



Trail Solutions LLC

Bridge Replacement Proposal

**For
City of La Porte**

1700 S Broadway St
La Poorte, TX 77571

Project Description

This proposal is presented by Sages Trail Solutions LLC (Sages) to City of La Porte for the Little Cedar Bayou Nature Trail Bridge Replacement Project.

The proposal provides details on Project Methodology, Personnel and Equipment to be utilized, and an Initial Project Plan. The proposal also includes Contractor qualifications, past projects information and references. A project review meeting and site walkthrough was attended by Sages Personnel where the locations and existing structures were reviewed, and designs were discussed for reference in developing this submittal.

Proposed Project Designs

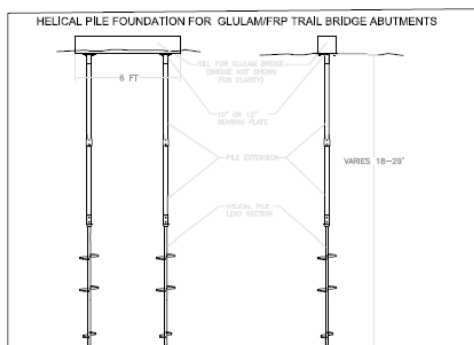
Sages is proposing the same design bridges and abutments as is currently being used for a USFS project in the Davy Crockett National Forest on the 4C Hiking Trail.

Per diagrams below, (2) helical piles will be anchored in 10-18' deep on both sides of the bayou approximately 15' back from drop-offs. 12" x 12" timbers 12' long will be attached to the helical piles and will serve as abutments sills.

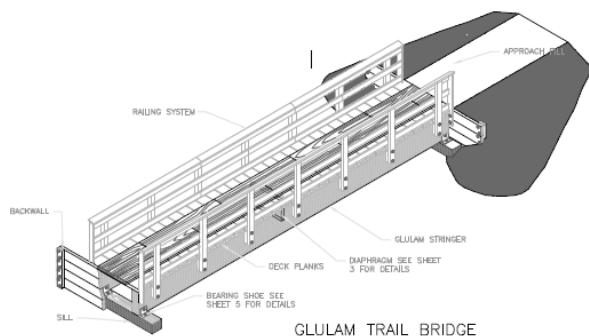
The 3 stringers that will be used to span the bayou and that will attach to the 12' x 12" timber abutments will be 40' Glulam beams that are 5 1/8" wide x 24 3/4" tall.

Decking will be 2"x6" RGH and will be 8' wide with same material used for railings.

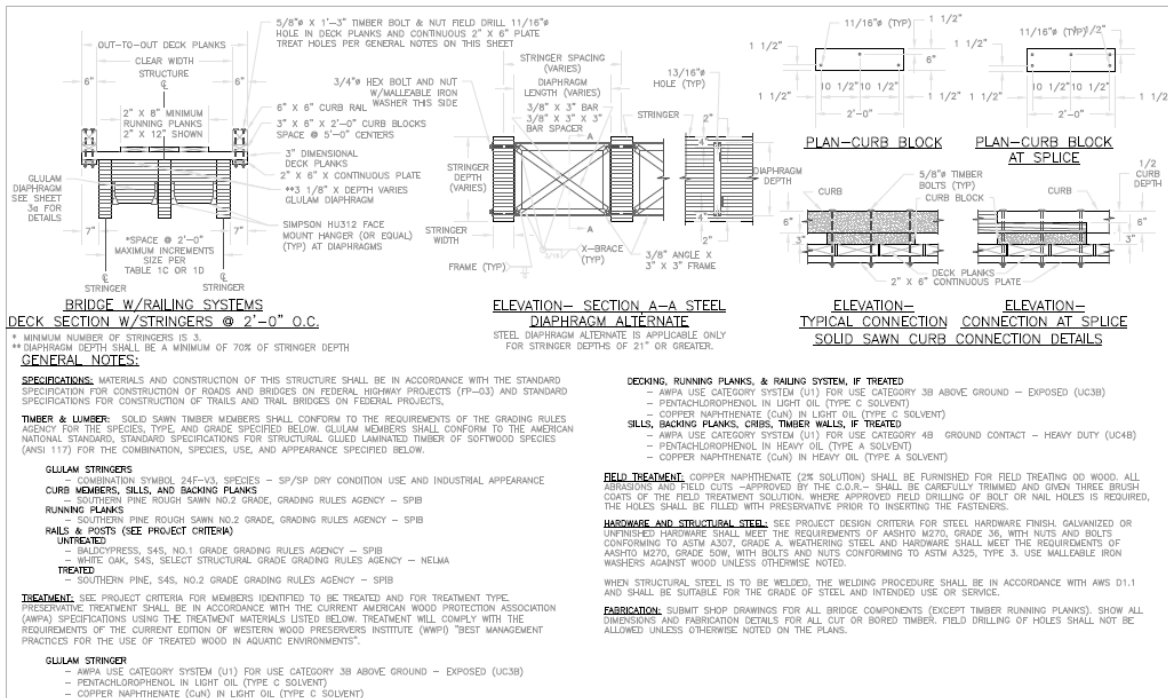
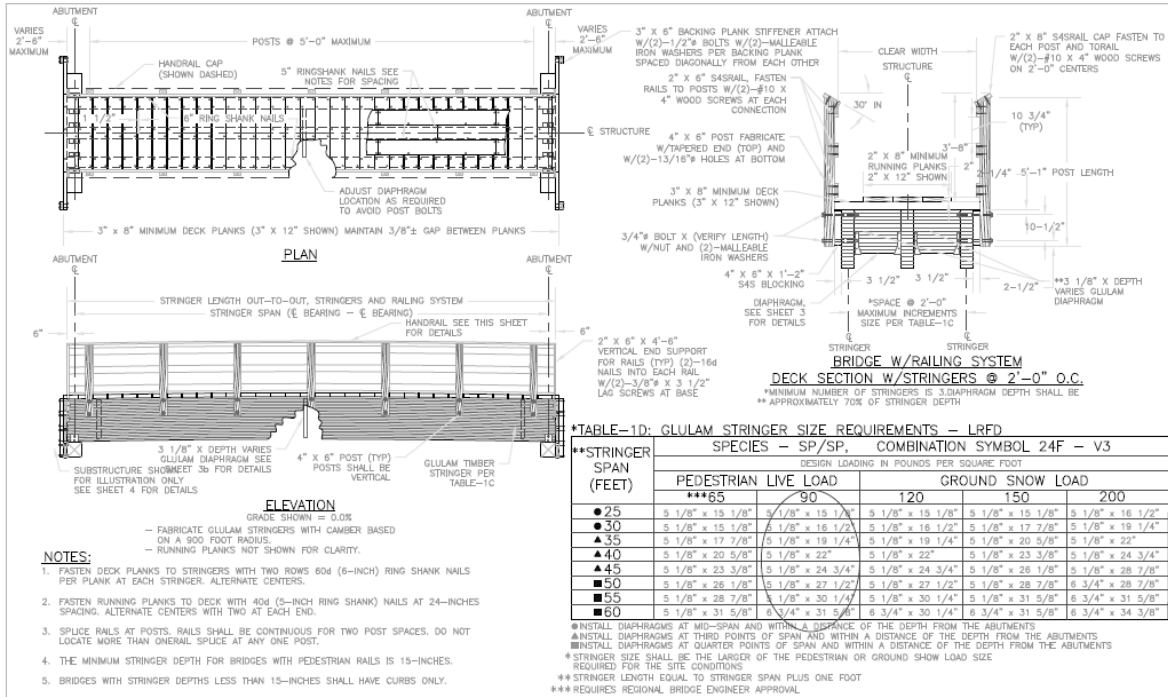
Abutment Diagram (different depthsproposed)



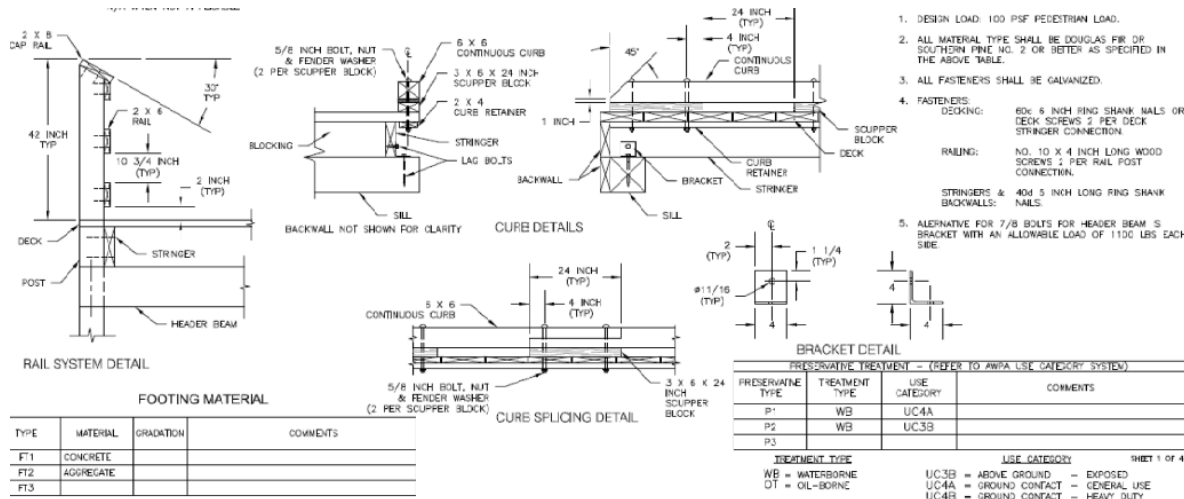
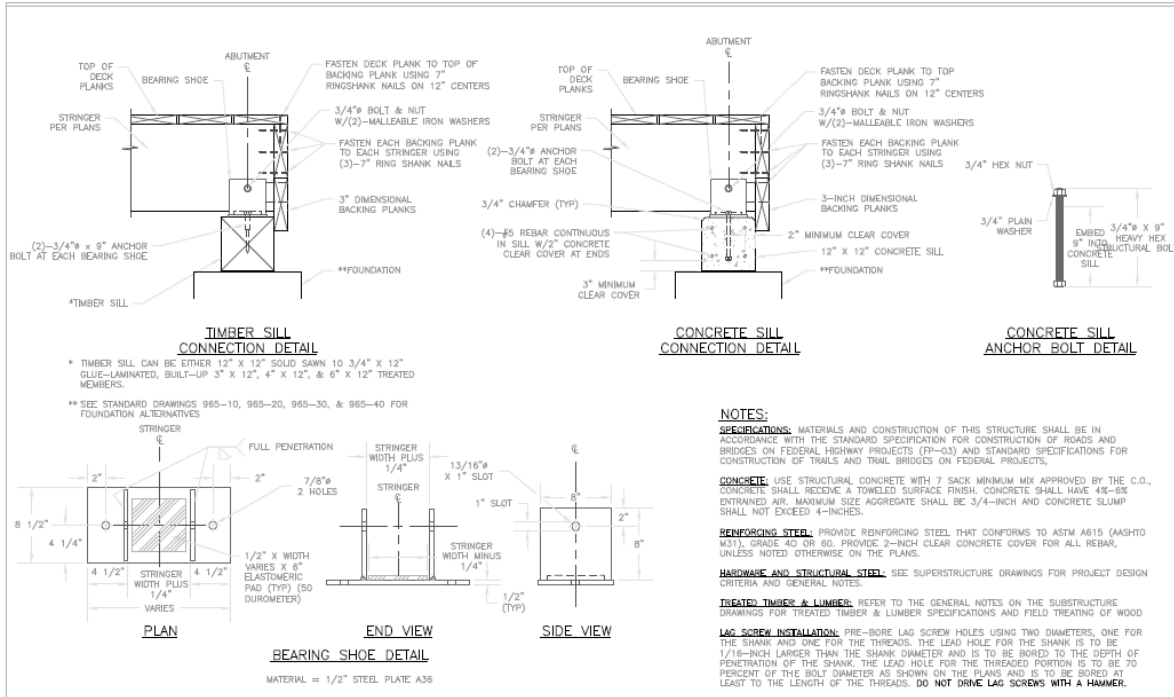
Bridge Diagrams



Additional details as reference examples.



La Porte Trail Bridge Replacements



Contractor Qualifications

Sages Trail Solutions LLC (SAGES) is a Limited Liability Corporation with office based in Texas. Physical address and contact details:

103 N Victoriana Cir
The Woodlands, Tx 77389
713-628-4996
cj.bernard@sagessolutions.com

SAGES was formed in 2001 in Lafayette, LA offering Environmental Services and was established in Texas in 2016 offering Trail Services. Christopher James (C.J.) Bernard has been the owner and manager since the corporation has been established.

Sages Employer Identification Number is: 82-3223680
Texas LLC Certificate number below: 802842150

SAGES provides a full line of service levels for Recreational Trails including;

- Planning and Education
- Design and Layout
- Build
- Maintain

At SAGES TRAIL SOLUTIONS LLC, we specialize in incorporating user features for every desired trail experience sought. Hiking, Biking, Horseback riding and Runners are our prime trail users and target stakeholders. From quiet tucked away nooks and crannies to multi level challenge features, our trail systems seek to appeal to all user groups giving multi-experience options that will keep users coming back for more!

We want users to feel refreshed, exhilarated and to get their adrenaline pumping if that is their desire!!!!

Personnel

SAGES has extensive hands on experiences providing various types of trail services and solutions and is also qualified through educational, vocational and personal experiences for successfully delivering on all of our client's expectations.

Christopher James (CJ) Bernard serves as President and owner of SAGES.

CJ loves the outdoors and is an accomplished woodsman. Growing up on farms and enjoying camping, hunting and fishing in the southern US, he worked for 10 years in industry before going for his BS degree, he has a practical approach to developing solutions and on delivering on expectations.

CJ's select qualifications include:

- BS Degree in Biology with Minor in Forestry w/course work in;
 - Surveying and Drainage
 - Urban and Regional Recreational Planning
 - Soils
 - Environmental Management
 - Wetland Ecology
 - Wildlife Management

- Various-Pre-Forestry courses
- Registered Environmental Manager (National Registry of Env. Professionals)
- Member American Trails Association
- Member Professional Trail Builders Association (PTBA) *pending*
- Member International Mountain Bike Association (IMBA)

Related course work from PTBA and IMBA conferences and symposiums;

- Terrain Dynamics for Trail Folks
- Fundamentals of Trail Design & Layout
- Stages of Trail Design & Layout
- Guidelines for Quality Trail Experiences
- Strategic Planning for Great Mountain Bike Trails
- Trail Equipment

Related course work from US Forestry Service (USFS);

- Heavy Equipment Operations Certification (*Certified for US Gov Lands*)
 - Trail Dozer Operation and Maintenance
 - Mini Excavator Operation and Maintenance
- Chain Saw Certification
- ATV Certification

CJ also served on the Board of Directors of **Greater Houston Off Road Biking Association (GHORBA.ORG)** as the Vice President and Trails Director for ~ 5 years and has gained a multitude of other trail building and remediation related experiences and has built relationships with local trail users and land managers.

Charles Convert serves as a partner in the firm.

Charles is a licensed and certified engineer and a trail builder with a passion for hiking & riding.

He has been working in collaboration with SAGES for the last 4 years designing, remediating and building multiuse trails. He has been riding in Texas, Utah, Nevada, California, Mexico and, in the French Alps where he was raised. He has ridden in cross country competitions, flow trails and various other trail systems. Trails he has experienced across the continent and has been involved in all stages of building, have allowed him to gain solid knowledge of current trail development practices plus a real feel for what today's user demand. He has acquired knowledge of the Texas landscape, ground characteristics and weather conditions essential for designing and constructing sustainable trails and trail features. He is an Engineer by trade and has successfully managed for the last 7 years the engineering and design of large multidisciplinary projects from feasibility to detail engineering and provided project and construction support. He has the knowledge of the tools and techniques required to deliver modern engineering and design.

Forrest Bernard is a Equipment Operator / Trails Technician.

Brett has been with Sages for more than 1.0 year and has gained experiences operating Mini Excavators, Skid Steers, Tracked Loaders and in bridge construction and repairs. Brett has taken courses in Welding and Carpentry and is scheduled for First Aid and Chainsaw certifications courses with the USFS. He is a valuable asset to the team.

Brett Hendon is a Equipment Operator / Trails Technician.

Brett has been with Sages for more than 1.5 years and has gained experiences operating Mini Excavators, Skid Steers, Tracked Loaders and in bridge construction and repairs. Brett has taken courses in Welding and Carpentry and is scheduled for First Aid and Chainsaw certifications courses with the USFS. He is a valuable asset to the team.

Past Project Descriptions and References

CJ has been involved with and provided trail related services 1st in the State of Louisiana, abroad in Malaysia and China and then where he currently resides, in the state of Texas.

Below are listings of related projects followed by corresponding references.

Additional project details can be found on the company website (www.sagestrailsolutions.com) along with photos showing stages of work and completed projects.

American Sportsman LLC (employed in 95-97)

- Managed several tracts of land in Louisiana for recreational activities for members.
- Mapped and installed signage on 75++ miles of hiking trails, motorized trails and fire roads on 5 different tracts of leased lands for recreational activities.
- Repaired and remediated multiple sections including reroutes, armouring and bridge and crossing construction.

Willis & Suire Forestry Consultants (SAGES)

- Multiple Recreational Trail Projects
 - Performed trail layout design and re-routing along with trail building, clearing and periodic maintenance and remediation.
 - Built handicap access bridges, walkways and deck areas along scenic areas and waterways within and along the trail systems.

Malaysia Private Land Holdings (Volunteer)

- Hiking and Hashing Trail Projects on the Island of Borneo Miri, Malaysia.
 - Trained local trail enthusiasts in IMBA and USFS Trail construction standards and assisted in new layout, and in repair/remediation techniques
 - Performed several trail reroutes and related remediation and construction projects
 - Performed trail armouring and water crossing projects

GHORBA (Volunteer)

- Trail remediation and repairs projects
 - Sam Houston National Forest- 12 miles of trail remediation and repairs from neglect and non-use and from hurricane damage.
 - Repaired and armoured 6 major and 8 minor drainage crossings and repaired and maintained board walks/bridges.
 - Repaired multiple trail systems (9) in the Houston from damages caused by Tax Day and Harvey floods. These included trails clearing and clean up, tread repairs and raising above grade elevation.
 - Repaired and Rebuilt 200' Boardwalk
- Design, Layout and Build
 - Designed and laid out trails for The Woodlands Township for 3 miles of multi-use trails.

Bayou Land Conservancy- (SAGES was Primary Contractor 100%- No Deadlines)

- Spring Creek Nature Trail (N Houston Area) (work done in 2017, 2018 and 2019)
 - Trail final layout and corridor and tread build
 - Reroutes around erosion prone areas
 - Remediation and Repairs of previously rutted and eroded areas
 - Design and installation of a compacted crushed concrete causeway over a section containing construction debris.

- Little Cypress Preserve (N Houston Area) (work done in 2019)
 - Designed Constructed and installed a Trail Kiosk

**Indigo Lakes Estates (Sages Primary 100%- 180 day deadline- completed in 120 days)
(work done 11-2020 through 03-2021)**

- Community Equestrian Trail Repairs and Improvements (Magnolia Texas)
 - Repaired 5 of the 7 miles of trails that were moderately to severely eroded
 - Installed 21 hardened drainage/creek crossings
 - Installed / Revised 25 + water management / diversion structures
 - Repaired / Revised adjacent drainage systems to minimize impact to trail
 - Built up 12 + low spots totalling ¼ mile of trail tread area

**The Woodland Hills Community (Sages Primary 100% No Deadline) (work done 3-2021
and is still active)**

- Multi-Use Nature Trail (Conroe Texas)
 - Trail Design, Layout and Construction (5 miles to date)
 - 2 Timber Bridges (One 40 foot and one 20 foot)
 - 14 hardened drainage crossings
 - 0.5 mile total of tread build up sections

Camp Cho Yeh (Livingston TX)

- Repaired 1 mile plus of existing trail and improved fall line layout with reroutes and/or water diversions.

Frontera Inc (Marfa Tx)

- Performed initial consultation and layout of nearly 6 miles of trail through rugged mountainous terrain in The Davis Mountain area.

Memorial Park Conservancy Houston TX (Sages Primary 100%)

- Sages repaired and improved many sections of trails in the Memorial Park Trail System. Work included, removing and replacing several bridges with interlocking paver hardened crossings, installing water diversions on erosion prone fall line trails, improving drainage across and around trail to prevent standing water on trails tread, adding milled asphalt to depression areas on trail and various other "as directed" projects.

USFS C57 Trail Bridge Repair Project Huntsville TX (Sages Primary 100%)

- Repaired failed Sutter abutment on 60' FRP bridge
- Replaced decking on bridge

Houston Parks Board (sub contractor to Times Construction)

- Built 4 miles of natural surface trails.
- Installed 12 wick craft bridges (20' to 8')
- Installed 6 revetment paver hardened crossings
- Installed 1 mile of helical pile & cable boundary fence

References

For Louisiana related projects and services;

American Sportsman LLC

Company is out of business and no known contacts available.

Willis & Suire Forestry Consultants LLC

671 Dry Bayou Rd
Washington, LA 70589

Jeff Willis (337) 254-4811 jeffww2001@yahoo.com

Daniel Suire (337) 658-9662 dnlsuire@yahoo.com

For Malaysia related projects;

Wim Van Vliet +60 19 885 6514 wimvanvliet123@hotmail.com

For Texas related projects and services;

Bayou Land Conservancy

281 576-1634

Suzanne Simpson Land Stewardship Director (Prime Contact)
Becky Martinez Conservation Director

Indigo Lakes Estates

Ann Petry, President (PAST)
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Caring for the land and serving people



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Caring for the land and serving people

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La Porte Trail Bridge Replacements



394 FM 1375 West
New Waverly, TX 77358
www.fs.fed.us



Caring for the land and serving people

For personal reference;

Derrick W. Lewis
13247 Stonecrest Lane
Conroe, Texas 77302
936 446 2829

Trail Equipment for 4C Project

The following list includes Trail specific (4'- 5'wide) equipment that will be employed for the project that enables a lesser footprint in the trail corridor and meet requirements set for minimizing disturbances,.

- | | |
|--|----------|
| 1. TB 225 Excavator | 4' Wide |
| 2. ASV RT 40 CTL | 4' Wide |
| 3. CTL Brush Cutter | 4' Wide |
| 4. CTL Dozer Blade | 4' Wide |
| 5. ASV RT 50 CTL | 5' Wide |
| 6. HD Trail Dump Trailer | 5' Wide |
| 7. ATV & Trail Trailer | >4' Wide |
| 8. F250 Ford HD Pickup | |
| 9. HD 16' Dump Trailer | |
| 10. 35' Gooseneck Trailer | |
| 11. 14' Utility Trailer | |
| 12. Generators | |
| 13. Chainsaws | |
| 14. Stihl HD Brush cutter | |
| 15. Roller Compactor | |
| 16. Plate Compactor | |
| 17. Digga Helical Pile Driver | |
| 18. Portable 8k Winch and tackle system | |
| 19. Various electrical hand tools and construction devices | |
| 20. Portable welding equipment | |

Pricing

For the execution of the services, SAGES is providing the below price for completion of the project.

Trail Bridge Pricing		
Amount	Description	
2	40' x 8' Trail Bridges Per above design diagrams	\$143,878.62
1	Engineering Stamped Design Shop Drawings	\$10,508.00
	TOTAL	\$154,386.62
<p><u><i>This pricing includes all materials, supplies and related operational and business expenses required to complete the project.</i></u></p>		

Project Communications

The below contact details are provided for all project related communications.

CJ Bernard



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