INTRODUCTION

Corrigan OSB, L.L.C. (Applicant) began evaluating the need for and feasibility of constructing a new oriented strand board (OSB) facility in 2014. During its feasibility assessment the Applicant evaluated different locations for the availability of sustainable supply of raw materials, proximity to the product market, availability of adequate infrastructure, environmental impacts, including impacts to jurisdictional waters, and other important factors. This document describes the analysis that ultimately led to the selection of the preferred location and layout of the proposed facility.

Project Purpose and Need

The purpose of the proposed project is to construct an OSB facility in east Texas capable of producing up to 900 million square feet (MSF)/year of OSB product with access to available wood supply to satisfy the demands of the regional and national construction markets.

Current market forecasts indicate a need for OSB to fill a supply gap of over 6 billion square feet in the US by 2018. This volume of OSB must come from incremental production that, today, is not available in the marketplace. While the construction of the Corrigan OSB facility will not entirely remedy this shortfall, it will be relied upon to fill a large portion of our country's future needs.

Over the next several years, North American structural panel markets are projected to grow by over 30% as housing starts to gradually increase to 1.5 million units. This growth is anticipated to be even more significant within the markets of the Southwest US, the primary markets serviced by the proposed Corrigan OSB facility. As an example, by 2018, half of all new housing starts in the US are forecasted to occur within this Southwest region of the country, requiring a higher percent of production from the area. The necessary production capacity does not currently exist. Exacerbating this need is the fact that overall panel production capacity has dwindled from 43 billion square feet in 2005 to only 27 billion square feet today. Plants that were shuttered during the economic downturn are no longer operational and those that were curtailed cannot practically serve the region due to substantial freight disadvantages.

SITING CRITERIA

Geographic Area

The first step in the feasibility assessment was to identify the general geographical location that potentially has sufficient sustainable raw material available to supply the proposed new plant, as well as the necessary infrastructure for transportation and operation. The availability of sustainable raw material is the primary siting factor that must be evaluated and satisfied to ensure the economic feasibility of an OSB plant. In assessing whether particular geographic areas could supply adequate volumes of raw material, the Applicant considered the following three criteria:

1. Whether the area can supply adequate volumes of raw material without threatening the long-term sustainability of the natural resource;
2. Whether the area can supply sufficient volumes of material without threatening project viability due to freight logistics and costs; and
3. Whether the area can supply volumes of raw materials that are reasonably priced in a fair and open market.

Based on market analysis, the ideal area containing an adequate sustainable raw material supply proved to be east-central Texas.

Supply Region within Area

An evaluation was then performed to determine the region(s) within this area with available sustainable raw materials to supply the proposed new facility. Once the region was determined, necessary infrastructure was evaluated and it was decided that Polk County, and specifically the area near the City of Corrigan would be an optimal location. The Applicant's sustainable wood basket study was determined to be an 85 road-mile zone surrounding Corrigan, Texas. Fifteen counties lie within this supply region.

Based on both internal and independent resource assessments performed on behalf of the Applicant, the supply region surrounding Polk County, Texas has the sustainable inventory and infrastructure necessary to supply pine pulpwood to the proposed Corrigan OSB facility, to all existing participants in the market, and to support some additional level of future demand. In addition, growth will outpace removal in the supply region despite the addition of the proposed facility and a hypothetical new market entrant. According to the US Department of Agriculture (USDA) Forest Service's Forest and Inventory Analysis database, the land base of the aforementioned fifteen-county supply region is 8.86 million acres, of which 4.72 million acres or approximately 53% are private timberland. The area has a long history of silviculture and the production of high-quality forests to meet diverse needs and values.

Specific Criteria

The Applicant searched for candidate sites located in this East Texas Piney Woods region, of which nearly all of the forest is classified as timberland suitable for production of timber products, and produces nearly all of the commercial timber in Texas. The Applicant used the following siting criteria when screening possible sites for the proposed project:

1. *Rail Access*

   The selected site must afford the possibility of accommodating rail access as part of long-term facility planning. Rail access was a limiting and determining factor when evaluating potential sites for the proposed facility. It was determined that the Union Pacific Railroad (UPRR), specifically the operation from Lufkin, Texas south to Goodrich, Texas, is capable of providing access in this region. The UPRR refers to the section of track that runs through the Corrigan area as "The Rabbit". The track has numerous horizontal and vertical curves connected with short tangent sections of track that are classified as "controlled access track". The speed is limited due to the track alignment with many track sections having 25 and 45 mph speed limits.

   The UPRR provides local service with a train traveling south out of Lufkin. To service a facility in the pertinent area, the train would be required to pull entirely off of the main line onto a dedicated siding (i.e. side track), and then pull into the site with empty railroad cars that would be released for loading. The train would then continue south. During the returning northbound journey, the train would travel back into the site, pick up the full railroad cars ready for shipping and continue north.

   This operation requires over a mile of siding track with double end switches, in addition to the turnouts and track into the facility. The turnout from the siding into the facility needs to be

located in the center of the siding allowing sufficient space on the siding for the train to pull off the main line and still access the turnout into the plant. Turnouts cannot be installed on horizontal or vertical curves and cannot be installed within 300 feet of a road.

2. *Access to Highways*

The proposed project site must have direct access to highways for transporting wood supply to the facility and finished product from the facility to the Applicant's local, regional, and southwest markets. In addition to existing roads, proximity to planned highways was considered for meeting future transportation needs.

When evaluating highway access, the Applicant considered the ability of infrastructure to handle the heavy traffic volume associated with the planned facility. Once the facility is operational, an average of over 250 trucks (log and flatbed) will access the facility every day of the year delivering raw materials and shipping finished product. Additional traffic will include wax and resin trucks. This large number of trucks requires wide access roads and highway acceleration and deceleration lanes for safe operation. The access road must be wide enough to accommodate: side-by-side passage of semi-trailer trucks; an adequate shoulder on each side of the roadway; a design capable of adequately draining the roadway and shoulders; and sufficient set-back from the adjacent forest canopy to allow sunlight to dry the roadway. The area alongside the access road must also be set-back a sufficient distance from the adjacent forest canopy to prevent any storm damage to secondary power lines which will be located along the access road.

3. *Availability of Utilities*

The proposed project site must have access to economical utility services. Utility services evaluated included sanitary sewer service, potable water supply, and the availability of a major transmission line for electricity able to reliably supply power for 35,000 connected HP motors. The site needs to be within 1-mile of the transmission line. The cost associated with power was a significant part of the site selection process.

The proposed plant also requires a natural gas supply of 150 MCFH for the operation of the auxiliary thermal oil heater as well as a back-up source of heat for operation of the wood dryers.

4. *Topography*

Due to the variable topography in east-central Texas, potential sites were assessed to determine whether the topography would make the engineering and construction of the proposed plant economically impracticable. As part of this assessment, the Applicant considered the extent to which site topography would require significant grading as grading may increase the project footprint and has the potential to increase impacts to jurisdictional waters.

5. *Suitable Acreage for the Plant*

The proposed project site must have a minimum of approximately 200 acres of usable acreage to construct a facility capable of producing 900 MSF/year of OSB product. The project size could not be reduced below 200 acres and still meet the purpose and need of the Applicant. The 200 acres does not include access roads, which would also be required to construct the facility or the buffer land described in criterion 6.

6. *Suitable Acreage for Buffering*

   The ideal project site would include additional acreage to provide a visual and noise buffer to surrounding property owners and communities. An OSB plant, particularly the de-barker unit, is very loud and having timbered acreage between the facility and neighboring properties reduces potential noise impacts. The ideal project site would include additional acreage to provide a noise buffer of a least 4,000 feet between the strander equipment and surrounding residences. Buffering for ambient light associated with 24 hour operation was also a consideration when selecting a site.

7. *Environmental Impact*

   The proposed project site must be the least damaging to the environment, including impacts to jurisdictional waters, while still meeting the siting criteria and design needs of the project.

ALTERNATIVES

The Applicant considered and analyzed a no action alternative and three different siting location alternatives (Figure 1). Once the preferred site was identified, the Applicant considered multiple on-site alternatives. The Applicant considered over 20 different plant layouts, which have been grouped into four general alternatives for the purpose of this analysis (Figure 5). Only after considering the various iterations of the four main alternatives did the Applicant select the proposed project footprint. Due to the size requirements of the proposed facility and topography and hydrology of east-central Texas, completely avoiding impacts to jurisdictional waters, was not feasible.

No Action Alternative

For the No-Action Alternative, the Applicant would not develop an OSB facility in east-central Texas. While the No-Action Alternative may not impact existing ephemeral streams, positive steps to enhance aquatic habitat through mitigation would not be required of the Applicant.

The No-Action Alternative may also result in significant, adverse environmental impacts related to increased transportation activities. Without an OSB facility in east-central Texas located near both sustainable raw materials and customers, additional trucking would be required to satisfy market demand. The No-Action Alternative would therefore be expected to have higher transportation-related impacts associated with the long distance shipment of both raw materials and finished product, including increased air emissions from diesel trucks.

The Applicant also determined that the No-Action Alternative would result in market demand for OSB not being satisfied and potential adverse impact on the commercial and residential construction markets. The American Plywood Association's recent projections for the availability of North American OSB to meet housing starts included the assumption that Ainsworth, a competitive OSB supplier, would continue to operate its OSB mill located in Grand Prairie, Alberta, Canada and the projection that two currently shut-in OSB mills in Quebec, Canada (LP and Norbord) would reopen and begin producing OSB. Since that time, Ainsworth has begun moving its Grand Prairie OSB plant (which supplies OSB to the region serviced by the proposed Corrigan facility) to Scotland and both LP and Norbord elected not to renew their pulpwood

contracts with the Crown (a clear confirmation that those two Canadian plants are not likely to be in production in the future).

The elimination of those assumed sources of capacity is significant. Without those three facilities, the capacity to produce OSB in North America could fall short of the capacity needed to meet 1.5 million housing starts.

The unsatisfied demand may result in the expansion of existing OSB plants in areas other than east-central Texas. These expansions could threaten the sustainability of natural resource in other operating areas, create distorted raw materials markets, and overrun current harvesting and trucking capacities that are already strained in certain communities outside the Corrigan OSB sustainable wood basket. Further, the region would not realize the temporary and permanent job opportunities associated with the construction and operation of the proposed facility. Thus, the No-Action Alternative would fail to achieve the economic benefits associated with an east-central Texas OSB plant. For these reasons, the No-Action Alternative was eliminated.

Site Alternatives

The Applicant assessed three possible sites for the OSB plant (Figures 1, Figure 2, and Figure 3). These three sites, Site Alternative 1, Site Alternative 2, and Site Alternative 3 (location of the preferred layout), are discussed below.

Site Alternative 1 (SA-1)

SA-1 is a 260-acre tract located approximately 7.5 miles north-northeast of Corrigan, TX and adjacent to the northwest corner of the intersection of US Highway 59 and FM 357 (Figure 2 and Figure 3). SA-1 was evaluated against the siting criteria and the results were as follows.

Rail Access – SA-1 is located adjacent to the UPRR. Early in the site selection process, the Applicant was informed by the UPRR that a turnout from the existing track would not be possible to SA-1. SA-1 was eliminated due to limitations for rail access following coordination with UPRR.

Access to Highways – SA-1 is bordered to the south by FM 357. FM 357 did not provide suitable access for the size and volume of trucks that will enter and leave the proposed facility each day. Highway access from FM 357 is limited to one small area that will allow the adequate sight distance. In addition, to be serviceable as an access point, FM 357 would need to be rebuilt in this area and upgraded to support the heavy traffic volume. TXDOT would have also needed to improve the FM 357/US 59 intersection to include additional acceleration, deceleration, and turning lanes. The access road from FM 357 would follow the existing logging roads located along a ridge, but would require significant widening and re-grading of the existing roads to accommodate the anticipated truck traffic.

Alternatively, SA-1 could be accessed from US 59, but that access point would require the construction of a longer road than access to FM 357. The entrance road to US 59 would form a new intersection with US 59. The intersection would have to be located so as to allow for the construction of acceleration, deceleration, and turning lanes to ensure the public safety on the highway.

Availability of Utilities – SA-1 does not have access to sanitary sewer service or potable water service. Sanitary sewerage would have to be treated on-site and discharged. Construction of a

treatment plant would result in an increased footprint of the site. Any increase in footprint has the potential for environmental impacts and therefore an alternative such as SA-1 that required a larger footprint was not considered favorable.

Further, there are no major electrical transmission lines or natural gas lines located directly adjacent to SA-1. To provide these utilities to SA-1, the Applicant would have to clear additional areas for a transmission line.

Topography – The topography of SA-1 proved to be prohibitive from an engineering standpoint. There is significant change in elevation (approximately 50-100 ft) from south to north and similar significant changes in elevation from west to east across SA-1. The need for additional grading could result in an increase in the overall footprint. Given environmental resources at the site, the greater footprint had the potential for increased impacts to wetlands and other jurisdictional waters. Additional grading could also result in an increase of air emissions during construction as well as increased traffic when removing material not suitable for use as fill.

Suitable Acreage for the Plant – SA-1 contains suitable acreage to construct the facility needed.

Suitable Acreage for Buffering – Given the size of the parcel it is unlikely that sufficient buffering from adjacent properties exists at SA-1.

Environmental Impact of the Project – Based on a review of US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data, US Geological Survey (USGS) topographic maps, Natural Resource Conservation Service (NRCS) soil data, 2014 USDA National Agriculture Imagery Program (NAIP) imagery, 2012 USDA NAIP imagery, 2008/2009 Texas Orthoimagery Program (TOP) natural color (NC) imagery, 2008/2009 TOP color infrared (CIR) imagery, 2008 Texas Farm Service (TFS) CIR imagery, and 1996 TOP CIR imagery, there are approximately 15,000 linear feet of potential other waters of the US (OTWs) and no potential wetlands within SA-1. Thus, SA-1 would result in lesser impacts to jurisdictional waters than SA-2, and greater impacts to OTWs than SA-3.

Conclusion – Ultimately, SA-1 was eliminated due the limitations associated with rail access, highway access, topography, lack of available potable water and sanitary sewer service, lack of electrical and natural gas service, and environmental considerations. Selection of this site would have resulted in a potential increase in environmental impacts to potential jurisdictional waters during construction when compared to SA-3.

Site Alternative 2 (SA-2)

SA-2 is a 499-acre tract located approximately seven miles north-northeast of Corrigan, Texas, and directly south of SA-1 (Figure 2 and Figure 3). SA-2 is adjacent to the southwest corner of the intersection of US Highway 59 and FM 357. SA-2 was evaluated against the siting criteria and the results are as follows.

Rail Access – SA-2 is located adjacent to the UPRR. Regarding rail access for SA-2, the intersection of FM 357 and the UPRR is located at approximately Station 5274+78. The UPRR is in a horizontal curve at the crossing that extends approximately 400 feet south of the intersection of FM 357 where the UPRR begins a tangent track that would allow for the installation of a turnout into the UPRR main line. There are two additional tangent track sections going south from FM 357 with a bridge located at station 5189+68. Although this site was not eliminated due solely to rail access

restrictions, Applicant's engineers learned of potential acreage restrictions to accommodate UPRR's requirements for double ended siding for switching tracks.

The horizontal and vertical alignment of a proposed track would make the provision of rail service to SA-2 impractical. The estimated elevation of the track at the projected point where the lead track enters the plant sets the elevation of the rail line (the midpoint of the main line siding). The limiting factors that affect the design of the track into the facility and ultimately the design of the facility begin with the tie-in to the rail elevation.

Although the UPRR allows track to be constructed at slopes up to 2%, based on over 30 years of designing tracks served by the UPRR and observing the difficulties the locomotives have starting and stopping cars on the maximum allowable slopes, Applicant's engineers have determined that a more prudent upper design limit is 1.75%, with a preferred maximum at 1.5%. On steeper grades, the locomotive will burn and deform the rail when starting and stopping as the wheels break traction and spin. An additional factor for not designing at the upper allowable limit of rail slope is that if the plant design requires the track to be shortened, there is no room to adjust the track elevations.

Based on Applicant's engineers review of the rail elevations, the tie-in to the UPRR in the area that would allow for rail access into SA-2 would be at an estimated elevation of 219 feet Mean Sea Level (MSL). Assuming 1,000 feet of lead track from the siding into the facility on a 1.5% slope, the maximum elevation of the track in the warehouse would be set at 234 feet MSL. This elevation sets the elevation for the warehouse slab and the main production building (the warehouse, finishing equipment, and forming line press are all set with a common finished floor elevation). Thus, to allow for a tie-in to the UPRR, the sloping terrain would have to be graded to an elevation of 234 MSL over the entire plant footprint, requiring significant cutting and filling.

Access to Highways – Like SA-1, SA-2 would need to access either FM 357 or US 59. SA-2 is bordered to the north by FM 357. FM 357 did not provide suitable access for the size and volume of trucks that will enter and leave the proposed facility each day. Highway access from FM 357 is limited to one small area that will allow the adequate site distance. In addition, to be serviceable as an access point, FM 357 would need to be rebuilt in this area and upgraded to support the heavy traffic volume. TXDOT would have also needed to improve the FM 357/US 59 intersection to allow for new acceleration, deceleration, and turning lanes. The access road to FM 357 would follow existing logging roads located along a ridge, but the existing roads would need to be significantly widened to accommodate the heavy traffic volume.

Alternatively, SA-2 could also be accessed from US 59, but that access point would require the construction of a longer road. The entrance road to US 59 would form a new intersection with US 59 and would have required TXDOT to construct a new intersection with US 59 to ensure the public safety on the highway, requiring the addition of turning lanes, acceleration lanes, and deceleration lanes.

Availability of Utilities – SA-2 does not have access to potable water or sanitary sewer service. Sanitary sewerage would have to be treated on-site and discharged. Construction of a treatment plant would result in an increased footprint of the site. Any increase in footprint has the potential for environmental impacts and therefore an alternative that required a larger footprint was not considered favorable.

Furthermore, there are no major electrical transmission lines or natural gas lines located directly adjacent to SA-2. To provide these utilities to SA-2, additional land clearing associated with a new transmission line would be required.

Topography – The topography at SA-2 is not prohibitive for construction; however, the need for additional grading when compared to the proposed layout could result in an increase in the overall footprint. Given environmental resources at the site, this would then result in a potential for increased impacts to wetlands and other jurisdictional waters. Additional grading could also result in an increase of air emissions during construction as well as increased traffic when removing material not suitable for use as fill.

Suitable Acreage for Plant – SA-2 contains suitable acreage to construct the facility.

Suitable Acreage for Buffering – Given the size of the parcel it is unlikely that sufficient buffering from adjacent properties exists at SA-2.

Environmental Impact of the Project – Based on a review of USFWS NWI data, USGS topographic maps, NRCS soil data, 2014 USDA NAIP imagery, 2012 USDA NAIP imagery, 2008/2009 TOP NC imagery, 2008/2009 TOP CIR imagery, 2008 TFS CIR imagery, and 1996 TOP CIR imagery, there are approximately 24,000 linear feet of potential OTWs and no potential wetlands within SA-2 based on a desktop assessment of the site. Thus, SA-2 would result in greater impacts to OTWs than the proposed project footprint.

Other – Sample borings were drilled at SA-2 for review of the site soils. The boring locations were limited to sites that could be accessed from existing logging roads and were widely spaced. These borings indicated an expansive clay soil near the surface which would require the use of special footings, under cut, and possible import of additional select fill. Although construction at this site would be possible, extensive engineering and additional construction would be required.

Conclusion – SA-2 was eliminated due to lack of electricity, potable water, sanitary sewer services and natural gas services, concerns about railway access, highway access constraints, and potentially greater impacts to potential OTW's when compared to SA-3. Further, there does not appear to be sufficient buffer for adjacent property owners.

Site Alternative 3 (SA-3)

SA-3 is an approximate 1,708 acre tract within the larger 8,900-acre geographic area known as the Polk County Industrial Site (Figure 4). This area was suggested to the Applicant by the Polk County Economic and Industrial Development Corporation during the initial stages of project planning. The area was prequalified under the Texas Site Selection criteria and listed on the "Texas, Wide Open for Business" website.

Within the Polk County Industrial Site, the Applicant evaluated potential locations for the proposed plant. The Applicant needed reasonable and dual vehicular access points to the property in case of emergencies and the need to evacuate the facility should any catastrophic event interrupt ingress and egress. In order to accomplish this, potential locations that provided access to both US 287 and US 59 were more desirable. The Applicant also needed to be positioned for significant commercial traffic (log trucks and flat beds) coming from and delivering to both the southern and northern regions from the facility which further supported a location more towards

the northeast portion of the Polk County Industrial Site. Considering access points to the north and east, the Applicant's goal was to afford plant traffic the opportunity to merge with vehicular traffic with the least exposure to risks. The location complemented a road layout that connected eastward with Hwy 59 south of the city limits of Corrigan, TX and its associated traffic as well as entering Hwy 257 northward, west of the public school and concentrated student bus traffic. Rail access was also a major consideration which eliminated the eastern portions of this area.

Adequate electrical service is provided only along the northern borders of the property and Entergy suggested the limit of distribution to no more than one mile from existing transmission lines in order to limit impacts to surrounding owners and stakeholders from rights of way and other necessary servitudes.

Proximity to residential development was also a consideration when locating the facility. The nearest neighbor is located at the southern end of Martin Luther King Blvd. To limit residents' exposure to noise, both distance (no nearer than 4,000 feet) and cover/buffer were taken into account. Ambient light exposure to residents and adjacent properties associated with continued operations was also a consideration. Ultimately, the plant site that emerged as the most feasible based on all of the siting criteria was a 1,708-acre tract within the Polk County Industrial Site. This 1,708-acre tract is referred to as SA-3 and hereafter as the Preferred Alternative. The Applicant's evaluation of the siting criteria for the Preferred Alternative is as follows:

Rail Access – The Preferred Alternative is located directly to the west of the UPRR in a favorable location for tract alignment and layout within the plant. There are no engineering constraints for constructing a rail spur from the warehouse to the UPRR. Therefore, this criterion is met at the Preferred Alternative.

Access to Highways – The location of the proposed site is preferable to either SA-1 or SA-2 alternatives as the majority of truck traffic will be coming from the west via US 287. Truck traffic would have to continue traveling east along US 287 and utilize US 59 and FM 357 to access alternative sites SA-1 and SA-2. As previously stated, neither FM 357 nor the US 59/FM357 intersection could adequately support the increased truck traffic volume without significant modification. Access to the Preferred Alternative requires only minimal upgrades to existing highways.

Availability of Utilities – The Preferred Alternative will have sanitary sewer service with the City of Corrigan and therefore, unlike the other sites considered, will not require the construction of a sewage treatment facility.

In addition to sanitary sewer services, the Applicant has contracted with the City of Corrigan for potable water. The terms of this contract provide that the City will use the funds received to upgrade its sewage treatment system to the benefit of both the Applicant and the citizens of the surrounding community and the environment.

The availability of potable water from the City of Corrigan is important. One of the many requirements for large industrial facilities is the need for fire protection of the facilities. As a part of providing coverage for such large facilities, insurance companies require a reliable supply of water in the quality and quantities required to protect the plant. One of the requirements is to be able to supply water at a design flow rate for two hours and then to be able to re-supply this

volume of water after the fire event in an eight hour period. For a plant like Corrigan, this requires at a minimum 850 gallons per minute (gpm) and more preferred a 1,000 gpm water supply source. The water well for this site can supply this volume of water, and the addition of water supply from the City of Corrigan at a maximum rate of 500 gpm provides an additional advantage for this site.

As referenced above, an electrical transmission line is located along the northern border of the property. Thus, the Preferred Alternative will have access to electricity necessary for plant operations.

The Preferred Alternative also has natural gas service. Discussions with the natural gas supplier indicated natural gas could be installed in the existing Entergy power right-of-way from the source to the proposed plant, reducing the amount of right of way needed to be cleared.

Topography – Although not prohibitive, topography within the Preferred Alternative presented some engineering challenges. The Applicant's engineers adjusted the site layout to optimize use of the site's topography while working to minimize environmental impacts to the extent practicable. The soils at the site are not as expansive as those at the other sites considered, and have excellent bearing capacity according to Applicant's project engineers. The advantage of this is that no off-site select fill is required. Further, no piling or deep foundations are required. These factors reduced the overall amount of site grading required when compared to the other sites considered.

Suitable Acreage for the Plant – The Preferred Alternative has suitable acreage for construction of the facility.

Suitable Acreage for Buffering – The Preferred Alternative has significant buffering potential. Specifically, the land between the proposed OSB plant and neighboring properties is currently used for timber and is owned and controlled by the applicant. There is a sufficient buffer such that noise and ambient light exposure to others in the community should be minimal.

Environmental Impact of the Project – The Applicant and its engineers evaluated several alternative layouts to determine which layout reduced environmental impacts to the greatest extent practicable. Those impacts are discussed below. The Applicant notes, however, that the "Preferred Layout" involves fewer impacts to jurisdictional waters than the potential impacts anticipated had the facility been constructed at either SA-1 or SA-2.

COMPARISON OF SA-1, SA-2, AND SA-3 (The Preferred Alternative)

The Preferred Alternative (SA-3) is the only alternative that meets all project objectives while at the same time minimizing impacts on jurisdictional waters. A summary matrix describing whether a site met or did not meet the criteria is provided below.

Criterion	SA-1	SA-2	Preferred Alternative
Rail Access			
Highway Access			
Utilities			
Topography			
Plant Acreage			
Buffer Acreage			
Environmental Impact			

Red = Did not meet
Yellow = Did meet, Presented Significant Challenges
Green = Did meet

PREFERRED ALTERNATIVE LAYOUTS

This section describes the various alternative designs located within the 1,708 acre tract (Figure 5). Applicant's engineers and environmental planners worked to locate the footprint and size the facility such that it minimized impacts to the environment to the extent practicable.

Preferred Alternative Layout 1 (PAL-1)

PAL-1 is the original 308-acre project footprint (Figure 6). This footprint approximately 8,257 linear feet of OTWs approximately 7,757 linear feet of a perennial stream (Dry Creek) and unnamed tributaries within the Dry Creek floodplain. PAL-1 included two entrance roads providing access to the facility from both US 287 and US 59 and a rail spur. PAL-1 was reviewed and eliminated due to the potential impact to a perennial stream. The Applicant re-designed the project footprint to decrease the overall size and reduce impacts to jurisdictional waters.

Preferred Alternative Layout 2 (PAL-2)

PAL-2 is the 263-acre re-designed project footprint which resulted in decreased impacts OTWs (Figure 7). This footprint included approximately 610 linear feet of impacts to OTWs. PAL-2 would not result in any perennial stream loss. The entrance road providing access from US 59 was eliminated from the project footprint. The design of the proposed entrance road from US 287 associated with SA-2 was considered preliminary and subject to change pending completion of the final design. The entrance road from US 287 to the facility was re-designed following the elimination of the entrance road from US 59 and to provide a more feasible crossing of Bear Creek.

Preferred Alternative Layout 3 (PAL-3)

Throughout the design of the proposed project, the footprint of the plant equipment, buildings, and pavement has been reduced as much as possible. Through modification of the equipment layout, the elevation difference from the log crane to the warehouse has been set at 16.5 feet. By setting the log yard higher than the warehouse, Applicant reduced the overall plant footprint by 450,000 square feet (10.33 acres). An additional area of 240,000 square feet (5.50 acres) was removed from the site with changes in equipment and conveyor design, further reducing the footprint of the entire facility.

PAL-3 is the 284-acre project footprint which resulted in similar impacts to OTWs compared to PAL-1 and PAL-2 (Figure 8.). This footprint included approximately 610 linear feet of OTWs. PAL-

3 would result in no loss of perennial streams. The redesigned entrance road succeeded in providing a more feasible crossing of Bear Creek; however, it was located slightly outside of a historic low water crossing.

PAL-3 also provides an increased noise and light buffer between the equipment (stranders, barking drum, and hog) and surrounding populated areas and school.

SELECTION OF PREFERRED LAYOUT (Proposed Project Footprint)

The Applicant's preferred layout is similar in location and layout to PAL-3; however, the Applicant has incorporated modifications designed to avoid and minimize impacts to OTWs to the extent practicable while meeting the purpose and need of the proposed project. These modifications include:

- Reconfiguring the entrance road to an area of a historic low water crossing which reduced impacts to other waters of the US;
- Reconfiguring the transmission line right-of-way to reduce impacts to potential other waters of the US;

The proposed entrance road has been re-aligned on several occasions with the final route selected determined to have the least impact on jurisdictional waters.

A review of the need to have an entrance road enter the site from US 59 was evaluated. The plant layout was adjusted to bring the incoming traffic in from the north along US 287. Shifting the entire site to the north and east allowed the final grade of the site to be adjusted, reducing the total volume of cut and fill from 2,000,000 cubic yards to approximately 1,000,000 cubic yards. This adjustment was made still allowing for the potential future rail access to the facility. The more northern site sets the plant at an overall lower elevation allowing for no future grade issues when rail access is added. The length of the entrance road from US 287 was reduced by 1,000 ft.

TXDOT recently completed improvements to US 287 at the tie-in to the proposed Corrigan OSB entrance road. Improvements include the construction of an additional left turn lane into the facility, an outbound acceleration lane, and an in-bound deceleration lane. Additionally, TXDOT intends to permanently reduce the US 287 speed limit from 75 mph to 55 mph in the location prior to construction of the highway improvements. The Applicant and its engineers have met multiple times with TXDOT to explore the issues and practicality of constructing an entrance to the plant from US 59. Several factors reviewed by Applicant and its engineers resulted in relocating the main plant entrance from US 59 to US 287. The primary entrance was originally planned to be from US 59 (see SA-1), with the project only having a construction entrance from US 287. The extent of the work required on US 59 influenced the decision to relocate the primary entrance to US 287. An entrance from US 59 would have required the construction of "looms" to allow for outbound traffic from the plant to merge with the US 59 traffic (all traffic would be forced to go south as mandated by TXDOT), then additional lanes to allow traffic to merge into the left hand lane into the loom for a direction reversal to go north, after crossing two lanes of US 59 northbound traffic. Incoming traffic from the south would merge into a north bound loom for similar crossing of US 59 before entering the plant entrance road south of the Dry Creek crossing.

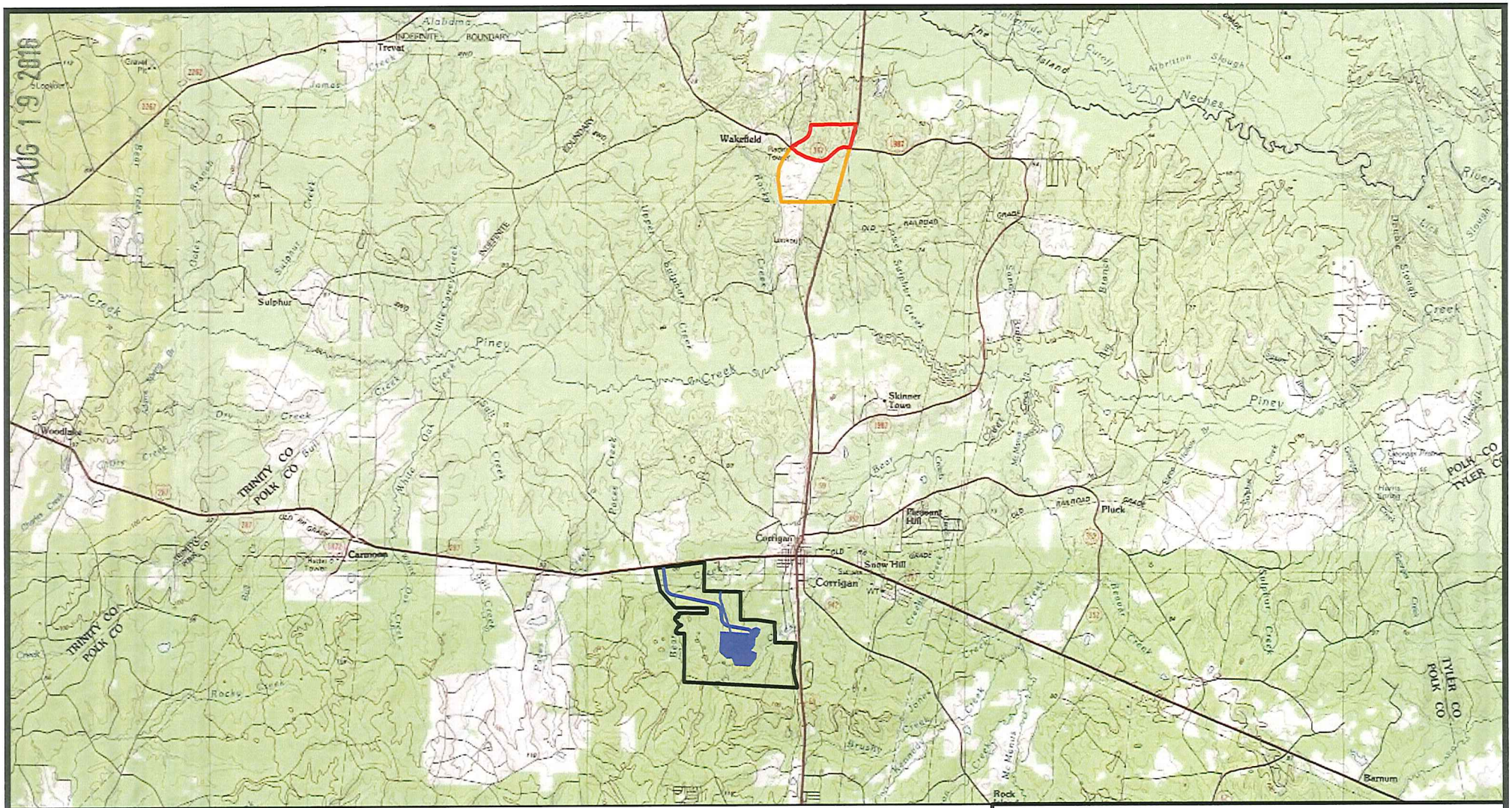
Following these modifications, the Applicant's proposed project footprint reduced the PAL-3 OTW impacts less than 1 acre. The total impacts to jurisdictional waters in the Preferred Layout are less than the anticipated impacts for PAL-1, PAL-2, and PAL-3.

Jurisdictional Waters Impact and Summary by Preferred Alternative Layouts		
Alternative	**Impacted Wetlands (acres)**	**Impacted Waters of the US (linear feet)**
PAL-1	N/A	approx. 8,257 LF
PAL-2	N/A	approx. 610 LF
PAL-3	N/A	approx. 610 LF
Proposed Project Footprint	N/A	approx. 610 LF

CONCLUSION

The Applicant's Preferred Layout (Proposed Project Footprint) would impact approximately 610 linear feet of OTWs.

The Preferred Alternative satisfies all of the siting criteria requirements for the proposed project and, compared to the other alternatives, is the most feasible area for construction of the facility that also avoids and minimizes impacts to environmental resources to the extent practicable.



Legend

- Site Alternative 1 (SA-1) (260 acres)
- Site Alternative 2 (SA-2) (499 acres)
- Site Alternative 3 (SA-3) (1,708 acres)
- Proposed Project Footprint (284 acres)

N

S

0 2 4

Miles

NOTE:
USGS 24K Series Quad Map, Wakefield, TX.

CORRIGAN OSB, L.L.C.

CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

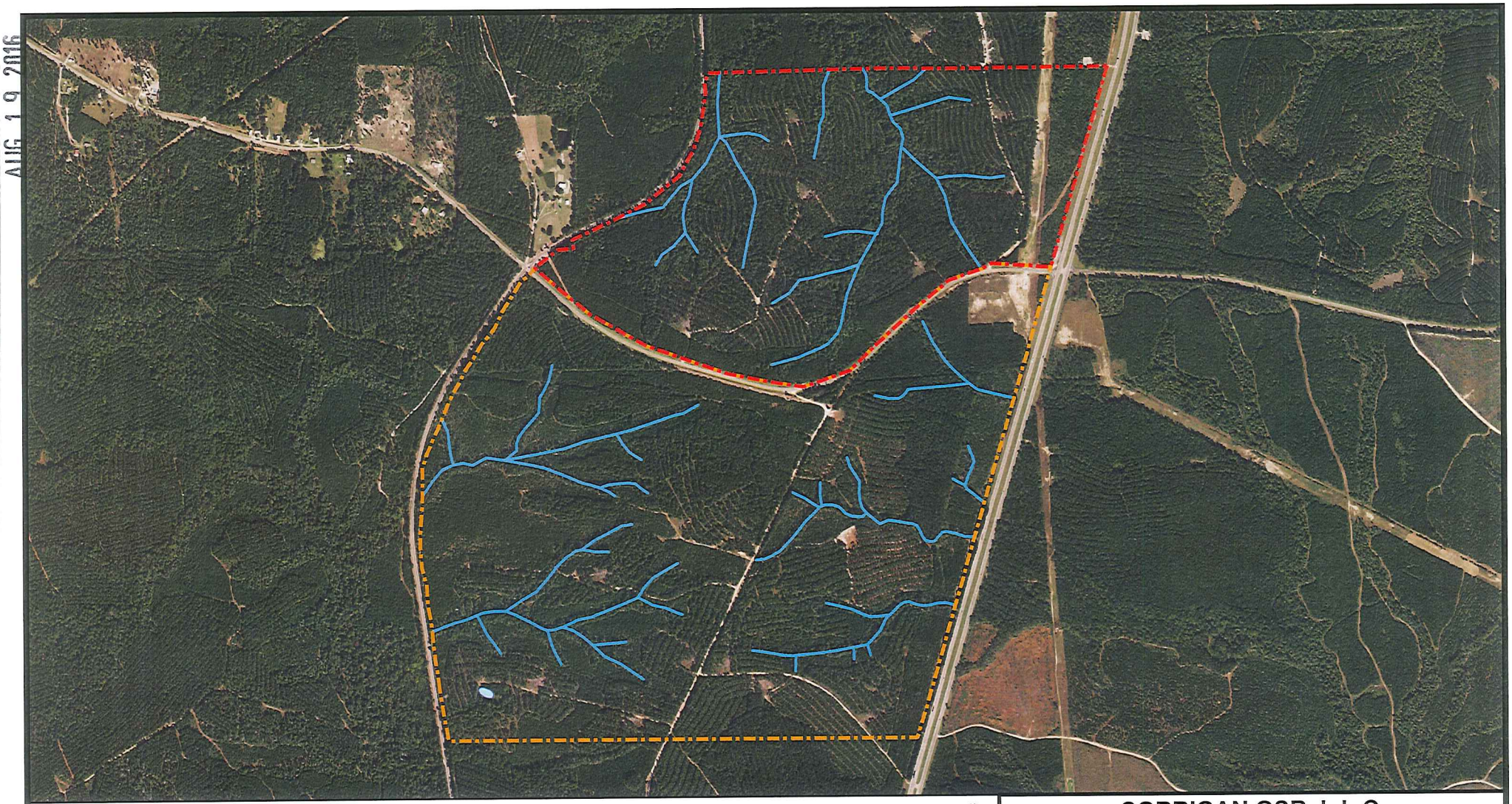
SITE ALTERNATIVE LOCATIONS

POLK COUNTY

CK Associates Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/03/2016
Dwg. No.:	A12356-51

FIGURE 1



Legend

- Site Alternative 1 (SA-1) (260 acres)
- Site Alternative 2 (SA-2) (499 acres)
- Potential Waters of the US

NWI Data

- Freshwater Pond

N

S

0 1,400 2,800

Feet

esri Partner Network Silver

NOTES:
1. Background is 2014 USDA NAIP imagery for Polk County, TX.
2. Location and extents of potential waters of the US based on desktop assessment conducted by CK.
3. NWI data from USFWS.

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

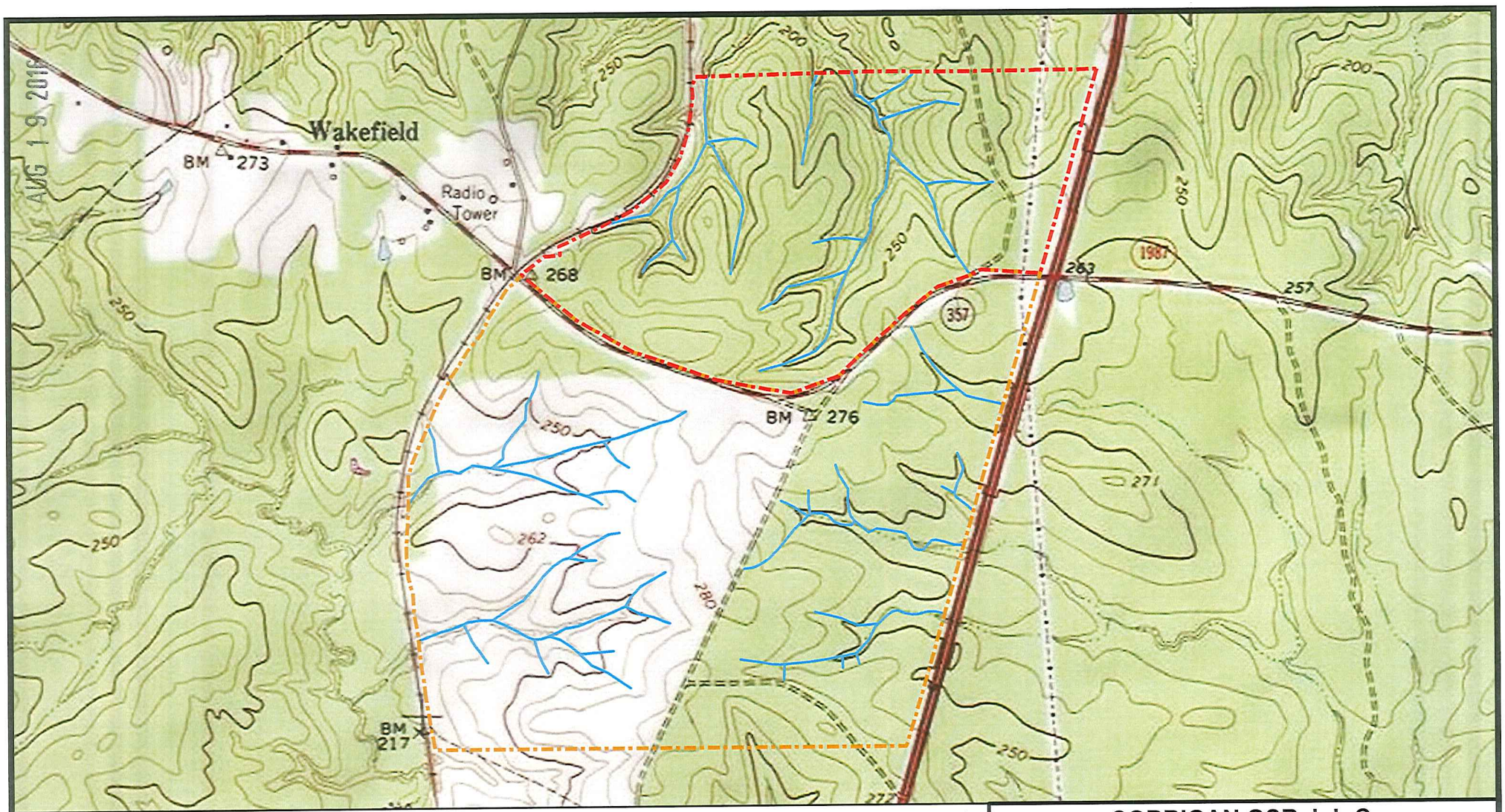
SITE ALTERNATIVES 1 & 2

POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/03/2016
Dwg. No.:	A12356-52

FIGURE 2



Legend

- Site Alternative 1 (SA-1) (260 acres)
- Site Alternative 2 (SA-2) (499 acres)
- Potential Waters of the US

N
S

0 1,400 2,800
Feet

esri Partner Network Silver

NOTES:
1. USGS.24K Series Quad Map, Wakefield, TX.
2. Location and extents of potential waters of the US based on desktop assessment conducted by CK.

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

SITE ALTERNATIVES 1 & 2 TOPOGRAPHIC MAP

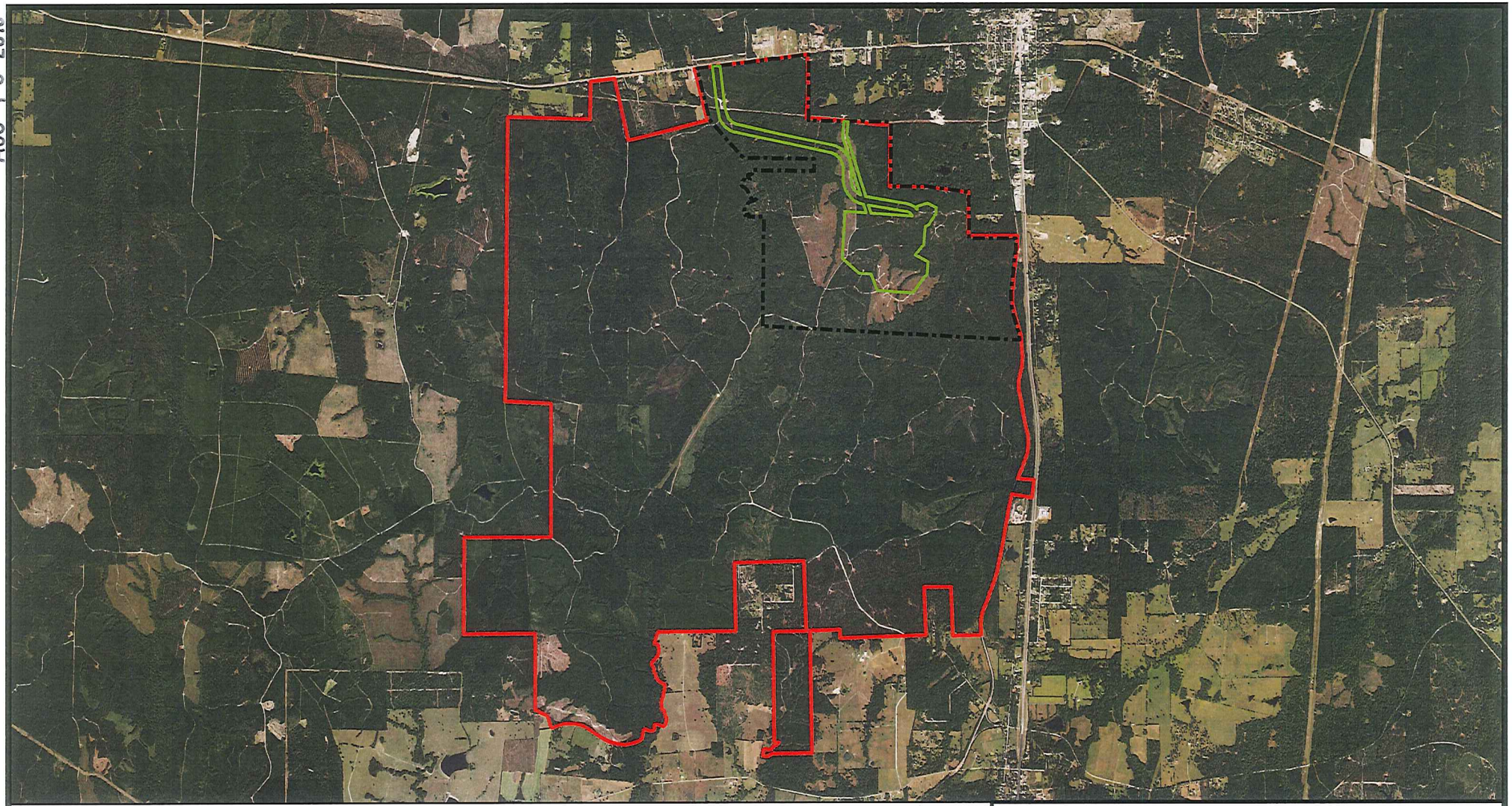
POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/03/2016
Dwg. No.:	A12356-53

FIGURE 3

AUG 19 2016



Legend

- Site Alternative 3 (SA-3) (Preferred Alternative) (1,708 acres)
- Proposed Project Footprint (284 acres)
- Polk County Industrial Site (Approx. 8,900 acres)

N

S

0 5,500 11,000

Feet

esri Partner Network Silver

NOTES:
Background is 2014 USDA NAIP imagery for Polk County, TX.

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

SITE ALTERNATIVE 3 & POLK COUNTY INDUSTRIAL SITE

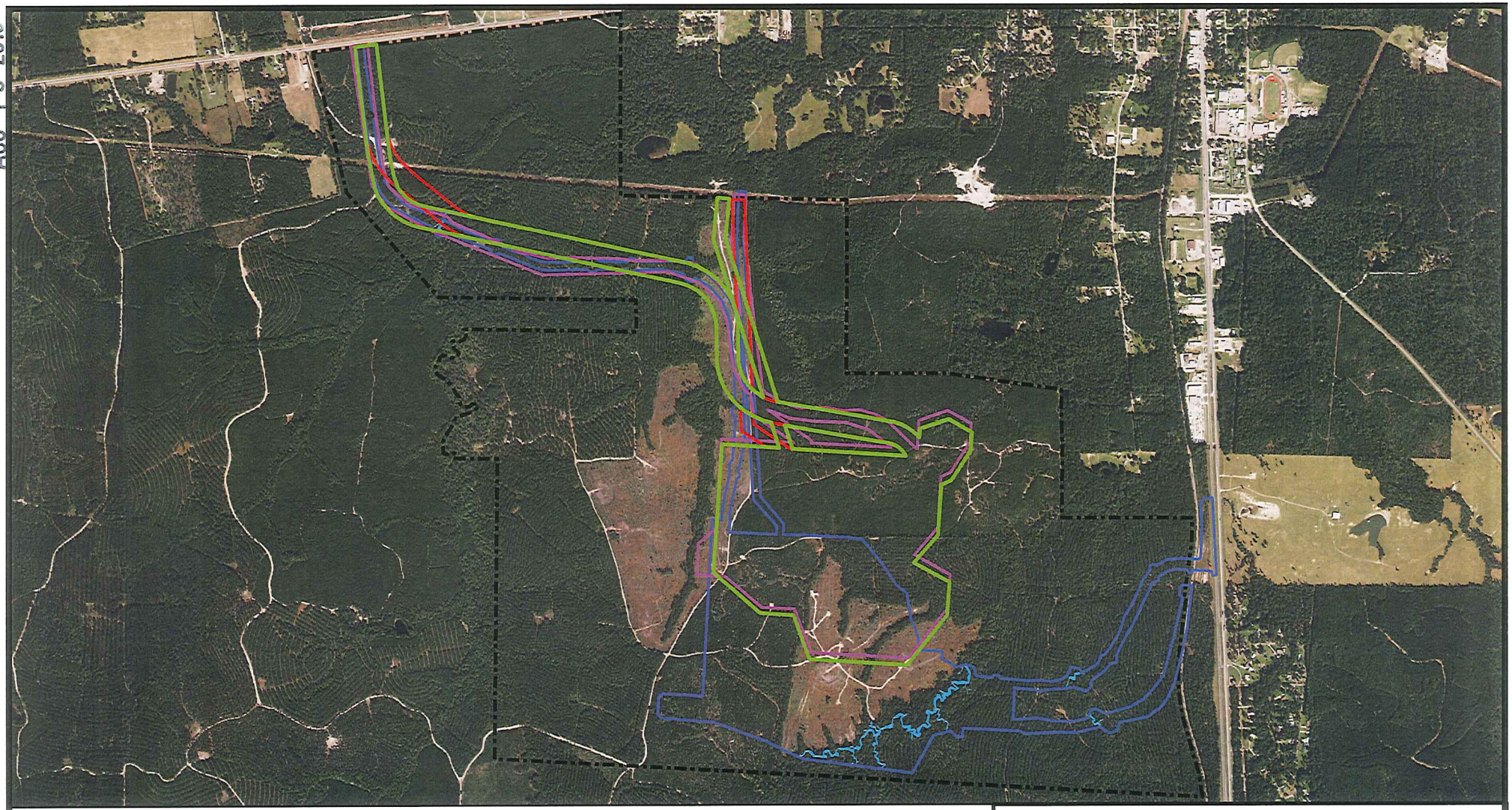
POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/03/2016
Dwg. No.:	A12356-54

FIGURE 4

AUG 19 2016



Legend

- Site Alternative 3 (SA-3) (Preferred Alternative) (1,708 acres)
- Proposed Project Footprint (284 acres)
- Preferred Alternative Layout 1 (PAL-1) (308 acres)
- Preferred Alternative Layout 2 (PAL-2) (263 acres)
- Preferred Alternative Layout 3 (PAL-3) (282 acres)
- Potential Waters of the US

N

S

0 2,000 4,000

Feet

Note:
Background is 2014 USDA NAIP imagery for Polk County, TX.

esri Partner Network Silver

CORRIGAN OSB, L.L.C.

CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

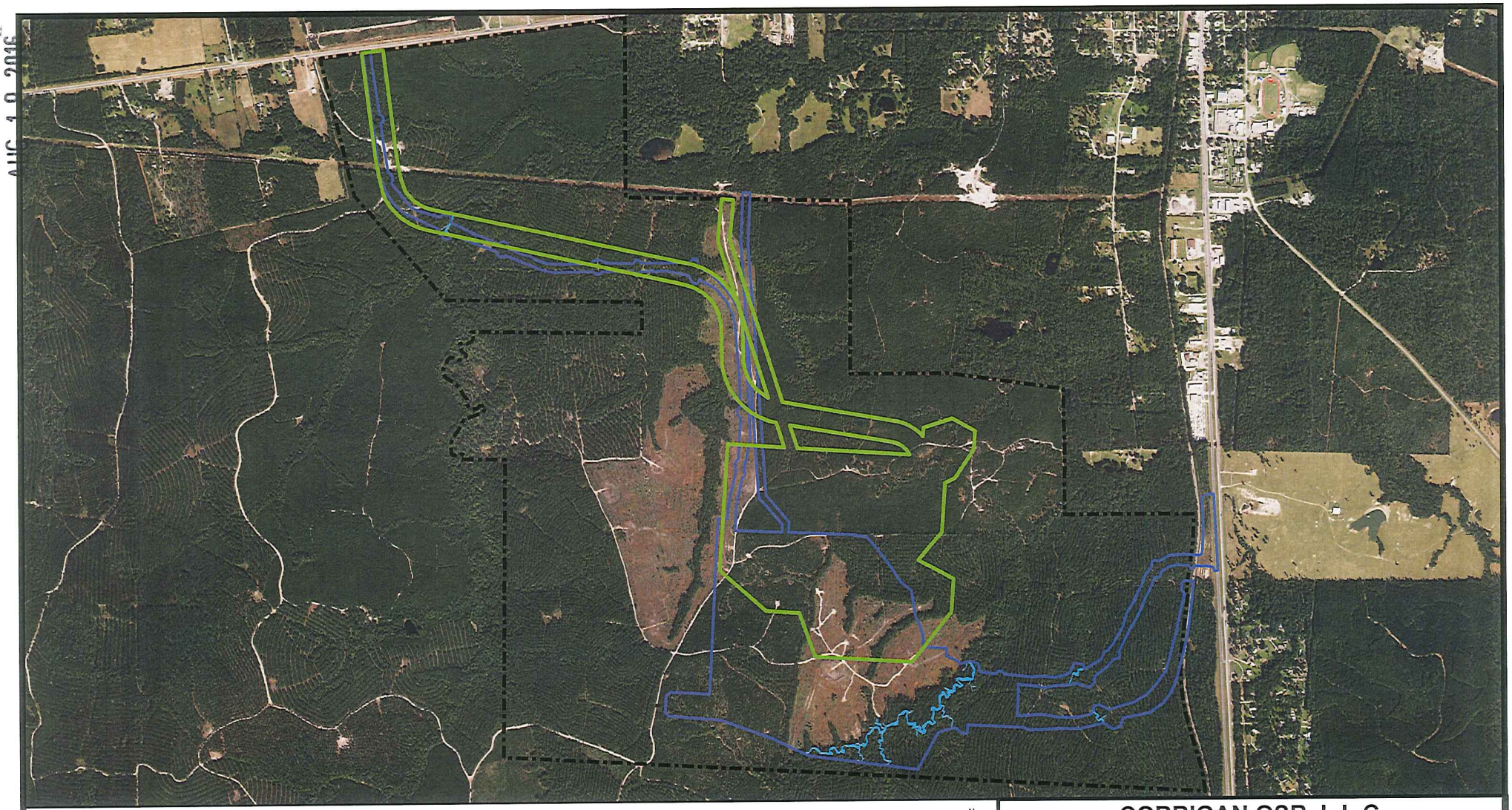
PREFERRED ALTERNATIVES LAYOUTS

POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/10/2016
Dwg. No.:	A12356-55

FIGURE 5



Legend

- Site Alternative 3 (SA-3) (Preferred Alternative) (1,708 acres)
- Proposed Project Footprint (284 acres)
- Preferred Alternative Layout 1 (PAL-1) (308 acres)
- Potential Waters of the US

N

S

0 2,000 4,000

Feet

Note:
Background is 2014 USDA NAIP imagery for Polk County, TX.

esri Partner Network Silver

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

PREFERRED ALTERNATIVE LAYOUT 1

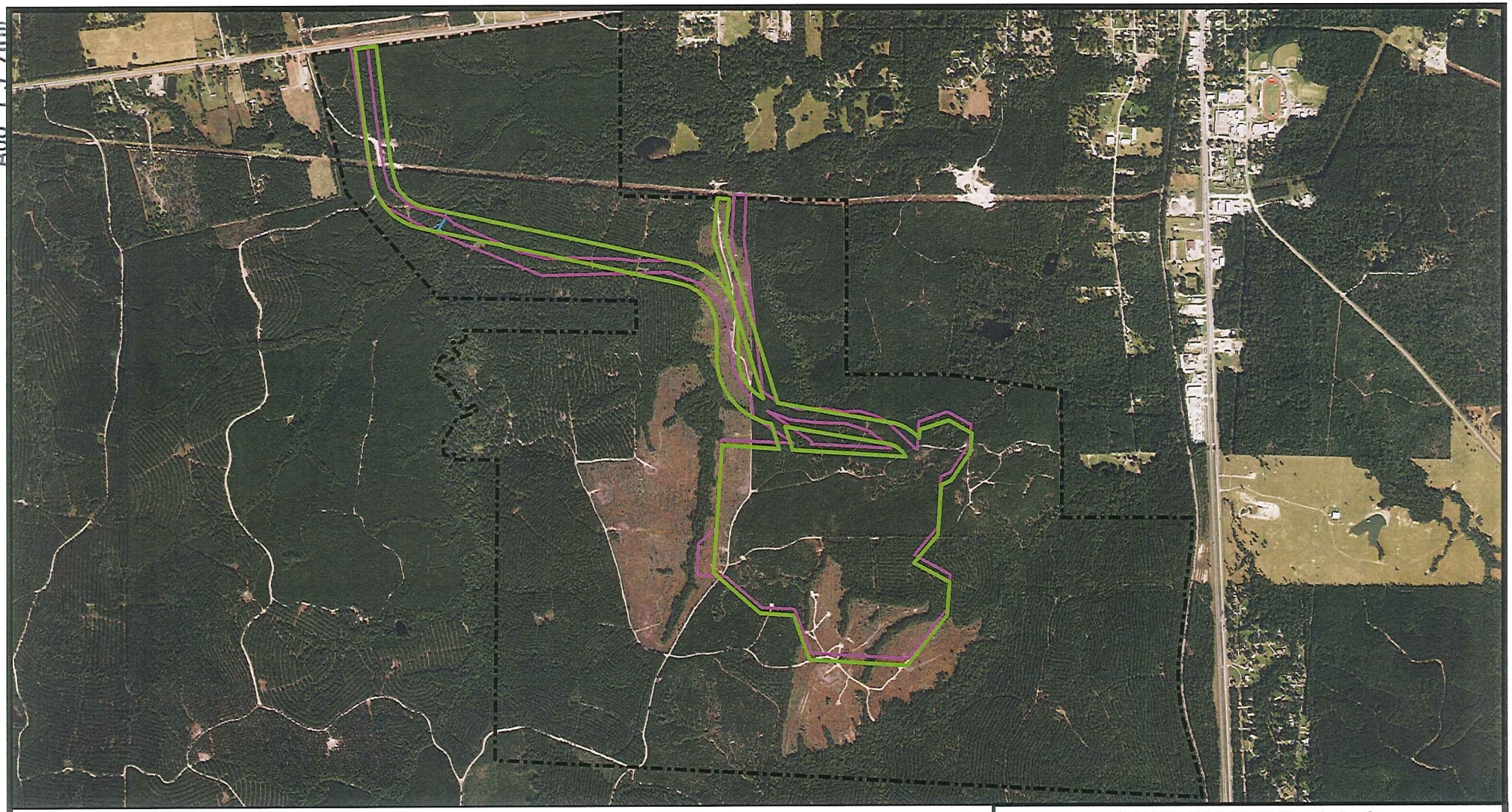
POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/10/2016
Dwg. No.:	A12356-56

FIGURE 6

AUG 19 2016



Legend

- Site Alternative 3 (SA-3) (Preferred Alternative) (1,708 acres)
- Proposed Project Footprint (284 acres)
- Preferred Alternative Layout 2 (PAL-2) (263 acres)
- Waters of the US

N

S

0 2,000 4,000

Feet

Note:
Background is 2014 USDA NAIP imagery for Polk County, TX.

esri Partner Network Silver

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

PREFERRED ALTERNATIVE LAYOUT 2

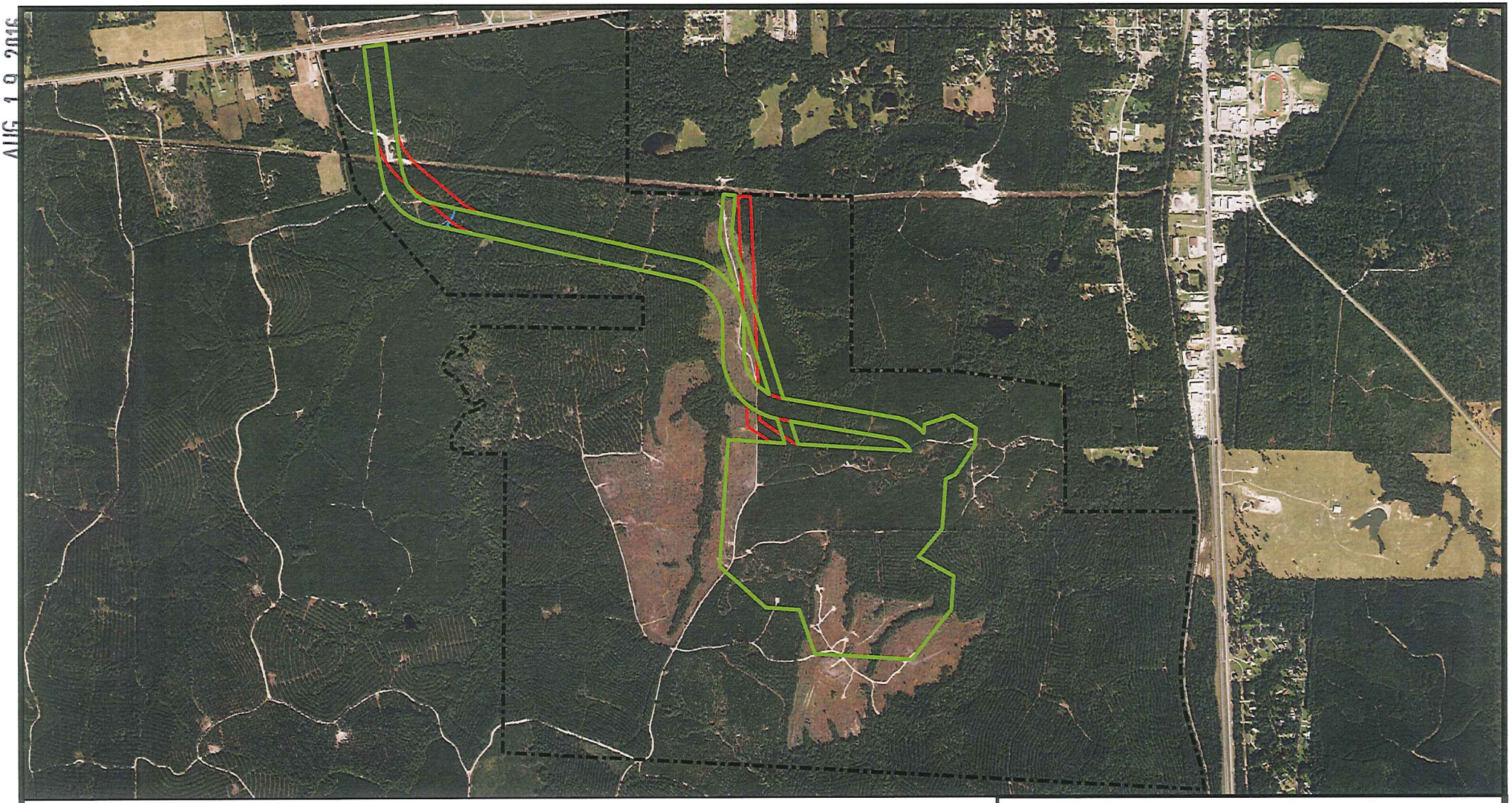
POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/10/2016
Dwg. No.:	A12356-57

FIGURE 7

AUG 19 2016



Legend

- Site Alternative 3 (SA-3) (Preferred Alternative) (1,708 acres)
- Proposed Project Footprint (284 acres)
- Preferred Alternative Layout 3 (PAL-3) (282 acres)
- Waters of the US

N

S

0 2,000 4,000

Feet

Note:
Background is 2014 USDA NAIP imagery for Polk County, TX.

esri Partner Network Silver

CORRIGAN OSB, L.L.C.
CORRIGAN, TEXAS

ORIENTED STRAND BOARD FACILITY -
ALTERNATIVES ANALYSIS

PREFERRED ALTERNATIVE LAYOUT 3

POLK COUNTY

CK ASSOCIATES Environmental Consultants

Drawn:	CPL/AM10.4
Checked:	CAL
Approved:	TEW
Date:	08/10/2016
Dwg. No.:	A12356-58

FIGURE 8

Texas Commission on Environmental Quality
Tier II
Alternatives Analysis Checklist

I. Alternatives

A. How can you satisfy your needs in ways which do not affect surface water in the State?

Response: A significant factor in the siting of the proposed project is the size required to construct the facility and access road (284 acres). Due to the size of the footprint and topography of the region, avoiding impacts to surface waters is unlikely. The project footprint was designed to avoid and minimize loss to Waters of the US where practicable.

B. How could the project be re-designed to fit the site without affecting surface water in the State?

Response: Due to the size of the footprint and topography of the region, impacts to waters have been minimized to the extent practicable. The applicant owns an approximately 1,700 acre parcel and CK worked with the applicant and engineers to design a footprint that avoided forested wetland areas and perennial streams within the parcel. The original design for the proposed project has been substantially reduced. CK also worked with the applicant and engineers to design a road alignment that reduced impacts to Waters of the US (Bear Creek crossing) to 610 linear feet and located the crossing at a historical low water crossing used during logging activities.

C. How could the project be made smaller and still meet your needs?

Response: The project size could not be reduced and still meet the needs of the applicant. To keep up with rising demand for oriented strand board, it is necessary to build a plant capable of producing 900 million square feet (MSF)/year in the east Texas area.

D. What other sites were considered?

Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

1. What geographical area was searched for alternative sites?

   Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

2. How did you determine whether other non-wetland sites are available for development in the area?

Response: A desktop analysis was performed on alternative sites to determine potential presence of wetlands and other waters. The proposed site was chosen based on the amount of impacts to Waters of the U.S.

3. In recent years, have you sold or leased any lands located within the vicinity of the project? If so, why were they unsuitable for the project?

   Response: In 2004, the applicant purchased a parcel in east Texas near Corrigan. Ultimately, the decision was made to build a plant in Oakdale, Louisiana and the property was sold. In recent years when the applicant once again considered building an additional facility in the east Texas area, the property purchased in 2004 was no longer available for purchase.

E. What are the consequences of not building the project?

Response: Not building the project will result in market demand for the OSB product not being satisfied and potentially impacting the commercial and residential construction markets.

II. Comparison of alternatives

A. How do the costs compare for the alternatives considered above?

Response: Per acre costs were similar for all sites considered.

B. Are there logistical (location, access, transportation, etc.) reasons that limit the alternatives considered?

Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

C. Are there technological limitations for the alternatives considered?

Response: The topography of Alternative Site 1 proved to be prohibitive from an engineering standpoint to constructing the necessary facilities associated with the new plant. There was significant change in elevation (approx. 50-100 ft vs. approx. 30 ft of chosen site) from south to north and similar significant changes in elevation from west to east across site. Also, streams located throughout this alternative site were prohibitive to construction of the proposed plant.

D. Are there other reasons certain alternatives are not feasible?

Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

III. If you have not chosen an alternative which would avoid impacts to surface water in the State, please explain:

A. Why your alternative was selected, and

Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

B. What you plan to do to minimize adverse effects on the surface water in the State impacted.

Response: See response to IB above.

IV. Please provide a comparison of each criterion (from Part II) for each site evaluation in the alternatives analysis.

Response: See Attached Alternative Site Analysis which was submitted to the USACE with the application.

Texas Commission on Environmental Quality
Tier II
401 Certification Questionnaire

I. Impacts to surface water in the State, including wetlands

A. What is the area of surface water in the State, including wetlands that will be disturbed, altered or destroyed by the proposed activity?

Response:

1.) There are no jurisdictional wetlands (as determined by the Galveston District U.S. Army Corps of Engineers (USACE) associated with construction of the access road and facility.

2.) Jurisdictional Waters of the US (as determined by the Galveston District USACE) associated with access road and facility impacted – 0.78 acres (approximately 610 linear feet)

B. Is compensatory mitigation proposed? If yes, submit a copy of the mitigation plan. If no, explain why not.

Response: Yes. The attached Mitigation Plan has been provided to the USACE for consideration.

C. Please complete the attached Alternatives Analysis Checklist.

Response: The completed Alternatives Analysis Checklist is attached.

II. Disposal of waste materials

A. Describe the methods for disposing of materials recovered from the removal of destruction of existing structures.

Response: Not applicable to the proposed project. There are no existing structures within the project area.

B. Describe the methods for disposing of sewage generated during construction. If the proposed work establishes a business or a subdivision, describe the method for disposing of sewage after completing the project.

Response: There will be no sewage generated during construction. Port-a-Johns are setup throughout the project area and are frequently serviced by the contracted company. Upon completion of construction, the proposed facility will tie into the City of Corrigan sewer system. All sewage and process wastewater will be disposed of through this system.

C. For marinas, describe plans for collecting and disposing of sewage from marine sanitation devices. Also, discuss provisions for the disposing of sewage generated from day-to-day activities.

Response: Not applicable to the proposed project.

III. Water quality impacts

A. Describe the methods to minimize the short-term and long-term turbidity and suspended solids in the waters being dredged and/or filled. Also, describe the type of sediment (sand, clay, etc.) that will be dredged or used for fill.

Response: The existing soil at the site is comprised primarily of Colita and Laska soils, which have the following classifications: poorly to moderately well drained, fine to very fine sandy loam overlaying sandy clay loam or loamy very fine sand. The disturbance of soils will be minimized to the maximum extent possible and best management practices utilized to reduce turbidity and suspended solids, in accordance with the site's coverage under the TPDES General Permit No. TXR150000 related to Storm Water Discharges Associated with Construction Activities (TPDES Construction General Permit).

Methods to minimize short-term turbidity and suspended solids include temporary silt fencing, stone outlet sediment check dams, and skimmer sediment basin outlets. Methods to minimize long-term turbidity and suspended solids include installation of rock rip-rap within drainage ditches and construction of two permanent sediment basins.

B. Describe measures that will be used to stabilize disturbed soil areas, including: dredge material mounds, new levees or berms, building sites, and construction work areas. The description should address both short-term (construction related) and long-term (normal operation or maintenance) measures. Typical measures might include containment structures, drainage modifications, sediment fences, or vegetative cover. Special construction techniques intended to minimize soil or sediment disruption should also be described.

Response: Solids will be kept from migrating offsite by maintaining vegetation between construction activities and drainage ditches whenever possible. Measures to stabilize disturbed soils, both short-term and long-term, shall include use of seed, sod, and erosion control mats. In accordance with the TPDES Construction General Permit, disturbed areas where construction has permanently or temporarily ceased will be stabilized within 14 days of the last disturbance, unless the area will be re-disturbed within 21 days.

C. Discuss how hydraulically dredged materials will be handled to ensure maximum settling of solids before discharging the decant water. Plans should include a calculation of minimum settling times with supporting data (Reference: Technical Report, DS-7810, Dredge Material Research Program, GUIDELINES FOR DESIGNING, OPERATING, AND MAINTAINING DREDGED MATERIAL CONTAINMENT AREAS). If future maintenance dredging will be required, the disposal site should be designed to accommodate additional dredged materials. If not, please include plans for periodically removing the dried sediments from the disposal area.

Response: Not applicable to the proposed project.

D. Describe any methods used to test the sediments for contamination, especially when dredging in an area known or likely to be contaminated, such as downstream of municipal or industrial wastewater discharges.

Response: Not applicable to the proposed project.