



Public Meeting Notice

Committee: Board of Adjustment and Appeals

Date & Time: Thursday, June 10, 2021 at 5:00PM

Place: City Council Chambers
161 North Section St.
Fairhope, AL 36532

Subject: Special Called Meeting to discuss a
continuance of Case BOA 21.07, a request
for a Public Utility located at 8300 Morphy
Ave.

City of Fairhope
Board of Adjustment and Appeals
5:00 PM
City Council Chambers
- Special Called Meeting -
June 10, 2021

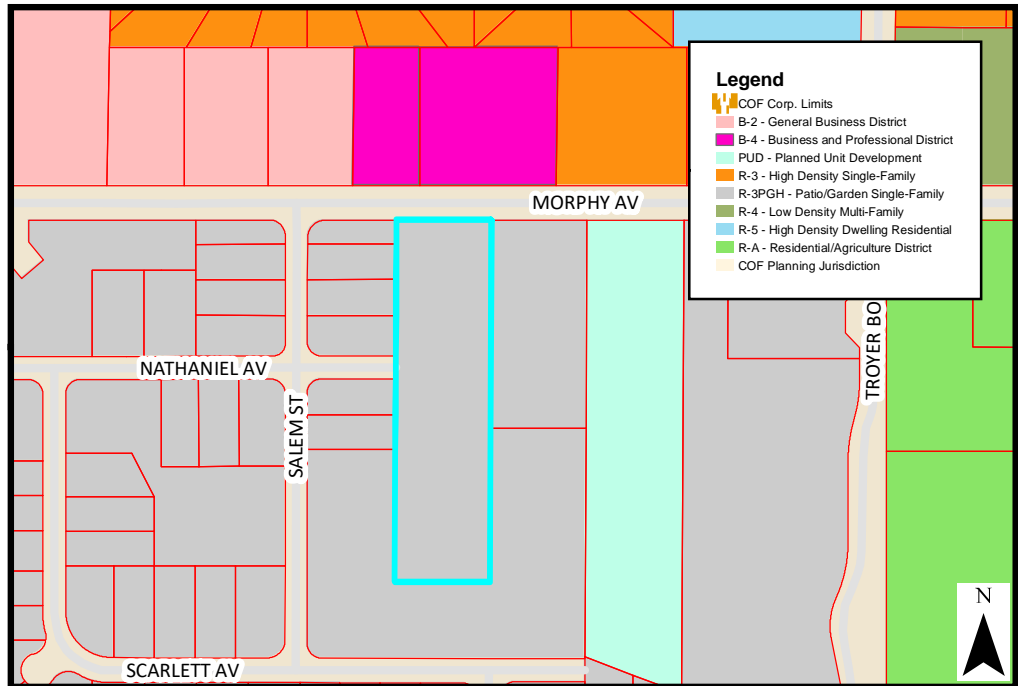
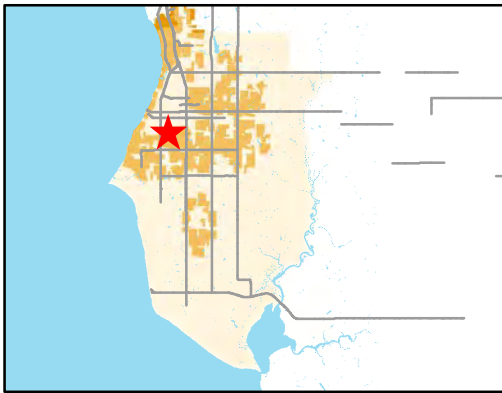
1. Call to Order
2. Consideration of Agenda Items:
 - A. BOA 21.07 Request of Fairhope Public Utilities for a Special Exception to allow a Public Utility for property located at 8300 Morphy Avenue.
PPIN #: 108954
3. Old/New Business
5. Adjourn

City of Fairhope Board of Adjustment and Appeals

June 10, 2021



BOA 21.07 - Morphy Ave Electrical Substation



Project Name:

Morphy Ave Electrical Substation

Application Type:

Special Exception

Variance Type:

Public Utility

Jurisdiction:

City of Fairhope

Zoning District:

R-3PGH

PPIN Number:

108954

General Location:

South side of Morphy Ave,
approximately 250' east of Salem St.

Surveyor of Record:

Engineer of Record:

Sawgrass Engineering

Owner / Applicant:

City of Fairhope

Recommendation:

Approval

Prepared by:

Hunter Simmons



Summary of Request:

Fairhope Utilities, is requesting a public utility use which is not allowed by right but by special exception in Fairhope’s Zoning Ordinance for the property located at 8300 Morphy Ave. The subject property is zoned R-3PGH. The applicant desires to install a new electrical substation that will allow for Fairhope Utilities to better serve its customers.

A public hearing was held at Board of Adjustment and Appeals meeting on May 17, 2021; proposed plans were presented. The Board unanimously voted to table Case BOA 21.07 until a special called meeting on June 10, 2021.

Within the motion, the following items were requested:

- 1. Revised site plan showing wetlands, if any; show elevations on site plan
- 2. Consideration for moving site to the east if possible
- 3. Rearrange retaining wall to create a larger buffer, if possible
- 4. Landscape plan

Comments

A summary addressing the design team’s response to each of the above concerns are listed below. Full plans are also included within the packet.

Condition 1: Revised site plan showing wetlands, if any; show elevations on site plan

Wetlands Sciences, Inc. conducted a site investigation and provided a report with their findings, which is attached. A small area (0.004 acres) of wetlands was found on the southwest corner of the site. 30’ wetlands buffers, as well as 50’ stream buffers were added the Geometry Plan (see Figure 1 blow). All proposed improvements are outside of the buffers.

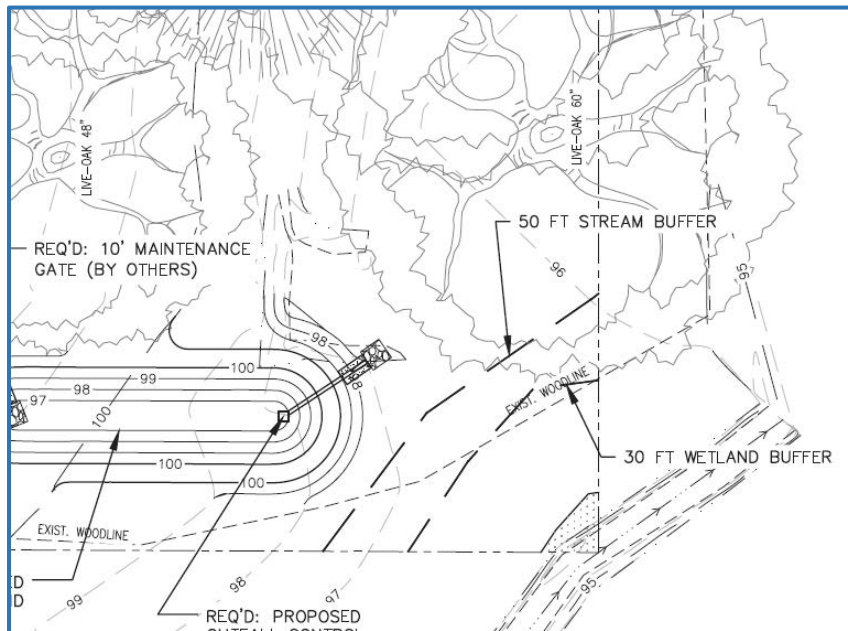


Figure 1: Wetland and Stream Buffers

Condition 2: Consideration for moving site to the east, if possible.

The proposed fence and gravel are 10' off the eastern property line. Moving the site further hinder the ability to provide a landscape screen on the eastern edge of the property.

Condition 3: Rearrange retaining wall to create a larger buffer, if possible.

The proposed retaining wall along the western property line has been moved to the east to allow a clear space from the face of the wall to the property line of 13 feet for plantings and screening for the adjacent property owners.

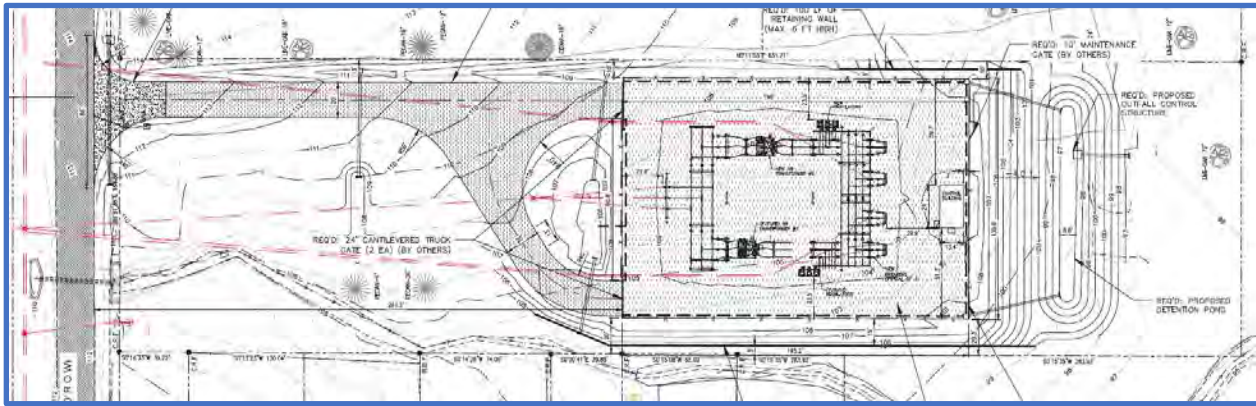


Figure 2: Plan as proposed at May 17 BOA Meeting.

Figure 2 above illustrates the originally proposed geometry plan and Figure 3 below illustrates revisions. In addition to moving the retaining wall to allow more screening, the site was also moved northward, and drainage was redesigned, to save large live oaks and preserve mature plant specimen along the west boundary of the property.

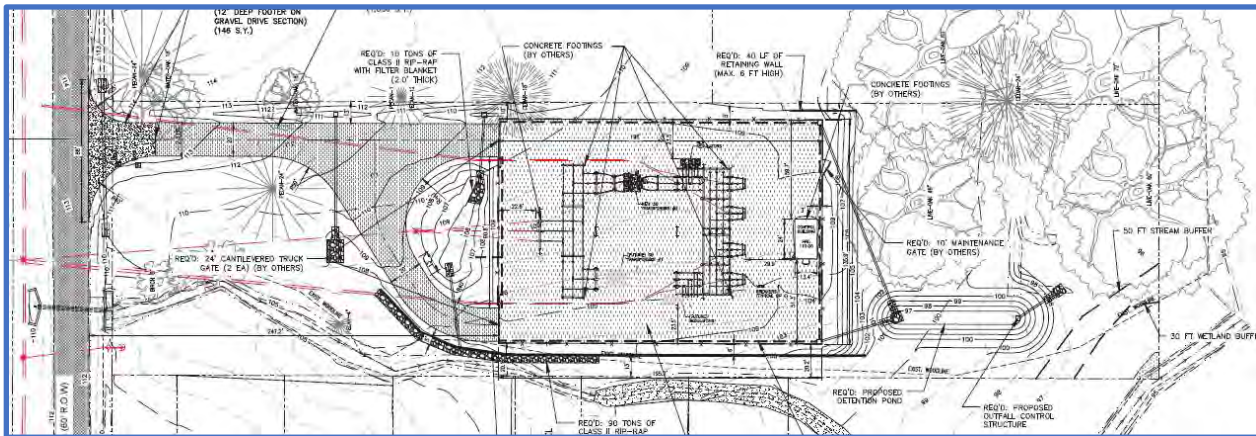


Figure 3: Revised plan.

Condition 4: Landscape Plan.

Landscape plans were provided by Jennifer Fidler and shown below in Figure 4. Additional site visits confirmed inventories of existing tree species. As the plans illustrate with tree protective measures, many of the trees to be removed are now planned to be saved.

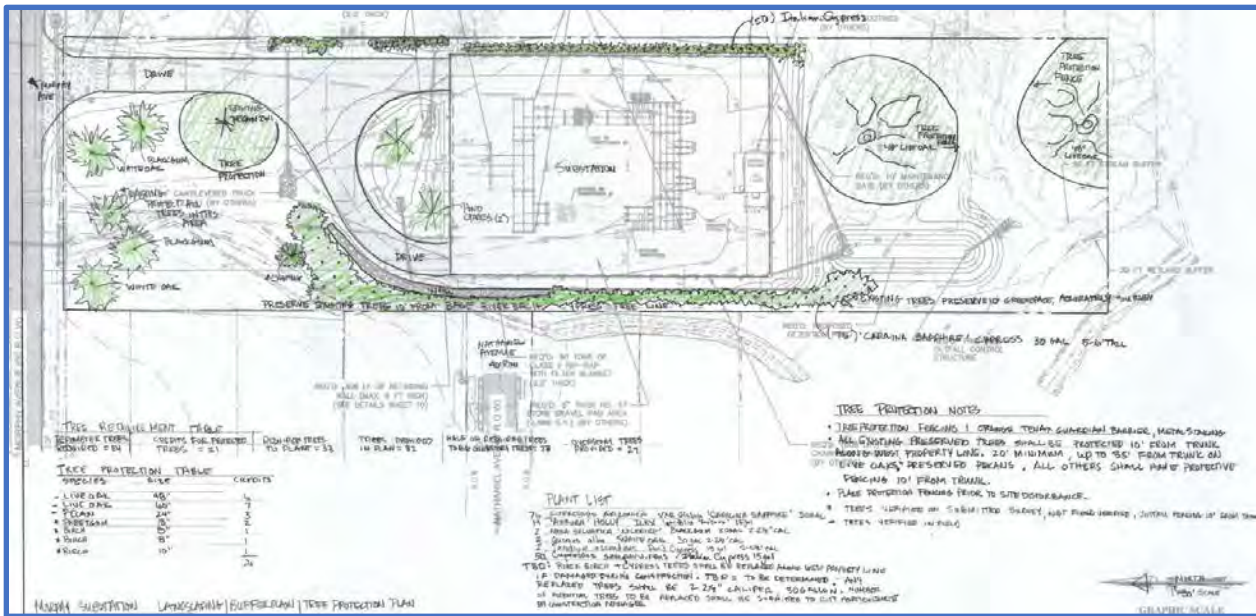


Figure 4: Landscape Plan

The installation of both the underground and overhead lines shown in Figure 5 will require removal of many of the existing pecan trees. 21 credits are available for the protection of the existing trees. Our tree ordinance requires 33 trees to be planted due to the removal of existing trees. 82 trees are provided within the landscape plan above, 27 overstory trees.

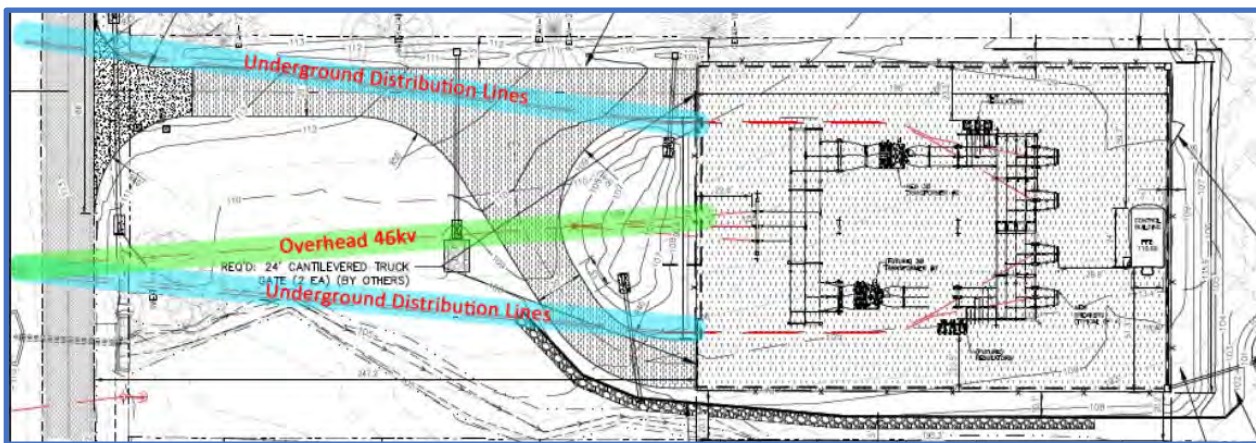


Figure 5: Proposed overhead and underground electrical.

In addition to the comments above, citizens and board members also asked how the property at 8300 Morphy Ave was selected. At the request of Mayor Sullivan, Lance Junkin, president of Stewart Engineering, provided the attached letter summarizing the five-year process that led to the selection of the property at 8300 Morphy Ave.

The following information, which was provided within the previous staff report, is included within this packet for convenience:

1. Electric Department Narrative
2. Letter and Documentation to address noise and EMF from Stewart Engineers.

3. Feedback from adjacent property owners.

Staff Recommendation: Staff recommends **APPROVAL** of the appeal for public utility facility uses at 8300 Morphy Avenue with the following conditions:

- 1.) A 20' landscape buffer is provided along Morphy Ave and will be shown on the plans.

Dear Mayor Sullivan,

In early 2016 Stewart Engineering was employed by the City of Fairhope to perform an Electrical Substation Capacity Analysis. This Analysis was completed and presented to the Mayor and Electrical Superintendent in June 2016. This was a detailed Analysis, with many specific recommendations.

One of the key concerns from the start was at the Fairhope Avenue Substation, located just under the water tank, behind the Intermediate School. This Substation was / is the most heavily loaded City Electrical Substation. It was loaded to 106% of base capacity at the 2015 peak. The small site made it impossible to increase the Substation in the way that was really needed, which was to both increase transformer capacity and increase feeder quantity. A future second transformer, when needed, could never be installed at this site. Therefore, the initial plan was to simply increase the size of the power transformer. At that time, the possibility of installing a new Substation in this portion of town seemed "out of reach", and was therefore initially discounted. However, as time went along, the plan to simply increase the size of the existing power transformer seemed less and less desirable. Yet another point of anxiety surfaced when the water tank was to be repainted. The scaffolding, hanging chains, huge paint "curtains" caused serious electrical concerns from both a safety perspective, and from the perspective of possibly causing an arcing fault that could totally destroy the Substation. There was a great deal of deliberation and discussion by the Fairhope Operations Manager, the Electrical Superintendent, and Stewart Engineering. All agreed that, in the long term, it would be much wiser to construct a new Substation, on a new site. In 2019 the City Council and Mayor agreed that a new Distribution Substation along Morphy Avenue was the best path forward, and instructed Stewart Engineering to move forward with that design.

The specific rationale behind a Morphy Avenue site was / is as follows:

1. The electrical loading in the Eastern part of town is heavy. Again, Fairhope Avenue Substation is the most heavily loaded Substation in Fairhope. A new Substation, on a larger lot, could be built to accommodate a future second power transformer, to be installed later as load growth warrants. This was / is not possible at the existing Fairhope Avenue Substation location.
2. The City's existing 46 KV Sub-Transmission line begins at Twin Beech Transmission Substation, extends up to Morphy, then East over to Bishop before turning North again to feed Fairhope Avenue and Volanta Avenue Substations. Since it runs along Morphy Avenue, it can be readily accessed to serve a new Substation along Morphy Avenue, without the need to construct a longer section of very expensive, 46 KV Sub-Transmission Line.
3. Main 12 KV Distribution lines, fed from both Fairhope Avenue Substation and Nichols Avenue Substation currently run on all four sides of the block, between Morphy and Fairhope Avenues, between Greeno and Bishop Roads. This makes it easier and less costly to integrate a new Substation, at this location, into the Distribution System.
4. By installing the Substation along Morphy Avenue, close to the City's electrical load center, system electrical line losses will be lower as compared to being installed at a location remote from the load center.

Mayor, the present proposed site (8300 Morphy Avenue) is not the only site that could accommodate a new Substation. However, as you know, at least 5 other sites were seriously considered. The present proposed site “rose to the top”, meeting all of the above criteria. And it was available to purchase by the City at a reasonable price, which is no small hurdle to clear in the City of Fairhope. Another strong benefit of this lot, as compared to some of the others considered, is that the cost to prepare the lot for construction at this location is very reasonable.

We realize that this is a rather long explanation, but the process has truly been in-depth and thorough. In the long run, a new Electrical Distribution Substation at 8300 Morphy Avenue would serve the City and its residents well, for many years. This location would result in reasonable Sub-Transmission and Distribution construction costs, and lower line losses due to proximity to the load. These benefits will help the City keep their Retail Electrical Rates more competitive for the long term. Additionally, a new Substation at this location would improve the Electric Department’s ability to maintain electrical service to all customers during scheduled (or unscheduled) outages at other City Electrical Substations, thereby improving electrical service reliability to all.

If you have any further questions, please don’t hesitate to reach out.

Sincerely,

Lance Junkin, P.E.

President of Stewart Engineering, Inc.



May 21, 2021

Jaye Robertson, PE
Sawgrass Consulting, LLC
30673 Sgt. E.I. "Boots" Thomas Drive
Spanish Fort, AL 36527

**Re: Wetland Assessment Report
8300 Morphy Avenue, Fairhope, Baldwin County, Alabama
WSI Project #2021-425**

Dear Mr. Robertson,

As requested, Wetland Sciences, Inc. has completed a field wetland delineation at 8300 Morphy Avenue in Baldwin County, Alabama. The property is identified by the Baldwin County Revenue Commission with the Parcel Identification Numbers: 05-46-05-16-0-000-028.674. This assessment included an analysis of plant communities, soils, and indirect hydrologic indicators. During this determination, Wetland Sciences, Inc. did identify wetlands which fall within the regulatory jurisdiction of the US Army Corps of Engineers (Corps) under **33 CFR 320-330**. See attached wetland sketch – Exhibit A). The following is a summary of our findings.

The assessment was completed by a thorough pedestrian survey covering 100% of the subject property. I personally inspected the property on May 19, 2021. Wetland Sciences, Inc. utilized the Corps of Engineers Wetland Delineation Manual, 1987 and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, 2010 to determine the federal wetland jurisdictional boundary.

The wetland boundaries shown on the attached sketch were delineated in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Federal – Corps). The wetland boundary was identified in the field by progressively locating points along the upland/wetland boundary at 15-20-ft. intervals or corresponding with directional changes with the boundary. Each point was identified and located by an experienced wetland scientist. Pink flags were placed at each point clearly marked "Wetland Delineation". Each flagged point also contains specific alpha numeric designator for later tracking of its location. Wetland Sciences, Inc. used a Trimble Geo7x GNSS system to locate each point. Data was collected using Trimble's TerraSync Professional Software with further data refinement using Trimble's Pathfinder Professional Software. Please keep in mind that there are many variables that affect the accuracy of the GPS data used to generate the attached sketch. This sketch should be considered approximate unless verified by a survey or other appropriate means.

The boundary of jurisdictional wetland as depicted in the exhibits of this report are not final or "binding" until such time as they are confirmed by the USACE through field inspection. As such, the depicted wetland boundary may be subject to minor changes upon such inspection/approval.

Impacts to wetlands and/or surface waters will require permits from the agencies referenced above. Wetland Sciences, Inc. is keenly aware of this process and can facilitate if necessary. This is a process that is better explained over the telephone or in a person to person meeting.

Finally, I have included a statement of our firm for services rendered and expenses incurred associated with this effort. If you find this statement in order, please place it in line for payment.

If you have any questions, please do not hesitate to contact me at (850) 453-4700.

Respectfully,
WETLAND SCIENCES, INC.

A handwritten signature in black ink, appearing to read "Craig Martin". The signature is fluid and cursive, with the first name "Craig" and last name "Martin" clearly distinguishable.

Craig Martin
Sr. Scientist



ENVIRONMENTAL CONSULTANTS

3308 GULF BEACH HIGHWAY
 PENSACOLA, FLORIDA 32507
 TEL: 850.453.4700
 CRAIG@WETLANDSCIENCES.COM

PROJECT NAME: 8300 Morphy Avenue

WETLAND SKETCH

PROJECT NO.: 2021-425

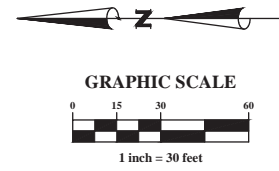
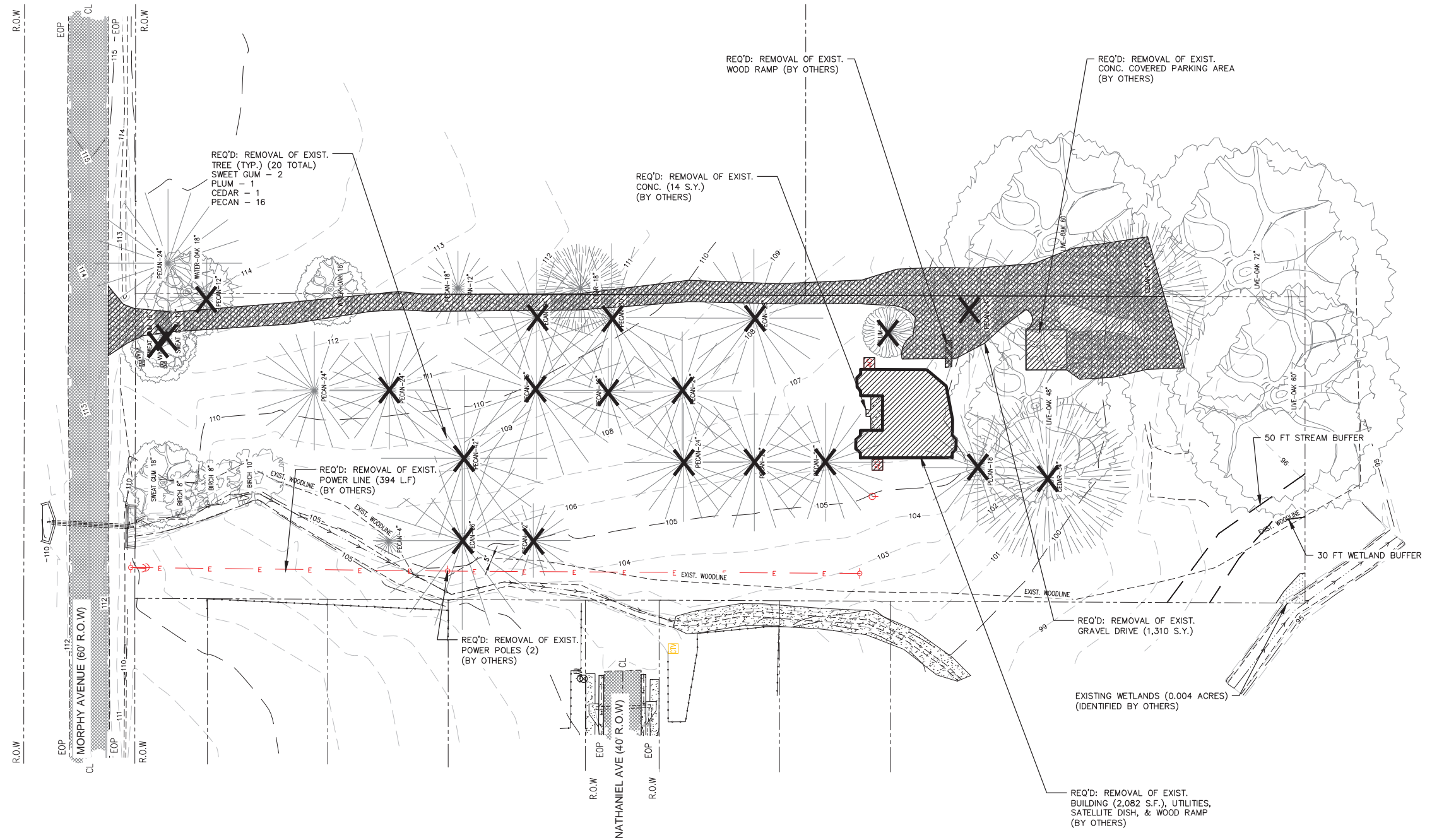
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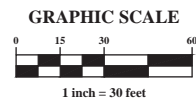
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- C.T.I.F. CRIMPED TOP IRON FOUND
- I.P.F. IRON PIPE FOUND
- O.T.I.F. OPEN TOP IRON FOUND
- P.K.N.F. "PK" NAIL FOUND
- P.T.I.F. PIG TAIL IRON FOUND
- R.B.F. REBAR FOUND
- R.R.S.F. RAILROAD SPIKE FOUND
- R.B.F. REBAR IRON FOUND
- C.R.S. 1/2" CAPPED REBAR SET "CA 1007-LS"
- P.K.N.S. "PK" NAIL SET
- R.R.S.S. RAILROAD SPIKE SET
- C.M.F. CONCRETE MONUMENT FOUND
- ⊕ POWER POLE
- ← GUY WIRE
- ⊠ AIR CONDITIONER
- ⊠ CATV PEDESTAL
- ⊕ FH FIRE HYDRANT
- ⊠ WM WATER METER
- ⊕ WV WATER VALVE
- EXIST. FENCE
- EXIST. PROPERTY LINE
- EXIST. DRAINAGE SWALE
- E EXIST. POWER
- ⊕ SATELLITE DISH
- EOP EXIST. PAVEMENT
- R.O.W EXIST. RIGHT-OF-WAY
- CL CENTERLINE
- ▨ DENOTES REMOVAL
- X DENOTES TREE REMOVAL



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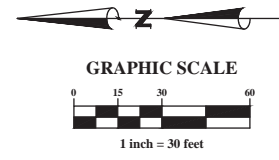
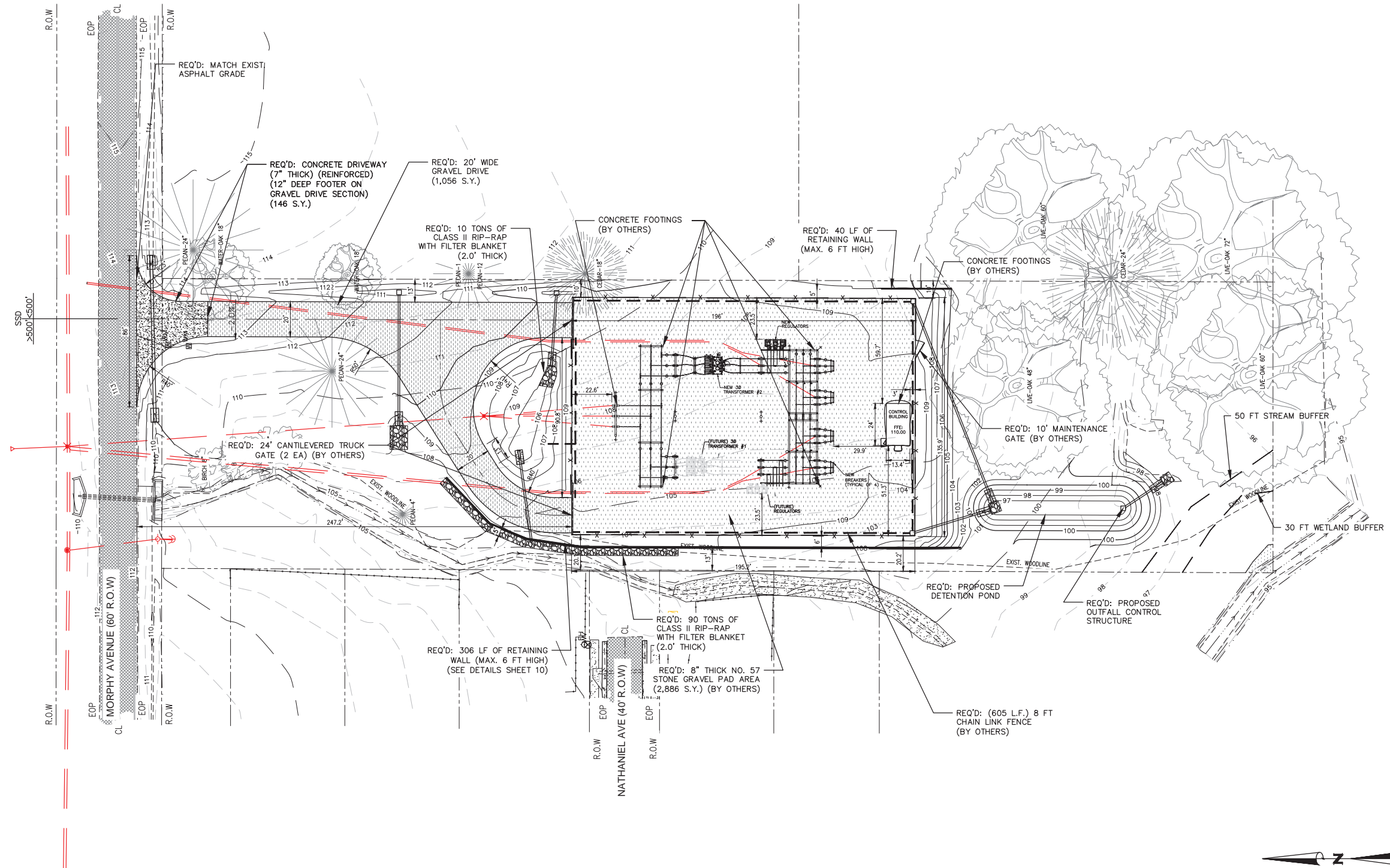
30673 Sgt. E. I. "Boots" Thomas Drive, Spanish Fort, AL 36527 Phone: (251) 544-7900

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| EXIST CONDITIONS & DEMO |
| MORPHY SUB STATION |
| CITY OF FAIRHOPE |

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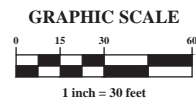
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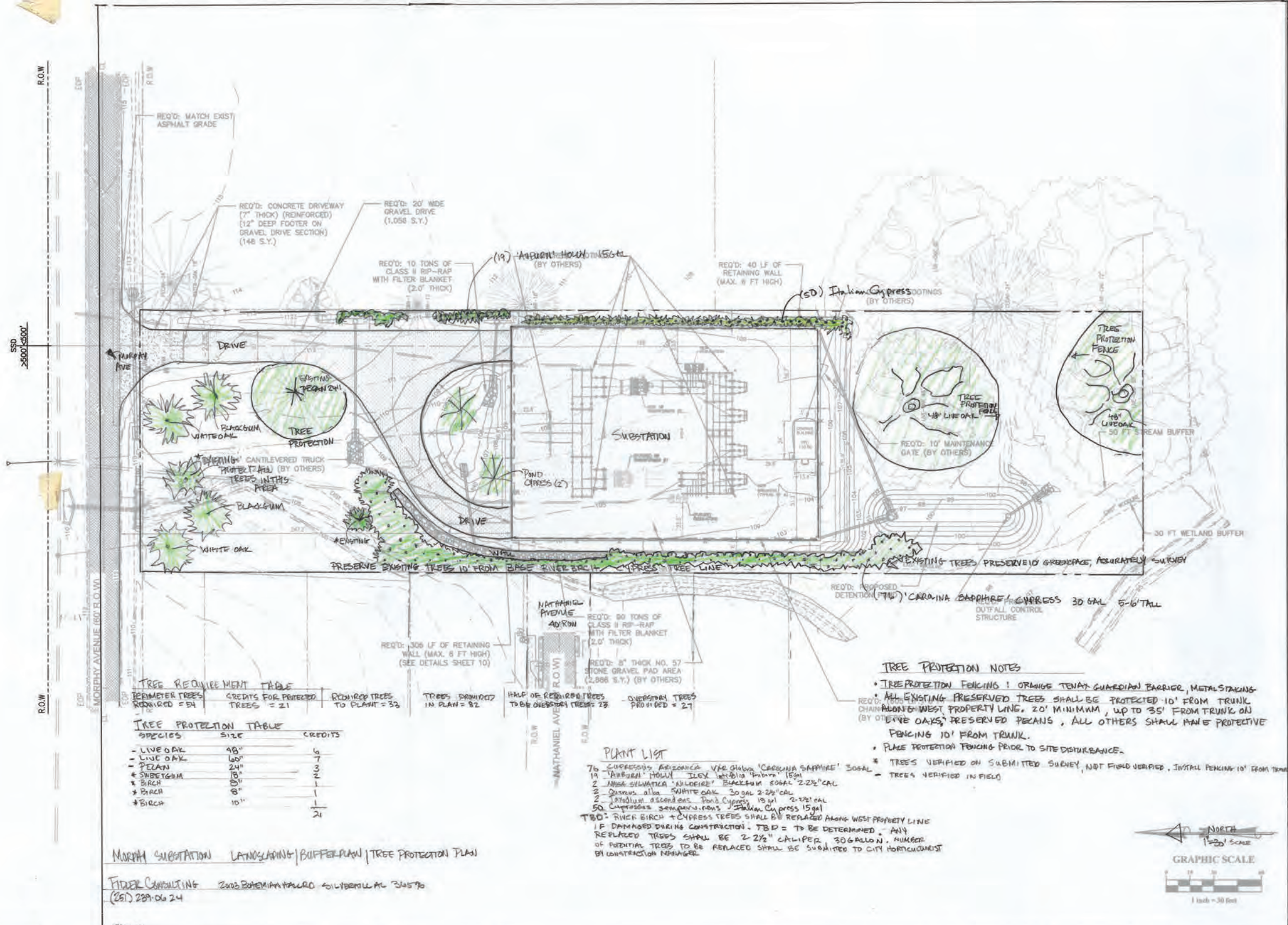
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GEOMETRY PLAN
MORPHY SUB STATION
CITY OF FAIRHOPE

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- EXIST. RIGHT-OF-WAY
- CL CENTERLINE
- NO. 57 STONE



TREE REQUIREMENT TABLE

| | | | | | |
|-------------------------------|----------------------------------|-----------------------------|-----------------------------|---|-------------------------------|
| PERIMETER TREES REQUIRED = 54 | CREDITS FOR PROTECTED TREES = 21 | REDUCED TREES TO PLANT = 33 | TREES PROVIDED IN PLAN = 82 | HALF OF REQUIRED TREES TO BE OVERSTOCK TREES = 28 | OVERSTOCK TREES PROVIDED = 21 |
|-------------------------------|----------------------------------|-----------------------------|-----------------------------|---|-------------------------------|

TREE PROTECTION TABLE

| SPECIES | SIZE | CREDITS |
|------------|------|---------|
| - LIVE OAK | 48" | 6 |
| - LIVE OAK | 60" | 7 |
| - PECAN | 24" | 3 |
| + SWBETGUM | 20" | 2 |
| + BIRCH | 8" | 1 |
| + BIRCH | 10" | 1 |
| | | 21 |

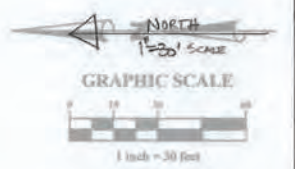
- PLANT LIST**
- 76 CUPRESSUS ARIZONICA VARIETAL 'CAROLINA SAPHIRE' 30gal
 - 19 'ARBUREAL HOLLY' ILEX latifolia 'holland' 15m
 - 2 NISSA SYLMATICA 'ALDOUCE' Blackgum 30gal 2-2 1/2" CAL
 - 3 Quercus alba 'WHITE OAK' 30gal 2-2 1/2" CAL
 - 3 Prinosylvestris ascendens 'Pond Cypress' 15m
 - 50 Camponotus pennsylvanicus 'Italian Cypress' 15gal
- TBD: RIVER BIRCH + CYPRESS TREES SHALL BE REPLACED ALONG WEST PROPERTY LINE IF DAMAGED DURING CONSTRUCTION. TBD = TO BE DETERMINED. ANY REPLACED TREES SHALL BE 2 1/2" CALIPER, 30 GALLON. NUMBER OF REPLACED TREES TO BE REPLACED SHALL BE SUBMITTED TO CITY HORTICULTURIST BY CONSTRUCTION MANAGER.

- TREE PROTECTION NOTES**
- TREE PROTECTION FENCING: ORANGE TENA GUARDIAN BARRIER, METAL STAKES
 - ALL EXISTING PRESERVED TREES SHALL BE PROTECTED 10' FROM TRUNK ALONG WEST PROPERTY LINE. 20' MINIMUM, UP TO 35' FROM TRUNK ON LIVE OAKS, PRESERVED PECANS, ALL OTHERS SHALL HAVE PROTECTIVE FENCING 10' FROM TRUNK.
 - PLACE PROTECTION FENCING PRIOR TO SITE DISTURBANCE.
 - TREES VERIFIED ON SUBMITTED SURVEY, NOT FIELD VERIFIED. INSTALL FENCING 10' FROM TRUNK.
 - TREES VERIFIED IN FIELD.

MORPHY SUBSTATION LANDSCAPING / BUFFER PLAN / TREE PROTECTION PLAN

FIDLER CONSULTING 2002 BOHEMIA PARK BOULDER CO 80503
(303) 289-0624

5/2021



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












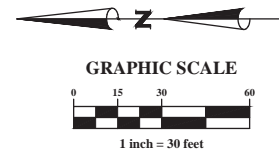
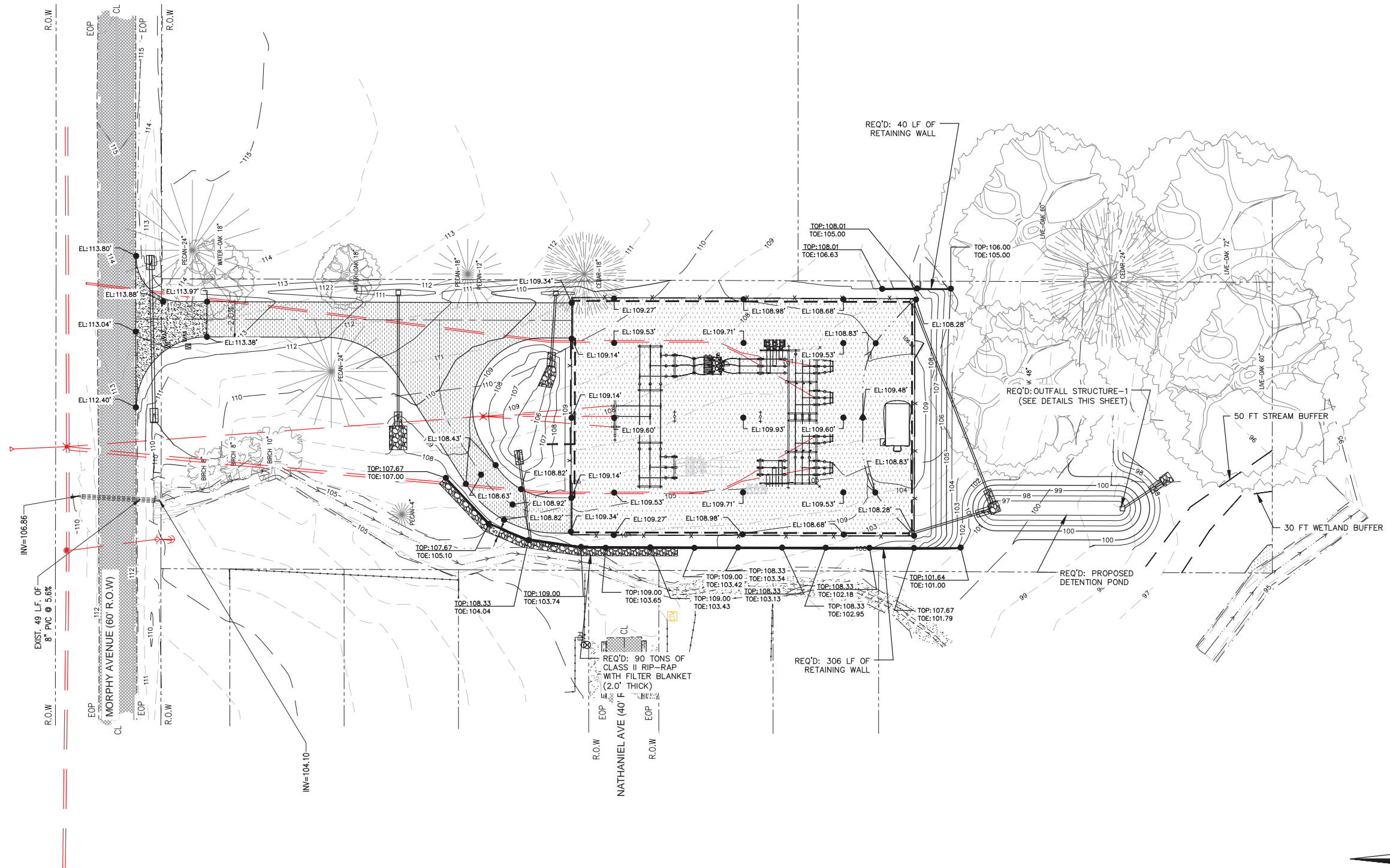
awgrass
ENGINEERING • SURVEYING • CONSTRUCTION MANAGEMENT
2872 1/2 St. • Boulder, Colorado 80501 • Phone (303) 444-7990

GEOMETRY PLAN
MORPHY SUB STATION
CITY OF FAIRHOPE

SCALE: 1" = 30'
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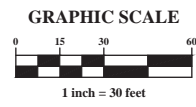
LEGEND

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-  GUY WIRE
-  CATV PEDESTAL
-  FIRE HYDRANT
-  WATER METER
-  WATER VALVE
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




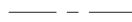
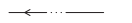






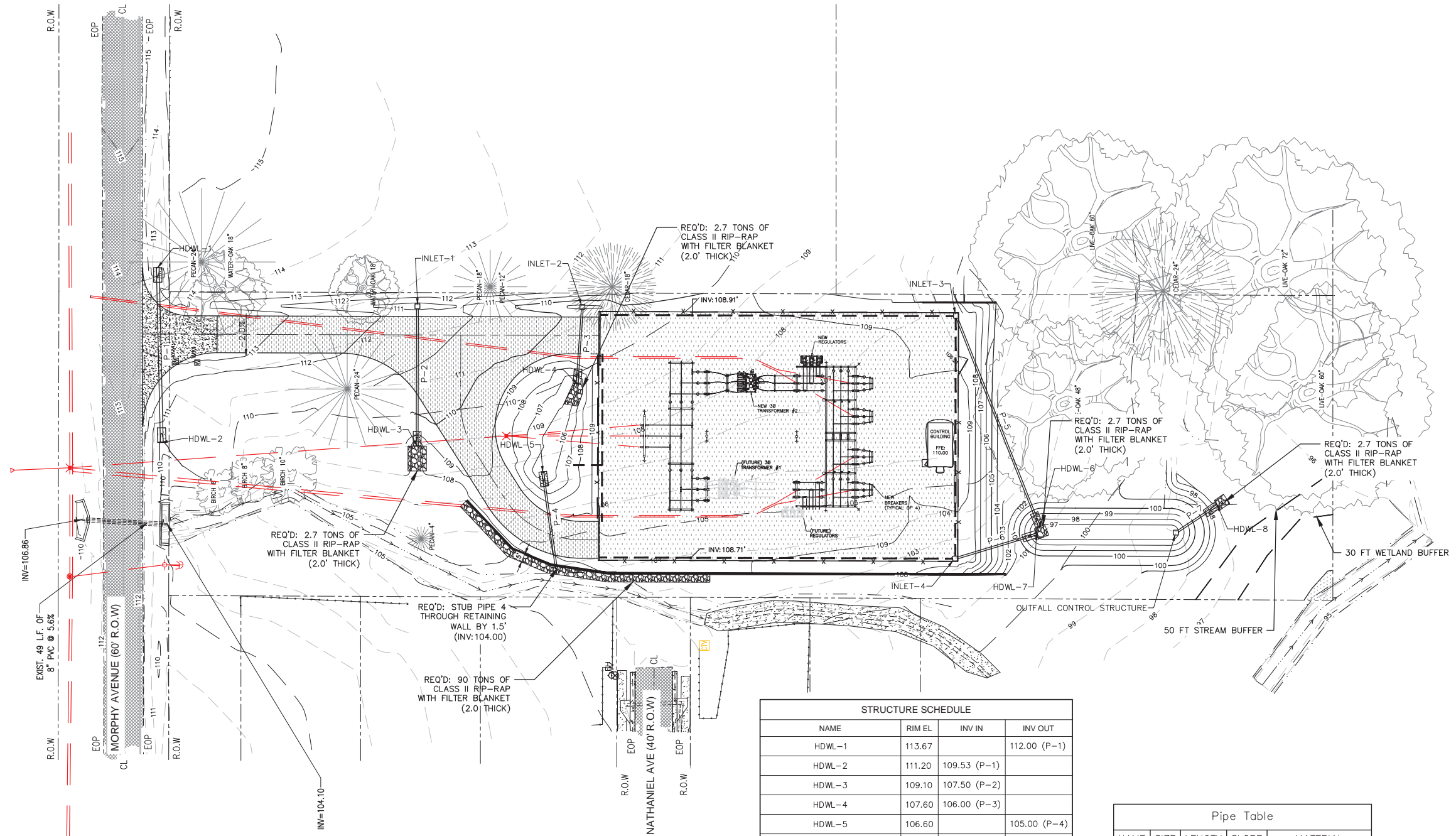
Sawgrass
ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT
30673 Sgt. E. I. "Boots" Thomas Drive, Spanish Fort, AL 36527 Phone: (251) 544-7900

GRADING PLAN
MORPHY SUB STATION
CITY OF FAIRHOPE

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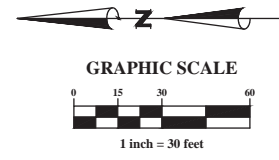
LEGEND

-  POWER POLE
-  GUY WIRE
-  CATV PEDESTAL
-  FIRE HYDRANT
-  WATER METER
-  WATER VALVE
-  EXIST. FENCE
-  EXIST. PROPERTY LINE
-  PROPOSED CENTERLINE
-  EXIST. DRAINAGE SWALE
-  EXIST. PAVEMENT
-  EXIST. RIGHT-OF-WAY
-  CENTERLINE
-  NO. 57 STONE



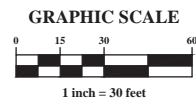
| STRUCTURE SCHEDULE | | | |
|---------------------------|--------|--------------|--------------|
| NAME | RIM EL | INV IN | INV OUT |
| HDWL-1 | 113.67 | | 112.00 (P-1) |
| HDWL-2 | 111.20 | 109.53 (P-1) | |
| HDWL-3 | 109.10 | 107.50 (P-2) | |
| HDWL-4 | 107.60 | 106.00 (P-3) | |
| HDWL-5 | 106.60 | | 105.00 (P-4) |
| HDWL-6 | 98.60 | 97.00 (P-5) | |
| HDWL-7 | 98.60 | 97.00 (P-6) | |
| HDWL-8 | 98.10 | 96.50 (P-7) | |
| INLET-1 | 110.58 | | 107.88 (P-2) |
| INLET-2 | 108.86 | | 106.21 (P-3) |
| INLET-3 | 108.07 | | 103.79 (P-5) |
| INLET-4 | 108.06 | | 100.23 (P-6) |
| OUTFALL CONTROL STRUCTURE | 97.74 | | 96.64 (P-7) |
| Structure - (25) | 105.60 | 104.00 (P-4) | |

| Pipe Table | | | | |
|------------|------|---------|-------|----------------------|
| NAME | SIZE | LENGTH | SLOPE | MATERIAL |
| P-1 | 18" | 94.98' | 2.60% | |
| P-2 | 12" | 75.85' | 0.50% | Corrugated HDPE Pipe |
| P-3 | 12" | 41.76' | 0.50% | Corrugated HDPE Pipe |
| P-4 | 12" | 52.92' | 1.89% | Corrugated HDPE Pipe |
| P-5 | 12" | 123.29' | 5.50% | Corrugated HDPE Pipe |
| P-6 | 12" | 46.15' | 7.00% | Corrugated HDPE Pipe |
| P-7 | 12" | 26.86' | 0.52% | Corrugated HDPE Pipe |



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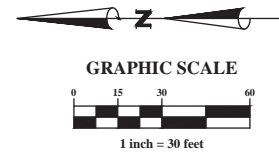
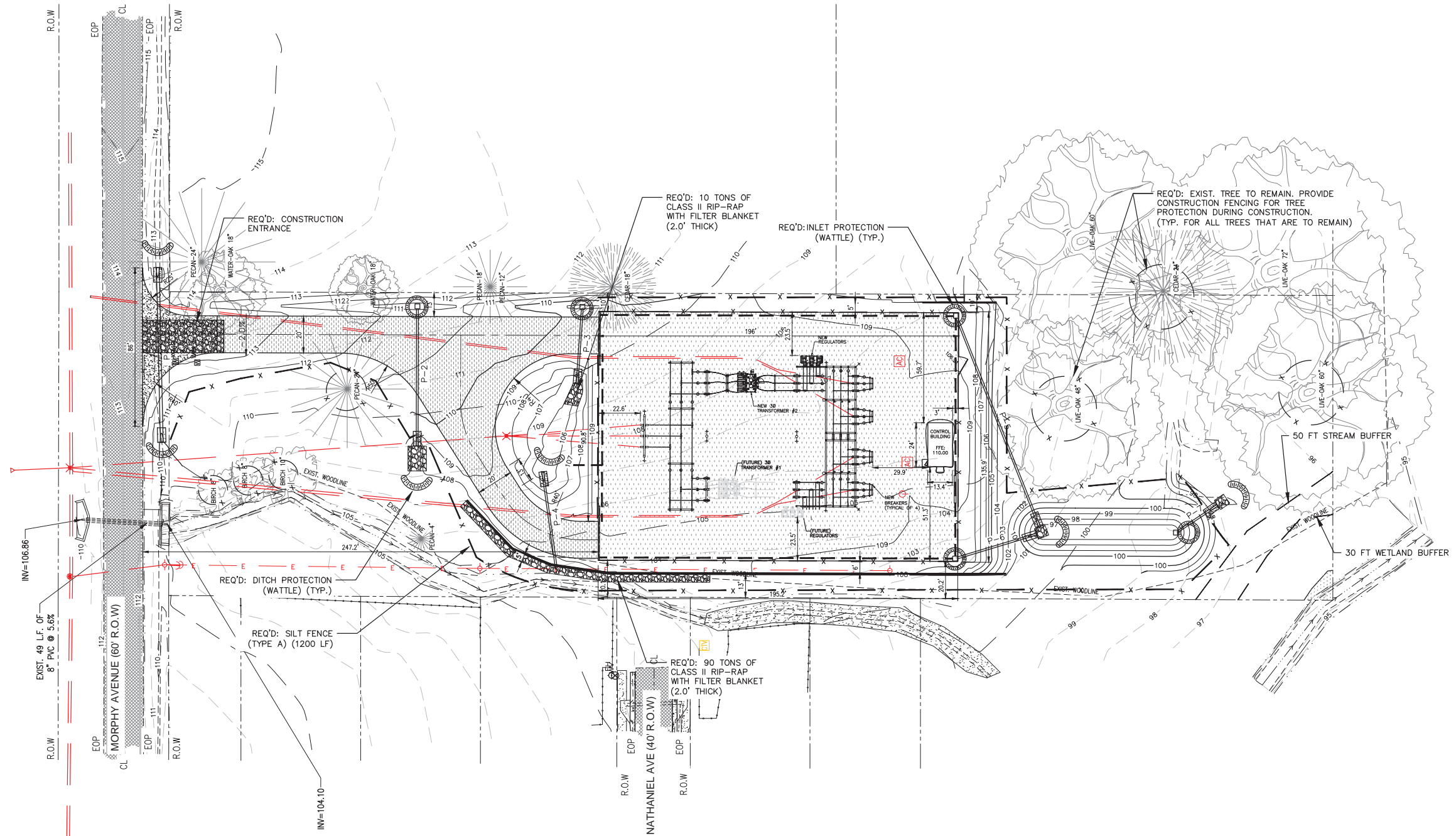
Sawgrass
ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT
30673 Sgt. E. I. "Boots" Thomas Drive, Spanish Fort, AL 36527 Phone: (251) 544-7900

DRAINAGE PLAN
MORPHY SUB STATION
CITY OF FAIRHOPE

SCALE: 1" = 30'
DATE: MAY, 2021
DRAWN BY: BAT
CHECKED BY: JHR
SHEET: 06 OF 11

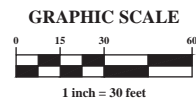
LEGEND

- C.R.F. CAPPED REBAR FOUND
- C.T.I.F. CRIMPED TOP IRON FOUND
- I.P.F. IRON PIPE FOUND
- O.T.I.F. OPEN TOP IRON FOUND
- P.K.N.F. "PK" NAIL FOUND
- P.T.I.F. PIG TAIL IRON FOUND
- R.B.F. REBAR FOUND
- R.R.S.F. RAILROAD SPIKE FOUND
- R.B.F. REBAR IRON FOUND
- C.R.S. 1/2" CAPPED REBAR SET "CA 1007-LS"
- P.K.N.S. "PK" NAIL SET
- R.R.S.S. RAILROAD SPIKE SET
- C.M.F. CONCRETE MONUMENT FOUND
- ⊖ POWER POLE
- GUY WIRE
- AC AIR CONDITIONER
- CTV CATV PEDESTAL
- FH FIRE HYDRANT
- WM WATER METER
- WV WATER VALVE
- EXIST. FENCE
- EXIST. PROPERTY LINE
- EXIST. DRAINAGE SWALE
- E EXIST. POWER
- ⊙ SATELLITE DISH
- EOP EXIST. PAVEMENT
- R.O.W EXIST. RIGHT-OF-WAY
- CL CENTER-LINE



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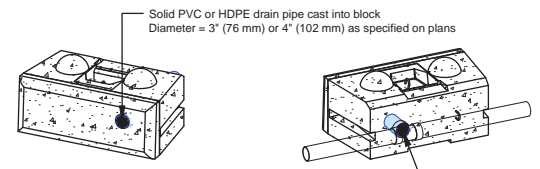
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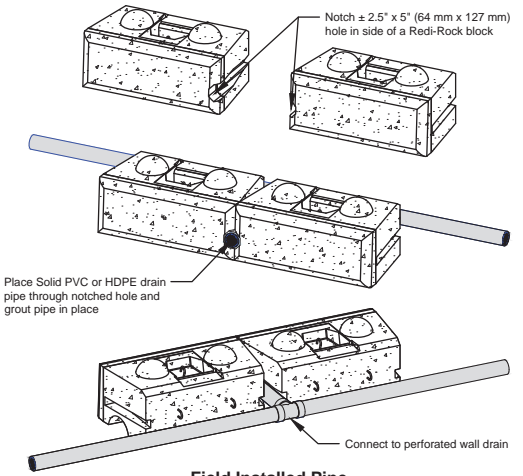
30673 Sgt. E. I. "Boots" Thomas Drive, Spanish Fort, AL 36527 Phone: (251) 544-7900

| |
|----------------------|
| EROSION CONTROL PLAN |
| MORPHY SUB STATION |
| CITY OF FAIRHOPE |

| |
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| SCALE: 1" = 30' |
| DATE: MAY, 2021 |
| DRAWN BY: BAT |
| CHECKED BY: JHR |
| SHEET: 07 OF 11 |



Custom Pipe Cast into Block

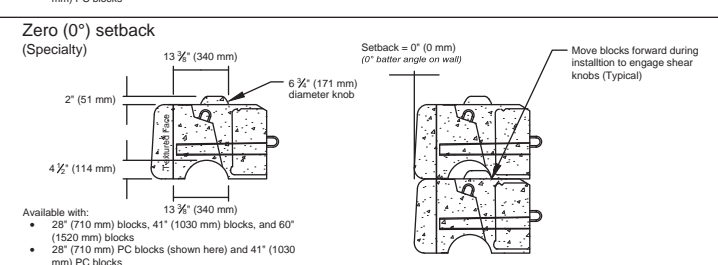
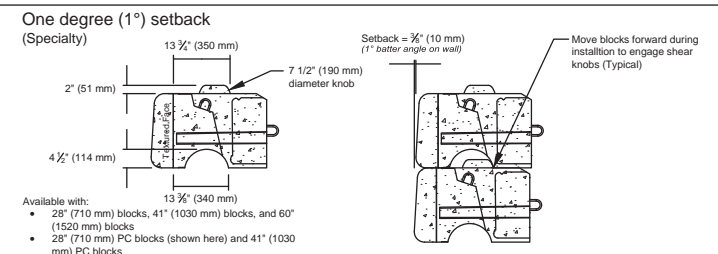
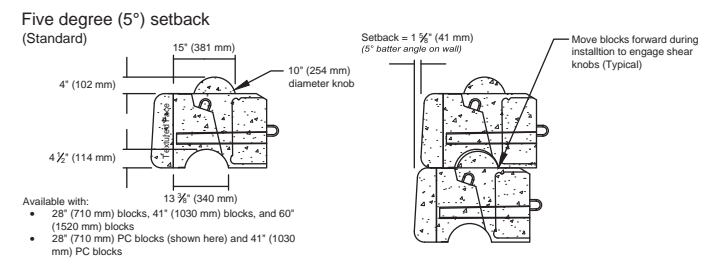


Field Installed Pipe

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

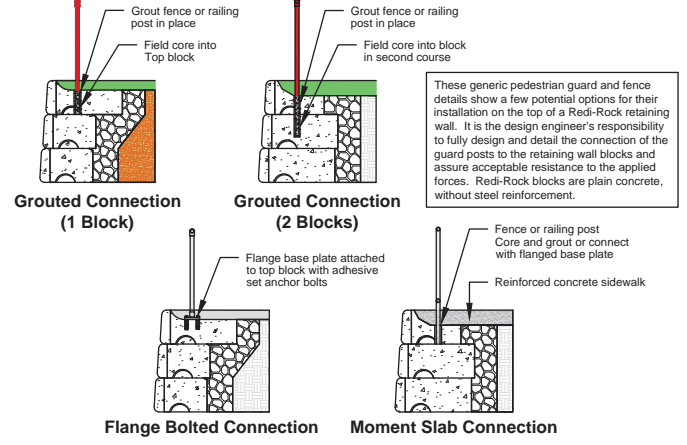
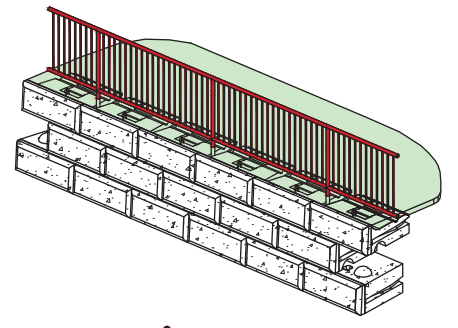
Wall Drain Weep Hole Options

N.T.S.



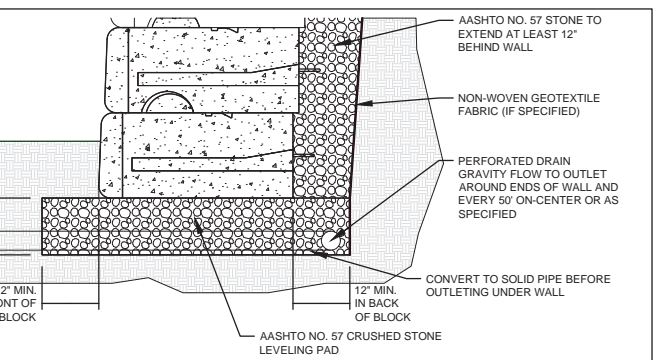
BLOCK-TO-BLOCK SETBACK OPTIONS

N.T.S.

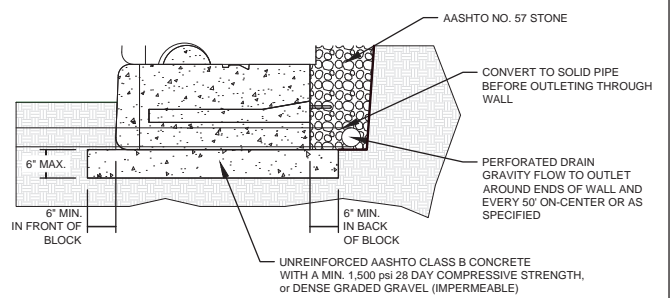


Fence or Pedestrian Guard Connection Options

N.T.S.



OPEN-GRADED CRUSHED STONE LEVELING PAD

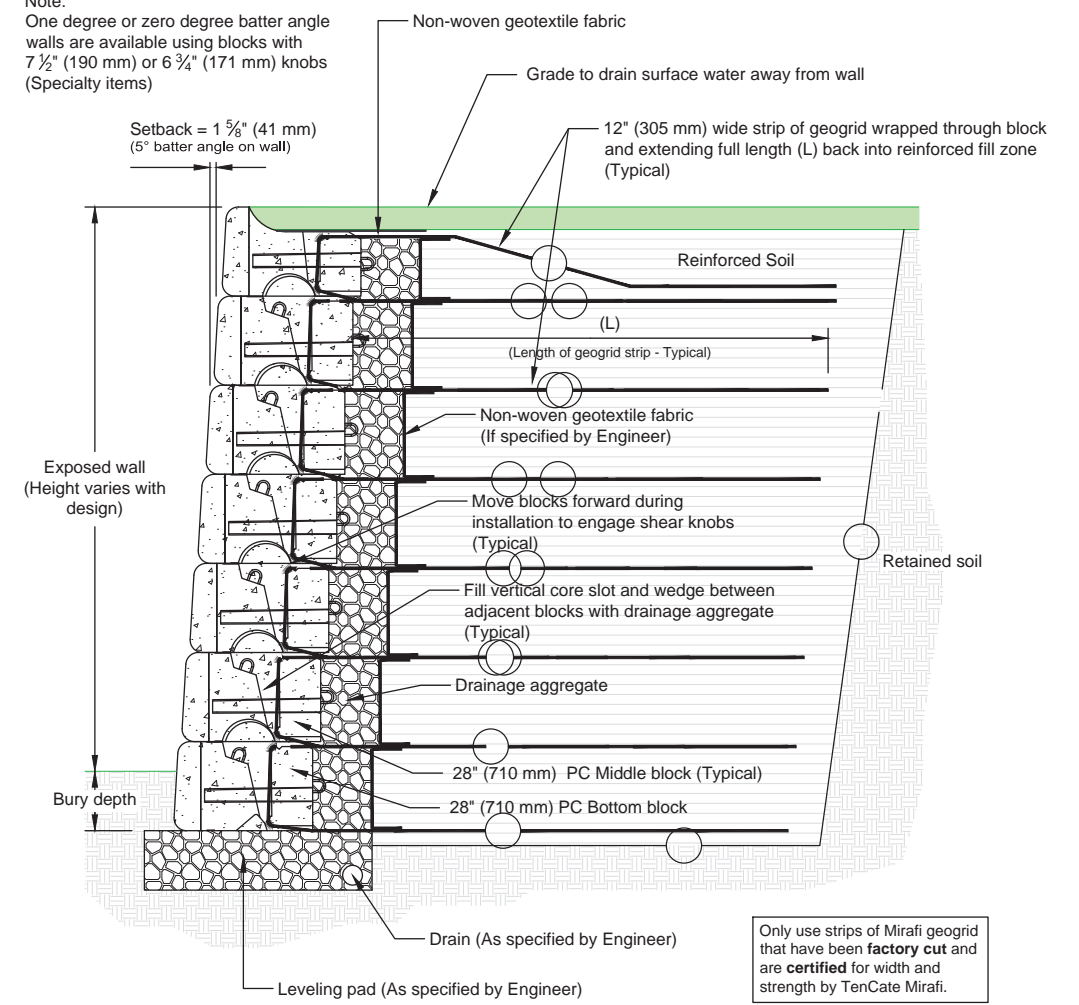


CONCRETE or DENSE GRADED GRAVEL LEVELING PAD

LEVELING PAD OPTIONS FOR RETAINING WALL BLOCKS

N.T.S.

Note:
One degree or zero degree batter angle walls are available using blocks with 7 1/2 inch (190 mm) or 6 3/4 inch (171 mm) knobs (Specialty items)



Typical Reinforced Wall Section

N.T.S.

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

NOTE:
• THE DRAWING DETAILS ON THIS SHEET FOR THE RETAINING WALLS ARE NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ENGINEERED AND STAMPED DRAWING SET, PREPARED BY AN ENGINEER CURRENTLY LICENSED IN THE STATE OF ALABAMA, FOR THE DESIGN OF THE RETAINING WALLS AND DRAINAGE PERTAINING TO THE RETAINING WALLS. THESE DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION BEGINS.

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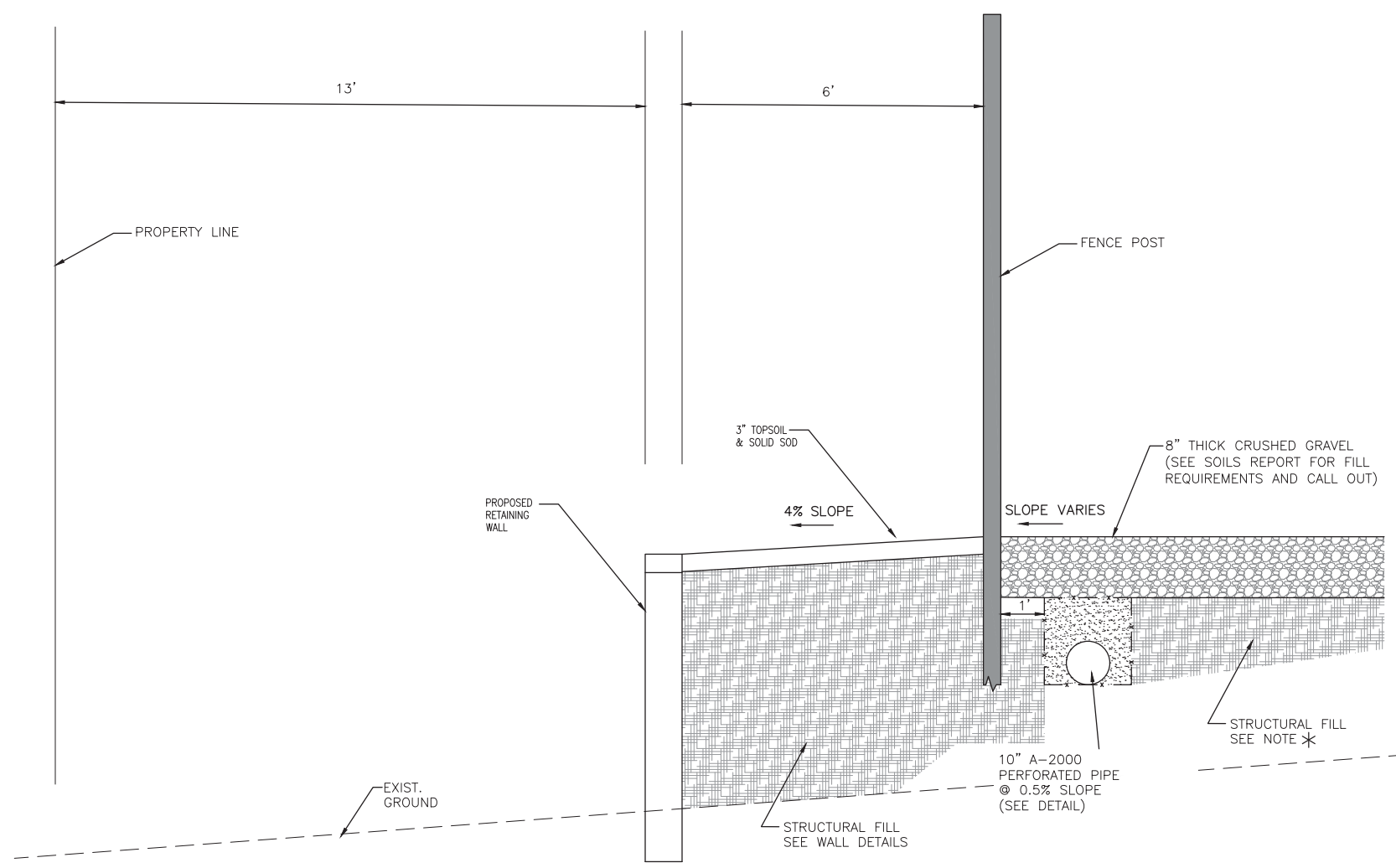
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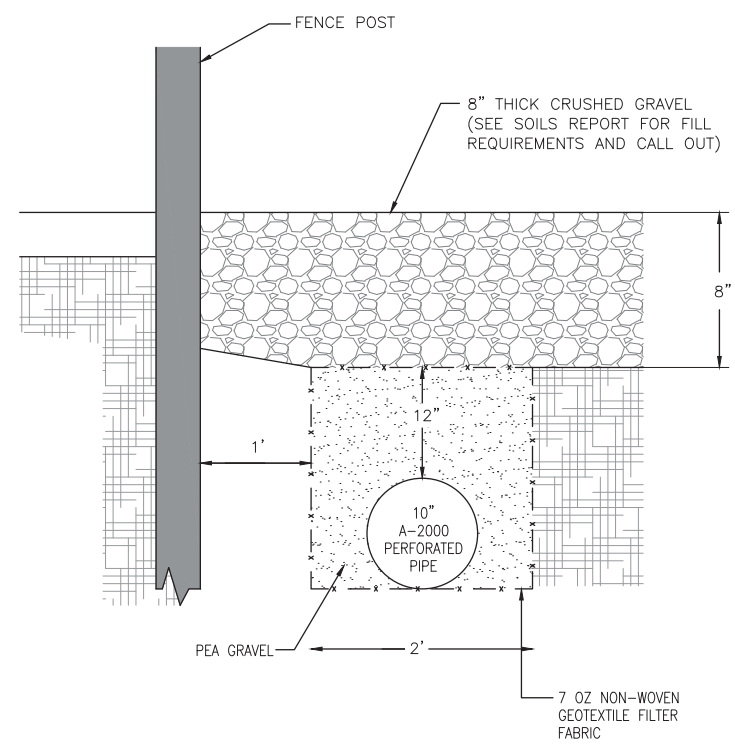
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| RETAINING WALL DETAILS |
| MORPHY SUB STATION |
| CITY OF FAIRHOPE |

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| DATE: MAY, 2021 |
| DRAWN BY: BAT |
| CHECKED BY: JHR |
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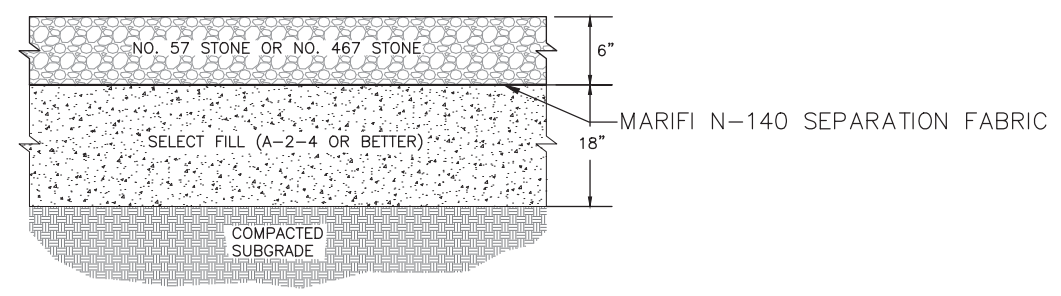
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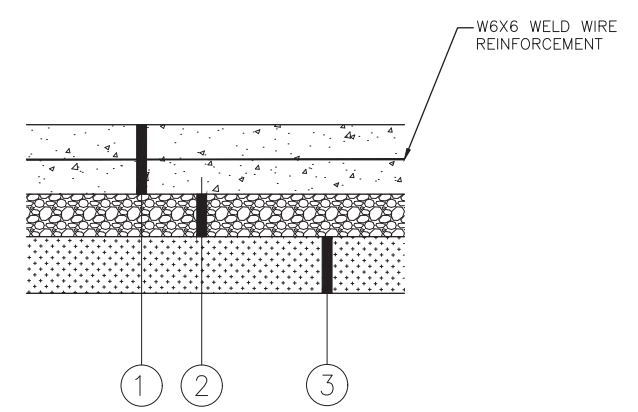
TYPICAL SECTION
N.T.S.



UNDERDRAIN DETAIL
N.T.S.



AGGREGATE DRIVEWAY
N.T.S.



STANDARD DUTY CONCRETE SECTION
N.T.S.

* STRUCTURAL FILL REQUIREMENTS

Structural fill should consist of clean sand with less than 12% passing the No. 200 mesh sieve. The initial lift of structural fill should be placed in a 18-inch-thick lift that is compacted to 98% ASTM D-698 standard Proctor density (top 6 inches 100% standard Proctor density). The remaining structural fill required to achieve final subgrade elevations should be placed in 8-inch max loose lifts and should be compacted to 100% ASTM D-698 standard Proctor density at moisture contents within +/- 3% of the material's optimal moisture content.

Structural fill should be placed in 8-inch lifts and compacted to at least 98% ASTM D-698 standard density. Proper placement of the structural fill layers will be critical in the performance of the foundations. Structural fill should meet the following requirements:

- 1) Exhibit SM classification according to the Unified Soil Classification System
- 2) Have a minimum of 15% to maximum 25% soil fines passing the No. 200 sieve
- 3) Have a maximum Liquid Limit (LL) of 25%
- 4) Have a Plasticity Index (PI) less than 3%
- 5) Have a minimum standard Proctor (ASTM D-698) maximum dry density of 110 pcf

LEGEND

- ① 6" THICK CONCRETE DRIVEWAY, REINFORCED
- ② 6" ALDOT SECTION 825 - CRUSHED AGGREGATE BASE COURSE (100% STANDARD DENSITY)
- ③ A-2-4 STRUCTURAL FILL (TOP 6" COMPACTED TO 100% STANDARD DENSITY)

| NUMBER: | REVISION: | DATE: |
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| CIVIL CONSTRUCTION DETAILS |
| MORPHY SUB STATION |
| CITY OF FAIRHOPE |

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| SCALE: NTS |
| DATE: MAY, 2021 |
| DRAWN BY: BAT |
| CHECKED BY: JHR |
| SHEET: 10 OF 11 |



May 4, 2021

Case: BOA 21.07

RE: Case BOA 21.07: Proposed Electrical Substation Location on Morphy Ave.

Dear Board of Adjustment Members,

Due to substantial load growth in all sectors, the City of Fairhope Electric Department must upgrade its existing electrical substations. One substation of particular concern in the existing Fairhope Avenue Substation, located at the East Water Tank, adjacent to Fairhope Avenue. It is the most loaded electrical substation, with peak loads of over 110% of base capacity. Fairhope Avenue Substation was built in the 1990's and, due to its site location, cannot be expanded.

A new site must meet certain criteria to be efficient and reliable. One main criterion is that it must be readily accessible to the 46KV sub-transmission line, which runs along Morphy Ave. Another important criterion is that it must be located so as to facilitate integration into the existing 12KV distribution line system.

Yet another important requirement is that the substation should be located as near to the electrical loads as possible. Doing so will reduce feeder lengths, thereby reducing both direct initial construction costs, and future operating costs. When these requirements are met, the City can continue to provide reliable power to our customers, at economical rates. The proposed Morphy Avenue site meets these requirements and is an ideal location for the new substation.

Thank you for your consideration,

A handwritten signature in black ink, appearing to read "JM", with a long horizontal flourish extending to the right.

Jeremy Morgan
Interim Electric Superintendent
City of Fairhope Electric Department

Sherry Sullivan
Mayor

Council Members

Kevin G. Boone

Robert A. Brown

Jack Burrell, ACMO

Jimmy Conyers

Corey Martin

Lisa A. Hanks, MMC
City Clerk

Kimberly Creech
City Treasurer

161 North Section Street

P.O. Drawer 429

Fairhope, Alabama 36533

251-928-2136

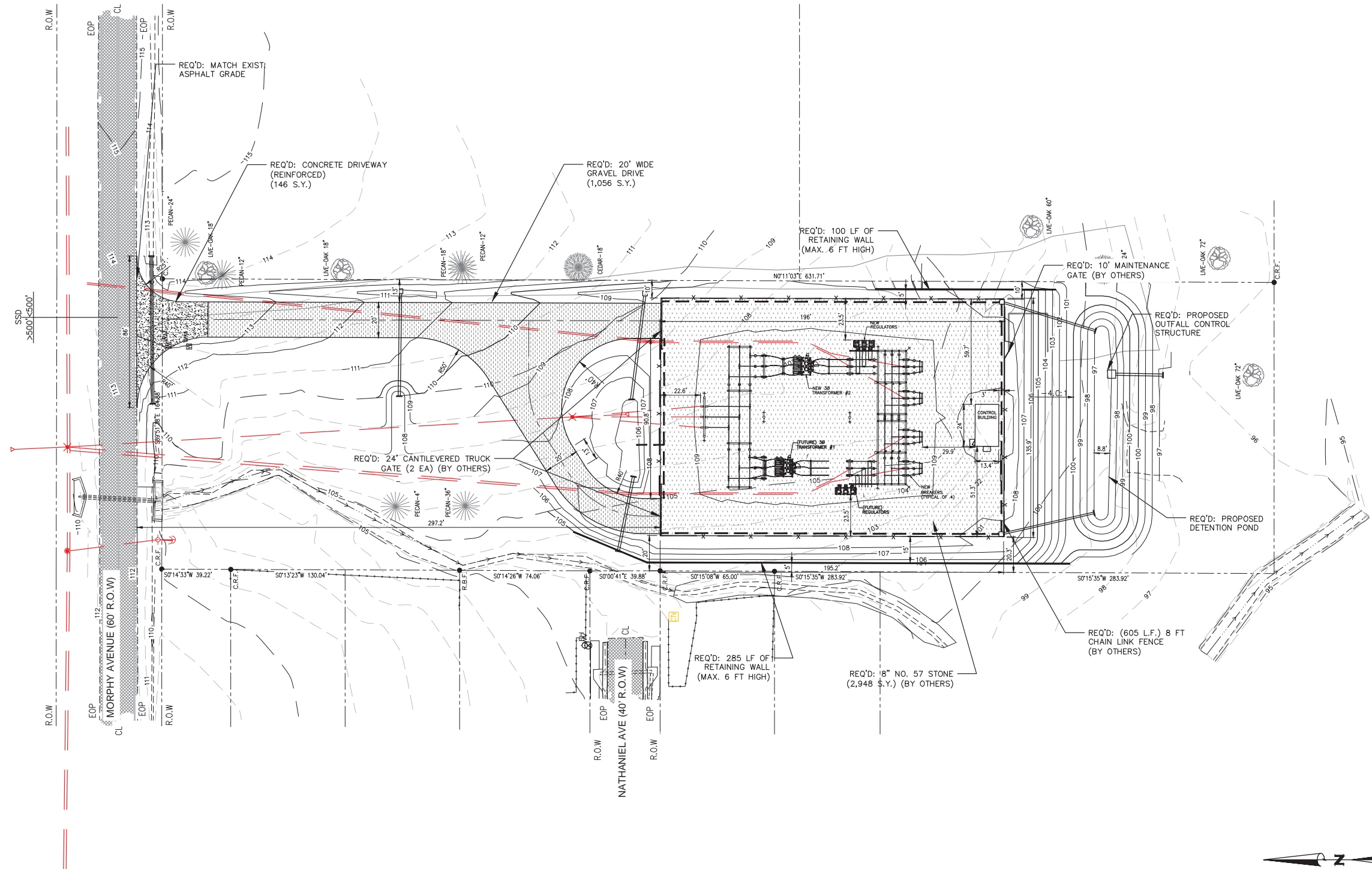
251-928-6776 Fax

www.fairhopeal.gov

Printed on recycled paper

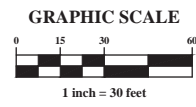
LEGEND

- C.R.F. CAPPED REBAR FOUND
- C.T.I.F. CRIMPED TOP IRON FOUND
- I.P.F. IRON PIPE FOUND
- O.T.I.F. OPEN TOP IRON FOUND
- P.K.N.F. "PK" NAIL FOUND
- P.T.I.F. PIG TAIL IRON FOUND
- R.B.F. REBAR FOUND
- R.R.S.F. RAILROAD SPIKE FOUND
- R.B.F. REBAR IRON FOUND
- C.R.S. 1/2" CAPPED REBAR SET "CA 1007-LS"
- P.K.N.S. "PK" NAIL SET
- R.R.S.S. RAILROAD SPIKE SET
- C.M.F. CONCRETE MONUMENT FOUND
- POWER POLE
- GUY WIRE
- CTV CATV PEDESTAL
- FH FIRE HYDRANT
- WM WATER METER
- WV WATER VALVE
- EXIST. FENCE
- EXIST. PROPERTY LINE
- PROPOSED CENTERLINE
- EXIST. DRAINAGE SWALE
- EOP EXIST. PAVEMENT
- R.O.W EXIST. RIGHT-OF-WAY
- CL CENTERLINE
- NO. 57 STONE



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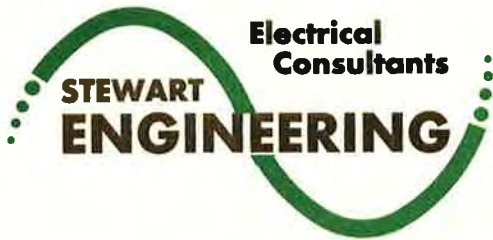


30673 Sgt. E. I. "Boots" Thomas Drive, Spanish Fort, AL 36527 Phone: (251) 544-7900

GEOMETRY PLAN
MORPHY SUB STATION
CITY OF FAIRHOPE

| |
|-----------------|
| SCALE: 1" = 30' |
| DATE: MAY, 2021 |
| DRAWN BY: BAT |
| CHECKED BY: JHR |
| SHEET: 4 OF 9 |





P. O. Box 2233 (36202)
300 E. 7th St. (36207)
Anniston, AL

Phone 256-237-0891

May 12, 2021

Ms. Sherry Sullivan, Mayor
161 North Section Street
Fairhope, AL 36532

Re: Proposed Morphy Substation - Noise

Dear Mayor Sullivan:

We realize that both of the documents received from VTC (Virginia Transformer Corporation, the Manufacturer of the Transformer that Fairhope has purchased for the subject site) are quite technical in nature. To help you, we have taken both of these documents, read through them, and highlighted important points.

We have a few comments to make in Summary:

A. Transformer Sound Levels

The Specifications used to guide the manufacturing of this Fairhope transformer required a final sound level at 6dB below NEMA Standards (the NEMA Standard is 70 dB), at a maximum. The Factory Tests Reports show your unit tested at 7dB below NEMA Standards, which would be 63dB. Remember that this is when measured at 1' and 6' from the transformer. Sound will diminish significantly as the distance increases. Even said ... will there be transformer noise? ... Yes, always. Will it be bothersome? It all depends on who you ask. As was noted in the white paper, noise reduction by sound screens or sound walls would be an option for improved sound attenuation. Sound attenuation can even be reduced by plantings, especially evergreen plantings.

Mayor Sherry Sullivan
May 12, 2021
Page Two

B. Magnetic Fields Caused by Current Flow in Power Lines

Important point ... Magnetic field strength rapidly diminishes with distance from an electrical source.

The drawing on Page 10 of the subject document shows that at a distance of 10 meters from the source, the magnetic field strength for the Morphy Substation (46 KV / 12 KV) incoming and outgoing power lines will have dropped to below 6 mG. The magnetic field strength at a distance of 40 meters (approximately 130 feet) from the source would be 0 mG. The drawing on Page 9 shows that the magnetic field strength at a vacuum cleaner inside a house is 300 mG, and at a power saw it would be 200 mG. The magnetic field strength at the neighboring houses would be less from this Substation than they are from the existing power lines which presently provide them with electrical service ... and even that is MUCH less than the magnetic field strength of in-house appliances.

See Page 11 in the subject document: Beyond the Substation fence, the magnetic field produced by the equipment within the Substation is typically indistinguishable from the background levels from other sources. Modern power transformers are built to keep the magnetic field within the core of the transformer to maximize its efficiency.

We hope this helps. Don't hesitate to let us know if we can be of further assistance.

Sincerely,

STEWART ENGINEERING, INC.



Lance Junkin

LJ:tcv

Transformer Noise

Lokesh Solanki
VTC Engineering Department

Introduction:

- **What is sound?**

Sound is an air pressure disturbance that human ear can 'hear'. Speech produces sound and disturbances produced by practically everything that moves. the frequency of the sound wave is perceived as pitch and amplitude is perceived as loudness.

When the sound is unwanted, it becomes "Noise". Transformers in operation emit noise, the magnitude of noise increases with its size in MVA and its voltage class.

Sound level for transformers is specified in NEMA TR1.

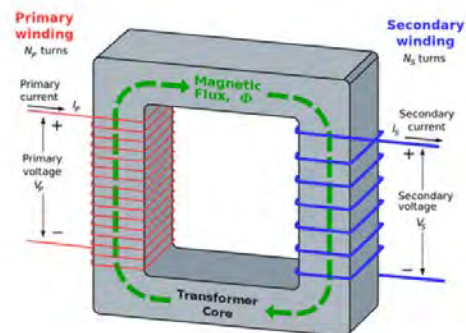
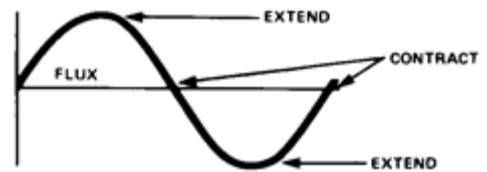
- **How it is produced?**

Transformer core noise is caused by a phenomenon called magnetostriction. In very simple terms this means that if a piece of magnetic sheet steel is magnetized it will extend itself. A transformer is magnetically excited by an alternating voltage and current so it becomes extended and contracted twice during a full cycle of magnetization. The frequency is 2X of the frequency of the voltage.

A transformer core is made from many thin sheets of special electrical steel. It is made this way to reduce losses due to circulating eddy currents, and the consequent heating effect. If the extensions and contractions described above are taking place in various directions depend upon the clamping of the laminations, each sheet can nonuniformly behave over its length and width. This 'writhing' and twisting motion produces harmonics of the fundamental frequency up to the 16th harmonic. These extensions are a few micro inches dimensionally, however, sufficient to cause a vibration as noise. This is the core noise.

Apart from the core noise, transformer windings contract and expand with the current. The frequency of winding noise is that of the current. The noise generated by core and winding is transmitted to the tank wall via the mechanical structure and through the oil. The magnetic shields, if used, will also vibrate with the magnetic flux and create noise.

During operation, transformer generate heat which is dissipated by radiators, fans are used to enhance cooling. The fan motor and blades, causing additional noise. The fan noise is added to transformer noise and total noise of transformer during operation increased.



- **What is the significance of sound to the quality and reliability of transformer?**

The transformer noise is mainly due to vibration in the core laminations due to magnetostriction. As we all know vibration is not good for any device. The effect of vibration in transformer is as bad as of any rotating equipment. More noise means more vibration and more vibration means more abrasion of transformer insulation. Vibration also cause looseness in hardware. Insulation

abrasion will lead to coil failure and loose hardware leads to increased vibration and increased insulation abrasion, and loosening of electrical connections.

How to mitigate transformer Noise?

- In order to mitigate transformer noise, it is essential to know the amount of noise generated by transformer. With wide range of transformer design and number of transformer tested designed and tested for noise level, VTC/GTC has developed an empirical formula to estimate noise level generated by transformer during operation.

$$\text{Transformer Noise} = K_1 \lg W + K_2 B + K_3 \text{ [dB]} \quad \dots\dots\dots (1)$$

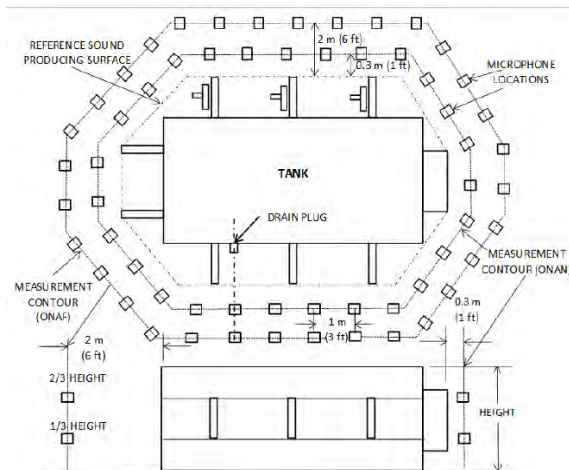
Where, W = Core weight, B = Flux Density and K_1, K_2, K_3 = coefficients and constants

These can be evaluated with large amount of data and then used to predict the noise from a transformer.

Using various design considerations as explained below the overall transformer noise is reduced at design stage.

- Reduction of noise from Core:
 - a. No-load sound level of core mainly depends on Magnetostriction and magnetic forces. The magnitude of Magnetostriction could be reduced by lowering flux density. The studies show that reducing induction by 0.1 Tesla flux density, noise of transformer's core reduces by 3 - 4 dB. Flux density is inversely proportional to the core weight, means the weight and cost of the transformer increases. This method, while the easiest, is the most costly method.
 - b. Grade of CRGO laminations, which is used for making the core, should have properties such as low loss, high permeability and low noise generation from core. When applying high B and laser scribed laminations, it is possible to reduce transformer's noise for approximately 3 dB.
 - c. Core construction is also important to reduce noise generated by core. Study shows that step-lap lap core construction reduces the noise of the magnetic core for up to 6 dB. At lower inductions with step-lap even greater noise reduction can be achieved.
 - d. Well-designed clamping and tightening structure and techniques for the core yokes and legs can reduce the noise due to reduced magnetostriction and reduced interlaminar 'chatter'. Controlling the 3 dimensional 'undulation' of the core assembly will also reduce the harmonics.
 - e. The vibration of transformer core sheets is the main source of noise generation in transformer. Tightening the core and reducing gaps in the corners will help to reduce core noise. Core laminations are tightened with glass tape (stage B epoxy) banding. This tightens the core uniformly when it is heated and leads to very strong and uniform tightening of core steel. Use of non metallic bolts for tightening of core yokes will provide additional tightening of the core lamination which helps core to produces less amount of noise.
 - f. Bottom yoke of core and core legs after stacking, are coated with varnish or wood glue to reduce vibration of the sheet edges.
 - g. The peaks in angles overhanging of laminations (horns) are cut off, since they are free and vibrate due to the magnetic flux. Alternatively, they can be covered with a putty to keep them from vibrating.
- Reduction of noise from Winding
 - a. Specific winding's noise reduction is achieved by increasing the conductor's size, or increasing the transformer's impedance. This however will increase the amount of copper in the cost of the transformer.
 - b. For large power transformers special kind of transposed conductors for making windings are being made in order to reduce losses in the windings and winding's noise reduction.

- c. Tightness of winding during manufacturing process, and pressing these axially during drying stage, at certain pressure will reduce the ‘accordion’ effect during operation.
 - d. Moreover, on magnetic circuit assembly after drying process assure winding compression. A tightly compress winding will help to reduce winding noise.
- Reduction of Noise Transfer to the Tank
 - a. Avoid mechanical connection between core and coil assembly and tank surfaces to eliminate structure borne noise transmission. No direct connection to tank base or tank wall. Use vibration damping arrangement between all connection points between core and coil assembly and tank walls bottom and top.
 - b. Use of wall sound barriers to reduce oil borne noise. Oil barriers and cushion padding may also help insulate transformer noise and prevent it from spreading.
 - c. The distance from the noise producing surfaces to the tank wall can be adjusted for the fundamental noise frequency to ‘reflect’ most of the sound pressure from the tank wall and ‘dissipate’ the sound energy in the oil.
 - Reduction of Fan Noise
 - a. Fan’s noise reduction is achieved with fewer numbers of rotor’s revolutions per minute of the fan, but at the same time it reduces the cooling capacity, thus the commonly used fans are with greater number or with larger diameter of blades, in order to compensate the reduced cooling capacity.
 - b. Reduction of fan’s noise can be achieved through balancing the rotating masses, quality of bearing and stable structure for securing the fan to the tank or the radiator for cooling.
 - c. Fan structure borne noise can be reduced by providing vibration dampening material in mounting arrangement between fan to the tank wall.
 - d. The location of fans on transformer also affects the overall noise of the transformer. Use multiple radiator banks and fan bank. Multiple radiator banks will help to increase overall sound producing surface and hence measurement contour for ONAN & ONAF testing. Multiple fan banks will help to reduce overall fan born noise to keep FA sound low.

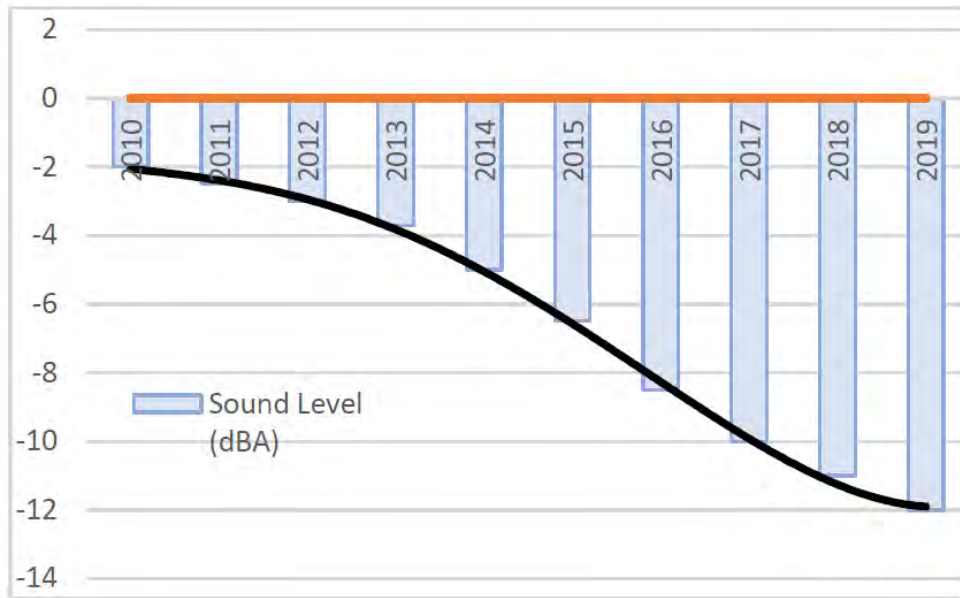


- Reduction of Overall External transformer Noise
 - a. While installing transformers at customer site, use external vibration dampeners along with flexible connections and mounting methods. This prevents metal contact between the mounting surface and the unit, to reduce noise transmission.

- b. Noise reduction by sound screens or sound walls would be next best option for sound attenuation. The sound barrier will help reduce the noise in surroundings and reduce sound travel.

VTC/GTC Achievement in transformer sound reduction

- VTC/GTC achieved 12dB sound reduction to NEMA TR-1 requirement by rigid mechanical design of core and coil, reduced vibration from coil by geometry and material and dampening of vibration emitted from core and coil assembly, reducing transmission of vibration and noise from transformer inside to outside. The graph below shows VTC/GTC achievement of transformer noise reduction compared to NEMA TR-1 –2013 a standard describing transformer sound level requirement. *



| Year of Mfg. | Description | Measured Sound, dBA | | NEMA Rating, dBA | | Difference - ONAN | Difference- ONAF |
|--------------|--|---------------------|-------|------------------|-------|-------------------|------------------|
| | | ONAN | ONAF2 | ONAN | ONAF2 | | |
| 2014 | 22.5/30/37.5MVA, 350kV BIL, 69kV | 52.7 | 58.11 | 71 | 74 | 18.3 | 15.89 |
| 2014 | 22.5/30/37.5MVA, 350kV BIL, 138kV | 52.83 | 57.82 | 71 | 74 | 18.17 | 16.18 |
| 2014 | 22.5/30/37.5MVA, 350kV BIL, 69kV | 53.23 | 59.2 | 71 | 74 | 17.77 | 14.8 |
| 2015 | 18/21.6/24/26.8/30/33.6M VA, 450kV BIL, 115 KV | 59 | 63.5 | 73 | 75 | 14 | 11.5 |
| 2016 | 11.2/14MVA, 250 Kv BIL, 69KV | 56 | 58 | 69 | 70 | 13 | 12 |

* **Disclaimer:** The transformer noise reduction depends on design, material, performance, size and cost. This paper does not confirm all transformer manufactured by VTC / GTC will have reduced sound as standard function. The noise level performance shown above are the jobs designed to achieve specific noise reduction.

References

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2. 2015 IEEE Std C57.12.90 – IEEE standard test code for liquid immersed Distribution, Power and Regulating Transformers, 2016 IEEE, New York.
3. S. V. Kulkarni, S. A. Khaparde, “Transformer engineering design and practice”, 2004 New York Marcel Dekker Inc.
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5. Ruchi Negi, Prateek Singh, Gaurav Shah “Causes of Noise Generation & its Mitigation in Transformer” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering Vol. 2, Issue 5, May 2013
6. Luis FERNÁNDEZ BRAÑA, César M. A. VASQUES, Hugo M. R. CAMPELO and Xosé M. LÓPEZ-FERNÁNDEZ “Quite Transformers: Design Issues” Advanced Research Workshop of Transformers 28-30 Oct 2013

Understanding Electric and Magnetic Fields



Contents

| | |
|---|----|
| What we do about EMF | 3 |
| What are electric & magnetic fields? | 5 |
| Comparing electric & magnetic fields | 6 |
| Electric field strength | 7 |
| Magnetic field strength. | 9 |
| Magnetic fields & health | 12 |
| Guidelines & exposure recommendations | 13 |
| FAQ | 15 |
| Resources | 17 |
| Glossary | 18 |

We've provided this booklet to explain electric and magnetic fields (EMF) and to summarize what national and international health and scientific agencies say about EMF.

We've included the following:

Glossary: Look up definitions of technical terms. Terms in the glossary are bolded the first time they are used in the booklet.

FAQs: Look at responses to some of the most frequently asked questions about EMF.

Contact Information: Contact us for more information or to borrow a magnetic field measuring kit.

Resources: Refer to this list for additional details, including links to scientific studies and information from established health authorities.

What we do about EMF

If you're looking to purchase a home that's located near a power line or if there's a new line being proposed for your neighbourhood, you may have questions about living near this type of electrical infrastructure.

The majority of the concerns we hear are about electric and magnetic fields given off by power lines. Electric and magnetic fields, commonly referred to as EMF, are invisible energy fields that are prevalent in our daily lives.

Some key facts and conclusions about electric and magnetic fields from power lines:

- EMF levels decrease rapidly the further you are from the source. This means that by the time EMF from power lines reach your home they're often at lower levels than those already present in your home.
- At the street level, the magnetic field levels from our power lines are actually very low, often lower than the level given off by home appliances.
- Magnetic fields aren't shielded or blocked by putting power lines underground.
- Despite long-term extensive international research over the last 40 years, no health consequences have been established from exposure to EMF at levels less than recommended international guidelines.

What we do about EMF continued

This conclusion is based on research and findings of national and international health authorities including Health Canada and the World Health Organization. We understand the relationship between EMF and health will continue to be the subject of ongoing research which is why we:

- Communicate openly and provide balanced, accurate information about EMF.
- Commission a regular summary report on the progress of scientific and medical research in this field. These reports, produced by an independent research group are available on bchydro.com/emf.
- Monitor developments with Health Canada and World Health Organization to ensure we follow their guidelines on EMF and power lines.
- Follow all federal and provincial legislation and regulations addressing EMF and ensure all our facilities and lines comply with applicable EMF standards.
- Take appropriate steps to reduce EMF levels in the design of new and upgraded electrical equipment.

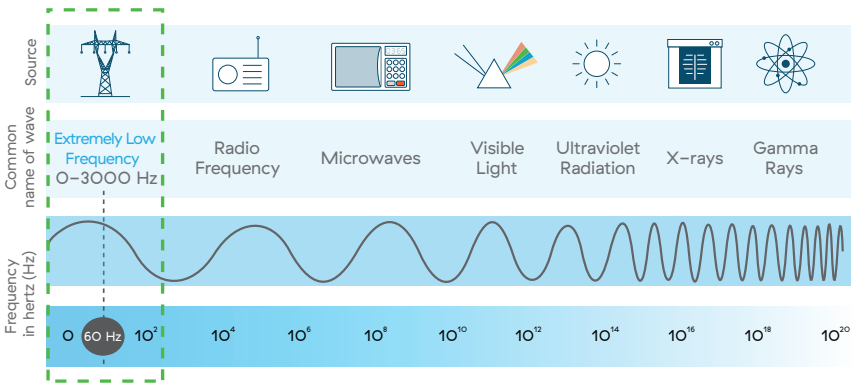


What are electric and magnetic fields?

Electric and magnetic fields (EMF) are present everywhere electricity flows. Electrical appliances, household wiring and power lines all produce EMF. These fields are part of a broad range of waves called the **electromagnetic spectrum**, which includes other waveforms such as radiowaves, microwaves, infrared rays and x-rays.

In North America, power line's alternative current (AC) standard frequency is 60Hz. That means the current cycles back and forth 60 times per second. The EMF produced by the power line has the same frequency of 60 Hz, categorizing power line EMF as Extremely Low Frequency (ELF).

FREQUENCIES OF THE ELECTROMAGNETIC SPECTRUM AND COMMON SOURCES



This diagram shows the different levels of energy that make up the electromagnetic spectrum. The energy of waveforms increases exponentially as the frequency moves from low to high.

Source: Institute of Electrical and Electronics Engineers.

Comparing electric and magnetic fields

Although they are often referred to together as EMF, electric fields and magnetic fields are actually two distinct components of electricity.

Electric fields are produced by voltage in a wire, such as a power line. An electric field is also present when an electrical appliance is plugged into an outlet even if it's not turned on. They can be blocked or shielded by objects like buildings or trees.

Magnetic fields are produced when electric current is flowing, so they're only present when an electrical appliance is turned on. As the flow of electricity—the current—increases, the magnetic fields increase. Magnetic fields pass through most objects and can't be blocked as easily as electric fields.

| Electric fields | Magnetic fields |
|---|---|
| Produced by voltage; present any time an appliance is plugged in even if it's turned off. | Produced by current; only present when an appliance is plugged in and turned on. |
| Measured in volts per metre or kilovolts per metre. | Measured in gauss or tesla. 10 milligauss (mG) is equal to 1 microtesla (μT). |
| Easily shielded by trees, buildings. | Not easily shielded. |

For both electric and magnetic fields, the strength of the field decreases rapidly with distance from the source.

Helpful hint

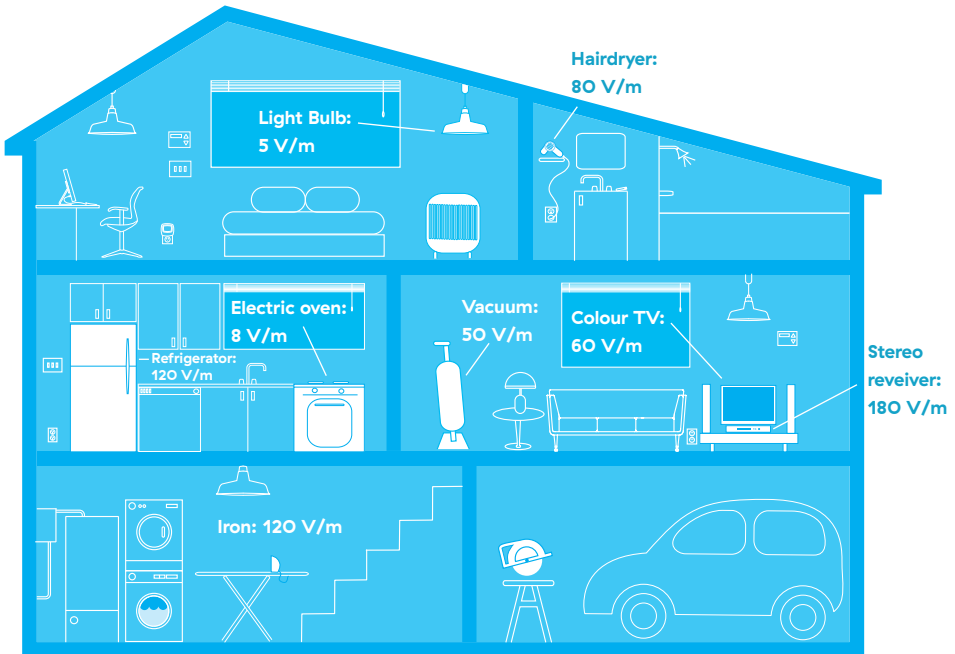
Terms set in bold are explained in more detail in the glossary. For more information related to radio frequency, see the resource section of this booklet.

Electric field strength

- Is directly related to the voltage of the line.
- Also diminishes rapidly with distance from the electrical source.

The strength of electric fields near charged electrical lines remain pretty constant. Electric fields near a charged line exist even when electricity is not being used. This means the electrical wiring your home is producing electric field constantly even when you aren't using any appliances.

TYPICAL MAGNETIC FIELD LEVELS IN THE HOME



Source: World Health Organization, accessed 2016
All measurements were taken at 30 cm from source.

The electric fields from transmission and distribution lines change very little because of the line's stable voltage. Electric field, like magnetic field, diminishes rapidly with distance.

Electric field can easily be shielded. Trees, fences and buildings naturally reduces electric field strength and the walls and the roof of your home further reduces the electric field strength from equipment outside the home.

ELECTRIC FIELDS AND STARTLE SHOCKS

Most of the interest in possible health effects is related to magnetic fields and not electric fields; however, people may notice the presence of electric fields when they're near power lines.

Conductive objects, like a vehicle, fence line or even the ground can attract an electrical charge when they're near electric fields. When a person touches that object he or she can experience a **startle shock**. This is similar in effect to the small shock you might feel in your house after shuffling your feet on the carpet and touching a door handle.

Startle shocks aren't harmful but understanding how and when they happen can help to reduce surprise if you experience one.

ELECTRIC FIELDS AND HEALTH

In June 2007, the World Health Organization concluded that there are no substantive health concerns related to electric fields at levels generally encountered by the public. (WHO, Fact Sheet No. 322 *Electromagnetic fields and public health*, June 2007)

For more information about electric fields, visit bchydro.com/emf.

The remainder of this booklet focuses on magnetic fields as most of the interest in possible health effects is related to them.

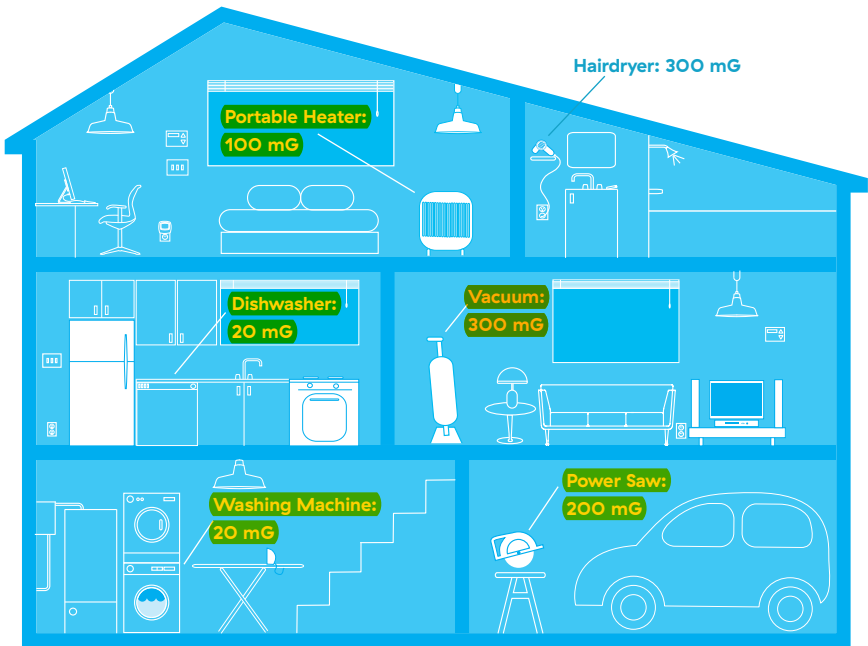
Magnetic field strength

Magnetic field strength:

- Is directly related to the amount of current flowing.
- Diminishes rapidly with distance from the electrical source.

For example, the strength of magnetic fields near electrical appliances depends on the current flowing through the appliance, the configuration of the wiring within the appliance, and the distance from the appliance. Due to proximity, magnetic field levels from appliances are often much higher than under power lines; however, the levels fade quickly as you move away from an appliance.

TYPICAL MAGNETIC FIELD LEVELS IN THE HOME

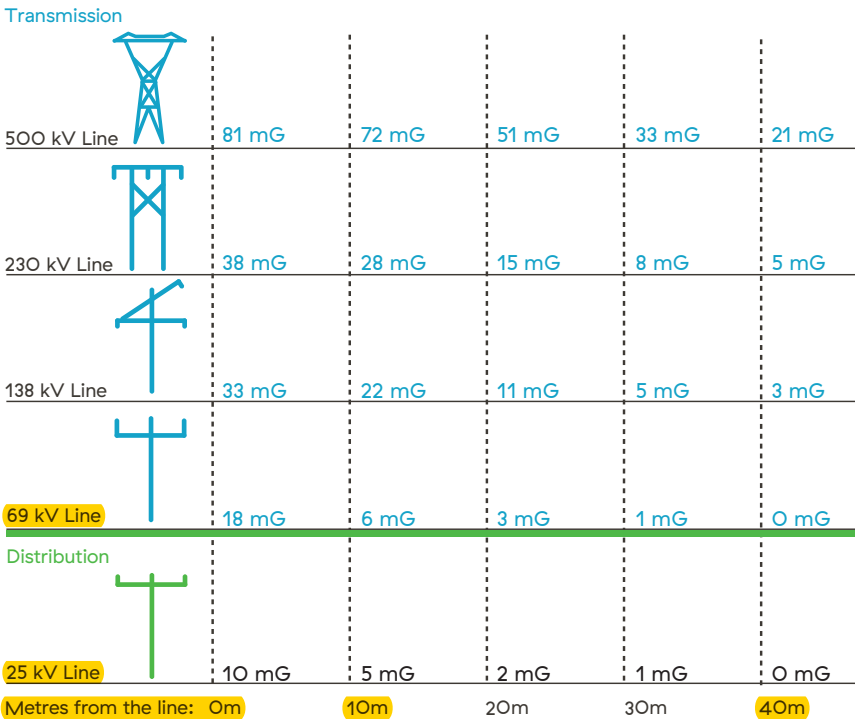


Source: *EMF in your Environment*, U.S. Protection Agency, 1992.
All measurements were taken 15cm from the sources.

Magnetic field strength (continued)

Just like appliances, the magnetic field levels from power lines depend on the current flowing on a line, the configuration of the wiring, and a person's distance from the line. The current on a transmission line will depend on the electrical load, or how much electricity is being used at any given time. In B.C. variations in current follow a fairly typical pattern, with peaks in the morning and evenings, and higher demand in the winter than the summer.

TYPICAL MAGNETIC FIELD LEVELS NEAR TRANSMISSION AND DISTRIBUTION LINES



The levels in this diagram are based on typical field levels that would be measured on most BC Hydro power line corridors in each voltage class. They are calculated using average line current and typical line heights. These levels are for general information only and are often different from levels found in EMF profiles produced specifically for new projects. Typically, a project-specific EMF profile shows the highest magnetic field levels possible during a specific line's lifetime, a condition rarely encountered and used for the purpose of line design.

TYPICAL MAGNETIC FIELD LEVELS NEAR SUBSTATIONS

Beyond the substation fence, the magnetic field produced by the equipment within the station is typically indistinguishable from the background levels from other sources. Generally, the strongest magnetic field around the outside of a substation comes from the power lines entering and leaving the station.

There is a misconception that the transformers within substations are a high source of magnetic field. Modern power transformers are built to keep the magnetic field in the core of the transformer to maximize its efficiency.

Magnetic fields & health

The question of whether exposure to electric and magnetic fields (EMF), in particular magnetic fields, causes adverse health effects has been the subject of numerous scientific studies over the last four decades with increasing quality.

The extensive health research and scientific knowledge surrounding EMF includes both **epidemiological studies** and **experimental studies** in animals, tissues and cells. These epidemiological studies and experimental studies provide pieces of the puzzle but no single study or even all the studies of just one type can give us the whole picture.

In epidemiological studies, researchers try to establish if there's a statistical association between the exposure of certain groups of people and diseases they experience. Some epidemiological studies have suggested a weak association between exposure to magnetic fields and childhood leukemia. It's unclear, however, whether exposure to magnetic fields actually caused the disease.

Some studies don't include magnetic field measurements when trying to determine an association and no epidemiological study has provided direct evidence that would permit drawing the conclusion that EMF is a cause of cancer or other adverse health effects.

Experimental studies involve exposing cells, tissues and animals to magnetic fields under controlled conditions. These studies allow researchers to closely control magnetic field exposure and provide information about any small scale biological changes that magnetic fields may cause. Experimental studies haven't provided a basis to conclude that magnetic fields are the cause of any disease. Scientists at Health Canada have been at the forefront of experimental studies to assess whether magnetic fields might cause or promote the development of cancer, but in decades of research they haven't found persuasive evidence for this hypothesis.

Magnetic fields & health (continued)

Many reputable health authorities such as the World Health Organization and Health Canada have conducted thorough reviews of all the different types of studies and research on EMF and health. These health authorities have examined the scientific **weight-of-evidence** and have determined that when all of the epidemiological and experimental studies are considered together, the consensus is that there is no **cause-effect relationship** between exposure to magnetic fields and human health.

We recognize that there are members of the public who remain concerned with the scientific findings to date, and we'll continue to monitor the scientific developments related to EMF.

Guidelines & exposure recommendations

Health Canada has reviewed the current scientific findings regarding exposure to Electric and Magnetic Fields (EMF) and concluded:

There have been many studies on the possible health effects from exposure to EMFs at ELF. While it is known that EMFs can cause weak electric currents to flow through the human body, the intensity of these currents is too low to cause any known health effects. Some studies have suggested a possible link between exposure to ELF magnetic fields and certain types of childhood cancer, but at present this association is not established.

(Health Canada, 2016)

AS A RESULT:

Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at ELF. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors.

(Health Canada, 2016)

The World Health Organization (WHO) has also looked at questions around EMF. In June 2007, WHO released a comprehensive report on possible health effects of exposure to extremely low frequency electric and magnetic fields. In this report, WHO stated that the evidence related to childhood leukemia is not strong enough to be considered causal. (WHO, Fact Sheet No. 322 Electromagnetic fields and public health, June 2007)

In 1998, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) developed voluntary exposure guidelines. ICNIRP is a formally recognized, international non-profit organization made up of independent scientific experts that are responsible for providing guidance and advice on non-ionizing radiation protection for people and the environment. In its guidelines update in 2010, ICNIRP recommends a residential magnetic field exposure limit of 2,000 **milligauss (mG)** and an occupational exposure limit of 10,000 mG.

These voluntary guidelines were developed to address short-term exposure only. ICNIRP determined that evidence for health effects from long-term exposure is insufficient to establish exposure standards. ICNIRP continues to monitor the research in this area.

WHO endorses the guidelines established by ICNIRP. As of 2016, there has been no change to WHO's position despite annual ICNIRP workshops and meetings on electromagnetic fields and health. You can find details of these meetings on WHO's EMF project site.

Moving forward we'll continue to monitor developments with Health Canada and World Health Organization to ensure we follow their guidelines on EMF and power lines.



Frequently asked questions

CAN I AVOID EXPOSURE TO EMF IF I STAY AWAY FROM POWER LINES?

No. EMF is found wherever there is electricity, whether in household wiring, electrical appliances, or power lines. Your exposure is determined by how strong the field is at its source, how far you're from the source, and how long you remain near the source. EMF is strongest at the source and fades rapidly as you move away.

CAN YOU ELIMINATE EMF BY BURYING THE LINES UNDERGROUND?

No. The ground will shield electric fields, but magnetic fields will still pass through.

SOMETIMES I FEEL ELECTRICITY IN THE AIR WHEN I'M UNDER A POWER LINE. WHAT'S HAPPENING?

Electric fields exist around all wires that carry electricity. Electric fields can sometimes be noticeable directly under high voltage power lines. This feeling can be discomforting (arm hair stimulation or tingling), but it's not unsafe or a health risk.

I RECEIVED A SHOCK WHEN I TOUCHED MY CAR THAT WAS PARKED NEAR A POWER LINE—WHAT CAUSES THAT?

This is called a “startle shock.” It may occur when conductive objects (including people) are located within a power line's electric field and become electrically charged. When a person with a different level of induced charge contacts an object or another person, the charge is equalized (discharged) between the two bodies and the person may receive a startle shock. A startle shock will not harm the recipient but could cause surprise.

WHY IS EMF CLASSIFIED AS A CARCINOGEN?

EMF is not a carcinogen but instead is classified as a “possible carcinogen”, or 2B carcinogen, by the International Agency for Research on Cancer (IARC). This classification is the weakest of three categories used by IARC to classify potential carcinogens. Other everyday items in this category include aloe vera, gasoline engine exhaust and pickled vegetables.

The 2B classification acknowledges that concerns have been raised from some epidemiological studies but conclusive evidence hasn’t been found despite extensive and ongoing research.

HOW HAS BC HYDRO TAKEN PRECAUTIONS TO REDUCE POTENTIAL EMF RISKS?

Our approach is modeled after recommendations by the World Health Organization to take reasonable precautionary measures. Examples include open communication with the public, monitoring the science on EMF and the way we design our projects including increasing ground clearances and the pole position within rights-of-way.

DOES BC HYDRO HAVE MAGNETIC FIELD MEASURING KITS?

Yes, we loan magnetic field measuring equipment. The Magnetic Field Measurement Kit comes with a gauss meter and a booklet that explain how to take measurements. To borrow a kit please contact us.

HOW DOES EMF AFFECT ME IF I HAVE AN IMPLANTED MEDICAL DEVICE?

The guidelines and exposure recommendations set out in this booklet are for the average population and can’t directly address the requirements of people with implanted medical devices like heart pacemakers. For more information and advice about EMF, contact the device manufacturer and the clinician who implanted the device.

IS THERE A CONNECTION BETWEEN EMF AND ELECTROMAGNETIC HYPERSENSITIVITY (EHS)?

According to the World Health Organization, electromagnetic hypersensitivity (EHS) has no clear diagnostic criteria and there is no scientific basis to link EHS to EMF.

Resources

If you'd like to learn more about EMF, we recommend the following sources:

OUR EMF WEBSITE

Our website is always being updated with new information. It also has links to the resources listed below.

bchydro.com/emf

EMF AND HEALTH: REVIEW AND UPDATE OF THE SCIENTIFIC RESEARCH

This report was prepared by an independent, technical and scientific research firm to assess the current status of research regarding the potential for health effects from exposure to EMF.

bchydro.com/emf

RADIO FREQUENCY & BC HYDRO'S SMART METERS

This site includes information on radio frequency and BC Hydro's Smart Meters.

bchydro.com/smartmeters_safety

HEALTH CANADA

This fact sheet contains basic information about EMF, typical Canadian exposures and Health Canada's role. *It's Your Health Fact Sheet: Electric and Magnetic Fields at Extremely Low Frequencies*

hc-sc.gc.ca/hl-vs/iyh-vsv/environ/magnet-eng.php

BC CENTRE FOR DISEASE CONTROL

This site includes statements from experts, information on scientific studies and resources for more information.

bccdc.ca/health-info/health-your-environment/electro-magnetic-exposures

WORLD HEALTH ORGANIZATION

This site from the United Nations health agency provides links to EMF fact sheets, extensive research publications and general information about EMF.

who.int/peh-emf/en

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

The US National Institute site provides information on research conclusions and results and overall information regarding EMF.

niehs.nih.gov/health/topics/agents/emf/index.cfm

CANADIAN ELECTRICITY ASSOCIATION

The Canadian Electricity Association (CEA) is the professional association of electrical companies across Canada. You'll find information about the CEA's commitments to safety and EMF research on the site.

emf.electricity.ca

Glossary

Cause–effect relationship: A relationship between two variables where one factor directly causes or influences the other.

Conductive object: in electrical engineering, a conductor is a type of material or object that allows the flow of electrical current in one or more directions. Metal is a common conductive material.

Electromagnetic spectrum: The range of electromagnetic waves, starting with long, low–frequency waves and spanning out to short, high frequency waves. The order of the spectrum is radio waves, microwaves, radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, x–rays, and gamma radiation.

Epidemiological studies: Epidemiological studies look at patterns of disease occurrence in human populations and the factors that influence these patterns. These studies are observational in that they examine and analyze people in their normal daily lives to try to determine and correlate their health events with exposure factors.

Experimental studies: Experimental studies involve exposing cells, tissues and animals to a specific agent, such as EMF, under carefully controlled conditions to determine if the agent is the cause of a disease.

Extremely low frequency (ELF) fields: Extremely low frequency refers to electromagnetic fields in the range of 0–3000 Hz.

Field strength: The strength of an electric field, measured in volts per metre (V/m) or of a magnetic field, measured in gauss (G) or milligauss (mG).

Gauss or milligauss: Magnetic fields are measured in units of gauss (G) or tesla (T). Gauss is the unit most commonly used in Canada, while tesla is more commonly used internationally. Most magnetic field levels related to electrical devices are only a fraction of a gauss so it's more common to measure magnetic levels in units of milligauss (mG). A milligauss is 1/1000 of a gauss.

Startle shock: A small discharge or shock that's noticeable but not dangerous.

Weight–of–evidence review: A weight–of–evidence review critically evaluates the strength of the evidence for causality for a particular exposure and disease. It entails a comprehensive assessment of all relevant scientific research, in which each of the studies is critically evaluated and more weight is given to studies of better quality.

If you're interested in measuring magnetic field levels in your home, magnetic field measuring equipment is available on loan. The Magnetic Field Measurement Kit includes a gauss meter with a pamphlet that explains how to take measurements. To borrow a kit, please contact us at 604 699 7678 or toll free at 1 866 647 3334.

For more information:

Visit: **[bchydro.com/emf](https://www.bchydro.com/emf)**

Phone: **604 699 7678** or toll-free at **1 866 647 3334**

Email: **emf@bchydro.com**

From: [Andrew King](#)
To: [Hunter Simmons](#); [Qalert 311](#)
Subject: Proposed substation at 8300 Morphy
Date: Wednesday, May 12, 2021 9:50:32 AM

SENT FROM AN EXTERNAL ADDRESS

Mayor Sullivan and Mr. Simmons,

My wife and I live at 539 Salem St in Hawthorne Glenn II. Our home is adjacent to the site that the city is proposing to use as an electric substation. We obviously are very disappointed that the city has decided to purchase property zoned single family residence, next door to a subdivision with approximately fifty homes. We purchased our home in 2018 as our forever home to live out our years in retirement. One of the main reasons we chose this spot was the natural beauty directly behind us. Never in our wildest dreams would we imagine that the city we have come to love would place an electric substation in our backyard.

We have several concerns on how this project has come about with basically zero opportunity for our neighbors to voice their concerns. We found out about this project on Saturday, May 8th. We were told to send our comments in writing by Friday, May 14th, just six days from receiving the notification. Apparently, the zoning board is planning on voting on this project on Monday, May 17th. In all fairness, do you really think that a decision like this that will a life changing event for the citizens in our neighborhood can be made in just ten days? We have also learned that the city purchased land with the intent to build this facility without any public input. This would appear to be a violation of rezoning protocols.

If this city moves forward with this despite the objections from the community, we would like to know what will be done to address the following concerns:

How will the city address the certain loss of our property values?

What is the city's plan to safeguard our homes from the potential safety hazards of being exposed to EMF radiation, the effects of which are well documented and there are several homeowners with small children adjacent to this proposed substation?

How will the city diminish the constant noise disruption that emanates from high voltage electric transformers?

Will the city put in writing that the 2.4 acres will not be used in the future as a storage facility for public works or other out buildings?

Does the city plan to cut down and destroy the several hundred year old pecan trees and other foliage on the property and if so will they replace with mature landscaping to reduce the unsightly facility in our backyard?

It's incomprehensible to the people in our community that the city has not done a better job of finding a site that does not require rezoning what is currently a single family neighborhood. Surely, there are other more suitable sites available that won't ruin our quality of life and home values.

We understand the property has already been purchased. Maybe that was a mistake before getting public input but as you well know, that property will continue to gain in value and the city can resell it in the future without taking a loss. We strongly encourage you to continue to search for another site or spend the additional dollars to utilize the site behind the ABC store near Winn-Dixie.

We are looking forward to sharing our concerns with you on Monday night.

Andrew and Rebecca King
539 Salem St.
Fairhope, AL 36532
251-300-7429

From: [Barbara](#)
To: [Hunter Simmons](#)
Subject: Electrical substation adjacent to our neighborhood
Date: Monday, May 10, 2021 3:01:37 PM

SENT FROM AN EXTERNAL ADDRESS

To whom it may concern:

I am totally against the electrical substation in my backyard!

1. Noise
2. Health hazard
3. Decreasing property value
4. Unsightly

With all due respect please tell the city to put it in their backyard, not mine. Plenty of vacant land on Greeno away from subdivisions.

From: [Christopher Wimmer](#)
To: [Hunter Simmons](#); [Qalert 311](#)
Subject: Substation Proposal Case BOA 21.01 - 8300 Morphy Avenue
Date: Thursday, May 13, 2021 3:06:33 PM

SENT FROM AN EXTERNAL ADDRESS

Good Afternoon,

We are writing in response to the City of Fairhope letter pertaining to the special exception hearing taking place next Monday, May 17th.

Our understanding is the city purchased and is proposing to build an electrical substation on the vacant lot, located at 8300 Morphy Ave. This is directly behind our house (531 Salem Street) and my neighbors. The news of this proposal is very upsetting and immediately brings several questions/concerns that are listed below.

Property Value

The impact of putting an electrical substation within a couple 100ft of our house and my neighbors will most certainly drive down the valuation of our homes. Our house is the first my wife and I have ever purchased. The thought of losing money and potentially being underwater on our mortgage is hard to comprehend knowing how strong the housing market has been in Fairhope and it was the city's decision that will be impacting our homes.

1. Is there any discussion on potential plans to assist the homes will be greatly impacted if the substation is built?

Location Change

We were aware the city was discussing plans in 2019 for an electrical substation across the street in the ABC Store/Winn Dixie shopping center. Our understanding was plans had been (or were being) drawn, and we would expect to see it being built in the near future. We did also hear the location presented additional hurdles being near a retention pond, but there was never any indication from the city that there was a potential change in location. We then get a letter that we have basically a week to respond to a new location, which feels like a short turn around for this type of change in the community.

1. Please explain why the initial site was no longer acceptable and the need of putting it closer to residential homes makes sense.
2. What is the cost difference between the two locations?
3. Have there been any other sites proposed? If so, what are the costs of those proposed sites?

Health Concerns

Our basic knowledge of an electric substation installation is there are very strict requirements and regulations that will have to be met. Also, putting the lines underground helps reduce some of the radiation concerns since the ground soil helps absorb it. That is good news, but it still presents environmental risks to my wife and 11-month-old son knowing we will be living so close to this. We also have several families with kids ranging from approximately 6-13 years old in the neighborhood. These kids regularly play in and around the tree line that backs

up to this lot. The potential of having this so close to where they regularly play makes me as a parent very nervous. It would not take much for a curious kid to one time want to get a closer look and something very serious happens.

1. What safety precautions are going to be in place that will help minimize the risks for the number of homes that surround it?

Design/Size

We have yet to see a plan of what is being proposed by the city.

1. When will these be available for the public to see?
2. Does the city plan on using the entire 2+ acres?
3. Are you planning to clear the entire lot?
4. What is the expected timeframe for this to be built?
5. Is the site going to be used for anything else?

We are having a hard time understanding why the city believes this location makes sense. We would strongly encourage the city to continue looking for another location that would have no real impact on the tax paying members of your community. This location seems to be better for a small park or something that allows the characteristics of the land to remain in-place, since it is a beautiful piece of property.

We would also ask the city to be very transparent in keeping everyone informed as this process continues. The lack of information is concerning and we feel very caught very off guard by what feels like a quick decision.

We look forward to speaking with you at the hearing.

Sincerely,
Chris and Laura Wimmer
531 Salem Street

May 12, 2021

Hunter Simmons
Planning and Zoning Manager
City of Fairhope

Request: Special Exception

Case: BOA 21.07

Applicant: Fairhope Public Utilities

Property Located: 830 Morphy Avenue

Dear Hunter Simmons,

My name is Frank G. Lamia, I reside in the Hawthorne Glenn subdivision abutting the west side of the property noted above. I am voicing a strong objection to this special exception for the following reasons:

- 1) All property south of Morphy surrounding the proposed substation is zoned single family residential (R-3, PGH) and is currently developed as such. Placing an industrial looking facility in the midst of this residential is just not thoughtful planning. Single family homes in Hawthorne Glenn will back up to it. When they bought their homes they were adjacent to other residential properties and had every reason to believe it would stay that way. Now they will be hearing and seeing an electrical substation.
- 2) If built I believe this substation will adversely impact property values for at least a portion of the homes in Hawthorne Glenn. It has to, who wants to live within view of this.
- 3) From a planning perspective the City should be looking for more commercial / industrial zoned sites for these facilities. This looks like not much long term master planning is being done to spot and acquire potential sites to accommodate utility growth. The solution should not be to force it into an established residential neighborhood.

We are hoping you will understand our concerns and help us protect our neighborhood and find another site.

Regards:

Frank G. Lamia
271 Hawthorne Circle
Fairhope, Alabama 36532

May 11, 2021

Board of Adjustments and Appeals

Honorable Members of the Board of Adjustments and Appeals,

My husband and I purchased our newly built home at 535 Salem Street in July 2016 and selected the house based on the location. The back of the lot adjoined almost 2 acres of undeveloped land (8300 Morphy Avenue) with a home located at the back of the property. We moved from an area in rural Tennessee that did not have zoning regulations. We understood that our property in Fairhope was zoned high density single family housing and believed this protected the property and the value of our home. We also understood that the property in back of us could be developed into home sites because of the zoning regulations. **We did not purchase our property thinking or believing the City of Fairhope would purchase the property at 8300 Morphy Avenue for an electrical substation.**

We respectfully request the Board of Adjustment and Appeals to deny this special exception for the following reasons:

- 1) Concern of the **potential health effects** from EMF's (electromagnetic fields) which are a form of radiation put off by power lines and substations. EMF's emitted by a substation can increase the risk of developing health problems such as cancer, illnesses with no determined cause, adrenal fatigue, hormone imbalance, insomnia, depression and anxiety.
- 2) **Reduction in property value.** Hawthorne Glenn is conveniently located to dining, shopping, and medical care. Since 2016 we have seen property values dramatically increase. Our home was purchased in 2016 for \$246,000. Recent home sales for the same type of home reflect values of \$342,000+. The construction of a substation directly behind our property will decrease our property value. **Any future sale of the property will be negatively impacted as the public perceives living next to an electrical substation as a health risk and an eyesore.** I have read that property values near a substation can decrease by as much as 40%. The overall property values for Hawthorne Glenn will decrease as this will affect all home owners.
- 3) **Decrease in the enjoyment of our property.** As previously stated, we did not buy our property believing a substation would be located in direct sight of our back yard. In addition to the sight concerns are noise and overhead power line concerns. We ask that you consider how you would feel if this happened to your property. **No one would want a substation in back of their property.**
- 4) We ask the Board of Adjustments and Appeals deny this change so the City Council can revisit **other sites located in commercial areas or locations away from high density single family homes.**
- 5) We ask the Board of Adjustments and Appeals to deny this change so the City Council can meet with residents to give **an overview of the project and how they propose to mitigate/eliminate the reduction of our property value, health concerns and loss of enjoyment of our property.**

One final observation. The City Council acted on buying property for this purpose without consulting residents who would be effected by this purchase and zoning exception. Since the property was purchased on April 12, through the date of this letter, we have had no communication from any City Council member or the City Mayor explaining their actions or supplying residents with an overview of the project and how they propose to mitigate the reduction of our property values, health concerns, and the loss of enjoyment

of our property. After a review of the minutes and agenda, I determined that no public discussion of this purchase took place whatsoever. The council just voted to ratify the council president's actions. I once again ask the members of the Board of Adjustments and appeals to deny this special exception. Today it is the residents of Hawthorne Glenn, tomorrow it will be you.

Respectively,

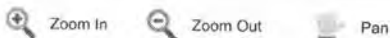
Kent and Malinda White
535 Salem Street
Fairhope, AL 36532

Baldwin County Parcel Viewer

Find address or place



Navigation Tools



Layers

- Baldwin County Data
- Baldwin County Contours
- Baldwin County Imagery 2018

Legend

Find Address

Search

By Attribute By Shape

Select A Layer:

Parcels

Owner Name: (at least 3 chars)

Enter the name Smith, John

Parcel Number: (at least 3 chars)

05-23-02-09-4-401-004.000

PIN (Parcel Identification Number): (at least 1 chars)

1234

Search

Print

Bookmarks

Markup

Street View

View the center of the map OR use the button to click on the map.

Google Maps

Hybrid Map



From: [Roy Cannedy](#)
To: [Hunter Simmons](#)
Cc: [Qalert 311](#)
Subject: Special Exception Request for 8300 Morphy Avenue
Date: Thursday, May 13, 2021 7:42:49 PM

SENT FROM AN EXTERNAL ADDRESS

I am writing in response to the letter dated May 5, 2021 pertaining to the Fairhope Public Utilities Special Exception Request for the property at 8300 Morphy Avenue.

I am a resident of the Hawthorne Glenn subdivision and am very disappointed with the city's decision to purchase this property with the intent to relocate and expand the electrical substation currently located on Fairhope Avenue. I have many questions and concerns regarding the choice of this parcel of land for this project, but I will highlight just a couple of those here.

(1) How would this project effect the safety and well being of the nearby residents?

There are two existing structures and many mature trees on this property and it is adjoined by several neighboring private homes. Isn't there an inherent fire risk that is associated with the operation of this type of equipment, and doesn't this regions unpredictable weather only heighten this threat? There is also concern of the additional EMF's that are generated by the components of this equipment. Studies have shown a link between these EMF's as being possibly carcinogenic and have been cited as a possible cause, in certain cases, of childhood leukemia.

(2) How would this project effect the aesthetic and, consequently, the property value of the nearby residents?

It may be one thing to drive by on Morphy Avenue and possibly not notice this at all but quite another when you see this every time you look out your kitchen window.

In stating my own personal view, why would this property which is in close proximity to schools, retail shopping, restaurants, Thomas Hospital, and many other places of business, and is in a residential neighborhood, not remain a residential property? I understand that the City of Fairhope and all of Baldwin County is experiencing tremendous growth at this time and that our city leaders are burdened with the tremendous challenges that are related to this growth, and I appreciate the time and effort and energy of all those involved, however, it is my hope that an alternative or perhaps existing location can be determined to be a better location for this project.

Respectfully submitted by,

Roy Cannedy
392 Scarlett Avenue

From: [Trey](#)
To: [Hunter Simmons](#)
Subject: Substation at 8300 Morphy Avenue
Date: Tuesday, May 11, 2021 2:38:40 PM

SENT FROM AN EXTERNAL ADDRESS

Mr. Simmons,

My name is Trey Canida, and I live at 522 Salem Street. I received the notice regarding the proposed substation to be built on 8300 Morphy Avenue.

I am sending this email to express my concerns with the proposal, and I plan to attend the meeting on May 17.

My concerns are mainly threefold. (1) diminution of property values (2) safety and (3) nuisance factor.

First, I would like to provide some background. The proposed substation will be directly behind my home. My wife and I have lived at this residence since November 2017. We welcomed our first child home in February 2020, and my wife is pregnant with our second child who is due in October. While all of us are lucky to live in a beautiful town like Fairhope. I fear that myself as well as my neighbors will be negatively impacted by this proposed substation being built directly behind our property. Specifically, there are five houses that share a boundary line with the property located at 8300 Morphy to the best of my knowledge. While living in Fairhope, I have seen my property value go up every year, and with the current state of the housing market, I know that property value would normally likely continue to go up. However, I can't help but be concerned that this proposed substation will diminish the value of my property as well as the property of my neighbors.

As I understand it, this substation was initially planned to be built behind or to the side of the ABC store in the Winn-Dixie shopping center. I understand that the substation was to be built at or near the current retaining pond that is located next to the ABC store, but that because of engineering surveys, additional costs were going to be a necessity to build up that property for the substation. I understand and appreciate the city's fiscal concern, and I am happy that the City does not want to expend additional funds when they feel they don't have to. However, I can't help but feel as if the City is instead passing those additional costs on to myself and my neighbors by building this substation directly behind our property, which will certainly cause a diminution in the value of our properties. Whether there is any truth to any safety or health concerns or nuisance factors, the ordinary person has concerns about living directly next to an electrical substation. The proposed substation would probably be less than 100 feet from my backyard. Due to this fact, I imagine my wife and I will lose property value in our home, and the resale value of the home will be affected.

Second, while I have no specific knowledge about any safety concerns regarding living in close proximity to an electrical substation. This is a matter that greatly concerns me. I would like to hear more from the city about any safety issues that might arise from having my wife and (soon to be) two small children living so close to an electrical substation. I'm certain that Fairhope Utilities has reviewed studies and/or has more information about this concern which

I am sure is shared amongst my neighbors.

Third, nuisance factor. I have heard anecdotal stories about loud humming noises emanating from electrical substations such as the one that the City is proposing to build next to my property. Again, this is something I hope Fairhope Utilities could provide more information about before Planning and Zoning makes their final decision.

When all of these factors are considered, I can't help but wonder why a better location cannot be found for this substation. Is it really necessary to build this substation so near a subdivision and multiple single family homes? Is there not a better, less populated and/or business zone where this could be built. I feel as if the location by the ABC store would have been a substantially better location for this proposal. Again, while I appreciate the City's fiscal concerns concerning that location, I hope the city will also appreciate the concerns that are shared amongst myself and my neighbors if this electrical substation is built right next door to our property. I would hope that anyone who has a vote or a voice in deciding whether this zoning variance is granted would consider how they would feel if the variance was in their own backyard.

Finally, I think I speak for myself and many neighbors when I say that we would like this process to be more well informed. As I understand it, plans are being drawn up regarding the engineering of the site, the placement of the substation, and the landscaping and layout of the proposed substation. I urge the Planning and zoning Commission to hold off on making any decision until such plans are made public and are available for review.

Thank you for your time, and I look forward to the meeting Monday night.

Thanks,
Trey and Amanda Canida
522 Salem Street

From: [Wilma Castillo](#)
To: [Hunter Simmons](#)
Subject: Regarding 8300 Morphy Ave.
Date: Thursday, May 13, 2021 4:13:36 PM

SENT FROM AN EXTERNAL ADDRESS

To whom it may concern:

I, Wilma Castillo, residing at 538 Salem St in the Hawthorne Glen II subdivision, ask that no electrical substation be built on the property at 8300 Morphy Ave. The current zoning is residential, myself and my neighbors would like it to remain so. This is in part out of potential concerns of negative effects on the health of people living nearby, and in part out of concern for the property value impacts. Especially among those who would be nearest to the property, are those who have very young children. For all of us living in this neighborhood, the property value concern is particularly troubling. We purchased homes here in this neighborhood, in this city, believing that the adjacent land would remain residential except for where businesses were already established. If the property at 8300 Morphy Ave. becomes an electrical substation area, it will make our homes considerably more difficult to sell should we decide to sell them. We would much rather continue to live in a Fairhope that doesn't think it appropriate to put an electrical substation so close to our homes. We would greatly appreciate it if another location, one not bordered by homes and families, be used for an electrical substation.

Thank you for considering our voices in this matter,

Wilma Castillo

Gayle Fogarty

From: Qalert 311
Sent: Monday, May 24, 2021 2:28 PM
To: Gayle Fogarty
Subject: A new Service Request has been created [Request ID #7620] (Contact the Mayors Office) - Fairhope, AL

Fairhope, AL

A new service request has been filed.

| Service Request Details | |
|-------------------------|--|
| ID | 7620 |
| Date/Time | 5/24/2021 2:28 PM |
| Type | Contact the Mayors Office |
| Address | Fairhope |
| Origin | Email |
| Comments | Proposed Substation on Morphy Sherry, Has the City considered buying the two properties east of 8300 Morphy Ave. and centering the substation on the combined lots. See attached map, Baldwin owns the lot outlined in blue and Hawthorne Glenn II POA owns the lot outlined in red. Hawthorne Glenn II POA would be happy to sell the lot to the city at a discounted price if the city could purchase the Baldwin lot and move the substation a little farther to the east. Please call me at your earliest convenience at 717-951-2386. Thank you Tony Wonsick Hawthorne Glenn II POA |

Submitter Wonsick, Tony
Fairhope, AL
tonywonsick@gmail.com

[View in QAlert](#)

Fairhope, AL

