

**SECTION 00950**

**CHANGE ORDER FORM**

Change Order No. 01  
Project Title KWRU Filter & CCC Replacement  
Bid No. 02  
Owner: Key West Resort Utilities Corp.  
Contractor: Wharton Smith  
Agreement Date: 4/18/ 2018

This Change Order is necessary to cover changes in the work to be performed under this Agreement. The GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, and STANDARD SPECIFICATIONS apply to and govern all work under this Change Order.

**THE FOLLOWING CHANGES ARE MADE TO THE CONTRACT DOCUMENTS:**

(1)	Original Contract Price	<u>\$ 935,000.00</u>
(2)	Current Contract Price (Adjusted by Previous Change Orders)	<u>\$ 935,000.00</u>
(3)	Total Proposed Change in Contract Price	<u>\$ 176,407.00</u>
(4)	New Contract Price (Item 2 + Item 3)	<u>\$ 1,111,407.00</u>
(5)	Original Contract Time	<u>180 Days</u>
(6)	Current Contract Time (Adjusted by Previous Change Orders)	<u>180 Days</u>
(7)	Total Proposed Change in Contract Time	<u>120 Days</u>
(8)	New Contract Time (Item 6 + Item 7)	<u>300 Days</u>
(9)	Original Contract Substantial Completion Date	<u>July 19, 2018</u>
(10)	New Contract Substantial Completion Date	<u>November 16, 2018</u>

---

**CHANGES ORDERED**

---

**ITEM 1**

**Description of Change:** Installation of new standby generator and foundation.

**Reason for Change:** Original backup generator is no longer functional and is beyond its service life.

**Change in Contract Price:** \$176,407.00

**Change in Contract Time:** 120 days.

---

**ITEM 2**

**Description of Change:**

**Reason for Change:**

**Change in Contract Price:**

**Change in Contract Time:**

---

**ITEM 3**

**Description of Change:**

**Reason for Change:**

**Change in Contract Price:**

**Change in Contract Time:**

---

**ITEM 4**

**Description of Change:**

**Reason for Change:**

**Change in Contract Price:**

**Change in Contract Time:**

---

**ITEM 5**

**Description of Change:**

**Reason for Change:**

**Change in Contract Price:**

**Change in Contract Time:**

---

<b>CHANGE ORDER SUMMARY</b>			
<b>No.</b>	<b>Description</b>	<b>Change in Contract Price</b>	<b>Change in Contract Time</b>
1	Installation of Standby Generator & Foundation	\$176,407.00	120
2			
3			
4			
5			
<b>TOTAL</b>		<b>\$176,407.00</b>	<b>120 Days</b>

**WAIVER** This Change Order constitutes full and mutual accord and satisfaction for the adjustment of the Contract Price and **Contract Time** as a result of increases or decreases in cost and time of performance caused directly and indirectly from the change. Acceptance of this Waiver constitutes an agreement between OWNER and CONTRACTOR that the Change Order represents an equitable adjustment to the Agreement and that CONTRACTOR shall waive all rights to file a Contract Claim or claim of any nature on this Change Order. Execution of this Change Order shall constitute CONTRACTOR's complete acceptance and satisfaction that it is entitled to no more costs or time (direct, indirect, impact, etc.) pursuant to this Change Order, either separately or cumulatively with all previous change orders.

**APPROVAL AND CHANGE ORDER AUTHORIZATION**

**ACKNOWLEDGMENTS**

The aforementioned change, and work affected thereby, is subject to all provisions of the original Agreement and specifically changed by this Change Order; and

It is expressly understood and agreed that the approval of the Change Order shall have no effect on the original Agreement other than matters expressly provided herein.

ATTEST:

[Signature]  
(Secretary) *office manager*  
4/20/18

Date

(Corporate Seal)

ATTEST:

\_\_\_\_\_

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

\_\_\_\_\_  
Date

(Seal)

Wharton-Smith

Contractor

GREGORY WILLIAMS DIVISION MANAGER  
Printed Name and Title of Officer

[Signature]  
By (Signature)

4/20/18  
Date

KW Resort Utilities

Owner

\_\_\_\_\_  
Printed Name and Title

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

\_\_\_\_\_  
Date

END OF SECTION



April 06, 2018

Mr. Steve Suggs, E.I.  
Weiler Engineering Corporation  
6805 Overseas Hwy  
Marathon, FL 33050

Re: Change Order Proposal No. 01 Revision 1  
KWRU Filter Replacement  
Generator Replacement

Dear Mr. Suggs:

As requested in the attached letter dated 03/29/18, we have developed Proposal Summary No. 01 Revision 1 to perform structural and electrical improvements to allow for installation of owner furnished generator in accordance with drawings G-01 thru F-05 & D-01 thru D-04 prepared by Weiler Engineering, signed and sealed by Ed Castle on 03/28/18. Included in the proposal is the cost of furnishing all necessary materials, labor, equipment, tools, supervision, and subcontractor costs required for the specified scope of work.

Clarifications include:

- o Existing generator to be **removed & disposed of by contractor at no additional cost to the owner (Change to scope submitted by contractor per negotiation between Chris Johnson & Greg Williams)**
- o Existing fuel tank to be turned over to the owner onsite after removal by contractor
- o Replacement generator is to be owner furnished
- o Start-up, testing and fueling of new generator is **not** included
- o Engineering for railings & ladder is included
- o Electrical shutdown of the entire plant for approximately **2 hours** will be required at completion of electrical improvements
- o Existing emergency generator currently onsite to be utilized to power the North plant for approximately **8 hours**, while the East and West plants will be out of service
- o Fueling and maintenance of existing emergency generator is **not** included
- o Due to lack of sales representation for the specified product, this proposal includes an allowance of **\$5,000.00** to purchase the hurricane tie down system. If the actual cost of the tie down system exceeds the allowance then additional compensation will be requested, conversely, if the actual cost of the tie down system is less than the allowance then we will credit accordingly.

Attached to this letter you will find our detailed Proposal Summary for the amount of **\$176,407.00** with all associated back-up documentation.

The time extension required for the additional scope of work is **120** calendar days.

Only the items listed in the Proposal Summary are to be considered as included in our scope of work. No cost allowance has been made for items of work not contained in the Proposal Summary, and are specifically excluded from this proposal. This Lump Sum proposal is valid for 5 calendar days.

125 W Indiantown Road, Suite 201, Jupiter, FL 33458 | Phone: (561) 748-5956 | Fax: (561) 748-5958



## Generator Scope

**To:** Prospective Bidders  
**From:** Steve Suggs  
**Date:** March 29<sup>th</sup>, 2018  
**Re:** KWRU Generator Scope

---

The items listed below are to be included in a COP for installation of the new KWRU backup generator.

- Demolition & removal of the existing generator. Coordinate with KWRU staff if they would like to salvage any part of the generator prior to disposal.
- Demolition of the existing external fuel tank containment area. Fuel tank shall remain the property of KWRU and will be relocated on the site to an area designated by KWRU staff.
- Installation of modified generator foundation as shown and described in the attached plans.
- Coordinate delivery with Generator supplier and offloading of generator from freight shipper.
- Setting & installation of generator on modified foundation as shown in attached plans.
- Underlayment (like what is proposed for the filters) shall be installed between generator fuel tank and concrete.
- Supply and installation of generator tie-downs as shown on the attached plans including all misc. hardware.
- Installation of aluminum handrail as shown in the attached PDF.
- Design and installation of aluminum access stairway as shown in the attached plans.
- Supply and installation of access ladder as shown in the attached plans.
- **Electrical scope:**
  - Modification of generator distribution system from 1200 amp single breaker to (2) 600 amp rated breakers. Work to be performed in accordance with the latest version of the NEC by a professionally licensed electrician. Breaker modification work shall be warranted by the contractor in accordance with the provisions shown in division 16000 specifications.

- Supply and installation of a 600 amp 316SS NEMA 4X rated ATS to replace existing transfer switch. Transfer switch shall be similar to the one installed as part of the WWTP plant expansion project.
  - Existing disconnect that was just installed as part of the WWTP expansion project shall be relocated and reused.
  - Contractor shall install all conduit, 316SS conduit supports, wires, etc.. necessary to provide a functioning system. Conduit sizes to be per NEC.
  - Contractor shall supply all necessary components to wire temporary on-site generator into existing electrical system in order to provide backup power for the WWTP while new generator is being installed.
  - New ATS status shall be shown in SCADA just as the one installed during the WWTP expansion.
- The contractor shall provide any and all items not described in this document and the attached plans that is required for proper installation and function of the generator system.



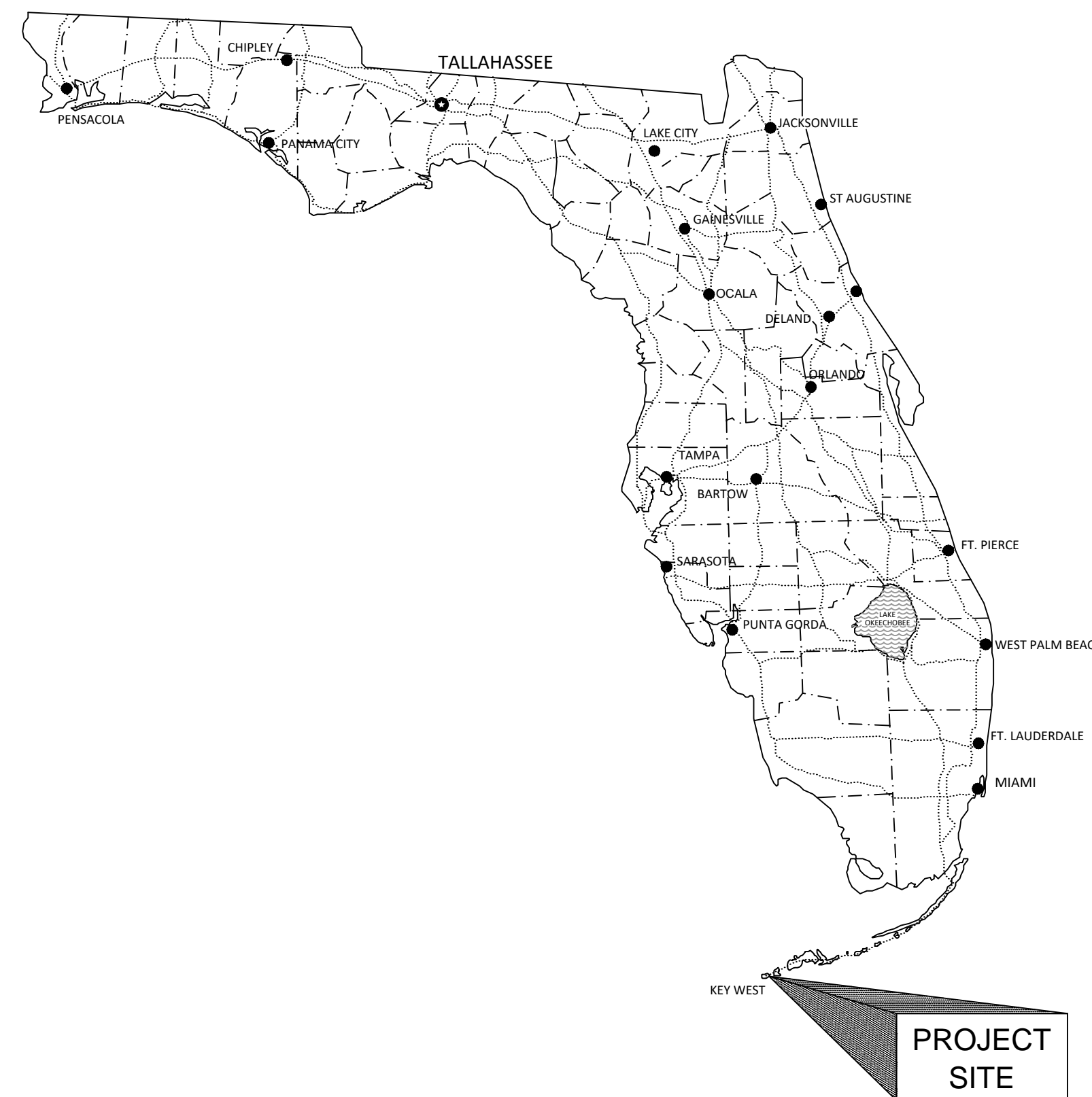
# CONSTRUCTION PLANS

## FOR

# KWRU WWTP GENERATOR REPLACEMENT

# KW RESORT UTILITIES

SECTION 35, TOWNSHIP 67 SOUTH, RANGE 25 EAST  
 STOCK ISLAND, FLORIDA



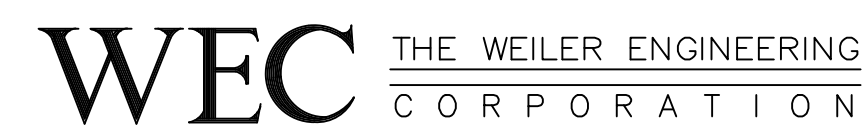
LOCATION MAP

OWNER

KW RESORT UTILITIES CORP  
 6630 FRONT ST.  
 STOCK ISLAND FL, 33040

PREPARED BY

THE WEILER ENGINEERING CORPORATION  
 6805 OVERSEAS HIGHWAY  
 MARATHON FLORIDA, 33050  
 EB # 6656  
 (305) 289-4161

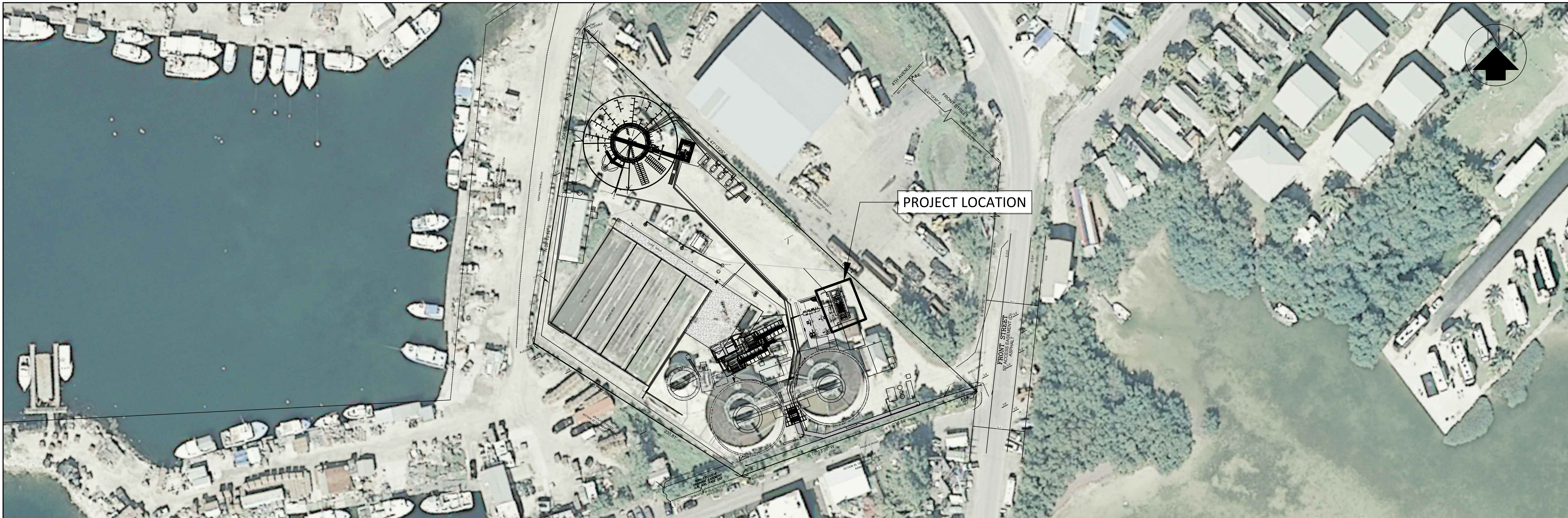


Edward R. Castle, State of Florida,  
 Professional Engineer, License No.  
 58574. This item has been  
 electronically signed and sealed by  
 Edward R. Castle, P.E. using an SHA-1  
 Authentication code. Printed copies  
 of this document are not considered  
 signed and sealed and the SHA-1  
 authentication code must be  
 verified on any electronic copies.



WEC PROJECT NO.  
 17013.003

Edward R. Castle  
 Professional Engineer  
 State of Florida  
 Registration No. 58574



# SITE MAP

## GENERAL SHEETS

- G-01 COVER
- G-02 SITE MAP, INDEX OF DRAWINGS
- G-03 GENERAL NOTES
- G-04 STRUCTURAL NOTES
- G-05 ABBREVIATIONS & SYMBOL LEGEND

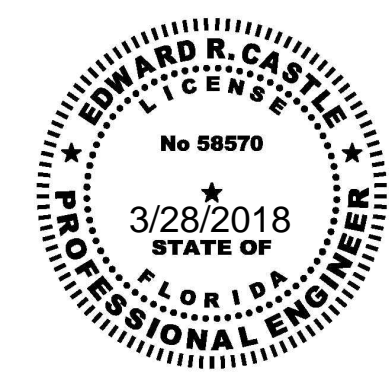
## DETAILS SHEETS

- D-01 GENERATOR DETAILS
- D-02 GENERATOR DETAILS
- D-03 LADDER DETAILS
- D-04 HANDRAIL DETAILS

Approved By:	ERC	S/S
Scale:	AS SHOWN	CWK,SJ,LS
Job No:	17013.003	ERC
Date Issued:	AS STAMPED	

**WEC** THE WELLER ENGINEERING CORPORATION  
 6805 OVERSEAS HWY  
 MARATHON, FLORIDA 33050  
 (305) 289-4161 PH, (305) 289-4162 FAX  
 EB #6555

Description	Revisions



PRE-CONSTRUCTION REQUIREMENTS  
THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO CONSTRUCTION TO FAMILIARIZE HIMSELF WITH THE CONDITIONS FOR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER A WRITTEN LIST OF ALL PERMITS AND COPIES THEREOF, AND CAREFULLY REVIEW ALL PLANS, SPECIFICATIONS, AND PERMITS PREVIOUSLY SECURED ON BEHALF OF THE OWNER. IN CASE OF ANY DISCREPANCY EITHER IN PERMIT DOCUMENTS, PLANS, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR MUST PROMPTLY SUBMIT A "WRITTEN CLARIFICATION REQUEST" TO THE OWNER, WHO WILL PROMPTLY FORWARD SAME TO THE ENGINEER WHO WILL MAKE A DETERMINATION IN WRITING. THE CONTRACTOR MUST VERIFY EXISTING FACILITY INFORMATION, AND ALL DESIGN/PERMIT DATA REQUIRED FOR WORK THAT IS TO CONNECT WITH EXISTING FACILITIES. ANY DISCREPANCIES BETWEEN THE CONTRACT REQUIREMENTS AND THE EXISTING CONDITIONS MUST BE REFERRED TO THE OWNER, IN WRITING, FOR AN ENGINEERING DETERMINATION. ANY FUTURE ADJUSTMENT DUE TO FAILURE BY THE CONTRACTOR TO IDENTIFY THE RELATED DISCREPANCY, WILL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY LICENSES ADDITIONAL PERMITS, AND FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS IN CONNECTION WITH THE PERFORMANCE OF THE WORK.

CONSTRUCTION SAFETY AND LIABILITY  
THE CONTRACTOR MUST TAKE PROPER SAFETY AND HEALTH PRECAUTIONS TO PROTECT THE WORK, THE WORKERS, THE PUBLIC, AND THE PROPERTY OF OTHERS. THE CONTRACTOR IS RESPONSIBLE ALSO FOR ALL MATERIALS DELIVERED AND WORK PERFORMED UNTIL COMPLETION AND ALL ACCEPTANCES HAVE BEEN OBTAINED. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO PERSONS OR PROPERTY THAT OCCURS AS A RESULT OF HIS NEGLIGENCE. THE CONTRACTOR MUST SAVE HARMLESS AND INDEMNIFY THE OWNER AND THE ENGINEER OF RECORD, ITS OFFICERS, REPRESENTATIVES AND EMPLOYEES FROM ALL CLAIMS, LOSS, DAMAGE, ACTIONS, CAUSES OF ACTION, AND/OR EXPENSES RESULTING FROM, BROUGHT FOR, OR ON ACCOUNT OF ANY PERSONAL INJURY OR PROPERTY DAMAGE RECEIVED OR SUSTAINED BY ANY PERSONS OR PROPERTY GROWING OUT OF OCCURRING, OR ATTRIBUTABLE TO ANY WORK PERFORMED UNDER OR RELATED TO THIS CONTRACT, RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE CONTRACTOR, ANY SUBCONTRACTOR, OR ANY EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE CONTRACTOR OR ANY SUBCONTRACTOR.

UNLESS OTHERWISE SPECIFIED BY THE UTILITY, THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, GAS, SEWER, TELEPHONE, AND POWER COMPANIES, 10 DAYS IN ADVANCE, THAT HE INTENDS TO START WORK IN A SPECIFIC AREA, THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE SUPPORT AND PROTECTION OF SEWERS, DRAINS, WATER LINES, GAS LINES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE, RIGHT-OF-WAY, OR EASEMENT.

PROJECT SIGN  
THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A CONSTRUCTION PROJECT SIGN AT A LOCATION DIRECTED BY THE OWNER. THE WEILER ENGINEERING CORPORATION SHALL PROVIDE A SEPARATE SIGN FOR INSTALLATION BY THE CONTRACTOR AT THIS LOCATION. THESE SIGNS SHALL BE ERECTED WITHIN 15 DAYS AFTER RECEIVING A NOTICE TO PROCEED. UPON PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE THESE SIGNS AND RETURN TO WEILER ENGINEERING CORPORATION THEIR SIGN.

ENVIRONMENTAL PROTECTION DURING CONSTRUCTION  
PROTECTION OF LAND RESOURCES - EXCEPT IN AREAS IDENTIFIED ON THE PLANS TO BE CLEARED, THE CONTRACTOR MUST NOT DEFACE, INJURE, OR DESTROY TREES OR SHRUBS OR REMOVE OR CUT THEM WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. IN THE ABSENCE OF A CLEARING PLAN, AREAS SHOWN FOR IMPROVEMENTS SHALL BE CLEARED UNLESS NOTED OTHERWISE.  
PROTECTION OF WATER RESOURCES - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVESTIGATE AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, REGIONAL COUNTY AND MUNICIPAL LAWS CONCERNING POLLUTION OF WATER RESOURCES. ALL WORK MUST BE PERFORMED IN SUCH A MANNER THAT OBJECTIONABLE CONDITIONS WILL NOT BE CREATED IN PUBLIC WATERS RUNNING THROUGH, OR ADJACENT TO THE PROJECT AREA.

- EROSION AND SEDIMENT CONTROL - ALL PRACTICABLE AND NECESSARY EFFORT SHOULD BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND THE TRANSPORT OF SEDIMENT TO SURFACE DRAINS, SURFACE WATER, OR ONTO OTHER PROPERTY BY ANY OR ALL OF THE FOLLOWING METHODS:
  - STORMWATER FACILITIES ARE TO BE BUILT AS EARLY IN THE CONSTRUCTION PHASE AS POSSIBLE TO ENSURE THE TREATMENT OF STORMWATER RUNOFF. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, HOWEVER, SUCH AS BERMS, SEDIMENT BASINS, GRASSING, SODDING, SAND BAGGING, BALED HAY OR STRAW, FLOATING SILT, BARRIERS, STACKED SILT BARRIERS, ETC., MUST BE PROVIDED AND MAINTAINED UNTIL THE PERMANENT FACILITIES ARE COMPLETED AND OPERATIONAL.
  - REVEGETATION AND STABILIZATION OF DISTURBED GROUND SURFACES SHOULD BE ACCOMPLISHED AS SOON AS POSSIBLE.
  - FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES.
  - PROHIBIT THE USE OF ANY CONSTRUCTION EQUIPMENT THAT LEAKS EXCESSIVE AMOUNTS OF FUEL OIL, OR HYDRAULIC FLUID.

- ALL DISTURBED AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, EXCEPT RETENTION AREAS, AND SHALL BE STABILIZED BY SODDING EXCEPT WHERE SEEDING AND MULCHING ARE CALLED FOR ON THE PLANS. THE LATEST VERSION OF THE F.D.O.T. ROAD AND BRIDGE SPECIFICATIONS SHALL BE USED UNLESS MORE RESTRICTIVE LOCAL SPECIFICATIONS EXIST.

CONTRACTOR RESPONSIBLE FOR STABILIZING AND MAINTAINING SLOPES AND SOD THROUGHOUT CONSTRUCTION UNTIL SUCH TIME AS APPROVED BY THE ENGINEER.

PROTECTION OF FISH AND WILDLIFE  
THE CONTRACTOR MUST AT ALL TIMES PERFORM ALL WORK IN A WAY AND TAKE SUCH STEPS AS REQUIRED TO PREVENT ANY INTERFERENCE WITH OR DISTURBANCE TO FISH AND WILDLIFE. THE CONTRACTOR SHALL NOT ALTER WATER FLOWS OR OTHERWISE DISTURB NATIVE HABITATS AND JURISDICTIONAL WETLANDS LOCATED WITHIN AND/OR ADJACENT TO THE PROJECT AREA.

RECORDING AND PRESERVING HISTORICAL AND ARCHEOLOGICAL INTEREST THAT ARE DISCOVERED IN THE COURSE OF ANY CONSTRUCTION ACTIVITIES MUST BE CAREFULLY PRESERVED. THE CONTRACTOR MUST LEAVE THE ARCHEOLOGICAL FIND UNDISTURBED AND MUST IMMEDIATELY REPORT THE FIND TO THE OWNER SO THAT THE PROPER AUTHORITY MAY BE NOTIFIED.

EARTHWORK  
1. GENERAL  
1-01 SUBMITTALS  
A. EROSION AND CONTROL MEASURES  
B. COMPACTION TESTS  
C. SOIL CLASSIFICATION TESTS  
D. PRESERVATION PLANS  
1-02 SITE EXAMINATION  
A. CONTRACTORS, BEFORE SUBMITTING BIDS, SHALL INFORM THEMSELVES AS TO LOCATION AND NATURE OF THE WORK, CHARACTER OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK, GENERAL AND LOCAL CONDITIONS PREVAILING AT THE SITE, AND OTHER MATTERS WHICH MAY IN ANY WAY AFFECT THE WORK UNDER CONTRACT. THE CONTRACTOR SHALL CONFORM WITH THE SPECIFICATIONS AND CODES OF THE REGULATORY AGENCIES ASSOCIATED WITH THE PERIOD OF CONSTRUCTION.

1-03 SUBSURFACE INVESTIGATIONS  
A. SUBSURFACE DATA, INCLUDING GROUND WATER ELEVATIONS OR CONDITIONS, IF SHOWN ON THE DRAWINGS OR ATTACHED TO THESE SPECIFICATIONS, ARE PRESENTED ONLY AS INFORMATION THAT IS AVAILABLE WHICH INDICATED CERTAIN CONDITIONS FOUND AND LIMITED TO THE EXACT LOCATIONS, SHALL NOT BE INTERPRETED AS AN INDICATION OF CONDITIONS THAT MAY ACTUALLY BE DEVELOPED THROUGH THE PERIOD OF CONSTRUCTION. BIDDERS SHALL EXAMINE THE SITE OF THE WORK AND MAKE THEIR OWN DETERMINATION OF THE CHARACTER OF MATERIALS AND THE CONDITIONS TO BE ENCOUNTERED IN THE WORK, AND THEIR PROPOSAL SHALL BE BASED UPON THEIR OWN INVESTIGATIONS. THE OWNER AND ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR VARIATIONS FOUND TO EXIST BETWEEN THE ATTACHED DATA ABOVE REFERRED TO AND ACTUAL FIELD CONDITIONS THAT DEVELOP THROUGH THE PERIOD OF CONSTRUCTION.

B. WHERE EXISTING GRADES, UTILITY LINES AND SUBSTRUCTURES ARE SHOWN ON THE DRAWINGS, THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR CORRECTION OF EXISTING CONDITIONS INDICATED. THE CONTRACTOR SHALL ASCERTAIN EXACT LOCATIONS OF UTILITIES AND SUBSTRUCTURES THAT MAY BE AFFECTED BY THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY THAT MAY RESULT FROM WORKING ON OR NEAR THOSE UTILITIES, SUBSTRUCTURES WHICH ARE NOT TO BE REMOVED OR DEMOLISHED.  
C. THE CONTRACTOR SHALL MAKE HIS OWN DEDUCTIONS OF THE SUBSURFACE CONDITIONS WHICH MAY AFFECT METHODS OR COST OF CONSTRUCTION AND HE AGREES THAT HE WILL MAKE NO CLAIM FOR DAMAGES OR OTHER COMPENSATION EXCEPT SUCH AS ARE PROVIDED FOR IN THE AGREEMENT, SHOULD HE FIND CONDITIONS DURING THE PROGRESS OF THE WORK DIFFERENT FROM THOSE AS CALCULATED OR ANTICIPATED BY HIM.

#### 1-04 BENCH MARKS AND MONUMENTS

A. MAINTAIN CAREFULLY EXISTING BENCH MARKS, MONUMENTS, AND OTHER REFERENCE POINTS IF DISTURBED OR DESTROYED, REPLACE AS DIRECTED.

#### 1-05 JOB CONDITIONS

- CONDITION OF PREMISES: ACCEPT SITE AS FOUND AND EXCAVATE, FILL, COMPACT, AND BACKFILL SITE AS HEREINAFTER SPECIFIED.
- PROTECTION  
1. EXISTING STRUCTURES AND PROPERTY: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES AND FACILITIES; PROVIDE AND PLACE BRACING OR SHORING AS NECESSARY OR PROPER IN CONNECTION THEREWITH; BE RESPONSIBLE FOR SAFETY AND SUPPORT OF SUCH STRUCTURES; BE LIABLE FOR ANY MOVEMENT OR SETTLEMENT, ANY DAMAGE OR INJURY CAUSED THEREBY OR RESULTING THEREFROM. IF AT ANY SAFETY OR ANY ADJACENT STRUCTURES APPEARS TO BE ENDANGERED, CEASE OPERATION, TAKE PRECAUTIONS TO SUPPORT SUCH STRUCTURES AND NOTIFY THE OWNER. RESUME OPERATIONS ONLY AFTER PERMISSION HAS BEEN CHANGED BY THE OWNER.
- SIDEWALKS AND STREETS: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT, SETTLEMENT OR COLLAPSE; REPAIR PROMPTLY SUCH DAMAGE WHEN SO ORDERED; INSTALL SUCH SHORING, INCLUDING SHEET PILING, AS MAY BE REQUIRED DURING EXCAVATION, TO PROTECT BANKS, ADJACENT PAVING, STRUCTURES AND UTILITIES.
- RESPONSIBILITY: BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES OR TO EQUIPMENT AND FURNISHINGS HOUSED THEREIN WHICH ARE DUE DIRECTLY OR INDIRECTLY TO CONSTRUCTION OPERATIONS, EXCEPT WHERE REMOVAL IS NECESSITATED BY SITE GRADING OR LOCATION OF NEW BUILDING. USE EVERY POSSIBLE PRECAUTION TO PREVENT INJURIES TO LANDSCAPING, DRIVES, CURBS AND WALKS ON OR ADJACENT TO SITE OF THE WORK AND REPLACE, AT NO EXPENSE TO OWNER, ANY OF SUCH DESTROYED.

#### II. EXECUTION

##### 2-01 GENERAL

- ACCOMPLISH IN A MANNER THAT PROVIDES FOR THE SAFETY OF THE PUBLIC AND WORKMEN AND PROVIDE FOR THE PROTECTION OF ALL PROPERTY.
- CONSTRUCTION: DO NOT CLOSE, OBSTRUCT OR STORE MATERIAL, OR EQUIPMENT IN STREETS, SIDEWALKS, ALLEYS OR PASSAGeways WITHOUT A PERMIT IN ACCORDANCE WITH LOCAL ORDINANCES, REGULATIONS AND CODES.
- INTERFERENCE: CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, ALLEYS, SIDEWALKS AND OTHER FACILITIES.
- PNEUMATIC TOOLS: WORK WITH PNEUMATIC OR VIBRATORY TOOLS WILL BE PERMITTED ONLY IN A MANNER WHICH CAUSES NO RELATED DAMAGES.
- REMOVAL: UNLESS OTHERWISE NOTED OR SPECIFIED TO BE RELOCATED OR WORKING MATERIALS REMOVED BECOME THE PROPERTY OF THE CONTRACTOR AND ARE TO BE REMOVED COMPLETELY AWAY FROM THE SITE BY HIM. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE SITE.
- TEMPORARY STRUCTURES: REMOVE ALL TEMPORARY STRUCTURES WHEN THEY ARE NO LONGER REQUIRED.
- REPAIR: CLEAN UP, REPAIR OR REPLACE AT NO COST TO OWNER ALL PROPERTY DAMAGED BY REASON OF REQUIRED WORK. ALL PATCHWORK SHALL MATCH EXISTING AND BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY CRAFTSMEN SKILLED IN THE TRADE INVOLVED. IN NEWLY GRADED AREAS TAKE EVERY PRECAUTION AND TEMPORARY MEASURE NECESSARY, TO PREVENT DAMAGE FROM EROSION OF FRESHLY GRADED AREA, WHERE ANY SETTLEMENT OR WASHING MAY OCCUR PRIOR TO ACCEPTANCE OF THE WORK. ESTABLISH GRADES TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER. THIS APPLIES TO DAMAGE TO THE NEWLY GRADED AREAS WITHIN THE CONSTRUCTION LIMITS AND DAMAGE TO ADJACENT PROPERTIES BY ERODED MATERIAL.

##### 2-02 LOCATIONS AND ELEVATIONS

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEYS, MEASUREMENTS AND LAYOUTS REQUIRED FOR PROPER EXECUTION OF THE WORK. LAY OUT LINES AND GRADES FROM EXISTING SURVEY CONTROL SYSTEM AND AS SHOWN ON DRAWINGS.
- CLEARING AND GRUBBING  
A. WITHIN LIMITS OF AREAS DESIGNATED FOR GRADING AND SITE CONSTRUCTION WORK, REMOVE TREES, BRUSH, STUMPS, WOOD, DEBRIS AND OTHER DELETERIOUS MATERIALS NOT REQUIRED TO REMAIN AS PART OF FINISHED WORK.  
B. REMOVE ALL GRASS, PLANTS, VEGETATION AND ORGANIC MATERIAL FROM SAME AREA.

2-04 STRIPPING  
A. STRIP ALL TOPSOIL ORGANIC MATERIAL SURFACE LITTER, RUBBLE, AND OVERBURDEN FOR ENTIRE DEPTH OF ROOT SYSTEM OF GRASS OR OTHER VEGETATION OVER THE LIMITS OF CONSTRUCTION.  
B. STOCKPILE TOPSOIL ON SITE WHERE DIRECTED.

##### 2-05 EXCAVATION

- BEGIN EXCAVATION AFTER STRIPPING, CLEARING AND GRUBBING WHERE APPLICABLE, HAS BEEN COMPLETED.
- EXCAVATE TO GRADES REQUIRED TO ACCOMMODATE THE PROPOSED CONSTRUCTION. DEWATER AS NEEDED.
- REMOVE "UNSATISFACTORY MATERIALS" ENCOUNTERED FROM THE BUILDING AREAS, AND OTHER NON-LANDSCAPED AREAS.
- EXCAVATE IN SUCH A MANNER THAT QUICK AND EFFICIENT DRAINAGE OF STORMWATER WILL BE AFFECTED.
- CLASSIFY EXCAVATED MATERIALS AND STOCKPILE SEPARATELY SUITABLE SOILS FOR USE AS BACKFILL MATERIALS. IF SUFFICIENT QUANTITIES OF EXCAVATED MATERIALS MEETING REQUIREMENTS FOR BACKFILL ARE NOT AVAILABLE ON SITE, PROVIDE MATERIALS MEETING THESE REQUIREMENTS.
- STOCKPILE EXCAVATED MATERIAL SUITABLE FOR USE AS FILL AND BACKFILL.

##### 2-06 FILLING, BACKFILLING AND COMPACTION

- THE WORK CONSISTS OF COMPACTION OF EXISTING EARTH (EXCLUDE ROCK), SURFACES AFTER EXCAVATION, FILLING AND COMPACTION OF SAID AREA TO LEVELS REQUIRED WITH SUITABLE BACKFILL MATERIAL.
- MATERIALS: "SATISFACTORY FILL MATERIALS" AASHTO CLASSIFICATION A-3 OR BETTER SHALL BE USED IN FILLS AND BACKFILLS.
- FILLING AND BACKFILLING: PLACE "SATISFACTORY FILL MATERIAL" IN HORIZONTAL LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH. COMPACT AS SPECIFIED HEREIN NO MATERIAL SHALL BE PLACED ON SURFACES THAT ARE MUDDY.
- COMPACTION: COMPACTION SHALL BE WITH EQUIPMENT SUITED TO SOIL BEING COMPACTED. MOISTEN OR AERATE MATERIAL AS NECESSARY TO PROVIDE MOISTURE CONTENT THAT WILL READILY FACILITATE OBTAINING SPECIFIED COMPACTION WITH EQUIPMENT USED. COMPACT EACH LAYER TO NOT LESS THAN PERCENTAGE OF MAXIMUM DENSITY SPECIFIED BELOW DETERMINED IN ACCORDANCE WITH AASHTO T-180. INSURE THAT THE COMPACTION OF PREVIOUSLY PREPARED FILL AREAS HAS BEEN MAINTAINED

- RECONDITIONING OF SUBGRADE: WHERE APPROVED COMPACTED SUBGRADES ARE DISTURBED BY THE CONTRACTOR'S SUBSEQUENT OPERATIONS OR ADVERSE WEATHER SUBGRADE SHALL BE SCRAPPED AND COMPACTED AS SPECIFIED HEREIN BEFORE TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION THEREON. RE-COMPACTION OVER UNDERGROUND UTILITIES SHALL BE BY POWER-DRIVEN HAND TAMPERS.
- COMPACTION REQUIREMENTS  
1. FILL UNDER LAWNS AND PLANTED:
  - SOIL CLASSIFICATION: ONE TEST FROM EACH TYPE OF MATERIAL 95%
  - BELOW SLABS ON GRADE: 98%
  - UNDER PAVING PARKING AREAS: 98%
- TESTING  
A. THE CONTRACTOR WILL PROVIDE THE SERVICES OF A TESTING LABORATORY TO PERFORM SPECIFIED TESTS, INSPECTIONS, INSTRUMENTATION AND INSPECTION OF THE WORK.  
B. TESTS OF MATERIALS SHALL BE AS FOLLOWS:
  - SOIL CLASSIFICATION: ONE TEST FROM EACH TYPE OF MATERIAL ENCOUNTERED AND OR PROPOSED TO BE USED.
  - LABORATORY TESTS FOR MOISTURE-CONTENT AND DENSITY ACCORDING TO AASHTO T-180: ONE TEST FOR EACH MATERIAL ENCOUNTERED AND/OR PROPOSED TO BE USED.
  - FIELD TESTS FOR MOISTURE-CONTENT AND DENSITY: ONE TEST PER LAYER OF FILL PER 5,000 SQUARE FEET OF AREA.

#### SUPPLEMENTAL SPECIFICATIONS

GENERAL  
THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND ADHERE TO THE SPECIFICATIONS AND STANDARDS OF THE UTILITY COMPANIES WHICH ARE SERVING THE PROJECT SITE. THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH ALL SITE DEVELOPMENT STANDARDS AND CODES OF THE REGULATORY AGENCIES ASSOCIATED WITH THIS AREA IT SHALL BE REMOVED FROM THE PLANS. THE STANDARDS AND SPECIFICATIONS OF THE ASSOCIATED UTILITY COMPANY SERVING THE PROJECT SITE SHALL BE ADHERED TO FOR ALL MATERIALS, INSTALLATION, TESTING, AND CERTIFICATION ACTIVITIES FOR ALL PUMP STATIONS, MAIN LINES, SERVICES, AND APPURTENANCES. IF STANDARDS AND SPECIFICATIONS ARE NOT AVAILABLE, THE CONTRACTOR SHALL CONFORM WITH THE LATEST STANDARDS AND SPECIFICATIONS ADOPTED BY MONROE COUNTY UTILITIES, LOCAL GOVERNMENTAL REGULATIONS, OR THE MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE. A COPY OF THE MONROE COUNTY UTILITIES SPECIFICATIONS CAN BE REVIEWED AT THE OFFICE OF THE WEILER ENGINEERING CORPORATION.

STORMWATER PIPE INSTALLATION AND MISCELLANEOUS EXCAVATIONS UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL

PERFORM THE EXCAVATION, BEDDING, JOINTS, AND BACKFILLING OPERATIONS IN ACCORDANCE WITH THE POTABLE WATER WASTEWATER INSTALLATION SPECIFICATIONS, LOCAL GOVERNMENTAL REGULATIONS OR STANDARDS, F.D.O.T. STANDARDS AND SPECIFICATIONS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE.

#### UNSUITABLE MATERIALS

IF UNSUITABLE MATERIALS IS ENCOUNTERED WITHIN THE ROADWAY AREA AND/OR UTILITY AREAS IT SHALL BE REMOVED TO A DEPTH OF THREE (3) FEET BELOW THE SUB-BASE OR TRENCH BOTTOM AND SHALL BE BACKFILLED WITH THE A-3 MATERIAL OR BETTER WITH PLACEMENT AND COMPACTION METHODS IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS OR AS OTHERWISE NOTED ON THE PLANS. UNSUITABLE MATERIALS SHALL BE REMOVED FROM SITE, UNLESS THE ENGINEER APPROVES USE WITHIN LANDSCAPED AREAS.

#### DEWATERING

##### 1-01 GENERAL

- DEWATERING CONSISTS OF PERFORMING ALL WORK NECESSARY TO REMOVE SURFACE WATER AND/OR CONTROL THE GROUND WATER LEVELS AND HYDROSTATIC PRESSURES IN ORDER TO PERMIT ALL EXCAVATION AND CONSTRUCTION UNDER THIS CONTRACT TO BE PERFORMED ON THE DRY.
- WORK OF THIS SECTION INCLUDES INSTALLATION, OPERATIONS, MAINTENANCE, SUPERVISION, SUPPLY, DISMANTLING, AND REMOVAL FROM THE SITE OF THE DEWATERING EQUIPMENT.
- THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE POTENTIAL FOR EXCESSIVE RAINFALL, THE GROUND CONDITIONS, AND THE GROUND WATER CONDITIONS, GROUND WATER ELEVATION CAN FLUCTUATE. IT IS ANTICIPATED THAT ANY EXCAVATIONS MAY ENCOUNTER THE GROUND WATER TABLE.
- DRAINAGE OF THE SITE: AT ALL TIMES THE CONTRACTOR SHALL MAINTAIN AND OPERATE ADEQUATE SURFACE AND SUBSURFACE DRAINAGE METHODS IN ORDER TO KEEP THE CONSTRUCTION SITE DRY AND IN SUCH CONDITION THAT PLACEMENT AND COMPACTION OF FILL MAY PROCEED UNHINDERED BY SATURATION OF THE AREA DURING CONSTRUCTION, THE SURFACE OF THE BACKFILL AREA SHALL BE LEFT IN SUCH CONDITION THAT PRECIPITATION AND/OR SURFACE WATER WILL RUN OFF WITHOUT PONDING.

##### 1-02 METHOD

- THE CONTROL OF ALL SURFACE AND SUBSURFACE WATER IS PART OF THE DEWATERING REQUIREMENTS, MAINTAIN ADEQUATE CONTROL SO THAT THE STABILITY OF EXCAVATED AND CONSTRUCTION SLOPES IS NOT ADVERSELY AFFECTED BY WATER, THAT EROSION IS CONTROLLED, AND THE FLOODING OF EXCAVATIONS OR DAMAGE TO STRUCTURES DOES NOT OCCUR, DRAIN SURFACE WATER AWAY FROM THE EXCAVATION.
- DISPOSE OF ALL WATER REMOVED FROM THE EXCAVATION IN A MANNER THAT WILL NOT ENDANGER PUBLIC HEALTH, PROPERTY, OR PORTIONS OF THE WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER IN A MANNER THAT WILL CAUSE NO INCONVENIENCE WHATSOEVER TO THE OWNER OR TO OTHERS ENGAGED IN WORK AT THE SITE.
- DISPOSE OF WATER RESULTING FROM DEWATERING OPERATIONS IN ACCORDANCE WITH CITY, COUNTY, STATE AND FEDERAL REGULATIONS.
- CONDUCT OPERATIONS SO THAT STORMWATER RUNOFF, SEDIMENT IS NOT DISCHARGED TO THE ADJACENT WATER BODIES, SEWERS, STREETS AND ADJACENT PROPERTIES
- DEWATERING SYSTEM SHALL BE SO DESIGNED AS TO PREVENT REMOVAL OF SOIL FINES FROM THE SITE DURING THE DEWATERING OPERATION

#### PORTLAND CEMENT CONCRETE

- QUALITY ASSURANCE  
A. COMPLY WITH ACI STANDARDS RECOMMENDED PRACTICES FOR CONSTRUCTION OF CONCRETE PAVEMENTS AND CONCRETE BASES (AC316, LATEST EDITION)
- REFERENCE STANDARDS  
A. THE FOLLOWING REFERENCE STANDARDS OF THE ISSUES LISTED BELOW BUT REFERRED TO THEREAFTER BY BASIC DESIGNATION ONLY, FORM A PART OF THIS SPECIFICATION TO THE EXTENT INDICATED BY THE REFERENCES THERETO. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH HEREINAFTER SPECIFIED STANDARDS.
  - AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
  - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD.
    - FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) 1991 STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - SECTION 350 - "CEMENT CONCRETE PAVEMENT".
    - T-180 MOISTURE-DENSITY RELATIONS OF SOILS

THE CONTRACTOR SHALL SUBMIT TWO COPIES OF TEST REPORTS PREPARED BY AN INDEPENDENT TESTING LABORATORY AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF FLORIDA. THESE REPORTS SHALL INDICATE ALL TESTS PERFORMED AND SHALL INCLUDE A CERTIFICATION STATEMENT OF COMPLIANCE WITH THE PROJECT SPECIFICATIONS. TESTS SHALL BE PERFORMED AS SPECIFIED UNDER THIS SECTION.

- SUBMIT FOR REVIEW THE FOLLOWING:
  - CONCRETE DESIGN MIX AND PROVING FLEXURAL STRENGTH (MODULUS OF RUPTURE) TESTS
  - EXPANSION JOINT FILLER DATE
  - JOINT SEALER DATE
  - PROPOSED PAVING CONSTRUCTION PLAN WHICH SHALL SHOW THE CONCRETE PAVING JOINT TYPES AND LOCATIONS AND SHALL INCLUDE A STATEMENT OF PROPOSED SEQUENCE AND SCHEDULE OF PAVING OPERATIONS
  - RESULTS OF CONCRETE TESTS
  - RESULTS OF FIELD TESTS OF IRR AND COMPACTION OF STABILIZED SUBGRADE.

#### 1-04 MATERIALS

- STABILIZED SUBGRADE: PROVIDE 12 INCH STABILIZED SUBGRADE (LR 40 MIN) COMPACTED TO A MINIMUM DENSITY OF 98% AS DETERMINED BY AASHTO T-180
- CONCRETE: CONCRETE FOR CONCRETE PAVEMENT SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. A SLUMP RANGE BETWEEN 2 TO 4 INCHES AND A 28 DAY MODULES OR RUPTURE OF 650 PSI AS DETERMINED BY THE REQUIREMENTS OF PARAGRAPH TESTING SPECIFIED HEREINAFTER.
- JOINT SEALER: JOINT SEALING SHALL CONFORM TO FEDERAL SPECIFICATIONS SS-5401 OR SS-5-2009 (COLD APPLIED)

- EXCAUTION  
A. COMPLY WITH AC STANDARD 316-74 AND SECTION 350, FDOT STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED HEREIN.
- FINAL GRADING: ALL CONCRETE PAVEMENT SHALL HAVE A MAXIMUM DEVIATION OF 1/8 INCH (PLUS/MINUS) FROM THE SPECIFIED SURFACE PLANE AND PLAN GRADES.
- THE SURFACE FINISH SHALL BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE. IN GENERAL THE TEXTURE IS OF A MEDIUM BROOM FINISH AFTER FLOATING.

#### JOINTS

- CONTRACTION JOINTS INDICATED ON DRAWINGS, OR AS REQUIRED, SHALL BE PLACED PERPENDICULAR TO THE FINISH GRADE OF THE CONCRETE. JOINTS SHALL BE CUT TO A DEPTH OF 1/4 OF THE SLAB THICKNESS BY CUTTING WITH AN EDGING TOOL HAVING A 1/4 INCH RADIUS OR BY SAWING WITH A BLADE PRODUCING A CUT NOT LESS THAN 3/8 INCH IN WIDTH. SAW JOINTS WITHIN 4 TO 6 HOURS OF CONCRETE PLACEMENT.
- EXPANSION JOINTS SHALL BE PLACED WHERE INDICATED ON DRAWINGS, OR AS REQUIRED, USING 1/2 INCH THICK PREFORMED EXPANSION JOINT MATERIAL ANCHOR WITH APPROVED DEVICES TO PREVENT DISPLACEMENT DURING PLACEMENT AND FINISHING. EDGES SHALL BE ROUNDED WITH AN EDGING TOOL. JOINTS SHALL BE FULL DEPTH OF CONCRETE EXCEPT THAT TOP EDGES SHALL BE 1/2 INCH BELOW THE FINISH CONCRETE SURFACE. EXPANSION JOINTS SHALL BE SEALED TO THE SURFACE BY FILLING WITH JOINT SEALING COMPOUND. JOINTS SHALL BE CLEAN AND DRY BEFORE SEALING COMPOUND IS PUT IN PLACE.
- CONSTRUCTION JOINTS ARE TO BE USED AT CONTRACTION JOINT LOCATIONS TO STOP CONCRETE POURS.

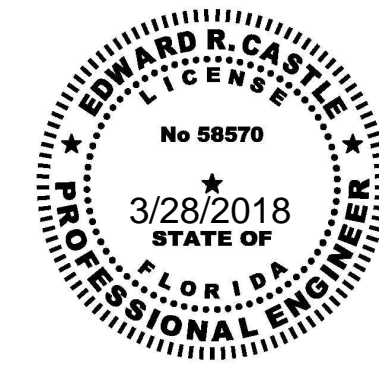
- CURING: CONCRETE SHALL BE CURED BY PROTECTING IT AGAINST LOSS OF MOISTURE AND MECHANICAL INJURY FOR AT LEAST THREE DAYS AFTER PLACEMENT. A PIGMENTED LIQUID CURING MEMBRANE SHALL BE APPLIED IMMEDIATELY AFTER FINISHING, OPERATING AT THE RATE OF ONE GALLON TO NOT MORE THAN 200 SQUARE FEET.
- CLEANING AND SEALING JOINTS: JOINTS SHALL BE FILLED WITH JOINT-SEALING MATERIAL NO LESS THAN 8 HOURS AND WITHIN 2 WEEKS AFTER PLACEMENT. JOINT SEALING SHALL BE PERFORMED ON SAMPLES TAKEN AT A THOROUGHLY CLEANED OF ALL FOREIGN MATERIAL INCLUDING ANY MEMBRANE CURING COMPOUND.
- TESTING: LABORATORY AND FIELD TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE. IN ADDITION, ALL RETESTING SHALL BE DONE AT CONTRACTOR'S EXPENSE.
  - DESIGN MIXES AND TESTING REQUIREMENTS FOR THE CONCRETE PAVEMENT SHALL BE AS FOLLOWS:
    - FLEXURAL STRENGTH TESTS OF CONCRETE AS BASIS FOR DESIGN
    - SLUMP, MODULES OF RUPTURE AND 7-AND 28 DAY COMPRESSIVE STRENGTH TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE.
  - WHERE THE FLEXURAL STRENGTH OF THE CONCRETE IS SPECIFIED, MAKE ONE STRENGTH TEST AND ONE FLEXURAL TEST FOLLOWING (ASTM C192 AND ASTM C78) FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF PLACED PER DAY. NUMBER OF CYLINDERS SHALL BE THREE FOR STRENGTH TEST AND THREE FOR FLEXURAL TEST. TEST ONE AT THREE DAYS, ONE AT SEVEN DAYS AND ONE AT 28 DAYS

PORTLAND CEMENT CONCRETE - CONCRETE SHALL BE TESTED FOR THE FOLLOWING PARAMETERS: SLUMP, MODULES OF RUPTURE, AND 7 AND 28 DAY COMPRESSIVE STRENGTH TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB. RETENTION/DETENTION FACILITIES - IF INCLUDED WITHIN THE PROJECT, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND PERFORM A DRAW DOWN AND CAPACITY TEST OF THE FACILITIES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT WATER AND ACCEPTABLE MEANS TO MEASURE THE WATER VOLUMES PROVIDED, IF REQUIRED BY THE ENGINEER. IF A FILTRATION SYSTEM IS INCLUDED WITHIN THE PROJECT, THE FILTER MEDIA SHALL BE TESTED FOR COMPLIANCE WITH ALL CURRENT SPECIFICATIONS OF THE WATER MANAGEMENT DISTRICT. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

- IN ADDITION TO THE ENVIRONMENTAL PROTECTION DURING CONSTRUCTION SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM THE FOLLOWING IN THE ORDER LISTED:
- PRIOR TO COMMENCEMENT, PROVIDE NOTIFICATION TO THE LOCAL WATER MANAGEMENT DISTRICT AND LOCAL GOVERNMENT OFFICES.
  - ERECT A TURBIDITY SCREEN ON ANY DOWNSTREAM SYSTEM WHICH RECEIVES RUNOFF FROM THE PROJECT. INSTALL OUTFALL CONTROL STRUCTURE AND FILTRATION SYSTEM IF INCLUDED
  - PROVIDE A TEMPORARY FILTER CLOTH COVERED WITH GRAVEL OVER ANY PROPOSED FILTERS.
  - INSTALL A TEMPORARY TURBIDITY SCREEN AT ALL CONTROL STRUCTURES.
  - CONSTRUCT A TEMPORARY PERIMETER BERM AS NECESSARY TO DIRECT ALL RUNOFF WITHIN ANY AREA PLANNED FOR CLEARING.
  - MAINTAIN FILTER DURING CONSTRUCTION TO PROVIDE CONTINUOUS OPERATION.
  - UPON PERFORMING FINAL GRADING, THE CONTRACTOR SHALL REMOVE ALL SILTS, CLAYS AND OTHER DELETERIOUS MATERIAL FROM THE BOTTOM OF ALL STORMWATER MANAGEMENT AREAS PRIOR TO GRASSING.
  - AFTER ACHIEVING A NON-ERODIBLE COVER OF GRASS, REMOVE TEMPORARY FILTER CLOTH AND GRAVEL OVER FILTERS AND REPLACE WITH NEW FILTER CLOTH AND COVER MATERIAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
  - NOTIFY THE OWNER FOR FINAL INSPECTION.
  - UPON FINAL APPROVAL FROM OWNER, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES.

#### PIPING

- ALL VALVE OPERATORS AND HAND WHEELS, ETC. SHALL FACE AND BE ACCESSIBLE TO PLATFORMS OR OPERATING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR PROPER ORIENTATION TO MEET THIS REQUIREMENT.
- PIPING PLANS DO NOT PURPORT TO SHOW ALL FITTINGS, SPECIALS, ETC., WHICH MAY BE NECESSARY TO ACCOMMODATE FIELD LAYING CONDITIONS. THE CONTRACTOR SHALL FURNISH AND INSTALL EXTRA PIPE FITTINGS TO AFFORD PROPER PIPE CLEARANCES AND ALIGNMENT WHERE NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- ALL HYDRAULIC STRUCTURES SHALL HAVE WALL PIPES AT PIPE PENETRATIONS.
- ALL BENDS, TEES, PLUGS, ETC. ON PRESSURE MAINS SHALL BE RESTRAINED IN ACCORDANCE WITH SPECIFICATIONS.
- ALL TRENCHES FOR NEW PIPING AND CONDUIT SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND BE THOROUGHLY COMPACTED, UNLESS OTHERWISE SPECIFIED.
- WHERE DRAINING AND CLEANING OF EXISTING TANKS IS REQUIRED TO PERFORM WORK UNDER THIS CONTRACT, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OPERATE ALL VALVES, GATES, AND PUMPS TO BE COMPLETED BY PASS OF THE UNIT, TO DRAIN WASTEWATER BACK TO HEAD OF PLANT AND TO CLEAN AND DISPOSE OF ALL SLUDGE REMOVED.
- ALL EXISTING EQUIPMENT, PIPING, VALVES AND OTHER ITEMS REMOVED AND DEEMED REUSABLE DURING CONSTRUCTION OPERATIONS SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED ON THE SITE IN THE LOCATION DESIGNATED BY THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOWS THROUGH EXISTING PIPING AND STRUCTURES AND DIVERSION OF FLOWS AS NECESSARY DURING CONSTRUCTION UNDER THIS CONTRACT. TO INSURE CONTINUATION OF PLANT OPERATION WITHOUT INTERRUPTION, ALL WORK WHICH AFFECTS PLANT OPERATIONS SHALL BE COORDINATED AND SCHEDULED TO THE SATISFACTION OF PLANT PERSONNEL PRIOR TO BEGINNING. ALL WORK ON EXISTING SYSTEM SHALL BE COORDINATED A MINIMUM OF 72 HOURS PRIOR WITH THE OWNER.
- DIMENSION, ELEVATIONS, AND LOCATIONS SHOWN ON THESE DRAWINGS FOR EXISTING STRUCTURES, PIPING, ETC., MAY BE FROM RECORD DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL INFORMATION PRIOR TO BEGINNING HIS CONSTRUCTION OPERATIONS IN EACH AREA AND AT NO ADDITIONAL COST TO THE OWNER. MAKE ALL NECESSARY ADJUSTMENTS TO PERFORM THE INTENT OF WORK UNDER THIS CONTRACT.



Edward R. Castle  
Professional Engineer  
State of Florida  
Registration No. 58574

Sheet No. G-03

KWRU 020028

WEC THE WEILER ENGINEERING CORPORATION

6805 OVERSEAS HWY  
MARATHON, FLORIDA 33050  
(305) 289-4161 PH, (305) 289-4162 FAX

GENERAL NOTES FOR KWRU WWTP EXPANSION

Revisions

Description

THIS SHEET IS NOT VALID WITHOUT THE SIGNATURE AND OFFICIAL SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

Sheet No. G-03

SHOP DRAWINGS

1. PROVIDE FABRICATION SHOP DRAWINGS AND ERECTION SHOP DRAWINGS FOR REVIEW ON ITEMS INDICATED IN THESE NOTES. DESIGN ON STRUCTURAL ITEMS SHALL BE PERFORMED BY AN EXPERIENCED PROFESSIONAL ENGINEER REGISTERED IN FLORIDA. DESIGN CALCULATIONS SHALL BE SUBMITTED FOR REVIEW UPON REQUEST.
2. DRAWINGS SHALL INCLUDE ALL DESIGN LOADS, CONNECTION DETAILS, HANDLING REQUIREMENTS, AND PLAN LOCATIONS. SHOP DRAWINGS MUST BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
3. ALL SHOP DRAWINGS TO HAVE CONTRACTORS REVIEW STAMP PRIOR TO SUBMISSION TO THE ENGINEER.

DESIGN DATA

1. THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH FLORIDA BUILDING CODE 2017.
2. SOILS PER GEOTHECNICAL REPORT "UNIVERSAL ENGINEERING SCIENCES No: 0530.1400016.000" FROM MARCH 27, 2014 AND OTHER SOIL CONSIDERATIONS.
3. BASIC WIND SPEED (V) = 200 MPH; STRUCTURAL CATEGORY: III
4. EXPOSURE "C"
5. FLOOD RESISTANT CONSTRUCTION IS IN COMPLIANCE WITH ASCE 24-05 AND ASCE 7-10 STANDARDS

FOUNDATION SOILS

1. SLABS AND FOOTINGS TO BE PLACED ON UNDISTURBED SOIL. IF FILL MATERIAL IS REQUIRED, PLACE IN 8"-12" LIFTS AND COMPACT TO 98% DENSITY AS MEASURED BY THE STANDARD PROCTOR DENSITY TEST.
2. FILL AND EXISTING SUB-GRADE MATERIALS SHALL CONTAIN NO MUCK, STUMPS, ROOTS, BRUSH, VEGETABLE MATTER, RUBBISH OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE SUBGRADE.

STRUCTURAL STEEL:

- 1) ALL STRUCTURAL STEEL COMPONENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AISC STEEL AND CONSTRUCTION MANUAL.
- 2) ALL W-SHAPES AND C-SHAPES SHALL BE ASTM A992 WITH Fy=50 ksi.
- 3) ALL RECTANGULAR AND SQUARE HSS SHAPES SHALL BE ASTM A500 GRADE B WITH Fy= 46 ksi.
- 4) ALL STEEL PLATES AND OTHER MISC. ELEMENTS SHALL BE ASTM A992 WITH Fy=50 ksi.
- 5) ALL BOLTS NUTS AND WASHERS SHALL BE HDG

CONCRETE:

1. USE 5000 PSI CONCRETE MINIMUM, TARGETED SLUMP 4 INCHES, MAXIMUM W/C RATIO OF 0.44, AIR CONTENT 1-6%, UNLESS STATED OTHERWISE ON PLANS.
2. CURING: CONCRETE SHALL BE CURED BY PROTECTING IT AGAINST LOSS OF MOISTURE AND MECHANICAL INJURY FOR AT LEAST THREE DAYS AFTER PLACEMENT. A LIQUID CURING MEMBRANE SHALL BE APPLIED IMMEDIATELY AFTER FINISHING; APPLY AT THE RATE OF ONE GALLON TO NOT MORE THAN 200 SQUARE FEET. ALTERNATIVELY WET CURING CAN BE IMPLEMENTED. ALL EXPOSED SURFACES SHALL BE KEPT CONTINUOUSLY WET FOR AT LEAST THREE DAYS AFTER PLACEMENT.
3. TESTING: LABORATORY AND FIELD TESTING SHALL BE PERFORMED BY LICENSED TESTING LABORATORY. MINIMUM OF 3 SAMPLES SHALL BE TAKEN AND TESTED.
  - 3.1 THE MINIMUM SAMPLING FREQUENCY IS:
    - A) ONCE A DAY FOR A GIVEN CLASS.
    - B) ONCE EVERY 50 CUBIC YARDS.
    - C) ONCE EACH 5000 FEET<sup>2</sup> OF SURFACE AREA FOR SLABS OR WALLS.
  - 3.2 SAMPLES ARE TAKEN ON A RANDOM BASIS - CONCRETE IS NOT TO BE SAMPLED DUE TO APPEARANCE, CONVENIENCE, OR OTHER BIASED CRITERIA.
  - 3.3 EACH SET OF CYLINDERS COME FROM A DIFFERENT BATCH OF CONCRETE.
  - 3.4 NO WATER WAS ADDED TO THE CONCRETE AFTER THE SAMPLES WERE TAKEN.
  - 3.5 QUALIFIED FIELD TESTING TECHNICIANS PERFORMED THE TEST ON THE FRESH CONCRETE.
  - 3.6 QUALIFIED LABORATORY TECHNICIAN PERFORMED ALL REQUIRED LABORATORY TESTS.
  - 3.7 MINIMUM (3) ORIGINALS SIGNED LAB TESTING RESULTS SHALL BE SUBMITTED TO ENGINEER AND OWNER.
  4. REINFORCEMENT SHALL BE GRADE 60 BILLET STEEL, DEFORMED, STRENGTH = 60,000 PSI. MATERIALS, BAR CLEARANCES, COVER, & OTHER DETAILING TO BE IN ACCORDANCE WITH ACI-318.
  5. REINFORCEMENT SHALL BE CLEAN AND FREE OF RUST AND LUBRICANTS.
  6. ALL EXPOSED EDGES OF CAST-IN-PLACE AND PRECAST MEMBERS SHALL HAVE 3/4" CHAMFERS, UNLESS SHOWN OTHERWISE ON THE PLANS.
  7. USE ONLY PLASTIC OR STAINLESS CHAIRS FOR REBAR SUPPORT.
  8. PRECAST PRESTRESSED CONCRETE PRODUCTS TOLERANCES SHALL BE AS DESCRIBED IN THE TABLE 8.2.1 OF "PCI DESIGN HANDBOOK/SIXTH EDITION"
  9. CAST-IN-PLACE AND PRECAST MEMBERS ERECTION TOLERANCES SHALL BE AS SPECIFIED IN THE TABLE 8.2.2 OR IN SECTION 8.3 OF "PCI DESIGN HANDBOOK/SIXTH EDITION"

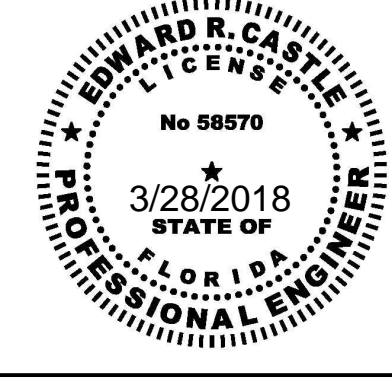
CONCRETE PAVEMENTS:

1. USE CLASS I (Pavement) 5000 PSI CONCRETE, TARGETED SLUMP 4 INCHES, MAXIMUM W/C RATIO OF 0.44, AIR CONTENT 1-6%.
2. ALL SURFACES SHALL HAVE LIGHT BROOM FINISH.
3. AFTER COMPLETING THE FINISHING OPERATIONS AND AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO NOT MAR THE SURFACE, COVER AND CURE THE ENTIRE SURFACE. OR UNIFORMLY APPLY CURING COMPOUND TO THE SURFACES TO BE CURED, IN A SINGLE COAT, CONTINUOUS FILM, AT THE MINIMUM RATE OF 1 GALLON TO EVERY 200 FT<sup>2</sup>, BY A MECHANICAL SPRAYER. AT THE TIME OF USE, THOROUGHLY MIX THE COMPOUND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
4. SAW CUT CONTROL JOINTS IN NEW PAVEMENT AT 10'-14' MAX. ALIGN JOINTS WITH COLUMNS AXIS. CONTROL JOINTS SHALL BE 1/8" Min. WIDE AND 1.5" DEEP. CONTROL JOINTS SHALL BE CUT AS SOON AS POSSIBLE BUT NOT LATER THAN 72 HOURS FROM CONCRETE PLACEMENT.
5. PROTECT FRESH CONCRETE FROM VEHICULAR TRAFFIC FOR 7 DAYS MINIMUM.

**WEC**  
THE WELLER ENGINEERING CORPORATION  
6805 OVERSEAS HWY  
MARATHON, FLORIDA 33050  
(305) 289-4161 PH, (305) 289-4162 FAX  
EB #6555

**STRUCTURAL NOTES  
FOR  
KWRU WWTP EXPANSION**

Description	Revisions



THIS SHEET IS NOT VALID WITHOUT THE SIGNATURE AND OFFICIAL RASSED SEAL OF A FLORIDA LICENSED PROFESSIONAL ENGINEER.

Edward R. Castle  
Professional Engineer  
State of Florida  
Registration No. 58574

Sheet No. G-04

### ABBREVIATIONS

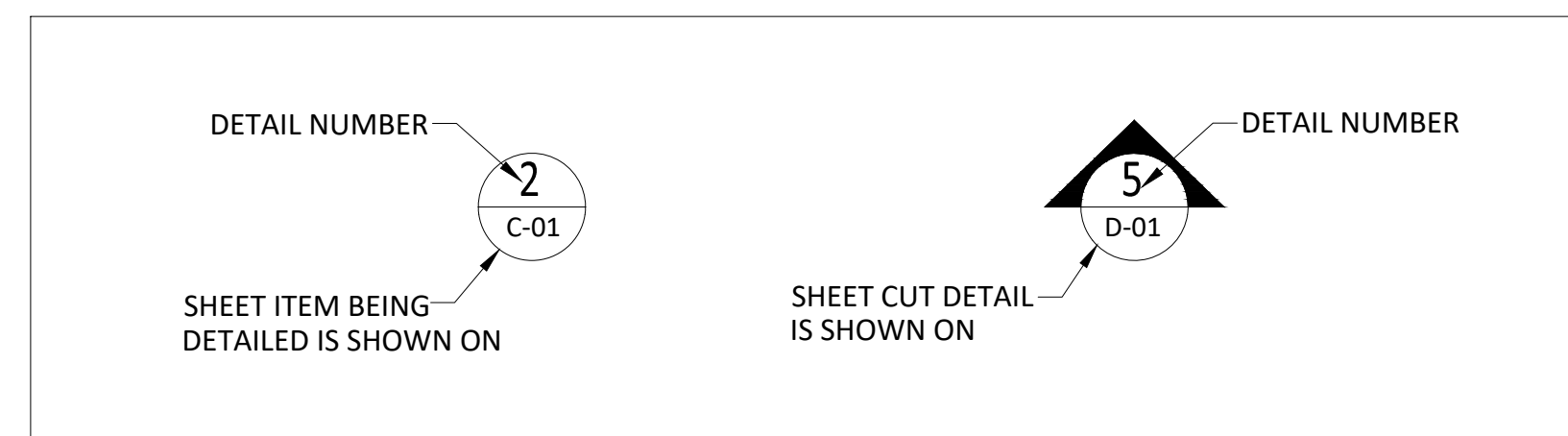
<b>A A/C</b> Air Conditioner	<b>E EFF</b> Effluent	<b>L LF</b> Linear Foot	<b>R REF</b> Reference
<b>ACP</b> Asbestos Cement Pipe	<b>EL</b> Elevation	<b>LH</b> Left Hand	<b>REQD</b> Required
<b>AL, ALUM</b> Aluminum	<b>ELEV</b> Elevator	<b>LWFC</b> Lightweight Concrete Fill	<b>REV</b> Revision
<b>ALT</b> Alternate	<b>EMER</b> Emergency	<b>LWL</b> Low Water Level	<b>RH</b> Right Hand
<b>AMP</b> Ampere	<b>EO</b> Electrically Operated	<b>M MAX</b> Maximum	<b>RM</b> Room
<b>ARV</b> Air Release Valve	<b>EOP</b> Edge Of Pavement	<b>MBR</b> Membrane Batch Reactor	<b>RPM</b> Revolution Per Minute
<b>ASB</b> Asbestos	<b>EO</b> Equal or Equalization	<b>MCC</b> Motor Control Center	<b>RFG</b> Refrigerator
<b>AUX</b> Auxiliary	<b>EQUIP</b> Equipment	<b>MECH</b> Mechanical	<b>S S</b> South
<b>AWL</b> Average Water Level	<b>EW</b> Each Way	<b>MEMB</b> Membrane	<b>SBR</b> Sequencing Batch Reactor
<b>B BFP</b> Backflow Preventer	<b>EXH</b> Exhaust	<b>MFM</b> Magnetic Flow Meter	<b>SCH</b> Schedule
<b>BFV</b> Butterfly Valve	<b>EXP</b> Expansion	<b>MG</b> Million Gallons	<b>SECT</b> Section
<b>BHP</b> Brake Horsepower	<b>F FE</b> Flow Element or Fire Extinguisher	<b>MGD</b> Million Gallons Per Day	<b>SD</b> Storm Drain
<b>BL, @</b> Baseline	<b>FFE</b> Finished Floor Elevation	<b>MH</b> Manhole	<b>SF</b> Square Feet
<b>BLDG</b> Building	<b>FH</b> Fire Hydrant	<b>MIN</b> Minute or Minimum	<b>SHWR</b> Shower
<b>BM</b> Bench Mark	<b>FIN</b> Finished	<b>MISC</b> Miscellaneous	<b>SOV</b> Solenoid Valve
<b>BPS</b> Booster Pump Station	<b>FLG</b> Flange	<b>MJ</b> Mechanical Joint	<b>SPEC</b> Specification
<b>BPV</b> Back Pressure Valve	<b>FLM</b> Flow Meter	<b>MM</b> Millimeter	<b>SS</b> Stainless Steel
<b>BSMT</b> Basement	<b>FM</b> Force Main	<b>MO</b> Motor Operated	<b>STO</b> Storage
<b>BV</b> Ball Valve	<b>FPS</b> Feet Per Second	<b>MSL</b> Mean Sea Level	<b>STD</b> Standard
<b>BYP</b> Bypass	<b>FRP</b> Fiber Reinforced Plastic	<b>MW</b> Megawatt or Monitoring Well	<b>SWW</b> Storm Water Well
<b>C CCC</b> Chlorine Contact Chamber	<b>FT</b> Foot	<b>MWL</b> Maximum Water Level	<b>SYM</b> Symbol
<b>CB</b> Catch Basin	<b>FTG</b> Footing	<b>N N</b> North	<b>T T&amp;P</b> Time and Pressure
<b>CA</b> Compressed Air	<b>G GA</b> Gauge	<b>NA</b> Not Applicable	<b>TB</b> Thrust Block
<b>CCB</b> Chlorine Contact Basin	<b>GAL</b> Gallon	<b>NG</b> Natural Gas	<b>TDH</b> Total Dynamic Head
<b>CEM</b> Cement	<b>GALV</b> Galvanized	<b>NO, #</b> Number	<b>TEMP</b> Temperature
<b>CF</b> Cubic Foot	<b>GLV</b> Globe Valve	<b>NOM</b> Nominal	<b>TOP</b> Top of Pavement
<b>CFS</b> Cubic Feet Per Second	<b>GPD</b> Gallons Per Day	<b>NPT</b> National Pipe Thread	<b>TOS</b> Top of Slab
<b>CFM</b> Cubic Feet Per Minute	<b>GPH</b> Gallons Per Hour	<b>NPW</b> Non-Potable Water	<b>TOW</b> Top of Wall
<b>CI</b> Cast Iron	<b>GPM</b> Gallons Per Minute	<b>NTS</b> Not To Scale	<b>TYP</b> Typical
<b>CIP</b> Cast Iron Pipe	<b>GV</b> Gate Valve	<b>O OC</b> On Center	<b>U UON</b> Unless Otherwise Noted
<b>CIPC</b> Cast-in-Place Concrete	<b>H HB</b> Hose Bibb	<b>OD</b> Outside Diameter	<b>V V</b> Volt
<b>CL, @</b> Centerline	<b>HDWR</b> Hardware	<b>ODC</b> Odor Control	<b>VAC</b> Vacuum
<b>CLR</b> Clear	<b>HORZ</b> Horizontal	<b>P PC</b> Porous Concrete	<b>VAL</b> VALVE
<b>CMU</b> Concrete Masonry Unit	<b>HP</b> Horsepower	<b>PD</b> Plant Drain	<b>VAT</b> Vinyl Asbestos Tile
<b>CO</b> Clean Out	<b>HR</b> Handrail	<b>PG</b> Pressure Gauge	<b>VCP</b> Vitrified Clay Pipe
<b>COL</b> Column	<b>HT</b> Height	<b>PI</b> Plant Influent	<b>VCT</b> Vitrified Clay Tile
<b>CONC</b> Concrete	<b>HWL</b> High Water Level	<b>PL, @</b> Property Line	<b>VEL</b> Velocity
<b>CONT</b> Continuous	<b>HZ</b> Hertz	<b>PLC</b> Programmable Logic Center	<b>VIF</b> Verify In Field
<b>CTR</b> Center	<b>I ID</b> Inside Diameter	<b>PLV</b> Plug Valve	<b>VERT</b> Vertical
<b>CV</b> Check Valve	<b>IN, "</b> Inch	<b>PPS</b> Plant Pump Station	<b>VOL</b> Volume
<b>CWR</b> Cold Water Return	<b>INF</b> Influent	<b>PRDV</b> Pressure Reducing Valve	<b>W W</b> Watt or West
<b>CWS</b> Cold Water Supply	<b>INV</b> Invert	<b>PRIM</b> Primary	<b>W/D</b> Washer / Dryer
<b>D DEG, °</b> Degree	<b>IPF</b> Iron Pin Found	<b>PRV</b> Pressure Relief Valve	<b>WAS</b> Waste Activated Sludge
<b>DI</b> Ductile Iron	<b>IPS</b> Injection Pump Station	<b>PSS</b> Pressure Safety Switch	<b>WS</b> Waste Sludge or Water Stop
<b>DIA, Ø</b> Diameter	<b>IW</b> Injection Well	<b>PSW</b> Pressure Switch	<b>WT</b> Weight
<b>DIP</b> Ductile Iron Pipe	<b>J JCT</b> Junction	<b>PVC</b> Polyvinyl Chloride	<b>WW</b> Wastewater
<b>DN</b> Down	<b>K KG</b> Kilogram	<b>PVMT</b> Pavement	<b>WWF</b> Welded Wire Fabric
<b>DO</b> Dissolved Oxygen	<b>KSI</b> Kips Per Square Inch	<b>PW</b> Potable Water	<b>WWTP</b> Wastewater Treatment Plant
<b>DS</b> Digested Sludge	<b>KGV</b> Knife Gate Valve	<b>Q QTY</b> Quantity	<b>Y YH</b> Yard Hydrant
<b>E E</b> East	<b>KW</b> Kilowatt	<b>R RAD, R</b> Radius	<b>YR</b> Year
<b>ECC</b> Eccentric	<b>L LAB</b> Laboratory	<b>RC</b> Reinforced Concrete	
<b>EF</b> Each Face	<b>LB</b> Pound	<b>RCC</b> Roller Compacted Concrete	

### GENERAL SYMBOL LEGEND

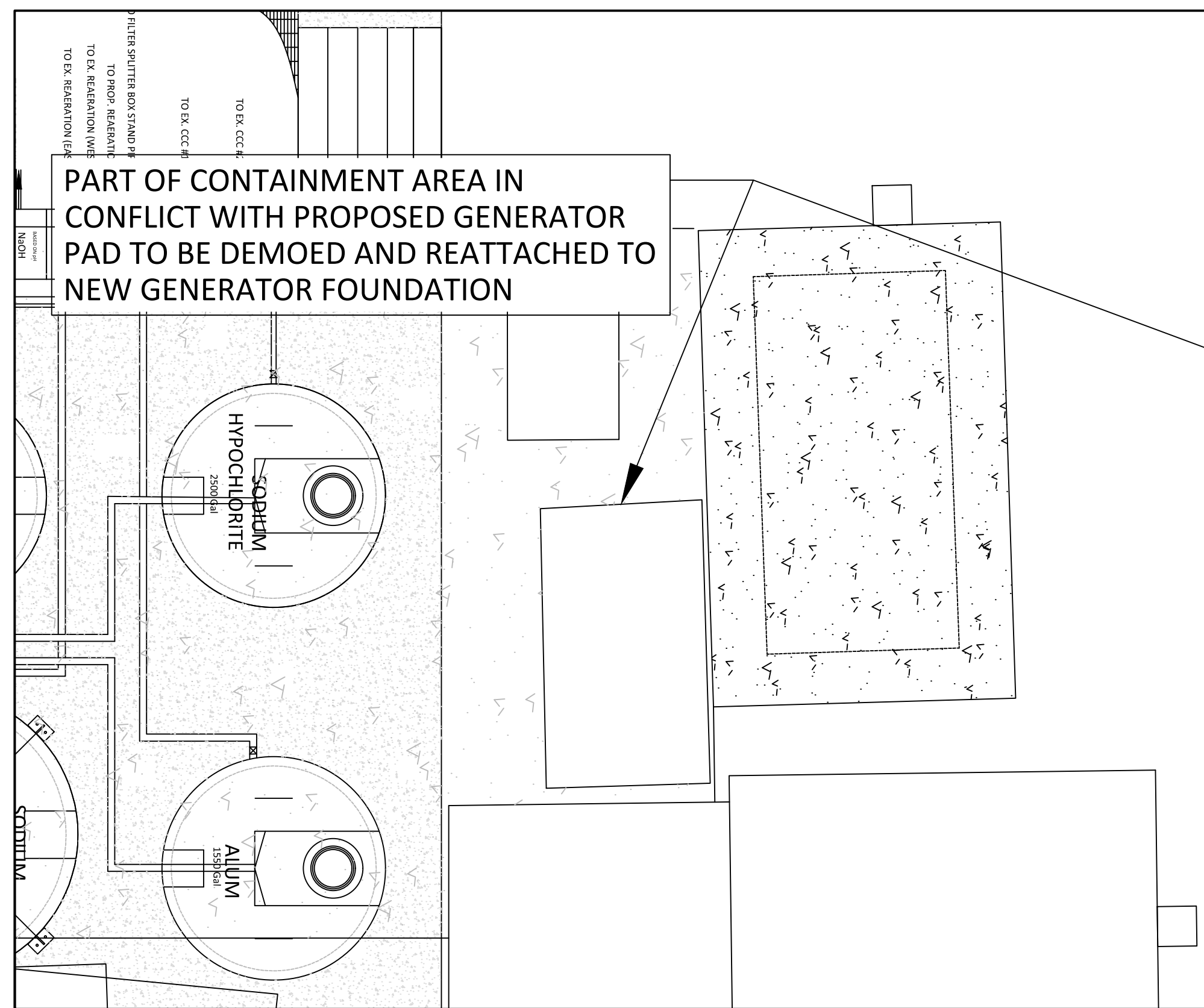
	EXISTING CONTOUR		OVERHEAD ELECTRIC WIRE
	FINISHED CONTOUR		EXISTING POWER POLE
	SPOT ELEVATION		PROPOSED PIPING
	ELEVATION DESIGNATION		EXISTING PIPING
	HOSE BIBB		
	EXISTING ELECTRICAL		YARD HYDRANT - PROPOSED
	EXISTING FENCE		YARD HYDRANT - EXISTING
	NEW FENCE		FIRE HYDRANT - PROPOSED
	PROPERTY LINE		FIRE HYDRANT - EXISTING
	RIGHT-OF-WAY LINE		CLEAN OUT - PROPOSED
	BALL VALVE		VALVE DESIGNATION
	REDUCER		EQUIPMENT LABEL
	CHECK VALVE		FIELD MOUNTED
	GATE VALVE		FIELD PANEL MOUNTED
	PLUG VALVE		
	BALANCING VALVE		INTERLOCK
	BUTTERFLY VALVE		PUMP
	ISOLATION VALVE		INSTRUMENT (FIELD MTD.)
	SOLENOID VALVE		INSTRUMENT (MTD. IN PRIMARY LOCATION)
	PNEUMATIC CONTROL VALVE		SCADA
	PRESSURE REGULATING VALVE		FLOAT SWITCH
	SURGE RELIEF VALVE		PILOT LIGHT
	AIR RELEASE VALVE		
	NEEDLE VALVE		
	3-WAY ACTUATED VALVE		
	UNDERGROUND ELECTRIC		
	FLOW METER		
	CITY WATER LINE (POTABLE)		
	PROPOSED CHEMICAL LINE		
	EXISTING CHLORINE		
	EXISTING SANITARY SEWER LINE		
	LIQUID CALIBRATION TUBE		

NOTE:  
LEGEND APPLIES WHERE INADEQUATE DESCRIPTION AVAILABLE. VERIFY CONFLICTS WITH ENGINEER.

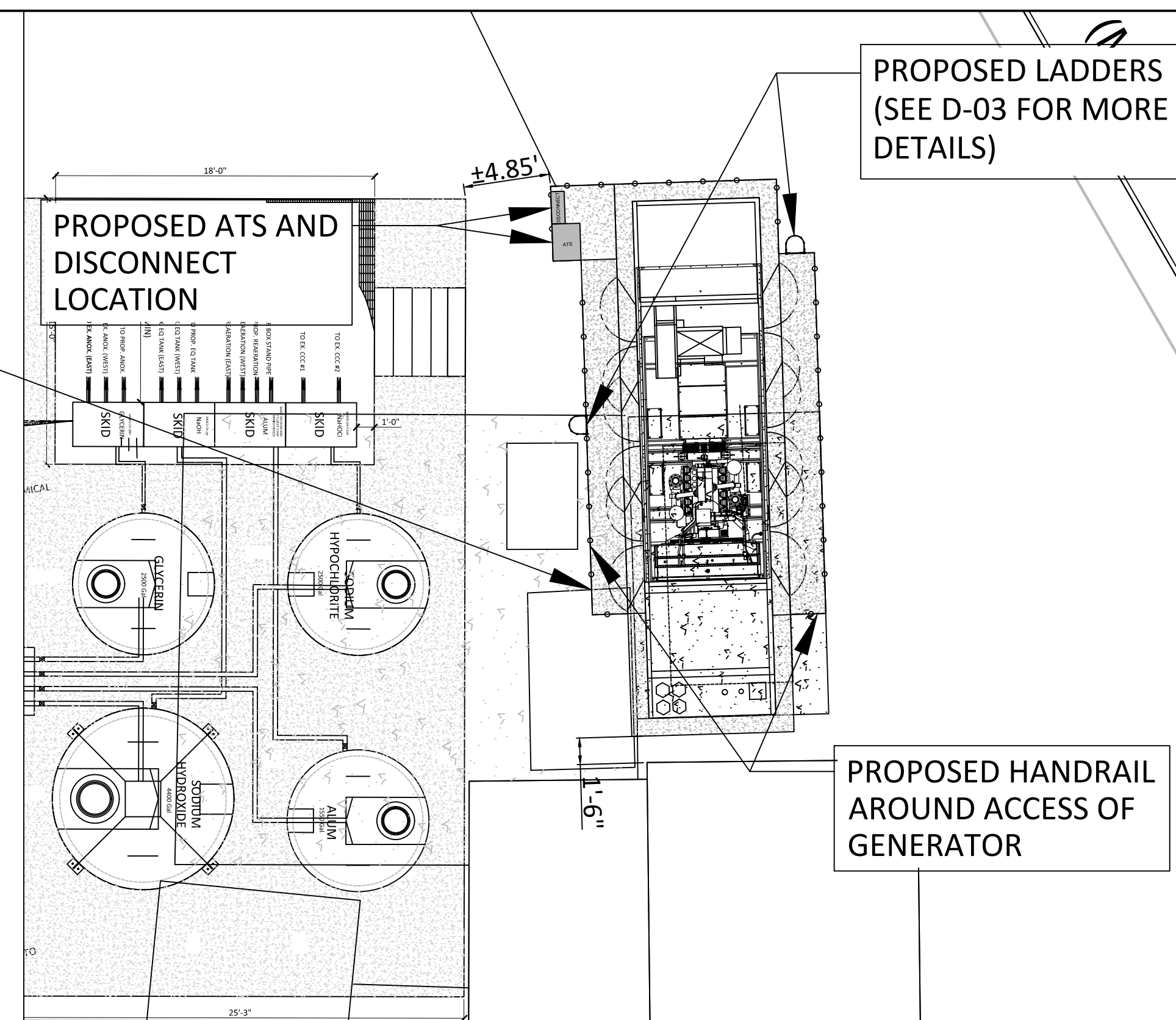
### SECTION CUTS & DETAIL CALLOUTS



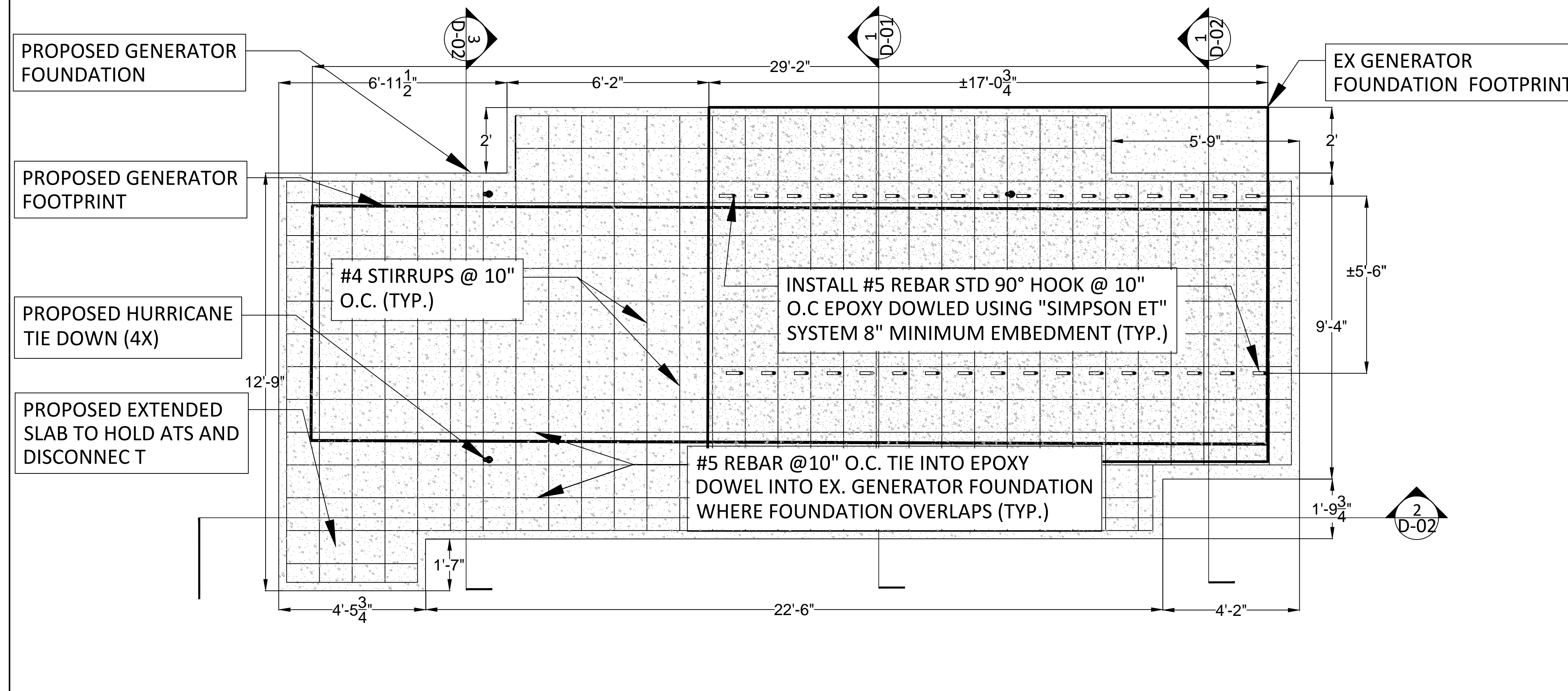
SUS	Design:	ERC
	Drawn:	AS SHOWN
	Checked:	17013.003
SUS	Scale:	AS STAMPED
	Job No:	17013.003
	Date Issued:	AS STAMPED
<b>WEC</b> THE WELLER ENGINEERING CORPORATION 6805 OVERSEAS HWY MARATHON, FLORIDA 33050 (305) 289-4161 PH, (305) 289-4162 FAX EB #6555		
<b>LEGEND FOR KWRU WWTP EXPANSION</b>		
Revisions		
Description		
THIS SHEET IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A PROFESSIONAL ENGINEER.		
Edward R. Castle Professional Engineer State of Florida Registration No. 58574		
Sheet No. G-05		



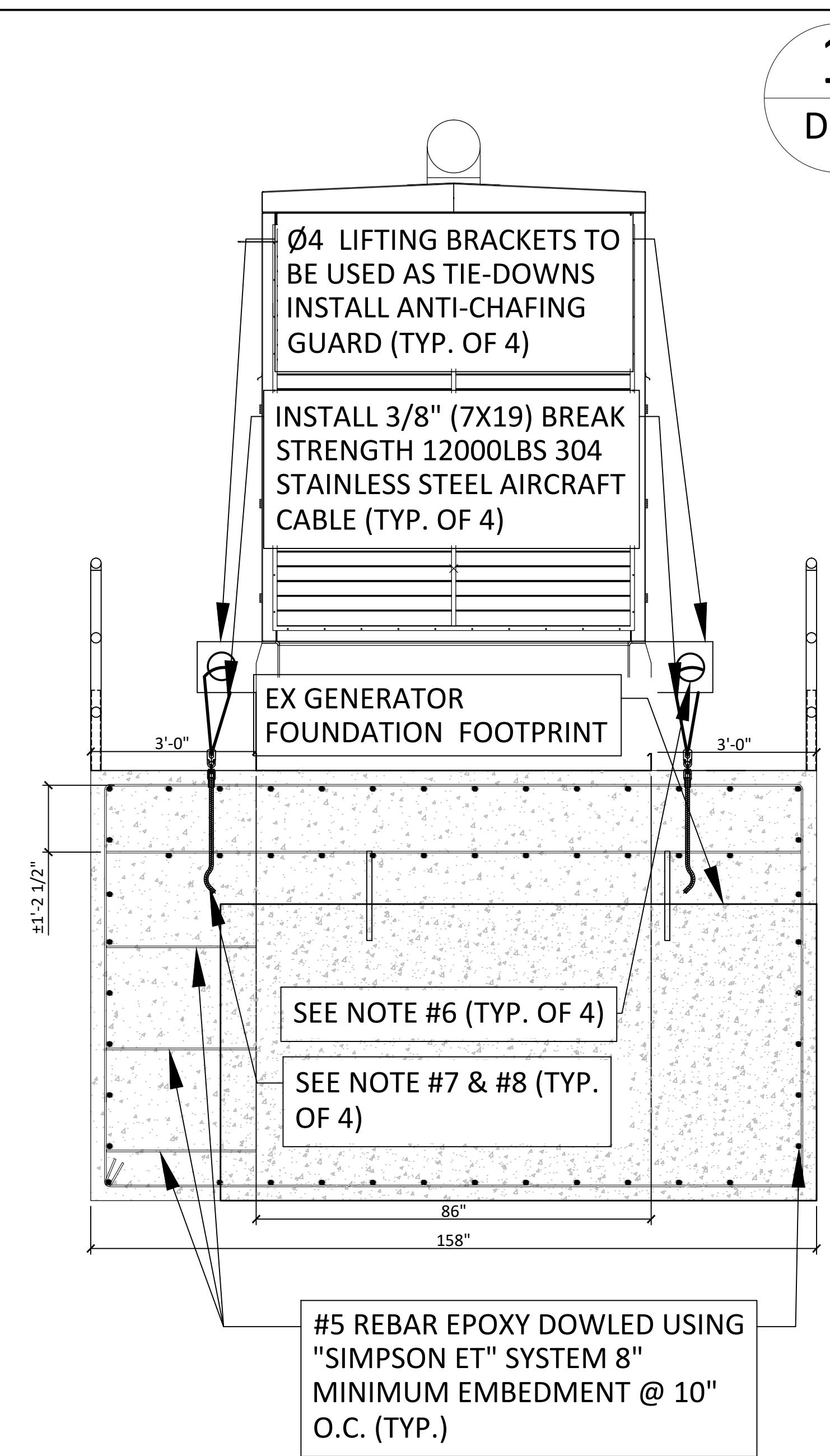
EXISTING CONDITIONS



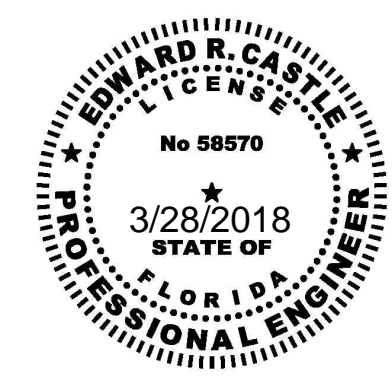
PROPOSED CONDITIONS



PROPOSED GENERATOR FOUNDATION DETAILS

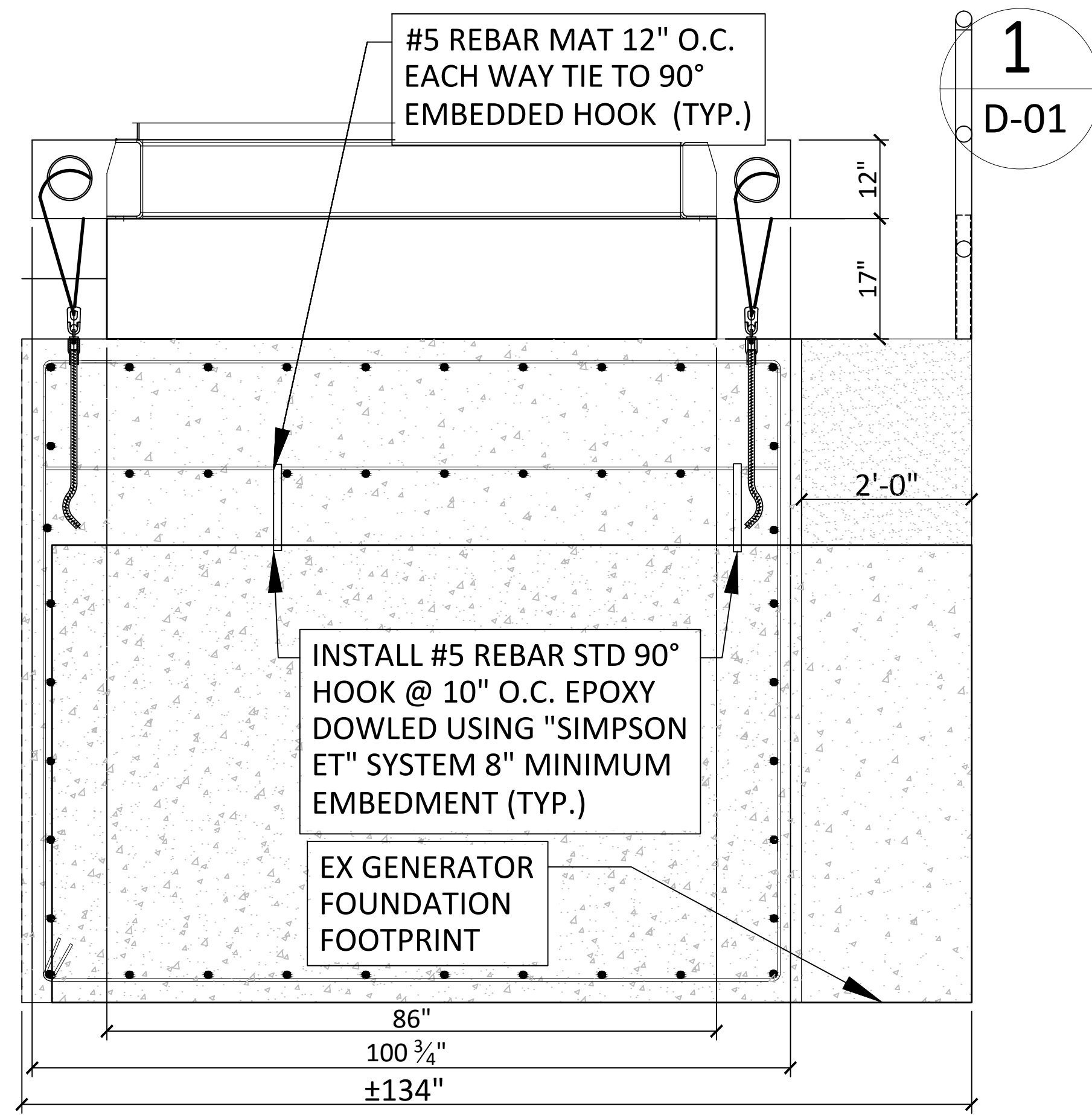


- NOTES:
- FOR CONCRETE STRUCTURAL NOTES, SEE SHEET G-04
  - ALUMINUM FABRICATED LADDERS & HANDRAIL ENGINEERED BY FABRICATOR, COORDINATE SHOP DRAWINGS WITH PROJECT ENGINEER. LADDERS TO MOUNT TO FOUNDATION.
  - FOR LADDER AND HAND RAIL DETAILS SEE SHEETS D-03 & D-04
  - SOME ITEMS NOT SHOWN FOR CLARITY
  - ELECTRICAL CONTRACTOR TO PROVIDE STAND TO RAISE ATS & DISCONNECT ABOVE BASE FLOOD ELEVATION 10.00 NGVD
  - CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE SUCH AS SOCKETS, CLIPS, ETC...TO INSTALL HURRICANE TIE DOWN, ALL HARDWARE SHALL BE 304SS OR 316SS
  - PFEIFER SUPER LIFTER Z55 W/ A 55KN LOAD CAPACITY (OR APPROVED EQUAL). CONTRACTOR IS RESPONSIBLE FOR ALL TIE DOWN COMPONENTS FUNCTION TOGETHER
  - PFEIFER SUPER ANCHOR Z55 (05.090.055.3) OR APPROVED EQUAL. LOCATION TO BE DIRECTLY UNDER LIFTING HOOKS
  - COMPACT SUBGRADE UNDER NEW FOUNDATION TO 98% DENSITY (TESTING REQUIRED).

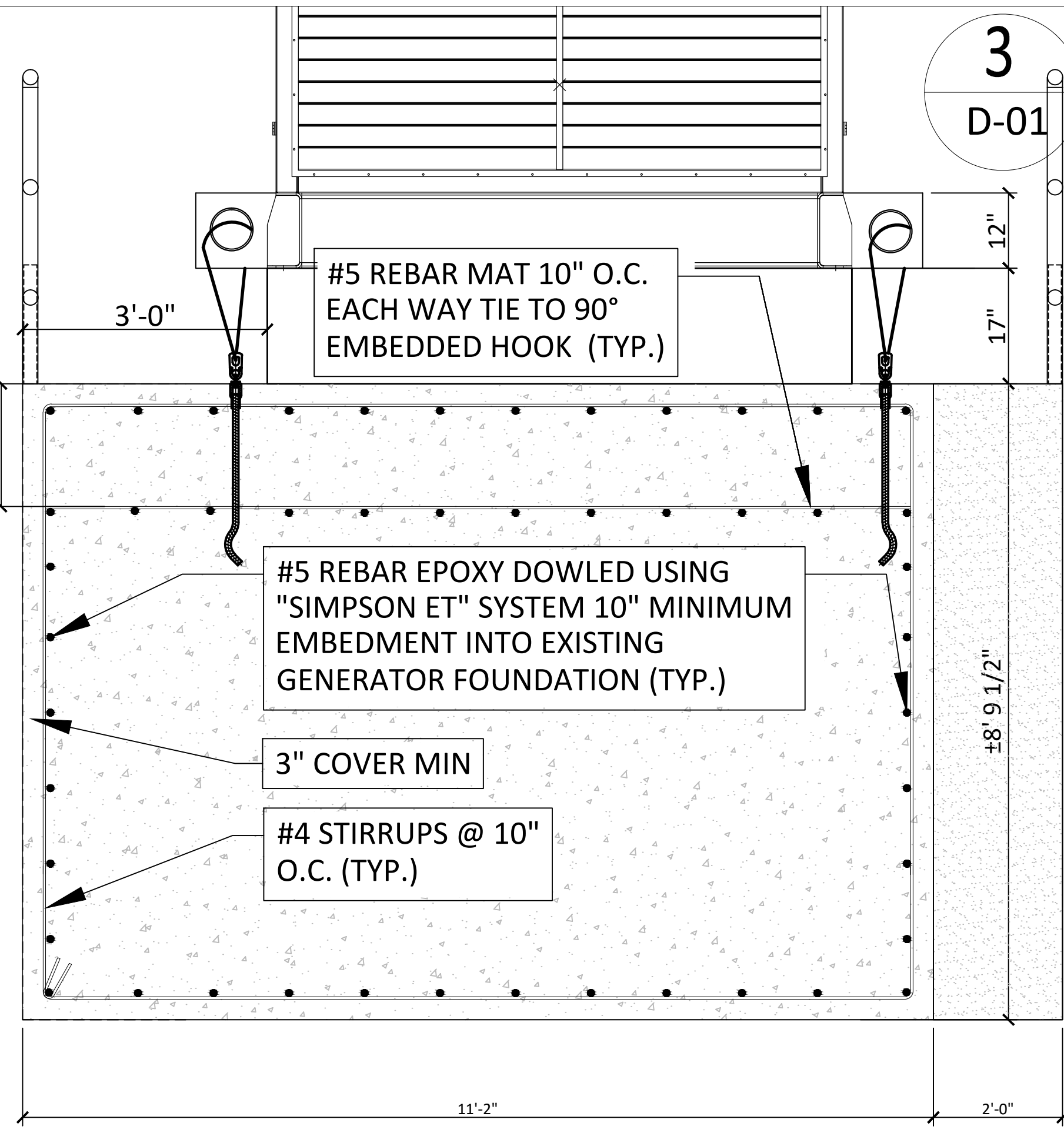


1  
D-01

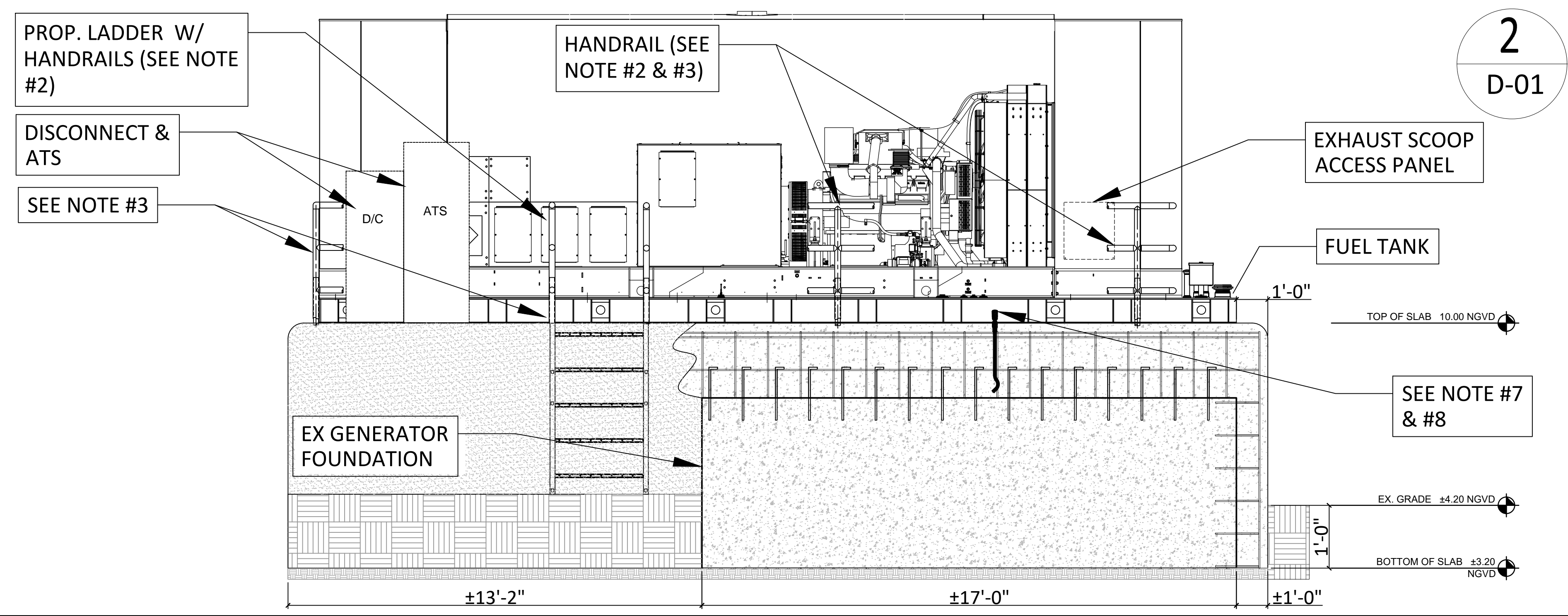
Design:	SJS
Drawn:	JCS
Checked:	ERC
Approved By:	ERC
Scale:	AS SHOWN
Job No:	17013.003
Date Issued:	AS STAMPED
<b>WEC</b> THE WELLER ENGINEERING CORPORATION 6805 OVERSEAS HWY MARATHON, FLORIDA 33050 (305) 289-4161 PH, (305) 289-4162 FAX EB #6555	
<b>GENERATOR DETAILS FOR KWRU WWTP EXPANSION</b>	
Revisions	
Description	
Edward R. Castle Professional Engineer State of Florida Registration No. 58574 Sheet No. D-01	



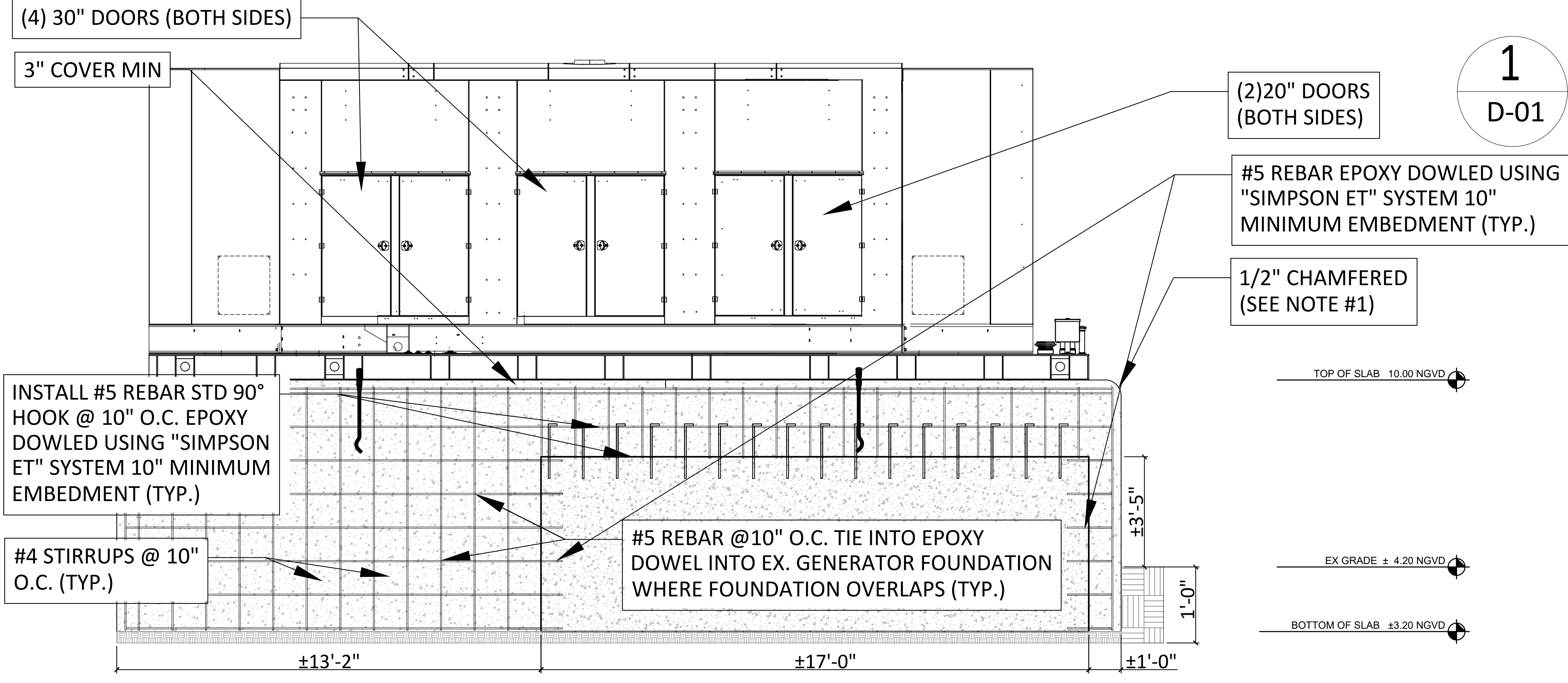
**1**  
D-01



**3**  
D-01



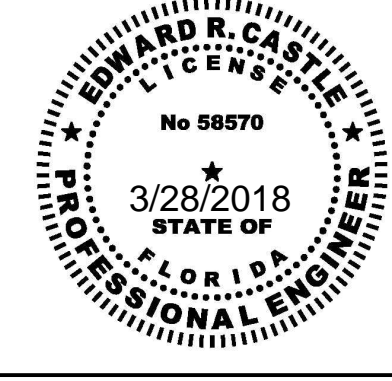
**2**  
D-01



**1**  
D-01

### GENERATOR FOUNDATION DETAILS

- NOTES:
- FOR CONCRETE STRUCTURAL NOTES, SEE SHEET G-04
  - ALUMINUM FABRICATED LADDERS & HANDRAIL ENGINEERED BY FABRICATOR, COORDINATE SHOP DRAWINGS WITH PROJECT ENGINEER. LADDERS TO MOUNT TO FOUNDATION.
  - FOR LADDER AND HAND RAIL DETAILS SEE SHEETS D-03 & D-04
  - SOME ITEMS NOT SHOWN FOR CLARITY
  - ELECTRICAL CONTRACTOR TO PROVIDE STAND TO RAISE ATS & DISCONNECT ABOVE BASE FLOOD ELEVATION 10.00 NGVD
  - CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE SUCH AS SOCKETS, CLIPS, ETC... TO INSTALL HURRICANE TIE DOWN, ALL HARDWARE SHALL BE 304SS OR 316SS
  - PFEIFER SUPER LIFTER Z55 W/ A 55KN LOAD CAPACITY (OR APPROVED EQUAL). CONTRACTOR IS RESPONSIBLE FOR ALL TIE DOWN COMPONENTS FUNCTION TOGETHER
  - PFEIFER SUPER ANCHOR Z55 (05.090.055.3) OR APPROVED EQUAL. LOCATION TO BE DIRECTLY UNDER LIFTING HOOKS
  - COMPACT SUBGRADE UNDER NEW FOUNDATION TO 98% DENSITY (TESTING REQUIRED).



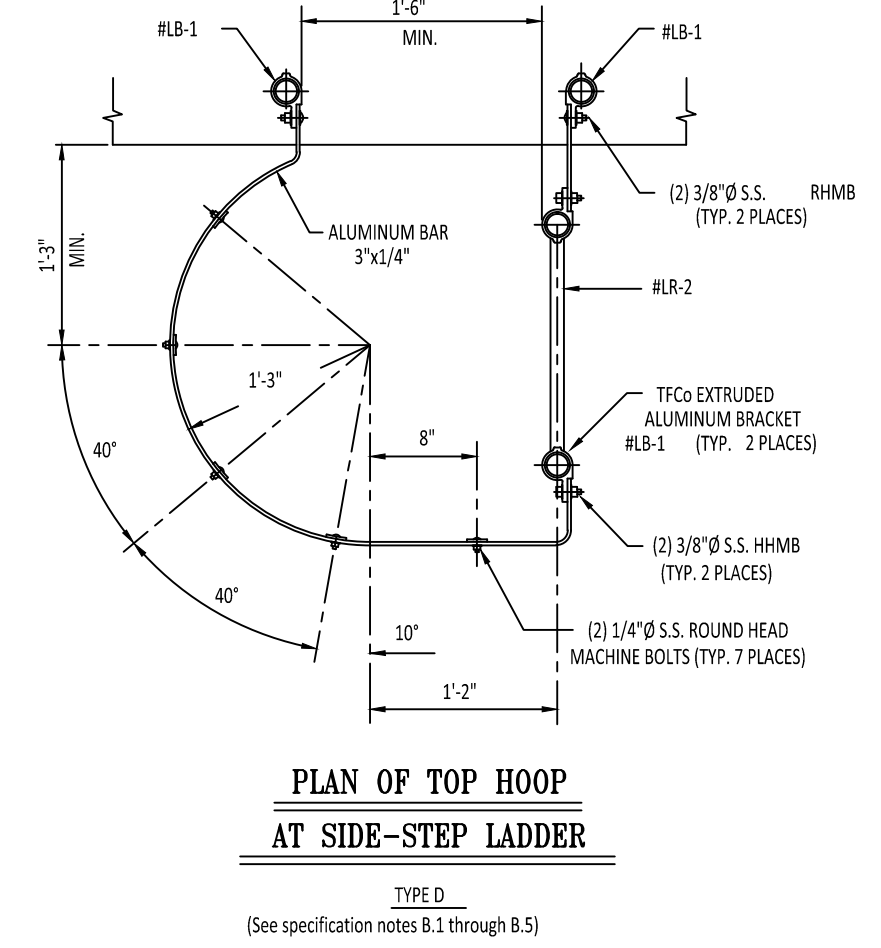
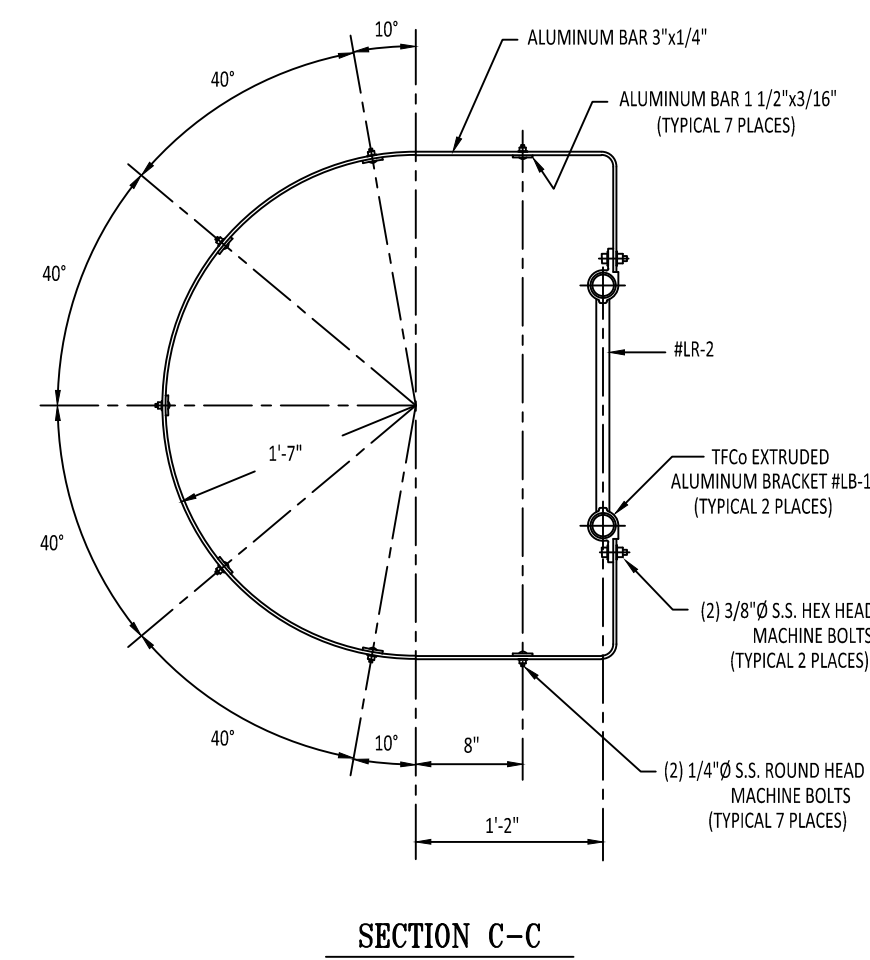
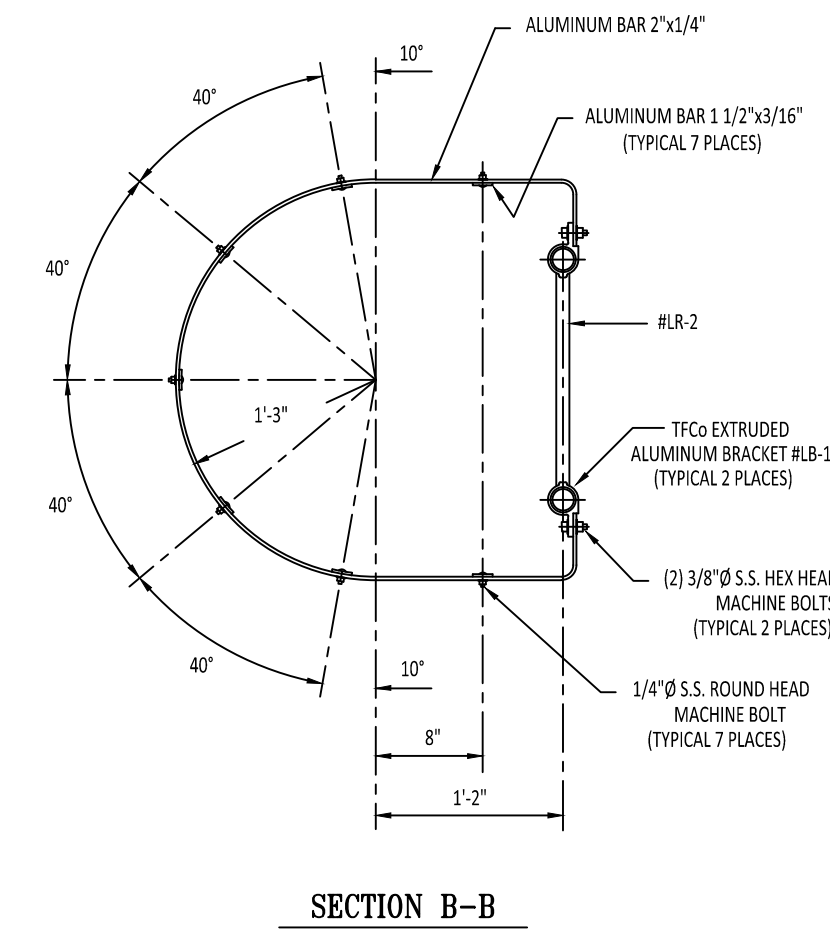
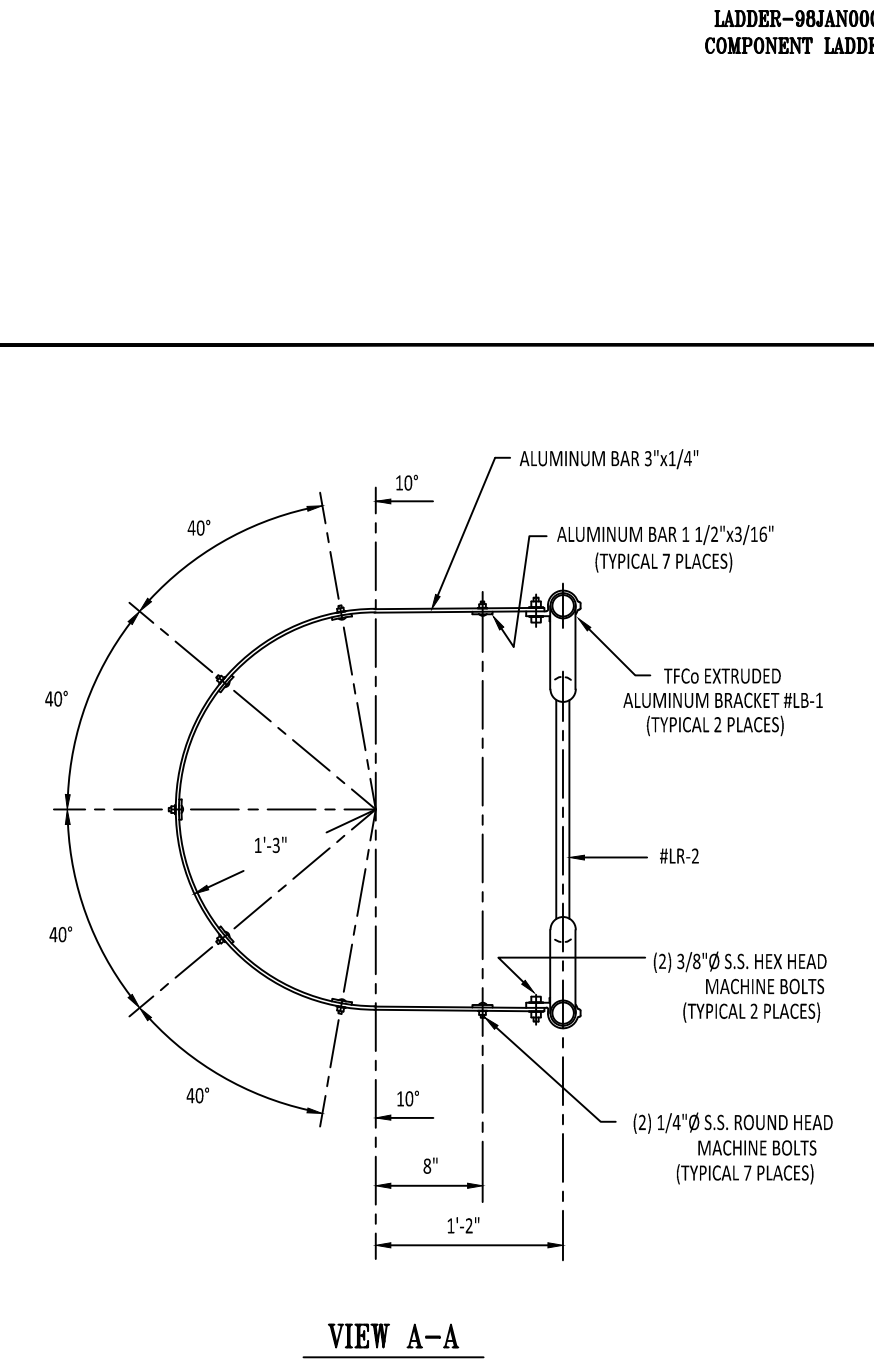
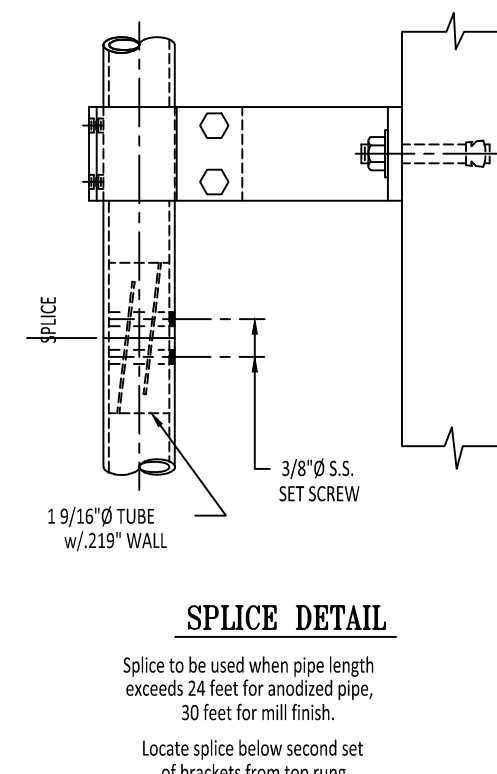
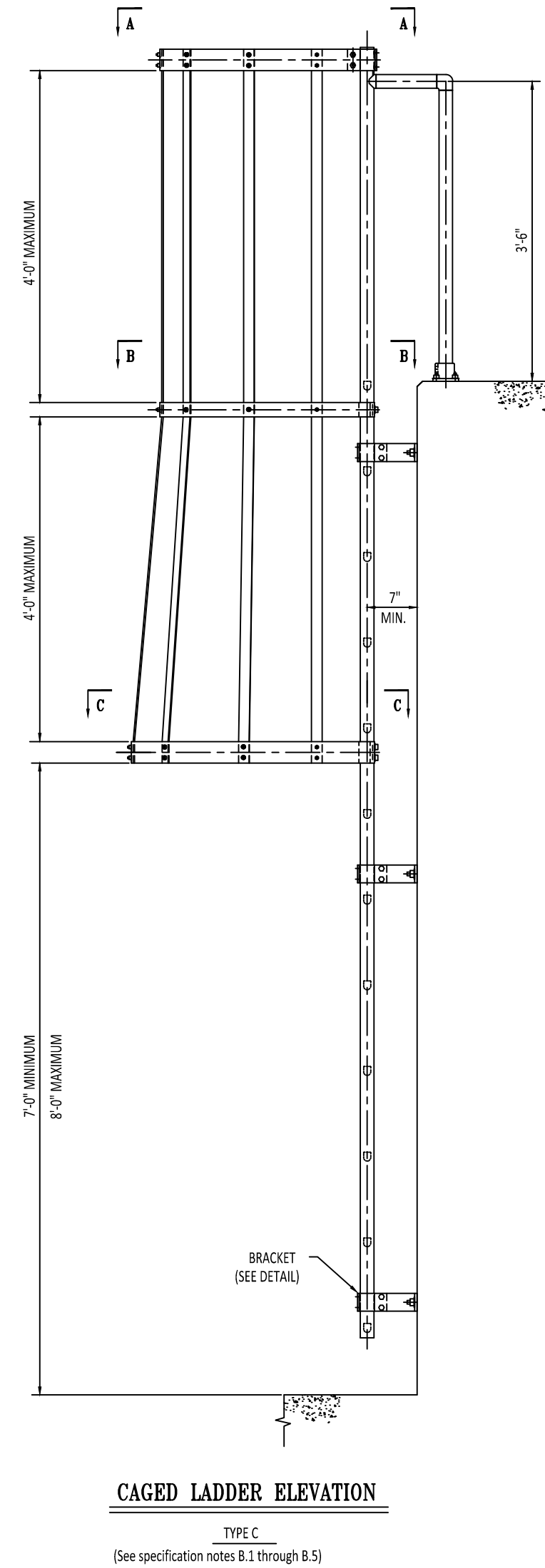
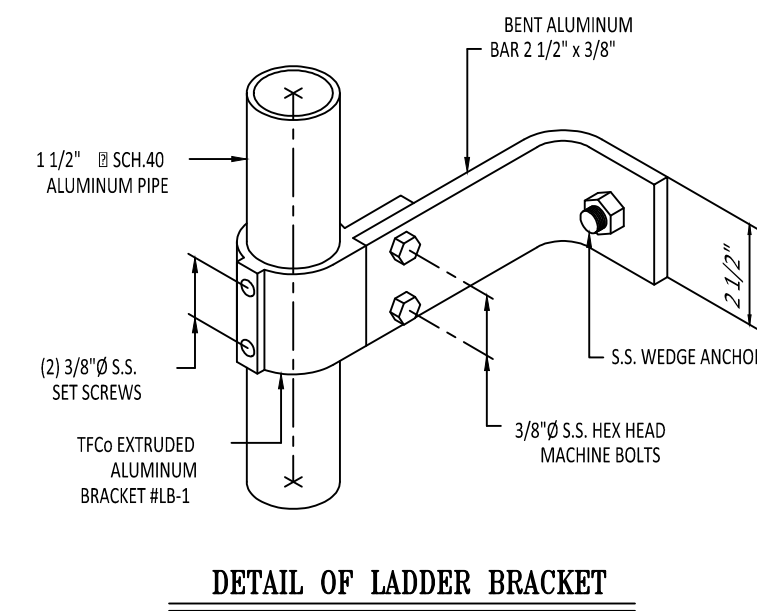
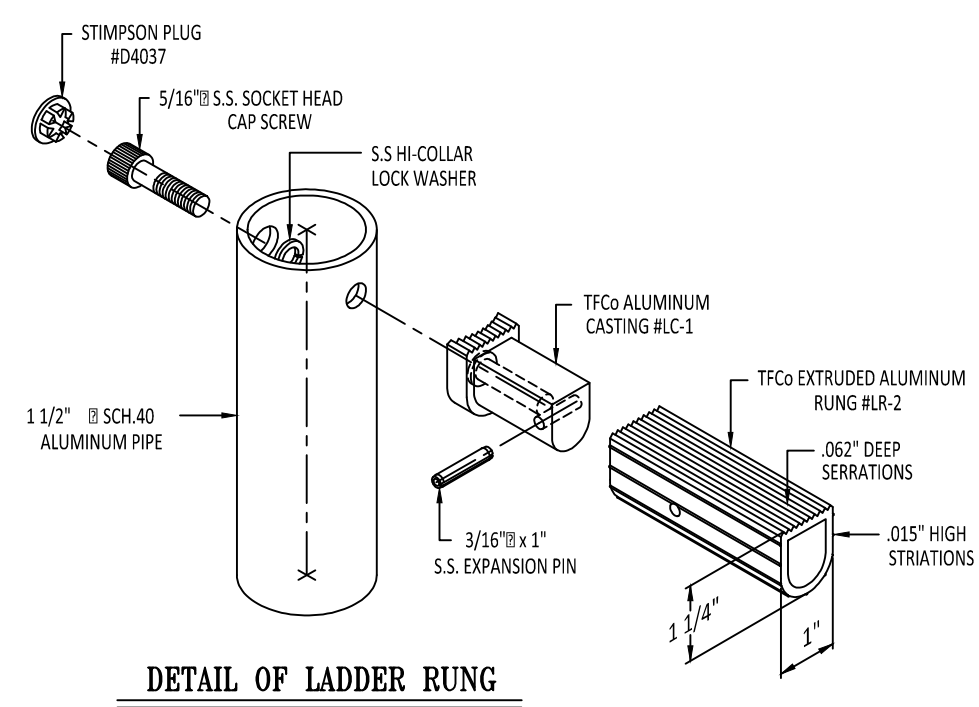
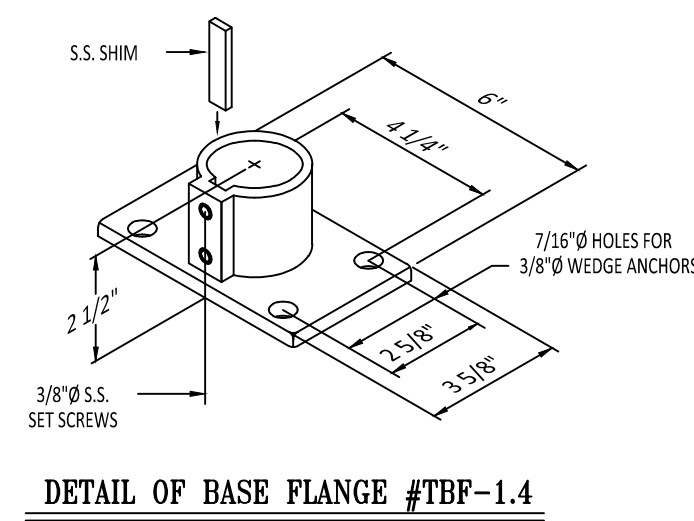
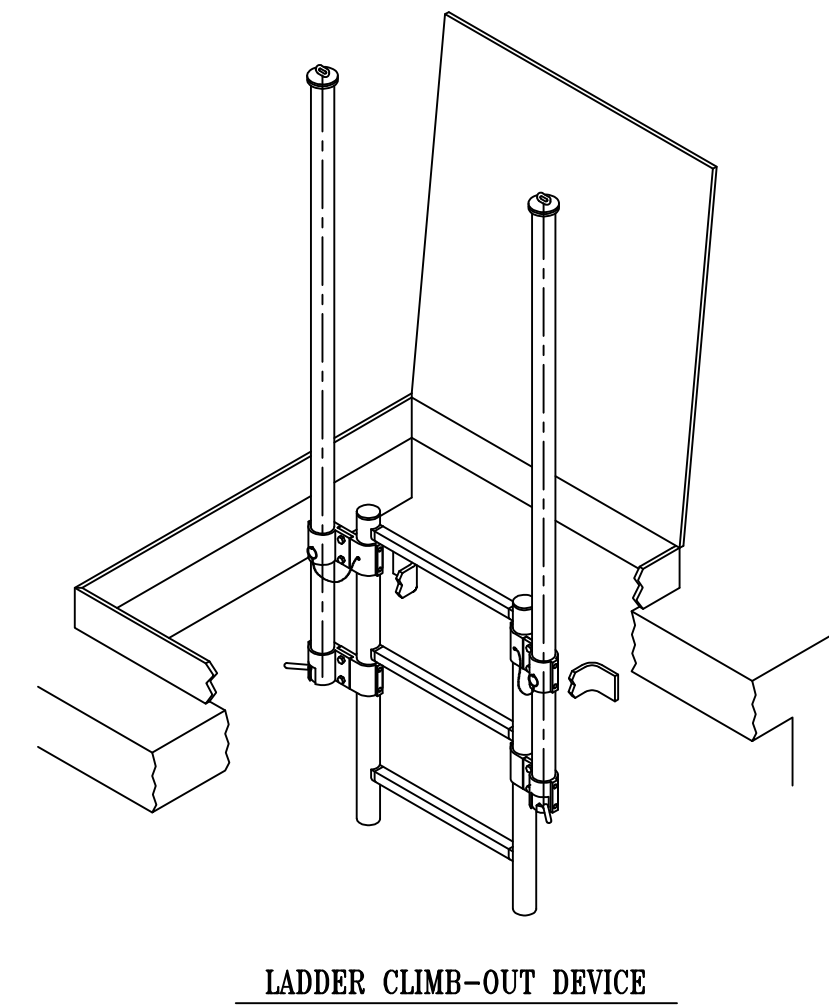
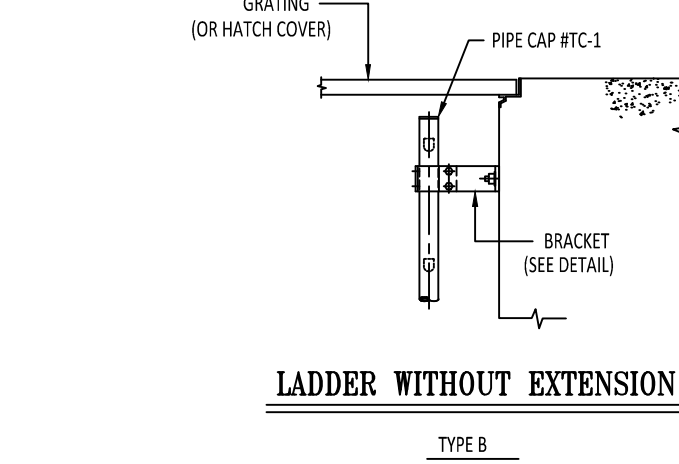
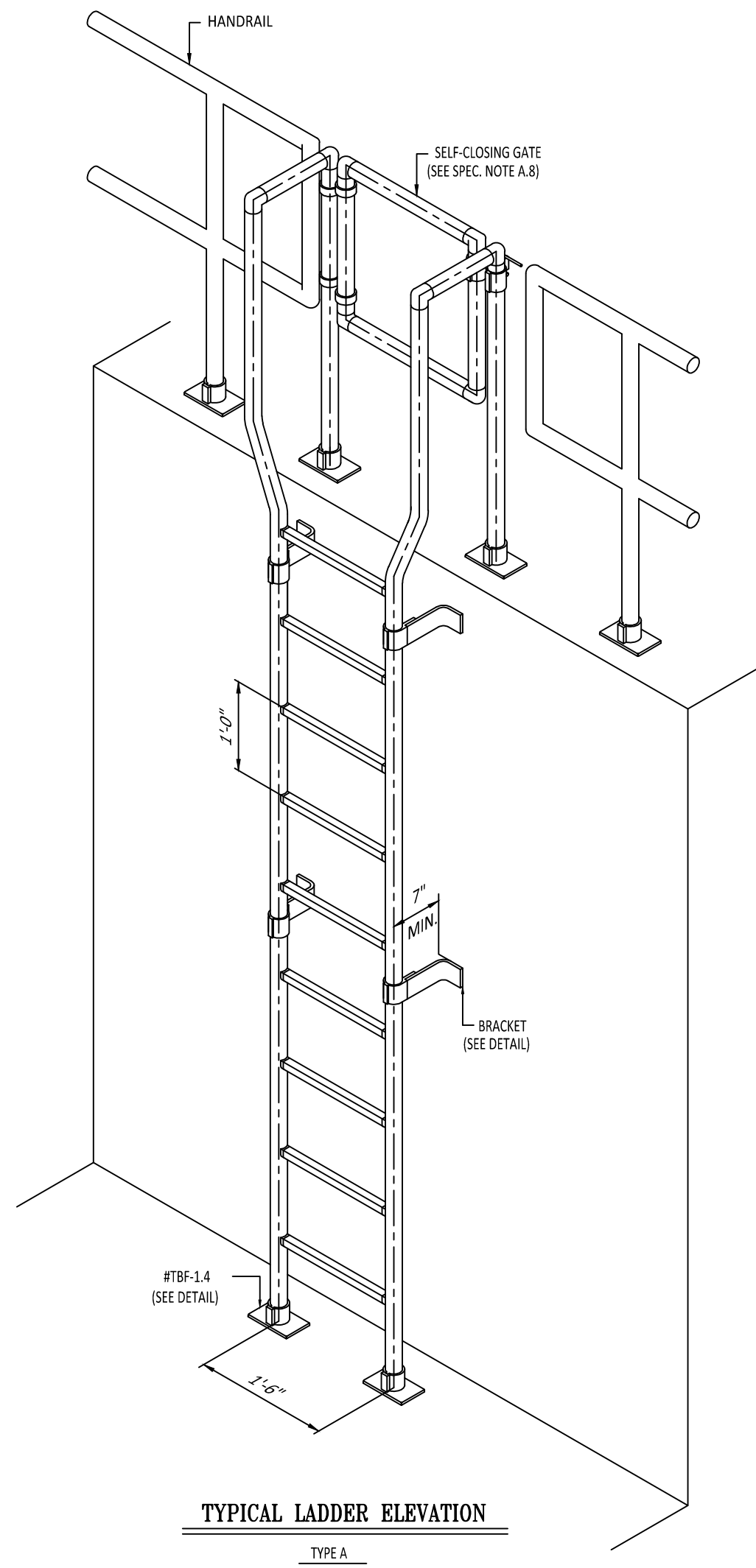
**WEC** THE WELLER ENGINEERING CORPORATION  
 6805 OVERSEAS HWY  
 MARATHON, FLORIDA 33050  
 (305) 289-4161 PH, (305) 289-4162 FAX  
 EB #6555

Approved By:	ERC	AS SHOWN	17013.003	AS STAMPED
Scale:	J.C.S.	AS SHOWN	17013.003	AS STAMPED
Job No.:	J.C.S.	AS SHOWN	17013.003	AS STAMPED
Date Issued:	J.C.S.	AS SHOWN	17013.003	AS STAMPED

**GENERATOR DETAILS FOR KWRU WWTP EXPANSION**

Revisions	Description

Edward R. Castle  
 Professional Engineer  
 State of Florida  
 Registration No. 58574  
 Sheet No. D-02



**A: SPECIFICATIONS FOR ALUMINUM LADDER**

- Ladder shall be TUF Ladder manufactured by Thompson Fabricating Company (Birmingham, Alabama) or approved equal.
- Rung Description  
The rung shall be designed to provide a non-slip power grip surface with a flat 1" wide serrated top surface and a semicircular bottom. The straight sides and semicircular bottom shall have striations at approximately 5/16" centers for gripping surface. The rung shall be an aluminum extrusion, alloy 6063-T6, of sufficient section modulus and moment of inertia to withstand the design loads.
- Side Rail Description  
The side rail shall be 1 1/2" Schedule 40 pipe, alloy 6063-T6, 6105-T5 or 6061-T6. Pipe shall conform to ASTM-B-429 or ASTM-B-221.
- Codes  
The ladder shall meet the requirements of ANSI-A14.3.
- Design Loads  
a) Ladder rungs shall be designed to withstand a concentrated load of 250 pounds plus 30% impact. Maximum rung deflection shall not exceed 1/260. The design load shall be applied at the center of the rung on a 4" wide area.  
b) Ladder side rails shall be designed to withstand a minimum live load of two 250 pound loads plus 30% impact concentrated between any two consecutive attachments.
- Testing  
Submit test reports for the Engineer's approval to verify design loads and deflections on the rungs and rung to side rail attachments. Testing to be verified by an independent testing laboratory. The design load, 325 lbs. (250x1.3), shall be applied at the center of the rung on an area 4" wide. The test rung will be attached to the side rails in the same manner as the production ladder. Design loads shall be applied and released a minimum of 200,000 times to demonstrate fatigue resistance and a safe extended service life. Deflection shall be checked periodically and shall not exceed 1/260 at any time under full design load. At completion of testing the rung and attachments to the side rail shall be inspected for cracks, looseness, distortion, bending (permanent set) or other obvious damage.
- Finish  
Pipe for side rails shall have the same finish as handrail if the ladder is located at an opening in handrail. Rungs, cage and brackets are to be mill finish.
- Guarding Floor and Wall Openings and Holes (OSHA 1910.23(a)(2))  
Every ladderway floor opening or platform shall be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening. Self-closing gates are required only where shown on plans.

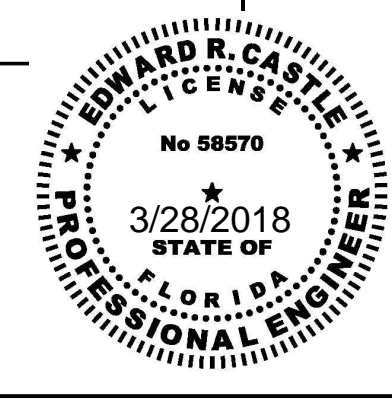
**B: SPECIFICATIONS FOR ALUMINUM LADDER CAGE**

- Cage general design and size shall be in accordance with ANSI-A-14.3. The cage shall be shipped knocked down for field assembly.
- The prefabricated horizontal bands shall be aluminum bars, alloy 6061-T6, 3"x1/4" for the top and bottom bands and 2"x1/4" for the intermediate bands.
- The pre-cut, pre-drilled vertical bars shall be aluminum bars 1 1/2" x3/16", alloy 6061-T6.
- All necessary stainless steel hardware shall be furnished for field assembly of the cage.
- Cages are required on ladders only where shown on the plans.

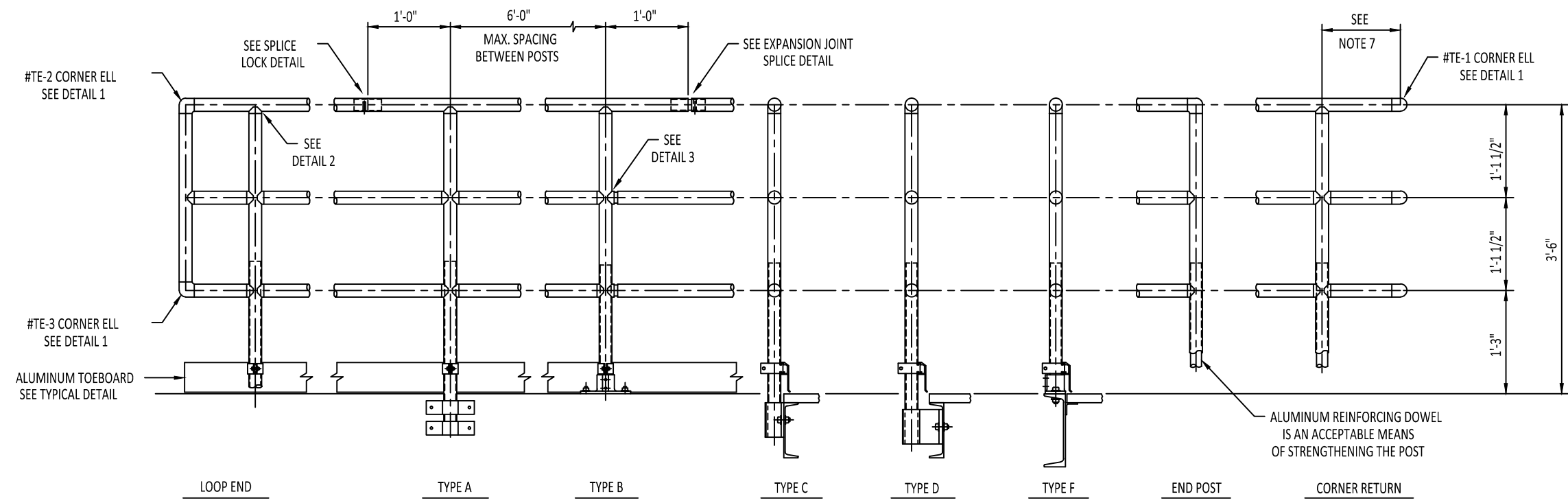
Design:	SJS
Drawn:	CVK/SJS/JCS
Checked:	ERC
Approved By:	ERC
Scale:	AS SHOWN
Job No.:	17013.003
Date Issued:	AS STAMPED

**WEC** THE WELLER ENGINEERING CORPORATION  
6805 OVERSEAS HWY  
MARATHON, FLORIDA 33050  
(305) 289-4161 PH, (305) 289-4162 FAX  
EB #6555

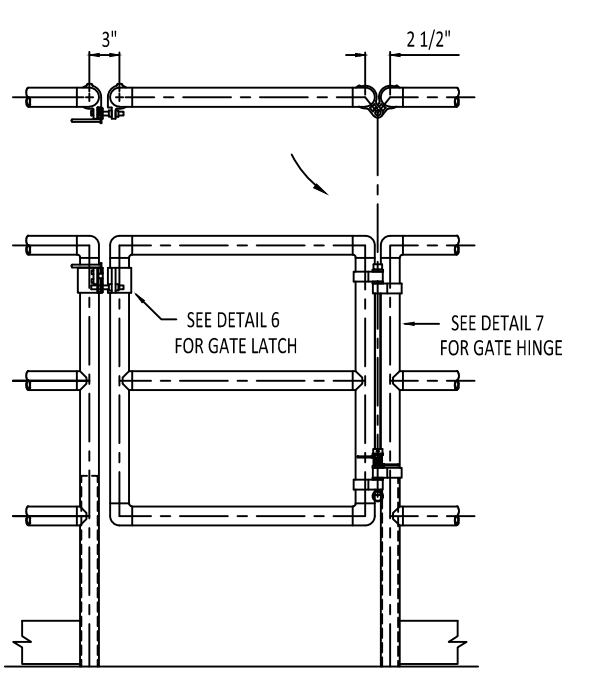
Revisions	Description





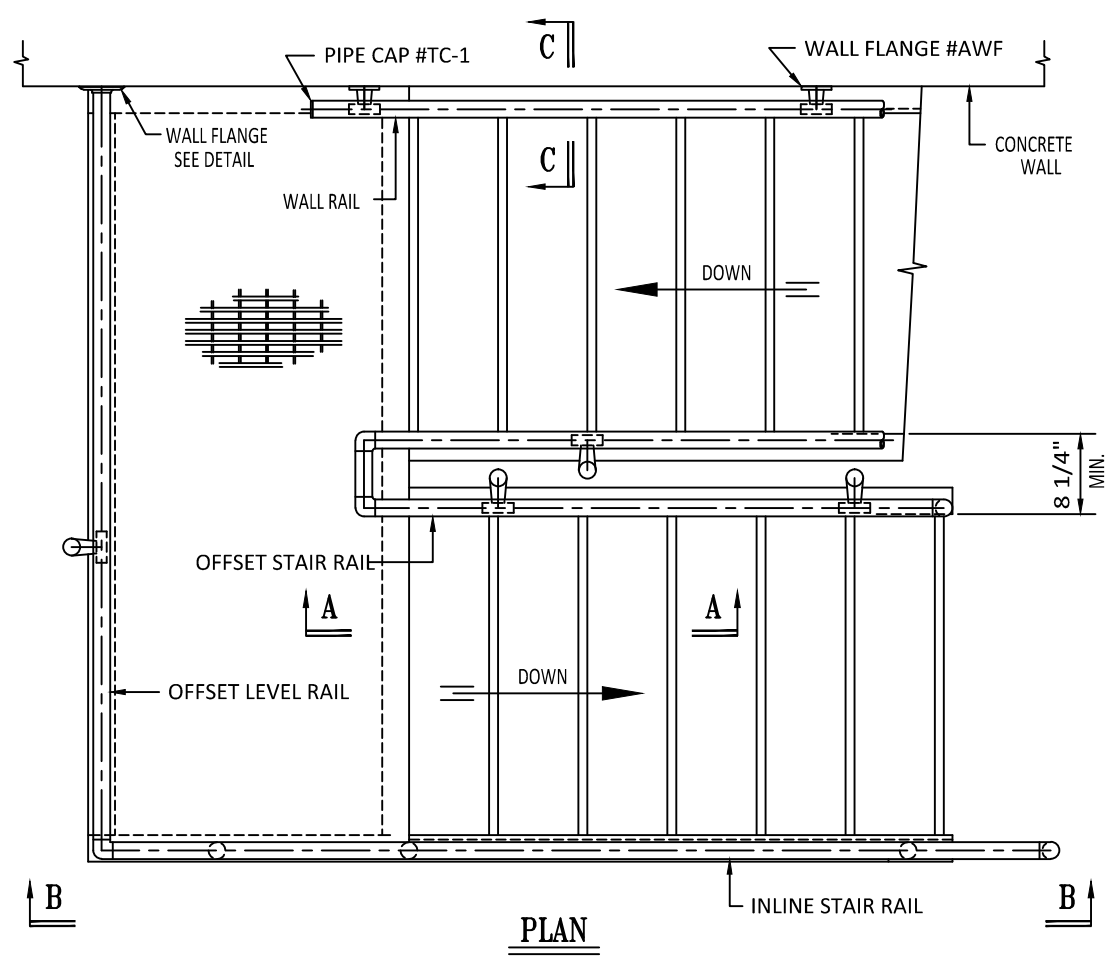


**TYPICAL HANDRAIL**

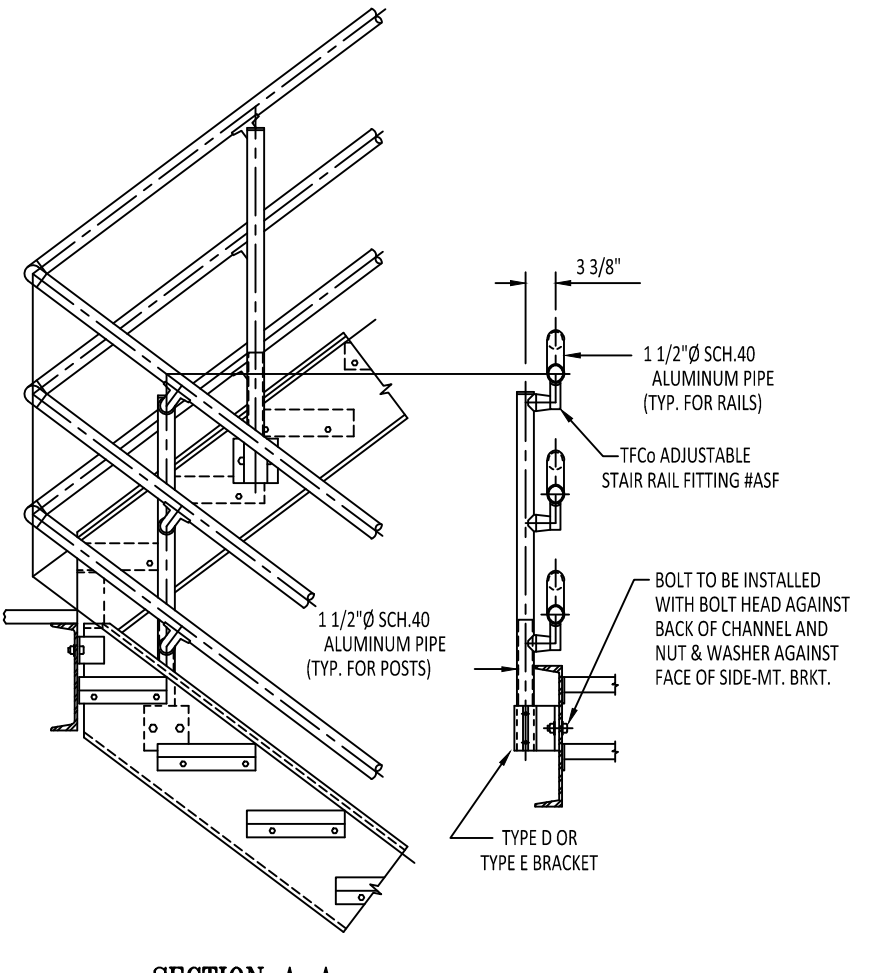


**TYPICAL GATE**  
LEFT HAND GATE SHOWN

UBC-IRSL-96JAN00  
3-LINE COMPONENT HANDRAIL  
IN COMPLIANCE WITH 1994 UNIFORM BUILDING CODE



TYPICAL HANDRAIL AT METAL STAIRS; HANDRAIL AT CONCRETE STEPS SIMILAR



SECTION A-A

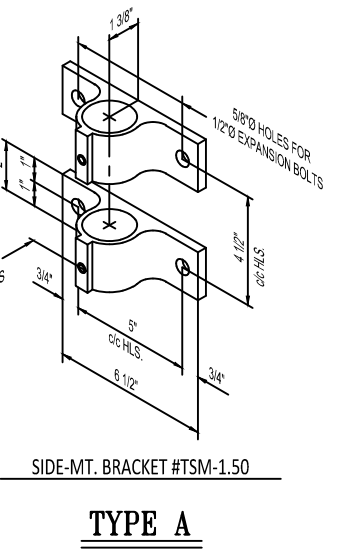
Design:	S/S
Drawn:	CWK/SJS
Checked:	ERC
Approved By:	ERC
Scale:	AS SHOWN
Job No:	17013.003
Date Issued:	AS STAMPED

WEC THE WELLER ENGINEERING CORPORATION  
6805 OVERSEAS HWY  
MARATHON, FLORIDA 33050  
(305) 289-4161 PH, (305) 289-4162 FAX  
EB #6555

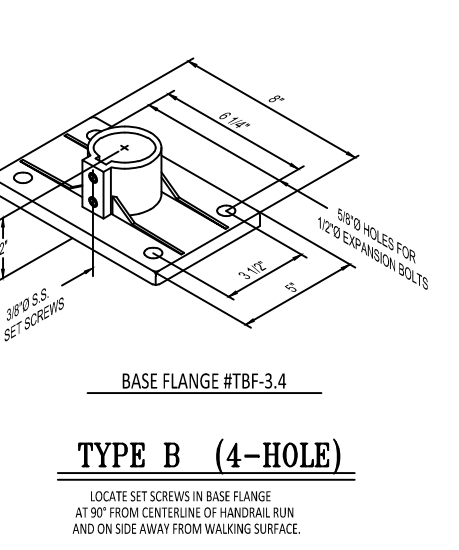
HAND RAIL DETAILS FOR KWRU WWTP EXPANSION

Revisions	Description

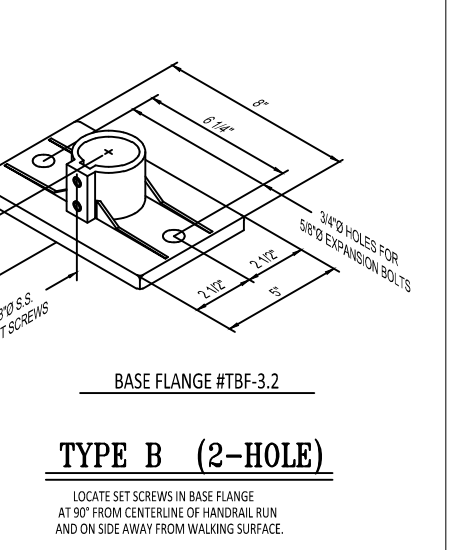
Edward R. Castle  
Professional Engineer  
State of Florida  
Registration No. 58574



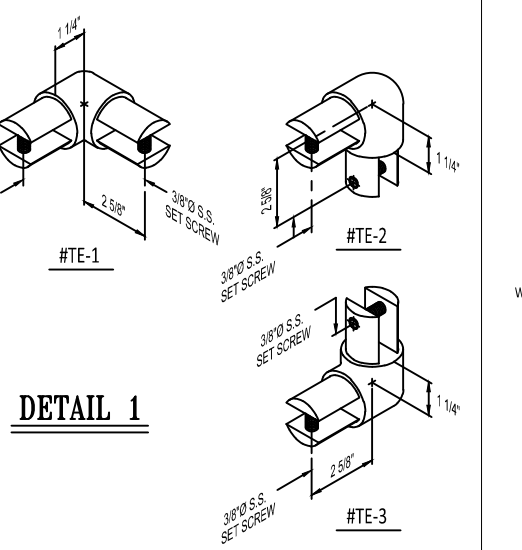
**TYPE A**



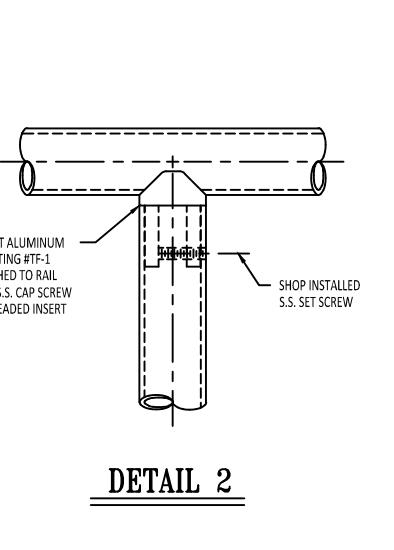
**TYPE B (4-HOLE)**



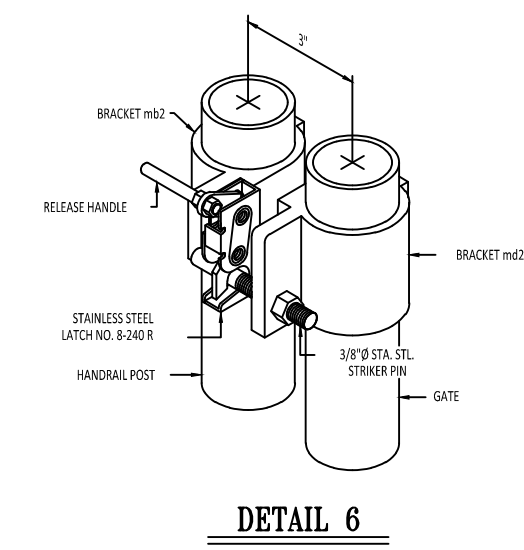
**TYPE B (2-HOLE)**



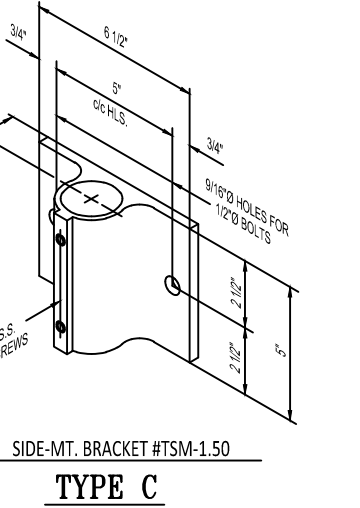
**DETAIL 1**



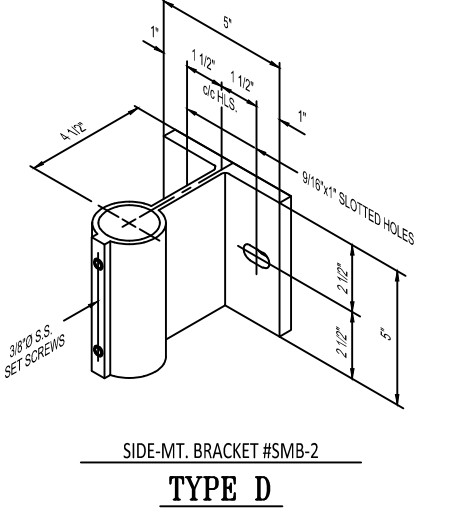
**DETAIL 2**



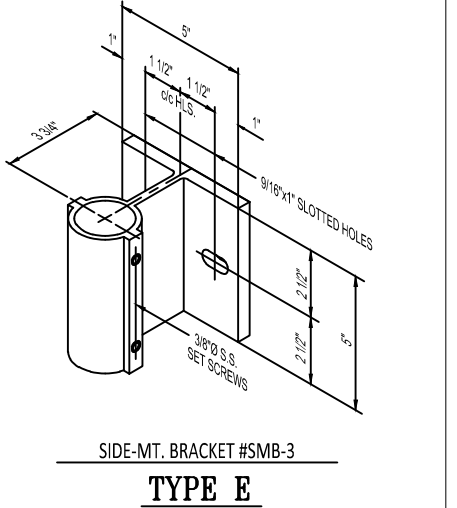
**DETAIL 6**



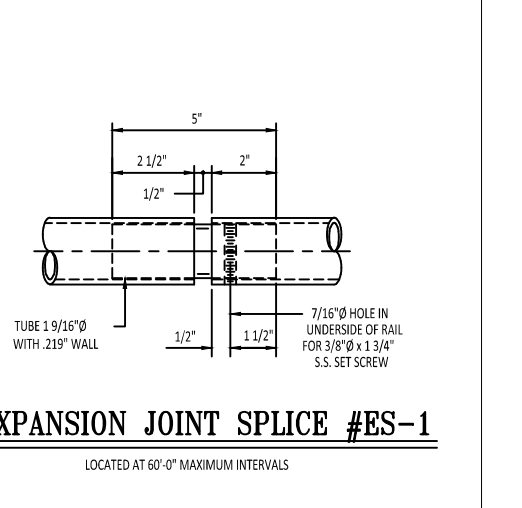
**TYPE C**



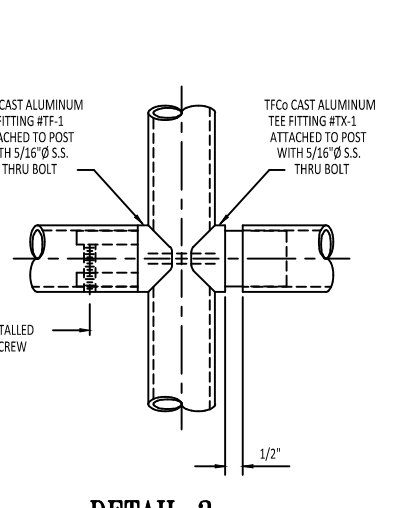
**TYPE D**



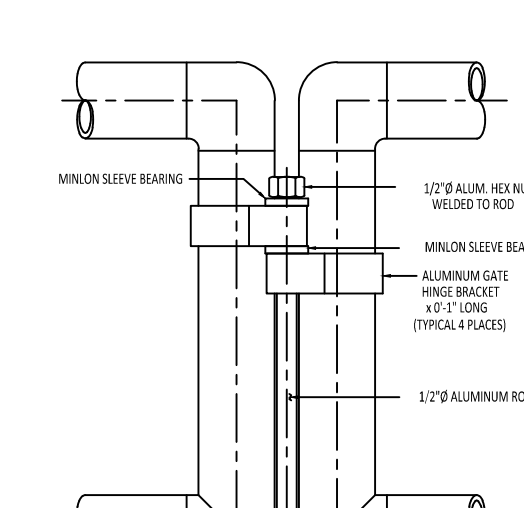
**TYPE E**



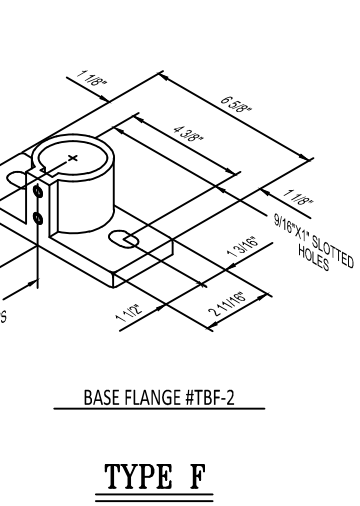
**EXPANSION JOINT SPLICE #ES-1**



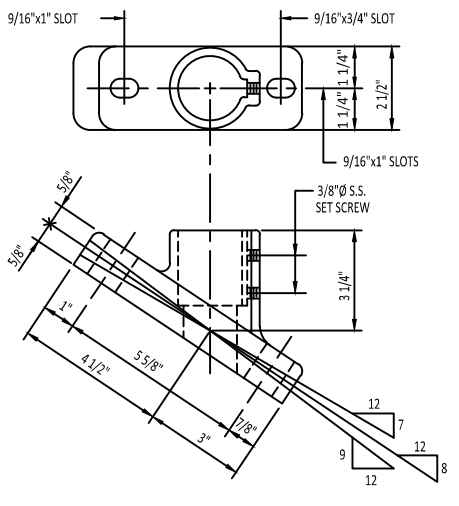
**DETAIL 3**



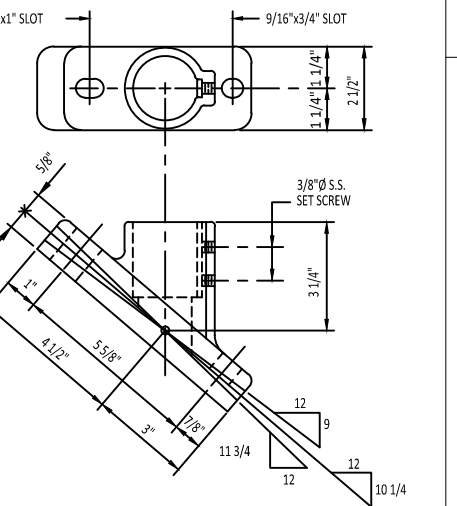
**DETAIL 7**



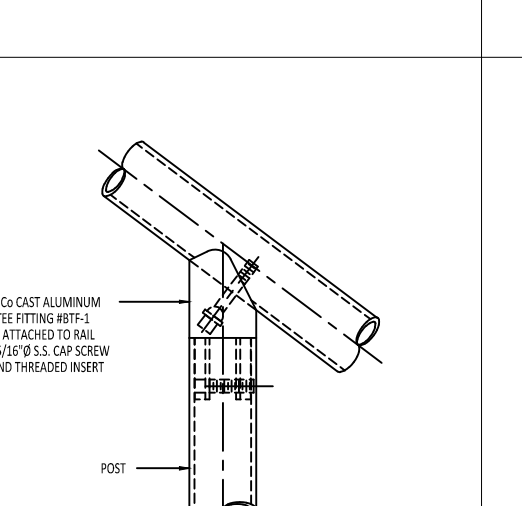
**TYPE F**



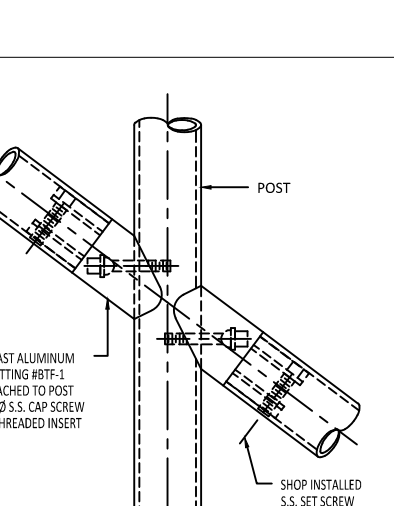
**TYPE G**



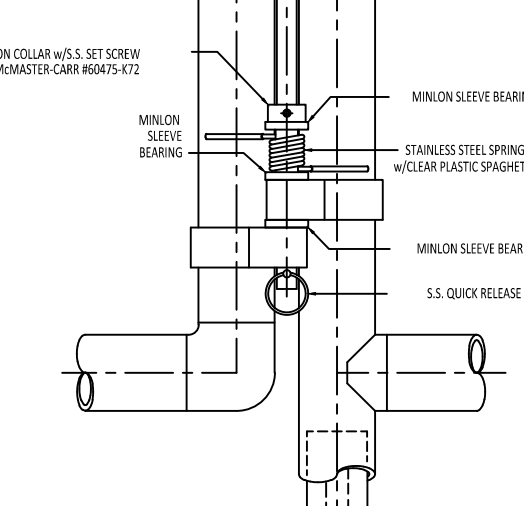
**TYPE G**



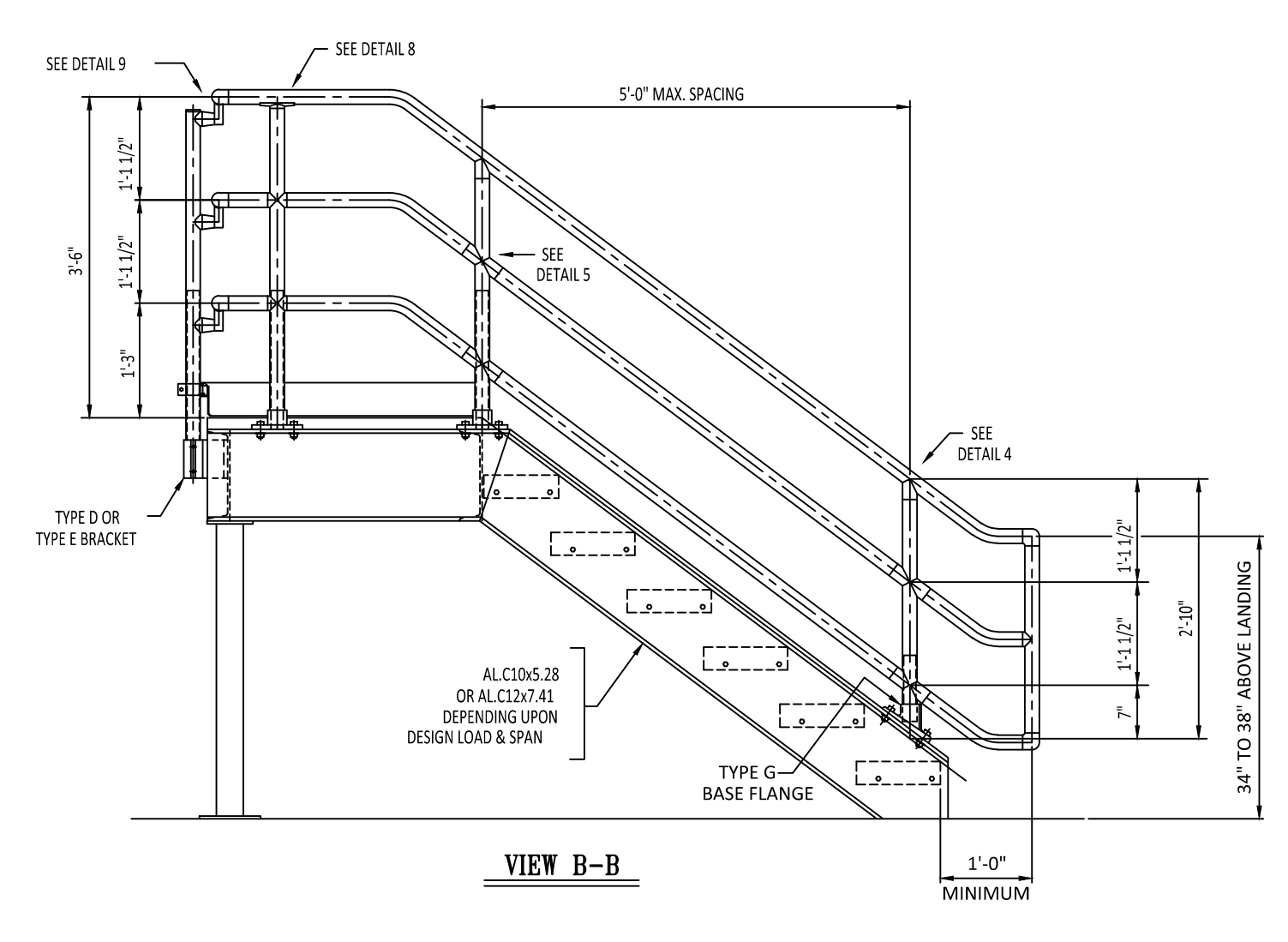
**DETAIL 4**



**DETAIL 5**



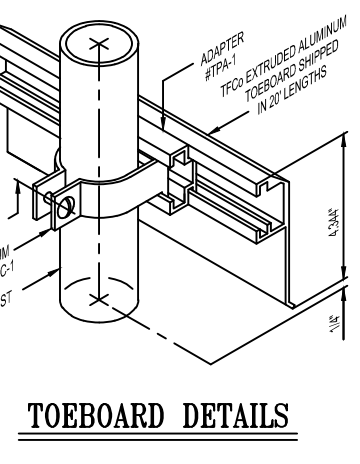
**DETAIL 9**



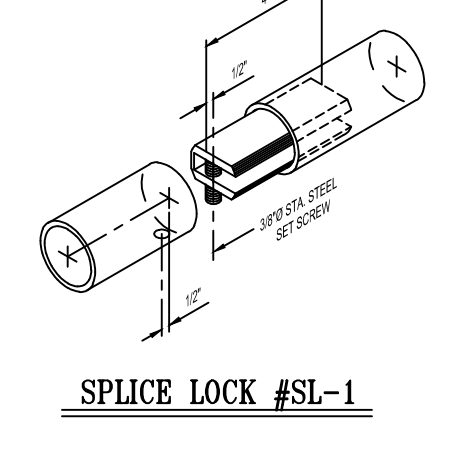
**VIEW B-B**

**UNIFORM BUILDING CODE DESIGN SPECIFICATIONS**

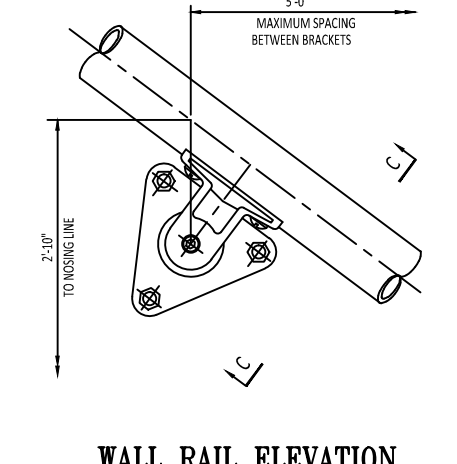
- Handrail shall be the product of a company normally engaged in the manufacture of pipe railing. Railing shall be shop assembled in lengths not to exceed 24 feet for field erection.
- Handrails and stair rails shall be designed to withstand a 200# concentrated load applied in any direction at any point on the top rail. Handrails and stair rails shall also be designed to withstand a load of 50#/ft applied horizontally to the top rail. The 200# load will not be applied simultaneously with the 50#/ft load. In addition, the handrails shall be designed to withstand a load of 100#/ft applied vertically downward to the top rail and simultaneously with the 50#/ft horizontal load. The 100#/ft vertical load does not apply to stair rails.
- The manufacturer shall submit calculations to the Engineer for approval. Testing of base castings or base extrusions by an independent lab or manufacturer's lab (if manufacturer's lab meets the requirements of the Aluminum Association) will be an acceptable substitute for calculations. Calculations will be required for approval of all other design aspects.
- Post spacing shall be a maximum of 6'-0". Posts and railings shall be a minimum of 1-1/2" Schedule 40 aluminum pipe alloy 6105-15, ASTM-B-429 or ASTM-B-221. The handrail manufacturer shall show that their posts are of adequate strength to meet the loading requirements. If the manufacturer's posts are not of adequate strength, the manufacturer may reduce the post spacing or add reinforcing dowels or may do both in order to meet the loading requirements.
- The handrail shall be made of pipes joined together with component fittings. Samples of all components, bases, toe plate and pipe must be submitted for approval. Components that are pop-riveted or glued at the joints will not be acceptable. All components must be mechanically fastened with stainless steel hardware. Handrail and components shall be TFC RAIL, as manufactured by Thompson Fabricating Company (Birmingham, Alabama) or an approved equal.
- Posts shall not interrupt the continuation of the top rail at any point along the railing, including corners and end terminations (OSHA 1910.23). The top surface of the top railing shall be smooth and shall not be interrupted by projected fittings.
- The midrail at a corner return shall be able to withstand a 200# load without loosening. The manufacturer is to determine this dimension for their system. Provide physical tests from a laboratory to confirm compliance.
- Expansion bolts shall be spaced 10d apart and 5d edge distance for no reduction in pullout strength. A safety factor of 4 shall be used on expansion bolt pullout values published by the manufacturer. Expansion bolts shall be stainless steel type 18-8 wedge bolts and shall be furnished by the handrail manufacturer.
- Toe plate shall conform to OSHA standards. Toe plate shall be a minimum of 4" high and shall be an extrusion that attaches to the posts with clamps which will allow for expansion and contraction between posts. Toe plates shall be set 1/4" above the walking surface. Toe plates shall be provided on handrails as required by OSHA and/or as shown on drawings. Toe plates shall be shipped loose in stock lengths with pre-manufactured corners for field installation.
- Openings in the railing shall be guarded by a self-closing gate (OSHA 1910.23). Safety chains shall not be used unless specifically shown on the drawings.
- Finish shall be Aluminum Association M10-C22-A41 (215-R1). The pipe shall be plastic-wrapped. The plastic wrap is to be removed after erection.
- Aluminum surfaces in contact with concrete, grout or dissimilar metals will be protected with a coat of bituminous paint, mylar isolators or other approved material.



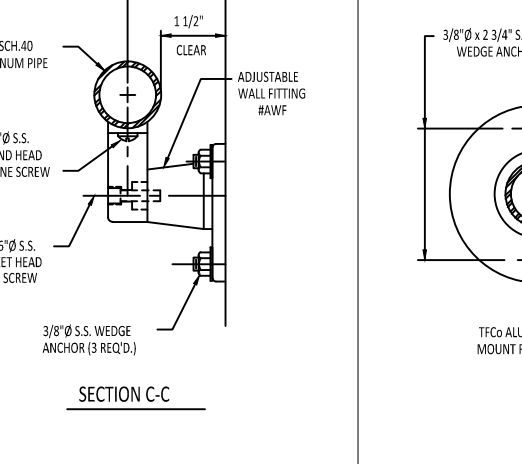
**TOEBOARD DETAILS**



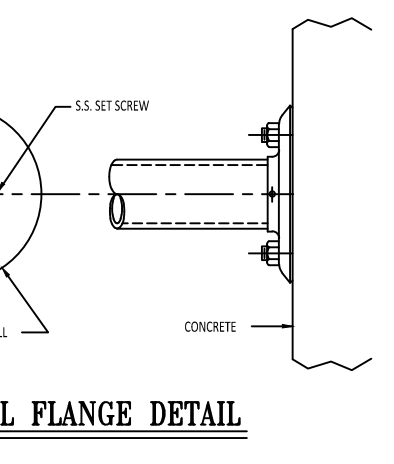
**SPLICE LOCK #SL-1**



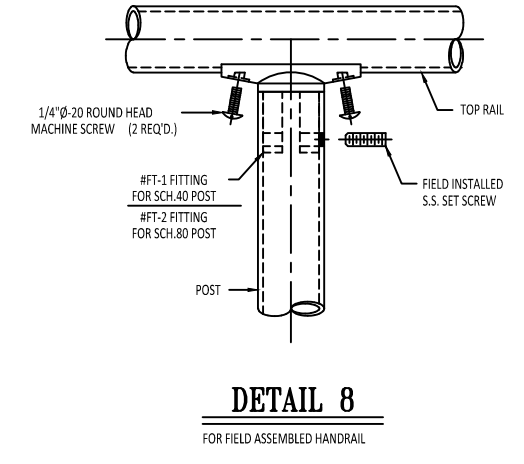
**WALL RAIL ELEVATION**



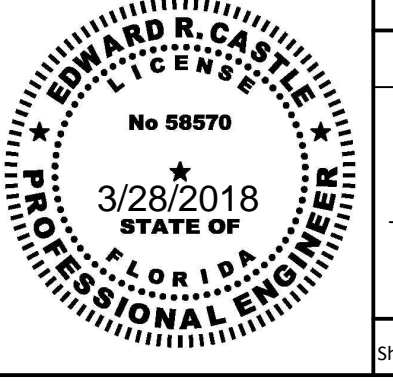
**SECTION C-C**



**WALL FLANGE DETAIL**



**DETAIL 8**





**CHANGE ORDER COST PROPOSAL NO. 01**

**KWRU WWTP FILTER REPLACEMENT**

**PROPOSAL SUMMARY**

4/6/2018

#	DESCRIPTION	NOTES		
1	Furnish all necessary labor, materials, tools, equipment & supervision required to perform structural and electrical improvements to allow for installation of owner furnished generator in accordance with attached Generator Scope letter dated 02/26/18 and drawings G-01 thru G-05 & D-01 thru D-05 prepared by Weiler Engineering and signed & sealed by Ed Castle on 02/26/18.			
2				
3				
4				
5				
6				
7				
8				
9				
10		The duration for the additional work outlined in this proposal is <u>30</u> calendar days.		
11	The Contract Time Extension due to this <u>Change Order</u> is <u>120</u> calendar days.			
12	<b>MATERIALS</b>	<b>TOTAL</b>		
13	From Page 2	\$ 43,372.00		
14	* 6% State Tax plus 1-1/2% County Surtax	Tax 7.50% \$ 2,602.32 \$ 45,974.32		
15	* County Surtax applies to 1st \$5,000	Markup 15.0% \$ 6,896.15 \$ 52,870.47		
16		<b>\$ 52,870.47</b>		
17				
18	<b>LABOR</b>	<b>HRS</b>	<b>AVG \$ / HR</b>	<b>TOTAL</b>
19	From Page 3	688.24	\$ 58.72	\$ 40,411.00
20			Markup 15.0% \$ 6,061.65	\$ 46,472.65
21				<b>\$ 46,472.65</b>
22				
23	<b>TOOLS &amp; EQUIPMENT</b>	<b>TOTAL</b>		
24	From Page 4			\$ 15,240.68
25	* 6% State Tax plus 1-1/2% County Surtax		Tax 7.50% \$ 1,143.05	\$ 16,383.73
26	* County Surtax applies to 1st \$5,000		Markup 15.0% \$ 2,457.56	\$ 18,841.29
27				<b>\$ 18,841.29</b>
28				
29	<b>SUBCONTRACTS</b>	<b>TOTAL</b>		
30	From Page 5			\$ 55,450.00
31				\$ -
32				
33				
34			Subtotal	\$ 55,450.00
35			Markup 5.0% \$ 2,772.50	\$ 58,222.50
36				<b>\$ 58,222.50</b>
37				
38	<b>OTHER</b>	<b>QTY</b>	<b>REFERENCE</b>	<b>TOTAL</b>
39	Extended Overhead		Days * Cost Per Day	\$ - \$ -
40	Additional Insurance	0.45%	M + L + T&E + S	\$ 176,406.91 \$ 793.83
41	Additional Bond	0.55%	M + L + T&E + S	\$ 177,200.74 \$ 974.60
42			Subtotal	\$ 1,768.44
43			Markup 0.0% \$ 1,768.44	\$ -
44				<b>\$ -</b>
45				
46	<b>FINAL QUOTE TOTAL</b>		<b>TOTAL</b>	
47				\$ 176,407.00
48				
49			<b>\$ 176,407.00</b>	

**CHANGE ORDER COST PROPOSAL NO. 01**

Revision 01



**KWRU WWTP FILTER REPLACEMENT**

**MATERIAL ESTIMATE**

#	MATERIALS	INV	QTY	UNIT	UNIT RATE	TOTAL	NOTES
1	Concrete		120	cy	\$ 200.75	\$ 24,090.00	
2	Rebar		5398	lbs	\$ 0.50	\$ 2,699.00	
3	Allowance - Hurricane Tie Down System		1	LS	\$ 5,000.00	\$ 5,000.00	
4	Aluminum Railings & Ladders		1	LS	\$ 9,533.00	\$ 9,533.00	
5	Engineering for Railings & Ladders		1	LS	\$ 1,500.00	\$ 1,500.00	
6	Epoxy - Simpson ET		1	LS	\$ 250.00	\$ 250.00	
7	Underlayment		3	rolls	\$ 100.00	\$ 300.00	
8						\$ -	
9						\$ -	
10						\$ -	
11						\$ -	
12						\$ -	
13						\$ -	
14						\$ -	
15						\$ -	
16						\$ -	
17						\$ -	
18						\$ -	
19						\$ -	
20						\$ -	
21						\$ -	
22						\$ -	
23						\$ -	
24						\$ -	
25						\$ -	
26						\$ -	
27						\$ -	
28						\$ -	
29						\$ -	
30						\$ -	
31						\$ -	
32						\$ -	
33						\$ -	
34						\$ -	
35						\$ -	
36						\$ -	
37						\$ -	
38	<b>MATERIAL SUBTOTAL</b>					<b>TOTAL</b>	
39						\$ 43,372.00	
40					<b>\$ 43,372.00</b>		



## CHANGE ORDER COST PROPOSAL NO. 01

### KWRU WWTP FILTER REPLACEMENT

### LABOR ESTIMATE

Revision 01

#	LABOR	HRS		RATE		COST			NOTES
		ST	OT	ST	OT	ST	OT	TOTAL	
1	Superintendent	80		\$ 95.00	\$ 142.50	\$ 7,600.00	\$ -	\$ 7,600.00	
2	Asst. Superintendent	0		\$ 85.00	\$ 127.50	\$ -	\$ -	\$ -	
3	Surveyor	0		\$ 65.00	\$ 97.50	\$ -	\$ -	\$ -	
4	Craft Foreman	168		\$ 65.00	\$ 97.50	\$ 10,920.00	\$ -	\$ 10,920.00	
5	Operator	0		\$ 60.00	\$ 90.00	\$ -	\$ -	\$ -	
6	Rodbuster	0		\$ 50.00	\$ 75.00	\$ -	\$ -	\$ -	
7	Carpenter	168		\$ 50.00	\$ 75.00	\$ 8,400.00	\$ -	\$ 8,400.00	
8	Pipefitter	0		\$ 50.00	\$ 75.00	\$ -	\$ -	\$ -	
9	Plumber	0		\$ 50.00	\$ 75.00	\$ -	\$ -	\$ -	
10	Finisher	0		\$ 45.00	\$ 67.50	\$ -	\$ -	\$ -	
11	Laborer	168		\$ 40.00	\$ 60.00	\$ 6,720.00	\$ -	\$ 6,720.00	
12					\$ -	\$ -	\$ -	\$ -	
13					\$ -	\$ -	\$ -	\$ -	
14					\$ -	\$ -	\$ -	\$ -	
15					\$ -	\$ -	\$ -	\$ -	
16					\$ -	\$ -	\$ -	\$ -	
17					\$ -	\$ -	\$ -	\$ -	
18					\$ -	\$ -	\$ -	\$ -	
19					\$ -	\$ -	\$ -	\$ -	
20					\$ -	\$ -	\$ -	\$ -	
21		584.0	0.0			\$ 33,640.00	\$ -		
22		<b>584.0</b>						<b>\$ 33,640.00</b>	
23									
24	<b>ADJUSTMENTS</b>	<b>%</b>	<b>HRS</b>			<b>RATE / HR</b>		<b>TOTAL</b>	
25	Material Handling	7.0%	40.88			\$ 30.00		\$ 1,226.40	
26	Testing & Cleaning	2.5%	14.6			\$ 30.00		\$ 438.00	
27	Warranty & Punchlist	1.5%	8.76			\$ 35.00		\$ 306.60	
28			<b>64.24</b>					<b>\$ 1,971.00</b>	
29									
30	<b>PROJECT MANAGEMENT</b>		<b>HRS</b>			<b>RATE / HR</b>		<b>TOTAL</b>	
31	Project Manager		40			\$ 120.00		\$ 4,800.00	
32	Asst. Project Manager		0			\$ 105.00		\$ -	
33	Project Engineer		0			\$ 75.00		\$ -	
34			<b>40.0</b>					<b>\$ 4,800.00</b>	
35									
36	<b>LABOR SUBTOTAL</b>					<b>HRS</b>	<b>AVG \$ / HR</b>	<b>TOTAL</b>	
37	Manhours	584.0	64.2	40.0		688.2	\$ 58.72	\$ 40,411.00	
38						<b>688.2</b>			
39								<b>\$ 40,411.00</b>	
40									



**CHANGE ORDER COST PROPOSAL NO. 01**  
**KWRU WWTP FILTER REPLACEMENT**  
**EQUIPMENT ESTIMATE**

#	TOOLS	DESCRIPTION	REF		RATE	TOTAL	
1	Small Tools	4% Labor Cost	\$ 40,411		4%	\$ 1,616.44	
2	Consumables	\$1.00 / Labor Hr	688.2		\$ 1.00	\$ 688.24	
3						\$ -	
4						<b>\$ 2,304.68</b>	
5							
#	EQUIPMENT	DESCRIPTION	QTY	UNIT	RATE	TOTAL	
7	Pickup Truck	Superintendent	1.0	LS	\$ 800.00	\$ 800.00	
8	Vehicle			LS	\$ 750.00	\$ -	
9	Backhoe/Loader			Day	\$ 465.00	\$ -	
10	Manlift			Day	\$ 450.00	\$ -	
11	Generator			Day	\$ 68.50	\$ -	
12						<b>\$ 800.00</b>	
13							
#	RENTALS	DESCRIPTION	QTY	UNIT	RATE	TOTAL	
15	Crane		1.00	LS	\$ 7,000.00	\$ 7,000.00	
16	Combination		1.00	Month	\$ 3,500.00	\$ 3,500.00	
17	Compactor		1.00	Day	\$ 250.00	\$ 250.00	
18	Lull Loader			Day	\$ 575.00	\$ -	
19	Backhoe			Day	\$ 465.00	\$ -	
20	Concrete Pump			Day	\$ 960.00	\$ -	
21	Excavator			Day	\$ 465.00	\$ -	
22	150 Ton Crane			Day	\$ 3,500.00	\$ -	
23	Core Drill			Day	\$ 85.00	\$ -	
24						<b>\$ 10,750.00</b>	
25							
#	FUEL	DESCRIPTION		Rate	REF	TOTAL	
27	Equipment Fuel	12% Fueled Equipment Cost		12%	\$ 11,550.00	\$ 1,386.00	
28						<b>\$ 1,386.00</b>	
29							
30							
31	<b>EQUIPMENT SUBTOTAL</b>					<b>TOTAL</b>	
32						<b>\$ 15,240.68</b>	
33							
34						<b>\$ 15,240.68</b>	



**CHANGE ORDER COST PROPOSAL NO. 01**  
**KWRU WWTP FILTER REPLACEMENT**  
**SUBCONTRACT ESTIMATE**

#	SUBCONTRACTOR	SCOPE	INV	TOTAL	NOTES
1	Nearshore Electric	Electrical Scope of Work		\$ 51,450.00	
2	Bella Construction	Concrete Pumping - 39 meter boom pump w/ (1) additional labor for 8 hours		\$ 2,500.00	
3	Tierra	Independent Testing		\$ 500.00	
4	Surveyor	Survey/As-built Dwg		\$ 1,000.00	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38	<b>SUBCONTRACT SUBTOTAL</b>			<b>TOTAL</b>	
39				\$ 55,450.00	
40				<b>\$ 55,450.00</b>	





Date: April 6, 2018  
 Expiration Date: 30 days

*PRICE QUOTATION*

**Key West Plant**  
 Monroe Concrete Products  
 125 Toppino Industrial Drive  
 Key West, FL 33040  
 305-296-9934  
 FDOT Plant No:90-429

SALESPERSON	JOB	PAYMENT TERMS	DUE DATE
JP	KWRU WWTP Attn:James Contino		

QTY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1 yard	5000psi Reg \$192.75 per yard		
1 yard	5000psi Pump \$200.75 per yard		
	*\$15.00 Fuel & Environmental Surcharge Per Load		

SUBTOTAL	
SALES TAX	
TOTAL	

Quotation prepared by: Jason Pfahl

This is a quotation on the goods named, subject to the conditions noted below: (Describe any conditions pertaining to these prices and any additional terms of the agreement. You may want to include contingencies that will affect the quotation.)

To accept this quotation, sign here and return: \_\_\_\_\_

**Thank you for the Business!**



## James Contino

---

**From:** Canizares, Guillermo <Guillermo.Canizares@hdsupply.com>  
**Sent:** Monday, March 19, 2018 11:22 AM  
**To:** James Contino  
**Subject:** RE: 17-160 - KWRU WWTP Filter Replacement - Rebar

James,

The total weight for the above job is 5,398 Lbs @ \$0.50/Lb = \$2,699.00 + TAX. This price is subject to change due to the volatility of the rebar market.

Please note that this price is good till 03/23/18.

If you have any questions please do not hesitate to call me.

Regards,

Guillermo Cañizares  
Fabrication Manager  
HDS White Cap Construction Supply – BR# 251  
10800 NW 92<sup>nd</sup> Terrace – Suite 103  
Miami, FL 33178  
P – 305-885-8699  
F – 305-885-6621  
C – 305-525-1533

**One Team driving Customer Success and Value Creation**

**Please consider the environment - think before you print**

---

**From:** James Contino [mailto:jcontino@whartonsmith.com]  
**Sent:** Friday, March 16, 2018 4:35 PM  
**To:** Canizares, Guillermo <Guillermo.Canizares@hdsupply.com>  
**Cc:** Nancy O'Neill <noneill@whartonsmith.com>; Kilbourne, Michael W <MICHAEL.KILBOURNE@hdsupply.com>; Erica Marnati <emarnati@whartonsmith.com>  
**Subject:** 17-160 - KWRU WWTP Filter Replacement - Rebar

Guillermo,

Attached please find the drawings for the generator slab. Please provide pricing to furnish the rebar and tie downs delivered to Key West. Please include in your proposal to furnish the rebar drawings.

Thanks,

**James M. Contino | Project Manager**  
**Wharton-Smith, Inc. | Construction Group of Choice | [www.whartonsmith.com](http://www.whartonsmith.com)**

125 W. Indiantown Road, Suite 201, Jupiter, FL 33458  
Office: (561) 748-5956 Ext. 2321 | Cell: (561) 354-8786 | Fax: (561) 748-5958

# **T3 CUSTOM FABRICATION, INC.**

P.O. Box 1687, Sorrento, FL 32776  
Estimating PH (352) 409-7432 Fax (800) 657-6619  
Main Office PH (352) 742-2060

**BID #18-140**  
Original Date: 04/03/18

To: General Contractors

Attn: Project Estimators

JOB NAME: KWRU WWTP  
BID DATE: ASAP  
LOCATION: STOCK ISLAND, FL  
PLANS: 12 of 12  
SPECIFICATIONS:  
ADDENDUMS REVIEWED:

## SCOPE OF WORK

- 1) ALUMINUM LADDERS (2) @ GENERATOR
- 2) 3-LINE ALUMINUM HANDRAIL @ GENERATOR PAD

TOTAL PRICE \$9,533.00 PLUS TAX

Add \$1,500.00 for Engineered Drawings

**Delivery: F.O.B. Tavares, FL      Number of Shipments in Above Price (1)**

(If, at the request of the buyer, additional deliveries are required, the additional cost and change order will be received prior to shipment)

### Exclusions:

- Addendums unavailable for review (see addendums reviewed above)
- Erection of furnished materials (unless specifically included)
- Field measurements
- Testing and inspection costs
- Bond premium (unless specifically included)
- Responsibility of design and code requirements where specific sizes appear on drawings
- Signed and sealed shop drawings by a Florida registered engineer, unless specifically included in scope above
- Engineering calculations are specifically excluded but, if required, will be added to the price quoted above on a cost-plus basis

### Qualifications:

- Structural and miscellaneous metals will be shop primed to specifications.
- Mechanical aluminum handrail will be supplied sub-assembled (unless noted otherwise).
- Material and labor cost are subject to review after 30 days.
- Prices include only those items specifically listed in this proposal.
- Any item over 8'-0" wide or 9'-0" high will be shipped "knocked down" for field welding or bolting.
- Our total price includes only those items specifically listed in our scope of work.

KWRU 020043

- We do not accept retainage as a part of payment terms.
- Pricing assumes that all items will be shipped to the jobsite within 12 months of this proposal and that payment terms are 1/2% 10, net 30 from date of invoice.
- Drawing and delivery schedule will be negotiated at the time the purchase order is tendered. Work will not begin until an approved purchase order or satisfactory letter of intent is received.

---

### **Terms and conditions of quotation and sale:**

- Agreements outside of contract: It is expressly agreed that there are no promises, agreements, or understandings outside of this contract and any subsequent cancellations or modifications must be mutually agreed upon in writing.
- The term "T3" as used herein shall mean T3 Custom Fabrication, Inc. The word "materials" as used herein shall mean any and all items tendered within the scope of this proposal or to be added to it, at a subsequent date.
- 1/2% 10, net 30 days, no retainage
- This proposal is based on release of, and fabrication and delivery of materials specified herein in substantially complete and contiguous sub-units. Partial releases and deliveries are subject to additional charges for costs incurred by T3 at their sole discretion.
- The contract between the buyer and T3 shall consist of buyer's purchase order and any quotation/proposal made by T3 referred to in buyer's purchase order, with the written acceptance of same by T3, and these terms and conditions of quotation and sale.
- The buyer shall inspect all materials immediately upon their arrival for both quantities and conformance with the contract requirements and shall within five (5) days thereafter, give written notice to T3 of any claims that the materials do not conform to the requirements of the contract. If no such notice is given within said five (5) day period of time, the materials shall conclusively be deemed to conform in all aspects to the requirements of the contract. All claims made within the said five (5) day period will, if justified, be satisfied by T3.
- Special conditions on the buyer's purchase order in no way negate the above conditions of sale. In ordering the materials described above, the buyer accepts all of these conditions whether noted on his purchase order or not.
- Our price does not include: sales tax, erection, taking of field dimensions, any item not specifically listed in our scope.
- Proposal acceptance: This proposal is offered for acceptance within 30 days from date herein, after which it is subject to confirmation by the seller.

---

**QUOTED BY:**

---

**GEORGE WILSON**

KWRU 020044



# Nearshore Electric, Inc.

State Certified Electrical Contractor

#EC13001186

## Scope of Work

**Owner:** Key West Resort Utilities

**Job #1242018**

**Project:** Generator Hookup

**CO#1**

**Project Address:** 6630 Front Street

**Confidential**

**Key West, FL 33040**

March 14, 2018

To all concerned,

We are pleased to offer you our proposal for the electrical work required at KWRU WWTP in Key West Florida. All work performed by Nearshore Electric, Inc. shall conform to current codes, regulations, and project specifications. All work performed by Nearshore Electric, Inc. shall be warranted for a period of one year. The following breakdown describes the items and services that Nearshore Electric, Inc. shall provide as well as any exclusion from our scope of work.

### INCLUDED IN BID:

- ◆ Disconnect existing generator
- ◆ Connect temp generator to existing services
- ◆ Install conduit in new slab extension for generator power, control, battery charger and jacket heater
- ◆ Relocate existing 600amp disconnect to new location on generator slab
- ◆ Provide and install new 600amp disconnect for East and West plant EM power
- ◆ Provide and install open transition ATS 600amp NEMA4X SS located on generator slab
- ◆ Install conduit and wire from new ATS to existing ATS location
- ◆ Remove existing ATS switch and terminate new conductors to existing conductors
- ◆ Re-route existing conduits feeding existing ATS for new plant to new 600amp disconnect location on generator slab
- ◆ Re-route existing ATS control conduit to new generator
- ◆ Install auxiliary ground rod and bond slab steel and generator frame
- ◆ Install wire for power and control and terminate
- ◆ Workers Comp/General Liability Insurance
- ◆ Taxes
- ◆ Warranty

### EXCLUDED FROM BID:

- ◆ Permit fees
- ◆ Generator
- ◆ Generator fuel
- ◆ Batteries
- ◆ Load bank testing
- ◆ Any Scope of work not clearly shown on drawings or within the bid documents and/or specifications is not included in this proposal.

We propose to furnish material and labor, complete in accordance with the above specifications, for the lump sum of: **Fifty One Thousand Four Hundred Fifty Dollars and No Cents ..... \$51,450.00**

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

Jeffery L Kirk ~ President

Date 3/14/2018



## **RATE SHEET**

### **CONCRETE PUMPING**

---

#### **2" SYSTEM**

MOBILIZATION \$55  
PLUS  
2 HOUR MINIMUM PUMPING \$185  
PLUS  
ADDITIONAL HOURS @ \$55 / HOUR  
OVER 150' HOSE EXTRA HOSE CHG \$50

---

#### **3"- 5" SYSTEM**

MOBILIZATION \$75  
PLUS  
2 HOUR MINIMUM PUMPING \$300  
PLUS  
ADDITIONAL HOURS @ \$100 / HOUR  
OVER 150' HOSE EXTRA HOSE CHG \$75

---

#### **39 METER BOOM PUMP**

MOBILIZATION \$150  
4 HOUR MINIMUM PUMPING \$600  
ADDITIONAL HOURS @ \$150 / HOUR  
PLUS - \$3.50 PER CUBIC YARD PUMPED

---

**\*\*PUMPING INCLUDES PUMP OPERATOR ONLY  
EXTRA LABOR MUST BE REQUESTED IN ADVANCE  
LABOR RATE \$40 HOUR \*\***

**\*\*ALL PUMPING INVOICES ARE SUBJECT TO A 7.5% FUEL SURCHARGE & \$15.00 SLICK PRIME  
FEE\*\***

---

**PUMP, PLACE & FINISH - CALL FOR PRICING**



## LABOR RATE SHEET

### OUR LABOR RATES ARE AS FOLLOWS:

LABORER	\$35.00
CARPENTERS HELPER	\$45.00
CARPENTER – JOURNEYMAN	\$55.00
FINISHER	\$60.00
MASONS HELPER	\$30.00
MASON	\$45.00
FOREMAN	\$65.00
SUPERINTENDENT	\$75.00

MATERIAL IS BILLED AT COST PLUS 15%