



July 26, 2021

Ms. Cindy Mulkey
Office of Siting Coordination
Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399

Re: **St. Lucie Nuclear Power Plant– PPSA No. PA74-02**
Post-Certification Amendment
Fence Enhancement/Replacement

Dear Ms. Mulkey:

Florida Power & Light Company (FPL) is requesting a post-certification amendment to the Site Certification for FPL's St. Lucie Nuclear Power Plant, pursuant to rule 62-17.205(1)(A) F.A.C. The purpose of this amendment is to obtain approval to enhance or replace the current fencing within the certified boundary of St. Lucie Nuclear Power Plant.

Attachment A shows site and project location maps. The project will include replacing the Nuisance, Delay, and Perimeter Fencing in 5 phases and is planned to begin in 2021 and end in 2022. Each phase replaces fencing along a different portion of the Protected Area (PA) Perimeter. PA-Boundary Perimeter Fencing will be replaced with 9-foot-tall grating style fence with the exception of the portion of fence that crosses the UHS Barrier, and safenet bridge which will remain wire-mesh. All other fencing (Non PA-Boundary) will be replaced with 8-foot-tall standard fencing per the standard PSL details. Attachment B provides the construction sketches for enhancement/replacement fencing. Attachment C provides the Problem Statement and Change Package for all work associated with the fence enhancement/replacement.

Thank you for your attention to and consideration of FPL's request to amend the Site Certification for the St. Lucie Nuclear Power Plant. If you have any questions regarding this submittal, please do not hesitate to contact me at 561-691-7041.

Sincerely,
Florida Power & Light Company

A handwritten signature in black ink, appearing to read 'Beth Flah', is written over a horizontal line.

Beth Flah, PE
Environmental Specialist

Attachment A

Project Location Maps

Site Map

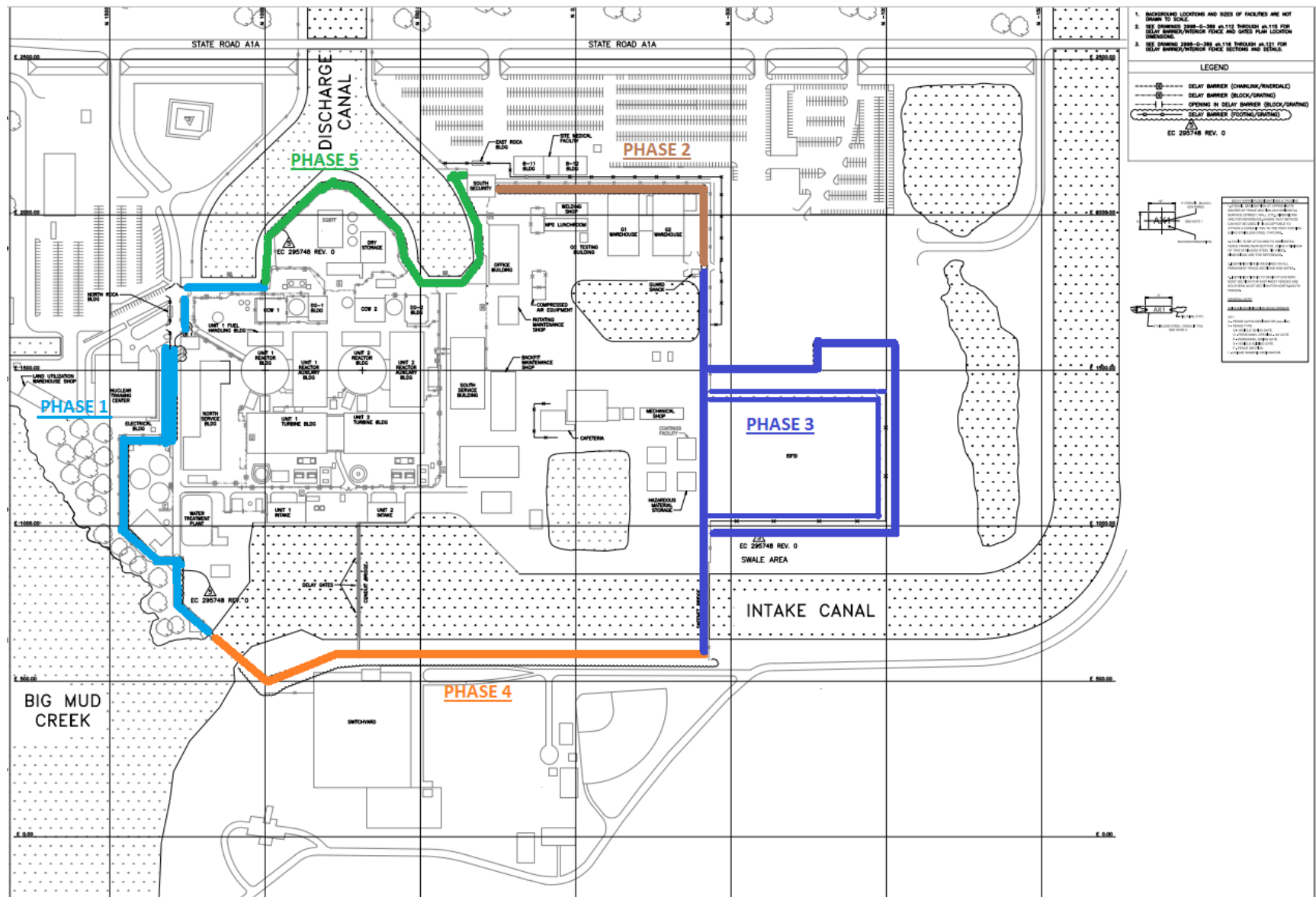
Port St. Lucie Nuclear Plant

Legend

 Certified Area



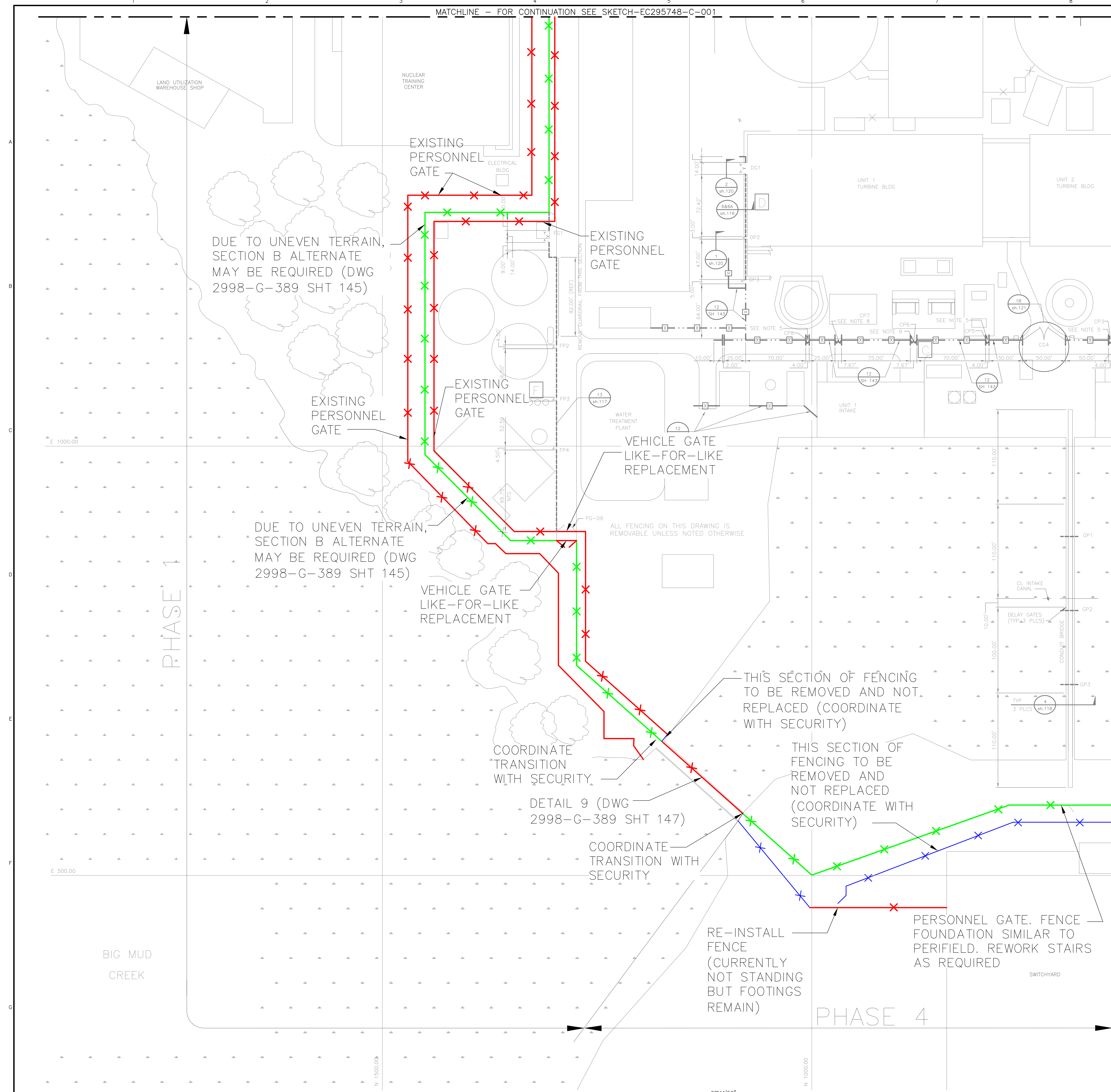
Port Saint Luice – Security Fence Replacement



Attachment B

Fencing Construction

Sketches



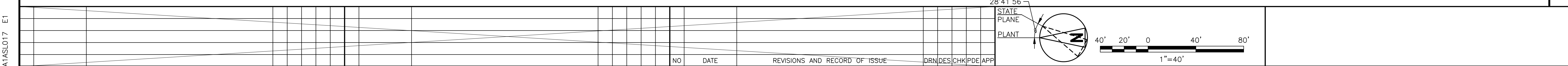
- NOTES
1. SEE DRAWING 2998-G-389 sh.111 FOR DELAY BARRIER/INTERIOR FENCE OVERALL SITE PLAN.
 2. BACKGROUND LOCATIONS AND SIZES OF FACILITIES ARE NOT DRAWN TO SCALE.
 3. SEE DRAWING 2998-G-389 sh.116 THROUGH SH.121 FOR FENCE AND GATE GENERAL NOTES, SECTION AND DETAIL 9.
 4. NOT USED
 5. LOCATE GATE IN FRONT OF FIRE HYDRANT/VALVE.
 6. FOR TYPICAL SIDEWALK AND ROADWAY REINFORCEMENT SEE DRAWING 2998-G-389 sh.116.
 7. DIMENSIONS ARE FOR REFERENCE ONLY.
 8. INSTALL DOUBLE GATE IN FRONT OF POLISHER BUILDING.
 9. INSTALL DOUBLE GATE AND SMALL FENCE PANEL BETWEEN THE UNIT 1 TRANSFORMERS.

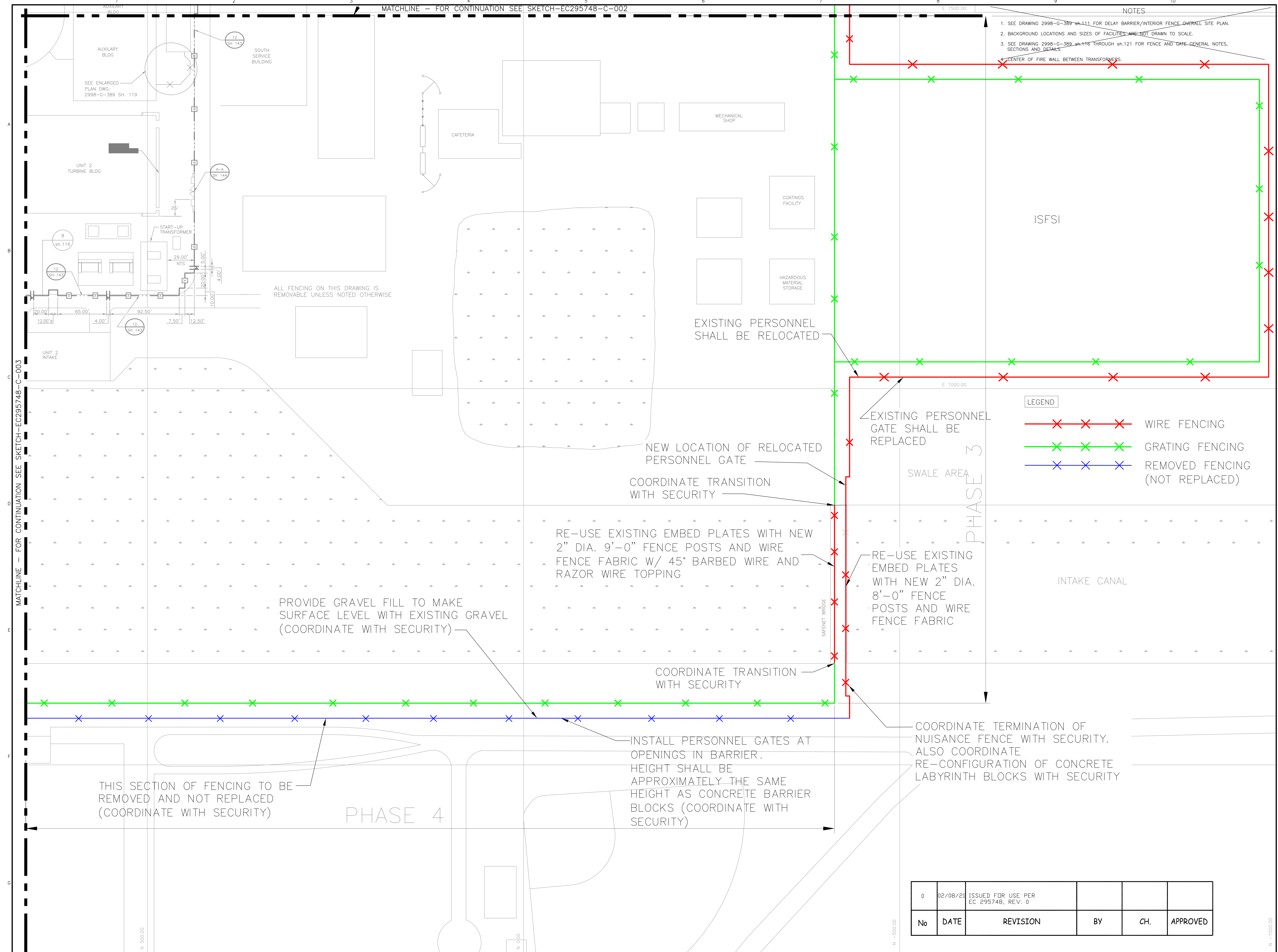
- LEGEND
- X—X—X—X—X— WIRE FENCING
 - X—X—X—X—X— GRATING FENCING
 - X—X—X—X—X— REMOVED FENCING (NOT REPLACED)

MATCHLINE - FOR CONTINUATION SEE SKETCH-EC295748-C-004

0	02/08/21	ISSUED FOR USE PER EC 295748, REV. 0			
No	DATE	REVISION	BY	CH.	APPROVED

FLORIDA POWER & LIGHT PORT ST. LUCIE NUCLEAR PLANT		PROJECT	DRAWING NUMBER	REV
CONSTRUCTION SUPPORT SKETCH AREA 3 - PHASE 1 & 4		CODE	SKETCH-EC295748-C-003	
		AREA		





- NOTES
1. SEE DRAWING 2998-G-389 SH.111 FOR DELAY BARRIER/INTERIOR FENCE OVERALL SITE PLAN.
 2. BACKGROUND LOCATIONS AND SIZES OF FACILITIES ARE NOT DRAWN TO SCALE.
 3. SEE DRAWING 2998-G-389 SH.116 THROUGH SH.121 FOR FENCE AND GATE GENERAL NOTES, SECTIONS AND DETAILS.
 4. CENTER OF FIRE WALL BETWEEN TRANSFORMERS.

LEGEND

- x — x — x — WIRE FENCING
- x — x — x — GRATING FENCING
- x — x — x — REMOVED FENCING (NOT REPLACED)

0	02/08/21	ISSUED FOR USE PER EC 295748, REV. 0			
No	DATE	REVISION	BY	CH.	APPROVED

Attachment C

Problem Statement
and Change Package

Design Equivalent Change Package			
Document Number: EC295748	Revision: 00000	Facility and Unit: St. Lucie Unit(s) 0	Page 1 of 15
Title: Replacement of Nuisance and Perimeter Fences			
Safety Classification: Safety Related ☐ Augmented Quality ☐ Non-Safety Related ☒			
Risk Category: Low (Per EN-AA-213-1000)			
Permanent Change ☒ Temporary Change ☐			

A) Problem Statement and Change Package Approval

Problem Statement: The PSL Security department continuously monitors “Industry Best Practices” and successful defensive improvements in response to the adversarial tactics employed throughout the nation to ensure the PSL Protective Strategy remains effective. Recent Protective Strategy Walkdowns have identified a requirement to enhance or replace the current fencing at St. Lucie Nuclear Power Plant. Specifically, existing delay, nuisance, and Protected Area (PA) fencing and fence posts around the perimeter of the PA have been identified as requiring replacement, and in some cases enhancement.		
Solution Statement: The PSL Protective Strategy utilizes Nuisance Fencing outside of the PA, Delay Fencing inside of the PA, and a Perimeter Fence along the PA Boundary. This EC replaces the Nuisance, Delay, and Perimeter Fencing in 5 phases planned to begin in 2021 and end in 2022. Each phase replaces fencing along a different portion of the PA Perimeter.		
Prepared by: Dept/Discipline:	Signature: SEE MILESTONE (NAMS)	Date:
Verified/Reviewed by:	Signature: SEE MILESTONE (NAMS)	Date:
Owner Acceptance Review (if req'd):	Signature: SEE MILESTONE (NAMS)	Date:
Approved by (Vendor, if applicable):	Signature: SEE MILESTONE (NAMS)	Date:
Approved by (Utility):	Signature: SEE MILESTONE (NAMS)	Date:
Plant Review Board Review (if appl):	Mtg Minutes or Chair Signature: N/A	Date:
Other Approval (if applicable):	Signature: N/A	Date:

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A.1 Revision Log:

Revision No.	Description
0	Initial Issue

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B) Design

B.1 Description of the Change:

Description of Change:

This EC replaces the Nuisance, Delay, and Perimeter Fencing in 5 phases planned to begin in 2021 and end in 2022. Each phase replaces fencing along a different portion of the PA Perimeter.

PA-Boundary Perimeter Fencing is replaced with 9ft tall grating style fence with the exception of the portion of fence that crosses the UHS Barrier, and safenet bridge which will remain wire-mesh. Grating fence details are per Drawings 2998-G-389 Sheets 145, 146, and 147. The design of the grating style fence is similar to the movable barriers that were previously installed per EC285482 and other fencing which was recently installed at Turkey Point.

All other fencing (Non PA-Boundary) is replaced with 8 ft tall standard fencing per the standard PSL details provided on Drawings 2998-G-389 Sheets 116 through 122.

Attachment 3 provides construction sketches which identify the locations of the fences that are impacted by this EC. The construction sketches are coordinated with PSL Security based on extensive field walkdowns which are documented in Attachment 2.

B.2 Affected Components ID/Number:

Component ID/Number	Description

B.3 Department Interfaces:

Department	Performing a Design Activity	Stakeholder/ Impacted Department	Name of person performing the Interdisciplinary/Interdepartmental/ Impact Review
Operations		Yes	Andy Terezakis

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Department	Performing a Design Activity	Stakeholder/ Impacted Department	Name of person performing the Interdisciplinary/Interdepartmental/ Impact Review
Security		Yes	Elliot Gonzalez
Land Utilization		Yes	Vince Munne
Work Planning / Construction		Yes	Gregg Verhoeven

B.4 Design Evaluation:

Design Inputs/Critical Characteristics	Requirement	Original Value/Config	Replacement Value/Config	Evaluation of Change	References
Perimeter Fence Meets NRC Requirements	10 CFR Part 73 provides one definition of a physical barrier to be a fence constructed of No. 11 American wire gauge, or heavier wire fabric, topped by three strands or more of barbed wire or similar material on brackets angled inward or outward between 30 and 45 from the vertical, with an overall height of not less than eight feet, including the barbed topping.	The existing Perimeter Fence meets the definition provided for a physical barrier.	The replacement Perimeter Fence exceeds the definition for a physical barrier by providing more robust fencing panels and a higher overall height.	Meets Requirements – Acceptable	Drawings: 2998-G-389 Sh 111 2998-G-389 Sh 112 2998-G-389 Sh 113 2998-G-389 Sh 114 2998-G-389 Sh 115 2998-G-389 Sh 116 2998-G-389 Sh 145 2998-G-389 Sh 146 2998-G-389 Sh 147 2998-G-389 Sh 45 2998-G-680 Sh 2

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Design Inputs/Critical Characteristics	Requirement	Original Value/Config	Replacement Value/Config	Evaluation of Change	References
Nuisance and Delay Fence meets PSL Security / Security Plan Requirements	PSL Security has provided input that the non-PA boundary fencing that is replaced by this EC shall be 8 feet high.	The existing Nuisance and Delay Fence are 4-8 feet high wire fences.	The replacement Nuisance and Delay Fence are 8 feet high wire fences.	Meets Requirements – Acceptable	Attachment 2, “Walkdown” Attachment 3, “Construction Sketches” Drawings: 2998-G-389 Sh 111 2998-G-389 Sh 112 2998-G-389 Sh 113 2998-G-389 Sh 114 2998-G-389 Sh 115 2998-G-389 Sh 116 2998-G-389 Sh 45 2998-G-680 Sh 2

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Design Inputs/Critical Characteristics	Requirement	Original Value/Config	Replacement Value/Config	Evaluation of Change	References
Time Critical Actions	The modifications to the fence cannot adversely impact time critical actions.	The current configuration of the fence is acceptable in that time critical actions which require interaction with the fence such as walking around or through a gate can be performed in adequate time.	The PA-Boundary and other fences installed by this modification are in the same locations and orientations as existing fences. Fence heights and materials are modified. 1 personnel gate near the ISFSI is moved several dozen feet.	Coordination with Ops and Security ensures that the movement of the personnel gate and modification of fence heights and materials have no impact on time critical actions.	Attachment 2, "Walkdown" Attachment 3, "Construction Sketches" Drawings: 2998-G-389 Sh 111 2998-G-389 Sh 112 2998-G-389 Sh 113 2998-G-389 Sh 114 2998-G-389 Sh 115
Fencing is designed to withstand all applicable forces including winds	Fencing is designed to withstand applicable wind speeds per Florida Building Code	Existing Fencing is adequately designed.	Replacement Perimeter Fence is designed per applicable Florida Building Code requirements including wind speeds. Other replacement fences are per existing site standard details.	Calculation PSL-0LHC-21-001 Rev. 0 and Attachment 5 evaluates the fencing. Meets Requirements – Acceptable	PSL-0LHC-21-001 Rev. 0 Attachment 5 Drawings: 2998-G-389 Sh 145 2998-G-389 Sh 146 2998-G-389 Sh 147 2998-G-389 Sh 45 2998-G-680 Sh 2

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Design Inputs/Critical Characteristics	Requirement	Original Value/Config	Replacement Value/Config	Evaluation of Change	References
Flooding Analysis not adversely impacted	Installation of replacement fencing shall not negatively impact flooding analysis	The impacted fences are currently wire-mesh fencing ranging from 4 to 8 ft in height	The fences will be replaced with a combination of wire-mesh and grating fencing ranging from 8 to 9 ft in height. The impacted fences are mostly in locations where flood barriers are already modelled in Calculation NEE-131-CALC-002 Rev. 1.	Attachment 4 evaluates the impact due to the change in fence. Also, addition of gravel on west side of intake has no affect on flooding analysis. Meets Requirements – Acceptable	NEE-131-CALC-002 Rev. 1 Attachment 4 Drawings: 2998-G-389 Sh 111 2998-G-389 Sh 112 2998-G-389 Sh 113 2998-G-389 Sh 114 2998-G-389 Sh 115
Impact to UHS barrier which separates Big Mud Creek from the intake canal and the Safenet Bridge which crosses the intake canal	Modifications to fencing on top of intake canal structure shall not adversely impact these structures	Existing PA-Boundary Fencing is 8ft high wire mesh. The Safenet bridge also has an existing 4ft high wire mesh fence.	Replacement PA-Boundary Fencing is 9ft high wire mesh. The additional fence on the Safenet bridge is replaced with an 8ft high wire mesh fence.	Attachment 5 evaluates the impact to these structures Meets Requirements – Acceptable	PSL-0LHC-21-001 Rev. 0 Attachment 5 Drawings: 2998-G-389 Sh 145 2998-G-389 Sh 146 2998-G-389 Sh 147 2998-G-389 Sh 45 2998-G-680 Sh 2 8870-G-712 Sh 1&2

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Design Inputs/Critical Characteristics	Requirement	Original Value/Config	Replacement Value/Config	Evaluation of Change	References
Grounding	Fences and gates shall be grounded.	Existing fences and gates are grounded per station requirements.	Modified fences and gates shall be grounded per station requirements.	Meets requirements per referenced documents.	2998-G-389 Sh 122 2998-B-412 Sh 11 8770-B-412 Sh 11

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B.5 Licensing Evaluation:

Does the change meet all of the alternate 50.59/72.48 screening criteria in step 3.3.5? Yes ☒ No ☐

If No, then a 10 CFR 50.59 or 10 CFR 72.48 screen is required. Reference/Doc No.: _____

Explanation of any "Yes" or "No" Screening Criteria/Questions (if necessary): Refer to Attachment 1 for responses to questions from IP-ENG-001 Attachment 5. Per IP-ENG-001, since all responses are "NO", a 50.59 screening is not required.

B.6 Open Items:

Open Item	Resolution Requirement (Turnover or Closeout)	Tracking Mechanism/No.

C) Affected Documents List:

Affected Document Number	Document Type	Title	Document Mark-up Number and Rev. (if applicable)	Doc Update Requirements (Turnover or Closeout)	Tracking Mechanism/No. (if applicable)
		SEE NAMS			

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D) Special Implementation Instructions:

General Precautions

1. Contractor/Installer shall take all appropriate precautions to ensure the safety of all people located on the work site, including Contractor's/Installer's personnel (or that of its subcontractor(s)) performing the work.
2. All WORK done by Contractor/Installer pursuant to contained drawings shall: (a) Conform to the governing contract documents; (b) be performed exclusively by its trained, competent personnel or, where permitted, that of its subcontractor(s); and (c) comply with all applicable safety laws, regulations, programs and practices to ensure the safety of all people located on the work site, including the Contractor's/Installer's personnel (or that of its subcontractor(s)) performing the WORK.
3. Underground or embedded utilities may exist within the area of and adjacent to the limits of the WORK. The location or identification of such utilities has not been verified by Owner or by S&L. Contractor/Installer is responsible for field locating and identifying underground or embedded utilities and any other underground or embedded utility dimensions.
4. Due caution shall be taken during any excavation/foundation/demolition work within the area of and adjacent to the limits of the WORK due to possible interferences.
5. All existing concrete may contain embedded conduit with energized circuits or operable utilities that are not identified on, or are in locations other than as indicated on, S&L design drawings or other drawings. It is the contractor's responsibility to field locate and identify all embedded items prior to starting the work.

Special Considerations and Instructions

6. Environmental Controls Program per Procedure ADM 27.19 shall be adhered to prior and during to excavation activities.
7. Due to the proximity to the protected mangrove area, additional caution shall be exercised and proper protocols shall be followed.
8. Proper safety and situational awareness shall be exercised when working with razor wire or other sharp/dangerous materials.
9. Contact Security and Security I&C to ensure appropriate Security Compensatory Measures are in place prior to performing any work.
10. Due caution shall be given to not impact any Security Intrusion Detection Systems (IDS). In the event that an IDS must be temporarily reconfigured to allow for construction to proceed, contact

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Security and Security I&C to ensure appropriate Security Compensatory Measures are in place prior to performing the work.

11. Replacement fences and gates shall be grounded per the details on Drawings 2998-G-389 Sheet 122, 2998-B-412 Sheet 11, and 8770-B-412 Sheet 11.
12. Unless otherwise noted on design drawings, the maximum gap in any fence barrier shall be less than 6".
13. Since S&L's recommendation to perform Ground Penetration Radar Scanning during the design phase was not taken, any buried commodities which result in an interference shall be coordinated with engineering.
14. Hydro excavation shall be utilized to ensure no buried commodities are damaged during construction.
15. Refer to the Construction Sketches EC295748-C-001, EC295748-C-002, EC295748-C-003, and EC295748-C-004 in Attachment 3 for identification of fencing to be replaced. The construction sketches should be viewed in color.
16. Construction Phases 1 through 5 as indicated on the Construction Sketches in Attachment 3 are recommendations. Based on coordination with Security and work planning the actual limits of each phase of construction may be altered as needed. Considerations shall be made so that no gaps or holes are created in the fence lines between construction phases.
17. Final configuration of the impacted fences shall match the configuration shown the revisions to Drawings 2998-G-389 Sheets 111, 112, 113, 114, and 115.

PA-Boundary Fencing Instructions

18. The PA-Boundary Fence line can be identified on the Construction Sketches as the majority of the fencing is shown with a green line indicating that the grating style fence shall be installed for the majority of locations. Note that some vehicle gates and the sections of fencing crossing the intake canal are shown red which indicates wire-mesh fencing shall be installed (UHS Barrier and Safenet Bridge). All PA-Boundary fences shall have 45° topping elements with the orientation facing out. Field shall connect fences at transition locations as required. Coordinate all transitions in fence type with Security based on field conditions.
19. Fences to be replaced with Grating (see Note 18) shall be per Drawings 2998-G-389 Sheets 145, 146, and 147.
20. UHS Barrier wire-mesh fencing replacement shall be per Detail 9 on Drawing 2998-G-389 Sheet 147.

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21. Safenet Bridge wire-mesh fencing replacement shall be per Drawings 2998-G-680 Sheet 2 Section Q and 2998-G-389 Sheet 45 Section C-C. Vertical fence posts shall be HSS2.375x0.250. Remaining fence hardware shall be standard fencing hardware similar to Drawing 2998-G-389 Sheet 116 Detail 2.
22. The new personnel gate on west side of conduit bridge should be similar to the doors installed per Drawings 2998-G-389 Sheets 143 and 144. Field should pour concrete up to walkway similar to how Perifield foundation was poured in this location. Fence Post may be cast in concrete at this location if required to be installed on or near steeply sloped concrete, (Similar to Drawing 2998-G-389 Sheet 145 Section C Alternate). Re-work stairs as required.
23. Wire-mesh vehicle gates shall be replaced like-for-like. For power-operated gates, replace only the gate panels (no electronics or controls shall be replaced).
24. As shown on Construction Sketch EC295748-C-001, two (2) vehicle gates on the Northeast corner of the PA are replaced with manually operated sliding gates with grating material. These gates shall be procured and installed per the information provided in Attachment 6. Field shall verify the width of the existing gates. Design of gate posts and foundations to meet Florida Building Code (by fabricator/others). If gates are too heavy to reasonably operate manually, coordinate with Security and Fabricator on the option to use a lighter weight grating such as 19-W-4 with ¾" x 1/8" bearing bars.
25. In the Southwest corner of the PA, the truck trap fencing (shown on Construction Sketch EC295748-C-002 inside the grating fence line) shall be installed using plant standard details for wire fences provided on Drawings 2998-G-389 Sheets 116 through 121 except with 9 ft tall fencing.

Non-PA Boundary Perimeter Fencing Instructions

26. Replacement fences and gates shall be 8ft tall and installed using plant standard details provided on Drawings 2998-G-389 Sheets 116 through 121. Note that fence posts do not need to be removable and can be cast directly into the concrete foundations.

E) Testing Requirements:

Critical Characteristic	Acceptance Criteria	Test Method
Security Protective Strategy Expert shall visually inspect replacement fencing and ensure all Intrusion Detection Systems are performing as expected prior to removing Security Compensatory	Fencing and associated Intrusion Detection System are installed and functioning as expected.	Per Work Order.

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Measures.		

F) Design Verification/Engineering Review:

☒ Design Verification or ☐ Engineering Review	
Design Verification Review Method	
☒ Design Review	
☐ Alternate Calculation	
☐ Qualification Testing	
Summary of Verification (summary is optional for Engineering Review): EC295748, Rev. 0 has been reviewed in its entirety from a Civil/Structural perspective and for interface with other disciplines. This included calculations, drawings, material lists, etc. (as applicable) and was performed using the design review methodology. This design change will not have an adverse impact on any plant structures, systems or components from a civil/structural perspective.	

G) Other References:

1. None

H) Attachments:

1. Alternative Screening Criteria
2. Walkdown Report
3. Construction Sketches
4. Civil Flooding Evaluation

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- 5. Structural Evaluation
- 6. Sliding Gate Order Details