ATTACHMENT A

SECTION 09 29 00
GYPSUM BOARD

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies installation and finishing of gypsum board.

1.2 TERMINOLOGY

A. Definitions and description of terms shall be in accordance with ASTM C11, C840, and as specified.

B. Underside of Structure Overhead: In spaces where steel trusses or bar joists are shown, the underside of structure overhead shall be the underside of the floor or roof construction supported by the trusses or bar joists.

1.3 SUBMITTALS

A. Manufacturer's Literature and Data:
   a. Cornerbead and edge trim.
   b. Finishing materials.
   c. Laminating adhesive.
   d. Gypsum board, each type.
   e. Insulation.

B. Shop Drawings:
   a. Typical gypsum board installation, showing corner details, edge trim details and the like.
   b. Typical fire rated assembly and column fireproofing, indicating details of construction same as that used in fire rating test.

C. Test Results:
   a. Fire rating test, each fire rating required for each assembly.

D. Certificates: Certify that gypsum board types, gypsum backing board types, cementitious backer units, and joint treating materials do not contain asbestos material.

1.4 DELIVERY, IDENTIFICATION, HANDLING AND STORAGE

In accordance with the requirements of ASTM C840.

1.5 ENVIRONMENTAL CONDITIONS

In accordance with the requirements of ASTM C840.

1.6 REFERENCE STANDARDS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society for Testing And Materials (ASTM):

C11-15.....Terminology Relating to Gypsum and Related Building Materials and Systems

C475-15 ..... Joint Compound and Joint Tape for Finishing Gypsum Board
C665 ..... Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
C840-13 ..... Application and Finishing of Gypsum Board
C1002-14 ..... Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
C1047-14 ..... Accessories for Gypsum Wallboard and Gypsum Veneer Base
C1396-14 ..... Gypsum Board

C. Underwriters Laboratories Inc. (UL):
Latest Edition ..... Fire Resistance Directory

D. Inchcape Testing Services (ITS):
Latest Editions ..... Certification Listings

PART 2 - PRODUCTS

2.1 GYPSUM BOARD

A. Water Resistant Gypsum Backing Board: ASTM C630, Type X, 5/8 inch thick.

2.2 JOINT TAPE

Use pressure-sensitive or staple-attached open-weave glass fiber reinforcing tape with compatible joint compound where recommended by manufacturer of gypsum board and joint treatment materials for application indicated.

2.3 SETTING-TYPE JOINT COMPOUND

A. Where setting-type joint compounds are indicated for use as taping and topping compounds, use formulation for each which develops greatest bond strength and crack resistance and is compatible with other joint compounds applied over it.

B. For pre-filling gypsum board joints, use formulation recommended by gypsum board manufacturer.

C. For filling joints and treating fasteners of water-resistant gypsum backing board behind base for ceramic tile, use formulation recommended by gypsum board manufacturer for this purpose

2.4 ACCESSORIES

A. ASTM C1047, except form of 0.015 inch thick zinc coated steel sheet or rigid PVC plastic.

B. Flanges not less than 7/8 inch wide with punchouts or deformations as required to provide compound bond.

2.5 FASTENERS

A. ASTM C1002 and ASTM C840, except as otherwise specified.

B. Select screws of size and type recommended by the manufacturer of the material being fastened.

C. For fire rated construction, type and size same as used in fire rating test.

D. Clips: Zinc-coated (galvanized) steel; gypsum board manufacturer's standard items.

2.6 FINISHING MATERIALS AND LAMINATING ADHESIVE

ASTM C475 and ASTM C840. Free of antifreeze, vinyl adhesives, preservatives, biocides and other VOC. Adhesive shall contain a maximum VOC content of 50 g/l.

2.7 THERMAL INSULATION

Unfaced Mineral Fiber Blanket Insulation: Unfaced mineral fiber blanket insulation produced by combining mineral fibers manufactured from glass with thermosetting resins to comply with ASTM C 665 for Type I. Minimum R-value of 30.

PART 3 - EXECUTION

3.1 INSTALLING GYPSUM BOARD

A. Coordinate installation of gypsum board with other trades and related work.

B. Install gypsum board in accordance with ASTM C840, except as otherwise specified.

C. Single-layer gypsum board application at maximum practical lengths to minimize number of end joints.

D. Install exposed gypsum board with face side out. Do not install imperfect, damaged, or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16" open space between boards.

E. Bring gypsum board into contact, but do not force into place.

F. Install ceiling boards across framing in the manner which minimizes the number of end-butt joints, and which avoids end joints in the central area of each ceiling. Stagger end joints at least 24".

G. Position boards so that like edges abut, tapered edges against tapered edges, and mill-cut or field-cut ends against mill-cut or field-cut ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.

H. Joints larger than ½" will not be accepted as satisfactory Work. Should this occur, the wallboard shall be removed and replaced with wallboard having the specified joint dimension.

I. Single-layer fastening method with screws.

3.2 INSTALLING ACCESSORIES

A. Set accessories plumb, level and true to line, neatly mitered at corners and intersections, and securely attach to supporting surfaces as specified.

B. Install in one piece, without the limits of the longest commercially available lengths.

C. Corner Beads:

   a. Install at all external corners and where shown.

   b. Use screws only. Do not use crimping tool.

D. Edge Trim (casings Beads):

   a. At both sides of expansion and control joints unless shown otherwise.

b. Where gypsum board terminates against dissimilar materials and at perimeter of openings, except where covered by flanges, casings or permanently built-in equipment.
c. Where gypsum board surfaces of non-load bearing assemblies abut load bearing members.

E. Install mineral fiber insulation in accordance with manufacturer's instructions.

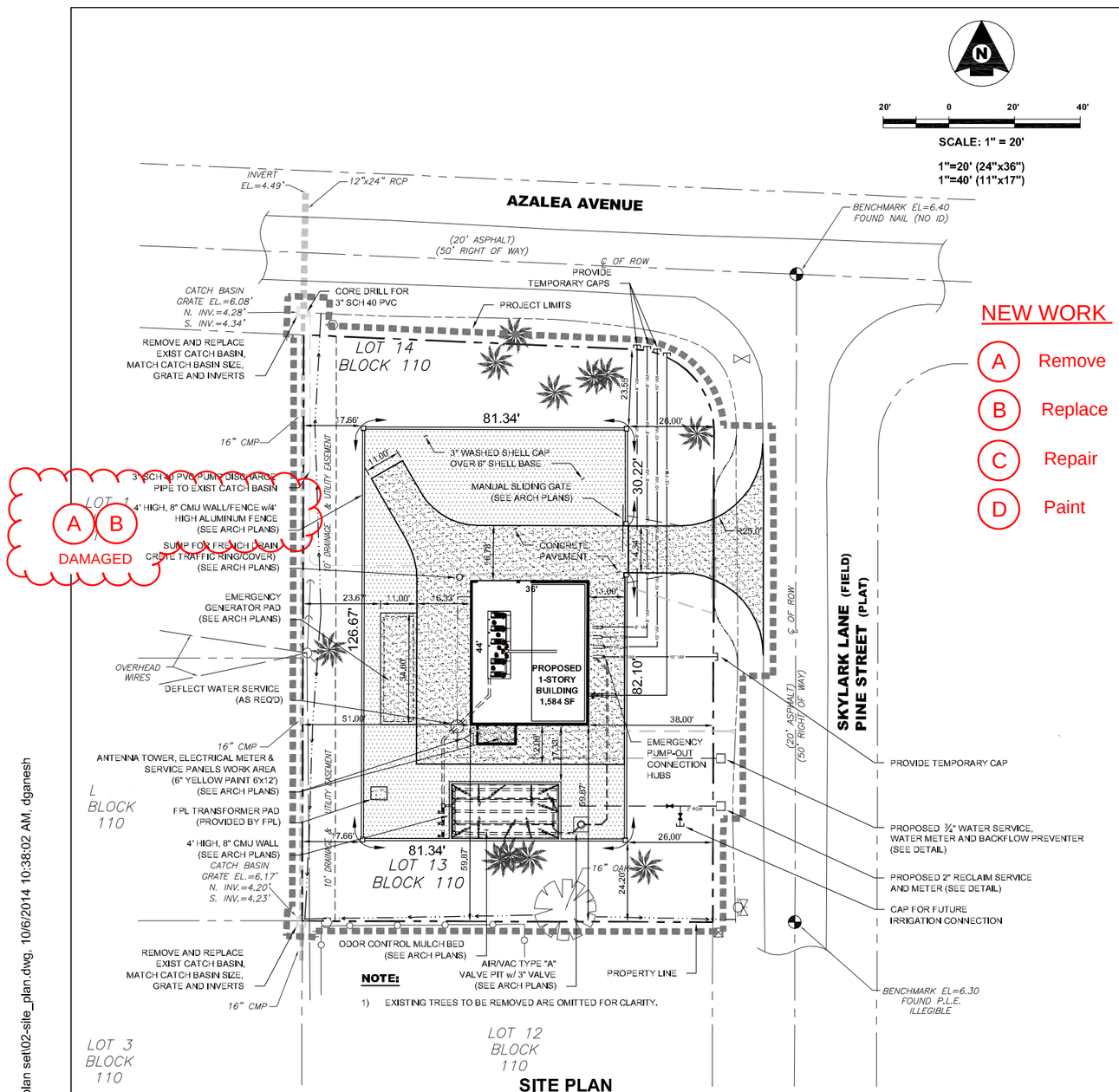
3.3 FINISHING OF GYPSUM BOARD

A. Before proceeding with installation of finishing materials, assure the following:
   a. Gypsum board is fastened and held close to framing or furring.
   b. Fastening heads in gypsum board are slightly below surface in dimple formed by driving tool.
B. Finish joints, edges, corners, and fastener heads in accordance with ASTM C840. Use Level 4 finish for all finished areas open to public view.
   a. Pre-fill open joints and rounded or beveled edges, if any, using setting-type joint compound.
   b. Apply joint tape at joints between gypsum boards, except where trim accessories are indicated.
   c. Finish interior gypsum wallboard by applying the following joint compounds in three (3) coats (not including pre-fill of openings in base), and sand between coats and after last coat.
C. Finish joints, fasteners, and all openings, including openings around penetrations. After the installation of hanger rods, hanger wires, supports, equipment, conduits, piping and similar work, seal remaining openings and maintain the integrity of the construction.

3.4 REPAIRS

A. After taping and finishing has been completed, and before decoration, repair all damaged and defective work, including nondecorated surfaces.
B. Patch holes or openings 1/2 inch or less in diameter, or equivalent size, with a setting type finishing compound or patching plaster.
C. Repair holes or openings over 1/2-inch diameter, or equivalent size, with 5/8-inch-thick gypsum board secured in such a manner as to provide solid substrate equivalent to undamaged surface.
D. Tape and refinish scratched, abraded or damaged finish surfaces including cracks and joints in non-decorated surface.

- - - E N D - - -



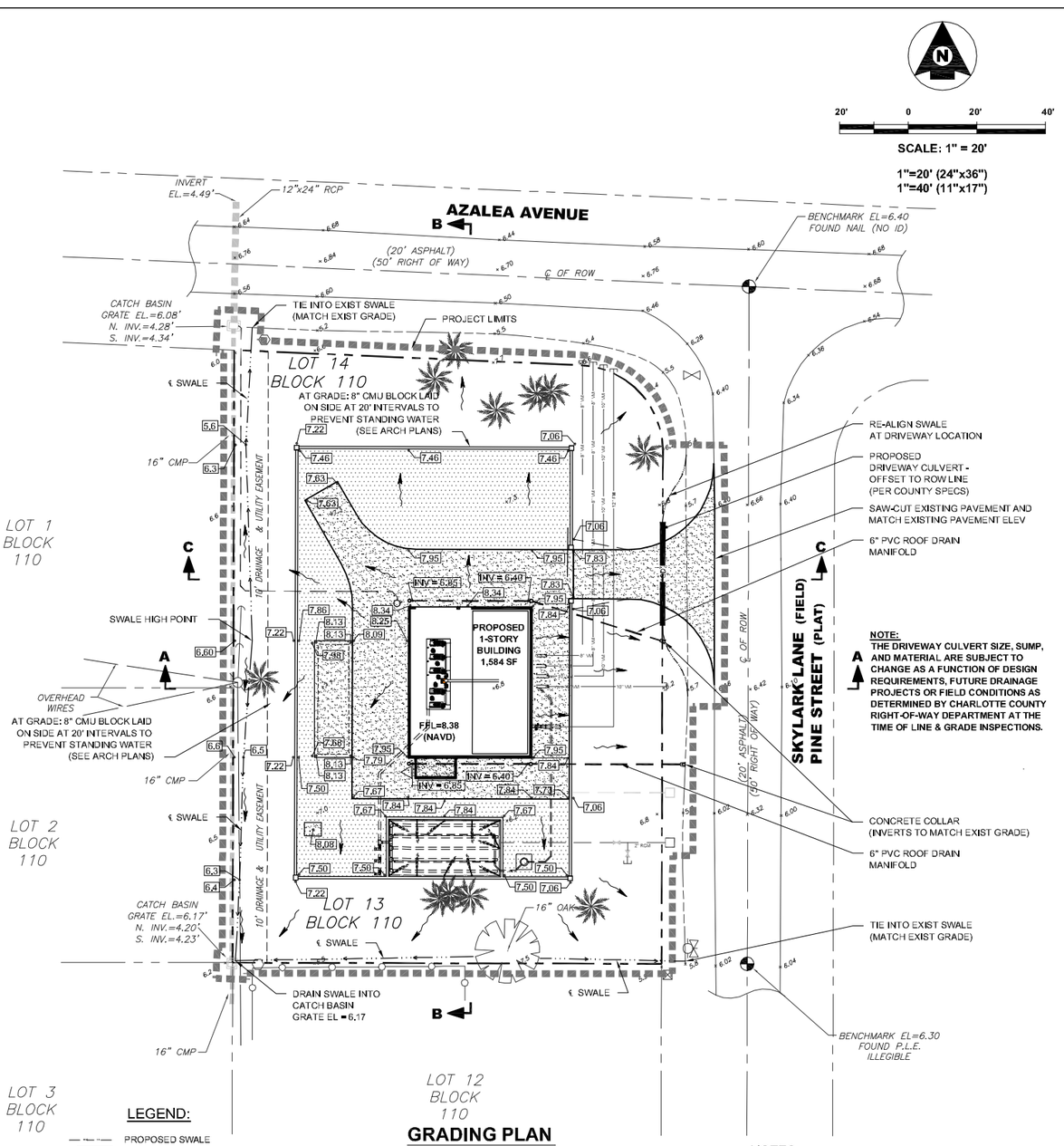
SITE PLAN

SITE DEVELOPMENT DATA:

1. LAND USE	RESIDENTIAL
2. LAND AREA	0.50 ACRES
3. ZONING	RSF 3.5, SE-14-002
4. FEMA	ZONE AE, ELEV 9 (NGVD 1929) (PANEL NO. 12015C0226F, DATED MAY 5, 2003)
5. DATUM	ELEVATIONS AS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD1988)

NOTES:

1) ALL EASEMENTS, PER RECORD PLAT, ARE SHOWN.
2) SLOPE EASEMENTS, IF REQUIRED, WILL BE OBTAINED BY THE OWNER.
3) ELEVATIONS SHOWN ARE BASED ON NAVD 88.
4) CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES.
5) ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH O.S.H.A SAFETY STANDARDS, INCLUDING O.S.H.A. TRENCH SAFETY STANDARDS AND PROJECT DOCUMENTS (CONSTRUCTION PLANS AND SPECIFICATIONS).



NOTE:
THE DRIVEWAY CULVERT SIZE, SUMP, AND MATERIAL ARE SUBJECT TO CHANGE AS A FUNCTION OF DESIGN REQUIREMENTS, FUTURE DRAINAGE PROJECTS OR FIELD CONDITIONS AS DETERMINED BY CHARLOTTE COUNTY RIGHT-OF-WAY DEPARTMENT AT THE TIME OF LINE & GRADE INSPECTIONS.

GRADING PLAN

LEGEND:

- PROPOSED SWALE
- PROPOSED 3" WASHED SHELL CAP ON 6" SHELL BASE
- PROPOSED CONCRETE PAVEMENT
- EXISTING ELEVATION, NAVD 88
- PROPOSED ELEVATION
- PROPOSED DRAINAGE FLOW
- EXISTING PALM TREE TO REMAIN
- EXISTING OAK TREE TO REMAIN
- EXISTING VALVE
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- EXISTING PHONE RISER
- EXISTING CHAIN LINK FENCE
- EXISTING GUY WIRE
- EXISTING UTIL POLE

NOTES:

ELEVATIONS AS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD1988) FROM CHARLOTTE COUNTY BENCHMARK GPC051, HAVING AN ELEVATION OF 8.423', NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD1929) CONVERTED TO AN ELEVATION OF 7.298', (NAVD1988) USING ARMY CORPS OF ENGINEERS CORPSCON V6.0.1

CONVERSION FACTOR FOR NGVD29 TO NAVD88 IS (-)1.125'

COORDINATES AS SHOWN ARE BASED ON THE STATE PLANE COORDINATE SYSTEM FLORIDA WEST ZONE NORTH AMERICAN DATUM OF 1983.

DATE	REVISION	BY	DATE	REVISION	BY

SED Southwest Engineering & Design
660 Charlotte Street, Suite 8
Punta Gorda, Florida 33950
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www.sedfl.com
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Phone (941) 475-7981
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DATE: 10/06/14	CKD. BY	DATE	
DRAWN: DEV	EPL	10/6/14	
DESIGN: KHR	-	10/6/14	
APPROVED:			

EAST-WEST SPRING LAKE
AREA 1 VACUUM STATION
CONSTRUCTION PLANS
SITE AND GRADING PLAN

SCALE: AS NOTED	
SHEET 2 OF 18	
SED NO. 14-0205	*EDWARD P. LOMSKI JR., P.E. FLORIDA REG No. 62507*

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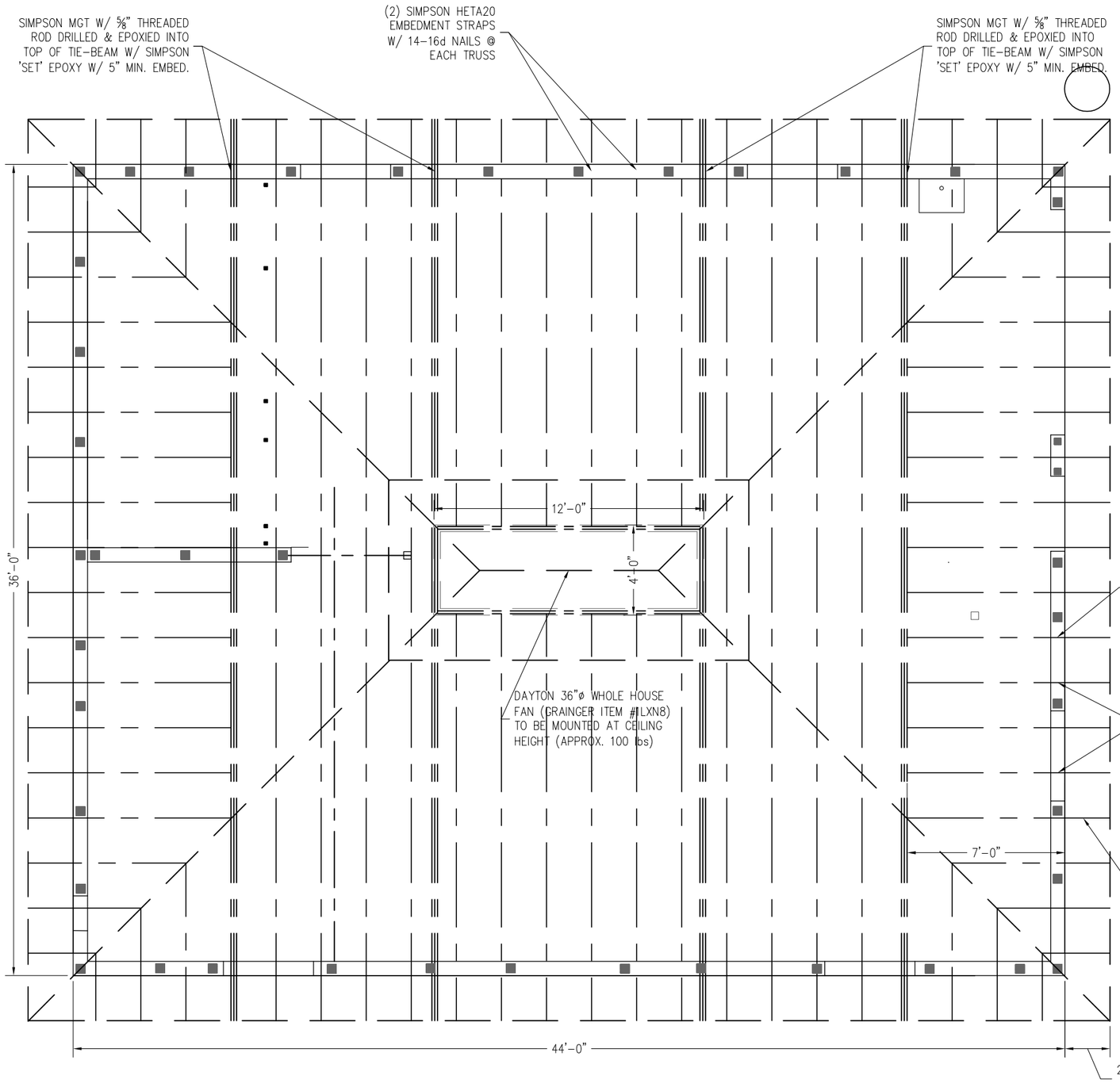
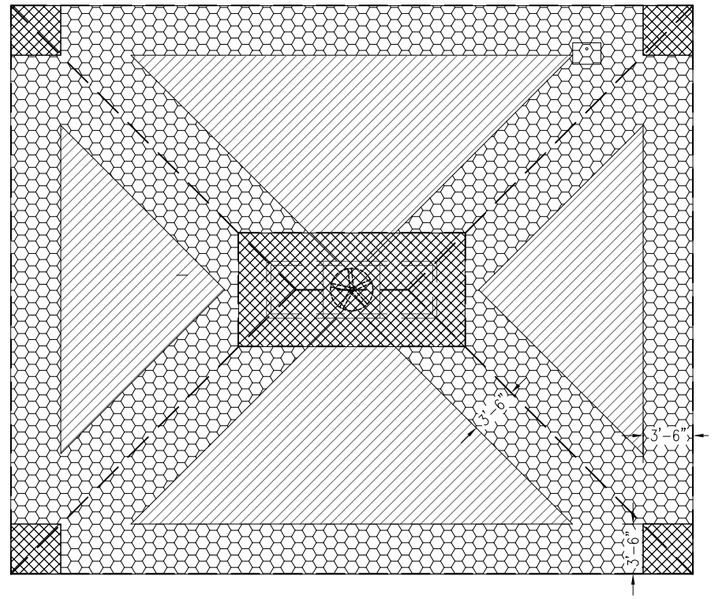




ROOF NAILING ZONES

DAMAGED A B — ROOF SHEATHING TO BE 5/8" EXTERIOR GRADE OSB OR PLYWOOD

NEW WORK

A Remove
B Replace
C Repair
D Paint

ZONE 1
10d (0.148" SHANK) NAILS @ 4" o.c. AT ALL EDGES; 6" o.c. IN FIELD

ZONE 2
10d (0.148" SHANK) NAILS @ 3" o.c. AT ALL EDGES; 6" o.c. IN FIELD

ZONE 3
10d (0.148" SHANK) NAILS @ 3" o.c. THROUGHOUT

NOTE: USE ZONE 3 NAILING PATTERN FOR CUPOLA ROOF.

NOTE TO TRUSS MANUFACTURER:
ALL TRUSSES SHALL BE DESIGNED TO ALLOW FOR A 150 lb DEAD LOAD APPLIED AT ANY POINT ALONG THE BOTTOM CHORD TO PERMIT THE INSTALLATION OF PIPE HANGERS AS REQ'D (TYPICAL)

ALSO, CENTER TRUSSES SHALL BE DESIGNED FOR THE ADDITIONAL LOADING FROM THE CUPOLA ABOVE, AS SHOWN.

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	08/14
DRAWN:	TS
CHK'D BY:	JB

Charlotte County Government
Spring Lake
Vacuum Station

ROOF TRUSS & NAILING PLAN

SCALE : 3/8"=1'-0"

Spring Lake Vac. Sta.
SHEET: 8 OF 18
GWE NO. 6176.00

NEW WORK

A Remove

B Replace

C Repair

D Paint

A B R-30 BATT INSULATION OR EQUIVALENT

METAL PANEL, STANDING SEAM ROOFING TO BE FASTENED PER MANUFACTURER'S SPECIFICATIONS FOR 160 mph (V-asd) WIND SPEED, (ASTM A 653 G-90 ROOFING)

A B

A B 30# FELT OR ADHESIVE ROOF DRY IN OVER 5/8" 5-PLY CDX PLYWOOD FASTENED PER NAILING SCHEDULE SHOWN ON ROOF FRAMING PLAN (TYPICAL)

ENGINEERED WOOD TRUSSES @ 24" o.c. (TYP. BY OTHERS)

1 COURSE BOND BEAM W/ 1-#5 REBAR

SEE ROOF FRAMING PLAN FOR REQUIRED TRUSS TIE-DOWNS

5" GUTTERS & DOWNSPOUTS AROUND PERIMETER; ALUMINUM FASCIA & SOFFIT ATTACHED 12" O.C.

A B DAMAGED, TOUCH UP PAINT IF NEEDED

APPLY ONE COAT OF PRIMER/SEALER & TWO COATS OF EXTERIOR ELASTIMERTIC PAINT OVER STUCCO FINISH PER ASTM C-926 (TYPICAL)

SCREENED & LOUVERED VENTS ON ALL SIDES OF CUPOLA

5 12

AIR FLOW

DAYTON 36"ø WHOLE HOUSE FAN (GRAINGER ITEM #1LXN8)

8" BEAM SEAT W/ (2) ½"x 8" J-BOLTS

W8x28 BEAMS

4x4x¼ TUBE COLUMN

TRUSS TO TRUSS CONNECTION BY TRUSS MANUFACTURER

A B

NOTE: FLASHING SHALL HAVE A MINIMUM THICKNESS OF 0.019 in (26 GAGE) AND SHALL BE GALVANIZED SHEET METAL. ZINC COATED PER G90

FLASHING SHALL BE INSTALLED:
- AT WALL & ROOF INTERSECTIONS
- AT GUTTERS
- WHEREVER THERE IS A CHANGE IN ROOF SLOPE OR DIRECTION
- AROUND ROOF OPENINGS

5/8" TYPE X GYP. BRD. CLG. W/ 2 REMOVABLE 2'x4' PANELS. DRYWALL TO BE TAPED & FINISHED W/ PRIMER/SEALER (ORANGE PEEL FINISH)

A B D

T.O.W. 17.71 NAVD 88 BRG. HEIGHT

1½" I.D. ALUMINUM PIPE GUARDRAILS @ 42" A.F.F. (TYP.)

9'-4"

APPLY ONE COAT OF PRIMER/SEALER & TWO COATS OF EXTERIOR ELASTIMERTIC PAINT OVER STUCCO FINISH PER ASTM C-926 (TYPICAL)

½" EXPANSION JOINT (TYP.)

6" THICK 3,000 PSI CONC. SLAB W/ FIBERMESH

@ 38' NAVD 88

9'-0"

APPLY ONE COAT OF XYPEX CONCENTRATE (OR ENGINEER APPROVED EQUAL) TO CONC. WALLS AND SLAB AT THE RATE OF 1.25 TO 1.5 lb/sq. yd.

STEEL SLEEVES EMBEDDED INTO CONC. FOR REMOVABLE RAIL

ALUMINUM STAIRS/HANDRAIL DESIGN, SHOP DRAWING TO BE REVIEWED/APPROVED BY ENGINEER

3'-0"

14" THICK CONCRETE WALL (SEE FOUNDATION PLAN FOR DETAILS)

ø8" SCH.80 PVC SUPPLIED & INSTALLED BY CONTRACTOR

4"x4"x3/8" ALUMINUM TUBES AT LANDING (TYP.) SHOP DRAWING TO BE REVIEWED/APPROVED BY ENGINEER

14" THICK CONCRETE WALL (SEE FOUNDATION PLAN FOR DETAILS)

12'-0"

STAIRS SHOWN SUPER-IMPOSED OVER AIRVAC EQUIPMENT FOR CLARITY

TANK CENTERLINE

3' 3' 3' 6'

1'-4⅛"

5"x7"x½" ALUMINUM BASEPLATE W/ (2) ½"x4" S.S. ANCHORS TO SLAB (TYP.)

F.F. ELEV. -3.62' NAVD 88

CLEAN COMPACTED BACK FILL IN 1 FT LIFT. PROVIDE COMPACTION TESTING BY REGISTERED GEOTECH DESIGN PROFESSIONAL.

6"ø PERFORATED PVC FRENCH DRAIN SET IN SHELL AROUND ENTIRE PERIMETER. RISER TO GRADE WITH CLEANOUT. TIE TO 24"ø SUMP. (TYP. ALL SIDES)

20 MIL. POLYETHYLENE VAPOR BARRIER

6" COMPACTED SAND BASE

TERMITE TREATED, COMPACTED SOIL (PRIOR TO START OF FLOOR CONSTRUCTION, SOIL TREATMENT MUST BE PERFORMED BY CERTIFIED PEST CONTROL BUSINESS)

2'-0" THICK CONC. SLAB (SEE FOUNDATION PLAN FOR DETAILS)

SECTION A-A

SCALE : 1/4"=1'-0"

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY
5-4-15	AIR-VAC REVISION	TS

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	05/15
DRAWN:	TS
CHK'D BY:	JB

Charlotte County Government
Spring Lake
Vacuum Station

SECTION

Spring Lake Vac. Sta.
SHEET: 9 OF 18
GWE NO. 6176.00

NEW WORK

A Remove

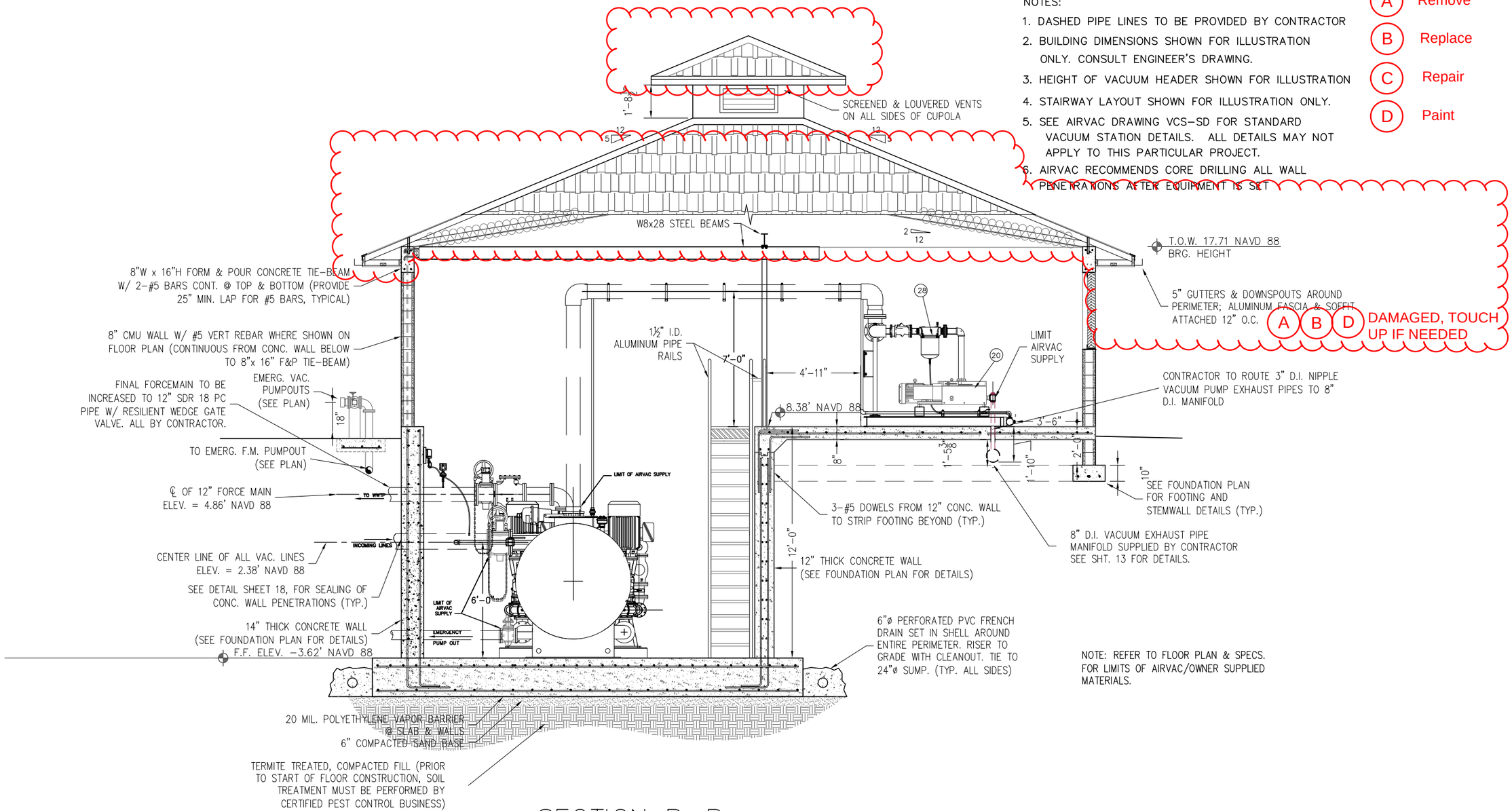
B Replace

C Repair

D Paint

NOTES:

1. DASHED PIPE LINES TO BE PROVIDED BY CONTRACTOR
2. BUILDING DIMENSIONS SHOWN FOR ILLUSTRATION ONLY. CONSULT ENGINEER'S DRAWING.
3. HEIGHT OF VACUUM HEADER SHOWN FOR ILLUSTRATION
4. STAIRWAY LAYOUT SHOWN FOR ILLUSTRATION ONLY.
5. SEE AIRVAC DRAWING VCS-SD FOR STANDARD VACUUM STATION DETAILS. ALL DETAILS MAY NOT APPLY TO THIS PARTICULAR PROJECT.
6. AIRVAC RECOMMENDS CORE DRILLING ALL WALL PENETRATIONS AFTER EQUIPMENT IS SET



NOTE: REFER TO FLOOR PLAN & SPECS. FOR LIMITS OF AIRVAC/OWNER SUPPLIED MATERIALS.

SECTION B-B

SCALE : 1/4"=1'-0"

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

[redacted]

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #56384
STATE OF FLORIDA

DATE	REVISION	BY
5-4-15	AIR-VAC REVISION	TS

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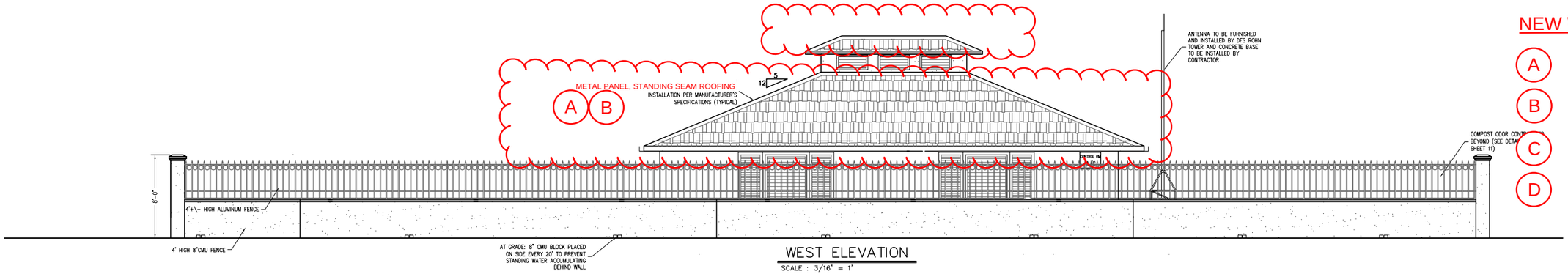
Charlotte County Government
Spring Lake
Vacuum Station

SECTION

Spring Lake Vac. Sta.
SHEET: 10 OF 18
GWE NO. 6176.00

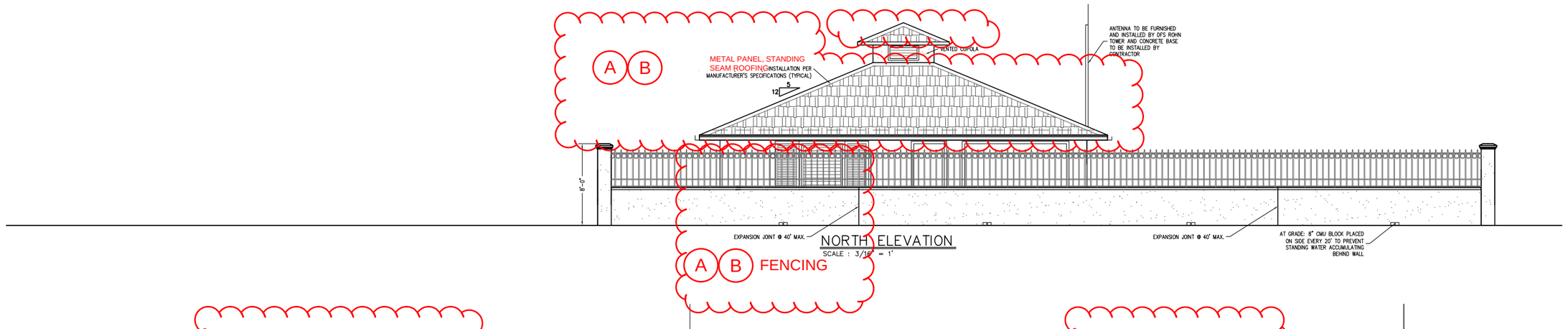
NEW WORK

- A — Remove
- B — Replace
- C — Repair
- D — Paint



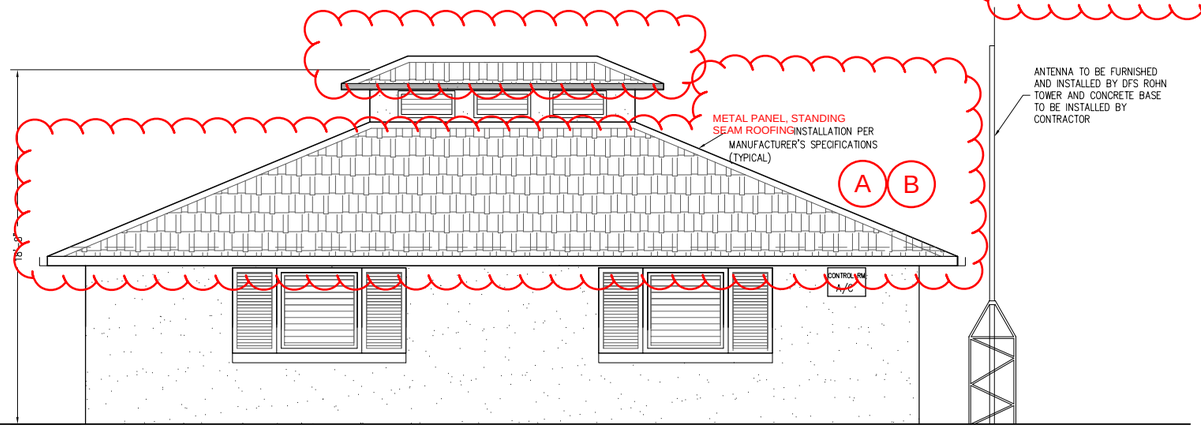
WEST ELEVATION

SCALE : 3/16" = 1'



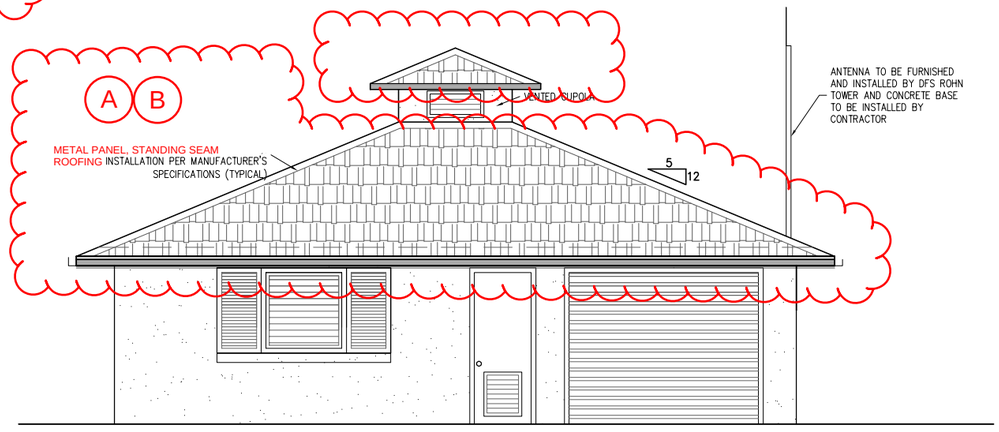
NORTH ELEVATION

SCALE : 3/16" = 1'



WEST ELEVATION

SCALE : 1/4" = 1'



NORTH ELEVATION

SCALE : 1/4" = 1'

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

[redacted]

PROFESSIONAL ENGINEER OF RECORD
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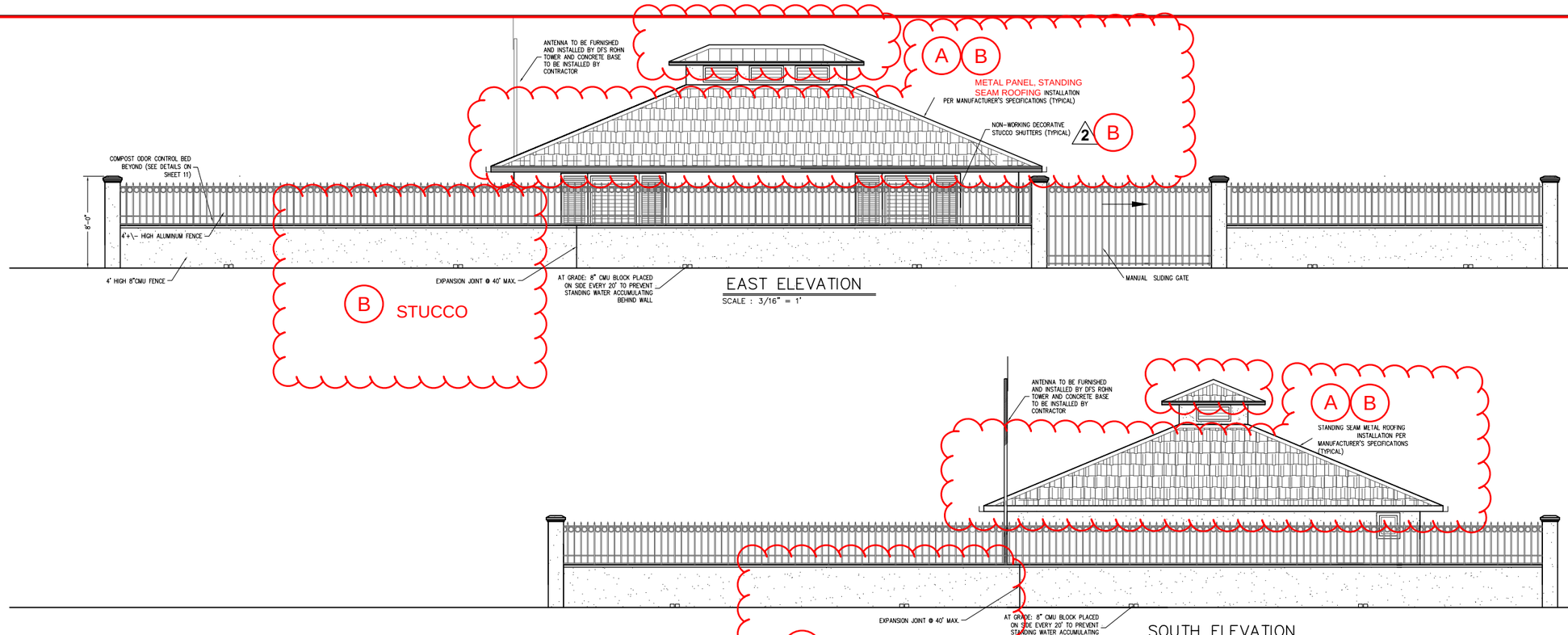
Charlotte County Government
Spring Lake
Vacuum Station

ELEVATIONS

SCALE : 3/16"=1'-0"

Spring Lake Vac. Sta.
SHEET: 11 OF 18
GWE NO. 6176.00



NEW WORK

- A Remove
- B Replace
- C Repair
- D Paint

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY
10-28-14	1 TANK PUMP-OUT	TS
11-14-14	2 SHUTTERS / DECO	TS

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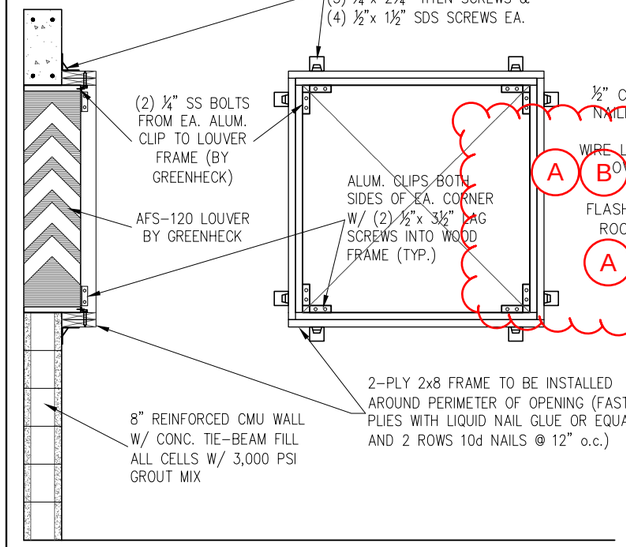
Charlotte County Government
Spring Lake
Vacuum Station

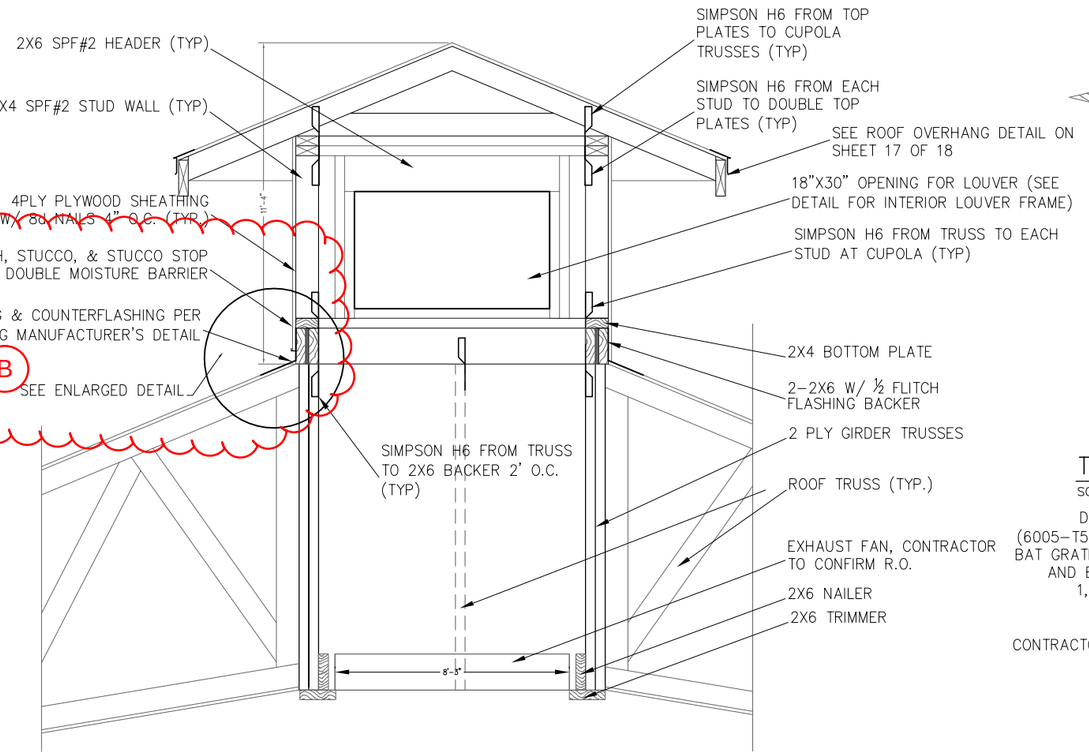
ELEVATIONS
SCALE : 3/16"=1'-0"

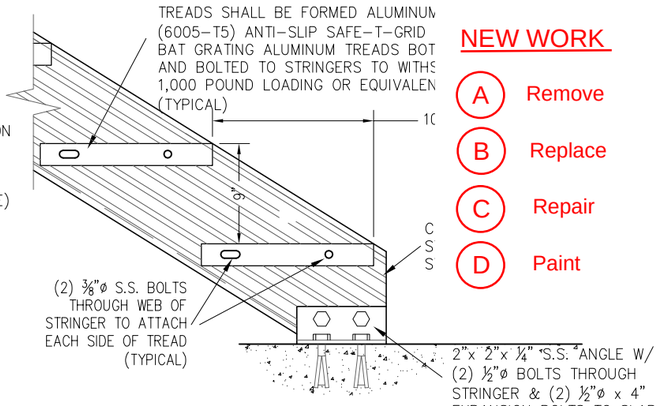
Spring Lake Vac. Sta.
SHEET: 12 OF 18
GWE NO. 6176.00



LOUVER FASTENING DETAILS

SCALE: N.T.S.



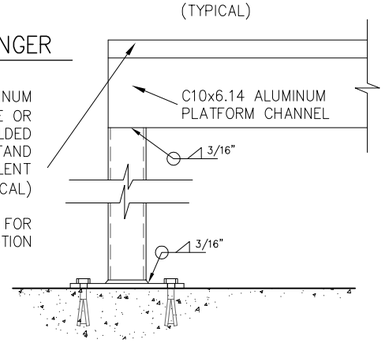


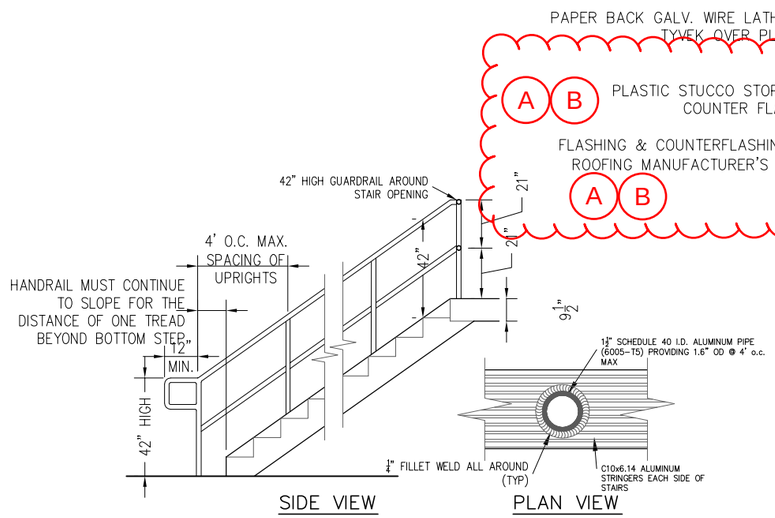
TYPICAL TREAD & STRINGER

SCALE: N.T.S.

DECKING SHALL BE FORMED ALUMINUM (6005-T5) ANTI-SLIP SAFE-T-GRID PLATE OR BAT GRATING ALUMINUM TREADS BOTH WELDED AND BOLTED TO STRINGERS TO WITHSTAND 1,000 POUND LOADING OR EQUIVALENT (TYPICAL)

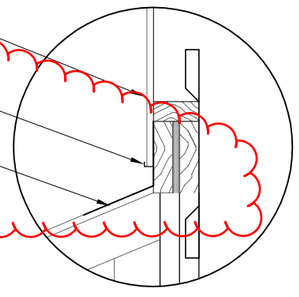
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION





TYPICAL STAIR RAILING

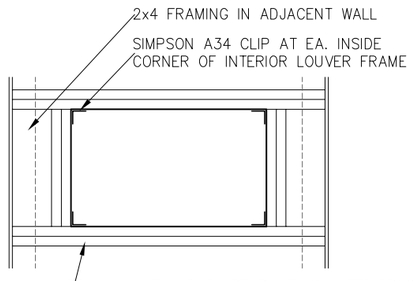
SCALE: N.T.S.



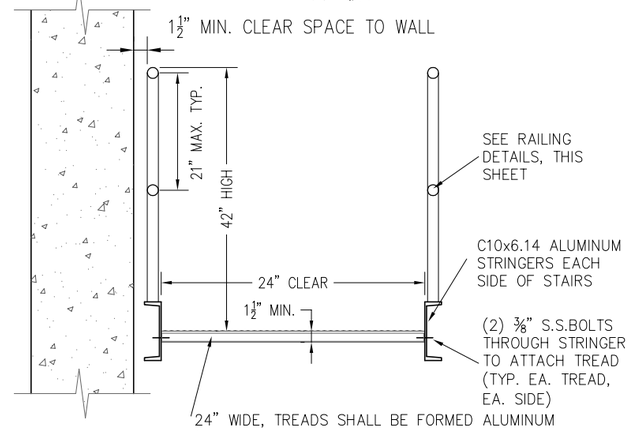
CUPOLA BASE DETAIL

CUPOLA SECTION

SCALE: N.T.S.



INTERIOR LOUVER FRAME



TYPICAL STAIR SECTION

SCALE: N.T.S.

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY

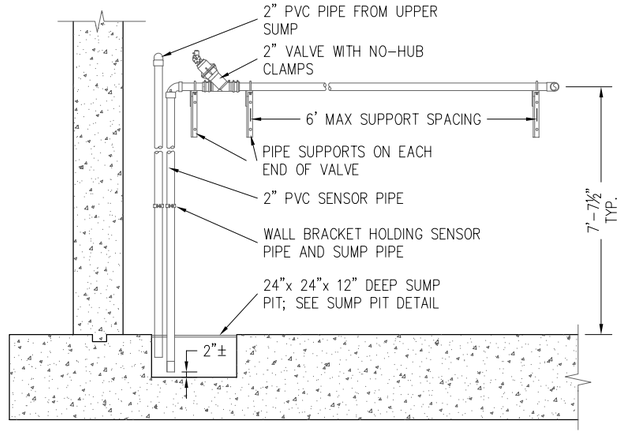
GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	08/14
DRAWN:	TS
CHK'D BY:	JB

Charlotte County Government
Spring Lake
Vacuum Station

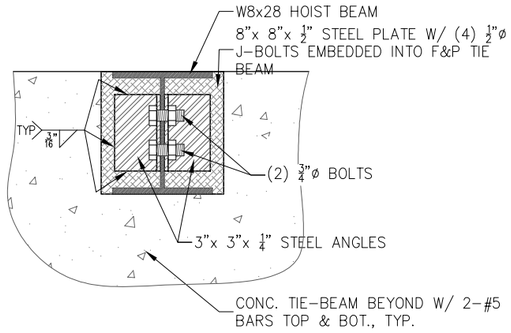
MISCELLANEOUS DETAILS

Spring Lake Vac. Sta.
SHEET: 16 OF 18
GWE NO. 6176.00



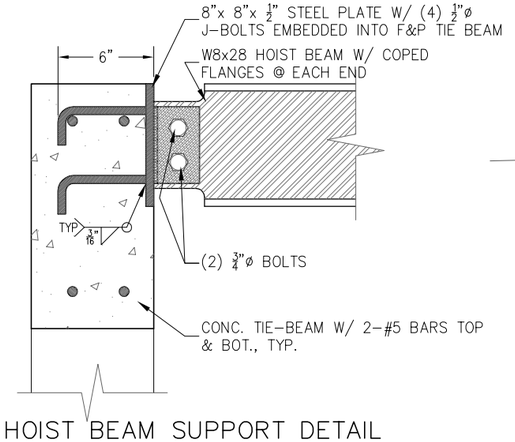
SUMP PIPING DETAIL

SCALE: N.T.S.



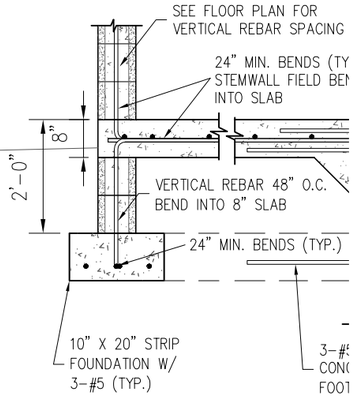
HOIST BEAM SUPPORT DETAIL – SECTION THROUGH HOIST BEAM

SCALE: N.T.S.



HOIST BEAM SUPPORT DETAIL – SECTION THROUGH TIE BEAM

SCALE: N.T.S.

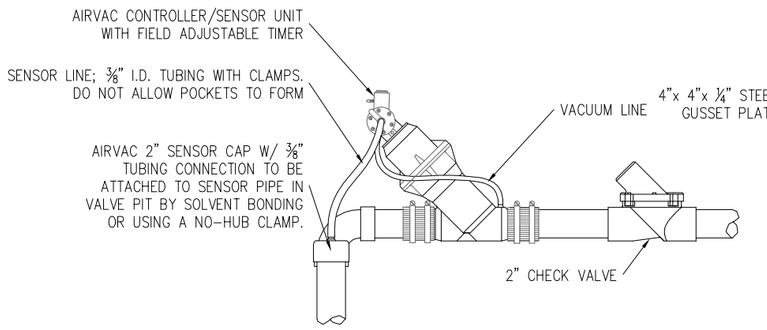


STEMWALL DETAIL

SCALE: N.T.S.

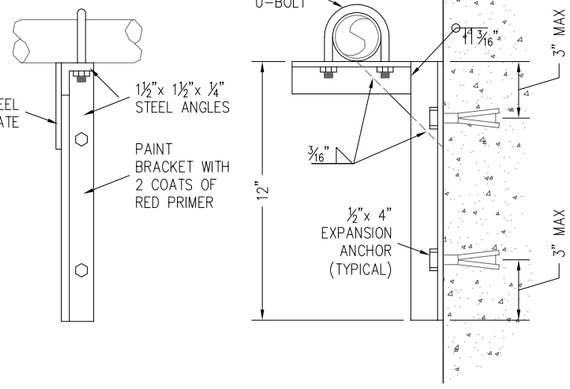
NEW WORK

- A – Remove
- B – Replace
- C – Repair
- D – Paint



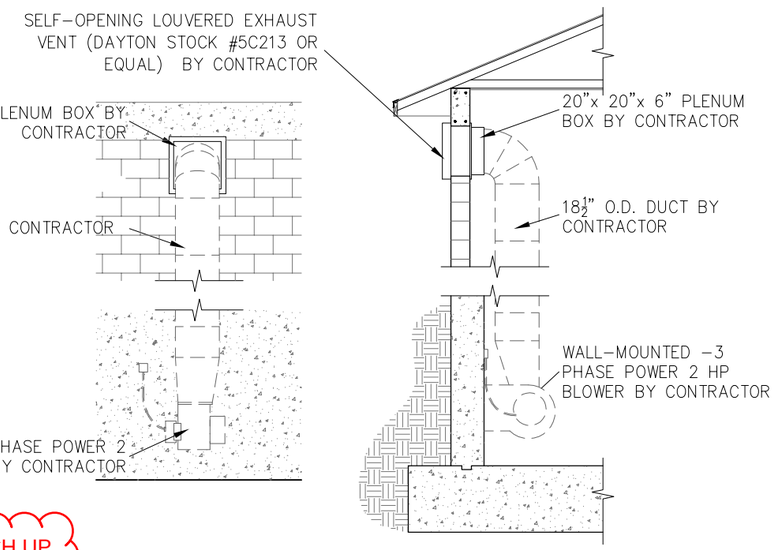
SUMP VALVE DETAIL – SIDE VIEW

SCALE: N.T.S.



SUMP PIPE SUPPORT DETAIL

SCALE: N.T.S.

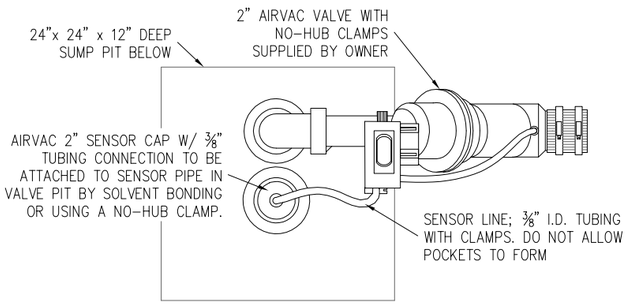


ELEVATION VIEW

SECTION VIEW

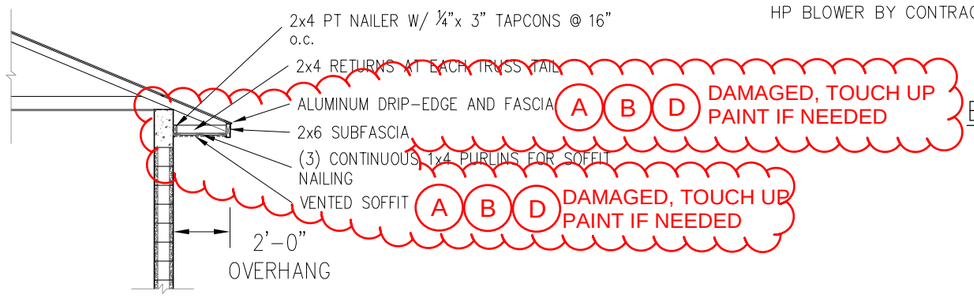
BLOWER & DUCT DETAIL

SCALE : 3/8"=1'-0"



SUMP VALVE DETAIL – PLAN VIEW

SCALE: N.T.S.



ROOF OVER HANG DETAIL

SCALE : 3/8"=1'-0"

DATE	REVISION	BY

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CERTIFICATE OF AUTHORIZATION #3607
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DATE:	08/14
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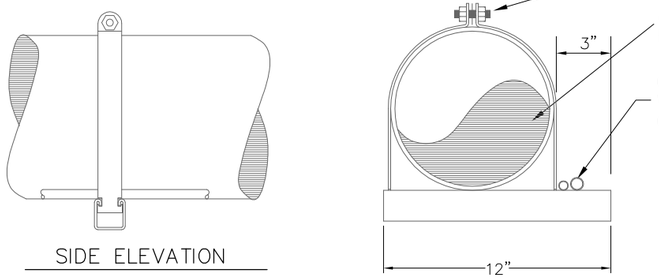
Charlotte County Government
Spring Lake
Vacuum Station

MISCELLANEOUS DETAILS

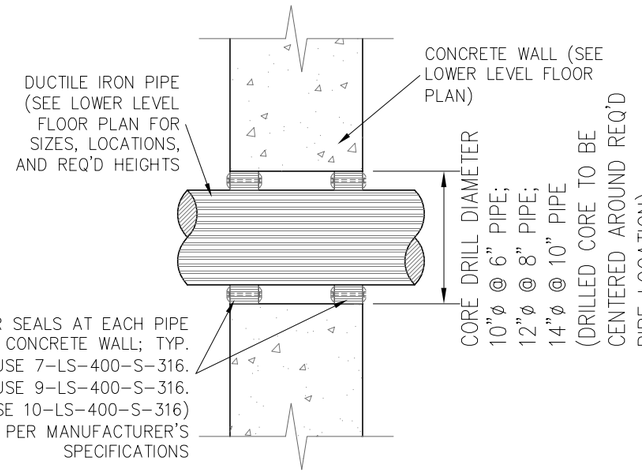
Spring Lake Vac. Sta.
SHEET: 17 OF 18
GWE NO. 6176.00

NOTE: UNI-STRUT, CLAMPS, BOLTS, AND NUTS PROVIDED BY AIRVAC; PARTS SHIPPED LOOSE AND INSTALLED BY CONTRACTOR AT SITE.



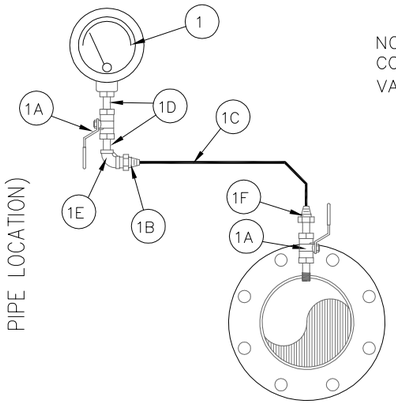
UNI-STRUT CLAMP DETAIL

VACUUM HEADER
UNI-STRUT DETAIL
SCALE: N.T.S.



LINK-SEAL DETAIL

SCALE: N.T.S.



NOTE:
CONTRACTOR TO DRILL/TAP INCOMING VACUUM LINES FOR 1/4" PIPE THREADS.

(1) 0-30"HG VACUUM GAUGE MOUNTED TO TANK (TYP. OF 4)
(1A) MERIT 1/2" S.S. BALL VALVE
(1B) 1/2" MPT X 3/8" BARB ADAPTER
(1C) 3/8" DIA. FLEX TUBING X 20'
(1D) 1/2" X 1" S.S. NIPPLE
(1E) 1/2" 90° S.S. ELBOW
(1F) 1/4" MPT X 3/8" BARB ADAPTER

TYPICAL VACUUM LINE GAUGE PIPING DETAIL

SCALE: N.T.S.

GENERAL NOTES:

DESIGN CRITERIA:

Florida Building Code, 2023 8th Edition
ASCE 7- 22

1. Wind Velocity = 162 M.P.H.
   Internal Pressure Coefficient = ±0.18 (Enclosed Building)
   Category III Building
   Exposure B

   Component & Cladding Loads based on a loaded area of 10 sf or less and a wind directionality factor of 0.85 are as follows:

ASD		
Zone	1:	-26.2/+13.9
Zone	2:	-58.9/+13.9
Zone	3:	-81.4/+13.9
Zone	4:	-26.2/+24.1
Zone	5:	-32.3/+24.1

If a specific component has a tributary area larger than 10 sf and requires a reduced component & cladding load, ths specifications & dimensions of the product shall be submitted to the Engineer of Record for wind analysis.

2. Live Loads - in accordance with FBC 2004, Table 1607.1 unless noted.

Floors, Decks, & Stairs:	100 psf
Roofs:	20 psf

GENERAL:

CONSTRUCTION:

1. Unless noted otherwise, all wood construction shall meet or exceed requirements of Chapter 23, FBC. Table 2304.9.1 shall be used as a minimum for all nailing schedules. Roof, wall, & floor diaphragms shall be as follows unless noted otherwise:

   -Unblocked @ roof: 4" @ edges/ 6" @ intermediate supports

   -Min. 5/8" CDX 5-ply plywood shall be used for roof diaphragm w/ 10d ringshank nails (0.131"ø shank)

2. Pre-manufactured straps, hangers, and clips shall be installed according to manufacturer's recommendations as required to supply desired performance.

3. Due to the nature of this construction the Engineer of Record shall be given the opportunity to re-evaluate these plans and specifications as additional information becomes available or unforeseen circumstances arise.

SOIL COMPACTION:

Top soil shall be removed to a minimum depth of one foot over the entire building area and five feet beyond building lines. These areas should be cleared and grubbed of any vegetation. The exposed surface should than be compacted to a depth of (1) foot below the cleared and grubbed surface to a minimum 98% of the standard or modified proctor density as determined in accordance with ASTM D-698. After densification of natural soils, fill material to finished grade shall be placed with a maximum lift of 6" and compacted to a minimum 98% of the standard or modified proctor density. Fill material shall be clean to slightly silty fine sand, free of organic material.

SUBMITTALS:

1. All construction shall meet requirements of all Local and State Building Codes.

2. Engineer of Record shall be notified of any deviation to this plan during construction.

3. Contractor shall retain the services of a certified material testing laboratory to conduct all required concrete & soils compaction testing. Results of all tests shall be submitted to the Engineer of Record for review.

MATERIALS:

1. Contractor shall submit cut sheets and erection drawings for all manufactured structural components (including concrete piles) to Engineer of Record for review.

2. Contractor shall verify all dimensions and conditions in the field as work progresses. All discrepancies and deviations from the plans shall be reported to the Engineer of Record.

3. All structural changes shall be signed & sealed by the Engineer of Record & re-submitted to the Building Department prior to installation.

PREFABRICATED WOOD TRUSSES:
Truss components shall be designed by others to withstand the wind loads for Components & Cladding as determined by ASCE 7-10, Chapter 30. Complete designs of each truss (profiles) and the truss layout plan shall be submitted to the Engineer of Record for review. Shop drawings shall bear the signature & seal of the Florida Registered Professional Engineer responsible for the design of the trusses.

Truss reactions & uplift on the host structure shall be determined based on appropriate live & dead loads and the Main Wind Force Resistance System criteria of ASCE 7-10. Net uplift forces shall be determined using the actual available dead load. ASCE 7-10 method of wind analysis shall be noted on the truss designs and the layout.

MATERIALS (Cont.):

CONCRETE:
Provide mix designed by a recognized testing laboratory to achieve a strength at 28 days as listed below with a plastic and workable mix:

5000 psi for all below-grade concrete pit walls and pit slabs
3000 psi or stronger is acceptable for all other structural components (slabs, monolithic footings, tie-beams, etc.)

Materials used to produce concrete and admixtures for concrete shall comply with ACI 318. Concrete shall comply with all requirements of ASTM C 150, ASTM C 595, or ASTM C 845. Concrete shall comply with all the requirements of ASTM Standard C94-74A for measuring, mixing, transporting, etc. Concrete tickets shall be time stamped when concrete is batched, the maximum time allowed from the time the water is added until it is deposited in its final position shall not exceed one and one half (1½) hours. If for any reason there is a longer delay than that stated above, the concrete shall be discarded. It shall be the responsibility of the testing lab to notify the owner's representative and the contractor of any non-compliance with the above. Concrete testing to be paid for by the contractor. Admixtures may be used only with the approval of the engineer. During hot weather, proper attention shall be given to the ingredients, production methods, handling, placing, protection and curing to prevent excessive concrete temperatures or water evaporation that may impair required strength or serviceability of the member or structure as per 1906.5 and 1906.7 of the Florida Building Code.

MASONRY:
All Masonry work shall be done in accordance with "Building Code Requirements for Masonry Structures (ACI 530)" & "Specifications for Masonry Structures (ACI 530.1)"

1. Concrete masonry units shall be Grade "N" Hollow Load Bearing Units, conforming to ASTM C-90 with a minimum compressive strength (f'm) of 1500 psi.

2. Mortar: Type M or S and shall conform to ASTM C-270.

3. Grout or pea-gravel concrete with an ultimate compressive strength of 3000 psi at 28 days, except for those locations as marked or noted on the structural drawings. Corefill mix shall conform to ASTM C-476.

4. Air-Entraining mixtures or hydrated lime containing air-entraining mixtures are prohibited because such admixtures will reduce the shear, tensile and compressive strength of the masonry. Calcium chloride is not permitted in mortar or grout in which reinforcement, metal ties, or anchors are embedded because of excessive corrosion.

MATERIALS (Cont.):

METAL:
1. All steel plates, bolts, washers, nuts, fasteners, hangers, straps and clips shall be "Z-MAX" (Salt air exposure) galvanized or stainless steel - (Simpson Products or equal).

2. Steel plates and rolled steel members shall conform to ASTM A36 unless noted otherwise. Bolts, nuts and washers shall conform to ASTM A307 unless noted otherwise.

3. Lag bolts, nails, screws, hangers, straps, and clips shall be fabricated from appropriate materials and H.D.G. (Hot-dipped Galvanized) to meet conditions shown.

4. All handrails, guardrails and steel framing components (not including walking surfaces) shall be painted with rust-proof primer and shall be finished with safety yellow paint.

GLUE:
Glue used in the field for assembling wood products shall be waterproof exterior grade equal to or better than Liquid Nails.

EXTERIOR DOORS & LOUVERS:
1. All exterior windows, louvers & doors are required to be tested in accordance with ANSI/AMMA/NWWDA 101/IS2 standard and bear an AMMA or WDMA label identifying the manufacturer, performance characteristics, and approved product testing entity.

REINFORCING STEEL:
Reinforcing shall be ASTM A615 Grade 60, free from oil, scale and rust, and placed in accordance with the typical bending diagram and placing details and ACI 318 Standards and Specifications. Reinforcement shall be deformed reinforcement, except that plain reinforcement shall be permitted for spirals or tendons.

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2010 FLORIDA BUILDING CODE. THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY
10-7-14	WIND SPEED	TS

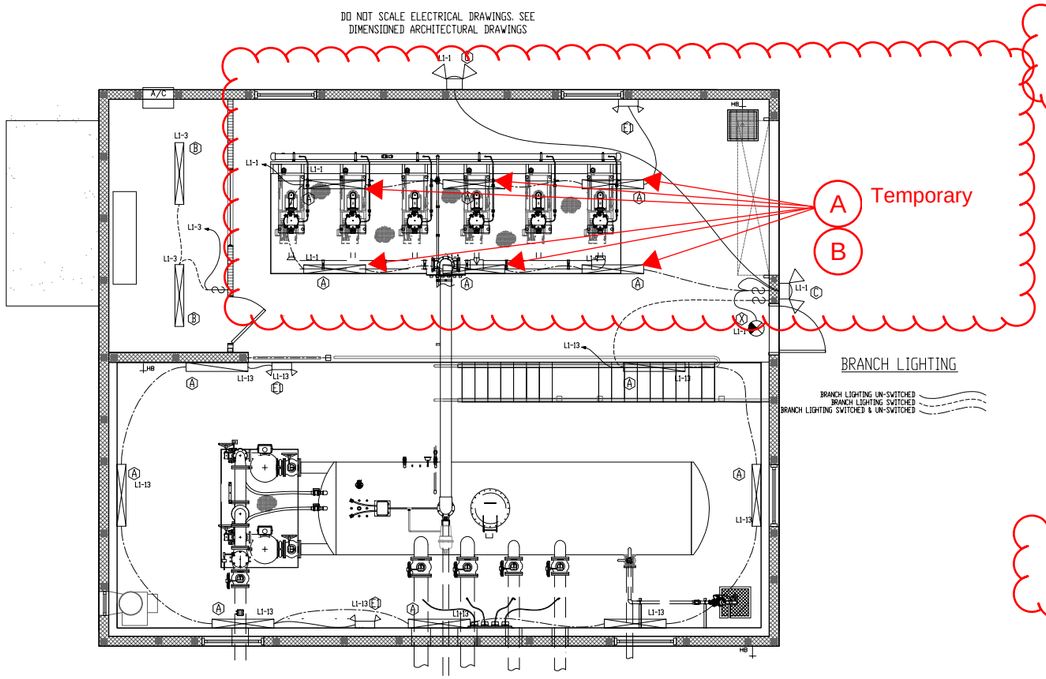
GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

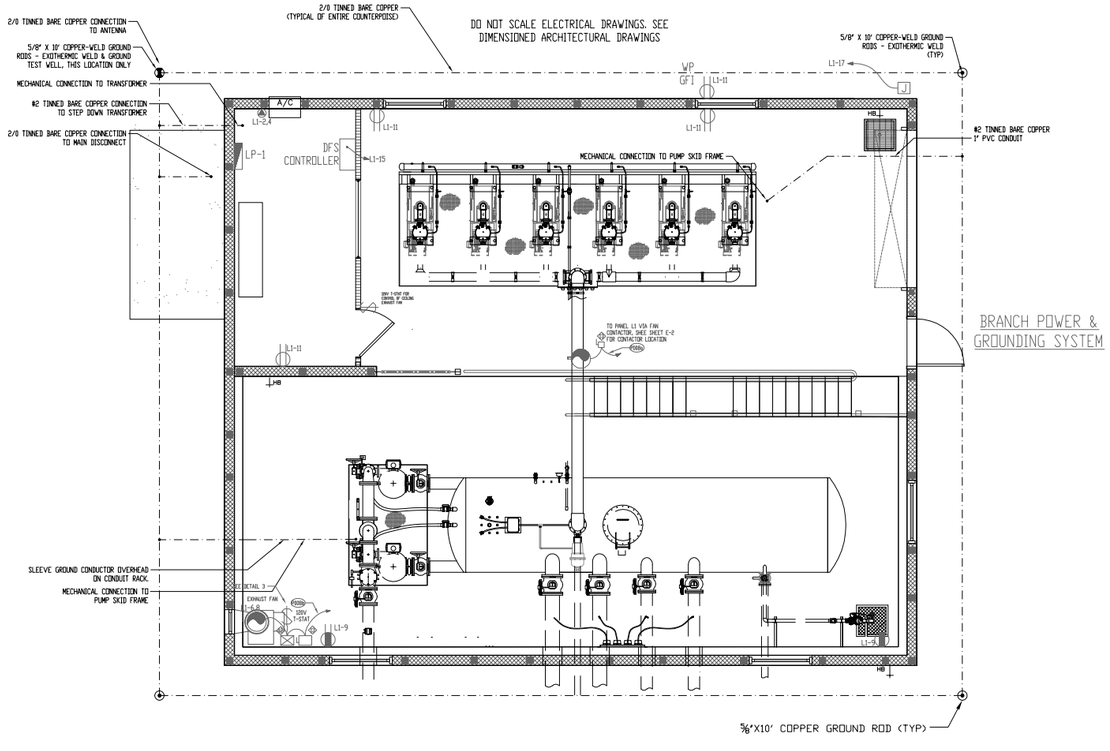
DATE:	08/14
DRAWN:	TS
CHK'D BY:	JB

Charlotte County Government
Spring Lake
Vacuum Station

MISCELLANEOUS DETAILS

Spring Lake Vac. Sta.
SHEET: 18 OF 18
GWE NO. 6176.00





LIGHTING FIXTURE SCHEDULE		
A	WILLIAMS 92-4-232-A-WET/2-SSLATCH-EB2-UNV (2) F32T8 LAMPS	1 X 4 SURFACE MOUNT GASKETED VP FLUORESCENT
B	LUMINAIRE VPF84-2F32T8-120-CP-GRY (2) F32T8 LAMPS	1 X 4 SURFACE MOUNT ENCLOSED FLUORESCENT
C	PHILIPS LP16T LED LAMP	DUAL HEAD LED WITH MOTION SENSOR
E1	WILLIAMS EMER/CP-WHT 2 - 5.4WATT INC (INCLUDED)	DUAL HEAD EMERGENCY LIGHT CONNECT TO UN-SWITCHED LIGHTING CIRCUIT IN THAT AREA
X	WILLIAMS EXIT-R-EM-WHT LED	EXIT LIGHT UNIVARSAL MOUNT CONNECT TO UN-SWITCHED LIGHTING CIRCUIT IN THAT AREA

B

NEW WORK

- A Remove
- B Replace
- C Repair
- D Paint

BRANCH LIGHTING AND POWER GENERAL NOTES:

1. ALL EXPOSED CONDUIT SHALL BE RIGID ALUMINUM, BELOW GRADE CONDUIT SHALL BE PVC-80
2. MC CABLE PERMISSIBLE FOR CONCEALED FIXTURE CONNECTION ONLY
3. ALL POWER CONDUCTORS SHALL BE THHN/THWN-2 COPPER
4. MINIMUM BRANCH POWER CONDUCTOR #12
5. MINIMUM INDOOR BRANCH LIGHTING AND RECEPTACLE CONDUIT ½"
6. DUPLEX RECEPTACLES SHALL BE 20A SPECIFICATION GRADE (LEVITON 5362)
7. LIGHTING SWITCHES SHALL BE 20A SPECIFICATION GRADE (LEVITON 1221)
8. CEILING FLUORESCENT TO BE FASTENED TO DRYWALL WITH 3/16" X 3" EXPANDING TOGGLE BOLTS
9. WALL MOUNTED FLUORESCENT TO BE FASTENED WITH 1/4" STAINLESS SLEEVE ANCHORS
10. EXIT & EMERGENCY LIGHTING TO BE CONNECTED TO THE UN-SWITCHED LIGHTING CIRCUIT IN THE AREA WHERE INSTALLED
11. VERIFY LOCATION AND CIRCUIT REQUIREMENTS FOR WALL MOUNTED ELECTRICAL ROOM AC
12. SEE SHEET E-3 FOR NOTED EQUIPMENT SCHEDULE
13. TAP-CON TYPE ANCHORS WILL NOT BE PERMITTED FOR ATTACHING EQUIPMENT TO EXTERIOR WALLS.
14. CUPOLA EXHAUST FAN CONTACTOR TO BE LOCATED ADJACENT TO PANEL L1.

B

PANELBOARD DESIGNATION LP1

125A MAIN BREAKER PANEL, 120/240V 3P 4W N-1 SURFACE

SERVICE ORIGINATION POINT PANEL MDP VIA T-1

	CB SIZE	LOAD (VA)	CKT #	PHASE LOAD (VA) 'A'	'B'	'C'	CKT #	LOAD (VA)	CB SIZE	
INDOOR LIGHTING	20	1290	1	4170			2	2880	30	A/C UNIT
EXTERIOR LIGHTING	20	500	3		3380		4	2880		
CUPOLA FAN	20	1200	5			2400	6	1200	20	EXHAUST FAN
		1200	7	2400			8	1200		
BRANCH RECEPTACLE	20	1500	9		4700		10	3200	60	GENERATOR PANEL 'GEN-1'
BRANCH RECEPTACLE	20	720	11			3920	12	3200		
INDOOR LIGHTING	20	1200	13	1920			14	720	20	BRANCH RECEPTACLE
DFS CONTROL PANEL	20	1200	15		1200		16			SPACE
SUMP PUMP J-BOX	20	1500	17			3000	18	1500	20	SPARE
			19	0			20			
			21		0		22			
			23			0	24			
			25	0			26			
			27		0		28			
			29			0	30			
					TOTALS					
				8490.0	9280.0	9320.0				
CONNECTED AMPS=	75.20			70.75	77.33	77.67				
CONNECTED KVA=	27.09									

VOLTAGE	208Y/120	MAINS RATING	125	AMP	XXX M/B	#1	FEEDER CONDUCTORS
SURFACE	XXX	BREAKER RATING	125	AMP	MLO	#1	NEUTRAL CONDUCTORS
FLUSH		FAULT CURRENT	10K	AIC		#6	GROUNDING CONDUCTOR

CONSTRUCTION DRAWINGS

Bay Area Electric, Inc.
6244 Clark Center Ave. • Unit-2 • Sarasota, FL 34238
Phone 941.921.9067 Fax 941.921.9066
www.bayareaelectricfl.com EC13001351 EC0001556

DATE	REVISION	BY
9/18/14	ELECTRICAL/CONTROL REVISIONS	MG
5/12/15	AIR-VAC REQUIRED REVISIONS	MG

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
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Phone (941)475-7981
Fax (941)474-4285

DATE: 09/14

Charlotte County Government
Spring Lake
Vacuum Station

Spring Lake Vac. Sta.
SHEET: E1 OF E7
GWE NO. 6176.00

EQUIPMENT POWER & CONTROLS DISTRIBUTION SYSTEM

KEYED CONTROL NOTES

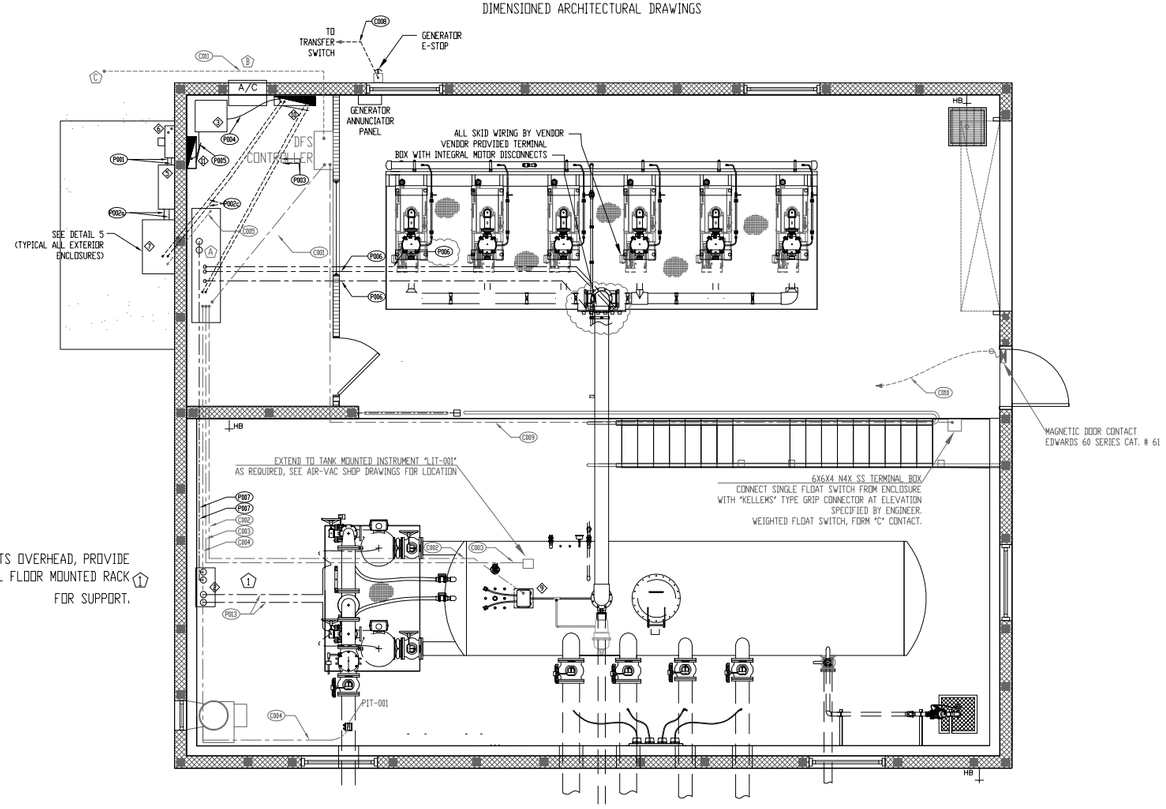
A VERIFY EXACT CONDUIT STUB UP LOCATIONS IN AIR-VAC CONTROL PANEL PRIOR TO ROUGH-IN

B ANTENNA CONDUIT SHALL BE INSTALLED AS TO ELIMINATE ALL TIGHT BENDS, MINIMUM 11" RADIUS ELBOWS.

C VERIFY ANTENNA LOCATION PRIOR TO ROUGH-IN

- SEE SHEET E-4 FOR NOTED EQUIPMENT SCHEDULE
- SEE SHEET E-3 FOR SITE INSTALLATION

DO NOT SCALE ELECTRICAL DRAWINGS. SEE DIMENSIONED ARCHITECTURAL DRAWINGS



ROUTE CONDUITS OVERHEAD, PROVIDE STAINLESS STEEL FLOOR MOUNTED RACK (1) FOR SUPPORT.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT			CONDUCTOR			DESCRIPTION		
				INSULATION				
DESIGNATION	SIZE	TYPE	QTY. - AWG	TYPE	VOLTS	FROM	TO	NOTES
P-001	(2) 3"	PVC-80 AL	3-350; 1-250N	THHN	600	UTILITY TRANSFORMER	METER / MAIN DISCONNECT	
P-002a	(2) 3"	PVC-80 AL	3-350; 1-250N; 1-2/0 GND.	THHN	600	MAIN DISCONNECT	TRANSFER SWITCH	
P-002b	(2) 3"	PVC-80 AL	3-350; 1-250N; 1-2/0 GN.	THHN	600	GENERATOR	TRANSFER SWITCH	
P-002c	(2) 3"	PVC-80 AL	3-350; 1-250; 1-2/0 GND	THHN	600	TRANSFER SWITCH	PANEL MDP	
P-003	(2) 3"	AL	3-3/0; 1-2/0 N; 1-#3 GND	THHN	600	PANEL - MDP	MAIN PUMP CONTROL PANEL	VERIFY CONTROL PANEL TERMINATION POINT PRIOR TO ROUGH-IN
P-004	1"	FMC	3-#6; 1-#8 GND.	THHN	600	PANEL - MDP	TRANSFORMER T-1	
P-005	1.5"	FMC	3-#1; 1-#1N 1-#6 GND	THHN	600	TRANSFORMER T-1	PANEL L1	
P-006	(2) 1"	AL	6-#10; 1-#10 GND	THHN	600	MAIN PUMP CONTROL PANEL	VACUUM PUMP JUNCTION BOX	ONE CONDUIT FOR TWO PUMPS, DO NOT EXCEED 80% DERATING FACTOR.
P-007	(2) 1.5"	AL	3-#1; 4-#14; 1-#6 GND	THHN	600	MAIN PUMP CONTROL PANEL	SEWAGE PUMP DISCONNECT ENCLOSURE	ONE CONDUIT FOR EACH PUMP, #14 CONDUCTORS - MOISTURE SENSOR & THERMAL SENSOR
P-008a	.75"	AL	3-#12; 1-#12 GND.	THHN	600	PANEL - L1	CUPOLA EXHAUST FAN	ROUTE FEEDERS THROUGH CONTACTOR
P-008b	.75"	AL	3-#12; 1-#12 GND.	THHN	600	PANEL - L1	LOWER LEVEL EXHAUST FAN	ROUTE FEEDERS THROUGH CONTACTOR
P-009	1"	PVC-80 AL	2-#6; 1-#8 N; 1-#8 GND	THHN	600	PANEL L1	GENERATOR ENCLOSURE LOAD CENTER	CONFIRM REQUIREMENTS WITH GENERATOR MANUFACTURER
P-010	.75"	AL	1-#12; 1-#12 N; 1-#12 GND	THHN	600	PANEL - L1	BRANCH LOADS	SEE SHEET E-1 AND E-2 FOR LOCATIONS
P-011	.75"	AL	2-#10; 1-#10 GND	THHN	600	PANEL - L1	WALL AC	VERIFY LOCATION OF UNIT PRIOR TO ROUGH-IN
P-012	.75"	AL	1-#12; 1-#12 N; 1-#12 GND	THHN	600	PANEL - L1	BRANCH LIGHTING	MC CABLE ALLOWED FOR BRANCH LIGHTING CONCEALED WHIPS ONLY
P-013	(2) 1.5"	AL	3-#1; 4-#14; 1-#6 GND	THHN	600	SEWAGE PUMP DISCONNECT ENCLOSURE	SEWAGE PUMP	
P-014	.75"	AL	1-#12; 1-#12 N; 1-#12 GND	THHN	600	PANEL - L1	DFS CONTROLLER	
C-001	.75"	AL	1-CAT-5e			MAIN PUMP CONTROL PANEL	DFS CONTROLLER	AIRVAC/PLC INTERFACE CABLE
C-002	.75"	AL	9-#14; 1-#14 GND.	THHN	600	MAIN PUMP CONTROL PANEL	VACUUM TANK JUNCTION BOX	DUAL GROUNDING CONDUCTORS, ONE FOR ISOLATION VALVE POWER, ONE FOR PROBES
C-003	.75"	AL	1-#16TSP		600	MAIN PUMP CONTROL PANEL	LIT-001 VACUUM TANK LEVEL INSTRUMENTS	LIT-001
C-004	1"	AL	1-#16TSP	THHN	600	MAIN PUMP CONTROL PANEL	PIT-001 FORCE MAIN PRESSURE TRANSMITTER	
C-005	.75"	AL	7-#14; 1-#12 GND.	THHN	600	MAIN PUMP CONTROL PANEL	AUTOMATIC TRANSFER SWITCH	
C-006	1"	PVC-80 AL	8-#14; 1-#18TSP; 1-#12 GND.	THHN	600	GENERATOR CONTROL PANEL	GENERATOR ANNUNCIATOR	ANALOG AND DISCRETE SIGNAL. CONFIRM CABLE REQUIREMENT WITH GENERATOR PROVIDER
C-007	1"	PVC-80 AL	8-#14; 1-#12 GND.	THHN	600	GENERATOR CONTROL PANEL	TRANSFER SWITCH	DISCRETE SIGNAL, CONFIRM CABLE REQUIREMENT WITH GENERATOR PROVIDER
C-008	.75"	PVC-80 AL	2-#14; 1-#12 GND.	THHN	600	GENERATOR CONTROL PANEL	E-STOP SWITCH	
C-009	.75"	AL	2-#14; 1-#12 GND.	THHN	600	DFS CONTROLLER	LOWER LEVEL FLOAT SWITCH "LEVEL INDICATOR"	CONFIRM FLOAT SWITCH ELEVATION WITH ENGINEER PRIOR TO INSTALLATION
C-010	.5"	AL	2-#14	THHN	600	DFS CONTROLLER	DOOR INTRUSION SWITCH	L-V N-O DOOR CONTACT FROM RTU SWITCH RATED 30V, 250mA
C-011	1.25"	PVC-80 AL	PULL STRING			DFS CONTROLLER	ANTENNA LOCATION	USE LONG RADIUS SWEEPS, 11" RADIUS MINIMUM
G-001	1.25"	PVC-80	1-2/0 GND.	BARE COPPER	NA	MAIN SERVICE GROUNDING COUNTERPOISE	MAIN DISCONNECT	
G-002	.75"	PVC-80	1-#6 GND.	BARE COPPER	NA	MAIN SERVICE GROUNDING COUNTERPOISE	TRANSFORMER T-1	

SERVICE DISTRIBUTION AND EQUIPMENT CONNECTION GENERAL NOTES:

1. ALL ABOVE GRADE CONDUIT SHALL BE RIGID ALUMINUM
2. ALL BELOW GRADE CONDUIT SHALL BE PVC-80
3. ALL POWER CONDUCTORS SHALL BE THHN/THWN-2 COPPER UNLESS OTHERWISE NOTED
4. ALL EXTERIOR FASTENERS TO BE STAINLESS STEEL
5. ALL EXTERIOR MOUNTING CHANNEL SHALL BE ALUMINUM
6. ALL BELOW GRADE GROUNDING CONNECTIONS TO BE EXOTHERMIC WELDS
7. MINIMUM BRANCH POWER CONDUCTOR #12, MINIMUM DISCRETE CONTROL CONDUCTOR #14
8. ANALOG SIGNAL CABLE - #16TSP BELDEN 8719 (OR EQUAL)
9. MINIMUM EQUIPMENT CONNECTION CONDUIT ¾"
10. FLEXIBLE CONDUIT SHALL BE LIQUID-TITE FLEXIBLE METAL TYPE-EF.

PROVIDE FOR INFORMATION

CONSTRUCTION DRAWINGS

Bay Area Electric, Inc.
6244 Clark Center Ave. • Unit-2 • Sarasota, FL 34238
Phone 941.921.8067 Fax 941.921.9066
www.bayareaelectricfl.com EC13001351 EC0001556

DATE	REVISION	BY
9/18/14	ELECTRICAL/CONTROL REVISIONS	MG
5/12/15	AIR-VAC REQUIRED REVISIONS	MG

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

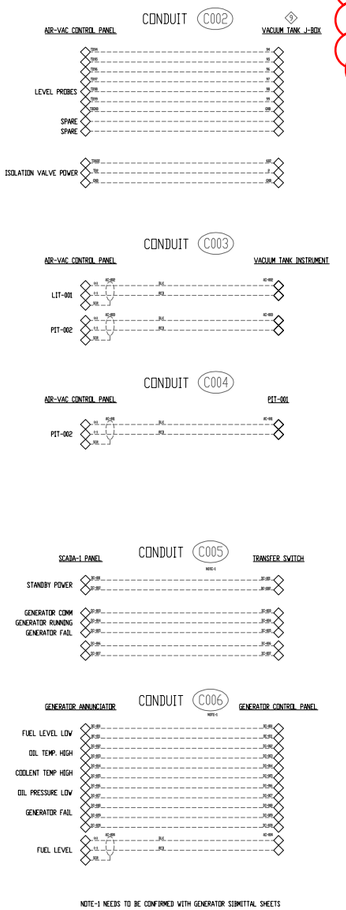
DATE: 08/14

Charlotte County Government
Spring Lake
Vacuum Station

Spring Lake Vac. Sta.
SHEET: E2 OF E7
GWE NO. 6176.00

ELECTRICAL SPECIFICATIONS

CONTROL INTERCONNECT SCHEMATIC



NOTE-1 NEEDS TO BE CONFIRMED WITH GENERATOR SUBMITTAL SHEETS

1. SCOPE

The scope of the work covered herein consists of furnishing all labor, materials, necessary equipment and services to complete the Electrical Work and related work in full accordance as indicated on the drawings, as specified herein or both and subject to the terms and conditions of the Contract.

All items noted herein, shown by the electrical plans, or reasonably to be interpreted from the plans necessary to complete the electrical system shall be provided and installed under the work of this Section, whether same are specifically mentioned herein or not.

2. CODES, RULES, PERMITS, FEES

The Contractor is generally responsible to insure all work, both old and new, complies with the NEC and any applicable local and state codes and ordinances.

3. DRAWINGS

Drawings are diagrammatic and indicate the general arrangement of systems and work included in the contract. Drawings are not to be scaled. The Architectural drawings and details shall be examined for exact location of fixtures and equipment. Any conflict shall be immediately brought to the attention of the Engineer before proceeding with the work.

4. SHOP DRAWINGS

The contractor shall submit six (6) copies for approval of detailed shop drawings of all equipment and all material required to complete the project to the Engineer.

Materials or products specified herein and/or indicated on drawings by trade name, manufacturer's name or catalog number shall be provided as specified.

5. COOPERATION WITH OTHER TRADES

The contractor shall give full cooperation to other trades and shall furnish in writing to the Contractor, with copies to the Engineer, any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay. Coordinate all conduit runs and equipment with other trades. Verify nameplate electrical data of actual equipment furnished by others before beginning installation.

6. CUTTING, PATCHING, AND FINISHING

The Contractor shall do all cutting, drilling, etc. required for work under this section of the specifications, inside and outside the building, including preparing of finished surfaces, all required shoring and bracing, and all protection for safety of persons and property.

7. EXCAVATING AND BACK FILLING

The contractor shall do all trench and pit excavating and backfilling required for work under this section of the specifications, inside and outside the building, including repairing of finished surfaces, all required shoring, bracing, pumping, and all protection for safety of persons and property.

8. MATERIAL AND WORKMANSHIP

All materials and apparatus required for the work shall be new unless indicated otherwise on the plans.

Contractor shall provide and install all electrical as shown, verifying all mounting heights and exact locations of all wall-mounted electrical devices with architect prior to rough-in.

Connections and junction boxes to equipment are diagrammatic. Verify exact location of connection to specific equipment and devices.

9. PANELBOARDS

Panels shall be as manufactured by Square D or equal of equivalent of sizes, ratings, and requirements shown on the plans. 480v Panels shall be of dead front construction . All bussing shall be copper. Existing panels may be reused if in good condition.
Minimum width of 480v panels shall be 20".
240v Panels shall be of dead front construction . All bussing shall be copper. Existing panels may be reused if in good condition.
Minimum width of 240v panels shall be 14".

New circuit breakers shall be 20A minimum. Multi-pole breakers shall have a single handle to trip all poles at once. AIC rating of breakers shall match AIC rating of panel.

A laminated black plastic with white lettering plastic nameplate with the identification number as shown on the panel schedule shall be mounted on the outside of the door with sheet metal screws. Nameplate size shall be 3" wide x 1-1/2" high with 1/2" high engraving. Provide a completed circuit directory, typed and mounted in a clear plastic sleeve, on the interior of the panel door.

10. GROUNDING

Provide a complete grounding network for the entire electrical system to comply with NEC requirements as indicated on drawings.

All conduits shall have a ground wire installed. Conduit shall not be used as a ground.

Bond service entrance ground to building steel, metal water mains, main electrodes, etc.

11. DISCONNECT SWITCHES

Equipment disconnect switches shall be Square D, G.E., ITE or equivalent heavy duty of the type and ratings shown on the plans. Fuses shall be provided of the appropriate type and rating for the equipment to be served.

12. MISCELLANEOUS EQUIPMENT

a. Switches - All general use lighting (SPST toggle with or without pilot) switches to be rated 20A., 120-277V. as manufactured by Leviton, Lutron, P & S, or equivalent. Coordinate color with Owner/Architect.

b. Receptacles - All general use duplex receptacles to be rated 20A., 120V as manufactured by Leviton, Lutron, P & S, or equivalent. Coordinate color with Owner/Engineer.

c. Power/lighting circuits - All power/lighting circuits 100A or less shall be as indicated on the wire and conduit schedule. Other circuits shall be as shown on the plans.

d. Homeruns - All homeruns shall be a minimum of 3/4" conduit w/maximum 40% fill.

e. Conductors - All conductors shall be rated 600V, copper, type THW, THHN/THWN, XHHW. Wire/conduit sizing/fill is based upon type THW conductors, conductors of #12 AWG and larger shall be stranded.

f. Timers - A Tork #T920L shall be used for lighting control. Multiple units may be required for all controlled circuits shown on the plans.

g. Photo Control - A Tork #2100 shall be mounted where shown on the drawings.

h. Lighting fixtures - Lighting fixtures shall be as indicated on the fixture schedule or approved equals.

13. CONDUIT

Below Grade & concealed locations shall be PVC SCH. 80.
Exposed interior and exterior locations shall be aluminum.

Aluminum conduit in contact with concrete or earth shall have two coats of bitumastic to a point 6" above finished grade or concrete slab.

Flexible connection to equipment shall be with liquid-tite flexible metal conduit. Liquid-tite flexible metal conduit sittings shall have insulated throats.

Type M/C cable shall be permitted for lighting branch wiring only where concealed above hard ceiling & installation shall meet NEC-2008

Conduit entrance into enclosures shall be made by conduit hubs in order to maintain the NEMA integrity of the enclosure.

Sizes indicated are minimums, larger sizes may be used to facilitate wire pulls, etc.

14. EQUIPMENT FURNISHED BY OTHERS

Contractor shall provide all conduit, wire and disconnect switches to connect electrical equipment supplied by others which shall include both new and relocation of existing equipment. All final electrical connections are to be by Contractor.

15. RECORD DRAWINGS

The Contractor shall keep accurate records of actual construction including device locations and conduit runs if different from the plans.

The Contractor shall provide the owner with a reproducible set in CAD format of plans depicting the complete electrical system as installed (as built drawings). The scale on these as built drawings shall be no smaller than the scale used on the original plans.

16. TESTING

Ground system test shall be made and test report furnished to the engineer.
Function test shall be completed only after the engineer has confirmed that the installation is complete.

17. FINAL ACCEPTANCE

After testing a final inspection shall be made by the Engineer and other authorized persons with the Contractor.

Final acceptance of the project shall not prejudice the Owner's right to require replacement and/or repair of any defective work or materials.

ELECTRICAL SYMBOL LIST

	SIMPLEX RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	44" AFF OR AS NOTED
	QUAD RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	QUAD RECEPTACLE 125V 20A	44" AFF OR AS NOTED
	MULTI POLE RECEPTACLE	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	FLUSH WITH FLOOR
	DUPLEX RECEPTACLE 125V 20A (1/2 RECEPTACLE SWITCHED)	16" AFF OR AS NOTED
GFI	DUPLEX RECEPTACLE 125V 20A GROUND FAULT	16" AFF OR AS NOTED
GFI	DUPLEX RECEPTACLE 125V 20A GROUND FAULT	44" AFF OR AS NOTED
$	SINGLE POLE SWITCH MTD. 48" AFF UNLESS OTHERWISE NOTED, MOTOR DUTY AS REQUIRED.	48" AFF OR AS NOTED
$MS	SINGLE POLE SWITCH MTD. 48" AFF UNLESS OTHERWISE NOTED, MOTION SENSOR	48" AFF OR AS NOTED
$2	2-POLE SWITCH MOUNTED AT 48" OR AT EQUIPMENT	48" AFF OR AS NOTED
$3	THREE-WAY SWITCH MTD. 48" AFF	48" AFF OR AS NOTED
$4	FOUR-WAY SWITCH MTD. 48" AFF	48" AFF OR AS NOTED
J	JUNCTION BOX	48" AFF OR AS NOTED
	DISCONNECT	48" AFF OR AS NOTED
	RECESSED LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE CEILING LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE WALL LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE CEILING FLUORESCENT LIGHTING FIXTURE, SEE SCHEDULE FOR REQUIREMENTS	
	RECESSED CEILING FLUORESCENT LIGHTING FIXTURE, SEE SCHEDULE FOR REQUIREMENTS	
	EMERGENCY EGRESS LTG. MTD. 7'-6" AFF OR AS NOTED, W/ BATTERY BACKUP	
	EXIT SIGN MTD. 7-6" AFF OR FROM CEILING, W/ BATTERY BACKUP FACES AND ARROWS AS INDICATED	
	COMBO EXIT / EL MTD. 7-6" AFF OR FROM CEILING, W/ BATTERY BACKUP FACES AND ARROWS AS INDICATED	
	PANEL	
	EXHAUST FAN	

BRANCH LIGHTING SWITCHED

BRANCH LIGHTING SWITCHED & UN-SWITCHED

BRANCH LIGHTING UN-SWITCHED

CONSTRUCTION DRAWINGS

Bay Area Electric, Inc.
6244 Clark Center Ave. • Unit-2 • Sarasota, FL 34238
Phone 941.921.9067 Fax 941.921.9066
www.bayareaelectricfl.com EC13001351 EC0001556

DATE	REVISION	BY
9/18/14	ELECTRICAL/CONTROL REVISIONS	MG
5/12/15	AIR-VAC REQUIRED REVISIONS	MG

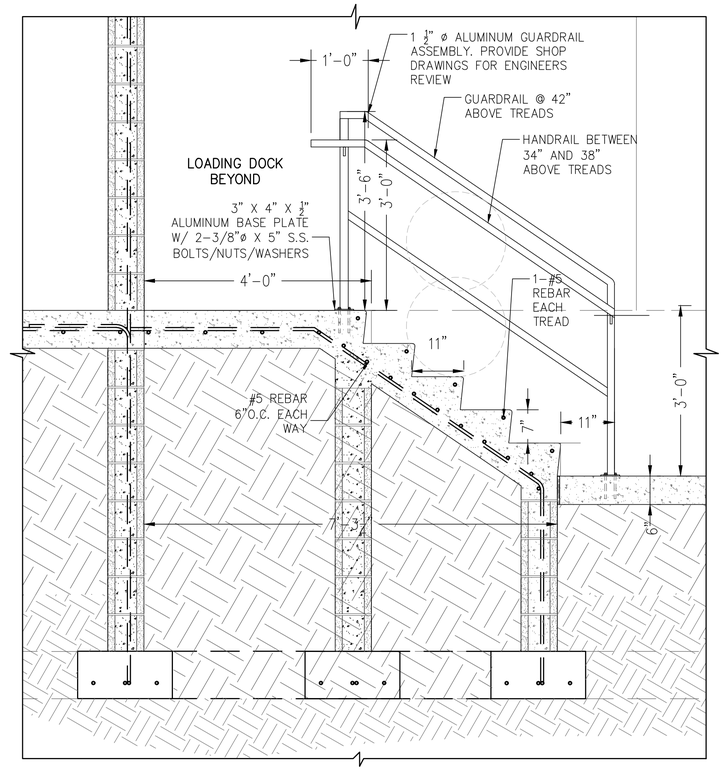
GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE: 08/14

Charlotte County Government
Spring Lake
Vacuum Station

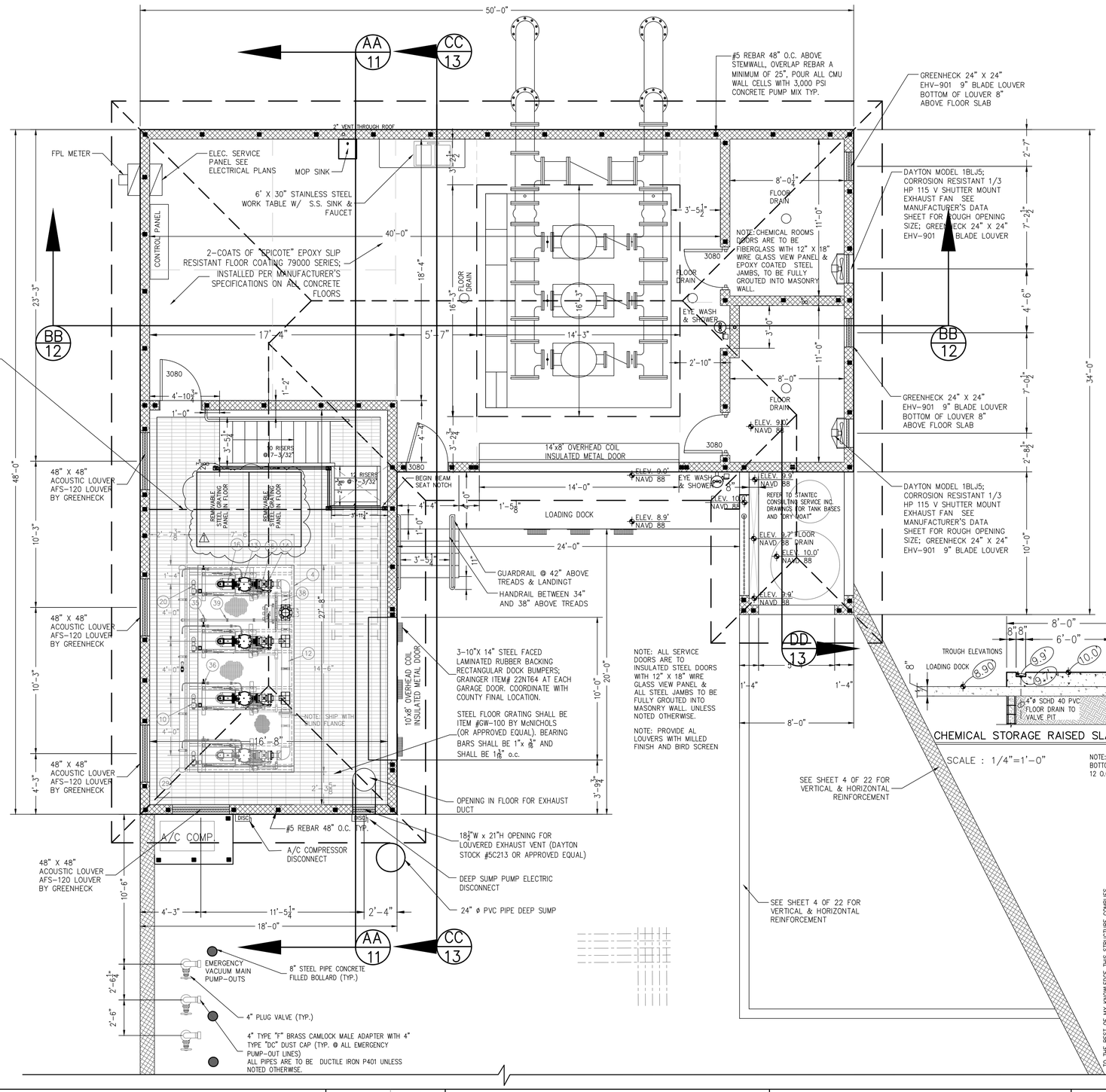
Spring Lake Vac. Sta.
SHEET: E6 OF E7
GWE NO. 6176.00

MATERIALS LIST	
#	DESCRIPTION
1.	VERTICAL CENTRIFUGAL SEWAGE PUMP 4NHTA, 25 HP 273 GPM @ 100 TDH
2.	VACUUM PUMP -- MINK MODEL 1502, 353 ACFM, 15 HP
3.	LEVEL SENSING PROBES INCLUDING GROUND AND HIGH LEVEL LOCKOUT
4.	STRUCTURAL STEEL SKID DECK
5.	AIRVAC ELECTRICAL CONTROL PANEL (SEE SEPARATE ELEC. DRAWINGS)
6.	6'-0" DIA., 2500 GALLON FIBERGLASS COLLECTION TANK (SEE SEPARATE DRAWING)
7.	ELECTRICAL JUNCTION BOX
8.	0-30" VACUUM / 0-100 PSI COMPOUND GAUGE
9.	0-30" HG VACUUM GAUGE ASSEMBLIES ON (1) GAUGE PANEL
10	2", 304 S.S. THREADED VACUUM PUMP EXHAUST PIPING
11	PIPE SUPPORTS AS REQUIRED (NOT ALL SHOWN FOR CLARITY)
12	6" SCH 80 PVC VACUUM HEADER ASSEMBLY
13	3" MOISTURE SEPARATOR ON INLET PIPING TO VACUUM PUMPS
14	3" LEVER OPERATED BUTTERFLY VALVE FOR VAC. PUMP INLET
15	3" FLANGED RESILIANT COATED SWING CHECK VALVE FOR VAC. PUMP INLET
16	3", 304 S.S. THREADED VACUUM PUMP INLET PIPING
17	4" RUBBER VIBRATION ISOLATORS
18	6" FLANGED FULL PORT RESILIENT PLUG VALVE W/ GEAR OPERATOR & HAND WHEEL
19	6" FLANGED FIBERGLASS PUMP SUCTION ASSEMBLY W/FITTINGS
20	2" WAFER STYLE CHECK VALVE
21	6" FLANGED CHECK VALVE WITH OUTSIDE WEIGHT AND LEVER
22	6" FLANGED PUMP DISCHARGE ASSEMBLY
23	1" EQUALIZING LINE ASSEMBLY
24	8" PLUG VALVE WITH GEAR OPERATOR AND CHAIN WHEEL ASSEMBLY
25	6" FLANGED FLOW METER
26	6" BUTTERFLY VALVE AND ACTUATOR
27	



ENTRY STAIR SECTION

SCALE : 3/4"=1'-0"



CHEMICAL STORAGE RAISED SLAB SECTION

SCALE : 1/4"=1'-0"

NOTE: 2 MATS; TOP & BOTTOM W/ #5 REBAR 12 O.C. EACH WAY

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2017 5TH EDITION FLORIDA BUILDING CODE.
THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. CRANE, P.E. #63584
STATE OF FLORIDA

DATE	REVISION	BY
4/29/19	REMOVABLE FLOOR GRATING	TS ⚠

GWE CERTIFICATE OF AUTHORIZATION #3607

GIFFELS-WEBSTER ENGINEERS, INC.

900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	01/18
DRAWN:	TS
CHK'D BY:	JC

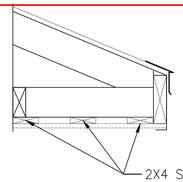
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
Myakka Pump & Vac. Station
4070 Railroad Avenue, Port Charlotte, FL 33953

FLOOR PLAN

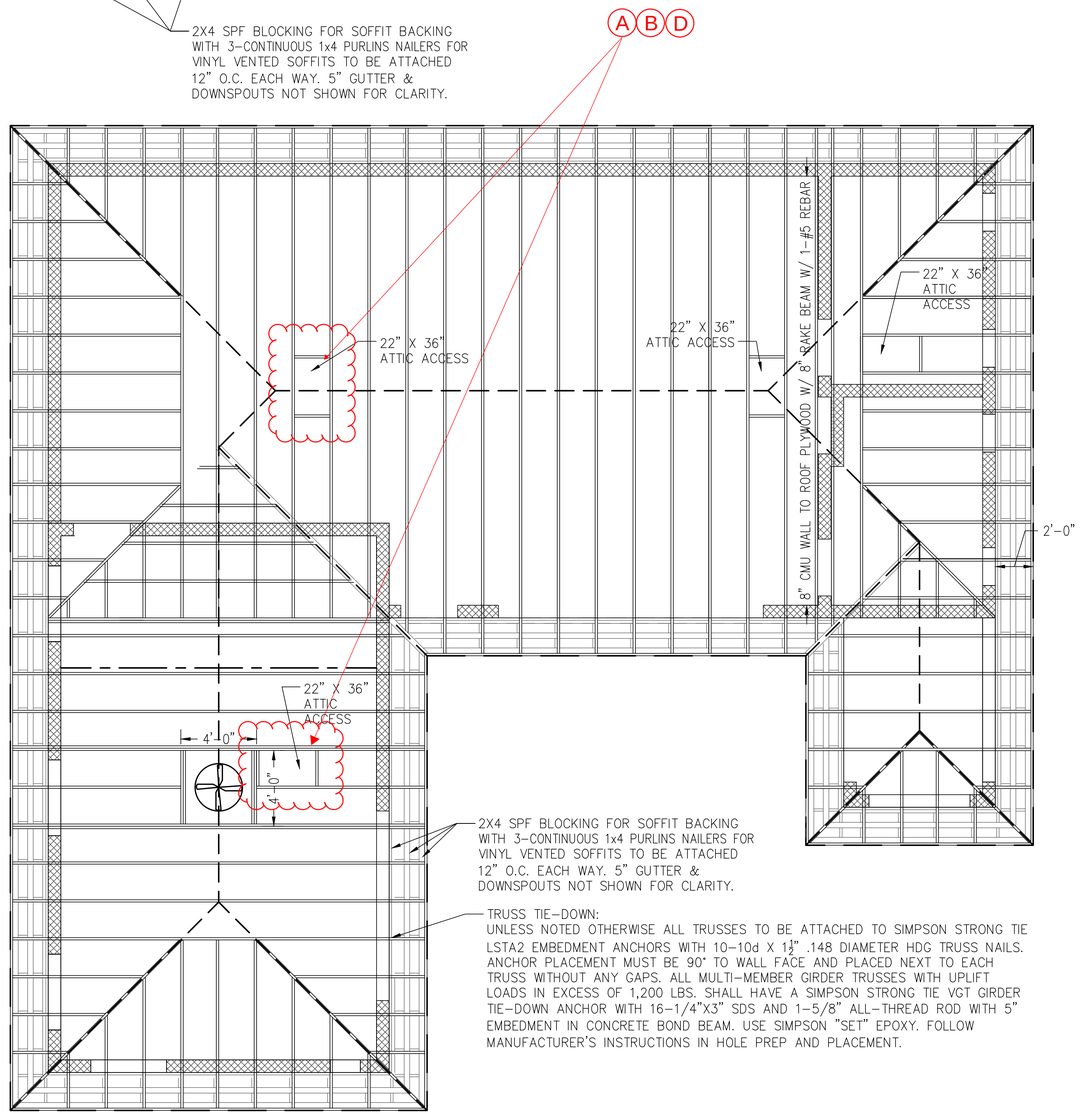
SCALE : 1/4"=1'-0"

Myakka Pump & Vac. Sta.
SHEET: 7 OF 22
GWE NO. 6354.00

S:\PROJECTS\6350\6354 El Jobean Site Vacuum Station\MP&EV Building_C.dwg, 8/12/2019 10:15:16 AM

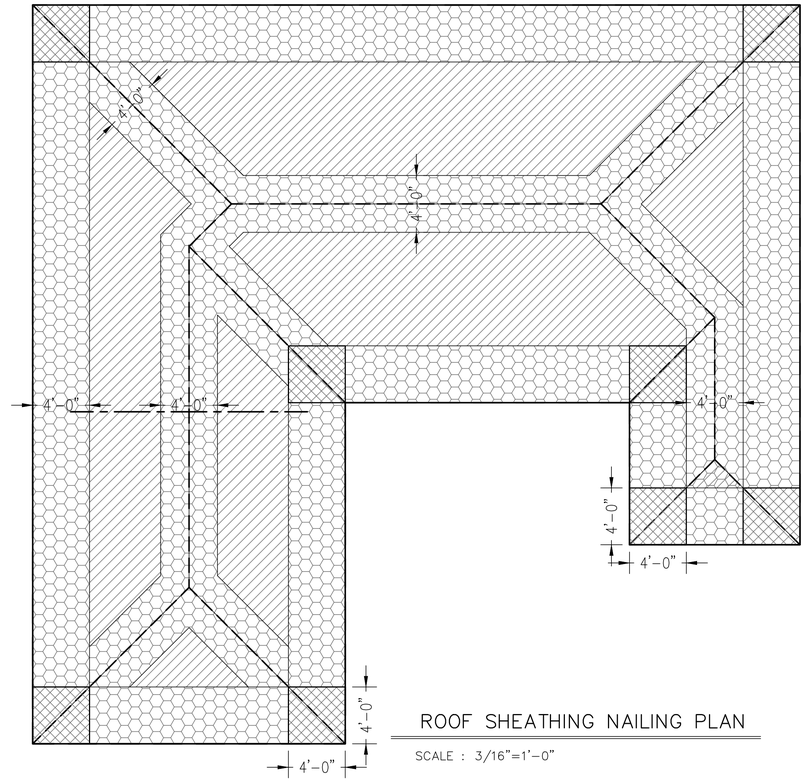


2X4 SPF BLOCKING FOR SOFFIT BACKING WITH 3-CONTINUOUS 1x4 PURLINS NAILERS FOR VINYL VENTED SOFFITS TO BE ATTACHED 12" O.C. EACH WAY. 5" GUTTER & DOWNSPOUTS NOT SHOWN FOR CLARITY.



ROOF TRUSS LAYOUT PLAN

SCALE : 1/4"=1'-0"



ROOF SHEATHING NAILING PLAN

SCALE : 3/16"=1'-0"

ROOF NAILING ZONES

DAMAGED (A) (B) ROOF SHEATHING TO BE 19/32" 5-PLY CDX PLYWOOD

ZONE 1
10d (3"X 0.148" RINGSHANK)
316 STAINLESS STEEL NAILS
@ 4" o.c. AT ALL EDGES;
6" o.c. IN FIELD

ZONE 2
10d (3"X 0.148" RINGSHANK)
316 STAINLESS STEEL NAILS
@ 3" o.c. AT ALL EDGES;
6" o.c. IN FIELD

ZONE 3
10d (3"X 0.148" RINGSHANK)
316 STAINLESS STEEL NAILS
@ 3" o.c. THROUGHOUT

NOTE: USE ZONE 3 NAILING PATTERN FOR CUPOLA ROOF.

NEW WORK

(A) Remove
(B) Replace
(C) Repair
(D) Paint

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2017 5TH EDITION FLORIDA BUILDING CODE.
THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607

900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	01/18
DRAWN:	TS
CHK'D BY:	JC

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
M□a□□a Boo□t□r Pum□ & E□Jo□□an Vacuum Station
4070 Rai□road A□□nu□, Port C□arott□, F□33953

ROOF TRUSS & ROOF NAILING PLAN
SCALE : VARIES

Myakka Pump & Vac. Sta.
SHEET: 10 OF 22
GWE NO. 6354.00

S:\PROJECTS\6300\6354 El Jobean Site Vacuum Station\MP&EY Building_C.dwg, 8/12/2019 10:27:25 AM

NOTE:
CARPENTER TO INSTALL ALL DRYWALL BACKING

A B
NOTE: FLASHING SHALL HAVE A MINIMUM THICKNESS OF 0.019 in (26 GAGE) AND SHALL BE GALVANIZED SHEET METAL. ZINC COATED PER G90.
FLASHING SHALL BE INSTALLED:
–AT WALL & ROOF INTERSECTIONS
–AT GUTTERS
–WHEREVER THERE IS A CHANGE IN ROOF SLOPE OR DIRECTION
–AROUND ROOF OPENINGS

A B METAL PANEL, STANDING SEAM ROOFING TO BE FASTENED PER MANUFACTURER'S SPECIFICATIONS FOR 162 mph (V–asd) WIND SPEED, (ASTM D 3161 CLASS H ROOFING)

ENGINEERED WOOD TRUSSES @ 24" o.c. (TYP. BY OTHERS)

2X4 SYP #2 LATERAL BRACE AT THIRD POINTS

B–5* AT THIRD POINTS BOLTED W/ ½" BOLT, NUT, & WASHERS TO BOTTOM CHORD OF TRUSS FOR LATERAL BRACING

A B 3–ROOF VENTS IN UPPER THIRD OF ROOF, SPACED EQUALLY ACROSS ROOF PLAN

GREENHECK 48"X30" LOUVER EHV–901 (2–SIDES)

DAYTON 36"ø WHOLE HOUSE FAN (GRAINGER ITEM #1LXN8) TO BE MOUNTED AT CEILING HEIGHT (APPROX. 100 lbs) ADD 3' WIDE WORK AREA ALL SIDES OF FAN WITH ¾" PLYWOOD & 2X FRAMING

30# FELT OR ADHESIVE ROOF DRY IN OVER 19/32" 5–PLY CDX PLYWOOD FASTENED PER NAILING SCHEDULE SHOWN ON ROOF FRAMING PLAN (TYP.) A B

OWENS CORNING 24" X 24" X 1–1/8" ACOUSTIC SOUND ABSORBING WALL PANELS 4' O.C. INSTALLED PER MANUFACTURER'S INSTRUCTIONS

8X24 FORM & POUR CONCRETE BOND BEAM WITH 2–#5 REBAR TOP, MIDDLE & BOTTOM & #3 STIRRUP/TIES 24" O.C. TYPICAL OF ALL CMU WALLS UNLESS NOTED OTHERWISE.

AIR FLOW

R–30 BATT INSULATION

SEE ROOF FRAMING PLAN FOR REQUIRED TRUSS TIE–DOWNS

8"W x 24"H FORM & POUR CONCRETE TIE–BEAM W/ 2–#5 BARS CONT. @ TOP, MIDDLE & BOTTOM W/ #3 STIRRUPS, RES 24" O.C. (PROVIDE 25" MIN. LAP FOR #5 BARS, TYPICAL)

5" GUTTERS & DOWNSPOUTS AROUND PERIMETER; 2 ¼" DRIP EDGE, 6" ALUMINUM FASCIA & VENTED SOFFIT ATTACHED 12" O.C.

A B D DAMAGED, TOUCH UP IF NEEDED

GREENHECK 48 x48 LOUVER AFS–120

STEEL FLOOR GRATING SHALL BE ITEM #GW–100 BY McNICHOLS (OR APPROVED EQUAL). BEARING BARS SHALL BE 1"x 1/16" AND SHALL BE 1 3/16" o.c.

W8x28x 20'L HOIST BEAM W/ DAYTON QUICK INSTALL TROLLEY, 8,000 LB (GRAINGER #25k804; CM LOW HEADROOM CHAIN HOIST, 4,000 LB. 20FT. (GRAINGER #5W560) ALLOWABLE LOAD 1 TON

TRUSS TO TRUSS CONNECTION BY TRUSS MANUFACTURE

FINISHED W/ PRIMER/SEALER & PAINT (TYP.)

5/8" TYPE X GYP. BRD. CLG. W/ 2 REMOVABLE ATTIC ACCESS 2'x4' PANELS. DRYWALL TO BE TAPED, FINISHED, & TEXTURE W/ PRIMER/SEALER (ORANGE PEEL FINISH) & PAINT (TYP.)

5" GUTTERS & DOWNSPOUTS AROUND PERIMETER; 2 ¼" DRIP EDGE, 6" ALUMINUM FASCIA & VENTED SOFFIT ATTACHED 12" O.C.

A B D DAMAGED, TOUCH UP IF NEEDED

GRADE "N" HOLLOW LOAD BEARING CONCRETE MASONRY UNITS, (CMU) WITH TYPE "M" MORTAR PER ASTM C–270., STRUCK JOINTS INSDE AND STUCCO PER ASTM C–926 OUTSIDE, FILL ALL CELLS WITH CONCRETE GROUT. SEE SHEET 6 OF 22 FOR HORIZONTAL AND VERTICAL REINFORCEMENT IN ADDITION TO #5 STANDARD HOOK AT 48" O.C. AND LADDER TYPE JOINT REINFORCEMENT EVERY THIRD COARSE.

APPLY ONE COAT OF PRIMER/SEALER & TWO COATS OF EXTERIOR PAINT OVER SKIP TROWEL STUCCO FINISH PER ASTM C–926 (TYPICAL)

ROUTE 2" S.S. NIPPLE & FNPTXFNPT UL LISTED 1–WAY FLOW 2" BRONZE BALL VALVE TO VACUUM PUMP EXHAUST PIPES TO 8" S.S. MANIFOLD USE 2" 150 PSI wsp, 1 PIECE 316 S.S, JACKETED MINERAL WOOL HEAT INSULATION AROUND ALL EXHAUST PIPES, ADAPT S.S. FITTINGS TO VACUUM PUMP AS REQD. TYP.

1½" I.D. STEEL PIPE GUARDRAILS @ 42" A.F.F. (TYP.)

2"x 4" KEYWAY W/ ADEKA ULTRA SEAL WATERSTOP (TYP.)

#5 STANDARD HOOK 48" O.C. TYP.
SEE SHEET 6 OF 22 FOR ADDITIONAL SLAB REINFORCEMENT

9.0 FINISH FLOOR NAVD 88

9.0'

8" DUCTILE IRON PIPE AND MJ FITTINGS, FKM GASKETS, P401 LINED (TYPICAL) FOR ALL UNDERGROUND EXHAUST PIPING

5.8'

4.2'

2.16'

EXHAUST PRESSURE TAP;BRASS ¼" NPT CONNECTION TO TRANSMITTER AT CONTROL PANEL

8" DUCTILE IRON VACUUM PUMPS EXHAUST PIPE TO ODOR CONTROL BED & 8" S.S. PIPE INSIDE OF BUILDING. SEE SITE PIPING PLAN

LINK–SEAL MODULAR SEALS FOR ALL THROUGH PIT WALL PIPE PENETRATIONS, FINAL INVERT ELEVATION T.B.D. ON FINAL ASSEMBLY.

6–3/8" BEAM SEAT IN 14" THICK WALL

GRAINGER ITEM # 5LWX7 ANVIL CLEVIS PIPE HANGER BOLTED TO FLOOR FRAMING 1–BEAM

6 MIL. POLYETHYLENE VAPOR BARRIER OVER TERMITE TREATED SOIL TYP.

WELL COMPACTED SOIL TYP.

NOTE: STAIR GUARDRAIL & HANDRAIL NOT SHOWN FOR CLARITY

2.16 BOTTOM OF 10" FOUNDATION NAVD 88

SEE DETAIL ON SHT. 6 OF 22 FOR FOOTING AND STEMWALL DETAILS

2"x 4" KEYWAY W/ WATERSTOP (TYP.)

FINISHED W/ PRIMER/SEALER & PAINT (TYP.)

USE XYPEX C–1000NF ADMIXTURE IN CONCRETE

STEEL FLOOR GRATING SHALL BE ITEM #GW–100 BY McNICHOLS (OR APPROVED EQUAL). BEARING BARS SHALL BE 1"x 3/16" AND SHALL BE 1 3/16" o.c.

7–3/32" RISER

3/16" WELD ALL AROUND

20" WIDE X 10" DEEP STEMWALL FOUNDATION WITH 3–#5 REBAR; OVERLAP ALL #5 REBAR 25" MIN. EMBED (DRILL & EPOXY) FOUNDATION REBAR INTO ALL ADJACENT WALL OR FOUNDATIONS 5" WITH SIMPSON "SET" EPOXY OR EQUAL.

6"ø PERFORATED PVC FRENCH DRAIN SYSTEM SET IN A 24" WIDE BY 18" HIGH #57 STONE BED AROUND ENTIRE THE PIT PERIMETER. USE WOVEN 12 OZ. FILTER CLOTH ON ALL SIDES OF FRENCH DRAIN. PROVIDE A 24"ø PVC PIPE RISER FROM BOTTOM OF THE FRENCH DRAIN SYSTEM TO GRADE WITH A VEHICLE RATED MANHOLE COVER FOR 1/2 HORSE SUBMERSIBLE PUMP. PROVIDE 4" SCHD 40 PVC CLEAN–OUT AT EACH CORNER. SEE DETAIL ON SHEET 19 OF 20

4.00 NAVD 88

6.00 NAVD 88

24" DEEP COMPACTED #57 STONE

2'–0" THICK COMPACTED #57 STONE

6 MIL. POLYETHYLENE VAPOR BARRIER OVER TERMITE TREATED SOIL, TYP.

NOTE: 8" VACUUM PUMP EXHAUST MANIFOLD AND FITTINGS, INSTALLED BELOW FLOOR SUPPORTS IS TO BE 8" 316 LSS SCH 40 PIPE AND FITTING. CONTRACTOR TO SUBMIT FINAL AS BUILT DIMENSIONED CONFIGURATION WITH SKID SHOP DRAWINGS.
NOTE: JACKETED MINERAL WOOL HEAT INSULATION AROUND ALL EXHAUST PIPE.

NEW WORK
A Remove
B Replace
C Repair
D Paint

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2017 5TH EDITION FLORIDA BUILDING CODE.
THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607

900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475–7981
Fax (941)474–4285

DATE:	01/18
DRAWN:	TS
CHK'D BY:	JC

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
M□a□□a Boo□t□r Pum□ & E□Jo□□an Vacuum Station
4070 Railroad A□nu□, Port C□arott□, F□33953

SECTIONS AA
SCALE : 3/8"=1'–0"

Myakka Pump & Vac. Sta.
SHEET: 11 OF 22
GWE NO. 6354.00

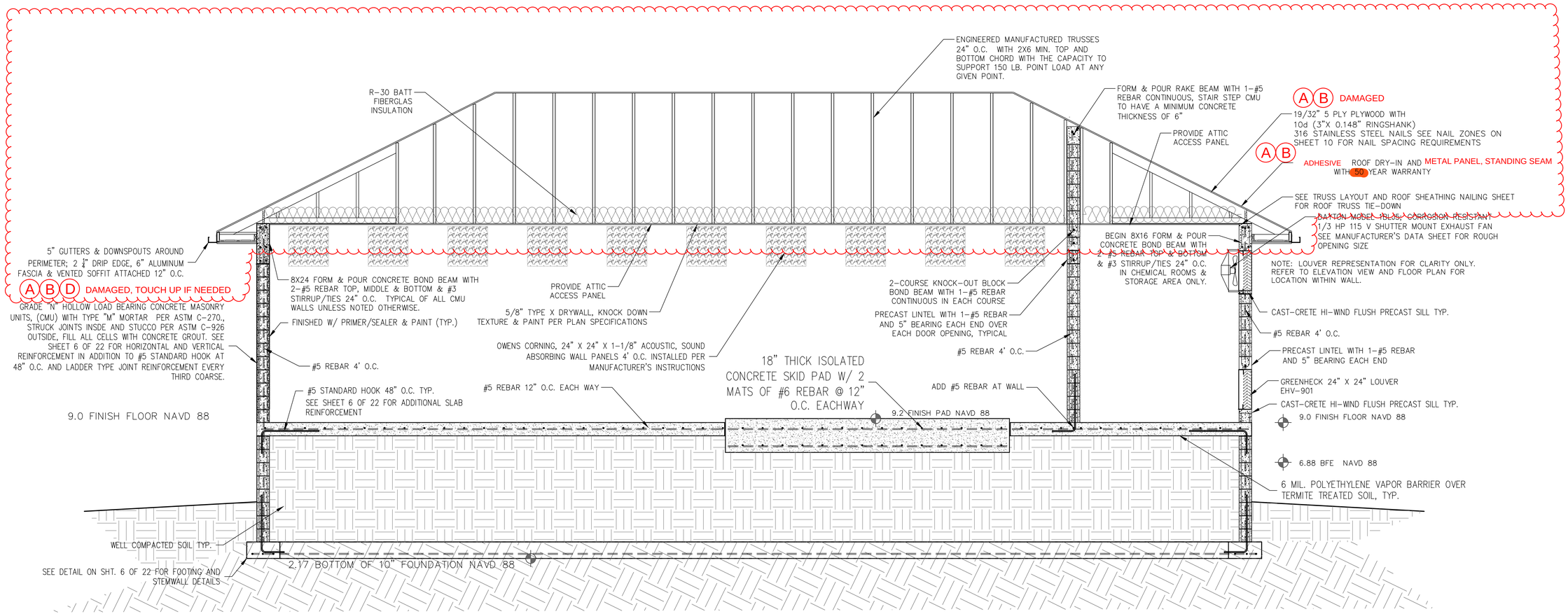
NEW WORK

(A) Remove

(B) Replace

(C) Repair

(D) Paint



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4070 Rai□road A□□nu□, Port C□arott□, F□33953

SECTIONS BB

SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.
SHEET: 12 OF 22
GWE NO. 6354.00

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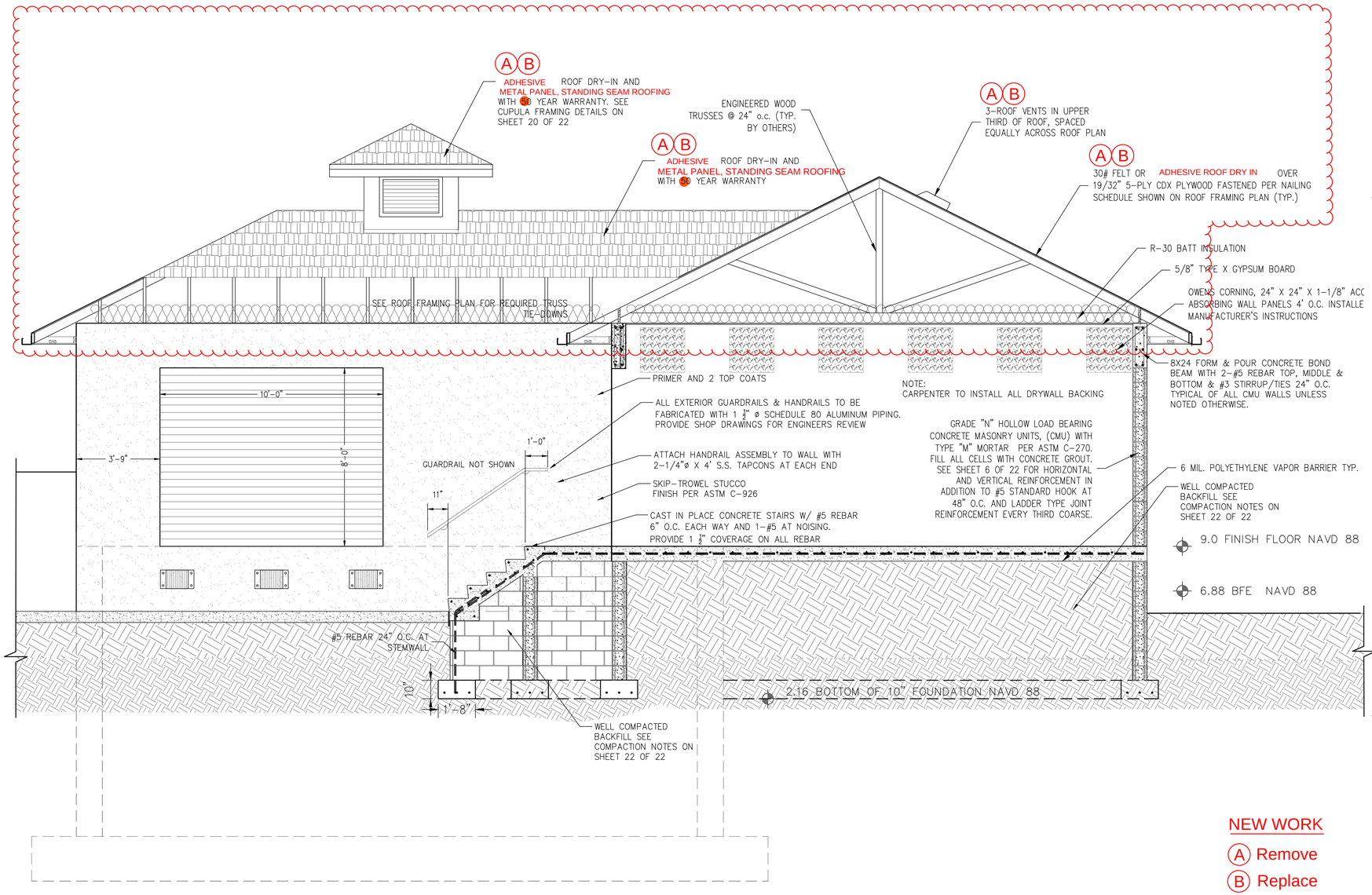
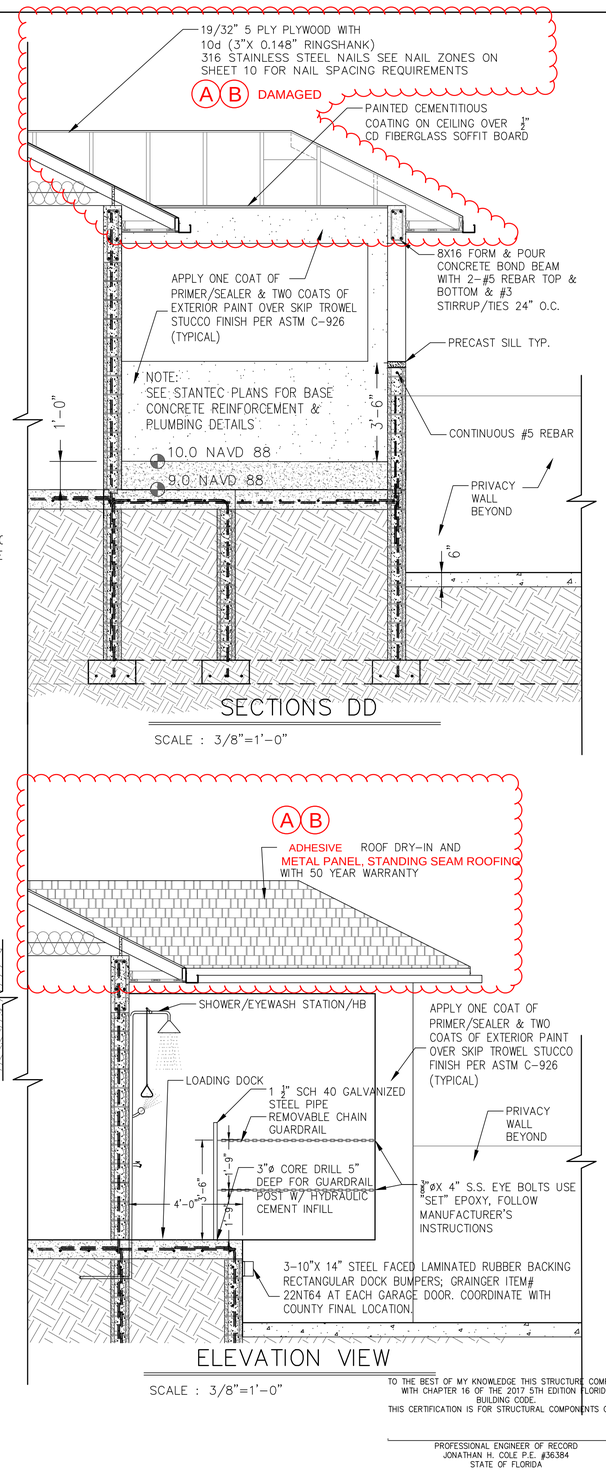


SECTIONS CC

SCALE : 3/8"=1'-0"



SECTIONS DD

SCALE : 3/8"=1'-0"

ELEVATION VIEW

SCALE : 3/8"=1'-0"

NEW WORK

- (A) Remove
- (B) Replace
- (C) Repair
- (D) Paint

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4070 Rai□road A□nu□, Port C□arott□, F□33953

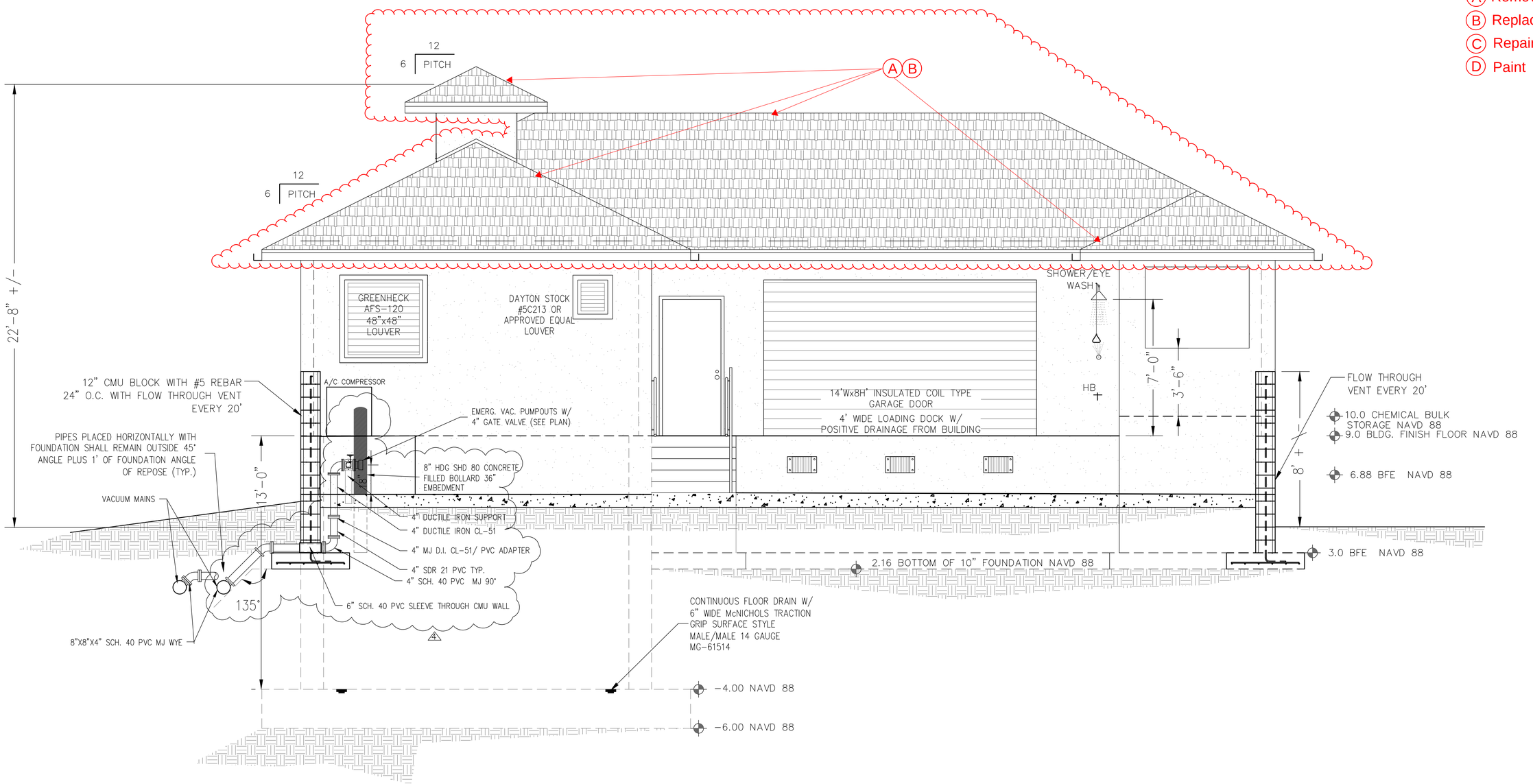
SECTIONS CC & DD
SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.
SHEET: 13 OF 22
GWE NO. 6354.00

S:\PROJECTS\6300\6354 El Jobean Site Vacuum Station\MPMEP Building_C.dwg, 8/12/2019 10:30:11 AM

NEW WORK

(A) Remove
(B) Replace
(C) Repair
(D) Paint



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PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E. #56384
STATE OF FLORIDA

DATE	REVISION	BY
6/13/19	EMERGENCY PUMP-OUTS & BOLLARDS RELOCATED	TS

4

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4070 Rai□road A□□nu□, Port C□arott□, F□ 33953

NORTH WEST ELEVATION

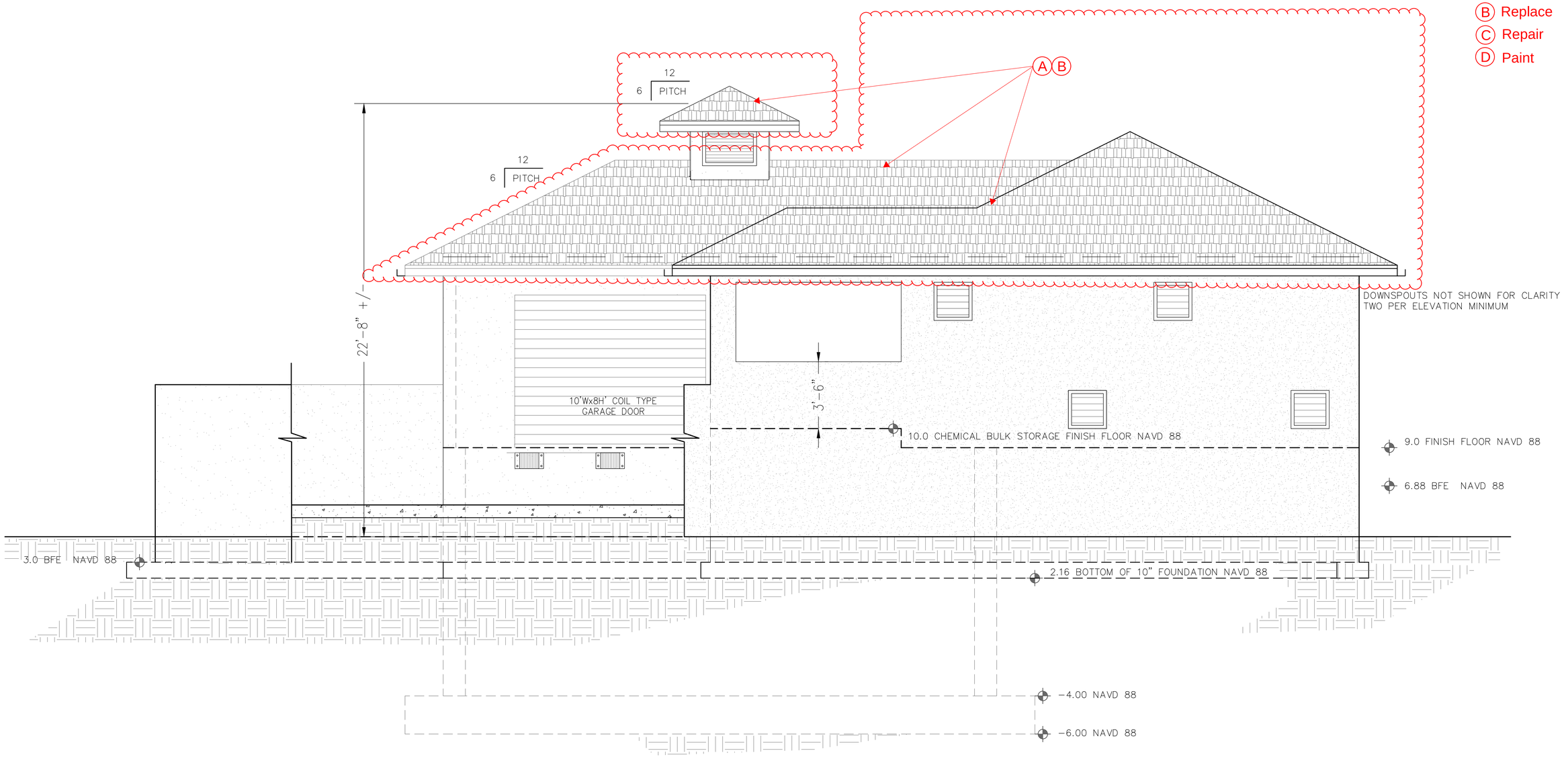
SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.
SHEET: 14 OF 22
GWE NO. 6354.00

S:\PROJECTS\6300\6354 El Jobean Site Vacuum Station\MPAEV Building_C.dwg, 8/12/2019 10:31:17 AM

NEW WORK

- (A) Remove
- (B) Replace
- (C) Repair
- (D) Paint



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SOUTH WEST ELEVATION

SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.
SHEET: 15 OF 22
GWE NO. 6354.00

S:\PROJECTS\6300\6354 El Jobean Site Vacuum Station\MP&EV Building_C.dwg, 8/12/2019 10:32:18 AM

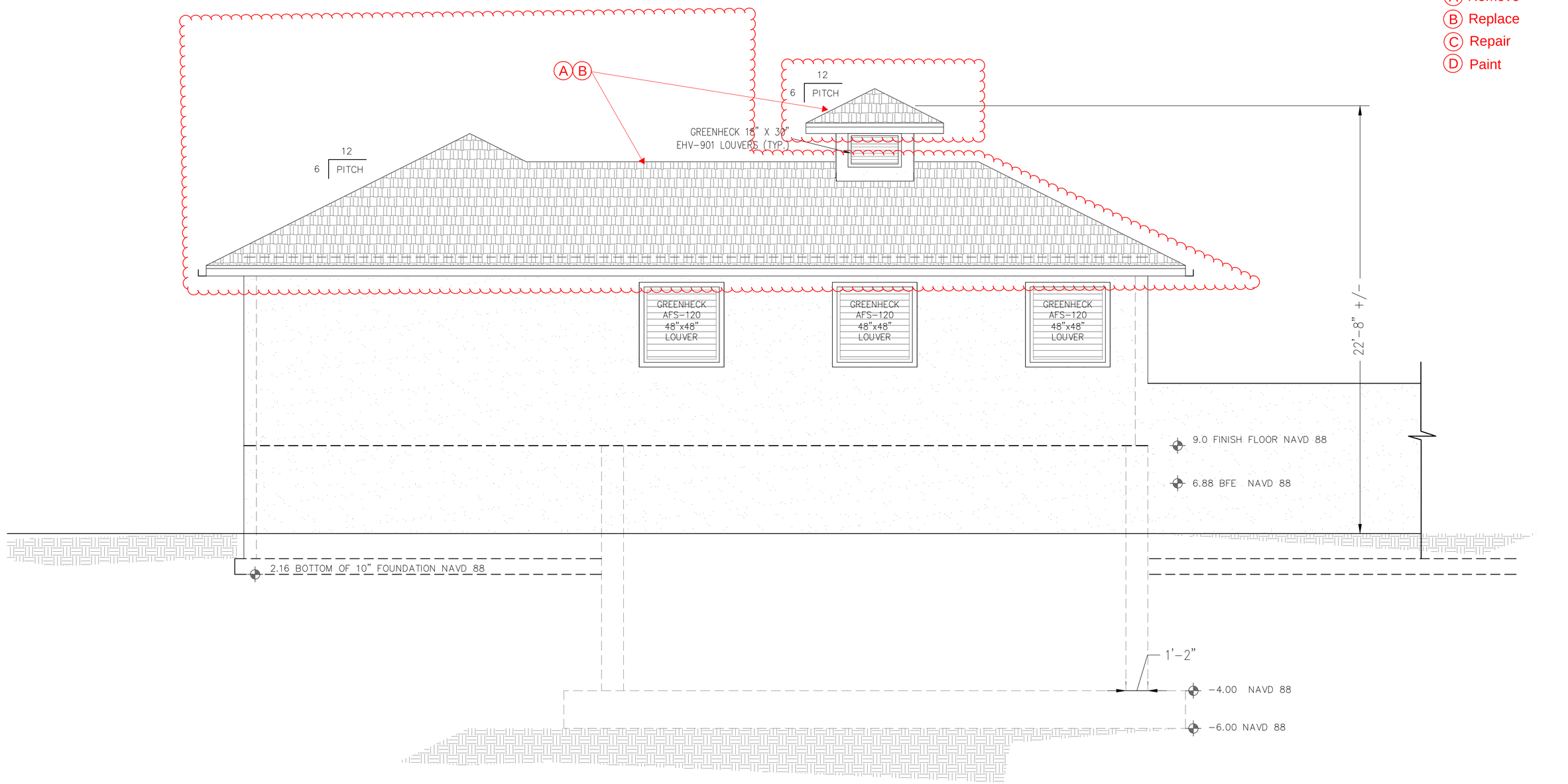
NEW WORK

(A) Remove

(B) Replace

(C) Repair

(D) Paint



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4070 Rai□road A□□nu□, Port C□arott□, F□33953

NORTH EAST ELEVATION

SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.

SHEET: 16 OF 22

GWE NO. 6354.00

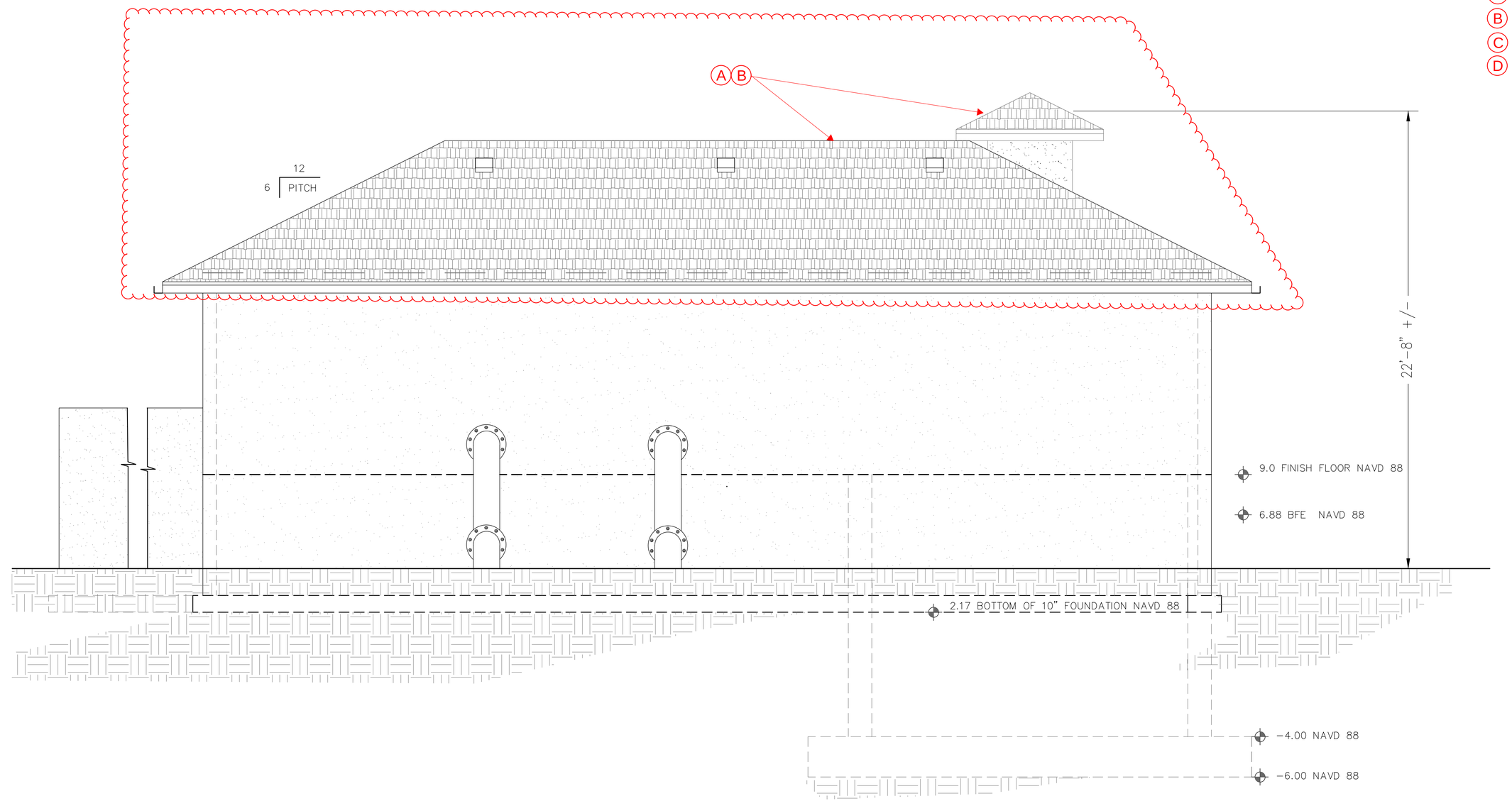
NEW WORK

(A) Remove

(B) Replace

(C) Repair

(D) Paint



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SOUTH EAST ELEVATIONS

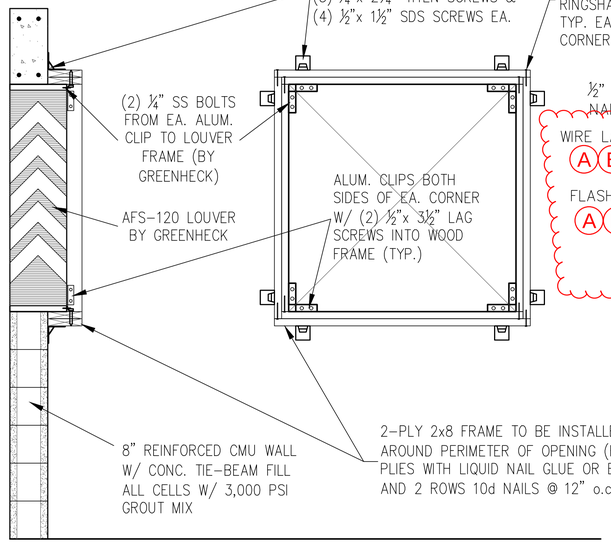
SCALE : 3/8"=1'-0"

Myakka Pump & Vac. Sta.

SHEET: 17 OF 22

GWE NO. 6354.00

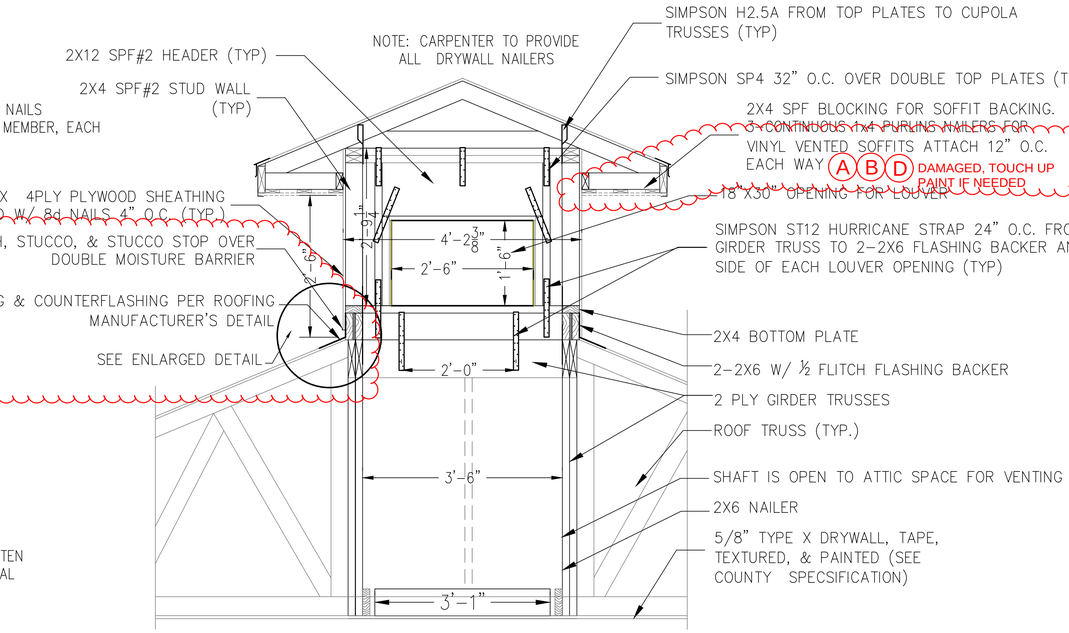
S:\PROJECTS\6300\6354 Et Jobean Site Vacuum Station\MP&EV Building_C.dwg, 8/12/2019 10:34:33 AM



SECTION VIEW INTERIOR ELEVATION VIEW

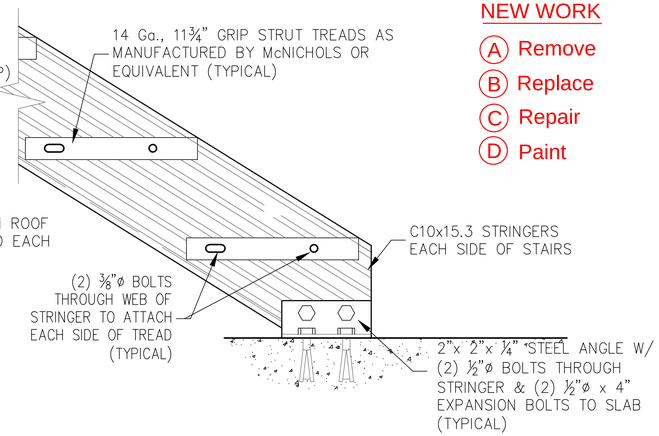
LOUVER FASTENING DETAILS

SCALE: N.T.S.



CUPOLA SECTION

SCALE: N.T.S.

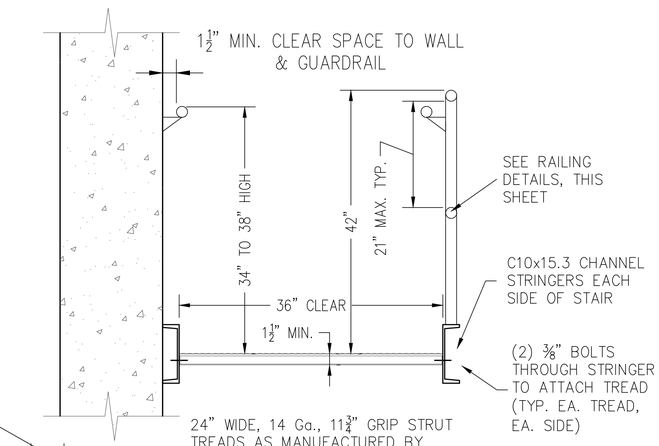


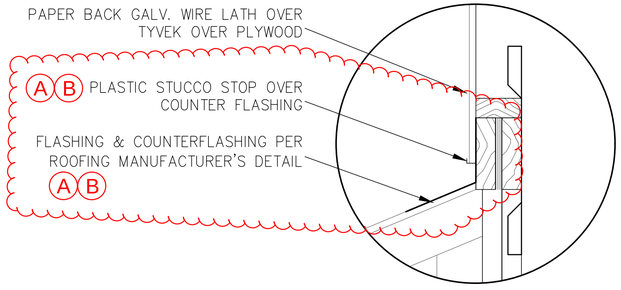
NEW WORK

- (A) Remove
- (B) Replace
- (C) Repair
- (D) Paint

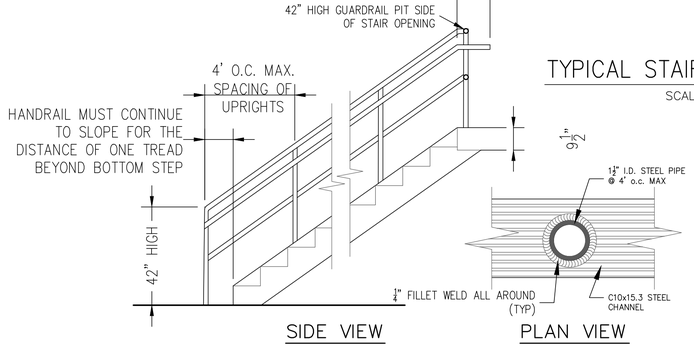
TYPICAL TREAD & STRINGER

SCALE: N.T.S.





CUPOLA BASE DETAIL



TYPICAL STAIR SECTION

SCALE: N.T.S.

PIT SIDE STAIR RAILING

SCALE: N.T.S.

FERROUS METAL PAINT & PRIMER

RUST-OLEUM TRMCLD 2X3.78LT RED OXIDE PRIMER IS NOT INTENDED FOR USE WITH NON-FERROUS METALS, SUCH AS COPPER, BRASS OR ALUMINUM. IT IS REQUIRED FOR PROTECTING STEEL FRAMING METALS FROM RUST AND CORROSION. BEFORE APPLYING RED OXIDE PRIMER, THE SURFACE OF THE MATERIAL MUST BE CLEAN, DRY AND FREE OF DEBRIS AND GREASE. ALL SURFACES TO BE SANDBLASTED, WIRED BRUSHED, SCRAPED, GROUND SMOOTH.

RED OXIDE PRIMER SHALL BE APPLIED USING A BRUSH, ROLLER OR SPRAY. TWO COATS SHALL BE APPLIED BEFORE THE METAL IS PAINTED WITH RUST-OLEUM ENAMEL TOP COATS. EACH RED OXIDE PRIMER COAT NEEDS 6 HOURS TO FULLY DRY BEFORE 2ND COAT IS APPLIED. APPLY TWO COATS OF HIGH GLOSS RUST-OLEUM PROFESSIONAL HIGH PERFORMANCE ENAMEL # 7781402 LIGHT MACHINE GREY TOPCOAT PER MANUFACTURERS TECHNICAL DATA SHEET REVISED 03/29/17

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2017 5TH EDITION FLORIDA BUILDING CODE.
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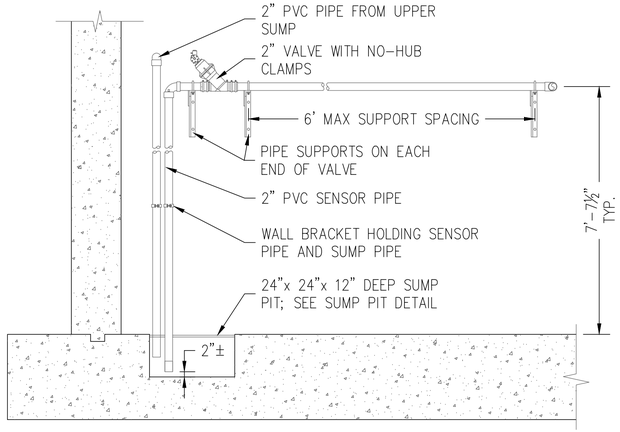
4070 Rai□road A□nu□, Port C□arott□, F□.33953

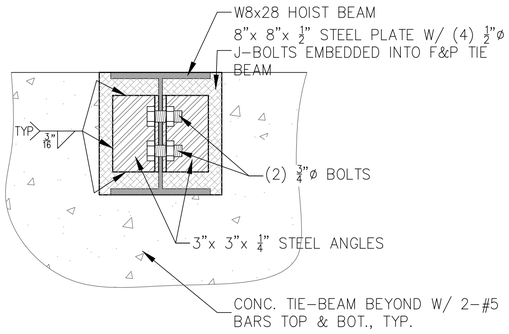
MISCELLANEOUS DETAILS

Myakka Pump & Vac. Sta.
SHEET: 20 OF 22
GWE NO. 6354.00



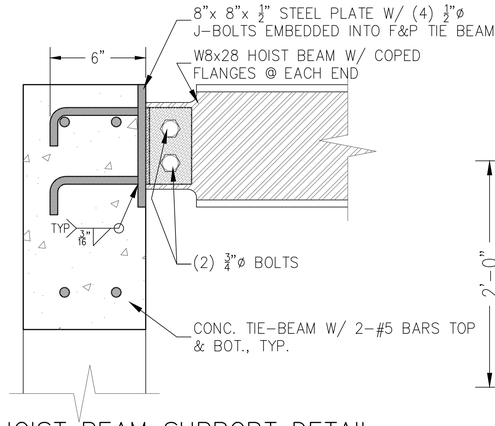
SUMP PIPING DETAIL

SCALE: N.T.S.



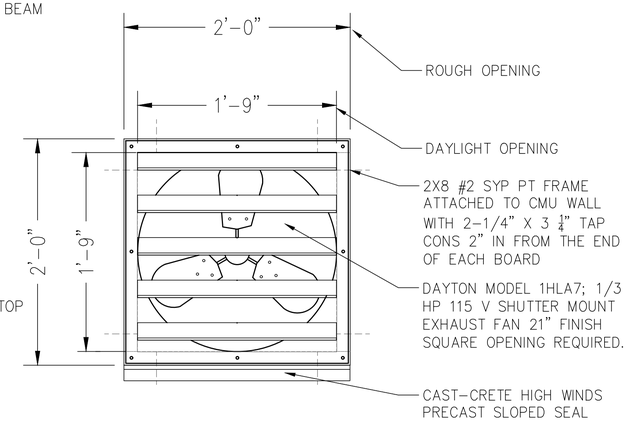
HOIST BEAM SUPPORT DETAIL – SECTION THROUGH HOIST BEAM

SCALE: N.T.S.



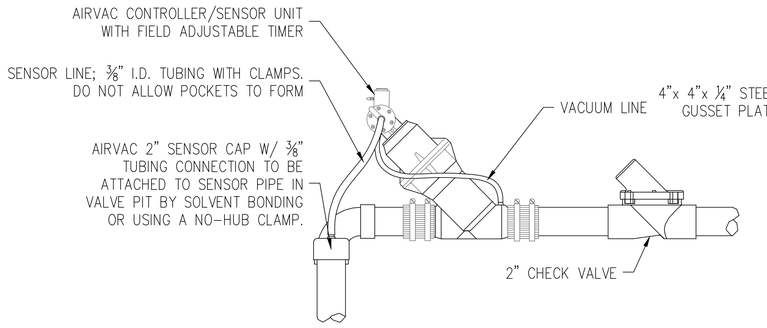
HOIST BEAM SUPPORT DETAIL – SECTION THROUGH TIE BEAM

SCALE: N.T.S.



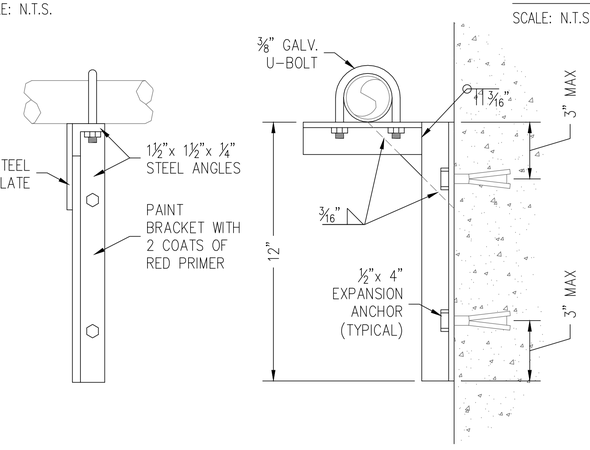
CHEMICAL ROOMS EXHAUST FAN

SCALE: N.T.S.



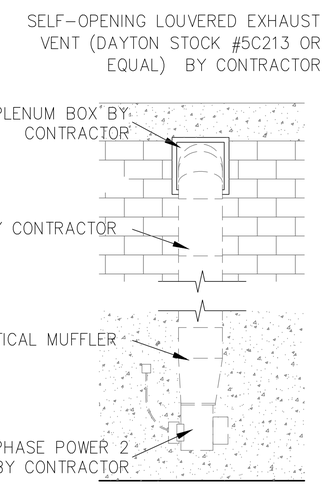
SUMP VALVE DETAIL – SIDE VIEW

SCALE: N.T.S.

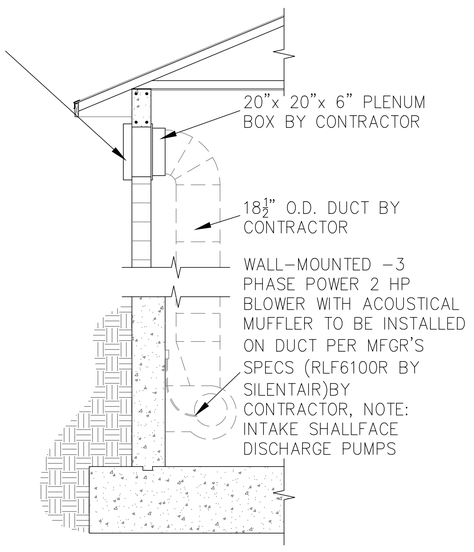


SUMP PIPE SUPPORT DETAIL

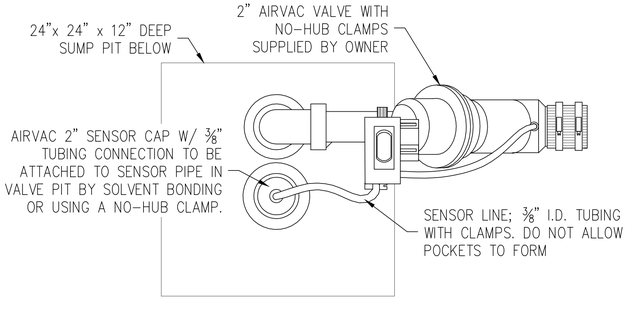
SCALE: N.T.S.



ELEVATION VIEW

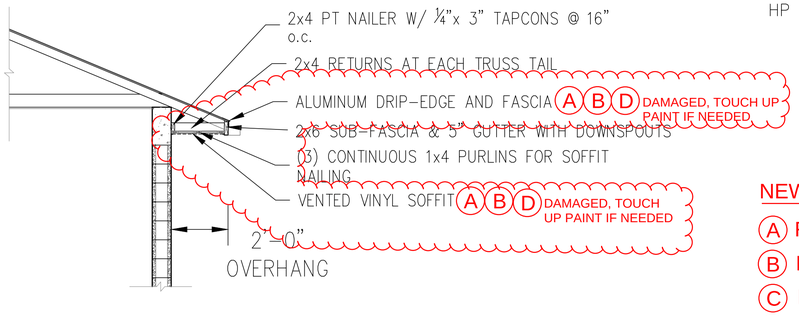


SECTION VIEW



SUMP VALVE DETAIL – PLAN VIEW

SCALE: N.T.S.



ROOF OVER HANG DETAIL

SCALE : 3/8"=1'-0"

NEW WORK

- (A) Remove
- (B) Replace
- (C) Repair
- (D) Paint

BLOWER & DUCT DETAIL

SCALE : 3/8"=1'-0"

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2017 5TH EDITION FLORIDA BUILDING CODE.
THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E. #56384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607

900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

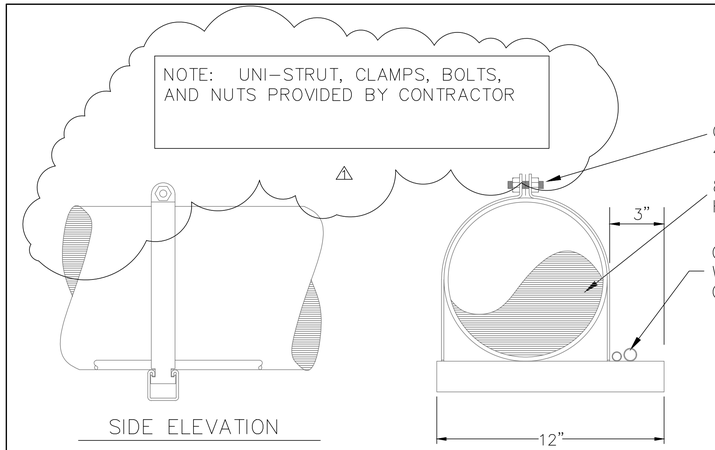
DATE:	01/18
DRAWN:	TS
CHK'D BY:	JC

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
M□a□□a Boo□t□r Pum□ & E□Jo□□an Vacuum Station
4070 Rai□road A□□nu□, Port C□arott□, F□ 33953

MISCELLANEOUS DETAILS

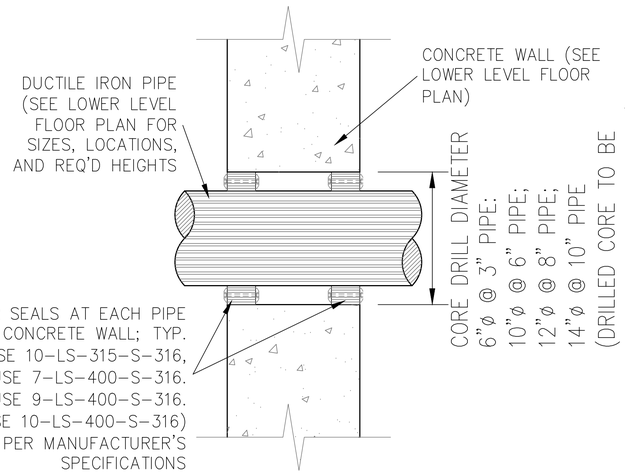
Myakka Pump & Vac. Sta.
SHEET: 21 OF 22
GWE NO. 6354.00

S:\PROJECTS\6300\6354 El Jobean Site Vacuum Station\MP\REV Building_C.dwg, 8/12/2019 10:38:54 AM



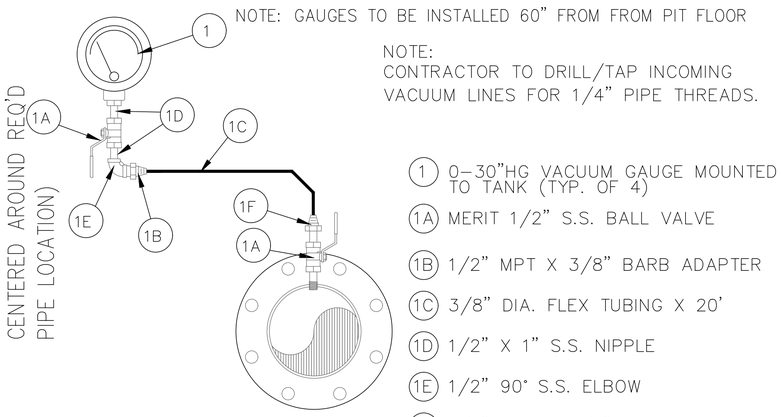
UNI-STRUT CLAMP DETAIL

VACUUM HEADER
UNI-STRUT DETAIL
SCALE: N.T.S.



LINK-SEAL DETAIL

SCALE: N.T.S.



TYPICAL VACUUM LINE GAUGE PIPING DETAIL

SCALE: N.T.S.

GENERAL NOTES:

DESIGN CRITERIA:

Florida Building Code, 2023 8th Edition
ASCE 7- 22

1. Wind Velocity = 162 M.P.H.
   Internal Pressure Coefficient = ±0.18 (Enclosed Building)
   Category III Building
   Exposure C

Component & Cladding ASD Loads based on a loaded area of 10 sf or less and a wind directionality factor of 0.85 are as follows:

Zone	1:	-39.7/+21.1
Zone	2:	-89.4/+21.1
Zone	3:	-123.6/+21.1
Zone	4:	-39.7/+36.6
Zone	5:	-49.0/+36.6

If a specific ~~component has a tributary~~ area larger than 10 sf and requires a reduced component & cladding load, ths specifications & dimensions of the product shall be submitted to the Engineer of Record for wind analysis.

2. Live Loads - in accordance with FBC 2017, Table 1607.1 unless noted.

Floors, Decks, & Stairs:	100 psf
Roofs:	20 psf

GENERAL:

CONSTRUCTION:

1. Unless noted otherwise, all wood construction shall meet or exceed requirements of Chapter 23, FBC. Table 2304.9.1 shall be used as a minimum for all nailing schedules. Roof, wall, & floor diaphragms shall be as follows unless noted otherwise:

-Unblocked @ roof: 4" @ edges/ 6" @ intermediate supports

-Min. 19/32" CDX 4-ply plywood shall be used for roof diaphragm w/ 10d ringshank nails (0.148"ø shank)

2. Pre-manufactured straps, hangers, and clips shall be installed according to manufacturer's recommendations as required to supply desired performance.

3. Due to the nature of this construction the Engineer of Record shall be given the opportunity to re-evaluate these plans and specifications as additional information becomes available or unforeseen circumstances arise.

4. This structure has been designed to be self supporting and stable after the building is complete. It is the responsibility of the contractor to determine suitable sequencing, means and methods of construction, including, but not limited to the addition of necessary shoring, tie downs, temporary bracing, etc.

SOIL COMPACTION:

Top soil shall be removed to a minimum depth of one foot over the entire building area and five feet beyond building lines. These areas should be cleared and grubbed of any vegetation. The exposed surface should than be compacted to a depth of (1) foot below the cleared and grubbed surface to a minimum 95% of the modified proctor density as determined in accordance with ASTM D-698. After densification of natural soils, fill material to finished grade shall be placed with a maximum lift of 12" and compacted to a minimum 95% of the modified proctor density. Fill material shall be clean to slightly silty fine sand, free of organic material.

SUBMITTALS:

1. All construction shall meet requirements of all Local and State Building Codes.

2. Engineer of Record shall be notified of any deviation to this plan during construction.

3. Contractor shall retain the services of a certified material testing laboratory to conduct all required concrete & soils compaction testing. Results of all tests shall be submitted to the Engineer of Record for review.

MATERIALS:

1. Contractor shall submit cut sheets and erection drawings for all manufactured structural components (including concrete piles) to Engineer of Record for review.

2. Contractor shall verify all dimensions and conditions in the field as work progresses. All discrepancies and deviations from the plans shall be reported to the Engineer of Record.

3. All structural changes shall be signed & sealed by the Engineer of Record & re-submitted to the Building Department prior to installation.

~~PREFABRICATED~~ WOOD TRUSSES:
Truss components shall be designed by others to withstand the wind loads for Components & Cladding as determined by ASCE 7-10, Chapter 6. Complete designs of each truss (profiles) and the truss layout plan shall be submitted to the Engineer of Record for review. Shop drawings shall bear the signature & seal of the Florida Registered Professional Engineer responsible for the design of the trusses.

Truss reactions & uplift on the host structure shall be determined based on appropriate live & dead loads and the Main Wind Force Resistance System criteria of ASCE 7-10. Net uplift forces shall be determined using the actual available dead load. ASCE 7-10 method of wind analysis shall be noted on the truss designs and the layout.

MATERIALS (Cont.):

CONCRETE:
Provide mix designed by a recognized testing laboratory to achieve a strength at 28 days as listed below with a plastic and workable mix:

5000 psi for all below-grade concrete pit walls and pit slabs
3000 psi or stronger is acceptable for all other structural components (slabs, monolithic footings, tie-beams, etc.)

Materials used to produce concrete and admixtures for concrete shall comply with ACI 318. Concrete shall comply with all requirements of ASTM C 150, ASTM C 595, or ASTM C 845. Concrete shall comply with all the requirements of ASTM Standard C94-74A for measuring, mixing, transporting, etc. Concrete tickets shall be time stamped when concrete is batched, the maximum time allowed from the time the water is added until it is deposited in its final position shall not exceed one and one half ($1\frac{1}{2}$) hours. If for any reason there is a longer delay than that stated above, the concrete shall be discarded. It shall be the responsibility of the testing lab to notify the owner's representative and the contractor of any non-compliance with the above. Concrete testing to be paid for by the contractor. Admixtures may be used only with the approval of the engineer. During hot weather, proper attention shall be given to the ingredients, production methods, handling, placing, protection and curing to prevent excessive concrete temperatures or water evaporation that may impair required strength or serviceability of the member or structure as per 1906.5 and 1906.7 of the Florida Building Code.

MASONRY:
All Masonry work shall be done in accordance with "Building Code Requirements for Masonry Structures (ACI 530)" & "Specifications for Masonry Structures (ACI 530.1)"

1. Concrete masonry units shall be Grade "N" Hollow Load bearing Units, conforming to ASTM C-90 with a minimum compressive strength (f'm) of 1500 psi.

2. Mortar: Type M or S and shall conform to ASTM C-270.

3. Grout or pea-gravel concrete with an ultimate compressive strength of 3000 psi at 28 days, except for those locations as marked or noted on the structural drawings. Corefill mix shall conform to ASTM C-476.

4. Air-Entraining mixtures or hydrated lime containing air-entraining mixtures are prohibited because such admixtures will reduce the shear, tensile and compressive strength of the masonry. Calcium chloride is not permitted in mortar or grout in which reinforcement, metal ties, or anchors are embedded because of excessive corrosion.

MATERIALS (Cont.):

METAL:
1. All steel plates, bolts, washers, nuts, fasteners, hangers, straps and clips shall be "Z-MAX" (Salt air exposure) galvanized or stainless steel - (Simpson Products or equal).

2. Steel plates and rolled steel members shall conform to ASTM A36 unless noted otherwise. Bolts, nuts and washers shall conform to ASTM A307 unless noted otherwise.

3. Lag bolts, nails, screws, hangers, straps, and clips shall be fabricated from appropriate materials and H.D.G. (Hot-dipped Galvanized) to meet conditions shown.

4. All handrails, guardrails and steel framing components (not including walking surfaces) shall be painted with rust-proof primer and shall be finished with safety yellow paint.

GLUE:
Glue used in the field for assembling wood products shall be waterproof exterior grade equal to or better than Liquid Nails.

EXTERIOR DOORS & LOUVERS:
1. All exterior windows, louvers & doors are required to be tested in accordance with ANSI/AMMA/NWWDA 101/IS2 standard and bear an AMMA or WDMA label identifying the manufacturer, performance characteristics, and approved product testing entity.

REINFORCING STEEL:
Reinforcing shall be ASTM A615 Grade 60, free from oil, scale and rust, and placed in accordance with the typical bending diagram and placing details and ACI 318 Standards and Specifications. Reinforcement shall be deformed reinforcement, except that plain reinforcement shall be permitted for spirals or tendons.

OCCUPANCY; CODE COMPLIANCE CRITERIA

GROUP U, UTILITY

CONSTRUCTION TYPE: III B

UNSPRINKLERED FBC 903.2.11

FIRE ALARM DETECTION SYSTEM NO REQUIREMENTS FBC 907

OCCUPANT LOAD 2,150 SF/300 MECH. EQUIP. AREA (TABLE1004.1.2) 7 PERSONS

EXIT ACCESS TRAVEL DISTANCE <300'

ENCLOSED BUILDING SQUARE FOOTAGE	1,632 SF
PIT SQUARE FOOTAGE	461 SF
LOADING DOCK & STAIR SQUARE FOOTAGE	115 SF
TOTAL	2,288 SF

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PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY
1/16/19	UNISTRUTS BY CONTRACTOR	TS
1/16/19	WIND ZONE CORRECTION	TS

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607

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Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	01/18
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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
M□a□□a Boo□t□r Pum□ & E□Jo□□an Vacuum Station
4070 Rai□road A□□nu□, Port C□arott□, F□33953

MISC. DETAILS & NOTES

Myakka Pump & Vac. Sta.
SHEET: 22 OF 22
GWE NO. 6354.00

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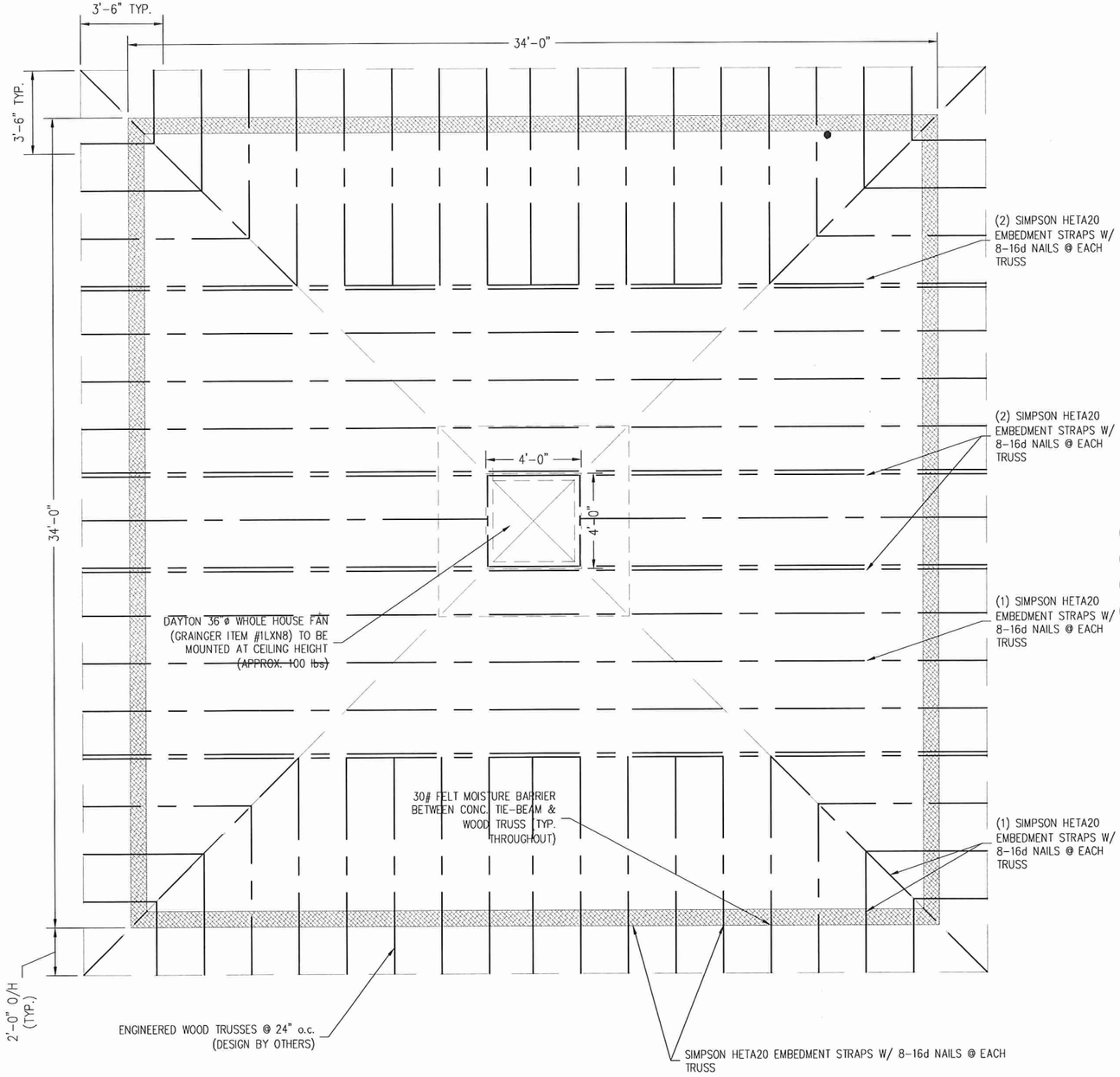

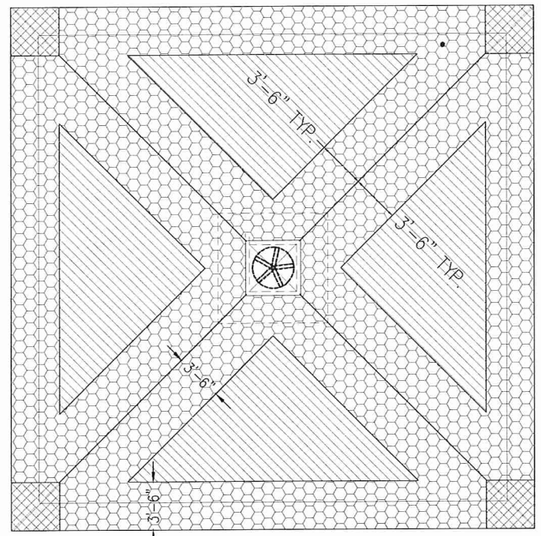

ROOF NAILING ZONES

DAMAGED (A) (B)

ROOF SHEATHING TO BE 15/32" EXTERIOR GRADE OSB OR PLYWOOD

ZONE 1
8d (0.131" SHANK) NAILS @ 4" o.c. AT ALL EDGES; 6" o.c. IN FIELD

ZONE 2
8d (0.131" SHANK) NAILS @ 3" o.c. AT ALL EDGES; 6" o.c. IN FIELD

ZONE 3
8d (0.131" SHANK) NAILS @ 3" o.c. THROUGHOUT

NOTE: USE ZONE 3 NAILING PATTERN FOR CUPOLA ROOF.

NOTE TO TRUSS MANUFACTURER:
ALL TRUSSES SHALL BE DESIGNED TO ALLOW FOR A 150 lb DEAD LOAD APPLIED AT ANY POINT ALONG THE BOTTOM CHORD TO PERMIT THE INSTALLATION OF PIPE HANGERS AS REQ'D (TYPICAL)

ALSO, CENTER TRUSSES SHALL BE DESIGNED FOR THE ADDITIONAL LOADING FROM THE CUPOLA ABOVE, AS SHOWN.

NEW WORK

- (A) Remove
- (B) Replace
- (C) Repair
- (D) Paint

JONATHAN H. COLE LICENSE No. 36384 STATE OF FLORIDA PROFESSIONAL ENGINEER

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2014 5TH EDITION FLORIDA BUILDING CODE.
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PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E., #36384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607
900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

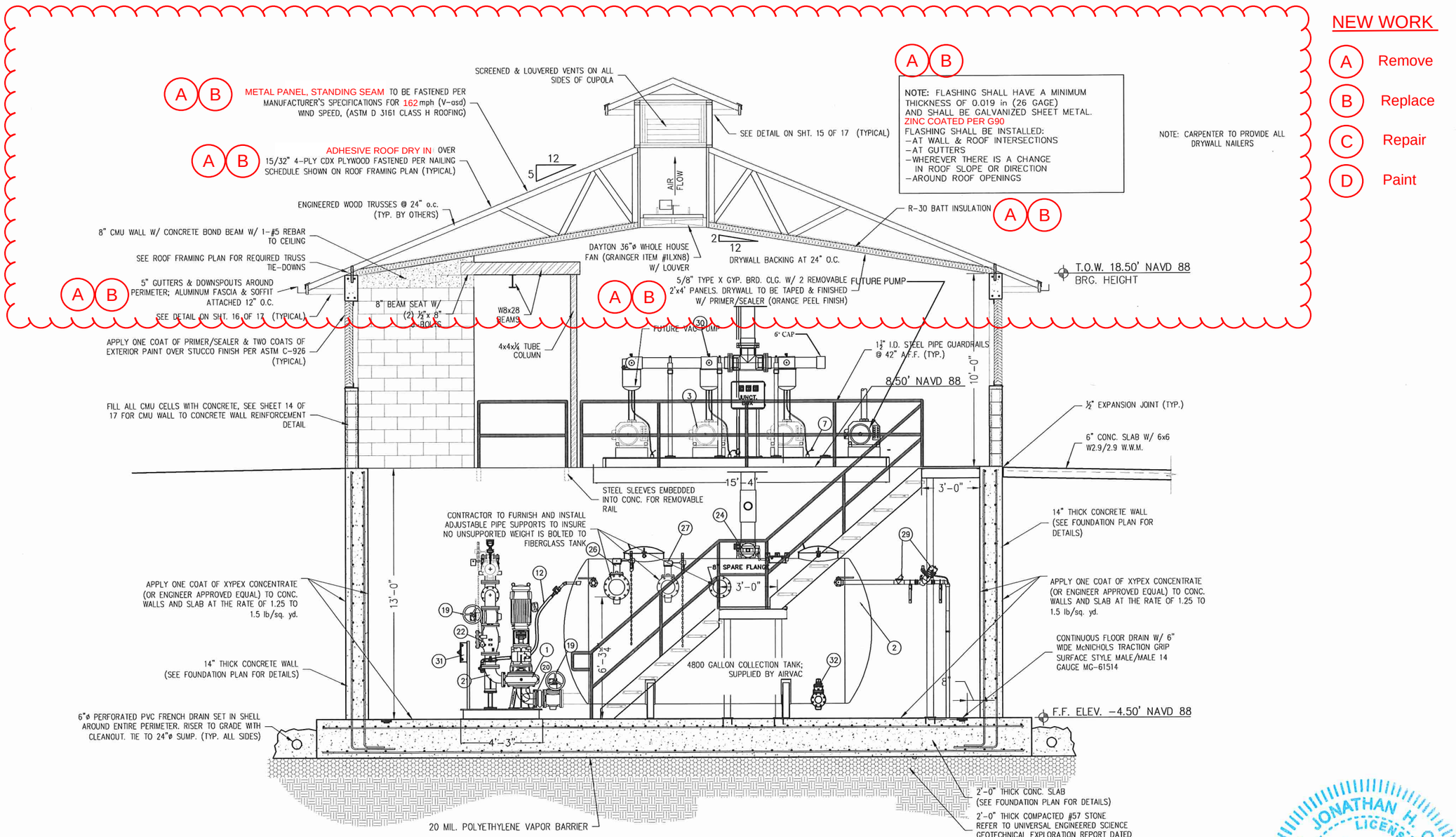
DATE:	03/16
DRAWN:	TS
CHK'D BY:	JC

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTRACT "D"
Vacuum Station

ROOF TRUSS & ROOF NAILING PLAN

SCALE : 3/8"=1'-0"

CONTRACT "D" Vac. Sta.
SHEET: 7 OF 17
GWE NO. 6258.00



SECTION A-A

SCALE : 1/4"=1'-0"

NEW WORK

- A Remove
- B Replace
- C Repair
- D Paint

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTRACT "D"
Vacuum Station

SECTIONS
SCALE : 3/8"=1'-0"

CONTRACT "D" Vac. Sta
SHEET: 8 OF 17
GWE NO. 6258.00

NEW WORK

- A — Remove
- B — Replace
- C — Repair
- D — Paint

A B D

DAMAGED, TOUCH UP IF NEEDED

A B

SCREENED & LOUVERED VENTS ON ALL SIDES OF CUPOLA

12/5 12/5

W8x28 STEEL BEAMS

F.F. ELEV. 18.50' NAVD 88

2/12

5" GUTTERS & DOWNSPOUTS AROUND PERIMETER; ALUMINUM FASCIA & SOFFIT ATTACHED 12" O.C.

8"W x 16"H FORM & POUR CONCRETE TIE-BEAM W/ 2-#5 BARS CONT. @ TOP & BOTTOM (PROVIDE 25" MIN. LAP FOR #5 BARS, TYPICAL)

CONTRACTOR TO ROUTE 3" DI NIPPLE VACUUM PUMP EXHAUST PIPES TO 8" D.I. MANIFOLD; 3" 150 PSI wsp, 1 PIECE, 3 INCH PIPE, FNPT X FNPT, UL LISTED, INLINE - ONE WAY FLOW, BRONZE BALL VALVE TO BE ADDED BELOW UNION AND JACKETED MINERALWOOL HEAT INSULATION AROUND EXHAUST PIPES

LIMIT AIRVAC SUPPLY

PIPE SUPPORTS AS REQUIRED

8"ø SCH. 80 PVC PIPE; SUPPLIED BY AIRVAC IN RANDOM LENGTHS, CUT TO SUIT AND INSTALLED BY CONTRACTOR

1½" I.D. STEEL PIPE RAILS

8" CMU WALL W/ #5 VERT REBAR WHERE SHOWN ON FLOOR PLAN (CONTINUOUS FROM CONC. WALL BELOW TO 8"x 16" F&P TIE-BEAM)

10'-0"

2'-0"

PIPE HANGER REQUIRED @ GALV. PIPE TO HEADER CONNECTION

EMERG. VAC. PUMPOUTS (SEE PLAN)

18"

SCH. 80 TEE x 4" W/ SLP x MIP ADAPTER TO 4" GALV. PIPE; SUPPLIED BY CONTRACTOR

4" GALV. EMERGENCY VACUUM LINE SUPPLIED BY CONTRACTOR

4800 GALLON COLLECTION TANK; SUPPLIED BY AIRVAC

TO EMERG. F.M. PUMPOUT (SEE PLAN)

F.F. ELEV. 8.50' NAVD 88

4'-7½"

SEE FOUNDATION PLAN FOR FOOTING AND STEMWALL DETAILS (TYP.)

3-#5 DOWELS FROM 12" CONC. WALL TO STRIP FOOTING BEYOND

SEE LINK-SEAL DETAIL SHT 16, FOR SEALING OF CONC. WALL PENETRATIONS (TYP.)

2'-7" 2'-7"

CENTER LINE OF FORCE-MAIN ELEV. =3.25' NAVD 88'

8" D.I. VACUUM EXHAUST PIPE MANIFOLD SUPPLIED BY CONTRACTOR SEE SHT. 13 FOR DETAILS.

11'3"-0"

CENTER LINE OF ALL VAC. LINES ELEV. =1.81'

12" THICK CONCRETE WALL (SEE FOUNDATION PLAN FOR DETAILS)

APPLY ONE COAT OF XYPEX CONCENTRATE (OR ENGINEER APPROVED EQUAL) TO CONC. WALLS AND SLAB AT THE RATE OF 1.25 TO 1.5 lb/sq. yd.

TERMITE TREATED, COMPACTED SOIL (PRIOR TO START OF FLOOR CONSTRUCTION, SOIL TREATMENT MUST BE PERFORMED BY CERTIFIED PEST CONTROL BUSINESS)

CONTINUOUS FLOOR DRAIN W/ 6" WIDE McNICHOLS TRACTION GRIP SURFACE STYLE MALE/MALE 14 GAUGE MG-61514

14" THICK CONCRETE WALL (SEE FOUNDATION PLAN FOR DETAILS)

6"ø PERFORATED PVC FRENCH DRAIN SET IN SHELL AROUND ENTIRE PERIMETER. RISER TO GRADE WITH CLEANOUT. TIE TO 24"ø SUMP. (TYP. ALL SIDES)

PIPE SUPPORTS AS REQUIRED

F.F. ELEV. -4.50' NAVD 88

20 MIL. POLYETHYLENE VAPOR BARRIER

2'-0" THICK COMPACTED #57 STONE REFER TO UNIVERSAL ENGINEERED SCIENCE GEOTECHNICAL EXPLORATION REPORT DATED APRIL 28, 2016

SECTION B-B

SCALE : 1/4"=1'-0"

JONATHAN H. COLE LICENSE No. 36384 STATE OF FLORIDA PROFESSIONAL ENGINEER

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PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE P.E., #36384
STATE OF FLORIDA

DATE	REVISION	BY

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DATE:	03/16
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CHK'D BY:	JC

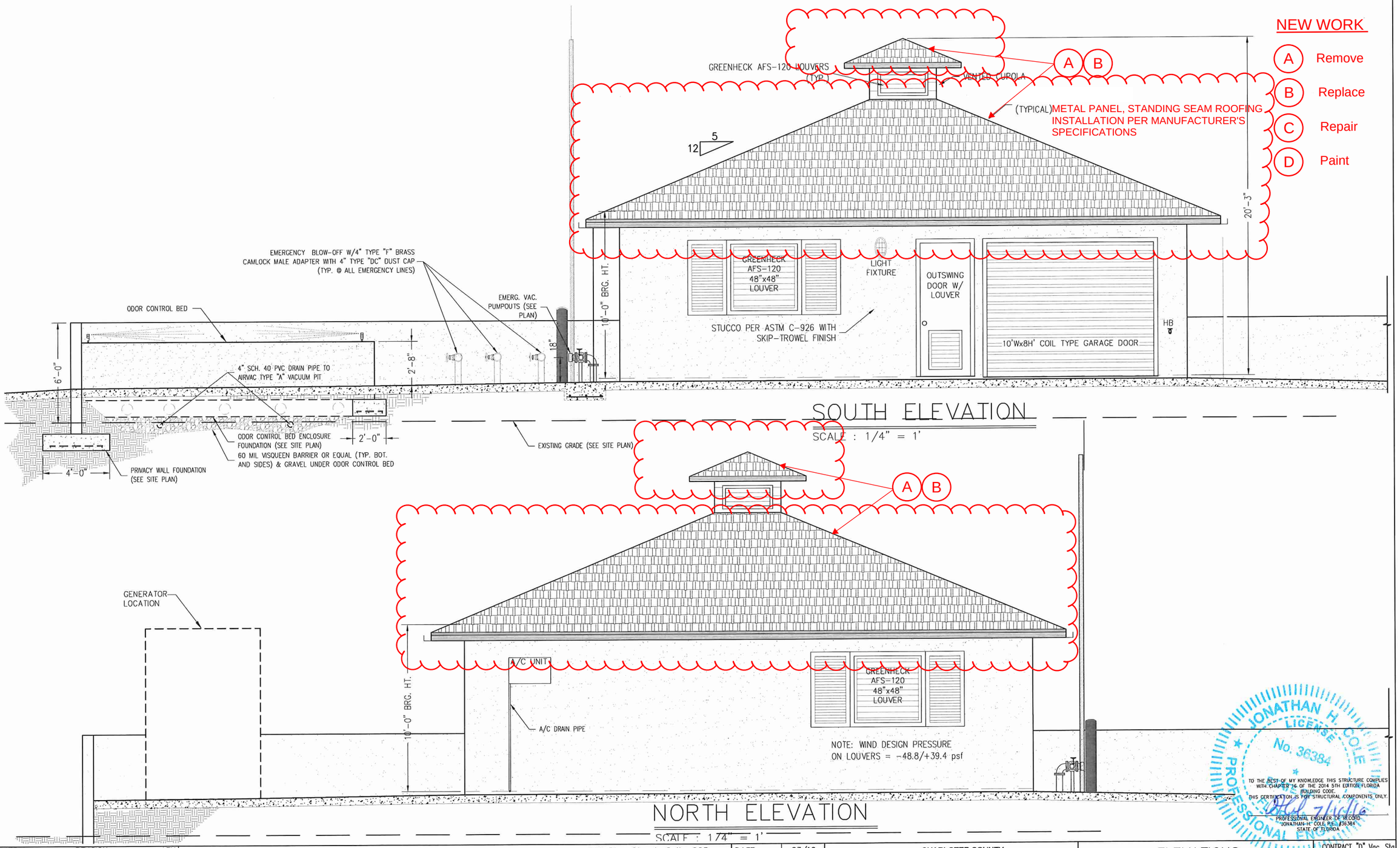
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTRACT "D"
Vacuum Station

SECTIONS
SCALE : 3/8"=1'-0"

CONTRACT "D" Vac. Sta
SHEET: 9 OF 17
GWE NO. 6258.00

NEW WORK

- A — Remove
- B — Replace
- C — Repair
- D — Paint



SOUTH ELEVATION

SCALE : 1/4" = 1'

NORTH ELEVATION

SCALE : 1/4" = 1'

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CONTRACT "D"
Vacuum Station

ELEVATIONS

SCALE : 3/8"=1'-0"

CONTRACT "D" Vac. Sta
SHEET: 10 OF 17
GWE NO. 6258.00

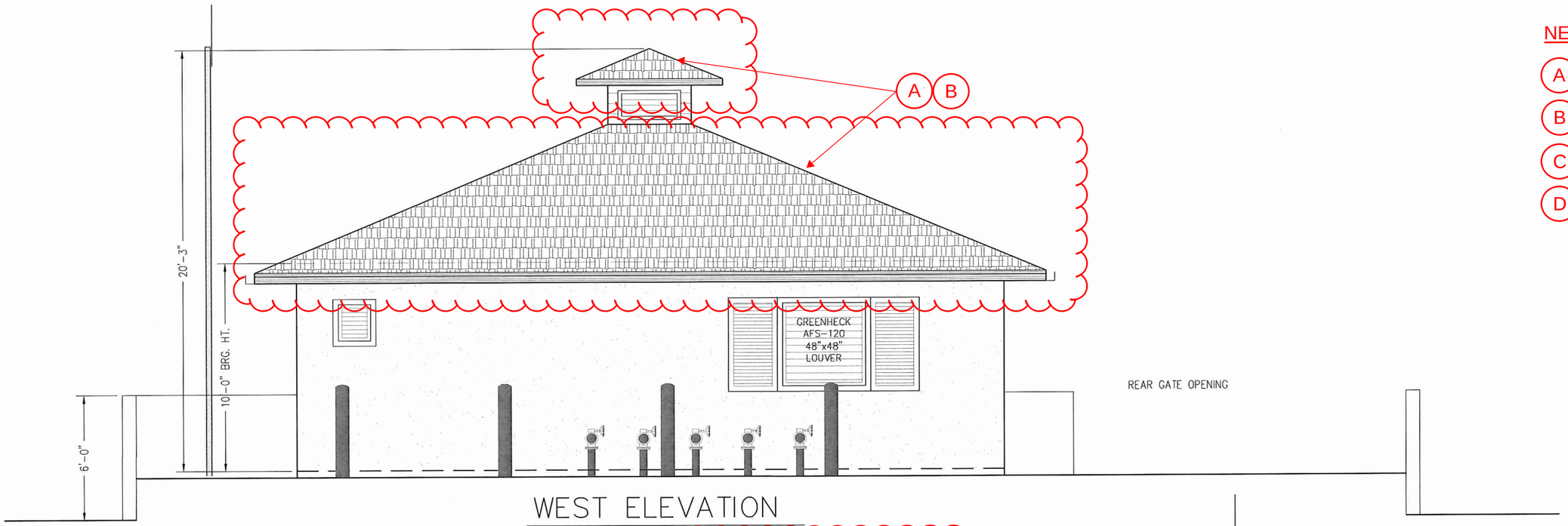
NEW WORK

A Remove

B Replace

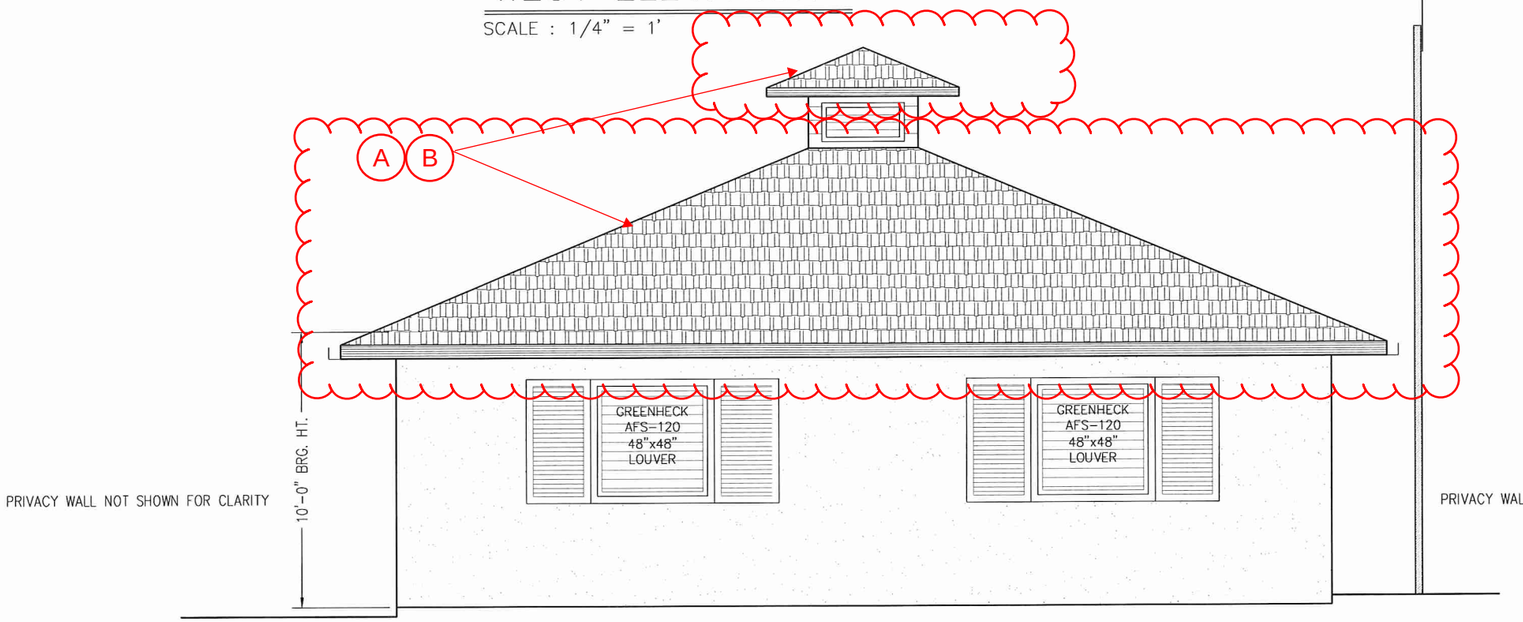
C Repair

D Paint



WEST ELEVATION

SCALE : 1/4" = 1'



EAST ELEVATION

SCALE : 1/4" = 1'

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900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
Fax (941)474-4285

DATE:	03/16
DRAWN:	TS
CHK'D BY:	JC

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTRACT "D"
Vacuum Station

ELEVATIONS

SCALE : 3/8"=1'-0"

CONTRACT "D" Vac. Sta
SHEET: 11 OF 17
GWE NO. 6258.00

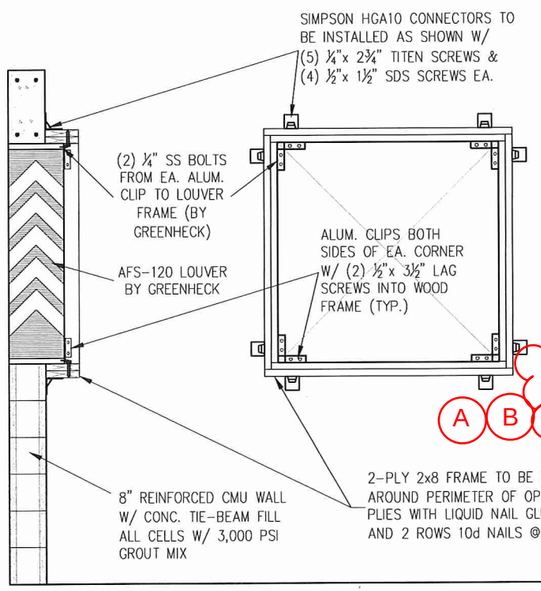
NEW WORK

A Remove

B Replace

C Repair

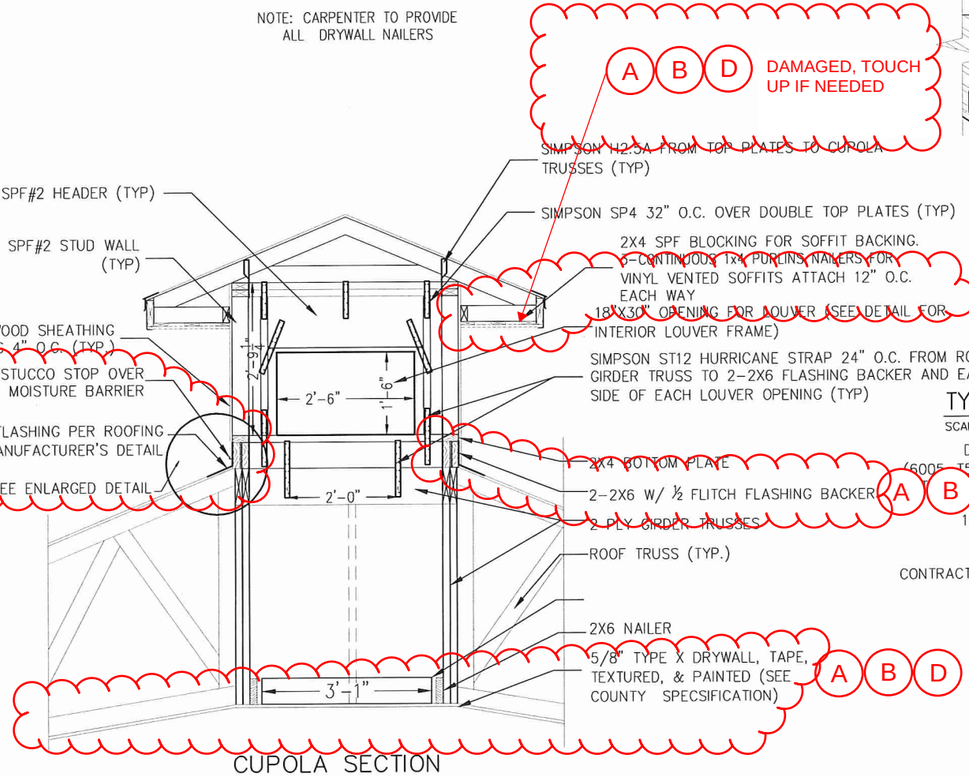
D Paint



SECTION VIEW INTERIOR ELEVATION VIEW

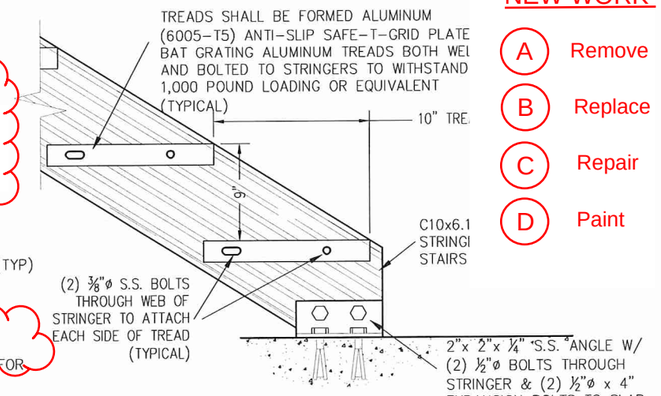
LOUVER FASTENING DETAILS

SCALE: N.T.S.



CUPOLA SECTION

SCALE: N.T.S.

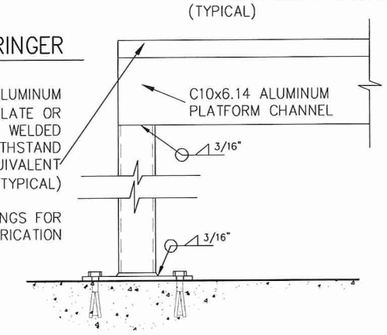


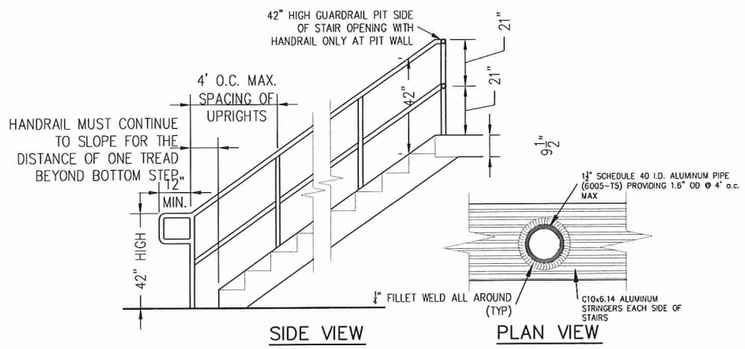
TYPICAL TREAD & STRINGER

SCALE: N.T.S.

DECKING SHALL BE FORMED ALUMINUM (6005-T5) ANTI-SLIP SAFE-T-GRID PLATE OR NG ALUMINUM TREADS BOTH WELDED BOLTED TO STRINGERS TO WITHSTAND 1,000 POUND LOADING OR EQUIVALENT (TYPICAL)

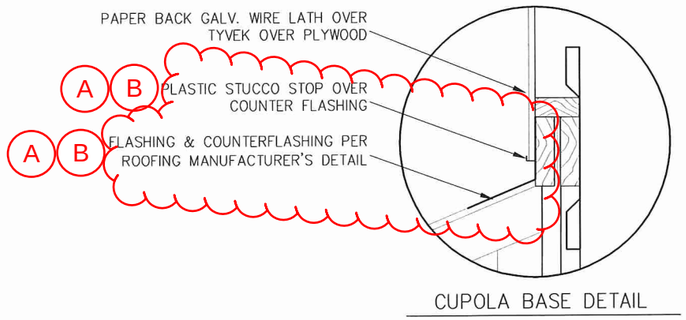
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION



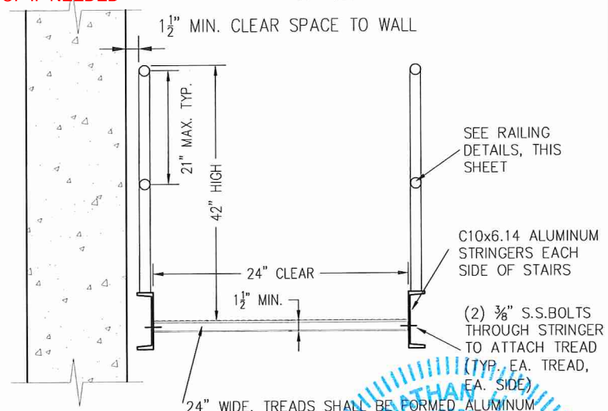


TYPICAL STAIR RAILING

SCALE: N.T.S.



CUPOLA BASE DETAIL



TYPICAL STAIR SECTION

SCALE: N.T.S.

JONATHAN H. COLE No. 36384 STATE OF FLORIDA PROFESSIONAL ENGINEER

TO THE BEST OF MY KNOWLEDGE THIS STRUCTURE COMPLIES WITH CHAPTER 16 OF THE 2014 5TH EDITION FLORIDA BUILDING CODE.
THIS CERTIFICATION IS FOR STRUCTURAL COMPONENTS ONLY.

PROFESSIONAL ENGINEER OF RECORD
JONATHAN H. COLE, P.E. #36384
STATE OF FLORIDA

DATE	REVISION	BY

GWE GIFFELS-WEBSTER ENGINEERS, INC.
CERTIFICATE OF AUTHORIZATION #3607

900 Pine Street, Suite 225
Englewood, Florida 34223
Phone (941)475-7981
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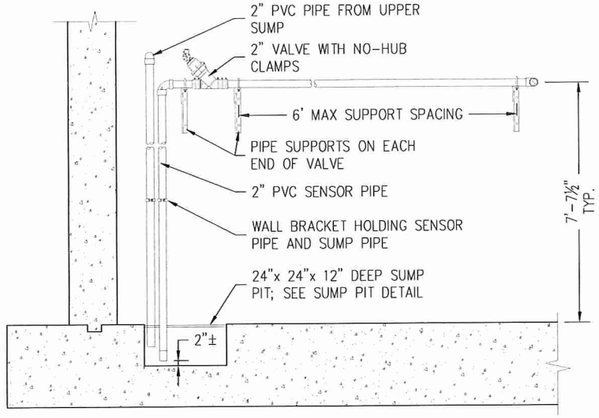
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS
CONTRACT "D"
Vacuum Station

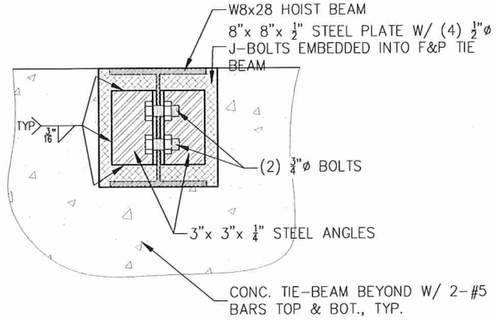
MISCELLANEOUS DETAILS

CONTRACT "D" Vac. Sta
SHEET: 15 OF 17
GWE NO. 6258.00



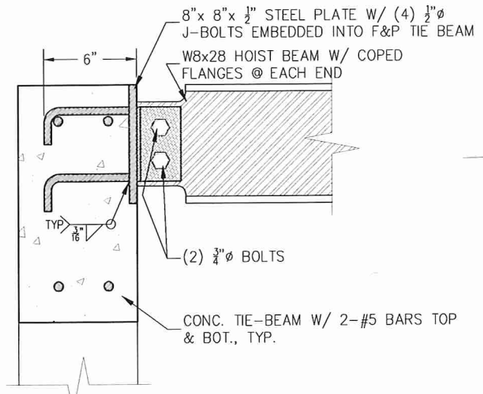
SUMP PIPING DETAIL

SCALE: N.T.S.



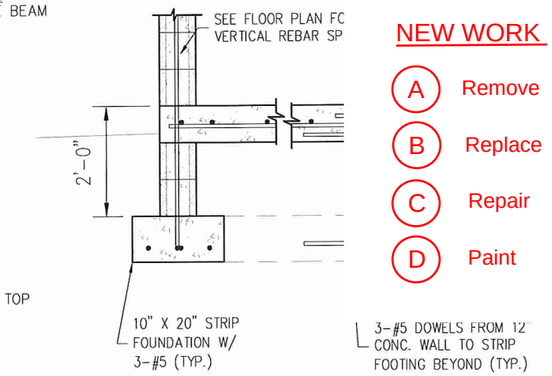
HOIST BEAM SUPPORT DETAIL – SECTION THROUGH HOIST BEAM

SCALE: N.T.S.



HOIST BEAM SUPPORT DETAIL – SECTION THROUGH TIE BEAM

SCALE: N.T.S.

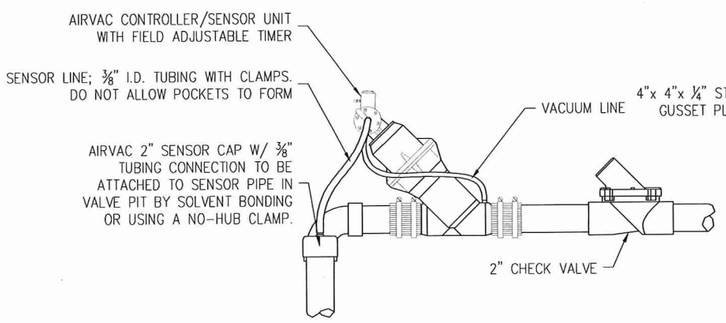


STEMWALL DETAIL "C"

SCALE: N.T.S.

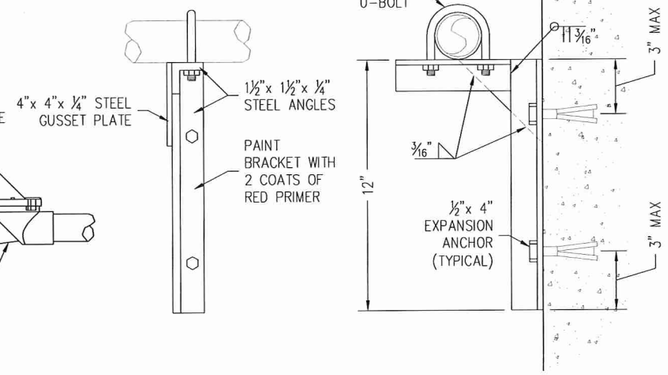
NEW WORK

- A – Remove
- B – Replace
- C – Repair
- D – Paint



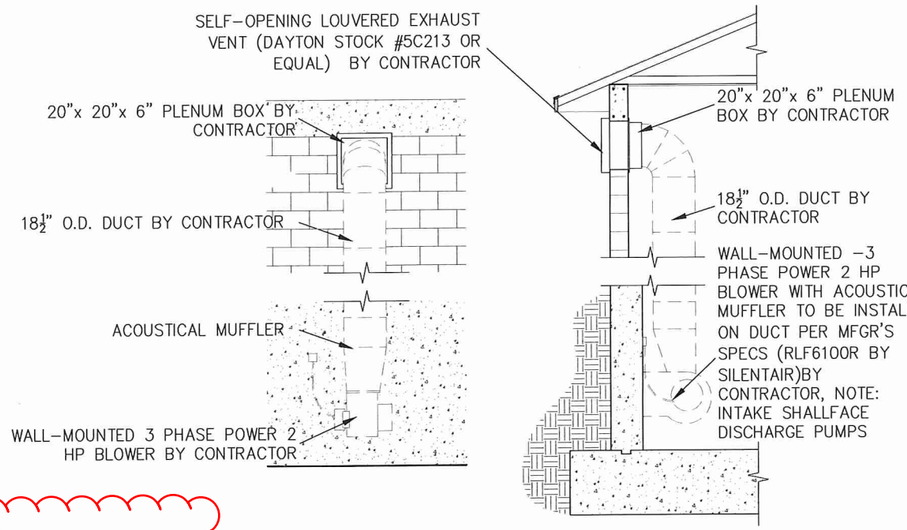
SUMP VALVE DETAIL – SIDE VIEW

SCALE: N.T.S.



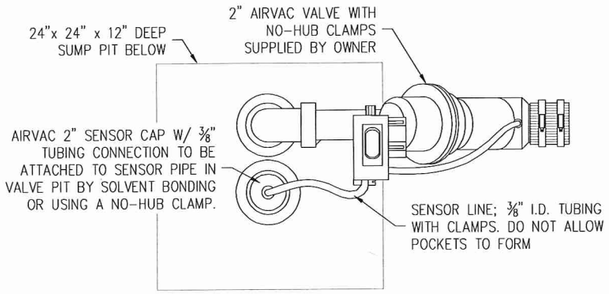
SUMP PIPE SUPPORT DETAIL

SCALE: N.T.S.



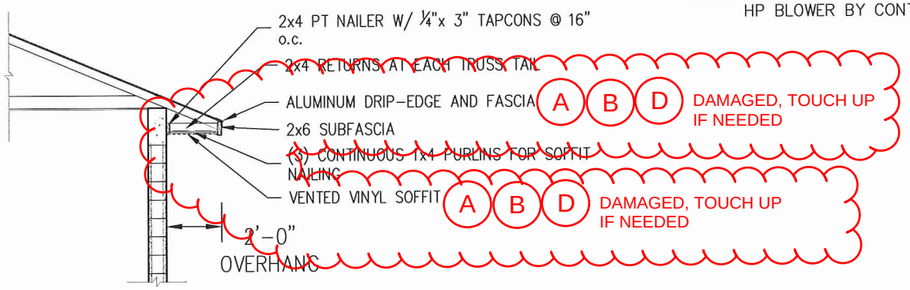
ELEVATION VIEW

SECTION VIEW



SUMP VALVE DETAIL – PLAN VIEW

SCALE: N.T.S.



ROOF OVER HANG DETAIL

SCALE : 3/8"=1'-0"

BLOWER & DUCT DETAIL

SCALE : 3/8"=1'-0"

JONATHAN H. COLE LICENSE No. 36384 STATE OF FLORIDA PROFESSIONAL ENGINEER

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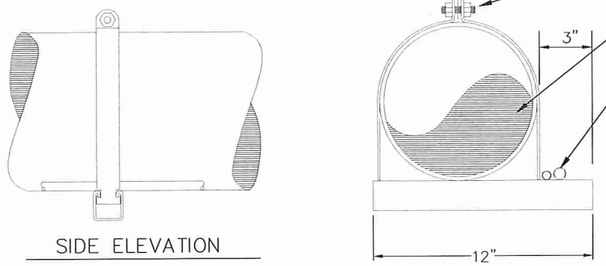
MISCELLANEOUS DETAILS

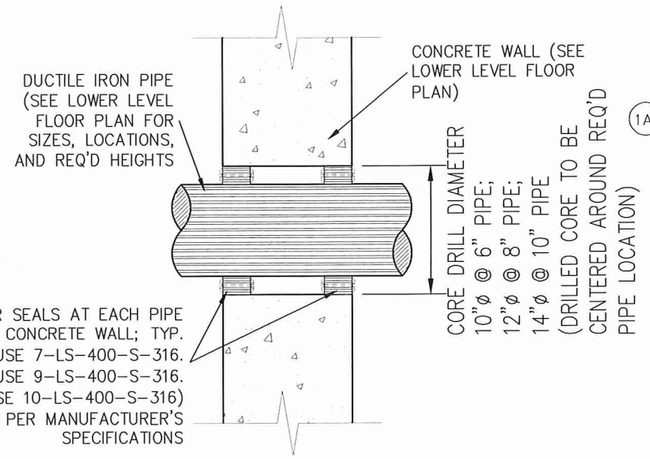
CONTRACT "D" Vac. Sta
SHEET: 16 OF 17
GWE NO. 6258.00

NOTE: UNI-STRUT, CLAMPS, BOLTS, AND NUTS PROVIDED BY AIRVAC; PARTS SHIPPED LOOSE AND INSTALLED BY CONTRACTOR AT SITE.



UNI-STRUT CLAMP DETAIL

VACUUM HEADER UNI-STRUT DETAIL
SCALE: N.T.S.

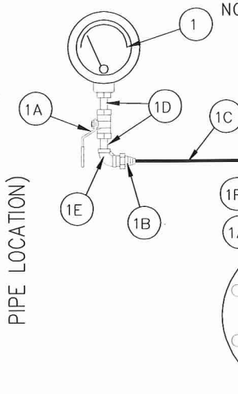


LINK-SEAL DETAIL

SCALE: N.T.S.

NOTE: GAUGES TO BE INSTALLED 60" FROM FROM PIT FLOOR

NOTE:
CONTRACTOR TO DRILL/TAP INCOMING VACUUM LINES FOR 1/4" PIPE THREADS.



(1) 0-30"HG VACUUM GAUGE MOUNTED TO TANK (TYP. OF 4)
(1A) MERIT 1/2" S.S. BALL VALVE
(1B) 1/2" MPT X 3/8" BARB ADAPTER
(1C) 3/8" DIA. FLEX TUBING X 20'
(1D) 1/2" X 1" S.S. NIPPLE
(1E) 1/2" 90° S.S. ELBOW
(1F) 1/4" MPT X 3/8" BARB ADAPTER

TYPICAL VACUUM LINE GAUGE PIPING DETAIL

SCALE: N.T.S.

GENERAL NOTES:

DESIGN CRITERIA:

Florida Building Code, 2023 8th Edition
ASCE 7-22

1. Wind Velocity = 162 M.P.H.
   Internal Pressure Coefficient = ±0.18 (Enclosed Building)
   Category III Building
   Exposure B

Component & Cladding ASD Loads based on a loaded area of 10 sf or less and a wind directionality factor of 0.85 are as follows:

Zone	1:	-36.3/+19.3
Zone	2:	-81.7/+19.3
Zone	3:	-112.9/+19.3
Zone	4:	-36.3/+33.5
Zone	5:	-44.8/+33.5

If a specific component has a tributary area larger than 10 sf and requires a reduced component & cladding load, ths specifications & dimensions of the product shall be submitted to the Engineer of Record for wind analysis.

2. Live Loads - in accordance with FBC 2004, Table 1607.1 unless noted.

Floors, Decks, & Stairs:	100 psf
Roofs:	20 psf

GENERAL:

CONSTRUCTION:

1. Unless noted otherwise, all wood construction shall meet or exceed requirements of Chapter 23, FBC. Table 2304.9.1 shall be used as a minimum for all nailing schedules. Roof, wall, & floor diaphragms shall be as follows unless noted otherwise:

-Unblocked @ roof: 4" @ edges/ 6" @ intermediate supports

-Min. 15/32" CDX 4-ply plywood shall be used for roof diaphragm w/ 8d ringshank nails (0.131"ø shank)

2. Pre-manufactured straps, hangers, and clips shall be installed according to manufacturer's recommendations as required to supply desired performance.

3. Due to the nature of this construction the Engineer of Record shall be given the opportunity to re-evaluate these plans and specifications as additional information becomes available or unforeseen circumstances arise.

4. This structure has been designed to be self supporting and stable after the building is complete. It is the responsibility of the contractor to determine suitable sequencing, means and methods of construction, including, but not limited to the addition of necessary shoring, tie downs, temporary bracing, etc.

SOIL COMPACTION:

Top soil shall be removed to a minimum depth of one foot over the entire building area and five feet beyond building lines. These areas should be cleared and grubbed of any vegetation. The exposed surface should than be compacted to a depth of (1) foot below the cleared and grubbed surface to a minimum 98% of the standard or modified proctor density as determined in accordance with ASTM D-698. After densification of natural soils, fill material to finished grade shall be placed with a maximum lift of 6" and compacted to a minimum 98% of the standard or modified proctor density. Fill material shall be clean to slightly silty fine sand, free of organic material.

SUBMITTALS:

1. All construction shall meet requirements of all Local and State Building Codes.

2. Engineer of Record shall be notified of any deviation to this plan during construction.

3. Contractor shall retain the services of a certified material testing laboratory to conduct all required concrete & soils compaction testing. Results of all tests shall be submitted to the Engineer of Record for review.

MATERIALS:

1. Contractor shall submit cut sheets and erection drawings for all manufactured structural components (including concrete piles) to Engineer of Record for review.

2. Contractor shall verify all dimensions and conditions in the field as work progresses. All discrepancies and deviations from the plans shall be reported to the Engineer of Record.

3. All structural changes shall be signed & sealed by the Engineer of Record & re-submitted to the Building Department prior to installation.

PREFABRICATED WOOD TRUSSES:
Truss components shall be designed by others to withstand the wind loads for Components & Cladding as determined by ASCE 7-10, Chapter 6. Complete designs of each truss (profiles) and the truss layout plan shall be submitted to the Engineer of Record for review. Shop drawings shall bear the signature & seal of the Florida Registered Professional Engineer responsible for the design of the trusses.

Truss reactions & uplift on the host structure shall be determined based on appropriate live & dead loads and the Main Wind Force Resistance System criteria of ASCE 7-10. Net uplift forces shall be determined using the actual available dead load. ASCE 7-10 method of wind analysis shall be noted on the truss designs and the layout.

MATERIALS (Cont.):

CONCRETE:
Provide mix designed by a recognized testing laboratory to achieve a strength at 28 days as listed below with a plastic and workable mix:

5000 psi for all below-grade concrete pit walls and pit slabs
3000 psi or stronger is acceptable for all other structural components (slabs, monolithic footings, tie-beams, etc.)

Materials used to produce concrete and admixtures for concrete shall comply with ACI 318. Concrete shall comply with all requirements of ASTM C 150, ASTM C 595, or ASTM C 845. Concrete shall comply with all the requirements of ASTM Standard C94-74A for measuring, mixing, transporting, etc. Concrete tickets shall be time stamped when concrete is batched, the maximum time allowed from the time the water is added until it is deposited in its final position shall not exceed one and one half (1½) hours. If for any reason there is a longer delay than that stated above, the concrete shall be discarded. It shall be the responsibility of the testing lab to notify the owner's representative and the contractor of any non-compliance with the above. Concrete testing to be paid for by the contractor. Admixtures may be used only with the approval of the engineer. During hot weather, proper attention shall be given to the ingredients, production methods, handling, placing, protection and curing to prevent excessive concrete temperatures or water evaporation that may impair required strength or serviceability of the member or structure as per 1906.5 and 1906.7 of the Florida Building Code.

MASONRY:
All Masonry work shall be done in accordance with "Building Code Requirements for Masonry Structures (ACI 530)" & "Specifications for Masonry Structures (ACI 530.1)"

1. Concrete masonry units shall be Grade "N" Hollow Load bearing Units, conforming to ASTM C-90 with a minimum compressive strength (f'm) of 1500 psi.

2. Mortar: Type M or S and shall conform to ASTM C-270.

3. Grout or pea-gravel concrete with an ultimate compressive strength of 3000 psi at 28 days, except for those locations as marked or noted on the structural drawings. Corefill mix shall conform to ASTM C-476.

4. Air-Entraining mixtures or hydrated lime containing air-entraining mixtures are prohibited because such admixtures will reduce the shear, tensile and compressive strength of the masonry. Calcium chloride is not permitted in mortar or grout in. which reinforcement, metal ties, or anchors are embedded because of excessive corrosion.

MATERIALS (Cont.):

METAL:
1. All steel plates, bolts, washers, nuts, fasteners, hangers, straps and clips shall be "Z-MAX" (Salt air exposure) galvanized or stainless steel - (Simpson Products or equal).

2. Steel plates and rolled steel members shall conform to ASTM A36 unless noted otherwise. Bolts, nuts and washers shall conform to ASTM A307 unless noted otherwise.

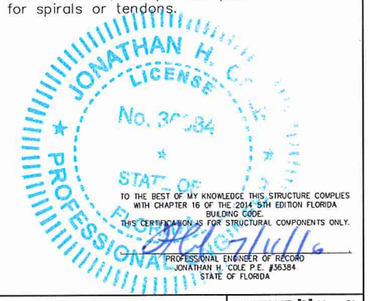
3. Lag bolts, nails, screws, hangers, straps, and clips shall be fabricated from appropriate materials and H.D.G. (Hot-dipped Galvanized) to meet conditions shown.

4. All handrails, guardrails and steel framing components (not including walking surfaces) shall be painted with rust-proof primer and shall be finished with safety yellow paint.

GLUE:
Glue used in the field for assembling wood products shall be waterproof exterior grade equal to or better than Liquid Nails.

EXTERIOR DOORS & LOUVERS:
1. All exterior windows, louvers & doors are required to be tested in accordance with ANSI/AMMA/NWWDA 101/IS2 standard and bear an AMMA or WDMA label identifying the manufacturer, performance characteristics, and approved product testing entity.

REINFORCING STEEL:
Reinforcing shall be ASTM A615 Grade 60, free from oil, scale and rust, and placed in accordance with the typical bending diagram and placing details and ACI 318 Standards and Specifications. Reinforcement shall be deformed reinforcement, except that plain reinforcement shall be permitted for spirals or tendons.



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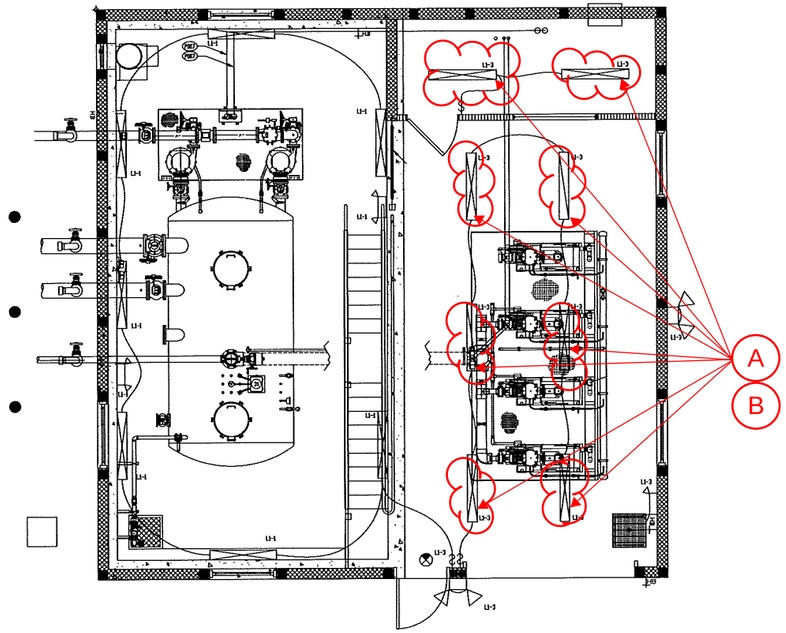
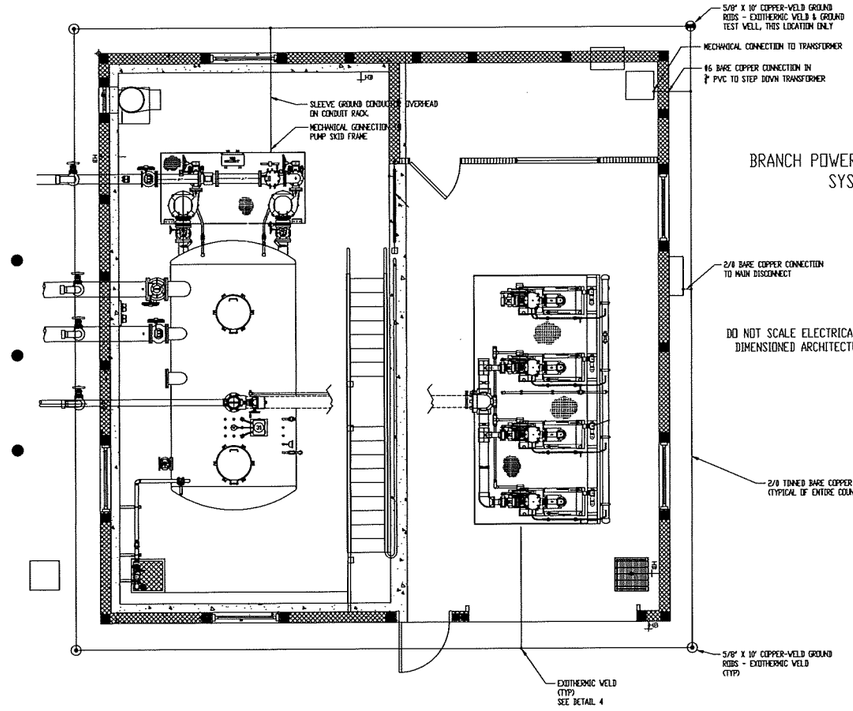


NEW WORK

- A Remove
- B Replace
- C Repair
- D Paint

BRANCH LIGHTING

- A Temporary
- B



BRANCH POWER & GROUNDING SYSTEM

DO NOT SCALE ELECTRICAL DRAWINGS. SEE DIMENSIONED ARCHITECTURAL DRAWINGS

B

LIGHTING FIXTURE SCHEDULE		
A	WILLIAMS 92-4-232-A-WET/2-SSLATCH-EB2-UNV (2) F32T8 LAMPS	1 X 4 SURFACE MOUNT GASKETED VP FLUORESCENT
B	LUMINAIRE VPF84-2F32T8-120-CP-GRY (2) F32T8 LAMPS	1 X 4 SURFACE MOUNT ENCLOSED FLUORESCENT
C	PHILIPS LP16T LED LAMP	DUAL HEAD LED WITH MOTION SENSOR
E	WILLIAMS EMER/CP-WHT 2 - 5.4WATT INC (INCLUDED)	DUAL HEAD EMERGENCY LIGHT CONNECT TO UN-SWITCHED LIGHTING CIRCUIT IN THAT AREA
X	WILLIAMS EXIT-R-EM-WHT LED	EXIT LIGHT UNIVARSAL MOUNT CONNECT TO UN-SWITCHED LIGHTING CIRCUIT IN THAT AREA

BRANCH LIGHTING AND POWER GENERAL NOTES:

1. ALL EXPOSED CONDUIT SHALL BE RIGID ALUMINUM, BELOW GRADE CONDUIT SHALL BE PVC-80
2. MC CABLE PERMISSIBLE FOR CONCEALED FIXTURE CONNECTION ONLY
3. ALL POWER CONDUCTORS SHALL BE THHN/THWN-2 COPPER
4. MINIMUM BRANCH POWER CONDUCTOR #12
5. MINIMUM INDOOR BRANCH LIGHTING AND RECEPTACLE CONDUIT ½"
6. DUPLEX RECEPTACLES SHALL BE 20A SPECIFICATION GRADE (LEVITON 5362)
7. LIGHTING SWITCHES SHALL BE 20A SPECIFICATION GRADE (LEVITON 1221)
8. CEILING FLUORESCENT TO BE FASTENED TO DRYWALL WITH 3/16" X 3" EXPANDING TOGGLE BOLTS
9. WALL MOUNTED FLUORESCENT TO BE FASTENED WITH 1/4" STAINLESS SLEEVE ANCHORS.
10. EXIT & EMERGENCY LIGHTING TO BE CONNECTED TO THE UN-SWITCHED LIGHTING CIRCUIT IN THE AREA WHERE INSTALLED
11. VERIFY LOCATION AND CIRCUIT REQUIREMENTS FOR WALL MOUNTED ELECTRICAL ROOM AC
12. SEE SHEET E-3 FOR NOTED EQUIPMENT SCHEDULE
13. TAP-CON TYPE ANCHORS WILL NOT BE PERMITTED FOR ATTACHING PANELS TO EXTERIOR WALLS.

PANELBOARD DESIGNATION LP1
125A MAIN BREAKER PANEL, 120/208 3P 4W N1 SURFACE
SERVICE ORIGINATION POINT

	CB SIZE	LOAD (VA)	CKT #	PHASE LOAD (VA) "A"	"B"	"C"	CKT #	LOAD (VA)	CB SIZE	
LOWER LEVEL LIGHTING	20	1140	1	4020			2	2880	30	A/C UNIT
UPPER LEVEL LIGHTING	20	1540	3		4420		4	2880		
CUPOLA FAN	20	984	5			1704	6	720	20	EXHAUST FAN
SPACE			7	720			8	720		
BRANCH RECEPTACLE	20	1500	9		2220		10	720		
BRANCH RECEPTACLE	20	720	11			5280	12	4560	60	GENERATOR PANEL "GEN-1"
INDOOR LIGHTING	20	1200	13	5760			14	4560		
DFS CONTROLLER	20	1200	15		2700		16	1500	20	BRANCH RECEPTACLE
SUMP PUMP J-BOX	20	1500	17			3000	18	1500	20	SPARE
			19	0			20			
			21		0		22			
			23			0	24			
				TOTALS						
				10500.00	9340.00	9984.00				
				87.50	77.83	83.20				

CONNECTED AMPS= 82.79
CONNECTED KVA= 29.82

VOLTAGE 208Y/120 | MAINS RATING 125 AMP | XX M/B | #1 FEEDER CONDUCTORS
MOUNTING SURFACE | BREAKER RATING 125 AMP | MLO | #1 NEUTRAL CONDUCTORS
ENCLOSURE N1 | FAULT CURRENT 10K AIC | #6 GROUNDING CONDUCTOR

NAME		DATE
DESIGNED BY:	M.G.	6/15/2016
CHECKED BY:	NAME	DATE
DRAWN BY:	M.G.	6/15/2016
SCALE:	1/8" = 1'-0" (ARCH-D 24x36)	
FILE NAME:	S: FILE LOCATION	

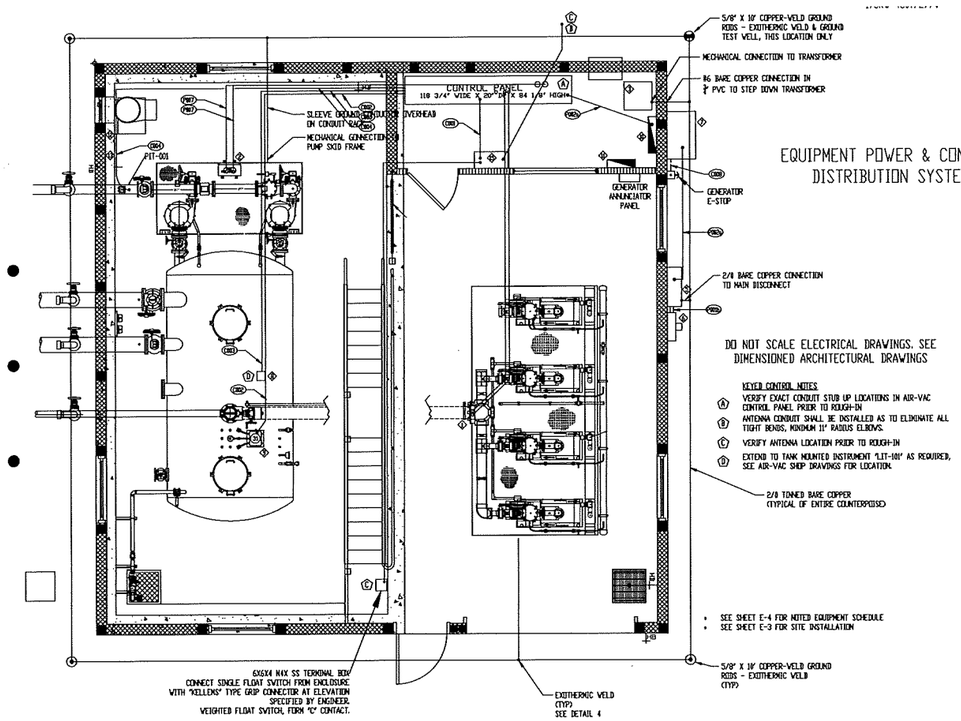
NO.	REVISION DESCRIPTION	BY	DATE
1	--- ---	MG	0/0/00

Bay Area Electric, Inc.
6244 Clark Center Ave. Unit-2 Sarasota, FL 34238
Phone 941.921.9067 Fax 941.921.9066
www.bayareaelectric.com
EC13001351 EC0001556

CHARLOTTE COUNTY GOVERNMENT
SPRING LAKE CONTRACT D VACUUM STATION

FLOOR PLAN
LIGHTING – BRANCH POWER – GROUNDING

PROJ. NO:	000000
DWG DATE:	6/15/2016
DWG NO:	00000
SHEET:	E-1



EQUIPMENT POWER & CONTROLS DISTRIBUTION SYSTEMS

SERVICE DISTRIBUTION AND EQUIPMENT CONNECTION GENERAL NOTES:

1. ALL ABOVE GRADE CONDUIT SHALL BE RIGID ALUMINUM
2. ALL BELOW GRADE CONDUIT SHALL BE PVC-80
3. ALL POWER CONDUCTORS SHALL BE THHN/THWN-2 COPPER UNLESS OTHERWISE NOTED
4. ALL EXTERIOR FASTENERS TO BE STAINLESS STEEL
5. ALL EXTERIOR MOUNTING CHANNEL SHALL BE ALUMINUM
6. ALL BELOW GRADE GROUNDING CONNECTIONS TO BE EXOTHERMIC WELDS
7. MINIMUM BRANCH POWER CONDUCTOR #12, MINIMUM DISCRETE CONTROL CONDUCTOR #14
8. ANALOG SIGNAL CABLE - #16TSP BELDEN 8719 (OR EQUAL)
9. MINIMUM EQUIPMENT CONNECTION CONDUIT ¾"
10. FLEXIBLE CONDUIT SHALL BE LIQUID-TITE FLEXIBLE METAL TYPE-EF.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT			CONDUCTOR			DESCRIPTION		
DESIGNATION	SIZE	TYPE	QTY. - AWG	INSULATION TYPE	INSULATION VOLTS	FROM	TO	NOTES
P-001a	3"	PVC-80 AL.	3-350, 1-250N	THHN	600	UTILITY TRANSFORMER	METER	
P-001b	3"	AL	3-350, 1-250N	THHN	600	METER	MAIN DISCONNECT	
P-002a	3"	PVC-80 AL.	3-350, 1-2/0N, 1-1/0 GND.	THHN	600	MAIN DISCONNECT	TRANSFER SWITCH	
P-002b	3"	PVC-80 AL.	3-350, 1-2/0N, 1-1/0 GN.	THHN	600	GENERATER	TRANSFER SWITCH	
P-002c	3"	PVC-80 AL.	3-350, 1-2/0N, 1-1/0 GND	THHN	600	TRANSFER SWITCH	PANEL MDP	
P-003	3"	AL	3-250, 1-#4 GND	THHN	600	PANEL - MDP	MAIN PUMP CONTROL PANEL	VERIFY CONTROL PANEL FEEDER TERMINATION POINT PRIOR TO ROUGH-IN
P-004	1"	FMC	3-#6, 1-#8 GND.	THHN	600	PANEL - MDP	TRANSFORMER T-1	
P-005	1.5"	FMC	3-#1, 1-#1N 1-#6 GND	THHN	600	TRANSFORMER T-1	PANEL L1	
P-006	(2) 1"	AL	6-#10, 1-#10 GND	THHN	600	MAIN PUMP CONTROL PANEL	VACUUM PUMP JUNCTION BOX	ONE CONDUIT FOR TWO PUMPS, DO NOT EXCEED 60% DERATING FACTOR.
P-007	(2) 1.5"	AL	3-#4, 4-#14, 1-#6 GND	THHN	600	MAIN PUMP CONTROL PANEL	SEWAGE PUMP DISCONNECT ENCLOSURE	ONE CONDUIT FOR EACH PUMP, #14 CONDUCTORS - MOISTURE SENSOR & THERMAL SENSOR
P-008a	.75"	AL	1-#12, 1-#12N 1-#12 GND.	THHN	600	PANEL - L1	CUPOLA EXHAUST FAN	ROUTE FEEDERS THROUGH CONTACTOR
P-008b	.75"	AL	3-#12, 1-#12N 1-#12 GND.	THHN	600	PANEL - L1	LOWER LEVEL EXHAUST FAN	ROUTE FEEDERS THROUGH CONTACTOR NEUTRAL FOR COIL OPERATION
P-009	1"	PVC-80 AL.	2-#6, 1-#8 N, 1-#8 GND	THHN	600	PANEL L1	GENERATOR ENCLOSURE LOAD CENTER	CONFIRM REQUIREMENTS WITH GENERATOR MANUFACTURER
P-010	.75"	AL	1-#12, 1-#12 N, 1-#12 GND	THHN	600	PANEL - L1	BRANCH LOADS	SEE SHEET E-1 AND E-2 FOR LOCATIONS
P-011	.75"	AL	2-#10, 1-#10 GND	THHN	600	PANEL - L1	WALL AC	VERIFY LOCATION OF UNIT PRIOR TO ROUGH-IN
P-012	.75"	AL	1-#12, 1-#12 N, 1-#12 GND	THHN	600	PANEL - L1	BRANCH LIGHTING	MC CABLE ALLOWED FOR BRANCH LIGHTING CONCEALED VAPS ONLY
P-013	(2) 1.5"	AL	3-#1, 4-#14, 1-#6 GND	THHN	600	SEWAGE PUMP DISCONNECT ENCLOSURE	SEWAGE PUMP	
P-014	.75"	AL	1-#12, 1-#12 N, 1-#12 GND	THHN	600	PANEL - L1	DFS CONTROLLER	
C-001	.75"	AL	1-CAT-5e			MAIN PUMP CONTROL PANEL	DFS CONTROLLER	ARP/VAC/PLC INTERFACE CABLE
C-002	.75"	AL	9-#14, 1-#14 GND.	THHN	600	MAIN PUMP CONTROL PANEL	VACUUM TANK JUNCTION BOX	DUAL GROUNDING CONDUCTORS, ONE FOR ISOLATION VALVE POWER, ONE FOR PROBES
C-003	.75"	AL	1-#16TSP		600	MAIN PUMP CONTROL PANEL	LIT-001 VACUUM TANK LEVEL INSTRUMENTS	LIT-001
C-004	1"	AL	1-#16TSP	THHN	600	MAIN PUMP CONTROL PANEL	PIT-001 FORCE MAIN PRESSURE TRANSMITTER	
C-005	.75"	AL	7-#14, 1-#12 GND.	THHN	600	MAIN PUMP CONTROL PANEL	AUTOMATIC TRANSFER SWITCH	
C-006	1"	PVC-80 AL.	8-#14, 1-#18TSP, 1-#12 GND.	THHN	600	GENERATER CONTROL PANEL	GENERATOR ANNUNCIATOR	ANALOG AND DISCRETE SIGNAL, CONFIRM CABLE REQUIREMENT WITH GENERATOR PROVIDER
C-007	1"	PVC-80 AL.	8-#14, 1-#12 GND.	THHN	600	GENERATER CONTROL PANEL	TRANSFER SWITCH	DISCRETE SIGNAL, CONFIRM CABLE REQUIREMENT WITH GENERATOR PROVIDER
C-008	.75"	AL	2-#14, 1-#12 GND.	THHN	600	TRANSFER SWITCH	E-STOP SWITCH	
C-009	.75"	AL	2-#14, 1-#12 GND.	THHN	600	DFS CONTROLLER	LOWER LEVEL FLOAT SWITCH "LEVEL INDICATOR"	CONFIRM FLOAT SVITCH ELEVATION WITH ENGINEER PRIOR TO INSTALLATION
C-010	.5"	AL	2-#14	THHN	600	DFS CONTROLLER	DOOR INTRUSION SWITCH	L-V N-O DOOR CONTACT FROM RTU SVITCH RATED 30V, 250mA
C-011	1.25"	PVC-80 AL.	PULL STRING			DFS CONTROLLER	ANTENNA LOCATION	USE LONG RADIUS SWEEPS, 11" RADIUS MINIMUM
G-001	1"	PVC-80	1-#2 GND.	BARE COPPER	NA	MAIN SERVICE GROUNDING COUNTERPOISE	MAIN DISCONNECT	
G-002	.75"	PVC-80	1-#6 GND.	BARE COPPER	NA	MAIN SERVICE GROUNDING COUNTERPOISE	TRANSFORMER T-1	

PROVIDE FOR INFORMATION

NAME		DATE
DESIGNED BY:	M.G.	6/15/2016
CHECKED BY:	NAME	DATE
DRAWN BY:	M.G.	6/15/2016
SCALE:	1/8" = 1'-0" (ARCH-D 24x36)	
FILE NAME:	S: FILE LOCATION	

NO.	REVISION DESCRIPTION	BY	DATE
△	---	MG	0/0/00

Bay Area Electric, Inc.
6244 Clark Center Ave. Unit-2 Sarasota, FL 34238
Phone 941.921.9067 Fax 941.921.9068
www.bayareaelectric.com
EC13001351 EC0001556

CHARLOTTE COUNTY GOVERNMENT
SPRING LAKE CONTRACT D VACUUM STATION

BUILDING DISTRIBUTION ELECTRICAL & CONTROLS

PROJ. NO:	000000
DWG DATE:	6/15/2016
DWG NO:	00000
SHEET:	E-2

ELECTRICAL SPECIFICATIONS

1. SCOPE
The scope of the work covered herein consists of furnishing all labor, materials, necessary equipment and services to complete the Electrical Work and related work in full accordance as indicated on the drawings, as specified herein or both and subject to the terms and conditions of the Contract.

All items noted herein, shown by the electrical plans, or reasonably to be interpreted from the plans necessary to complete the electrical system shall be provided and installed under the work of this section, whether same are specifically mentioned herein or not.

2. CODES, RULES, PERMITS, FEES
The Contractor is generally responsible to insure all work, both old and new, complies with the NEC and any applicable local and state codes and ordinances.

3. DRAWINGS
Drawings are diagrammatic and indicate the general arrangement of systems and work included in the contract. Drawings are not to be scaled. The Architectural drawings and details shall be examined for exact location of fixtures and equipment. Any conflict shall be immediately brought to the attention of the Engineer before proceeding with the work.

4. SHOP DRAWINGS
The contractor shall submit six (6) copies for approval of detailed shop drawings of all equipment and all material required to complete the project to the Engineer.

Materials or products specified herein and/or indicated on drawings by trade name, manufacturer's name or catalog number shall be provided as specified.

5. COOPERATION WITH OTHER TRADES
The contractor shall give full cooperation to other trades and shall furnish in writing to the Contractor, with copies to the Engineer, any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay. Coordinate all conduit runs and equipment with other trades. Verify nameplate electrical data of actual equipment furnished by others before beginning installation.

6. CUTTING, PATCHING, AND FINISHING
The Contractor shall do all cutting, drilling, etc. required for work under this section of the specifications, inside and outside the building, including preparing of finished surfaces, all required shoring and bracing, and all protection for safety of persons and property.

7. EXCAVATING AND BACK FILLING
The contractor shall do all trench and pit excavating and backfilling required for work under this section of the specifications, inside and outside the building, including repairing of finished surfaces, all required shoring, bracing, pumping, and all protection for safety of persons and property.

8. MATERIAL AND WORKMANSHIP
All materials and apparatus required for the work shall be new unless indicated otherwise on the plans.

Contractor shall provide and install all electrical as shown, verifying all mounting heights and exact locations of all wall-mounted electrical devices with architect prior to rough-in.

Connections and junction boxes to equipment are diagrammatic. Verify exact location of connection to specific equipment and devices.

9. PANELBOARDS
Panels shall be as manufactured by Square D or equal of equivalent of sizes, ratings, and requirements shown on the plans. 480v Panels shall be of dead front construction . All bussing shall be copper. Existing panels may be reused if in good condition.
Minimum width of 480v panels shall be 20".
240v Panels shall be of dead front construction . All bussing shall be copper. Existing panels may be reused if in good condition.
Minimum width of 240v panels shall be 14".

New circuit breakers shall be 20A minimum. Multi-pole breakers shall have a single handle to trip all poles at once. AIC rating of breakers shall match AIC rating of panel.

A laminated black plastic with white lettering plastic nameplate with the identification number as shown on the panel schedule shall be mounted on the outside of the door with sheet metal screws. Nameplate size shall be 3" wide x 1-1/2" high with 1/2" high engraving. Provide a completed circuit directory, typed and mounted in a clear plastic sleeve, on the interior of the panel door.

10. GROUNDING
Provide a complete grounding network for the entire electrical system to comply with NEC requirements as indicated on drawings.

All conduits shall have a ground wire installed. Conduit shall not be used as a ground.

Bond service entrance ground to building steel, metal water mains, main electrodes, etc.

11. DISCONNECT SWITCHES
Equipment disconnect switches shall be Square D, G.E., ITE or equivalent heavy duty of the type and ratings shown on the plans. Fuses shall be provided of the appropriate type and rating for the equipment to be served.

12. MISCELLANEOUS EQUIPMENT
a. Switches - All general use lighting (SPST toggle with or without pilot) switches to be rated 20A., 120-277V. as manufactured by Leviton, Lutron, P & S, or equivalent. Coordinate color with Owner/Architect.

b. Receptacles - All general use duplex receptacles to be rated 20A., 120V as manufactured by Leviton, Lutron, P & S, or equivalent. Coordinate color with Owner/Engineer.

c. Power/lighting circuits - All power/lighting circuits 100A or less shall be as indicated on the wire and conduit schedule. Other circuits shall be as shown on the plans.

d. Homeruns - All homeruns shall be a minimum of 3/4" conduit w/maximum 40% fill.

e. Conductors - All conductors shall be rated 600V, copper, type THW, THHN/THWN, XHHW. Wire/conduit sizing/fill is based upon type THW conductors, conductors of #12 AWG and larger shall be stranded.

f. Timers - A Tork #T920L shall be used for lighting control. Multiple units may be required for all controlled circuits shown on the plans.

g. Photo Control - A Tork #2100 shall be mounted where shown on the drawings.

h. Lighting fixtures - Lighting fixtures shall be as indicated on the fixture schedule or approved equals.

13. CONDUIT
Below grade & concealed locations shall be PVC SCH. 80.
Exposed interior and exterior locations shall be aluminum.

Aluminum conduit in contact with concrete or earth shall have two coats of bitumastic to a point 6" above finished grade or concrete slab.

Flexible connection to equipment shall be with liquid-tite flexible metal conduit. Liquid-tite flexible metal conduit sittings shall have insulated throats.

Type M/C cable shall be permitted for lighting branch wiring only where concealed above hard ceiling & installation shall meet NEC-2008

Conduit entrance into enclosures shall be made by conduit hubs in order to maintain the NEMA integrity of the enclosure.

Sizes indicated are minimums, larger sizes may be used to facilitate wire pulls, etc.

14. EQUIPMENT FURNISHED BY OTHERS
Contractor shall provide all conduit, wire and disconnect switches to connect electrical equipment supplied by others which shall include both new and relocation of existing equipment. All final electrical connections are to be by contractor.

15. RECORD DRAWINGS
The Contractor shall keep accurate records of actual construction including device locations and conduit runs if different from the plans.
The Contractor shall provide the owner with a reproducible set in CAD format of plans depicting the complete electrical system as installed (as built drawings). The scale on these as built drawings shall be no smaller than the scale used on the original plans.

16. TESTING
Ground system test shall be made and test report furnished to the engineer.
Function test shall be completed only after the engineer has confirmed that the installation is complete.

17. FINAL ACCEPTANCE
After testing a final inspection shall be made by the Engineer and other authorized persons with the Contractor.

Final acceptance of the project shall not prejudice the Owner's right to require replacement and/or repair of any defective work or materials.

ELECTRICAL SYMBOL LIST

	SIMPLEX RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	44" AFF OR AS NOTED
	QUAD RECEPTACLE 125V 20A	16" AFF OR AS NOTED
	QUAD RECEPTACLE 125V 20A	44" AFF OR AS NOTED
	MULTI POLE RECEPTACLE	16" AFF OR AS NOTED
	DUPLEX RECEPTACLE 125V 20A	FLUSH WITH FLOOR
	DUPLEX RECEPTACLE 125V 20A (1/2 RECEPTACLE SWITCHED)	16" AFF OR AS NOTED
GFI	DUPLEX RECEPTACLE 125V 20A GROUND FAULT	16" AFF OR AS NOTED
GFI	DUPLEX RECEPTACLE 125V 20A GROUND FAULT	44" AFF OR AS NOTED
$	SINGLE POLE SWITCH MTD. 48" AFF UNLESS OTHERWISE NOTED, MOTOR DUTY AS REQUIRED.	48" AFF OR AS NOTED
$MS	SINGLE POLE SWITCH MTD. 48" AFF UNLESS OTHERWISE NOTED, MOTION SENSOR	48" AFF OR AS NOTED
$2	2-POLE SWITCH MOUNTED AT 48" OR AT EQUIPMENT	48" AFF OR AS NOTED
$3	THREE-WAY SWITCH MTD. 48" AFF	48" AFF OR AS NOTED
$4	FOUR-WAY SWITCH MTD. 48" AFF	48" AFF OR AS NOTED
J	JUNCTION BOX	48" AFF OR AS NOTED
	DISCONNECT	48" AFF OR AS NOTED
	RECESSED LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE CEILING LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE WALL LIGHTING FIXTURE, SEE SCHEDULE FOR TYPE AND LAMP REQUIREMENTS	
	SURFACE CEILING FLUORESCENT LIGHTING FIXTURE, SEE SCHEDULE FOR REQUIREMENTS	
	RECESSED CEILING FLUORESCENT LIGHTING FIXTURE, SEE SCHEDULE FOR REQUIREMENTS	
	EMERGENCY EGRESS LTG. MTD. 7'-6" AFF OR AS NOTED, W/ BATTERY BACKUP	
	EXIT SIGN MTD. 7-6" AFF OR FROM CEILING, W/ BATTTERY BACKUP FACES AND ARROWS AS INDICATED	
	COMBO EXIT / EL MTD. 7-6" AFF OR FROM CEILING, W/ BATTTERY BACKUP FACES AND ARROWS AS INDICATED	
	PANEL	
	EXHAUST FAN	

BRANCH LIGHTING SWITCHED

BRANCH LIGHTING SWITCHED & UN-SWITCHED

BRANCH LIGHTING UN-SWITCHED

NAME		DATE
DESIGNED BY:	M.G.	6/15/2016
CHECKED BY:	NAME	DATE
DRAWN BY:	M.G.	6/15/2016
SCALE:	NA	
FILE NAME:	S: FILE LOCATION	

NO.	REVISION DESCRIPTION	BY	DATE
A	---	MG	6/6/00

Bay Area Electric, Inc.
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EC13001351 EC0001556

CHARLOTTE COUNTY GOVERNMENT
SPRING LAKE CONTRACT D VACUUM STATION

SPECIFICATIONS & SYMBOL LIST

PROJ. NO: 000000
DWG DATE: 6/15/2016
DWG NO: 00000
SHEET: E-6

CHARLOTTE COUNTY
FLORIDA

Site Inspection Report for Charlotte County – East Port Lift Station #59 Skylark Vac Station Florida Hurricane Ian (DR-4673-FL)

CSA CONSULTING GROUP LLC
Consulting Excellence

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(1)

Created: Thu 22 Feb 08:00 2024
Group: Identification
Cause of Damage: N/A
GPS Lat/Long: 26.987535, -82.112682

Component Description:
Site ID.

(2)

Created: Thu 22 Feb 08:01 2024
Group: Exterior - Roof
Cause of Damage: High Winds

Component Description:
Roof damaged, resulting to water intrusion to interior. Temporary repair in place obscuring exact extent of damage and type of roofing. Per PoC, roofing is galvanized aluminium tiles with waterproofing membrane underneath.

44’ x 36’ footprint. 26’ cap to base.

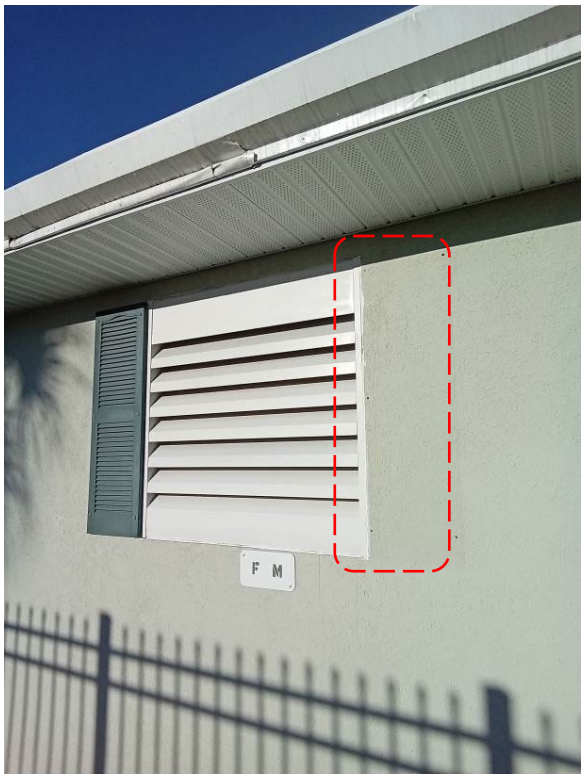
Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(3)

Created: Thu 22 Feb 08:02 2024
Group: Exterior - East
Cause of Damage: N/A

Component Description:
Overview Photo.

(4)



Created: Thu 22 Feb 08:07 2024
Group: Exterior - East
Cause of Damage: High Winds

Component Description:
Missing decorative shutter.

14” x 48”

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(5)

Created: Thu 22 Feb 08:08 2024
Group: Exterior - East
Cause of Damage: High Winds

Component Description:
Refer to Photo (4).

(6)

Created: Thu 22 Feb 08:08 2024
Group: Exterior - East
Cause of Damage: High Winds

Component Description:
Refer to Photo (4).

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(7)

Created: Thu 22 Feb 08:02 2024
Group: Exterior - Roof
Cause of Damage: High Winds

Component Description:
Missing/damaged soffit.

White aluminium. 2' W.

~ 5 LF

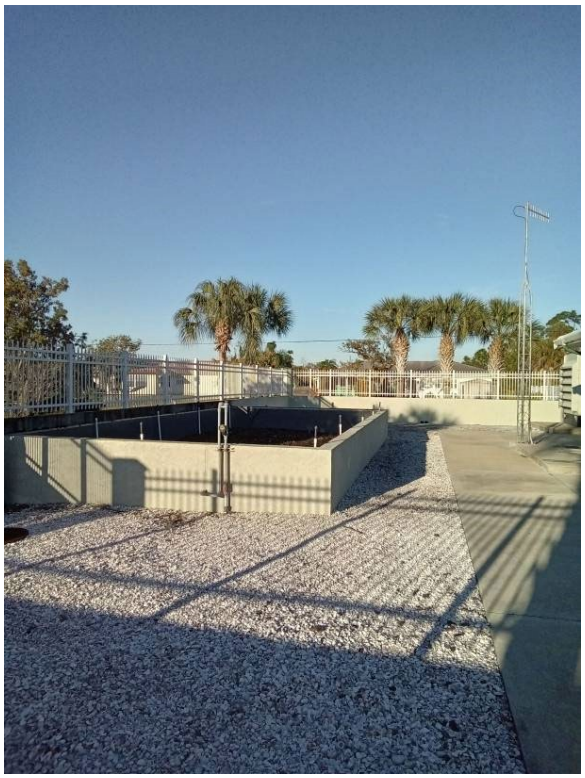
(8)

Created: Thu 22 Feb 08:03 2024
Group: Exterior - South
Cause of Damage: N/A

Component Description:
Overview Photo.

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(9)



Created: Thu 22 Feb 08:04 2024
Group: Odor Control
Cause of Damage: N/A

Component Description:
Overview Photo.

(10)

Created: Thu 22 Feb 08:05 2024
Group: Odor Control
Cause of Damage: N/A

Component Description:
Overview Photo

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(11)

Created: Thu 22 Feb 08:06 2024
Group:
Cause of Damage: N/A

Component Description:
Overview Photo

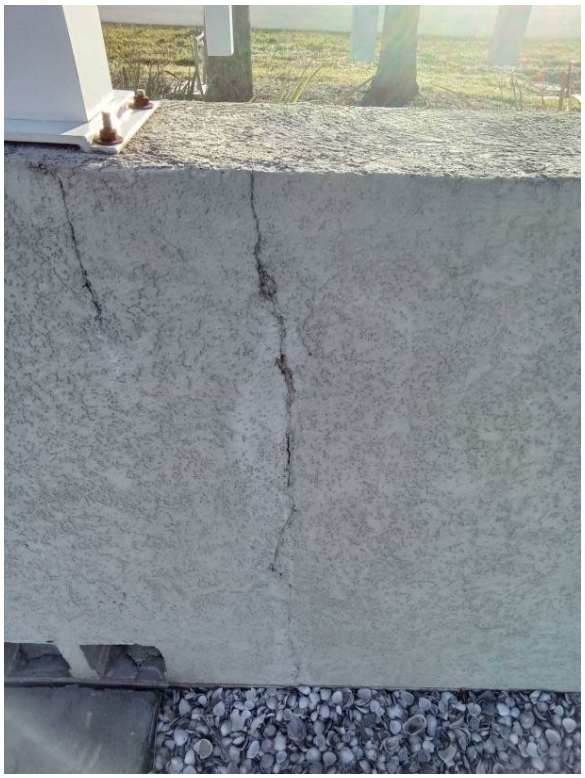
(12)

Created: Thu 22 Feb 08:12 2024
Group: Wall - South
Cause of Damage: N/A

Component Description:
Overview Photo

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(13)



Created: Thu 22 Feb 08:13 2024
Group: Wall - East
Cause of Damage: Wind Blown Debris

Component Description:
Stucco cracking.

[4] cracks total – [2] on south wall and [2] on east wall.

41” H.

8” W block.

(14)

Created: Thu 22 Feb 08:14 2024
Group: Wall - South
Cause of Damage: Wind Blown Debris

Component Description:
Refer to Photo (13).

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(15)

Created: Thu 22 Feb 08:15 2024
Group: Wall - South
Cause of Damage: Wind Blown Debris

Component Description:
Refer to Photo (13).

(16)

Created: Thu 22 Feb 08:04 2024
Group: Exterior - West
Cause of Damage: N/A

Component Description:
Overview Photo.

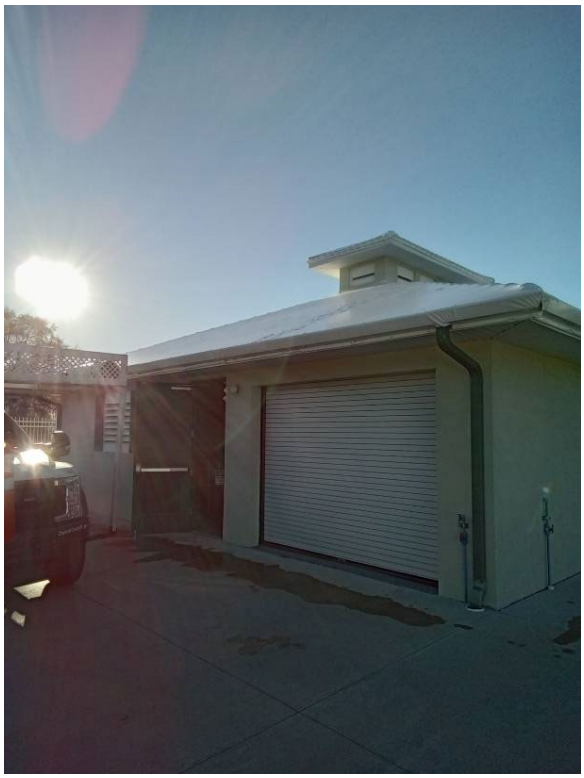
Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(17)

Created: Thu 22 Feb 08:05 2024
Group: Generator Building
Cause of Damage: N/A

Component Description:
Overview Photo.

(18)



Created: Thu 22 Feb 08:09 2024
Group: Exterior - North
Cause of Damage: N/A

Component Description:
Overview Photo.

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

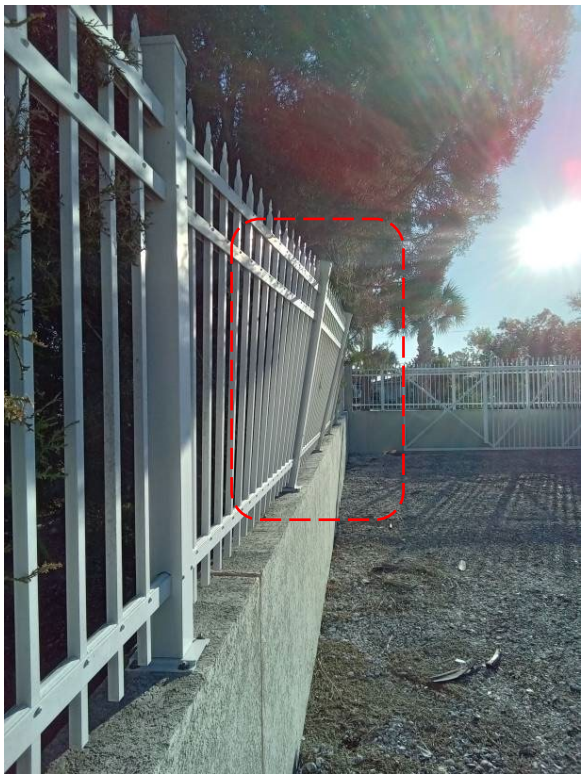
(19)

Created: Thu 22 Feb 08:09 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Damaged aluminium fence posts.

[3] posts. White aluminium. 3” x 3” x 4’

(20)



Created: Thu 22 Feb 08:09 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(21)

Created: Thu 22 Feb 08:09 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

(22)

Created: Thu 22 Feb 08:10 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(23)

Created: Thu 22 Feb 08:10 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

(24)

Created: Thu 22 Feb 08:10 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(25)

Created: Thu 22 Feb 08:11 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

(26)

Created: Thu 22 Feb 08:11 2024
Group: Wall - North
Cause of Damage: High Winds

Component Description:
Refer to Photo (19).

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(27)

Created: Thu 22 Feb 08:16 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Drywall and insulation damaged throughout. Subsequently removed. No apparent permanent damage or mold to roof sheathing.

Drywall slopes upward. 43’ x 35’ footprint.

(28)

Created: Thu 22 Feb 08:16 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (27).

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(29)

Created: Thu 22 Feb 08:16 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (27).

(30)

Created: Thu 22 Feb 08:17 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (27).

Dual pole fluorescent light fixtures damaged and replaced with temporary lighting.

[6] 4’ fixtures.

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(31)

Created: Thu 22 Feb 08:17 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (30).

(32)

Created: Thu 22 Feb 08:17 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (30).

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(33)

Created: Thu 22 Feb 08:18 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (30).

(34)

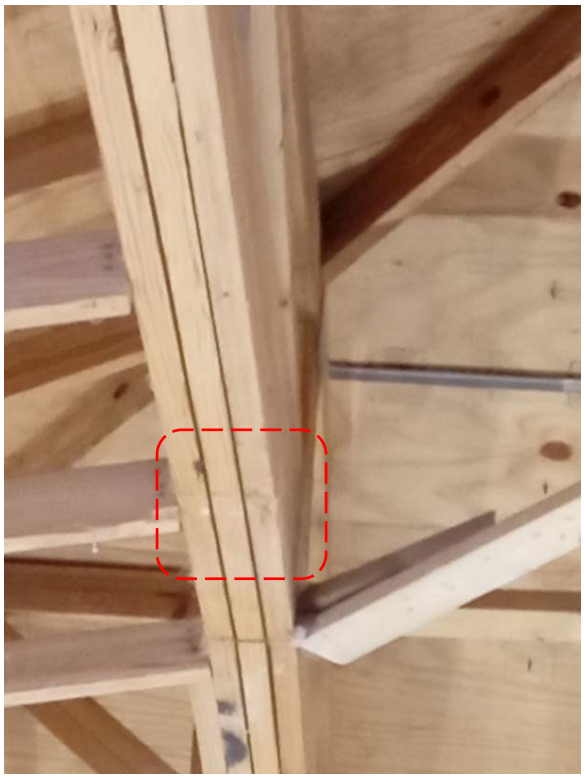
Created: Thu 22 Feb 08:18 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (27).

Visible remnant of insulation.

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(35)



Created: Thu 22 Feb 08:19 2024
Group: Interior - Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Refer to Photo (27).

Visible remanent of insulation.

(36)

Created: Thu 22 Feb 08:19 2024
Group: Interior - Pump Room
Cause of Damage: N/A

Component Description:
Overview Photo.

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(37)

Created: Thu 22 Feb 08:20 2024
Group: Inter – MCC Room
Cause of Damage: N/A

Component Description:
Overview Photo.

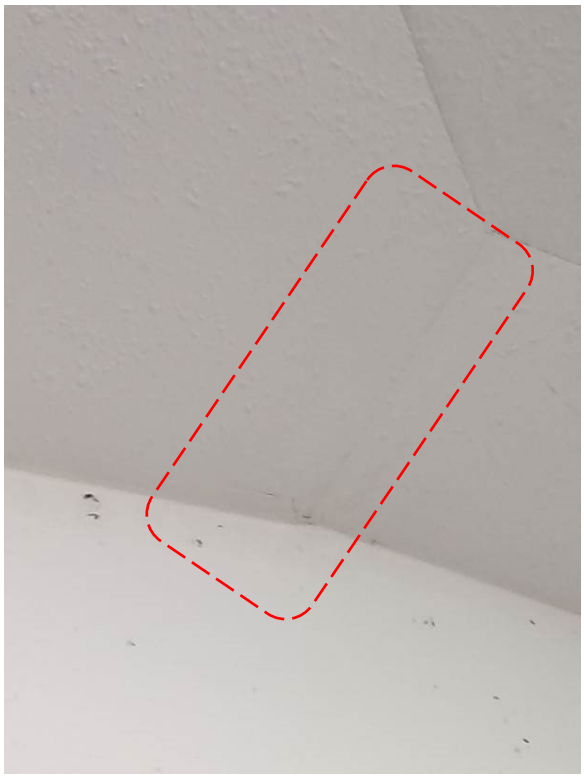
(38)

Created: Thu 22 Feb 08:20 2024
Group: Inter – MCC Room
Cause of Damage: N/A

Component Description:
Overview photo.

Created:	Thu 22 Feb 08:00 2024	**Contact:**	Chris Riti
Location:	East Port Lift Station #59 Skylark Vac Station	**Company:**	CSA Consulting Group, LLC.
Address:	391 Azalea Ave NW, Port Charlotte, Florida 33952	**Phone:**	(941) 284-0159
No. Items:	39	**Email:**	chris.riti@csaconsultinggroup.com

(39)



Created:	Thu 22 Feb 08:20 2024
Group:	Interior – MCC Room
Cause of Damage:	Wind Driven Rain

Component Description:
Water damage to ceiling drywall.

Drywall area calculated in with pump room. Refer to Photo (27).

CHARLOTTE COUNTY
FLORIDA

Site Inspection Report for Charlotte County – East Port Lift Station #99 El Jobean Vac Station Florida Hurricane Ian (DR-4673-FL)

CSA CONSULTING GROUP LLC
Consulting Excellence

Created:	Mon 20 Nov 08:45 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #99 El Jobean Vac Station	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Address:	4060 Railroad Ave, Port Charlotte, Florida, 33953	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	10		

(1)

Created: Mon 20 Nov 09:02 2023
Group: Exterior
Cause of Damage: N/A
GPS Lat/Long: 26.972741; -82.209742

Component Description:
Overview Photo.

(2)

Created: Mon 20 Nov 09:02 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Roof damage.

Aluminium shingles.

Exact quantity unknown – roof covered with temporary waterproofing membrane.

Created:	Mon 20 Nov 08:45 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #99 El Jobean Vac Station	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Address:	4060 Railroad Ave, Port Charlotte, Florida, 33953	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	10		

(3)

Created: Mon 20 Nov 09:02 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Refer to Photo (2).

(4)

Created: Mon 20 Nov 09:13 2023
Group: Exterior
Cause of Damage: N/A

Component Description:
Overview Photo.

(5)

Created: Mon 20 Nov 09:12 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Soffit missing.

White aluminium soffit. 2’ W.

2 LF.

(6)

Created: Mon 20 Nov 09:13 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Soffit damage.

White aluminium. 2’ W.

2 LF.

Contact: Chris Riti
Company: CSA Consulting Group, LLC.
Phone: (941) 284-0159
Email: chris.riti@csaconsultinggroup.com

(7)

Created: Mon 20 Nov 09:08 2023
Group: Pump Room
Cause of Damage: N/A

Component Description:
Overview Photo.

(8)

Created: Mon 20 Nov 09:08 2023
Group: Pump Room
Cause of Damage: Wind Driven Rain

Component Description:
Water damage to attic scuttle access panel.

(1) 22” x 36” scuttle access panel.

Created:	Mon 20 Nov 08:45 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #99 El Jobean Vac Station	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Address:	4060 Railroad Ave, Port Charlotte, Florida, 33953	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	10		

(9)

Created: Mon 20 Nov 09:09 2023
Group: MCC Room
Cause of Damage: N/A

Component Description:
Overview Photo.

(10)

Created: Mon 20 Nov 09:10 2023
Group: MCC Room
Cause of Damage: N/A

Component Description:
Overview Photo.

CHARLOTTE COUNTY
FLORIDA

Site Inspection Report for Charlotte County – East Port Lift Station #143 – Harbor Blvd Florida Hurricane Ian (DR-4673-FL)

CSA CONSULTING GROUP LLC
Consulting Excellence

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

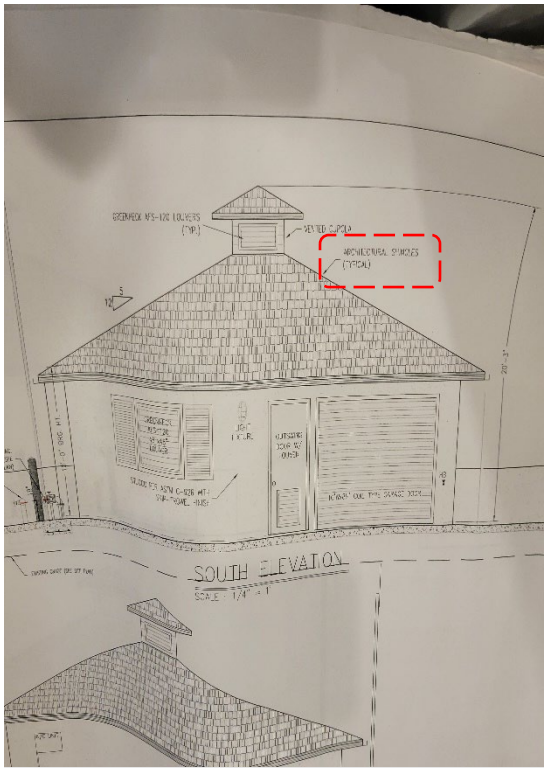
(1)

Created: Mon 20 Nov 14:04 2023
Group: Exterior
Cause of Damage: High Winds
GPS Lat/Long: 26.976782; -82.098974

Component Description:
Roof panels blown off. Roofing membrane damaged. Temporary repair in place.

Building footprint: 34’ x 34’

(2)



Panel type: Architectural Shingles
Created: Mon 20 Nov 14:05 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Refer to Photo (1)

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

(3)

Created: Mon 20 Nov 14:05 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Refer to Photo (1)

(4)

Created: Mon 20 Nov 14:05 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Refer to Photo (1).

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

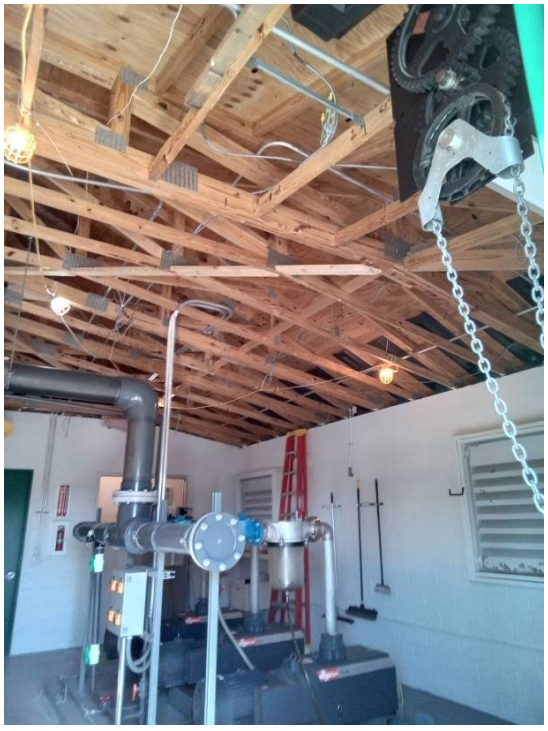
(5)

Created: Mon 20 Nov 14:07 2023
Group: Exterior
Cause of Damage: High Winds

Component Description:
Soffit separation on upper roof.

2’ W white aluminium soffit. 2 LF.

(6)



Created: Mon 20 Nov 14:08 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

Component Description:
Insulation and drywall damaged and removed after water intrusion from damaged roof membrane. Sheathing damage unknown.

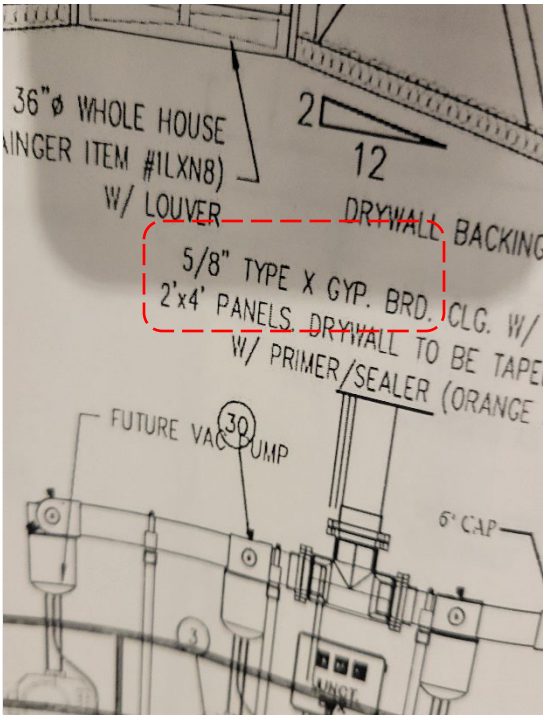
(6) dual pole, 4’ fluorescent fixtures removed and stored offsite.

34' x 34’ drywall footprint, incl. MCC Room. 5/8” Type X.

R 30 Batt insulation.

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

(7)



Created: Mon 20 Nov 14:08 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (6).

(8)

Created: Mon 20 Nov 14:08 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

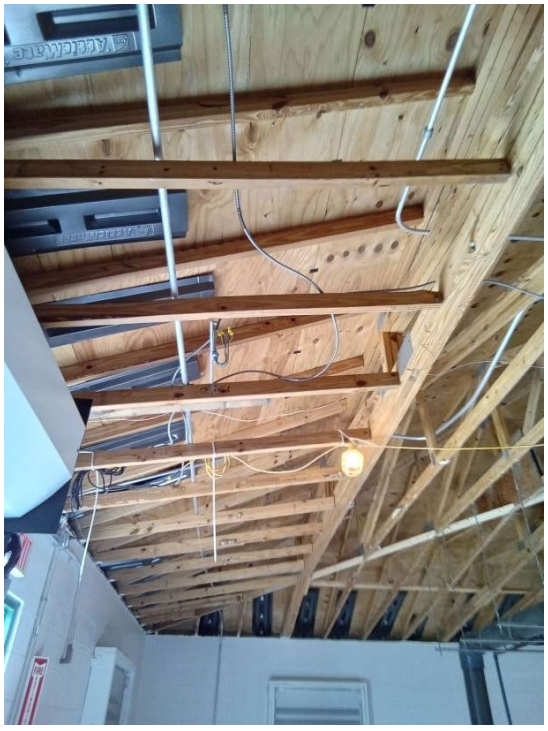
Component Description:
Refer to Photo (6).

(9)

Created: Mon 20 Nov 14:09 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (6).

(10)



Created: Mon 20 Nov 14:09 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (6).

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

(11)

Created: Mon 20 Nov 14:13 2023
Group: Pump Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (6).

Remnant of batt insulation.

(12)

Created: Mon 20 Nov 14:14 2023
Group: MCC Room
Cause of Damage: Wind-Driven Rain

Component Description:
No damage to equipment. Ceiling drywall was damaged and replaced with unfinished repair to reestablish AC to protect equipment.

(2) 4’ dual pole fluorescent light fixtures removed and replaced with temporary lights. Fixtures onsite.

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

(13)

Created: Mon 20 Nov 14:14 2023
Group: MCC Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (12).

(14)

Created: Mon 20 Nov 14:14 2023
Group: MCC Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (12).

Created:	Mon 20 Nov 14:04 2023	**Contact:**	Chris Riti
Location:	East Port Lift Station #143 Harbor Blvd	**Company:**	CSA Consulting Group, LLC.
		Phone:	(941) 284-0159
Title:	218 Deerfield Ave, Port Charlotte, Florida, 33952	**Email:**	chris.riti@csaconsultinggroup.com
No. Items:	15		

(15)

Created: Mon 20 Nov 14:14 2023
Group: MCC Room
Cause of Damage: Wind-Driven Rain

Component Description:
Refer to Photo (12).