			0.4			0.4						
		108+25.40 to 108+29.15	LT			4.0			4.0						
		108+29.15 to 108+37.11	LT			9.2			9.2						
		108+29.25 to 108+29.57	RT			0.5			0.5						
		108+29.27 to 108+30.76	RT			2.5			2.5						
		108+29.57 to 108+30.76	RT			16.2			16.2						
		108+37.11 to 108+45.22	LT			41.2			41.2						
		108+40.57 to 108+43.01	LT			3.6			3.6						
		108+43.01 to 108+45.86	LT			52.7			52.7						
		108+45.22 to 108+45.48	LT			0.4			0.4						
		108+45.48 to 108+45.60	LT			0.1			0.1						
		108+45.60 to 108+45.86	LT			0.4			0.4						
		108+50.02 to 108+74.17	RT			94.7			94.7						
		108+63.06 to 108+65.67	LT			30.9			30.9						
		108+63.06 to 109+01.49	LT			64.8			64.8						
		108+65.67 to 108+68.48	LT			5.2			5.2						
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915								GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION									SUMMARY OF QUANTITIES		200671	SQ-6

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

11/8/2019 5:50:03 PM J:\CR044\CR044002.03\ms\roadway\SUMQRD01.DGN

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

SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS														
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY					TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.				GROSS LENGTH	DEDUCTIONS		NET LENGTH		P	F		
							TYPE	LENGTH	P	F				
0520 1 7	CONCRETE CURB & GUTTER, TYPE E (CONT'D)	108+68.48 to 109+00.51	LT		LF	36.9			36.9					
		108+78.64 to 108+79.17	LT/RT			10.0			10.0					
		108+78.64 to 108+80.53	LT			2.8			2.8					
		108+78.72 to 108+79.17	RT			20.3			20.3					
		108+78.72 to 108+81.25	RT			3.9			3.9					
		108+80.53 to 108+88.92	LT			9.8			9.8					
		108+81.25 to 109+05.68	RT			24.9			24.9					
		108+85.77 to 108+88.55	RT			8.2			8.2					
		108+85.77 to 108+89.03	LT/RT			10.0			10.0					
		108+88.55 to 109+05.53	RT			18.6			18.6					
		108+88.92 to 108+89.03	LT			0.3			0.3					
		108+98.64 to 108+99.25	RT			1.9			1.9					
		108+98.64 to 108+99.30	RT			1.8			1.8					
		108+99.25 to 108+99.59	RT			0.4			0.4					
		108+99.30 to 109+12.26	RT			14.0			14.0					
		108+99.59 to 109+69.89	RT			72.3			72.3					
		109+00.51 to 109+00.88	LT			0.4			0.4					
		109+00.88 to 109+01.57	LT			2.0			2.0					
		109+01.49 to 109+01.57	LT			0.3			0.3					
		109+05.53 to 109+05.69	RT			0.3			0.3					
		109+05.68 to 109+05.89	RT			0.4			0.4					
		109+05.69 to 109+05.89	RT			0.9			0.9					
		109+11.02 to 109+11.14	LT			0.4			0.4					
		109+11.02 to 109+11.36	LT			1.0			1.0					
		109+11.14 to 109+23.56	LT			13.4			13.4					
		109+11.36 to 109+11.74	LT			0.5			0.5					
		109+11.74 to 109+23.56	LT			13.5			13.5					
		109+12.26 to 109+16.11	RT			6.0			6.0					
		109+16.11 to 109+17.26	RT			5.4			5.4					
		109+17.26 to 109+17.53	RT			0.4			0.4					
		109+17.53 to 109+56.24	RT			39.2			39.2					
		109+56.24 to 110+63.87	RT			107.9			107.9					
		109+69.89 to 110+66.32	LT/RT			98.7			98.7					
		205+99.21 to 205+99.89	RT			1.2			1.2					
		205+99.21 to 205+99.92	RT			1.2			1.2					
		205+99.89 to 206+36.73	RT			36.9			36.9					
		205+99.92 to 206+31.14	RT			31.1			31.1					
		206+31.14 to 206+81.17	RT			49.9			49.9					
		206+36.73 to 206+70.75	RT			33.8			33.8					
		206+70.75 to 207+92.29	RT			120.8			120.8					
		206+81.17 to 207+09.74	RT			28.5			28.5					
		207+09.74 to 208+48.75	LT/RT			139.6			139.6					
		207+92.29 to 209+39.01	RT			147.1			147.1					
		208+48.75 to 208+62.21	LT			13.6			13.6					
		208+62.21 to 208+81.18	LT			19.1			19.1					
		208+81.18 to 209+31.18	LT			50.0			50.0					
		209+31.18 to 209+42.92	LT			11.7			11.7					
		209+39.01 to 209+55.73	RT			17.0			17.0					
		209+42.92 to 209+43.17	LT			0.4			0.4					
		209+43.17 to 209+43.17	LT			5.1			5.1					
</														

SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS															
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY				TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS		
		STA. TO STA.				GROSS LENGTH	DEDUCTIONS		NET LENGTH		P			F	
0520 1 7	CONCRETE CURB & GUTTER, TYPE E (CONT'D)	209+43.17 to 209+49.57	LT/RT		LF	9.7			9.7						
		209+49.58 to 209+84.50	RT			35.4			35.4						
		209+55.73 to 209+84.21	RT			28.9			28.9						
		209+84.21 to 209+84.44	RT			0.8			0.8						
		211+89.13 to 211+89.18	RT			1.0			1.0						
		211+89.13 to 211+91.68	RT			7.6			7.6						
		211+89.18 to 211+91.00	RT			4.3			4.3						
		211+91.00 to 211+91.31	RT			0.4			0.4						
		211+91.31 to 212+14.03	RT			24.3			24.3						
		211+91.68 to 211+91.89	RT			0.3			0.3						
		211+91.89 to 211+97.41	RT			5.6			5.6						
		211+97.41 to 212+45.36	LT/RT			48.8			48.8						
		212+14.03 to 212+86.56	LT/RT			74.2			74.2						
		212+45.36 to 213+36.72	LT			91.8			91.8						
		0520 1 10	CONCRETE CURB & GUTTER, TYPE F	212+86.56 to 213+36.52	LT			50.0			50.0				
213+36.52 to 213+36.65	LT					6.9			6.9						
105+19.88 to 106+32.41	RT				LF	114.5			114.5	2615					
105+46.42 to 106+28.72	LT					81.4			81.4						
106+28.72 to 107+35.43	LT					107.2			107.2						
106+32.41 to 106+66.13	RT					34.6			34.6						
106+66.13 to 108+21.58	RT					243.6			243.6						
107+35.43 to 107+62.18	LT					28.1			28.1						
107+62.18 to 108+08.10	LT					99.4			99.4						
108+59.29 to 109+44.59	RT					165.1			165.1						
108+75.46 to 110+02.96	LT					254.8			254.8						
109+44.59 to 110+50.68	RT					106.6			106.6						
110+02.96 to 110+16.69	LT					13.9			13.9						
110+16.69 to 110+99.99	LT					84.1			84.1						
110+50.68 to 110+63.87	RT					13.2			13.2						
110+99.99 to 111+13.02	LT					13.0			13.0						
111+13.02 to 113+03.08	LT					192.3			192.3						
205+79.48 to 206+71.20	RT					89.6			89.6						
205+81.13 to 206+31.14	LT					51.5			51.5						
206+31.14 to 206+81.14	LT					51.5			51.5						
206+71.20 to 207+89.28	RT					115.5			115.5						
206+81.14 to 207+31.15	LT					51.5			51.5						
207+31.15 to 207+81.15	LT					51.5			51.5						
207+81.15 to 208+31.16	LT					51.5			51.5						
207+89.28 to 208+99.95	RT					108.3			108.3						
208+31.16 to 208+79.89	LT			50.2			50.2								
208+99.95 to 209+42.61	RT			43.4			43.4								
212+50.29 to 212+69.70	LT			19.6			19.6								
212+63.03 to 212+72.37	RT			9.5			9.5								
212+69.70 to 212+86.23	LT			19.8			19.8								
212+69.70 to 213+39.84	LT			70.2			70.2								
212+72.37 to 213+03.81	RT			31.4			31.4								
212+86.23 to 212+90.27	LT			13.8			13.8								
212+90.27 to 212+90.30	LT			7.0			7.0								
212+90.30 to 212+90.64	LT			3.7			3.7								
		213+18.16 to 213+18.20	LT			3.9			3.9						
APPROVED LDO2019-00573 Tom Sawtell, Plan Reviewer Lee County Development Services 12/17/2019															
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915						GATEWAY BOULEVARD AT FORCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.		
DATE	DESCRIPTION	DATE	DESCRIPTION							SUMMARY OF QUANTITIES		200671	SQ-8		

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



SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY					TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.				GROSS LENGTH	DEDUCTIONS		NET LENGTH		P	F		
							TYPE	LENGTH	P	F				
0520 1 10	CONCRETE CURB & GUTTER, TYPE F (CONT'D)	213+18.20 to 213+18.27	LT		LF	5.2			5.2					
		213+18.27 to 213+39.84	LT			34.7			34.7					
		213+39.84 to 213+45.91	LT			6.1			6.1					
		213+45.91 to 213+99.79	LT			53.7			53.7					
		213+99.79 to 214+74.69	LT			74.6			74.6					
		214+74.69 to 215+20.46	LT			45.5			45.5					
0520 2 4	CONCRETE CURB, TYPE D	106+56.03 to 106+58.29	RT		LF	3.1			3.1		196			
		106+58.29 to 106+58.52	RT			1.5			1.5					
		106+58.52 to 106+64.70	RT			6.3			6.3					
		106+64.48 to 106+64.70	RT			1.5			1.5					
		106+64.48 to 106+66.13	RT			3.1			3.1					
		106+83.69 to 106+85.44	LT			3.2			3.2					
		106+85.23 to 106+85.44	LT			1.4			1.4					
		106+85.23 to 106+91.58	LT			6.3			6.3					
		106+91.58 to 106+91.79	LT			1.4			1.4					
		106+91.79 to 106+94.15	LT			3.2			3.2					
		108+08.99 to 108+19.19	LT/RT			164.9			164.9		269			
0520 2 8	CONCRETE CURB, TYPE RA	108+05.86 to 108+22.47	LT/RT		LF	268.6			268.6					

SUMMARY OF SIDEWALK & DETECTABLE WARNINGS

LOCATION	SIDE	AREA ID	CONC SIDEWALK 6"		DETECTABLE WARNINGS		DIRECTIONAL INDICATORS		DESIGN NOTES	CONSTRUCTION REMARKS
			0522 2		0527 2		0919 528			
			SY		SF		SF			
STA. TO STA.			P	F	P	F	P	F		
106+31.82 to 107+61.91	RT	27397	93.9							
106+37.11 to 107+94.62	LT	27113	213.1							
107+03.26 to 107+25.73	RT	27413	5.4							
107+12.74 to 107+42.12	LT/RT	27033	36.0							
108+81.98 to 110+21.43	RT	27343	96.9							
108+85.48 to 109+17.07	LT/RT	26989	44.5							
109+00.51 to 109+11.60	LT/RT	26953	2.6							
109+02.21 to 111+13.04	LT	27165	200.8							
109+04.37 to 109+26.07	LT	27422	19.8							
109+07.89 to 109+30.23	RT	27427	5.5							
208+37.55 to 210+09.30	LT	27177	198.3							
208+68.34 to 209+89.59	RT	27139	107.4							
209+36.91 to 209+60.91	LT	27437	13.3							
209+43.17 to 209+87.55	LT/RT	26968	47.9							
209+60.26 to 209+85.19	RT	27444	13.4							
211+43.56 to 212+72.37	RT	27464	99.2							
211+69.19 to 212+80.64	LT	27246	98.7							
211+76.99 to 211+91.48	RT	27016	19.0							
211+83.82 to 212+06.64	RT	27392	5.3							APPROVED LDO2019-00573 Tom Sawtell, Plan Lee County Devel 12/17/2019
211+87.83 to 212+09.26	LT	27432	4.9							
212+80.00 to 212+89.17	LT	27370	4.5							
212+78.55 to 213+30.09	LT	23545	58.7					DRIVEWAY		
213+99.79 to 214+74.69	LT	20187	121.4					DRIVEWAY		
SUB-TOTAL:			1510.4							
TOTAL:			1510		324		97			


APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTTTIES	200671	SQ-9
5/16/19	 UPDATED QUANTITY BL CR2204W (DRIVEWAY)							

SUMMARY OF SIDEWALK & DETECTABLE WARNINGS										
LOCATION	SIDE	AREA ID	CONC SIDEWALK 6"		DETECTABLE WARNINGS		DIRECTIONAL INDICATORS		DESIGN NOTES	CONSTRUCTION REMARKS
			0522 2		0527 2		0919 528			
			SY		SF		SF			
STA. TO STA.			P	F	P	F	P	F		
107+05.50 to 107+15.84	LT	18343			20.0					
107+09.92 to 107+19.72	RT	18361			20.0					
107+13.19 to 107+23.57	LT	18348			20.0					
107+28.96 to 107+38.72	RT	18354			19.9					
108+89.10 to 108+98.67	RT	18308			20.2					
109+06.22 to 109+16.54	RT	18302			20.1					
109+09.21 to 109+18.32	LT	18314			21.3					
109+14.15 to 109+23.71	RT	18297			20.5					
209+43.91 to 209+53.91	LT	18319			20.0					
209+43.92 to 209+53.93	LT	18331			20.0					
209+68.37 to 209+78.71	RT	27477			20.1					
209+75.45 to 209+85.73	RT	27482			20.2					
211+79.29 to 211+90.92	RT	18280			21.9					
211+80.18 to 211+90.40	RT	18286			20.1					
211+90.53 to 212+00.43	RT	18291			20.0					
211+93.35 to 212+03.44	LT	18275			20.0					
106+97.50 to 107+01.70	RT	29213					9.5			
106+99.08 to 107+02.12	LT	29212					8.3			
109+30.96 to 109+33.93	RT	28750					10.2			
110+29.81 to 110+41.35	LT	29210					18.4			
208+80.90 to 208+98.15	RT	29211					23.6			
208+81.90 to 208+92.22	LT	27489					16.7			
212+07.92 to 212+11.91	RT	28436					10.2			
212+46.36 to 212+51.37	LT	29214					9.2			
SUB-TOTAL:					324.3		96.6			


SUMMARY OF DITCH PAVEMENT						
LOCATION	SIDE	AREA ID	CONCRETE DITCH PAVEMENT - REINFORCED (4")		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			0524 1 29			
			SY			
			P	F		
105+73.40 to 105+75.90	LT/RT	16819	2.7		@ GATEWAY BLVD	
109+96.08 to 109+99.96	LT	16824	2.7		@ GATEWAY BLVD	
110+42.11 to 110+45.99	LT	16832	2.7		@ GATEWAY BLVD	
SUB-TOTAL :			8.1			
TOTAL :			8			

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT CUMBERLAND LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES		200671	SQ-10

SUMMARY OF PERFORMANCE TURF										
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	PERFORMANCE TURF (SOD)		ROOT BARRIER		DESIGN NOTES	CONSTRUCTION REMARKS
					0570	1 2	***			
					SY		LF			
STA. TO STA.					P	F	P	F		
105+19.88 to 107+84.02	RT	29967			93.8					
105+19.90 to 107+15.88	LT/RT	29373			310.1					
105+46.42 to 107+01.08	LT	29906			133.7					
106+43.22 to 107+04.29	RT	29534			27.4					
106+45.94 to 107+05.12	LT	29872			55.9					
106+50.00 to 107+56.72	LT	29917			29.1					
107+11.97 to 108+02.90	LT	29886			79.5					
107+24.08 to 107+49.31	LT/RT	29327			36.9					
107+24.72 to 107+93.24	RT	29547			21.3					
108+08.99 to 108+08.99	RT	29340			240.5					
108+63.06 to 109+01.57	LT	29296			47.7					
108+68.48 to 109+08.34	RT	29597			13.3					
108+75.89 to 109+06.76	LT	29290			36.9					
108+78.64 to 109+05.77	LT/RT	29702			41.8					
108+98.64 to 110+94.60	LT/RT	29716			242.7					
108+99.85 to 110+54.85	LT	29663			55.8					
109+22.10 to 111+06.12	LT	29672			384.3					
109+29.82 to 110+12.14	RT	29602			82.8					
109+94.25 to 109+94.25	RT	29620			71.7					
110+41.13 to 113+03.09	LT	29741			87.5					
110+90.20 to 113+03.08	LT	29732			71.2					
205+79.48 to 210+07.36	RT	29259			145.1					
205+81.13 to 208+82.09	LT	29244			117.1					
205+99.21 to 209+45.33	LT/RT	29846			569.0					
208+37.58 to 209+88.31	LT	29304			51.3					
208+79.74 to 209+36.91	LT	29284			28.6					
208+82.67 to 209+61.98	RT	29276			39.7					
209+54.93 to 210+09.69	LT/RT	29751			50.6					
211+46.31 to 211+83.57	LT	29468			23.9					
211+61.31 to 211+80.22	RT	29442			31.3					
211+65.82 to 212+90.64	LT	29570			49.7					
211+89.13 to 213+36.72	LT/RT	29453			96.7					
212+05.79 to 212+63.03	RT	29556			30.0					
212+08.59 to 212+51.95	LT	29563			9.0					
212+50.25 to 212+86.23	LT	29526			28.0					
212+72.37 to 215+20.45	RT	29473			83.7					
213+18.16 to 214+24.54	LT	29504			44.4					
214+52.69 to 215+20.46	LT	29497			26.9					
FROM DRAINAGE STRUCTURES	LT/RT				20					
SUB-TOTAL :					3608.9					
TOTAL :					3609					

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019


REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTITIES			
								200671	SQ-11



SUMMARY OF ROOT BARRIER						
LOCATION	SIDE	AREA ID	ROOT BARRIER		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			***			
			LF			
			P	F		
104+92.57 to 105+53.00	RT		60.7			
105+13.70 to 105+34.83	RT		21.2			
105+41.63 to 105+62.48	LT		20.5			
105+52.97 to 105+99.47	RT		46.7			
106+31.80 to 106+59.79	RT		28.9			
106+33.47 to 107+00.41	LT		70.0			
106+34.56 to 106+96.28	LT		60.5			
106+40.04 to 106+53.88	LT		13.7			
106+50.17 to 106+91.89	LT		40.6			
106+52.25 to 106+53.56	LT		9.3			
106+52.52 to 106+53.88	LT		9.9			
106+70.14 to 106+81.48	RT		11.7			
108+88.25 to 109+19.25	RT		4.5			
109+23.16 to 109+51.67	RT		29.8			
109+30.06 to 110+02.53	RT		73.4			
109+30.55 to 109+56.92	RT		27.0			
109+56.95 to 109+85.79	RT		29.6			
109+85.79 to 110+02.53	RT		18.8			
109+96.87 to 110+55.82	LT		59.0			
110+51.02 to 110+94.55	RT		43.5			
110+52.04 to 111+03.47	RT		51.4			
110+66.69 to 111+72.05	LT		106.0			
111+18.58 to 113+03.09	LT		186.8			
111+72.05 to 112+30.12	LT		58.2			
112+30.12 to 113+03.07	LT		73.5			
205+79.38 to 208+66.66	LT		296.1			
206+83.67 to 208+09.40	RT		122.1			
207+70.56 to 208+48.82	LT/RT		78.9			
207+81.25 to 208+76.84	RT		94.6			
208+37.55 to 208+63.66	LT		27.6			
208+37.58 to 208+45.22	LT		8.0			
208+45.22 to 208+69.51	LT		25.8			
208+48.81 to 208+62.21	LT		13.5			
208+62.20 to 208+88.50	LT		26.4			
208+63.66 to 208+74.30	LT		11.4			
208+63.97 to 209+29.62	RT		66.0			
208+66.66 to 208+74.30	LT		8.4			
208+69.51 to 208+92.22	LT		23.3			
208+92.22 to 209+50.51	LT		58.3			
209+50.51 to 209+73.46	LT		38.3			
212+23.48 to 212+51.92	RT		23.3			
212+51.92 to 212+74.62	RT		27.4			
SUB-TOTAL :			2104.6			
TOTAL :			2286			

SUMMARY OF ROOT BARRIER						
LOCATION	SIDE	AREA ID	ROOT BARRIER		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			***			
			LF			
			P	F		
213+40.49 to 213+49.38	RT		9.0			
213+49.38 to 213+53.77	RT		4.4			
213+53.77 to 213+56.41	RT		2.6			
213+56.41 to 215+20.45	RT		165.8			
SUB-TOTAL :			181.8			

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SUMMARY OF QUANTTTIES		200671	SQ-12

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

CONTRACT PLANS COMPONENTS

ROADWAY PLANS  
SIGNING AND PAVEMENT MARKING PLANS  
LIGHTING PLANS

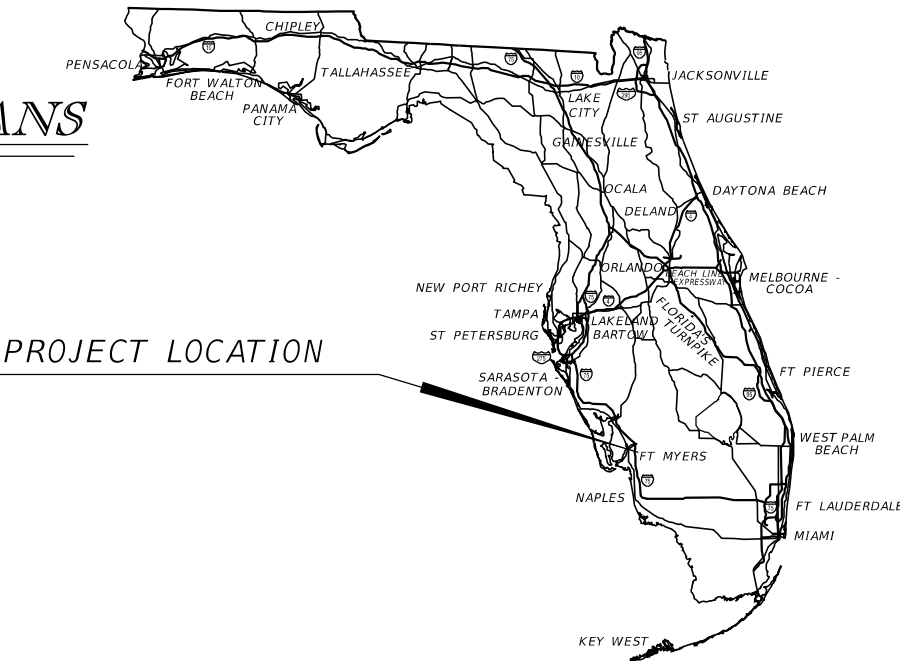
LEE COUNTY  
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING PLANS

INDEX OF SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.	SHEET DESCRIPTION
S-1	KEY SHEET
S-2	SUMMARY OF PAY ITEMS
S-3	PROJECT NOTES AND DETAILS
S-4 THRU S-9	SIGNING AND PAVEMENT MARKINGS
S-10	GUIDE SIGN WORKSHEET

GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE  
INTERSECTION CONTROL (ROUNDBOUT)



Development Order Approval does not  
vest nor guarantee that changes will not  
be required, if subsequent changes are  
made to the Uniform Lee County Fire Code.

100% PLANS  
NOVEMBER 2019  
(NOT FOR CONSTRUCTION)

LEE COUNTY  
DOT RIGHT-OF-WAY  
PERMIT REQUIRED

SIGNING AND PAVEMENT MARKING  
PLANS ENGINEER OF RECORD:

JASON Y. YAM, P.E.  
P.E. NO.: 62449  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FL 33759  
(727) 531-3505  
CERTIFICATE OF AUTHORIZATION NO.: 29915

COUNTY PROJECT MANAGER:  
Alejandro J. Slaibe, P.E.

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2019-20 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

APPLICABLE IRs: N/A

GOVERNING STANDARD SPECIFICATIONS:


Lee County Department of Transportation Specifications, and Florida Department of Transportation, JULY2019 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

**\*\*FINAL INSPECTION REQUIRED\*\***  
At the completion of the improvements, please  
submit a Letter of Substantial Compliance to  
schedule a Final Inspection.

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

CIP NO.	FISCAL YEAR	SHEET NO.
200671	19	S-1

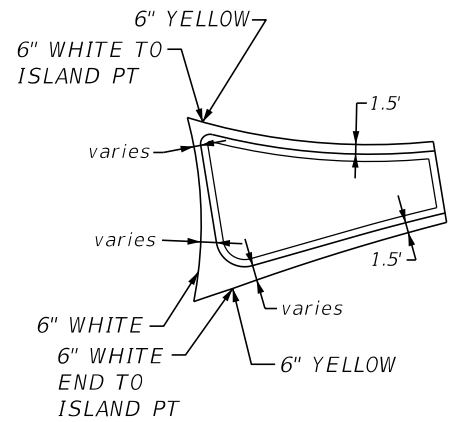


TABULATION OF QUANTITIES																				
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			S - 4		S - 5		S - 6		S - 7		S - 8		S - 9							
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
654-2-21	RECTANGULAR RAPID FLASHING BEACON, F&I-SOLAR POWERED, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS			10												10		10	
654-2-22	RECTANGULAR RAPID FLASHING BEACON, F&I-SOLAR POWERED, COMPLETE SIGN ASSEMBLY- BACK TO BACK	AS			3												3		3	
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	1		17		2		1		1		1				23		23	
700-1-13	SINGLE POST SIGN, F&I GROUND MOUNT, 21-30 SF	AS	1				1				1		1				4		4	
700-1-60	SINGLE POST SIGN, REMOVE	AS	1				1				5						7		7	
700-2-11	MULTI-POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS			2												2		2	
700-2-12	MULTI-POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS			2												2		2	
710-90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	LS																	1	
*	RETRO-REFLECTIVE PAVEMENT MARKERS - BI-DIRECTIONAL WHITE/RED	EA			50		6		3		50		8				117		117	
*	RETRO-REFLECTIVE PAVEMENT MARKERS - BI-DIRECTIONAL YELLOW/YELLOW	EA											40				40		40	
*	STANDARD, WHITE, SOLID, 6"	GM			0.392		0.047				0.116		0.100				0.655		0.655	
*	STANDARD, WHITE, SOLID, 8"	GM			0.084				0.008		0.083						0.175		0.175	
*	STANDARD, WHITE, SOLID, 12"	LF			455												455		455	
*	STANDARD, WHITE, SOLID, 18"	LF			75				15		340						430		430	
*	STANDARD, WHITE, SOLID, 24"	LF			420								15				435		435	
*	STANDARD, YELLOW, SOLID, 6"	GM			0.282		0.047				0.141		0.125				0.595		0.595	
*	STANDARD, YELLOW, SOLID, 18"	LF											65				65		65.000	
*	STANDARD, WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6"	GM			0.011				0.020		0.012						0.043		0.043	
*	STANDARD, WHITE, 2-2 DOTTED GUIDELINE, 12" FOR ROUNDABOUT	GM			0.033												0.033		0.033	
*	STANDARD, YELLOW, 6-10 DOTTED EXTENSION LINE, 6"	GM											0.025				0.025		0.025	
*	STANDARD WHITE MESSAGE																			
*	YIELD	EA			7												7		7	
*	MERGE	EA							2								2		2	
*	STANDARD WHITE ARROW																			
*	LEFT	EA									3						3		3	
*	THROUGH	EA			3												3		3	
*	RIGHT	EA			2								3				5		5	
*	THROUGH / RIGHT	EA			3		1										4		4	
*	THROUGH / LEFT ROUNDABOUT	EA			5		1										6		6	
*	THROUGH / LEFT	EA			4												4		4	
*	MERGE	EA							2								2		2	
711-11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF			75				15		340						430		430	
711-11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6"	GM			0.011				0.020		0.012						0.043		0.043	
711-11-144	THERMOPLASTIC, STANDARD, WHITE, 2-2 DOTTED GUIDELINE, 12" FOR ROUNDABOUT	GM			0.033												0.033		0.033	
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF											65				65		65	
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, 6-10 DOTTED EXTENSION LINE, 6"	GM											0.025				0.025		0.025	
711-14-123	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 12" FOR CROSSWALK	LF			455												455		455	
711-14-125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK/STOPBAR	LF			420								15				435		435	
711-14-160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE																			
	YIELD	EA			7												7		7	
	MERGE	EA							2								2		2	
711-14-170	THERMOPLASTIC, PREFORMED, WHITE, ARROW																			
	LEFT	EA									3						3		3	
	THROUGH	EA			3												3		3	
	RIGHT	EA			2								3				5		5	
	THROUGH / RIGHT	EA			3		1										4		4	
	THROUGH / LEFT ROUNDABOUT	EA			5		1										6		6	
	THROUGH / LEFT	EA			4												4		4	
	MERGE	EA							2								2		2	
711-16-101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM			0.392		0.047		0.084		0.116		0.100				0.739		0.739	
711-16-102	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 8"	GM			0.084				0.008		0.083						0.175		0.175	
711-16-131	THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6", 10-30 SKIP	GM			0.059		0.045				0.063						0.167		0.167	
711-16-201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM			0.282		0.047		0.010		0.141		0.125				0.605		0.605	
<div>APPROVED</div> <div>LDO2019-00573</div> <div>Tom Sawtell, Plan Reviewer</div> <div>Lee County Development Services</div> <div>12/17/2019</div>																				
* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED.																				
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915				 DEPARTMENT OF TRANSPORTATION				GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)				CIP NO.		SHT. NO.		
DATE	DESCRIPTION	DATE	DESCRIPTION																	
																200671		S-2		

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

SIGNING AND PAVEMENT MARKING NOTES:

- 1. SIGNS SHALL BE PLACED BASED ON FDOT STANDARD PLANS INDEX NO. 700-101, UNLESS OTHERWISE NOTED ON PLANS. ALL SIGNS MOUNTED OVER SIDEWALKS SHALL HAVE A VERTICAL CLEARANCE OF EIGHT FEET (8') STANDARD.
- 2. UNLESS OTHERWISE NOTED ON PLAN SHEETS, ALL CROSSWALKS SHALL BE TEN FEET (10') IN WIDTH. MEASUREMENTS SHALL BE FROM INSIDE TO INSIDE OF 12" STRIPES.
- 3. ALL PAVEMENT MARKINGS AND CROSSING MARKINGS ARE TO CONFORM TO FDOT STANDARD PLANS INDEX NO. 711-001 AND 711-002 UNLESS OTHERWISE SHOWN ON PLANS.
- 4. REFER TO FDOT STANDARD PLANS INDEX NO. 706-001 FOR PLACEMENT, TYPE AND SPACING OF ALL REFLECTIVE PAVEMENT MARKERS (RPM'S) UNLESS OTHERWISE SHOWN ON PLANS.
- 5. FINAL ASPHALT COURSE SHALL HAVE TEMPORARY PAVEMENT MARKINGS FOR 14 DAYS PRIOR TO INSTALLATION OF FINAL (PERMANENT) THERMOPLASTIC MARKINGS.
- 6. ALL THE TEMPORARY PAVEMENT MARKINGS NOT FULLY COVERED BY THE PERMANENT PAVEMENT SHALL BE REMOVED PRIOR TO INSTALLING FINAL (PERMANENT) THERMOPLASTIC MARKINGS.
- 7. PAVEMENT MARKING AROUND THE NOSES OF ROUNDABOUT MEDIAN ISLANDS SHALL BE COMPLETED AS SHOWN IN THE MEDIAN ISLAND DETAIL BELOW, UNLESS OTHERWISE SHOWN ON THE PLANS.
- 8. PAY ITEM 700-1-11: ALL SIGN POSTS SHALL BE SELECTED USING THE PROCESS DESCRIBED IN FDOT STANDARD PLANS INDEX NO. 700-010. ALL SIGN REFLECTIVE SHEETING SHALL BE TYPE 11 DIAMOND GRADE.

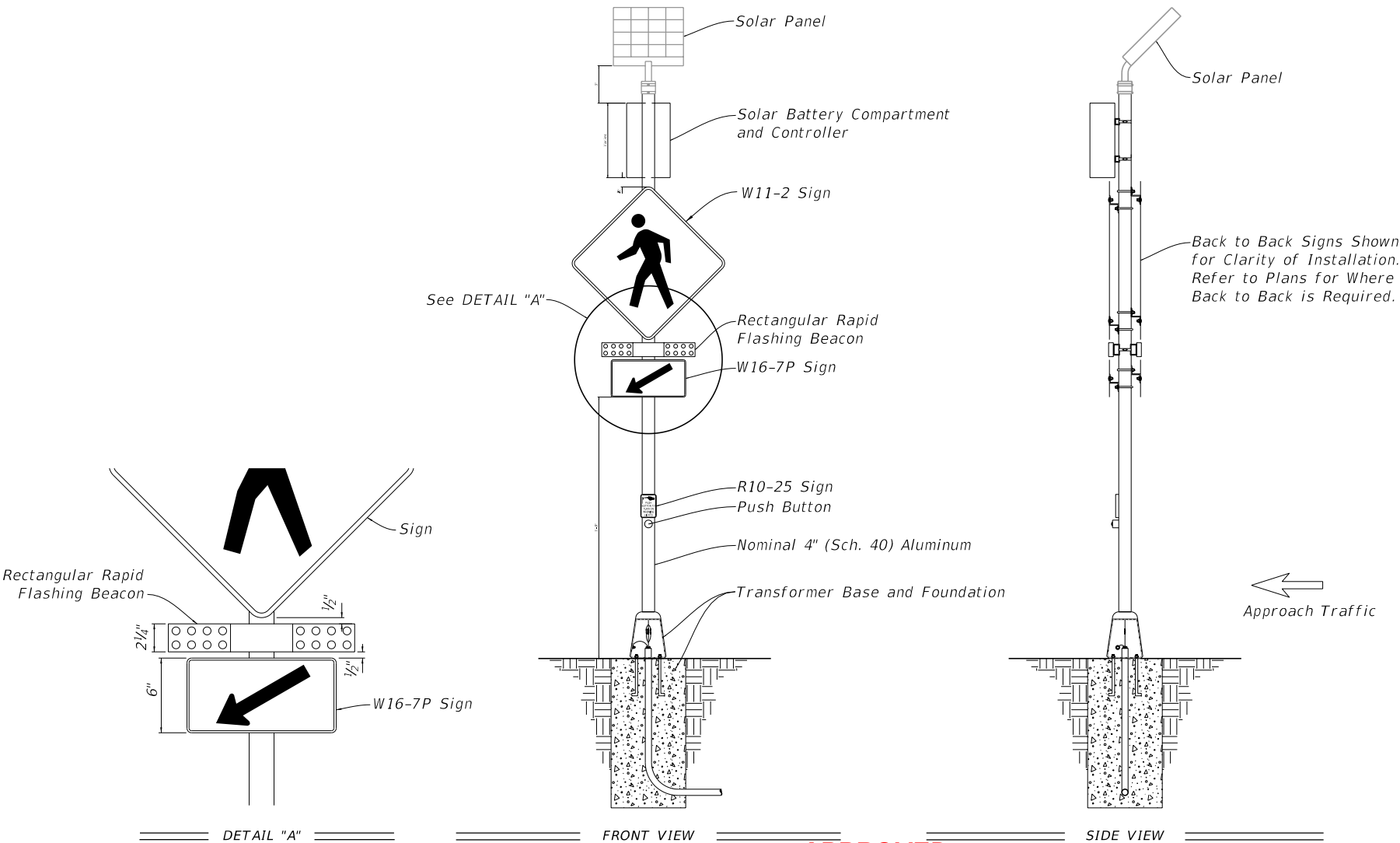


MEDIAN ISLAND DETAIL (TYP.)


RRFB NOTES:

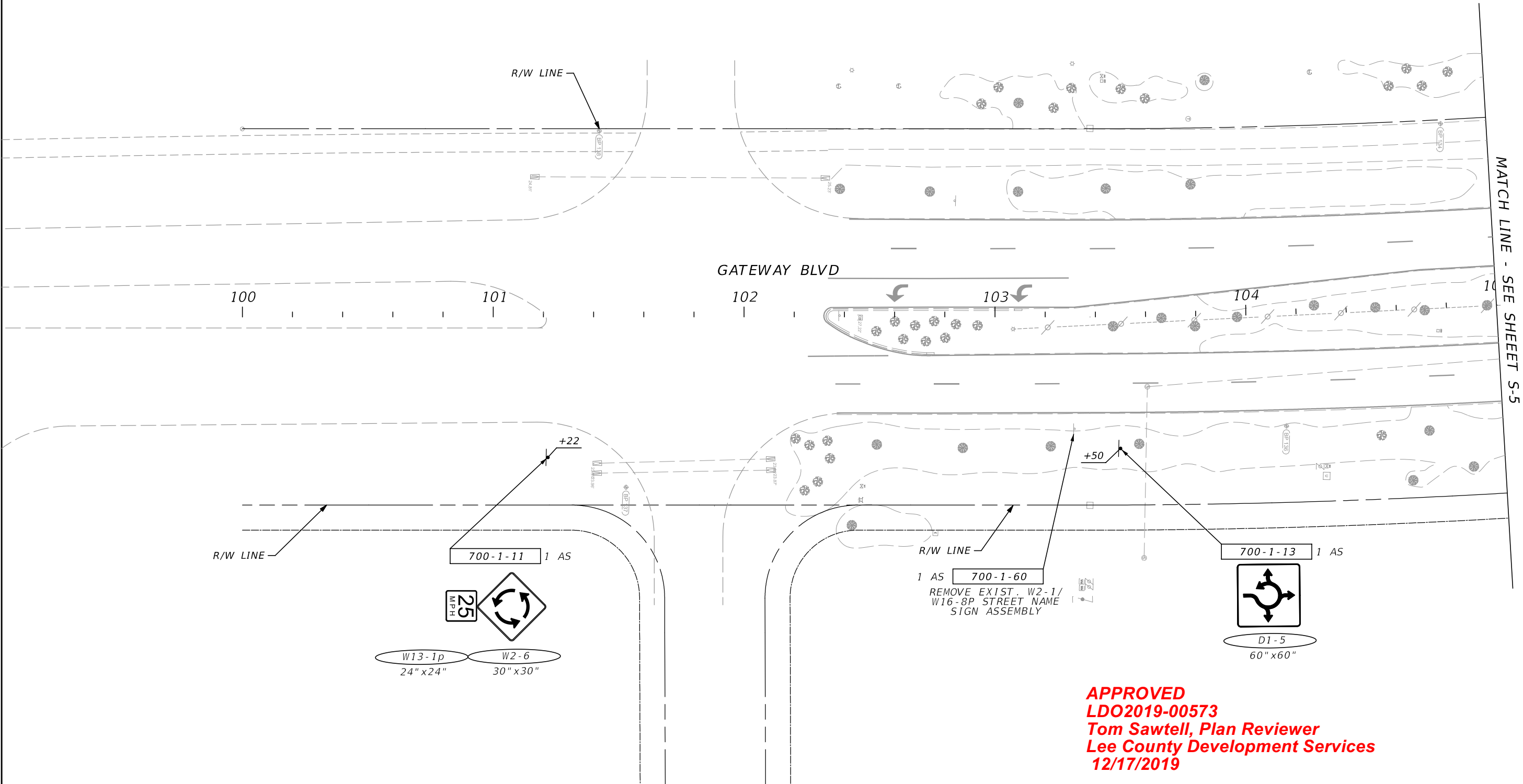
- 1. A TRANSFORMER BASE IS REQUIRED FOR BOTH CONVENTIONALLY-POWERED AND SOLAR-POWERED APPLICATIONS.
- 2. INSTALL THE RRFB IN PAIRS, ONE ON EITHER SIDE OF APPROACH TRAFFIC.
- 3. INSTALL CONTROLLER ON THE BACKSIDE OF POST FROM APPROACH TRAFFIC.
- 4. INSTALL A 30"x30" W11-2 SIGN ON TWO-LANE ROADWAYS AND A 36"x36" W11-2 SIGN FOR MULTILANE ROADWAYS.
- 5. INSTALL PUSH BUTTON AND R10-25 SIGN IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 665-001.
- 6. ENGAGE ALL THREADS ON THE TRANSFORMER BASE AND POST UNLESS THE ALUMINUM POST IS FULLY SEATED INTO BASE.

- 7. MEET THE REQUIREMENTS OF SPECIFICATION 646 FOR ALUMINUM POLES AND TRANSFORMER BASES.
- 8. INSTALL A CONCRETE SLAB AROUND ALL PULL BOXES. THE MINIMUM SLAB DIMENSION IS 4'-0" BY 4'-0". IN URBAN AREAS WHERE SPACE IS LIMITED SLAB DIMENSIONS MAY BE ADJUSTED AS SHOWN IN THE PLANS.
- 9. FOR ASSEMBLIES CONNECTED TO CONVENTIONAL POWER, PROVIDE SINGLE POLE NON-FUSED WATERTIGHT BREAKAWAY ELECTRICAL CONNECTORS IN THE FRANGIBLE TRANSFORMER BASE.
- 10. WHEN WIRE ENTRY HOLES ARE DRILLED IN THE SIGN COLUMN, USE A BUSHING OR RUBBER GROMMET TOPROTECT CONDUCTORS.
- 11. FOR SOLAR-POWERED APPLICATIONS, ORIENT SOLAR PANEL TO FACE SOUTH FOR OPTIMAL EXPOSURE TO SUNLIGHT.




**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			PROJECT NOTES AND DETAILS		200671	S-3




APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019



REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915	<div>Lee County Southwest Florida DEPARTMENT OF TRANSPORTATION</div>	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SIGNING AND PAVEMENT MARKINGS (1)	200671	S-4



(A) 700-1-11 7 AS  
R1-2  
36" x 36" x 36"





(B) 654-2-21 8 AS  
W16-7PL 30" x 18"  
W11-2 36" x 36"

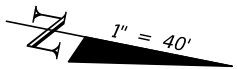



1 EA

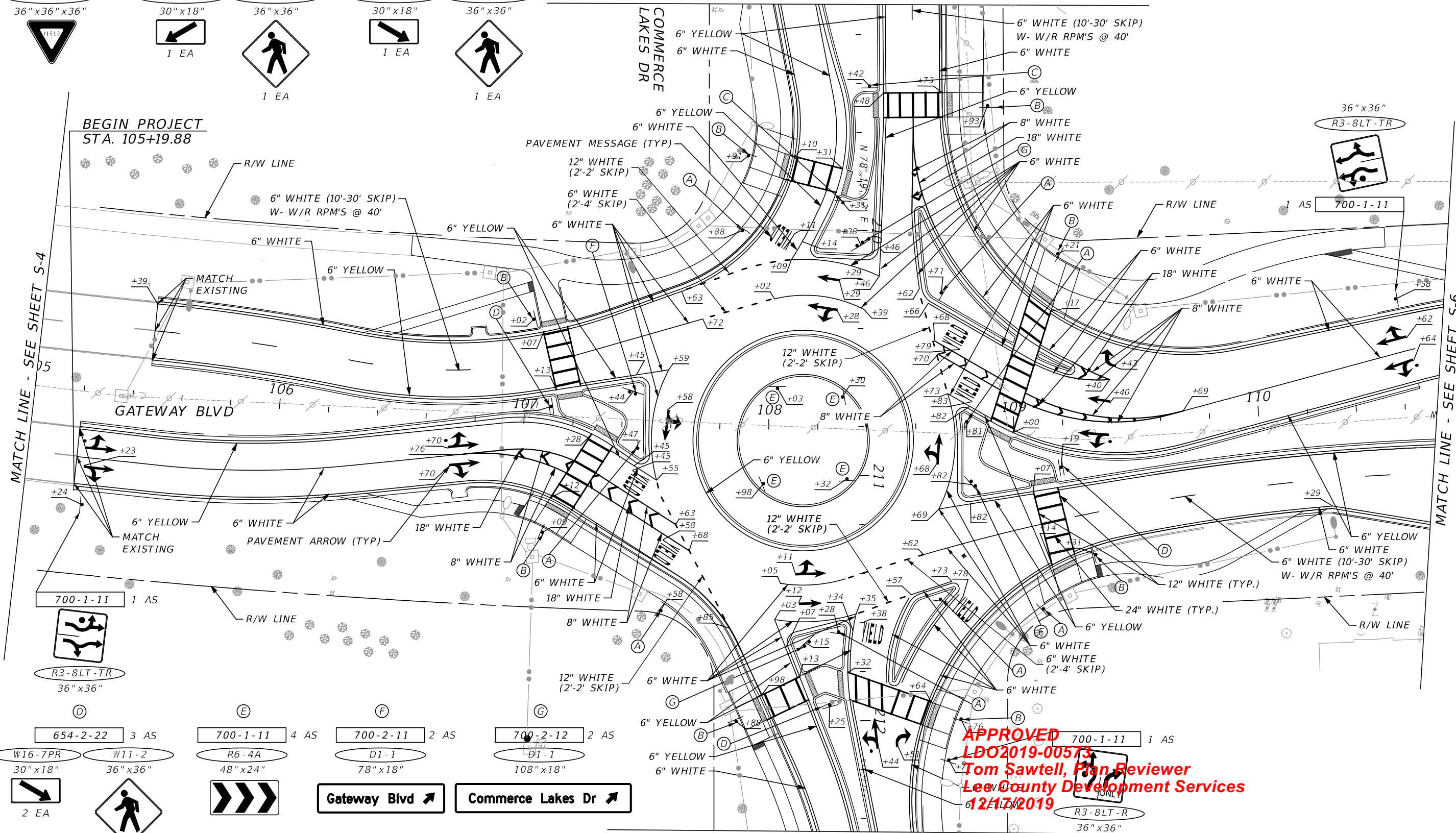
(C) 654-2-21 2 AS  
W16-7PR 30" x 18"  
W11-2 36" x 36"

1 EA




MATCH LINE - SEE SHEET S-8

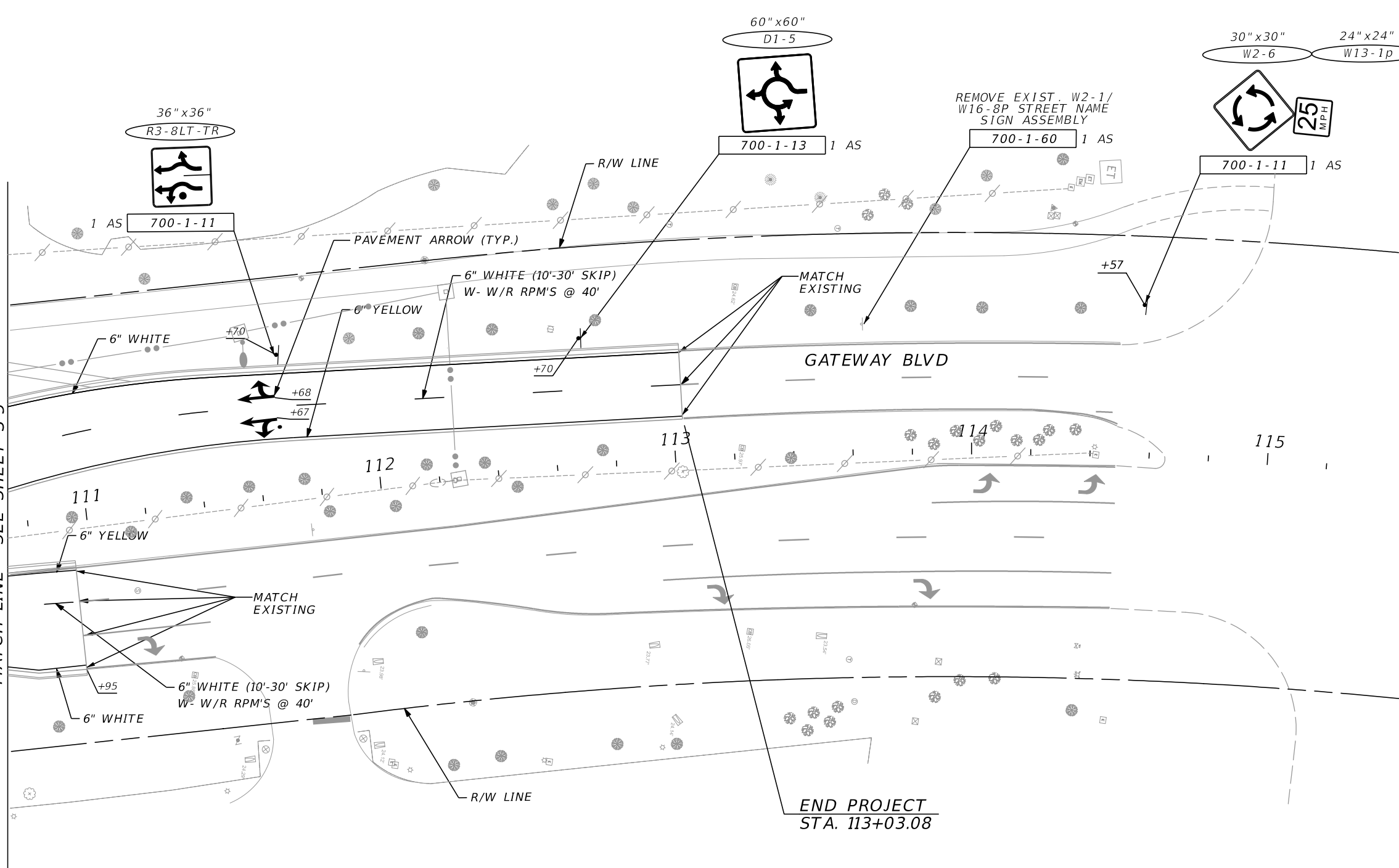


MATCH LINE - SEE SHEET S-9

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SIGNING AND PAVEMENT MARKINGS (2)		200671	S-5

MATCH LINE - SEE SHEET S-5



**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

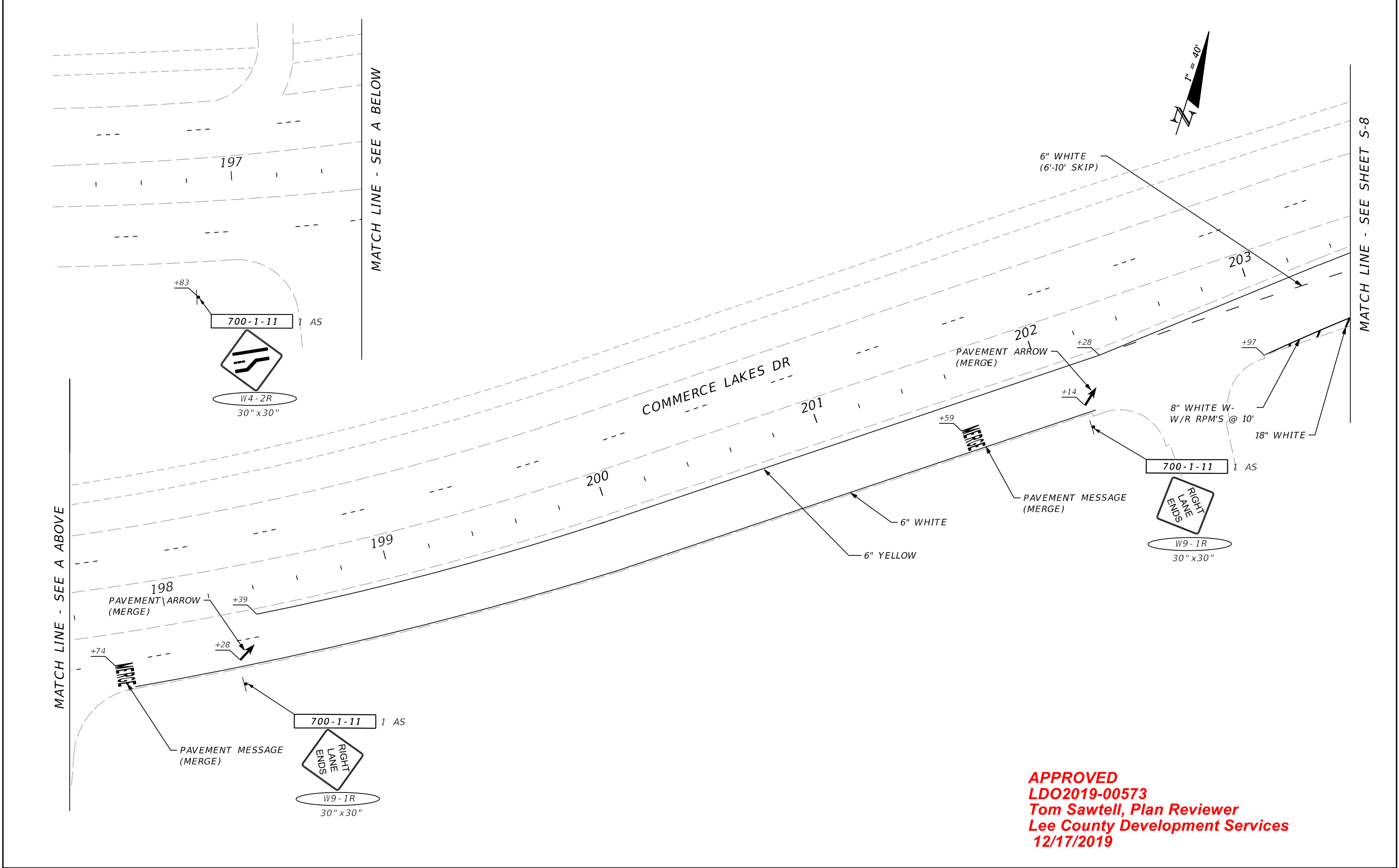
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JASON Y. YAM, P.E.  
P.E. LICENSE NUMBER 62449  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FLORIDA 33759  
CERTIFICATE OF AUTHORIZATION 29915




GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
SIGNING AND PAVEMENT MARKINGS (3)		200671	S-6

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



**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

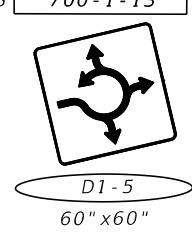
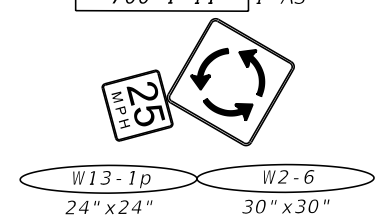
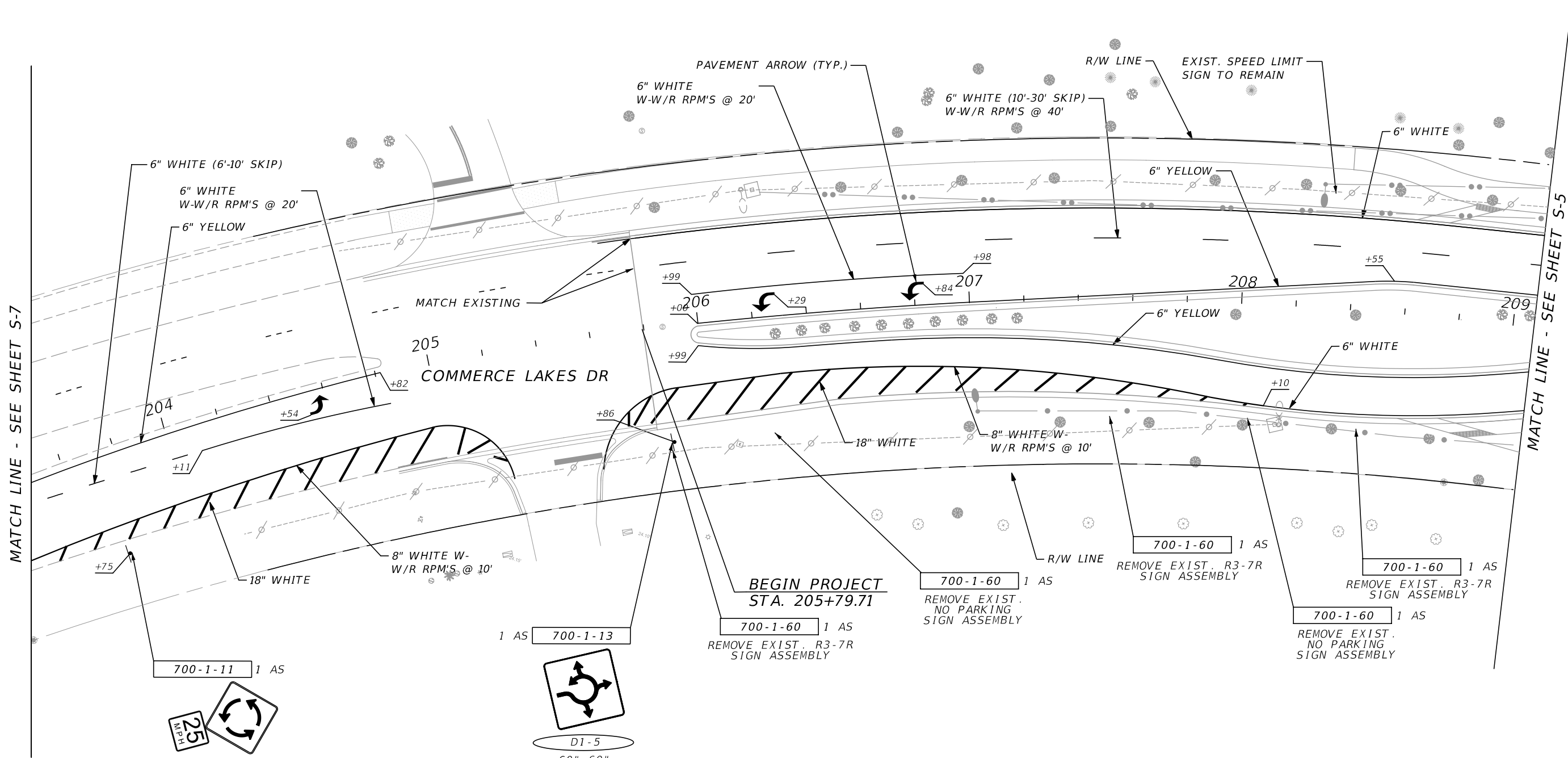
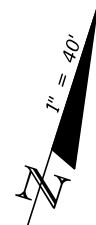
REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SIGNING AND PAVEMENT MARKINGS (4)	200671	S-7

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



MATCH LINE - SEE SHEET S-7

MATCH LINE - SEE SHEET S-5



**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JASON Y. YAM, P.E.  
P.E. LICENSE NUMBER 62449  
CARDNO, INC.  
380 PARK PLACE BOULEVARD, SUITE 300  
CLEARWATER, FLORIDA 33759  
CERTIFICATE OF AUTHORIZATION 29915

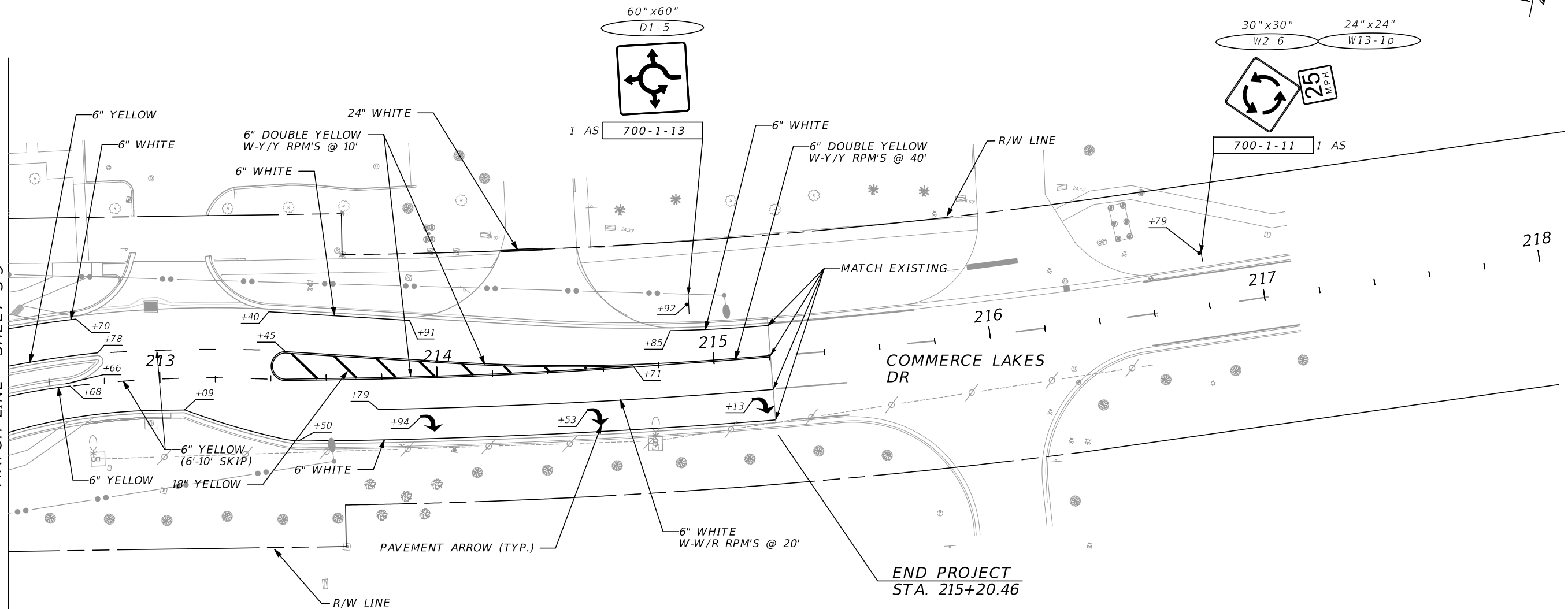


GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
SIGNING AND PAVEMENT MARKINGS (5)		200671	S-8


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



MATCH LINE - SHEET S-5



**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				JASON Y. YAM, P.E. P.E. LICENSE NUMBER 62449 CARDNO, INC. 380 PARK PLACE BOULEVARD, SUITE 300 CLEARWATER, FLORIDA 33759 CERTIFICATE OF AUTHORIZATION 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			SIGNING AND PAVEMENT MARKINGS (6)			
								200671	S-9

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



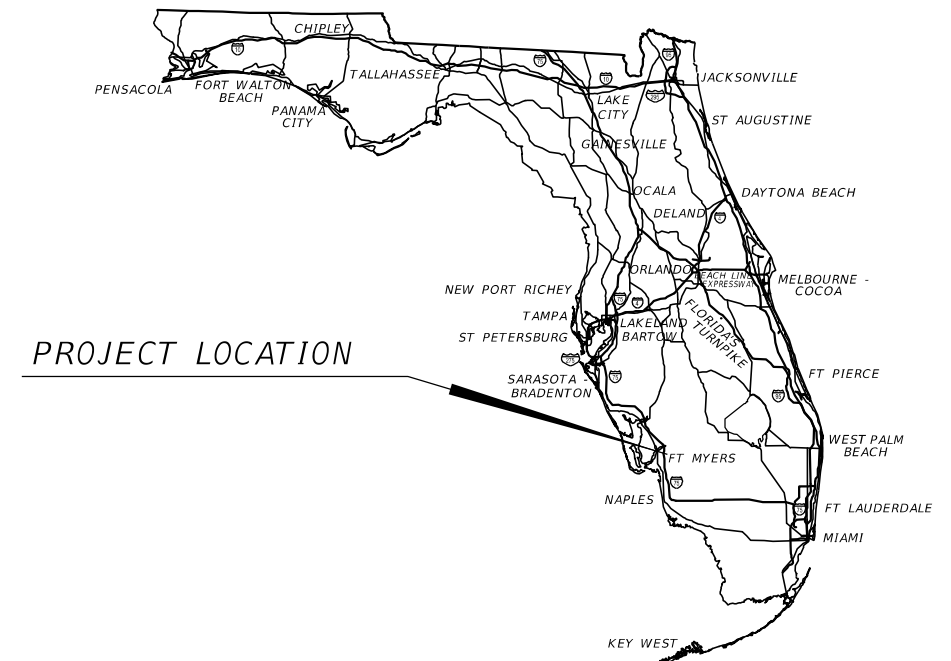
*LEE COUNTY*  
*DEPARTMENT OF TRANSPORTATION*

*LIGHTING PLANS*

*INDEX OF LIGHTING PLANS*

<i>SHEET NO.</i>	<i>SHEET DESCRIPTION</i>
L-1	KEY SHEET
L-2	TABULATION OF QUANTITIES
L-3	GENERAL NOTES
L-4	POLE DATA AND LEGEND
L-5 TO L-8	LIGHTING PLAN
L-9 to L-10	SERVICE POINT DETAILS

GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE  
INTERSECTION CONTROL (ROUNDAABOUT)



Development Order Approval does not  
vest nor guarantee that changes will not  
be required, if subsequent changes are  
made to the Uniform Lee County Fire Code.

**LEE COUNTY  
DOT RIGHT-OF-WAY  
PERMIT REQUIRED**

**\*\*FINAL INSPECTION REQUIRED\*\***

At the completion of the improvements, please  
submit a Letter of Substantial Compliance to  
schedule a Final Inspection.

**APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019**

100% PLANS  
NOVEMBER 2019  
(NOT FOR CONSTRUCTION)

*LIGHTING PLANS  
ENGINEER OF RECORD:*

DAVID ALLEN, P.E.  
P.E. NO. 58540  
CARDNO, INC.  
3905 CRESCENT PARK DR.  
RIVERVIEW FL. 33578  
(813) 257-0005  
CERTIFICATE OF AUTHORIZATION NO.: 29915

*COUNTY PROJECT MANAGER:*

Alejandro J. Slaibe, P.E.

CIP NO.	FISCAL YEAR	SHEET NO.
200671	20	L-1

TABULATION OF QUANTITIES																				
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			L - 5		L - 6		L - 7		L - 8											
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	85				200										285		285	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	1390		215		375		400								2380		2380	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	17		3		2		2								24		24	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1														1		1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE (12')	EA	3														3		3	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO 8 TO NO 6	LF	8317		1077		1869		1296								12559		12559	
715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF	2256		513		933		648								4350		4350	
715-4-12	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT	EA	10		1		2		2								15		15	
715-4-70	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA	4		1		1		2								8		8	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	1														1		1	

PAY ITEM FOOTNOTES

1. PAY ITEM 630-2-11:  
THE CONDUITS SHALL BE FITTED WITH BELL ENDS OR EQUIVALENT FITTINGS PRIOR TO THE PULLING OF ANY WIRE INTO THE CONDUITS.

2. PAY ITEM 630-2-12:  
THE CONDUITS SHALL BE FITTED WITH BELL ENDS OR EQUIVALENT FITTINGS PRIOR TO THE PULLING OF ANY WIRE INTO THE CONDUITS. ALL DIRECTIONAL BORES UNDER ROADWAY SHALL INCLUDE A SPARE CONDUIT CONTAINING A PULL WIRE AND SEALED WITH A WATER TIGHT CAP.

3. PAY ITEM 635-2-11:  
THE PULL BOXES SHALL HAVE "STREET LIGHTS" STAMPED IN RAISED LETTERING ON THE PULL BOX COVERS.

4. PAY ITEM 639-1-122:  
THIS PAY ITEM IS FOR THE COST OF ALL THE POWER SERVICE ASSEMBLY COMPONENTS FOR EACH LOAD CENTER PAID UNDER A SEPARATE PAY ITEM NUMBER.

5. PAY ITEM 641-2-12:  
CONCRETE SERVICE POLE FOR THE POWER SERVICE ASSEMBLIES SHALL BE 12 FEET.


6. PAY ITEM 715-12-60:  
AT LOCATIONS WHERE EXISTING LIGHTING CONDUCTORS ARE TO BE REMOVED, THE CONDUIT SHALL REMAIN AND BE FILLED WITH GROUT.

7. PAY ITEM 715-4-12:  
THIS PAY ITEM INCLUDES THE OPTIONAL 7 PIN PHOTOCONTROL RECEPTACLE AND THE COST OF THE FIELD INSTALLED HOUSESIDE SHIELD AND ROADSIDE SHIELD ACCESSORIES. THE HOUSESIDE SHIELDS SHALL BE INSTALLED ON ALL LUMINAIRES. THE CONTRACTOR SHALL INSTALL THE ROADSIDE SHIELDS ONLY ON THE LUMINAIRES DETERMINED BY THE ENGINEER TO REDUCE ADDITIONAL GLARE. ALL SHIELDS NOT FIELD INSTALLED SHALL BE DELIVERED TO LEE COUNTY. SEE POLE DATA AND LEGEND FOR LUMINIARE SPECIFICATIONS.

8. PAY ITEM 715-4-70:  
INCLUDES THE REMOVAL OF POLE, BRACKET ARM, LUMINAIRE, TRANSFORMER BASE, FOUNDATION, ASSOCIATED WIRING AND ALL RESTORATION.

9. PAY ITEM 715-7-11:  
THIS PAY ITEM FOR THE LOAD CENTER SHALL INCLUDE BUT NOT LIMITED TO NEMA 4X POLE MOUNT CABINET, ADDITIONAL ENCLOSURES, PANEL BOARDS, MAIN BREAKER, CIRCUIT BREAKERS, LIGHTNING PROTECTION, PHOTO-ELECTRIC ASSEMBLY, CONTACTOR, H.O.A SWITCH. CONDUIT AND FEEDER CONDUCTORS FROM THE POWER SERVICE ASSEMBLY TO THE LIGHTING CONTROL PANEL AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE INSTALLATION. TWO TYPE P-II CONCRETE SERVICE PEDESTALS FOR THE LOAD CENTER ASSEMBLY ARE PAID FOR SEPARATELY.  
  
THE LOAD CENTER SHALL BE A THREE WIRE, SINGLE PHASE 120V/240V POWER SERVICE ASSEMBLY.

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			TABULATION OF QUANTITIES	200671	L-2

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



ROADWAY LIGHTING GENERAL NOTES

1. ADHERE TO REQUIREMENTS IN "LEE COUNTY DEPARTMENT OF TRANSPORTATION PLAN SPECIFICATIONS FOR SIGNAL & STREET LIGHTING", DATE REVISED APRIL 15, 2014. CONTACT LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) FOR ANY QUESTIONS REGARDING EQUIPMENT OR INSTALLATION REQUIREMENTS. FOLLOW THE FDOT GOVERNING STANDARDS AND SPECIFICATIONS FOR ALL ITEMS NOT COVERED BY LEE COUNTY SPECIFICATIONS,
2. SPARE CONDUIT AT PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.
3. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. THE SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.
4. PROVIDE SHOP DRAWINGS OF THE PHOTOMETRIC CALCULATIONS FOR LUMINAIRES OTHER THAN THE BASIS OF DESIGN. THE LUMINAIRE BASIS OF DESIGN IS THE FOLLOWING:
- AMERICAN ELECTRIC LIGHTING AUTOBAHN ATB2 88 WATT LED LUMINAIRE 4000K COLOR TEMPERATURE WITH TYPE III DISTRIBUTION AND HOUSESIDE SHIELD. PHOTOMETRIC CURVE IS ATB2\_40BLEDE70\_XXXXX\_R3\_HS.
  - AMERICAN ELECTRIC LIGHTING AUTOBAHN ATB2 133 WATT LED LUMINAIRE 4000K COLOR TEMPERATURE WITH TYPE III DISTRIBUTION AND HOUSESIDE SHIELD. PHOTOMETRIC CURVE IS ATB2\_40BLEDE10\_XXXXX\_R3\_HS.
- SEE POLE DATA AND LEGEND SHEET AND PAY ITEM FOOTNOTES FOR ADDITIONAL INFORMATION. MEET ALL PHOTOMETRIC REQUIREMENTS IN THE CONTRACT DOCUMENTS.
5. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OWNER(S) FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.
6. BEFORE EXCAVATING, IT IS REQUIRED THAT NOTICE BE GIVEN TO SUNSHINE STATE ONE CALL OF FLORIDA, INC. (SSOCOF) AT 1-800-432-4770 A MINIMUM OF TWO (2) FULL BUSINESS DAYS BEFORE WORK BEGINS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF SSOCOF.
7. THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS AND JUNCTION BOXES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR WITH APPROVAL FROM THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS. THE MAINTENANCE SLAB ORIENTATION SHALL BE DETERMINED BY THE CONTRACTOR PER INDIVIDUAL POLE LOCATION.
8. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", AND SHALL HAVE BEEN TESTED BY FHWA APPROVED METHODS (LATEST EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
9. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER NEC REQUIREMENTS.
10. IN ACCORDANCE WITH NEC, IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING THE CIRCUIT FOR EACH LUMINAIRE AT ACCESS HAND HOLE FOR EACH POLE.
11. THE CONTRACTOR SHALL NOTIFY THE LOCAL POWER COMPANY(S) AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN THE DISTANCE PER CURRENT OSHA REQUIREMENTS OF ENERGIZED ELECTRICAL CONDUCTORS. THE LOCAL POWER COMPANY(S), AT ITS OPTION, WILL ASSIST THE CONTRACTOR TO COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITES OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.
12. OVERHEAD FACILITIES ARE TO REMAIN ENERGIZED AND IN PLACE. TABLE "A", MINIMUM CLEARANCE DISTANCES SPECIFIED IN SUBPART CC OF OSHA RULE 1926 (AS THEY PERTAIN TO CRANE/DERRICK OPERATIONS), AND/OR THOSE MINIMUM DISTANCES SPECIFIED IN 29 CFR 1910.333(c)(3)(i)(A) AND (iii)(A) FOR WORK IN PROXIMITY TO POWER LINES NOT COVERED BY THIS SUBPART CC, ARE TO BE MAINTAINED.
13. AT LOCATIONS WHERE THE PROXIMITY OF THE INSTALLATION IS CLOSE TO THE EXISTING OVERHEAD POWER, AS DETERMINED BY THE ENGINEER, A "LOW PROFILE" RIG SHALL BE REQUIRED TO DRILL THE FOUNDATION AND INSTALL THE LIGHT POLES.
14. WIRE PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY THE NEC OR NESC FOR CABLE USED.
15. NO SCREW TYPE BASE FOUNDATIONS SHALL BE USED.
16. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN TWO FEET OF THE LIGHT POLE FOOTER OR CONDUIT RUN, THE CONTRACTOR SHALL HAND DIG THE FIRST FOUR FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
17. THE NEW LIGHTING SYSTEM CONDUIT SHALL GO STRAIGHT TO THE PROPOSED LIGHT POLE FOUNDATION. ALL SPLICES SHALL BE DONE IN THE TRANSFORMER BASES

18. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CANNOT BE BACKFILLED IN THE SAME WORK PERIOD.
19. THE LIGHTING SYSTEM WILL BE MAINTAINED BY LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) UPON FINAL ACCEPTANCE.
20. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING THE CONSTRUCTION OPERATION.
21. UPON PASSING THE FINAL INSPECTION, SEND A WRITTEN REQUEST TO THE FOLLOWING:
- LEE COUNTY DEPARTMENT OF TRANSPORTATION  
TRAFFIC ENGINEERING DEPARTMENT  
1500 MONROE STREET  
FORT MYERS, FLORIDA 33901  
PHONE: 239-533-8580
22. WHEN REQUESTING TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO LCDOT. LCDOT WILL RESPOND WITHIN FIVE (5) WORKING DAYS TO ESTABLISH TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.
23. WHEN CONSTRUCTION IS COMPLETE, A HARD COPY SET OF "AS-BUILT" PLANS IN ADDITION TO AN ELECTRONIC COPY (PDF) IS TO BE SUBMITTED TO BOTH:
- CHRIS SHOEMAKER  
GATEWAY SERVICE COMMUNITY DEVELOPMENT DISTRICT  
13240 GRIFFIN DRIVE  
FORT MYERS, FLORIDA 33913  
PHONE: 259-561-1313
- AND
- LEE COUNTY DEPARTMENT OF TRANSPORTATION  
TRAFFIC ENGINEERING DEPARTMENT  
1500 MONROE STREET  
FORT MYERS, FLORIDA 33901  
PHONE: 239-533-8580
24. LIGHT POLES AND PULL BOXES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DITCHES, WETLANDS, DRIVEWAYS, SURFACE WATER, PAVED SHOULDERS OR PEDESTRIAN RAMPS.
25. THE CONTRACTOR SHALL BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUIT OR PULL BOXES ARE TO BE INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
26. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOOTER SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND PAID FOR UNDER PAY ITEMS 715-4-12.
27. CONTACT GATEWAY SERVICE COMMUNITY DEVELOPMENT DISTRICT A MINIMUM OF TWO (2) WEEKS PRIOR TO ANY WORK ON THE EXISTING LIGHTING SYSTEM. CONTACT INFORMATION IS AS FOLLOWS:
- CHRIS SHOEMAKER  
GATEWAY SERVICE COMMUNITY DEVELOPMENT DISTRICT  
13240 GRIFFIN DRIVE  
FORT MYERS, FLORIDA 33913  
PHONE: 259-561-1313
28. COORDINATE WITH GATEWAY SERVICE COMMUNITY DEVELOPMENT DISTRICT FOR ACCESS TO THE EXISTING LIGHTING LOAD CENTER WHEN WORKING ON THE EXISTING LIGHTING SYSTEM.
29. THE EXISTING LIGHTING SYSTEM WITHIN PROJECT LIMITS SHALL BE IN COMPLETE WORKING ORDER PRIOR TO FINAL ACCEPTANCE.
30. ALL REMOVED ITEMS INCLUDING BUT NOT LIMITED TO THE LIGHT POLES, LUMINAIRES, PULL BOXES, WIRING AND CONDUCTORS ARE TO BE DISPOSED OF BY THE CONTRACTOR AT A PLACE DETERMINED BY HIM.

APPROVED

LD-2019-00573

Tom Sawtell, Plan Reviewer

Lee County Development Services

12/17/2019





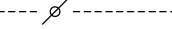

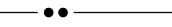




REVISIONS				 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	GENERAL NOTES	200671	L-3
DATE	DESCRIPTION	DATE	DESCRIPTION					
				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915				

POLE DATA


## ROUNDAABOUT LIGHTING DESIGN CRITERIA

Average Horizontal Initial Intensity	3.0 Foot Candles
Average Vertical Initial Intensity	2.3 Foot Candles
Uniformity Ratio Avg./Min.	4:1 Or Less
Max./Min.	10:1 Or Less
Veiling Luminance Ratio	0.3:1 Or Less
Wind Speed	170 MPH

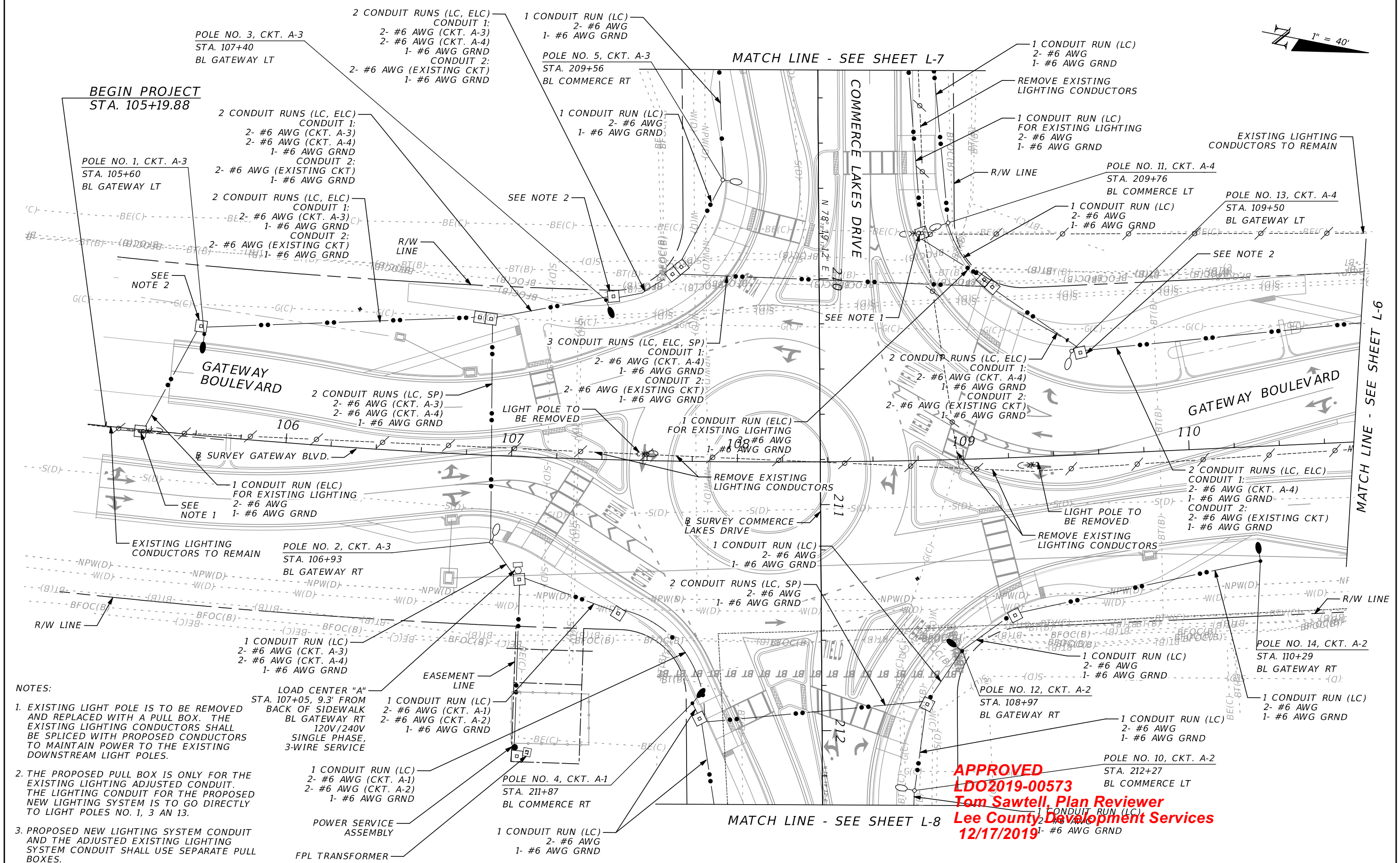
### LEGEND


SYMBOLS	DESCRIPTION
	Designed for a American Electric Lighting Autobahn ATB2 88 watt LED luminaire with 3000k color temperature, Roadway Type III distribution and houseside shields. See pay item footnotes for additional luminaire information. Luminaire shall be wired for 480 volt operation. Pole mounting height is 35 feet with a 15-foot arm length mounted on a standard light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_40BLEDE70_XXXXX_R3_3k_HSS with output lumens of 11,000.
	Designed for a American Electric Lighting Autobahn ATB2 133 watt LED luminaire with 3000k color temperature, Roadway Type III distribution and houseside shields. See pay item footnotes for additional luminaire information. Luminaire shall be wired for 480 volt operation. Pole mounting height is 35 feet with a 15-foot arm length mounted on a standard light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_40BLEDE10_XXXXX_R3_3k_HSS with output lumens of 16,000.
	Existing pole and luminaire to remain.
	Existing pole and luminaire to be removed.
	Existing conduit and conductors to remain unless noted otherwise.
	Proposed open trench conduit with THWN-2 conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) No. 6 AWG (minimum) copper bond conductor (THWN green insulation) inside conduit with other conductors.
	Proposed conduit directional bored with THWN-2 conductors inside (conduit and conductor size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes. Run one (1) No. 6 AWG (minimum) copper bond conductor (THWN green insulation) inside conduit with other conductors.
	Pull box with concrete apron. For specifications see Section 635 of Standard Specifications For Road And Bridge Construction.
	Proposed 120V/240V Load Center. For requirements see Index No. 639-001 of the FDOT Standard Plans.
	Existing FPL Transformer to be used for power source.
	Power service assembly. For specifications see Section 639 of FDOT Standard Specifications for Road and Bridge Construction.

FOC = FACE OF CURB, FOS = FRONT OF SIDEWALK, BOS = BACK OF SIDEWALK, GW = GRAVITY WALL

REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			POLE DATA AND LEGEND	200671	L-4





REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			LIGHTING PLAN (1)		200671	L-5

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**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**



MATCH LINE - SEE SHEET L-5

2 CONDUIT RUNS (LC, ELC)  
CONDUIT 1:  
2- #6 AWG (CKT. A-4)  
1- #6 AWG GRND  
CONDUIT 2:  
2- #6 AWG (EXISTING CKT)  
1- #6 AWG GRND

SEE NOTE 2

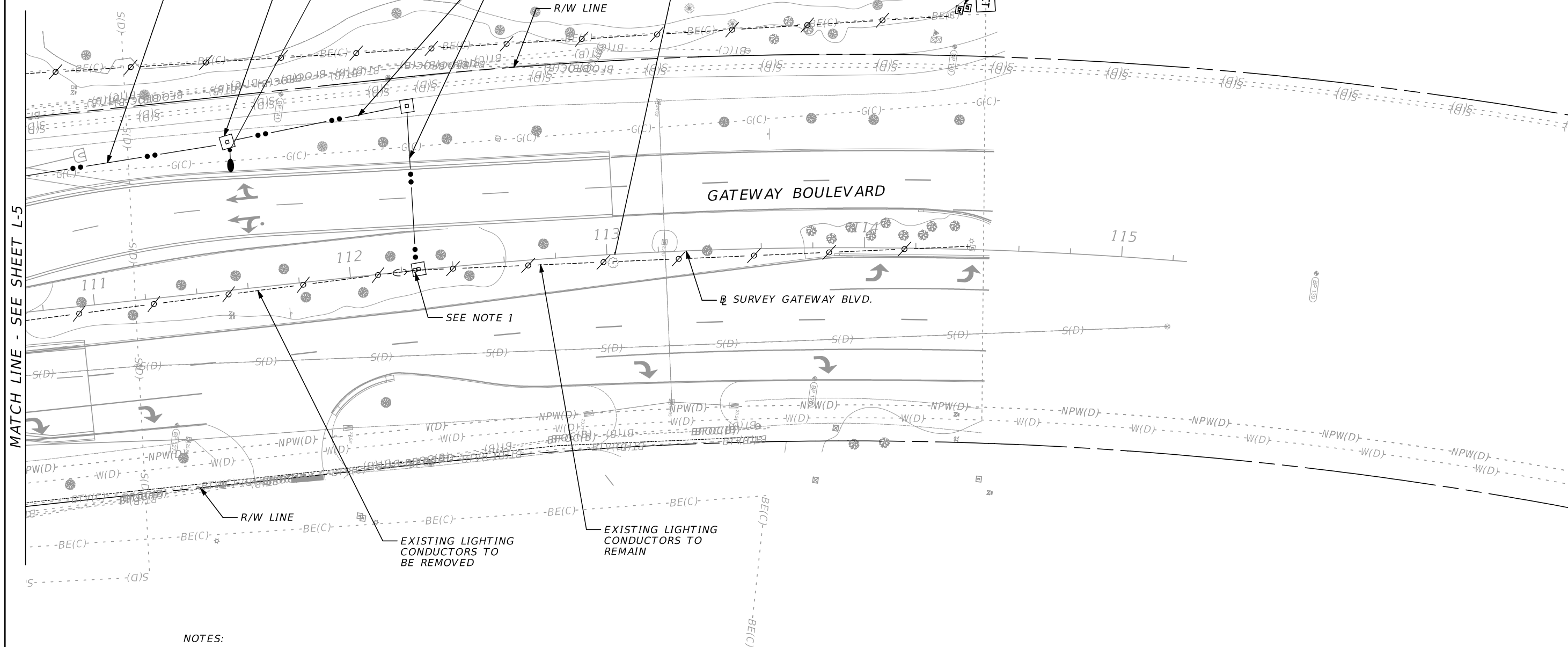
POLE NO. 15, CKT. A-4  
STA. 111+59  
BL GATEWAY LT

1 CONDUIT RUN (ELC)  
2- #6 AWG  
1- #6 AWG GRND

END PROJECT  
STA. 113+03.08

EXISTING GATEWAY BOULEVARD  
ROADWAY LIGHTING POWER SOURCE  
(FPL TRANSFORMERS)

1" = 40'



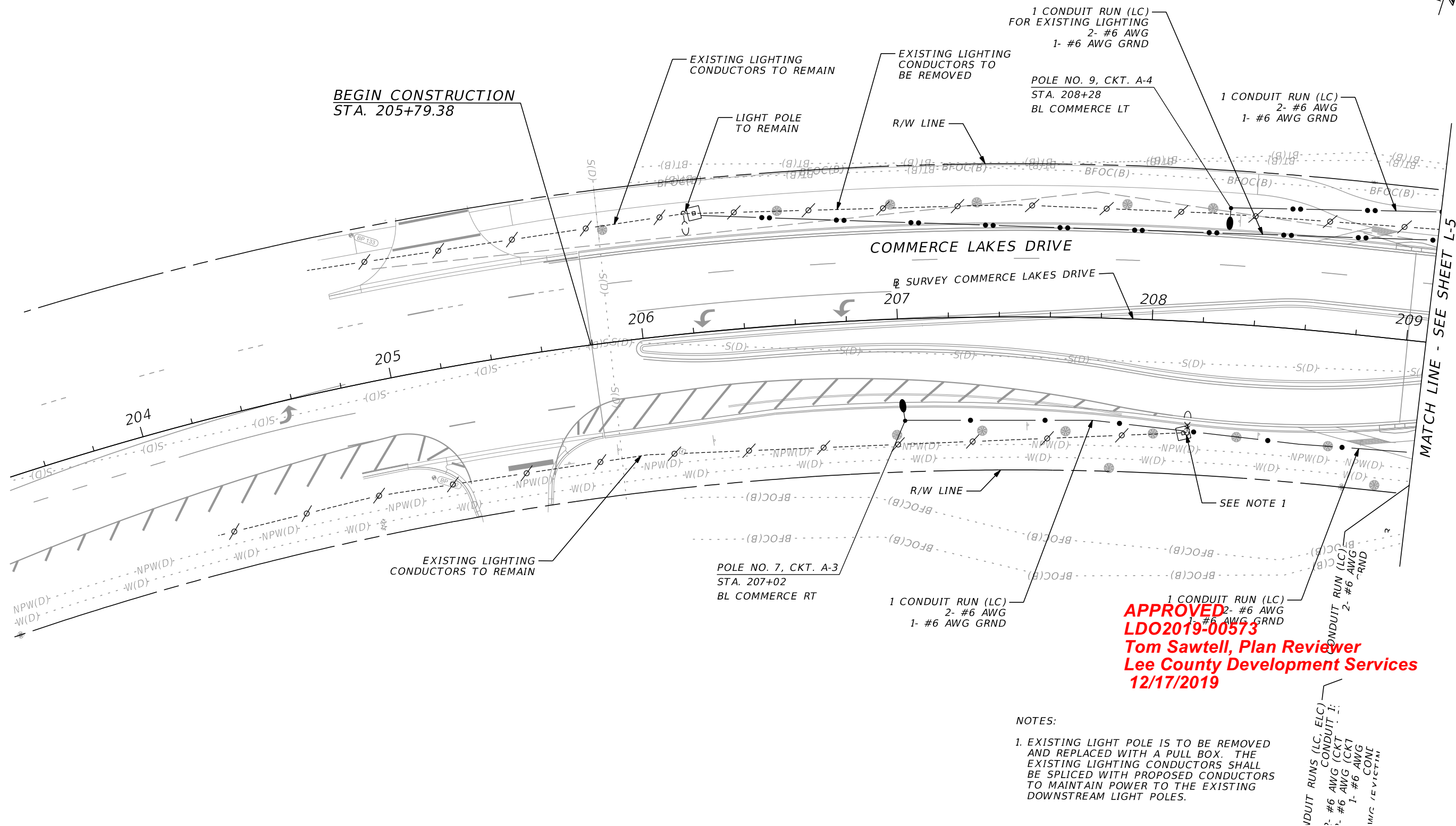
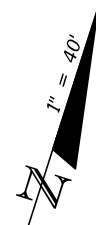
NOTES:

1. EXISTING LIGHT POLE IS TO BE REMOVED AND REPLACED WITH A PULL BOX. THE EXISTING LIGHTING CONDUCTORS SHALL BE SPICED WITH PROPOSED CONDUCTORS TO MAINTAIN POWER TO THE EXISTING DOWNSTREAM LIGHT POLES.
2. THE PROPOSED PULL BOX IS ONLY FOR THE EXISTING LIGHTING ADJUSTED CONDUIT. THE LIGHTING CONDUIT FOR THE PROPOSED NEW LIGHTING SYSTEM IS TO GO DIRECTLY TO LIGHT POLE NO. 15.

**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			LIGHTING PLAN (2)		200671	L-6

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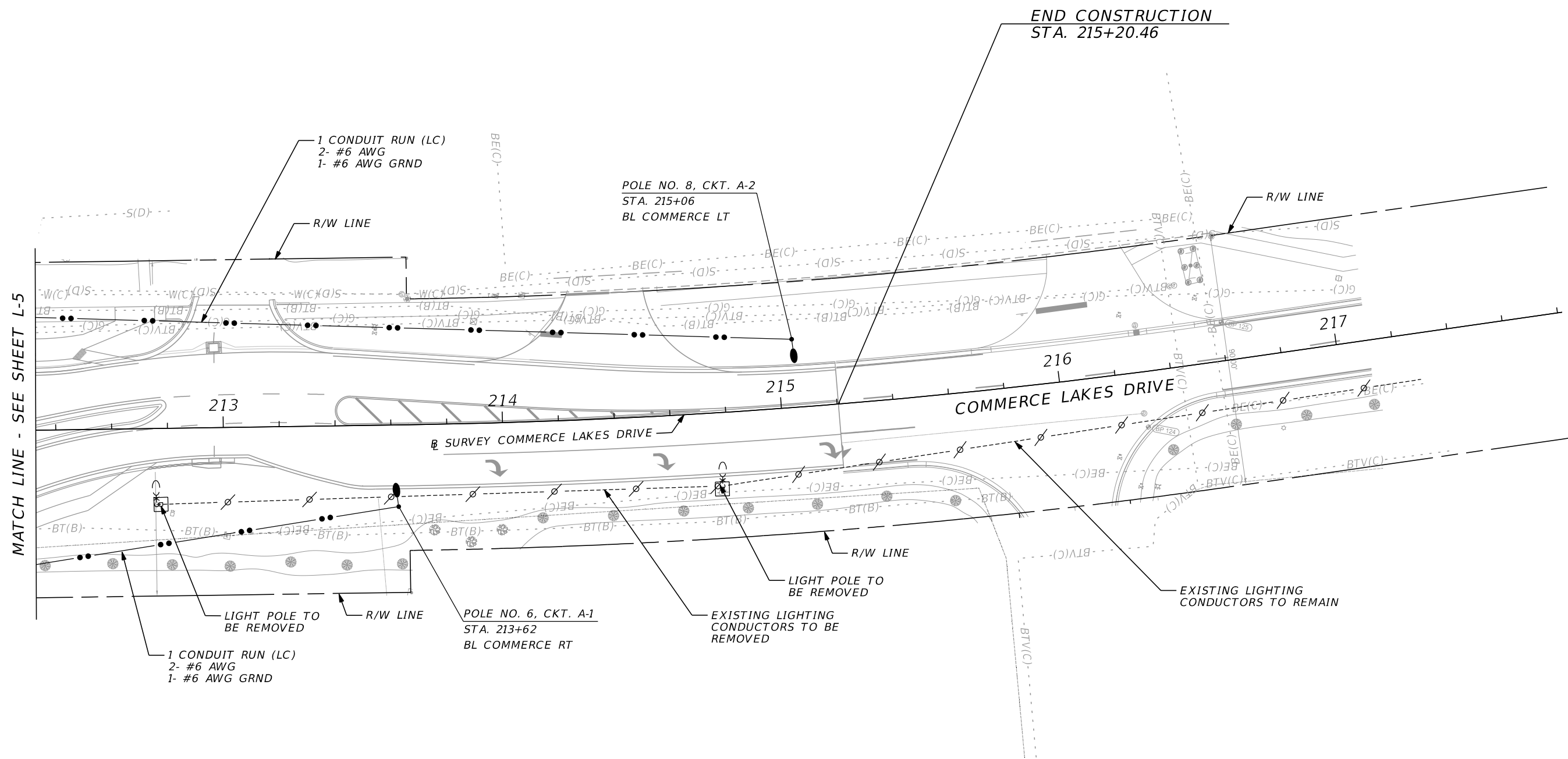


**APPROVED**  
**LDO2019-00573**  
**Tom Sawtell, Plan Reviewer**  
**Lee County Development Services**  
**12/17/2019**

NOTES:


1. EXISTING LIGHT POLE IS TO BE REMOVED AND REPLACED WITH A PULL BOX. THE EXISTING LIGHTING CONDUCTORS SHALL BE SPLICED WITH PROPOSED CONDUCTORS TO MAINTAIN POWER TO THE EXISTING DOWNSTREAM LIGHT POLES.

REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915	 DEPARTMENT OF TRANSPORTATION	GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDAABOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			LIGHTING PLAN (3)		200671	L-7



NOTES:  
1. EXISTING LIGHT POLE IS TO BE REMOVED AND REPLACED WITH A PULL BOX. THE EXISTING LIGHTING CONDUCTORS SHALL BE SPLICED THROUGH TO MAINTAIN POWER TO THE EXISTING DOWNSTREAM LIGHT POLES.

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**LDO2019-00573**  
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**Lee County Development Services**  
**12/17/2019**

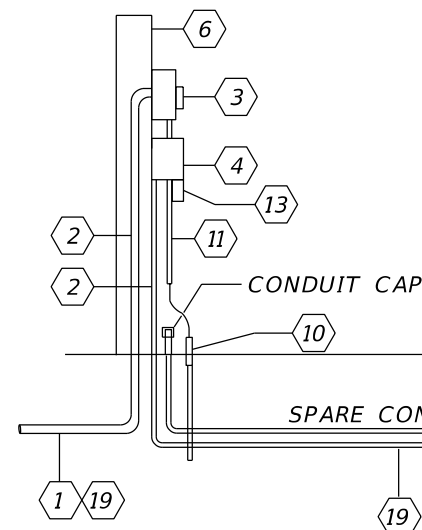
REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)		CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			LIGHTING PLAN (4)		200671	L-8

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

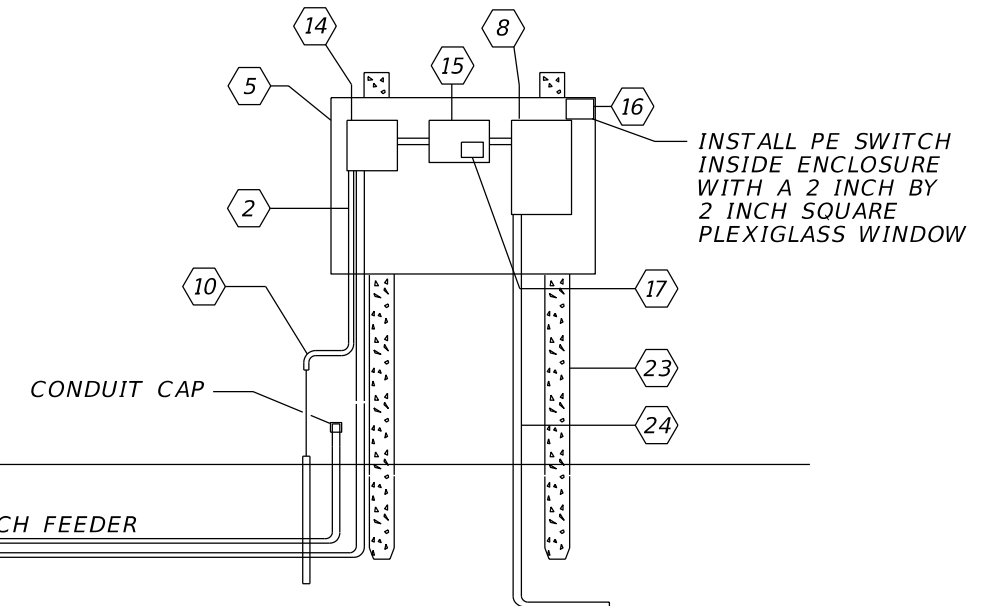
## KEYED NOTES

- 1 120/240V SINGLE PHASE 3-WIRE FPL ELECTRIC DISTRIBUTION UNDERGROUND SERVICE FROM FPL TRANSFORMER.
- 2 INSULATED #2 COPPER FEEDER CONDUCTORS IN RIGID GALVANIZED STEEL CONDUIT
- 3 METER SOCKET BY CONTRACTOR. METER BY FPL.
- 4 SERVICE MAIN DISCONNECT: 600V, 2-POLE HEAVY DUTY NEMA 3R WITH ENCLOSED BREAKER.
- 5 POST-MOUNTED 4X CABINET WITH LOCKABLE HINGED DOOR. SIZE PER EQUIPMENT REQUIREMENT.
- 6 12' PEDESTAL CONCRETE POLE
- 8 ELECTRICAL PANEL, 240V, SINGLE PHASE. 3-WIRE WITH GROUND BAR AND CIRCUIT BREAKERS. SEE PANEL SCHEDULE FOR MORE INFORMATION.
- 10 COPPER CLAD GROUND ROD  $\frac{5}{8}$ -INCH DIA. 40 FEET LONG.
- 11 FPL REQUIRED SIZED INSULATED COPPER GROUND WIRE IN 1-INCH RIGID GALVANIZED STEEL. BOND THE SERVICE NEUTRAL TO GROUND AT SERVICE MAIN DISCONNECT.
- 13 LIGHTNING ARRESTOR MOUNTED ON OUTSIDE OF ENCLOSURE.
- 14 MAIN CIRCUIT BREAKER 2-POLE, 240V. SEE DISTRIBUTION POINT DESCRIPTION ON LIGHTING PLAN SHEETS FOR SIZE.
- 15 2-POLE, ELECTRICALLY HELD CONTACTOR WITH SAME AMPACITY RATING AS MAIN CIRCUIT BREAKER.
- 16 PHOTO ELECTRIC CELL SWITCH - 120V RATED, INSIDE ENCLOSURE.
- 17 'HAND-OFF-AUTOMATIC' SELECTOR SWITCH (PART OF LIGHTING CONTACTOR).
- 19 UNDERGROUND FEEDER CONDUIT INSULATED #2 COPPER FEEDER CONDUCTORS
- 23 12' CONCRETE PEDESTAL POLES WITH GALVANIZED UNISTRUT TO SUPPORT ELECTRICAL EQUIPMENT.
- 24 CONDUIT(S) WITH CONDUCTORS FOR THE LIGHTING CIRCUITS. THE CONTRACTOR SHALL DETERMINE THE NUMBER OF NECESSARY CONDUIT DROPS.

POWER SERVICE ASSEMBLY  
(639-1-122)




LOAD CENTER  
(715-7-11)



RISER DIAGRAM  
(NTS)

**APPROVED**  
**LDO2019-00573**  
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**12/17/2019**

REVISIONS				DAVID J. ALLEN, PE P.E. NO.: 58540 CARDNO 3905 CRESCENT PARK DRIVE RIVERVIEW, FL 33578 CERTIFICATE OF AUTHORIZATION: 29915		GATEWAY BOULEVARD AT COMMERCE LAKES DRIVE INTERSECTION CONTROL (ROUNDBOUT)	CIP NO.	SHT. NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					
						<b>SERVICE POINT DETAILS (1)</b>	200671	L-9

PANEL "A" SCHEDULE

Panel ID: Proposed Load Center "A"

Location: Sta. 107+05 BL GATEWAY RT, 9.3' FROM BOS

Mounting: Surface

Main Breaker: 100 A

Voltage: 120/240 V

Single Phase, 3-wire

Circuit Description		Load (KVA)	Breaker	Pole	Bus	Pole	Breaker	Load (KVA)	Circuit Description	
1	A-1	0.32	20	2	A	2	20	0.63	A-2	2
3	↓	0.32			B			0.63	↓	4
5	A-3	0.79	20	2	A	2	30	0.63	A-4	6
7	↓	0.79			B			0.63	↓	8
9					A					10
11					B					12
13					A					14
15					B					16
17					A					18
19					B					20
21					A					22
23					B					24

NOTES

1. SAFETY SWITCH - 100 AMP F/A 100 AMP
2. BOS = BACK OF SIDEWALK

TOTAL DEMAND

TOTAL DEMAND AMPS

NO. OF POLES

4.74 KVA

19.75 AMPS

15

APPROVED  
LDO2019-00573  
Tom Sawtell, Plan Reviewer  
Lee County Development Services  
12/17/2019

### **3. GEOTECHNICAL INFORMATION**



August 9, 2019

Cardno  
380 Park Place Blvd. Suite 300  
Clearwater, Florida 33759

Attn: Mr. Jason Yam, P.E.

**RE: Seasonal High Groundwater Table Estimates  
Gateway Boulevard and Commerce Lakes Drive  
Lee County, Florida  
Tierra Project No.: 6511-19-101**

Mr. Yam:

Tierra, Inc. (Tierra) has performed preliminary geotechnical services for the above referenced project to estimate the Seasonal High Groundwater Table (SHGWT) levels at the Gateway Boulevard and Commerce Lakes Drive intersection and the results of our study are presented herein. As the project progresses, Tierra will provide updated evaluations and recommendations based on additional field explorations.

#### Review of Available Data

As part of our study, Tierra reviewed published soils information obtained from the "Soil Survey of Lee County, Florida" published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) and topographic information obtained from the "Fort Meyers SE, Florida" Quadrangle Map published by the United States Geological Survey (USGS). A **Summary of the USDA Soil Survey Information** is included in the **Attachments** of this report.

#### Soil Borings Performed at Intersection

A total of eight (8) auger borings were completed at selected locations within the vicinity of the intersection to estimate the SHGWT and to evaluate near-surface soils. The depths of these borings ranged from approximately 5 to 6 feet below existing grades. The **Roadway Soil Profiles** and **Roadway Boring Location Plan** for the field work performed to date are provided in the **Attachments**.

In general, the subsurface conditions encountered within the borings consisted of sandy soils (A-3) and silty sands (A-2-4).

#### Summary of SHGWT Estimates

The boring locations were staked in the field by representatives of Tierra using Garmin Etrex® hand-held Global Positioning System (GPS) equipment with a reported accuracy of ±10 feet and site information provided by Cardno. The approximate boring locations are presented on the attached **Boring Location Plan**.

The SHGWT levels at the boring locations were estimated based on a review of the soil samples, the USDA Lee County Soil Survey information, surrounding topography, natural indicators within the soils and measured groundwater levels in the borings. A **Summary of Seasonal High Groundwater Table Estimates** is provided in the **Attachments**.



Tierra appreciates the opportunity to be of service to Cardno on this project. If you have any questions or comments regarding this correspondence, please contact our office at your earliest convenience.

Sincerely,

**TIERRA, INC.**



Dylan A. Nelson, E.I.  
Geotechnical Engineer Intern



Kevin H. Scott, P.E.  
Senior Geotechnical Engineer  
Florida License No. 65514

Attachments:

Summary of the USDA Soil Survey Information  
Summary of Seasonal High Groundwater Table Estimates  
Roadway Boring Location Plan  
Roadway Soil Profiles

**Summary of USDA Soil Survey Information**  
**Gateway Boulevard at Commerce Lakes Drive**  
**Lee County, Florida**  
**Tierra Project No.: 6511-19-101**

USDA Map Unit	Depth (in)	Soil Classification		Permeability (in/hr)	pH	Seasonal High Groundwater	
		USCS	AASHTO			Depth (ft)	Months
(111) Felda fine sand, ponded- Urban land	0-7	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	3.5-7.8	+2.0 - 0.5	Jan-Dec
	7-24	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	3.5-7.8		
	24-36	CL, SC, SC-SM	A-7-6, A-2-4, A-4	0.6 - 6.0	5.1-7.8		
	36-80	SP-SM, SM	A-2-4	6.0 - 20.0	6.1-8.4		
	---	---	---	---	---	---	---
(119) Malabar fine sand- Urban land	0-5	SM, SP- SM	A-2-4, A-3	6.0 - 20.0	5.1-7.0	0.3 - 1.5	Jul-Oct
	5-17	SM, SP- SM	A-2-4, A-3	6.0 - 20.0	5.1-8.0		
	17-42	SM, SP- SM	A-2-4, A-3	6.0 - 20.0	5.1-8.0		
	42-59	CL, SC- SM, SC	A-2-4, A-4, A-6	2.0 - 6.0	3.3-8.0		
	59-80	SM	A-2-4, A-4	6.0 - 20.0	5.1-8.0		
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**Summary of Seasonal High Groundwater Table Estimates**  
**Gateway Boulevard at Commerce Lakes Drive**  
**Lee County, Florida**  
**Tierra Project No.: 6511-19-101**

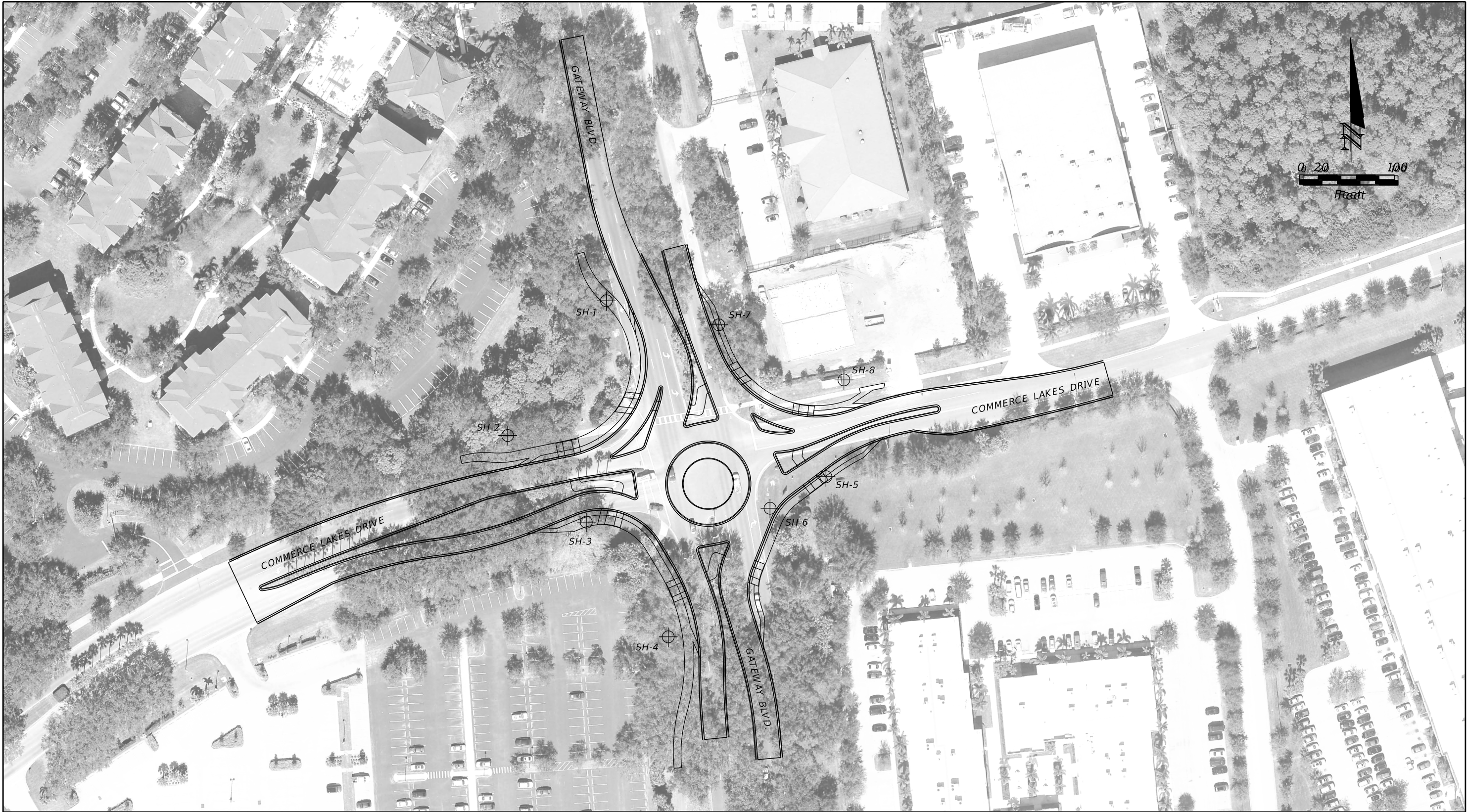
Boring Name	Boring Location <sup>(1)</sup>		Boring Depth <sup>(2)</sup> (feet)	Measured Groundwater Table	Date Groundwater Table Recorded	USDA Soil Survey		Estimated SHGWT <sup>(4)</sup>
	Easting	Northing		Depth <sup>(2)</sup> (feet)		Map Symbol	Estimated SHGWT <sup>(3)</sup> Depth (feet)	Depth <sup>(2)</sup> (feet)
SH-1	737155	810025	5.0	2.2	8/8/2019	111/119	+2.0-0.5 / 0.3-1.5	1.5
SH-2	737051	809883	5.5	2.6	8/8/2019	119	0.3-1.5	2.0
SH-3	737134	809792	5.0	2.6	8/8/2019	119	0.3-1.5	2.0
SH-4	737220	809671	5.0	1.5	8/8/2019	119	0.3-1.5	0.5
SH-5	737386	809839	6.0	3.7	8/8/2019	119	0.3-1.5	3.0
SH-6	737327	809806	5.0	3.1	8/8/2019	119	0.3-1.5	2.5
SH-7	737273	809999	5.5	3.6	8/8/2019	111/119	+2.0-0.5 / 0.3-1.5	3.0
SH-8	737405	809941	5.0	3.0	8/8/2019	119	0.3-1.5	2.5

<sup>(1)</sup> Boring locations are in State Plane West coordinates and were determined using a hand-held GPS device with a reported accuracy of +/- 10 feet.

<sup>(2)</sup> Depth below existing grades at time of field services.

<sup>(3)</sup> Seasonal High Groundwater Table (SHGWT) depth reported in the Soil Survey of Lee County, Florida published by the USDA/NRCS.

<sup>(4)</sup> Seasonal High Groundwater Table depth estimated based on a combination of factors including the soil stratigraphy, groundwater table readings obtained from the borings and the Lee County, Florida USDA Soil Survey.

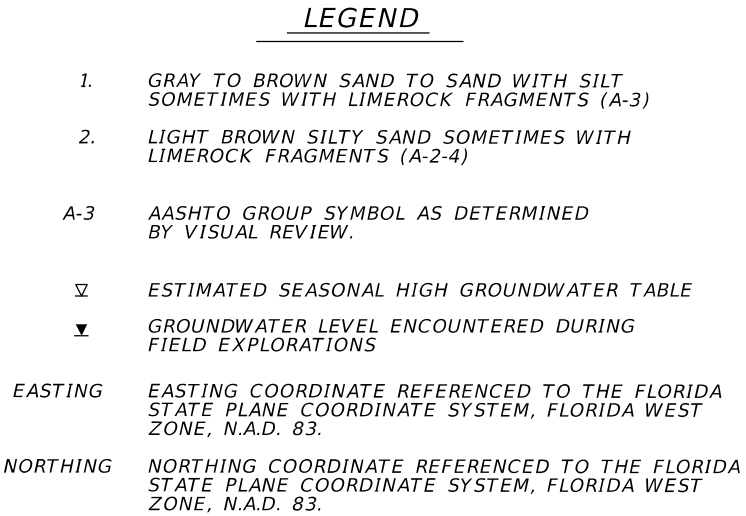


LEGEND



APPROXIMATE AUGER BORING LOCATION

REVISIONS				KEVIN H. SCOTT, P.E. P.E. LICENSE NUMBER 65514 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION NO. 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			BORING LOCATION PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						LEE			



#### **4. GATEWAY SERVICES COMMUNITY DEVELOPMENT DISTRICT**

**TECHNICAL SPECIFICATIONS**  
**GATEWAY BLVD AT COMMERCE LAKES DR**  
**UTILITY RELOCATION**

Prepared For:

**Gateway Services Community Development District**  
**13240 Griffin Dr.**  
**Fort Myers, FL 33913**



Prepared By:

**Alfred J. Mittl, P.E.**  
**P.E. No. 59913, FL**  
**Tetra Tech, Inc.**  
**10600 Chevrolet Way, Suite 102**  
**Estero, Florida 33928**  
**Engineering Business No. 2429**

Alfred J. Mittl,  
PE No. 59913

Digitally signed by  
Alfred J. Mittl, PE No.  
59913  
Date: 2020.02.03  
14:11:23 -05'00'

**Project No. 200-37678-20002**

**ISSUED FOR BIDDING**  
**February 3, 2020**



## TECHNICAL SPECIFICATIONS

### GATEWAY BLVD AT COMMERCE LAKES DR UTILITY RELOCATION

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## TECHNICAL SPECIFICATIONS

### GATEWAY BLVD AT COMMERCE LAKES DR UTILITY RELOCATION

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SECTION 01 11 00  
SUMMARY OF WORK

PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

The Work of this Contract includes, but is not limited to, the following:

- A. The Work to be done under this Contract is shown on the drawings and specified in Contract Documents. The Work consists of replacing potable water, irrigation water, and wastewater mains at the Gateway Boulevard at Commerce Lakes Drive intersection. The Work includes open trench construction of: 16-inch DIP water main with 30-inch steel casing; 10-inch PVC irrigation main; 12-inch PVC irrigation main with 24-inch steel casing; 6-inch PVC wastewater force main; 12-inch PVC wastewater force main with 24-inch steel casing. Additionally, the Work includes: connections to existing mains; grouting and abandoning existing mains and other Work displayed or described in the Contract Documents.

1.2 CONTRACT TIME

- A. Contract Time from the notice to proceed to the date of substantial completion shall not exceed 365 calendar days.

1.3 CONTRACTS

- A. Construct the portions of Work under a lump sum and unit price Contract as shown on the attached bid sheet.

1.4 WORK BY OTHERS

Not Used

1.5 FUTURE WORK

Not Used

1.6 WORK SEQUENCE

- A. The Contractor is responsible for determining their work sequencing for the project.
- B. Service to all existing facilities shall be maintained at all times including but not limited to:
  - 1. The existing potable water, irrigation water and wastewater systems.
  - 2. All public and private roadways, driveways, mailboxes, etc.

## 1.7 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit his use of the premises for Work and for storage, to the areas shown on the Drawings.
- B. Coordinate use of premises under direction of Engineer.
- C. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the site.
- D. Move any stored Products, under Contractor's Control, which interfere with operations of the Owner or others.

## 1.8 OWNER OCCUPANCY

- A. Owner will occupy premises during entire construction period for conduct of his normal operations. Cooperate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

## 1.9 REQUIRED INSURANCES

See General Conditions.

## 1.10 SAFETY AND OSHA COMPLIANCE

- A. The Contractor shall comply in all respects with all Federal, State and Local safety and health regulations. Copies of the Federal regulations may be obtained from the U.S. Department of Labor, Occupation Safety and Health Administration (OSHA), Washington, DC 20210 or their regional offices.
- B. The Contractor shall comply in all respects with the applicable Workman's Compensation Laws.

## 1.11 PRE-PURCHASED EQUIPMENT

Not Used

## 1.12 CONTRACTOR PURCHASE RESPONSIBILITY

The Contractor, as a part of this Contract, shall include in his bid the furnishing and installation of all labor, materials, and work as necessary to complete the installation of the various water mains, services, valves, and all of items shown on the Drawings and described in these specifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

## SECTION 01 22 13

### MEASUREMENT AND PAYMENT

#### PART 1 GENERAL

##### 1.1 EXPLANATION AND DEFINITIONS

- A. The Contractor shall receive and accept the compensation provided in the Proposal and the Contract as full payment for furnishing all materials, labor, tools and equipment, for performing all operations necessary to complete the work under the Contract, and also in full payment for all loss or damages arising from the nature of the work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the Engineer, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Owner.
- B. The prices stated in the proposal include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Drawings and specified herein. The basis of payment for an item at the unit price shown in the proposal shall be in accordance with the description of that item in this Section.
- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid Form or Payment Items, he shall include the cost for that work in some other applicable bid item, so that his proposal for the project does reflect his total price for completing the work in its entirety.

##### 1.2 MEASUREMENT

- A. The quantities for payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the Owner, in accordance with the applicable method of measurement therefore contained herein. The quantities shown on the Bid Form are to establish unit prices for the work. It is the Contractor's responsibility to verify all quantities prior to ordering of material.

##### 1.3 PAYMENT

- A. Payment shall be made for the items listed on the Bid Form on the basis of the work actually performed and completed, such work including but not limited to, the furnishing of all necessary labor, materials, equipment, transportation,

clean up, restoration of disturbed areas, and all other appurtenances to complete the construction and installation of the work as shown on the drawings and described in the specifications.

- B. Unit prices are used as a means of computing the final figures for bid and Contract purposed, for periodic payments for work performed, for determining value of additions or deletions and wherever else reasonable.

## PART 2 EXECUTION

### 2.1 MEASUREMENT AND PAYMENT

#### ITEM 1A MOBILIZATION

- A. No measurement shall be made for this item.
- B. Payment shall be made at this lump sum price named in the Bid Schedule, which shall constitute full compensation for preparatory work and operations in mobilizing for the beginning work on the project including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, for establishment of temporary facilities, cost of bonds, permits, required insurance and other preconstruction expenses necessary for the start of the work. **Contractor shall be limited to a maximum of five percent (5.0%) of the total price bid for mobilization.** The cost of mobilization shall be shown in the Schedule of Values. **Demobilization shall be shown in the Schedule Of Values as a minimum of twenty-five percent (25.0%) of the value for mobilization.**

#### ITEM 1B SURVEYING, LAYOUT AND FIELD STAKING

- A. Measurement for payment for surveying, layout and field staking as described in Section 02 21 13 – Lines and Grades will be on a lump sum basis.
- B. Payment for Surveying, Layout and Field Staking will be made at the Bid Form lump sum price, paid in equal monthly amounts based on the scheduled duration of the project, from Notice to Proceed to Substantial Completion, which will be full compensation for all labor, materials, and equipment necessary to provide surveying, layout and field staking as described in Section 02 21 13 including replacement/restoration of any damaged/removed items.
- C. Payment for Locating Utilities in Advance of Construction Contractor will

be included in the contract lump price for this item, which price and payment shall be full compensation for all labor, materials, and equipment necessary to physically locate all utilities in the immediate area using non-destructive digging equipment, supplies and personnel experienced in the use of subsurface utility engineering (SUE) to determine precise horizontal and vertical positions of all utilities within the project limits. The Contractor shall perform utility locates at least 21 calendar days in advance of construction in order to request clarification if required from the Engineer. The Engineer will have 7 calendar days to respond. This construction scheduling will allow all necessary decisions to be made prior to the Contractor's crews reaching the work area and having a delay claim and/or a crew mobilization/demobilization claim.

- D. The Work includes equipment to paint/mark the approximate position of the public or private underground utility, vacuum excavation equipment that includes air tools (water jet, air lance) to break up the surface and soil. The vacuum excavation equipment involves removing the disturbed soil and temporarily storing it. The exposed underground utility is examined and pertinent data such as size, type, material, and depth is gathered. A marker such as an iron rod and cap or nail and disk are placed next to the test hole and the depth measurement is taken to this point. The stored soil is then returned to the excavated test hole and the surface is returned to its original state; asphalt patch is tamped into the hole when applicable. Markings such as paint and/or lathe and ribbon are left near the hole for future identification. Assume all lines to be located are active lines and service must be maintained at all times possible.

#### ITEM 1C FINAL RECORD DRAWINGS AND FINAL SUBMITTALS

- A. Measurement for payment for Final Record Drawings and Final Submittals shall be on a lump sum basis for providing submittals as described in Section 01 77 00 – Contract Closeout and 01 33 00 – Submittals, and will be considered complete upon the approval of all the record drawings and final submittals listed in those Sections by the County.
- B. Payment for the final record drawings and final submittals shall be made at the Bid Form lump sum price, which will be full compensation for all labor, materials, and equipment necessary to prepare and deliver the record drawings and final submittals.



The following rules of credit will be used for payment of this Work:

Certified As-Builts	50%
Final Submittals	50%

ITEM 1D MAINTENANCE OF TRAFFIC

- A. Measurement for payment for maintenance of traffic as described in Specification 01570 will be on a lump sum basis.
- B. Payment for maintenance of traffic will be made at the Bid Form lump sum price, which will be full compensation for all labor, materials, and equipment necessary to provide maintenance of traffic items as described in Specification 01570 including replacement/restoration of any damaged/removed items due to maintenance of traffic plan, shall be paid in equal monthly amounts based on the scheduled duration of the project from Notice to Proceed to Substantial Completion.

ITEM 2A 16-INCH DI POTABLE WATER MAIN

- C. Measurement for payment for various material type and sizes of potable water main pipe shall be the horizontal linear feet of pipe furnished, installed, and accepted in accordance with the Drawings and these specifications, as measured along the center line of the completed pipe, including the length of fittings and appurtenances as required. Measurement shall also include lines installed in casings, and any temporary pavement needed to complete this work.
- D. Payment for various material types and sizes of potable water main will be made at the Bid Form unit price per linear foot for the size and type installed where required on plans, which payment shall be full compensation for all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, temporary pavement patch, furnishing pipe and fittings, restrained joints where required, connections to existing valves and mains where required, roll downs with fittings or deflection to avoid conflicts, connections to existing plugs or caps

ITEM 2B 16-INCH DI POTABLE WATER MAIN W/30-INCH ASTM A139 GRADE "B" STEEL CASING

- A. Measurement for payment 16-inch DI potable water main with 30-Inch ASTM A139 Grade "B" steel casing shall be actual linear feet of pipe installed in casing measured horizontally at grade above the pipeline along the completed water line.

- B. Payment for 16-inch DI potable water main with 30-Inch ASTM A139 Grade "B" steel casing shall be at the Bid Form unit price per linear foot, which payment shall be full compensation for the DI pipe, fittings, trenching, restoration, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, and all other incidentals necessary to complete the installation as specified.

ITEM 2C 16-INCH GATE VALVES

- A. Measurement for payment for gate valves of each size shall be the actual number installed and accepted.
- B. Payment for gate valves shall be at the Bid Form unit price per each for each size, which payment shall be full compensation for the valve and operator, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, compaction, valve boxes, extension rods, and concrete pads, and all other incidentals necessary to complete the installation as specified.

ITEM 2D HOT TAP CONNECTIONS TO EXISTING POTABLE WATER MAIN

- A. Measurement for payment for hot tap connections to existing utilities shall be the actual number of hot tap connections installed on potable water mains and accepted. This item is limited to those connections where a hot tap connection is required.
- B. Payment shall be made at the Bid Form unit price for each hot tap connection made, including all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, tapping sleeve, tapping valves, tees or other such connection identified in the Drawings or as required to provide a complete assembly. This item shall also include any notifications or temporary facilities that may be required to facilitate the connection.

ITEM 2E POTABLE WATER MAIN LINE STOPS

- A. Measurement for payment for line stops shall be on the actual count of line stops required to complete connections to existing mains.

- B. Payment for the line stops shall be made at the Bid Form unit price, which will be full compensation for all labor, fittings included restrained cap, materials included poured in place concrete thrust blocking, and equipment necessary to perform the task. This shall include excavation, tapping the existing line, maintaining service upstream of the line stop, completing the connection and repairing the point of line stop.

ITEM 2F      PRESSURE TEST AND DISINFECT POTABLE WATER MAINS

- A. Measurement for payment for pressure testing, flushing and disinfection of potable water mains shall be on a lump sum basis for the complete tests and disinfection as described in the Specifications. The lump sum includes the pressure and leakage testing of new potable water mains. This item shall also include any required testing and disinfection of existing lines disturbed by the Contractor's operations.
- B. Payment for disinfection and pressure testing will be made at the Bid Form unit lump sum price, which shall be full compensation for all labor, materials and equipment necessary to perform the disinfection and pressure tests, including all Owner water use and meter rental. The Contractor shall provide an estimate of the potable water quantities to the Owner prior to testing. Equipment used to fill the new lines, such as temporary jumpers including backflow preventers and hoses shall also be included in the lump sum price.

ITEMS 2G      GROUTING EXISTING 16-INCH POTABLE WATER MAINS

- A. Measurement for grouting existing potable water main shall be on a lump sum basis for the complete grouting of the existing watermain as indicated on the Drawings.
- B. Payment for grouting existing potable water main shall be made at the Bid Form unit lump sum price, which will be full compensation for all labor, materials, and equipment necessary to grout the potable water main. This shall include excavation, cutting existing potable water main, isolating existing pipe segments from active segments, grout, all fittings required to complete the task, backfill, and compaction.

ITEMS 3A & 3B      IRRIGATION MAIN

- A. Measurement for payment for various sizes of irrigation main shall be the actual horizontal linear feet of pipe furnished, installed, and accepted in accordance with the Drawings and these specifications, as measured along the center line of the completed pipe, including the

length of fittings and appurtenances as required.

- B. Payment for various sizes of irrigation main will be made at the Bid Form unit price per linear foot for the size and type installed, which payment shall be full compensation for all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, furnishing pipe and fittings, restrained joints where required, connections to existing valves and mains where required, roll downs with fittings or deflection to avoid conflicts, connections to existing plugs or caps, all equipment, and all other incidentals necessary to complete the installation as specified.

ITEM 3C      12-INCH PVC IRRIGATION WATER MAIN W/24-INCH ASTM A139  
GRADE "B" STEEL CASING

- A. Measurement for payment 12-inch PVC irrigation main with 24-Inch ASTM A139 Grade "B" steel casing shall be actual linear feet of pipe installed in casing measured horizontally at grade above the pipeline along the completed water line.
- B. Payment for 12-inch PVC irrigation main with 24-Inch ASTM A139 Grade "B" steel casing shall be at the Bid Form unit price per linear foot, which payment shall be full compensation for the PVC pipe, fittings, trenching, restoration, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, and all other incidentals necessary to complete the installation as specified.

ITEM 3D      12-INCH GATE VALVES

- A. Measurement for payment for gate valves of each size shall be the actual number installed and accepted.
- B. Payment for gate valves shall be at the Bid Form unit price per each for each size, which payment shall be full compensation for the valve and operator, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, compaction, valve boxes, extension rods, and concrete pads, and all other incidentals necessary to complete the installation as specified.

ITEMS 3E & 3F      CUT-IN CONNECT TO EXISTING IRRIGATION MAIN

- A. Measurement for payment for cut-in connect connections to existing

utilities shall be the actual number of connections installed and accepted. This item is limited to those connections where a cut-in is required. Where the Contractor is required to remove an existing cap or plug and connect, payment will not be made under this pay item.

- B. Payment shall be made at the Bid Form unit price for each cut-in connection made, including cut-in fittings, or other such connection identified on the Drawings or as required to provide a complete assembly. This item shall also include all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, and any notifications or temporary facilities that may be required to facilitate the connection. Valves required at cut-ins shall be paid for under the applicable valve unit price.

ITEM 3G 2-INCH IRRIGATION SERVICE W/4-INCH PVC CASING

- A. Measurement for payment for new irrigation water services shall be the actual number of items including service saddles required to tap the main line furnished per type, installed and accepted.
- B. Payment for irrigation service shall be made at the Bid Form unit price per each item per type installed, which payment shall be full compensation for all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, complete installation of irrigation services, including meter box, service saddles, hot taps to existing mains, fittings, pipe, corporation stops, curb stops, locking devices, locating devices and tape.

ITEM 3H PRESSURE TEST AND FLUSH IRRIGATION MAINS

- A. Measurement for payment for pressure testing and flushing of irrigation water mains shall be on a lump sum basis for the complete tests and disinfection as described in the Specifications. The lump sum includes the pressure and leakage testing of new irrigation mains. This item shall also include any required testing of existing lines disturbed by the Contractor's operations.
- B. Payment for pressure testing and flushing will be made at the Bid Form unit lump sum price, which shall be full compensation for all labor, materials and equipment necessary to perform the pressure tests, including all Owner water use and meter rental. The Contractor shall provide an estimate of the potable water quantities to the Owner prior

to testing. Equipment used to fill the new lines, such as temporary jumpers including backflow preventers and hoses shall also be included in the lump sum price.

ITEMS 3I & 3J                      GROUTING EXISTING IRRIGATION MAINS

- A.      Measurement for grouting existing irrigation mains shall be on a lump sum basis for the complete grouting of the existing irrigation mains as indicated on the Drawings.
- B.      Payment for grouting existing irrigation mains shall be made at the Bid Form unit lump sum price, which will be full compensation for all labor, materials, and equipment necessary to grout the irrigation mains. This shall include excavation, cutting existing irrigation mains, isolating existing pipe segments from active segments, grout, all fittings required to complete the task, backfill, and compaction.

ITEMS 4A & 4B                      SEWER FORCE MAIN

- A.      Measurement for payment for various sizes of sewer force main shall be the horizontal length of the pipe in linear feet, installed and accepted in accordance with the Drawings and these specifications, as measured along the center line of the completed pipe, including the length of fittings and appurtenances as required.
- B.      Payment for various sizes of sewer force main will be made at the Bid Form unit price per linear foot for the size installed, which payment shall be full compensation for all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, compaction, furnishing pipe and fittings, connections to existing valves where required, roll downs with fittings or deflection to avoid conflicts, connections to existing plugs or caps, connections to new manholes, all equipment, and all other incidentals necessary to complete the installation as specified.

ITEM 4C                      12-INCH PVC SEWER FORCE MAIN W/24-INCH ASTM A139 GRADE "B" STEEL CASING

- A.      Measurement for payment 12-inch PVC sewer force main with 24-Inch ASTM A139 Grade "B" steel casing shall be actual linear feet of pipe installed in casing measured horizontally at grade above the pipeline along the completed water line.
- B.      Payment for 12-inch PVC sewer force main with 24-Inch ASTM A139

Grade "B" steel casing shall be at the Bid Form unit price per linear foot, which payment shall be full compensation for the PVC pipe, fittings, trenching, restoration, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, and all other incidentals necessary to complete the installation as specified.

#### ITEMS 4D & 4E      PLUG VALVES

- A. Measurement for payment for plug valves of each size shall be the actual number installed and accepted.
- B. Payment for plug valves shall be at the Bid Form unit price per each for each size, which payment shall be full compensation for the valve and operator, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, compaction, valve boxes, extension rods, and concrete pads, and all other incidentals necessary to complete the installation as specified.

#### ITEMS 4F & 4G      INSERTION VALVES

- A. Measurement for payment for insertion valves of each size shall be the actual number installed and accepted.
- B. Payment for insertion valves shall be at the Bid Form unit price per each for each size, which payment shall be full compensation for the valve and operator, excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding material, backfill, compaction, valve boxes, extension rods, and concrete pads, and all other incidentals necessary to complete the installation as specified.

#### ITEMS 4H, 4I, 4J      CUT-IN CONNECT TO EXISTING SEWER FORCE MAIN

- C. Measurement for payment for cut-in connect connections to existing utilities shall be the actual number of connections installed and accepted. This item is limited to those connections where a cut-in is required. Where the Contractor is required to remove an existing cap or plug and connect, payment will not be made under this pay item.
- D. Payment shall be made at the Bid Form unit price for each cut-in connection made, including cut-in fittings, or other such connection identified on the Drawings or as required to provide a complete



assembly. This item shall also include all excavation (including rock, and other inorganic and organic unsuitable material), disposal of excess material, bedding, backfill, compaction, and any notifications or temporary facilities that may be required to facilitate the connection. Valves required at cut-ins shall be paid for under the applicable valve unit price.

**ITEM 4K      PRESSURE TEST AND FLUSH SEWER FORCE MAINS**

- A. Measurement for payment for pressure testing and flushing of sewer force mains shall be on a lump sum basis for the complete testing and flushing as described in the specifications. The lump sum will include the pressure testing and flushing of new sewer force mains. This item shall also include any required testing of existing lines disturbed by the Contractor's operations.
- B. Payment for pressure testing of force mains will be made at the Bid Form lump sum price, which shall be full compensation for all labor, materials and equipment necessary to perform the pressure tests including all Owner water use and meter rental. Equipment used to fill the new lines, such as temporary jumpers including backflow preventers and hoses shall also be included in the lump sum price.

**ITEMS 3L & 3M      GROUTING EXISTING IRRIGATION MAINS**

- A. Measurement for grouting existing irrigation mains shall be on a lump sum basis for the complete grouting of the existing irrigation mains as indicated on the Drawings.
- B. Payment for grouting existing irrigation mains shall be made at the Bid Form unit lump sum price, which will be full compensation for all labor, materials, and equipment necessary to grout the irrigation mains. This shall include excavation, cutting existing irrigation mains, isolating existing pipe segments from active segments, grout, all fittings required to complete the task, backfill, and compaction.

**PART 3 – PRODUCTS (NOT USED)**

**END OF SECTION**

SECTION 01051  
LINES AND GRADES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General
- B. Surveys
- C. Datum Plane
- D. Protection of Survey Data

1.2 GENERAL

- A. Construct all work in accordance with the lines and grades shown on the Drawings. Assume full responsibility for keeping all alignment and grade.

1.3 SURVEYS

- A. Reference Points: The OWNER will provide reference points for the work as described in the General Conditions. Base horizontal and vertical control points will be designated by the ENGINEER and used as datum for the Work. Perform all additional survey, layout, and measurement work.
  - 1. Keep ENGINEER informed, sufficiently in advance, of the times and places at which work is to be performed so that base horizontal and vertical control points may be established and any checking deemed necessary by ENGINEER may be done, with minimum inconvenience to the ENGINEER and at no delay to CONTRACTOR. It is the intention not to impede the Work for the establishment of control points and the checking of lines and grades set by the CONTRACTOR. However, when necessary, suspend working operations for such reasonable time as the ENGINEER may require for this purpose. Costs associated with such suspension are deemed to be included in the Contract Price, and no time extension or additional costs will be allowed.
  - 2. Provide an experienced survey crew including an instrument operator, competent assistants, and any instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement of work performed by the CONTRACTOR.

#### 1.4 DATUM PLANE

- A. All elevations indicated or specified refer to the Mean Sea Level Datum Plane, 1929 General Adjustment, of the United States Coast and Geodetic Survey and are expressed in feet and decimal parts thereof, or in feet and inches.

#### 1.5 PROTECTION OF SURVEY DATA

- A. General: Safeguard all points, stakes, grade marks, known property corners, monuments, and bench marks made or established for the Work. Reestablish them if disturbed, and bear the entire expense of checking reestablished marks and rectifying work improperly installed.
- B. Records: Keep neat and legible notes of measurements and calculations made in connection with the layout of the Work. Furnish copies of such data to the ENGINEER for use in checking the CONTRACTOR's layout. Data considered of value to the OWNER will be transmitted to the OWNER by the ENGINEER with other records on completion of the Work.

#### PART 2 PRODUCTS

Not Used

#### PART 3 EXECUTION

Not Used

END OF SECTION

## SECTION 01300

### SUBMITTALS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Description of Requirements
- B. Submittal Procedures
- C. Specific Submittal Requirements
- D. Action on Submittals
- E. Repetitive Review

##### 1.2 DESCRIPTION OF REQUIREMENTS

- A. This section specifies procedural requirements for Shop Drawings, product data, samples, and other miscellaneous Work-related submittals.
- B. Procedures concerning items such as listing of manufacturers, suppliers, subcontractors, construction progress schedule, schedule of Shop Drawing submissions, bonds, payment applications, insurance certificates, and schedule of values are specified elsewhere.
- C. Work-Related Submittals:
  - 1. Substitution or "Or Equal" Items:
    - a. Includes material or equipment CONTRACTOR requests ENGINEER to accept, after Bids are received, as substitute for items specified or described in Specifications by using name of a proprietary item or name of particular supplier.
  - 2. Shop Drawings:
    - a. Includes technical data and drawings specially prepared for this Project, including fabrication and installation drawings, diagrams, actual performance curves, data sheets, schedules, templates, patterns, reports, instructions, design mix formulas, measurements, and similar information not in standard printed form.

- b. Standard information prepared without specific reference to the Project is not considered a Shop Drawing.
- 3. Product Data:
  - a. Includes standard printed information on manufactured products, and systems that has not been specially prepared for this Project, including manufacturer's product specifications and installation instructions, catalog cuts, standard wiring diagrams, printed performance curves, mill reports, and standard color charts.
- 4. Samples:
  - a. Includes both fabricated and manufactured physical examples of materials, products, and units of work, partial cuts of manufactured or fabricated work, swatches showing color, texture, and pattern, and units of work to be used for independent inspection and testing.
  - b. Mock-ups are special forms of samples which are too large or otherwise inconvenient for handling in manner specified for transmittal of sample submittals.
- 5. Working Drawings:
  - a. When used in the Contract Documents, the term "working drawings" shall be considered to mean the CONTRACTOR'S plans for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities control systems, forming and falsework for underpinning; temporary by-pass pumping and for such other work as may be required for construction but does not become an integral part of the project.
  - b. Copies of working drawings shall be submitted to the ENGINEER at least fourteen (14) calendar days (unless otherwise specified by the ENGINEER) in advance of the required work.
  - c. Working drawings shall be signed by a registered Professional Engineer currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use.
- 6. Miscellaneous Submittals:
  - a. Work-related submittals that do not fit in the previous categories, such as guarantees, warranties, certifications, experience records, maintenance agreements, Operating and Maintenance Manuals, workmanship bonds,

survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, and similar information, devices, and materials applicable to the Work.

### 1.3 SUBMITTAL PROCEDURES

#### A. Scheduling:

1. Submit for approval, a preliminary schedule of shop drawings and samples submittals, in duplicate, and in accordance with the General Conditions.
2. Prepare and transmit each submittal to ENGINEER sufficiently in advance of scheduled performance of related work and other applicable activities.

#### B. Coordination:

1. Coordinate preparation and processing of submittals with performance of work. Coordinate each submittal with other submittals and related activities such as substitution requests, testing, purchasing, fabrication, delivery, and similar activities that require sequential activity.
2. Coordinate submission of different units of interrelated work so that one submittal will not be delayed by ENGINEER's need to review a related submittal. ENGINEER may withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.

#### C. Submittal Preparation:

1. Stamp and sign each submittal certifying to review of submittal, verification of products, field measurement, field construction criteria, coordination of information within submittal with requirements of the Work and the Contract Documents, coordination with all trades, and verification that product will fit in space provided.
2. Transmittal Form: In the transmittal form forwarding each specific submittal to the ENGINEER include the following information as a minimum.
  - a. Date of submittal and dates of previous submittals containing the same material.
  - b. Project title and number.
  - c. Submittal and transmittal number.
  - d. Contract identification.

- e. Names of:
  - (1) Contractor
  - (2) Supplier
  - (3) Manufacturer
- f. Identification of equipment and material with equipment identification numbers, model numbers, and Specification section number.
- g. Variations from Contract Documents and any limitations which may impact the Work.
- h. Drawing sheet and detail number as appropriate.

D. Resubmittal Preparation:

- 1. Comply with the requirements described in Submittal Preparation. In addition:
  - a. Identify on transmittal form that submittal is a resubmission.
  - b. Make any corrections or changes in submittals required by ENGINEER's notations on returned submittal.
  - c. Respond to ENGINEER's notations:
    - (1) On the transmittal or on a separate page attached to CONTRACTOR's resubmission transmittal, answer or acknowledge in writing all notations or questions indicated by ENGINEER on ENGINEER's transmittal form returning review submission to CONTRACTOR.
    - (2) Identify each response by question or notation number established by ENGINEER.
    - (3) If CONTRACTOR does not respond to each notation or question, resubmission will be returned without action by ENGINEER until CONTRACTOR provides a written response to all ENGINEER's notations or questions.
  - d. CONTRACTOR initiated revisions or variations:
    - (1) On transmittal form identify variations or revisions from previously reviewed submittal, other than those called for by ENGINEER.
    - (2) ENGINEER's responsibility for variations or revisions is established in the General Conditions.



#### 1.4 SPECIFIC SUBMITTAL REQUIREMENTS

- A. Specific submittals required for individual elements of work are specified in the individual Specification sections. Except as otherwise indicated in Specification sections, comply with requirements specified herein for each indicated type of submittal.
- B. Requests for Substitution or "Or Equal"
  - 1. Collect data for items to be submitted for review as substitution into one submittal for each item of material or equipment in accordance with the General Conditions.
  - 2. Submit with other scheduled submittals for the material or equipment allowing time for ENGINEER to evaluate the additional information required to be submitted.
  - 3. If CONTRACTOR requests to substitute for material or equipment specified but not identified in Specifications as requiring submittals, schedule substitution submittal request in Submittal schedule and submit as scheduled.
- C. Shop Drawings:
  - 1. Check all drawings, data and samples before submitting to the ENGINEER for review. Each and every copy of the drawings and data shall bear CONTRACTOR's stamp showing that they have been so checked. Shop drawings submitted to the ENGINEER without the CONTRACTOR's stamp will be returned to the CONTRACTOR for conformance with this requirement. All shop drawings shall be submitted through the CONTRACTOR, including those from any subcontractors.
  - 2. Submit newly prepared information, with graphic information at accurate scale. Indicate name of manufacturer or supplier (firm name). Show dimensions and clearly note which are based on field measurement; identify materials and products which are included in the Work; identify revisions. Indicate compliance with standards and notation of coordination requirements with other work. Highlight, encircle or otherwise indicate variations from Contract Documents or previous submittals.
  - 3. Include on each drawing or page:
    - a. Submittal date and revision dates.
    - b. Project name, division number and descriptions.
    - c. Detailed specifications section number and page number.

- d. Identification of equipment, product or material.
  - e. Name of CONTRACTOR and Subcontractor.
  - f. Name of Supplier and Manufacturer.
  - g. Relation to adjacent structure or material.
  - h. Field dimensions, clearly identified.
  - i. Standards or Industry Specification references.
  - j. Identification of deviations from the Contract Documents.
  - k. CONTRACTOR's stamp, initialed or signed, dated and certifying to review of submittal, certification of field measurements and compliance with Contract.
  - l. Physical location and location relative to other connected or attached material at which the equipment or materials are to be installed.
- 4. Provide 8-inch by 3-inch blank space for CONTRACTOR and ENGINEER stamps.
  - 5. Submittals:
    - a. Submit 3 blue line or black line prints, or 2 reverse sepia reproducible and 1 blue or black line print. One reproducible or one print will be returned.
  - 6. Distribution:
    - a. Do not proceed with installation of materials, products or systems until copy of applicable product data showing only approved information is in possession of installer.
    - b. Maintain one set of product data (for each submittal) at Project site.
    - c. Mark 5 additional copies with the date of approval and forward to the ENGINEER for use in field and for OWNER's records.
- D. Product Data:
- 1. Preparation:
    - a. Collect required data into single submittal for each element of work or system. Where product data has been printed to include information on several similar products, some of which are not required for use on

Project or are not included in submittal, mark copies to clearly show such information is not applicable.

- b. Where product data must be specially prepared for required products, materials or systems, because standard printed data are not suitable for use, submit data as a Shop Drawing and not as product data.

2. Submittals:

- a. Submittal is for information and record, and to determine that products, materials, and systems comply with Contract Documents. Submittal is final when returned by ENGINEER marked "Approved" or "Approved as Noted".
- b. Submit 3 copies.

3. Distribution:

- a. Do not proceed with installation of materials, products or systems until copy of applicable product data showing only approval information is in possession of installer.
- b. Maintain one set of product data (for each submittal) at Project site, available for reference by ENGINEER and others.
- c. Mark 5 additional copies with the date of approval and forward to the ENGINEER for use in field and for OWNER records.

E. Samples:

1. Preparation:

- a. Where possible, provide samples that are physically identical with proposed materials or products to be incorporated into the Work. Where variations in color, pattern or texture are inherent in material or product represented by sample, submit multiple units (not less than 3 units) showing approximate limits of variations.
- b. Provide full set of optional samples where ENGINEER's selection required. Prepare samples to match ENGINEER's selection where so indicated.
- c. Include information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards.

- d. Submit samples for ENGINEER's visual review of general generic kind, color, pattern, texture, and for final check of coordination of these characteristics with other related elements of work.

2. Submittals:

- a. At CONTRACTOR's option, and depending upon nature of anticipated response from ENGINEER, initial submittal of samples may be either preliminary or final submittal.
- b. A preliminary submittal, consisting of a single set of samples, is required where specifications indicate ENGINEER's selection of color, pattern, texture or similar characteristics from manufacturer's range of standard choices is necessary. Preliminary submittals will be reviewed and returned with ENGINEER's "Action" marking.
- c. Final Submittals: Submit 3 sets of samples in final submittal, 1 set will be returned.

3. Distribution:

- a. Maintain returned final set of samples at Project site, in suitable condition and available for quality control comparisons throughout course of performing work.
- b. Returned samples intended or permitted to be incorporated in the Work are indicated in Specification sections, and shall be in undamaged condition at time of use.

F. Mock-Ups:

- 1. Mock-ups and similar samples specified in Specification sections are recognized as special type of samples. Comply with samples submittal requirements to greatest extent possible. Process transmittal forms to provide record of activity.

G. Miscellaneous Submittals:

1. Inspection and Test Reports:

- a. Classify each inspection and test report as being either "Shop Drawings" or "product data", depending on whether report is specially prepared for Project or standard publication of workmanship control testing at point of production. Process inspection and test reports accordingly.

2. Guarantees, Warranties, Maintenance Agreements, and Workmanship Bonds:

- a. Refer to Specification sections for specific requirements. Submittal is final when returned by ENGINEER marked "Approved" or "Approved as Noted".
  - b. In addition to copies desired for CONTRACTOR's use, furnish 2 executed copies. Provide 2 additional copies where required for maintenance data.
- 3. Survey Data:
  - a. Refer to Specification sections for specific requirements on property surveys, building or structure condition surveys, field measurements, quantitative records of actual Work, damage surveys, photographs, and similar data required by Specification sections. Copies will not be returned.
    - (1) Survey Copies: Furnish 2 copies. Provide 10 copies of final property survey (if any).
    - (2) Condition Surveys: Furnish 2 copies.
- 4. Certifications:
  - a. Refer to Specification sections for specific requirement on submittal of certifications. Submit 7 copies. Certifications are submitted for review of conformance with specified requirements and information. Submittal is final when returned by ENGINEER marked "Approved".
- 5. Closeout Submittals:
  - a. Refer to Specification Section 01720 for specific requirements on submittal of closeout information, materials, tools, and similar items.
    - (1) Record Documents: Section 01720.
    - (2) Materials and Tools: Spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be submitted.
    - (3) Operating and maintenance data.
- H. Operation and Maintenance Manuals:
  - 1. Submit Operation and Maintenance Manuals in accordance with Section 01730.
- I. General Distribution:

1. Unless required elsewhere, provide distribution of submittals to subcontractors, suppliers, governing authorities, and others as necessary for proper performance of work.

## 1.5 ACTION ON SUBMITTALS

### A. ENGINEER's Action:

#### 1. General:

- a. Except for submittals for record and similar purposes, where action and return on submittals are required or requested, ENGINEER will review each submittal, mark with appropriate action, and return. Where submittal must be held for coordination, ENGINEER will also advise CONTRACTOR without delay.
- b. ENGINEER will stamp each submittal with uniform, self-explanatory action stamp, appropriately marked with submittal action.

### B. Action Stamp:

#### 1. Approved:

- a. Final Unrestricted Release: Where submittals are marked "Approved", Work covered by submittal may proceed PROVIDED IT COMPLIES WITH CONTRACT DOCUMENTS. Acceptance of Work will depend upon that compliance.

#### 2. Approved As Noted:

- a. When submittals are marked "Approved as Noted", Work covered by submittal may proceed PROVIDED IT COMPLIES WITH BOTH ENGINEER'S NOTATIONS OR CORRECTIONS ON SUBMITTAL AND WITH Contract Documents. Acceptance of Work will depend on that compliance. Re-submittal is not required.

#### 3. Comments Attached - Confirm or Resubmit:

- a. When submittals are marked "Examined and Returned for Correction", do not proceed with Work covered by submittal. Do not permit Work covered by submittal to be used at Project site or elsewhere where Work is in progress.
- b. Revise submittal or prepare new submittal in accordance with ENGINEER's notations in accordance with Paragraph 1.3D of this section. Resubmit submittal without delay. Repeat if necessary to obtain different action marking.

## 1.6 RE-SUBMITTAL REVIEW

- A. Cost of Subsequent Reviews: Shop Drawings and Operation and Maintenance Manuals submitted for each item will be reviewed no more than twice at the OWNER's expense. All subsequent reviews will be performed at times convenient to the ENGINEER and at the CONTRACTOR's expense based on the ENGINEER's then prevailing rates including all direct and indirect costs and fees. Reimburse the OWNER for all such fees invoiced to the OWNER by the ENGINEER.
- B. Time Extension: Any need for more than one resubmission, or any other delay in ENGINEER's review of submittals, will not entitle CONTRACTOR to extension of the Contract Time.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

Not Used

END OF SECTION



(NO TEXT FOR THIS PAGE)

SECTION 01570  
TRAFFIC REGULATION

PART 1 GENERAL

1.1 SECTION INCLUDES:

- A. General Requirements
- B. Traffic Control

1.2 RELATED SECTIONS

- A. Section 01041 – Project Coordination
- B. Section 02230 – Roadway Crossings by Open Cut

1.3 GENERAL REQUIREMENTS

- A. The CONTRACTOR shall be responsible for providing safe and expeditious movement of traffic through construction zones. A construction zone is defined as the immediate areas of actual construction and all abutting areas which are used by the CONTRACTOR and which interfere with the driving or walking public.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.
- C. The requirements specified herein are in addition to the plan for Maintenance of Traffic as specified in Sections 01041 and 02230.

1.4 TRAFFIC CONTROL

- A. The necessary precautions shall include, but not be limited to, such items as proper construction warning signs, signals, lighting devices, marking, barricades, channelization, and hand signaling devices. The CONTRACTOR shall be responsible for installation and maintenance of all devices and requirements for the duration of the Construction period.
- B. The CONTRACTOR shall provide at least 72 hours notification to the State or County Department of Transportation of the necessity to close any portion of a roadway carrying vehicles or pedestrians so that the final approval of such closings can be obtained at least 48 hours in advanced. At no time will more than one (1) lane of roadway be closed to vehicles and pedestrians. With any such closings adequate provision shall be made for the safe expeditious movement of each.

- C. The CONTRACTOR shall also be responsible for notifying Police, Fire, and other Emergency Departments whenever construction is within roadways and of the alternate routes. Monthly status reports shall be provided to these Departments, as a minimum.
- D. The CONTRACTOR shall be responsible for removal, relocation, or replacement of any traffic control device in the construction area which exists as part of the normal pre-construction traffic control scheme. Any such actions shall be performed by the CONTRACTOR under the supervision, and in accordance with the Specifications, of the Owner, unless otherwise specified.
- E. The CONTRACTOR shall immediately notify the Owner of any vehicular or pedestrian safety or efficiency problems incurred as a result of the construction of the project.
- F. The CONTRACTOR shall be responsible for notifying all residents of any road construction and limited access at least 72 hours in advance.

## PART 2 PRODUCTS

NOT USED.

## PART 3 EXECUTION

NOT USED.

END OF SECTION

## SECTION 02 50 10

### PIPELINE REMOVAL AND GROUT ABANDONMENT

#### PART 1 GENERAL

##### 1.1 DESCRIPTION

- A. Scope of Work: The work specified in this Section consists of furnishing all labor, equipment and materials and performing all work connected with the removal and/or grout abandonment of existing pipelines and placement of the cementaceous grout to fill the voids.
- B. Applicable Codes, Standard and Specifications:
  - 1. American Water Works Association (AWWA) and American National Standards Institute (ANSI) latest edition: ANSI/AWWA C 110/A21.10 - Ductile Iron Gray Iron Fittings; ANSI/AWWA C153/A21.53 - Compact Ductile Iron Fittings
  - 2. All work associated with asbestos material shall be performed in accordance with the standards listed below and all other applicable local, State, or Federal standards.
    - a. Florida Administrative Code, Chapter 17-25.1, "Asbestos"
    - b. National Emission Standards Hazardous Air Pollution (NESHAP), 40 CFR 61, subpart M.
    - c. Occupational Safety and Health Act, 29 CFR
    - d. Environmental Protection Agency (EPA) Asbestos Abatement Worker Protection Rule
    - e. Florida Statute 455.300
- C. Definitions:
  - 1. Pipeline Abandonment - isolate from active pipelines, remove from service, dispose of pipeline contents, grout fill pipeline, plug pipeline, leave pipe in place.
  - 2. Pipeline Removal - isolate from active pipelines, remove from service. dispose of pipeline contents, remove pipe, valves, fittings, dispose or stockpile removed materials as required.

## 1.2 QUALITY ASSURANCE

- A. All work associated with the removal or taking out of service of existing asbestos cement pipelines shall be performed by a licensed asbestos abatement contractor or subcontractor registered in the State of Florida.

## 1.3 SUBMITTALS

- A. Shop Drawings: Shop Drawings shall be submitted in accordance with Division 1. In addition, the following shall be submitted to the Engineer for acceptance prior to construction.
  - 1. A detailed description of equipment and operational procedures to accomplish the grouting operation, including grout mixture design, grout mixer data, grout samples and test data.
  - 2. Asbestos abatement contractor/subcontractor licensing and qualifications, if necessary.
  - 3. Pipeline grouting contractor/subcontractor licensing and qualifications.

## PART 2 PRODUCTS

### 2.1 FITTINGS

- A. Fittings shall be manufactured of ductile iron, conforming to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53.
- B. All fittings shall be Class 250.

### 2.2 CONCRETE GROUT

- A. Provide grout with minimum 28 day compressive strength of 1000 psi, minimum slump of 5 inches, maximum slump of 9 inches. The grout mixture per cubic yard shall be:
  - 1. Cement - 500 pounds
  - 2. Fly Ash - 500 pounds
  - 3. Water - 350 pounds (42 gallons)
  - 4. Sand - 2248 pounds
  - 5. Air entrainment admixture (Darex or equal) - 3 ounces

6. Bentonite - 6 pounds (to be mixed with sufficient water to form colloidal mixture, added at the job site)

## 2.3 EQUIPMENT

- A. All grout shall be mixed with a high shear, high energy colloidal type mixer to achieve the best uniform density.
- B. The grout shall be pumped with a non-pulsating centrifugal or tri-plex pump.
- C. The mixer shall be capable of continuous mixing. Batch mixing shall not be permitted.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Traffic control measures shall be implemented prior to construction.

### 3.2 PERFORMANCE

- A. Pipe Isolation:
  1. Where indicated on the Drawings, line stops shall be utilized to isolate portions of pressurized mains.
  2. In lieu of line stops, the use of existing valves may be used to isolate portions of the pipeline. Submit work plan showing existing valves to be closed to provide isolation. Review of plan will be conducted by Engineer and Utility to determine affected area. In no case will service to residences and businesses affected by the isolation be allowed to be interrupted by more than 1 hour.
  3. Line stops shall be completed while the pipelines are pressurized.
  4. Line stops shall consist of a line stop fitting, stopping valve, blind flange for installation after stop is completed, and 1 inch equalization/purge fitting.
  5. Provide additional pipe restraining in the vicinity of the line stop for preventing pipe movement due to any unbalanced forces created by the line stop and subsequent cutting and removal of existing pipe adjacent to any line stop.
  6. In the event a pressurized potable water pipeline that will remain in service loses pressure to less than 20 psi, disinfect the water main and

submit bacteriological test results to the Florida Department of Environmental Protection. Satisfactory test results are required to be submitted for tests conducted on two consecutive days.

B. Pipe Cutting and Plugging:

1. Cut all pipe as necessary. Cut sections of pipe shall be cleared and smoothed. The contents of the pipe are to be removed and disposed as allowed by local rules and regulations.
2. Plug ends of pipe to remain in accordance with the following:
  - a. Remaining pressurized pipe - install ductile iron plug fitting. Install restraining devices to prevent pipe movement.
  - b. Remaining non-pressurized pipe - grout ends of pipe or install ductile iron cap fitting.

C. Pipeline Abandonment: Limits of removal and/or abandonment (take out of service) shall be in accordance with information shown on the Drawings. Abandonment shall be in accordance with the following:

1. Pipes under roadways or less than five feet from the edge of pavement, 2-inches and larger, shall be fully grouted along entire length. Pipe sizes less than 2-inches shall be capped or grouted at the ends of the pipe.
2. Pipes outside of roadways five feet or greater from the edge of pavement, 2-inches and larger, shall be fully grouted along entire length. Pipes sizes less than 2 inches shall be capped or grouted at the ends of the pipe. All ductile iron pipes shall be capped or grouted at the ends of the pipe.

D. Pipeline Grouting:

1. Grouting of the annular space due to the abandonment of the existing water pipe will be allowed in continuous individually bulkheaded segments of up to 500 linear feet.
2. Grout shall be placed in a maximum of three stages, with the initial stage volume equal to or greater than 50% of the total volume for that section of pipe being grouted. The maximum time wait between grouting stages shall be 24 hours.
3. For each stage, mix and pump the material in one continuous process so as to avoid partial setting of some grout material during that stage,



thus, eliminating voids and possible subsequent surface damage due to "cave-ins".

4. Each section shall be grouted by injecting grout from the lowest point and allowing it to flow toward the highest point to displace water from the annulus and assure complete void-free coverage. Grout shall be placed through tubes installed in the bulkheads at the insertion pits or manholes. Grout tubes shall be at least 2-inch nominal diameter.
5. One set of the 3 inch x 6 inch sample test cylinders shall be made for each grout mix preparation.
6. After the ends of each section of pipe are exposed, the entire space, not to exceed 500 linear feet end to end, shall be sealed by controlled pumping of grout until it flows from the pipe at the opposite end of the grouting. Grouting shall be carried out until the entire space is filled.
7. Grout pressure in the void space is not to exceed five (5) psi above maximum hydrostatic groundwater level. An open ended, highpoint tap or equivalent vent must be provided and monitored at the bulkhead opposite to the bulkhead through which grout is injected. This bulkhead will be blocked closed as grout escapes to allow the pressuring of the annular space.
8. The pump used for grouting shall be a continuous flow positive displacement model with a pugmill type mixing vat having a minimum shaft speed of 60 rpm and incorporated as an integral part of the equipment. Alternate equipment may be used subject to the approval of the Engineer. The rate of pumping shall not exceed 6 cubic feet per minute.

E. Restoration

1. All areas disturbed as a result of pipeline removal and abandonment shall be restored to equal or better condition than the existing condition.

### 3.3 FIELD QUALITY CONTROL

- A. The quality of the grout, application of the equipment and installation techniques is the responsibility of the Contractor. The review and acceptance or approval of specific mix design, equipment or installation procedures shall in no way relieve the Contractor of his obligation to provide the final product as specified herein.

- B. Contractor shall coordinate with the Owner to shut-off all system valves. Only the Owner's staff may operate valves. All valves shall be shut-off and water service shall be verified for all customers in the affected area prior to grout being injected.

END OF SECTION

## SECTION 05 56 00

### METAL CASTINGS

#### PART 1 GENERAL

##### 1.1 SUMMARY

A. Section Includes: Miscellaneous ferrous and nonferrous castings.

1. This classification includes wheel guards, valve boxes, manhole frames and covers, manhole steps, stop plank grooves, brackets and supports for piping and gutter inlets, floor drains, cleanouts and special malleable iron castings and inserts.

##### 1.2 REFERENCES

A. Codes and standards referred to in this Section are:

1. ASTM A 27/A27M - Specification for Steel Castings, Carbon for General Applications
2. ASTM A 47 - Specification for Ferric Malleable Iron Castings
3. ASTM A 48 - Specifications for Gray Cast Iron Castings
4. ASTM A 148/A148M - Specifications for Steel Castings
5. ASTM A 536 - Specifications for Ductile Iron Castings
6. ASTM B 26/B26M - Aluminum
7. ASTM B 148 - Aluminum Bronze Sand Castings
8. ASTM B 138 - Manganese Bronze

#### PART 2 PRODUCTS

##### 2.1 WORKMANSHIP

- A. Provide castings accurately made to the approved dimensions, and plane or grind castings where marked or where otherwise necessary to secure flat and true surfaces. Make allowance in the patterns so that the specified thickness is not reduced. Provide manhole covers which conform to the details shown and which are true and seat at all points. Supply castings showing the name of the manufacturer

and the country of manufacture. No plugging or welding of defective castings will be permitted.

## 2.2 WEIGHTS

- A. Reject castings with a weight which is less than the theoretical weight based on required dimensions by more than 5 percent. Provide facilities at the site for weighing castings in the presence of the ENGINEER, or furnish invoices showing true weights, certified by the supplier.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Erect all castings to accurate grades and alignment, and when placing in concrete carefully support castings to prevent movement during concreting.

### 3.2 PAINTING

- A. Clean metal castings thoroughly before painting. Give manhole frames and covers and valve boxes one coat of primer and two coats of an approved asphaltum varnish or other approved coating at the point of manufacture. Deliver all other castings to the job site unpainted. Paint all other castings as specified in Section 09 90 00.

END OF SECTION

## SECTION 09900

### PAINTING AND COATING

#### PART 1 GENERAL

##### 1.1 INTENT

- A. The intent of this Specifications is to provide the material and workmanship necessary to produce complete protection of the surfaces to be coated for Lee County Utilities. This includes all surface preparation, pre-treatment, coating application, touch-up of factory coated surfaces, protection of surfaces not to be coated, clean-up, and appurtenant work, all in accordance with the requirements of the Contract Documents. Throughout this specification "ENGINEER" refers to the Lee County Utilities Project Manager or Contract Manager. And "OWNER" refers to Lee County Utilities.

##### 1.2 PURPOSE

- A. The purpose of this Specification is to generally outline the work contemplated for the painting and protective coating work performed for Lee County Utilities, including Contract Operations, Capital Improvement Projects, and Developer Contributed Assets as defined under Scope below; together with the General Conditions, Special Provisions and all other Technical Specifications included herewith. All paints and materials used on interior tank or treatment unit surfaces shall conform to AWWA and/or Florida Department of Environmental Protection (FDEP) regulations as they may apply to potable water or wastewater service. The manufacturer furnishing the coating material may be required to furnish certification to the ENGINEER/OWNER that the materials meet these provisions.

##### 1.3 DESCRIPTION

- A. The extent of painting work is shown on the project drawings, contracts and schedules, and as specified herein.
- B. The work includes painting and finishing of interior and exterior exposed items and surfaces throughout the project, except as otherwise specified or shown on the drawings.
  - 1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of the work.
- C. The work includes field painting of exposed bare and covered pipes and ducts including color coding, and of hangers, exposed steel and iron work, tanks, vessels, and primed metal surfaces of equipment installed under the mechanical and electrical work, except as otherwise indicated.

- D. Paint all exposed surfaces normally painted in the execution of a building project whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, or are not specifically excluded from the painting work, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the OWNER will select these from standard colors available for the materials systems specified.

#### 1.4 PAINTING NOT INCLUDED

- A. The following categories of work are not included as part of the field-applied finish work, unless otherwise noted on the drawings or in the Contract Documents.
  - 1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under the various sections for structural steel, miscellaneous metal, metal fabrications, hollow metal work, and similar items. Also, for fabricated components such as shop-fabricated or factory-built mechanical and electrical equipment or accessories.
  - 2. Pre-Finished Items: Unless otherwise shown or specified, do not include painting when factory-finishing or installer finishing is specified for such items as, but not limited to, finished electrical equipment including light fixtures, switchgear and distribution cabinets.
  - 3. Concealed Surfaces: Unless otherwise shown or specified, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas. Painting of galvanized work that will be concealed in the completed work is not required. Do not paint structural steel to be encased in concrete, nor structural steel specified not to be painted under Division 5. Except for touch-up as specified in Part 3, painting of shop primed structural steel and ferrous metals that will be concealed in the completed work is not required.
  - 4. Finished Metal Surfaces: Metal surfaces of anodized aluminum, stainless steel, chromium plating, copper, bronze and similar finished materials will not require finish painting, unless otherwise specified.
  - 5. Operating and Machined Parts and Labels: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, machined surfaces, grease fittings, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting unless otherwise specified.
    - a. Do not paint over any code-requiring labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

6. Other Surfaces: Do not apply to glass, manhole frames and covers, aluminum platform gratings, stair treads, door thresholds, concrete wearing surfaces, or other walking surfaces unless otherwise specified.

## 1.5 CODES, STANDARDS AND REGULATIONS

- A. The work herein specified shall be performed in a legally acceptable manner, and it shall be the responsibility of the CONTRACTOR to obtain any and all licenses, permits, and legal approvals required to perform the work specified.
- B. All material and work covered by this specification shall comply with all currently approved or accepted provisions of applicable codes and standards published by the following organizations:

ANSI	-	American National Standards Institute 11 West 42nd New York, NY 10036 212-642-4900
API	-	American Petroleum Institute 1220 L Street N.W. Washington, DC 20005 202-682-8000
ASTM	-	American Society for Testing and Materials 100 Barr Harbor Dr. West Conshohocken, PA. 19428 610-832-9500
AWS	-	American Welding Society 550 N.W. LeJeune Rd. Miami, FL 33126 305-443-9353
AWWA	-	American Water Works Association 6666 West Quincy Avenue Denver, CO. 80235 303-794-7711
FM	-	Factory Mutual Research 1151 Boston-Providence Turnpike Norwood, MA 02062 617-762-4300
NACE	-	National Association of Corrosion Engineers PO Box 218340 Houston, TX 77218 1440 South Creek Dr.



Houston, TX. 77084-4906  
713-492-0535

- NEMA - National Electrical Manufacturer's Association  
2101 L Street N.W. Ste. 300  
Washington DC 20037  
202-457-8400
- NFPA - National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02269-9101  
617-770-3000
- OSHA - Occupational Safety and Health Act  
U.S. Department of Labor  
Occupational Safety & Health Administration  
8040 Peters Rd. Bldg. H-100  
Fort Lauderdale, FL 33324  
954-424-0242
- SAE - Society of Automotive Engineers  
400 Commonwealth Dr.  
Warrendale PA. 15096-0001  
412-776-4841
- SSPC - Steel Structures Painting Council  
40 24th Street  
Pittsburgh, PA 15222  
412-281-2331
- SSPWC - Standard Specifications for Public Works Construction  
Building News, Inc.  
3055 Overland Avenue  
Los Angeles, CA 90034  
310-202-7775
- UBC - Uniform Building Code  
Published by ICBO
- UL - Underwriters Laboratories Inc.  
333Psingsten Rd.  
Northbrook IL. 67062  
312-273-4255

C. The CONTRACTOR shall comply with all applicable Federal, state, and local laws and ordinances.

## 1.6 ACCEPTABLE COATING MANUFACTURERS

- A. Except as otherwise indicated herein, materials specified are from the catalog of the Kop-Coat, Inc. listed below. Materials by other manufacturers approved by the Engineer are acceptable provided that they are established to the satisfaction of the ENGINEER as being compatible with and of equal quality to the coatings of the company listed. The CONTRACTOR shall provide satisfactory documentation from the firm manufacturing the proposed material that the material meets the specified requirements and is equivalent or better than the listed materials in the following properties:
1. Quality
  2. Durability
  3. Resistance to abrasion and physical damage
  4. Life expectancy
  5. Ability to recoat in future
  6. Solids content by volume
  7. Dry film thickness per coat
  8. Compatibility with other coatings
  9. Suitability for the intended service
  10. Resistance to chemical attack
  11. Temperature limitations in service and during application
  12. Type and quality of recommended undercoats and topcoats
  13. Ease of application
  14. Ease of repairing damaged areas
  15. Stability of colors
- B. The cost of all testing and analyzing of the proposed substitute materials that may be required by the ENGINEER, shall be paid by the CONTRACTOR. If the proposed substitution requires changes in the contract work, the CONTRACTOR shall bear all such costs involved and the costs of allied trades affected by the substitution. These substitutions for other manufacturers must be made and approved prior to the bid date opening.
- C. Material Sources: Kop-Coat Inc. is the standard of quality for the industrial coating materials specified in this Section. Where paint numbers are listed, it is to show the type and quality of coatings that are required. For convenience of reference, this specification includes product designations for coatings and coating colors as manufactured by the Kop-Coat Inc., St. Louis, MO. 800-547-2468. Other acceptable manufacturers are, Keeler and Long, Watertown, CT. 203-274-6701, and Tnemec Co., Kansas City, MO. 816-483-3400 , and Porter International, Louisville, Ky. 502-588-9769. Proposed substitute materials must be shown to satisfy the material descriptions and to equal or exceed the properties of the listed materials as required above in Paragraph 1-06 A.

## 1.7 SUBMITTALS

- A. Coating Materials List: The CONTRACTOR shall provide six (6) copies of a coating materials list which indicates the manufacturer and the coating number, keyed to the coating schedule herein, for approval of the ENGINEER. The submittals shall be made sufficiently in advance of the coating operations to allow ample time for checking, correcting, resubmitting and rechecking.
- B. Paint Manufacturer's Information: For each paint system to be used, the CONTRACTOR shall submit the following listed data prior to beginning painting operations.
  - 1. Paint manufacturer's data sheet for each product used.
  - 2. Paint manufacturer's instructions and recommendations on surface preparation and application.
  - 3. Colors available for each product (where applicable).
  - 4. Compatibility of shop and field applied coatings (where applicable).
  - 5. Material safety data sheet for each product used.
- C. Samples and Manufacturer's Certificate: Provide all submittals, including the following, as specified in Division 1.
  - 1. Submit manufacturer's standard color chart for color selection.
  - 2. Submit specimens, approximately 8 by 10 inches in size, for custom mixed colors for approval, not including color coding colors.
  - 3. Where equipment is customarily shipped with a standard finish, submit samples of the proposed color and finish for approval prior to shipping.
  - 4. Furnish affidavits from the manufacturer certifying that materials furnished conform to the requirements specified and that paint products have been checked for compatibility.
  - 5. Submit a supplementary schedule of paint products with mil thickness, and solids by volume, including all paint applied in the shop and in the field. Provide a schedule that is in accordance with the recommendations of the paint manufacturer.
  - 6. Furnish affidavits from the manufacturer certifying that coatings in immersion service contain no water soluble solvents or corrosion inhibitive (active) pigments with slight water solubility.

## 1.8 DELIVERY AND STORAGE

- A. Deliver all coating materials to the job site in original, new and unbroken, sealed packages and containers bearing manufacturer's name and label, and the following information, all of which shall be plainly legible at the time of use:
  - 1. Name or title of material.
  - 2. Fed. Spec. number, if applicable.
  - 3. Manufacturer's stock number and date of manufacturer.

4. Manufacturer's formula or specification number.
  5. Manufacturer's batch number.
  6. Manufacturer's name.
  7. Contents by volume, for major pigment and vehicle constituents.
  8. Thinning instructions.
  9. Application instructions.
  10. Color name and number.
  11. Expiration date.
- B. Store paint materials and painting tools and equipment, including solvents and cleaning materials, in a well ventilated, dry area and away from high heat. Do not store in building or structure being painted, nor leave overnight therein. Follow manufacturer's recommendations for the safe storage of paints and solvents. CONTRACTOR shall store materials in compliance with all local, state, and federal regulations.

## 1.9 QUALITY ASSURANCE

- A. Inspection by the ENGINEER, or the waiver of inspection of any particular portion of the work, shall not relieve the CONTRACTOR of his responsibility to perform the work in accordance with these Specifications.
- B. Inspection Devices: The CONTRACTOR shall furnish, until final acceptance of the work, inspection devices in good working condition for the detection of holidays, measurement of surface profile, and measurement of dry film thicknesses of the protective coatings. Surface preparation comparison visual standards, profile and dry film thickness devices shall be made available for the ENGINEER's use at all times while coating is being done. The CONTRACTOR shall provide the services of a trained operator of the holiday detection devices until the final acceptance of such coatings. Holiday detection devices shall be operated only in the presence of the ENGINEER.
- C. Surface Cleanliness: Preparation of metallic surfaces shall be based upon comparison with SSPC-VIS 1 (ASTM D2200), and as described herein. The CONTRACTOR shall furnish the photographic standards. To facilitate inspection, the CONTRACTOR shall, on the first day of abrasive blasting operations, abrasive blast metal panels to the standards specified. Plates shall measure a minimum of 8.5 inches by 11 inches. Panels meeting the requirements of the Specifications shall be initialed by the CONTRACTOR and the OWNER's representative and coated with a clear non-yellowing finish. One of these panels shall be prepared for each type of abrasive blasting and shall be used as a comparison standard throughout the project. The CONTRACTOR shall provide SSPC-VIS 1 Surface Preparation Standards for use during the abrasive blasting operations.
- D. Surface Profile: The blast abrasive shall be suitable to achieve the blast profile as required for the coating system used. The CONTRACTOR shall furnish for the ENGINEER's use, a Keane-Tator Surface Comparator No. 372 or approved equal.

- E. Film Thickness Testing: On ferrous metals, the dry film coating thickness shall be measured in accordance with the SSPC "Paint Application Specification No. 2" (SSPC-PA2), using a magnetic-type dry film thickness gauge such as Mikrotest Model FM, Elcometer Model 111/1EZ, Positector 2000 or approved equal. Each coat shall be tested for the correct thickness. No measurements shall be made until at least eight (8) hours after application of the coating. On non-ferrous metals and other substrates, the coating thicknesses shall be measured at the time of application using a wet film gauge.
- F. Holiday Testing: The CONTRACTOR shall holiday test all coated ferrous surfaces inside a steel reservoir, or other surfaces which will be submerged in water or other liquids, or surfaces which are enclosed in a vapor space in such structures. Areas which contain holidays shall be marked and repaired, or recoated in accordance with the coating manufacturer's printed instructions and then retested.
  - 1. Coatings With Thickness Exceeding 20 Mils: For surfaces having a total dry film coating thickness exceeding 20 mils: Pulse-type holiday detector such as Tinker & Razor Model AP-W, D.E. Stearns Co. Model 14/20, or approved equal shall be used. The unit shall be adjusted to operate at the voltage required to cause a spark jump across an air gap equal to twice the specified coating thickness.
  - 2. Coatings With Thickness of 20 Mils or Less: For surfaces having a total dry film coating thickness of 20 mils or less: Tinker & Razor Model M-1 non-destructive type holiday detector, K-D Bird Dog or approved equal shall be used. The unit shall operate at less than 75-volts. For thicknesses between 10 and 20 mils, a non-sudsing type wetting agent, such as Kodak Photo-Flo, or equal shall be added to the water prior to wetting the detector sponge.

#### 1.10 MANUFACTURER'S REPRESENTATIVE

- A. The CONTRACTOR shall require the protective coating manufacturer to furnish a qualified technical representative to visit the project site for technical support and as may be necessary to resolve field problems attributable or associated with the manufacturer's products furnished under this contract or the application thereof.

#### 1.11 SAFETY AND HEALTH REQUIREMENTS

- A. General: The CONTRACTOR shall provide and require use of personal protective and safety equipment for persons working in or about the project site, in accordance with requirements of OSHA Safety and Health Standards for Construction (29CFR 1910, 1915, and 1926) its revisions, and all other applicable regulations. The CONTRACTOR shall also comply with the coating manufacturer's printed instructions, appropriate technical bulletins, manuals, and material safety data sheets in the handling of potentially hazardous or harmful materials.

- B. Head and Face Protection and Respiratory Devices: The CONTRACTOR shall require all persons to wear protective helmets while in the vicinity of the work. In additions, workers engaged in or near the work during sandblasting shall wear eye and face protection devices and air purifying, half-mask or mouthpiece respirators with appropriate filters. Barrier creams shall be used on any exposed areas of skin.
- C. Ventilation: Where ventilation is used to control hazardous exposure, all equipment shall be explosion proof. Forced air ventilation shall be provided to reduce the concentration of air contaminants to the degree such that a hazard does not exist and to assist in the proper curing of coatings applied in a confined area. Air circulation and exhausting of solvent vapors shall be continued until coatings have fully cured.
- D. Sound Levels: Whenever the occupational noise exposure exceeds maximum allowable sound levels permitted under OSHA regulations, the CONTRACTOR shall provide and require the use of approved hearing protection devices.
- E. Illumination: Adequate illumination shall be provided while work is in progress, including explosion-proof lights and electrical equipment. Whenever required by the ENGINEER, the CONTRACTOR shall provide additional illumination to cover all areas to be inspected. The level of illumination for inspection purposes shall be determined by the ENGINEER.
- F. Temporary Access: All temporary ladders and scaffolding shall conform to applicable safety requirements. Scaffolding shall be erected where requested by the ENGINEER to facilitate inspection and shall be moved by the CONTRACTOR to locations as requested by the ENGINEER.
- G. Cloths and cotton waste that might constitute a fire hazard shall be placed in fire resistant closed metal containers until removed from the project site or destroyed at the end of each work day.

#### 1.12 WARRANTY

- A. All work covered under the Contract shall be guaranteed against defective workmanship and materials for a period of one (1) year after completion and acceptance of the work. A first anniversary inspection will be scheduled by the CONTRACTOR during the eleventh (11th) month following acceptance of the work. A report shall be furnished to the OWNER describing the condition of the paint system and other work covered under the Contract. Tank draining shall be coordinated with the OWNER. Any latent defects found during this inspection shall be promptly repaired by the CONTRACTOR at no additional cost to the OWNER. Any location where coats of paint have peeled off, bubbled or cracked, and any location where rusting is evident, shall be considered a failure of the paint system. The CONTRACTOR shall make repairs at all points where failures are observed by removing the deteriorated coating, cleaning the surfaces and recoating with the same paint system. Any such repair work shall be completed by the CONTRACTOR within thirty (30) days after written notice of such defects unless otherwise negotiated.



- B. Failure on the part of the CONTRACTOR to schedule this warranty inspection will not relieve him of warranty responsibility and any defects found by the OWNER after the normal warranty period will be assumed to have occurred during the one (1) year while the warranty was in effect.

## PART 2 PRODUCTS AND COATING SYSTEMS

### 2.1 GENERAL

- A. Definitions: The term "paint", "coatings", or "finishes" as used herein, shall include surface treatments, emulsions, enamels, paints, epoxy resins, and all other protective coatings, excepting galvanizing or anodizing, whether used as a pre-treatment, primer, intermediate coat, or finish coat. The term "DFT" means minimum dry film thickness.
- B. Compatibility: In any coating system, only compatible materials from a single manufacturer shall be used in the work. Particular attention shall be directed to compatibility of primers and finish coats. If necessary, subject to the approval of the ENGINEER, a barrier coat shall be applied between all existing prime coats and subsequent field coats to insure compatibility.

### 2.2 COLORS AND FINISHES

- A. All colors and shades of colors for all coats of paint shall be as selected or specified. Paint colors, surface treatment, gloss, and finishes, are indicated or specified in the "schedules" of the contract documents. Color and gloss not indicated or specified will be selected by the OWNER.
- B. Each coat shall be of a slightly different shade, as directed by the ENGINEER, to facilitate inspection of surface coverage of each coat. Finish colors shall be as selected from the manufacturer's standard color samples or shall be customer mixed to match color samples furnished by the ENGINEER. Final acceptance of colors will be from samples applied on the job.
- C. Color Pigments: Pure, non-fading, applicable types to suit the substrates and service indicated.
- D. Paint Coordination: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Furnish information to manufacturers, fabricators, suppliers and others where necessary on the characteristics of the finish materials to be used, to ensure compatible prime coats of use. Provide barrier coats over incompatible primers or remove and re-prime as required.
- E. Color Coding: All exposed piping in structures, aboveground or in pipe trenches, shall be color code painted in strict accordance with the color code chart presented in



Paragraph 3-15 of this section. All colors shall be as specified or as selected by the OWNER.

## 2.3 UNDERCOATS AND THINNERS

- A. Undercoats: Provide undercoat paint produced by the same manufacturer as the finish coats.
- B. Thinners: Use only thinners approved by the paint manufacturer and use only within recommended limits.

## 2.4 INDUSTRIAL COATING SYSTEMS

- A. The CONTRACTOR shall use coating materials suitable for the intended use and recommended by their manufacturer for the intended service.
- B. Protective Coating Materials: Products shall be standard coatings produced by recognized manufacturers regularly engaged in production of such materials for application on essentially identical facilities to those proposed in this project. Where requested, the CONTRACTOR shall provide the ENGINEER with the names of not less than ten (10) successful applications of the proposed manufacturer's products, which have been proven over a three (3) year period of time, demonstrating compliance with this specification requirement.
- C. System 1 - Alkyd Enamel: High quality gloss or semi-gloss, long oil alkyd finish with a minimum solids content of 57% by volume. Primer as recommended by manufacturer.

### 1. Painting New Construction

- a. Prime coat except wood surfaces (DFT = 3.0 mils) Kop-Coat 622-LCF Primer.
- b. Prime coat for wood surfaces (DFT = 1.5 mils) Kop-Coat Rustarmor 500 enamel thinned 15% with Kop-Coat 4000 Thinner.
- c. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat Rustarmor 500 Enamel.
- d. Total system DFT except wood surfaces = 6.0 mils  
Total system DFT for wood surfaces = 4.5 mils

### 2. Repainting Existing Surfaces

- a. The cleaned steel is to be hand brushed twice with (DFT = 4.0 mils) Kop-Coat 622-LCF Primer. Completely work the primer into all the irregular surface faces of the steel.
- b. Finish coats, two (total DFT = 3.0 mils) Kop-Coat Rustarmor 500 Enamel.

- c. Total millage shall be at least 7.0 mils.
- D. System 2 - Silicone Alkyd Enamel: High quality gloss alkyd, medium long oil alkyd finish. Minimum solids content of 48% by volume. Prime coat to be as recommended by manufacturer.
  - 1. Painting New Construction
    - a. Prime coat (DFT = 3.0 mils) Kop-Coat 622-LCF Primer.
    - b. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat Sub-Sil B
    - c. Total system DFT = 6.0 mils.
  - 2. Repainting Existing Surfaces
    - a. The cleaned steel is to be hand brushed twice with (DFT = 4.0 mils) Kop-Coat 622-LCF Primer.
    - b. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat 1515 Silicone Alkyd.
    - c. Total millage shall be at least 7.0 mils.
- E. System 3 - High Build Epoxy: High build polyamide epoxy coating, resistant to splash, spillage and fumes of dilute acids, bases and salts, and with high resistance to weathering. Coating material shall have a minimum solids content of 56% by volume. Prime coat to be a rust inhibitive epoxy primer as recommended by manufacturer.
  - 1. Prime coat (DFT = 1.5 mils) Kop-Coat 294 Epoxy Primer.
  - 2. Finish coats, two (Total DFT = 10.0 mils) Kop-Coat Hi-Gard Epoxy Coating.
  - 3. Total system DFT = 11.5 mils.
- F. System 4 Acrylic Latex (High Sheen): Single component, water based acrylic latex with a fungicide additive and minimum solids content of 35% by volume. Prime coat to be as recommended by manufacturer.
  - 1. Prime coat (DFT = 2.0 mils) as recommended by manufacturer, if needed.
  - 2. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat 620 Acrylic Emulsion.
  - 3. Total system DFT = 5.0 mils (with prime coat). 3.0 mils (without prime coat).
- G. System 5 - Acrylic, Concrete and Masonry (Flat): High molecular weight acrylic coating material with a minimum solids content of 41% by volume. Prime coat shall be an acrylic filler and sealer for concrete surfaces.

1. Painting New Construction
    - a. Prime coat (filler/sealer) Kop-Coat Concrete and Masonry Filler.
    - b. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat 600 Interior-Exterior Acrylic Emulsion.
    - c. Total system DFT = 3.0 mils.
  2. Repainting Existing Surfaces
    - a. Spot prime if needed with Kop-Coat Concrete and Masonry Filler to insure a consistent total finish appearance.
    - b. Finish coats, two (Total DFT = 3.0 mils) Kop-Coat 600 Interior-Exterior Acrylic Emulsion.
    - c. Total millage shall be at least 3.0 mils.
- H. System 6 - Coal Tar Epoxy, Steel: High build, 2-component amine or polyamide cured coal tar epoxy, solids content of at least 74% by volume, suitable for long term immersion in wastewater and for coating of buried surfaces, and conforming to or exceeding Corps of Engineers Specification C-200, or SSPC Paint 16. Prime coats are for use as a shop primer only. Prime coat shall be omitted when both surface preparation and coating are to be performed in the field.
1. Prime coat (DFT = 1.5 mils) Kop-Coat 654 Epoxy Primer.
  2. Finish coats, two (Total DFT = 20.0 mils) Kop-Coat Bitumastic No. 300-M.
- Note: Time between coats is critical and maximum times as stated by the manufacturer must not be exceeded.
3. Total system DFT = 21.5 mils (with prime coat). 20.0 mils (without prime coat).
- Notes:
- a. Spot sandblast to SSPC-SP10 all areas damaged during erection, or areas not precoated before application of coating.
  - b. All edges, nuts, bolts, lap joints, weld seams and the roof rim angle shall receive one brush-applied coat prior to the application of the complete spray coat.
- I. System 7 - Coal Tar Epoxy, Concrete: High build, 2-component amine or polyamide cured coal tar epoxy, solids content of at least 74% by volume, suitable for long term immersion in wastewater and for coating of buried surfaces and conforming to or exceeding Corps. of Engineers Specification C-200, or SSPC Paint 16. Filler

compound shall be a 2-component epoxy material used to fill voids and provide a suitable surface for the application of the coal tar epoxy. Filler is worked into the concrete surface with a wide blade putty knife or a squeegee.

1. First coat - Kop-Coat Bitumastic No. 300-M, thinned 33 percent with Thinner 2000 and apply at the rate of 200-300 sq. ft. per gallon. Allow not more than 24 hours before applying additional coats at the normal, unthinned rate.
2. Finish coats, two (Total DFT = 20.0 mils) Kop-Coat Bitumastic No. 300-M.

Note: Time between coats is critical and maximum times as stated by the manufacturer must not be exceeded.

3. Total system DFT = 20.0 mils.

- J. System 8-Polyamide Cured Epoxy for Steel or Concrete Potable Water Storage Tanks or Treatment Units: High build polyamide cured epoxy coating with solids contents of at least 56% by volume and a finish coat color of white. The material shall be capable of achieving at least 5 mils dry film thickness per coat. The epoxy coating material shall be suitable for long-term immersion service in potable water. The materials used shall appear on the latest published list of approved coatings for use in potable water issued by the Florida Department of Environmental Protection. Submit a written certification that the proposed materials meet the above regulatory agency standards and policies. Apply the material with a primer if recommended by the coating manufacturer. Thinners and additives shall also be in compliance with this paragraph.

1. Steel Tanks or Treatment Units
  - a. First coat (DFT = 5.0 mils) Kop-Coat Hi-Gard Epoxy. See notes (1), (2) and (3)
  - b. Finish coat (DFT = 5.0 mils) Kop-Coat Hi-Gard Epoxy
  - c. Total system DFT = 10.0 mils

Notes:

- (1) All sharp edges, weld burrs, weld spatter and surface irregularities shall be ground smooth before applying coating.
- (2) Touch-up coating to be done for areas damaged during erection, or areas not pre-coated. Spot sandblast to SSPC-SP10 before application of coating.
- (3) All edges, nuts, bolts, lap joints, weld seams and the roof rim angle shall receive one brush-applied coat prior to the application of the complete spray coat.

2. Concrete Tanks or Treatment Units
    - a. First coat (DFT = 4.0 mils) Kop-Coat Hi-Gard Epoxy thinned 20% with Kop-Coat 2,000 Thinner.
    - b. Finish coat (DFT = 6.0 mils) Kop-Coat Hi-Gard Epoxy.
    - c. Total system DFT = 10.0 mils.
  3. Curing Period: Prior to immersion, subject the completed system to at least 7 days of curing time with the substrate temperature at a minimum of 70 degrees F, or 10 days at a minimum of 60 degrees F. More curing time or a higher temperature shall be provided if recommended by the manufacturer. If the environmental conditions do not provide the necessary minimum temperature, use heated air to provide the necessary heat for curing. Other combinations of curing time and temperature may be used if the coating manufacturer presents satisfactory documentation and test results to substantiate that the degree of curing is equal or greater than curing for 7 days at 70 degrees F.
- K. System 9 - Polyurethane: High gloss, 2 - component aliphatic polyurethane for use on steel, fiberglass and PVC. Coating material shall have a minimum solids content of 56% by volume. Prep surface as recommended by manufacture. Product is not recommended for interior building surfaces or continuous immersion.
1. Prime coat (DFT = 3.0 mils) Hi-GARD Epoxy
  2. Finish coats, two (total DFT = 3.0 mils) Kop-Coat 1122 BRS Linear Polyurethane
  3. Total system = 6.0 mils minimum

## PART 3 EXECUTION

### 3.1 STORAGE, MIXING AND THINNING OF MATERIALS

- A. Manufacturer's Recommendations: Unless otherwise specified herein, the coating manufacturer's printed recommendations and instructions for thinning, mixing, handling, applying, and protecting its coating materials, for preparation of surfaces for coating, and for all other procedures relative to coating shall be strictly observed. No substitutes or other deviations will be permitted without written permission of the ENGINEER. The CONTRACTOR shall supply the ENGINEER with copies of each manufacturer's instructions in accordance with the requirements of Paragraph 1-07, "SUBMITTALS".
- B. All protective coating materials shall be used within the manufacturer's recommended shelf life.

- C. Storage and mixing of paint or other coating materials shall be performed only in those areas designated by the ENGINEER.

### 3.2 PREPARATION FOR COATING

- A. General: All surfaces to receive protective coatings shall be cleaned as specified herein prior to application of said coatings. The CONTRACTOR shall examine all surfaces to be coated, and shall correct all surface defects before application of any coating material. All marred or abraded spots on shop-primed and on factory-finished surfaces shall receive touch-up restoration prior to any coating application. Do not paint over dirt, rust, scale, oil, grease, moisture, scuffed surfaces or other foreign material or in conditions otherwise detrimental to the formation of a durable paint bond and film.
- B. Protection of Surfaces Not to be Coated: Surfaces which are not to receive protective coatings shall be protected during surface preparation, cleaning, and coating operations. All hardware, lighting fixtures, switch plates, machined surfaces, couplings, shafts, bearings, nameplates on machinery and other surfaces not to be painted shall be removed, masked or otherwise protected. Drop cloths shall be provided to prevent coating materials from falling on or marring adjacent surfaces. The working parts of all mechanical and electrical equipment shall be protected from damage during surface preparation and coating operations. Openings in motors shall be masked to prevent entry of coating or other materials.
- C. Protection of Adjacent Work and Areas: Care shall be exercised not to damage adjacent work during blast cleaning operations. Spray painting shall be conducted under carefully controlled conditions. The CONTRACTOR shall be fully responsible for and shall promptly repair to the satisfaction of the OWNER any and all damage to adjacent work or adjoining property occurring from blast cleaning or coating operations.
- D. Protection of Painted Surfaces: Cleaning and coating shall be so programmed that dust and other contaminants from the cleaning process will not fall on wet, newly-coated surfaces.

### 3.3 SURFACE PREPARATION STANDARDS

- A. The following referenced surface preparation specifications of the Steel Structures Painting Council shall form a part of this Specification:
  - 1. Solvent Cleaning (SSPC-SP1): The method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants from steel surfaces through the use of solvent, vapor, emulsion, alkaline, and/or steam.

2. Hand Tool Cleaning (SSPC-SP2): The method for removing all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter through the use of non-power hand tools.
3. Power Tool Cleaning (SSPC-SP3): The method for removing all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter through the use of power assisted hand tools.
4. White Metal Blast Cleaning (SSPC-SP5): The method of preparing steel surfaces which, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, and paint.
5. Commercial Blast Cleaning (SSPC-SP6): The method of preparing steel surfaces which, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, and paint. Evenly dispersed very light shadows, streaks, and discolorations caused by stains of rust, mill scale, and previously applied paint may remain on no more than 33% of the surface.
6. Brush-off Blast Cleaning (SSPC-SP7): The method of preparing steel surfaces which, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface.
7. Near-White Blast Cleaning (SSPC-SP10): The method of preparing steel surfaces which, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, and paint. Evenly dispersed very light shadows, streaks, and discolorations caused by stains of rust, mill scale, and previously applied paint may remain on no more than 5% of the surface.

### 3.4 SURFACE PREPARATION

- A. General: Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's instructions and as herein specified, for each particular substrate condition.
  1. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.
  2. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program the cleaning and painting so that contaminants from the cleaning process will not fall onto wet, newly painted surfaces. Remove mildew in accordance with the paint manufacturer's recommendations.



### 3.5 NEW FERROUS METAL SURFACE PREPARATION (UNGALVANIZED)

- A. The minimum abrasive blasting surface preparation shall be as specified in the coating system schedules included at the end of this section. Where there is a conflict between these Specifications and the coating manufacturer's printed recommendations for the intended service, the higher degree of cleaning shall apply.
- B. Workmanship for metal surface preparation shall be in conformance with the current SSPC Standards and this section. Blast cleaned surfaces shall match the standard samples available from the National Association of Corrosion Engineers (NACE) Standard TM-01-70.
- C. All oil, grease, welding fluxes and other surface contaminants shall be removed by alkaline cleaning per SSPC-SP1 prior to blast cleaning.
- D. All sharp edges shall be rounded or chamfered and all burrs, surface defects and weld splatter shall be ground smooth prior to blast cleaning.
- E. The type and size of abrasive shall be selected to produce a surface profile that meets the coating manufacturer's recommendation for the particular coating and service conditions. CONTRACTOR shall submit data and samples for approval on abrasives to be used on the Project. Abrasives that are used shall be designed for the specific purpose of blast cleaning. Abrasives shall be free of contaminants and chlorides. Ordinary builder's sand shall not be considered to be approved abrasive material. ENGINEER will periodically sample abrasives used at the job site for comparison with approved submitted materials.
- F. The abrasive shall not be reused unless otherwise approved by the ENGINEER. For automated shop blasting systems, clean oil and moisture-free abrasives shall be maintained.
- G. The CONTRACTOR shall comply with the applicable federal, state, and local air pollution control regulations for blast cleaning.
- H. Compressed air for air blast cleaning shall be supplied at adequate pressure from well maintained compressors equipped with oil/moisture separators which remove all contaminants.
- I. Surfaces shall be cleaned of all dust and residual particles of the cleaning operation by dry air blast cleaning, vacuuming or other approved method prior to painting.
- J. Enclosed areas and other areas where dust settling is a problem shall be vacuum cleaned and wiped with a tack cloth.
- K. Damaged or defective coating shall be removed by the specified blast cleaning to meet the clean surface requirements before recoating.

- L. If the specified abrasive blast cleaning will damage adjacent work, the area to be cleaned is less than 100 square feet, and the coated surface will not be submerged in service, the SSPC-SP2, Hand Tool Cleaning, or SSPC-SP3, Power Tool Cleaning, will be permitted.
- M. Shop applied coatings of unknown composition shall be completely removed before the specified coatings are applied. Valves, castings, ductile iron pipe, and fabricated pipe or equipment shall be examined for the presence of shop-applied temporary coatings. Temporary coatings shall be completely removed by Solvent Cleaning per SSPC-SP1 before the abrasive blast cleaning work has been started.
- N. Shop primed equipment shall be alkaline cleaned in the field before finish coats are applied.

### 3.6 FERROUS METAL SURFACE PREPARATION (GALVANIZED)

- A. All installation and erection caused blemishes to galvanized surfaces shall be touched up in accordance with ASTM A780 prior to coating.
- B. Galvanized ferrous metal shall be alkaline cleaned per SSPC-SP1 to remove oil, grease, and other contaminants detrimental to adhesion of the protective coating system to be used.
- C. Surfaces shall be pretreated with Kop-Coat 40 Passivator, one coat 0.4 mil DFT, prior to finish coating, in accordance with the printed recommendations of the coating manufacturer.

### 3.7 SURFACE PREPARATION OF FERROUS SURFACES WITH EXISTING COATINGS, EXCLUDING STEEL TANK OR TREATMENT UNIT INTERIORS (IN ADDITION TO REQUIREMENTS IN PARAGRAPHS 3-05 AND 3-06).

- A. General: All grease, oil, heavy chalk, dirt, or other contaminants shall be removed by solvent or detergent cleaning prior to abrasive blast cleaning. The CONTRACTOR shall determine the generic type of the existing coatings by laboratory testing, at no additional cost to the OWNER.
- B. Abrasive Blast Cleaning: The CONTRACTOR shall provide the degree of cleaning specified in the coating system schedule for the entire surface to be coated. If the degree of cleaning is not specified in the schedule, deteriorated coatings shall be removed by abrasive blast cleaning to SSPC-SP6, Commercial Blast Cleaning. Areas of tightly adhering coatings shall be cleaned to SSPC-SP7, Brush-Off Blast Cleaning, with the remaining thickness of existing coating not to exceed 3 mils.
- C. Incompatible Coatings: If coatings to be applied are not compatible with existing coatings, the CONTRACTOR shall apply intermediate coatings per the paint

manufacturer's recommendation for the specified abrasive blast cleaning. A small trial application shall be conducted for compatibility prior to painting large areas.

- D. Unknown Coatings: Coatings of unknown composition shall be completely removed prior to application of new coatings.

### 3.8 SURFACE PREPARATION FOR REPAINTING EXISTING STEEL

- A. The entire structure is to be completely pressure washed at 3,000 to 5,000 psi with potable water.
- B. All areas shall be cleaned/sandblasted to the surface preparation standards as specified herein, or superceded by the bid form.
- C. All cleaned areas are to be primed the same work day that they are cleaned and blasted.

### 3.9 PRESSURE WASH CLEANING FOR REPAINTING EXISTING CONCRETE

- A. The entire structure is to be pressure washed at 3,000 to 5,000 psi with a solution of 50% water and bleach to yield a mixture with a minimum concentration of 2-1/2% sodium hypochlorite.
- B. The entire structure is to be completely rinsed by pressure washing at 3,000 to 5,000 psi with potable water.

### 3.10 CONCRETE AND CONCRETE BLOCK MASONRY SURFACE PREPARATION

- A. Surface preparation shall not begin until at least 30 days after the concrete has been placed.
- B. All efflorescence, chalk, dust, dirt, oil and grease shall be removed by Detergent Cleaning per SSPC-SP1 before abrasive blast cleaning.
- C. Concrete, concrete block masonry surfaces, previously painted concrete and masonry and deteriorated concrete and masonry surfaces to be coated shall be abrasive blast cleaned to remove laitance, paint, deteriorated concrete, and roughen the entire surface equivalent to the surface of the No. 80 grit flint sandpaper. Concrete shall have a consistent, even texture (void free) and shall be patched where needed.
- D. Determine the alkalinity and moisture content of the surfaces to be painted by performing appropriate tests. If the surfaces are found to be sufficiently alkaline to cause blistering and burning of the finish paint, correct this condition before application of paint. Do not paint over surfaces where the moisture content exceeds that permitted in the manufacturer's printed directions.

- E. If acid etching is required by the coating application instructions, the treatment shall be made after sandblasting. After acid etching, rinse surfaces with clean water to neutralize the acid and test the pH. The pH shall be between 7.0 and 8.0.
- F. Surfaces shall be clean and dry and as recommended by the coating manufacturer before coating is started.
- G. Unless required for proper adhesion, surfaces shall be dry prior to coating. The presence of moisture shall be determined with a moisture detection device such as Delmhors Model DB, or approved equal.

### 3.11 PLASTIC, FIBERGLASS AND NONFERROUS METALS SURFACE PREPARATION

- A. Plastic and Fiberglass surfaces shall be sanded or Brush Off Blast Cleaned, SSPC-SP7, prior to solvent cleaning with a chemical compatible with the coating system primer. If blast cleaned, use 60-80 mesh abrasive.
- B. Non-ferrous metal surfaces shall be Solvent Cleaned, SSPC-SP1, followed by sanding or Brush Off Blast Cleaning, SSPC-SP7.
- C. All surfaces shall be clean and dry prior to coating application.

### 3.12 WOOD SURFACE PREPARATION

- A. Clean wood surfaces to be painted of all dust, dirt, grease, oil, or other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sandpaper smooth those finished surfaces exposed to view, with either manual or mechanical means, as applicable, and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer, before application of the priming coat. After priming, fill holes and imperfections in finish surfaces with putty or plastic woodfiller. Sandpaper smooth when dried and dust off.
- B. Prime or seal wood required to be job-painted immediately upon delivery to job. Prime edges, ends, faces, undersides, and backsides of such wood.

### 3.13 WORKMANSHIP

- A. Skilled craftsmen and experienced supervision shall be used on all work.
- B. Clean drop cloths shall be used. All damage to surfaces resulting from the work hereunder shall be leaned, repaired, and refinished to the complete satisfaction of the ENGINEER, at no cost to the OWNER.
- C. All coatings shall be applied under dry and dust-free conditions. Coating shall be done in a workmanlike manner so as to produce an even film of uniform thickness. Edges, corners, crevices, and joints shall receive special attention to insure that they have been thoroughly cleaned and that they receive an adequate thickness of coating

material. The finished surfaces shall be free from runs, drops, ridges, waves, laps, alligating, brush marks, and variations in color, texture, and finish. The hiding shall be so complete that the addition of another coat would not increase the hiding. Special attention shall be given to insure that edges, corners, crevices, welds, and similar areas receive a film thickness equivalent to adjacent areas, and installations shall be protected by the use of drop cloths or other approved precautionary measures.

### 3.14 SHOP COATING REQUIREMENTS

- A. All items of equipment, or parts of equipment which are not submerged in service, shall be shop primed and then finish coated in the field after installation with the specified or approved color. The methods, materials, application, equipment and all other details of shop painting shall comply with these Specifications. If the shop primer requires top- coating within a specified period of time, the equipment shall be finish coated in the shop and then touch-up painted after installation.
- B. All items of equipment, or parts and surfaces of equipment which are submerged when in service, with the exception of pumps and valves shall have all surface preparation and coating work performed in the field.
- C. The interior surfaces of steel water reservoirs shall have all surface preparation and coating work performed in the field.
- D. For certain pieces of equipment it may be undesirable or impractical to apply finish coatings in the field. Such equipment may include engine generator sets, equipment such as electrical control panels, switch-gear or main control boards, submerged parts of the pumps, ferrous metal passages in valves, or other items where it is not possible to obtain the specified quality in the field. Such equipment shall be shop primed and finish coated in the field with the identical material after installation. The CONTRACTOR shall require the manufacturer of each such piece of equipment to certify as part of its shop drawings that the surface preparation is in accordance with these Specifications. The coating material data sheet shall be submitted with the shop drawings for the equipment.
- E. For certain small pieces of equipment the manufacturer may have a standard coating system which is suitable for the intended service conditions. In such cases, the final determination of suitability will be made during review of the shop drawing submittals. Equipment of this type generally includes only indoor equipment such as instruments, small compressors, and chemical metering pumps.
- F. Shop painted surfaces shall be protected during shipment and handling by suitable provisions including padding, blocking, and the use of canvas or nylon slings. Primed surfaces shall not be exposed to the weather for more than 6 months before finish coating, or less time if recommended by the coating manufacturer.

- G. Damage to shop-applied coatings shall be repaired in accordance with this section and the coating manufacturer's printed instructions prior to finish painting.
- H. The CONTRACTOR shall make certain that the shop primers and field topcoats are compatible and meet the requirements of this section. Copies of applicable coating manufacturer's data sheets shall be submitted with equipment shop drawings.

### 3.15 APPLICATION OF COATINGS

- A. The application of protective coatings to steel substrates shall be in accordance with "Paint Application Specification No. 1", (SSPC-A-1), Steel Structures Painting Council.
- B. Cleaned surfaces and all coats shall be inspected prior to each succeeding coat. The CONTRACTOR shall schedule such inspection with the ENGINEER in advance.
- C. Blast cleaned ferrous metal surfaces shall be painted before any rusting or other deterioration of the surface occurs. Blast cleaning shall be limited to only those surfaces that can be painted in the same working day.
- D. Coatings shall be prepared, mixed and applied in accordance with the manufacturer's instructions and recommendations, and these Specifications. If directions differ, the most stringent requirements shall be followed.
- E. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
- F. Stir materials before application to produce a mixture of uniform density, and stir as required during the application of the materials. Do not stir surface film into the coating materials. Remove the film, and if necessary, strain the material before using.
- G. Special attention shall be given to edges, angles, weld seams, flanges, nuts and bolts, and other places where insufficient film thicknesses are likely to be present. Use stripe (brushed or gloved) painting for these areas.
- H. Finish coats, including touch-up and damage repair coats shall be applied in a manner which will present a uniform texture and color matched appearance.
- I. Job Conditions: The following job conditions will be strictly enforced during the application of coatings for the project.
  - 1. Apply water-base coatings only when the temperature of surfaces to be painted and the surrounding air temperatures are between 50 degrees F and 90 degrees F unless otherwise permitted by the paint manufacturer's printed instructions.

2. Apply solvent-thinned coatings only when the temperature of surfaces to be painted and the surrounding air temperatures are between 45 degrees F and 95 degrees F unless otherwise permitted by the paint manufacturer's printed instructions.
  3. Do not apply paint in dust or smoke laden atmosphere, high winds, rain, fog or mist; or when the relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by the paint manufacturer's printed instructions.
  4. Do not apply coatings when the temperature is less than 5 degrees F above the dewpoint. Dewpoint shall be determined by use of a sling psychrometer in conjunction with U.S. Weather Bureau psychometric tables.
  5. Do not apply coatings when the outside air temperature is expected to drop below 45 degrees F or less than 5 degrees F above the dewpoint, within 8 hours after application of the coating.
  6. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.
- J. The finish coat on all work shall be applied after all concrete, masonry, and equipment installation is complete and the work areas are clean and dust-free.
- K. General Considerations:
1. Apply paint as specified and in accordance with the manufacturer's directions. Use brushes for applying first coat on wood and on metals other than steel and sheetmetal and items fabricated from steel and sheetmetal. For other coats on wood, metal and other substrates, use applicators and techniques best suited for the type of material being applied.
  2. Apply additional coats when undercoats, stains or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Insure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  3. Paint surfaces behind movable equipment the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment with prime coat only before final installation of equipment.
  4. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint.
  5. Paint the back sides of removable or hinged covers to match the exposed surfaces.



6. Finish exterior doors on tops, bottoms and side edges the same as the exterior faces, unless otherwise indicated or specified.
  7. Sand lightly between each succeeding enamel coat.
  8. Omit the field prime coat on shop-primed surfaces and touch up painted metal surfaces which are not to be finished painted and which will not be exposed to view in the completed work. Do not omit primer on metal surfaces specified to be finish coated or on metal surfaces that will be exposed to view in the completed work.
- L. Scheduled Painting:
1. Apply the first coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
  2. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- M. Minimum Coating Thickness: Apply each material at not less than the manufacturer's recommended spreading rate, to establish a total dry film thickness as specified or, if not specified, as recommended by coating manufacturer.
- N. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to those items exposed in mechanical equipment rooms and in occupied spaces, and on the outside or exterior of buildings or structures:
1. Mechanical items to be painted include, but are not limited to, the following:
    - a. Piping, valves, pipe hangers, and supports.
    - b. Pumps
    - c. Tanks
    - d. Duct work, insulation
    - e. Motors, mechanical equipment, and supports
    - f. Accessory items
  2. Electrical items to be painted include, but are not limited to, the following:
    - a. Conduit and fittings
    - b. Switchgear
- O. Prime Coats: Apply a prime coat to material, equipment and surfaces which are required to be painted or finished, and which have not been prime coated by others.

Clean and prime unprimed ferrous metals as soon as possible after delivery of the metals to the job site. Recoat primed and sealed surfaces where there is evidence of suction spots or /unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.

- P. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling such as laps, irregularity in texture, skid marks, or other surfaces imperfections.
- Q. Pigmented, Opaque Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
- R. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

### 3.16 CURING OF COATINGS

- A. The CONTRACTOR shall provide curing conditions in accordance with the conditions recommended by the coating material manufacturer or by these Specifications, whichever is the more stringent requirement, prior to placing the completed coating system into service.
- B. Forced Air Ventilation of Steel Reservoirs and Enclosed Hydraulic Structures: Forced air ventilation is required for the application and curing of coatings on the interior surfaces of steel reservoirs and enclosed hydraulic structures. During curing periods, continuously exhaust air from a manhole in the lowest shell ring or in the case of an enclosed hydraulic structure, from the lowest level of the structure using portable ducting. After all interior coating operations have been completed, provide a final curing period for a minimum of 10 days, during which time the forced air ventilation system shall operate continuously. For additional requirements, refer to the specific written instructions of the manufacturer for the coating system being applied.

### 3.17 COLOR CODING

- A. All exposed piping shall be color coded. After the finish coat has been applied, label each line with stenciled legends identifying the nature of the pipe contents and the direction of flow. This stenciled identification shall appear in one or more places in the line as deemed necessary by the ENGINEER. Stencil legends shall be white for all pipe except white color coded pipe, which shall have black legends. Labels shall occur a minimum of every 15 feet of straight piping and at all bends. Minimum stencil size shall be two-inch letters for 4-inch and larger diameter piping and one-inch letters for 2-inch to 3-1/2-inch diameter piping. Piping 1-1/2-inch diameter and smaller shall be identified using plastic wrap-around pipe markers.

- B. Items to be coded but not specifically mentioned shall be coated in a color selected by the ENGINEER or OWNER.
- C. All paints/coatings used in potable water contact areas must have AWWA and EPA classification and approvals.
- D. All requirements of the Occupational Safety and Health Act (OSHA) concerning color coding and safety markings shall be considered part of these Specifications unless specifically excluded.
- E. Any paint/coating requirements/specifications not specifically addressed in the foregoing shall be decided upon as required by the ENGINEER.
- F. Every valve or connection, where it may be possible for a worker to be exposed to a hazardous substance, shall be labeled per General Industry Safety Orders, Article 112, OSHA Occupational Safety and Health Standards 29CFR1910.
- G. Color Code Chart

APPLICATION	COLOR
Dangerous machine parts, equipment and guards	Orange - Kop-Coat OSHA Safety Orange #J498
<u>Water Lines/Piping</u>	
Raw Settled or Clarified Finished or Potable Reuse Water	Olive Green - Kop-Coat OSHA Safety Green #2383 Aqua - Kop-Coat Marine Green #7333 Dark Blue - Kop-Coat OSHA Safety Blue A#183 Pantone Purple 522C - Kop-Coat OSHA Safety
<u>Chemical Lines/Piping</u>	
Alum or Sodium Aluminate Ammonia Carbon Slurry Chlorine (Gas/Solution) Fluoride  Methanol	Orange - Kop-Coat OSHA Safety Orange #J498 White - Kop-Coat #0800 Black - Kop-Coat #C900 Yellow - Kop-Coat OSHA Safety Yellow #625 Light Blue w/Red Band - Kop-Coat Dawn Blue #8155 with 6 " bands of Kop-Coat OSHA Safety Red #0508 Red w/Yellow Band - Kop-Coat OSHA Safety Red #0508 with 6" bands of Kop-Coat OSHA Safety Yellow #S625
Lime Slurry Odophos Sulfuric Acid or Sulfur Dioxide	Light Green – Kop-Coat Eye-Rest Green #2369 Violet – Kop-coat OSHA Safety Purple #S585 Light Green w/Yellow Band, Kop-Coat Eye-Rest Green #2369 with 6" bands of Kop-Coat OSHA Safety Yellow #S625
<u>Waste Lines/Piping</u>	
Backwash Waste	Light Brown – Kop-Coat French Grey #G243
Return Sludge	Dark Brown – Kop-Coat Dark Brown #G241
Waste Sludge	Dark Red – Kop-Coat Tile Red #0516
Untreated Wastewater (Sanitary/Other)	Dark Grey – Kop-Coat Battleship Grey #0761

APPLICATION	COLOR
<u>Other Lines/Piping</u>	
Compressed Air	Dark Green - Kop-Coat Olive Green #9379
Gasoline, propane or Diesel	Red – Kop-Coat OSHA Safety Red #0508
Other	Light Grey – Kop-coat Light Grey #0746
Traffic Operations and Housekeeping Marking Fire Protection Equip. and Flammable Materials Pumps, Equipment and Motors Couplings Guards Chlorine Equipment, Cylinder Lifting Bards and Related Equipment Header Guards & Cylinder Trunnions Cranes, Crane Bridges, Hoist and Related Equip.	White – Kop-Coat White #0800  Red - Kop-Coat OSHA Safety Red #0508  Grey – Kop-Coat Light Grey #0746  Orange – Kop-Coat OSHA Safety Orange #J498 Yellow – Kop-Coat OSHA Safety Yellow #S625  Yellow – Kop-Coat OSHA Safety Yellow #S625  Yellow- Kop-Coat OSHA Safety Yellow #S625
<u>Structures Exterior</u>	
All Buildings Exterior Exterior Doors & Door Trim Ground Storage Tanks and Reservoirs Filter Tanks Treatment Tanks Chemical Storage Tanks w/required chemical color Coding by using 3” stripping on tank and stencil legend (See above under Chemical lines.)	Ivory – Kop-Coat Ivory #0855 Dark Brown – Kop-Coat Dark Brown #G241  Ivory – Kop-Coat Ivory #0855 Ivory – Kop-Coat Ivory #0855 Ivory – Kop-Coat Ivory #0855
<u>Concrete Floors Interior &amp; Exterior</u>	
Stairways, Steps, Landings And Sidewalks	Wol-Stain

### 3.18 COATING SYSTEM SCHEDULES

#### A. COATING SYSTEM SCHEDULE, FERROUS METAL - NOT GALVANIZED (FM):

Schedule No.	Item	Surface Prep.	System No.
FM-1	All exposed surfaces outdoors, exposed to normal industrial exposure	Commercial Blast Cleaning, SSPC-SP6	Urethane #9
FM-2	All exposed surfaces indoors and outdoors, exposed to moderate and severe industrial exposure	Commercial Blast Cleaning, SSPC-SP6	(2b) Urethane #9
FM-3	Surfaces in Chlorination room, chlorine gas exposure	Commercial Blast Cleaning, SSPC-SP6	(3) High Build Epoxy

Schedule No.	Item	Surface Prep.	System No.
FM-4	Surfaces submerged or intermittently submerged in potable water, including all surfaces lower than 2' above high water level and all surfaces inside enclosed hydraulic structures, tanks and treatment units, and all surfaces of valves, couplings and pumps	Near White Metal Blast Cleaning, SSPC-SP10	(3) or (8) High Build Epoxy
FM-5	Surfaces submerged or intermittently submerged in wastewater, including all surfaces lower than 2' above high water level and all surfaces inside enclosed hydraulic structures, tanks and treatment units and all surfaces of valves, couplings and pumps	Near White Metal Blast Cleaning, SSPC-SP10	(6) Coal Tar Epoxy or (3) High Build Epoxy (if color desired)
FM-6	Buried surfaces that are not specified to be coated elsewhere	Near White Metal Blast Cleaning, SSPC-SP10	(6) Coal Tar Epoxy
FM-7	Indoor architectural sheet metal, flashings, door frames, and exposed ducts	Commercial Blast Cleaning, SSPC-SP6	(1) Alkyd Enamel
FM-8	Surfaces of indoor equipment	Commercial Blast Cleaning, SSPC-SP6	(1) Alkyd Enamel

**B. COATING SYSTEM SCHEDULE, FERROUS METAL - GALVANIZED (FMG):**

All galvanized surfaces except for the following items shall be coated unless required by other Sections: (1) Floor gratings and frames, (2) Handrails, (3) Stair treads, (4) Chain link fencing and appurtenances.

Schedule No.	Item	Surface Prep.	System No.
FMG-1	All exposed surfaces indoors and outdoors, except those included below	Solvent Cleaning per Paragraph 3-06	(1) Alkyd Enamel
FMG-2	All exposed surfaces indoors and outdoors, including surfaces in chlorinator room and chlorine storage room, except those included below	Solvent Cleaning per Paragraph 3-06	(3) or (8) High Build Epoxy
FMG-3	Surfaces buried or submerged in wastewater	Solvent Cleaning per Paragraph 3-06 or Brush Off Grade Blast Cleaning SSPC-SP7	(6) Coal Tar Epoxy
FMG-4	Indoor architectural sheet metal, flashings, doors, frames, and exposed ducts	Solvent Cleaning per Paragraph 3-06	(1) Alkyd Enamel

C. COATING SYSTEM SCHEDULE, STEEL DIGESTER FLOATING COVERS AND DIGESTER GASHOLDERS (SD):

Schedule No.	Item	Surface Prep.	System No.
SD-1	All ferrous surfaces submerged in water or sludge, including rim plate	White Metal Blast Cleaning, SSPC-SP5	(6) Coal Tar Epoxy
SD-2	All ferrous surfaces exposed to digester gas	White Metal Blast Cleaning, SSPC-SP5	(6) Coal Tar Epoxy
SD-3	All interior ferrous surfaces of gasholder shell, including top angle	White Metal Blast Cleaning, SSPC-SP5	(6) Coal Tar Epoxy
SD-4	Exposed, outdoors	Commercial Blast Cleaning, SSPC-SP6	(2) Silicone Alkyd Enamel or Urethane

D. COATING SYSTEM SCHEDULE, NON-FERROUS METAL, PLASTIC, FIBERGLASS (NFM):

Where isolated non-ferrous parts are associated with equipment or piping, the CONTRACTOR shall use the coating system for the adjacent connected surfaces. Do not coat handrails, gratings, frames or hatches. Only primers recommended by the coating manufacturer shall be used.

Schedule No.	Item	Surface Prep.	System No.
NFM-1	All exposed surfaces indoors and outdoors, except those included below	Solvent Cleaning per Paragraph 3-09	(1) Alkyd Enamel
NFM-2	Chlorination room and chlorine storage room	Solvent Cleaning per Paragraph 3-09	(3) or (8) High Build Epoxy
NFM-3	Polyvinyl chloride plastic piping, and fiberglass surfaces, indoor and outdoors, or in structures not submerged	Solvent Cleaning per Paragraph 3-09	(4) Acrylic Latex

E. COATING SYSTEM SCHEDULE - CONCRETE AND CONCRETE BLOCK MASONRY (C):

Schedule No.	Item	Surface Prep.	System No.
C-1	Exposed, indoors and outdoors, as indicated on the plans	Per Paragraph 3-09	(5b) Acrylic-Concrete Repainting
C-2	Submerged in wastewater as indicated on the plans	Per Paragraph 3-10	(7) Coal Tar Epoxy-Concrete
C-3	Interior surfaces of sewer manholes, including sidewalls, bottom, and metal appurtenances, for manholes and L/S's indicated on the plans	Per Paragraph 3-10	See Specification 09950
C-4	Exterior walls, exposed to chemical	Per Paragraph 3-10	(8) High Build

Schedule No.	Item	Surface Prep.	System No.
	splash, washdown etc. as indicated on the plans		Epoxy
C-5	Interior surfaces of potable water tanks and treatment units	Per Paragraph 3-10	(8) High Build Epoxy

F. COATING SYSTEM SCHEDULE - WOOD (W):

Schedule No.	Item	Surface Prep.	System No.
W-1	Exposed indoors and outdoors as indicated on the plans	Per Paragraph 2-12	(1) Alkyd Enamel
W-2	Exposed indoors and outdoors as indicated on the plans	Per Paragraph 3-12	(4) Acrylic Latex

3.19 CLEAN-UP AND PROTECTION

- A. Clean Up: During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day. Upon completion of painting work, clean window glass and other paint-spattered surfaces located on site and off site. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- B. Protection: Protect work of other trades located on site and off site, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting.
  1. Provide "Wet Paint" signs, as required, to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
  2. At the completion of work of other trades, touch up and restore all damaged or defaced painted surfaces.

3.20 APPEARANCE AND INSPECTION

- A. All painting shall be accomplished in a workmanlike manner and shall be free of unsightly sags, runs, bubbles, drips, waves, laps, alligating, unnecessary brush marks and overspray or other physical defects and shall be uniform in color.
- B. The CONTRACTOR shall provide all rigging, scaffolding and other equipment necessary for a satisfactory inspection of a complete paint system and acceptance by the ENGINEER/OWNER.
- C. Inspection shall be conducted by an inspector selected by the ENGINEER/OWNER in the presence of the OWNER's representative and the CONTRACTOR or his representative. Provisions for calibrated and functional test equipment is the responsibility of the CONTRACTOR.



- D. The paint film shall be free of pinholes and holidays as determined by the use of an approved holiday detector as defined in Paragraph 1-09 of this Section.
- E. The paint film shall be randomly checked for dry film thickness as stipulated in the "Coating System" sections of these specifications. Thicknesses shall be checked with a properly calibrated and approved magnetic gauge as defined in Paragraph 1-09 of this Section.

### 3.21 REPAIR OF DEFECTS IN PAINT

- A. Any defects discovered during inspection, such as low film millage, holidays or pinholes, shall be repaired with the same materials as used for the original finish coat(s). Excessive low millage could require extra full coat(s) of paint.
- B. A final inspection will be conducted by the ENGINEER/OWNER or his representative after any necessary repairs and prior to final acceptance of the job.

### 3.22 DISINFECTION OF POTABLE WATER STORAGE TANKS

- A. Description: This paragraph specifies disinfection procedures for potable water storage tanks.
- B. Quality Assurance: The following documents are a part of this section as specified and modified. In case of conflict between the requirements of this paragraph and those of the listed documents, the requirements of this paragraph shall prevail.

#### Reference

#### Title

AWWA D105, latest revision

Disinfection of Water Storage Facilities

- C. Information to be Provided: Affidavit of Compliance as described in AWWA D105.
- D. After the tank has been painted and the interior surfaces have thoroughly dried, the CONTRACTOR shall remove all visible dirt and contaminating materials. The interior of the tank shall be disinfected in accordance with Chlorination Method 2 of AWWA D105. The CONTRACTOR shall furnish all of the chlorine required.
- E. The CONTRACTOR shall be responsible for obtaining proper disinfection as determined by bacteriological testing. Samples for bacterial analyses will be taken and analyzed by the OWNER. Two consecutive samples are required to pass the bacteriological tests for the tank to comply with these disinfection requirements.
- F. Water for filling the tank after the initial disinfection will be provided by the OWNER. If bacteriological testing shows the presence of coliform bacteria, the tank shall be

redisinfected. The CONTRACTOR shall pay the OWNER for water required to fill the tank after the first filling at currently approved General Service water rates for the OWNER.

END OF SECTION

(NO TEXT FOR THIS PAGE)

## SECTION 31 10 00

### SITE CLEARING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Requirements for clearing of all areas within the Contract limits and other areas shown, including work designated in permits and other agreements, in accordance with the requirements of Division 1.
- B. Related Work Specified in Other Sections Includes:
  - 1. Section 31 23 16 - Excavation - Earth and Rock
  - 2. Section 31 23 23 - Backfilling
  - 3. Section 32 92 00 – Lawn Restoration

##### 1.2 DEFINITIONS

- A. Clearing: Clearing is the removal from the ground surface and disposal, within the designated areas, of trees, brush, shrubs, down timber, decayed wood, other vegetation, rubbish and debris as well as the removal of fences.
- B. Grubbing: Grubbing is the removal and disposal of all stumps, buried logs, roots larger than 1-1/2 inches, matted roots and organic materials.

#### PART 2 PRODUCTS

Not Used

#### PART 3 EXECUTION

##### 3.1 TREE REMOVAL

- A. Tree Removal Within Property Limits: Remove trees and shrubs within the (limits of the right-of-way) (property limits) unless otherwise indicated.
  - 1. Remove trees and shrubs to avoid damage to trees and shrubs designated to remain.

2. Grub and remove tree stumps and shrubs felled within the (property limits) (right-of-way) to an authorized disposal site. Fill depressions created by such removal with material suitable for backfill as specified in Section 31 23 23.
- B. Tree Removal Outside Property Limits: Do not cut or damage trees outside the (right-of-way) (property limits) unless shown to be removed or unless written permission has been obtained from the property owner. Furnish three copies of the written permission before removal operations commence.
- C. If the land owner desires the timber or small trees, the CONTRACTOR shall cut and neatly pile it in 4 ft. lengths for removal by the OWNER; otherwise, the CONTRACTOR shall dispose of it by hauling it away from the project site.

### 3.2 TREES AND SHRUBS TO BE SAVED

- A. Protection: Protect trees and shrubs within the (construction site) (right-of-way) (construction strip) that are so delineated or are marked in the field to be saved from defacement, injury and destruction.
  1. Work within the limits of the tree drip line with extreme care using either hand tools or equipment that will not cause damage to trees.
    - a. Do not disturb or cut roots unnecessarily. Do not cut roots 1-1/2 inches and larger unless approved.
    - b. Immediately backfill around tree roots after completion of construction in the vicinity of trees.
    - c. Do not operate any wheeled or tracked equipment within drip line.
  2. Protect vegetation from damage caused by emissions from engine-powered equipment.
  3. During working operations, protect the trunk, foliage and root system of all trees to be saved with boards or other guards placed as shown and as required to prevent damage, injury and defacement.
    - a. Do not pile excavated materials within the drip line or adjacent to the trunk of trees.
    - b. Do not allow runoff to accumulate around trunk of trees.
    - c. Do not fasten or attach ropes, cables, or guy wires to trees without permission. When such permission is granted, protect the tree before

making fastening or attachments by providing burlap wrapping and softwood cleats.

- d. The use of axes or climbing spurs for trimming will not be permitted.
  - e. Provide climbing ropes during trimming.
4. Remove shrubs to be saved, taking a sufficient earth ball with the roots to maintain the shrub.
- a. Temporarily replant if required, and replace at the completion of construction in a condition equaling that which existed prior to removal.
  - b. Replace in kind if the transplant fails.
5. Have any tree and shrub repair performed by a tree surgeon properly licensed by the State of Florida and within 24 hours after damage occurred.

### 3.3 CLEARING AND GRUBBING

- A. Clearing: Clear all items specified to the limits shown and remove cleared and grubbed materials from the site.
- 1. Do not start earthwork operations in areas where clearing and grubbing is not complete, except that stumps and large roots may be removed concurrent with excavation.
  - 2. Comply with erosion, sediment control and storm management measures as specified in Division 1.
- B. Grubbing: Clear and grub areas to be excavated, areas receiving less than 3 feet of fill and areas upon which structures are to be constructed.
- 1. Remove stumps and root mats in these areas to a depth of not less than 18 inches below the subgrade of sloped surfaces.
  - 2. Fill all depressions made by the removal of stumps or roots with material suitable for backfill as specified in Section 31 23 23.
- C. Limited Clearing: Clear areas receiving more than 3 feet of fill by cutting trees and shrubs as close as practical to the existing ground. Grubbing will not be required.
- D. Dispose of all material and debris from the clearing and grubbing operation by hauling such material and debris away to an approved dump. The cost of disposal (including hauling) of cleared and grubbed material and debris shall be considered

a subsidiary obligation of the Contractor; the cost of which shall be included in the prices bid for the various classes of work.

3.4 TOPSOIL

- A. Stripping: Strip existing topsoil from areas that will be excavated or graded prior to commencement of excavating or grading and place in well-drained stockpiles in approved locations.

3.5 PRESERVATION OF DEVELOPED PRIVATE PROPERTY

- A. The CONTRACTOR shall exercise extreme care to avoid unnecessary disturbance of developed private property along the route of the construction. Trees, shrubbery, gardens, lawns, and other landscaping, which in the opinion of the ENGINEER must be removed, shall be replaced and replanted to restore the construction easement to the condition existing prior to construction.
- B. All soil preservation procedures and replanting operations shall be under the supervision of a nursery representative experienced in such operations.
- C. Improvements to the land such as fences, walls, outbuildings, and other structures which of necessity must be removed, shall be replaced with equal quality materials and workmanship.
- D. Clean up the construction site across developed private property directly after construction is completed upon approval of the ENGINEER.
- E. Any commercial signs, disturbed or removed, shall be restored to their original condition within 24 hours.

3.6 PRESERVATION OF PUBLIC PROPERTY

- A. The appropriate paragraphs of Articles 3.5 and 3.6 of these Specifications shall apply to the preservation and restoration of public lands, parks, rights-of-way, easements, and all other damaged areas.

END OF SECTION



## SECTION 31 23 16

### EXCAVATION - EARTH AND ROCK

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Requirements for performing opencut excavations to the widths and depths necessary for constructing structures, pipelines and conduits including excavation of any material necessary for any purpose pertinent to the construction of the Work.
- B. Related Work Specified In Other Sections Includes:
  - 1. Section 31 10 00 - Site Clearing
  - 2. Section 31 40 00 - Shoring, Sheet piling and Bracing
  - 3. Section 31 23 23 - Backfilling

##### 1.2 DEFINITIONS

- A. Earth: "Earth" includes all materials which, in the opinion of the ENGINEER, do not require blasting, barring, wedging or special impact tools for their removal from their original beds, and removal of which can be completed using standard excavating equipment. Specifically excluded are all ledge and bedrock and boulders or pieces of masonry larger than one cubic yard in volume.
- B. Rock: "Rock" includes all materials which, in the opinion of the ENGINEER, require blasting, barring, wedging and/or special impact tools such as jack hammers, sledges, chisels, or similar devices specifically designed for use in cutting or breaking rock for removal from their original beds and which have compressive strengths in their natural undisturbed state in excess of 300 psi. Boulders or masonry larger than one cubic yard in volume are classed as rock excavation.

##### 1.3 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in Division 1.
- B. Dewatering Excavation Plan: Develop an excavation dewatering plan that considers site ground and groundwater conditions, the type and arrangement of the equipment to be used and the proper method of groundwater disposal. Prepare the dewatering plan before beginning excavations below groundwater. Maintain one copy of the dewatering plan at the project site to be available for inspection while all dewatering operations are underway.

## 1.4 SITE CONDITIONS

- A. Geotechnical Investigation: A geotechnical investigation and report was prepared by Ardaman and Associates and was intended only for use by the OWNER and ENGINEER in preparing the Contract Documents.
  - 1. The geotechnical investigation report may be examined for what ever value it may be considered to be worth. However, this information is not guaranteed as to its accuracy or completeness.
  - 2. The geotechnical investigation report is not part of the Contract Documents.
- B. Actual Conditions: Make any geotechnical investigations deemed necessary to determine actual site conditions.
- C. Underground Utilities: Locate and identify all existing underground utilities prior to the commencement of Work.
- D. Quality and Quantity: Make any other investigations and determinations necessary to determine the quality and quantities of earth and rock and the methods to be used to excavate these materials.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

### 3.1 GENERAL

- A. Clearing: Clear opencut excavation sites of obstructions preparatory to excavation. Clearing in accordance with Section 31 10 00, includes removal and disposal of vegetation, trees, stumps, roots and bushes, except those specified to be protected during trench excavation.
- B. Banks: Shore or slope banks to the angle of repose to prevent slides or cave-ins in accordance with Section 31 40 00.
- C. Safety: Whenever an excavation site or trench is left unattended by the CONTRACTOR or when an area is not within 100 feet of observation by the CONTRACTOR, the excavation site or trench shall be filled and/or, at the OWNER's discretion, protected by other means to prevent accidental or unauthorized entry. Such protection shall include barricades and other protection devices requested by the ENGINEER or OWNER, including temporary fencing, snow fencing, or temporary "structure" tape. Such safety items shall not relieve the CONTRACTOR of any site

safety requirements or liabilities established by Federal, State and local laws and agencies, including OSHA, but is intended as additional safety measures to protect the general public.

- D. Hazardous Materials: If encountered, take care of hazardous materials not specifically shown or noted in accordance with Section 01 57 00.
- E. During excavation and any site work, storm water pollution prevention measures shall be taken to ensure that water quality criteria are not violated in the receiving water body and all state and local regulatory requirements are met.

### 3.2 STRUCTURE EXCAVATION

- A. Excavation Size: Provide excavations of sufficient size and only of sufficient size to permit the Work to be economically and properly constructed in the manner and of the size specified.
- B. Excavation Shape: Shape and dimension the bottom of the excavation in earth or rock to the shape and dimensions of the underside of the structure or drainage blanket wherever the nature of the excavated material permits.
- C. Compaction: Before placing foundation slabs, footings or backfill, proof roll the bottom of the excavations to detect soft spots.
  - 1. For accessible areas, proof roll with a ten wheel tandem axle dump truck loaded to at least 15 tons or similarly loaded construction equipment.
  - 2. For small areas, proof roll with a smooth-faced steel roller filled with water or sand, or compact with a mechanical tamper.
  - 3. Make one complete coverage, with overlap, of the area.
  - 4. Overexcavate soft zones and replace with compacted select fill in accordance with Part 3, Section 3.9.

### 3.3 TRENCH EXCAVATION

- A. Preparation: Properly brace and protect trees, shrubs, poles and other structures which are to be preserved. Unless shown or specified otherwise, preserve all trees and large shrubs. Hold damage to the root structure to a minimum. Small shrubs may be preserved or replaced with equivalent specimens.
- B. Adequate Space: Keep the width of trenches to a minimum, however provide adequate space for workers to place, joint and backfill the pipe properly.

1. The minimum width of the trench shall be equal to the outside diameter of the pipe at the joint plus 8-inches for unsheeted trench or 12 inches for sheeted trench.

The maximum width of trench, measured at the top of the pipe, shall not exceed the outside pipe diameter plus 2 feet, unless otherwise shown on the drawing details or approved by the ENGINEER. Trench walls shall be maintained vertical from the bottom of the trench to a line measured one foot above the top of the pipe. From one foot above the top of the pipe to the surface the trench walls shall conform with OSHA Regulations.

2. In sheeted trenches, measure the clear width of the trench at the level of the top of the pipe to the inside of the sheeting.
3. Should the maximum trench widths specified above be exceeded without written approval, provide concrete cradle or encasement for the pipe as directed. No separate payment will be made for such concrete cradle or encasement.

C. Depth:

1. Excavate trenches to a minimum depth of 8 inches below the bottom of the pipe or the bottom of encasement for electrical ducts, unless otherwise shown, specified or directed, so that bedding material can be placed in the bottom of the trench and shaped to provide a continuous, firm bearing for duct encasement, pipe barrels and bells.
2. Standard trench grade shall be defined as the bottom surface of the utility to be constructed or placed within the trench. Trench grade for utilities in rock or other non-cushioning material shall be defined as additional undercuts backfilled with #57 stone compacted in 6-inch lifts, below the standard 8-inches minimum trench undercut. Excavation below trench grade that is not ordered in writing by the ENGINEER shall be backfilled to trench grade and compacted.

D. Unstable or Unsuitable Materials: If unstable or unsuitable material is exposed at the level of the bottom of the trench excavation, excavate the material in accordance with the subsection headed "Authorized Additional Excavation".

1. Material shall be removed for the full width of the trench and to the depth required to reach suitable foundation material.
2. When in the judgment of the ENGINEER the unstable or unsuitable material extends to an excessive depth, the ENGINEER may advise, in writing, the need for stabilization of the trench bottom with additional select fill material, crushed stone, washed shell, gravel mat or the need to provide firm support for the pipe or electrical duct by other suitable methods.

3. Crushed stone, washed shell and gravel shall be as specified in Section 31 23 23.
  4. Payment for such trench stabilization will be made under the appropriate Contract Items or where no such items exist, as a change in the Work.
- E. Length of Excavation: Keep the open excavated trench preceding the pipe or electrical duct laying operation and the unfilled trench, with pipe or duct in place, to a minimum length which causes the least disturbance. Provide ladders for a means of exit from the trench as required by applicable safety and health regulations.
- F. Excavated Material: Excavated material to be used for backfill shall be neatly deposited at the sides of the trenches where space is available. Where stockpiling of excavated material is required, the Contractor shall be responsible for obtaining the sites to be used and shall maintain his operations to provide for natural drainage and not present an unsightly appearance.
- G. Water: Allow no water to rise in the trench excavation until sufficient backfill has been placed to prevent pipe or duct flotation.

### 3.4 SHORT TUNNEL EXCAVATION

- A. Short Tunnel Requirements: In some instances, trees, shrubs, utilities, sidewalks and other obstructions may be encountered, the proximity of which may be a hindrance to open-cut trench excavation. In such cases, excavate by means of short tunnels in order to protect such obstructions against damage.
1. Construct the short tunnel by hand, auger or other approved method approximately 6 inches larger than the diameter of pipe bells or outer electrical duct encasement.
  2. Consider such short tunnel work incidental to the construction of pipelines or conduits and all appurtenances. The need for short tunnels will not be grounds for additional payment.

### 3.5 EXCAVATION FOR JACKING AND AUGERING

- A. Jacking and Augering Requirements: Allow adequate length in jacking pits to provide room for the jacking frame, the jacking head, the reaction blocks, the jacks, auger rig, and the jacking pipe. Provide sufficient pit width to allow ample working space on each side of the jacking frame. Allow sufficient pit depth such that the invert of the pipe, when placed on the guide frame, will be at the elevation desired for the completed line. Tighten sheet the pit and keep it dry at all times.

### 3.6 ROCK EXCAVATION

- A. Rock Excavation: Excavate rock within the boundary lines and grades as shown, specified or required.

1. Rock removed from the excavation becomes the property of the CONTRACTOR. Transport and dispose of excavated rock at an off site disposal location. Obtain the off site disposal location.
  2. Remove all shattered rock and loose pieces.
- B. Structure Depths: For cast-in-place structures, excavate the rock only to the bottom of the structure, foundation slab, or drainage blanket.
- C. Trench Width: Maintain a minimum clear width of the trench at the level of the top of the pipe of the outside diameter of the pipe barrel plus 4 feet, unless otherwise approved.
- D. Trench Depth: For trench excavation in which pipelines or electrical ducts are to be placed, excavate the rock to a minimum depth of 8 inches below the bottom of the pipe or duct encasement. Provide a cushion of sand or suitable crushed rock. Refill the excavated space with pipe bedding material in accordance with Section 31 23 23. Include placing, compacting and shaping pipe bedding material in the appropriate Contract Items.
- E. Manhole Depths: For manhole excavation, excavate the rock to a minimum depth of 8 inches below the bottom of the manhole base for pipelines 24 inches in diameter and larger and 6 inches below the bottom manhole base for pipelines less than 24 inches in diameter. Refill the excavated space with pipe bedding material in accordance with Section 31 23 23. Include placing, compacting and shaping pipe bedding material for manhole bases in the appropriate Contract Items.
- F. Over-excavated Space: Refill the excavated space in rock below structures, pipelines, conduits and manholes, which exceeds the specified depths with 2,500 psi concrete, crushed stone, washed shell, or other material as directed. Include refilling of over-excavated space in rock as part of the rock excavation.
- G. Other Requirements: Follow, where applicable, the requirements of the subsections on "Trench Excavation" and "Structure Excavation".
- H. Payment: Rock excavation, including placing, compacting and shaping of the select fill material, will be paid for under the appropriate Contract Items or where no such items exist, as a change in the Work.
- I. Blasting: Perform authorized blasting by authorized and qualified workers as approved as to the number, length, placing and direction, and loading of holes. Do not use charges which will make the excavation unduly large or irregular, nor shatter the rock upon or against which masonry is to be built, nor injure masonry or existing structures at the site or in the vicinity.

1. Cover each blast with a woven wire cable mat weighted with heavy timbers. Blasting will not be permitted within 25 feet of existing or of the completed pipeline or structure. Control blasts in tunnels so that the material surrounding the tunnel base proper is not loosened or displaced.
2. Discontinue blasting whenever it is determined that further blasting may injure or damage adjacent rock, masonry, utility lines, or other structures. In such cases, excavate the remaining rock by barring, wedging, or other approved methods.
3. Where sewers, gas, water, steam, or other utility ducts or lines, catch basin connections, or other structures have been exposed during excavation, adequately protect such structures from damage before proceeding with the blasting. Promptly repair any structure damaged by blasting at no addition to the Contract Price.
4. Take due precautions to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent powerlines, dust storms or other sources of extraneous electricity.
5. Keep a sufficient quantity of explosives on hand to avoid delay to the Work on the site when rock excavation is in progress. At no time keep a quantity in excess of that which will be required for use within the following 12 hours.
6. Store, handle and use such explosives in conformity with all laws, ordinances, and regulations of the County or governing body governing the storage and use of explosives at the construction site.
7. Provide a magazine keeper to keep accurate daily records and account for each piece of explosive, detonator and equipment from time of delivery at the magazine until used or removed from the site. Abandon no explosives or blasting agents.
8. Take sole responsibility for the methods of handling, use, and storage of explosives and any damage to persons or property resulting therefrom. Approval of these methods or failure to order that blasting be discontinued does not relieve the CONTRACTOR of any of this responsibility.

### 3.7 FINISHED EXCAVATION

- A. Finish: Provide a reasonably smooth finished surface for all excavations, which is uniformly compacted and free from irregular surface changes.
- B. Finish Methods: Provide a degree of finish which is ordinarily obtainable from blade-grade operations, except as otherwise specified in Section 31 23 23.



### 3.8 PROTECTION

- A. Traffic and Erosion: Protect newly graded areas from traffic and from erosion.
- B. Repair: Repair any settlement or washing away that may occur from any cause, prior to acceptance. Re-establish grades to the required elevations and slopes.
- C. It shall be the CONTRACTOR's responsibility to acquaint himself with all existing conditions and to locate all structures and utilities along the proposed utility alignment in order to avoid conflicts. Where actual conflicts are unavoidable, work shall be coordinated with the facility owner and performed so as to cause as little interference as possible with the service rendered by the facility disturbed. Facilities or structures damaged in the prosecution of the work shall be repaired and/or replaced immediately, in conformance with current standard practices of the industry, or according to the direction of the owner of such facility, at the CONTRACTOR's expense.
- D. Other Requirements: Conduct all Work in accordance with the environmental protection requirements specified in Division 1.

### 3.9 AUTHORIZED ADDITIONAL EXCAVATION

- A. Additional Excavation: Carry the excavation to such additional depth and width as authorized in writing, for the following reasons:
  - 1. In case the materials encountered at the elevations shown are not suitable.
  - 2. In case it is found desirable or necessary to go to an additional depth, or to an additional depth and width.
- B. Refill Materials: Refill such excavated space with either authorized 2500 psi concrete or compacted select fill material, in compliance with the applicable provisions of Section 31 23 23.
- C. Compaction: Where necessary, compact fill materials to avoid future settlement. As a minimum, unless otherwise specified or directed, backfill layers shall not exceed 6-inches in thickness for the full trench width and compaction shall equal 95% of maximum density, or 98% if under paved area of roadway, as determined by using ASTM D 1557. Compaction density tests shall be made at all such backfill areas with spacing not to exceed 100 feet apart and on each 6-inch compacted layer.
- D. Payment: Additional earth excavations so authorized and concrete or select fill materials authorized for filling such additional excavation and compaction of select fill materials will be paid for under the appropriate Contract Items or where no such items exist, as a change in the Work.

### 3.10 UNAUTHORIZED EXCAVATION

- A. Stability: Refill any excavation carried beyond or below the lines and grades shown, except as specified in the subsection headed "Authorized Additional Excavation", with such material and in such manner as may be approved in order to provide for the stability of the various structures.
- B. Refill Materials: Refill spaces beneath all manholes, structures, pipelines, or conduits excavated without authority with 2500 psi concrete or compacted select fill material, as approved.
- C. Payment: Refill for unauthorized excavation will not be measured and no payment will be made therefor.

### 3.11 SEGREGATION STORAGE AND DISPOSAL OF MATERIAL

- A. Stockpiling Suitable Materials: Stockpile topsoil suitable for final grading and landscaping and excavated material suitable for backfilling or embankments separately on the site in approved locations.
- B. Stockpile Locations: Store excavated and other material a sufficient distance away from the edge of any excavation to prevent its falling or sliding back into the excavation and to prevent collapse of the wall of the excavation. Provide not less than 2 feet clear space between the top of any stockpile and other material and the edge of any excavation.
- C. Excess Materials: CONTRACTOR shall be responsible to transport and dispose of surplus excavated material and excavated material unsuitable for backfilling or embankments at an off site disposal location secured by the CONTRACTOR.

### 3.12 REMOVAL OF WATER

- A. Water Removal: At all times during the excavation period and until completion and acceptance of the WORK at final inspection, provide ample means and equipment with which to remove promptly and dispose of properly all water entering any excavation or other parts of the WORK.
- B. Dry Excavations: Keep the excavation dry.
- C. Water Contact: Allow no water to rise over or come in contact with masonry and concrete until the concrete and mortar have attained a set and, in any event, not sooner than 12 hours after placing the masonry or concrete.
- D. Discharge of Water: Dispose of water pumped or drained from the Work in a safe and suitable manner without damage to adjacent property or streets or to other work under construction.

- E. Protection: Provide adequate protection for water discharged onto streets. Protect the street surface at the point of discharge.
- F. Sanitary Sewers: Discharge no water into sanitary sewers.
- G. Storm Sewers: Discharge no water containing settleable solids into storm sewers.
- H. Repair: Promptly repair any and all damage caused by dewatering the Work.

END OF SECTION

## SECTION 31 23 23

### BACKFILLING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. General Requirements: Backfill all excavation to the original surface of the ground or to such other grades as may be shown or required. For areas to be covered by topsoil, leave or stop backfill (12) inches below the finished grade or as shown. Obtain approval for the time elapsing before backfilling against masonry structures. Remove from all backfill, any compressible, putrescible, or destructible rubbish and refuse and all lumber and braces from the excavated space before backfilling is started. Leave sheeting and bracing in place or remove as the work progresses.
- B. Equipment Limitations: Do not permit construction equipment used to backfill to travel against and over cast-in-place concrete structures until the specified concrete strength has been obtained, as verified by concrete test cylinders. In special cases where conditions warrant, the above restriction may be modified providing the concrete has gained sufficient strength, as determined from test cylinders, to satisfy design requirements for the removal of forms and the application of load.
- C. Related Work Specified in Other Sections Includes:
  - 1. Section 31 10 00 - Site Clearing
  - 2. Section 31 23 16 - Excavation – Earth and Rock

##### 1.2 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. ASTM D 1557 - Standard Test Methods for Moisture-Density Relations of Soil and Soil-Aggregate Mixtures Using 10 lb Rammer and 18 in Drop

#### PART 2 PRODUCTS

##### 2.1 BACKFILL MATERIAL - GENERAL

- A. General: Backfill with sound materials, free from waste, organic matter, rubbish, boggy or other unsuitable materials.
- B. General Materials Requirements: Conform materials used for backfilling to the requirements specified. Follow common fill requirements whenever drainage or

select fill is not specified. Determine and obtain the approval of the appropriate test method where more than one compaction test method is specified.

- C. Frozen Materials: Do not use frozen material for backfilling.

## 2.2 DRAINAGE FILL

- A. Materials for Drainage Fill: Use clean gravel, crushed stone, or other suitable material conforming to the gradation specified for drainage fill. Clay and fine particles are unacceptable in drainage fill. Provide drainage fill of a grade between the following limits:

U.S. Standard Sieve	Percent Passing By Weight
1-1/2 inch	100
1 inch	95-100
1/2 inch	45-65
#4	5-15
#16	0-4

## 2.3 SELECT FILL

- A. Materials for Select Fill: Use clean gravel, crushed stone, washed shell, or other granular or similar material as approved which can be readily and thoroughly compacted to 95 percent of the maximum dry density obtainable by ASTM D 1557.

1. Allowed Materials: Grade select fill between the following limits:

U.S. Standard Sieve	Percent Passing By Weight
2 inch	100
1-1/2 inch	90-100
1 inch	75-95
1/2 inch	45-70
#4	25-50
#10	15-40
#200	5-15

2. Unallowed Materials: Very fine sand, uniformly graded sands and gravels, sand and silt, soft earth, or other materials that have a tendency to flow under pressure when wet are unacceptable as select fill.

## 2.4 COMMON FILL

- A. Materials for Common Fill: Material from on-site excavation may be used as common fill provided that it can be readily compacted to 90 percent of the maximum dry density obtainable by ASTM D 1557, and does not contain unsuitable material. Select fill may be used as common fill at no change in the Contract Price.
- B. Granular Materials On-Site: Granular on-site material, which is fairly well graded between the following limits may be used as granular common fill:

U.S. Standard Sieve	Percent Passing by Weight
3 inch	100
#10	50-100
#60	20-90
#200	0-20

- C. Cohesive Materials On-Site: Cohesive site material may be used as common fill.
  - 1. The gradation requirements do not apply to cohesive common fill.
  - 2. Use material having a liquid limit less than or equal to 40 and a plasticity index less than or equal to 20.
- D. Material Approval: All material used as common fill is subject to approval. If there is insufficient on-site material, import whatever additional off-site material is required which conforms to the specifications and at no additional cost.

## 2.5 UTILITY PIPE BEDDING

- A. Class A (special utility bedding). Should special bedding be required due to depth of cover, impact loadings or other conditions, Class A bedding shall be installed, as shown in Section 6 of the Lee County Utilities Operations Manual.
- B. Class B (minimum utility bedding). The bottom of the trench shall be shaped to provide a firm bedding for the utility pipe. The utility shall be firmly bedded in undisturbed firm soil or hand shaped unyielding material. The bedding shall be shaped so that the pipe will be in continuous contact therewith for its full length and shall provide a minimum bottom segment support for the pipe equal to 0.3 times the outside diameter of the barrel.

## PART 3 EXECUTION

### 3.1 ELECTRICAL DUCT AND PRECAST MANHOLE BEDDING

- A. Bedding Compaction: Bed all electrical ducts and precast manholes in well graded, compacted, select fill conforming to the requirements except as otherwise shown, specified, or required. Extend electrical duct bedding a minimum of 6 inches below the bottom of the duct encasement for the full trench width. Compact bedding thickness no less than 6 inches for precast concrete manhole bases.
- B. Concrete Work Mats: Cast cast-in-place manhole bases and other foundations for structures against a 2500 psi concrete work mat in clean and dry excavations, unless otherwise shown, specified or required.
- C. Bedding Placement: Place select fill used for bedding beneath electrical ducts and precast manhole bases, in uniform layers not greater than 9 inches in loose thickness. Thoroughly compact in place with suitable mechanical or pneumatic tools to not less than 95 percent of the maximum dry density as determined by ASTM D 1557.
- D. Use of Select Fill: Bed existing underground structures, tunnels, conduits and pipes crossing the excavation with compacted select fill material. Place bedding material under and around each existing underground structure, tunnel, conduit or pipe and extend underneath and on each side to a distance equal to the depth of the trench below the structure, tunnel, conduit or pipe.

### 3.2 PIPE BEDDING AND INITIAL BACKFILL

- A. Hand Placement: Place select fill by hand for initial pipe backfill from top of bedding to 1 foot over top of pipes in uniform layers not greater than 6 inches in loose thickness. Tamp under pipe haunches and thoroughly compact in place the select fill with suitable mechanical or pneumatic tools to not less than 95 percent of the maximum dry density as determined by ASTM D 1557.
- B. Stone Placement: Do not place large stone fragments in the pipe bedding or backfill to 1 foot over the top of pipes, nor nearer than 2 feet at any point from any pipe, conduit or concrete wall.
- C. Unallowed Materials: Pipe bedding containing very fine sand, uniformly graded sands and gravels, sand and silt, soft earth, or other materials that have a tendency to flow under pressure when wet is unacceptable.

### 3.3 BEDDING PLACEMENT AND BACKFILL FOR PIPE IN SHORT TUNNEL

- A. Bed pipelines or electrical ducts placed in short tunnels in select fill or 2500 psi concrete. Completely fill the remainder of the annular space between the outside of the pipe wall and the tunnel wall with select fill, suitable job-excavated material, or 2500 psi concrete, as approved. Suitably support pipelines or ducts in short tunnels to permit placing of backfill suitably tamped in place.



### 3.4 TRENCH BACKFILL

- A. General: Backfill material shall be clean earth fill composed of sand, clay and sand, sand and stone, crushed stone, or an approved combination thereof. Backfilling shall be accomplished under two specified requirements: First Lift, from trench grade to a point 12 inches above the top of the utility, and, Second Lift, from the top of the First Lift to the ground surface. Where thrust blocks, encasements, or other below-grade concrete work have been installed, backfilling shall not proceed until the concrete has obtained sufficient strength to support the backfill load.
- B. First Lift: Fine material shall be carefully placed and tamped around the lower half of the utility. Backfilling shall be carefully continued in compacted and tested layers not exceeding 6 inches in thickness for the full trench width, until the fill is 12 inches above the top of the utility, using the best available material from the excavation, if approved. The material for these first layers of backfill shall be lowered to within 2 feet above the top of pipes before it is allowed to fall, unless the material is placed with approved devices that protect the pipes from impact. The "First Lift" shall be thoroughly compacted and tested before the "Second Lift" is placed. Unless otherwise specified, compaction shall equal 98% of maximum density, as determined by ASTM D 1557. The "First Lift" backfill shall exclude stones, or rock fragments larger than the following:

(Greatest Dimension-Inches)	
<u>Pipe Type</u>	<u>Fragment Size (Inches)</u>
Steel	2
Concrete	2
Ductile Iron	2
Plastic	1
Fiberglass	1

- C. Second Lift: The remainder of the trench, above the "First Lift", shall be backfilled and tested in layers not exceeding 6 inches. The maximum dimension of a stone, rock, or pavement fragment shall be 6 inches. When trenches are cut in pavements or areas to be paved, compaction, as determined by ASTM D 1557, shall be equal to 98% of maximum density, with compaction in other areas not less than 95% of maximum density in unpaved portions of the Rights-of-Way or 90% of maximum density in other areas.

As an alternative, or if required under roadways, Flowable Fill may be substituted. If Flowable Fill is to be used, a fabric mesh shall be installed between the "first lift" and the Flowable Fill. Flowable Fill shall be in accordance with Section 4.7.AH of the Lee County Utilities Operations Manual.

- D. Compaction Methods: The above specified compaction shall be accomplished using accepted standard methods (powered tampers, vibrators, etc.), with exception that the first two feet of backfilling over the pipe shall be compacted by hand-operated tamping devices. Flooding or puddling with water to consolidate backfill is not

acceptable, except where sand is the only material utilized and encountered and the operation has been approved by the OWNER.

- E. Density Tests: Density tests for determination of the above specified compaction shall be made by an independent testing laboratory and certified by a Florida Registered, Professional ENGINEER at the expense of the Developer or CONTRACTOR. Test locations will be determined by the OWNER but in any case, shall be spaced not more than 100 feet apart where the trench cut is continuous. If any test results are unsatisfactory, the CONTRACTOR shall re-excavate and re-compact the backfill at his expense until the desired compaction is obtained. Additional compaction tests shall be made to each site of an unsatisfactory test, as directed, to determine the extent of re-excavation and re-compaction if necessary.

Copies of all density test results shall be furnished on a regular basis by the ENGINEER, to Lee County Utilities. Failure to furnish these results will result in the project not being recommended for acceptance by Lee County

- F. Dropping of Material on Work: Do trench backfilling work in such a way as to prevent dropping material directly on top of any conduit or pipe through any great vertical distance. Do not allow backfilling material from a bucket to fall directly on a structure or pipe and, in all cases, lower the bucket so that the shock of falling earth will not cause damage.
- G. Distribution of Large Materials: Break lumps up and distribute any stones, pieces of crushed rock or lumps which cannot be readily broken up, throughout the mass so that all interstices are solidly filled with fine material.

### 3.5 STRUCTURE BACKFILL

- A. Use of Select Fill: Use select fill underneath all structures, and adjacent to structures where pipes, connections, electrical ducts and structural foundations are to be located within this fill. Use select fill beneath all pavements, walkways, and railroad tracks, and extend to the bottom of pavement base course or ballast.
1. Place backfill in uniform layers not greater than 8 inches in loose thickness and thoroughly compact in place with suitable approved mechanical or pneumatic equipment.
  2. Compact backfill to not less than 95 percent of the maximum dry density as determined by ASTM D 1557.
- B. Use of Common Fill: Use common granular fill adjacent to structures in all areas not specified above, unless otherwise shown or specified. Select fill may be used in place of common granular fill at no additional cost.
1. Extend such backfill from the bottom of the excavation or top of bedding to the bottom of subgrade for lawns or lawn replacement, the top of previously existing ground surface or to such other grades as may be shown or required.

2. Place backfill in uniform layers not greater than 8 inches in loose thickness and thoroughly compact in place with suitable equipment, as specified above.
  3. Compact backfill to not less than 90 percent of the maximum dry density as determined by ASTM D 1557.
- C. Use of Clay: In unpaved areas adjacent to structures for the top 1 foot of fill directly under lawn subgrades use clay backfill placed in 6-inch lifts. Compact clay backfill to not less than 90 percent of the maximum dry density as determined by ASTM D 1557.
1. Use clay having a liquid limit less than or equal to 40 and a plasticity index less than or equal to 20.

### 3.6 COMPACTION EQUIPMENT

- A. Equipment and Methods: Carry out all compaction with suitable approved equipment and methods.
1. Compact clay and other cohesive material with sheep's-foot rollers or similar equipment where practicable. Use hand held pneumatic tampers elsewhere for compaction of cohesive fill material.
  2. Compact low cohesive soils with pneumatic-tire rollers or large vibratory equipment where practicable. Use small vibratory equipment elsewhere for compaction of cohesionless fill material.
  3. Do not use heavy compaction equipment over pipelines or other structures, unless the depth of fill is sufficient to adequately distribute the load.

### 3.7 BORROW

- A. Should there be insufficient material from the excavations to meet the requirements for fill material, borrow shall be obtained from pits secured and tested by the CONTRACTOR and approved by the OWNER. Copies of all test results shall be submitted to Lee County Utilities.

### 3.8 FINISH GRADING

- A. Final Contours: Perform finish grading in accordance with the completed contour elevations and grades shown and blend into conformation with remaining natural ground surfaces.
  - 1. Leave all finished grading surfaces smooth and firm to drain.
  - 2. Bring finish grades to elevations within plus or minus 0.10 foot of elevations or contours shown.
- B. Surface Drainage: Perform grading outside of building or structure lines in a manner to prevent accumulation of water within the area. Where necessary or where shown, extend finish grading to ensure that water will be carried to drainage ditches, and the site area left smooth and free from depressions holding water.

### 3.9 RESPONSIBILITY FOR AFTERSETTLEMENT

- A. Aftersettlement Responsibility: Take responsibility for correcting any depression which may develop in backfilled areas from settlement within one year after the work is fully completed. Provide as needed, backfill material, pavement base replacement, permanent pavement, sidewalk, curb and driveway repair or replacement, and lawn replacement, and perform the necessary reconditioning and restoration work to bring such depressed areas to proper grade as approved.

### 3.10 INSPECTION AND TESTING OF BACKFILLING

- A. Sampling and Testing: Provide sampling, testing, and laboratory methods in accordance with the appropriate ASTM Standard Specification. Subject all backfill to these tests.
- B. Compaction density tests shall be made at all such backfill areas with spacing not to exceed 100 feet apart and on each 6-inch compacted layer.
- C. Correction of Work: Correct any areas of unsatisfactory compaction by removal and replacement, or by scarifying, aerating or sprinkling as needed and recompaction in place prior to placement of a new lift.

END OF SECTION

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## SECTION 31 40 00

### SHORING, SHEETING AND BRACING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Work required for protection of an excavation or structure through shoring, sheeting, and bracing.
- B. Related Work Specified in Other Sections Includes:
  - 1. Section 31 23 16 - Excavation - Earth and Rock
  - 2. Section 31 23 23 - Backfilling

##### 1.2 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in Division 1.
- B. CONTRACTOR's Submittals: All sheeting and bracing shall be the responsibility of the CONTRACTOR to retain qualified design services for these systems, and to be completed with strict adherence to OSHA Regulations. Submit complete design calculations and working drawings of proposed shoring, sheeting and bracing which have been prepared, signed and sealed by a Licensed Professional Engineer experienced in Structural Engineering and registered in the State of Florida, before starting excavation for jacking pits and structures. Use the soil pressure diagram shown for shoring, sheeting and bracing design. ENGINEER's review of calculations and working drawings will be limited to confirming that the design was prepared by a licensed professional engineer and that the soil pressure diagram shown was used.

##### 1.3 REFERENCES

- A. Design: Comply with all Federal and State laws and regulations applying to the design and construction of shoring, sheeting and bracing.
- B. N.B.S. Building Science Series 127 "Recommended Technical Provisions for Construction Practice in Shoring and Sloping Trenches and Excavations.

##### 1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Do work in accordance with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54), and the Florida Trench Safety Act. The



CONTRACTOR shall also observe 29 CFR 1910.46 OSHA's regulation for Confined Space Entry.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS AND MATERIALS

- A. Material Recommendations: Use manufacturers and materials for shoring, sheeting and bracing as recommended by the Licensed Professional Engineer who designed the shoring, sheeting, and bracing.

## PART 3 EXECUTION

### 3.1 SHORING, SHEETING AND BRACING INSTALLATION

- A. General: Provide safe working conditions, to prevent shifting of material, to prevent damage to structures or other work, to avoid delay to the work, all in accordance with applicable safety and health regulations. Properly shore, sheet, and brace all excavations which are not cut back to the proper slope and where shown. Meet the general trenching requirements of the applicable safety and health regulations for the minimum shoring, sheeting and bracing for trench excavations.
  - 1. CONTRACTOR's Responsibility: Sole responsibility for the design, methods of installation, and adequacy of the shoring, sheeting and bracing.
- B. Arrange shoring, sheeting and bracing so as not to place any strain on portions of completed work until the general construction has proceeded far enough to provide ample strength.
- C. If ENGINEER is of the opinion that at any point the shoring, sheeting or bracing are inadequate or unsuited for the purpose, resubmission of design calculations and working drawings for that point may be ordered, taking into consideration the observed field conditions. If the new calculations show the need for additional shoring, sheeting and bracing, it should be installed immediately.
- D. Monitoring: Periodically monitor horizontal and vertical deflections of sheeting. Submit these measurements for review.
- E. Accurately locate all underground utilities and take the required measures necessary to protect them from damage. All underground utilities shall be kept in service at all times as specified in Division 1.
- F. Driven Sheet piling: Drive tight sheet piling in that portion of any excavation in paved or surface streets City collector and arterial streets and in State and County highways below the intersection of a one-on-one slope line from the nearest face of the excavation to the edge of the existing pavement or surface.

G. Sheeting Depth: In general drive or place sheeting for pipelines to a depth at elevation equal to the top of the pipe as approved.

1. If it is necessary to drive sheeting below that elevation in order to obtain a dry trench or satisfactory working conditions, cut the sheeting off at the top of the pipe and leave in place sheeting below the top of the pipe.
2. Cut off sheeting not designated as "Sheeting Left in Place". The cut ends of sheeting left adjacent to the pipe will be paid for as "Sheeting Left in Place".
3. Do not cut the sheeting until backfill has been placed and compacted to the top of the pipe.

H. Sheeting Removal: In general, remove sheeting and bracing above the top of the pipe as the excavation is refilled in a manner to avoid the caving in of the bank or disturbance to adjacent areas or structures. Sheeting shall be removed as backfilling progresses so that the sides are always supported or when removal would not endanger the construction of adjacent structures. When required to eliminate excessive trench width or other damages, shoring or bracing shall be left in place and the top cut off at an elevation 2.5 feet below finished grade, unless otherwise directed.

1. Carefully fill voids left by the withdrawal of the sheeting by jetting, ramming or otherwise.
2. No separate payment will be made for filling of such voids.

I. Permission for Removal: Obtain permission before the removal of any shoring, sheeting or bracing. Retain the responsibility for injury to structures or to other property or persons from failure to leave such shoring, sheeting and bracing in place even though permission for removal has been obtained.

J. Preload internal braces to 50 percent of the design loads.

K. Proof test tie backs to 133 percent of the design loads and lock off tie backs at 75 percent of the design loads.

### 3.2 SHEETING LEFT IN PLACE FOR PROTECTION

A. Ordered Left in Place: In addition to sheeting specified or shown to be left in place, the ENGINEER may order, in writing, any or all other shoring, sheeting or bracing to be left in place for the purpose of preventing injury to the structures, pipelines or to other property or to persons.

1. Cutoff sheeting left in place at the elevation shown or ordered, but, in general, at least 2.5 feet below the final ground surface.
  2. Drive up tight any bracing remaining in place.
- B. Right to Order: Do not construe the right to order shoring, sheeting and bracing left in place as creating any obligation to issue such orders.
- C. Payment: Shoring, sheeting and bracing left in place, by written order, will be paid for under the appropriate Contract Items or where no such items exist, as changes in the work.

END OF SECTION

## SECTION 33 05 01

### LEAKAGE TESTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Testing for any signs of leakage in all pipelines and structures required to be watertight.
  - 1. Test gravity sewers and drain lines by low pressure air testing.
  - 2. Test all other pipelines with water under the specified pressures.
- B. Operation of Existing Facilities: Conduct all tests in a manner to minimize as much as possible any interference with the day-to-day operations of existing facilities or other contractors working on the site.

##### 1.2 PERFORMANCE REQUIREMENTS

- A. Written Notification of Testing: Provide written notice when the work is ready for testing, and make the tests as soon thereafter as possible.
  - 1. Personnel for reading meters, gauges, or other measuring devices, will be furnished.
  - 2. Furnish all other labor, equipment, air, water and materials, including meters, gauges, smoke producers, blower, pumps, compressors, fuel, water, bulkheads and accessory equipment.

##### 1.3 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. AWWA C 600 - Installation of Ductile-Iron Water Mains and Their Appurtenances

##### 1.4 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in Division 1.
- B. Testing Report: Prior to placing the sewer system in service submit for review and approval a detailed bound report summarizing the leakage test data, describing the test procedure and showing the calculations on which the leakage test data is based.

## 1. Reference Sewer Line Data

### a. For Low Pressure Air Testing

- (1) The length and diameter of the section of line tested (MH to MH) including any laterals.
- (2) A complete description of test procedures and methods, including:
  - (a) Trench backfilling and sewer cleaning status
  - (b) Type of plugs used and where
  - (c) Depth of sewer, and ground water pressure over sewer pipe
  - (d) Stabilization time period and air pressure
  - (e) Actual air test pressures used if ground water is present
  - (f) The allowed time by specifications
  - (g) The actual test time
  - (h) The air pressure at beginning and end of test
- (3) The name of the inspector/tester and the date(s) and time(s) of all testing, including any retesting.
- (4) A description of any repairs made.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

### 3.1 LEAKAGE TESTING

- A. All new sewer and water pipelines installed shall be tested for leakage. The test used will be Hydrostatic Testing for pressure lines and Low Pressure Air Testing for gravity lines. Tests to be performed will be indicated by the ENGINEER and witnessed by the ENGINEER and the Lee County Utilities representatives.

#### 1. Flushing

- a. All mains shall be flushed to remove all sand and other foreign matter. The velocity of the flushing water shall be at least 4 fps. Flushing shall be terminated at the direction of the ENGINEER. dispose of the flushing water without causing a nuisance or property damage.
- b. Temporary flush out connections shall be installed on all dead end water mains at the locations shown on the Drawings and in accordance with the detail shown in Section 9 of the Lee County Utilities Operations Manual.

## 2. Hydrostatic Testing

Perform hydrostatic testing of the system as set forth in the following, and shall conduct said tests in the presence of representatives from the COUNTY and other authorized agencies, with 48 hours advance notice provided.

Piping and appurtenances to be tested shall be within sections between valves unless alternate methods have received prior approval from the COUNTY. Testing shall not proceed until concrete thrust blocks are in place and cured, or other restraining devices installed. All piping shall be thoroughly cleaned and flushed prior to testing to clear the lines of all foreign matter. While the piping is being filled with water, care shall be exercised to permit the escape of air from extremities of the test section, with additional release cocks provided if required.

Hydrostatic testing shall be performed with a sustained pressure for a minimum of two (2) hours at 150 psi pressure or 2-1/2 times working pressure, whichever is higher, unless otherwise approved by Lee County Utilities, for a period of not less than two (2) hours. Testing shall be in accordance with the applicable provisions as set forth in the most recent edition of AWWA Standard C600. The allowable rate of leakage shall be less than the number of gallons per hour determined by the following formula:

$$L = \frac{SD (P)^{1/2}}{133,200}$$

Where,

L = Allowable leakage in gallons per hour;

S = Length of pipe tested in feet;

D = Nominal diameter of the pipe in inches;

P = Average test pressure maintained during the leakage test in pounds per square inch

$$\text{For 150 psi, } L = (9.195 \times 10^{-5}) SD$$

The testing procedure shall include the continued application of the specified pressure to the test system, for the one hour period, by way of a pump taking

supply from a container suitable for measuring water loss. The amount of loss shall be determined by measuring the volume displaced from said container.

Should the test fail, necessary repairs shall be accomplished by the CONTRACTOR and the test repeated until results are within the established limits. The CONTRACTOR shall furnish the necessary labor, water, pumps, and gauges at specified location(s) and all other items required to conduct the required testing and perform necessary repairs.

General. All sanitary sewers and associated service lines shall be constructed watertight to prevent infiltration and/or exfiltration. All new sanitary sewer systems will be subject to low pressure air testing.

### 3. Low Pressure Air Test

After completing backfill of a section of gravity sewer line, conduct a Line Acceptance Test using low pressure air. The test shall be performed using the below stated equipment, according to state procedures and under the supervision of the ENGINEER and in the presence of a Lee County Utilities representative, with 48 hours advanced notice provided.

#### a. Equipment:

1. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
2. Pneumatic plugs shall resist internal bracing or blocking.
3. All air used shall pass through a single control panel.
4. Three individual hoses shall be used for the following connections:
  - a. From control panel to pneumatic plugs for inflation.
  - b. From control panel to sealed line for introducing the low pressure air.
  - c. From sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

#### b. Procedures:

All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs to 25 psi. The sealed pipe shall be pressurized



to 5 psi. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipe.

After a manhole to manhole reach of pipe has been backfilled and cleaned and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to 25 psi. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psi greater than the average back pressure of any ground water that may be over the pipe. At least two (2) minutes shall be allowed for the air pressure to stabilize. After the stabilization period (3.5 psi minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "Acceptable", if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psi (greater than the average back pressure of any ground water that may be over the pipe) is greater than the time shown for the given diameters in the following table:

Pipe Diameter <u>In Inches</u>	<u>Minutes</u>
8	4.0
10	5.0
12	5.5
16	7.5
18	8.5
24	11.5

Time in minutes = 0.472 D

D = Diameter of pipe in inches.

In areas where ground water is known to exist, the CONTRACTOR shall install capped pipe adjacent to the top of one of the sewer lines. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the ground water shall be determined by removing the pipe cap, and a measurement of the height in feet of water over the invert of the pipe shall be taken. The height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of water is 11-1/2 feet, then the added pressure will be 5 psi. This increases the 3.5 psi to 8.5 psi, and the 2.5 psi to 7.5 psi. The allowable drop of one pound and the timing remain the same).

If the installation fails to meet this requirement, the CONTRACTOR shall, at his own expense, determine the source of leakage. He shall then repair or replace all defective materials and/or workmanship.

### 3.2 LEAKAGE TESTS FOR STRUCTURES

- A. Structure Leakage Testing: Perform leakage tests of wet wells, tanks, vaults and similar purpose structures before backfilling, by filling the structure with water to the overflow water level and observing the water surface level for the following 24 hours.
1. Make an inspection for leakage of the exterior surface of the structure, especially in areas around construction joints.
  2. Leakage will be accepted as within the allowable limits for structures from which there are no visible leaks.
  3. If visible leaks appear, repair the structure by removing and replacing the leaking portions of the structure, waterproofing the inside, or by other methods approved.
  4. Water for testing will be provided by the OWNER at the CONTRACTOR's expense.

END OF SECTION

## SECTION 33 05 03

### LAYING AND JOINTING BURIED PIPELINES

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Installation of all underground pipelines. Provide pipeline materials, coatings and linings as specified and pipe of the types, sizes and classes shown or specified.
  - 1. Use proper and suitable tools and appliances for the safe and convenient cutting, handling, and laying of the pipe and fittings.
  - 2. Use suitable fittings where shown and at connections or where grade or alignment changes require offsets greater than those recommended and approved.
  - 3. Lay all underground pipelines not supported on piles or concrete cradle in select fill bedding material.
  - 4. Close off all lines with bulkheads when pipe laying is not in progress.
- B. Related Work Specified in Other Sections Includes:
  - 1. Section 31 23 16 - Excavation - Earth and Rock
  - 2. Section 31 23 23 - Backfilling
  - 3. Section 33 05 01 - Leakage Tests
  - 4. Section 33 11 02 - High Density Polyethylene (HDPE) Pipe and Fittings
  - 5. Section 33 11 03 - Ductile Iron Pipe and Fittings
  - 6. Section 33 11 12 - Disinfection

##### 1.21.2

- A. Codes and standards referred to in this Section are:
  - 1. ASTM D 2774 - Practice for Underground Installation of Thermoplastic Pressure Piping

- |    |                  |   |
|----|------------------|---|
| 2. | AWWA C600        | - Installation of Ductile-Iron Water Mains and Their Appurtenances  |
| 3. | ASTM A 307       | - Specification for Carbon Steel Bolts and Studs, 60000 psi Tensile |
| 4. | ASME B16.1       | - Cast Iron Pipe Flanges and Flanged Fittings, C25, 125, 250, 800   |
| 5. | ASME B16.21      | - Nonmetallic Flat Gaskets for Pipe Flanges                         |
| 6. | AWWA C111/A21.11 | - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings  |
| 7. | AWWA C115/A21.15 | - Flanged Ductile-Iron Pipe With Threaded Flanges                   |
| 8. | ASTM E 165       | - Practice for Liquid Penetrant Examination                         |
| 9. | ASTM E 709       | - Practice for Magnetic Particle Examination                        |

### 1.3 DELIVERY, STORAGE AND HANDLING

- A. General: Deliver, store and handle all products and materials as specified in Division 1 and as follows:
- B. Transportation and Delivery: Take every precaution to prevent injury to the pipe during transportation and delivery to the site.
- C. Loading and Unloading: Take extreme care in loading and unloading the pipe and fittings.
  - 1. Work slowly with skids or suitable power equipment, and keep pipe under perfect control at all times.
  - 2. Under no condition is the pipe to be dropped, bumped, dragged, pushed, or moved in any way that will cause damage to the pipe or coating.
- D. Sling: When handling the pipe with a crane, use a suitable sling around the pipe.
  - 1. Under no condition pass the sling through the pipe.
  - 2. Use a nylon canvas type sling or other material designed to prevent damage to the pipe and coating.
  - 3. When handling reinforced concrete pipe or uncoated steel or ductile iron pipe, steel cables, chain or like slings are acceptable.

- E. Damaged Piping: If in the process of transportation, handling, or laying, any pipe or fitting is damaged, replace or repair such pipe or pipes.
- F. Blocking and Stakes: Provide suitable blocking and stakes installed to prevent pipe from rolling.
  - 1. Obtain approval for the type of blocking and stakes, and the method of installation.
- G. Storage for Gaskets: Store gaskets for pipe joints in a cool place and protect gaskets from light, sunlight, heat, oil, or grease until installed.
  - 1. Do not use any gaskets showing signs of checking, weathering or other deterioration.
  - 2. Do not use gasket material stored in excess of six months without approval.

#### 1.4 FIELD CONDITIONS

- A. Repair of Sanitary Sewers and Services: Rebed, in compacted select fill material, sanitary sewers which cross over the new pipe or which cross under the new pipe with less than 12 inches clear vertical separation. Compact the bedding to densities required for new pipeline construction and extend bedding below the sewer to undisturbed earth. Reconstruct sewers damaged by pipeline construction.
  - 1. Furnish and install all materials and do all work necessary for the reconstruction or repairs of sanitary sewers and services.
  - 2. Provide pipe for reconstruction of sanitary sewers and services meeting the appropriate specification requirements.
  - 3. Provide pipe of the same size as the existing sewer or when the same size is not available, use the next larger size of pipe. Obtain approval of joints made between new pipe and existing pipe.

#### PART 2 PRODUCTS

- A. The materials allowed for buried sewer pipes are PVC, HDPE or fiberglass. Use of ductile iron pipe is not allowed for sewer construction without specific approval of Lee County Utilities.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Dry Trench Bottoms: Lay pipe only in dry trenches having a stable bottom.
  - 1. Where groundwater is encountered, make every effort to obtain a dry trench bottom.
  - 2. If a dry trench bottom has not been obtained due to improper or insufficient use of all known methods of trench dewatering, then the order to excavate below grade and place sufficient select fill material, crushed stone, or 2500 psi concrete over the trench bottom may be given.
  - 3. If all efforts fail to obtain a stable dry trench bottom and it is determined that the trench bottom is unsuitable for pipe foundation, obtain an order, in writing, for the kind of stabilization to be constructed.
  - 4. Perform trench excavation and backfill in accordance with Sections 31 23 16 and 31 23 23.

### 3.2 INSTALLATION

- A. General: Install all piping in accordance with the manufacturer's recommendations and approved shop drawings and as specified in Division 1. Where pipe deflections are used, do not exceed 80 percent of the maximum deflection limits shown in AWWA C600.
  - 1. Arrange miscellaneous pipelines, which are shown in diagram form on the Plans, clear of other pipelines and equipment.
- B. Code Requirements: Provide pipeline installations complying with AWWA C600 for iron pipe, AWWA Manual M11 for steel pipe, ASTM D 2774 for thermoplastic pressure piping, and as modified or supplemented by the Specifications.
- C. Pipe Laying - General:
  - 1. For pipelines intended for gravity flow, begin pipeline laying at the low end of a run and proceed upgrade.
  - 2. Generally, lay all pipe with bells pointing ahead.
  - 3. Carefully place each pipe and check for alignment and grade.
  - 4. Make adjustments to bring pipe to line and grade by scraping away or filling in select fill material under the body of the pipe.

5. Wedging or blocking up the pipe barrel is not permitted.
6. Bring the faces of the spigot ends and the bells of pipes into fair contact and firmly and completely shove the pipe home.
7. As the work progresses, clean the interior of pipelines of all dirt and superfluous materials of every description.
8. Keep all lines absolutely clean during construction.
9. Lay pipelines accurately to line and grade.
10. During suspension of work for any reason at any time, a suitable stopper shall be placed in the end of the pipe last laid to prevent mud or other material from entering the pipe.

D. Pipe Laying - Trenches:

1. Lay all pipelines in trench excavations on select fill bedding, concrete cradle or other foundations as shown, specified or ordered in writing.
2. Properly secure the pipe against movement and make the pipe joints in the excavation as required.
3. Carefully grade and compact pipe bedding.
4. Bell Holes:
  - a. Cut out bell holes for each joint as required to permit the joint to be properly made and allow the barrel of the pipe to have full bearing throughout its length.
  - b. Thoroughly tamp bell holes full of select fill material following the making of each joint.

E. Other Foundations: Install pipelines laid on other types of foundations as specified for such other foundations or as ordered in writing.

F. Ductile Iron Pipe Mechanical Joints:

1. Assembly: In making up mechanical joints, center the spigot in the bell.
  - a. Thoroughly brush the surfaces with which the rubber gasket comes in contact with a wire brush just prior to assembly of the joint.
  - b. Brush lubricant over the gasket just prior to installation.



- c. Place the gasket and gland in position, bolts inserted, and the nuts tightened fingertight.
  - d. Tighten the nuts with a torque wrench so that the gland is brought up toward the pipe evenly. Torque wrenches shall be set as specified in AWWA C111. Spanner type wrenches not longer than specified in AWWA C111 may be used with the permission of Lee County Utilities.
  - e. Prime all bolts by dipping with a bituminous coating, except the threads. Coat threads immediately prior to installation of nuts.
2. Torques: Apply the following range of bolt torques:

<u>Size Inches</u>	<u>Range of Torque - ft. lbs</u>
5/8	45 - 60
3/4	75 - 90
1	85 - 100
1-1/4	105 - 120

3. Remaking of Joints: If effective sealing is not obtained at the maximum torque listed above, disassemble and reassemble the joint after thorough cleaning.

G. Ductile Iron Pipe Rubber Gasket Joints:

- 1. Assembly: In making up the rubber gasket joint, brush the gasket seat in the socket thoroughly with a wire brush and wipe the gasket with a cloth.
  - a. Place the gasket in the socket with the large round end entering first so that the groove fits over the bead in the seat.
  - b. Apply a thin film of lubricant to the inside surface of the gasket that will come in contact with the entering pipe.
  - c. Brush the plain end of the pipe to be entered thoroughly with a wire brush and place it in alignment with the bell of the pipe to which it is to be joined.
  - d. Exert sufficient force on the entering pipe so that its plain end is moved past the gasket until it makes contact with the base of the socket to make the joint.
- 2. Positioning: Before proceeding with backfilling, feel completely around the joint using a feeler gauge to confirm that the gasket is in its proper position.
  - a. If the gasket can be felt out of position, withdraw the pipe and examine the gasket for cuts or breaks.

- b. If the gasket has been damaged, replace it with a new one before re-installing the pipe.
- 3. Optional Mechanical Joints: Use mechanical joint fittings that meet the requirements of Section 33 11 03 with the rubber gasket joint pipe when specified or when rubber gasket fittings are not available.
- H. Temporary Bulkheads: Provide temporary bulkheads at the ends of sections where adjoining pipelines have not been completed, and in connections built into pipelines where adjoining pipelines or structures have not been completed and are not ready to be connected.
  - 1. Remove bulkheads encountered in connecting sewers or structures included in this Contract, or in pipelines or structures previously built, when they are no longer needed or when ordered.
- I. Sleeve Type Couplings: For sleeve type couplings, equally tighten diametrically opposite bolts on the connection so that the gaskets will be brought up evenly all around the pipe.
  - 1. Torque Wrenches: Do the final tightening with torque wrenches set for the torque recommended by the coupling manufacturer.
- J. Concrete Encasement: Concrete encasement shall be constructed in accordance with Lee County standard details when:
  - 1. A waterline crosses at a depth which provides less than 18 inches clear distance from sewer lines. Encasement shall extend a minimum 10 feet on each side of the point of crossing. Encase the sewer main unless specifically approved by Lee County Utilities.
  - 2. A waterline running parallel to a sewer line provides less than 10 feet separation. Encase the sewer main unless specifically approved by Lee County Utilities.
  - 3. The Engineer has ordered the line encased.

The points of beginning and ending of pipe encasement shall be not more than 6 inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads.
- K. Valve Box Setting: Install valve boxes vertical and concentric with the valve stem.
  - 1. Satisfactorily reset any valve box which is moved from its original position, preventing the operation of the extension valve stem.

2. Replace any extension valve stem which has been damaged so that it can be operated.

L. Jacking:

1. General: Perform jacking as shown. After jacking is completed, seal the ends of the casing pipe with brick masonry.
  - a. Jacking Pit: Provide jacking pit of adequate length to provide room for the jacking frame, the jacking head, reaction block, the jacks, rig, and jacking pipe.
  - b. Construct the pit to be sufficiently wide to allow ample working space on each side of the jacking frame and sufficiently deep so that the invert of the pipe will be at the elevation desired for the completed line when placed on the guide frame.
  - c. Tightly sheet the pit and keep it dry at all times.
  - d. Provide adequate protective railings at the top of the pit at all times.
2. Jacking Frame: Design the jacking frame so that it applies a uniform pressure over the entire pipe wall area of the pipe to be jacked.
3. Reaction Blocks: Adequately design the reaction blocks to carry the thrust of the jacks to the soil without excessive soil deflection in a manner which avoids any disturbance of adjacent structures or utilities.
4. Hydraulic Jacks: Use hydraulic jacks in the jacking operation, and take extreme care to hold the casing pipe to exact line and grade.
5. Advance Excavation: Advance excavation by augering.
6. Casing Pipe: Furnish steel casing pipe, unless otherwise specified, conforming to ASTM A 139 with wall thicknesses and pipe diameters shown on the Plans. Provide full penetration butt welded pipe joints.
7. Fill Material: Use fill material, consisting of 1-1/4 pounds of Bentonite per gallon of water, during jacking to fill any voids between the casing pipe and the earth.

M. Identification:

1. Identification Tape: For all types of pipe to be installed, 3-inch detectable marking tape, of appropriate color, shall be placed along the entire pipe length. In all cases, marking tape shall be installed 12 inches to 18 inches below the finished grade during backfill operations. All PVC pipe, PVC fittings, and identification tape shall be color-coded per standards outlined in the Utility

Location and Coordinating Council's Uniform Color Code as specified in Section 4 of the Lee County Utilities Operations Manual.

2. Locating Wire: A locating tracing wire shall also be installed with PVC, HDPE and fiberglass pipes and shall be a continuous No. 12 insulated copper tracing wire laid in the trench on top of the utility pipe and attached to the pipe at ten (10) foot intervals. This continuous tracing wire shall run along the entire pipe and be stubbed out at valves, pressure clean-outs and air release valves.

### 3.3 FIELD QUALITY CONTROL

- A. Testing: Test pipelines in accordance with Section 33 05 01.
  1. Test valves in place, as far as practicable, and correct any defects in valves or connections.
- B. Inspection: Clean, inspect, and examine each piece of pipe and each fitting and special for defects before it is installed.
  1. Cut away any lumps or projections on the face of the spigot end or the shoulder.
  2. Do not use any cracked, broken, or defective pieces in the work.
  3. If any defective piece should be discovered after having been installed, remove and replace this piece with a sound piece in a satisfactory manner at no increase in Contract Amount.

### 3.4 CLEANING

- A. General: Thoroughly clean all pipe before it is laid and keep it clean until it is accepted in the completed work.
- B. Removal of Materials: Exercise special care to avoid leaving bits of wood, dirt, and other foreign particles in the pipe. If any particles are discovered before the final acceptance of the work, remove and clean the pipe.

### 3.5 DISINFECTION

- A. General: Disinfect all pipelines that are to carry potable water in accordance with Section 33 11 12.

END OF SECTION

(NO TEXT FOR THIS PAGE)

## SECTION 33 11 03

### DUCTILE IRON PIPE AND FITTINGS

#### PART 1 GENERAL

##### 1.1 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required, and install ductile iron pipe, fittings and appurtenances as shown on the Drawings and as specified herein.
- B. NOTE: No buried ductile iron pipe shall be acceptable for sanitary force main construction. All water mains larger than 12 inches shall be constructed of Ductile Iron Pipe and shall be used for all vertical deflections ditch crossings, subaqueous crossings, and all paved surfaces unless otherwise approved by Lee County Utilities.

##### 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 33 05 03 - Laying and Jointing Buried Pipe

##### 1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Commercial Standards: (Latest Revision)
  - 1. ANSI/AWWA C104/A21.4 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
  - 2. ANSI/AWWA C110/A21.10 Ductile-Iron Fittings, 3 in. Through 48 Inches, for Water and Other Liquids. (C110 2-48 inches).
  - 3. ANSI/AWWA C111/A21.11 Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
  - 4. ANSI/AWWA C115/A21.15 Flanged Ductile-Iron Pipe with Threaded Flanges.
  - 5. ANSI/AWWA C150/A21.50 Thickness Design of Ductile-Iron Pipe.
  - 6. ANSI/AWWA C151/A21.51 Ductile-Iron Pipe, Centrifugally Cast for Water or Other Liquids.
  - 7. ANSI/AWWA C153/A21.53 Ductile-Iron Compact Fittings, 3 inches through 64 inches, for Water and Other Liquids.

- |     |           |   |
|-----|-----------|---|
| 8.  | AWWA C600 | Installation of Ductile Iron Water Mains and Their Appurtenances.             |
| 9.  | AWWA C602 |   |
| 10. | ASTM G62  |   |
| 11. | ASTM F477 | Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Material |

#### 1.4 CONTRACTOR SUBMITTALS

- A. Shop Drawings: Submit shop drawings of pipe and fittings in accordance with the requirements in the General Conditions, the requirements of the referenced standards and the following supplemental requirements as applicable:
  - 1. Certified dimensional drawings of all valves, fittings, and appurtenances.
  - 2. For pipe 48 inches in diameter and larger, a line layout and marking diagram shall indicate the specific number and location (station) of each fitting.
  - 3. In all cases, a line layout to indicate the limits of each reach of restrained joints, or of concrete encasement shall be supplied.
- B. Certifications: Furnish a certified affidavit of compliance for all pipe and other products or materials furnished under this Section of the Specifications, which indicates that all tests have been made and that all results comply with the requirements of AWWA C151, including but not necessarily limited to the following:
  - 1. Acceptance Tests.
  - 2. Hydrostatic Tests.
  - 3. Low Temperature Impact Tests.
- C. Additional Documentation: Foundry records shall be furnished in the form of written transcripts upon request.
- D. All expenses incurred for certification, testing, and data submittal shall be borne by the CONTRACTOR or the Supplier.

#### 1.5 QUALITY ASSURANCE

- A. Inspection: All pipe shall be available for inspection at the place of manufacture prior to shipping in accordance with the provisions of the referenced standards. Notify the ENGINEER in writing not less than 10 calendar days prior to the shipping of the pipe.
- B. The ENGINEER shall be given access to all areas where manufacturing and testing is performed and shall be permitted to make all inspections necessary to confirm manufacturer compliance with these Specifications.



- C. Tests: Except as modified herein, all materials used in the manufacture of the pipe shall be tested in accordance with the requirements of the referenced standards as applicable.
- D. Provide data on material tests at no additional cost to the OWNER.
- E. In addition to those tests specifically required, the ENGINEER may request additional samples of any material including lining and coating samples for testing by the OWNER. The additional samples shall be furnished at no additional cost to the OWNER.

## 1.6 CORROSION PROTECTION

- A. The allowed force main pipe materials are polyvinyl chloride (PVC) or high-density polyethylene (HDPE) or fiberglass. Use of ductile iron pipe (DIP) and DIP fittings are not allowed without the specific approval of Lee County Utilities. Where a force main is expected to flow full pipe at all times, DIP may be used after specific approval by Lee County Utilities. The DIP pipe will be required to have an approved lining (see LCU Approved Materials List). The lining consists of a minimum of 60 mils thick polyethylene lining with a fusion bonded epoxy primer layer to the DIP pipe. This lining must extend through the bell of the pipe to a point under the sealing gasket. To ensure a holiday-free lining, documentation must be provided, prior to shipment, showing each section of the lined pipe has passed the holiday testing at production per ASTM G62 with a minimum of 10,000-volt charge.
- B. If specifically approved by Lee County Utilities for use, exterior protection shall be provided for underground ductile iron pipe and fittings within areas of severe corrosive conditions. This shall be accomplished by the installation of polyethylene encasement through the area of concern. The soil test evaluation to determine the necessity for extra protection in suspect areas shall be those set forth in ANSI Standard A21.5. Additionally, where other existing utilities are known to be cathodically protected, ductile iron pipe crossing said utility shall be protected for a distance of 20 feet to each side. If ductile iron pipe is to be installed parallel to and within 10 feet of cathodically protected pipe, then protection shall be provided for the entire length. Steel pipe shall not be installed in severe corrosion areas.

## PART 2 PRODUCTS

### 2.1 GENERAL

- A. Cement mortar lined ductile iron pipe shall conform to ANSI/AWWA C151 and C104, subject to the following supplemental requirements. The pipe shall be of the diameter and class shown, shall be furnished complete with rubber gaskets as indicated in the Contract Documents, and all specials and fittings shall be provided as required under the Contract Documents.

- B. Markings: Legibly mark specials 48 inches in diameter and larger in accordance with the laying schedule and marking diagram. All fittings shall be marked at each end with top field centerline.
- C. Handling and Storage: The pipe shall be handled by wide slings, padded cradles, or other devices designed and constructed to prevent damage to the pipe and its lining. The use of equipment or handling, which might injure the pipe and its lining, will not be permitted. Stockpiled pipe shall be suitably supported and shall be secured to prevent accidental rolling. All other pipe handling equipment and methods shall be acceptable to the ENGINEER.
- D. Laying lengths: Maximum pipe laying lengths shall be 20 feet.
- E. Finish: The pipe shall have smooth dense interior surfaces and shall be free from fractures, excessive interior surface crazing and roughness, in accordance with ANSI/AWWA C104.
- F. Closures and Correction Pieces: Closures and correction pieces shall be provided as required so that closures may be made due to different headings in the pipe laying operation and so that correction may be made to adjust the pipe laying to conform to pipe stationing shown on the Drawings or line layouts where applicable.

## 2.2 PIPE DESIGN CRITERIA

- A. General: Ductile Iron pipe shall be designed in accordance with the requirements of ANSI/AWWA C150 as applicable and as modified in this Section.
- B. Pipe Wall Thickness for Internal Pressure: The pipe shall be designed with a net thickness to withstand the design internal pressure in accordance with the hoop stress formula. In addition to the requirements of the Section, the minimum wall thickness shall be in accordance with the minimum thickness wall depicted in table 50.5 of ANSI/AWWA C150.
- C. Ductile Iron Pipe shall be a minimum of Class 50 or pressure Class 250 and will be accepted in any diameter for use within the water distribution system.
- D. All aboveground water main pipe shall be painted blue. The pipe wall thickness shall not be less than that required by a working pressure of 250 psi in laying condition Type 4 "B" with 5-foot cover in conformance with ANSI Standard A21.50.

## 2.3 MATERIALS

- A. Ductile Iron Pipe: Pipe materials shall conform to the requirements of ANSI/AWWA C151.
- B. Cement: Cement for mortar lining shall conform to the requirements of ANSI/AWWA C104; provided that cement for mortar lining shall be Type II or V. A fly ash or pozzolan shall not be used.

- C. Adapters to connect ductile iron pipe or fittings to pipe or fittings of dissimilar materials shall be supplied by the CONTRACTOR in accordance with the pipe manufacturer recommendations, and as approved by the ENGINEER.

## 2.4 SPECIALS AND FITTINGS

- A. Fittings for ductile iron pipe shall conform to the requirements of ANSI/AWWA C153/A21.53 or ANSI/AWWA C110/A21.10 for diameters 3 inches through 48 inches and shall have a minimum pressure rating of 250 psi. Ductile iron fittings shall be cement lined, seal coated and outside coated as specified. Ductile Iron fittings larger than 48 inches shall conform to the above referenced standard with the necessary modifications for the larger size manufacturer's standard.
- B. All above-ground fittings in direct contact with wastewater shall be HDPE or ductile iron flanged joints with a minimum pressure rating of 250 psi conforming to ANSI A21.10. If above-ground ductile iron fitting is used, the fitting shall be lined with an approved liner (see LCU Approved Materials List) applied in strict accordance with the manufacturer's specifications to a dry film thickness of 40 mils. All above-ground fittings shall have a factory applied exterior epoxy coating in accordance with AWWA C550.

## 2.5 DESIGN OF PIPE

- A. General: The pipe furnished shall be ductile iron pipe, mortar-lined, with rubber gasketed joints.
- B. The pipe shall be designed, manufactured, tested, inspected, and marked according to applicable requirements previously stated and except as hereinafter modified, shall conform to ANSI/AWWA C151.
- C. Pipe Dimensions: The pipe shall be of the diameter and class shown. The minimum wall thickness for each pipe size shall be as specified herein or shown on the Drawings.
- D. Fitting Dimensions: The fittings shall be of the diameter shown and class specified.
- E. Joint Design: Ductile Iron pipe and fittings shall be furnished with mechanical joints, push-on joints and flanged joints as follows:
  - 1. For buried pipe applications, unless otherwise indicated, mechanical and push-on joints shall conform to ANSI/AWWA C111/A21.11, with the minimum pressure rating of 250 psi.
  - 2. For above-ground or buried vault applications, unless otherwise indicated, flanged joints shall conform to ANSI/AWWA C115/A21.15, with the minimum pressure rating of 250 psi. All above-ground fittings shall be painted blue.

- F. Restraining Devices: Restraining joints shall be placed at all bends, tees, plugs, reducers, and other fittings to provide lateral support, and shall conform to the details shown on the drawings in Sections 9 of the Lee County Utilities Operations Manual. Concrete thrust blocks may be utilized as additional restraint if approved by Lee County Utilities.
1. See LCU Approved Materials List for Joint restraint devices for ductile iron mechanical joint pipe and ductile iron mechanical joint fittings to ductile iron pipe.
  2. See LCU Approved Materials List for Bell joint restraint devices for ductile iron push joint pipe.
- G. For bell-and-spigot ends with rubber gaskets, the clearance between the bells and spigots shall be such that when combined with the gasket groove configuration and the gasket itself will provide watertight joints under all operating conditions when properly installed. Require the pipe manufacturer to submit details complete with significant dimensions and tolerances and also to submit performance data indicating that the proposed joint has performed satisfactorily under similar conditions. In the absence of a history of field performance, the results of a test program shall be submitted.
- H. Gaskets shall be a Buna N, Neoprene, or a Nitril-based rubber product approved by the County. Gaskets shall have clean tips unless otherwise specified. Elastomeric gaskets conforming to ASTM F-477 shall also be acceptable.
- I. Shop-applied interior linings and exterior coatings shall be applied evenly to the nominal thickness specified. Holiday free cement is not possible to manufacture. Exterior coatings: asphalt coating for buried pipe or primed pipe cannot be furnished holiday free.

## 2.6 CEMENT-MORTAR LINING

- A. Cement-Mortar Lining For Shop Application: Except as otherwise provided herein, interior surfaces of all ductile iron pipe shall be cleaned and lined in the shop with cement-mortar lining applied centrifugally in conformity with ANSI/AWWA C104. Ductile-Iron pipefittings need not have the cement-mortar lining applied centrifugally. The lining machines shall be of a type that has been used successfully for similar work. Every precaution shall be taken to prevent damage to the lining. If lining is damaged or found faulty at delivery site, the damaged or unsatisfactory portions shall be repaired in the field in accordance with ANSI/AWWA C104.
- B. The nominal wet lining thickness shall be as follows:

Nominal Factory Nominal Replacement		
Nominal Pipe Diameter (in.)	Applied Lining Thickness (in.)	Lining Thickness (in.)
3-12	1/8	1/8

14-24	3/16	3/16
30-64	1/4	1/4

- C. Protection of Pipe Lining/Interior: All shop-applied cement mortar lining shall be given a seal coat of asphaltic material in conformance with ANSI/AWWA C104.

## 2.7 EXTERIOR COATING OF PIPE

- A. Exterior Coating of Exposed Piping: The exterior surfaces of pipe which will be exposed to the atmosphere inside structures or above ground shall be thoroughly cleaned and then given a shop coat of rust-inhibitive primer conforming to the requirements of Section 09 90 00, "Painting and Coating". All above-ground pipe shall be painted blue.

### NOTE:

Where severely corrosive soils and other adverse conditions occur, this coating may not provide the desired protection. In such cases, a heavier coating, polyethylene wrap, cathodic protection or a combination of these may be required. To determine the protection needed, an investigation should be made of the following items.

- Experience with existing installations in the area, if any
- Soil resistivity
- Soil Ph
- Oxidation-reduction potential of the soil
- Sulfides
- Moisture content
- Soil description
- Existence of stray direct currents
- Possible cathodic interference

To use the polyethylene wrap, refer to ANSI A21.5 for Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids.

Edit this Section if additional protection is needed. Also edit Sections 33 05 03 "Laying and Jointing Buried Pipelines". A section on cathodic protection of buried ductile-iron pipe may be also required.

- B. Exterior Coating of Buried Piping: The exterior coating shall be an asphaltic coating approximately 1 mil thick, conforming to ANSI/AWWA C151.

## 2.8 CORROSION PROTECTION

- A. The allowed force main pipe materials are polyvinyl chloride (PVC) or high-density polyethylene (HDPE) or fiberglass. Use of ductile iron pipe (DIP) and DIP fittings are not allowed without the specific approval of Lee County Utilities. Where a force main is expected to flow full pipe at all times, DIP may be used after specific approval by Lee County Utilities. The DIP pipe will be required to have an approved lining (see

LCU Approved Materials List). The lining consists of a minimum of 60 mils thick polyethylene lining with a fusion bonded epoxy primer layer to the DIP pipe. This lining must extend through the bell of the pipe to a point under the sealing gasket. To ensure a holiday-free lining, documentation must be provided, prior to shipment, showing each section of the lined pipe has passed the holiday testing at production per ASTM G62 with a minimum of 10,000-volt charge.

- B. If specifically approved by Lee County Utilities for use, exterior protection shall be provided for underground ductile iron pipe and fittings within areas of severe corrosive conditions. This shall be accomplished by the installation of polyethylene encasement through the area of concern. The soil test evaluation to determine the necessity for extra protection in suspect areas shall be those set forth in ANSI Standard A21.5. Additionally, where other existing utilities are known to be cathodically protected, ductile iron pipe crossing said utility shall be protected for a distance of 20 feet to each side. If ductile iron pipe is to be installed parallel to and within 10 feet of cathodically protected pipe, then protection shall be provided for the entire length. Steel pipe shall not be installed in severe corrosion areas.

## PART 3 EXECUTION

### 3.1 INSTALLATION OF PIPE

- A. Handling and Storage: All pipe, fittings, etc., shall be carefully handled and protected against damage, impact shocks, and free fall and in accordance with ANSI/AWWA C600. Pipe shall not be placed directly on rough rocky ground but in such instances shall be supported in a manner which will protect the pipe against injury whenever stored at such trench site or elsewhere. No pipe shall be installed where the lining or coating show defects that may be harmful as determined by the ENGINEER. Such damaged lining or coating shall be repaired, or a new undamaged pipe shall be furnished and installed.
- B. All pipe damaged prior to Substantial Completion or during warrantee period shall be repaired or replaced by the CONTRACTOR.
- C. Inspect each pipe and fitting prior to installation to ensure that no damaged portions of the pipe get installed.
- D. Before placement of pipe in the trench, each pipe or fitting shall be thoroughly cleaned of any foreign substance, which may have collected therein and shall be kept clean at all times thereafter. For this purpose, the openings of all pipes and fittings in the trench shall be closed during any interruption to the work.
- E. Pipe Laying: The pipe shall be installed in accordance with ANSI/AWWA C600.
- F. Pipe shall be laid directly on the bedding material. No blocking will be permitted, and the bedding shall be such that it forms a continuous, solid bearing for the full length of the pipe. Excavations shall be made as needed to facilitate removal of handling



devices after the pipe is laid. Bell holes shall be formed at the ends of the pipe to prevent point loading at the bells or couplings. Excavation shall be made as needed outside the normal trench section at field joints to permit adequate access to the joints for field connection operations and for application of coating on field joints.

- G. Where necessary to raise or lower the pipe due to unforeseen obstructions or other causes, the ENGINEER may change the alignment and/or the grades. Such change shall be made by the deflection of joints, by the use of bevel adapters, or by the use of additional fittings. However, in no case shall the deflection in the joint exceed 70 percent of the maximum deflection recommended by the pipe manufacturer. No joint shall be misfit any amount which will be detrimental to the strength and water tightness of the finished joint.
- H. Pipe and Specials Protection: The openings of all pipe and specials shall be protected with suitable bulkheads to prevent unauthorized access by persons, animals, water, or any undesirable substance. At all times, means shall be provided to prevent the pipe from floating.
- I. Pipe Cleanup: As pipe laying progresses, keep the pipe interior free of all debris. Completely clean the interior of the pipe of all sand, dirt, mortar splatter and any other debris following completion of pipe laying, pointing of joints, and any necessary interior repairs per ANSI/AWWA C600 and C602 prior to testing and disinfecting the completed pipeline. Pipe larger than 12" diameter will utilize a polyurethane foam plug "Poly Pig" to remove all debris from main.

### 3.2 RUBBER GASKETED JOINTS

- A. Rubber Gasketed Joints: Immediately before jointing pipe, the bell end of the pipe shall be thoroughly cleaned, and a clean rubber gasket shall be placed in the bell groove. The bell and spigot end of push-on joint pipe shall be carefully cleaned and lubricated with a vegetable-based lubricant or per manufacturer's recommendation. The spigot end of the pipe section shall then be inserted into the bell of the previously laid joint and telescoped into its proper position. Tilting of the pipe to insert the spigot into the bell will not be permitted.

### 3.3 INSTALLATION OF PIPE APPURTENANCES

- A. Installation of Valves: All valves shall be handled in a manner to prevent any injury or damage to any part of the valve. All joints shall be thoroughly cleaned and prepared prior to installation. Adjust all stem packing and operate each valve prior to installation to insure proper operation.
- B. All valves shall be installed so that the valve stems are plumb and in the location shown on the Drawings.
- C. Mechanical joints consisting of bell, socket, gland, gasket, bolts, and nuts shall conform to ANSI Standard A21.11. Bolts and nuts shall be high strength, low alloy, Cor-Ten, T-Head Type having hexagonal nuts. Bolts and nuts shall be machined



through and nuts shall be tapped at right angles to a smooth bearing surface. Single sealed gasket push-on type joints shall conform to the requirements of ANSI A21.11 (see LCU Approved Materials List).

- D. Mechanical joint retainer glands may be used to restrain mechanical joint pipe and fittings to the plain end of ductile iron pipe and fittings when used in conjunction with thrust blocks of reduced size. The Utilities ENGINEER must approve thrust block size. Joint flexibility shall be maintained.

#### 3.4 TESTING AND DISINFECTION

- A. Test completed water pipeline in accordance with Section 33 05 01. Disinfect completed water pipeline in accordance with Section 33 11 12.

END OF SECTION

## SECTION 33 11 04

### POLYVINYL CHLORIDE (PVC) WATERLINE

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required, and install polyvinyl chloride (PVC) waterline, fittings, and appurtenances as shown on the drawings and as specified herein.

##### 1.02 REFERENCE SPECIFICATIONS, CODES & STANDARDS

- A. This standard references the documents listed below. They form a part of this standard to the extent specified herein. In any case of conflict, the requirements of this standard shall prevail.
  - 1. ASTM D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
  - 2. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series).
  - 3. ASTM A252 -
  - 4. AWWA C900 -
  - 5. AWWA C110 -
  - 6. AWWA C111 -

##### 1.03 SUBMITTAL

- A. Submit to the Engineer within ten days after receipt of Notice-to-Proceed a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. Submit for approval, as provided in the Supplement to the General Conditions, complete, detailed shop drawings of all PVC pipe and fittings.
- C. Submit and shall comply with pipe manufacturer's recommendations for handling, storing, and installing pipe and fittings.

## PART 2 - PRODUCTS

### 2.01 WATER MAIN

#### A. Polyvinyl Chloride (PVC) Pipe

1. Pipe smaller than 4 inches: Conform to requirements of ASTM D2241 with a standard dimension ratio (SDR) of 18, and a pressure rating of 200 psi. PVC material used in pipe shall be as specified in ASTM D1784, Cell Classification 12454-B.
2. Pipe 4 inches through 12 inches: Conform to requirements of AWWA C-900 with a dimension ratio (DR) of 18, pressure class 150. PVC material used in pipe shall be as specified in ASTM D1784, Cell Classification 1245-B.
3. The potable water mains shall be blue in color.
4. All pipe shall be manufactured in the United States.

#### B. Steel Encasement Pipe: Conform to ASTM Designation A252, Grade 2. Joints shall be welded completely around the pipe by a certified welder. Pipe shall meet all AASHTO standards and Florida DOT requirements.

#### C. Fittings:

1. PVC Pipe: Fittings shall be ductile iron mechanical joint, with a working pressure of 250 psi and conforming to AWWA Specifications C110 or C153. All bolts and nuts shall be 304 stainless steel, Cor-blue or Cor-Ten or equal. Cor-Ten shall meet the requirements for ANSI/AWWA C111/A21-11 for buried application. For pipe 8 inches and smaller, fittings shall be C900 PVC rated fittings.
2. Tapping Sleeves: Sleeve shall be stainless steel, mechanical joint type, with working pressure rating of 250 PSI, and conform to AWWA Standard C223.
3. All fittings shall be manufactured in the United States.

#### D. Joints

1. Restrained Joint for PVC Pipe: Pipe fittings and other requiring restraint shall utilize approved appurtenances (see LCU Approved Materials List) joint restrain devices.

## 2.02 IDENTIFICATION

- A. Pipe shall bear identification markings that will remain legible after normal handling, storage, and installation. Markings shall be applied in a manner that will not weaken or damage the pipe. Marking shall be applied at intervals of not more than 5 feet on the pipe. Marking on the pipe shall include the following:
  - 1. Nominal size and OD base.
  - 2. PVC
  - 3. Dimension ratio
  - 4. AWWA pressure rating.
  - 5. AWWA designation.
  - 6. Manufacturer's name and trademark.
  - 7. Manufacturer's production code, including day, month, year, shift, plant, and extruder of manufacturer.
  - 8. All PVC water pipe shall be color-coded blue.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. Polyvinyl Chloride (PVC) water pipe shall be installed in accordance with the manufacturer's recommendation, as shown on the drawings, and as specified herein.
- B. The Contractor shall use care in handling, storage, and installation of pipe and fittings. Storage of pipe on the job site shall be done in accordance with the pipe manufacturer's recommendation. Under no circumstances shall pipe or fittings be dropped into the trench.
- C. Pipe shall be laid to lines and grade shown on the drawings with bedding and backfill as shown on the drawings. Blocking under the pipe will not be permitted.
- D. When laying is not in progress, or the potential exists for dirt or debris to enter the pipe, the open ends of the pipe shall be closed with plug or by other approved means.

### 3.02 TESTING WATER MAIN

- A. All force mains shall be field tested in accordance with AWWA C-900 and as specified herein. The Contractor shall supply all labor, equipment, material, gages, pumps, and incidentals required for testing.
- B. The test pressure shall be 150 psi for water mains, unless noted otherwise. The test pressure shall be measured at the highest point along the test section.
- C. Testing shall be conducted after backfilling has been completed and before placement of permanent surface.
- D. Testing procedures shall be as follows:
  - 1. Fill line slowly with water. Maintain flow velocity less than two feet per second.
  - 2. Expel air completely from the line during filling and again before applying test pressure. Air shall be expelled by means of taps at points of highest elevation.
  - 3. Apply test pressure. Maintain pressure within 5 psi of the test pressure for a period of two hours. Measure the quantity of water that was pumped into the line to maintain pressure and the quantity of water required to bring the line up to test pressure. The sum of these two quantities is defined as leakage.
  - 4. Carefully examine all exposed pipe, fittings, and joints during the test.
- E. No pipe installation will be accepted if the leakage is greater than that determine by the following formula:
$$L = \frac{SD(P)^{1/2}}{133,200}$$

in which L is the allowable leakage, in gallons per hour; S is the length of pipe tested; D is the nominal diameter, in inches; and P is the test pressure, in psi.
- F. If any test of pipe laid discloses leakage greater than that allowed, the Contractor shall, at his own expense, locate and repair the cause of leakage and retest the line.
- G. All visible leaks are to be repaired regardless of the amount of leakage.

### 3.03 CLEANING

- A. At the conclusion of the work, the Contractor shall thoroughly clean all of the new pipe lines by flushing with water and pigged to remove all dirt, stones, pieces of wood, or other material which may have entered during the construction period. Debris cleaned from the lines shall be removed from the job site. If, after this cleaning, any obstructions remain, they shall be removed at the Contractor's expense.

### 3.04 DISINFECTION

Disinfect completed water pipeline in accordance with Section 33 11 12.

END OF SECTION

## SECTION 33 11 12

### DISINFECTION

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Disinfection of all pipelines, tanks, structures, conduits and equipment which are to store, handle or carry potable water. Furnish all labor, water, chemicals and equipment, including taps, corporation stops, temporary pumps and other items necessary to perform the Work, except as otherwise specified.

##### 1.2 REFERENCES

- A. Codes and standards referred to in this Section are:
  - 1. AWWA C651 - Disinfecting Water Mains
  - 2. AWWA C652 - Disinfection of Water-Storage Facilities

##### 1.3 QUALITY ASSURANCE

- A. Disinfection Standards: Disinfect in accordance with AWWA C651 for water mains and AWWA C652 for water storage facilities and equipment.
- B. Chlorinated Water Disposal: Dispose of old highly chlorinated water in accordance with applicable regulations.

#### PART 2 PRODUCTS

Not Used

#### PART 3 EXECUTION

##### 3.1 WATER MAIN DISINFECTION

- A. Following acceptable pressure testing, disinfect all sections of the water distribution system and receive approval thereof from the appropriate agencies, prior to placing in service. Advance notice of 24 hours shall be provided to the County before disinfecting procedures start. The disinfection shall be accomplished in accordance with the applicable provisions of AWWA Standard C601, "Disinfecting Water Main" and all appropriate approval agencies.
- B. The disinfecting agent shall be free chlorine in aqueous solution with sustained concentration for 12 hours or more of not less than 50 parts per million. Chlorine may



be derived from Chlorine gas, or 70% (high test) calcium hypochlorite (HTH or Perchloron, or equal). Administration may be by any of the several methods described in AWWA Standard C601 as proposed by the CONTRACTOR and approved by the ENGINEER. Proposals as to method must be made prior to commencement of the disinfection process.

- C. Following contact with chlorine solution, the system shall be thoroughly flushed out. Samples shall then be taken using sterile containers obtained from the County Health Department. Samples shall be taken by the CONTRACTOR and delivered by him to the County Health Department or approved laboratory for analysis.
- D. If samples do not demonstrate satisfactory results, the disinfection procedure shall be repeated until two series of satisfactory samples are obtained, the period between such series of samples to be a minimum of 24 hours.

### 3.2 DISINFECTION PROCEDURES FOR TANKS

- A. Disinfect potable water storage tanks and equipment in accordance with AWWA C652, Method 2 or 3, using sodium hypochlorite.
  - 1. In Method 2, spray method, spray the entire interior surface of the tank with chlorinated water containing 200 mg/l of available chlorine. After spraying, allow the tank to stand at least two hours before filling with fresh water.
- B. After disinfection, allow the tanks and equipment to overflow until the chlorine residual is approximately 2 mg/l.

END OF SECTION

## SECTION 33 12 16

### WATER VALVES AND APPURTENANCES

#### PART 1 GENERAL

##### 1.1 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required and install complete and ready for operation all valves and appurtenances as shown on the Drawings and as specified herein.

##### 1.2 REFERENCES

- A. Codes, specifications, and standards referred to by number or title form a part of this Section to the extent required by the references to codes, specifications, and standards. Latest revisions, as of the date of bid opening, apply, unless otherwise noted on the Drawings or specified in this Section.

B. Standards

Designation	Title
ANSI/AWWA C111/A21.11	Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings
ANSI/AWWA C500	Gate Valves
ANSI/AWWA C509	Resilient-Seated Gate Valves 3 through 12 NPS, for Water Systems
ANSI/AWWA C510	Double Check Valve Backflow Prevention Assembly
ANSI/AWWA C511	Reduced-Pressure Principle Backflow Prevention Assembly
AWWA C550	Protection Interior Coatings for Valves and Hydrants
ANSI/B16.1	Gray Iron Pipe Flanges and Flanged Fittings, Class 25, 125, and 250
ANSI/B16.3	Malleable Iron Threaded Fittings, Class 150 and 300
ANSI/B16.5	Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys
ASTM A48	Standard Specification for Gray Iron Castings

ASTM A126	Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
ASTM A276	Specification for Stainless and Steel Bars and Shapes
ASTM A231	Standard Specification for Chromium-Vanadium Alloy Steel Spring Wire
ASTM D429	Standard Test Methods for Rubber Property – Adhesion to Rigid Substrates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A743	Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, and Nickel-Base Corrosion-Resistant for General Application
ASTM D2794	Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
MSS SP-60	Connecting Flange Joint Between Tapping Sleeves and Tapping Valves

### 1.3 DEFINITIONS

- A. References to valve sizes on the Drawings and in the Specifications are intended to be nominal size, and shall be interpreted as nominal size.

### 1.4 SUBMITTALS

- A. General: as specified in:
  - 1. General Conditions;
  - 2. Supplementary General Conditions;

### 1.5 QUALITY ASSURANCE

- A. Testing: Test valves as specified in this Section.

## PART 2 PRODUCTS

### 2.1 GENERAL:

- A. All valves and appurtenances shall be of the size shown on the Drawings and as far as possible all equipment of the same type shall be from one manufacturer.

- B. All valves and appurtenances shall have the name of the maker and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.

## 2.2 MANUFACTURERS

- A. See LCU Approved Materials List.

## 2.3 DESIGN

- A. Resilient, Wedge or Gate Valves and Boxes

1. Valves for pipe less than 2" in diameter shall conform to the requirements of AWWA C509 (latest revision) and shall be cast iron, single wedge, non-rising stem, screwed bonnet, 125 pounds S.P., 200 pounds W.O.G with stuffing box repackable under pressure and all parts renewable. Ends shall be as shown or indicated on the drawings.
2. Resilient, wedge or gate valves 2" in diameter and larger shall be cast or ductile iron body, non-rising stem, bronze mounted gate valves, mechanical joint conforming to requirements of the AWWA Standard C509 and shall be provided with a 2" square operating nut. Valves shall be resilient, wedge, or gate type and shall turn to the left (counter clockwise) to open. The wedge or gate shall be cast iron or ductile iron per ASTM A536, minimum 65,000 psi strength and, completely encapsulated with urethane rubber, permanently bonded to the wedge or gate to meet ASTM test for rubber metal bond, ASTM D429. The valve stems for non-rising stem assemblies shall be cast bronze with integral collars in full compliance with AWWA. The NRS stem stuffing box shall be the O-ring seal type with two rings located above thrust collar; the two rings shall be replaceable with valve fully open and subjected to full rated working pressure.
3. There shall be two low torque thrust bearings located above and below the stem collar. The stem nut shall be independent of wedge and shall be made of solid bronze. There shall be a smooth unobstructed waterway free of all pockets, cavities and depressions in the seat area. The body and bonnet shall be coated with fusion bonded epoxy both interior and exterior. The valve shall be designed and tested to be opened and closed under a differential pressure of 150 psi or greater.

- B. Valves for Buried Service

1. Valves for buried service shall meet all the requirements as specified herein for interior except that buried valves shall have mechanical joint ends.
2. All buried valves shall have cast-iron three-piece valve boxes, valve boxes shall be provided with suitable heavy bonnets to extend to such elevation at the finished grade surface as directed by the ENGINEER. The barrel shall be two-piece, screw type, having 53" shaft. The upper section shall have a flange

at the bottom having sufficient bearing area to prevent settling, shall be designed so as to prevent the transmission of surface loads directly to the valve or piping, and shall be complete with cast iron covers. Covers shall have "WATER" cast into the top. The covers shall be so constructed as to prevent tipping or rattling. Valve boxes shall be manufactured by an approved manufacturer (see LCU Approved Materials List).

3. One tee-handled wrench of suitable length shall be furnished to operate each valve with a valve box.
4. Where valves are located out of pavement, the boxes shall be adjusted to finished grade and a concrete slab two feet square and six inches thick shall be poured around the box.
5. Valve boxes shall be of the heavy duty, traffic bearing cast iron, adjustable screw type with a drop cover. The valve box assembly shall consist of a bottom section, top section and cover which is cast from gray iron, formulated to ASTM specification A-48 latest revision, class 30 minimum and shall be free from blowholes, shrinkage or other imperfections not true to pattern. The shaft size shall be 5 1/4" and the adjustable length shall be from 18" to 24". The wall thickness shall be 3/16"  $\pm$  1/16". The weight of the assembly shall be 61 pounds  $\pm$  2 pounds, with the cover weight being a minimum of 12 pounds.
6. The name of the manufacturer and foundry of origin shall be cast into each of the components of the assembly in legible form. The assembly shall be suitable for highway traffic wheel loads of 16,000 pounds and shall withstand a proof load test of 25,000 pounds without failure or permanent deflection, as per Federal Specification RR-F-621-C, latest revision. The valve box shall be cast, machined, assembled, and packaged within the United States and shall fully comply with the Buy American provisions of Public Law 102-240, enacted 12/18/91.

#### C. Gate Valves Greater Than 20 Inches

1. Valves larger than 20" in diameter and larger shall be approved by the County and shall be epoxy-coated, cast or ductile iron body mechanical joint type conforming to requirements of the AWWA Standards and shall be provided with a 2" square operating nut.
2. 20" or larger resilient gate valve must have a 4" bypass line and 4" gate valve. If an approved equal resilient gate valve (see LCU Approved Materials List) is used, the 4" bypass line and 4" gate valve is not required. Butterfly valves may be used for valves greater than 24" without the 4" bypass line and 4" gate valve.

#### D. Check Valves

1. Check valves smaller than 4" shall have a bronze body with a bronze disk. Check valves shall absolutely prevent the return of water back through the valve when the inlet pressure decreases below the delivery pressure.
2. The valve must be full opening, tight seating and its seat right shall be renewable and must be securely held in place by a threaded joint; the valve disc shall be bronze and shall be suspended from a non-corrosive shaft which will pass through a stuffing box.
3. The check valve 4" and larger shall be a rubber flapper type swing check valve and the body and cover shall be cast iron construction meeting ASTM A126 Class B or Ductile Iron construction. The flapper shall be Buna-N having an "O" ring seating edge and be internally reinforced with steel.
4. Flapper to be captured between the body and the body cover in a manner to permit the flapper to flex from closed to full open position during flow through the valve. Flapper shall be easily removed without need to remove valve from line. Check Valves to have full pipe size flow area. Seating surface to be on a 45° angle requiring the flapper to travel only 35° from closed to full open position, for minimum head loss and non-slam closure.
5. Non-slam closing characteristic shall be provided through a short 35° disc stroke and a memory flex disc return action.
6. When essential to create backflow thru the check valve, i.e.; to prime or backflush a clogged pump, an external backflow device shall be included.
7. Valve exterior to be painted Phenolic Primer Red Oxide for high resistance to corrosion.
8. Materials of construction shall be certified in writing to conform to A.S.T.M. specified above.
9. Valve shall be of an approved make and model (see LCU Approved Materials List).

E. Backflow Prevention Devices

1. Backflow prevention devices for fire protection systems which do not utilize chemical additives or an auxiliary water supply shall be double detector check valve assemblies, shall be USC approved, painted red, and meet all requirements of ANSI/AWWA C510 For all other applications, backflow prevention devices shall be reduced pressure principle assemblies and shall be USC approved, and shall meet all requirements of ANSI/AWWA C511 and the Southern Standard Plumbing Code. Refer to Section 9 of the Lee County Utilities Operations Manual for details and Section 17196.

F. Air Release Valves

1. Air release valves shall be of the short body, automatic type as shown on the Lee County Standard Detail No. 9.27 in the Operations Manual. The valve body shall be cast iron construction, ASTM A126, Class B, and all internal working parts shall be 300 Series stainless steel, and BUNA-N orifice button. The inlet openings shall be 1" NPT screwed connection. The venting orifice shall be 3/16" in diameter and shall be installed to vent a minimum of 1 foot above the flood elevation. Air release valves shall be of an approved make and model (see LCU Approved Materials List).

#### G. Tapping Valves and Sleeves

1. Tapping valves shall be of non-rising stem type of O-Ring seals and conform to the applicable requirement as specified above for valves and shall have one flange joint end and mechanical joint end.
2. Valve end connecting to tapping sleeve shall have a flange for bolting to the sleeve. The flange shall have a tongue which fits a recess in sleeve. Tongues shall meet the requirements of MSS SP-60. Resilient-seated gate valves having a port diameter equal to or exceeding 1/4 inch over nominal diameter shall not require a tongue. Flange dimensions and drilling shall meet the requirements of ANSI B16.1. Mechanical joints shall meet the requirements of ANSI/AWWA C111/A21.11. A full nominal diameter cutter shall be used for tapping.
3. Tapping valves 16" and smaller, shall be installed vertically. Tapping valves larger than 16" shall be installed horizontally and shall have bypass valves. Tapping valves installed horizontally shall have rollers and tracks. Valves 16" and larger, shall have gear operators with enclosed gear cases suitable for buried service. Gear cases shall be extended type or totally enclosed type. Extended type gear cases shall have bolted side plates to cover stem and stuffing box.

#### H. Meter Boxes

1. Meters shall be installed in an approved meter box (see LCU Approved Materials List).
2. Meters larger than 2" shall be installed above ground and approved by Lee County Utilities. Refer to Lee County standard details.

Meter boxes, which need to be replaced, shall be of an approved make and model (see LCU Approved Materials List).



## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the ENGINEER before they are installed.
- B. After installation, all valves and appurtenances shall be tested at least one hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the ENGINEER.
- C. Install all floor boxes, brackets, extension rods, guides, the various types of operators and appurtenances as shown on the Drawings that are in masonry floors or walls, and install concrete inserts for hangers and supports as soon as forms are erected and before concrete is poured. Before setting these items, the CONTRACTOR shall check all plans and figures which have a direct bearing on their location and he shall be responsible for the proper location of these valves and appurtenances during the construction of the structures.
- D. Flanged joints shall be made with Series 300, stainless steel bolts. All exposed bolts shall be made with Series 300 stainless steel bolts.
- E. Prior to assembly of split couplings, the grooves as well as other parts shall be thoroughly cleaned. The ends of the pipes and outside of the gaskets shall be moderately coated with petroleum jelly, cup grease, soft soap or graphite paste, and the gasket shall be slipped over one pipe end. After the other pipe has been brought to the correct position, the gasket shall be centered properly over the pipe ends with the lips against the pipes. The housing sections then shall be placed. After the bolts have been inserted, the nuts shall be tightened until the housing sections are firmly in contact, metal-to-metal, without excessive bolt tension.
- F. Prior to the installation of sleeve-type couplings, the pipe ends shall be cleaned thoroughly for a distance of 8". Soapy water may be used as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6" from the end, and the middle ring shall be placed on the already laid pipe end until it is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to proper position in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly into the middle ring flanges. After the bolts have been inserted and all nuts have been made up finger-tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint, preferably by use of a torque wrench of the appropriate size and torque for the bolts.
- G. Valves shall be carefully inspected, opened wide and then tightly closed and the various nuts and bolts shall be tested for tightness. Special care shall be taken to prevent any foreign matter from becoming lodged in the valve seat. Gate valves,

unless shown otherwise, shall be set with their stems vertically above the center line of the pipe. Any valve that does not operate correctly shall be removed and replaced.

- H. Valve boxes shall be carefully centered over the operating nuts of the valves so as to permit a valve wrench or key to be fitted easily to the operating nut. Valve boxes shall be set to conform to the level of the finished surface and held in position by a ring of concrete placed under the support flange as shown on the details in Section 9 of the Lee County Utilities Operations Manual. The valve box shall not transmit surface loads to the pipe or valve. Care shall be taken to prevent earth and other material from entering the valve box.

Any valve box which is out of alignment or whose top does not conform to the finished ground surface shall be dug and reset. Before final acceptance of the work, all valve boxes shall be adjusted to finish grade. Valve operating risers shall be installed with any valves required to ensure that the operating nut is 30 inches or less from the ground surface.

### 3.2 SHOP PAINTING

- A. Ferrous surfaces of valves and appurtenances shall receive a coating of epoxy in accordance with AWWA Standard C550 and meets or exceeds all test requirements including the Food and Drug Administration Document Title 21 of the Federal Regulations on Food Additives, Section 175.000 entitled "Resinous and Polymeric Coating"; Impact Test Requirement in accordance with the ASTM D2794.

END OF SECTION

## SECTION 33 34 12

### WASTEWATER VALVES AND APPURTENANCES

#### PART 1 GENERAL

##### 1.1 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install complete and ready for operation all valves and appurtenances as shown on the Drawings and as specified herein.
- B. The equipment shall include, but not be limited to, the following:
  - 1. Eccentric Plug Valves
  - 2. Check Valves
  - 3. Pinch Check Valves
  - 4. Vacuum Breakers
  - 5. Air Release Valves
  - 6. Corporation Stops
  - 7. Flange Adapter Couplings
  - 8. Flexible Couplings
  - 9. Diaphragm Seals
  - 10. Unions
  - 11. Mechanical Type Seals
  - 12. Hose End Faucets
  - 13. Pressure Gauges
  - 14. Reduced Pressure Backflow Preventor
  - 15. Flow Meters

##### 1.2 DESCRIPTION OF SYSTEMS

- A. All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of wastewater and reclaimed water.

##### 1.3 QUALIFICATIONS

- A. All of the types of valves and appurtenances shall be products of well established reputable firms who are fully experienced, reputable and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these specifications as applicable.

#### 1.4 SUBMITTALS

- A. Submit within 30 days after execution of the contract a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. Complete shop drawings of all valves and appurtenances shall be submitted to the ENGINEER for approval in accordance with the requirements of Section 01 33 00 and the General Conditions.

#### 1.5 TOOLS

- A. Special tools, if required for normal operation and maintenance shall be supplied with the equipment.

### PART 2 PRODUCTS

#### A. General:

- 1. All valves and appurtenances shall be of the size shown on the Drawings and as far as possible all equipment of the same type shall be from one manufacturer.
- 2. All valves and appurtenances shall have the name of the maker and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.

#### B. Eccentric Plug Valves

- 1. All valves shall be eccentric plug valves unless otherwise specified. Valves shall be of an approved make and model (see LCU Approved Materials List).
- 2. Plug valves shall be tested in accordance with AWWA C504 Section 5. Each valve shall be performance tested in accordance with AWWA C504 Section 5.2 and shall be given a leakage test and hydrostatic test as described in AWWA C504 Paragraphs 5.3 and 5.4. The leakage test shall be applied to the face of the plug tending to unseat the valve. The Manufacturer shall furnish certified copies of reports covering proof of design testing as described in AWWA C504 Section 5.5.
- 3. Plug valves shall be of the tight closing, resilient faced, non-lubricating variety and shall be of eccentric design such that the valve's pressure member (plug) rises off the body seat contact area immediately upon shaft rotation during the opening movement. Valve pressure ratings shall be as follows and shall be established by hydrostatic tests as specified by ANSI B16.1-1967. Valves shall be drip-tight in both directions (bi-directional) at rated pressure, 175 psi through

12-inch diameter, 150 psi for 14-inch diameter and above. The valve shall be provided with a 2-inch square operating nut.

4. The valve body shall be constructed of cast iron ASTM A126, Class B. Body ends shall be mechanical joint to meet the requirements of AWWA C111/ANSI A21.11 or single gasket push-on type.
5. The valve plug shall be constructed of cast iron or ductile iron and shall have a conical seating surface which is eccentrically offset from the center of the plug shafts. The plug and shafts shall be integral. The entire plug face shall be totally encapsulated with Buna N (Nitrile) rubber in all valve sizes. The rubber to metal bond must withstand 75 lbs. pull under test procedure ASTM D-429-73, Method B. When the plug is in full open position, plug geometry and body waterway contours must provide a passageway that allows flow capacity **equal to 100% of the adjacent pipe area.**
6. Valve seat mating surface shall be constructed of a welded-in overlay of not less than 90% nickel or be a one-piece 304 stainless steel ring. Seat ring contour must be precision machined.
7. A mechanical "brake" shall be supplied on all valves and shall be capable of "locking" the valve in any intermediate position between full-open and full-closed.
8. Valves shall have multiple V-type packing and packing glands and shall be capable of being field adjusted or repacked without the bonnet or plug being removed from the valve with the valve under the full rated pressure. Valves shall have a port position indicator.
9. For corrosion protection, the interior ferrous surfaces of all plug valves shall have a 2-part epoxy internal coating to a minimum of 20 mils thickness.
10. Valve shaft seals shall be adjustable and comply with AWWA C507 Section 10 and with AWWA C507 Section 11.
11. Manual valves shall have lever or gear actuators and tee wrenches, extension stems, floorstands, etc. as indicated on the plans. All valves 6" and larger shall be equipped with gear actuators. All gearing shall be enclosed in a semi-steel housing and be suitable for running in a lubricant with seals provided on all shafts to prevent entry of dirt and water into the actuator. All actuator shafts shall be supported on permanently lubricated bronze bearings. Actuators shall clearly indicate valve position and an adjustable stop shall be provided to set closing torque. All adjustable stop shall be provided to set closing torque. All exposed nuts, bolts, and washers shall be zinc or cadmium plated. Valve packing adjustment shall be accessible without disassembly of the actuator.

12. Valves and gear actuators for submerged service shall have seals on all shafts and gaskets on the valve and actuator covers to prevent entry of water. Actuator mounting brackets for buried or submerged service shall be totally enclosed and shall have gasket seals. All exposed nuts, bolts, springs and washers shall be stainless steel.
13. Three-way plug valves shall be non-lubricated gear oriented. Valve bodies shall be ASTM A-126 Class, and be semi-steel with 125 lb. ANSI standard flanges. Plugs shall be resilient faced. Three-way valves shall be 3-way, 3 port 270 degree turn.
14. Plug valves installed such that actuators are 6 feet or more above the floor shall have chain wheels.
15. Where shown on the Drawings, plug valves shall be installed with extended shafts and actuators. Actuators for extended shafts shall be mounted on floor stands where indicated on the drawings or shall be removable handwheels where floor stands are not called for. Six-inch sleeves shall be provided for extended shafts in all floors; where necessary covers shall be provided. Shafts shall be of adequate strength to operate the valve and shall be 304 stainless steel where submerged and carbon steel elsewhere. Floor stands and covers, where called for shall be cast iron. Floor stands shall be equipped with valve position indicators. Where shown on the drawings, plug valves shall be furnished with extended bonnets, see LCU Approved Materials List.
16. All buried plug valves shall have a remote position indicator in the valve box showing position of the valve. A stainless steel centering and I.D. plate shall be provided showing direction of opening and number of turns to open for each valve.

C. Valves for Buried Service

1. Valves for buried service shall meet all the requirements as specified herein for interior except that buried valves shall have mechanical joint ends.
2. All buried valves shall have cast-iron three-piece valve boxes, valve boxes shall be provided with suitable heavy bonnets to extend to such elevation at the finished grade surface as directed by the ENGINEER. The barrel shall be two-piece, screw type, having 53" shaft. The upper section shall have a flange at the bottom having sufficient bearing area to prevent settling, shall be designed so as to prevent the transmission of surface loads directly to the valve or piping, and shall be complete with cast iron covers. Covers shall have "SEWER" cast into the top. The covers shall be so constructed as to prevent tipping or rattling. Valve boxes shall be of an approved manufacture listed in the LCU Approved Materials List.

3. One tee-handled gatewrench of suitable length shall be furnished to operate each valve with a valve box.
4. Where valves are located out of pavement, the boxes shall be adjusted to finished grade and a concrete slab two feet square and six inches thick shall be poured around the box.
5. Valve boxes shall be of the heavy duty, traffic bearing cast iron, adjustable screw type with a drop cover. The valve box assembly shall consist of a bottom section, top section and cover which is cast from gray iron, formulated to ASTM specification A-48 latest revision, class 30 minimum and shall be free from blowholes, shrinkage or other imperfections not true to pattern. The shaft size shall be 5 1/4" and the adjustable length shall be from 18" to 24". The wall thickness shall be 3/16"  $\pm$  1/16". The weight of the assembly shall be 61 pounds  $\pm$  2 pounds, with the cover weight being a minimum of 12 pounds.
6. The name of the manufacturer and foundry of origin shall be cast into each of the components of the assembly in legible form. The assembly shall be suitable for highway traffic wheel loads of 16,000 pounds and shall withstand a proof load test of 25,000 pounds without failure or permanent deflection, as per Federal Specification RR-F-621-C, latest revision. The valve box shall be cast, machined, assembled, and packaged within the United States and shall fully comply with the Buy American provisions of Public Law 102-240, enacted 12/18/91.

#### D. Check Valves

1. Check valves smaller than 10 cm (4") shall have a bronze body with a bronze disk. Check valves shall absolutely prevent the return of water back through the valve when the inlet pressure decreases below the delivery pressure. The valve must be full opening, tight seating and its seat right shall be renewable and must be securely held in place by a threaded joint; the valve disc shall be bronze and shall be suspended from a non-corrosive shaft which will pass through a stuffing box.
2. The check valve 10 cm (4") and larger shall be a rubber flapper type swing check valve and the body and cover shall be cast iron construction meeting ASTM A126 Class B or ductile iron construction. The flapper shall be Buna-N having an "O" ring seating edge and be internally reinforced with steel.
3. Flapper to be captured between the body and the body cover in a manner to permit the flapper to flex from closed to full open position during flow through the valve. Flapper shall be easily removed without need to remove valve from line. Check Valves to have full pipe size flow area. Seating surface to be on a 45° angle requiring the flapper to travel only 35° from closed to full open position, for minimum head loss and non-slam closure.



4. Non-slam closing characteristic shall be provided through a short 35° disc stroke and a memory flex disc return action.
5. When essential to create backflow through the check valve, i.e.; to prime or backflush a clogged pump, an external backflow device shall be included.
6. Valve exterior to be painted Phenolic Primer Red Oxide for high resistance to corrosion.
7. For corrosion protection, the interior ferrous surfaces of all check valves used in sewage applications shall be coated with a factory applied, two-part epoxy coating to a minimum of 20 mils thick.
8. Materials of construction shall be certified in writing to conform to A.S.T.M. specified above.
9. Valve shall be of an approved make and model (see LCU Approved Materials List).
10. All valves shall have a three-year 100% replacement guarantee.

E. Pinch Check Valves

1. Pinch check valves shall be of an approved make and model (see LCU Approved Materials List).

F. Air Release Valves

1. Air release valves (ARV) used on sewer force mains shall be of the automatic type designed for wastewater applications. The valve body shall be cast iron construction, ASTM A126, Class B, and all internal working parts shall be 316 Series stainless steel, and BUNA-N orifice button. The venting orifice shall be a minimum of 2.54 cm (1") in diameter. The inlet openings shall be sized per manufacturer's recommendation but no less than 5 cm (2") NPT screwed connection. ARVs shall be of an approved make and model (see LCU Approved Materials List).
2. The Bermad Flow Control Accessories model ARI D-40 combination valve shall be installed to release air from the discharge piping at the pump station. This valve shall be located as shown in Section 9 of the Lee County Utilities Operations Manual, just past the 90-degree bend on the header pipe detail. The working pressure shall be 200 psi minimum and shall have a 2-inch threaded connection. Air discharged from this valve shall be released through connecting 2-inch PVC or HDPE pipe back through into the wetwell.

3. Ball valve shall be stainless steel.

G. Corporation Stops

1. Corporation stops for connections to ductile iron or steel piping shall be all stainless steel suitable for 150 psi test pressure, see LCU Approved Materials List.

H. Flange Adapter Couplings

1. Flange adapter couplings shall be of the size and pressure rating required for each installation and shall be suitable for use on either cast iron or ductile iron pipe. They shall be of an approved make and model (see LCU Approved Materials List).

I. Flexible Couplings:

1. Flexible couplings shall be either the split type or the sleeve type as shown on the Drawings.
  - a. Split type coupling shall be either the split type or the sleeve type as shown on the Drawings. The couplings shall be mechanical type for radius groove piping. The couplings shall mechanically engage and lock grooved pipe ends in a positive coupling and allow for angular deflection and contraction and expansion.
  - b. Couplings shall consist of malleable iron, ASTM Specification A47, Grade 32510 housing clamps in two or more parts, a single chlorinated butyl composition sealing gasket with a "C" shaped cross-section and internal sealing lips projecting diagonally inward, and two or more oval track head type bolts with hexagonal heavy nuts conforming to ASTM Specification A183 and A194 to assemble the housing clamps. Bolts and nuts shall be Series 300 stainless steel.
  - c. Victaulic type couplings and fittings may be used in lieu of flanged joints. Pipes shall be radius grooved as specified for use with the Victaulic couplings. Flanged adapter connections at fittings, valves, and equipment shall be of an approved make and model (see LCU Approved Materials List).
  - d. Sleeve type couplings shall be used with all buried piping. The couplings shall be of steel and shall be of an approved make and model (see LCU Approved Materials List). The coupling shall be provided with stainless steel bolts and nuts unless indicated otherwise.
  - e. All couplings shall be furnished with the pipe stop removed.

- f. Couplings shall be provided with gaskets of a composition suitable for exposure to the liquid within the pipe.
- g. If the Contractor decides to use victaulic couplings in lieu of flanged joints, he shall be responsible for supplying supports for the joints.

J. Diaphragm Seals:

- 1. Diaphragm seals shall be installed on pressure gauge connection to all lines where shown on the Drawings, to protect pressure switches used to monitor excessive pressures on pipe lines. The diaphragm shall be "thread attached" to both piping and pressure switches. Diaphragm seals shall be constructed of cadmium plated carbon steel, except for the lower housing which shall be specifically chosen according to the fluid pressure being monitored.
- 2. Diaphragm seals shall have a flushing connection and be of an approved make and model (see LCU Approved Materials List).

K. Unions

- 1. Unions on ferrous pipe 2" in diameter and smaller shall be 150 pounds malleable iron, zinc-coated. Unions on water piping 22" in diameter and larger shall be flange pattern, 125-pound class, zinc-coated. Gaskets for flanged unions shall be of the best quality fiber, plastic, or leather. Unions shall not be concealed in walls, ceilings, or partitions.

L. Mechanical Type Seals

- 1. Mechanical type seals shall consist of an adjustable modular bolted, synthetic rubber and plastic sealing element. The sealing element shall be of an approved make and model (see LCU Approved Materials List).

M. Hose End Faucets

- 1. Hose end faucets for potable water supply at submersible stations shall be of an approved make and model (see LCU Approved Materials List). Faucet shall be furnished with removable key and shall be lockable.

N. Pressure Gauges

- 1. Each pressure gauge shall be direct mounted, cast aluminum case, with a 42" diameter dial and furnished with a clear glass crystal window, 3/8" shut-off valve, and a bronze pressure snubber. Provide diaphragm seals between shut-off valve and pressure gauge on all sludge and lines with nonclear matter in suspension of solution. All gauges shall be weatherproofed. The face dial

shall be white finished aluminum with jet black graduations and figures. The face dial shall indicate the units of pressure being measured (e.g., feet, inches, etc.) or be dual scale.

2. If shown on the drawings, each pump discharge line shall be furnished with gauges sized 0-100 psi.

O. Reduce Pressure Backflow Preventor

1. If shown on the drawings, backflow preventors shall be supplied at each pump station.

P. Flow Meters

1. Meters shall be of the magnetic type with Teflon lining, stainless steel electrodes and ultrasonic cleaning, or the universal venturi type with flanged cast or ductile iron body and bronze throat. Flow meters shall be designed to record both the peak pumping station capacity and anticipated minimum flows with equally high accuracy. The meters shall be direct reading in gallons per minute, totalizing in million gallons per day and recording on 12-inch diameter, 24-hour linear charts in gallons per minute. All meters shall also be tied to the Radio Telemetry SCADA System. The flow metering system shall be installed within the pumping station structure, if space is available, or in an exterior protected and drained pit. In all cases, meter by-pass valves and piping shall be provided.
2. Flow meters shall be provided for all sewage pumping stations with ultimate ratings greater than 1500 gpm, or as directed by LCU.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the ENGINEER before they are installed.
- B. Valves shall be carefully inspected, opened wide and then tightly closed and the various nuts and bolts shall be tested for tightness. Special care shall be taken to prevent any foreign matter from becoming lodged in the valve seat. Valves, unless shown otherwise shall be set with their operator shaft vertically. Any valve that does not operate correctly shall be removed and replaced.
- C. Valve boxes shall be carefully centered over the operating nuts of the valves so as to permit a valve wrench or key to be fitted easily to the operating nut. Valve boxes shall be set to conform to the level of the finished surface and held in position by a ring of concrete placed under the support flange as shown on the details in Section 9 of the Lee County Utilities Operations Manual. The valve box shall not transmit surface

loads to the pipe or valve. Care shall be taken to prevent earth and other material from entering the valve box. Any valve box which is out of alignment or whose top does not conform to the finished ground surface shall be dug out and reset. Before final acceptance of the work, all valve boxes shall be adjusted to finish grade. Valve operating risers shall be installed with any valves required to ensure that the operating nut is 30-inches or less from the ground surface.

- D. After installation, all valves and appurtenances shall be tested at least 1 hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the ENGINEER.
- E. Install all floor boxes, brackets, extension rods, guides, the various types of operators and appurtenances as shown on the Drawings that are in masonry floors or walls, and install concrete inserts for hangers and supports as soon as forms are erected and before concrete is poured. Before setting these items, check all plans and figures which have a direct bearing on their location and he shall be responsible for the proper location of these valves and appurtenances during the construction of the structures.
- F. Pipe for use with flexible couplings shall have plain ends as specified in the respective pipe sections in Division 15.
- G. Buried flanged or mechanical joints shall be made with Series 300, stainless steel bolts. All exposed bolts shall be made with Series 300 stainless steel bolts.
- H. Prior to assembly of split couplings, the grooves as well as other parts shall be thoroughly cleaned. The ends of the pipes and outside of the gaskets shall be moderately coated with petroleum jelly, cup grease, soft soap or graphite paste, and the gasket shall be slipped over one pipe end. After the other pipe has been brought to the correct position, the gasket shall be centered properly over the pipe ends with the lips against the pipes. The housing sections then shall be placed. After the bolts have been inserted, the nuts shall be tightened until the housing sections are firmly in contact, metal-to-metal, without excessive bolt tension.
- I. Prior to the installation of sleeve-type couplings, the pipe ends shall be cleaned thoroughly for a distance of 8". Soapy water may be used as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6" from the end, and the middle ring shall be placed on the already laid pipe end until it is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to proper position in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly into the middle ring flaires. After the bolts have been inserted and all nuts have been made up finger-tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint, preferably by use of a torque wrench of the appropriate size and torque for the bolts.

### 3.2 SHOP PAINTING

- A. Ferrous surfaces of valves and appurtenances shall receive a coating of rust-inhibitive primer. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

### 3.3 FIELD PAINTING

- A. All metal valves and appurtenances specified herein and installed in valve and meter pits will be painted as specified in Section 09 90 00.

### 3.4 INSPECTION AND TESTING

- A. Completed pipe shall be subjected to hydrostatic pressure test for hours at full working pressure. All leaks shall be repaired and line retested as approved by the ENGINEER. Prior to testing, the gravity pipelines shall be supported in an approved manner to prevent movement during tests.

END OF SECTION

(NO TEXT FOR THIS PAGE)



**EXHIBIT K**  
**TECHNICAL SPECIAL PROVISIONS**

RESERVED

**EXHIBIT L**  
**FDOT AND LEE COUNTY DESIGN STANDARDS**

The following design standards are expressly agreed to be incorporated by reference and made a part of this Agreement:

1. Florida Department of Transportation FY2019-20 Standard Plans as published at the following link:

<https://www.fdot.gov/design/standardplans/SPRBC.shtm>

2. Lee County Department of Transportation Plan Specifications for Sign Installation, **September 2018** edition as published at the following link:

<http://www.leegov.com/dot/traffic/trafficinstall>

3. Lee County Department of Transportation Plan Specifications for Signal & Street Lighting, April 15, 2014 edition as published at the following link:

<http://www.leegov.com/dot/traffic/trafficstandard>

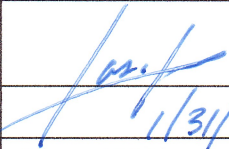
4. Lee County Utilities Design Manual, the latest edition as published at the following link:

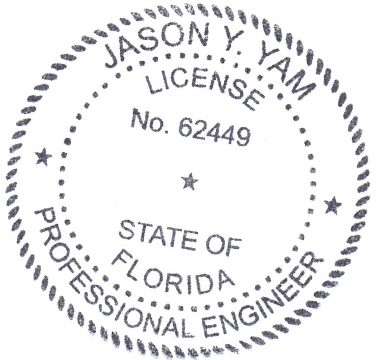
<http://www.leegov.com/utilities/design-manual>

In the event of discrepancies between the Lee County and FDOT design standards, Lee County Standards shall govern.

**EXHIBIT M**  
**DEVELOPMENTAL SPECIFICATIONS**

*I hereby certify that these Developmental Specifications have been properly prepared by me, or under my responsible charge:*

Developmental Specifications Section(s): 528	
Signature:	
Date:	1/31/20
Engineer of Record:	Jason Y. Yam
Florida License No.:	62449
Firm Name:	Cardno, Inc
Firm Address:	380 Park Place Blvd, Suite 300
City, State, Zip Code:	Clearwater, FL 33759
Cert. of Authorization No:	29915



**SECTION 528 – DIRECTIONAL TACTILE WALKING SURFACE INDICATORS**

**528-1 Description.**

Furnish and install directional tactile walking surface indicators (directional indicators) on concrete or asphalt walking surfaces in accordance with the Plans, this Section and Developmental Standard Plan, Index 528-001.

**528-2 Materials.**

Directional indicators must consist of materials intended for exterior use subject to routine pedestrian traffic. Use directional indicators consisting of weather-resistant tiles, pavers or panels that are cast into concrete, or panels or mats that are surface applied to concrete or asphalt surfaces with adhesives and mechanical fasteners. Do not form directional indicators in wet concrete.

Directional indicators meeting the requirements of this Section are listed on the Department's Innovative Product List (IPL). Manufacturers may submit products for inclusion on the IPL.

**528-2.1 Material Properties:** Directional indicators must meet the following requirements:

Property	Standard	Test Value
Slip Resistance	FM 3-C1028	Dry Coefficient of Friction – 0.8 min. Wet Coefficient of Friction – 0.65 min.
Wear Resistance	FM 5-594	Average Volume Loss: no more than 0.06 cm <sup>3</sup>
Water Absorption*	ASTM D570	Not to exceed 5%.
Adhesion/Bond Strength**	FM 5-589	150 psi min. tensile adhesion strength
Non-Hazardous Classification	Submit Material Safety Data Sheet (SDS)	Non-Hazardous, per RCRA Subtitle C
Dimensions	ISO 23599	Meet criteria in ISO 23599, section 4.1.3.2
* Applies only to plastic materials. ** Applies to surface-applied materials.		

**528-2.2 Color/Contrast:** Use safety yellow, brick red or black colored directional indicators on concrete walking surfaces. Use safety yellow colored directional indicators on asphalt walking surfaces. Acceptable materials must meet the following criteria for a duration of three years.

Color	Light Reflectance Values (LRV) CAP Y*
Safety Yellow	25 – 45
Brick Red	5 – 15
Black	0 – 5
*When measured with a spectrophotometer	

### 528-3 Installation Procedures.

**528-3.1 Surface Preparation and Installation:** Prepare the surface in accordance with the manufacturer's recommendations. Use only products and materials appropriate for the surface on which they will be applied. Install in accordance with the manufacturer's instructions, using materials and equipment recommended and approved by the manufacturer. For surface- applied panels or mats, use adhesives applied over the entire surface and mechanical fasteners.

**528-3.2 Cutting Directional Indicators:** Edges must maintain factory edges for all pedestrian approaches. Cutting of directional indicators allowed only on edges not approachable by pedestrians.

### 528-4 Method of Measurement.

The quantity to be paid for will be the plan quantity, in square feet, for directional indicators, completed and accepted.

**528-5 Basis of Payment.**

Price and payment will be full compensation for all work specified in this Section, including all materials, equipment, labor, surface preparation, and incidentals necessary to complete the work.

Payment will be made under:

919-528- A Directional Indicators – per square foot

**EXHIBIT N**  
**CONTRACTOR'S BACKGROUND SCREENING AFFIDAVIT**



**CONTRACTOR BACKGROUND  
SCREENING AFFIDAVIT**

Florida Statutes Chapter 435 governs required background screenings for any employees, contractors, subcontractors, or agents of the Contractor who will have contact with any vulnerable person, as defined by statute, or who otherwise are required to undergo a Level 1 or Level 2 background screening in accordance with Florida law.

The Contractor is responsible for ensuring that such required background screenings are conducted in accordance with Florida Statutes Chapter 435. Documentation of such completed background screenings must be maintained for a period of no less than five (5) years and are subject to audit by Lee County at any time during such five (5) year period.

**Under penalty of perjury, I declare that I have read and understand the requirements stated above, and that all required background screenings shall be conducted in accordance with this affidavit.** I further understand that there may be additional local, state, and federal regulations that may require background screening, and that the Contractor will be solely responsible for complying with such legal requirements. Furthermore, the Contractor shall indemnify and hold Lee County harmless from any and all claims or actions resulting from failure to comply with this affidavit.

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

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

\_\_\_\_\_  
Name/Title

On the date set forth above, the foregoing instrument was sworn to (or affirmed) and subscribed before me by the above-named person and in their stated capacity, and is either personally known to me or who has produce the following as identification: \_\_\_\_\_

[Stamp/seal required]

\_\_\_\_\_  
Signature, Notary Public

**EXHIBIT O**  
**OTHER RELEVANT FORMS**