



City of Tampa
Jane Castor, Mayor

Contract Administration
Michael W. Chucran, Director

306 East Jackson Street, 4N
Tampa, FL 33602

Office (813) 274-8116

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ADDENDUM 2

Via E-Mail

DATE: August 26, 2021

Contract 21-C-00009 Krause Pumping Station Standby Generators

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: The Bid Opening date is here by changed to September 14, 2021.

Item 2: Replace Proposal page P-2 with the attached Proposal page P-2R.

Item 3: The attached Apprenticeship Requirements and Reporting Form document is hereby incorporated into the Contract and Bidders shall comply therewith. Additional information can be found by following the links below.

<https://www.fldoe.org/academics/career-adult-edu/apprenticeship-programs/>

<https://apprenticeflorida.com/>

<https://www.apprenticeship.gov/>

<https://www.apprenticeship.gov/employers/registered-apprenticeship-program/register/standards-builder>

Item 4: Replace SP-71 Electrical Requirements, second paragraph, with the following:

Electrician Qualifications

The Electrician performing the electrical work shall be licensed/certified in the State of Florida. The Electrician shall be thoroughly experienced with, and regularly engaged in the demolition, installation, and troubleshooting of industrial power systems with nominal system voltages of 240 volts or greater. The Electrician shall provide the City with evidence demonstrating at least three (3) years of successful industrial power system installations of similar complexity, content, and scope of the contract bid project. Specifically, the Electrician shall have successfully completed a minimum two (2) projects

involving the electrical work associated with the installation of 500 KW or larger generators at industrial facilities. The Electrician shall supply the City with references of industrial clients that will attest to the Electrician's work experience and power system installations.

Item 5: Replace plan sheet number 2 with the attached plan sheet number 2; and, add the attached plan sheet numbers L-0.7 and L-0.8.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to ContractAdministration@tampagov.net.

Jim Greiner

Jim Greiner, P.E., Contract Management Supervisor

Contract Item No.	Unit	Estimated Quantity	Description and Price in Words	Computed Total Price for Item in Figures
BASE BID	LS		The work includes the furnishing of all labor, equipment, and material for the demolition and removal of existing generator terminal boxes, installation of two (2) 500 KW generators with subbase diesel fuel storage tanks, and associated conduit, conductors, instrumentation, construction of generator's concrete foundation and aluminum access platforms, stormwater pipe relocation, stormwater pond modifications; landscaping, fencing, any allowances that may be listed in Section 01020, and with all associated work required for a complete project in accordance with the Contract Documents.	
			_____ _____ dollars and _____ cents	
			BASE BID LS	\$ _____
ITEM 2	LS	1	Contingency	\$ <u>100,000.00</u>
			TOTAL	\$ _____

ORDINANCE NO. 2021- 33

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AN ORDINANCE OF THE CITY OF TAMPA, FLORIDA, AMENDING CITY OF TAMPA CODE OF ORDINANCES CHAPTER 26.5 TO ADD "ARTICLE IV. APPRENTICE REQUIREMENTS IN CITY CONSTRUCTION CONTRACTS"; SECTIONS 26.5-211 THROUGH 26.5-216; TO ESTABLISH REQUIREMENTS PERTAINING TO THE USE OF APPRENTICE LABOR IN CERTAIN CITY OF TAMPA CONSTRUCTION PROJECTS, TO INCLUDE SPECIFIC EXCEPTIONS THERETO; TO PROVIDE CONDITIONS RELATING TO DOCUMENTATION, INCENTIVE FOR COMPLIANCE, FEE FOR NONCOMPLIANCE AND OTHER REMEDIES, IMPLEMENTATION, EXPANSION OF SCOPE AND REPORTING; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT THEREWITH; PROVIDING FOR SEVERABILITY; PROVIDING AN EFFECTIVE DATE.

WHEREAS, construction contractors in the City of Tampa have identified a shortage of skilled labor for construction projects and a need to train younger workers as the existing job force ages; and

WHEREAS, this shortage of labor could result in delays, expenses, and other challenges to the City's future construction projects; and

WHEREAS, the City of Tampa has determined that apprenticeships create opportunities for training and experience that will assist in ensuring that a trained workforce will be available for future City construction projects; and

WHEREAS, requiring the employment of apprentices on certain City of Tampa construction projects will promote business and economic development by increasing the number of skilled workers in the City; and

WHEREAS, the City of Council of the City of Tampa has determined that the creation of Chapter 26.5, Article IV, pertaining to Apprentice Requirements in City Construction Projects, is appropriate and in the interest of the public health, safety or welfare of the City of Tampa at this time; and

WHEREAS, duly noticed public hearings, as required by law, were held by the City Council of the City of Tampa at which all residents and interested persons were given an opportunity to be heard.

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NOW, THEREFORE,

**BE IT ORDAINED BY THE CITY COUNCIL
OF THE CITY OF TAMPA, FLORIDA:**

Section 1. That the recitals set forth above are hereby incorporated as if fully set forth herein.

Section 2. That the City of Tampa Code, Section 26.5, is hereby amended by creating Article IV, Sections 26.5-211 through 26.5-216, to read as follows:

“ARTICLE IV.- APPRENTICE REQUIREMENTS IN CITY CONSTRUCTION CONTRACTS

DIVISION 1. - IN GENERAL

Sec 26.5-211. – Title; Applicability.

This Article IV shall be known and may be cited as the “City of Tampa Apprentice Requirements in City Construction Contracts Ordinance”. This Article shall apply to contracts for certain City of Tampa construction projects as specified in more detail herein.

Sec. 26.5-212. Legislative Findings and Intent.

(a) There is a shortage of skilled labor for construction projects and a need to train younger workers as the existing job force ages. This shortage of labor could result in delays, expenses, and other challenges to the City's future construction projects. Apprenticeships create opportunities for training and experience that will assist in ensuring that a trained workforce will be available for future City construction projects. By requiring contactors to use apprentices for City construction contracts, it is the intent of the City to increase the number of apprentices used by contractors, creating opportunities that will enable these apprentices to develop into more skilled labor that will then be available for City construction projects.

(b) Apprenticeship programs are recognized as an effective means of providing training and experience to individuals seeking to enter or advance in the workforce, offering an opportunity to earn wages while acquiring valuable marketable skills. The training that apprentices receive on city projects will also help them to market their skills to other contractors. In this way, apprenticeship training helps create a skilled pipeline of talent to support and sustain ongoing economic development activities in the City of Tampa.

Sec.26.5-213. - Definitions.

Apprentice means any person who is enrolled in and participating in an apprenticeship program or on-the-job training program registered with the Florida Department of Education or the United States Department of Labor, or in

1 a registered on-the-job training program, as defined in Chapter 446, Florida
2 Statutes.

3 *Bidder* means any individual, firm, corporation, partnership, company,
4 association, joint venture, or other entity that seeks the award of a construction
5 contract.

6 *Contractor* means any individual, firm, corporation, partnership, company,
7 association, joint venture, or other entity that has a construction contract with the
8 City.

9 *Construction contract*, for purposes of this article, means a contract
10 between the City and a contractor for a vertical construction project, as defined
11 herein. By no later than one year after implementation of this ordinance, this
12 definition shall be expanded to include horizontal construction projects, as also
13 defined herein.

14 *Vertical construction project* means a project, funded by City dollars in an
15 amount of at least one million dollars (\$1,000,000) priced on the basis of a lump
16 sum/fixed price amount, that involves the process of building, altering, repairing,
17 improving, or demolishing any public structure or building, or other public
18 improvements of any kind that are predominantly vertical (i.e., above-ground), on
19 or to any real property owned or under the control of the City, which work is being
20 performed under a construction contract. For purposes of this article, vertical
21 construction also includes on-site horizontal work that is integral to or part of the
22 vertical construction project.

23 *Horizontal construction project* means a project, funded by City dollars in
24 an amount of at least one million dollars (\$1,000,000) priced on the basis of a
25 lump sum/fixed price amount, that involves construction of highways, roads,
26 streets, bridges, utilities, water distribution or transmission pipelines, wastewater
27 interceptors, force mains or collection systems, and stormwater conveyance
28 facilities. For purposes of this article, horizontal construction also includes
29 rehabilitation of water, wastewater and stormwater pipelines including, but not
30 limited to, cured-in place, pulled-in place and pipe bursting methods.

31 *Good faith effort* means that the contractor, without an intent to defraud
32 or seek an unfair advantage, took all necessary steps to secure and maximize,
33 consistent with the requirements of this section, the required percentage for
34 apprentices on a construction project, to the satisfaction of the City of Tampa.
35 The contractor shall provide evidence of good faith efforts for consideration by
36 the City, which evidence may include documentation of the contractor's contacts

1 with the Florida Department of Education, Division of Career and Adult
2 Education's Apprenticeship Section; documentation of its contacts with state-
3 approved training programs, with labor organizations, and/or with technical
4 schools and training schools; documentation of its use of job fairs and other
5 outreach efforts; the frequency and duration of any employment advertisements
6 for apprentices; the extent to which the size of a contractor's workforce affects its
7 hiring opportunities for apprentices; and any other evidence demonstrating to the
8 satisfaction of the City that the contractor made a good faith attempt to secure
9 apprentice labor.

10 *Subcontractor* means an entity or individual providing services to the City
11 through a contractor for all or any portion of the construction contract.

12 *Labor hours* means the total hours worked on the site of a construction
13 project by workers who are employed by contractors or subcontractors on the
14 construction project, excluding hours worked by forepersons, superintendents, or
15 owners. Notwithstanding the above, the percentage requirements of this article
16 shall apply to the labor hours performed in a trade(s) for which registered
17 apprenticeship programs or on-the-job training programs exist.

18 **Sec. 26.5-214. - Apprenticeship Requirements and Exceptions.**

19 (a) When responding to a City of Tampa solicitation for a vertical construction project, a
20 bidder must certify that:

- 21 (1) The bidder or its subcontractors participate in an apprenticeship program that is
22 registered with the Florida Department of Education or the United States
23 Department of Labor; or
- 24 (2) The bidder commits that at the time the bidder executes a construction contract,
25 it or its subcontractors will be participating in an apprenticeship program that is
26 approved by the Florida Department of Education or the United States
27 Department of Labor or an on-the-job training program; or
- 28 (3) The bidder has submitted documentation that confirms, to the satisfaction of the
29 City of Tampa, that there are no registered apprenticeship or on-the-job training
30 programs for any type of work to be performed on the construction project.

31 (b) Prior to the City entering a construction contract, the City must receive
32 documentation from the bidder verifying compliance with Section 26-214(a).

33 (c) For the duration of the construction contract, as same may be extended including
34 through the issuance of change orders, at least 12% of the labor hours performed in
35 a trade(s) for which registered apprenticeship programs or on-the-job training
36 programs exist, including all work performed pursuant to change orders, must be

1 performed by apprentices employed by the contractor or subcontractors, with
2 required documentation provided to the City as set forth in Sec. 26-215 herein.

3 (d) If the contractor is unable to achieve or maintain the required percentage, the
4 contractor must notify the City in writing and document its good faith effort, as
5 defined herein, made to achieve or maintain the required percentage. The City will
6 then determine whether the contractor made all required good faith effort by
7 evaluating the contractor's submitted documentation.

8 (e) The construction contract between the City and the contractor must include a
9 provision requiring the contractor and its subcontractors to comply with the
10 requirements of this article.

11 (f) Exceptions.

12 (1) This article will not apply if:

13 a. It is prohibited by or in conflict with federal or state law or the terms of a
14 federal or state grant applicable to the construction project; or

15 b. The Mayor or the Mayor's designee determines that emergency
16 circumstances exist such that applying the article to the construction project
17 is not in the best interest of the City.

18 (2) This article will not apply to a subcontractor that is a WMBE or SLBE if the
19 compensation to be paid under the applicable subcontract for labor costs is less
20 than \$1,000,000.

21 (3) The twelve percent (12%) requirement of labor hours on the construction
22 project that must be performed by apprentices may be reduced by the Mayor or
23 the Mayor's designee if:

24 a. The contractor has successfully demonstrated to the City, after making a
25 good faith effort as defined herein, that the contractor has been unable to
26 find, or there does not exist, a sufficient number or type of apprentices
27 available to meet the required percentage; or

28 b. The Mayor or the Mayor's designee determines that there exists, for the
29 construction project at issue, a disproportionately high ratio of material
30 costs to labor hours, which makes infeasible the required percentage of
31 apprentice participation.

32
33 **Sec. 26.5-215. - Required Documentation, Incentive for Compliance, and**
34 **Noncompliance Fee and Other Remedies.**

35
36 (a) *Required documentation.* The contractor must prepare, submit, and certify, on a
37 monthly basis for the duration of the construction contract, accurate and timely
38 records, on a form prepared by the City, identifying the name, hourly rate, and trade
39 classification of each apprentice, the cumulative number of hours worked on the

1 project to date by apprentices, and the labor hours of all workers used by the
2 contractor and each subcontractor on the construction project. If a subcontractor
3 uses apprentices that will be included to satisfy the 12% requirement set forth herein,
4 the contractor must require that the subcontractors prepare, maintain, and certify,
5 for submittal by the contractor to the City, accurate and timely records, on a form
6 prepared by the City, identifying for such subcontractor, the name, hourly rate, trade
7 classification, labor hours for apprentices used by the subcontractor on the
8 construction project, and labor hours of all workers used by the subcontractor on the
9 construction project.

10 (b) *Incentive for Compliance.* At the point at which a contract is 50% complete, the City
11 will reduce 1% of the retainage, provided the City has determined that (i) the
12 contractor is in compliance with the percentage requirements of subsection 26.5-
13 214(c) for the work performed to date, and (ii) is otherwise performing its contract
14 obligations to the full satisfaction of the City.

15 (c) *Fee for Partial Compliance or Noncompliance.* Contracts for all projects to which these
16 requirements apply will provide that if a contractor fails to fully comply with the
17 percentage requirements of subsection 26.5-214(c), and the requirement is not
18 adjusted in writing by the Mayor or the Mayor's designee, as provided for above, the
19 contractor will be assessed a penalty fee amount for each hour that is not achieved.

20 1. The amount per hour shall be based on the extent to which the contractor or
21 subcontractor met the 12% labor hour requirement. The fee schedule for the
22 amount per hour that will be assessed shall be adopted by Resolution.

23 2. The assessments imposed shall be deducted from the contractor's final pay
24 application and shall be utilized to support construction/building trade apprentice
25 training programs registered with the State of Florida or the United States
26 Department of Labor and located within Hillsborough County, and/or such
27 apprentice training programs provided by the Hillsborough County School District.

28 (d) *Noncompliance-Other Remedies.* Failure of a contractor to comply with the
29 requirements of this article may subject the contractor to all remedies available to the
30 City at law, including but not limited to debarment or suspension of the contractor
31 from consideration for the award of future contracts, and termination of the
32 construction contract.

33 **Sec. 26.5-216.- Implementation, Expansion of Scope to include Horizontal Construction,**
34 **and Reporting.**

35 (a) *Implementation.* The Mayor or the Mayor's designee shall implement the provisions
36 of this ordinance no later than six months from its effective date.

37 (b) *Expansion of the Scope of the Apprentice Requirements to apply to Horizontal*
38 *Construction.* By no later than twelve months after implementation of this ordinance,
39 this article shall be amended as necessary to expand its application to horizontal
40 construction contracts, as defined herein.

1 (c) *Reporting.* At six month intervals during the first year after implementation of this
2 article, and thereafter on an annual basis, the Mayor or the Mayor's designee shall
3 prepare a report to be presented on the agenda of the City Council, that includes for
4 each contract to which this article applies, a line item breakdown of: the name of the
5 contractor, the name or description of the construction project, the total dollar value
6 of the construction project, the number of apprentices hired for the construction
7 project, the number of apprentice hours worked on the construction project, and the
8 total labor hours expended on the construction project. Additionally, the report will
9 identify any contracts where the 12% requirement was not met, and the reason; a
10 report on outreach efforts made by the City Council and the City Administration, along
11 with any other relevant details or recommendations regarding the City's
12 apprenticeship requirements that the Mayor or the Mayor's designee wish to include.

13
14 **Section 3.** That all ordinances or parts of ordinances in conflict herewith are repealed
15 to the extent of any conflict with the terms of this ordinance.

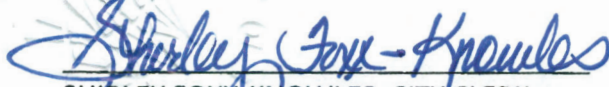
16
17 **Section 4.** That if any part of this Ordinance shall be declared unconstitutional or
18 invalid by a court of competent jurisdiction, the remaining provisions shall remain in full
19 force and effect.

20
21 **Section 5.** Except to the extent expressly addressed herein, this Ordinance shall take
22 effect immediately upon becoming a law.


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25 PASSED AND ORDAINED BY THE CITY COUNCIL OF THE CITY OF TAMPA,
26 FLORIDA, ON March 18, 2021.

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31 CHAIRMAN/CHAIRMAN PRO-TEM,
32 CITY COUNCIL

33 ATTEST;

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36 SHIRLEY FOXX-KNOWLES, CITY CLERK

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38 APPROVED BY ME ON 3/22/21

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42 JANE CASTOR, MAYOR
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Approved as to Legal Sufficiency:

ANDREA ZELMAN, DEPUTY CITY ATTORNEY

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RESOLUTION 2021 - _____

RESOLUTION ESTABLISHING A SCHEDULE OF FEES FOR PARTIAL COMPLIANCE OR NONCOMPLIANCE WITH APPRENTICE LABOR HOUR PERCENTAGE REQUIREMENTS PURSUANT TO CHAPTER 26.5, ARTICLE IV. APPRENTICE REQUIREMENTS IN CITY CONSTRUCTION CONTRACTS, SUBSECTION 26.5-215(c)1, OF THE CITY OF TAMPA CODE; PROVIDING AN EFFECTIVE DATE.

WHEREAS, on March 18, 2021, City Council adopted Ordinance No. 2021-33, which added Chapter 26.5, Article IV., Apprentice Requirements in City Construction Projects, Sections 26.5-211 through 26.5-216, to the City of Tampa Code (the “Apprentice Ordinance”); and

WHEREAS, Subsection 26.5-215(c) provides for the assessment of a fee for partial compliance or noncompliance with the apprentice labor hour percentage requirements of subsection 26.5-214(c), with the fee amount to be based on the extent to which the contractor or subcontractor met the apprentice labor hour requirements under the ordinance; and

WHEREAS, Subsection 26.5-215(c)1. provides for the adoption of a fee schedule by Resolution; and

WHEREAS, the fees established pursuant to this Resolution are reasonable and are consistent with the purpose, intent and express requirements of the Apprentice Ordinance.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TAMPA, FLORIDA:

Section 1. That pursuant to the authority of Section 26.5-215(c)1., the following is the schedule of fees for partial compliance or noncompliance with the apprentice labor hour requirements of subsection 26.5-214(c), City of Tampa Code:

Percent of goal met	Assessment per unmet hour
100%	\$0.00
90% to 99%	\$2.50
75% to 89%	\$5.25
50% to 74%	\$8.00
1% to 49%	\$11.25
0%	\$15.00

Section 2. That the proper officers of the City of Tampa are hereby authorized and directed to do all things necessary and proper in order to carry out and make effective the provisions of this resolution.

Section 3. That this Resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF TAMPA,
FLORIDA, ON _____ .

CHAIRMAN/CHAIRMAN PRO-TEM
CITY COUNCIL

ATTEST:

CITY CLERK/DEPUTY CITY CLERK

PREPARED BY AND APPROVED
AS TO LEGAL SUFFICIENCY:

e/s
ANDREA E. ZELMAN
DEPUTY CITY ATTORNEY

City of Tampa - Apprenticeship / OJT Progress Report

Contract: No.; _____ Name; _____

Pay App. # _____

Designated Trade For Which Apprenticeship Program(s) Are Available: _____

Use a separate form for each applicable trade.

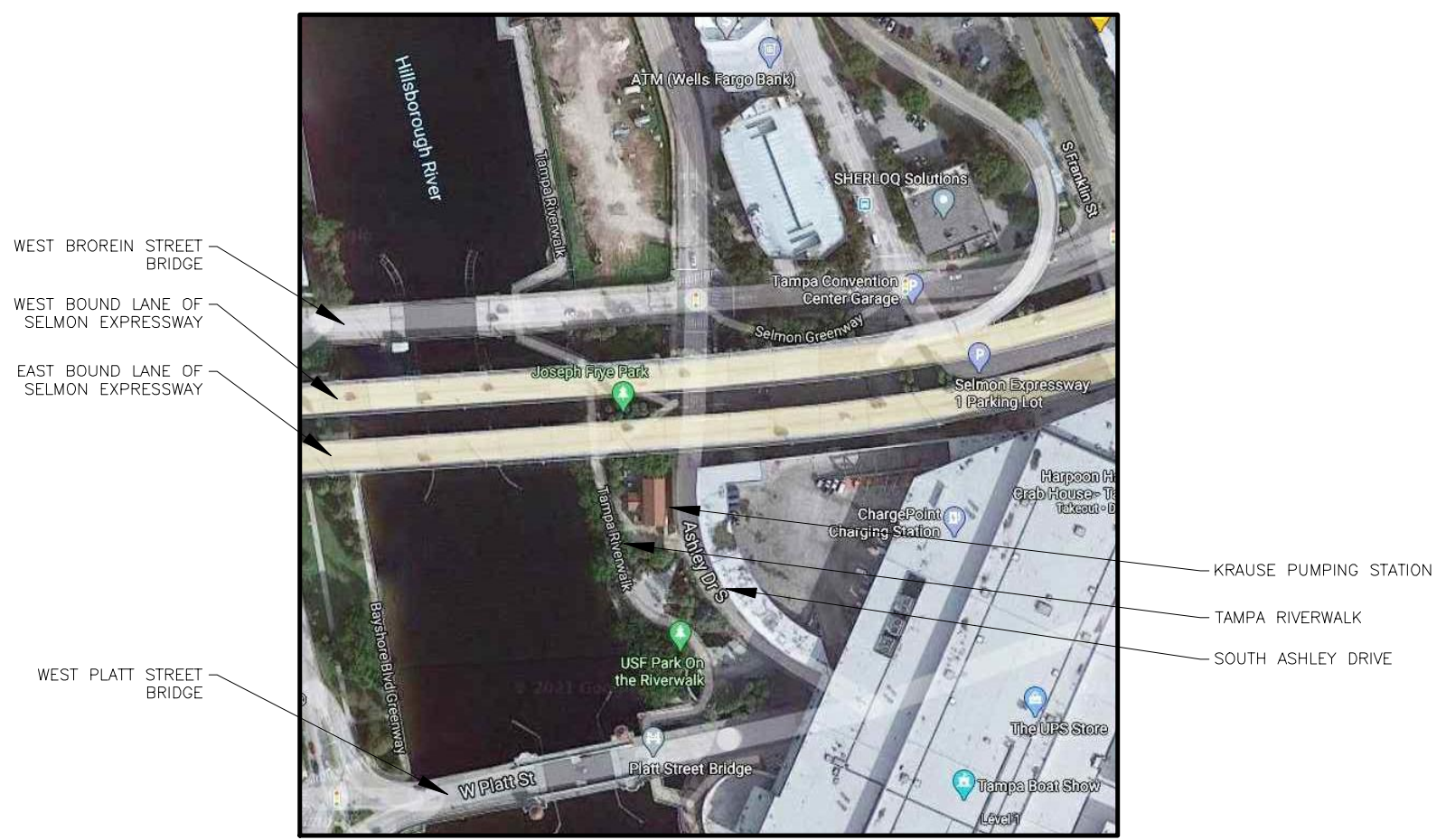
Apprentice/OJT Employee Name	Apprenticeship / OJT Program	Hourly Rate	Cumulative Hours Worked To Date

Total Apprentice & OJT Hours	
Total Non-Supv. Labor Hours For Designated Trade	
Percent AppOJT/ Non-Supv. Labor	

Remarks:

Certified by: _____
 Name/Title/Date: _____
Firm Name: _____

DRAWING INDEX	
SHEET No.	SHEET TITLE
1	COVER SHEET
2	SHEET INDEX AND LOCATION MAP
C-0.1	KRAUSE GENERATOR DESIGN EXISTING SITE LAYOUT
C-0.2	KRAUSE GENERATOR DESIGN DEMO PLAN
C-0.3	KRAUSE GENERATOR DESIGN SITE PLAN
C-0.4	KRAUSE GENERATOR DESIGN STORMWATER PLAN
C-0.5	KRAUSE GENERATOR DESIGN SITE CIVIL DETAILS
C-0.6	KRAUSE GENERATOR DESIGN SITE CIVIL DETAILS
S-0.1	KRAUSE GENERATOR DESIGN STRUCTURAL NOTES
S-0.2	KRAUSE GENERATOR DESIGN FOUNDATION DETAIL
S-0.3	KRAUSE GENERATOR DESIGN PLAN VIEW AND TYPICAL STAIR DETAIL
S-0.4	KRAUSE GENERATOR DESIGN FRAME DETAILS
S-0.5	KRAUSE GENERATOR DESIGN FRAME DETAILS
S-0.6	KRAUSE GENERATOR DESIGN CROSS SECTIONS
S-0.7	KRAUSE GENERATOR DESIGN CROSS SECTIONS
S-0.8	KRAUSE GENERATOR DESIGN TYPICAL WALKWAY DETAILS
S-0.9	KRAUSE GENERATOR DESIGN STAIR AND RAILING DETAILS
L-0.1	KRAUSE GENERATOR DESIGN LANDSCAPE PLAN
L-0.2	KRAUSE GENERATOR DESIGN LANDSCAPE SCHEDULE
L-0.3	KRAUSE GENERATOR DESIGN LANDSCAPE DETAILS
L-0.4	KRAUSE GENERATOR DESIGN LANDSCAPE DETAILS
L-0.5	KRAUSE GENERATOR DESIGN LANDSCAPE NOTES
L-0.6	KRAUSE GENERATOR DESIGN LANDSCAPE NOTES
L-0.7	KRAUSE GENERATOR DESIGN TREE CALCULATIONS
L-0.8	KRAUSE GENERATOR DESIGN TREE CALCULATIONS CONT.
I-0.1	KRAUSE GENERATOR DESIGN IRRIGATION PLAN
I-0.2	KRAUSE GENERATOR DESIGN IRRIGATION SCHEDULE
I-0.3	KRAUSE GENERATOR DESIGN IRRIGATION NOTES
I-0.4	KRAUSE GENERATOR DESIGN IRRIGATION NOTES
I-0.5	KRAUSE GENERATOR DESIGN IRRIGATION NOTES & DETAILS
I-0.6	KRAUSE GENERATOR DESIGN IRRIGATION DETAILS
EG1	ELECTRICAL GENERAL NOTES AND SCOPE OF WORK
EG2	ELECTRICAL SYMBOLS AND LEGEND (SHEET 1 OF 2)
EG3	ELECTRICAL SYMBOLS AND LEGEND (SHEET 2 OF 2)
E-0.1	ELECTRICAL SITE PLAN
E-0.2	KRAUSE PUMP STATION EXISTING EQUIPMENT LAYOUT
E-0.3	CONDUIT ROUTING AND INSTALLATION DETAILS
E-1.0	EXISTING SWITCHBOARD 'KPS' ONE LINE DIAGRAM
E-1.1	EXISTING SWITCHBOARD 'KPS' FRONT ELEVATIONS
E-1.2	CIRCUIT BREAKER 52-G1 CONTROL MODIFICATIONS
E-1.3	CIRCUIT BREAKER 52-G2 CONTROL MODIFICATIONS
E-1.4	SWITCHBOARD 'KPS' PLC CONTROL MODIFICATIONS
E-1.5	SWITCHBOARD 'KPS' PLC CONTROL MODIFICATIONS
E-2.0	EXISTING REMOTE CIRCUIT BREAKER PANEL (RCBP) ELEVATIONS
E-3.0	EXISTING PUMP CONTROL PANEL/PLC INTERIOR ELEVATION
E-3.1	REQUIRED FIELD TERMINATIONS FOR GENERATOR 'A' I/O
E-3.2	REQUIRED FIELD TERMINATIONS FOR GENERATOR 'B' I/O
E-3.3	EXISTING ACE3600 DI/DO SLOT 2 MODIFICATIONS
E-3.4	EXISTING ACE3600 DI/DO SLOT 6 MODIFICATIONS
E-3.5	EXISTING ACE3600 ANALOG INPUT SLOT 8 MODIFICATIONS
E-4.0	TYPICAL GENERATOR ELEVATION AND DETAILS
E-5.0	EXISTING PANELBOARD 'LPA' CIRCUIT ADDITIONS
E-5.1	CONDUIT AND CABLE SCHEDULE
E-6.0	CONDUIT INSTALLATION DETAILS (SHEET 1 OF 2)
E-6.1	CONDUIT INSTALLATION DETAILS (SHEET 2 OF 2)



LOCATION MAP
SCALE: NOT TO SCALE



JOB No.	231901542						
DESIGNED	TDT						
DRAWN	JLH						
CHECKED	TDT	1				ADDENDUM	
DATE	3/2021	No.	DATE	BY	APP	REVISION DESCRIPTION	

SCALE

NOT TO SCALE

City of Tampa Wastewater Department

KRAUSE PUMPING STATION
STANDBY GENERATORS

**SHEET INDEX AND
LOCATION MAP**

SHEET NUMBER	2
TIMOTHY THOMAS, P.E. No. 47079	FILE: 231901542

TABLE 284.4.1-A: TREE RETENTION-MITIGATION EQUIVALENCY TABLES BY TREE TYPE

KRAUSE GENERATOR DESIGN

TYPE 1: TALL & WIDE	Trees Retained	# of trees	Retention Multiplier	Total Credits	Grand Trees Retained	# of trees	Equivalent # of 2.5" Cal Trees	Total Credits	
	<i>Diameter (inches) / Dripline (feet)</i>								
	5" to 10"	0	-1	0	Grand tree(s)	0	0	0	
	11" to 20"	0	-2	0					
	21" to 25"	0	-4	0					
	26" to 31"	1	-12	-12					
	Subtotal	1		-12	Subtotal			0	
TYPE 1: TALL & WIDE	Trees Removed	# of trees	Replacement Multiplier	Total Debits	Grand Trees Removed	# of trees	Equivalent # of 2.5" Cal Trees	Total Debits	
	<i>Diameter (inches) / Dripline (feet)</i>								
	5" to 10"	0	1	0	Grand tree(s)	0	0	0	
	11" to 20"	0	2	0					
	21" to 25"	0	3	0					
	26" to 31"	0	4	0					
	Subtotal	0		0	Subtotal			0	
								Type 1: Total Mitigation Trees Required	-12
TYPE 2: TALL & NARROW	Trees Retained	# of trees	Retention Multiplier	Total Credits	Grand Trees Retained	# of trees	Equivalent # of 2.5" Cal Trees	Total Credits	
	<i>Diameter (inches) / Dripline (feet)</i>								
	5" to 17"	0	-1	0	Grand tree(s)	0	0	0	
	18" to 29"	0	-2	0					
	30" to 31"	0	-3	0					
	Subtotal	0		0	Subtotal			0	
TYPE 2: TALL & NARROW	Trees Removed	# of trees	Replacement Multiplier	Total Debits	Grand Trees Removed	# of trees	Equivalent # of 2.5" Cal Trees	Total Debits	
	<i>Diameter (inches) / Dripline (feet)</i>								
	5" to 17"	0	1	0	Grand tree(s)	0	0	0	
	18" to 29"	0	2	0					
	30" to 31"	0	3	0					
	Subtotal	0		0	Subtotal			0	
								Type 2: Total Mitigation Trees Required	0



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777 S. Harbour Island Blvd,
 Suite 350
 Tampa, FL 33602
 813.227.9190
 Certificate of Authorization No. 8363

JOB No.	231901842								
DESIGNED									
DRAWN									
CHECKED	1								ADDENDUM
DATE	8/2021	No.	DATE	BY	APP	REVISION	DESCRIPTION		

SCALE

NOT TO SCALE

City of Tampa Wastewater Department

KRAUSE PUMPING STATION
STANDBY GENERATORS

KRAUSE GENERATOR DESIGN
TREE CALCULATIONS

DAVID J. FLANAGAN, PLA NO. 0001495

SHEET NUMBER
L-0.7
FILE: 231902342E2

TYPE 3: SHORT & WIDE/MULTI-STEM	Trees Retained				Grand Trees Retained			
	Diameter (inches) / Dripline (feet)	# of trees	Retention Multiplier	Total Credits	# of trees	Equivalent # of 2.5" Cal Trees	Total Credits	
	5" to 7"	0	-1	0	Grand tree(s)	0	0	
	8" to 17"	1	-2	-2				
	18" to 29"	0	-3	0				
	30" to 31"	0	-12	0				
	Subtotal	1		-2	Subtotal		0	
TYPE 3: SHORT & WIDE/MULTI-STEM	Trees Removed				Grand Trees Removed			
	Diameter (inches) / Dripline (feet)	# of trees	Replacement Multiplier	Total Debits	# of trees	Equivalent # of 2.5" Cal Trees	Total Debits	
	5" to 7"	0	1	0	Grand tree(s)	0	0	
	8" to 17"	0	2	0				
	18" to 29"	0	3	0				
	30" to 31"	0	4	0				
	Subtotal	0		0	Subtotal		0	
Type 3: Total Mitigation Trees Required							-2	
PALMS	Trees Retained				Trees Removed			
	Diameter (inches) / Dripline (feet)	# of trees	Retention Multiplier	Total Credits	# of trees	Replacement Multiplier	Total Debits	
	Palm, any species with 6' clear trunk	18	1	18	Palm, any species with 6' clear trunk	0	1	
	Subtotal	18		18	Subtotal	0	0	
Palm: Total Mitigation Trees Required							0	



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SCALE

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City of Tampa Wastewater Department

KRAUSE PUMPING STATION
STANDBY GENERATORS

KRAUSE GENERATOR DESIGN
TREE CALCULATIONS CONT.

SHEET NUMBER	L-0.8
DAVID J. FLANAGAN, PLA NO. 0001495	FILE: 231902342E2