



Beaufort, South Carolina concept

P.O. Box 311
124 East Thompson Street
Thomaston, Georgia 30286
706-647-0414

**City of Beaufort Department of Planning & Development Services
DESIGN REVIEW BOARD (DRB) APPLICATION FORM**

- | | |
|--|-------------------|
| <input type="checkbox"/> Board review | \$200 per meeting |
| <input type="checkbox"/> Staff review | \$ 50 |
| <input type="checkbox"/> Special Meeting | \$350 |
| *Post Facto applications shall be twice the normal fee | |

Please TYPE or PRINT legibly

Date of Submittal: 2-19-16 Design Review Board Meeting Date: 3/10/16
 Project Name: Tidal Wave Auto Spa
 Project Address: Sams Point Rd, Hwy 802
 Property Zoning: General Commercial
 Tax Map/Parcel No. 123 015 000 0605
 Project Developer: SHJ Construction Group
 Address: 124 East Thompson St., Thomaston GA
 Phone/Fax/Email: 706-847-0414 / Martie@Shjconstructiongroup.com
 Project Consultant: Martie Murphy
 Phone/Fax/Email: 706-975-6882 / Martie@Shjconstructiongroup.com
 Address: 124 East Thompson St., Thomaston GA
 Property Owner: Lady Beaufort, LLC

Address: 2409 Mill Drive suite 16 N. Charleston SC
 Owner's Signature: [Signature] Owner's Name (Please Print) Timmy Kerr Date 2/19/16

NOTE: If the developer is not the property owner, the owner must sign this application or provide a letter stating approval of the plan being submitted. Owner's signature required prior to final approval.

- DESIGN REVIEW BOARD PROJECT REVIEW**
- CONCEPTUAL REVIEW
 - PRELIMINARY REVIEW
 - FINAL REVIEW

- STAFF PROJECT REVIEW**
- CONCEPTUAL
 - PRELIMINARY
 - FINAL
 - Non-Corridor (See Page #6)

Pursuant to Section 6-29-1145 of the South Carolina Code of Laws, is this tract or parcel restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the activity described in this application? ___ Yes ___ No

To the best of my knowledge, the information on this application and all additional documentation is true, factual and complete. I hereby agree to abide by all conditions of any approvals granted by the City of Beaufort. I understand that such conditions shall apply to the subject property only and are a right or obligation transferable by sale.

Developer's Signature: [Signature] Developer's Name (Please Print) Martie Murphy Date 2/18/16

DESIGN REVIEW BOARD (DRB) APPLICATION FORM

✓ Project Narrative ✓

Project Name:

TIDAL WAVE AUTO SPA

Provide a Project Narrative. (Please attach additional sheets if needed)

See Attached

Property Size in Acres: 1

Proposed Building Use: Auto Spa

Building Square Feet: 3500

Number of Parking Spaces Required: _____ Number of Parking Spaces Provided _____

Is the project a redevelopment project? NO If yes, has 25% parking reduction been taken? _____

Are there existing buildings on site? NO Will existing buildings remain or be removed? _____

APPLICATION SUBMITTAL REQUIREMENTS:

Board Review: 8 hardcopies of all documents + a digital copy must be filed by 12:00 noon on the deadline date.

Staff Review: 3 hardcopies of all documents are required to be submitted.

CONTACT INFORMATION:

Attention: Julie A. Bachety, Administrative Assistant I

City of Beaufort Department of Planning & Development Services

1911 Boundary Street

Beaufort, South Carolina 29902

Phone: (843) 525-7011 / Fax: (843) 986-5606

E-Mail: jbachety@cityofbeaufort.org

Website: www.cityofbeaufort.org

Tidal Wave Auto Spa provides the nicest, cleanest, friendliest car wash in the world. We will create a relationship with both the City of Beaufort and its residents that other businesses will want to model themselves after. Our relationship with our customers is our number one priority, and we focus all of our efforts towards that goal. We recruit and hire only those who share our positive attitudes and our commitment to provide the finest wash anywhere. We recognize that we are responsible for the preservation of our environment, which includes building our wash to local standards and aesthetics. Tidal Wave always strives for excellence while providing local communities with a beautiful business with service that is second to none.

City of Beaufort
Department of Planning & Development Services
1911 Boundary Street
Beaufort, South Carolina 29902
Phone (843) 525-7011 / Fax (843) 986-5606

Application Fee
\$400

Revised -- August 2010

APPLICATION FOR UNIFIED DEVELOPMENT ORDINANCE AMENDMENT

OFFICE USE ONLY: Application #: _____ Date Received: _____

Applicant: Martie Murphy (TIDAZ WAVE)
Phone #: 706 975 6682 Fax #: 706 647 0474
E-Mail Address: Martie@SHJConstructiongroup.com
Address: 124 East Thompson St.
Thomaston GA 30286

List sections of Unified Development Ordinance proposed to be changed: Article 6 section 6.6

Reasons for requesting amendment: Lot is not wide enough to
orient bay door away from road.

Pursuant to Section 6-29-1145 of the South Carolina Code of Laws, is this tract or parcel restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the activity described in this application: Yes No

Applicant signature: Martie Murphy Date: 7/18/16

**CITY OF BEAUFORT
DESIGN REVIEW BOARD
Staff Report
Meeting of March 10, 2016**

Case Number: 16-04 DRB.1
Project: 9 Sam's Point Road
Property Address: Parris Island Gateway & County Shed Road
Parcel #: R123 015 000 0160 0605 (a portion of this parcel)
Zoning: General Commercial
Design District: Sam's Point Road Design District
Type of Review: Preliminary Review – New Construction

Request:

The applicant is requesting to construct a new 3,500 square foot auto spa (car wash). The project is located on 1 acre on the west side of Sam's Point Road.

Background:

This project has not come to the DRB previously.

Zoning Issues:

Zoning - General Commercial, Sam's Point Road Design District

Setbacks: Front: 7-12' build-to
Side: 10'
Rear: 10'

Percent Impervious: 65% maximum; this is shown at 56%

Building Height: 50' maximum

Use: this use requires an ordinance amendment, as stand-alone car washes which are not associated with a gas station, are not permitted in this zoning district. The applicant is going through the process to change the verbiage to permit this type of stand-alone single-bay car wash in this area. It would still need to comply with all of the design district standards. Staff is recommending that if this ordinance amendment is to be made the bay door facing the right of way would still require a variance to be consistent with the other districts where this use is permitted in this ordinance. The DRB should provide a recommendation as to whether or not they think this amendment is appropriate.

Applicable Guidelines:

- The Design District Standards in Section 6.6 of the UDO apply to this project
- The 2014 Civic Master Plan, p. 134 discusses this area. It states that "over time, infill development and redevelopment will create a more connected and coherent pattern of circulation through the area and reinforced the streetscape with building types that define a consistent urban street edge to improve the pedestrian environment and general aesthetics."

Staff Comments & Suggestions:

General:

- Staff appreciates the effort the applicant has gone through to create a building that conforms with the intent of this district. It is very important to the city to have a consistent streetscape in this area, particularly as one approaches the intersection of Sam's Point Road and Sea Island Parkway. The general layout of this site is headed in the right direction towards this.

Site:

- Orientation:
 - The applicant and staff have discussed the possibility of rotating the building so that the long façade faces the street. This would serve to screen the street from the vacuum stalls/parking area and would help the applicant meet the build-to line requirement. Given the dimension of the building, this was unable to be accomplished.
 - The alternative was to create a front portico onto the car-wash exit to allow the building to meet the build-to line. More discussion on this to follow.
- Vehicular Circulation:
 - The parcel will be accessed via a shared entry between 13 and 15 Sam's Point Road. That drive will connect into the Walgreens parking lot. There are no additional curb cuts on to Sam's Point Road. This is in keeping with the connectivity recommended by the Civic Master Plan.
- Pedestrian Circulation:
 - A sidewalk connection into the site should be established. Staff realizes that this is a vehicular-oriented business, however employees may choose to walk elsewhere for lunch, etc. so that connectivity should be provided.
- Parking:
 - All of the parking spaces shown are dual-purpose; they are for parking but also are under the vacuum canopy. There are no restrictions on this other than the impervious surface coverage and tree canopy relationship (1 per 55').
- Trees:
 - An arborist report has been done for this parcel (attached). It identifies a number of great and good trees (categories A & B in the report) on the property. There are some that will be difficult to work around and others that should be carefully considered. These later trees include: 24" sweet gum at the front of the property; 26" live oak on the southwest corner; 42" live oak adjacent to the building; 26" laurel oak at the vehicular entry to the property. Attached is a sketch that shows how those trees can possible be retained.
 - For the remainder of the A & B trees to be removed, 1/3 of the caliper inches should be mitigated.
- Stormwater: How will this be handled?
- A landscape plan is required showing existing trees to be preserved and removed, and new landscaping meeting the mitigation requirements.

- All mechanical equipment, trash/recycling receptacles, and propane tanks must be shown on the plan. They must be screened from view and details of the screening shall be provided.
- A lighting plan, showing building and site lighting, will be required. Full-cut off fixtures are required for parking lot lighting.

Building:

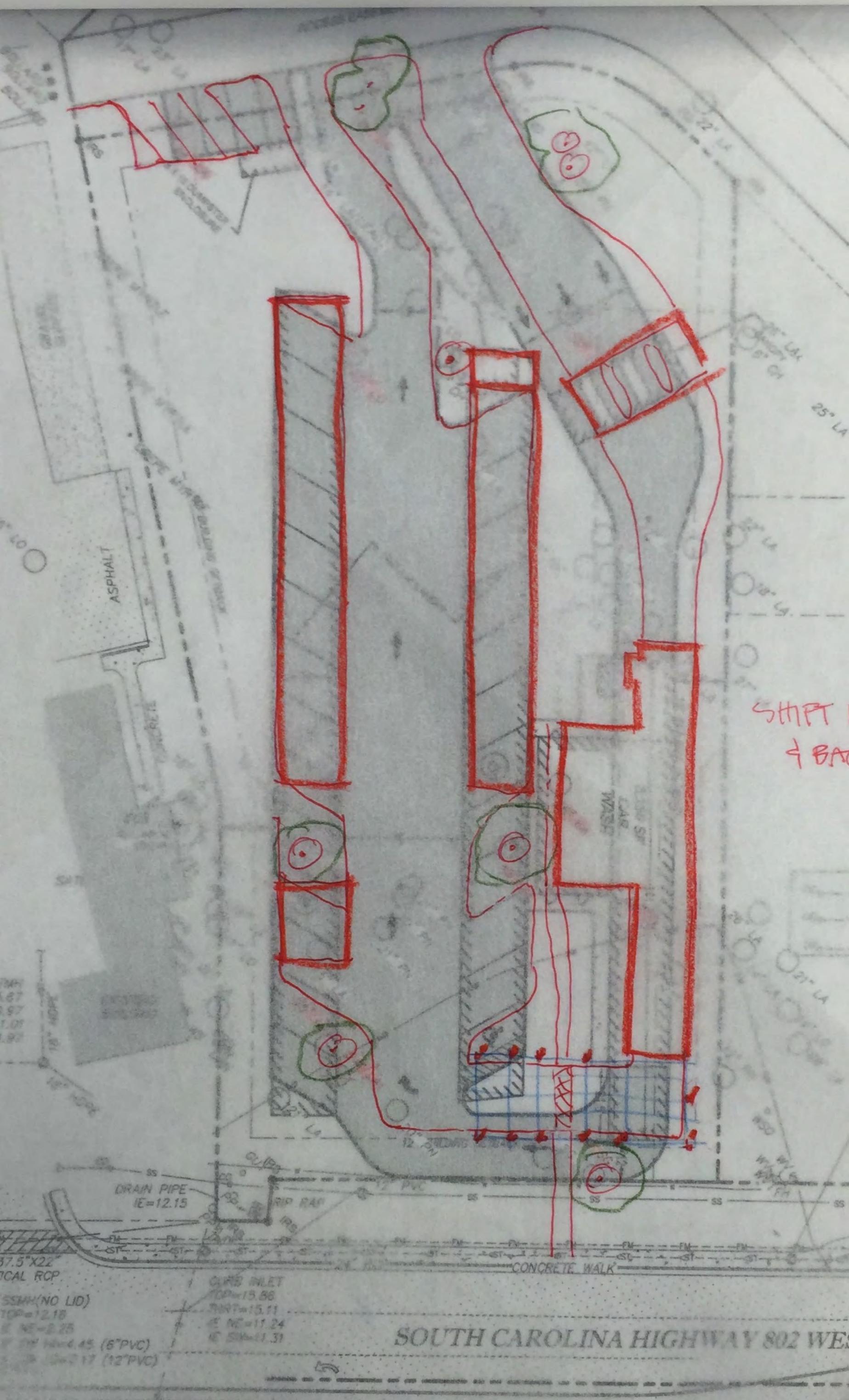
- This building is unique due to the very specific use and equipment it houses. At the street frontage, it is narrower than most buildings in this area. Additional elements, such as a portico and trellis, should be considered at the street frontage to mitigate this and bring it into full compliance with the build-to line (at least 50% of the site should comply with build-to line). More suggestions on this below.
- As a concept the design and detailing of the building seems to be compatible with the UDO and the area. For the canopies, please provide elevations of the street showing how the entire frontage will look with the canopies and the building. The canopy materials and colors should be compatible with the building.

Staff suggestions: the attached sketch depicts the following modifications that may help this building better comply with the intent of this area:

- Shift building back a few feet and northeast to the 10' setback line. This allows two of the trees to be retained
- Create a portico with support columns (in lieu of a cantilever) that continues into a trellis across the front of the property. This could help the building meet the intent of the build-to line by placing building elements along the frontage for at least 50% of the property.
- Modify the canopy to save some trees identified as good.
- Modify the entry drives to retain trees
- Modify parking along the rear access road to diagonal. Head-in is not permitted; this is similar to the Waffle House site.

Staff Recommendation

Staff recommends that the DRB discuss whether or not this type of use and building can be compatible with the UDO and Civic Master Plan. If the board determines that it can be compatible with appropriate design elements, staff recommends the DRB grant conceptual approval to this design on the conditions that the items discussed in the staff comments and sketch be addressed at the next submission.



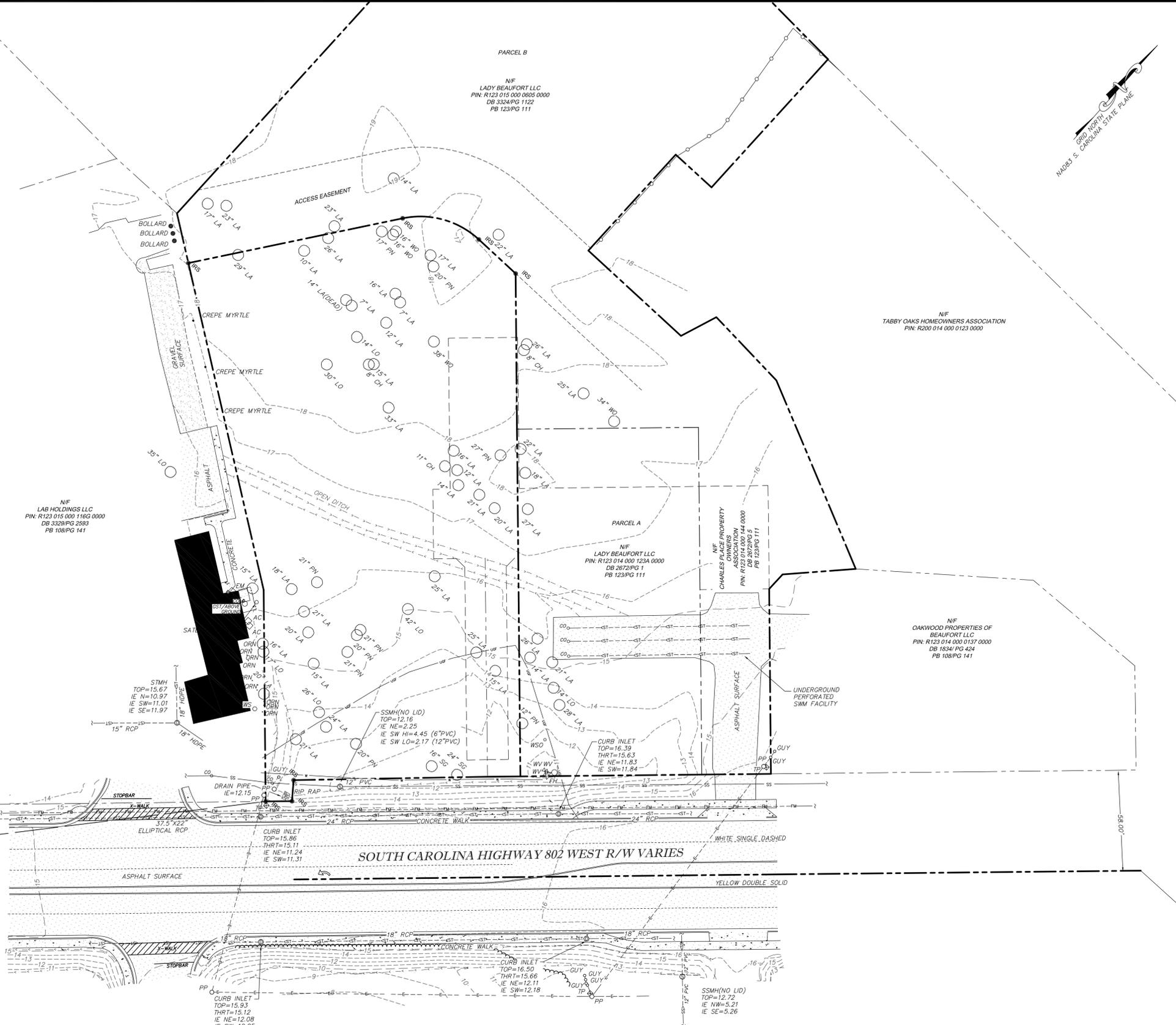
SURVEY NOTES

- Survey prepared for Irby Tidal Wave, LLC.
- Horizontal Datum is South Carolina State Plane Coordinate System, North American Datum of 1983 (NAD83). Vertical Datum is North American Vertical Datum of 1988 (NAVD88)
- All deed book references shown hereon are recorded in the Clerk of Superior Court's office of Beaufort County, South Carolina
- Structures visible on the date of survey are shown hereon.
- Locations are accurate only where dimensioned.
- This property is not located in a Special Flood Hazard Area per the Federal Emergency Management Agency's Flood Insurance Rate Maps, Map No. 45041C0142E; Effective Date: December 16, 2014.
- No person may copy, reproduce, distribute or alter this plat in whole or in part without the written permission of EMC Engineering Services Inc.
- The certification, as shown hereon, is purely a statement of professional opinion based on knowledge, information and belief, and based on existing field evidence and documentary evidence available. The certification is not an expressed or implied warranty or guarantee.
- This survey is valid only if print has the original signature of the surveyor.

SURVEY DATA
 Total Area Overall Parcel B 146,002 Square Feet (3.352 acres)
 Total Area: Tidal Wave Site 50,467 Square Feet (1.159 acres)
 E.O.C. Plat: 1 in 161610
 E.O.C. Field: 1 in 86840
 Angular Error: <8" per angle point
 Adjusted by: Compass Rule
 Equipment used: Topcon GPT-3005W
 Champion GPS
 Field Work Completed on: January 26, 2016

LEGEND

METES AND BOUNDS	N47°45'54"E	GUY WIRE ANCHOR	CWA
5/8" IRON ROD FOUND	IRF 5/8"	LIGHT POLE	LP
IRON REBAR SET	IRS	POWER POLE	PP
CONCRETE MONUMENT FOUND	CMF	ELECTRIC METER	EM
PROPERTY BOUNDARY	---	GRATE INLET	GI
SEWER LINE	SS	STORM MANHOLE	SM
STORM WASTE LINE	ST	REINFORCED CONCRETE PIPE	RCP
OVERHEAD POWER LINE	OPW	POLY(VINYL CHLORIDE) PIPE	PVC
UNDERGROUND TELEPHONE	UOT	CORRUGATED METAL PIPE	CMP
SANITARY SEWER MANHOLE	SSM	TELECOMMUNICATION PEDESTAL	TP
CLEAN OUT	CO	LIVE OAK	LO
GREASE TRAP	GST	LAUREL OAK	LA
WATER METER	WM	SWEET GUM	SG
WATER VALVE	WV	CHERRY	CH
IRRIGATION CONTROL VALVE	ICV	PINE	PN
SIGN	---	WATER OAK	WO
BENCHMARK FOUND	BMF		



NO.	REVISION DESCRIPTION	BY	DATE



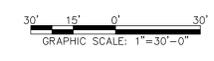
EMC ENGINEERING SERVICES, INC.
 10 CHATHAM CENTER S.
 SUITE 100
 SAVANNAH, GA 31412
 PH: (912) 232-6533
 FX: (912) 762-2884
 savannah@emc-eng.com

EMC ENGINEERING SERVICES, INC. CIVIL ENGINEERING SERVICES, INC. No. 1016172
 ENVIRONMENTAL ENGINEERING
 OFFICES: ALBANY, ATLANTA, AUGUSTA, BRUNSWICK, COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

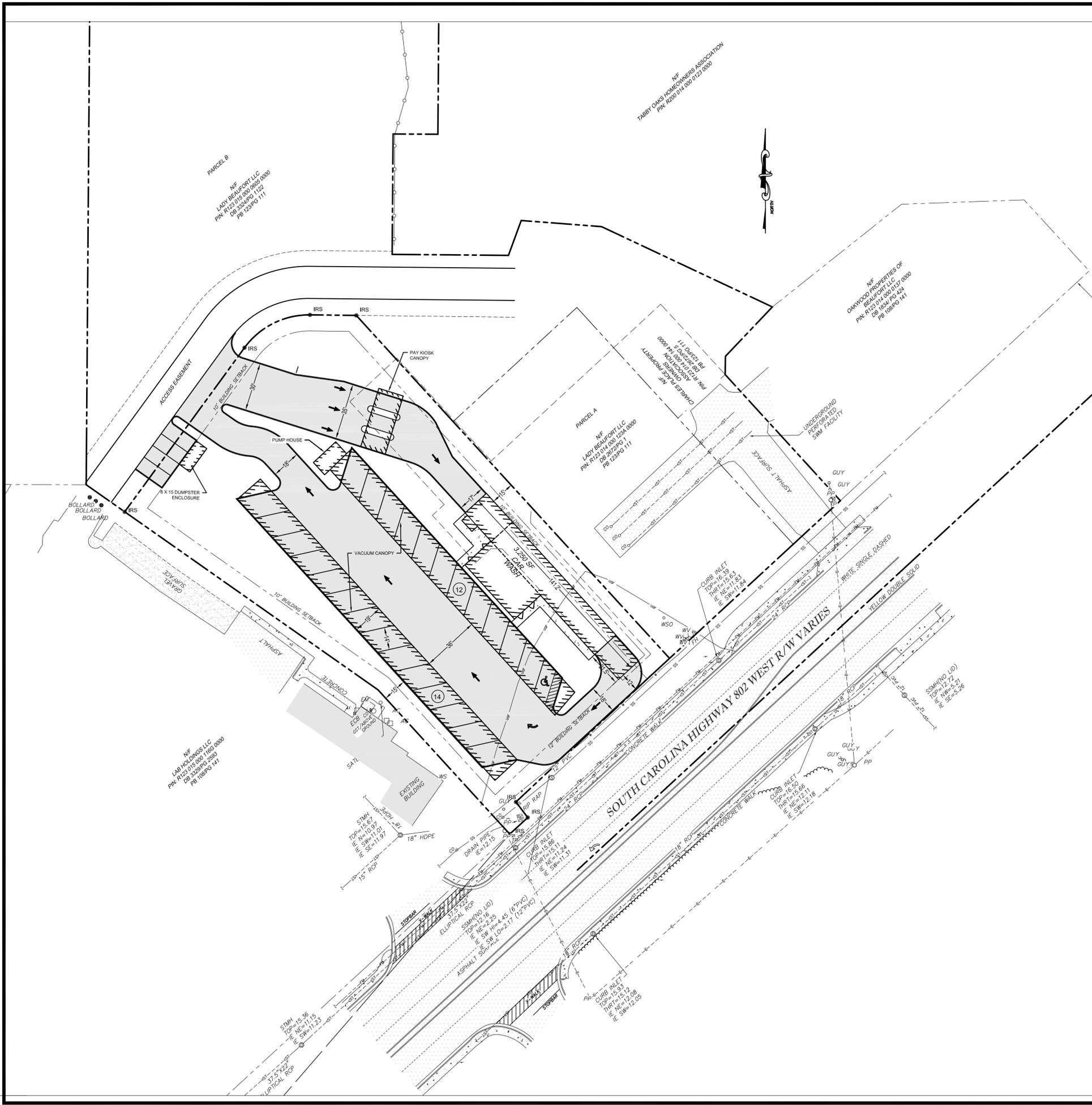
EXISTING CONDITIONS SURVEY

TIDAL WAVE AUTO SPA
 CITY OF BEAUFORT, BEAUFORT COUNTY, SOUTH CAROLINA
 Prepared for:
TIDAL WAVE, LLC

PROJECT NO.:	16-6005.20
DRAWN BY:	CJH
DESIGNED BY:	RE/MS
SURVEYED BY:	RE/MS
SURVEY DATE:	01/26/2016
CHECKED BY:	TWH
SCALE:	1"=30'
DATE:	01/26/2016



D:\2016\16-6005-SHJ-TIDAL WAVE BEAUFORT. SC\DWG\16-6005_E01_CONCEPT_3.DWG 2/17/2016 3:07 PM



SITE INFORMATION

ADDRESS: US 802
 PROPERTY AREA: 1.16 AC
 PROPERTY ZONING: CURRENT GC (PROPOSED HC)

BUILDING SETBACKS:
 FRONT: 12 FEET
 SIDE: 10 FEET
 REAR: 10 FEET

LANDSCAPE SETBACK:
 FRONT: 25 FEET
 SIDE: 15 FEET
 REAR: 10 FEET

IMPERVIOUS AREA	PERVIOUS AREA
± 0.65 AC	± 0.51 AC
± 56 %	± 44 %

(60% MAXIMUM IMPERVIOUS AREA PER PROPOSED ZONING HC)

PARKING NOTE

PARKING REQUIRED:
 1 SPACE PER 300 SF
 = 11 SPACES REQUIRED

PARKING PROVIDE:
 25 STANDARD SPACES
 1 HANDICAPPED SPACES
 26 TOTAL SPACES

SITE LAYOUT AND STAKING NOTES

- IF THE PLANS ARE NOT CLEAR OR DISCREPANCIES OCCUR, THE CONTRACTOR IS TO CONTACT EMC ENGINEERING SERVICES, INC AT 229-435-8133 FOR CLARIFICATION IMMEDIATELY.
- ALL NORTHING AND EASTING ARE TO THE FACE OF CURB, EDGE OF BUILDING.
- CONTRACTOR SHALL CAREFULLY EXAMINE ALL DOCUMENTS AND THE CONSTRUCTION SITE TO OBTAIN FIRST HAND KNOWLEDGE OF EXISTING CONDITIONS.
- ENTIRE SITE SHALL BE DRESSED TO UNIFORM, WELL DRAINED AND VISUALLY APPEALING SURFACE WITH A MINIMUM TOPSOIL LAYER OF FOUR INCHES.
- ALL STRIPING AND SIGNS SHALL CONFORM WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION. PARKING STALL STRIPING TO BE YELLOW WITH BLUE HANDICAPPED STRIPING
- ALL HANDICAP PARKING SPACES AND ACCESSIBLE ROUTE SHALL CONFORM WITH THE AMERICAN WITH DISABILITY ACT DESIGN GUIDELINES AND SPECIFICATIONS LATEST EDITION.
- DIMENSIONS AND CURVE RADII ARE GIVEN TO FACE OF CURB, WHERE CURB AND GUTTER IS SHOWN. OTHERWISE DIMENSIONS ARE GIVEN TO THE EDGE OF PAVEMENT. CONTRACTOR IS TO COORDINATE WITH THE ARCHITECTURAL PLANS AS TO THE BUILDING LAYOUT AND DIMENSIONS

HATCH LEGEND:



NO.	REVISION DESCRIPTION	BY	DATE



1"=20'-0"

EMC ENGINEERING SERVICES, INC.
 1344 U.S. HWY 19 SOUTH
 BEESBURG, GEORGIA 31763
 TEL: (229) 435-8133
 FAX: (229) 435-7379
 albanym@emc-eng.com

EMC
 CIVIL
 MARINE
 ENVIRONMENTAL

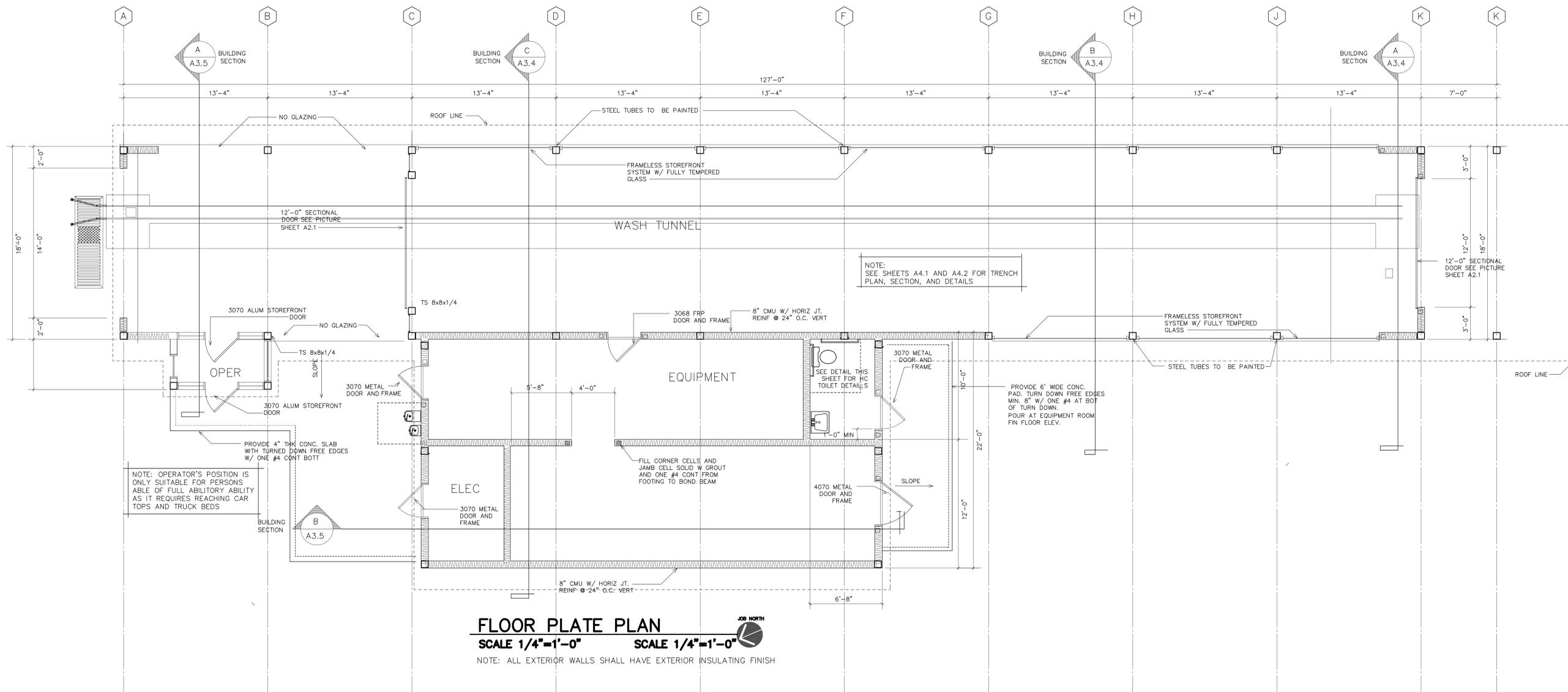
OFFICES: ALBANY, ATLANTA, AUGUSTA, BRUNSWICK, COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

CONCEPTUAL SITE PLAN

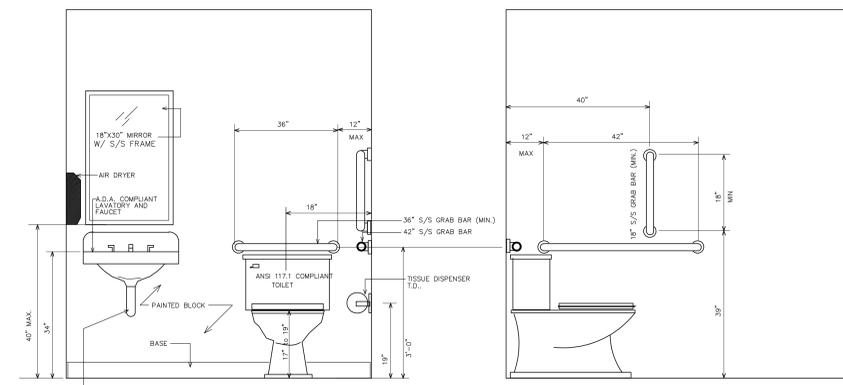
TIDAL WAVE AUTO SPA
 TAX MAP PARCEL: R23-015-0605
 BEAUFORT COUNTY, SOUTH CAROLINA
 Prepared for:
SHJ CONSTRUCTION GROUP, LLC

PROJECT NO.:	16-6005
DRAWN BY:	JWT
DESIGNED BY:	BHB
SURVEYED BY:	EMC
SURVEY DATE:	
CHECKED BY:	CEB
SCALE:	1"=20'
DATE:	1/25/2016





FLOOR PLATE PLAN
 SCALE 1/4"=1'-0" SCALE 1/4"=1'-0"
 NOTE: ALL EXTERIOR WALLS SHALL HAVE EXTERIOR INSULATING FINISH



01 ELEVATION - HANDICAP RESTROOM FIXTURE PLACEMENT
 A2.1

A NEW
TIDAL WAVE AUTO SPA
 BEAUFORT SOUTH CAROLINA

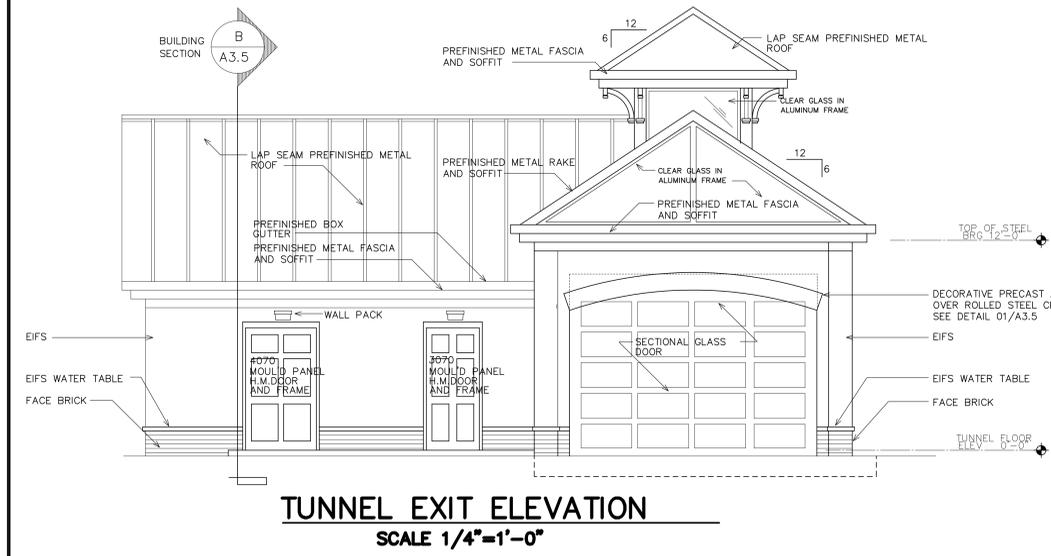
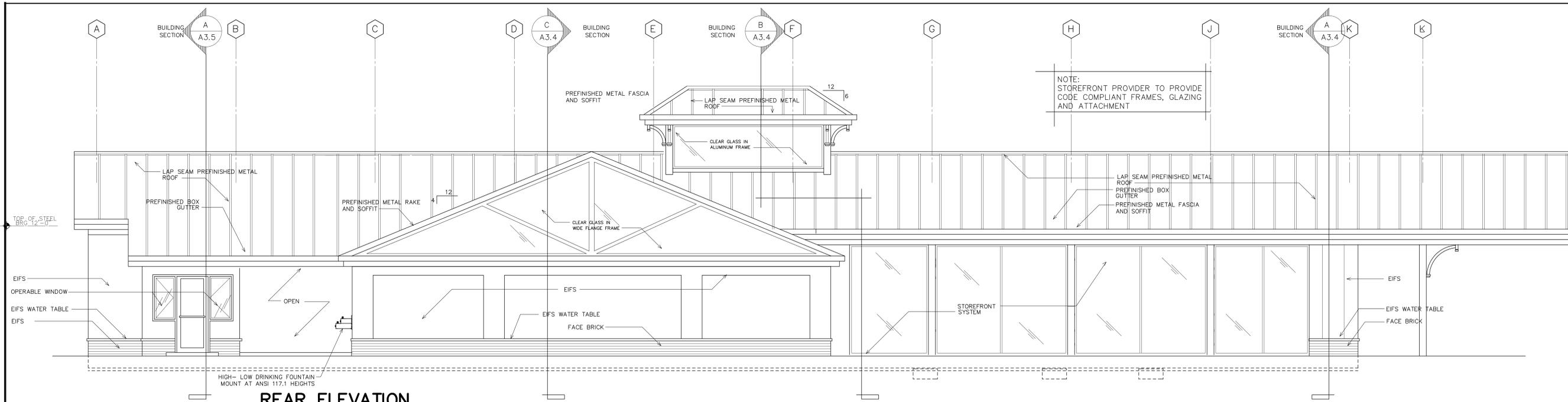
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 101 South Center Street
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 706-647-4692

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 706-647-4692

SHEET:
A2.1
 OF: 09

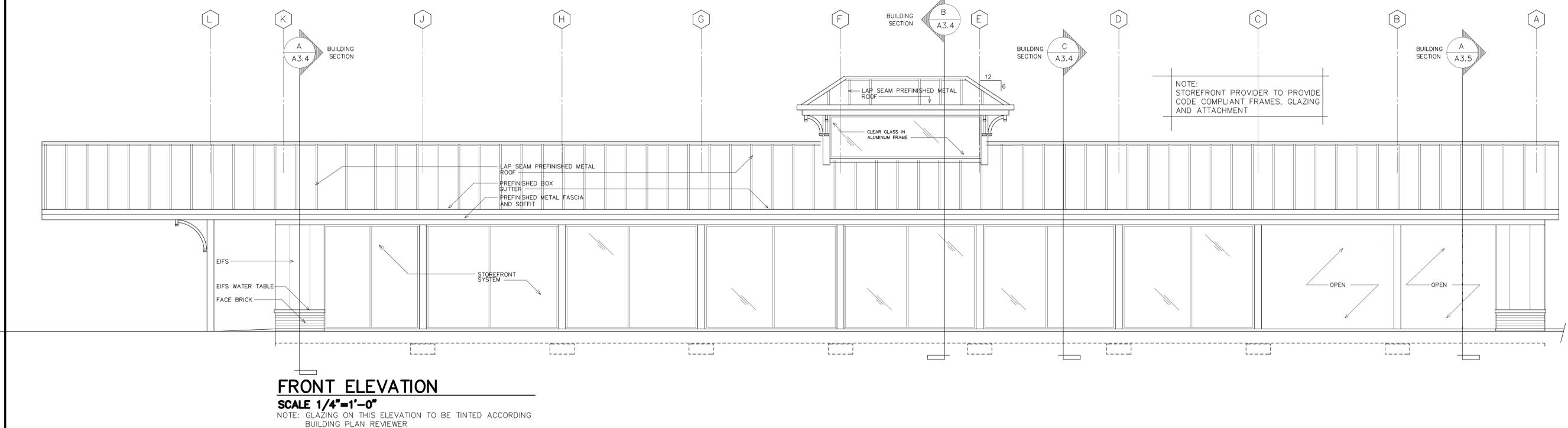
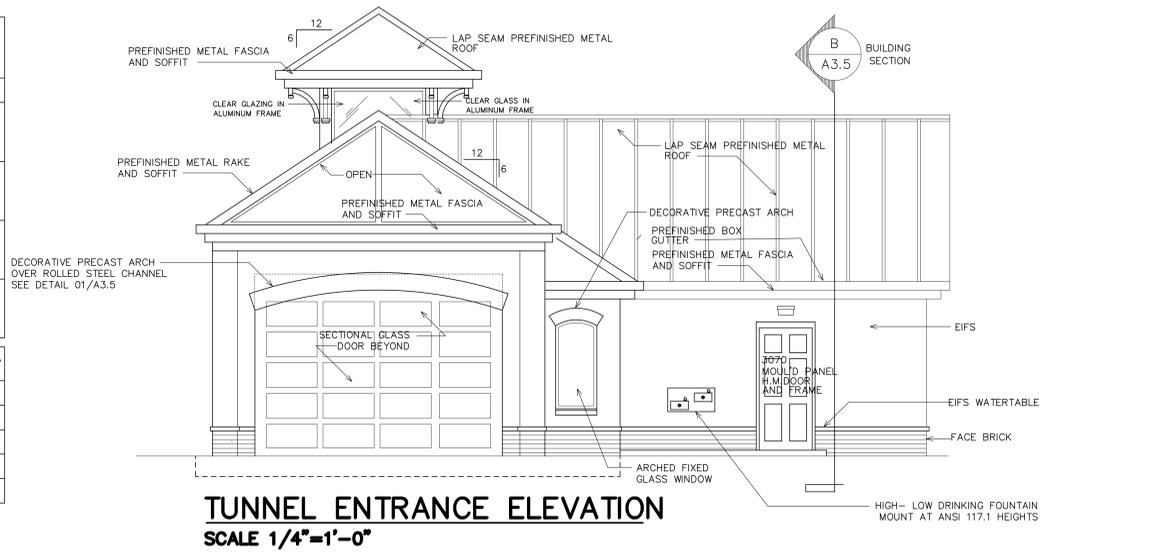


MATERIAL FINISHES PERCENTAGES "CAR WASH" BUILDING PERCENTAGES

BUILDING ELEVATION	PERCENTAGE MATERIAL FINISH
FRONT 1,212 SQ FT	STONE 222 SQ FT = 17%
	PRECAST 16 SQ FT = 01%
	BRICK 156 SQ FT = 14%
TUNNEL EXIT 449 SQ FT	STONE 32 SQ FT = 07%
	PRECAST 12 SQ FT = 02%
	BRICK 135 SQ FT = 29%
REAR 1345 SQ FT	STONE 160 SQ FT = 14%
	PRECAST 22 SQ FT = 01%
	BRICK 491 SQ FT = 36%
TUNNEL ENTRANCE 449 SQ FT	STONE 38 SQ FT = 08%
	PRECAST 12 SQ FT = 01%
	BRICK 187 SQ FT = 44%

FENESTRATION PERCENTAGES "CAR WASH BUILDING"

BUILDING ELEVATION	PERCENTAGE MATERIAL FINISH
FRONT	818 SQ FT = 68% OF 1,212
TUNNEL EXIT	270 SQ FT = 62% OF 449
REAR	672 SQ FT = 49% OF 1345
TUNNEL ENTRANCE	212 SQ FT = 47% OF 449



NOTE: STOREFRONT PROVIDER TO PROVIDE CODE COMPLIANT FRAMES, GLAZING AND ATTACHMENT

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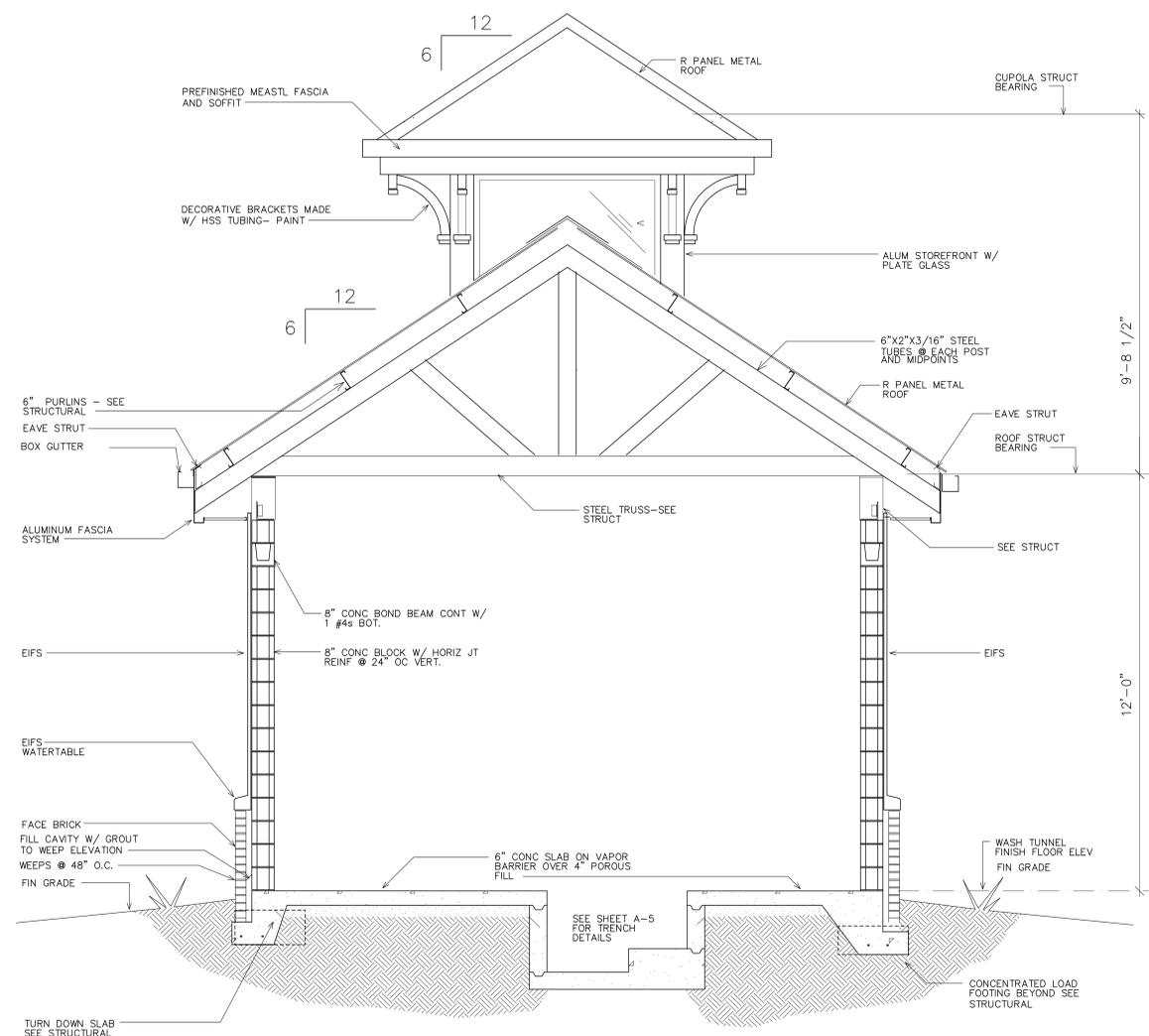
A NEW
TIDAL WAVE AUTO SPA
BEAUFORT SOUTH CAROLINA

DATE: FEB 18, 2016
PROJECT # COM-04-16
DRAWN BY: DATYLER

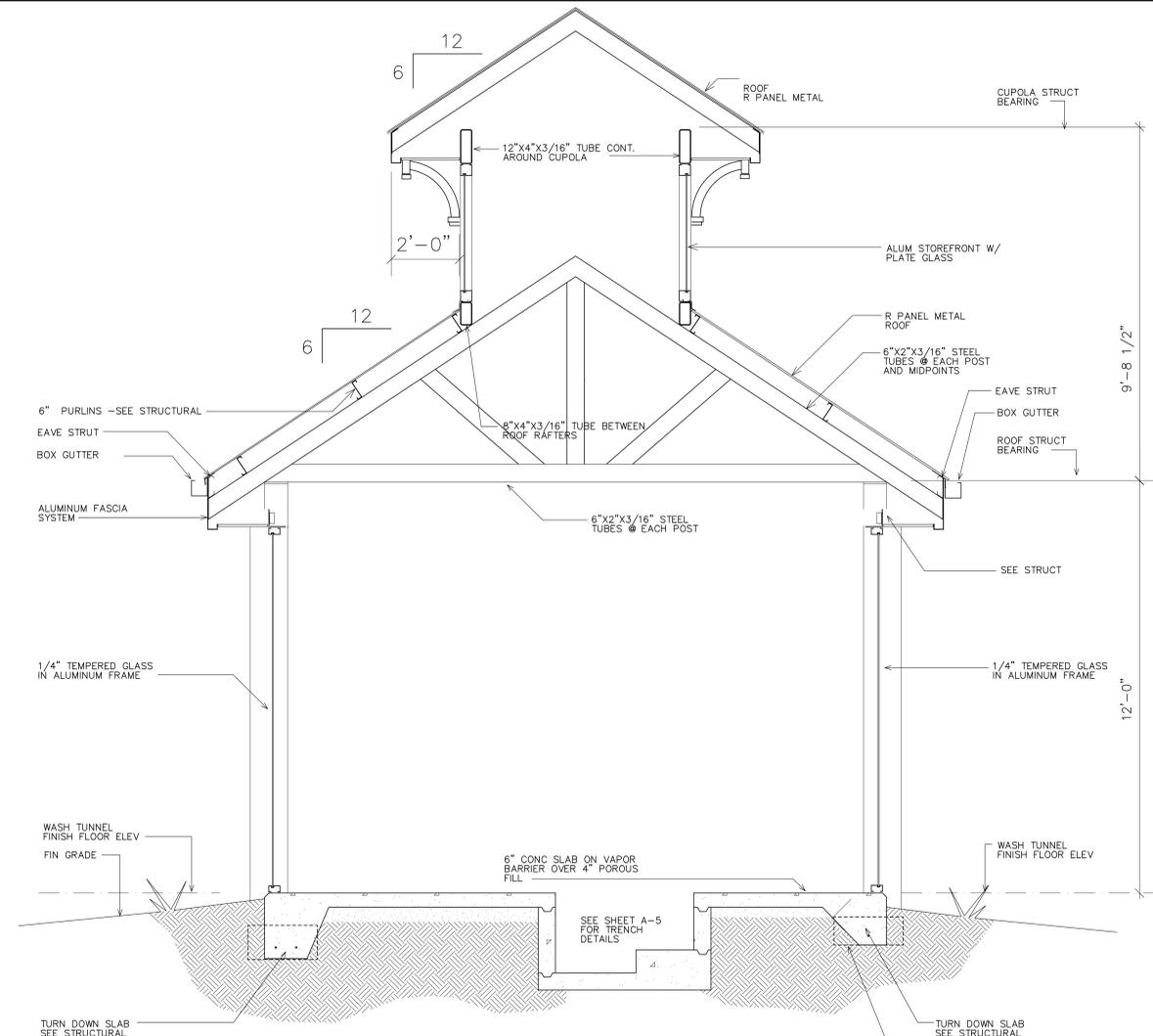
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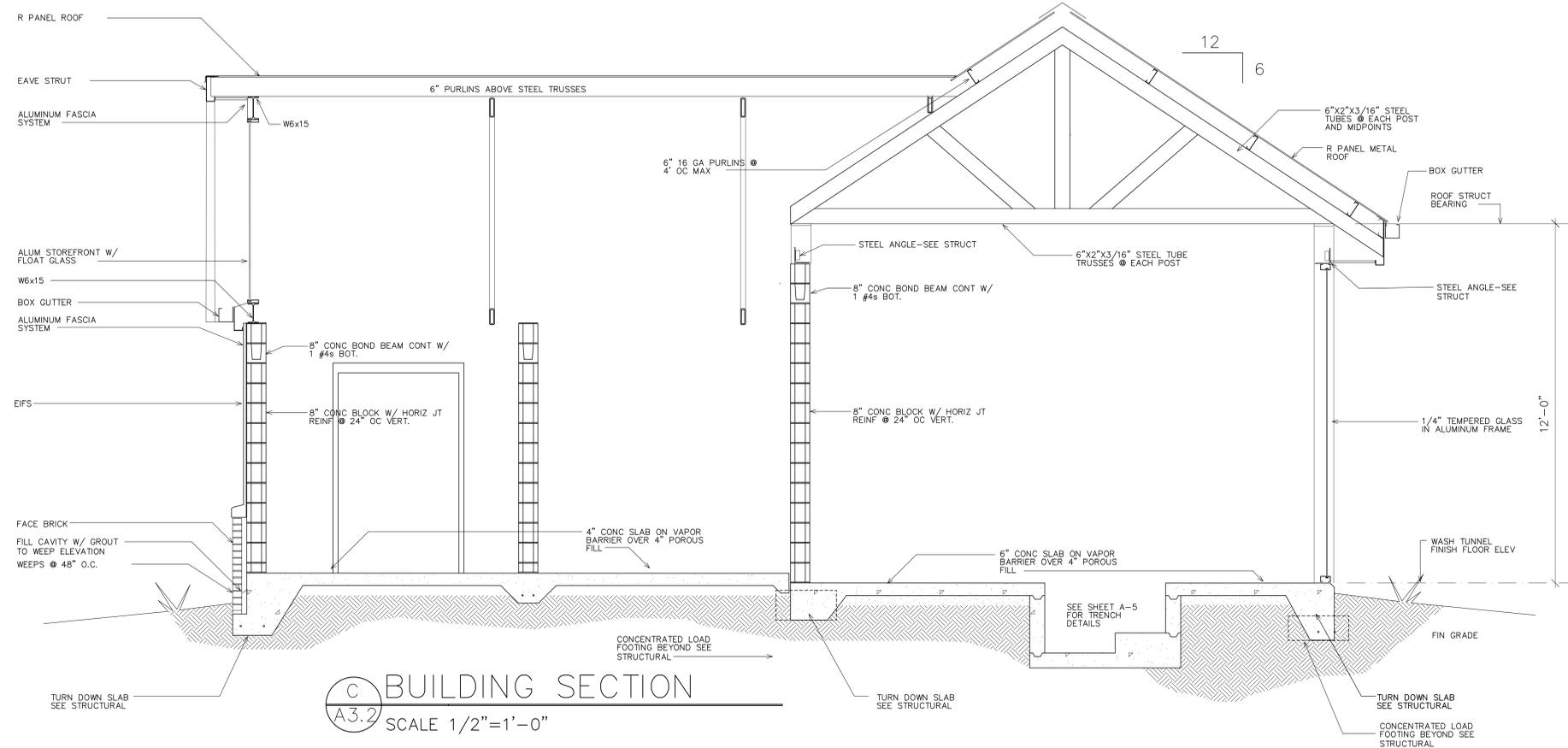
SHEET:
A3.1
OF: 09



A BUILDING SECTION
A3.2 SCALE 1/2"=1'-0"



B BUILDING SECTION
A3.2 SCALE 1/2"=1'-0"



C BUILDING SECTION
A3.2 SCALE 1/2"=1'-0"

A NEW
TIDAL WAVE AUTO SPA
BEAUFORT SOUTH CAROLINA

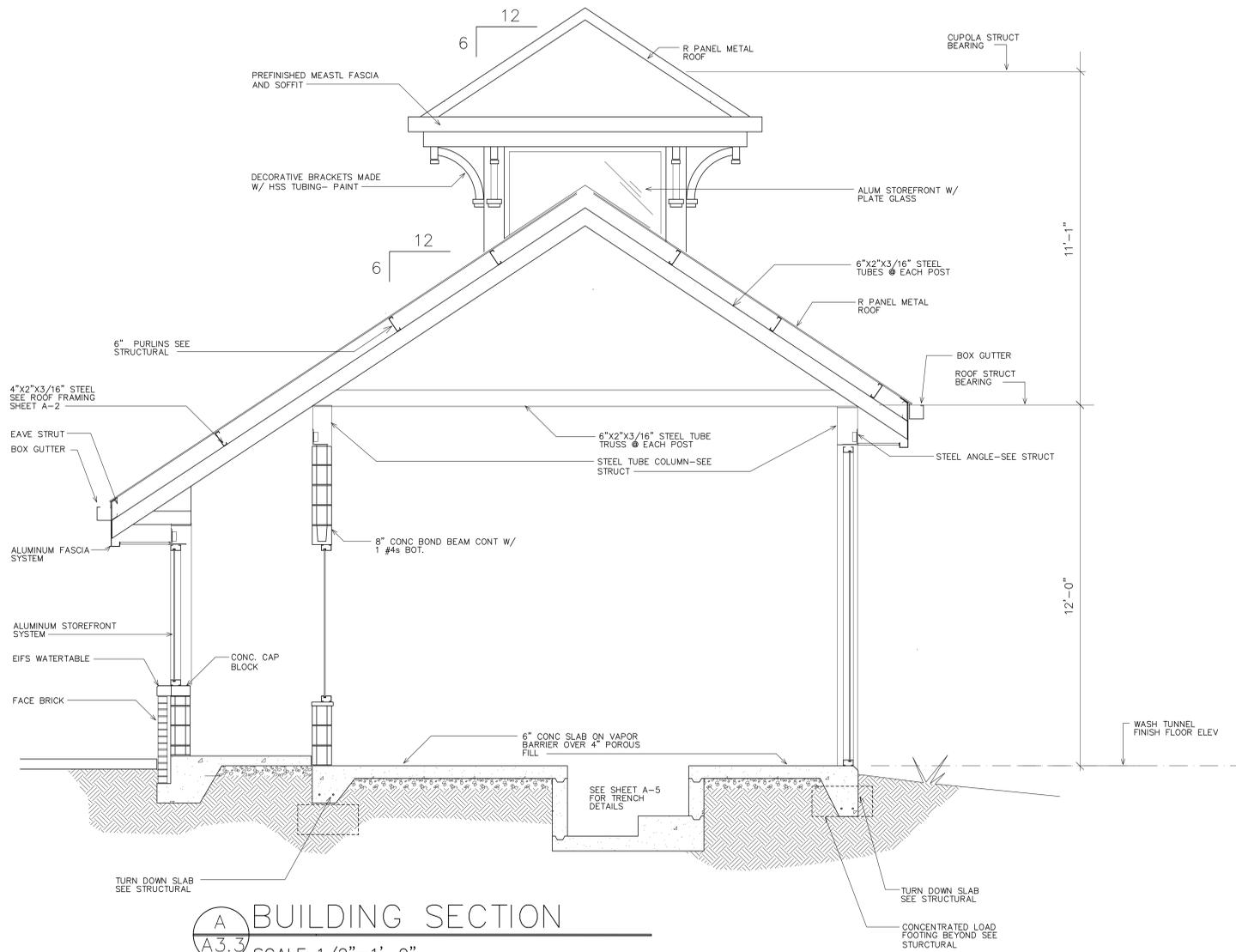
DATE: FEB 19, 2016 PROJECT # COM-04-16 DRAWN BY: DANTLER

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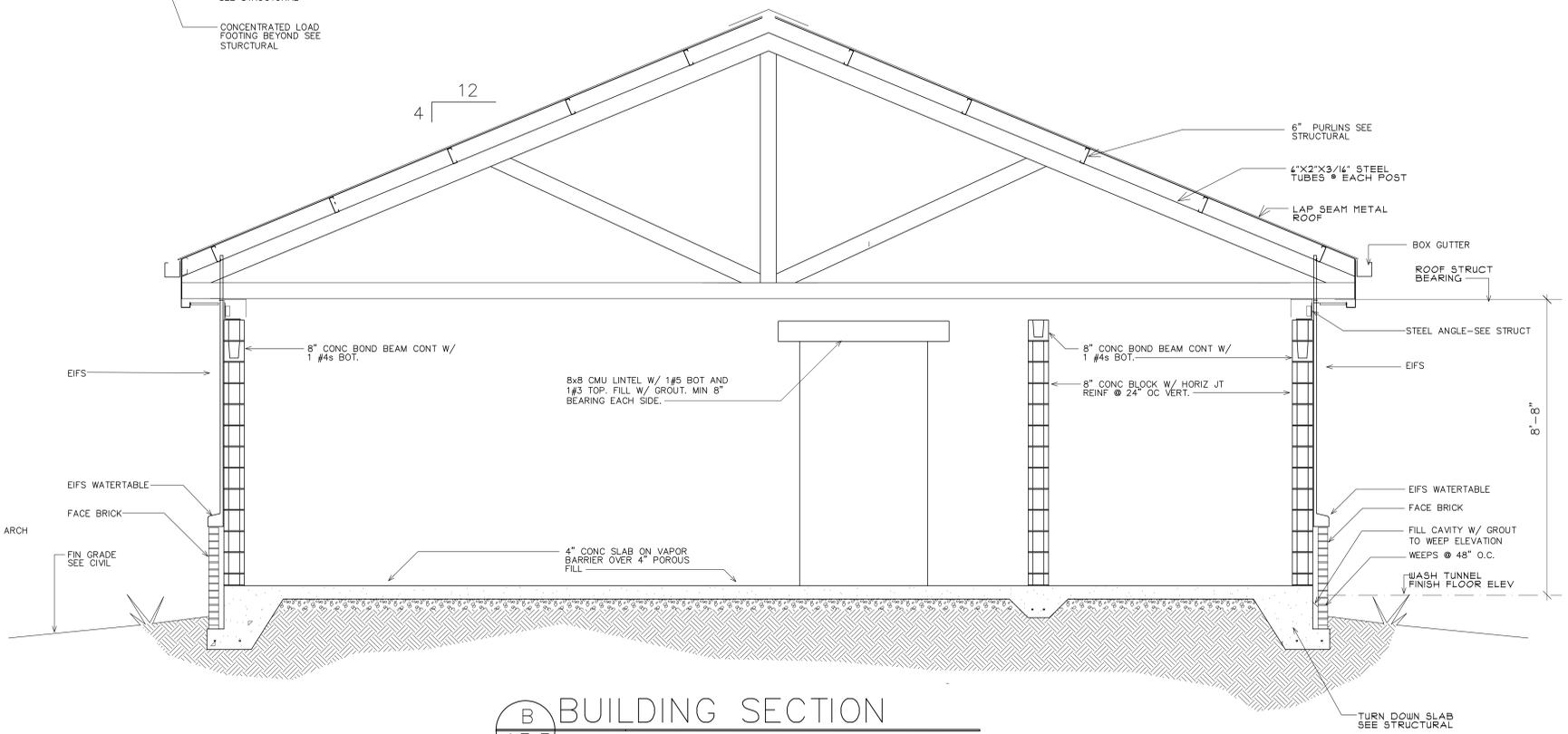
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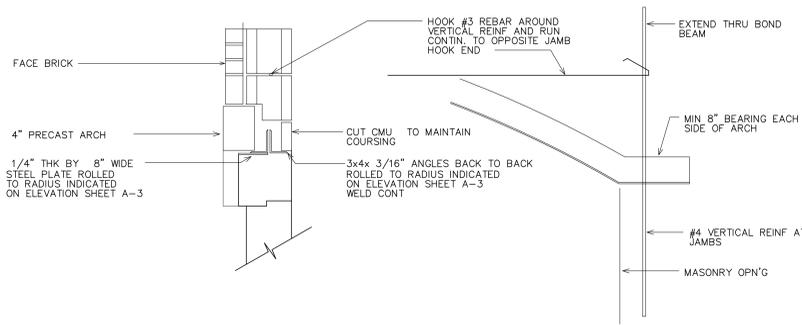
SHEET:
A3.2
OF: 09



A BUILDING SECTION
 A3.3 SCALE 1/2"=1'-0"



B BUILDING SECTION
 A3.3 SCALE 1/2"=1'-0"



01 ARCH SUPPORT DETAIL
 A3.3 SCALE 1/2"=1'-0"

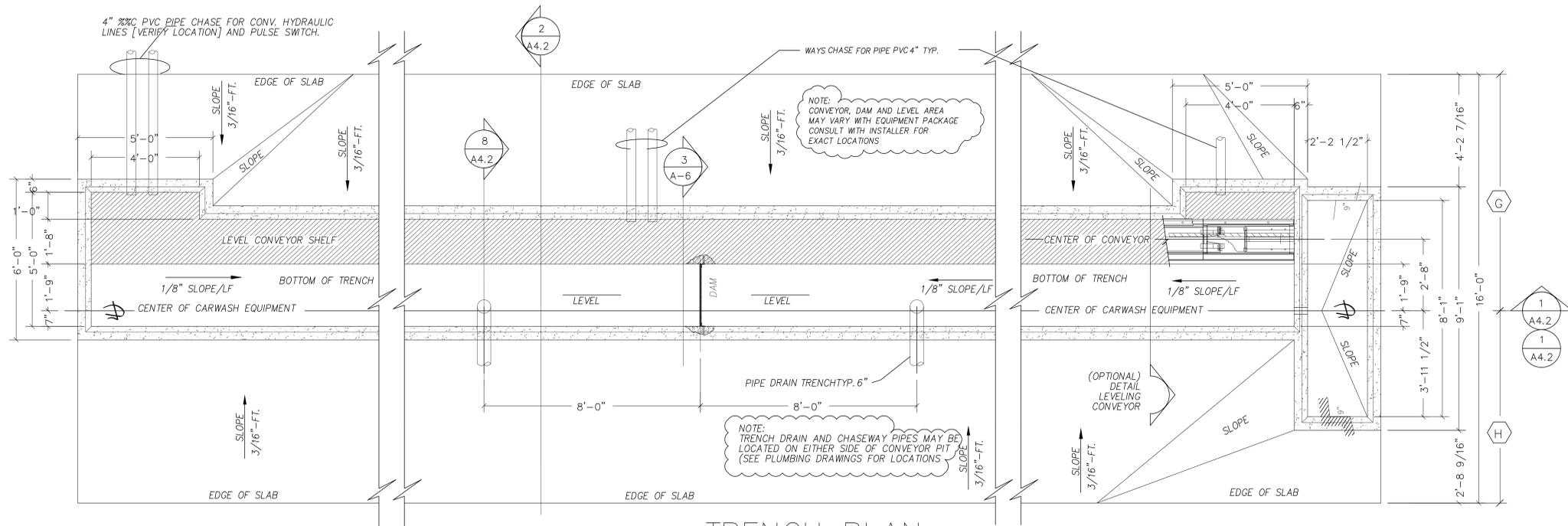
A NEW
 TIDAL WAVE AUTO SPA
 BEAUFORT SOUTH CAROLINA

DATE: FEB 19, 2016
 PROJECT # COM-04-16
 DRAWN BY: DATYLER

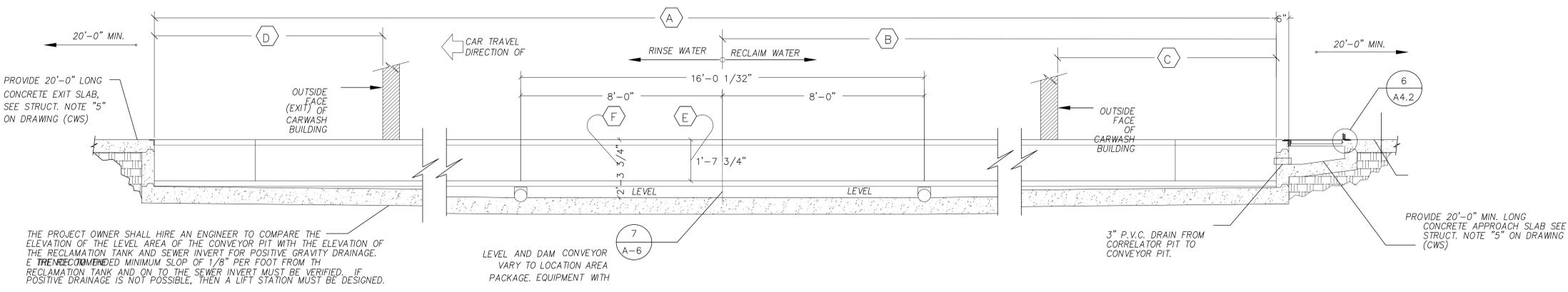
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 Thomaston, Georgia 30286
 706-647-4692

SHEET:
A3.3
 OF 09



TRENCH PLAN



THE PROJECT OWNER SHALL HIRE AN ENGINEER TO COMPARE THE ELEVATION OF THE LEVEL AREA OF THE CONVEYOR PIT WITH THE ELEVATION OF THE RECLAMATION TANK AND SEWER INVERT FOR POSITIVE GRAVITY DRAINAGE. THE RECOMMENDED MINIMUM SLOPE OF 1/8" PER FOOT FROM THE RECLAMATION TANK AND ON TO THE SEWER INVERT MUST BE VERIFIED. IF POSITIVE DRAINAGE IS NOT POSSIBLE, THEN A LIFT STATION MUST BE DESIGNED.

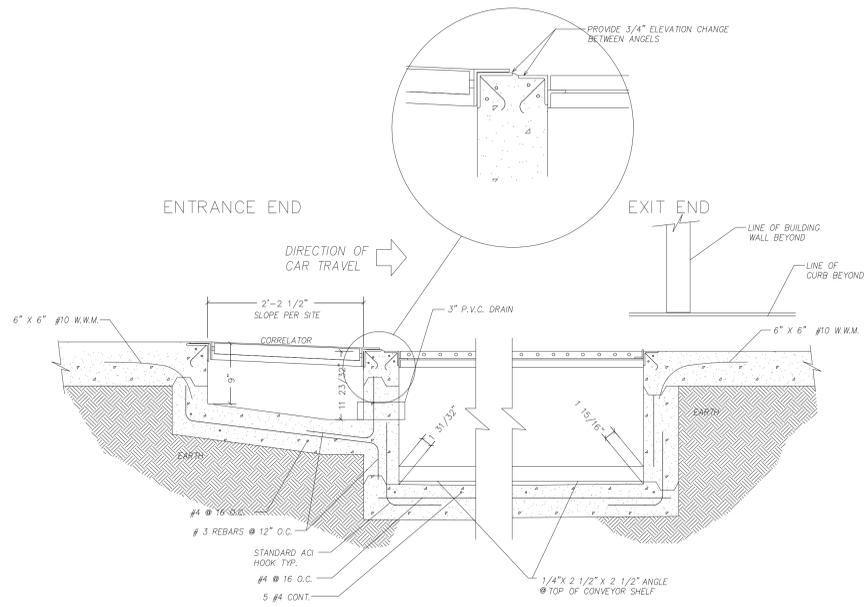
LEVEL AND DAM CONVEYOR VARY TO LOCATION AREA PACKAGE EQUIPMENT WITH

PROVIDE 20'-0" MIN. LONG CONCRETE APPROACH SLAB SEE STRUCT. NOTE "5" ON DRAWING (CWS)

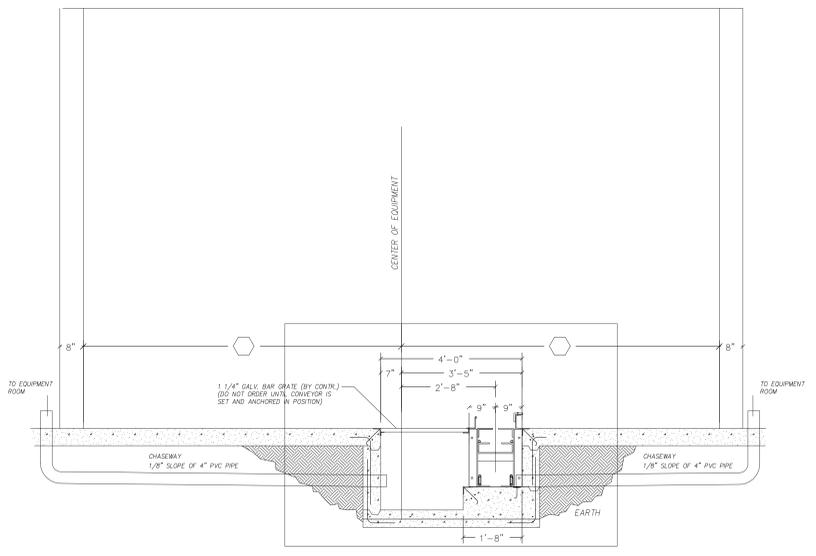
NOTE:

DIMENSION LEGEND		
TAG	DESCRIPTION	DIMENSION
A	TRENCH CONVEYOR PIT LENGTH	121'-6"
B	DAM LOCATION ENTRANCE EDGE OF CONVEYOR PIT	85'-0"
C	TRENCH PIT OUTSIDE BUILDING (ENTRANCE)	22'-7"
D	TRENCH PIT OUTSIDE BUILDING (EXIT)	N/A
E	CONVEYOR SHELF DEPTH FRONT-W-PULL=21'-3/4" REAR-W-PUSH=19'-3/4"	19'-3/4"
F	MAX DEPTH OF TRENCH	34"
G	CENTERLINE OF EQUIPMENT TO DRIVERS SIDE WALL	9'-0"
H	CENTERLINE OF EQUIPMENT TO PASSENGER SIDE WALL	9'-0"

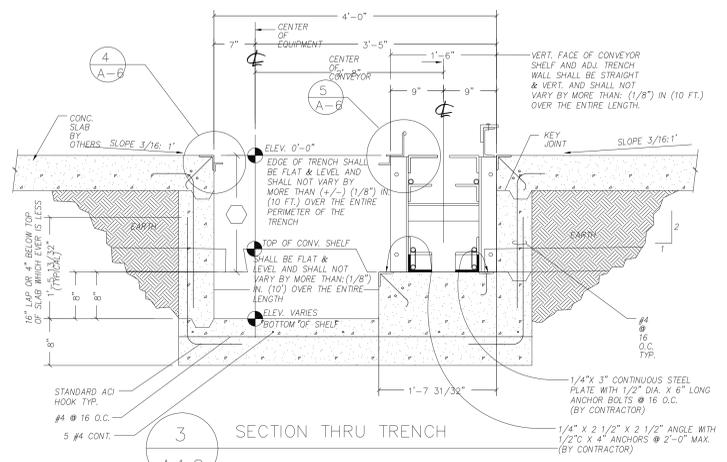
1 A4.1 SHALLOW TRENCH ELEVATION SCALE 1/4"=1'-0"



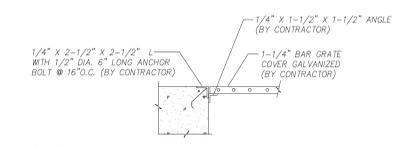
1 SECTION THRU TRENCH/CORRELATOR
A4.2



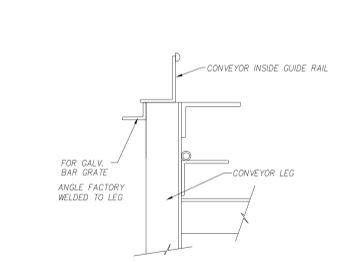
2 USECTION THRU TUNNEL
A4.2



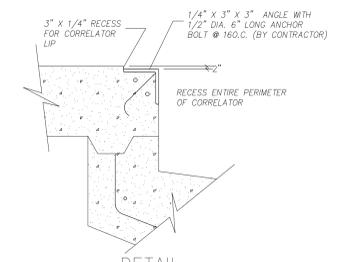
3 SECTION THRU TRENCH
A4.2



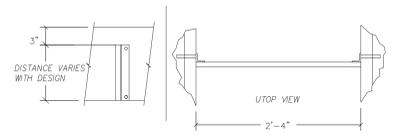
4 BAR GRATE DETAIL
A4.2



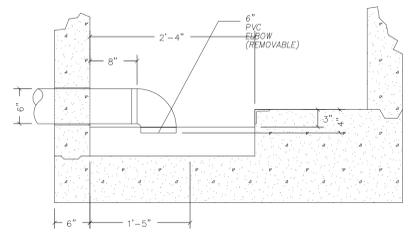
5 DETAIL
A4.2



6 DETAIL CORRELATOR LIP ANGLE
A4.2



7 TRENCH DAM SECTION
A4.2



8 TRENCH DRAINAGE PIPE
A4.2







Michael P. Murphy,
NJ-0146B

February 13, 2016

Dan Fischer
EMC Engineering Services
P. O. Box 8101
Savannah, GA 31412-8101

Re: Tidal Wave Auto Spa, Lady's Island, SC

PURPOSE

The purpose of this report is to perform a modified Level 2, Basic Tree Risk Assessment on all trees shown on the most current site plan for the proposed Tidal wave Auto Spa located on Sams Point Road, Lady's Island, S.C. Special attention will be paid to the nine (9) trees designated as grand trees (>24") by the City of Beaufort. This assessment will be based on standards set forth in ANSI A300-Part 9, Tree Risk Assessment Standard.

Each tree will have a detailed visual inspection of its surrounding site, buttress roots, trunk and branches and an assessment of the trees general health. The information will be used to determine physical and structural health of the trees, as well as the likelihood and consequences of failure in each tree, in order to evaluate the degree of risk associated therein. A potential of failure will be assigned to each tree. This potential rating can be submitted to the City of Beaufort and may result in a reduction allowances to the total caliper inches of grand trees which need to be mitigated for. It can also be used to determine which trees should, or should not, be preserved on site as well as which trees may need special attention.

A Level 2 Basic Tree Risk Assessment is not the highest level of assessment available to arborists. Any trees that are pending to be preserved on site which may require a higher level of assessment will also be identified and any additional necessary recommendations will be given.

Recommendations will be given for performance and timing of maintenance procedures, such as crown pruning, root pruning and root fertilization; required to be performed on trees that are to be preserved on site.

Each of the grand trees on site will be categorized into four different groups designating each tree's individual condition based on both structural and physical health factors. Additionally, smaller trees, out of the grand tree category, will also be highlighted so that you will have more information on their health and be able to better make judgement calls on whether they should remain in the landscape. Each condition grouping will be highlighted with a specific color on the site plan. These designating letters and groupings are as follows:

- A.) Trees with slight defects having an improbable likelihood of failure. These are highlighted in Green.
- B.) Trees with moderate defects having a possible likelihood of failure. These are highlighted in Orange.
- C.) Trees with severe defects having a probable likelihood of failure. These are highlighted in Blue.
- D.) Trees with critical defects having an imminent likelihood of failure. These will need immediate attention and will be highlighted in Red.

PREFACE

Tree preservation on construction sites involves planning, forethought and visualization. The process of merely retaining trees on site is not tree preservation. Pre-construction maintenance procedures before groundbreaking, coupled with vigilant protective measures and a commitment to future maintenance all are a part of this procedure. Minimum Tree Root Protection Zones (TRPZ), equaling a six (6) inch radius for every inch of trunk diameter, need to be established on the site plan, transferred to the actual site and maintained for the entire length of the construction process as soon as possible after permitting has been attained.

Note: The preferred and recommended radius for TRPZ is one a (1) foot radius per inch of trunk diameter. Flexibility and options for wet and dry utility placement and the ability to perform directional boring as needed where roots would otherwise have been cut within TRPZ, all need to be options that should be considered. Use these report findings wisely. Do not attempt to preserve a tree on site that will put the proposed buildings or residents in jeopardy. Do not allow the mitigation requirements of the City of Beaufort to influence your decisions on whether a tree should be preserved on site. Preservation of poorly structured or weak trees on construction sites is generally futile. Construction conditions have the capacity to exacerbate these problems and usually results in death or failure at a time that adds great expense to their removal; not to mention the additional exposure to risk factors that are involved.

SITE

The site consists of an approximate 1.30 acre area adjacent to a recently proposed Waffle House site. The two sites appeared to have been one at one time. This site is marked as Parcel "B". It is comprised primarily of a mix of laurel oak, live oak, water oak and pine with two wild cherry and two sweetgum trees.

PRE-CONSTRUCTION MAINTENANCE

All trees proposed to be preserved on site should be crown cleaned and root fertilized well in advance of site work. The pruning requirement could be performed fairly close to the beginning of site work but the root fertilization will need to be completed at least three months prior to groundbreaking. If construction is eminent and the root fertilization cannot be performed within this scheduled time frame, then it should be delayed until at least three months after site work begins.

During this crown cleaning procedure, no matter what condition the trees have been rated at, any over-extended limbs and leads on the larger oaks will need weight reduction performed in order to reduce the risk of limb or lead failure.

Great care should be taken by the arborists contracted to perform the pruning in retaining as much live wood on the interior of the trees as possible while actively reducing any and all over extended limbs and leads. Future pruning requirements of the trees will require these interior limbs to remain in place.

ROOT CUTS

The trees on this site are growing in a fairly well drained sandy loam soil. Most trees growing under these conditions have fairly extensive and relatively deep root systems. Nevertheless, any root cuts can be critical to each trees' survivability. The minimum suggested radial setback distance for root cuts is three times the trunk diameter. The preferred radial distance is five times the trunk diameter. This is assuming that the tree is healthy and has no additional root defects or other conditions that would predispose it to failure. Cuts this close to the trunk will impact the trees' overall health somewhat, but generally will not substantially increase the risk of failure.

Directional boring should be the first recourse when wet or dry utilities are to be placed through any TRPZs.

Any roots needing to be cut should be cut cleanly back into the backfill area of the retained root end. All root cut setback distances shall be measured in the field from the leading edge of the tree's root flare or buttress. If any trenching needs to take

place within these setbacks, then the excavation will need to be dug by hand for a distance of ten feet either side of the centerline of the tree trunk for a total hand-dug distance of twenty feet. Any roots encountered in this trenching shall also be cut cleanly back into the backfill area.

FILL

The site plan that I reviewed did not have any topography markings so it was difficult to determine if there was the need for any significant fill. The addition of fill soil on a site can be a major issue for the survivability of the preserved trees. Tree roots can usually survive moderate backfill situations where all organic material has removed prior to the new soil being installed and there is no prior compaction to the original grade before the fill is installed. Tree root flare or buttress areas should never have fill covering them. The fill should be gently feathered away from them and they should stay at their natural exposure at original grade.

TREE ROOT PROTECTION ZONES

All trees preserved on site shall have TRPZ established with appropriate fencing installed at its perimeters. This fencing shall be permanent throughout the entire construction process and taken down for final landscaping installation. The radius of this protection fencing should be a minimum of six (6) inches for every inch of trunk diameter. The preferred radius is one (1) foot radius for every inch of trunk diameter. Multiple trees growing closely together should be grouped into large TRPZ whenever possible. No construction operations should take place within the TRPZ. Future landscape trenching for irrigation lines should be run outside of the TRPZ. The landscape firms bidding on the installation should be notified of this before bids are sought. This may not be able to be accomplished on all trees to be preserved given the proposed plan. Trees that cannot be fully protected may have an increased risk of being impacted more severely by the construction process. If the tree in question has been listed as having either a slight or moderate risk level, then it's preservation on site should usually proceed. TRPZ do not have to be perfect circles around the tree trunk, they can be increased on other sides if they need to be narrowed up on construction frontages.

AFTER-CARE

All trees preserved on site that may have had moderate to severe soil compaction that affected its protected root zone should have a root invigoration performed after construction has been completed and before landscaping. The arborist who will be performing this service should have a direct line of communication with the

landscaper in order to assure that original grade soil levels are not buried before root invigoration takes place. The association with the landscaper will also be important to help map out the irrigation trenches and make sure that they are placed outside the original TRPZ as mentioned before in the recommendations. Root invigoration is a process that aerates the soil and incorporates additional organic matter back into it in the form of compost that can restore vitality to the soil and the tree roots living in it. This is performed with the assistance of a compressor run air spade.

After construction, the trees should be inspected quarterly for the first two years, semi-annually for the next two years and annually after that. Annual root fertilization programs should be set up and implemented as is deemed necessary from the results of these inspections.

ASSESSMENT RESULTS

- A.) Trees with slight defects having an improbable likelihood of failure and are highlighted in Green on the site plan: 22"laurel oak, 20"pine, 17"laurel oak, 17"pine, 14"Laurel oak.
- B.) Trees with moderate defects having a possible likelihood of failure and are highlighted in Orange on the site plan: 42"live oak, 26"live oak, 27"pine, 26"laurel oak, 25"laurel oak, 25"laurel oak, 24"sweetgum, 23"laurel oak, 21"laurel oak, 21"laurel oak , 20"laurel oak, 21"pine, 20"pine, 20"pine, 17"laurel oak, 16"/16"water oak, 16"laurel oak, 16"sweetgum, 16"laurel oak, 15"laurel oak, 15"laurel oak, 15"laurel oak, 14"live oak, 12"pine, 12"laurel oak, 11"cherry, 10"laurel oak, 7"laurel oak, 7"laurel oak.
- C.) Trees with severe defects having a probable likelihood of failure and are highlighted in Blue on the site plan: 38"water oak, 33"laurel oak, 30"live oak, 29"laurel oak, 24"laurel oak, 23"laurel oak, 21"laurel oak, 21"pine, 21"pine, 20"laurel oak, 20"laurel oak, 18"laurel oak, 17"live oak, 14"laurel oak, 12"laurel oak, 8"cherry.
- D.) Trees with critical defects having an imminent likelihood of failure and are highlighted in Red on the site plan: 16"laurel oak, 14"laurel oak.

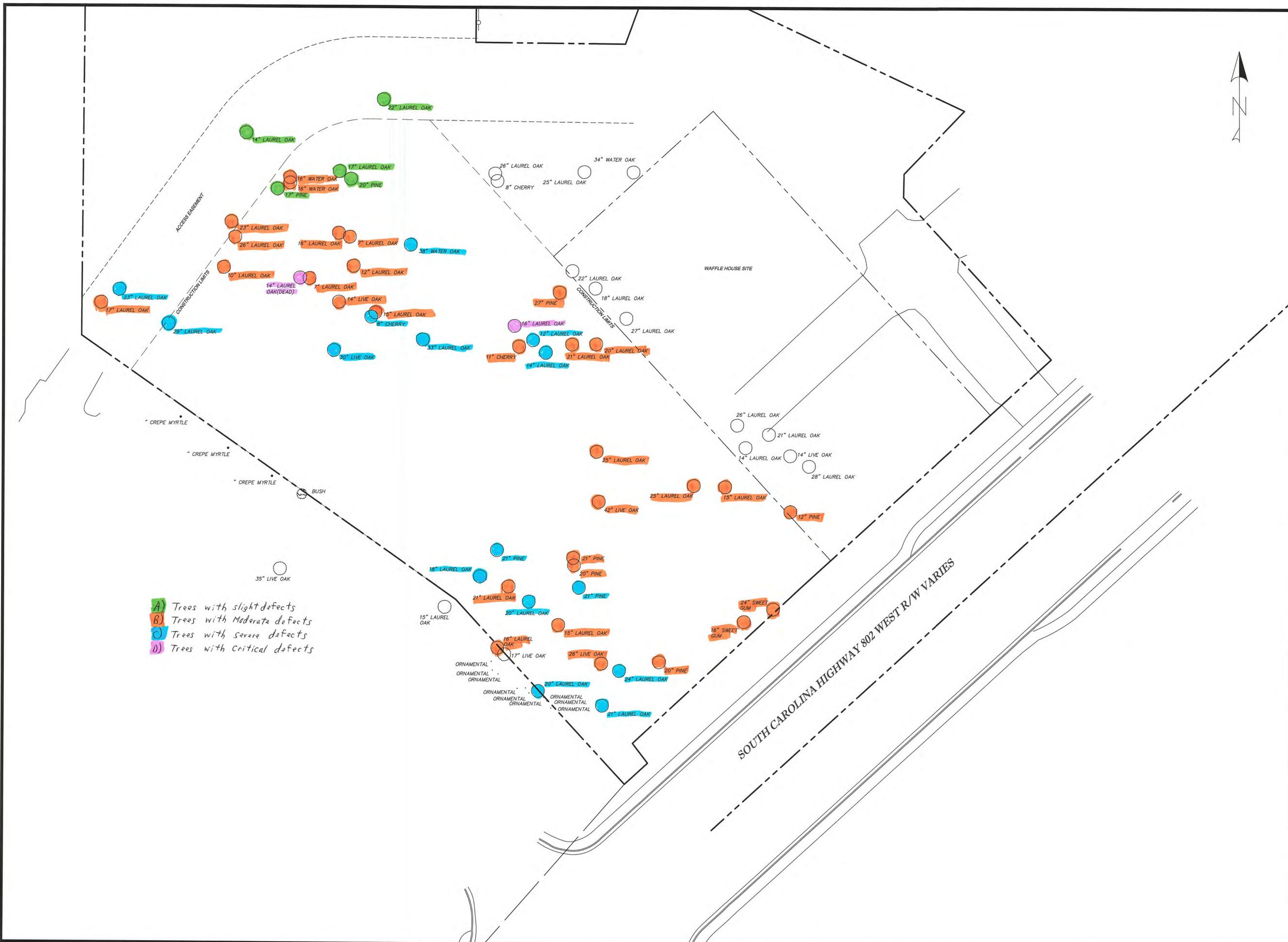
Please call if you have any questions about this report or if you need further onsite clarifications.

Respectfully submitted,

A handwritten signature in blue ink that reads "Michael P. Murphy". The signature is written in a cursive, flowing style.

Michael P. Murphy
Board Certified Master Arborist NJ-0146B

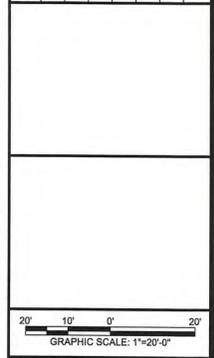
Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of the trees and attempt to reduce the risk of living near trees. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time. Likewise, remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To live near trees is to accept some degree of risk.



- A) Trees with slight defects
- B) Trees with Moderate defects
- C) Trees with severe defects
- D) Trees with critical defects



NO.	REVISION DESCRIPTION	BY	DATE



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 savannah@emc-eng.com

CIVIL
 MARINE
 ENVIRONMENTAL

OFFICES: ALBANY, ATLANTA, AUGUSTA, BRUNSWICK, COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

TREE LOCATIONS

TIDAL WAVE AUTO SPA
 CITY OF BEAUFORT, BEAUFORT COUNTY, SOUTH CAROLINA

PROJECT NO.:	16-6005.20
DRAWN BY:	C.J.H.
DESIGNED BY:	-
SURVEYED BY:	-
SURVEY DATE:	01/28/2016
CHECKED BY:	-
SCALE:	1"=20'
DATE:	01/28/2016